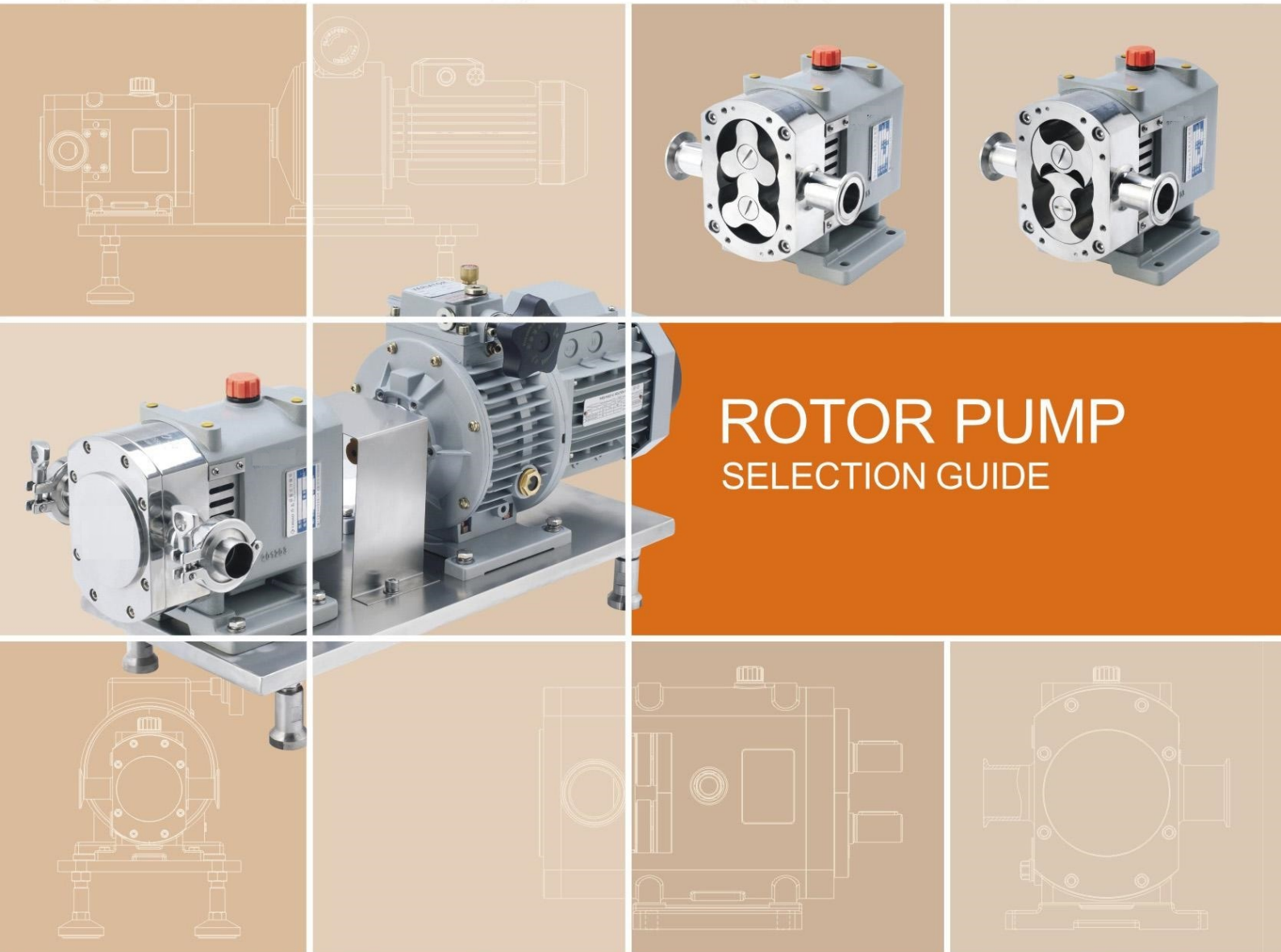


# PROLOBE

## ROTOR PUMP SELECTION GUIDE



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# Applications

**Food Industry:** milk, yoghurt, butter, ice-cream, chocolate, jelly, jam, syrup, beer, soft drinks, fruit juice, pudding, tomato sauce, sesame, peanut butter, condiment, edible oil, cheese blocks, whey, wort, yeast, etc.

**Daily Chemicals:** face cream, shampoo, detergent, hand sanitizer, skin gel, detergent, cosmetics, skin cream, toothpaste, hair dye, soap, shoe polish, glycerol, fatty alcohol, hair gel, etc.

**Chemical Industry:** gasoline, diesel, kerosene, crude oil, sludge, asphalt, paint, pigment, dyes, coating material, catalyzer, leather, fat, solvents, resins, silicone oil, adhesives, latex, colloidal material, and other colloidal subst, etc.

**Pharmacy Industry:** health care products, pharmaceutical, vaccine, biological products, syrup, slurry, protein, royal jelly, extracts, emulsions, pills slurry, fish meal, pollen, etc.

**Environmental Protection:** mud, manure, fertilizer solution, sewage, sludge, toxic agents, etc.

**Construction Industry:** paints, coatings, resins, organic solvents, indoor/outdoor wall coating, water proof coating, ceramic coating, paint coating, ceramic glazing, etc.

**Other:** nano-materials, papermaking, textile, plastic, biochemical, coal industry, etc.



## Typical rotors and application features



### Three-lobe rotor pump

Especially suitable for the mediums that are easy to foaming or may be damaged during high-speed transportation. Output materials has been steadily delivered and its components will not be destroyed.



### Butterfly rotor pump

With butterfly rotor, it is superior to other rotor pump when transferring material with high viscosity and large powder and effectively transports extremely stiff material. Output material has been steadily delivered and its components will not be destroyed.



### Single-lobe rotor pump

This pump is especially for material with large particles.



# Drive Configuration

## Motor+stepless speed reducer

The main characteristics: High speed-regulating precision, large speed-changing range (The speed ratio ranges from 200 to 1000 freely). Continuous in running, smooth in driving, stable in performance and low in noise, this is reliable and infinitive flow adjustment. But it changes the speed by manual adjustment, low degree of automation, and speed-regulation should be effected in running. Do not turn the hand wheel of speed-regulation when the machine stops. The stepless speed reducer is not used in such an occasion where overload or running-blockage is easy to occur.



## Motor+one grade stepless speed reducer

The main characteristics: Compared with ordinary stepless speed reducer, it has lower speed (40-400rpm). With the same power, it has higher torque. And it runs more smoothly and steadily with lower noise, its disadvantages are same as ordinary stepless speed reducer.



## Motor +one-grade gear reducer

The main characteristics: Strong bearing capacity, specifically for the delivery of materials with high viscosity and thickness. If the inverter motor adopted, the inverter can be configured, in order to achieve the automatic adjustment of the flow.



## Motor+two-grade gear reducer

The main characteristic: Same as one-grade gear reducer, but has lower speed and higher torque.



## PLC+VFD Control

Main features: Controlled by PLC or VFD, the medium can be fed quantitatively, regularly and constant pressure. PLC is a kind of automatic control. It can be acted as high-precision metering pump.



## Servo drive control

The rotor pump is driven by servo motor and is equipped with PLC+HMI control system, which can realize high-precision and highly automatic metering and dosing;

- ● The rotor pump can meet the sanitary requirements of materials (viscosity, solid content) to adapt to a wide range of applications;
- Can be equipped with multiple leaf rotor, to achieve high precision, low pulse measurement dosing;□
- The minimum volume error is about 0.5ml, transportation repeatability accuracy up to  $\pm 2\%$ ;□
- Highly automated and integrated; With the control, DCS and other systems docking, to achieve all-digital control;□
- Servo motor with brake, can achieve a very short time, high frequency start and stop, and ensure the delivery of high precision, widely used in filling, dosing and other industries.



## Main Parameter

Model	Capacity L/R	Flow m <sup>3</sup> /h	Speed rpm	Max Pressure Mpa	Viscosity cp	Power kw	Connection Clamp	Flange
PLBP1	0.05	0~1	40~700	1.0	1~500000	0.25~1.5	1"	DN20
PLBP2	0.1	0.2~2	40~700	1.2	1~500000	0.55~2.2	1.25"	DN25
PLBP3	0.17	0.4~3	40~500	1.2	1~1000000	0.75~3.0	1.5"	DN32
PLBP5	0.26	0.6~5	40~500	1.5	1~1000000	1.5~5.5	2"	DN40
PLBP8	0.46	1~8	40~450	1.5	1~1000000	2.2~11	2.5"	DN50
PLBP12	0.70	1.6~12	40~450	1.5	1~1000000	3.0~15	2.5"	DN50 or DN65
PLBP20	1.20	2.8~20	40~400	1.5	1~1000000	4.0~18.5	3"	DN65 or DN80
PLBP35	2.10	5~35	40~400	1.5	1~1000000	7.5~30	4"	DN100
PLBP55	4.20	10~55	40~350	1.5	1~1000000	11~45		DN125
PLBP80	6.70	16~80	40~350	1.5	1~1000000	15~75		DN125 or DN150
PLBP120	11.0	26~120	40~300	1.5	1~1000000	22~90		DN150

- 1.The value for L/R in the table is tested by water;
- 2.The higher viscosity of the liquid, the lower speed should be;
- 3.Flow is proportional to the speed, and inversely proportional to the pressure;
- 4.Max pressure means the max pressure pump can produce; the max pressure may be different for different liquids;

## Option



**V shape inlet**



**Vertical inlet and outlet**

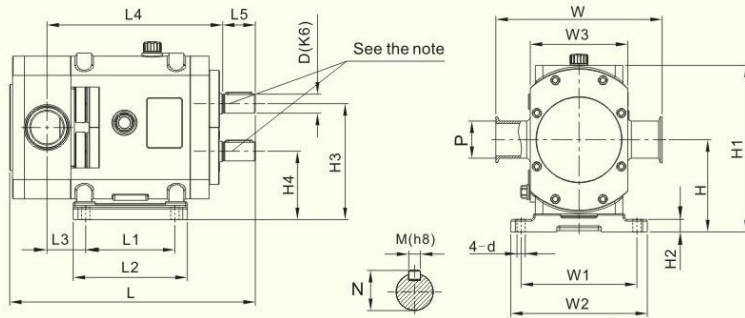


**Heat jacket**



**Movable**

## Pump Head Drawing



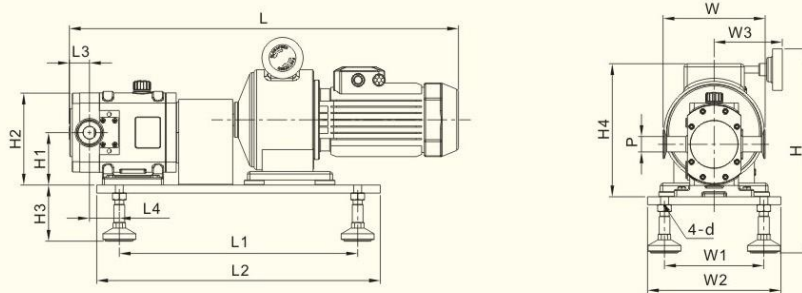
**Note:**  
Main driving shaft position: The height of the main driving shaft is at H3 if the driving is ordinary stepless speed variator, frequency conversion motor or two-grade gear reducer. The height of the main driving shaft is at H4 if the driving is one grade gear reducer or one grade stepless speed variator.

Unit (mm)

Model	L	L1	L2	L3	L4	L5	H	H1	H2	H3	H4	W	W1	W2	W3	M(h8)	N	d	D(K6)	P	
																				Clamp	Flange
PLBP1	233	78	108	37	167	30	92.5	165	13	115	70	180	115	140	94	5	18	Φ9	Φ16	1"	DN20
PLBP2	267	92	124	45.5	193	31	105	188	14	131	79	198	132	156	110	6	20.5	Φ9	Φ19	1.25"	DN25
PLBP3	313	110	143	49.5	221	43	121	217.5	17	150	92	217	144	170	125	8	27	Φ10	Φ24	1.5"	DN32
PLBP5	363.5	130	170	61.5	262	46	134	241	19	168.5	99.5	240	170	202	142	8	31	Φ12	Φ28	2"	DN40
PLBP8	413	150	192	65	295	55	155	280	21	195	115	280	195	230	164	10	35	Φ12	Φ32	2.5"	DN50
PLBP12	477	155	215	86.5	340	62	181	328	24	228.5	133.5	320	225	270	192	12	45	Φ14	Φ42	2.5"	DN65 or DN50
PLBP20	544	190	250	98	390	70	209	382	26	266	152	372	268	315	232	14	53.5	Φ16	Φ50	3"	DN80 or DN65
PLBP35	614	218	278	104	436	80	239	439	26	306.5	171.5	432	298	348	266	18	64.5	Φ18	Φ60	4"	DN100
PLBP55	720	215	295	154	513.5	95	287	527	32	369.5	204.5	522	370	430	318	20	74.5	Φ22	Φ70		DN125
PLBP80	803	260	340	162.5	579	105	339.5	619	37	435	239	570	410	480	366	22	85	Φ22	Φ90		DN125 or DN150
PLBP120	930	315	410	178	660	130	398	740	42	508	270	640	470	550	425	25	95.5	Φ26	Φ100		DN150

**Note:**The data in the table is subject to change without notice . See the actual products for the right data .

## General Installation Drawing



Unit (mm)

Model	L	L1	L2	L3	L4	H	H1	H2	H3	W	W1	W2	W3	d	P		
															Clamp	Flange	
PLBP1	685	420	500	35	53	360	92.5	162	100	180	175	235	120	M16	Φ14	1"	DN20
PLBP2	805	490	570	42	60	391	105	185	100	198	200	260	148	M16	Φ14	1.25"	DN25
PLBP3	925	600	700	48.5	68	455	121	213	100	217	270	350	166	M16	Φ14	1.5"	DN32
PLBP5	1050	630	750	55.5	81.5	478	134	236.5	110	240	270	350	166	M20	Φ18	2"	DN40
PLBP8	1250	720	840	63	84	573	160	280	110	280	320	420	195	M20	Φ18	2.5"	DN50
PLBP12	1335	780	940	74.5	116.5	490	181	323	125	320	330	420	200	M24	Φ20	2.5"	DN65 or DN50
PLBP20	1550	840	1000	83	119	555	209	376.5	125	372	385	475	245	M24	Φ20	3"	DN80 or DN65
PLBP35	1680	1035	1200	98	101	590	239	433	134	432	410	460	171	Φ25		4"	DN100
PLBP55	1930	1200	1400	111	149	705	287	527	178	522	525	586	205	Φ35			DN125
PLBP80	2180	1400	1600	119.5	142	812	339.5	619	198	570	600	670	230	Φ40			DN125 or DN150
PLBP120	2450	1650	1900	130	158	920	398	740	225	640	700	780	280	Φ45			DN150

**Note:**The data in the table is subject to change without notice . See the actual products for the right data .