

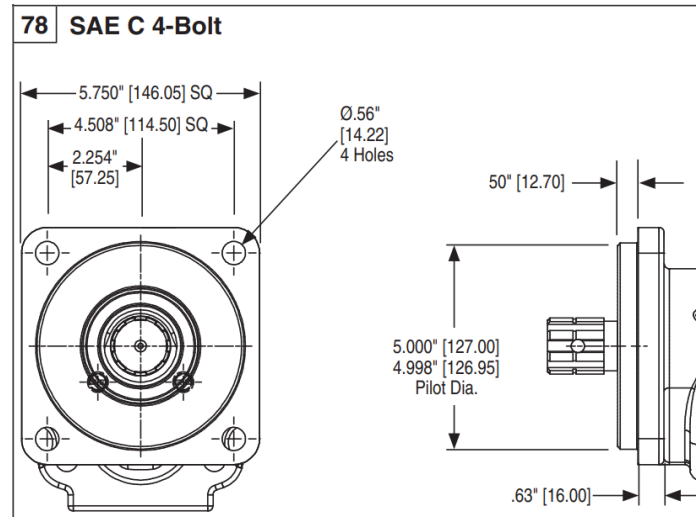
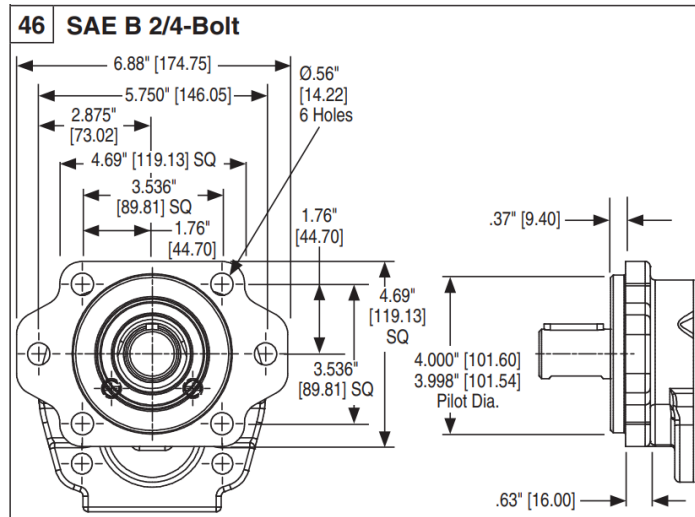
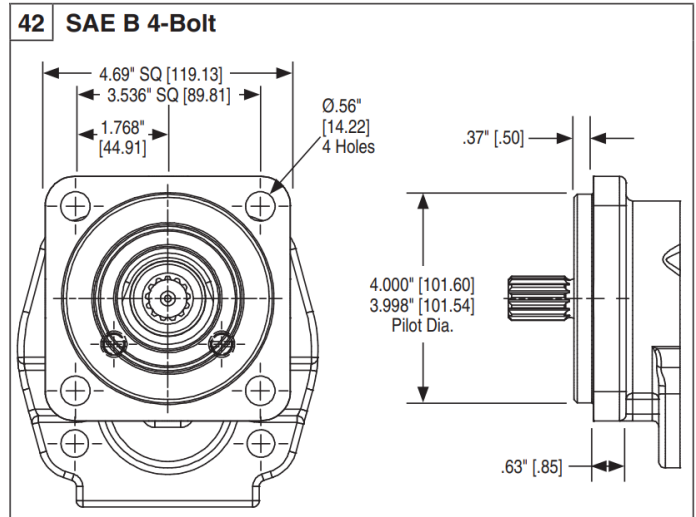
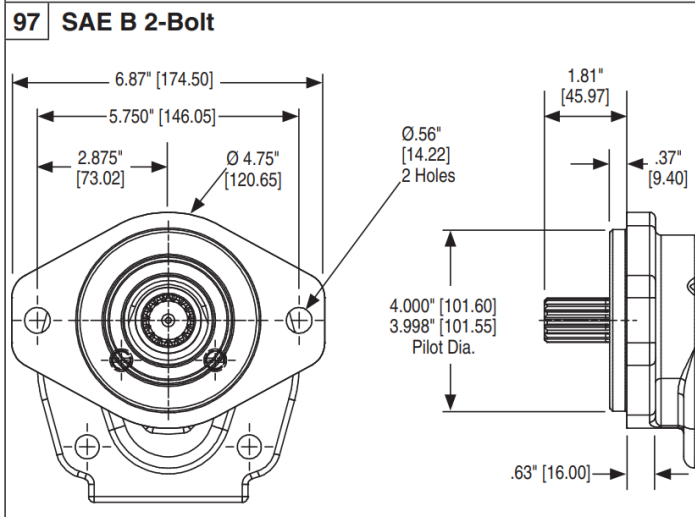


- **Three-piece cast iron construction**
High efficiency and long life in severe operating environments.
- **Low friction bushing**
Provides strength in heavy duty applications.
- **Balanced thrust plates**
Optimize pump efficiency.
- **Largest journal bearings available**
for high pressure and long life.

The PGP/PGM300 Series pumps and motors set the standard for superior performance and reliability in heavy-duty hydraulic application. The three-piece cast iron construction with large area, low-friction bushings provide strength, high efficiency, and long life in severe operating environments. The design includes an advanced thrust plate and seal configuration, which optimizes performance even in high temperature and low viscosity conditions.

PGP/PGM displacement and general specification

Frame size		05	07	10	12	15	17	20	22	25
330	Gear housing width	1.00"	1.25"	1.50"	1.75"	2.00"	2.25"	2.50"		
	Gear width	0.50"	0.75"	1.00"	1.25"	1.50"	1.75"	2.00"		
	cc/rev	16.00	24.10	32.20	40.30	48.30	56.40	64.50		
	Max pressure (Bar)	241	241	241	241	241	224	207		
	Max pressure (PSI)	3500	3500	3500	3500	3500	3250	3000		
	Max speed (rpm)	3000	3000	3000	3000	3000	3000	3000		
	Pump weight (kg)	15.20	15.80	16.30	16.90	17.50	18.10	18.70		
350	Gear housing width	1.00"	1.25"	1.50"	1.75"	2.00"	2.25"	2.50"	2.75"	3.00"
	Gear width	0.50"	0.75"	1.00"	1.25"	1.50"	1.75"	2.00"	2.25"	2.5"
	cc/rev	20.90	31.30	41.80	52.20	62.70	73.10	83.60	94.00	104.50
	Max pressure (Bar)	241	241	241	241	241	224	207	190	172
	Max pressure (PSI)	3500	3500	3500	3500	3500	3250	3000	2750	2500
	Max speed (rpm)	2400	2400	2400	2400	2400	2400	2400	2400	2400
	Pump weight (kg)	21.80	22.40	23.10	23.80	24.50	25.20	25.90	26.50	27.20
365	Gear housing width		1.25"	1.50"	1.75"	2.00"	2.25"	2.50"	2.75"	3.00"
	Gear width		0.75"	1.00"	1.25"	1.50"	1.75"	2.00"	2.25"	2.5"
	cc/rev		44.30	59.00	73.80	88.50	103.30	118.00	132.80	147.50
	Max pressure (Bar)		241	241	241	241	241	241	224	207
	Max pressure (PSI)		3500	3500	3500	3500	3500	3500	3250	3000
	Max speed (rpm)		2400	2400	2400	2400	2400	2400	2400	2400
	Pump weight (kg)		24.30	25.40	26.50	27.70	28.80	30.00	31.10	32.20



PL Chart		
Shaft Style	Integral Shaft & Gear	Two-Piece Style
PGP/PGM330		
SAE "B" Spline	8,450	6,250
SAE "B" Key	6,250	6,250
SAE "B-B" Spline	13,000	6,250
SAE "B-B" Key	9,300	6,250
SAE "C" Spline	--	6,250
SAE "C" Key	--	6,250
Connecting Shaft	--	6,250
PGP/PGM350		
SAE "B" Spline	6,450	6,450
SAE "B" Key	4,750	4,750
SAE "B-B" Spline	9,900	9,000
SAE "B-B" Key	7,100	7,100
SAE "C" Spline	19,100	9,000
SAE "C" Key	13,900	9,000
Connecting Shaft	--	9,000
PGP/PGM385		
SAE "B" Spline	5,050	5,050
SAE "B" Key	3,700	3,700
SAE "B-B" Spline	7,750	5,350
SAE "B-B" Key	5,550	5,550
SAE "C" Spline	14,900	11,950
SAE "C" Key	10,800	10,800
Connecting Shaft	--	11,950

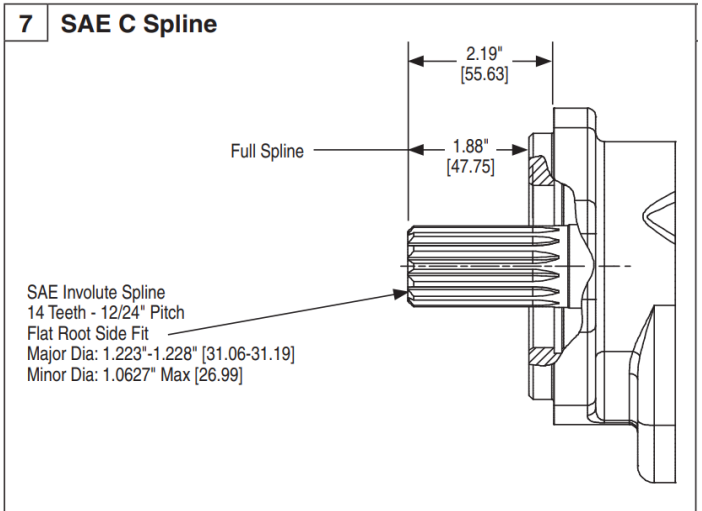
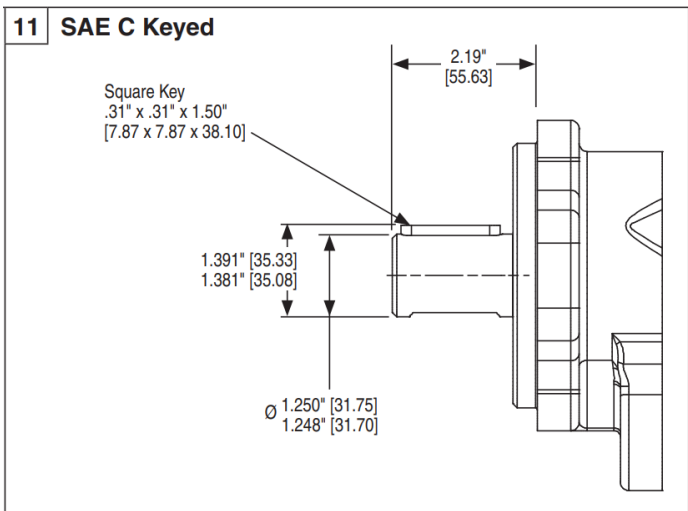
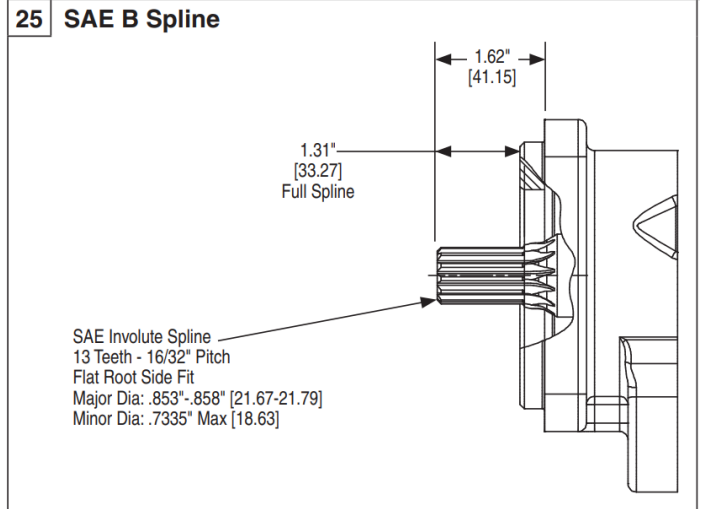
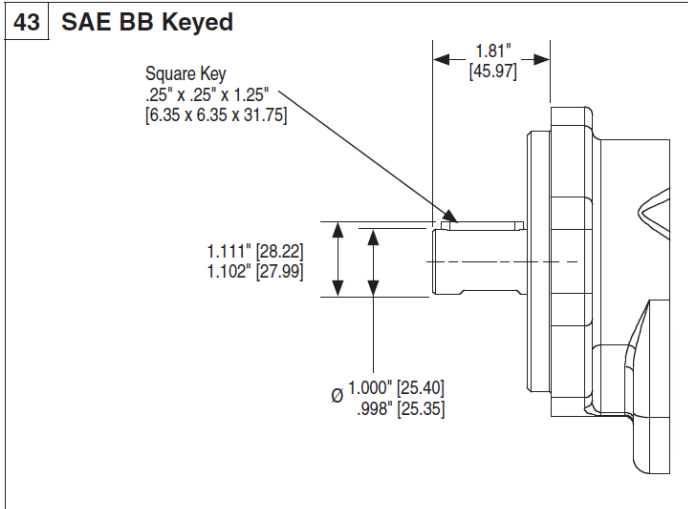
PL Factor

Each section of a multiple pump or motor should be regarded as a single unit with corresponding delivery and power input requirements. Since the entire input horsepower is fed through a common drive shaft, the power delivered to or from the unit is limited by the physical strength of the shaft. This limit is defined as a "PL" factor; "P" being the operating pressure and "L" the summation of gear widths.

In multiple units the "PL" must be calculated for the first connecting shaft as well as the drive shaft. Each style or type of shaft has a unique "PL" factor as noted in the table to the right.

$$\text{Pressure X Total Gear Width} = \text{PL}$$

PL MUST NOT EXCEED NUMBER SHOWN IN CHART FOR APPROPRIATE SHAFT.



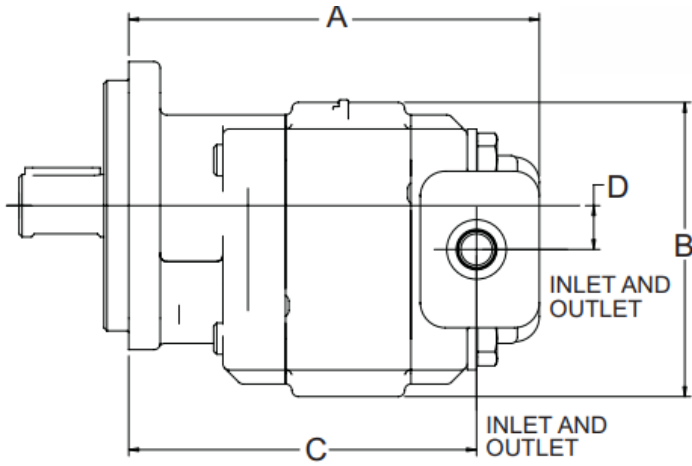
Shaft Style		Integral : 1 2 pieces : 2	Series 330		Series 350		Series 365	
			Maximum torque lb-ft	Nm	Maximum torque lb-ft	Nm	Maximum torque lb-ft	Nm
SAE B	Spline 13 teeth	1	242	328	242	328	242	328
		2	159	215	242	328	242	328
SAE BB	1" Keyed	1	250	339	-	-	250	339
		2	159	215	-	-	250	339
SAE C	Spline 14 teeth	1	-	-	708	960	708	960
		2	159	215	300	407	533	723
	1.25" Keyed	1	-	-	500	678	500	678
		2	159	215	300	407	500	678
Connecting Shaft			159	215	300	407	533	723

Torque (lb-ft) = Pressure (PSI) x Displacement (in³/rev)

75.4

Torque (Nm) = Pressure (Bar) x Displacement (cc/rev)

62.8

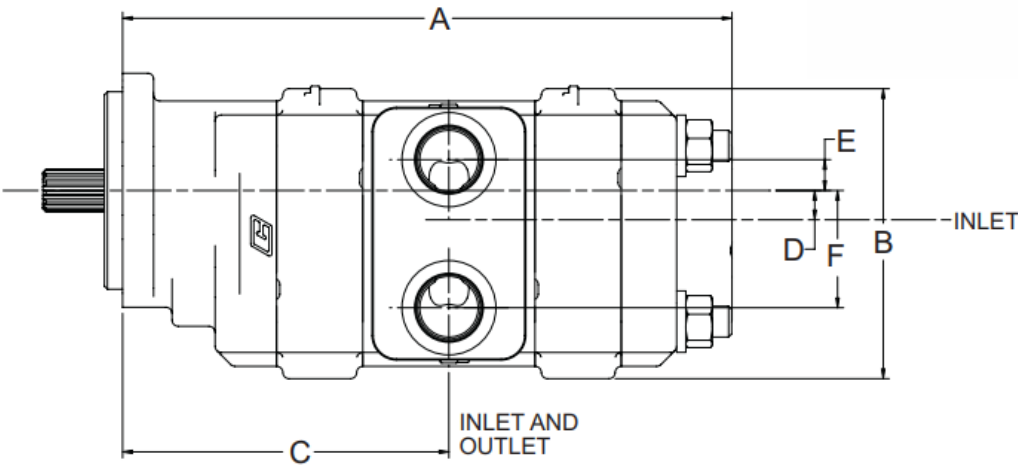


Single pump/motor

There is only one split flange port of each inlet and outlet port.

Multiple pump/motor

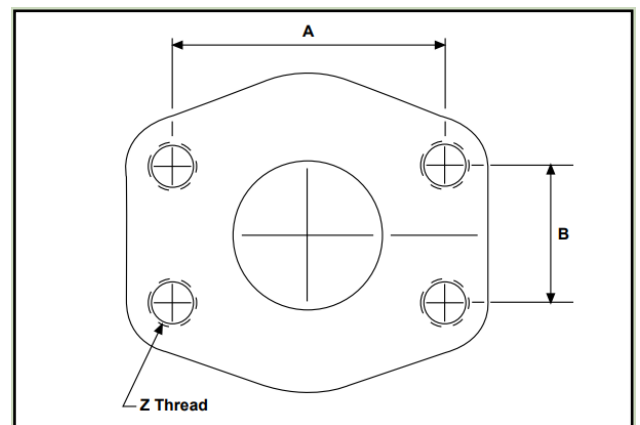
There are single bearing carrier (1 Inlet, 1 Outlet port) and dual bearing carrier (1 Inlet, 2 Outlet port) available.

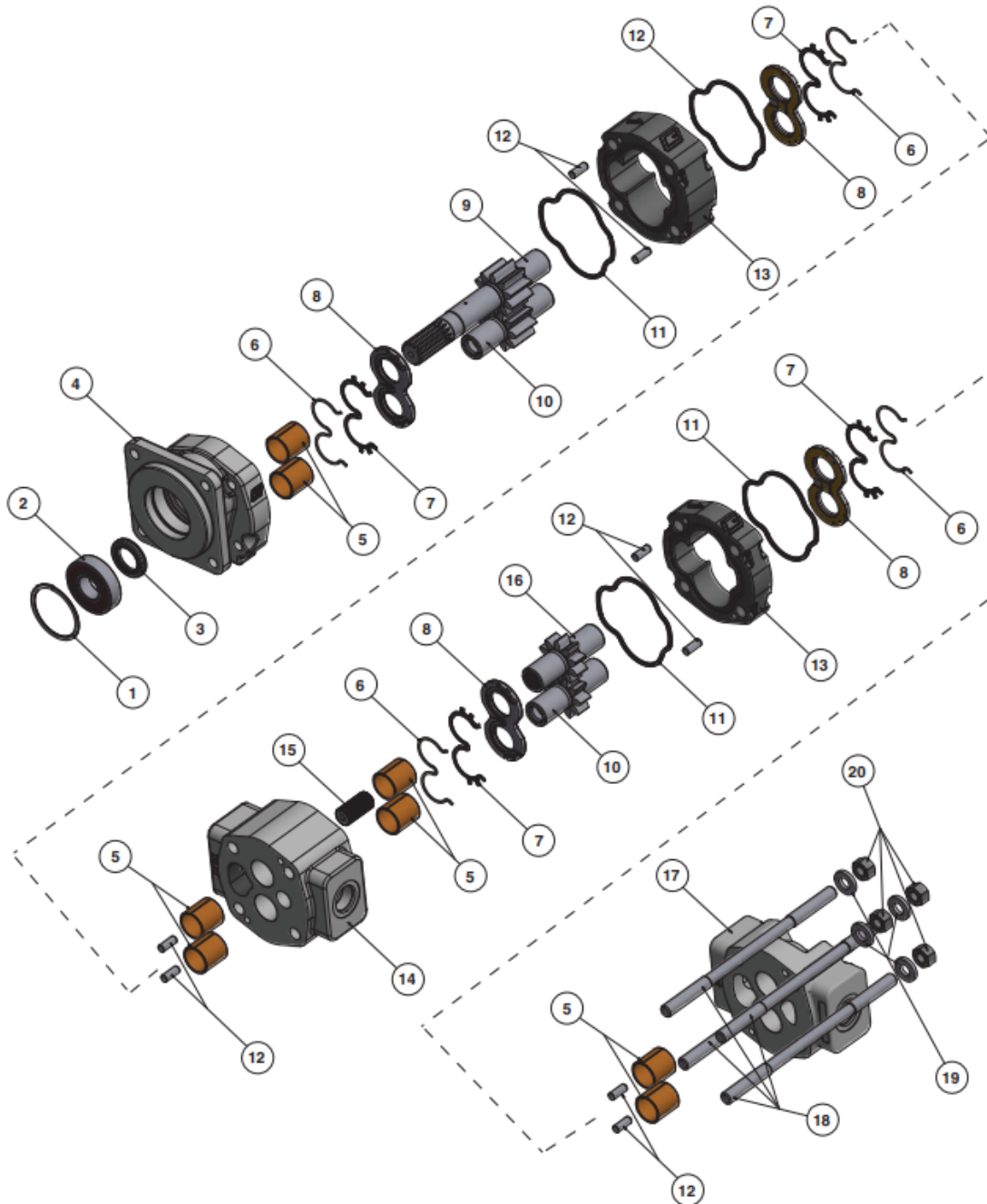


Port Size (SAE 3000)

PGP/PGM 300 Series

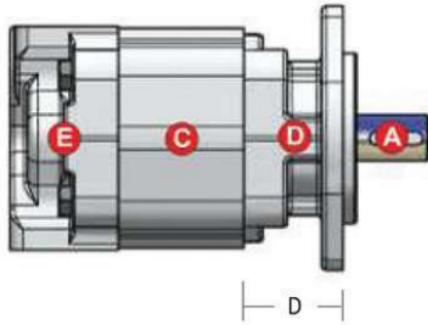
SAE Flange Size (D)	Dash Size	A		B		Thread (Z)	
		mm	inches	mm	inches	UNC	Metric
1/2"	- 08	38.10	1.5	17.48	0.69	5/16"	M8
3/4"	- 12	47.63	1.88	22.23	0.88	3/8"	M10
1"	- 16	52.37	2.06	26.19	1.03	3/8"	M10
1 1/4"	- 20	58.72	2.31	30.18	1.19	7/16"	M10
1 1/2"	- 24	69.85	2.75	35.71	1.41	1/2"	M12
2"	- 32	77.77	3.06	42.88	1.69	1/2"	M12
2 1/2"	- 40	88.90	3.50	50.80	2.00	1/2"	M12
3"	- 48	106.38	4.19	61.93	2.44	5/8"	M16



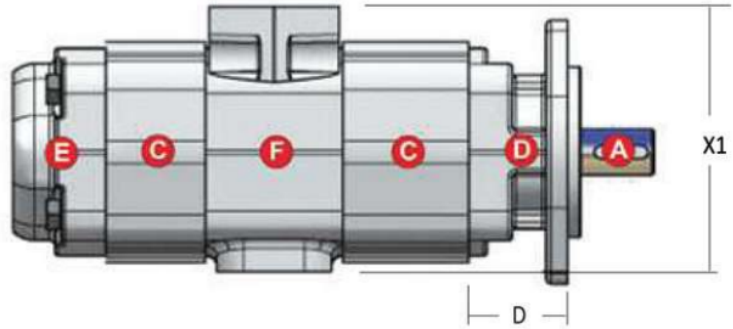


Item	Description	Item	Description
1	Snap Ring	11	Gasket Seal
2	Outboard Bearing	12	Dowel Pin
3	Lip Seal, Shaft Seal	13	Gear housing
4	Front End Cover	14	Bearing Carrier (Single & Dual)
5	Bushing	15	Connecting Shaft
6	Back Up Seal	16	Drive Match Gear
7	Channel Seal	17	Port End Cover
8	Trust Plate (or Pressure Plate)	18	Stud 5/8"
9	Gear Shaft, Drive Gear	19	Washer
10	Diven Match Gear	20	Hex Nut

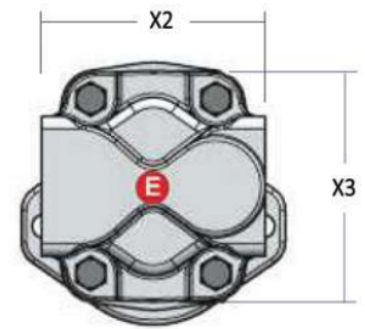
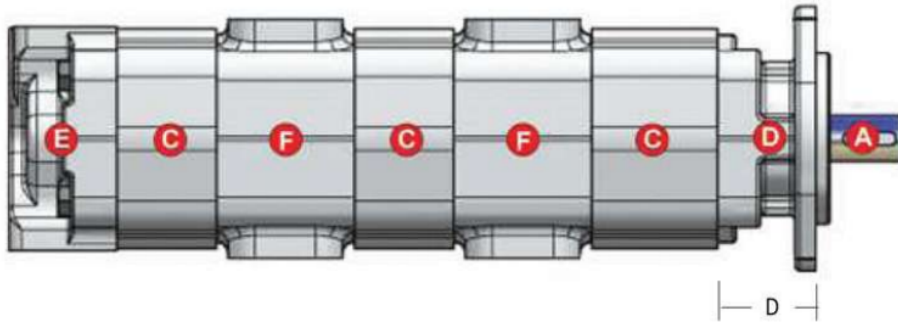
SINGLE



DOUBLE

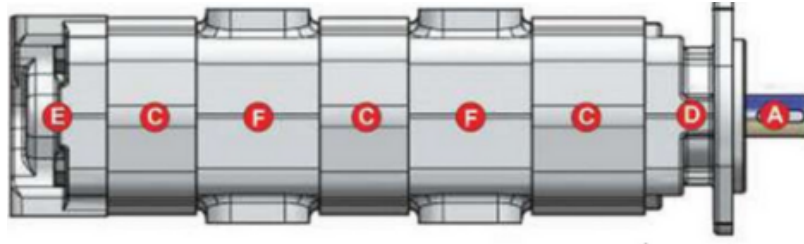


TRIPLE



C SERIES 330 / 350 / 365			
Gear Housing	GW	inches	mm.
	- 05	1"	25.40
	- 07	1-1/4"	31.75
	- 10	1-1/2"	38.10
	- 12	1-3/4"	44.45
	- 15	2"	50.80
	- 17	2-1/4"	57.15
	- 20	2-1/2"	63.50
	- 22	2-3/4"	69.85
	- 25	3"	76.20

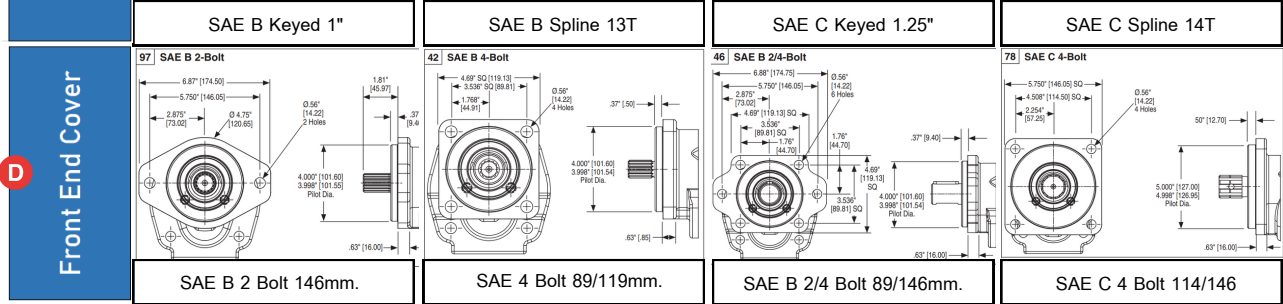
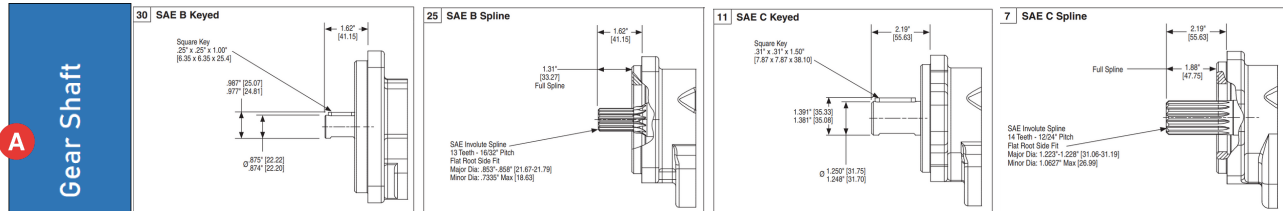
Series	E	D	F	X1	X2	X3
330	80 mm.	56 mm.	89 mm.	173 mm.	179 mm.	149 mm.
	3.15"	2.20"	3.5"	6.82"	7.06"	5.87"
350	89 mm.	56 mm.	89 mm.	195 mm.	184 mm.	157 mm.
	3.52"	2.20"	3.5"	7.68"	7.25"	6.18"
365	96 mm.	76 mm.	102 mm.	212 mm.	188 mm.	189 mm.
	3.76"	2.97"	4.01"	7.42"	7.42"	7.44"



SINGLE PUMP/MOTOR

Front End Cover	330			350			365		
	Pump		Motor	Pump		Motor	Pump		Motor
	Right	Left	Bi-direction	Right	Left	Bi-direction	Right	Left	Bi-direction

Gear width	05	07	10	12	15	17	20	22	25
	330 - 16.00 cc/rev 350 - 20.90 cc/rev 365 -	330 - 24.10 cc/rev 350 - 31.30 cc/rev 365 - 44.30 cc/rev	330 - 32.20 cc/rev 350 - 41.80 cc/rev 365 - 59.00 cc/rev	330 - 40.30 cc/rev 350 - 52.20 cc/rev 365 - 73.80 cc/rev	330 - 48.30 cc/rev 350 - 62.70 cc/rev 365 - 88.50 cc/rev	330 - 56.40 cc/rev 350 - 73.10 cc/rev 365 - 103.30 cc/rev	330 - 64.50 cc/rev 350 - 83.60 cc/rev 365 - 118.00 cc/rev	330 - 94.00 cc/rev 350 - 104.50 cc/rev 365 - 132.80 cc/rev	330 - 104.50 cc/rev 350 - 104.50 cc/rev 365 - 147.50 cc/rev



Inlet	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/4"	2-1/2"
	Outlet	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/4"

DOUBLE PUMP

Gear width	05	07	10	12	15	17	20	22	25
	330 - 16.00 cc/rev 350 - 20.90 cc/rev 365 -	330 - 24.10 cc/rev 350 - 31.30 cc/rev 365 - 44.30 cc/rev	330 - 32.20 cc/rev 350 - 41.80 cc/rev 365 - 59.00 cc/rev	330 - 40.30 cc/rev 350 - 52.20 cc/rev 365 - 73.80 cc/rev	330 - 48.30 cc/rev 350 - 62.70 cc/rev 365 - 88.50 cc/rev	330 - 56.40 cc/rev 350 - 73.10 cc/rev 365 - 103.30 cc/rev	330 - 64.50 cc/rev 350 - 83.60 cc/rev 365 - 118.00 cc/rev	330 - 94.00 cc/rev 350 - 104.50 cc/rev 365 - 132.80 cc/rev	330 - 104.50 cc/rev 350 - 104.50 cc/rev 365 - 147.50 cc/rev

Inlet	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/4"	2-1/2"
	Outlet	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/4"

TRIPLE PUMP

Gear width	05	07	10	12	15	17	20	22	25
	330 - 16.00 cc/rev 350 - 20.90 cc/rev 365 -	330 - 24.10 cc/rev 350 - 31.30 cc/rev 365 - 44.30 cc/rev	330 - 32.20 cc/rev 350 - 41.80 cc/rev 365 - 59.00 cc/rev	330 - 40.30 cc/rev 350 - 52.20 cc/rev 365 - 73.80 cc/rev	330 - 48.30 cc/rev 350 - 62.70 cc/rev 365 - 88.50 cc/rev	330 - 56.40 cc/rev 350 - 73.10 cc/rev 365 - 103.30 cc/rev	330 - 64.50 cc/rev 350 - 83.60 cc/rev 365 - 118.00 cc/rev	330 - 94.00 cc/rev 350 - 104.50 cc/rev 365 - 132.80 cc/rev	330 - 104.50 cc/rev 350 - 104.50 cc/rev 365 - 147.50 cc/rev

Inlet	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/4"	2-1/2"
	Outlet	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/4"

