

Individual pumps

1.1 Variable displacement axial piston pump type V30D

Variable displacement axial piston pumps operate according to the bent axis principle. They adjust the geometric output volume from maximum to zero. As a result they vary the flow rate that is provided to the loads.

The axial piston pump type V30D is designed for open circuits in industrial hydraulics and operate according to the swash plate principle. They are available with the option of a thru-shaft for operating additional hydraulic pumps in series.

The sturdy pump is particularly suitable for continuous operation in challenging applications. The range of pump controllers allows the axial piston pump to be used in a variety of applications.

Features and benefits:

- Low-noise emissions
- Wide controller options
- Full torque available at the second pump in tandem pump applications

Intended applications:

- Presses
- Industrial plants
- Marine cranes and winches
- Power pack assembly



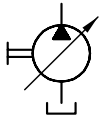
Nomenclature:	Axial piston pump Variable pump
Design:	Single pump Multiple pump
p_{max}:	System pressure: 350 bar Peak pressure: 420 bar
$V_{g max}$:	250 cm ³ /rev

Design and order coding example

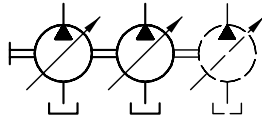
V30D	- 095	R	SF	N	- 1	- 1	- XX	/LN	-2	/120	- 200
											Pressure specification [bar]
											Torque setting [Nm]
											Additional versions e.g. stroke limitation
											Controller See section "Controller"
											Release
											swash plate angle indicator With/without swash plate angle indicator
											Housing version With/without thru-shaft
											Seal material
											▪ NBR (N)
											▪ EPDM (E)
											▪ FKM (V)
											Shaft version/flange version
											▪ Spline shaft DIN 5480 (D)
											▪ Spline shaft SAE J744 (S)
											▪ Parallel key (K)
											Rotating direction Anti-clockwise (L), clockwise (R)
											Nominal size
											Basic type

Function

Single pump



Multiple pump



Controller

Pressure controller:

- Pressure controller (N)
- Pressure controller with remote-control port (P, Pb)

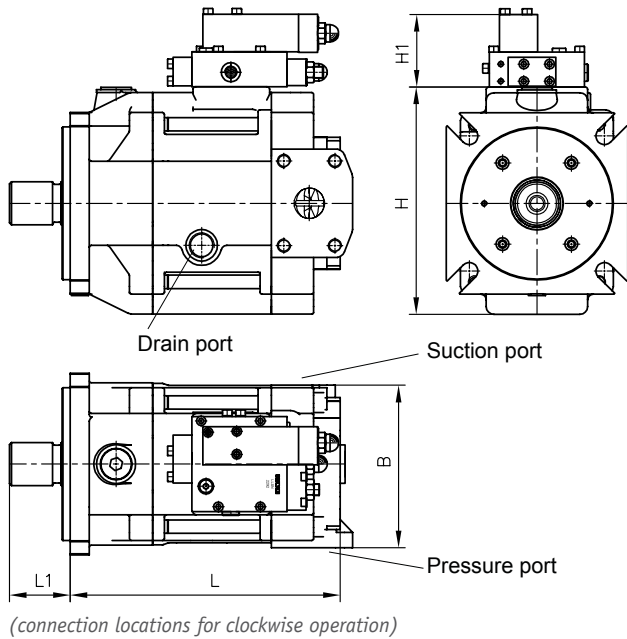
flow controller

- Load-sensing controller (LS)
- Load-sensing controller with integrated pressure limitation (LSN)
- Flow controller for setting a constant, speed-independent volumetric flow (Q, Qb)
- Electro-proportional flow controller with rising characteristic (V)
- Hydraulic-proportional flow controller with rising characteristic (VH)

Power controller:

- Power controller (L)
- Power controller, hydraulically adjustable (Lf1)

General parameters and dimensions



- 1 Drain port
- 2 Suction port
- 3 Pressure connection

Parameters

	Geom. delivery volume V_g [cm ³ /rev]	Nominal pressure P_{nom} (P_{max}) [bar]	Max rotation speed n [rpm]	Dimensions [mm]					m [kg] (with controller)
				L	L1	H	H1	B	
V30D - 045	45	350 (420)	2600	268	68	150	82	160	40 (46)
V30D - 075	75		2400	310	80	170	86	178	60 (66)
V30D - 095	95		2200	341	93	196	87	196	70 (76)
V30D - 115	115	250 (300) ¹⁾	2000	341	93	196	87	196	70 (76)
V30D - 140	140	350 (420)	2200	363	90	212	85	212	85 (91)
V30D - 160	160	250 (300) ¹⁾	1900	363	90	212	85	212	85 (91)
V30D - 250	265	350 (420)	1800	432	115	224	97	272	130 (136)

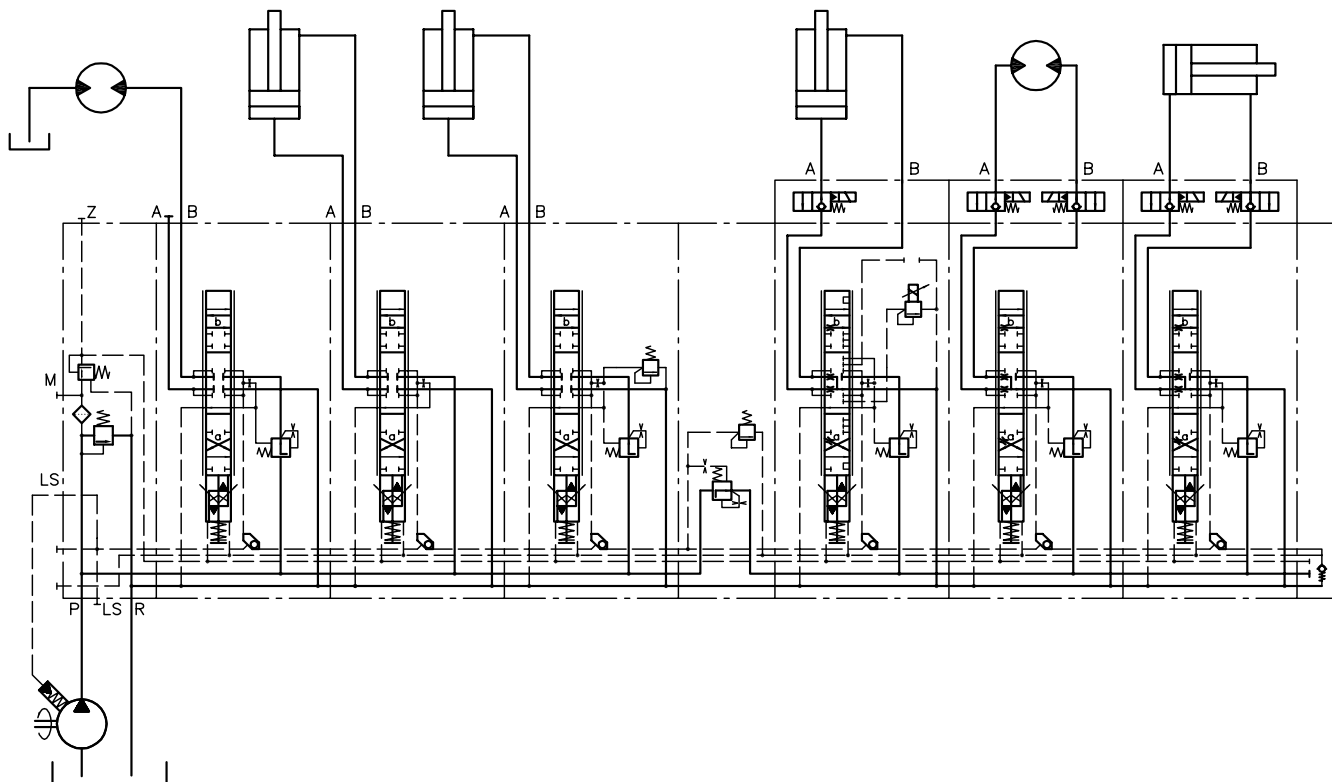
1) Higher pressures are possible with reduced delivery flow

Ports

	Pressure connection	Suction port	Drain port
V30D - 045	3/4" SAE J518	1 1/2" SAE J518	G 1/2
V30D - 075	1" SAE J518	2" SAE J518	G 3/4
V30D - 095	1 1/4" SAE J518	2" SAE J518	G 3/4
V30D - 115	1 1/4" SAE J518	2" SAE J518	G 3/4
V30D - 140	1 1/4" SAE J518	2 1/2" SAE J518	G 3/4
V30D - 160	1 1/4" SAE J518	2 1/2" SAE J518	G 3/4
V30D - 250	1 1/2" SAE J518	3" SAE J518	M 33x 2

Circuit example:

V30D-250-LSN-2-1/05-LSN-320


Associated technical data sheets:

- Variable displacement axial piston pump type V30D: [D 7960](#),

Similar products:

- Variable displacement axial piston pump type V30E: [Page 16](#)
- Variable displacement axial piston pump type V60N: [Page 26](#)
- Fixed displacement axial piston pump type K60N: [Page 30](#)
- Variable displacement axial piston pump type V80M: [Page 24](#)

Suitable proportional directional spool valve:

- Type EDL: [Page 82](#)
- Type PSL/PSV 2, 3 and 5: [Page 90](#)
- Type PSLF/PSVF 3, 5 and 7: [Page 96](#)

Suitable accessories:

- Proportional amplifier type EV1M3: [Page 272](#)
- Proportional amplifier type EV2S: [Page 274](#)
- Proportional amplifier type EV1D: [Page 272](#)