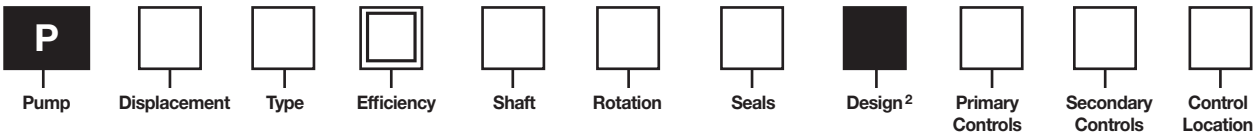


Code	Displacement
6	6.00 in³/rev (98 cc/rev)
7	7.25 in³/rev (119 cc/rev)
8	8.00 in³/rev (131 cc/rev)
11	11.0 in³/rev (180 cc/rev)
14	14.0 in³/rev (229 cc/rev)
24	24.6 in³/rev (403 cc/rev)
30	30.6 in³/rev (501 cc/rev)

Code	Type
F	Fixed Displacement, Open/Closed Circuit
M	Fixed Displacement with High Torque Thru-Drive, Open/Closed Circuit
P	Variable Displacement, Closed Circuit
X	Variable Displacement with Medium Torque Thru-Drive, Closed Circuit
S	Variable Displacement with Medium Torque Thru-Drive & Shuttle Package, Closed Circuit
R	Variable Displacement with High Torque Thru-Drive, Closed Circuit
L	Variable Displacement with High Torque Thru-Drive & Shuttle Package, Closed Circuit
V	Variable Displacement, Open Circuit (P6, 7, 8, 11 & 14 only)
D	Variable Displacement, Open & Closed Circuit (P6, 7 & 8 only)

Code	Efficiency
H	High Efficiency (P24 only)
Omit	Standard Efficiency

Code	Shaft
2	Keyed SAE – Mechanical Shaft Seal (Single Lip Seal on P6, 7, 8F/M)
3	Splined SAE – Mechanical Shaft Seal (Single Lip Seal on P6, 7, 8F/M)
4	Keyed SAE-D (Mounting & Shaft) – Mechanical Shaft Seal (P6, 7 & 8 only, Single Lip Seal on Fixed Displacement Pumps)
-5	Splined SAE-D (Mounting & Shaft) – Mechanical Shaft Seal (P6, 7 & 8 only, Single Lip Seal on Fixed Displacement Pumps)
7	Keyed SAE – Double Lip Shaft Seal
8	Splined SAE – Double Lip Shaft Seal
9	Keyed (long) SAE – Double Lip Shaft Seal
10	Keyed (long) SAE – Mechanical Shaft Seal

Code	Rotation
R	Clockwise
L	Counterclockwise

Code	Seals
1	Nitrile (Buna-N)
4	EPR [1, 3, 4]
5	Fluorocarbon

Code	Primary Controls
Omit	None (Fixed Displacement only)
10	Screw Adjustment (Spring Offset to Maximum Displacement)
2A	Cylinder Control w/Adjustable Maximum Volume Stops
2H	Cylinder Control – 3-Position (Spring Control with Zero Adjustment)
2M	Cylinder Control – 2-Position Electrohydraulic w/Adjustable Maximum Volume Stop (Spring Offset to Minimum Displacement) [1]
2N	Cylinder Control – 3-Position (Spring Centered) Electrohydraulic [1]
40	Rotary Servo – Spring Centered
4A	Rotary Servo – Spring Centered w/ Adjustable Maximum Volume Stops
4B	Rotary Servo – Spring Centered w/ Automatic Brake Control
4C	Rotary Servo – Spring centered w/Adjustable Maximum Volume Stops & Automatic Brake Control
7D	High IQ with 10 GPM Servo Valve & Volume Indicator [1]
7F	High IQ with 10 GPM Servovalve & 4A (Rotary Servo) Control [1]
7J	High IQ with DF+ Valve & Volume Indicator [1]
7K	High IQ with DF+ Valve & 4A (Rotary Servo) Control [1]
7Q	High IQ with digital DF+ valve and & volume indicator (Only with "8" secondary control)
7R	High IQ with digital DF+ valve and & 4A (rotary servo) control (Only with "8" secondary control)
8A	Hydraulic Stroker w/Adjustable Maximum Volume Stops
8C	Hydraulic Stroker w/Adjustable Maximum Volume Stops & Automatic Brake Control
9A	Electrohydraulic Stroker w/Adjustable Maximum Volume Stops [1]
9C	Electrohydraulic Stroker w/Adjustable Maximum Volume Stops & Automatic Brake Control [1]
9D	Electro-hydraulic stroker w/ adjustable maximum volume stops

Code	Secondary Controls
Omit	None (Fixed Displacement only)
2	Volume Indicator
4	Torque Limiter & Volume Indicator
6	Cam Position Feedback Potentiometer [1]
7	Cam Position Feedback RVDT (AC) [1]
8	Cam Position Feedback R VDT (DC) [1]
9	Hall Effect Cam Position Feedback [1]
E	E - Intelligence Enabled with Sensors (only P, X, S, R, L, V, D Type with only 9A Primary Control)

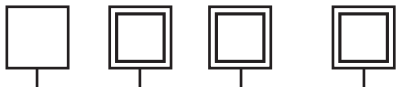
Code	Control Location
Omit	None (Fixed Displacement only)
A	Primary Control on Port A Side
B	Primary Control on Port B Side

1 Not ATEX approved.
2 Assigned by manufacturer.
3 Pump will be unpainted unless otherwise specified.
4 Not available with "5A" or "5C" primary controls or "E" secondary control.

= Omit if not required

Parker Hannifin Corporation
Hydraulic Pump and Power Systems Division
United States

Control & Displacement Features



Internal Pump | External Drive | External Mounting | Special Modifications

Control	Code	Control & Displacement Features
2M* & 2N*	00	CETOP3, NG6 Valve, 110AC/60Hz with Hirschmann Connector [1]
	01	CETOP3, NG6 Valve, 12VDC with Hirschmann Connector [1]
	02	CETOP3, NG6 Valve, 240VAC/50Hz with Hirschmann Connector [1]
	03	CETOP3, NG6 Valve, 110VAC/60Hz, Wiring Box [1]
	04	CETOP3, NG6 Valve, 12VDC, Wiring Box [1]
	05	CETOP3 (D03, NG6) Interface, No Valve [1]
	06	CETOP3, NG6 Valve, 24VDC with Hirschmann Connector [1]
	07	CETOP3, NG6 Valve, 110VAC/50Hz with Hirschmann Connector [1]
7**	00	Without Manual Override Shutoff [1] (Required for 7D, 7J & 7Q Primary Controls)
	01	With Manual Override Shutoff [1] (Required for 7F, 7K, & 7R Primary Controls)
8**	00	75-350 PSI (5-24 Bar)
	01	75-435 PSI (5-30 Bar)
	02	100-380 PSI (7-26 Bar)
	03	150-400 PSI (10-28 Bar)
	04	75-250 PSI (5-17 Bar)
9**	00	24VDC
	01	12VDC
All Other	00	None [1]

Pump	Code	Reduced Displacement
P**F & P**M	00	Standard Cam (19°)
	10	P6 with 17° Cam – 5.3 in³/rev (87cc/rev) P7 with 17° Cam – 6.4 in³/rec (105 cc/rev) P8 with 17° Cam – 7.1 in³/rev (116 cc/rev) P11 with 17° Cam – 9.7 in³/rev (160 cc/rev) P14 with 17° Cam – 12.5 in³/rev (205 cc/rev) P24 with 17° Cam – 22.0 in³/rev (360 cc/rev) P30 with 17° Cam – 27.2 in³/rev (446 cc/rev)
	20	P6 with 15° Cam – 4.6 in³/rev (76 cc/rev) P7 with 15° Cam – 5.6 in³/rev (92 cc/rev) P8 with 15° Cam – 6.2 in³/rev (102 cc/rev) P11 with 15° Cam – 8.5 in³/rev (140 cc/rev) P14 with 15° Cam – 10.9 in³/rev (179 cc/rev)
	30	P6 with 13° Cam – 4.0 in³/rev (66 cc/rev) P7 with 13° Cam – 4.8 in³/rev (79 cc/rev) P8 with 13° Cam – 5.3 in³/rev (88 cc/rev)

Code	Internal Pump
0	1.07 in³/rev (17.5 cc/rev) – P6, 7, 8P/S/X/V/D & P11, 14V only 2.14 in³/rev (35 cc/rev) – P11, 14P/S/X only 2.81 in³/rev (46 cc.rev) – P24, 30P/S/X only (standard)
1	1.61 in³/rev (26.4 cc/rev) – P24, 30P/S/X only (auxiliary external replenishing flow required)
2	1.05 in³/rev (17.2 cc/rev) – P24, 30P/S/X only (auxiliary external replenishing flow required)
3	3.56 in³/rev (58.3 cc/rev) – P24, 30P/S/X only
4	4.84 in³/rev (79.3 cc/rev) – P24, 30P/S/X only
5	5.42 in³/rev (88.8 cc/rev) – P24, 30P/S/X only
6	6.10 in³/rev (100.0 cc/rev) – P24, 30P/S/X only
X	No Internal Pump (standard on P*R/L/F/M)

Code	External Drive
Omit	None [1]
M	Blanking plate – for P6, 7, 8, 11, 14S/X only
A	SAE-A (SAE 82-2) – P6, 7, 8, 11, 14S/X/R/L/M only
B	SAE-B (SAE 101-2) – P6, 7, 8, 11, 14, 24, 30/S/X/R/L/M SAE-B (SAE 101-4) – P11, 14, 24, 30R/L/M
C	SAE-C (SAE 127-2) – P6, 7, 8, 11, 14, 24, 30R/L/M & P24, 30S/X SAE-C (SAE 127-4) – P11, 14, 24, 30R/L/M
D	SAE-D (SAE 152-4) – P11, 14, 24, 30R/L/M only
E	SAE-E (SAE 165-4) – P11, 14, 24, 30R/L/M only
F	SAE-F (SAE 177-4) – P24, 30R/L/M only

Code	External Mounting
Omit	No External Drive Required
0	No External Pump Mounted
1	External Pump Mounted (must be separately specified) – Requires Special Modification "-M2" [1]
2	ATEX Externally Mounted Pump

Code	Special Modifications
Omit	None
NP	No Paint [1]
EX	ATEX APPROVED PUMP without the "E" secondary control (May contain additional modifications. Contact tech support.)
M5	Other Special Modification (example: bronze caged barrel bearing for low viscosity fluids, tandem pumps, etc.) [1]

 = Omit if not required