Technical Features

Variable displacement, axial piston pumps for open circuit hydraulic systems

Available as standard (P2) or supercharged (P3) version

Optimized for mobile applications:

- Dedicated envelope design and unique port layout
- High self-priming speed
- Standard integrated pre-compression volume
- Heavy duty approval (size 105 and 145) for increased power density

Customer Benefits

- Cost saving installation by direct PTO mount
- High productivity by maximized output flow
- High altitude operation capability
- Low noise level and reduced flow ripple

P2 Series

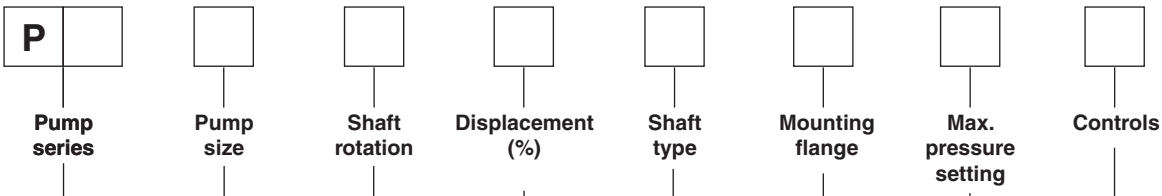
P3 Series

Technical Data

		P2 Series				P3 Series	
Frame size		**P2060**	**P2075**	**P2105**	**P2145**	**P3105**	**P3145**
Max. displacement	[cm³/rev]	60	75	105	145	105	145
Self-priming speed at 1 bar absolute inlet pressure 1)	[rpm]	2800	2500	2300	2200	2600	2500
Nominal pressure 2)	[bar]	320	320	350	350	350	350
Min. inlet pressure, absolute 1)	[bar]	0.8	0.8	0.8	0.8	0.8	0.8
Max. inlet pressure, absolute	[bar]	10	10	10	10	1.5	1.5
Max. case drain pressure, absolute	[bar]	1.5	1.5	1.5	1.5	1.5	1.5
Min. outlet pressure, absolute	[bar]	15	15	15	15	15	15
Noise level at full flow at 1800 rpm and 250 bar	[dbA]	74	76	78	80	78	80
Weight with load sense control	[kg]	37	44	63	78	62	76
Mass moment of inertia (at axis of shaft)	[kg m²]	0.0061	0.0101	0.0168	0.0241	0.0177	0.0264

1) Detailed inlet characteristics can be taken from page 18 and 36

2) For maximum operating pressures exceeding above mentioned nominal ratings please consult manufacturer



Code	Pump series
2	Standard
3	Super charged

Code	Pump size (max. displacement in cc/rev)	
	P2	P3
060	60	-
075	75	-
105	105	105
145	145	145

Code	Shaft rotation [1]
R	Right (CW)
L	Left (CCW)

[1] Viewed from shaft end.

Code	% of max. displacement
00	100 % stroke standard factory set
XX	Range is 70 % to 99 %

Code	Shaft type (splined)[2] [3]	Pump size			
		060	075	105	145
B1	SAE B	•	–	–	–
B2	SAE B-B	•	•	–	–
C1	SAE C	•	•	•	•
C2	SAE C-C	–	•	•	•
C3	SAE C, w/o undercut	•	•	•	•
D1	SAE D	–	–	•	•
D2	SAE D, w/o undercut	–	–	•	•
M6	DIN 5480, W50	–	–	–	•

[2] See pages 32 and 44 for permissible input torque.
[3] For further shaft options please consult manufacturer.

Code	Mounting flange	Pump size			
		060	075	105	145
B	SAE B 2-bolt	•	–	–	–
C	SAE C 2-bolt	–	–	–	•
	SAE C 2 & 4-bolt	–	•	•	–
	SAE C 4-bolt	•	–	–	[4]
D	SAE D 4-bolt	–	–	–	•

[4] Please consult manufacturer.

Code	Max. pressure setting	
XX	Pressure setting in 10 bar increments	
	060	100 to 320 bar, XX = [10…32]
	075	
	105	100 to 350 bar, XX = [10…35]
	145	

Code	Controls
PA	Max. pressure control
RA	Remote pressure control with max. pressure control
LA	Load sensing control w/o bleed-off orifice, with max. pressure control
LB	Load sensing control with bleed-off orifice, with max. pressure control
TA	Torque control, load sensing w/o bleed-off orifice and max. pressure control, range 20...60 % of reference torque value
TB	Torque control, load sensing with bleed-off orifice and max. pressure control, range 20...60% of reference torque value
TC	Torque control, load sensing w/o bleed-off orifice and max. pressure control, range 50...90 % of reference torque value
TD	Torque control, load sensing with bleed-off orifice and max. pressure control, range 50...90 % of reference torque value

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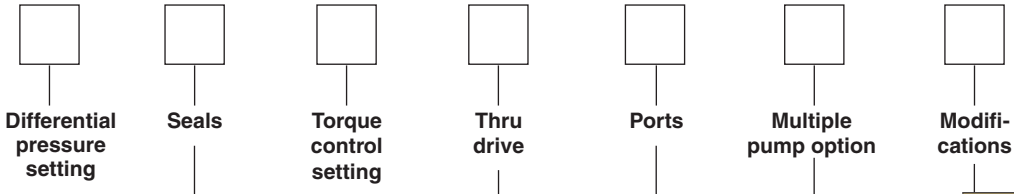

Pump	Code	Modifications
P2	U	No paint
	P	Parker black painted
P3	D	No paint
	E	Parker black painted

Code	Multiple pump option [6]
1	Single pump
2	Front pump of multiple pumps [7]
3	Middle pump of multiple pumps [7]
4	Rear pump of multiple pumps [7]

[6] For multiple pump assemblies please contact manufacturer for issue of part number.

[7] Choose this option if pump is considered to be shipped as part of a combination assembled by manufacturer, otherwise please use option 1.

Code	Ports
A	Side ports, UNC threads
B	Side ports, metric threads

Code	Thru drive		Pump size			
	Mounting flange	Coupling	060	075	105	145
S1	No thru drive		•	•	•	•
T1	Prepared for thru drive - no coupling		•	•	•	•
A1	SAE A 2-bolt	SAE A, spline	•	•	•	•
B1	SAE B 2-bolt	SAE B, spline	•	•	•	•
B2	SAE B 2-bolt	SAE B-B, spline	•	•	•	•
C1	SAE C 2-bolt	SAE C, spline	•	•	•	•
C2	SAE C 2-bolt	SAE C-C, spline	–	–	–	•
C3	SAE C 4-bolt	SAE C, spline	•	•	•	•
C4	SAE C 4-bolt	SAE C-C, spline	–	–	–	•
D3	SAE D 4-bolt	SAE D, spline	–	–	–	•

Code	Torque control setting					
00	Non torque controlled (PA, RA, LA and LB control)					
XX	20% to 90% of reference torque value[5]	pump size	60	75	105	145
		torque ref. [Nm]	339	424	594	820

[5] Example: To limit maximum input torque of P2145 to 600Nm setting to be defined is 73%

Code	Seals
N	NBR seals, FPM single shaft seal
B	NBR seals, NBR single shaft seal
D	NBR seals, FPM double shaft seal
Q	NBR seals, NBR double shaft seal
V	FPM seals, FPM single shaft seal
T	FPM seals, FPM double shaft seal

Code	Differential pressure setting
00	Not applicable for PA controlled pumps
XX	Δ pressure setting range 10 to 35 bar

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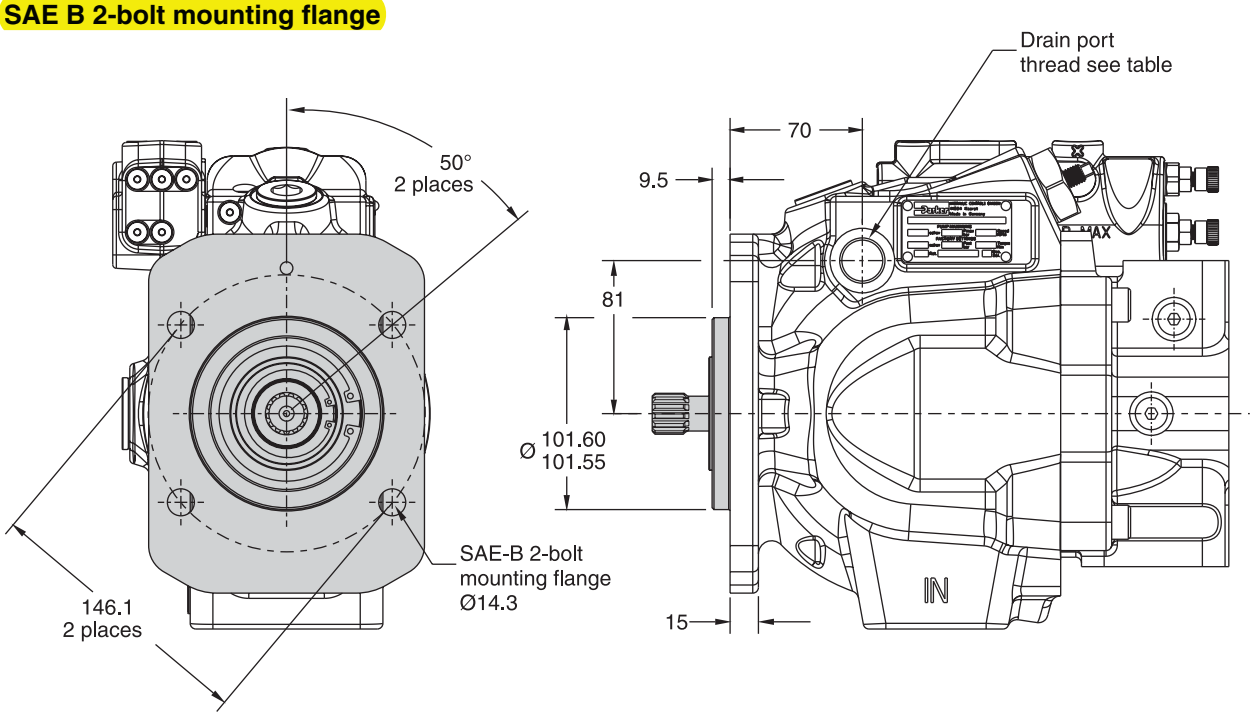
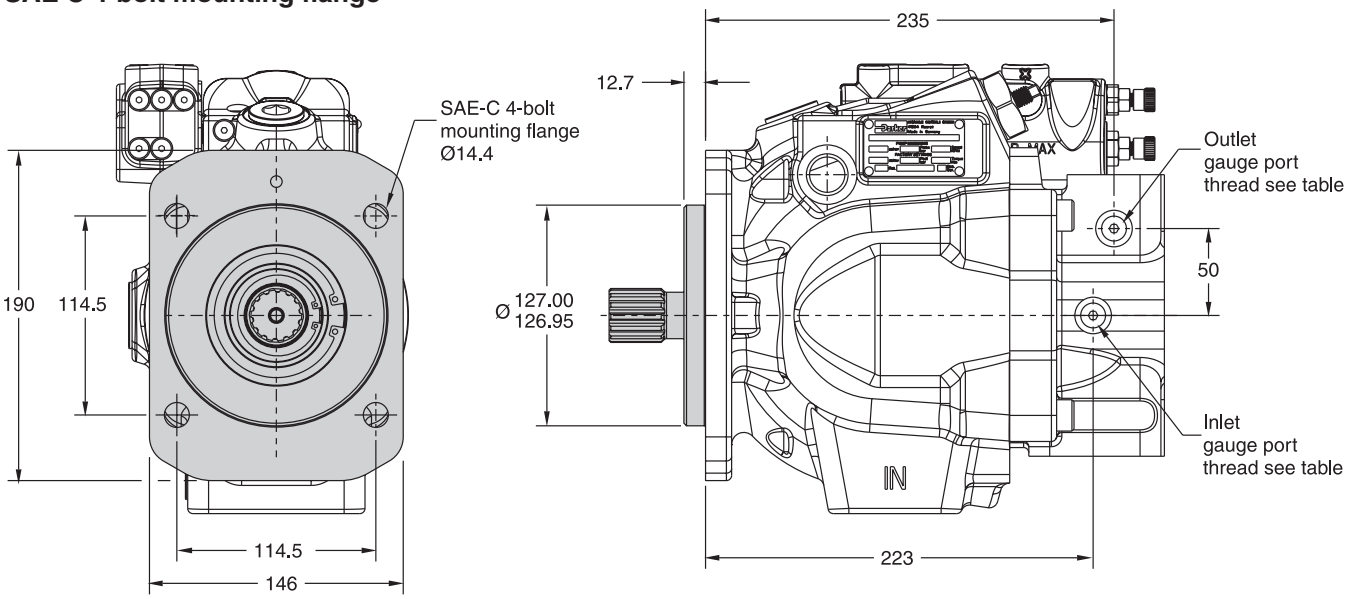
P2060 Mounting flange

SAE B 2-bolt mounting flange



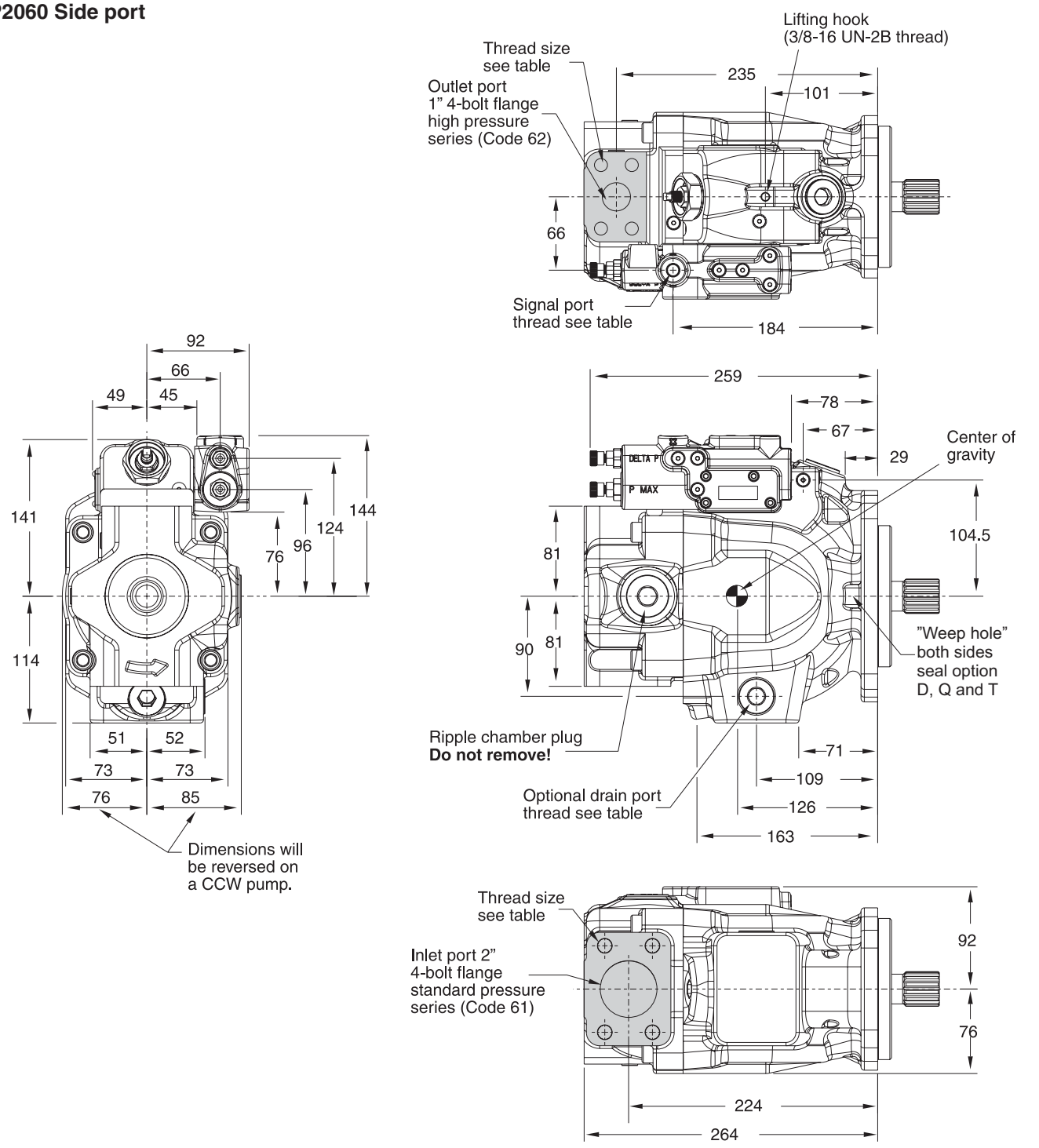
SAE C 4-bolt mounting flange



CW pump shown.
CCW pump will have inlet and outlet gauge ports reversed.

Port ordering code	Drain port	Inlet gauge port / Outlet gauge port / Signal port
“A” side - UNC	SAE-10 straight thread / O-ring port: 7/8-14 UN thread	SAE-4 straight thread / O-ring port: 7/16-20 UN thread
“B” side - metric	ISO 6149 straight thread / O-ring port: M22 x 1.5 thread	ISO 6149 straight thread / O-ring port: M12 x 1.5 thread

P2060 Side port



Pump shown is a CW rotation P2060 series pump with load sense and max. pressure compensator.

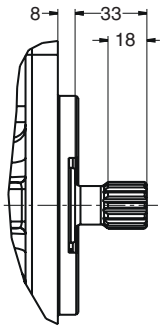
As an option the compensator unit can be positioned at opposite side of the pump. Please consult manufacturer for details.

CCW pump will have inlet and outlet gauge ports reversed.

Port option	Drain port	Inlet port	Outlet port	Inlet gauge port / Outlet gauge port / Signal port
"A" side - UNC	SAE-10 straight thread / O-ring port: 7/8-14 UN thread	1/2-13 UN	7/16-14 UN	SAE-4 straight thread / O-ring port: 7/16-20 UN thread
"B" side - metric	ISO 6149 straight thread / O-ring port: M22 x 1.5 thread	M12 x 1.75	M12 x 1.75	ISO 6149 straight thread / O-ring port: M12 x 1.5 thread

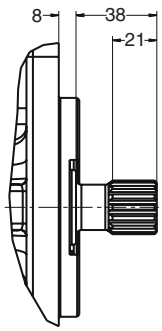
P2 Shaft options

B1



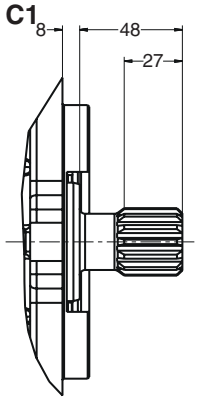
SAE “B” spline
13 tooth
16/32 pitch
30° involute spline
Max. input torque
209 Nm

B2



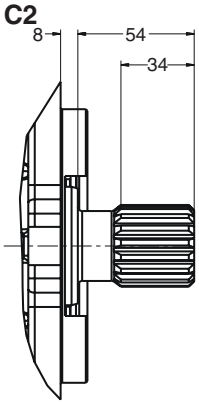
SAE “B-B” spline
15 tooth
16/32 pitch
30° involute spline
Max. input torque
337 Nm

C1



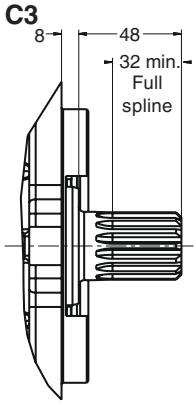
SAE “C” spline
14 tooth
12/24 pitch
30° involute spline
Max. input torque
641 Nm

C2



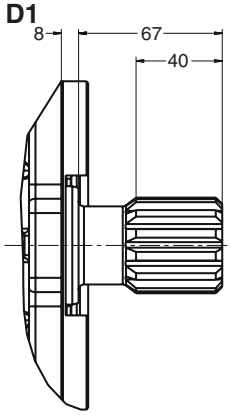
SAE “C-C” spline
17 tooth
12/24 pitch
30° involute spline
Max. input torque
1217 Nm

C3



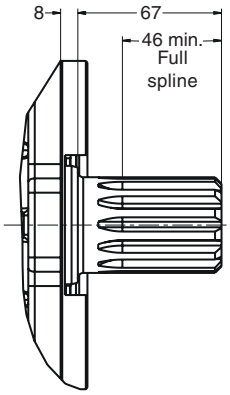
SAE "C" spline
no undercut
14 tooth
12/24 pitch
30° involute spline
Max. input torque
769 Nm

D1



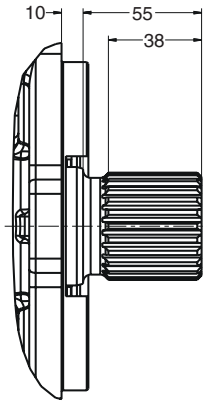
SAE D
13 tooth
8/16 pitch
30° involute spline
Max. input torque
1701 Nm

D2



SAE “D” spline
no undercut
13 tooth
8/16 pitch
30° involute spline
Max. input torque
2041 Nm

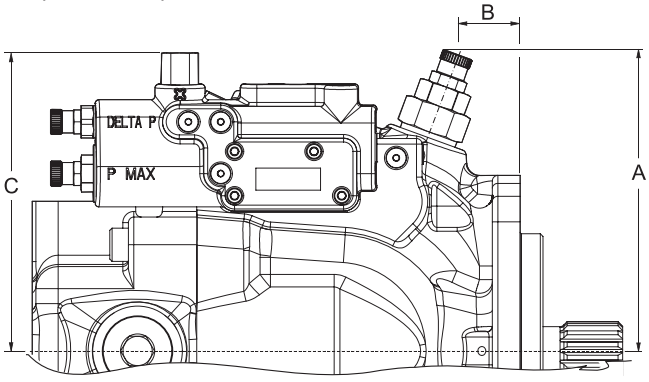
M6



DIN 5480 spline
W50x2x30x24x9g
Max. input torque
3050 Nm

Torque control dimensions

Torque control options ”TA”, ”TB”, ”TC” and ”TD”



	P2060	P2075	P2105	P2145
A	163	171	190	202
B	34	69	69	69
C	161	154	175	186

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