

The Ultimate Multi-Stage Pump

Centrifugal Pumps for High Pressure Coolant Delivery

- Pressures to 180 psi; heads to 416 ft.
- Variable flow rates to 33 GPM
- Pulsation-free coolant delivery
- Contributes substantially to longer tool life
- Combines with tank for a complete coolant system



Graymills

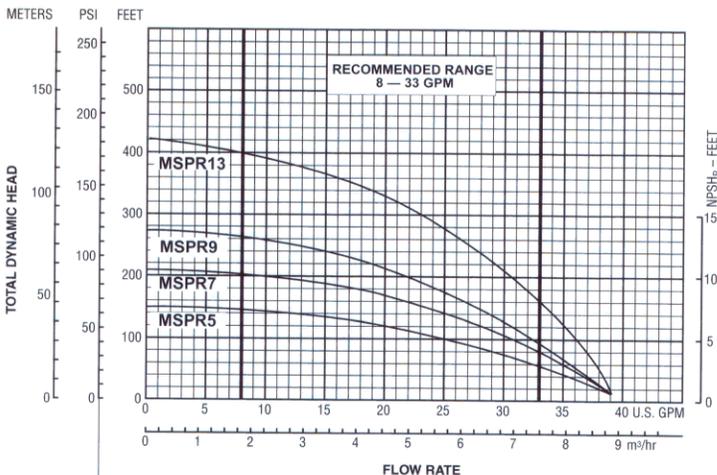
MSPR PUMPS

Graymills Multi-Stage Centrifugal Pumps for drilling, boring, milling, and other machining operations requiring high pressure coolant delivery.



MSPR pumps, available in 5, 7, 9 or 13 stages, are designed to meet coolant delivery requirements where high pressure is needed to accomplish chip removal in addition to dissipating heat.

- **Steady, pulsation-free coolant delivery.**
- **Prevents thermal shock to cutting tool**
- **Permits greatly increased feed rates.**
- **Perfect for “through the tool” machining applications.**
- **Substantially lengthens tool life.**
- **Variable capacity:** centrifugal pump design allows flow adjustment by installing valve in pump discharge line (use of the included by-pass kit may be required*).
- **Integral discharge:** simplifies plumbing. No extra holes in tank lid.
- **Designed for long service life:** rugged cast iron discharge head and frame. Corrosion resistant 300 series stainless steel and thermoplastic internal components are encased in a stainless steel shell. Mechanical seal has carbon/ceramic faces, viton elastomers and stainless steel parts.
- **Abrasion resistant impellers and diffusers:** high strength polycarbonate.
- **Mounts vertically or horizontally without loss of performance.**



*See page 4 for by-pass requirement

MSPR Pump Specifications

PUMP

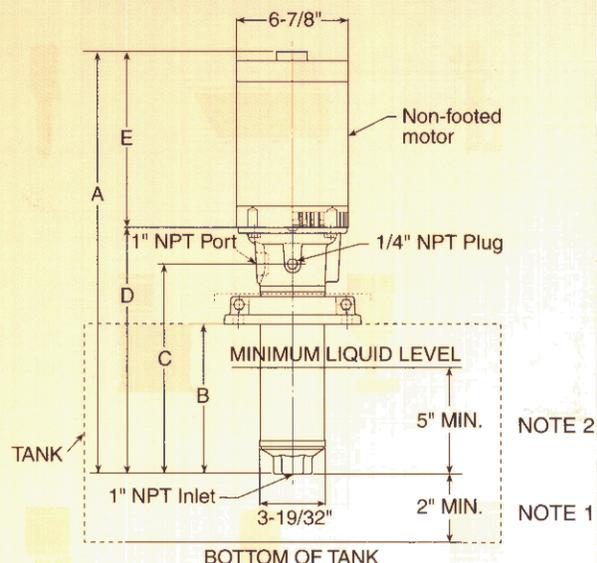
- Pressures to 180 psi; heads to 416 ft.
- Variable flow rates to 33 GPM
- Inlet pressure: 75 psi maximum
- Maximum liquid temperature: 160°F/71°C
- Maximum SSU: 300
- Stainless steel shaft
- Rotation: CCW when viewed from the motor end
- Pipe Connection: Suction and discharge to 1" NPT

MOTOR

- NEMA Standard TEFC
- 230/460V, 3 Phase, 60 Hz
- 3500 RPM
- 1, 1.5, 2 & 3 HP
- Capacitor type
- Built-in overload with automatic reset

Note 1: Intake of pump must be a minimum of 2" above bottom of tank.

Note 2: Liquid level must always cover at least 5" of pump at all times.



MSPR SPECIFICATIONS							
Model	Stages	HP	A	B*	C	D	E
MSPR5	5	1	21 ¹ / ₄	6 ¹ / ₈	9 ¹ / ₄	11 ¹ / ₄	10
MSPR7	7	1.5	24	8	11 ¹ / ₈	13 ¹ / ₄	10 ³ / ₄
MSPR9	9	2	26	9 ⁵ / ₈	13	15	11
MSPR13	13	3	30 ¹ / ₂	13 ¹ / ₂	16 ³ / ₄	18 ³ / ₄	11 ³ / ₄

*Graymills uses "B" length to define the measurement from the bottom of the volute to the bottom of mounting flange.

MSPR Pump & Tank High Pressure Coolant Circulating Systems

TANK SPECIFICATIONS			
Model	Capacity	Dimensions (LxWxH)	Baffles
C-29864	21 gal	36 x 16 x 9.75	1
C-29865	34 gal	37.5 x 16 x 16.5	3
C-29866	50 gal	42 x 16 x 16.5	4

(MSPR 9 and MSPR 13 cannot be used with 21-gallon tank.)

Combine MSPR pumps with 21, 38 or 50 gallon tank kits for a complete system. (85 or 110 gallon tank available on request.)

Tanks are durably constructed of 16 gauge cold rolled steel. Edges are hemmed to increase rigidity and eliminate sharp edges.

Chip collection baskets trap particles; are easily removed for cleaning.

Tank baffles are carefully sized and positioned to make finer solids settle out and keep circulating fluid clean.

5 and 7 stage pumps may be used with 21, 38 or 50 gallon tank kits. 9 and 13 stage pumps may only be used with the 38 and 50 gallon tank kits. 85 or 110 gallon tank available on request.

Tank kit includes pump mounting bracket and pipe nipple (if required) which allows pumping down to 2" liquid level.



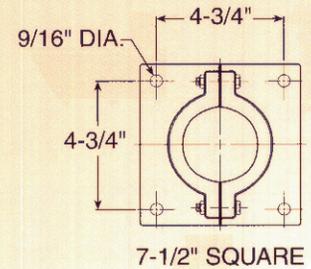
MSPR Accessories

Vertical Mounting Flange C-32106

Heavy cast iron construction. Allows vertical mounting and adjustment of immersion depth.

By-Pass Kit P/N: C-32450

The By-pass Kit is included with new MSPR pumps or may be purchased as a replacement kit. With this kit, the operator can control the discharge volume while maintaining the minimum amount of flow required to avoid overheating the pump. It is required for low flow applications (below 8 GPM) or when intermittent dead-heading occurs.



High pressure Filters

Filter screen traps particles, scale and contaminants to prevent costly damage. Collects up to 20 cu. in. of material without pressure drop. Available in 14" length single cartridge model (HPFB10) or 24" length dual cartridge model (HPFB20). All models are 304 stainless steel for use with water-soluble and corrosive liquids. Reusable stainless steel cartridges available in 10, 50, and 100 mesh. 1" NPT intake.

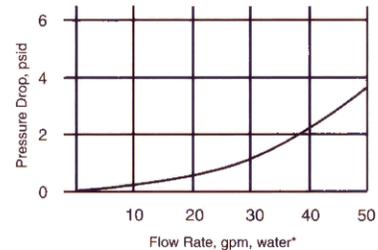
Maximum operating pressure: 250psig
Construction: Cast brass head, 304 stainless steel shell
Inlet and outlet connections: 1" NPT
Drain: 1/4" NPT



Liquid Flow Rate		
Model	GPM	Housing Dimensions
HPFB-10	10	14" x 4 3/4"
HPFB-20	20	24 1/4" x 4 3/4"
Note: HPFB20 requires two cartridges		

Filter Cartridges	
Part Number	Micron/Size
742-07955-1	10 micron
742-07954-1	50 micron
742-07953-1	100 micron
Note: HPFB20 requires two cartridges	

Housing Pressure Drop vs. Liquid Flow Rate 1" Outlet



*For liquids other than water multiply the above values by the specific gravity of the liquid.

The proof of the product is in the performance.

Graymills offers an extensive line of pumps and pump and tank systems covering diverse applications and specifications to provide a comprehensive line of fluid collection and recirculating systems. Other fluid management products offered by Graymills include mist coolant systems, bed filters and more. Graymills products are distributed and supported worldwide. Questions? Call us, fax us, or visit us on the Web!

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