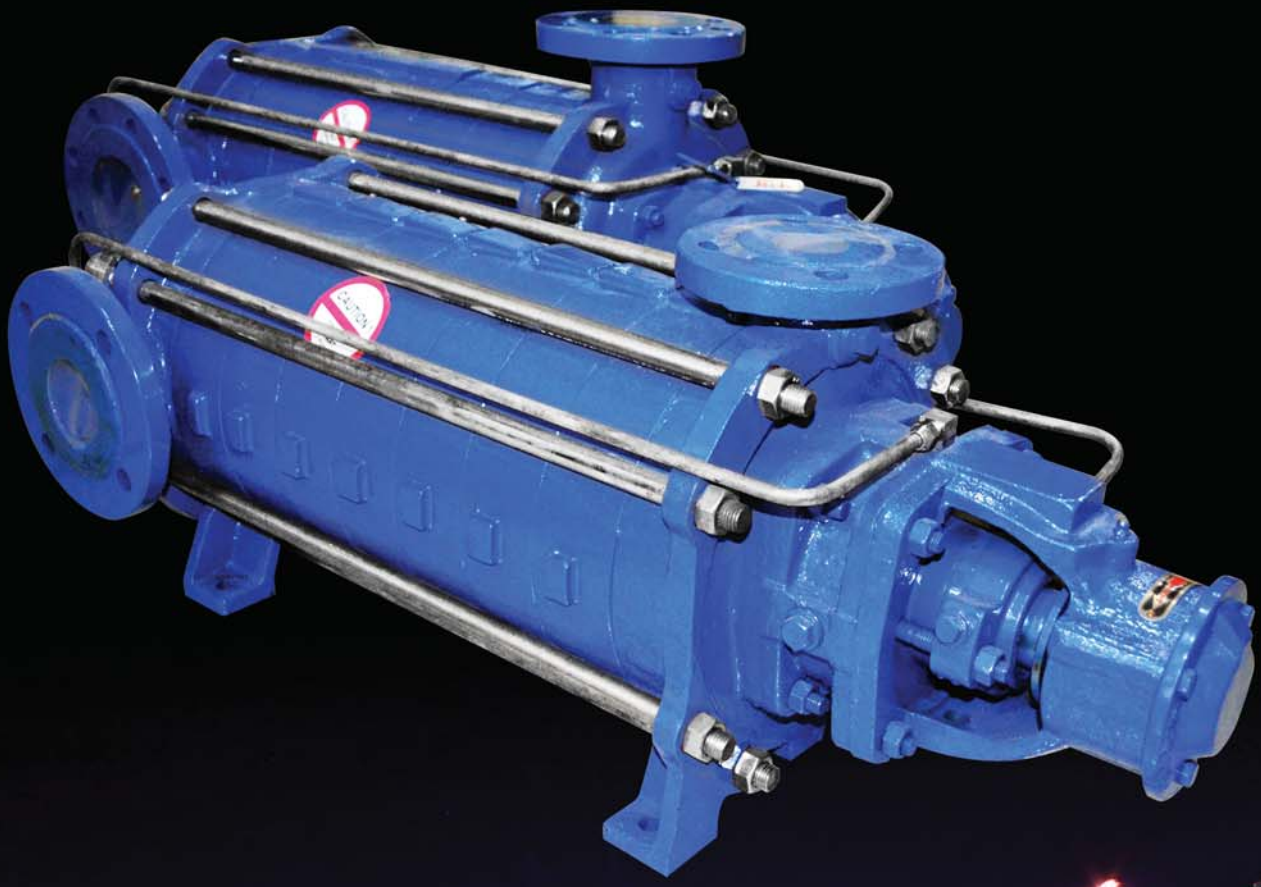
XFLO
PUMPS

HEGA Horizontal Multi-stage Pump



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Brief Introduction

HEGA-Horizontal Multi-stage Pump is the new multi-stage product series, the excellent hydraulic performance and structure of which have enabled low cost running for customers under various circumstances.

Technical Parameter:

Suction Diameter: 40~250 mm Discharge Diameter: 25~200 mm
Max. capacity: 500 m^3/h Max. Pump Head: 395 m
Max. Working Pressure: 4.0 Mpa Max. Liquid Temperature: 110°C
Sealing: Gland Packing or Mechanical Seal
Revolution Direction: Clockwise (Viewed from motor side)
Standard: Q/FP 2104-2004

Application Range

HEGA-Horizontal Multi-stage Pump is mainly used for conveying pure water or liquid with minor particles and similar to water in physical and chemical sharacter. Its application range covers paper mill, water supply company, liquid boosting system, cycling and cooling system, fire-service station, refinery, irrigation system, high pressure water station, etc.

Product Feature:

Segmental, horizontal, equipped with closed impellers, the multistage pump type includes ten different sizes, two to thirteen stages of each. The axial thrust of pump is mainlu balanced through the unique structure consisting of double wearing ring, labyrinth orifice sleeve and pressure relief pipe, while angular contact ball bearings share the residual.
Impellers of different sizes can be installed in each pump so that customers requirement for various performance and low power consumption will be fulfilled in maxium.
For pump type between HEGA25 and 80, the pump feet of inlet side are located in the center of first stage. Intlet direction can be adjusted appropriately for different isntallations.
Normally driving is located at the inlet side.

Casing working pressure

Relations between pump size and pressure toleration

Below HEGA65	4.0 MPa
Above HEGA80	3.3 MPa

Nozzle arrangement

Viewed from motor side, the pump inlet is located horizontally rightward and outlet vertically upward. For pump type between HEGA25 and HEGA80, inlet can be installed leftward upon user's requirement. For pump type of three-stage or above, inlet can also be installed vertically upward. (The two above-mentioned cases should be specified in purchase orders).
Flange applicable nominal pressure (Standard: GB/T 17241.6-1998 neq ISO 7005.2:1988)

	HEGA25	HEGA32	HEGA40	HEGA50	HEGA65	HEGA80	HEGA100	HEGA125	HEGA150	HEGA200
Inlet	4.0 MPa	4.0 MPa	1.6 MPa	4.0 MPa	1.6 MPa	1.6 MPa	1.6 MPa	1.6 MPa	1.0 MPa	1.0 MPa
Outlet	4.0 MPa	4.0 MPa	4.0 MPa	4.0 MPa	4.0 MPa	4.0 MPa	1.6 MPa	1.6 MPa	1.6 MPa	1.6 MPa

Note: The bigger one is inlet flange while the smaller one is outlet. Flange of 4.0 MPa can also be applied for the pressure requirement of 1.0 MPa, 1.6 MPa and 2.5 MPa

Bearing

SKF/NSK bearing as standard configuration, the cylinder roller bearings at inlet side and a pair of angular contact ball bearings at outlet side have been fully filled with Lithium Base Grease before deliveri from manudacturer.

Sealing

Both gland packing and mechanical seal are available upon request. Mechanical seal is the standard configuration, the installation size of which corresponds to DIN24960. Crane 2100 is the brand normally adopted.

O ring

O ring is made of FPM.

Material of main spare parts

Code	Spare parts		Material code and material			
			EW	EY	EZ	EB
106 107 108	Suction casing Discharge casing Stage casing		Cast iron			CF-8M
230	Impeller		Cast iron	Bronze		CF-8M
502	Wearing ring		Bronze			CF-8M
117	Diffuser		Cast iron		Bronze	CF-8M
210	Shaft		1.4462			
524	Shaft sleeve (gland packing)		SS 420			316
523	Shaft sleever (mechanical seal)		SS 420			316
461	Sealing	Gland packing	Carbon fiber packing			
433		Mechanical seal	SiC or ceramic / Graphite, NBR			

Note: Please make inquiry to relative technical dept if you want pumps made of other material.

Maximum stage number under different speeds for each type (Standard speed is marked "*"

	Speed (rpm)				
	1000	1500*	1800	3000*	3600
HEGA25	-	13	13	13	10
HEGA32	-	12	12	11	7
HEGA40	-	12	12	9	6
HEGA50	-	11	11	8	5
HEGA65	-	10	9	6	4
HEGA80	-	11	8	-	-
HEGA100	-	10	5	-	-
HEGA125	6	6	3	-	-
HEGA150	5	5	2	-	-
HEGA200	4	3	1	-	-

Standard Configuration

a. Pump material assembly
Standard material assembly: EW (As specified in the table of material code)

b. Flange
17241.6-1998 neq ISO 7005.2:1988. Sealing interface: Convex

c. Bearing
NSK bearings (grease lubrication)

d. Sealing
Mechanical seal : Single mechanical seal (T2100)
Seal interface material: Graphite/Sic. Auxiliary material: NBR, Spring, SS316
Sealing pipes configuration: Inner cycling liquid flows to sealing chamber then returns to pump inlet.

e. Unit setting
Equipped with IP55 series motor
Welded steel baseplate, foot bolts and nuts.
Claw coupling or flexible pin coupling (based on motor power)

f. Wearing parts offered together with the pump
Two O rings used at separation sleeves and two used at mechanical seal covers

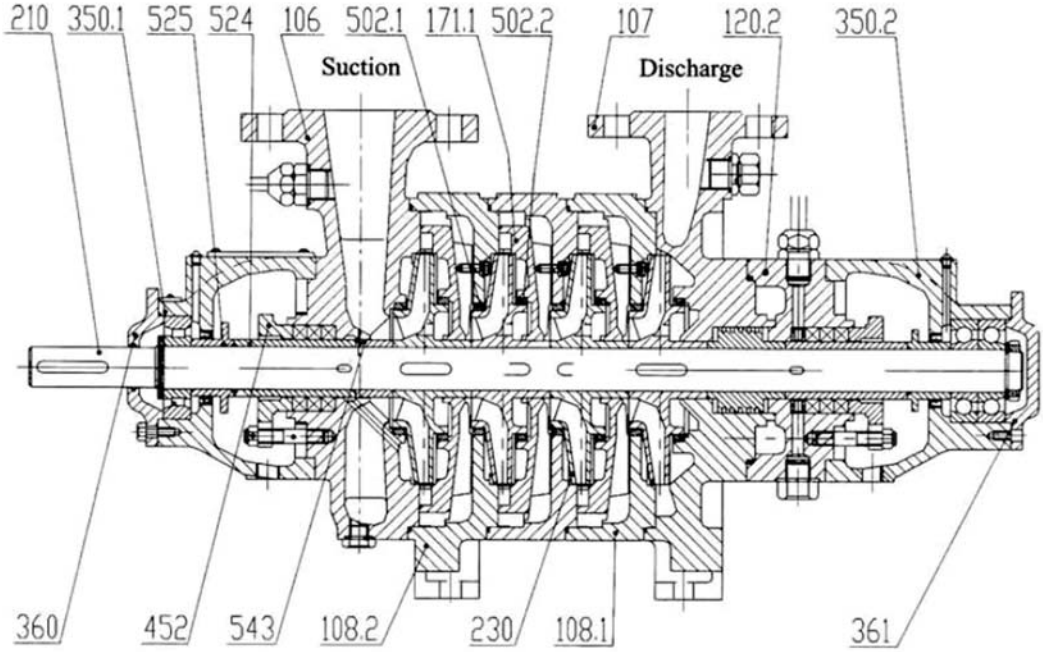
Components of pump unit

Pump (1), motor (1), baseplate (1), coupling set (1), coupling guard (1), foot bolts and nuts (4 or 6 of each)
Technical material: Installation and operation manual (1), list of spare parts (1), packing list (1)

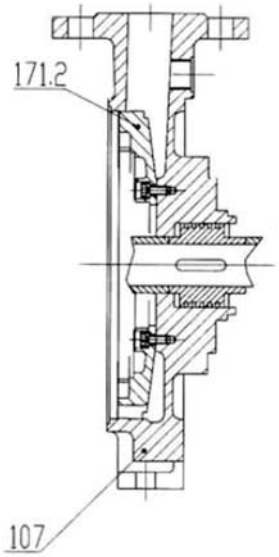
Wearing parts
O rings used at separation sleeves and O rings used at mechanical seal covers
Other spare parts, including impeller, wearing ring, shaft sleeve, mechanical seal or gland, O ring, etc., will be supplied according to order.

Pump Construction Chart

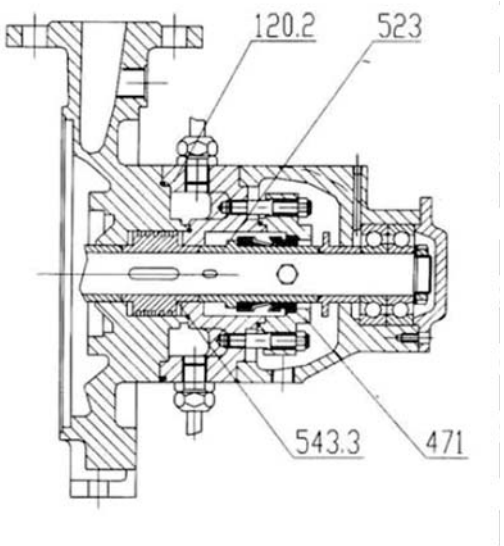
Gland Packing



Pump structure (with diffuser)

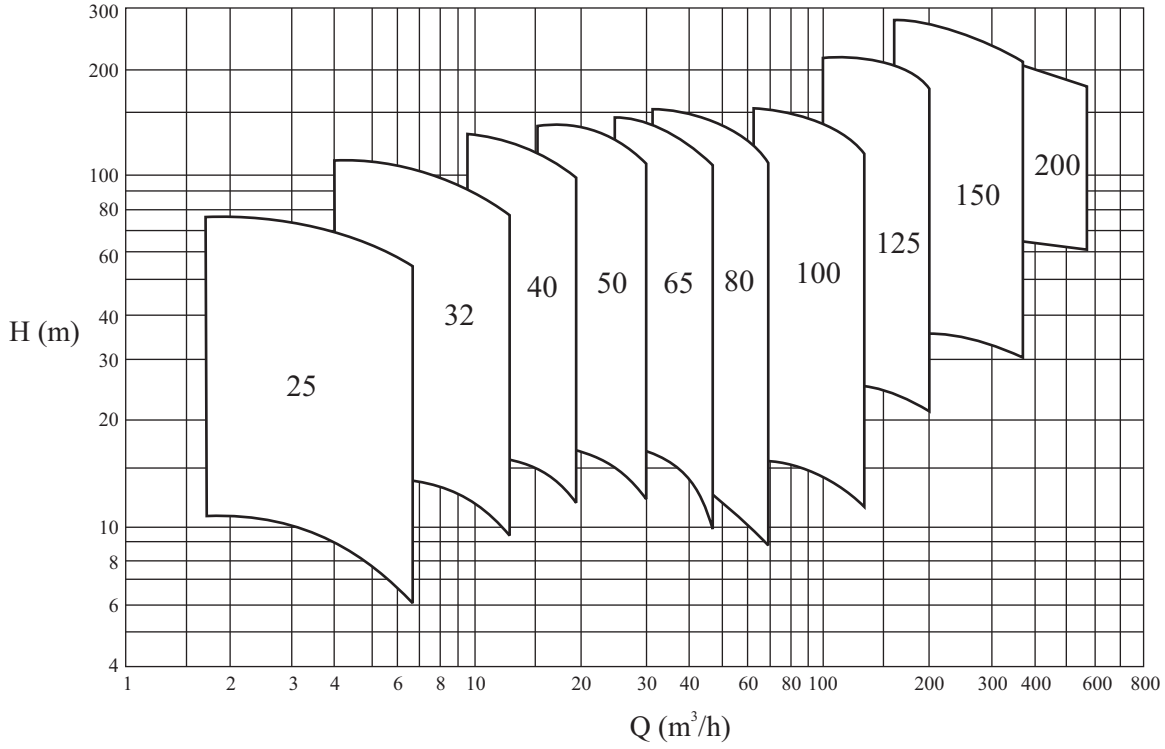


Mechanical seal



106-Suction casing	107-Discharge casing	108.1-Stage casing	108.2-Stage casing
120.1-Additional section	120.2-Additional section	171.1-Diffuser	171.2-Diffuser
210-Shaft	230-Impeller	350.1-Bearing frame	350.2-Bearing frame
360-Bearing cover	361-Bearing cover	452-Gland	457-Packing ring
471-Mechanical seal cover	502.1-Wearing ring	502.2-Wearing ring	523-Mechanical seal sleeve
524-Packing sleeve	525-Separation cover	543.1-Separation sleeve	543.2-Separatin sleeve

Performance chart
(1450rpm)



Performance chart
(2900rpm)