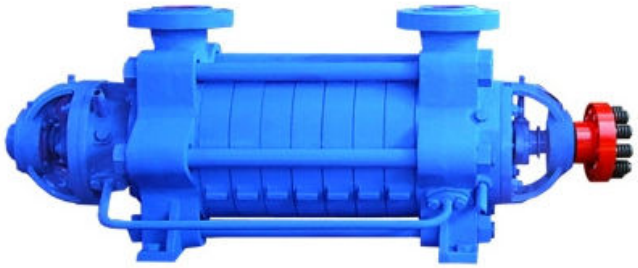
# Dr. Pump Multistage Boiler Feed Pumps

*With Balance Disc*

## DRDG Series

### Technical Data

| | |
|---|---|
| Flow: | max. 850 m³/h |
| Head: | max. 100 bar |
| NPSH: | 2- 7 m |
| Speed: | max. 2950 rpm |
| Material: | Cast Iron, Cast Steel and Stainless Steel |
| Temperature: | max. 210 ºC |
| Rotation: | Clockwise viewing from drive end |



### Applications

Pumps of the Dr Pump DG range meet the specific requirements of many applications including:

- Water Supply of Boiler System
- Condensate Water Supply
- Municipal Water Supply
- Fire Fighting in High Rise Buildings

A range of materials is available to meet the specific needs of customers.

### Description

Dr Pump DG multistage boiler feed pumps is a between bearings, multistage, radially split centrifugal pump.

With a feature of high power, high efficiency, wide range of performance, safety, low noise and long life. It is used for handling water free of solid particles (abrasive) or property like water and other liquids.

It can also handle water, oil, corrosive or abrasive fluid by changing the pump material (or the material of flow passage), the seal or the pressure of the cooling system.

### Construction

**Casing**
The Dr Pump DG Pump has maintenance holes outside the casing which enable convenient maintenance and cleaning; meanwhile, the other one advanced device - wear plate would greatly prolong the whole service life.

**Material**
Casing- Cast Iron standard, Cast Steel and Stainless-Steel executions are available.

Impeller- Cast Iron, Cast Steel and Stainless Steel.

Shaft- Stainless and Carbon Steel.

**Sealing**
Shaft Seal- Packing or mechanical seal as per application or customer specification.

**Balancing Disc**
• High efficiency
• Energy conservation

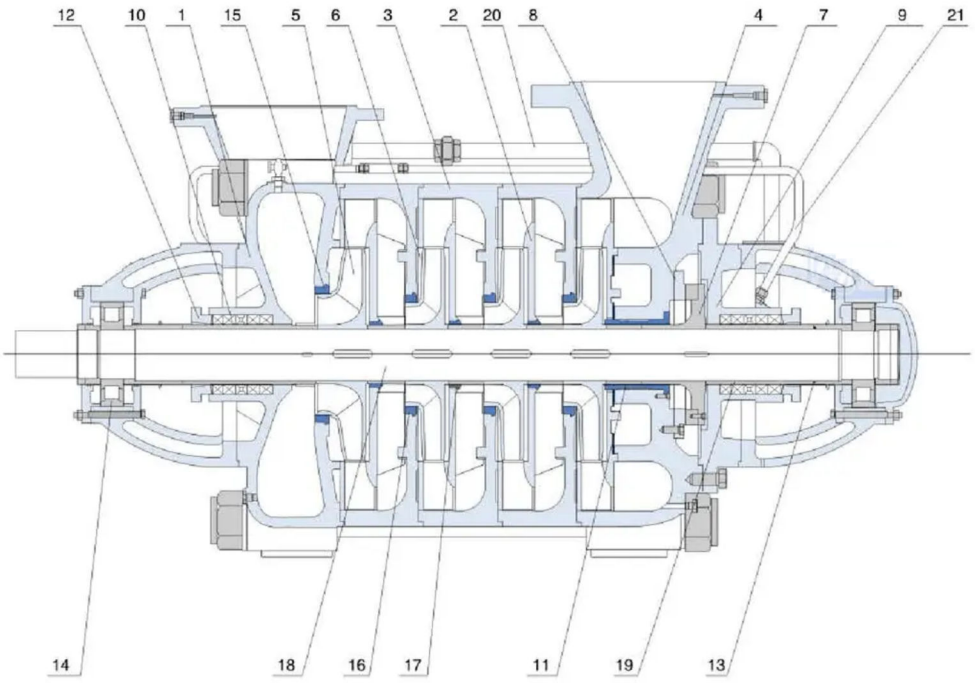
# DR DG

## Material Design

| Product Identification Code | | | |
|---|---|---|---|
| **Position** | **Characteristic** | **Code** | **Explanation** |
| **1-2** | **Type** | **DG** | Multistage Boiler Feed Pump with balancing disc |
| **3-4** | **Flow** | **85** | e.g. The designed flow: 85m³/h |
| **5-6** | **Stage Pressure** | **67** | e.g. The single stage: 67m |
| **7** | **Impellers** | **3** | Number of impellers |

## Sectional Drawing

| Item | Part |
|---|---|
| 1 | Casing |
| 2 | Diffuser |
| 3 | Stage Casing |
| 4 | Delivery Casing |
| 5 | Impeller First Stage |
| 6 | Impeller |
| 7 | Balancing Disc |
| 8 | Balacing Ring |
| 9 | Stuffing Box Housing |
| 10 | Packing |
| 11 | Balance Sleeve |
| 12 | Packing Gland |
| 13 | O-Ring |
| 14 | Bearing |
| 15 | First Stage Waer Ring |
| 16 | Wear Ring |
| 17 | Diffuser Bush |
| 18 | Shaft |
| 19 | Shaft Sleeve |
| 20 | Balancing Water Piping |
| 21 | Water Seal Piping |




## Materials

| Parts Name | Material Type | Suction casing Second suction casing Discharge casing | Stage casing Guide vanes End gland | Impellers | Shaft | | Shaft Sleeve | | Throttling shaft sleeve | Throttling sleeve | Seal ring Disffuser sleeve |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Common shaft | Long shaft | Mechanical Seal | Packing | | | |
| D | Cast Iron | HT200 | HT200 | HT200 | 45 | 40Cr | 2Cr13 | HT250 | 40Cr | QT600Mn2 | HT250 |
| MD | wear-resisting ductile iron | QT400 | QT400 | ZG230-450 /QT500 | 45 | 40Cr | 2Cr13 | QT500 | QT500 | QT600Mn2 | QT500 |
| DG | Cast Iron | HT200 | HT200 | HT200 | 45 | 40Cr | 2Cr13 | | 2Cr13 | 2Cr13 | HT250 |
| | Cast Steel | ZG230-450 | ZG230-450 | ZG230-450 | 45 | 40Cr | 2Cr13 | | 2Cr13 | 2Cr13 | 2Cr13 |
| | Stainless Steel | 2Cr13 | 2Cr13 | 2Cr13 | 3Cr13 | | 2Cr13 | | 2Cr13 | 2Cr13 | 2Cr13 |
| DF | Slightly anti-corrosion | 2Cr13 | 2Cr13 | 2Cr13 | 3Cr13 | | 2Cr13 | | 2Cr13 | 2Cr13 | 2Cr13 |
| | Moderately anti-corrosion | 0Cr18Ni9 (304) | 0Cr18Ni9 (304) | 0Cr18Ni9 (304) | 3Cr13 | | 0Cr18Ni9 (304) | | 0Cr18Ni9 (304) | 0Cr18Ni9 (304) | 3Cr13 |
| | Highly anti-corrosion | 0Cr17Ni12Mo2 (316) | 0Cr17Ni12Mo2 (316) | 0Cr17Ni12Mo2 (316) | 3Cr13 | | 1Cr18Ni9Ti | | 1Cr18Ni9Ti | 1Cr18Ni9Ti | 0Cr18Ni9 (304) |
| DY | Cast Iron | HT200 | HT200 | HT200 | 45 | 40Cr | 2Cr13 | | 2Cr13 | 2Cr13 | HT250 |
| | Cast Steel | ZG230-450 | ZG230-450 | ZG230-450 | 45 | 40Cr | 2Cr13 | | 2Cr13 | 2Cr13 | 2Cr13 |
| | Stainless Steel | 2Cr13 | 2Cr13 | 1Cr18Ni9T | 3Cr13 | | 2Cr13 | | 2Cr13 | 2Cr13 | 2Cr13 |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