

VAR 12-400

Diesel - Qmax 1,400 m³/h (6,160 USgpm) - Hmax 29 m (96 ft)



VAR 12-400 Liquid cooled engine



VAR 12-400 Air cooled engine

VAR - Self-priming centrifugal pumps

These self-priming centrifugal pumps are for applications where the main feature is the difficulty in priming. Even with suction heights of several meters the machine quickly evacuates the air from the suction pipe and starts pumping. Additionally, thanks to the semi-open impeller, the VAR range is also suitable for pumping liquids with solids in suspension.

Applications

Both Atlas Copco and Varisco have decades of experience in designing and producing pumps. We have put those years of expertise into providing a solutions portfolio that works across multiple applications. The VAR range is packed with features that not only meet, but exceed the needs of the market. We are focused on an efficient, extremely versatile pump that is suitable for many industries, including construction, general dewatering and emergency applications, such as flood clean up.

Benefits

Rapid self-priming

Without foot valve up to a height of 7.5 m (24.5 ft)

High resistance

To abrasive liquids and turbid sandy waters

Semi-open impeller

Solids handling up to 70 mm (2.8")

Easy maintenance

Removable front cover for direct access to the impeller

Wear plate

Cast iron or stainless steel (F10) wear plate, that is easily replaceable

VAR 12-400

Performance curves

Test according to UNI EN ISO 9906 standard - level 2

Test liquid: clean water, density $1,000 \text{ kg/m}^3$

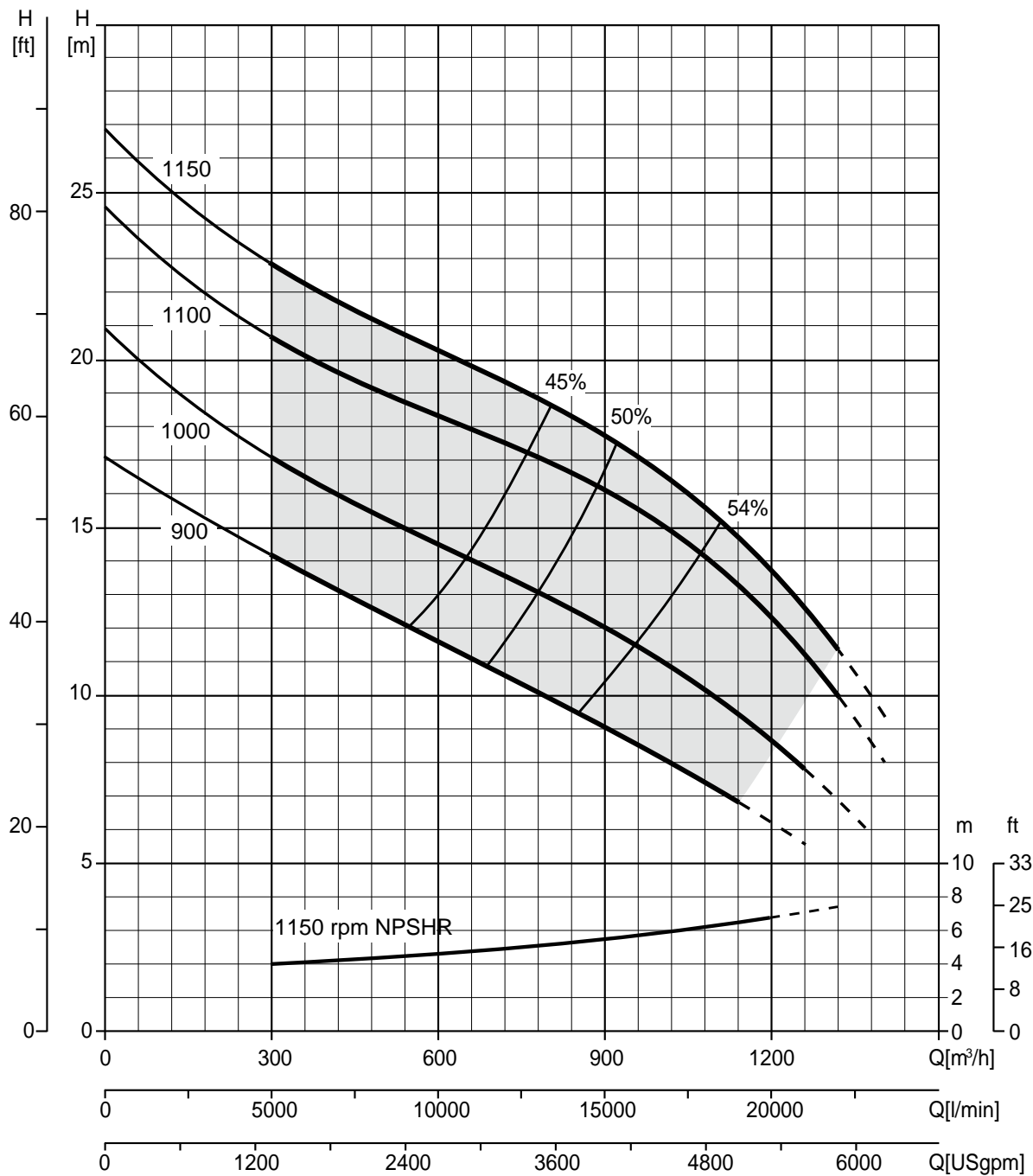
Spherical solids handling: D.70 mm (2.8")

Priming time: 35 s from 1,5 m (4.9 ft)

Max absorbed power: 85,5 kW - 114.7 HP (1.150 rpm)



Recommended
operating range



VAR 12-400

Technical data

Pump

Model	VAR 12-400	
Qmax	1.400 m³/h - 23.330 l/min (6,200 USgpm)	
Hmax	29 m (96 ft)	
Q max eff.	1.110 m³/h - 18.500 l/min (4,900 USgpm)	
Eff. max	54 %	
Suction port	Flanged - DN 300 UNI 6082 (12")	
Delivery port	Flanged - DN 300 UNI 6082 (12")	
Impeller type	Semi-Open, 4 vane	
Solids handling	70 mm (2.8 ")	
Material	G10	F10
Casing	EN-GJL-200 cast iron	EN-GJL-200 cast iron
Impeller	EN-GJS-500 ductile iron	CF8M stainless steel
Wear plates	EN-GJL-200 cast iron	CF8M stainless steel
Number of plates	1	1
Shaft	39NiCrMo3 steel	AISI 316 stainless steel
Mechanical seal	Silicon carbide / Silicon carbide	Silicon carbide / Silicon carbide
Elastomers	NBR	VITON

Engines

Make	Deutz				Deutz			
Model	BF6L914 (ZD24)				TCD 3.6 L4 (ZD46)			
Type	Diesel direct injection, turbocharged				Diesel turbo common rail			
Displacement	6.500 cm³ (397 in³)				3.600 cm³ (220 in³)			
No. cylinders	6				4			
Cooling	Air				Liquid with radiator			
Rpm type	Variable				Variable			
Standard speed	2.300 rpm				2.200 rpm			
EU emissions	2002/88/CE Stage 2				2002/88/CE Stage 3B			
US emissions	EPA Tier II				EPA Tier IV interim			
Starting	Electric				Electric			
Starting voltage	12 V				12 V			
Oil change interval	300 h				300 h			
Market	Extra UE				UE			
Speed [rpm]	1600	1800	2000	2300	1600	1800	2000	2200
Consumption [l/h]	20,5	22,2	23,9	27,2	17,1	19,1	19,6	20,4
Power [kW]	81,8	87	92,3	100,1	70,7	78,2	78,6	79,1
Power [HP]	109.7	116.7	123.8	134.2	94.8	104.9	105.4	106.1

Control panel

Model	CP KL DEUTZ 01	CP DEUTZ ATS25 TCD
	Manual operation	Manual operation
	Hour meter	Backlighted LCD display
	Engine failure alarms with LED lights in case of:	Protection rating - IP65
	- low oil pressure	Digital hour meter
	- engine overheating	
	- lack of battery charging	
	Throttle rod	Digital rev counter
		Battery voltmeter
		Automatic engine shutdown in case of:
		- low oil pressure
		- water overheating
		- lack of battery charging
		- low fuel level
		Up/down throttle

VAR 12-400

Arrangements

Technical data	
Material	S275JR EN 10025-2 carbon steel
Coatings	Epoxy powder, average thickness of 80 µm
Color	Yellow and grey Atlas Copco (standard)
Features	Modular and demountable framework; hot dip galvanised steel support bases, bullbars and lifting beam. Mudguards with galvanised steel walkable surface. Tow bar, adjustable support feet. Lockable battery box. Fuel level indicator.
Battery	Acid charge Pb-Ca maintenance free 12 V - 100 Ah - 400 A
Tank	600 l (158.5 USG)
Locking keys	Fuel cap

BLOCK VAR 12-400



Dimensions	1145 x 2850 x 2035 mm 45 x 112 x 80 "
H suction port	1,14 m (3.7 ft)
Weight (ZD24)	1800 kg (3,970 lb)
Weight (ZD46)	2015 kg (4,440 lb)

SKID01 VAR 12-400



Dimensions	1145 x 3365 x 2160 mm 45 x 132 x 85 "
H suction port	1,26 m (4.1 ft)
Weight (ZD24)	2000 kg (4,410 lb)
Weight (ZD46)	2215 kg (4,880 lb)

SKID02 VAR 12-400



Dimensions	1230 x 3430 x 2205 mm 48 x 135 x 87 "
H suction port	1,31 m (4.3 ft)
Weight (ZD24)	1910 kg (4,210 lb)
Weight (ZD46)	2125 kg (4,680 lb)

STACK VAR 12-400



Dimensions	1145 x 2850 x 2100 mm 45 x 112 x 83 "
H suction port	1,14 m (3.7 ft)
Weight (ZD24)	1940 kg (4,280 lb)
Weight (ZD46)	2155 kg (4,750 lb)

TRAILER VAR 12-400



Dimensions	1850 x 3500 x 2500 mm 73 x 138 x 98 "
H suction port	1,6 m (5.2 ft)
Weight (ZD24)	1970 kg (4,340 lb)
Weight (ZD46)	2185 kg (4,820 lb)

VAR 12-400

Arrangements

CNP VAR 12-400



Dimensions	1550 x 3395 x 2165 mm (61 x 134 x 85 ")
Material	S275JR EN 10025-2 carbon steel
Coatings	Epoxy powder, average thickness of 80 µm
Color	Yellow and grey Atlas Copco (standard)
Features	Hot dip galvanised steel base; modular frame, stackable
Battery	Acid charge Pb-Ca maintenance free, 12 V - 100 Ah - 400 A
Tank	500 l (132.1 USG)
Drip pan	550 l (145.3 USG) (110% of the total volume of the tank)
Emergency stop	Outside the canopy
Locking keys	Control panel door and canopy doors
H suction port	0,81 m (2.7 ft)
Weight (ZD46)	3500 kg (7,720 lb)
Noise level (ZD46)	66-71 dB(A) @10 m (32 ft)

Engines

Make	Deutz			
Model	TCD 3.6 L4 (ZD46)			
Type	Diesel turbo common rail			
Displacement	3.600 cm ³ (220 in ³)			
No. cylinders	4			
Cooling	Liquid with radiator			
Rpm type	Variable			
Standard speed	2.200 rpm			
EU emissions	2002/88/CE Stage 3B			
US emissions	EPA Tier IV interim			
Starting	Electric			
Starting voltage	12 V			
Oil change interval	300 h			
Market	UE			
Speed [rpm]	1600	1800	2000	2200
Consumption [l/h]	17,1	19,1	19,6	20,4
Power [kW]	70,7	78,2	78,6	79,1
Power [HP]	94.8	104.9	105.4	106.1

Control panel

Model	CP CNP 01
	Manual operation, automatic operation (startstop with floats), emergency operation
	Hour meter
	Rev counter
	Battery voltmeter
	Fuel level indicator
	Vacuum gauge
	Emergency stop button
	Display with 6 languages
	Automatic engine shutdown in case of:
	- low oil pressure
	- water overheating
	- lack of battery charging
	(engine failure alarms with LED lights and display message)
	GSM communication module (optional)
	Throttle rod