

SHANGHAI MIAOFENG INDUSTRIAL CO.,LTD

**Vertical, Heavy Duty, Single Stage
High Speed Integrally Gear Driven
Process Pumps**

GSB-L
API-610 Latest Edition



www.oh6pump.com

SHANGHAI MIAOFENG INDUSTRIAL CO.,LTD

Leader in API 610 high-speed pump Technology

OH6 TYPE Pump combines more than 23 years of experience in API 610 high-speed pump development and manufacturing with a deep commitment to meeting the needs of our customers

Our detailed process and application knowledge has allowed us to develop innovative API 610 high-speed pump pumping solutions

Today the company is recognized for the quality and reliability of its over 11,000 sets of high-speed pumps installed in worldwide products.

We have sales and service facilities in all the major markets to provide fast and flexible response and support.

Extensive Services and Product Range

TIANDE Pump provide innovative high-speed pump pumping solutions to business partners in the following industries:

- Oil & Gas
- Refinery
- Hydrocarbon Processing
- Fertilizers
- Petrochemical

All our pumps are manufactured and test the latest edition of API 610 to ensure reliable and safe operation at site.



Model Description:

GSB - L1/2/3 - Flow / Head
1 2 3 4

Number signification

- 1.GSB: High-speed Pumps
- 2. L: Vertical
- 2.1-One stage increase speed, 2 two stage increase speed, 3 two stage high power
- 3. Flow: Design point flow (m³/h)
- 4. Head : Design point head (m)

Standard Scope of Supply

- Pump with integrally gear box
- Main motor
- Coupling with guard
- Shaft driven lube oil pump
- Auxiliary lube oil pump with motor
- Single filter (Double filter optional)
- Lube oil pressure gauge
- Lube oil temperature gauge
- Lube oil pressure transmitter
- Water cooler(Forced air cooler with driver optional)
- Mechanical seal & system
- All necessary auxiliary pipelines
- Common skids

■ Pump can be customized do suitable customer design parameter



Optional Features

- API 614 lube oil console
- Vibration monitoring system
- Parallel arrangement
- Custom skid packaging
- Customized instruments and system is applicable
- Sound noise enclosure



**GSB-L1
Design Feature**

Input Shaft Assembly:
Balancing standard service reduces vibration and noise while improving reliability and operating life. ISO 1940 Grade 2.5

O-Rings Standard in Gearbox Split Line:
Eliminates leakage and reduces clean-up and contamination to atmosphere. Improves durability for shipping, storage, and assembly.

Oil Mechanical Seal:
Eliminates leakage and reduces clean-up and contamination to atmosphere. Improves durability for shipping, storage, and assembly.

Lube Oil Pump:
Improved design eliminates oil pressure fluctuations. prevents oil.

Mechanical Seal:
Single, Double, & Tandem Mechanical Seal Arrangements can be optional.

Pump Volute:
The hydraulic optimization design can effectively improve the hydraulic efficiency of the pump.

Tapered Alignment Pins:
Maintains true position and integrity of the bearing bores. Alignment is maintained even after multiple rebuilds.

Upper Radial Journal Bearing:
To ensure the smooth operation of the pump.

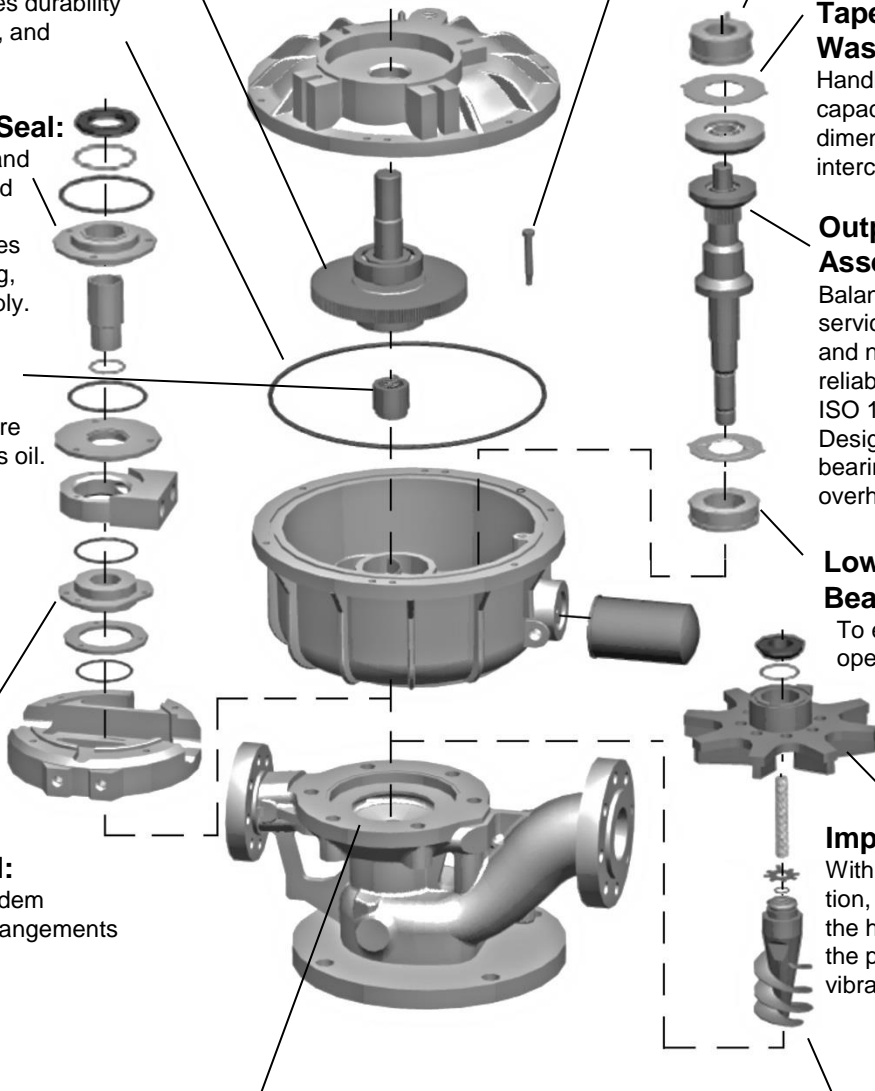
Tapered Thrust Washer:
Handles higher thrust capacity and is dimensionally interchangeable.

Output Shaft Assembly:
Balancing standard service reduces vibration and noise while improving reliability and operating life. ISO 1940 Grade 2.5. Designed for minimum bearing span to overhang ratio.

Lower Radial Journal Bearing:
To ensure the smooth operation of the pump.

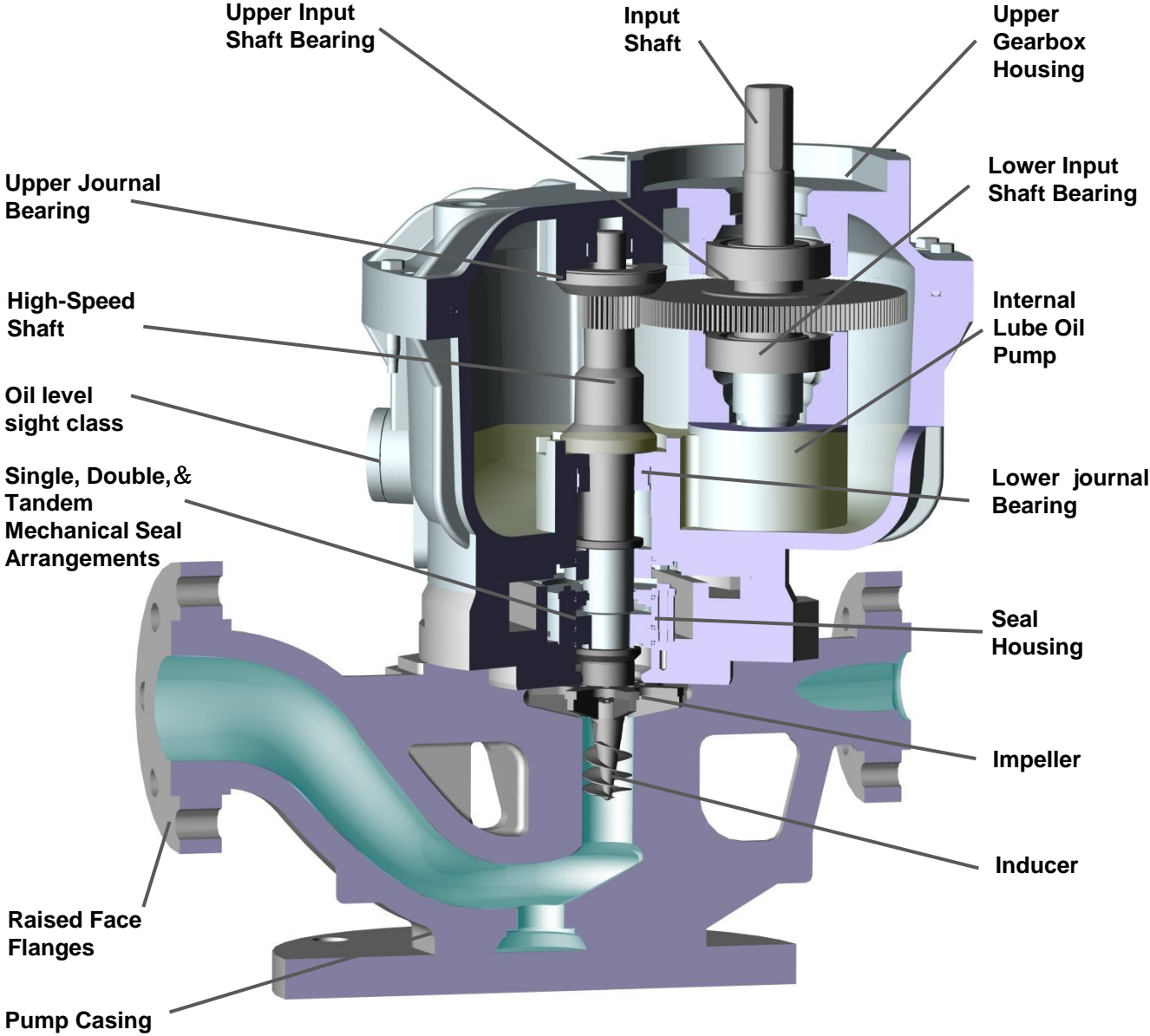
Impeller:
With the impeller combination, can effectively improve the hydraulic efficiency of the pump, reducing pump vibration and noise.

Inducer:
Produced by machining centre, which can better improve the NPSHr



GSB-L1

Cross Sectional



Materials

All common API 610 Material Classes like S-5, S-6, S-8, C-6, A-7, A-8, D-1, D-2. Other material combinations are readily available like alloy 20, Titanium ...

GSB-L2

Design Feature

Input Shaft Assembly:

Balancing standard service reduces vibration and noise while improving reliability and operating life. ISO 1940 Grade 2.5.

Lube Oil Pump:

Improved design eliminates oil pressure fluctuations. prevents oil.

Radial Journal Bearing:

To ensure the smooth operation

Tapered Thrust Washer:

Handles higher thrust capacity and is dimensionally interchangeable.

Output Shaft Assembly:

Balancing standard service reduces vibration and noise while improving reliability and operating life. ISO 1940 Grade 2.5. Designed for minimum bearing span to overhang ratio.

Tapered Alignment Pins:

Maintains true position and integrity of the bearing bores. Alignment is maintained even after multiple rebuilds.

O-Rings Standard in Gearbox Split Line:

Eliminates leakage and reduces clean-up and contamination to atmosphere

Idler Shaft Assembly:

Balancing standard service reduces vibration and noise while improving reliability and operating life. ISO 1940 Grade 2.5.

Oil Mechanical Seal:

Eliminates leakage and reduces clean-up and contamination to atmosphere

Impeller:

With the impeller combination, can effectively improve the hydraulic efficiency of the pump, reducing pump vibration and noise.

Inducer:

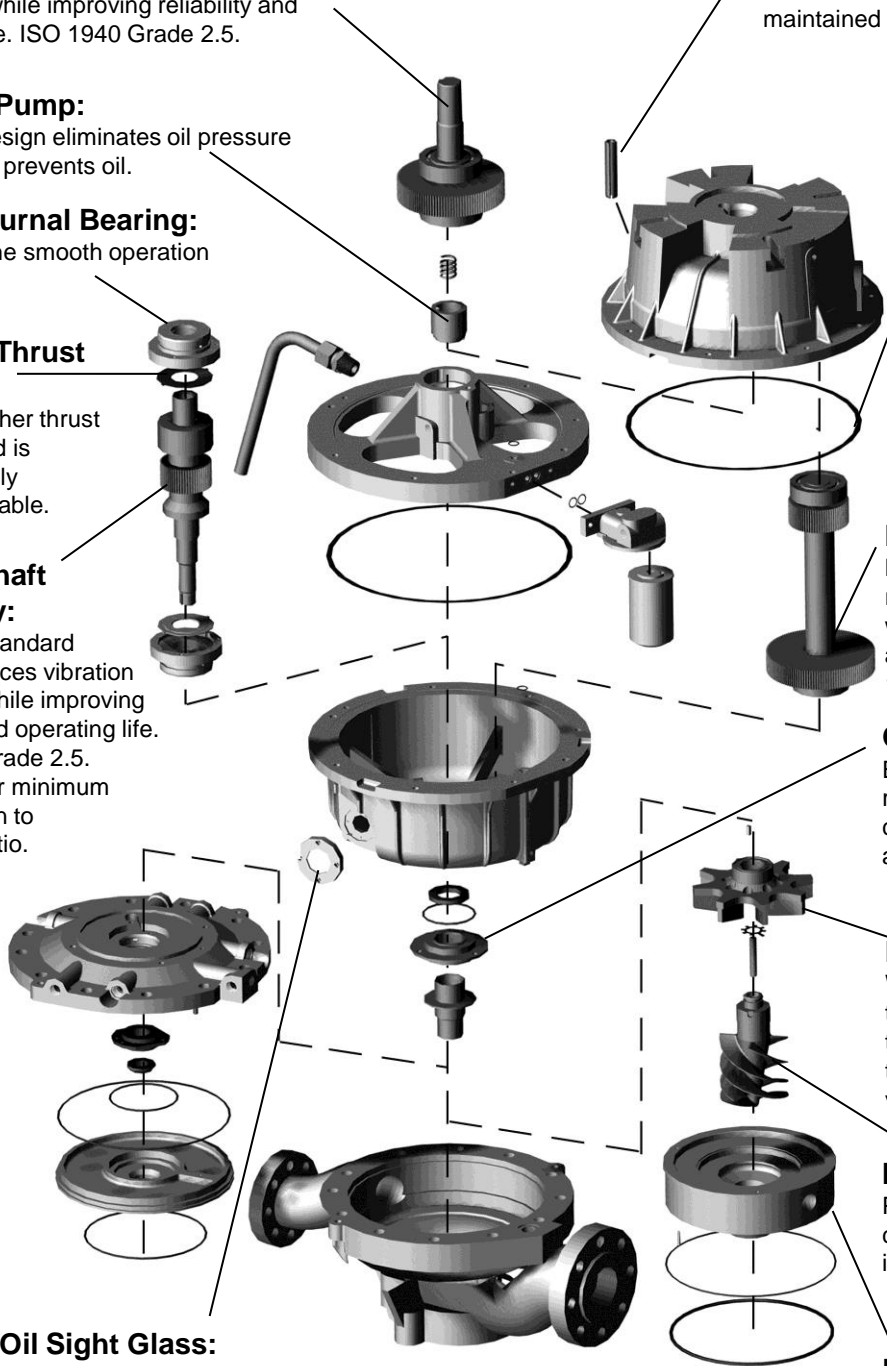
Produced by machining center, which can better improve the

Diffuser:

The hydraulic optimization design can effectively improve the hydraulic efficiency of the pump.

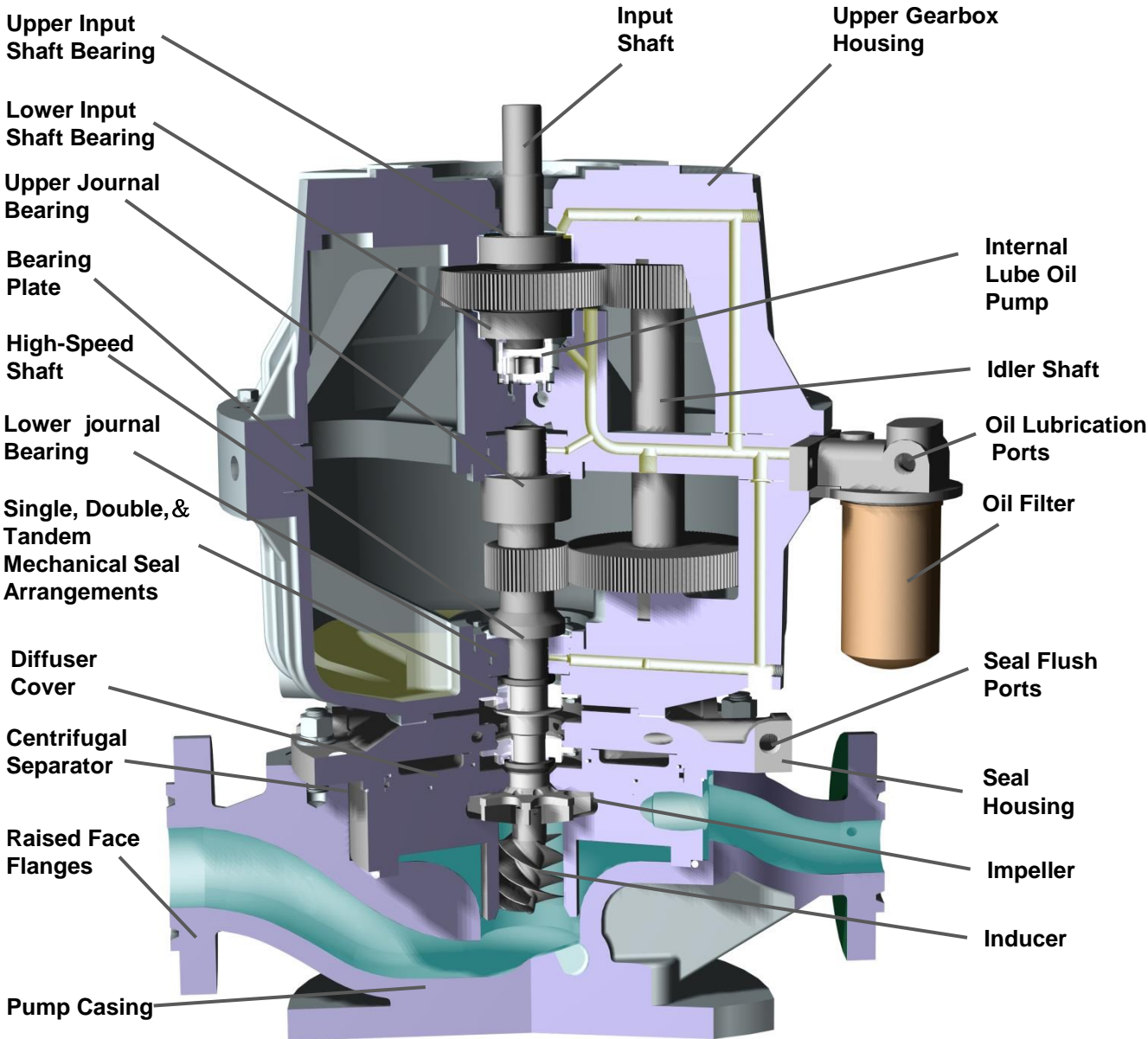
Extended Oil Sight Glass:

Greatly improves oil level reading accuracy at all temperatures and speeds. Helps to prevent overfilling.



GSB-L2

Cross Sectional



Materials

All common API 610 Material Classes like S-5, S-6, S-8, C-6, A-7, A-8, D-1, D-2. Other material combinations are readily available like alloy 20, Titanium ...

GSB-L3

Design Feature

Input Shaft Assembly:

Balancing standard service reduces vibration and noise while improving reliability and operating life. ISO 1940 Grade 2.5.

Lube Oil Pump:

Improved design eliminates oil pressure fluctuations. prevents oil.

Radial Journal Bearing:

To ensure the smooth operation of the pump.

Tapered Thrust Washer:

Handles higher thrust capacity and is dimensionally interchangeable.

Output Shaft Assembly:

Balancing standard service reduces vibration and noise while improving reliability and operating life. ISO 1940 Grade 2.5. Designed for minimum bearing span to overhang ratio.

Extended Oil Sight Glass:

Greatly improves oil level reading accuracy at all temperatures and speeds. Helps to prevent overfilling.

Oil Mechanical Seal:

Eliminates leakage and reduces clean-up and contamination to atmosphere. Improves durability for shipping, storage, and assembly.

Mechanical Seal:

Eliminates leakage and reduces clean-up and contamination to atmosphere. Improves durability for shipping, storage, and assembly. Single, Double, & Tandem Mechanical Seal Arrangements can be optional.

Tapered Alignment Pins:

Maintains true position and integrity of the bearing bores. Alignment is maintained even after multiple rebuilds.

Combination Labyrinth Seal:

The inner sleeve eliminates input shaft grooving and extends seal life to 3 years. The seal may be removed and reused many times.

O-Rings Standard in Gearbox Split Line:

Eliminates leakage and reduces clean-up and contamination to atmosphere. Improves durability for shipping, storage, and assembly.

Idler Shaft Assembly:

Balancing standard service reduces vibration and noise while improving reliability and operating life. ISO 1940 Grade 2.5.

Impeller:

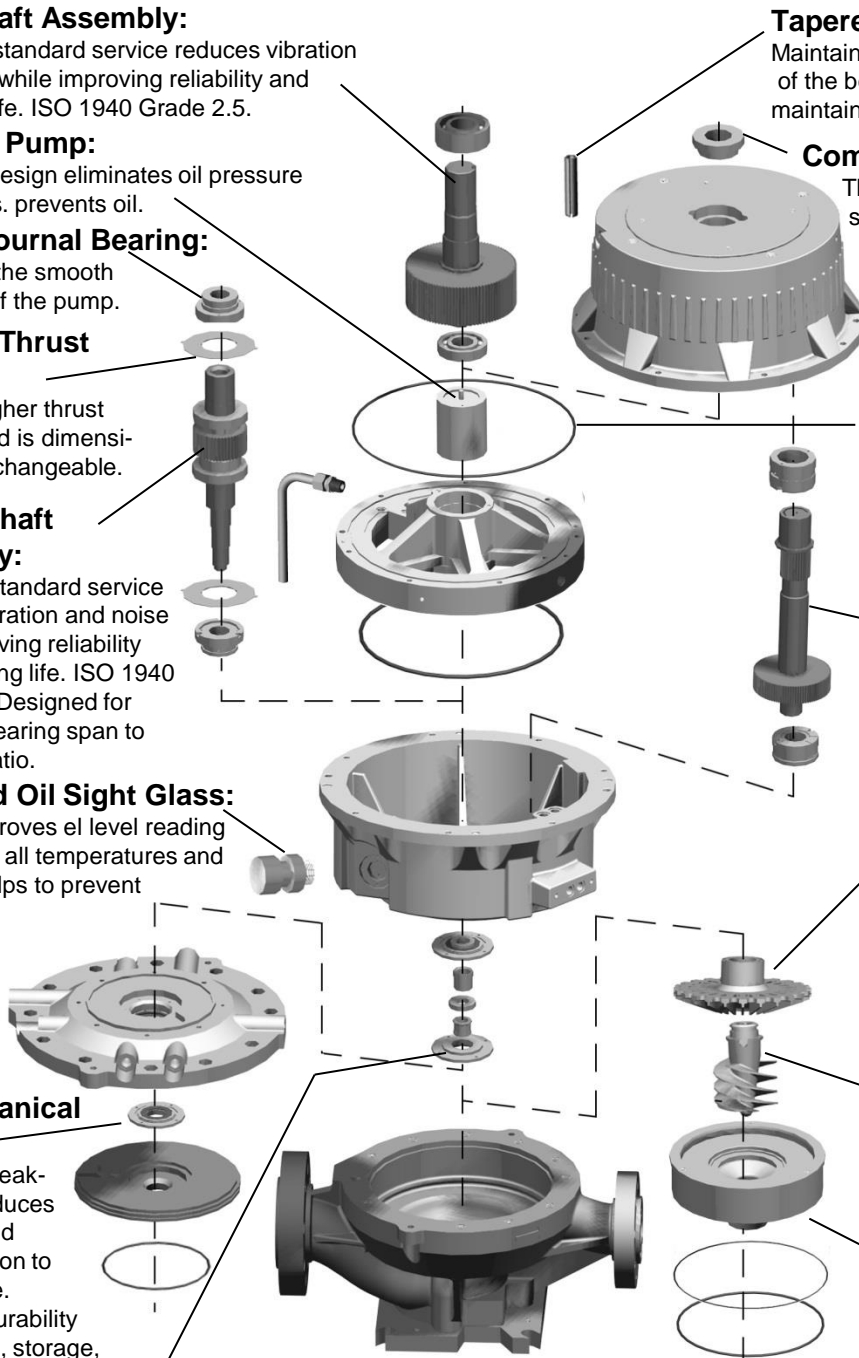
With the impeller combination, can effectively improve the hydraulic efficiency of the pump, reducing pump vibration and noise.

Inducer:

Produced by machining center, which can better improve the NPSHr of the pump.

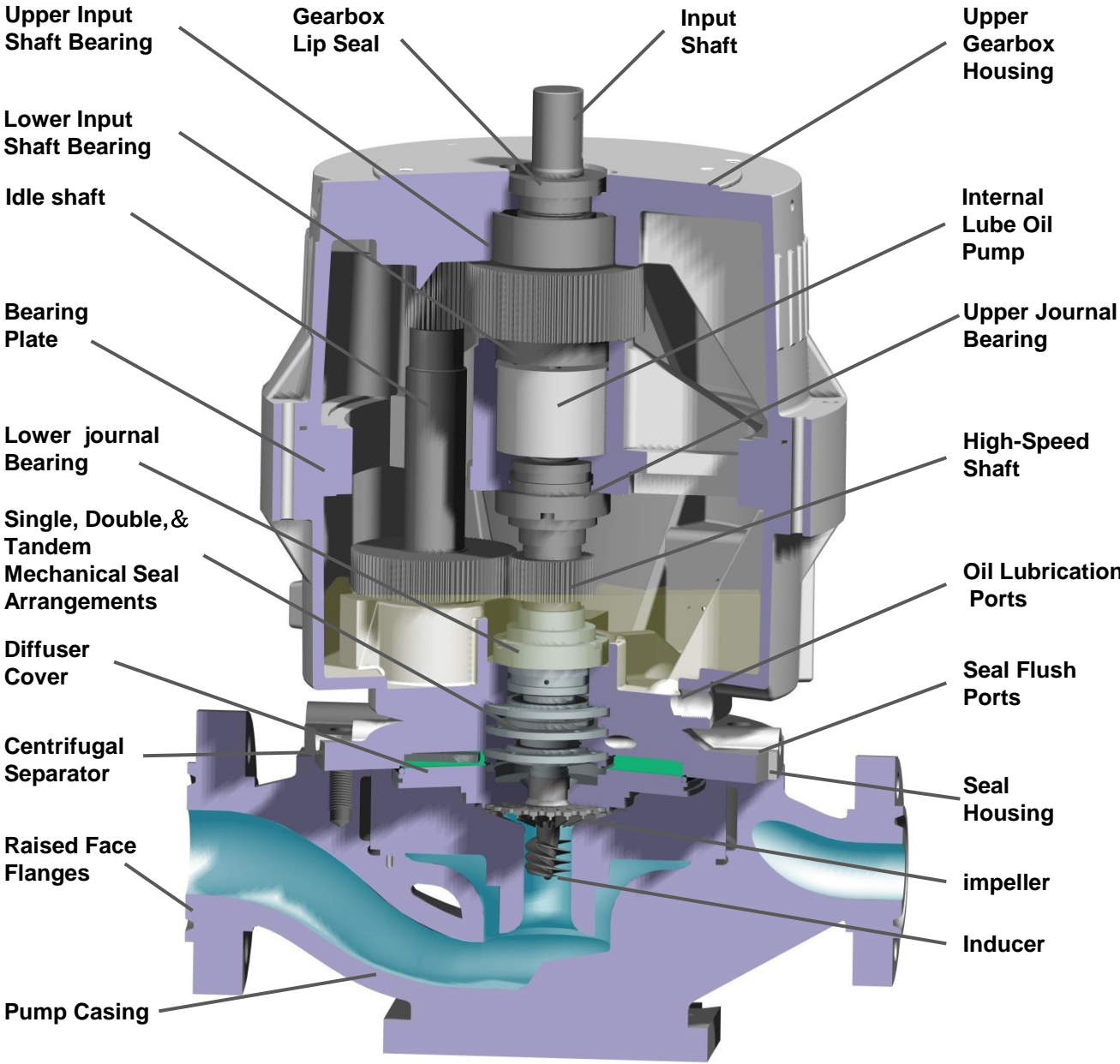
Diffuser:

The hydraulic optimization design can effectively improve the hydraulic efficiency of the pump.



GSB-L3

Cross Sectional



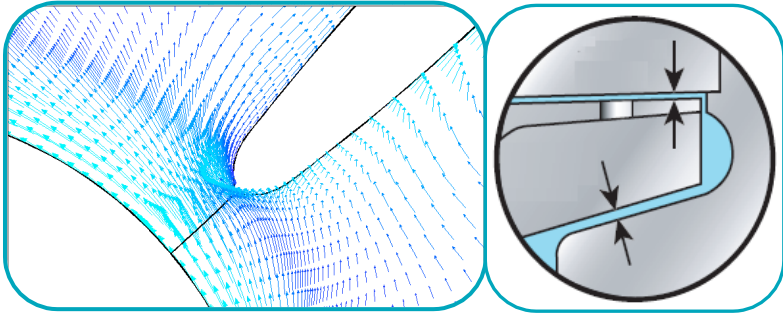
Materials

All common API 610 Material Classes like S-5, S-6, S-8, C-6, A-7, A-8, D-1, D-2. Other material combinations are readily available like alloy 20, Titanium ...

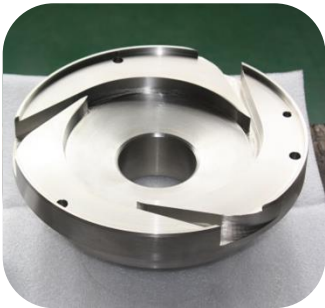
Hydraulic performance optimization



- Open, semi-open or closed
- Impeller blades & clearance
- Optimized hydraulic
- Maximize efficiency
- Minimum thrust load



Customized Hydraulics to match customer application

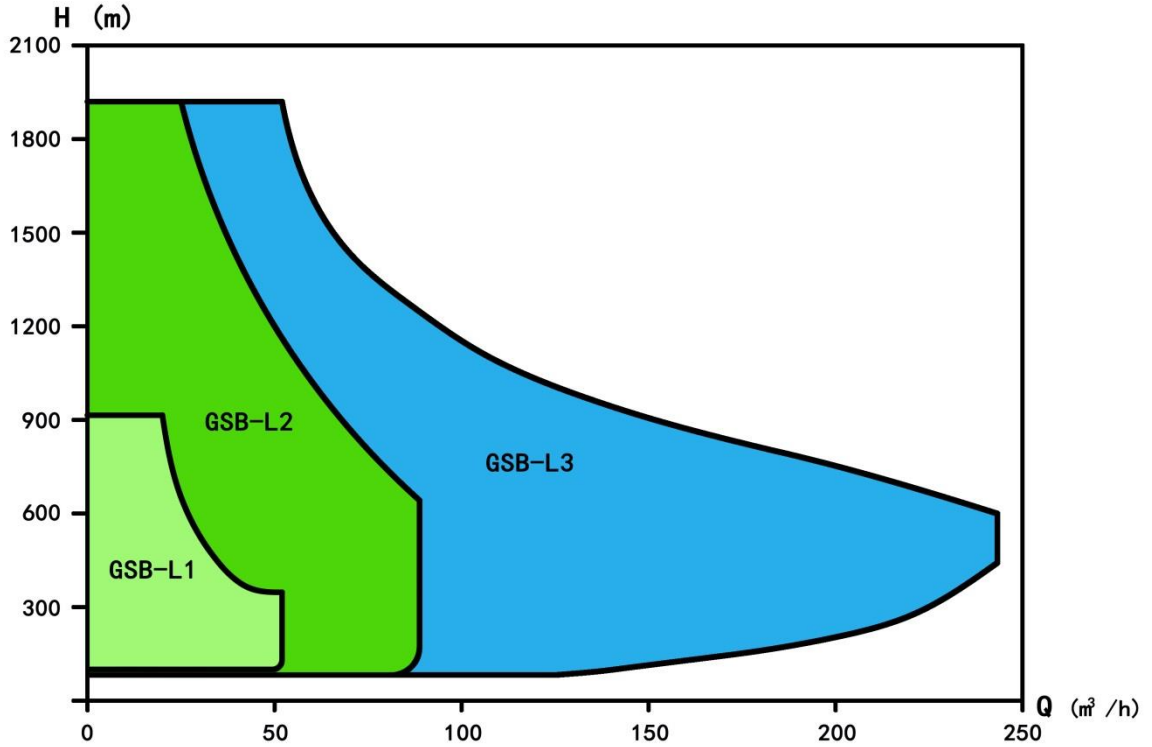


Robust shaft and gear design with balancing service standard reduces vibration and noise while improving reliability and increasing operating life.



State-of-the-Art Inducers for superior NPSHr

Performance Specification



Pump model	Capacity m3/h	Head	Speed RPM	Temperature	Motor Power kW
GSB-L1	5 to 52	70 to 920	4800 to 14200	-130 to 340	5.5 to 37
GSB-L2	5 to 90	250 to 1220	7850 to 22700	-130 to 340	37 to 132
GSB-L3	10 to 227	500 to 1980	7850 to 22700	-130 to 340	132 to 315

Meeting Your Needs Today



CNOOC SHELL HUIZHOU REFINERY

Flow : 31 m³/h
 Head: 397 m
 Medium: Ethylene
 Motor power: 55kW



CNPC LUOYANG REFINERY

Flow : 52 m³/h
 Head: 1080 m
 Motor power: 315kW



YANCHANG YULIN REFINERY

Flow : 12 m³/h
 Head: 820 m
 Motor power: 110kW



IRAN LORDEGAN UREA FERTILIZER PROJECT

	GSB-L1	GSB-L2	GSB-L3
Flow (m ³ /h)	9	20	15
Head(m)	153	405	1250
Motor power(kw)	18.5	90	220