MEZIERE
ENTERPRISES

GEAR
for Your Ride

New *Pro-Style Flexplates* pg 10!

Meziere **SWAG**
hoodies, t-shirts and more pg 54

HEMI
Block Adapters
pg 44

5.0 Coyote Pumps pg 29

COOL IT!
Tricks of the trade to keep your hot ride cool. pg 55

NEW **TS500** Starter Less space. Same great power. pg 5

Over 30 Years and Still Proudly Made in the U.S.A.

MAKE / MODEL	PART #	COLOR	OPTIONS	INLET REQ.	SUGGESTED	OUTLET	LENGTH	WEIGHT
CHEVROLET								
Big Block								
Standard Electric	WP100	All	HD	Yes	WP1175	WN0022D	6.78	5.8
Reservoir Electric	WP200	All	HD	Yes		WN0912	6.78	8.2
High Flow Electric	WP300	All	PORTED	Included	Welded 1.75"	WN0022D	7.28	7.4
Mechanical Vee Belt	WP400	Blk, Chrm, Pol	PORTED	Included	Welded 1.75"	WN0022D	5.75	5.4
Mechanical Serpentine Belt	WPR400	Blk, Chrm, Pol	PORTED	Included	Welded 1.75"	WN0022D	5.75	5.5
Small Block								
Standard Electric	WP101	All	HD	Yes	WP1175	WN0022D	6.78	5.5
Reservoir Electric	WP201	All	HD	Yes		WN0912	6.78	8.5
High Flow Electric	WP301	All	PORTED	Included	Welded 1.75"	WN0022D	7.28	7.0
Mechanical Vee Belt	WP401	Blk, Chrm, Pol	PORTED	Included	Welded 1.75"	WN0022D	5.66	5.4
Mechanical Serpentine Belt	WPR401	Blk, Chrm, Pol	PORTED	Included	Welded 1.75"	WN0022D	5.80	5.5
Mechanical Vee Belt	WP402	Machined		Included	Welded 1.75"		5.80	6.8
Mechanical Serpentine Belt	WPR402	Machined		Included	Welded 1.75"		5.80	6.8
GENERAL MOTORS								
LT-1 / LT-4 (Standard Electric)	WP118	Blk, Chrm	HD				3.0 / HD 3.5	3.6
LS-X Various (Standard Electric)	WP119	All	HD	Yes	WP1150	Included	6.80	7.0
LS-X Various (High Flow Elec Street)	WP319	All		Yes	WN0019	Included	7.80	14.9
LS-X 2010 Camaro (High Flow Elec Street)	WP329	Clear Ano		Yes	WN0019	Included	8.15	16.6
LS-3 Corvette (2010 - 2013)	WP330	Clear Ano		Yes	WN0019	Included	7.65	16.3
LS-X Various (Mechanical Serpen Belt)	WP419	Clear Ano		Yes	WN0019	Included	5.45	11.6
DRCE (Standard Electric)	WP110	All	HD	Yes	WP1175		6.78	5.8
High Flow Electric	WP310	Blk, Chrm, Pol		Included	Welded 1.75"		7.28	7.4
GM3800 (Standard Electric)	WP140	All	HD				3.50	4.1
BUICK / OLDSMOBILE / PONTIAC								
BUICK (Small Block) Std Electric	WP125	All	HD	Yes	WP1150		5.78	7.0
BUICK (400, 435, 455) Std Elec	WP126	All	HD				4.00	5.7
OLDSMOBILE (Standard Electric)	WP135	All	HD	Yes	WP2175		6.10	5.8
PONTIAC (Standard Electric)	WP103	All	HD				3.78	5.9
FORD								
Big Block (429, 460) Std Elec	WP108	All	HD	Yes	WP1175	WN0013	6.10	5.8
Reservoir Electric	WP208	All	HD	Yes		WN0812	6.10	8.2
High Flow Electric	WP308	All		Yes	WN0033	WN0013	6.60	7.4
FE (352, 390, 406, 427, 428) Std Elec	WP170	All	HD	Yes	WP2175		7.43	6.6
Small Block (W,C,M) Std Elec	WP111	All	HD	Yes	WP2175	WN0023	6.30	5.6
High Flow Electric	WP311	All		Included		WN0023	5.55	8.6
High Flow Elec Street	WP312	All		Included		WN0023	6.30	10.2
Mechanical Vee Belt	WP411	Clear Ano		Included		WN0023	6.25	8.0
Mechanical Serpen Belt	WPR411	Clear Ano		Included		WN0023	6.25	8.0
Small Block 94-95 (Short) Std Elec	WP173	All	HD	Yes	WP2175		6.10	5.6
High Flow Electric	WP373	All		Included			4.51	5.3
High Flow Elec Street	WP374	All		Included			4.75	6.9
5.0 Coyote	WP341	Blk					5.20	7.3
High Flow Elec Street	WP342	Blk					5.54	9.1
Specialty Blown Apps.	WP343	Blk					5.54	9.0
5.0 Cobra Jet	WP340	Blk					5.54	9.1

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

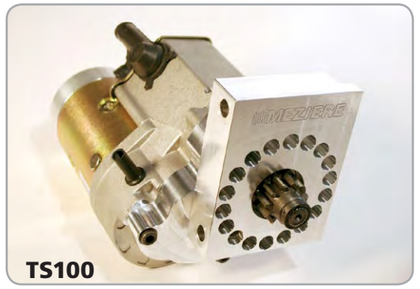
Quick Reference Guide

MAKE / MODEL	PART #	COLOR	OPTIONS	INLET REQ.	SUGGESTED	OUTLET	LENGTH	WEIGHT
FORD *continued*								
Modular (High Flow Electric)	WP345	Blk, Chrm					3.50	5.0
High Flow Elec Street	WP346	Blk					3.75	6.9
Elec Specialty Blown Apps.	WP347	Blk					3.75	6.7
Oversized pulley	WP348	Blk					3.75	6.8
H. Flow Street Super Duty	WP349	Blk					5.00	7.1
MOPAR								
Big Block B, RB, Hemi (Std Elec)	WP106	All	HD	Yes	WP1175	WN0029	6.80	7.1
Reservoir Electric	WP206	All	HD	Yes		WP12012	6.80	9.5
High Flow Electric	WP306	All		Yes	WN0033	WN0029	7.25	8.8
Reverse High Flow Electric	WP307	All		Yes	WN0033	WP12012 x2	7.25	8.1
Electric Insert (Stk Housing)	WP105	Blk, Chrm	HD			WN0029	3.50	3.6
Small Block (Standard Electric)	WP114	All	HD	Yes	WP11175	WN0029/30	6.10	5.7
Late Model SB Hemi (High Flow Elec)	WP314	All		Yes	WN0033		6.60	7.2
REMOTE MOUNT								
Remote Bulkhead (Std Elec)	WP116	All	HD	Yes	WP1175	WP12012 x2	5.00	5.4
Remote Bulkhead (High Flow Elec)	WP316	All		Yes	WN0033	WP1202 x2	5.50	6.3
Remote Inline (Mini Electric)	WP136	Blk		Yes	WP12012	WP12012	7.25	5.2
Remote Inline (Mini Elec Dual Out)	WP137	Blk		Yes	WP12012	WP12012 x2	7.25	5.3
Remote Inline (High Flow Elec Sngl Out)	WP336	Blk, Chrm		Yes	WN0033	WN0033	5.20	6.2
Remote Inline (High Flow Elec Dual Out)	WP337	Blk, Chrm		Yes	WN0033	WP16016/ WP16E16	5.20	6.2
Radiator Mount (High Flow Elec Sngl Out)	WP361	Blk, Chrm		Supplied	Radiator Mount	WN0033	5.20	5.9
Radiator Mount (High Flow Elec Dual Out)	WP362	Blk, Chrm		Supplied	Radiator Mount	WP16016/ WP16E16	5.20	5.9
Remote (Mechanical Vee Belt)	WP430	Blk		Yes	WN0033	WP12012 x2	5.55	3.5
Remote (Mechanical Vee Belt)	WP431	Blk		Yes	WN0033		6.30	
Remote (Mechanical Serpen Belt)	WP432	Blk		Yes	WN0033		6.30	
HONDA / ACURA								
B Series 1.6-1.7 & Type R 1.8 (Elec)	WPK50022			Included		Included		8.6
B Series 1.8-2.1 (Electric)	WPK50019			Included		Included		8.6
H Series 2.2-2.3 (Electric)	WPK50026			Included		Included		8.6
MAZDA								
Rotary (Electric Dual Inlet)	WP90	Pol		Yes	WP34012 x2	WP1125		
Rotary (Electric Single Inlet)	WP91	Pol			WP16016	WP16016		
NISSAN								
SR20 2.0 (Standard Electric)	WPK510							8.6
TOYOTA								
93-98 Supra Turbo (Std Elec)	WP520						4.25	5.2

Table of Contents

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS



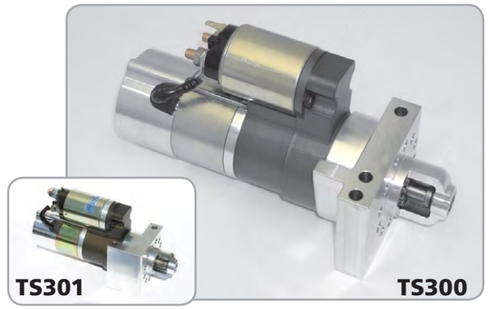
TS100

"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
TS119 - LS for 168 tooth flexplate.
*Note: TS119 Not built within factory package size.

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

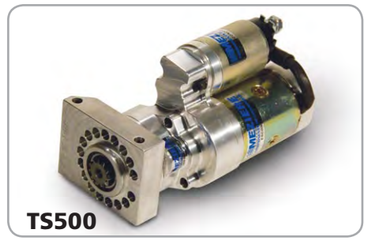
TS300 - Chevy inline for 168 tooth flexplate - Std. straight bolt pattern - Super Duty drive
TS301 - Chevy inline for 168 tooth flexplate - staggered "400 style" bolt pattern - Super Duty drive

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. Note: For a starter compatible with 24 volt please add "24" to the part number (ex TS40024).

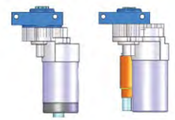
TS400 - Chevy offset for 168 tooth flexplate - Super Duty drive
TS400DS - Chevy offset for 168 tooth flexplate - Super Duty drive - Driver's side mount
TS400DP - Chevy offset for 168 tooth or 153 tooth flexplate - Super Duty drive


TS500

Less space. Same great power.

Our TS500 model is the next evolution in the True Start line. The knowledge we have gained from the 400 series has allowed us to redesign with weight and space savings in mind. An end on view will show that this design will provide more header and frame clearance for applications where space is at a premium.

Note: For a starter compatible with 24 volt please add "24" to the part number (ex TS50024).


TS500 vs. TS400

TS500 - Chevy offset for 168 tooth flexplate - Slim Line - Super Duty drive
TST500 - Chevy offset for 139 tooth flexplate - Slim Line - Super Duty drive

Fits big block and small block Chevy engines. 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
Note: For a starter compatible with 24 volt please add "24" to the part number (ex TST40024).

Boasting 2.2 Kilowatts of power and proprietary drive design you can rest assured your Ford engine will turn over faster than ever and will live to see the next round. The ingenious design of the TS409 allows you to achieve proper gear clearance. These starters also feature excellent gear support.

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
Note: For a starter compatible with 24 volt please add "24" to the part number (ex TST40824).

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
Note: For a starter compatible with 24 volt please add "24" to the part number (ex TST40924).

For your BIG Mopar 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

The TS306 Mopar starter has been designed to be a solid cranking solution on everything from a stock '68 Hemi Cuda to a Drag-Pak Challenger. The driver's side mounted slim design has an adjustable nose support that enables it to work with 727, 904 or manual transmission applications. It will fit BRB HEMI and small blocks.
Note: This WILL NOT fit '05-up GEN 3 HEMI passenger side mount applications.
Note: For a starter compatible with 24 volt please add "24" to the part number (ex TS30624).

Developed for Pro Mod. 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.
Note: For a starter compatible with 24 volt please add "24" to the part number (ex TS406H24).

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

TST406H - Mopar for 139 tooth 10 pitch
14.14 diameter flexplate

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

CUSTOM STARTERS
Just give us a call and tell us what you need, we can create a custom starter for your specific application.

Designed with the rigors of off-road racing in mind. 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

Relay Kit

Fits most starters and chassis wiring. The kit makes it easy to guarantee 50 plus amps to the solenoid for trouble free starts. The key is the correct solenoid switch and the Meziere 10 gauge "super fine strand" wire.

Super-fine

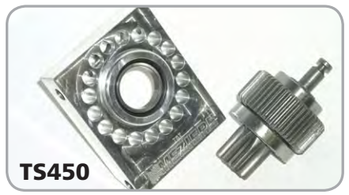
stranded cable with a tin coating moves the voltage in the most efficient manner. Weight conscious racers can rest assured this is the right solution.

Cable Type	*Lbs./Ft.*	*5' Part #*	*20' Part #*	*100' Part #*
1/0 Blk	.436	**PW5A0S**	**PW0A0S**	**PW1A0S**
1/0 Red	.436	**PW5A0R**	**PW0A0R**	**PW1A0R**
4 Gauge Red	.177	**PW504R**	**PW004R**	**PW104R**
10 Gauge Red	.045	**PW510R**	**PW010R**	**PW110R**

Starter main supply cable

Changeovers and Upgrades

Part #	*Descripton*
TS450	Chevy 400 series 12 pitch to 10 pitch
TS451	Chevy 400 series 10 pitch to 12 pitch
SS276	12 to 24 solenoid changeover kit



Shim Kits

Part #	*Descripton*
SS224	.030 thick shims, set of 2 for Chevy
SS078	.060 thick shim for Chevy
SS044	.160 thick shim for Chevy
SS017	.030 thick shim for Chevy

Starter Drives

Part #	*Descripton*
SS139	400 series replacement drive 12 pitch 11 tooth
SS140	400 series replacement drive 10 pitch 9 tooth

Solenoids

Part #	*Descripton*
SS037	Replacement solenoid 400 series starter 12 / 16 volt
SS193	Replacement solenoid 400 series starter 24 volt

Bearings

Part #	*Descripton*
SS116	Nose bearing 400 series starter
SS117	Intermediate bearing 400 series starter
SS115	Rear support bearing 400 series starter

Bolts

Part #	*Descripton*
SS043	Starter install kit, two 3/8" bolts 2 washers .030 shim

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 29.2

Application	FP300 (Fig. 1) Chevy - Large	FP300A (Fig. 1) Chevy - Large	FP300B (Fig. 1) Chevy - Large	FPT300 Ten Pitch (Fig. 1) 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
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
Suggested Bolt Kit	FPH437625	FPH437625	FPH437625	FPH437625

Application	FP301 (Fig. 1) Chevy - Small	FPS006 (Fig. 1) Chevy - Large	FPS008 (Fig. 1) Chevy - Large
Dimension A	12.83	14.14	14.14
Dimension B	.450	.450	.450
Dimension C	.170	.170	.170
Dimension D	2.49	2.49	2.49
Tooth Count	153	168	168
Pitch	12	12	12
Total Weight	5.65 lbs.	6.4 lbs.	6.4 lbs.
Counter Bal. Wt.	Neutral	Neutral	Neutral
Converter Pattern	3 on 10.75	6 on 10.75	6 on 11.50
Suggested Bolt Kit	FPH437625	FPH437625	FPH437625

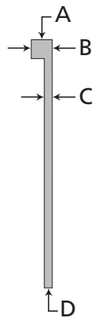
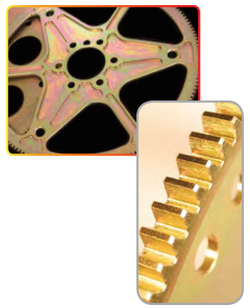


Fig. 1

Low Inertia

May not be suitable for extreme applications. Call to discuss your specific application.

Application	FPS037 (Fig. 1) Chevy -Large	FPS057 (Fig. 1) Chevy -Large	FPS059 (Fig. 1) Chevy -Small
Dimension A	14.14	14.14	12.83
Dimension B	.450	.450	.450
Dimension C	.270	.270	.270
Dimension D	2.49	2.49	2.49
Tooth Count	168	139	153
Pitch	12	10	12
Total Weight	5.3 lbs.	5.3 lbs.	5.0 lbs.
Counter Bal. Wt.	Neutral	Neutral	Neutral
Converter Pattern	3 on 10.75	3 on 10.75	3 on 10.75
Suggested Bolt Kit	FPH437625	FPH437625	FPH437625



CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

Application	FP303 (Fig. 1) Pontiac	FP335 (Fig. 1) Oldsmobile	FP318A (Fig. 1) GM LT-1	FP318 (Fig. 1) GM LT-1
Dimension A	13.96	13.89	12.83	12.83
Dimension B	.380	.450	.450	.450
Dimension C	.200	.170	.170	.170
Dimension D	2.91	2.55	2.072	2.072
Tooth Count	166	166	153	153
Pitch	12	12	12	12
Total Weight	6.3 lbs.	6.7 lbs.	5.8 lbs.	5.8 lbs.
Counter Bal. Wt.	Neutral	Neutral	Stk LT-1	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 11.05	3 on 10.75 and 3 on 11.05
Suggested Bolt Kit	FPH500500	FPH437625	FPHM111.5	FPHM111.5

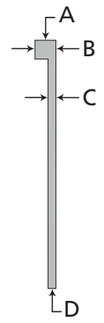


Fig. 1

Application	FP319 (Fig. 2) 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 281mm and 3 on 10.75
Suggested Bolt Kit	FPHM111.5

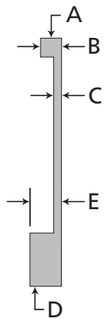


Fig. 2

Application	FP340A (Fig. 3) 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	stock OEM
Suggested Bolt Kit	n/a

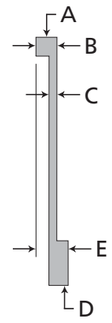


Fig. 3

Mopar flexplates made with an integral ring gear (not stock configuration).

Application	FP30606 (Fig. 1) Mopar - 6 hole	FP30608 (Fig. 1) Mopar - 8 hole	FP306168 (Fig. 1) Mopar *	FP306139 (Fig. 1) Mopar*
Dimension A	13.2	13.2	14.14	14.14
Dimension B	.450	.450	.450	.450
Dimension C	.170	.170	.170	.170
Dimension D	2.40	2.40	2.40	2.40
Tooth Count	130	130	168	139
Pitch	10	10	12	10
Total Weight	6.4 lbs.	8.46 lbs.	6.4 lbs.	6.4 lbs.
Counter Bal. Wt.	Neutral	Neutral	Neutral	Neutral
Converter Pattern	3 on 10.75	3 on 10.75	3 on 10.75 and 3 on 11.5	3 on 10.75 and 3 on 11.5
Suggested Bolt Kit	FPH437625	FPH500500**	FPH500100**	FPH500100**
Centering Hub	Included	Included	n/a	n/a

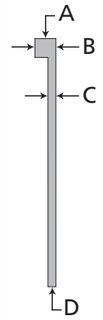


Fig. 1

*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. Bolts may require additional length.

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

Pro Mod's EXTREME STRENGTH

Built for the Most Extreme Conditions

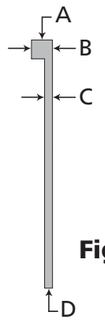


Fig. 1

	FPS020	FPS022*	Ten Pitch FPS027	FPS041	Ten Pitch FPS042	Ten Pitch FPS048
Application	Hemi - 8 bolt	Hemi - 8 bolt	Hemi - 8 bolt	Chevy - Large	Chevy - Large	Hemi - 8 bolt
Dimension A	14.14	13.00	14.14	14.14	14.14	13.2
Dimension B	.450	—	.450	.450	.450	.450
Dimension C	.300	.270	.300	.270	.270	.270
Dimension D	2.40	1.705	2.40	2.49	2.49	1.705
Dimension E	.500	.500	.500	n/a	n/a	.630
Tooth Count	168	—	139	168	139	130
Pitch	12	—	10	12	10	10
Total Weight	11.25	10.44	11.25	9.6	9.6	10.5
Counter Bal. Wt.	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
Converter Pattern	6 on 10.75 3 on 11.50 3 on 10.75	6 on 10.75 3 on 11.50 3 on 10.75	6 on 10.75 3 on 11.50 3 on 10.75	3 on 10.75 3 on 11.50 6 on 10.75	3 on 10.75 3 on 11.50	3 on 10.75 3 on 11.50
Suggested Bolt Kit	FPH500100	FPH500100	FPH500100	FPH437875 (Longer)	FPH437875 (Longer)	FPH500100

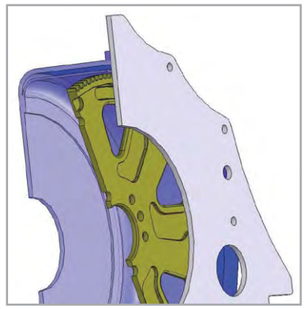
(*no ring gear)

Note: Pro Mod plates now feature a brass bushing for the converter pilot

NEW!!! PRO MOD SOLUTIONS

Recent rule changes have presented significant challenges to Pro Mod racers. Fitting a large diameter flexplate inside of a standard, lined bellhousing simply does not work. Fortunately, Meziere Enterprises has teamed up with industry partners to solve this difficult issue. We now offer a new line of flexplates designed specifically for Pro Mod Vehicles with an adjusted outside diameter and tooth count. Our 136 tooth plates fit inside of lined bellhousings, incorporate "ten pitch" gear technology and when coupled with the appropriate Meziere starter can solve these difficult space and safety problems. All plates are certified SFI 29.2.

	FPS091	FPS092	FPS096
Application	Chevy - Custom	Chevy - Custom	Hemi - 8 Bolt
Dimension A	13.83	13.83	13.83
Dimension B	.450	.450	.450
Dimension C	.27	.27	.27
Dimension D	2.49	2.49	1.87
Tooth Count	136	136	136
Pitch	10	10	10
Total Weight	7.9 lbs.	7.9 lbs.	9.73 lbs.
Counter Bal. Wt.	Neutral	Neutral	Neutral
Converter Pattern	6 on 10.75	6 on 10.75	6 on 10.75
Suggested Bolt Kit	FPH500875	FPH437875	FPH500100
Notes	1/2" ø crank bolts	7/16" ø crank bolts	



	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
Suggested Bolt Kit	FPH437625	FPH437625	FPH437625

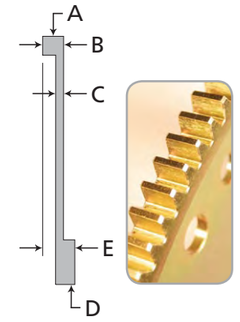


Fig. 3

	FP312 (Fig. 4)	FP312A (Fig. 4)	FP312B (Fig. 4)	FP346 (Fig. 4)
Application	SB Ford	SB Ford	SB Ford	Modular 4.6 and 5.8 with 8 bolt crankshaft
Dimension A	14.24	14.24	14.24	14.24
Dimension B	.375	.375	.375	.375
Dimension C	.180	.180	.180	.180
Dimension D	1.753	1.753	1.753	1.753
Dimension E	.875	.875	.875	.875
Tooth Count	164	164	164	164
Pitch	12	12	12	12
Total Weight	7.26 lbs.	7.4 lbs.	7.5 lbs.	7.26
Counter Bal. Wt.	Neutral	28	50	Neutral
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	3 on 10.75 and 3 on 11.5 4 on 10.5 and 4 on 11.38
Suggested Bolt Kit	FPH437625	FPH437625	FPH437625	FPHM101.0

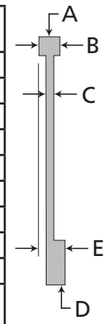


Fig. 4

	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
Suggested Bolt Kit	FPH437625	FPH437625

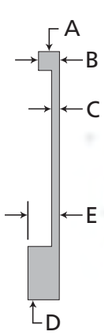
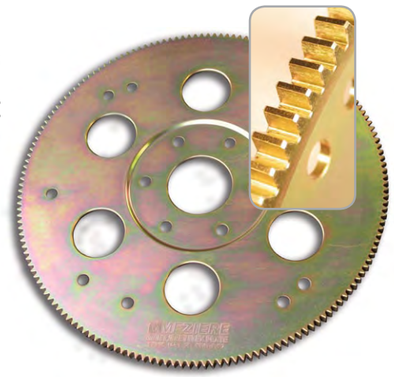


Fig. 2



Combos, Bolts and Spacers

One for the Tool Box! Because we race, and get what it takes, we have produced the best flex plate turning tool on the market. The slim design lets you grab the gear teeth straight, even if you have a mid-motor plate. A combination of hardened steel and alloy steel materials boasts "no compromise" and a polished surface finish is protected by black oxide coating. Positive pulling is finally a reality!

FPA1001

TSF112

TSF110

Make the wholesale switch!

Whether you are beginning a new build or solving problems with older components you can get the combo, get a complete and solid system in place and save some money in the process.

Application	*Starter #*	*Flexplate #*	*Combo #*
Chevrolet 12 pitch	**TS300**	**FP300**	**TSF113**
Chevrolet 12 pitch	**TS400**	**FP300**	**TSF112**
Chevrolet 10 pitch	**TST400**	**FPT300**	**TSF110**

FPH437625

Race proven

to be the very best. Sold with Locktite© thread locker.

Flexplate bolt specs.	*Part #*
Six 7/16" diameter x 7/8" long	**FPH437875**
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**
Six 11mm diameter x 1.5mm x 35mm long	**FPHM111.5**

FPA437125

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**

FPS437187

FPS437125

Achieve the proper clearance

with these precision spacers. 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**

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

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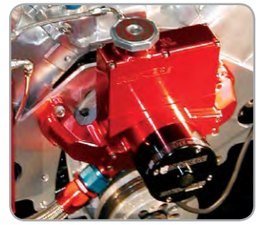
Water Pump Buyer's Guide

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.

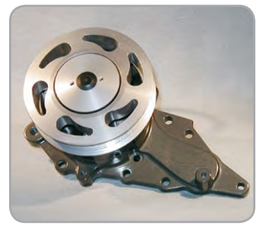
200 Series are currently available for Big Block Chevy and Ford, Small Block Chevy, Mopar B/ RB and HEMI engines. This line is a new and innovative design with an integrated expansion tank to remedy the problems associated with low and horizontally mounted radiators. Everyone that has installed this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

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

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Relay Kit
Using a relay when wiring your electric water pump 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**

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)

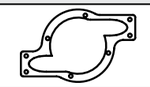
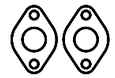
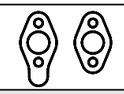
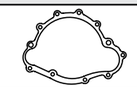
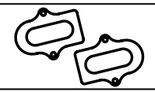
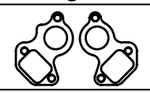
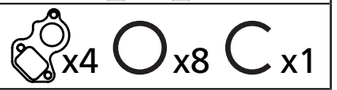
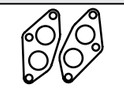
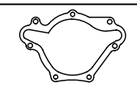
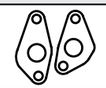
R=Red, **B**=Blue, **S**=Black, **U**=Polished, **C**=Chrome.

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.

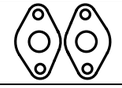
Motor Options
Electric pumps may be ordered with a Heavy Duty option. This provides more power and RPM, increasing flow and pressure. The Heavy Duty "HD" option is recommended for street cars and other continuous duty applications (where High Flow model pumps are not available). This option also adds 1 lb. to the total weight, add 1/2" to the length of the pumps, and 2 amps to current draw. **HD**=Heavy Duty.

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

Water Pump Gaskets & O-rings

Part #	*Gasket Description*	*Reference Diagram*
	UNIVERSAL	
WPG001	Front Plate Gasket	
	CHEVROLET	
WPG100	Big Block Chevy Flange (pair)	
WPG101	Small Block Chevy Flange (pair)	
	GENERAL MOTORS	
WPG103	Pontiac Front Cover	
WPG1031	Pontiac Flanges (pair)	
WPG135	Oldsmobile Flange (pair)	
WPG119	LS-X (pair)	
WPG319	WP319 resealing kit	
	CHRYSLER / MOPAR	
WPG106	Big Block Mopar (pair)	
WPG114	Small Block Mopar Flange (pair)	
WPG115	Small Block Mopar Back Plate	
	FORD	
WPG108	Big Block Ford Flange (pair)	
WPG111	Small Block Ford Traditional (pair)	

Water Pump Gaskets & O-rings

FORD		
WPG170	FE Ford Flange (pair)	
WPG173	Small Block Ford Flange '94-'95 style (pair)	

Part #	*O-Ring Description*	*O-Ring Number(s)*
Water Pump O-Rings		
WPG801	200 Series Tank O-Ring	-157
WPG802	Transmission Pan O-Ring	custom
WPG908	Heater Port Fitting O-Ring	-908
WPG803	WP103 Pontiac Sleeve O-Rings (2 pcs)	-212 x2
WPG804	WP125 Buick O-Ring Kit (4 pcs)	-239, -215, -214, -205
WPG805	WP311/312 Front Plate O-Ring	-048
WPG806	Honda Idler Plate 19/22T O-Ring	-240
WPG807	Honda Idler Plate 26T O-Ring	-247
WPG808	Nissan Block Off Plate O-Ring	-156
WPG809	WP361/362 O-Ring Kit (2 pcs)	-160, -233
WPG810	WP336/337 O-Ring	-160
WPG811	WP136 Base O-Ring	-230
WPG812	WP137 O-Ring Kit (3 pcs)	-230, -155, -123
WPG813	WP430 O-Ring Kit	-236
Fitting O-Rings		
WPG920	WN Series Fitting O-Ring	-222
WPG916	#16AN Fitting O-Ring	-916
WPG911	#12AN Fitting O-Ring	-911
WPG910	#10AN Fitting O-Ring	-910
WPG908	#08AN Fitting O-Ring	-908
Waterneck O-Rings		
WPG814	WN0019 LS-X	-228
WPG820	WN0020 Swivel Kit (3 pcs)	-228, -222 x2
WPG814	WN0021 / WN0022	-228
WPG815	WN0023 Ford Small Block	-908, -230
WPG814	WN0029 Big Block Mopar	-228
WPG816	WN0030 Small Block Mopar	-140
WPG814	WN0039 LS-X	-228
WPG814	WN0812, WN0816	-228
WPG814	WN0912, WN0916	-228

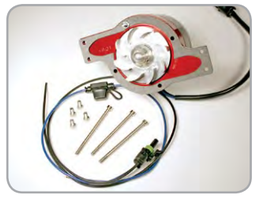
CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

Waterneck O-Rings (continued)		
WPG814	WN0028 Spacer	-228
WPG814	WN1028 Spacer	-228
WPG814	WN1912	-228
WPG814	WN1916	-228
Block Adapter O-rings		
WPG817	BBC WP80 (pair)	-223
WPG817	BBC WP8012AN (pair)	-223
WPG817	BBC WP8016AN (pair)	-223
WPG818	SBC WP8112AN (pair)	-216
WPG818	SBC WP8116AN (pair)	-216
WPG819	DRCE WP8612AN (pair)	-220
WPG819	DRCE WP8616AN (pair)	-220

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.

Comes Complete!
Installs in Minutes!



Specify color and options when ordering.

WP150R

WP156R

BB Buick specific

WP350S

WP155R

WP355S

Water Pumps • Chevrolet
100 & 200 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
42 GPM Heavy Duty

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

WP101C


1" NPT inlet required.
See page 40.

WP101R


WPL100S

Application	*Pump Model*	*Color*	*Additional Option*	*Weight (standard)*	*Weight (HD)*	*Depth (standard)*	*Depth (HD)*
BBC 396-572	**WP100**	**R,B,S,U,C**	**HD**	5.8 lbs.	6.8 lbs.	6.780"	7.280"
SBC 4.3 V6, 262-400	**WP101**	**R,B,S,U,C**	**HD**	5.5 lbs.	6.5 lbs.	6.780"	7.280"
BBC Lightweight	**WPL100**	**S**	**HD**	5.2 lbs.	6.2 lbs.	6.780"	7.280"

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

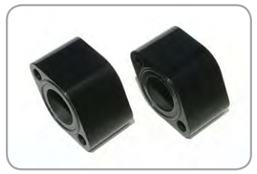
WP200R

Fill it and forget it. The 200 Series pumps are the only viable method to properly fill a cooling system when filling through the radiator is not an option. Fill necks trap air leaving room for coolant to rapidly expand and overheat. The built-in expansion tank separates the air and provides coolant free from air and the cavitation it creates. Eliminate air and problems with the WP200. You will run cooler or your money back.

35 GPM Standard
42 GPM Heavy Duty

Remember Your Accessories!


1" NPT Inlet required.
See page 40.


Spacers
See pages 44 & 45.


Relay Kit WIK346
See page 14.

Radiator Cap
See page 38.

Application	*Pump Model*	*Color*	*Additional Option*	*Weight (standard)*	*Weight (HD)*	*Depth (standard)*	*Depth (HD)*
BBC 396-572	**WP200**	**R,B,S,U,C**	**HD**	8.5 lbs.	9.5 lbs.	6.780"	7.280"
SBC 4.3 V6, 262-400	**WP201**	**R,B,S,U,C**	**HD**	8.2 lbs.	9.2 lbs.	6.780"	7.280"

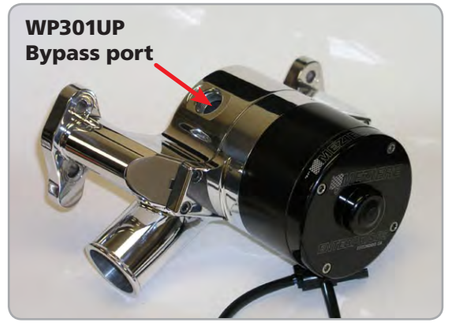
R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty. When ordering please choose part #, color, and any options you prefer. For example **WP100RHD** would be a **W**ater **P**ump, **100** series, **R**ed color with **H**eavy **D**uty option. See our 'Water Pump Buyer's Guide' on pages 13-14 for more details.

Water Pumps • Chevrolet
300 Series

WP300C

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.

55 GPM Standard



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!

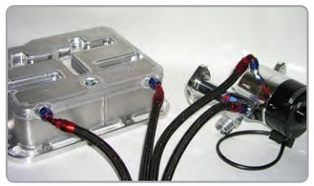
Ported option available in all colors.

Application	*Pump Model*	*Color*	*Ported Option*	*Weight (standard)*	*Depth (standard)*
BBC 396-572	**WP300**	**R,B,S,U,C**	**P** (ported)	7.4 lbs.	7.280"
SBC 4.3 V6, 262-400	**WP301**	**R,B,S,U,C**	**P** (ported)	7.0 lbs.	7.280"

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

Take on both engine cooling and transmission cooling with our new line of Trans Pan ready pumps. Each model has been ported especially to take the challenge out of connecting to our heat exchanging transmission pan. All that is left to do is make the two connecting hoses and your transmission temperatures will be stabilized by your cooling system.

See page 48 for trans pan info.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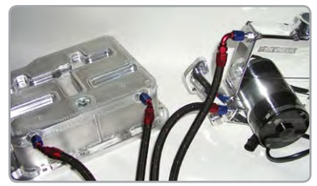

WT200


WT300

Application	*Pump Model*	*Color*	*Options*
Chevy BBC Standard	**WT100**	**R,B,S,U,C**	**HD**
Chevy BBC Reservoir	**WT200**	**R,B,S,U,C**	**HD**
Chevy BBC High Flow	**WT300**	**R,B,S,U,C**	

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty. 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 13-14 for more details.

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

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

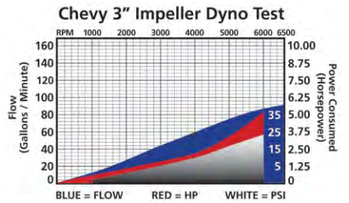
Our pulleys have a 6.5" diameter and a unique style with 5 large windows.

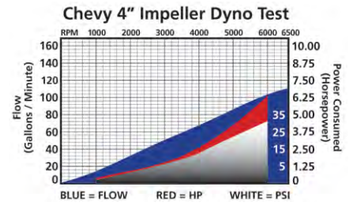
Application	*Pump Model*	*Impeller Diameter*	*Color*	*Additional Option*	*Weight (standard)*	*Block to Hub*
BBC 396-572	**WP400**	**3"**	**S,U,C**	**P** (ported)	5.4 lbs.	5.75"
SBC 4.3 V6, 262-400	**WP401**	**3"**	**S,U,C**	**P** (ported)	5.4 lbs.	5.625"
SBC 4.3 V6, 262-400	**WP402**	**4"**	**S,U,C**	**P** (ported)	6.8 lbs.	5.625"

New mechanical options

are available for small block Chevy. Our design team produced a highly effective street pump but we didn't rest there. We now offer a full race, 4" impeller mechanical pump and its performance rivals the most renowned race pumps on the market. Both low and high pressure ports are available for auxiliary plumbing. Expect the very best in performance and durability.

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





SERPENTINE PULLEY **WP422** Dia:5.9" Available color: **U,C**

Application	*Pump Model*	*Impeller Diameter*	*Color*	*Additional Option*	*Weight (standard)*	*Block to Hub*
BBC 396-572	**WPR400**	**3"**	**S,U,C**	**P** (ported)	5.5 lbs.	5.75"
SBC 4.3 V6, 262-400	**WPR401**	**3"**	**S,U,C**	**P** (ported)	5.5 lbs.	5.63"
SBC 4.3 V6, 262-400	**WPR402**	**4"**	**S,U,C**	**P** (ported)	6.8 lbs.	5.63"

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

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**

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty. 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 13-14 for more details.

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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**

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

If a replacement gasket is needed, please use GM part #10128329

Application		*Pump Model*	*Additional Option*	*Weight (standard)*	*Weight (HD)*	*Depth (standard)*	*Depth (HD)*
All LT-1 vehicles	'93-'97	**WP118**	**HD**	3.6 lbs.	4.6 lbs.	3.000"	3.500"

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. *WP140 fits GM 3800 engines 1997-2006.*

- 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.

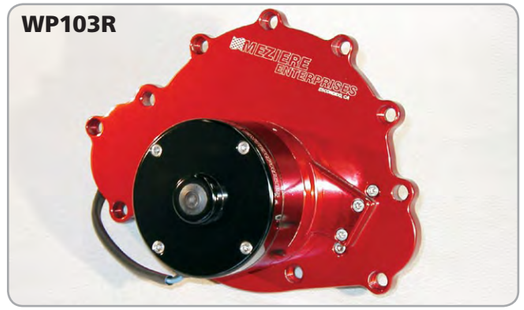
Application	*Pump Model*	*Color*	*Additional Option*	*Weight (standard)*	*Weight (HD)*	*Depth (standard)*	*Depth (HD)*
3800-V6	**WP140**	**R,B,S,U,C**	**HD**	4.1 lbs.	5.1 lbs.	3.8"	4.3"

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
42 GPM Heavy Duty

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



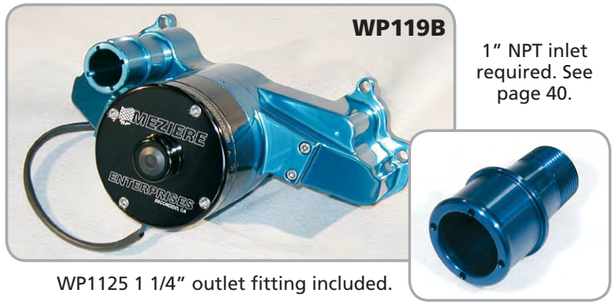
Countersunk bolts and stock thickness body make it compatible with engine plates.

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

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty. 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 13-14 for more details.

Our LS-X 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 **42 GPM Heavy Duty**
• Driver or Passenger side inlet ports



1" NPT inlet required. See page 40.

WP1125 1 1/4" outlet fitting included.

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

Our street version for the LS engine boasts 55 GPM flow rate and ease of installation. Accommodates the factory accessory belt. Proven to free up more than 11 rear wheel horsepower in most applications.

Accessorize with waterneck #WN0019 on page 42.

Replacement center section part number is WP359

WP319 Application		*Engine*	*Pump Model*	*Color*	*Weight*	*Depth*
Corvette	1997 - 2004	**LS-1**	**WP319**	**R,B,S,U,C,N**	14.9 lbs.	7.8"
Corvette	2005 - 2007	**LS-2**	**WP319**	**R,B,S,U,C,N**	14.9 lbs.	7.8"
Corvette	2007 - 2010	**LS-3**	**WP319**	**R,B,S,U,C,N**	14.9 lbs.	7.8"
Camaro	1998 - 2002	**LS-1**	**WP319**	**R,B,S,U,C,N**	14.9 lbs.	7.8"
Firebird Trans Am	1998 - 2002	**LS-1**	**WP319**	**R,B,S,U,C,N**	14.9 lbs.	7.8"
Pontiac GTO	2004	**LS-1**	**WP319**	**R,B,S,U,C,N**	14.9 lbs.	7.8"
Pontiac GTO	2005 - 2006	**LS-2**	**WP319**	**R,B,S,U,C,N**	14.9 lbs.	7.8"
Cadillac CTS	2004 - 2005	**LS-6**	**WP319**	**R,B,S,U,C,N**	14.9 lbs.	7.8"
Cadillac CTS	2006 - 2007	**LS-2**	**WP319**	**R,B,S,U,C,N**	14.9 lbs.	7.8"

Application list based on internet research - please verify outlet location before ordering.

Fitting available for AN line connection. See page 40 for details.

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty. 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 13-14 for more details.

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The new Corvette / Camaro pump is here! This completely new design has been one of the most requested pumps in recent memory. Our engineers went to work to provide our brand of solid quality water pump solutions to the proud owners of the new Chevrolet muscle cars, and the result is one of the best performing pumps we have ever developed!

Replacement center section part number is WP359

Fitting available for AN line connection. See page 40 for details.

Application		*Engine*	*Pump Model*	*Color*	*Depth*
Camaro-manual trans	2010 - 2013	**LS-3**	**WP329**	**Clear Ano**	8.15"
Corvette	2010 - 2013	**LS-3**	**WP330**	**Clear Ano**	7.65"
Camaro-auto trans	2010-2013	**L99**	**WP331**	**Clear Ano**	9.25

Take advantage of our superior flow rates and minimal horsepower draw with the new mechanical pump for LS engines.

See page 42 for details

Application	*Pump Model*	*Color**	*Weight*	*Depth*
LS-X engines 1997 - 2013	**WP419N**	Satin	11.6 lbs.	5.95"

Application list based on internet research - please verify outlet location before ordering.
*WP419 available in Satin finish only - other color options do not apply.

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, N=Natural, HD=Heavy Duty. 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 13-14 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 its 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
42 GPM Heavy Duty

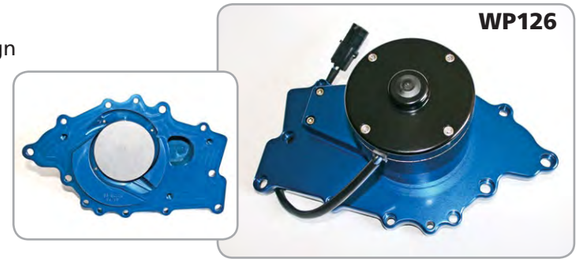
1" NPT inlet required. See page 40.

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

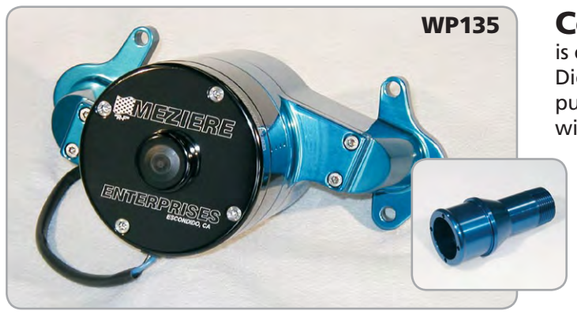
The big block Buick's factory timing cover forced us to do things a little different in the design of this pump. The end result gives you all the features of the 100 series pump and clearance for non-A/C V-belt routing. **No inlet required.**

35 GPM Standard
42 GPM Heavy Duty

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



Application		Pump Model	Color	Additional Option	Weight (standard)	Weight (HD)	Depth (standard)	Depth (HD)
400/430/455	'67-'76	**WP126**	R,B,S,U,C	**HD**	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
42 GPM Heavy Duty

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

WP2175 Recommended. See page 40.

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

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty. 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 13-14 for more details.

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

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Water Pumps • Ford
Big Block

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. Compatible with belt drives.

1" NPT inlet required. See page 40.

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**	5.9 lbs.	6.9 lbs.	6.100"	6.600"
Back plate .19 thick	**WP109**	R,B,S,U,C	**Complete your pump with this back plate!**				

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 42

Inlet WP2175 recommended. See page 40.

Application	Model #	Color	Additional Options	Weight (standard)	Weight (HD or 16)	Depth (standard)	Depth (HD or 16)
427 F.E. 352, 390, 406, 427, 428	**WP170**	R,B,S,U,C	**HD**	5.9 lbs.	6.9 lbs.	7.430"	8.100"

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 42**

1" NPT inlet required. See page 40.

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**	8.2 lbs.	9.2 lbs.	6.100"	6.600"
Back plate .19 thick	**WP109**	R,B,S,U,C	**Complete your pump with this back plate!**				

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 38-39. 55 GPM Standard**

Application	Model #	Color	Weight (standard)	Depth (standard)
429-460	**WP308**	R,B,S,U,C	7.4 lbs.	6.600"
Back plate .19 thick	**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. When ordering please choose part #, color, and any options you prefer. See our 'Water Pump Buyer's Guide' on pages 13-14 for more details.

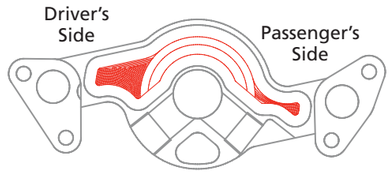
Water Pumps • Ford
100 Series Small Block

WP111S


1" NPT inlet required. See page 40.


BACK

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.

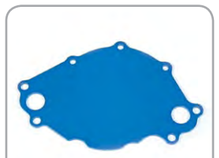


Note: Carefully compare this graphic with the graphic found on the next page to confirm which part number pump will mate correctly to your front cover.

Application	*Pump Model*	*Color*	*Additional Option*	*Weight (standard)*	*Weight (HD)*	*Depth (standard)*	*Depth (HD)*
SB Ford	**WP111**	**R,B,S,U,C**	**HD**	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.


WP112U


WP113B


WP123R

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"

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty. 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 13-14 for more details.

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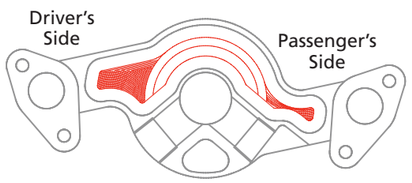
Water Pumps • Ford & AMC
Electric and Mechanical for Small Block

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 front covers purchased with belt cam drive systems.

35 GPM Standard
42 GPM Heavy Duty


WP173



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.


WP174

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 Option*	*Weight (standard)*	*Weight (HD)*	*Depth (standard)*	*Depth (HD)*
'94-'95 Short SB Ford	**WP173**	**R,B,S,U,C**	**HD**	5.6 lbs.	6.6 lbs.	6.100"	6.600"
Back plate .19 thick	**WP174**	**R,B,S,U,C**	**Complete your pump with this back plate!**				


WP411

Off road racing demands more performance from a cooling system than any other form of motorsport. The WP411 was born from the need desert racers have to out flow other racing pumps in all RPM ranges. The WP411 does exactly that; more flow at low speeds and nearly double at high RPM.

Application	*Pump Model*	*Color*	*Weight*	*Depth*
Traditional Ford 5.0 front cover (79-93 style)	**WP411**	Clear Ano	4.2 lbs.	6.25"
	WPR411 (reverse rotation)	Clear Ano	4.2 lbs.	6.25"

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty. 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 13-14 for more details.

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*	*Weight (standard)*	*Depth (standard)*
289*-351W, 5.0-5.8 to '93*	**WP311 (No pulley)**	**R,B,S,U,C**	8.6 lbs.	6.00"
289*-351W, 5.0-5.8 to '93*	**WP312 (With pulley)**	**R,B,S,U,C**	10.2 lbs.	6.78"

'94-'95 SBF Street

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

1 3/4" inlet fitting included

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

AMC

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
42 GPM Heavy Duty

1" NPT inlet required. See page 40.

Application	*Pump Model*	*Color*	*Additional Option*	*Weight (standard)*	*Weight (HD)*	*Depth (standard)*	*Depth (HD)*
AMC 360-401	**WP111**	**R,B,S,U,C**	**HD**	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. 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 13-14 for more details.

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

Modular

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

Cobra Note: 2003-2004 Cobra engines will not accept our Modular pumps. There will be clearance issues.

Application	*Pump Model*	*Color*	*Weight (standard)*	*Depth (standard)*	*Pulley (diameter)*
Ford Modular w/o idler pulley	**WP345**	**S,C**	5.0 lbs.	3.500"	N/A
Ford Modular w/stock size pulley	**WP346**	**S**	6.9 lbs.	3.750"	5.100"
Ford Modular w/undersized pulley for blower drive clearance	**WP347**	**S**	6.9 lbs.	3.750"	4.700"
Ford Modular w/oversized pulley for aftermarket drive systems.	**WP348**	**S**	6.9 lbs.	3.750"	5.500"
Ford Modular super duty	**WP349**	**S**	9.3 lbs.	5.000"	5.100"

5.0 Coyote

Elegant solutions for the new Ford 5.0

Ford's new "Coyote" engine has really been an exciting addition to the list of high tech powerplants. We offer 5 pumps to finish off the job of building one of these performance newcomers. From normally aspirated with no accessories to a variety of supercharged options, we have been hard at work to make sure you can keep it cool!

Application	*Pump Model*	*Color*	*Weight (standard)*	*Depth (standard)*	*Pulley (diameter)*
Ford Coyote no pulley	**WP341**	**S**	7.3 lbs.	5.200"	N/A
Ford Modular w/stock size pulley	**WP342**	**S**	9.1 lbs.	5.540"	5.5"
Ford Coyote KBell reduced pulley	**WP343**	**S**	9.0 lbs.	5.540"	4.8"
Ford Coyote Supercharged Cobra Jet	**WP340**	**S**	9.1 lbs.	5.540"	4.8"

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty. 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 13-14 for more details.

Water Pumps • Mopar
100 & 200 Series Big Block


WP105

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

42 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**	3.6 lbs.	4.6 lbs.	2.700"	3.200"

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. See page 40 for AN line connection.

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

- Plugs for both Driver and passenger sides
- Driver's side adapter for standard mechanical temp sender
- Adapter for 3/8 NPT electric sender

35 GPM Standard
42 GPM Heavy Duty


WP106


1" NPT inlet required. See page 40.

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**	5.7 lbs.	6.7 lbs.	6.100"	6.600"


WP206


1" NPT inlet fitting required. See page 40.

-12 O-ring outlet adapter required. See page 41.

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. See page 40 for AN line connection.

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

35 GPM Standard
42 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**	9.5 lbs.	10.5 lbs.	6.800"	7.300"

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty. 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 13-14 for more details.

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

Water Pumps • Mopar
Big Block and Small Block

These high flow pumps keep extreme Mopars cool, 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 38-39.**


WP306B

See page 40 for AN line connection.


WP307R

WP306 includes:
- Plugs for both driver and passenger sides
- Driver's side adapter for standard mechanical temp sender
- Adapter for 3/8 NPT electric sender

Application	Pump Model	Color	Weight	Depth	Flow Direction	Outlet Configuration
BB Mopar B/RB & Hemi	**WP306**	**R,B,S,U,C**	8.8 lbs.	7.25"	Standard	Std. Mopar
BB Mopar B/RB & Hemi	**WP307**	**R,B,S,U,C**	8.1 lbs	7.25"	Reverse	2X -12AN


WP114

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 40.


WP115S

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**	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**				

The best solution for the new Mopar Hemi engine is the Meziere high flow pump. Step up the cooling system to world class performance and enjoy all of the performance benefits as well as the stunning good looks provided by our exceptional design team. Sold separately the back plate utilizes the factory molded gasket and provides exceptional sealing. The inlet of the pump requires our WN style fittings found on Page 38-39.


WP315
1 1/2" fitting included


WP314
1 3/4" fitting included

Application	Model #	Back Plate	Color	Combined Weight	Combined Depth
5.7 and 6.1 Late Model Hemi	**WP314**	WP315	**S,U**	10.7 lbs.	6.75"

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty. 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 13-14 for more details.

Kit includes 2 fittings for 1 1/4" diameter hose

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.
Note: The supplied bracket is designed for applications with manual transmissions. No bracket available for automatic transmission.

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 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.

Note: for 2JZ-GE engines some modifications may be necessary

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

35 GPM Standard

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

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

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

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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 41.

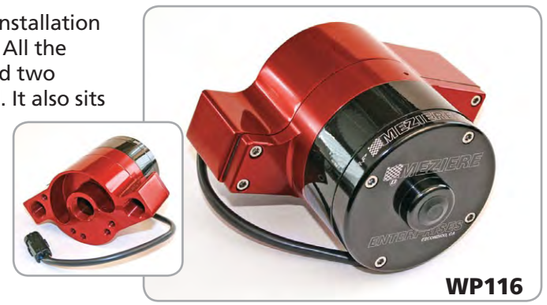
Pump Model	*Weight (standard)*	*Height (standard)*
WP136	6.3 lbs.	7.250"
WP137	6.4 lbs.	7.250"

360° INLET

A pair of -12 O-ring boss outlet fittings required. See page 41.

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 40-41. Mounting bracket included.

35 GPM Standard or **42 GPM Heavy Duty**



The high flow version of our bulkhead 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 -20AN and requires one of our WN style fittings. The two exit ports accept -12AN fittings. See pages 38-41 for fitting options. Mounting bracket included.

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**	5.4 lbs.	6.4 lbs.	5.000"	5.500"
WP316	R,B,S,U,C		6.3 lbs.	n/a	5.500"	n/a

R=Red, B=Blue, S=Black, U=Polished, C=Chrome, HD=Heavy Duty. 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 13-14 for more details.

Remote Water Pumps
Hi-Flow Inline

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

Fittings shown are not included. See page 38-41.

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

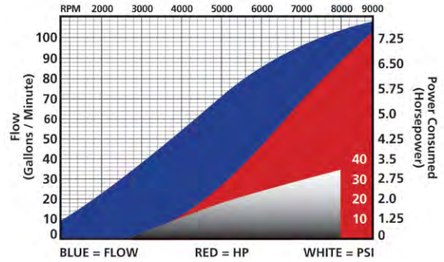
Our new design allows you the option of adding a true thermostat circuit to assist the warm-up cycle. This has proven a great benefit for engines with aluminum blocks. These engines tend to be built with tighter clearances which require engine heat to avoid excessive wear. The pump can be configured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

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

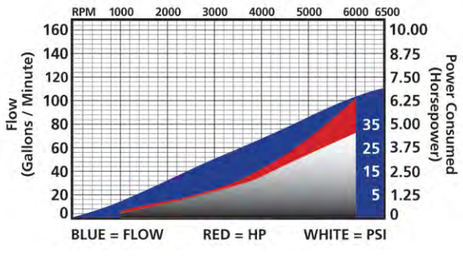
CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

WP430 and WPR430 Performance



WP431 and WP432 Performance



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 18 for performance graph.**

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

WP430 - Standard Rotation pump
WPR430 - Reverse Rotation pump

"WN" style fittings and 2 -12AN outlet fittings required. See page 38-41.

This pump uses the 4" impeller found in our ultra successful off road pumps for engines such as the small block Ford. It has been used for land speed as well as for off road custom vehicles to deliver elevated block pressure and flow performance necessary for high demand engines. Call us with your challenging application and let us help out!

- High performance bearing and seal
- Flanged pulley mount for common drive systems
- Single in, double out configuration
- Accepts our "WN" series fittings

WP431 - Standard Rotation pump
WP432 - Reverse Rotation pump

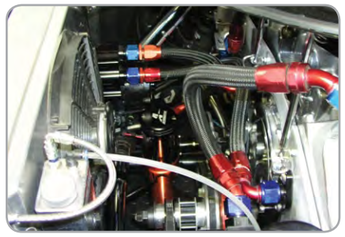
"WN" style fittings for the inlet and outlets required. See page 38-39.

Remote Water Pumps
Radiator Mount and Thermostatic

WS100

If you want that extra bit of protection for your engine this Lucas product will do the trick. Adding to your cooling system you will gain protection from harmful buildup and you will notice better heat-dissipating properties. In short, your engine will cool better and last longer!

Part #
WS100




Radiator mounted pump in action

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS


WP361


WP362

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

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


WP3613



Helpful fittings available! See page 38-41 for our line of fittings to make your plumbing super clean.

Application	*Pump Model*	*Flow Rate*	*Weight (standard)*	*Depth (standard)*
Single outlet	**WP161**	**20 GPM**	6.4 lbs.	4.200”
Single outlet	**WP361**	**55 GPM**	6.2 lbs.	5.200”
Dual outlet	**WP362**	**55 GPM**	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)

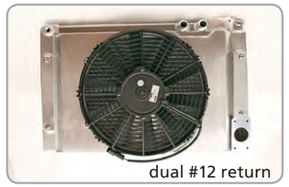

WC0110


WC012016

WC0310
(pump sold separately)


WC0120


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

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS


RFA20AN

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,G**
1.50” Hose	**RFA150**	**R,B,S,U,G**
1.75” Hose	**RFA175**	**R,B,S,U,G**
2.00” Hose	**RFA20AN**	**R,B,S,U,G**

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.

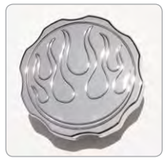
Application	*Housing #*
Standard	**WN0012**
Flush Mount	**WN0012W**


WN0012 & **WN0012W**

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

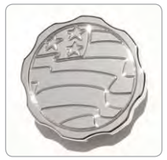
LOGO

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

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

AN

Fits AN Size	*Fitting Model*	*Projection Distance*
-10	**WN0042**	**1.15**
-12	**WN0043**	**1.25**
-16	**WN0040**	**1.37**
-20	**WN0041**	**1.37**
-24	**WN0044**	**1.37**

Extended

Application	*Fitting Model*	*Projection Distance*
1 3/4" Hose	**WN2033**	**3.6**
2 1/4" Extension	**WN2000**	**2.22**

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**.

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. Assembled length is 4" overall.

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"
WN0073	1 1/2" to 1 1/4"
WN0070160	160 Degree Tstat
WN0070170	170 Degree Tstat
WN0070180	180 Degree Tstat
WN0070195	195 Degree Tstat

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.

-160 Degrees
-185 Degrees
-195 Degrees

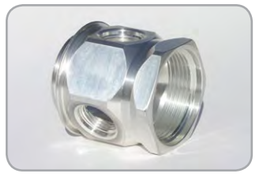
WN Style fittings -20AN fittings used for thermostat housings and some 300 Series pumps.

Smooth Hose

Fits Hose Ø	*Fitting Model*	*Projection Distance*
3/4"	**WN0034**	**1.9"**
1"	**WN0035**	**1.9"**
1 1/4"	**WN0031**	**2.05"**
1 1/2"	**WN0032**	**2.05"**
1 3/4"	**WN0033**	**2.05"**

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**.

Low Pressure Side Port for any of our WN style connections. Most commonly used to provide a low pressure port for heater plumbing. Has three -8AN side ports 120 degrees apart and is shipped with two plugs. Connection port sold separately.



Fitting Model
WN0047

When the space available simply will not allow a straight fitting you can still get the job done with our 90 degree outlet. It has a male WN thread on one side and a female o-ring thread on the other. It also comes with three shims of varying thickness to allow proper clocking.

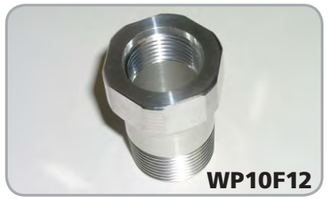
Fitting Model
WN2090

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.

Fitting Model
WP1045

Overall Length
2.70

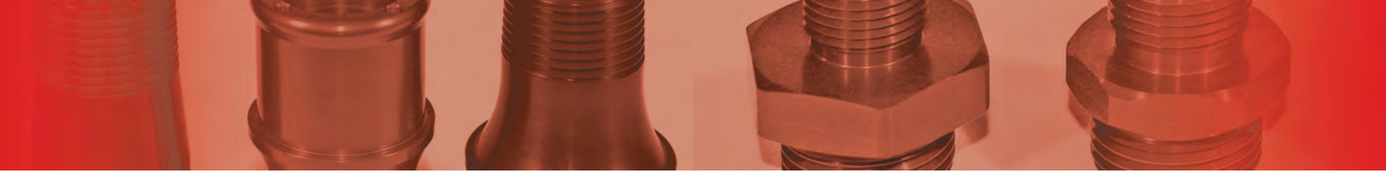
Inlet to make secondary low pressure connections simple. This adapter has a 1" NPT thread on one end and a -12AN female thread in the other. All colors available.



Fitting Model
WP10F12

Overall Length
2.20

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**.



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

Smooth Hose

Fits Hose Ø	*Fitting Model*	*Overall Length*
1 1/4"	**WP1125**	**3.13**
1 1/4"	**WP1125STUB**	**1.99**
1 1/2"	**WP1150**	**3.13**
1 3/4"	**WP1175**	**3.13**

AN

Fits AN Size	*Fitting Model*	*Overall Length*
-12	**WP1012**	**3.13**
-16	**WP1016**	**3.13**
-20	**WP1020**	**3.13**

Extended

Fits Hose Ø	*Fitting Model*	*Overall Length*
1 1/4"	**WP2125**	**4.13**
1 3/4"	**WP2175**	**4.13**
2" Extension	**WP1000**	**3.25**

Spanner Wrench

An easy way to install your fittings.

Part #
WPA010

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**.

If you are trying to get your LS-X pump hooked up using AN hose you have come to the right place. We offer two options to help you get the job done.

Part #	*Hooks to AN*
WPLS11716	-16
WPLS11720	-20

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.

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

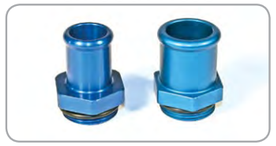
CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

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

*-16AN are available in Blue or Black. Just add 'B' (for blue) or 'S' (for black) at the end of the part number. For example: WP16100B

Smooth Hose



Application	*Fitting Model*
1"	**WP16100***
1 1/4"	**WP16125***

AN

Application	*Fitting Model*
-12	**WP16012***
-16	**WP16016***

EXTENDED

Application	*Fitting Model*
-12	**WP16E12***
-16	**WP16E16***

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

*-12AN are available in Blue or Black. Just add 'B' (for blue) or 'S' (for black) at the end of the part number. For example: WP10100B

Smooth Hose

App.	*Fitting Model*
1"	**WP12100***
1 1/4"	**WP12125***
1 1/2"	**WP12150***
1 3/4"	**WP12175***

Barbed Hose

App.	*Fitting Model*
5/8"	**WP12058***
3/4"	**WP12034***

AN

App.	*Fitting Model*
-08	**WP12008***
-10	**WP12010***
-12	**WP12012***
-16	**WP12016***

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

Barbed Hose

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

AN

Application	*Fitting Model*
-06	**WPM06**
-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 and Ford


WN0021DR

Low profile & 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,**
1 1/4" Ps. Side	**WN0021P**	**R,B,S,U,**
1 1/2" Dr. Side	**WN0022D**	**R,B,S,U,**
1 1/2" Ps. Side	**WN0022P**	**R,B,S,U,**


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,**

Fittings are required. See page 37.


WN1022R

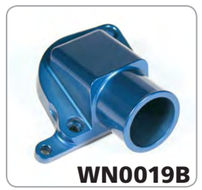
360° swivel design!
Swivels 360 degrees for easy hose alignment. Integral 1.5" outlet hose connection. O-ring seal, no gasket required.

Application	*Housing #*	*Color*
SB & BB Chevy or BB Mopar	**WN1022**	**R,B,S,U**


WN0023

SB Ford Waterneck
This billet neck provides for the stock bypass hose and will accept a thermostat. A plug is also supplied for eliminating the bypass.

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


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. Outlet size is 1.5"

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


WN0039S

WN0039
This is our "straight out" design to simplify some aftermarket applications. For our billet solution see above. ***Will not work with factory OEM style thermostat.***

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

Fittings are required. See page 37.


WN1019

Made
specifically to assist the installation of our mechanical WP419 pump for LS engines. Provides proper retention of the OEM style thermostat and accepts any of our WN style fittings to connect your lower hose.

Application	*Housing #*
GM LS-X	**WN1019**


WN1122B

360°swivel with side ports
provides a quick and clean connection for auxiliary lines. Swivels 360° for easy hose alignment.Side ports #6AN o-ring boss both sides. Outlet size is 1.5"

Application	*Housing #*	*Color*
SB & BB Chevy or BB Mopar	**WN1122**	**R,B,S,U,**

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

Manifold Connections
Chevy, Mopar and Ford


WN0912R

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

Application	*Housing #*	*Connection*	*Color*
Chevy or BB Mopar	**WN0912**	-12AN	**R,B,S,U,**
Chevy or BB Mopar	**WN0916**	-16AN	**R,B,S,U,**
BB Ford	**WN0812**	-12AN	**R,B,S,U,**
BB Ford	**WN0816**	-16AN	**R,B,S,U,**


WN1916R

Higher flow applications
can make use of this plate featuring #16AN upper hose connection and has two #6AN side ports.

Application	*Housing #*	*Color*
Chevy or BB Mopar	**WN1916**	**R,B,S,U,**


WN0007U

Manifold plate options.
We also offer simple thermostat housing plates, blockoffs and NPT ported plates.

Application	*Housing #*	*Color*
Chevy or BB Mopar	**WN0007**	**R,B,S,U,**


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.

Description	*Housing #*	*Color*
Spacer with 2 3/8" NPT side ports	**WN0028**	**R,B,S,U,**


WN1912B

Complex connections made easy!
This manifold plate features a #12AN upper hose connection and has two #6AN side ports necessary for auxiliary plumbing.

Application	*Housing #*	*Color*
Chevy or BB Mopar	**WN1912**	**R,B,S,U**


WN0029R

Mopar Style
Accepts WN fittings from -10 thru -24 or from 1 1/4" to 1 3/4" Fittings are not included. Works with factory thermostat. See page 37.

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


WN0008R

Blockoff Cap
with 3/4" NPT Internal thread. Fittings not included.

Application	*Housing #*	*Color*
Chevy or BB Mopar	**WN0008**	**R,B,S,U,**


WN1028U

Waterneck Spacer
same as our waterneck spacer to the left, but this one has two -8AN o-ring side ports.

Application	*Housing #*	*Color*
Spacer with 2 -8AN o-ring side ports	**WN1028**	**R,B,S,U,**

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
Hemi	**WP8716AN**	**S,U,**	-16AN Male

Late model Hemi

adapters allow you to connect a remote mounted pump. Five components are necessary and are sold individually. To complete the engine connection you'll need a back plate (pictured), pair of block adapters (pictured), WN Style fitting for the upper connection (see pages 38&39) and two #16AN fittings (see page 41) for the lower connections.


WP315


WP8716AN

Application	*Description*	*Part#*	*Color*	*Hose Connection Thread Type*
Late Model Hemi	**Back Plate**	**WP315**	**R,B,S,U,C**	WN Style
Late Model Hemi	**Block Adapters**	**WP8716AN**	**R,B,S,U,C**	-16AN


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**.

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

Our Ford adapters

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

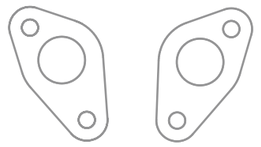

WP83R


WP8312ANB

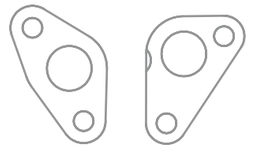

WP8212ANR

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**.

"Yates / Jessel / Danny B and similar belt drives require the late model '94-'95 spacers or block adapters."

Chevy spacers

Application	*Model #*	*Color*	*Thickness*	*O-ring*
BB Chevy	**WPS100**	**R,B,S,U,C**	.9"	2 sides
BB Chevy	**WPS100-.500**	**R,B,S,U,C**	.5"	none
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-.500**	**R,B,S,U,C**	.5"	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-.500**	**R,B,S,U,C**	.5"	2 sides
DRCE	**WPS110-1.500**	**R,B,S,U,C**	1.5"	2 sides

LS spacers

Application	*Model #*	*Color*	*Thickness*	*O-ring*
LS1 thru LS9	**WPS119-1.75**	**U,S**	1.75"	none
LS1 thru LS9	**WPS119-.465**	**U,S**	0.465"	none

R=Red, B=Blue, S=Black, U=Polished, C=Chrome. When ordering please choose part # then color. For example **WP8312ANB** would be a **WP8312AN** adapter in **Blue**.

WAM12AN

Use "WN" style fittings and -12 "WP" fittings. See page 38-41.

Manifold #	*Color*
WAM12AN	**R,B,S,U**
WAM12ANP	**R,B,S,U**

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". Part is available with or without #6 ports on the back.

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

Water manifold

This clean billet manifold gets a single source distributed to both banks of your Big Block Chevy. The mating surface is grooved for a positive o-ring seal and it is designed to accept -20AN fittings. Available in chrome or polished finish.

WAM10020

A highly effective and lightweight solution for

connecting four input sources to one outlet source is this four into one water manifold. They are aluminum, CNC machined and ready to connect in a variety of configurations.

Part #	*Description*	*Inlet*	*Outlet*
WAM401	4 to 1 adapter	-12AN	1.5" hose
WAM402	4 to 1 adapter	3/4 Wiggins	1.5" hose

WAM401

WR100R

Recovery Tank

Reduce aeration and maintain pressure. Designed to catch over-flow liquid and purge air out of your system during heat cycles.

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

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*
22 oz.	**WR100**	**R,B,S,U,C**	10"H x 2"W x 3"D

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

For more tank information see page 59.

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**.

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

MSP0010

This fuel pump blockoff will

prove itself a reliable solution. A clean and effective solution, this plate incorporates an o-ring groove designed to "grip" the o-ring and comes with stainless fasteners.

Description	*Part #*
Fits Chevrolet blocks	**MSP0010**

MSP0038

MSP0039

One more item to make your engine project easier to complete, this mount is made to bolt to traditional big block Chevrolet heads and mount you ignition coil. They come in black with clear anodized spacers and hardware.

Part #	*Fits Coil#*	*Fits Cylinder Head*
MSP0038	8261	BB Chevy
MSP0039	8201	BB Chevy

WTO100

Transmission Overflow Tank

Our unique design offers all of the best options for a clean and effective transmission overflow tank. Each end has two 1/8NPT ports for hose connection, venting and drain. The 3" diameter body can be easily mounted by using a standard bottle clamp or by using the supplied bracket. The versatile and lightweight bracket is designed to fit on any of the four transmission pan rails (back, front or sides). This gem weights in at a trim 1.25 lbs.

Tank #	*Color*	*Capacity*	*Weight*
WTO100	**S,C**	25 oz.	1.25lbs

Transmission Cooling
Billet Heat Exchange System

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.

- **Fully Machined Pan Rail**
- **Fully Machined Heat Exchange**
- **Billet 6061 Aluminum**

WP155

Close-up of pressure port

-6 AN inlet / outlet on pan

O-ring groove in fully machined pan rail

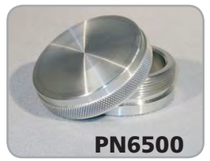
Transmission-ready Water Pumps

Application	*Pump Model*	*Color*	*Options*
Chevy BBC Standard	**WT100**	**R,B,S,U,G**	**HD**
Chevy BBC Reservoir	**WT200**	**R,B,S,U,G**	**HD**
Chevy BBC High Flow	**WT300**	**R,B,S,U,G**	

Description	*Part #*	*Additional information*
Powerglide Trans Pan with Heat Transfer Passage	**WTP300**	Comes with filter spacer
Water pump center section with high pressure port	**WP155**	To connect trans pan fits most 100 series pumps
Water pump center section with high pressure port	**WP355**	To connect trans pan fits most 300 series pumps
Powerglide Trans Pan w/Heat Transfer Passage/ Quick disconnect option	**WTP301**	Comes with filter spacer
Replacement o-ring seal	**WPG300**	Pan rail o-ring

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.



Size	*Aluminum*	*Steel*	*Stainless Steel*	*Thread*
1.75”	**PN6550**	**PN6551**	**PN6552**	1.312” - 12
2.5”	**PN6500**	**PN6501**		2.500” - 20
2.5” Pro	**PN6700**	**PN6701**		2.250” - 6
2.5” Pro	**PN6710**	**PN6711**		2.250” - 6
2.5” Pro	**PN6720**	**PN6721**		2.250” - 6
2.5” Pro	**PN6730**	**PN6731**		2.250” - 6

6700 Alternate Styles

PN6710 **PN6720** **PN6730**

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

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

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*	*Stainless Steel*
-06	9/16” - 18	**WF06FA**	**WF06FS**	**WF06FN**
-08	3/4” - 16	**WF08FA**	**WF08FS**	**WF08FN**
-10	7/8” - 14	**WF10FA**	**WF10FS**	**WF10FN**
-12	1 1/16” - 12	**WF12FA**	**WF12FS**	**WF12FN**
-16	1 5/16” - 12	**WF16FA**	**n/a**	**n/a**
-20	1 5/8” - 12	**WF20FA**	**n/a**	**n/a**
-32	2 1/2” - 12	**WF32FA**	**n/a**	**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*	*Stainless Steel*
-06	9/16” - 18	**WF06MA**	**WF06MS**	**WF06MN**
-08	3/4” - 16	**WF08MA**	**WF08MS**	**WF08MN**
-10	7/8” - 14	**WF10MA**	**WF10MS**	**WF10MN**
-12	1 1/16” - 12	**WF12MA**	**WF12MS**	**WF12MN**
-16	1 5/16” - 12	**WF16MA**	**n/a**	**n/a**
-20	1 5/8” - 12	**WF20MA**	**n/a**	**n/a**
-24	1 7/8” - 12	**WF24MA**	**n/a**	**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*	*Stainless Steel*
1/8”	**WF18PFA**	**n/a**	**n/a**
1/4”	**WF14PFA**	**n/a**	**n/a**
3/8”	**WF38PFA**	**WF38PFS**	**WF38PFN**
1/2”	**WF12PFA**	**WF12PFS**	**n/a**
3/4”	**WF34PFA**	**WF34PFS**	**WF34PFN**
1”	**WF10PFA**	**WF10PFS**	**n/a**
1 1/2”	**WF112PFA**	**n/a**	**n/a**

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.

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

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.

4130 alloy

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

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**

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**

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

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"
5/16 x .058	CE51							
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.

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.

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

Thread Size

Tube 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						RE1034F*	RE1034G*			
1 3/4 x .120								RE1036H*		

(*) Indicates hex on left hand threaded parts.

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.

Shown in use with front A-arm suspension.

Shown in use with 4 link rear suspension.

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

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


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**

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

Hole size listed in photo.


WP85

This bracket is designed to mount any of our electric remote pumps. It is 4130 material and is .090 thick with two bent flanges for better strength and rigidity.

Part #
WP85

Hey, it's a hoodie...you've seen them before. This one happens to have the Meziere logo on the front and a custom graphic on the back. Wear with pride. Hoodies offered in black only, sizes are Large and XL only.

front

back

Back inprint enlarged

Size	*Part #*
LG	**RA815**
XL	**RA816**

Hey, it's a t-shirt...just like the hoodie but in t-shirt form.
T-shirts offered in grey and black. Meziere logo on left chest and custom graphic on back.

front

back

Black Shirts

Size	*Part #*
XXXL	**RA708**
XXL	**RA707**
XL	**RA706**
LG	**RA705**
MED	**RA704**
SML	**RA703**

Grey Shirts

Size	*Part #*
XXXL	**RA714**
XXL	**RA713**
XL	**RA712**
LG	**RA711**
MED	**RA710**
SML	**RA709**

High end headwear! Whether you're at Pomona or Bonneville this will keep the sun off your noggin in style.

Part #
RA800

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

Cooling System Principles

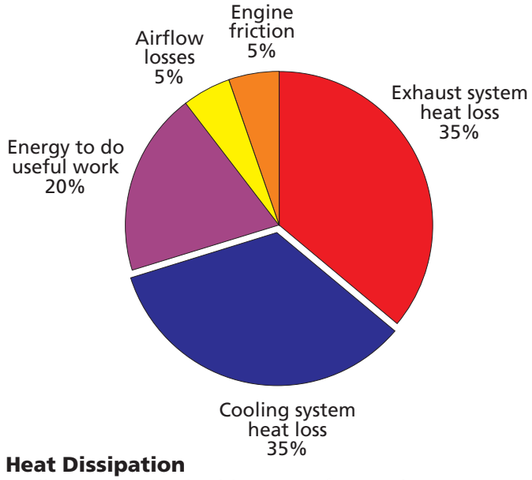
All the best aftermarket parts used the wrong way can be less effective than the factory system. In the search for cooling knowledge, it is found that the topic of cooling systems is left out of most books on automotive high-performance. The next few paragraphs will give you a better understanding of 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.

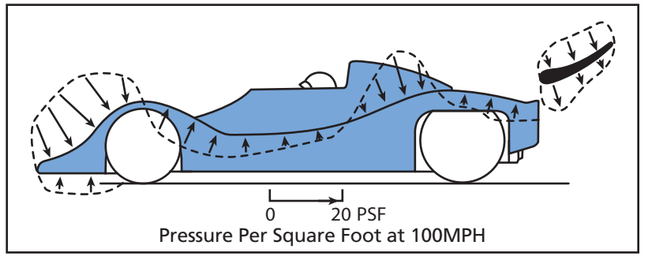
Heat Dissipation

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.

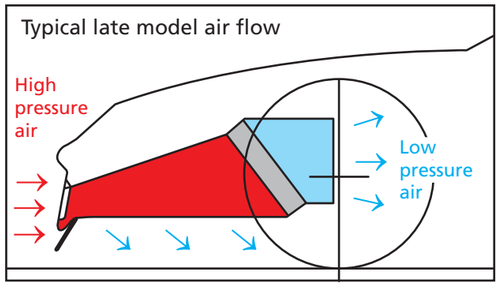
Coolants will vary in heat transfer characteristics. Straight water is accepted as the most efficient coolant. A trade-off is usually made with glycol-based products to increase the boiling point, lubricate the pump seal, reduce corrosion, and prevent freezing. Some sanctioning bodies do not allow glycol-based 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.

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

Air Flow (cont.)
The radiator transfers heat to air as it passes through the core. For proper function, the air stream must be under high pressure at the front side of the radiator and lower pressure behind. This pressure differential drives the fresh air past the fins. If air pressure builds up in the fan shroud or the engine compartment and the difference in pressure is decreased, air flow across the radiator can stall. Therefore, thoughtful planning should be done to consider both "at rest" and "at speed" conditions and how fresh air can be presented to the radiator effectively in both situations. In a case where an electric fan has been installed with a shroud that covers the entire radiator core, rubber or mechanical trap doors can be incorporated. These automatically close when "at rest" to seal the shroud and move the most air by preventing bypass. They also open when "at speed" allowing more air flow and preventing the shroud from damming air. The engine compartment must also 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 and running into unexpected problems.

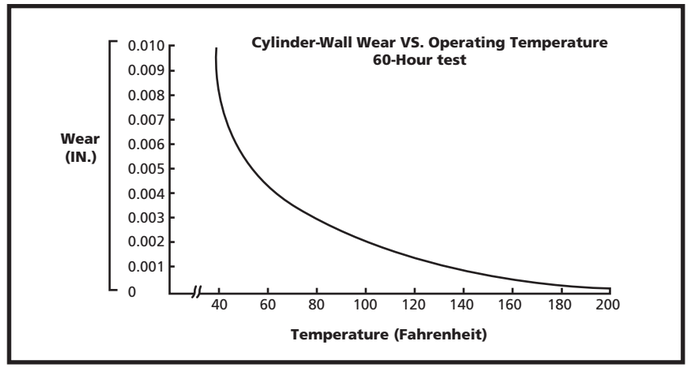
Water Flow
Many times water flow is the last aspect of the cooling system to be addressed. Ironically, it is also where the majority of problems lie. This is our focus at Meziere. The typical stock water pump has excessive clearance and straight impeller blades, usually open front and back. At low rpm 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.

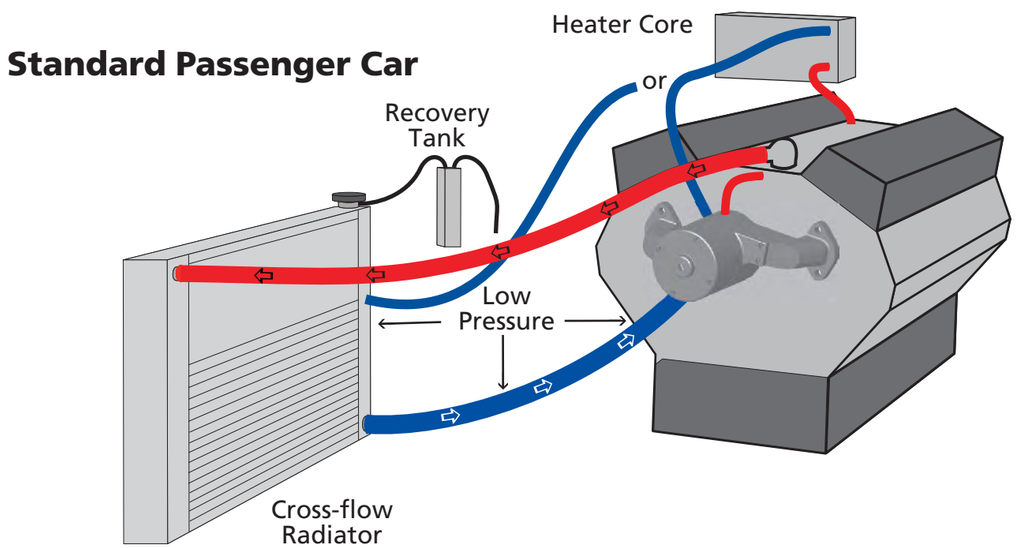
The higher the pressure produced by the water pump, the less chance of the steam pockets. The same boiling point law is in effect here. Racing pumps can generate pressure in the water jacket in excess of 30 psi to control hot spots and reduce detonation or pre-ignition.

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.

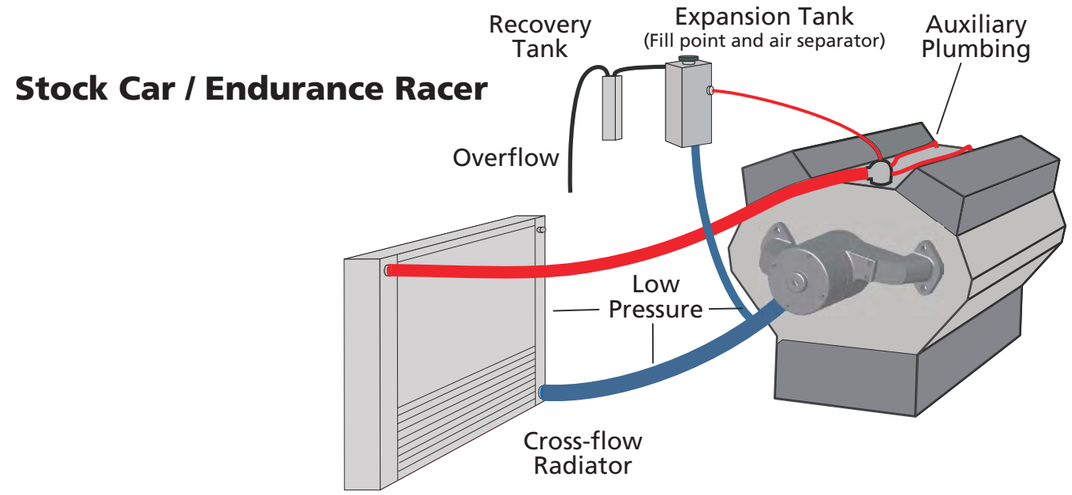


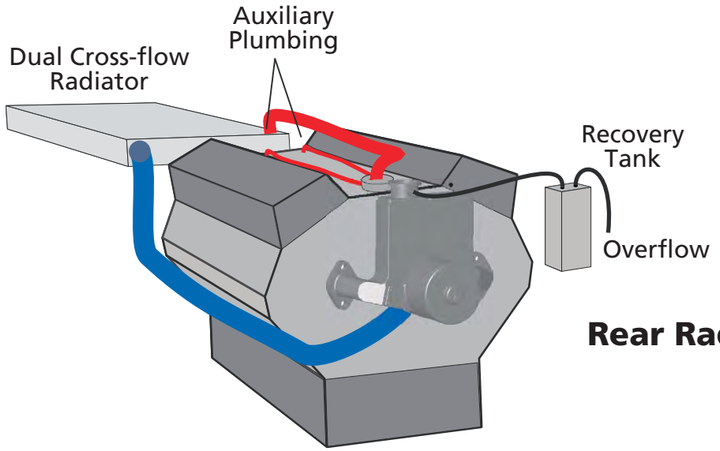
Regular and Irregular System Configurations
The following illustrations are examples of the correct way to plumb typical automotive and racing cooling systems.



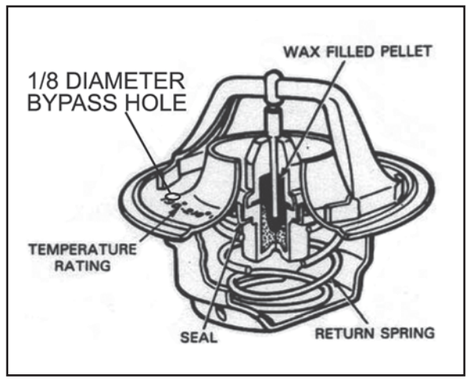
CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

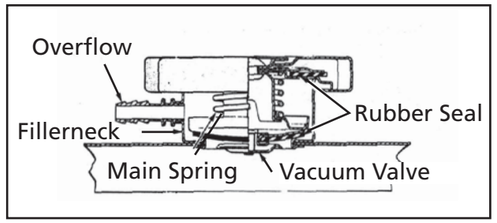




Thermostat
A thermostat's primary purpose is to quickly bring the engine up to operating temperature (see section entitled *Recommended Operating Temperatures*). With the exception of drag racing, a thermostat is recommended for most applications. Most racers avoid thermostats, seeing them as another 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.

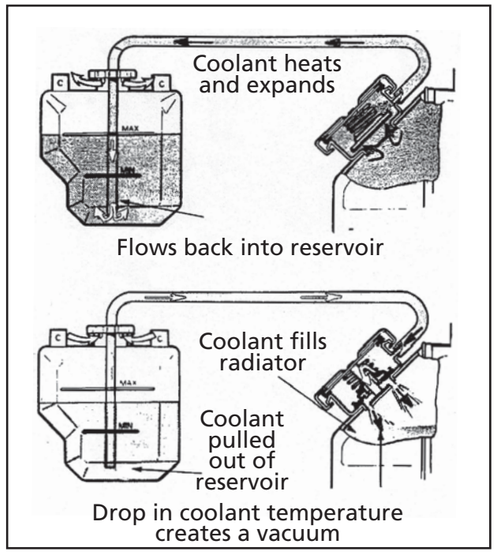


Pressure Cap



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 low pressure side of the system, air is pushed out first. When the system cools a vacuum is created. The radiator cap is equipped with a valve that opens under negative pressure and 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. A catch can does not facilitate the action of returning the fluid to the system as it cools. 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 and either a recovery tank or a catch can will accomplish this. The only benefit to a catch can is to determine 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.

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

CLICK OR PRESS HERE TO GO DIRECTLY TO THE TABLE OF CONTENTS

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.

Please keep the safety of yourself and those around you in mind first.
Use jack stands and proper lifting equipment while working under your vehicle.

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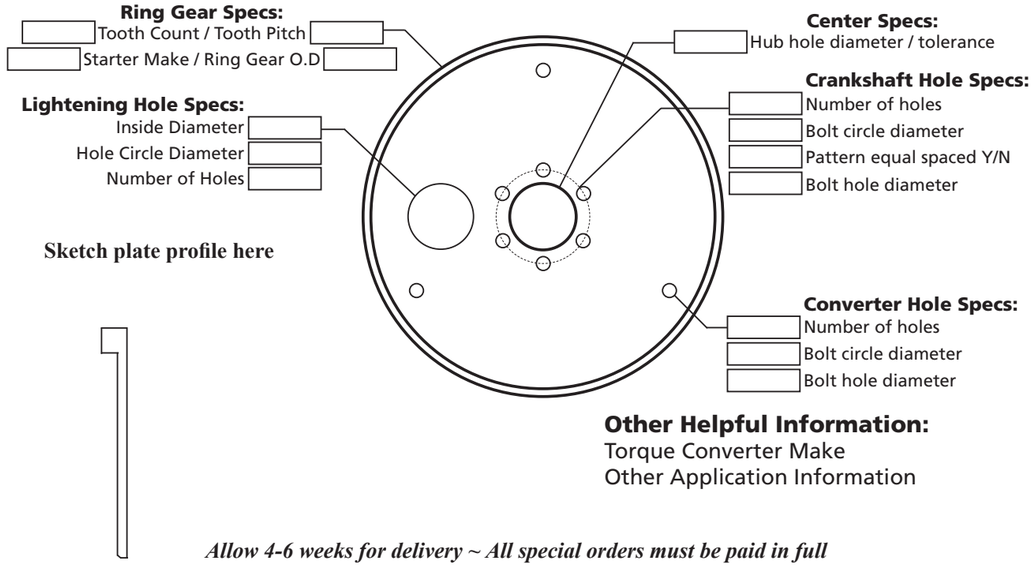

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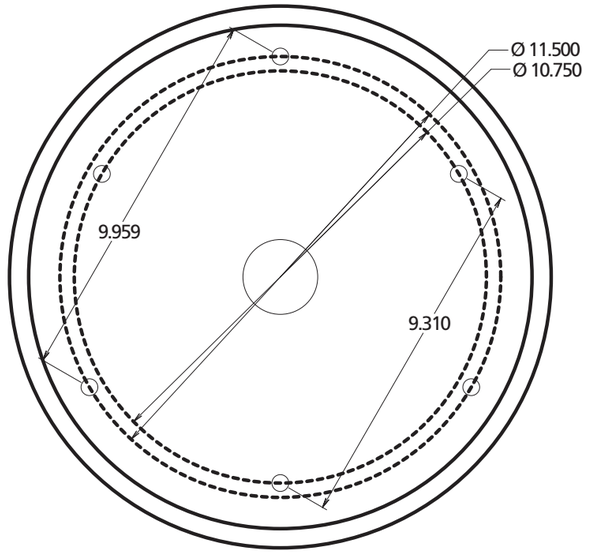

Torque Converter Pattern - cheat sheet
By measuring across 2 of the 3 bolt holes in the circle, these numbers will help you determine which converter pattern you currently have.

Meziere Enterprises
220 S. Hale Avenue
Escondido, Ca. 92029

Ordering from Meziere Enterprises, Inc.

Business Hours: Phone hours are 8:00 a.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. ***Web orders taken 24/7 at www.Meziere.com***.

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