

**MDS** *Multi-stage heavy duty axially split casing centrifugal pump*

**Application**

- Crude oil both in and offshore
- Remote pipelines
- Process plants
- Refineries
- Sewage water with oil and solid
- Boiler feed
- General water supply
- Mine dewatering
- Sea water pumping
- Water injection

**Operating Data**

- Capacity to 2000m<sup>3</sup>/h
- Head to 1300m
- Temperatures to 200°C
- Working pressure to 170bar

**Model Code**

KY is a two stages pump with two single suction impellers.  
 KSY is a two stages pump with two double suction impellers.  
 KDY is a multistage pump with three or more impellers.

**Instrumentation**

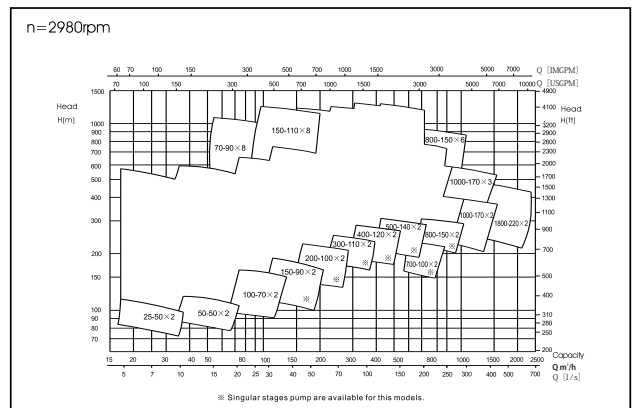
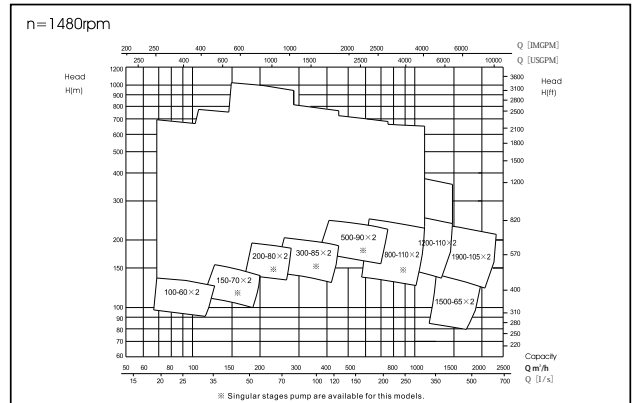
Pump can be furnished with instrumentation options to measure vibration, temperature and seal leakage.

**Pump and baseplate design compliance API610 latest edition**

**Material**

Pump' s material according to API610  
 ( I-1, I-2, S-1,S-3,S-4,S-5, S-6 ,S-8, C-6, A-8 and D-1)

**Hydraulic Coverage ( 50Hz )**

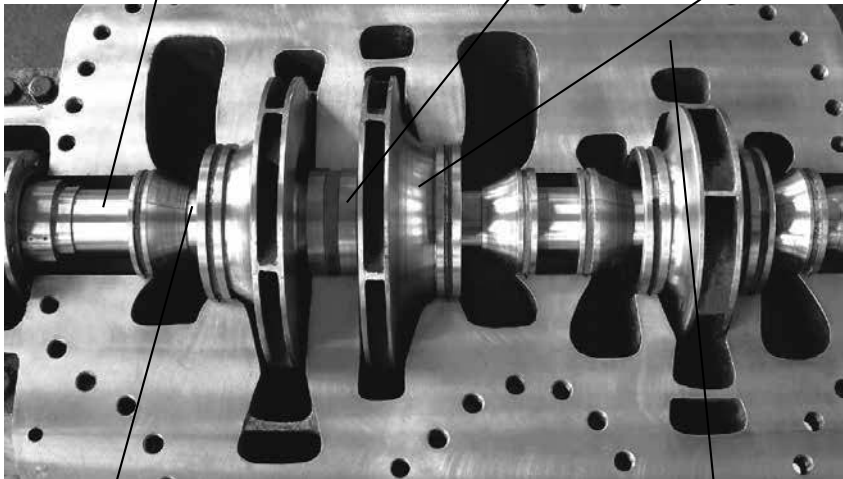


**Design Features and advantages**

**D. Shaft Sealing and Seal Chambers**  
 1. Soft packing or mechanical seals  
 2. Seal chambers meet API610 dimensional requirement and accept a wide range of cartridge type mechanical seals  
 3. Seal flush system according to API682 plans

**C. Bearing and Bushing**  
 1. Oil lubricated air cooling or water cooling, duplex ball thrust/ball radial bearing, sleeve radial bearing and tilting pad thrust bearing can be furnished to meet customer or operating requirements  
 2. Split stage pieces and center case bushing can be removed for inspection of wear surface without disassembling rotor assembly

**B. Impeller and Rotor**  
 1. Precision impeller individually balance for smooth operation  
 2. Opposed impeller arrangement provides permanent axial hydraulic balance  
 3. Impeller staggered on shaft to minimize vane-pass vibration  
 4. Key driven with shrink fit impellers independently secured against axial movement  
 5. Double suction first stage impeller for low NPSH service requirement  
 6. Inducer design are available  
 7. Entire rotating assembly can be removed without disturbing piping  
 8. Impellers and rotating equipment element dynamically balanced to API610 requirement



**E. Shaft**  
 1. Large diameter shaft stepped for ease of assembly  
 2. Sized to satisfy rotor dynamics and power transmission  
 3. NEMA shaft taper for ease of coupling removal

**A. Casing**  
 1. Axially split casing for extreme ease of maintenance  
 2. Dual volute design balance hydraulic radial thrust at each stage for extended seal/bearing life  
 3. Integral compact crossovers minimize flow losses, maximize efficiency  
 4. Heavy duty single row bolting, all nuts located on top for ease of maintenance  
 5. ANSI B16.5 flanges class 900RF standard on suction and discharge, other classes available as options