



Mastercool[®] Inc.
"World Class Quality"

AUTOMOTIVE
AIR CONDITIONING, SERVICE TOOLS & EQUIPMENT

For over 35 years Mastercool has been supplying professional quality air conditioning service tools and equipment. As one of the fastest growing companies in this market, our primary goal is to drive new product innovation and technologies to make the every day work of the automotive technician easier!

With our never-ending focus on innovation and new technology, Mastercool has been awarded many patents worldwide. Our products are currently being distributed in over 76 countries and growing everyday!

Corporate Office
Manufacturing and USA Warehouse



European Sales Office and Warehouse



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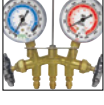




Australian Sales Office










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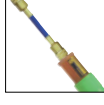

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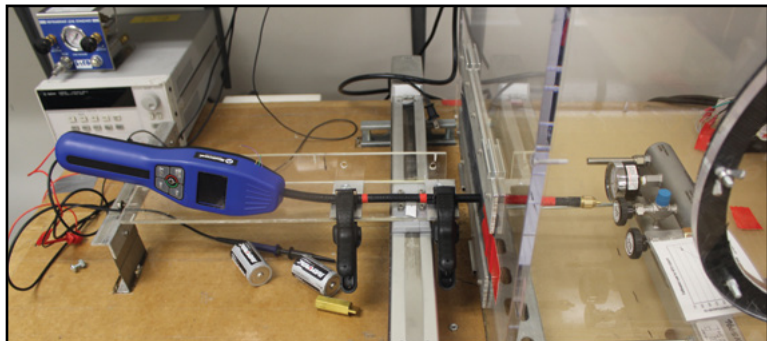
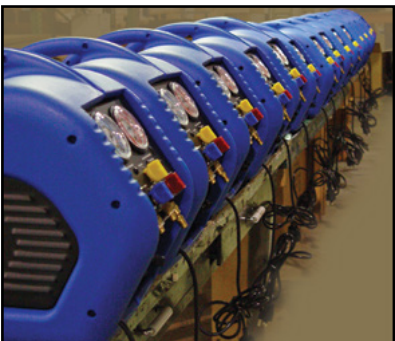
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MASTERCool PRODUCTS ARE
MADE/ASSEMBLED IN THE USA



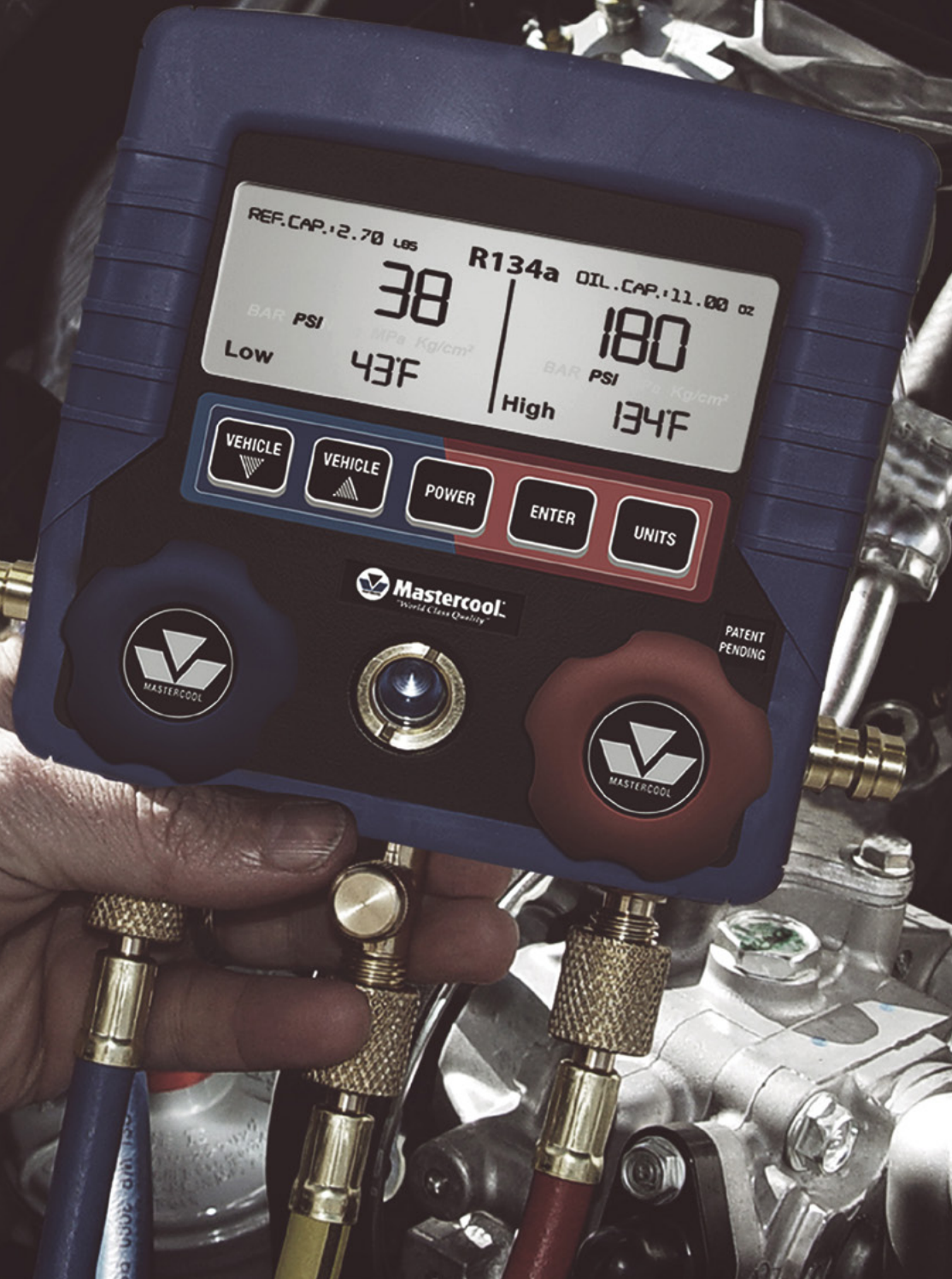
Mastercool manufactures all of its products with the highest quality components and management systems. All products are checked and tested directly at Mastercool headquarters in Randolph, New Jersey, USA.

Our products comply in every respect with the requirements set forth by SAE and EPA Standards as well as ARI Standard 740-98, EU Directives and PROP 65 guidelines.



⚠ All of our products comply with current PROP 65 guidelines.

MANIFOLDS





ALL THE INFORMATION YOU NEED IN THE PALM OF YOUR HAND - NOW AVAILABLE WITH R1234YF!



Patent Pending

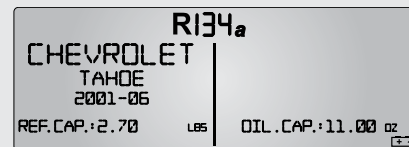


This manifold offers a large easy to read LCD that displays temperature, pressure and vacuum readings. The unit easily allows the technician to obtain refrigerant and oil capacity readings for many popular automobile manufacturers. This unit also performs systems leak check at the conclusion of the evacuation process. To insure lasting performance and durability the manifold case is constructed of ABS material and protected by a rugged rubber boot. The technician now has a fully functional manifold with the intelligence to quickly access and deliver the accurate information needed to do the job right!

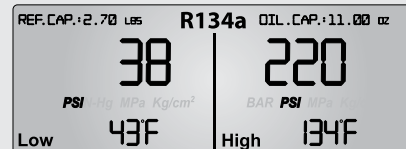
SPECIFICATIONS

- Refrigerant: R134a or R134a/R1234yf
- Pressure & Vacuum Display: Low Side - PSI, Bar, MPa, Kg/cm² & IN-Hg
High Side - PSI, Bar, MPa, Kg/cm²
- Temperature Display: -40 to 200°F (-4 to 93°C)
- Response Time: 250 mSec.
- Connection: 1/2" acme
- Operating Temperature: 32 to 122°F (0 to 45°C)
- Power: 9V DC battery
- Low Battery Indicator: Special ICON on LCD
- Auto-Off: 15 min. with disabling capability

FOR A COMPLETE LIST OF MANUFACTURERS INCLUDED



MANUFACTURER/MODEL/YEAR REFRIGERANT (LB/KG) & OIL CAPACITY (OZ/ML) DISPLAY



TEMPERATURE/PRESSURE DISPLAY



- 99134-A Digital manifold only
- 99860-A Complete kit in a blow molded case includes: R134a manifold with a set of 3-60" hoses and a set of manual couplers (82834 & 82934).
- 99872-A Complete kit in a blow molded case includes: R134a manifold with a set of 3-72" hoses and a set of manual couplers (82834 & 82934).
- 99134-AR <<NEW>> Dual R134a/R1234yf digital manifold only
- 99172 <<NEW>> Complete kit in a blow molded case includes: dual R134a/R1234yf digital manifold set of 3-72" R134a hoses, set of R134a couplers (82834, 82934), set of R1234yf couplers (83834, 83934), 1/2" ACME-M x 1/2" ACME-F LH thread adapter (83633) (2) 12 mm-M x 14 mm-F R1234yf adapters (83735)



R1234yf/R134a ALUMINUM MANIFOLD GAUGE SET



- Professional extruded aluminum block
- 2 1/2" silicone dampened, recalibrateable gauges
- Free-floating piston type valves reduce o-ring wear
- Extra access port for vacuum line
- Extra large sight glass for visual refrigerant check
- Large easy-to-grip knobs
- R1234yf high and low side couplers with extended disconnect protection sleeve meets SAE J639 & J2888
- R134a high and low side manual couplers meet SAE, UL and EPA requirements for containment of refrigerant
- 1/2" acme-m x 1/2" acme-f LH thread adapter
- (2) 12 mm-m x 14 mm-f R1234yf adapters
- Set of 3 - R134a standard hoses

89636-AYF R1234yf/R134a aluminum manifold gauge set, 2 1/2" gauges, 3-36" R134a standard hoses, R134a manual couplers (82834, 82934), R1234yf couplers (83834, 83934), 1/2" acme-m x 1/2" acme-f LH thread adapter (83633), (2) 12 mm-m x 14 mm-f R1234yf adapters (83735)

89661-AYF R1234yf/R134a aluminum manifold gauge set, 2 1/2" gauges, 3-60" R134a standard hoses, R134a manual couplers (82834, 82934), R1234yf couplers (83834, 83934), 1/2" acme-m x 1/2" acme-f LH thread adapter (83633), (2) 12 mm-m x 14 mm-f R1234yf adapters (83735)

89772-AYF R1234yf/R134a aluminum manifold gauge set, 2 1/2" gauges, 3-72" R134a standard hoses, R134a manual couplers (82834, 82934), R1234yf couplers (83834, 83934), 1/2" acme-m x 1/2" acme-f LH thread adapter (83633), (2) 12 mm-m x 14 mm-f R1234yf adapters (83735)



R1234yf/R134a BRASS MANIFOLD GAUGE SET



- 2 1/2" silicone dampened, recalibrateable gauges
- Extra access port for vacuum line
- R1234yf high and low side quick couplers
- R134a high and low side economy couplers
- 1/2" acme-m x 1/2" acme-f LH thread adapter
- (2) 12 mm-m x 14 mm-f R1234yf adapters
- Set of 3 - R134a standard hoses

66636-AYF R1234yf/R134a brass manifold gauge set, 2 1/2" gauges, 3-36" R134a standard hoses, R134a economy couplers (66234, 66334), R1234yf quick couplers (67434, 67534), 1/2" acme-m x 1/2" acme-f LH thread adapter (83633), (2) 12 mm-m x 14 mm-f R1234yf adapters (83735)

66661-AYF R1234yf/R134a brass manifold gauge set, 2 1/2" gauges, 3-60" R134a standard hoses, R134a economy couplers (66234, 66334), R1234yf quick couplers (67434, 67534), 1/2" acme-m x 1/2" acme-f LH thread adapter (83633), (2) 12 mm-m x 14 mm-f R1234yf adapters (83735)

66672-AYF R1234yf/R134a brass manifold gauge set, 2 1/2" gauges, 3-72" R134a standard hoses, R134a economy couplers (66234, 66334), R1234yf quick couplers (67434, 67534), 1/2" acme-m x 1/2" acme-f LH thread adapter (83633), (2) 12 mm-m x 14 mm-f R1234yf adapters (83735)

PARTS FOR 2-WAY ALUMINUM MANIFOLDS

- 85215** O-rings for aluminum manifold (4 pcs)
- 85216** Seal and seat assembly (2 pcs)

PARTS FOR 2-WAY BRASS MANIFOLD

- 34215** O-rings for brass manifolds
- 34216** Seal and seat assembly for brass manifolds



R134a AUTO A/C 2-WAY MANIFOLD GAUGE SETS WITH HOSES PACKAGED IN CLAMSHELLS



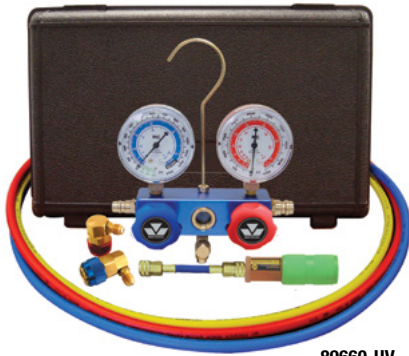
- Hose connections for blue and red are 14mm-M
- Yellow hose is 1/2" ACME-F with auto shut-off valve
- Gauges are 2 1/2" in PSI/°F, 3 1/8" in PSI/Kpa & °F

HOSE LENGTH (SET OF 3)	W/MANUAL COUPLERS		W/E-Z SNAP™ COUPLERS		W/O COUPLERS	
GAUGE SIZE	2 1/2"	3 1/8"	2 1/2"	3 1/8"	2 1/2"	3 1/8"
36"	89636	89136	88436	88136	85636	85136
60"	89661	89161	88461	88161	85661	85161
72"	89772	89172	88472	88172	85772	85172

To order manifolds with shock-resistant gauge protectors, simply place a "-G" after the part number (2 1/2" only)

AUTOMOTIVE R134a MANIFOLD GAUGE SET

>>POPULAR<<

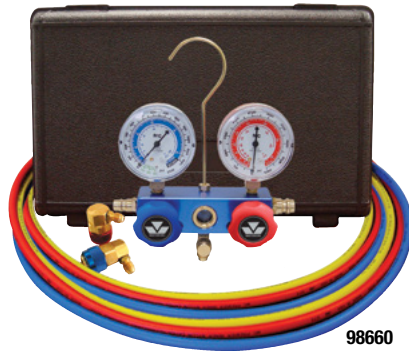


89660-UV

- Professional extruded aluminum block
- 2 1/2" silicone dampened, recalibrateable gauges
- Free-floating piston type valves reduce o-ring wear
- Extra access port for vacuum line
- Extra large sight glass for visual refrigerant check
- Large easy-to-grip knobs
- 3 - SAE approved nylon barrier hoses
- Custom molded carrying case

- 89660** Complete kit in a blow molded case includes aluminum manifold, 60" hoses and professional couplers
- 89660-UV** Complete kit in a blow molded case includes aluminum manifold, 60" hoses, professional couplers and 10 application mini dye injector
- 89661-UV** Complete kit in a blow molded case includes aluminum manifold, 60" hoses, manual couplers and 10 application mini dye injector

DUAL R134a/R12 MANIFOLD GAUGE SET



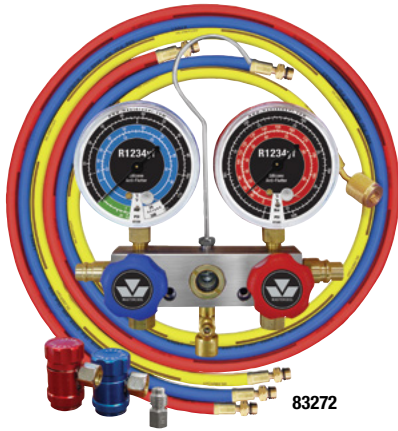
98660

- Professional extruded aluminum block
- 2 1/2" silicone dampened, recalibrateable gauges
- Free-floating piston type valves reduce o-ring wear
- Extra access port for vacuum line
- Extra large sight glass for visual refrigerant check
- Large easy-to-grip knobs
- Set of 3 - R134a nylon barrier hoses
- Set of 3 - R12 nylon barrier hoses
- Custom molded carrying case

- 98660** Complete kit in a blow molded case includes aluminum manifold, 60" hoses and professional couplers
- 98661** Complete kit in a blow molded case includes aluminum manifold, 60" hoses and manual couplers



R1234yf 2-WAY PISTON VALVE MANIFOLD FOR AUTOMOTIVE A/C



- Manifold block assembled with (3) 12mm-F fittings per SAE J2888
- Red & Blue nylon barrier hoses with 12mm-M fittings on both sides meets SAE J2888, EPA, SAE & UL standards
- Yellow hose 12mm fitting on one side and 1/2 x 16 acme LH on the other meets SAE J2888
- R1234yf high and low side couplers with extended disconnect protection sleeve meets SAE J639 & J2888
- Piston type free-floating valves reduce o-ring wear
- Extra large sight glass for visual checks of refrigerant
- Easy to recalibrate 3 1/8" gauges to ensure accuracy

Unit	Bar/PSI
Gauge p/n (HP/LP)	87500-87350
Manifold with gauges, 3 x 12 mm-F fittings	83102
Manifold with 3 – 72" hoses and R1234yf couplers packaged in a clam shell	83272

R12, R22 AND R502 2-WAY ALUMINUM MANIFOLD GAUGE SETS WITH HOSES PACKAGED IN CLAMSHELLS

- Hose connections are 1/4" SAE
- Gauges are 2 1/2" in PSI & °F



HOSE LENGTH (SET OF 3)	STANDARD HOSES STANDARD FITTINGS	STANDARD HOSES AUTO SHUT-OFF VALVES	NYLON BARRIER HOSES STANDARD FITTINGS	NYLON BARRIER HOSES AUTO SHUT-OFF VALVES	NYLON BARRIER HOSES MANUAL BALL VALVES
36"	93636	95636	96636	97636	92636
60"	93661	95661	96661	97661	92661
72"	93772	95772	96772	97772	92772

To order manifolds with shock-resistant gauge protectors, simply place a "-G" after the part number (2 1/2" only)

2-WAY ALUMINUM MANIFOLDS WITH GAUGES ONLY

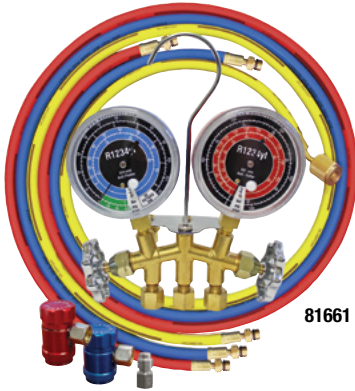
93103	R12, R22 & R502 (2 1/2" gauges) 1/4" MFL
85103	R134a (2 1/2" gauges) 1/2" ACME-M
85113	R134a (3 1/8" gauges) 1/2" ACME-M

PARTS FOR 2-WAY ALUMINUM MANIFOLDS

85215	O-rings for aluminum manifold (4 pcs)
85216	Seal and seat assembly (2 pcs)



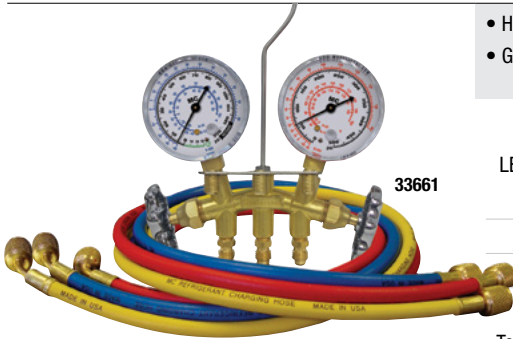
R1234yf 2-WAY BRASS MANIFOLD FOR AUTOMOTIVE A/C



- Manifold assembled with (3) 12mm-F fittings per SAE J2888
- Red & blue nylon barrier hoses with 12mm-M fittings on both sides meets SAE J2888, EPA, SAE & UL standards
- Yellow hose 12mm fitting on one side and 1/2 x 16 acme LH on the other meets SAE J2888
- R1234yf high and low side couplers with extended disconnect protection sleeve meets SAE J639 & J2888
- Easy to recalibrate 3 1/8" gauges to ensure accuracy

Unit	Bar/PSI
Gauge p/n (HP/LP)	87500-87350
Manifold with gauges, 3 x 12 mm-F fittings	81102
Manifold with 3 – 60" hoses and R1234yf couplers packaged in a clam shell	81661

R12, R22 AND R502 2-WAY BRASS MANIFOLD GAUGE SETS WITH HOSES PACKAGED IN CLAMSHELLS

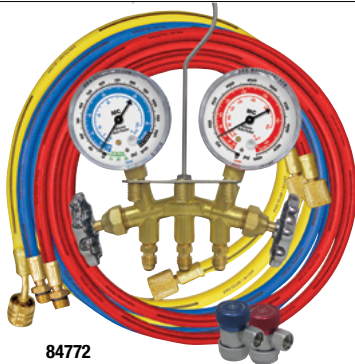


- Hose connections are 1/4" SAE
- Gauges are 2 1/2" in PSI & °F

HOSE LENGTH (SET OF 3)	STANDARD HOSES STANDARD FITTINGS	STANDARD HOSES AUTO SHUT-OFF VALVES	NYLON BARRIER HOSES STANDARD FITTINGS	NYLON BARRIER HOSES AUTO SHUT-OFF VALVES	NYLON BARRIER HOSES MANUAL BALL VALVES
36"	33636	35636	36636	37636	32636
60"	33661	35661	36661	37661	32661
72"	33772	35772	36772	37772	32772

To order manifolds with shock-resistant gauge protectors, simply place a "-G" after the part number (2 1/2" only)

R134a AUTO A/C 2-WAY BRASS MANIFOLD GAUGE SETS WITH HOSES PACKAGED IN CLAMSHELLS



- Hose connections for blue and red are 14mm-M
- Yellow hose is 1/2" ACME-F with auto shut-off valve
- Gauges are available 2 1/2" and 3 1/8" in PSI/°F

HOSE LENGTH (SET OF 3)	W/MANUAL COUPLERS		W/E-Z SNAP™ COUPLERS		W/O COUPLERS	
	GAUGE SIZE					
36"	84636	84136	83436	83136	80636	80136
60"	84661	84161	83461	83161	80661	80161
72"	84772 >>>POPULAR<<<	84172	83472	83172	80772	80172

To order manifolds with shock-resistant gauge protectors, simply place a "-G" after the part number (2 1/2" only)

AUTOMOTIVE R134a MANIFOLD GAUGE SETS WITH ECONOMY COUPLERS



66660 Brass R134a Manifold Gauge Set comes complete with 1 – 60" hose, 2 – 36" hoses and economy couplers. Packaged in a clamshell.

66661 Brass R134a Manifold Gauge Set comes complete with 3 – 60" hoses and economy couplers. Packaged in a clamshell.

2-WAY BRASS MANIFOLDS WITH GAUGES ONLY

80103	R134a (2 1/2" gauges) 1/2" ACME-M
81113	R134a (3 1/8" gauges) 1/2" ACME-M
33103	R12, R22, R502 (2 1/2" gauges) 1/4" MFL

PARTS FOR 2-WAY BRASS MANIFOLD

34215	O-rings for brass manifolds
34216	Seal and seat assembly for brass manifolds

REPLACEMENT GAUGES

Mastercool offers one of the most extensive lines of high quality replacement gauges. Our wide variety of gauges are available in different sizes and styles. All of our gauges are designed with the **ANTI-FLUTTER** feature that reduces needle fluctuation and increases reading accuracy.

	High pressure p/n	Low pressure p/n	Gauge Diameter	Units	Refrigerant Scales
	93500	93350	2 1/2"	PSI/F	R12 R22 R502
	85500	85350	2 1/2"	PSI/F	R134a R12
	85500-AYF	85350-AYF	2 1/2"	PSI/F	R1234yf R134a
	86500	86350	3 1/8"	PSI/Kpa/F	R134a
	87500	87350	3 1/8"	Bar/PSI °F/°C	R1234yf

GAUGE PROTECTORS



Mastercool gauge protectors are built to cushion shock due to rough handling. The unique ribbing deadens bumps and deflects shocks. Snug fitting. Color coded. All Mastercool manifold gauge sets are available with gauge protectors installed. To order, simply place a “-G” after any gauge set number.

2 1/2" (63 MM) GAUGE PROTECTORS

93253-E 2 1/2" (63 mm) blue gauge protector

93503-E 2 1/2" (63 mm) red gauge protector

93553-E 2 1/2" (63 mm) set (red & blue)

3 1/8" (80 MM) GAUGE PROTECTORS

91253-EE 3 1/8" (80 mm) red gauge protector

91503-EE 3 1/8" (80 mm) blue gauge protector

91553-EE 3 1/8" (80 mm) set (red & blue)

LENS



85253-E 2 1/2" (63 mm) lens

98251-E 3 1/8" (80 mm) lens

4-WAY MANIFOLD REPLACEMENT KNOBS



58211 Blue knob

58212 Red knob

58213 Yellow knob

58214 Black knob

2-WAY MANIFOLD REPLACEMENT KNOBS



85211 Blue knob

85212 Red knob

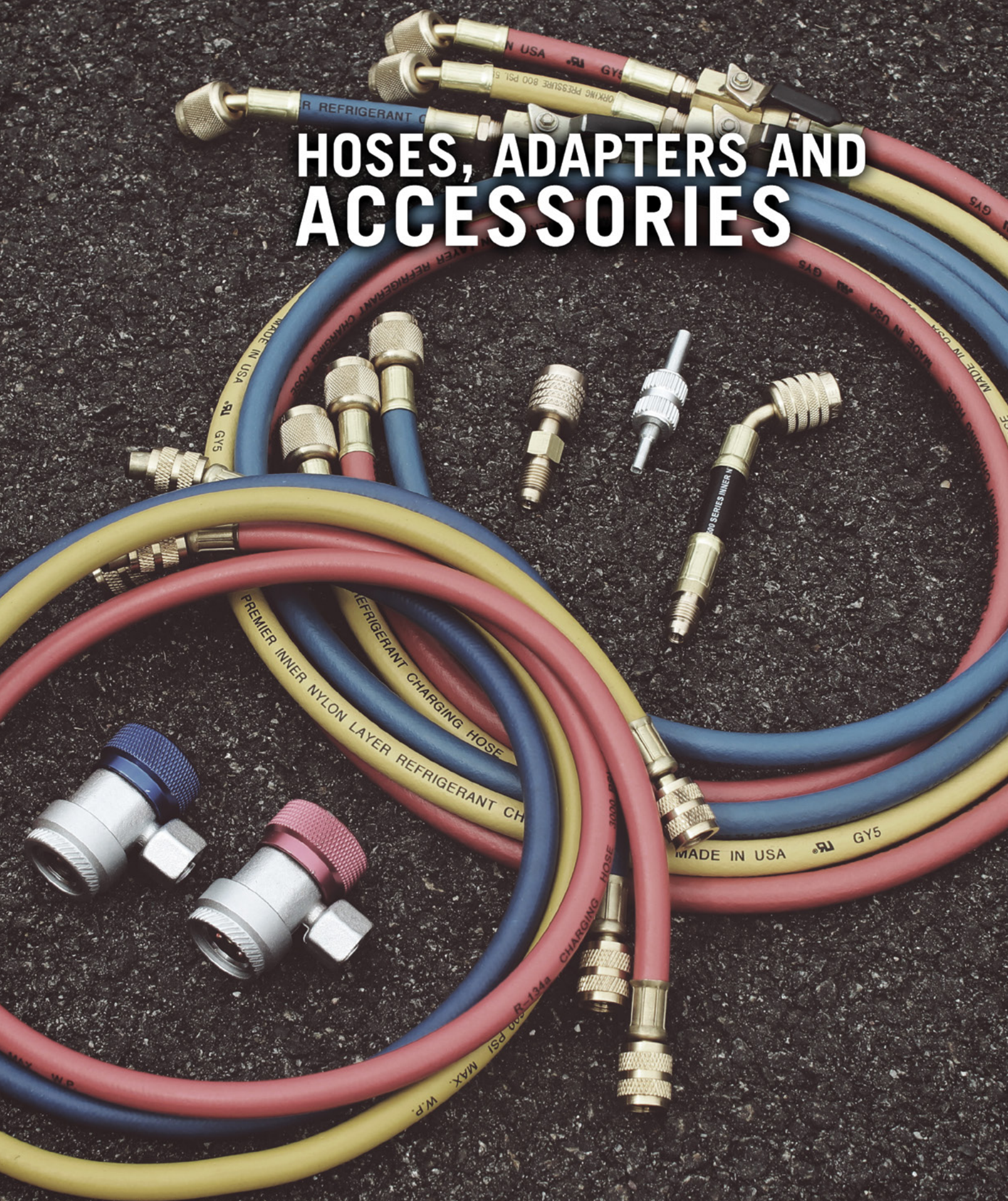
93211 Black knob

85211-R Blue knob

85212-R Red knob

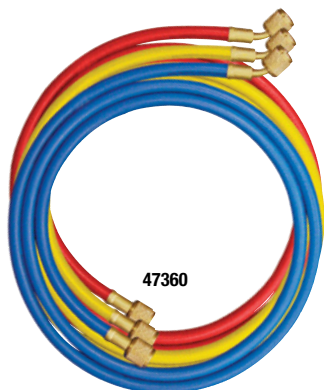
93211-R Black knob

HOSES, ADAPTERS AND ACCESSORIES



Mastercool uses only **(GRADE 5 HOSE)** with a selection of standard and nylon barrier for high pressure applications. Knurled brass nuts make finger tightening easy. **Crimped with 8 segment dies for secure fit and maximum durability.** Hoses are available in sets and a variety of lengths to meet all EPA, SAE and UL requirements for containment of refrigerant. **Sets include one blue, one red and one yellow hose.**

STANDARD & HIGH PRESSURE HOSES W/STANDARD FITTINGS (1/4" SAE)



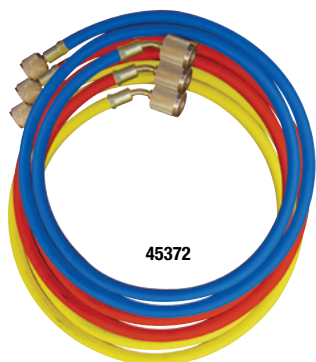
Standard Hoses, Working Pressure 600 PSI, Burst 3000 PSI

HOSE LENGTH	36"	60"	72"	96"
Blue 1/4" x 1/4"	41361	41601	41721	41961
Yellow 1/4" x 1/4"	41362	41602	41722	41962
Red 1/4" x 1/4"	41363	41603	41723	41963
SETS 1/4" x 1/4"	40336	40360	40372	40396

Nylon Barrier Hoses, Working Pressure 800 PSI, Burst 4000 PSI

Blue 1/4" x 1/4"	47361	47601	47721	47961
Yellow 1/4" x 1/4"	47362	47602	47722	47962
Red 1/4" x 1/4"	47363	47603	47723	47963
Black 1/4" x 1/4"	47364	47604	47724	47964
SETS 1/4" x 1/4"	47336	47360	47372	47396
Black 1/4" hose w/(3/8" x 3/8" fitting)	48364	48604	48724	48964

STANDARD & HIGH PRESSURE HOSES W/AUTOMATIC SHUT-OFF VALVE FITTINGS (1/4" SAE)



Standard Hoses, Working Pressure 600 PSI, Burst 3000 PSI

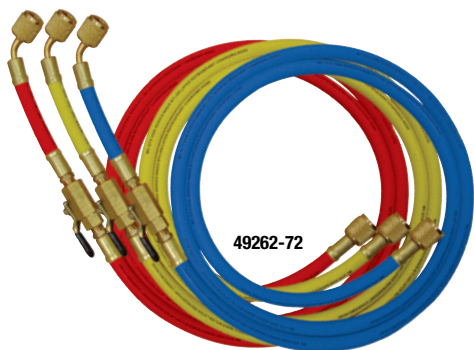
HOSE LENGTH	36"	60"	72"	96"
Blue 1/4" x 1/4"	45361	45601	45721	45961
Yellow 1/4" x 1/4"	45362	45602	45722	45962
Red 1/4" x 1/4"	45363	45603	45723	45963
SETS 1/4" x 1/4"	45336	45360	45372	45396

Nylon Barrier Hoses, Working Pressure 800 PSI, Burst 4000 PSI

Blue 1/4" x 1/4"	46361	46601	46721	46961
Yellow 1/4" x 1/4"	46362	46602	46722	46962
Red 1/4" x 1/4"	46363	46603	46723	46963
Black 1/4" x 1/4"	46364	46604	46724	46964
SETS 1/4" x 1/4"	46336	46360	46372	46396

Auto shut-off valves automatically retain refrigerant in the service hose when they are removed from the system. Meets EPA, SAE and UL standards for containment of refrigerant.

STANDARD & HIGH PRESSURE HOSES W/MANUAL SHUT-OFF VALVE FITTINGS (1/4" SAE)



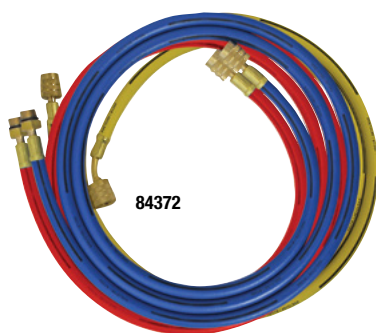
Standard Hoses, Working Pressure 600 PSI, Burst 3000 PSI

HOSE LENGTH	36"	60"	72"
Blue 1/4" x 1/4"	90263-36	90263-60	90263-72
Yellow 1/4" x 1/4"	90264-36	90264-60	90264-72
Red 1/4" x 1/4"	90265-36	90265-60	90265-72
SETS 1/4" x 1/4"	90262-36	90262-60	90262-72

Nylon Barrier Hoses, Working Pressure 800 PSI, Burst 4000 PSI

Blue 1/4" x 1/4"	49263-36	49263-60	49263-72
Yellow 1/4" x 1/4"	49264-36	49264-60	49264-72
Red 1/4" x 1/4"	49265-36	49265-60	49265-72
SETS 1/4" x 1/4"	49262-36	49262-60	49262-72

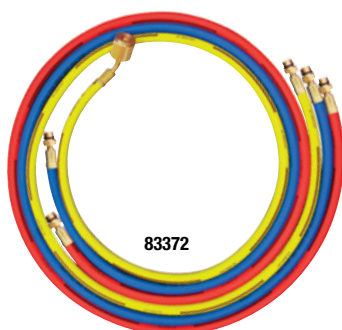
R134a HOSES WITH 1/2" ACME-F AND 14 MM-M AUTO A/C FITTINGS



HOSE LENGTH	36"	60"	72"	96"
Blue-14 mm-M x 1/2" ACME-F	84361	84601	84721	84961
Yellow w/Shut-off Valve 1/2" ACME-F x 1/2" ACME-F	84362	84602	84722	84962
Red-14 mm-M x 1/2" ACME-F	84363	84603	84723	84963
Black-1/2" ACME-F x 1/2" ACME-F	84364	84604	84724	84964
Black Conversion Hose 1/2" ACME-F x 1/4" FL-F	98364	98604	98724	98964
Yellow w/o Shut-off Valve 1/2" ACME-F x 1/2" ACME-F	84365	84605	84725	84965
SETS Blue/Red 14 mm-M x 1/2" ACME-F and Yellow w/Shut-off Valve 1/2" ACME-F x 1/2" ACME-F	84336	84360	84372	84396

Mastercool R134a charging hoses meet SAE J2196 specifications and are UL tested. Tested for working pressure of 600 PSI and burst pressure of 3000 PSI.

R1234yf HOSES (Meets J2888, EPA, SAE & UL Standards)



Nylon Barrier Hoses, Working Pressure 800 PSI, Burst 4000 PSI

HOSE LENGTH	60"	72"
Blue-12mm-M x 12mm-M	83601	83721
Yellow-12mm fitting x 1/2 x 16 ACME LH	83602	83722
Red-12mm-M x 12mm-M	83603	83723
SET blue/red 12mm-M x 12mm-M and yellow 12mm fitting x 1/2 x 16 ACME LH	83660	83372

SERVICE HOSE REPLACEMENT PARTS



	1/4" SAE		1/2" ACME		14 mm-M O-RING	UNF 1/2 - 20"	
	GASKET	DEPRESSOR	GASKET	DEPRESSOR		GASKET	DEPRESSOR
Charging Hoses	42010-10	42014-10	82010-10	42014-10	83341-10	42010-10	42014-10
Shut-Off Valve	90336-10	N/A	82336-10	N/A	N/A	N/A	N/A

80011 HEAVY DUTY RATCHET HOSE CUTTER



Ratcheted action makes this cutter extremely easy to operate resulting in quick, clean cuts. Cutting blade is made of special alloy, heat treated steel for long life. Cuts all rubber hoses and PVC pipe up to 1 1/2" (38 mm) O.D. (Not recommended for PVC200)

80111 Replacement blade for 80011

80013 AUTOMOTIVE REFRIGERANT HOSE CUTTER



Makes quick, clean cuts. Cuts rubber automotive refrigerant hoses up to 1 1/2" O.D.

80113 Replacement blade for 80013

AUTOMATIC & MANUAL SHUT-OFF VALVES

Mastercool manufactures a complete line of shut-off valves for containment of refrigerant. EPA requires shut-off valves within 12 inches of the charging hose ends to prevent unnecessary venting of refrigerant. Using shut-off valves is much safer than allowing refrigerant to blow out during service.

90259 90° MANUAL SHUT-OFF VALVE SET



Needle valve design with flexible hose controls refrigerant with a twist of a knob. Meets SAE, EPA and UL requirements for containment of refrigerant. Screws onto charging hose end.

90° Manual Shut-Off Valve Set Includes:

90269 Blue 1/4" x 1/4"

90279 Yellow 1/4" x 1/4"

90289 Red 1/4" x 1/4"

Also Available:

90389 Red 1/4 x 3/16" (Automotive)

90262 STRAIGHT MANUAL SHUT-OFF VALVE SET



Ball valve design with flexible hose controls refrigerant with a quarter turn of the valve handle. Meets SAE, EPA and UL requirements for containment of refrigerant. One hand operation. Screws onto charging hose end.

Straight and Manual Shut-Off Valve Set includes:

90263 Blue 1/4 x 1/4"

90264 Yellow 1/4" x 1/4"

90265 Red 1/4" x 1/4"

Also Available:

90365 Red 1/4 x 3/16"

MANUAL SHUT-OFF BALL VALVES



For custom application, Mastercool offers swivel ball valves without the hoses. This valve may be used to add shut-off valves to recycling equipment, manifold sets, flushing equipment, etc.

90430 1/4 FL-F x 1/4 FL-M swivel ball valve (less hose)

82495 1/2" ACME x 1/2" ACME R134a ball valve

AUTOMATIC SHUT-OFF VALVES



Valve simply screws onto hose end. Available in straight and 90° models. Meets SAE, EPA and UL requirements for containment of refrigerant.

<< QUICK DISCONNECT : NO LOSS OF REFRIGERANT >>

90333-R 90° 1/4 FL-M x 1/4 FL-F

90333-UV 90° 1/4" FFL x 13 mm

90335-R Straight 1/4 FL-M x 1/4 FL-F

90337 Straight 1/4 FL-M x 3/16 FL-F

CONTROL VALVE



Ideal for use on charged systems. Eliminates refrigerant, oil or dye from spraying during connections.

- 90328 1/4" FFL x 1/4" MFL
- 90328-5/16 5/16" FFL x 5/16" MFL

RETROFIT ADAPTERS

INDIVIDUAL TERMINATION (BLOCK OFF) CAPS



- 81297 1/4 (7/16" - 20) alum.
- 81379 3/16 (3/8" - 24) alum.
- 82297 Low side R134a blue cap
- 82379 High side R134a red cap

STRAIGHT ADAPTERS W/VALVE CORE & SERVICE PORT CAPS



- 82274 Low side, 1/4 (7/16" - 20) x 13 mm
- 82332 High side, 1/4 (7/16" - 20) x 16 mm
- 82358 High side, 3/16 (3/8" - 24) x 16 mm

90° ADAPTERS W/VALVE CORE & SERVICE PORT CAPS



- 82275 Low side, 1/4 (7/16" - 20) x 13 mm
- 82333 High side, 1/4 (7/16" - 20) x 16 mm
- 82354 High side, 3/16 (3/8" - 24) x 16 mm

82357 GM HIGH FLOW ADAPTER W/ VALVE CORE & SERVICE PORT CAPS



GM high flow adapter

MANUAL COUPLERS

»POPULAR«



Patented manual couplers adjust easily to R134a service ports with varying dimensions. All metal construction for extra durability. Patented, spring loaded depressor will not damage service valves. Can be removed from service ports regardless of knob position without losing refrigerant. Meets SAE, UL and EPA requirements for containment of refrigerant. Color coded. **PATENT# 5,370,359**

82834 High-side manual R134a 14 mm-F x 16 mm quick coupler

82934 Low-side manual R134a 14 mm-F x 13 mm quick coupler

82834-E High-side manual R134a 1/4" FL-M x 16 mm quick coupler

82934-E Low-Side manual R134a 1/4" FL-M x 13 mm quick coupler

80034 O-ring for 16 mm quick coupler (10 pcs)

80134 O-ring for 13 mm quick coupler (10 pcs)

SAFETY-LOCK MANUAL COUPLERS



Mastercool's safety-lock manual couplers are designed for use on all R134a systems. This unique design allows the technician to work on the system without the worry of accidentally disconnecting the hose regardless of movement. Once the coupler is connected to the system, the safety-lock sleeve slides into place guaranteeing that the coupler cannot be taken off without unscrewing the manual valve. Meets all SAE, UL and EPA requirements for containment of refrigerant. Color coded.



82834-SL High side manual R134a 14 mm-F x 16 mm safety lock coupler

82934-SL Low side manual R134a 14 mm-F x 13 mm safety lock coupler

82834-SL-E High side manual R134a 1/4" FL-M x 16 mm safety lock coupler

82934-SL-E Low side manual R134a 1/4" FL-M x 13 mm safety lock coupler

80034 O-ring for 16 mm quick coupler (10 pcs)

80134 O-ring for 13 mm quick coupler (10 pcs)

E-Z SNAP™ COUPLERS



This unique patented design easily snaps on and off the A/C systems service ports under any pressure. The E-Z Snap™ automatically adjusts to various service port dimensions allowing fast and immediate access into the A/C system. The swivel feature enables the user to easily access all service ports, even in the tightest quarters. Meets SAE, UL, and EPA requirements for containment of refrigerant. **PATENT# 5,244,010**

82214 High-side E-Z Snap R134a 14 mm-F x 16 mm quick coupler

82224 Low-side E-Z Snap R134a 14 mm-F x 13 mm quick coupler

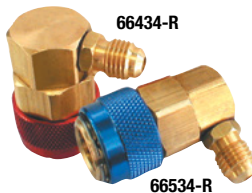
82214-E High-side E-Z Snap R134a 1/4" FL-M x 16 mm quick coupler

82224-E Low-side E-Z Snap R134a 1/4" FL-M x 13 mm quick coupler

80034 O-ring for 16 mm quick coupler (10 pcs)

80134 O-ring for 13 mm quick coupler (10 pcs)

ECONOMY COUPLERS



Specially designed to work in the tightest quarters. Snaps easily to A/C service ports.

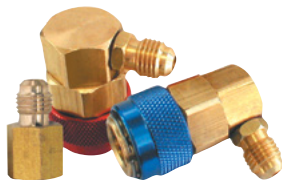
66434-R High side R134a 1/4" FL-M x 16 mm economy coupler

66534-R Low side R134a 1/4" FL-M x 13 mm economy coupler

60034-10 O-ring for 66434 (10 pcs)

60134-10 O-ring for 66534 (10 pcs)

98370 R134a CONVERSION KIT



Includes high and low side R134a couplers and R134a tank adapter.



R1234yf COUPLERS



- Meets SAE J639 & J2888
- Allows recovery of entire refrigerant, including the space between the coupler and fitting

83834	High side R1234yf 12 mm-F x 17 mm coupler with extended disconnect sleeve
83934	Low side R1234yf 12 mm-F x 14 mm coupler with extended disconnect sleeve
67434	High side R1234yf 12 mm-F x 17 mm quick coupler
67534	Low side R1234yf 12 mm-F x 14 mm quick coupler

R134a EXTRA LONG COUPLERS



Extra long high side R134a coupler used on BMW E60 (2003-2009 5 series), Volvo and Renault models. This extra long high side coupler can easily reach the service port.

82836	High side extra long 14 mm-F x 16 mm
82836-E	High side extra long 1/4" SAE-M x 16 mm



R134a/R1234YF CONVERSION KITS



Easily convert any R134a manifold gauge set to a R1234yf manifold gauge set.

83736-K	Kit includes: high side R1234yf 12 mm-F x 17 mm coupler (83834), low side R1234yf 12 mm-F x 14 mm coupler (83934), 1/2" ACME-M x 1/2" ACME-F LH thread adapter (83633), (2) 12mm-M x 14mm-F R1234yf adapters (83735)
63736-K	Kit includes: high side R1234yf 12 mm-F x 17 mm quick coupler (67434), low side R1234yf 12 mm-F x 14 mm quick coupler (67534), 1/2" ACME-M x 1/2" ACME-F LH thread adapter (83633), (2) 12mm-M x 14mm-F R1234yf adapters (83735)

MALE x MALE CONNECTORS



82734	14 mm-M x 1/4" FL-M (7/16-20") connector
82735	14 mm-M x M10 x 1.5-M connector
82736	14 mm-M x M12 x 1.75-M connector
82738	14 mm-M x 3/8" FL-M connector
83341	O-Ring for 82733, 82734, 82735 and 82736
80234	O-Ring for 82634, 82634-M, 90364 and 90365
83734	<<NEW>> 12mm-m x 1/4" FL-M R1234yf connector

FEMALE x MALE CONNECTORS



82634	1/4" FL-F (7/16-20") x 1/2" ACME-M connector
82634-M	1/4" FL-F (7/16-20") x 1/2" ACME-M R134a connector
82635	1/2" ACME-F x 1/4" FL-M (7/16-20") R134a adapter coupler
82733	14 mm-F x 1/2" ACME-M connector
83633	<<NEW>> 1/2" ACME-M x 1/2" ACME-F LH connector
83735	<<NEW>> 12mm-M x 14mm-F R1234yf adapter
90364	1/4" (7/16-20")-F x M10 x 1.5-M adapter
90363	5/16" (1/2-20 UNF)-F x 1/4" FL-M connector

93000 SPRING LOCK COUPLING TOOL SET



Four sizes 3/8" (#6), 1/2" (#8), 5/8" (#10) and 3/4" (#12) used on Fords and Chryslers. Durable spring loaded design for long life and reliable fit.

Set includes:

93098	3/8" (#6) red	93100	5/8" (#10) black
93099	1/2" (#8) blue	93101	3/4" (#12) beige



Mastercool®
"World Class Quality"

91207 CHARGING AND DEPRESSOR ASSORTMENT



Replacement gaskets, o-rings and depressors for charging hoses and adapters.

Consists of:

42010	1/4" gasket (3 pcs)
42014	1/4" depressor (3 pcs)
90368	3/16" depressor (3 pcs)
90369	3/16" gasket (3 pcs)
90341	1/8" o-ring (3 pcs)

91334 CHARGING ADAPTER REPAIR KIT



55 piece assortment of replacement gaskets, o-rings and depressors for charging hoses and adapters.

Consists of:

42010	1/4" gasket (10 pcs)
42014	1/4" depressor (10 pcs)
90368	3/16" depressor (10 pcs)
90369	3/16" gasket (10 pcs)
90341	1/8" o-ring (10 pcs)
92107	Quick disconnect gasket (5 pcs)

91334-A R12/R134a CHARGING HOSE REPLACEMENT PARTS ASSORTMENT



Consists of:

42010	1/4" FL gasket (10 pcs)
42014	1/4" FL depressor (5 pcs)
42016	Screw type depressor (5 pcs)
90336	Gasket for 90335 (5 pcs)
82010	Black gasket for R134a Hose (10 pcs)
83341	O-ring for R134a hose (5 pcs)
80034-2	Black o-ring for high side (5 pcs)
80134-2	Black o-ring for low side (5 pcs)

85200 DELUXE A/C SERVICE REPAIR KIT



Replacement gaskets, depressors, o-rings and nylon guides for charging hoses and adapters.

Consists of:

42010	1/4" gasket (10 pcs)
42014	1/4" depressor (10 pcs)
80034	O-ring for 82834 (10 pcs)
80034-1	High side nylon guide (5 pcs)
80134	O-ring for 82934 (10 pcs)
80134-1	Low side nylon guide (5 pcs)
82010	Gasket for R134a hose (10 pcs)
82336	Gasket for 82335 (10 pcs)
83341	O-ring for R134a hose (10 pcs)
90336	Gasket for 90335 shut-off valve (10 pcs)

91335 MASTER A/C CHARGING ADAPTER REPAIR KIT



126 piece assortment of replacement gaskets, o-rings and depressors for charging hoses and adapters. Also includes valve core removal tool and replacement valve cores.

Consists of:

- 42010** 1/4" gasket (20 pcs)
- 42014** 1/4" depressor (20 pcs)
- 90368** 3/16" depressor (20 pcs)
- 90369** 3/16" gasket (20 pcs)
- 90341** 1/8" o-ring (20 pcs)
- 92107** Quick disconnect gasket (10 pcs)
- 0377-001** Refrigeration valve core (10 pcs)
- 90378** GM large bore valve core (5 pcs)

91336 FORD SPRING LOCK REPLACEMENT O-RING AND GARTER SPRING ASSORTMENT



Compatible with R12 and R134a systems.

Consists of:

- 1336-006** #6 O-ring (10 pcs)
- 1336-008** #8 O-ring (10 pcs)
- 1336-010** #10 O-ring (10 pcs)
- 1336-012** #12 O-ring (10 pcs)
- 1336-016** #6 Garter spring (5 pcs)
- 1336-018** #8 Garter spring (5 pcs)
- 1336-110** #10 Garter spring (5 pcs)
- 1336-112** #12 Garter spring (5 pcs)

91337 R12/R134a VALVE CORE REPAIR KIT



Replacement valve cores for valve core removers & installers.

Consists of:

- 0377-001** Access valve core (20 pcs)
- 0378-001** Valve core (10 pcs)
- 0531-001** R134a JRA high/low import valve core (10 pcs)
- 0768-001** R134a domestic high flow valve core M8 (5 pcs)
- 0769-001** R134a domestic high flow valve core M10 (5 pcs)
- 81290** R12/R134a valve core remover/installer (1 pc)

91339 AUTOMOTIVE R12 & R134a O-RING ASSORTMENT (270 PIECE HNBR)



Consists of:

- | | |
|--|---|
| 91339-01 7/32" x 1/16" (5.29 x 1.78 mm) (20 pcs) | 91339-10 11 x 2 mm (15 pcs) |
| 91339-02 1/4" x 1/16" (6.07 x 1.78 mm) (20 pcs) | 91339-11 12 x 2 mm (15 pcs) |
| 91339-03 6.8 x 1.9 mm (20 pcs) | 91339-12 13.9 x 1.8 mm (10 pcs) |
| 91339-04 5/16" x 1/16" (7.65 x 1.78 mm) (20 pcs) | 91339-13 9/16" x 3/32" (13.95 x 2.62 mm) (10 pcs) |
| 91339-05 7.8 x 1.9 mm (20 pcs) | 91339-14 14 x 2 mm (10 pcs) |
| 91339-06 8 x 2 mm (20 pcs) | 91339-15 15 x 2 (10 pcs) |
| 91339-07 8.8 x 1.9 mm (20 pcs) | 91339-16 17 x 2 (10 pcs) |
| 91339-08 7/16" x 1/16" (10.82 x 1.78 mm) (15 pcs) | 91339-17 11/16" x 1/16" (17.17 x 1.78 mm) (10 pcs) |
| 91339-09 7/16" x 3/32" (10.77 x 2.62 mm) (15 pcs) | 91339-18 11/16" x 1/8" (17.04 x 3.53 mm) (10 pcs) |

58490 UNIVERSAL R12/R134a MASTER KIT

»POPULAR«



Allows the user to service valve cores without losing the systems charge. Kit covers all R12 & R134a system valve cores for Standard, JRA, Eaton and GM Large Bore.

PATENT# 6,253,436

Includes:

- Valve assembly
- R134a high side 16mm connector
- R134a low side 13mm connector
- 1/4" FL swivel connector
- Standard valve core remover/installer assembly
- GM large bore valve core remover/installer assembly
- JRA R134a valve core remover/installer assembly
- Eaton R134a low side valve core remover/installer assembly
- Eaton R134a high side valve core remover/installer assembly
- Adapter 1/4"-M x 3/16"-F high side GM/Ford
- Adapter 1/4"-M x 1/8"-F high side Ford



58490-YF UNIVERSAL R1234yf MASTER KIT



Allows the user to service valve cores without losing the systems charge. Kit covers 17 mm and 14 mm high and low side service ports.

Includes:

- Valve assembly
- High side 17 mm connector
- Low side 14 mm connector
- Standard valve core shaft
- GM large bore valve core shaft
- Eaton R134a/R1234yf high side valve core shaft

58531 R134a STANDARD & JRA (M6) VALVE CORE KIT



Allows the user to service valve cores without losing the systems charge. Kit covers the most popular R134a valve cores.

Includes:

- Valve assembly
- R134a high side 16mm connector
- R134a low side 13mm connector
- Standard valve core shaft
- JRA R134a valve core shaft

58560 R134a EATON (M8 & M10) VALVE CORE KIT



Allows the user to service valve cores without losing the systems charge. Kit covers the Eaton style R134a valve cores.

Includes:

- Valve assembly
- R134a high side 16mm connector
- R134a low side 13mm connector
- Eaton R134a low side valve core shaft
- Eaton R134a high side valve core shaft

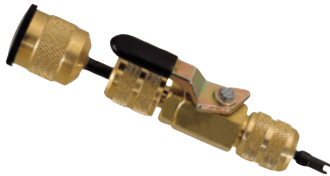
90376 VALVE CORE REMOVER W/VALVE CORES FOR R12



Quickly removes valve cores. Storage area includes six replacement access valve cores.

90377 Replacement standard valve cores for 90376 (6 pcs of 0377-001)

91490 STANDARD VALVE CORE REMOVER/INSTALLER



VALVE CORE REMOVERS/INSTALLERS AUTOMOTIVE/HVAC (1/4" FL)
Sturdy ball valve design controls refrigerant flow with 1/4 turn of the valve lever. Lever position also gives visual indication of whether valve is opened or closed.

81490 R134a VALVE CORE REMOVER AND INSTALLER



- For 13 mm and 16 mm high and low service port standard type valve
- Built-in ball valve retains charge and allows access to A/C system
- Excellent for replacing valve cores without discharging the system and for speeding recovery and recharging large systems

81290 R134a UNIVERSAL LARGE BORE REMOVER



Used on R12/R134a Standard and JRA/EATON Large Bore R134a Valve Cores.

91290 UNIVERSAL VALVE CORE REMOVER



Double ended for easy replacement of Standard and GM R12 large bore valve cores.

85530 3-IN-1 SIDE MOUNT CAN TAP VALVE



This unique design covers 2 7/8" (R134a), 2 1/2" and 2" (OIL) charge cans. Includes 1/2" ACME-M and 1/4" FL-M ports. Internal safety check valve prevents system back flow.

85510 R134a CAN TAP VALVE - SCREW-ON



- 1/2" ACME-M
- Screw-on design for R134a ACME male can taps
- Exclusive "full grip" valve knob
- Gasket assures leak proof operation
- Built-in safety check

85525 R134a RECHARGE KIT



Charge A/C systems using R134a cans with 1/2" ACME fitting

85512 R134a 1/2" ACME-M SELF-SEALING DESIGN CAN TAP VALVE



- 1/2" ACME-M thread for use with R134a self-sealing/reusable designed cans
- All metal construction provides durability
- Gasket assures leak proof operation

85535 R134a RECHARGE KIT



Charge A/C systems using R134a self-sealing designed cans

Consists of:

- | | |
|----------------|--|
| 85512 | R134a can tap valve - self-sealing design |
| 67534-R | R134a low side economy coupler 1/4" FL-M x 13 mm |
| 98122 | R134a 12" yellow hose |

R1234yf
Compatible**85510-YF R1234yf 1/2" ACME-LH THREAD PIERCING DESIGN CAN TAP VALVE**

- 1/2" ACME-LH thread for use with R1234yf pierce designed cans
- Exclusive "full grip" valve knob
- All metal construction provides durability
- Gasket assures leak proof operation
- Built-in safety check
- Meets SAE J2844

85525-YF R1234yf RECHARGE KIT - PIERCING DESIGNR1234yf
Compatible

Charge A/C systems using R1234yf pierce designed cans

- Meets SAE J2844 & J2888

Consists of:

85510-YF	R1234yf can tap valve - piercing design
67534	R1234yf low side quick coupler 12 mm-F x 14 mm
83181	R1234yf 18" blue hose

85512-YF R1234yf 1/2" ACME-LH THREAD SELF-SEALING DESIGN CAN TAP VALVER1234yf
Compatible

- 1/2" ACME-LH thread for use with R1234yf self-sealing/reusable designed cans
- All metal construction provides durability
- Gasket assures leak proof operation
- Meets SAE J2844

85535-YF R1234yf RECHARGE KIT - SELF-SEALING DESIGNR1234yf
Compatible

Charge A/C systems using R1234yf self-sealing/reusable designed cans

- Meets SAE J2844 & J2888

Consists of:


85512-YF	R1234yf can tap valve - self-sealing design
67534	R1234yf low side quick coupler 12 mm-F x 14 mm
83181	R1234yf 18" blue hose




Mastercool®
"World Class Quality"

CHARGING ADAPTERS, REPLACEMENT GASKETS, DEPRESSORS










90° ADAPTERS

		REPLACEMENT	GASKET/O-RING	DEPRESSOR	
	A	90333-R	Shut-off valve 1/4" MFL x 1/4" FFL	90336	-
	B	90314*	1/4" MFL x 1/4" FFL	42010	42014
	B	90340*	1/4" MFL x 1/8" FFL (high side) Ford 1977-1980	90341	90368
	B	90354*	1/4" MFL x 3/16" FFL (high side) GM 1976 & later	90369	90368

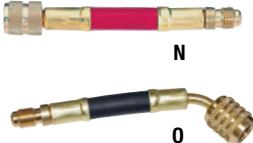
45° ADAPTERS

	C	90924	1/4" MFL x 1/4" FFL	42010	42014
	C	90927*	1/4" MFL x 3/16" FFL (high-side)	90369	90368

STRAIGHT ADAPTERS

	D	82272*	R134a 1/2" ACME-F x 13 mm R134a (low side)	85511	-
	E	82335	R134a shut-off valve 1/2" ACME-M x 1/2" ACME-F	90336	-
	E	90335-R	Shut-off valve 1/4" MFL x 1/4" FFL	90336	-
	E	90337	Shut-off valve 1/4" MFL x 3/16" FFL	90331	-
	F	82634*	1/4" FFL x 1/2" ACME-M	90331	-
	F	82634-M	1/4" FFL x 1/2" ACME-M without valve core	90331	-
	G	82734	14 mm-M x 1/4" MFL	83341	-
	H	90358*	1/4" MFL x 3/16" FFL (high side)	42010	42014
	I	90274	1/4" MFL x 1/4" FFL swivel	42010	42014
	I	90332**	1/4" MFL x 1/4" FFL anti-blowback fitting	42010	42014
	I	90357	1/4" MFL x 3/16" FFL (high side) swivel	90369	90368
	I	91084*	1/4" MFL x 3/16" FFL (high side) swivel adapter GM 1976 & Later, Ford 1981 & later	90369	90368
	J	90338*	GM 1991 & later service adapter	90339	-
	K	90637	3/4" NPSF x 1/4" MFL refrigeration tank adapter	90638	-
	L	90633	1/4" MFL x 1/4" MFL union	-	-
	L	82633	1/2" ACME-M x 1/2" ACME-M union	-	-
	M	83634-M	1/4 FL-F x 1/2 ACME LH-M fitting for R1234yf systems without check valve	90331	-
	M				

FLEX ADAPTERS

	N	90355*	1/4" MFL x 3/16" FFL (high side) GM 1976 & later, Ford 1981 & later	90369	90368
	N	90356*	1/4" MFL x 1/4" FFL	42010	42014
	N	90373*	1/4" MFL x 1/8" FFL (high side) Ford 1977-1980	90341	90368
	O	90410	Convert 1/4 SAE hose into 5/16 SAE, swivel connection	82010	-

ACCESS SERVICE TOOLS

	P	90296*	1/4" MFL x 1/8" NPT	-	-
	P	80296*	1/2" ACME-M x 1/8" NPT	-	-

* Includes access valve core (0377-001) – (90-110 PSI opening) / ** Includes check valve core (0332-002) – (8-12 PSI opening)

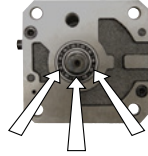
VACUUM PUMPS



2 STAGE ELITE BALL BEARING DESIGN VACUUM PUMPS



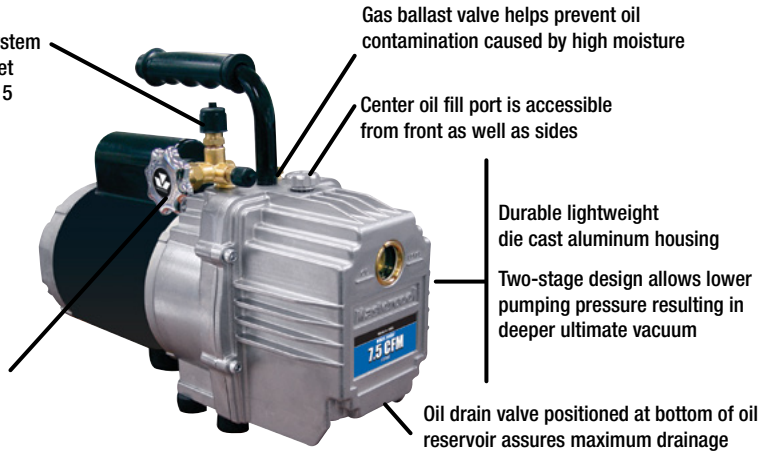
A good quality vacuum pump is an integral tool for complete A/C service. Mastercool vacuum pumps are durable and time tested. They stand up to the most grueling conditions and will provide years of reliable service. Mastercool offers a complete selection of pumps. Regardless of your service requirements, Mastercool has a model for your application.



Ball Bearing Cartridge Design
reduces running temperatures by 30% and extends the life of the pump.

Manifold valve isolates pump from the system when testing for leaks. Includes three inlet ports – 1/4", 3/8" SAE and 1/2" ACME on 5 and 7.5 CFM models

Internal check valve stops oil blowout in case of accidental power loss



Gas ballast valve helps prevent oil contamination caused by high moisture

Center oil fill port is accessible from front as well as sides

Durable lightweight die cast aluminum housing

Two-stage design allows lower pumping pressure resulting in deeper ultimate vacuum

Oil drain valve positioned at bottom of oil reservoir assures maximum drainage

5 CFM VACUUM PUMP

>>POPULAR<<



MODEL	90065
NO. OF STAGES	2
FREE AIR DISPLACEMENT	5 CFM
ULTIMATE VACUUM	25 Microns
MOTOR	1/3 HP
PUMP SPEED	1425 RPM 1725 RPM
ELECTRICAL SPECS	110 V / 60 HZ
WEIGHT	29 lbs
DIMENSIONS	14.5 x 6 x 11 x 9.5"

7 CFM VACUUM PUMP



MODEL	90067
NO. OF STAGES	2
FREE AIR DISPLACEMENT	7.5 CFM
ULTIMATE VACUUM	25 Microns
MOTOR	1/2 HP
PUMP SPEED	1425 RPM 1725 RPM
ELECTRICAL SPECS	110 V / 60 HZ
WEIGHT	35.5 lbs
DIMENSIONS IN CM	16 x 6 x 11 x 9.5"

2 STAGE DUAL VOLTAGE VACUUM PUMPS

- U.S. design
- Stronger motor
- Field serviceable
- Cooling fins to keep temperature cooler during extended motor operation
- Easily removable vapor discharge/oil fill port. Contains internal check valve to prevent escape of liquid oil
- Manifold valve isolates pump from the system when testing for leaks. Includes 3 inlet ports, 1/4", 3/8" SAE and 1/2" ACME

3 CFM DUAL VOLTAGE VACUUM PUMP



MODEL	90063-2V-110-B
NO. OF STAGES	2
FREE AIR DISPLACEMENT	3 CFM
ULTIMATE VACUUM	15 Microns
MOTOR	1/3 HP
PUMP SPEED	1720 RPM
ELECTRICAL SPECS	110 V/220 V, 50/60 Hz
POWER CORD	110 V Cable (US Standard)
WEIGHT	15.43 lbs
DIMENSIONS	11 x 6 x 10

6 CFM DUAL VOLTAGE VACUUM PUMP

»POPULAR«



MODEL	90066-2V-110-B
NO. OF STAGES	2
FREE AIR DISPLACEMENT	6 CFM
ULTIMATE VACUUM	15 Microns
MOTOR	1/2 HP
PUMP SPEED	1720 RPM
ELECTRICAL SPECS	110 V/220 V, 50/60 Hz
POWER CORD	110 V Cable (US Standard)
WEIGHT	24.25 lbs
DIMENSIONS	15 x 6.5 x 11

8 CFM DUAL VOLTAGE VACUUM PUMP



MODEL	90068-2V-110-B
NO. OF STAGES	2
FREE AIR DISPLACEMENT	8 CFM
ULTIMATE VACUUM	15 Microns
MOTOR	3/4 HP
PUMP SPEED	1720 RPM
ELECTRICAL SPECS	110 V/220 V, 50/60 Hz
POWER CORD	110 V Cable (US Standard)
WEIGHT	34 lbs
DIMENSIONS	15 x 7 x 11

12 CFM DUAL VOLTAGE VACUUM PUMP



MODEL	90612-2V-110-B
NO. OF STAGES	2
FREE AIR DISPLACEMENT	12 CFM
ULTIMATE VACUUM	15 Microns
MOTOR	1 HP
PUMP SPEED	1720 RPM
ELECTRICAL SPECS	110 V/220 V, 50/60 Hz
POWER CORD	110 V Cable (US Standard)
WEIGHT	35 lbs
DIMENSIONS	15 x 7 x 11



Mastercool[®]
"World Class Quality"

SINGLE STAGE VACUUM PUMPS

1.8 CFM SINGLE STAGE VACUUM PUMP



MODEL	90059-B
NO. OF STAGES	1
FREE AIR DISPLACEMENT	1.8 CFM
ULTIMATE VACUUM	80 Microns
MOTOR	1/4 HP
PUMP SPEED	1720 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ
WEIGHT	13.6 lbs
DIMENSIONS	12 x 6 x 10"


3 CFM SINGLE STAGE VACUUM PUMP



MODEL	90062-B
NO. OF STAGES	1
FREE AIR DISPLACEMENT	3 CFM
ULTIMATE VACUUM	80 Microns
MOTOR	1/4 HP
PUMP SPEED	1720 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ
WEIGHT	14 lbs
DIMENSIONS	12 x 6 x 10.5"

6 CFM SINGLE STAGE VACUUM PUMP



MODEL	90066-B	90066-B-SF <i>Spark Free</i>
		
NO. OF STAGES	1	1
FREE AIR DISPLACEMENT	6 CFM	6 CFM
ULTIMATE VACUUM	80 Microns	80 Microns
MOTOR	1/3 HP	1/3 HP
PUMP SPEED	1720 RPM	1720 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ	110/120 V, 60 HZ
WEIGHT	20.5 lbs	20.5 lbs
DIMENSIONS	15 x 6.5 x 11"	15 x 6.5 x 11"

91200 AIR OPERATED LIGHT DUTY VACUUM PUMP



Requires 4.5 CFM/90 PSI shop air. No moving parts, no oil required, 1.3 CFM air displacement venturi type pump will pull up to 29 inches of vacuum (Hg.) at sea level. Includes 1/4" flare (R12) connection and 1/2" ACME (R134a) connection.

* PLEASE NOTE: The micron readings on all vacuum pumps represent optimal laboratory conditions. Field conditions may vary from these readings.



18 VOLT CORDLESS, 1.5 CFM, 2 STAGE VACUUM PUMP



90058-A-AUT



90058-CH



90058-BAT-5A



90058-SL-MC

- Sure-grip handle, ergonomically designed for superior comfort and portability
- Reinforced base provides extreme shock resistance
- Air cooled motor design allows for operation under high temperature conditions
- Pump runs with extremely high ultimate vacuum and low noise
- Accessible oil drain port & sight glass make both oil maintenance and accuracy easy
- Built-in device eliminates oil mist and an oil-gas separator at the air exhaust outlet prevents oil contamination in the air exhaust

SPECIFICATIONS:

- No. of stages: 2
- Free air displacement: 1.5 CFM
- Motor: DC 18V, 90 W
- Ultimate vacuum: 15 microns/3 Pa
- Oil capacity: 3.5 oz.
- Dimensions without battery: 9.9 x 3.7 x 6.1"
- Net weight: 7.9 lb

Rechargeable Battery

- Li-ion 18 V 5.0 Ah

Battery Charger

- Input 100-240 V, 50-60 Hz, 73 W
- Output: 18V/14.4V 3A

* Mastercool does not recommend this pump be used with any other battery

90058-AUT-5A	Complete kit includes: 18 V cordless vacuum pump, 1/4" SAE port and 1/2" ACME adapter, Mastercool designed rechargeable battery, Mastercool adapter sleeve, standard 110V battery charger and 3.5 oz of oil
90058-A-AUT	18 V cordless vacuum pump, 1/4" SAE port, 1/2" ACME adapter and 3.5 oz of oil (without battery and adapter sleeve)
90058-BAT-KT-5A	Mastercool rechargeable battery and adapter sleeve
90058-BAT-5A	Mastercool rechargeable battery
90058-CH	Mastercool battery charger, 110V standard US cable
90058-SL-MC	Adapter sleeve to allow for use with Mastercool batteries

82031 VACUUM PUMP SWIVEL ADAPTER



"T" style adapter screws onto existing 1/4" flare fitting and converts to 1/4" -FL and 1/2" ACME

SERVICE INFORMATION

	OIL CAPACITY	REPLACEMENT CARTRIDGE	SEAL SERVICE KIT
90065	18 oz	90165-R	90062-11-SEAL
90067	24 oz	90167-R	90062-11-SEAL
90063-2V-110-B	8.5 oz	-	-
90066-2V-110-B	15 oz	90166-B	-
90068-2V-110-B	19 oz	90168-B	-
90612-2V-110-B	18 oz	90112-B	-
90059-B, 90062-B	12 oz	-	-
90066-B, 90066-B-SF	18 oz	-	-

VACUUM PUMP OIL



90010-6	(Six) - 10 oz bottles (90058, 90063-2V-B)
90016-6	(Six) - 16 oz bottles (90059-B, 90062-B)
90018-6	(Six) - 18 oz bottles (90065, 90066-2V-B, 90612-2V-B, 90066-B, 90066-B-SF)
90024-6	(Six) - 24 oz bottles (90067, 90068-2V-B)
90032-6	(Six) - 32 oz bottles
90128-4	(Four) - 1 gallon bottles



Mastercool[®]
"World Class Quality"

98061 DIGITAL VACUUM GAUGE in blow molded case
98061-C DIGITAL VACUUM GAUGE in a clamshell



SPECIFICATIONS:

- Response Time: 250 mSec.
- Sensor Cable: Spiral cable extended to 6.5 feet (2.6 meter)
- Sensor: Thermocouple sensor
- Connection Fitting: 1/4" flare female adapter
- Operating Temperature: 32 to 120°F (0 to 45°C)
- Power: 9V DC battery (AC/DC Adapter optional)
- Battery Life: 36 hours
- Low Battery Indicator: Special ICON on LCD
- Vacuum Units: Micron, Torr, mTorr, mmHg, mBar, Pa
- Range: 20,000 to 1 micron
- Accuracy Range*: ATM-1000 Microns: ±10% of reading
 1000 - 100 Microns: ±7% of reading,
 100 - 1 Micron: ±5% of reading

* Unit accuracy refers to sensor specifications and is based on optimal laboratory conditions. Field operations may greatly deviate from these levels.

Optional Accessories

98061-SENSOR	Replacement Sensor
99334-110	110 V AC/DC Adapter
99333	1/4 FL-M x 1/4 FL-M x 1/4 FL-F Tee

BLOWER FANS



- 120 Volts, 60 Hz
- Rated power: 2.0 Amp
- For indoor or outdoor use
- Variable speed switch controls motor speed: 950-1650 RPM
- Built-in overload protection
- (2 pcs) 11 amp built-in grounded receptacles
- Housing material: impact resistant ABS
- 8.5 ft cord length, SJTW 14 AWG
- 4-position adjustment feet

21200	1200 CFM BLOWER FAN • Moves air up to: 1200 CFM • Unit weight: 15.9 lbs
20300	300 CFM BLOWER FAN • Moves air up to: 300 CFM • Unit weight: 11.5 lbs

20300-HTR HEATER ATTACHMENT FOR 300 CFM BLOWER FAN



- 1320 Watts, 120 Volts
- 11 Amps, 5000 BTU
- Converts blower into a heater
- Clips securely onto the front of the blower and plugs into one of the outlets on the side of the blower
- 16 AWG SJT cord, grounded plug

CHARGING AND RECOVERY EQUIPMENT



ARCTIC COMMANDER



Mastercool introduces its new ARCTIC COMMANDER line of R/R/R machines. Equipped with the latest technology, all models come standard with an 8" command center. The graphic user interface (GUI) will enable navigation through all functions and features with the greatest of ease. There is no longer a need to read any external instructions or paper manuals, simply sit back, watch and learn how to use your machines. All machines are also equipped with Wi-Fi capabilities; allowing for real-time, interactive communication and troubleshooting. ***It's about time somebody introduced R/R/R machines for the 21st century!***

SPECIFICATIONS:

- Design Certified:
R1234yf - SAE J2843
R134a - SAE J2788
- Voltage: 110 V / 60 Hz or 220 V / 50/60 Hz
- Scale Resolution: .02 lb (10 g)
- Working Temperature Range: 50/120°F (10/49°C)
- Compressor: Hermetically sealed, 12cc, high pressure
- Recovery Speed: 95% at 70 to 75°F (21 to 24°C) <30 minutes
- Recovery Cylinder: 30 lb (12.5 liters), refillable
- Charge Accuracy: ±0.5 oz. at 70 to 75°F (±15 g at 21 to 24°C)
- Filter System:
R1234yf - 1 filter for cleaning and water removal
R134a - 2 filters for cleaning and water removal
- Hoses: 96" (250 cm)
- Pressure Gauges: Class 1
- Cylinder Temperature Sensor: Integrated
- Cylinder Heater: Standard Equipment
- Dimensions (mm): 1150 (h) x 600 (w) x 770 (d)



WI-FI

Wi-Fi capability allows for real time, interactive communication and troubleshooting



COMPACT DESIGN

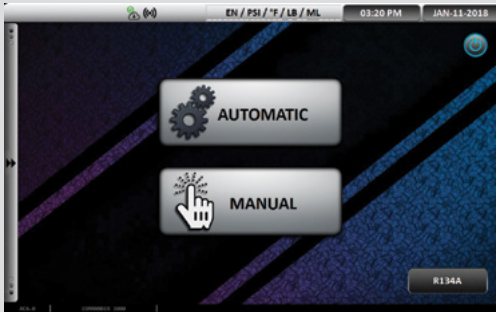
The machine's compact design makes it easy to maneuver and requires minimal shop space



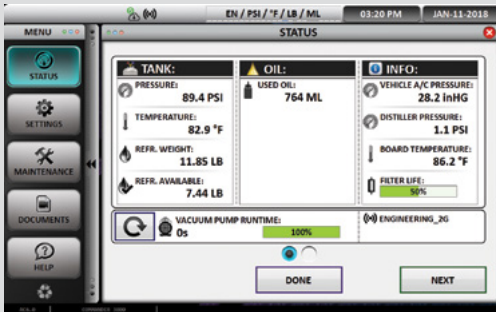
COOLING FAN

Dedicated PC board cooling fan keeps the PC board consistently cool

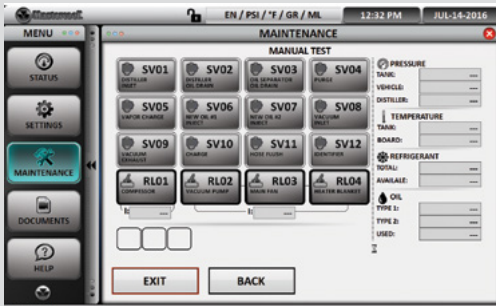
8" COLOR TABLET WITH TOUCH SCREEN FEATURES:



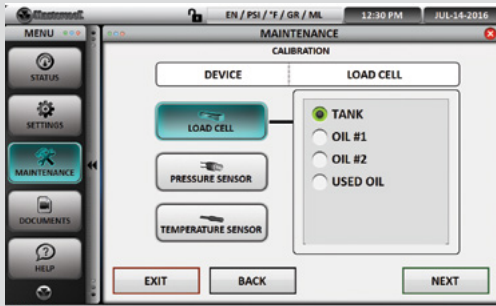
Home Screen
allows for quick touch selection of options



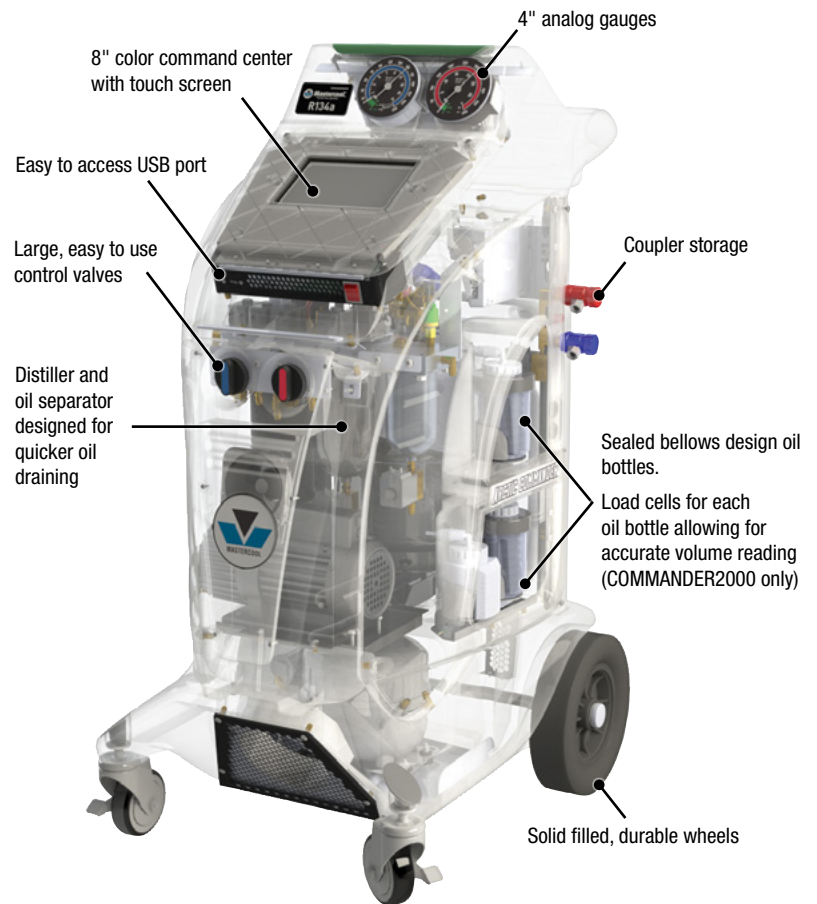
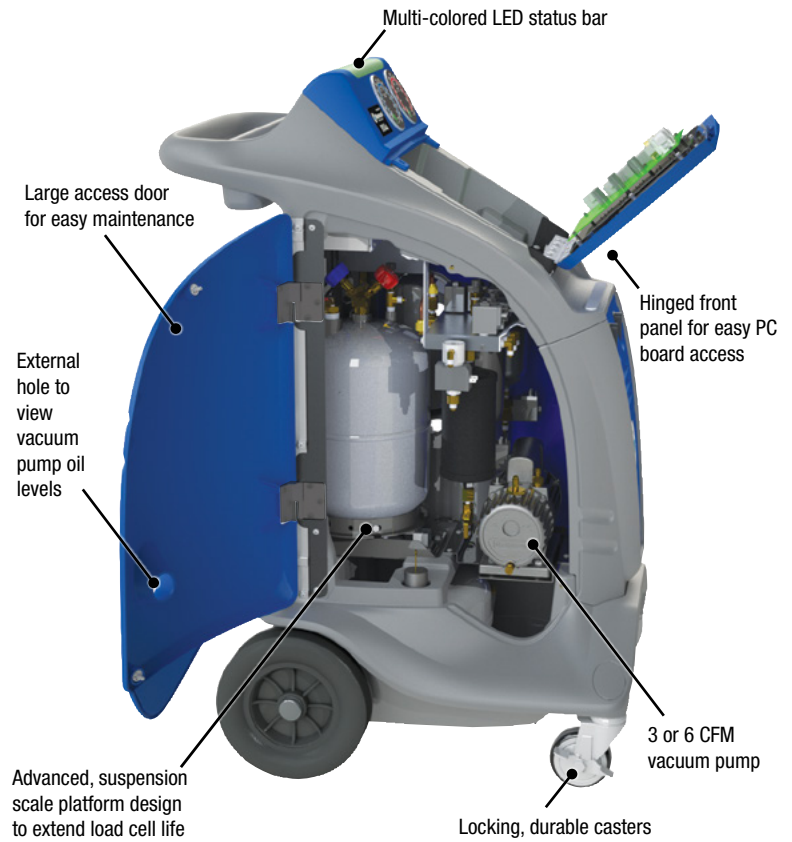
Status Screen
for quick reference of resources



Maintenance Screen
offered only to authorized service technicians allowing for quick and easy diagnosis



Maintenance Screen
offered only to authorized service technicians allowing for quick and easy diagnosis



RECOVER/RECYCLE/RECHARGE



COMMANDER4000



COMMANDER3000



COMMANDER2000



COMMANDER1000

	COMMANDER4000 (110V) R1234yf & HYBRID	COMMANDER3000 (110V) R134a & HYBRID	COMMANDER2000 (110V) R134a FULLY AUTOMATIC	COMMANDER1000 (110V) R134a SEMI-AUTOMATIC
8" Color Command Center with Touch Screen	X	X	X	X
Automatic and Manual Procedures	X	X	X	Manual procedures only
Refrigerant Database	X	X	X	Optional
Automatic Vacuum Leak Test: Programmable	X	X	X	X
Auto Oil Discharge	X	X	X	X
Auto and Manual Air Purge	X	X	X	X
Auto Filter and Full Tank Alarm	X	X	X	X
Low Refrigerant Alarm	X	X	X	X
Auto Oil Injection	N/A	N/A	X	N/A
Thermal Printer	X	X	Optional	Optional
Hose Flushing	X	X	N/A	N/A
Vehicle A/C System Flushing	Optional	Optional	N/A	N/A
Tank Heater	X	X	X	X
Vacuum Pump	6 CFM	6 CFM	6 CFM	3 CFM
Refrigerant Identifier	X	N/A	N/A	N/A
On-board Instruction Manual	X	X	X	X
Multiple Languages	X	X	X	X
On-board Unit Conversion Calculator	X	X	X	X
New Cabinet Design for Increased Air Flow	X	X	X	X
Large Analog Gauges	X	X	X	X
Hard Wired Power Cord	X	X	X	X
Hose Coupler Storage	X	X	X	X
Solid Durable Wheels with Locking Casters	X	X	X	X
Multi-colored LED Status Bar	X	X	X	N/A
Self-Diagnostic Check	X	X	X	X
Wi-Fi Capable	X	X	X	X
Dust Cover	X	X	X	X
Dimensions (mm): 1150 (h) x 600 (w) x 770 (d)	X	X	X	X

For a R1234yf machine without a refrigerant identifier, please use part number COMMANDER4000-X (for 110V model)

NOTE: Per SAE J2843, the COMMANDER4000-X will work only in conjunction with an external identifier

COMMANDER CONSUMABLES

Mastercool uses only the highest quality oils and dies with their products. In order to keep your warranty valid, please use Mastercool oils and dies at all times. For the Commander line of machines, Mastercool recommends the following consumables:

COMPRESSOR OILS



92709-65-8 92709-65-32

Maximum protection with excellent thermal & oxidative stability. Moisture tolerant. OEM approved.

92709-65-8	PAG 65 oil (8 oz (236 ml) bottle)
92709-65-32	PAG 65 oil (32 oz (1 L) bottle)
92709-100-8	PAG 100 oil (8 oz (236 ml) bottle)
92709-100-32	PAG 100 oil (32 oz (1 L) bottle)
92709-150-8	PAG 150 oil (8 oz (236 ml) bottle)
92709-150-32	PAG 150 oil (32 oz (1 L) bottle)

ZEROL[®] HD46 R1234yf MOBILE AIR CONDITIONING COMPRESSOR LUBRICANT



92709-YF-8 92709-YF-32

- Optimized miscibility in HFO refrigerant R1234yf
 - Superior lubricity
 - Exceptional viscosity index (VI)
 - Good high temperature and chemical stability
 - Low hygroscopicity (tendency to absorb moisture)
 - Formulating expertise
 - Excellent electrical resistivity properties for electrically driven systems
- * For more information please see page 59

92709-YF-8	8 fl. oz (236 ml) bottle
92709-YF-32	32 fl. oz (946 ml) bottle

ULTRAVIOLET A/C DYES



92708 92732 53625

92708	Standard universal dye 8 oz (240 ml) bottle - 32 applications
92732	Standard universal dye 32 oz (1 L) bottle - 128 applications
53625	Concentrated universal dye 2 oz (60 ml) bottle - 25 applications

COMMANDER REPLACEMENT FILTERS



COMD2-FLTRPK

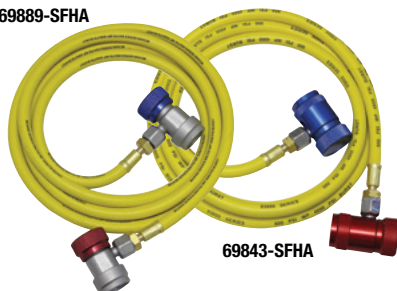
Change the filter-drier when notified by the machine to assure adequate moisture and contaminant removal as well as prevent lockout.

COMD2-FLTRPK	2 filter pack for COMMANDER1000, COMMANDER2000, COMMANDER3000. Has a 175 lb filtering capacity.
COMD1-FLTRPK	1 filter for COMMANDER4000, COMMANDER4000-E, COMMANDER3000-E, COMMANDER2000-E, COMMANDER1000-E. Has a 350 lb filtering capacity.

A/C SYSTEM FLUSH HOSE ASSEMBLY



69889-SFHA



69843-SFHA

69889-SFHA	R134a A/C system flush hose assembly includes high and low side couplers (82834, 82934) and 8 foot yellow hose
69843-SFHA	R1234yf A/C system flush hose assembly includes high and low side couplers (83834, 83934) and 8 foot yellow hose



Mastercool[®]
"World Class Quality"

THE TWIN TURBO SERIES IS THE MOST COMPLETE SOLUTION TO YOUR RECOVERY NEEDS!

TWIN TURBO
REFRIGERANT RECOVERY MACHINE

R32
Compatible



69300



69370

Mastercool's newest addition to the recovery machine lineup takes the reliability of the 69000 series machines and enhances those features to allow for maximum recovery capacity while at the same time decreasing size and weight. The design of the new double piston compressor and cooling by the largest fan and condenser in the market makes the 69300 series the most complete solution to your recovery needs!

FEATURES & BENEFITS:

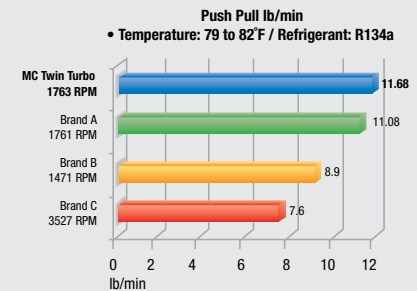
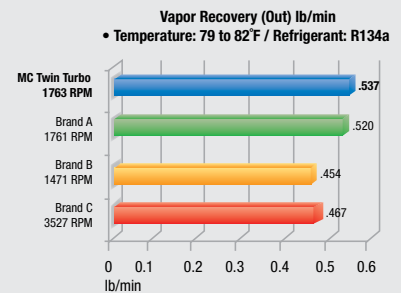
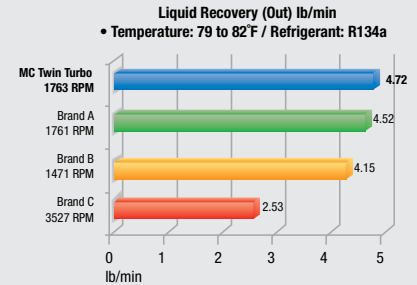
- Revolutionary double piston oil-less compressor
- Safety high pressure switch
- Simple internal structure for field service
- Largest volume recovery rate in market
- For use with all refrigerants including R410A
- Injection molded high density polyethylene case for maximum durability
- Front cover has bumper guards built in to reduce damage to the control knobs

SPECIFICATIONS:

- 1/2 hp oil less compressor
- Recovery rate:

R134a	<ul style="list-style-type: none"> • Direct vapor up to .537 lb/min • Direct liquid up to 4.72 lb/min • Push pull up to 11.68 lb/min
R22	<ul style="list-style-type: none"> • Direct vapor up to .63 lb/min • Direct liquid up to 7.56 lb/min • Push pull up to 18.3 lb/min
R410A	<ul style="list-style-type: none"> • Direct vapor up to .70 lb/min • Direct liquid up to 7.7 lb/min • Push pull up to 20.2 lb/min

- Operating temperature: 32 to 122°F
- Weight: 28.3 lbs
- Dimensions: 18" (l) x 10" (w) x 14" (h)
- Case material is HDPE (high density polyethylene)
- Compatible refrigerants: All CFC, HCFC, and HFC's



69300 115 V - 60 Hz

69370

115 V - 60 Hz
This unit offers all the same functions and features as the 69300. In addition it has a 6' 3 pole female float switch cable



3 pole female float switch cable

TWIN TURBO REFRIGERANT RECOVERY MACHINE



69360-YF



69365

These units offer all the same functions and features as the 69300, in addition, they have an oil separation module, filter dryer and sight glass.



69360 115 V - 60 Hz includes 30 lb DOT tank, sight glass, R134a low side coupler, oil drain bottle, a yellow and blue hose and a 1/4" FFL X 1/2" ACME-M adapter

Twin Turbo Complete Recovery Machine for R1234yf vehicles

COMPATIBLE WITH COMBUSTIBLE GASES

69360-YF includes a 30 lb DOT tank, sight-glass, R1234yf low side coupler, oil drain bottle and R1234yf blue and yellow hose

69365 115 V - 60 Hz Heavy Duty Recovery Machine for Buses and Fleet Applications includes 50 lb DOT tank, sight glass, R134a low side coupler, oil drain bottle, a yellow and blue hose and a 1/4" FFL X 1/2" ACME-M adapter

69500-DR Replacement filter dryer



69390



COMPATIBLE WITH COMBUSTIBLE GASES

FOR CONTAMINATED MOBILE A/C SYSTEMS DESIGNED FOR R1234yf

This unit offers all the same functions and features as the 69300.

In addition:

- Meets all requirements of SAE J2851, contaminated recovery only device
- Comes equipped with overfill protection switch cutting off at 80% tank capacity (Recovery tanks must have floats using 3 pin Brad Harris plug)
- 60" R1234yf blue hose and low side (1/4 FL-M x 13 mm) coupler
- 60" yellow transfer hose

69390 115 V - 60 Hz

69391 115 V - 60 Hz with 30 lb DOT tank



Mastercool[®]
"World Class Quality"

69000 REFRIGERANT RECOVERY SYSTEM (115 V - 60 Hz)

»POPULAR«



These recovery systems are compact, lightweight and work with all refrigerants. They're ideal for commercial, residential or industrial appliance applications. Our recovery systems offer a state-of-the-art 1/2 HP oil-less compressor with a built-in high volume cooling fan. This innovative design delivers maximum cooling efficiency which keeps the compressor working at high capacities in even the hottest climates. The compressor is also protected by an automatic low pressure cut-off switch that shuts off the unit once the recovery is complete. This AUTO SHUT-OFF feature eliminates the risk of compressor failure and reduces the user's need to monitor the entire recovery system. All of our recovery systems offer our color-coded gauges with pressure readings in PSI, BAR and MPa. Our stainless steel ball valve designed manifold, controls the flow smoothly and quickly with only a 1/4 turn. With all of this protected by a reinforced hard plastic case, Mastercool's recovery systems will meet all your refrigerant recovery needs.

FEATURES:

- High performance oil-less compressor
- High volume cooling fan design
- Automatic low pressure cut-off switch
- Liquid compatible head-valve system
- Safety high pressure cut-off switch
- Fully reinforced hard plastic casing

SPECIFICATIONS:

- 1/2 HP oil-less compressor
- Recovery rate:
Direct vapor up to .44 lb/min
Direct liquid up to 2.6 lb/min
Push-pull up to 11.9 lb
- Operating temperature range: 32 to 122°F
- Weight: 38 lbs / Dimensions: 17" (l) x 10" (w) x 12" (h)
- Refrigerants: CFC's, HCFC's, HFC's

69100 COMPLETE A/C RECOVERY SYSTEM (115 V - 60 Hz)

»POPULAR«



- Compact, lightweight and works with all refrigerants
- State of the art 1/2 hp oil-less compressor with built-in high volume cooling fan. Delivers maximum cooling efficiency which keeps compressor working at high capacities in even the warmest climates. Compressor is protected by an automatic low pressure cut-off switch that shuts off unit once the recovery is complete. This feature eliminates the risk of compressor failure and reduces user's need to monitor entire recovery process
- Includes an oil separator and filter dryer to cleanse the refrigerant during the recovery process
- Color-coded gauges with pressure readings in PSI, BAR and MPA
- Stainless steel ball valve designed manifold controls the refrigerant flow smoothly and quickly with only a 1/4 turn
- Internal components have been arranged and isolated to ensure a smooth and quiet performance
- Protected by a reinforced hard plastic case

FEATURES & BENEFITS:

- High performance oil-less compressor
- High volume cooling fan design
- Automatic low pressure cut-off switch
- Liquid compatible head-valve system
- Safety high pressure cut-off switch
- Fully reinforced hard plastic casing

SPECIFICATIONS:

- 1/2 HP oil-less compressor
- Recovery rate:
Direct vapor up to .44 lb/min
Direct liquid up to 2.62 lb/min
Push pull up to 12 lb/min
- Operating temperature range: 32 to 122°F
- Weight: 38 lbs / Dimensions: 17" L x 10" W x 12" H
- Refrigerants: all

69110 AUTOMOTIVE A/C RECOVERY SYSTEM**Design Certified to Meet SAE J2810**

- Includes recovery unit, 30 lb DOT tank, 60" yellow service hose, 72" blue and red conversion hoses, UL approved high and low side R134a manual couplers and oil purge bottle
- Designed to meet SAE J2810 and works with all refrigerants.
- Recovers and removes oil from refrigerant.
- All internal components have been arranged and isolated to ensure smooth and quiet performance.
- State of the art 1/2 hp oil-less compressor with built-in high volume cooling fan.
- Delivers maximum cooling efficiency, keeping compressor working at high capacities even in warmest climates.
- Stainless steel ball valve design manifold controls refrigerant flow smoothly and quickly with only 1/4 turn.
- Gauges provide pressure readings in PSI, BAR and MPA.

SPECIFICATIONS:

- Refrigerant R134a
- 115 Volts AC
- High Side Design Pressure 500 psig
- Low Side Design Pressure 174 psig
- 1 PH, 60 HZ., 8.6 Amps, 1.25 S/F
- Service Factor 10.75 AMP

69400-CON REFRIGERANT RECOVERY MACHINE FOR CONTAMINATED R134a AND R1234yf**COMPATIBLE WITH COMBUSTIBLE GASES**

Mastercool's "Mini Twin Turbo" recovery machine quickly and easily removes contaminated refrigerant from R134a and R1234yf systems. This machine has been constructed with the safest spark free component allowing for use with all combustible gases.

This refrigerant recovery machine for contaminated R134a and R1234yf contains: "Mini Twin Turbo" recovery machine (69400), 30 lb DOT approved tank (62010-CON), 72" yellow hose (83722-CON), 72" blue hose (83721-CON), low side R1234yf 12 mm-F x 14 mm quick coupler (67534), low side R134a 14 mm-F x 13 mm economy coupler (66334), R1234yf adapter 12mm-m x 14mm-f (83735)

SPECIFICATIONS:

- 115 V – 60 Hz
- 1/2 HP motor
- Operating temperature: 32 to 122°F (0 to 50°C)
- Compatible with all CFC, HCFC, HFC's, and combustible gases
- 30 lb DOT approved tank
- Weight (69400): 24 lbs (11 kg)
- Dimensions (69400): 11.8" (l) x 7.9" (w) x 10.6" (h) (300 mm (l) x 200 mm (w) x 270 mm (h))

69500 RECOVERYMATE

Speed up the recovery process! Remove unwanted moisture and separate oil from recovered refrigerant. (Use with any recovery machine.)

SPECIFICATIONS:

- Lightweight and easy to carry
- 4-way ball valve manifold controls the flow smoothly and quickly with only 1/4 turn
- Large capacity oil separator
- High performance dryer eliminates moisture from recovered refrigerant
- Extra large sight glass monitors refrigerant flow and changes color when a dryer change is necessary
- Rugged carrying case can stand on its own or be mounted on a wall or bench
- Length: 15" / Width: 4" / Height: 17"
- Weight: 12.25 lbs



Mastercool®
"World Class Quality"

DOT-APPROVED RECOVERY CYLINDERS

Features:

- Powder coated cylinder for high gloss, durable finish
- Pre-charged cylinder provides a clean, dry interior
- 3/4" NPT opening accepts 80% fill float switch shut-off device
- Reusable and conforms to DOT-4BA400 specs and ARI guidelines
- Collar design for ease of handling
- Storage and transport of recovered refrigerant gases
- Y-valve for liquid/vapor
- AUS Approved and TC Canadian Approved

30 LB. DOT-APPROVED RECOVERY CYLINDERS



62010

67010

67011

- Size (w x h): 9.125" x 17.52"
- Standard spec.: DOT - 4BA400
- Service pressure: 400 PSI / 2.7 MPa
- Tare weight: 17.99 LB
- Body material: HP295
- Relief valve pressure: 600 PSI / 4.1 MPa
- Nominal water capacity: >26.2 LB / 11.9 L
- Tank test pressure: 800 PSI / 5.5 MPa
- Air tightness test pressure: 400 PSI / 2.7 MPa

Model	62010 without float switch	62011 with float switch	62012 with float switch & NCG Port	64010 without float switch	67010 with float switch	67011 with float switch
Connection	1/4" FL-M (7/16-20)			1/2" ACME		
Color	yellow/gray			blue		yellow/blue

50 LB. DOT-APPROVED RECOVERY CYLINDERS



63010

66010

63010-AUS

- Size (w x h): 12.25" x 18.78"
- Standard spec.: DOT - 4BA400
- Service pressure: 400 PSI / 2.7 MPa
- Tare weight: 28.71 LB
- Body material: HP325 or HP345
- Relief valve pressure: 600 PSI / 4.1 MPa
- Nominal water capacity: >47.7 LB / 21.6 L
- Tank test pressure: 800 PSI / 5.5 MPa
- Air tightness test pressure: 400 PSI / 2.7 MPa

Model	63010 without float switch	65010 with float switch	66010 without float switch	66011 with float switch	66012 with float switch & NCG Port	63010-AUS without float switch (Australian standard)
Connection	1/4" FL-M (7/16-20)			1/2" ACME		1/2" ACME
Color	yellow/gray			yellow/gray		white

100 LB. DOT-APPROVED RECOVERY CYLINDERS



68010

- Size (w x h): 11.25" x 31.81"
- Standard spec.: DOT - 4BW400
- Service pressure: 400 PSI / 2.7 MPa
- Tare weight: 50.5 LB
- Body material: HP325
- Relief valve pressure: 600 PSI / 4.1 MPa
- Nominal water capacity: >92.5 LB / 41.9 L
- Tank test pressure: 800 PSI / 5.5 MPa
- Air tightness test pressure: >87 PSI / 0.6 MPa

Model	68010 without float switch
Connection	1/4" FL-M (7/16-20)
Color	yellow/gray

ENVIRO TANK (REFILLABLE CYLINDER)

30 LB. REFILLABLE CYLINDER



62020-W

- Size (w x h): 8.39" x 20"
- Standard spec.: DOT - 4BA400
- Service pressure: 400 PSI / 2.7 MPa
- Tare weight: 19.9 LB
- Body material: HP295
- Relief valve pressure: 600 PSI / 4.1 MPa
- Nominal water capacity: >30 LB / 13.6 L
- Tank test pressure: 800 PSI / 5.5 MPa
- Air tightness test pressure: >87 PSI / 0.6 MPa

Model	62020-W
Connection	1/4" FL-M (7/16-20)
Color	white

MOBILE ELECTRONIC CHARGING STATION



91685

Keeping the same ideals in mind as the Portable Electronic Charging Station, the mobile unit is directed towards the garage technician. With an enlarged carry cart and larger wheels, this unit can get around the shop with the greatest of ease!

- Dimensions: 45" x 18" x 16.5"

VACUUM PUMP	5 CFM
MANIFOLD	
2 Way Aluminum Block	91685
4 Way Aluminum Block	91686
VACUUM PUMP	7.5 CFM
MANIFOLD	
2 Way Aluminum Block	91687
4 Way Aluminum Block	91688

PORTABLE ELECTRONIC CHARGING STATION



91585

A lightweight, durable, steel frame cart that contains all the necessary tools to quickly and conveniently charge the A/C system. No need for different sized charging cylinders with Mastercool's rugged die cast electronic scale. Simply place the refrigerant cylinder on the scale and charge.

FEATURES:

- A rugged, lightweight steel cart with wheels and convenient storage pocket for scale and hoses allows this portable charging station to be taken almost anywhere
- 240 lb capacity scale with long lasting 9V battery (60 hrs)
- Deep micron, rotary vane vacuum pumps
- Extruded aluminum manifold with long lasting valve design

2 STAGE PORTABLE ELECTRONIC CHARGING STATION

- Includes electronic charging scale and a set of 72" hoses

Also available:

- Refrigerant tank heater blanket #98250
- D.O.T. cylinder #62010-R12 w/o float
- * R134a Automotive Service Couplers not included

VACUUM PUMP	5 CFM	7.5 CFM
MANIFOLD		
2 Way Aluminum Block with 2 1/2" gauges	91585	91587
4 Way Aluminum Block with 3 1/8" gauges	91586	91588



91585-B

R134a SINGLE STAGE PORTABLE ELECTRONIC CHARGING STATION

- 2-way manifold with 2 1/2" gauges in R134a
- Electronic charging scale, manual couplers, set of hoses

Also available:

- Refrigerant tank heater blanket #98250

1.8 CFM Single Stage Vacuum Pump	91580-A
3 CFM Single Stage Vacuum Pump	91580-B
6 CFM Single Stage Vacuum Pump	91585-B

91585-B-YF DUAL R134a/R1234yf SINGLE STAGE PORTABLE ELECTRONIC CHARGING STATION



- 2-way manifold with 2 1/2" gauges
- 6 CFM, single stage *Smart Air* vacuum pump
- Electronic charging scale, R1234yf manual couplers, R134a manual couplers, 1/2" acme-m x 1/2" acme-F LH thread fitting, R1234yf adapter 14mm-F x 12mm-M, set of 60" service hoses

98310 WIRELESS REFRIGERANT CHARGING SCALE
98315 WIRELESS REFRIGERANT CHARGING SCALE WITH SOLENOID
98315-AUT WIRELESS REFRIGERANT CHARGING SCALE WITH SOLENOID
 (includes 1/4" F-FL x 1/2 ACME-M fitting without valve core (82634-M))



98315 with solenoid



When remote is out of range the unit will automatically pause. This pause mechanism allows unit to restart when remote is back in range.

FEATURES:

- Wireless unit prevents unwanted tangles in wires
- Easily store the remote in the body of the platform
- Keypad provides synchronization and zeroing
- Extremely accurate weight sensor
- Magnet on remote allows easy placement on fixtures
- Battery life symbol for platform and remote constantly displayed on LCD
- Wireless signal strength indicator conveniently displays on remote

FUNCTIONS:

CHARGE PROGRAMMING:

Allows user to program desired quantities. Before charge is complete, an alarm will sound allowing ample time to turn off refrigerant supply.

PAUSE/CHARGE (98315 model only):

This feature allows user to stop and continue charging.

TANK CAPACITY PROGRAMMING:

EMPTY/FULL tank feature allows user to know the amount of refrigerant in the tank at any time.

REPEAT (98315 model only):

Allows user to charge previously stored amount.

SPECIFICATIONS:

- Capacity: 243 lbs (110 kg)
- Accuracy: $\leq \pm 0.05\%$ of reading
- Resolution: 0.05 lb / 0.5 oz / 0.01 kg
- 3 hrs auto off function
- Operating temperature: 32°F to 120°F (0°C to 49°C)
- Battery life: approximately 20 hours
- 31 cm platform
- Accepts all US & EU standard cylinders



REMOTE RANGE:
100 FEET (30 M),
LINE OF SIGHT

98210-A ACCU-CHARGE II



Mastercool's ACCU-CHARGE II is the most advanced electronic refrigerant scale in the market today. Constructed with a rugged aluminum cast body, the ACCU-CHARGE II now offers programming capabilities.

FUNCTIONS:

CHARGE PROGRAMMING:

Allows user to program desired quantities. Before charge is complete, an alarm will sound allowing user ample time to turn off refrigerant supply.

TANK CAPACITY PROGRAMMING:

Allows user to know the amount of refrigerant that is left in the tank at any time.

REPEAT:

Allows user to charge previously stored amount.

SPECIFICATIONS:

- Capacity: 243 lbs (110 kg)
- Accuracy: $\leq \pm 0.05\%$ of reading
- Resolution: 0.05 lb / 0.5 oz / 0.01 kg
- 3 hrs auto off function
- Operating temperature: 32 to 120°F (0 to 49°C)
- Battery life: approximately 40 hours
- Works with 110 or 220V transformer (**part no. 99334-110**)
- 9 x 9" (22 x 22 cm) platform

98211-A ACCU-CHARGE III CERTIFIED REFRIGERANT SCALE (OIML & CE Approved, Legal for Trade)



FUNCTIONS:

CHARGE PROGRAMMING:

Allows user to program desired quantities. Before charge is complete, an alarm will sound allowing user ample time to turn off refrigerant supply.

PAUSE/CHARGE:

(Using the 98230 charging solenoid module)

TANK CAPACITY PROGRAMMING:

Allows user to know the amount of refrigerant that is left in the tank at any time.

REPEAT:

Allows user to charge previously stored amount.

SPECIFICATIONS:

- Complies with European (OIML) standards
- Capacity: 110 lbs (50 kg)
- Accuracy: ±50 g
- Resolution: 0.05 kg
- 3 hours auto off function
- Operating temperature: 32 to 120°F (0 to 49°C)
- Battery life: approximately 40 hours
- 9 x 9" (22 x 22 cm) platform

98230 CHARGING SOLENOID MODULE



The 98230 charging solenoid module turns the 98210-A ACCU-CHARGE II & 98211-A ACCU-CHARGE III into automatic programmable scales!

This module allows the user to control the exact amount of refrigerant transferring to and from the A/C system. The compact design is battery powered (9V), lightweight, portable and works with all types of refrigerant. 98230 includes a short hose for tank connection, USB cord and 1/4"FL - 1/2" ACME adapters.



98250 ELECTRONIC TANK HEATER BLANKET



The Mastercool refrigerant tank heater blanket speeds up recharging time.

- Assures total discharge of refrigerant from 30 lb and 50 lb tanks. Heats tanks to 125°F resulting in maximum pressure of 185 psi for R134a and 170 psi for R12
- Quick working 300W heater element
- An excellent complement to all Mastercool refrigerant scales

69134-A REFRIGERANT IDENTIFIER FOR R134a



Keeps equipment safe, prevents contamination, detects air contamination. The refrigerant identifier helps confirm the presence and quality of R134a refrigerant in vehicle air conditioning systems. This process will help avoid potential damage from refrigerant contamination.

SPECIFICATIONS:

- Weight: 0.8 kg
- Refrigerant detected: R134a (tetrafluoroethane)
- Accuracy: PASS/FAIL - 95% pure R134a
- Power requirements: 12 VDC
- User interface: membrane type w/ visual indicators and function key
- Calibration method: manual pump aspirator
- Minimum input pressure: 1.38 Bar (20 Psig)
- Maximum input pressure: 20.70 Bar (300 Psig)
- Storage temperature: -10° to 50°C
- Operating temperature: 10 to 45°C
- Construction material: molded ABS housing/molded rubber sleeve



691234YF-MINI MINI ID REFRIGERANT IDENTIFIER FOR R1234yf



Keeps equipment safe, prevents contamination, detects air contamination

SPECIFICATIONS:

- Weight: 0.8 kg
- Refrigerant detected: R1234yf (tetrafluoropropene)
- Accuracy: PASS/FAIL - 95% pure R1234yf
- Power requirements: 12 VDC
- Approvals: UL, CE, RoHS compliant
- User interface: membrane type with visual indicators and function key
- Calibration method: manual pump aspirator
- Storage temperature: -10° to 50°C
- Operating temperature: 10°C to 45°C
- Construction material: molded ABS housing/molded rubber sleeve

LEGEND SERIES™ R1234YF & R134A REFRIGERANT ANALYZER



- Quickly and accurately determines refrigerant purity
- Displays % air in pure R1234yf & R134a
- Displays percentage purity of R1234yf, R134a, R12, R22 and hydrocarbons
- Easily prints test results with optional printer
- Capable of testing R12 with optional R12 hose accessory

SPECIFICATIONS:

- Refrigerants measured: R1234yf, R134a, R12
- Power: 12VDC @ 1.5 amps
- Contaminants measured: R22, hydrocarbons, unknown
- User interface: 5" color LCD with soft keys
- Accuracy: exceeds the requirements of SAE J2912
- Approvals: CE, UL, SAE J2912
- Refrigerant % displayed: R1234yf, R134a, R22, R12, HC, unknown, air
- Ambient operating temperature range: 10 to 49°C
- Communication protocols: USB 2.0, Bluetooth 2.0

Comes complete with: R1234yf and R134a low side service couplers, R1234yf and R134a cylinder adapters, (2) R1234yf sample hoses, (2) R134a sample hoses, charging adapter, custom fit storage case

- 69LEGEND** Legend Series™ R1234yf & R134a Refrigerant Analyzer without bluetooth / without printer
- 69LEGEND-P** Legend Series™ R1234yf & R134a Refrigerant Analyzer without bluetooth / with printer
- 69LEGEND-BT** Legend Series™ R1234yf & R134a Refrigerant Analyzer with bluetooth / without printer
- 69LEGEND-BTP** Legend Series™ R1234yf & R134a Refrigerant Analyzer with bluetooth / with printer

LEAK DETECTION



SENSITIVITY: ● L ● M ● H

HR
LR
INT/WT
CA
READY

HIGH
DETECTION
LOW

VOLUME MUTE

PEAK MUTE

H M L

55900 *IntellaSense II* REFRIGERANT LEAK DETECTOR



Display



Keypad

At the heart of this leak detector is a low power metal oxide gas sensor with superior performance properties such as lower current consumption and sensor longevity. The sensor is characterized by high sensitivity and fast response upon detecting the presence of extremely small levels of chlorofluorocarbon gases. For this reason, this sensor was selected and integrated into the 55900 leak detector. In addition, a powerful microprocessor was integrated into the design that automatically selects the best operating condition for the sensor to ensure optimum performance throughout its life.

This unit comes packaged in a blow molded case with 2 "C" batteries, leak test vial and replacement filters.

<< DESIGN CERTIFIED BY INTERTEK TO MEET J2791 (R134A), J2913 (R1234yf) AND EN 14624 >>

SPECIFICATIONS:

SENSITIVITY*: HIGH ≥ 0.15 oz/yr (4 g/yr), MEDIUM ≥ 0.25 oz/yr (7 g/yr), LOW ≥ 0.50 oz/yr (14 g/yr)

* based on optimal laboratory conditions

PROBE:

- Intelligent tip design that senses the condition of the environment, to eliminate the potential of false alarms.
- Flexible 15.5" probe for difficult to reach locations

DISPLAY:

Six vertical LED's (red, yellow or green) display the following information to the user such as:

- Relative signal level of the detected leak
- Selected sensitivity range (low/medium or high) of the unit
- Diagnostic information: low battery, interference/wait, contaminated atmosphere, readiness of the unit or fault conditions of the unit

REFRIGERANTS: Detects all refrigerants (CFC's, HCFC's, & HFC's and blends)

SENSOR LIFE: 2000 hours

SENSING ELEMENT: Heated tin oxide

OPERATING TEMPERATURE RANGE: 0 to 120°F

RESPONSE TIME: Less than 1 second

POWER: 2 C Alkaline 6000 mAh batteries

BATTERY LIFE: 30 hours

WEIGHT: 1.08 lbs

"SUPER SENSITIVE FUNCTION" allows the unit further sensitizing beyond the standard settings for locating small leaks with gases such as R1234yf and R407C

KEYPAD FUNCTIONS:

ON/OFF: Press the ON/OFF button to turn the unit on or off.

VOLUME/MUTE: Press the VOLUME/MUTE button to control the volume of the unit.

H M L SENSITIVITY: Press the H M L SENSITIVITY button to select the desired sensitivity level.

PEAK/HR/LR: The PEAK/HR/LR key serves a dual purpose:

- (1) To assist the user in locating the "largest leak" in a system with multiple leaks present
- (2) To enable the user to switch between HR (high range) and LR (low range) modes

55975

IntellaSense III

COMBUSTIBLE GAS LEAK DETECTOR

 COMPATIBLE WITH COMBUSTIBLE GASES


DETECTS: Acetone, Acetylene, Ammonia, Benzene, Butane, Butanol, Chlorine, Ethane, Ethanol, Gasoline, Hexane, Hydrogen, Hydrogen Sulfide, Isobutane, Methane (natural gas), Methanol, Methyl Acetate, Methyl Chloride, Methyl Ether, Naptha, N-Butane, Pentane, Propane, Propanol, Sulfur Dioxide and Trichloroethane

Intella Sense III Combustible Gas Leak Detector is packaged in a blow molded case with 2 "C" batteries, leak test vial and replacement filters

SPECIFICATIONS

- Sensing element: heated tin oxide
- Refrigerants: detects all refrigerants
- Battery: 2 "C" alkaline 6000 mAh batteries
- Ultimate sensitivity: 50 – 1000 ppm
- * based on optimal laboratory conditions
- Sensor life: 2000 hours
- Response time: less than 1 second
- Operating temperature range: 0°F to 120°F

PROBE:

- Intelligent tip, with environment sensing element to eliminate the potential of false alarms
- Flexible 15.5 inch probe length for difficult to reach locations

DISPLAY:

Six vertical LED's enabled selectively (red, yellow or green) to display the following information to the user such as:

- The relative signal level of the detected leak
- The selected sensitivity range (low, medium or high) of the unit
- Diagnostic information (low battery, interference/wait, contaminated atmosphere readiness of the unit or fault conditions of the unit)

KEYPAD CONTROLS:

- ON/OFF, volume/mute, sensitivity for high, medium and low level selection, peak when multiple leaks are suspected

43707 COMBUSTION GAS LEAK TESTER KIT



Fast, economical and accurate method to test for combustion gas leaks from head gasket, cylinder head & engine block.

- Dual chamber for improved accuracy and to reduce the risk of coolant contaminating the test
- Works on gasoline & diesel engines
- Indicates that a leak is present when the tester fluid changes color
- Test results in the top chamber will provide an indication of a combustion leak

KIT INCLUDES:

Test chamber with rubber bulb pump, combustion leak tester fluid and instructions packaged in a plastic box

43708

Radiator Cooling Test Cap Adapter with Vent

Test cap adapter will provide a leak free secure connection to ensure the correct testing of the cooling system without the use of a rubber cone. Works with caps from Mastercool radiator test kits (43300, 43301, 43302, 43305 and 43306)

43709

Replacement Combustion Leak Tester Fluid

Quickly check leaks between combustion chamber and cooling system

43710 COMBUSTION GAS LEAK TESTER KIT WITH TEST CAP ADAPTER



Fast, economical and accurate method to test for combustion gas leaks from head gasket, cylinder head & engine block. Includes expansion tank adapter with vent allowing the end user to securely attach adapters to radiator or expansion tank when performing a combustion gas leak test. Quick connect coupler will attach to the radiator cap and expansion tank adapters in the Mastercool 43300, 43301-A, 43302, 43305 and 43306. The test cap adapter will provide a leak free secure connection to ensure the correct testing of the cooling system without the use of a rubber cone.

- Dual chamber for improved accuracy and to reduce the risk of coolant contaminating the test
- Works on gasoline & diesel engines
- Indicates that a leak is present when the tester fluid changes color
- Test results in the top chamber will provide an indication of a combustion leak

KIT INCLUDES:

Test chamber with rubber bulb pump, combustion leak tester fluid, radiator cooling test cap adapter with vent and instructions packaged in a plastic box



Mastercool®
"World Class Quality"

56100



>>POPULAR<<

The *Raptor Refrigerant Leak Detector* offers state-of-the-art features and micro-processing technology while the design sensor delivers an accurate and instantaneous response. Packaged in a blow molded case with 2 “C” batteries and sensor tip.

FEATURES:

- Digital signal micro processor
- Visual leak level indicator
- Reset function and keypad control
- Sensitivity level adjustment
- Battery test function
- Variable frequency audible alarm
- Meets and exceeds SAE J1627

SPECIFICATIONS:

- 3 levels of sensitivity (5 levels of detection)
- Detects leaks as small as 1/10 oz per year*
**based on optimal laboratory conditions*
- Detects all refrigerants (CFC's, HCFC's, HFC's)
- Power: 2 “C” batteries
- Probe: flexible 16” (43 cm)



56200



with UV Blue Light



>>POPULAR<<

The *Raptor Refrigerant Leak Detector with UV Blue Light* offers state-of-the-art features and micro-processing technology while the design sensor delivers an accurate and instantaneous response. An ultra bright UV light is built into the end of the probe allowing for both electronic and UV leak detection of even the toughest leaks. Packaged in a blow molded case with UV glasses, 2 “C” batteries and sensor tip.

FEATURES:

- Digital signal micro processor
- Mute function
- Visual leak level indicator
- Reset function and keypad control
- Battery test function
- Sensitivity level adjustment
- Ultra bright UV/blue LED light
- Variable frequency audible alarm
- Meets and exceeds SAE J1627

SPECIFICATIONS:

- 6 levels of sensitivity (15 levels of detection)
- Detects leaks as small as 1/10 oz per year*
**based on optimal laboratory conditions*
- Detects all refrigerants (CFC's, HCFC's, HFC's)
- Power: 2 “C” batteries
- Probe: flexible 16” (43 cm)



COMPLETE ELECTRONIC & UV LEAK DETECTION KITS

The ultimate solution for all your A/C leak detection needs.



56300

56300 Kit includes: 56200 “Raptor” electronic leak Detector with UV blue light, UV dye injector w/25 application dye cartridge, dye injector connection hose w/ 1/4” FL adapter, dye cleaner & UV safety glasses, comes in a custom molded carrying case

56310 Kit includes: 56200 “Raptor” electronic leak detector with UV blue light, UV dye injector w/10 application dye cartridge, dye injector connection hose w/ 1/4” FL adapter, dye cleaner & UV safety glasses, comes in a custom molded carrying case

56400 Kit includes: 56200 “Raptor” electronic leak detector with UV blue light, refillable dye injector, dye injector connection hose w/ 1/4” FL adapter, 2 oz bottle of concentrated universal dye, UV safety glasses & dye cleaner, comes in a custom molded carrying case

53518-UV RECHARGEABLE 110 V HIGH INTENSITY LED UV FLASHLIGHT



- AAA battery holder provides backup power to flashlight (3 AAA batteries included)
 - Battery life: 3 to 5 hours continuous leak detection
 - Includes safety glasses and 110 V charger
- SPECIFICATIONS:**
- Lamp power: 2W
 - 154 – 170 $\mu\text{W}/\text{cm}^2$ which is compatible to a 50 watt UV flashlight
 - UV wavelength: 390-400
 - Illumination mode: on-off
 - Battery: lithium li-ion, full discharge and cut-off discharge of 4.2V and 2.75V



53513-UV MINI UV FLASHLIGHT (LED)



- High intensity LED bulb - UV illumination
- Aluminum body with anodized finish
- 3 AAA batteries
- UV wavelength: 390-400
- Easy grip texture
- 25,000 hour bulb life
- Includes safety glasses

53517-UV COMPACT UV FLASHLIGHT (LED)



- 17 LED bulb UV illumination
- Easy grip texture
- 3 AAA batteries
- Aluminum body with anodized finish
- 25,000 hour bulb life
- Includes safety glasses

53515 MACH IV FLEXIBLE UV LIGHT (LED)



- The Mach IV flexible UV light has **4 TRUE UV LEDS** delivering a brilliant fluorescent glow.
- Gets into tight areas easily.
 - Includes UV enhancing safety glasses
- PATENT NO. 6,647,761**

53515-B Light bulb

53515-BAT-2 CR2 lithium battery

53012 UV SWIVEL HEAD LIGHT (12 V/100 WATTS)



- 180° swivel heads get into tight places
- Heavy duty metal construction
- Instant on
- Includes UV enhancing safety glasses

53012-B Light bulb

53012-L Lens

53312 UV MINI LIGHT (12 V/50 WATTS)



- High intensity
- 16ft. (5m) cord
- Compact & lightweight
- Instant on
- Includes UV enhancing safety glasses



53312-B Light bulb

53312-L Lens

COMPACT UV LEAK LOCATOR KITS

Leading the way in UV LEAK DETECTION, Mastercool offers a variety of compact UV leak locator kits. Each kit offers a powerful inspection lamp, a "Refillable" or "Cartridge Type" Dye Injector and accessories. All kits are packaged in a clamshell or custom molded carrying case.



KIT PART#	INJECTOR / LIGHT	CONTENTS OF EACH KIT	VOLTAGE/WATT
53451-110	53123/ 53518-UV	Rechargeable UV light, batteries, rechargeable batteries, battery holder, refillable 2 oz dye injector, 2 oz concentrated universal A/C fluorescent dye (25 application), 4 oz dye remover, 25 service information labels, UV enhancing safety glasses	LED
53451-C-110	53223/ 53518-UV	Same as 53451-110 but with replaceable 2 oz dye cartridge (25 applications)	LED
53583	53809/ 53513-UV	Mini UV Flashlight (53513-UV), "cartridge type" 1 oz dye injector with replaceable dye cartridge, low side hose, 1/4" FL adapter, UV safety glasses, service info. labels	LED
53587	53809/ 53517-UV	Compact UV flashlight (53517-UV), 1 oz dye injector with replaceable 1 oz dye cartridge (10 application), low side hose, 1/4" FL adapter, UV enhancing safety glasses, service information labels, packaged in a clam shell	LED
53580	53809/ 53515	MACH IV flexible LED UV light with 1 oz (30 ml) dye injector, w/replaceable 1 oz (30 ml) dye cartridge (10 application.), low-side hose with R134a coupler, 1/4" FL adapter, 10 service information labels & UV enhancing safety glasses	LED
53585	53809/ 53515	Same as above, but with 1 oz OIL/ATF/Gas (53610) & diesel fluorescent dye and 1oz (30ml) engine coolant fluorescent dye (53609)	LED
53100	53123/ 53012	High intensity swivel head light, with refillable 2 oz (60 ml) dye injector, 2 oz (60 ml) concentrated universal A/C fluorescent dye (25 application.), 4 oz (1200 ml) dye remover, 25 service information labels & UV enhancing safety glasses	12 V/100 WATT
53100-C	53223/ 53012	Same as 53100, but with replaceable 2 oz (60 ml) dye cartridge (25 application.)	12 V/100 WATT
53500	53123/ 53312	High intensity mini light w/refillable 2 oz (60 ml) dye injector, 2 oz (60 ml) concentrated universal A/C fluorescent dye (25 application.), 4 oz (120 ml) dye remover, 25 service information labels & UV enhancing safety glasses	12 V/50 WATT
53500-C	53223/ 53312	Same as 53500, but with replaceable 2 oz (60 ml) dye cartridge (25 Appl.)	12 V/50 WATT
53351	53809/ 53312	High intensity, 12V/50 watt, mini light (53312, replaceable 1 oz (10 application) dye cartridge (53809), A/C connection hose w/R134a coupler, 1/4" FL adapter, 1 oz OIL/ATF/Gas and diesel fluorescent dye, 1 oz engine coolant dye, 4 oz dye remover, 25 service information labels, UV enhancing safety glasses	12 V/50 WATT

REFILLABLE UNIVERSAL OIL/DYE INJECTOR



To inject the oil or dye, simply connect the injector to the low side of the A/C system and twist the handle until you reach the desired amount.

- 53123** Refillable Universal Dye Injector with auto shut-off valve adapter and 2 oz (60 ml) Bottle of Concentrated A/C Dye (25 Applications)
- 53123-A** Refillable Universal Dye/Oil Injector (w/o dye) with auto shut-off valve adapter
- 53134** Refillable Oil/Dye Injector with (R134a 13 mm Connection) and 2 oz (60 ml) Bottle of Concentrated A/C Dye (25 Applications)
- 53322** Refillable Dye Injector with (1/4" Auto Shut-off Valve Connection) and 2 oz (60 ml) Bottle of Concentrated A/C Dye (25 Applications)



53123-YF REFILLABLE R1234yf OIL/DYE INJECTOR



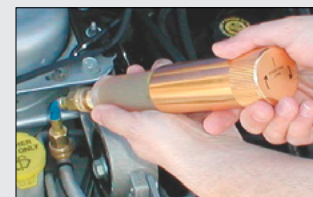
To inject the oil or dye, simply connect the injector to the low side of the A/C system and twist the handle until you reach the desired amount. The injector hose comes complete with a R1234yf coupler.

- Heavy duty, anodized aluminum 2 oz. container with dye scales represented in 1/10 ounce, 1/4 ounce and milliliters
- Nylon barrier blue hose meets J2888, EPA, SAE and UL standards
- R1234yf low side coupler with extended disconnect sleeve and meets SAEJ639 and J2888

53223 "CARTRIDGE TYPE" UNIVERSAL DYE INJECTOR



Adding dye with the 53223 is fast and easy, simply connect the injector to the low side of the A/C system and twist the handle to the next application line. The replaceable cartridge provides 25 applications of universal dye that is compatible with all systems. The injector hose comes complete with an auto shut-off valve adapter for 1/4" FL systems.

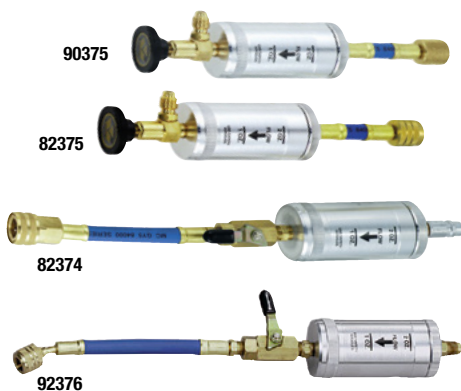


53809 MINI DYE INJECTOR



"Cartridge Type" dye injector (10 applications) concentrated dye.

OIL INJECTOR



Excellent method for adding refrigerant oil or large amounts of UV leak detection dye to the A/C system. Add oil by allowing vacuum to pull it in after the evacuation process, or use refrigerant to push it in using the recharge system. Rugged all metal 2 oz canister. Available in standard or "easy connect" design. The standard models use a needle style valve attached between the manifold gauge set or charging equipment and A/C hose. The "easy connect" models use a ball valve design attached directly onto the end of the A/C hose. Model 82374 includes a low-side coupler on the outlet hose. Model 92376 includes auto shut-off valve on the outside hose.

STANDARD

- 90375** Standard 1/4" FFL x 1/4" MFL
- 82375** ACME 1/2" FFL x 1/2" MFL

EASY CONNECT

- 82374** 13mm-M x 13mm-F low side coupler (R134a)
- 92376** 1/4" FFL x 1/4" MFL



STANDARD UNIVERSAL ULTRAVIOLET A/C DYES



- 92699** Standard Universal Dye - Six 1/4 oz packs (6 pcs) (pack = 1/4 oz (7.5 ml) - 1 application)
- 92708** Standard Universal Dye 8 oz (240 ml) bottle - 32 applications
- 92732** Standard Universal Dye 32 oz (1 L) bottle - 128 applications

CONCENTRATED UNIVERSAL ULTRAVIOLET A/C DYES



- 53825** Concentrated Universal Dye Cartridge replaceable cartridge - 25 applications
- 53810** Concentrated Universal Dye Cartridge replaceable cartridge - 10 applications
- 53625** Concentrated Universal Dye 2 oz (60 ml) bottle - 25 applications

FLUORESCENT DYE



- 53609** Engine Coolant (1 oz. (30 ml) bottle)
 - 1 oz for 1 vehicle application per 16 quarts (15 L) of fluid
- 53610** Engine Oil (1 oz. (30 ml) bottle)
 - Engine oil (Gas & Diesel) - 1 vehicle application per 4-5 quarts (4 L-5 L) of oil
 - Automatic transmission fluid - 1 vehicle application per 4-5 quarts (4 L-5 L) of fluid
 - Gasoline & diesel fuel - 1 vehicle application per 2 gallons (8 L) of fuel

AUTO A/C MASTER LEAK SHIELD



- Lubricates system and helps prevent leaks
- Seals small leaks in evaporator, condenser, hoses, o-rings and gaskets
- Illuminates larger leaks through the use of high quality universal fluorescent dye
- For R12, R134a A/C systems
- Safe for hybrid and electric compressors



- 53909** Mini Auto A/C Master Leak Shield Dye Injector "Cartridge Type" 1 oz injector with auto A/C master leak shield sealant with dye, low side hose, 1/4" FL adapter
- 53910** Auto A/C Master Leak Shield 1 oz replacement cartridge of auto A/C master leak shield sealant with dye
- 53593** Mini UV Flashlight Kit 53513-UV mini UV flashlight, "Cartridge Type" 1 oz injector with auto A/C master leak shield sealant with dye, low side hose, 1/4" FL adapter, UV safety glasses, service info. labels, packaged in clam shell
- 53597** Compact UV Flashlight Kit 53517-UV compact UV flashlight (17 LED), "Cartridge Type" 1 oz injector with auto A/C master leak shield sealant with dye, low side hose, 1/4" FL adapter, UV safety glasses, service info. labels, packaged in clam shell



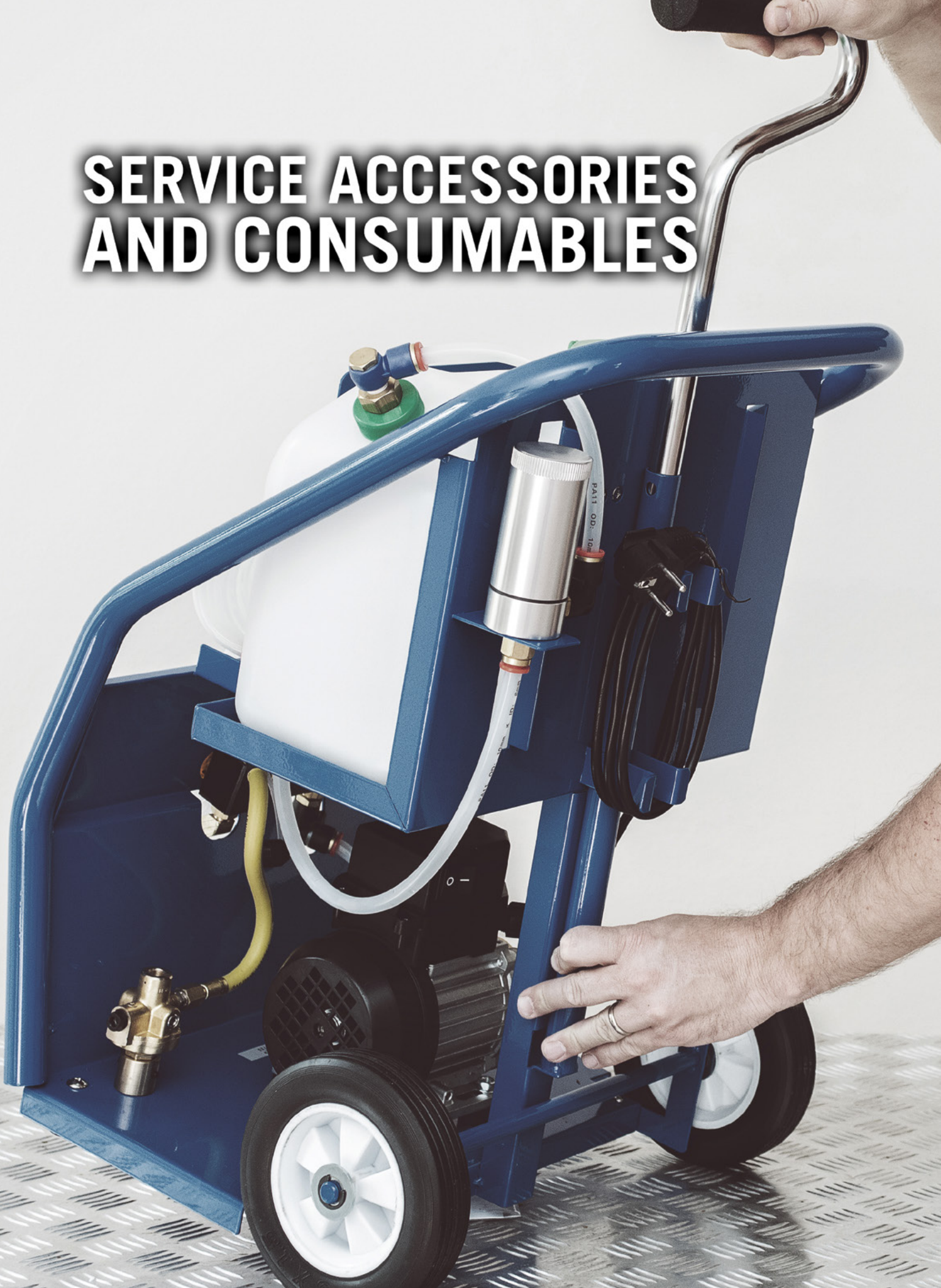
Easy to use! Stops leaks in metal and rubber automotive air conditioner parts including evaporators, condensers, o-rings, gaskets and hoses.

- For use in R134a, HFO-1234yf, hybrid and electronic A/C systems
- Includes o-ring conditioner, proprietary anti-wear and anti-oxidant additives
- Adds 1 oz. (30 ml) leak stop with UV leak detection dye
- Patented delivery system, does not contain refrigerant
- Safe, does not contain harmful polymers
- HFC Free Aerosol

US Patent No. 8,074,009, other US and foreign patents pending

- 53615-A** Auto Master Leak Shield 1 oz can of auto master leak shield sealant with dye

SERVICE ACCESSORIES AND CONSUMABLES



NITROGEN PRESSURE REGULATOR



Mastercool's nitrogen regulator is specifically designed to meet the specifications of HVAC/R and automotive A/C systems. This single stage nitrogen regulator is used to test systems for leaks when they do not contain refrigerant.

- 1/4" SAE flare outlet port, with control valve, to keep pressure on the regulator at all times
- T-Handle for ease of pressure adjustment
- 63 mm (2 1/2") gauges with guards
- High pressure gauge 4400 psig (300 bar)
- Low pressure gauge 1000 psig (70 bar)

53001 CGA580 (US) Standard, 1/4 FL-M outlet connection

- 53010-AUT** Pressure Testing Regulator Kit
- 53001 nitrogen pressure regulator
 - CGA580 (US) standard
 - 1/4 FL-M outlet connection
 - 38" yellow charging hose (47382)
 - Leak testing adapter (53042)
 - High side standard R134a, 1/4" FL-M x 16 mm economy coupler (66434-R)
 - Blow molded case (53000-PB)

OPTIONAL ACCESSORIES

66434-R High side R134a 1/4" FL-M x 16mm economy coupler

82834-E High side manual R134a 1/4" FL-M x 16 mm coupler

90413 R410a straight adapter 1/4" FL-M x 5/16" swivel-F

53042 Leak testing adapter

53000-42 Leak testing gauge

53000-70 Low pressure regulator gauge

53000-300 High pressure regulator gauge

47382 38" yellow charging hose

93254-E Black gauge guard

53000-W Teflon washer

53042-YF LEAK TESTING ADAPTER FOR R1234yf



- 80 mm gauge
- R1234yf low side coupler

69900 “MASTERCLEANSE” FLUSH MACHINE (110V/60 HZ)



Mastercool introduces its new “MASTERCLEANSE” large volume flush machines designed to flush all HVAC/R and automotive systems. “MASTERCLEANSE” will be commonly used for the removal of all solids and residues caused by breakage of compressor or filters. Designed with durable roll-away wheels and handle, this machine can conveniently move as needed.

FEATURES:

- Stainless steel ball valve controls
- 1/4” SAE connection
- Additional external container connection
- External nitrogen bottle connection
- Pump equipped with mechanical seal and PTFE gasket
- Mechanical filter present at suction side

SPECIFICATIONS:

- Pump flow rate: 16 l/min (4 g/min)
- Pump motor: 300 watts
- Pump horsepower: 110V/60 Hz - 0.4 HP,
- Full load amperage: 110V/60 Hz - 2.4 amps
- Flush container: 2.6 gal (10 l)
- Hoses: 9 ft (3 m) flexible, clear coiled
- Dimensions: 15” (l) x 16” (w) x 24” (h) with handle extended 36” (h)
- Weight: 42 lbs (19 kg)



69925 MULTIPLE FLUSHING & LEAK TEST ADAPTER KIT FOR FLUSH MACHINE



Multi-purpose leak test and flushing adapters suitable for more than 80% of the automotive air conditioning systems in the market!

- Isolates A/C system components for closed loop flushing
- Flush individual components without removing them from the vehicle
- Install adapters on A/C line ends to allow attachment of flushing equipment



TOTAL A/C QUICK FLUSH



Specific fluid for the inner flushing of air conditioning and refrigeration systems

- O-ring safe
- Non-Flammable
- Non-Corrosive
- For professional use
- Pressurized container ready to use

91051	Total A/C Quick Flush Kit
91050	17 oz. Total A/C Quick Flush Can
91050-6	6 Pack - 17 oz. Total A/C Quick Flush Cans

91046-A A/C SYSTEM FLUSH KIT



Includes flush gun, hose, canister and canister adapter. Designed to work with any light weight flushing agent which can be mixed with pressurized air. Excellent for quickly and effectively removing refrigerant oil debris during retrofitting or compressor replacement.

POPULAR



A/C FLUSH SOLVENT



- Effectively removes debris and sludge from A/C components
- Solvent-based
- Evaporates quickly
- Leaves no residue

91049-32	32 oz. Flush Solvent
91049-32-6	6 pack - 32 oz. Flush Solvent
91049-128	1 Gallon Flush Solvent
91049-128-4	4 pack - 1 Gallon Flush Solvent

92707 HYBRID A/C COMPRESSOR OIL



- Formulated for vehicles with electric A/C compressors
- High dielectric formula provides advanced compressor protection
- Synthetic lubricant specifically created for electric hybrid air conditioning compressors
- For replenishing hybrid or electric compressor oil in accordance with the quantity evacuated or the quantity recommended by the compressor manufacturer
- Provides outstanding lubricity and compressor protection
- Compatible replacement lubricant for compressors using Honda 38899RCJA01, ND-10, ND-OIL 11 (ND-11), and SE-10Y
- High dielectric protection formula has excellent “resistivity” to potential electrical current leakage in high voltage hybrid A/C systems
- Contains conditioners, inhibitors and anti-wear agents
- Net contents 7 oz. (210 ml)

COMPRESSOR OILS



Maximum protection with excellent thermal & oxidative stability. Moisture tolerant. OEM approved.

PAG 65

- 92709-65-8** PAG 65 Oil (8 oz (240 ml) bottle)
- 92709-65-32** PAG 65 Oil (32 oz (1 L) bottle)

PAG 100

- 53826** PAG 100 Oil (2 oz (60 ml) cartridge)
- 92709-100-8** PAG 100 Oil (8 oz (240 ml) bottle)
- 92709-100-32** PAG 100 Oil (32 oz (1 L) bottle)

PAG 150

- 92709-150-8** PAG 150 Oil (8 oz (240 ml) bottle)
- 92709-150-32** PAG 150 Oil (32 oz (1 L) bottle)

ESTER 100 OIL

- 53827** Ester 100 Oil (2 oz (60 ml) cartridge)
- 92710** Ester 100 Oil (8 oz (240 ml) bottle)
- 92712** Ester 100 Oil (32 oz (1 L) bottle)

ACCESSORIES



- 53314** Dye Remover
4 oz (120 ml)
- 53315** Service Labels
25 per pack, bright yellow label indicating that the system has been charged with UV Dye.
- 92398** UV Enhancing Safety Glasses
This is a must for protection against ultraviolet light during leak detection.

ZEROL® HD46 R1234yf MOBILE AIR CONDITIONING COMPRESSOR LUBRICANT



ZEROL HD46 is a fully formulated ISO VG46 grade polyalkylene glycol lubricant designed specifically for application with HFO refrigerant R1234yf in mobile air conditioning (MAC) systems. The product is a double end-capped PAG, and is manufactured to exacting standards of high double end-capping efficiency. ZEROL HD46 is suitable for use in both belt and electrically driven compressors utilizing R1234yf, and is also fully suitable for use in R134a belt-driven and electric MAC compressors.

- Optimized miscibility in HFO refrigerant R1234yf
- Superior lubricity compared to alternative lubricant types, including standard 'single end-capped' PAG products, and di-capped PAGs with lower di-capped material content
- Exceptional viscosity index (VI) – The high VI enhances compressor life by ensuring efficient running at temperature extremes. The high VI may also allow the user to select a lower viscosity fluid than typically used, with associated power usage savings
- Good high temperature and chemical stability, even in presence of water, resulting in system lifetime extension and reduced maintenance costs
- Low hygroscopicity (tendency to absorb moisture) compared to alternative PAG products with lower di-capping content
- Formulating expertise – ZEROL HD46 series contain optimized additive technology to provide additional corrosion protection within the A/C system, to further enhance the extreme pressure and anti-wear performance of the PAG, and to maximize fluid lifetime by ensuring against thermal or oxidative deterioration of the lubricant
- Excellent electrical resistivity properties for electrically driven systems

SPECIFICATIONS:

- Viscosity @ 40°C (cSt): 42.0 – 48.0
- Colour (Gardner): 1 max.
- Water content (ppm): 300 max.
- Total acid value (mgKOH/g): 0.03 max.
- Pour point (°C): <-25
- Capping efficiency: 85.0% minimum
- Appearance: clear to slightly hazy, free of visible particles

- 92709-YF-8** 8 fl. oz (236 ml) bottle
- 92709-YF-32** 32 fl. oz (946 ml) bottle

ALUM BOND



A two-component epoxy formula highly concentrated with carefully selected pure aluminum particles, modified curing agents and special high quality additives to provide maximum strength, durability and ease of application. Alumbond is aluminum filled epoxy specially formulated for repairing condenser coils, tanks, valves, pumps, castings, water jackets, radiators, etc., where non-rusting, non-magnetic aluminum finish is desired.



PHYSICAL PROPERTIES:

- Hardness (Shore, ASTM D 1706): 83D
- Coefficient of thermal expansion: 40 x 10⁻⁶ cm/cm°C
- Compression strength (ASTM D 695): 8600 psi (59 M Pa)
- Tensile strength (ASTM D 638): 3500 psi (24 M Pa)
- Maximum line pressure (after 5 hours application time): 650 psi

- 90935** Aluminum Repair Kit (6.5 oz package)
- 90934** Aluminum Repair Kit (2 oz package)

90925 CONDENSER FIN COMB



Cleans and straightens condenser and evaporator fins. Six sided head for 8, 9, 10, 12, 14 and 15 fins per inch applications.



MEASURE AND TEST INSTRUMENTS

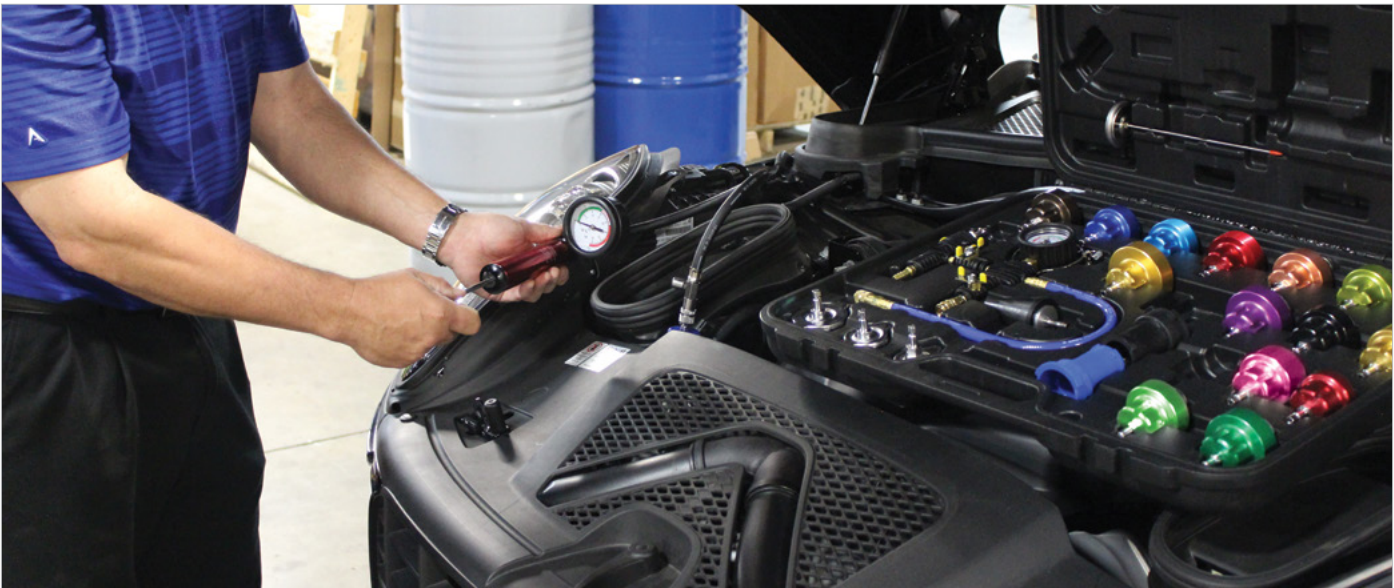
43300 14 PIECE COOLING SYSTEM PRESSURE TEST KIT



- Detects and exposes external system leaks
- Detects internal engine leaks due to blown gaskets or cracked block
- Includes hand pump, thermometer and 12 adapters (No.'s 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13) to fit most popular domestic and import car and trucks

43301-A MASTER RADIATOR PRESSURE SYSTEM KIT AND VACUUM SYSTEM KIT

patented



- Detects and exposes external system leaks
- Detects internal engine leaks due to blown gaskets or cracked block
- Vacuum type cooling system
- Purge and refill for quick change of coolant
- Test Range: 0 – 35 psi
- Includes 1 blue radiator cap test connector R123/R125
- Includes 1 black radiator cap test connector R123/R124
- Includes 1 thermometer, 1 universal radiator cap, 1 vacuum purge and refill tool, coolant hose and additional installation accessories
- Includes hand pump and 19 adapters (No.'s 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 21, 22 and 23) to fit most popular domestic and import cars and trucks

* For the complete pressure testing adapter chart, please see page 79

43302 25 PIECE COOLING SYSTEM PRESSURE TEST KIT

- Detects and exposes external system leaks
- Detects internal engine leaks due to blown gaskets or cracked block
- Includes blue and black radiator cap test connectors
- Includes hand pump, thermometer and 21 adapters (No.'s 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23) to fit most popular domestic and import car and trucks

43305 10 PIECE COOLING SYSTEM PRESSURE TEST ADAPTER KIT

- Adapter update kit to be used with 43300
- Detects and exposes external system leaks
- Detects internal engine leaks due to blown gaskets or cracked block
- Includes blue and black radiator cap test connectors
- Includes 8 adapters (No.'s 14, 15, 16, 17, 18, 19, 20, 21) to fit most popular domestic and import car and trucks

43306 HEAVY DUTY COOLING SYSTEM PRESSURE TEST & REFILL KIT

Remove the complications that often result from unreliable rubber plugs or bladders with our heavy duty cooling system pressure test & refill kit. This kit will save set-up time and provide precise test results.

- Uses shop air to uphold continual pressure to the cooling system during testing and refill
- 4 quick disconnect vacuum attachments provide quick refilling of the cooling system and eradicates airlocks
- For use with Freightliner, International, Kenworth, Peterbilt, Mack, Volvo, GMC and Sterling cooling systems
- Includes heavy duty vehicle adapters, pressure test regulator and vacuum refill attachment with tubing

43390 UNIVERSAL 90° ADAPTER FITTING FOR COOLING SYSTEM PRESSURE TEST ADAPTERS

- Universal fitting for cooling system pressure test hand pumps
- Provides 90° access for hard to reach places



Mastercool®
"World Class Quality"

43013 VACUUM TYPE COOLING SYSTEM FILLER KIT

patented



- Significantly shortens time for refilling new coolant by creating a vacuum in the cooling system
- No need to undergo time-consuming air bleeding after refilling new coolant
- Conical adapter offers a wide application to different radiator filler necks
- Kit can be hooked underneath the vehicle's hood for easy access
- Minimizes the risks of engine overheating
- Kit includes vacuum purge and refill tool, coolant hose, 1 universal radiator cap



43012 COOLING SYSTEM VACUUM PURGE AND REFILL KIT



- Refill new coolant by creating a vacuum in the cooling system
- No need to undergo time-consuming air bleeding after refilling new coolant
- Sealing collar with three rubber bushings offers a wide variety of applications for radiator filler necks
- Minimizes the risk of engine overheating

INCLUDED IN KIT:

Vacuum Gauge (43013-001-G)	0 - 30 inHg
Sealing Collar	Turn clockwise to expand rubber
Valve	To control air and coolant flow
Quick Coupling	For connecting vacuum pump and coolant hose
Venturi Style Vacuum	To connect with an air compressor to create vacuum
Rubber Gasket - small (43012-35)	OD 35 mm × ID 30 mm
Rubber Gasket - medium (43012-39)	OD 39 mm × ID 30 mm
Rubber Gasket - large (43012-44)	OD 44 mm × ID 30 mm
Coolant Hose	Ø 0.5" × 47" long
Drain Hose	For draining residual fluid in the radiator and the tool



43014 VACUUM-TYPE COOLING SYSTEM FILLER KIT



- Refill new coolant by creating a vacuum in the cooling system
- No need to undergo time-consuming air bleeding after refilling new coolant
- Conical adapter offers a wide variety of applications for different radiator filler necks
- Minimizes the risk of engine overheating
- For passenger and heavy duty vehicles

INCLUDED IN KIT:

Vacuum Gauge (43013-001-G)	0 - 30 inHg
Shop air connector	Connect to create vacuum
Air Valve	To control air flow
Venturi Style Vacuum	To connect with an air compressor to create vacuum
Conical Adapter	To connect to radiator or expansion tank
Coolant Hose with Connector and Coolant Valve	To add new coolant. Turn coolant valve to pull new coolant into system - 51" long
Drain Hose	For draining residual fluid in the radiator and the tool

43705 REFRACTOMETER



- Offers a quick and easy way to test the freezing point of coolant/anti-freeze
- Compatible with ethylene or propylene glycol
- Measures battery acid gravity to verify battery life
- Automatic temperature compensation
- Large, easy to read graphics, high contrast lens and adjustable viewfinder
- Strong, steel body structure
- Includes storage case, fluid dropper and mini screw driver

43050 AIR POWERED BRAKE CALIPER WIND BACK TOOL KIT

Pneumatic brake caliper piston compressor kit constructed of light weight durable anodized aluminum. Right or left hand wind-back operation for rear brake caliper pistons. Pneumatic single piston press shaft operation allows one technician to perform the brake job.

- Durable non-impact single piston shaft
- Magnetic base to secure press adapters
- 15 piece press adapter set
- Left or right wind-back operation
- O-ring protected shaft to maintain proper pressure
- Center shaft constructed of chrome alloy steel
- Protective rubber guard to prevent damage to shaft and caliper
- 3/8" drive adapter surface

43051 AIR POWERED BRAKE CALIPER WIND BACK TOOL

- Pneumatic wind back tool offers energy-savings on brake calipers
- Pneumatic tool allows right and left-hand rotation

43058 DRUM BRAKE HOLD-DOWN SPRING PLIERS

- Universal application for nearly all drum brakes
- Special curved neck provides easy access to hold-down pins regardless of the barrier created by the wheel hub
- An integral forming head without welding offers high strength



52224-A INFRARED THERMOMETER WITH LASER

»POPULAR«



The 52224-A offers laser targeting accuracy, enhanced back-lit LCD Display and an expanded temperature range. The compact design is simple to use and easy to store.

SPECIFICATIONS:

- Non-contact temperature range: -58 to 1022°F (-50 to 550°C)
- Field of view: 12 : 1
- Display illumination: back-lit LCD color display
- Target indicator: circular laser spot
- Emissivity: 0.95
- Resolution: 0.1°F / 0.1°C
- Accuracy: ±4°F (2°C) or ±2% of reading
- Response time: 0.5 seconds
- Power off: automatic after 15 seconds
- Battery life: approximately 14 hours
- Included accessories: 2 AAA batteries, instruction manual, plastic molded case



52224-CC INFRARED THERMOMETER WITH CIRCULAR LASER



Features both infrared and dual laser technologies.

SPECIFICATIONS:

- Non-contact temperature range: -76 to 1400°F (-60 to 760°C)
- Field of view: 12 : 1
- Display illumination: back-lit LCD color display
- Target indicator: Circular laser spot
- Emissivity: 0.95
- Resolution: 0.1°F / 0.1°C
- Accuracy: ±4°F (2°C) or ±2% of reading
- Response time: 1 second
- Power off: automatic after 15 seconds
- Battery life: approximately 14 hours
- Included accessories: 2 AAA batteries, instruction manual, plastic molded case



52225-A DUAL TEMP PLUS INFRARED THERMOMETER

Features both infrared and contact thermometer technologies. Includes programmable HI/LO alarms and Lock Mode to capture temperature readings. The contact function offers a built-in K type jack and wire thermocouple.

SPECIFICATIONS:

- Non-contact temperature range: -76 to 1400°F (-60 to 760°C)
- Thermocouple temperature range: -83 to 1999°F (-64 to 1400°C)
- Field of view: 30 : 1
- Display illumination: back-lit LCD display
- Target indicator: single laser spot
- Emissivity: 0.10 (10E) to 1.0 (100E)
- Resolution: 0.1°F / 0.1°C
- Modes: MIN, MAX, DIFF & AVG
- Accuracy: ±4°F (2°C) or ±2% of reading
- Response time: 1 second
- Power off: automatic after 15 seconds
- Battery life: approximately 14 hours
- Included accessories: 2 AAA batteries, 1m thermocouple probe, instruction manual, plastic molded case



3 ft. (1m) Wire Thermocouple Included

Optional accessories: 3 m wire thermocouple probe, piercing penetration probe, surface probe, air probe

52225-B ULTRA TEMP DUAL LASER THERMOMETER

Features both infrared and contact thermometer technologies. Includes programmable HI/LO alarms, and lock mode to capture temperature readings. The built-in K type jack offers optional contact functions. Illuminates working area with built-in LED light.

SPECIFICATIONS:

- Non-contact temperature range: -83 to 1832°F (-64 to 1000°C)
- Thermocouple temperature range: -83 to 2552°F (-64 to 1400°C)
- Field of view: 50 : 1
- Display illumination: back-lit LCD display
- Target indicator: dual laser spot
- Emissivity: Adjustable 0.1 to 1 step .01
- Resolution: 0.1°F / 0.1°C
- Modes: MIN, MAX, DIFF & AVG
- Accuracy: ±4°F (2°C) or ±2% of reading
- Response time: 1 second
- Power off: automatic after 15 seconds
- Battery life: approximately 14 hours
- Included accessories: 2 AAA batteries, instruction manual, plastic molded case
- Optional accessories: 1 m, 3 m wire thermocouple probes, piercing penetration probe, surface probe, air probe



Optional Wire Thermocouple

52226 DUAL TEMP INFRARED/PROBE THERMOMETER



The 52226 dual temp thermometer offers both infrared and contact probe technologies.

- Infrared temperature range: -67 to 428°F (-55 to 220°C)
- Probe temperature range: -67 to 626°F (-55 to 330°C)
- Field of view ratio 1 : 1
- Adjustable emissivity
- Lock mode for hands free scanning
- Minimum/maximum capture mode
- Contact probe locks safely on the side of the unit

52227 POCKET INFRARED THERMOMETER



The 52227 pocket infrared thermometer offers accurate non-contact temperature measurement in a compact and easy to use size.

- Temperature range: -67 to 428°F (-55 to 220°C)
- Field of view ratio 1 : 1
- Adjustable emissivity
- Back-lit LCD display
- Minimum/maximum capture mode

POCKET DESIGNS



All thermometers include pocket holder and clip.

Pocket Analog Design

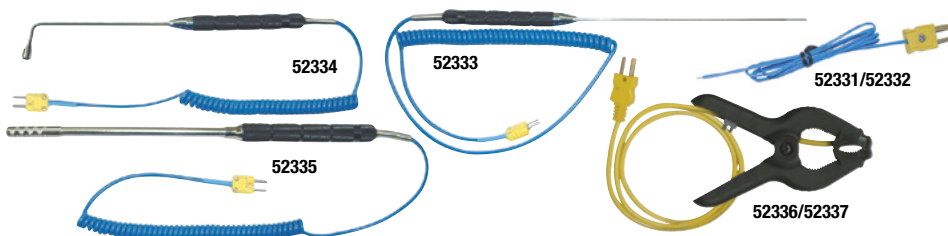
Item#	Dial Size	Temperature Scale
52220	25 mm	0 to 220°F
52161	35 mm	-40 to 160°F (-40 to 70°C)
91120	44.5 mm	0 to 220°F

Pocket Digital Design

Battery operated, on/off and auto shut-off after 10 minutes, ±1°C accuracy, 0.1°C resolution

Item#	Dial Size	Temperature Scale
52223-A	25 mm	-58 to 302°F (-50 to 150°C)

OPTIONAL THERMOCOUPLE PROBES



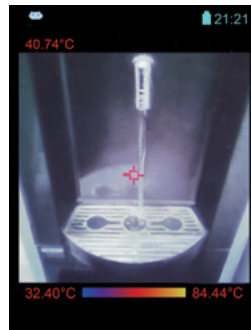
52331	Wire probe - 3 ft (1 m)
52332	Wire probe- 10 ft (3 m)
52333	Piercing penetration probe w/coil cord
52334	Surface probe w/coil cord
52335	Air probe w/coil cord
52336	Clamp-on probe - 3 ft (1 m)
52337	Clamp-on probe - 10 ft (3 m)

52325 THERMAL IMAGING CAMERA WITH VISIBLE CAMERA

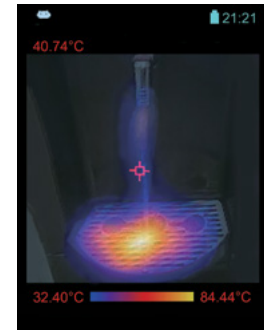
with carry case, micro SD card, CD, USB cord, batteries and instructions



VISIBLE CAMERA:



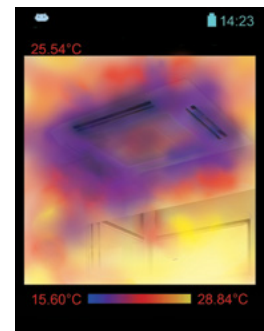
Visual



Fusion



Visual



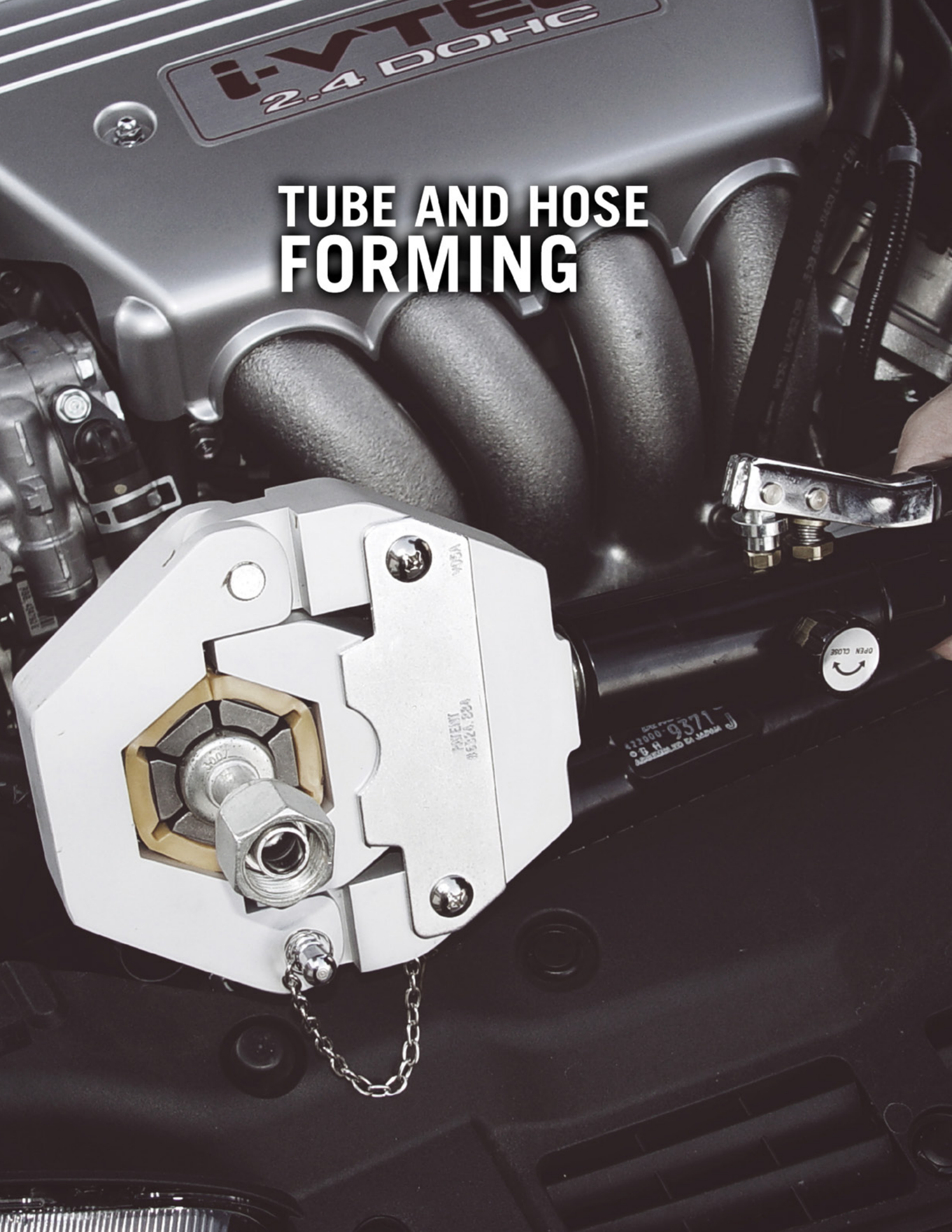
Fusion

- Fully automatic
- Focus free
- Superior measurement/accuracy
- Micro SD card storage
- Reporting software included

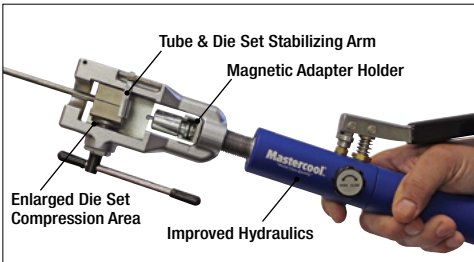
SPECIFICATIONS:

Thermal image resolution:	32 x 31 pixels
Visual image resolution:	640 x 480
Measurement range:	-4 to 662°F (-20 to 350°C)
Accuracy (tamb=20 to 26°C):	±2% of reading, or 4°F (2°C) whichever is greater
Thermal sensitivity:	0.1°F (0.1°C)
Frame rate:	9 Hz
Field of view:	40 x 40 deg
Emissivity range:	0.95 default – adjustable 0.1 to 1 step 0.1
Focus:	Focus free
LCD size:	2.8" (71 mm)
LCD:	Color
Image storage:	Stores up to 25,000 images, BMP format (typical 8G micro SD card)
Memory type:	Micro SD card
Sensor filter:	8 to 14 um
Interface:	USB
Battery type:	3.6V Li-ion rechargeable battery
Battery life (with back-lit):	3 hours continuous use
Dimensions:	3.73 x 2.91 x 9.20 inch (94.65 x 74.03 x 233.68 mm)

TUBE AND HOSE FORMING



72475 UNIVERSAL HYDRAULIC FLARING TOOL SET



This kit fabricates: push connect 1/4, 5/16 and 3/8", GM fuel line flare, brake lines and transmission 5/16 and 3/8", flare/double flare 3/16, 1/4, 5/16, 3/8 and 1/2", metric bubble flare 4.75, 6, 8, and 10 mm. Comes in a custom molded box. **PATENT# 5,782,128**

- 71202** Hydra-flare yoke & pump assembly
- 71097-01** 45° flaring cone
- 72485-PB** Custom molded plastic box for 72475

Push Connect Adapters

- 71204** 1/4" adapter
- 71205** 5/16" adapter
- 71206** 3/8" adapter

Push Connect Die Sets

- 71214** 1/4" die set
- 71215** 5/16" die set
- 71216** 3/8" die set

GM Fuel Line Adapters

- 71405** 5/16" adapter
- 71406** 3/8" adapter

GM Fuel Line Die Sets

- 71415** 5/16" die set
- 71416** 3/8" die set

45° & Double Flaring Adapters

- 71097-03** 3/16" adapter
- 71097-04** 1/4" adapter
- 71097-05** 5/16" adapter
- 71097-06** 3/8" adapter
- 71097-08** 1/2" adapter

45° & Double Flaring Die Sets

- 71097-13** 3/16" die set
- 71097-14** 1/4" die set
- 71097-15** 5/16" die set
- 71097-16** 3/8" die set
- 71097-18** 1/2" die set

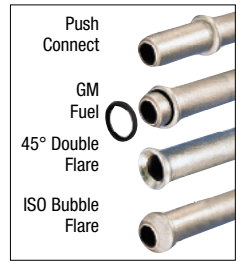
Metric Bubble Flaring Adapters

- 71475-4M** 4.75mm adapter
- 71475-6M** 6mm adapter
- 71475-8M** 8mm adapter
- 71475-10M** 10mm adapter

Metric Bubble Flaring Die Sets

- 71475-14M** 4.75mm die set
- 71475-16M** 6mm die set
- 71475-18M** 8mm die set
- 71475-110M** 10mm die set

>>POPULAR<<



72485 UNIVERSAL HYDRAULIC FLARING TOOL SET



This kit fabricates: push connect 1/4, 5/16 and 3/8", GM fuel line flare, brake lines and transmission 5/16 and 3/8", flare/double flare 3/16, 1/4, 5/16, 3/8 and 1/2", metric bubble flare 4.75, 6, 8, and 10 mm, GM transmission cooling line 3/8 and 1/2". Comes in a custom molded box. **PATENT# 5,782,128**

- 71202** Hydra-flare yoke & pump assembly
- 71097-01** 45° flaring cone
- 72485-PB** Custom molded plastic box for 72475

Push Connect Adapters

- 71204** 1/4" adapter
- 71205** 5/16" adapter
- 71206** 3/8" adapter

Push Connect Die Sets

- 71214** 1/4" die set
- 71215** 5/16" die set
- 71216** 3/8" die set

GM Fuel Line Adapters

- 71405** 5/16" adapter
- 71406** 3/8" adapter

GM Fuel Line Die Sets

- 71415** 5/16" die set
- 71416** 3/8" die set

45° & Double Flaring Adapters

- 71097-03** 3/16" adapter
- 71097-04** 1/4" adapter
- 71097-05** 5/16" adapter
- 71097-06** 3/8" adapter
- 71097-08** 1/2" adapter

45° & Double Flaring Die Sets

- 71097-13** 3/16" die set
- 71097-14** 1/4" die set
- 71097-15** 5/16" die set
- 71097-16** 3/8" die set
- 71097-18** 1/2" die set

Metric Bubble Flaring Adapters

- 71475-4M** 4.75mm adapter
- 71475-6M** 6mm adapter
- 71475-8M** 8mm adapter
- 71475-10M** 10mm adapter

Metric Bubble Flaring Die Sets

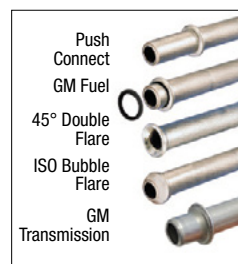
- 71475-14M** 4.75mm die set
- 71475-16M** 6mm die set
- 71475-18M** 8mm die set
- 71475-110M** 10mm die set

GM Transmission Cooling Line Adapters

- 71099-06** 3/8" adapter
- 71099-08** 1/2" adapter

GM Transmission Cooling Line Die Sets

- 71099-16** 3/8" die set
- 71099-18** 1/2" die set



71197 45° AND DOUBLE FLARING ADAPTERS AND DIES FOR HYDRA-FLARE YOKE AND PUMP ASSEMBLY



To be used with 71475 hydraulic pump assembly.

Includes:

- 71097-01 45° flaring cone
- 71097-03 3/16" 45° & double flaring adapter
- 71097-04 1/4" 45° & double flaring adapter
- 71097-05 5/16" 45° & double flaring adapter
- 71097-06 3/8" 45° & double flaring adapter
- 71097-08 1/2" 45° & double flaring adapter
- 71097-13 3/16" 45° & double flaring die set
- 71097-14 1/4" 45° & double flaring die set
- 71097-15 5/16" 45° & double flaring die set
- 71097-16 3/8" 45° & double flaring die set
- 71097-18 1/2" 45° & double flaring die set

71144 GM FUEL LINE ADAPTERS AND DIES FOR HYDRA-FLARE YOKE AND PUMP ASSEMBLY



To be used with 71475 hydraulic pump assembly.

Includes:

- 71405 5/16" GM fuel line adapter
- 71406 3/8" GM fuel line adapter
- 71415 5/16" GM fuel line die set
- 71416 3/8" GM fuel line die set

71175 METRIC BUBBLE FLARING ADAPTERS AND DIES FOR HYDRA-FLARE YOKE AND PUMP ASSEMBLY



To be used with 71475 hydraulic pump assembly.

Includes:

- 71475-4M 4.75mm metric bubble flaring adapters
- 71475-6M 6mm metric bubble flaring adapters
- 71475-8M 8mm metric bubble flaring adapters
- 71475-10M 10mm metric bubble flaring adapters
- 71475-14M 4.75mm metric bubble flaring die set
- 71475-16M 6mm metric bubble flaring die set
- 71475-18M 8mm metric bubble flaring die set
- 71475-110M 10mm metric bubble flaring die set

71099-TC 3/8" GM TRANSMISSION COOLING LINE DIE AND ADAPTER SET



To be used with 71475 hydraulic pump assembly.

Includes:

- 71099-06 3/8" GM transmission cooling line adapter
- 71099-16 3/8" GM transmission cooling line die set

71099-TC8 1/2" GM TRANSMISSION COOLING LINE DIE AND ADAPTER SET



To be used with 71475 hydraulic pump assembly.

Includes:

- 71099-08 1/2" GM transmission cooling line adapter
- 71099-18 1/2" GM transmission cooling line die set

71098 37° FLARING & DOUBLE FLARING ADAPTER SET



Includes:

- 71098-03 3/16" 37° double flaring adapter
- 71098-04 1/4" 37° double flaring adapter
- 71098-05 5/16" 37° double flaring adapter
- 71098-06 3/8" 37° double flaring adapter
- 71098-08 1/2" 37° double flaring adapter
- 71098-01 37° cone
- 71098-13 3/16" 37° double flare die set
- 71098-14 1/4" 37° double flare die set
- 71098-15 5/16" 37° double flare die set
- 71098-16 3/8" 37° double flare die set
- 71098-18 1/2" 37° double flare die set

71201-001A-REPK REPAIR KIT FOR 71475, 71480, 71300, 71400, 71450, 72475, 72480, 72300, 72400, 72450, 72485



Includes snap ring "c-clip", o-ring for shaft, back Up o-ring for shaft, valve assembly kit with .187" silver ball, back check valve and shaft handle assembly

72480 37° FLARING AND DOUBLE FLARING HYDRAULIC TOOL KIT



This kit fabricates factory style 37° and 37° double flare found on aviation and specialty automotive applications. The hand-held hydraulic pump operates easily with all steel and light stainless tubing. Includes: 3/16, 1/4, 5/16, 3/8 and 1/2" dies 3/16, 1/4, 5/16, 3/8 and 1/2" double flare adapters and 37° Cone.

- 71202** Hydra-flare yoke & pump assembly
- 71098-01** 37° cone
- 72480-PB** Custom molded plastic box for 72480

37° Double Flaring Adapters & Die Sets

- | | |
|--|--|
| 71098-03 3/16" double flare adapter | 71098-13 3/16" double flare die set |
| 71097-04 1/4" double flare adapter | 71098-14 1/4" double flare die set |
| 71097-05 5/16" double flare adapter | 71098-15 5/16" double flare die set |
| 71097-06 3/8" double flare adapter | 71098-16 3/8" double flare die set |
| 71097-08 1/2" double flare adapter | 71098-18 1/2" double flare die set |

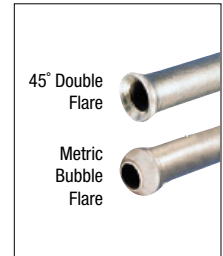


72450 DOUBLE FLARE & METRIC BUBBLE FLARING TOOL SET



This kit fabricates flare/double flare 3/16, 1/4, 5/16, 3/8 and 1/2"; and metric bubble flare 4.75, 6, 8 and 10mm. Comes in a custom molded carrying case and includes:

- 71202** Hydra-flare yoke & pump assembly
 - 71097-01** 45° flaring cone
- | | |
|--|--|
| 45° & Double Flaring Adapters | 45° & Double Flaring Die Sets |
| 71097-03 3/16" adapter | 71097-13 3/16" die set |
| 71097-04 1/4" adapter | 71097-14 1/4" die set |
| 71097-05 5/16" adapter | 71097-15 5/16" die set |
| 71097-06 3/8" adapter | 71097-16 3/8" die set |
| 71097-08 1/2" adapter | 71097-18 1/2" die set |
| Metric Bubble Flaring Adapters | Metric Bubble Flaring Die Sets |
| 71475-4M 4.75mm adapter | 71475-14M 4.75mm die set |
| 71475-6M 6mm adapter | 71475-16M 6mm die set |
| 71475-8M 8mm adapter | 71475-18M 8mm die set |
| 71475-10M 10mm adapter | 71475-110M 10mm die set |



72400 GM FUEL LINE FLARING KIT



This kit fabricates the special flares found on most GM fuel lines and some GM truck power steering pump return lines (5/16"). Kit comes in a custom molded carrying case and includes:

- 71202** Hydra-flare yoke & pump assembly
- | | |
|------------------------------|------------------------------|
| GM Fuel Line Adapters | GM Fuel Line Die Sets |
| 71405 5/16" adapter | 71415 5/16" die set |
| 71406 3/8" adapter | 71416 3/8" die set |

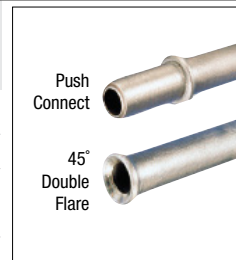


72300 PUSH-CONNECT, 45° & DOUBLE FLARING SET WITH “HYDRA-FLARE”



Fabricates “production quality” flares quickly and easily with hand held convenience. Flaring die sets for five sizes: 3/16, 1/4, 5/16, 3/8 and 1/2” O.D. tubing; five double flaring adapters cover 3/16, 1/4, 5/16, 3/8 and 1/2” O.D. tubing. Set includes:

71202	Hydra-flare yoke & pump assembly	
71097-01	45° flaring cone	
Push Connect Adapters		
71204	1/4” adapter	71214 1/4” die set
71205	5/16” adapter	71215 5/16” die set
71206	3/8” adapter	71216 3/8” die set
45° & Double Flaring Adapters		
71097-03	3/16” adapter	71097-13 3/16” die set
71097-04	1/4” adapter	71097-14 1/4” die set
71097-05	5/16” adapter	71097-15 5/16” die set
71097-06	3/8” adapter	71097-16 3/8” die set
71097-08	1/2” adapter	71097-18 1/2” die set



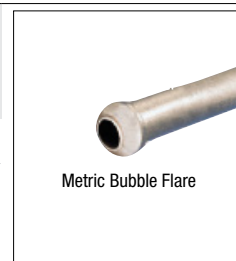
71100 METRIC BUBBLE FLARING TOOL SET



Fashions International Standards Organization (I.S.O.) bubble flare found on European, Japanese and some domestic model brake lines. Flares without removing brake lines from a vehicle. Includes hardened steel bar and carrying case. Set includes: Adapters for 4.75, 6, 8 and 10mm O.D. tubing.

Also available:

71101	Set of four bubble flaring adapters for 4.75, 6, 8 and 10mm O.D. tubing
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70092 45° FLARING, DOUBLE FLARING & CUTTING TOOL SET



Includes heavy duty tube cutter 70033 for 1/8 to 1 1/8” O.D. tubing; standard 45° flaring tool 70051 flares 7 sizes: 3/16, 1/4, 5/16, 3/8, 7/16, 1/2 and 5/8” O.D. tubing; five double flaring adapters 70192 cover 3/16, 1/4, 5/16, 3/8 and 1/2” O.D. tubing.

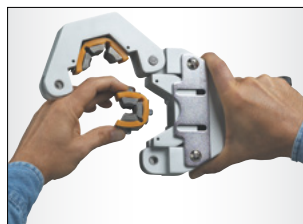
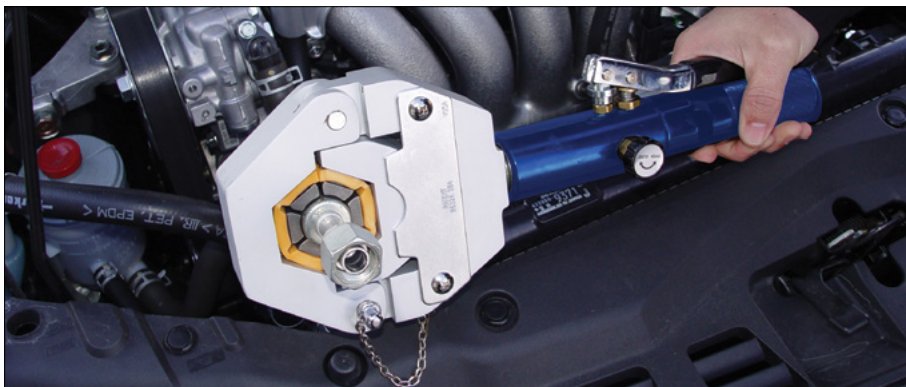
Also available:

70097	Same as 70092, less 70033 tube cutter
70192	Set of 5 double flaring adapters for 3/16, 1/4, 5/16, 3/8 and 1/2” O.D. tubing
70092-M	Metric flaring, double flaring & cutting tool set flares 7 metric sizes: 4, 6, 8, 10, 12, 15 and 16mm O.D. tubing
70192-M	Metric double flaring adapter set covers 4.75, 5, 6, 8 and 10mm O.D. tubing
70097-M	Same as 70092-M, less 70033 tube cutter



71500-A HYDRA-KRIMP

»POPULAR«



The die snaps quickly into the press fixture requiring no pins or screws.



Fabricating A/C Hoses Just Got Easier...

Mastercool's patented "Hydra - Krimp" makes crimping barbed and beaded fittings as easy as 1 - 2 - 3! The lightweight hand-held hydraulic press is very portable and ideal for shop and field applications. The kit comes with a complete set of dies covering hose sizes #6, #8, #10, #12 and reduced barrier #6, #8, #10 and #12. The dies snap quickly into the press fixture requiring no pins or screws. **PATENT# 6,324,884**

Kit comes in a custom molded case and includes:

- 71500-001AB** Hydra-Krimp pump
- 71500-001B** Hydra-Krimp yoke
- 71500-001C** Complete die set assembly (7 pc. set)
- 71500-6** Die set - #6 (5/16"), die set - #8 (13/32" reduced barrier)
- 71500-8** Die set - #8 (13/32")
- 71500-10** Die set - #10 (1/2")
- 71500-12** Die set - #12 (5/8")
- 71500-6SRB** Die set - #6 (5/16" reduced barrier)
- 71500-10SRB** Die set - #10 (1/2" reduced barrier)
- 71500-12SRB** Die set - #12 (5/8" reduced barrier)
- 71500-PB** Custom molded box

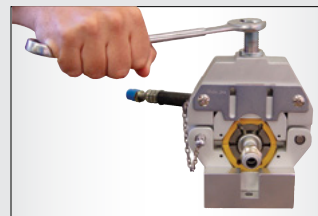
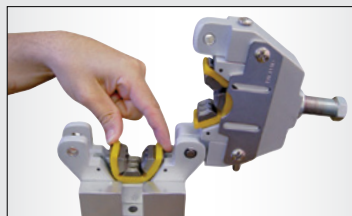
71550 A/C HOSE CRIMPER

»POPULAR«



The 71550 is our "manual style" A/C hose crimper. The dies snap quickly into place requiring no pins or screws. The unit can be easily mounted to a bench using the holding fixture or held securely in a vice. This kit comes with a complete set of dies covering standard hose sizes #6, #8, #10 and #12. **PATENT# 6,324,884**

***Optional reduced barrier sizes are available.**



The die snaps quickly into the press fixture requiring no pins or screws.

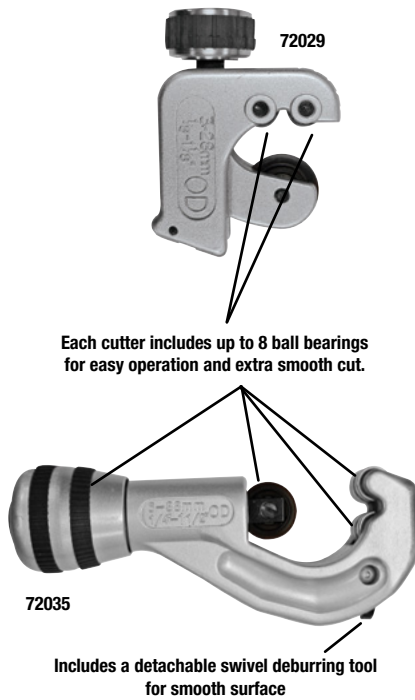


Kit comes in a custom molded case and includes:

- | | | | |
|------------------|--------------------------|-----------------|-----------------------------|
| 71500-001 | Hydra-Krimp pump | 71500-8 | Die set - #8 (13/32") |
| 71550-002 | Arbor assembly | 71500-10 | Die set - #10 (1/2") |
| 71550-003 | Holding fixture assembly | 71500-12 | Die set - #12 (5/8") |
| 71500-6 | Die set - #6 (5/16") | 71550-PB | Custom molded carrying case |



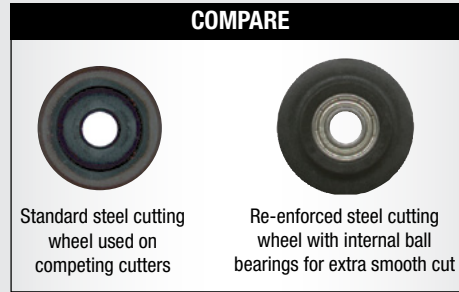
BALL BEARING CUTTERS



Each cutter includes up to 8 ball bearings for easy operation and extra smooth cut.

Includes a detachable swivel deburring tool for smooth surface

Mastercool's ball bearing tube cutters offer the latest "reduced friction" technology! Our reduced friction design incorporates ball bearings into the cutter wheel, tube rollers and a control knob. Reducing the resistance in these high friction areas allows the cutter to roll fast and easy as it slices through the tube. The "reduced friction" design is sure to save time and reduce fatigue!



Standard steel cutting wheel used on competing cutters

Re-enforced steel cutting wheel with internal ball bearings for extra smooth cut



- 72029** "Reduced friction" tube cutter for 1/8 to 1 1/8" (3-28 mm)
- 72035** "Reduced friction" tube cutter for 1/4 to 1 1/2" (6-38 mm)
- 72030** Replacement cutting wheel for 72029
- 72034** Replacement cutting wheel for 72035

TUBE CUTTERS



Mastercool tube cutters are lightweight yet durable. Carbide steel cutting wheels work with hard and soft copper, aluminum, brass, thin wall steel and stainless steel. All cutters feature rollers with flare cut-off grooves to salvage as much old tubing material as possible.

- 70027** Mini tube cutter for 1/8 to 5/8" (3-16 mm) O.D. tubing (1/8 to 1/2" nominal)
- 70029** Mini tube cutter for 3/8 to 1 1/8" (4-28 mm) O.D. tubing (1/4 to 1" nominal)
- 70033** Heavy duty tube cutter for 1/8 to 1 1/8" (4-28 mm) O.D. tubing (1/4 to 1" nominal)
- 70035** Heavy duty tube cutter for 1/4 to 1 5/8" (6-40 mm) (1/4 to 1 1/2" nominal)
- 70037** Sliding ratchet tube cutter for 1/4 to 2 5/8" (6-67 mm) O.D. tubing (1/4 to 2 3/4" nominal), triple chrome plated
- 70038** Sliding ratchet tube cutter for 1/4 to 3 1/2" (6-89 mm) O.D. tubing (1/4 to 3" nominal)



RATCHET STYLE TUBE CUTTER



When you don't have swing room, ratchet action allows cutting all the way around the tubing easy.

70030 (1/4 to 7/8" O.D. tubing)

70031 (5/16 to 1 1/8" O.D. tubing)

80021 PLUMBERS TYPE MINI CUTTER



Designed for applications with limited working space. Cuts soft copper, aluminum and thin wall steel tubing. Tube cutter for 1/8 to 7/8" (4-22 mm) O.D. Tubing. (1/8 to 3/4" nom.)

80121 Spare cutting wheel for 80021

REPLACEMENT CUTTER WHEELS



70028



70034

70028 Replacement cutting wheels for 70027 (10 pcs).

70034 Replacement cutting wheels for 70029, 70030, 70031, 70033, 70035, 70037 (10 pcs + 1 holding screw)

70128 Carbide cutting wheel & screw set for 70027 includes: 2 spare cutting wheels and 1 holding screw

70134 Carbide cutting wheel and screw set for 70029, 70035. Includes: 2 spare cutting wheels and 1 holding screw

70138 Replacement cutting wheel for 70038 (1 per pkg.) Cut hard and soft copper, aluminum, brass, thin wall steel and stainless steel

70237 PVC cutting wheel for 70037. Cuts PVC and ABS

70238 Oversize PVC cutting wheel for 70038. Wheel is 1 5/8" diameter. Cuts PVC and ABS

TUBE CONSTRICTOR WHEEL

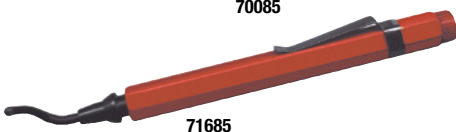


70233 Used with 70033 or 70035

INNER-OUTER REAMERS



70085

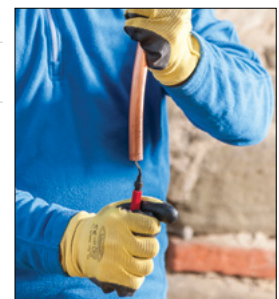


71685

70085 Inner/outer reamer for 3/16 to 1 1/2" O.D. tubing

71685 Designed to remove inner burrs easily. Full metal grip. Includes one spare tungsten blade for long use

71686-2 Two spare blades for 71685 (2 pcs)

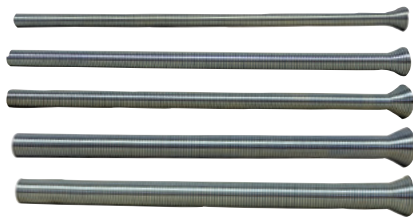


70069-A 4-IN-1 LEVER STYLE TUBE BENDER



Complete 180° bend all metal multi-purpose tube bender for 3/16, 1/4, 5/16 and 3/8" O.D. tubing.

SPRING STYLE TUBE BENDERS



Economical and effective tools for bending soft copper or aluminum tubing without kinks. Special nickel plated, spring steel is flared on one end for quick tube insertion. Each tool bends one size.

MODEL#	SIZE	LENGTH
70071	1/4"	10"
70072	5/16"	10"
70073	3/8"	10"
70074	1/2"	12"
70075	5/8"	14"
70077	3/4"	14"

70076 SPRING STYLE TUBE BENDER SET



Set of 5 spring benders for 1/4, 5/16, 3/8, 1/2 and 5/8" O.D. tubing.

RATCHET WRENCHES



- 70081** Steel forged wrench with reversible ratchet. 9/16", 1/2" hex, 1/4" and 3/16" square
- 70082** Compact chrome satin wrench specially designed for use in hard to reach places. 1/4, 3/8, 3/16 and 5/16" square ratchet

91000-A DELUXE CLUTCH HUB PULLER/INSTALLER KIT **>>POPULAR<<**

Kit contains a complete offering of A/C compressor clutch hub pullers and installers for GM, Ford, Chrysler and Imports. Includes a compressor identification chart and comes in a custom molded case.



92311 DELUXE ORIFICE TUBE SERVICE KIT

This 5 piece universal kit will remove and install any style orifice tube. Comes in custom molded box.



92329 TOYOTA A/C DISCONNECT TOOL

The new Toyota spring lock A/C hose couplings require this special disconnect tool. Simply insert the end of the tool into the coupling to disengage the hose.



91002 GM & FORD ORIFICE TUBE REMOVER/INSTALLER

Used on all GM (CCOT) and Ford (FOTCC) systems with evaporator inlet orifice tube



91008 FORD (FOTCC) REMOVER/INSTALLER

Used for Ford systems produced after 1980



91009 GM (CCOT) & FORD (FOTCC) SCREEN EXTRACTOR

Used with 91002 and 91008

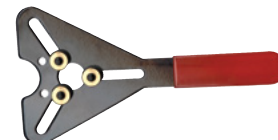


91010 FORD AEROSTAR EXPANSION TUBE REMOVER/INSTALLER

Special design for condenser mounted tube



90499 UNIVERSAL CLUTCH HOLDING TOOL



PRESSURE TESTING ADAPTER CHART

CAP #	MAKE & MODEL
2	Mercedes Benz, GM (Buick), Jeep
3	Buick (Lesabre: 1990-, Park Avenue: 1991-), Chrysler (Sebring: 1995-), Chevrolet (Venture: 1997-), Dodge (Caravan: 1989-, Dakota: 1989-, Stratus: 1995-), Jeep, Mercedes (W123, W124, W126, W201), Oldsmobile (Silhouette: 1990-), Pontiac (Bonneville: 1990-, Grand Prix: -2003)
4	Acura (Integra: 1991-1993, Legend: 1989-1990, NSX: 1995-2004, SLX: 1997, Vigor: 1992-1994), BMW (M6:2008), Chevrolet (Nova: 1985-1998, Spectrum: 1985-1988, Sprint: 1986-1988), Chrysler (Laser: 1991-1998, Sebring: 1996-1998), Dodge (Avenger: 1995-1995, Colt: 1984-1991, Ram 50: 1989-1992, Stealth 1993-1996), Eagle (Summit: 1989, Talon: 1991-1998), Ford (Aspire: 1994-1997, Escort: 1991-2002, Expedition: 2009-2011, Explorer: 1995-2001, Explorer Sport Trac: 2001-2005, F150: 2009-2011, Festiva: 1989-1993, Mustang: 1997-2004, Probe: 1989-1997, Ranger: 1995-2011, Tempo: 1992-1994, Thunderbird: 1992-1995, Windstar: 1996-1999), Geo (Metro: 1989-1993, Prizm: 1989-1991, Spectrum: 1989, Storm: 1990-1993, Tracker: 1989), GM (Nova, Spectrum, Sprint), Honda (Accord: 1990-1993, Civic: 1988-1991, CRX: 1989-1990, Motorcycles: 1991-2004, Passport: 1994-2002, Prelude: 1990-1998), Hyundai (Accent: 1995-2010, Azera: 2006-2010, Elantra: 1992-2011, Entourage: 2007-2008, Excel: 1986-1994, Genesis: 2009-2010, Genesis Coupe: 2010, Sante Fe: 2002-2010, Scoupe: 1994, Sonata: 1989-2011, Tiburon: 1998-2008, Tuscon: 2005-2010, Veracruz: 2007-2010, XG 350: 2004) Infiniti: (FX35: 2003-2007, G20: 1991-2002, G35: 2004-2007, I30: 1997-2000, I35: 2002-2004, J30: 1996, M30: 1990-1992, M35: 2006-2009, M45: 2003-2010, Q45: 1990-2006, QX4: 1998-2003), Isuzu (Amigo: 1989-2000, Axiom: 2002-2004, I-Mark: 1985-1989, Impulse: 1985-1992), Kia (Amanti: 2006-2009, Borrego: 2009, Forte: 2011, Optima: 2002-2010, Rio: 2002-2011, Rio5: 2007-2011, Rondo: 2009-2010, Sedona: 2003-2011, Sephia: 1994-2001, Sorrento: 2003-2011, Soul: 2010-2011, Spectra: 2002-2009, Spectra5: 2005-2009, Sportage: 1995-2011), Lexus (ES300: 1996-2003, ES330: 2005, LS400: 1992, LX 450: 1996-1999, LX470: 1998-2005, SC400: 1992), Lincoln (Navigator: 2009-2011), Mazda (323: 1986-1993, 626: 1985-1999, 929: 1990-1993, B2000: 1986-1987, B2200: 1988-1993, B2300: 2005, B2500: 1998-2000, B2600: 1987-1993, B3000: 1996-2007, B4000: 1995-2006, CX-9: 2007-2010, Matia: 1991-2005, Millennia: 1995-2002, MPV: 1991-2006, MX-5 Matia: 2006-2012, MX-6: 1991-1997, Protege: 1993-2003, RX-7: 1986-1995, RX-8: 2005-2009), Mercury (Capri: 1991-1994, Cougar: 1989-1992, Cougar w/V6: 1993-1997, Mountaineer: 1997-2000, Topaz: 1992-1994, Tracer: 1988-1999, Villager: 1994-2002), Mitsubishi (3000GT: 1992-1996, Cordia: 1986-1988, Diamante: 1992-1995, Eclipse: 1990-1999, Galant: 1989-1993, Mighty Max: 1987-1994, Mirage: 1985-1992, Montero: 1989-1998, Outlander: 2003-2011, Outlander Sport: 2011, Precis: 1988-1992, Starion: 1984-1986), Mercedes Benz, Nissan (200SX: 1984-1988, 240SX: 1990-1994, 300ZX: 1984-1996, Altima: 1993-2006, Axxess: 1990, Cube: 2009-2010, D21: 1986-1994, Frontier: 1998-2011, Maxima: 1987-2008, Murano: 2003-2007, NX: 1991-1993, Pathfinder: 1987-2004, Pulsar NX: 1987-1989, Quest: 1994-2009, Rogue: 2009-2010, Sentra: 1987-2011, Stanza: 1987-1992, Versa: 2007-2011, Xterra: 2000-2012), Plymouth (Colt: 1984-1991, Laser: 1993-1994), Subaru (Baja: 2004-2005, Brat: 1983-1987, DL: 1983-1989, Forester: 1999-2011, GL: 1983-1989, GL-10: 1985-1989, Impreza: 1993-2001, Justy: 1998-1993, Legacy: 1990-2011, Loyale: 1990-1992, Outback: 2000-2011, RX: 1986, SVX: 1994-1997, XT: 1985-1991), Suzuki (Equator: 2009-2011, Samurai: 1986, Sidekick: 1989-1991, Swift: 1990-1994, XL-7: 2004-2006), Toyota (4Runner: 1986-1995, Avalon: 1995-2004, Camry: 1983-1991, Camry 4cylinder: 1994-1999, Celica: 1983-1989, Corolla: 1983-1992, Cressida: 1985-1992, Land Cruiser: 1993-2007, MR2: 1989-1995, Previa: 1991-1997, Sienna: 1998-2006, Solara: 1999-2008, Starlet: 1983-1984, Supra: 1987-1990, T100: 1995-1998, Tacoma: 1996-2004, Tercel: 1983-1990)
5	Acura (CL: 1997-2002, Integra: 1994-2000, Legend: 1993-1995, MDX: 2001-2011, RDX: 2009-2012, RL: 1996-2011, TSX: 2007-2012), Chevrolet (Metro: 1999-2000, Prizm: 1998-2002, Tracker: 1998-2004), Chrysler (Sebring: 2011), Dodge (Colt: 1993-1994, Stratus: 2001-2004), Eagle (Summit: 1992-1993), Geo (Metro: 1995-1997, Prizm: 1993-1997, Tracker: 1997), Honda (Accord: 1994-2011, Civic: 1992-2010, Civic del Sol: 1993-1997, CR-V: 1997-2010, CR-Z: 2011, Element: 2003-2010, Fit: 2008-2009, Insight: 2001-2011, Odyssey: 1998-2010, Pilot: 2003-2011, Prelude: 1999-2001, Ridgeline: 2007-2011, S2000: 2006-2009), Isuzu (Oasis: 1997, Rodeo: 1999-2000, Rodeo Sport: 2003), Lexus (ES250: 1990-1991, ES350: 2008-2012, GS300: 1993-2003, GS350: 2007-2009, GS430: 2004-2007, GX470: 2004-2005, IS300: 2003, IS350: 2009-2012, LS430: 2001-2003, LX570: 2011-2013, RX300: 1999-2006, RX350: 2008-2010, RX400H: 2006-2008, SC300: 1992-2010), Mazda (Mazda 2: 2011, Mazda 5: 2008-2010, Protege: 1995-2003), Mercedes (ML-class, W163, W164), Mitsubishi (Diamante: 1996-2004, Eclipse: 2000-2010, Endeavor: 2006-2011, Expo: 1992-1995, Expo LRV: 1992-1994, Galant: 1994-2011, Mirage: 1993-2002, Montero Sport: 1997-2003), Plymouth (Colt: 1992-1994), Pontiac (Vibe: 2003-2010), Scion (FR-S: 2013, iQ: 2012, tC: 2005-2010, xA: 2006), Subaru (B9 Tribeca: 2006-2007, Tribeca: 2008-2010), Suzuki (Aerio: 2003-2007, Esteem: 1995-2002, Sidekick: 1991-1998, Swift: 1999-2001, SX4: 2004, Cordoba-6K2: 1999-2002, Cordoba-6L2: 2002-2009, Ibiza III-6K1: 1999-2002, Ibiza IV-6L1: 2002-2009, 2005-2010, Camry V6 w/auto trans: 1990-1991, Camry: 1992-2011, Celica: 1990-1999, Corolla: 1993-2012, Echo: 2001-2005, FJ Cruiser: 2007-2010, Highlander: 2001-2011, Land Cruiser: 2009, Matrix: 2003-2011, Paseo: 1992-1998, Prius: 2001-2009, RAV4: 1996-2003, Sequoia: 2001-2011, Sienna: 2007-2011, Supra: 1990-1998, Tacoma: 2005-2011, Tercel: 1991-1998, Tundra: 2000-2011, Venza: 2009-2011, Yaris: 2008-2011), VW (Touareg: 2004)
6	Cadillac (Catera: 1997-2001), Chevrolet (Aveo: 2004-2011, Aveo5: 2006-2011, Epica: 2004), Daewoo (Leganza: 1999-2002, Lanos: 1999-2002, Nubira: 1999-2002), Ford (Contour: 1995-2000, Fiesta: 1995-, Focus: 1998-, Fusion: 2006-), GM (Achieva, Skylark, Grand Am: 1992-2002), Jaguar (All: 1990-1994, XJ8: 1998-2001, XJR: 1998-2001, XK8: 1997-2006, XKR: 2000-2006, X-Type: 2002-2007), Jeep , Land Rover (Discovery: 1989-2004, Range Rover: 1988-1994), Mercedes-Benz (ML-Class: 1997-2011), Mercury (Mystique: 1995-2000), Pontiac (Le Mans: 1988-1993, G3: 2009, Wave: 2005, Wave5: 2005), Porsche (911: 1999-, Boxter: 1997-), Saab (900: 1994-1998, 9-3: 1999-2003, 9-5: 1999-2008), Saturn (L100: 2001-2002, L200: 2001-2003, L300:2001-2005, L300-1: 2004, L300-2: 2004, L300-3: 2004, LS: 2000, LS1: 2000, LS2: 2000, LW1: 2000, LW2: 2000, LW200: 2001-2003, LW300: 2001-2003, Vue: 2002), Suzuki (Forenza: 2004-2008, Reno: 2005-2008, Swift+: 2004, Verona: 2004-2005)
7	Alfa Romeo (145-930: 1994-2001, 146-930: 1994-2001, 164-164: 1987-1998, 166-936: 1998, 33-907A: 1990-1994, 33 sportwagon-907B: 1990-1994, GTV-916C: 1994, Spider-916S: 1994-2005), Citroen (Jumper Box 230L: 1994-2002, Jumper Bus 230P: 1994-2002, Jumper Platform/Chassis 230: 1994-2002), Fiat (Coupe FA/175: 1993-2000, Cromia-154: 1985-1996, Ducato Box-230L: 1994-2002, Ducato Box-244: 2002, Ducato Bus-230: 1994-2002, Ducato Bus-244Z: 2002, Ducato Platform/Chassis230: 1994-2002), Lancia (Delta II-836: 1993-1999, Kappa-938A: 1994-2001, Kappa Coupe-838: 1996-2001, Kappa SW-838B: 1996-2001, Thema-834: 1984-1994, Thema SW-834: 1987-1994), MiniCooper (S:2002-), Peugeot (206: 1999-, 307-2004-, 406: 1999-, 407: 2004-, 807: 2004-, Boxer Box-230L: 1994-2002, Boxer Bus-230P: 1994-2002, Boxer platform/Chassis-ZCT: 1994-2002), Renault (All-1985-1987, Avantage: 2002-, Espace: 2002-), Saab (900-1978-1993, 9000: 1986-1998), Sterling (All: 1987-1991), Jeep , Volvo (Passenger vehicles w threaded neck)
8	VW (Vento, T4, Passat: 1990-1997, Beetle, Sharan, Cabrio: 1995-2002, Corrado: 1990-1994, Eurovan: 1993-2003, Golf: 1990-1999, 1990-1998: with female thread on filler neck of expansion tank - except 1998 Passat & New Beetle, Jetta: 1990-1999)
9	Audi (A3: 2006-2012, A3-8P1: 2003, A3 Sportback-8PA: 2004, A4: 1996-2012, A4-8EC, B7: 2004-2008, A4 Avant-8ED, B7: 2004-2008, A4 Quattro: 1996-2012, A5: 2011-2012, A5 Quattro: 2008-2012, A6: 1998-2012, A6 Quattro: 1998-2011, A7 Quattro: 2012, A8 Quattro: 2004-2010, Allroad Quattro: 2001-2005, Q5: 2009-2012, Q7: 2007-2012, R8: 2008-2012, RS4: 2007-2008, RS6: 2003, S4: 2000-2012, S5: 2008-2012, S6: 2002-2011, S8: 2007-2009, TT: 2000-2009, TT-8J3: 2006, TT-8N3: 1998-2006, TT Quattro: 2000-2013, TT Roadster-8J9: 2007, TT Roadster 8N9: 1999-2006), BMW (345), Porsche (Cayenne), Seat (Altea-5P1: 2004, Cordoba-6K2: 1999-2002, Cordoba-6L2: 2002-2009, Ibiza III-6K1: 1999-2002, Ibiza IV-6L1: 2002-2009, Leon-1M1: 199-2006), Skoda (Fabia: 2006, Fabia 6Y2: 1999-2008, Fabia Combi: 2007, Fabia Combi-6Y5: 2000-2007, Fabia Praktik: 2001-2007, Fabia Saloon-6Y3: 1999-2007, Laura-1Z3: 2004, Octavia 1U2: 1996-2010, Octavia Combi-1U5: 1998-2010, Octavia Combi-1Z5: 2004, Roomster-5J: 2006, Superb Estate: 3T5: 2009), VW (Beatie: 1998-2012, Caddy III Box-2KA, 2KH, 2CA, 2CH: 2004, Caddy III Estate-2KB, 2KJ, 2CB, 2CJ: 2004, CC: 2009-2013, Crafter 30-35 Bus 2E: 2006, Crafter 30-50 Box 2E: 2006, Crafter 30-50 Platform / Chassis 2F, EOS: 2007-2012, EOS-1F7, 1F8: 2006, Fox-5Z1, 5Z3: 2003, Golf: 1999-2012, Golf Plus-5M1, 521: 2005, Golf V-1K1: 2003-2009, Golf V Variant 1K5: 2007, GTI: 2006-2013, Jetta: 1997-2012, Jetta I Saloon-1K2: 2005-2010, LT 28-35 II Bus-2DM: 1996-2006, LT 28-46 II Box-2DX0AE: 1996-2006, LT 28-46 II Platform/Chassis 2DX0FE: 1996-2006, Multivan Mk V-7HM, 7HN, 7EF, 7EM, 7EN: 2003, New Beetle-9C1, 1C1: 1998, New Beetle Convertible-1Y7: 2002-2010, Passat: 1998-2012, Passat-3B3: 2000-2005, Passat-3C2: 2005, Passat Variant-3B6: 2000-2005, Passat Varian 3C5: 2005, Polo-9N: 2001, Polo Saloon: 2002, R32: 2008, Rabbit: 2006-2009, Tiguan: 2009, Touareg: 2004-2012, Touran-1T1, 1T2, 1T3: 2003, Transporter/Caravelle MK V Bus-7HB, 7HJ, 7EB, 7EJ, 7EF: 2003, Transporter MK V Box-7HA, 7HH, 7EA, 7EH: 2003, Transporter MK V Platform/Chassis-7JD, 7JE, 7JL, 7JY, 7JZ: 2003)
10	BMW (3-E30: 1982-1992, 3-E36: 1990-1998, 3-E46: 1998-2005, 3-E90: 2005, 3 Compact-E36: 1994-2000, 3 Compact-E46: 2001-2005, 3 Convertible-E30: 1985-1993, 3 Convertible-E36: 1993-1999, 3 Convertible-E46: 2000, 3 Coupe-E36: 1992-1999, 3 Coupe-E-46: 1999, 3 Touring-E30: 1987-1994, 3 Touring-E36: 1995-1999, 3 Touring-E46: 1999-2005, 3 Touring-E91: 2005, 5-E28: 1980-1990, 5-E34: 1987-1995, 5-E39: 1995-2003, 5-E60: 2003, 5 Touring-E34: 1991-1997, 5 Touring-E39: 1997-2004, 7-E23: 1977-1986, 7-E32: 1986-1994, 7-E38: 1994-2001, 7 E65, E66: 2001, 8-E31: 1990-1999, X3-E83: 2004, X3-E53: 2000, Z3-E36: 1995-2003, Z3 Coupe-E36: 1997-2003, Z4-E85: 2003, Z4 Coupe-E86: 2006, Z8-E53: 2000-2003, Brilliance 3 Series-E46: 2003-2005, Brilliance 3 Series-E90: 2004), Landrover (Freelander-LN: 1998, Range Rover III-LM: 2002)
11	Audi (1975-1993: w/ male thread on expansion tank), VW (1975-1993: w/ male thread on expansion tank, Golf: 1983-1992, Cabriolet: 1985-1993, Dasher: 1980-1981, Fox: 1987-1993, Golf: 1985-1990, Jetta: 1980-1990, Quantum: 1980-1988, Rabbit: 1975, Rabbit Convertible: 1980-1984, Scirocco: 1975-1988)

PRESSURE TESTING ADAPTER CHART

12	<p>Caterham (Super Seven 1990-1999), Ford (Cougar 1998-2001, Mondeo 1996-2007, Mondeo Estate Wagon: 1996-2007, Transit 260: 2000-2006, Transit 280: 2000-2006, Transit 300: 2000-2006, Transit 330: 2000-2006, Transit 350: 2000-2006, Transit 425: 2003-2006, Transit 430: 2001-2006, Transit Tourneo: 2000-2006, Courier III: 1990-1995, Courier IV: 1995-2001, Escort 55 IV: 1986-1990, Escort 55 VI: 1994-2000, Escort 75 VI: 1994-2000, Escort IV: 1986-1990, Escort V: 1990-1996, Escort VI: 1995-2000, Fiesta Classic: 1987-1989, Fiesta II: 1989-1989, Fiesta III: 1989-1996, Fiesta IV: 1995-1999, Fiesta V: 1999-2002, Fiesta Van 11: 1987-1989, Fiesta Van 1V: 1995-2002, Fiesta Van V: 1999-2002, Fiesta Van VI: 2002-2008, Fiesta VI: 2002-2008, Focus 1: 1998-2005, Focus Wagon 1: 1998-2005, Fusion: 2002-2005, Granada Scorpio: 1985-1994, Ka 1: 1996-2005, Mondeo 1: 1993-1996, Mondeo 11: 1996-1998, Mondeo Wagon 1: 1993-1996, Mondeo Wagon 11: 1996-2000, Orion 11: 1986-1990, Orion 111: 1990-1993, P100 Sierra: 1989-1994, Puma 1: 1997-2002, Scorpio 1: 1984-1994, Scorpio 11: 1994-1998, Sierra Cosworth 11: 1987-1993, Sierra 1: 1984-1987, Sierra11: 1987-1993, Sierra Sapphire 11: 1987-1993, Streetka 1: 2003-2005, Transit 100: 1994-1999, Transit 120: 1994-1999, Transit 150: 1994-1999, Transit 190: 1994-1999, Transit Connect: 2002-), Landrover, Mazda (2: 2002-2007, 121: 1996-2002), Opel (Agila: 2000-2008, Ascona B: 1978-1981, Ascona C: 1981-1988, Astra Cabrio F: 1993-2001, Astra Cabrio G: 2001-2005, Astra Classic F: 1998-2002, Astra Coupe G: 1999-2005, Astra F: 1991-1998, Astra G: 1998-2005, Astra H: 2004-2005, Astra Van F: 1991-1998, Astra Van G: 1998-2004, Calibra: 1989-1998, Combo Corsa B: 1992-2001, Combo Corsa C: 2001-2004, Corsa A: 1982-1993, Corsa B: 1993-2000, Corsa C: 2000-2006, Corsa Van A: 1982-1994, Corsa Van B: 1994-2001, Corsa Van C: 2000-2003, Frontera A: 1991-1998, Kadett O: 1979-1984, Kadett E: 1984-1992, Kadett Van E: 1984-1992, Manta A: 1974-1975, Manta B: 1975-1988, Meriva: 2003-2005, Monza: 1981-1987, Omega A: 1986-1994, Omega B: 1994-2003, Senator A: 1981-1987, Senator B: 1987-1993, Tigra A: 1994-2001, Tigra B: 2004, Vectra A: 1988-1995, Vectra B: 1995-2003, Zafira A: 1999-2005, Zafira Van: 2002-2003), Saab (900 11: 1993-1998), Skoda (Favorit: 1989-1995, Favorit Forman: 1993-1995, Felicia - 6U1: 1994-2000), Ssangyong, Vauxhall (Astra Cabrio 111: 1991-2001, Astra Cabrio 1V: 2001-2007, Astra Coupe 1V: 1999-2005, Astra 1: 1979-1984, Astra 11: 1984-1991, Astra 111: 1991-1998, Astra 1V: 1998-2005, Astra Van 111: 1991-1996, Astra Van 1V: 1998-2005, Astramax: 1985-1991, Astravan 1 1982-1984, Astravan 11 1984-1991, Belmont: 1986-1991, Calibra: 1990-1998, Carlton: 1983-1994, Cavalier 11: 1981-1988, Cavalier 111: 1988-1995, Combo: 1993-2004, Combo Crew Van: 2001-2006, Corsa 1: 1993-2000, Corsa 11: 2000-2006, Corsa Van 1: 1993-2001, Corsa Van 11: 2001-2006, Frontera A: 1991-1998, Meriva: 1982-1993, Nova: 1982-1993, Nova Van: 1990-1993, Omega: 1994-2003, Senator: 1987-1993, Tigra: 1994-2004, Vectra 1: 1999-2005, Zafira A: 1999-2005, Zafira B: 2005-2007)</p>
13	<p>Chrysler (Crossfire: 2004-), Mercedes (w/ thread filler neck on expansion tank, except M-Class, 300SE: 1992-1993, 400SE: 1992, 400SEL: 1993, 500SEC: 1993, 500SEL: 1992-1993, 500SL: 1900-1993, 600SEC: 1993, 600SEL: 1992-1993, 600SL: 1993, C230: 2002, C240: 2001-2005, C280: 1994-2007, C300: 2008-2009, C32 AMG: 2002-2004, C320: 2001: 2005, C350: 2008, C36 AMG: 1995-1997, C43 AMG: 1998-2000, CL500: 1998-2006, CL55 AMG: 2001-2002, CL600: 1998-2006, CL65 AMG: 2005-2006, CLK 320: 1998-2005, CLK 430: 1999-2003, CLK500: 2003-2005, CLK55 AMG: 2001-2005, E300: 1996-1997, E320: 1996-2005, E350: 2006-2009, E420: 1997, E430: 1998-2002, E500: 2003-2006, E55 AMG: 1999-2002, E550: 2009, G500: 2002-2005, G55 AMG: 2003-2005, GL450: 2007-2008, ML350: 2006-2008, ML500: 2006-2007, ML550: 2008-2009, S320: 1994-1999, S350: 1994-2006, S420: 1994-1999, S500: 1994-2006, S55 AMG: 2001-2006, S600: 1994-2006, S65 AMG: 2006, SL320: 1994-1997, SL500: 1994-1998, SL600: 1994-2002, SLK280: 2006-2008, SLK32 AMG: 2002-2004, SLK 320: 2001-2004, SLK 350: 2006-2008, SLK55 AMG: 2008)</p>
14	<p>Ford (Mondeo: 2000-2007, Focus: 2000-2005, C-MAX03, Contour: 1995-2000), Mercury (Cougar: 1999, Mystique: 1995-1999)</p>
15	<p>Ford International (C-Max: 2007-2012, C-Max 11: 2010, Fiesta V JH, JO: 2001, Fiesta Van: 2009, Fiesta VI: 2009, Fiesta VI: 2008, Focus C-Max: 2003-2007, Focus 11 OA: 2004, Focus 11 Convertible: 2006, Focus 11 Estate OAW: 2004, Focus Saloon OA: 2005, Focus 11 Station Wagon OAW: 2004, Focus 111: 2011, Focus 111 Saloon: 2011, Focus 111 Turnier: 2011, Galaxy: 2006, Grand C-Max: 2010, Kuga: 2008, Mondeo 1V: 2007, Mondeo 1V Saloon: 2007, Mondeo 1V Turnier: 2007, Rager: 2011, S-Max: 2006, Transit Bus: 2006, Transit Flatbed Chassis: 2006, Transit Tourneo: 2006), Ford Asia & Oceania (Fiesta: 2002-2013, Focus: 2004-2011, Focus Estate Wagon: 2011, Mondeo: 2007, Ranger: 2011), Ford Europe (B-Max: 2012, C-Max: 2007-2012, Fiesta: 2001-2013, Focus Van: 2008-2010, Focus: 2004-2013, Focus CC: 2006-2011, Focus C-Max: 2003-2007, Focus Estate Wagon: 2004-2013, Focus Van: 2005-2013, Galaxy: 2006-2011, Galaxy Van: 2006-2010, Grand C-Max: 2010-2012, Kuga: 2008-2012, Mondeo: 2007-2012, Mondeo Estate Wagon: 2007-2011, S-Max: 2006-2011, Transit 250: 2011, Transit 260: 2006, Transit 280: 2006, Transit 300: 2006, Transit 330: 2006-2013, Transit 350: 2006-2013, Transit 370: 2006, Transit 410: 2006, Transit 430: 2006-2013, Transit 460: 2006, Transit Custom 250: 2012, Transit Custom 270: 2012, Transit Custom 290: 2012, Transit Custom 300: 2012, Transit Custom 310: 2012, Transit Custom 330: 2012, Transit Tourneo: 2012, Transit Tourneo Custom: 2012), Ford USA (Ranger: 2011), Ford Australia (Fiesta WS: 2008, Fiesta Hatchback WT: 2010, Fiesta Saloon WT: 2010, Focus Hatchback LT: 2005, Focus Hatchback LV: 2009-2011, Focus Hatchback LT: 2005, Focus Saloon LS, LT: 2005, Focus Saloon LV: 2009-2011, Mondeo Hatchback MA, MB: 2007), Land Rover (Freelander 2 FA: 2006, Range Rover Evoque: 2011, Freelander: 2006-2013, LR2: 2006), Mazda (2: 2007, 3: 2003-2013, 5: 2010, 2 0E: 2007, 3 BK: 2003, 3 BL: 2009, 3 Saloon BK: 2000-2009, 3 Saloon BL: 2009, 5 CW: 2010, Axela: 2003, BT50: 2011), Volvo (C30: 2006-2012, C70: 2005-2011, C70 11 Convertible: 2006, S40: 2004-2010, S40 11 MS 2004, S60: 2010-2013, S60 11: 2010, S80: 2006-2011, S80 11 AS: 2006, V40: 2012, V40 Cross Country: 2012, V40 Hatchback: 2012, V50: 2003-2012, V50 NW: 2004, V60: 2010-2013, V70: 2007-2012, V70 III Estate: 2007, XC60: 2008, XC70: 20 7-2012, XC70 Cross Country: 2007-2011, XC70 11: 2007)</p>
16	<p>Mercedes (A140: 19 7-2004, A150: 2009-2011, B40: 2012-2014, A160: 1997-2012, A170: 1998-2012, A180: 220004-2012, A190: 1999-2004, A200: 2004-2012, A21 AMG: 2002-2004, A210: 2002-2004, B150: 2009-2011, B160: 2009-2011, B170: 2005-2011, B180: 200 -2011, B200: 2005-2011, Vaneo: 2001-2005, Vaneo 1.6: 2002, Vaneo 1.7: 2002, Vaneo 1.9: 2002, W168: 1997-2004)</p>
17	<p>BMW (X5: 2000-2011, X5 M: 2009-2012, X5 xDrive 30i: 2008-2010, X5 xDrive 48i, X5 xDrive 50i: 2010-2012, X6: 2008-2012, ActiveHybrid X6: 2010, X6 M: 2009, X6 xDrive 35i: 2008-2013, X6 xDrive 50i: 2008, Z3: 1996-2002, Z4: 2003-2008, Z8: 2000-2003)</p>
18	<p>Ford (Galaxy Van : 1995-2006), SEAT (Alhambra Van: 1996-2010), VW (Sharan Van: 1996-2010)</p>
19	<p>Lexus (GS460: 2008-2011, HS 250h: 2010, 1S F: 2008-2013, LS460: 2007-2013, LS 600h: 2008-2012), Scion (tC: 2011-2012, xB: 2008-2012), Toyota (Celica: 2000-2005, MR2 Spyder: 2000-2005, Prius: 2010-2011, RAV4: 2006-2012)</p>
20	<p>Saab (EcoPower 9-3, 9-5)</p>
21	<p>Buick (LaCrosse: 2005, Rainier: 2005-2007), Cadillac (CTS: 2006, Escalade: 2004-2007, SRX: 2004-2007, STS: 2005-2006, BLS: 2007), Chevrolet (Avalanche 1500: 2002-2006, Avalanche: 2007, Cavalier: 1999-2005, Classic: 2004, Cobalt: 2007, Colorado: 2004-2007, Equinox: 2005-2007, Express 1500: 2004-2007, Express 2500: 2003-2007, Express 3500: 2003-2007, HHR: 2007, Malibu: 2001-2007, Silverado 1500: 1999-2007, Silverado 1500 HO: 2002-2007, Silverado 2500: 1999-2004, Silverado 2500 HO: 2001-2007, Silverado 3500: 2001-2007, Silverado 3500 HO: 2007, SSR: 2006, Suburban 1500: 2001-2007, Suburban 2500: 2001-2007, Tahoe: 2000-2007, Trailblazer: 2002-2007, Viva: 2003-2008), Fiat (Croma: 2005-2013), Ford (Crown Victoria: 1993-2011, E-150: 2003-2012, E-150 Club Wagon: 2003-2005, E-150 Econoline: 1992-2002, E-150 Econoline Club Wagon: 1992-2012, E-250 Econoline: 1992-2002, E-250 Super Duty: 2004-2005, E-350: 2003, E-350 Club Wagon: 2003-2005, E-350 Econoline: 1992-2002, E-350 Econoline Club Wagon: 1992-2002, E-350 Super Duty: 2004-2012, Edge: 2007-2012, Excursion: 2000-2005, Expedition: 1997-2008, Explorer: 2002-2012, F-150: 1997-2012, F-250 Super Duty: 1999-2012, F-350 Super Duty: 2005-2012, F-450 Super Duty: 2005-2012, F-550 Super Duty: 2005-2012, Five Hundred: 2005-2007, Flex: 2009-2012, Freestar: 2004-2007, Fusion: 2006-2012, Mustang: 1996-2012, Ranger: 1998-2011, Taurus: 1996-2012, Thunderbird: 2002-2005, Windstar: 1999-2003), GMC (Canyon: 2004-2007, Envoy: 2003-2007, K2500 Suburban: 1999, Savana 1500: 2003-2007, Savana 2500: 2003-2007, Savana 3500: 2004-2007, Sierra 1500: 1999-2007, Sierra 1500 HO: 2001-2007, Sierra 2500: 1999-2004, Sierra 2500 HO: 2001-2007, Sierra 3500: 2001-2007, Sierra 3500 HO: 2007, Sierra C3: 2001, Yukon: 2000-2006, Yukon XL 1500: 2000-2007, Yukon XL 2500: 2001-2007), Hummer (H2: 2004-2006, H3: 2006), Isuzu (Ascender: 2003-2006, i-280: 2006, i-290: 2007), Lincoln (Continental: 1995-2002, Mark V111: 1993-1998, MKS: 2009-2012, MKT: 2010-2012, MKX: 2007-2012, MKZ: 2007-2012, Town Car: 1993-2011, Zephyr: 2006), Mazda (Mazda 6: 2006), Mercury (Cougar: 1993-1997, Grand Marquis: 1993-2011, Milan: 2006-2011, Monterey: 2004-2007, Sable: 1996-2009), Oldsmobile (Alero: 1999-2004, Cutlass: 1999, Intrigue: 2002), Opel (Astra: 2004-2013, Astra Cabrio: 2003-2006, Astra Classic: 2006-2009, Astra Coupe: 2003-2005, Astra GTC: 2005-2011, Astra H: 2004-2010, Astra Van: 2004-2010, Corsa: 2006-2013, Corsa O: 2007-2011, Corsa Van: 2006-2010, Meriva: 2006-2010, Signum: 2003-2008, Vectra: 2002-2008, Zafira: 2005, Zafira B: 2005-2011, Zafira Van: 2005), Pontiac (G5: 2007, G6: 2006, Grand Am: 199-2005, Grand Prix: 2005-2006, Pursuit: 2005-2006, Solstice: 2006-2007, Sunfire: 2005), Saab (9-3: 2003-2012, 9-3 Sport: 2002-2012, 9-3 X: 2009-2012, 9-7 X: 2007), Saturn (Aura: 2007, Ion 1: 2003-2005, Ion 2: 2003-2007, Ion 3: 2003-2007, Outlook: 2007, Sky: 2007, Vue: 2005-2007), Suzuki (XL-7: 2007), Vauxhall (Astra: 2002-2011, Astra Cabrio: 2006-2011, Astra Coupe: 2005-2008, Astra GTC: 2004-2011, Combo: 2005-2011, Corsa: 2006-2012, Meriva: 2006-2010, Signum: 2003-2008, Vectra: 2002-2008, Zafira: 2005-2013)</p>
22	<p>BMW (550i 2010-2012, 550i Gran Turismo: 2012, 550i GT: 2010-2012, 550i GT xDrive: 2011-2012, 550i xDrive Gran Turismo: 2012, 550i X: 2011-2012, 550i XGT: 2010-2012, 650i: 2012, 650i Cabrio: 2012, 650i Convertible: 2011-2012, 650i Coupe: 2011-2012, 650i Gran Coupe: 2012, 650i xDrive Gran Coupe: 2012, 650i X Coupe: 2012, 750i: 2009-2012, 750i Active Hybrid: 2011, 750i xDrive: 2010-2011, 750i X: 2010, 750Li: 2009-2012, 750 Li Active Hybrid: 2011, 750 LiX: 2010, 760i: 2010-2012, 760Li: 2010-2012, Alpi a B7: 2010-2012, Alpina B7 xDrive: 2011-2012, Alpina B7L: 2010-2012, Alpina B7L xDrive: 2011-2012, Alpina B7LX: 2011-2012, Alpina B7X: 2011-2012, Hybrid 5: 2012, M5: 2012, M6 Convertible: 2012, X5: 2004-2012, X5 50iX: 2011, X5 M: 2009-2010, X5 xDrive 48i: 2008-2010, X5 xDrive 50i: 2010, X6: 2008-2012, X6 50iX: 2008-2010, X6 Active Hybrid: 2010, X6 Hybrid: 2010-2011, X6 M: 2009-2010, X6 xDrive 50i: 2008), Land Rover (Range Rover: 2003-2005), Mini (Cooper: 2008-2012, Cooper Clubman: 2008-2012, Cooper Countryman: 2011-2012, Cooper Convertible: 2009-2012, Cooper S Clubman: 2008-2012, Cooper S Convertible: 2009-2012, Cooper SX: 2011-2012, Cooper Works: 2007-2012, Cooper Works Clubman: 2008-2012, Cooper Works Convertible: 2009-2012, Cooper S: 2007-2012, Mini Clubman: 2007-2013, Mini Clubvan: 2010-2012, Mini Cooper: 2006-2013, Mini Countryman: 2010-2013, Mini Coupe: 2011, Mini One: 2009-2010, Mini Roadster: 2012)</p>
23	<p>Ford (Late Model), GM (Late Model)</p>

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







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HOSE CRIMPING TOOLS **92**



SPECIALTY HYDRAULIC TOOLS **93**



TUBING TOOLS **96**

PROMOTIONAL PRODUCTS **104**

NUMERICAL INDEX **106**

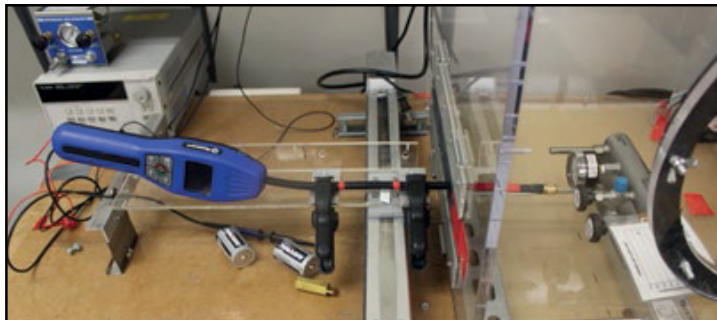


MASTERCool PRODUCTS ARE MADE/ASSEMBLED IN THE USA



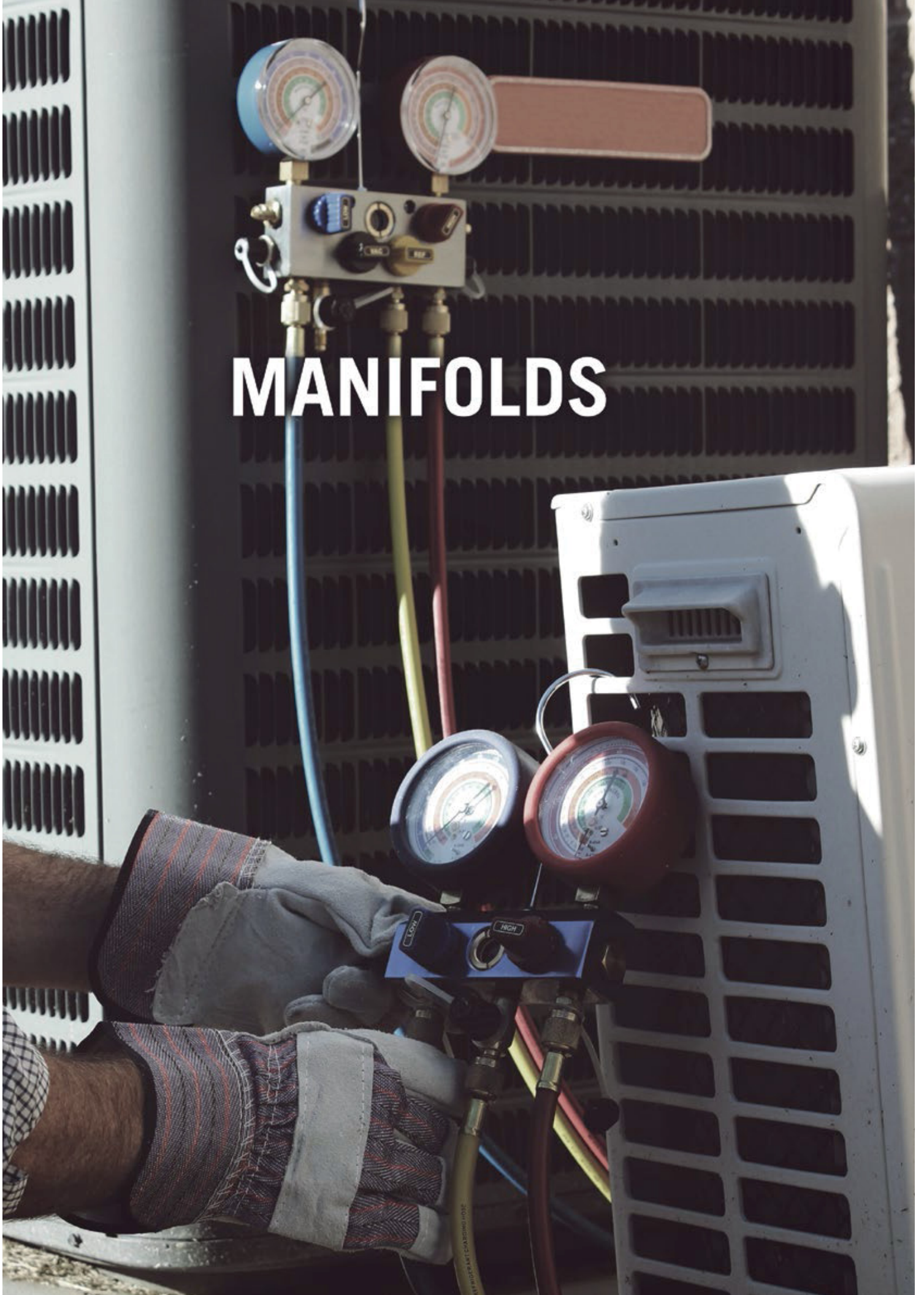
Mastercool manufactures all of its products with the highest quality components and management systems. All products are checked and tested directly at Mastercool headquarters in Randolph, New Jersey, USA.

Our products comply in every respect with the requirements set forth by SAE and EPA Standards as well as ARI Standard 740-98 and EU Directives.



△ All of our products comply with current PROP 65 guidelines.

MANIFOLDS





THE BEST KEEPS GETTING BETTER.....

**NOW COMPATIBLE WITH R744 (CO₂)
SENSORS ABLE TO WITHSTAND
PRESSURE UP TO 750 PSI (50 BAR)**



USB CONNECTOR PORT

USB Cable
99903-USB



THERMOCOUPLE PORT

3 ft. Clamp-On
Thermocouple
52336



VACUUM THERMOCOUPLE SENSOR PORT

Vacuum Sensor and
Cable Assembly
98062



99961



90413

90430

90433

99333



Patent Pending

- 99903** 4-Way Digital Manifold only

- 99903-2** Manifold with (2) clamp-on thermocouples in a blow molded case

- 99961** Complete Kit in a blow molded case includes: manifold with a set of 3-150 cm ball valve hoses with manual shut-off valves and one black vacuum hose, vacuum sensor with cable, clamp-on thermocouple, data logger CD and USB cable

- 99972** Complete Kit in a blow molded case includes: manifold with a set of 3-180 cm ball valve hoses with manual shut-off valves and one black vacuum hose, vacuum sensor with cable, clamp-on thermocouple, data logger CD and USB cable

- 99961-EU** Complete Kit in a blow molded case includes: manifold with a set of 3-150 cm ball valve hoses with manual shut-off valves and one black vacuum hose, vacuum sensor with cable, clamp-on thermocouple, 2-straight adapter fittings (90413), data logger CD and USB cable

- 99963-EU** Same as 99961-EU less vacuum sensor with cable

* Manifolds assembled with teflon gasket hoses, add a -T

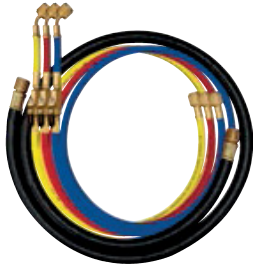
* Manifolds assembled with ball valves at the end of hoses, add a -E

OPTIONAL ACCESSORIES

52336	Clamp-on Thermocouple (extends 1 m)	90433	1/4 x 5/16" Swivel Ball Valve
52337	Clamp-on Thermocouple (extends 3 m)	99333	1/4 FL-M x 1/4 FL-M x 1/4 FL-F Tee
90413	R410A Straight Adapter 1/4 FL-M x 5/16 Swivel-F	99334-110	110 V AC/DC Adapter
98062	Vacuum Sensor and Cable Assembly (6.5 ft)	99334-220	220 V AC/DC Adapter (schuko plug)
90430	1/4 x 1/4" Swivel Ball Valve	99903-PBA	Plastic Carrying Case



Mastercool[®]
"World Class Quality"



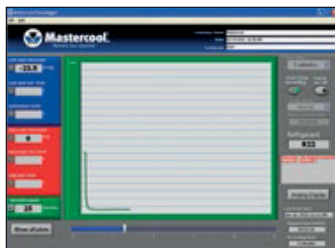
Includes three 1/4" SAE B-R-Y nylon barrier ball valve hoses with manual shut-off valves and one 3/8" SAE black vacuum hose



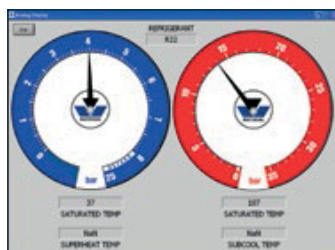
Mastercool Datalogger Application



Temperature/Pressure Screen



Vacuum Screen



Analog Gauge Screen

CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

With the 4-way digital manifold, Mastercool is showing its determination to become the leader in this sector of the industry. Taking the experience gained with the 2-way digital manifold the 4-way model not only offers a 4-valve option but it also allows for a multitude of interactive PC enhanced functions and the capability of 24 hours of data logging.

- Record and store up to 24 hours of data and up to 15 jobs
- Large easy to read LCD
- Displays pressures, saturated, actual, superheat and subcool temperatures
- Over 60 refrigerants
- Clamp-on thermocouple connector displays actual temperature and automatically calculates superheat or subcool temperature
- Vacuum sensor cable displays deep vacuum
- Ball valve design includes 3/8" bore through the block for increased flow

SPECIFICATIONS:

- Class 1.0 standard gauge reading
- Pressure Display: PSI, INHg, Bar, MPa, Kg/cm²
- Temperature Display: °F or °C
- Deep Vacuum Display: Micron, mBar, KPa, Pa, Torr, mTorr, mmHg
- Sensing Resolution: 1 psi (.07 Bar, .007 MPa, .07 Kg/cm²)
- Sensing Accuracy: ±1 psi or 1% of reading (whichever is greater)
- Working Pressure: 0 to 750 psi (52 Bar, 5 MPa, 52 Kg/cm²) (does not display 0-5 psi)
- Proof Pressure: 1000 psi (70 Bar, 7 MPa, 70 Kg/cm²) (Tolerable pressure without internal damage)
- Refrigerant Temperature Range: -40 to 200°F (-40 to 93°C)
- Operating Temperature: 32 to 122°F (0 to 45°C)
- Temperature Accuracy: ±1°F (±0.5°C) between 32 to 160°F (0 to 71°C)
- Storage Temperature: 10 to 120°F (-12 to 49°C)
- Connections: 1/4" M-Flare
- Power: 9V DC battery with optional AC/DC adapter
- Battery Life: 30-36 hours pressure and temperature mode only (continuous use)
25-30 hours vacuum or back-light mode (continuous use)
- Auto-Off: 15 min. with disabling capability

EASILY UPDATE REFRIGERANTS: New refrigerants can be updated with a USB connection and Mastercool Software. R12, R22, R23, R32, R113, R114, R115, R116, R123, R124, R134, R134a, R141B, R142B, R143, R143a, R152a, R290, R401A, R401B, R404A, R407A, R407B, R407C, R407D, R407F, R409A, R410A, R410B, R411A, R411B, R412A, R413A, R414A, R414B, R417A, R422A, R422B, R422C, R422D, R427A, R434A, R437A, R438A, R441A, R448A, R449A, R452A, R455A, R501, R502, R503, R504, R507A, R508B, R509A, R600, R600A, R601, R601A, R744

MASTERCOOL'S 4-WAY DIGITAL MANIFOLD RECORDING FUNCTION:

- Records and stores data directly into the manifold memory
- Records up to 24 hours of data or 15 jobs before having to download
- Downloads data at a rate 115 kb per second (24 hrs of data = approx. 15 min of download time)
- Uses Mastercool's data logger application to easily view data

MASTERCOOL DATA LOGGER APPLICATION:

- Display data in "real time" using a USB connection, computer and software
- Platform: Windows 2000, XP, Windows Vista and Windows 7
- Log customer name, date and technician's name
- Recorder/cursor function features:
 - (1) Recorder TIME command. Record in intervals of 5, 15 min, 1, 4, 8 and 24 hrs.
 - (2) Recorder ON/OFF command.
 - (3) ZOOM: NORMAL, 5X or 10X. Use the zoom option to view specific data points of interest.
 - (4) The time-line measures the selected recording time. Moving the cursor along the timeline easily displays specific plot points.
- The data logger program uses the Units information (Kg/cm², BAR, Mpa, PSI, °C, and °F) contained in each data bit on the manifold and displays these units on the screen.
- Display function features
 - (1) Display ALL command. This enables all parameters of the digital manifold to be displayed simultaneously. As the line functions propagate across the screen, the "real-time" data will also be displayed digitally.
 - (2) Monitor specific functions of interest. The data logger continues to record all the functions in the background, regardless of how many individual functions are being displayed.
 - (3) Display DEEP VACUUM ONLY command. This enables only the deep vacuum readings to be displayed on the screen.
 - (4) View ANALOG GAUGES function enables the user to represent the digital manifold data in the form of high and low pressure analog gauges.



Mastercool[®]
"World Class Quality"



THERMOCOUPLE PORT

3 ft. Clamp-On Thermocouple
52336



VACUUM THERMOCOUPLE SENSOR PORT

Vacuum Sensor and Cable Assembly
98062



AC/DC PORT

AC/DC Adapter
99334-110
99334-220



90413

90430

90433

99333



Patent Pending



99661-A



99661-A-EU

- 99103-A** 2-Way Digital Manifold only
- 99103-A-2** Manifold with (2) clamp-on thermocouples in a blow molded case
- 99661-A** Complete Kit in a blow molded case includes: manifold with a set of 3-150 cm hoses, vacuum sensor with cable and clamp-on thermocouple
- 99772-A** Complete Kit in a blow molded case includes: manifold with a set of 3-180 cm hoses, vacuum sensor with cable and clamp-on thermocouple
- 99661-A-EU** Complete Kit in a blow molded case includes: manifold with a set of 3-150 cm ball valve hoses with manual shut-off valves, vacuum sensor with cable, clamp-on thermocouple and 2-straight adapter fittings (90413)

99663-A-EU Same as 99661-A-EU less vacuum sensor with cable

* Manifolds assembled with teflon gasket hoses, add a -T

* Manifolds assembled with ball valves at the end of hoses, add a -E

OPTIONAL ACCESSORIES

52336	Clamp-on Thermocouple (extends 1 m)	90433	1/4 x 5/16" Swivel Ball Valve
52337	Clamp-on Thermocouple (extends 3 m)	99333	1/4 FL-M x 1/4 FL-M x 1/4 FL-F Tee
90413	R410A Straight Adapter 1/4 FL-M x 5/16 Swivel-F	99334-110	110 V AC/DC Adapter
98062	Vacuum Sensor and Cable Assembly (6.5 ft)	99334-220	220 V AC/DC Adapter (schuko plug)
90430	1/4 x 1/4" Swivel Ball Valve	99903-PBA	Plastic Carrying Case



ALL THE INFORMATION YOU NEED IN THE PALM OF YOUR HAND!



**NOW COMPATIBLE WITH R744 (CO₂)
SENSORS ABLE TO WITHSTAND
PRESSURE UP TO 750 PSI (50 BAR)**



78 PSI	R	11	290 PSI
Saturated Temp. 19 IF	Low	Saturated Temp. 137F	High
Sensor Temp. 49F			
Superheat 14 IF			

SUPERHEAT & SUBCOOL CALCULATIONS

Clamp-on thermocouple provides fast and accurate superheat and subcool readings.



Vacuum	120 MICRONS
--------	-------------

PRECISE VACUUM READINGS

Vacuum thermocouple sensor provides accurate vacuum readings.

CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

Mastercool's 2-way digital manifold is the most advanced and user friendly digital manifold on the market today! This manifold offers a large easy to read LCD that displays pressures, saturated temperatures, actual temperatures, superheat and subcooling temperatures for over 60 refrigerants. When used with the clamp-on thermocouple connector it will display the actual temperature and automatically calculate the superheat or subcool temperature. When the vacuum sensor cable is attached to the manifold it will display deep vacuum. To insure lasting performance and durability the manifold case is constructed of ABS material and protected by a rugged rubber boot. The technician now has a fully functional manifold with the intelligence to quickly access and deliver the accurate information needed *to do the job right!*

REFRIGERANTS INCLUDED:

R12, R22, R23, R32, R113, R114, R115, R116, R123, R124, R134, R134A, R141B, R142B, R143, R143A, R152A, R290, R401A, R401B, R404A, R407A, R407B, R407C, R407D, R407F, R409A, R410A, R410B, R411A, R411B, R412A, R413A, R414A, R414B, R417A, R422A, R422B, R422C, R422D, R427A, R434A, R437A, R438A, R441A, R448A, R449A, R452A, R455A, R501, R502, R503, R504, R507A, R508B, R509A, R600, R600A, R601, R601A, R744

SPECIFICATIONS:

- Class 1.0 standard gauge reading
- Pressure Display: PSI, INHg, Bar, MPa, Kg/cm²
- Temperature Display: °F or °C
- Deep Vacuum Display: Micron, mBar, KPa, Pa, Torr, mTorr, mmHg
- Sensing Resolution: 1 psi (.07 Bar, .007 MPa, .07 Kg/cm²)
- Sensing Accuracy: ±1 psi or 1% of reading (whichever is greater)
- Working Pressure: 0 to 750 psi (52 Bar, 5 MPa, 52 Kg/cm²) (does not display 0-5 psi)
- Proof Pressure: 1000 psi (70 Bar, 7 MPa, 70 Kg/cm²) (Tolerable pressure without internal damage)
- Refrigerant Temperature Range: -40 to 200°F (-40 to 93°C)
- Operating Temperature: 32 to 122°F (0 to 45°C)
- Temperature Accuracy: ±1°F (±0.5°C) between 32 to 160°F (0 to 71°C)
- Storage Temperature: 10 to 120°F (-12 to 49°C)
- Connections: 1/4" M-Flare
- Power: 9V DC battery with optional AC/DC adapter
- Battery Life: 30-36 hours pressure and temperature mode only (continuous use)
25-30 hours vacuum and back-light mode (continuous use)
- Auto-Off: 15 min. with disabling capability



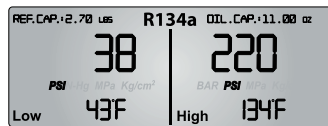
R134a DIGITAL MANIFOLD



Patent Pending



MANUFACTURER/MODEL/YEAR
REFRIGERANT (LB/KG) & OIL CAPACITY (OZ/ML) DISPLAY



TEMPERATURE/PRESSURE DISPLAY



99860-1/4-A

CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

This manifold offers a large easy to read LCD that displays temperature, pressure and vacuum readings for R134a. The unit easily allows the technician to obtain refrigerant and oil capacity readings for automobile manufacturers. This unit also performs systems leak check at the conclusion of the evacuation process. To insure lasting performance and durability the manifold case is constructed of ABS material and protected by a rugged rubber boot. The technician now has a fully functional manifold with the intelligence to quickly access and deliver the accurate information needed to do the job right!

SPECIFICATIONS

- Refrigerant: R134a
- Pressure & Vacuum Display: Low Side - PSI, Bar, MPa, Kg/cm² & IN-Hg
High Side - PSI, Bar, MPa, Kg/cm²
- Temperature Display: -40 to 200°F (-4 to 93°C)
- Response Time: 250 mSec.
- Connection: 1/4" FL-M
- Operating Temperature: 32 to 122°F (0 to 45°C)
- Power: 9V DC battery
- Battery Life: 50-60 hours continuous use
- Low Battery Indicator: Special ICON on LCD
- Auto-Off: 15 min. with disabling capability

MANUFACTURERS INCLUDE:

Acura	Hummer	Mercury	Saab
Audi	Hyundai	Mini	Saturn
BMW	Infiniti	Mitsubishi	Scion
Buick	Isuzu	Mercedes Benz	Smart
Cadillac	Jaguar	Nissan	Subaru
Chevrolet	Jeep	Oldsmobile	Suzuki
Chrysler	Kia	Peugeot	Toyota
Dodge	Lancia	Plymouth	Volkswagen
Fiat	Land Rover	Pontiac	Volvo
Ford	Lexus	Porsche	
GMC	Lincoln	Renault	
Honda	Mazda	Rover	

99134-1/4-A Manifold only with 1/4 FL-M (7/16"-20 UNF) connection

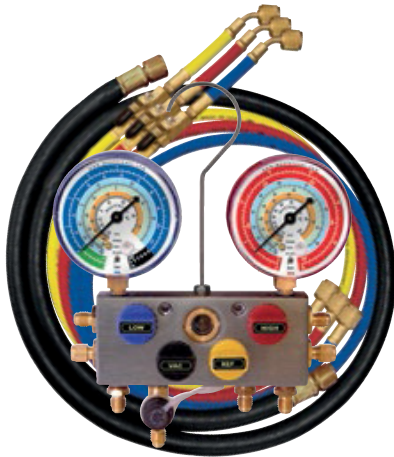
99860-1/4-A Complete Kit in a blow molded case includes: manifold with a set of 3-150 cm hoses and a set of manual couplers (82834-E & 82934-E).

99872-1/4-A Complete Kit in a blow molded case includes: manifold with a set of 3-180 cm hoses and a set of manual couplers (82834-E & 82934-E).

* Manifolds assembled with teflon gasket Hoses, add a -T
* Capable of software upgrade



3/8" BORE 4-WAY BALL VALVE MANIFOLD



CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

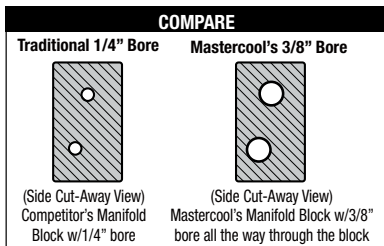
Mastercool is the leading manufacturer of professional quality A/C manifold gauge sets. Our manifold gauge sets are constructed of the finest materials and machined with precision to the highest quality standards. At Mastercool, every manifold we build is built to last.

All Mastercool Gauges are Color Coordinated for Easy Refrigerant Recognition.

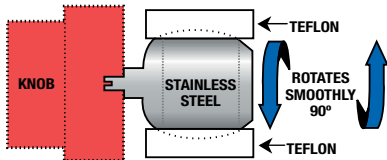
- Full 3/8" bore through the block increases flow considerably, faster charging & recovery
- Ball valve rotates 90° between two teflon washers requiring little effort to turn, even under pressure
- Opens and closes quickly with only a quarter turn
- Knob position shows whether valves are open or closed (Vertical = OPEN, Horizontal = CLOSED)

All fittings 1/4" SAE, tee with branch 3/8"

Assemblies packed in custom molded plastic carrying case, p/n 86772-PB.



Mastercool's Aluminum 4-Way Manifolds feature PREMIER SERIES BALL VALVE DESIGN.



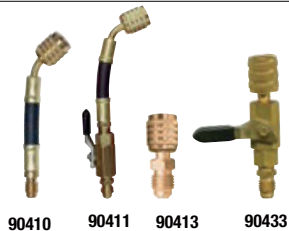
Gauge class – diameter	1.6 - 80 mm			
Units	Bar/PSI/°C	Bar/°C	Bar/PSI/°C	Bar/°C
Refrigerant scales	R134a R22 R12 R404A	R134a R404A R407C R22 R507A	R410A R407C R22	R22 R422A R427A R422D R417A
Gauge p/n (HP/LP)	MRBH MRBL	MBH MBL	EBH EBL	EBRL EBRH
Manifold body only	95102	95102	95102	95102
Manifold with gauges only	96203-MRB	96203-MB	96203-EB	96203-EBR
Manifold (as above) with 3 - 150 cm ball valve hoses (p/n 49262-60) + 1 - 150 cm black 3/8" hose (p/n 94160)	96261-MRB	96261-MB	96261-EB	96261-EBR
Manifold (as above) with 3 - 180 cm ball valve hoses (p/n 49262-72) + 1 - 180 cm black 3/8" hose (p/n 94172)	96272-MRB	96272-MB	96272-EB	96272-EBR

* Manifolds assembled with teflon gasket hoses, add a -T

* Manifolds assembled with ball valves at the end of hoses, add a -E

OPTIONAL 1/4 X 5/16" ADAPTERS

For all manifolds ending in -E and -EB add the suffix



-410 to include **2 pieces of 90410** flex adapters to convert 1/4 SAE hose into 5/16 SAE

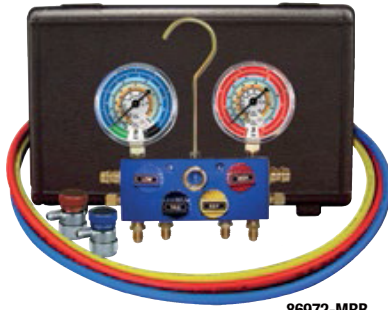
-411 to include **2 pieces of 90411** flex adapters with ball valve to convert 1/4 SAE hose into 5/16 SAE

-413 to include **2 pieces of 90413** straight adapter fittings to convert 1/4 to 5/16 SAE

-433 to include **2 pieces of 90433** adapter with fittings to convert 1/4 to 5/16 SAE



4-WAY BALL VALVE MANIFOLD FOR AUTOMOTIVE A/C



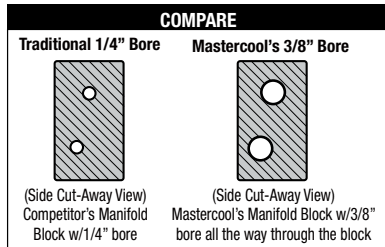
86972-MRB

CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

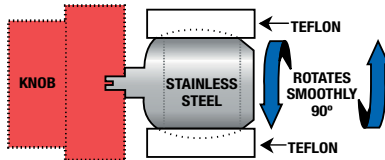
Mastercool is the leading manufacturer of professional quality A/C manifold gauge sets. Our manifold gauge sets are constructed of the finest materials and machined with precision to the highest quality standards. At Mastercool, every manifold we build is built to last.

- Full 3/8" bore through the block increases flow considerably, faster charging & recovery
- Ball valve rotates 90° between two teflon washers requiring little effort to turn, even under pressure
- Opens and closes quickly with only a quarter turn
- Knob position shows whether valves are open or closed (Vertical = OPEN, Horizontal = CLOSED)

All fittings 1/4" SAE, blind connections for automotive quick couplers. Assemblies packed in custom molded carrying case, inclusive quick couplers (p/n 82834-E and 82934-E)



Mastercool's Aluminum 4-Way Manifolds feature PREMIER SERIES BALL VALVE DESIGN.



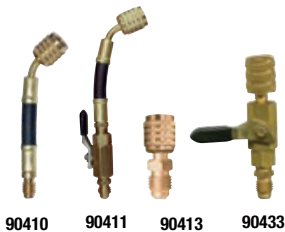
Gauge class – diameter	1.6 - 80 mm	
Units	Bar/°C	Bar/PSI/°C
Refrigerant scales	R134a R404A R407C R507A R22	R134a R22 R12 R404A
Gauge p/n (HP/LP)	MBH - MBL	MRBH - MRBL
Manifold body only, 1/4"	86102-1/4	86102-1/4
Manifold with gauges only	86103-MB	86103-MRB
Manifold (as above) with (3) 180 cm 1/4" hoses (p/n 40372) + (1) 180 cm black 1/4" hose (p/n 47724) - No quick couplers	86572-MB	86572-MRB
Manifold (as above) with (3) 180 cm 1/4" hoses (p/n 40372) + (1) 180 cm black 1/4" hose (p/n 47724) - Manual quick couplers	86972-MB	86972-MRB
Manifold (as above) with (3) 250 cm 1/4" hoses (p/n 40396) + (1) 250 cm black 1/4" hose (p/n 47964) - No quick couplers	86596-MB	86596-MRB
Manifold (as above) with (3) 250 cm 1/4" hoses (p/n 40396) + (1) 250 cm black 1/4" hose (p/n 47964) - Manual quick couplers	86996-MB	86996-MRB

* Manifolds assembled with teflon gasket hoses, add a -T

* Manifolds assembled with ball valves at the end of hoses, add a -E

OPTIONAL 1/4 X 5/16" ADAPTERS

For all manifolds ending in -E and -EB add the suffix



-410 to include **2 pieces of 90410** flex adapters to convert 1/4 SAE hose into 5/16 SAE

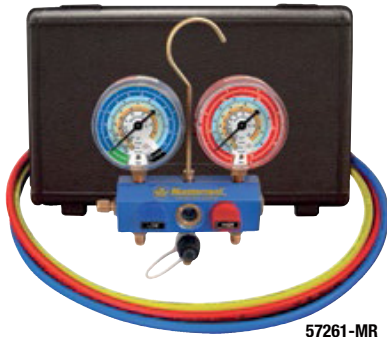
-411 to include **2 pieces of 90411** flex adapters with ball valve to convert 1/4 SAE hose into 5/16 SAE

-413 to include **2 pieces of 90413** straight adapter fittings to convert 1/4 to 5/16 SAE

-433 to include **2 pieces of 90433** adapter with fittings to convert 1/4 to 5/16 SAE



2-WAY SIGHT GLASS MANIFOLD – BALL VALVES



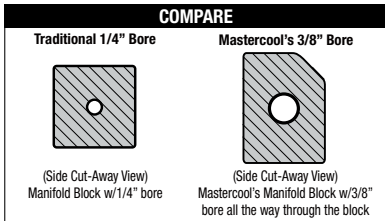
57261-MR

CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

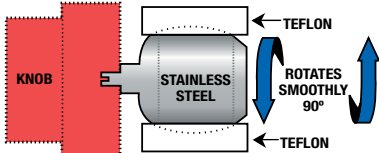
- Full 3/8" bore all the way through the block increases flow considerably – faster charging and time savings
- Ball valve rotates 90° between two teflon washers requiring little effort to turn, even under pressure
- Opens and closes quickly with only a quarter turn
- Knob position shows whether valves are open or closed
- Includes nylon barrier GY5 hoses with manual ball valves
- Assemblies packed in plastic carrying case. Plastic carrying case, p/n 58102-PBR

1.6 GAUGE CLASS - 63 MM DIAMETER

Units	Bar/PSI/°C	Bar/PSI/°C	Bar/°C
Refrigerant scales	R410A, R507, R404A, R22	R134a, R22, R12, R404A	R134a, R404A, R407C, R22, R507A
Gauge p/n (HP/LP)	EH-EL	MRH-MRL	MH-ML
Hoses 1/4" SAE	nylon barrier with in-line ball valve		
Manifold with gauges 2 x 1/4" fittings + central tee 1/4" SAE with branch 3/8"	58103-E	58103-MR	58103-M
Manifold with 3-90 cm ball valve hoses	57236-E	57236-MR	57236-M
Manifold with 3-150 cm ball valve hoses	57261-E	57261-MR	57261-M
Manifold with 3-180 cm ball valve hoses	57272-E	57272-MR	57272-M
R410A Manifold with 3-150 cm nylon barrier with in-line ball valve - red and blue 1/4" x 5/16", yellow 1/4" x 1/4" hoses	57261-E-JT	-	-



Mastercool's Aluminum 2-Way Manifolds feature PREMIER SERIES BALL VALVE DESIGN.



Optional 90° 3/8" swivel ball valve 90530 for 3/8" vacuum, makes 2-valve into 3-valve full control 4-way manifold

1.6 GAUGE CLASS - 80 MM DIAMETER

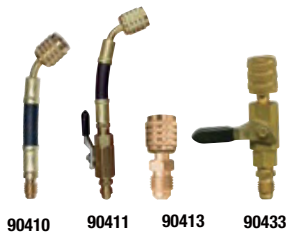
Units	Bar/PSI/°C	Bar/PSI/°C	Bar/°C	Bar/°C
Refrigerant scales	R410A, R407C, R22	R134a, R22, R12, R404A	R134, R404A, R407C, R22, R507A	R22, R422A, R427A, R422D, R417A
Gauge p/n (HP/LP)	EBH-EBL	MRBH-MRBL	MBH-MBL	EBRL-EBRH
Hoses 1/4" SAE	nylon barrier with in-line ball valve			
Manifold with gauges 2 x 1/4" fittings + central tee 1/4" SAE with branch 3/8"	58103-EB	58103-MRB	58103-MB	58103-EBR
Manifold with 3-90 cm ball valve hoses	57236-EB	57236-MRB	57236-MB	57236-EBR
Manifold with 3-150 cm ball valve hoses	57261-EB	57261-MRB	57261-MB	57261-EBR
Manifold with 3-180 cm ball valve hoses	57272-EB	57272-MRB	57272-MB	57272-EBR
R410A Manifold with 3-150 cm nylon barrier with in-line ball valve - red and blue 1/4" x 5/16", yellow 1/4" x 1/4" hoses	57261-EB-JT	-	-	-

* Manifolds assembled with teflon gasket hoses, add a -T

* Manifolds assembled with ball valves at the end of hoses, add a -E

OPTIONAL 1/4 X 5/16" ADAPTERS

For all manifolds ending in -E and -EB add the suffix



-410 to include 2 pieces of 90410 flex adapters to convert 1/4 SAE hose into 5/16 SAE

-411 to include 2 pieces of 90411 flex adapters with ball valve to convert 1/4 SAE hose into 5/16 SAE

-413 to include 2 pieces of 90413 straight adapter fittings to convert 1/4 to 5/16 SAE

-433 to include 2 pieces of 90433 adapter with fittings to convert 1/4 to 5/16 SAE



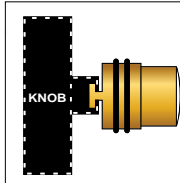
Mastercool[®]
"World Class Quality"



2-WAY ALUMINUM MANIFOLD – PISTON VALVES



93636-MR



Mastercool's 2-Way Manifolds feature **FREE FLOATING PISTON VALVE DESIGN.**

CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

All Mastercool Gauges are Color Coordinated for Easy Refrigerant Recognition.

- Our free floating piston valve results in less wear and tear in comparison to market standard twisting piston valves
- Double o-ring allows for a much better seal resulting in less leaks

1.6 GAUGE CLASS - 63 MM DIAMETER

Units	Bar/PSI/°C	Bar/PSI/°C	Bar/°C
Refrigerant scales	R410A, R507A, R404A, R22	R134a, R22, R12, R404A	R134a, R404A, R407C, R22, R507A
Gauge p/n (HP/LP)	EH-EL	MRH-MRL	MH-ML
Hoses 1/4" SAE	standard		
Manifold with gauges, fittings + central tee 1/4" SAE	93103-E	93103-MR	93103-M
Manifold with 3-90 cm hoses	93636-E	93636-MR	93636-M
Manifold with 3-150 cm hoses	93661-E	93661-MR	93661-M
Manifold with 3-150 cm ball valve hoses	92661-E	92661-MR	92661-M
Manifold with 3-180 cm hoses	93772-E	93772-MR	93772-M
R410 Manifold with 3-150 cm standard with in-line ball valve - red and blue 1/4" x 5/16", yellow 1/4" x 1/4" hoses	92661-E-JT	-	-

1.6 GAUGE CLASS - 80 MM DIAMETER

Units	Bar/PSI/°C	Bar/PSI/°C	Bar/°C	Bar/°C
Refrigerant scales	R410A, R407C, R22	R134a, R22, R12, R404A	R134a, R404A, R407C, R22, R507A	R22, R422A, R427A, R422D, R417A
Gauge p/n (HP/LP)	EBH-EBL	MRBH-MRBL	MBH-MBL	EBRL-EBRH
Hoses 1/4" SAE	standard			
Manifold with gauges, fittings + central tee 1/4" SAE	93103-EB	93103-MRB	93103-MB	93103-EBR
Manifold with 3-90 cm hoses	93636-EB	93636-MRB	93636-MB	93636-EBR
Manifold with 3-150 cm hoses	93661-EB	93661-MRB	93661-MB	93661-EBR
Manifold with 3-150 cm ball valve hoses	92661-EB	92661-MRB	92661-MB	92661-EBR
Manifold with 3-180 cm hoses	93772-EB	93772-MRB	93772-MB	93772-EBR
R410 Manifold with 3-150 cm standard with in-line ball valve - red and blue 1/4" x 5/16", yellow 1/4" x 1/4" hoses	92661-EB-JT	-	-	-

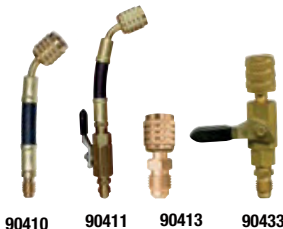
* Manifolds assembled with teflon gasket hoses, add a -T

* Manifolds assembled with ball valves at the end of hoses, add a -E

* For packaging please see page 19

OPTIONAL 1/4 X 5/16" ADAPTERS

For all manifolds ending in -E and -EB add the suffix



90410

90411

90413

90433

-410 to include **2 pieces of 90410** flex adapters to convert 1/4 SAE hose into 5/16 SAE

-411 to include **2 pieces of 90411** flex adapters with ball valve to convert 1/4 SAE hose into 5/16 SAE

-413 to include **2 pieces of 90413** straight adapter fittings to convert 1/4 to 5/16 SAE

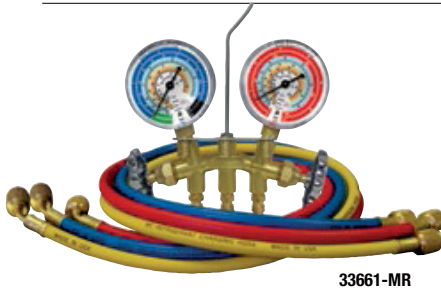
-433 to include **2 pieces of 90433** adapter with fittings to convert 1/4 to 5/16 SAE



Mastercool®
"World Class Quality"



2-WAY BRASS MANIFOLD – PISTON VALVES



CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST
All Mastercool Gauges are Color Coordinated for Easy Refrigerant Recognition.

- Our free floating piston valve results in less wear and tear in comparison to market standard twisting piston valves
- Double o-ring allows for a much better seal resulting in less leaks



Mastercool's 2-Way Manifolds feature **FREE FLOATING PISTON VALVE DESIGN.**

1.6 GAUGE CLASS - 63 MM DIAMETER

Unit	Bar/PSI/°C	Bar/PSI/°C	Bar/°C
Refrigerant scales	R410A, R507A, R404A, R22	R134a, R22, R12, R404A	R134a, R404A, R407C, R22, R507A
Gauge p/n (HP/LP)	EH-EL	MRH-MRL	MH-ML
Hoses 1/4" SAE	standard		
Manifold with gauges, 3 x 1/4" SAE fittings	33103-E	33103-MR	33103-M
Manifold with 3 – 90 cm hoses	33636-E	33636-MR	33636-M
Manifold with 3 – 150 cm hoses	33661-E	33661-MR	33661-M
Manifold with 3 – 150 cm ball valve hoses	32661-E	32661-MR	32661-M
Manifold with 3 – 180 cm hoses	33772-E	33772-MR	33772-M
R410 Manifold with 3-150 cm standard with in-line ball valve - red and blue 1/4" x 5/16", yellow 1/4" x 1/4" hoses	33661-E-JT	-	-

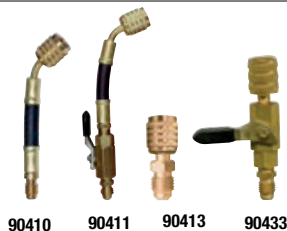
1.6 GAUGE CLASS - 80 MM DIAMETER

Unit	Bar/PSI/°C	Bar/PSI/°C	Bar/°C	Bar/°C
Refrigerant scales	R410A, R407C, R22	R134a, R22, R12, R404A	R134a, R404A, R407C, R22-R507A	R22, R422A, R427A, R422D, R417A
Gauge p/n (HP/LP)	EBH-EBL	MRBH-MRBL	MBH-MBL	EBRL-EBRH
Hoses 1/4" SAE	standard			
Manifold with gauges, 3 x 1/4" SAE fittings	33103-EB	33103-MRB	33103-MB	33103-EBR
Manifold with 3 – 90 cm hoses	33636-EB	33636-MRB	33636-MB	33636-EBR
Manifold with 3 – 150 cm hoses	33661-EB	33661-MRB	33661-MB	33661-EBR
Manifold with 3 – 150 cm ball valve hoses	32661-EB	32661-MRB	32661-MB	32661-EBR
Manifold with 3 – 180 cm hoses	33772-EB	33772-MRB	33772-MB	33772-EBR
R410 Manifold with 3-150 cm standard with in-line ball valve - red and blue 1/4" x 5/16", yellow 1/4" x 1/4" hoses	32661-EB-JT	-	-	-

- * Manifolds assembled with teflon gasket hoses, add a -T
- * Manifolds assembled with ball valves at the end of hoses, add a -E
- * For packaging please see page 19

OPTIONAL 1/4 X 5/16" ADAPTERS

For all manifolds ending in -E and -EB add the suffix



- 410 to include **2 pieces of 90410** flex adapters to convert 1/4 SAE hose into 5/16 SAE
- 411 to include **2 pieces of 90411** flex adapters with ball valve to convert 1/4 SAE hose into 5/16 SAE
- 413 to include **2 pieces of 90413** straight adapter fittings to convert 1/4 to 5/16 SAE
- 433 to include **2 pieces of 90433** adapter with fittings to convert 1/4 to 5/16 SAE



2-WAY PISTON VALVE MANIFOLD FOR AUTOMOTIVE A/C - R134a



89772-M

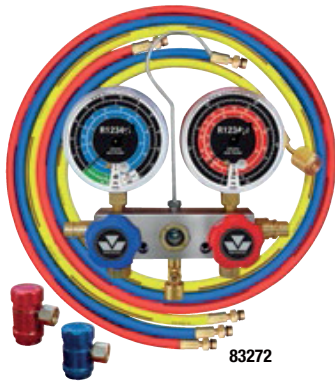
CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

- Free floating piston valve results in less wear and tear in comparison to market standard twisting piston valves
- Double o-ring allows for a much better seal resulting in less leaks
- Solid extruded aluminum body
- Extra access port for vacuum line
- Silicone dampened gauges smooth out needle movement
- Gauges can be easily re-calibrated in the field to maintain accuracy
- Extra large sight glass for visual refrigerant check
- Large easy-to-grip knobs

Gauge class – diameter	1.6 - 63 mm	1.6 - 80 mm	
Units	Bar/°C	Bar/°C	Bar/PSI/°C
Refrigerant scales	R134a, R404A, R407C, R22, R507A	R134a, R404A, R407C, R22, R507A	R134a, R22, R12, R404A
Gauge p/n (HP/LP)	MH-ML	MBH-MBL	MRBH-MRBL
Manifold body only (1/4" SAE)	85102-1/4	85102-1/4	85102-1/4
Manifold with gauges only (1/4" SAE)	85103-M	85103-MB	85103-MRB
Manifold (as above) with 3 - 180 cm hoses, 1/4" SAE (p/n 40372) w/quick couplers (p/n 82834-E & 82934-E)	89772-M	89772-MB	89772-MRB
Manifold (as above) with 3 - 250 cm hoses, 1/4" SAE (p/n 40396) w/quick couplers (p/n 82834-E & 82934-E)	89996-M	89996-MB	89996-MRB



2-WAY PISTON VALVE MANIFOLD FOR AUTOMOTIVE A/C - R1234yf



83272

CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

- Anti-flutter gauges smooth out needle movement
- Easy to read temperature scales on gauge face
- Easy to recalibrate gauges to insure accuracy
- Extra large sight glass for visual checks of refrigerant
- Easy grip front-facing knobs
- Piston type free-floating valves reduce o-ring wear
- Manifold block assembled with (3) 12 mm-F fittings per SAE J2888
- Red & Blue nylon barrier hoses with 12 mm-M fittings on both sides meets SAE J2888, EPA, SAE & UL standards
- Yellow hose 12 mm fitting on one side and 1/2 x 16 ACME LH on the other meets SAE J2888
- R1234yf high and low side couplers with extended disconnect protection sleeve meets SAE J639 & J2888

Gauge class – diameter	1.6 - 80 mm
Unit	Bar/PSI
Refrigerant scales	R1234yf
Gauge p/n (HP/LP)	87500-87350
Manifold with gauges, 3 x 12 mm-F fittings	83102
Manifold with 3 – 180 cm hoses and R1234yf couplers packaged in a clam shell	83272

83634-M VACUUM PUMP ADAPTER FITTING

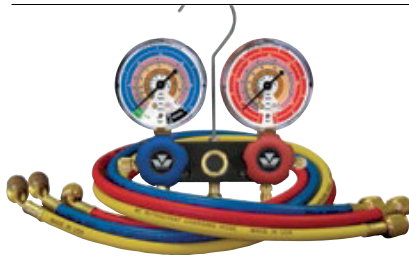


1/4 FL-F x 1/2 ACME LH male vacuum pump adapter fitting for R1234yf systems





2-WAY ALUMINUM MANIFOLD – PISTON VALVES – CLASS 1.0 GAUGES



93661-EB1



93661-MRB1

CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

All Mastercool Gauges are Color Coordinated for Easy Refrigerant Recognition.

- Our free floating piston valve results in less wear and tear in comparison to market standard twisting piston valves
- Double o-ring allows for a much better seal resulting in less leaks

1.0 GAUGE CLASS - 80 MM DIAMETER

Units	Bar/PSI/°C	Bar/PSI/°C	Bar/PSI/°C
Refrigerant scales	R22, R407C, R32, R410A	R22, R404A, R407F, R134a	>>NEW<< R455A, R448A, R449A, R452A
Gauge p/n (HP/LP)	EBH1-EBL1	MRBH1-MRBL1	MNBH1-MNBL1
Hoses 1/4" SAE	standard		
Manifold with gauges, fittings + central tee 1/4" SAE	93103-EB1	93103-MRB1	93103-MNB1
Manifold with 3-90 cm hoses	93636-EB1	93636-MRB1	93636-MNB1
Manifold with 3-150 cm hoses	93661-EB1	93661-MRB1	93661-MNB1
Manifold with 3-150 cm ball valve hoses	92661-EB1	92661-MRB1	92661-MNB1
Manifold with 3-180 cm hoses	93772-EB1	93772-MRB1	93772-MNB1
R410 Manifold with 3-150 cm standard with in-line ball valve - red and blue 1/4" x 5/16", yellow 1/4" x 1/4" hoses	92661-EB1-JT	-	-

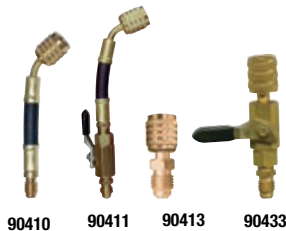
* Manifolds assembled with teflon gasket hoses, add a -T

* Manifolds assembled with ball valves at the end of hoses, add a -E

* For packaging please see below

OPTIONAL 1/4 X 5/16" ADAPTERS

For all manifolds ending in -E and -EB add the suffix



90410 90411 90413 90433

-410 to include **2 pieces of 90410** flex adapters to convert 1/4 SAE hose into 5/16 SAE

-411 to include **2 pieces of 90411** flex adapters with ball valve to convert 1/4 SAE hose into 5/16 SAE

-413 to include **2 pieces of 90413** straight adapter fittings to convert 1/4 to 5/16 SAE

-433 to include **2 pieces of 90433** adapter with fittings to convert 1/4 to 5/16 SAE

***Packaging Note**



clamshell cardboard box 58102-PBR

• All piston valve 2-way manifold gauge sets are packaged in a clamshell

• European standard packaging - cardboard box

• For plastic carrying case, please order Part# 58102-PBR



2-WAY ALUMINUM MANIFOLD – PISTON VALVES – ISOBUTANE GAUGES



93661-RB

CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

All Mastercool Gauges are Color Coordinated for Easy Refrigerant Recognition.

1.6 GAUGE CLASS - 80 MM DIAMETER

Units	Bar/PSI/°C
Refrigerant scales	R1270, R290, R600a
Gauge p/n (HP/LP)	RBH-RBL
Hoses 1/4" SAE	standard
Manifold with gauges, fittings + central tee 1/4" SAE	93103-RB
Manifold with 3-90 cm hoses	93636-RB
Manifold with 3-150 cm hoses	93661-RB
Manifold with 3-150 cm ball valve hoses	92661-RB
Manifold with 3-180 cm hoses	93772-RB

* Manifolds assembled with teflon gasket hoses, add a -T

* Manifolds assembled with ball valves at the end of hoses, add a -E

* For packaging please see page 19



2-WAY PISTON VALVE MANIFOLD FOR CO2 (R744)



CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

- Our free floating piston valve results in less wear and tear in comparison to market standard twisting piston valves
- Double o-ring allows for a much better seal resulting in less leaks
- Oil filled, class 1.0, 70 mm gauges
- Low side gauge max pressure of 10 MPA (1400 PSI), high side gauge max pressure of 16 MPA (2400 PSI)
- E-Z to read temperature scales on gauge face
- Solid extruded aluminum body
- Large easy-to-grip-knobs
- 1/4" SAE
- Steel braided hoses for CO2 with 200 bar working pressure and 800 bar burst
- Assemblies packed in plastic carrying case
- Plastic carrying case, p/n 58102-PBR

Gauge class – diameter	1.0 - 70 mm
Units	PSI/MPa
Refrigerant scales	R744
Gauge p/n (HP/LP)	55102-2400 55102-1400
Manifold body with hook and hose holder (1/4" SAE)	55102
Manifold with oil filled gauges only (1/4" SAE)	55103
Manifold (as above) with 3 - 150 cm braided hoses	55661





1/4" SINGLE VALVE MANIFOLD – BALL VALVE



92103-MRL

CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST
(packaged in a clamshell)

Single Valve Manifold	Gauge Class Diameter	Unit	Refrigerant Scales	Gauge p/n (HP/LP)
92103-EL	1.6 63 mm	Bar/PSI/°C	R410A-R507A- R404A-R22	EL
92103-MRL		Bar/PSI/°C	R134a-R22- R12-R404A	MRL
92103-ML		Bar/°C	R134a-R404A- R407C-R22-R507A	ML
92103-EBL	1.6 80 mm	Bar/PSI/°C	R410A-R407C- R22	EBL
92103-MRBL		Bar/PSI/°C	R134a-R22- R12-R404A	MRBL
92103-MBL		Bar/°C	R134a-R404A- R407C-R22-R507A	MBL
92103-EBRL		Bar/°C	R22-R422A- R427A-R422D-R417A	EBRL
92103-RB	1.0 80 mm	Bar/PSI/°C	R1270-R290-R600a	RBL
92103-MRB1		Bar/PSI/°C	R22-R404A-R407F- R134a	MRBL1
92103-EB1		Bar/PSI/°C	R22-R407C-R32- R410A	EBL1

* Manifolds assembled with gauge guards, add a -G



5/16" SINGLE VALVE MANIFOLD – BALL VALVE



92103-EBL-5/16

CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST
(packaged in a clamshell)

Single Valve Manifold	Gauge Class Diameter	Unit	Refrigerant Scales	Gauge p/n (HP/LP)
92103-EL-5/16	1.6 63 mm	Bar/PSI/°C	R410A-R507A- R404A-R22	EL
92103-MRL-5/16		Bar/PSI/°C	R134a-R22- R12-R404A	MRL
92103-ML-5/16		Bar/°C	R134a-R404A- R407C-R22-R507A	ML
92103-EBL-5/16	1.6 80 mm	Bar/PSI/°C	R410A-R407C- R22	EBL
92103-MRBL-5/16		Bar/PSI/°C	R134a-R22- R12-R404A	MRBL
92103-MBL-5/16		Bar/°C	R134a-R404A- R407C-R22-R507A	MBL
92103-EBRL-5/16		Bar/°C	R22-R422A- R427A-R422D-R417A	EBRL
92103-RB-5/16	1.0 80 mm	Bar/PSI/°C	R1270-R290-R600a	RBL
92103-MRB1-5/16		Bar/PSI/°C	R22-R404A-R407F- R134a	MRBL1
92103-EB1-5/16		Bar/PSI/°C	R22-R407C-R32- R410A	EBL1

* Manifolds assembled with gauge guards, add a -G

CLASS 1.6 REPLACEMENT GAUGES

	High pressure p/n	Low pressure p/n	Gauge Diameter	Units	Refrigerant Scales
	MH	ML	63 mm	Bar/°C	R134a R404A R407C R22 R507A
	MRH	MRL	63 mm	Bar/PSI/°C	R134a R22 R404A R12
	EH	EL	63 mm	Bar/PSI/°C	R410A R404A R507A R22
	MRKH	MRKL	63 mm	PSI/kg/ cm ² /°C	R12 R404A R22 R134a
	MBH	MBL	80 mm	Bar/°C	R134a R404A R407C R22 R507A
	MRBH	MRBL	80 mm	Bar/PSI/°C	R134a R22 R404A R12
	EBH	EBL	80 mm	Bar/PSI/°C	R410A R407C R22
	EBRH	EBRL	80 mm	Bar/°C	R22 R422A R427A R422D R417A

CLASS 1.6 REPLACEMENT GAUGES

	High pressure p/n	Low pressure p/n	Gauge Diameter	Units	Refrigerant Scales
	RBH	RBL	80 mm	Bar/PSI/°C	R1270 R290 R600a
	87500	87350	80 mm	Bar/PSI/°F/°C	R1234yf

CLASS 1.0 REPLACEMENT GAUGES

	High pressure p/n	Low pressure p/n	Gauge Diameter	Units	Refrigerant Scales
	EBH1	EBL1	80 mm	Bar/PSI/°C	R22 R407C R32 R410A
	EBAH1	EBAL1	80 mm	Bar/kPA/PSI/°C	>>NEW<< R32 R410A
	MRBH1	MRBL1	80 mm	Bar/kPA/PSI/°C	R22 R404A R407F R134a
	MNBH1	MNBL1	80 mm	Bar/PSI/°C	>>NEW<< R455A R448A R449A R452A

CLASS 1.0 REPLACEMENT GAUGE FOR CO2



Oil filled

High pressure p/n	Low pressure p/n	Gauge Diameter	Units	Refrigerant Scales
55102-2400	55102-1400	70 mm	PSI/MPa	R744

MANIFOLD REPLACEMENT PARTS

63 MM GAUGE PROTECTORS



- 93253-E 63 mm Blue Gauge Protector
- 93503-E 63 mm Red Gauge Protector
- 93553-E 63 mm Set (Red & Blue)

80 MM GAUGE PROTECTORS



- 91253-EE 80 mm Red Gauge Protector
- 91503-EE 80 mm Blue Gauge Protector
- 91553-EE 80 mm Set (Red & Blue)

LENS



- 85253-E 63 mm (2 1/2") Lens
- 98251-E 80 mm (3 1/8") Lens

4-WAY MANIFOLD REPLACEMENT KNOBS



- 58211 Blue Knob
- 58212 Red Knob
- 58213 Yellow Knob
- 58214 Black Knob

2-WAY MANIFOLD REPLACEMENT KNOBS



- 85211 Blue Knob
- 85212 Red Knob
- 93211 Black Knob
- 85211-R Blue Knob
- 85212-R Red Knob
- 93211-R Black Knob

PARTS FOR PISTON MANIFOLDS

- 85215 O-rings (4 pcs)
- 85216 Seal & Seat Assembly (2 pcs)
- 85217 Stem O-ring (2 pcs)

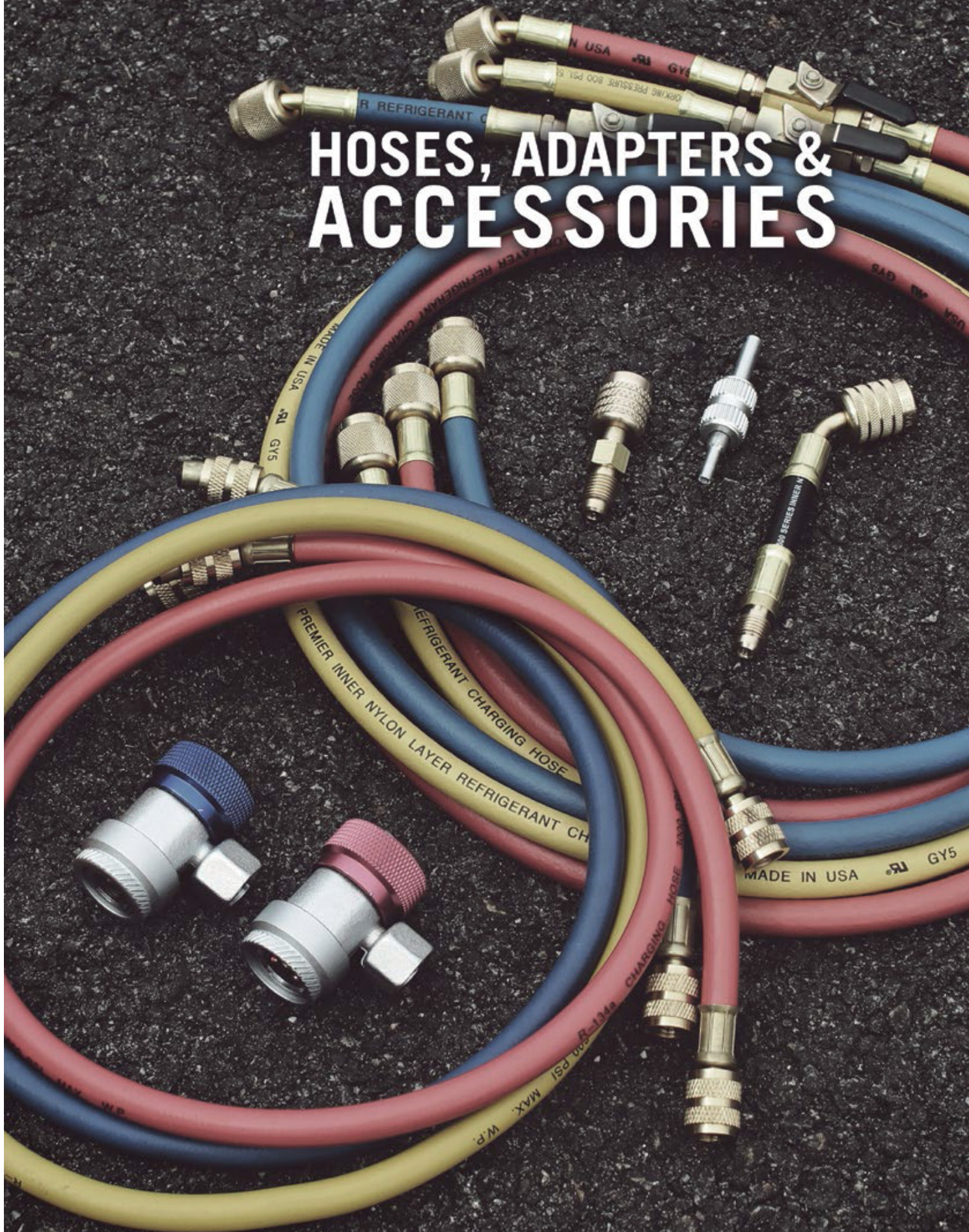
PARTS FOR 2-3 AND 4 WAY BALL VALVE MANIFOLDS



- 95102-R-KIT O-ring Repair Kit for 2-3 and 4 Way Ball Valve Manifold



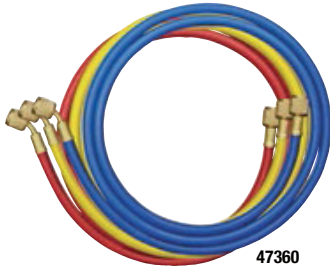
HOSES, ADAPTERS & ACCESSORIES



Mastercool uses only **(GRADE 5 HOSE)** with a selection of standard and nylon barrier for high pressure applications. Knurled brass nuts make finger tightening easy. **Crimped with 8 segment dies for secure fit and maximum durability.** Hoses are available in sets and a variety of lengths to meet all EPA, SAE and UL requirements for containment of refrigerant.

- Sets include one blue, one red and one yellow hose
- Hoses assembled with teflon gaskets, add a -T to the p/n
- For special length hoses, please inquire

STANDARD & HIGH PRESSURE HOSES W/STANDARD FITTINGS (1/4" SAE)



Standard Hoses, Working Pressure 41 BAR, Burst 210 BAR

HOSE LENGTH	90 cm	150 cm	180 cm	250 cm	3 m	5 m
Blue 1/4" x 1/4"	41361	41601	41721	41961	41961-120	41961-200
Yellow 1/4" x 1/4"	41362	41602	41722	41962	41962-120	41962-200
Red 1/4" x 1/4"	41363	41603	41723	41963	41963-120	41963-200
SETS 1/4" x 1/4"	40336	40360	40372	40396	40396-120	40396-200

Nylon Barrier Hoses, Working Pressure 56 BAR, Burst 280 BAR

Blue 1/4" x 1/4"	47361	47601	47721	47961	47961-120	47961-200
Yellow 1/4" x 1/4"	47362	47602	47722	47962	47962-120	47962-200
Red 1/4" x 1/4"	47363	47603	47723	47963	47963-120	47963-200
Black 1/4" x 1/4"	47364	47604	47724	47964	N/A	N/A
SETS 1/4" x 1/4"	47336	47360	47372	47396	47396-120	47396-200
Black 1/4" hose w/(3/8" x 3/8" fitting)	48364	48604	48724	48964	N/A	N/A
Black 3/8" hose w/(3/8" x 3/8" fitting)	94136	94160	94172	N/A	N/A	N/A

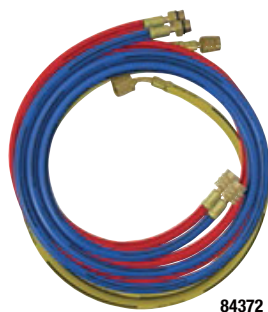
R410A HOSES



Nylon Barrier Hoses, Working Pressure 56 BAR, Burst 280 BAR

HOSE LENGTH	90 cm	150 cm
Blue 5/16" SAE x 5/16" SAE	49361-J	49601-J
Yellow 5/16" SAE x 5/16" SAE	49362-J	49602-J
Red 5/16" SAE x 5/16" SAE	49363-J	49603-J
SETS 5/16" SAE x 5/16" SAE	49336-J	49360-J
Blue 1/4" x 5/16"	-	96411
Red 1/4" x 5/16"	-	96413
SETS Blue/Red 1/4" x 5/16" and Yellow 1/4" x 1/4"	49336-JT	49360-JT

R134a HOSES WITH 1/2" ACME-F AND 14 MM-M AUTO A/C FITTINGS



Nylon Barrier Hoses, Working Pressure 56 BAR, Burst 280 BAR

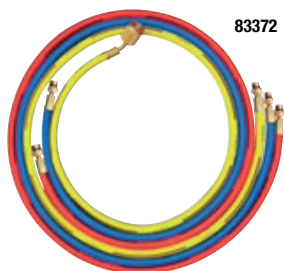
HOSE LENGTH	90 cm	150 cm	180 cm	240 cm
Blue-14 mm-M x 1/2" ACME-F	84361	84601	84721	84961
Yellow w/Shut-off Valve 1/2" ACME-F x 1/2" ACME-F	84362	84602	84722	84962
Red-14 mm-M x 1/2" ACME-F	84363	84603	84723	84963
Black-1/2" ACME-F x 1/2" ACME-F	84364	84604	84724	84964
Yellow w/o Shut-off Valve 1/2" ACME-F x 1/2" ACME-F	84365	84605	84725	84965
SETS Blue/Red 14 mm-M x 1/2" ACME-F and Yellow w/Shut-off Valve 1/2" ACME-F x 1/2" ACME-F	84336	84360	84372	84396

Mastercool R134a charging hoses meet SAE J2196 specifications and are UL tested.



Mastercool®
"World Class Quality"

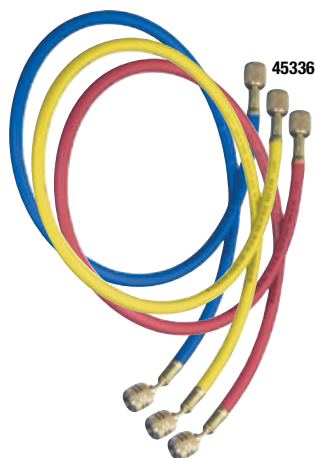
R1234yf HOSES (Meets J2888, EPA, SAE & UL Standards)



Nylon Barrier Hoses, Working Pressure 56 BAR, Burst 280 BAR

HOSE LENGTH	180 cm
Blue-12 mm-M x 12 mm-M	83721
Yellow-12 mm fitting x 1/2 x 16 ACME LH	83722
Red-12 mm-M x 12 mm-M	83723
SET Blue/Red 12 mm-M x 12 mm-M and Yellow 12 mm fitting x 1/2 x 16 ACME LH	83372

STANDARD & HIGH PRESSURE HOSES W/AUTOMATIC SHUT-OFF VALVE FITTINGS (1/4" SAE)



Standard Hoses, Working Pressure 41 BAR, Burst 210 BAR

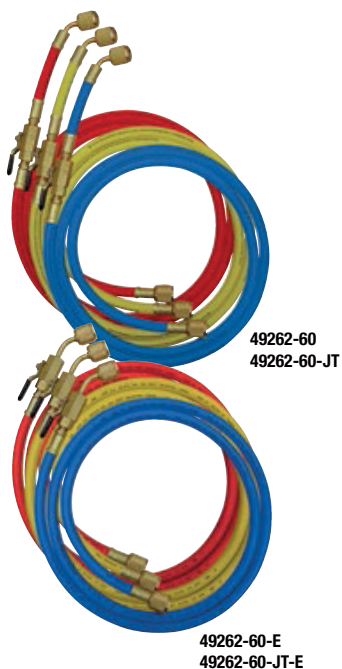
HOSE LENGTH	90 cm	150 cm	180 cm	250 cm
Blue 1/4" x 1/4"	45361	45601	45721	45961
Yellow 1/4" x 1/4"	45362	45602	45722	45962
Red 1/4" x 1/4"	45363	45603	45723	45963
Black 1/4" x 1/4"	N/A	N/A	N/A	N/A
SETS 1/4" x 1/4"	45336	45360	45372	45396

Nylon Barrier Hoses, Working Pressure 56 BAR, Burst 280 BAR

Blue 1/4" x 1/4"	46361	46601	46721	46961
Yellow 1/4" x 1/4"	46362	46602	46722	46962
Red 1/4" x 1/4"	46363	46603	46723	46963
Black 1/4" x 1/4"	46364	46604	46724	46964
SETS 1/4" x 1/4"	46336	46360	46372	46396

Auto shut-off valves automatically retain refrigerant in the service hose when they are removed from the system, meets EPA, SAE and UL standards for containment of refrigerant.

STANDARD & HIGH PRESSURE HOSES W/MANUAL SHUT-OFF VALVE FITTINGS (1/4" SAE)



Standard Hoses, Working Pressure 41 BAR, Burst 210 BAR

HOSE LENGTH	90 cm	150 cm	180 cm
Blue 1/4" x 1/4"	90263-36	90263-60	90263-72
Yellow 1/4" x 1/4"	90264-36	90264-60	90264-72
Red 1/4" x 1/4"	90265-36	90265-60	90265-72
SETS 1/4" x 1/4"	90262-36	90262-60	90262-72

Nylon Barrier Hoses, Working Pressure 56 BAR, Burst 280 BAR

Blue 1/4" x 1/4"	49263-36	49263-60	49263-72
Yellow 1/4" x 1/4"	49264-36	49264-60	49264-72
Red 1/4" x 1/4"	49265-36	49265-60	49265-72
SETS 1/4" x 1/4"	49262-36	49262-60	49262-72
Black 3/8" Hose with (3/8" x 3/8" fitting)	94236	94260	94272
Red 1/4 x 5/16"	49265-36-JT	49265-60-JT	49265-72-JT
Blue 1/4 x 5/16"	49263-36-JT	49263-60-JT	49263-72-JT
SETS Red/Blue 1/4 x 5/16", Yellow 1/4 x 1/4"	49262-36-JT	49262-60-JT	49262-72-JT

Add a -E for ball valve at the end hoses



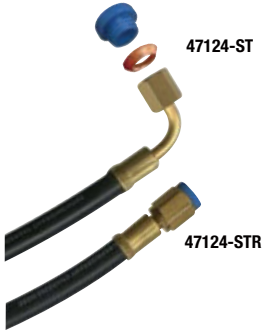
STEEL BRAIDED HOSES FOR CO2



Steel Braided Hoses, Working Pressure 200 BAR, Burst 800 BAR

HOSE LENGTH	150 cm
Steel braided hose for CO2	55601
SET of 3 steel braided hoses for CO2	55360

PRESSURE CONTROL HOSES



Replaces regular copper capillary tubing and eliminates capillary failure due to work hardening from vibration.

- 1/4" operates to 600 psi (42 bar) and 200°F (93°C)
- Operational temperature: -20° to 200°F (-29° to 93°C)

Hex Style Fittings with 1/4" SAE Thread

HOSE LENGTH	STRAIGHT X STRAIGHT	STRAIGHT X 90°
12"	47124-STR	47124-ST
18"	47184-STR	47184-ST
24"	47244-STR	47244-ST
36"	47364-STR	47364-ST
48"	47484-STR	47484-ST
60"	47604-STR	47604-ST

AUTOMATIC SHUT-OFF VALVES



Valve simply screws onto hose end. Available in straight and 90° models. Meets SAE, EPA and UL requirements for containment of refrigerant.

<< QUICK DISCONNECT : NO LOSS OF REFRIGERANT >>

90333-R	90° 1/4 x 1/4"	90335-R	Straight 1/4 x 1/4"
90333-UV	90° 1/4" FFL x 13 mm	90337	Straight 1/4 x 3/16"

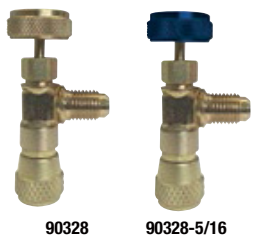
MANUAL SHUT-OFF BALL VALVES



For custom application, Mastercool offers swivel ball valves without the hoses. This valve may be used to add shut-off valves to recycling equipment, manifold sets, flushing equipment, etc.

90430	1/4 x 1/4" Swivel Ball Valve
90433	1/4 x 5/16" Swivel Ball Valve

CONTROL VALVE



Ideal for use on charged systems. Eliminates refrigerant, oil or dye from spraying during connections.

90328	1/4" FFL x 1/4" MFL
90328-5/16	5/16" FFL x 5/16" MFL

SERVICE HOSE REPLACEMENT PARTS

	1/4" SAE		1/2" ACME		14 mm-M O-RING	3/8" GASKET	UNF 1/2 - 20"	
	GASKET	DEPRESSOR	GASKET	DEPRESSOR			GASKET	DEPRESSOR
Charging Hoses	42010-10	42014-10	82010-10	42014-10	83341-10	48010-10	82010-10	42016-10
	42010-T-10 (Teflon)	42016-10 (Screw-Type)						
Shut-Off Valve	90336-10	N/A	90336-10	N/A	N/A	N/A	N/A	N/A



Mastercool[®]
"World Class Quality"

80011 HEAVY DUTY RATCHET HOSE CUTTER



Ratcheted action makes this cutter extremely easy to operate resulting in quick, clean cuts. Cutting blade is made of special alloy, heat treated steel for long life. Cuts all rubber hoses and PVC pipe up to 1 1/2" (38 mm) O.D. (Not recommended for PVC200)

80111 Replacement blade for 80011

80013 AUTOMOTIVE REFRIGERANT HOSE CUTTER



Makes quick, clean cuts. Cuts rubber automotive refrigerant hoses up to 1 1/2" O.D.

80113 Replacement blade for 80013

91390 R12 SERVICE PORT THREAD REPAIR TOOL



Recuts stripped R12 service port threads. All-in-one design for 1/8", 3/16" and 1/4" service ports. An excellent retrofit tool - it will ensure that the R134a retrofit adapters will fit securely.

R134a OCTAGON SERVICE PORT SOCKETS



98134 R134a Low Side Octagon Socket

98234 R134a High Side Octagon Socket

90925 CONDENSER FIN COMB



Cleans and straightens condenser and evaporator fins. Six sided head for 8, 9, 10, 12, 14 and 15 fins per inch applications.

CAN TAP VALVES



85510-E 1/4" SAE Can Tap Valve - Screw-On Model (European Standard)

85510-J R134a Can Tap Valve - Screw-On Model (Japanese Standard) M14-F x M10-FL-M

85510-YF R1234yf 1/2" Acme-LH Thread Piercing Design Can Tap Valve



- Exclusive "full grip" valve knob
- All metal construction provides durability
- Gasket assures leak proof operation
- Built-in safety check
- Meets SAE J2844

85512-YF R1234yf 1/2" Acme-LH Thread Self-Sealing Design Can Tap Valve



- Exclusive "full grip" valve knob
- All metal construction provides durability
- Gasket assures leak proof operation
- Built-in safety check
- Meets SAE J2844



MANUAL COUPLERS



82834 82934

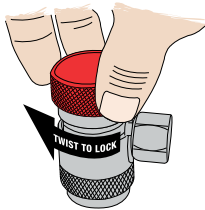


82834-E 82934-E

Patented manual couplers adjust easily to R134a service ports with varying dimensions. All metal construction for extra durability. Patented, spring loaded depressor will not damage service valves. Can be removed from service ports regardless of knob position without losing refrigerant. Meets SAE, UL and EPA requirements for containment of refrigerant. Color coded. **PATENT# 5,370,359**

- 82834** High-Side Manual R134a 14 mm-F x 16 mm Quick Coupler
- 82934** Low-Side Manual R134a 14 mm-F x 13 mm Quick Coupler
- 82834-E** High-Side Manual R134a 1/4" FL-M x 16 mm Quick Coupler
- 82934-E** Low-Side Manual R134a 1/4" FL-M x 13 mm Quick Coupler
- 82834-3/8** High-Side Manual R134a 3/8" FL-M x 16 mm Quick Coupler
- 82934-3/8** Low-Side Manual R134a 3/8" FL-M x 13 mm Quick Coupler
- 82834-J** High-Side Manual R134a M12 x 1.75 x 16 mm Quick Coupler
- 82934-J** Low-Side Manual R134a M10 x 1.5 x 13 mm Quick Coupler
- 80034** O-ring for 16 mm Quick Coupler (10 pcs)
- 80134** O-ring for 13 mm Quick Coupler (10 pcs)

SAFETY-LOCK MANUAL COUPLERS



82834-SL 82934-SL

Mastercool's new safety-lock manual couplers are designed for use on all R134a systems. This unique design allows the technician to work on the system without the worry of accidentally disconnecting the hose regardless of movement. Once the coupler is connected to the system, the safety-lock sleeve slides into place guaranteeing that the coupler cannot be taken off without unscrewing the manual valve. Meets all SAE, UL and EPA requirements for containment of refrigerant. Color coded.

- 82834-SL** High Side Manual R134a Safety Lock Coupler 14 mm-F x 16 mm
- 82934-SL** Low Side Manual R134a Safety Lock Coupler 14 mm-F x 13 mm
- 82834-SL-E** High Side Manual R134a Safety Lock Coupler 1/4" FL-M x 16 mm
- 82934-SL-E** Low Side Manual R134a Safety Lock Coupler 1/4" FL-M x 13 mm
- 82834-SL-3/8** High Side Manual R134a Safety Lock Coupler 3/8" FL-M x 16 mm
- 82934-SL-3/8** Low Side Manual R134a Safety Lock Coupler 3/8" FL-M x 13 mm
- 82834-SL-J** High Side Manual R134a Safety Lock Coupler M12 x 1.75 x 16 mm
- 82934-SL-J** Low Side Manual R134a Safety Lock Coupler M10 x 1.5 x 13 mm
- 80034** O-ring for 16 mm Quick Coupler (10 pcs)
- 80134** O-ring for 13 mm Quick Coupler (10 pcs)

E-Z SNAP™ COUPLERS



82214 82224



82214-E 82224-E

This unique patented design easily snaps on and off the A/C systems service ports under any pressure. The E-Z Snap™ automatically adjusts to various service port dimensions allowing fast and immediate access into the A/C system. The swivel feature enables the user to easily access all service ports, even in the tightest quarters. Meets SAE, UL, and EPA requirements for containment of refrigerant. **PATENT# 5,244,010**

- 82214** High-Side E-Z Snap R134a 14 mm-F x 16 mm Quick Coupler
- 82224** Low-Side E-Z Snap R134a 14 mm-F x 13 mm Quick Coupler
- 82214-E** High-Side E-Z Snap R134a 1/4" FL-M x 16 mm Quick Coupler
- 82224-E** Low-Side E-Z Snap R134a 1/4" FL-M x 13 mm Quick Coupler
- 82214-3/8** High-Side E-Z Snap R134a 3/8" FL-M x 16 mm Quick Coupler
- 82224-3/8** Low-Side E-Z Snap R134a 3/8" FL-M x 13 mm Quick Coupler
- 82214-J** High-Side E-Z Snap R134a M12 x 1.75 x 16 mm Quick Coupler
- 82224-J** Low-Side E-Z Snap R134a M10 x 1.5 x 13 mm Quick Coupler
- 80034** O-ring for 16 mm Quick Coupler (10 pcs)
- 80134** O-ring for 13 mm Quick Coupler (10 pcs)

ECONOMY COUPLERS



Specially designed to work in the tightest quarters. Attaches to your existing 1/4" flare hoses and snaps easily to A/C service ports.

- 66434-R** High Side R134a 1/4" FL-M x 16 mm Economy Coupler
- 66534-R** Low Side R134a 1/4" FL-M x 13 mm Economy Coupler
- 60034-10** O-ring for 66434 (10 pcs)
- 60134-10** O-ring for 66534 (10 pcs)

R1234yf COUPLERS



- Meets SAE J639 & J2888
- Allows recovery of entire refrigerant, including the space between the coupler and fitting.

- 83834** High Side R1234yf 12 mm-F x 17 mm Coupler with extended disconnect protection sleeve
- 83934** Low Side R1234yf 12 mm-F x 14 mm Coupler with extended disconnect protection sleeve
- 67434** High Side R1234yf 12 mm-F x 17 mm Quick Coupler
- 67534** Low Side R1234yf 12 mm-F x 14 mm Quick Coupler



R134a EXTRA LONG COUPLERS



Extra long high side R134a coupler used on BMW E60 (2003-2009 5 series), Volvo and Renault models. This extra long high side coupler can easily reach the service port.

- 82836** High Side Extra Long 14 mm-F x 16 mm
- 82836-E** High Side Extra Long 1/4" SAE-M x 16 mm

MALE x MALE CONNECTORS



- 82734** 14 mm-M x 1/4" FL-M (7/16-20") Connector
- 82735** 14 mm-M x M10 x 1.5-M Connector
- 82736** 14 mm-M x M12 x 1.75-M Connector
- 82738** 14 mm-M x 3/8" FL-M Connector
- 83341** O-Ring for 82733, 82734, 82735 and 82736
- 80234** O-Ring for 82634, 82634-M, 90364 and 90365

FEMALE x MALE CONNECTORS



- 82635** 1/2" ACME-F x 1/4" FL (7/16-20")-M R134a Adapter Coupler
- 82733** 14 mm-F x 1/2" ACME-M Connector
- 90364** 1/4" (7/16-20")-F x M10 x 1.5-M Adapter
- 90363** 5/16" (1/2-20 UNF)-F x 1/4" FL-M Connector
- 82634** 1/4" FL-F (7/16-20") x 1/2" ACME-M Connector
- 82634-M** 1/4" FL-F (7/16-20") x 1/2" ACME-M R134a Connector

93000 SPRING LOCK COUPLING TOOL SET



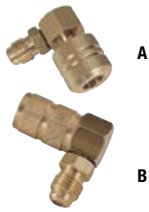
Four sizes 3/8" (#6), 1/2" (#8), 5/8" (#10) and 3/4" (#12) used on Fords and Chryslers. Durable spring loaded design for long life and reliable fit.

Set includes:

- | | | | |
|--------------|----------------|--------------|------------------|
| 93098 | 3/8" (#6) Red | 93100 | 5/8" (#10) Black |
| 93099 | 1/2" (#8) Blue | 93101 | 3/4" (#12) Beige |

CHARGING ADAPTERS, REPLACEMENT GASKETS & DEPRESSORS

90° ADAPTERS



		REPLACEMENT	GASKET/O-RING	DEPRESSOR
A	90333-R	Shut-Off Valve 1/4" MFL x 1/4" FFL	90336	-
B	90314*	1/4" MFL x 1/4" FFL	42010	42014
B	90340*	1/4" MFL x 1/8" FFL (High Side) Ford 1977-1980	90341	90368
B	90354*	1/4" MFL x 3/16" FFL (High Side) GM 1976 & Later	90369	90368

45° ADAPTERS



		REPLACEMENT	GASKET/O-RING	DEPRESSOR
C	90924	1/4" MFL x 1/4" FFL	42010	42014
C	90927*	1/4" MFL x 3/16" FFL (High-Side)	90369	90368

STRAIGHT ADAPTERS



		REPLACEMENT	GASKET/O-RING	DEPRESSOR
D	82272*	R134a 1/2" ACME-F x 13 mm R134a (Low-Side)	85511	-
E	82335	R134a Shut-Off Valve 1/2" ACME-M x 1/2" ACME-F	90336	-
E	90335-R	Shut-Off Valve 1/4" MFL x 1/4" FFL	90336	-
F	90337	Shut-Off Valve 1/4" MFL x 3/16" FFL	90331	-
F	82634*	1/4" FFL x 1/2" ACME-M	80234	-
F	82634-M	1/4" FFL x 1/2" ACME-M without Core Valve	80234	-
G	82734	14 mm-M x 1/4" MFL	83341	-
H	90358*	1/4" MFL x 3/16" FFL (High-Side)	42010	42014
I	90274	1/4" MFL x 1/4" FFL Swivel	42010	42014
I	90332**	1/4" MFL x 1/4" FFL Anti-Blowback Fitting	42010	42014
I	90357	1/4" MFL x 3/16" FFL (High-Side) Swivel	90369	90368
I	91084*	1/4" MFL x 3/16" FFL (High-Side) Swivel Adapter GM 1976 & Later, Ford 1981 & Later	90369	90368
J	90338*	GM 1991 & Later Service Adapter	90339	-
K	90633	1/4" MFL x 1/4" MFL Union	-	-
K	82633	1/2" ACME-M x 1/2" ACME-M Union	-	-
L	90413	Convert 1/4 to 5/16 SAE (1/2-20 UNF) swivel female nut with depressor	-	-

90416 SWIVEL/ANGLE ADAPTER FITTING



R410A/R32 1/4" SAE x 5/16 SAE (1/2" - 20 UNF) swivel/angle adapter fitting

FLEX ADAPTERS



		REPLACEMENT	GASKET/O-RING	DEPRESSOR
L	90355*	1/4" MFL x 3/16" FFL (High-Side) GM 1976 & Later, Ford 1981 & Later	90369	90368
L	90356*	1/4" MFL x 1/4" FFL	42010	42014
L	90373*	1/4" MFL x 1/8" FFL (High-Side) Ford 1977-1980	90341	90368

90410 FLEX ADAPTER



Convert 1/4 SAE hose into 5/16 SAE, 1/2-20 UNF swivel connection for R410A.

90411 FLEX ADAPTER WITH BALL VALVE



Convert 1/4 SAE hose into 5/16 SAE, 1/2-20 UNF swivel connection for R410A.

ACCESS SERVICE TOOLS



		REPLACEMENT	GASKET/O-RING	DEPRESSOR
M	90296*	1/4" MFL x 1/8" NPT	-	-
M	80296*	1/2" ACME-M x 1/8" NPT	-	-

* Includes Access Valve Core (0377-001) – (90-110 PSI Opening)

** Includes Check Valve Core (0332-002) – (8-12 PSI Opening)

RETROFIT ADAPTERS

82357 GM HIGH FLOW ADAPTER W/VALVE CORE & SERVICE PORT CAPS



GM High Flow Adapter

INDIVIDUAL TERMINATION (BLOCK OFF) CAPS



81297	1/4 (7/16" - 20) alum.
81379	3/16 (3/8" - 24) alum.
82297	Low Side R134a blue cap
82379	High Side R134a red cap

STRAIGHT ADAPTERS W/VALVE CORE & SERVICE PORT CAPS



82274	Low Side, 1/4 (7/16" - 20) x 13 mm
82332	High Side, 1/4 (7/16" - 20) x 16 mm
82358	High Side, 3/16 (3/8" - 24) x 16 mm

90° ADAPTERS W/VALVE CORE & SERVICE PORT CAPS



82275	Low Side, 1/4 (7/16" - 20) x 13 mm
82333	High Side, 1/4 (7/16" - 20) x 16 mm
82354	High Side, 3/16 (3/8" - 24) x 16 mm



91207 CHARGING AND DEPRESSOR ASSORTMENT



Replacement gaskets, o-rings and depressors for charging hoses and adapters.

Consists of:

42010	1/4" Gasket (3 pcs)
42014	1/4" Depressor (3 pcs)
90368	3/16" Depressor (3 pcs)
90369	3/16" Gasket (3 pcs)
90341	1/8" O-ring (3 pcs)

91334 CHARGING ADAPTER REPAIR KIT



55 piece assortment of replacement gaskets, o-rings and depressors for charging hoses and adapters.

Consists of:

42010	1/4" Gasket (10 pcs)
42014	1/4" Depressor (10 pcs)
90368	3/16" Depressor (10 pcs)
90369	3/16" Gasket (10 pcs)
90341	1/8" O-ring (10 pcs)
92107	Quick Disconnect Gasket (5 pcs)

91334-A R12/R134a CHARGING HOSE REPLACEMENT PARTS ASSORTMENT



Consists of:

42010	1/4" FL Gasket (10 pcs)
42014	1/4" FL Depressor (5 pcs)
42016	Screw Type Depressor (5 pcs)
90336	Gasket for 90335 (5 pcs)
82010	Black Gasket for R134a Hose (10 pcs)
83341	O-ring for R134a Hose (5 pcs)
80034-2	Black O-ring for High Side (5 pcs)
80134-2	Black O-ring for Low Side (5 pcs)

85200 DELUXE A/C SERVICE REPAIR KIT



Replacement gaskets, depressors, o-rings and nylon guides for charging hoses and adapters.

Consists of:

42010	1/4" Gasket (10 pcs)
42014	1/4" Depressor (10 pcs)
80034	O-ring for 82834 (10 pcs)
80034-1	High Side Nylon Guide (5 pcs)
80134	O-ring for 82934 (10 pcs)
80134-1	Low Side Nylon Guide (5 pcs)
82010	Gasket for R134a Hose (10 pcs)
82336	Gasket for 82335 (10 pcs)
83341	O-ring for R134a Hose (10 pcs)
90336	Gasket for 90335 Shut-off Valve (10 pcs)

91335 MASTER A/C CHARGING ADAPTER REPAIR KIT



126 piece assortment of replacement gaskets, o-rings and depressors for charging hoses and adapters. Also includes valve core removal tool and replacement valve cores.

Consists of:

- 42010** 1/4" Gasket (20 pcs)
- 42014** 1/4" Depressor (20 pcs)
- 90368** 3/16" Depressor (20 pcs)
- 90369** 3/16" Gasket (20 pcs)
- 90341** 1/8" O-ring (20 pcs)
- 92107** Quick Disconnect Gasket (10 pcs)
- 0377-001** Refrigeration Valve Core (10 pcs)
- 90378** GM Large Bore Valve Core (5 pcs)

91336 FORD SPRING LOCK REPLACEMENT O-RING AND GARTER SPRING ASSORTMENT



Compatible with R12 and R134a systems.

Consists of:

- 1336-006** #6 O-ring (10 pcs)
- 1336-008** #8 O-ring (10 pcs)
- 1336-010** #10 O-ring (10 pcs)
- 1336-012** #12 O-ring (10 pcs)
- 1336-016** #6 Garter Spring (5 pcs)
- 1336-018** #8 Garter Spring (5 pcs)
- 1336-110** #10 Garter Spring (5 pcs)
- 1336-112** #12 Garter Spring (5 pcs)

91337 R12/R134a VALVE CORE REPAIR KIT



Replacement valve cores for valve core removers & installers.

Consists of:

- 0377-001** Access Valve Core (20 pcs)
- 0378-001** Valve Core (10 pcs)
- 0531-001** R134a JRA High/Low Import Valve Core (10 pcs)
- 0768-001** R134a Domestic High Flow Valve Core M8 (5 pcs)
- 0769-001** R134a Domestic High Flow Valve Core M10 (5 pcs)
- 81290** R12/R134a Valve Core Remover/Installer (1 pc)

91339 AUTOMOTIVE R12 & R134a O-RING ASSORTMENT (270 PIECE HNBR)



Consists of:

- | | |
|---|--|
| 91339-01 7/32" x 1/16"
(5.29 x 1.78 mm) (20 pcs) | 91339-10 11 x 2 mm (15 pcs) |
| 91339-02 1/4" x 1/16"
(6.07 x 1.78 mm) (20 pcs) | 91339-11 12 x 2 mm (15 pcs) |
| 91339-03 6.8 x 1.9 mm (20 pcs) | 91339-12 13.9 x 1.8 mm (10 pcs) |
| 91339-04 5/16" x 1/16"
(7.65 x 1.78 mm) (20 pcs) | 91339-13 9/16" x 3/32"
(13.95 x 2.62 mm) (10 pcs) |
| 91339-05 7.8 x 1.9 mm (20 pcs) | 91339-14 14 x 2 mm (10 pcs) |
| 91339-06 8 x 2 mm (20 pcs) | 91339-15 15 x 2 (10 pcs) |
| 91339-07 8.8 x 1.9 mm (20 pcs) | 91339-16 17 x 2 (10 pcs) |
| 91339-08 7/16" x 1/16"
(10.82 x 1.78 mm) (15 pcs) | 91339-17 11/16" x 1/16"
(17.17 x 1.78 mm) (10 pcs) |
| 91339-09 7/16" x 3/32"
(10.77 x 2.62 mm) (15 pcs) | 91339-18 11/16" x 1/8"
(17.04 x 3.53 mm) (10 pcs) |





58490 UNIVERSAL R12/R134a MASTER KIT



Kit covers all R12 & R134a system valve cores for Standard, JRA, Eaton and GM Large Bore.
PATENT# 6,253,436



58490-YF UNIVERSAL R1234yf MASTER KIT



For 17 mm and 14 mm high and low side service ports. Kit covers: Standard Valve Cores, High Flow Valve Core M10, High Flow Valve Core M8.

VALVE CORE REMOVERS



81290 R134A UNIVERSAL LARGE BORE REMOVER

Used on R12/R134a Standard and JRA/EATON Large Bore R134a Valve Cores.

91290 UNIVERSAL VALVE CORE REMOVER

Double ended for easy replacement of Standard and GM R12 Large Bore Valve Cores.

81490 R134a VALVE CORE REMOVER AND INSTALLER



- For 13 mm and 16 mm high and low service port standard type valve
- Built-in ball valve retains charge and allows access to A/C system
- Excellent for replacing valve cores without discharging the system and for speeding recovery and recharging large systems



81490-YF R1234yf VALVE CORE REMOVER AND INSTALLER



- For 17 mm and 14 mm high and low service port standard type valve
- Built-in ball valve retains charge and allows access to A/C system
- Excellent for replacing valve cores without discharging the system and for speeding recovery and recharging large systems

90376 VALVE CORE REMOVER W/VALVE CORES FOR R12



Quickly removes valve cores. Storage area includes six replacement access valve cores.

90377 Replacement Standard Valve Cores for 90376 (6 pcs of 0377-001)

91490 STANDARD VALVE CORE REMOVER/INSTALLER



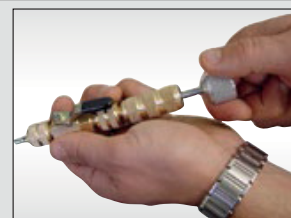
Sturdy ball valve design controls refrigerant flow with 1/4 turn of the valve lever. Lever position also gives visual indication of whether valve is opened or closed.

91496 Valve Core Remover/Installer with 1/4" MFL side port

91498 UNIVERSAL VALVE CORE REMOVER/INSTALLER KIT



(for High Pressure Refrigerants) (410A) Newly designed with patented locking mechanism, the 91498 is the only valve core remover kit that has a safety nut allowing the technician to freely access the valve core without fighting high pressures. Packaged in a blow molded carrying case, this kit also offers 1/2"-20 UNF and 1/4" flare fittings for all refrigerant applications. **PATENT# 6,253,436**





MEASURE & TEST INSTRUMENTS



THE COMPLETE A/C DIAGNOSTIC TOOL



52251



52270



52280

Mastercool's A/C System Analyzer is an all-in one tool that not only calculates critical information for the air conditioning system but also diagnoses basic system problems. The LCD display leads the technician through basic tests making service quicker and less complicated. The A/C System Analyzer is able to calculate: actual superheat, subcool, target superheat, temperature split, dry bulb, wet bulb, relative humidity, dew point, air velocity and air flow volume. The A/C System Analyzer easily guides the technician in determining if the refrigerant charge is correct. No calculations or charts are needed. Easily save test results under a customer and technician name and even download the data for future reference.

FEATURES:

- Calculates actual superheat and subcool temperatures for the following refrigerants: R22, R114, R123, R124, R134, R134a, R141, R142, R401A, R401B, R404A, R407A, R407B, R407C, R407D, R408A, R409A, R410A, R411A, R411B, R414A, R414B, R417A, R507A
- Provides all the functions of a high-end anemometer: airflow volume, air velocity, dry bulb temperature, wet bulb temperature, relative humidity and dew point
- Save results and download in Excel format for future use
- Optional pressure transducer for direct system readings
- Optional antenna type meter for any hard to reach locations

SPECIFICATIONS:

- Operating Temperature: 0 to 50°C (32 to 122°F), humidity <80%
- Storage Temperature: -20 to 50°C (-4 to 122°F), humidity <90%
- Dimensions with boot: 191mm x 93 mm x 41 mm
- Weight: (meter w/ batteries & round vane) 500 g
- Temperature Display: °F and °C
- Pressure Display: PSI and Bar
- Back-lit LCD Display
- Low battery indicator
- K-type thermocouple connection
- USB connection
- 6 AA batteries

All models available in multiple languages.

Please add the suffix below to the part number for the corresponding languages

- ES : English and Spanish
- EG : English and German
- EF : English and French
- EI : English and Italian
- EP : English and Portuguese

Part #	52251 System Analyzer	52253 Round Vane	52254 Antenna Type Meter (extends to 37")	52336 3 Ft. Clamp-on Thermocouple	52252 Pressure Transducer
SYSTEM ANALYZER KITS in a blow molded plastic box					
52255	✓	✓	-	✓	-
52260	✓	-	✓	✓	-
52270	✓	✓	-	✓	✓
52280	✓	-	✓	✓	✓

52253 ROUND VANE



Temp. Range/Resolution/Accuracy:

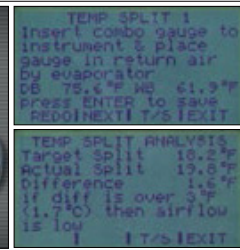
- -20 to 60°C (-4 to 140°F)
- 0.1°C (0.2°F)
- ±0.6°C (1.1°F) (-20 to 50°C (-4 to 122°F)), ±1.2°C (2.2°F) at other range

Humidity Range/Resolution/Accuracy:

- 0.1% to 99.9% RH
- 0.1% RH
- ±3% RH (at 25°C (77°F), 10 to 90% RH), ±5% RH at other range

Windspeed Range/Resolution/Accuracy:

- 0.6 to 32 m/s
- 0.1 m/s
- ±2% of full scale



Just two measurements with the probe will give the target temperature split and actual temperature split across the evaporator and compare the two.

52254 ANTENNA TYPE METER



Temp. Range/Resolution/Accuracy:

- -20 to 60°C (-4 to 140°F)
- 0.1°C (0.2°F)
- ±0.6°C (1.1°F) (-20 to 50°C (-4 to 122°F)), ±1.2°C (2.2°F) at other range

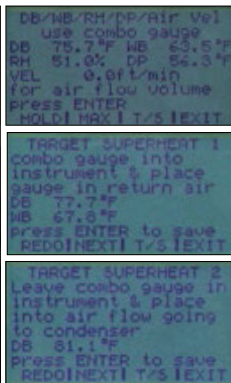
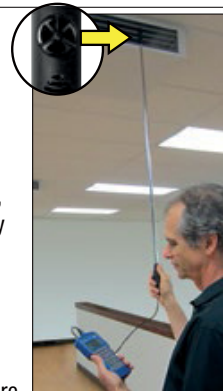
Humidity Range/Resolution/Accuracy:

- 0.1% to 99.9% RH
- 0.1% RH
- ±3% RH (at 25°C (77°F), 10 to 90% RH), ±5% RH at other range

Windspeed Range/Resolution/Accuracy:

- 0.5 to 25 m/s
- 0.1 m/s
- ±(2% of reading +0.3 m/s)

Probe will measure dry bulb, wet bulb, relative humidity, dew point, air velocity and air volume.

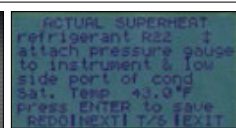
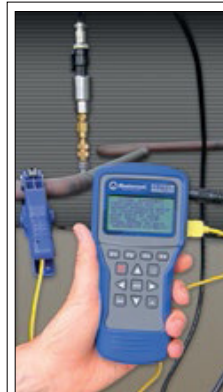


Get target superheat temperature by following screen instructions for two simple measurements with the probe.

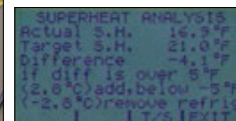
52252 PRESSURE TRANSDUCER



- Operating Pressure Range: 0-750 psi (0-52 bar)
- 1/4 FL swivel nut connection
- Accuracy: ±0.5, ±1% F.S.
- Operating Temperature: -40 to 100°C (-40 to 212°F)
- Certification: CE, Explosion-proof D
- EMC: EN50081-1/-2; EMS: EN50082-2



Pressure transducer and thermocouple will measure saturated temperature and actual temperature, to calculate actual superheat and subcool temperature.



System will compare target and actual superheat.

52336 CLAMP-ON THERMOCOUPLE (extends 3 ft (1 M))



Temp. Range/Resolution

- -40 to 121°C (-40 to 250°F)
- 0.1°C (0.2°F)

52337 Clamp-On Thermocouple (extends 10 ft (3 M))



52246 COMPACT SUBCOOL/SUPERHEAT CALCULATOR



FEATURES:

- Clamp-on K-Type thermocouple included to achieve accurate temperature measurement
- View bubble and dew temperature for corresponding pressure on large LCD display
- Easily select superheat or subcool temperature with a touch of a button
- Easily look up saturated temperature using the pressure from any gauge set
- Hold function keeps data on LCD even when thermocouple is disconnected

SPECIFICATIONS:

- R22, R32, R114, R123, R124, R134, R134a, R141B, R142B, R290, R401A, R401B, R404A, R407A, R407B, R407C, R407D, R407F, R408A, R409A, R410A, R411A, R411B, R414A, R414B, R417A, R421A, R422A, R422B, R422C, R422D, R427A, R434A, R437A, R438A, R441A, R507A
- °F or °C Temperature
- Displays bubble, saturated and dew point temperatures
- Pressure displays in Kg/cm², MPa, Bar, PSI (0-600 PSI)

52236 AIRFLOW+PSYCHROMETER



Reads Humidity, Air Temp., Dew Point, Wet Bulb, Air Velocity, Air Volume & BTU. The sensor is built into the remote fan and is protected by a rotating cap.

FEATURES:

- Auto-off with disabling capability
- Large back-lit LCD display
- Metric & inch unit selection
- Fast response & accurate reading
- Tripod mountable for extended use
- Dew point & wet bulb
- Microprocessor circuitry
- 4 AAA batteries
- Professional remote vane
- Low battery indicator

SPECIFICATIONS:

- *Temperature:* -4 to 140°F (-20 to 60°C) / Accuracy: ±1°F (±0.6°C)
- *Relative Humidity:* 0 to 100% RH / Accuracy: ±3% at 10 to 90% RH (cal. temp.) ±5% at other range
- *Dew Point:* -90 to 158°F (-68 to 70°C)
- *Wet Bulb Temperature:* -7.6 to 158°F (-22 to 70°C)
- *Air Velocity:* 0.3 to 35 m/s (1 to 114 ft/s)
- *Air Volume:* 0 to 99999 m³/s (0 to 99999 cfm)

52237 Data Logger CD & USB Cable for use with 52236 AirFlow + Psychrometer



52230 PEN TYPE HYGROMETER



- Rotating cap to protect sensor
- Temperature and humidity in °F or °C
- Data hold to capture readings
- LCD digital display
- Max/Min record function
- Auto-off function

SPECIFICATIONS:

Size: 6.8" x 1.6" x 0.6" (17 x 4 x 1.5 cm)
 Sensor: Electronic Capacitance Polymer Film
 Temp. Range: -4 to 140°F (-20 to 60°C)
 RH Range: 0 to 100%
 Accuracy: ±3% from 10 to 95% RH at 77°F (25°C) / ±1% from other RH range
 Resolution: 0.1°F / 0.1°C / 0.1%
 Storage Temp.: 14 to 140°F (-10 to 60°C) / Storage RH%: <95%
 Battery: (1) CR2032 (Lithium Coin Cell) / Battery Life: 100 hrs.

52233 DIGITAL PSYCHROMETER



- Rotating cap to protect sensor
- LCD digital display
- Low battery indicator
- Max/Min record function
- Auto power off with disabling capability
- External temp. probe (optional)
- Data hold to capture readings
- Fast response, accurate reading
- Microprocessor circuitry for reliability

SPECIFICATIONS:

Temp. Range: -4 to 122°F (-20 to 50°C)
 RH% Range: 0 to 100% RH
 Wet Bulb Range: -6.88 to 122°F (-21.6 to 50.0°C)
 Dew Point Range: -109.7 to 122°F (-78.7 to 50.0°C)
 Ext Temp. Range: -4 to 158°F (-20 to 70°C)
 Accuracy: RH% 3% at 77°F (25°C)/Temp: 1°F (0.6°C)
 Response Time: 60 seconds
 Pocket Size: 0.9" (h) x 1.9" (w) x 7.0" (l) (2 x 5 x 18 cm)
 Power: (2) 1.5V AAA battery

52231 Probe for 52233



52238 DIGITAL SOUND LEVEL METER



- Automatic or manual ranging
- 4 measurement ranges from 40 to 130 dB
- 0.1dB resolution
- Select fast or slow response times
- Select A or C weighting
- Maximum hold function
- Record maximum or minimum measurements
- Jacks provide AC analog output

52240 PROFESSIONAL HVAC/R CLAMP METER



- Multi-Function: Frequency count, diode check and alarm
- Current: (AC) 20 MA - 600A
- Voltage: AC 200 mv - 750V / DC 1V-1000V
- Auto Power OFF
- Frequency: 10Hz - 2KHZ
- Ohms: (Resistance) 200m ohm-20K ohm
- Peak data hold
- Unit and sign display

SALT SOLUTION BOTTLE

52733



52775

for calibrating 52230 Pen Type Hygrometer and 52233 Digital Psychrometer

52733 Salt Solution Bottle 33% (Dark Brown Bottle)

52775 Salt Solution Bottle 75% (Blue Bottle)





52224-A INFRARED THERMOMETER WITH LASER



The 52224-A offers laser targeting accuracy, enhanced back-lit LCD display and an expanded temperature range. The compact design is simple to use and easy to store.

SPECIFICATIONS:

Non-Contact Temperature Range:	-50 to 500°C (-58 to 932°F)
Field of View:	12 : 1
Display Illumination:	Back-lit LCD Color Display
Target Indicator:	Single Laser Spot
Emissivity:	0.95
Resolution:	0.5°F / 0.5°C
Accuracy:	±2°C (4°F) or ±2% of reading
Response Time:	0.5 seconds
Power Off:	Automatic after 15 seconds
Battery Life:	Approximately 14 hours
Included Accessories:	2 AAA batteries, instruction manual, plastic molded case



52224-CC INFRARED THERMOMETER WITH CIRCULAR LASER



Features both infrared and circular laser technologies.

SPECIFICATIONS:

Non-Contact Temperature Range:	-60 to 550°C (-76 to 1022°F)
Field of View:	12 : 1
Display Illumination:	Back-lit LCD Color Display
Target Indicator:	Circular Laser
Emissivity:	0.95
Resolution:	0.1°F / 0.1°C
Accuracy:	±2°C (4°F) or ±2% of reading
Response Time:	1 second
Power Off:	Automatic after 15 seconds
Battery Life:	Approximately 14 hours
Included Accessories:	2 AAA batteries, instruction manual, plastic molded carrying case



52224-D MULTI-LASER INFRARED THERMOMETER



The multi-laser infrared thermometer safely monitors hot, hazardous, or hard to reach materials without contamination or damage to the surface. Simply point at target, pull the trigger, and read the temperature.

SPECIFICATIONS:

Measurement Range:	-60 to 760°C (-76 to 1400°F)
Operating Range:	0 to 50°C (32 to 122°F)
Field of View:	12 : 1
Display Illumination:	Back-lit LCD Color display
Target Indicator:	Eight Laser
Emissivity:	0.95 default - adjustable 0.1 to 1 step .01
Resolution:	0.1°C/0.1°F at -76 to 999.9(°C/°F), otherwise 1°C/1°F
Modes:	E, MAX, MIN, DIF and AVG
Accuracy, (Tobj=15-35°C, Tamb=25°C):	±1.0°C (1.8°F)
Accuracy, (Tamb=23 ±3°C):	Tobj=-60~0: ±(2+0.05/°C)°C, Tobj=0~760: ±2% of reading or 2°C (4°F) whichever is greater
Response Time:	1 second
Battery Life:	Min. 30 hours continuous use without laser, Min. 7 hours continuous use with laser
Included Accessories:	2 AAA batteries, instruction manual, plastic molded case



52225-A DUAL TEMP PLUS INFRARED THERMOMETER



3 ft. (1m) Wire Thermocouple Included

Features both infrared and contact thermometer technologies. Includes programmable HI/LO alarms and Lock Mode to capture temperature readings. The contact function offers a built-in K type jack and wire thermocouple.

SPECIFICATIONS:

Non-Contact Temperature Range:	-60 to 760°C (-76 to 1400°F)
Thermocouple Temperature Range:	-64 to 1400°C (-83 to 1999°F)
Field of View:	30 : 1
Display Illumination:	Back-lit LCD display
Target Indicator:	Single Laser Spot
Emissivity:	0.10 (10E) to 1.0 (100E)
Resolution:	0.1°F / 0.1°C
Modes:	MIN, MAX, DIFF & AVG
Accuracy:	±2°C (4°F) or ±2% of reading
Response Time:	1 second
Power Off:	Automatic after 15 seconds
Battery Life:	Approximately 14 hours
Included Accessories:	2 AAA batteries, 1m thermocouple probe, instruction manual, plastic molded case
Optional Accessories:	3 m wire thermocouple probe, piercing penetration probe, surface probe, air probe



52225-B ULTRA TEMP DUAL LASER THERMOMETER



Optional Wire Thermocouple

Features both infrared and contact thermometer technologies. Includes programmable HI/LO alarms, and Lock Mode to capture temperature readings. The built-in K type jack offers optional contact functions. Illuminates working area with built-in LED light.

SPECIFICATIONS:

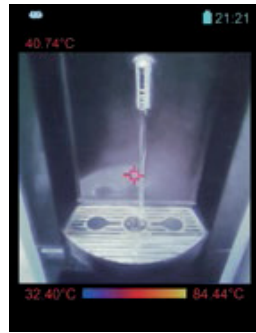
Non-Contact Temperature Range:	-60 to 1000°C (-76 to 1832°F)
Thermocouple Temperature Range:	-64 to 1400°C (-83 to 1999°F)
Field of View:	50 : 1
Display Illumination:	Back-lit LCD display
Target Indicator:	Dual Laser Spot
Emissivity:	0.95
Resolution:	0.1°F / 0.1°C
Modes:	MIN, MAX, DIFF & AVG
Accuracy:	±2°C (4°F) or ±2% of reading
Response Time:	1 second
Power Off:	Automatic after 15 seconds
Battery Life:	Approximately 14 hours
Included Accessories:	2 AAA batteries, instruction manual, plastic molded case
Optional Accessories:	1 m, 3 m wire thermocouple probes, piercing penetration probe, surface probe, air probe



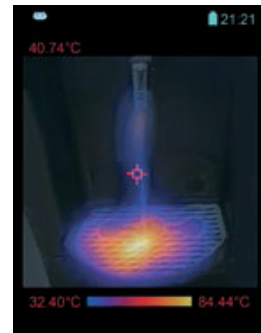
52325 THERMAL IMAGING CAMERA



VISIBLE CAMERA:



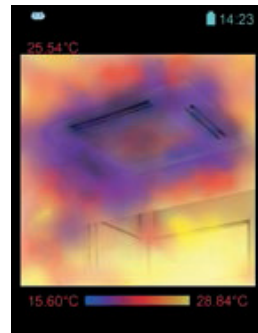
Visual



Fusion



Visual



Fusion

- Fully Automatic
- Focus Free
- Superior Measurement/Accuracy
- Micro SD Card Storage
- Carry case, micro SD card, USB cord, batteries and instructions included

SPECIFICATIONS:

- Thermal Image Resolution: 32 x 32 pixels
- Visual Image Resolution: 640 x 480
- Measurement Range: -4 to 662°F (-20 to 350°C)
- Accuracy (Tamb=20 to 26°C): ±2% of reading, or 4°F (2°C) whichever is greater
- Thermal Sensitivity: 0.1°F (0.1°C)
- Frame Rate: 9 Hz
- Field of View: 33 x 33 deg
- Emissivity Range: 0.95 default – adjustable 0.1 to 1 step 0.01
- Focus: Focus free
- LCD Size: 2.8" (71 mm)
- LCD: Color
- Memory Type: micro SD card
- Sensor Filter: 8 to 14 um
- Interface: USB
- Battery Type: 3.7 V Li-ion rechargeable battery
- Battery Life (with back-lit): 3 hours continuous use
- Dimensions: 96.29 x 74.03 x 233.68 mm (3.79 x 2.91 x 9.20 inch)



52226 DUAL TEMP INFRARED/PROBE THERMOMETER



The 52226 Dual Temp Thermometer offers both infrared and contact probe technologies.

- Infrared Temp Range: -67 to 428°F (-55 to 220°C)
- Probe Temp Range: -67 to 626°F (-55 to 330°C)
- Field of View Ratio 1 : 1
- Adjustable Emissivity
- Lock Mode for hands free scanning
- Minimum/Maximum capture mode
- Contact Probe locks safely on the side of the unit

52227 POCKET INFRARED THERMOMETER



The 52227 Pocket Infrared Thermometer offers accurate non-contact temperature measurement in a compact and easy to use size.

- Temp Range: -67 to 428°F (-55 to 220°C)
- Field of View Ratio 1 : 1
- Adjustable Emissivity
- Back-lit LCD Display
- Minimum/Maximum Capture Mode



52228 DIGITAL DIFFERENTIAL THERMOMETER



The 52228 Digital Differential Thermometer provides instant measurements of TWO points. (T1, T2) and T1 – T2.

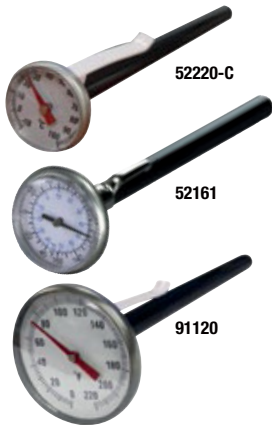
- Max Hold Function
- Data Hold Function
- Temperature in °F or °C
- AUX Output Jacks
- T1 – T2 Differential
- Temp. Range: -50 to 1999°F (-50 to 1300°C)
- Type K Thermocouple Input
- Resolution: 1°F (1°C)
- Includes two 3 ft (1m) Thermocouple Probes

52229 HANDHELD WATERPROOF DIGITAL THERMOMETER



- Measuring Range: -58 to 572°F / -50 to 300°C
- Wide Measurement Range
- Maximum/Minimum temperature memory
- Celsius and Fahrenheit exchange
- Data Hold Function
- High/Low Temperature Alarm Setting
- Key Tone for Operation Confirmation
- Stainless Steel Probe
- Foldaway Stand

POCKET ANALOG DESIGNS



All thermometers include pocket holder and clip.

Item#	Dial Size	Temperature Scale
52220-C	25 mm	-10 to 100°C
52161	35 mm	-40 to 70°C (-40 to 160°F)
91120	44.5 mm	0 to 220°F

POCKET DIGITAL DESIGN

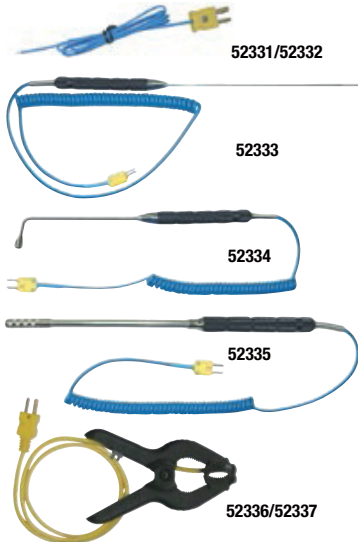


All thermometers include pocket holder and clip.
 Battery operated, (on/off and auto shut-off after 10 minutes)

- ±1°C Accuracy
- 0.1°C Resolution

Item#	Dial Size	Temperature Scale
52223-A	25 mm	-50 to 150°C (-58 to 302°F)

OPTIONAL THERMOCOUPLE PROBES



52331	Wire Probe - 3 ft (1 m)
52332	Wire Probe - 10 ft (3 m)
52333	Piercing Penetration Probe w/coil cord
52334	Surface Probe w/coil cord
52335	Air Probe w/coil cord
52336	Clamp-On Probe - 3 ft (1 m)
52337	Clamp-On Probe - 10 ft (3 m)

43300 14 PIECE UNIVERSAL COOLING SYSTEM PRESSURE TEST KIT



- Detects and exposes external system leaks
- Detects internal engine leaks due to blown gaskets or cracked block
- Includes hand pump, thermometer and 12 adapters (No.'s 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13) to fit most popular domestic and import cars and trucks

43301 27 PIECE MASTER RADIATOR PRESSURE TEST KIT



- Detects and exposes external system leaks
- Detects internal engine leaks due to blown gaskets or cracked block
- Vacuum type cooling system
- Purge and refill for quick change of coolant
- Test Range: 0 – 35 psi
- Includes 1 blue radiator cap test connector R123/R125
- Includes 1 black radiator cap test connector R123/R124
- Includes 1 thermometer, 1 universal radiator cap, 1 vacuum purge and refill tool, coolant hose and additional installation accessories
- Includes hand pump and 19 adapters (No.'s 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21) to fit most popular domestic and import cars and trucks

43302 25 PIECE MASTER COOLING SYSTEM PRESSURE TEST KIT



- Detects and exposes external system leaks
- Detects internal engine leaks due to blown gaskets or cracked block
- Includes blue and black radiator cap test connectors
- Includes hand pump, thermometer and 21 adapters (No.'s 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23) to fit most popular domestic and import cars and trucks





43305 10 PIECE COOLING SYSTEM PRESSURE TEST ADAPTER KIT



- Adapter update kit to be used with 43300
- Detects and exposes external system leaks
- Detects internal engine leaks due to blown gaskets or cracked block
- Includes blue and black radiator cap test connectors
- Includes 8 adapters (No's 14, 15, 16, 17, 18, 19, 20, 21) to fit most popular domestic and import cars and trucks



43306 HEAVY DUTY COOLING SYSTEM PRESSURE TEST & REFILL KIT



Remove the complications that often result from unreliable rubber plugs or bladders with our heavy duty cooling system pressure test & refill kit. This kit will save set-up time and provide precise test results.

- Uses shop air to uphold continual pressure to the cooling system during testing and refill
- 4 quick disconnect vacuum attachments provide quick refilling of the cooling system and eradicates airlocks
- For use with Freightliner, International, Kenworth, Peterbilt, Mack, Volvo, GMC and Sterling cooling systems
- Includes heavy duty vehicle adapters, pressure test regulator, vacuum refill attachment with tubing in a plastic case



43390 UNIVERSAL 90° ADAPTER FITTING FOR COOLING SYSTEM PRESSURE TEST ADAPTERS



- Universal fitting for cooling system pressure test hand pumps
- Provides 90° access for hard to reach places



43013 VACUUM TYPE COOLING SYSTEM FILLER KIT



- Significantly shortens time for refilling new coolant by creating a vacuum in the cooling system
- No need to undergo time-consuming air bleeding after refilling new coolant
- Conical adapter offers a wide application to different radiator filler necks
- Kit can be hooked underneath the vehicle's hood for easy access
- Minimizes the risks of engine overheating
- Kit includes vacuum purge and refill tool, coolant hose, 1 universal radiator cap



43705 REFRACTOMETER



- Offers a quick and easy way to test the freezing point of coolant/anti-freeze
- Compatible with Ethylene or Propylene Glycol
- Measures battery acid specific gravity
- Automatic temperature compensation
- Large, easy to read graphics and high contrast lens
- Adjustable focus viewfinder
- Strong, metal body structure
- Includes storage case, fluid dropper and calibration screw driver
- Not for use with OAT coolants or DEF
- Fahrenheit temperature scale (celsius conversion chart supplied)





43050 AIR POWERED BRAKE CALIPER WIND BACK TOOL KIT



Pneumatic brake caliper piston compressor kit constructed of light weight durable anodized aluminum. Right or left hand wind-back operation for rear brake caliper pistons. Pneumatic single piston press shaft operation allows one technician to perform the brake job.

- Durable non-impact single piston shaft
- Magnetic base to secure press adapters
- 15 piece press adapter set
- Left or right wind-back operation
- O-ring protected shaft to maintain proper pressure
- Center shaft constructed of chrome alloy steel
- Protective rubber guard to prevent damage to shaft and caliper
- 3/8" drive adapter surface



43051 AIR POWERED BRAKE CALIPER WIND BACK TOOL



- Pneumatic wind back tool offers energy-savings on brake calipers
- Pneumatic tool allows right and left-hand rotation

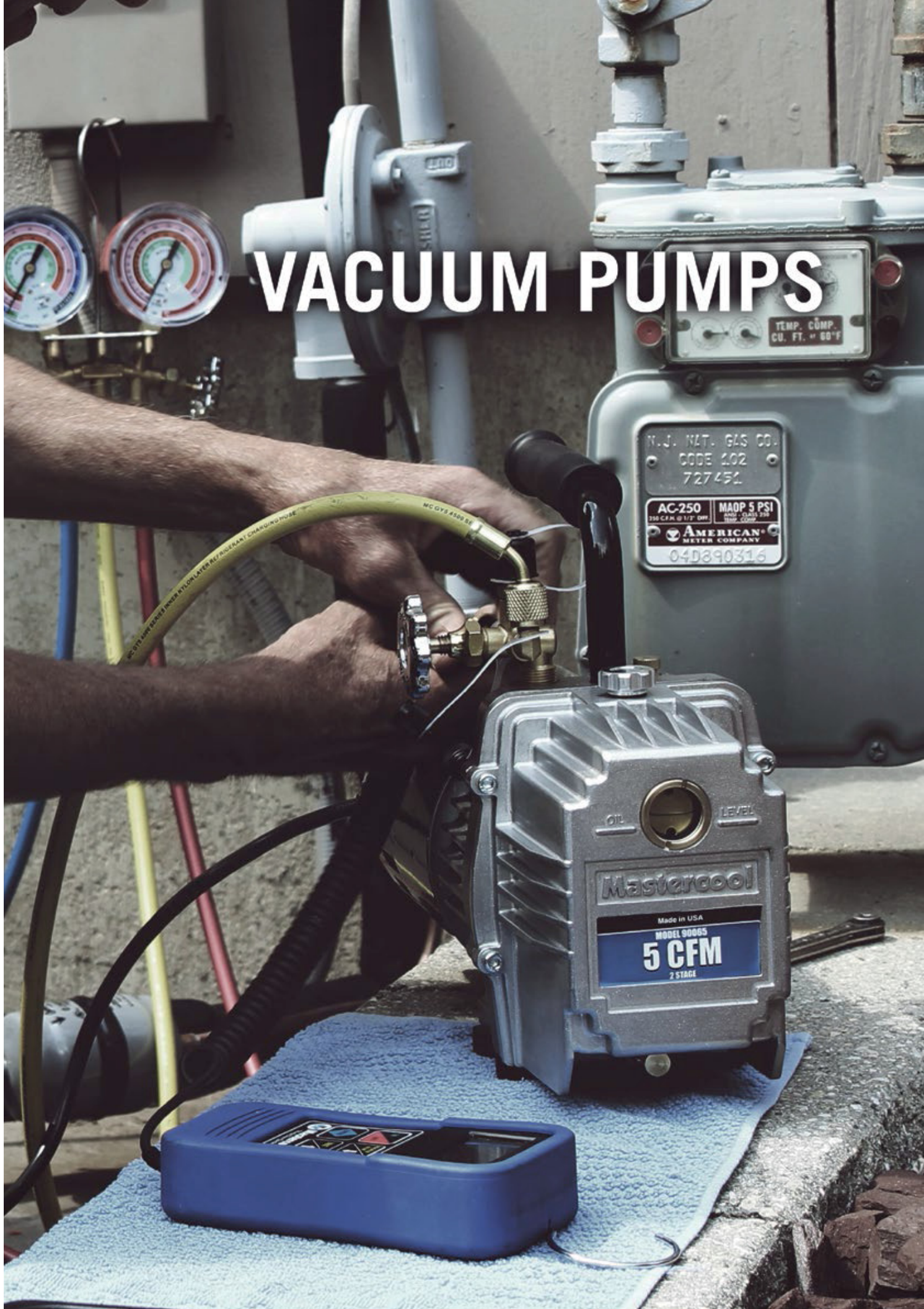


43058 DRUM BRAKE HOLD-DOWN SPRING PLIERS



- Universal application for nearly all drum brakes
- Special curved neck provides easy access to hold-down pins regardless of the barrier created by the wheel hub
- An integral forming head without welding offers high strength

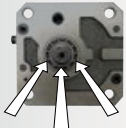
VACUUM PUMPS



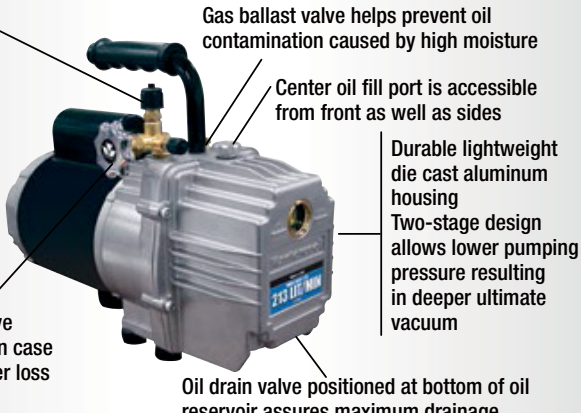
2 STAGE ELITE BALL BEARING DESIGN VACUUM PUMPS



A good quality vacuum pump is an integral tool for complete A/C service. Mastercool vacuum pumps are durable and time tested. They stand up to the most grueling conditions and will provide years of reliable service. Mastercool offers a complete selection of pumps. Regardless of your service requirements, Mastercool has a model for your application.



Ball Bearing Cartridge Design
reduces running temperatures by 30% and extends the life of the pump.



Manifold valve isolates pump from the system when testing for leaks. Includes three inlet ports – 1/4", 3/8" SAE and 1/2" ACME on 5 and 7.5 CFM models

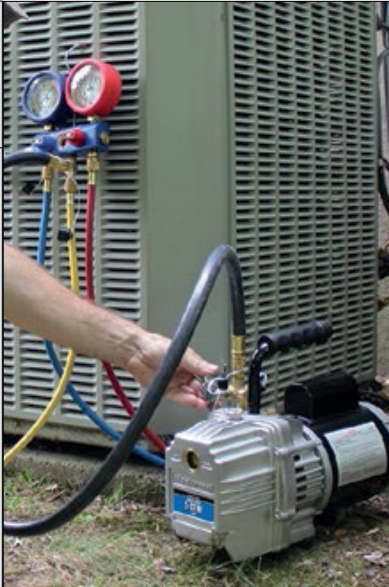
Gas ballast valve helps prevent oil contamination caused by high moisture

Center oil fill port is accessible from front as well as sides

Durable lightweight die cast aluminum housing
Two-stage design allows lower pumping pressure resulting in deeper ultimate vacuum

Internal check valve stops oil blowout in case of accidental power loss

Oil drain valve positioned at bottom of oil reservoir assures maximum drainage



119 LIT/MIN - 142 LIT/MIN - 5 CFM VACUUM PUMP

*Japanese Standard



MODEL	90065-220	90065	90065-J*
NO. OF STAGES	2	2	2
FREE AIR DISPLACEMENT	119 lit/min 142 lit/min	5 CFM	119 lit/min 142 lit/min
ULTIMATE VACUUM	25 Microns	25 Microns	25 Microns
MOTOR	1/3 HP	1/3 HP	1/3 HP
PUMP SPEED	1425 RPM 1725 RPM	1425 RPM 1725 RPM	1425 RPM 1725 RPM
ELECTRICAL SPECS	220 V / 50 HZ 220 V / 60 HZ	110 V / 60 HZ	100 V / 50/60 HZ
WEIGHT	13.2 kg (29 lbs)	13.2 kg (29 lbs)	13.2 kg (29 lbs)
DIMENSIONS IN CM	37 x 15.5 x 27.5 x 24	37 x 15.5 x 27.5 x 24	37 x 15.5 x 27.5 x 24

178 LIT/MIN - 213 LIT/MIN - 7 CFM VACUUM PUMP

*Japanese Standard



MODEL	90067-220	90067	90067-J*
NO. OF STAGES	2	2	2
FREE AIR DISPLACEMENT	178 lit/min 213 lit/min	7.5 CFM	178 lit/min 213 lit/min
ULTIMATE VACUUM	25 Microns	25 Microns	25 Microns
MOTOR	1/2 HP	1/2 HP	1/2 HP
PUMP SPEED	1425 RPM 1725 RPM	1425 RPM 1725 RPM	1425 RPM 1725 RPM
ELECTRICAL SPECS	220 V / 50 HZ 220 V / 60 HZ	110 V / 60 HZ	100 V / 50/60 HZ
WEIGHT	16.0 kg (35.5 lbs)	16.0 kg (35.5 lbs)	16.0 kg (35.5 lbs)
DIMENSIONS IN CM	41 x 15.5 x 27.5 x 24	41 x 15.5 x 27.5 x 24	41 x 15.5 x 27.5 x 24





2 STAGE DUAL VOLTAGE VACUUM PUMPS

- New U.S. Design
- Stronger Motor
- Field Serviceable

70 LIT/MIN - 58 LIT/MIN - 3 CFM DUAL VOLTAGE VACUUM PUMP



MODEL	90063-2V-110-B	90063-2V-220-B
NO. OF STAGES	2	2
FREE AIR DISPLACEMENT	3 CFM	85 lit/min (60Hz) 71 lit/min (50Hz)
ULTIMATE VACUUM	15 Microns	15 Microns
MOTOR	1/3 HP	1/3 HP
PUMP SPEED	1720 RPM	1440 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ	220 V, 50/60 HZ
POWER CORD	110 V Cable (US)	220 V Cable (Schuko)
WEIGHT	7 kg (15.43 lbs)	7 kg (15.43 lbs)
DIMENSIONS IN CM	27 x 15 x 25	27 x 15 x 25

170 LIT/MIN - 142 LIT/MIN - 6 CFM DUAL VOLTAGE VACUUM PUMP



MODEL	90066-2V-110-B	90066-2V-220-B
NO. OF STAGES	2	2
FREE AIR DISPLACEMENT	6 CFM	170 lit/min (60Hz) 142 lit/min (50Hz)
ULTIMATE VACUUM	15 Microns	15 Microns
MOTOR	1/2 HP	1/2 HP
PUMP SPEED	1720 RPM	1440 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ	220 V, 50/60 HZ
POWER CORD	110 V Cable (US)	220 V Cable (Schuko)
WEIGHT	11 kg (24.25 lbs)	11 kg (24.25 lbs)
DIMENSIONS IN CM	37.9 x 16.7 x 27.5	37.9 x 16.7 x 27.5

227 LIT/MIN - 189 LIT/MIN - 8 CFM DUAL VOLTAGE VACUUM PUMP



MODEL	90068-2V-110-B	90068-2V-220-B
NO. OF STAGES	2	2
FREE AIR DISPLACEMENT	8 CFM	227 lit/min (60Hz) 189 lit/min (50Hz)
ULTIMATE VACUUM	15 Microns	15 Microns
MOTOR	3/4 HP	3/4 HP
PUMP SPEED	1720 RPM	1440 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ	220 V, 50/60 HZ
POWER CORD	110 V Cable (US)	220 V Cable (Schuko)
WEIGHT	15.43 kg (34 lbs)	15.43 kg (34 lbs)
DIMENSIONS IN CM	38 x 18 x 27	38 x 18 x 27

340 LIT/MIN - 283 LIT/MIN - 12 CFM DUAL VOLTAGE VACUUM PUMP



MODEL	90612-2V-110-B	90612-2V-220-B
NO. OF STAGES	2	2
FREE AIR DISPLACEMENT	12 CFM	340 lit/min (60Hz) 283 lit/min (50Hz)
ULTIMATE VACUUM	15 Microns	15 Microns
MOTOR	1 HP	1 HP
PUMP SPEED	1720 RPM	1440 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ	220 V, 50/60 HZ
POWER CORD	110 V Cable (US)	220 V Cable (Schuko)
WEIGHT	15.88 kg (35 lbs)	15.88 kg (35 lbs)
DIMENSIONS IN CM	39 x 18 x 27	39 x 18 x 27

2 STAGE VACUUM PUMPS WITH SOLENOID VALVE



DUAL VOLTAGE SERIES WITH SOLENOID VALVE



MODEL	90063-2V-220SVB	90066-2V-220SVB	90068-2V-220SVB	90612-2V-220SVB
NO. OF STAGES	2	2	2	2
FREE AIR DISPLACEMENT	85 lit/min (60Hz), 71 lit/min (50Hz)	170 lit/min (60Hz), 142 lit/min (50Hz)	227 lit/min (60Hz), 189 lit/min (50Hz)	340 lit/min (60Hz), 283 lit/min (50Hz)
ULTIMATE VACUUM	15 Microns	15 Microns	15 Microns	15 Microns
MOTOR	1/3 HP	1/2 HP	3/4 HP	1 HP
PUMP SPEED	1440 RPM	1440 RPM	1440 RPM	1440 RPM
ELECTRICAL SPECS	220 V, 50/60 HZ	220 V, 50/60 HZ	220 V, 50/60 HZ	220 V, 50/60 HZ
POWER CORD	220 V Cable (Schuko)	220 V Cable (Schuko)	220 V Cable (Schuko)	220 V Cable (Schuko)
WEIGHT	7.37 kg (16.2 lbs)	11.33 kg (25 lbs)	15.76 kg (34.75 lbs)	16.32 kg (36 lbs)

ELITE BALL BEARING DESIGN WITH SOLENOID VALVE



MODEL	90065-220-SV	90067-220-SV
NO. OF STAGES	2	2
FREE AIR DISPLACEMENT	119 lit/min, 142 lit/min	178 lit/min, 213 lit/min
ULTIMATE VACUUM	25 Microns	25 Microns
MOTOR	1/3 HP	1/2 HP
PUMP SPEED	1425 RPM , 1725 RPM	1425 RPM, 1725 RPM
ELECTRICAL SPECS	220 V / 50 HZ, 220 V / 60 HZ	220 V / 50 HZ, 220 V / 60 HZ
POWER CORD	220 V Cable (Schuko)	220 V Cable (Schuko)
WEIGHT	13.6 kg (30 lbs)	17 kg (36.5 lbs)

90066-SV-220 UNIVERSAL SOLENOID VALVE AND GAUGE ASSEMBLY



Mastercool's universal solenoid valve and gauge assembly can be assembled on any vacuum pump for protection of pump and systems with full control by solenoid valve. Gauge assembly will also allow for vacuum leak test.

- 3/8 NPT vacuum connection port
- 1/4" flare hose connection port

*Note: Some internal wiring assembly necessary

90066-SV-G Replacement gauge for universal solenoid valve and gauge assembly

SPARK FREE 2 STAGE VACUUM PUMP

170 LIT/MIN - 142 LIT/MIN 2 STAGE VACUUM PUMP <<SPARK FREE>>



MODEL	90066-220-BSF
NO. OF STAGES	2
FREE AIR DISPLACEMENT	170 lit/min (60Hz), 142 lit/min (50Hz)
ULTIMATE VACUUM	15 Microns
MOTOR	1/2 HP
PUMP SPEED	1440 RPM
ELECTRICAL SPECS	220 V, 50/60 HZ
POWER CORD	220 V Cable (Schuko)
WEIGHT	11 kg (24.25 lbs)
DIMENSIONS IN CM	37.9 x 16.7 x 27.5



SINGLE STAGE VACUUM PUMPS



51 LIT/MIN - 42 LIT/MIN / 1.8 CFM SINGLE STAGE VACUUM PUMP



MODEL	90059-B-220	90059-B
NO. OF STAGES	1	1
FREE AIR DISPLACEMENT	51 lit/min, 42 lit/min	1.8 CFM
ULTIMATE VACUUM	80 Microns	80 Microns
MOTOR	1/4 HP	1/4 HP
PUMP SPEED	1440 RPM	1720 RPM
ELECTRICAL SPECS	220 V, 50/60 HZ	110/120 V, 60 HZ
WEIGHT	6.2 kg (13.6 lbs)	6.2 kg (13.6 lbs)
DIMENSIONS IN CM	30 x 15 x 26	30 x 15 x 26

* PLEASE NOTE:
 The micron readings on all vacuum pumps represent optimal laboratory conditions. Field conditions may vary from these readings.
 All vacuum pumps are available with either a UK or Australian Cable, please add a:
-AUS for an Australian cable
-UK for a UK cable

SERVICE INFORMATION

	OIL CAPACITY	REPLACEMENT CARTRIDGE	SEAL SERVICE KIT
90065, 90065-220	531 ml / 18 oz	90165-R	90062-11-SEAL
90067, 90067-220	708 ml / 24 oz	90167-R	90062-11-SEAL
90063-2V-110-B, 90063-2V-220-B	250 ml / 8.5 oz	-	-
90066-2V-110-B, 90066-2V-220-B	440 ml / 15 oz	90166-B	-
90068-2V-110-B, 90068-2V-220-B	570 ml / 19 oz	90168-B	-
90612-2V-110-B, 90612-2V-220-B	536 ml / 18 oz	90112-B	-
90059-B, 90059-220-B	342 ml / 12 oz	-	-
90066-220-BSF	440 ml / 15 oz	90166-B	-

VACUUM PUMP OIL



90010-6	(Six) - 295 ml / 10 oz bottles (90063-2V-B)
90016-6	(Six) - 450 ml / 16 oz bottles (90059-B)
90018-6	(Six) - 531 ml / 18 oz bottles (90065, 90066-2V-B, 90612-2V-B, 90066-220-BSF)
90024-6	(Six) - 708 ml / 24 oz bottles (90067, 90068-2V-B)
90032-6	(Six) - 946 ml / 32 oz bottles
90128-4	(Four) - 3.7 liter / 1 gallon bottles

98061 DIGITAL VACUUM GAUGE



As a professional technician the assurance of a deep vacuum on a system is imperative. The main problem with many small handheld units is their inaccuracy and durability. Although the thermocouple sensor has been proven to be much more accurate and durable than the thermister type, the problem has been the inconvenience of a cumbersome tabletop unit.

Mastercool's hand held unit uses thermocouple technology. This vacuum gauge has been designed with the technician's field environment in mind, allowing for self-calibration and a sensor that will not be damaged by small mists of oil. The Mastercool unit allows for a target vacuum range to be programmed with a light sensor indicator. Now you have the freedom to continue with your other work and come back to the system once you see the indicator light signaling your target vacuum. (packaged in blow molded case)

SPECIFICATIONS:

- Response Time: 250 mSec.
- Sensor Cable: Spiral cable extended to 6.5 feet (2.6 meter)
- Sensor: Thermocouple sensor
- Connection Fitting: 1/4" flare female adapter
- Operating Temperature: 32 to 120°F (0 to 45°C)
- Power: 9V DC battery (AC/DC Adapter optional)
- Battery Life: 36 hours
- Low Battery Indicator: Special ICON on LCD
- Vacuum Units: Micron, Torr, mTorr, mmHg, mBar, Pa
- Range: 20,000 to 1 micron
- Accuracy Range*:
 - ATM-1000 Microns: ±10% of reading
 - 1000 - 100 Microns: ±7% of reading,
 - 100 - 1 Micron: ±5% of reading



* Unit accuracy refers to sensor specifications and is based on optimal laboratory conditions. Field operations may greatly deviate from these levels.

Optional Accessories

98061-SENSOR	Replacement Sensor
99334-110	110 V AC/DC Adapter
99334-220	220 V AC/DC Adapter
99333	1/4 FL-M x 1/4 FL-M x 1/4 FL-F Tee

CHARGING & RECOVERY EQUIPMENT



98310 WIRELESS REFRIGERANT CHARGING SCALE
98315 WIRELESS REFRIGERANT CHARGING SCALE WITH SOLENOID



98315 with solenoid



CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

FEATURES:

- Wireless unit prevents unwanted tangles in wires
- Easily store the remote in the body of the platform
- Keypad provides synchronization and zeroing
- Extremely accurate weight sensor
- Magnet on remote allows easy placement on fixtures
- Battery life symbol for platform and remote constantly displayed on LCD
- Wireless signal strength indicator conveniently displays on remote

FUNCTIONS:

CHARGE PROGRAMMING: Allows user to program desired quantities. Before charge is complete, an alarm will sound allowing ample time to turn off refrigerant supply.

PAUSE/CHARGE (98315 model only): This feature allows user to stop and continue charging.

TANK CAPACITY PROGRAMMING: EMPTY/FULL tank feature allows user to know the amount of refrigerant in the tank at any time.

REPEAT (98315 model only): Allows user to charge previously stored amount.

SPECIFICATIONS:

- Capacity: 243 lbs (110 kg)
- Accuracy: $\leq \pm 0.05\%$ of reading
- Resolution: 0.05 lb / 0.5 oz / 0.01 kg
- Automatic Shut-Off: 3 hours
- Operating Temperature: 32°F to 120°F (0°C to 49°C)
- Battery Life: approximately 20 hours
- 31 cm Platform
- Accepts all US & EU standard cylinders



When remote is out of range the unit will automatically pause. This pause mechanism allows unit to restart when remote is back in range.



REMOTE RANGE:
100 FEET (30 M),
LINE OF SIGHT

98210-A ACCU-CHARGE II



CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

Mastercool's ACCU-CHARGE II is the most advanced electronic refrigerant scale in the market today. Constructed with a rugged aluminum cast body, the ACCU-CHARGE II now offers programming capabilities.

FUNCTIONS:

CHARGE PROGRAMMING: Allows user to program desired quantities. Before charge is complete, an alarm will sound allowing user ample time to turn off refrigerant supply.

TANK CAPACITY PROGRAMMING: Allows user to know the amount of refrigerant that is left in the tank at any time.

REPEAT: Allows user to charge previously stored amount.

SPECIFICATIONS:

- Capacity: 110 kg (243 lbs)
- Accuracy: $\leq \pm 0.05\%$ of reading
- Resolution: 0.05 lb / 0.5 oz / 0.01 kg
- Operating Temperature: 0 to 49°C (32 to 120°F)
- 3 hrs auto off function
- Battery life approximately 40 hrs
- Works w/110 or 220V transformer
(part no. 99334-110 or 99334-220)
- 22 x 22 cm (9 x 9") platform

98211-A ACCU-CHARGE III CERTIFIED REFRIGERANT SCALE
(OIML & CE Approved, Legal for Trade)



FUNCTIONS:

CHARGE PROGRAMMING: Allows user to program desired quantities. Before charge is complete, an alarm will sound allowing user ample time to turn off refrigerant supply.
PAUSE/CHARGE: (Using the 98230 Charging Solenoid Module)
TANK CAPACITY PROGRAMMING: Allows user to know the amount of refrigerant that is left in the tank at any time.
REPEAT: Allows user to charge previously stored amount.

SPECIFICATIONS:

- Complies with European (OIML) Standards
- Capacity: 50 kg
- Accuracy: ±50 g
- Resolution: 0.05 kg
- 3 hrs AUTO OFF function
- Operating Temperature is 0 to 49°C (32 to 120°F)
- Battery Life (approximately 40 hrs)
- 22 x 22 cm (9 x 9") Platform



98230 CHARGING SOLENOID MODULE



The 98230 Charging Solenoid Module turns the 98210-A ACCU-CHARGE II & 98211-A ACCU-CHARGE III into Automatic Programmable Scales!

This module allows the user to control the exact amount of refrigerant transferring to and from the A/C System. The compact design is battery powered (9V), lightweight, portable and works with all types of refrigerant. The 98230 with 1/4" x 1/4" fittings includes a short hose for tank connection, USB cord and 1/4" FL - 1/2" ACME adapters.



98209 ELECTRONIC CHARGING SCALE



- Slim design for easy storage
 - Two keys for easy operation
 - Unit change (grams & ounces)
 - One touch tare weighing function
 - Auto zero and auto off
- Automatically turns off its power if the scale is not used within 2 minutes

SPECIFICATIONS:

- Capacity: 5000 g / 176 oz
- Sensitivity: 1 g / .035 oz
- Dimension: 140 (w) x 185 (l) x 35 (h) mm
- Platform Size: 120 mm
- Power Source: 2 x AAA 1.5v battery

ELECTRONIC TANK HEATER BLANKET



The Mastercool Refrigerant Tank Heater Blanket speeds up recharging time.

- Assures total discharge of refrigerant from 30 lb and 50 lb tanks. Heats tanks to 125°F resulting in maximum pressure of 185 psi for R134a.
- Quick working 300W heater element
- An excellent complement to all Mastercool Refrigerant Scales

98250 110 V

98250-220 220 V

REFRIGERANT/RECOVERY CYLINDERS

- Y-valve for liquid/vapour TPED approved
- Single valve for vapour TPED approved
- Raised collar for ease of handling and protection
- Tanks conform to PED and ADR regulations
- CE and TÜV approved
- Used for storage and transport of refrigerant gases



6 LITER REFRIGERANT/RECOVERY CYLINDERS

61009-EUGRN-1/4 61009-EUGRY-1/4 61009-EUGRN



61009-EUGRY 61010-EUGRN 61010-EUGRY

- Size (w x h): 185 mm x 338 mm
- Tare Weight: 5.18 Kg
- Standard Specification: ADR/RID2009, EN13322-1N D TUV 1
- Nominal Water Capacity: 6 l
- Tank Test Pressure: 48 bar
- Air Tightness Test Pressure: 32 bar
- Bursting Pressure: >108 bar
- Bursting Volumetric Expansion Rate: >20%
- Body Material: HP295
- Service Pressure: 32 bar

SINGLE VALVE (available from US factory)

Model	61009-EUGRY-1/4 (grey tank)	61009-EUGRY (grey tank)
	61009-EUGRN-1/4 (green tank)	61009-EUGRN (green tank)

DOUBLE VALVE

Model	61010-EUGRY (grey tank)	NA
	61010-EUGRN (green tank)	NA
Connection	1/4" FL-M (7/16-20)	W21.8-14.M

12.5 LITER REFRIGERANT/RECOVERY CYLINDERS

62009-EUGRY-1/4 62009-EUGRN-1/4 62010-EUGRY



62010-EUGRN 62009-EUGRY 62009-EUGRN

- Size (w x h): 228 mm x 516 mm
- Tare Weight: 8 Kg
- Standard Specification: ADR/RID2009, EN13322-1N D TUV 1
- Nominal Water Capacity: 12.5 l
- Service Pressure: 32 bar, Tank Test Pressure: 48 bar
- Air Tightness Test Pressure: 32 bar
- Bursting Pressure: >108 bar
- Bursting Volumetric Expansion Rate: >20%
- Body Material: HP295

SINGLE VALVE (available from US factory)

Model	62009-EUGRY-1/4 (grey tank)	62009-EUGRY (grey tank)
	62009-EUGRN-1/4 (green tank)	62009-EUGRN (green tank)

DOUBLE VALVE

Model	62010-EUGRY (grey tank)	NA
	62010-EUGRN (green tank)	NA
Connection	1/4" FL-M (7/16-20)	W21.8-14.M

27.2 LITER REFRIGERANT/RECOVERY CYLINDERS

63009-EUGRN-1/4 63009-EUGRY-1/4 63010-EUGRN



63010-EUGRY 63009-EUGRN 63009-EUGRY

- Size (w x h): 298 mm x 613 mm
- Tare Weight: 15.7 Kg
- Standard Specification: ADR/RID2009, EN13322-1N D TUV 1
- Nominal Water Capacity: 27.2 l
- Service Pressure: 32 bar, Tank Test Pressure: 48 bar
- Air Tightness Test Pressure: 32 bar
- Bursting Pressure: >108 bar
- Bursting Volumetric Expansion Rate: >20%
- Body Material: HP295

SINGLE VALVE (available from US factory)

Model	63009-EUGRY-1/4 (grey tank)	63009-EUGRY (grey tank)
	63009-EUGRN-1/4 (green tank)	63009-EUGRN (green tank)

DOUBLE VALVE

Model	63010-EUGRY (grey tank)	NA
	63010-EUGRN (green tank)	NA
Connection	1/4" FL-M (7/16-20)	W21.8-14.M

TANK ADAPTERS



90639



90637

90639 W21.8-14 x 1/4" FL (EU Standard)

90637 3/4-16 x 1/4" FL (US Standard)

90640 Gasket for 90639

90638 Gasket for 90637



Mastercool[®]
"World Class Quality"

DOT-APPROVED RECOVERY CYLINDERS



- Powder coated cylinder for high gloss, durable finish
- Pre-charged cylinder provides a clean, dry interior
- 3/4" NPT opening accepts 80% fill float switch shut-off device
- Reusable and conforms to DOT-4BA400 specs and ARI guidelines
- Collar design for ease of handling
- Storage and transport of recovered refrigerant gases
- Y-valve for liquid/vapor
- AUS Approved and TC Canadian Approved
- 1/4" opening for air purge valve
- Valve & float switch UL Listed

30 LB. DOT-APPROVED RECOVERY CYLINDERS



62010 67010 67011

- Size (w x h): 9.125" x 17.52"
- Standard Spec.: DOT - 4BA400
- Service Pressure: 400 PSI / 2.7 MPa
- Tare Weight: 17.99 LB
- Body Material: HP295
- Relief Valve Pressure: 600 PSI / 4.1 MPa
- Nominal Water Capacity: >26.2 LB / 11.9 L
- Tank Test Pressure: 800 PSI / 5.5 MPa
- Air Tightness Test Pressure: 400 PSI / 2.7 MPa

Model	62010 without float switch	62011 with float switch	62012 with float switch & 1/4" SAE Port	64010 without float switch	67010 with float switch	67011 with float switch
Connection	1/4" FL-M (7/16-20)			1/2" ACME		
Color	yellow/gray			blue		yellow/blue

50 LB. DOT-APPROVED RECOVERY CYLINDERS



63010 66010 63010-AUS

- Size (w x h): 12.25" x 18.78"
- Standard Spec.: DOT - 4BA400
- Service Pressure: 400 PSI / 2.7 MPa
- Tare Weight: 28.71 LB
- Body Material: HP325 or HP345
- Relief Valve Pressure: 600 PSI / 4.1 MPa
- Nominal Water Capacity: >47.7 LB / 21.6 L
- Tank Test Pressure: 800 PSI / 5.5 MPa
- Air Tightness Test Pressure: 400 PSI / 2.7 MPa

Model	63010 without float switch	65010 with float switch	66010 without float switch	66011 with float switch	66012 with float switch & 1/4" SAE Port	63010-AUS without float switch (Australian standard)
Connection	1/4" FL-M (7/16-20)		1/2" ACME			1/2" ACME
Color	yellow/gray		yellow/gray			white

100 LB. DOT-APPROVED RECOVERY CYLINDERS



68010

- Size (w x h): 11.25" x 31.81"
- Standard Spec.: DOT - 4BW400
- Service Pressure: 400 PSI / 2.7 MPa
- Tare Weight: 50.5 LB
- Body Material: HP325
- Relief Valve Pressure: 600 PSI / 4.1 MPa
- Nominal Water Capacity: >92.5 LB / 41.9 L
- Tank Test Pressure: 800 PSI / 5.5 MPa
- Air Tightness Test Pressure: >87 PSI / 0.6 MPa

Model	68010 without float switch
Connection	1/4" FL-M (7/16-20)
Color	yellow/gray

ENVIRO TANK (REFILLABLE CYLINDER)

30 LB. REFILLABLE CYLINDER



62020-W

- Size (w x h): 8.39" x 20"
- Standard Spec.: DOT - 4BA400
- Service Pressure: 400 PSI / 2.7 MPa
- Tare Weight: 19.9 LB
- Body Material: HP295
- Relief Valve Pressure: 600 PSI / 4.1 MPa
- Nominal Water Capacity: >30 LB / 13.6 L
- Tank Test Pressure: 800 PSI / 5.5 MPa
- Air Tightness Test Pressure: >87 PSI / 0.6 MPa

Model	62020-W
Connection	1/4" FL-M (7/16-20)
Color	white

ARCTIC COMMANDER



Mastercool introduces its new ARCTIC COMMANDER line of R/R/R machines. Equipped with the latest technology, all models come standard with an 8" command center. The graphic user interface (GUI) will enable navigation through all functions and features with the greatest of ease. There is no longer a need to read any external instructions or paper manuals, simply sit back, watch and learn how to use your machines. All machines are also equipped with Wi-Fi capabilities; allowing for real-time, interactive communication and troubleshooting. ***It's about time somebody introduced R/R/R machines for the 21st century!***

SPECIFICATIONS:

- Design Certified:
R1234yf - SAE J2843
R134a - SAE J2788
- Voltage: 110 V / 60 Hz or 220 V / 50/60 Hz
- Scale Resolution: .02 lb (10 g)
- Working Temperature Range: 50/120°F (10/49°C)
- Compressor: Hermetically sealed, 12cc, high pressure
- Recovery Speed: 95% at 70 to 75°F (21 to 24°C) <30 minutes
- Recovery Cylinder: 30 lb (12.5 liters), refillable
- Charge Accuracy: ±0.5 oz. at 70 to 75°F (±15 g at 21 to 24°C)
- Filter System:
R1234yf - 1 filter for cleaning and water removal
R134a - 2 filters for cleaning and water removal
- Hoses: 96" (250 cm)
- Pressure Gauges: Class 1
- Cylinder Temperature Sensor: Integrated
- Cylinder Heater: Standard Equipment
- Dimensions (mm): 1150 (h) x 600 (w) x 770 (d)



WI-FI

Wi-Fi capability allows for real time, interactive communication and troubleshooting



COMPACT DESIGN

The machine's compact design makes it easy to maneuver and requires minimal shop space



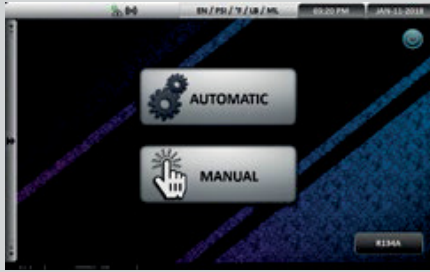
COOLING FAN

Dedicated PC board cooling fan keeps the PC board consistently cool



Mastercool®
"World Class Quality"

8" COLOR TABLET WITH TOUCH SCREEN FEATURES:



Home Screen
allows for quick touch selection of options



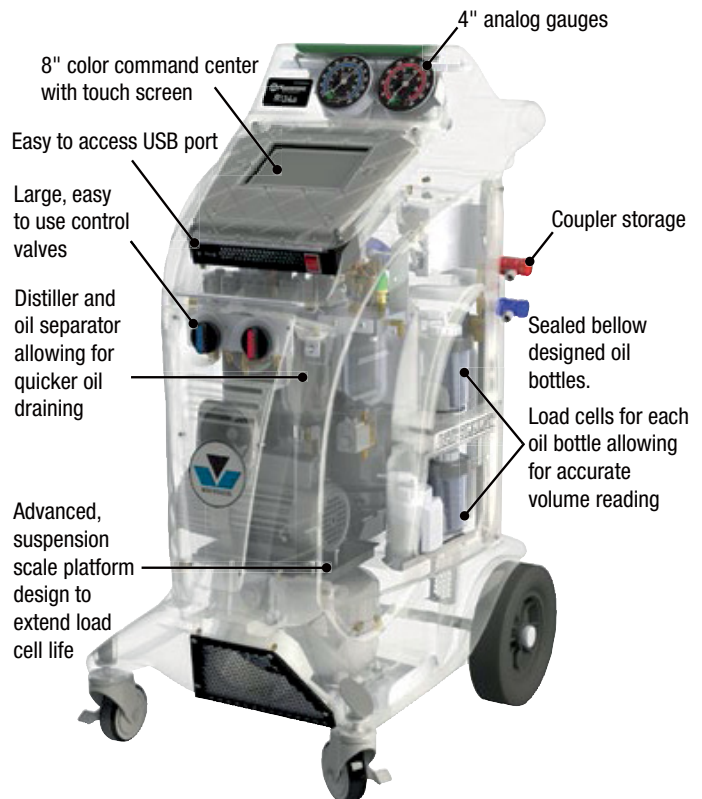
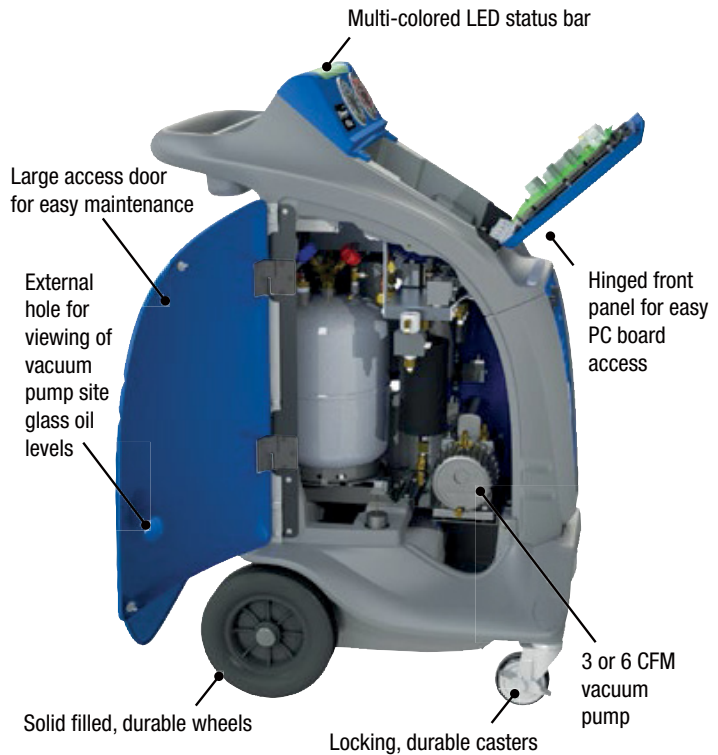
Status Screen
for quick reference of resources



Settings Screen
allows the user to select a default language, units, temperature, volume and weight measurement



Maintenance Screen
offered only to authorized service technicians allowing for quick and easy diagnosis





COMMANDER4000-E



COMMANDER3000-E



COMMANDER2000-E



COMMANDER1000-E

	COMMANDER4000 (110V) COMMANDER4000-E (220V) R1234yf	COMMANDER3000 (110V) COMMANDER3000-E (220V) R134a HYBRID	COMMANDER2000 (110V) COMMANDER2000-E (220V) R134a FULLY AUTOMATIC	COMMANDER1000 (110V) COMMANDER1000-E (220V) R134a MANUAL
8" Color Touch Screen	X	X	X	X
Automatic and Manual Procedures	X	X	X	Manual procedures only
Refrigerant Database	X	X	X	Optional
Automatic Vacuum Leak Test: Programmable	X	X	X	X
Auto Oil Discharge	X	X	X	X
Auto and Manual Air Purge	X	X	X	X
Auto Filter and Full Tank Alarm	X	X	X	X
Low Refrigerant Alarm	X	X	X	X
Auto Oil Injection	COMMANDER4000-E only	COMMANDER3000-E only	X	NA
Thermal Printer	X	X	Optional	Optional
Hose Flushing	X	X	NA	NA
Vehicle A/C System Flushing	Optional	Optional	NA	NA
Tank Heater	X	X	X	X
Vacuum Pump	6 CFM	6 CFM	6 CFM	3 CFM
Refrigerant Identifier	X	NA	NA	NA
On-board Instructions	X	X	X	X
Multiple Languages	X	X	X	X
On-board Unit Conversion Calculator	X	X	X	X
New Cabinet Design for Increased Air Flow	X	X	X	X
Large Analog Gauges	X	X	X	X
Hard Wired Power Cord	X	X	X	X
Hose Coupler Storage	X	X	X	X
Solid Durable Wheels with Locking Casters	X	X	X	X
Multi-colored LED Status Bar	X	X	X	NA
Wi-Fi Capable	X	X	X	X

For R1234yf machines without a refrigerant identifier, use COMMANDER4000-X (110V model) or COMMANDER4000-E-X (220V model)

NOTE: Per SAE J2843, the COMMANDER4000-X will work only in conjunction with an external refrigerant identifier

All Commander Machines are available with the following cables, please add:



-E for 220V schuko



-E-AUS for Australia



-E-UK for UK



-E-BR for Brazil



Mastercool[®]
"World Class Quality"

COMMANDER CONSUMABLES

Mastercool uses only the highest quality oils and dies with their products. In order to keep your warranty valid, please use Mastercool oils and dies at all times. For the Commander line of machines, Mastercool recommends the following consumables:

COMPRESSOR OILS



92709-65-8 92709-65-32

Maximum protection with excellent thermal & oxidative stability. Moisture tolerant. OEM approved.

- 92709-65-8 PAG 65 Oil (8 oz (236 ml) bottle)
- 92709-65-32 PAG 65 Oil (32 oz (1 L) bottle)
- 92709-100-8 PAG 100 Oil (8 oz (236 ml) bottle)
- 92709-100-32 PAG 100 Oil (32 oz (1 L) bottle)
- 92709-150-8 PAG 150 Oil (8 oz (236 ml) bottle)
- 92709-150-32 PAG 150 Oil (32 oz (1 L) bottle)

ZEROL[®] HD46 R1234yf MOBILE AIR CONDITIONING COMPRESSOR LUBRICANT



92709-YF-8 92709-YF-32

- Optimized miscibility in HFO refrigerant R1234yf
 - Superior lubricity
 - Exceptional Viscosity Index (VI)
 - Good high temperature and chemical stability
 - Low hygroscopicity (tendency to absorb moisture)
 - Formulating expertise
 - Excellent electrical resistivity properties for electrically driven systems
- * For more information please see page 89

- 92709-YF-8 8 fl. oz (236 ml) bottle
- 92709-YF-32 32 fl. oz (946 ml) bottle

ULTRAVIOLET A/C DYES



92708 92732 53625

- 92708 Standard Universal Dye
8 oz (240 ml) Bottle - 32 Applications
- 92732 Standard Universal Dye
32 oz (1 L) Bottle - 128 Applications
- 53625 Concentrated Universal Dye
2 oz (60 ml) Bottle - 25 Applications

COMMANDER REPLACEMENT FILTERS



COMD2-FLTRPK

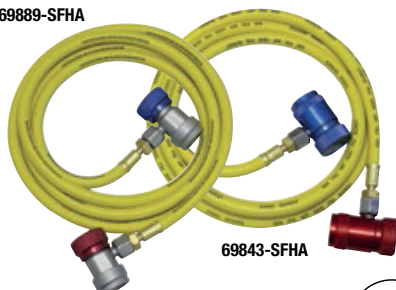
Change the filter-drier when notified by the machine to assure adequate moisture and contaminant removal as well as prevent lockout.

- COMD2-FLTRPK 2 filter pack for COMMANDER1000, COMMANDER2000, COMMANDER3000. Has a 175 lb filtering capacity.
- COMD1-FLTRPK 1 filter for COMMANDER4000, COMMANDER4000-E, COMMANDER3000-E, COMMANDER2000-E, COMMANDER1000-E. Has a 350 lb filtering capacity.

A/C SYSTEM FLUSH HOSE ASSEMBLY



69889-SFHA



69843-SFHA

- 69889-SFHA R134a A/C System Flush Hose Assembly includes high and low side couplers (82834, 82934) and 8 foot yellow hose
- 69843-SFHA R1234yf A/C System Flush Hose Assembly includes high and low side couplers (83834, 83934) and 8 foot yellow hose



THE TWIN TURBO SERIES IS THE MOST COMPLETE SOLUTION TO YOUR RECOVERY NEEDS!

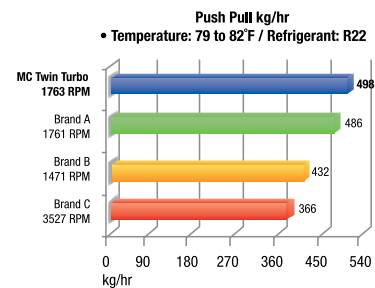
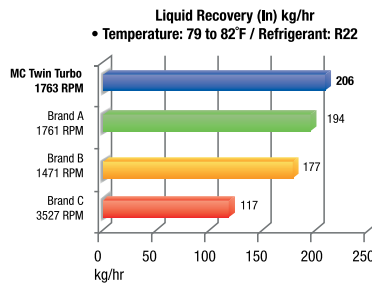
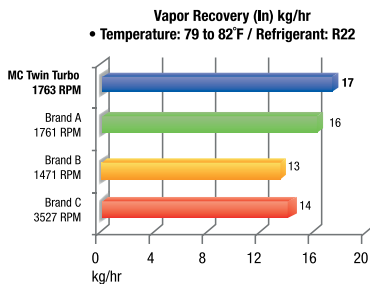


FEATURES & BENEFITS:

- Revolutionary double piston oil-less compressor
- Safety high pressure switch
- Simple internal structure for field service
- Largest volume recovery rate in market
- For use with all refrigerants including R410A
- Injection molded high density polyethylene case for maximum durability
- Front cover has bumper guards built in to reduce damage to the control knobs
- Compatible refrigerants: All CFC, HCFC, and HFC's

SPECIFICATIONS:

- 1/2 hp oil less compressor
- Recovery Rate:
 - R134a**
 - Direct vapor up to 14 kg/hr
 - Direct liquid up to 130 kg/hr
 - Push pull up to 318 kg/hr
 - R22**
 - Direct vapor up to 17 kg/hr
 - Direct liquid up to 206 kg/hr
 - Push pull up to 498 kg/hr
- Operating Temperature: 0 to 50°C / 32 to 122°F
- Weight: 12.8 kg / 28.3 lbs
- Dimensions: 457 mm (l) x 254 mm (w) x 356 mm (h) (18" (l) x 10" (w) x 14" (h))
- Case Material is HDPE (High Density Polyethylene)



All Twin Turbo Recovery Machines are available with either a UK or Australian Cable, please add a:
-AUS for an Australian cable
-UK for a UK cable



Mastercool®
"World Class Quality"

TWIN TURBO REFRIGERANT RECOVERY MACHINE



69300-220



DUAL VOLTAGE
69300-2V-220

Mastercool's addition to the recovery machine lineup takes the reliability of the 69000 series machines and enhances those features to allow for maximum recovery capacity while at the same time decreasing size and weight. The design of the double piston compressor and cooling by the largest fan and condenser in the market makes the 69300 series the most complete solution to your recovery needs!

69300	115 V - 60 Hz
69300-220	220 V - 50/60 Hz
69300-220-EU	220 V - 50/60 Hz includes a manual restart button per EU standards
69300-2V-110	Dual Voltage 110/220 V - 50/60 HZ - 110 V Cable
69300-2V-220	Dual Voltage 110/220 V - 50/60 HZ - 220 V Cable (Schuko)
69300-2V-UK	Dual Voltage 110/220 V - 50/60 HZ - UK Cable

TWIN TURBO REFRIGERANT RECOVERY MACHINE



69350-220

This unit offers all the same functions and features as the 69300. In addition it has an oil separation module, filter dryer and sight glass.

69350	115 V - 60 Hz
69350-220	220 V - 50/60 Hz
69350-220-EU	220 V - 50/60 Hz Includes a manual restart button per EU standards
69350-2V-110	Dual Voltage 110/220 V - 50/60 HZ - 110 V Cable
69350-2V-220	Dual Voltage 110/220 V - 50/60 HZ - 220 V Cable (Schuko)
69350-2V-UK	Dual Voltage 110/220 V - 50/60 HZ - UK Cable
69500-DR	Replacement Filter Dryer

MOBILE RECOVERY MACHINE



COMPATIBLE WITH COMBUSTIBLE GASES



69390-220

69390	115 V - 60 Hz FOR MOBILE A/C SYSTEMS DESIGNED FOR R1234yf This unit offers all the same functions and features as the 69300. In addition: <ul style="list-style-type: none"> • Meets all requirements of SAE J2851 • 60" R1234yf blue hose and low side (1/4 FL-M x 13 mm) coupler • 60" yellow transfer hose Comes equipped with overfill protection switch cutting off at 80% tank capacity (Recovery tanks must have floats using 3 pin Brad Harris plug)
69390-220	220 V - 50/60 Hz (same as above)
69395-220	HVAC Combustible Gas Recovery Machine (220 V - 50/60 Hz) Comes as pictured less hoses and couplers with 1/4" flare fittings

mini
TWINTURBO
REFRIGERANT RECOVERY MACHINE



COMPATIBLE WITH COMBUSTIBLE GASES

Mastercool introduces the new “Mini Twin” all in one recovery machine. Equipped with the same high quality twin piston compressor as the Twin Turbo series this unit has been designed to work in all applications. Whether you find yourself up a ladder, in a crawl space or just not looking forward to lugging around a heavy piece of equipment, this is the right machine for you. Best of all, this machine has been constructed with the safest spark free component allowing for use with all combustibile gases.

SPECIFICATIONS:

- 1/2 HP motor
- Operating Temperature: 0 to 50°C (32 to 122°F)
- Compatible with all CFC, HCFC, HFC's, and Combustible gases
- Weight: 11 kg (24 lbs)
- Dimensions: 300 mm (l) x 200 mm (w) x 270 mm (h) (11.8" (l) x 7.9" (w) x 10.6" (h))

69400 115 V - 60 Hz

69400-220 220 V - 50/60 Hz

69500 RECOVERYMATE



Turn any Recovery Machine into a Portable Recycler by adding the RECOVERYMATE!

SPECIFICATIONS:

- Lightweight and easy to carry
- 4-way ball valve manifold controls the flow smoothly and quickly with only 1/4 turn
- Large capacity oil separator
- High performance dryer eliminates moisture from recovered refrigerant
- Extra large sight glass monitors refrigerant flow and changes color when a dryer change is necessary
- Rugged carrying case can stand on its own or be mounted on a wall or bench
- Length: 38 cm (15")
- Width: 10 cm (4")
- Height: 43 cm (17")
- Weight: 5.5 kg (12.25 lbs)
- Includes hoses

REFRIGERANT RECOVERY SYSTEM



These recovery systems are compact, lightweight and work with all refrigerants. They're ideal for commercial, residential or industrial appliance applications. Our recovery systems offer a state-of-the-art 1/2 HP oil-less compressor with a built-in high volume cooling fan. This innovative design delivers maximum cooling efficiency which keeps the compressor working at high capacities in even the hottest climates. The compressor is also protected by an automatic low pressure cut-off switch that shuts off the unit once the recovery is complete. This AUTO SHUT-OFF feature eliminates the risk of compressor failure and reduces the user's need to monitor the entire recovery system. All of our recovery systems offer our color-coded gauges with pressure readings in PSI, BAR and MPa. Our stainless steel ball valve designed manifold, controls the flow smoothly and quickly with only a 1/4 turn. With all of this protected by a reinforced hard plastic case, Mastercool's recovery systems will meet all your refrigerant recovery needs.

FEATURES:

- High performance oil-less compressor
- High volume cooling fan design
- Automatic low pressure cut-off switch
- Liquid compatible head-valve system
- Safety high pressure cut-off switch
- Fully reinforced hard plastic casing

SPECIFICATIONS:

- 1/2 HP oil-less compressor
- Recovery Rate:
 - Direct vapor up to 12 kg/h
 - Direct liquid up to 71 kg/h
 - Push-pull up to 326 kg/h
- Operating Temp. Range: 0 to 50°C (32 to 122°F)
- Weight: 16 kg (38 lbs)
- Dimensions: 432 mm (l) x 254 mm (w) x 305 mm (h) (17" (l) x 10" (w) x 12" (h))
- Refrigerants: CFC's, HCFC's, HFC's

69000	115 V - 60 Hz
69000-220	220 V - 50/60 Hz
69000-220-TUV	220 V - 50 Hz Certified to TUV/GS and E35-421
69000-J	100 V - 50 Hz (Japanese Standard)

69200-220 COMPLETE A/C RECOVERY SYSTEM



This unit offers all the same functions and features as the reliable 69000 recovery machine. In addition, Mastercool has strategically placed an oil separation module inside the unit that will dispense used oil effortlessly. Together with its filter dryer and sight glass this unit allows for the technician to actually clean the used refrigerant and potentially re-use.

69500-DR Replacement Filter Dryer



PORTABLE ELECTRONIC CHARGING STATION



91585-220

A lightweight, durable, steel frame cart that contains all the necessary tools to quickly and conveniently charge the A/C system. No need for different sized charging cylinders with Mastercool's rugged die cast electronic scale. Simply place the refrigerant cylinder on the scale and charge.

FEATURES:

- A rugged, lightweight steel cart with wheels and convenient storage pocket for scale and hoses allows this portable charging station to be taken almost anywhere
- Dimensions: 26" x 17" x 13" (66 cm x 43 cm x 33 cm)
- Extruded aluminum manifold with long lasting valve design
- Large 80 mm gauges make it easy to read the pressure and temperature scales
- 109 kg (240 lb) capacity scale with long lasting 9V battery (60 hrs)
- Deep micron, rotary vane vacuum pumps.
Available in 119 lit/min and 178 lit/min.
- Includes set of 180 cm (72") hoses

ALSO AVAILABLE:

- Refrigerant tank heater blanket #98250 and #98250-220
- * R134a Automotive Service Couplers not included

VACUUM PUMP	5 CFM	119 lit/min (50 Hz) 142 lit/min (60 Hz)	7.5 CFM	178 lit/min (50 Hz) 213 lit/min (60 Hz)
MANIFOLD	110 V	220 V	110 V	220 V
2 Way Alum Block	91585	91585-220	91587	91587-220
4 Way Alum Block	91586	91586-220	91588	91588-220

DUAL VOLTAGE PORTABLE CHARGING STATION

VACUUM PUMP	90063-2V-220-B	90066-2V-220-B
MANIFOLD	110/220 V	110/220 V
2 Way Alum Block	91583-2V-220	91585-2V-220
4 Way Alum Block	91584-2V-220	91586-2V-220

MOBILE ELECTRONIC CHARGING STATION



91680

Keeping the same ideals in mind as the Portable Electronic Charging Station, the mobile unit is directed towards the garage technician. With an enlarged carry cart and larger wheels, this unit can get around the shop with the greatest of ease!

- Dimensions: 45" x 18" x 16.5" (114 cm x 46 cm x 42 cm)

VACUUM PUMP	5 CFM	119 lit/min	7.5 CFM	178 lit/min
MANIFOLD	110 V	220 V	110 V	220 V
2 Way Alum Block	91685	91685-220	91687	91687-220
4 Way Alum Block	91686	91686-220	91688	91688-220

DUAL VOLTAGE MOBILE CHARGING STATION

VACUUM PUMP	90063-2V-220-B	90066-2V-220-B
MANIFOLD	110/220 V	110/220 V
2 Way Alum Block	91683-2V-220	91685-2V-220
4 Way Alum Block	91684-2V-220	91686-2V-220

All charging stations are available with either a UK or Australian Cable, please add a:
-AUS for an Australian cable
-UK for a UK cable



69134-A REFRIGERANT IDENTIFIER FOR R134a



The Refrigerant Identifier helps confirm the presence and quality of R134a refrigerant in vehicle air conditioning systems.

SPECIFICATIONS:

- Weight: 0.8 kg
- Refrigerant Detected: R134a (Tetrafluoroethane)
- Accuracy: PASS/FAIL - 95% Pure R134a
- Power Requirements: 12 VDC
- User Interface: Membrane type with visual indicators and function key
- Calibration Method: Manual pump aspirator
- Minimum Input Pressure: 1.38 Bar (20 Psig), Maximum Input Pressure: 20.70 Bar (300 Psig)
- Storage Temperature: -10° to 50°C
- Operating Temperature: 10 to 45°C
- Construction Material: Molded ABS housing/molded rubber sleeve



691234YF-MINI MINI ID REFRIGERANT IDENTIFIER FOR R1234yf



The 691234YF-MINI helps verify the presence and quality of R1234yf refrigerant in vehicle air conditioning systems, to avoid potential damage from refrigerant contamination. The MINI ID delivers fast and accurate refrigerant analysis in a self-contained, compact, and extremely portable package. It automatically provides step-by-step indication of the gas sampling process.

SPECIFICATIONS:

- Weight: 0.8 kg
- Refrigerant Detected: R1234yf (Tetrafluoropropene)
- Accuracy: PASS/FAIL - 95% Pure R1234yf
- Power Requirements: 12 VDC
- Approvals: UL, CE, RoHS Compliant
- User Interface: Membrane type with visual indicators and function key
- Calibration Method: Manual pump aspirator
- Storage Temperature: -10° to 50°C
- Operating Temperature: 10°C to 45°C
- Construction Material: Molded ABS
- Housing/Molded Rubber Sleeve



691234YF ULTIMA ID 1234YF REFRIGERANT ANALYZER



The Ultima ID 1234yf refrigerant analyzer is SAE J2912 certified. Its portability and USB integration with the R/R/R machine, provides a versatile and efficient method of validating the refrigerant purity during service.

- Displays % air in pure R1234yf and R134a
- Built-in rechargeable power pack and printer to easily print test results
- Connects directly to SAE J2843 R/R/R machine

SPECIFICATIONS:

- Refrigerant Measured: R1234yf, R134a
- Accuracy: Better than $\pm 1.0\%$
- Refrigerant % Displayed: R1234yf, R134a, R22, HC, Air
- Ambient Operating Temperature Range: 50° to 120°F
- Power: 110/220V 50/60Hz
- Communication Protocols: USB 2.0
- User Interface: LCD + 3 switches
- Approvals: CE, UL, SAE
- Integral Pressure/Flow Control: Yes
- Integral Calibration Pump: Yes
- Oil Contamination: User Replaceable Oil Trap
- Filtration: User Replaceable

Comes with complete kit: R134a adapter fitting for ACME ported cylinders, identifier and accessories housed in a portable case, R1234yf adapter for cylinders, R1234yf and R134a sample hoses



Mastercool®
"World Class Quality"



ULTIMA ID™ HVAC REFRIGERANT IDENTIFIER



- Contractors can accurately determine the type of refrigerant they are recovering.
- Wholesalers can quickly check contractors' refrigerant and prevent contamination to their bulk reclaim supply.
- Reclaimers can easily pre-screen incoming refrigerant prior to the costly GC process and catch problem refrigerant before it causes damage.

Comes with complete kit: 1/4" FL sample hose, 110/220VAC power adapter, identifier and accessories in a rugged case

SPECIFICATIONS:

- Refrigerant: R12, R134a, R22, and HC
- Weight: 8.0 lbs.
- Power requirements: 110/220 VAC via included adapter
- Display: 128 x 64 pixel graphing
- 12-15V DC optional battery pack (Internal)
- Resolution: 0.1%
- Output: Digital display and LEDs
- Operating temperature: 40 to 130°F
- Operating humidity: 0-95% RH non-condensing
- Optional built-in printer

69HVAC	Ultima ID™ HVAC Refrigerant Identifier
69HVAC-P	Ultima ID™ HVAC Refrigerant Identifier with printer
69HVAC-PR	Printer roll for 69HVAC-P & 69HVAC-PRO

ULTIMA ID™ PRO2 HVAC REFRIGERANT IDENTIFIER



The Ultima ID Pro2 HVAC/R Refrigerant Analyzer enables fast, accurate testing of refrigerant, reducing the need for costly and time-consuming gas chromatography.

FEATURES:

- Oil contamination resistant
- Vapor or liquid sample analysis
- Internal thermal printer
- Greater accuracy in less time
- Wide refrigerant range
- Refrigerant composition breakdown
- Remote software updates for new refrigerants
- 1/4" flare sample hose

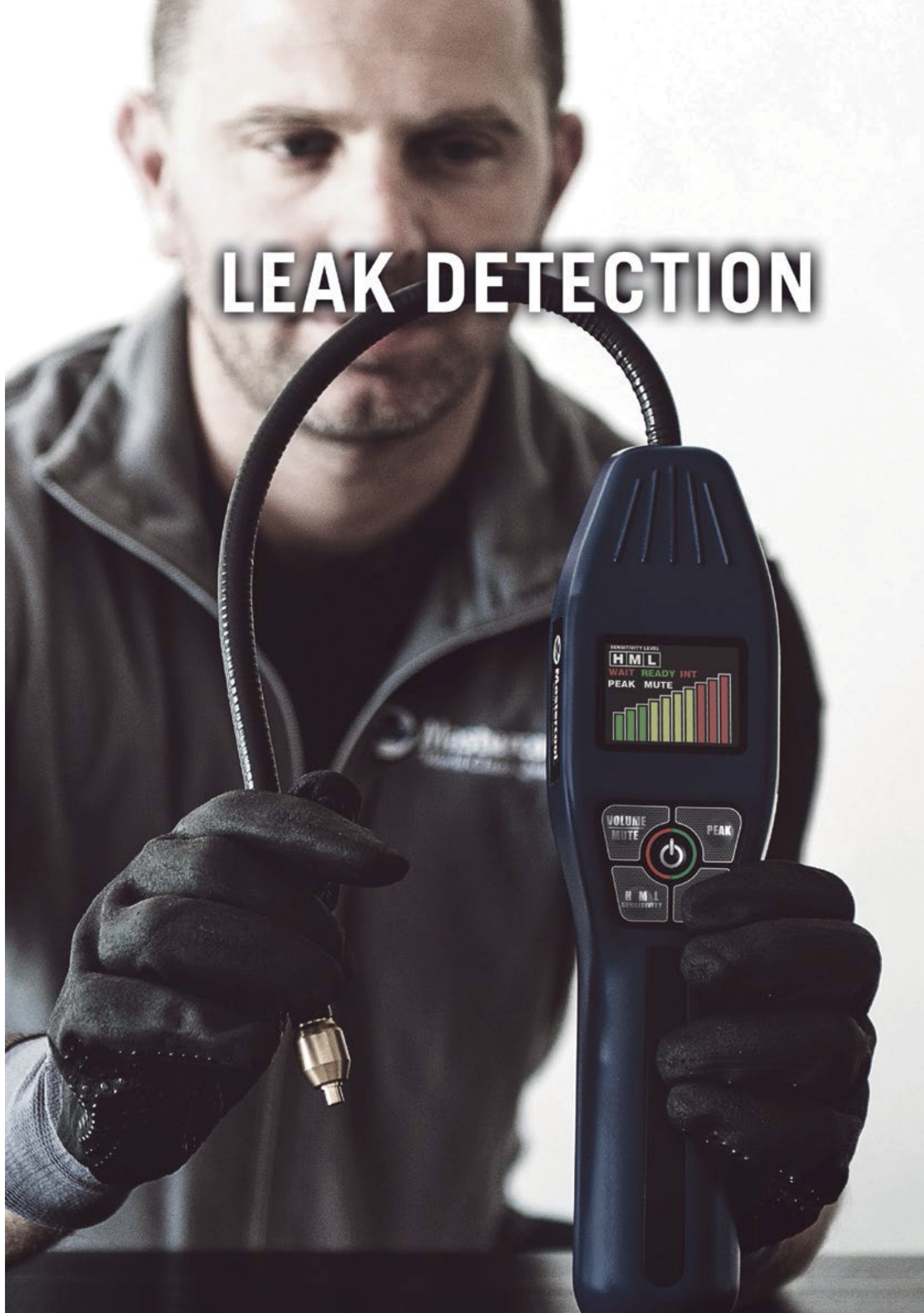
SPECIFICATIONS:

- Analyzed Refrigerants: R22, R32, R134a, R404A, R407C, R410a, Hydrocarbons (HC) and Air
- Identified Refrigerants: R12, R1234yf, R408A, R409A, R417A, R421A, R421B, R422A, R422B, R422C, R427A and Hydrocarbons (HC)
- Weight: Less than 10 Lbs.
- Accuracy: ±2% of indicated gases or better
- Approvals: CE, UL and CUL
- Power Requirements: 12 VDC @ 2A via 110/220 VAC Adapter
- User Interface: Graphic display, soft keys, built in printer
- Sample Gas Extraction: Pressure from cylinder or system
- Temperature Range: 50 to 120°F
- Response Time: Less than 3 minutes
- Humidity: 0-95% RH non-condensing
- Test Sample Size: 5g per test, Test Pressure: 50 psi - 500 psi

69HVAC-PRO2	Ultima ID™ PRO HVAC Refrigerant Identifier
69HVAC-PRO2EU	Ultima ID™ HVAC Refrigerant Identifier with schuko plug



LEAK DETECTION



VOLUME MUTE

PEAK

H M L SENSITIVITY

LEAK DETECTOR OVERVIEW

					
Model	55800	55975	56100	56200	55744
Refrigerants	Detects all refrigerants (CFC's, HCFC's, HFC's and blends), combustible gases, hydrogen	Detects combustible gases, hydrogen	Detects all refrigerants (CFC's, HCFC's, HFC's and blends)	Detects all refrigerants (CFC's, HCFC's, HFC's and blends)	R744
Sensor Life	2000 hours	2000 hours	20 hours	20 hours	>2 years
Power	2 "D" batteries	2 "C" batteries	2 "C" batteries	2 "C" batteries	4 "AA" batteries

THE ONLY LEAK DETECTOR YOU WILL EVER NEED



IntelliSense
REFRIGERANT LEAK DETECTOR

CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

Detects: Combustible Gases, Hydrogen, Refrigerants: All CFC's, HCFC's & HFC's and blends
<< MEETS AND EXCEEDS J2791 (R134A), J2913 (R1234YF) AND EN 14624 >>

The 55800 leak detector employs a new metal oxide gas sensor for the detection of chlorofluorocarbon gases and blends. This tin oxide sensor is characterized by high sensitivity and a fast response, upon detecting the presence of extremely small levels of chlorofluorocarbon gases. Integrated into the design is a powerful microprocessor that automatically selects the best operating conditions for the sensor, to ensure optimum performance. The optimum sensor performance is maintained and monitored throughout the life of the sensor.

SPECIFICATIONS:

SENSITIVITY (*based on optimal laboratory conditions):

- HIGH ≥ 0.05 oz/yr (1.5 g/yr), MEDIUM ≥ 0.25 oz/yr (7 g/yr), LOW ≥ 0.5 oz/yr (14 g/yr)

PROBE:

- Intelligent tip design that senses the condition of the environment, to eliminate the potential of false alarms
- Flexible 16" probe for difficult to reach locations

DISPLAY:

- Progressive LCD with vertical bars corresponding to the magnitude of the detected leak
- Visual indication of the selected sensitivity range

REFRIGERANTS: Detects all refrigerants (CFC's, HCFC's, & HFC's) Unit has been tested and approved to work with R1234yf as well as R32 and R410a

SENSOR LIFE: 2000 hours

OPERATING TEMPERATURE RANGE: 0 to 140°F

POWER: Two (2) D Batteries

BATTERY LIFE: 60 hours continuous use

WEIGHT: 1 lb. 8 oz

"SUPER SENSITIVE FUNCTION" allows the unit further sensitizing beyond the standard settings for locating small leaks with gases such as R1234yf and R407C

LCD FEATURES:

Wait Mode, Ready Mode, INT Mode, Low Battery Indication, High-Medium-Low Sensitivity Range, Signal Level Bars, Error Signals

KEYPAD FUNCTIONS:

On/Off, Volume/Mute, HML Sensitivity, Hold and Peak



LCD Display



Keypad

55800 Intelli Sense Refrigerant Leak Detector packaged in a blow molded case with 2 "D" batteries, leak test vial and replacement filters

55800-FILTER 3 Replacement Filters

55800-VL Leak Test Vial



Mastercool®
"World Class Quality"

55850 *IntellaSense*
REFRIGERANT LEAK DETECTOR **KIT**



CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

Intella Sense Refrigerant Leak Detector

Kit includes:

- Intella Sense Refrigerant Leak Detector
- 12 LED UV light (53512-UV)
- UV safety glasses (92398)
- 2 "D" batteries
- Replacement filters (55800-FILTER)
- Leak test vial (55800-VL)
- Blow molded case (55800-PB)

55975 *IntellaSense III*
COMBUSTIBLE GAS LEAK DETECTOR



 **COMPATIBLE WITH COMBUSTIBLE GASES**

CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

Intella Sense III Combustible Gas Leak Detector is packaged in a blow molded case with 2 "C" batteries, leak test vial and replacement filters

SPECIFICATIONS

- Sensing Element: Heated tin oxide
- Sensor Life: 2000 hours
- Refrigerants: Detects combustible gases
- Response Time: less than 1 second
- Battery: 2 "C" alkaline 6000 mAh batteries
- Operating Temperature Range: 0°F to 120°F
- Ultimate Sensitivity: 50 – 1000 ppm

Probe:

- Intelligent tip, with environment sensing element to eliminate the potential of false alarms
- Flexible 15.5 inch probe length for difficult to reach locations

Display:

Six vertical LED's enable selectively (red, yellow or green) to display the following information to the user such as:

- The relative signal level of the detected leak
- The selected sensitivity range (low/medium or high) of the unit
- Diagnostic information: low battery, interference/wait, contaminated atmosphere, readiness of the unit or fault conditions of the unit

Keypad Controls:

- ON/OFF, Volume/Mute, Sensitivity for High, Medium and Low level selection, Peak button when multiple leaks are suspected

DETECTS: Acetone, Acetylene, Ammonia, Benzene, Butane, Butanol, Chlorine, Ethane, Ethanol, Gasoline, Hexane, Hydrogen, Hydrogen Sulfide, Isobutane, Methane (natural gas), Methanol, Methyl Acetate, Methyl Chloride, Methyl Ether, Naptha, N-Butane, Pentane, Propane, Propanol, Sulfur Dioxide and Trichloroethane



Mastercool®
"World Class Quality"

56100



CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

The *Raptor Refrigerant Leak Detector* offers state-of-the-art features and micro-processing technology while the design sensor delivers an accurate and instantaneous response. Packaged in a blow molded case with 2 “C” batteries and sensor tip.

FEATURES:

- Digital Signal Micro Processor
- Visual Leak Level Indicator
- Reset Function and Keypad Control
- Sensitivity Level Adjustment
- Battery Test Function
- Variable Frequency Audible Alarm
- Meets and Exceeds SAE J1627

SPECIFICATIONS:

- 3 Levels of Sensitivity (5 Levels of Detection)
- Detects leaks as small as 1/10 oz per year*
*based on optimal laboratory conditions
- Detects all refrigerants (CFC's, HCFC's, HFC's)
- Power: 2 “C” Batteries
- Probe: Flexible 16” (43 cm)



56200



WITH UV BLUE LIGHT



CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

The *Raptor Refrigerant Leak Detector with UV Blue Light* offers state-of-the-art features and micro-processing technology while the design sensor delivers an accurate and instantaneous response. An ultra bright UV light is built into the end of the probe allowing for both electronic and UV leak detection of even the toughest leaks. Packaged in a blow molded case with UV glasses, 2 “C” batteries and sensor tip.

FEATURES:

- Digital Signal Micro Processor
- Mute Function
- Visual Leak Level Indicator
- Reset Function and Keypad Control
- Battery Test Function
- Sensitivity Level Adjustment
- Ultra Bright UV/Blue LED Light
- Variable Frequency Audible Alarm
- Meets and Exceeds SAE J1627

SPECIFICATIONS:

- 6 Levels of Sensitivity (15 Levels of Detection)
- Detects leaks as small as 1/10 oz per year*
*based on optimal laboratory conditions
- Detects all refrigerants (CFC's, HCFC's, HFC's)
- Power: 2 “C” Batteries
- Probe: Flexible 16” (43 cm)





56300 COMPLETE ELECTRONIC & UV LEAK DETECTION KIT



CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

The ultimate solution for all your A/C leak detection needs.

Kit Includes:

- 56200 "Raptor" Electronic Leak Detector with UV Blue Light
- UV Dye Injector w/25 Application Dye Cartridge
- Dye Injector Connection Hose w/R12 Adapter
- Dye Cleaner
- UV Safety Glasses
- Custom Molded Carrying Case



56400 COMPLETE ELECTRONIC & UV LEAK DETECTION KIT



CALIBRATION CERTIFICATE AVAILABLE UPON REQUEST

The ultimate solution for all your A/C leak detection needs.

Kit Includes:

- 56200 "Raptor" Electronic Leak Detector with UV Blue Light
- Refillable Dye Injector
- Dye Injector Connection Hose w/R12 Adapter
- 2 oz Bottle of Concentrated Universal Dye
- UV Safety Glasses
- Dye Cleaner
- Custom Molded Carrying Case



55744 ELECTRONIC LEAK DETECTOR FOR R744



Mastercool's Electronic Leak Detector for R744 is the most technologically advanced instrument of its kind. The minimal power requirements, small size and high sensitivity combine to create a tool which is easy to handle and ultra-effective at locating even the most difficult to find leaks.

SPECIFICATIONS:

- Operating Temperature: 32 - 122°F (0-50°C)
- Warm Up Time: 10 seconds
- Response Time: < 1 second
- Reset Time: < 1 second
- Sensitivity (High): < 400 ppm at 350 ppm ambient
- Sensitivity (Low): < 4,000 ppm at 350 ppm ambient
- Sensor Lifetime: > 2 years
- Probe Length: 12" (30cm)
- Batteries: 4 x 1.5V 'AA' Alkaline Batteries (6 VDC)
- Battery Life: 20 hours
- Dimensions: 20.3 cm x 6.3 cm x 5.7 cm
- Weight: 15 oz (425 grams) with batteries



Mastercool®
"World Class Quality"

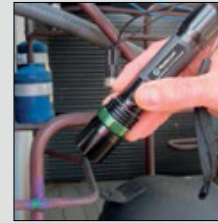
53518-UV RECHARGEABLE 110 V UV FLASHLIGHT (LED)
53518-UV-220 RECHARGEABLE 220 V UV FLASHLIGHT (LED)



- Twist the handle to zoom the UV light in or out
- AAA battery holder provides backup power to flashlight (3 AAA batteries included)
- Battery Life: 3 to 5 hours continuous leak detection
- Includes safety glasses

SPECIFICATIONS:

- High Intensity LED
- 154 - 170 $\mu\text{W}/\text{cm}^2$ which is compatible to a 50 watt UV flashlight
- 2 Illumination Modes: super bright and battery conservation
- Battery: Lithium Li-Ion, full discharge and cut-off discharge of 4.2V and 2.75V



53512-UV MINI UV FLASHLIGHT (LED)



- 12 LED Bulb UV Illumination
- Aluminum body with Type III anodized finish
- Battery Life: 5 hours continuous leak detection
- Includes safety glasses
- Easy grip texture
- 3 AAA batteries
- 25,000 hour bulb life

53517-UV COMPACT UV FLASHLIGHT (LED)



- 17 LED Bulb UV Illumination
- Aluminum body with Type III anodized finish
- Battery Life: 4 hours continuous leak detection
- Includes safety glasses
- Easy grip texture
- 3 AAA batteries
- 25,000 hour bulb life

53515 MACH IV FLEXIBLE UV LIGHT (LED)



The Mach IV flexible UV light has **4 TRUE UV LEDS** delivering a brilliant fluorescent glow.

- Gets into tight areas easily.
- Includes UV Enhancing Safety Glasses

PATENT NO. 6,647,761

53515-B Light Bulb

53012 UV SWIVEL HEAD LIGHT (12 V/100 WATTS)



- 180° Swivel Heads Get Into Tight Places
- Heavy Duty Metal Construction
- Instant ON
- Includes UV Enhancing Safety Glasses

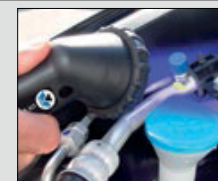
53012-B Light Bulb

53012-L Lens

53312 UV MINI LIGHT (12 V/50 WATTS)



- High Intensity
- 16ft. (5m) Cord
- Compact & Lightweight
- Instant ON
- Includes UV Enhancing Safety Glasses



53312-B Light Bulb

53312-L Lens

COMPACT UV LEAK LOCATOR KITS



Leading the way in UV LEAK DETECTION, Mastercool offers a variety of compact UV Leak Locator Kits. Each kit offers a powerful inspection lamp, a "Refillable" or "Cartridge Type" Dye Injector and accessories. All kits are packaged in a clamshell or custom molded carrying case.

KIT PART#	INJECTOR / LIGHT	CONTENTS OF EACH KIT	VOLTAGE/ WATT
53451-110	53123/ 53518-UV	Rechargeable UV light, Batteries, Rechargeable Batteries, Battery Holder, Refillable 2 oz Dye Injector, 2 oz Concentrated Universal A/C Fluorescent Dye (25 Application), 4 oz Dye Remover, 25 Service Information Labels, UV Enhancing Safety Glasses	LED
53451-220	53123/ 53518-UV-220	Rechargeable UV light, Batteries, Rechargeable Batteries, Battery Holder, Refillable 2 oz Dye Injector, 2 oz Concentrated Universal A/C Fluorescent Dye (25 Application), 4 oz Dye Remover, 25 Service Information Labels, UV Enhancing Safety Glasses	LED
53451-C-110	53223/ 53518-UV	Same as 53451-110 but with Replaceable 2 oz Dye Cartridge (25 Applications)	LED
53451-C-220	53223/ 53518-UV-220	Same as 53451-220 but with Replaceable 2 oz Dye Cartridge 25 Applications)	LED
53587	53809/ 53517-UV	Compact UV Flashlight (53517-UV), 1 oz die injector with replaceable 1 oz die cartridge (10 application), Low Side Hose, 1/4" FL adapter, UV Enhancing Safety Glasses, Service Information Labels, Packaged in a clam shell	LED
53580	53809/ 53515	MACH IV Flexible LED UV Light w/1 oz (30 ml) Dye Injector, w/Replaceable 1 oz (30 ml) Dye Cartridge (10 Appl.), Low-Side Hose w/R134a Coupler, 1/4" FL Adapter, 10 Serv. Info. Lbls. & UV Enhancing Safety Glasses	LED
53585	53809/ 53515	Same as above, but w/1 oz OIL/ATF/Gas (53610) & Diesel Fluorescent Dye and 1oz (30ml) Engine Coolant Fluorescent Dye (53609)	LED
53100	53123/ 53012	High Intensity Swivel Head Light, w/ Refillable 2 oz (60 ml) Dye Injector, 2 oz (60 ml) Concentrated Universal A/C Fluorescent Dye (25 Appl.), 4 oz (1200 ml) Dye Remover, 25 Serv. Info. Lbls. & UV Enhancing Safety Glasses	12 V/100 WATT
53100-C	53223/ 53012	Same as 53100, but with Replaceable 2 oz (60 ml) Dye Cartridge (25 Appl.)	12 V/100 WATT
53500	53123/ 53312	High Intensity Mini Light w/Refillable 2 oz (60 ml) Dye Injector, 2 oz (60 ml) Concentrated Universal A/C Fluorescent Dye (25 Appl.), 4 oz (120 ml) Dye Remover, 25 Serv. Info. Lbls. & UV Enhancing Safety Glasses	12 V/50 WATT
53500-C	53223/ 53312	Same as 53500, but with Replaceable 2 oz (60 ml) Dye Cartridge (25 Appl.)	12 V/50 WATT

REFILLABLE “PISTON TYPE” UNIVERSAL OIL/DYE INJECTOR



To inject the oil or dye, simply connect the injector to the low side of the A/C system and twist the handle until you reach the desired amount.

- 53123** Refillable Universal Dye Injector with auto shut-off valve adapter and 2 oz (60 ml) Bottle of Concentrated A/C Dye (25 Apps)

- 53123-A** Refillable Universal Dye/Oil Injector (w/o dye) with auto shut-off valve adapter

- 53134** Refillable Oil/Dye Injector with (R134a 13 mm Connection) and 2 oz (60 ml) Bottle of Concentrated A/C Dye (25 Applications)

- 53322** Refillable Dye Injector with (1/4" Auto Shut-off Valve Connection) and 2 oz (60 ml) Bottle of Concentrated A/C Dye (25 Apps)

53223 “CARTRIDGE TYPE” UNIVERSAL DYE/OIL INJECTOR



Adding dye with the 53223 is fast and easy, simply connect the injector to the low side of the A/C system and twist the handle to the next application line. The replaceable cartridge provides 25 applications of universal dye that is compatible with all systems. The injector hose comes complete with an auto shut-off valve adapter for 1/4" FL systems.

53809 MINI DYE INJECTOR



“Cartridge Type” Dye Injector (10 Applications) Concentrated Dye.

53123-YF REFILLABLE R1234yf OIL/DYE INJECTOR



To inject the oil or dye, simply connect the injector to the low side of the A/C system and twist the handle until you reach the desired amount.

- Heavy duty, anodized aluminum, 2 oz container with dye scales represented in 1/10 ounce, 1/4 ounce and milliliters
- Nylon barrier blue hose meets J2888, EPA, SAE and UL standards
- R1234yf low side coupler with extended disconnect sleeve and meets SAEJ639 and J2888

OIL INJECTOR



Excellent method for adding refrigerant oil or large amounts of UV leak detection dye to the A/C system. Add oil by allowing vacuum to pull it in after evacuation process, or use refrigerant to push it in using the recharge system.

- 90375** Standard 1/4" FFL x 1/4" MFL

- 82375** ACME 1/2" FFL x 1/2" MFL

STANDARD UNIVERSAL ULTRAVIOLET A/C DYES



- 92699** Standard Universal Dye - Six 1/4 oz Packs (6 pcs)
Pack 1/4 oz (7.5 ml) - 1 Application

- 92708** Standard Universal Dye
8 oz (240 ml) Bottle - 32 Applications

- 92732** Standard Universal Dye
32 oz (1 L) Bottle - 128 Applications

CONCENTRATED UNIVERSAL ULTRAVIOLET A/C DYES



- 53825** Concentrated Universal Dye Cartridge
Replaceable Cartridge - 25 Applications

- 53810** Concentrated Universal Dye Cartridge
Replaceable Cartridge - 10 Applications

- 53625** Concentrated Universal Dye
2 oz (60 ml) Bottle - 25 Applications

FLUORESCENT DYE



- 53609** Engine Coolant (1 oz. (30 ml) bottle)
 - 1 oz for 1 vehicle application per 16 quarts (15 L) of fluid

- 53610** Engine Oil (1 oz. (30 ml) bottle)
 - Engine Oil (Gas & Diesel) - 1 vehicle application per 4-5 quarts (4 L-5 L) of oil
 - Automatic Transmission Fluid - 1 vehicle application per 4-5 quarts (4 L-5 L) of fluid
 - Gasoline & Diesel Fuel - 1 vehicle application per 2 gallons (8 L) of fuel



- Lubricates system and helps prevent leaks
 - Seals small leaks
 - Illuminates larger leaks through the use of high quality universal fluorescent dye
 - Compatible with all refrigerants and oils
 - No need to recover refrigerant during application.
 - Stops leaks in metal and rubber air conditioner and refrigeration parts including evaporators, o-rings, gaskets and hoses.
 - Patented delivery system prevents any residual sealant from being left in can
-
- 53615** Master Leak Shield HVAC - up to 1.5 Tons (5.3 kW)
1 oz can of Master Leak Shield HVAC sealant with dye for use on systems up to 1.5 tons

 - 53660** Master Leak Shield HVAC - 1.5 to 6 Tons (5.3 kW to 21 kW)
3 oz can of Master Leak Shield HVAC sealant with dye for use on systems 1.5 to 6 tons



- Lubricates system and helps prevent leaks
- Seals small leaks in evaporator, condenser, hoses, o-rings and gaskets
- Illuminates larger leaks through the use of high quality universal fluorescent dye
- For R134a A/C systems
- Safe for hybrid and electric compressors

53909 Mini Auto A/C Master Leak Shield Dye Injector
 “Cartridge Type” 1 oz injector with Auto A/C Master Leak Shield Sealant with dye, low side hose, 1/4” FL adapter

53910 Auto A/C Master Leak Shield
 1 oz replacement cartridge of Auto A/C Master Leak Shield Sealant with dye

53592 Mini UV Flashlight Kit
 53512-UV Mini UV Flashlight (12 LED), “cartridge type” 1 oz Injector with Auto A/C Master Leak Shield Sealant with dye, low side hose, 1/4” FL adapter, UV safety glasses, service info. labels, packaged in clam shell

53597 Compact UV Flashlight Kit
 53517-UV Compact UV Flashlight (17 LED), “cartridge type” 1 oz Injector with Auto A/C Master Leak Shield Sealant with Dye, low side hose, 1/4” FL adapter, UV safety glasses, service info. labels, packaged in clam shell



Easy to use! Stops leaks in metal and rubber automotive air conditioner parts including evaporators, condensers, o-rings, gaskets and hoses.

- For use in R134a, HFO-1234yf, hybrid and electronic A/C systems
- Includes o-ring conditioner, proprietary anti-wear and anti-oxidant additives
- Adds 1 oz. (30 ml) leak stop with U/V leak detection dye
- Patented delivery system, does not contain refrigerant
- Safe, does not contain harmful polymers
- HFC Free Aerosol

US Patent No. 8,074,009, other US and foreign patents pending

53615-A Auto Master Leak Shield
 1 oz can of Auto Master Leak Shield Sealant with dye









SERVICE ACCESSORIES AND CONSUMABLES

NITROGEN PRESSURE REGULATORS

Mastercool's nitrogen regulator is specifically designed to meet the specifications of HVAC/R and automotive A/C systems. This single stage nitrogen regulator is used to test systems for leaks when they do not contain refrigerant.

- 1/4" SAE flare outlet port, with control valve, to keep pressure on the regulator at all times
- T-Handle for ease of pressure adjustment
- 63 mm (2 1/2") gauges with guards
- High pressure gauge 4400 psig (300 bar), Low pressure gauge 1000 psig (70 bar)

					
53001	53002	53003	53004	53005	53006
CGA580 (US)	DIN477#6 and DIN477#10 (This unit includes an adapter to convert DIN477#6 to DIN477#10) (France/Germany)	BS3 (England)	AS2473.2 (Australia)	5-UNI11144 (Italy)	21.8 L NEN 3268 Nitrogen/Hydrogen

1/4 FL-M outlet connection

PRESSURE TESTING REGULATOR KITS



53010 PRESSURE TESTING REGULATOR KIT (US): Nitrogen pressure regulator (53001), 48" yellow charging hose (47482), leak testing adapter (53042), R410a straight adapter 1/4 FL-M x 5/16 swivel-F (90413), blow molded case (53000-PB)

53020 PRESSURE TESTING REGULATOR KIT (France/Germany): Nitrogen pressure regulator (53002), 48" yellow charging hose (47482), leak testing adapter (53042), R410a straight adapter 1/4 FL-M x 5/16 swivel-F (90413), blow molded case (53000-PB)

53030 PRESSURE TESTING REGULATOR KIT (England): Nitrogen pressure regulator (53003), 48" yellow charging hose (47482), leak testing adapter (53042), R410a straight adapter 1/4 FL-M x 5/16 swivel-F (90413), blow molded case (53000-PB)

53040 PRESSURE TESTING REGULATOR KIT (Australia): Nitrogen pressure regulator (53004), 48" yellow charging hose (47482), leak testing adapter (53042), R410a straight adapter 1/4 FL-M x 5/16 swivel-F (90413), blow molded case (53000-PB)

53050 PRESSURE TESTING REGULATOR KIT (Italy): Nitrogen pressure regulator (53005), 48" yellow charging hose (47482), leak testing adapter (53042), R410a straight adapter 1/4 FL-M x 5/16 swivel-F (90413), blow molded case (53000-PB)

53060 NITROGEN/HYDROGEN PRESSURE TESTING REGULATOR KIT: Nitrogen/Hydrogen pressure regulator (53006), 48" yellow charging hose (47482), leak testing adapter (53042), R410a straight adapter 1/4 FL-M x 5/16 swivel-F (90413), blow molded case (53000-PB)

53042-YF LEAK TESTING ADAPTER FOR R1234yf



- 80 mm gauge
- R1234yf low side coupler

R1234yf Compatible

OPTIONAL ACCESSORIES

66434-R High Side Standard R134a 1/4" FL-M x 16 mm Economy Coupler	53000-70 Low Pressure Regulator Gauge
82834-E High-Side Manual R134a 1/4" FL-M x 16 mm Coupler	53000-300 High Pressure Regulator Gauge
90413 R410a Straight Adapter 1/4" FL-M x 5/16" Swivel-F	47482 48" Yellow Charging Hose
53042 Leak Testing Adapter	93254-E Black Gauge Guard
53000-42 Leak Testing Gauge	53000-W Teflon Washer

PRESSURE TESTING REGULATOR KITS*

ONLY FOR SALE IN EUROPE



53025

53025 PRESSURE TESTING REGULATOR KIT (France/Germany): Nitrogen pressure regulator (53002), 48" yellow charging hose (47482), leak testing adapter (53042), R410a straight adapter 1/4 FL-M x 5/16 swivel-F (90413), regulator adapter (53002-AD), 1 liter bottle of nitrogen (91150), blow molded case (53015-PB)

53035 PRESSURE TESTING REGULATOR KIT (England): Nitrogen pressure regulator (53003), 48" yellow charging hose (47482), leak testing adapter (53042), R410a straight adapter 1/4 FL-M x 5/16 swivel-F (90413), 1 liter bottle of nitrogen (91150), regulator adapter (53003-AD), blow molded case (53015-PB)

53055 PRESSURE TESTING REGULATOR KIT (Italy): Nitrogen pressure regulator (53005), 48" yellow charging hose (47482), leak testing adapter (53042), R410a straight adapter 1/4 FL-M x 5/16 swivel-F (90413), 1 liter bottle of nitrogen (91150), regulator adapter (53004-AD), blow molded case (53015-PB)

53025-NH PRESSURE TESTING REGULATOR KIT (France/Germany): Nitrogen pressure regulator (53002), 48" yellow charging hose (47482), leak testing adapter (53042), R410a straight adapter 1/4 FL-M x 5/16 swivel-F (90413), 1 liter bottle of NitroH (91151), regulator adapter (53002-AD), blow molded case (53015-PB)

53035-NH PRESSURE TESTING REGULATOR KIT (England): Nitrogen pressure regulator (53003), 48" yellow charging hose (47482), leak testing adapter (53042), R410a straight adapter 1/4 FL-M x 5/16 swivel-F (90413), 1 liter bottle of NitroH (91151), regulator adapter (53003-AD), blow molded case (53015-PB)

53055-NH PRESSURE TESTING REGULATOR KIT (Italy): Nitrogen pressure regulator (53005), 48" yellow charging hose (47482), leak testing adapter (53042), R410a straight adapter 1/4 FL-M x 5/16 swivel-F (90413), 1 liter bottle of NitroH (91151), regulator adapter (53004-AD), blow molded case (53015-PB)

* add an **-A** to include a low side manual R134a 1/4" FL-M x 13mm quick coupler (82934-e)

* add an **-AYF** to convert the leak testing adapter to a R1234yf leak testing adapter (53042-yf)



REGULATOR ADAPTER

ONLY FOR SALE IN EUROPE



53003-AD

These adapters are designed to work with Mastercool's line of Nitrogen Pressure Regulators and allow for the use of our new 1 Liter Nitrogen and NitroH bottles.

53002-AD France/Germany | **53003-AD** England | **53005-AD** Italy

1 LITER NITROGEN BOTTLE (max filling pressure 110 bar)

ONLY FOR SALE IN EUROPE



Mastercool introduces its new offering of 1 liter portable Nitrogen bottles.

The nitrogen bottles are commonly used for:

- Testing for leaks in pressure of HVAC & A/C
- Flushing of HVAC & A/C systems
- Fluxing during soldering in HVAC & A/C
- Calibration of pressure switches
- Gauge calibration and much more

91150-6 (6 pcs.) 1 liter bottle of Nitrogen

91150-48 (48 pcs.) 1 liter bottle of Nitrogen

91150-96 (96 pcs.) 1 liter bottle of Nitrogen

1 LITER NITRO H BOTTLE (max filling pressure 110 bar)

ONLY FOR SALE IN EUROPE



Mastercool introduces its new offering of 1 liter portable NitroH bottles. NitroH is a mixture of 95% nitrogen and 5% hydrogen. This unique combination allows this gas to be used for leak detection in conjunction with Mastercool's 55800 Intella Sense Refrigerant Leak Detector.

91151-6 (6 pcs.) 1 liter bottle of NitroH

91151-48 (48 pcs.) 1 liter bottle of NitroH

91151-96 (96 pcs.) 1 liter bottle of NitroH

“MASTERCLEANSE” FLUSH MACHINE



Mastercool introduces its new “MASTERCLEANSE” large volume flush machines designed to flush all HVAC/R and automotive systems. “MASTERCLEANSE” will be commonly used for the removal of all solids and residues caused by breakage of compressor or filters. Designed with durable roll-away wheels and handle, this machine can conveniently move as needed.

FEATURES:

- Stainless steel ball valve controls
- 1/4” SAE connection
- Additional external container connection
- External nitrogen bottle connection
- Pump equipped with mechanical seal and PTFE gasket
- Mechanical filter present at suction side

SPECIFICATIONS:

- Pump Flow Rate: 4 g/min (16 l/min)
- Pump Motor: 300 watts
- Pump Horsepower: 110V/60 Hz - 0.4 HP, 220-240V/50/60 Hz - 0.28 HP
- Full Load Amperage: 110V/60 Hz - 2.4 amps, 220-240V/50/60 Hz - 1.7 amps
- Flush Container: 2.6 gal (10 l)
- Hoses: 9 ft (3 m) flexible, clear coiled
- Dimensions: 15” (l) x 16” (w) x 24” (h) /with handle extended 36” (h) (381 mm (l) x 406 mm (w) x 609 mm (h) /with handle extended 914 mm (h))
- Weight: 42 lbs (19 kg)



- 69900** 110 V / 60 Hz
- 69900-220** 220-240 V / 50/60 Hz
- 69901-220** 220-240 V / 50/60 Hz with internal nitrogen regulator for use with European standard 1 liter nitrogen bottle

69925 MULTIPLE FLUSHING & LEAK TEST ADAPTER KIT FOR FLUSH MACHINE



Multi-purpose leak test and flushing adapters suitable for more than 80% of the automotive air conditioning systems in the market!

- Isolates A/C system components for closed loop flushing
- Flush individual components without removing them from the vehicle
- Install adapters on A/C line ends to allow attachment of flushing equipment



A/C FLUSH SOLVENT



91049-32

91049-128

- Effectively removes debris and sludge from A/C components
- Solvent-based
- Evaporates quickly
- Leaves no residue
- O-Ring safe
- Non-Flammable
- Non-Corrosive
- Flush any A/C system

91049-32	32 oz. Flush Solvent
91049-32-6	6 pack - 32 oz. Flush Solvent
91049-128	1 Gallon Flush Solvent
91049-128-4	4 pack - 1 Gallon Flush Solvent

TOTAL A/C QUICK FLUSH



91051

91050

- Specific fluid for the inner flushing of air conditioning and refrigeration systems.
- O-Ring safe
 - Non-Flammable
 - Non-Corrosive
 - For Professional Use
 - Pressurized container ready to use

91051	Total A/C Quick Flush Kit
91050	17 oz. Total A/C Quick Flush Can
91050-6	6 Pack - 17 oz. Total A/C Quick Flush Cans

A/C SYSTEM FLUSH KIT



91046-A

91046-OEX

Includes flush gun, hose, canister and canister adapter.
 Designed to work with any light weight flushing agent which can be mixed with pressurized air. Excellent for quickly and effectively removing refrigerant oil debris during retrofitting or compressor replacement.



91046-A	A/C System Flush Kit with standard compressed air connection
91046-OEX	A/C System Flush Kit with 1/4" male flare connection

92707 HYBRID A/C COMPRESSOR OIL



- Formulated for vehicles with electric A/C compressors
- High dielectric formula provides advanced compressor protection
- Synthetic lubricant specifically created for electric hybrid air conditioning compressors
- For replenishing hybrid or electric compressor oil in accordance with the quantity evacuated or the quantity recommended by the compressor manufacturer
- Provides outstanding lubricity and compressor protection
- Compatible replacement lubricant for compressors using Honda 38899RCJA01, ND-10, ND-OIL 11 (ND-11), and SE-10Y
- High dielectric protection formula has excellent “resistivity” to potential electrical current leakage in high voltage hybrid A/C systems
- Contains conditioners, inhibitors and anti-wear agents
- Net contents 7 oz. (210 mL)

COMPRESSOR OILS



Maximum protection with excellent thermal & oxidative stability. Moisture tolerant. OEM approved.

PAG 65

92709-65-8 PAG 65 Oil (8 oz (236 ml) bottle)

92709-65-32 PAG 65 Oil (32 oz (1 L) bottle)

PAG 100

53826 PAG 100 Oil (2 oz (60 ml) cartridge)

92709-100-8 PAG 100 Oil (8 oz (236 ml) bottle)

92709-100-32 PAG 100 Oil (32 oz (1 L) bottle)

PAG 150

92709-150-8 PAG 150 Oil (8 oz (236 ml) bottle)

92709-150-32 PAG 150 Oil (32 oz (1 L) bottle)

Ester 100 Oil

53827 Ester Oil (2 oz (60 ml) cartridge)

92710 Ester Oil (8 oz (236 ml) bottle)

92712 Ester Oil (32 oz (1 L) bottle)

ACCESSORIES



53314 Dye Remover
4 oz (120 ml)

53315 Service Labels
25 per pack, bright yellow label indicating that the system has been charged with UV Dye.

92398 UV Enhancing Safety Glasses
This is a must for protection against ultraviolet light during leak detection.

ZEROL® HD46 R1234yf MOBILE AIR CONDITIONING COMPRESSOR LUBRICANT

ZEROL HD46 is a fully formulated ISO VG46 grade polyalkylene glycol lubricant designed specifically for application with HFO refrigerant R1234yf in mobile air conditioning (MAC) systems. The product is a double end-capped PAG, and is manufactured to exacting standards of high double endcapping efficiency. ZEROL HD46 is suitable for use in both belt and electrically driven compressors utilizing R1234yf, and is also fully suitable for use in R134a belt-driven and electric MAC compressors.

- Optimized miscibility in HFO refrigerant R1234yf
- Superior lubricity compared to alternative lubricant types, including standard 'single end-capped' PAG products, and di-capped PAGs with lower di-capped material content
- Exceptional Viscosity Index (VI) – The high VI enhances compressor life by ensuring efficient running at temperature extremes. The high VI may also allow the user to select a lower viscosity fluid than typically used, with associated power usage savings.
- Good high temperature and chemical stability, even in presence of water, resulting in system lifetime extension and reduced maintenance costs.
- Low hygroscopicity (tendency to absorb moisture) compared to alternative PAG products with lower di-capping content.
- Formulating expertise – ZEROL HD46 series contain optimized additive technology to provide additional corrosion protection within the A/C system, to further enhance the extreme pressure and anti-wear performance of the PAG, and to maximize fluid lifetime by ensuring against thermal or oxidative deterioration of the lubricant.
- Excellent electrical resistivity properties for electrically driven systems.

SPECIFICATIONS:

- Viscosity @ 40°C (cSt): 42.0 – 48.0
- Colour (Gardner): 1 max.
- Water content (ppm): 300 max.
- Total Acid Value (mgKOH/g): 0.03 max.
- Pour point (°C): <-25
- Capping Efficiency: 85.0% minimum
- Appearance: Clear to slightly hazy, free of visible particles

92709-YF-8 8 fl. oz (236 ml) bottle

92709-YF-32 32 fl. oz (946 ml) bottle

ALUM BOND

A two-component epoxy formula highly concentrated with carefully selected pure aluminum particles, modified curing agents and special high quality additives to provide maximum strength, durability and ease of application. Alumbond is aluminum filled epoxy specially formulated for repairing condenser coils, tanks, valves, pumps, castings, water jackets, radiators, etc., where non-rusting, non-magnetic aluminum finish is desired.

PHYSICAL PROPERTIES:

- Hardness (Shore, ASTM D 1706): 83D
- Coefficient of Thermal Expansion: 40 x 10⁻⁶ cm/cm/°C
- Compression Strength (ASTM D 695): 8600 psi (59 M Pa)
- Tensile Strength (ASTM D 638): 3500 psi (24 M Pa)
- Maximum Line Pressure (after 5 hrs application time): 650 psi



90935 Aluminum Repair Kit (6.5 oz package)

90934 Aluminum Repair Kit (2 oz package)

90935-12 Aluminum Repair Kit - box of 12 (each box contains Hardener & Resin (3.25 oz. (94g) each)



Mastercool®
"World Class Quality"

91000-B DELUXE CLUTCH HUB PULLER/INSTALLER KIT



Kit contains a complete offering of A/C compressor clutch hub pullers and installers for GM, Ford, Chrysler and Imports. Includes a universal clutch holding tool and comes in a custom molded case.

92311 DELUXE ORIFICE TUBE SERVICE KIT



This 5 piece universal kit will remove and install any style orifice tube. Comes in custom molded box.

92329 TOYOTA A/C DISCONNECT TOOL



The new Toyota spring lock A/C hose couplings require this special disconnect tool. Simply insert the end of the tool into the coupling to disengage the hose.



TUBE & HOSE FORMING

71500-A HYDRA-KRIMP



The die snaps quickly into the press fixture requiring no pins or screws.



Fabricating A/C Hoses Just Got Easier...

Mastercool's Patented "Hydra - Krimp" makes crimping barbed and beaded fittings as easy as 1 - 2 - 3! The lightweight hand-held hydraulic press is very portable and ideal for shop and field applications. The kit comes with a complete set of dies covering hose sizes #6, #8, #10, #12 and reduced barrier #6, #8, #10 and #12. The dies snap quickly into the press fixture requiring no pins or screws. **PATENT# 6,324,884**

Kit comes in a custom molded case and includes:

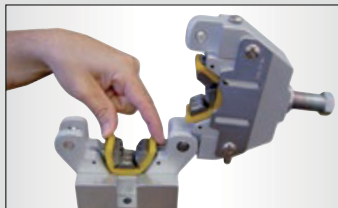
71500-001AB	Hydra - Krimp Pump
71500-001B	Hydra - Krimp Yoke
71500-001C	Complete Die Set Assembly (7 pc. set)
71500-6	Die Set - #6 (5/16"), Die Set - #8 (13/32" Reduced Barrier)
71500-8	Die Set - #8 (13/32")
71500-10	Die Set - #10 (1/2")
71500-12	Die Set - #12 (5/8")
71500-6SRB	Die Set - #6 (5/16" Reduced Barrier)
71500-10SRB	Die Set - #10 (1/2" Reduced Barrier)
71500-12SRB	Die Set - #12 (5/8" Reduced Barrier)
71500-PB	Custom Molded Box

71550 A/C HOSE CRIMPER



The 71550 is our "manual style" A/C hose crimper. The dies snap quickly into place requiring no pins or screws. The unit can be easily mounted to a bench using the holding fixture or held securely in a vice. This kit comes with a complete set of dies covering standard hose sizes #6, #8, #10 and #12. **PATENT# 6,324,884**

***Optional reduced barrier sizes are available.**



The die snaps quickly into the press fixture requiring no pins or screws.



Kit comes in a custom molded case and includes:

71500-001	Hydra - Krimp Pump	71500-8	Die Set - #8 (13/32")
71550-002	Arbor Assembly	71500-10	Die Set - #10 (1/2")
71550-003	Holding Fixture Assembly	71500-12	Die Set - #12 (5/8")
71500-6	Die Set - #6 (5/16")	71550-PB	Custom Molded Carrying Case





HYDRA-SWAGE



Fabricates and Expands Copper, Aluminum and Soft Steel Tubing Using Hydraulic Power.

PATENT# 6,619,099

- 71600-A (7 HEAD KIT)** Consists of Expander Heads 3/8, 1/2, 5/8, 3/4, 7/8, 1 and 1 1/8", Hydra-Swage 71601, Adapter and Inner-Outer Reamer
- 71600-A-M (7 HEAD KIT)** Same as 71600, but using Metric Expander Heads 10, 12, 15, 16, 18, 22 and 28 mm.
- 71650-A (10 HEAD KIT)** Consists of Expander Heads 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/8, 1 3/8, 1 5/8, and 2 1/8", Hydra-Swage 71601, Adapter and Inner-Outer Reamer.
- 71601-A** Hydra-Swage
- 71601-D** Adapter for 71601
- 71685** Inner - Outer Reamer
- 71600-PB** Molded Box for 71600, 71600-M & 71650



PART#	DESCRIPTION	TUBE O.D.
71600-03	Expander Head	3/8"
71600-04	Expander Head	1/2"
71600-05	Expander Head	5/8"
71600-06	Expander Head	3/4"
71600-07	Expander Head	7/8"
71600-08	Expander Head	1"
71600-09	Expander Head	1 1/8"
71600-11	Expander Head	1 3/8" (35 mm)
71600-13	Expander Head	1 5/8"
71600-17	Expander Head	2 1/8" (54 mm)
71600-10M	Expander Head	10 mm
71600-12M	Expander Head	12 mm
71600-15M	Expander Head	15 mm
71600-16M	Expander Head	16 mm
71600-18M	Expander Head	18 mm
71600-22M	Expander Head	22 mm
71600-28M	Expander Head	28 mm



HYDRAULIC FLARING AND EXPANDING



Mastercool introduces the newest members of its handheld hydraulic line of tubing tools. These new kits are an upgrade to the existing hydra-swage expanding kits, allowing the user to easily make OEM flares with a pump of the handle.
PATENT# 6,619,099

71675 (7 HEAD KIT)

Complete Hydraulic Flaring and Expanding Kit
 Consists of Expander Heads 3/8, 1/2, 5/8, 3/4, 7/8, 1 and 1 1/8", Hydra-Swage 71601, Adapter, Inner-Outer Reamer and Hydraulic Flaring Accessory 71680 packaged in a blow molded case



71676 (10 HEAD KIT)

Complete Hydraulic Flaring and Expanding Kit
 Consists of Expander Heads 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/8, 1 3/8, 1 5/8, and 2 1/8", Hydra-Swage 71601, Adapter, Inner-Outer Reamer and Hydraulic Flaring Accessory 71680 packaged in a blow molded case



71680 HYDRAULIC FLARING ACCESSORY



Add the 71680 to your existing Mastercool hydraulic expanding kits to allow for the ability to make OEM flares with a simple pump of the handle. Flares 7 sizes: 1/4, 5/16, 3/8, 1/2, 5/8, 3/4, 7/8."

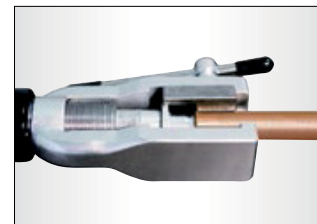
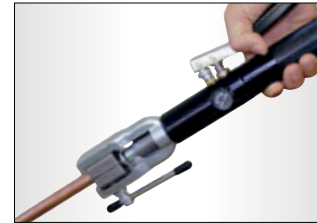


71700 HYDRAULIC FLARING & SWAGING TOOL



This kit features a hand-held hydraulic press that accurately flares & swages copper tubing. Once the die and adapter are secured in the fixture, a few pumps of the handle and you're done! This tool really takes the work out of swaging and flaring, especially on larger tube sizes. The kit includes dies and adapters for flaring and swaging copper tubing sizes 1/4, 5/16, 3/8, 1/2, 5/8, 3/4 and 7/8." Comes in custom molded carrying case. **PATENT# 5,782,128**

- 71700-A** Flaring & Swaging Pump
- 71700-B** Yoke Assembly
- 71700-PB** Plastic Molded Box
- 71700-01** 45° Flaring Cone
- 71700-04** 1/4" Swaging Adapter
- 71700-05** 5/16" Swaging Adapter
- 71700-06** 3/8" Swaging Adapter
- 71700-08** 1/2" Swaging Adapter
- 71700-10** 5/8" Swaging Adapter
- 71700-12** 3/4" Swaging Adapter
- 71700-14** 7/8" Swaging Adapter
- 71700-104** 1/4" Die Set
- 71700-105** 5/16" Die Set
- 71700-106** 3/8" Die Set
- 71700-108** 1/2" Die Set
- 71700-110** 5/8" Die Set
- 71700-112** 3/4" Die Set
- 71700-114** 7/8" Die Set
- 71685** Inner-Outer Reamer
- 70087** Steel Brush Thread Cleaner



The copper tube is secured in the holding fixture by the forming dies. The hydraulic pump pushes in the forming adapter to fabricate the flare or swage. This cut-away photo shows the forming process.

72475 UNIVERSAL HYDRAULIC FLARING TOOL SET



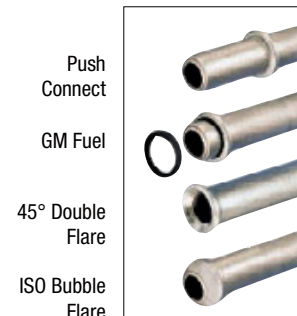
This kit fabricates:

- Push Connect 1/4, 5/16 and 3/8"
- GM Fuel Line Flare
- Brake Lines and Transmission 5/16 and 3/8"
- Flare/Double Flare 3/16, 1/4, 5/16, 3/8 and 1/2"
- Metric Bubble Flare 4.75, 6, 8, and 10 mm
- Comes in a custom molded box.

PATENT# 5,782,128

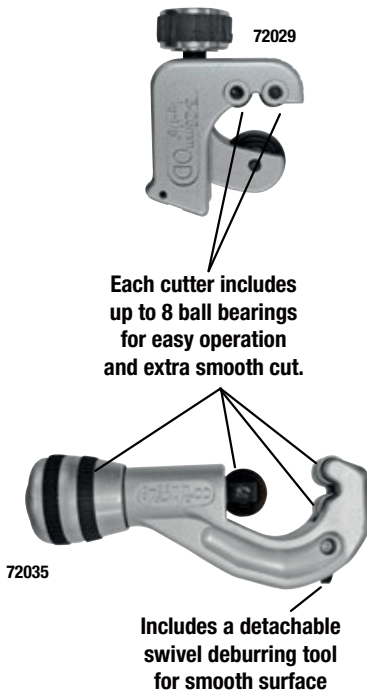


72485-PB Custom Molded Plastic Box for 72475







BALL BEARING CUTTERS



Mastercool's EZ Tube Cutters offer the latest "Reduced Friction" technology! Our reduced friction design incorporates ball bearings into the cutter wheel, tube rollers and a control knob. Reducing the resistance in these high friction areas allows the cutter to roll fast and easy as it slices through the tube. The "Reduced Friction" design is sure to save time and reduce fatigue!



COMPARE	
	
Standard steel cutting wheel used on competing cutters	Re-enforced steel cutting wheel with internal ball bearings for extra smooth cut

- 72029** "Reduced Friction" Tube Cutter for 1/8 to 1 1/8" (3-28 mm)
- 72035** "Reduced Friction" Tube Cutter for 1/4 to 1 1/2" (6-38 mm)
- 72030** Replacement Cutting Wheel for 72029
- 72034** Replacement Cutting Wheel for 72035

TUBE CUTTERS



MASTERCool tube cutters are lightweight yet durable. Carbide steel cutting wheels work with hard and soft copper, aluminum, brass, thin wall steel and stainless steel. All cutters feature rollers with flare cut-off grooves to salvage as much old tubing material as possible.

- 70027** Mini Tube Cutter for 1/8 to 5/8" (3-16 mm) O.D. Tubing (1/8 to 1/2" Nominal)
- 70029** Mini Tube Cutter for 3/8 to 1 1/8" (4-28 mm) O.D. Tubing (1/4 to 1" Nominal)
- 70033** Heavy Duty Tube Cutter for 1/8 to 1 1/8" (4-28 mm) O.D. Tubing (1/4 to 1" Nominal)
- 70035** Heavy Duty Tube Cutter for 1/4 to 1 5/8" (6-40 mm) (1/4 to 1 1/2" Nominal)
- 70037** Sliding Ratchet Tube Cutter for 1/4 to 2 5/8" (6-67 mm) O.D. Tubing (1/4 to 2 3/4" Nominal), Triple Chrome Plated
- 70038** Sliding Ratchet Tube Cutter for 1/4 to 3 1/2" (6-89 mm) O.D. Tubing (1/4 to 3" Nominal)

RATCHET STYLE TUBE CUTTER



When you don't have swing room, ratchet action allows cutting all the way around the tubing easy.

70030 (1/4 to 7/8" O.D. Tubing)

70031 (5/16 to 1 1/8" O.D. Tubing)

70025 CAPILLARY TUBE CUTTER



Cuts all sizes of capillary tubes without collapsing the tube.

80021 PLUMBERS TYPE MINI CUTTER



Designed for applications with limited working space. Cuts soft copper, aluminum and thin wall steel tubing. Tube Cutter for 1/8 to 7/8" (4-22 mm) O.D. Tubing. (1/8 to 3/4" nom.)

80121 Spare Cutting Wheel for 80021

REPLACEMENT CUTTER WHEELS



70028 Replacement Cutting Wheels for 70027 (10 pcs).

70034 Replacement Cutting Wheels for 70029, 70030, 70031, 70033, 70035, 70037 (10 pcs + 1 holding screw).

70128 Carbide Cutting Wheel & Screw Set for 70027 includes: 2 Spare Cutting Wheels and 1 Holding Screw.

70134 Carbide Cutting Wheel and Screw Set for 70029, 70035. Includes: 2 Spare Cutting Wheels and 1 Holding Screw.

70138 Replacement Cutting Wheel for 70038 (1 per pkg.) Cut Hard and Soft Copper, Aluminum, Brass, Thin Wall Steel and Stainless Steel.

70237 PVC Cutting Wheel for 70037. Cuts PVC and ABS.

70238 Oversize PVC Cutting Wheel for 70038. Wheel is 1 5/8" Diameter. Cuts PVC and ABS.

TUBE CONSTRICTOR WHEEL



70233 Used with 70033 or 70035.

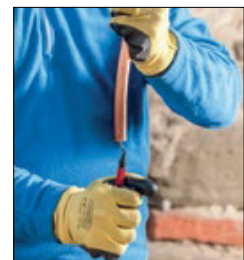
INNER-OUTER REAMERS



70085 Inner/Outer Reamer for 3/16 to 1 1/2" O.D. Tubing.

71685 Designed to remove inner burrs easily. Full metal grip. Includes one spare tungsten blade for long use.

71686-2 Two spare blades for 71685 (2 pcs).



ONLY ECCENTRIC FLARING TOOL ON THE MARKET TO COVER UP TO 7/8"



Make the perfect flare every time.

Keeping with tradition, Mastercool introduces the newest addition to our flaring tool line. This eccentric flaring tool is the only tool on the market to cover up to 7/8" making the job of the HVAC/R technician easier everyday! Its automatic torque release prevents cracking of copper caused by over flaring.

Flares 6 sizes: 1/4, 3/8, 1/2, 5/8, 3/4, 7/8" O.D. Tubing



Railing allows yoke to smoothly travel while keeping the flaring tool and bar aligned



3/8" access drive allows for use with impact wrench

70059 Flares 6 sizes: 1/4, 3/8, 1/2, 5/8, 3/4, 7/8" O.D. Tubing.

70060 Kit includes: **70059** Eccentric Flaring Tool, **71685** Inner-Outer Reamer, **70033** Heavy Duty Tube Cutter for (1/8" – 1 1/8") 4 to 28 mm.

ECCENTRIC FLARING TOOLS



<< NEW AND IMPROVED >>

- Aluminum design
- Light weight and durable
- Automatic torque release

70057-A Flares 6 Sizes: 1/4, 5/16, 3/8, 1/2, 5/8 and 3/4" O.D. Tubing.

70057-AM Flares 7 Metric Sizes: 6, 8, 10, 12, 14, 16 and 18 mm O.D. Tubing.

70058-A Kit includes: **70057-A** Eccentric Flaring Tool, **71685** Inner-Outer Reamer, **70033** Heavy Duty Tube Cutter for (1/8 – 1 1/8") 4 to 28 mm. O.D. Tubing (1/4 to 1" Nominal).

70058-AM Same as Kit 70058-A, but with Metric Eccentric Flaring Tool 70057-AM.

STANDARD 45° FLARING TOOL

70051 Standard 45° Flaring Tool
Flares 7 Sizes: 3/16, 1/4, 5/16, 3/8, 7/16, 1/2 and 5/8" O.D. Tubing.

70051-M Metric 45° Flaring Tool
Flares 7 Metric Sizes: 4, 6, 8, 10, 12, 15 and 16 mm O.D. Tubing.

70052 SLIDING DIE-BLOCK 45° FLARING TOOL

Sliding Die-Block 45° Flaring Tool Flares and Burnishes 6 Sizes: 3/16, 1/4, 5/16, 3/8, 1/2 and 5/8" O.D. Tubing.

70053 45° FLARING & SWAGING TOOL SET

Durable forged steel slip-on yoke. Bars are chrome plated, hardened steel. Swages in close quarters where punch style cannot be used. Includes custom molded plastic box.

45° Flaring & Swaging Tool Set includes:

Two Flaring Bars covering 9 sizes: 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8 and 3/4" O.D. Tubing.

Five Swaging Adapters covering 7 sizes: 3/16, 1/4, 5/16, 3/8, 1/2, 5/8 and 3/4" O.D. Tubing.



Mastercool[®]
"World Class Quality"

PUNCH-TYPE SWAGING TOOLS



Enlarge one end of copper tubing to accept piece of original size tubing then solder together like a fitting. Tools are heat treated for durability.

- 70040** All-In-One Swaging Punch
Nickel-Chrome finish. Swages 1/4, 5/16, 3/8, 1/2 and 5/8”.
- 70048** Set of 5 Swaging Punches
for 1/4, 5/16, 3/8, 1/2 and 5/8” O.D.
- 70049** Flaring Bar and Set of 5 Punches
for 1/4, 5/16, 3/8, 1/2 and 5/8” O.D. all in case.

MODEL#	SIZE	LENGTH
70041	1/4”	1/8”
70042	5/16”	–
70043	3/8”	1/4”
70044	1/2”	3/8”
70045	5/8”	1/2”
70046	3/4”	5/8”
70047	7/8”	3/4”

70078 TORQUE WRENCH



Ensures accurate tightness of fittings, especially R410A. Kit in a blow molded case includes sizes: 17, 22, 24, 26, 27 and 29 mm.

Optional Wrench Sizes Available:

- 70078-19** 19 mm
- 70078-25** 25 mm
- 70078-28** 28 mm
- 70078-32** 32 mm

RATCHET WRENCHES



- 70081** Steel forged wrench with reversible ratchet. 9/16”, 1/2” hex, 1/4” and 3/16” square.
- 70082** Compact chrome plated wrench specially designed for use in hard to reach places. 1/4, 3/8, 3/16 and 5/16” square ratchet.

70088 1/4” TUBE PIERCING PLIER



- 70088-TIP** Replacement Tip for 70088

70083 PINCH-OFF PLIER



Specially designed for the refrigeration industry. Pinches off and locks on copper tubing. Size: Throat 7”, Depth 1”, Jaw thickness 1/4”

70069-A 4-IN-1 LEVER STYLE TUBE BENDER



Complete 180° bend all metal multi-purpose tube bender for 3/16, 1/4, 5/16 and 3/8" O.D. Tubing.

70069-AM Complete 180° bend all metal multi-purpose tube bender for 6, 8, 10 mm O.D. Tubing.

SPRING STYLE TUBE BENDERS



Economical and effective tools for bending soft copper or aluminum tubing without kinks. Special nickel plated, spring steel is flared on one end for quick tube insertion. Each tool bends one size.

MODEL#	SIZE	LENGTH
70071	1/4"	10"
70072	5/16"	10"
70073	3/8"	10"
70074	1/2"	12"
70075	5/8"	14"
70077	3/4"	14"

70076 SPRING STYLE TUBE BENDER SET



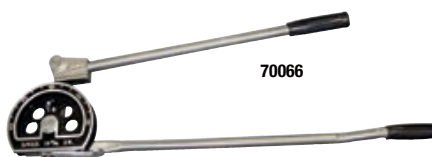
Set of 5 spring benders for 1/4, 5/16, 3/8, 1/2 and 5/8" O.D. tubing.

LEVER STYLE TUBE BENDERS



70061

Open side design slips over tube at any point. Makes smooth short radius bends up to 180° with minimum effort. Calibrated to show angle of bend. Easy 90° start requires much less effort to make fast and accurate bends. Each tool bends one size.



70066

MODEL #	OUTSIDE DIAMETER OF TUBING	NOMINAL SIZE	RADIUS TO CENTER OF TUBE
70061	1/4"	1/8"	9/16"
70062	5/16"	-	11/16"
70063	3/8"	1/4"	15/16"
70064	1/2"	3/8"	1 1/2"
70065	5/8"	1/2"	2 1/4"
70066	3/4"	5/8"	3"
70067	7/8"	3/4"	3"



70070 "Ratchet Style" TUBE BENDER KIT - 5 SIZES



- Hand-operated ratchet design bends tubes easily. Bends 5 sizes: 3/8, 1/2, 5/8, 3/4 and 7/8" O.D. soft tubing
- Includes heavy duty tube cutter for 1/8 – 1 1/8" O.D. tubing
- Includes inner-outer reamer for 3/16 – 1 1/2" O.D. tubing
- Comes in custom molded case



70070-M "Ratchet Style" Metric Tube Bender Kit

Same as 70070 less 70033 Cutter & 70085 Reamer. Bends 8, 10, 12, 14, 16, 18 & 22 mm O.D. soft tubing.

70080 "Ratchet Style" TUBE BENDER KIT - 6 SIZES



<< BENDS 6 SIZES >>

Same as 70070 less 70033 Cutter & 70085 Reamer. Bends 6 sizes: 3/8, 1/2, 5/8, 3/4, 7/8 and 1 1/8" O.D. soft tubing.

70070-RD REVERSE DIRECTION BENDING ADAPTER



Bends: 1/4", 5/16", 3/8", 1/2", 5/8", 3/4", 7/8" O.D. tubing



70200-MSK-INT MINI-SPLIT TOOL KIT



Consists of:

- MC HVAC-BAG** HVAC Utility Bag
- 57261-E-G** Ball Valve Manifold Gauge Set with Gauge Guards & Set of 3-60" ball valve hoses
- 70078** Torque Wrench
- 90413** Straight Adapter Fittings (2 pcs)
- 70058** Eccentric Flaring Tool Kit
- 91498** Universal Valve Core Remover/Installer Kit

70200-BSK-INT BASIC STARTER KIT



Consists of:

- MC HVAC-BAG** HVAC Utility Bag
- 33661-E-G** Brass Manifold Gauge Set with gauge guard & Set of 3-60" hoses
- 70082** Ratchet Wrench
- 70040** All in One Swaging Punch
- 70076** Spring Style Tube Bender
- 70091** 45° Flaring & Cutting Tool
- 70085** Reamer
- 90376** Valve Core Remover w/Valve Cores
- 70088** 1/4" Tube Piercing Plier
- 52227** Pocket Infrared Thermometer

70200-PK-INT PREMIUM KIT



Consists of:

- MC HVAC-BAG** HVAC Utility Bag
- 33661-E-G** Brass Manifold Gauge Set with gauge guard & Set of 3-60" hoses
- 70082** Ratchet Wrench
- 70053** Flaring and Swaging Tool Kit
- 70069-A** 4-1 Lever Style Tool Bender
- 72029** Ball Bearing Tube Cutter
- 71685** Pen Type Inner/Outer Reamer
- 91498** Universal Valve Core Remover/Installer
- 252219** 8:1 Infrared Thermometer

70200-PRK-INT PRO KIT



Consists of:

- MC HVAC-BAG** HVAC Utility Bag
- 57261-E-G** Ball Valve Manifold Gauge Set with Gauge Guards & Set of 3-60" ball valve hoses
- 52246** Compact Subcool/Superheat Calculator
- 98061** Digital Vacuum Gauge

70200-HK-INT HAND TOOL KIT



Consists of:

- MC HVAC-BAG** HVAC Utility Bag
- 70082** Ratchet Wrench
- 70088** 1/4" Tube Piercing Plier
- 70083** Pinch Off Plier
- 71685** Pen Type Inner/Outer Reamer
- 52227** Pocket Infrared Thermometer
- 52336** Clamp-On Thermocouple (extends 3 feet)



MC-GLASS-DISP LIGHTED GLASS DISPLAY



Lighted Glass Display to promote Mastercool products.
Dimensions: 2000 mm (h) x 750 mm (w) x 500 mm (d)

MC-CRDBD-DISP FULL COLOR DISPLAY



3 Level, Full Color Cardboard Display to promote Mastercool products.
Dimensions: 1828 mm (h) x 508 mm (w) x 724 mm (d)

MC-LCD-DISP LCD MONITOR



17" LCD monitor that mounts to ceiling. This monitor displays video containing information and operation procedures of various Mastercool products.
Dimensions: 370 mm (h) x 540 mm (w)

APPAREL



This T-shirt is made with 100% combed ringspun, preshrunk cotton material and features Mastercool's screenprinted logo on the front.
 Adult-size solid-color cotton hat features Mastercool's embroidered logo on the front. Cloth strap with buckle closure in back.

- MC-SHIRT-SS** Small Silver T-Shirt
- MC-SHIRT-MS** Medium Silver T-Shirt
- MC-SHIRT-LS** Large Silver T-Shirt
- MC-SHIRT-XLS** Extra Large Silver T-Shirt
- MC-SHIRT-SB** Small Black T-Shirt
- MC-SHIRT-MB** Medium Black T-Shirt
- MC-SHIRT-LB** Large Black T-Shirt
- MC-SHIRT-XLB** Extra Large Black T-Shirt
- MC-HAT** Hat

MC-BANNER12-LG LARGE VINYL BANNER



Heavy-Duty vinyl banner with grommets for easy hanging.
 Dimensions: 48" (w) x 24" (h)

MC-SIGN12-SM CARDBOARD SIGN



Cardboard sign for top of display
 Dimensions: 30" (w) x 6" (h)

COUNTERPAD-18 COUNTERPAD



Counterpad features a scratch resistant surface and non-slip base to provide durability.
 Dimensions: 20" (w) x 14" (h)

POSTERS



MCPOSTER-AUTO18

MCPOSTER-HVAC17

Gloss finish poster
 Dimensions: 24" (w) x 36" (h)

- MCPOSTER-HVAC17** HVAC Poster
- MCPOSTER-AUTO18** Auto Poster

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"World Class Quality"

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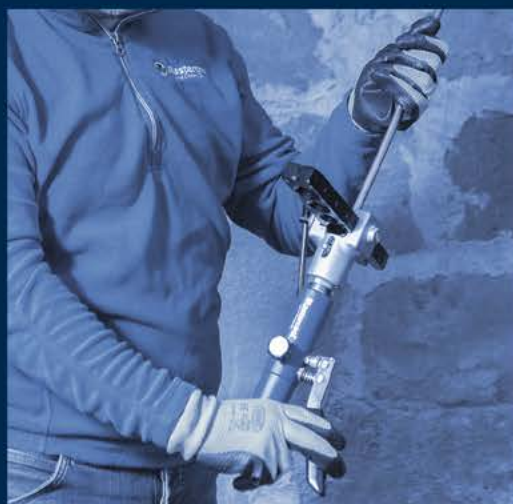


AIR CONDITIONING, REFRIGERATION, SERVICE TOOLS & EQUIPMENT



Mastercool[®] Inc.

"World Class Quality"



HVAC/R



For over 30 years Mastercool has been supplying professional quality air conditioning service tools and equipment. As one of the fastest growing companies in this market, our primary goal is to drive New Product Innovation and Technologies to make the every day work of the HVAC/R technician easier!

With our never-ending focus on innovation and new technology, Mastercool has been awarded many patents worldwide. Our products are currently being distributed in over 76 countries and growing everyday!

Corporate Office
Manufacturing and USA Warehouse



European Sales Office and Warehouse



Brazil Sales Office and Warehouse








Australian Sales Office





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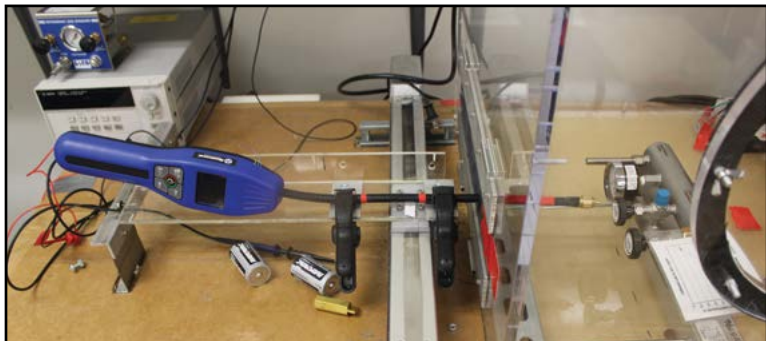
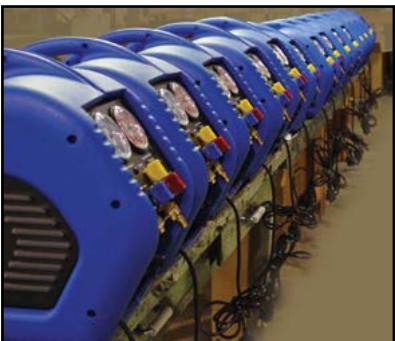
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MASTERCool PRODUCTS ARE
MADE/ASSEMBLED IN THE USA



Mastercool manufactures all of its products with the highest quality components and management systems. All products are checked and tested directly at Mastercool headquarters in Randolph, New Jersey, USA.

Our products comply in every respect with the requirements set forth by SAE and EPA Standards as well as ARI Standard 740-98 and EU Directives.



CHARGING & RECOVERY EQUIPMENT



THE TWIN TURBO SERIES IS THE MOST COMPLETE SOLUTION TO YOUR RECOVERY NEEDS!

TWIN TURBO
REFRIGERANT RECOVERY MACHINE



69300

Mastercool's newest addition to the recovery machine lineup takes the reliability of the 69000 series machines and enhances those features to allow for maximum recovery capacity while at the same time decreasing size and weight. The design of the new double piston compressor and cooling by the largest fan and condenser in the market makes the 69300 series the most complete solution to your recovery needs!



FEATURES & BENEFITS:

- Revolutionary double piston oil-less compressor
- Safety high pressure switch
- Simple internal structure for field service
- Largest volume recovery rate in market
- For use with all refrigerants including R410A
- Injection molded high density polyethylene case for maximum durability
- Front cover has bumper guards built in to reduce damage to the control knobs

SPECIFICATIONS:

- 1/2 hp oil less compressor
- Recovery Rate:

R134a
• Direct vapor up to .537 lb/min
• Direct liquid up to 4.72 lb/min
• Push pull up to 11.68 lb/min
R22
• Direct vapor up to .63 lb/min
• Direct liquid up to 7.56 lb/min
• Push pull up to 18.3 lb/min
R410A
• Direct vapor up to .70 lb/min
• Direct liquid up to 7.7 lb/min
• Push pull up to 20.2 lb/min

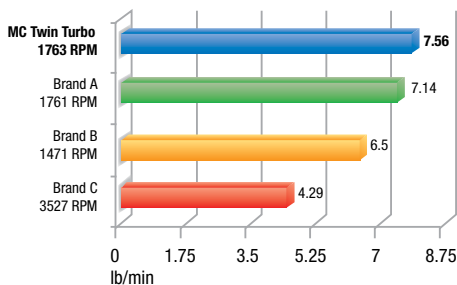
- Operating Temperature: 32 to 122°F / 0 to 50°C
- Weight: 28.3 lbs / 12.8 kg
- Dimensions: 18" (l) x 10" (w) x 14" (h)
(457 mm (l) x 254 mm (w) x 356 mm (h))
- Case Material is HDPE (High Density Polyethylene)
- Compatible refrigerants: All CFC, HCFC, and HFC's



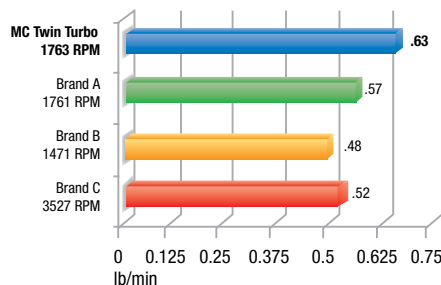
69300

115 V - 60 Hz

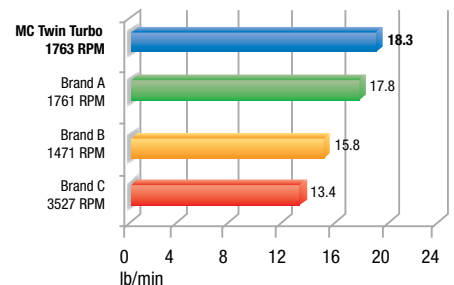
Liquid Recovery (ln) lb/min
• Temperature: 79 to 82°F / Refrigerant: R22



Vapor Recovery (ln) lb/min
• Temperature: 79 to 82°F / Refrigerant: R22



Push Pull lb/min
• Temperature: 79 to 82°F / Refrigerant: R22



Mastercool®
"World Class Quality"

TWIN TURBO REFRIGERANT RECOVERY MACHINE



This unit offers all the same functions and features as the 69300. In addition it has a 6' 3 pole female float switch cable



3 pole female float switch cable

69370 115 V - 60 Hz

Spark Free **COMBUSTIBLE GAS RECOVERY MACHINE**



COMPATIBLE WITH COMBUSTIBLE GASES



This unit offers all the same functions and features as the 69300. In addition:

- Compatible with all CFC, HCFC and HFC's

69395 115 V - 60 Hz
Spark Free Combustible Gas Recovery Machine

mini TWINTURBO
REFRIGERANT RECOVERY MACHINE



COMPATIBLE WITH COMBUSTIBLE GASES



Mastercool introduces the new "Mini Twin" all in one recovery machine. Equipped with the same high quality twin piston compressor as the Twin Turbo series this unit has been designed to work in all applications. Whether you find yourself up a ladder, in a crawl space or just not looking forward to lugging around a heavy piece of equipment this is the right machine for you. Best of all, this machine has been constructed with the safest spark free component allowing for use with all combustible gases.

SPECIFICATIONS:

- 1/2 HP motor
- Operating Temperature: 0 to 50°C (32 to 122°F)
- Compatible with all CFC, HCFC, HFC's, and Combustible gases
- Weight: 11 kg (24 lbs)
- Dimensions: 300 mm (l) x 200 mm (w) x 270 mm (h) (11.8" (l) x 7.9" (w) x 10.6" (h))

69400 115 V - 60 Hz

REFRIGERANT RECOVERY SYSTEM



69000

These recovery systems are compact, lightweight and work with all refrigerants. They're ideal for commercial, residential or industrial appliance applications.

Our recovery systems offer a state-of-the-art 1/2 HP oil-less compressor with a built-in high volume cooling fan. This innovative design delivers maximum cooling efficiency which keeps the compressor working at high capacities in even the hottest climates. The compressor is also protected by an automatic low pressure cut-off switch that shuts off the unit once the recovery is complete. This AUTO SHUT-OFF feature eliminates the risk of compressor failure and reduces the user's need to monitor the entire recovery system.

All of our recovery systems offer our color-coded gauges with pressure readings in PSI, BAR and MPa. Our stainless steel ball valve designed manifold, controls the flow smoothly and quickly with only a 1/4 turn. With all of this protected by a reinforced hard plastic case, Mastercool's recovery systems will meet all your refrigerant recovery needs.

FEATURES:

- High performance oil-less compressor
- Automatic low pressure Cut-Off Switch
- Safety high pressure Cut-Off Switch
- High volume cooling fan design
- Liquid compatible head-valve system
- Fully reinforced hard plastic casing

SPECIFICATIONS:

- 1/2 HP oil-less compressor
- Recovery Rate:
 - direct vapor up to .44 lb/min (12 kg/h)
 - direct liquid up to 2.6 lb/min (71 kg/h)
 - push-pull up to 11.9 lb (326 kg/h)
- Operating Temp. Range: 32 to 122°F (0 to 50°C)
- Weight: 38 lbs (16 kg)
- Dimensions: 17" (l) x 10" (w) x 12" (h) (432 mm (l) x 254 mm (w) x 305 mm (h))
- Refrigerants: CFC's, HCFC's, HFC's



69115

69000

115 V - 60 Hz

This unit offers all the same functions and features as the 69000. In addition it has a 6' 3 pole female float switch cable



3 pole female float switch cable

69115

115 V - 60 Hz

69500 RECOVERYMATE



Turn any Recovery Machine into a Portable Recycler by adding the RECOVERYMATE!

SPECIFICATIONS:

- Lightweight and easy to carry
- 4-Way Ball Valve Manifold controls the flow smoothly and quickly with only 1/4 turn
- Large capacity oil separator
- High Performance Dryer eliminates moisture from recovered refrigerant
- Extra large sight glass monitors refrigerant flow and changes color when a dryer change is necessary
- Rugged carrying case can stand on its own or be mounted on a wall or bench
- Length: 15" (38 cm)
- Width: 4" (10 cm)
- Height: 17" (43 cm)
- Weight: 12.25 lbs (5.5 kg)
- Includes hoses



Mastercool[®]
"World Class Quality"

PORTABLE ELECTRONIC CHARGING STATION



A lightweight, durable, steel frame cart that contains all the necessary tools to quickly and conveniently charge the A/C system. No need for different sized charging cylinders with Mastercool's rugged die cast electronic scale. Simply place the refrigerant cylinder on the scale and charge.

FEATURES:

- A rugged, lightweight steel cart with wheels and convenient storage pocket for scale and hoses allows this portable charging station to be taken almost anywhere
- Dimensions: 26" x 17" x 13" (66 cm x 43 cm x 33 cm)
- Extruded aluminum manifold with long lasting valve design
- 240 lb (109 kg) capacity scale with long lasting 9V battery (60 hrs)
- Deep micron, rotary vane vacuum pumps.

ALSO AVAILABLE:

- Refrigerant tank heater blanket #98250
- * R134a Automotive Service Couplers not included

2 STAGE PORTABLE ELECTRONIC CHARGING STATION

- Large 3 1/8" gauges make it easy to read the pressure and temperature scales
- Deep micron, rotary vane vacuum pumps
- Available in 5 and 7.5 CFM
- Includes set of 72" hoses

VACUUM PUMP	5 CFM	7.5 CFM
MANIFOLD	110 V	110 V
2 Way Alum Block	91585	91587
4 Way Alum Block	91586	91588

SINGLE STAGE PORTABLE ELECTRONIC CHARGING STATION

- 2 1/2" gauges
- Deep micron, rotary vane vacuum pumps
- Available in 1.8, 3 and 6 CFM

91580-A	91580-B	91585-B
R134a 2-Way Manifold		
1.8 CFM Single Stage Vacuum Pump	3 CFM Single Stage Vacuum Pump	6 CFM Single Stage Vacuum Pump
Electronic Charging Scale		
Manual Couplers		
Set of Hoses		



98310 WIRELESS REFRIGERANT CHARGING SCALE

98315 WIRELESS REFRIGERANT CHARGING SCALE WITH SOLENOID



98315 with solenoid



REMOTE RANGE:
100 FEET (30 M),
LINE OF SIGHT

FEATURES:

- Wireless unit prevents unwanted tangles in wires
- Easily store the remote in the body of the platform
- Keypad provides synchronization and zeroing
- Extremely accurate weight sensor
- Magnet on remote allows easy placement on fixtures
- Battery life symbol for platform and remote constantly displayed on LCD
- Wireless signal strength indicator conveniently displays on remote

FUNCTIONS:

CHARGE PROGRAMMING:

Allows user to program desired quantities. Before charge is complete, an alarm will sound allowing ample time to turn off refrigerant supply.

PAUSE/CHARGE (98315 model only):

This feature allows user to stop and continue charging.

TANK CAPACITY PROGRAMMING:

EMPTY/FULL tank feature allows user to know the amount of refrigerant in the tank at any time.

REPEAT (98315 model only):

Allows user to charge previously stored amount.

SPECIFICATIONS:

- Capacity: 243 lbs (110 kg)
- Accuracy: $[\pm 0.01 \text{ lb} / \pm 0.005 \text{ kg}]$ or 0.1% of reading whichever is greater
- Resolution: 0.02 lb / 0.01 kg
- Automatic Shut-Off: After 20 minutes
- Operating Temperature: 32°F to 120°F (0°C to 49°C)
- Battery Life: approximately 20 hours
- 31 cm Platform
- Accepts all US & EU standard cylinders



When remote is out of range the unit will automatically pause. This pause mechanism allows unit to restart when remote is back in range.



98210-A ACCU-CHARGE II



Mastercool's ACCU-CHARGE II is the most advanced electronic refrigerant scale in the market today. Constructed with a rugged aluminum cast body, the ACCU-CHARGE II now offers programming capabilities.

FUNCTIONS:

CHARGE PROGRAMMING:

Allows user to program desired quantities. Before charge is complete, an alarm will sound allowing user ample time to turn off refrigerant supply.

TANK CAPACITY PROGRAMMING:

Allows user to know the amount of refrigerant that is left in the tank at any time.

REPEAT:

Allows user to charge previously stored amount.

SPECIFICATIONS:

- Capacity: 240 lbs (110 kg)
- Accuracy: $\pm 0.01 \text{ kg}$
 $\pm 0.16 \text{ oz}$
 $\pm 0.01 \text{ lb}$ } or 0.1% of reading
(whichever is greater)
- Resolution: 0.02 lb / 0.01 kg
- 3 hrs Auto Off Function
- Operating Temperature is 32 to 120°F (0 to 49°C)
- Battery Life (approximately 40 hrs)
- Works w/110 Transformer
(part no. 99334-110)
- 9 x 9" (22 x 22 cm) Platform



Mastercool[®]
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98211-A ACCU-CHARGE III CERTIFIED REFRIGERANT SCALE (OIML & CE Approved, Legal for Trade)



FUNCTIONS:

CHARGE PROGRAMMING:

Allows user to program desired quantities. Before charge is complete, an alarm will sound allowing user ample time to turn off refrigerant supply.

PAUSE/CHARGE:

(Using the 98230 Charging Solenoid Module)

TANK CAPACITY PROGRAMMING:

Allows user to know the amount of refrigerant that is left in the tank at any time.

REPEAT:

Allows user to charge previously stored amount.

SPECIFICATIONS:

- Complies with European (OIML) Standards
- Capacity: 50 kg
- Accuracy: ± 50 g
- Resolution: 0.05 kg
- 3 hrs AUTO OFF Function
- Operating Temperature is 32 to 120°F (0 to 49°C)
- Battery Life (approximately 40 hrs)
- 9 x 9" (22 x 22 cm) Platform

OIML

98230 CHARGING SOLENOID MODULE



The 98230 Charging Solenoid Module turns the 98210-A ACCU-CHARGE II & 98211-A ACCU-CHARGE III into Automatic Programmable Scales!

This module allows the user to control the exact amount of refrigerant transferring to and from the A/C System. The compact design is battery powered (9V), lightweight, portable and works with all types of refrigerant. 98230 includes a short hose for tank connection, USB cord and 1/4"FL - 1/2" ACME adapters.



98209 ELECTRONIC CHARGING SCALE



- Slim Design for Easy Storage
- Two Keys for Easy Operation
- Unit Change (grams & ounces)
- One Touch Tare Weighing Function
- Auto Zero and Auto Off, Automatically turns off its power if the scale is not used within 2 minutes

SPECIFICATIONS:

- Capacity: 176 oz / 5000 g
- Sensitivity: .035 oz / 1 g
- Dimension: 140 (w) x 185 (l) x 35 (h) mm
- Platform Size: 120 mm
- Power Source: 2 x AAA 1.5v battery

ELECTRONIC TANK HEATER BLANKET



The Mastercool Refrigerant Tank Heater Blanket speeds up recharging time.

- Assures total discharge of refrigerant from 30 lb and 50 lb tanks. Heats tanks to 125°F resulting in maximum pressure of 185 psi for R134a and 170 psi for R12.
- Quick working 300W heater element
- An excellent complement to all Mastercool Refrigerant Scales

98250

110 V



Mastercool[®]
"World Class Quality"

DOT-APPROVED RECOVERY CYLINDERS

Features:

- Powder coated cylinder for high gloss, durable finish
- Pre-charged cylinder provides a clean, dry interior
- 3/4" NPT opening accepts 80% fill float switch shut-off device
- Reusable and conforms to DOT-4BA400 specs and ARI guidelines

- Collar design for ease of handling
- Storage and transport of recovered refrigerant gases
- Y-valve for liquid/vapor
- AUS Approved and TC Canadian Approved

- 1/4" opening for air purge valve
- Valve & Float Switch UL Listed



30 LB. DOT-APPROVED RECOVERY CYLINDERS



- Size (w x h): 9.125" x 17.52"
- Standard Spec.: DOT - 4BA400
- Service Pressure: 400 PSI / 2.7 MPa
- Tare Weight: 17.99 LB
- Body Material: HP295
- Relief Valve Pressure: 600 PSI / 4.1 MPa
- Nominal Water Capacity: >26.2 LB / 11.9 L
- Tank Test Pressure: 800 PSI / 5.5 MPa
- Air Tightness Test Pressure: 400 PSI / 2.7 MPa

Model	62010 without float switch	62011 with float switch	62012 with float switch & NCG Port	64010 without float switch	67010 with float switch	67011 with float switch
Connection	1/4" FL-M (7/16-20)			1/2" ACME		
Color	yellow/gray			blue	yellow/blue	

50 LB. DOT-APPROVED RECOVERY CYLINDERS



- Size (w x h): 12.25" x 18.78"
- Standard Spec.: DOT - 4BA400
- Service Pressure: 400 PSI / 2.7 MPa
- Tare Weight: 28.71 LB
- Body Material: HP325 or HP345
- Relief Valve Pressure: 600 PSI / 4.1 MPa
- Nominal Water Capacity: >47.7 LB / 21.6 L
- Tank Test Pressure: 800 PSI / 5.5 MPa
- Air Tightness Test Pressure: 400 PSI / 2.7 MPa

Model	63010 without float switch	65010 with float switch	66010 without float switch	66011 with float switch	66012 with float switch & NCG Port	63010-AUS without float switch (Australian standard)
Connection	1/4" FL-M (7/16-20)			1/2" ACME		1/2" ACME
Color	yellow/gray			yellow/gray		white

100 LB. DOT-APPROVED RECOVERY CYLINDERS



- Size (w x h): 11.25" x 31.81"
- Standard Spec.: DOT - 4BW400
- Service Pressure: 400 PSI / 2.7 MPa
- Tare Weight: 50.5 LB
- Body Material: HP325
- Relief Valve Pressure: 600 PSI / 4.1 MPa
- Nominal Water Capacity: >92.5 LB / 41.9 L
- Tank Test Pressure: 800 PSI / 5.5 MPa
- Air Tightness Test Pressure: >87 PSI / 0.6 MPa

Model	68010 without float switch
Connection	1/4" FL-M (7/16-20)
Color	yellow/gray

ENVIRO TANK (REFILLABLE CYLINDER)

30 LB. REFILLABLE CYLINDER



- Size (w x h): 8.39" x 20"
- Standard Spec.: DOT - 4BA400
- Service Pressure: 400 PSI / 2.7 MPa
- Tare Weight: 19.9 LB
- Body Material: HP295
- Relief Valve Pressure: 600 PSI / 4.1 MPa
- Nominal Water Capacity: >30 LB / 13.6 L
- Tank Test Pressure: 800 PSI / 5.5 MPa
- Air Tightness Test Pressure: >87 PSI / 0.6 MPa

Model	62020-W
Connection	1/4" FL-M (7/16-20)
Color	white



Mastercool[®]
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69HVAC **ULTIMA ID™ HVAC REFRIGERANT IDENTIFIER**
69HVAC-P **ULTIMA ID™ HVAC REFRIGERANT IDENTIFIER WITH PRINTER**



The Ultima ID Refrigerant Identifier is the most advanced A/C service tool on the market. Smarter and faster than any refrigerant identifier you've ever used, its compact size and light weight makes testing easier.

Avoid costly cross contamination!

- Contractors can accurately determine the type of refrigerant they are recovering.
- Wholesalers can quickly check contractors' refrigerant and prevent contamination to their bulk reclaim supply.
- Reclaimers can easily pre-screen incoming refrigerant prior to the costly GC process and catch problem refrigerant before it causes damage.

Comes with complete kit: 1/4" Flare sample hose, 110/220VAC Power Adapter, Identifier and accessories housed in a rugged portable case

SPECIFICATIONS:

- Refrigerant: R12, R134a, R22, and HC
- Weight: 8.0 lbs.
- Power requirements: 110/220 VAC via included adapter
- Display: 128 x 64 Pixel Graphing
 - 12-15V DC optional battery pack (Internal)
- Resolution: 0.1%
- Output: Digital display and LEDs
- Operating temperature: 40 to 130°F
- Operating humidity: 0-95% RH non-condensing
- Optional built-in printer

69HVAC-PR Printer roll for 69HVAC-P & 69HVAC-PRO2

69HVAC-PRO2 **ULTIMA ID™ PRO HVAC REFRIGERANT IDENTIFIER**



Diagnostic refrigerant analyzer for multiple HVAC and refrigeration applications

The Ultima ID Pro 2 HVAC/R Refrigerant Analyzer enables fast, accurate testing of refrigerant, reducing the need for costly and time-consuming gas chromatography. Improved accuracy and the ability to test for a wide variety of refrigerants make this an essential tool for pre-screening refrigerant prior to consolidation and reclamation.



FEATURES:

- Oil contamination resistant
- Fast test results
- Internal thermal printer
- Greater accuracy in less time
- Wide refrigerant range
- Refrigerant composition breakdown
- Remote software updates for new refrigerants
- 1/4" flare sample hose
- Vapor or liquid sample analysis

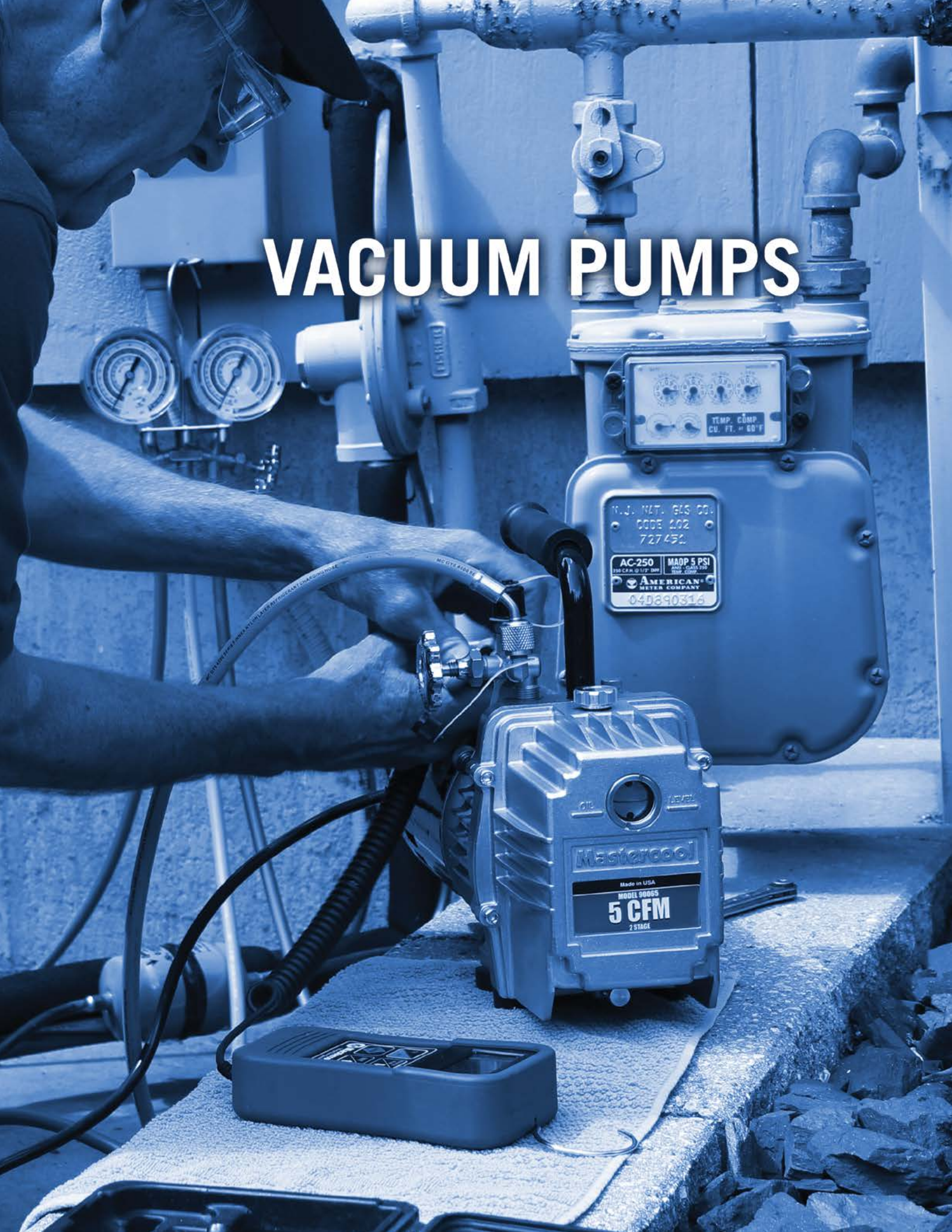
SPECIFICATIONS:

- Analyzed Refrigerants: R22, R32, R134a, R404A, R407C, R410a, Hydrocarbons (HC) and Air
- Identified Refrigerants: R12, R1234yf, R408A, R409A, R417A, R421A, R421B, R422A, R422B, R422C, R427A and Hydrocarbons (HC)
- Weight: Less than 10 Lbs.
- Accuracy: +/- 2% of indicated gasses or better
- Approvals: CE, UL and CUL
- Power Requirements: 12 VDC @ 2A via 110/220 VAC Adapter
- User Interface: Graphic display, soft keys, built in printer
- Sample Gas Extraction: Pressure from cylinder or system
- Temperature Range: 50 to 120°F
- Response Time: Less than 3 minutes
- Humidity: 0-95% RH non-condensing
- Test Sample Size: 5g per test, Test Pressure: 50 psi - 500 psi



Mastercool®
 "World Class Quality"

VACUUM PUMPS



N.J. MET. GAS CO.
CODE 262
727450
AC-250 MADD 5 PSI
150 CFM @ 1/2" WPG
AMERICAN METER COMPANY
040890316

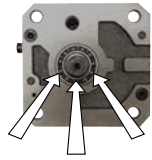
Mastercool
Made in USA
MODEL 98055
5 CFM
2 STAGE





2 STAGE ELITE BALL BEARING DESIGN VACUUM PUMPS

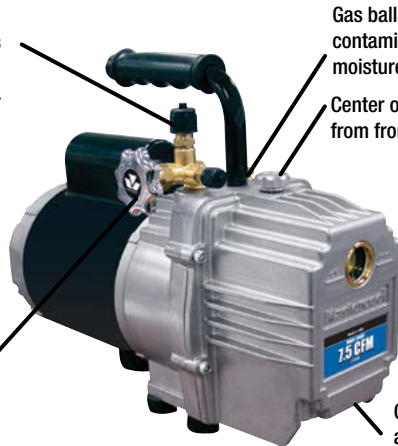
A good quality vacuum pump is an integral tool for complete A/C service. Mastercool vacuum pumps are durable and time tested. They stand up to the most grueling conditions and will provide years of reliable service. Mastercool offers a complete selection of pumps. Regardless of your service requirements, Mastercool has a model for your application.



Ball Bearing Cartridge Design
reduces running temperatures by 30% and extends the life of the pump.

Manifold valve isolates pump from the system when testing for leaks. Includes three inlet ports – 1/4", 3/8" SAE and 1/2" ACME on 5 and 7.5 CFM models

Internal check valve stops oil blowout in case of accidental power loss



Gas ballast valve helps prevent oil contamination caused by high moisture

Center oil fill port is accessible from front as well as sides

Durable lightweight die cast aluminum housing

Two-stage design allows lower pumping pressure resulting in deeper ultimate vacuum

Oil drain valve positioned at bottom of oil reservoir assures maximum drainage



VACUUM PUMPS

5 CFM VACUUM PUMP



MODEL	90065
NO. OF STAGES	2
FREE AIR DISPLACEMENT	5 CFM
ULTIMATE VACUUM	25 Microns
MOTOR	1/3 HP
PUMP SPEED	1425 RPM 1725 RPM
ELECTRICAL SPECS	110 V / 60 HZ
WEIGHT	13.2 kg (29 lbs)
DIMENSIONS IN CM	37 x 15.5 x 27.5 x 24

7 CFM VACUUM PUMP



MODEL	90067
NO. OF STAGES	2
FREE AIR DISPLACEMENT	7.5 CFM
ULTIMATE VACUUM	25 Microns
MOTOR	1/2 HP
PUMP SPEED	1425 RPM 1725 RPM
ELECTRICAL SPECS	110 V / 60 HZ
WEIGHT	16.0 kg (35.5 lbs)
DIMENSIONS IN CM	41 x 15.5 x 27.5 x 24



Mastercool[®]
"World Class Quality"

2 STAGE DUAL VOLTAGE VACUUM PUMPS

- New U.S. Design
- Stronger Motor
- Field Serviceable
- Cooling Fins to Keep Temperature Cooler During Extended Motor Operation
- Easily Removable Vapor Discharge/Oil Fill Port. Contains Internal Check Valve to Prevent Escape of Liquid Oil
- Manifold Valve Isolates Pump from the System when Testing for Leaks. Includes 3 Inlet Ports, 1/4", 3/8" SAE and 1/2" ACME



3 CFM DUAL VOLTAGE VACUUM PUMP



MODEL	90063-2V-110-B
NO. OF STAGES	2
FREE AIR DISPLACEMENT	3 CFM
ULTIMATE VACUUM	15 Microns
MOTOR	1/3 HP
PUMP SPEED	1720 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ
POWER CORD	110 V Cable (US Standard)
WEIGHT	7 kg (15.43 lbs)
DIMENSIONS IN CM	27 x 15 x 25

6 CFM DUAL VOLTAGE VACUUM PUMP



MODEL	90066-2V-110-B
NO. OF STAGES	2
FREE AIR DISPLACEMENT	6 CFM
ULTIMATE VACUUM	15 Microns
MOTOR	1/2 HP
PUMP SPEED	1720 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ
POWER CORD	110 V Cable (US Standard)
WEIGHT	11 kg (24.25 lbs)
DIMENSIONS IN CM	37.9 x 16.7 x 27.5

8 CFM DUAL VOLTAGE VACUUM PUMP



MODEL	90068-2V-110-B
NO. OF STAGES	2
FREE AIR DISPLACEMENT	8 CFM
ULTIMATE VACUUM	15 Microns
MOTOR	3/4 HP
PUMP SPEED	1720 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ
POWER CORD	110 V Cable (US Standard)
WEIGHT	15.43 kg (34 lbs)
DIMENSIONS IN CM	38 x 18 x 27

12 CFM DUAL VOLTAGE VACUUM PUMP



MODEL	90612-2V-110-B
NO. OF STAGES	2
FREE AIR DISPLACEMENT	12 CFM
ULTIMATE VACUUM	15 Microns
MOTOR	1 HP
PUMP SPEED	1720 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ
POWER CORD	110 V Cable (US Standard)
WEIGHT	15.88 kg (35 lbs)
DIMENSIONS IN CM	39 x 18 x 27



SINGLE STAGE VACUUM PUMPS

- High volume fan provides cool air motor and pump
- Vapor discharge/oil fill port, easily removable, contains internal check valve to prevent escape of liquid oil
- Internal check valve to prevent oil back flow
- Cooling fins to keep temperature cooler during extended motor operation
- Thermally protected motor with on/off rocker switch
- Large, lightweight reinforced base for stable positioning
- Easily accessible oil drain valve
- Large oil level sight glass with max/min oil level indicator



VACUUM PUMPS

1.8 CFM SINGLE STAGE VACUUM PUMP



MODEL	90059-B
NO. OF STAGES	1
FREE AIR DISPLACEMENT	1.8 CFM
ULTIMATE VACUUM	80 Microns
MOTOR	1/4 HP
PUMP SPEED	1720 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ
WEIGHT	6.2 kg (13.6 lbs)
DIMENSIONS IN CM	30 x 15 x 26

3 CFM SINGLE STAGE VACUUM PUMP



MODEL	90062-B
NO. OF STAGES	1
FREE AIR DISPLACEMENT	3 CFM
ULTIMATE VACUUM	80 Microns
MOTOR	1/4 HP
PUMP SPEED	1720 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ
WEIGHT	6.35 kg (14 lbs)
DIMENSIONS IN CM	30 x 15 x 26.5

6 CFM SINGLE STAGE VACUUM PUMP



MODEL	90066-B	90066-B-SF <i>Spark Free</i>
NO. OF STAGES	1	1
FREE AIR DISPLACEMENT	6 CFM	6 CFM
ULTIMATE VACUUM	80 Microns	80 Microns
MOTOR	1/3 HP	1/3 HP
PUMP SPEED	1720 RPM	1720 RPM
ELECTRICAL SPECS	110/120 V, 60 HZ	110/120 V, 60 HZ
WEIGHT	9.3 kg (20.5 lbs)	9.3 kg (20.5 lbs)
DIMENSIONS IN CM	38 x 17 x 27.5	38 x 17 x 27.5

*** PLEASE NOTE:**

The micron readings on all vacuum pumps represent optimal laboratory conditions. Field conditions may vary from these readings.

SERVICE INFORMATION

	90065	90067	90063-2V-110-B	90066-2V-110-B	90068-2V-110-B	90612-2V-110-B	90059-B	90066-B
OIL CAPACITY	531 ml / 18 oz	708 ml / 24 oz	250 ml / 8.5 oz	440 ml / 15 oz	570 ml / 19 oz	536 ml / 18 oz	342 ml / 12 oz	536 ml / 18 oz
REPLACEMENT CARTRIDGE	90165-R	90167-R	-	90166-B	90168-B	90112-B	-	-
SEAL SERVICE KIT	90062-11-SEAL	90062-11-SEAL	-	-	-	-	-	-

VACUUM PUMP OIL



90010-6	(Six) - 10 oz bottles (90063-2V-B)
90016-6	(Six) - 16 oz bottles (90059-B)
90018-6	(Six) - 18 oz bottles (90065, 90066-2V-B, 90612-2V-B, 90066-B)
90024-6	(Six) - 24 oz bottles (90067, 90068-2V-B)
90032-6	(Six) - 32 oz bottles
90061-8	(Eight) 8 oz bottles
90128	(Four) - 1 gallon bottles

98061 DIGITAL VACUUM GAUGE

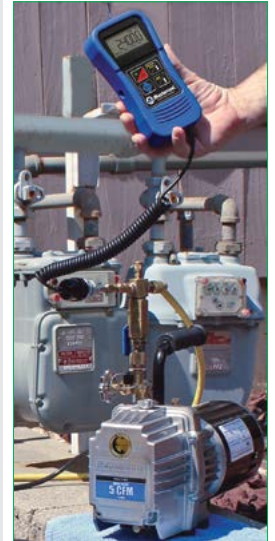


As a professional technician the assurance of a deep vacuum on a system is imperative. The main problem with many small handheld units is their inaccuracy and durability. Although the thermocouple sensor has been proven to be much more accurate and durable than the thermister type, the problem has been the inconvenience of a cumbersome tabletop unit. Mastercool's hand held unit uses thermocouple technology. This vacuum gauge has been designed with the technician's field environment in mind, allowing for self-calibration and a sensor that will not be damaged by small mists of oil. The Mastercool unit allows for a target vacuum range to be programmed with a light sensor indicator. Now you have the freedom to continue with your other work and come back to the system once you see the indicator light signaling your target vacuum.

SPECIFICATIONS:

- Response Time: 250 mSec.
- Sensor Cable: Spiral cable extended to 6.5 feet (2.6 meter)
- Sensor: Thermocouple sensor
- Connection Fitting: 1/4" flare female adapter
- Operating Temperature: 32 to 120°F (0 to 45°C)
- Power: 9V DC battery (AC/DC Adapter optional)
- Battery Life: 36 hours
- Low Battery Indicator: Special ICON on LCD
- Vacuum Units: Micron, Torr, mTorr, mmHg, mBar, Pa
- Range: 20,000 to 1 micron
- Accuracy Range*: ATM-1000 Microns: ±10% of reading
1000 - 100 Microns: ±7% of reading
100 - 1 Micron: ±5% of reading

* Unit accuracy refers to sensor specifications and is based on optimal laboratory conditions. Field operations may greatly deviate from these levels.



Optional Accessories

98061-SENSOR	Replacement Sensor
99334-110	110 V AC/DC Adapter
99333	1/4 FL-M x 1/4 FL-M x 1/4 FL-F Tee



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"World Class Quality"



MANIFOLDS

THE BEST KEEPS GETTING BETTER.....

Patent Pending

**NOW COMPATIBLE WITH R744 (CO₂)
SENSORS ABLE TO WITHSTAND
PRESSURE UP TO 750 PSI (50 BAR)**



USB CONNECTOR PORT

USB Cable
99903-USB



THERMOCOUPLE PORT

3 ft. Clamp-On
Thermocouple
52336



VACUUM THERMOCOUPLE SENSOR PORT

Vacuum Sensor and
Cable Assembly
98062



99961

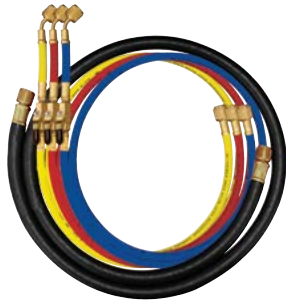
- 99903** 4-Way Digital Manifold only
- 99903-2** Manifold with (2) clamp-on thermocouples in a blow molded case
- 99961** Complete Kit in a blow molded case includes: manifold with a set of 3-60" ball valve hoses with manual shut-off valves and one black vacuum hose, vacuum sensor with cable, clamp-on thermocouple, data logger CD and USB cable
- 99972** Complete Kit in a blow molded case includes: manifold with a set of 3-72" ball valve hoses with manual shut-off valves and one black vacuum hose, vacuum sensor with cable, clamp-on thermocouple, data logger CD and USB cable

OPTIONAL ACCESSORIES

52336	Clamp-on Thermocouple (extends 3 ft)	90411	1/4 x 5/16 R410A Ball Valve Adapter
52337	Clamp-on Thermocouple (extends 10 ft)	99333	1/4 FL-M x 1/4 FL-M x 1/4 FL-F Tee
90413	R410A Straight Adapter 1/4 FL-M x 5/16 Swivel-F	99334-110	110 V AC/DC Adapter
98062	Vacuum Sensor and Cable Assembly (6.5 ft)	99903-PBA	Plastic Carrying Case
99332	1/8 NPT x 1/4-FL Flare Swivel Adapter		



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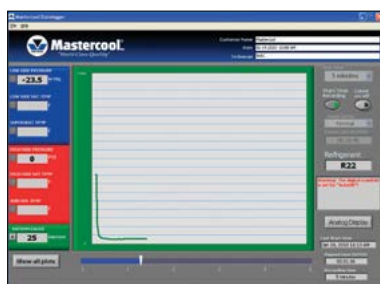
Includes three 1/4" SAE B-R-Y nylon barrier ball valve hoses with manual shut-off valves and one 3/8" SAE black vacuum hose



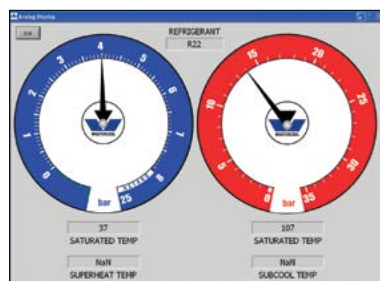
Mastercool Datalogger Application



Temperature/Pressure Screen



Vacuum Screen



Analog Gauge Screen

With the 4-Way Digital Manifold, Mastercool is showing its determination to become the leader in this sector of the industry. Taking the experience gained with the 2-Way Digital Manifold the 4-Way model not only offers a 4-valve option but it also allows for a multitude of interactive PC enhanced functions and the capability of 24 hours of data logging.

- Record and store up to 24 hours of data and up to 15 jobs
- Large Easy to Read LCD
- Displays Pressures, Saturated, Actual, Superheat and Subcool Temperatures
- Over 60 Refrigerants
- Clamp-on Thermocouple Connector displays Actual Temperature and Automatically Calculates Superheat or Subcool Temperature
- Vacuum Sensor Cable displays Deep Vacuum
- Ball valve design includes 3/8" bore through the block for increased flow

SPECIFICATIONS:

- Class 1.0 standard gauge reading
- Pressure Display: PSI, INHg, Bar, MPa, Kg/cm²
- Temperature Display: °F or °C
- Deep Vacuum Display: Micron, mBar, KPa, Pa, Torr, mTorr, mmHg
- Sensing Resolution: 1 psi (.07 Bar, .007 MPa, .07 Kg/cm²)
- Sensing Accuracy: ±1 psi or 1% of reading (whichever is greater)
- Working Pressure: 0 to 750 psi (52 Bar, 5 MPa, 52 Kg/cm²) (does not display 0-5 psi)
- Proof Pressure: 1000 psi (70 Bar, 7 MPa, 70 Kg/cm²) (Tolerable pressure without internal damage)
- Refrigerant Temperature Range: -40 to 200°F (-40 to 93°C)
- Operating Temperature: 32 to 122°F (0 to 45°C)
- Temperature Accuracy: ±1°F (±0.5°C) between 32 to 160°F (0 to 71°C)
- Storage Temperature: 10 to 120°F (-12 to 49°C)
- Connections: 1/4" M-Flare
- Power: 9V DC battery with optional AC/DC adapter
- Battery Life: 30-36 hours pressure and temperature mode only (continuous use)
25-30 hours vacuum or backlight mode (continuous use)
- Auto-Off: 15 min. with disabling capability

EASILY UPDATE REFRIGERANTS:

New refrigerants can be updated with a USB connection and Mastercool Software.

R12, R22, R23, R32, R113, R114, R115, R116, R123, R124, R134, R134a, R141B, R142B, R143, R143A, R290, R401A, R401B, R401C, R402A, R402B, R403A, R403B, R404A, R405A, R406A, R407A, R407B, R407C, R407D, R407F, R408A, R409A, R410A, R410B, R411A, R411B, R412A, R413A, R414A, R414B, R417A (ISCEON M059), R421A, R422A (ISCEON M079), R422B, R422C, R422D (ISCEON M029), R427A (FX100), R434A, R437A, R438A, R441A, R501, R502, R503, R504, R507A, R508B, R509A, R600, R600A, R601, R601A, R744

MASTERCOOL'S 4-WAY DIGITAL MANIFOLD RECORDING FUNCTION:

- Records and stores data directly into the manifold memory
- Records up to 24 hours of data or 15 jobs before having to download
- Downloads data at a rate 115 kb per second (24 hrs of data = approx. 15 min of download time)
- Uses Mastercool's Data Logger Application to easily view data

MASTERCOOL DATA LOGGER APPLICATION:

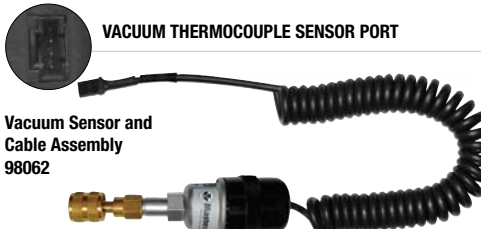
- Display data in "real time" using a USB connection, computer and software
- Platform: Windows 2000, XP, Windows Vista and Windows 7
- Log Customer Name, Date and Technician's Name
- Recorder/Cursor Function Features
 - (1) Recorder TIME command. Record in intervals of 5, 15 min, 1, 4, 8 and 24 hrs.
 - (2) Recorder ON/OFF command.
 - (3) ZOOM: NORMAL, 5X or 10X. Use the zoom option to view specific data points of interest.
 - (4) The Time-Line measures the selected recording time. Moving the cursor along the timeline easily displays specific plot points.
- The Data Logger program uses the Units information (Kg/cm², BAR, Mpa, PSI, °C, and °F) contained in each data bit on the manifold and displays these units on the screen.
- Display Function Features
 - (1) Display ALL command. This enables all parameters of the Digital Manifold to be displayed simultaneously. As the line functions propagate across the screen, the "real-time" data will also be displayed digitally.
 - (2) Monitor specific functions of interest. The Data Logger continues to record all the functions in the background, regardless of how many individual functions are being displayed.
 - (3) Display DEEP VACUUM ONLY command. This enables only the deep vacuum readings to be displayed on the screen.
 - (4) View ANALOG GAUGES function enables the user to represent the Digital Manifold data in the form of high and low pressure analog gauges.



MANIFOLDS

ALL THE INFORMATION YOU NEED IN THE PALM OF YOUR HAND!

Patent Pending



99661-A



99661-A-EU

Model #	Digital Manifold	Hoses	Vacuum Sensor & Cable (98062)	Clamp-On Thermocouple (52336)
99103-A	✓	NA	NA	NA
99103-A-2	✓	NA	NA	✓ (2)
99661-A	✓*	3-60" standard hoses	✓	✓
99661-AR	✓*	3-60" manual shut-off valve hoses	✓	✓
99663-R	✓*	3-60" standard hoses	NA	✓
99663-AR	✓*	3-60" manual shut-off valve hoses	NA	✓
99772-A	✓*	3-72" standard hoses	✓	✓
99772-AR	✓*	3-72" manual shut-off valve hoses	✓	✓
99773-R	✓*	3-72" standard hoses	NA	✓
99773-AR	✓*	3-72" manual shut-off valve hoses	NA	✓

* includes blow molded plastic box

OPTIONAL ACCESSORIES

52336	Clamp-on Thermocouple (extends 3 ft)	90411	1/4 x 5/16 R410A Ball Valve Adapter
52337	Clamp-on Thermocouple (extends 10 ft)	99333	1/4 FL-M x 1/4 FL-M x 1/4 FL-F Tee
90413	R410A Straight Adapter 1/4 FL-M x 5/16 Swivel-F	99334-110	110 V AC/DC Adapter
98062	Vacuum Sensor and Cable Assembly (6.5 ft)	99903-PBA	Plastic Carrying Case
99332	1/8 NPT x 1/4-FL Flare Swivel Adapter		



Mastercool®
"World Class Quality"

**NOW COMPATIBLE WITH R744 (CO₂)
SENSORS ABLE TO WITHSTAND
PRESSURE UP TO 750 PSI (50 BAR)**



78 PSI		R	290 PSI	
Saturated Temp.	19 IF	Low	Saturated Temp.	137F High
Sensor Temp.	49F			
Superheat	14 IF			

SUPERHEAT & SUBCOOL CALCULATIONS

Clamp-on thermocouple provides fast and accurate superheat and subcool readings.



Vacuum	120 MICRONS
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PRECISE VACUUM READINGS

Vacuum thermocouple sensor provides accurate vacuum readings.

Mastercool's 2-Way Digital Manifold is the most advanced and user friendly Digital Manifold on the market today! This manifold offers a large easy to read LCD that displays Pressures, Saturated Temperatures, Actual Temperatures, Superheat and Subcooling Temperatures for over 60 refrigerants. When used with the clamp-on thermocouple connector it will display the actual temperature and automatically calculate the superheat or subcool temperature. When the vacuum sensor cable is attached to the manifold it will display deep vacuum. To insure lasting performance and durability the manifold case is constructed of ABS material and protected by a rugged rubber boot. The technician now has a fully functional manifold with the intelligence to quickly access and deliver the accurate information needed *to do the job right!*



INCLUDES THE FOLLOWING REFRIGERANTS:

R12, R22, R23, R32, R113, R114, R115, R116, R123, R124, R134, R134a, R141B, R142B, R143, R143A, R290, R401A, R401B, R401C, R402A, R402B, R403A, R403B, R404A, R405A, R406A, R407A, R407B, R407C, R407D, R407F, R408A, R409A, R410A, R410B, R411A, R411B, R412A, R413A, R414A, R414B, R417A (ISCEON M059), R421A, R422A (ISCEON M079), R422B, R422C, R422D (ISCEON M029), R427A (FX100), R434A, R437A, R438A, R441A, R501, R502, R503, R504, R507A, R508B, R509A, R600, R600A, R601, R601A, R744

SPECIFICATIONS:

- Class 1.0 standard gauge reading
- Pressure Display: PSI, INHg, Bar, MPa, Kg/cm²
- Temperature Display: °F or °C
- Deep Vacuum Display: Micron, mBar, KPa, Pa, Torr, mTorr, mmHg
- Sensing Resolution: 1 psi (.07 Bar, .007 MPa, .07 Kg/cm²)
- Sensing Accuracy: ±1 psi or 1% of reading (whichever is greater)
- Working Pressure: 0 to 750 psi (52 Bar, 5 MPa, 52 Kg/cm²) (does not display 0-5 psi)
- Proof Pressure: 1000 psi (70 Bar, 7 MPa, 70 Kg/cm²) (Tolerable pressure without internal damage)
- Refrigerant Temperature Range: -40 to 200°F (-40 to 93°C)
- Operating Temperature: 32 to 122°F (0 to 45°C)
- Temperature Accuracy: ±1°F (±0.5°C) between 32 to 160°F (0 to 71°C)
- Storage Temperature: 10 to 120°F (-12 to 49°C)
- Connections: 1/4" M-Flare
- Power: 9V DC battery with optional AC/DC adapter
- Battery Life: 30-36 hours pressure and temperature mode only (continuous use)
25-30 hours vacuum and backlight mode (continuous use)
- Auto-Off: 15 min. with disabling capability

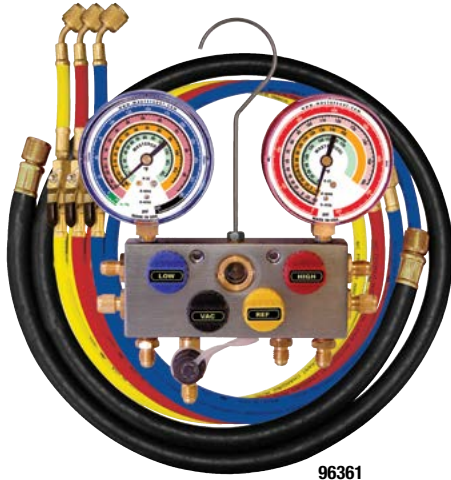
MANIFOLDS



Mastercool[®]
"World Class Quality"

ALUMINUM 3/8" BORE 4-WAY BALL VALVE MANIFOLD

ALUMINUM 3/8" BORE 4-WAY BALL VALVE MANIFOLD GAUGE SETS WITH HOSES



Exclusive 3/8" Ball Valve Design

- Full 3/8" bore all the way through the block increases flow over the standard block designs.
- Ball valve rotates 90° between two teflon washers requiring little effort to turn, even under pressure.
- Opens and closes quickly with only a quarter turn.
- Visual knob position quickly indicates if valves are opened or closed.
- Gauges offered in a wide variety of selections.
- Color Coordinated Gauges for multi-refrigerant recognition.
- Includes three 1/4" SAE B-R-Y nylon barrier ball valve hoses with manual shut-off valves and one 3/8" SAE Black Vacuum Hose in plastic box.

R410A, R22 & R404A		
HOSE LENGTH	2 1/2" GAUGES (PSI/°F)	3 1/8" GAUGES (PSI/°F)
36"	96236	96336
60"	96261	96361 >>POPULAR<<
72"	96272	96372
R12, R22 & R502		R404A, R407C, R507A & R134a
HOSE LENGTH	2 1/2" GAUGES (PSI/°F)	3 1/8" GAUGES (PSI/BAR/°F)
36"	96436-A	96536
60"	96461-A	96561
72"	96472-A	96572

* All gauges above are available with shock resistant gauge protectors – to order, add -G after the Part#

4-WAY MANIFOLDS WITH GAUGES ONLY

96203	R410A, R22, & R404A (2 1/2" Gauges)
96303	R410A, R22, & R404A (3 1/8" Gauges)
95103-A	R12, R22 & R502 (2 1/2" Gauges)
96503	R404A, R407A, R507A & R134a (3 1/8") Gauges

REPLACEMENT GAUGES

2 1/2" Gauge Sets

57501	R410A, R22, & R404A (PSI-°F) Low-Side (2 1/2")
57803	R410A, R22, & R404A (PSI-°F) High-Side (2 1/2")
93350	R12, R22, R502 (PSI-°F) Low Side (2 1/2")
93500	R12, R22, R502 (PSI-°F) High Side (2 1/2")

3 1/8" Gauge Sets

58501	R410A, R22, & R404A (PSI-°F) Low-Side (3 1/8")
58803	R410A, R22, & R404A (PSI-°F) High-Side (3 1/8")
54350	R404A, R407A, R507A & R134a (PSI-°F) Low-Side (3 1/8")
54500	R404A, R407A, R507A & R134a (PSI-°F) High-Side (3 1/8")

3/8" SAE REPLACEMENT BLACK HOSE

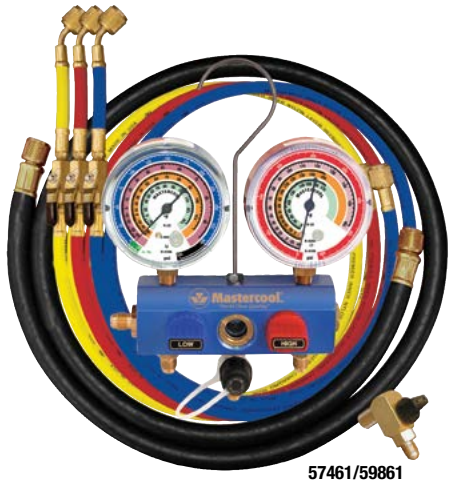


94136	Without Ball Valve (36")
94160	Without Ball Valve (60")
94172	Without Ball Valve (72")
94236	With Ball Valve (36")
94260	With Ball Valve (60")
94272	With Ball Valve (72")



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ALUMINUM 3/8" BORE 2-3 WAY BALL VALVE MANIFOLD GAUGE SETS WITH HOSES

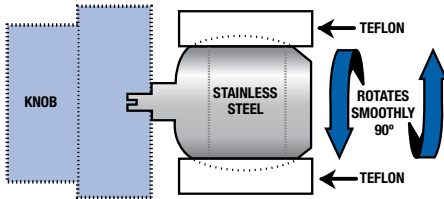


Exclusive 3/8" Ball Valve Design

- Full 3/8" bore all the way through the block increases flow over the standard block designs.
- Ball valve rotates 90° between two teflon washers requiring little effort to turn, even under pressure.
- Opens and closes quickly with only a quarter turn.
- Visual knob position quickly indicates if valves are opened or closed.
- Gauges offered in a wide variety of selections.
- Color Coordinated Gauges for multi-refrigerant recognition.
- Includes nylon barrier ball valve hoses with manual shut-off valves in a plastic box.

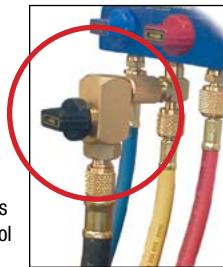
R410A, R22 & R404A BALL VALVE MANIFOLD SET W/ STANDARD 2 1/2" GAUGES

Hose Length	2-Way 3/8" Ball Valve Manifold w/ (3) 1/4" SAE Ball Valve Hoses with Manual Shut-Off Valves	3-Way 3/8" Ball Valve Manifold w/ (3) 1/4" SAE Ball Valve Hoses with Manual Shut-Off Valves, (1) 3/8" SAE Vacuum Hose & 90° Swivel Vacuum Ball Valve
36"	57236	57436
60"	57261	57461
72"	57272	57472



R410A, R22 & R404A BALL VALVE MANIFOLD SET W/ LARGE 3 1/8" GAUGES

Hose Length	2-Way 3/8" Ball Valve Manifold w/ (3) 1/4" SAE Hoses with Manual Ball Valves	3-Way 3/8" Ball Valve Manifold w/ (3) 1/4" SAE Hoses w/Manual Ball Valves, (1) 3/8" SAE Vacuum Hose & 90° Swivel Vacuum Ball Valve
36"	59636	59836
60"	59661	59861 >>POPULAR<<
72"	59672	59872



* Optional 3/8" hose with special 90° 3/8" swivel ball valve for vacuum line makes 2-Way into 3-Way full control gauge set.

BALL VALVE MANIFOLD WITH GAUGES ONLY

58103	R410A, R22 & R404A (2 1/2" Gauges)
58203	R410A, R22 & R404A (3 1/8" Gauges)

REPLACEMENT GAUGES

2 1/2" Gauge Sets

57501	R410A, R22, & R404A (PSI-°F) Low-Side (2 1/2")
57803	R410A, R22, & R404A (PSI-°F) High-Side (2 1/2")

3 1/8" Gauge Sets

58501	R410A, R22, & R404A (PSI-°F) Low-Side (3 1/8")
58803	R410A, R22, & R404A (PSI-°F) High-Side (3 1/8")

REPLACEMENT PARTS



90530	Ball Valve Only (3/8" FML x 3/8" FFL 90°)
98225	Ball Valve Repair Kit
89772-PB	Plastic Carrying Case



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2-WAY ALUMINUM MANIFOLD GAUGE SETS

ALUMINUM R12, R22 & R502 2-WAY MANIFOLD GAUGE SETS WITH HOSES PACKAGED IN CLAMSHELLS



Hose connections are 1/4" SAE. Gauges are 2 1/2" in PSI & °F.

HOSE LENGTH (SET OF 3)	STANDARD HOSES STANDARD FITTINGS	STANDARD HOSES AUTO SHUT-OFF VALVES	NYLON BARRIER HOSES STANDARD FITTINGS	NYLON BARRIER HOSES AUTO SHUT-OFF VALVES	NYLON BARRIER HOSES MANUAL BALL VALVES
36"	93636	95636	96636	97636	92636
60"	93661	95661	96661	97661	92661
72"	93772	95772	96772	97772	92772

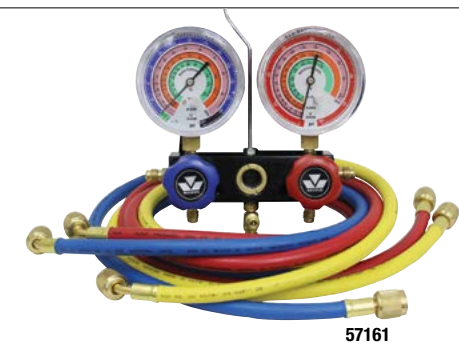
ALUMINUM R404A, R407C, R507A & R134a 2-WAY COMMERCIAL MANIFOLD GAUGE SETS W/HOSES PACKAGED IN CLAMSHELLS



Hose connections are 1/4" SAE. Gauges are 3 1/8" in PSI, BAR & °F.

HOSE LENGTH (SET OF 3)	NYLON BARRIER HOSES STANDARD FITTINGS	NYLON BARRIER HOSES AUTO SHUT-OFF VALVES	NYLON BARRIER HOSES BALL VALVE
36"	54136	54236	54336
60"	54161	54261	54361
72"	54172	54272	54372

ALUMINUM R22, R404A & R410A 2-WAY MANIFOLD GAUGE SETS W/HOSES PACKAGED IN CLAMSHELLS



Designed for High Pressure R410A. Gauges are 3 1/8" in PSI, °F.

HOSE LENGTH (SET OF 3)	R410A HOSES STANDARD 1/4" SAE FITTINGS	R410A HOSES BALL VALVE CONTROL STANDARD 1/4" SAE FITTINGS
36"	57136	57336
60"	57161	57361
72"	57172	57372

2-WAY ALUMINUM MANIFOLDS WITH GAUGES ONLY

93103	R12, R22 & R502 (2 1/2") 1/4" MFL
54103	R404A, R407C, R507A & R134a (3 1/8") 1/4" MFL
57103	R22, R404A & R410A (3 1/8") 1/4" MFL

REPLACEMENT GAUGES

2 1/2" Gauge Sets

93350	R12, R22, R502 (PSI-°F) Low Side (2 1/2")
93500	R12, R22, R502 (PSI-°F) High Side (2 1/2")

3 1/8" Gauge Sets

58501	R410A, R22, & R404A (PSI-°F) Low-Side (3 1/8")
58803	R410A, R22, & R404A (PSI-°F) High-Side (3 1/8")
54350	R404A, R407A, R507A & R134a (PSI-°F) Low-Side (3 1/8")
54500	R404A, R407A, R507A & R134a (PSI-°F) High-Side (3 1/8")



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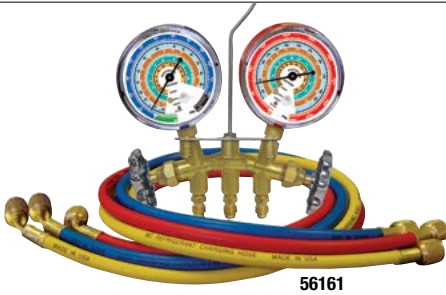
BRASS R12, R22 & R502 2-WAY MANIFOLD GAUGE SETS WITH HOSES PACKAGED IN CLAMSHELLS



Hose connections are 1/4" SAE. Gauges are 2 1/2" in PSI & °F.

HOSE LENGTH (SET OF 3)	STANDARD HOSES STANDARD FITTINGS	STANDARD HOSES AUTO SHUT-OFF VALVES	NYLON BARRIER HOSES STANDARD FITTINGS	NYLON BARRIER HOSES AUTO SHUT-OFF VALVES	NYLON BARRIER HOSES MANUAL BALL VALVES
36"	33636	35636	36636	37636	32636
60"	33661 >>POPULAR<<	35661	36661	37661	32661
72"	33772	35772	36772	37772	32772

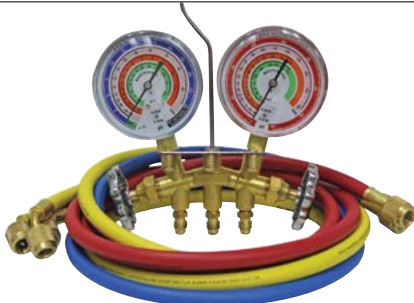
BRASS R404A, R407C, R507A & R134a 2-WAY COMMERCIAL MANIFOLD GAUGE SETS W/HOSES PACKAGED IN CLAMSHELLS



Hose connections are 1/4" SAE. Gauges are 3 1/8" in PSI, BAR & °F.

HOSE LENGTH (SET OF 3)	NYLON BARRIER HOSES STANDARD FITTINGS	NYLON BARRIER HOSES AUTO SHUT-OFF VALVES	NYLON BARRIER HOSES BALL VALVE
36"	56136	56236	56336
60"	56161 >>POPULAR<<	56261	56361
72"	56172	56272	56372

BRASS R22, R404A & R410A 2-WAY MANIFOLD GAUGE SETS W/HOSES PACKAGED IN CLAMSHELLS



Designed for High Pressure R410A. Gauges are 3 1/8" in PSI, °F.

HOSE LENGTH (SET OF 3)	R410A HOSES STANDARD 1/4" SAE FITTINGS	R410A HOSES BALL VALVE CONTROL STANDARD 1/4" SAE FITTINGS
36"	59136	59236
60"	59161 >>POPULAR<<	59261
72"	59172	59272

2-WAY BRASS MANIFOLDS WITH GAUGES ONLY

33103	R12, R22 & R502 (2 1/2") 1/4" MFL
56103	R404A, R407C, R507A & R134a (3 1/8") 1/4" MFL
59103	R22, R404A & R410A (3 1/8") 1/4" MFL

REPLACEMENT GAUGES

2 1/2" Gauge Sets

93350	R12, R22, R502 (PSI-°F) Low Side (2 1/2")
93500	R12, R22, R502 (PSI-°F) High Side (2 1/2")

3 1/8" Gauge Sets

58501	R410A, R22, & R404A (PSI-°F) Low-Side (3 1/8")
58803	R410A, R22, & R404A (PSI-°F) High-Side (3 1/8")
54350	R404A, R407A, R507A & R134a (PSI-°F) Low-Side (3 1/8")
54500	R404A, R407A, R507A & R134a (PSI-°F) High-Side (3 1/8")



2-WAY PISTON VALVE MANIFOLD FOR CO2 (R744)

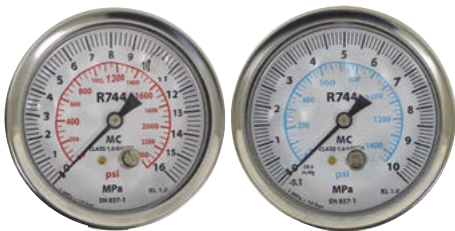


- Our Free Floating Piston Valve results in less wear and tear in comparison to market standard twisting piston valves
- Double O-Ring allows for a much better seal resulting in less leaks
- Oil filled, class 1% (1A), 2 3/4" gauges
- E-Z to read temperature scales on gauge face
- Solid extruded aluminum body
- Large easy-to-grip-knobs
- 1/4" SAE
- Steel braided hoses for CO2
- Assemblies packed in plastic carrying case
- Plastic carrying case, p/n 58102-PBR



Gauge class – diameter	1% (1A) - 2 3/4"
Units	PSI/MPa
Refrigerant scales	R744
Gauge p/n (HP/LP)	55102-2400 55102-1400
Manifold body with hook and hose holder (1/4" SAE)	55102
Manifold with oil filled gauges only (1/4" SAE)	55103
Manifold (as above) with 3 - 60" braided hoses	55661

CLASS 1.0 REPLACEMENT GAUGE FOR CO2



High pressure p/n	Low pressure p/n	Gauge Diameter	Units	Refrigerant Scales
55102-2400	55102-1400	2 3/4"	PSI/MPa	R744

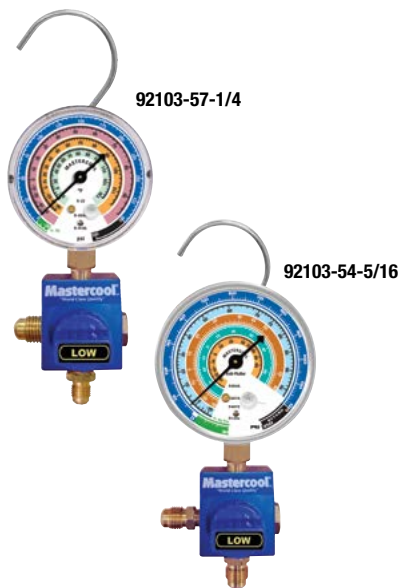
STEEL BRAIDED HOSES FOR CO2



Steel Braided Hoses, Working Pressure 2900 PSI, Burst 11600 PSI

HOSE LENGTH	60"
Steel braided hose for CO2	55601
SET of 3 steel braided hoses for CO2	55360

SINGLE VALVE MANIFOLDS



(packaged in a clamshell)

1/4" SINGLE VALVE MANIFOLD – BALL VALVE

Single Valve Manifold	Gauge Class Diameter	Unit	Refrigerant Scales	Gauge p/n (HP/LP)
92103-93-1/4	1.6	PSI/°F	R12, R22 & R502	93350
92103-57-1/4	2 1/2"	PSI/°F	R410A, R22 & R404A	57501
92103-54-1/4	1.6	PSI/°F	R404A, R407C, R507A & R134a	54350
92103-58-1/4	3 1/8"	PSI/°F	R410A, R22 & R404A	58501

5/16" SINGLE VALVE MANIFOLD – BALL VALVE

Single Valve Manifold	Gauge Class Diameter	Unit	Refrigerant Scales	Gauge p/n (HP/LP)
92103-93-5/16	1.6	PSI/°F	R12, R22 & R502	93350
92103-57-5/16	2 1/2"	PSI/°F	R410A, R22 & R404A	57501
92103-54-5/16	1.6	PSI/°F	R404A, R407C, R507A & R134a	54350
92103-58-5/16	3 1/8"	PSI/°F	R410A, R22 & R404A	58501

* Manifolds assembled with gauge guards, add a -G

MANIFOLDS

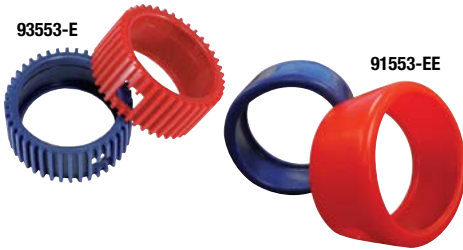
REPLACEMENT GAUGES

Mastercool offers one of the most extensive lines of high quality replacement gauges. Our wide variety of gauge scales are available in different sizes and styles. All of our gauges are designed with the **ANTI-FLUTTER** feature that reduces needle fluctuation and increases reading accuracy.

	High pressure p/n	Low pressure p/n	Gauge Diameter	Units	Refrigerant Scales
	93500	93350	2 1/2"	PSI/°F	R12, R22, R502
	57803	57501	2 1/2"	PSI/°F	R410A, R22, R404A
	54500	54350	3 1/8"	PSI/°F	R404A, R407C, R507A, R134a
	58803	58501	3 1/8"	PSI/°F	R410A, R22, R404A

MANIFOLD REPLACEMENT PARTS

GAUGE PROTECTORS



Mastercool gauge protectors are built to cushion shock due to rough handling. The unique ribbing deadens bumps and deflects shocks. Snug fitting. Color coded. All Mastercool manifold gauge sets are available with gauge protectors installed. To order, simply place a "-G" after any gauge set number.

2 1/2" (63 MM) GAUGE PROTECTORS

93253-E	2 1/2" (63 mm) Blue Gauge Protector
93503-E	2 1/2" (63 mm) Red Gauge Protector
93553-E	2 1/2" (63 mm) Set (Red & Blue)

3 1/8" (80 MM) GAUGE PROTECTORS

91253-EE	3 1/8" (80 mm) Red Gauge Protector
91503-EE	3 1/8" (80 mm) Blue Gauge Protector
91553-EE	3 1/8" (80 mm) Set (Red & Blue)

LENS



85253-E	2 1/2" (63 mm) Lens
98251-E	3 1/8" (80 mm) Lens

4-WAY MANIFOLD REPLACEMENT KNOBS



4-WAY MANIFOLD REPLACEMENT KNOBS

58211	Blue Knob
58212	Red Knob
58213	Yellow Knob
58214	Black Knob

2-WAY MANIFOLD REPLACEMENT KNOBS

85211-R	Blue Knob
85212-R	Red Knob
93211-R	Black Knob

85200 DELUXE A/C SERVICE REPAIR KIT



Replacement gaskets, depressors, o-rings and nylon guides for charging hoses and adapters. Consists of:

42010	1/4" Gasket (10 pcs)	82010	Gasket for R134a Hose (10 pcs)
42014	1/4" Depressor (10 pcs)	82336	Gasket for 82335 (10 pcs)
80034	O-ring for 82834 (10 pcs)	83341	O-ring for R134a Hose (10 pcs)
80034-1	High side nylon guide (5 pcs)	90336	Gasket for R12 shut-off valve (10 pcs)
80134	O-ring for 82934 (10 pcs)		

92207 REFRIGERATION GASKET, DEPRESSOR ASSORTMENT KIT



Consists of:

42010	1/4" Gasket (6 pcs)
85511	3/8" Hose Gasket (1 pc)
42016	Screw Type Depressor (3 pcs)

PARTS FOR MANIFOLDS



95102-R-KIT

PARTS FOR 2-WAY BRASS MANIFOLDS

34215	O-rings for Brass Manifolds	34216	Seal & Seat Assembly for Brass Manifolds
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PARTS FOR 2-WAY ALUMINUM MANIFOLDS

85215	O-rings (4 pcs)	85216	Seal & Seat Assembly (2 pcs)
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PARTS FOR 2-3 AND 4 WAY BALL VALVE MANIFOLDS

95102-R-KIT	O-Ring Repair Kit for 2-3 and 4 Way Ball Valve Manifold
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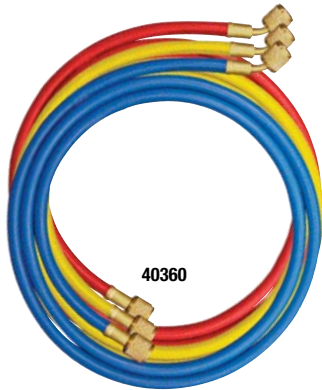
Mastercool[®]
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HOSES, ADAPTERS & ACCESSORIES



Mastercool uses only **(GRADE 5 HOSE)** with a selection of Standard and Nylon Barrier for high pressure applications. Knurled brass nuts make finger tightening easy. **Crimped with 8 segment dies for secure fit and maximum durability.** Hoses are available in sets and a variety of lengths to meet all EPA, SAE and UL requirements for containment of refrigerant. **Sets include one blue, one red and one yellow hose.**

STANDARD & HIGH PRESSURE HOSES W/STANDARD FITTINGS (1/4" SAE)



R12, R22, R502 Standard Hoses, Working pressure 750 PSI, Burst 3000 PSI

HOSE LENGTH	36"	60"	72"	96"
Blue 1/4" x 1/4"	41361	41601	41721	41961
Yellow 1/4" x 1/4"	41362	41602	41722	41962
Red 1/4" x 1/4"	41363	41603	41723	41963
SETS 1/4" x 1/4"	40336	40360 >>POPULAR<<	40372	40396

R22, R410A Nylon Barrier Hoses, Working Pressure 800 PSI, Burst 4000 PSI

Blue 1/4" x 1/4"	47361	47601	47721	47961
Yellow 1/4" x 1/4"	47362	47602	47722	47962
Red 1/4" x 1/4"	47363	47603	47723	47963
Black 1/4" x 1/4"	47364	47604	47724	47964
SETS 1/4" x 1/4"	47336	47360 >>POPULAR<<	47372	47396
Black 1/4" hose w/(3/8" x 3/8" fitting)	48364	48604	48724	48964

STANDARD & HIGH PRESSURE HOSES W/AUTOMATIC SHUT-OFF VALVE FITTINGS (1/4" SAE)



R12, R22, R502 Standard Hoses, Working pressure 750 PSI, Burst 3000 PSI

HOSE LENGTH	36"	60"	72"	96"
Blue 1/4" x 1/4"	45361	45601	45721	45961
Yellow 1/4" x 1/4"	45362	45602	45722	45962
Red 1/4" x 1/4"	45363	45603	45723	45963
Black 1/4" x 1/4"	N/A	N/A	N/A	N/A
SETS 1/4" x 1/4"	45336	45360 >>POPULAR<<	45372	45396

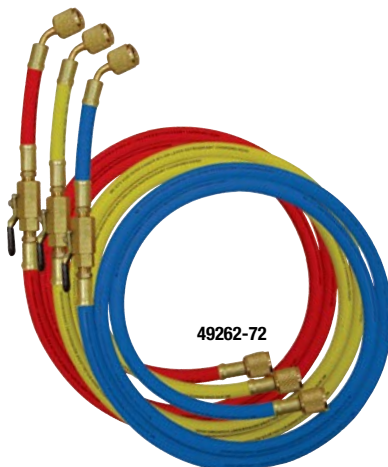
R22, R410A Nylon Barrier Hoses, Working Pressure 800 PSI, Burst 4000 PSI

Blue 1/4" x 1/4"	46361	46601	46721	46961
Yellow 1/4" x 1/4"	46362	46602	46722	46962
Red 1/4" x 1/4"	46363	46603	46723	46963
Black 1/4" x 1/4"	46364	46604	46724	46964
SETS 1/4" x 1/4"	46336	46360 >>POPULAR<<	46372	46396

Auto shut-off valves automatically retain refrigerant in the service hose when they are removed from the system, meets EPA, SAE and UL standards for containment of refrigerant.

STANDARD & HIGH PRESSURE HOSES W/MANUAL SHUT-OFF VALVE FITTINGS (1/4" SAE)

>> RECOMMENDED FOR R410A <<



R12, R22, R502 Standard Hoses, Working pressure 750 PSI, Burst 3000 PSI

HOSE LENGTH	36"	60"	72"
Blue 1/4" x 1/4"	90263-36	90263-60	90263-72
Yellow 1/4" x 1/4"	90264-36	90264-60	90264-72
Red 1/4" x 1/4"	90265-36	90265-60	90265-72
SETS 1/4" x 1/4"	90262-36	90262-60	90262-72

R22, R410A Nylon Barrier Hoses, Working Pressure 800 PSI, Burst 4000 PSI

Blue 1/4" x 1/4"	49263-36	49263-60	49263-72
Yellow 1/4" x 1/4"	49264-36	49264-60	49264-72
Red 1/4" x 1/4"	49265-36	49265-60	49265-72
SETS 1/4" x 1/4"	49262-36	49262-60 >>POPULAR<<	49262-72
Red 1/4 x 5/16"	49265-36-JT	49265-60-JT	49265-72-JT
Blue 1/4 x 5/16"	49263-36-JT	49263-60-JT	49263-72-JT
SETS Red/Blue 1/4 x 5/16", Yellow 1/4 x 1/4"	49262-36-JT	49262-60-JT	49262-72-JT



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3/8" SAE REPLACEMENT BLACK HOSE



HOSE LENGTH	36"	60"	72"
Without Ball Valve	94136	94160	94172
With Ball Valve	94236	94260	94272

PRESSURE CONTROL HOSES



Replaces regular copper capillary tubing and eliminates capillary failure due to work hardening from vibration.

- 1/4" operates to 600 psi (42 bar) and 200°F (93°C)
- Operational temperature: -20° to 200°F (-29° to 93°C)

Hex Style Fittings with 1/4" SAE Thread

HOSE LENGTH	STRAIGHT X STRAIGHT	STRAIGHT X 90°
12"	47124-STR	47124-ST
18"	47184-STR	47184-ST
24"	47244-STR	47244-ST
36"	47364-STR	47364-ST
48"	47484-STR	47484-ST
60"	47604-STR	47604-ST

SERVICE HOSE REPLACEMENT PARTS



1/4" FITTING	SPRING TYPE		SCREW TYPE	
	GASKET	DEPRESSOR	GASKET	DEPRESSOR
CHARGING HOSES	42010-10	42014-10	42010-10	42016-10
SHUT-OFF VALVE	90336-10	N/A	N/A	N/A

85511-10 3/8" GASKET for 85510 (can tap valve)
48010 3/8" GASKET for 3/8" Hose

HOSES, ADAPTERS AND ACCESSORIES

SHUT-OFF VALVES

Mastercool manufactures a complete line of shut-off valves for containment of refrigerant. EPA requires shut-off valves within 12 inches of the charging hose ends to prevent unnecessary venting of refrigerant. Using shut-off valves is much safer than allowing refrigerant to blow out during service.

90262-R 45° MANUAL SHUT-OFF VALVE SET >>POPULAR<<



Ball valve design with flexible hose controls refrigerant with a quarter turn of the valve handle. Meets SAE, EPA and UL requirements for containment of refrigerant. One hand operation. Screws onto charging hose end.

45° Manual Shut-Off Valve Set Includes:

90263-R Blue 1/4" x 1/4"

90264-R Yellow 1/4" x 1/4"

90265-R Red 1/4" x 1/4"

MANUAL SHUT-OFF BALL VALVES



For custom application, Mastercool offers swivel ball valves without the hoses. This valve may be used to add shut-off valves to recycling equipment, manifold sets, flushing equipment, etc.

90430 1/4 x 1/4" Swivel Ball Valve

AUTOMATIC SHUT-OFF VALVES



90333-R

90335-R

Valve simply screws onto hose end. Available in straight and 90° models. Meets SAE, EPA and UL requirements for containment of refrigerant.

<< QUICK DISCONNECT : NO LOSS OF REFRIGERANT >>

90333-R 90° 1/4 x 1/4"

90333-UV 90° 1/4" FFL x 13 mm

90335-R Straight 1/4 x 1/4"

90337 Straight 1/4 x 3/16"

CONTROL VALVE



90328

90328-5/16

Ideal for use on charged systems. Eliminates refrigerant, oil or dye from spraying during connections.



90328 1/4" FFL x 1/4" MFL

90328-5/16 5/16" FFL x 5/16" MFL

91290 UNIVERSAL VALVE CORE REMOVER



Double ended for easy replacement of Standard and GM R12 Large Bore Valve Cores.

90376 VALVE CORE REMOVER W/VALVE CORES



Quickly removes valve cores. Storage area includes six replacement access valve cores.

90377 Replacement Standard Valve Cores for 90376 (6 pcs of 0377-001)

VALVE CORE REMOVERS/INSTALLERS AUTOMOTIVE/HVAC (1/4"FL)

91490 STANDARD VALVE CORE REMOVER/INSTALLER



Sturdy ball valve design controls refrigerant flow with 1/4 turn of the valve lever. Lever position also gives visual indication of whether valve is opened or closed.

1490-002 Standard valve core shaft only (Can be used w/ 91490/91491 body)

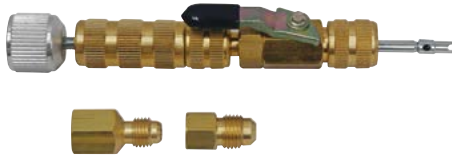
91490-K Replacement Tip & Pin for 91490, 91496 & 91499

91496 VALVE CORE REMOVER/INSTALLER WITH ACCESS PORT



Temporary removal of service valve core eliminates the restriction it creates and provides full flow of refrigerant and vacuum during recovery, evacuation and recharge. You will save valuable service time.

91498 UNIVERSAL VALVE CORE REMOVER/INSTALLER KIT



(for High Pressure Refrigerants) (410A)

Newly designed with patented locking mechanism, the 91498 is the only valve core remover kit that has a safety nut allowing the technician to freely access the valve core without fighting high pressures. Packaged in a blow molded carrying case, this kit also offers 5/16" and 1/4" flare fittings for all refrigerant applications.

PATENT# 6,253,436



91499 SUPERHEAT DETERMINATION SET (HVAC)



Special valve core remover/installer adapter allows replacement of damaged or faulty service valve cores without recharging the system. Valve replacement no longer requires time consuming refrigerant recovery. Calculation of superheat with excellent accuracy by reading refrigerant temperature and pressure from the same location in the system.

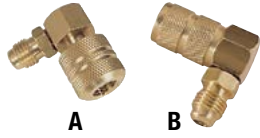
HOSES, ADAPTERS AND ACCESSORIES



CHARGING ADAPTERS, REPLACEMENT GASKETS & DEPRESSORS

* Includes Access Valve Core (0377-001) – (90-110 PSI Opening)
 ** Includes Check Valve Core (0332-002) – (8-12 PSI Opening)

90° ADAPTERS



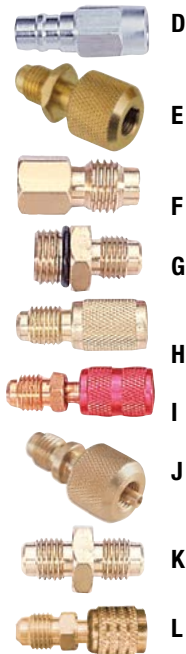
		REPLACEMENT	GASKET/O-RING	DEPRESSOR
A	90333-R	Shut-Off Valve 1/4" MFL x 1/4" FFL	90336	-
B	90314*	1/4" MFL x 1/4" FFL w/ Valve Core	42010	42014
B	90354*	1/4" MFL x 3/16" FFL (High Side) GM 1976 & Later	90369	90368

45° ADAPTERS



		REPLACEMENT	GASKET/O-RING	DEPRESSOR
C	90924	1/4" MFL x 1/4" FFL	42010	42014
C	90927*	1/4" MFL x 3/16" FFL (High-Side)	90369	90368

STRAIGHT ADAPTERS



		REPLACEMENT	GASKET/O-RING	DEPRESSOR
D	82272*	R134a 1/2" ACME-F x 13 mm R134a (Low-Side)	85511	-
E	82335	R134a Shut-Off Valve 1/2" ACME-M x 1/2" ACME-F	90336	-
E	90335-R	Shut-Off Valve 1/4" MFL x 1/4" FFL	90336	-
E	90337	Shut-Off Valve 1/4" MFL x 3/16" FFL	90331	-
F	82634*	1/4" FFL x 1/2" ACME-M	80234	-
G	82734	14 mm-M x 1/4" MFL	83341	-
H	90358*	1/4" MFL x 3/16" FFL (High-Side)	42010	42014
I	90274	1/4" MFL x 1/4" FFL Swivel	42010	42014
I	90332**	1/4" MFL x 1/4" FFL Anti-Blowback Fitting	42010	42014
I	90357	1/4" MFL x 3/16" FFL (High-Side) Swivel	90369	90368
I	91084*	1/4" MFL x 3/16" FFL (High-Side) Swivel Adapter GM 1976 & Later, Ford 1981 & Later	90369	90368
J	90338*	GM 1991 & Later Service Adapter	90339	-
K	90633	1/4" MFL x 1/4" MFL Union	-	-
K	82633	1/2" ACME-M x 1/2" ACME-M Union	-	-
L	90413	Convert 1/4 to 5/16 SAE (1/2-20 UNF) swivel female nut with depressor.	-	-

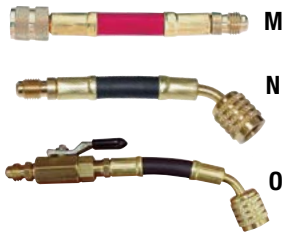
90416 SWIVEL/ANGLE ADAPTER FITTING



R410A 1/4" SAE x 5/16 SAE (1/2" - 20 UNF) Swivel/Angle Adapter Fitting



FLEX ADAPTERS



		REPLACEMENT	GASKET/O-RING	DEPRESSOR
M	90355*	1/4" MFL x 3/16" FFL (High-Side) GM 1976 & Later, Ford 1981 & Later	90369	90368
M	90356*	1/4" MFL x 1/4" FFL	42010	42014
N	90410	Convert 1/4 SAE hose into 5/16 SAE, 1/2-20 UNF swivel connection for R410A.	-	-
O	90411	Flex Adapter with Ball Valve - convert 1/4 SAE hose into 5/16 SAE, 1/2-20 UNF swivel connection for R410A.	-	-

ACCESS SERVICE TOOLS



		REPLACEMENT	GASKET/O-RING	DEPRESSOR
P	90296*	1/4" MFL x 1/8" NPT	-	-
P	80296*	1/2" ACME-M x 1/8" NPT	-	-



Mastercool[®]
 "World Class Quality"

MALE x MALE CONNECTORS



82734

- 82734** 14 mm-M x 1/4" FL-M (7/16-20") Connector
- 82735** 14 mm-M x M10 x 1.5-M Connector
- 82736** 14 mm-M x M12 x 1.75-M Connector
- 82738** 14 mm-M x 3/8" FL-M Connector
- 83341** O-Ring for 82733, 82734, 82735 and 82736
- 80234** O-Ring for 82634, 82634-M, 90364 and 90365

FEMALE x MALE CONNECTORS



82634

- 82635** 1/2" ACME-F x 1/4" FL (7/16-20")-M R134a Adapter Coupler
- 82733** 14 mm-F x 1/2" ACME-M Connector
- 90364** 1/4" (7/16-20")-F x M10 x 1.5-M Adapter
- 90363** 5/16" (1/2-20 UNF)-F x 1/4" FL-M Connector
- 82634** 1/4" FL-F (7/16-20") x 1/2" ACME-M Connector
- 82634-M** 1/4" FL-F (7/16-20") x 1/2" ACME-M R134a Connector

80011 HEAVY DUTY RATCHET HOSE CUTTER



Ratcheted action makes this cutter extremely easy to operate resulting in quick, clean cuts. Cutting blade is made of special alloy, heat treated steel for long life. Cuts all rubber hoses and PVC pipe up to 1 1/2" (38 mm) O.D.
(Not recommended for PVC200)

80111 Replacement blade for 80011

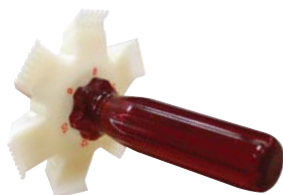
80013 AUTOMOTIVE REFRIGERANT HOSE CUTTER



Makes quick, clean cuts. Cuts rubber automotive refrigerant hoses up to 1 1/2" O.D.

80113 Replacement blade for 80013

90925 CONDENSER FIN COMB



Cleans and straightens condenser and evaporator fins. Six sided head for 8, 9, 10, 12, 14 and 15 fins per inch applications.

85530 3-IN-1 SIDE MOUNT CAN TAP VALVE



This unique design covers 2 7/8" (R134a), 2 1/2" and 2" (OIL) charge cans. Includes 1/2" ACME-M and 1/4" FL-M ports. Internal safety check valve prevents system back flow.

MANUAL COUPLERS



Patented manual couplers adjust easily to R134a service ports with varying dimensions. All metal construction for extra durability. Patented, spring loaded depressor will not damage service valves. Can be removed from service ports regardless of knob position without losing refrigerant. Meets SAE, UL and EPA requirements for containment of refrigerant. Color coded. **PATENT# 5,370,359**

- 82834** High-Side Manual R134a 14 mm-F x 16 mm Quick Coupler
- 82934** Low-Side Manual R134a 14 mm-F x 13 mm Quick Coupler
- 82834-E** High-Side Manual R134a 1/4" FL-M x 16 mm Quick Coupler
- 82934-E** Low-Side Manual R134a 1/4" FL-M x 13 mm Quick Coupler
- 82834-3/8** High-Side Manual R134a 3/8" FL-M x 16 mm Quick Coupler
- 82934-3/8** Low-Side Manual R134a 3/8" FL-M x 13 mm Quick Coupler
- 80034** O-ring for 16 mm Quick Coupler (10 pcs)
- 80134** O-ring for 13 mm Quick Coupler (10 pcs)

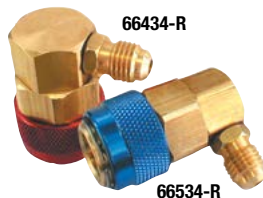
E-Z SNAP™ COUPLERS



This unique patented design easily snaps on and off the A/C systems service ports under any pressure. The E-Z Snap™ automatically adjusts to various service port dimensions allowing fast and immediate access into the A/C system. The swivel feature enables the user to easily access all service ports, even in the tightest quarters. Meets SAE, UL, and EPA requirements for containment of refrigerant. **PATENT# 5,244,010**

- 82214** High-Side E-Z Snap R134a 14 mm-F x 16 mm Quick Coupler
- 82224** Low-Side E-Z Snap R134a 14 mm-F x 13 mm Quick Coupler
- 82214-E** High-Side E-Z Snap R134a 1/4" FL-M x 16 mm Quick Coupler
- 82224-E** Low-Side E-Z Snap R134a 1/4" FL-M x 13 mm Quick Coupler
- 82214-3/8** High-Side E-Z Snap R134a 3/8" FL-M x 16 mm Quick Coupler
- 82224-3/8** Low-Side E-Z Snap R134a 3/8" FL-M x 13 mm Quick Coupler
- 80034** O-ring for 16 mm Quick Coupler (10 pcs)
- 80134** O-ring for 13 mm Quick Coupler (10 pcs)

ECONOMY COUPLERS



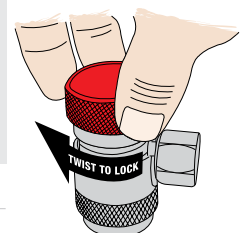
Specially designed to work in the tightest quarters. Attaches to your existing R12 hoses and snaps easily to A/C service ports.

- 66434-R** High Side R134a 1/4" FL-M x 16 mm Economy Coupler
- 66534-R** Low Side R134a 1/4" FL-M x 13 mm Economy Coupler
- 60034-10** O-ring for 66434 (10 pcs)
- 60134-10** O-ring for 66534 (10 pcs)

SAFETY-LOCK MANUAL COUPLERS



Mastercool's new safety-lock manual couplers are designed for use on all R134a systems. This unique design allows the technician to work on the system without the worry of accidentally disconnecting the hose regardless of movement. Once the coupler is connected to the system, the safety-lock sleeve slides into place guaranteeing that the coupler cannot be taken off without unscrewing the manual valve. Meets all SAE, UL and EPA requirements for containment of refrigerant.



- 82834-SL** High Side Manual R134a Safety Lock Coupler 14 mm-F x 16 mm
- 82934-SL** Low Side Manual R134a Safety Lock Coupler 14 mm-F x 13 mm
- 82834-SL-E** High Side Manual R134a Safety Lock Coupler 1/4" FL-M x 16 mm
- 82934-SL-E** Low Side Manual R134a Safety Lock Coupler 1/4" FL-M x 13 mm
- 82834-SL-3/8** High Side Manual R134a Safety Lock Coupler 3/8" FL-M x 16 mm
- 82934-SL-3/8** Low Side Manual R134a Safety Lock Coupler 3/8" FL-M x 13 mm
- 80034** O-ring for 16 mm Quick Coupler (10 pcs)
- 80134** O-ring for 13 mm Quick Coupler (10 pcs)



MEASURE & TEST INSTRUMENTS

THE COMPLETE A/C DIAGNOSTIC TOOL



52251



52270



52280

Mastercool's new A/C System Analyzer is an all-in one tool that not only calculates critical information for the air conditioning system but also diagnoses basic system problems. The LCD display leads the technician through basic tests making service quicker and less complicated. The A/C System Analyzer is able to calculate: Actual Superheat, Subcool, Target Superheat, Temperature Split, Dry Bulb, Wet Bulb, Relative Humidity, Dew Point, Air Velocity and Air Flow Volume.

The A/C System Analyzer easily guides the technician in determining if the refrigerant charge is correct. No calculations or charts are needed. Easily save test results under a customer and technician name and even download the data for future reference.

FEATURES:

- Calculates actual superheat and subcool temperatures for the following refrigerants: R22, R114, R123, R124, R134a, R141B, R142B, R401A, R401B, R404A, R407A, R407B, R407C, R407D, R408A, R409A, R410A, R411A, R411B, R414A, R414B, R417A, R507A
- Provides all the functions of a high-end anemometer: airflow volume, air velocity, dry bulb temperature, wet bulb temperature, relative humidity and dew point
- Save results and download in Excel format for future use
- Optional Pressure Transducer for direct system readings
- Optional Antenna Type Meter for any hard to reach locations

SPECIFICATIONS:

- Operating Temperature: 32 to 122°F (0 to 50°C), humidity <80%
- Storage Temperature: -4 to 122°F (-20 to 50°C), humidity <90%
- Dimensions with boot: 191mm x 93 mm x 41 mm
- Weight: (meter w/ batteries & round vane) 1.1 lb (500 g)
- Temperature Display: °F and °C
- Pressure Display: PSI and Bar
- Backlit LCD Display
- Low battery indicator
- K-type thermocouple connection
- USB connection
- 6 AA batteries

All models available in multiple languages.

Please add the suffix below to the part number for the corresponding languages

- ES : English and Spanish
- EG : English and German
- EF : English and French
- EI : English and Italian
- EP : English and Portuguese



the NEWS | SILVER



Part #	52251 System Analyzer	52253 Round Vane	52254 Antenna Type Meter (extends to 37")	52336 3 Ft. Clamp-on Thermocouple	52252 Pressure Transducer
SYSTEM ANALYZER KITS in a blow molded plastic box					
52255	✓	✓	-	✓	-
52260	✓	-	✓	✓	-
52270	✓	✓	-	✓	✓
52280	✓	-	✓	✓	✓



Mastercool[®]
"World Class Quality"

52253 ROUND VANE



Temp. Range/Resolution/Accuracy:

- -4 to 140°F (-20 to 60°C)
- 0.2°F (0.1°C)
- ±0.6°C (1.1°F) (-20 to 50°C (-4 to 122°F)), ±1.2°C (2.2°F) at other range

Humidity Range/Resolution/Accuracy:

- 0.1% to 99.9% RH
- 0.1% RH
- ±3% RH (at 77°F (25°C), 10 to 90% RH), ±5% RH at other range

Windspeed Range/Resolution/Accuracy:

- 0.6 to 32 m/s
- 0.1 m/s
- ±2% of full scale



Just two measurements with the probe will give the target temperature split and actual temperature split across the evaporator and compare the two.

52254 ANTENNA TYPE METER



Temp. Range/Resolution/Accuracy:

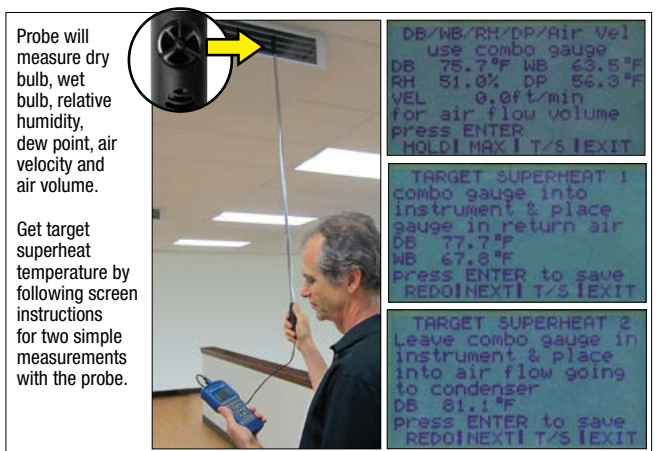
- -4 to 140°F (-20 to 60°C)
- 0.2°F (0.1°C)
- ±0.6°C (1.1°F) (-20 to 50°C (-4 to 122°F)), ±1.2°C (2.2°F) at other range

Humidity Range/Resolution/Accuracy:

- 0.1% to 99.9% RH
- 0.1% RH
- ±3% RH (at 25°C (77°F), 10 to 90% RH), ±5% RH at other range

Windspeed Range/Resolution/Accuracy:

- 0.5 to 25 m/s
- 0.1 m/s
- ±(2% of reading +0.3 m/s)



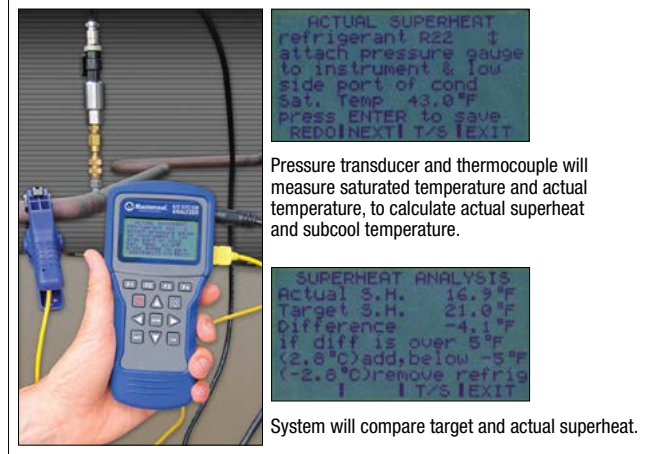
Probe will measure dry bulb, wet bulb, relative humidity, dew point, air velocity and air volume.

Get target superheat temperature by following screen instructions for two simple measurements with the probe.

52252 PRESSURE TRANSDUCER



- Operating Pressure Range: 0-750 psi (0-52 bar)
- 1/4FL Swivel nut connection
- Accuracy: ±0.5, ±1% F.S.
- Operating Temperature: -40 to 100°C (-40 to 212°F)
- Certification: CE, Explosion-proof D EMC: EN50081-1/-2: EMS: EN50082-2



Pressure transducer and thermocouple will measure saturated temperature and actual temperature, to calculate actual superheat and subcool temperature.

System will compare target and actual superheat.

52336 CLAMP-ON THERMOCOUPLE (extends 3 ft (1 M))



Temp. Range/Resolution

- -40 to 250°F (-40 to 121°C)
- 0.2°F (0.1°C)

52337 Clamp-On Thermocouple (extends 10 ft (3 M))

52246 COMPACT SUBCOOL/SUPERHEAT CALCULATOR



ACHIEVE SUBCOOL OR SUPERHEAT READINGS
IN 3 EASY STEPS...

- 1.) Enter refrigerant
- 2.) Enter pressure from gauges
- 3.) Clamp thermocouple on proper tube



FEATURES:

- Pre-programmed with 37 popular refrigerants
- Clamp-on K-Type thermocouple included to achieve accurate temperature measurement
- View bubble and dew temperature for corresponding pressure on large LCD display
- Easily select superheat or subcool temperature with a touch of a button
- Easily look up saturated temperature using the pressure from any gauge set
- Hold function keeps data on the LCD even when thermocouple is disconnected

SPECIFICATIONS:

- 37 Refrigerants (R22, R32, R114, R123, R124, R134, R134a, R141B, R142B, R290, R401A, R401B, R404A, R407A, R407B, R407C, R407D, R407F, R408A, R409A, R410A, R411A, R411B, R414A, R414B, R417A, R421A, R422A, R422B, R422C, R422D, R427A, R434A, R437A, R438A, R441A, R507A)
- °F or °C Temperature
- Displays Bubble, Saturated and Dew Point Temperatures
- Pressure displays in Kg/cm², MPa, Bar, PSI (0-600 PSI)

52236 AIRFLOW+PSYCHROMETER



Reads Humidity, Air Temp., Dew Point, Wet Bulb, Air Velocity, Air Volume & BTU. The sensor is built into the remote fan and is protected by a rotating cap.

FEATURES:

- Auto-off with disabling capability
- Metric & inch unit selection
- Tripod mountable for extended use
- Microprocessor circuitry
- Professional remote vane
- Large backlit LCD display
- Fast response & accurate reading
- Dew Point & Wet Bulb
- 4 AAA batteries
- Low battery indicator

SPECIFICATIONS:

- *Temperature:* -4 to 140°F (-20 to 60°C)
Accuracy: ±1°F (±0.6°C)
- *Relative Humidity:* 0 to 100% RH
Accuracy: ±3% at 10 to 90% RH (cal. temp.) ±5% at other range
- *Dew Point:* -90 to 158°F (-68 to 70°C)
- *Wet Bulb Temperature:* -7.6 to 158°F (-22 to 70°C)
- *Air Velocity:* 0.3 to 35 m/s (1 to 114 ft/s)
- *Air Volume:* 0 to 99999 m³/s (0 to 99999 cfm)

52237 Data Logger CD & USB Cable for use with 52236 AirFlow+Psychrometer



52230 PEN TYPE HYGROMETER



- Rotating cap to protect sensor
- Temperature and humidity in °F or °C
- Data Hold to capture readings
- LCD digital display
- Max/Min record function
- Auto-off function

SPECIFICATIONS:

- Size: 6.8" x 1.6" x 0.6" (17 x 4 x 1.5 cm)
- Sensor: Electronic Capacitance Polymer Film
- Temp. Range: -4 to 140°F (-20 to 60°C)
- RH Range: 0 to 100%
- Accuracy: ±3% from 10 to 95% RH at 77°F (25°C) / ±1% from other RH range
- Resolution: 0.1°F / 0.1°C / 0.1%
- Storage Temp.: 14 to 140°F (-10 to 60°C) / Storage RH%: <95%
- Battery: (1) CR2032 (Lithium Coin Cell) / Battery Life: 100 hrs.



52233 DIGITAL PSYCHROMETER



- Rotating cap to protect sensor
- LCD digital display
- Low battery indicator
- Max/Min record function
- Auto Power Off with disabling capability
- External Temp. probe (optional)
- Data Hold to capture readings
- Fast response, Accurate reading
- Microprocessor circuitry for reliability

SPECIFICATIONS:

Temp. Range: -4 to 122°F (-20 to 50°C)
 RH% Range: 0 to 100% RH
 Wet Bulb Range: -6.88 to 122°F (-21.6 to 50.0°C)
 Dew Point Range: -109.7 to 122°F (-78.7 to 50.0°C)
 Ext Temp. Range: -4 to 158°F (-20 to 70°C)
 Accuracy: RH% 3% at 77°F (25°C)/Temp: 1°F (0.6°C)
 Response Time: 60 seconds
 Pocket Size: 0.9" (h) x 1.9" (w) x 7.0" (l) (2 x 5 x 18 cm)
 Power: (2) 1.5V AAA battery

52231 Probe for 52233



52238 DIGITAL SOUND LEVEL METER



- Automatic or manual ranging
- 4 measurement ranges from 40 to 130 dB
- 0.1 dB resolution
- Select fast or slow response times
- Select A or C weighting
- Maximum hold function
- Record maximum or minimum measurements
- Jacks provide AC analog output

52240 PROFESSIONAL HVAC/R CLAMP METER



- Multi-Function: Frequency count, diode check and alarm
- Current: (AC) 20 MA - 600A
- Voltage: AC 200 mv - 750V / DC 1V-1000V
- Auto Power OFF
- Frequency: 10Hz - 2KHZ
- Ohms: (Resistance) 200m ohm-20K ohm
- Peak data hold
- Unit and sign display

SALT SOLUTION BOTTLE



for calibrating 52230 Pen Type Hygrometer and 52233 Digital Psychrometer

52733 Salt Solution Bottle 33% (Dark Brown Bottle)

52775 Salt Solution Bottle 75% (Blue Bottle)

52224-A INFRARED THERMOMETER WITH LASER



The 52224-A offers laser targeting accuracy, enhanced backlit LCD Display and an expanded temperature range. The compact design is simple to use and easy to store.



SPECIFICATIONS:

Non-Contact Temperature Range: -58 to 932°F (-50 to 500°C)
 Field of View: 12 : 1
 Display Illumination: Backlit LCD Color Display
 Target Indicator: Single Laser Spot
 Emissivity: 0.95
 Resolution: 0.5°F / 0.5°C
 Accuracy: ±4°F (2°C) or ±2% of reading
 Response Time: 0.5 seconds
 Power Off: Automatic after 15 seconds
 Battery Life: Approximately 180 hours
 Included Accessories: 2 AAA batteries, instruction manual, plastic molded case

52224-C INFRARED THERMOMETER WITH DUAL LASER



Features both infrared and dual laser technologies.



SPECIFICATIONS:

Non-Contact Temperature Range: -76 to 1022°F (-60 to 550°C)
 Field of View: 12 : 1
 Display Illumination: Backlit LCD Color Display
 Target Indicator: Dual Laser Spot
 Emissivity: 0.95
 Resolution: 0.1°F / 0.1°C
 Accuracy: ±4°F (2°C) or ±2% of reading
 Response Time: 1 second
 Power Off: Automatic after 15 seconds
 Battery Life: Approximately 180 hours
 Included Accessories: 2 AAA batteries, instruction manual, plastic molded case

52224-D MULTI-LASER INFRARED THERMOMETER



The multi-laser infrared thermometer safely monitors hot, hazardous, or hard to reach materials without contamination or damage to the surface. Simply point at target, pull the trigger, and read the temperature.



SPECIFICATIONS:

Measurement Range: -76 to 1400°F (-60 to 760°C)
 Field of View: 12 : 1 (90% energy covered)
 Display Illumination: Backlit LCD Color Display
 Target Indicator: Eight Laser
 Emissivity: 0.95 fixed
 Resolution: 0.1°F/0.1°C at -76 to 999.9(°F/°C), otherwise 1°F/1°C
 Modes: E, MAX, MIN, DIF and AVG
 Accuracy: (Tobj=15-35°C, Tamb=25°C): +/-1.0°C (1.8°F)
 (Tamb=23 +/- 3°C): 0~550°C: +/-2% of reading or 2°C (4°F) whichever is greater -60~0°C: +/- (2°C+0.05/degree)
 Response Time (90%): 1 second
 Battery Life: Typ.12, min 9 hours continuous use (Alkaline, with Laser and Back Light.)
 Included Accessories: 2 AAA batteries, instruction manual, plastic molded case



52225-A DUAL TEMP PLUS INFRARED THERMOMETER



3 ft. (1m) Wire Thermocouple Included

Features both infrared and contact thermometer technologies. Includes programmable HI/LO alarms and Lock Mode to capture temperature readings. The contact function offers a built-in K type jack and wire thermocouple.

SPECIFICATIONS:

- Non-Contact Temperature Range: -76 to 1400°F (-60 to 760°C)
- Thermocouple Temperature Range: -83 to 1999°F (-64 to 1400°C)
- Field of View: 30 : 1
- Display Illumination: Backlit LCD display
- Target Indicator: Single Laser Spot
- Emissivity: 0.10 (10E) to 1.0 (100E)
- Resolution: 0.1°F / 0.1°C
- Modes: MIN, MAX, DIFF & AVG
- Accuracy: ±4°F (2°C) or ±2% of reading
- Response Time: 1 second
- Power Off: Automatic after 15 seconds
- Battery Life: Approximately 180 hours
- Included Accessories: 2 AAA batteries, 1m thermocouple probe, instruction manual, plastic molded case
- Optional Accessories: 3 m Wire Thermocouple Probe, Piercing Penetration Probe, Surface Probe, Air Probe



52225-B ULTRA TEMP DUAL LASER THERMOMETER



Optional Wire Thermocouple

Features both infrared and contact thermometer technologies. Includes programmable HI/LO alarms, and Lock Mode to capture temperature readings. The built-in K type jack offers optional contact functions. Illuminates working area with built-in LED light.

SPECIFICATIONS:

- Non-Contact Temperature Range: -76 to 1832°F (-60 to 1000°C)
- Thermocouple Temperature Range: -83 to 1999°F (-64 to 1400°C)
- Field of View: 50 : 1
- Display Illumination: Backlit LCD display
- Target Indicator: Dual Laser Spot
- Emissivity: 0.95
- Resolution: 0.1°F / 0.1°C
- Modes: MIN, MAX, DIFF & AVG
- Accuracy: ±4°F (2°C) or ±2% of reading
- Response Time: 1 second
- Power Off: Automatic after 15 seconds
- Battery Life: Approximately 180 hours
- Included Accessories: 2 AAA batteries, instruction manual, plastic molded case
- Optional Accessories: 1 m, 3 m Wire Thermocouple Probes, Piercing Penetration Probe, Surface Probe, Air Probe



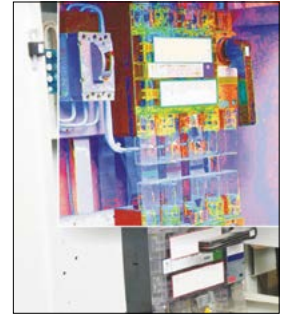
TAKE TEMPERATURE MEASURING TO ANOTHER LEVEL WITH MASTERCool'S NEW THERMAL IMAGING CAMERA...



- Fully Automatic
- Focus Free
- Superior Measurement/Accuracy
- Micro SD Card Storage
- Reporting Software Included

SPECIFICATIONS:

Thermal Image Resolution: 82 x 62 pixels
 Measurement Range: -4 to 662°F (-20 to 350°C)
 Accuracy (Tamb=20~26°C): ±2% of reading, or 4°F (2°C) whichever is greater
 Thermal Sensitivity: 0.1°F (0.1°C)
 Frame Rate: 9 Hz
 Field of View: 40 x 30 deg
 Emissivity Range: 0.95 default – adjustable 0.1 to 1 step .01
 Focus: Focus free
 LCD (inch): 2.8" (71 mm)
 LCD Type: Color
 Image Storage: Stores up to 20,000 images, BMP format
 Memory Type: Support 8G micro SD card
 Spectral Range: 8 to 14 um
 Interface: USB
 Battery Type: (4) AA
 Battery Life (with backlit): 3 hrs continuous use
 Dimensions: 94.65 x 74.03 x 233.68 mm (3.73 x 2.91 x 9.20 inch)
 Weight: 0.10 kg (13.8 oz)



Electrical/Mechanical



Solar

52350 Thermal Imaging Camera with carry case, 8 gb micro SD card, CD, USB cord, batteries and instructions

52300 THERMAL IMAGING CAMERA with carry case, 8 gb micro SD card, CD, USB cord, batteries and instructions



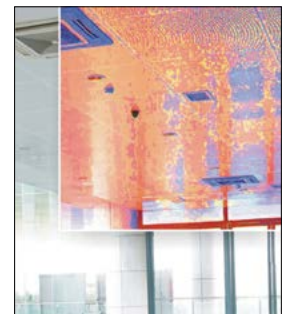
- Fully Automatic
- Focus Free
- Superior Measurement/Accuracy
- Micro SD Card Storage
- Reporting Software Included

SPECIFICATIONS:

Thermal Image Resolution: 32 x 31 pixels
 Measurement Range: -4 to 662°F (-20 to 350°C)
 Accuracy (Tamb=20 to 26°C): ±2% of reading, or 4°F (2°C) whichever is greater
 Thermal Sensitivity: 0.1°F (0.1°C)
 Frame Rate: 9 Hz
 Field of View: 33 x 33 deg
 Emissivity Range: 0.95 default – adjustable 0.1 to 1 step 0.1
 Focus: Focus free
 LCD Size: 2.8" (71 mm)
 LCD: Color
 Image Storage: Stores up to 25,000 images, BMP format
 Memory Type: Support 8G micro SD card
 Sensor Filter: 8 to 14 um
 Interface: USB
 Battery Type: (4) AA
 Battery Life (with backlit): 6 hours continuous use
 Dimensions: 94.65 x 74.03 x 233.68 mm (3.73 x 2.91 x 9.20 inch)
 Weight: 0.4 kg (14.1 oz)



Building Diagnostics



HVAC



Mastercool[®]
 "World Class Quality"

52226 DUAL TEMP INFRARED/PROBE THERMOMETER



The 52226 Dual Temp Thermometer offers both infrared and contact probe technologies.

- Infrared Temp Range: -67 to 428°F (-55 to 220°C)
- Probe Temp Range: -67 to 626°F (-55 to 330°C)
- Field of View Ratio 1 : 1
- Adjustable Emissivity
- Lock Mode for hands free scanning
- Minimum/Maximum capture mode
- Contact Probe locks safely on the side of the unit

52227 POCKET INFRARED THERMOMETER



The 52227 Pocket Infrared Thermometer offers accurate non-contact temperature measurement in a compact and easy to use size.

- Temp Range: -67 to 428°F (-55 to 220°C)
- Field of View Ratio 1 : 1
- Adjustable Emissivity
- Backlit LCD Display
- Minimum/Maximum capture mode



52228 DIGITAL DIFFERENTIAL THERMOMETER



The 52228 Digital Differential Thermometer provides instant measurements of TWO points. (T1, T2) and T1 – T2.

- Max Hold Function
- Data Hold Function
- Temperature in °F or °C
- AUX Output Jacks
- T1 – T2 Differential
- Temp. Range: -50 to 1999°F (-50 to 1300°C)
- Type K Thermocouple Input
- Resolution: 1°F (1°C)
- Includes two 3 ft (1m) Thermocouple Probes

52229 HANDHELD WATERPROOF DIGITAL THERMOMETER



- Measuring Range: -58 to 572°F / -50 to 300°C
- Wide Measurement Range
- Maximum/Minimum temperature memory
- Celsius and Fahrenheit exchange
- Data hold function
- High/Low temperature alarm setting
- Key tone for operation confirmation
- Stainless steel probe
- Foldaway stand



POCKET ANALOG DESIGNS



All thermometers include pocket holder and clip.

Item#	Dial Size	Temperature Scale
52220	25 mm	0 to 220°F
52161	35 mm	-40 to 160°F (-40 to 70°C)
91120	44.5 mm	0 to 220°F

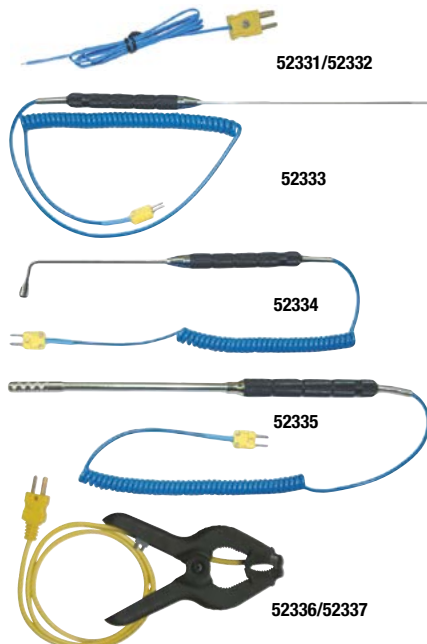
POCKET DIGITAL DESIGN



All thermometers include pocket holder and clip.
 Battery operated, (on/off and auto shut-off after 10 minutes)
 • $\pm 1^\circ\text{C}$ Accuracy
 • 0.1°C Resolution

Item#	Dial Size	Temperature Scale
52223-A	25 mm	-50 to 150°C (-58 to 302°F)

OPTIONAL THERMOCOUPLE PROBES



52331	Wire Probe - 3 ft (1 m)
52332	Wire Probe- 10 ft (3 m)
52333	Piercing Penetration Probe w/coil cord
52334	Surface Probe w/coil cord
52335	Air Probe w/coil cord
52336	Clamp-On Probe - 3 ft (1 m)
52337	Clamp-On Probe - 10 ft (3 m)

LEAK DETECTION



SENSITIVITY LEVEL
HML E8
WAIT READY INT
PEAK MUTE

VOLUME
MUTE
PEAK
H.M.L.
SENSITIVITY

THE ONLY LEAK DETECTOR YOU WILL EVER NEED



IntelliSense
REFRIGERANT LEAK DETECTOR



- Detects:
- Combustible Gases
 - Hydrogen
 - Refrigerants: All CFC's, HCFC's & HFC's

<< MEETS AND EXCEEDS J2791 (R134A), J2913 (R1234YF) AND EN 14624 >>

The 55800 leak detector employs a new metal oxide gas sensor for the detection of chlorofluorocarbon gases and blends. This tin oxide sensor is characterized by high sensitivity and a fast response, upon detecting the presence of extremely small levels of chlorofluorocarbon gases. Integrated into the design is a powerful microprocessor that automatically selects the best operating conditions for the sensor, to ensure optimum performance. The optimum sensor performance is maintained and monitored throughout the life of the sensor.

SPECIFICATIONS:

- SENSITIVITY:**
- HIGH ≥ 0.05 oz/yr (1.5 g/yr)
 - MEDIUM ≥ 0.25 oz/yr (7 g/yr)
 - LOW ≥ 0.5 oz/yr (14 g/yr)
- * based on optimal laboratory conditions*

- PROBE:**
- Intelligent tip design that senses the condition of the environment, to eliminate the potential of false alarms.
 - Flexible 16" probe for difficult to reach locations

- DISPLAY:**
- Progressive LCD with vertical bars corresponding to the magnitude of the detected leak.
 - Visual indication of the selected sensitivity range

REFRIGERANTS: Detects all refrigerants (CFC's, HCFC's, & HFC's)
Unit has been tested and approved to work with R1234yf as well as R32 and R410a

- SENSOR LIFE:** 2000 hours
OPERATING TEMPERATURE RANGE: 0 to 140°F
POWER: Two (2) D Batteries
BATTERY LIFE: 60 hours continuous use
WEIGHT: 1 lb. 8 oz

"SUPER SENSITIVE FUNCTION" allows the unit further sensitizing beyond the standard settings for locating small leaks with gases such as R1234yf and R407C

LCD FEATURES:

WAIT: This indication flashes whenever the unit is in the wait mode. This could occur whenever the unit is turned on or interference is detected.

READY: This indication appears when the unit is ready for use.

INT: This indication appears whenever the microprocessor detects conditions that are not suitable for reliable leak detection. Excessive wind blowing, blocked probe (no air flow), burned out fan, or a missing or defective sensor that needs to be replaced.

BATTERY SYMBOL: When the battery symbol becomes illuminated this is an indication that the battery is low and needs to be replaced.

H - M - L: High, Medium and Low sensitivity ranges will be displayed accordingly based on the selection made on the keypad.

SIGNAL LEVEL BARS: There are 10 vertical signal level bars on the display corresponding to the level of signal detected by the unit.

ERROR SIGNALS: E1 through E9 indicates diagnostic signals.

KEYPAD FUNCTIONS:

ON/OFF: Press the ON/OFF button on the center of the keypad to turn the unit on or off.

VOLUME/MUTE: Press the VOLUME/MUTE button to control the volume of the unit.

H M L SENSITIVITY: Press the H M L SENSITIVITY button to select the desired sensitivity level.

HOLD: Press the HOLD button to freeze the signal bars. Press the HOLD button again to disengage.

PEAK: Press the PEAK button when multiple leaks are suspected as being present.



LCD Display



Keypad



Mastercool[®]
"World Class Quality"

55800 *IntellaSense*
REFRIGERANT LEAK DETECTOR



- High Sensitivity, Fast Response
- Intelligent tip design senses environmental conditions to eliminate the potential of false alarms
- First progressive color LCD corresponds to the magnitude of the detected leak
- Packaged in a blow molded case with 2 "D" batteries, leak test vial and replacement filters



55800-FILTER 3 Replacement Filters

55800-VL Leak Test Vial

55850 *IntellaSense*
REFRIGERANT LEAK DETECTOR **KIT**



Intella Sense Refrigerant Leak Detector Kit includes:

- Intella Sense Refrigerant Leak Detector
- 12 LED UV light (53512-UV)
- UV safety glasses (92398)
- 2 "D" batteries
- Replacement filters (55800-FILTER)
- Leak Test Vial (55800-VL)
- Blow molded case (55800-PB)



55975 *IntellaSense III*
COMBUSTIBLE GAS LEAK DETECTOR



COMPATIBLE WITH COMBUSTIBLE GASES



Intella Sense III Combustible Gas Leak Detector is packaged in a blow molded case with 2 "C" batteries, leak test vial and replacement filters

SPECIFICATIONS

- Sensing Element: Heated Tin Oxide
- Sensor Life: 2000 hours
- Refrigerants: Detects combustible gases (see below)
- Response Time: less than 1 second
- Battery: 2 "C" Alkaline 6000 mAh batteries
- Operating Temperature Range: 0°F to 120°F
- Ultimate Sensitivity: 50 – 1000 ppm

Probe:

- Intelligent tip, with environment sensing element to eliminate the potential of false alarms.
- Flexible 15.5 inch probe length for difficult to reach locations.

Display:

Six vertical LED's enabled selectively (red, yellow or green) to display the following information to the user such as:

- The relative signal level of the detected leak
- The selected sensitivity range (low/medium or high) of the unit
- Diagnostic information : low battery, interference/wait, contaminated atmosphere readiness of the unit or fault conditions of the unit

Keypad Controls:

- ON/OFF, Volume/Mute, Sensitivity for High, Medium and Low level selection, Peak button when multiple leaks are suspected

DETECTS: Acetone, Acetylene, Ammonia, Benzene, Butane, Butanol, Chlorine, Ethane, Ethanol, Gasoline, Hexane, Hydrogen, Hydrogen Sulfide, Isobutane, Methane (natural gas), Methanol, Methyl Acetate, Methyl Chloride, Methyl Ether, Naptha, N-Butane, Pentane, Propane, Propanol, Sulfur Dioxide and Trichloroethane

LEAK DETECTION



Mastercool[®]
"World Class Quality"

ELECTRONIC LEAK DETECTION

The 55200 "INSPECTOR" and 55100 offer revolutionary features and state of the art micro processing technology. The design sensor delivers an accurate and instantaneous response. Both units come in a heavy duty custom molded carrying case and meet SAE J1627 and CE conformity.

55100 / 55200 GENERAL FEATURES & SPECIFICATIONS:

- Digital Signal Micro Processor
- Detects All Halogenated Refrigerants
- Meets SAE J1627 / CE Conformity
- Auto Release Feature
- Battery Test Feature
- Flexible 43 cm (16") Probe
- Keypad Control
- Power Supply (2 "C" Batteries)
- Variable Frequency Audible Alarm

55100 ELECTRONIC LEAK DETECTOR



The 55100 offers an accurate and reliable solution to Electronic Leak Detection.

SPECIFIC FEATURES:

- 3 Levels Of Sensitivity (5 Levels Of Detection)
- Visual Leak Level Indicator
- Detects Leaks As Small As 3 gr (1/10 oz) Per Year*
* based on optimal laboratory conditions
- Detects All Refrigerants, CFC'S, HCFC'S, HFC'S
- Includes a Custom Molded Carrying Case



55100-SEN Sensor Tip for 55100, 55200, 55300 & 55400

55200 "INSPECTOR" 2 IN 1 ELECTRONIC / UV LEAK DETECTOR



This revolutionary design allows the user to perform Electronic and UV Leak Detection all with one tool. The "INSPECTOR" offers six levels of sensitivity (15 levels of detection) with a tri-colored LED indicator. This allows the "INSPECTOR" to pin-point leaks as small as 3 gr (1/10 oz) per year. The ultra bright UV light is built into the end of the probe allowing easy access into tight areas. Incorporating both electronic and UV technology into one unit insures that even the toughest leaks can be found.

PATENT# 6,647,761

SPECIFIC FEATURES:

- Ultra Bright UV/Blue LED Light
- UV Safety Glasses
- 6 Levels Of Sensitivity (15 Levels Of Detection)
- Tri-colored Visual Leak Level Indicator
- Mute Function
- Detects Leaks As Small As 3 gr (1/10 oz) Per Year*
* based on optimal laboratory conditions
- Detects All Refrigerants, CFC'S, HCFC'S, HFC'S
- Includes A Custom Molded Carrying Case



53515-B LED Bulb for 55200, 55300 & 55400

55300 COMPLETE ELECTRONIC & UV LEAK DETECTION KIT



This kit offers the "INSPECTOR" along with our UV Dye Injection System. Our cartridge type dye injector is fast and easy to use. Just twist the handle to inject the appropriate amount of dye. The 55300 kit is the ultimate solution for all your A/C leak detection needs.

SPECIFIC FEATURES:

- 55200 "INSPECTOR" Electronic Leak Detector
- UV Dye Injector w/25 Application Dye Cartridge
- Dye Injector Connection Hose w/ 1/4" FL Adapter
- UV Safety Glasses & Dye Cleaner
- Comes In A Custom Molded Carrying Case

55400 COMPLETE ELECTRONIC & UV LEAK DETECTION KIT



This kit offers the "INSPECTOR" along with our UV Dye Injection System. Our refillable dye injector is fast and easy to use. Just twist the handle to inject the appropriate amount of dye. The 55400 kit is the ultimate solution for all your A/C leak detection needs.

SPECIFIC FEATURES:

- 55200 "INSPECTOR" Electronic Leak Detector
- Refillable Dye Injector
- Dye Injector Connection Hose w/ 1/4" FL Adapter
- 2 oz Bottle of Concentrated Universal Dye
- UV Safety Glasses & Dye Cleaner
- Comes In A Custom Molded Carrying Case

55744 ELECTRONIC LEAK DETECTOR FOR R744



Mastercool's Electronic Leak Detector for R744 is the most technologically advanced instrument of its kind. The minimal power requirements, small size and high sensitivity combine to create a tool which is easy to handle and ultra-effective at locating even the most difficult to find leaks.



SPECIFICATIONS:

- Operating Temperature: 32 - 122°F (0-50°C)
- Warm Up Time: 10 seconds
- Response Time: < 1 second
- Reset Time: < 1 second
- Sensitivity (High): < 400 ppm at 350 ppm ambient
- Sensitivity (Low): < 4,000 ppm at 350 ppm ambient
- Sensor Lifetime: > 2 years
- Probe Length: 12" (30cm)
- Batteries: 4 x 1.5V 'AA' Alkaline Batteries (6 VDC)
- Battery Life: 20 hours
- Dimensions: 20.3 cm x 6.3 cm x 5.7 cm
- Weight: 15 oz (425 grams) with batteries



LEAK DETECTION

53518-UV RECHARGEABLE 110 V UV FLASHLIGHT (LED)



- Twist the handle to zoom the UV light in or out
- AAA battery holder provides backup power to flashlight (3 AAA batteries included)
- Battery Life: 3 to 5 hours continuous leak detection
- Includes safety glasses

SPECIFICATIONS:

- High Intensity LED
- 154 - 170 $\mu\text{W}/\text{cm}^2$ which is compatible to a 50 watt UV flashlight
- 2 Illumination Modes: super bright and battery conservation
- Battery: Lithium Li-Ion, full discharge and cut-off discharge of 4.2V and 2.75V
- 53518-UV includes 110V charger



53512-UV MINI UV FLASHLIGHT (LED)



- 12 LED Bulb UV Illumination
- Battery Life: 5 hours continuous leak detection
- Aluminum body with Type III anodized finish
- Easy grip texture
- 25,000 hour bulb life
- 3 AAA batteries
- Includes safety glasses

53517-UV COMPACT UV FLASHLIGHT (LED)



- 17 LED Bulb UV Illumination
- Battery Life: 4 hours continuous leak detection
- Aluminum body with Type III anodized finish
- Easy grip texture
- 25,000 hour bulb life
- 3 AAA batteries
- Includes safety glasses

53515 MACH IV FLEXIBLE UV LIGHT (LED)



The Mach IV flexible UV light has **4 TRUE UV LEDS** delivering a brilliant fluorescent glow.

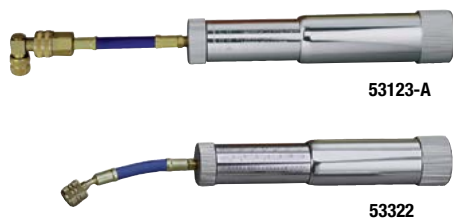
- Gets into tight areas easily.
- Includes UV Enhancing Safety Glasses

PATENT NO. 6,647,761

53515-B Light Bulb



REFILLABLE UNIVERSAL OIL/DYE INJECTOR



To inject the oil or dye, simply connect the injector to the low side of the A/C system and twist the handle until you reach the desired amount.

- 53123** Refillable Universal Dye Injector with auto shut-off valve adapter and 2 oz (60 ml) Bottle of Concentrated A/C Dye (25 Apps)
- 53123-A** Refillable Universal Dye/Oil Injector (w/o dye) with auto shut-off valve adapter
- 53322** Refillable Dye Injector with (1/4" Auto Shut-off Valve Connection) and 2 oz (60 ml) Bottle of Concentrated A/C Dye (25 Apps)
- 53322-A** Refillable Dye Injector with (1/4" Auto Shut-off Valve Connection) (w/o dye)

53223 "CARTRIDGE TYPE" UNIVERSAL DYE INJECTOR



Adding dye with the 53223 is fast and easy, simply connect the injector to the low side of the A/C system and twist the handle to the next application line. The replaceable cartridge provides 25 applications of universal dye that is compatible with all systems. The injector hose comes complete with an auto shut-off valve adapter for 1/4" FL systems.

92376 ON-LINE DYE INJECTOR



Refillable On-Line Dye Injector with 1/4" Auto Shut-Off Valve Connection.

STANDARD UNIVERSAL ULTRAVIOLET A/C DYES



<used with 53123, 53322, 92376 Injectors>

- 92699** Standard Universal Dye - Six 1/4 oz Packs (6 pcs) Pack 1/4 oz (7.5 ml) - 1 Application
- 92708** Standard Universal Dye 8 oz (240 ml) Ester (POE) Oil Base Bottle - 32 Applications
- 92732** Standard Universal Dye 32 oz (1 L) Ester (POE) Oil Base Bottle - 128 Applications

CONCENTRATED UNIVERSAL ULTRAVIOLET A/C DYES



<used with 53223 Injector>

- 53825** Concentrated Universal Dye Cartridge Replaceable Cartridge (Ester (POE) Oil Base) - 25 Applications
- <used with 53123, 53322, 92376 Injectors>
- 53625** Concentrated Universal Dye 2 oz (60 ml) Ester (POE) Oil Base Bottle - 25 Applications



- Lubricates system and helps prevent leaks
- Seals small leaks
- Illuminates larger leaks through the use of high quality universal fluorescent dye
- Compatible with all refrigerants and oils
- No need to recover refrigerant during application.
- Stops leaks in metal and rubber air conditioner and refrigeration parts including evaporators, o-rings, gaskets and hoses.
- Patented delivery system prevents any residual sealant from being left in can



- 53615** Master Leak Shield HVAC - Up to 1.5 Tons (5.3 kW) 1 oz can of Master Leak Shield HVAC sealant with dye for use on systems up to 1.5 tons
- 53660** Master Leak Shield HVAC - 1.5 to 6 Tons (5.3 kW to 21 kW) 3 oz can of Master Leak Shield HVAC sealant with dye for use on systems 1.5 to 6 tons



SERVICE ACCESSORIES AND CONSUMABLES

INNER NYLON LAYER REFRIGERANT CHARGING TOOL

TOTAL A/C QUICK FLUSH



Specific fluid for the inner flushing of air conditioning and refrigeration systems

- 91051** Total A/C Quick Flush Kit
- 91050** 17 oz. Total A/C Quick Flush Can
- 91050-6** 6 Pack - 17 oz. Total A/C Quick Flush Can

A/C FLUSH SOLVENT



Effectively removes debris and sludge from A/C components.

- Solvent based
- Evaporates quickly
- Leaks no residue

- 91049-32** 32 oz. Flush Solvent
- 91049-32-6** 6 pack - 32 oz. Flush Solvent
- 91049-128** 1 Gallon Flush Solvent
- 91049-128-4** 4 pack - 1 Gallon Flush Solvent

NITROGEN PRESSURE REGULATOR



Mastercool's nitrogen regulator is specifically designed to meet the specifications of HVAC/R and automotive A/C systems. This single stage nitrogen regulator is used to test systems for leaks when they do not contain refrigerant.



- 1/4" SAE flare outlet port, with control valve, to keep pressure on the regulator at all times
- T-Handle for ease of pressure adjustment
- 63 mm (2 1/2") gauges with guards
- High pressure gauge 4400 psig (300 bar), Low pressure gauge 1000 psig (70 bar)

- 53001** CGA580 (US) Standard, 1/4 FL-M outlet connection
- 53010** Pressure Testing Regulator Kit
53001 Nitrogen Pressure Regulator, 48" Yellow Charging Hose (47482), Leak Testing Adapter (53042), Blow molded case (53000-PB)

OPTIONAL ACCESSORIES

- 66434-R** High Side Standard R134a 1/4" FL-M x 13 mm Economy Coupler
- 82834** High Side Manual R134a 14 mm-F x 16 mm Coupler
- 90413** R410a Straight Adapter 1/4" FL-M x 5/16" Swivel-F
- 53042** Leak Testing Adapter
- 53000-42** Leak Testing Gauge
- 53000-70** Low Pressure Regulator Gauge
- 53000-300** High Pressure Regulator Gauge
- 47482** 48" Yellow Charging Hose
- 93254-E** Black Gauge Guard
- 53000-W** Teflon Washer

ACCESSORIES



- 53314** Dye Remover
4 oz (120 ml)
- 53315** Service Labels
25 per pack, bright yellow label indicating that the system has been charged with UV Dye.
- 92398** UV Enhancing Safety Glasses
This is a must for protection against ultraviolet light during leak detection.

90935 ALUM BOND (6.5 oz package)



A two-component epoxy formula highly concentrated with carefully selected pure aluminum particles, modified curing agents and special high quality additives to provide maximum strength, durability and ease of application. Alumbond is aluminum filled epoxy specially formulated for repairing condenser coils, tanks, valves, pumps, castings, water jackets, radiators, etc., where non-rusting, non-magnetic aluminum finish is desired.

PHYSICAL PROPERTIES:

- Hardness (Shore, ASTM D 1706): 83D
- Coefficient of Thermal Expansion: 40 x 10⁻⁶ cm/cm^oC
- Compression Strength (ASTM D 695): 8600 psi (59 M Pa)
- Tensile Strength (ASTM D 638): 3500 psi (24 M Pa)
- Maximum Line Pressure (after 5 hours application time): 650 psi



BLOWER FANS



- 120 Volts, 60 Hz
- Rated Power: 2.0 Amp
- For indoor or outdoor use
- Variable Speed Switch Controls Motor Speed: 950-1650 RPM
- Built-in Overload Protection
- (2 pcs) 11 Amp Built-In Grounded Receptacles
- Housing Material: Impact Resistant ABS
- 8.5 ft Cord Length, SJTW 14AWG
- 4-position adjustment feet

- 21200** **1200 CFM BLOWER FAN**
 - Moves air up to: 1200 CFM
 - Unit weight: 15.9 lbs

- 20300** **300 CFM BLOWER FAN**
 - Moves air up to: 300 CFM
 - Unit weight: 11.5 lbs

20300-HTR HEATER ATTACHMENT FOR 300 CFM BLOWER FAN



- 1320 Watts, 120 Volts
- 11 Amps, 5000 BTU
- Converts Blower into a Heater
- Clips Securely onto the Front of the Blower and Plugs into one of the Outlets on the Side of the Blower
- 14AWG SJT Cord, Grounded Plug



**TUBE AND HOSE
FORMING**

HYDRA-SWAGE



71600-A



71650-A

Fabricates and Expands Copper, Aluminum and Soft Steel Tubing Using Hydraulic Power.
PATENT# 6,619,099



71600-A (7 HEAD KIT) Consists of Expander Heads 3/8, 1/2, 5/8, 3/4, 7/8, 1 and 1 1/8", Hydra-Swage 71601, Adapter and Inner-Outer Reamer

71650-A (10 HEAD KIT) Consists of Expander Heads 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/8, 1 3/8, 1 5/8, and 2 1/8", Hydra-Swage 71601, Adapter and Inner-Outer Reamer.

PART#	DESCRIPTION	TUBE O.D.
71601-A	Hydra-Swage	
71601-D	Adapter for 71601	
71685	Inner - Outer Reamer	
71600-PB	Molded Box for 71600, 71600-M & 71650	
71600-03	Expander Head	3/8"
71600-04	Expander Head	1/2"
71600-05	Expander Head	5/8"
71600-06	Expander Head	3/4"
71600-07	Expander Head	7/8"
71600-08	Expander Head	1"
71600-09	Expander Head	1 1/8"
71600-11	Expander Head	1 3/8" (35 mm)
71600-13	Expander Head	1 5/8"
71600-17	Expander Head	2 1/8" (54 mm)



HYDRAULIC FLARING AND EXPANDING



71675

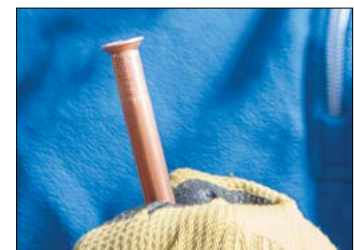


71676

Mastercool introduces the newest members of its handheld hydraulic line of tubing tools. These new kits are an upgrade to the existing hydra-swage expanding kits, allowing the user to easily make OEM flares with a pump of the handle.

71675 (7 HEAD KIT)
 Complete Hydraulic Flaring and Expanding Kit Consists of Expander Heads 3/8, 1/2, 5/8, 3/4, 7/8, 1 and 1 1/8", Hydra-Swage 71601, Adapter, Inner-Outer Reamer and Hydraulic Flaring Accessory 71680 packaged in a blow molded case

71676 (10 HEAD KIT)
 Complete Hydraulic Flaring and Expanding Kit Consists of Expander Heads 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/8, 1 3/8, 1 5/8, and 2 1/8", Hydra-Swage 71601, Adapter, Inner-Outer Reamer and Hydraulic Flaring Accessory 71680 packaged in a blow molded case



Mastercool[®]
 "World Class Quality"

71680 HYDRAULIC FLARING ACCESSORY

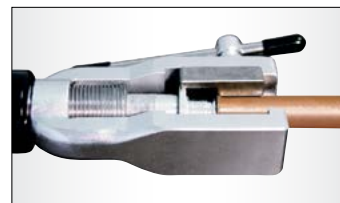


Add the 71680 to your existing Mastercool hydraulic expanding kits to allow for the ability to make OEM flares with a simple pump of the handle.

71700 HYDRAULIC FLARING & SWAGING TOOL



This kit features a hand-held hydraulic press that accurately flares & swages copper tubing. Once the die and adapter are secured in the fixture, a few pumps of the handle and you're done! This tool really takes the work out of swaging and flaring, especially on larger tube sizes. The kit includes dies and adapters for flaring and swaging copper tubing sizes 1/4, 5/16, 3/8, 1/2, 5/8, 3/4 and 7/8." Comes in custom molded carrying case. **PATENT# 5,782,128**



The copper tube is secured in the holding fixture by the forming dies. The hydraulic pump pushes in the forming adapter to fabricate the flare or swage. This cut-away photo shows the forming process.



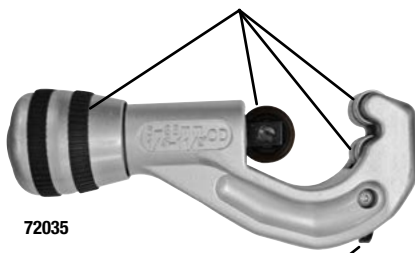
- 71700-A** Flaring & Swaging Pump
- 71700-B** Yoke Assembly
- 71700-PB** Plastic Molded Box
- 71700-01** 45° Flaring Cone
- 71700-04** 1/4" Swaging Adapter
- 71700-05** 5/16" Swaging Adapter
- 71700-06** 3/8" Swaging Adapter
- 71700-08** 1/2" Swaging Adapter
- 71700-10** 5/8" Swaging Adapter
- 71700-12** 3/4" Swaging Adapter
- 71700-14** 7/8" Swaging Adapter
- 71700-104** 1/4" Die Set
- 71700-105** 5/16" Die Set
- 71700-106** 3/8" Die Set
- 71700-108** 1/2" Die Set
- 71700-110** 5/8" Die Set
- 71700-112** 3/4" Die Set
- 71700-114** 7/8" Die Set
- 71685** Inner-Outer Reamer
- 70087** Steel Brush Thread Cleaner



BALL BEARING CUTTERS



Each cutter includes up to 8 ball bearings for easy operation and extra smooth cut.



Includes a detachable swivel deburring tool for smooth surface

Mastercool's EZ Tube Cutters offer the latest "Reduced Friction" technology! Our reduced friction design incorporates ball bearings into the cutter wheel, tube rollers and a control knob. Reducing the resistance in these high friction areas allows the cutter to roll fast and easy as it slices through the tube. The "Reduced Friction" design is sure to save time and reduce fatigue!



COMPARE



Standard steel cutting wheel used on competing cutters



Reinforced steel cutting wheel with internal ball bearings for extra smooth cut

- 72029** "Reduced Friction" Tube Cutter for 1/8 to 1 1/8" (3-28 mm)

- 72035** "Reduced Friction" Tube Cutter for 1/4 to 1 1/2" (6-38 mm)

- 72030** Replacement Cutting Wheel for 72029

- 72034** Replacement Cutting Wheel for 72035

TUBE CUTTERS



70027



70029



70033



70037

MASTERCool tube cutters are lightweight yet durable. Carbide steel cutting wheels work with hard and soft copper, aluminum, brass, thin wall steel and stainless steel. All cutters feature rollers with flare cut-off grooves to salvage as much old tubing material as possible.

- 70027** Mini Tube Cutter for 1/8 to 5/8" (3-16 mm) O.D. Tubing (1/8 to 1/2" Nominal)

- 70029** Mini Tube Cutter for 3/8 to 1 1/8" (4-28 mm) O.D. Tubing (1/4 to 1" Nominal)

- 70033** Heavy Duty Tube Cutter for 1/8 to 1 1/8" (4-28 mm) O.D. Tubing (1/4 to 1" Nominal)

- 70035** Heavy Duty Tube Cutter for 1/4 to 1 5/8" (6-40 mm) (1/4 to 1 1/2" Nominal)

- 70037** Sliding Ratchet Tube Cutter for 1/4 to 2 5/8" (6-67 mm) O.D. Tubing (1/4 to 2 3/4" Nominal), Triple Chrome Plated

- 70038** Sliding Ratchet Tube Cutter for 1/4 to 3 1/2" (6-89 mm) O.D. Tubing (1/4 to 3" Nominal)



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TUBE CUTTER KIT



- 70090** contains:
70027 Mini Tube Cutter for 1/8" to 5/8" O.D. Tubing (1/8" to 1/2" Nominal)
70029 Midi Tube Cutter for 3/8" to 1 1/8" O.D. Tubing (1/4" to 1" Nominal)
70033 Heavy Duty Tube Cutter for 1/8" to 1 1/8" O.D. Tubing (1/4" to 1" Nominal)
- 70090-A** contains:
70027 Mini Tube Cutter for 1/8" to 5/8" O.D. Tubing (1/8" to 1/2" Nominal)
70029 Midi Tube Cutter for 3/8" to 1 1/8" O.D. Tubing (1/4" to 1" Nominal)
70033 Heavy Duty Tube Cutter for 1/8" to 1 1/8" O.D. Tubing (1/4" to 1" Nominal)
70037 Heavy Duty Tube Cutter for 1/4" to 2 5/8" O.D. Tubing (1/4" to 2 3/4" Nominal)

RATCHET STYLE TUBE CUTTER



70030

When you don't have swing room, ratchet action allows cutting all the way around the tubing easy.

- 70030** (1/4 to 7/8" O.D. Tubing)
70031 (5/16 to 1 1/8" O.D. Tubing)

70025 CAPILLARY TUBE CUTTER



Cuts all sizes of capillary tubes without collapsing the tube.

80021 PLUMBERS TYPE MINI CUTTER



Designed for applications with limited working space. Cuts soft copper, aluminum and thin wall steel tubing. Tube Cutter for 1/8 to 7/8" (4-22 mm) O.D. Tubing. (1/8 to 3/4" nom.)

- 80121** Spare Cutting Wheel for 80021

REPLACEMENT CUTTER WHEELS



70028



70034

- 70028** Replacement Cutting Wheels for 70027 (10 pcs).
70034 Replacement Cutting Wheels for 70029, 70030, 70031, 70033, 70035 (10 pcs + 1 holding screw).
70128 Carbide Cutting Wheel & Screw Set for 70027 includes: 2 Spare Cutting Wheels and 1 Holding Screw.
70134 Carbide Cutting Wheel and Screw Set for 70029, 70035. Includes: 2 Spare Cutting Wheels and 1 Holding Screw.
70138 Replacement Cutting Wheel for 70038 (1 per pkg.) Cut Hard and Soft Copper, Aluminum, Brass, Thin Wall Steel and Stainless Steel.
70237 PVC Cutting Wheel for 70037. Cuts PVC and ABS.
70238 Oversize PVC Cutting Wheel for 70038. Wheel is 1 5/8" Diameter. Cuts PVC and ABS.

TUBE CONSTRICTOR WHEEL



- 70233** Used with 70033 or 70035.



ONLY ECCENTRIC FLARING TOOL ON THE MARKET TO COVER UP TO 7/8"



Make the perfect flare every time. Keeping with tradition, Mastercool introduces the newest addition to our flaring tool line. This eccentric flaring tool is the only tool on the market to cover up to 7/8" making the job of the HVAC/R technician easier everyday! Its automatic torque release prevents cracking of copper caused by over flaring. Flares 6 sizes: 1/4, 3/8, 1/2, 5/8, 3/4, 7/8" O.D. Tubing



Railing allows yoke to smoothly travel while keeping the flaring tool and bar aligned



3/8" access drive allows for use with impact wrench

70059 Flares 6 sizes: 1/4, 3/8, 1/2, 5/8, 3/4, 7/8" O.D. Tubing.

70060 Kit includes: **70059** Eccentric Flaring Tool, **71685** Inner-Outer Reamer, **70033** Heavy Duty Tube Cutter for (1/8" – 1 1/8") 4 to 28 mm.

ECCENTRIC FLARING TOOLS



<< NEW AND IMPROVED >>

- Aluminum design
- Light weight and durable
- Automatic torque release

70057-A Flares 6 Sizes: 1/4, 5/16, 3/8, 1/2, 5/8 and 3/4" O.D. Tubing.

70058-A Kit includes: **70057-A** Eccentric Flaring Tool, **71685** Inner-Outer Reamer, **70033** Heavy Duty Tube Cutter for (1/8" – 1 1/8") 4 to 28 mm. O.D. Tubing (1/4 to 1" Nominal).

70051 STANDARD 45° FLARING TOOL

Durable forged steel slip-on yoke. Flaring bar is hardened, highly polished and nickel chrome plated. Auto centering yoke features bearing driven hardened cone for easy flaring. Flares 7 sizes: 3/16", 1/4", 5/16", 3/8", 7/16", 1/2" and 5/8" O.D. tubing.



70052 SLIDING DIE-BLOCK 45° FLARING TOOL

Uniquely designed flaring cone flares and burnishes in one easy operation. Slide-on yoke is simple to use. Hardened multi-size flaring bar speeds flaring time. Flares and burnishes 6 sizes: 3/16", 1/4", 5/16", 3/8", 1/2" and 5/8" O.D. tubing.



70056 LARGE CAPACITY 45° FLARING TOOL

Flares large tube sizes. Hard chrome plated, swivel flaring cone makes flaring quick and easy. Flaring bar is hardened and nickel chrome plated. Flares 4 sizes: 5/8", 3/4", 7/8" and 1 1/8" O.D. tubing.



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70091 45° FLARING & CUTTING TOOL SET

45° Flaring & Cutting Tool Set includes:

- 70033** Heavy Duty Tube Cutter for 1/8" to 1 1/8"
- 70051** Standard 45° Flaring Tool flares 7 sizes: 3/16", 1/4", 5/16", 3/8", 7/16", 1/2" and 5/8" O.D. tubing.



70092 45° FLARING, DOUBLE FLARING & CUTTING TOOL SET

The 70092 Tool Set includes a heavy duty tube cutter for 1/8 to 1 1/8" tubing, standard 45° flaring tool flares 7 sizes: 3/16, 1/4, 5/16, 3/8, 7/16, 1/2 and 5/8" O.D. tubing and 5 double flaring adapters for 3/16, 1/4, 5/16, 3/8 and 1/2" O.D.



70093 45° SLIDING DIE-BLOCK FLARING & CUTTING TOOL SET

Includes heavy duty tube cutter (70033) and sliding die-block flaring tool (70052.) Uniquely designed flaring cone flares and burnishes in one easy operation. Slide-on yoke is simple to use. Hardened multi-size flaring bar speeds flaring time.

45° Sliding Die-Block Flaring & Cutting Tool Set includes:

- 70052** 45° Flaring Tool flares and burnishes 6 sizes: 3/16", 1/4", 5/16", 3/8", 1/2" and 5/8" O.D. tubing.
- 70033** Heavy Duty Tube Cutter for 1/8" to 1 1/8" O.D. tubing.



70094 WIDE RANGE 45° FLARING & CUTTING TOOL SET

Includes heavy duty tube cutter (70033) and wide range flaring tool (70054) with rugged forged steel slip-on yoke. Flaring bars are hardened, highly polished and nickel chrome plated.

Wide Range 45° Flaring & Cutting Tool Set includes:

- 70054** Flaring Tool flares 9 sizes: 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8" and 3/4"
- 70033** Heavy Duty Tube Cutter for 1/8" to 1 1/8" O.D. tubing.
- 70082** Ratchet Wrench for 1/4", 3/8", 3/16" and 5/16" O.D. tubing.



70053 45° FLARING & SWAGING TOOL SET



Durable forged steel slip-on yoke. Bars are chrome plated, hardened steel. Swages in close quarters where punch style cannot be used. Includes custom molded plastic box.

45° Flaring & Swaging Tool Set includes:

- Two Flaring Bars covering 9 sizes: 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8 and 3/4" O.D. Tubing.
- Five Swaging Adapters covering 7 sizes: 3/16, 1/4, 5/16, 3/8, 1/2, 5/8 and 3/4" O.D. Tubing.



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TUBE BENDERS

70069-A 4-IN-1 LEVER STYLE TUBE BENDER



Complete 180° bend all metal multi-purpose tube bender for 3/16, 1/4, 5/16 and 3/8" O.D. Tubing.

SPRING STYLE TUBE BENDERS



Economical and effective tools for bending soft copper or aluminum tubing without kinks. Special nickel plated, spring steel is flared on one end for quick tube insertion. Each tool bends one size.

MODEL#	SIZE	LENGTH
70071	1/4"	10"
70072	5/16"	10"
70073	3/8"	10"
70074	1/2"	12"
70075	5/8"	14"
70077	3/4"	14"

70076 SPRING STYLE TUBE BENDER SET



Set of 5 spring benders for 1/4, 5/16, 3/8, 1/2 and 5/8" O.D. tubing.

LEVER STYLE TUBE BENDERS



70061

Open side design slips over tube at any point. Makes smooth short radius bends up to 180° with minimum effort. Calibrated to show angle of bend. Easy 90° start requires much less effort to make fast and accurate bends. Each tool bends one size.



MODEL #	OUTSIDE DIAMETER OF TUBING	NOMINAL SIZE	RADIUS TO CENTER OF TUBE
70061	1/4"	1/8"	9/16"
70062	5/16"	-	11/16"
70063	3/8"	1/4"	15/16"
70064	1/2"	3/8"	1 1/2"
70065	5/8"	1/2"	2 1/4"
70066	3/4"	5/8"	3"
70067	7/8"	3/4"	3"



70066



70070 “Ratchet Style” TUBE BENDER KIT - 5 SIZES



- Hand-operated ratchet design bends tubes easily. Bends 5 sizes: 3/8, 1/2, 5/8, 3/4 and 7/8” O.D. soft tubing
- Includes heavy duty tube cutter for 1/8 – 1 1/8” O.D. tubing
- Includes inner-outer reamer for 3/16 – 1 1/2” O.D. tubing
- Comes in custom molded case



70080 “Ratchet Style” TUBE BENDER KIT - 6 SIZES



<< BENDS 6 SIZES >>

Same as 70070 less 70033 Cutter & 70085 Reamer. Bends 6 sizes: 3/8, 1/2, 5/8, 3/4, 7/8 and 1 1/8” O.D. soft tubing.

70070-RD REVERSE DIRECTION BENDING ADAPTER



Bends: 1/4”, 5/16”, 3/8”, 1/2”, 5/8”, 3/4”, 7/8” O.D. tubing



PUNCH-TYPE SWAGING TOOLS



Enlarge one end of copper tubing to accept piece of original size tubing then solder together like a fitting. Tools are heat treated for durability.

- 70040** All-In-One Swaging Punch Nickel-Chrome finish. Swages 1/4, 5/16, 3/8, 1/2 and 5/8".
- 70048** Set of 5 Swaging Punches for 1/4, 5/16, 3/8, 1/2 and 5/8" O.D.
- 70049** Flaring Bar and Set of 5 Punches for 1/4, 5/16, 3/8, 1/2 and 5/8" O.D. all in case.

MODEL#	SIZE	LENGTH
70041	1/4"	1/8"
70042	5/16"	-
70043	3/8"	1/4"
70044	1/2"	3/8"
70045	5/8"	1/2"
70046	3/4"	5/8"
70047	7/8"	3/4"

70078 TORQUE WRENCH



Ensures accurate tightness of fittings, especially R410A. Kit in a blow molded case includes sizes: 17, 22, 24, 26, 27 and 29 mm.

Optional Wrench Sizes Available:

70078-19	19 mm	70078-28	28 mm
70078-25	25 mm	70078-32	32 mm

RATCHET WRENCHES



- 70081** Steel forged wrench with reversible ratchet. 9/16", 1/2" hex, 1/4" and 3/16" square.
- 70082** Compact chrome plated wrench specially designed for use in hard to reach places. 1/4, 3/8, 3/16 and 5/16" square ratchet.

70088 1/4" TUBE PIERCING PLIER



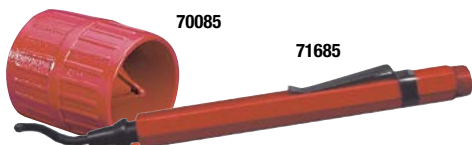
- 70088-TIP** Replacement Tip for 70088

70083 PINCH-OFF PLIER



Specially designed for the refrigeration industry. Pinches off and locks on copper tubing. Size: Throat 7", Depth 1", Jaw thickness 1/4"

INNER-OUTER REAMERS



- 70085** Inner/Outer Reamer for 3/16 to 1 1/2" O.D. Tubing.
- 71685** Designed to remove inner burrs easily. Full metal grip. Includes one spare tungsten blade for long use.
- 71686-2** Two spare blades for 71685 (2 pcs).



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70200-MSK MINI-SPLIT TOOL KIT



Consists of:

- MC HVAC-BAG** HVAC Utility Bag
- 59661-G** 2 Way Ball Valve Manifold Gauge Set
- 70078** Torque Wrench
- 90413** Straight Adapter Fittings (2 pcs)
- 70058-A** Eccentric Flaring Tool Kit
- 91498** Universal Valve Core Remover/Installer Kit

70200-BSK BASIC STARTER KIT



Consists of:

- MC HVAC-BAG** HVAC Utility Bag
- 59161-G** Brass Manifold Gauge Set w/gauge guards & 3-60" hoses
- 70082** Ratchet Wrench
- 70040** All in One Swaging Punch
- 70076** Spring Style Tube Bender
- 70091** 45° Flaring & Cutting Tool
- 70085** Reamer
- 90376** Valve Core Remover w/Valve Cores
- 70088** 1/4" Tube Piercing Plier
- 52227** Pocket Infrared Thermometer

70200-PK PREMIUM KIT



Consists of:

- MC HVAC-BAG** HVAC Utility Bag
- 59161-G** Brass Manifold Gauge Set w/gauge guards & 3-60" hoses
- 70082** Ratchet Wrench
- 70053** Flaring and Swaging Tool Kit
- 70069-A** 4-1 Lever Style Tool Bender
- 72029** Ball Bearing Tube Cutter
- 71685** Pen Type Inner/Outer Reamer
- 91498** Universal Valve Core Remover/Installer
- 252219** 8:1 Infrared Thermometer

70200-PRK PRO KIT



Consists of:

- MC HVAC-BAG** HVAC Utility Bag
- 58203-G** Ball Valve Manifold (Gauges Only) with Gauge Guards
- 49262-60** 60" Set of High Pressure hoses with manual shut-off valve fittings
- 52246** Compact Subcool/Superheat Calculator
- 98061** Digital Vacuum Gauge

70200-HK HAND TOOL KIT



Consists of:

- MC HVAC-BAG** HVAC Utility Bag
- 70082** Ratchet Wrench
- 70088** 1/4" Tube Piercing Plier
- 70083** Pinch Off Plier
- 71685** Pen Type Inner/Outer Reamer
- 52227** Pocket Infrared Thermometer
- 52336** Clamp-On Thermocoupler (extends 3 feet)



TUBING TOOL SELECTION CHART

TUBING TOOL SELECTION CHART

+ Tubing should be torch annealed before flaring.

		TYPES OF TUBING												
		COPPER					STEEL					STAINLESS		
Type of Tool	Size Range Tube O.D.	Annealed (Soft) Gen. Purpose	Type K		Type L			Annealed Aluminum (Soft)	Annealed Brass (Soft)	S.A.E. 1010 (Soft)	Brazed-Bundy GM	Annealed Soft	1/8 Hard	Titanium
			Soft	Hard	Soft	Soft	Type M							
Tube Cutters														
70027	1/8 - 5/8"	*	*	*	*	*	*	*	*	*	*	*	*	*
70029	3/8 - 1 1/8"	*	*	*	*	*	*	*	*	*	*	*	*	*
70033	1/8 - 1 1/8"	*	*	*	*	*	*	*	*	*	*	*	*	*
70035	1/4 - 1 5/8"	*	*	*	*	*	*	*	*	*	*	*	*	*
70039	3/8 - 2 5/8"	*	*	*	*	*	*	*	*	*	*	*	*	*
72029	1/8 - 1 1/8"	*	*	*	*	*	*	*	*	*	*	*	*	*
72035	1/4 - 1 1/2"	*	*	*	*	*	*	*	*	*	*	*	*	*
45° Flaring & Expanding Tools														
70051	3/16 - 5/8"	*	*	*	*		+	*	*					
70052	3/16 - 5/8"	*	*	*	*		+	*	*					
70053	1/8 - 3/4"	*	*	*	*		+	*	*					
70054	1/8 - 3/4"	*	*	*	*		+	*	*					
70056	5/8 - 1 1/8"	*	*	*	*		+	*	*					
71600	3/8 - 1 1/8"	*	*	*	*		+	*	*					
71650	3/8 - 2 1/8"	*	*	*	*		+	*	*					
71700	1/4 - 7/8"	*	*	*	*		+	*	*					
45° Double Flaring Tool 70092 3/16 - 1/2"														
Reaming and Deburring Tools														
70085	3/16 - 1 1/2"	*	*	*	*	*	*	*	*					
71685		*	*	*	*	*	*	*	*					
Bending Tools														
70061-70069	1/4 - 7/8"	*	*	*	*			*	*	*	*			
70071 - 70077	1/4 - 3/4"	*	*	*	*			*	*	*	*			
70070	3/8 - 7/8"	*	*	*	*			*	*	*	*			
70080	3/8 - 1 1/8"	*	*	*	*			*	*	*	*			
Tube Constrictor 70233 1/8 - 1 5/8"														
Swaging Tools 70040 - 70049 1/4 - 7/8"														
		+	+			+		+	+					

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