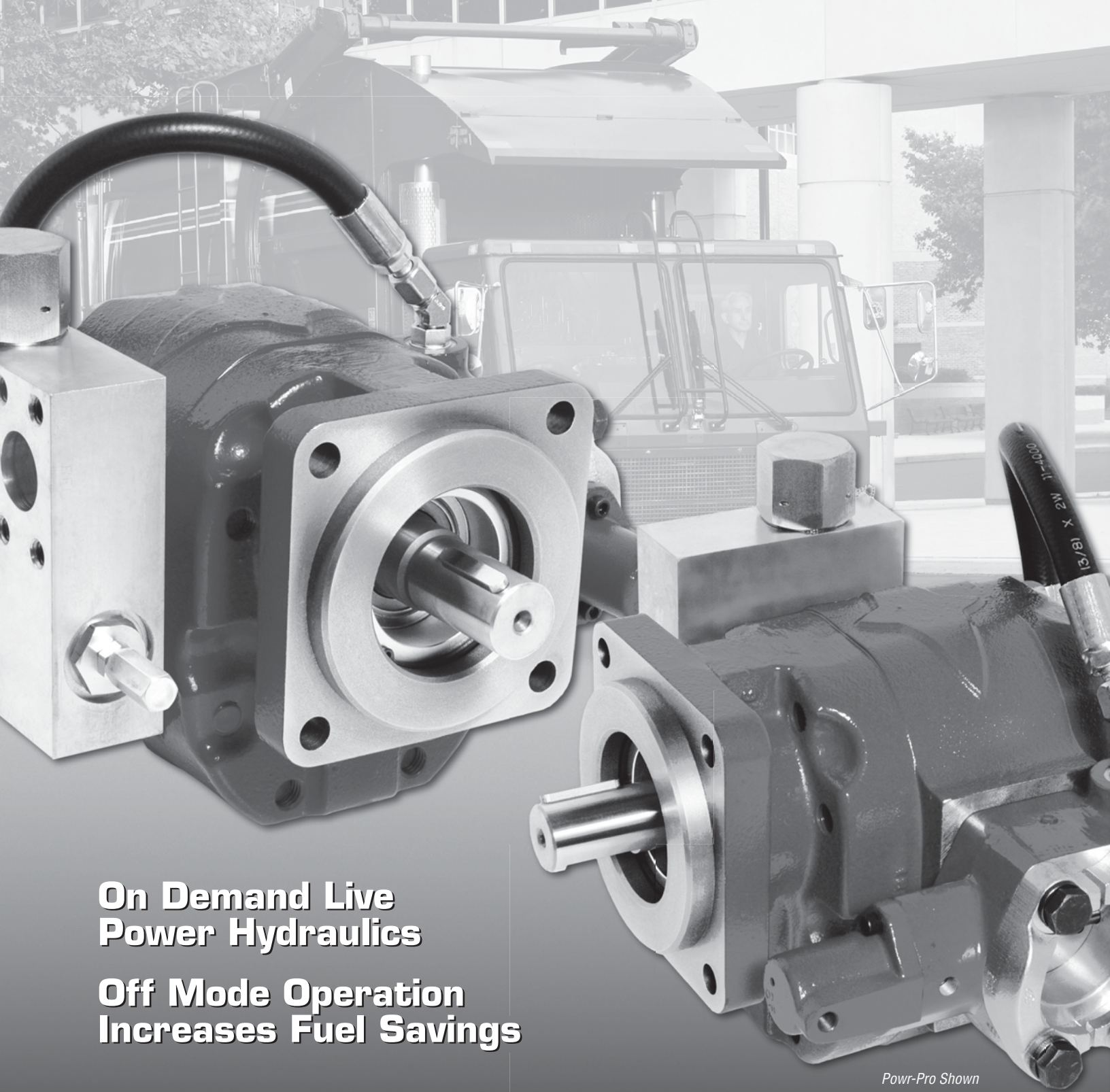




# **POWER-MISER & POWER-PRO PUMP SYSTEMS**



**On Demand Live  
Power Hydraulics**

**Off Mode Operation  
Increases Fuel Savings**

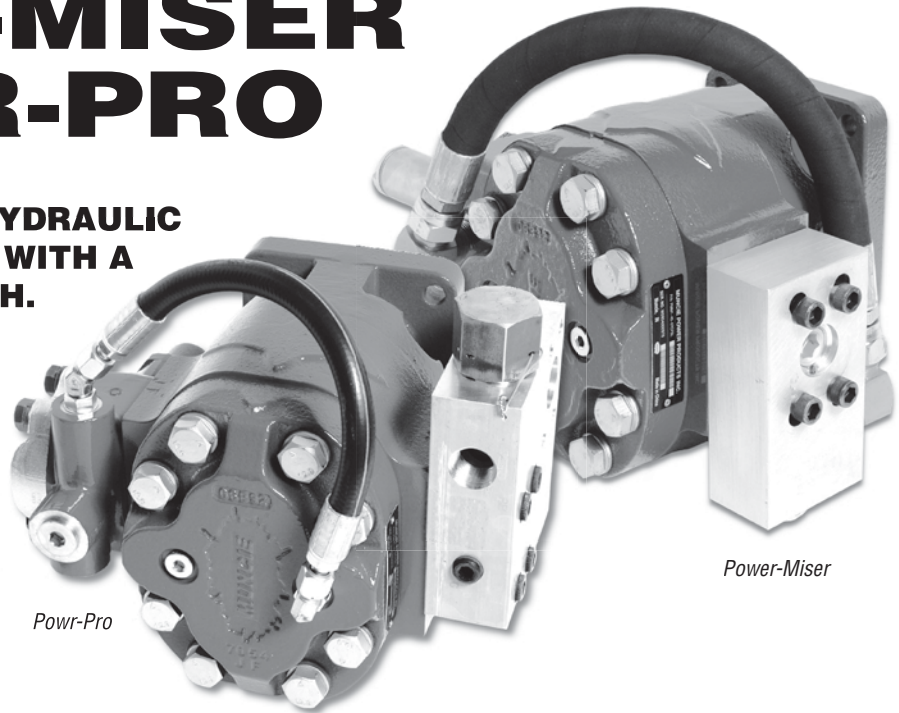
*Power-Pro Shown*

# POWER-MISER & POWR-PRO

## PUMP SYSTEMS

**ON-DEMAND LIVE POWER HYDRAULIC SYSTEMS READY TO WORK WITH A SINGLE FLIP OF THE SWITCH.**

THE PUMP CAN BE DRIVEN BY EITHER THE ENGINE CRANKSHAFT OR FLY-WHEEL PTO AND CONTAINS NO CLUTCHES OR GEARS TO ENGAGE OR DISENGAGE, THUS PROVIDING INCREASED PRODUCTIVITY FOR ALL SOLID WASTE PACKERS AND OTHER MOBILE POWER APPLICATIONS.



*Powr-Pro*

*Power-Miser*

LOWER OPERATING COSTS are achieved when the system is operated in the off mode. Only enough oil flow to lubricate the pump is permitted. When off the pump requires extremely low horsepower to turn, thus increasing fuel economy.

SYSTEM MATCHED COMPONENTS assure you of a properly operating system with long lasting performance.

REDUCED SYSTEM HEAT by providing an unloaded off time. System efficiency is increased by eliminating externally mounted lube oil protection devices.

QUICK SHIFTING response time between off/on modes due to the internal valve spool logic and unique rotating shutoff plate (powr-pro only).

ADDITIONAL Powr-Pro FEATURES: direct inline inlet hose routing • compatible with existing over-speed control devices • individual bolt-on components for easy field service • internal porting for easy hookup • improved inlet flow characteristics with our unique rotating shutoff plate (ppv).

A BLEED OFF VALVE is required with power-miser (pmv) and is installed between the pump outlet and reservoir to ensure that lubrication flow during the off mode cannot be pressurized. maximum off mode back pressure is 20 psi (1 bar).

## ACCESSORIES & OPTIONS

EASY, DASH-MOUNTED CONTROL. From the convenience of a dash-mounted control — Electric Switch or Manual Air Valve — power demand upon the engine can be reduced when hydraulic operation is not required.

STANDARD AIR SHIFT  
(Kit No. 48M61255 for PMV)  
(Kit No. 48M61256 for PPV)  
Simple access to an air line is all that's necessary to install this dependable system. Easy, dash-controlled operations.



ELECTRIC AIR SHIFT

(Kit No. 48M81251 for PMV)  
(Kit No. 48M81252 for PPV)

Convenient operations from dash-mounted control. Installation is simplified since no in-cab air controls and lines are required.



SPD-1001A SAFETY PROTECTION DEVICE

provides positive protection against overspeed, excessive system flow, and dynamic engagement shock.

The SPD-1001A requires the Electric/Air Shift option.



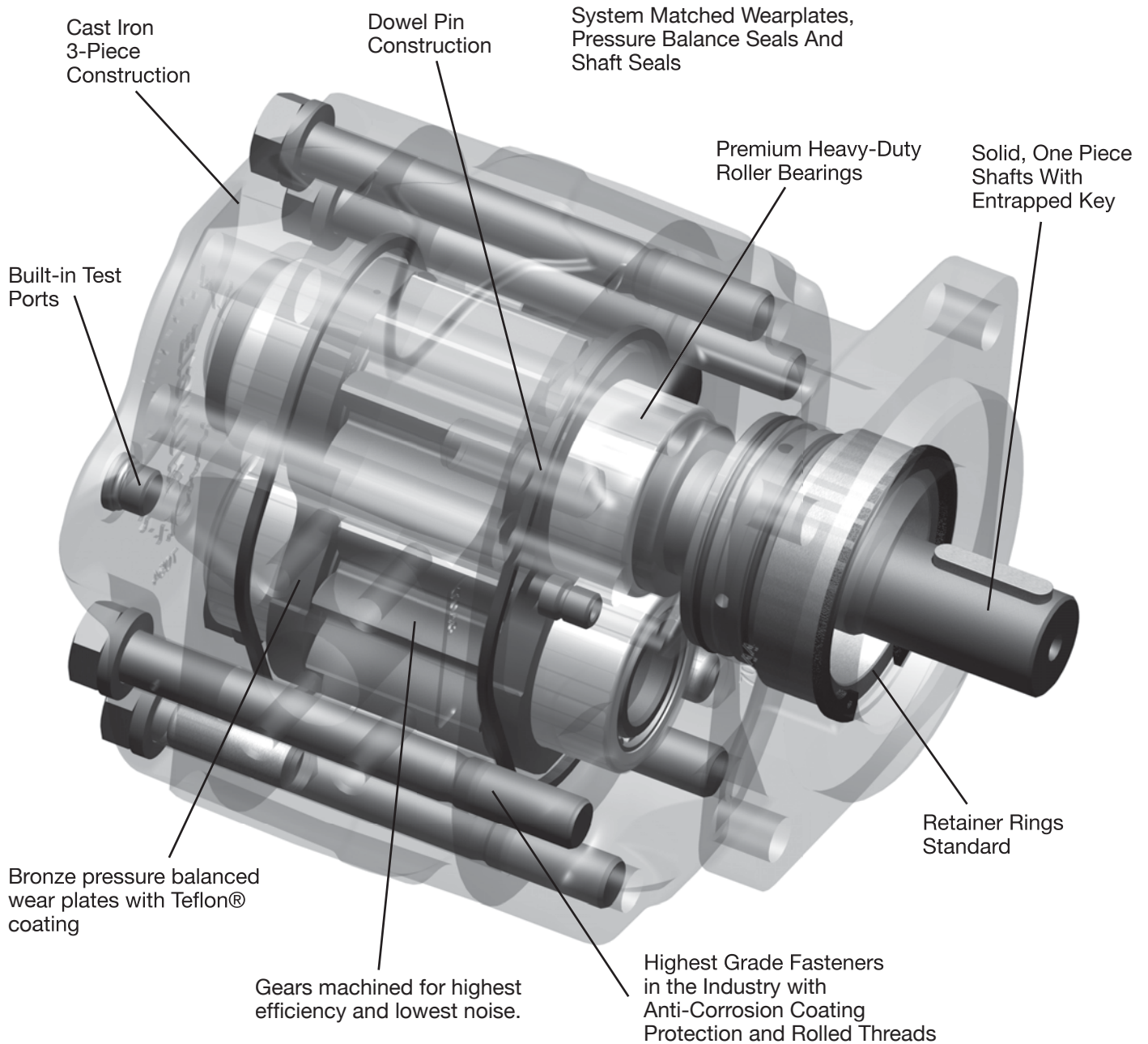
BOLT-ON FLOW CONTROLS  
(VP10, VP-15)

Directly mounts to pump outlet to limit flow to the system by bypassing excess flow. Both fixed (VP-10) and adjustable (VP-15) are available.





# PUMP FEATURES AND CONSTRUCTION M SERIES SHOWN



**ALL CAST IRON THREE PIECE CONSTRUCTION • PRESSURE TO 3000 PSI • SYSTEM MATCHED COMPONENTS** PROVIDE FOR LESS SYSTEM HEAT BUILDUP AND A MORE ENERGY EFFICIENT PRODUCT IN ALL OPERATIONAL MODES • **QUALITY CONTROL** ALL PUMPS ARE 100% TESTED BEFORE SHIPMENT. • **SPEEDS TO 3000 RPM • EIGHT STANDARD PUMP SIZES**



# MODEL NUMBER CONSTRUCTION

**PM40 - 07 C F S L - M - A - 63 - B**

## PUMP MODEL

PL14 (not available w/PPV)  
 PL19  
 PL23 *For Replacement Pump Only*  
 PL25 *Pump Prefix is:*  
 PM27 *PML1-\*\*\* or PMM1-\*\*\**  
 PM31 *(Delete model coding after Rotation)*  
 PM35  
 PM40

## SHAFT

01—1.0" Rd. (25.4 mm) (L Only)  
 05—1.25" 14T (31.8 mm) (M Only)  
 07—1.25" Rd. (31.8 mm) (L23 & M Only)

## MOUNTING FLANGE

C—SAE "C" 4-BOLT  
 L—SAE "C" 2-BOLT (M only)

## PORT TYPE

F—SAE 4-BOLT

## PORT LOCATION

S—SIDE

## BLEED VALVE\*\*

A — No Bleed Valve  
 B — 2 GPM (8 LPM)

## FLOW CONTROL VALVE\*

00 — No Option  
 VP-10 (Fixed)  
 28 — 28 GPM (106 LPM)  
 33 — 33 GPM (125 LPM)  
 36 — 36 GPM (136 LPM)  
 40 — 40 GPM (151 LPM)  
 52 — 52 GPM (197 LPM)  
 55 — 55 GPM (208 LPM)  
 63 — 63 GPM (238 LPM)  
 VP-15 (Adjustable)  
 15 — 5 GPM (19 LPM) to 50 GPM (180 LPM)

## HOSE KIT

A — No Hose Kit  
 H — For PPV Only

## POWR-PRO(P) / POWER-MISER(M) VALVE

P — PPV-2402 — PM27, PM31, PL19, PL23, PL25  
 P — PPV-3202 — PM35, PM40  
 M — PMV-20 — PL14  
 M — PMV-24 — PM27, PM31, PL19, PL23, PL25  
 M — PMV-32 — PM35, PM40

## ROTATION

L — Left Hand (CCW)  
 R — Right Hand (CW)

\* OPTIONAL. Bypass flow should not exceed output flow by more than 50%. Contact Muncie Sales for the correct selection for your application.

\*\*POWER-MISER ONLY: A bleed valve must always be installed to prevent premature pump failure. Part Number FFC-3-2 (not used on PPV).

NOTE: Vehicle must be equipped with an air system. POWR-PRO valve must be shifted with a 2-position, 4-way valve.

## L SERIES PUMP SPECIFICATIONS

MODEL NO.	DISPL. CU. IN. (CC)	MAX. * RPM	MIN. RPM	MAX. PSI (BAR)	MAX. OFF PSI (BAR)	INLET PORT SAE 4-BOLT	OUTLET PORT SAE 4-BOLT	MAX INLET VACUUM
PL*14	3.18 (52)	3000*	800	3000 (207)	20 (1.4)	1-1/2*	1	5In.Hg.(.17BAR)
PL*19	4.46 (73)	3000*	800	3000 (207)	20 (1.4)	1-1/2	1-1/4	5In.Hg.(.17BAR)
PL*23	5.20 (85)	3000	800	2500 (172)	20 (1.4)	1-1/2	1-1/4	5In.Hg.(.17BAR)
PL*25	5.73 (93)	2500	800	2500 (172)	20 (1.4)	1-1/2	1-1/4	5In.Hg.(.17BAR)

\* Power-Miser Only: Pump Inlet Port is 1-1/4, but the Power-Miser Valve Block Inlet Port is 1-1/2.

## M SERIES PUMP SPECIFICATIONS

MODEL NO.	DISPL. CU. IN. (CC)	MAX. * RPM	MIN. RPM	MAX. PSI (BAR)	MAX. OFF PSI (BAR)	INLET PORT SAE 4-BOLT	OUTLET PORT SAE 4-BOLT	MAX INLET VACUUM
PM*27	6.10 (100)	3000*	800	3000 (207)	20 (1.4)	1-1/2	1-1/4	5In.Hg.(.17BAR)
PM*31	7.11 (117)	3000	800	3000 (207)	20 (1.4)	1-1/2	1-1/4	5In.Hg.(.17BAR)
PM*35	8.20 (134)	3000	800	2500 (172)	20 (1.4)	2	1-1/4	5In.Hg.(.17BAR)
PM*40	9.27 (152)	2500	800	2500 (172)	20 (1.4)	2	1-1/4	5In.Hg.(.17BAR)

\* Off-Mode RPM. 2500 RPM for On-Mode, except PL\*25 and PM\*40 which is 2300 RPM.

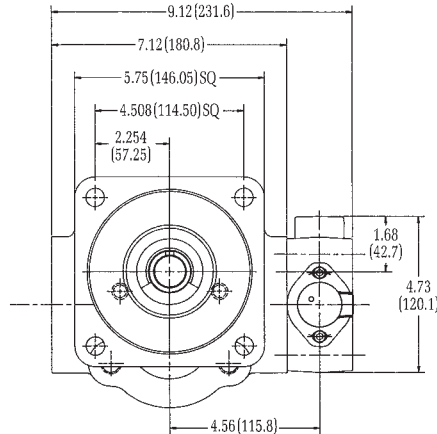
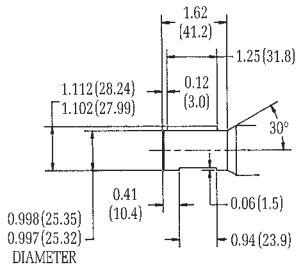
NOTES: Maximum oil temperature is 200°F (93°C). Never use Teflon Tape on pipe ports. 10 Micron Filtration Recommended.



# POWR-PRO INSTALLATION DIMENSIONS

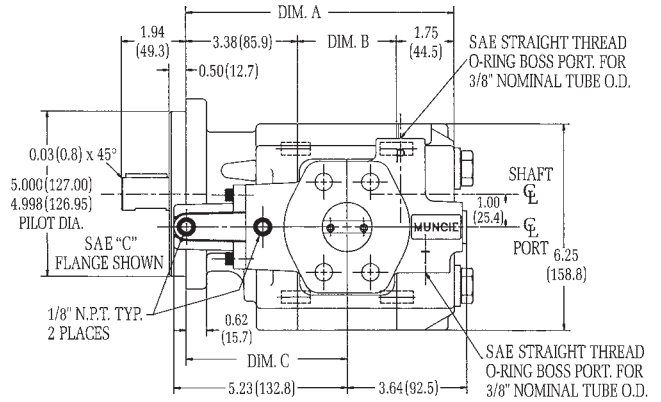
## L SERIES

### SHAFT TYPE 1



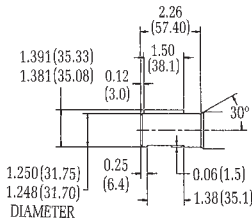
CCW ROTATION SHOWN  
SAE "C" 4-BOLT

MODEL NO.	DIM. A IN (MM)	DIM. B IN (MM)	DIM. C IN (MM)
PL-19	7.62 (193.5)	2.50 (63.5)	4.62 (117.3)
PL-23	7.87 (199.9)	2.75 (69.9)	4.75 (120.7)
PL-25	8.12 (206.2)	3.00 (76.2)	4.88 (124.0)

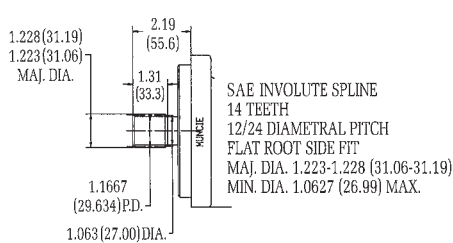


## M SERIES

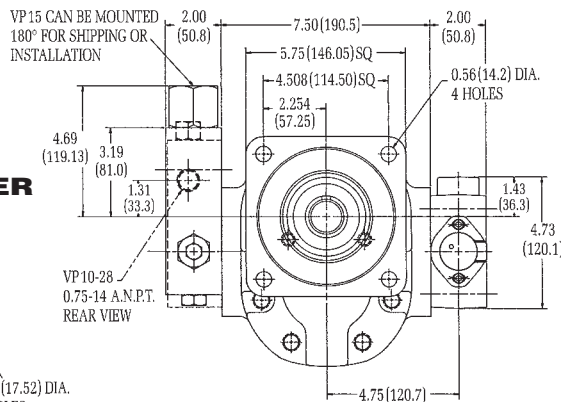
### SHAFT TYPE 7



### SHAFT TYPE 5

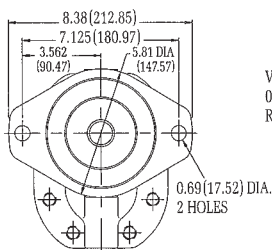


MODEL NO.	DIM. A IN (MM)	DIM. B IN (MM)	DIM. C IN (MM)
PM-27	8.25 (209.6)	2.50 (63.5)	5.00 (127.0)
PM-31	8.50 (215.9)	2.75 (69.9)	5.12 (130.0)
PM-35	8.75 (222.3)	3.00 (76.2)	5.25 (133.4)
PM-40	9.00 (228.6)	3.25 (82.6)	5.38 (136.7)

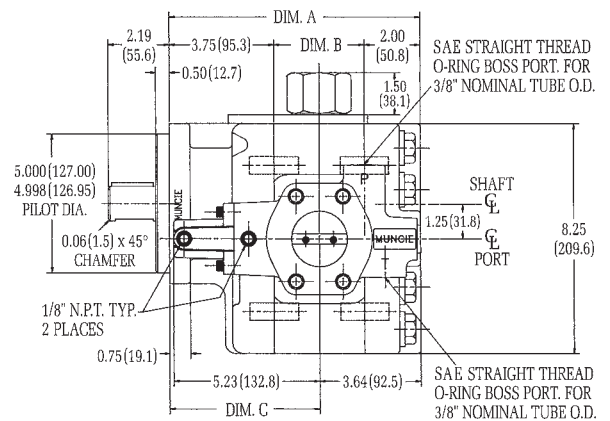


CCW ROTATION SHOWN  
SAE "C" 4-BOLT

### OPTIONAL FRONT COVER

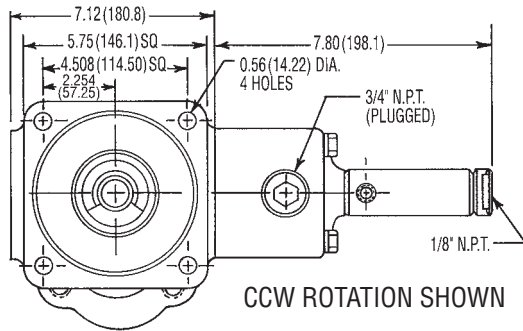


SAE "C" 2-BOLT

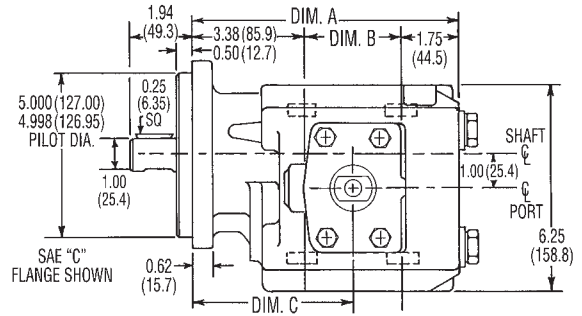


# POWER-MISER INSTALLATION DIMENSIONS

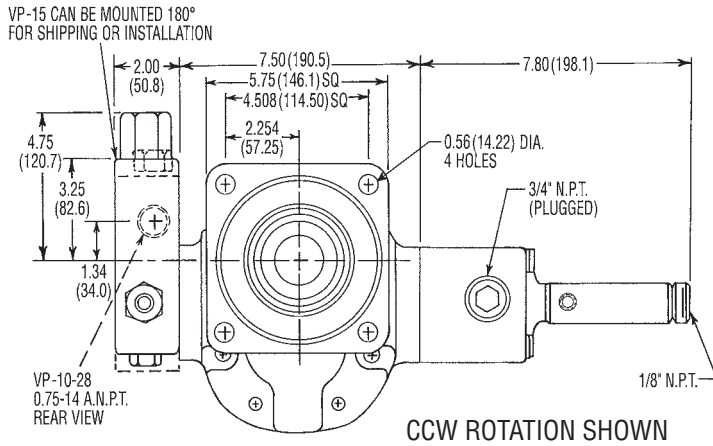
## L SERIES



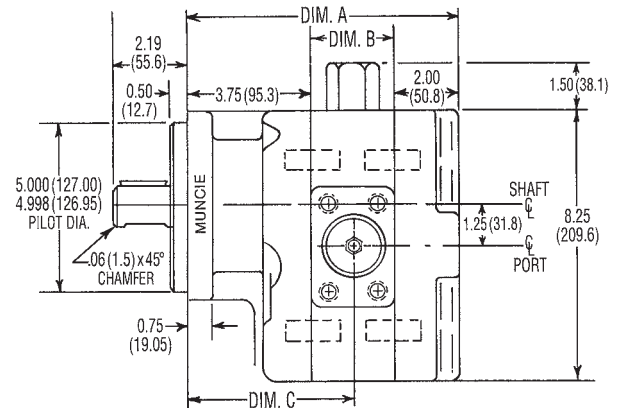
MODEL NO.	DIM. A IN (MM)	DIM. B IN (MM)	DIM. C IN (MM)
PL-14	7.12 (180.8)	2.00 (50.8)	4.38 (111.3)
PL-19	7.62 (193.5)	2.50 (63.5)	4.62 (117.3)
PL-25	8.12 (206.2)	3.00 (76.2)	4.88 (124.0)



## M SERIES



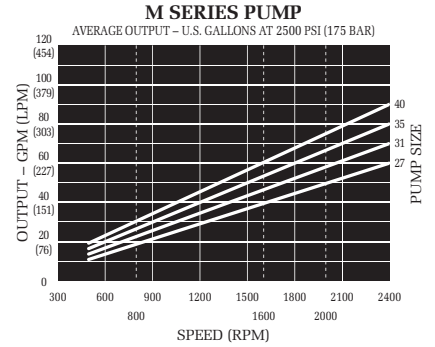
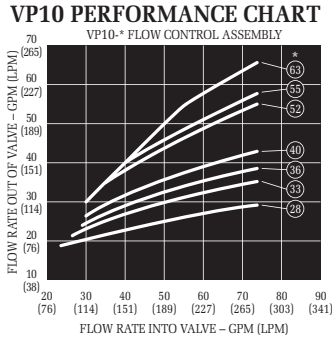
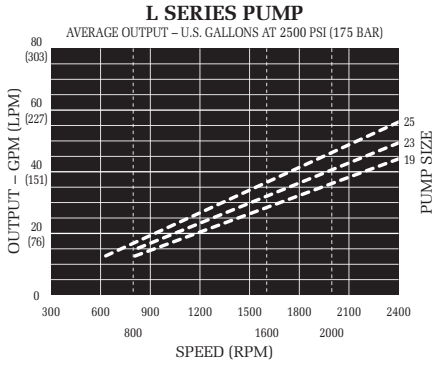
MODEL NO.	DIM. A IN (MM)	DIM. B IN (MM)	DIM. C IN (MM)
PM-27	8.25 (209.6)	2.50 (63.5)	5.00 (127.0)
PM-31	8.50 (215.9)	2.75 (69.9)	5.12 (130.0)
PM-35	8.75 (222.3)	3.00 (76.2)	5.25 (133.4)
PM-40	9.00 (228.6)	3.25 (82.6)	5.38 (136.7)



SAE INVOLUTE SPLINE  
14 TEETH  
12/24 DIAMETRAL PITCH  
FLAT ROOT SIDE FIT  
MAJ. DIA. 1.223-1.228 (31.06-31.19)  
MIN. DIA. 1.0627 (26.99) MAX.



# PUMP OUTPUT



Note: Flow control orifices should be sized such that they bypass no higher than 50% of the desired control flow.

## OIL RECOMMENDATIONS

Muncie does not promote specific manufacturers' brands of oil. Recommendations below are guidelines; consult oil manufacturer for exact application needs.

### VISCOSITY RANGE:

- Viscosity Minimum: 50-60 SUS (7.5-10.5 cST)
- Viscosity Optimum Continuous: 60-100 SUS (10.5-21.6 cST)
- Viscosity Maximum @ Startup: 7500 SUS (1600 cST)
- Viscosity Index: 90 Minimum

Aniline Point: 175 Minimum

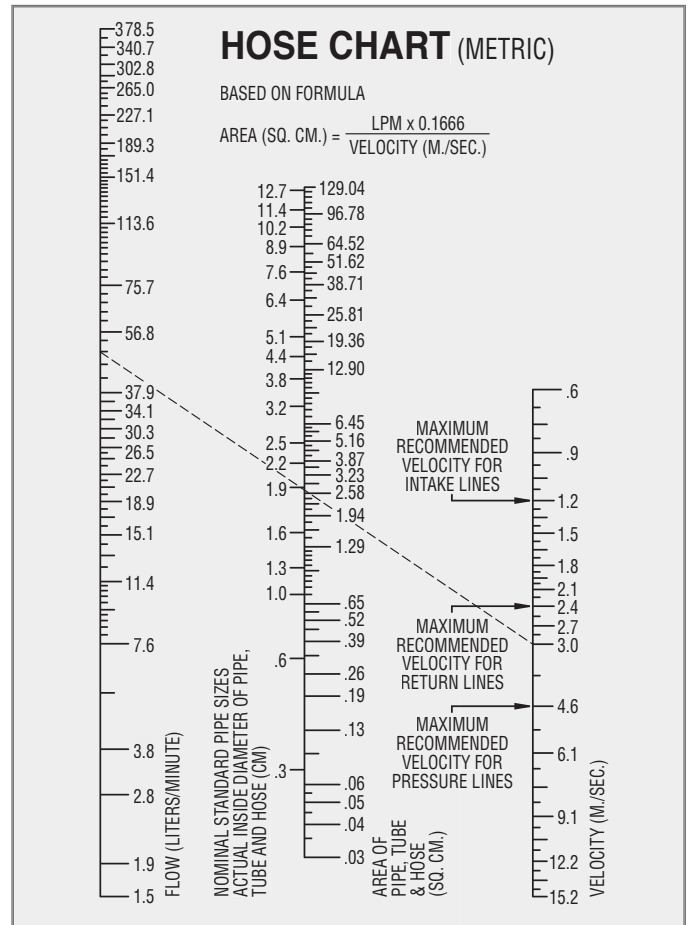
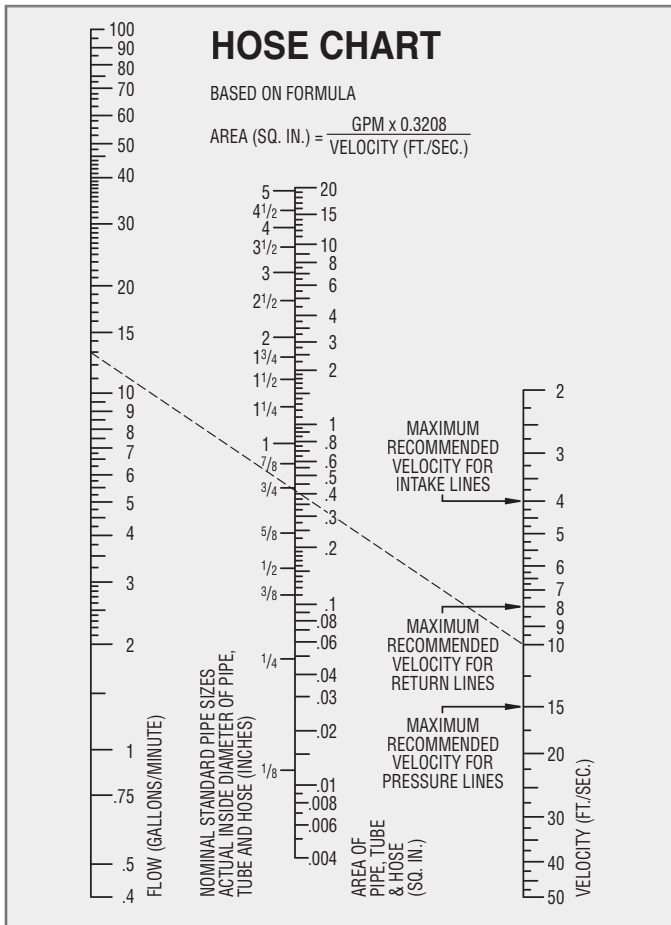
- Pour Point: 15°F (-10°C) Maximum
- Foam Resistance: Recommended
- Rust Resistance Inhibitors: Recommended
- Corrosion Resistance: Recommended
- Oxidation Stability: Recommended
- Anti-Wear Additive: .06% Zinc Minimum\*

NOTE: Cold weather operation requires special oil considerations. Viscosity should not exceed 7500 SUS (1600 cST) at lowest startup temperature. Continuous operation should range between 60-100 SUS (10.5-21.6 cST) for all temperature ranges. Never use diesel fuel or kerosene to thin oil.

\*Anti-Wear Additives are optional. Typical not required for gear pump or gear motor anti-wear, but some motor manufacturers may recommend.

## FLOW CAPACITIES

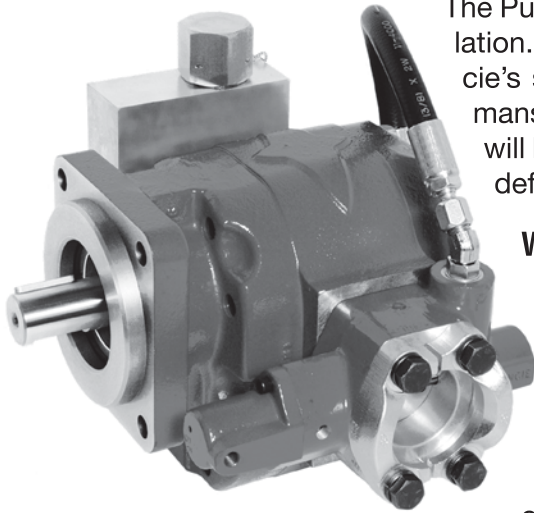
For Pipe, Tube and Hose at Recommended Flow Capacities





# ONE-YEAR PUMP WARRANTY

The Muncie Cast Iron/Roller Bearing Pump Series "L & M" is warranted against any defect in material and workmanship which existed at the time of sale by Muncie, according to the following provisions, subject to the requirements that the Pump must be used only in accordance with catalogue and package instructions, and the warranty card must be filled out and returned to Muncie within ten days after the pump is installed.



*Power-Pro Shown*

The Pump is warranted for a period of one-year from the date of installation. If during the warranty period the Pump fails to operate to Muncie's specifications due to a defect in any part in material or workmanship that existed at the time of sale by Muncie, the defective part will be repaired or replaced, at Muncie's election, at no charge, if the defective part is returned to Muncie with transportation prepaid.

**WARNING.** The above warranty shall terminate if any alterations or repairs are made to the Pump other than at a Service Center owned by Muncie, or if the Pump is used on any equipment other than the equipment upon which it is first installed.

As to any Cast Iron/Roller Bearing Pump Series "L & M" which is rebuilt and retested at a Service Center owned by Muncie, the period of the above warranty is extended for a period of one additional year from the retest date.

**THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER OBLIGATIONS AND LIABILITIES, INCLUDING NEGLIGENCE AND ALL WARRANTIES OF MERCHANTABILITY AND SUITABILITY, EXPRESSED OR IMPLIED AND STATE MUNCIE'S ENTIRE AND EXCLUSIVE LIABILITY AND BUYER'S EXCLUSIVE REMEDY FOR ANY CLAIM OF DAMAGES IN CONNECTION WITH THE SALE, REPAIR OR REPLACEMENT OF THE ABOVE GOODS, THEIR DESIGN, INSTALLATION OR OPERATION. MUNCIE WILL IN NO EVENT BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES WHATSOEVER, AND OUR LIABILITY UNDER NO CIRCUMSTANCES WILL EXCEED THE CONTRACT PRICE FOR THE GOODS FOR WHICH LIABILITY IS CLAIMED.**

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Power  
Products**

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