

VARIABLE DISPLACEMENT AXIAL PISTON PUMP

FAMILY CODE

108-050/051

VDPP 90



Installed position	preferably horizontal (other positions on request!)
Hydraulic fluid	hydraulic oil to DIN 51524 table 2 and 3; ISO VG 10 to 68 acc. to DIN 51519. Viscosity range: min. approx. 10; max. approx. 1000 mm ² /sec. Optimal operation range: approx. 10...35 mm ² /sec. Also suitable are biologically degradable pressure fluids type HEES (synth. Ester) at operation temperatures up to approx. +70°C.
Temperature	Ambient: approx. -40...+60°C. Fluid: -25...+80°C, pay attention to the viscosity range! Start temperature down to -40°C is allowable (Pay attention to the viscosity range during start!), as long as the operation temperature during subsequent running is at least 20K (Kelvin) higher.
Filtration	Recommended contamination level ≤ 18/13 conforming DIN ISO 4406.
Initial operation	All pipes should be flushed with the same fluid intended for the later service prior to initial operation. The housing of the pump should be primed via the upper case drain port. The case drain line must be routed in such a way the running empty is prevented. The pressure limiting valve should be set to 50 bar or lower for initial operation and the first few minutes of regular service. Attention: do not screw-out the set screw of the sequence/pressure limiting valve beyond the red index marking!

Angle of the swash plate	21,5°
Required inlet pressure abs. for open circuit	0,85 bar
Max. permissible drive torque	600 Nm
Max. rev. rating when self priming and max. angle of the swash plate at 1 bar abs. inlet pressure.	2300 rpm
Min. rev. rating for permanent running	500 rpm
Required torque at 100 bar	151 Nm
Drive power for 250 bar and 2000 rpm	79,5 kW
Weight torque	35,3 Nm
Inertia moment	0,008 kg m ²
Sound level at 250 bar, 1500 rpm and max. swash plate angle (Measured in a sound measuring room DIN ISO 4412, distance 1m)	75 dB(A)
Pressure range differential pressure	p 15...30bar (setting 25 bar)
Pressure limitation	50 ... 400 bar
Nomenclature axial piston pump according to the swash plate principle	
Direction of rotation clock wise or counter clock wise	
Changing the rotation direction turn the endplate and change the port plate.	

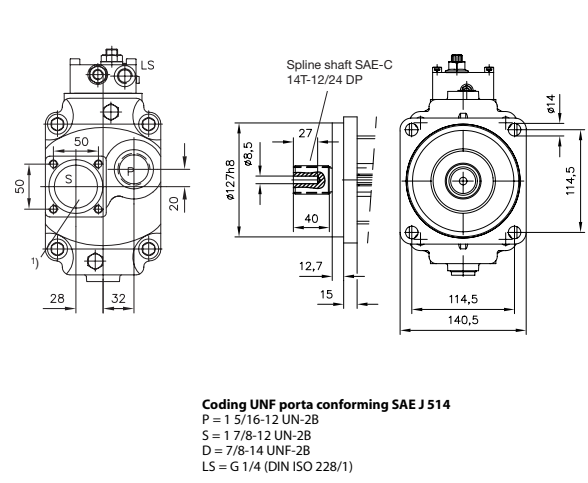
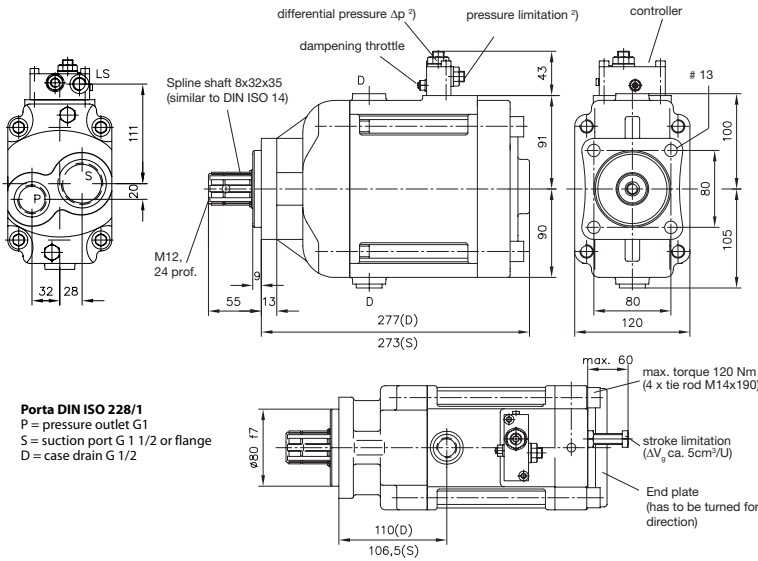
Pump type	Rotation		Nominal pressure bar	Maximum pressure bar	Displacement cm ³ /giro	Weight kg
	Right	Left				
VDPP 90 ISO	108-050-00903	108-050-00912	350	400	90	25,8
VDPP 90 SAE	108-051-00902	108-051-00911				

SUCTION FITTINGS				
	STRAIGHT			WITH THREAD
	45°	90°	THREAD	THREAD
∅ 50	108-950-35045	108-950-35090	108-950-35000	
∅ 64	108-950-36445	108-950-36490	108-950-36400	
G 1" 1/2				108-950-41129
G 1" 1/4				108-950-41147

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VDPP 90 ISO

VDPP 90 SAE



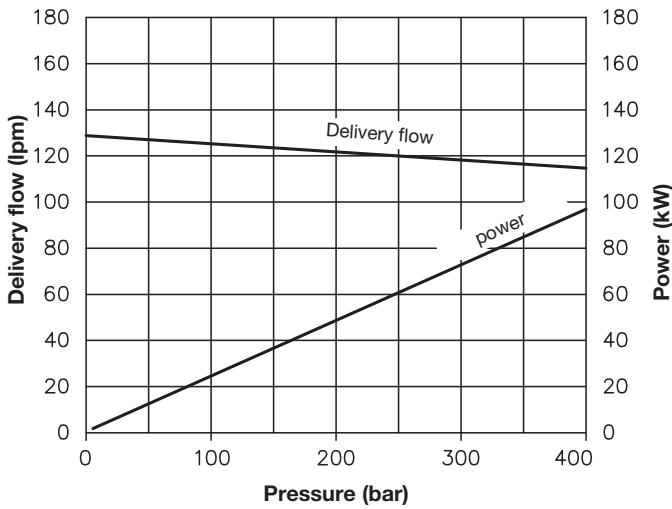
Porta DIN ISO 228/1
 P = pressure outlet G1
 S = suction port G 1 1/2 or flange
 D = case drain G 1/2

Coding UNF porta conforming SAE J 514
 P = 1 5/16-12 UN-2B
 S = 1 7/8-12 UN-2B
 D = 7/8-14 UNF-2B
 LS = G 1/4 (DIN ISO 228/1)

Attention: Do not screw-out the set screw of the sequence/pressure limiting valve beyond the red index marking!

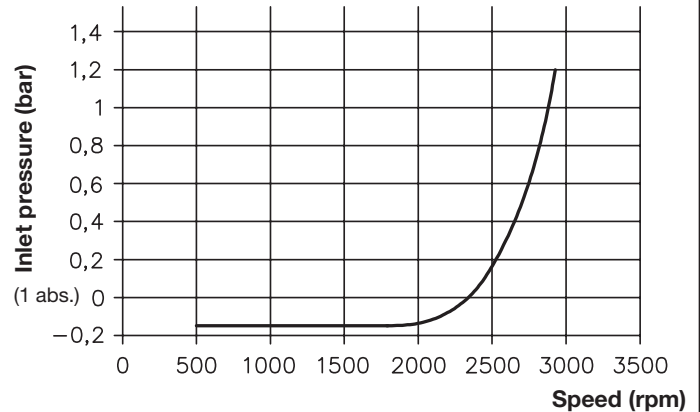
DELIVERY FLOW AND PERFORMANCE

The curves illustrate delivery flow/pressure (without) controller. Drive power at max. swash plate angle and drive power at zero stroke at 1500 rpm.



INLET PRESSURE

The curve was taken at viscosity 75 mm²/sec and max. swash plate angle.



	RIGHT	LEFT
SEALS	108-950-50897	
SEALS SAE	108-950-50904	
DISTRIBUTOR PLATE	108-950-10902	108-950-20900
REGULATOR LSN	108-950-00100	
PRESSURE REGULATOR	108-950-00208	