

## 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



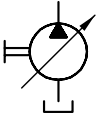
<b>Nomenclature:</b>	Axial piston pump Variable pump
<b>Design:</b>	Single pump Multiple pump
<b>p<sub>max</sub>:</b>	System pressure: 400 bar Peak pressure: 450 bar
<b>V<sub>g max</sub>:</b>	130 cm <sup>3</sup> /rev

### Design and order coding example

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

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



## Controller

### Pressure controller

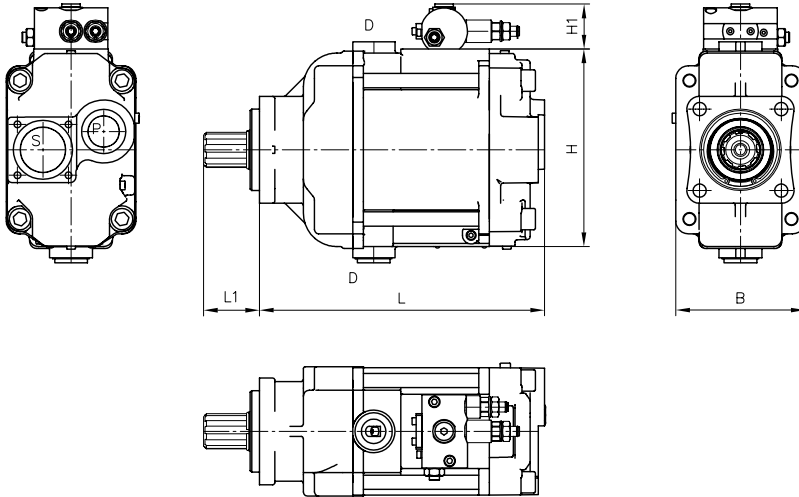
- Pressure controller (NR)
- Electro-proportional pressure controller with rising characteristic (PR)
- Electro-proportional pressure controller with falling characteristic (P1R)

### 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]
				$V_g$ [cm <sup>3</sup> /rev]	$p_{nom}$ ( $p_{max}$ ) [bar]	$n$ [rpm]	L	L1	
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:

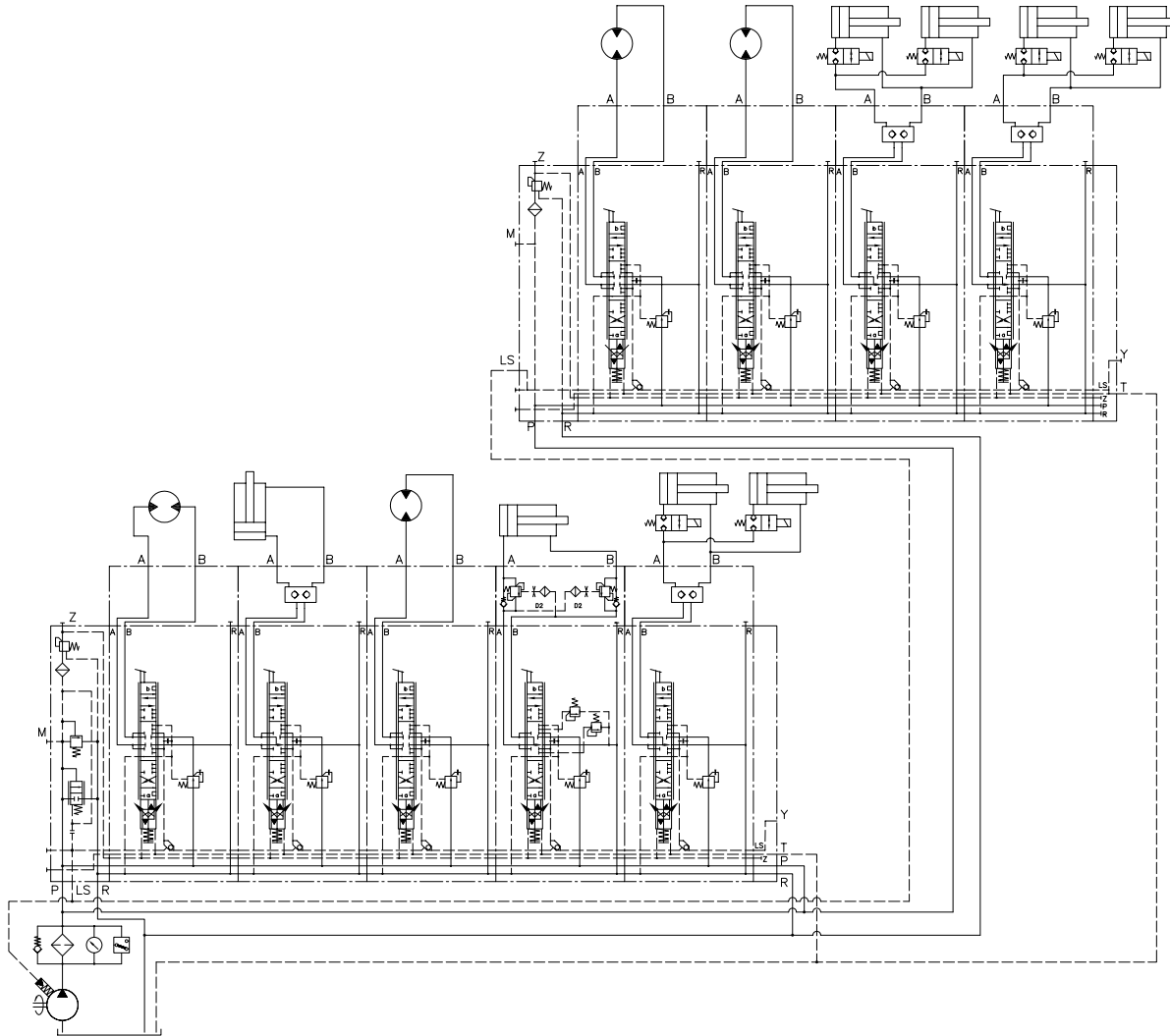
### V60N-130 RSFN-1-0-03 / LSNR-2-250

#### 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: D 7960](#)
- [Variable displacement axial piston pump type V30E: D 7960 E](#)
- [Fixed displacement axial piston pump type K60N: D 7960 K](#)
- [Variable displacement axial piston pump V80M: D 7962 M](#)

#### Suitable prop. directional spool valves:

- Type EDL: [D 8086](#)
- Type PSL/PSV size 2, 3 and 5: [D 7700-2](#), [D 7700-3](#), [D 7700-5](#)
- Type PSLF/PSVF size 3, 5 and 7: [D 7700-3F](#), [D 7700-5F](#), [D 7700-7F](#)

#### Suitable accessories:

- [Proportional amplifier type EV1M3: D 7831/2](#)
- [Proportional amplifier type EV2S: D 7818/1](#)
- [Proportional amplifier type EV1D: D 7831 D](#)