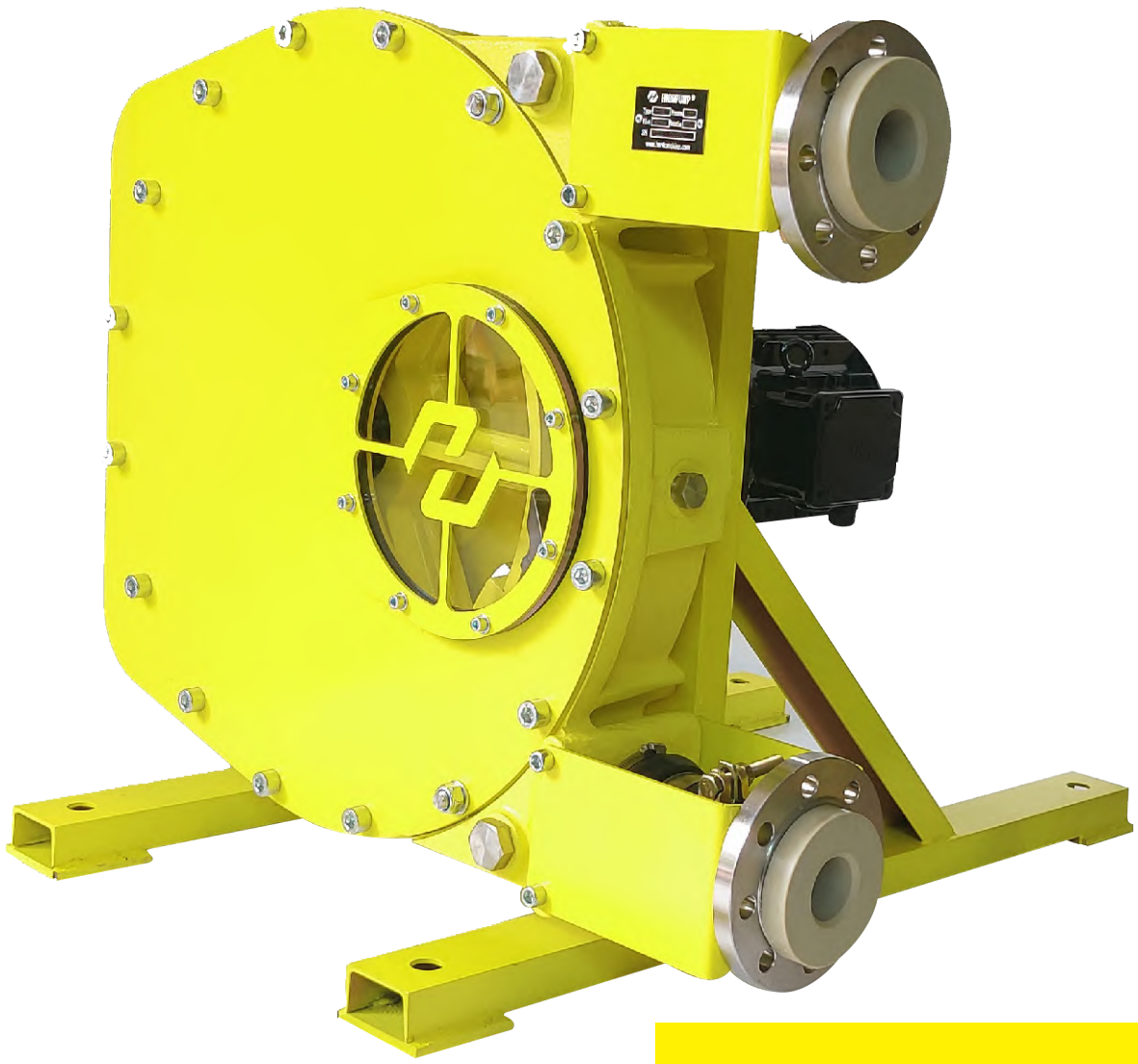
HIGHPUMP™

A HANKUN Brand



Hankun Quality Driving The Future

HOSE PUMP

SUMMARY

HIGHPUMP™

The HIGHPUMP hose pump,a brand of Hankun, provides customers with perfect solutions for harsh working conditions and the transportation of special medium such as corrosive fluid, solid-liquid two-phase medium, viscous fluid, etc.

HIGHPUMP focuses on the process industries and is committed to provide professional fluid control solutions for process industries,such as water treatment,environmental protection, power, petroleum, chemical, pharmaceutical, food and other process industries. According to actual working condition, we provide the end-users with safe, environmental -friendly and economical solutions. We supply equipment in strict accordan ce with the contract requirements and provide the installation and commissi oning guidance for clients.

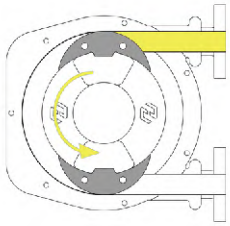
Hankun was founded in 2007, produces core fluid control equipment such as pumps, valves, and actuators. Using IoT communication, we provide integrated dosing skids, complete sets of equipment, on-site system maintenance services, and other extended service.

Our clients are distributed in thermal power, nuclear power, petrochemical, lithium battery, coal chemical, water treatment industries and other fields, our products are high quality and have a high reputation in the market.

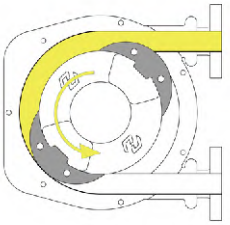
With rich experience in fluid industrial products, Hankun has an excellent sales team and a group of professional technicians. Technology is the foundation of the company's development, and reputation is the driving force of the company's development. The purpose and value of our work is to make end-users feel relieved and satisfied.

HH SERIES

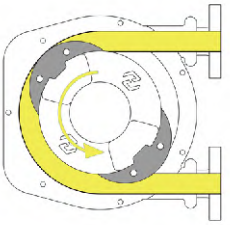
We have combined high quality materials with advanced design solutions in order to maximize running time and minimize maintenance.
Two shoes mounted at 180° on a rotating wheel compress successively a reinforced rubber hose that contains a fluid to be pumped.
The compression of the hose by the rotating shoes creates continuous suction at the inlet of the pump and pushes the fluid to the outlet of the pump.
The pump casing contains a lubricant that reduces friction and insures the best pump performance with a minimum of maintenance.
The pumped fluid is in contact only with the interior of the rubber hose, thus permitting the pumping of a wide variety of reactive fluids.



The hose is installed inside the pump casing and compressed by two pressing shoes installed on the wheel. The first pressing shoe compresses the hose wall to generate a vacuum and suck the medium into the hose.



After the medium enters the hose, the second pressing shoe will continue to compress the hose and push the medium toward the outlet direction.

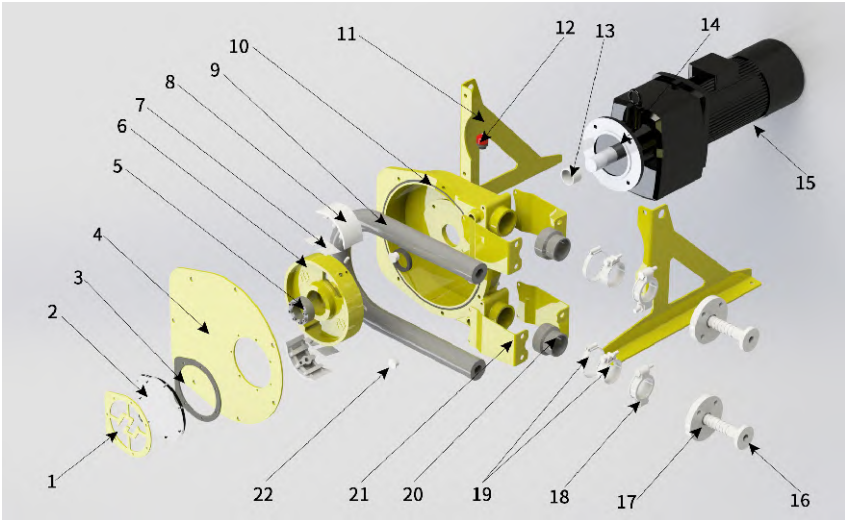


When the pressing shoe in the outlet direction leaves the hose, the other pressing shoe is already compressing the hose, so as to avoid internal backflow leakage, and then suck the medium in sequence with the movement of the wheel.

ADVANTAGES

- No mechanical seal or stuffing box
- No check valve
- Suitable for aggressive or viscous fluids
- Dosing
- Perfect volumetric flow
- Fully self-priming up to 9.8 m
- Damage-free continuous dry running
- Reversible flow
- Outlet pressures up to 16bar
- Plug and Play
- Simple maintenance
- Overload protection
- Low sound level : ⩽ 70 dB

STRUCTURE



No.	Name	No	Name
1	Window holder	12	Breather plug
2	Window	13	Shaft seal ring
3	Sight glass seal	14	Reducer
4	Pump cover	15	Motor
5	Hub	16	Insert
6	Wheel	17	Flange
7	Shim	18	Clamp on hose
8	Shoe	19	Clamp on sleeve
9	Hose	20	Sleeve
10	Pump casing	21	Bracket
11	Frame	22	Oil plug

APPLICATION

Water treatement: Add acids, alkalis, flocculants and other agents to discharge various fluid media,Sediment recovery and discharge

Environment industry: Limewater, Chemicals, Filtration and Wastewater Treatment

Chemical industry: various acid-base slurries, crystallization liquids, suspensions, resins, oozes, phosphates, titanium dioxide slurries, latex

Refinery: recovery and discharge of dirty oil, sewage, sludge, container cleaning, etc.

Thermal power&nuclear power plant: chemical treatment (acid-base liquid), equipment scrubbing and deep pit drainage, radioactive waste liquid

Ceramics: cavity filling, ceramic slurry, slip, glaze, clay conveyingoring.

Beer industry: yeast, diatomaceous earth, distiller's grains, syrup, ingredients, concentrate (liquid), gas-liquid mixture

Food industry:ketchup, mashed potatoes, gelatin, fish sauce, olive oil, wine, etc.

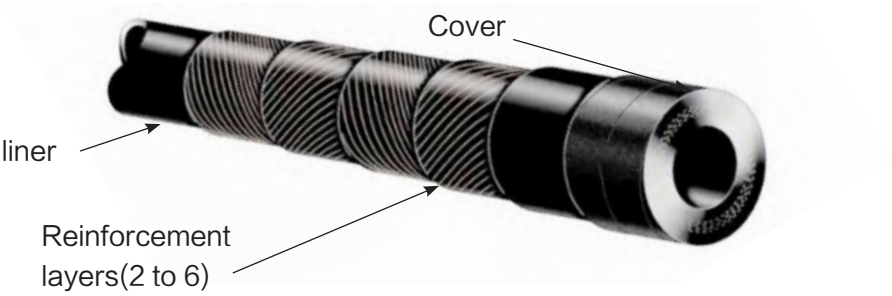
Waste incineration: leachate, activated carbon slurry

Construction : fiber mortar, plaster, lightweight concrete, cement floor

Paint: water based paint, acrylics, pigments, ink, wall coating.

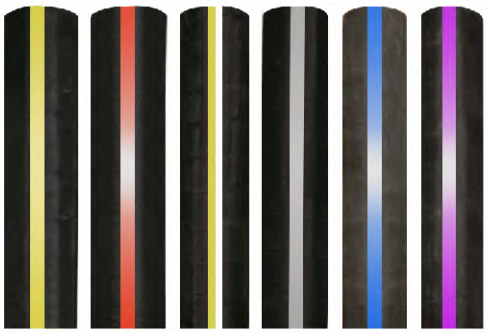
Paper mills:latex, kaolin, paper waste sludge, various chemical dosing.

HH HOSE



We only work with high quality compounded rubbers, reinforced with 2 to 6 individual layers of braided polyamide and with an outer layer made to strict tolerances to ensure perfect compression.
The characteristics of HIGHPUMP hoses enable them to last approximately 30% longer than other hoses on the market.

For the hose inner layers, 6 materials are available to suit the diversity of the pumped fluids :



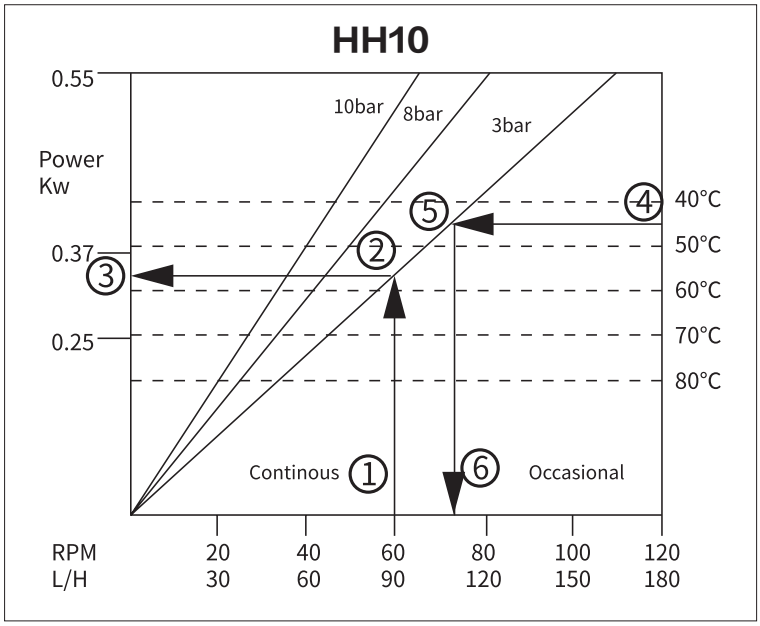
- NR Natural rubber
- NBR Nitrile rubber
- EPDM EPDM rubber
- CSM HYPALON rubber
- FKM VITON rubber
- NBR FDA Nitrile rubber FDA

HOSE MATERIAL FOR COMMON FLUID

Fluid	Hose material
30% HCL	EPDM
30% NaOH	NR/EPDM
Ammonia water	NR
40% FeCl3	NR
Sea water	NR

Fluid	Hose material
Organic Sulfur	EPDM
Coagulant aid	EPDM
PAM flocculating agent ~ Polyacrylamide	EPDM
PAC ~ Polyaluminum chloride	NR
Waste oil	NBR

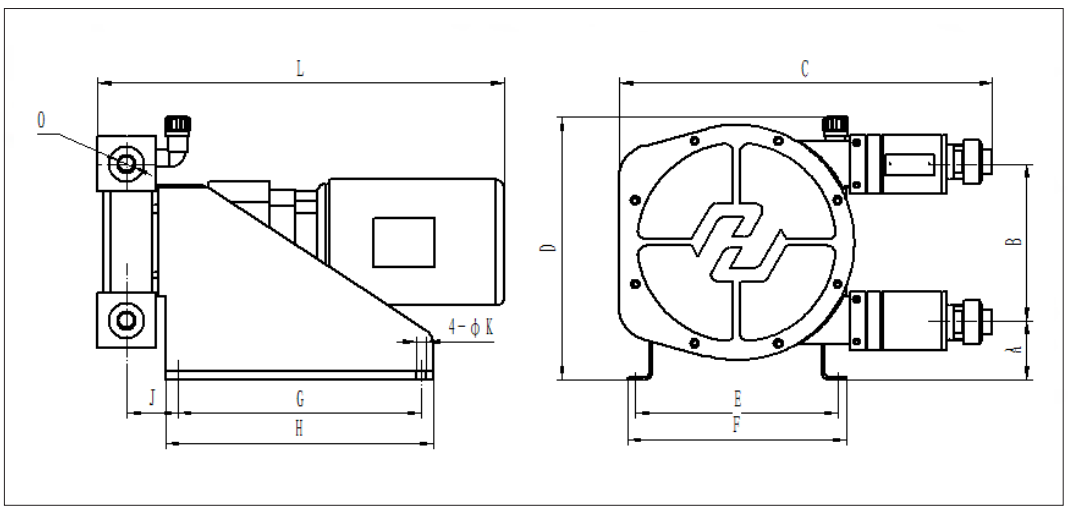
HOW TO USE THE FLOW CURVE



HOW TO USE THE FLOW CURVE

1. Select the required flow rate and find the corresponding speed of the pump.
2. Move upwards to the calculated outlet pressure.
3. Move left to find the corresponding motor power.
4. Determine the maximum temperature of the medium.
5. Move left to the calculated outlet pressure.
6. Move downwards to determine the maximum pump speed allowed at that temperature.

HH05（3 LOBES） HH10（3 LOBES） HH10



Model	A	B	C	D	E	F	G	H	J	K	L	O
HH05	103	115	343	275	220	240	260	300	56	9	/	Φ20
HH10	103	115	343	275	220	240	260	300	56	9	/	Φ20

PERFORMANCE PARAMETERS

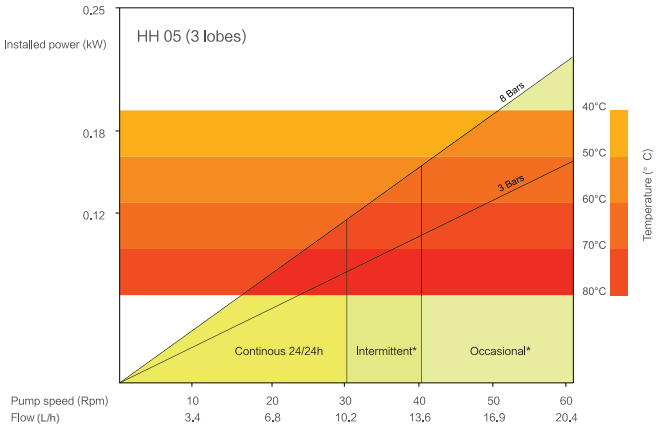
HH05 (3 lobes)

Maximum flow: 20.4 L/h

Maximum outlet pressure: 8bar

Maximum medium temperature: 80℃

Lubricant: 0.2L



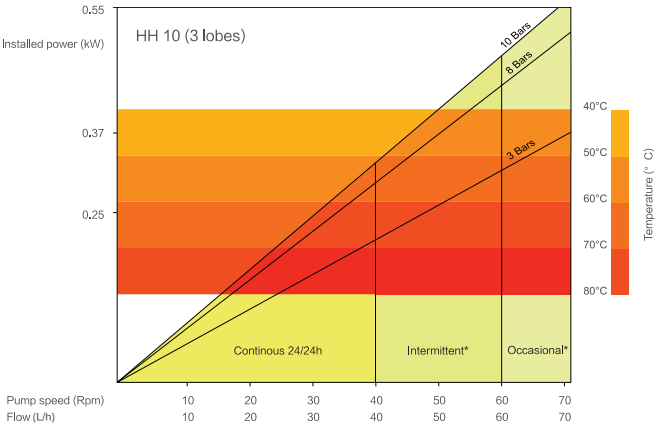
HH10 (3 lobes)

Maximum flow: 70 L/h

Maximum outlet pressure: 10bar

Maximum medium temperature: 80℃

Lubricant: 0.2L



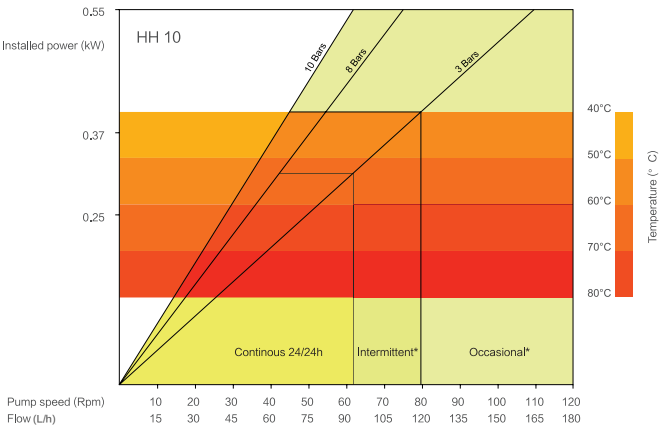
HH10

Maximum flow: 180 L/h

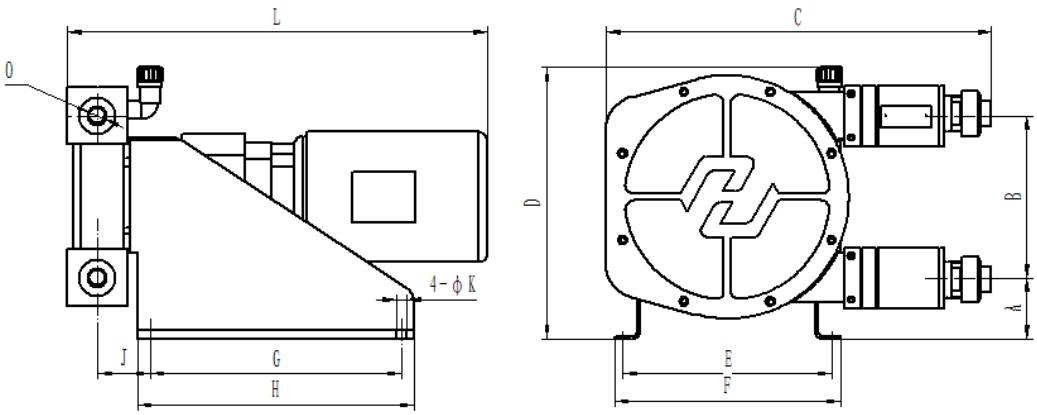
Maximum outlet pressure: 10bar

Maximum medium temperature: 80℃

Lubricant: 0.2L



HH15 (3 LOBES) HH15 HH20 (3 LOBES) HH20



Model	A	B	C	D	E	F	G	H	J	K	L	O
HH15	73	193	460	325	250	280	300	330	69	13	/	Φ20
HH20	73	193	460	325	250	280	300	330	69	13	/	Φ25

PERFORMANCE PARAMETERS

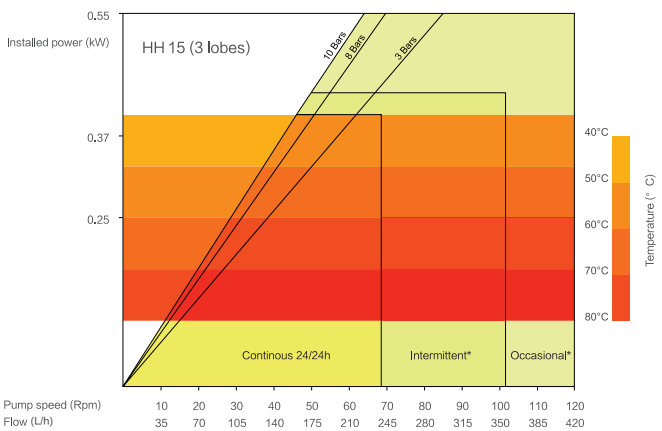
HH15 (3 lobes)

Maximum flow: 420L/h

Maximum outlet pressure: 10bar

Maximum medium temperature: 80℃

Lubricant: 0.55L



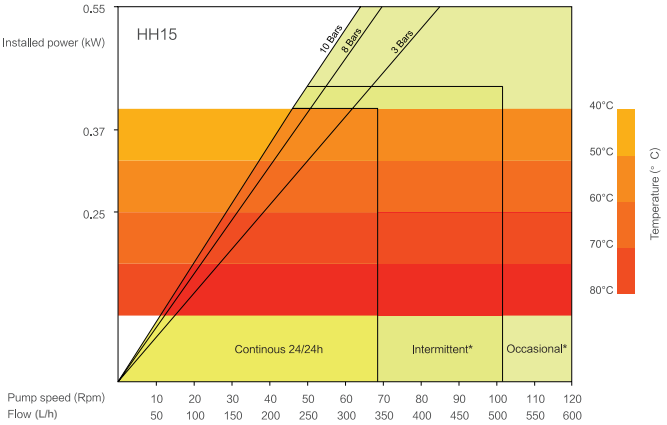
HH15

Maximum flow: 600L/h

Maximum outlet pressure: 10bar

Maximum medium temperature: 80℃

Lubricant: 0.55L



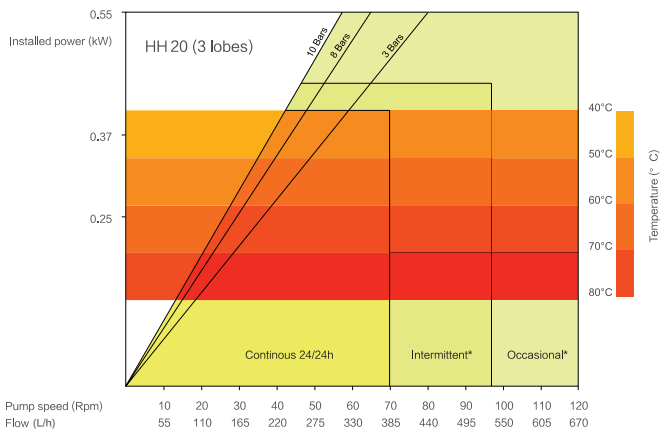
HH20 (3 lobes)

Maximum flow: 670L/h

Maximum outlet pressure: 10bar

Maximum medium temperature: 80℃

Lubricant: 0.55L



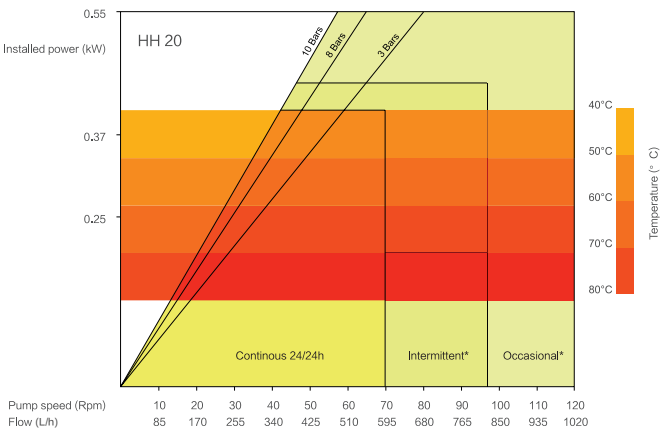
HH20

Maximum flow: 1020L/h

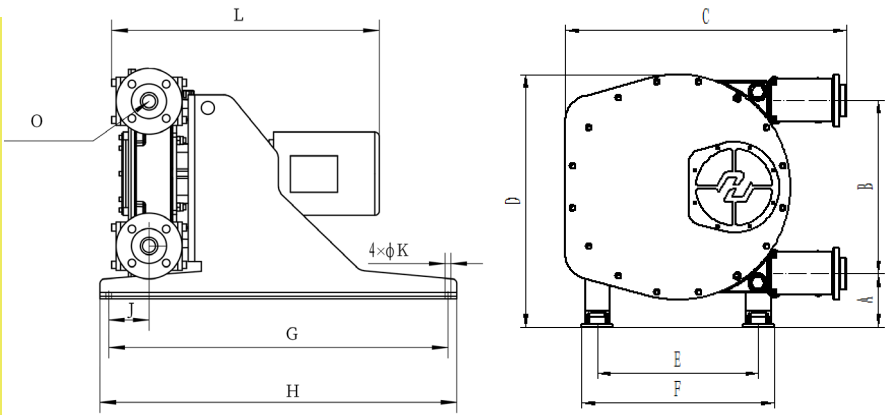
Maximum outlet pressure: 10bar

Maximum medium temperature: 80℃

Lubricant: 0.55L



HH25 HH32 HH40 HH50



Model	A	B	C	D	E	F	G	H	J	K	L	O
HH25	95	265	544	418	311	351	520	560	81	13	/	DN25 PN16
HH32	123	330	680	523	426	476	770	810	109	13	/	DN32 PN16
HH40	123	330	680	523	426	476	770	810	109	13	/	DN40 PN16
HH50	165	554	898	807	515	615	950	1050	152	19	/	DN50 PN16

PERFORMANCE PARAMETERS

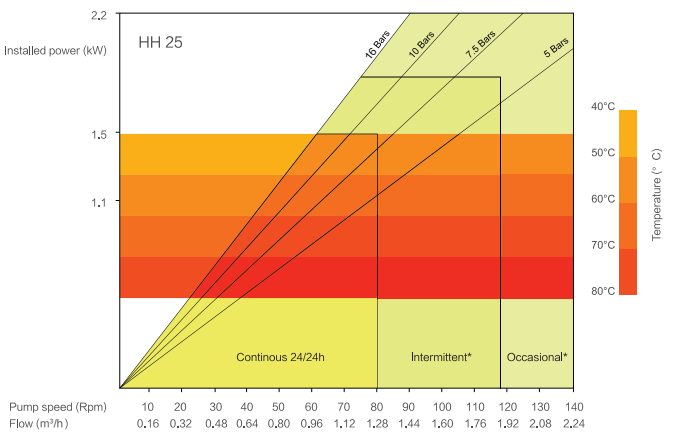
HH25

Maximum flow: 2.24m^3/h

Maximum outlet pressure: 16bar

Maximum medium temperature: 80℃

Lubricant: 2L



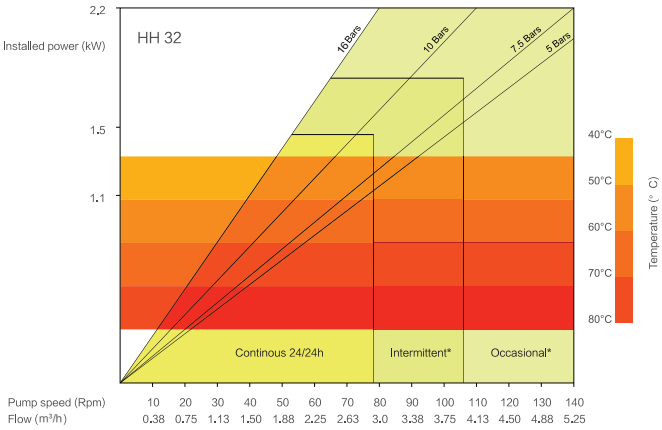
HH32

Maximum flow: 5.25m³/h

Maximum outlet pressure: 16bar

Maximum medium temperature: 80℃

Lubricant: 3L



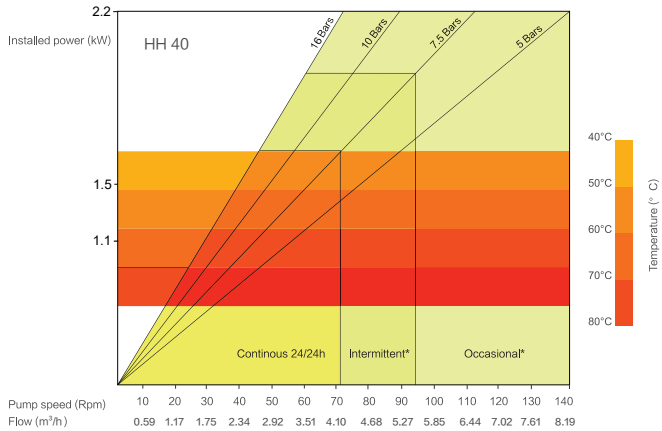
HH40

Maximum flow: 8.19m³/h

Maximum outlet pressure: 16bar

Maximum medium temperature: 80℃

Lubricant: 3L



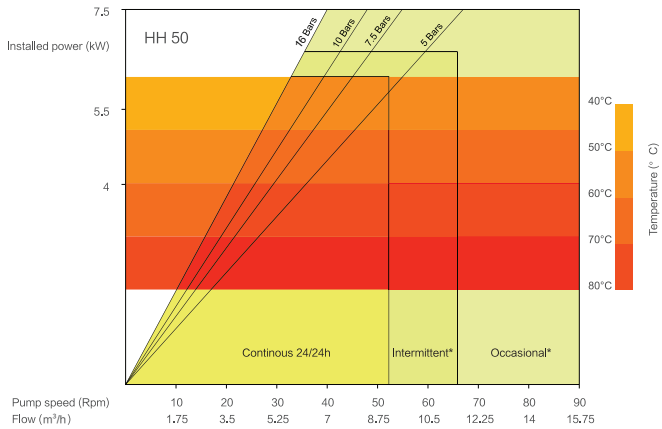
HH50

Maximum flow: 15.75m³/ h

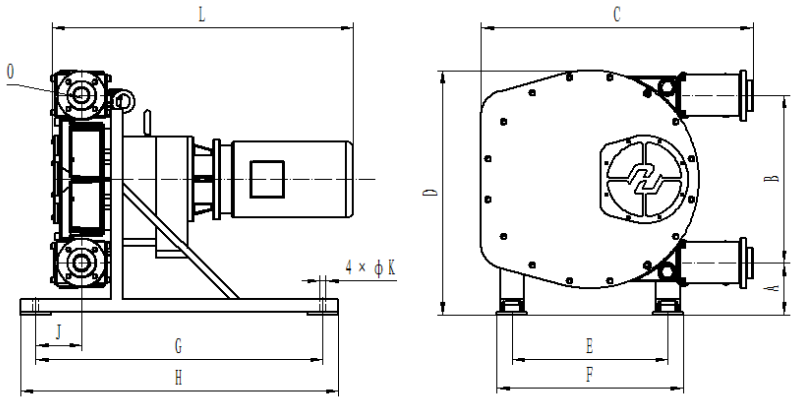
Maximum outlet pressure: 16bar

Maximum medium temperature: 80℃

Lubricant: 13L



HH65 HH80



Model	A	B	C	D	E	F	G	H	J	K	L	O
HH65	165	554	898	807	515	615	950	1050	152	19	/	DN65 PN16
HH80	262	876	1363	1260	690	830	1300	1400	210	27	/	DN80 PN16

PERFORMANCE PARAMETERS

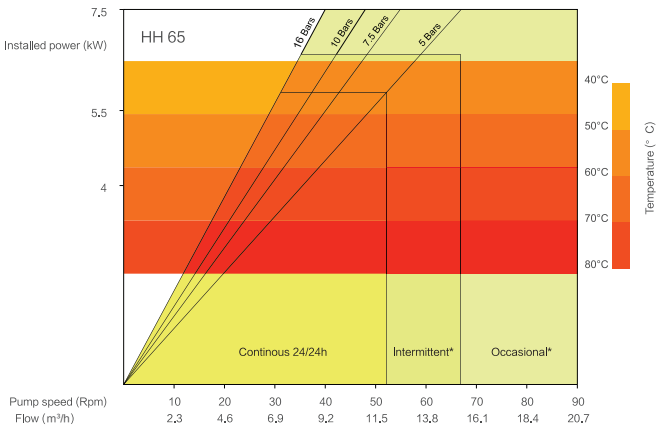
HH65

Maximum flow: 20.7m³/h

Maximum outlet pressure: 16bar

Maximum medium temperature: 80℃

Lubricant: 13L



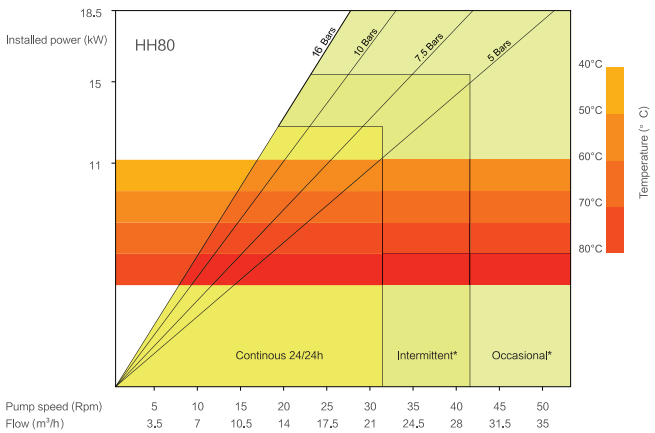
HH80

Maximum flow: 35m³/h

Maximum outlet pressure: 16bar

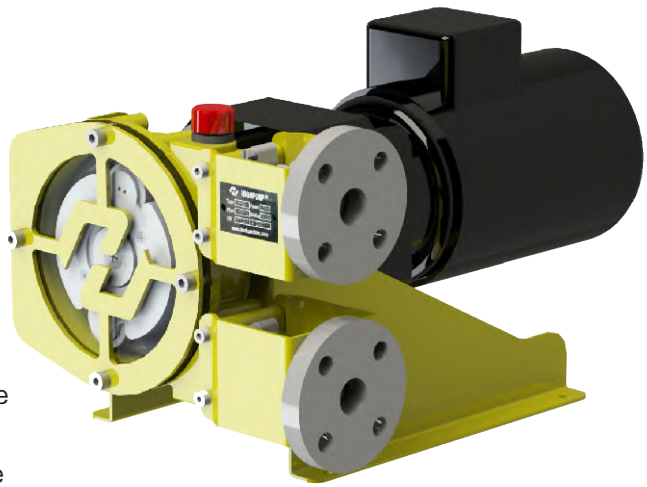
Maximum medium temperature: 80℃

Lubricant: 40L



HP SERIES

HP series peristaltic pumps are superior to other pumps that rely on seals, valves and vanes. These components cause repeated pump failures and high maintenance rates. Other positive displacement pumps cannot solve the problem of separating the pump from the medium.
HP series peristaltic pumps are suitable for quantitatively conveying various media with high viscosity, low viscosity, pasty, pure, neutral, corrosive, corrosive and containing gas, foam or solid hard particles.
HP series peristaltic pumps help customers achieve significant improvements in equipment process performance, maintenance, and quality at the same time, but at a lower cost.



ADVANTAGES

Accurate and repeatable dosing and metering

Industry requires repeatable pump control for accurate dosing. Many traditional positive displacement pumps have varying flow rates, resulting in scrapped product and increased costs. HIGHPUMP are accurate up to ±0.5% across their total speed range, with the additional benefit of process control capabilities which allows easy installation. Less waste means increased profits.

Long life and greater reliability

Pump failure cannot be tolerated. HIGHPUMP have no seals, valves, diaphragms, glands or immersed rotors to leak, clog or replace. Abrasive, corrosive and aggressive liquids are handled with ease because the fluid stays within the hose and never comes into contact with moving parts of the pump. The HP series range is designed and manufactured for heavy duty industrial use, and advanced elastomer technology ensures accurate and repeatable performance that truly outperforms all other pumps.

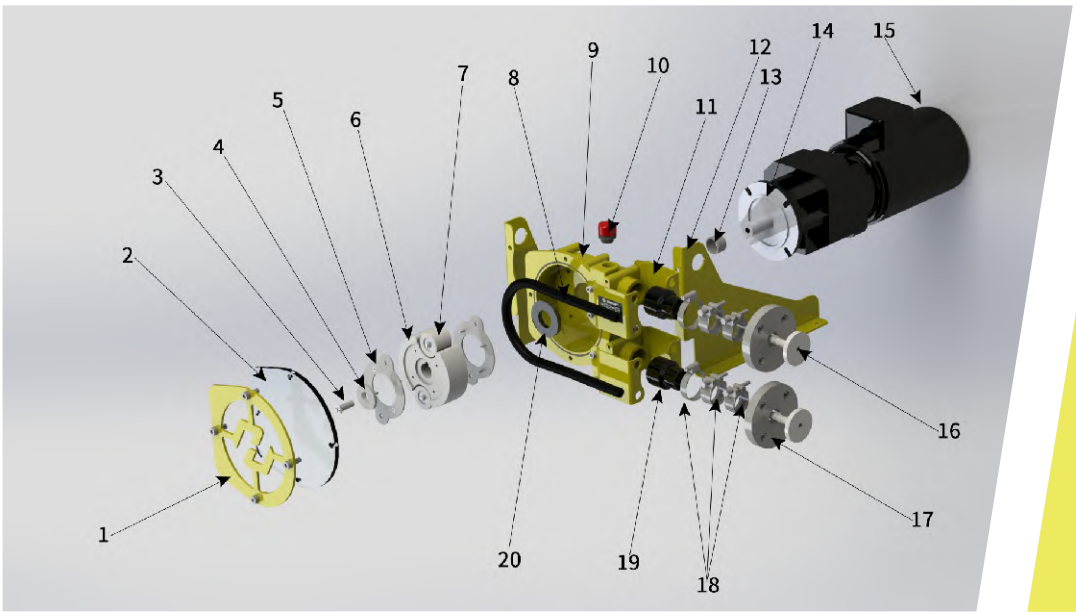
Self-priming and continuous dry running

It is not always possible to position a pump in the ideal location and often self-priming and dry- running performance is required. These conditions can cause wear in conventional pumps, resulting in loss of flow and premature failure. HIGHPUMP can self-prime up to 9.8 meters and run dry indefinitely.

Lowest cost of ownership and quick and easy maintenance

Leakage, clogging or blockage of conventional positive displacement pumps which incorporate seals, valves, lobes, rotors or vanes can be a regular occurrence and expensive to rectify. HIGHPUMP contain the fluid hose, requiring only one component to be changed, which means that maintenance costs are considerably lower than other pump types. Increased plant productivity and lower repair costs means pump payback is over months rather than years.

STRUCTURE

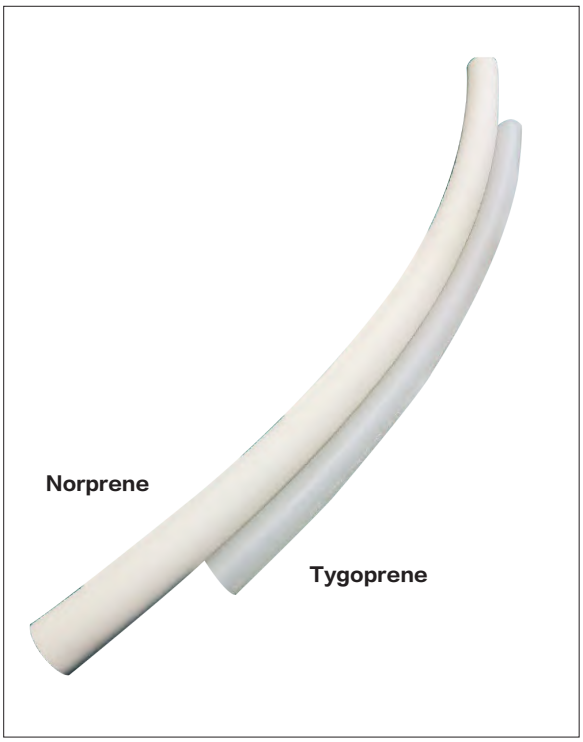


No.	Name	No.	Name
1	Window holder	11	Bracket
2	Window	12	Frame
3	Roller pin	13	Hub
4	Spacer	14	Reducer
5	Washer	15	Motor
6	Rotor	16	Insert
7	Roller	17	Flange
8	Hose	18	Hose clamp
9	Pump casing	19	Sleeve
10	Breather plug	20	Rotary shaft lip seals

HP HOSE

HP series peristaltic pumps provide a variety of hoses to meet various special requirements.

- Tygoprene it can be used when the medium is concentrated sulfuric acid and sodium hypochlorite.
- Norprene it can be used when the medium is sodium hypochlorite.
- NR Natural rubber
- NBR Nitrile rubber
- NBR FDA Nitrile rubber FDA
- EPDM EPDM rubber
- CSM HYPALON rubber
- FKM Viton rubber



- 1 Inner layer of various types of rubber
- 2 Nylon braided reinforcement
- 3 Outer layer

APPLICATION

Water treatment:

Sodium hypochlorite and concentrated sulfuric acid are often used in water treatment. They are two challenging medium, very corrosive and oxidizing. The HP series hose pump can transport these two medium well due to its unique structure and special hose. There have been a large number of application examples in power plants, water treatment and other industries.

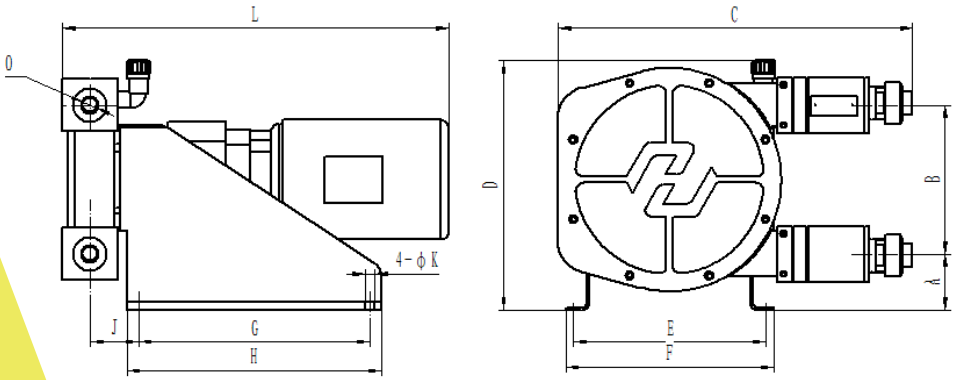
Transport of neutralized water in petrochemical plants:

Because the medium is unstable in acidity and alkalinity and contains many impurities, and the temperature is higher than normal temperature, the centrifugal pump is frequently damaged. After replacing it with a hose pump, it takes about 1 year to change a hose, and zero maintenance is basically achieved.

Condensate polishing treatment in power plant:

Accurate metering, solving the problems of easy crystallization of lye and corrosion of hydrochloric acid, and achieving completely maintenance-free.

HP09 HP13 HP17

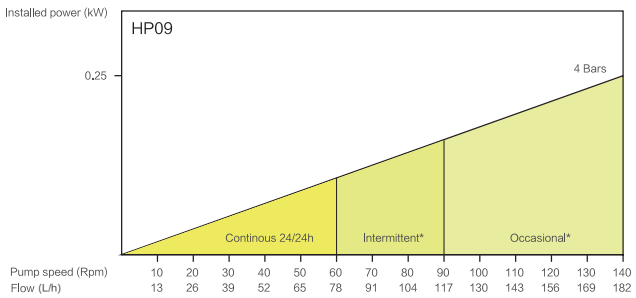


Model	A	B	C	D	E	F	G	H	J	K	L	O
HP09	103	115	343	275	220	240	260	300	56	9	/	Φ20
HP13	103	115	343	275	220	240	260	300	56	9	/	Φ20
HP17	73	193	460	325	250	280	300	330	69	13	/	Φ20

HP09

Maximum flow: 182 L/h

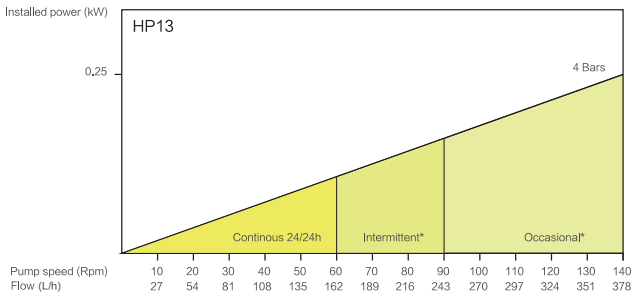
Maximum outlet pressure: 4bar



HP13

Maximum flow: 378 L/h

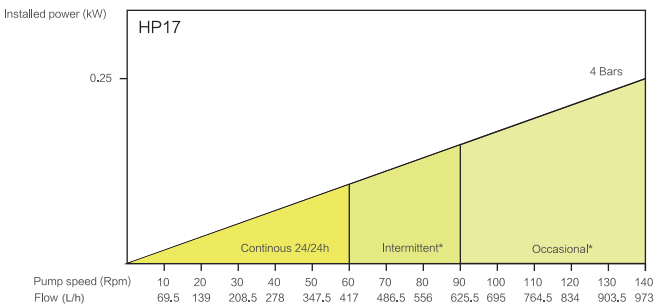
Maximum outlet pressure: 4bar



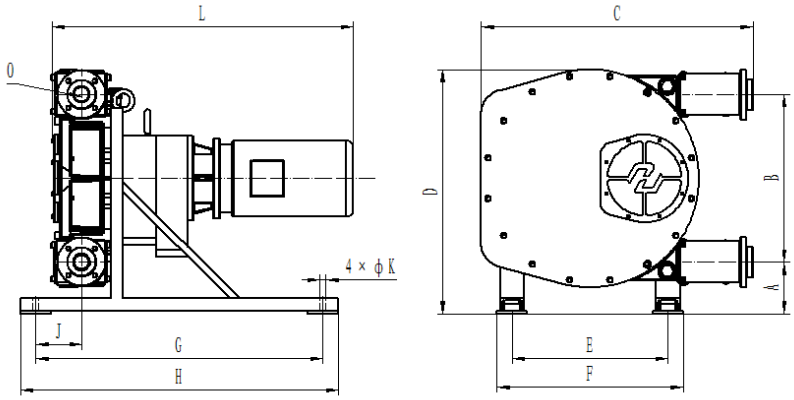
HP17

Maximum flow: 973 L/h

Maximum outlet pressure: 4bar



HP25 HP30 HP45

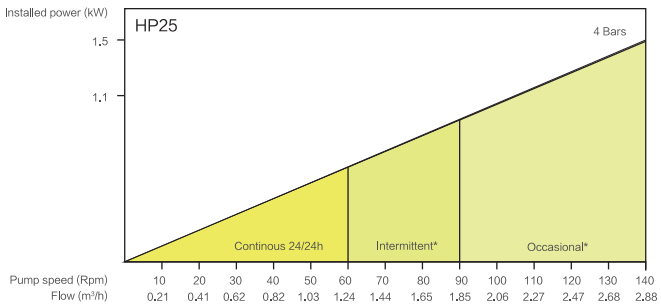


Model	A	B	C	D	E	F	G	H	J	K	L	O
HP25	95	265	544	418	311	351	520	560	81	13	/	DN25 PN16
HP30	95	265	544	418	311	351	520	560	81	13	/	DN32 PN16
HP45	165	554	898	807	515	615	950	1050	152	19	/	DN40/DN50 PN16

HP25

Maximum flow: 2.88m³/h

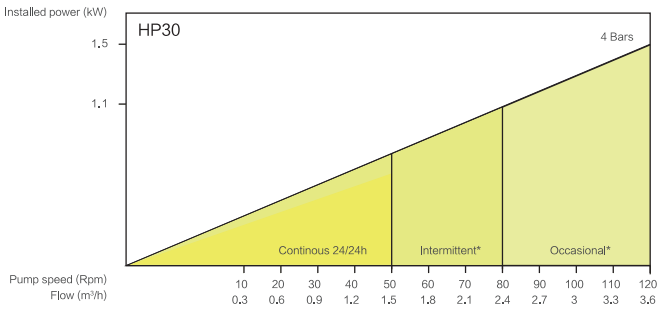
Maximum outlet pressure: 4bar



HP30

Maximum flow: 3.6m³/h

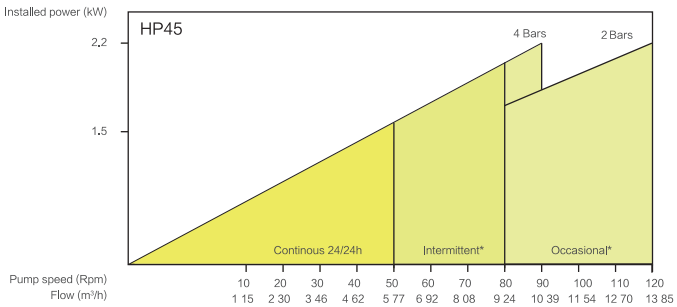
Maximum outlet pressure: 4bar



HP45

Maximum flow: 13.85m³/h

Maximum outlet pressure: 4bar



OPTIONS

IoT PUMP

The intelligent hose pump based on the Internet of Things is independently developed, designed and produced by Han Kun, with complete intellectual property rights.

The IoT pump has the following characteristics:
It is integrated with IoT controller and supports 2G, 4G access so that the device is online in real time. Flexible single device access to network mode can realize remote online comprehensive monitoring of hose pump working condition which contains pump outlet temperature and pressure, pump casing temperature and pressure, hose leakage, lubricating oil level, hose life and other parameters. Operating data is collected and stored in real time and supplied to the platform for data analysis, establishing an operation and maintenance model, and providing preventive maintenance and an effective shutdown protection mechanism.

DOSING DEVICE

Dosing device is also called dosing system and dosing equipment. According to the process flow, the chemical dosing device is a complete set of device that injects chemical liquid into various systems. The device can be divided into three categories according to the application situation.

1. Oil field dosing device. It is mainly used to inject flocculant, scale inhibitor, corrosion inhibitor, demulsifier and other chemicals into wellhead and other systems on the platform during oil exploitation.
2. Boiler dosing device. It can be used to add ammonia and hydrazine to boiler feed water, condensate water, shutdown protection and phosphate to steam boiler. It is mainly used in power plant and power station.
3. Water treatment dosing device. In the process of water treatment, chemicals are added to tap water, waste water and sewage. Mainly used for water supply and drainage treatment, environmental protection and other processes. Such as waterworks, hotels, restaurants, swimming pools, sewage treatment plants, etc.

STAINLESS STEEL PUMP

The stainless steel hose pump, pump body and frame are all made of stainless steel, which can better deal with strong corrosive environments than conventional hose pumps; at the same time, the pump body does not need to be painted, and can also be used for nuclear power and other higher requirement fields.

ACCESSORIES

Safety valve

Safety valve is generally installed at the outlet of the pump, which can release the pipeline pressure to ensure the stability of the system pressure;in conjunction with dampers, it can reduce the harm of water hammer and achieve superior low-vibration adjustment effects.

Filter

The Y-type filter is an indispensable device on the pipeline for transporting fluid and is usually installed at the inlet end of the pump.It is used to filter impurities in the fluid to protect pumps.

Integrated frequency converter

The hose pump can be integrated with a frequency converter which is compact, convenient and quick to install and debug, and the speed of the pump can be conveniently controlled on the field by the frequency converter. At the same time, the inverter can also receive external control signals to realize remote control and monitoring of the pump.

Damper

Dampers rely on the compressibility of air to buffer pressure fluctuations of incompressible fluids. Choosing the right type of pulsation damper can reduce the pulsation of the system by more than 90%, so that the conveyed liquid is close to the state of laminar flow.

Flowmeter

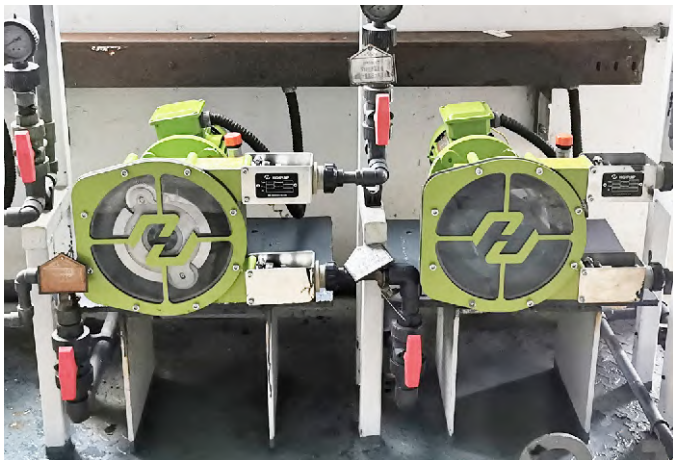
The flowmeter adopts an electronic digital display pipeline type high-precision sensor, which is specially designed for measuring corrosive special media such as acid and alkali. The measurement is accurate, the error is reduced, and the response is rapid.

Pressure gauge

The all-plastic diaphragm pressure gauge has excellent anti-corrosion performance, which is suitable for the chemical industry to measure the pressure of corrosive liquids or gases such as chlorine and nitric acid.

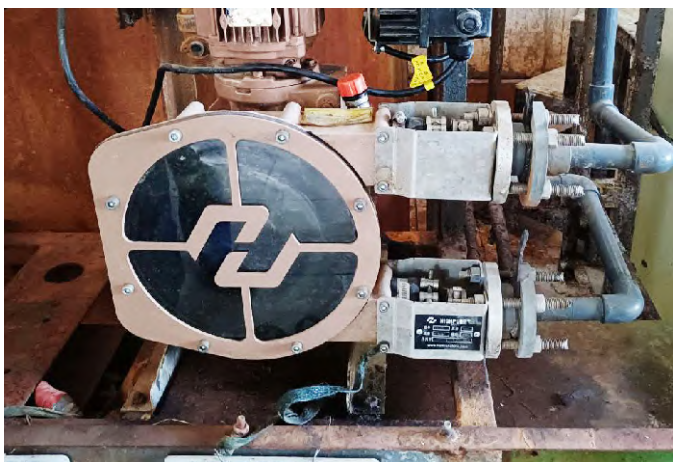
SINOPEC Jingmen Company
Dirty Oil Pump Renovation Project

The medium is dirty oil,the flow rate is 5 m^3/h, and there are explosion-proof requirements on site. HH50 model is chosen and the hose material is NBR. According to customer requirements, we provide color customization services. The color of the pump head is silver gray, and the color of the motor and reducer is apple green.



HUANENG POWER INTERNATIONAL INC. Yunhe Power Plant
Two hydrochloric acid pumps

The medium is 31% hydrochloric acid, the flow rate is 52L/h, HH15-EPDM and HP17-TYG are selected, and they are used well.



China Coal Group Ordos Company
Flocculant pump

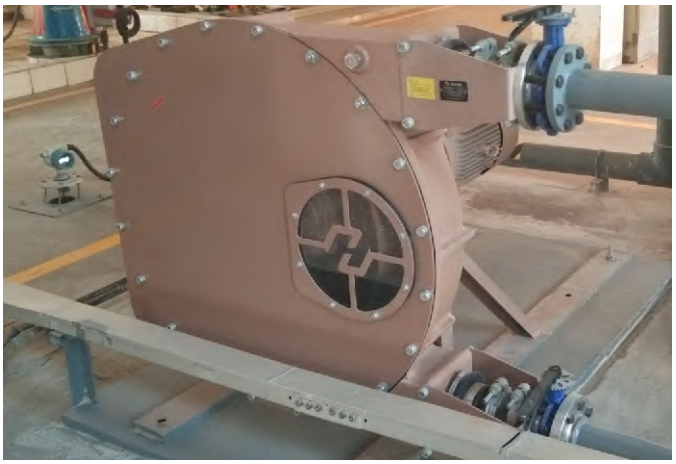
The specific composition of the flocculant is polyaluminum sulfate with a flow rate of 170L/h. It is required to adjust the flow rate and is equipped with a frequency converter. Choose NR for the hose material, and select the model HH15.

SINOPEC Changling Company
Sewage pump

The medium is septic tank sewage,the flow rate is 5m³/h.Choose HH50 with NR material hose, and require first-class energy efficiency level for the motor.

CHN ENERGY Hulun Buir Power Plant
Filter delivery pump

The medium is sewage, the flow rate is 15 m³/h and 20m³/h, the selection is HH80-NR, the quantity is two.



CHN ENERGY Hulun Buir Power Plant

The medium is ferric chloride sulfate, the flow rate is 50L/h,2 sets of HH10-EPDM;
The medium is organic sulfur, the flow rate is 100L/h,2 sets of HH15-EPDM;
The medium is coagulant, the flow rate is 200L/h,2 sets of HH20-EPDM;

HIGHPUMP is used in multiple locations in this plant.

PERFORMANCE

No.	Project	Medium
1	CHN ENERGY Hulun Buir Power Plant	Ferric Chloride Sulfate、organic Sulfur、coagulant、sludge
2	CHN ENERGY Ewenki Power Plant	30%hydrochloric acid、30%NaOH
3	China Coal Group Ordos Company	PAC
4	CHN ENERGY Jungar Power Plant	Inhibitor
5	HUANENG POWER INTERNATIONAL INC. Linhe Power Plant	mud
6	BEIH Jingtai Power Plant	Coal slurry
7	Xinjiang Rand Fine Petrochemical Co., Ltd.	Nickel Naphthenate
8	CHN ENERGY Suizhong Power Plant	NaOH
9	CHN ENERGY Dalian Power Plant	PAC
10	CNNC 404 company	Cement mortar
11	SHANGXI YANCHANG PETROLEUM (GROUP) CO.,LTD.	PAC
12	CHINA HUADIAN CORPORATION LTD. Laiwu Power Plant	ammonia
13	CHINA HUADIAN CORPORATION LTD. Zibo Power Plant	NaOH、Trisodium Phosphate、High temperature corrosion inhibitor
14	Shangdong shouguang LuQing petrochemical co., LTD	Flocculant
15	SHANDONG FUYANG BIOTECHNOLOGY CO.,LTD	Carbon paste
16	CHN ENERGY Shengli Power Plant	hydrochloric acid、PAM/PAC/Inhibitor、NaClO
17	CHN ENERGY Heze Power Plant	hydrochloric acid
18	Lihuayi Group Lijin Company	Catalyst fine powder slurry
19	SINOPEC Cangzhou Company	Flocculant
20	CHINA HUADIAN CORPORATION LTD. New Energy Development Co., Ltd.	Biogas slurry
21	SINOPEC Luoyang Company	Toner、FeCl3、Waste oil
22	SPIC Luyang Power Plant	Lye
23	SINOPEC Changling Company	Lye
24	SINOPEC Changling Company	Septic tank sewage

PERFORMANCE

No.	Project	Medium
25	SINOPEC Changling Company	Lye
26	SINOPEC Changling Company	Sulfur-containing sewage
27	SINOPEC Changling Company	Lye
28	YUEYANG XINGCHANG PETROCHEMICAL CO.,LTD.	Waste oil、90%H2SO4
29	SINOPEC Baling Company	Emulsified calcium carbonate
30	China Resources Power (Lianyuan) Co., Ltd.	Flocculant
31	CHINA HUADIAN CORPORATION LTD. Changsha Power Plant	Flocculant
32	HUANENG POWER INTERNATIONAL INC. Yueyang Power Plant	Lye
33	SINOPEC Jingmen Company	Waste oil、paraffin
34	SINOPEC Wuhan Company	Lye
35	CHINA HUADIAN CORPORATION LTD. Xisaishan Power Plant	NaClO
36	CHINA HUADIAN CORPORATION LTD. Huangshi Power Plant	Flocculant
37	CHINA HUADIAN CORPORATION LTD. Jiangling Power Plant	NaClO
38	SINOPEC Jiujiang Company	98%H2SO4
39	SINOPEC Jiujiang Company	corrosion inhibitor
40	SINOPEC Jiujiang Company	Flocculant dosing
41	CHN ENERGY Jiujiang Power Plant	NaClO
42	SPIC Guixi Power Plant	Sludge sewage
43	SPIC Fenyi Power Plant	hydrochloric acid、Alkali
44	SINOCHEM QUANZHOU PETROCHEMICAL CO., LTD.	PAM
45	GUANGDONG ENERGY GROUP CO., LTD. Zhanjiang Power Plant	PAC
46	GUANGDONG ENERGY GROUP CO., LTD. Jinghai Power Plant	NaOH、Coagulant
47	GUANGDONG ENERGY GROUP CO., LTD. Shaoguan Power Plant	sludge、NaOH
48	SINOPEC Maoming Company	The medium contains impurities such as dirty oil and butene

HIGHPUMP™

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Version 1.0.3

Note: As the products improvements, specifications are subject to change without notice.Please kindly contact us for latest information.