

# Individual pumps

## 1.1 Variable displacement axial piston pump type V30E

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 V30E is designed for open circuits in mobile 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:

- Machines for forestry and agricultural purposes
- Cranes and lifting equipment
- Construction machines



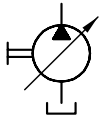
<b>Nomenclature:</b>	Axial piston pump Variable pump
<b>Design:</b>	Single pump Multiple pump
<b>p<sub>max</sub>:</b>	System pressure: 350 bar Peak pressure: 420 bar
<b>V<sub>g max</sub>:</b>	270 cm <sup>3</sup> /rev

### Design and order coding example

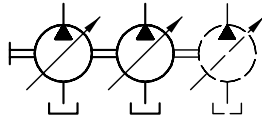
V30E	- 095	R	S	F	N	- 1	- 2	- XX	/LSP	/120	- 200
											Pressure specification [bar]
											Torque setting [Nm]
											Controllers See section "Controller"
											Release
											swash plate angle indicator With/without swash plate angle indicator
											Housing version With/without thru-shaft
											Seal material
											▪ NBR (N)
											▪ EPDM (E)
											▪ FKM (V, C)
											Flange version
											▪ Flange ISO 3019-2 (G)
											▪ Flange SAE J744 (F, W)
											Shaft version
											▪ Spline shaft DIN 5480 (D)
											▪ Parallel key (K)
											▪ Spline shaft SAE J744 (S, U)
											Rotating direction
											Anti-clockwise (L), clockwise (R)
											Nominal size
											Basic type

## Function

Single pump



Multiple pump



## Controller

### Pressure controller:

- Pressure controller (P, Pb)
- Electro-proportional pressure controller (P-PMVPS)

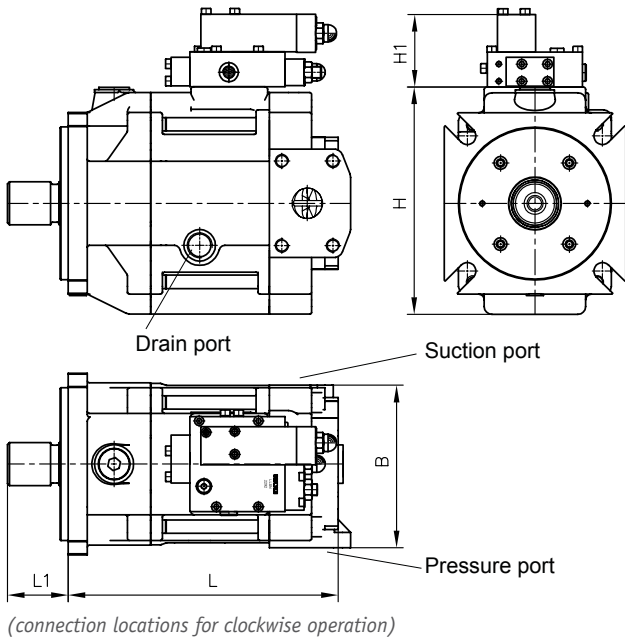
### Flow controller

- Load-sensing controller with integrated pressure limitation (LSP, LSPb)
- Load-sensing controller with integrated pressure limitation and electric pump direction switching (LSP-BVPM)
- Electro-hydraulic flow controller with integrated pivoting angle pick-up and control electronics for adjustment of setpoint and actual value (EM.CH)

### Power controller:

- Power controller (L)
- Power controller (Lf, Lf1)

## General parameters and dimensions



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

## Parameters

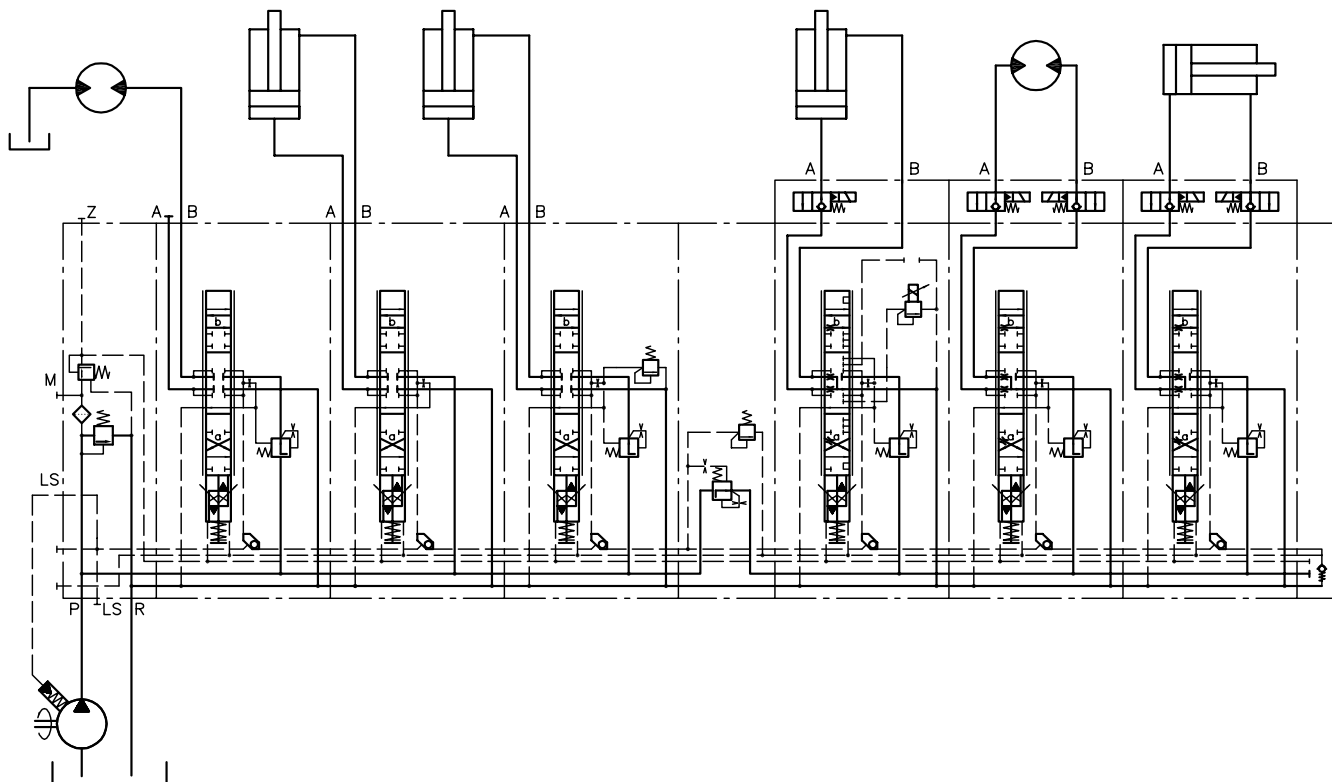
	Geom. delivery volume $V_g$ [cm <sup>3</sup> /rev]	Nominal pressure $P_{nom}$ ( $P_{max}$ ) [bar]	Max. rotation speed $n$ [rpm]	Dimensions [mm] approx.					m [kg] (with controller)
				L	L1	H	H1	B	
V30E - 095	95	350 (420)	2500	296	75	236	36	190	57
V30E - 160	160		2100	332	75	273	36	212	77
V30E - 270	270		1800	399	88	326	36	266	129

## Ports

	Pressure connection	Suction port	Drain port
V30E - 095	1 1/4" SAE J518	2 1/2" SAE J518	G 3/4
V30E - 160	1 1/4" SAE J518	2 1/2" SAE J518	G 3/4
V30E - 270	1 1/2" SAE J518	3" SAE J518	G 1

**Circuit example:**

V30E-270-LSFN-2-1/03-LSP-320


**Associated technical data sheets:**

- Variable displacement axial piston pump type V30E: [D 7960 E](#)

**Similar products:**

- Variable displacement axial piston pump type V30D: [Page 20](#)
- 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 size 2, 3 and 5: [Page 90](#)
- Type PSLF/PSVF size 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](#)