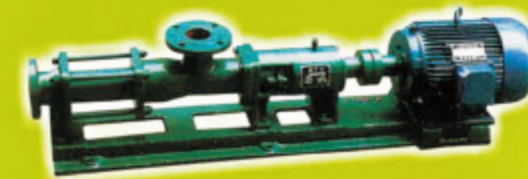


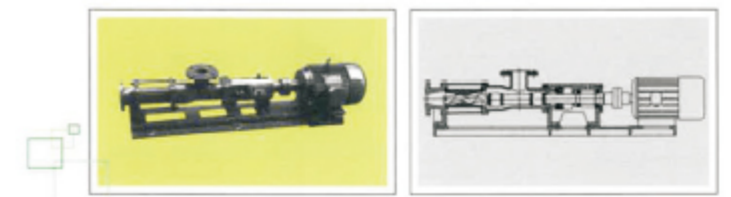
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FOR YOUR SECURITY, READ THE INTRODUCTION CAREFULLY BEFORE USING.



**G Type Screw Pump
Use Specification**



■ Brief introduction and features

G type single helical rotor pump (eccentric helical rotor pump) is a kind of internal-padded closed screw pump, which belong to rotary pump, that can transport fluids of medium that contain fibre and solid grain and also can transport medium that contain water or air, it is used very widely.

Features

- light vibration, has no impulse and operate smoothly;
- Perfect priming performance, and the priming head can reach to more than 6.0m;
- The two ends of jointing shaft adopts multi-direction tie-in, The bolt and bolt cover are made of special material, so their using life are prolonged greatly, and their structure is simple and is easy to be dismantled;
- The thickness of rubber wall is even, the twist distance of starting up and operation is small, so that reduced the equipped motor power.
- The two ends of lining cover have wrapped rubber, that make the tie-in of inlet and outlet seal more reliable, so that ensured the lining cover not be corroded;
- The specification is edited carry out the standard of GB9969.1-1998,《specification of industrial products as total principal》.

■ Operating conditions

- When the medium temperature is 15~120 °C (it is decided by the lining cover's basic characteristics);
- Operating pressure: The maximum working pressure $\leq 2.5\text{Mpa}$, that is system pressure = inlet pressure + pump's inlet and outlet pressure $\leq 2.5\text{Mpa}$ (it is different for different pump type);
- The ambient temperature can't exceed 1000m;
- The ambient temperature can't exceed 40 °C, the relative damp can't exceed 95%;
- The running past degree of the draining and discharging medium should be kept in 1~10000;
- The PH of draining and discharging medium is 4~10, when have strong corrosion, should give clear indication.

Applying range

This type of pump can be used to transport liquid with easy to be eroded medium, and clean or be of abrasional liquid, and transport those liquid with air or the liquid that easy to bring out gas, or transport the high paste or low paste degree liquid (containing liquid with fibre materials or solid materials).

- Environment protection: They are used to transport industrial sewage, living sewage, and mud and sewage that contain solid grain and short fibre, which especially applied to oil and water separator, board pressure filter equipments;
- Shipping industry: Applied to transport oil, sewage and sea water etc;
- Petrol industry: They are used to transport many kinds of oil, especially to transport primary oil;
- Be used to transport combining fibre liquid, pasting glue liquid, coloring materials and nylon power liquid etc;
- Medicine, daily chemical products: transporting various rosy plasma, emulsivity liquid, and various ointment cosmetic.
- Industry of food and can: Transporting various rosy amyllum, cooking oil, honey, sirup, jam, cream, etc;
- Brewage industry: Diversified barmy rosy liquid, thick lees, food stuff dregs, diversified catsup, plasma and rosy liquid containing solid materials etc;
- construction industry: It applies to transport grout, slurry of lime, dope and other mash;
- Metallurgy and mine industry: It is used to transport oxid and waste water, discharging water for mine and liquid dynamite;
- Chemical industry: It applies to transport diversified suspended liquid, grease, diversified colloidal slurry, diversified bond, paper making, print, high paste printing ink, paper pulp black liquid, PVC and diversified thickness pulp, and short fibre pulp etc.

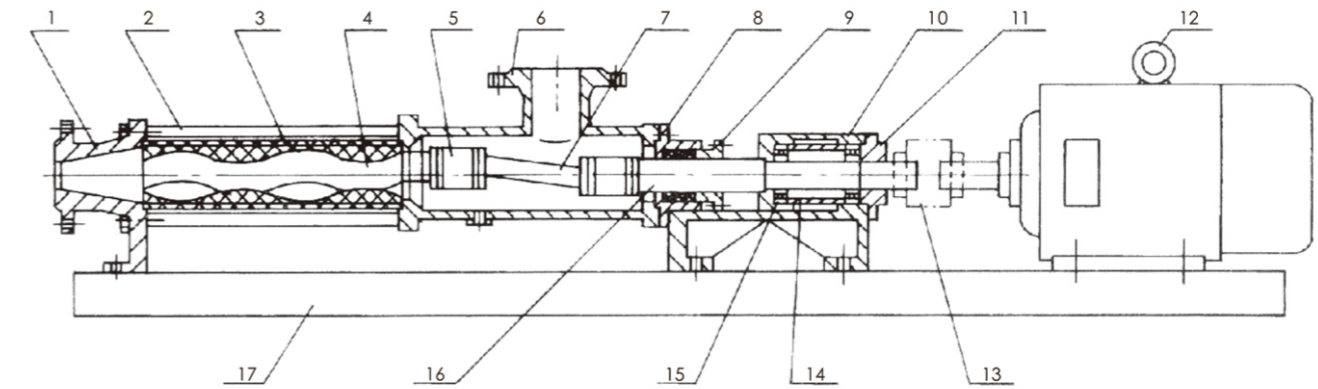
Troubles	Causation	Eliminational methods
Pump can't be started-up	<ul style="list-style-type: none"> a. The new pump's rotor and stator work in compactly. b. Voltage is too low. c. Medium viscosity is too high. 	<ul style="list-style-type: none"> a. Turn several circles with tools and person. b. Adjust voltage. c. Dilute stuffing liquid.
Liquid can't come out of pump	<ul style="list-style-type: none"> a. Rotating direction is wrong. b. Have something wrong with draining pipe. c. Strong medium viscosity. d. Rotor and stator or driving parts have been damaged. e. Pump has been blocked by some things. 	<ul style="list-style-type: none"> a. Adjust direction; b. Check out if it has leakage, turn on inlet and outlet valve; c. Dilute material liquid; d. Check out and exchange; e. Discharge eyewinker
Capacity is not enough	<ul style="list-style-type: none"> a. Pipeline has leakage; b. Valve can't be turned on completely or stopped partly; c. Speed is too low; d. Rotor and stator have been frayed. 	<ul style="list-style-type: none"> a. Check out and repair pipeline; b. Turn on all the valves, eliminate stopping things; c. Adjust speed; d. Exchange damaged parts.
Pressure is not enough	<ul style="list-style-type: none"> a. Rotor and stator have been frayed. 	<ul style="list-style-type: none"> a. Exchange rotor and stator.
Motor temperature is too hot	<ul style="list-style-type: none"> a. Have troubles with motor. b. The outlet pressure is too high, motor has overload; c. Motor bearing has been damaged. 	<ul style="list-style-type: none"> a. Check out motor and deal with troubles. b. Change outlet valve opening degree and adjust pressure; c. Exchange damaged parts.
Capacity and pressure failed greatly	<ul style="list-style-type: none"> a. Pipeline is stopped or leaked suddenly; b. Stator has been frayed worsely; c. Liquid viscosity has been changed suddenly; d. Voltage is taken down suddenly. 	<ul style="list-style-type: none"> a. Clear out stopping or sealing pipeline; b. Exchange stator rubber; c. Change liquid viscosity or motor power; d. Adjust pressure.
Lead large quantity liquid at shaft seal place	<ul style="list-style-type: none"> a. Soft padding has been frayed. 	<ul style="list-style-type: none"> a. Press or exchange padding.

Type GG trouble' s reason and method to eliminate

Fault	Cause	Elimination method
Pump fails to start	<ul style="list-style-type: none"> a. New pump, rotor-stator over-tight fit b. Low voltage c. High fluid viscosity 	<ul style="list-style-type: none"> a. Manually rotate several circles with tools b. Adjust pressure c. Dilute feed liquid
No liquid output	<ul style="list-style-type: none"> a. Incorrect rotation direction b. Faulty suction pipeline c. Excessively high medium viscosity d. Damaged rotor, stator or transmission parts e. Foreign blockage inside pump 	<ul style="list-style-type: none"> a. Adjust rotation direction b. Check for leakage and open inlet & outlet valves c. Dilute the feed liquid d. Inspect and replace damaged parts e. Remove foreign objects
Insufficient flow rate	<ul style="list-style-type: none"> a. Pipe leak b. Valve blocked/partially closed c. Low speed d. Rotor & stator worn 	<ul style="list-style-type: none"> a. Inspect and repair the pipeline b. Fully open all valves and clear blockages c. Adjust rotating speed d. Replace damaged parts
Insufficient pressure	<ul style="list-style-type: none"> a. Rotor & stator worn 	<ul style="list-style-type: none"> a. Replace the rotor and stator
Motor overheating	<ul style="list-style-type: none"> a. Motor failure b. High outlet pressure, motor overload c. Motor bearing damaged 	<ul style="list-style-type: none"> a. Check motor & troubleshoot b. Regulate pressure via outlet valve opening c. Replace defective components
Sharp drop in flow rate and pressure	<ul style="list-style-type: none"> a. Pipe sudden block/leak b. Stator severely worn c. Abrupt viscosity change d. Voltage sudden drop 	<ul style="list-style-type: none"> a. Remove blockage / Seal pipe b. Replace stator rubber sleeve c. Modify viscosity or motor power d. Adjust pressure
Heavy liquid leakage at shaft seal	<ul style="list-style-type: none"> a. Wear of the soft packing material 	<ul style="list-style-type: none"> a. Tighten or replace the packing

G type pump structural drawing、material

■ Structural drawing



1	2	3	4	5	6	7	8	9
Material-out chamber	Pulling pole	Screw cover	Screw shaft	Joint assembly	Draining pipe	Jointing shaft	Padding base	Padding gland
10	11	12	13	14	15	16	17	
Bearing base	Bearing cover	Motor	Coupler	Shaft cover	Bearing	Driving shaft	Base	

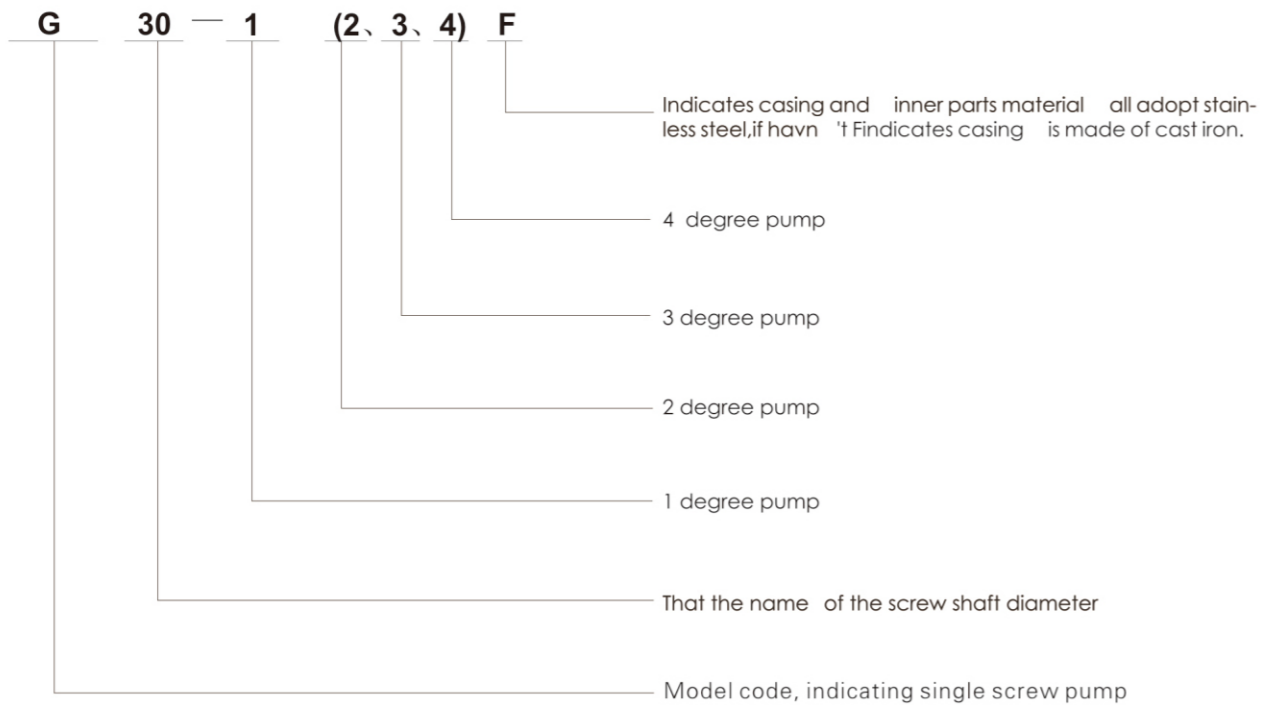
■ Material table

Name	Bearing base	Draining pipe	Pulling pole	Screw shaft	Coupler	Padding base	Jointing shaft	Screw cover	Padding	Base
Material	HT200 1Cr18 Ni9Ti	HT200 1Cr18 Ni9Ti	45	1Cr18 Ni9Ti	HT200	HT200 1Cr18 Ni9Ti	1Cr18 Ni9Ti	Non clearance steelpipe	Oil asbestos	HT200

Operating principle and structure introduction

- This type of pump is composed of rotor that be of double screw chambers, and single screw shaft, when driving shaft rotate around stator through multi-direction driving screw shaft, stator-screw shaft will gear continually and form closed chamber, these closed chamber running at the same speed and cubbahe ish changed, made the transporting medium flow from draining end into the padded chamber woht be stirred and damahed when flowing stator, so this type of pump can transport diversified medium which containing hard fraying impuvity and solid grain and ropy liquid.

Designation



Chosen of common rubber for bush

- According to medium characteristic, should choose different bush rubber.

Flexibility of rubber	Buna	Neoprene	Flrubber	Food rubber	Second th-ird rubber	Flexibility of rubber	Buna	Neoprene	Flrubber	Food rubber	Second th-ird rubber
Code	NBR	CR	FPM	W.NBR	EPDM	Code	NBR	CR	FPM	W.NBR	EPDM
Water(contain sewage)	●	●	●	●	●	Coal oil	●	●	●	●	×
Vegetable oil	●	△	●	●	△	Diesel oil	●	×	●	●	×
Mine oil	●	△	●	●	×	Hydrochloric	×	×	△	×	×
Nitrogenous water	●	×	×	●	△	Coppery materials	×	×	×	×	●
Balmy solvent	×	×	●	×	×	Mellow materials	●	●	●	●	●
Bromic alkali	●	●	×	●	●	Grease materials	×	×	×	×	●
Thick nitric acid	×	×	△	×	×	Aether materials	×	×	×	×	●
Ice acetum	●	×	●	●	×	Slurry	●	△	△	●	●
Thin vitriol	●	×	●	●	●	Calcium phosphate	△	●	△	△	●
Thick vitriol	×	×	●	×	△	Sodium carbonate	●	●	×	●	●
Thin muriatic acid	●	●	●	×	●	Aldose	△	△	△	△	●
Thick muriatic acid	●	×	●	●	●	100 Benzene	×	×	●	×	×
Hot water	△	×	×	△	●	Acetone	×	×	×	×	●
Gas	●	△	●	●	×	Linseed oil	●	●	●	●	●
Touene	×	×	●	×	×	Carbon bisulfide	×	×	●	×	×
Xylene	×	×	●	×	×						
Ethanol	●	△	●	●	△						

Notice: The midium in table are some common medium's natural conditions, if have special medium condition or specl demand, you can contact with our company.

- Indicate good △ Indicate common × Indicate floeey

Guide of choosing pump

Speed selection unit

- In order to prolong the using life of sets, and make it operate in best state, when the medium be of high viscosity or contain grain, you should choose different rotating speed according different medium.
- According to different viscosity, choose different speed.

(cst) Medium viscosity	1~1000	1000~10000	10000~100000	100000~1000000
(r/min) Speed	800~1000	600~800	400~600	200~400

- Choose set's speed according to medium abrasion.

Abrasion	Medium name	(r/min) Speed scope
No	Freshwater, promote coagulant, oil, slurry, meat, suds, blood and glycerin	800~1000
Common	Slurry, industrial waste water, paint, sticky cinder llasm, fish, millfeed etc.	600~800
Special	Slurry of lime, clunch, plaster, argil	200~400

Notice: 1. When the pump standard is much larger, you should choose lower speed;

2. You should choose speed according to appearance, because some factors may affect choosing speed, when you made sure the above numerical value, you'd better negotiate with our company;

3. After speed is changed, the pump capacity will be changed too, the calculate formula is:

$Q \cdot \text{change} = K \frac{n \cdot \text{change}}{n \cdot \text{former}} \times Q \cdot \text{former}$, quatiety: $K=0.7\sim 1$, the quatiety will change with the speed changing, generally speaking, speed change greatly, the quatiety will be more lower, that is relative to 960r/min.

Max grain diameter and fibre length

Type	G25	G30	G35	G40	G50	G60	G70	G85
(mm) Max permitting grain diameter	2.5	3	3.5	3.8	5	5.5	6.8	9.5
(mm) Max penmitting fibre logth	40	42	45	48	60	70	79	98

- If the grain diameter and solid containing are increased, pump seed must be reduced.

Performance data of type G

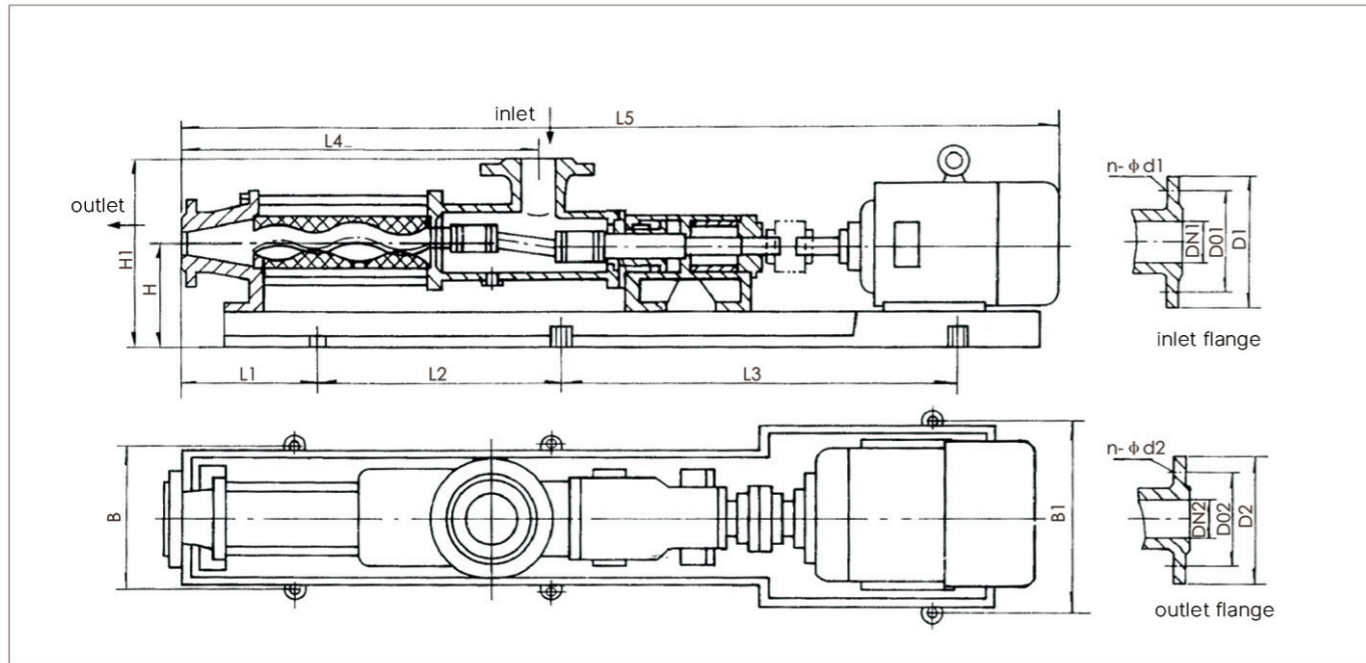
Parameter Table

Type	Speed	Capacity	Pressure	Motor	Head	Inlet	Inlet	Grain diameter	Fibre length	Device weighs
G20-1	960	0.8	0.6	0.75	60	DN25	DN25	1.5	25	90
G25-1	960	2	0.6	1.5	60	DN32	DN25	2	30	110
G25-2	960	2	1.2	2.2	120	DN32	DN25	2	30	150
G30-1	960	5	0.6	2.2	60	DN50	DN40	2.5	35	120
G30-2	960	5	1.2	3	120	DN50	DN40	2.5	35	180
G35-1	960	8	0.6	3	60	DN65	DN50	3	40	170
G35-2	960	8	1.2	4	120	DN65	DN50	3	40	200
G40-1	960	12	0.6	4	60	DN80	DN65	3.8	45	180
G40-2	960	12	1.2	5.5	120	DN80	DN65	3.8	45	210
G50-1	960	20	0.6	5.5	60	DN100	DN80	5	50	220
G50-2	960	20	1.2	7.5	120	DN100	DN80	5	50	260
G60-1	960	30	0.6	11	60	DN125	DN100	6	60	300
G60-2	960	30	1.2	15	120	DN125	DN100	6	60	300
G70-1	720	45	0.6	11	60	DN150	DN125	8	70	400
G70-2	720	45	1.2	18.5	120	DN150	DN125	8	70	450
G85-1	720	65	0.6	15	60	DN150	Dn150	10	80	450
G105-1	500	100	0.6	22	60	DN200	DN200	15	110	550
G135-1	400	150	0.6	37	60	DN250	DN250	20	150	600

Notice:

- The testing data of performance table is eau douce whose thmperature is 20 °C, the viscosity is 1 mm²/s.
- When pump transport high viscosity medium which containing grain, according to medium characteristic, the pump speed must different.
- When pump transport diversified abrasional medium, the pump speed also different.

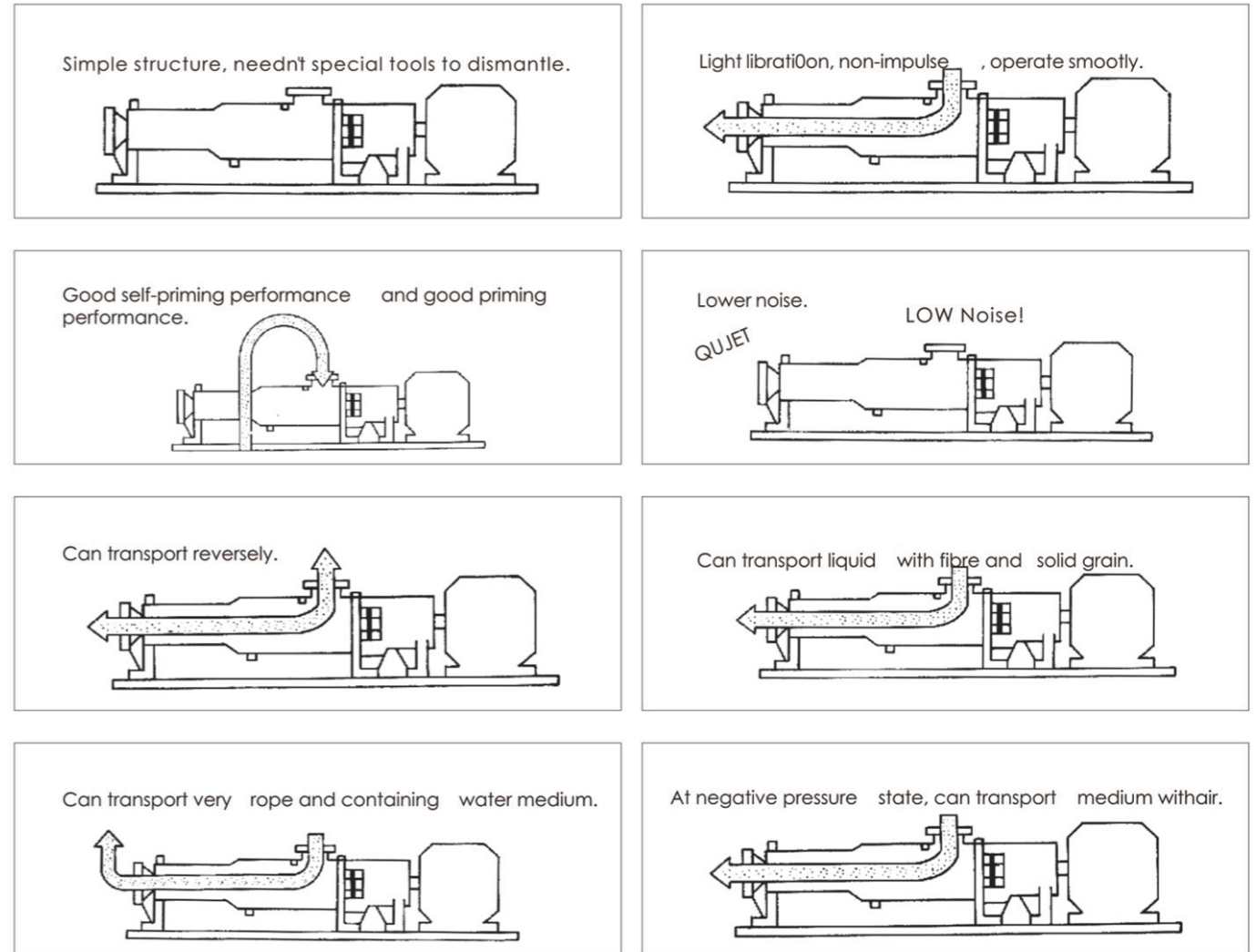
■ Outline installation drawing



■ Outline installational dimension table

Type	L1	L2	L3	L4	L5	H	H1	B	B1	N-φd
G20-1	93	-	545	220	800	130	195	125	160	4-φ14
G25-1	135	-	800	325	1140	145	250	160	180	4-φ14
G25-2	110	-	935	460	1280	160	260	160	200	4-φ14
G30-1	105	-	935	340	1170	160	265	160	200	4-φ14
G30-2	135	650	460	550	1505	195	315	200	245	6-φ16
G35-1	130	475	530	430	1385	200	315	205	245	6-φ16
G35-2	140	485	715	620	1610	215	340	200	245	6-φ16
G40-1	150	465	622	455	1515	200	315	205	250	6-φ16
G40-2	165	665	625	670	1720	215	325	210	240	6-φ16
G50-1	150	575	545	490	1560	210	320	205	245	6-φ16
G50-2	150	700	700	735	1975	240	380	230	295	6-φ16
G60-1	150	675	700	570	1840	235	385	235	285	6-φ16
G60-2	150	800	845	850	2145	240	390	240	315	6-φ16
G70-1	183	720	750	685	1995	245	435	240	315	6-φ16
G70-2	190	900	935	1055	2380	265	465	250	350	6-φ20
G85-1	200	800	850	735	2045	280	480	260	350	6-φ20
G105-1	210	870	930	855	2200	300	500	300	400	6-φ20
G135-1	250	930	970	985	2300	300	510	320	450	6-φ22

■ Perfect demonstration



■ Chosen of pump driving ways

Driving ways	Instructio n
	Jointed by spring coupler and driven by rating speed common motor.
	Jointed by spring coupler and driven by frequency conversion timing motor.
	Jointed by spring coupler and driven by stepless shift motor.
	Backpacing motor driving