

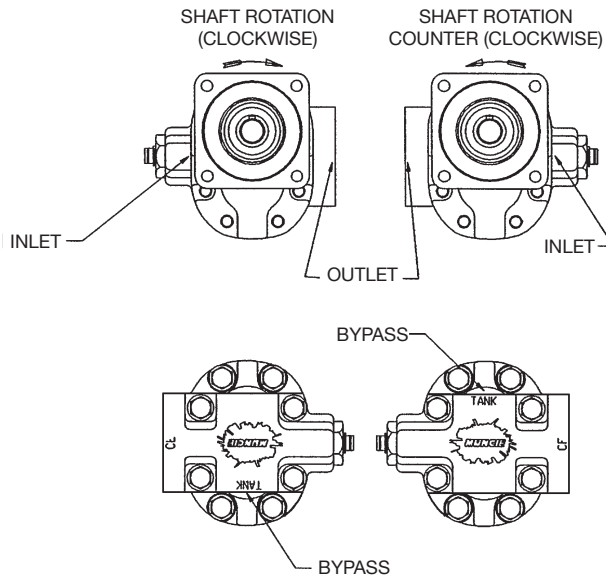


MLS SERIES M PUMP

FOR LIVE PACK INSTALLATIONS • INSTALLATION INSTRUCTIONS

These instructions provide recommendations and tips on the installation and hook up of the Muncie MLS pump. Never work on a raised body without proper body props and supports.

PUMP ROTATION AND PORTING



PORT SIZES/TYPE

MODEL	INLET	OUTLET
27	1½	1¼
31 thru 44	2	1¼

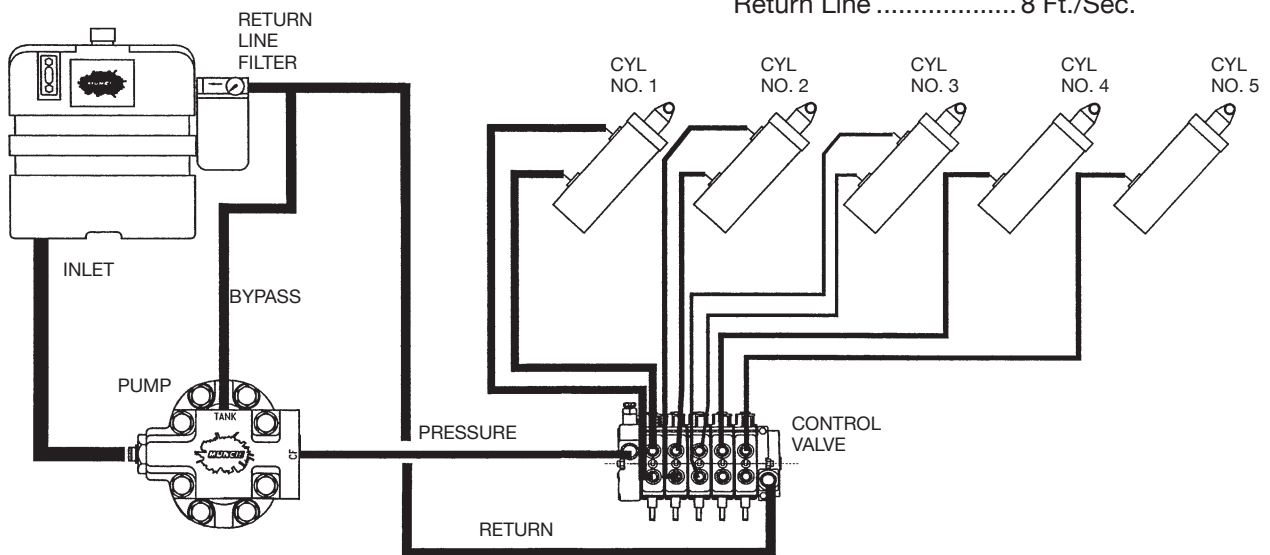
Bypass (All) 1¼ Split Flange
 Test Ports (All) -6 Str. Thd.
Note: Internal Drain Line

TYPICAL PLUMBING DIAGRAM

NOTE: Circuit shown is generic and for reference only. Internal sense passage and drain.

Hose sizes will be affected by flow requirements and should be sized for the following maximum fluid velocities.

- Inlet Line 4 Ft./Sec.
- Pressure Line 15 Ft./Sec.
- Return Line 8 Ft./Sec.

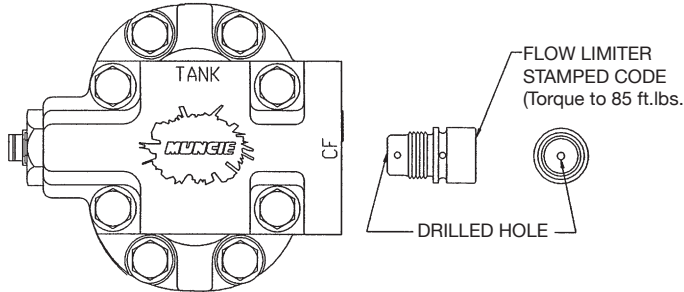


Recommended Hose Types:

- SAE 100R4 Inlet Line
- SAE 100R2 or higher Pressure Line
- SAE 100R1 Return/Bypass Line

FLOW LIMITER

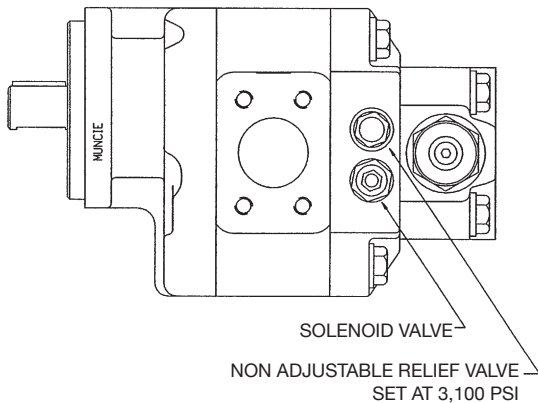
The LPV Valve is easily set up with a Flow Limiter to control the desired amount of flow to the system. The orifice screws in at the pressure port and can easily be changed out or drilled to a larger size for increased capacity.



FLOW LIMITER SIZES		
FLOW GPM (LPM)	STAMP CODE	DRILL SIZE
25 (94)	B	.0935
30 (113)	D	.1562
35 (132)	F	.2031
40 (151)	G	.2188
45 (170)	I	.2500
50 (189)	K	.2812
55 (208)	L	.3120
60 (227)	M	.3438
TORQUE TO 1,000 IN.LBS.		

PRESSURE RELIEF ADJUSTMENT

This pump has been built with a fixed non-adjustable relief which has been preset at 3,100 PSI. This is not to be used as the system's primary circuit protection. A main system relief is still required that is adjusted to the desired setting for proper protection. Individual port reliefs are still required if a particular function requires a lower pressure than what the system main relief is set for. Contact Muncie Power Products with additional questions.



PUMP PRESSURE RATINGS	
MODEL	MAX. PSI (BAR)
MLSM*-27	3,000 (207)
MLSM*-31	3,000 (207)
MLSM*-35	2,750 (190)
MLSM*-40	2,750 (190)
MLSM*-44	2,500 (170)

*Torque cartridges to 20 ft.lbs.
Torque coil nut to 65 in.lbs.

PRESSURE RELIEF ADJUSTMENT

Proper mounting of the pump is critical to achieve maximum pump and driveline life. The pump is to be mounted parallel to the engine crankshaft within 1.5°. Universal joints need to be in phase and driveline should be balanced to a speed equal to maximum engine RPM. Shaft offset should be at 3-7°.

Direct mount units should have anti-seize grease applied to the splines and should be reapplied annually or sooner for severe use (new PTOs from Muncie will already have this lube applied).

Maximum inlet vacuum is 5 In.Hg. (.17 BAR).

Maximum oil temperature is 200°F (93°C).