

- Original Commercial pump design
- Three-piece cast iron construction for assembly flexibility
- Durable high-strength cast iron body for excellent power to weight ratio
- Balanced thrust plates optimize pump efficiency
- Roller bearings for durability and resistance to fluid contamination
- Multiple sections available



Product Features	Description
Pump Type	Cast iron roller bearing, external gear
Mounting	SAE, Pad, 6-Bolt
Ports	SAE Straight Thread or Split Flange, NPT
Shaft Style	SAE splined, keyed or tapered
Pump Speed	900 to 2400 RPM
Motor Speed	800 to 2000 RPM
Maximum Displ.	3.9 in ³ /rev
Maximum Operating Pressure	3000 PSI

Product Features	Description
Fluids	Mineral oil
Fluid Temperature	Range of Operating Temperature -20 to 80°C (0 to 180°F)
Fluid Viscosity	50-7500 SUS
Direction of Rotation (looking at the driveshaft)	Clockwise, Counter Clockwise, Bi-Direction

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PGP/PGM031 Specifications

PGP031 Frame Size	05	07	10	12	15	17	20
Displacement – cm ³ /rev (in ³ /rev)	16.1 (0.99)	24.2 (1.48)	32.3 (1.97)	40.4 (2.46)	48.4 (2.96)	56.5 (3.45)	64.6 (3.94)
Max continuous pressure – bar (PSI)	207 (3,000)	207 (3,000)	207 (3,000)	207 (3,000)	207 (3,000)	172 (2,500)	172 (2,500)
Max Speed – RPM	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Approximate Weight – Lbs. [kg]	30 [13.5]	31 [14]	33 [15]	34 [15.5]	35 [16]	36 [16.5]	37 [17]

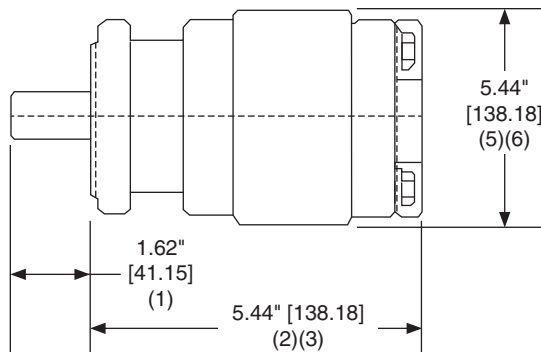
PGM031 Frame Size	05	07	10	12	15	17	20
Displacement – cm ³ /rev (in ³ /rev)	16.1 (0.99)	24.2 (1.48)	32.3 (1.97)	40.4 (2.46)	48.4 (2.96)	56.5 (3.45)	64.6 (3.94)
Max continuous pressure – bar (PSI)	207 (3,000)	207 (3,000)	207 (3,000)	207 (3,000)	207 (3,000)	172 (2,500)	172 (2,500)
Max Speed – RPM	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Approximate Weight – Lbs. [kg]	30 [13.5]	31 [14]	33 [15]	34 [15.5]	35 [16]	36 [16.5]	37 [17.0]

PGP/PGM031 Dimensions

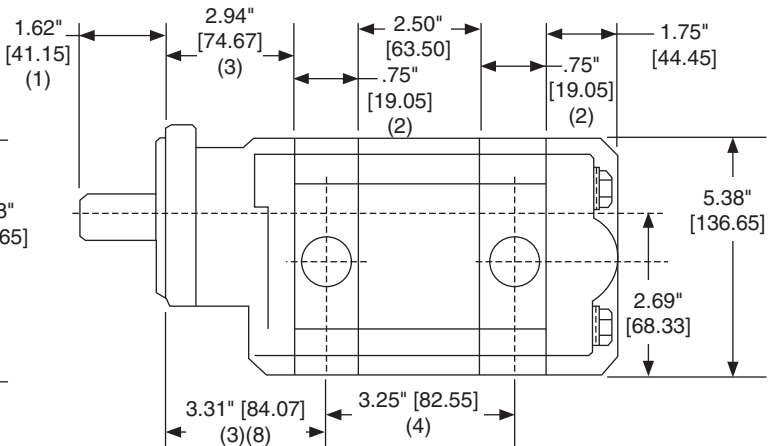
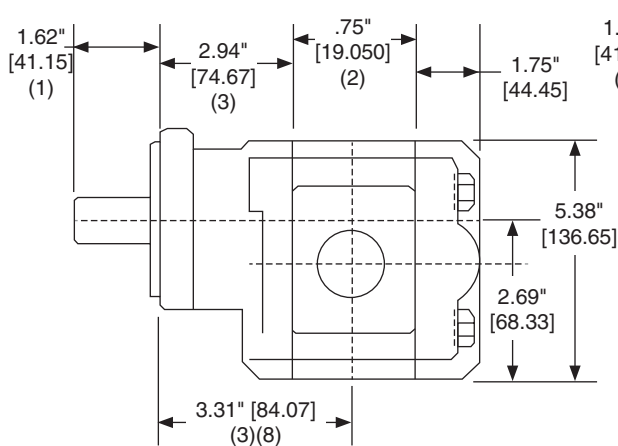
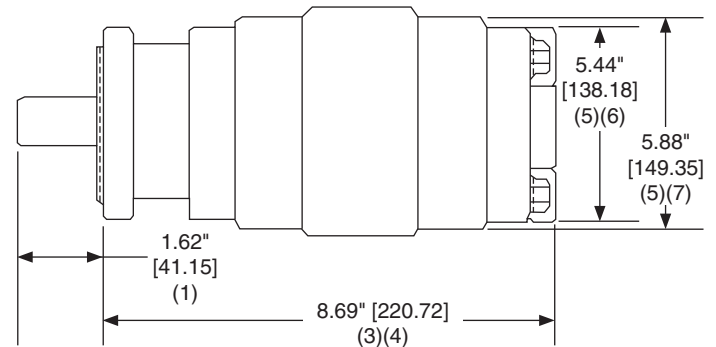
NOTES

1. Dimension will vary with shaft type
2. Dimension + gear width
3. Dimension is for Type 1 SEC. For Type 2: subtract 1.12" (28.4 mm) for 031
4. Dimension + total gear width
5. Dimension will vary with port type. Subtract 0.25" (6.4 mm) for S.F. ports.
6. Dimension is for wide B-C. Narrow B-C dimensions: 5.00" (127 mm) for 031
7. Dimension + ½ front section gear width

Single Units



Multiple Units



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PGP031

Flow data at 2500 PSI (172 bar) unless noted

Speed RPM	Gear Width Output (gpm/lpm)				
	1"	1 ¼"	1 ½"	1 ¾"	2"
900	6.5	8	10	12	13.5
	24.5	30	38	45.5	51
1200	9	11.5	14	16	18.5
	34	43.5	53	60.5	70
1500	11.5	14.5	17.5	20.5	23.5
	43.5	55	66	77.5	89
1800	14	18	21.5	25	29
	53	68	81.5	94.5	110
2100	16.5	21	25	29.5	34
	62.5	79.5	94.5	112	129
2400	19	24	29	34	39
	72	91	110	129	148

*Flow data at 2000 PSI (138 bar) rated pressure.

PGP031

Input power at 2500 PSI (172 bar) unless noted

Speed RPM	Gear Width Inches (HP/kW)				
	1"	1 ¼"	1 ½"	1 ¾"	2"
900	14	17	20	23	25
	11	13	15	17	19
1200	19	22	26	30	33
	14	17	20	22	25
1500	23	28	33	37	42
	17	21	24	27	31
1800	27	33	39	44	50
	20	25	29	33	37
2100	32	38	45	51	58
	24	29	34	38	43
2400	36	44	51	58	66
	26	33	38	43	49

*Input power at 2000 PSI (138 bar)

PGM031

Motor performance data at 2500 PSI (172 bar) unless noted.

Speed RPM	1" Gear			1 ½" Gear			2" Gear		
	Output		Input	Output		Input	Output		Input
	Torque	Power	Flow	Torque	Power	Flow	Torque	Power	Flow
800	675	8.5	9	1035	13	13	1385	17.5	17
	76.5	6.5	34	117	9.5	49	156.5	13	64.5
1200	685	13	13	1055	20	18	1410	27	23.5
	77.5	9.5	49	119	15	68	159.5	20	89
1600	680	17.5	16	1030	26	23	1390	35	30.5
	77	13	60.5	116.5	19.5	87	157	26	115
2000	660	21	19.5	1010	32	28	1370	43.5	37
	74.5	15.5	74	114	24	106	155	32.5	140

U.S./Metric Torque: $\frac{\text{In.-lbs.}}{\text{Nm}}$ Flow: $\frac{\text{GPM}}{\text{LPM}}$ Power: $\frac{\text{HP}}{\text{kW}}$

*Motor performance data at 2000 PSI (138 bar).

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No Porting ≤ 2500 PSI

Order Code		Port Size		Gear Width Availability	
CW	CCW	In	Out	17	20
AB	AB	None	None	X	X

CW = Clockwise CCW = Counter Clockwise

No Porting ≤ 3000 PSI

Order Code		Port Size		Gear Width Availability		
CW	CCW	In	Out	10	12	15
AB	AB	None	None	X	X	X

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ODT Tube Ports ≤ 2500 PSI

Order Code		ODT Tube Porting Port Size		Gear Width Availability	
CW	CCW	In	Out	17	20
EC	ED	3/4"	-	X	X
ED	EC	-	3/4"	X	X
EF	EF	3/4"	3/4"	X	X
EK	EH	1-1/4"	3/4"	X*	
IP	IN	1-1/2"	3/4"	X*	
AC	AD	1"	-	X	X
AD	AC	-	1"	X	X
AF	AF	1"	1"	X	X
AJ	AG	1-1/4"	1"	X*	X*
AK	AH	1-1/2"	1"	X*	X*
AA	AO	1-1/4"	-	X*	
AL	AL	1-1/4"	1-1/4"		X
AP	AM	1-1/2"	1-1/4"		X*
AE	AU	1-1/2"	-		X*


ODT Tube Ports ≤ 3000 PSI

Order Code		ODT Tube Porting Port Size		Gear Width Availability		
CW	CCW	In	Out	10	12	15
EC	ED	3/4"	-	X*	X	X
ED	EC	-	3/4"		X	X
EF	EF	3/4"	3/4"		X	X
EJ	EG	1"	3/4"		X*	X*
EK	EH	1-1/4"	3/4"			X*
AC	AD	1"	-	X*	X*	2500
AD	AC	-	1"			2500
AF	AF	1"	1"			2500
AJ	AG	1-1/4"	1"			2500
AA	AO	1-1/4"	-			X*

* Ports designated by an asterisk * are for use as the low-pressure inlet port only.

NOTES

1. ■ Shaded cells are acceptable for motor codes.
2. X means both codes are available.
3. 2500 indicates maximum pressure rating on port.
4. CW = Clockwise; CWW = Counter Clockwise.

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Split Flange Porting ≤ 3000 PSI


Order Code		Split Flange Porting Port Size		Gear Width Availability		
CW	CCW	In	Out	10	12	15
UC	UD	3/4"	-	X	X	X
UD	UC	-	3/4"	X	X	X
UF	UF	3/4"	3/4"	X	X	X
UJ	UG	1"*	3/4"	X*	X	
UK	UH	1-1/4"*	3/4"		X*	X*
OC	OD	1"*	-	2500	X	X
OD	OC	-	1"	2500	X	X
OF	OF	1"	1"	2500	X	X
OJ	OG	1-1/4"*	1"		X*	X*
OA	OB	1-1/4"*	-		X*	2500
OB	OA	-	1-1/4"			2500


Split Flange Porting ≤ 2500 PSI

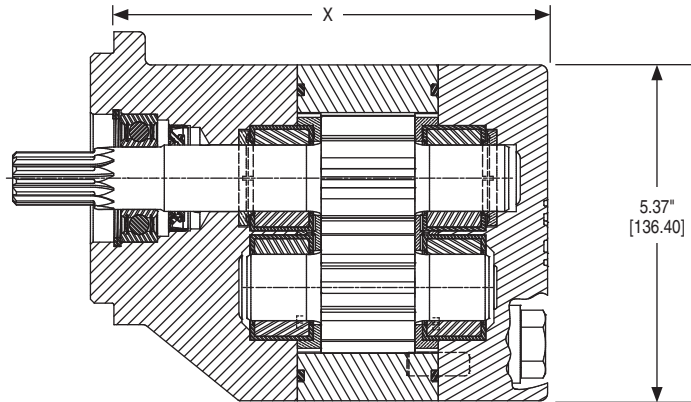
Order Code		Split Flange Porting Port Size		Gear Width Availability	
CW	CCW	In	Out	17	20
UC	UD	3/4"	-	X	
UD	UC	-	3/4"	X	
OF	OF	1"	1"	X	X
OJ	OG	1-1/4"*	1"	X	X
OK	OH	1-1/2"*	1"	X*	X*
OL	OL	1-1/4"	1-1/4"	X	X
OP	OM	1-1/2"*	1-1/4"	X*	X*
OE	OU	1-1/2"*	-	X*	X
OU	OE	-	1-1/2"		X

* Ports designated by an asterisk * are for use as the low-pressure inlet port only.

NOTES

1.  Shaded cells are acceptable for motor codes.
2. X means both codes are available.
3. 2500 indicates maximum pressure rating on port.
4. CW = Clockwise; CWW = Counter Clockwise.

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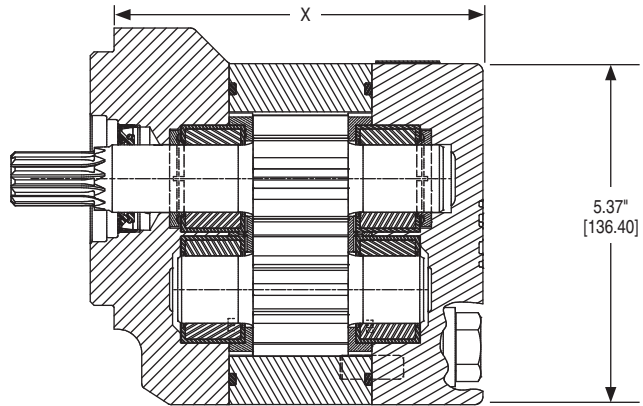
X DIMENSION – Type 1

SEC CODE	05	07	10	12	15	17	20
00	5.94" [150.88]	6.19" [157.23]	6.44" [163.58]	6.69" [169.93]	6.94" [176.28]	7.19" [182.63]	7.44" [188.98]
05	5.94" [150.88]	6.19" [157.23]	6.44" [163.58]	6.69" [169.93]	6.94" [176.28]	7.19" [182.63]	7.44" [188.98]
42	5.94" [150.88]	6.19" [157.23]	6.44" [163.58]	6.69" [169.93]	6.94" [176.28]	7.19" [182.63]	7.44" [188.98]
78	5.94" [150.88]	6.19" [157.23]	6.44" [163.58]	6.69" [169.93]	6.94" [176.28]	7.19" [182.63]	7.44" [188.98]
94	5.94" [150.88]	6.19" [157.23]	6.44" [163.58]	6.69" [169.93]	6.94" [176.28]	7.19" [182.63]	7.44" [188.98]
97	5.94" [150.88]	6.19" [157.23]	6.44" [163.58]	6.69" [169.93]	6.94" [176.28]	7.19" [182.63]	7.44" [188.98]

X DIMENSION – Type 1 (w/Extra Wide PEC 312 3420 100)

SEC CODE	05	07	10	12	15	17	20
00	6.44" [163.58]	6.69" [169.93]	6.94" [176.28]	7.19" [182.63]	7.44" [188.98]	7.69" [195.33]	7.94" [201.68]
05	6.44" [163.58]	6.69" [169.93]	6.94" [176.28]	7.19" [182.63]	7.44" [188.98]	7.69" [195.33]	7.94" [201.68]
42	6.44" [163.58]	6.69" [169.93]	6.94" [176.28]	7.19" [182.63]	7.44" [188.98]	7.69" [195.33]	7.94" [201.68]
78	6.44" [163.58]	6.69" [169.93]	6.94" [176.28]	7.19" [182.63]	7.44" [188.98]	7.69" [195.33]	7.94" [201.68]
94	6.44" [163.58]	6.69" [169.93]	6.94" [176.28]	7.19" [182.63]	7.44" [188.98]	7.69" [195.33]	7.94" [201.68]
97	6.44" [163.58]	6.69" [169.93]	6.94" [176.28]	7.19" [182.63]	7.44" [188.98]	7.69" [195.33]	7.94" [201.68]

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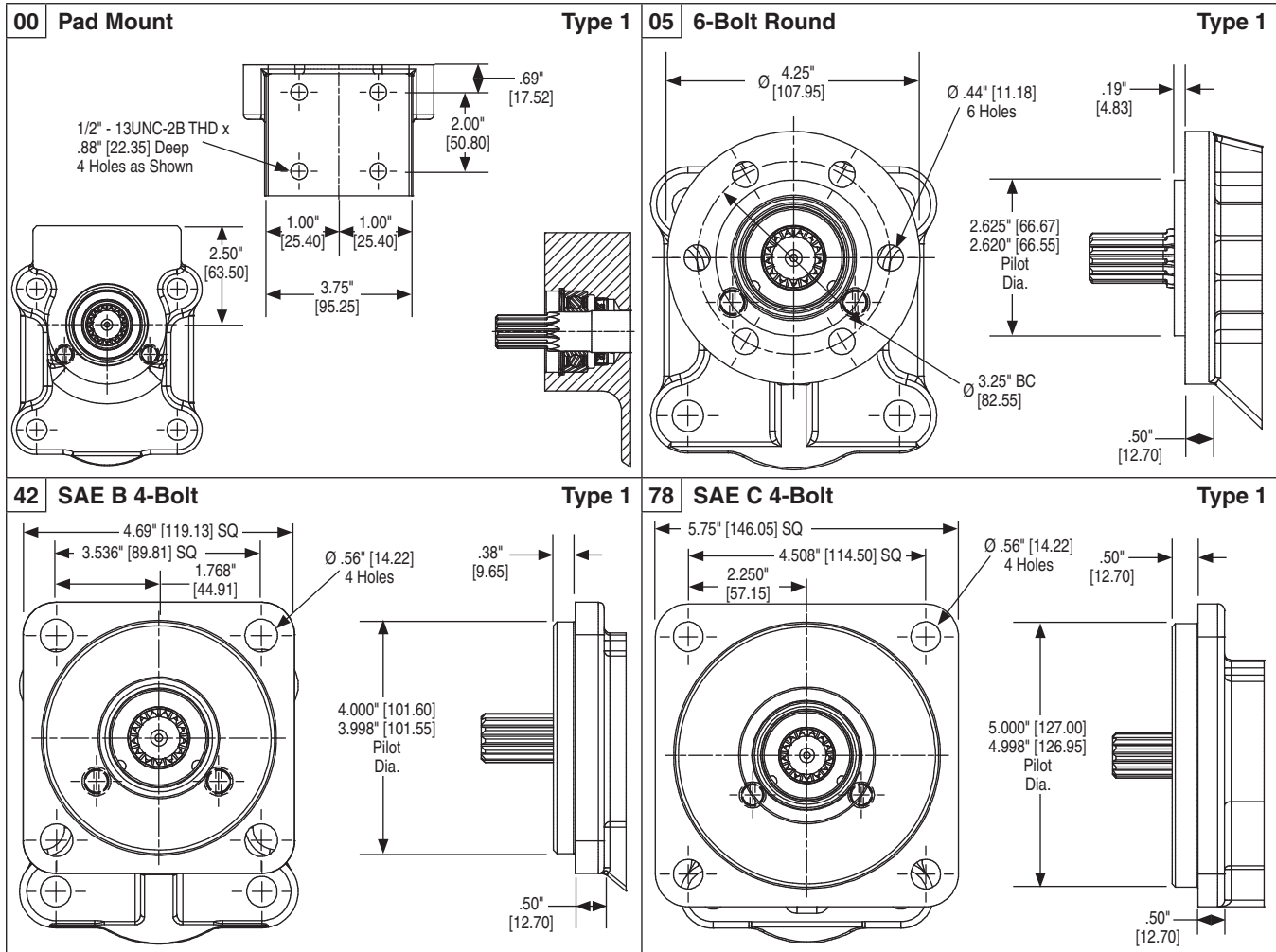
X DIMENSION – Type 2

SEC CODE	05	07	10	12	15	17	20
96	4.81" [122.17]	5.06" [128.52]	5.31" [134.87]	5.56" [141.22]	5.81" [147.57]	6.06" [153.92]	6.31" [160.27]

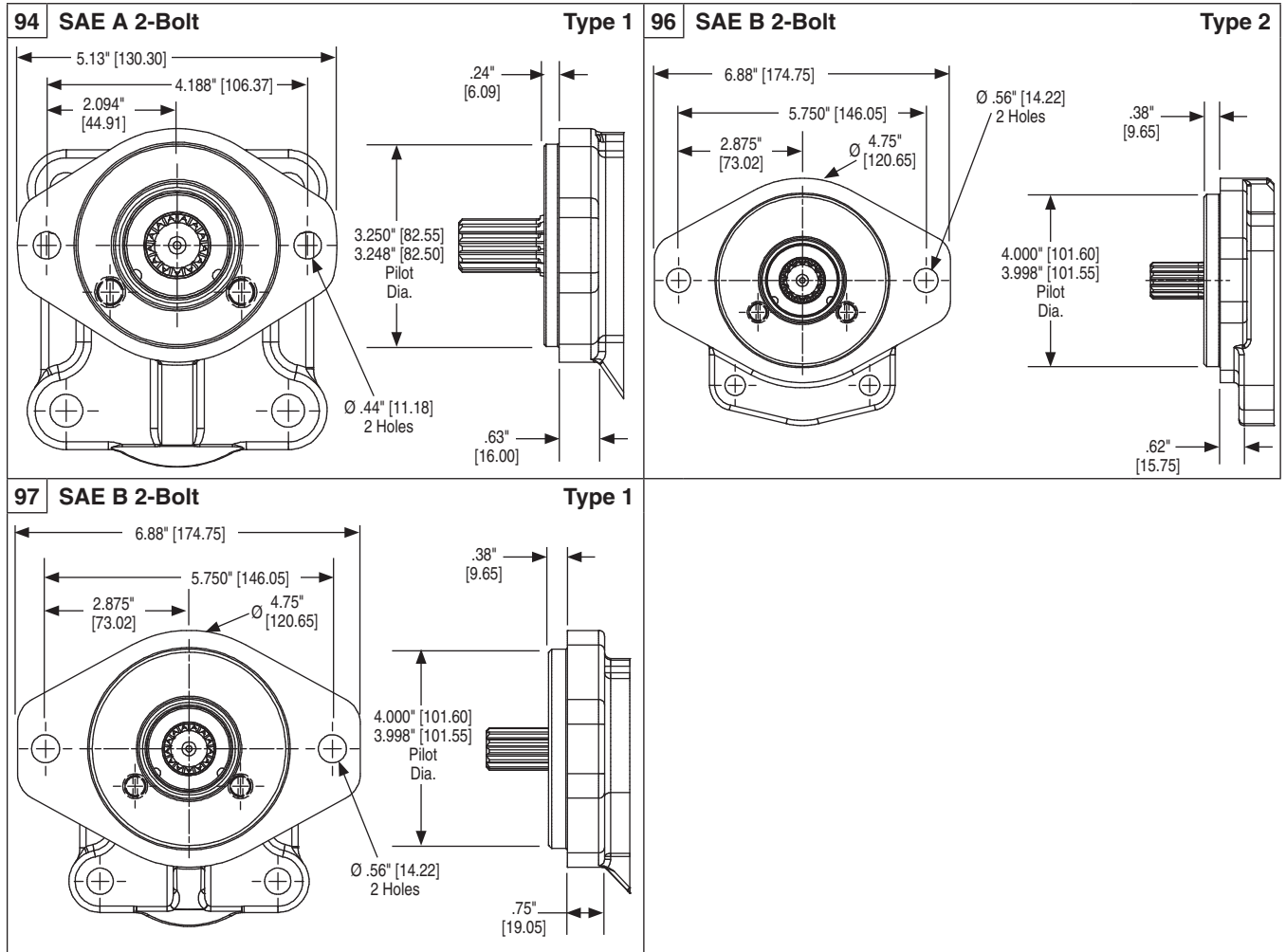
X DIMENSION – Type 2 (w/Extra Wide PEC 312 3420 100)

SEC CODE	05	07	10	12	15	17	20
96	5.31" [134.87]	5.56" [141.22]	5.81" [147.57]	6.06" [153.92]	6.31" [160.27]	6.56" [166.62]	6.81" [172.97]

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<p>25 SAE B Spline / ANSI 22-4 Type 1</p> <p>SAE Involute Spline 16/32 Pitch - 13 Teeth Flat Root Side Fit Major Dia. .853"-.858" [21.67-21.79] Minor Dia. .7335" [18.63] Max.</p>	<p>30 SAE B Keyed / ANSI 22-1 Type 1</p> <p>#15 P&W Key .25" x .38" x 1.00" [6.35 x 9.65 x 25.40]</p>
<p>32 Clutch Pump Shaft Type 1</p> <p>#6 Woodruff Key .156" x Ø.625" [3.96 x 15.87]</p> <p>5/16"-24 UNF-2B THD x 1.00" [25.40] Deep</p> <p>Ø.841" [21.36] Gauge</p> <p>Ø.640" [16.26]</p> <p>3.006" ± .005" [76.35 ± .127] Taper Per Foot</p> <p>Ø.875" [22.22]</p>	<p>43 SAE BB Keyed / ANSI 25-1 Type 1</p> <p>#21 P&W Key .25" x .38" x 1.25" [6.35 x 9.65 x 31.75]</p> <p>1.112" [28.24]</p> <p>1.102" [27.99]</p>
<p>65 SAE B Spline / ANSI 22-4 Type 2</p> <p>SAE Involute Spline 16/32 Pitch - 13 Teeth Flat Root Side Fit Major Dia. .853"-.858" [21.67-21.79] Minor Dia. .7335" [18.63] Max.</p>	<p>66 SAE B Keyed, Type 2</p> <p>#15 P&W Key .25" x .38" x 1.00" [6.35 x 9.65 x 25.40]</p>

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<p>67 SAE BB Keyed / ANSI 25-1 Modified,, Type 2</p> <p>#21 P&W Key .25" x .38" x 1.25" [6.35 x 9.65 x 31.75]</p> <p>1.94" [49.27]</p> <p>1.112" [28.24] 1.102" [27.99]</p> <p>Ø .9988" [25.37] Ø .9984" [25.36]</p>	<p>68 1.00" Dia. 6 Tooth Spline Shaft Type 1</p> <p>1.62" [41.15]</p> <p>1.625" [41.27] Full Spline</p> <p>6 Tooth Spline Major Dia. .995"-.997" [25.27-25.32] Minor Dia. .820"-.824" [20.87-20.93] Tooth THK: .244"-.245" [6.20-6.22]</p>
<p>90 SAE B Keyed / ANSI 22-2 Modified Type 1</p> <p>#15 Woodruff Key .25" x Ø1.00" [6.35 x 25.40]</p> <p>2.44" [61.98]</p> <p>1.34" [34.04]</p> <p>.987" [25.07] .977" [24.82]</p> <p>Ø .875" [22.24] .874" [22.20]</p> <p>5/8"-18 UNF-2A THD</p> <p>Ø.16" [4.06]</p>	<p>95 SAE A Spline / ANSI 16-4 Type 1</p> <p>1.25" [31.75]</p> <p>.94" [23.88] Full Spline</p> <p>SAE Involute Spline 9 Teeth - 16/32 Pitch Flat Root Side Fit Major Dia. .603"-.609" [15.32-15.47] Minor Dia. .4835 Max [12.28]</p>
<p>98 SAE BB Spline / ANSI 25-4 Type 1</p> <p>1.81" [45.97]</p> <p>1.44" [36.58] Full Spline</p> <p>SAE Involute Spline 15 Teeth - 16/32 Pitch Flat Root Side Fit Major Dia. .978"-.983" [24.84-24.97] Minor Dia. .8585 Max [21.80]</p>	

WARNING: This product can expose you to chemicals including lead or DEHP which are known to the state of California to cause cancer, birth defects, and other reproductive harm. www.p65warnings.ca.gov