

SINGLE STAGE CENTRIFUGAL PUMPS



**QUARTZ
SERIES**

QUARTZ SERIES CENTRIFUGAL PUMP

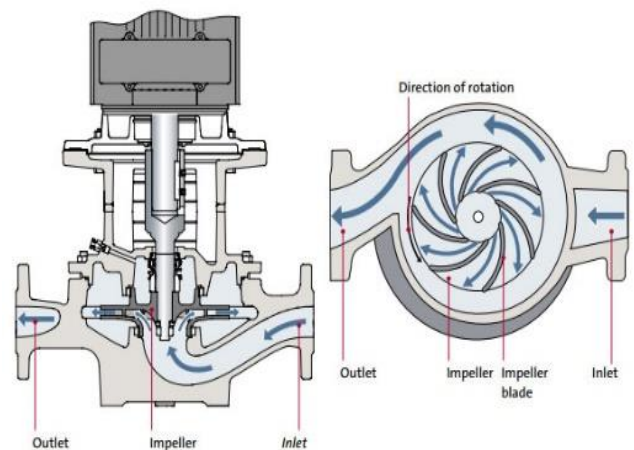


Working Principle

A centrifugal pump has an induction motor mounted at the top of the pump. A shaft is connected between the motor and pump while an impeller is mounted on the shaft. When the motor starts to function, it rotates the shaft which in turn rotates the impeller inside the pump. This process converts the rotational energy from the motor to kinetic energy of the moving fluid under the act of the centrifugal force.

During operation of the centrifugal pump, fluid enters continuously through the suction nozzle and flows into the eye of the impeller. Rotation of the impeller forces the fluid in the cavities between the impeller vanes to move tangentially and radially outwards from the center to beyond the circumference of the impeller.

While passing through the impeller, the fluid is gaining both velocity and pressure. The increase in pressure head of the rotating fluid at any point is directly proportional to the velocity of the liquid at that point. The revolving fluid in the pump is forced to be continuously displaced under centrifugal effect. As the impeller continues to rotate, the pressure at the impeller eye lowers, causing the fluid to flow constantly into the pump.



Vertical Pipeline Centrifugal Pump

One of the EVOL Quartz (QZ) series centrifugal pumps are vertical pipeline centrifugal pumps. They are coupled with motor at the same shaft and mounted on a base-plate. In addition, the suction and discharge nozzles are located 180° apart on the same centerline for mounting directly in a pipeline. This inline design eliminates the critical pipe alignment for ease of assembly and minimum pipe strain, which will then reduce the cost of foundations and guarantee minimum space requirements.

EVOL Technologies has also designed all parts of pump in contact with the liquid are made with 316L stainless steel, which is ideal for most small domestic industry, water supply system and chemical industry.



Vertical Pipeline Centrifugal Pump

Specifications

Motor Power Range		0.18 to 160 kW
Rotary speed		1450 to 2900 rpm
Type		EVQZ-V
Model range	Inlet diameter	15 to 500 mm
	Outlet diameter	15 to 500 mm
	Impeller diameter	80 to 315 mm
Flowrate Range, Q		1.1 to 1450 m ³ /h
		0.3 to 403 L/s
Head		8.5 to 27 m
Efficiency		Up to 78 %
(NPSH) _r		2.3 to 6.0 m
Weight		17 to 2070 kg

❖ Please contact EVOL TECHNOLOGIES for detailed datasheet enquiry.

Features

Transport water and other liquid similar to water in physical and chemical characteristics

Working temperature: < 80 °C

Enclosed stainless steel impeller

Compact structure, which occupies a little space in installation

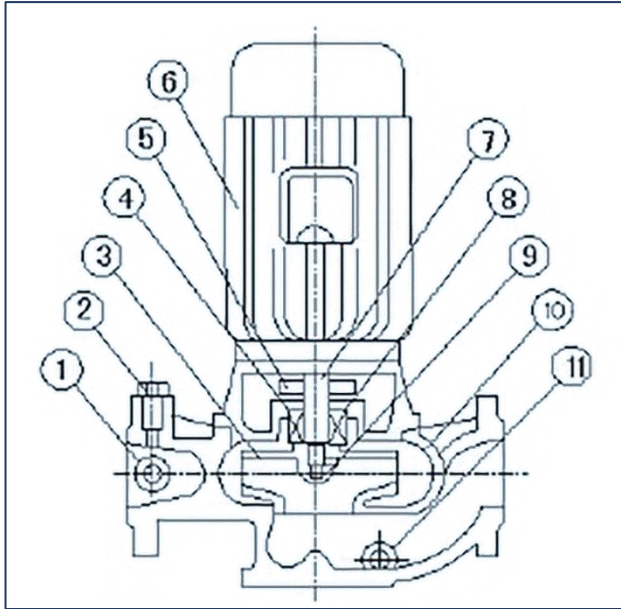
Ease of assembly reduces the maintenance cost

Wide applications in field of:

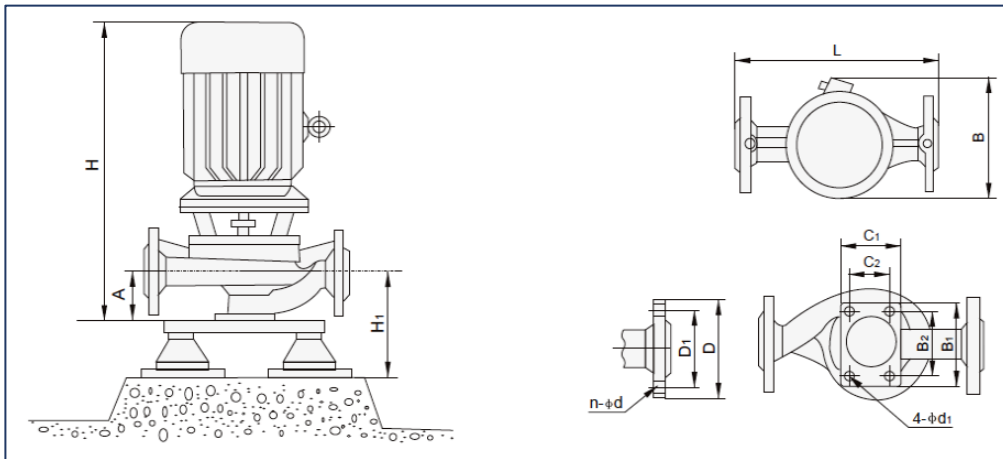
Booster in Fire-fighting, Irrigation, Transportation in Long Distance, Water Circulation and Industry or City Drainage System

❖ We also provide customized features based on customer's requirements.

Structure Specifications

Model Type: Conventional centrifugal pump (EVQZ-V)	Parts
	<ol style="list-style-type: none"> 1. Pressure plug 2. Air valve 3. Impeller 4. Mechanical seal 5. Water baffle-ring 6. Motor 7. Shaft 8. United seat 9. Impeller nut 10. Pump casing 11. Water valve

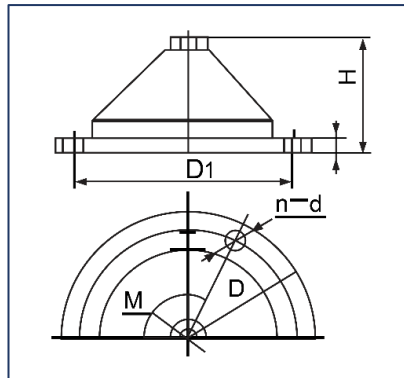
Outer Type & Installation Drawing



Inlet and outlet diameter (mm)	Impeller diameter (mm)	Outer Dimension (mm)				Installation Dimension (mm)			Dimension of inlet and outlet flange (mm)			Vibration Isolator	
		L	B	H	C ₁ × B ₁	A	C ₂ × B ₂	4-φ ₁	D	D ₁	n-d	Specification	H ₁ (mm)
15 to 500	80 to 315	180 to 1450	160 to 750	340 to 1960	100 × 75 to 550 × 480	40 to 720	45 × 70 to 480 × 440	4-φ12 to 4-φ26	Up to φ715	Up to φ650	Up to 20-φ33	*Refer to table below for vibration isolator models	60 to 648

❖ Please contact EVOL TECHNOLOGIES for detailed datasheet enquiry.

Vibration Isolator Installation



Model	M	D	D ₁	H	d	n
JGD2-3	8	180	150	47	12	3
JGD3-2	12	230	200	64	12	3
JGD3-3	12	230	200	64	12	3
JGD4-1	16	280	250	76	12	3
JGD4-2	16	280	250	76	12	3
JGD5-3	20	330	300	104	12	3

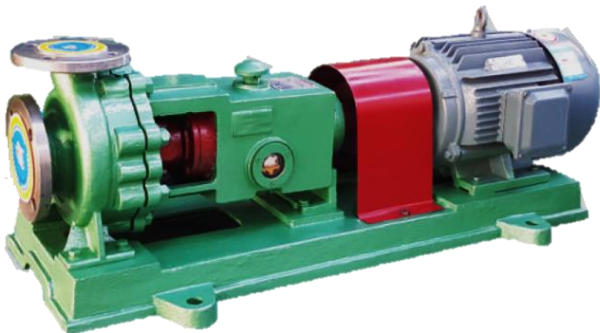
❖ Please contact EVOL TECHNOLOGIES for detailed datasheet enquiry.

Standard Materials

Parts	Materials	Applications
Bracket	316L Stainless Steel	Excellent corrosion-resistant
Impeller	316L Stainless Steel	Excellent corrosion-resistant
Shaft	316L Stainless Steel	Excellent corrosion-resistant
Base plate	316L Stainless Steel	Excellent corrosion-resistant
Seal housing	316L Stainless Steel	Excellent corrosion-resistant
Seal elastomer	EPR / EPDM / FKM	Good flex life; excellent resistance to heat, oxidation and ozone
Seal ring	Carbon / Graphite silicon-carbide	Able to move radially and act to self-lubricate when the seal rubs; prolong the life of seal ring
Spring	316L Stainless Steel	Excellent corrosion-resistant
Seat insert	Silicon-carbide / Graphite silicon-carbide	Great corrosion resistant; high chemical and temperature resistance

❖ Other special materials available upon request.

Horizontal Centrifugal Pump



Horizontal Centrifugal Pump

Horizontal centrifugal pump (EVQZ-H) is a type of end suction pump under EVOL QZ series. The centrifugal pump, which is also known as single-stage pump, consists of one open or semi impeller. It is the most common type and most cost-effective type of centrifugal pump.

In addition, the dimensions and technical specifications of the pump are made in accordance with ISO2858 and GB/T5656. With the features of 316LSS body material, these pumps are ideal for most of the chemical industries.

EVOL Technologies employed the most modern and highly sophisticated machinery and technology to manufacture these pumps using quality raw materials to ensure long life.

Specifications

Motor Power Range		0.75 to 200 kW
Rotary speed		1450 to 2900 rpm
Type		EVQZ-H
Model range	Inlet diameter	32 to 200 mm
	Outlet diameter	20 to 150 mm
	Impeller diameter	125 to 400 mm
Flowrate Range, Q		1.6 to 460 m ³ /h
		0.4 to 128 L/s
Head		5.0 to 132 m
Efficiency		Up to 79 %
(NPSH) _r		2.0 to 5.8 m

❖ Please contact EVOL TECHNOLOGIES for detailed datasheet enquiry.

Features

Suitable for transportation of corrosive liquid contained little particle

Working temperature: -40 °C to 180 °C

Enclosed stainless steel impeller

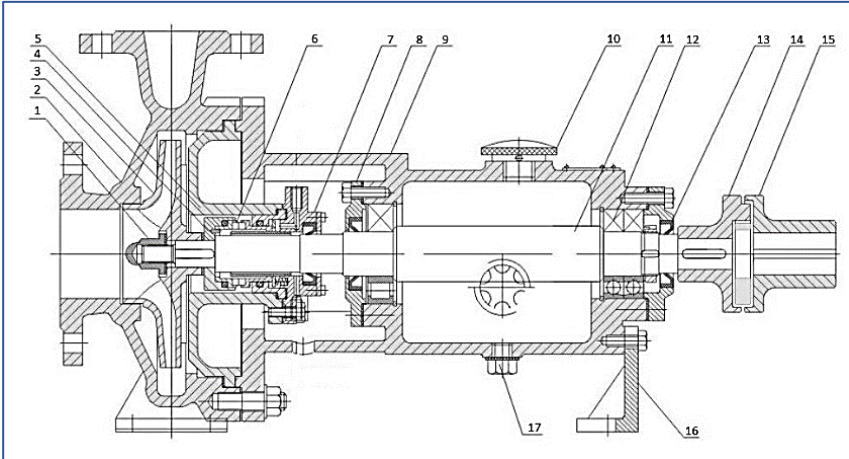
Low headroom requirement, which makes it suitable for indoor installations

Ease of installation and maintenance

Wide applications in field of:
chemical industry, papermaking, coal processing industry, alkali and acid making, food industry, pharmaceutical industry

❖ We also provide customized features based on customer's requirements.

Structure Specifications

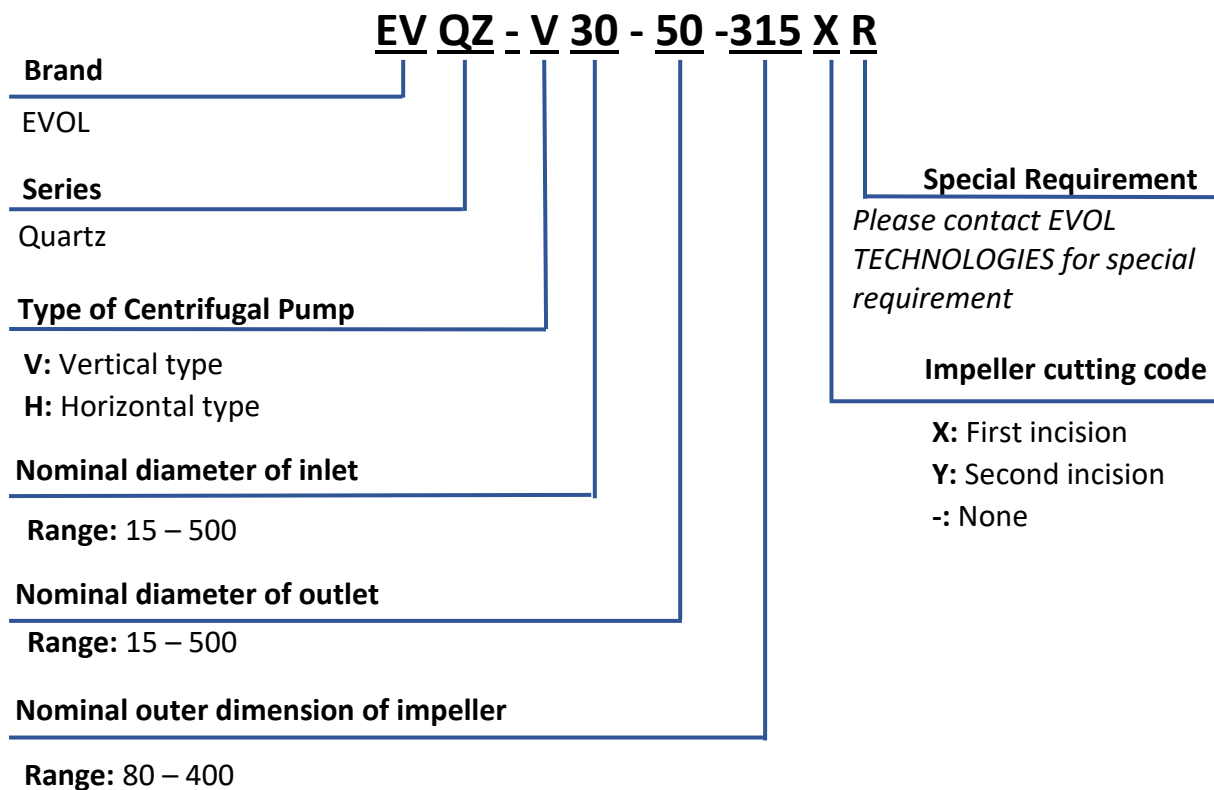
Model Type: Horizontal chemical pump	Parts
	<ol style="list-style-type: none"> 1. Impeller nut 2. Pump body 3. Impeller 4. Moving ring seat 5. Pump cover 6. Mechanical seal 7. Seal gland 8. Bearing gland 9. Bearing box 10. Breathable plug 11. Shaft 12. Bearing 13. Oil seal 14. Pump coupling 15. Motor coupling 16. Support base 17. Oil drain bolt

Standard Materials

Parts	Materials	Applications
Casing	316L Stainless Steel	Excellent corrosion-resistant
Impeller	316L Stainless Steel	Excellent corrosion-resistant
Pump cover	316L Stainless Steel	Excellent corrosion-resistant
Shaft	316L Stainless Steel	Excellent corrosion-resistant

❖ Other special materials available upon request.

Model Number





EVOLTechnologies

www.evol-technologies.com

Lot 2075, Jalan Disa Krokop, 98000 Miri, Sarawak

+6085 416320 / 433101

enquiry@evol-technologies.com