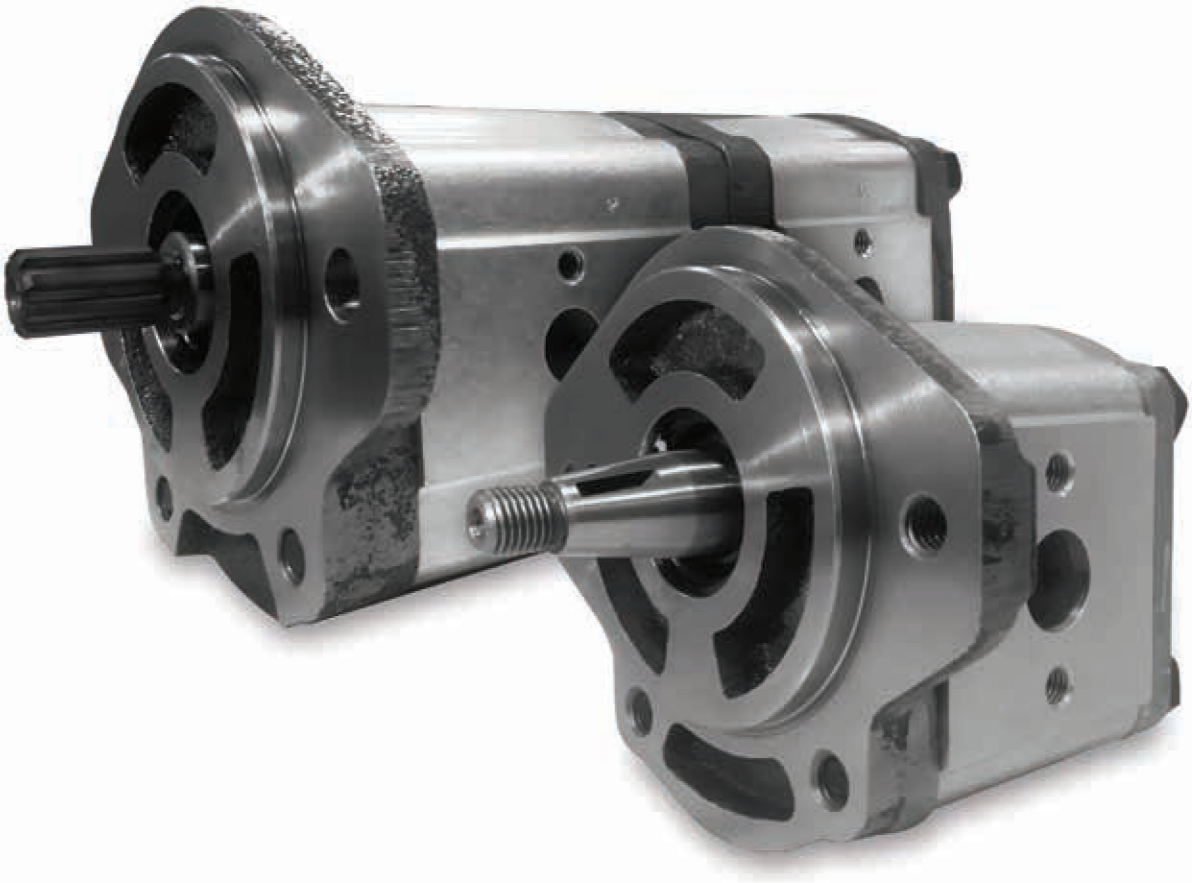
External Gear Pump
GD5 - Series



Powering Business Worldwide

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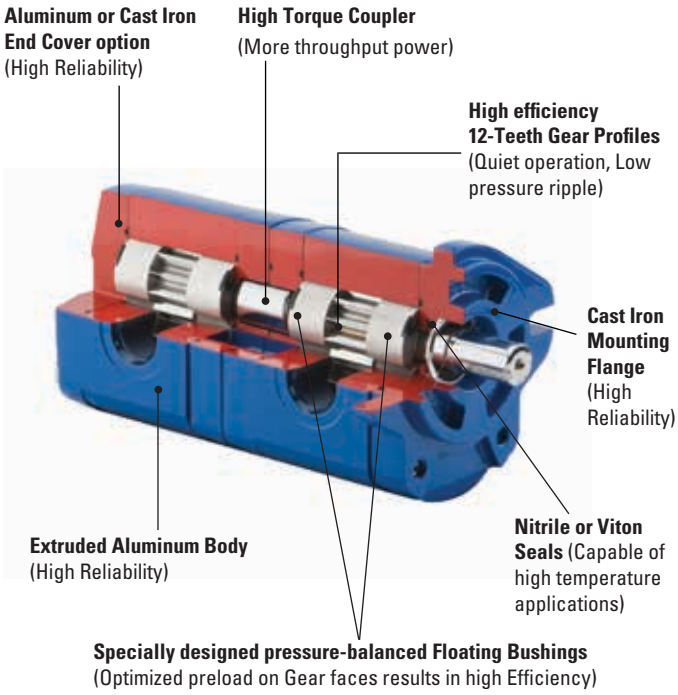
General Introduction

Highlights

Eaton Gear Products combine state of the art innovation & manufacturing processes. These products are designed to satisfy global customer requirements for higher pressure, quiet operation, long life & full range of options & features.

GD5 Gear pump is a floating bushing, pressure balanced design with a high strength extruded Aluminum Body, Aluminium or Cast Iron End Cover & Cast Iron Mounting Flange.

The wide choice of Shafts, Flanges & Ports in compliance with all international standards (SAE, DIN, ISO & European). Displacements from 5.1cm³/rev (0.31in³/rev) to 24.0 cm³/rev (1.46 in³/rev). Maximum Pressure up to 210 bar (3046 psi). Maximum speed up to 3000 RPM.



Features

- 12 Teeth, Low noise, Low pressure ripple & High efficiency gear design
- Continuous operating pressures upto 210 bar (3046 psi)
- Maximum operating speed - 3000 RPM
- Displacements from 5.1cm³/rev (0.31in³/rev) to 24.0 cm³/rev (1.46 in³/rev)
- SAE, European, DIN & ISO Flange, Porting styles & Shaft options
- Optional Sectional Sealing for Double pumps
- Built to ISO 9001 Standards

Benefits

- Low noise & Low pressure ripple
- Wide array of features for design flexibility
- Field reversability
- Optimized preload on gear faces resulting in higher efficiencies

Applications

- Tractors & Harvesters
- Machine Tools
- Steering Circuits
- Compactors
- Sweepers
- Rotary & Reel Mowers
- Lift Trucks
- Fan Drive Systems
- Auxiliary Work Circuits

Markets Served

- Agriculture
- Turfcare Equipment
- Construction
- Earthmoving
- Material Handling
- Mining
- Utility Vehicles
- Forestry
- Truck & Bus
- Industrial
- Primary Metals
- Automotive Plant
- Power Generation
- Entertainment

Hydraulic System Design Calculations

Basic Formulae

Output Flow (Q)

$$LPM = \frac{cm^3/r \times RPM}{1000} \qquad GPM = \frac{in^3/r \times RPM}{231}$$

Input Power (P)

$$kW = \frac{LPM \times bar}{600} \qquad hp = \frac{GPM \times psi}{1714}$$

Shaft Torque (M)

$$N\text{-}m = \frac{bar \times cm^3/r}{62.8} \qquad lbf\text{-}in = \frac{psi \times in^3/r}{6.28}$$

Shaft Speed (n)

$$RPM = \frac{1000 \times LPM}{cm^3/r} \qquad RPM = \frac{231 \times GPM}{in^3/r}$$

Output Power (P)

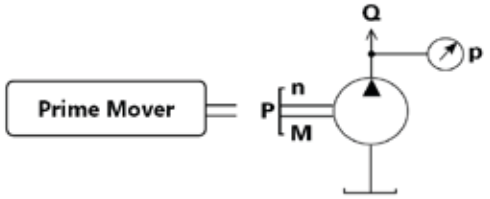
$$kW = \frac{N\text{-}m \times RPM}{9549} \qquad hp = \frac{lbf\text{-}in \times RPM}{63025}$$

Efficiency

$$\text{Volumetric } N_v = \frac{\text{Output Flow Actual}}{\text{Output Flow Theoretical}}$$

$$\text{Mechanical } N_m = \frac{\text{Shaft Torque Theoretical}}{\text{Shaft Torque Actual}}$$

$$\text{Total } N_t = N_v \times N_m$$



Basic Units

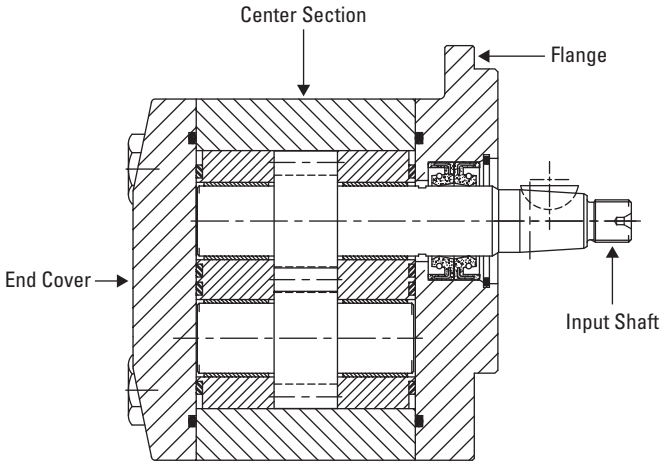
bar	=	10 Newtons/cm²
GPM	=	Gallons per Minute
hp	=	Horsepower
lbf-in	=	Pound Inch
lbf-ft	=	Pound Feet
kW	=	Kilowatt
kgf	=	Kilogram-Force
LPM	=	Liters per Minute
N-m	=	Newton Meter
psi	=	Pounds per Square Inch
RPM	=	Revolutions per Minute
cm³/r	=	Cubic Centimeter per Revolution
in³/r	=	Cubic Inch per Revolution

Commonly Used Conversinos

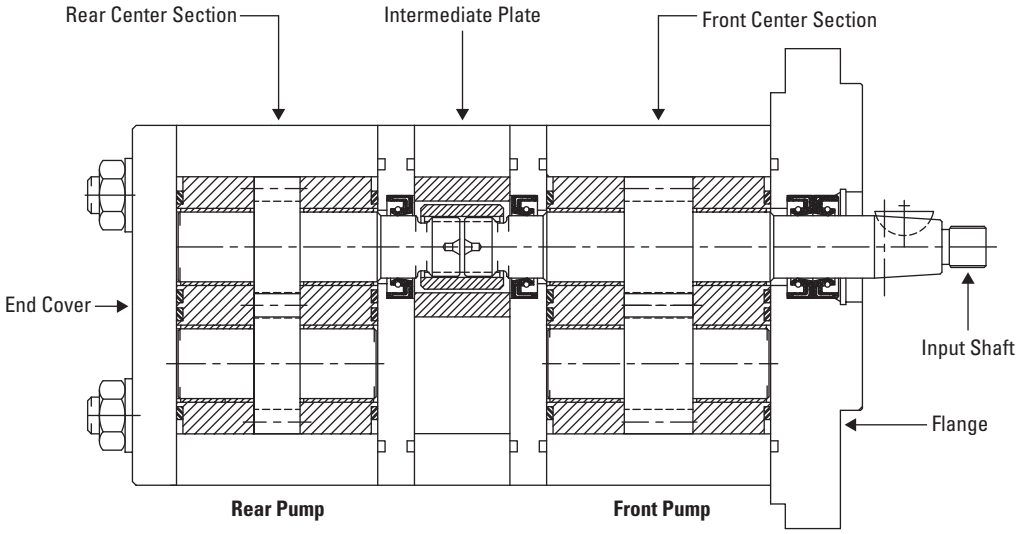
To Convert	Into	Multiply by
bar	psi	14.5
cm³	in³	0.06102
°C	°F	(°C × 1.8) + 32
Gallons (US)	liters	3.785
kg	lbs	2.205
kW	hp	1.341
liters	US Gallons	0.2642
mm	Inches	0.03937
N-m	lb-in	8.85
N-m	lb-ft	0.7375
°F	°C	(°F - 32) / 1.8
hp	kW	0.7457
Inch	mm	25.4
in³	cm³	16.387
lb-in	N-m	0.113
lb-ft	N-m	1.356
lbs	kg	0.4535
psi	bar	0.06895
psi	kgf / cm²	0.070307

Parts Nomenclature

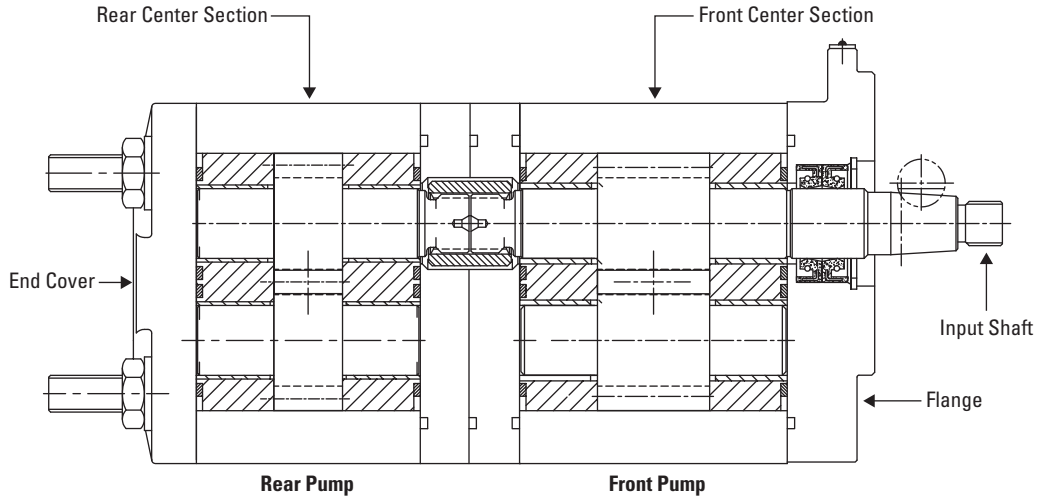
Single Pump



Double Pump with Sectional Sealing
(For two separate grades of oil)



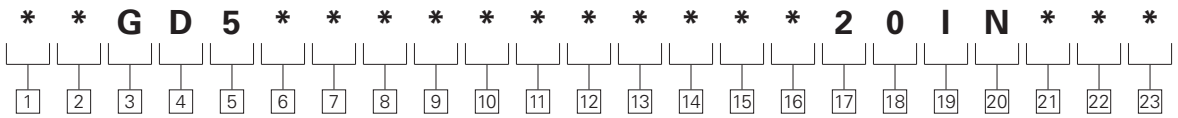
Double Pump
(For common oil)



Model Code

Single Pump

The following 23-digit coding system has been developed to identify standard configuration options for the External Single Gear Pump. Use this model code to specify a pump with the desired features. All 23 digits of the code must be present to release a new product number for ordering.



No.	Feature	Code	Feature Description
1 2	**Features** (Omit for Standard)	F3	Viton Seal Pack
		F4	Outboard Thrust Bearing
3 4	**Type**	GD	External Gear Pump
5	**Size**	5	Frame Size
6 7	**Displacement** cm^3/rev (in^3/rev)	05	5.1 (0.31)
		06	6.0 (0.37)
		08	8.2 (0.50)
		09	9.5 (0.58)
		11	11.0 (0.67)
		12	12.3 (0.75)
		16	16.5 (1.01)
		18	18.0 (1.10)
		20	20.0 (1.22)
		24	24.0 (1.46)
8 9	**Mounting Flange**	A1	SAE "A" 2 Bolt
		H1	European Rectangular 4 Bolt
		H2	German Rectangular 4 Bolt
		G1	Customized Flange#
10 11	**Drive Shaft#**	09	Taper 1:8 on dia. with Woodruff Key, External Threads 7/16"-20 UNF Shaft (Shaft ext. 39.7 mm)
		19	14 Teeth, 24/48 DP 30° Involute, Flat Root, Side Fit, 20.0 Min. Full Spline as per ANSI B92.1 (Shaft ext. 32.4 mm)
		20	11 Teeth, 16/32 DP 30° Involute, Flat Root, Side Fit, 20.0 Min. Full Spline as per ANSI B92.1 (Shaft ext. 32.4 mm)
		21	Straight Keyed Shaft with ø 17.46, Key width 4.76 mm (Shaft ext. 31.8 mm)
		22	Straight Keyed Shaft with ø 19.05, Key width 4.76 mm (Shaft ext. 31 .0 mm)
		24	Straight Keyed Shaft with ø 15.88, Key width 3.97 mm (Shaft ext. 31.8 mm)
		27	9 Teeth 16/32 DP 30°, Involute, Flat Root, Side Fit, 20.0 Min. Full Spline as per ANSI B92.1 (Shaft ext. 31.5 mm)
		29	28 Teeth, 48/96 DP 45°, Involute, Fillet Root, Side Fit, Class 6, 28.50 Min. Full Spline as per ANSI B92.1 (Shaft Ext 41.2 mm)

No.	Feature	Code	Feature Description
	Port Options		
12 13	**Inlet Port**		
14 15	**Outlet Port**		
	European Flanged Ports - 4 Bolts	FA	M8 × 1.25, PCD 40.0 & Dia. 19.0
		FB	M6 × 1, PCD 30.2 & Dia.14.0
	German Flanged Ports- 4 Bolts	FO	M6 × 1, PCD 35.0 & Dia. 15.0
		FN	M6 × 1, PCD 40.0 & Dia.20.0
		FP	M6 × 1, PCD 40.0 & Dia.19.0
	SAE Straight Thread O-Ring Ports	TF	7/8"-14 UNF-2B (SAE#10)
		TG	1-5/16"-12 UN-2B (SAE#16)
		TJ	3/4"-16 UNF-2B (SAE#8)
		TM	1-1/16"-12 UN-2B (SAE#12)
		TS	1-3/16"-12 UN-2B (SAE#14)
	BSPP Straight Thread Ports	TB	G ½"
		TC	G ¾"
		TR	G ⅜"
	Metric Straight Thread Ports (ISO 6149)	TD	M18 × 1.5-6H
		TE	M27 × 2.0-6H
		TL	M22 × 1.5-6H
	Special Ports	FU	Customized Port#
		BT	Beaded Tube
		FC	Manifold - Inlet Port
16	**Rotation**	L	Left Handed CCW
		R	Right Handed CW
17 18	**Design Number**	20	Design
19 20	**Modification** (Omit for Standard)	IN	Modification in Product
21 22 23	**Series No.** (Omit for Standard)	* * *	Modification Series No.

For customized Mounting Flange, Drive Shaft & Port options consult Eaton Representative

Model Code

Double Pump

The following 29-digit coding system has been developed to identify standard configuration options for the External Double Gear Pump. Use this model code to specify a pump with the desired features. All 29 digits of the code must be present to release a new product number for ordering.

*	*	G	D	5	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	2	0	I	N	*	*	*
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29

No.	Feature	Code	Feature Description
1 2	**Features** (Omit for Standard)	F2	Sectional Sealing
		F3	Viton Seal Pack
		F4	Outboard Thrust Bearing
3 4	**Type**	GD	External Gear Pump
5	**Size**	5	Frame Size
6 7 8 9	**Displacement†** cm³/rev (in³/rev) **Front Pump Displacement** **Rear Pump Displacement**	05	5.1 (0.31)
		06	6.0 (0.37)
		08	8.2 (0.50)
		09	9.5 (0.58)
		11	11.0 (0.67)
		12	12.3 (0.75)
		16	16.5 (1.01)
		18	18.0 (1.10)
		20	20.0 (1.22)
		24	24.0 (1.46)
10 11	**Mounting Flange**	A1	SAE "A" 2 Bolt
		H1	European Rectangular 4 Bolt
		H2	German Rectangular 4 Bolt
		G1	Customized Flange#
12 13	**Drive Shaft#**	09	Taper 1:8 on dia. with Woodruff Key, External Threads 7/16"-20 UNF Shaft (Shaft ext. 39.7 mm)
		19	14 Teeth, 24/48 DP 30º Involute, Flat Root, Side Fit, 20.0 Min. Full Spline as per ANSI B92.1 (Shaft ext. 32.4 mm)
		20	11 Teeth, 16/32 DP 30º Involute, Flat Root, Side Fit, 20.0 Min. Full Spline as per ANSI B92.1 (Shaft ext. 32.4 mm)
		21	Straight Keyed Shaft with ø 17.46, Key width 4.76 mm (Shaft ext. 31.8 mm)
		22	Straight Keyed Shaft with ø 19.05, Key width 4.76 mm (Shaft ext. 31 .0 mm)
		24	Straight Keyed Shaft with ø 15.88, Key width 3.97 mm (Shaft ext. 31.8 mm)
		27	9 Teeth 16/32 DP 30º, Involute, Flat Root, Side Fit, 20.0 Min. Full Spline as per ANSI B92.1 (Shaft ext. 31.5 mm)
		29	28 Teeth, 48/96 DP 45°, Involute, Fillet Root, Side Fit, Class 6, 28.50 Min. Full Spline as per ANSI B92.1 (Shaft Ext 41.2 mm)

No.	Feature	Code	Feature Description
	Port Options		
14 15	**Front Pump Inlet Port**		
16 17	**Front Pump Outlet Port**		
18 19	**Rear Pump Inlet Port**		
20 21	**Rear Pump Outlet Port**		
	European Flanged Ports - 4 Bolts	FA	M8 × 1.25, PCD 40.0 & Dia.19.0
		FB	M6 × 1, PCD 30.2 & Dia.14.0
	German Flanged Ports- 4 Bolts	FO	M6 × 1, PCD 35.0 & Dia. 15.0
		FN	M6 × 1, PCD 40.0 & Dia.20.0
		FP	M6 × 1, PCD 40.0 & Dia.19.0
	SAE Straight Thread O-Ring Ports	TF	7/8"-14 UNF-2B (SAE#10)
		TG	1-5/16"-12 UN-2B (SAE#16)
		TJ	3/4"-16 UNF-2B (SAE#8)
		TM	1-1/16"-12 UN-2B (SAE#12)
		TS	1-3/16"-12 UN-2B (SAE#14)
	BSPP Straight Thread Ports	TB	G ½"
		TC	G ¾"
		TR	G ⅜"
	Metric Straight Thread Ports (ISO 6149)	TD	M18 × 1.5-6H
		TE	M27 × 2.0-6H
		TL	M22 × 1.5-6H
	Special Ports	FU	Customized Port#
		BT	Beaded Tube
		FC	Manifold – Front Pump Inlet Port
		FD	Manifold – Rear Pump Inlet Port
		TO	No Port
22	**Rotation**	L	Left Handed CCW
		R	Right Handed CW
23 24	**Design Number**	20	Design
25 26	**Modification** (Omit for Standard)	IN	Modification in Product
27 28 29	**Series No.** (Omit for Standard)	* * *	Modification Series No.

For customized Mounting Flange, Drive Shaft & Port options consult Eaton Representative

† Combination of displacements for Double Pump is decided by torsional strength of Drive Shaft & Coupler. Please consult Eaton Representative while selecting Double Pump displacements

Specifications

Displacement		Rated Pressure		Speed RPM		Minimum Output Flow at 2000 RPM & at Rated Pressure		Approx. Weight
cm^3/rev	in^3/rev	bar	psi	min.	max.	LPM	GPM	kg
5.1	0.31	210	3046	700	3000	8.4	2.22	2.7
6.0	0.37	210	3046	700	3000	10.8	2.85	2.8
8.2	0.50	210	3046	700	3000	14.3	3.78	2.9
9.5	0.58	210	3046	700	3000	17.0	4.49	3.0
11.0	0.67	210	3046	700	3000	19.7	5.20	3.2
12.3	0.75	210	3046	700	3000	21.4	5.65	3.3
16.5	1.01	210	3046	700	3000	29.5	7.79	3.4
18.0	1.10	210	3046	700	3000	32.2	8.51	3.5
20.0	1.22	210	3046	700	3000	35.8	9.46	3.7
24.0	1.46	175	2538	700	3000	42.9	11.33	4.0

Technical Data

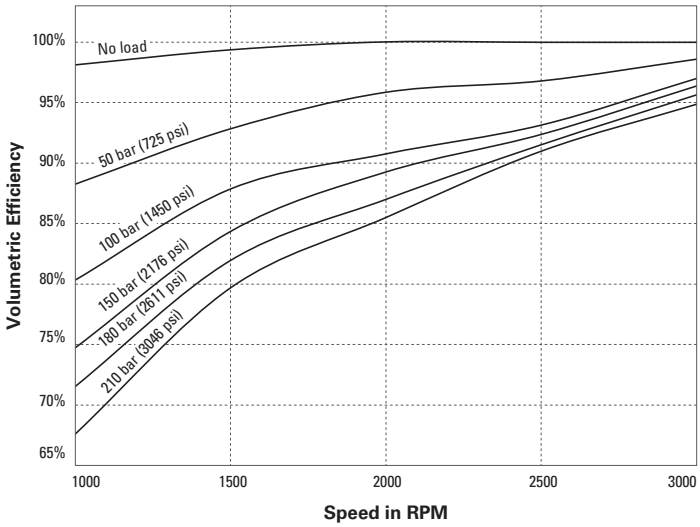
Rotation	Field Reversible (CW & CCW)
Maximum Axial Load	1000 N#
Recommended Fluid Viscosity	16 to 40 cSt (82-185 SUS)
Fluid Operating Temperature Range	-30°C to 100°C†
Recommended Cleanliness Requirement (ISO 4406:99)	20/18/13
Inlet Pressure Range	-0.2 bar to 2.0 bar

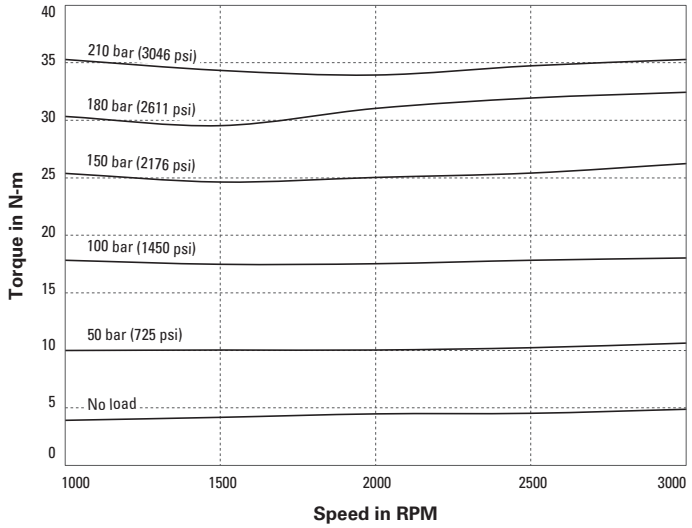
Applicable only for A1 Flange code with Thrust Bearing. For other options consult Eaton representative

† Viton seals available for higher temperatures up to 120°C

Performance Curves

5.1cc





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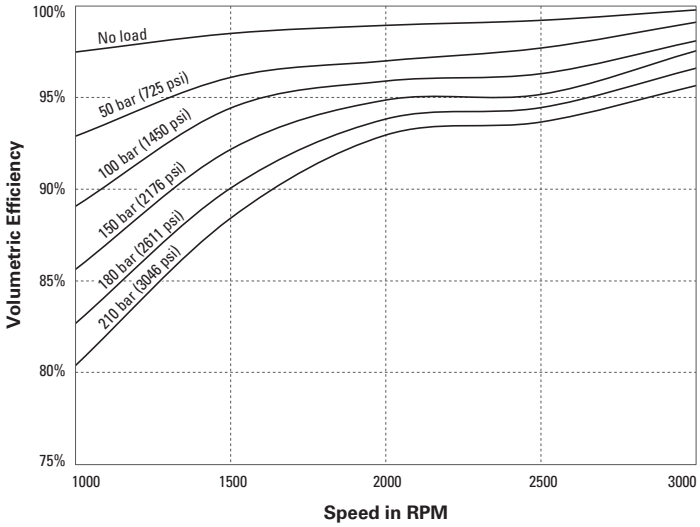

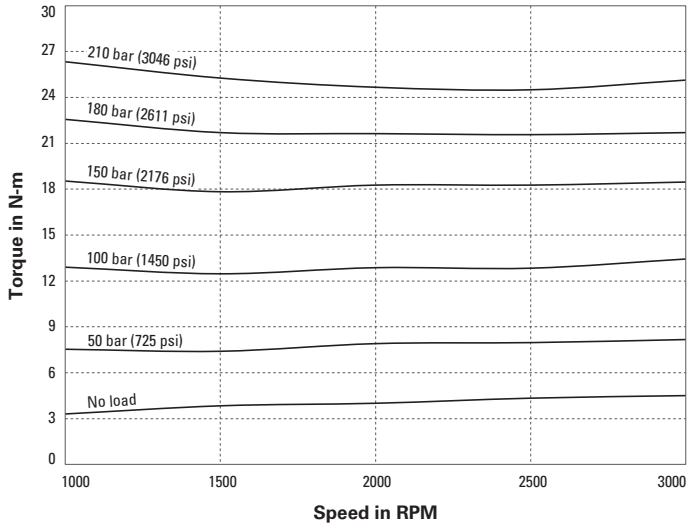

Performance data was collected using a mineral based oil with viscosity of 28 cSt at 45°C - 50°C

Performance Curves

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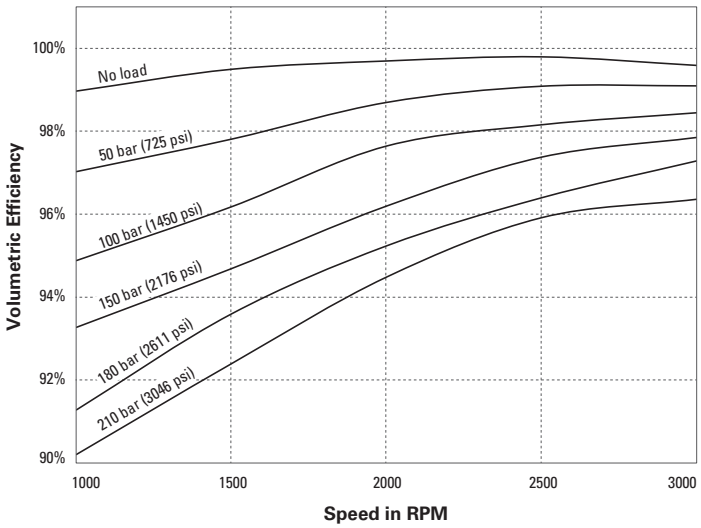
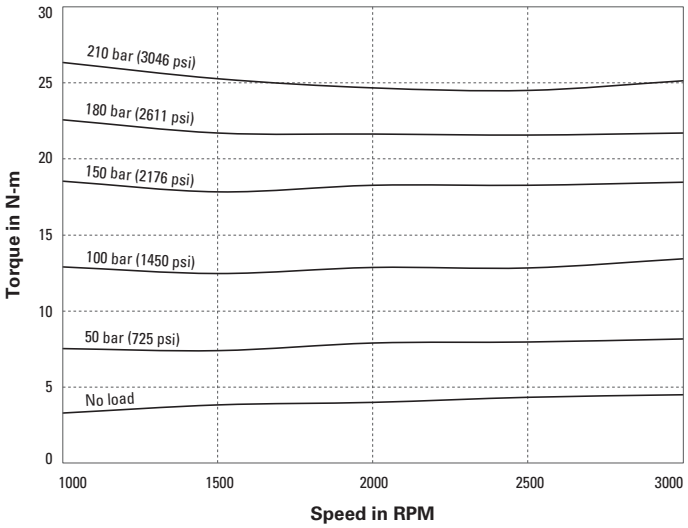
8.2cc





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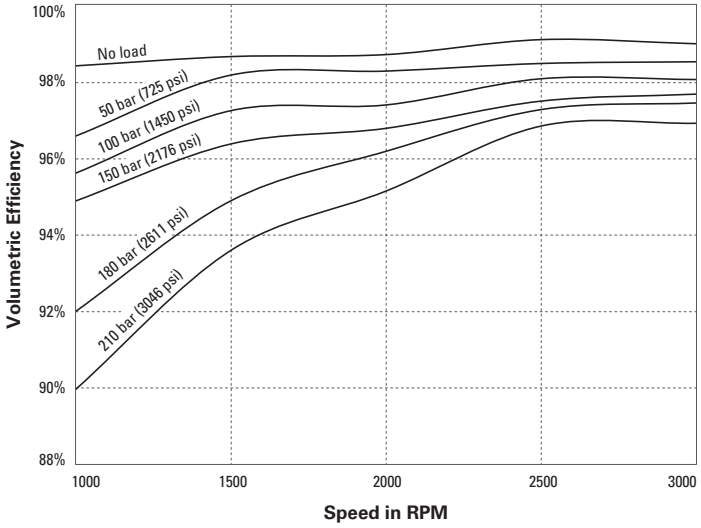

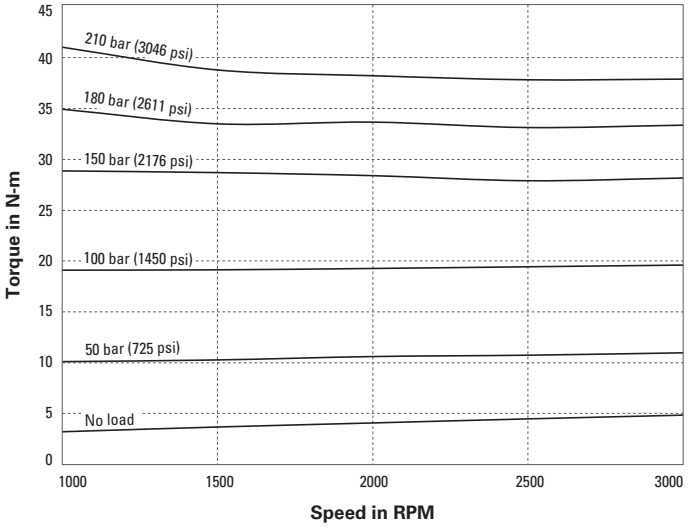

Performance data was collected using a mineral based oil with viscosity of 28 cSt at 45°C - 50°C

Performance Curves

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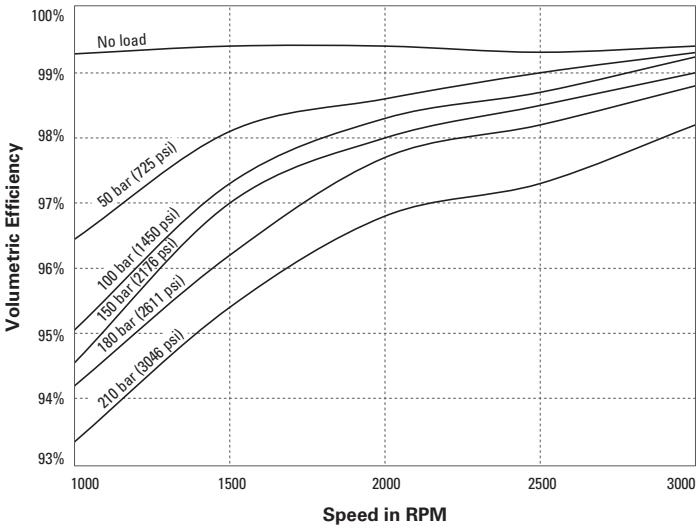

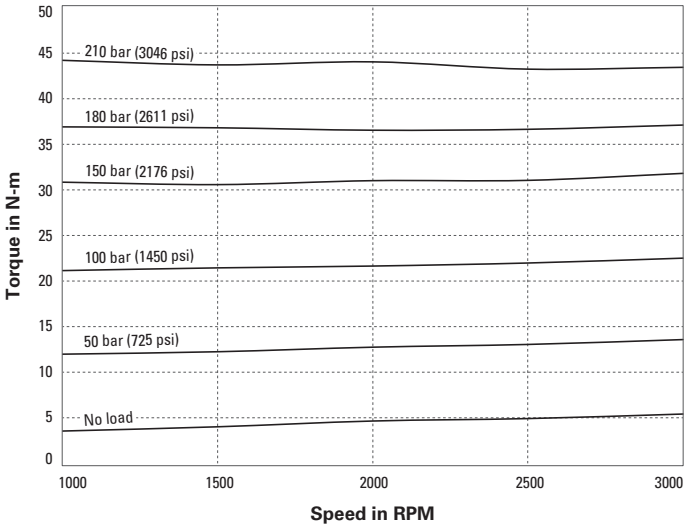

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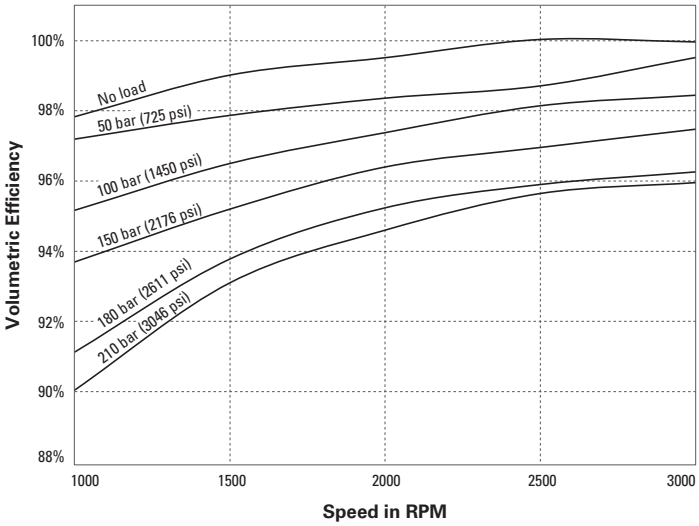

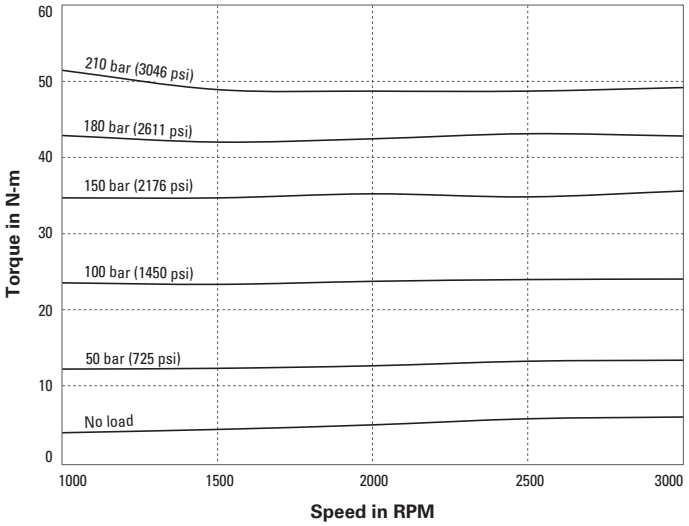

Performance data was collected using a mineral based oil with viscosity of 28 cSt at 45°C - 50°C

Performance Curves

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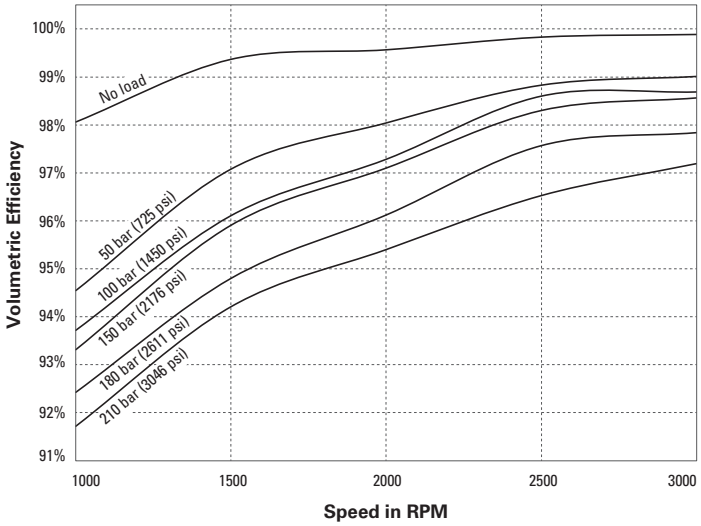

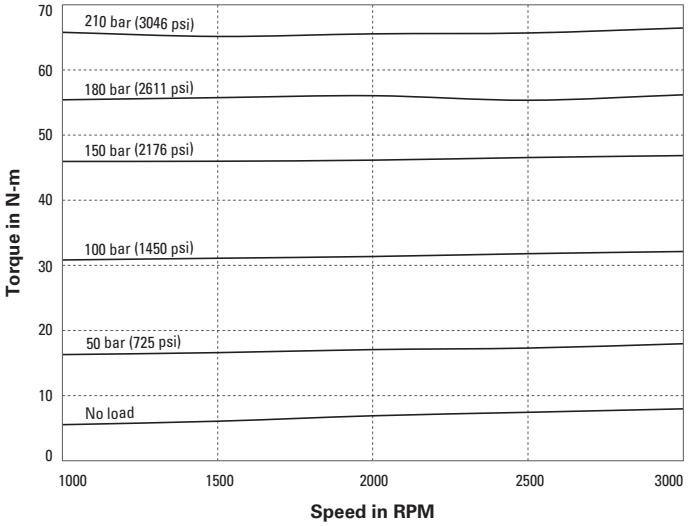

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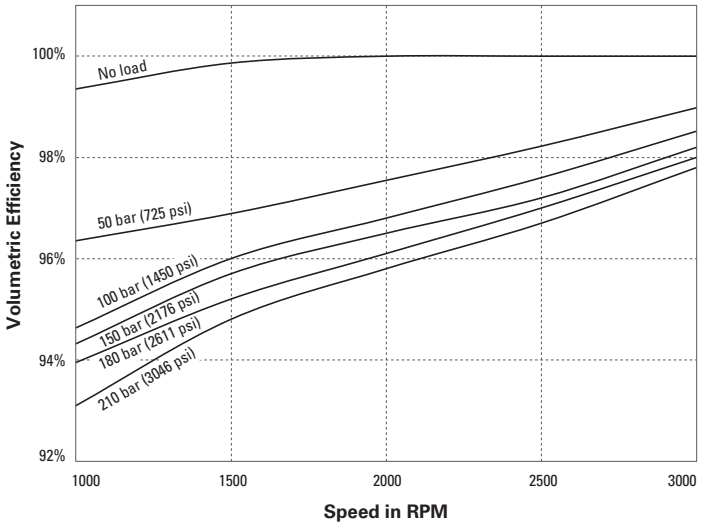

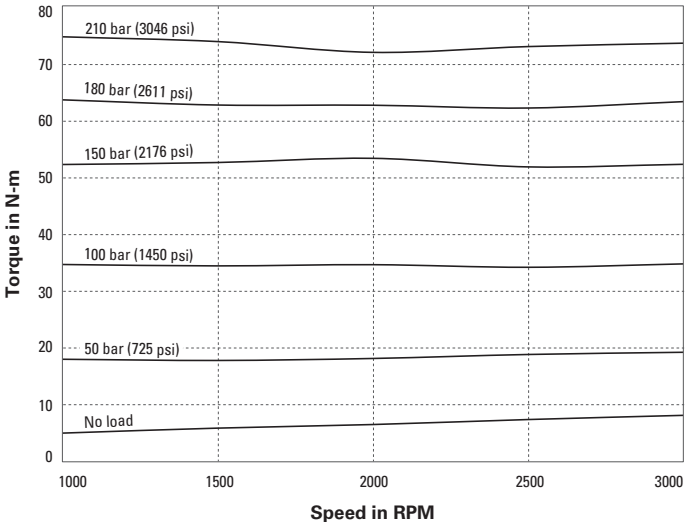

Performance data was collected using a mineral based oil with viscosity of 28 cSt at 45°C - 50°C

Performance Curves

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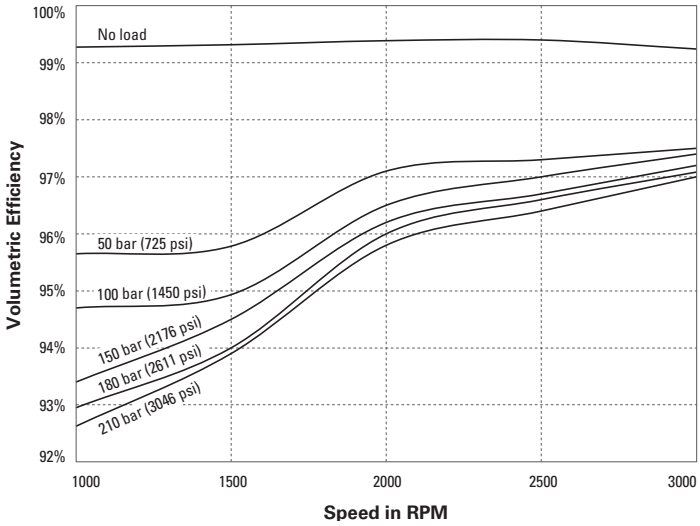

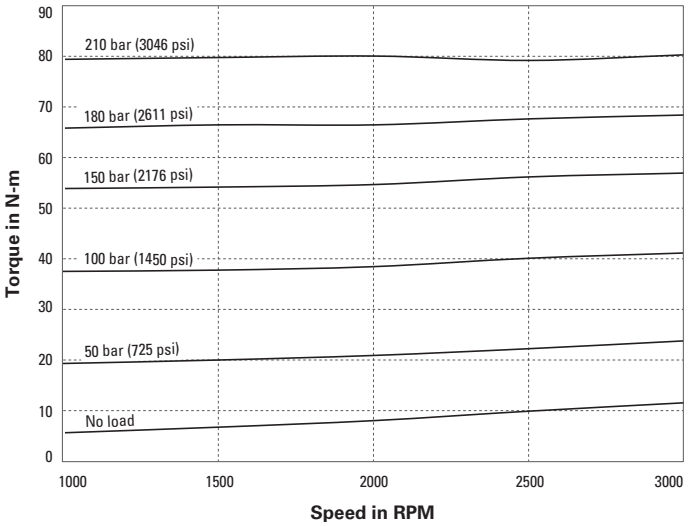

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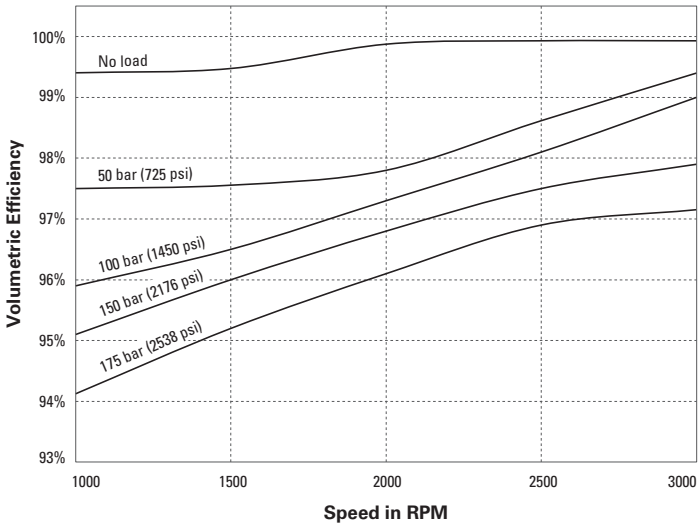
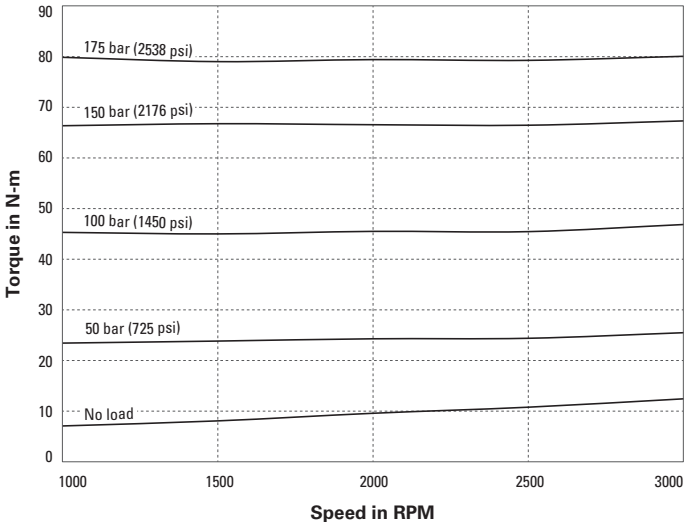




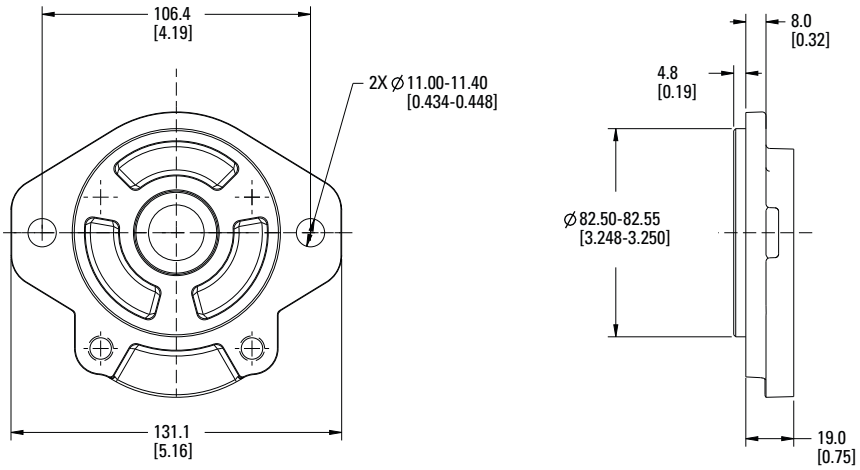
Performance data was collected using a mineral based oil with viscosity of 28 cSt at 45°C - 50°C

Component Dimensions

Mounting Flange Options

SAE "A" 2 Bolt

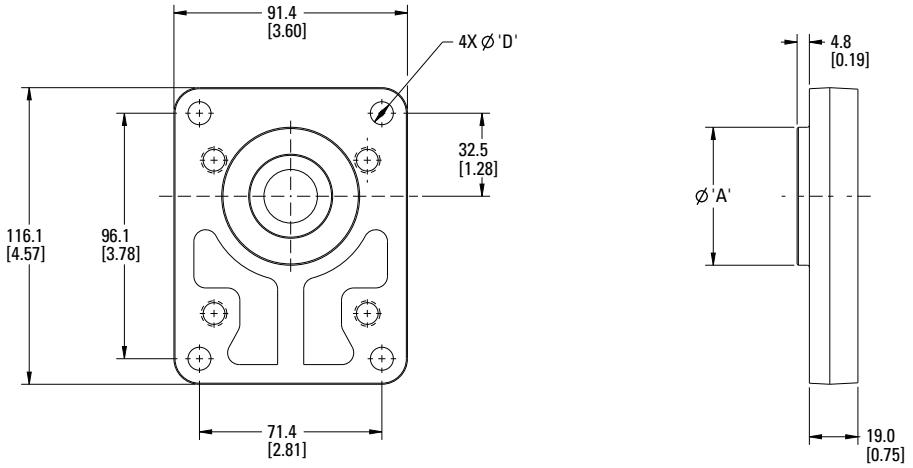
(Code – A1)



European Rectangular 4 Bolt

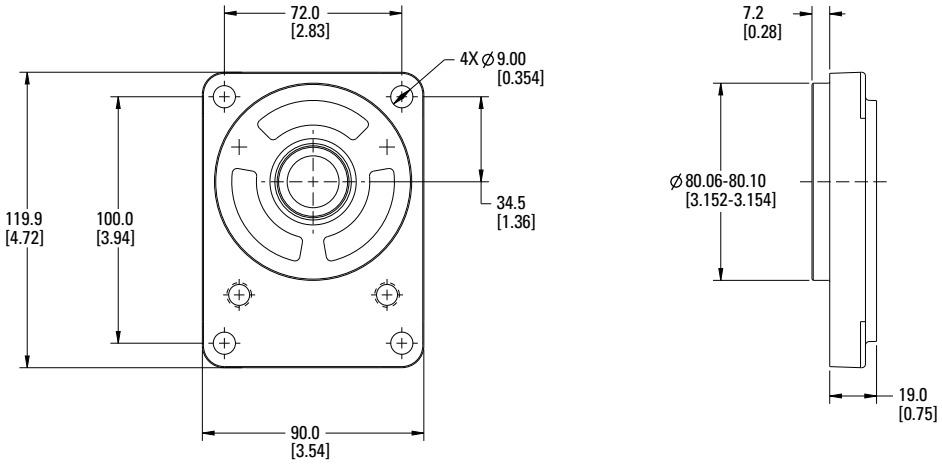
(Code – H1)

'A'		
36.47 $^{0}_{-0.05}$ [1.435 $^{0}_{-0.002}$]	50.00 $^{0}_{-0.05}$ [1.968 $^{0}_{-0.002}$]	54.00 $^{-0.03}_{-0.08}$ [2.125 $^{-0.001}_{-0.003}$]
'D'		
7.00 [0.275]	7.50 [0.295]	9.00 [0.354]



German Rectangular 4 Bolt

(Code – H2)

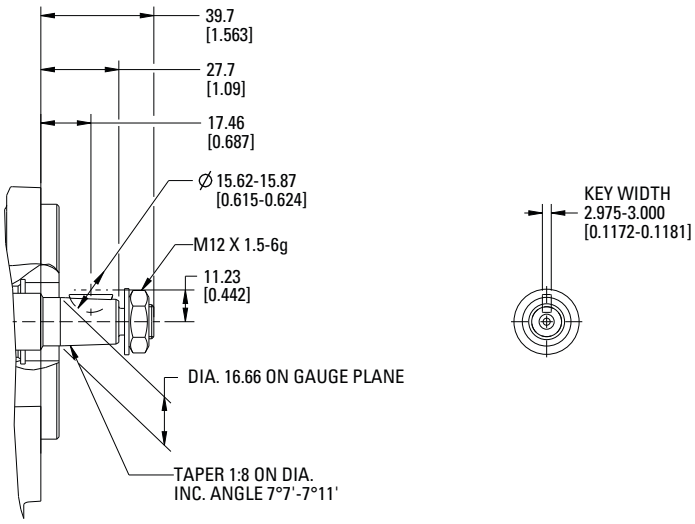


All dimensions are in mm [in]

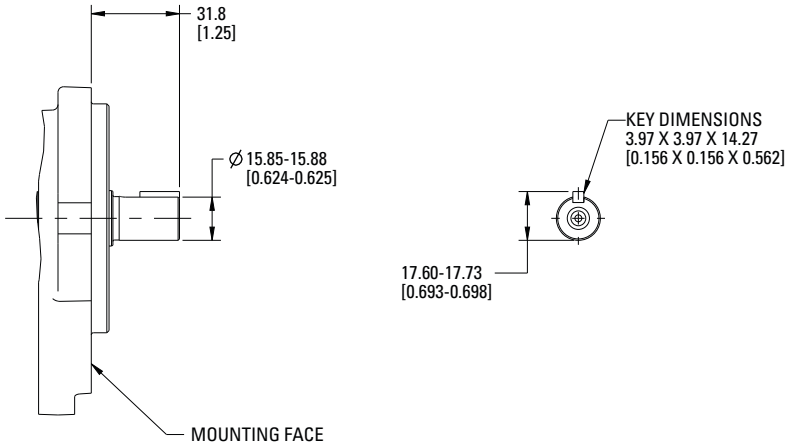
Component Dimensions

Input Shaft Options

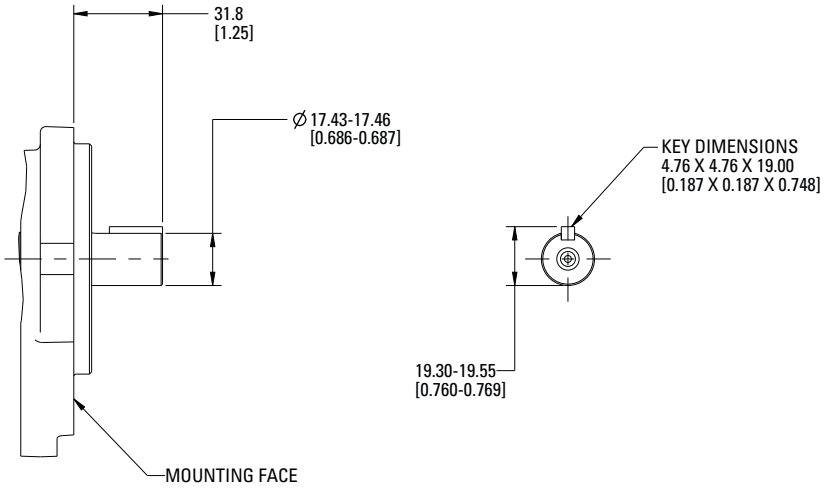
Taper 1:8 on dia.
(Code – 09)



Straight Keyed Shaft with ø 15.88
(Code – 24)



Straight Keyed Shaft with ø 17.46
(Code – 21)

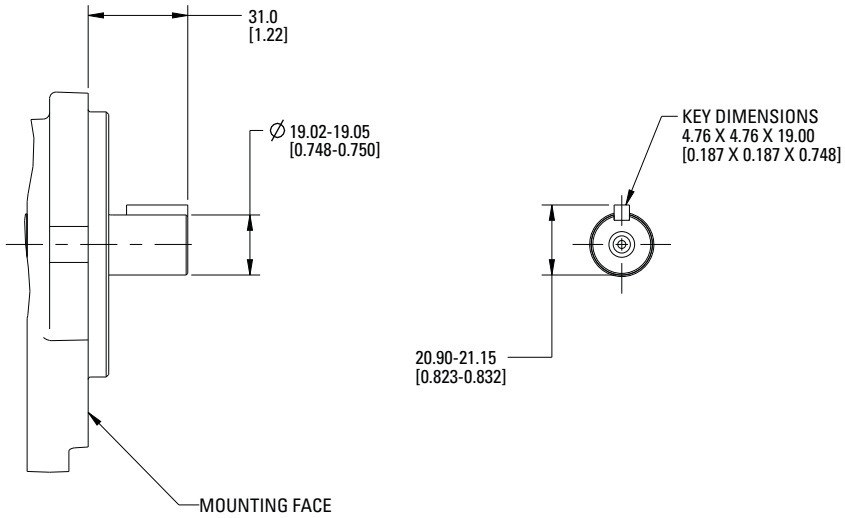


All dimensions are in mm [in]

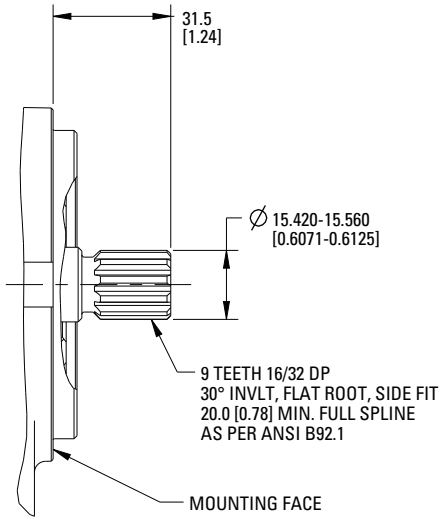
Component Dimensions

Input Shaft Options Continued...

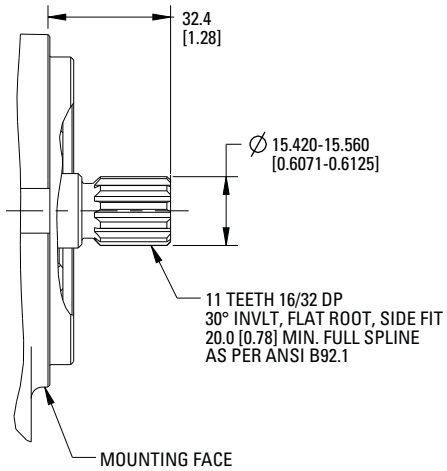
Straight Keyed Shaft with ø 19.05
(Code – 22)



9 Teeth Shaft
(Code – 27)



11 Teeth Shaft
(Code – 20)



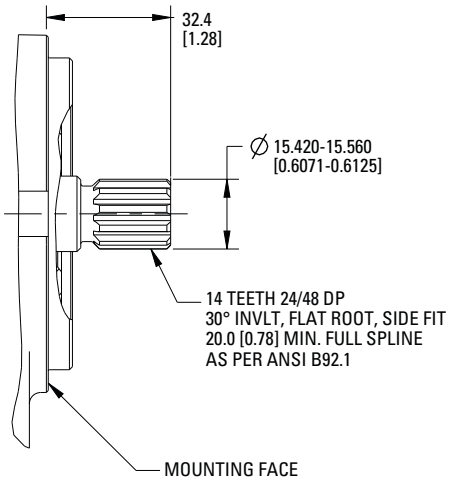
All dimensions are in mm [in]

Component Dimensions

Input Shaft Options Continued...

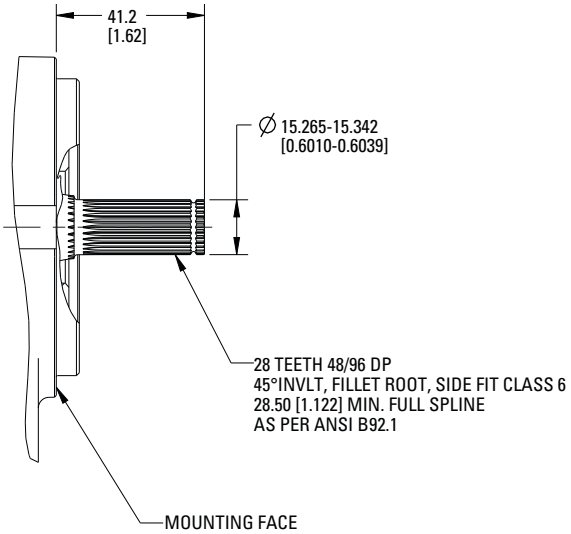
14 Teeth Shaft

(Code – 19)



28 Teeth Shaft

(Code – 29)

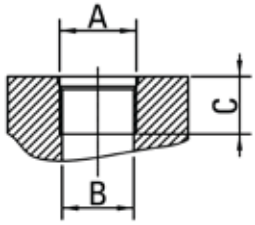


All dimensions are in mm [in]

Component Dimensions

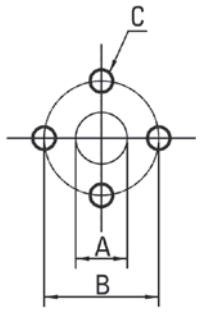
Port Options

SAE Straight Thread O-Ring Ports



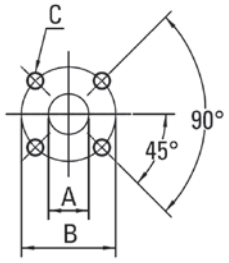
Code	SAE No.	A (Thread Size)	ØB mm (in)	C mm (in)
TJ	8	0.750-16 UNF-2B	17.5 (0.69)	14.3 (0.56)
TF	10	0.875-14 UNF-2B	20.5 (0.81)	16.7 (0.66)
TM	12	1.0625-12 UN-2B	24.9 (0.98)	19.1 (0.75)
TS	14	1.1875-12 UN-2B	28.1 (1.11)	19.1 (0.75)
TG	16	1.3125-12 UN-2B	31.3 (1.23)	19.1 (0.75)

European Flanged Ports – 4 Bolts



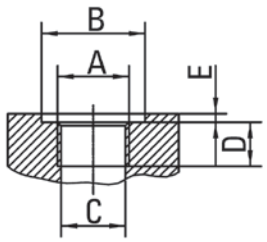
Code	Nominal Size	ØA mm (in)	B mm (in)	C Thread	C Thread Depth mm (in)
FB	14	14.0 (0.55)	30.0 (1.18)	M6	13 (0.51)
FA	19	19.0 (0.75)	40.0 (1.57)	M8	13 (0.51)

German Flanged Ports – 4 Bolts



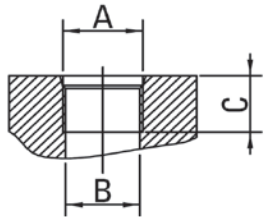
Code	Nominal Size	ØA mm (in)	B mm (in)	C Thread	C Thread Depth mm (in)
FO	15	15.0 (0.59)	35.0 (1.38)	M6	13 (0.51)
FP	19	19.0 (0.75)	40.0 (1.57)	M6	13 (0.51)
FN	20	20.0 (0.79)	40.0 (1.57)	M6	13 (0.51)

BSPP Straight Thread Ports



Code	Nominal Size	A	ØB mm (in)	ØC mm (in)	D mm (in)	E mm (in)
TR	3/8″	G 3/8″	27.0 (1.06)	15.3 (0.60)	12.2 (0.48)	1.5 (0.06)
TB	1/2″	G 1/2″	33.0 (1.30)	19.0 (0.75)	15.3 (0.60)	1.5 (0.06)
TC	3/4″	G 3/4″	42.0 (1.65)	24.5 (0.96)	16.0 (0.63)	1.5 (0.06)

Metric Straight Thread Ports (ISO 6149)



Code	A Thread Size	Ø B mm (in)	C mm (in)
TD	M18 × 1.5	16.5 (0.65)	12.5 (0.49)
TC	M22 × 1.5	20.5 (0.81)	13.5 (0.53)
TR	M27 × 2.0	25.0 (0.98)	17.0 (0.67)

Installation & Maintenance

Mounting

Pump can be mounted with Drive Shaft in horizontal, vertical or at any angle in between. All Flanges have pilot (Spigot) for proper alignment of Pump with respect to drive system.

Rotation

Shaft rotation is denoted in the unit coding. Arrow indicating direction of rotation is stamped on Pump's Centre Body. Direction of rotation is as viewed from Pump's Drive Shaft end.

Drives

Coupling used to drive the pump should not transfer any radial or axial load on Pump's Drive Shaft. A flexible coupling is recommended to accommodate slight misalignment & to dampen the vibration.

Fluids

Pressure ratings given in this catalog are based on petroleum based hydraulic fluids. Recommended viscosity range is as per specifications page of this catalog. Avoid using mixtures of two different oils which could result in decomposition & reduction of oil's lubricating capability.
For use with other oils, consult Eaton representative for approval.

Fluid Reservoir

As a general rule of thumb, reservoir capacity for Industrial Systems with open loop flow should be at least 3 times as that of the flow. Pump suction line should draw oil from a point not less than 100 mm (4 Inch) above the tank bottom to avoid sludge deposits from entering the pump. Return line should be submerged in the oil & should be positioned as far apart as possible from the inlet line. Return & Inlet Lines should be separated by Baffles.

Lines

Inside diameter of inlet line must be as large as possible. Inlet line should be free from sharp bends, 90 degree Elbow Fittings or other restrictions which would cause resistance to flow. Positive head should be maintained at pump inlet as far as possible. However if pump is required to operate at low inlet pressure condition then inlet vacuum should not be less than 0.2 bar (6 inches of Hg). (If the inlet vacuum is outside of the recommendations, consult Eaton representative for approval). Maximum inlet pressure of the pump is limited by the Shaft Seal & should not exceed 2 bar gauge. Inside diameter of outlet line should be at least equal to the opening diameter of Outlet Port. Do not over tighten coupling connected to threaded type Inlet & Outlet Port as it may damage threads in pump body.

Filtration

Most of the premature failures of gear pumps are due to contaminated Fluid. Oil contamination level should not exceed ISO cleanliness code 20/18/13 per ISO 4406:99. Full flow filtering is always recommended. Initial cleanliness level of the fluid with which system is filled must not exceed NAS 1638 Class 9.

Starting up

Fill the pump with fluid before installing. Check direction of rotation. It should be in line with arrow marked on the pump. Check that all fitting connections are torqued to proper specifications. For first run of the pump gradually increase pressure & speed until operating levels are obtained.

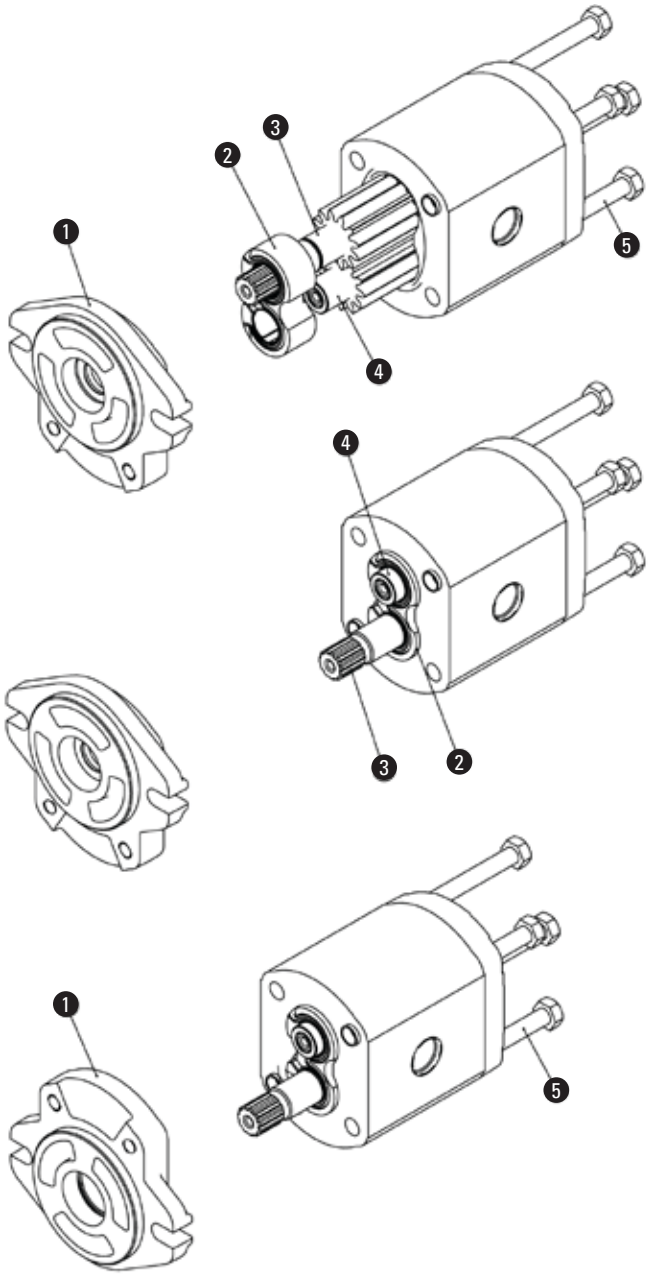
Periodic checks

Keep outside surface of the pump clean, especially area near to the Drive Shaft Seal. Contact of abrasive powder with Shaft Seal will cause faster wear of the seal & will lead to leakage. Replace Filters regularly in order to keep Hydraulic Fluid clean. Monitor oil level & replenish oil if necessary.

Changing Rotation

To change rotation of pump

1. Clean the pump externally with care.
2. Coat the sharp edges of the Drive Shaft ❸ with adhesive tape & smear a layer of clean grease on the Shaft end extension to avoid damaging the lip of the shaft seal when removing the Mounting Flange.
3. Loosen & remove the Clamp Bolts ❺
4. Remove the Mounting Flange ❶ taking care to keep the Flange as straight as possible during removal. If the Flange is stuck, tap around the edge with a fibre or rubber mallet in order to break away from the body. Ensure that while removing the front Mounting Flange, the Drive Shaft & other components remain in position.
5. Remove front Bushing block ❷ do not remove rear Back Plate or Bushing block.
6. Remove the Driven Gear ❹ without overturning. The Rear Plate is not to be removed.
7. Re-locate the Driven Gear ❹ in the position previously occupied by the Drive Gear ❸.
8. Re-locate the Drive Gear ❸ in the position previously occupied by the Driven Gear ❹.
9. Replace the Bushing block ❷ in its original position.
10. Gently wipe the machined surface of the Mounting Flange ❶.
11. Refit the front Mounting Flange ❶ turned 180 degree from its original position.
12. Refit the clamp bolts ❺ & tighten in a crisscross pattern with the following torque value –
    - For Single Pump with Aluminium End Cover – 45 N-m
    - (398 lbf-in).For Double Pump with Aluminium end cover – 55 N-m (487 lbf-in).
    - For both Single & Double Pump with Cast Iron end cover – 65 N-m (575 lbf-in).
13. The pump is ready for installation with the original rotation reversed.



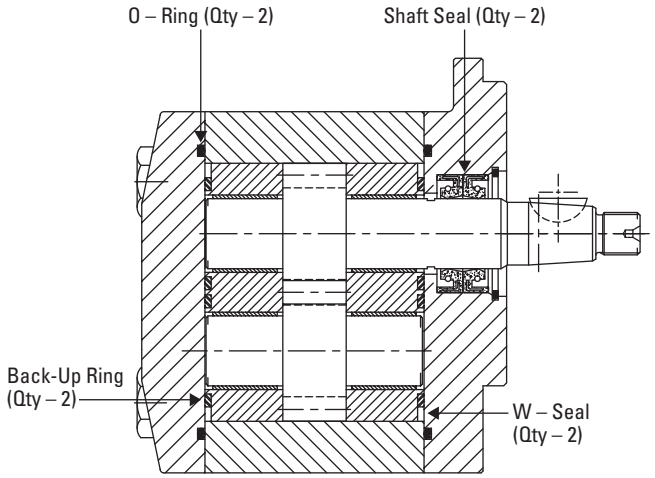
⚠ Changing Rotation should be done by a trained service person or an authorized distributor.

Spares

Seal Kit

Single pump with no Special Feature

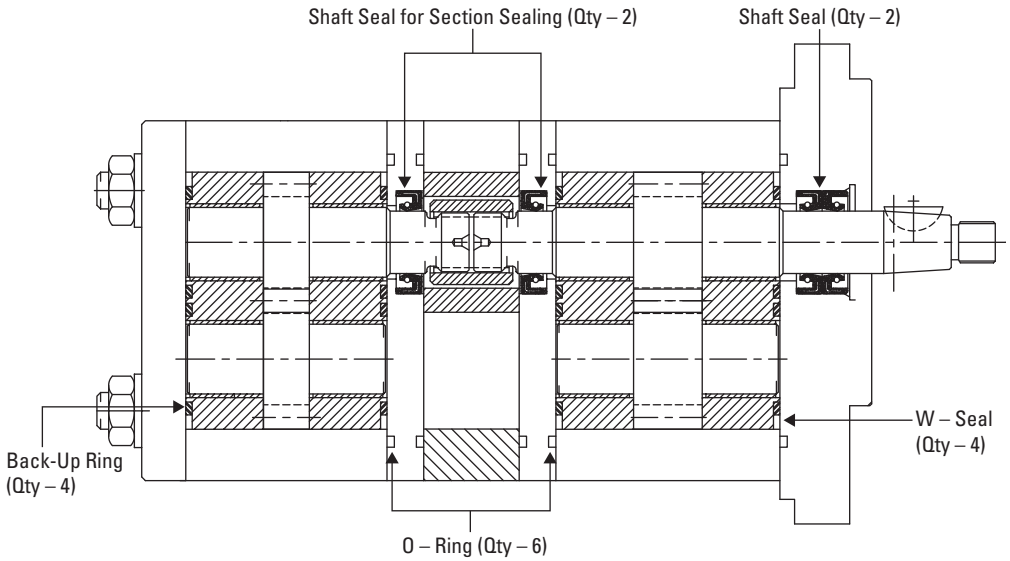
Part No.	
931547	Nitrile
9901061-000	Viton



Double Pump with Sectional Sealing

(For two separate grades of oil)

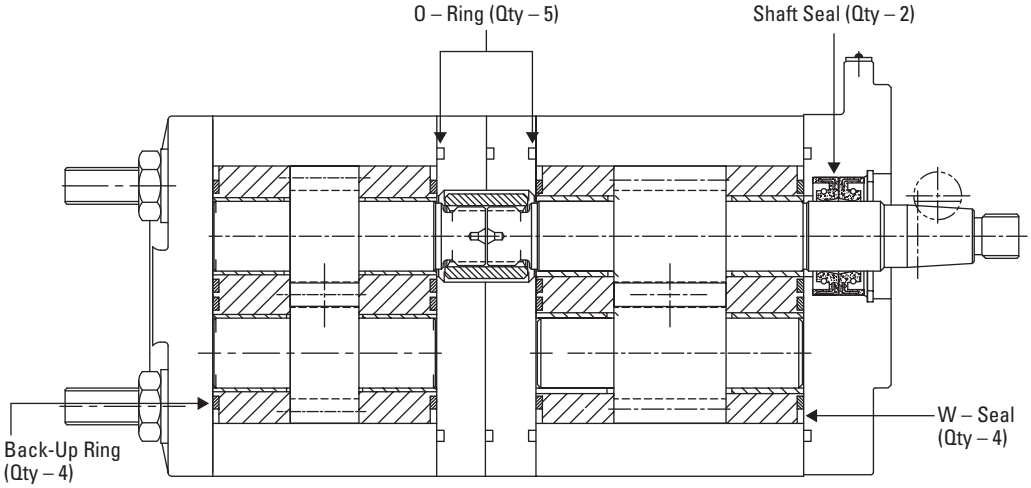
Part No.	
5001676-001	Nitrile
9901063-000	Viton



Double Pump

(For common oil)

Part No.	
5001589-001	Nitrile
9901062-000	Viton



Notes

Notes

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