



TORONTECH™

## CATALOGUE

2014

TTAAI-Series of Multistage Centrifugal Pump (API)



PRODUCT BROCHURE

TORONTECH  
**PUMPS**

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TORONTECH™

Torontech™ is a leading North American based international manufacturer and supplier of pumps, pipes, valves & actuators. The Torontech™ group has established an extensive network in the USA as well as international markets and remains to be a preferred vendor of choice supplying quality pumps for today's leading corporations.

Creating comprehensive solutions for our clients has always been the core value of our company. From sales, to order execution, and post-sales support; every staff member is here to assist you in selecting the solution that best suits your unique requirements and budget.

The Torontech™ group offers a complete range of quality pumps that are, ANSI to ISO approved and engineered to last, ensuring your company continuous production without interruptions.

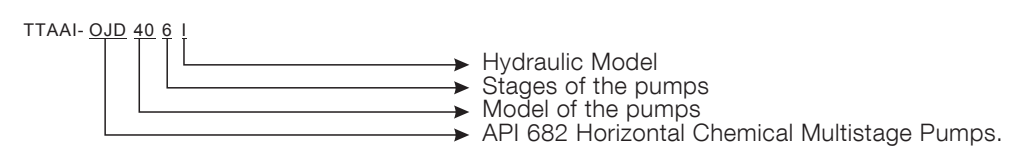
Since the beginning, we have succeeded in only offering quality manufactured pumps that are currently being used worldwide. We offer the best value for your investment and provide world-class support.

Due to the demand for our quality pumps, Torontech™ has experience explosive growth primarily in the oil & gas, water filtration and chemical refinery industries.

We offer an extensive range of solutions and products for oil & gas projects, refineries, petrochemical plants, and marine applications. Our main class of pumps includes API (American Petroleum Institute) Standard, Mining, Water & Sewage and Firefighting applications. The pumps are offered in various configurations depending on orientation of the pump, required head and type of fuel used for operation.



## TTAAI-Series of Multistage Centrifugal Pump (API)



**Design:**  
Compliant to ISO 2858, API 682 standards.

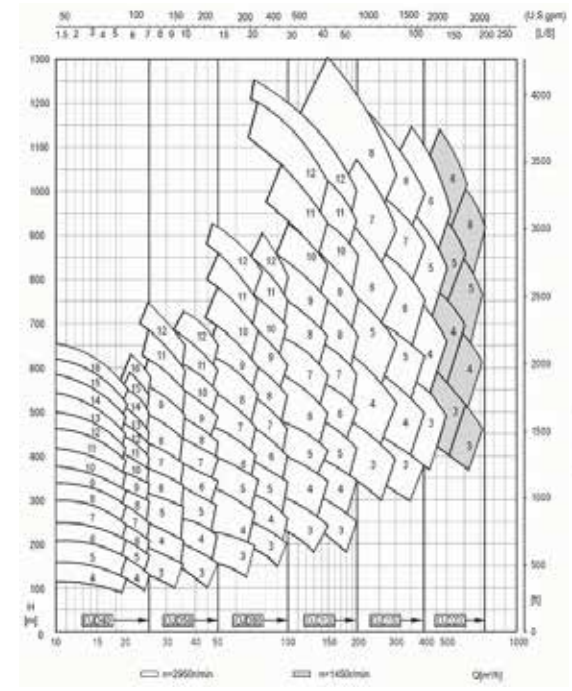
TTAAI-OJD series pump is a horizontal multi-stage single suction centrifugal pump with sectional and radial split structure. It has self-centering radial sliding bearings or thrust bearing and comes with either water cooling or fan cooling system. It uses balance drum to balance axial force, and labyrinth seal to restrict leakage. The pump coupling adopts slice coupling and the bearing casing is designed to bear pressure up to 15MPa and temperature up to 180 degree C. Various hydraulic model designs will ensure the pump operates highly efficient. The suction type and first stage impeller has improved anti-cavitation ability for the pump. The flexibility of the inlet and outlet arrangement makes it easier to satisfy various requirements from customers. Seal pattern adopts cartridge seal. The designs of the sealing, flushing and cooling auxiliary systems are compliant to API682 standard and can be provided according to different operating temperatures and media.

- Material:**
- For wetted parts in contact with medium, the common materials are as follows
  - Ss304, ss321, ss316L, OCr25Ni-6, TA2
- Technical Data:**
- Head: 100-1200m
  - Capacity: 10-500m<sup>3</sup>/h
  - Temperature: -80°C — 180°C
  - Max operating pressure: 15MPa

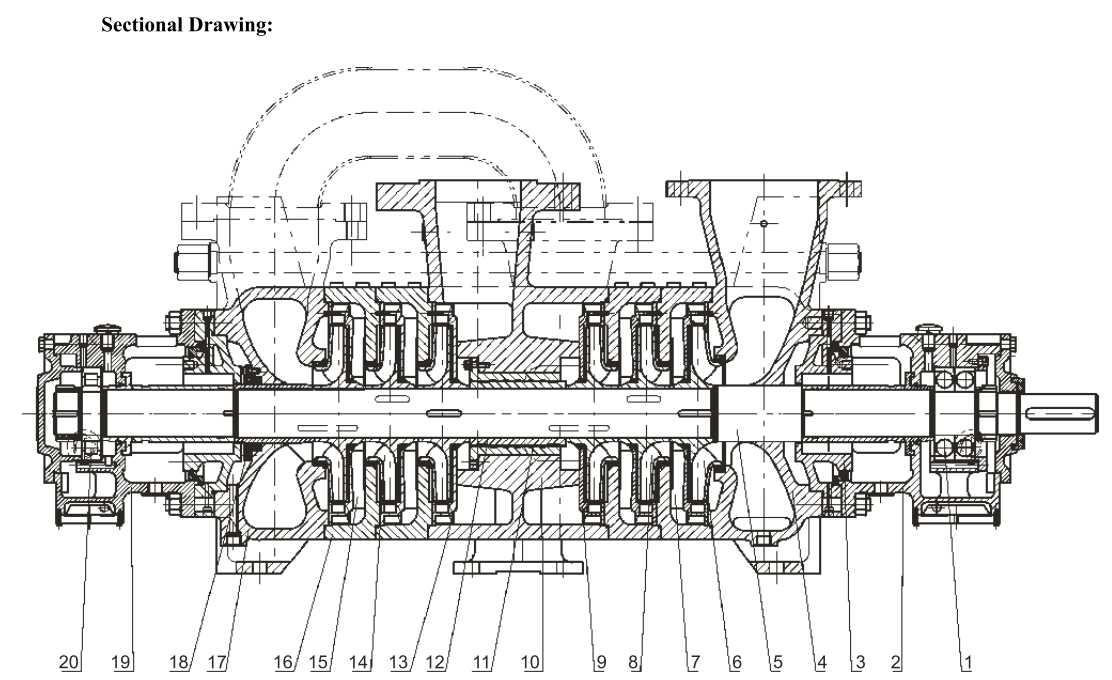
- Application:**
1. Industrial water supply equipment
  2. Power Plant (boiler feed)
  3. Petrochemical industry
  4. Cooling or heating system
  5. City water supply

The new design abandoned the non-integrated structure of 171 mechanical seal and freshly added shaft sleeve of mechanical seal, front cover plate and snap ring. The 171A mechanical seal is compliant to API 682 standard.

**Family Curve:**

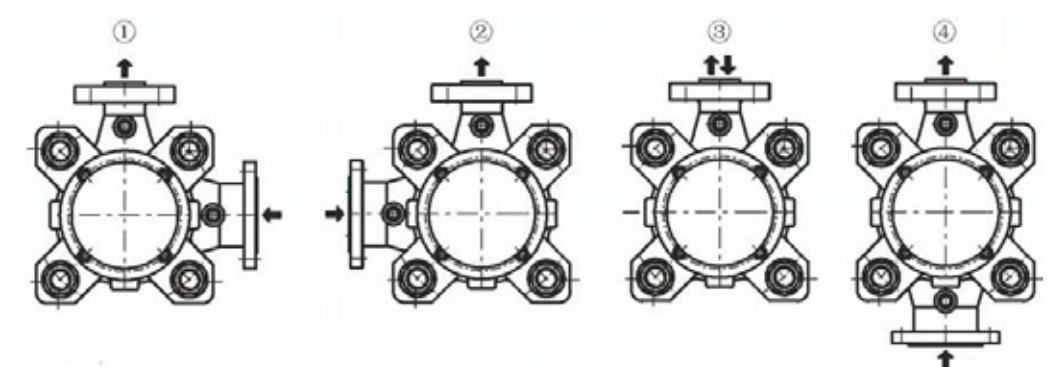


## TTAAI-Series of Multistage Centrifugal Pump (API)



- |                                     |                                      |                                       |
|-------------------------------------|--------------------------------------|---------------------------------------|
| 1. Bearing                          | 8. Second stage impeller             | 15. Guide vane (opposite)             |
| 2. Bearing bracket on the inlet end | 9. Final-stage guide vane            | 16. Case of middle section            |
| 3. Sealing case                     | 10. Outlet section                   | 17. Second stage inlet section        |
| 4. Inlet section                    | 11. Slipping bearing sleeve          | 18. Quench shaft sleeve               |
| 5. shaft                            | 12. Slipping bearing                 | 19. Bearing bracket on the outlet end |
| 6. First stage impeller             | 13. Final stage impeller (opposite)  | 20. Bearing                           |
| 7. Guide vane                       | 14. Second stage impeller (opposite) |                                       |

**Installing selections:**



Installing selections of TTAAI- OJD chemical multi-stage pumps (viewed from the motor end)  
 Selections for direction of inlet and outlet.  
 1), For TTAAI-OJD40 AND OJD50 pumps, a, b, c can be selected  
 2) for Other specifications, a.b.c.d all can be selected



**Special Mechanical Seal**

**2. Installing selections**

Installing selections of TTAAI-HJD chemical multi-stage pumps (viewed from the motor end)

**Selections for direction of inlet and outlet:**

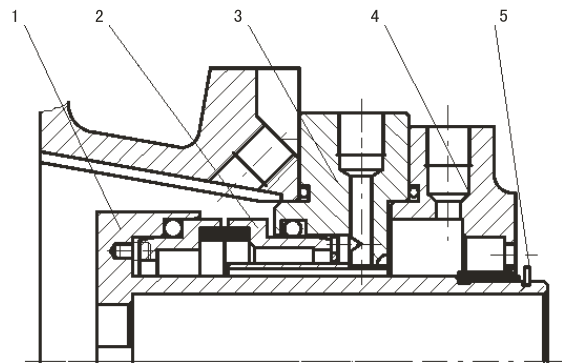
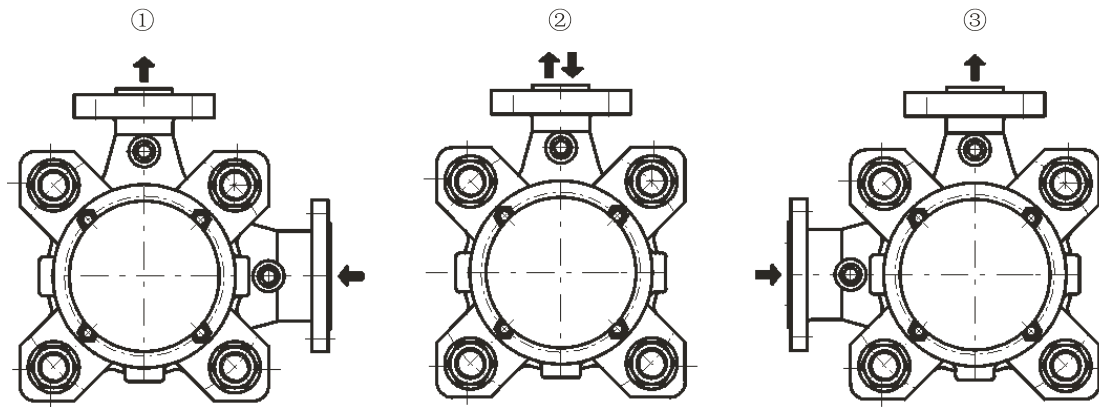
The acquiescent configuration of this series is illustration ② (Please specify if other configuration is required )

**3. Rotation direction of pump**

It is clockwise viewed from the driver end.

**4. Hydraulic parts**

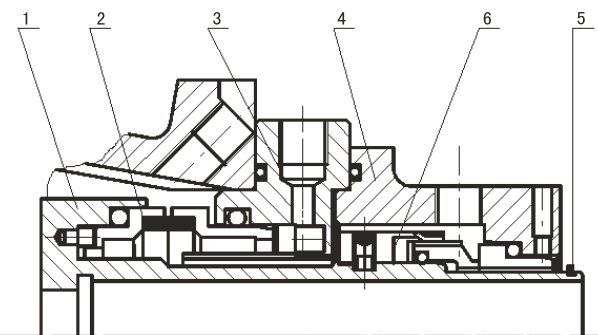
- ◆ The first impeller is suction type one to improve its NPSH proof performance.
- ◆ Various hydraulic models can be used to improve efficiency.



(Figure of 171A integrated single mechanical seal)

The new design abandoned the non-integrated structure of 171 mechanical seal and freshly added shaft sleeve of mechanical seal, front cover plate and snap ring. The 171A mechanical seal is compliant to API 682 standard.

1. Shaft sleeve of mechanical seal
2. Mechanical seal
3. Front cover plate
4. Seal gland
5. Snap ring



171A+H75N series connection double face mechanical seal(no pressure)

Can be installed for any circumstance that requires

1. Shafting sleeve of mechanical seal
2. 171A mechanical seal
3. Front cover plate
4. Mechanical seal cover plate
5. Snap ring
6. H75N mechanical seal



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