

SA10V0/VSO Series Piston Pumps

SA10V Series 31 & 52 Replacement Pumps



The SFP SA10V(S)O open loop piston pump has proven itself in many applications. Rear and side ported, through drive auxiliary pump mounting flanges and a large selection of flow and pressure controls makes this pump a strong, versatile alternative in both industrial and mobile applications. Low noise levels, excellent control repeatability, short response times and pressure ratings up to 4000 psi are just a few of the performance characteristics this pump has to offer. Controllers available: Pressure, Pressure/Flow, Load Sensing/Pressure/Flow/Power.

- Suitable for a variety of applications
- 31 and 52 Series Designs available
- Multiple displacements and options available
- Single and Through-drive shaft models
- Low operating noise level
- Multiple drive shaft options
- Controller options include: DR, DRG, DFR, DFR1 & DFLR
- SAE and metric flange option



SA10V0/VS0 Series 52

Model Code Breakdown

SA10V(S) - O - 45 - DR - 52 - R - P - S - C - 62 - N00

Axial Piston Unit

SA10V(S) = Swash Plate Variable Pump, for Industrial

Modes of Operation

O = Pump, Open Circuit

Displacement Size

cm³/r (in³/r)

45	60
(2.75)	(3.66)

Control Devices

	45	60
DR = Pressure Control	•	•
DRG = G - Remote Control	•	•
DFR = Pressure and Flow Control	•	•
DFR1 = X Channel Plugged	•	•

Series

52 Series

Rotation

R = Clockwise CW

L = Counter-Clockwise CCW

Seals

P = Buna-N (NBR per DIN ISO 1629)

V = FPM (Fluorocarbon) Viton

Shafts

	45	60
S = SAE Splined Shaft	1"	1¼"
U = SAE Splined Shaft, Smaller Size (not for pumps w/Through-drive)	¾"	1"
W = SAE Splined Shaft, Reinforced U-type Shaft	¾"	1"
K = SAE Keyed Shaft	1"	1¼"
P = Parallel w/Key DIN 6885	25mm	32mm

Through-drive

	45	60
N00 = Without Through-drive	•	•

With through-drive to accept axial piston or gear pump

Mtg. Flange / Shaft/Coupling	45	60
K04 = 101-2 (B) 1" 15T (B-B) A10V45(S,R), 60(U,W)	•	•
K01 = 82-2 (A) ⅝" 9T (A) A10V18(U,W)	•	•
K02 = 101-2 (B) ⅞" 13T (B) A10V28(S,R), 45(U,W)	•	•

Service Ports

Pressure Port B & Suction Port S	45	60
61 = Rear Ports, UNC Mounting Screws	•	•
62 = Opposite Side Ports, UNC Mounting Screws	•	•
11 = Rear Ports, Metric Mounting Screws	•	•
12 = Opposite Side Ports, Metric Mounting Screws	•	•
64 = Rear ORB Ports	•	-

Port pos. 61, 11 and 64 only for version without Through-drive

Mounting Flange

	45	60
C = SAE 2-Bolt	4"	4"
A = ISO 2-Bolt	100mm	-
D = SAE 4-Bolt	-	5"

SA10V0/VSO Series 31

Model Code Breakdown

SA10V(S) - O - 71 - DR - 31 - R - P - S - C - 62 - N00

Axial Piston Unit

SA10V = Swash Plate Variable Pump

SA10VS = Swash Plate Variable Pump, for Industrial

Modes of Operation

O = Pump, Open Circuit

Displacement Size

cm³/r (in³/r)

18	28	45	71	100	140
(1.10)	(1.71)	(2.75)	(4.33)	(6.10)	(8.54)

Control Devices

	18	28	45	71	100	140
DR = Pressure Control	•	•	•	•	•	•
DRG = G - Remote Control	•	•	•	•	•	•
DFR = Pressure and Flow Control	•	•	•	•	•	•
DFR1 = X Channel Plugged	•	•	•	•	•	•
DFLR = Pressure, Flow and Power Control	-	•	•	•	•	•

Series

31 Series

Rotation

R = Clockwise CW

L = Counter-Clockwise CCW

Seals

P = Buna-N (NBR per DIN ISO 1629)

V = FPM (Fluorocarbon) Viton

Shafts

	18	28	45	71	100	140
S = SAE Splined Shaft	¾"	⅞"	1"	1¼"	1½"	1¾"
R = SAE Splined Shaft, Reinforced (Higher Through-drive Torques)	¾"	⅞"	1"	1¼"	1½"	-
U = SAE Splined Shaft, Smaller Size (not for pumps w/Through-drive)	⅝"	-	⅞"	-	1¼"	-
W = SAE Splined Shaft, Reinforced U-type Shaft	-	-	⅞"	-	1¼"	-
K = SAE Keyed Shaft	¾"	⅞"	1"	1¼"	1½"	1¾"
P = Parallel w/Key DIN 6885	18mm	22mm	25mm	32mm	40mm	45mm

Mounting Flange

	18	28	45	71	100	140
C = SAE 2-Bolt	3¼"	4"	4"	5"	5"	-
A = ISO 2-Bolt	80mm	100mm	100mm	125mm	125mm	-
D = SAE 4-Bolt	-	-	-	-	-	6"
B = ISO 4-Bolt	-	-	-	-	-	180mm

Through-drive

	18	28	45	71	100	140
N00 = Without Through-drive	•	•	•	•	•	•

With through-drive to accept axial piston or gear pump

Mtg. Flange / Shaft/Coupling	18	28	45	71	100	140
K04 = 101-2 (B) 1" 15T (B-B) A10V45(S,R), 60(U,W)	-	•	•	•	•	•
K01 = 82-2 (A) ⅝" 9T (A) A10V18(U,W)	•	•	•	•	•	•
K02/K68 = 101-2 (B) ⅞" 13T (B) A10V28(S,R), 45(U,W)	-	•	•	•	•	•
K07 = 127-2 (C) 1¼" 14T (C) A10V71(S,R), 100(U,W)	-	-	-	•	•	•
K24 = 127-2 (C) 1½" 17T (C-C) A10V100(S,R), 85(S)	-	-	-	-	•	•
K17 = 152-4 (D) 1¾" 13T (D) A10V140(S,R)	-	-	-	-	-	•
KB7 = ISO 3019-2 1¾" 13T (D) A10V140(S,R)	-	-	-	-	-	•

Service Ports

Pressure Port B & Suction Port S	18	28	45	71	100	140
61 = Rear Ports, UNC Mounting Screws ^{1 2}	-	•	•	•	•	•
62 = Opposite Side Ports, UNC Mounting Screws ²	•	•	•	•	•	•
11 = Rear Ports, Metric Mounting Screws ¹	-	•	•	•	•	•
12 = Opposite Side Ports, Metric Mounting Screws	•	•	•	•	•	•
91 = Rear Ports, UNC Mounting Screws ¹	-	-	-	•	-	-
92 = Opposite Side Ports, UNC Mounting Screws	-	-	-	•	-	-
41 = Rear Ports, Metric Mounting Screws ¹	-	-	-	•	-	-
42 = Opposite Side Ports, Metric Mounting Screws	-	-	-	•	-	-

Port pos. 61, 11 only for version without Through-drive

¹ All rear porting, non Through-drive only

² SA10V071 = 8 threaded holes on pressure port code 11, 61, 12 & 62

Quality Product, Delivered On Time

SA10V(S)O 18-140, Series 31

Pump Series	Displacement (in ³ / cm ³)	Max RPM	Flow at 1800 RPM (gpm / lpm)	Operating Pressure (psi)
SA10VO-18	1.10 / 18	3000	8.5 / 32	4000
SA10VO-28	1.71 / 28	3000	13 / 50	4000
SA10VO-45	2.75 / 45	2600	21 / 81	4000
SA10VO-71	4.33 / 71	2200	33.5 / 127	4000
SA10VO-100	6.10 / 100	2000	47.5 / 179	4000
SA10VO-140	8.54 / 140	1800	66.5 / 251	4000



SA10V(S)O 45 & 60, Series 52

Pump Series	Displacement (in ³ / cm ³)	Max RPM	Flow at 1800 RPM (gpm / lpm)	Operating Pressure (psi)
SA10VO-45	2.75 / 45	2600	21 / 81	3600
SA10VO-60	3.66 / 60	2700	28.3 / 107	3600

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