V80ML-200 WITH IMPELLER

Variable displacement axial piston pump type V80ML-200 with impeller,
Peak pressure 450 bar/2500 rpm

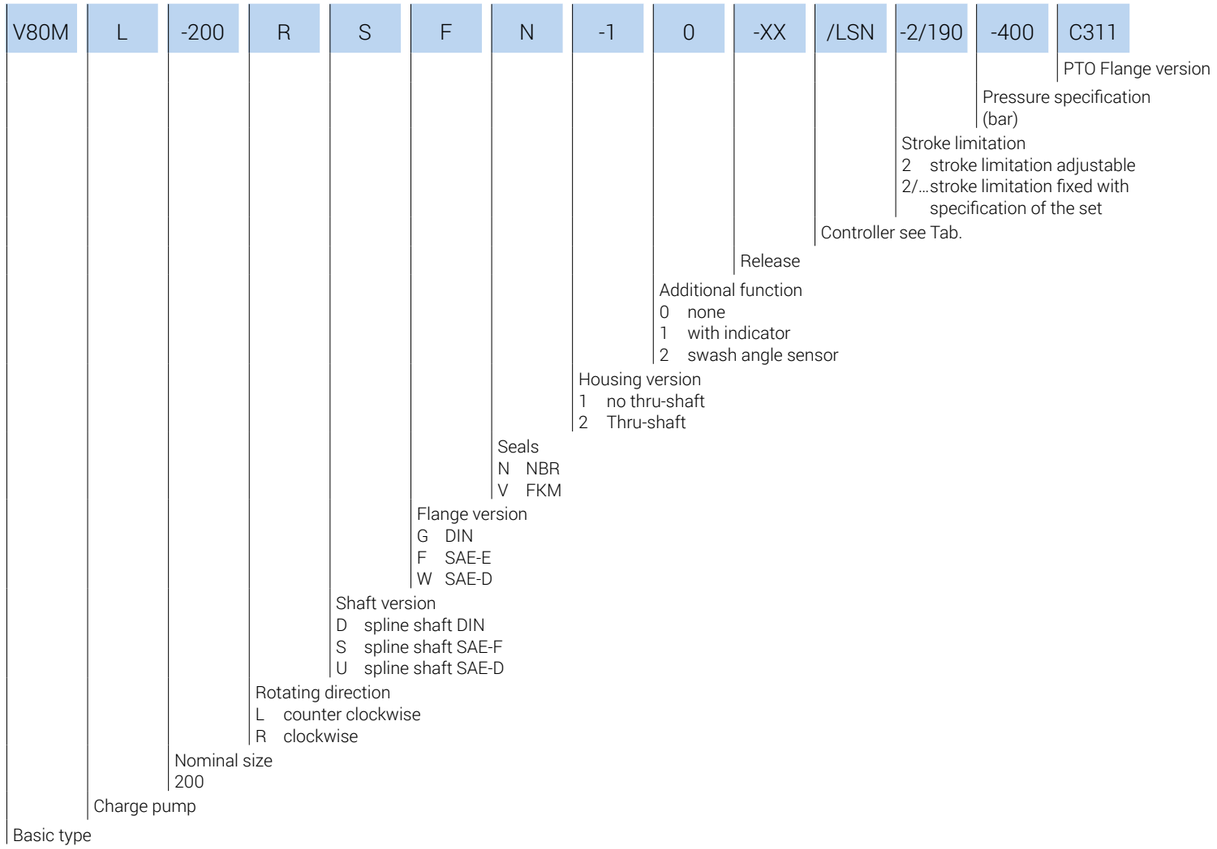
Tradition – Quality – Future

HIGH-PERFORMANCE PUMPS – MADE IN GERMANY

V80ML Benefits

- Small envelope size
- Higher pressure range up to 450 bar
- Higher speed capability
- Larger usable volumetric flow
- Higher power density

Type code



Technical data	
Max. swash plate angle	16°
Absolute inlet pressure required in open circuit	0,85 bar abs
Min. operating pressure	15 bar
Max. permissible housing pressure (static/dynamic)	2 bar / 3 bar
Max. permissible inlet pressure (static/dynamic)	20 bar / 30 bar
Max. rotation speed during self priming operation and max. swash plate angle at 1 bar abs. Inlet pressure	2150 U/min.
Max. rotation speed in charge mode	2500 U/min.
Min. rotation speed in continuous operation	500 U/min.
Required drive torque at 100 bar	350 Nm
Drive power at 250 bar and 1450 rpm	133 kW
Weight / without controller / with controller	93 kg / 96 kg
Moment of Inertia	0,075 kg/m²
Service life Lh of the shaft bearing at 250 bar, 1450 rpm and max. swash plate angle	20000 h
Noise level at 250 bar, 1450 rpm and max. swash plate angle (measured in acoustic measurement chamber according to DIN ISO 4412, measurement distance 1m)	75 dB (A)

Table: Controller	
Coding:	Discription:
...N	Pressure controller with adjustable pressure. The pressure controller automatically maintains a constant system pressure independently of the required delivery flow. Therefore, it is suited to constant pressure systems where differing delivery flows are required or for efficient pressure limitation of a hydraulic system.
...Nb	Coding Nb with external feedback of the pump pressure to compensate for a pressure loss in the pressure line.
...LSN	Load-sensing controller with pressure limitation. Stand-by pressure adjustable from 15 ... 35 bar. Default differential pressure setting: 27 bar
...LSNb	Coding LSNb with external feedback of the pump pressure to compensate for a pressure loss in the pressure line.

Main characters V80ML-200	
Description	Variable displacement axial piston pump
Mounting	Flange mounting or foot bracket
Surface	Temporarily protected by oil film
Direction of rotating	Clockwise or counter clockwise
Installation position	Any, if vertical -> deairing line
Ports	Suction port Pressure port Drain port Deairing port
Hydraulic fluid	Hydraulic oil: according to DIN 51 524 Part 1 to 3; ISO VG 10 to 68 according to DIN 51 519 Viscosity range: min. approx. 10; max. approx. 1000 mm²/s Optimal operating range: 16 to 35 mm²/s Also suitable for biologically degradable pressure fluids type HEPG (polyalkalene glycol) and HEES (synthetic ester) at operating temperatures up to approx. +70°C. HFC pressure fluids (water glycol) (house flushing requested)
Temperature Ambient	approx. -40 to +60°C, oil: -25 to +80°C, pay attention to the viscosity range! Start temperature: down to -40°C is permissible (observe start-viscosity!), as long as the steady-state temperature is at least 20K higher for subsequent operation. Biologically degradable pressure fluids: note manufacturer specifications. With consideration for the seal compatibility, not above +70°C.
Purity class	19/17/14 to ISO 4406

V80ML designed for mobile use

The axial piston pump type V80ML-200 by HAWE InLine Hydraulik GmbH guarantees a new power density in its class. Working pressures up to 400 bar and peak pressures up to 450 bar are possible. Based on the previous engine of the V80M-200, the integrated impeller pump leads to a speed-up from 2150 up to 2500 revolutions per min. So this pump performs up to 500 l/min and achieves a motor capacity of 370 kW.

The pump is built directly on the combustion engine or a transfer case using a variety of available flange and shaft combinations. A very compact design including the new controller varieties sets new standards.

The materials and the balanced interaction of the components make a continuous service under heavy circumstances possible and have a very low mass moment in the drive train. Designed for best performance, the V80ML-200 is used in heavy duty mobile construction machine.

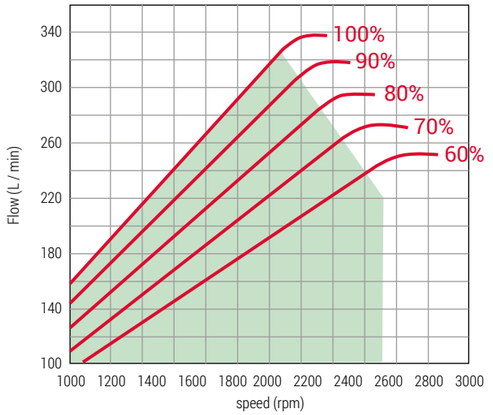
The reliable engine and regulation system provides an excellent level of efficiency in a broad scale of pressure, rotation and volume stream. A minimum of heat loss reduces the fuel consumption of the machine significantly.

This pump is available with controller for pressure, load sensing and power resp. torque.

Speed Capability

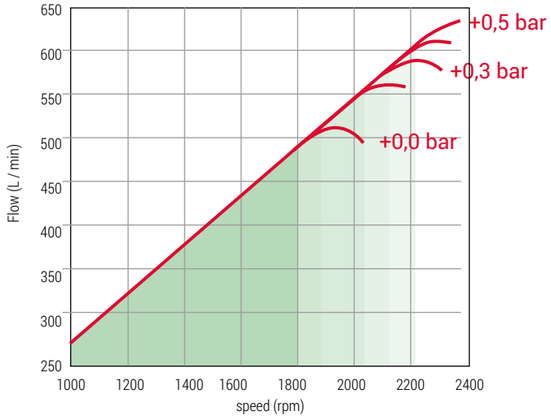
and possible measures to increase speed

Self priming speed V30E-160 reduced swash angle



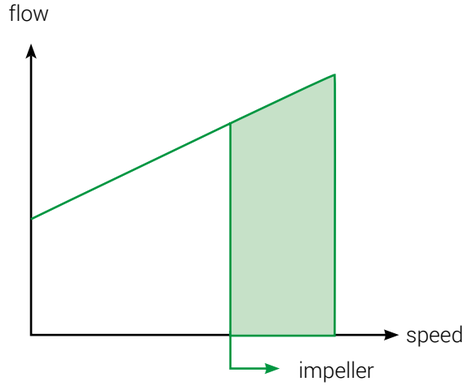
1. Reducing swash angle

Self priming speed V30E-270 with tank pressure

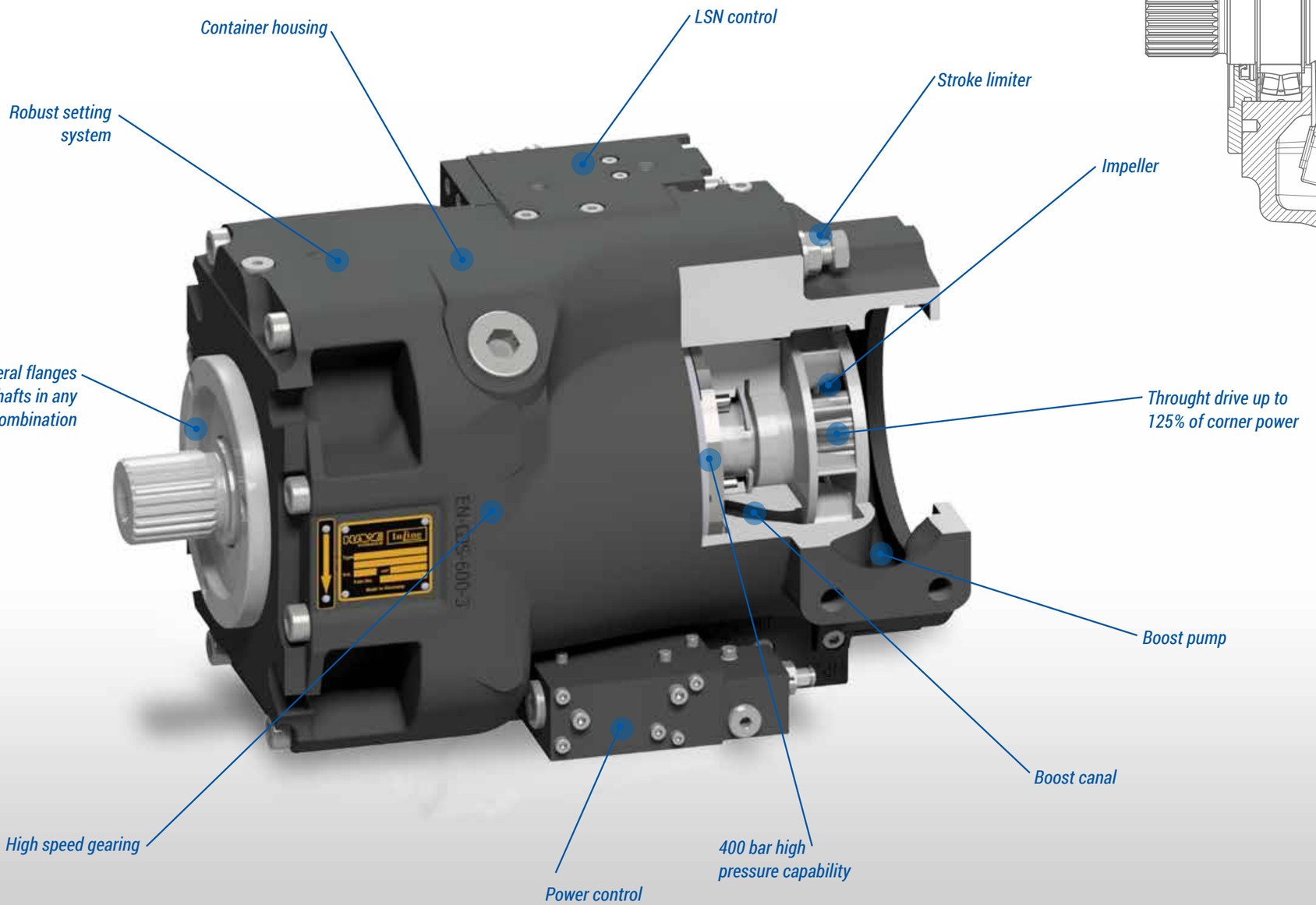


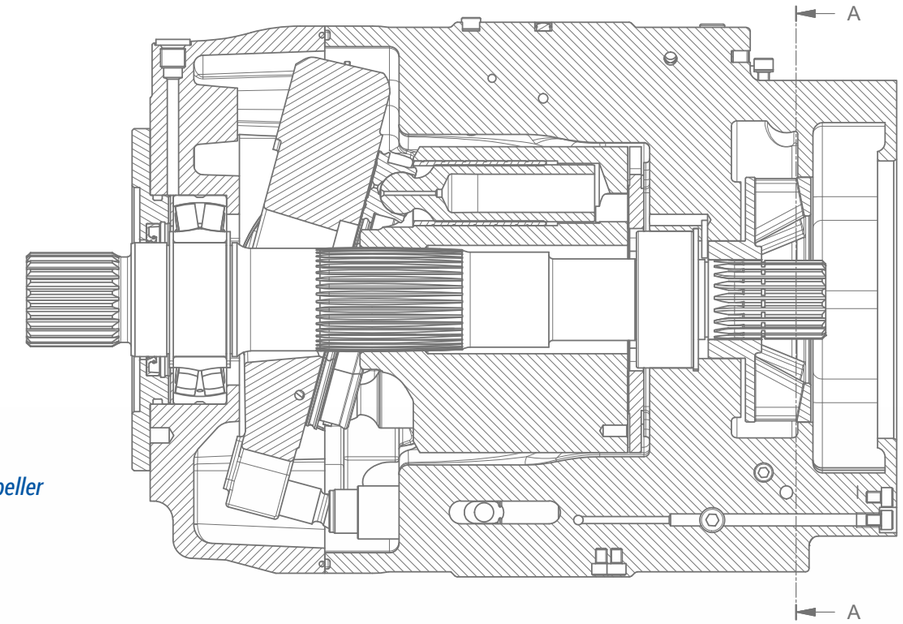
2. increasing air pressure in the tank

Increasing speed by creating charge pressure

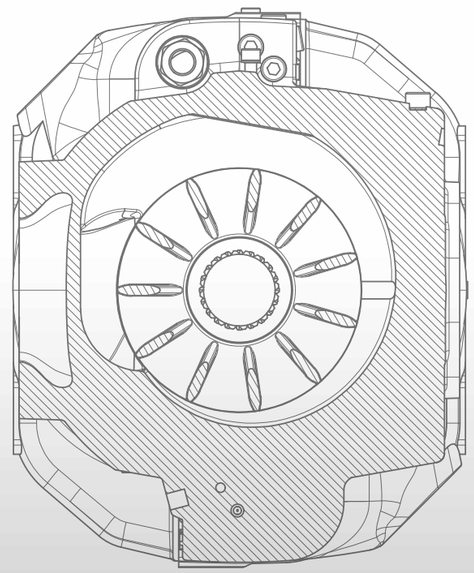


3. create charge pressure in suction port by impeller





A-A



Structure and Features of V80M

Applications

Concrete pump

Concrete pump

Concrete pump

Wheel loader

Wheel loader

Truck crane

Truck crane

HAWE InLine Hydraulik GmbH

Sperenberger Straße 13
D-12277 Berlin

Tel: +49 (30) 72088 - 0
Fax: +49 (30) 72088 - 44

info@hawe-inline.com
www.hawe-inline.com

Member of the Hengli Group

Management Service