TH GROUP

venz

CENTRIFUGAL PUMP

An Impeller Tailored to Each Liquid

Closed Impeller
is used for pumping clean liquids or liquids containing some impurities.
For pump types:
- APP
- EPP

Open Impeller
is designed for liquids containing solid particles abrasive liquids or stock up to 8 % consistency.
For pump types:
- APP
- ARP
- ASP
- EPP

Special Open Impeller
is suitable for liquids containing larger solid particles and long fibers, abrasive liquids or stock up to 8 % consistency.
For pump types:
- APP
- ARP
- ASP
- ASP
- EPP

Low Pulse Impeller
is designed and manufactured to minimize pressure pulsations.
For pump type:
- APP

Non-Clogging Closed Impeller
is used for sludges or slurries containing large solid particles.
For pump types:
- NPP
- NRP
- NSP

Vortex Impeller
is suitable for liquids containing large or long solid particles or abrasive liquids.
For pump types:
- NPP
- NRP
- NSP
- WPP
- WRP
- WSP

Wear-Resistant Closed Impeller
is used for pumping both erosive and corrosive liquids or slurries containing solid particles.
For pump types:
- NPP
- NRP
- NSP
- WPP
- WRP
- WSP

Wear-Resistant Open Impeller
is suitable for liquids with larger solid particles and long fibers, abrasive liquids or stock up to 8% consistency.
For pump types:
- WPP
- WRP
- WSP

Expanded VENZ Process Pumps

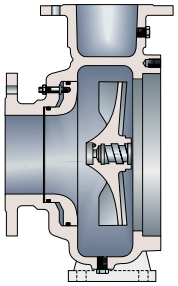
A double volute casing in larger VENZ pumps reduces radial forces and shaft deflection.

The self-venting, top centerline casing prevents air lock in the top of the casing.

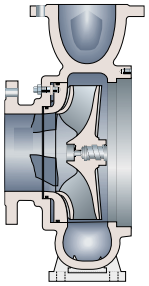
The sideplate is adjusted externally to maintain a constant impeller clearance and continuous high efficiency.

ROTOKEY impeller mounting provides strong, reliable power transmission. It is self-locking and reverse rotation safe. ROTOKEY facilitates the installation and removal of the impeller. It is not sensitive to axial loads created during pump operation.

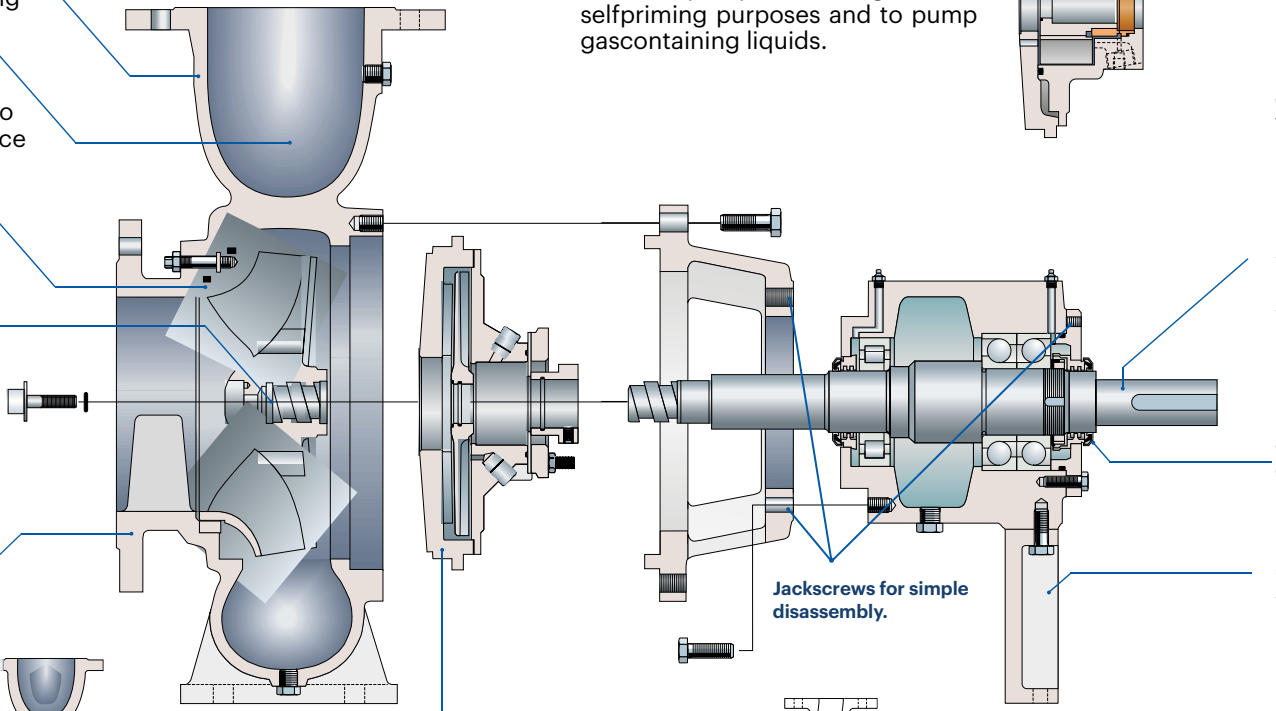
A-Hydraulics
Designed for pumping clean, abrasive or corrosive liquids especially stocks of various kinds.



N-Hydraulics
Non-clogging process pumps are the right solutions when the liquid contains large or long particles.

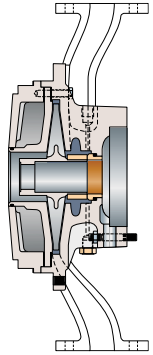


W-Hydraulics
Wear-resistant pumps guarantee reliable pumping when the liquid is very corrosive and/or abrasive.

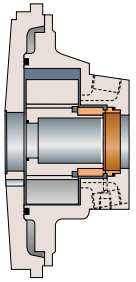


A wide selection of shaft seals is available to meet the needs of each specific application. Dynamic seals and ready fitted mechanical seals suit all requirements.

Self-Priming S
Self-priming pumps with an internal vacuum pump are designed for selfpriming purposes and to pump gascontaining liquids.



Air-Separating R
Air-separating pumps with an external vacuum pump are particularly applicable for pumping gas-containing liquids.



Bearing Unit
Simplified heavy-duty bearing unit design ensures reliability.

Grease Lubrication
Temperature of pumped liquid max. 120˚C

Oil Lubrication
Temperature of pumped liquid max. 180˚C (EPP 210˚C)

Heavy-duty shaft. Deflection at stuffing box less than 0.05 mm. High strength duplex stainless steel is standard shaft material.

Non-contacting bearing protection for the combined advantages of labyrinth - ring, deflector and lipseal. Lipseal protects in standstill position.

Strong and rigid bearing support foot improves mounting stability and maintains solid support.

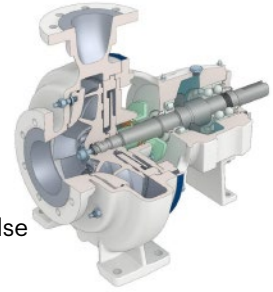
Others
VENZ hydraulics are also utilized in NVP non-clogging vertical process pumps and NKP/WKP non-clogging cantilever pumps.

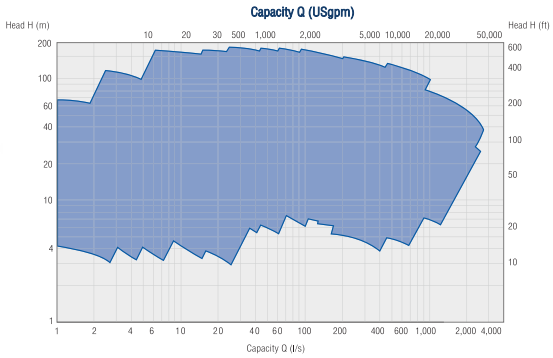
EPP hot liquid pumps for industrial processes where the system pressure is high and pressure or

Performance Ranges and Material Options

AVZ Performance

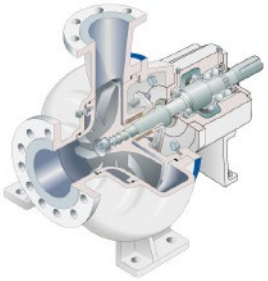
Head up to 160 m / 525 ft
Capacity up to 2,500 l/s / 40,000 USgpm
Temperature max. 180 ˚C / 355 ˚F
Frequency 50 or 60 Hz
Pressure up to 1.6/2.5 MPa, 230/360 psi, depending on material and size.
Closed, low flow, open, special open, low pulse and high efficiency non-clogging vortex

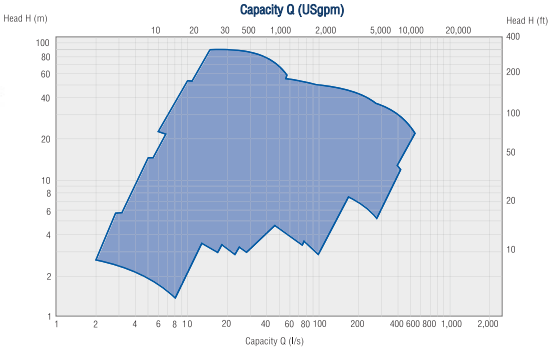




NVZ Performance

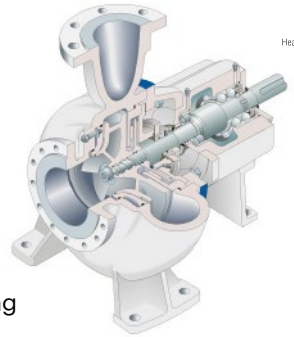
Head up to 90 m / 295 ft
Capacity up to 550 l/s / 8,700 USgpm
Temperature max. 180 ˚C / 355 ˚F
Frequency 50 or 60 Hz
Pressure up to 1.6 MPa, 230 psi, depending on material and size.
Non-clogging closed and non-clogging vortex impellers.

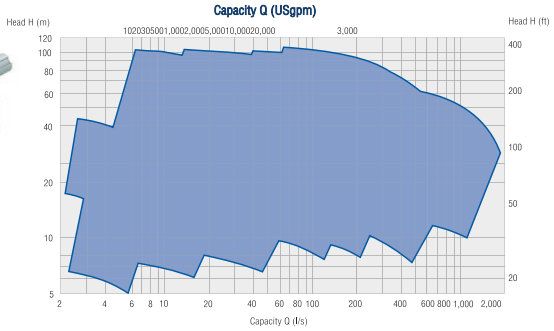




WVZ Performance

Head up to 110 m / 360 ft
Capacity up to 2,000 l/s / 32,000 USgpm
Temperature max. 180 ˚C / 355 ˚F
Frequency 50 or 60 Hz
Pressure up to 1.6 MPa, 230 psi, depending on material and size.
Wear-resistant closed, wear-resistant special open and wear-resistant non-clogging vortex impellers.





Standard Material Combinations Stailess Steel Design			Nominal Chemical Composition %					
			C Max.	Cr	Ni	Mo	Cu	N
Duplex SS	ASTM A890 Grade 3A	41	0.06	24.0-27.0	4.0-6.0	1.75-2.50	-	0.15-0.25
	ASTM A890 Grade 1B	4L	0.04	24.5-26.5	4.75-6.00	1.75-2.25	2.75-3.25	-
	ASTM A890 Grade 5A	4T	0.03	24.0-26.0	6.0-8.0	4.0-5.0	-	0.10-0.30
Austenltic SS	ASTM A743 Grade CF-8	4C	0.08	18.0-21.0	8.0-11.0	-	-	-
	ASTM A743 Grade CG-3M	4G	0.03	18.0-21.0	9.0-13.0	3.0-4.0	-	-
	ASTM A743 Grade CN-7M	43	0.07	19.0-22.0	27.5-30.5	2.0-3.0	3.0-4.0	-
	AVESTA 654 SMO	4U	0.025	23.0-25.0	21.0-23.0	7.1-7.5	0.3-0.7	0.45-0.55
Martensitic SS	ASTM A747 Grade CB7Cu-2	4E	0.07	14.0-15.5	4.5-5.5	-	2.5-3.2	-
Other design			**C Max.**	**Cr**	**Ni**	**Mo**	**Cu**	**N**
Nickel alloy	A494CW-6M	4J	0.07	17.0-20.0	Balance	17.0-20.0	-	-
Cast Iron design			**C**	**Cr**	**Ni**	**Mo**	**Cu**	**Si**
Cast iron	ASTM A48 CL 35 B	53	3.1-3.4	-	-	-	0.5-1.0	1.5-2.1
Chromium iron	A532 IIIA	5B	2.0-3.3	23.0-30.0	2.5 Max.	3.0 Max.	1.2 Max.	1.5 Max.
Material alternatives f or other parts								
Gasket material	Klinger SIL C-4430	83	Use in temperature range -40 to 160 ˚C and pH 2-12					
	PTFE/Glass	84	Use in temperature range -190 to 240 ˚C and pH 0-14					
O-ring materlal	EPDM	92	Use in temperature range -50 to 150 ˚C					
	FKM	96	Use in temperature range -20 to 210 ˚C					

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