Standard pumps

Variable displacement axial piston pumps type V30D and V30E

The variable displacement axial piston pumps type V30D V30E are designed for open circuits in industrial and mobile hydraulics and operate according to the swash plate principle. A thru-shaft is optionally available to enable the connection of additional variable displacement pumps or an auxiliary pump. In this context, type V30E represents a design according to the most recent findings in pump design. Above all this concerns the optimised self-suction speed, reduced noise emissions and pulsation, increased service life and significantly reduced weight. A wide range of controllers (modular principle) offers the user a wide range of application possibilities.

Features and benefits:

- Low noise emissions
- Wide range of controllers
- Full torque available at the second pump in tandem pump applications

Intended applications:

- Machines for forestry and agricultural purposes
- Cranes and lifting equipment
- Presses
- Municipal trucks

Nomenclature:	**Variable displacement axial piston pump**
Design:	**Individual pump Pump combination**
p_{max}:	**350 bar (continuous) 420 bar (peak)**
Q_{max}:	**65 ... 392 lpm (1450 rpm)**
$V_{g\ max}$:	**45 ... 270 cm³/rev**

Design and order coding example

V30D - 095	R	SF	N	- 1	- 1	- XX	/LN	-2	/120	- 200

Pressure specification [bar]

Torque setting [Nm] Alternatively specification for power [kW] and speed [rpm]

Additional versions
- Conversion with L power controller
- Max. stroke limitation

Controllers see "Controller types"

Release

Pivoting angle indicator With/without indicator or with pivoting angle pick-up

Shaft version With/without thru-shaft

Seal material
- NBR (N)
- EPDM (E)
- FKM (V)

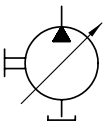
Shaft journal/flange
- Spline shaft (DIN 5480) (D)
- SAE spline shaft and flange (S)
- Parallel key (K)
- DIN (W)
- SAE (F)

Rotation direction Anti-clockwise (L), clockwise (R)

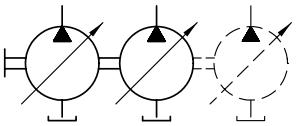
Basic type, nominal size
- Individual pumps
- Dual and multiple pumps (tandem pumps)

Function

Individual pump



Multiple pump



Controller types:

Power controller:
- To restrict the drive torque (L)
- With option to reduce the geom. delivery flow (Lf1)

Load-sensing controller:
- For proportional directional spool valve (LS)
- with pressure limitation (LSN)

Pressure controller:
- For constant pressure systems (N)
- With remote-control port (P)
- With remote-control port for systems that are very sensitive to vibration (Pb)

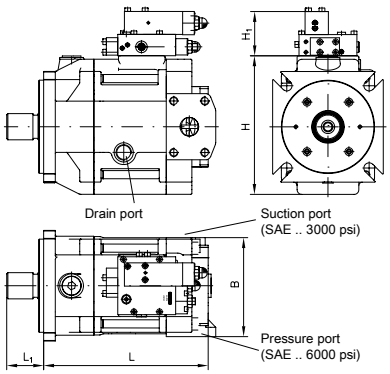
Flow controller:
- For maintaining a constant flow (Q)
- For maintaining a constant level at higher speeds (Qb)

Electro-hydraulic proportional control of the pump:
- For continuous delivery flow control using an electronic control card (V)

Controller:
- With hydraulic proportional control of the delivery flow (VH)

General parameters and dimensions

V30



(connection locations for clockwise operation)

	Geom. delivery volume	Delivery flow[1]	Nom. pressure	Self-suction speed	Dimensions [mm] approx.					m [kg]
	V_g [cm³/rev]	Q_{max} [lpm]	p_{nom} (p_{max}) [bar]	n [rpm]	L	L1	H	H1	B	(with controller)
V30E - 095	95	139	350 (420)	2600	300	63	190	50	190	59
V30E - 160	160	232		2100	330	65	210	50	210	92
V30E - 270	270	392		1900	399	79	326	50	242	126
V30D - 045	45	65	350 (420)	2600	268	68	150	82	160	40 (46)
V30D - 075	75	109		2400	310	80	170	86	178	60 (66)
V30D - 095	95	139		2200	341	93	196	87	196	70 (76)
V30D - 115	115	167	250 (300)[2]	2000	341	93	196	87	196	70 (76)
V30D - 140	140	206	350 (420)	2200	363	90	212	85	212	85 (91)
V30D - 160	160	238	250 (300)[2]	1900	363	90	212	85	212	85 (91)
V30D - 250	265	380	350 (420)	1800	432	115	224	97	272	130 (136)

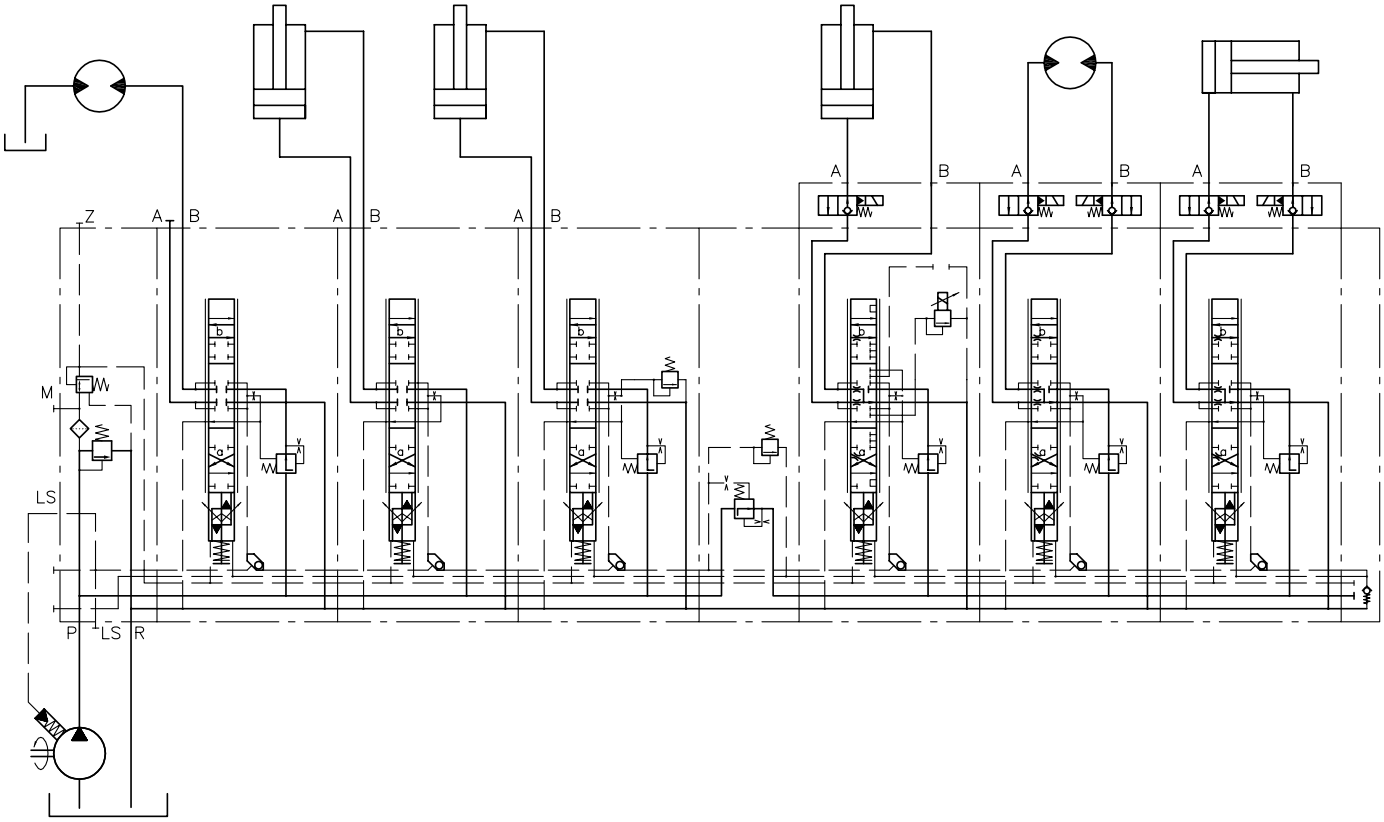
1) Approximate reference value at 1450 rpm
2) Higher pressure is possible with reduced geom. delivery flow

Ports:

	Drain port	Auxiliary port	Suction port	Pressure port
V30E - 095	G 3/4	-	2 1/2"	1 1/4"
V30E - 160	G 3/4	-	2 1/2"	1 1/4"
V30E - 270	G 1	-	3"	1 1/2"
V30D - 045	G 1/2	G 1/4	1 1/2 "	3/4"
V30D - 075	G 3/4	G 1/4	2"	1"
V30D - 095	G 3/4	G 1/4	2"	1 1/4"
V30D - 115	G 3/4	G 1/4	2"	1 1/4"
V30D - 140	G 3/4	G 1/4	2 1/2 "	1 1/4"
V30D - 160	G 3/4	G 1/4	2 1/2 "	1 1/4"
V30D - 250	M 33x 2	Pipe ∅ 8	3"	1 1/2"

Example circuit:

V30E-270-LSF N-2-1/03-LSN-320



Associated technical data sheets:

- Type V30D variable displacement axial piston pumps: D 7960, Type V30E: D 7960 E

Similar products:

- Type V40M variable displacement axial piston pump: D 7961
- Variable displacement axial piston pump type V60N: D 7960 N
- Type K60N fixed displacement axial piston pump: D 7960 K
- Type M60N axial piston motor: D 7960 M

Suitable prop. directional spool valves:

- Type PSL/PSV sizes 2, 3 and 5: D 7700-2, D 7700-3, D 7700-5
- Type PSLF/PSVF sizes 3, 5 and 7: D 7700-F, D 7700-7F

Suitable accessories:

- Type EV1M2 prop. amplifier: D 7831/1
- Programmable logic valve control type PLVC: D 7845-21, D 7845-41, D 7845 M