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CATALOGUE **SANITARY PUMP & MIXER**

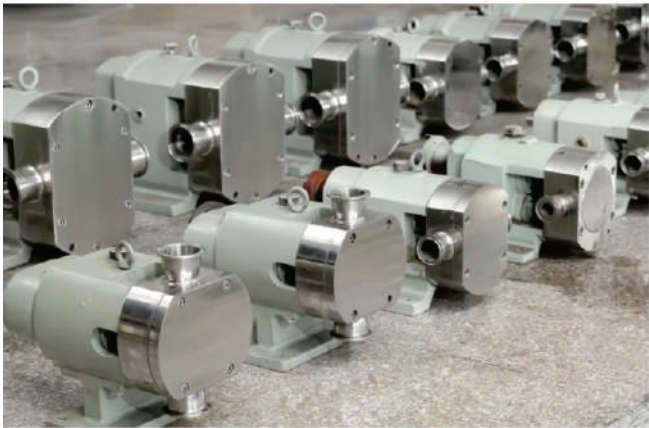


Company Profile



Carten Pump - The effective choice for industrial pump solutions

With the aim of becoming a leading brand in providing comprehensive solutions for industrial pumps and pump parts certified with ISO 9001, CE, 3A standards, etc... widely applied in industries such as food, cosmetics, pharmaceuticals, chemicals, wastewater treatment, and packaging...



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HLS

Sanitary Centrifugal Pump



Applications

- Centrifugal pump is manufactured in stainless steel and with a hrouded motor.
- Its sanitary and cost-efficient design makes it perfect for the dairies, beverages, food-processing, pharmaceutical and fine chemicals industries.

Operating Principles

- Housed inside the casing, the impeller rotates in conjunction with the pump shaft. With this arrangement, the impeller blades convey energy to the fluid in the form of kinetic energy and pressure energy.
- This pump is not reversible by simple reversal of the direction of rotation. The direction of rotation is clockwise when the pump is viewed from the rear side of the motor.

Design Features

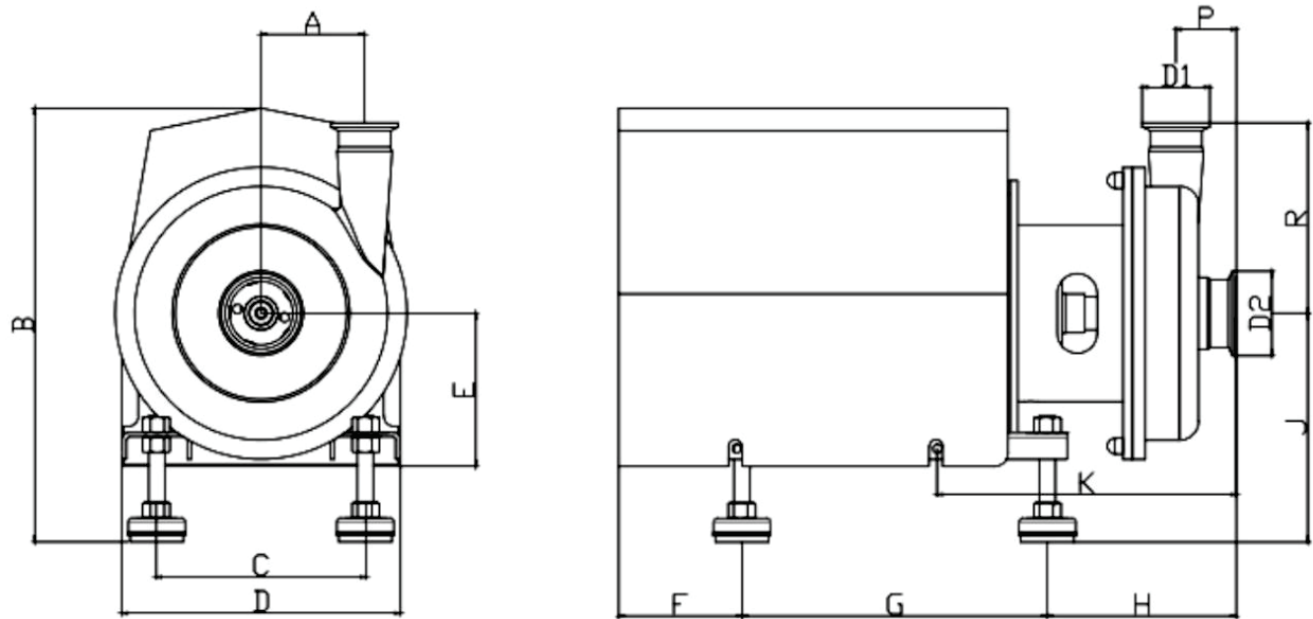
- Casing manufactured with cold-formed plates. Open impeller and close impeller manufactured with stainless steel investment casting.
- Adjustable stainless steel legs. Pump designed according to 3A sanitary standards. IEC NEMA B34 motors, IP 55, F-class insulation, 50HZ, 60HZ.



Sanitary Centrifugal Pump (HLS Series)



Assembly Dimension



Technical Parameters

Material	SUS304, SUS316L (In the selection of materials, the pump body, pump cover, impeller and other parts that contact the material are made of SUS316L or SUS304 stainless steel)
Connection standard	DIN, SMS
Impeller	Open impeller, leaving no sanitary corners
Working conditions	Sanitary centrifugal pump belongs to high and low liquid level and horizontal conveying, non-self-priming pump (self-priming type is self-priming pump)
Surface treatment	The contact part is polished, the rest is matt or sandblasted
Maximum inlet pressure	0.5MPa
Temperature range	-10°C to 140°C (EPDM)
Flushable mechanical seal	Maximum pressure: 0.1MPa Capacity: 0.25-0.5L/min

HLS series size parameters (ABB motor)

Motor power	A	B	C	D	E	F	G	H	K	J	R	P	KG
0.75KW	67	321	142	210	118	89	230	169	220	169	124	41.5	21.5
1.5KW	78	327	158	210	115	93	230	142	225	169	147	45.5	28
2.2KW	78	342	158	210	115	108	255	144	227	172	143.5	45.5	31
3.0KW	93	436	176	260	141	133	290	161	244	217	163	46.5	53
4.0KW	93	439	192	260	141	128	290	180	261	217	163	58	63
5.5KW	102	472	230	310	157	135	335	200	288	229	168	54	89
7.5KW	102	472	230	310	157	135	335	200	288	229	168	54	93
11KW	100	575	254	370	185	160	400	260	348	280	188	66.5	145
15KW	100	575	254	370	185	160	400	263	348	280	188	69.5	165
18.5KW	128	575	254	370	185	160	460	234	322	280	183	44	180
22KW	128	575	254	370	185	160	460	237	322	280	183	47	190
30KW	128	635	318	420	235	136	530	269	384	320	212	50	280

Sanitary Centrifugal Pump (HLS Series)

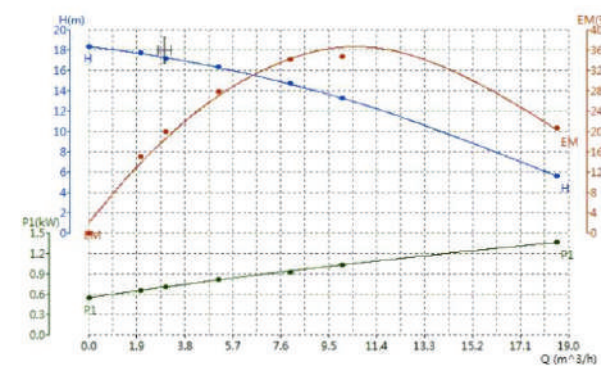


HLS series flow head parameters

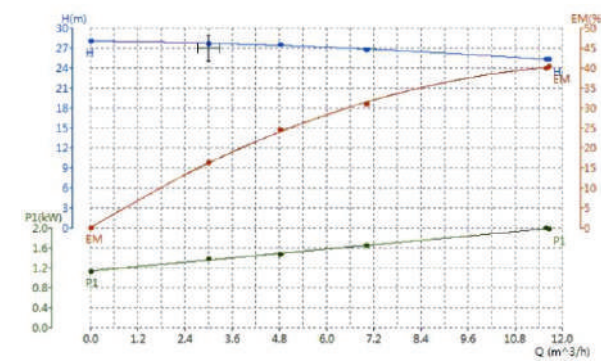
MODEL	FLOW (T/H)	HEAD (M)	MOTOR POWER (KW)	ROTATE SPEED (RPM)	INLET / OUTLET (MM)
HLS-10	3	19	0.75	2900	38 - 32
HLS-15	6	24	1.5	2900	51 - 38
HLS-22	11	24	2.2	2900	51 - 38
HLS-30	16	24	3.0	2900	51 - 38
HLS-40	21	24	4.0	2900	51 - 51
HLS-55	32	24	5.5	2900	51 - 51
	26	35	5.5	2900	51 - 51
HLS-75	41	25	7.5	2900	63 - 51
	30	38	7.5	2900	51 - 51
HLS-110	52	25	11.0	2900	76 - 63
	21	26	11.0	2900	76 - 63
HLS-150	60	32	15.0	2900	76 - 63
	31	56	15.0	2900	76 - 63
HLS-185	60	51	18.5	2900	76 - 63
	32	65	18.5	2900	76 - 63
HLS-220	80	51	22.0	2900	89 - 76
	42	70	22.0	2900	89 - 76
HLS-300	100	51	30.0	2900	89 - 76
	42	80	30.0	2900	89 - 76



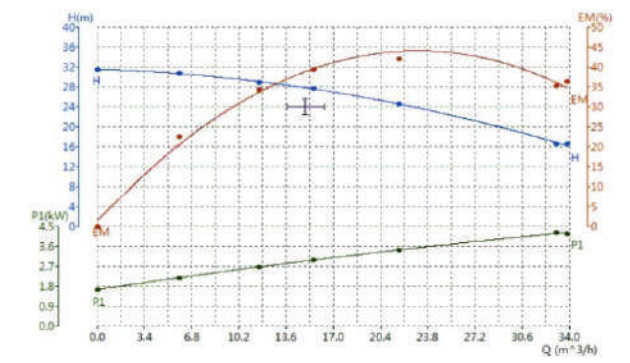
HLS-10 - 0.75KW



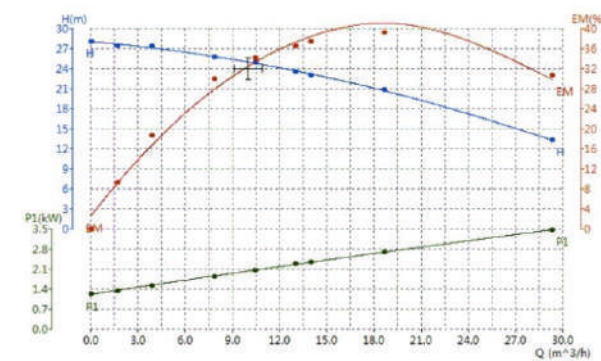
HLS-15 - 1.5KW



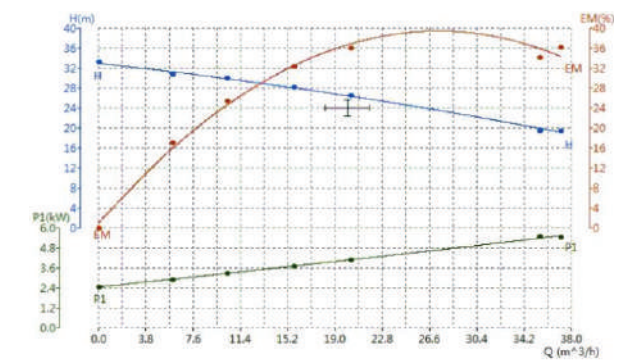
HLS-30 - 3KW



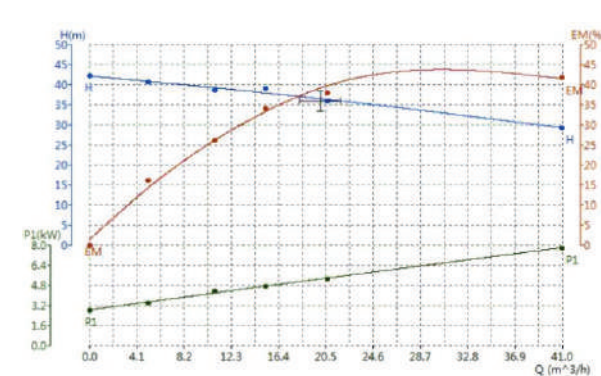
HLS-22 - 2.2KW



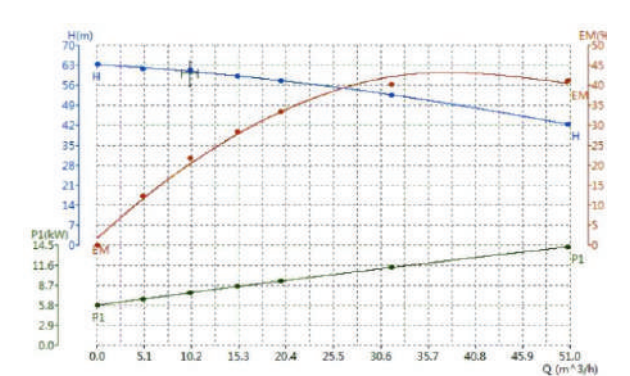
HLS-40 - 4KW



HLS-55 - 5.5KW



HLS-75 - 7.5KW



HSC

Sanitary CIP Pump



Technical Parameters

Application	Self-priming pumps are mainly used to handle the transportation of some gas-containing materials. Therefore, it is widely used to suck materials on various occasions where the liquid level is unstable or even lower than the pump inlet. It is also used as the return stroke in the CIP system.
Material	SUS316L (the pump body, pump cover, impeller and other parts in contact with the material are made of SUS316L stainless in the selection of materials), and the liquid sealing material is EPDM ethylene propylene rubber.
Connection standard	DIN, SMS
Impeller	Louvered impeller
Maximum inlet pressure	0.5MPa
Temperature range	-10°C to 120°C (EPDM)

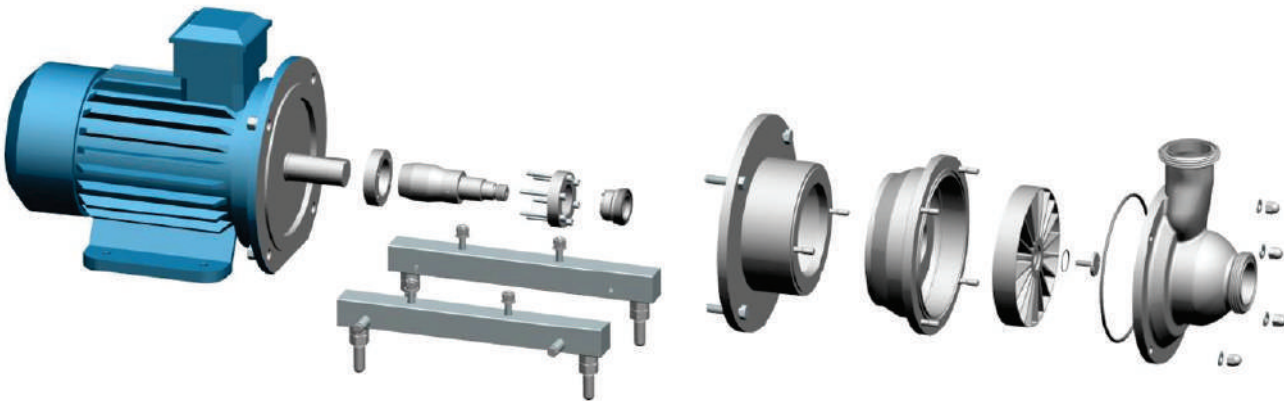
Sanitary CIP Pump (HSC Series)



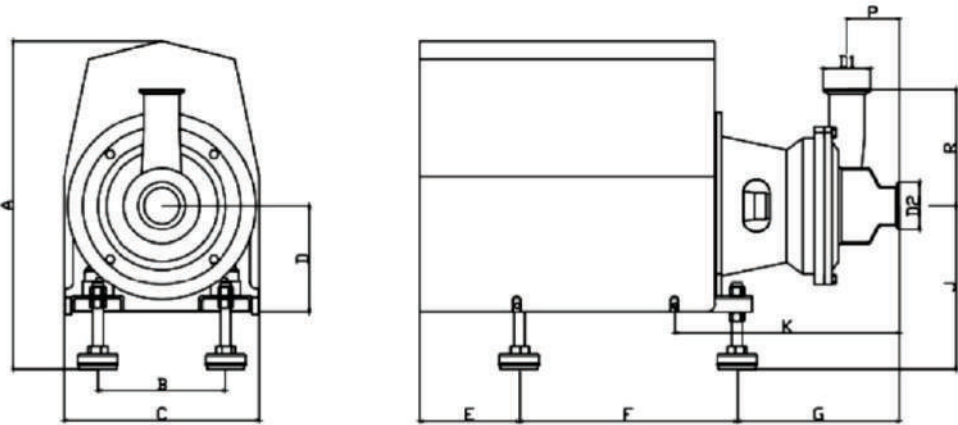
Options

- Mechanical seal SiC (silicon carbide/graphite, silicon carbide/silicon carbide, cemented carbide)
- Gaskets in FPM(VITON) and PTFE
- Inlet & outlet connections: Clamp, Thread, Flange, DIN, SMS, 3A, RJT

Power (kW)	Voltage	Power (kW)	Voltage
2.2	210V~230V/50HZ 360V~400V/50HZ 420V~460V/60HZ	5.5	360V~400V/50HZ 630V~690V/50HZ 420V~460V/60HZ
3		7.5	
4		11	



Assembly Dimension



HSC series technical parameter description (ABB motor)

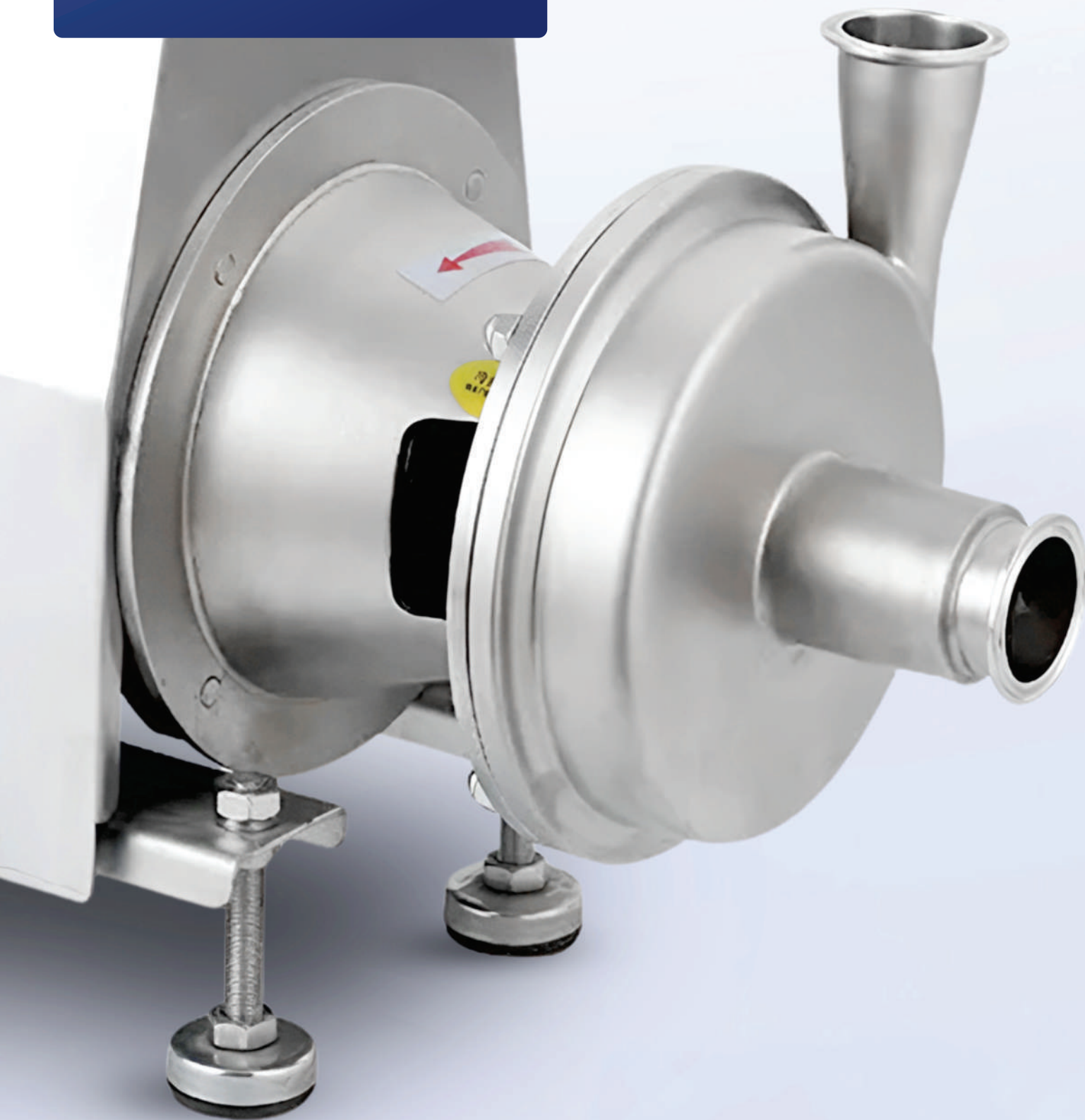
Motor power	A	B	C	D	E	F	G	K	J	R	P	KG
2.2KW	436	170	260	141	133	290	216	299	217	155	70	58
3.0KW	439	192	260	138	128	290	229	310	217	175	66	66
4.0KW	439	192	260	138	128	290	229	310	217	175	66	66
5.5KW	472	230	310	157	135	335	257.5	345.5	229	175	66	90
7.5KW	472	230	310	157	135	335	257.5	345.5	229	175	66	90
11KW	575	254	370	185	160	400	317	405	280	200	75	157
15KW	575	254	370	185	160	400	317	405	280	200	75	172

HSC series flow head parameters

NO.	MODEL	FLOW (T/H)	HEAD (M)	MOTOR POWER (KW)	ROTATE SPEED (RPM)	INLET / OUTLET (MM)
1.	HSC-22	5	21	2.2	1450	51 - 51
2.	HSC-30	11	25	3.0	1450	63 - 63
3.	HSC-40	20	25	4.0	1450	63 - 63
4.	HSC-55	26	25	5.5	1450	76 - 63
5.	HSC-75	30	25	7.5	1450	76 - 76
6.	HSC-110	36	35	11.0	1450	89 - 76
7.	HSC-150	42	35	15.0	1450	89 - 76

HSF

Sanitary Negative Pressure Pump



Technical Parameters

Application	It belongs to the turbine diversion centrifugal negative pressure pump, which can pump the liquid in the vacuum tank under the negative pressure of 0.09MPa.
Material	SUS304, SUS316L (In the selection of materials, the pump body, pump cover, impeller and other parts that contact the material are made of SUS316L or SUS304 stainless steel)
Connection standard	DIN, SMS
Rotor	Open impeller, leaving no sanitary corners
Working conditions	The sanitary negative pressure pump belongs to high and low liquid level and horizontal conveying, and has a certain suction power.
Surface treatment	The wetted part is polished, the rest is matt or sandblasted
Maximum inlet pressure	0.5MPa
Temperature range	-10°C to 140°C (EPDM)
Flushable mechanical seal	Maximum pressure: 0.1MPa Capacity: 0.25-0.5L/min



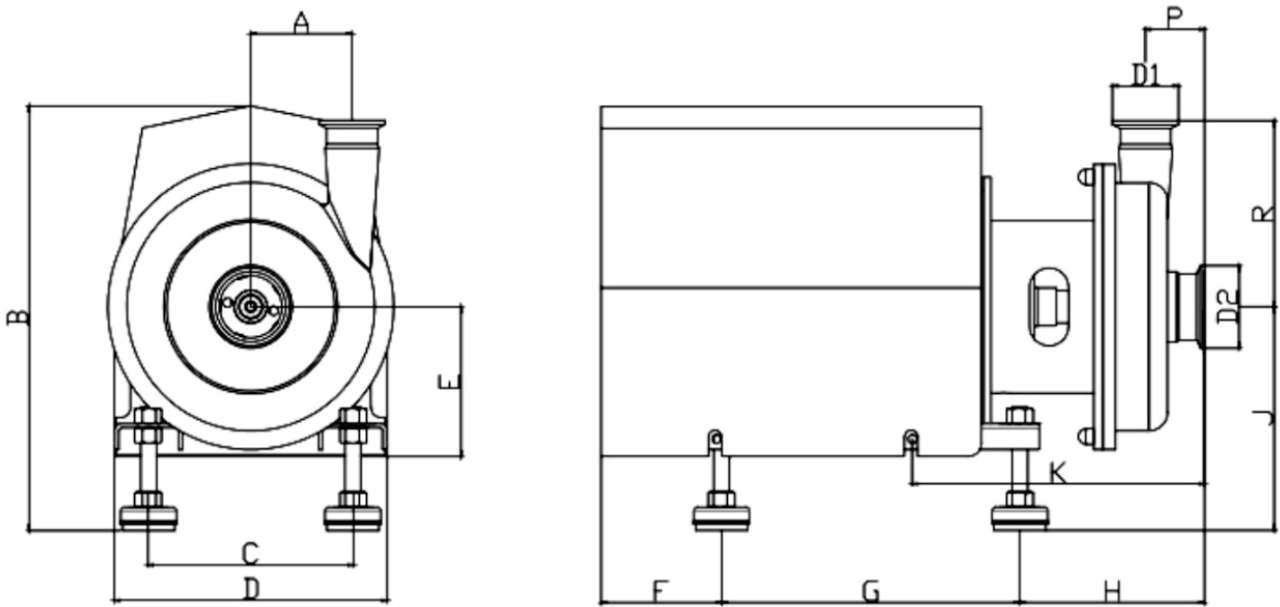
Sanitary Negative Pressure Pump (HSF Series)



HSF series technical parameter description (ABB motor)

MODEL	FLOW (T/H)	HEAD (M)	MOTOR POWER (KW)	ROTATE SPEED (RPM)	INLET / OUTLET (MM)
HSF-15	6	24	1.5	2900	38 - 38
HSF-22	11	24	2.2	2900	51 - 38
HSF-30	16	24	3.0	2900	51 - 38
HSF-40	21	24	4.0	2900	51 - 51
HSF-55	32	24	5.5	2900	63 - 51
	22	35	5.5	2900	51 - 51
HSF-75	41	25	7.5	2900	63 - 51
	30	38	7.5	2900	51 - 51
HSF-110	52	30	11.0	2900	76 - 63
	30	52	11.0	2900	76 - 63
HSF-150	60	42	15.0	2900	76 - 63
	42	50	15.0	2900	76 - 63
HSF-185	80	42	18.5	2900	76 - 63
	52	60	18.5	2900	76 - 63

Assembly Dimension

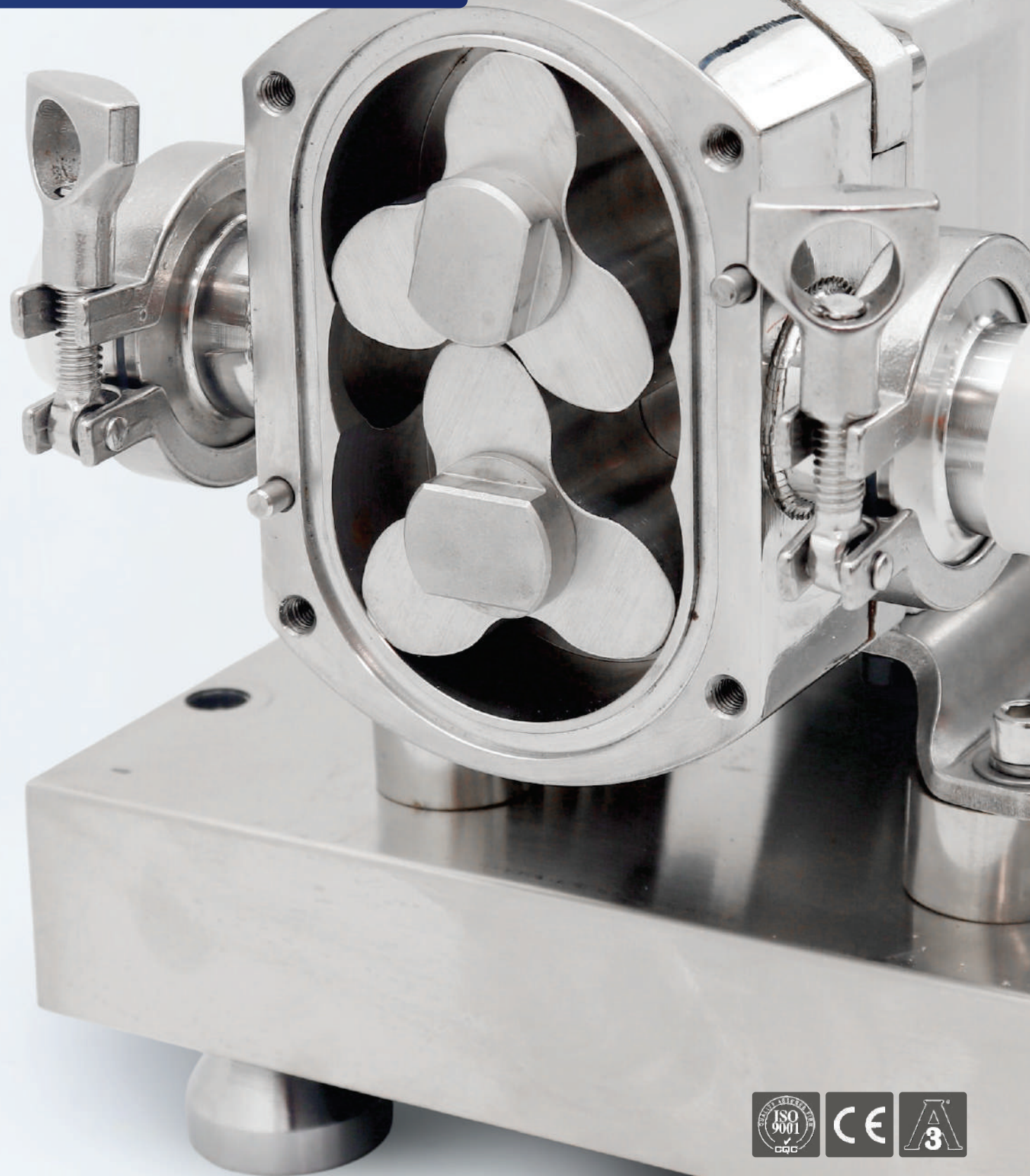


HSF series flow head parameters (under positive pressure)

Motor power	A	B	C	D	E	F	G	H	K	J	R	P	KG
1.5KW	69	327	158	210	115	93	230	229.5	312.5	172	134.5	104	32
2.2KW	69	342	158	210	115	108	255	229.5	312.5	172	134.5	104	34
3.0KW	83.5	439	170	260	141	133	290	243	326	217	144	101.5	54
4.0KW	83.5	439	192	260	138	128	290	248	329	217	144	101.5	58
5.5KW	95.5	472	230	310	157	135	335	295.5	383.5	229	165	108.5	88
7.5KW	95.5	472	230	310	157	135	335	295.5	383.5	229	165	108.5	92
11KW	108.5	575	254	370	185	160	400	352	440	280	180	113.5	150
15KW	108.5	575	254	370	185	160	400	357	445	280	180	113.5	170
18.5kw	128	575	254	370	185	160	460	362	450	280	180	113.5	185

HLP3A

Rotary Lobe Pump



Application:

- Food and beverage: dairy, latex, chocolate, syrup, cheese, wort, cream, concentrated juice, ice cream, jelly, condiments, etc.
- Medicine: various ointments, extracts, medicinal creams, syrups, pill syrups, health products, etc.
- Daily chemicals: AES, LAS, AOS, MES, K12, glycerin, sorbitol, fatty alcohol, shower gel, hand cream, shampoo, toothpaste, soap, washing powder, etc.
- Others: chemical fiber, paper, paint, etc.

Technical Parameters

Material	SUS304, SUS316L (in terms of material selection, all parts in contact with the material are made of SUS304, SUS316L stainless steel).
Connection standard	DIN, SMS
Rotor	Single-blade rotor, two-blade rotor, three-blade rotor, multi-blade rotor
Surface treatment	The wetted part is polished, the rest is matt or sandblasted
Maximum inlet pressure	0.5MPa
Temperature range	-10°C to 140°C (EPDM)

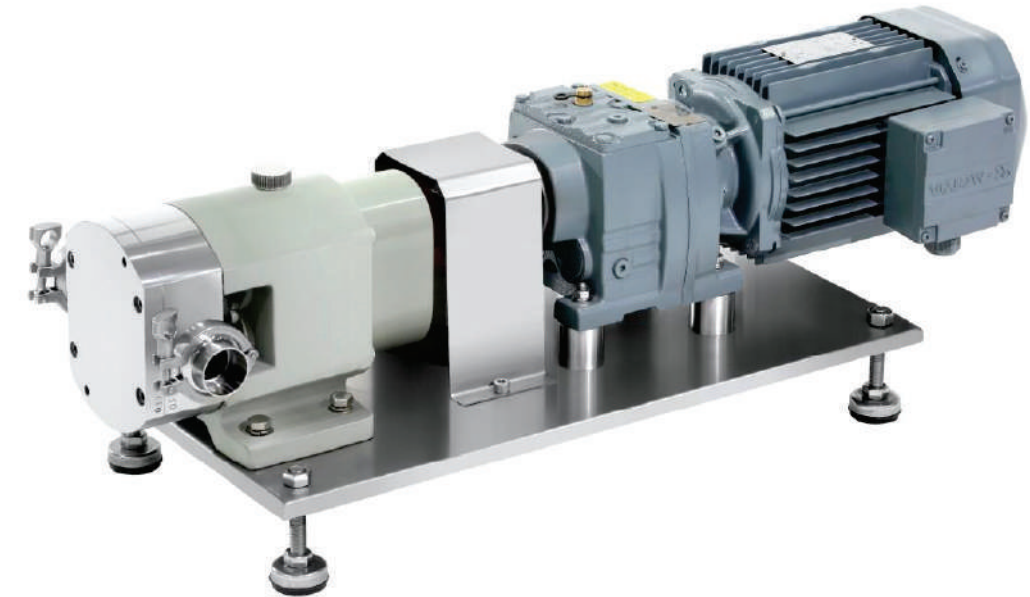
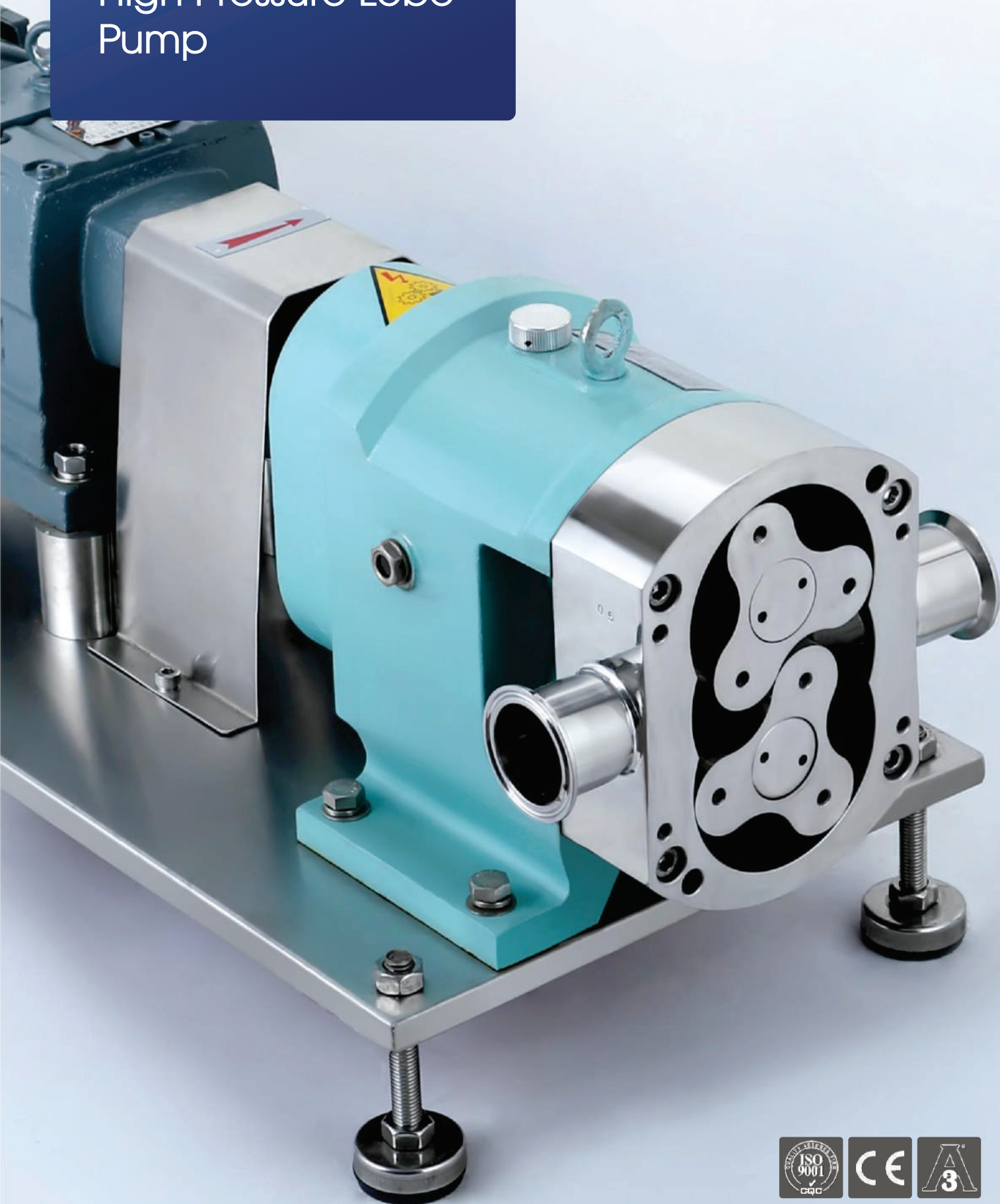
HLP3A series technical parameter description (fixed speed reducer)

MODEL	CAPACITY (L/REV)	PRESSURE (BAR)	MOTOR POWER (KW)	RECOMMEND SPEED (RPM)	INLET / OUTLET (MM)
HLP3A-9	0.09	7	1.5	200 - 950	32 - 32
HLP3A-18	0.18	7	2.2	200 - 950	38 - 38
HLP3A-36	0.36	7	4.0	100 - 450	51 - 51
HLP3A-60	0.60	7	5.5	100 - 450	63 - 63
HLP3A-125	1.25	7	11.0	100 - 450	76 - 76
HLP3A-175	1.75	7	15.0	100 - 450	76 - 76
HLP3A-250	2.50	7	18.5	100 - 450	101 - 101
HLP3A-510	5.10	7	22.0	100 - 450	152 - 152
HLP3A-750	7.50	7	30.0	100 - 450	152 - 152



HLP3S

High Pressure Lobe Pump

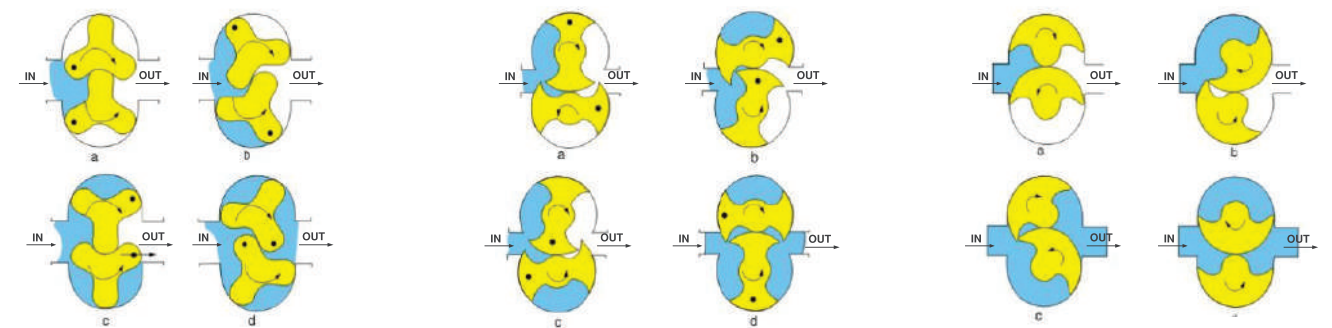


Operation Principle

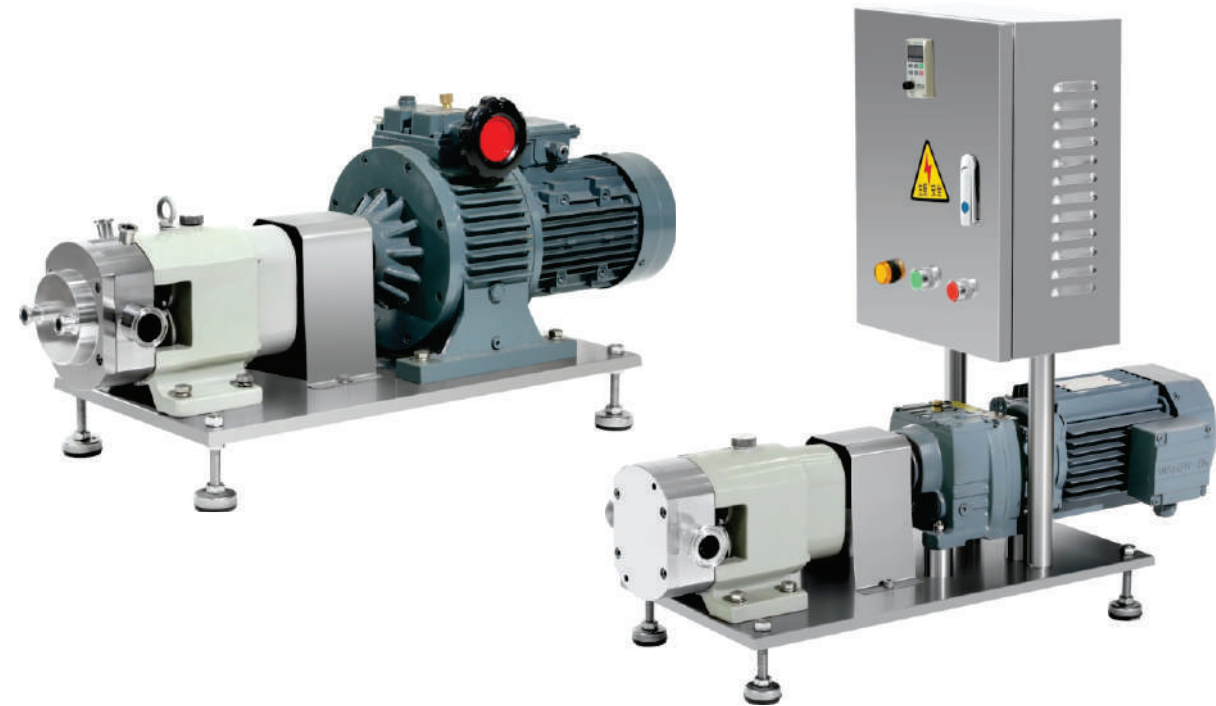
High pressure lobe pump is also named rotary lobe pump, three-lobe pump, etc. When the 2 simultaneous reverse rotating rotors (with 2-4 gears) revolve., it produces suction force at the inlet (vacuum), which intakes the material delivered. The 2 rotors divide the rotor housing into many smaller parts and revolve in the sequence of a→b→c→d. When it revolves to position a, only housing I is filled with medium, when it goes to position c, housing A encloses medium, and finally it goes to position d, then housing A, B and II are interlinked and the medium is transported to the outlet. As this process is repeated, medium (material) is transported continuously.



Work Schematic Drawing



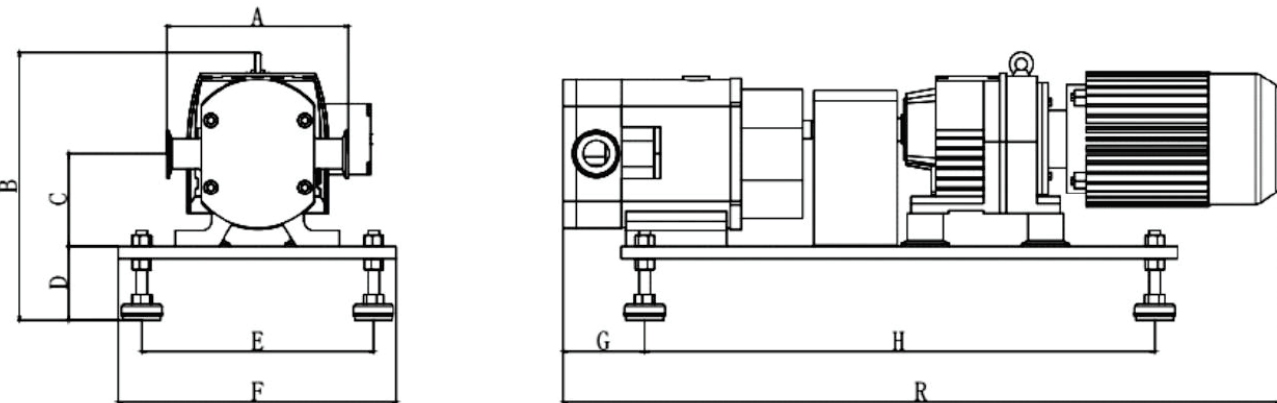
High Pressure lobe pump (HLP3S Series)



Technical Parameters

Application	Food and beverage: dairy, latex, chocolate, syrup, cheese, wort, cream, concentrated juice, ice cream, jelly, condiments, etc. Medicine: various ointments, extracts, medicinal creams, syrups, pill syrups, health products, etc. Daily chemicals: AES, LAS, AOS, MES, K12, glycerin, sorbitol, fatty alcohol, shower gel, hand cream, shampoo, toothpaste, soap, washing powder, etc. Others: chemical fiber, paper, paint, etc
Material	SUS304, SUS316L (in terms of material selection, all parts in contact with the material are made of SUS304, SUS316L stainless steel).
Connection standard	DIN, SMS
Rotor	Single-blade rotor, two-blade rotor, three-blade rotor, multi-blade rotor.
Surface treatment	The wetted part is polished, the rest is matt or sandblasted
Maximum inlet pressure	0.5MPa
Temperature range	-10°C to 120°C (EPDM)

Assembly Dimension



HLP3S series technical parameter description (fixed speed reducer)

Model	Motor power	Reducer base	A	B	C	D	E	F	G	H	R
HLP3S-10	0.75 - 1.5	R37	196	287.5	98.5	80	250	300	87.5	550	772
HLP3S-20	1.5 - 2.2	R37	212	328	118	80	250	300	93	550	854
HLP3S-30	3.0 - 4.0	R37	260	386	133	100	330	380	99	650	957
HLP3S-40	5.5 - 7.5	R37	308	511	158	120	390	450	115	740	1141
HLP3S-60	11.0 - 15.0	R37	400	540.5	219	63	430	490	217	900	1480
HLP3S-80	15.0 -22.0	R37	480	607.5	253	63	430	550	224	950	1776

HLP3S series flow head parameters

MODEL	CAPACITY (L/REV)	PRESSURE (BAR)	MOTOR POWER (KW)	RECOMMEND SPEED (RPM)	INLET / OUTLET (MM)
HLP3S-10	0.10	14	0.75 - 1.5	50 - 720	25 - 25
HLP3S-20	0.16	14	1.5 - 2.2	50 - 720	38 - 38
HLP3S-30	0.32	14	3.0 - 4.0	50 - 500	51 - 51
HLP3S-40	0.65	14	5.5 - 7.5	50 - 500	63 - 63
HLP3S-60	1.80	14	11.0 - 15.0	50 - 500	76 - 76
HLP3S-80	3.80	14	15.0 - 22.0	50 - 400	89 - 89

HFM

Lobe Pump Filling System



Application:

The Lobe Pump Filling System (HFM) has advantage of high accuracy when filling thick liquid or paste like jam, noodle pulp, meat stuffing, tomato paste etc... It is widely used in food, cosmetics, daily chemical industries. The pump used in this product is a rotor pump, so this machine is also called a rotor pump filling machine; at the same time, the filling nozzle part adopts pneumatic filling, which can fill very sticky things, like honey, high viscosity gel, acrylgel-polygel, high viscosity cream, peanut butter, ointment and other products. If your product is very viscous, you can use this filling machine.



Power	220V 50HZ
Chuck	50.5mm / 64mm / 77.5mm
Filling valve	Piston type anti-drip
External start	Foot switch
Drive control	Servo motor + PLC pulse control
Air capacity	≤0.1m³/min (this machine is electric, only the anti-drip valve consumes air)



HFM series flow head parameters

MODEL	FILLING CAPACITY (ML)	ERROR (G)	MOTOR POWER (KW)	ADJUST SPEED RANGE (RPM)	FILLING VALVE SIZE (MM)
HFM-10	5 - 45000	≤1	0.75	0 - 1000	32
HFM-20	5 - 90000	≤1	1.0	0 - 1000	38
HFM-30	10 - 180000	≤1	1.5	0 - 1000	51
HFM-40	20 - 300000	≤1	2.3	0 - 1000	63
HFM-50	50 - 500000	≤3	4.5	0 - 1000	76

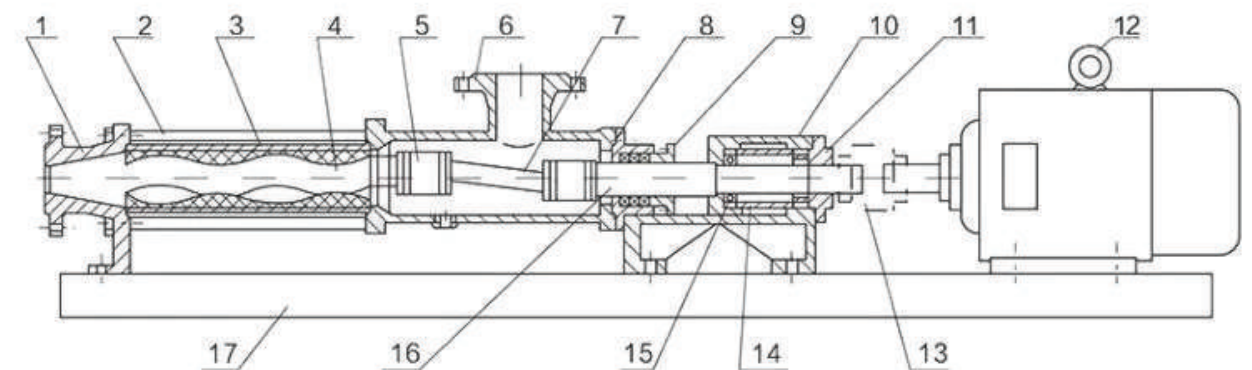
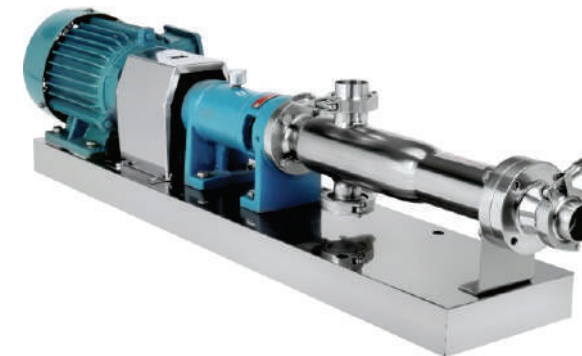
HSS

Sanitary Single Screw Pump



Application:

It can be used to transport neutral or corrosive liquids, clean or abrasive liquids, liquids containing gases or bubbles, high viscosity or low viscosity liquids, including liquids containing fibers and solids. It can work continuously for a long time and maintain a steady flow, and has a good self-priming ability.

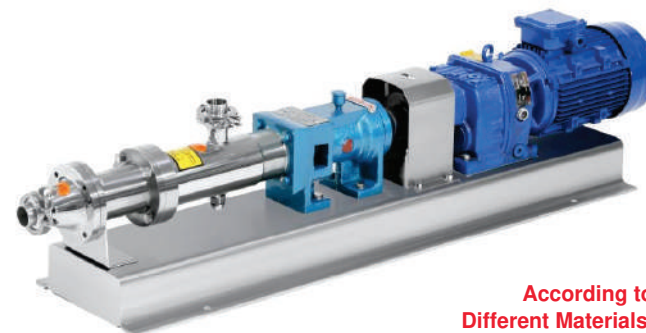


1. Discharge cavity 2. Pull-bar 3. Screw sleeve 4. Screw axis 5. Directional node assembly 6. Suck-in pipe 7. Joint shaft 8. Packing seat 9. Packing gland 10. Bearing seat 11. Bearing cover 12. Motor 13. Clutch 14. Muff 15. Bearing 16. Driving shaft 17. Foundation

HSS Series Technical Parameters

MODEL	MAX FLOW (M ³ /H)	PRESSURE (BAR)	MOTOR POWER (KW)	RECOMMEND SPEED (RPM)	INLET / OUTLET (MM)
HSS-10	1.1	7	0.55 - 0.75	100 - 960	25
HSS-20	1.6	7	0.55 - 1.1	100 - 960	32
HSS-30	2.2	7	0.75 - 1.5	100 - 960	32
HSS-40	3.2	7	1.1 - 2.2	100 - 960	38
HSS-50	5.2	7	1.5 - 3.0	100 - 960	51
HSS-60	6.5	7	1.5 - 3.0	100 - 960	51
HSS-70	6.5	7	2.2 - 4.0	100 - 720	51
HSS-80	8.0	7	3.0 - 5.5	100 - 720	51
HSS-90	12.0	7	4.0 - 7.5	100 - 720	89
HSS-100	14.0	7	4.0 - 7.5	100 - 720	89
HSS-110	30.0	7	7.5 - 11.0	100 - 720	101
HSS-120	42.0	7	7.5 - 11.0	100 - 720	127
HSS-150	60.0	7	11.0 - 15.0	100 - 720	152

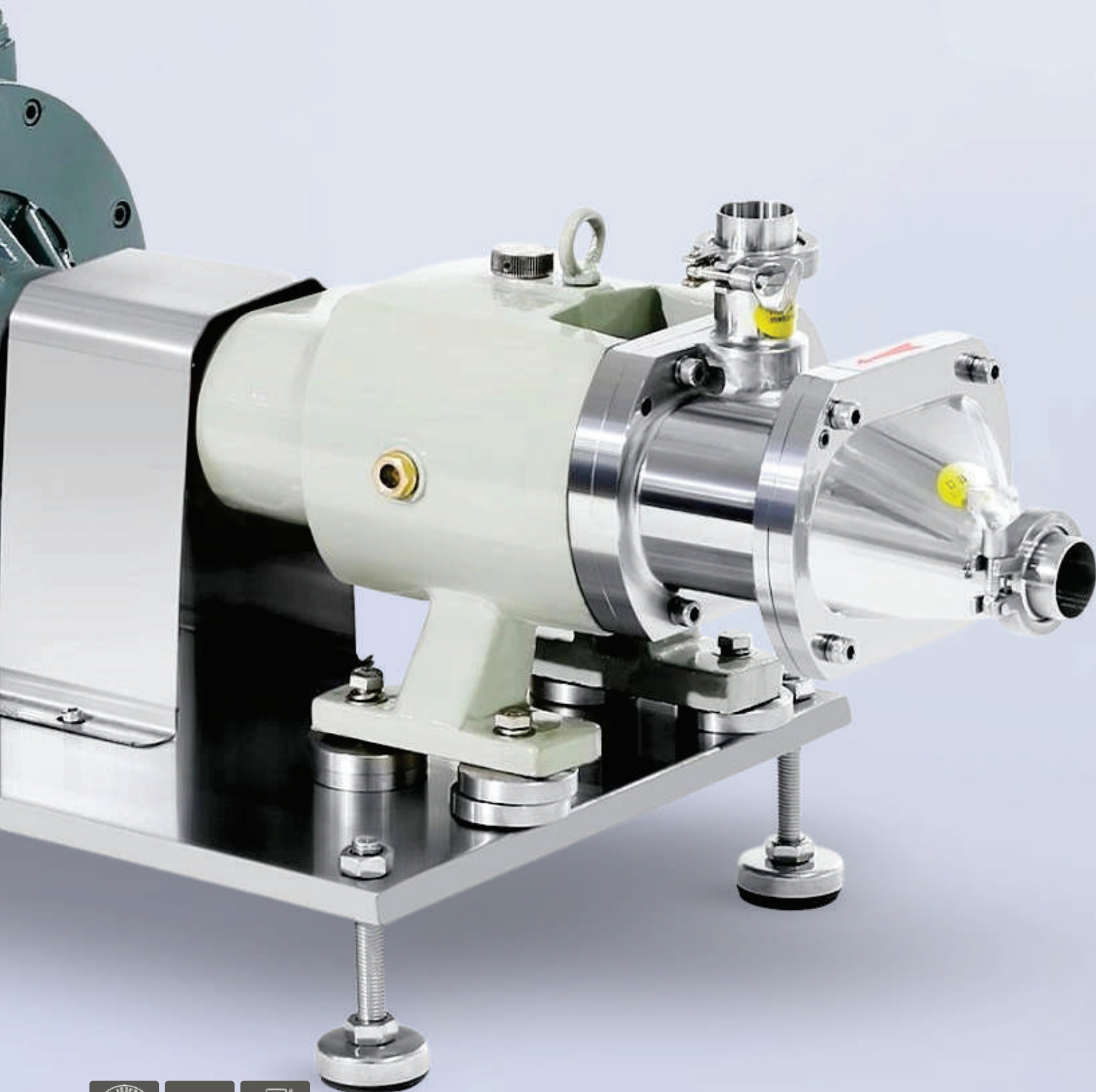
The single screw pump is an internal meshing rotary positive displacement pump. The main working parts are eccentric screw (rotor) and fixed busing (stator). Due to the special geometry of the rotor and stator, several separate sealed chambers are formed. The operation of the rotor continuously and uniformly transports the medium in each sealed chamber from the suction end to the extrusion end, the internal flow rate is low, the volume remains unchanged, and the pressure is stable, so that eddy current and agitation are not generated.



According to
Different Materials,
Different Speeds Can Be Selected

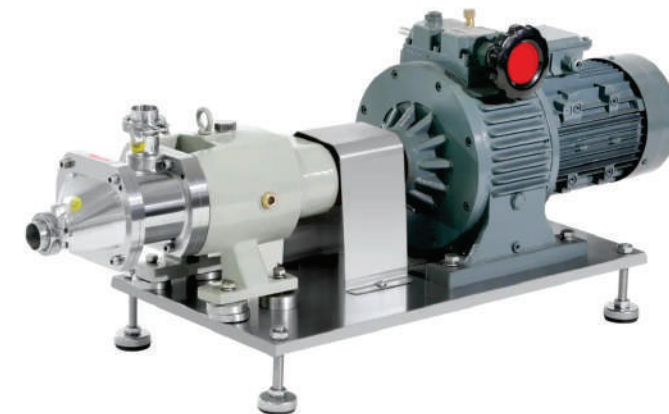
HTS

Sanitary Twin Screw Pump



Scope of application

HTS twin-screw pumps are specially designed to transport media with a wide range of viscosities and gas in the sanitary industry. They are widely used in the dairy, beer, pharmaceutical, cosmetics and baking industries to gently transport viscous media without damaging the particles, such as the fruit particles in yogurt. Nuts in ice cream, etc..., the maximum diameter of the conveyed particles is 40mm.



HTS twin screw pump is the most ideal choice among positive displacement pumps. Thanks to the large adjustable range of the speed of the twin-screw pump, the HTS twin-screw pump can be used as a CIP cleaning pump at the same time, and there is no need to use a centrifugal pump external bypass to be a CIP pump.

Features

- The material in contact with the product is: SS304/SS316L;
- 100% CIP high-speed operation.
- The rotor will not come into contact with the product during high-pressure operation.
- It is suitable for process pumps and CIP cleaning pumps, without other auxiliary pumps, which can reduce the cost of additional equipment and save time.
- With high suction power, it can handle low-viscosity and high-viscosity products (from 1-1000000 cp).
- Two-way operation and self-priming, which can handle up to 60% of entrained air products, and can achieve 100% drainage effect.



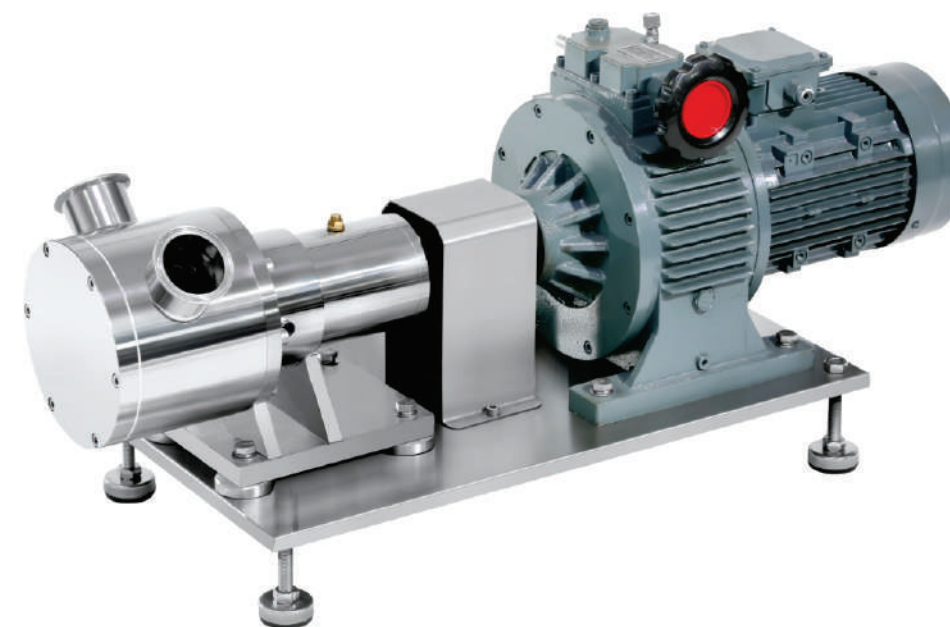
Combining the characteristics of a rotor pump and a centrifugal pump, it can handle high-viscosity products, and can retain the integrity of the product without damaging the product. The rotor, mechanical seal, and pipe inlet and outlet connections can be selected according to the product's medium.

HTS Series Technical Parameters

MODEL	MAX FLOW (M ³ /H)	PRESSURE (BAR)	MOTOR POWER (KW)	ROTATE SPEED (RPM)	INLET / OUTLET (MM)
HTS-10	3.2	20	2.2 - 4.0	200 - 1450	51
HTS-20	6.5	20	5.5 - 7.5	200 - 1450	63
HTS-30	16	20	11.0 - 18.5	200 - 1450	76
HTS-40	32	20	22.0 - 30.0	200 - 1450	76
HTS-50	52	20	37.0 - 55.0	200 - 1450	101

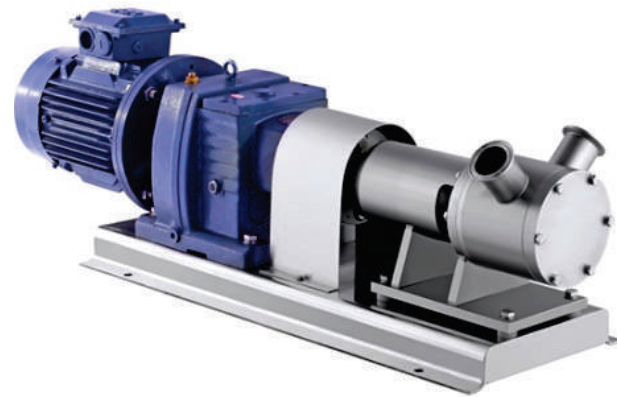


Sanitary Sine Pump



Pump Body Material	SS304, SS316L
Seal Material	PTFE, EPDM, Silicon, Viton
Max. Viscosity	4.000.000cps
Max. Flow	90 m ³ /h
Max. Speed	1000min
Sealing Type	Flushed double mechanical seal/single mechanical seal
Voltage	220V, 380V
Surface Treatment	Inner polished and Sandblast outside
Available Connection	Clamp, Thread, Flange
Available Standard	DIN, SMS, 3A, ISO/IDF

Sanitary Sine Pump (HSB Series)



Technology Advantage

- Sine pump-excellent efficiency, high viscosity Best selection of super low shear feeding.
- Super low shear feeding, Compared with rotor pump although with a great deal of solid particle and fragile product A safe and no damage feeding can be provided.
- High viscosity performance reaches the limit of flowing capability Can reach 4,000,000cps.
- No pulse, stable feeding, Flow cubage adjustment precisely, without interference and shock Filling machine can supply a stable product dose evenly.

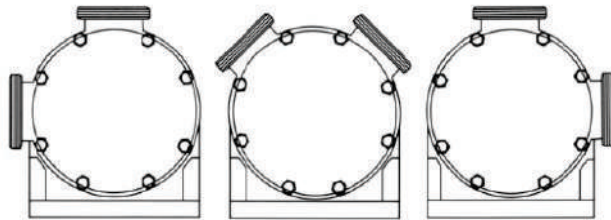
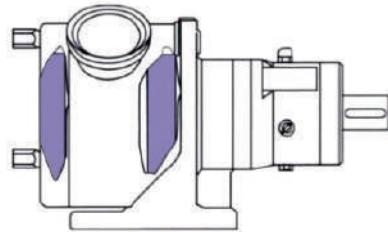
Function Principle

- Any exquisite product or good functional product has a simple configuration- - including few components..... Sine pump is not an exception.
- The sine wave shape of the impeller means a cavity can be formed at every rotation (4 cavities can be formed every passing the lining space). This operation can “push” or “release” flowing products. The pump cavity is divided into a suction chamber and extraction chamber by control panel to ensure pressure tolerances at exit and entrance. Meanwhile, the control panel plays another important role to lubricate the pump bearing by product in compulsion.
- Sine pump: Special two sine-curve-like vane is taken, instead of rotor, epicyclic gear or piston, and it runs with a movable panel and a fixed line, forming a special volume pump and realizing liquid super low shear, without pulse feeding, although in condition of 10 bar back pressure (water feeding), there won't be any movement on pressure gauge.

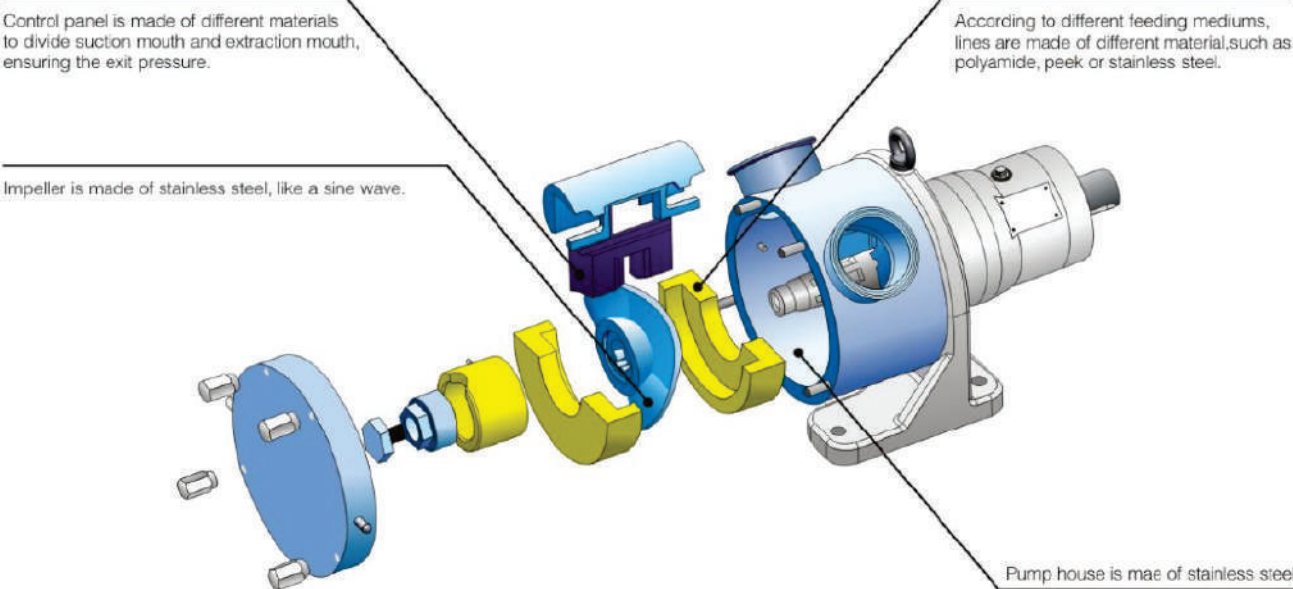


Function Principle

- Many products (such as those in the sugar making industry) need to be heated or cooled. We can provide the pump case jacket option to safely and conveniently connect it to any hot water supply system.
- Various connection types can be provided: ferrule, thread and flange. The following diagram shows the optional inlet and outlet connection directions.



Structural diagram



Sine Pump Technical Parameters

MODEL	CAPACITY (L/REV)	PRESSURE (BAR)	MOTOR POWER (KW)	RECOMMEND SPEED (RPM)	INLET / OUTLET (MM)
HSB-10	0.07	10	1.5	50 -960	25
HSB-20	0.12	10	2.2	50 -960	51
HSB-30	0.30	10	3.0	50 -960	63
HSB-40	0.46	10	4.0	50 -960	76
HSB-50	0.78	10	5.5	50 -960	89
HSB-80	1.08	10	7.5	50 -960	101
HSB-100	2.60	10	15.0	50 -960	152

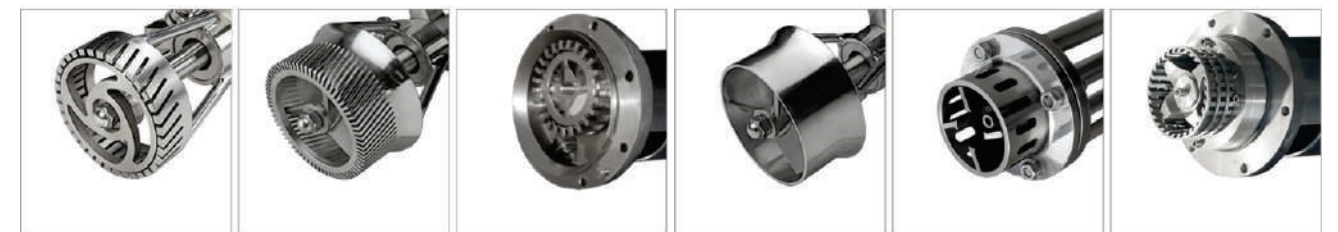
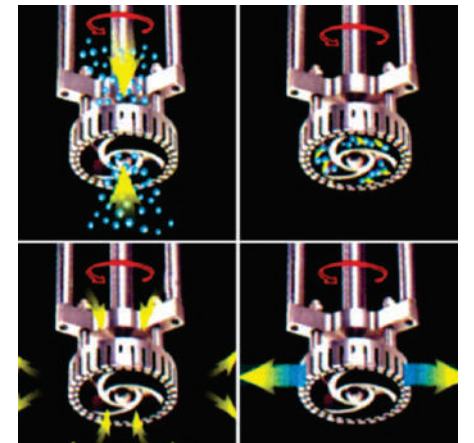
HDM

High Shear
Dispersing Mixer



Operation Principle

High shear dispersing emulsifiers effectively, quickly and evenly disperse a phase or phases to another consecutive phase, usually, these phases are dissolvable to each other. The rotor revolves quickly and strong force is produced through high tangent speed and high frequency mechanical effect, therefore, the material in the narrow slot among stator and rotor receives strong forces from mechanical and liquid shearing, centrifugal force, pressing, liquid fraction, clashing, tearing and rushing water. The dissolvable solid, liquid and gas material is then instantly dispersed and emulsified evenly and finely with better production procedures and appropriate additives and finally products with stable high quality are made.

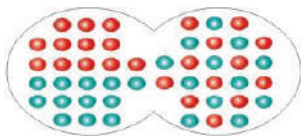


High Shear Dispersing Mixer (HDM Series)



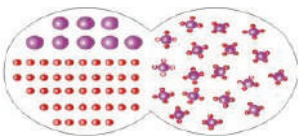
Technical Parameters

MODEL	MOTOR POWER (KW)	ROTATION SPEED (RPM)	HANDLING CAPACITY (L)
HDM-10	1.5	2900	5 - 50
HDM-20	2.2		50 - 100
HDM-30	4.0		100 - 300
HDM-40	7.5		200 - 800
HDM-50	11.0		300 - 1000
HDM-60	18.5	1450	500 - 1500
HDM-70	22.0		800 - 2000
HDM-80	30.0		1000 - 3000
HDM-90	37.0		1500 - 5000
HDM-100	55.0		2000 - 8000
HDM-120	75.0		3000 - 10000



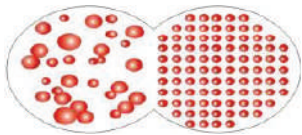
Mixing

Syrup, shampoo, detergent, juice concentrated solution, yogurt, dessert, mixed dairy, ink and enamel.



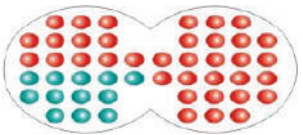
Emulsifying

Medicated lotion, ointment, vanishing cream, facial mask, face cream, emulsified essence, oil-water emulsification, emulsified asphalt, resin emulsification, chemical fiber, visose, wax emulsification, waterborne polyurethane emulsification and pesticide.



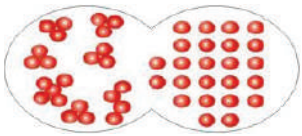
Homogenizing

Medicated lotion, ointment, vanishing cream, facial mask, face cream tissue homogenate, dairy homogenization, juice, printing ink and fruit jam.



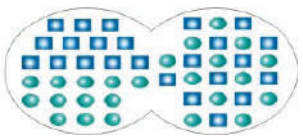
Reacting

Efficient extraction, hydrogenation reaction, saponification reaction, sulfonation reaction, TDI, MDI and microsphere reaction, etc.



Dispersing

Suspension, pill coating, drug depolymerization, paint dispersion, lipstick, vegetable bisque, mustard mixture, catalyst, matting agent, metal, pigment, modified asphalt, Preparation and depolymerization of nanomaterials.



Powder/liquid mixing

Fumed silicon, silicon dioxide, silica, titanium dioxide, bentonite, talcum powder, CMC, xanthocollagen and sugar milk powder.

MODEL	D	D1	H1	D2	D3	H	G
HDM-10	90	167	550	195	220	960	4 x 12.5
HDM-20	100	167	650	195	220	1100	4 x 12.5
HDM-30	120	195	750	225	255	1250	6 x 12.5
HDM-40	142	220	850	225	285	1450	8 x 12.5
HDM-50	167	225	850	290	325	1620	8 x 12.5
HDM-60	180	275	1200	310	350	1980	8 x 12.5
HDM-70	200	275	1200	310	350	2000	8 x 12.5
HDM-80	220	300	1300	340	380	2200	10 x 14.5
HDM-90	240	320	1400	360	415	2300	12 x 14.5
HDM-100	270	350	1600	400	450	2600	12 x 16.5
HDM-120	290	370	1600	400	500	2650	12 x 16.5

HDP

High Shear
Emulsifying Pump



Technical Parameters

Minxing dissolving	Soluble solid or liquid blends together with liquid in the state of the molecule or the goué, Crystallization powderody, salt, sugar, ether sulfate, abrasive, hydrolysising colloid, CMC thixotropy, rubber natural and synthetic resin
Dispersed suspension	Insoluble solid or liquid forms finer particle blended solution or suspended solution Catalyst, flatting agent, pigment, graphite, paint coating, alumina, compound fertilizer, printing ink packing agent weedkiller, bactericide
Emulsification	Insoluble liquid together with liquid does not separate Cream, ice cream, animal oil, vegetable oil, protein, silicon oil, light oil, mineral oil, paraffin wax cream, rosin
Homogeneity	Make emulsification and suspended grain size finer with more even distribution Cream, flavouring, fruit juice, jam, condiment, cheese, fat milk, toothpaste, typing ink, enamel paint
Thick liquid	Cell's tissue, organic tissue, the animal and plant tissues
Chemical reaction	Nanometer material, inflating with higher speed, synthesization with higher speed
Extraction	The vortex extraction
Depolymerization	Nanometer powder, dough powder

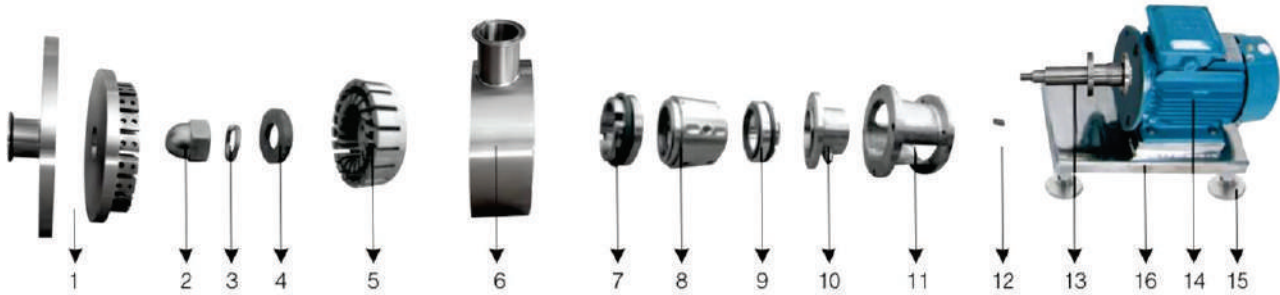


High Shear Emulsifying Pump (HDP Series)



The HDP series is an in-line continuous production emulsified homogenizing pump consisting of stator and rotor. The treated material will be dispersed, sheared, refined, crushed, emulsified and mixed through 6-10 layers of rotor and stator, homogenization, etc. Compared with the traditional production process, the pump is simpler, more convenient and more optimized. It improves the production efficiency and quality of the material to be treated. Mainly used in food, beverage, pharmaceutical, health care, fine chemicals, coatings, pesticides, daily washing, paper and other industrial fields.

Pipeline Higt Shear Dispersing Emulsifer

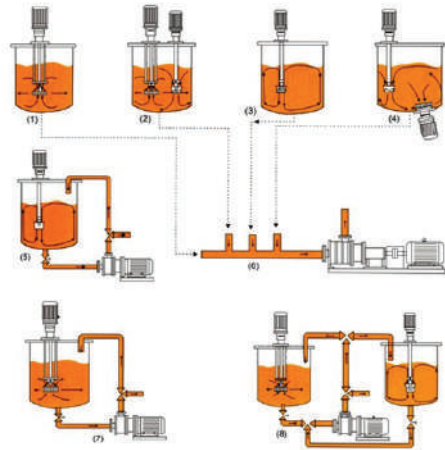


- 1.Stator 2.Screw cap 3.Flexible gasket 4.Flat gasket 5.Rotor 6.Pump cavity 7. Mechanical seal (stationary ring)
8.Mechanical seal (moving ring) 9.Mechanical seal (stationary ring) 10.Seal cool seat 11.Pump seat 12.Pin
13.Pump shaft 14.Motor 15.Support 16.Frame

Technical Parameters

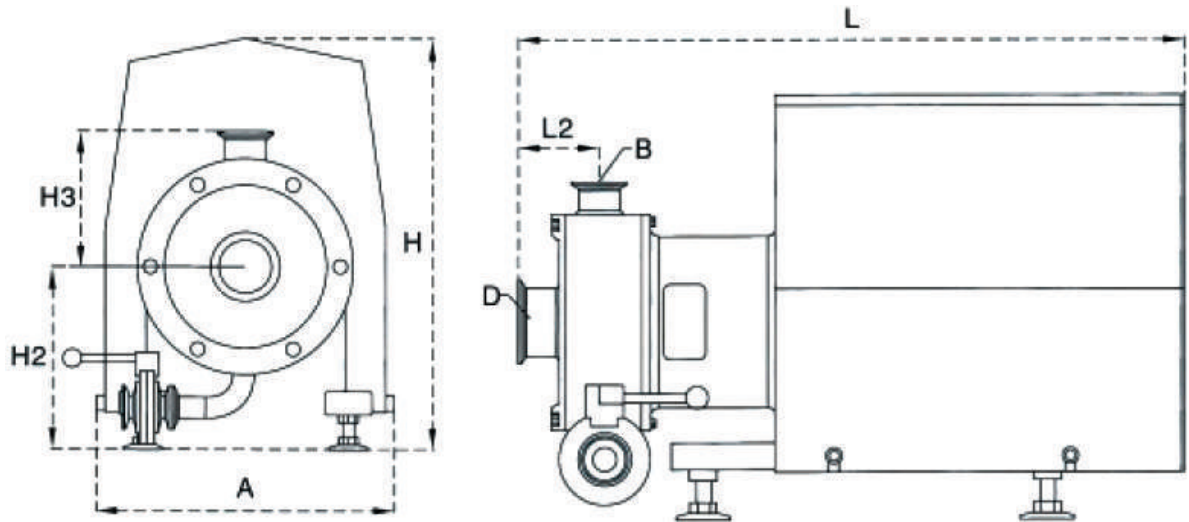
MODEL	CAPACITY (M ³ /H)	ROTATION SPEED(RPM)	MOTOR POWER (KW)
HDP-10	0 - 1.6	2900	1.5
HDP-20	0 - 3.2	2900	2.2
HDP-30	0 - 4	2900	4.0
HDP-40	0 - 5.5	2900	5.5
HDP-50	0 - 8.5	2900	7.5
HDP-60	0 - 12.5	2900	11.0
HDP-70	0 - 18.5	1450	15.0
HDP-80	0 - 26	1450	22.0
HDP-90	0 - 36	1450	30.0
HDP-100	0 - 52	1450	45.0

Note: the flow in the table refers to the data tested taking water as the medium. Outlet pressure of the listed type ≤ 0.2Mpa.
If a circulated procedure is adopted, intermittent high shear emulsifiers are recommended. If there is high temperature, high pressure, flammable, explosive or corrosive condition, the correct date should be provided by customers in order to customize the right producttype.
For mediums that flow slowly, pumps of matched flow rate should be equipped in the inlet.
The data in the table is subject to change without notice. See the actual products for the right data.



Operation Principle

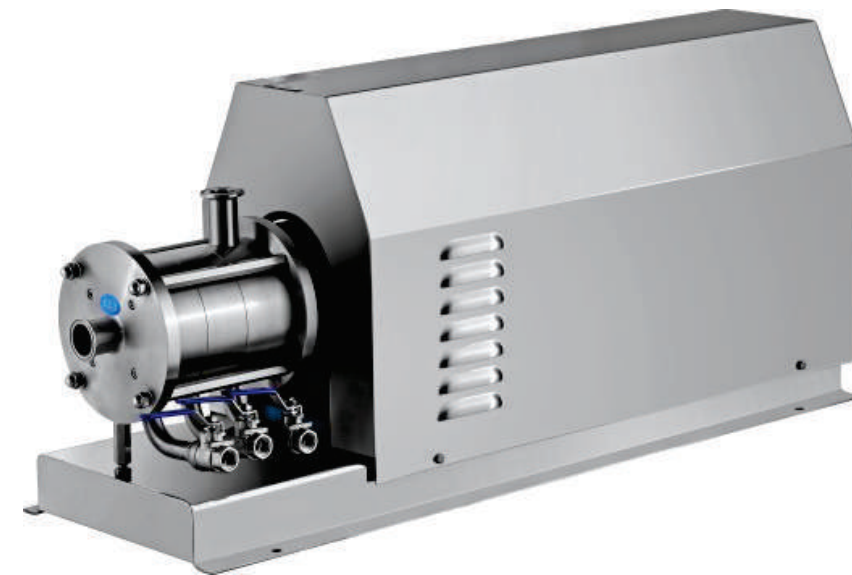
High shear emulsifying pump is a high performance equipment used for continuous production or circulated treatment of fine material. In the small chamber, there are 1-3 sets of paired and clutched stators and rotors. Driven by a motor, the rotor revolves quickly and produces a strong axial suction force which intakes the material to the chamber. The machine disperses, shears and emulsifies the material in the shortest time, and the diameter range of the particles gets smaller so that fine and stable products are produced



MODEL	L2	L	H	A	H2	H3	DΦ	BΦ
HDP-10	74	528	367	220	180	126.5	38	32
HDP-20	74	528	367	220	180	126.5	38	32
HDP-30	76	611	413	270	202	135	51	38
HDP-40	80	660	490	320	222	152.5	51	51
HDP-50	80	700	490	340	222	152.5	51	51
HDP-60	92	847	554	370	260	167.5	63.5	63.5
HDP-70	92	847	554	370	260	167.5	76.2	63.5
HDP-80	96.5	957	585	370	290	181	76.2	63.5
HDP-90	109	1035	650	430	310	186	89	76.2
HDP-100	115	1090	705	470	323	196	102	89

HDP3

3 Pipeline High Shear Emulsifying Pump



Technology Advantage

Three sets of stators and rotors are equipped in the working cavity. Driving shaft in the working cavity is an arm, electrical motor and the shaft in the bearing cabinet can be connected by spring coupling to improve the operation quality of the driving shaft. Seal form can be selected in different conditions. It is fit for middle-large scale online continuous production or circulated treatment production process.



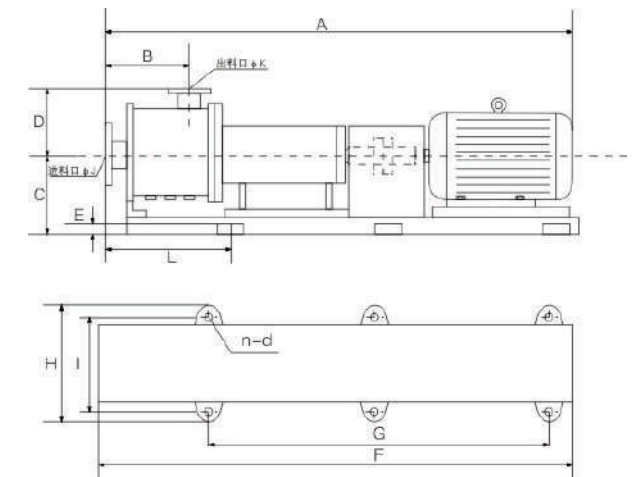
Coarse teeth
Beat, shatter, shear, dissolve, rough dispers



Middle teeth
Disperse, refine, solutize, emulsify



Fine teeth
Superfine disperse, emulsify, homogenize, pulpify



MODEL	MOTOR POWER (KW)	ROTATION SPEED (RPM)	A	B	C	D	E	F	G	H	I	J DN	K DN	L	CAPACITY (M ³ /H)	N - D
HDP3-100	4	2900	950	200	180	100	8	900	700	380	320	38	32	150	0 - 1.6	4 - Φ16
HDP3-200	5.5	2900	1070	230	232	155	10	1000	800	450	390	50	40	150	0 - 3.2	4 - Φ20
HDP3-300	7.5	2900	1315	245	260	170	12	1250	1050	505	445	65	50	150	0 - 4	4 - Φ20
HDP3-400	11	2900	1370	260	260	185	12	1300	1100	505	445	65	50	150	0 - 5.5	4 - Φ20
HDP3-500	18.5	2900	1430	300	280	220	15	1350	1150	550	480	65	50	155	0 - 8.5	4 - Φ20
HDP3-600	22	2900	1870	300	300	242	15	1800	1600	590	520	100	80	160	0 - 12.5	4 - Φ20
HDP3-800	30	1450	1980	300	350	280	15	1900	1700	710	630	125	100	165	0 - 18.5	4 - Φ24
HDP3-900	45	1450	2100	305	380	300	15	2000	1800	785	705	125	100	165	0 - 26	4 - Φ24

Notes: Flow listed on the table refers to the datas measured when the medium is water, the exit pressure $\leq 0.2\text{Mpa}$ of the model listed in the table. In conditions of high temperature, high pressure, flammability, explosion and erosion, relevant parameters must be provided clearly for selecting customization precisely.

For poor liquid medium, a pump which has a matching flow is suggested to feed at the inlet, input pressure $\leq 0.2\text{Mpa}$.

If the data in the table is modified, no further notification will be given, and the right parameters as per the provided sample.



HMP

Powder Mixing Pump

Powder Mixing Pump

HMP Series



Technical Parameters

Application	The mixer is used to mix solids into liquids. In food processing, it provides an online perfect solution for the preparation of milk powder, the production of syrup, and the preparation of salt water. It is also suitable for various industries such as pharmaceuticals, cosmetics and chemicals.
Material	SUS30, SUS316L (in terms of material selection, all parts in contact with the material are made of SUS316L stainless steel).
Connection standard	DIN, SMS
Impeller	Open impeller, no sanitary corners.
Surface treatment	Mirror reflection
Temperature range	-10°C to 120°C (EPDM)



Technical parameter description of water-powder mixing pump series

MOTOR POWER	A	B	C	D	E	F	G	H	J	P
3KW/4KW	165	674	1144	272	610	80	302	340	389	510.5
5.5/7.5KW	172	703	1173	703	723	95.5	360	385	410	542

HMP water powder mixing pump selection table

MODEL	SOLID INTAKE (KG/H)	HOPPER CAPACITY (L)	SOLID IMPORT SIZE (MM)	LIQUID INLET (MM)	EXIT (MM)
HMP-30	500 - 1500	40	63	38	38
HMP-40	500 - 2000	40	63	38	38
HMP-55	1000 - 3500	45	76	51	51
HMP-75	1000 - 4000	45	76	51	51



HSL

High Shear Mixing System
(800cps Viscosity)



**The Highest Viscosity
Can Reach 800cps**

Equipment Introduction

The HSL series single-type powder-liquid mixer is specially designed for the dissolution of easily soluble powders (sugar, skimmed milk powder) and a small amount of incompatible powders. The equipment uses the Venturi principle to generate a vacuum, sucks the powder into the liquid stream from the funnel, and then enters the high-shear pump together. The powder and liquid are quickly and uniformly dispersed and dissolved in one-time online.

Applicable Materials

Dairy industry: sugar, milk powder, a small amount of CMC (within 2%) dissolved online, skimmed milk powder, cream and other small materials added.

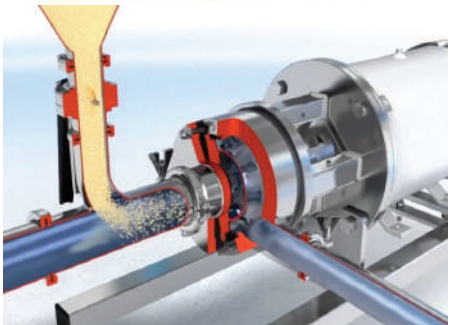
Beverage industry: online dissolution of milk powder, sugar, stabilizers; dissolve a small amount of colloids, thickeners into beverages, disperse citric acid, sour agents and other small materials to beverages to dissolve maltose, vitamins, etc.

Other industries: Starch/water online homogenization, concentrated juice dissolution, tea powder dissolution, olive oil, water emulsion.



Advantage Analysis

HSL generates a vacuum through the venturi, and the wall is free of dust. The equipment is quickly homogenized. All the liquid and powder materials passing through the high-shear pump are dispersed at one time, and the powder completely dissolves without agglomeration. In the traditional mixing equipment, agglomeration, residue on the tank wall, excessive mixing at the center of the blade, insufficient mixing at the edge, large powder loss, dust pollution, and harm to the respiratory system of the operator will occur during the reproduction process. High-shear pump improves product quality, no particles, no powder clusters, no clumps, no attached walls, stable and uniform.



MODEL	HOPPER CAPACITY (L)	CAPACITY (M ³ /H)	ROTATION SPEED (RPM)	MOTOR POWER (KW)
HSL-10	20 - 40	0 - 1.6	2900	1.5
HSL-20	20 - 40	0 - 3.2	2900	2.2
HSL-30	20 - 40	0 - 4	2900	4.0
HSL-40	30 - 50	0 - 5.5	2900	5.5
HSL-50	30 - 50	0 - 8.5	2900	7.5
HSL-60	40 - 65	0 - 12.5	2900	11.0
HSL-70	40 - 65	0 - 18.5	1450	15.0
HSL-80	40 - 65	0 - 26	1450	22.0
HSL-90	50 - 80	0 - 36	1450	30.0
HSL-100	50 - 80	0 - 52	1450	45.0



HSM

High Shear Mixing System
(5000cps Viscosity)



**Suitable For Medium/high
Viscosity System Materials
The Highest Viscosity Can
Reach 5000cps**

Advantage Analysis

- Product diversity, sugar, salt, milk powder, CMC, gelatin, pectin, gum, xanthan gum, palm oil
- Diversified functions, mixing, dispersing, homogenizing, emulsifying, homogenizing, strong versatility
- High-speed batching, which can shorten the mixing time by 50% to 90%, reduce production, labor, energy consumption, and cost
- Improved product quality, no particles, no powder clusters, no clumps, no attached walls, stable and uniform
- Reduce energy consumption, ice water can be used to dissolve the powder, no requirement for dissolution temperature
- Reduce investment, occupy small space, do not need elevator, in silo, vacuum system and other complex systems
- Simplify the batching process, do not need pre-mixing, pre-maturation, and mixing
- Improve the hygiene of ingredients, clean, no dust, no moisture, no cross-contamination
- Fully online CIP/SIP3A-standard, GMP and EHEDG certification

Function Description

- On-line liquid-liquid, solid-liquid, powder-liquid, gas-liquid mixing, homogenization, emulsification, dispersion
- Homogeneously dispersed pectin, gelatin, carrageenan, CMC stabilizer and other colloids
- Quickly dissolve sugar, salt, milk powder, flour, skimmed milk powder, modified starch
- Emulsified sugar enters oil and fat to form an oil-in-water and water-in-oil stable state
- Homogenized yogurt, brown drink, lactic acid drink and other fermented bag products
- High-speed ingredients such as concentrated tea powder, concentrated juice, condiments, cosmetics, etc...
- Polymer materials, lithium battery raw materials, nano materials
- Dispersion and mixing of other new material.

MODEL	FLOW RATE (M ³ /H)	STATOR SLOT WIDTH (MM)	MOTOR POWER OF HIGH SHEAR PUMP (KW)	ROTATION SPEED OF HIGH SHEAR PUMP (RPM)	FEEDING PUMP TYPE
HSM-10	0.1 - 3	4	4.0	2900	CIP / LOBE PUMP
HSM-20	0.3 - 5	6	5.5 / 7.5	2900	CIP / LOBE PUMP
HSM-30	0.3 - 8	6	7.5 / 11	2900	CIP / LOBE PUMP
HSM-40	1 - 10	6	11 / 15	2900	CIP / LOBE PUMP
HSM-50	1 - 12	8	15 / 18.5	2900	CIP / LOBE PUMP
HSM-60	1 - 20	8	18.5 / 22	2900	CIP / LOBE PUMP
HSM-80	1 - 20	10	22	2900	CIP / LOBE PUMP
HSM-100	2 - 30	10	30	2900	CIP / LOBE PUMP





HCM

Colloid Mill System

Operation Principle

A colloid mill reduces the particle size of a solid by applying shearing, grinding and high speed mixing. Grinding is accomplished by the relative motion of two tooth profile inclines (one rotating at a high speed, the other being still). Materials between the tooth profile inclines are effectively dispersed, pulverized and homogenized under high levels of shearing force, friction, high-frequency vibration and other forces.



HLD3A

Sanitary Diaphragm Pump



Equipment Introduction

The pump body has a smooth surface, hard material, high-performance diaphragm, high efficiency, corrosion resistance, high temperature resistance, wear resistance, etc., suitable for the transferring for most medium.

Technical Parameters

MODEL	CAPACITY (M ³ /H)	HEAD (M)	SUCTION (M)	MAXIMUM AIR CONSUMPTION (SCFM)	MAX. PRACTICLE DIAMETER (MM)	INLET/OUTLET (MM)
HLD3A-10	2	70	4.5	12.5	2.5	25
HLD3A-20	6	70	4.5	23.5	3.2	38
HLD3A-30	12	70	5.5	32	5.5	51
HLD3A-50	22	70	5.5	55	6.3	76