Individual pumps

1.1 Variable displacement axial piston pump type V60N

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 V60N 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 pump is fitted above all to the power take-off on commercial vehicle transmissions.

The range of pump controllers allows the axial piston pump to be used in a variety of applications.

Features and benefits:

- Optimized power-to-weight ratio
- High self-suction speed
- Wide controller options

Intended applications:

- Municipal trucks
- Cranes and lifting equipment
- Machines for forestry and agricultural purposes
- Truck-mounted concrete pumps

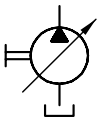
Nomen-clature:	**Axial piston pump Variable pump**
Design:	**Single pump Multiple pump**
p_{max}:	**System pressure: 400 bar Peak pressure: 450 bar**
$V_{g\ max}$:	**130 cm³/rev**

Design and order coding example

V60N - 110 R S F N - 1 - 0 - 03 /LSNR -2 - 320

- **Pressure specification [bar]**
- **Stroke limitation** — With/without max. stroke limitation
- **Controller** — See section "Controller"
- **Release**
- **Additional function**
- **Housing version**
  - Axial ports
  - Radial ports with thru-shaft
  - Radial ports
- **Seal material**
  - NBR (N), FKM (V)
- **Flange version**
  - Flange ISO 7653-1985 (Y, P)
  - Flange ISO 3019-2 (G)
  - Flange SAE J744 (X, Z, F)
- **Shaft version**
  - ISO 14 parallel key splined shaft (D)
  - Spline shaft DIN 5480 (M)
  - Spline shaft SAE J744 (H, U, T, S, Q)
- **Rotating direction** — Anti-clockwise (L), clockwise (R)
- **Nominal size**
- **Basic type**

Function



Controller

Pressure controller

- Pressure controller (NR)
- Electro-proportional pressure controller with rising characteristic (PR)
- Electro-proportional pressure controller with falling characteristic (P1R)

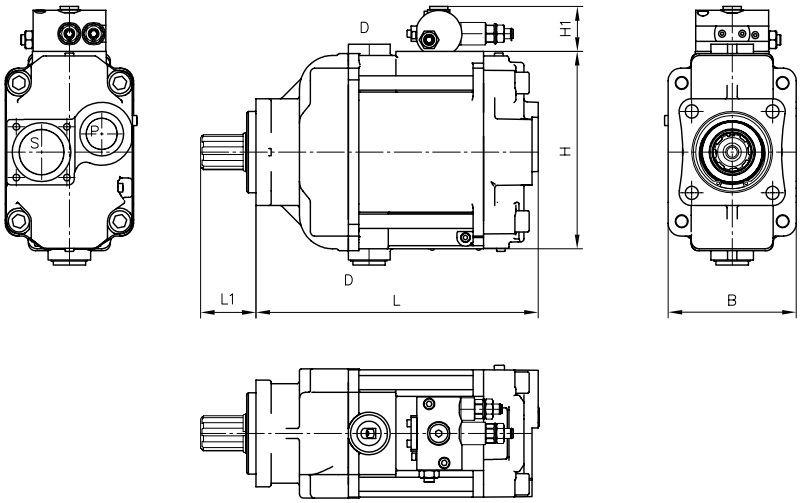
Flow controller

- Load-sensing controller with integrated pressure limitation (LSNR, LSNRT)
- Flow controller for setting a constant, speed-independent volumetric flow (QNR)
- Electro-proportional flow controller with rising characteristic (V)
- Electro-proportional flow controller with falling characteristic (V1)

Power controller

- Power controller (L, /ZL)

General parameters and dimensions



Parameters

	Geom. output volume	Nom. pressure	Max. speed	Dimensions [mm]					m [kg]
	V_g [cm³/rev]	p_{nom} (p_{max}) [bar]	n [rpm]	L	L1	H	H1	B	
V60N - 060	60	350 (400)	2500	254	55	177	45	115	24
V60N - 090	90		2300	278	55	184	45	120	27
V60N - 110	110		2200	280	55	194	45	125	30
V60N - 130	130	400 (450)	2100	270	55	210	45	130	31

Ports

	Pressure port P	Suction port S	Drain port D	LS connection
V60N - 060	G 3/4	1 1/2" SAE J518	G 3/4	G 1/4
V60N - 090	G 1			
V60N - 110				
V60N - 130				

Circuit example:

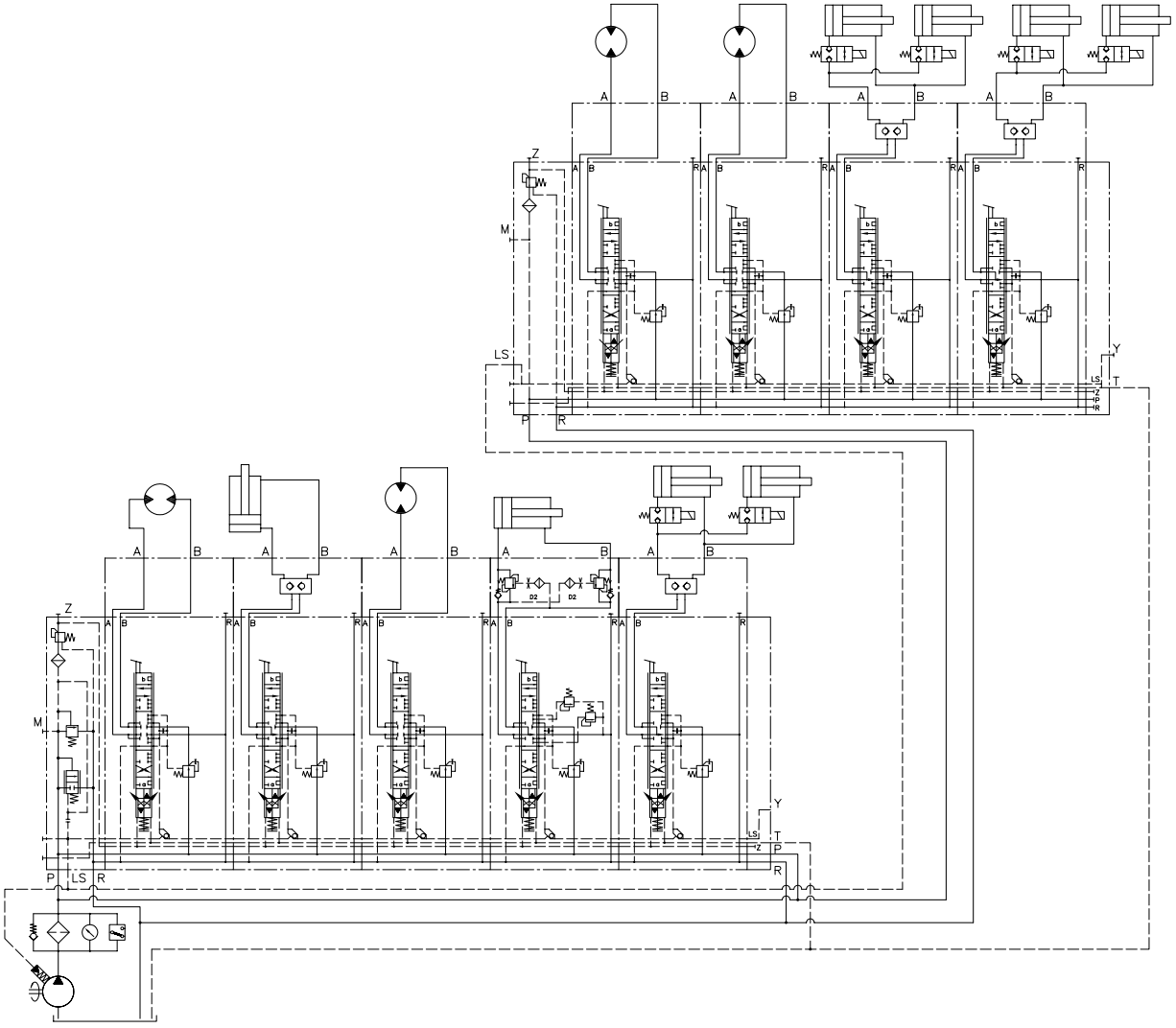
V60N-130 RSFN-1-0-03 / LSNR-2-250

PSV 31/D280-2

- A 2 L 25/25/EA1/2
- A 2 H 40/40/EA1/2 DRH
- A 2 L 25/25/EA1/2
- A 2 H 3/3 A 100 B 100/EA1/2 AL-0-D 4/120-BL-0-D 4/120
- A 2 H 3/3/EA1/2 DRH
- E 18-G 24

PSV 31-1

- A2 L 25/25/EA1/2
- A2 L 25/25/EA1/2
- A2 H 3/3/EA1/2 DRH
- A2 H 3/3/EA1/2 DRH
- E 1 - G24



Associated technical data sheets:

- Variable displacement axial piston pump type V60N: D 7960 N

Similar products:

- Variable displacement axial piston pump type V30D:Page 20
- Variable displacement axial piston pump type V30E: Page 16
- Fixed displacement axial piston pump type K60N:Page 30
- Variable displacement axial piston pump type V80M:Page 24

Suitable prop. directional spool valves:

- 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