

# MHPVB10/15 SERIES

## PISTON PUMPS



### FEATURES

Our MHPVB in-line variable displacement piston pumps have excellent operating features and are capable of operating with many types of hydraulic fluid. These units are durable and offer a long service life, which makes them suitable for the industrial market. Available in six displacements to meet the demands of many applications.

- High flow, high performance
- Compact and lightweight
- Highly efficient with a variety of hydraulic fluids
- Engineered for extended life
- Interchangeable with Vickers® PVB series



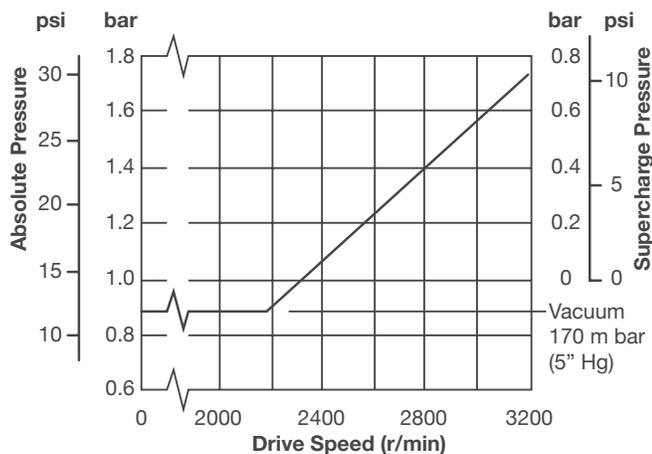
### SPECIFICATIONS

MODEL	DISPL. IN <sup>3</sup> /R (CM <sup>3</sup> /R)	MAXIMUM SHAFT SPEED (RPM)			MAXIMUM OUTLET PRESSURE PSI (BAR)			FLOW AT 1800 RPM GPM (LPM)
		ANTI-WEAR HYD.OIL	WATER-IN-OIL EMULSION (40%/60%)	WATER- GLYCOL	ANTI-WEAR HYD.OIL	WATER-IN-OIL EMULSION (40%/60%)	WATER- GLYCOL	
MHPVB10	1.29 (21.1)	1800	1800	1800	3000 (210)	2000 (140)	2000 (140)	10 (37.8)
MHPVB15	2.01 (33.0)	1800	1800	1800	2000 (140)	1500 (100)	1500 (100)	15.7 (59.4)

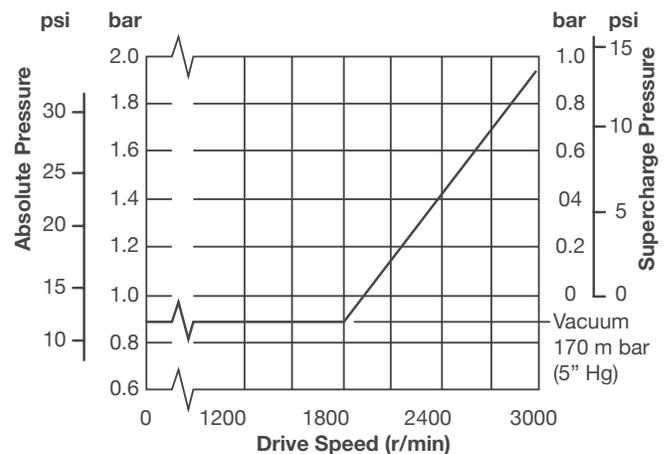
**Maximum Inlet Pressure -** All pumps except PVB5/6/10/15 with H, M or V controls = 15 psi (1.0 bar)  
 PVB5/6/10/15 with H, M or V controls = As 'Max. Outlet Pressure' above for appropriate size.

### MINIMUM INLET PRESSURE

#### MHPVB10

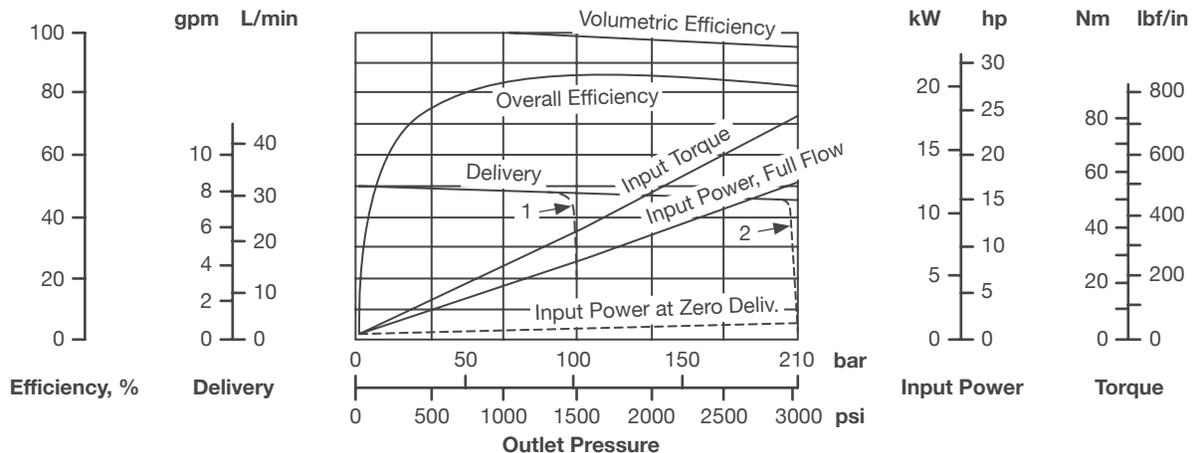


#### MHPVB15



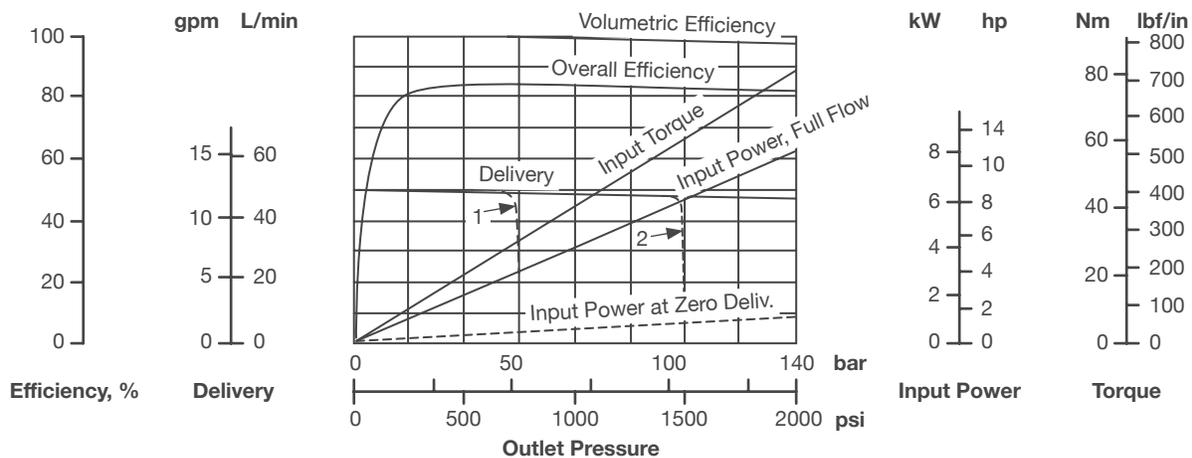
## PERFORMANCE CHARTS AT 1500 R/MIN DRIVE SPEED

### MHPVB10



1 = Delivery with compensator setting of 1500 psi (100 bar)  
 2 = Delivery with compensator setting of 3000 psi (200 bar)

### MHPVB15



1 = Delivery with compensator setting of 750 psi (50 bar)  
 2 = Delivery with compensator setting of 1500 psi (100 bar)

## CONTROL DATA FOR MHPVB PUMPS

### 'C' and 'CM' Pressure Compensators

These automatically adjust pump delivery at pre-adjusted pressure to match system demand. Delivery can decrease rapidly from maximum to zero through a pressure gradient typically 4 to 6 bar (60 to 90 psi) with normal circuit volumes. Please note:

- When using PVB6, 15 or 29 pumps with 'C' type compensators you must ensure that the maximum pressure setting never exceeds 140 or 100 bar (2000 or 1500 psi) dependent on the type of fluid being used.
- It is recommended that a relief valve be fitted externally as protection against overloads.

### 'CG' Pressure Compensator, Remotely Controlled

Same as the 'C' compensator, but arranged for remote pressure adjustment by appropriate pilot controls. One or more pilot relief valves and/or pilot directional valves, in series or in parallel, can provide many varied remote pilot systems.

### 'CV' Load Sensing Compensator, Remotely Controlled

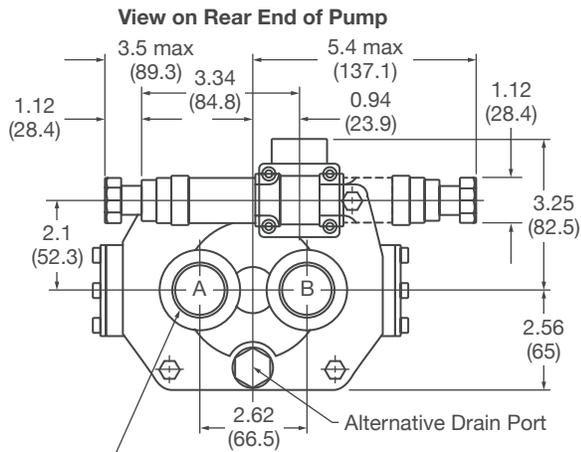
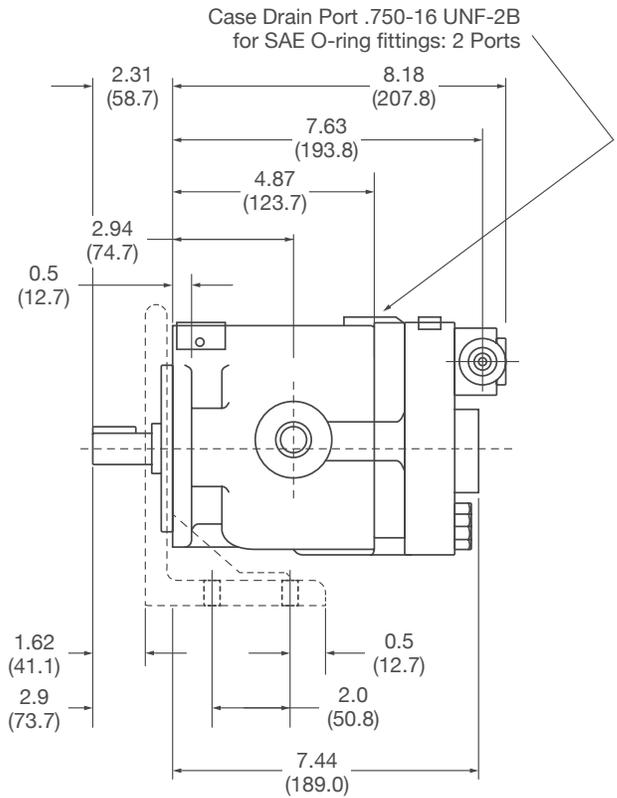
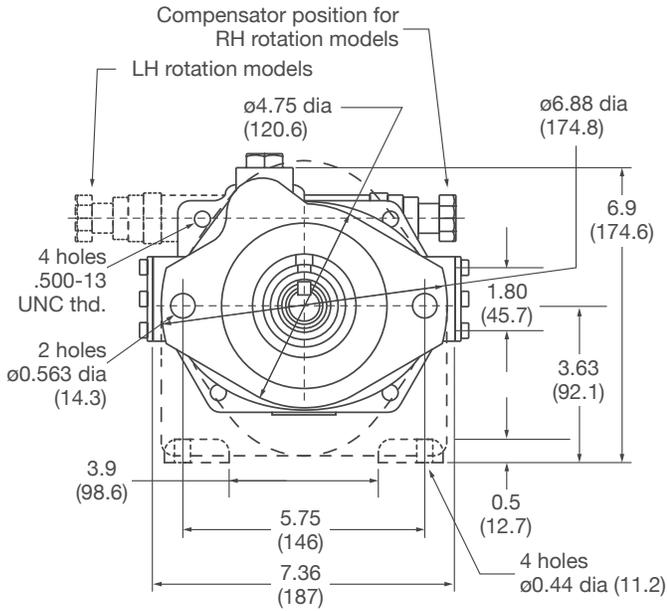
Automatically matches pump delivery to system demand at a pressure approximately 17 bar (250 psi) above load pressure. This pressure difference can be created by:

- a variable flow restrictor (noncompensated flow control) or the spool opening of a directional control valve.

# DIMENSIONS

Installation dimensions are in inches (mm).

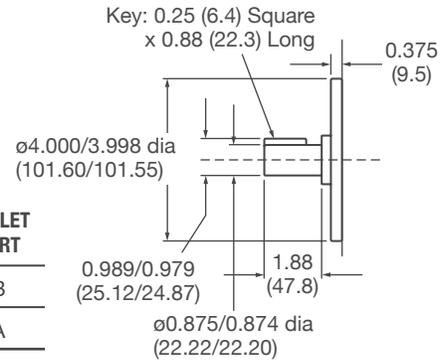
Optional foot bracket shown in dashed outline.



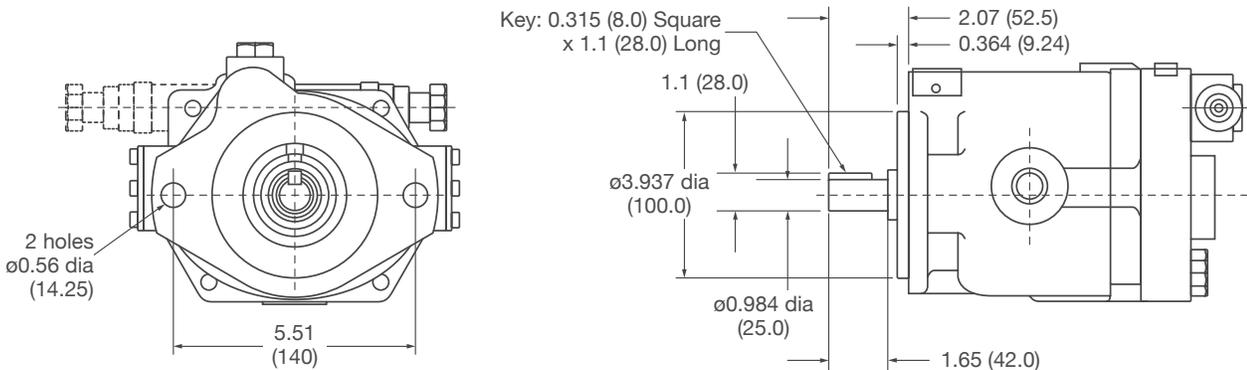
Inlet/Outlet Ports (See table):  
1.625-12 UN-2B Thread for SAE O-ring fittings.

SHAFT ROTATION	INLET PORT	OUTLET PORT
RH	A	B
LH	B	A

## Detail of Shaft, Key & Locating Dia.



# MHPVB10/15 - PRESSURE COMPENSATED CONTROL - 'C' AND 'CM'



# MODEL CODE BREAKDOWN

MHPVB - \*\* - R - S - Y - 40 - C - C - 11 - \*\*

**Series**  
MHPVB

**Pump Size**  
 5 = 10.55 cm<sup>3</sup>/r (0.64 in<sup>3</sup>/r)  
 6 = 13.81 cm<sup>3</sup>/r (0.84 in<sup>3</sup>/r)  
 10 = 21.10 cm<sup>3</sup>/r (1.29 in<sup>3</sup>/r)  
 15 = 33.00 cm<sup>3</sup>/r (2.01 in<sup>3</sup>/r)  
 20 = 42.80 cm<sup>3</sup>/r (2.61 in<sup>3</sup>/r)  
 29 = 61.60 cm<sup>3</sup>/r (3.76 in<sup>3</sup>/r)

**Rotation**  
 R = Right (Clockwise Rotation)  
 L = Left (Counter-Clockwise Rotation)

**Displacement Zone**  
 S = One side of center  
 (Pressure Compensated models only)

**Shaft Type**  
 Y = SAE models PVB5 thru 15 only  
 (Both Keyed and Splined Shafts are available for all models)  
 Omit for Short Shaft

**Special Features**  
 S124 = Splined Shaft

**Control Design Number**  
 12 = 'C' and 'CM' controls  
 30 = 'CG' control

**Optional Features**  
 C = Adjustable Maximum Stop

**Pressure Control Type**  
 C = Pressure Compensator, (250-3000 psi on 5, 10, 20 models; 250-2000 psi on 6, 15, 29 models)  
 CG = Remotely Adjustable Pressure Setting  
 CM = Pressure Compensator, 17-100 bar (250-1500 psi)  
 CVP = Pressure Limiter/Load Sensing

**Pump Design Number**  
 40 = 5 or 6 displacement  
 40 = 10 or 15 displacement  
 20 = 20 or 29 displacement



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