



**WEBTEC**

**WEBTEC PRODUCTS LIMITED**







# **Hydraulic Motors**

**Hydraulic Motors**

**Quality Hydraulic Components  
from the Webtec Range**



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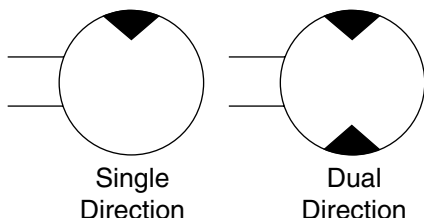
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## B Series

### Gear Motors 2.5 to 9.6 cc/rev Capacity

An **EXTERNAL GEAR MOTOR** consists basically of two meshing gears which rotate in opposite directions inside a housing with an inlet and an outlet port. System pressure at the inlet acts on one of the gears creating an imbalance which results in gear rotation. The meshing gear is attached to a shaft which supplies torque to a resisting load. Increasing system pressure or the size of the gear teeth will increase torque output.

#### Symbol



#### Features

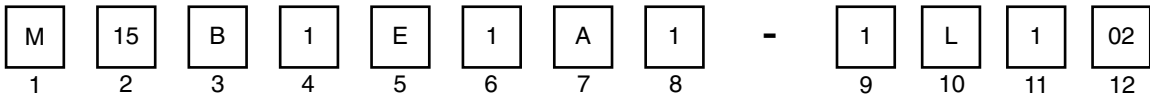
- Durable construction consisting of heat treated alloy steel shafts and gears, high density grey iron body construction.
- Double lip seals and heavy duty needle bearings fitted as standard features.
- Straight keyed shafts are standard with tang shafts available as an option.
- Mechanical, high pressure or viton seals available as an option.
- Suitable for mining and underground use.

# Quality Hydraulic Components from the Webtec Range

## B Series

### Motors

Typical Codes



**1 Application**

M Motor

**2 Displacement Code**

Actual Displacement

**3 B Series Motor**

**4 Type of Control**

1 Fixed Clearance

**5 Mounting**

E 4 Bolt (1.781 dia Pilot)  
F 2 Bolt AA (2.00 dia Pilot)

**6 Porting**

1 1/2 NPTF Side Inlet (Cover) & 3/8 NPTF side Outlet (Body)  
2 1/2 NPTF Side Inlet and Outlet (Both cover)

**7 Shaft Extension**

A Tang (.50 dia x .147 wide x .312 extension)  
B 0.50 dia straight shaft with .12 sq key  
1.50 extension

**8 Valving**

X No valves  
1 Relief only  
2 Relief and Outlet Check

**9 Customer Variation**

- Standard (Buna-N Seal)  
1 Outboard bearing  
2 Mechanical Seal (300 psi)  
3 High Pressure Seal (100 psi)

**10 Shaft Rotation (Viewed from Shaft End)**

R Clockwise  
L Counter-clockwise  
B Bi-rotational

**11 Design Modification**

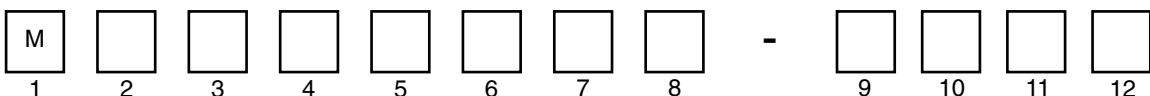
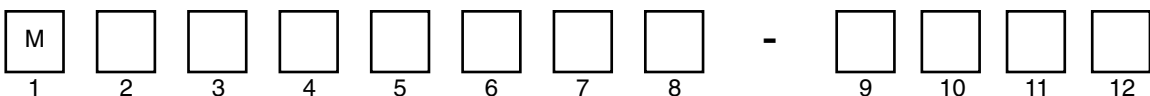
**12 Relief Valve Setting**

On all motors incorporating relief valves, motor code must indicate relief valve pressure setting which is to be indicated as follows: 01 = 100, 02 = 200, etc. These digits represent desired valve settings multiplied by 1/100. When no specific valve setting is specified by customer, relief will be set at 15B thru 30B @ 2000 psi, 37B & 47B @ 1200 psi, and 59B @ 1000 psi.

**Displacement**

Code	In <sup>3</sup> /rev (cc/rev)	Gear Width in (mm)
15	.15 (2.46)	6.35
18	.18 (2.95)	7.67
22	.22 (3.60)	9.40
30	.30 (4.91)	12.70
37	.37 (6.06)	15.75
47	.47 (7.70)	20.32
59	.59 (9.66)	25.4

Use these squares to pencil in your coding requirements



# Quality Hydraulic Components from the Webtec Range

## Specifications

**Maximum Pressure:**  
172 bar

**Capacity:**  
2.46 to 9.66 cc/rev

**Maximum Speed:**  
5000 rpm

**Porting:**  
1/2" NPTF Inlet (Cover) 3/8"  
NPTF Side Outlet (Body)  
1/2" NPTF Inlet & Outlet (Both Cover)

**Mounting:**  
Universal mounting flange permits either a 4 bolt  
or 2 bolt AA with optional adaptor ring

**Shafts:**  
Straight key shafts standard.  
Tang shaft optional

## Installation Details

**Seals:**  
Double lip, temperature and oil resistant  
standard

Optional at extra cost: Viton Mechanical and  
Double Lip High Pressure

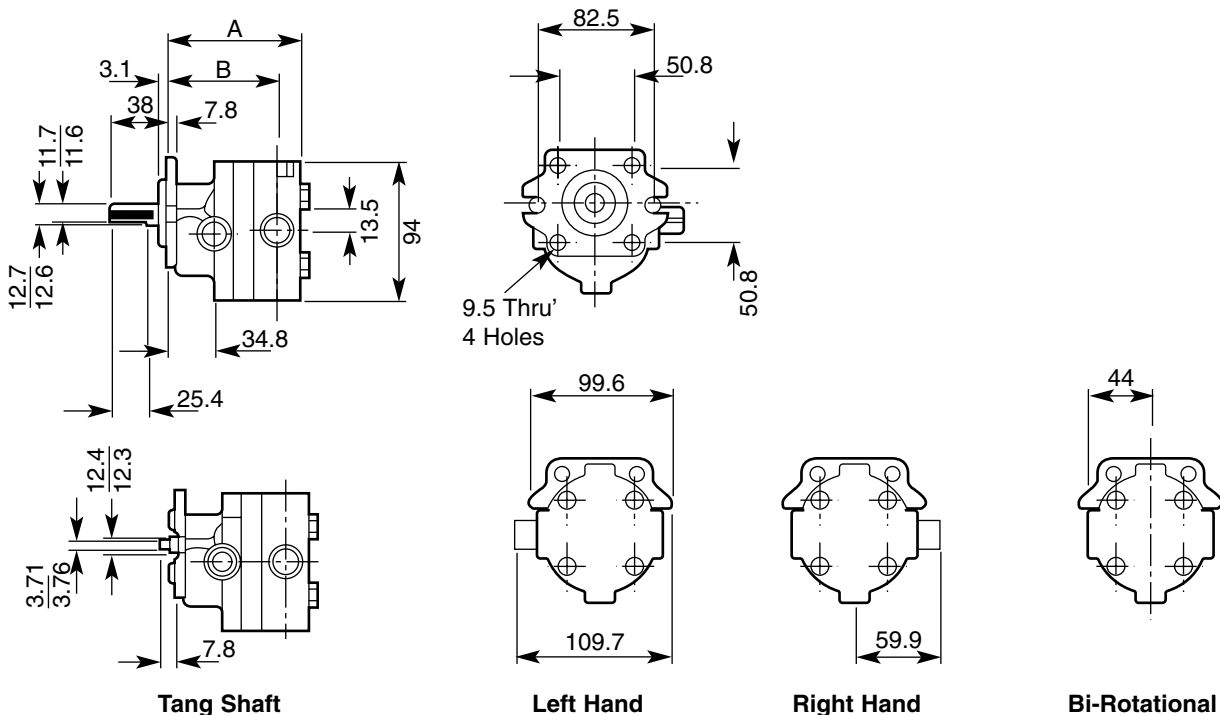
Maximum back pressure on all seals 0.7 bar,  
except for mechanical 21 bar, and High  
Pressure which is 7 bar.

**Relief Valve:**  
Standard models with integral relief valves will  
be set as follows

15B to 30B @2000 psi - Code 20  
37B and 47B @1200 psi - Code 12  
59B @1000 psi - Code 10

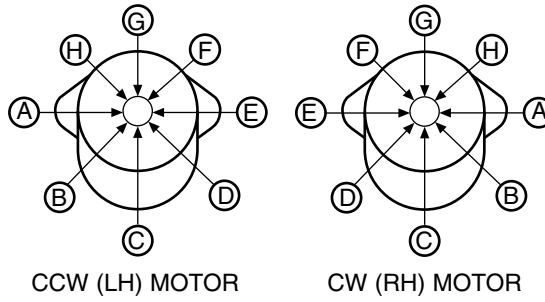
Model	A	B
15B	86.11 mm	70.10 mm
18B	87.63 mm	71.63 mm
22B	89.15 mm	73.15 mm
30B	92.46 mm	76.45 mm
37B	95.50 mm	79.50 mm
47B	100.00 mm	84.07 mm
59B	105.16 mm	89.15 mm

## Installation Details Dimensions in millimetres



# Quality Hydraulic Components from the Webtec Range

## Indirect Drive Forces With Outboard Bearings Option



**Note:** The radial force is located one inch (25.4 mm) from the mounting face. Axial loading is limited to 77 lbs (35 kg) in either direction. See order code for outboard bearing option.

Maximum Side Force *lbs (kg)							
	M15B	M18B	M22B	M30B	M37B	M47B	M59B
<b>A</b>	120 (54.4)	120 (54.4)	120 (54.4)	125 (56.7)	130 (58.9)	135 (61.2)	140 (63.5)
<b>B</b>	120 (54.4)	120 (54.4)	120 (54.4)	125 (56.7)	130 (58.9)	135 (61.2)	140 (63.5)
<b>C</b>	115 (52.1)	117 (52.9)	120 (54.4)	120 (54.4)	120 (54.4)	125 (56.7)	125 (56.7)
<b>D</b>	110 (49.9)	110 (49.9)	110 (49.9)	110 (49.9)	110 (49.9)	95 (43.0)	90 (40.9)
<b>E</b>	105 (47.7)	103 (46.6)	100 (45.3)	85 (38.5)	90 (40.9)	70 (31.8)	65 (29.5)
<b>F</b>	105 (47.7)	103 (46.6)	100 (45.3)	85 (38.5)	90 (40.9)	70 (31.8)	65 (29.5)
<b>G</b>	115 (52.1)	115 (52.1)	115 (52.1)	110 (49.9)	115 (52.1)	100 (45.3)	100 (45.3)
<b>H</b>	115 (52.1)	115 (52.1)	120 (54.4)	120 (54.4)	120 (54.4)	125 (56.7)	125 (56.7)
Pressure psi/bar							
	2500 (172)	2500 (172)	2500 (172)	2000 (138)	1500 (103)	1200 (82)	1000 (69)

## Typical Performance Curves

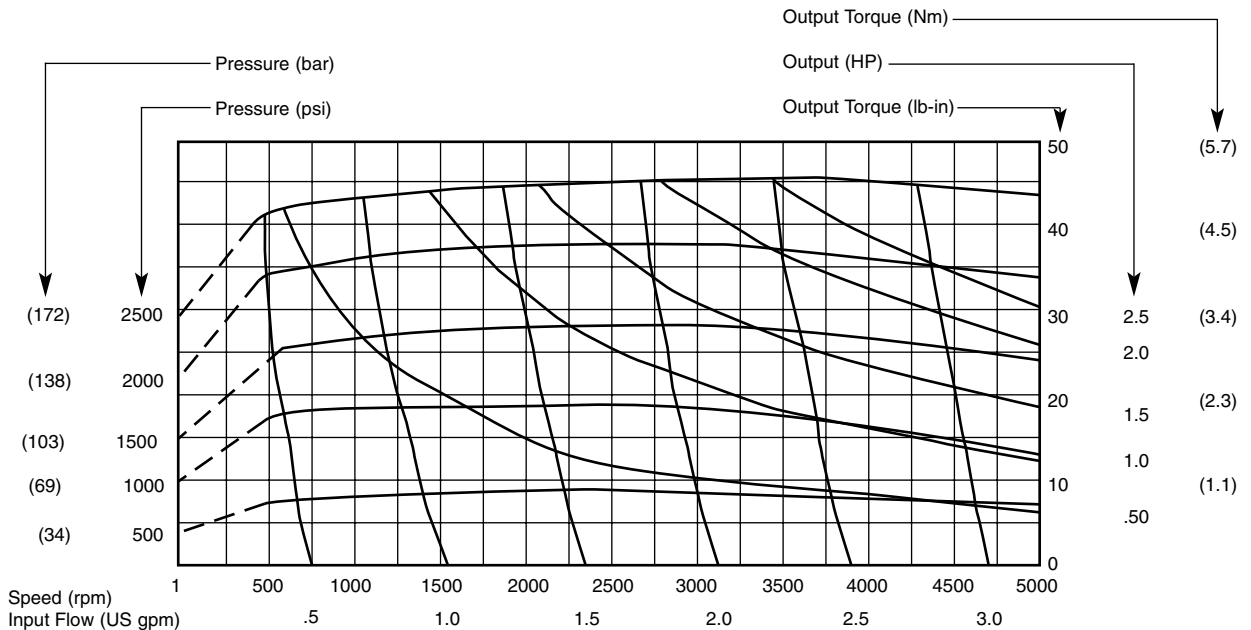
“B” Series Motors

Model M15B - R or L

**Note:** These curves depict maximum working pressures. Pressures shown in order code are full - flow relief set pressures

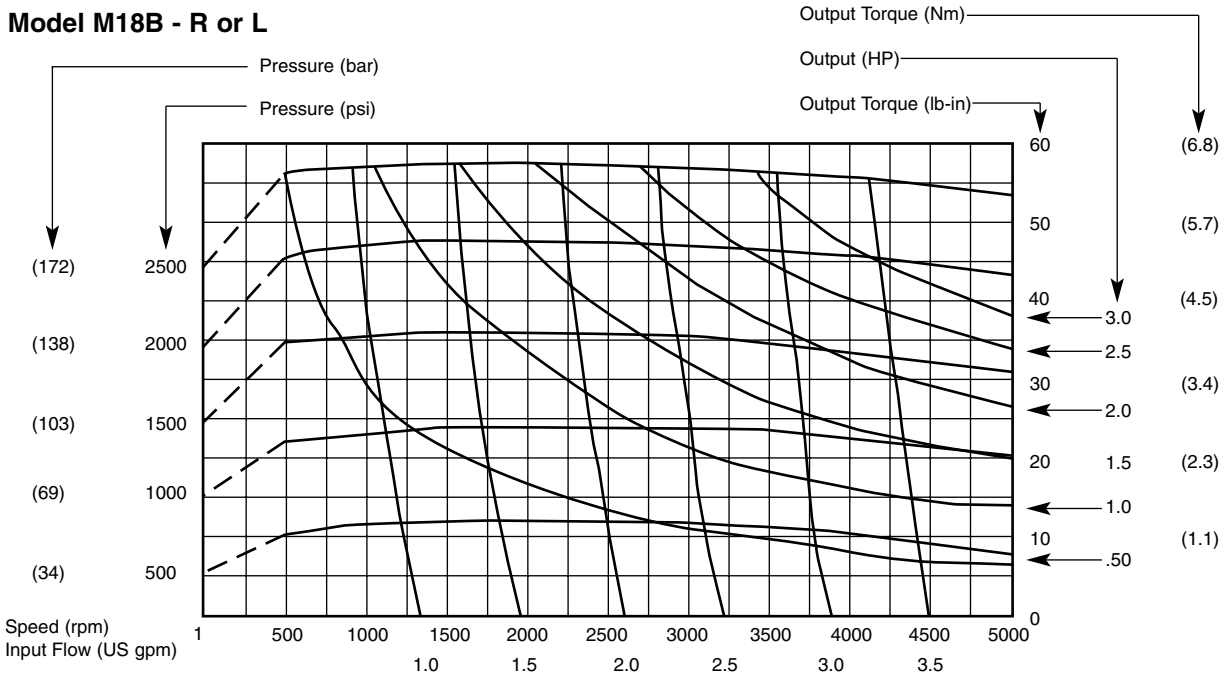
130 SSU Hydraulic Oil @ 120°F

Example : If 36 lb-in output torque at 2800 rpm is required, the motor requires 2.0 gpm supply at 2000 psi. Horsepower output is 1.6

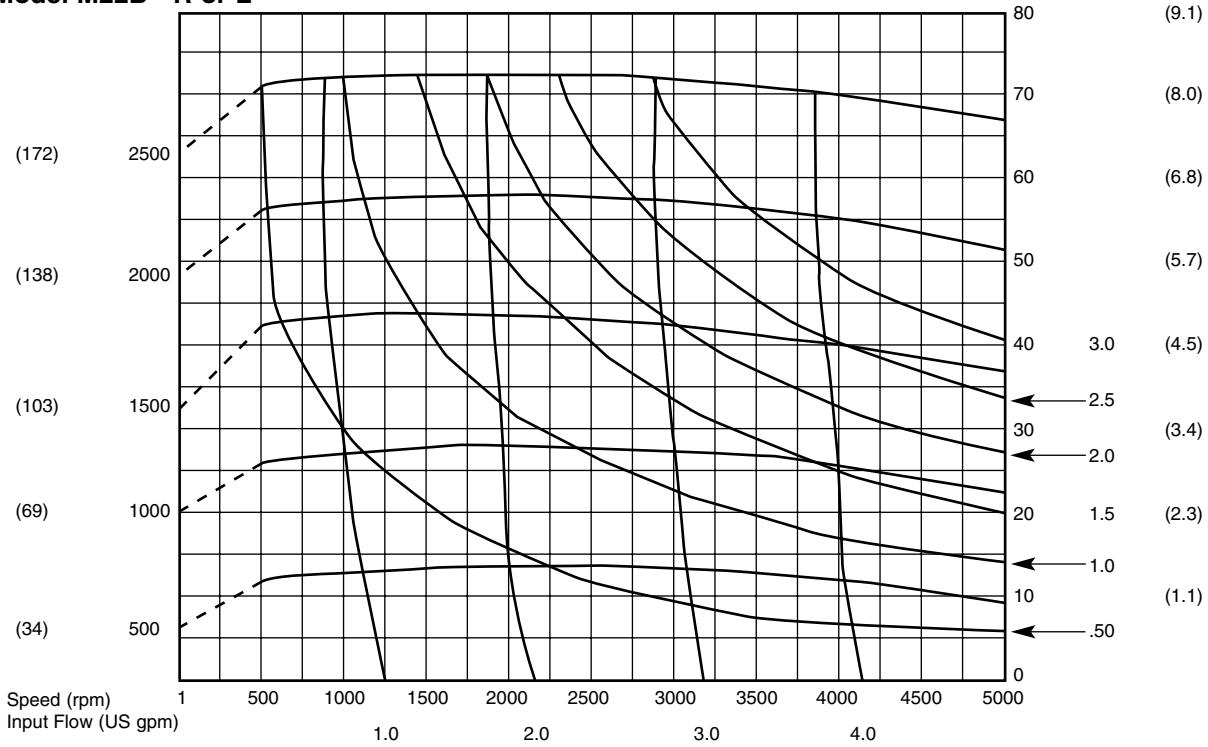


# Quality Hydraulic Components from the Webtec Range

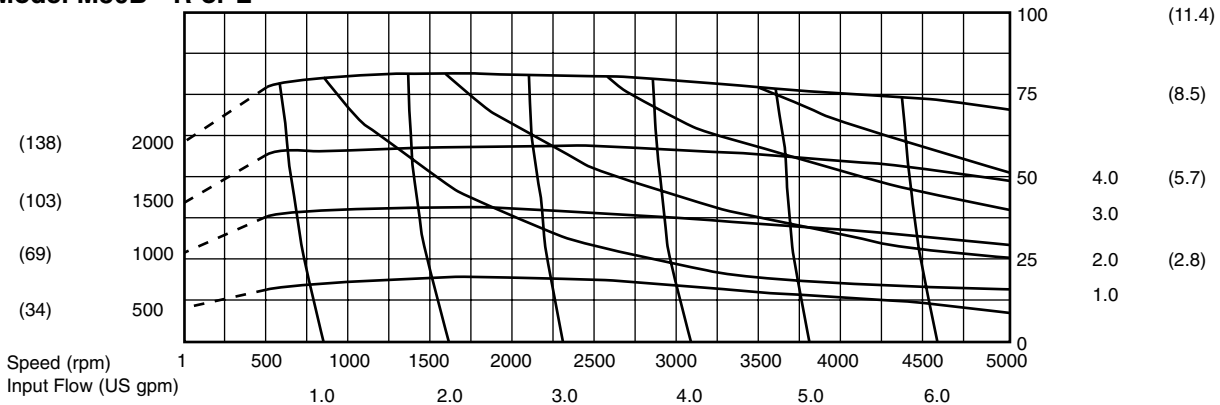
## Model M18B - R or L



## Model M22B - R or L



## Model M30B - R or L



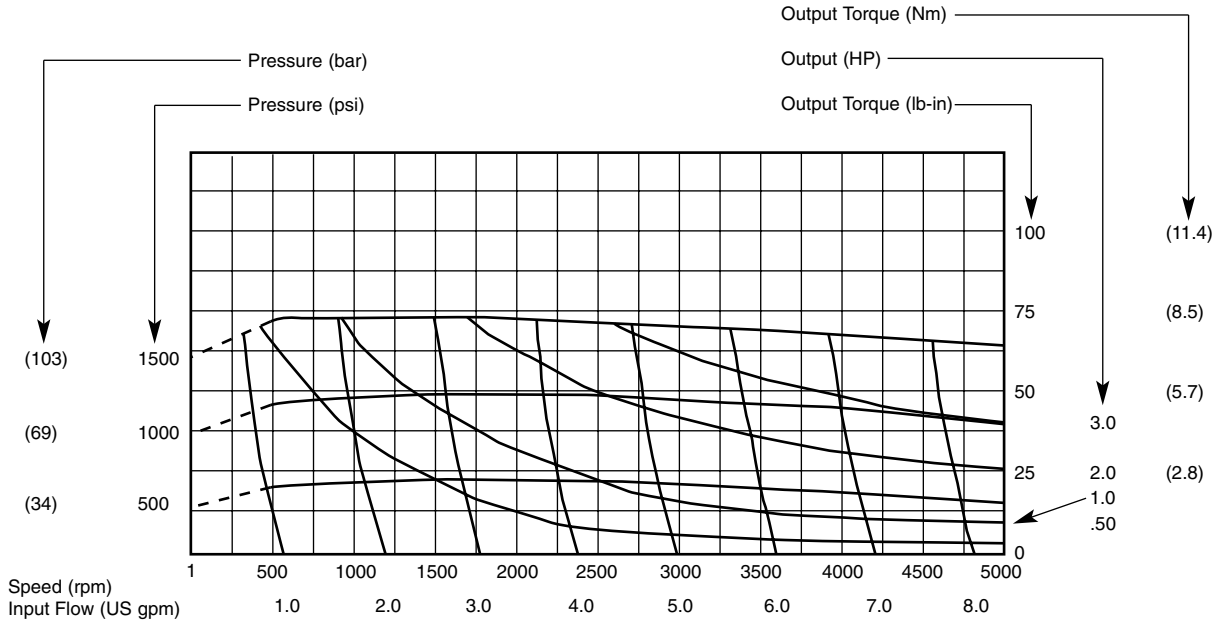
# Quality Hydraulic Components from the Webtec Range

## Typical Performance Curves

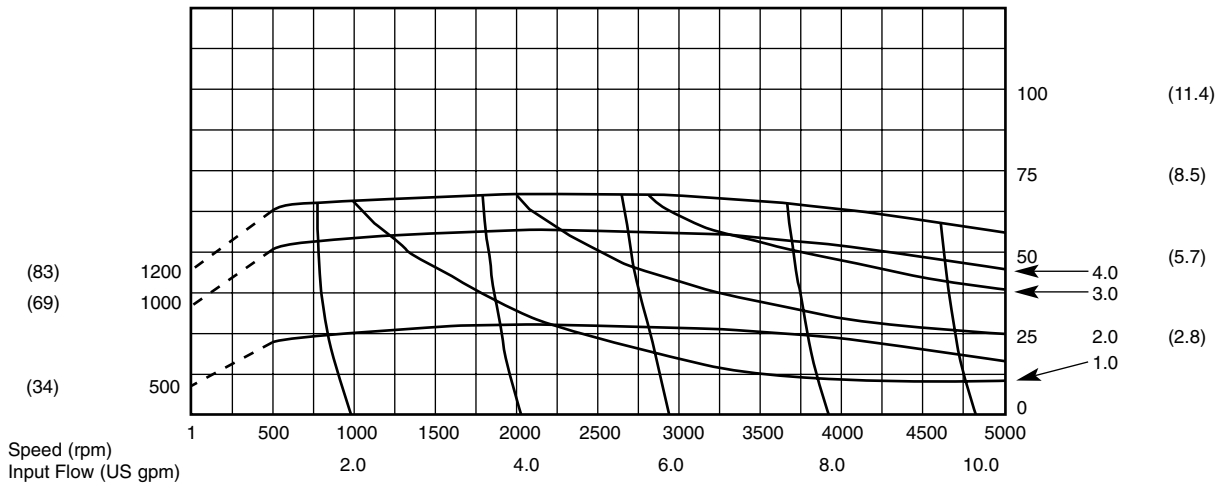
'B' Series Motors

Model M37B - R or L

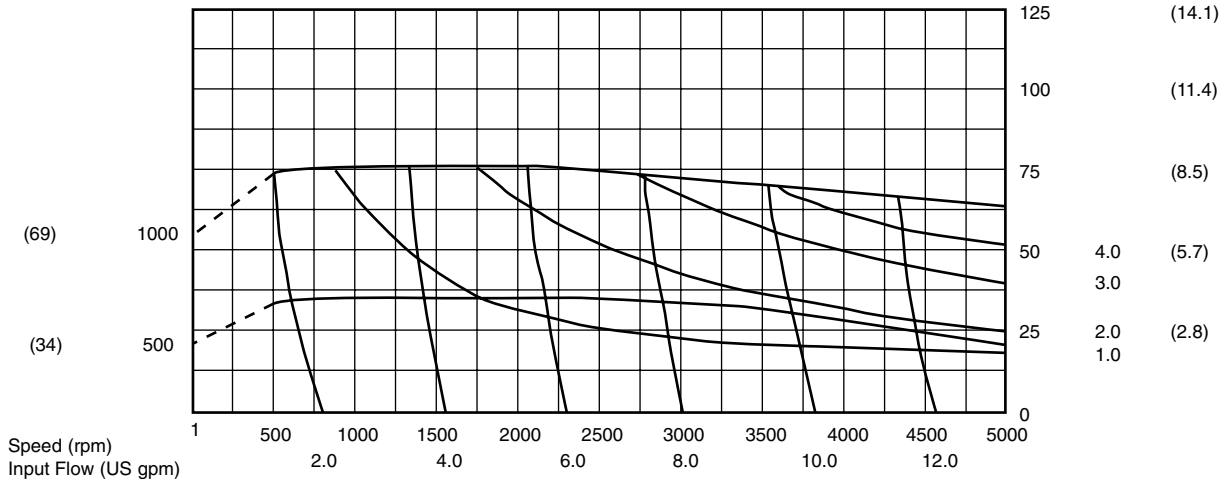
**Note:** These curves depict maximum working pressures. Pressures shown in order code are full - flow relief set pressures.



Model M47B - R or L



Model M59B - R or L



## MYB Series

### Gear Motors

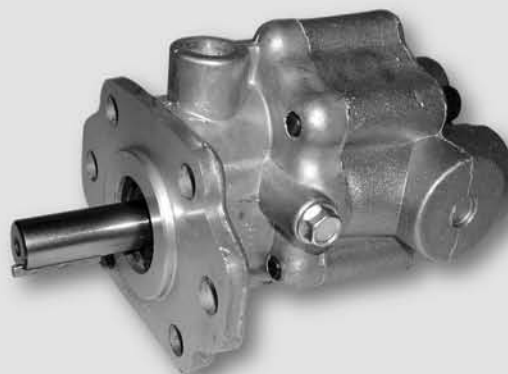
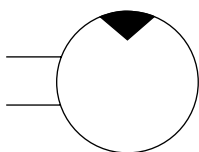
**28.3 Nm**

**Maximum Torque**

An **EXTERNAL GEAR MOTOR** consists basically of two meshing gears which rotate in opposite directions inside a housing with an inlet and an outlet port. System pressure at the inlet acts on one of the gears creating an imbalance which results in gear rotation. The meshing gear is attached to a shaft which supplies torque to a resisting load. Increasing system pressure or the size of the gear teeth will increase torque output.

The lightweight and compact design of the MYB series makes it ideal for mobile equipment including mower drives, fan drives, poultry processing equipment, mobile air conditioning systems and street sanitation equipment.

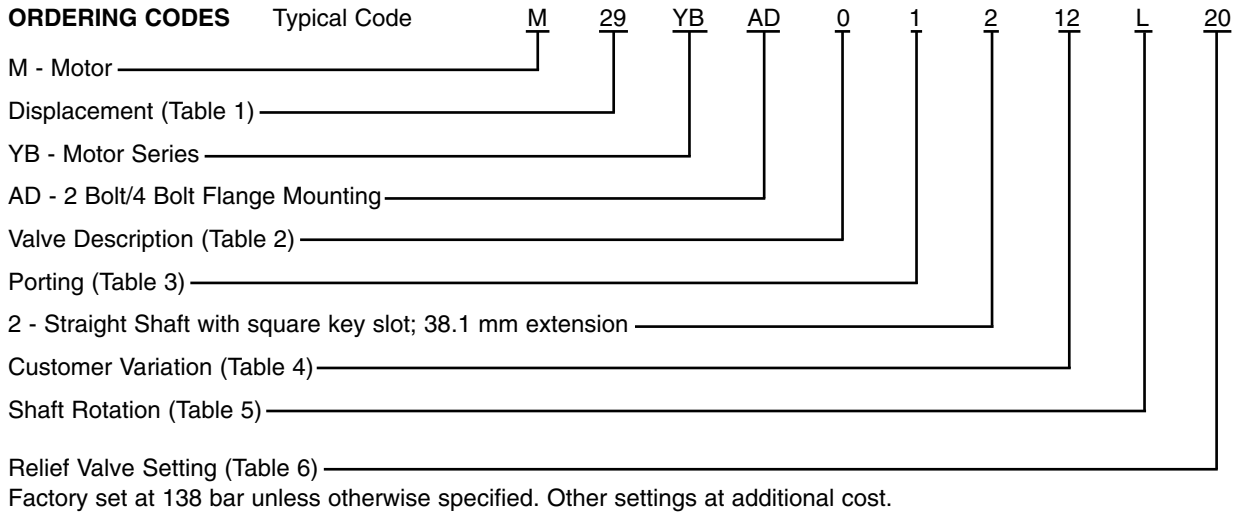
#### Symbol



#### Features

- Customer can select from 4 standard outputs up to 28.3 Nm.
- Positive displacement pressure balanced gear type motors for use with non-corrosive liquids with lubricating properties.
- Pressure balanced wear plate provides high volumetric and overall efficiency while permitting supply pressure to 138 bar. It also prevents scoring during momentary conditions of excessive temperature, speed or pressure.
- Internal drain eliminates plumbing connections to a drain line.
- High pressure shaft seal in 2 bolt/4 bolt 'AA' flange version permits return pressures as high as 7 bar so that downstream filters or coolers can be installed.
- Housings are of cast aluminium for minimum weight and maximum heat dissipation.

# Quality Hydraulic Components from the Webtec Range



**Table 1: Displacement**

Code	cc/rev
29	4.8
43	7.0
58	9.5
73	12.0

**Table 2: Valve Description**

Code	Description
29	No Relief Valve (Standard)
43	Relief Valve - specify pressure setting, Table 6

**Table 3: Porting**

Code	Description
1	M29YB - 3/8 NPTF Side Tank and Pressure
3	M43YB - thru M73YB - 1/2 NPTF, Side, Tank and 3/8 NPTF side Pressure <b>Note:</b> These are max, port sizes. Straight thread ports are available

**Table 4: Customer Variations**

Code	Description
3	BSP Ports
17	Outboard Bearings and High Pressure Shaft Seal

**Table 5: Rotation (viewed from shaft end)**

Code	Description
L	Anti-Clockwise
R	Clockwise

**Table 6: Relief Valve Setting**

Code	Pressure
01	7 bar
02	13.8 bar
20	138 bar

# Quality Hydraulic Components from the Webtec Range

## Specifications

### Maximum Pressure:

138 bar continuous  
172 bar intermittent

### Maximum Continuous Back Pressure:

0.7 bar; peaks to 3.5 bar with standard four bolt flange. 7 bar; peaks to 35 bar with optional two bolt flange (Back pressure should be kept as low possible to prolong seal life and improve efficiency).

### Maximum Torque:

28.3 Nm

### Maximum Speeds:

5000 rpm

### Porting:

side ports standard (see ordering codes)

### Weight:

0.8 to 1.4 kg

### Mounting:

Combination 2 bolt/4 bolt Mounting Flange

### Shafts:

Heat treated alloy steel 14.3 mm dia straight shaft with 3.2 mm square key.

### Seals:

Temperature and dirt resistant double lip shaft seal. High pressure shaft seal standard.

### Bearings:

Four needle type; five with out-board bearing option.

### Housing:

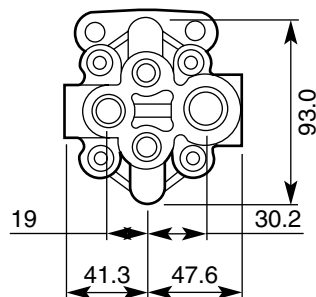
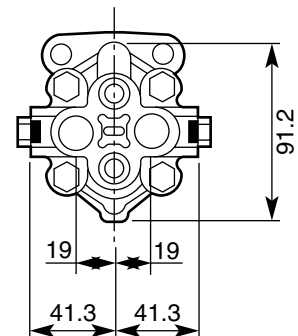
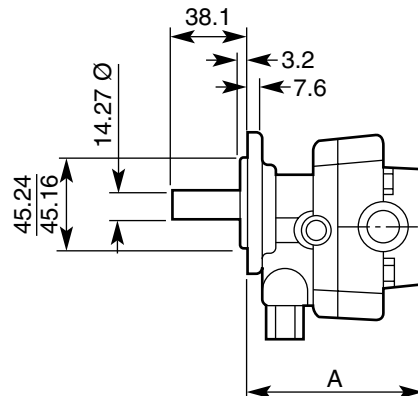
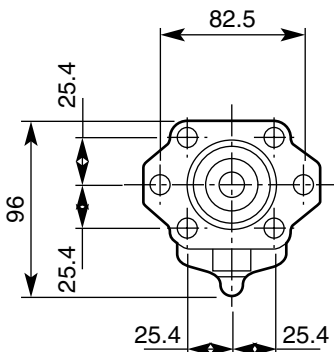
Die cast aluminium

### Gears:

Spur.

## Installation Details

### Dimensions in millimetres



**M29YB MOTORS**  
Left Hand Rotation Shown

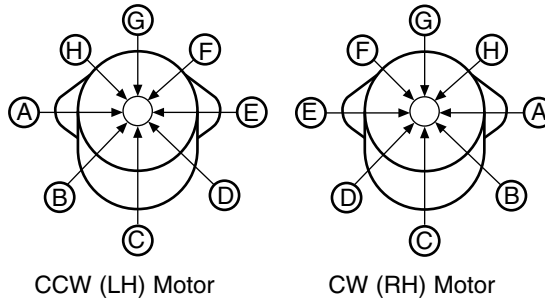
### M43YB, M58YB, and M73YB MOTORS

Left Hand Rotation Shown

	M29YB	M43YB	M58YB	M73YB
<b>Dim.A</b>	3.50	3.75	4.00	4.25

# Quality Hydraulic Components from the Webtec Range

## Indirect drive data YB Series Motor



\* Based on 2000 psi operating pressure. B10 bearing life for 500 hours at 2400 rpm, side load applied 1.5" from mounting face. Maximum thrust load is 131 lbs applied inward on shaft end only.

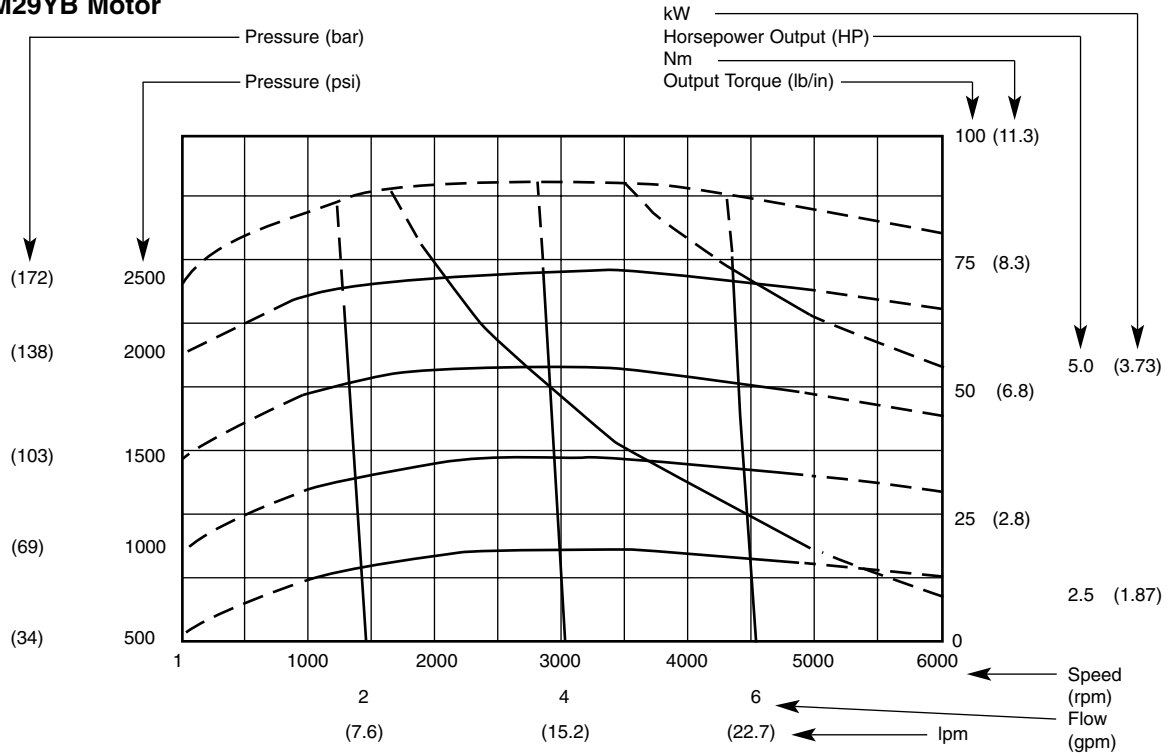
Maximum Side Force* (lbs)				
	29YB	43YB	58YB	73YB
<b>A</b>	137	148	165	0
<b>B</b>	137	148	165	0
<b>C</b>	130	134	113	0
<b>D</b>	111	80	0	0
<b>E</b>	88	54	0	0
<b>F</b>	89	56	0	0
<b>G</b>	115	86	0	0
<b>H</b>	131	136	137	0

# Quality Hydraulic Components from the Webtec Range

## Typical Performance Curves

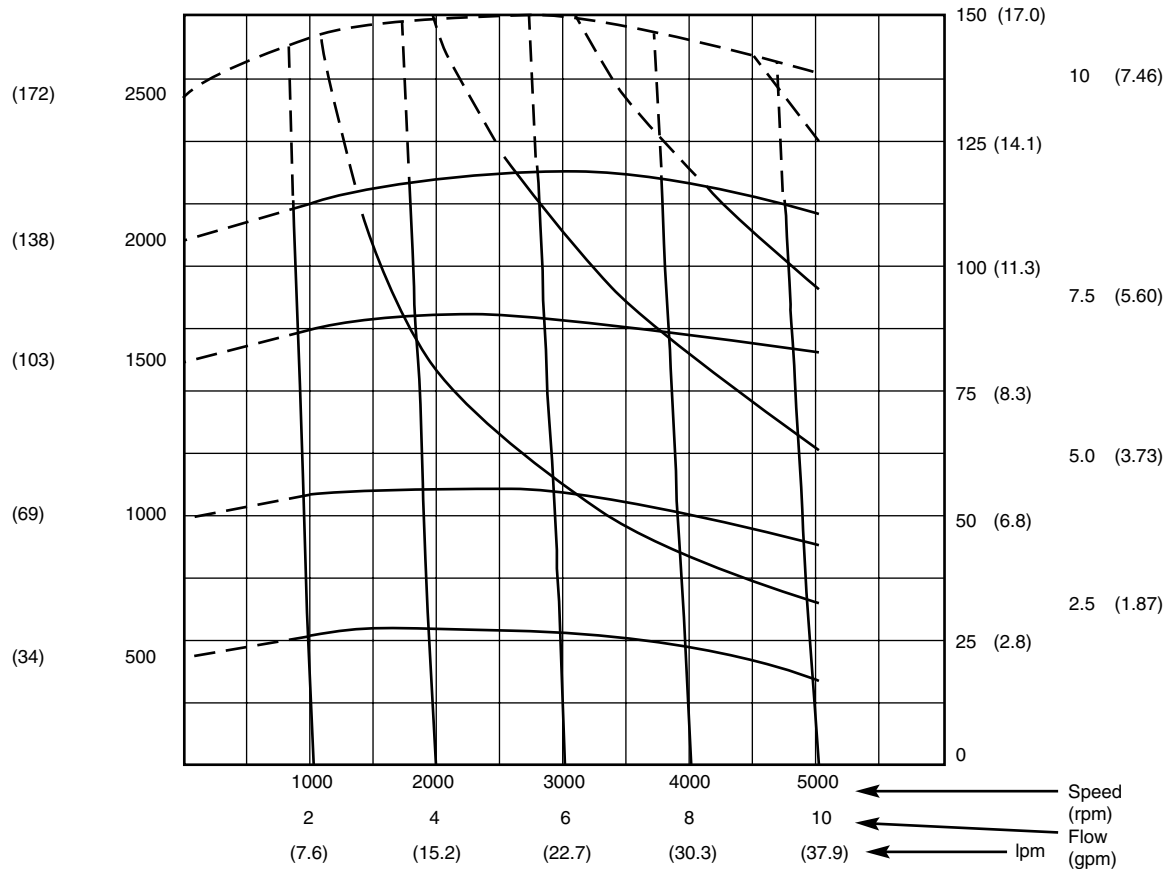
Curves established using hydraulic mineral oil with viscosity of 27.4 cSt at 49°C

### M29YB Motor



Example: If 4.0 Nm output torque at 4000 rpm is required, the motor requires 20 lpm supply at 69 bar. Kilowatt output is 1.9. Dashes indicate intermittent readings.

### M43YB Motor

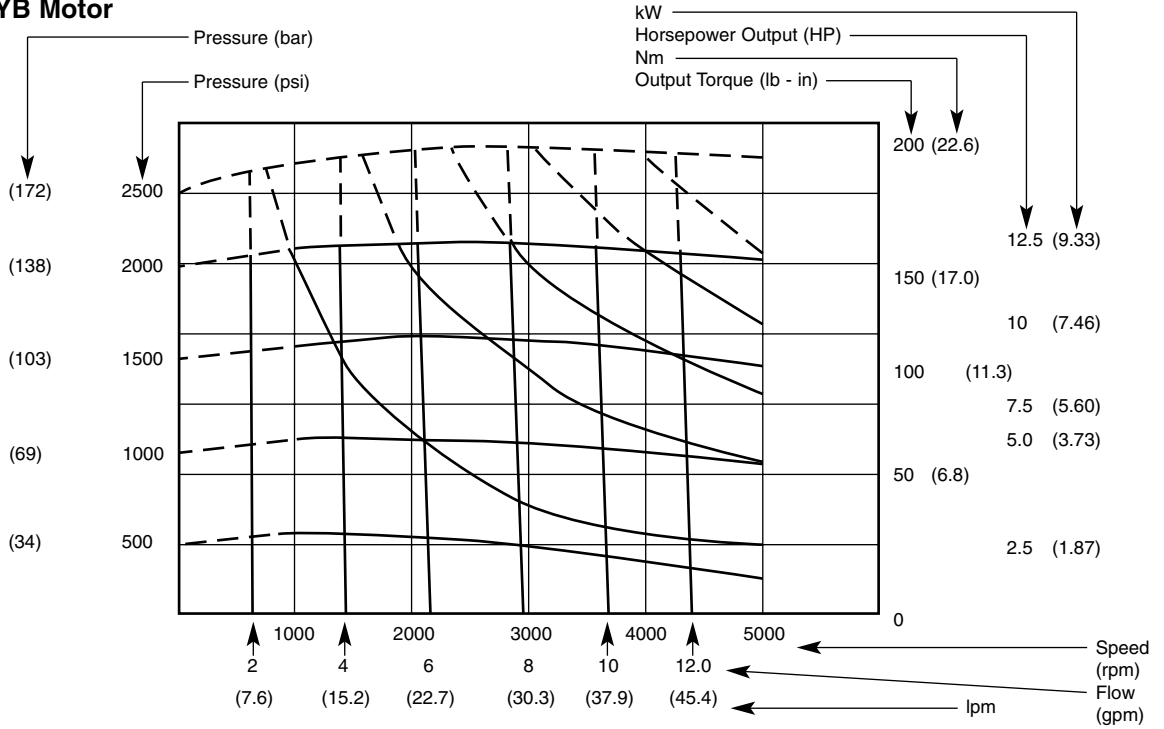


# Quality Hydraulic Components from the Webtec Range

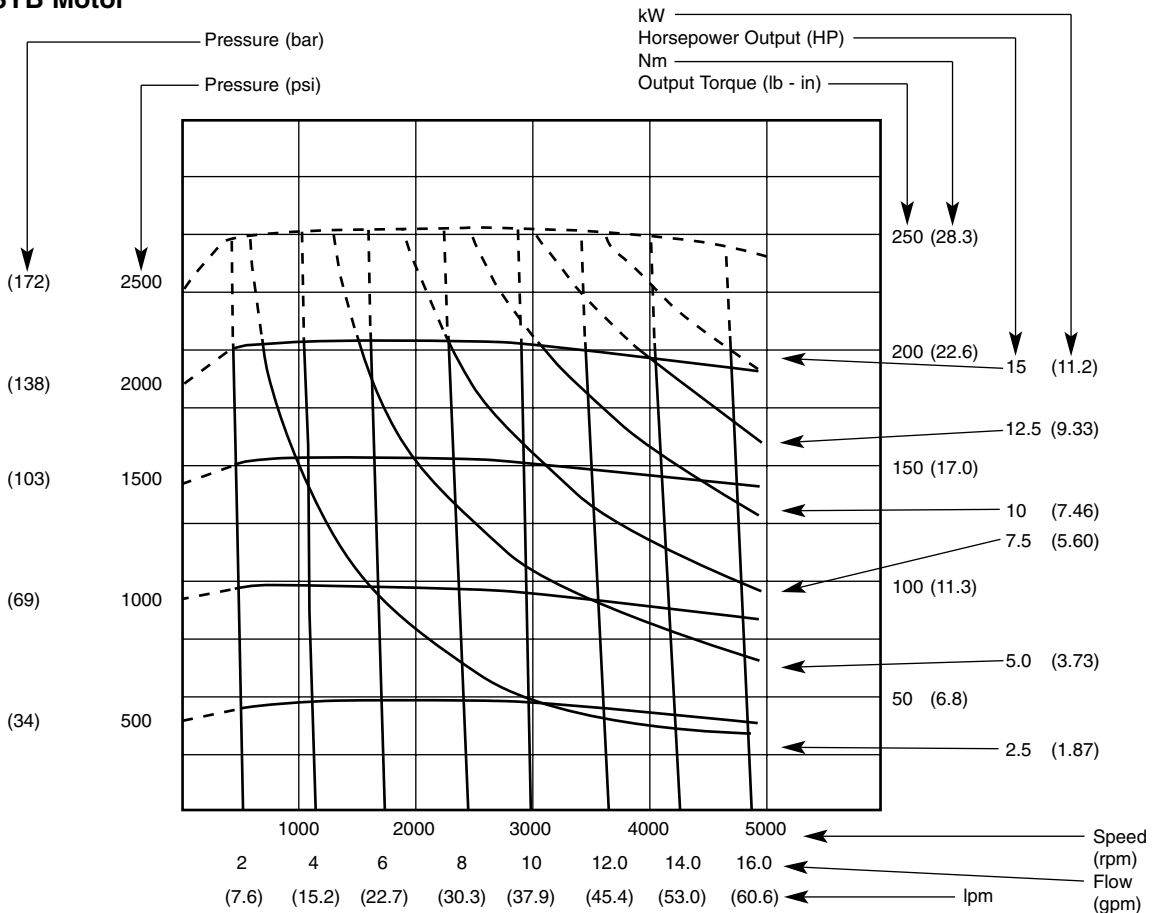
## Typical Performance Curves (continued)

Curves established using hydraulic mineral oil with viscosity of 27.4 cSt at 49°C

### M58YB Motor



### M73YB Motor

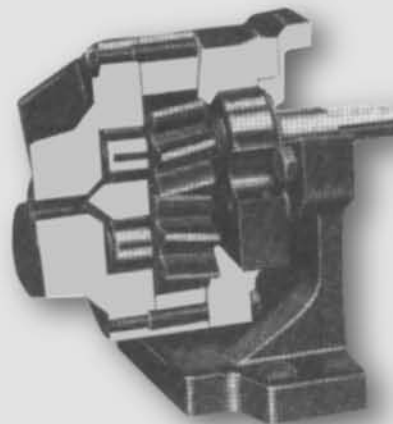
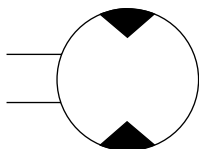


## MHCS Series

### Gear Motors 46.0 Nm Maximum Torque

An **EXTERNAL GEAR MOTOR** consists basically of two meshing gears which rotate in opposite directions inside a housing with an inlet and an outlet port. System pressure at the inlet acts on one of the gears creating an imbalance which results in gear rotation. The meshing gear is attached to a shaft which supplies torque to a resisting load. Increasing system pressure or the size of the gear teeth will increase torque output.

#### Symbol

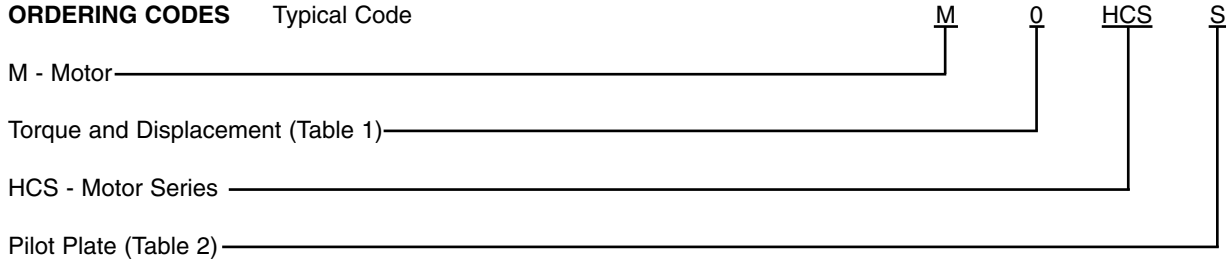


#### Features

- Customer can select from 4 standard outputs ranging from 2.75 to 3.44 Nm per 7 bar input.
- Positive displacement gear type motors for use with non-corrosive liquids with lubricating properties.
- Compact and rugged cast iron housings, heavily finned for extra strength, are assembled with eight high strength hardened bolts spaced for even distribution of pressure loads.
- Double-row ball bearing absorbs compound driving thrust and heavy duty needle bearings assure high mechanical efficiency.
- Helical gears for quiet operation.
- External drain permits rotation in either direction.
- Temperature and oil resistant double lip seals are standard. Viton or mechanical (face) seals available on special order.
- Suitable for mining and underground use when fitted with steel pilot plate.

# Quality Hydraulic Components from the Webtec Range

## ORDERING CODES Typical Code



**Table 1**

Code	Torque - Nm/7 bar	Displacement - cc/rev
0	1.40	12.6
1	1.92	17.5
2	2.75	25.1
3	3.44	31.3

**Table 2**

Code	Material
S	Steel Pilot Plate
A	Aluminium Pilot Plate

## Specifications

**Maximum Pressure:**  
103 bar

**Maximum Torque:**  
46.0 Nm

**Maximum Speed:**  
5000 rpm  
(Consult Webtec for speeds exceeding)  
2400 rpm

**Porting:**  
Inlet and outlet: 3/4-14 NPT drain: 1/4 - 18 NPTF

**Weight:**  
6.0 to 7.8 kg

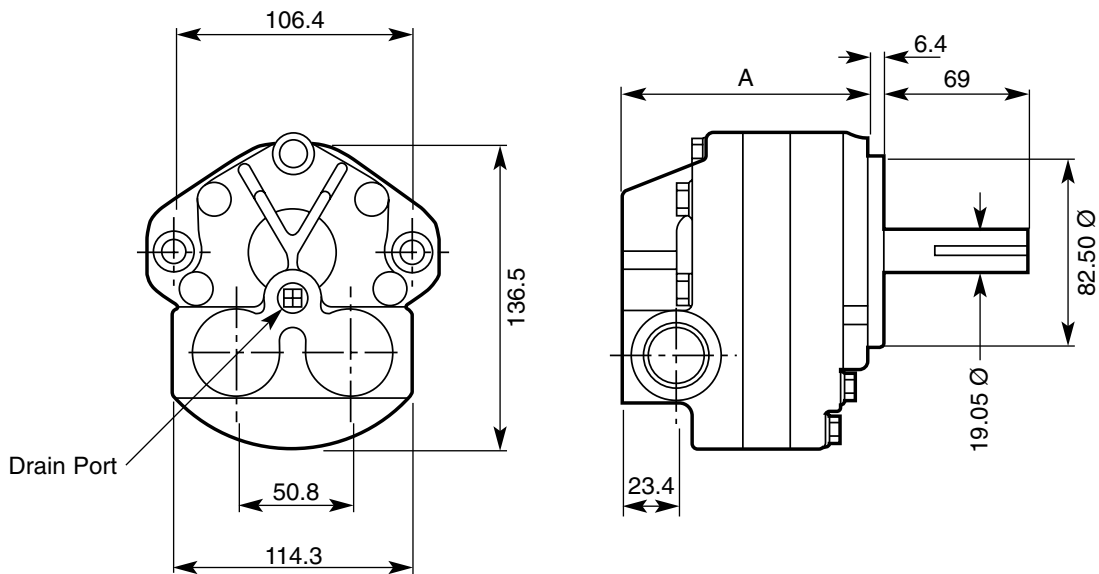
**Mounting:**  
SAE 'A' type two-bolt standard; for optional foot mount consult bulletin FP39-1 available from Webtec Hydraulics

**Drive:**  
Direct, gear or belt.

**Seals:**  
Double lip standard. Mechanical (face type) or Viton available on special order.

## Installation Details

### Dimensions in millimetres



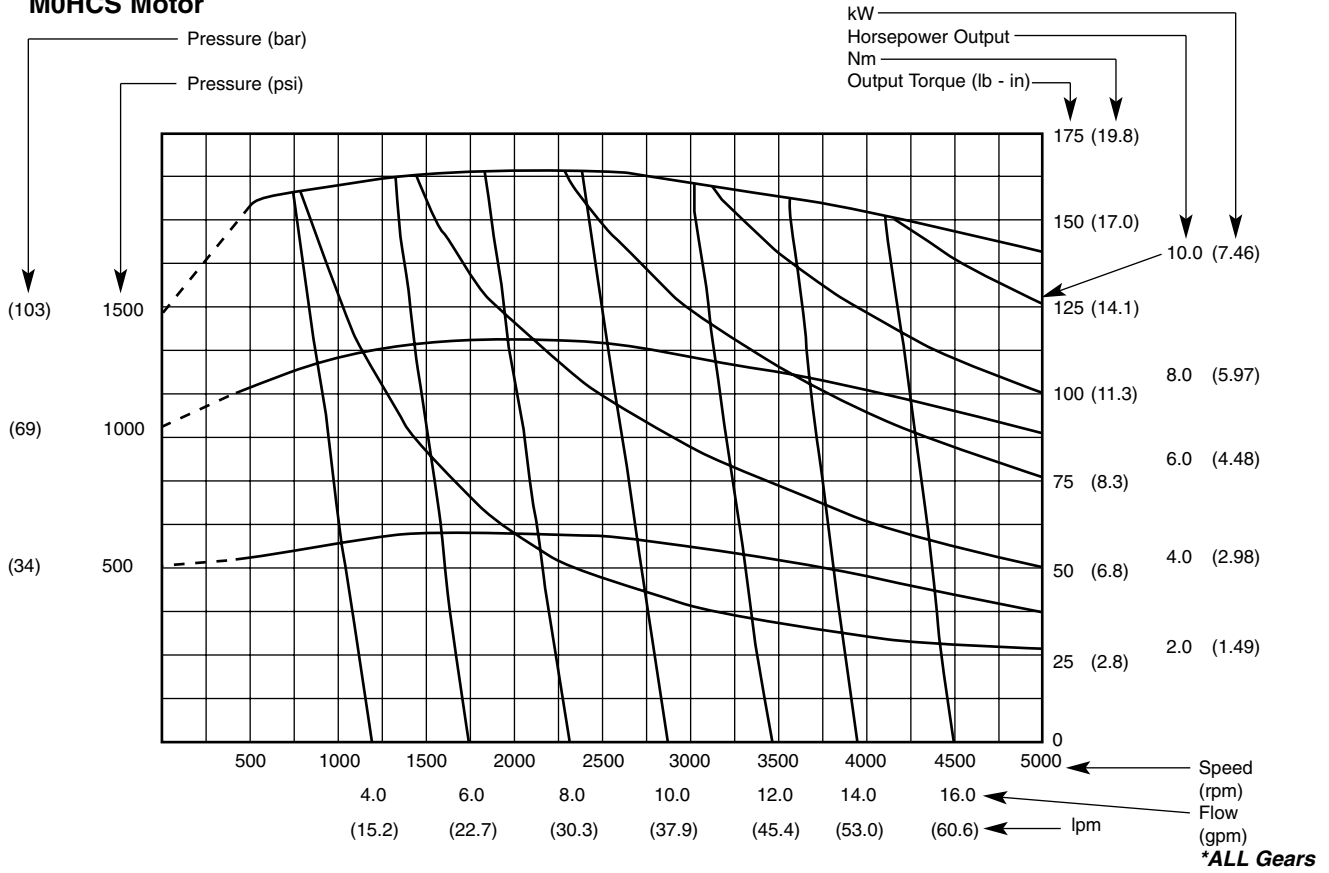
	M0HCS	M1HCS	M2HCS	M3HCS
<b>Dim.A</b>	96.8	100.8	107.1	111.9

# Quality Hydraulic Components from the Webtec Range

## Typical Performance Curves

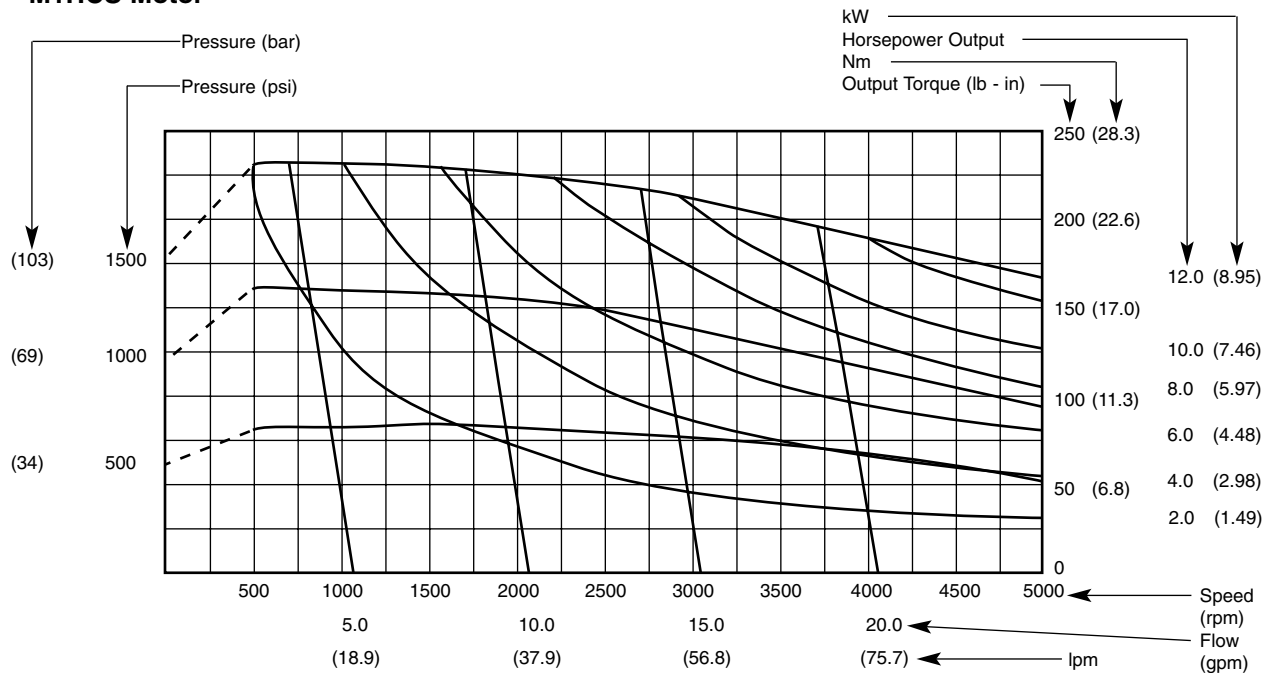
Curves established using hydraulic mineral oil with viscosity of 27.4 cSt at 49°C

### M0HCS Motor



Example: If 11.3 Nm output torque at 2500 rpm is required the motor requires 36 lpm, supply at 60 bar. kilowatt output is 2.9

### M1HCS Motor

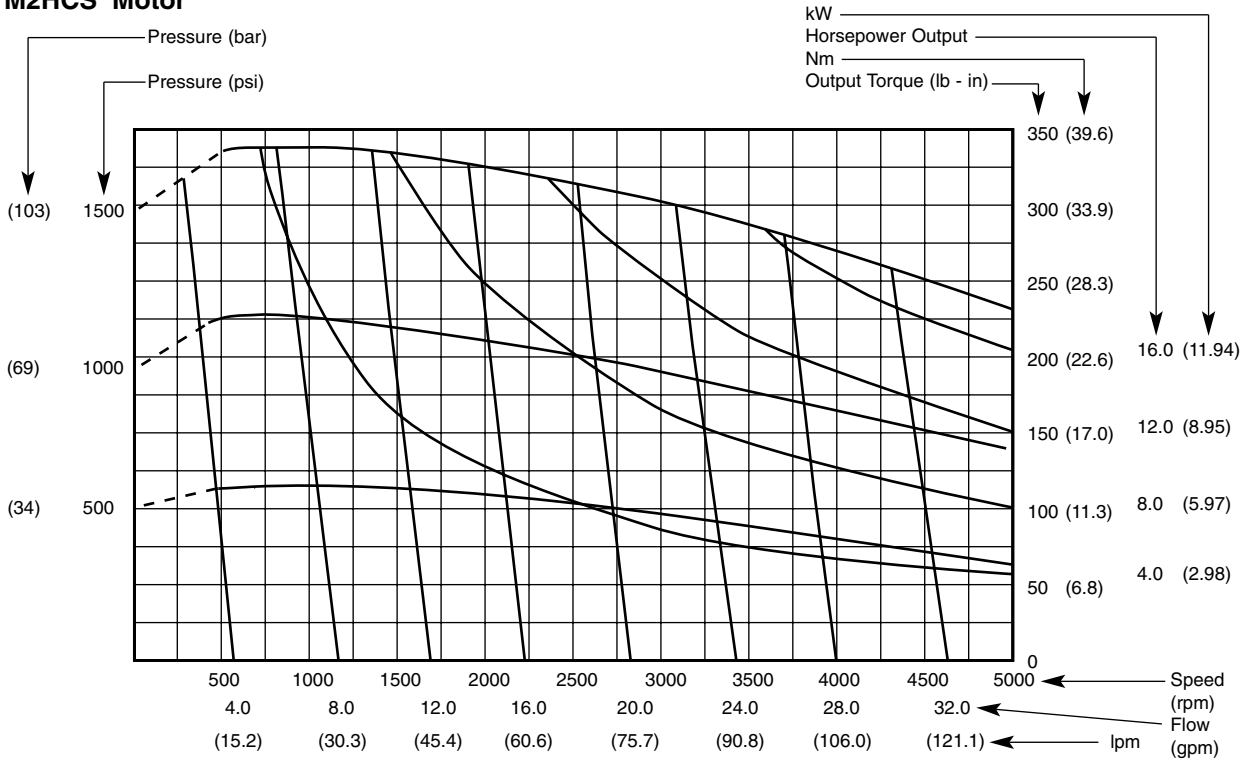


# Quality Hydraulic Components from the Webtec Range

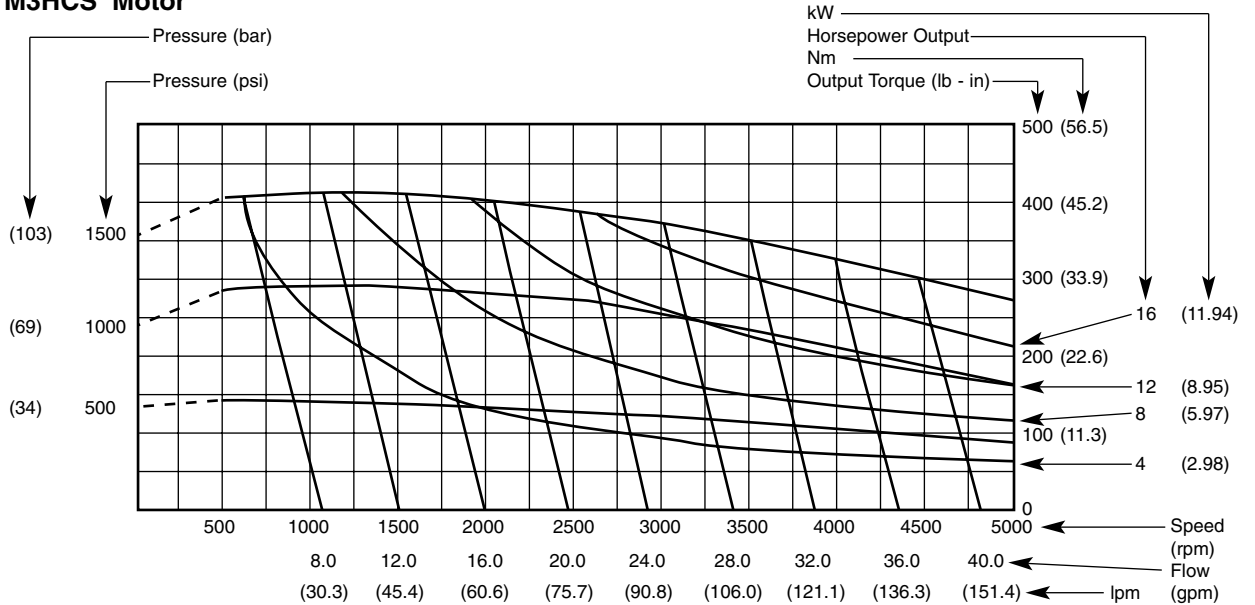
## Typical Performance Curves (continued)

Curves established using hydraulic mineral oil with viscosity of 27.4 cSt at 49°C

### M2HCS Motor



### M3HCS Motor

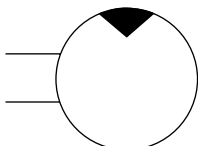


## MYC Series

### Gear Motors 64.4 Nm Maximum Torque

An **EXTERNAL GEAR MOTOR** consists basically of two meshing gears which rotate in opposite directions inside a housing with an inlet and an outlet port. System pressure at the inlet acts on one of the gears creating an imbalance which results in gear rotation. The meshing gear is attached to a shaft which supplies torque to a resisting load. Increasing system pressure or the size of the gear teeth will increase torque output.

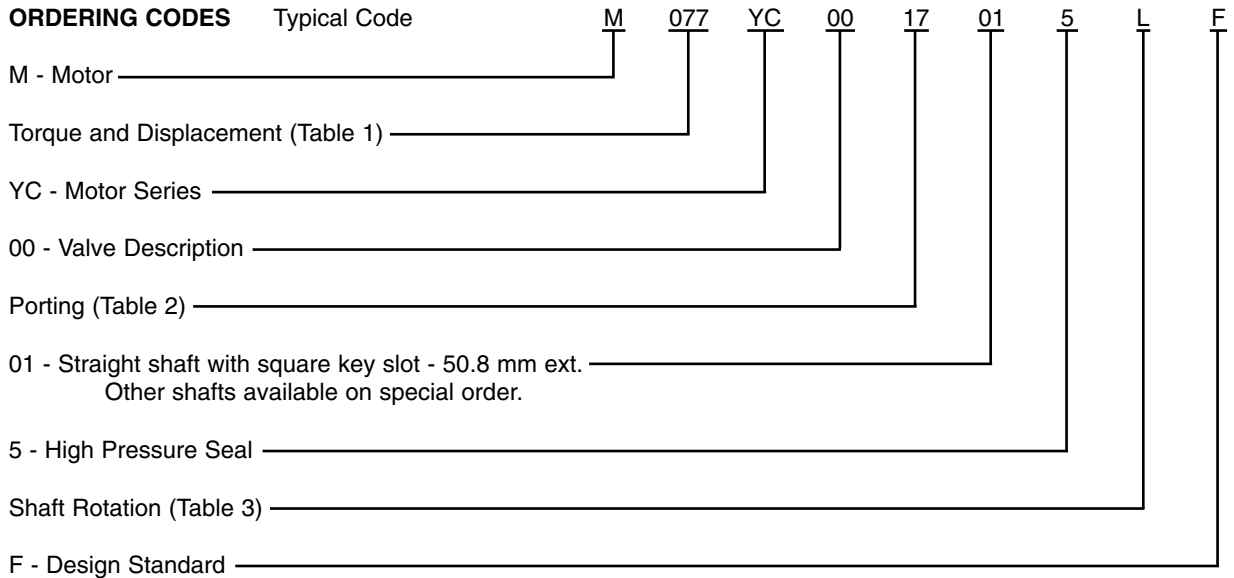
#### Symbol



#### Features

- Customer can select from 4 standard outputs ranging from 30.5 Nm to 64.4 Nm
- Positive displacement pressure balanced gear type motors for use with non-corrosive liquids with lubricating properties.
- Pressure balanced wear plate gives high volumetric efficiency by maintaining constant clearance.
- Double lip shaft seal is standard with a high pressure seal available as an option.
- Internal drain eliminates the need for an external drain line.
- Exceptionally compact design combined with high efficiency make the MYC series ideal for hydraulic applications where space is at a premium and weight is a critical factor.

# Quality Hydraulic Components from the Webtec Range



**Table 1:** Torque and Displacement

Code	Max. Torque - Nm	Displacement cc/rev
077	30.5	12
116	42.9	19
155	61.0	25
194	64.4	32

**Table 3:** Rotation

Code	Description
L	Anti-Clockwise
R	Clockwise

(as viewed from shaft end)

**Table 2:** Porting

Code	Description
02	Tank 1 NPTF side - press 1/2 NPTF
17	Tank 1.1/16 - 12 side - press 7/8 - 14 side (077 and 116)
21	Tank 1.3/16 - 12 side - press 7/8 - 14 side (155 and 194)
80	Tank 3/4 BSPF side - press 1/2 BSPF side (std on all motors)

## Specifications

**Maximum Pressure:**

172 bar (M077,  
M116, M155)  
138 bar (M194)

**Maximum Torque:**

64.4 Nm

**Maximum Speed:**

5000 rpm

**Porting:**

see ordering codes

**Weight:**

to 2.83 kg

**Mounting:**

SAE Type A 2-bolt mounting flange (standard).

**Gears:**

smooth running spur, heat treated alloy steel

**Housing:**

Lightweight high strength die cast aluminium; two piece construction assembled with 8 hardened steel screws

**Seals:**

Temperature and dirt resistant double lip shaft seal standard

**Wear Plate:**

Pressure balanced steel backed bronze.

**Bearings:**

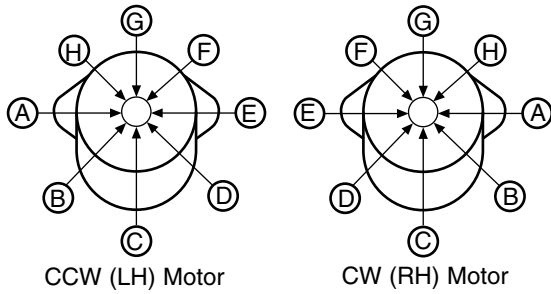
4 special sleeve type.

**Shafts:**

Heat treated alloy steel (see ordering codes)

# Quality Hydraulic Components from the Webtec Range

## Indirect Drive Forces

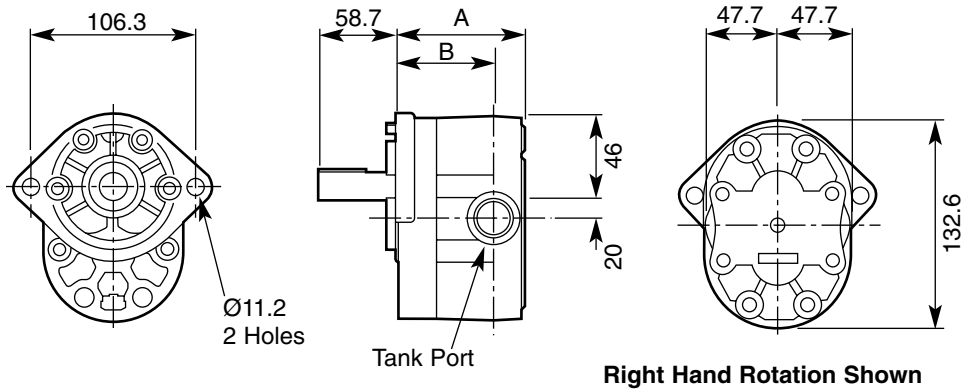


Maximum Side Force kg				
	077YC	116YC	155YC	194YC
<b>A</b>	340	274	163	186
<b>B</b>	365	335	217	247
<b>C</b>	349	340	277	299
<b>D</b>	261	211	124	136
<b>E</b>	233	177	99	106
<b>F</b>	267	240	133	143
<b>G</b>	363	360	308	333
<b>H</b>	365	274	206	233

Based on rated operating conditions; 2000 psi (138) bar for 194YC and 2500 psi (172) bar for other sizes. Side load applied 2.00 in (50.8 mm) from mounting face. Maximum thrust load is 300lb. (136 kg) applied inward on shaft end only

## Installation Details

Dimensions in millimetres

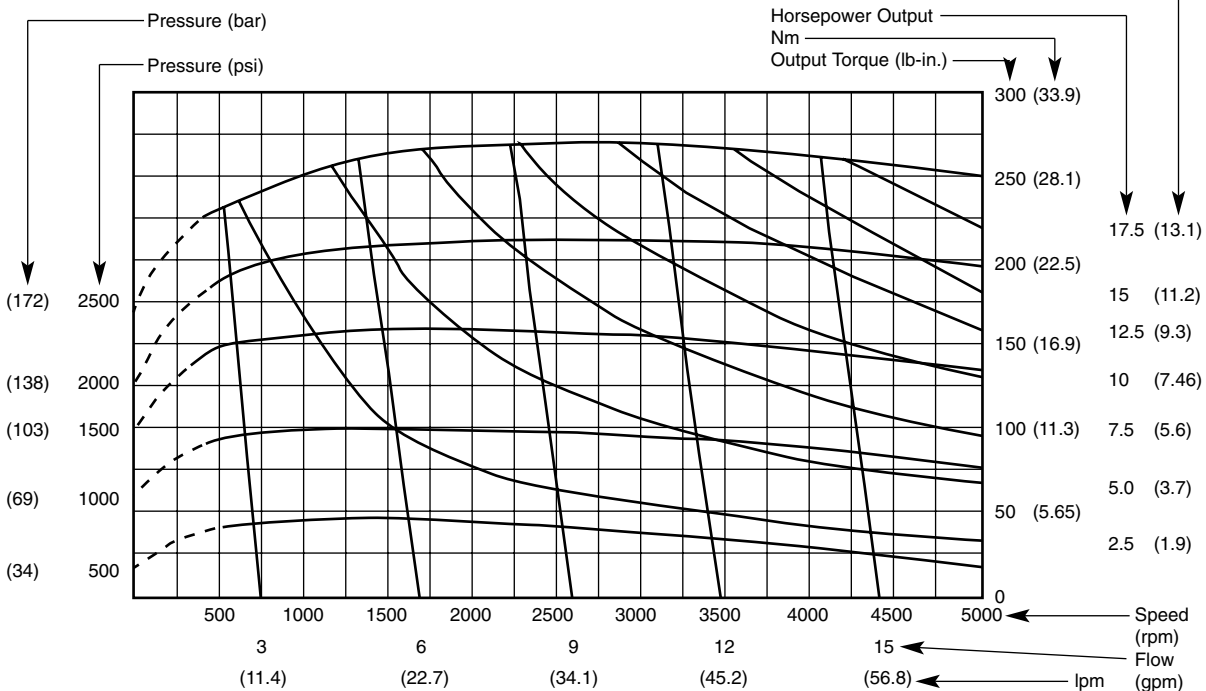


Code	Dim.A	Dim.B
M077	71.4 mm	51.8 mm
M116	77.7 mm	58.2 mm
M155	84.0 mm	64.5 mm
M194	90.4 mm	70.9 mm

## Typical Performance Curves

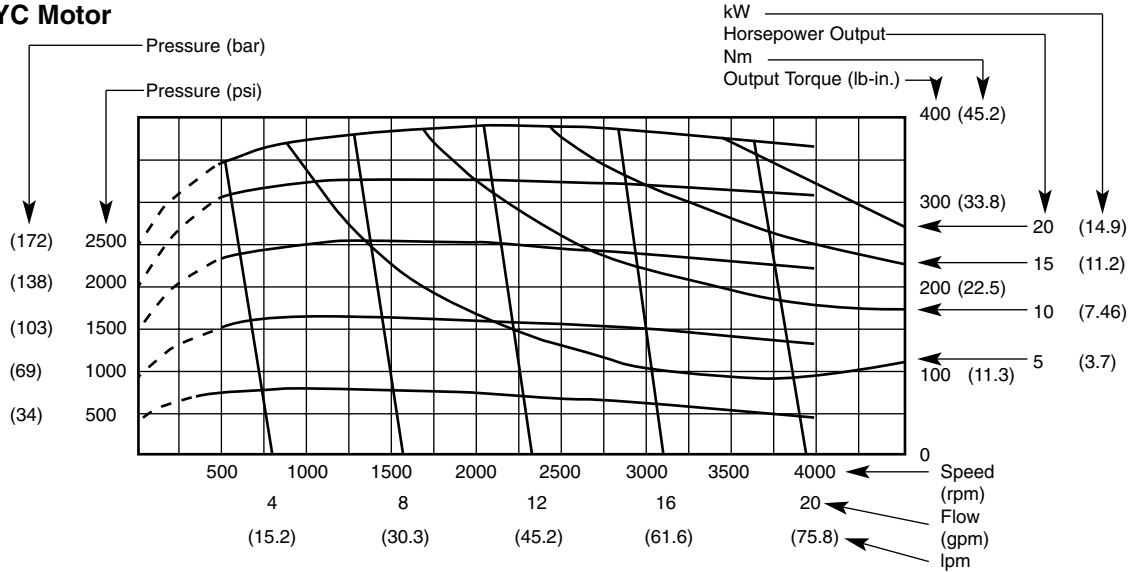
Curves established using hydraulic mineral oil with viscosity of 27.4 cSt at 49°C

### M077YC Motor

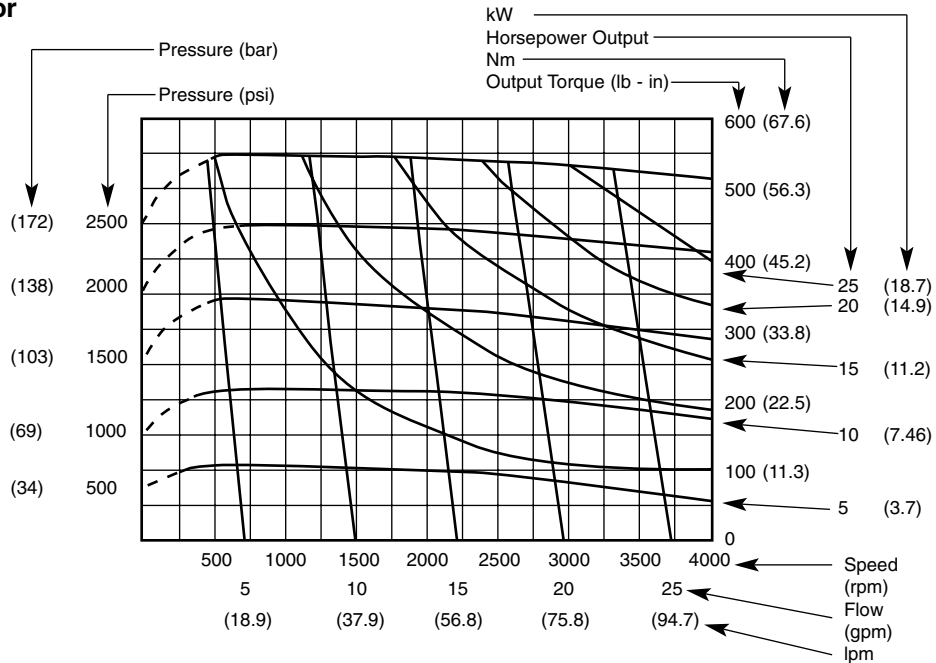


# Quality Hydraulic Components from the Webtec Range

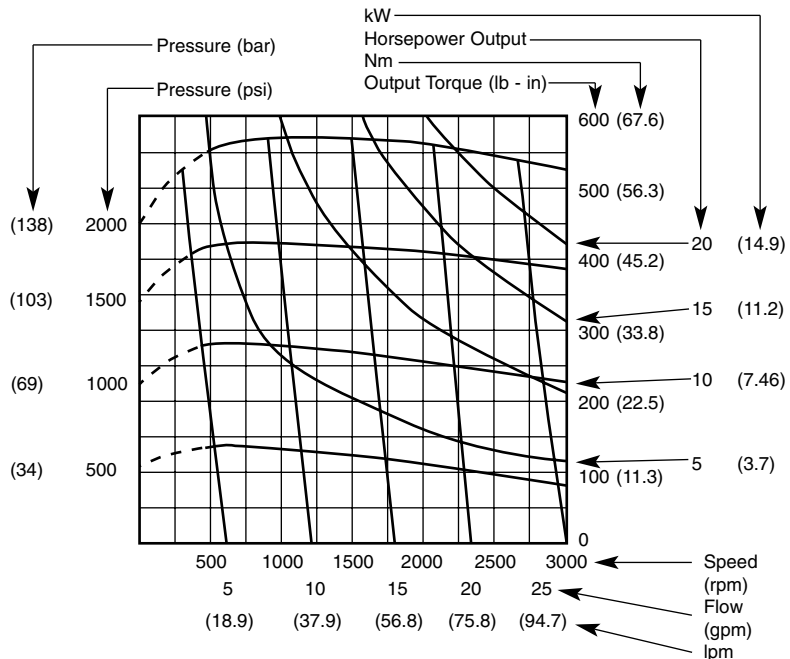
## M116YC Motor



## M155YC Motor



## M194YC Motor



## V Series

# Hydraulic Motor High Torque Low Speed 226 Nm Maximum Torque

**GEROTOR TYPE HYDRAULIC MOTOR.** The compact design is achieved by the use of a solid rotor set. A rotary commutator valve is used to feed oil to the fluid chambers in the rotor set in such a way that an in-built speed reduction and torque multiplication is achieved in a compact manor.

### Specifications

**Maximum Inlet Pressure:**  
175 bar

**Maximum Back Pressure:**  
70 bar

**Maximum Torque:**  
226 Nm

**Maximum Speed:**  
see ordering codes

**Porting:**  
Inlet and Outlet 1/2" BSP Drain 1/4" BSP

**Weight:**  
6.08 to 7.22 kg

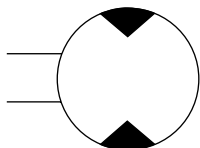
**Shaft:**  
25mm dia.

**Normal Operating Temperature:**  
30° C to 60° C

**Minimum Operating Temperature:**  
30° C

**Maximum Operating Temperature:**  
+ 85°C

### Symbol

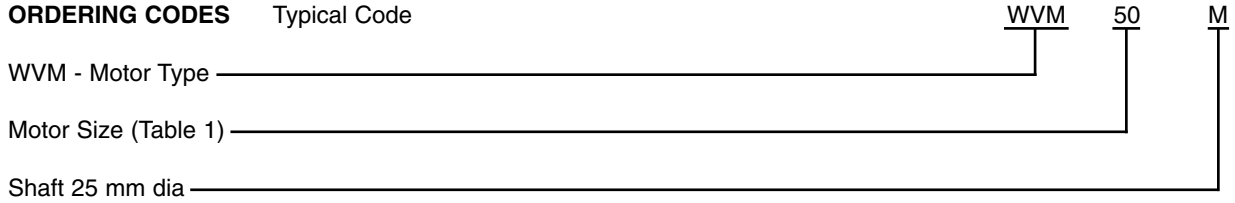


### Features

- Customer can select from 6 standard models with maximum output torques ranging from 68 to 226 Nm.
- Rotation is fully reversible

# Quality Hydraulic Components from the Webtec Range

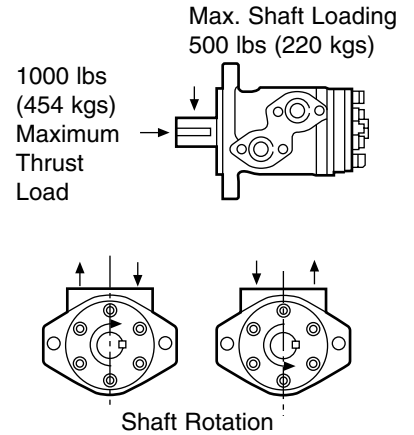
**ORDERING CODES** Typical Code



**Table 1: Motor Size**

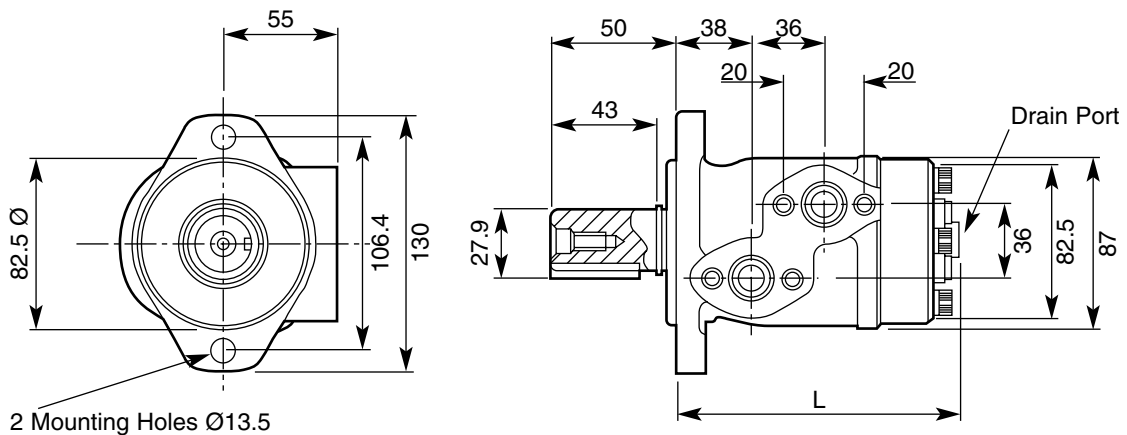
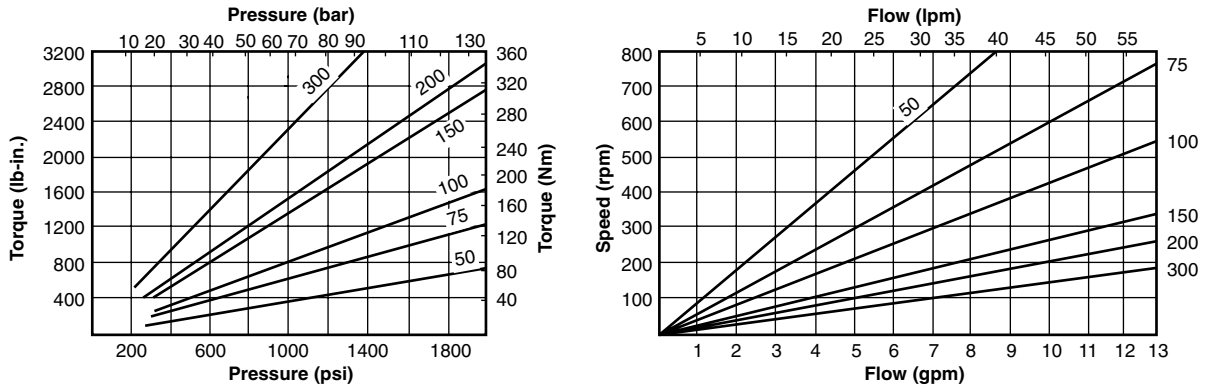
WVM Size	Displacement		Maximum Pressure Drop				Maximum Speed	
	cc/rev	cu. in/rev	lbf/in <sup>2</sup>		bar		rpm	
			cont.	int.	cont.	int.	cont.	int.
50	49.2	3.0	1500	2000	100	140	800	1000
75	73.8	4.5	1500	2000	100	140	750	950
100	101.6	6.2	1500	2000	100	140	600	750
150	168.8	10.3	1500	2000	100	140	400	500
200	195	11.9	1500	2000	100	140	300	400
300	293	17.9	1000	1500	70	100	200	250

## SHAFT LOADINGS



- \* Intermittent Operation - 10% operation of every minute.
- \* At speeds lower than 20 rpm consult Webtec Hydraulics
- \* To obtain optimum shaft seal life it is recommended that a drain connection is used when the back pressure exceeds 10 bar.

## Typical Performance Curves



WVM	Size	50	75	100	150	200	300
L	mm	137	140	143	150	156	170

## W Series

# Hydraulic Motor High Torque Low Speed 360 Nm Maximum Torque

**GEROLLER TYPE MOTOR** The Roller Vanes of the stator assure high volumetric and mechanical efficiencies leading to a long working life.

A rotary commutator valve is used to feed oil to the fluid chambers in the stator in such a way that an in-built speed reduction and torque multiplication is achieved in a compact manner.

### Specifications

**Maximum Inlet Pressure:**  
175 bar

**Maximum Back Pressure:**  
70 bar

**Maximum Torque:**  
360 Nm

**Maximum Speed:**  
see ordering codes

**Porting:**  
Inlet and Outlet 1/2" BSP Drain 1/4" BSP

**Weight:**  
6.6 to 8.4 kg

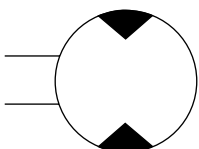
**Shaft:**  
1" dia

**Normal Operating Temperature:**  
30° C to 60° C

**Minimum Operating Temperature:**  
- 30° C

**Maximum Operating Temperature:**  
+ 85° C

### Symbol



### Features

- Customer can select from 5 standard models with maximum output torques ranging from 160 to 360 Nm.
- Rotation is fully reversible.

# Quality Hydraulic Components from the Webtec Range

ORDERING CODES Typical Code

WWM - Motor Type

Motor Size (Table 1)

Shaft Type 1" dia

WWM

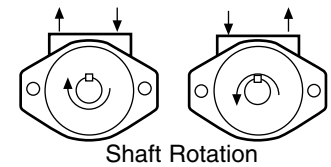
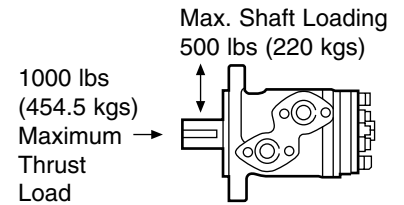
75

L

Table 1: Motor Size

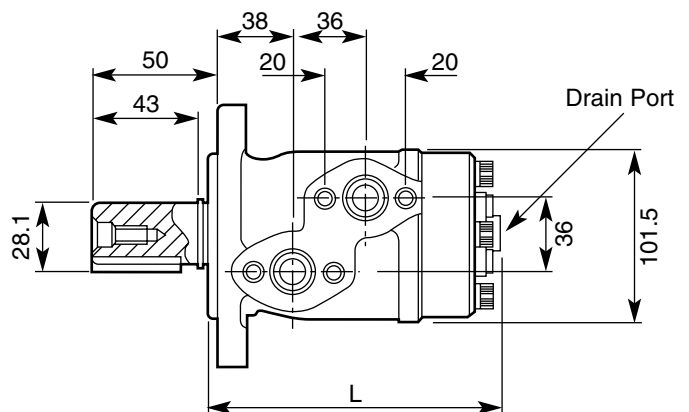
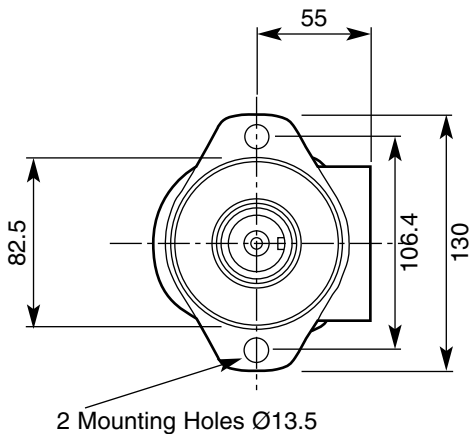
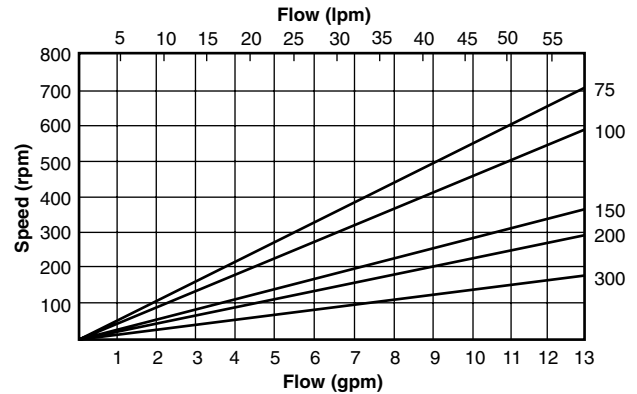
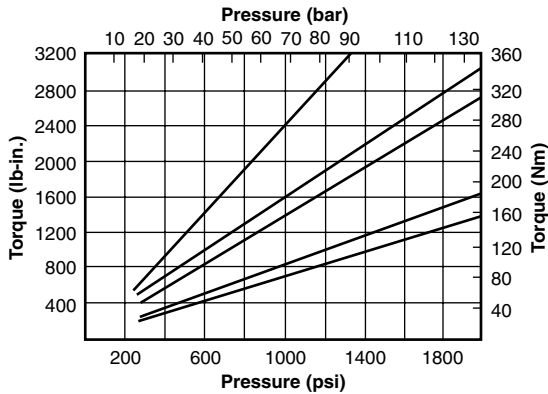
WWM Size	Displacement		Maximum Pressure Drop				Maximum Speed	
	cc/rev	cu. in/rev	lbf/in <sup>2</sup>		bar		rpm	
			cont.	int.	cont.	int.	cont.	int.
75	80.3	4.9	2000	2500	140	175	800	1000
100	97.5	5.95	2000	2500	140	175	650	800
150	160.7	9.81	2000	2500	140	175	400	500
200	200.9	12.26	1800	2500	125	175	300	400
300	298.9	18.27	1200	1800	85	125	200	250

## SHAFT LOADINGS



- \* Intermittent Operation - 10% operation of every minute.
- \* At speeds lower than 20 rpm consult Webtec Hydraulics
- \* To obtain optimum shaft seal life it is recommended that a drain connection is used when the back pressure exceeds 10 bar.

## Typical Performance Curves



WWM Size	75	100	150	200	300
L mm	140.4	143.4	154.4	161.4	178.4

