

# ***MV SERIES***

## ***HYDRAULIC MOTOR***

### ***HIGH TORQUE - LOW SPEED***

| TYPE               |                 |    | MV SERIES |       |       |       |       |       |
|--------------------|-----------------|----|-----------|-------|-------|-------|-------|-------|
| MOTOR SIZE         |                 |    | 300       | 400   | 500   | 630   | 800   | 960   |
| DISPLACEMENT       | cm <sup>3</sup> |    | 308       | 382   | 500   | 629   | 801   | 960   |
|                    | in <sup>3</sup> |    | 18.8      | 23.3  | 30.5  | 38.4  | 48.9  | 58.6  |
| MAX. SPEED         | rpm cont.       |    | 510       | 500   | 400   | 315   | 250   | 200   |
|                    | rpm int.        |    | 630       | 600   | 480   | 380   | 300   | 250   |
| MAX. TORQUE        | Nm cont.        |    | 920       | 1180  | 1460  | 1660  | 1880  | 1480  |
|                    | lbf.in cont.    |    | 8140      | 10440 | 12920 | 14960 | 16640 | 13100 |
|                    | Nm int.         |    | 1100      | 1410  | 1760  | 1940  | 2110  | 2125  |
|                    | lbf.in int.     |    | 9820      | 12480 | 15580 | 17170 | 18680 | 18810 |
| MAX. PRESSURE DROP | bar cont.       |    | 200       | 200   | 200   | 180   | 160   | 105   |
|                    | psi int.        |    | 2900      | 2900  | 2900  | 2610  | 2320  | 1520  |
|                    | bar int.        |    | 240       | 240   | 240   | 210   | 180   | 150   |
|                    | psi int.        |    | 3480      | 3480  | 3480  | 3050  | 2610  | 2175  |
| MAX. OIL FLOW      | lpm cont.       |    | 160       | 200   | 200   | 200   | 200   | 190   |
|                    | gpm cont.       |    | 35.2      | 44.0  | 44.0  | 44.0  | 44.0  | 41.9  |
|                    | lpm int.        |    | 200       | 240   | 240   | 240   | 240   | 240   |
|                    | gpm int.        |    | 44.0      | 52.9  | 52.9  | 52.9  | 52.9  | 52.9  |
| WEIGHT             | MVAP            | kg | 29.5      | 30.5  | 32.1  | 33.3  | 34.9  | 38.7  |
|                    | MVWP            | kg | 31.5      | 32.5  | 34.1  | 35.3  | 36.9  | 40.7  |
|                    | MVS             | kg | 22.5      | 23.5  | 25.1  | 26.3  | 27.9  | 31.7  |

Maximum inlet pressure 4350 psi - 300 bar  
High pressure shaft seal drain line not required for most applications.

Maximum pressure drop and speed must not be reached simultaneously.  
Intermittent operation may occur for 10% max. of every minute.

At speeds lower than 10 rpm please consult our Technical Department.

Mineral based hydraulic fluids with anti-wear additives are recommended  
with a viscosity of 35 mm<sup>2</sup>/s at a temperature of 50 C.

Minimum recommended oil viscosity 13 mm<sup>2</sup>/s at operating temperature.

Recommended oil cleanliness ISO 19/14 with a nominal filtration of  
25 micron or better.

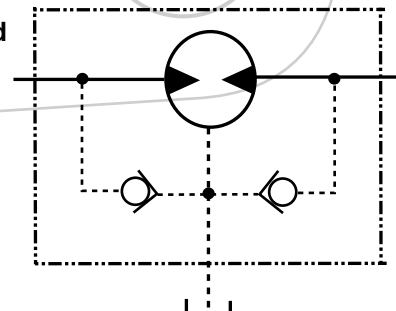
Where non-flammable fluids are to be used it is advisable to consult our  
Technical Department.

Ambient temperature should be between -30°C and +90°C.

Normal operating temperature should be between +30°C and +60°C.

Maximum operating temperature +85°C.

SYMBOL



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**ADAN LIMITED**

RIVERSIDE IND. ESTATE BOSTON LINCOLNSHIRE ENGLAND

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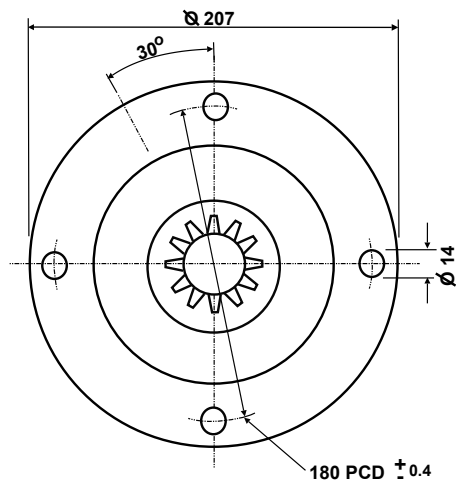
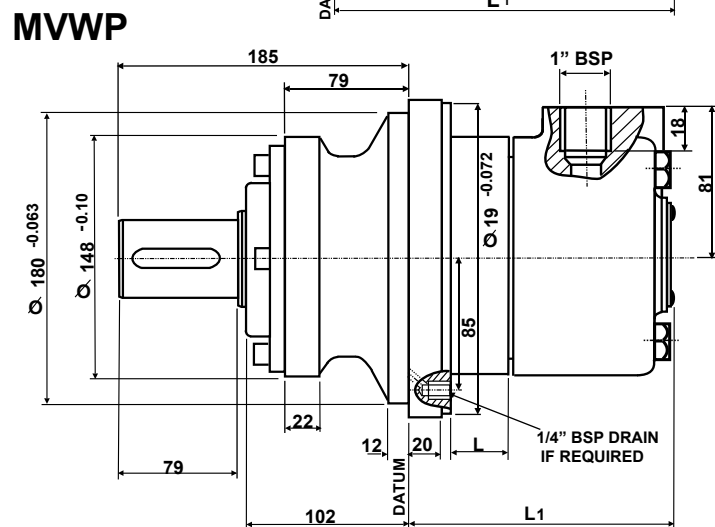
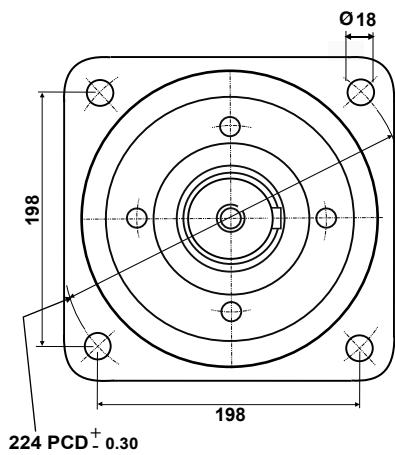
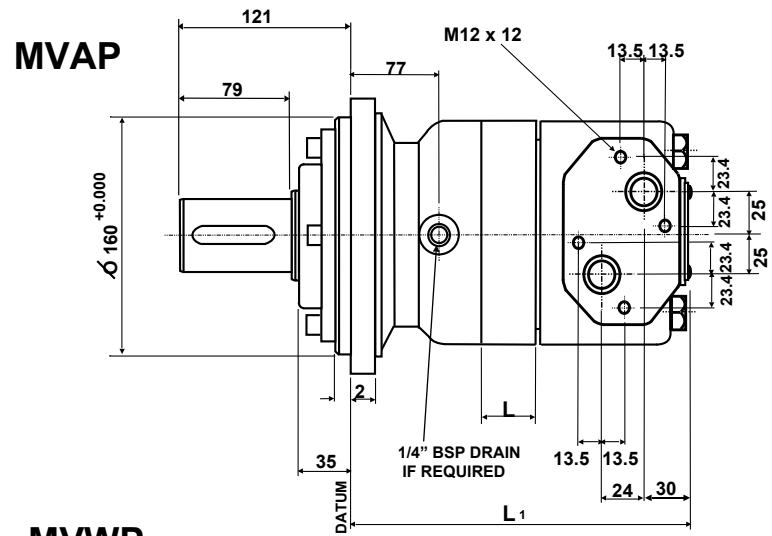
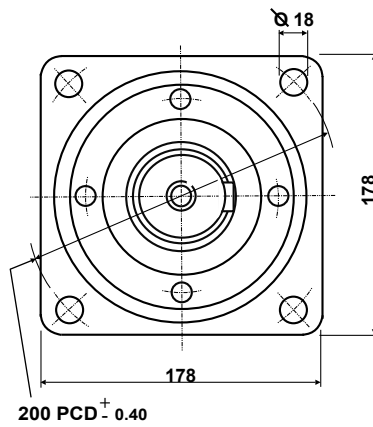
email: sales@adanltd.co.uk

Fax: +44 (01205) 358013

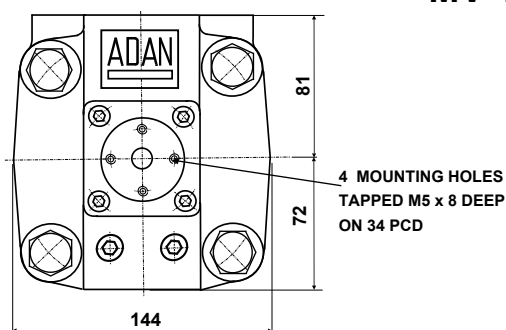
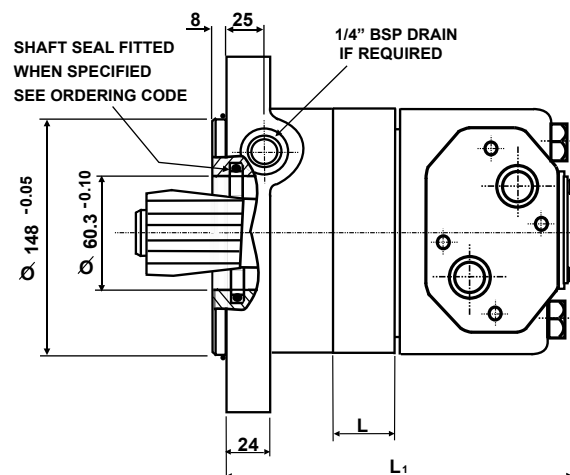
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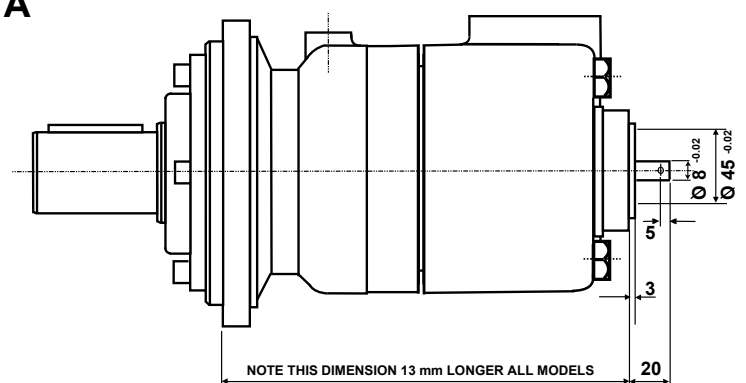
## MV SERIES

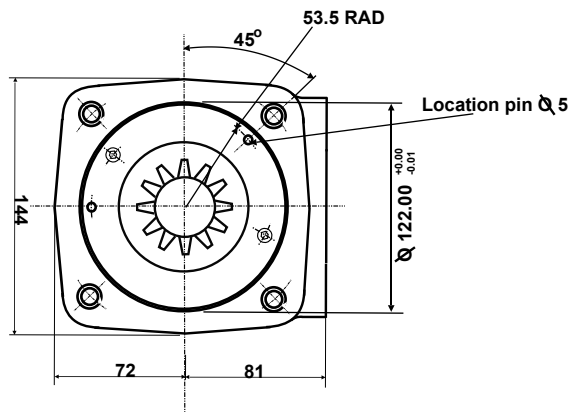


**MVS**

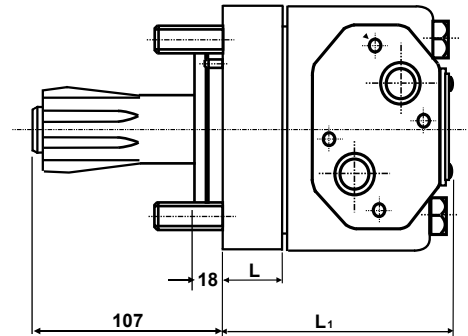


**MV-TA**



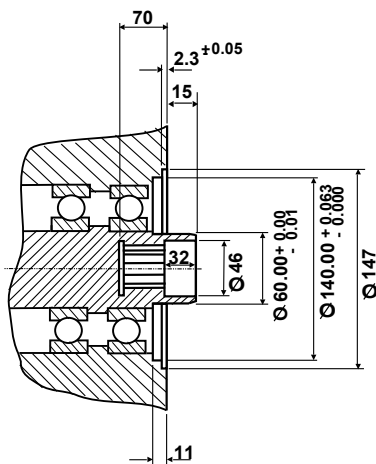


## MVSS

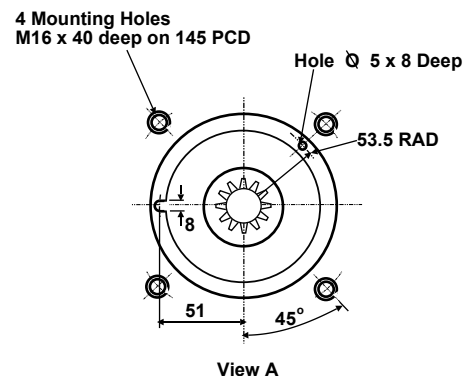
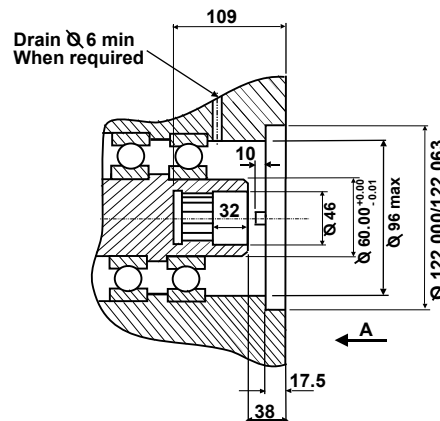


| Motor size | Dimn           | 300   | 400   | 500   | 630   | 800   | 960   |
|------------|----------------|-------|-------|-------|-------|-------|-------|
| ALL TYPES  | L              | 21.5  | 27.5  | 37.5  | 47.5  | 61.4  | 74.5  |
| MVAP       | L <sub>1</sub> | 217.0 | 223.0 | 233.0 | 243.0 | 256.9 | 270.0 |
| MVWP       | L <sub>1</sub> | 150.0 | 156.0 | 166.0 | 176.0 | 189.9 | 203.0 |
| MVS        | L <sub>1</sub> | 180.0 | 186.0 | 196.0 | 206.0 | 219.9 | 233.0 |
| MVSS       | L <sub>1</sub> | 124.5 | 130.5 | 140.5 | 150.5 | 164.4 | 177.5 |

### MATING DIMENSIONS MVS



### MATING DIMENSIONS MVSS



### INTERNAL SPLINE DATA

FILLET ROOT SIDE FIT, 16 TEETH, 10/20 DP, 30° PRESSURE ANGLE, PITCH DIA. 40.64, MAJOR DIA. 45.2/45.6, MINOR DIA. 38.500/38.5039, FILLET RAD. 0.4, MEASUREMENT BETWEEN 5.6000/5.6001 DIA. PINS 32.47/32.62

**MATING COMPONENT MATERIAL**  
CASE HARDENING STEEL  
TREATED TO 58/60 ROCKWELL 'C'  
0.7 mm CASE DEPTH.

### IMPORTANT

When using MVS or MVSS motors a drain line is required if the pressure in the return line exceeds the permissible pressure of the seal fitted to the attached component.

The drain line if fitted should be run to tank in such a way that there is no risk of the motor or component being drained of oil when at rest.

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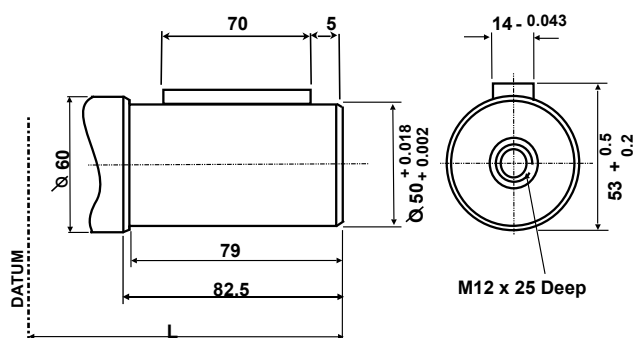
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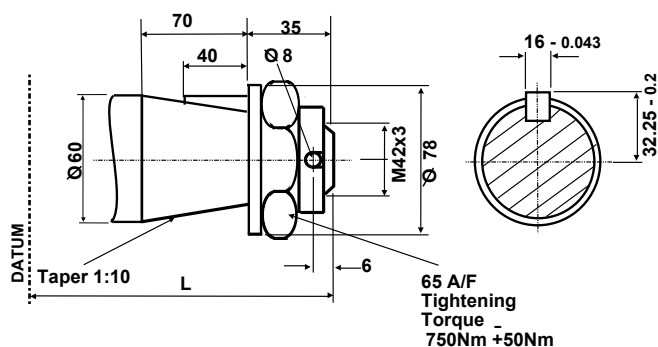
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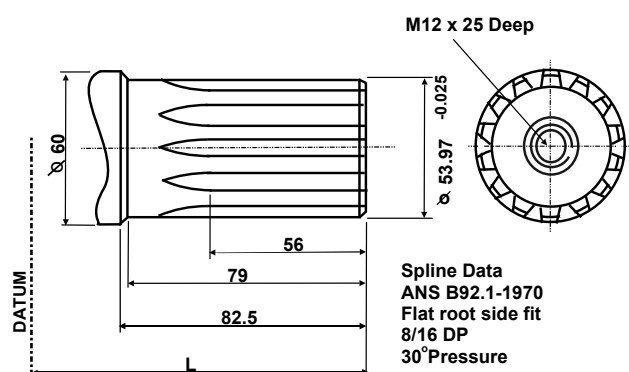
### Standard 50 mm Shaft - P



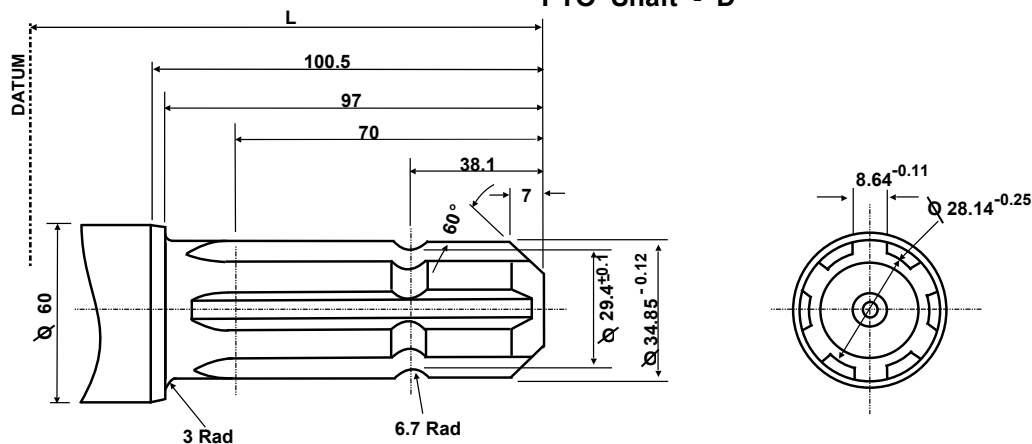
### Tapered Shaft - T



### Splined Shaft 16 Teeth - S



**PTO Shaft - D**

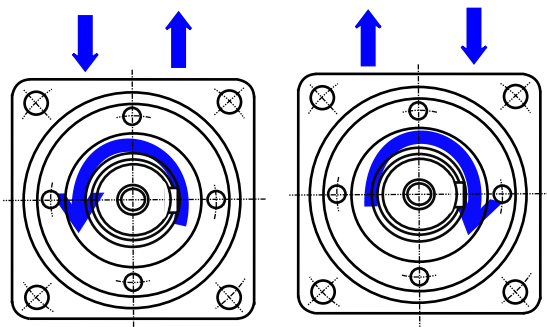


| Dim. | MOTOR TYPE | SHAFT TYPE |       |       |       |
|------|------------|------------|-------|-------|-------|
|      |            | P          | T     | S     | D     |
| L    | MVAP       | 121.0      | 144.0 | 121.0 | 139.0 |
|      | MVWP       | 185.0      | 211.0 | 185.0 | 204.0 |

**Special shafts can be supplied in most cases  
Please consult our Technical Department about your requirements**

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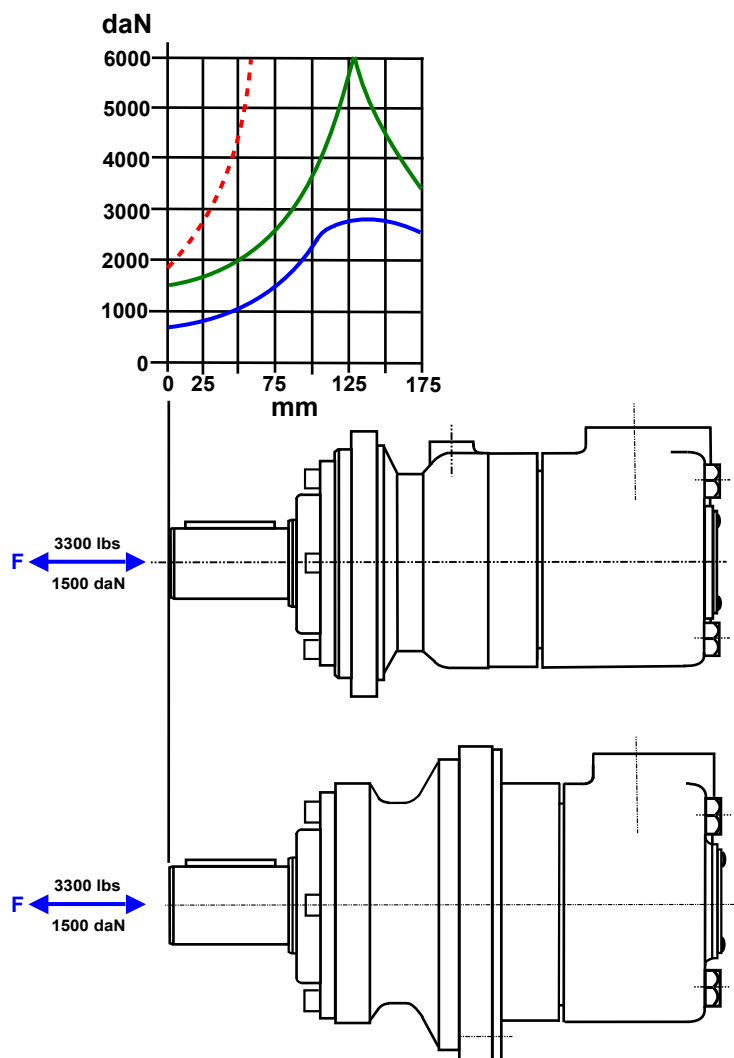
## SHAFT ROTATION



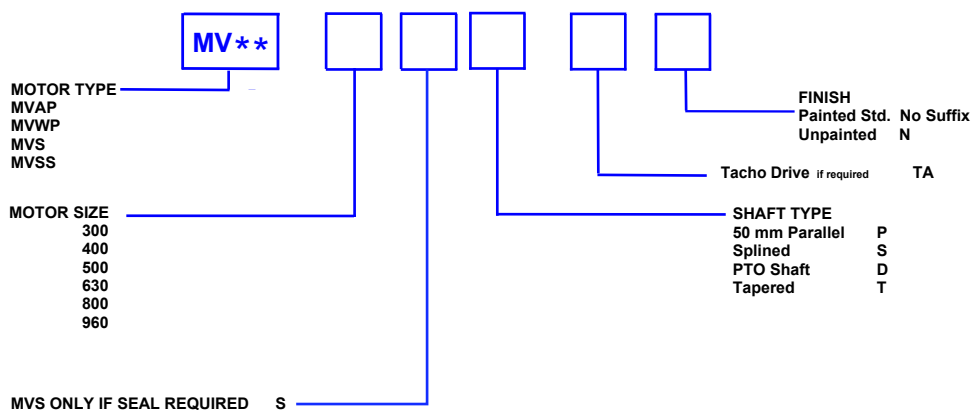
- Radial load if  $F = 0$  N
- Radial load if  $F = 10000$  N
- - - Absolute max. Radial load

The curves in Green and Blue are based on a B10 bearing life of 3000 hours at 200 rpm

## SHAFT LOADINGS



## ORDERING CODE



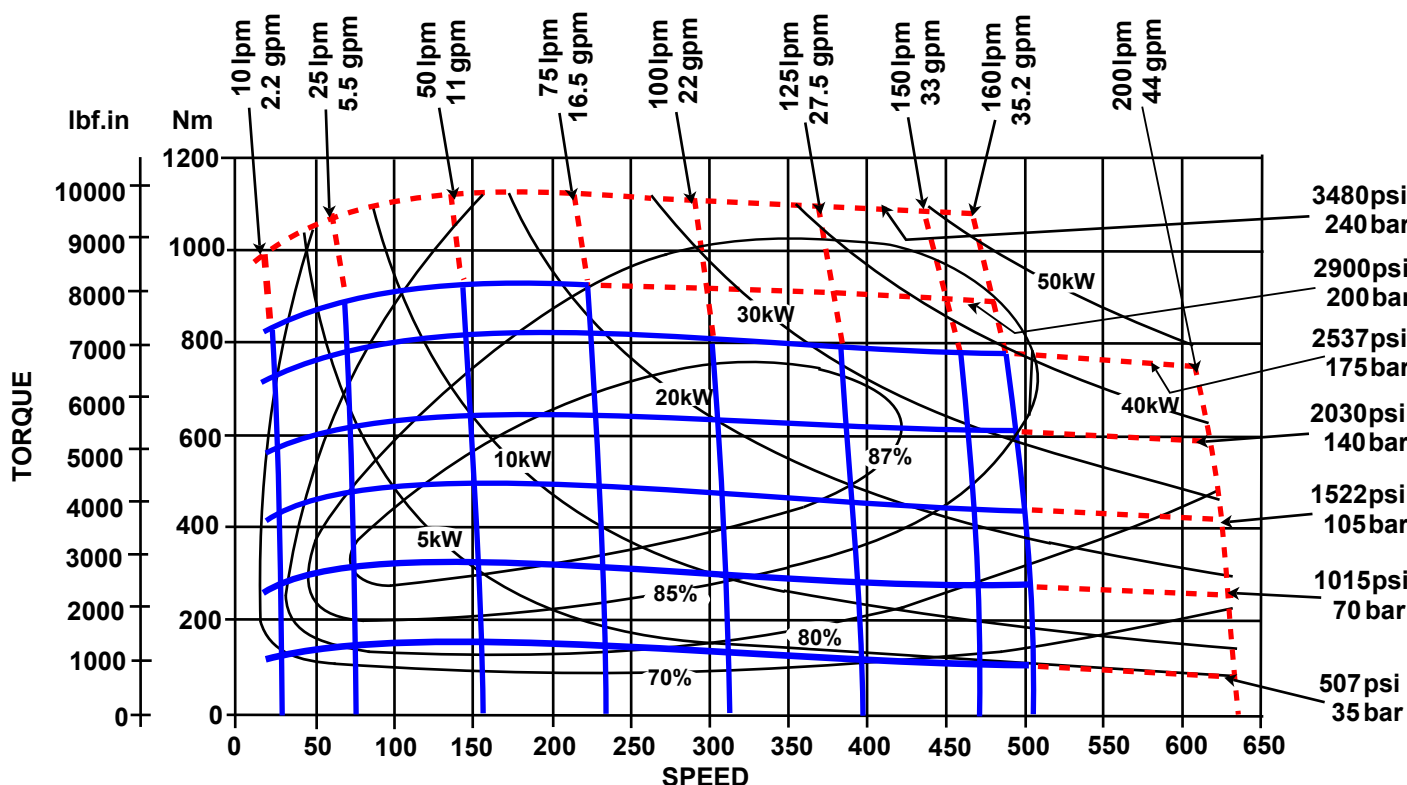
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# PERFORMANCE GRAPHS 300 & 400 cc MV SERIES

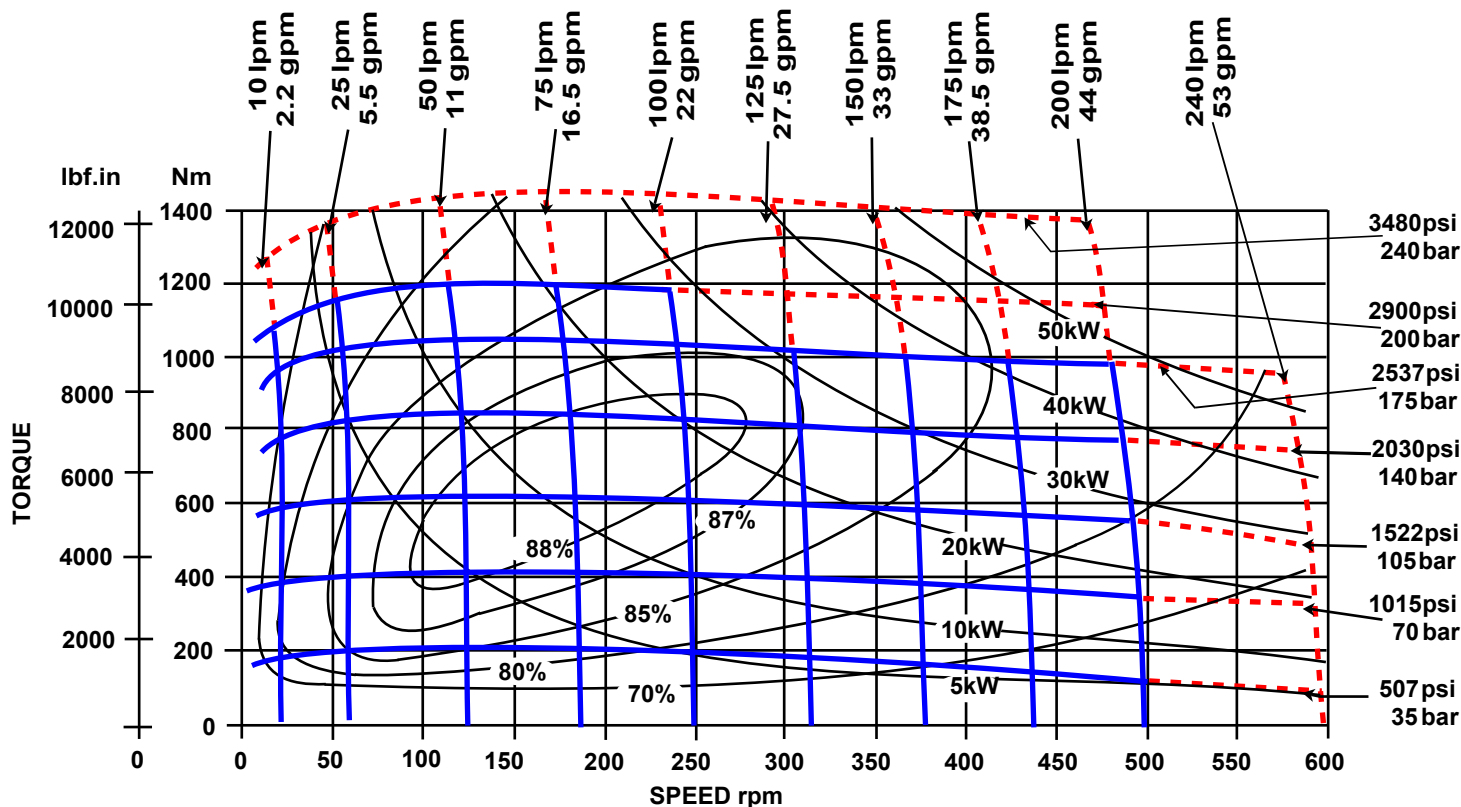
Solid blue lines represent continuous operation. Dotted red lines represent intermittent operation permissible for 10% of every minute.

Maximum pressure drop and maximum speed must not occur simultaneously.

## MVA 300



## MVA 400

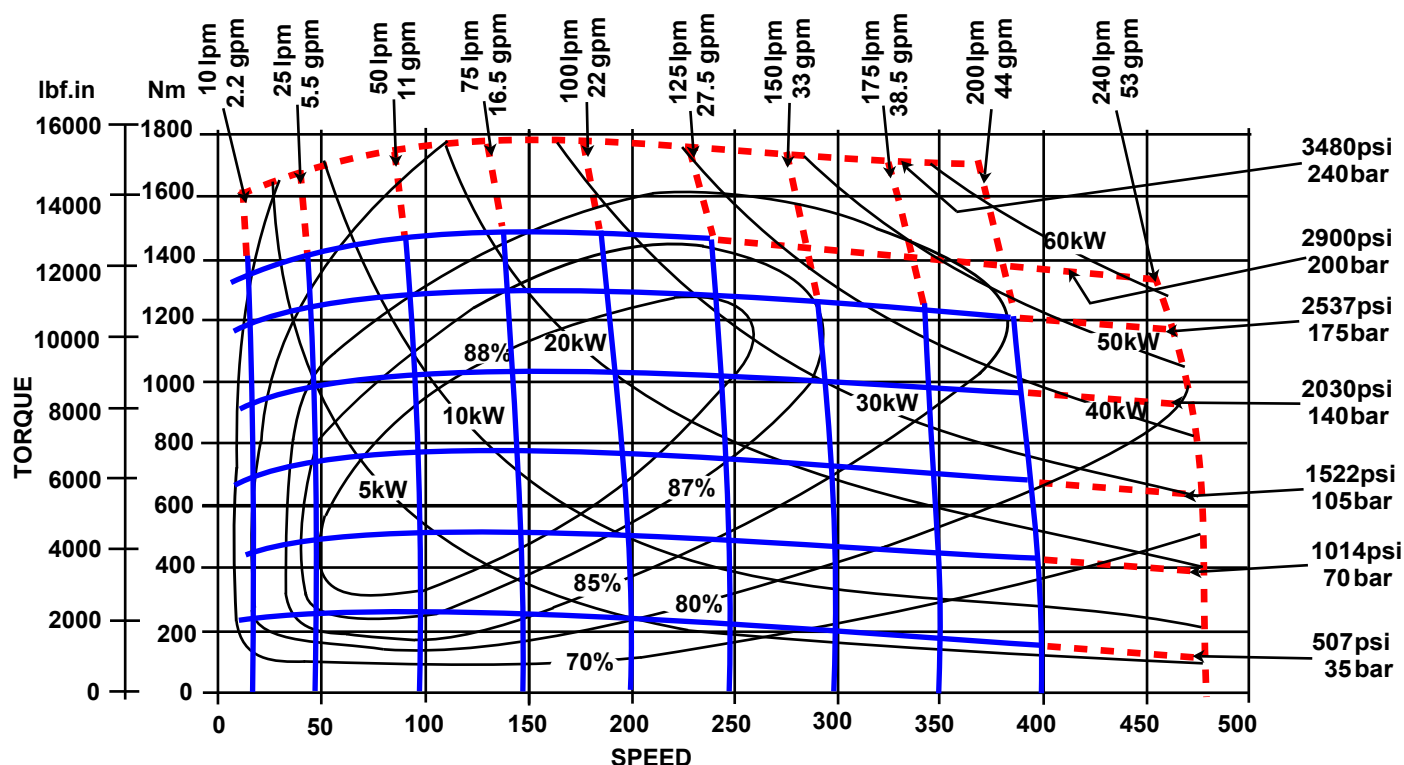


# PERFORMANCE GRAPHS 500 & 630 cc *MV SERIES*

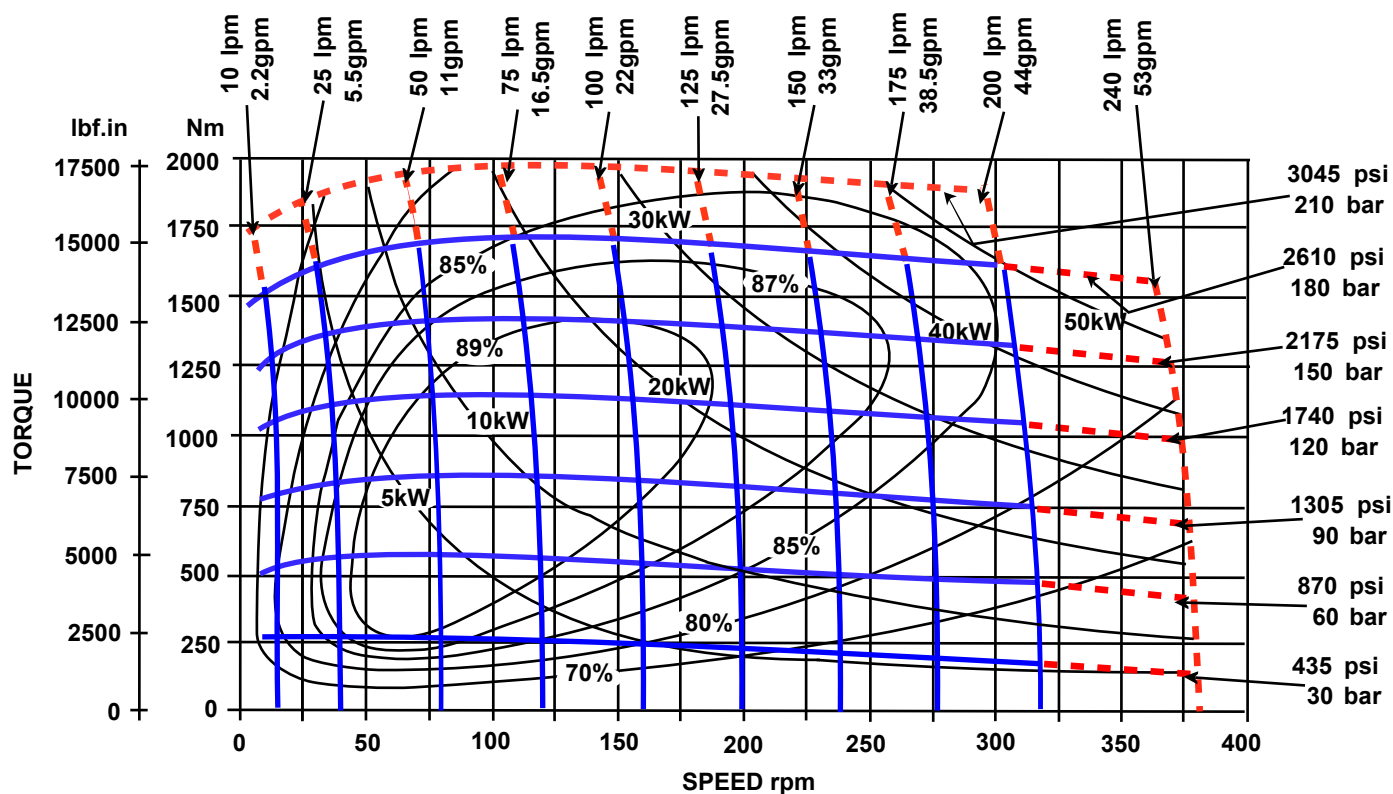
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## MVA 500



## MVA 630

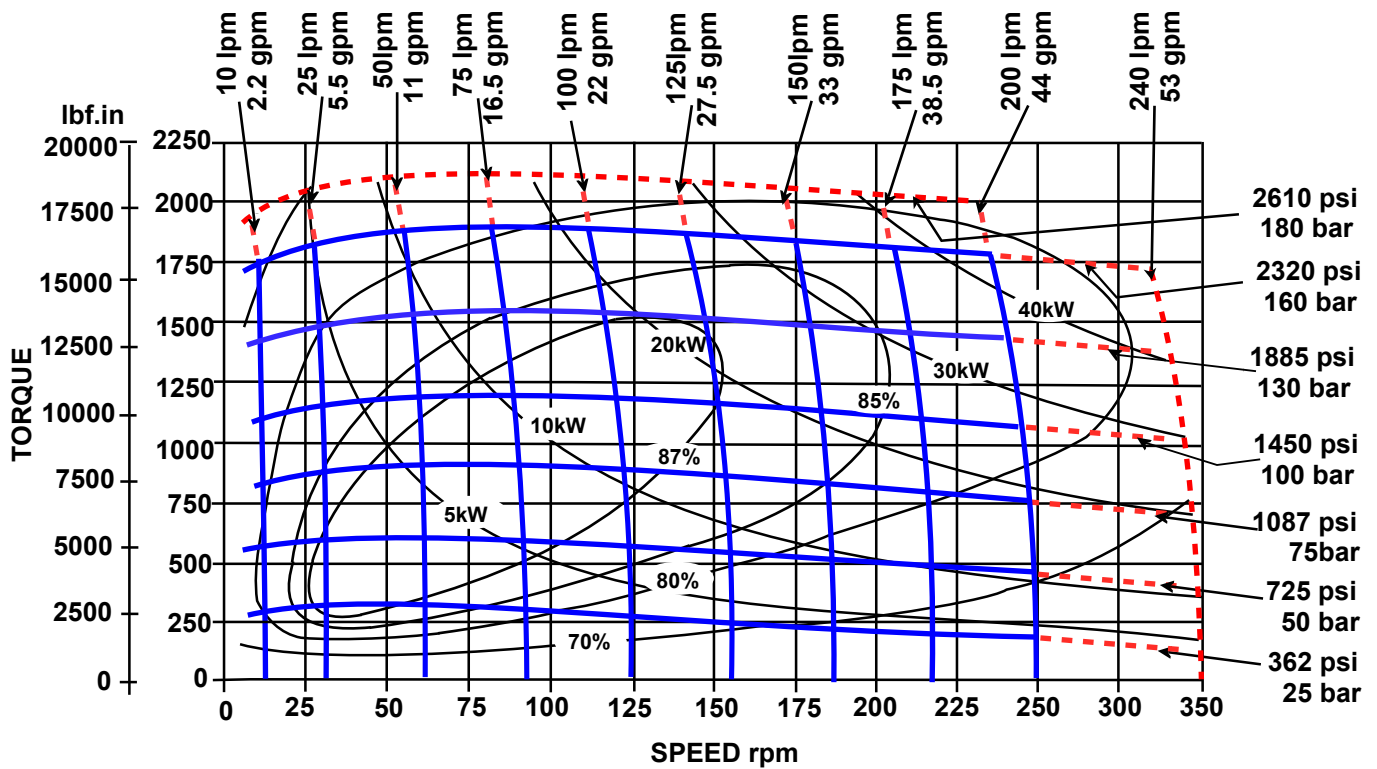


# PERFORMANCE GRAPHS 800 & 960 cc MV SERIES

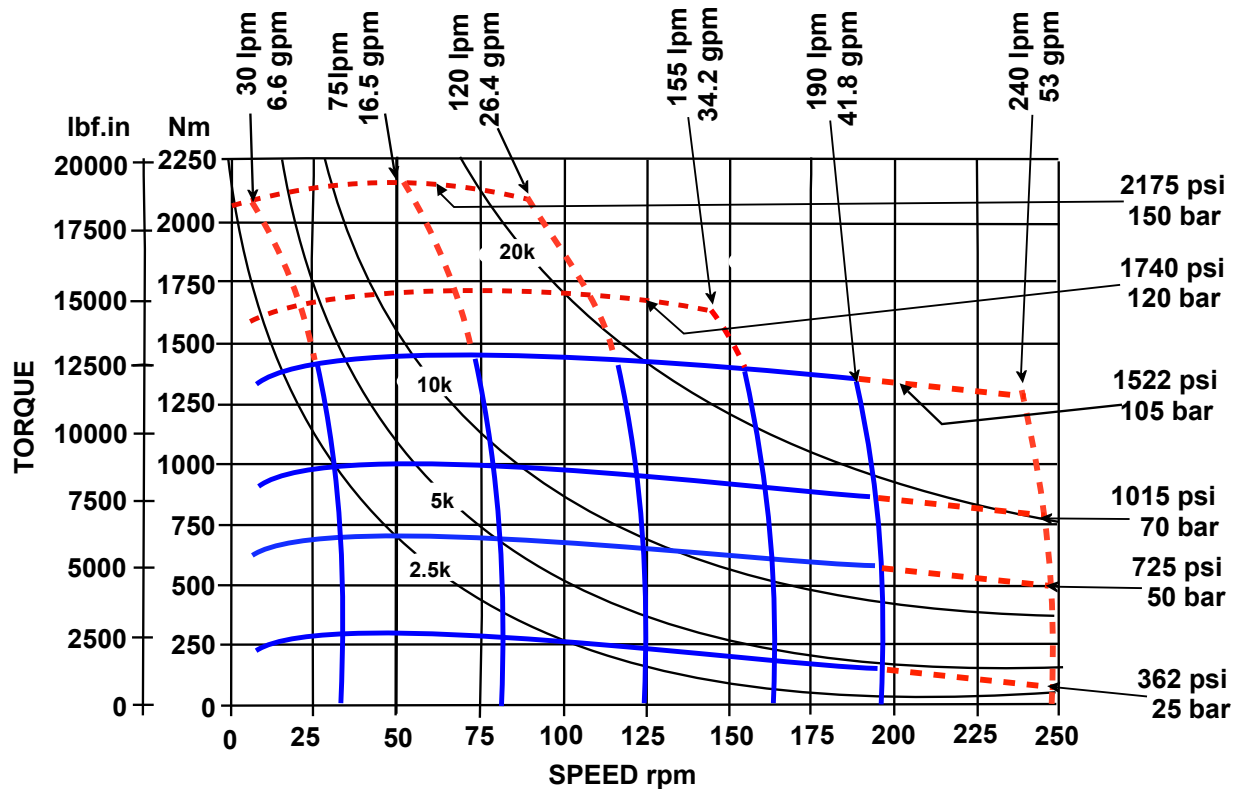
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## MVA 800



## MVA 960



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