

SNM

LINE SHAFT VERTICALLY SUSPENDED SUMP PUMPS

Model SIW

API 610 10th Edition Process Pump

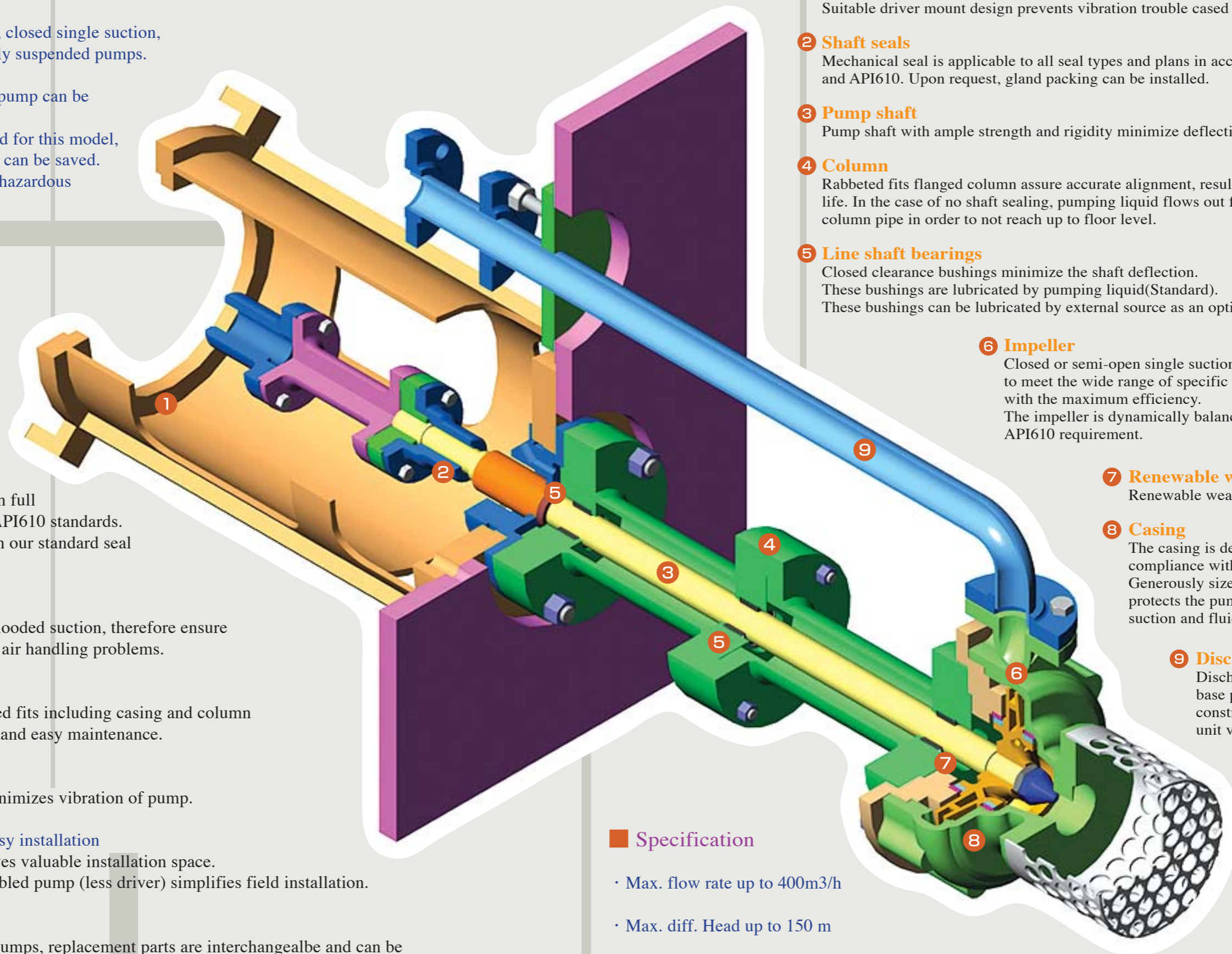


SHIN NIPPON MACHINERY CO.,LTD.

MODEL SIW Line Shaft Vertically Suspended Sump pumps(API Class VS4)

Design Feature

- The model SIW is single stage, closed single suction, volute type, line shaft, vertically suspended pumps.
- No mechanical shaft seal type pump can be provided.(Model SIWN)
-Mechanical seal is not required for this model, so initial and maintenance cost can be saved. This model is suitable for non-hazardous and non-flammable service.
- Semi-open impeller pump can be provided.(Model SIWO)
- SIW is suitable for wet pit application and pit drainage application, etc.
- Heavy duty construction is in full compliance with API 10th edition.
- Seal chamber
Seal chamber dimensions are in full compliance with API682 and API610 standards. Dual seals can be installed with our standard seal chamber dimension.
- Easy to start and operation
The pumps are usually under flooded suction, therefore ensure the elimination of priming and air handling problems.
- Easy maintenance
A series of interlocking rabbeted fits including casing and column provides permanent alignment and easy maintenance.
- Low vibration
Strong driver mount design minimizes vibration of pump.
- Small installation space and easy installation
Vertical pump arrangement saves valuable installation space. Shipment of completely assembled pump (less driver) simplifies field installation.
- Minimal variety of spare parts
By standardizing our vertical pumps, replacement parts are interchangeable and can be provided with little or no lead time.



1 Driver mount

Suitable driver mount design prevents vibration trouble caused by the resonance.

2 Shaft seals

Mechanical seal is applicable to all seal types and plans in accordance with API682 and API610. Upon request, gland packing can be installed.

3 Pump shaft

Pump shaft with ample strength and rigidity minimize deflection and vibration.

4 Column

Rabbeted fits flanged column assure accurate alignment, resulting in longer bearing life. In the case of no shaft sealing, pumping liquid flows out from the upper hole of column pipe in order to not reach up to floor level.

5 Line shaft bearings

Closed clearance bushings minimize the shaft deflection. These bushings are lubricated by pumping liquid(Standard). These bushings can be lubricated by external source as an option.

6 Impeller

Closed or semi-open single suction impeller is designed to meet the wide range of specific operating condition with the maximum efficiency. The impeller is dynamically balanced to meet the API610 requirement.

7 Renewable wear rings

Renewable wear rings are furnished.

8 Casing

The casing is designed in full compliance with API610. Generously sized suction strainer protects the pump from clogged suction and fluid starvation.

9 Discharge pipe

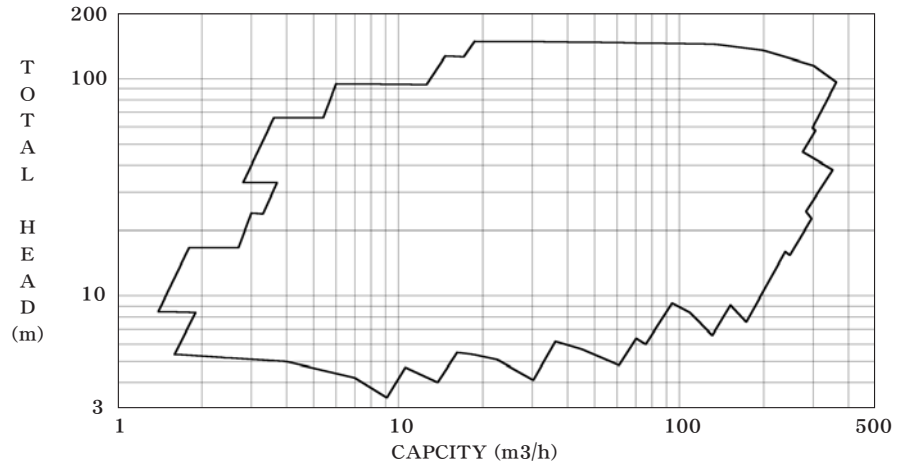
Discharge pipe is locked to base plate to provide rigid construction and minimizes unit vibration.

Specification

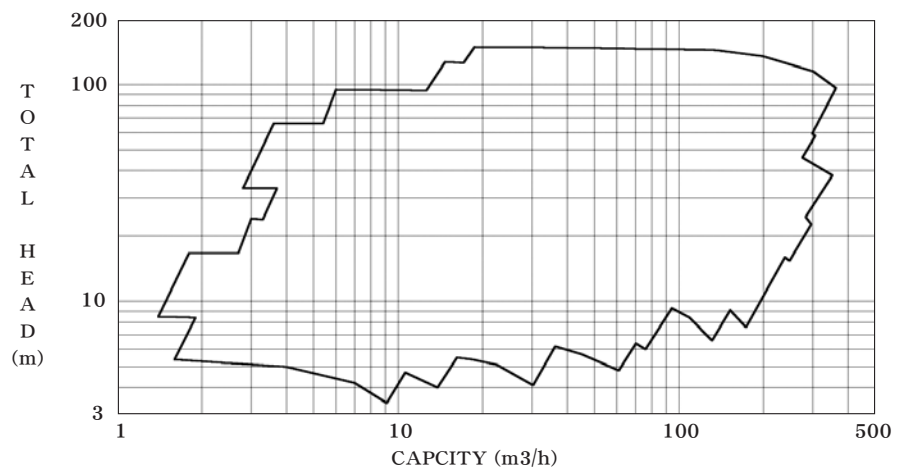
- Max. flow rate up to 400m³/h
- Max. diff. Head up to 150 m
- Max. operation temperature up to 250 °C

Model SIW performance chart

Coverage-50Hz



Coverage-60Hz



(※) In addition to above-mentioned chart, we will provide the best design for your application.

Optional Feature

Design for optimum operating condition

Optimized impeller

Optimum impellers(※) can be designed and produced to meet specific operating condition by using advanced flow analysis method.

Upon request, semi-open impeller can be provided to meet specific requirement.

(※)Machining processes for fabricated impellers offer capabilities for more exact profiles and higher efficiencies.

Optimized impeller



For higher efficiency requirement

SNAP material wear rings (SNAP=Shin Nippon Advanced Engineering-Plastic)

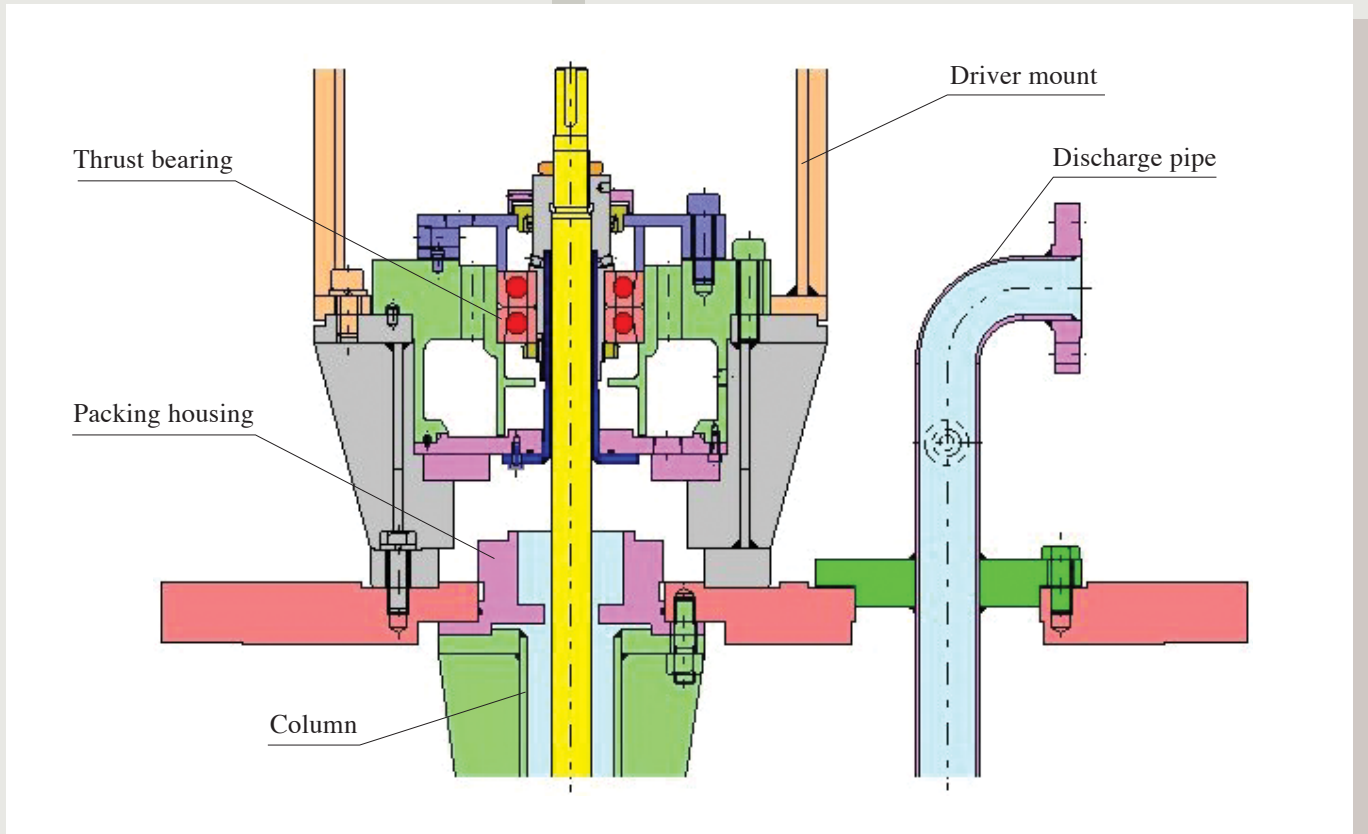
Use of SNAP material wear rings ensures improvement of pump efficiency.

Running clearance can be reduced with an improved reliability of the operation and freedom of seizure under specified operating condition.

Optional Feature

Additional thrust bearing

Thrust bearing can be installed.



Optional lubrication

- Oil mist lubrication

Oil mist lubrication can be provided.

Special protector

- Special gas breather
- Bearing protector

The above-mentioned parts protect more surely from lubricant contamination caused by cloudburst, sandstorm, entry of steam and other heavy condition.



Bearing protector



Special gas breather

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