

## Flowrox Rotary Disc Valve (LRD)



Flowrox Rotary Disc Valve is built with a cast body and features a heavy-duty stainless steel gate. LRD is a unique rotating disc valve designed specifically for heavy abrasive and corrosive slurries. The patented design allows the valve to cycle in heavy slurries without sticking or leaking and with minimum wear.

LRD is available with pressure ratings from 10 to 100 bar.

### Valve Operation

The LRD Valve is designed for leak tight shut off slurries and liquids within a pipeline. The valve is designed to be operated only in the fully open or fully closed position. As the actuator is opened or closed, the disc is allowed to rotate. This happens due to the pressure pushing against the disc, causing the disc to touch the valve seat and rotate. As the valve is cycled, the disc rotates a few degrees, seating in a different position each time. The wedge gate support has a cutaway behind the disc clearing debris away and thus, ensuring the disc closes and seals every time.

The very nature of the construction allows a maximum of flexibility in customizing to meet specific needs, in terms of materials pressure rating etc. The body and bonnet are made of cast steel and can be made out of different materials to best suit the customer needs.

The bonnet houses the rotating disc when open and seals around the spindle.



### Features

- No blocking or leakage = 100% tight.
- No leakage to atmosphere.
- No sticking.
- Long wear life, (due to rotating gate/disc).
- Self-clearing gate action.
- Seals in both directions.
- Repacking of gland stem seals under pressure.
- Wedge for positive seal
- Cut away to clean seating area.
- Seal out of flow when in open position.
- Rising or non-rising spindle.

### Applications

- Mining and metal industries
- Mineral processing
- Power generation
- Sand and gravel
- Chemical
- Pulp and paper
- Water and Wastewater treatment

### How the valve seals work?

LRD is a rotating disc valve for slurry. The isolation and sealing is between the replaceable rotating disc and seat. The disc seals against the seat when closed with the help of a tapered wedge gate support. The seat can be supplied in elastomer urethane or ceramic. This rotating disc and seat are both replaceable on site.

### Replaceable discs

LRD valve's design allows for on site replacement of the rotating disc.

## Product Specification

### Materials:

Valve Body: Cast Steel, Carbon Steel, Stainless Steel or High Chrome

Gate: Stainless Steel as standard, other materials on request.

Thrust Bearings: Included as standard, to reduce operating torque.

Materials: Valves are tested per SABS and recognized by the International Certification Network IQ NET

Pressure Rating: 10 bar to 100 bar (150Psi to 1500Psi)

Flanges: Flanges drilled to ANSI, DIN, BS, JS or SABS .

Face-to-face: as per table or specials on request.

Lifting Lugs: Valves have lifting lugs/holes sized and located for safe lifting of valve assembly.

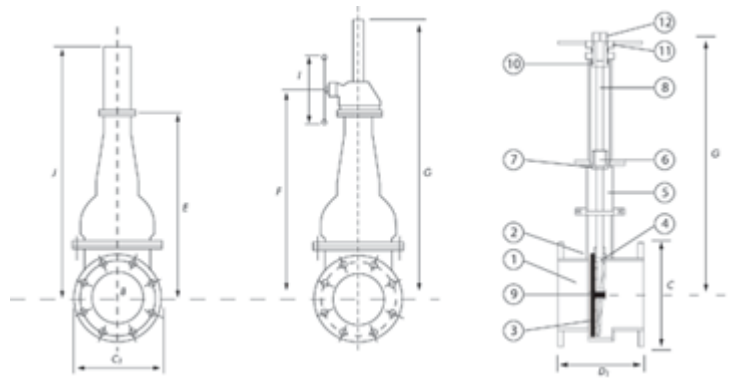
Body Lining: Rubber, URETHANE or Ceramic.

### Accessories

Dust covers  
Switches  
Bellows  
Guarding

## Actuators

- Manual
- Manual gear
- Pneumatic
- Hydraulic
- Electric



## Structure

Part	Description	Material	Part	Description	Material
1	Body	Carbon Steel/Stainless Steel	8	Spindle	Stainless Steel
2	Body Seat	Abrasion resistant AR Steel, SS or urethane rubber	9	Yoke Assembly	Mild Steel /Stainless Steel
3	Disc	Stain Steel or Other	10	Spindle Nut	Bronze
4	Wedges	Mild Steel	11	Hand wheel	Carbon Steel/Stainless Steel
5	Bonnet	Mild Steel/Stainless Steel	12	Hand wheel Nut	Carbon Steel/Stainless Steel
6	Packing	Graphite	13	Body Lining	Rubber, Urethane or Ceramic
7	Gland	S.S/Carbon Steel			

## Dimension and weights

Valve size A	80 mm	100 mm	150 mm	200 mm	250 mm	300 mm	350 mm	400 mm	450 mm	500 mm	600 mm
C <sub>1</sub>	191	229	279	343	406	483	538	597	635	711	826
B	75	100	150	200	250	300	350	400	450	500	590
C	191	220	279	343	406	483	583	597	635	711	826
D	51	51	57	70	70	76	76	89	89	114	365
D <sub>1</sub>	229	254	280	317	356	380	470	470	485	510	600
E	370	380	610	770	905	1012	1140	1280	1487	1690	1785
F	440	470	661	843	1014	1120	1239	1355	1600	1706	1885
G	521	559	861	1068	1235	1453	1716	1998	2331	2609	2849
H	200	300	400	400	400	500	500	600	600	600	600
I	30	40	85	100	118	184	200	257	450	500	550
J	639	710	1003	1224	1411	1615	1745	2016	2300	2579	2751
Weight KG	30	45	89	125	157	200	350	430	320	650	900

For larger sizes consult factory.

Dimensions are for guidance only - detailed dimensions drawings available on request. All dimensions are in millimeters, unless stated.

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