

TEMP-A-CURE™



Today's high performance car packs a lot of power in a smaller package. In order to save both weight and space, the typical OEM cooling system is designed for "normal" driving conditions. When driven hard for extended periods, the cooling system may prove less than adequate. Earl's offers the solution to marginal cooling systems—race proven lightweight and efficient oil coolers designed to fit in the smallest practical space.

Any performance vehicle can benefit from the TEMP-A-CURE difference. Tow vehicles, motor homes, passenger cars and even motorcycles can realize extended engine and/or transmission efficiency and life with an Earl's TEMP-A-CURE oil cooler.

Racing cars have always required oil coolers. Since World War II, most racing cars, world wide, have utilized brazed aluminum "modular" oil coolers. The basic design of the modular oil cooler dates back to the early 1930s when it was developed for use with the Rolls Royce Merlin engine that powered the Spitfires and Hurricanes that won the Battle of Britain. This type of cooler with its internal turbulator plates and dense air fins provides maximum liquid side and air side surface area. The large collector tanks ensure minimum flow restriction. The fully brazed construction results in the most efficient possible thermal transfer path between liquid and air. All of this adds up to the most thermally efficient liquid-to-air heat exchanger available.

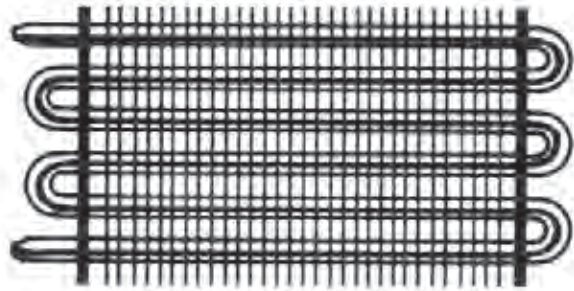
EARL'S TEMP-A-CURE OIL COOLERS OFFER THE FOLLOWING ADVANTAGES:

1. Manufactured in the U.S.A. from aircraft spec aluminum alloy, using the latest vacuum brazing technology.
2. Corrugated screen internal turbulator plates increase both thermal efficiency and mechanical strength resulting in the most efficient, smallest and lightest practical package (typically half the size of traditional tube & fin cooler).
3. Manufactured from thin aluminum plates for fastest possible heat transfer.
4. Inlet and outlet fittings seal with an o-ring to the top plate assembly for worry free performance.
5. Designed for the range of oil flows and air speeds encountered in high performance automobiles.
6. Available in three widths with inlet and outlet fittings, male AN -6 to -16
7. Every cooler is pressure checked to 175 psi. Periodic samples are burst tested to 350 psi.

TEMP-A-CURE™

EARL'S DESIGN

For many years, professional racers have been using modular style oil coolers almost exclusively. Virtually every Formula One, Indy and GTP or Trans-Am car depends on these type units for engine and transaxle cooling. Temp-A-Cure coolers have been developed specifically for use in all types of engines and transmissions subjected to temperature extremes, including competition and high performance uses. They are designed for the range of air speeds and oil flows normally encountered in automotive use, but built to aircraft standards of quality. They are constructed of high grade aluminum and are completely furnace brazed to insure the most thermally efficient joint possible between the oil tubes and air fins. The internal design of the oil tubes and the large area collector tanks provide maximum surface area with minimum pressure drop. The highly concentrated air fins offer maximum heat transfer to the outside air.



TYPICAL TUBE & FIN DESIGN

The tube and fin cooler has little to offer in the way of efficient oil cooling. Its typical serpentine design has a large pressure drop due to the tube length and to the restricted bends. The tube and fin cooler cannot approach the cooling efficiency of Earl's Fin density and oil side to air side mechanical bond.

AIR VELOCITY: THE CRITICAL FACTOR IN HEAT DISSIPATION

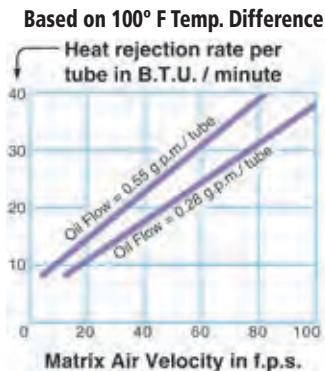
EARL'S TEMP-A-CURE OIL COOLERS are designed to efficiently use all of the air that passes through them. The center chart below shows that a Temp-A-Cure cooler of comparable size is between two and three times more efficient in terms of heat rejection as a typical tube and fin type cooler. ("B")

Cooler "A" in our chart below is of a popular stamped dish plate design; where the dish plates are the only components—no fins and no corrugated screen. This design, while extremely attractive to the manufacturer, sacrifices efficiency of heat transfer for ease of assembly.

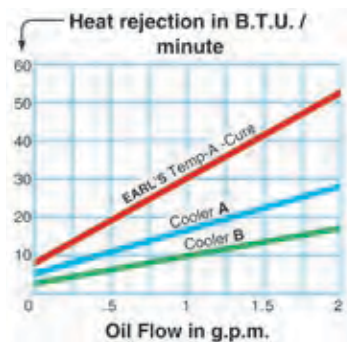
The right hand chart below represents testing to determine pressure drop. It shows that the Temp-A-Cure cooler can handle a larger volume of oil (four times the volume!) with less than half the pressure drop of a typical tube and fin style oil cooler.

Earl's Temp-A-Cure oil coolers are properly termed "air to liquid heat exchangers". In order to operate efficiently, they must be mounted in a stream of moving air at ambient temperature. It is not a good idea to mount the oil cooler behind the water radiator where it will receive only heated air. It is not enough to lead air to the cooler—the heated air must have somewhere to go after it passes through the core. Remember, air always obeys the immutable laws of fluid dynamics. Simply put, air will only flow from a region of relatively high pressure to a region of relatively low pressure. Any attempt on our part to convince it to do otherwise is doomed to failure.

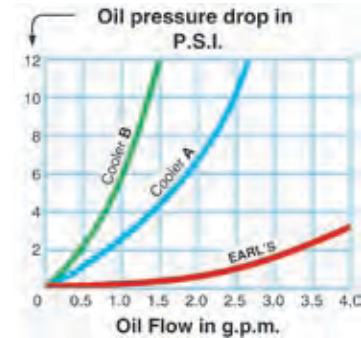
To obtain the heat rejection rate for a given Earl's Cooler, multiply the dissipation value from the chart by the number of tubes in the cooler.

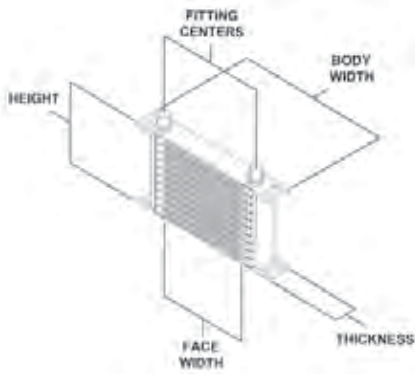


Comparable heat rejection rates based on SAE 10 weight oil at 200° F. inlet temperature and 7 square inches of matrix area. Contact Earl's for specific comparison data.



Comparable oil pressure drop across matrix with SAE 10 oil at 200° F. inlet temperature.





TEMP-A-CURE™

TEMP-A-CURE oil coolers are designed to suit any application. The chart below will assist you in choosing the correct model for your needs.

NOTE: Temp-A-Cure Coolers are available with male AN adapter fittings -6 to -12 and male -16 permanent fittings

FACE WIDTH (BETWEEN TANKS)	4"	4"	9"	9"	11"	11"
FITTING CENTERS	5-1/8"	5-1/8"	9-3/4"	9-3/4"	12-1/8"	12-1/8"
BODY WIDTH	8-1/4"	8-1/4"	13"	13"	15-1/4"	15-1/4"
THICKNESS	2"	2"	2"	2"	2"	2"



ROW # & HEIGHT	FITTING SIZE	GRAY-NARROW	BLACK-NARROW	GRAY-WIDE	BLACK-WIDE	GRAY-EXTRA WIDE	BLACK-EXTRA WIDE
7 Row Height 2"	Core Only	20700ERL	20700AERL	40700ERL	40700AERL	80700ERL	80700AERL
	-6 AN Male	20706ERL	20706AERL	40706ERL	40706AERL	80706ERL	80706AERL
	-8 AN Male	20708ERL	20708AERL	40708ERL	40708AERL	80708ERL	80708AERL
	12mmx1.5 female	20745ERL	-	-	-	-	-
10 Row Height 3"	Core Only	21000ERL	21000AERL	41000ERL	41000AERL	81000ERL	81000AERL
	-6 AN Male	21006ERL	21006AERL	41006ERL	41006AERL	81006ERL	81006AERL
	-8 AN Male	21008ERL	21008AERL	41008ERL	41008AERL	81008ERL	81008AERL
	-10 AN Male	21010ERL	21010AERL	41010ERL	41010AERL	81010ERL	81010AERL
	12mmx1.5 female	21045ERL	-	-	-	-	-
13 Row Height 4"	Core Only	21300ERL	21300AERL	41300ERL	41300AERL	81300ERL	81300AERL
	-6 AN Male	21306ERL	21306AERL	41306ERL	41306AERL	81306ERL	81306AERL
	-8 AN Male	21308ERL	21308AERL	41308ERL	41308AERL	81308ERL	81308AERL
	-10 AN Male	21310ERL	21310AERL	41310ERL	41310AERL	81310ERL	81310AERL
	-12 AN Male	21312ERL	21312AERL	41312ERL	41312AERL	81312ERL	81312AERL
	-16 AN Male	21316ERL*	21316AERL*	41316ERL*	41316AERL*	81316ERL*	81316AERL*
16 Row Height 5"	Core Only	21600ERL	21600AERL	41600ERL	41600AERL	81600ERL	81600AERL
	-6 AN Male	21606ERL	21606AERL	41606ERL	41606AERL	81606ERL	81606AERL
	-8 AN Male	21608ERL	21608AERL	41608ERL	41608AERL	81608ERL	81608AERL
	-10 AN Male	21610ERL	21610AERL	41610ERL	41610AERL	81610ERL	81610AERL
	-12 AN Male	21612ERL	21612AERL	41612ERL	41612AERL	81612ERL	81612AERL
	-16 AN Male	21616ERL*	21616AERL*	41616ERL*	41616AERL*	81616ERL*	81616AERL*
19 Row Height 5-7/8"	Core Only	21900ERL	21900AERL	41900ERL	41900AERL	81900ERL	81900AERL
	-6 AN Male	21906ERL	21906AERL	41906ERL	41906AERL	81906ERL	81906AERL
	-8 AN Male	21908ERL	21908AERL	41908ERL	41908AERL	81908ERL	81908AERL
	-10 AN Male	21910ERL	21910AERL	41910ERL	41910AERL	81910ERL	81910AERL
	-12 AN Male	21912ERL	21912AERL	41912ERL	41912AERL	81912ERL	81912AERL
	-16 AN Male	21916ERL*	21916AERL*	41916ERL*	41916AERL*	81916ERL*	81916AERL*

FACE WIDTH (BETWEEN TANKS)	4"	4"	9"	9"	11"	11"
FITTING CENTERS	5-1/8"	5-1/8"	9-3/4"	9-3/4"	12-1/8"	12-1/8"
BODY WIDTH	8-1/4"	8-1/4"	13"	13"	14"	14"
THICKNESS	2"	2"	2"	2"	2"	2"



ROW # & HEIGHT	FITTING SIZE	GRAY-NARROW	BLACK-NARROW	GRAY-WIDE	BLACK-WIDE	GRAY-EXTRA WIDE	BLACK-EXTRA WIDE
25 Row Height 7-3/4"	Core Only	22500ERL	22500AERL	42500ERL	42500AERL	82500ERL	82500AERL
	-6 AN Male	22506ERL	22506AERL	42506ERL	42506AERL	82506ERL	82506AERL
	-8 AN Male	22508ERL	22508AERL	42508ERL	42508AERL	82508ERL	82508AERL
	-10 AN Male	22510ERL	22510AERL	42510ERL	42510AERL	82510ERL	82510AERL
	-12 AN Male	22512ERL	22512AERL	42512ERL	42512AERL	82512ERL	82512AERL
	-16 AN Male	22516ERL*	22516AERL*	42516ERL*	42516AERL*	82516ERL*	82516AERL*
34 Row Height 10-1/2"	Core Only	23400ERL	23400AERL	43400ERL	43400AERL	83400ERL	83400AERL
	-6 AN Male	23406ERL	23406AERL	43406ERL	43406AERL	83406ERL	83406AERL
	-8 AN Male	23408ERL	23408AERL	43408ERL	43408AERL	83408ERL	83408AERL
	-10 AN Male	23410ERL	23410AERL	43410ERL	43410AERL	83410ERL	83410AERL
	-12 AN Male	23412ERL	23412AERL	43412ERL	43412AERL	83412ERL	83412AERL
	-16 AN Male	23416ERL*	23416AERL*	43416ERL*	43416AERL*	83416ERL*	83416AERL*

* -16 special order only

SPECIAL ORDER OIL COOLERS **Must purchase cores & fittings separately for -6 to -12 an sizes**

FACE WIDTH (BETWEEN TANKS)	4"	4"	9"	9"	11"	11"
FITTING CENTERS	5-1/8"	5-1/8"	9-3/4"	9-3/4"	12-1/8"	12-1/8"
BODY WIDTH	8-1/4"	8-1/4"	13"	13"	14"	14"
THICKNESS	2"	2"	2"	2"	2"	2"

ROW # & HEIGHT	FITTING SIZE	GRAY-NARROW	BLACK-NARROW	GRAY-WIDE	BLACK-WIDE	GRAY-EXTRA WIDE	BLACK-EXTRA WIDE
42 Row Height 13"	Core Only	24200ERL	24200AERL	44200ERL	44200AERL	84200ERL	84200AERL
	-16 AN Male	24216ERL	24216AERL	44216ERL	44216AERL	84216ERL	84216AERL
50 Row Height 15-1/2"	Core Only	25000ERL	25000AERL	45000ERL	45000AERL	85000ERL	85000AERL
	-16 AN Male	25016ERL	25016AERL	45016ERL	45016AERL	85016ERL	85016AERL
60 Row Height 18-1/2"	Core Only	26000ERL	26000AERL	46000ERL	46000AERL	86000ERL	86000AERL
	-16 AN Male	26016ERL	26016AERL	46016ERL	46016AERL	86016ERL	86016AERL

OIL COOLER ADAPTERS

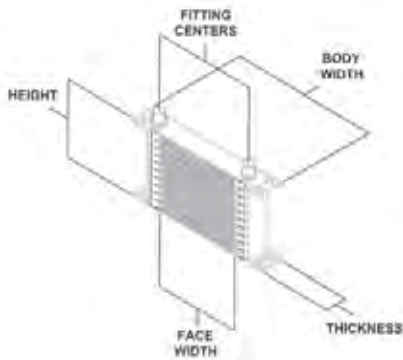
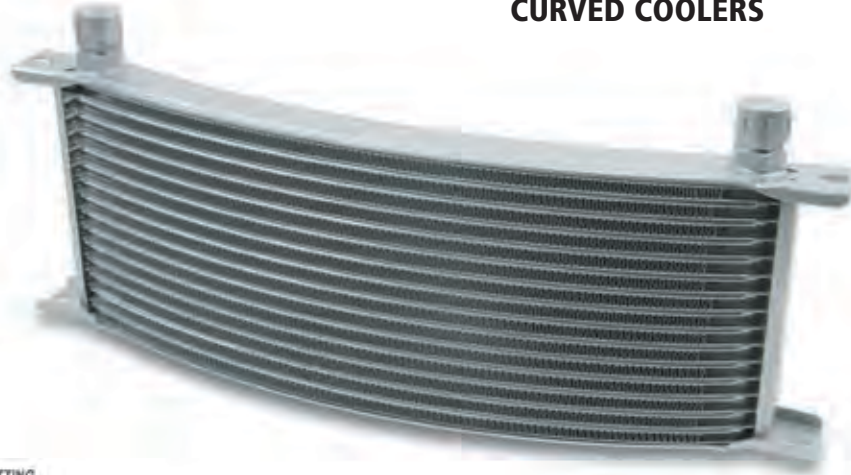
TEMP-A-CURE™ Coolers are manufactured with removable, interchangeable fittings that feature a contoured port side with an O-ring seal for worry free performance. You can stock your most common cooler cores and fittings, and mix and match to each customer's needs. This means you can lower your inventory, increase customer service, and increase inventory turns all at the same time!



PART NO.	AN FTG. SIZE	PORT FTG. SIZE
585106ERL	-6	-10
585108ERL	-8	-10
585110ERL	-10	-10
585112ERL	-12	-10

TEMP-A-CURE™

CURVED COOLERS



Earl's curved coolers are constructed with the same high grade aluminum and the same internal design as our standard 2" coolers, but have a curved design to fit neatly between the down tubes of a motorcycle for maximum heat dissipation. The curved design allows for full wheel travel no matter where it is mounted on the frame. These coolers are only 1-1/4" thick and are available in two widths, three different heights and male -6 or -8 inlet and outlet fittings.

FACE WIDTH (BETWEEN TANKS)	8"	8"	11"	11"
FITTING CENTERS	9.05"	9.05"	11.618"	11.618"
BODY WIDTH	11.562"	11.562"	14.125"	14.125"
THICKNESS	1.25"	1.25"	1.25"	1.25"



ROW # & HEIGHT	FITTING SIZE	GRAY-NARROW	BLACK-NARROW	GRAY-WIDE	BLACK-WIDE
10 Row Height 3.050 nom	-6 AN Male	71006ERL	71006AERL	91006ERL	91006AERL
	-8 AN Male	71008ERL	71008AERL	91008ERL	91008AERL
13 Row Height 3.977 nom	-6 AN Male	71306ERL	71306AERL	91306ERL	91306AERL
	-8 AN Male	71308ERL	71308AERL	91308ERL	91308AERL
16 Row Height 4.919 nom	-6 AN Male	71606ERL	71606AERL	91606ERL	91606AERL
	-8 AN Male	71608ERL	71608AERL	91608ERL	91608AERL

SUGGESTED TOOLS:

- Two Aluminum AN Hose End Wrenches (1-1/8")
- Earl's Performance Assembly Lube

TEMP-A-CURE OIL COOLER FITTING INSTALLATION

1. Inspect oil cooler threaded boss and AN fitting for nicks or burrs in O-ring contact area that might cause O-ring failure.
2. Lubricate O-ring by coating with Earl's Performance Products Assembly Lube or light petroleum oil and install the O-ring onto the fitting. (Fig. 1)
3. Screw male AN cooler fitting into the straight female thread boss on oil cooler. (Fig. 2)
4. Using two AN wrenches, tighten AN fitting until hexagon face contacts the face of the hexagon boss on cooler as shown in picture. Always use two wrenches to tighten fitting onto cooler. Using only one wrench and cooler as leverage will cause cooler to fail. (Fig. 3)
5. Do Not Over Tighten. Tighten to just snug. The O-ring is the sealing component. This is not a pipe thread.



Fig. 1



Fig. 2



Fig. 3

**NOTE: FAILURE TO FOLLOW ABOVE INSTALLATION PROCEDURES
VOIDS COOLER WARRANTY!**



ALUMINUM MOUNTING BRACKETS





Here is the strongest, most convenient and the best method for mounting an Earl's TEMP-A-CURE™ cooler. Manufactured from a custom aluminum extrusion and then ball burnished to a high luster, this bracket securely holds the TEMP-A-CURE™ cooler preventing vibration damage. The bracket is pre-drilled for ease of mounting to any surface, and comes complete with tension rods and the proper aircraft hardware. Check the chart below and choose the kit that matches the face height (number of rows) on your cooler. With proper installation the TEMP-A-CURE™ cooler will give a long service life.

NARROW COOLER PART NO.	WIDE COOLER PART NO.	EXTRA WIDE COOLER PART NO.	DESCRIPTION
1707ERL	1807ERL	1607ERL	Alum. Mounting Bracket Kit 7 Row Cooler
1710ERL	1810ERL	1610ERL	Alum. Mounting Bracket Kit 10 Row Cooler
1713ERL	1813ERL	1613ERL	Alum. Mounting Bracket Kit 13 Row Cooler
1716ERL	1816ERL	1616ERL	Alum. Mounting Bracket Kit 16 Row Cooler
1719ERL	1819ERL	1619ERL	Alum. Mounting Bracket Kit 19 Row Cooler
1725ERL	1825ERL	1625ERL	Alum. Mounting Bracket Kit 25 Row Cooler
1734ERL	1834ERL	1634ERL	Alum. Mounting Bracket Kit 34 Row Cooler
1742ERL	1842ERL	1642ERL	Alum. Mounting Bracket Kit 42 Row Cooler
1750ERL	1850ERL	1650ERL	Alum. Mounting Bracket Kit 50 Row Cooler
1760ERL	1860ERL	1660ERL	Alum. Mounting Bracket Kit 60 Row Cooler



OIL FILTER BY-PASS ADAPTERS


Many installations, particularly oil cooler installations, require the oil filter to be relocated. Earl's has bypass adapters for most spin-on applications. They are quick and easy to install. All ports are 1/2" NPT female.



	PART NO.	THREAD	PORT SIZE	O-RING O.D.	O-RING CROSS SECTION
	1178ERL	3/4-16	1/2 NPT	2-3/4" (69.2mm)	.139
TYPICAL APPLICATIONS* Most Ford, Chrysler, Toyota, Nissan & V-W vehicles with spin-on filter. Many other foreign makes.					
	1877ERL	22mm x 1.5	1/2 NPT	2-3/4" (69.2mm)	.139
TYPICAL APPLICATIONS* Many Honda and Acura vehicles. Some Ford.					
	1118ERL	3/4-16	1/2 NPT	2-1/2 (65mm)	.210
TYPICAL APPLICATIONS* Nissan, Toyota, Suzuki					
	1119ERL	20mm x 1.5	1/2 NPT	2-1/2 (65mm)	.210
TYPICAL APPLICATIONS* Nissan, Subaru, Holden					


*If you are unsure which adapter your vehicle requires or don't find your vehicle listed, please call factory for correct part number.


REMOTE OIL FILTER MOUNTS

USE THESE TEMP-A-CURE quality oil filter mounts from Earl's to relocate your oil filter. Machined from billet or cast from lightweight aluminum, these remote mounts are especially useful in high performance vehicles where quick, easy access to an oil filter is desired.

	DOUBLE PART NO.	CENTER THREAD	PORT SIZE
	2377ERL	3/4-16	1/2 NPT
	USE FILTER: Fram filters PH-8 or HP-1 (or equivalent)		

	SINGLE PART NO.	CENTER THREAD	PORT SIZE
	2178ERL	3/4-16	1/2 NPT
	2177ERL	3/4-16	1/2 NPT
	USE FILTER: Fram filters PH-8 or HP-1 (or equivalent)		

	2277ERL	3/4-16	1/2 NPT
	USE FILTER: Fram filters PH-8 or HP-1 (or equivalent)		

	2477ERL	13/16-16	1/2 NPT
	USE FILTER: Fram HP-2 (or equivalent)		

OIL THERMOSTAT




TO INSURE quick warm up under cold weather conditions, use our oil-stat. This uniquely designed product controls oil temperature like a thermostat controls water temperature in a radiator. The three 1/8" NPT sensor ports allow monitoring of oil temperature, flow and pressure. Designed for passenger car, marine and truck usage with Earl's TEMP-A-CURE oil coolers.

- .25 unthreaded mounting holes
- 4" x 4" x 1-3/8" unplated 6061 Billet Aluminum

PART #	501ERL
Fitting Size	-10 AN Female O-Ring Seal
Starts to Open	160° Fahrenheit
Fully Open	180° Fahrenheit







As in our remote oil thermostat these units facilitate quick oil warm up. These units mount between the oil filter mounting boss and the oil filter itself. **Opening starts at 160° / Fully open at 180°**

	PART NO.	CENTER PORT SIZE	PORT SIZE	O-RING O.D.	O-RING CROSS SECTION
	502ERL	3/4-16	10 AN Female O-Ring Seal	inner 2.887, outer 3.387	.139
	Typical Applications* Most Ford, Chrysler, Toyota, Nissan & V-W vehicles with spin-on filter. Many other foreign makes.				
	503ERL	13/16-16	10 AN Female O-Ring Seal	inner 2.887, outer 3.387	.139
	Typical Applications* Most General Motors and American Motors vehicles with spin-on filter.				
	504ERL	13/16-16	10 AN Female O-Ring Seal	inner 2.887, outer 3.387, spacer 3.77	.139 .210
	Typical Applications* Most Chevy V8 with spin on filter. All V8 through 1989 and some through 1996. 1990 and later may have metric threads.				

SANDWICH FILTER ADAPTERS

THESE UNITS allow the adaptation of an oil cooler to any engine while maintaining the stock oil filter location. These adapters add approximately 1" to the length of the filter and have 3/8 female pipe threads.

	PART NO.	CENTER PORT SIZE	PORT SIZE	O-RING O.D.	O-RING CROSS SECTION
	510ERL	3/4-16	3/8 NPT	2-3/4 (69.2mm)	.139
	Typical Applications* Most Ford, Chrysler, Toyota, Nissan & V-W vehicles with spin-on filters. Many other foreign makes.				
	514ERL	20mm x 1.5	3/8 NPT	2-3/4 & 3-3/8 (inner 69.2mm) (outer 85mm)	.139
	Typical Applications* Many Honda and Acura vehicles. Some Ford.				
	516ERL	3/4-16	3/8 NPT	2-1/2 (65mm)	.210
	Typical Applications* Toyota, VW, Suzuki, Nissan				
	517ERL	20mm x 1.5	3/8 NPT	2-1/2 (65mm)	.210
	Typical Applications* Honda, Acura, Nissan, Mazda, Subaru, Hyundai, KIA, Holden				

*If you are unsure of which adapter your vehicle requires or don't find your vehicle listed, please call factory for correct part number at 310-609-1602