

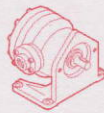

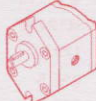

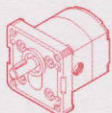

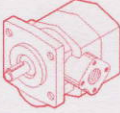

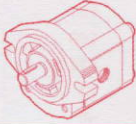

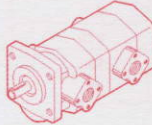

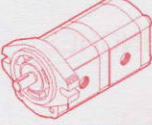

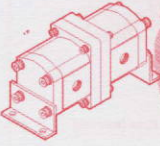

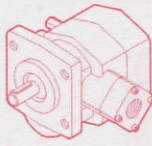
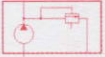
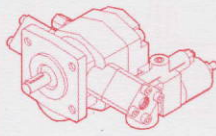



B

GEAR PUMPS		Graphic Symbol	Q max. cc/rev	P max. bar(PSI)	Speed r.p.m	Ref. Page
	GH1-02 ⋮ GH2-40		4.2 ⋮ 18.2	175 (2500)	300 ~ 2000	
	GS2-04 ⋮ GS2-22		4.5 ⋮ 22.4	210 (3000)	500 ~ 5000	
	HGP-05A-*03* ⋮ HGP-05A-*1.1*		0.35 ⋮ 1.13	210 (3000)	800 ~ 3500	
	HGP-1A-F1* ⋮ HGP-1A-F8*		1 ⋮ 7.8	250 (3500)	600 ~ 4500	
	HGP-2A-*2* ⋮ HGP-1A-*12*		2 ⋮ 12	250 (3500)	500 ~ 5000	
	HGP-3A-*6* ⋮ HGP-3A-*30*		6 ⋮ 30	250 (3500)	400 ~ 3000	
	HGP-22A-*22* ⋮ HGP-22A-*66*	Tandem Gear Pump 	2 ⋮ 12	250 (3500)	500 ~ 5000	
	HGP-33A-*66* ⋮ HGP-33A-*1717*	Tandem Gear Pump 	6 ⋮ 30	250 (3500)	400 ~ 3000	
	DMF-302A-6* ⋮ DMF-302A-30*	Synchronous Flow Divider 	2 ⋮ 30	210 (3000)	1000 ~ 3000	
	PR1-020 ⋮ PR2-080	Gear Pump + Relief Valve 	2 ⋮ 12	210 (3000)	500 ~ 5000	
	PR1+V2064 ⋮ PR2+V2064	Gear Pump + Lift Valve 	2 ⋮ 30	210 (3000)	500 ~ 5000	

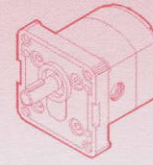
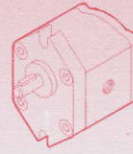


DIMENSIONS

MILLIMETERS(INCHES)

HGP-1A Series Single Gear Pumps

Pmax : 250 bar (3500 psi)
 Qmax : 1 cc/rev ~ 7.8 cc/rev
 Mounting Type : SAE 2-bolt European & DIN 4-bolt
 Fluid : ISO VG32 or VG46
 Viscosity & Temp : 12~800 cSt & -15 °C to 80 °C
 Filtration : 260 Microns Absolute or Finer
 Alignment and installation of pumps : under 0.05 TIR



B

Ordering Code

Design No.
 Type of Flange Mounting
 2B: SAE 2-bolt 4BD: DIN 4-bolt
 4DE: European 4-bolt
 Shaft Type
 X: Straight Shaft Y: Spline Shaft
 Rotation (Viewed from shaft end)
 R: Clockwise L: Counter-clockwise
 Geometric Displacement
 1: 1 cc/rev 2: 2 cc/rev 3: 3 cc/rev 4: 4 cc/rev
 5: 5 cc/rev 6: 6 cc/rev 8: 7.8 cc/rev
 Mounting Form
 F: Flange Mounting L: Foot Mounting
 Frame Size
 Series No.

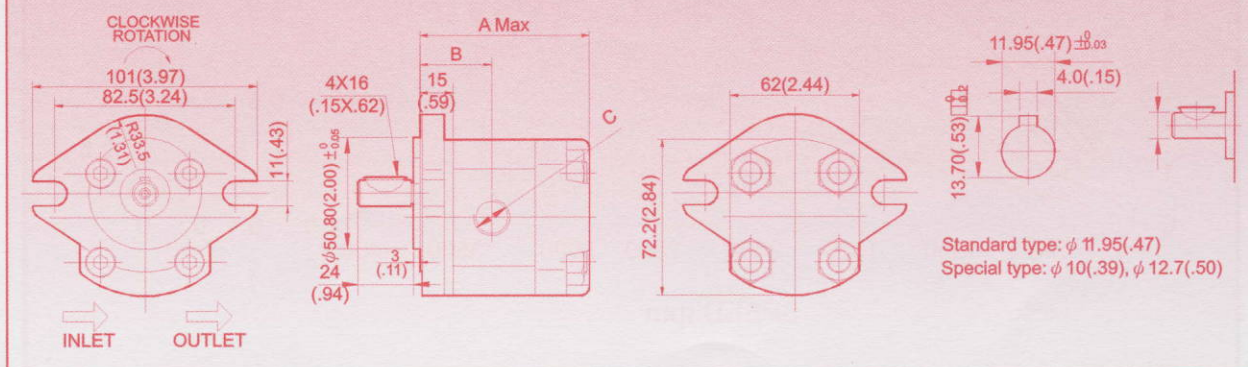
Ratings

Series	Geometric Displacement cc/rev	Pressure bar (psi)		Speed rpm			Weight Kg(lb)
		Work	Max.	Rate	Max.	Min.	
HGP-1A-F1*	1	210 (3000)	250 (3500)	1800	4500	1000	1.00(2.22)
HGP-1A-F2*	2				4500	600	1.05(2.33)
HGP-1A-F3*	3				4500	600	1.15(2.55)
HGP-1A-F4*	4				4000	600	1.18(2.62)
HGP-1A-F5*	5				3200	600	1.20(2.66)
HGP-1A-F6*	6				3200	600	1.30(2.88)
HGP-1A-F8*	7.8				3200	600	1.30(2.88)

DIMENSIONS

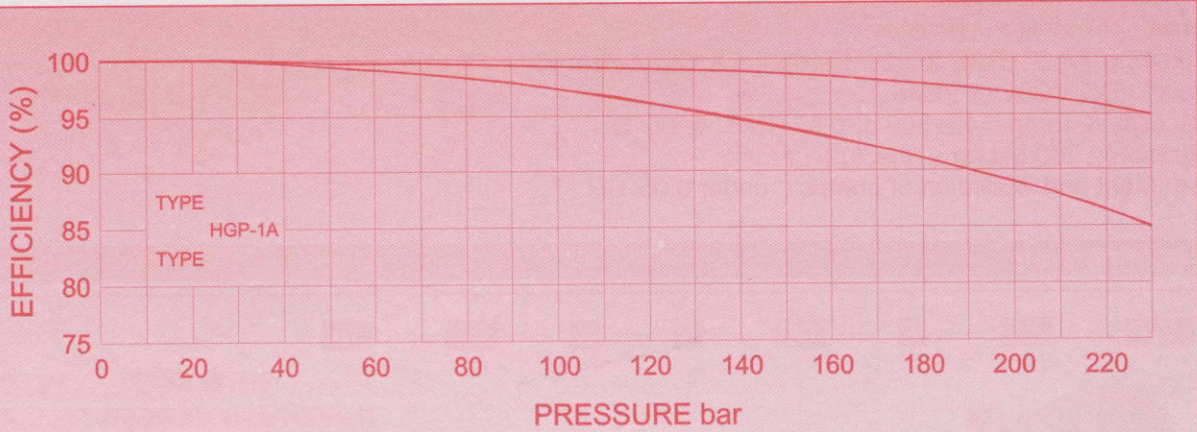
MILLIMETER(INCHES)

HGP-1A-F*-.*-2B-10 (SAE 2-bolt)



Performance Curves

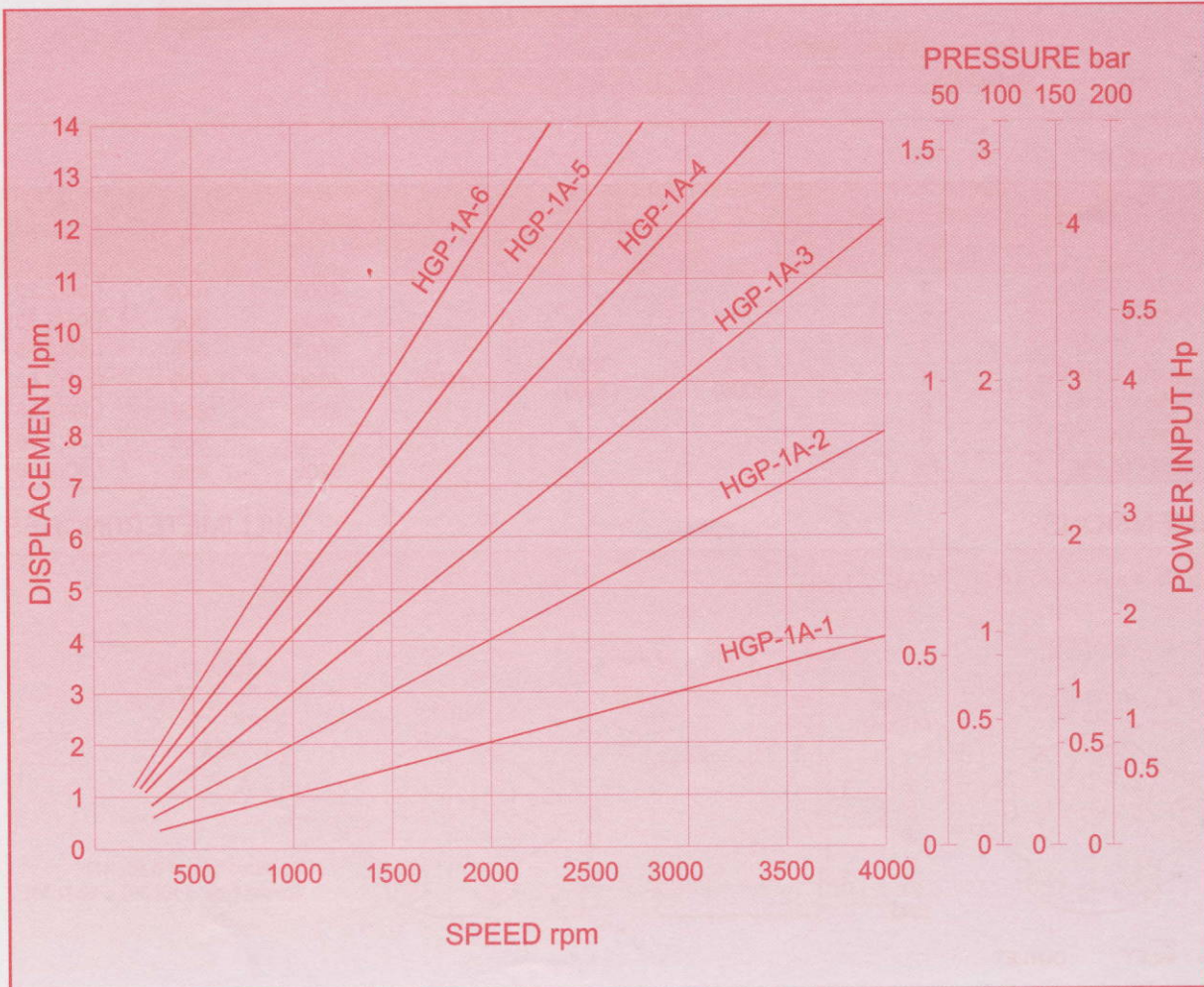
Pressure / Volumetric Efficiency



Test Conditions:

1. Oil Viscosity 45cSt
2. Oil Temperature 40 °C
3. Speed 1500rpm

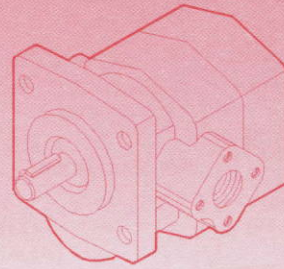
Displacement / Power Input / Speed





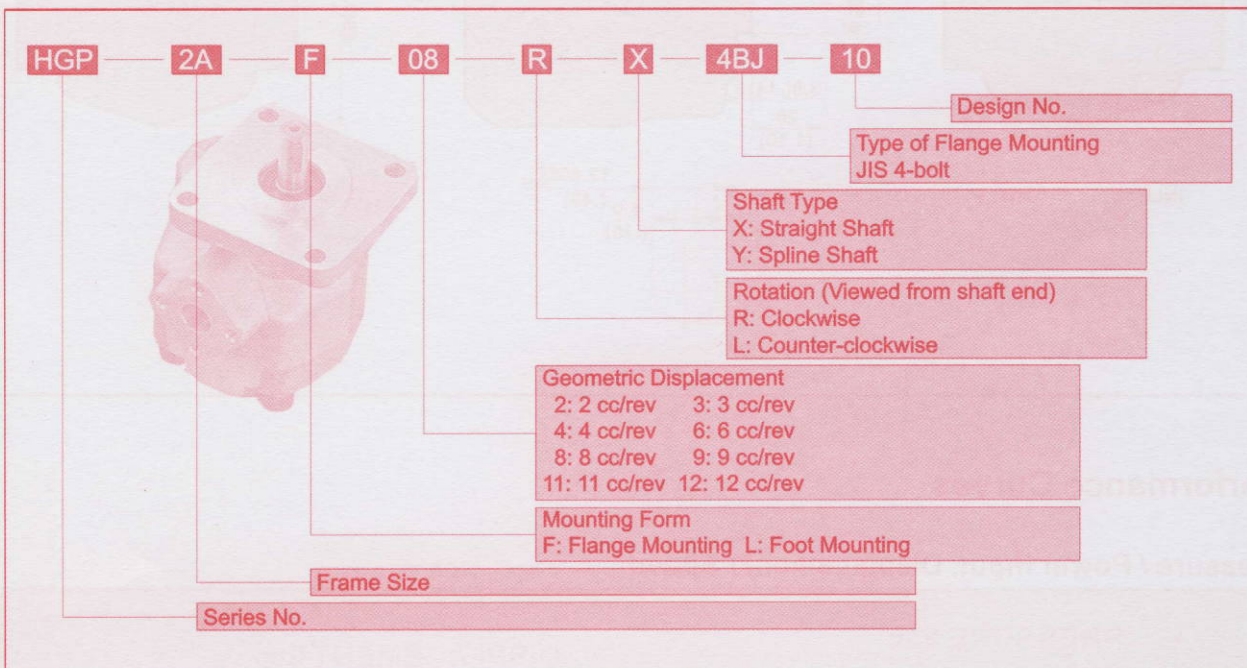
HGP-2A Series Single Gear Pumps

Pmax : 250 bar (3500 psi)
 Qmax : 2 cc/rev ~ 12 cc/rev
 Mounting Type : JIS 4-bolt
 Fluid : ISO VG32 or VG46
 Viscosity & Temp : 12~800 cSt & -15°C to 80 °C
 Filtration : 260 Microns Absolute or Finer
 Alignment and installation of pumps : under 0.05 TIR



B

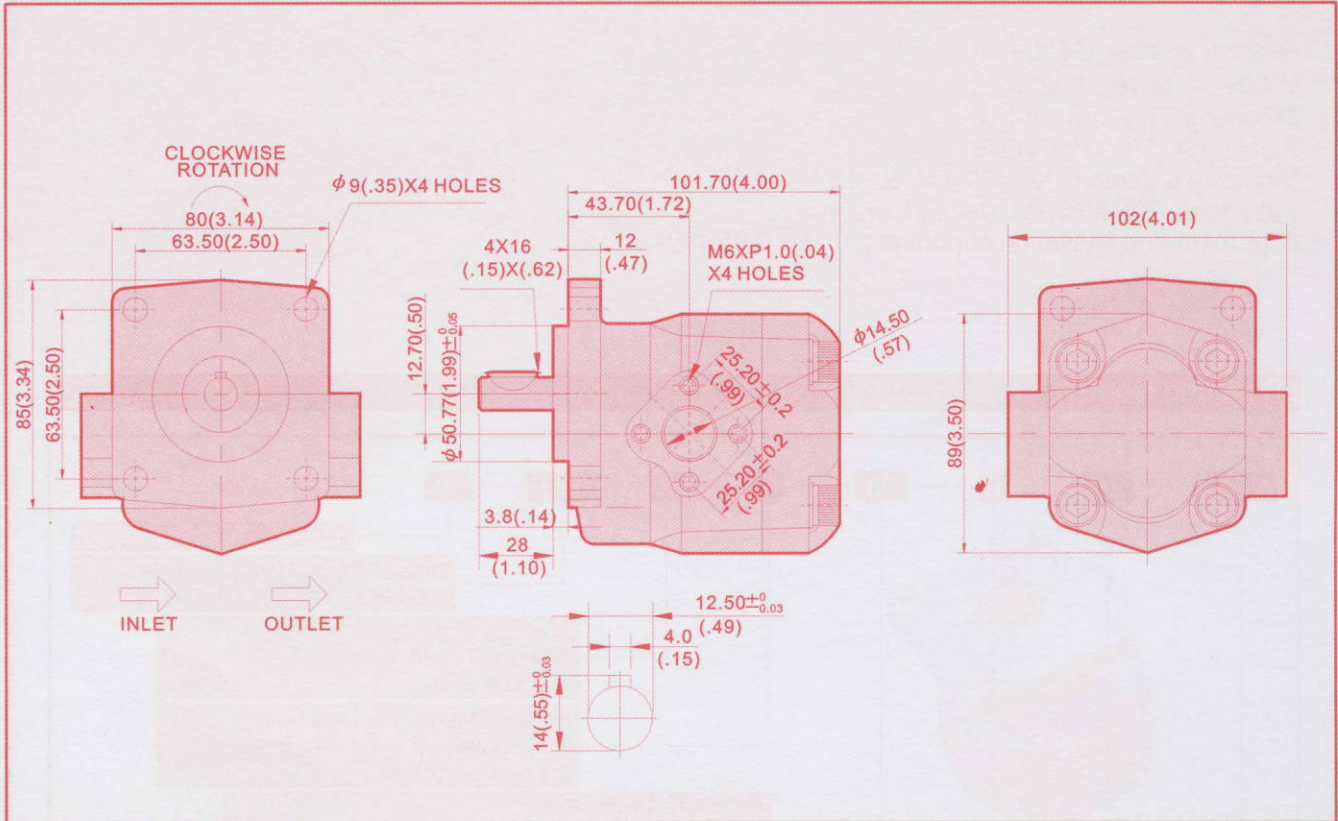
Ordering Code



■ Ratings

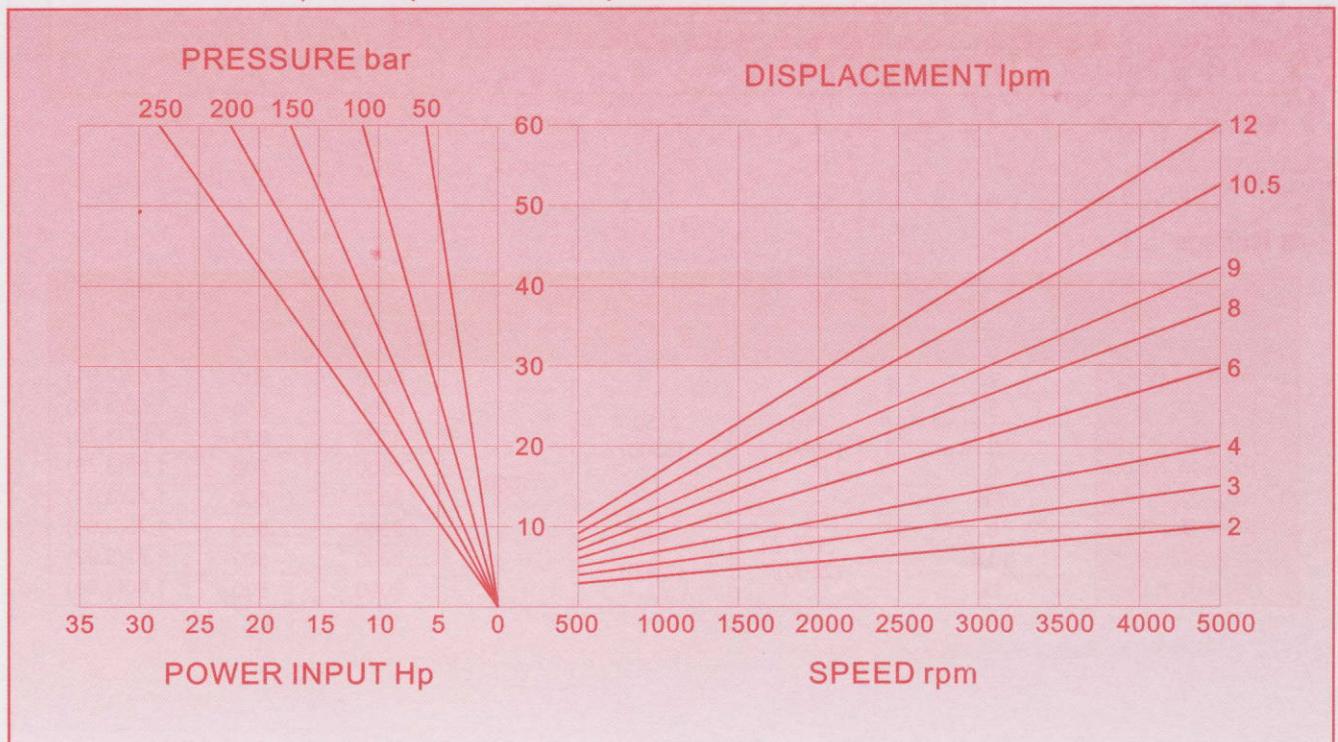
Series	Geometric Displacement cc/rev	Pressure bar (psi)		Speed rpm			Weight Kg(lb)
		Work	Max.	Rate	Max.	Min.	
HGP-2A-*2*	2	210 (3000)	250 (3500)	1800	5000	900	1.63(3.61)
HGP-2A-*3*	3				5000	850	1.65(3.66)
HGP-2A-*4*	4				4500	800	1.67(3.70)
HGP-2A-*6*	6				3500	700	1.69(3.75)
HGP-2A-*8*	7.5				3000	600	1.72(3.81)
HGP-2A-*9*	9	175 (2500)	210 (3000)	2000	2500	550	1.75(3.88)
HGP-2A-*11*	10.5				2000	500	1.77(3.92)
HGP-1A-*12*	12				2000	500	1.80(3.99)

HGP-2A Series



Performance Curves

Pressure / Power Input, Displacement / Speed



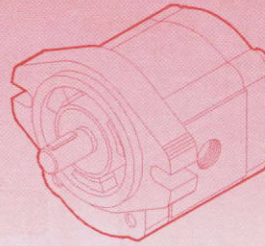


DIMENSIONS

MILLIMETERS(INCHES)

HGP-3A Series Single Gear Pumps

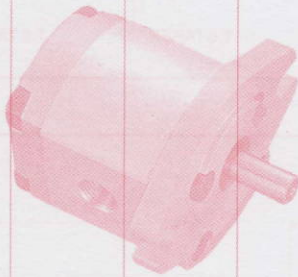
- Pmax : 250 bar (3500 psi)
- Qmax : 6 cc/rev ~ 30 cc/rev
- Mounting Type : SAE 2-BOLT DIN 4-bolt
- Fluid : ISO VG32 or VG46
- Viscosity & Temp : 12~800 cSt & -15°C to 80°C
- Filtration : 260 Microns Absolute or Finer
- Alignment and installation of pumps : under 0.05 TIR



B

Ordering Code

HGP — 3A — F — 13 — R — X — 2B — 10



Design No.

Type of Flange Mounting

- 2B: SAE 2-bolt
- 4BD: DIN 4-bolt

Shaft Type

- X: Straight Shaft
- Y: Spline Shaft
- Z: Taper Shaft

Rotation (Viewed from shaft end)

- R: Clockwise
- L: Counter-clockwise

Geometric Displacement

- 6: 6 cc/rev 8: 8.4 cc/rev 11: 11 cc/rev
- 13: 13 cc/rev 14: 14.3 cc/rev 17: 16.5 cc/rev
- 19: 19.2 cc/rev 23: 23 cc/rev 25: 25 cc/rev
- 28: 28 cc/rev 30: 30 cc/rev

Mounting Form

- F: Flange Mounting
- L: Foot Mounting

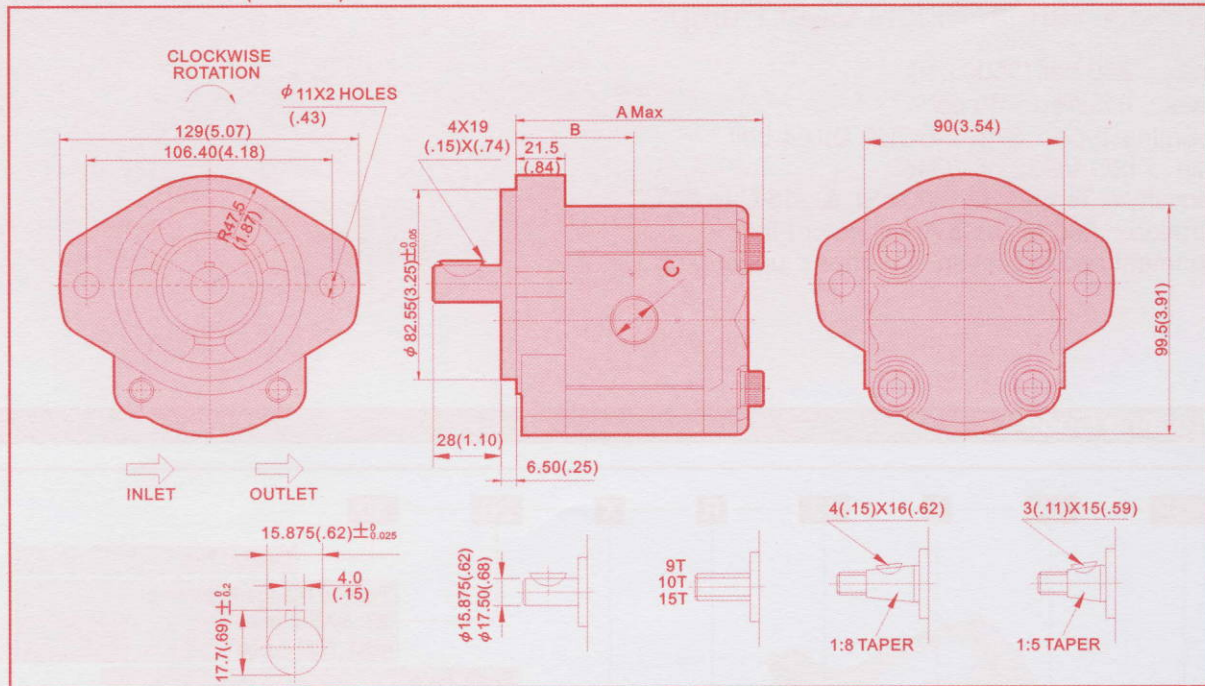
Frame Size

Series No.

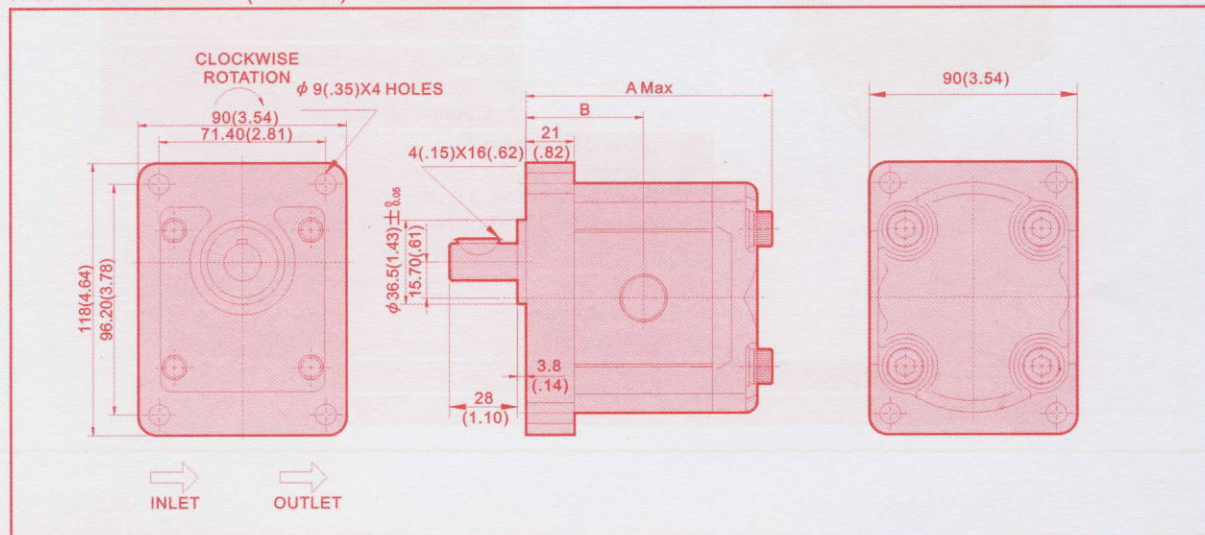
■ Ratings

Series	Geometric Displacement cc/rev	Pressure bar (psi)		Speed rpm			Port Sizes		Weight Kg(lb)
		Work	Work	Rate	Max.	Min.	Out	In	
HGP-3A-*6*	6	210 (3000)	250 (3500)	1800	3000	700	1/2PT(Rc)	3/8PT(Rc)	2.25(4.99)
HGP-3A-*8*	8.4								2.40(5.32)
HGP-3A-*11*	11						2.55(5.66)		
HGP-3A-*13*	13						2.70(5.99)		
HGP-3A-*14*	14.3						2.85(6.32)		
HGP-3A-*17*	16.5						3.05(6.77)		
HGP-3A-*19*	19.2						3.20(7.10)		
HGP-3A-*23*	23						3.35(7.43)		
HGP-3A-*25*	25						3.50(7.77)		
HGP-3A-*28*	28						175 (2000)	210 (2500)	400
HGP-3A-*30*	30	3.60(7.99)							

HGP-*3A-**-4BD-10 (4 Holes)

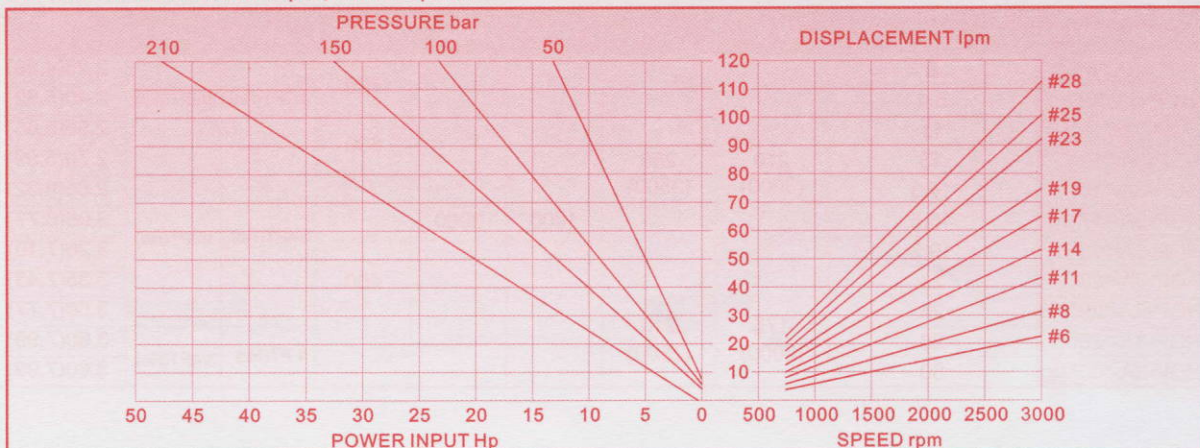


HGP-*3A-**-4BD-10 (4 Holes)



Performance Curves

Pressure / Flow / Power Input, Flow / Speed



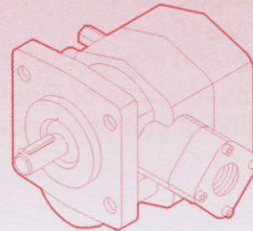


DIMENSIONS

MILLIMETERS(INCHES)

PR1 Series Gear Pump with Relief Valve

- Pmax : 210 bar (3000 psi)
- Qmax : 2 cc/rev ~ 12 cc/rev
- Mounting Type : JIS 4-bolt
- Fluid : ISO VG32 or VG46
- Viscosity & Temp : 12~800 cSt & -15°C to 80°C
- Filtration : 260 Microns Absolute or Finer
- Alignment and installation of pumps : under 0.05 TIR



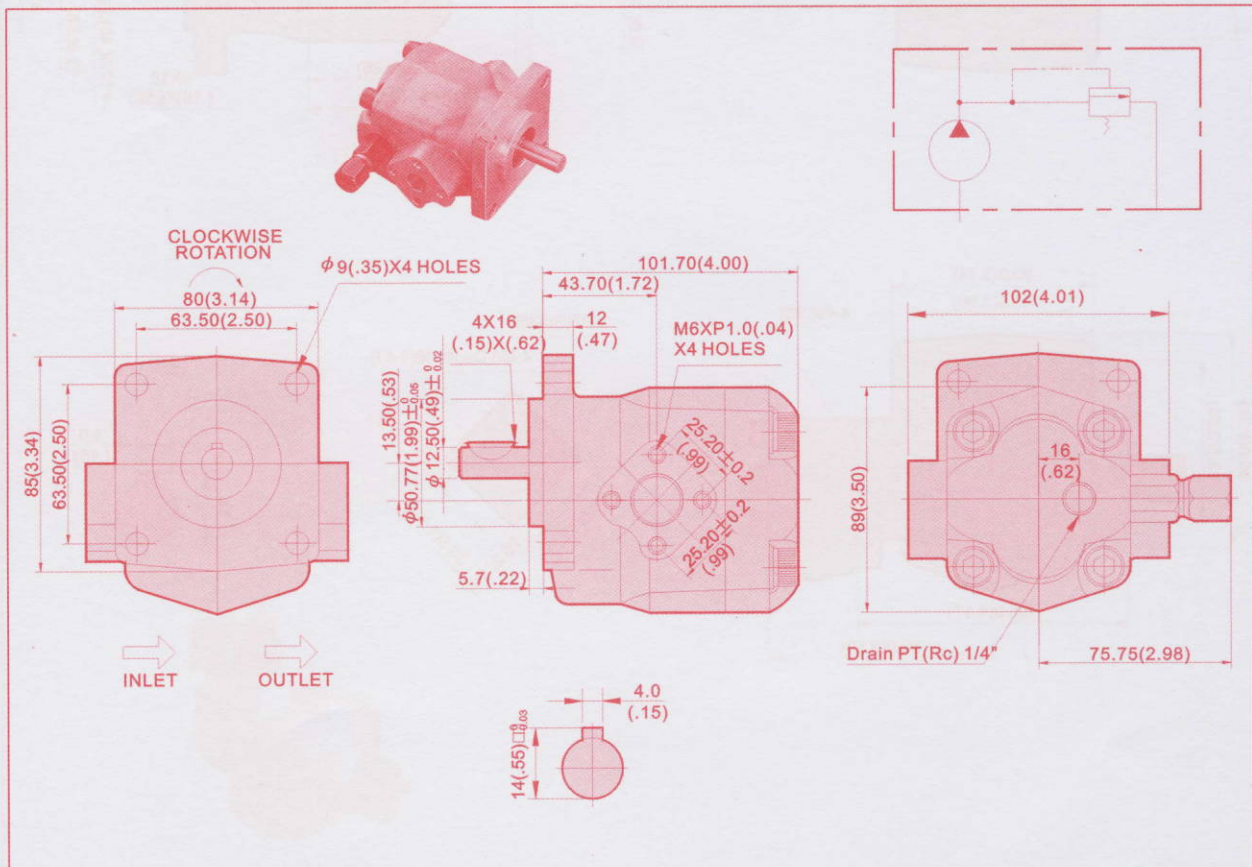
B

■ Ratings

Series	Geometric Displacement cc/rev	Pressure bar (psi)		Speed rpm	Speed rpm		Weight Kg(lb)
		Work	Max.		Rate	Max.	
PR1-020	2	175 (2500)	210 (3000)	1800	5000	900	1.70(3.77)
PR1-030	3				5000	850	1.70(3.77)
PR1-040	4				4500	800	1.70(3.77)
PR1-060	6				3500	700	1.70(3.77)
PR1-075	7.5				3000	600	1.70(3.77)
PR1-090	9				2500	550	1.70(3.77)
PR1-105	10.5				2000	500	1.70(3.77)
PR1-120	12				2000	500	1.70(3.77)

DIMENSIONS

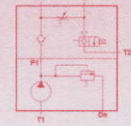
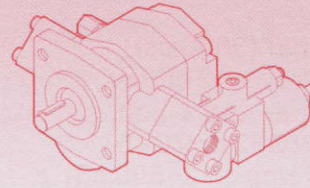
MILLIMETER(INCHES)





PR1 + V2064 Series Gear Pump with Lift Valve

Pmax : 210 bar (3000 psi)
Qmax : 20 lpm (1800 rpm)
Mounting Type : JIS 4-bolt
Fluid : ISO VG32 or VG46
Viscosity & Temp : 12~800 cSt & -15°C to 80°C
Filtration : 260 Microns Absolute or Finer
Alignment and installation of pumps : under 0.05 TIR



DIMENSIONS

MILLIMETER(INCHES)

