

# ***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.

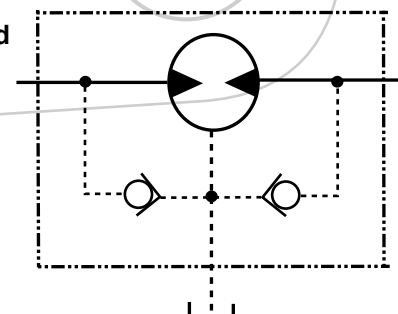
Where non-flammable fluids are to be used it is advisable to consult our Technical Department.

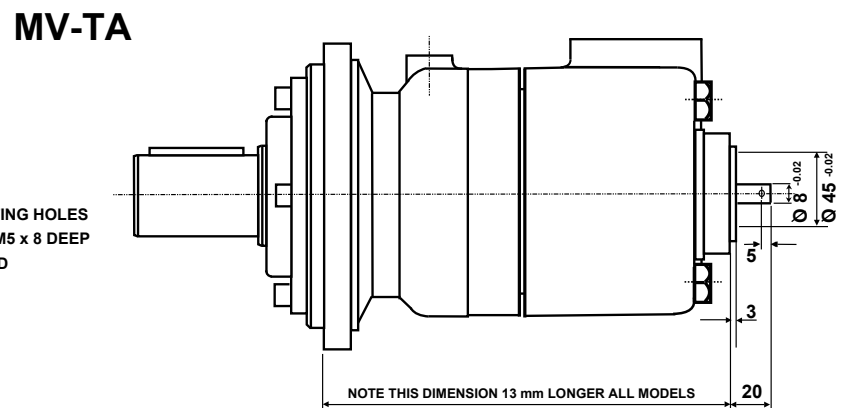
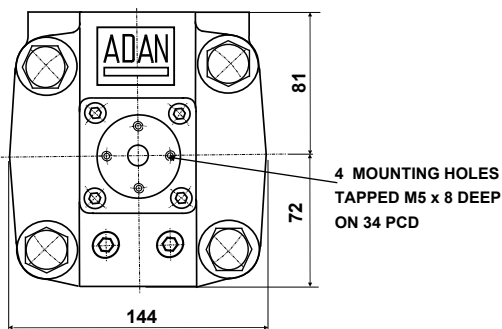
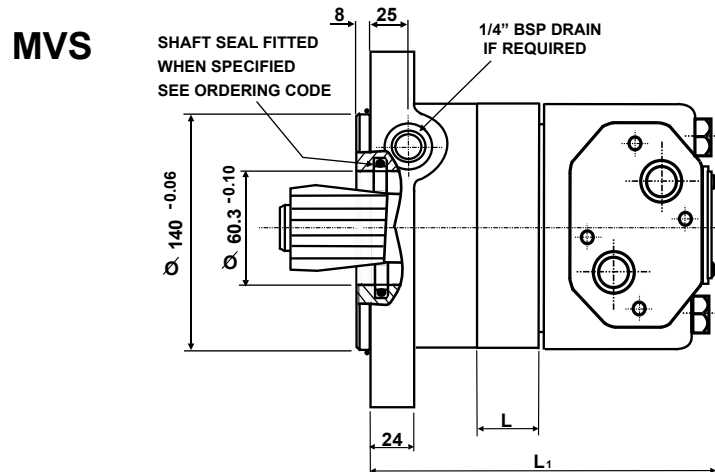
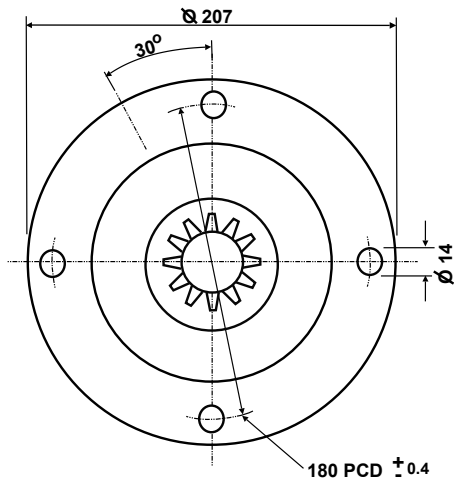
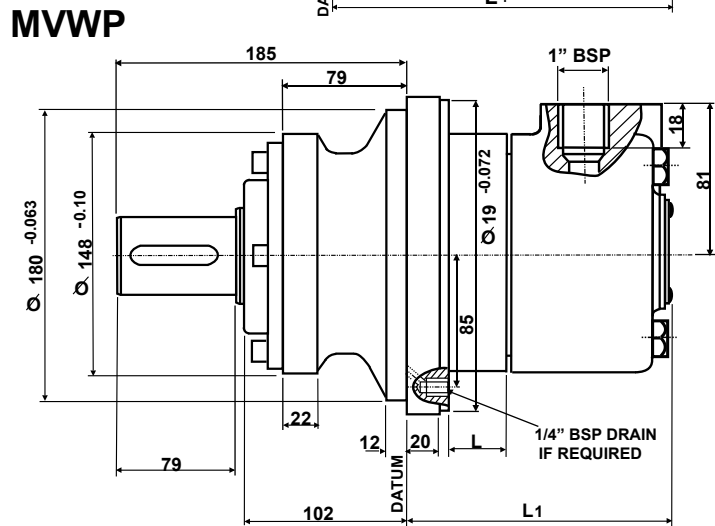
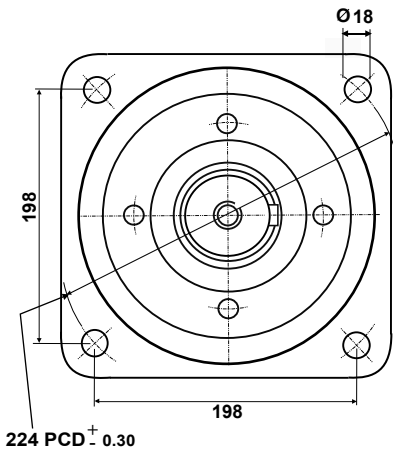
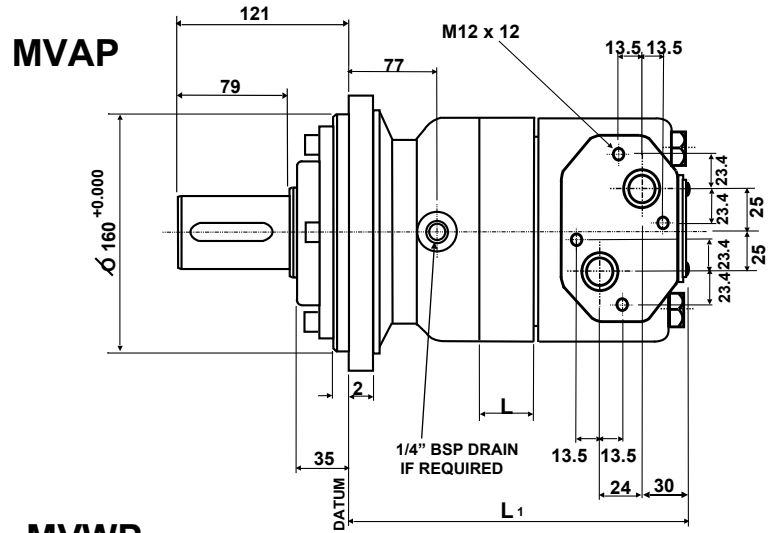
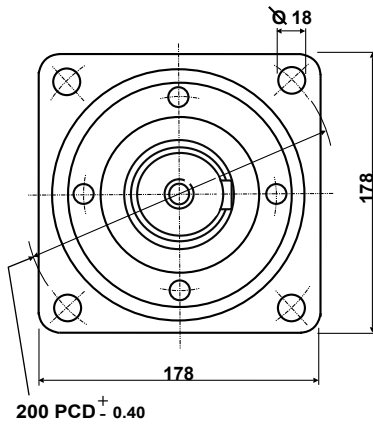
Ambient temperature should be between -30°C and +90°C.

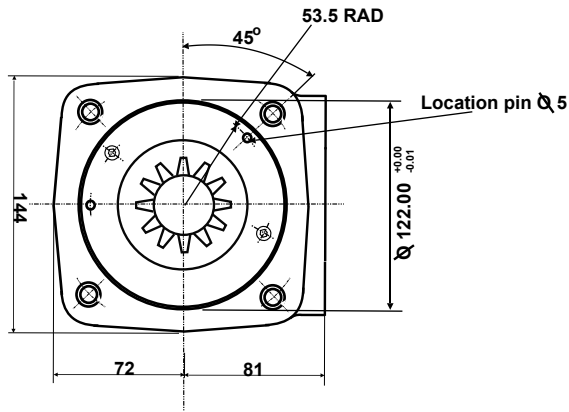
Normal operating temperature should be between +30°C and +60°C.

Maximum operating temperature +85°C.

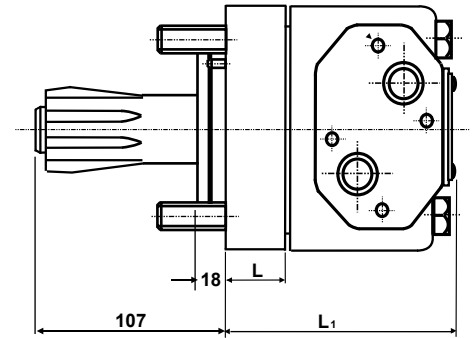
SYMBOL





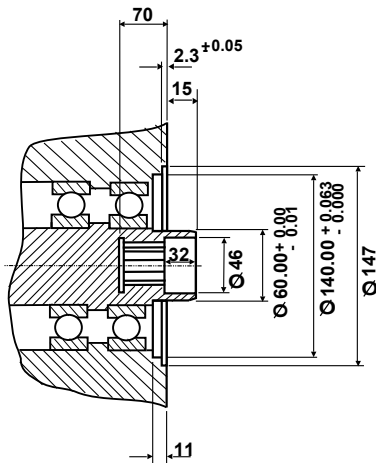


MVSS

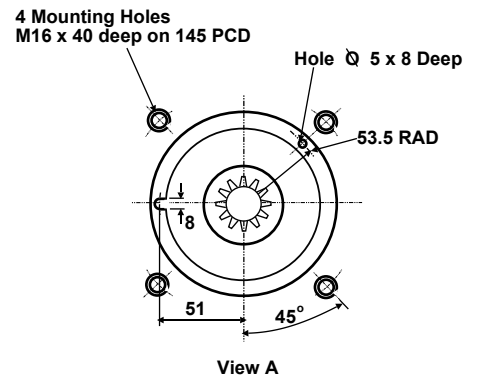
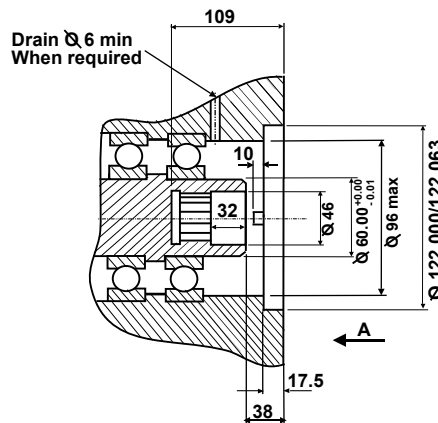


Motor size	Dimn.	300	400	500	630	800	960
ALL TYPES	L	21.5	27.5	37.5	47.5	61.4	74.5
MVAP	L <sub>1</sub>	217.0	223.0	233.0	243.0	256.9	270.0
MVWP	L <sub>1</sub>	150.0	156.0	166.0	176.0	189.9	203.0
MVS	L <sub>1</sub>	180.0	186.0	196.0	206.0	219.9	233.0
MVSS	L <sub>1</sub>	124.5	130.5	140.5	150.5	164.4	177.5

MATING DIMENSIONS MVS



MATING DIMENSIONS MVSS



INTERNAL SPLINE DATA

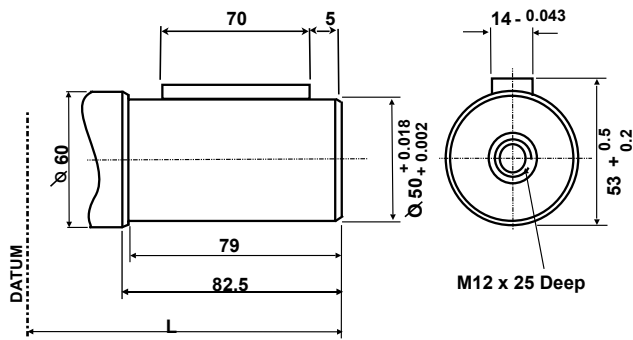
FILLET ROOT SIDE FIT, 16 TEETH, 10/20 DP, 30° PRESSURE ANGLE, PITCH DIA. 40.64, MAJOR DIA. 45.2/45.6, MINOR DIA. 38.500/38.5039, FILLET RAD. 0.4, MEASUREMENT BETWEEN 5.6000/5.6001 DIA. PINS 32.47/32.62

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

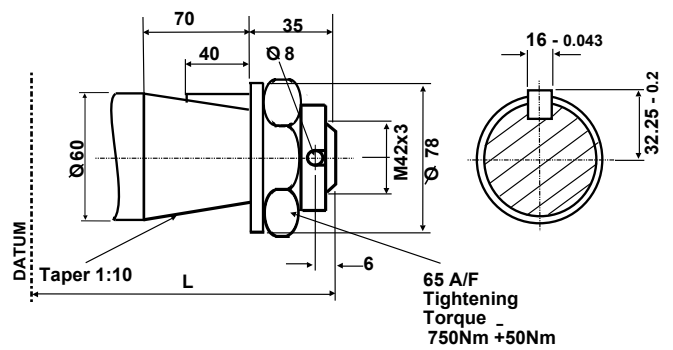
**IMPORTANT**

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.

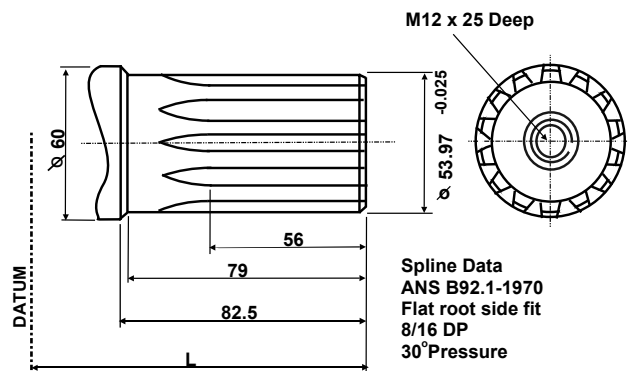
Standard 50 mm Shaft - P



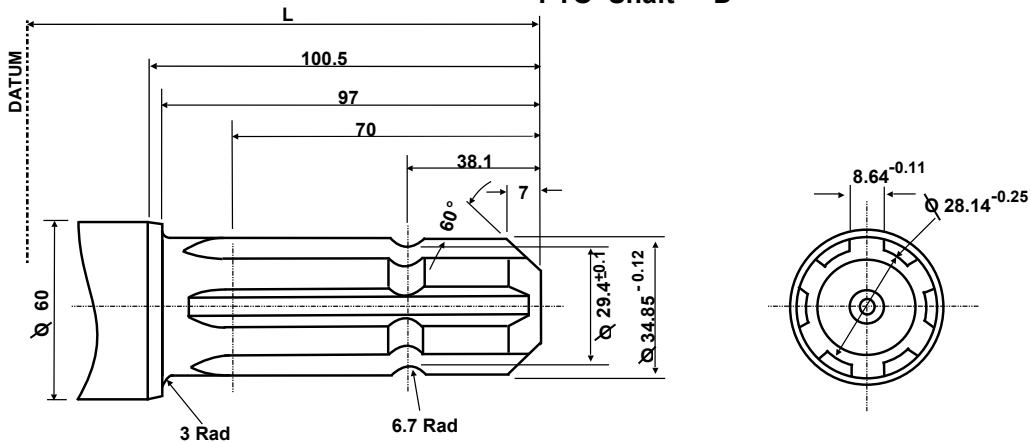
Tapered Shaft - T



Splined Shaft 16 Teeth - S



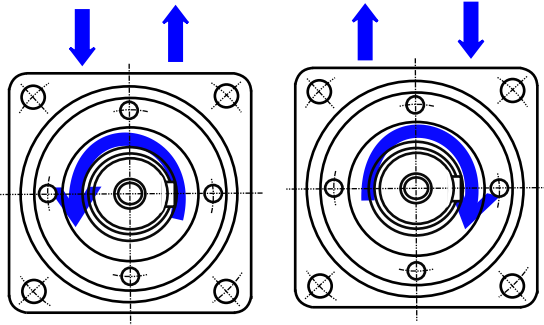
PTO Shaft - D



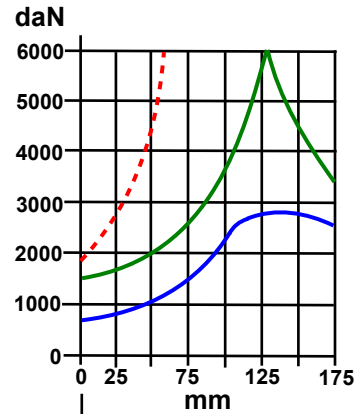
Dim.	MOTOR TYPE	SHAFT TYPE			
		P	T	S	D
L	MVAP	121.0	144.0	121.0	139.0
	MVWP	185.0	211.0	185.0	204.0

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

SHAFT ROTATION

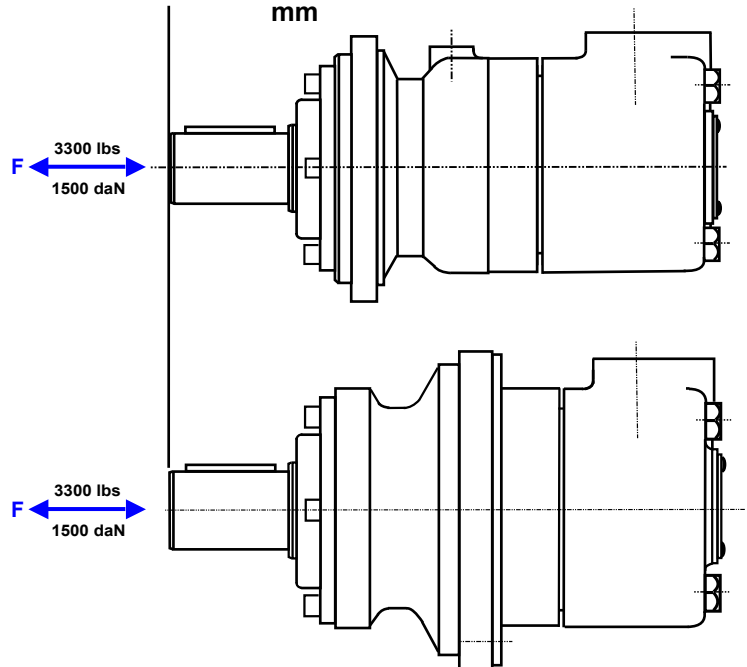


SHAFT LOADINGS

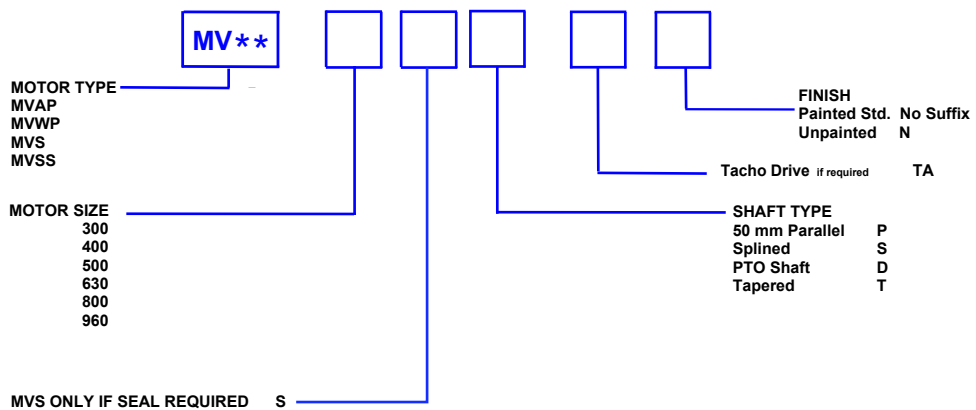


- Radial load if F = 0 N
- Radial load if F = 10000 N
- - - Absolute max. Radial load

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



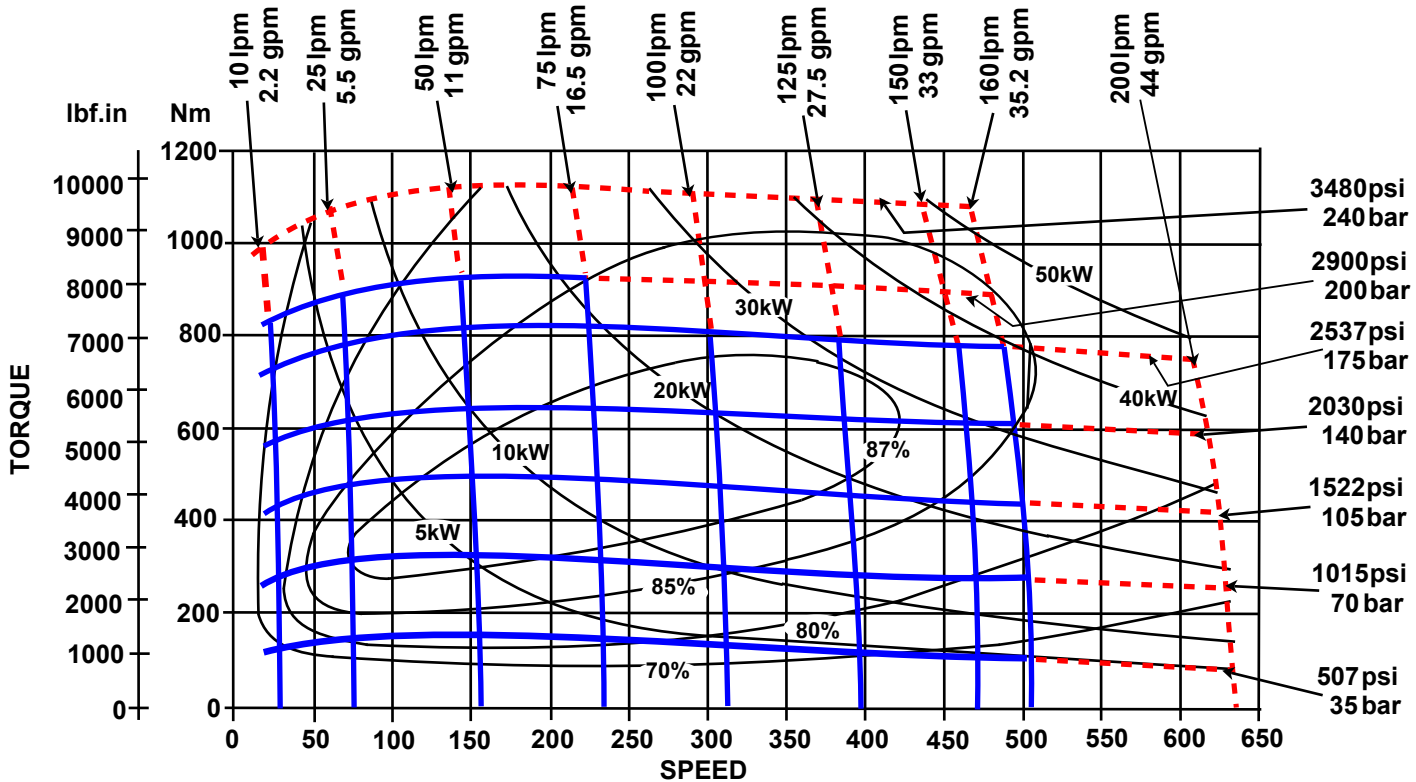
ORDERING CODE



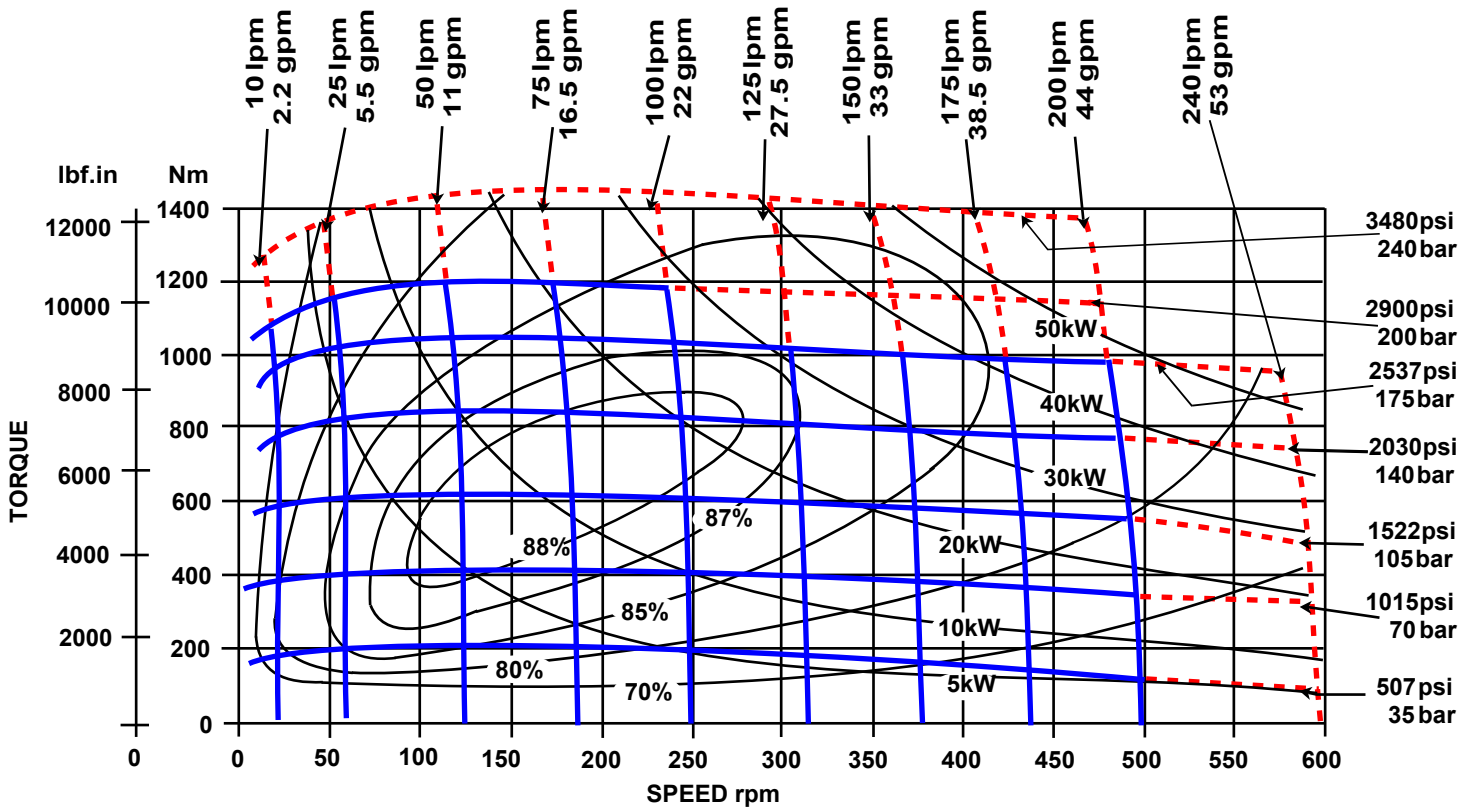
# PERFORMANCE GRAPHS 300 & 400 cc MV SERIES

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



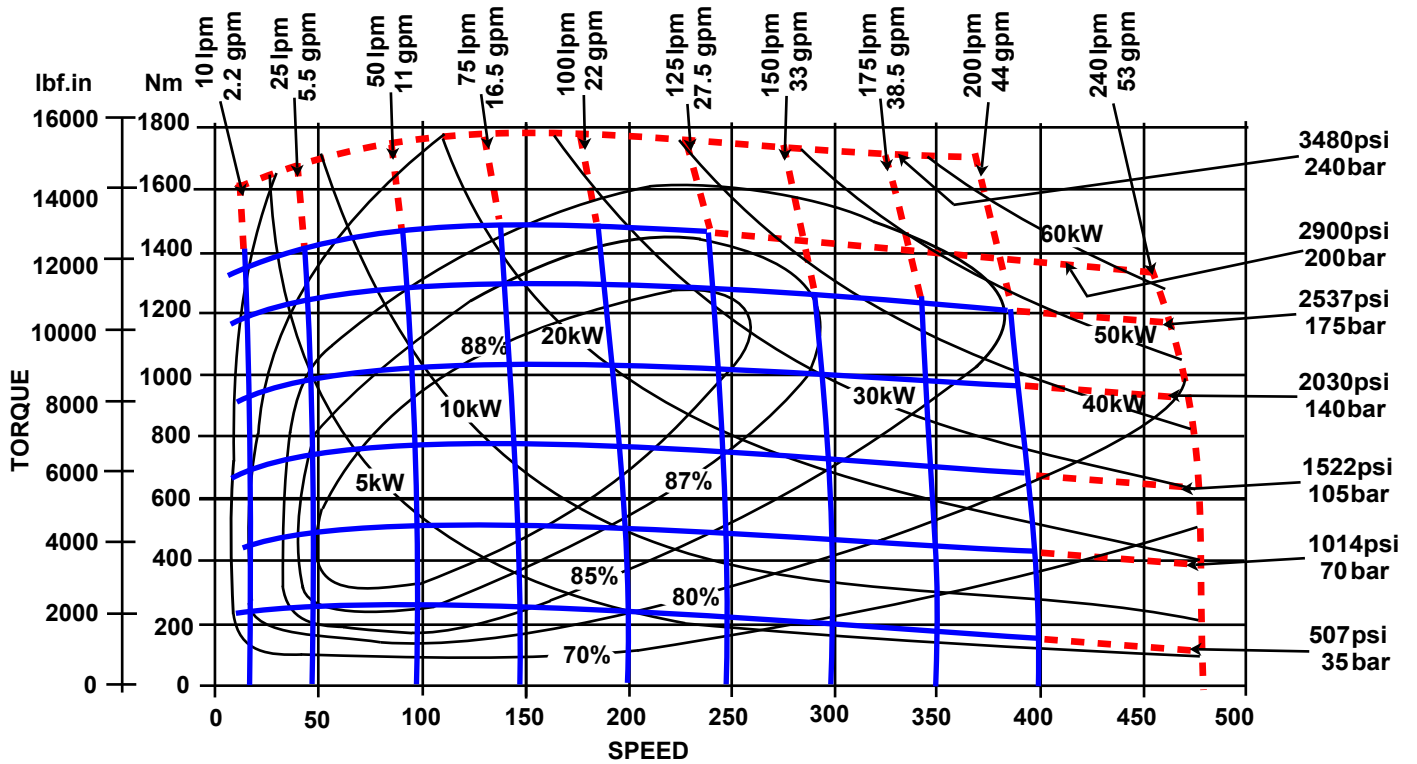
## MVA 400



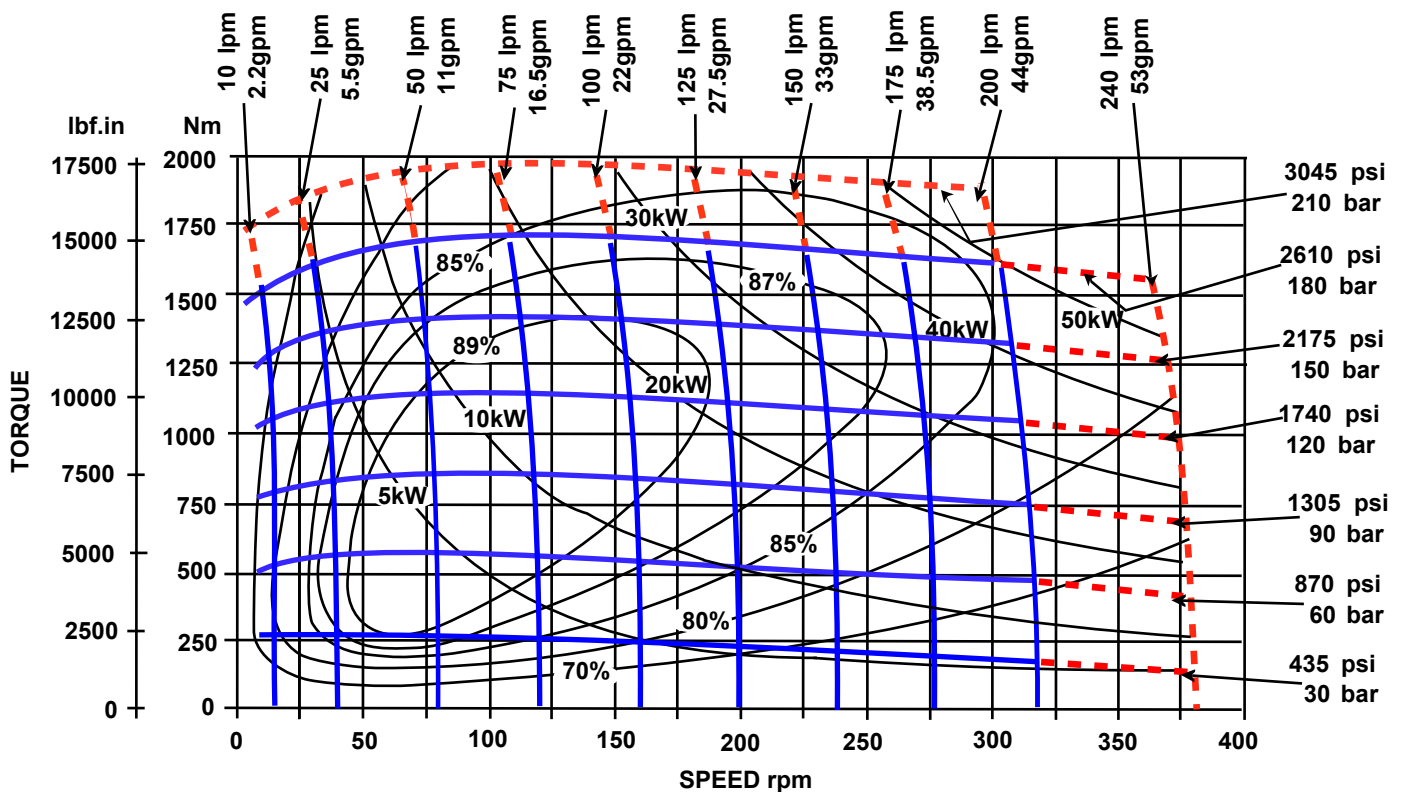
# PERFORMANCE GRAPHS 500 & 630 cc MV SERIES

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 500



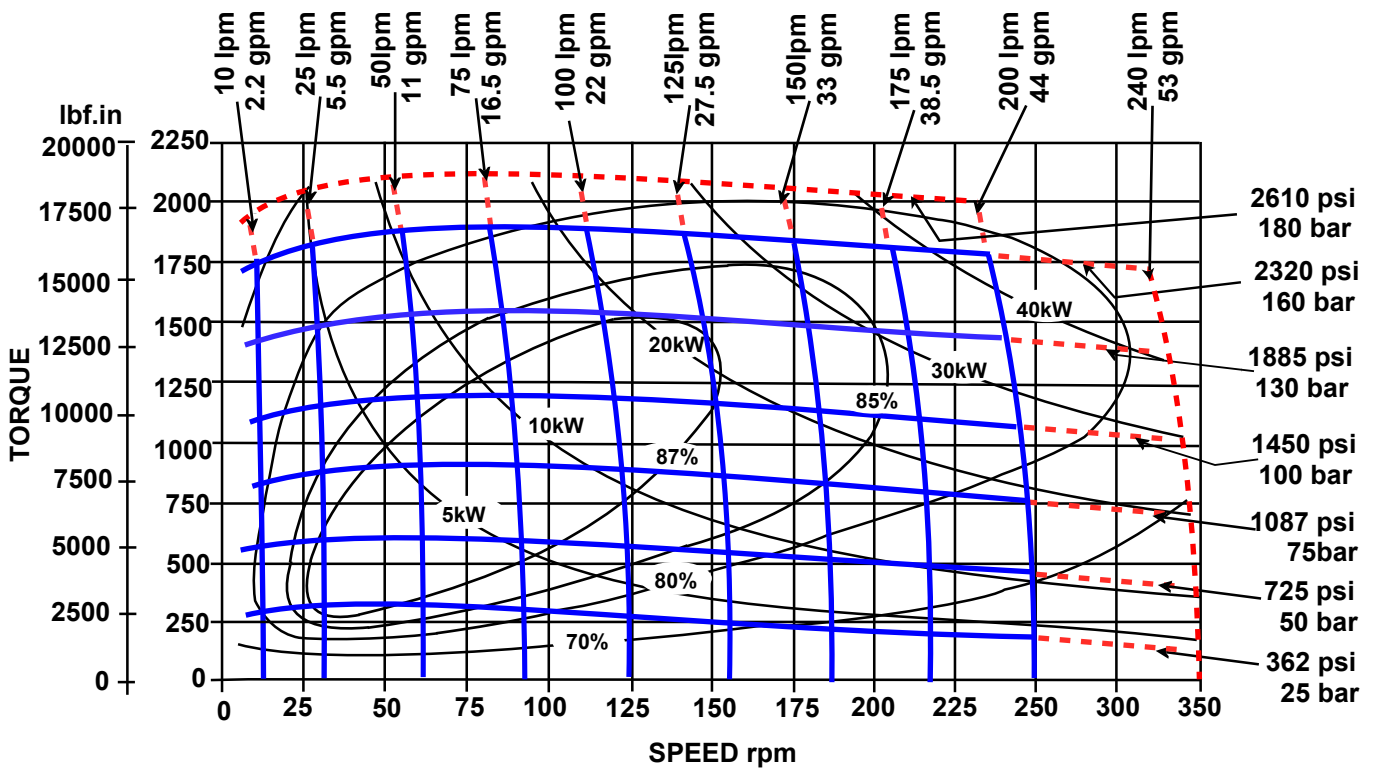
## MVA 630



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 800



MVA 960

