Pumps & Systems

SOT

Low Flow Pumps



Source Pumps & Systems Co., LTD.

www.sourcegroup.com.cn

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Application ranges

SOT series low flow rate pump is developed for the facts that normal centrifugal pump's application is limited by the condition of low flow rate and high head . It has the advantages of simple structure, maintance convenient, performance stable and the application range is wide, etc. It's efficiency is better than general centrifugal pump. It is for pumping clean or slightly polluted, cold or hot, chemically neutral or aggressive liquid , which mainly applied :

Oil Production

Water flood, saltwater disposal, well kill , transfer, pipeline injection, reverse osmosis,and steam generation

• Terrestrial Heat Natural Gas

Feeding , compressing , filling, storage and carriage , transfer

Chemical and Petroleum

Descaling, process injection, spraying, sampling, caustic serviec, seal flushing, reactor feed, high flow metering, transfer, and waste disposal.

Pollution Control

Spraying, descaling, wet scrubbing, ultra filtrantion, revers osmosis, and other similar application.

Pulp and Paper

Washdown, trim squirt , boiler feed, reverse osmosis, pigment metering, spent sulfide liquor, and seal flushing .

Power System

Boiler feed , desuperheating, condensate return, deaerating, seal flush, and turbine Nox suppression.

Mining

Seal flushing, dust supperssion, low flow dewateing, hydrauric mining, and in-situinjection.

Aerospace

Washing, refuelling, feeding in raw material, fuel flooding

Vihecle Manufcaturing

Spraying, painting, and lead finish booth cleaning , deburring plastics, continuous wire vulcanization, and gun drill coolant feed .

General Industry

Vihicle washing, fuel atomization, feeding, tanning paste board cleaning, continuous wire vulcanization, and boiler system .

Food and Beverage

Portable cleaning, central cleaning, beverage container washing, boiler feed , high flow metering, spraying, inuection

Pesticide and Medicine

Feeding, recirculation , filtering, reverse osmosis, transfer

Seals choice

• Packed stuffing boxes

Latern ring supplying liquid to seals is assembled in the middle of stuffing box , which cools and lubricates the stuffing , preventing gsa leaking. Sealing Pressure is at least 0.1 Mpa above shaft sealing pressure.

• Mechanical seals

Single seal

Operating data

Suction size :	DN: 40mm
Discharge size :	DN: 25mm
Capacity range :	Q : 0.4 ～ 6.3m³ /h
Heads:	H : 15 ～ 100m
Pressure :	P : ～ 2.5MPa
Temperature:	T : -40 ～ +200℃

Description of the type

For exanple:

SOT 40-160

- 160 — Nominal dianeterof Impeller mm
- 40 — Capacity code, The series has 5 capacity codes:
  - 10-0.4m³ /h
  - 20-0.8m³ /h
  - 30-1.6m³ /h
  - 40-3.2m³ /h
  - 50-6.3m³ /h
- SOT — Series

Characteristics of structuer

It is single stage, horizontal radially split partial emmission pump (tangent pump), a kind of partial centrifugal pump. The pump has a bracket, single suction open impeller, axial suction and tangent discharg. According to the operating. conditions, it can use packing seal or mechanical seals of any desigh (single or double) , with cooling and flushing system.The nomal pressure level of suction and discharge is same. the pump rotates CCW seen from driven end.

It uses bearings lubricated grease, which is equiped on the bracket, with flexible coupling can compensate little shaft distance of horlizontal, radial, and rotational direction.

Liquid transported

• Sulphric acid , hydrochloric acid ,phosphoric acid for organic acid and inorganic acid which at various temperature and concentration.

• Sodium hydroxide sodium carbonate and alkaline liquid at various temperature and conventration.

• All kinds of salt solution.

• Various liquid petrochemical products, organic compound as well as raw materials with corrosion behavious and the products .

At present , anti corrosive materials for pumps provided by our plant can meet all the requirements of the liquid mentioned above.

Please provided the detail service conditions for the pump to us when you order.

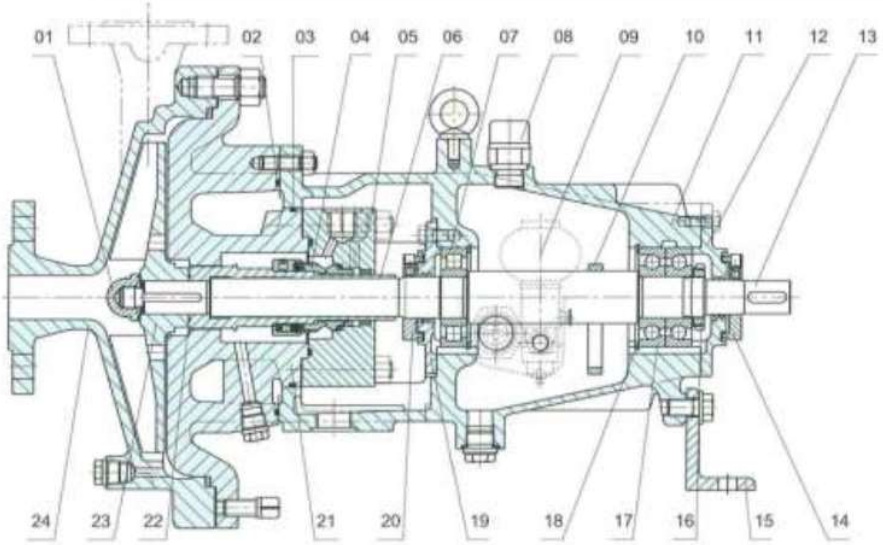
A propriate flushing plan should be chosen when single seal is applied this series pump's standard flushing plans include as following:API PLAN02, API PLAN 11 ,API PLAN 21. We recommend API PLAN 02 when media temperature is not high and lubricating is good.

Double seal

When liquid is slightly polluted or singal seal can't meet requirments. You shoud choose double seal. If temperature is above +200 ℃, we should draw cooling water to the seal cooling box.

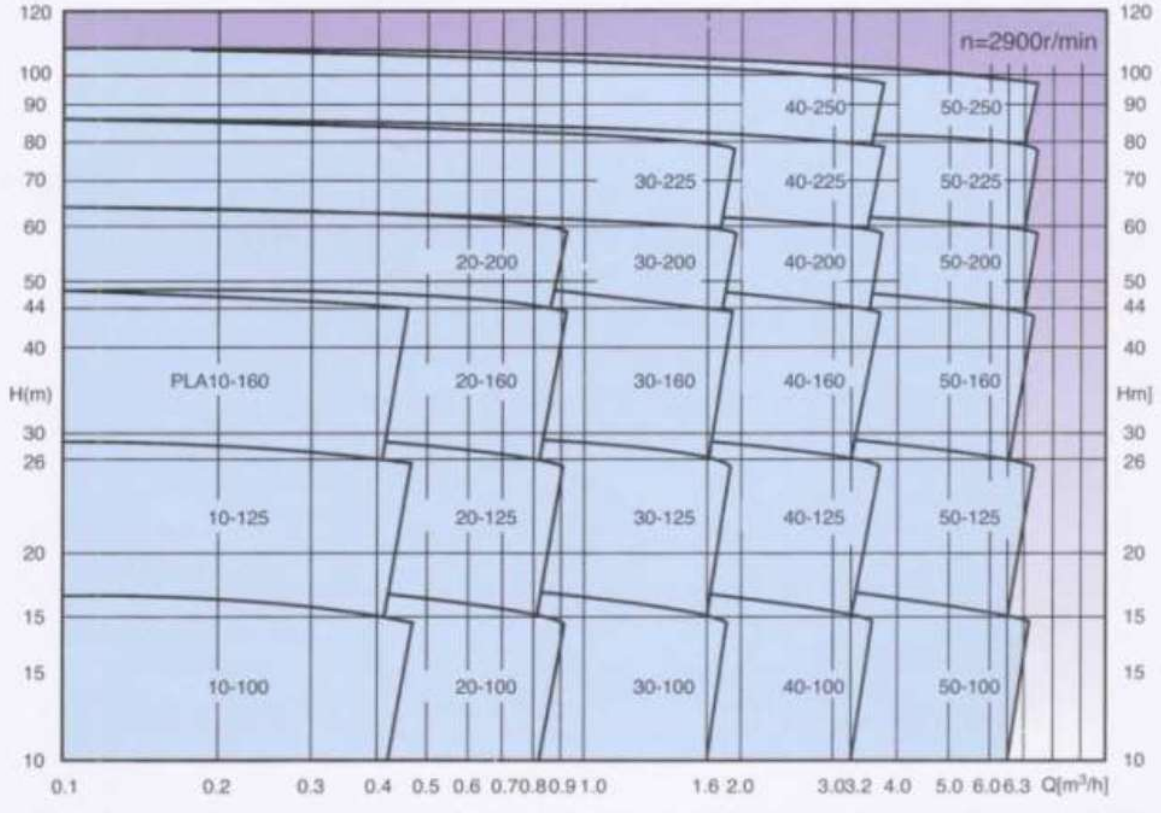
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SOT Section Drawing



01	Impeller Nut	05	Seal Cover	09	Constant Level Oiler	13	Shaft	17	Bearings	21	Pump Cover
02	O Ring	06	Seal Sleeve	10	Lubricating Ring	14	Deflector	18	Bearing Circlip	22	O Ring
03	O Ring	07	Bearing	11	Bearing House	15	Foot	19	Bearing Cover	23	Impeller
04	Mechanical Seal	08	Vent Plug	12	Bearing Cover	16	Circular Nut	20	Deflector	24	Pump Casing

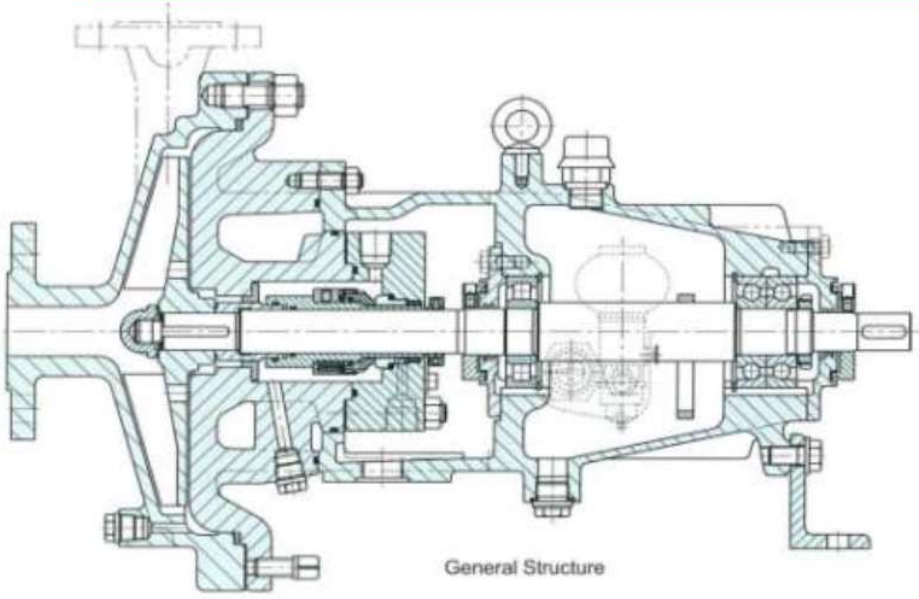
SOT Range of Performance



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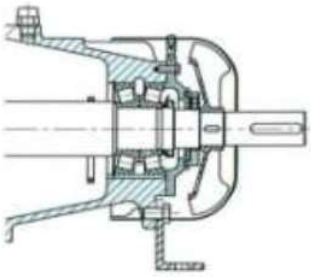
SOT Structure



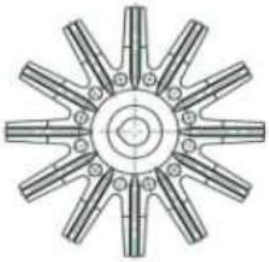
General Structure



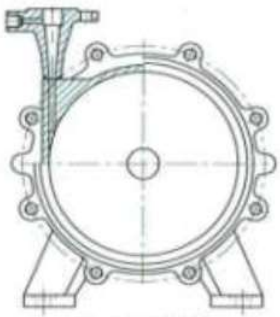
Heat keeping jacket in casing



Wind-cooling bearing bracket

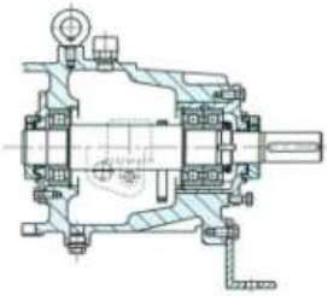


Partial flow impeller

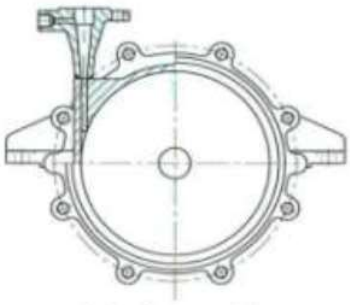


Foot support

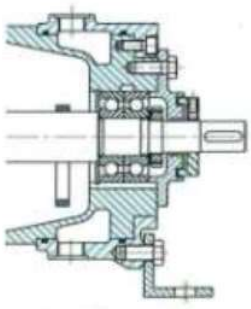




The axial adjustment available for bearing bracket



Centerline supporting



Water-cooling bearing bracket

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SOT Table of Standard Performance

Size	Q(m^3/h)	H(m)	η %	NPSHr(m)	N(kW)	Power and Type
10-100	0.4	15	18	1.6	1.5 1.5	Y90S-2 Y90S-2
10-125	0.4	26	13	1.6	1.5 1.5	Y90S-2 Y90S-2
10-160	0.4	44	8	1.6	2.2 2.2	Y90L-2 Y90L-2
20-100	0.8	15	27	2.0	1.5 2.2	Y90S-2 Y90L-2
20-125	0.8	26	18	2.0	1.5 2.2	Y90S-2 Y90L-2
20-160	0.8	44	9	2.0	2.2 3.0	Y90L-2 Y100L-2
20-200	0.8	60	6	2.0	5.5 5.5	Y132S1-2 Y132S1-2
30-100	1.6	15	25	2.4	1.5 2.2	Y90S-2 Y90L-2
30-125	1.6	26	20	2.4	1.5 2.2	Y90S-2 Y90L-2
30-160	1.6	44	16	2.4	3.0 3.0	Y100L-2 Y100L-2
30-200	1.6	60	10	2.4	5.5 5.5	Y132S1-2 Y132S1-2
30-225	1.6	80	8	2.4	7.5 7.5	Y132S2-2 Y132S2-2

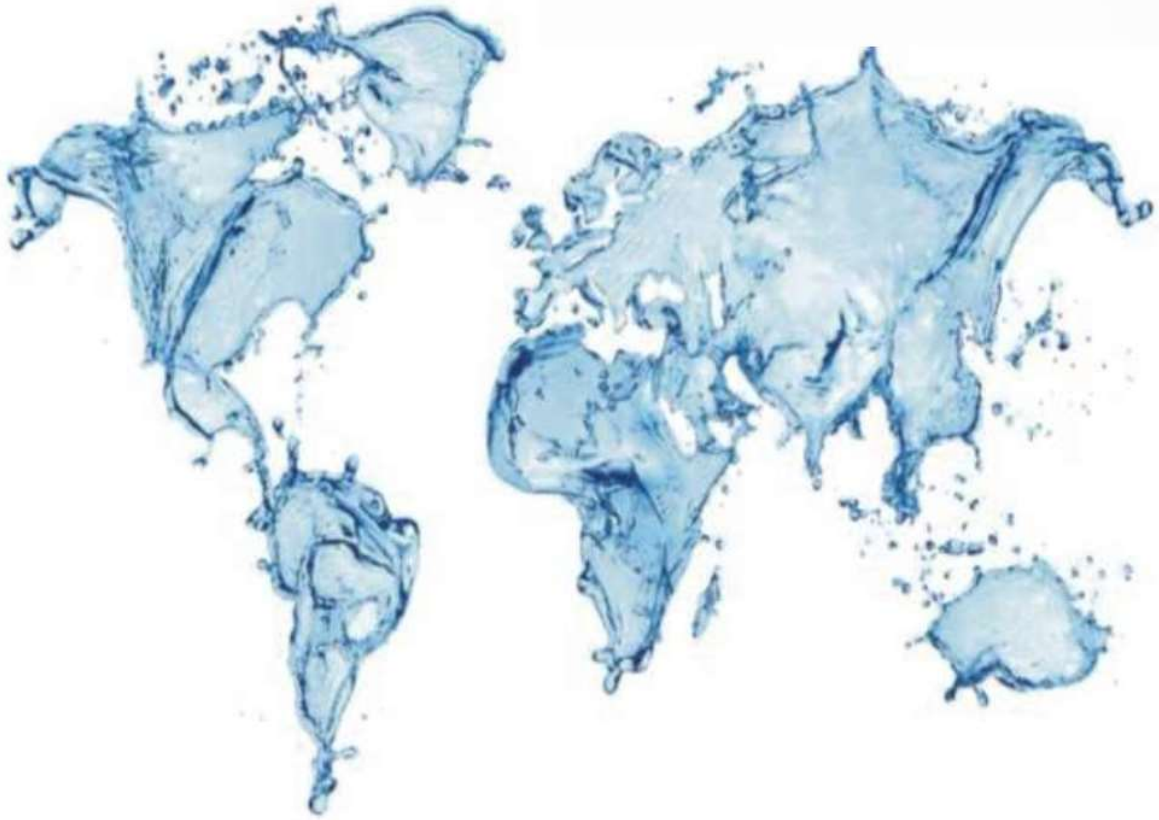
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Size	Q(m^3/h)	H(m)	η %	NPSHr(m)	N(kW)	Power and Type
40-100	3.2	15	35	3.0	1.5 2.2	Y90S-2 Y90L-2
40-125	3.2	26	28	3.0	2.2 2.2	Y90L-2 Y90L-2
40-160	3.2	44	22	3.0	4.0 4.0	Y112M-2 Y112M-2
40-200	3.2	60	18	3.0	5.5 5.5	Y132S1-2 Y132S1-2
40-225	3.2	80	15	3.0	7.5 7.5	Y132S2-2 Y132S2-2
40-250	3.2	100	12	3.0	11 11	Y160M1-2 Y160M1-2
50-100	6.3	15	52	3.5	2.2 2.2	Y90L-2 Y90L-2
50-125	6.3	26	47	3.5	2.2 3.0	Y90L-2 Y100L-2
50-160	6.3	44	38	3.5	4.0 5.5	Y112M-2 Y132S1-2
50-200	6.3	60	30	3.5	7.5 7.5	Y132S2-2 Y132S2-2
50-225	6.3	80	22	3.5	11 11	Y160M1-2 Y160M1-2
50-250	6.3	100	20	3.5	15 15	Y160M2-2 Y160M2-2

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