

MS SERIES

HYDRAULIC MOTOR

HIGH TORQUE - LOW SPEED



TYPE		MS SERIES								
MOTOR SIZE		75	100	125	150	200	250	300	400	
DISPLACEMENT	cm ³	81.8	101.3	126.3	161.0	201.2	251.2	315.9	400.4	
	in ³	4.91	5.00	7.72	9.85	12.31	15.36	19.32	24.49	
MAX. SPEED	rpm cont.	810	750	600	450	375	300	240	190	
	rpm int.	1000	900	720	560	450	360	285	230	
MAX. TORQUE	Nm cont.	240	305	275	490	610	720	825	865	
	lbf.in cont.	2120	2700	3320	4340	5400	6370	7300	7660	
	Nm int.	310	390	490	600	720	870	1000	990	
	lbf.in int.	2740	3450	4340	5310	6370	7700	8850	8760	
MAX. PRESSURE DROP	bar cont.	210	210	210	210	210	200	200	160	
	psi int.	3050	3050	3050	3050	3050	2900	2900	2320	
	bar int.	275	275	275	260	250	250	240	190	
	psi int.	3990	3990	3990	3770	3630	3630	3480	2760	
MAX. OIL FLOW	lpm cont.	65	75	75	75	75	75	75	75	
	gpm cont.	14.3	16.5	16.5	16.5	16.5	16.5	16.5	16.5	
	lpm int.	80	90	90	90	90	90	90	90	
	gpm int.	17.6	19.8	19.8	19.8	19.8	19.8	19.8	19.8	
WEIGHT	MSA, MSAS	kg	11	11.2	11.2	12.0	12.5	13.0	13.7	14.5
	MSW	kg	11.4	11.6	11.9	12.3	12.8	13.4	14.1	15.0
	MSAM	kg	11.2	11.4	11.4	12.2	12.7	13.2	13.9	14.7
	MS-RP	kg	12	12.2	12.2	13	13.5	14	14.7	15.5
	MSHP	kg								
	MSS	kg	8.5	8.7	9.0	9.4	9.9	10.5	11.2	12.0
	MSSS	kg	5.6	5.8	6.1	6.5	7.0	7.6	8.3	9.1

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 mm²/s at a temperature of 50 C.

Minimum recommended oil viscosity 13 mm²/s at operating temperature.

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

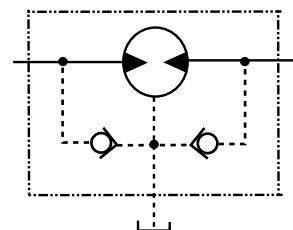
Where non-flammable fluids are to be used it is advisable to consult our Technical Department.

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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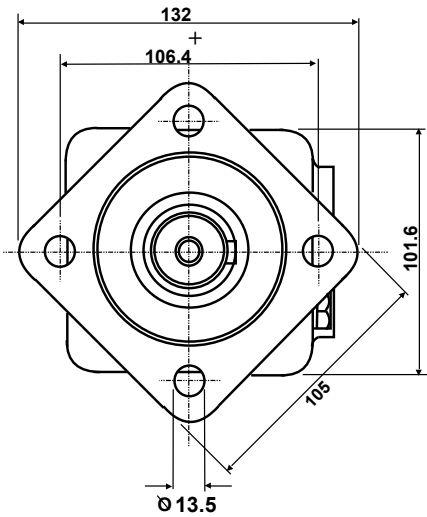
Tel: +44 (0)1205 311500

email: sales@adanltd.co.uk

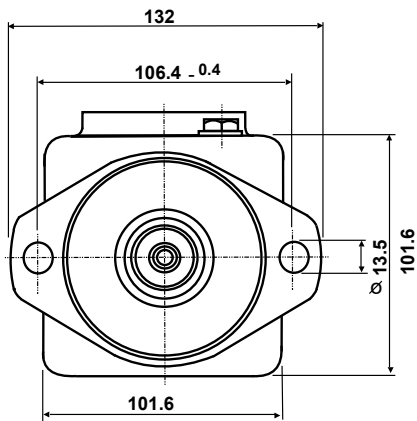
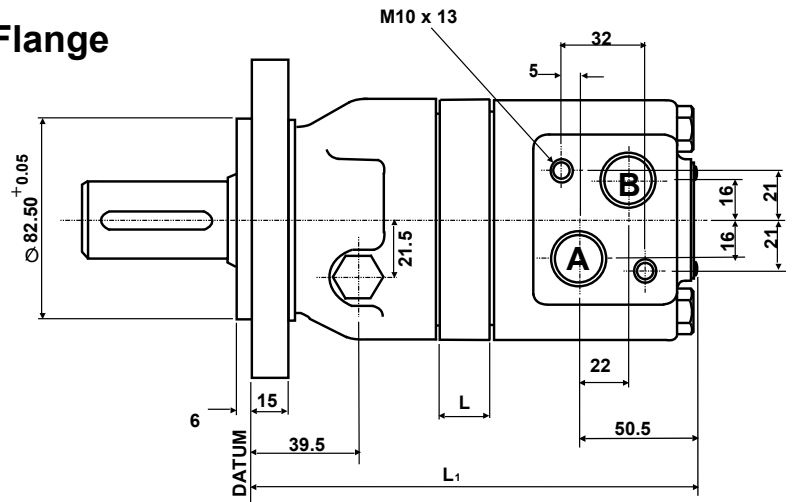
Fax: +44 (0)1205 358013

website: www.adanltd.co.uk

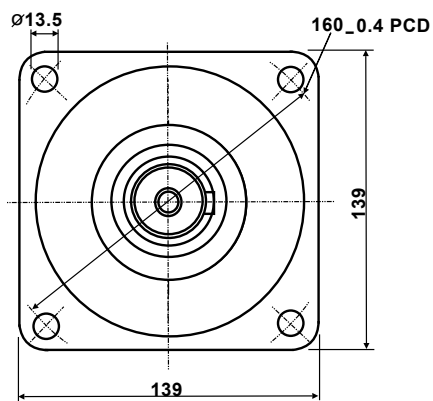
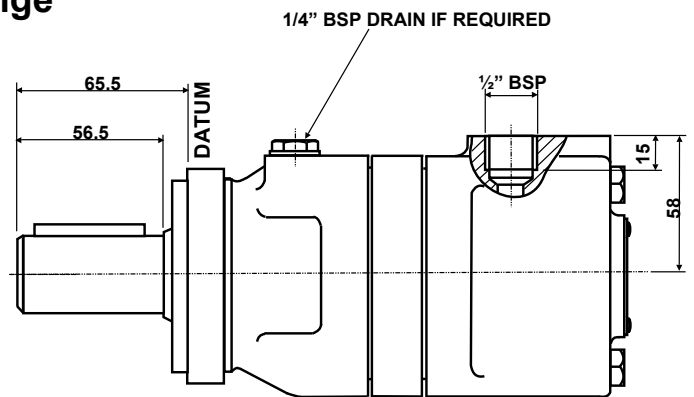




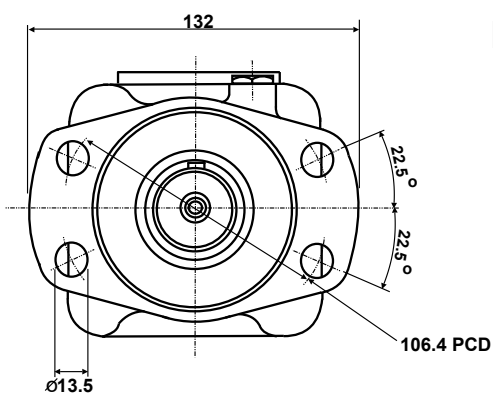
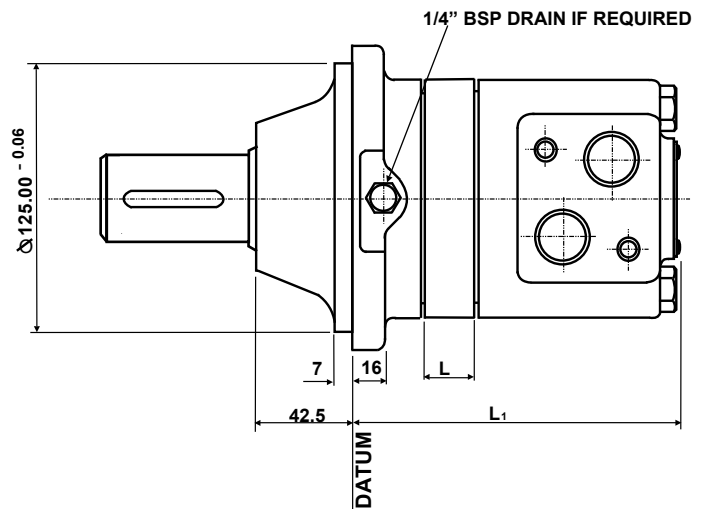
4 Bolt Flange



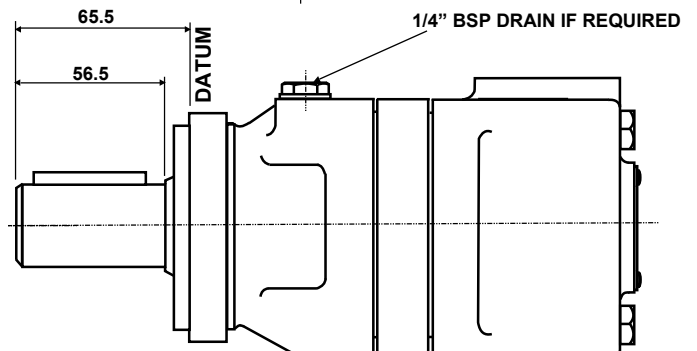
2 Bolt Flange



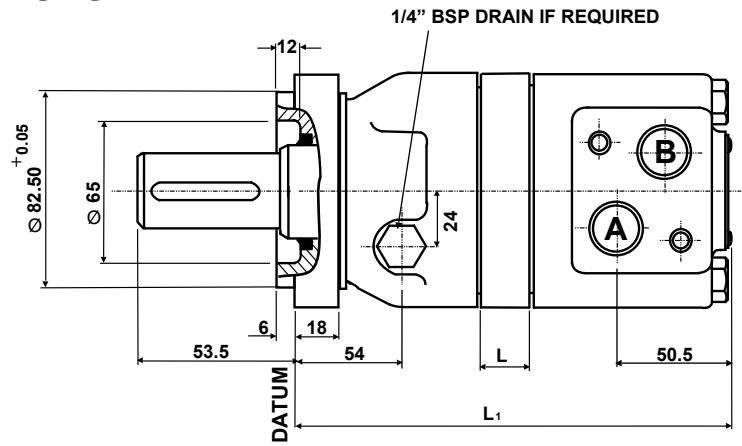
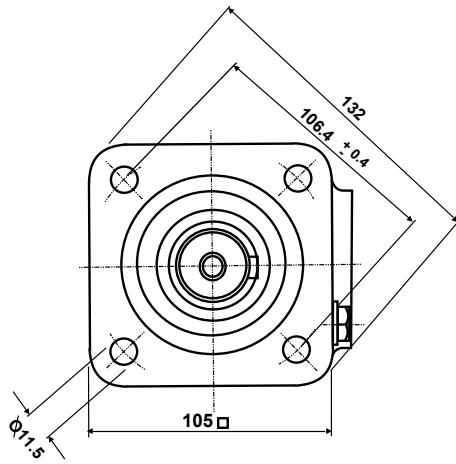
MSW



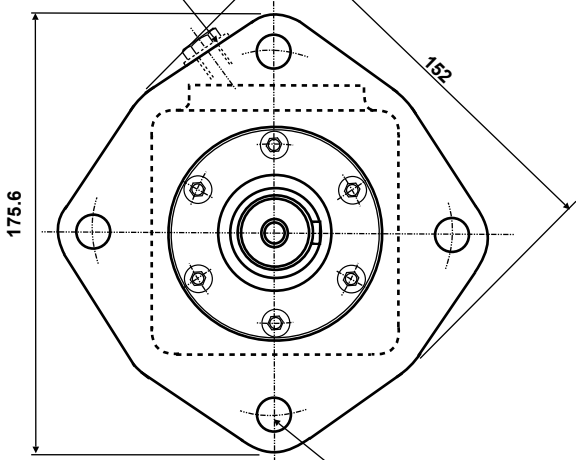
MSAM



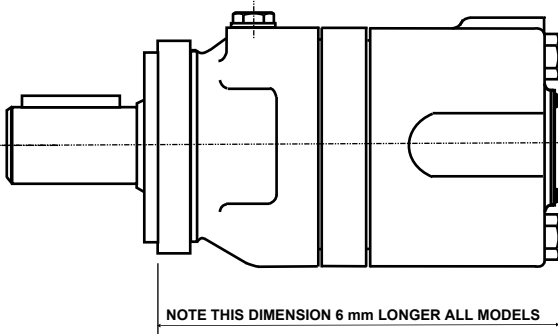
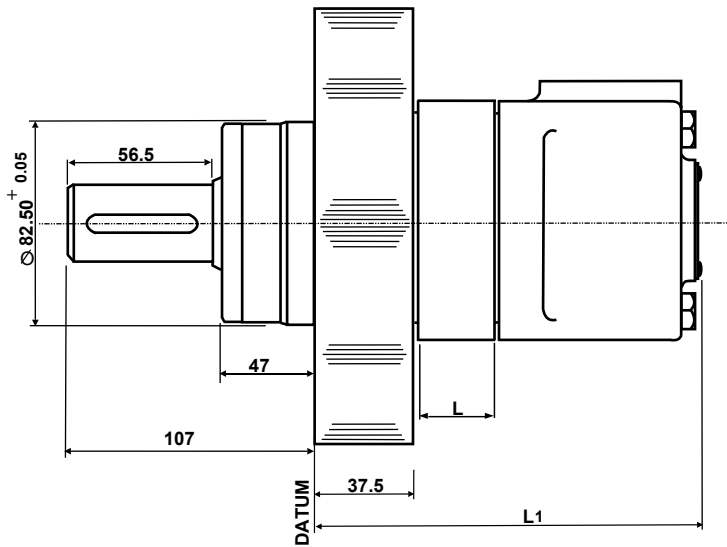
MSAS



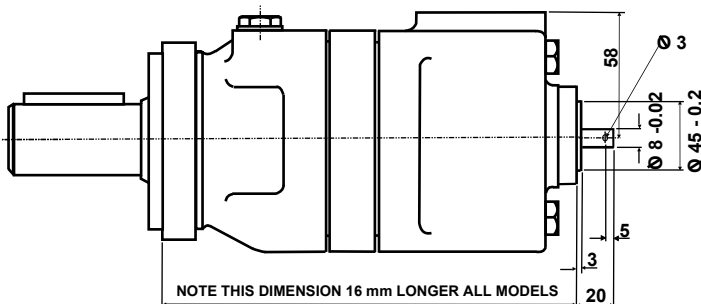
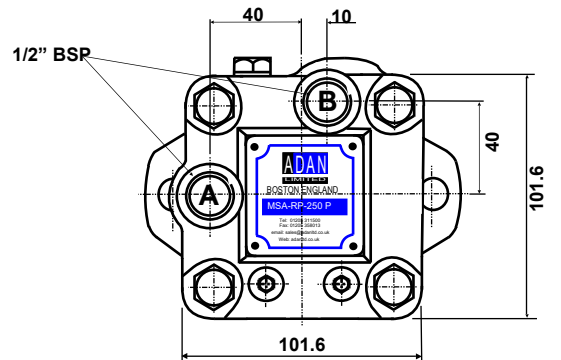
1/4" BSP DRAIN IF REQUIRED



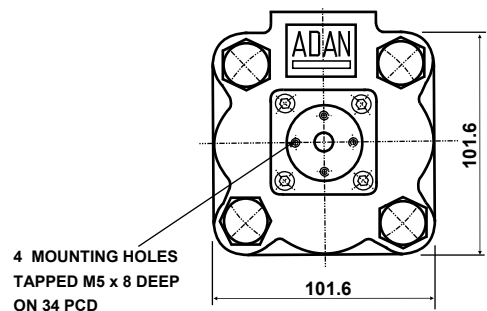
MSHP

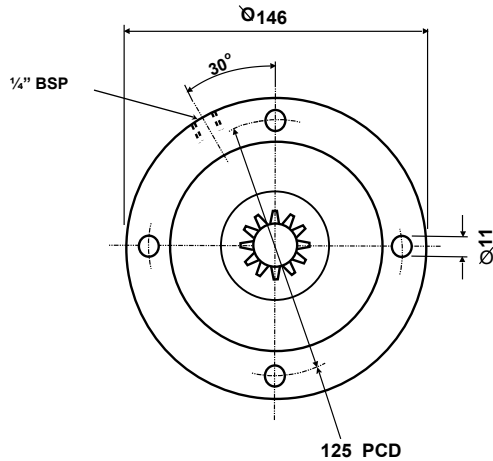


RP

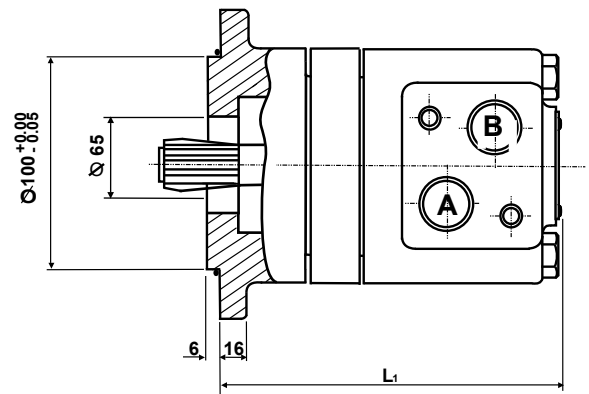


TA

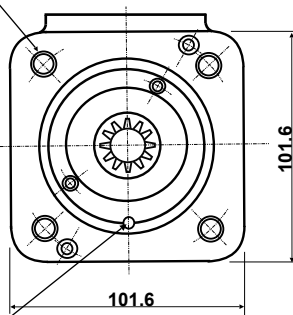




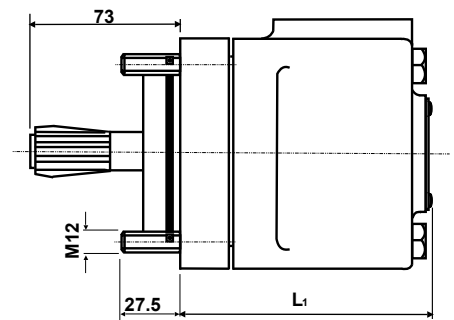
MSS



4 MOUNTING BOLTS ON 108 PCD



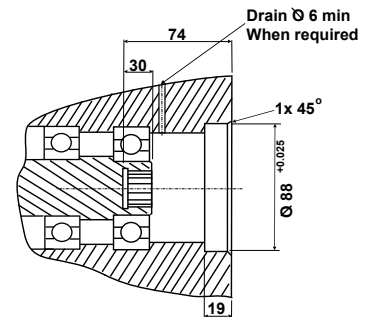
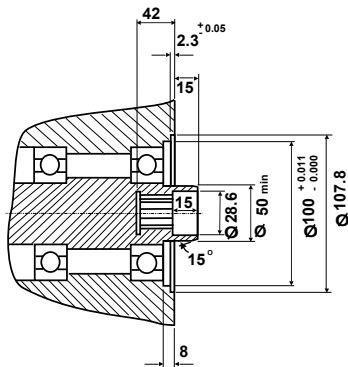
MSSS



DRAIN Ø 5 ON 77 PCD

MATING DIMENSIONS MSS

MATING DIMENSIONS MSSS



INTERNAL SPLINE DATA

FILLET ROOT SIDE FIT, 12 TEETH, 12/24 DP, 30° PRESSURE ANGLE,
 PITCH DIA. 25.4, MAJOR DIA. 28.0/27.9, MINOR DIA. 23.00/23.033,
 FILLET RAD. 0.2 MIN, MEASUREMENT BETWEEN 4.834/4.836 DIA. PINS 17.62/17.77

MATING COMPONENT MATERIAL

CASE HARDENING STEEL
 TREATED TO 58/60 ROCKWELL 'C'
 0.7 mm CASE DEPTH.

IMPORTANT

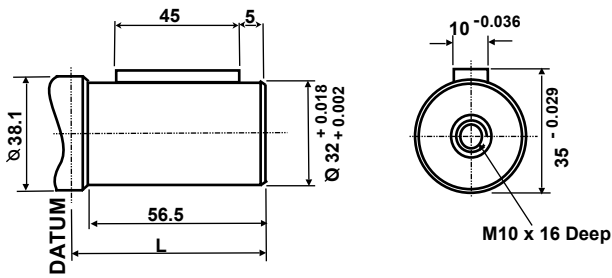
When using MSS or MSSS motors a drain line is required if the pressure in the return line exceeds the permissible pressure of the seal fitted to the attached component.

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.

Motor size	Dimn.	75	100	125	150	200	250	300	400
ALL TYPES	L	6.7	10.1	14.5	20.5	27.5	36.2	47.5	62.2
MSA/MSAM	L1	174.3	177.7	182.0	188.1	195.1	203.8	215.0	229.8
MSW	L1	136.3	139.7	144.0	150.1	157.1	165.8	177.0	191.8
MSAS	L1	185.3	188.7	193.0	199.1	206.1	214.8	226.0	240.8
MSHP	L1	135.5	138.5	142.5	148.5	155.5	164.5	175.5	190.5
MSS	L1	138.8	142.2	146.5	152.5	159.5	168.3	179.5	194.3
MSSS	L1	87.8	91.2	95.5	101.5	108.5	117.3	128.5	143.3

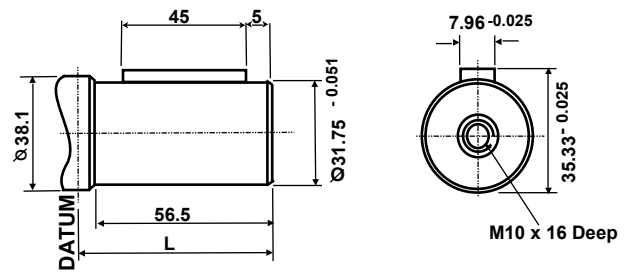
Standard 32mm Shaft - P

Max. Torque 850 Nm (7250 lbf-in)



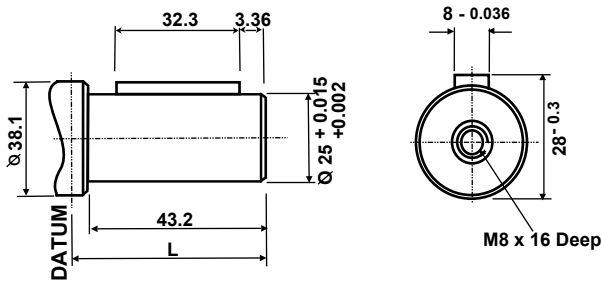
1 1/4" Dia. Shaft - U

Max. Torque 850 Nm (7250 lbf-in)



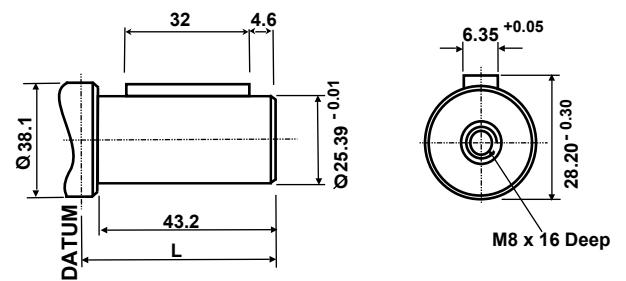
Metric 25mm Shaft - M

Max. Torque 300 Nm (3190 lbf-in)



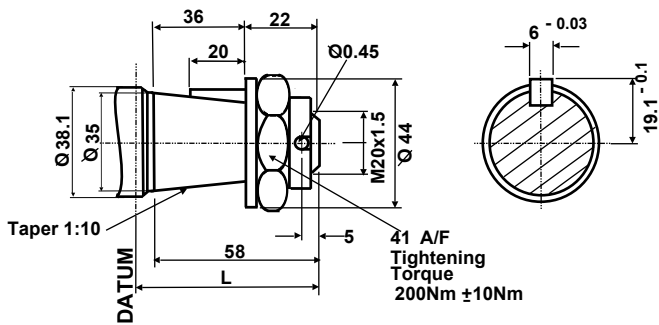
1" Dia Shaft - E

Max. Torque 300 Nm (3190 lbf-in)



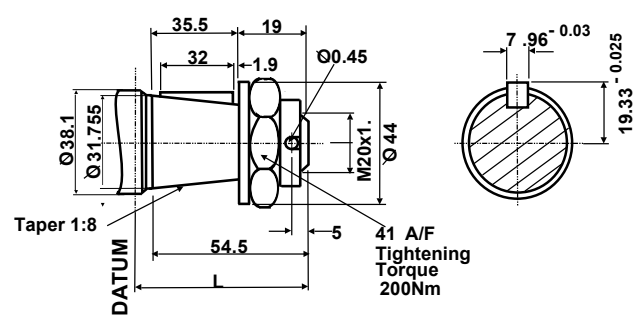
35mm Tapered Shaft - T

Max. Torque 950 Nm (8405 lbf-in)



1 1/4" Tapered Shaft - TX

Max. Torque 950 Nm (8405 lbf-in)



Dim.	MOTOR TYPE	SHAFT TYPE					
		P	U	M	E	T	TX
L	MSA/MSAM	65.5	65.5	52.2	52.2	65.5	65.5
	MSAS	53.5	53.5	40.2	40.2	53.5	53.5
	MSW	103.5	103.5	90.2	90.2	105.0	105.0
	MSHP	107.0	107.0	93.7	93.7	106.5	107.0

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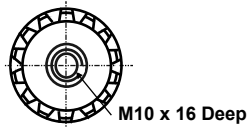
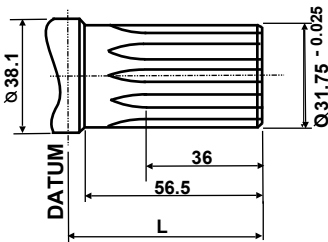
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14 Tooth Splined Shaft - S

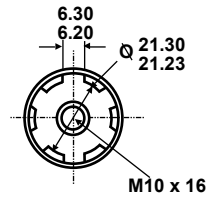
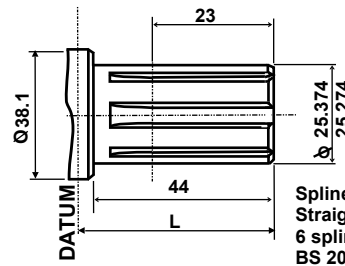
Max. Torque 850 Nm (7250 lbf-in)



Spline Data
ANS B92.1-1970
Flat root side fit
12/24 DP
30° Pressure Angle
14 Teeth

6 Splined Shaft - 6S

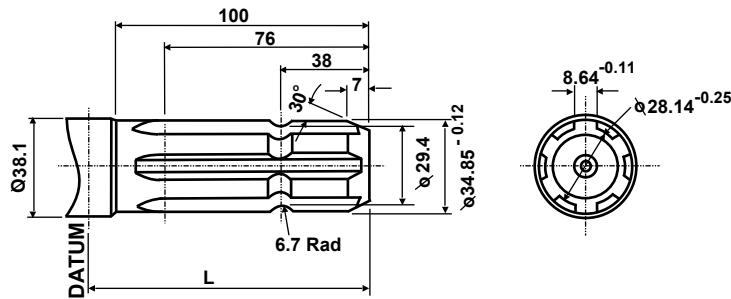
Max. Torque 360 Nm (3190 lbf-in)



Spline Data
Straight sided
6 splines
BS 2059 (SAE 6B)

PTO Shaft - D

Max. Torque 850 Nm (7250 lbf-in)



Dim.	MOTOR TYPE	SHAFT TYPE		
		S	6S	D
L	MSA/MSAM	65.5	53.0	109.0
	MSAS	53.5	43.0	99.0
	MSW	103.5	91.0	147.0
	MSHP	107.0	94.5	148.5

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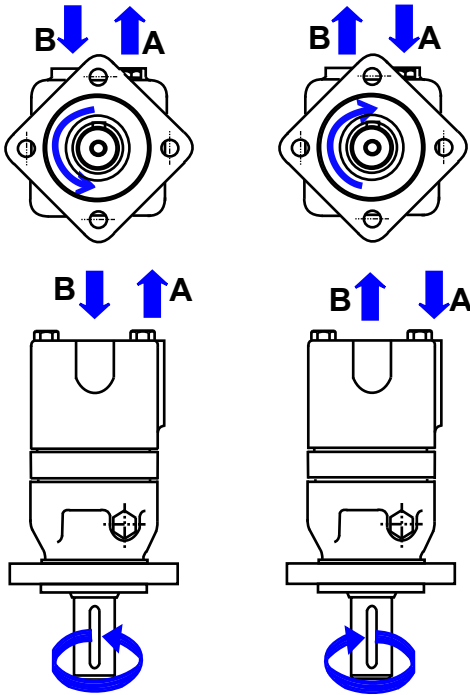


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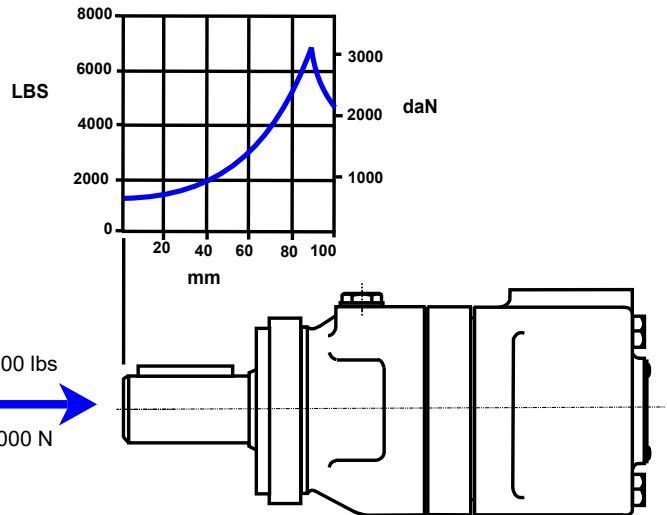
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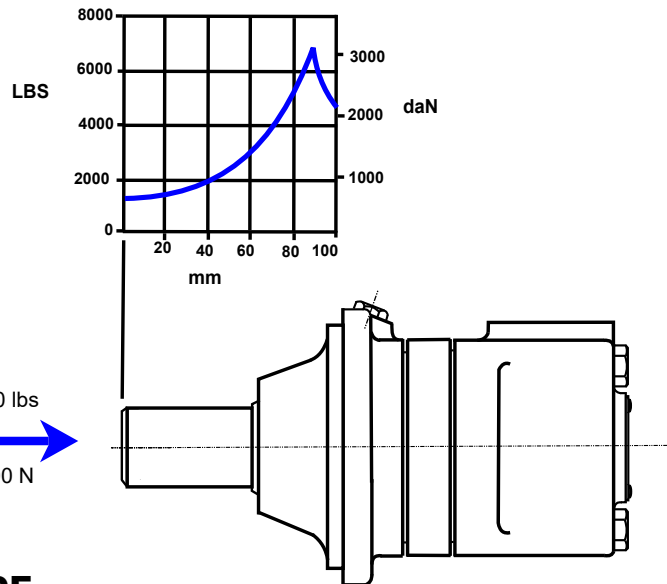
SHAFT ROTATION



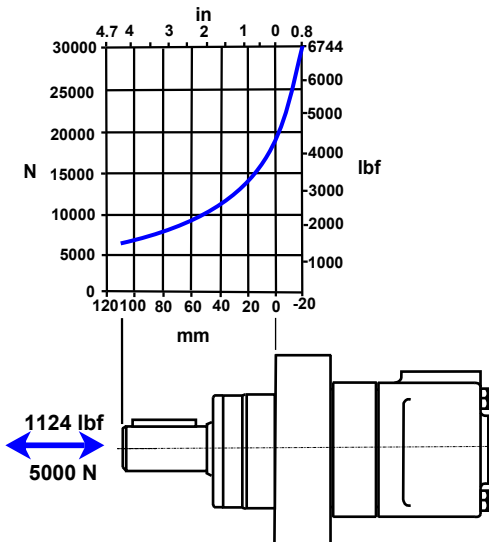
SHAFT LOADING
MSA, MSW, MSAM & MSAS



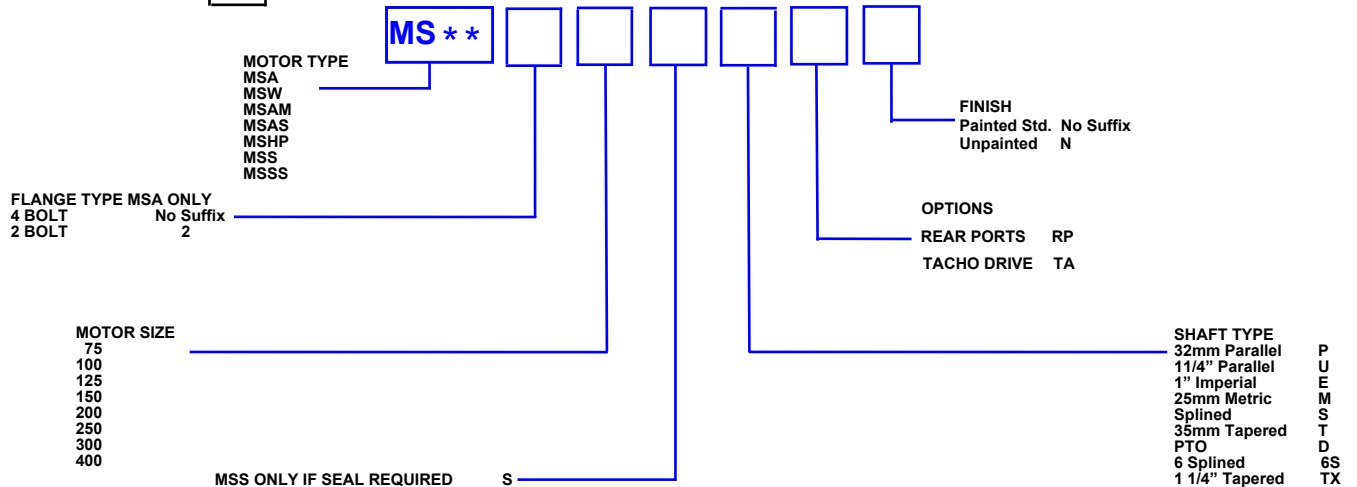
SHAFT LOADING MSW



SHAFT LOADING MSHP



ORDERING CODE



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PERFORMANCE GRAPHS 75 & 100 cc

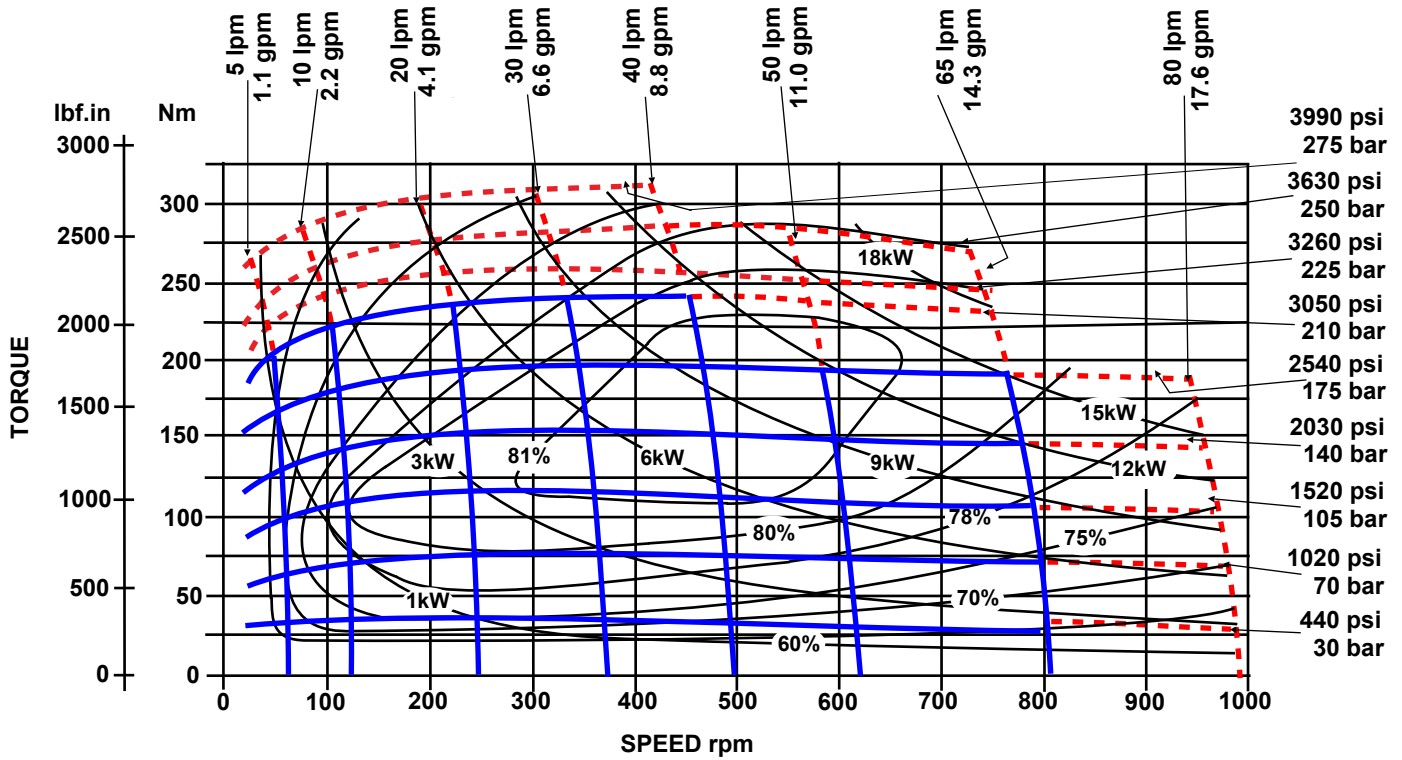
MS SERIES

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

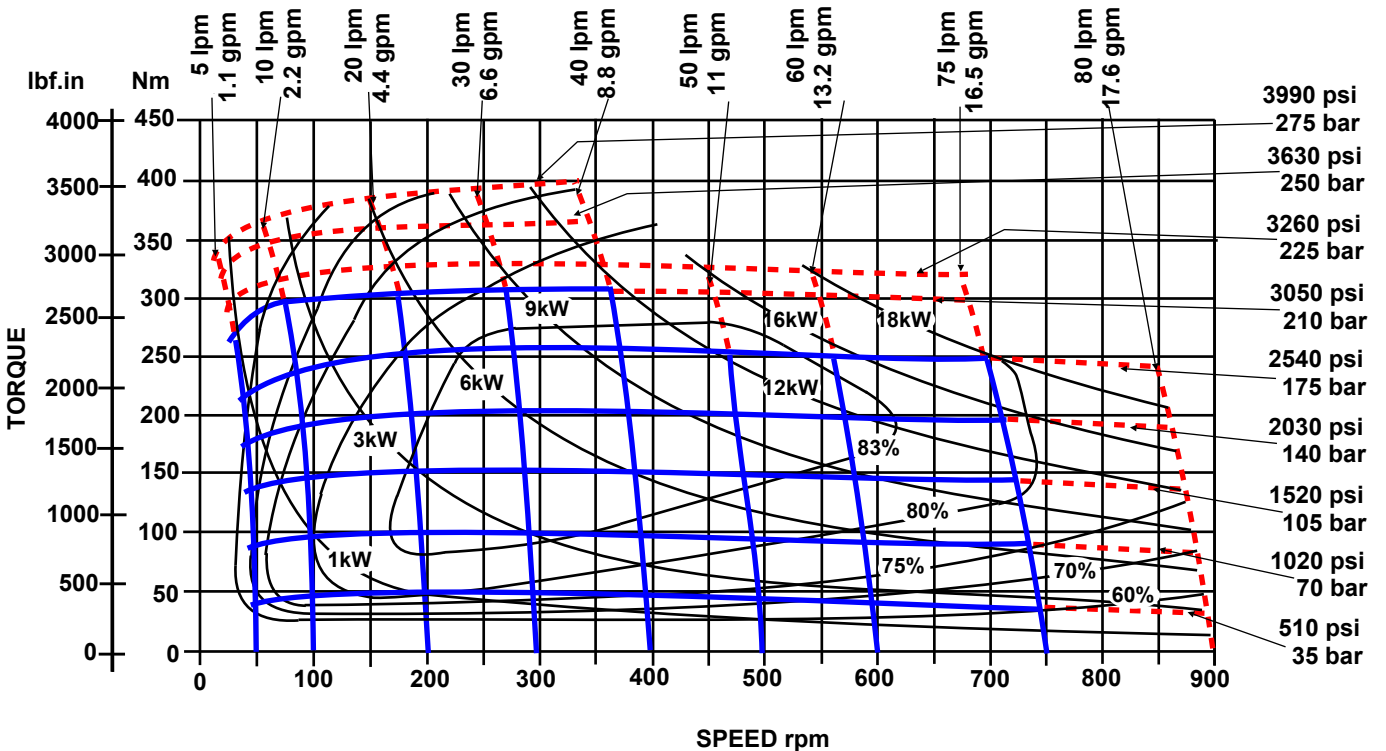
Maximum pressure drop and maximum speed must not occur simultaneously.

Maximum values are dependant on shaft type see note on page 5.

MSA 75



MSA 100



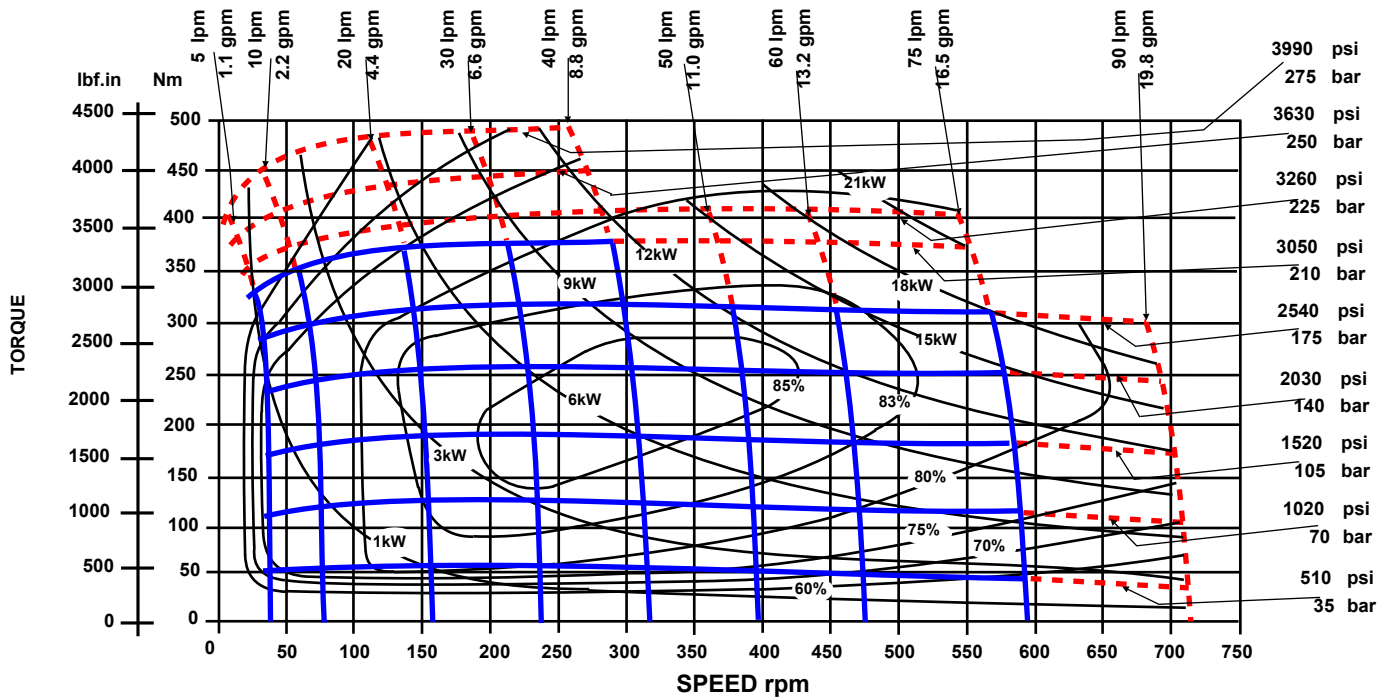
PERFORMANCE GRAPHS 125 & 150 cc MS SERIES

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

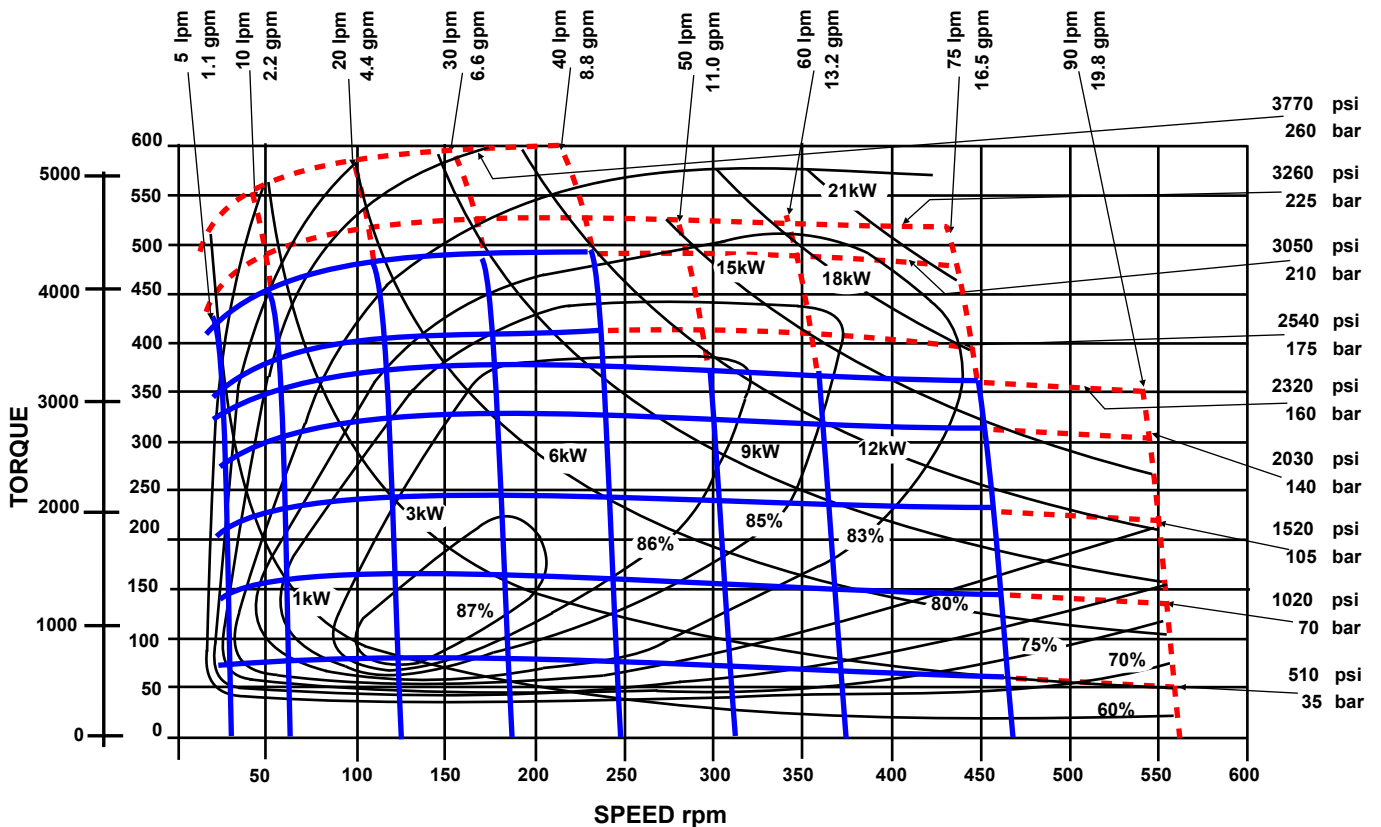
Maximum pressure drop and maximum speed must not occur simultaneously.

Maximum values are dependant on shaft type see note on page 5.

MSA 125



MSA 150



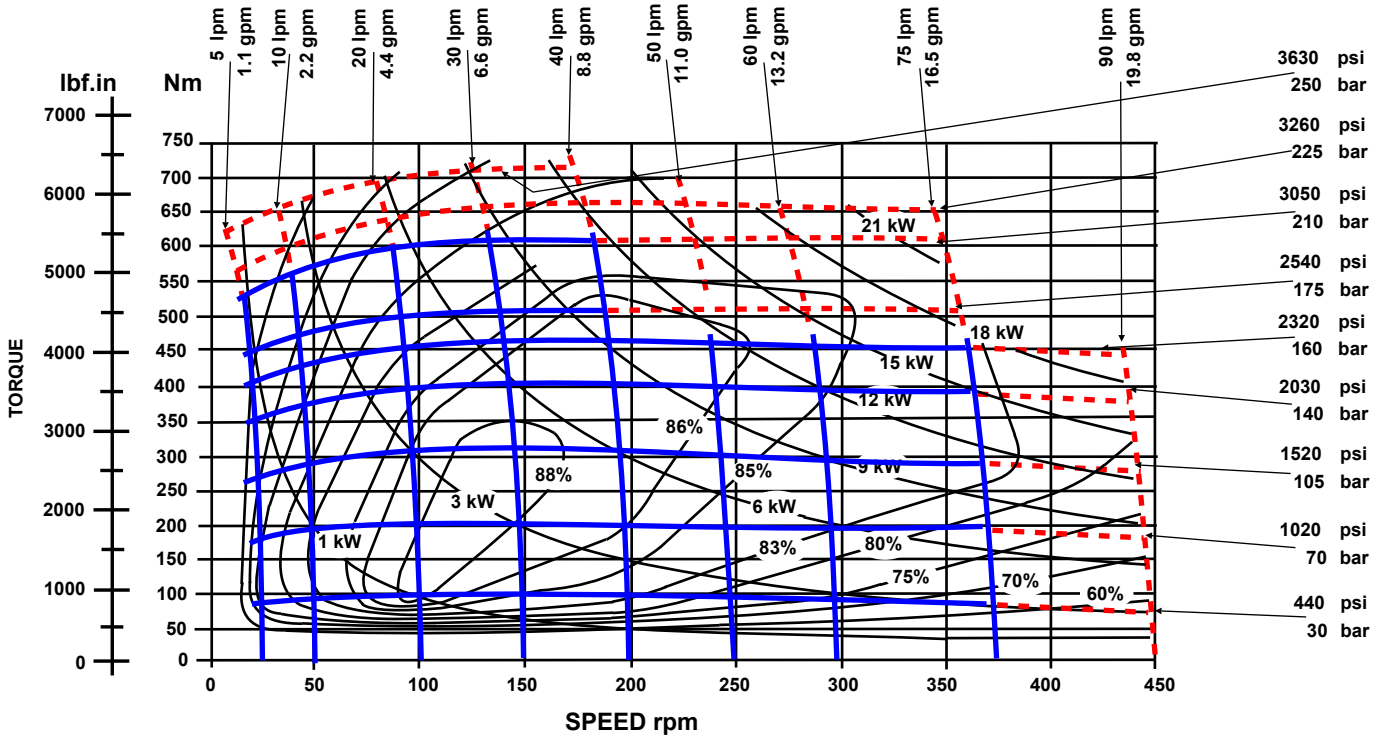
PERFORMANCE GRAPHS 200 & 250 cc MS SERIES

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

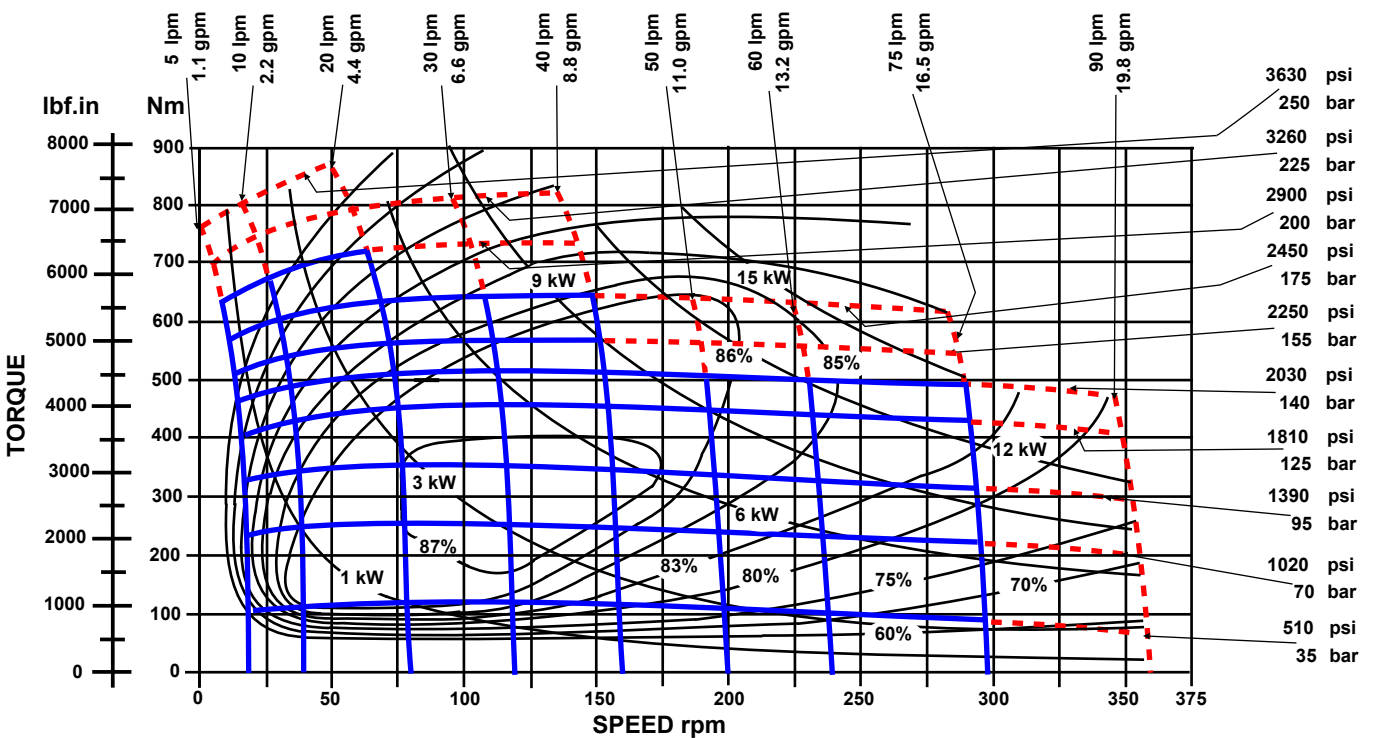
Maximum pressure drop and maximum speed must not occur simultaneously.

Maximum values are dependant on shaft type see note on page 5.

MSA 200



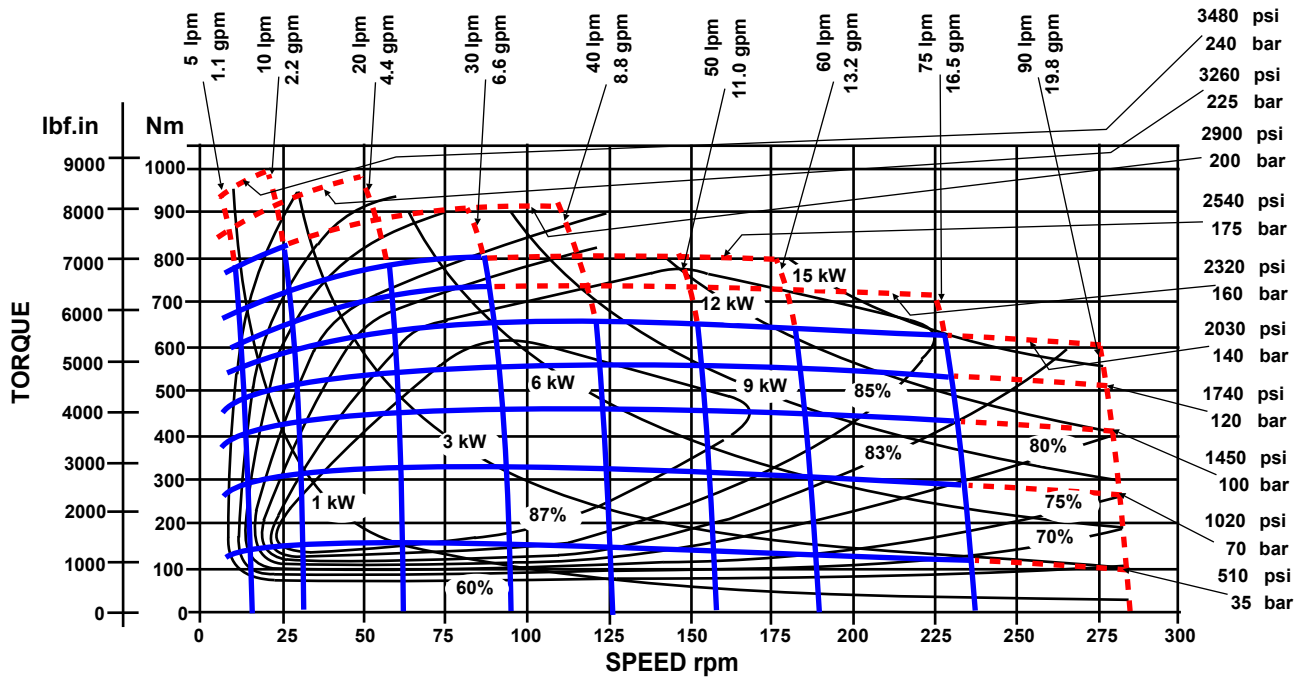
MSA 250



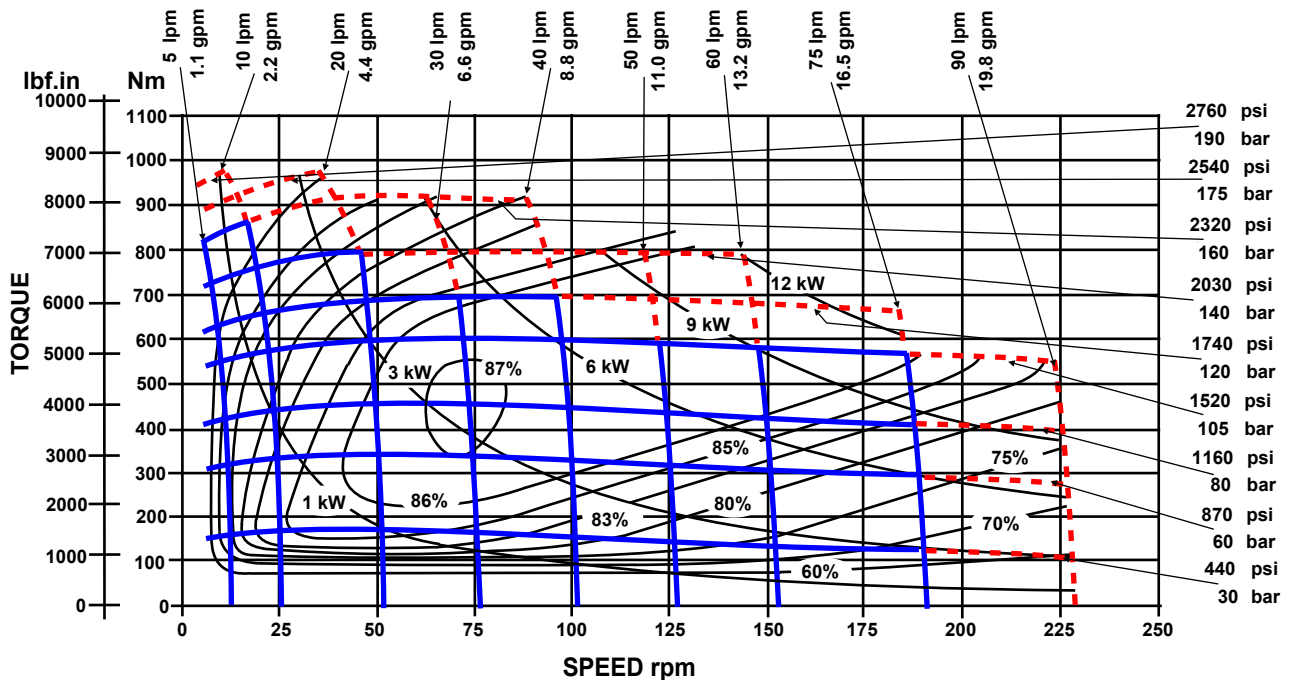
PERFORMANCE GRAPHS 300 & 400 cc MS SERIES

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MSA 300



MSA 400



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