MEZIERE
ENTERPRISES

2008 Catalog

Quick Reference Guide

General specifications include: options, length, weight and recommended fittings

MAKE / MODEL	PART #	COLOR	OPTIONS	INLET REQ.	SUGGESTED	OUTLET	LENGTH	WEIGHT
CHEVROLET								
Big Block	WP100	All	HD / 16V	Yes	WP1175	WN0022D	6.780	5.8
Reservoir	WP200	All	HD / 16V	Yes		WN0912	6.780	8.2
High Flow	WP300	All	16V/PORTED		Welded 1.75	WN0022D	7.280	7.4
Mechanical (V-Belt)	WP400	Blk, Pol, Chrm	PORTED		Welded 1.75	WN0022D		5.4
Mechanical (Serpentine)	WPR400	Blk, Pol, Chrm	PORTED		Welded 1.75	WN0022D		5.5
Small Block	WP101	All	HD / 16V	Yes	WP1175	WN0022D	6.780	5.5
Reservoir	WP201	All	HD / 16V	Yes		WN0912	6.780	8.5
High Flow	WP301	All	16V/PORTED		Welded 1.75	WN0022D	7.280	7.0
Mechanical (V-Belt)	WP401	Blk, Pol, Chrm	PORTED		Welded 1.75	WN0022D		5.4
Mechanical (Serpentine)	WPR401	Blk, Pol, Chrm	PORTED		Welded 1.75	WN0022D		5.5
GENERAL MOTORS								
LT-1 / LT-4	WP118	Blk, Chrm	HD / 16V		N/A		3.0 / HD 3.5	3.6
LS-1	WP119	All	HD / 16V	Yes	WP1150	Included	6.800	7.0
(High Flow w/ Idler)	WP319	All	16V		WN0019	Included	7.800	14.9
DRCE	WP110	All	HD / 16V	Yes	WP1175		6.780	7.0
High Flow	WP310	Blk, Pol, Chrm	16V		Welded 1.75		7.280	
BUICK (Small Block)	WP125	All	HD / 16V	Yes	WP1150		5.784	7.0
BUICK (400, 435, 455)	WP126	All	HD / 16V		N/A		4.00	5.7
OLDSMOBILE	WP135	All	HD / 16V	Yes	WP2175		6.100	5.8
PONTIAC	WP103	All	HD / 16V		N/A		3.776	5.9
GM All w/ 3800 Engine	WP140	All			N/A		3.500	4.1
FORD								
Big Block (390, 429, 460)	WP108	All	HD / 16V	Yes	WP1175	WN0014	6.100	5.8
Reservoir	WP208	All	HD / 16V	Yes		WN0812	6.100	8.2
High Flow	WP308	All		Yes	WN0033	WN0014	6.600	7.4
Big Block FE (352-428)	WP170	All	HD / 16V	Yes	WP2175		7.430	6.6
Small Block (221-351W,C,M)	WP111	All	HD / 16V	Yes	WP2175	WN0023	6.300	5.6
High Flow (No Idler)	WP311	All	16V	Included		WN0023	5.550	8.6
79-93 5.0 Serpentine	WP312	All	16V	Included		WN0023	6.300	10.2
94-95 5.0 Serpentine	WP374	All	16V	Included		WN0023	4.75	6.9
94-95 5.0 (No Idler)	WP373	All	16V	Included		WN0023	4.51	5.3
Danny B / Yates & Short Pump	WP173	All	HD / 16V	Yes	WP2175		6.100	5.6
Modular (4.6 / 5.4 / V10)	WP346	Blk, Chrm	16V		N/A		3.750	6.9
(No Idler)	WP345	Blk, Chrm	16V		N/A		3.500	5.0
MOPAR								
Big Block B, RB, HEMI	WP106	All	HD / 16V	Yes	WP1175	WN0029	6.800	7.1
Reservoir	WP206	All	HD / 16V	Yes	WP1016	WP10212B	6.800	9.5
High Flow	WP306	All	16V	Yes	WN0033	WN0029	N/A	N/A
Reverse High Flow	WP307	All	16V	Yes	WN0033	WP12012x2	N/A	N/A
Big Block Insert (Stock Housing)	WP105	Blk, Chrm	HD / 16V		N/A	WN0029	3.500	3.6
Small Block	WP114	All	HD / 16V	Yes	WP1175	WN0030	6.100	5.7
REMOTE								
Bulkhead	WP116	All	HD / 16V	Yes	WP1175	WP12012x2	5.000	5.4
High Flow Bulkhead	WP316	All	16V		Welded 1.75	WP12016x2	5.500	6.3
Mini Inline	WP136	Blk, Chrm		Yes	WP12125	WP12012	7.250	6.3
Mini Inline Dual Outlet	WP137	Blk, Chrm		Yes	WP12125	WP12012x2	7.250	6.4
High Flow Inline (Single Out)	WP336	Blk, Chrm	16V	Yes	WN0033	WN0033	5.200	6.2
High Flow Inline (Dual)	WP337	Blk, Chrm	16V	Yes	WN0033	WP16016x2	5.200	6.2
Radiator Mount (Single Out)	WP361	Blk, Chrm	16V		N/A	WN0033	5.200	5.9
Radiator Mount (Dual)	WP362	Blk, Chrm	16V		N/A	WP16016x2	5.200	5.9
Mechanical Remote	WP430	Blk, Chrm		Yes	WN0033	WP12012x2	5.550	
IMPORTS								
HONDA / ACURA								
B Series 1.6-1.7 & Type R 1.8	WPK50022	N/A			Included			8.6
B Series 1.8-2.1	WPK50019	N/A			Included			8.6
H Series 2.2-2.3	WPK50026	N/A			Included			8.6
MAZDA								
Rotary 11a,12a & 13b (Twin Inlets)	WP90			Yes	WP34012x2	WP1125		
Single Inlet	WP91			Yes	WP16016	WP16016		
NISSAN								
SR20 2.0	WPK510	N/A						8.6
TOYOTA								
93-98 Supra Turbo	WP520	N/A					4.250	5.2

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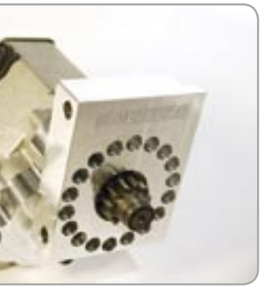

TS100

"Far superior to the common racing designs". That was the word from our engineering staff. A stronger drive and more powerful 2.2 KW motor provide superior performance. Our goal is to provide trouble free parts for your engine or vehicle. We recommend the TS100 series starters for engines smaller than 420 CID and up to 14.5:1 compression.

TS100 - Chevy for 168 tooth flexplate - Std. drive
TS101 - Chevy for 153 tooth flexplate - Std. drive

Inline design - straightforward starting.

All of the best components have been hand selected and assembled into one package. A powerful 1.9 KW permanent magnet motor is just the beginning. Hand crafted drive components provide stable power transfer through a unique planetary gear reduction sysem. This delivers impressive rotational speed to a 9310 hardened gear supported by a billet nose cone. This starter is recommended for engines up to 700 CID with straight sided oil pan configuration. Note: This starter will not clear oil pans which "kick out" on the passenger side.


TS301

TS300

TS300 - Chevy inline for 168 tooth flexplate - Std. straight bold pattern - Super Duty drive
TS301 - Chevy inline for 168 tooth flexplate - staggered "400 style" bold pattern - Super Duty drive


TS400

The engine builder's choice.

The recent trend among engine builders has been to increase displacement. Engines exceeding 540 CI, 632 or even larger are the norm. If this fits your description then we've got the prescription. Our TS400 design features a powerful 2.2 KW motor and a drive assembly specifically designed for extreme starting conditions. Virtually all of the power transmitting components have been scrutinized to bring you reliability unmatched by any other manufacturer.

TS400 - Chevy offset for 168 tooth flexplate - Super Duty drive
TS400DS - Chevy offset for 168 tooth flexplate - Super Duty drive - Driver's side mount
TS400DP - Chevy offset for 168 tooth or 153 tooth flexplate - Super Duty drive

The TST400 Starter fits big and small block Chevrolet engines. It requires that you use this in conjunction with part # FPT300 flexplate (139 tooth "ten pitch"). It is mandatory that the two "ten pitch" components be used together. The starter and flexplate combination will install exactly like a normal 12 pitch (standard Chevy) combination but will provide a deeper and stronger gear set.

TST400 - Chevy for 139 tooth 10 pitch flexplate - Super Duty drive


TST400

Ten Pitch

Next generation starting technology has arrived!

We've taken our proven superior components back to the development lab to produce a smaller, more compact unit. The results are in and the new TS500 design is a powerful starter with a space saving design. This starter fits alongside a wide variety of oil pans, offers full rotational adjustability and features our proprietary drive design for the very best in starting reliability


TS500

TS500 - Chevy slim line for 168 tooth flexplate - Super Duty drive


TS408

Ford starters really crank.

Boasting 2.2 kilowatts of power and our proprietary drive design you can rest assured your Ford engine will turn over faster than ever and will live to see the next round. Check out the ingenious design of the TS409 that allows you to achieve proper gear clearance. These starters also feature excellent gear support. The bottom line is more consistent starts.


TS409

Close-up of TS409 adjustable mount only.

TS408 - Ford for 164 tooth flexplate - Traditional mount
TS409 - Ford for 164 tooth flexplate - Adjustable mount to achieve precise gear mesh


TST409

Ten Pitch

Extreme Ford applications

demand stronger components and a proven starting approach. Apply the latest technology to your big cubic inch Ford engine with our TST409 starter combined with a "Ten Pitch" FPT308 True Billet flexplate. The TST409 features our eccentric drive adjustment and a stronger gear profile to solve the most difficult starting problems. Note: This starter must be mated to a ten pitch ring gear or flex plate.

TST409 - Ford for 140 tooth 10 pitch flexplate - Super Duty drive

Starters
GM, Mopar and Import

GM Starter


TS319

The LS series engine is gaining in popularity and a wide variety of accessory parts are coming available for it. Our new starting technology is the perfect upgrade when your extreme LS creation becomes more than a stock starter can handle.

TS319 - GM inline for 168 tooth flexplate fits LS engines - Super Duty drive

Mopar Starters

For your BIG Mopar it's best to provide big starting power. The TS106 gives you the most cranking speed and the biggest drive components available. Extreme cubic inches and extreme compression are no problem for this beast.

TS106 - Mopar for 130 tooth flexplate or converter gear - Std. drive


TS106


TS406H

This is a fine example of our passion for solving problems. This starter has been developed for the Pro Mod crowd. It features a face mount for mid plate attachment and a clever offset bushing set that allows you to properly adjust radial clearance between the starter gear and the flexplate.

TS406H - Mopar for 168 tooth 12 pitch Chevy style flexplate - Super Duty drive

Starters & Accessories

VW/Porsche


TS586

Designed with the rigors of off-road racing in mind, this beefy starter will not let you down in the heat of battle. Our superior drive and motor combination will bolt into most bellhousings that accept a VW / Porsche style starter. On this model, the back cap of the motor has additional drilled and tapped holes. These allow you to add support for off road racing activities where vibration and jarring are of concern.

TS586 - Volkswagen / Porsche style bell housing mount slim line - Super Duty drive

Starter Cable

Get the power all the way to the starter with our house brand of power cable. Super-fine stranded cable with a tin coating moves the voltage in the most efficient manner and lets your electrical system work the way it ought to. Weight conscious racers can rest assured this is the right solution.

Description	*Lbs./Ft.*	*20' Part #*	*100' Part #*
1/0 Power Cable Black	.436	**PW0A0S**	**PW1A0S**
1/0 Power Cable Red	.436	**PW0A0R**	**PW1A0R**
4 Gauge Cable Red	.177	**PW004R**	**PW104R**
10 Gauge Cable Red	.045	**PW010R**	**PW110R**

Starter main supply cable

Starter Cable Accessories

We also offer terminal ends and shrink tubing to help you take care of the final starting system details.

Ring Terminal Size	*Wire*	*Part #*
1/4"	10 Gauge	**PWA021**
5/16"	10 Gauge	**PWA022**
5/16"	4 Gauge	**PWA023**
3/8"	4 Gauge	**PWA024**
1/2"	4 Gauge	**PWA025**
5/16"	1/0 Gauge	**PWA026**
3/8"	1/0 Gauge	**PWA027**
1/2"	1/0 Gauge	**PWA028**

Shrink Tube Description	*Part #*
Red Shrink Tube 2" section for 1/0 terminal	**PWA051**
Black Shrink Tube 2" section for 1/0 terminal	**PWA052**


Terminal Ends


Terminal Ends


Shrink Tube


Assembly shown

Meziere True Billet Flexplates are clearly the superior choice for quality and precision. Machined to exacting tolerances from 4340 round bar, our proprietary manufacturing process ensures the strongest gear tooth, least runout and the best longevity on the market. All of our flexplates are certified to SFI spec 29.1

	FP300 (Fig. 1)	FP300A (Fig. 1)	FP300B (Fig. 1)	FPT300 Ten Pitch (Fig. 1)
Application	Chevy - Large	Chevy - Large	Chevy - Large	Chevy - Large
Dimension A	14.14	14.14	14.14	14.14
Dimension B	.450	.450	.450	.450
Dimension C	.170	.170	.170	.170
Dimension D	2.49	2.49	2.49	2.49
Dimension E	-	-	-	-
Tooth Count	168	168	168	139
Pitch	12	12	12	10
Total Weight	6.3 lbs.	6.4 lbs.	6.4 lbs.	6.3 lbs.
Counter Bal. Wt.	Neutral	454	502	Neutral
Converter Pattern	3 on 10.75 and 3 on 11.5	3 on 10.75 and 3 on 11.5	3 on 10.75 and 3 on 11.5	3 on 10.75 and 3 on 11.5

	FP301 (Fig. 1)	FP301A (Fig. 1)
Application	Chevy - Small	Chevy - Small
Dimension A	12.83	12.83
Dimension B	.450	.450
Dimension C	.170	.170
Dimension D	2.49	2.49
Dimension E	-	-
Tooth Count	153	153
Pitch	12	12
Total Weight	5.8 lbs.	5.9 lbs.
Counter Bal. Wt.	Neutral	400
Converter Pattern	3 on 10.75 and 3 on 11.5	3 on 10.75 and 3 on 11.5

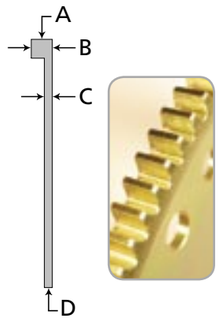


Fig. 1

	FP303 (Fig. 1)	FP335 (Fig. 1)	FP318A (Fig. 1)
Application	Pontiac	Oldsmobile	GM LT-1
Dimension A	13.96	13.89	12.83
Dimension B	.380	.450	.450
Dimension C	.200	.170	.170
Dimension D	2.91	2.55	2.072
Dimension E	-	-	-
Tooth Count	166	166	153
Pitch	12	12	12
Total Weight	6.3 lbs.	6.7 lbs.	5.8 lbs.
Counter Bal. Wt.	Neutral	Neutral	Stk LT-1
Converter Pattern	3 on 10.75 and 3 on 11.5	3 on 10.75 and 3 on 11.5	3 on 10.75 and 3 on 11.05

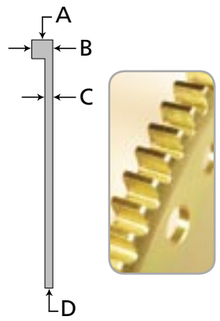


Fig. 1

FP319 (Fig. 2)

Application	GM LS-1
Dimension A	14.20
Dimension B	.450
Dimension C	.150
Dimension D	2.00
Dimension E	.585
Tooth Count	168
Pitch	12
Total Weight	6.95 lbs.
Counter Bal. Wt.	Neutral
Converter Pattern	Stk 3 hole w/slot on 11.056 and 3 on 10.75

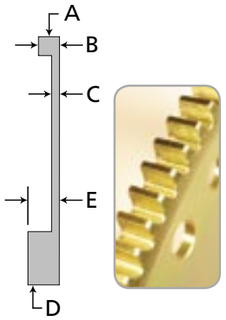


Fig. 2

FP340A (Fig. 3)

Application	GM 3800
Dimension A	11.90
Dimension B	.450
Dimension C	.170
Dimension D	1.266
Dimension E	.690
Tooth Count	142
Pitch	12
Total Weight	5.28 lbs.
Counter Bal. Wt.	Stk 3800
Converter Pattern	3 on 10.75 and 245 mm

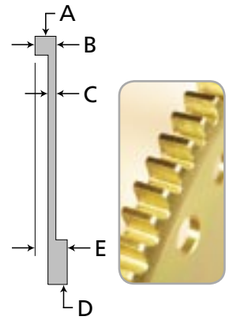


Fig. 3

Mopar flexplates come with a converter centering hub. Made with an integral ring gear (not stock configuration).

	FP30606 (Fig. 1)	FP30608 (Fig. 1)	FP306168 (Fig. 1)
Application	Mopar - 6 hole	Mopar - 8 hole	Mopar *
Dimension A	14.20	14.20	14.14
Dimension B	.450	.450	.450
Dimension C	.170	.170	.170
Dimension D	2.40	2.40	2.40
Dimension E	-	-	-
Tooth Count	130	130	168
Pitch	10	10	12
Total Weight	6.4 lbs.	8.46 lbs.	6.4 lbs.
Counter Bal. Wt.	Neutral	Neutral	Neutral
Converter Pattern	3 on 10.75	3 on 10.75	3 on 10.75 and 3 on 11.5

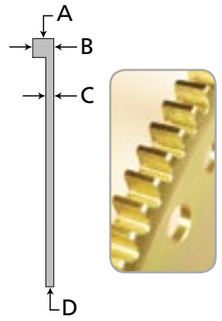


Fig. 1

*FP306168 has an 8 bolt crank pattern designed to fit Mopar “Hemi” engines. It will not fit the wedge type crank pattern

Note: Adapters available for various Hemi cranks...call for details

	FP311 (Fig. 3)	FP311A (Fig. 3)	FP311B (Fig. 3)
Application	SB Ford	SB Ford	SB Ford
Dimension A	13.30	13.30	13.30
Dimension B	.375	.375	.375
Dimension C	.180	.180	.180
Dimension D	1.753	1.753	1.753
Dimension E	.790	.790	.790
Tooth Count	157	157	157
Pitch	12	12	12
Total Weight	5.9 lbs.	6.0 lbs.	6.2 lbs.
Counter Bal. Wt.	Neutral	28	50
Converter Pattern	4 on 10.5 and 3 on 10.75	4 on 10.5 and 3 on 10.75	4 on 10.5 and 3 on 10.75

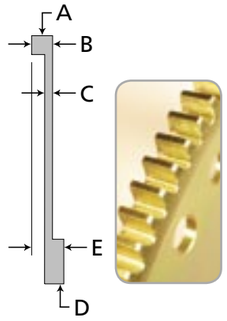


Fig. 3

	FP312 (Fig. 4)	FP312A (Fig. 4)	FP312B (Fig. 4)
Application	SB Ford	SB Ford	SB Ford
Dimension A	14.24	14.24	14.24
Dimension B	.375	.375	.375
Dimension C	.180	.180	.180
Dimension D	1.753	1.753	1.753
Dimension E	.875	.875	.875
Tooth Count	164	164	164
Pitch	12	12	12
Total Weight	7.26 lbs.	7.4 lbs.	7.5 lbs.
Counter Bal. Wt.	Neutral	28	50
Converter Pattern	3 on 10.75 and 3 on 11.5 4 on 10.5 and 4 on 11.38	3 on 10.75 and 3 on 11.5 4 on 10.5 and 4 on 11.38	3 on 10.75 and 3 on 11.5 4 on 10.5 and 4 on 11.38

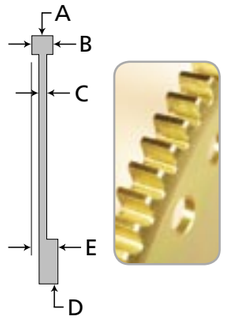


Fig. 4

	FP308 (Fig. 2)	FPT308 Ten Pitch (Fig. 2)
Application	BB Ford	BB Ford
Dimension A	14.21	14.21
Dimension B	.450	.450
Dimension C	.165	.165
Dimension D	2.502	2.502
Dimension E	.370	.370
Tooth Count	164	140
Pitch	12	10
Total Weight	6.94 lbs.	6.94 lbs.
Counter Bal. Wt.	Neutral	Neutral
Converter Pattern	3 on 10.75 and 3 on 11.5 4 on 11.38	3 on 10.75 and 3 on 11.5 4 on 11.38

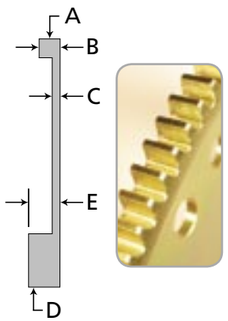


Fig. 2

Our line of flexplates have been solving problems for a few years now...for the "automatic transmission crowd" that is. Well now we have the ability to put superior ring gear precision in the hands of our friends with manual transmissions as well. Give us a call and talk to us about your ring gear needs. We enjoy using our resources to help you come up with the best solution for your high performance vehicle.

FPH437625

Secure your new True Billet flexplate with the finest hardware available. These bolts are race proven to be the very best. Sold with Locktite© thread locker for your convenience.

Flexplate bolt specs.	*Part #*
Six 7/16" diameter x 5/8" long	**FPH437625**
Six 1/2" diameter x 1/2" long	**FPH500500**
Eight 1/2" diameter x 1" long	**FPH500100**

Make the final connection with confidence. These converter bolt kits will take the abuse your engine gives out and will outlast any other bolt.

Converter bolt set specs.	*Part #*
7/16" diameter x 1.25" long	**FPA437125**
1/2" diameter x 1.5" long	**FPA500150**

FPA437125

FPS437125

FPS437187

Achieve the proper clearance with these precision spacers. Why use fender washers or clumsy "flat" washers (which are rarely flat) when you can choose the exact thickness to put your clearance in range.

Bolt size	*Thickness*	*Part #*
7/16"	.125"	**FPS437125**
7/16"	.187"	**FPS437187**
7/16"	.250"	**FPS437250**
1/2"	.125"	**FPS500125**
1/2"	.187"	**FPS500187**
1/2"	.250"	**FPS500250**

Water Pump Features

Performance
The design of the CNC machined impeller is the key to the performance of our pumps.

Longevity
One piece carbon-ceramic seal offers a life expectancy of 10,000 hours.

Corrosion Resistant
Corrosion can cause premature failure in the electrical portion of a pump. To combat this we supply a weather tight connector with our electric water pumps.

Durability
Epoxy coated motor windings protect against failure caused by harmonic vibration.

No Interference
Radio frequency suppression circuit incorporated into the motor brush card reduces "RF" interference.

Colors & Finishes
Most water pumps and accessories can be ordered in one of five finishes. Just insert the corresponding letter (R for Red) in the part number. (See example)

R=Red, **B**=Blue, **S**=Black, **U**=Polished, **C**=Chrome.

All pumps (except five part numbers) are fully polished to a show finish before anodizing. Any parts ordered as polished will be bare aluminum. Chrome parts are available but may require up to 3-4 weeks for delivery from the time of the order.

Motor Options
Electric pumps may be ordered with a Heavy Duty or 16 volt option. Both provide more power and RPM, increasing flow and pressure. The Heavy Duty "HD" option is recommended for street cars and other continuous duty applications (where High Flow model pumps are not available. Our 16 volt "16" motors offer protection against failure related to excessive voltage from charging or maintaining optimum voltage on 16 and 18 volt systems. These options also add 1 lb. to the total weight, add 1/2" to the length of the pumps, and 2 amps to current draw. **HD**=Heavy Duty, **16**=16 volt.

Example: WP100RHD would be a **W**ater **P**ump, **100** series, **R**ed color with **H**eavy **D**uty option.

Specify color and options when ordering.

Comes Complete! Installs in Minutes!

Reliability is how we made our name.
Although uncommon, failures do occur. The design that makes them so dependable also makes them non-field serviceable, so it is a good idea to keep a spare pump or center-section on hand. This replacement unit is not just a motor, it comes complete from end cap to impeller and includes wiring harness, gasket and hardware. 18 of the 21 100-200 series pumps utilize the WP150 center section. Spare gaskets can be ordered as well. The part number for most gaskets is 'WPG' then the pump number.

Water Pump Buyer's Guide

100 Series pumps generate 35 gallons per minute or more of water flow. This series continues to expand and now covers applications from AMC to ROVER. Most pumps use a 1" NPT port to direct water into the pump via one of the inlet adapters. These adapters are available in rubber hose and many AN sizes. Extended inlets, extensions, and angle adapters are also available.

200 Series are currently available for Big Block Chevy and Ford, Small Block Chevy, Mopar B/ RB and HEMI engines. This line is a new and innovative design with an integrated expansion tank to remedy the problems associated with low and horizontally mounted radiators. Everyone that has installed this pump is amazed at how simple the cooling system becomes.

300 Series pumps are the highest flow electric water pumps on the market. Most people use these on street high performance cars. Although the appearance of these models are similar to the 100 series pumps, internally everything is larger. Inlet inside diameters are 1 3/8" or 1 1/2". The impeller and pump cavity allow for greater volume of water. The Heavy Duty motors provide increased torque and RPM. The resulting flow rate of 55 GPM is enough to cool anything from a 600+ HP circle track car to a 2200 HP PRO MOD. We strongly recommend this series for supercharged, nitrous-oxide and high performance street engines. Applications now include radiator mount and three remote versions.

400 Series belt driven pumps are show quality outside and race bred inside. They are available for Big Block Chevy and Small Block Chevy (standard and reverse rotation). These pumps are all billet construction. The appearance and unmatched low speed flow numbers make them popular with the street rod crowd. The high RPM performance is capable of cooling any race engine.

500 Series pumps and radiator drop in kits are designed for specific import engines and/or cars. WPK part numbers are kits that convert the application from a belt driven, block mounted factory water pump to a remote electric. We have found that using the radiator as a platform for our popular WP136 pump has allowed hundreds of new sport compact car applications an easy way to plumb an electric water pump.

Water Pumps • Chevrolet
100 & 200 Series

100 Series

Recommended for Sport, Drag Cars and Mild Street Cars. All 100, and 200 Series pumps for Chevys are machined with enough back spacing to clear cam belt drives and are compatible with most roots blower drives. **Passenger side inlet port standard.**

35 GPM Standard
40 GPM Heavy Duty

WP100C (back)

WP101R

WP101C

For more technical information please see our Water Pump Buyer's Guide on pages 12-13.

1" NPT inlet required.
See page 34.

Application	*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
BBC 396-502	**WP100**	**R**,**B**,**S**,U,C	**HD** or **16**	5.8 lbs.	6.8 lbs.	6.780"	7.280"
SBC 4.3 V6, 262-400	**WP101**	**R**,**B**,**S**,U,C	**HD** or **16**	5.5 lbs.	6.5 lbs.	6.780"	7.280"

200 Series

A great cure for problems associated with low or horizontal mounted radiators. The 200 series pumps have a built in expansion tank that serves as a fill point and air separator. Returning the pressure cap to the low pressure side of the system allows you to fill the system easily with the pump running and maintains the level by purging air before any water escapes. With a head of water above a self priming pump cavity, this design eliminates air locking and cavitation.

35 GPM Standard
40 GPM Heavy Duty

1" NPT Inlet required.
See page 34.

Spacers
See pages 37 & 39.

Relay Kit WIK346
See page 40.

Radiator Cap
See page 33.

Application	*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
BBC 396-502	**WP200**	**R**,**B**,**S**,U,C	**HD** or **16**	8.5 lbs.	9.5 lbs.	6.780"	7.280"
SBC 4.3 V6, 262-400	**WP201**	**R**,**B**,**S**,U,C	**HD** or **16**	8.2 lbs.	9.2 lbs.	6.780"	7.280"

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty, 16=16 volt. When ordering please choose part #, color, and any options you prefer. For example **WP100RHD** would be a **W**ater **P**ump, **100** series, **R**ed color with **H**eavy **D**uty option. See our 'Water Pump Buyer's Guide' on pages 12-13 for more details.

Water Pumps • Chevrolet
300 Series

300 Series

55 GPM Standard

High Flow Pumps are the choice of NHRA Pro Stock champions Greg Anderson and Jason Line to keep cool in the heat of battle. The Meziere 300 series pumps changed the rules about using electric pumps on high horsepower street engines, nitrous motors, or super/turbo charged cars. Delivering 55 gallons per minute of flow, the 300 series pumps offer great cooling solutions to high horsepower vehicles. Higher flow rates reduce the chance of detonation.

High performance meets street practicability. We now offer our High Flow 55 GPM pumps for Chevrolet engines with a heater or bypass port. Fittings are available for a wide variety of hose connections. There's no need to freeze this winter...hook up the heater and go cruise!

Application	*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Depth (standard)*
BBC 396-502	**WP300**	**R**,**B**,**S**,U,C	**16**	7.4 lbs.	7.280"
SBC 4.3 V6, 262-400	**WP301**	**R**,**B**,**S**,U,C	**16**	7.0 lbs.	7.280"

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty, 16=16 volt. When ordering please choose part #, color, and any options you prefer. For example **WP100RHD** would be a **W**ater **P**ump, **100** series, **R**ed color with **H**eavy **D**uty option. See our 'Water Pump Buyer's Guide' on pages 12-13 for more details.


WP401U


WP420


WP421

Our pulleys have a 6.5" diameter and a unique style with 5 large windows.

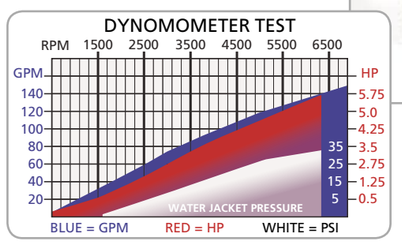
SINGLE GROOVE PULLEY **WP420**
Available color: **U,C**

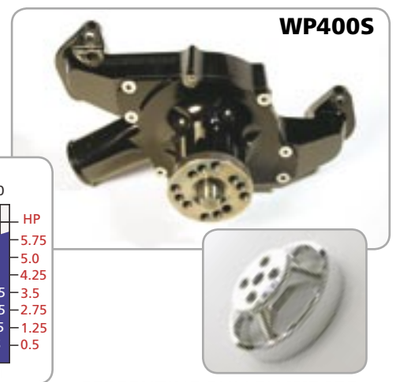
DOUBLE GROOVE PULLEY **WP421**
Available color: **U,C**

Application	*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Block to Hub*
BBC 396-502	**WP400**	**S,U,C**	**P** (ported)	5.4 lbs.	5.625"
SBC 4.3 V6, 262-400	**WP401**	**S,U,C**	**P** (ported)	5.4 lbs.	5.625"

The appearance of this all billet belt driven pump is a definite show stopper, but the true beauty can be seen in the performance chart and on your temperature gauge. Top end figures match the best racing pumps on the market **(over 140 GPM)** and off idle flow is 5 to 7 GPM higher than any competitor. This pump will save a racer over 10 HP compared to a stock pump and solve low speed cooling problems for the street rodder.

- **3/4" Roller bearing**
- **CNC machined impeller**
- **Carbon ceramic seal**
- **Triple bolt pattern flange**
- **Stainless steel hardware**




WP400S

SERPENTINE PULLEY **WP422**
Available color: **U,C**

The "**R**" in the prefix of these part numbers indicates reverse rotation making it compatible with most serpentine belt applications.

Application	*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Block to Hub*
BBC 396-502	**WPR400**	**S,U,C**	**P** (ported)	5.5 lbs.	5.800"
SBC 4.3 V6, 262-400	**WPR401**	**S,U,C**	**P** (ported)	5.5 lbs.	5.750"

Heater & Bypass

If your pump was ordered with the ported option ('**P**' added to the part number) Find the available connection fittings from the list at the right.

Description	*Fitting #*
5/8" Hose Barb	**WPM58**
3/4" Hose Barb	**WPM34**
-08AN	**WPM08**
-10AN	**WPM10**
-12AN	**WPM12**

S=Black, U=Polished, C=Chrome, P=Ported. When ordering please choose part #, color, and any options you prefer. For example **WP400CP** would be a **W**ater **P**ump, **400** series, **C**hrome with **P**orted option. See our 'Water Pump Buyer's Guide' on pages 12-13 for more details.


WP118S

43 GPM Standard or **55 GPM Heavy Duty**

The LT-1 water pump has proven our reliability with customers logging 50,000 to 60,000 miles on their daily drivers. For many, the economical price and longevity make it a logical choice over the factory replacement. Along with the horsepower savings, the relocated seal drain eliminates the possibility of a pump leak causing optispark failure. The need for the heavy and expensive factory timing chain is also eliminated. Some F-bodies may require trimming of the fan shroud. **No inlet required.**

- **Frees over 10 rear wheel HP**

Application		*Pump Model*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
Camaro / Firebird	'93-'97	**WP118**	**HD** or **16**	3.6 lbs.	4.6 lbs.	3.000"	3.500"
Corvette	'93-'96	**WP118**	**HD** or **16**	3.6 lbs.	4.6 lbs.	3.000"	3.500"
Impala / Roadmaster	'93-'96	**WP118**	**HD** or **16**	3.6 lbs.	4.6 lbs.	3.000"	3.500"

Our LS-X pump will dress out your engine while increasing mid range power and low speed cooling. Originally designed for Stock and Super Stock racers, this pump can also be found on street rods, dune buggies and modified street cars. This pump is not designed to accommodate factory accessories (i.e. P/S, ALT, A/C).

35 GPM Standard or **40 GPM Heavy Duty**
- **Compact and lightweight**
- **Driver or Passenger side inlet ports**


WP119B

1" NPT inlet required. See page 34.

1 1/4" outlet fitting included.

Application		*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
Camaro / Firebird	'98-'02	**WP119**	**R,B,S,U,C**	**HD** or **16**	7 lbs.	8 lbs.	6.700"	7.200"
Corvette	'97-up	**WP119**	**R,B,S,U,C**	**HD** or **16**	7 lbs.	8 lbs.	6.700"	7.200"
Chevy / GMC 5.3		**WP119**	**R,B,S,U,C**	**HD** or **16**	7 lbs.	8 lbs.	6.700"	7.200"


WP319B

Meziere has received overwhelming requests for a bolt-on electric water pump for the LS-X. We have developed a pump similar to the 5.0 model. It provides a high flow rate that is capable of cooling the most extreme street machines without interfering with factory or aftermarket accessories.

55 GPM Standard

Accessorize with waterneck #WN0019 on page 36.

Application		*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Depth (standard)*
Camaro / Firebird	'98-'02	**WP319**	**R,B,S,U,C**	**16**	14 lbs.	7.880"
Corvette	'97-up	**WP319**	**R,B,S,U,C**	**16**	14 lbs.	7.880"
Chevy / GMC 5.3	'97-up	**WP319**	**R,B,S,U,C**	**16**	14 lbs.	7.880"

Frees more than 11 rear-wheel horse power!

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty, 16=16 volt. When ordering please choose part #, color, and any options you prefer. For example **WP100RHD** would be a **W**ater **P**ump, **100** series, **R**ed color with **H**eavy **D**uty option. See our 'Water Pump Buyer's Guide' on pages 12-13 for more details.

Water Pumps • GM & Pontiac
100 Series Electric

The performance enthusiasts driving and racing the powerful GM 3800 demanded better cooling. Meziere brings the solution. Not only do drivers enjoy better cooling and less parasitic loss (more horsepower) the WP140 has a clean billet look for a custom engine compartment.

- Compact and lightweight
- Three custom finishes
- No modification required

35 GPM Standard
42 GPM Heavy Duty

Installation requires a 4" shorter belt, '97-'98 use Gates K060895, for 99-later use Gates K060875.

Application		*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
3800-V6		**WP140**	R,B,S,U,C	**HD** or **16**	4.1 lbs.	5.1 lbs.	3.8"	4.3"

Remember Your Accessories!

Radiator Cap see page 33.
(for GM 3800 97-03 use WCC00116)

Relay Kit WIK346
See page 40.

Word spreads fast among Pontiac racers regarding this pump. Walking through the pits at any national or divisional race, it is hard to find a Pontiac motor without our pump. Installation can be performed between rounds. After removing the water port sleeves, just clean the ports and gasket surface and the pump will bolt right up. **No inlet required.**

35 GPM Standard
40 GPM Heavy Duty

*1962 to '68 engines must use '69 & later 11 bolt timing cover (GM part #527291), vibration damper and pulleys.

Countersunk bolts and stock thickness body make it compatible with engine plates.

Application		*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
301 - 455	'69*-'81	**WP103**	R,B,S,U,C	**HD** or **16**	5.9 lbs.	6.9 lbs.	3.776"	4.276"

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty, 16=16 volt. When ordering please choose part #, color, and any options you prefer. For example **WP100RHD** would be a **W**ater **P**ump, **100** series, **R**ed color with **H**eavy **D**uty option. See our 'Water Pump Buyer's Guide' on pages 12-13 for more details.

Water Pumps • Buick & Olds
100 Series Electric

As you can see this pump covers from '61 Olds Starfire to a '02 Range Rover. It has proven it's performance dealing with the extreme horsepower of a Duttweiler Turbo V-6 as well as being tough enough for the extreme sand cars of the desert southwest.

35 GPM Standard
40 GPM Heavy Duty

1" NPT inlet required. See page 34.

Application		*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
Buick V6 169-274	'61-'89	**WP125**	R,B,S,U,C	**HD** or **16**	7.8 lbs.	8.8 lbs.	5.784"	6.284"
Buick V8 215-350	'61-'74	**WP125**	R,B,S,U,C	**HD** or **16**	7.8 lbs.	8.8 lbs.	5.784"	6.284"
Jeep V6 255		**WP125**	R,B,S,U,C	**HD** or **16**	7.8 lbs.	8.8 lbs.	5.784"	6.284"
Olds V8 215	'61 & '63	**WP125**	R,B,S,U,C	**HD** or **16**	7.8 lbs.	8.8 lbs.	5.784"	6.284"
Rover 3.5-4.6	'64-up	**WP125**	R,B,S,U,C	**HD** or **16**	7.8 lbs.	8.8 lbs.	5.784"	6.284"

The big block Buick's factory timing cover forced us to do things a little different in the design of this pump. The end result gives you all the features of the 100 series pump and clearance for non-A/C V-belt routing. **No inlet required.**

35 GPM Standard
40 GPM Heavy Duty

Pump center-section is unique to this model; use part # WP156.

Application		*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
400/430/455	'67-'76	**WP126**	R,B,S,U,C	**HD** or **16**	5.7 lbs.	6.7 lbs.	4.000"	4.500"

Coverage for Oldsmobile V-8's is easy. All Big Block, Small Block, Corporate, and Diesel engines after 1965 share the same water pump. The pump bolts to the factory timing plate with hardware and gaskets provided.

35 GPM Standard
40 GPM Heavy Duty

***Passenger side inlet only. Not compatible with 1964 330cid. driver side inlet radiator.**

WP2175 Recommended. See page 34.

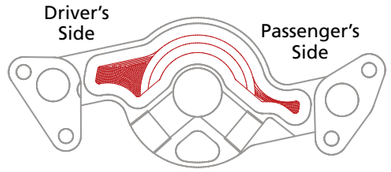
Application		*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
260-455	'64*-'86	**WP135**	R,B,S,U,C	**HD** or **16**	5.8 lbs.	6.8 lbs.	6.100"	6.600"

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty, 16=16 volt. When ordering please choose part #, color, and any options you prefer. For example **WP100RHD** would be a **W**ater **P**ump, **100** series, **R**ed color with **H**eavy **D**uty option. See our 'Water Pump Buyer's Guide' on pages 12-13 for more details.

Water Pumps • Ford
100 Series Small Block


1" NPT inlet required. See page 34.

WP111 is the most common pump body for small block Ford engines. It will bolt up to front covers from the very early 1964 style through 1993 and slightly beyond. It has been used as the heart of many cooling systems and can be coupled with one of several different back plates to complete your system right.



Note: Carefully compare this graphic with the graphic found on the next page to confirm which part number pump will mate correctly to your front cover.

Application	*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
SB Ford	**WP111**	**R**,**B**,**S**,**U**,**C**	**HD** or **16**	5.6 lbs.	6.6 lbs.	6.300"	6.800"

For the correct back plate carefully check the chart below. We offer a variety of plates to mate with the WP111 pump. One of these back plates is used to cover the center chamber in a stock type front cover. The back plate will not be used if you are using a modern belt cam drive system. Choosing correctly will ensure easy installation.

Application	*Plate Model*	*Color*	*Thickness*
221-289 early	**WP112**	**R**,**B**,**S**,**U**,**C**	.19"
Traditional 289 / 5.0	**WP113**	**R**,**B**,**S**,**U**,**C**	.19"
Cleveland	**WP123**	**R**,**B**,**S**,**U**,**C**	.19"

Female 3/4" NPT

-12AN Male

Designed for use with Meziere back plates WP113, WP123, and WP127. These port adapters will help you make the connection between any of our remote mounted or radiator mounted electric pumps.

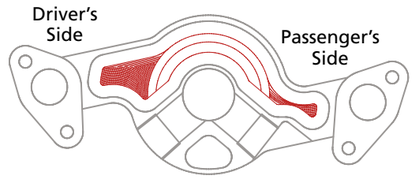
Application	*Adapter #*	*Color*	*Thread*
Traditional 289 / 5.0 / Windsor	**WP83**	**R**,**B**,**S**,**U**,**C**	3/4" internal
Traditional 289 / 5.0 / Windsor	**WP8312AN**	**R**,**B**,**S**,**U**,**C**	-12AN external
'94-'95 Short Style	**WP8212AN**	**R**,**B**,**S**,**U**,**C**	-12AN external
'94-'95 Short Style	**WP8216AN**	**R**,**B**,**S**,**U**,**C**	-16AN external

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty, 16=16 volt. When ordering please choose part #, color, and any options you prefer. For example **WP111SHD** would be a **W**ater **P**ump, **100** series, **B**lack color with **H**eavy **D**uty option. See our 'Water Pump Buyer's Guide' on pages 12-13 for more details.

Water Pumps • Ford & AMC
100 Series Small Block

WP173 is the right choice if you have a later model front cover on your 5.0 or 351 engine. This is known as the 1994-1995 design and is also shared by Ford Motorsport front covers. In addition, this has been the design chosen universally for fronts covers purchased with belt cam drive systems. This pump is shipped with O-rings for a positive pump-to-plate seal.

35 GPM Standard
40 GPM Heavy Duty



Note: Carefully compare this graphic with the graphic found on the previous page to confirm which part number pump will mate correctly to your front cover.

If you are using a stock style front cover you will need the back plate to complete the system. If you have an aftermarket cam belt drive system, you will not need the back plate. This pump is suitable for all known belt drive systems including Danny-B, Yates, Jesel and Race Master.

Application	*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
'94-'95 Short SB Ford	**WP173**	**R**,**B**,**S**,**U**,**C**	**HD** or **16**	5.6 lbs.	6.6 lbs.	6.100"	6.600"
Back plate	**WP174**	**R**,**B**,**S**,**U**,**C**	**Complete your pump with this back plate!**				

1" NPT inlet required. See page 34.

Treat your 360-401 AMC to an electric water pump. Save 11 rear wheel horsepower and get better low speed coolant flow.

35 GPM Standard
40 GPM Heavy Duty

Application	*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
AMC 360-401	**WP111**	**R**,**B**,**S**,**U**,**C**	**HD** or **16**	5.6 lbs.	6.6 lbs.	6.300"	6.800"
Back Plate	**WP127**	**R**,**B**,**S**,**U**,**C**	**This plate is mandatory for all AMC electric pump conversions**				

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty, 16=16 volt. When ordering please choose part #, color, and any options you prefer. For example **WP100RHD** would be a **W**ater **P**ump, **100** series, **R**ed color with **H**eavy **D**uty option. See our 'Water Pump Buyer's Guide' on pages 12-13 for more details.

Water Pumps • Ford
300 Series Small Block

SB Ford Street

These pumps share the feature of 55 GPM flow. The WP312 has a freewheeling idler pulley making this pump fully street ready and a 5.0 lover's dream come true. The WP311 has all the same features without the pulley making it perfect for racing applications. **55 GPM Standard**

- Heater & bypass fittings included
- Driver & passenger side inlet ports

*Will not fit "short water pump" timing covers; '92 & up T-Bird, Cougar, Explorer, all '94 & '95 Mustangs, and early Lightning F-150's.

1 3/4" inlet fitting included

Application	*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Depth (standard)*
289*-351W, 5.0-5.8 to '93*	**WP311 (No pulley)**	**R,B,S,U,C**	**16**	8.6 lbs.	5.555"
289*-351W, 5.0-5.8 to '93*	**WP312 (With pulley)**	**R,B,S,U,C**	**16**	10.2 lbs.	6.776"

'94-'95 Street

373 & 374
Pumps designed and built for daily street use with provisions for the serpentine accessory drive belt.

Application	*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Depth (standard)*
SBF '94-'95, SBF '91-'95 (short)	**WP373**	**R,B,S,U,C**	**16**	5.3 lbs.	4.510"
SBF '94-'95, SBF '91-'95 (short)	**WP374**	**R,B,S,U,C**	**16**	6.9 lbs.	4.750"

Modular Street

Specifically for street driven and fully equipped race cars. Installation is nearly identical to the factory pump and can be completed in 2-3 hours. Aftermarket underdrive pulley sets may require a shorter serpentine belt.

55 GPM Standard • Frees over 11 rear wheel HP • Cooler running in traffic

Application	*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Depth (standard)*
Ford Modular w/o idler pulley	**WP345**	**S,C**	**16**	5.0 lbs.	3.500"
Ford Modular w/stock size pulley	**WP346**	**S,C**	**16**	6.9 lbs.	3.750"
Ford Modular w/undersized pulley for blower drive clearance	**WP347**	**S,C**	**16**	6.9 lbs.	3.750"

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty, 16=16 volt. When ordering please choose part #, color, and any options you prefer. For example **WP100RHD** would be a **W**ater **P**ump, **100** series, **R**ed color with **H**eavy **D**uty option. See our 'Water Pump Buyer's Guide' on pages 12-13 for more details.

Water Pumps • Ford
Big Block

BB Ford

This pump is used on everything from home built 429ci powered street rods to Jon Kasse 812ci. IHRA Pro Stock engines. The back plate is available for stock front cover installations but may not be necessary for some racing blocks and newer motor plates.

1" NPT inlet required. See page 34.

Application	*Model #*	*Color*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
429-460	**WP108**	**R,B,S,U,C**	**HD** or **16**	5.9 lbs.	6.9 lbs.	6.100"	6.600"
Back plate	**WP109**	**R,B,S,U,C**	**Complete your pump with this back plate!**				

FE Ford

Never to leave the odd man out, our "FE" pump completes the Ford family of V-8's.

Drivers side inlet only.

35 GPM Standard or **GPM Heavy Duty 40**

Inlet WP2175 recommended. See page 34.

Application	*Model #*	*Color*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
429-460	**WP170**	**R,B,S,U,C**	**HD** or **16**	5.9 lbs.	6.9 lbs.	6.100"	6.600"

BB Ford

By popular demand, we present the reservoir pump for Big Block Ford. The reservoir pump for Big Block Ford is perfect for low mounted and out of the way radiator placements.

35 GPM Standard or **GPM Heavy Duty 40**

1" NPT inlet required. See page 34.

Application	*Model #*	*Color*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
429-460	**WP208**	**R,B,S,U,C**	**HD** or **16**	8.2 lbs.	9.2 lbs.	6.100"	6.600"
Back plate	**WP109**	**R,B,S,U,C**	**Complete your pump with this back plate!**				

300 Series

This pump is an Hi-Flow version of our popular Big Block Ford pump. The output of 55 GPM will cool anything from street rods to 812ci. IHRA Pro Stock engines. The back plate is available for stock front cover installations but may not be necessary for some racing blocks and newer motor plates. **Different fitting required for this pump. See 'WN' series on page 34.**

55 GPM Standard

Application	*Model #*	*Color*	*Additional Options*	*Weight (standard)*	*Depth (standard)*
429-460	**WP308**	**R,B,S,U,C**	**16**	7.4 lbs.	6.600"
Back plate	**WP109**	**R,B,S,U,C**	**Complete your pump with this back plate!**		

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty, 16=16 volt. When ordering please choose part #, color, and any options you prefer. See our 'Water Pump Buyer's Guide' on pages 12-13 for more details.

Built as a low cost alternative to our WP106. The WP105 uses the stock Mopar water pump housing. This pump looks good and flows over 35 GPM. **Relocation of factory brackets may be required. Street engines over 450 HP use HD pumps.**

- Fits factory housing
- Installs in minutes
- Uses factory gaskets
- Street or strip

40 GPM Standard
45 GPM Heavy Duty

Application		*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
B/RB/Hemi	350-440	**WP105**	**S,C**	**HD** or **16**	3.6 lbs.	4.6 lbs.	3.500"	4.000"

Tossing out your bulky factory water pump and switching to a Meziere pump will save space, horsepower, and remove about 10 lbs. from the front of your engine.

- Driver & passenger side inlet ports
- Temperature gauge adapters included
- Street or strip

35 GPM Standard
40 GPM Heavy Duty

1" NPT inlet required.
See page 34.

Application		*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
B/RB/Hemi	350-440	**WP106**	**R,B,S,U,C**	**HD** or **16**	5.7 lbs.	6.7 lbs.	6.100"	6.600"

1" NPT inlet fitting required.
See page 34.

-12 O-ring outlet adapter required.
See page 35.

Developed to cure problems associated with low mounted or horizontal radiators, the 200 series pumps have a built-in expansion tank that serves as a fill point and air separator. Returning the pressure cap to the suction side of the system allows you to fill your dragster with the pump running and maintains the level by purging accumulated air before any water escapes. With a head of water above a self priming pump cavity, this design eliminates air locking and cavitation.

- Fills easily with the pump running
- Self priming and no cavitation
- Driver & passenger side inlet ports
- Temperature gauge adapters included

35 GPM Standard
40 GPM Heavy Duty

Application		*Pump Model*	*Color*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
B/RB/Hemi	350-440	**WP206**	**R,B,S,U,C**	**HD** or **16**	9.5 lbs.	10.5 lbs.	6.800"	7.300"

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty, 16=16 volt. When ordering please choose part #, color, and any options you prefer. For example **WP100RHD** would be a **W**ater **P**ump, **100** series, **R**ed color with **H**eavy **D**uty option. See our 'Water Pump Buyer's Guide' on pages 12-13 for more details.

The new high flow pumps to keep extreme Mopars cool are sure to be a big hit with the high compression and supercharged crowd. We are proud to offer a true 55 GPM pump in the traditional Mopar configuration as well as a purpose built reverse flow 55 GPM pump. **Different fitting required for this pump. See 'WN' series on page 34.**

Application	*Pump Model*	*Color*	*Additional Options*	*Flow Direction*	*Outlet Configuration*
BB Mopar B/RB & Hemi	**WP306**	**R,B,S,U,C**	**16**	Standard	Std. Mopar
BB Mopar B/RB & Hemi	**WP307**	**R,B,S,U,C**	**16**	Reverse	2X -12AN

This pump is at home making passes on the strip at Pomona or cruising the strip on Woodward Ave.

- Driver & passenger side inlet ports

Back plate will not fit late model cars with Magnum engines.

1" NPT Inlet required.
See page 34.

Application	*Model #*	*Color*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
3.9 V-6 A273-360	**WP114**	**R,B,S,U,C**	**HD** or **16**	5.7 lbs.	6.7 lbs.	6.100"	6.600"
Back plate	**WP115**	**R,B,S,U,C**	**SB Mopar Early**				
Back plate	**WP117**	**R,B,S,U,C**	**SB Mopar '91 - up**				

Finish off your ride in style with quality accessories.

Inlets
See page 34.

Spacers
See pages 37 & 39.

Relay Kit WIK346
See page 40.

Radiator Cap
See page 33.

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty, 16=16 volt. When ordering please choose part #, color, and any options you prefer. For example **WP100RHD** would be a **W**ater **P**ump, **100** series, **R**ed color with **H**eavy **D**uty option. See our 'Water Pump Buyer's Guide' on pages 12-13 for more details.

These kits replace the OEM timing belt driven water pump with an idler pulley and block off plate. The pumping is performed by a remote pump spliced into the lower radiator hose. A bracket is supplied to mount the pump to the transaxle.

Installation of the idler plate is identical to shop manual instructions for water pump replacement. The job requires advanced knowledge to complete. **20 GPM Standard**

Kit Includes:

- Pump - WP136
- Idler plate w/ O-ring
- Toggle switch and crimp connectors
- Pump mounting bracket
- Hose adapter fittings

Our idler assemblies are used as a block off for the factory mechanical water pump and to maintain timing belt tension.

The idlers shown above are for reference. 19T is in kit WPK50019, 22T in kit WPK50022 & 26T in kit WPK50026.

Application	*Kit Model*	*Weight (standard)*
1.6/1.7/1.8 Type R	**WPK50022**	8.6 lbs.
1.8/2.0/2.1	**WPK50019**	8.6 lbs.
2.2/2.3	**WPK50026**	8.6 lbs.

The Toyota Supra model is one of our new Bolt-On electric water pumps. The idler pulley allows the use of the factory or aftermarket accessories. Installation is nearly identical to that of the factory water pump and advanced technical knowledge is necessary. The mechanically driven fan is eliminated and requires an electric fan be installed.

- Hard anodized finish
- Quick cool-down
- Frees over 10 horse power
- Improves low speed cooling
- Low amp draw

Factory gasket and hardware required
Requires minor modification of the timing cover

35 GPM Standard

Application	*Pump Model*	*Weight (standard)*	*Depth (standard)*
'93-'98 Supra Turbo (2JZ)	**WP520**	4.6 lbs.	4.250"

20 GPM Standard

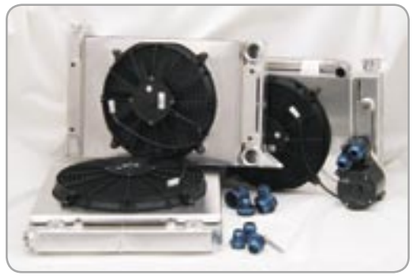
This kit replaces the belt driven factory pump with a remote mounted inline electric pump. The pump bolts to the transaxle case with the supplied bracket. To block off the opening left by the original pump an O-ring seal plate is provided.

Installation of the block off plate is nearly identical to that of the factory pump. A shorter v-belt is necessary as the water pump pulley is omitted.

WPK510 Kit Includes:

Pump - WP136 20 GPM
Pump mounting bracket
Block off plate with O-ring
Toggle switch and crimp connectors
Hose adapter fittings

Fits 1990 and up SR-20 Engine. High horsepower continuous duty applications may require our 300 series pump.



We do custom radiators. Call with specs or fill out and fax us the order sheet found on page 55.

The highest quality radiator is the right way to finish your cooling system. Our technicians can work with you to achieve the best fit and function possible. Intercoolers are also available. Please call for details.

11a/12a/13b **WP91**

Use with -16 O-ring fittings

- Eliminates high RPM cavitation
- Great for high HP and continuous duty applications

Mazda Rotary engines have seen tremendous benefits by switching to this electric pump system. The extreme RPM range does not affect the performance of the pump so you get consistent cooling throughout the power range. This system requires some fabrication and is not designed as a bolt-on replacement for stock equipped street machines. The water port adapter replaces the stock water pump housing that is also the mounting point for the alternator and other belt driven accessories. There are a number of pumps that can be utilized, with a variety of inlet and outlet configurations.

- Select which pump suits your mounting space and flow requirements.
- Select the appropriate plate based on the outlet configuration of the selected pump.
- Mount the pump, radiator and block plate.
- Install fittings, measure for hoses and connect.

11a/12a/13b **WP90**

Use with 3/4" and 1" NPT fittings

See pages 34-35 for fittings.
For pump options for all remotes see next page.

Remote Water Pumps
Mini Inline & Bulkhead

20 GPM Single or Dual Outlet

Designed for sport compacts, small engine applications and water to air intercoolers. The new dual outlet is well suited for alcohol powered drag cars. Many customers use it to replace existing inline pumps for increased reliability and performance. The pump may be small, but the quality and reliability is just what you have come to expect from Meziere.

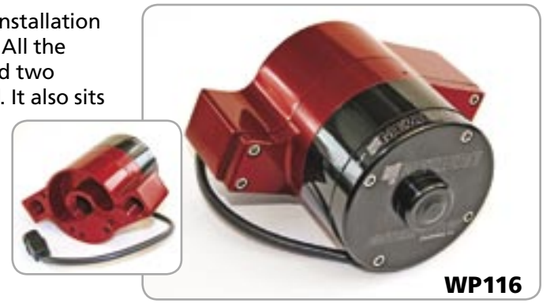
Fittings shown are not included. See page 34.

360° INLET

A pair of -12 O-ring boss outlet fittings required. See page 35.

Pump Model	*Weight (standard)*	*Height (standard)*
WP136	6.3 lbs.	7.250"
WP137	6.4 lbs.	7.250"

Our original remote makes a very clean installation when mounted to the back side of a V-8 motor plate. All the plumbing faces forward, with a single 1" NPT inlet and two -12 O-ring boss outlets. No water manifold is required. It also sits nicely into a fender well or out-of- the-way spot to provide more clearance in front of your engine. One 1" NPT inlet and two -12 outlets required. See pages 34-35.



35 GPM Standard or **40 GPM Heavy Duty**

The high flow version of our bulk-head mount remote pump combines the same mounting features with a larger impeller and ports. This pump moves 55 gallons per minute. The inlet connection is a 1 3/4" hose barb and the 2 exit ports accept -12AN fittings. See pages 34-35 for fitting options.

55 GPM Heavy Duty

Pump Model	*Color*	*Additional Options*	*Weight (standard)*	*Weight (HD or 16)*	*Depth (standard)*	*Depth (HD or 16)*
WP116	**R**,**B**,**S**,**U**,**C**	**HD** or **16**	5.4 lbs.	6.4 lbs.	5.000"	5.500"
WP316	**R**,**B**,**S**,**U**,**C**	**16**	6.3 lbs.	n/a	5.500"	n/a

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty, 16=16 volt. When ordering please choose part #, color, and any options you prefer. For example **WP100RHD** would be a **W**ater **P**ump, **100** series, **R**ed color with **H**eavy **D**uty option. See our 'Water Pump Buyer's Guide' on pages 12-13 for more details.

Remote Water Pumps
Hi-Flow Inline & Mechanical

"WN" style fittings are used for the inlet and the outlet.

Fittings shown are not included. See page 34.

Our most versatile pump design to date, combining an inline configuration with a 55 GPM flow rate and interchangeable fittings. Inlet and outlet ports are O-ring boss AN thread.

55 GPM Standard

Rear mount tab shown for WP336 and WP337.

"A pair of "WP16" fittings are required for outlet adapters.

- Smooth hose or AN line in and out
- Can be spliced into lower radiator hose
- 1.300 ID. inlet available
- Dual -16 outlet ports

Application	*Pump Model*	*Additional Options*	*Weight (standard)*	*Depth (standard)*	*Inlet Port*	*Outlet Port*
Single outlet	**WP336**	**16**	6.2 lbs.	5.200"	WN Style	WN Style
Dual outlet	**WP337**	**16**	6.2 lbs.	5.200"	WN Style	2X-16AN

Where high pressure and flow of a mechanical pump is necessary, this problem solver mounts and drives like a dry sump oil pump. This configuration can reduce the overall length of an engine package. These pumps have been utilized in a wide range of vehicles including 24 hour endurance racers, street rods, Bonneville racers and V-8 motorcycles. **Refer to page 16 for performance graph.**

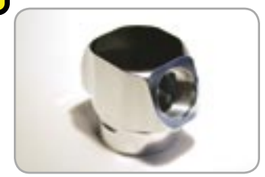
- All O-ring seals
- Variable inlet / outlet positioning in 45° increments
- 5/8" Keyed shaft

55 GPM Standard

"WN" style fittings and 2 -12AN outlet fittings required. See page 34.

Need to hook up to your engine? See pgs. 36-37 for Chevy or Mopar block adapers and pg. 39 for Ford block adapters.

Inlets See page 34.



Y-manifold See page 40.

Relay Kit WIK346 See page 40.

Radiator Cap See page 33.

16=16 volt. When ordering please choose part #, and any option you prefer. For example **WP33616** would be a **W**ater **P**ump, **300** series, with **16** volt option. See our 'Water Pump Buyer's Guide' on pages 12-13 for more details.

Remote Water Pumps
Radiator Mount


WP365

Our new design allows you the option of adding a true thermostat circuit to assist the warm-up cycle. This has proven a great benefit for engines with aluminum blocks. These engines tend to be built with tighter clearances which require engine heat to avoid excessive wear. The pump can be configured with a wide variety of hose choices by selecting the appropriate fittings for inlet, outlet and bypass.

Pump Model	*Color*	*Additional Options*	*Weight (standard)*	*Depth (standard)*
WP365 (Single out)	**S,C**	**16**	7.5 lbs.	8.3" (w/o fittings)
WP366 (Double out)	**S,C**	**16**	7.5 lbs.	8.3" (w/o fittings)


WP361


WP362

Save even more space
by mounting the pump directly into the radiator.

55 GPM Standard

- Compact design
- Single or Dual outlet ports
- Can be fabricated into most aluminum radiators

Application	*Pump Model*	*Additional Options*	*Weight (standard)*	*Depth (standard)*
Single outlet	**WP361**	**16**	6.2 lbs.	5.200"
Dual outlet	**WP362**	**16**	6.2 lbs.	5.200"

Radiators
Racing and Street

Our aluminum radiators are built to the highest quality standards and have excellent heat dissipation characteristics. Our "off the shelf" standard part numbers cover a wide variety of racing and street performance applications.

- High quality furnace brazed cores
- Fan & shroud included (except Sportsman*)
- Interchangeable O-ring boss fittings
- Sacrificial anode (optional)

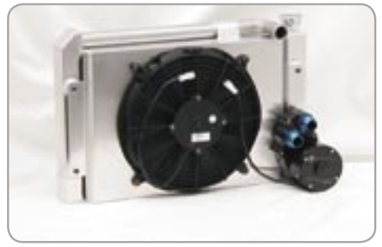
We Do Specials!

Call us or see our website for custom radiator order form.


WC0110


WC0120


WC012016


(pump sold separately) WC0310


WC0210


WC0311

Application	*Pump Model*	*Weight (standard)*	*Dimensions*
Scirocco	**WC0110**	12 lbs.	25"Wx13"Hx6"D
Sportsman (w/o fan & shroud)	**WC0120**	10.5 lbs.	25"Wx16"Hx2 1/2"D
Sportsman (w/ fan & shroud)	**WC012016**	13 lbs.	25"Wx16"Hx6"D
Pro Stock single return	**WC0310**	12.5 lbs.	22"Wx14"Hx6"D
Pro Stock dual return	**WC0311**	12.5 lbs.	22"Wx14"Hx6"D
Dragster radiator	**WC0210**	13.2 lbs.	17.5"Wx22"Hx6"D

The Meziere Research and Development Lab...

Adapter

These adapters can help convert
a radiator that is configured for our radiator mounted pump back to a conventional arrangement.

Application	*Part #*	*Color*
1.25" Hose	**RFA125**	**R,B,S,U,C**
1.50" Hose	**RFA150**	**R,B,S,U,C**
1.75" Hose	**RFA175**	**R,B,S,U,C**

Cooling Fans

These high quality
low profile fans provide a high CFM without taking up space. Light weight and easy to adapt to shrouds. They are designed to pull the air through the radiator, giving great low speed cooling.

Our high quality compact fan shrouds take up less space and still fill the requirement of keeping your engine cool. Theses light weight shrouds are available with any radiator.

Application	*Pump Model*	*Depth (standard)*	*Depth (high output)*	*CFM (standard)*	*Pump Model (high output)*	*CFM (high output)*
10 inch	**WCF10**	2.05"	n/a	650	**WCF10UH**	n/a
12 inch	**WCF12**	2.48"	3.70"	1230	**WCF12UH**	1360
14 inch	**WCF14**	2.48"	3.39"	1280	**WCF14UH**	1720
16 inch	**WCF16**	2.48"	3.39"	1610	**WCF16UH**	2360

Inline Thermostats

Step 1:
Select the primary hookup.

-WN connection
-1 1/4" hose
-1 1/2" hose
Weld-in connection

Step 2:
Select the secondary hookup.

-1 1/4" hose
-1 1/2" hose

Step 3:
Select the thermostat rating.

-170 Degrees
-185 Degrees
-195 Degrees

Inline thermostat housings
can be a real problem solver. We offer a full line of components to get a thermostat into your upper radiator hose.

Part #	*Description*
WN0051	WN to 1 1/4"
WN0052	WN to 1 1/2"
WN0061	Weld-in to 1 1/4"
WN0062	Weld-in to 1 1/2"
WN0071	1 1/4" to 1 1/4"
WN0072	1 1/2" to 1 1/2"
WN0070170	170 Degree Tstat
WN0070185	185 Degree Tstat
WN0070195	195 Degree Tstat

Radiator Caps

Billet Radiator caps
add a little class to any cooling system. Features an easy grip profile to assist when installing or removing the cap.

LOGO

RACING

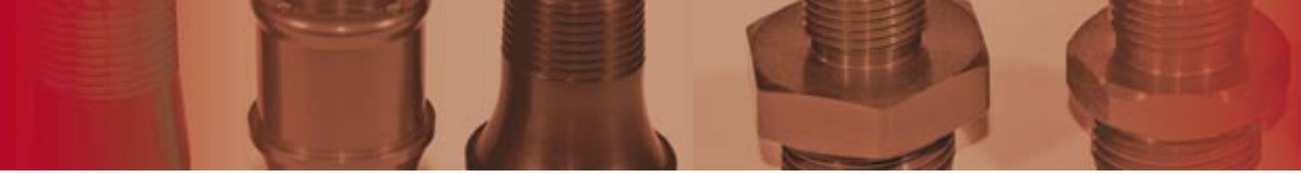
FLAMES

FIRE & DICE

FLAG

V8

Style	*Description*	*Part #*	*Color*
Logo	7 lb. cap	**WCC00107**	Chrome
Logo	16 lb. cap	**WCC00116**	Chrome
Racing	16 lb. cap	**WCC00216**	Chrome
Flames	16 lb. cap	**WCC00316**	Chrome
Fire & Dice	16 lb. cap	**WCC00416**	Chrome
Flag	16 lb. cap	**WCC00516**	Chrome
V8	16 lb. cap	**WCC00616**	Chrome



Standard 1" NPT pump fittings for use with most of our 100 Series pumps.

Smooth Hose

Application	*Fitting Model*
1 1/4"	**WP1125**
1 1/2"	**WP1150**
1 3/4"	**WP1175**

Extended

Application	*Fitting Model*
1 1/4"	**WP2125**
1 3/4"	**WP2175**
2" Extension	**WP1000**

AN

Application	*Fitting Model*
-12	**WP1012**
-16	**WP1016**
-20	**WP1020**

NPT fitting colors: When ordering please choose fitting model number then add the letter of the color you want that fitting to be: R=Red, B=Blue, S=Black, U=Polished, G=Chrome. For example **WP1125R** would be a **WP1125** fitting in **Red**.

WP1045B

This 45 degree

adapter will help when the damper or ignition parts interfere with the normal outlet position. Thread size is one inch pipe male and female.

WA Fittings:

These adapters allow you to make a clean transition from braided steel to slip-on hose. Commonly used to connect AN hose fittings to stock style radiators without fabrication.

Application	*1 1/4"*	*1 1/2"*	*1 3/4"*
-12	**WA12125**	**WA12150**	**WA12175**
-16	**WA16125**	**WA16150**	**WA16175**

45 Degree Adapter colors: When ordering please choose fitting model number then add the letter of the color you want that fitting to be: R=Red, B=Blue, S=Black, U=Polished, G=Chrome. For example **WP1125R** would be a **WP1125** fitting in **Red**.

WN Style fittings -20AN fittings used for thermostat housings and some 300 Series pumps.

Smooth Hose

Application	*Fitting Model*
1 1/4"	**WN0031**
1 1/2"	**WN0032**
1 3/4"	**WN0033**

AN

Application	*Fitting Model*
-10	**WN0042**
-12	**WN0043**
-16	**WN0040**
-20	**WN0041**
-24	**WN0044**

Extended

Application	*Fitting Model*
1 3/4" Extension	**WN2033** **WN2000**

WN Style fitting colors: When ordering please choose fitting model number then add the letter of the color you want that fitting to be: R=Red, B=Blue, S=Black, U=Polished, G=Chrome. For example **WN0031R** would be a **WN0031** fitting in **Red**.

-16AN pump fittings used for WP337, radiator mount WP362 and radiator outlets.

Smooth Hose

Application	*Fitting Model*
1"	**WP16100B**
1 1/4"	**WP16125B**

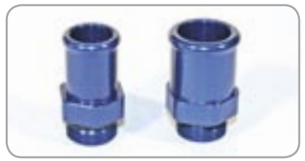
AN

Application	*Fitting Model*
-12	**WP16012B**
-16	**WP16016B**

-16AN and -12AN fitting colors:
-16AN and -12AN pump fittings are available in blue only.

-12AN pump fittings used for WP136, WP116, WP316 and port adapters.

Smooth Hose



Application	*Fitting Model*
1"	**WP12100B**
1 1/4"	**WP12125B**

Barbed Hose

Application	*Fitting Model*
5/8"	**WP12058B**
3/4"	**WP12034B**

AN

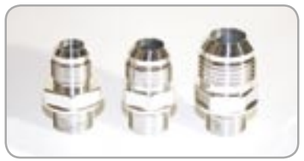
Application	*Fitting Model*
-08	**WP12008B**
-10	**WP12010B**
-12	**WP12012B**

-08AN pump fittings used for Chevy mechanical and some 300 Series pumps.

Barbed Hose

Application	*Fitting Model*
5/8"	**WPM58**
3/4"	**WPM34**

AN



Application	*Fitting Model*
-08	**WPM08**
-10	**WPM10**
-12	**WPM12**

-08AN fitting and plug colors: When ordering please choose fitting or plug model number then add the letter of the color you want that fitting to be: R=Red, B=Blue, S=Black, U=Polished, G=Chrome. For example **WPM58R** would be a **WPM58** fitting in **Red**.

Custom AN Plugs

Application	*Fitting Model*
-20	**WN0045**
-16	**WP1600**
-08	**WPM900**

NPT plugs

Application	*Fitting Model*
1/16" NPT	**XRP-993201**
1/8" NPT	**XRP-993202**
1/4" NPT	**XRP-993203**
3/8" NPT	**XRP-993204**
1/2" NPT	**XRP-993205**
3/4" NPT	**XRP-993206**
1" NPT*	**WP1001**

***WP1001** is available in colors (Red, Blue, Black, Polished & Chrome).

Thermostat Housings
Chevy & Mopar


WN0021DR

Low profile and clean is the perfect way to top off the manifold outlet on your Chevy engine. They complement and match your Meziere water pump.

- O-ring seal base
- Accepts thermostats
- Right or left outlets

Application	*Housing #*	*Color*
1 1/4" Dr. Side	**WN0021D**	**R,B,S,U,C**
1 1/4" Ps. Side	**WN0021P**	**R,B,S,U,C**
1 1/2" Dr. Side	**WN0022D**	**R,B,S,U,C**
1 1/2" Ps. Side	**WN0022P**	**R,B,S,U,C**


WN0020R

Swivel Neck
A versatile solution for upper radiator hose connections, this neck swivels 360 degrees yet seals securely and will accept a variety of "WN" fittings.

- Double O-ring swivel
- O-ring seal base
- Accepts thermostats

Application	*Housing #*	*Color*
Chevy or BB Mopar	**WN0020**	**R,B,S,U,C**

Fittings are required. See page 34.

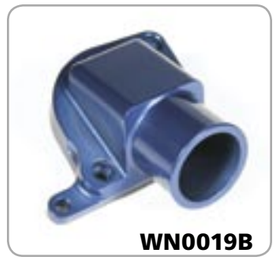

WN0015R

Tall Waterneck
The traditional selection for the top hose connection in drag only cars. Although we do not recommend this solution, we offer this for situations that exist already. Call our tech line for options.

- Tapered seat
- 1/8" NPT overflow

Application	*Housing #*	*Color*
Dr. Side	**WN0015D**	**R,B,S,U,C**
Ps. Side	**WN0015P**	**R,B,S,U,C**

Fittings are not included. See page 34.


WN0019B

For the LS-1 engine we offer two solutions, this is the billet alternative for the stock inlet housing. See below for our "straight out" design.

Application	*Housing #*	*Color*
GM LS-1	**WN0019**	**R,B,S,U,C**


WN0039S

WN0039
This is our "straight out" design to simplify some aftermarket applications.
For our billet solution see above.

Application	*Housing #*	*Color*
GM LS-1	**WN0039**	**R,B,S,U,C**

Fittings are required. See page 34.


WN0017B

Back Tapped
Same design as the tall waterneck but this part number offers a port on the backside for auxiliary plumbing.

- Tapered seat
- 1/8" NPT overflow
- 3/8" NPT

Application	*Housing #*	*Color*
Dr. Side	**WN0017D**	**R,B,S,U,C**
Ps. Side	**WN0017P**	**R,B,S,U,C**

Use our WN fittings. See page 34.

R=Red, B=Blue, S=Black, U=Polished, C=Chrome. When ordering please choose part # then color. For example **WP1125R** would be a **WP1125** fitting in **Red**.

Manifold Plates/Block Adapters
Mopar & GM


WN0029R

Mopar Style
Accepts WN fittings from -10 thru -24 or from 1 1/4" to 1 3/4"

Fittings are not included. See page 34.

Application	*Housing #*	*Color*
BBM	**WN0029**	**R,B,S,U,C**
SBM	**WN0030**	**R,B,S,U,C**


WN0912R

AN Style manifold plates provide a simple connection for your braided hose.

Fittings are not included. See page 35.

Application	*Housing #*	*Connection*	*Color*
Chevy or BB Mopar	**WN0912**	-12AN	**R,B,S,U,C**
Chevy or BB Mopar	**WN0916**	-16AN	**R,B,S,U,C**
BB Ford	**WN0812**	-12AN	**R,B,S,U,C**


WN0010R

More manifold plate options.
We also offer simple radiator cap plates, blockoffs and NPT ported plates. Fittings are not included. See page 34.


WN0028B

Waterneck Spacer will fit under any Chevy or BB Mopar neck. It is 1" thick with two side ports which are tapped 3/8" NPT.

Application	*Housing #*	*Color*	*Description*
Chevy or BB Mopar	**WN0007**	**R,B,S,U,C**	Blockoff
Chevy or BB Mopar	**WN0008**	**R,B,S,U,C**	Cap with 3/4" NPT internal thread
Chevy or BB Mopar	**WN0010**	**R,B,S,U,C**	Cap with radiator neck integral
Chevy or BB Mopar	**WN0028B**	**R,B,S,U,C**	Spacer with side ports

Female threaded block adapters
to complete systems that are using our radiator mounted or remote mounted pumps. They are sold in pairs, one each of driver and passenger side plates where applicable. Hardware included where applicable.


WP81R


WP84B

Application	*Adapter Model*	*Color*	*Internal Thread Type*	*Recommended Fitting*
Big Block Chevy	**WP80**	**R,B,S,U,C**	3/4" NPT	WP6112 (2x)
Small Block Chevy	**WP81**	**R,B,S,U,C**	3/4" NPT	WP6112 (2x)
DRCE - Olds Pro Stock	**WP86**	**S,U**	3/4" NPT	WP6112 (2x)
GM LS-1	**WP89**	**U,C**	-12AN	WP12012 (4x)
Big Block Mopar	**WP84**	**R,B,S,U,C**	-12AN	WP12012 (4x)

Male AN block plates are the prefect way to make the connection to the front of the engine when using a remote or radiator mounted pump. They are sold in pairs and are delivered to you with the required O-rings and hardware.


WP8112ANR


WP8016ANS

Application	*Adapter Model*	*Color*	*External Thread Type*
Big Block Chevy	**WP8012AN**	**R,B,S,U,C**	-12AN Male
Big Block Chevy	**WP8016AN**	**R,B,S,U,C**	-16AN Male
Small Block Chevy	**WP8112AN**	**R,B,S,U,C**	-12AN Male
Small Block Chevy	**WP8116AN**	**R,B,S,U,C**	-16AN Male
DRCE - Olds Pro Stock	**WP8612AN**	**R,B,S,U,C**	-12AN Male
DRCE - Olds Pro Stock	**WP8616AN**	**R,B,S,U,C**	-16AN Male

Thermostat Housings
Ford


WN0023

SB Ford Waterneck
This billet neck provides for the stock bypass hose and will accept a thermostat.

Application	*Housing #*	*Color*
SB	**WN0023**	**R,B,S,U,C**


WN0013

Low profile for your Big Block
Stay low with this 90 degree housing.

Application	*Housing #*	*Color*
BB	**WN0013**	**R,B,S,U,C**

Use WN style fittings on page 34.


WN0014S

Built-in Radiator Cap for Your Big Block

Application	*Housing #*	*Color*
BB	**WN0014**	**R,B,S,U,C**

Use WN style fittings on page 34.

Harold Meziere

Debut of the new Meziere Dragster at the 2007 Las Vegas Nationals

Spacers


WPS111B


WPS173U

Our Ford spacers are CNC machined to provide a perfect seal surface. Use in belt drive applications to clear the cam bolt and drive belt. **Items sold per pair.**

Application	*Model #*	*Color*	*Thickness*	*O-ring*
BB Ford	**WPS108-.50**	**R,B,S,U,C**	.5”	1 side
SB Ford 5.0 & Windsor	**WPS111**	**R,B,S,U,C**	.9”	none
SB Ford ’94-’95 & Belt Drive	**WPS173**	**R,B,S,U,C**	.9”	1 side

R=Red, B=Blue, S=Black, U=Polished, C=Chrome. When ordering please choose part # then color. For example **WN0014R** would be a **WN0014** housing in **Red**.

Block Adapters/Spacers
Generic

Our Ford adapters and Water Necks round out the accessories needed to keep your cooling system functional and beautiful. **Items sold per pair.**

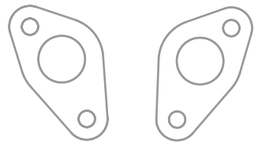

WP83R


WP8312ANB

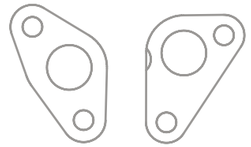

WP8212ANR

Application	*Adapter #*	*Color*	*Thread*
Traditional 289 / 5.0 / Windsor	**WP83**	**R,B,S,U,C**	3/4” internal
Traditional 289 / 5.0 / Windsor	**WP8312AN**	**R,B,S,U,C**	-12AN external
’94-’95 Short Style	**WP8212AN**	**R,B,S,U,C**	-12AN external
’94-’95 Short Style	**WP8216AN**	**R,B,S,U,C**	-16AN external
BB Ford	**WP8812AN**	**R,B,S,U,C**	-12AN external
BB Ford	**WP8816AN**	**R,B,S,U,C**	-16AN external

Passenger’s Side / Driver’s Side


WP8212AN

Passenger’s Side / Driver’s Side


WP8312AN

Ordering your part in a specific color: When ordering please choose plate or adapter model number then add the letter of the color you want that part to be: R=Red, B=Blue, S=Black, U=Polished, C=Chrome. For example **WP83R** would be a **WP83** adapter in **Red**.

Chevy spacers

Application	*Model #*	*Color*	*Thickness*	*O-ring*
BB Chevy	**WPS100**	**R,B,S,U,C**	.9”	2 sides
BB Chevy	**WPS100-1.500**	**R,B,S,U,C**	1.5”	2 sides
BB Chevy	**WPS100-1.750**	**R,B,S,U,C**	1.75”	2 sides
SB Chevy	**WPS101**	**R,B,S,U,C**	.9”	none
SB Chevy	**WPS101-1.500**	**R,B,S,U,C**	1.5”	none

Mopar spacers

Application	*Model #*	*Color*	*Thickness*	*O-ring*
SB Mopar	**WPS114**	**R,B,S,U,C**	2.25”	none
BB Mopar	**WPS106**	**R,B,S,U,C**	.9”	none

GM spacers

Application	*Model #*	*Color*	*Thickness*	*O-ring*
DRCE	**WPS110**	**R,B,S,U,C**	.9”	2 sides
DRCE	**WPS110-1.500**	**R,B,S,U,C**	1.5”	2 sides

R=Red, B=Blue, S=Black, U=Polished, C=Chrome. When ordering please choose part # then color. For example **WP8312ANB** would be a **WP8312** adapter in **Blue**.

Cooling Accessories
Problem Solvers


WAM12AN

Y-manifold
Another problem solver we offer is our O-ring boss port Y-manifold. This part accepts fittings to connect AN lines from -08 to -20 or hose from 5/8" to 1 3/4". Wall thickness on the top and back allow for extra NPT tapping.

There are 2 ports to accept -12AN O-ring fittings and one port to accept a WN style fitting.

Use "WN" style fittings and -12 "WP" fittings. See page 34.


WR100R

Recovery Tank
Reduce aeration and maintain pressure. Designed to catch overflow liquid and purge air out of your system during heat cycles.

- 1/8" NPT ports
- O-Ring seal cap

Capacity	*Housing #*	*Color*	*Dimensions*
28 oz.	**WR100**	**R,B,S,U,C**	10"H x 2"W x 3"D


WE100

Expansion Tank
The most effective method to complete your cooling system that requires a remote fill and expansion area. Ensures leak-free operation. Accepts any standard radiator cap.

- -08 O-ring boss outlet
- 2 - 1/4" NPT inlets
- CNC waterneck

Capacity	*Housing #*	*Color*	*Dimensions*
28 oz.	**WE100**	**R,B,S,U,C**	10"H x 2"W x 3"D

For more tank information see page 52.


WN0012 & WN0012W

Weld-in Waterneck
The filler neck is one of the most critical machined parts in the cooling system. Our weld-in filler neck is the highest quality available for upgrading an existing radiator or fabricating a new radiator. The sealing surfaces are machined with 5° tapers for a positive seal.

Application	*Housing #*
Standard	**WN0012**
Flush Mount	**WN0012W**


WIK346

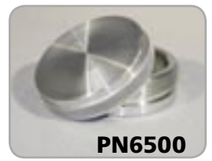
Relay Kit
Using a relay when wiring your electric water pup can save you from overloading existing wires and supply the pump with ample power. This kit is designed for Ford modular installations with wires cut to length but can be used for any of our electric pumps.

Application	*Part #*
Electrical Relay	**WIK346**

R=Red, B=Blue, S=Black, U=Polished, C=Chrome. When ordering please choose part # then color. For example **WR100R** would be a **WR100** recovery tank in **Red**.

Weld-in Products
Cap and Bung (AN & NPT)

Cap and Bung
assemblies are sold as shown with an aluminum cap and your choice of steel or aluminum bung. These assemblies are commonly used on valve covers, oil pans, differentials, and fuel tanks.


PN6500


PN6550


PN6700

Size	*Aluminum*	*Steel*	*Thread*
1.75"	**PN6550**	**PN6551**	1.312" - 12
2.5"	**PN6500**	**PN6501**	2.500" - 20
2.5" Pro	**PN6700**	**PN6701**	2.250" - 6

These Female AN
are the next evolution of our bungs for SAE O-ring boss. Features include a low profile and a thick weld land to reduce warp. They offer a more positive seal than pipe thread.

Size	*Thread Size*	*Aluminum*	*Steel*
-06	9/16" - 18	**WF06FA**	**WF06FS**
-08	3/4" - 16	**WF08FA**	**WF08FS**
-10	7/8" - 14	**WF10FA**	**WF10FS**
-12	1 1/16" - 12	**WF12FA**	**WF12FS**
-16	1 5/16" - 12	**WF16FA**	**n/a**
-20	1 5/8" - 12	**WF20FA**	**n/a**

These Male AN
adapters are machined to register easily and seal perfectly. The high quality finish makes welding easy.

Size	*Thread Size*	*Aluminum*	*Steel*
-06	9/16" - 18	**WF06MA**	**WF06MS**
-08	3/4" - 16	**WF08MA**	**WF08MS**
-10	7/8" - 14	**WF10MA**	**WF10MS**
-12	1 1/16" - 12	**WF12MA**	**WF12MS**
-16	1 5/16" - 12	**WF16MA**	**n/a**
-20	1 5/8" - 12	**WF20MA**	**n/a**

NPT fittings
continue to expand our line, and we now offer these bungs for NPT weld in bosses. These parts are cut from billet for superior integrity.

Size	*Aluminum*	*Steel*
3/8"	**WF38PFA**	**WF38PFS**
1/2"	**WF12PFA**	**WF12PFS**
3/4"	**WF34PFA**	**WF34PFS**
1"	**WF10PFA**	**WF10PFS**

Housing Ends

Our Housing Ends are made from premium tubing, unlike many on the market that are cast or flame cut from plate steel. Precision CNC machining from top quality material provides the best fit and allows for hotter, stronger welds resulting in a safer, more reliable finished product.


HE10


HE20


HE30


HE40


HE50


HE60

Application	*Part #*
Olds/Pontiac	**HE10**
Olds/Pontiac (tapped & scalloped)	**HE50**
Large Ford	**HE20**
Large Ford (symmetrical)	**HE60**
Small Ford	**HE30**
Mopar	**HE40**

Rack & Pinion

Designed for Mustang II and Pinto style non-power rack and pinion steering boxes. Part # RP01 will slide over a 3/4" shaft and the part # RP02 slips into 3/4" I.D. tubing. Made from 4130 alloy.


RP01, RP02

4130 alloy

Application		*Part #*
26 spline	3/4" I.D.	**RP01**
26 spline	3/4" O.D.	**RP02**

Mis-alignment Bushings

Our line of chassis components now includes mis-alignment bushings made from 4130 alloy steel. They provide a safer means of mounting a spherical rod end with a high angle of incidence.

HEIM Size	*Bolt Size*	*Part #*
5/8"	1/2"	**MB6250**
3/4"	1/2"	**MB7550**
3/4"	5/8"	**MB7562**
7/8"	5/8"	**MB8762**
1"	3/4"	**MB1075**

Contour Clevises


Inline and **Perpendicular**

Application	*Tube Size*	*Bolt Size*	*Slot Width*	*Part #*
Inline	1 1/4"	3/8"	3/4"	**CC123775I**
Perpendicular	1 1/4"	3/8"	3/4"	**CC123775P**
Inline	1 1/2"	3/8"	3/4"	**CC153775I**
Perpendicular	1 1/2"	3/8"	3/4"	**CC153775P**
Inline	1 5/8"	3/8"	3/4"	**CC163775I**
Perpendicular	1 5/8"	3/8"	3/4"	**CC163775P**

Weld-in Clevises

Tube Size	3/16" Bolt	1/4" Bolt	5/16" Bolt		3/8" Bolt			1/2" Bolt
Slot Width	1/8"			3/16"		1/4"	5/16"	3/8"
3/8 x .058	CE38							
1/2 x .058		CE12						
5/8 x .058			CE58					
3/4 x .058				CE34	CE35			
7/8 x .058					CE78			
1 x .058					CE10	CE11	CE15	
1-1/8 x .058					CE17	CE14		
1-1/8 x .083						CE13		
1-1/4 x .058						CE16		
1-1/2 x .120								CE21

Our line of 4130 alloy **weld-in clevises** are another useful machined product for the professional or amateur fabricator. They are available for a variety of tube sizes, wall thicknesses and cross bolt sizes. They are finished with the quality and care that is a part of every one of our products. Typical applications include: wheelie bars, wing struts or supports, seat mounts, battery mounts, parachute mounts, and many other mounting needs.

Threaded Clevises

Left Hand	Right Hand	Thread Size	Bolt Size	Slot Size	
TC1032L	TC1032	10-32	3/16	1/8	**303 Stainless**
TC1428L	TC1428	1/4-28	3/16	1/8	
TC3824L	TC3824	3/8-24	5/16	3/16	**4130 Alloy**
TC1220L	TC1220	1/2-20	3/8	1/4	

• zinc plated (zinc plating on 3/8 and 1/2 only) • rolled threads

Our large **threaded clevises** are made durable with 4130 alloy. We roll the threads for a stronger and better fit. The small clevises are made from stainless steel with a rounded slot base for additional strength. These parts make fabrication easy.

Safety Washers

Bolt Size	Alloy	Stainless	Aluminum
#10	SW10A	SW10S	SW10L
1/4	SW14A	SW14S	SW14L
5/16	SW51A	SW51S	SW51L
3/8	SW38A	SW38S	SW38L
7/16	SW71A	SW71S	SW71L
1/2	SW12A	SW12S	SW12L
5/8	SW58A	SW58S	SW58L
3/4	SW34A	SW34S	SW34L

These **safety washers** are mandated by some sanctioning bodies such as SCCA and SCTA to retain spherical rod ends in the event of a failure. Although designed as a safety measure, the added range of motion they provide makes them ideal for many applications like linkages or bump steer adjusters.

Fabrication Assistance
4130 Alloy Threaded Tube Ends

Tube Size \ Thread Size	10-32	1/4-28	5/16-24	3/8-24	7/16-20	1/2-20	5/8-18	3/4-16	7/8-14	1-12
3/8 x .058	RE1009AAA									
1/2 x .058		RE1010AA	RE1010A							
5/8 x .058			RE1011A	RE1011B						
3/4 x .058			RE1012A	RE1012B	RE1012C					
3/4 x .065			RE1013A	RE1013B	RE1013C					
7/8 x .058				RE1014B	RE1014C	RE1014D				
7/8 x .065				RE1015B	RE1015C	RE1015D				
7/8 x .083				RE1016B	RE1016C	RE1016D				
1 x .058				RE1017B	RE1017C	RE1017D	RE1017E			
1 x .065				RE1018B	RE1018C	RE1018D	RE1018E			
1 x .083				RE1019B	RE1019C	RE1019D	RE1019E			
1 x .095				RE1020B	RE1020C	RE1020D	RE1020E			
1 1/8 x .058						RE1125D				
1 1/8 x .083						RE1021D	RE1021E			
1 1/8 x .095						RE1022D	RE1022E	RE1022F		
1 1/4 x .058						RE1124D*	RE1124E*	RE1124F*		
1 1/4 x .065							RE1023E*	RE1023F*		
1 1/4 x .095						RE1024D*	RE1024E*	RE1024F*		
1 1/4 x .120						RE1025D*	RE1025E*	RE1025F*		
1 3/8 x .095							RE1026E*	RE1026F*		
1 3/8 x .120								RE1028F*	RE1028G*	
1 1/2 x .120								RE1030F*	RE1030G*	RE1030H*
1 1/2 x .065							RE1032E*			
1 5/8 x .083								RE1034G*		
1 3/4 x .120										RE1036H*

Monster Truck tube end: *Part#* RE1036J has 1 1/4" thread and fits 1 3/4" x .120" wall tube.

IMPORTANT!
For left hand threads add an 'L' to the end of the part number. (Example: RE1017DL)

Our Threaded Tube Ends have been the choice of the nation's top chassis builders for years. The strength, consistency, and finish quality are unmatched.

(*) Indicates hex on left hand threaded parts.

Custom machined parts available. Call for details.

Shown in use with front A-arm suspension.

Shown in use with 4 link rear suspension.

Fabrication Assistance
Chassis Tabs

Chassis builders note:
If you have a need for a particular tab for your application please call us. Our manufacturing is done in-house and we can respond quickly to your needs.

Bent tabs provide a stronger platform to build from. The integral gusset provides extra stability.

All bent tabs are .125" thick.

3/8" hole

CT30112

3/8" hole

CT30212

3/8" hole

CT30312

3/8" hole

CT30412


CT30412

Made from 4130 and *cut* not "punched" to size. This makes these tabs stronger and perfect every time.

1/4" hole

CT10112

5/16" hole

CT10212

1/4" hole

CT10312

3/8" hole

CT10412

3/8" hole

CT10512

3/8" hole

CT10712

1/4" hole

CT10812

7/16" hole

CT11112

1/4" hole

CT11312

5/16" hole

CT11510
.100" thick

5/16" hole

CT11612

3/8" hole

CT11712

5/16" hole

CT11812

.165" hole

CT12006
.0625" thick

All straight tabs are .125" thick unless otherwise marked.

Hole size listed in photo.

3/8" hole

CT11018
.187" thick

5/16" hole

CT11418
.187" thick

7/16" hole

.125" thick **CT10612**
.187" thick **CT10618**

5/16" hole

.125" thick **CT10912**
.187" thick **CT10918**

7/16" hole

.125" thick **CT11212**
.187" thick **CT11218**

Revolutionary cooling for your Transmission

Our next step in product development has been to address the problem of excessive transmission heat. By applying what we have learned by our extensive knowledge of cooling systems, we have created a new method of cooling transmission fluid as well as preheating it to a suitable level before each run. This new deep transmission pan for powerglide transmissions acts as a fluid temperature stabilizer and offers more consistent temperature for more consistent runs. Our testing data shows that the warmup cycle of the engine raised the transmission to within 15 degrees of engine temperature. That is, when exiting the staging lanes with an engine temperature of 165°F, the observed transmission temperature was 150°F. Likewise, on the cooldown cycle our data showed that the transmission fluid would drop temperature within 10 degrees of the engine. That is, the observed engine temperature at the end of the run was 205°F and the transmission was 215°F. The transmission quickly dropped to within 5 degrees of engine temp and followed the coolant temp all the way to 150°F.

Heat transfer starts with the right pan

The heart of the system is our revolutionary new transmission pan. It has similar dimensions to a standard deep powerglide transmission pan but then we cast in a water passage. This passage allows the water that is being cooled by the radiator to also remove heat from the transmission fluid. The outlets are ported -6AN on the front and the sides to offer a few different connection options.

Transmission Pan

The next step is to configure your vehicle so that a small amount of flow is diverted from the radiator and directed through the pan. To do this you must identify the low pressure and high pressure sides of the cooling system and tap into each. By introducing a pressure differential across the cooling jacket of the pan, water will be caused to flow through it. Remember, the pump is the "motivator" of the coolant through the system, so the high pressure area is found just after the impeller of the pump and the low pressure area is found just before it. For our testing purposes, we tapped into one of the legs of the water pump for high pressure and sent the return water to low pressure found in one of the tanks of the radiator. Careful selection of connection points can make this job fairly painless. Run 2 hoses -6AN or equivalent and you are set.

O-ring seal

Close-up of pressure port

Description	*Part #*	*Additional information*
Powerglide Trans Pan with Heat Transfer Passage	**WTP100**	Comes with filter spacer
Quick disconnect fittings for -6AN	**WTA100**	Aids trans change time
Water pump center section with high pressure port	**WP155**	Easy way to connect

Cooling System Principles

All the best aftermarket parts used the wrong way can be less effective than the factory system. In the search for cooling knowledge, it is found that the topic of cooling systems is left out of most books on automotive high-performance. The next few paragraphs will give you a better understanding of how to properly design a cooling system for your vehicle. The following information comes from well known engine builders and our personal experience.

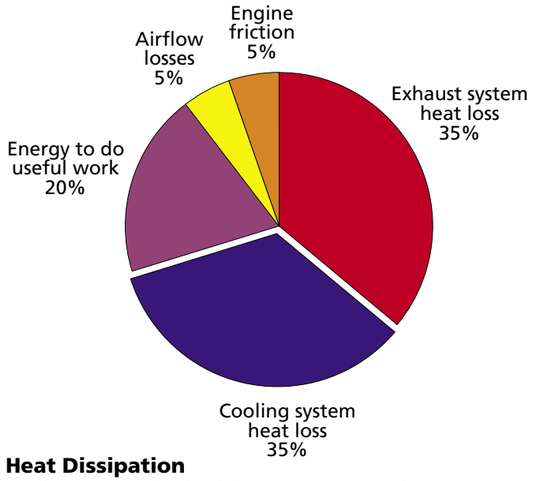
Engine Tune

Engine tune can be one of the greatest factors in water and oil temperature. A lean mixture (air/fuel) and/or retarded timing situation will make heat quickly. Lean mixtures burn hot causing detonation and preignition. Retarded timing makes the engine labor to compress the air/fuel mixture. The engine fires well after TDC at a reduced compression ratio. Exhaust valve timing or exhaust restriction will hold heat in the engine raising water temperature. These conditions also affect oil temperature through the cylinder heads and pistons.

The Big Five

With the engine tune problems eliminated it comes down to five major factors. They are:

1. Heat production (BTUs / HP)
2. Radiator Capacity (heat dissipation)
3. Air Flow
4. Water Flow
5. Pump & System Pressure



BTUs

Using a little science and math you can convert your horsepower to BTUs (heat). A horsepower/min. is equal to 42.44 BTU. One third of that heat goes into the water and must be dissipated by the radiator. When calculating radiator capacity you only need to consider the horsepower you're using continuously, not the amount your engine is capable of producing. For example, a 500 hp stock car will need much more cooling capacity than a 850 hp dragster. The stock car's engine RPM will cycle above and below peak horsepower twice a lap, heat soaking the cooling system with 180,000 BTU in a ten-minute event. The dragster, in one round, might idle less than ten minutes and make an 8 second run at a 750 horsepower average. Running 10 seconds at full throttle the dragster would release about 6,000 BTU. In the case of the dragster, the system must be adequate enough to prevent detonation under power and maintain temperature at idle.

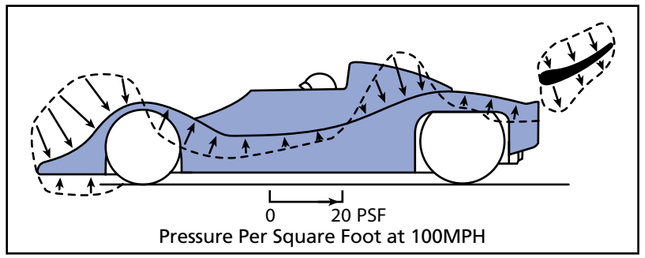
Heat Dissipation

Radiator capacity, in this case, refers to the amount of heat it can dissipate; not the amount of coolant it holds. Due to the various designs and materials used in radiators today, you cannot judge them on size alone. In the past, all radiators were made from copper and brass. Copper was the obvious choice for the cooling fins because of its superior heat dissipation. The problem was that the solder used to join the two materials reduced the amount of heat that could be transferred to the copper. In the last ten or fifteen years aluminum has become the material of choice for racing and original equipment radiators. The major design changes have been the switch from 1/2 - 3/4 inch wide tubes to 1" - 1 1/2" wide tubes and the use of double pass tanks. The wider tubes have more surface area and therefore more heat dissipation. Dual pass designs force the water to travel the length of the radiator twice, increasing the amount of temperature drop capable for a given size, unfortunately the restriction is much more than doubled. Surface area is king when it comes to radiators. Doubling the square inch of your radiator will double the heat dissipation, whereas doubling the thickness is less effective and restricts air flow.

Heat Dissipation (cont.)
Other factors that play a role in radiator design are fin count per inch and configuration such as down flow (top tank) or cross flow (side tanks). Inlet and outlet size also play a major role.

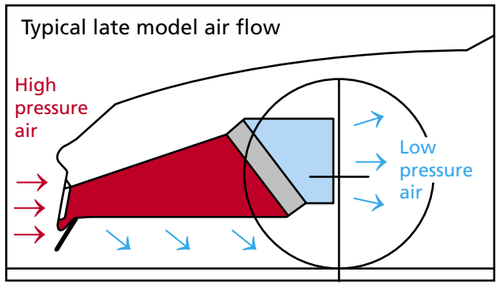
Coolants will vary in heat transfer characteristics. Straight water is accepted as the most efficient coolant. A trade-off is usually made with glycol-based products to increase the boiling point, lubricate the pump seal, reduce corrosion, and prevent freezing. Some sanctioning bodies do not allow glycol-based coolants because of obvious track clean-up problems. In these cases, use an anti-corrosion / seal conditioner additive available from any auto parts store. Many new coolants and additives are available. We suggest you do some research because many have merit, but some are more marketing than science.

Air Flow
Air flow is the most critical factor in water to air radiated systems. Nothing affects a radiator's efficiency more than air flow. The speed of a vehicle is normally considered when choosing a radiator. Winston Cup teams use different radiators for different situations (full size radiators for short tracks and smaller radiators for super speedways). Maintaining adequate air flow at various speeds is critical and more complex than you might think. First, the radiator must be supplied with fresh air. **The grill opening or air inlet can make all the difference.** Ideally it should be facing squarely into the wind. Looking at the illustration you can see the closer to perpendicular to the ground a surface is, the higher the pressure or downforce. Due to the reduced frontal area of late model vehicles, the valance area becomes the only surface with enough air pressure to provide adequate air flow. Scoops, bills, deflectors and recessed screens can be used to improve less than ideal surfaces. **The size of an opening should be proportional to the vehicle speed.** A Winston Cup car running laps at 180 MPH will run cool with less than a 6" x 6" opening. A short track late model with half the HP, the same body and an average speed of 90 MPH will require about a 6" x 24" opening.



Pressure Per Square Foot at 100MPH

Continuous duty race cars (stock car, sports cars, rally, etc.) should have a well-designed air box to feed the radiator. The air box needs to be tightly sealed to force all the inducted air through the radiator, this also keeps the incoming air from mixing with air already heated by the engine. To maintain velocity, the air box should slowly graduate from the inlet to the size of the radiator, avoiding bottle necks and the floor should be level or slope up to the radiator.



The fan is the next consideration. **At speeds under 30 MPH, electric fans are most effective** because they operate independent of engine RPM supplying maximum air flow at low vehicle speed when you need it the most. **Above 35 MPH** (with a good grill opening and/or air box) **fans are not necessary** and in most cases more air will pass through an electric fan when turned off. Most electric fans have an integral shroud to maximize efficiency, but without being incorporated into a shroud covering the entire radiator core, they will only pull air through the area directly in front of the blade circle. A minimum 1" gap between the core and the shroud is necessary for proper air flow. **In some cases trap doors must be used to relieve back pressure** (see next paragraph). Engine driven fans also must be properly shrouded to be effective. This means tightly sealed to the radiator with half the fan blade into the opening of the shroud. The fan should have no more than 1" clearance to the shroud (15" fan /17" opening). Some stock type engine driven fans can reach blade stall at high RPM. This means it becomes like a wall stopping air from passing through it.

Air Flow (cont.)
The radiator core must have a pressure drop across it. Air pressure builds up in the fan shroud or the engine compartment, the pressure will equalize and air flow across the radiator can stall. In the case of electric fan shrouds that cover the entire radiator core, rubber or mechanical trap doors can be used to bypass the fan opening as air flow increases at higher speeds. The engine compartment must be able to maintain a pressure differential as the vehicle speed increases. Auto makers will use an air dam to increase the air pressure at the radiator inlet and block air from passing under the car creating a low pressure or ground effect. Many owners of lowered cars have found out the hard way just how effective this technique is after removing the factory air dam.

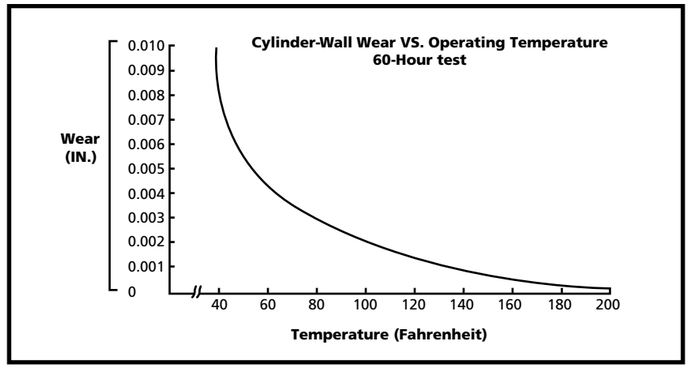
Water Flow
Many times water flow is the last aspect of the cooling system to be addressed. Ironically, it is also where the majority of problems lie. This is our focus at Meziere. The typical stock water pump has excessive clearance and straight impeller blades, usually open front and back. **At low rpm** this produces little flow and is responsible for cars overheating in traffic. **At high rpm** this design will cause cavitation and aeration. Circle track racers crutch this high rpm condition with under-drive pulleys only to find the engine overheats during caution laps. **A common misconception comes from this under-drive solution.** Many people believe they have fixed their overheating problem by slowing the water flow, when in fact it was reducing the cavitation by slowing the pump that provided the solution. In engine driven situations the only remedy is a quality racing pump with tight clearances and a swept blade closed impeller. Where rules and conditions permit, **electric water pumps can be a solution with multiple benefits.** The constant speed of an electric pump eliminates high and low RPM problems. The bonus is that you can run the pump when the engine is shut off. **Never run your engine without the water pump on because hot spots can form in the cylinder head before your temperature gauge begins to register.** Mated with a good electric fan you can easily regulate water temperature for consistency and rapidly cool the engine between rounds after shutdown.

Pump and System Pressure
The most widely known cooling system fact is: For every pound of pressure in a closed system the boiling point is increased three degrees. For example a 16 lb. cap can increase your boil-over point to 260°F (16 x 3 = 48 + 212 = 260). You may be thinking, "I'd never run over 210°F water temp so what is the benefit?" Although your gauge reads 190°F hot spots around the combustion chamber can be well over boiling temp (212°F @ sea level). A poorly sealed system, low pressure cap or low water level can allow a runaway boil over. The lack of pressure allows boiling to start prematurely. Gasses produced by this boiling pushes water out and aerates the coolant compounding the situation. Water is diverted around these steam pockets leading to more serious problems; surface distortion, metal fatigue and cracks. Once this process begins, it will not stop while the engine is under a load. Water flow, temp and pressure all work to manage this boiling at hot spots which can produce steam pockets that insulate the metal from the coolant.

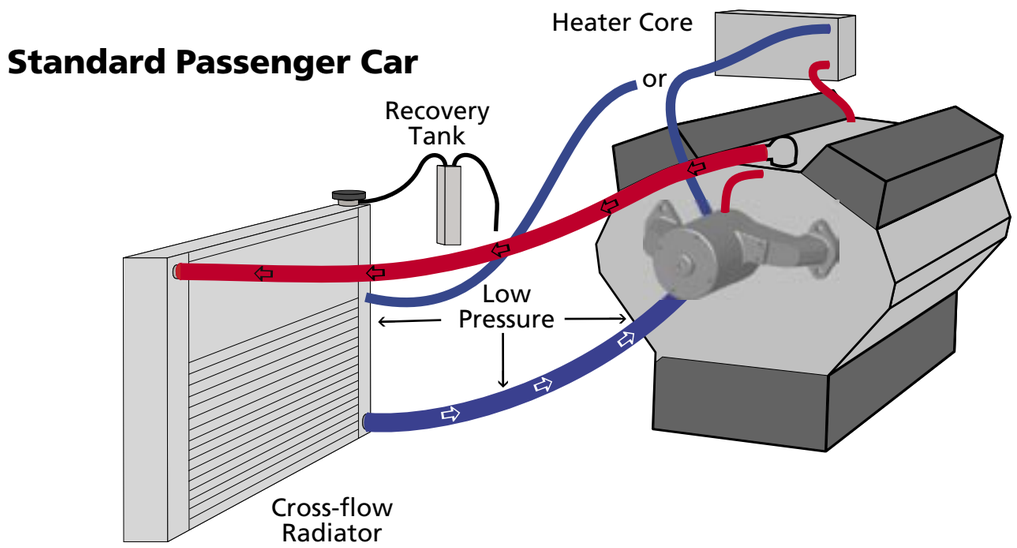
The higher the pressure produced by the water pump, the less chance of the steam pockets. The same boiling point law is in effect here. Racing pumps can generate pressure in the water jacket in excess of 30 psi to control hot spots and reduce detonation or pre-ignition.

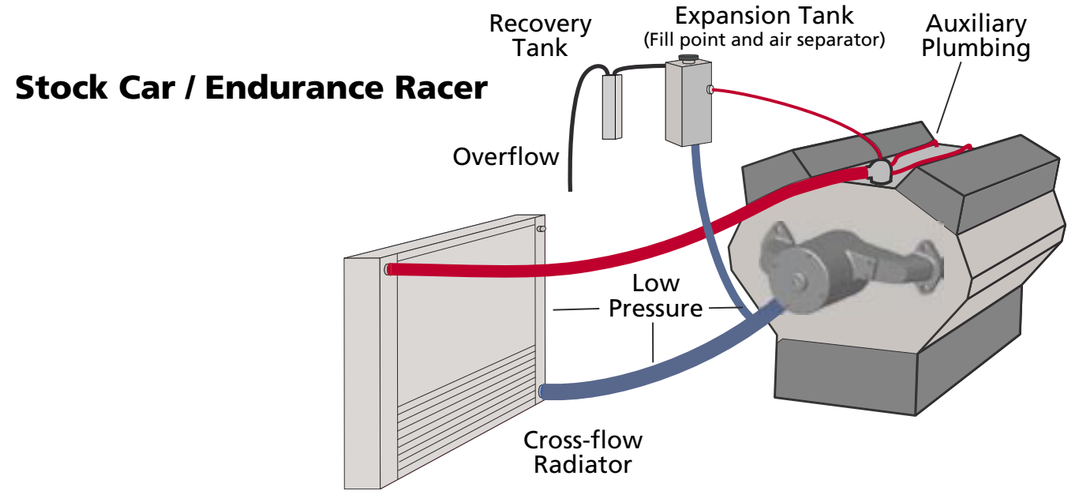
Recommended Operating Temperatures
There are a few different theories on coolant temperature and most have their place. Cold water (under 170°F) and hot oil (230°F) make power. Most drag racers live by this. Internal clearances, tuning, and other factors play the biggest role in where you make the most power. In most other forms of racing and street applications, the engine is under power for minutes or hours rather than a few seconds. In this case, higher temperatures in the range of 190°F to 210°F are ideal. Many factors determine this temperature; block and head castings, metal properties, proper combustion and machined clearances. Either inherently or by design small block Chevrolet engines prefer 190°F to 210°F. Most early domestic V8s are right in that neighborhood.

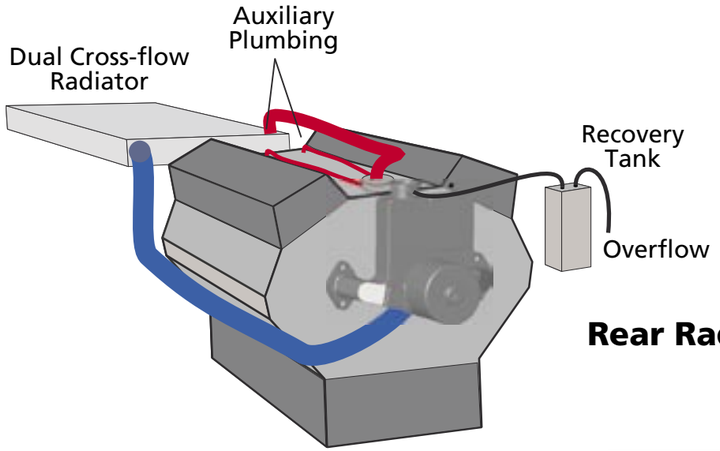
Recommended Operating Temperatures
Fuels react to engine temperature and combustion pressure. Low octane gasoline burns more completely at higher temperatures, so manufacturers design late model engines to operate up to 210°F for reduced emissions. Alcohol has a narrow window for proper combustion. Many tuners recommend a water temperature above 195°F to avoid fuel washing the cylinders from an incomplete burn and below 205°F where the combustion byproduct can leave harmful deposits. The internal clearances such as piston to wall and ring gap are set for a predetermined operating temperature by the engine builder. The chart below illustrates the excessive wear that occurs with coolant temperatures below 180°F.



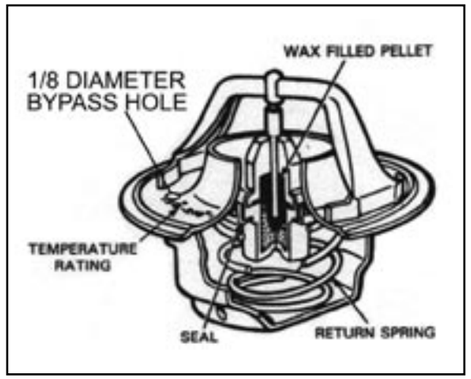
Regular and Irregular System Configurations
The following illustrations are examples of the correct way to plumb typical automotive and racing cooling systems.



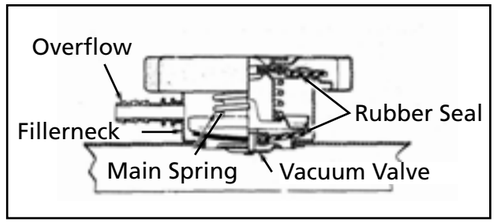




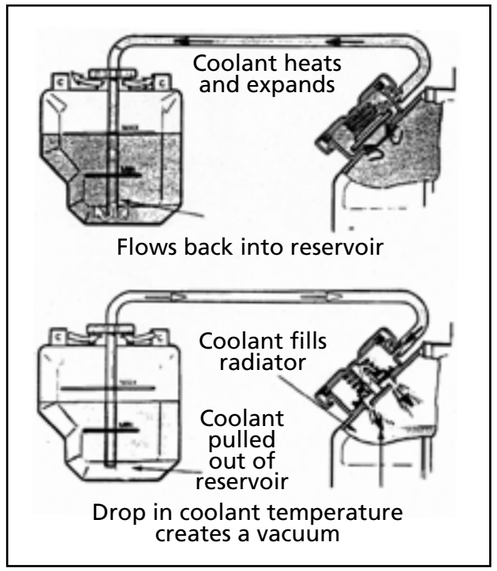
Thermostat
A thermostat's primary purpose is to quickly bring the engine up to operating temperature (see section entitled *Recommended Operating Temperatures*). With the exception of drag racing, a thermostat is recommended for most applications. Most racers avoid thermostats, seeing them as another part to fail. Their benefits far outweigh their stigma. In our opinion, the Robertshaw high flow thermostat, the Stant Superstat, or the highly reliable Cloristat used in the Volvo 4 cylinder engines (fits Chevy V8's) is your best choice. The Robertshaw thermostat (available from Mr. Gasket) offers the least amount of restriction when fully open which is desirable with electric pumps. When the cooling system is not equipped with a bypass system, we suggest drilling two small holes in the thermostat's outer ring.



Pressure Cap
As mentioned previously, the more pressure you can hold in a closed system, the higher your boiling point. Run the highest pressure cap your system can handle. The weakest link is typically the radiator or hoses. The radiator manufacturer should be able to suggest the appropriate cap pressure. Check the cap periodically to make sure it is maintaining the advertised pressure. The rubber seal on the cap may harden and form an impression from the seat in the filler neck. A new cap should be used whenever the filler neck or radiator is replaced. One commonly over looked component is the water neck/filler neck. Most are cast or formed metal. If the pressure cap seat is defective, distorted or poorly designed you will loose water while the engine is running. This situation acts like a bad head gasket. You will notice the engine gets hot faster every round or hot lap session. You wouldn't be the first or the last person fooled into thinking an engine problem was the cause for water pushing through the cap. Lack of pressure on the system builds heat faster and the quick boil-over is pushing all the water out.



Recovery System
Keeping the system full reduces aeration and maintains pressure. As the temperature increases the water expands and pressure builds. If the system is completely full the expansion pressure will exceed the cap pressure and over flow into the recovery tank. If your pressure cap is properly located on the suction side of the system, air is pushed out first. When the system cools a vacuum is created. When your radiator cap is equipped with a valve that opens under negative pressure it will draw coolant back into the system. The tube that extends to the bottom of the recovery tank transfers the coolant back to the radiator. Mount the tank as close as possible to the pressure cap. The line should be short and level, reducing restriction and the effect of gravity. If the recovery tank is kept 1/3 full (with the engine cold) every heat cycle will automatically purge more air out of the system. The opposite is true without a recovery system. With every heat cycle water will be pushed out, leaving more air space. This air space can be compressed lowering the boiling point.



Catch Can
What is normally referred to as a catch can should not be confused with a recovery tank. Most sanctioning bodies require a one pint or larger catch can to contain water overflow from the cooling system. The function is to keep coolant off the track. It will also give you some idea of how bad your over heating condition is based on the amount of coolant you drain from it.

Expansion Tank
An expansion tank is sometimes referred to as a surge tank, header tank or air separator. The tank has two main functions. It is used as a fill point when the top of your radiator is lower than the engine's water outlet. As the name infers, it can be used to deal with the expanding volume of water when a recovery system is not utilized. The bottom of the tank is plumbed to the low pressure (suction) side of the cooling system (after the radiator core and before the pump impeller). The smaller fitting on the upper portion of the tank is plumbed to the high points on the engine and radiator to remove trapped air and aerated water. This reservoir located high and out of the main flow of water allows air to separate out of the water making your cooling system more efficient.

Correct Motor Rotation
All of our electric pumps turn clockwise (as viewed from the front) except for LT-1, Modular, and Toyota Supra. The pump will flow a fraction of its potential when spun backwards. Remove the inspection plug in the motor end cap and you will see the 5/32" hex in the end of the motor shaft. Give the pump momentary power and observe the rotation as it comes to a stop. Switch the positive and ground wires if you need to reverse the electric motor.

No Rotation
Check the fuse and replace if blown.
Inspect the wiring from the power source to pump. Check the ground for possible faults. Check to see if the electric motor moves freely by removing the inspection plug and turning the shaft with a 5/32" hex wrench before testing pump operation. Turning the shaft back and forth with the hex wrench may dislodge any foreign objects jamming the impeller without disassembling the pump. Failure to install a fuse inline on the positive lead may result in motor failure in a jammed impeller situation.

Electrical Faults
Start from the pump ground. It should be free of paint, dirt and corrosion. The ground must also have a good path back to the battery; i.e. block to frame, frame to battery and block or frame to body. A chromoly chassis has poor conductivity and should not be used as a ground path. Inspect wiring for shorts. Check all the connections, especially crimp terminals. Tug on crimp connections and look for signs of overheating. Resistance at crimp connections can be reduced by adding a small amount of solder. This technique will increase reliability and reduce power consumption. Use a test light or jumper lead to check for an open circuit or switch.

No Flow- Air Locked
If the rotation is correct and you still have no water flow, the pump may be air locked. This occurs most frequently when the cooling system has been drained and refilled. Occasionally by raising the drivers side of the car, or squeezing the lower hose you can purge enough air to allow the pump to prime. There are a few ways you can modify the pump to rectify this problem if it continues to reoccur. Please call us 8 a.m. to 5 p.m. Pacific Time for more information.

Starter System Principles
When you make the decision to use aftermarket parts in your starting system you have moved away from the mass produced "loose tolerance" parts. What this means is; you now will need to take more of the responsibility in making sure the flexplate or flywheel and the starter drive engage correctly. These factors include both the ability of the starter to stay engaged without moving and the starter's ability to stay disengaged under the high G forces experienced during acceleration. Many factors can contribute to early starter or flexplate failure. We will outline some of the pitfalls that racers have come across.

Engine Tune
Assuming that you have carefully and correctly mounted your starter and flexplate you can still have problems with the engine not turning over well. Engine tune can be one of the greatest factors in early starting system failures. Most race engines run timing advanced in the 35-42 degrees BTDC range. With this much advance, combined with the high compression ratios of typical race engines, it is common to see the engine "kick back" against the starter when the engine fires well before TDC. Most racing ignition systems have a start retard system that will reduce the ignition timing during engine cranking. If the system is not set correctly you may experience costly starting problems. You can check the timing with a timing light while cranking the engine to verify that your start retard system is working properly.

Starter Engagement/Condition:
These checks can be made after the flexplate has been installed on the engine, but before the transmission has been installed. Before making any clearance checks, inspect the starter gear to make sure it is not worn, broken, or sloppy. Repair or replace as necessary.

Radial Clearance:
Physically engage the starter gear into the ring gear to observe engagement. You should be able to grab the gear with pliers and pull it out. The gear should be able to engage fully without interference and have some slight (.025" max) gear lash. This is an important step. Too much gear lash will put excessive load on the gear teeth. Too little lash will cause the starter gear to hang up in the ring gear after engine start. Add starter-to-block shims to increase lash. Decrease starter-to-block shims to decrease lash. If no shims are present and the lash is too great, special machining may need to be done to the starter mounting block. Do whatever is necessary to achieve proper clearance!

Axial Clearance:
With the starter gear retracted out of the flexplate there should be .06"-.140" clearance. This clearance is necessary to keep the starter gear from engaging under G-loads, but should not be so much that the gear can not reach full engagement during starting.

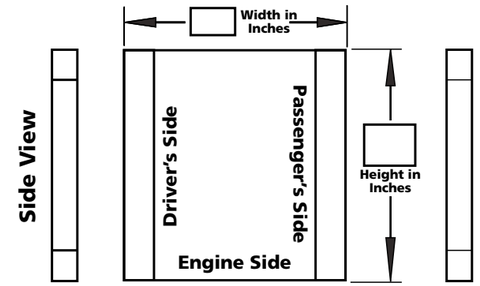
Starter Electrical Circuit:
Your starter can not perform to its potential if it does not get proper voltage and current. By performing a quick check, you can make sure your starter wiring is correct. To safely perform this test, take measures to prevent the engine from starting (ex. Disconnect coil wire). Measure voltage at the vehicle battery while cranking. Next measure voltage at the starter terminal while cranking. The voltage at the starter should be within 1⁄2 volt of the reading at the battery. At any time the voltage at the starter should not be less than 9.0VDC. If an excessive voltage drop exists, measure voltages at each connection in the system and repair the system as necessary. An under-voltaged starter can cause excessive load on the starter as well as over-load to the starter gear and ring gear.

Mechanical Conditions:
For the best results with your starter and /or flexplate installation, here are a few things to consider. When removing your old flexplate, inspect fasteners which may have been damaged or loose. Also look for any cracks, metal transfer, or abnormal ring gear wear which may suggest other problems. Inspect torque converter pads for flatness and check the back of the crank shaft and the starter mounting surface for metal transfer as well. All of these mating surfaces need to be completely flat for proper contact. If these surfaces are not flat, dress them with a file. Uneven mounting surfaces will cause misalignment and instability that cannot be corrected by shims or any other means. The goal is to allow your starter to enter the driven teeth at a 90 degree angle and maintain its position as it is driving the ring gear.

Always remember, safety first. Use jack stands and proper lifting equipment while working under your vehicle.

Meziere Custom Radiator Form

Step 1: Determine core size
Please fill in overall dimension of the core in the appropriate box. Thank you!



Step 2: Determine core thickness
Please select one:
- ☐ Single 1" (Drag racing)
- ☐ Dual 1" (Street and high horsepower drag racing)
- ☐ Dual 1 1/4" (Open track and special application)

Step 3: Upper and Lower Hoses
Please indicate the location of the upper hose by carefully drawing a circle and placing a "U" inside of it. Repeat for lower hose connection.

Examples: (U) (L)

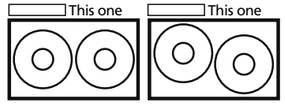
Step 4: Hose Connection Type
Upper hose connection
- ☐ 1.25" Rubber ☐ #12AN
- ☐ 1.50" Rubber ☐ #16AN
- ☐ 1.75" Rubber ☐ #20AN

Lower hose connection
- ☐ 1.25" Rubber ☐ #12AN
- ☐ 1.50" Rubber ☐ #16AN
- ☐ 1.75" Rubber ☐ #20AN

Step 5: Fan and Shroud
Please select one:
- ☐ No fan for me...I'm watching my weight
- ☐ Single fan please
- ☐ Double fan please...I'm goin' large

Please indicate dual fan layout

☐ This one ☐ This one



Step 6: Additional Features
1. Do you need a filler neck?* Please indicate the location on the sketch above.
2. Do you need special mounting tabs? Please indicate the location on the sketch above.
3. Do you need an internal transmission cooler? ☐ Yes ☐ No

** Please note: the filler neck will add 1.25" to the overall height.*

Step 7: Double-check your measurements

Step 8: Fax in order
Please fax your order to 760.746.8469
Please include your phone number below:
( )

Custom orders are NOT refundable.
Please double-check your measurements.

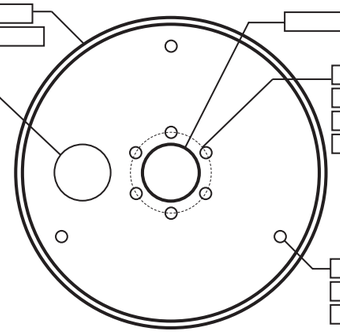
Meziere Custom Flexplate Order Form

Ring Gear Specs:
- ☐ Tooth Count / ☐ Tooth Pitch
- ☐ Starter Make / ☐ Ring Gear O.D

Lightening Hole Specs:
- ☐ Inside Diameter
- ☐ Hole Circle Diameter
- ☐ Number of Holes

Center Specs:
- ☐ Hub hole diameter / tolerance

Crankshaft Hole Specs:
- ☐ Number of holes
- ☐ Bolt circle diameter
- ☐ Pattern equal spaced Y/N
- ☐ Bolt hole diameter



Converter Hole Specs:
- ☐ Number of holes
- ☐ Bolt circle diameter
- ☐ Bolt hole diameter

Sketch plate profile here

Other Helpful Information:
Torque Converter Make
Other Application Information

Allow 4-6 weeks for delivery ~ All special orders must be paid in full

MEZIERE ENTERPRISES
220 S. Hale Avenue, Escondido, Ca. 92029

Ordering from Meziere Enterprises, Inc.

Business Hours: Phone hours are 8:30a.m. to 5:00 p.m. Pacific time, Monday through Friday. Closed Saturday and Sunday and all major Holidays. Phone orders are taken at (800) 208-1755. Technical information line is (760) 746-3273. Fax orders are taken 24 hours at (760) 746-8469.

Phone Orders: Anyone who answers our order line can direct you to the sales department. Fax orders please use part numbers including color when applicable. Please include your phone number in case there are questions.

Mail Orders: Please supply your name, address, zip code, phone number, and preferred method of shipment. Clearly state what you want, including part number if possible. When using VISA/MASTERCARD or American Express you must supply the card number, expiration date, 3 digit security code, and the name as it reads on the card. If the order is prepaid, it must be in certified funds. You will be notified if there is any delay in shipment.

Foreign Orders: Foreign orders please prearrange your own shipping arrangements. Some Canadian destinations fall into this situation also.

Special Orders: If you have a special request or need for an item not listed in our catalog, check with our salesperson or technical advisor to see if it is available. We constantly add new items to our inventory, making it possible that we have what you are looking for, but it is not mentioned in our catalog. Payment in full must accompany all special orders. No exceptions. No returns.

When You Receive Your Order

Check your order carefully as soon as you receive it to ensure that you have received what you ordered. Do not use or modify parts in any way before checking them. A part that is modified in any way cannot be accepted for return regardless of fault. If any parts are back ordered this will show on your invoice. If we are not otherwise notified, we will ship your order when available. Failure to accept a back order will result in your account being charged for the freight. On back orders greater than 60 days, we will notify you at the time of availability and give you the option of accepting the parts.

If You Have a Problem

If you receive a defective or wrong part, contact Meziere Enterprises immediately before returning the part. Shipping charges on all returns must be prepaid, we do not accept COD's.

Shipping: Ground UPS is our most common method of shipment unless otherwise specified. It is available to all 48 states in the Continental U.S. Other UPS options include 3rd day select, 2nd day air, and next day air. Shipments to Alaska, Hawaii, and Puerto Rico are available only through the air options. Other methods of shipment will have a special handling charge.