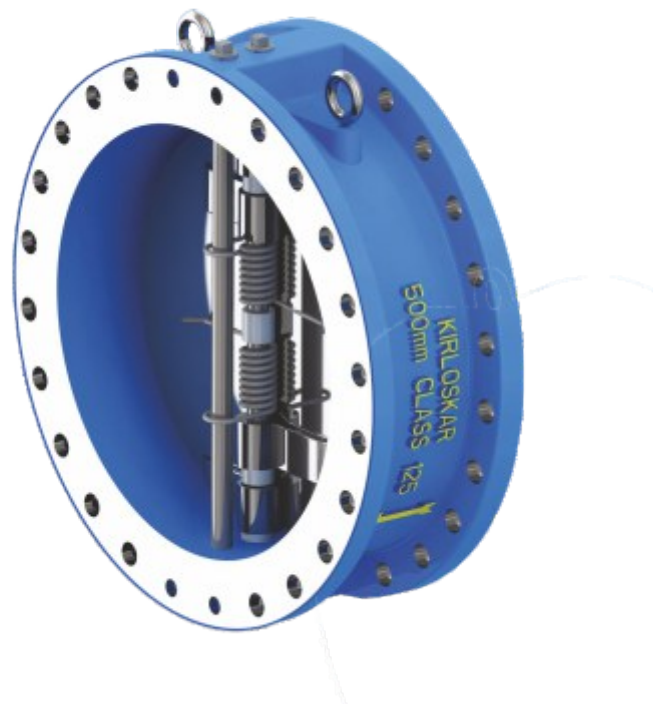




Enriching Lives

## DUAL PLATE CHECK (NON RETURN) VALVE

AS PER API : 594



**KIRLOSKAR BROTHERS LIMITED**

# DUAL PLATE CHECK (NON RETURN) VALVE ( DPCV )

Widely accepted by Municipal Corporations, Irrigation authorities, Water supply authorities, National Thermal Power Corporation, and Industrial users.

Designed as per latest editions of API : 594 specifications.

## Applications :

- Dual Plate Check Valves (DPCV) are used in pipe lines to prevent reverse flow of water and water hammer the pumps from rising mains.
- Water: Suitable to handle Cooling water, chilled / hot water system, Sea water, Portable, Raw water having turbidity upto 5000 ppm and temperature upto 45°C.
- Oil & Gas: On shore / Off shore.
- Metallurgical & Chemical process.

## Special Features :

- DPCV is stronger in strength, lighter in weight and compact in size compared to conventional Non Return Valve
- Lapped Body and Disc seats for drop tight seat
- The Proequip design of disc is provided with heavy duty "shock bumpers" to preventing the discs striking on stop pin
- High torsion springs ensures quick valve closure
- Innovative Hinge pin design allows disc assembly to lift off seat prior to disc rotation preventing heel of each disc from scrapping across The body seat
- Flexible Installation to suit pipe orientation
- Light weight, versatile design, lighter than conventional full - body check valves
- Reduces pipe supports, simplifies piping, easier, less costly installation
- Spring - loaded, double door design has low cracking pressure
- Discs open 85° to ensure positive closing
- Materials and trims available for all services within temperature range
- Resilient or Metal - to - Metal seat available

## Design Features :

- LAPPED BODY AND DISC SEATS:

The heart of each valve is the seat/seal interface. Our valves are manufactured using the most updated machining methods and equipment to achieve maximum flatness with a fine lapped finish. The end result is valves that easily meet and exceed test requirements of API 598

- VALVE DISC:

The dual-plate design produces maximum strength with minimum opening and closing time.

- SEALS:

Specially designed flat, full contact seals maintain positive shutoff at low working pressures. In case of Resilient seated BUNA-N, Viton, EPDM and other materials are molded on the body. For Metal to Metal seating seat surface will be either weld overlay or Integral as per Body & Disc material of construction.

- SPRINGS:

Torsion springs assist valve plate closure, preventing flow reversal, and consistent valve response ensures against slamming and water hammer. Extended leg springs prevent seat wear caused by scrubbing.

- HINGE PIN:

The shaft contains heavy-duty corrosion-resistant Construction

- THRUST WASHERS:

This reduces friction and wear of valve plate hinges.

- SUPERIOR HINGE DESIGN:

In order to eliminate seat wear during the opening cycle, all Dual plate check valves incorporate clearance between the hinge pin and holders, or hinge pin and disc bore. This clearance allows the disc assembly to lift off the seat prior to disc rotation preventing the heel of each disc from scraping across the body seat.

- INDEPENDENT PLATE SUSPENSION:

For valve sizes 500NB and above, each plate is supported independent of each other. In any position (Horizontal or Vertical) each plate's weight is directly transferred to the body.

### Material of Construction :

Scope	Standard Supply	Optional
Body	CI IS: 210 Gr.FG. 260	SGL IS: 1865 Gr. 500/7, SGI IS: Gr. 400/15, CS ASTM A 216 Gr. WCB, SS ASTM A 351 Gr. CF8, SS ASTM A 351 Gr. CF8M
Disc	CS ASTM A 216 Gr. WCB	SS ASTM A 351 Gr. CF8, SS ASTM A 351 Gr. CF8C, SS ASTM A 351 Gr. CF8M, SS ASTM A 351 Gr. CF83M, SS ASTM A 351 Gr. CA15
Body Seal	Buna - N	EPDM, Viton, WCB + 13% Cr., SS 410 / 304 / 316, CF8 / CF8M
Hinge Pin	SS 410	SS 431, SS 304, SS 316
Spring	SS 316	SS 304, Inconel X 750
Body / Plate Bearing	SS 410	SS 304, SS 316, Bronze, PTFE
Plugs	SS 410	SS 304, SS 316

Note: \* For special material of construction, please contact Design Office.

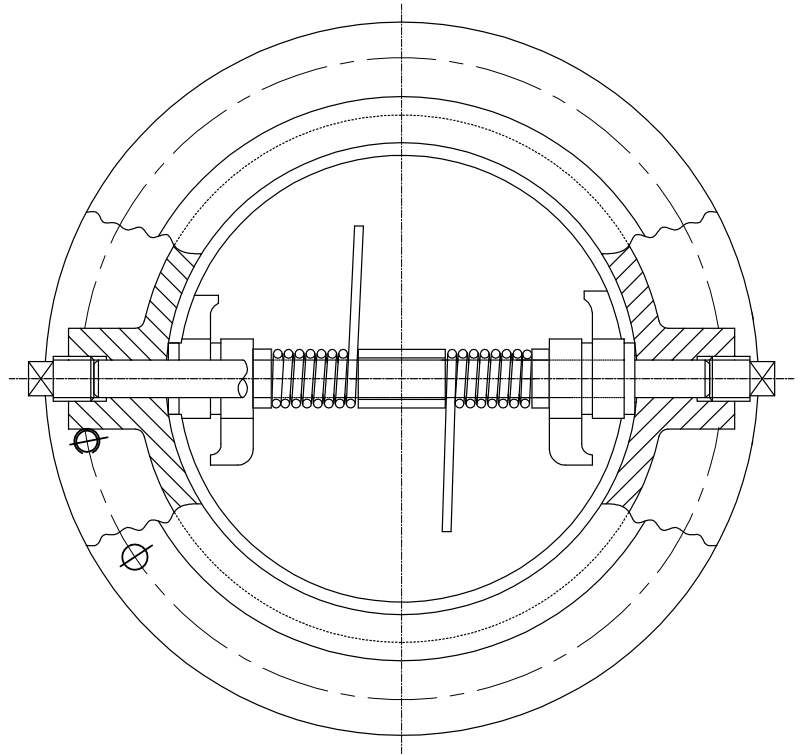
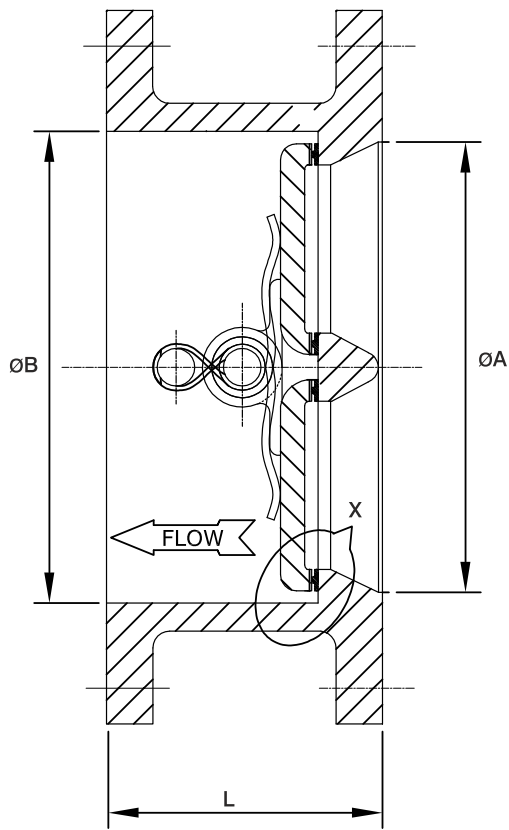
\* Optional: Special Protective coating for Body / Disc (Corrocoat / Ebonite / EPDM Lining) as per requirement

### Technical Specifications :

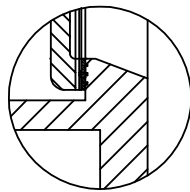
Design and Manufacturing Standard	API: 594
Testing and Inspection	API: 598
Pressure Temperature Rating	ASME B 16.34
Face to Face Dimension	API: 594

Note: \* For Higher Pressure Rating contact Design Office.

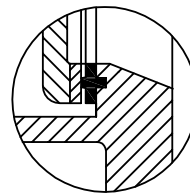
## General Outline Drawing :



FLANGED END



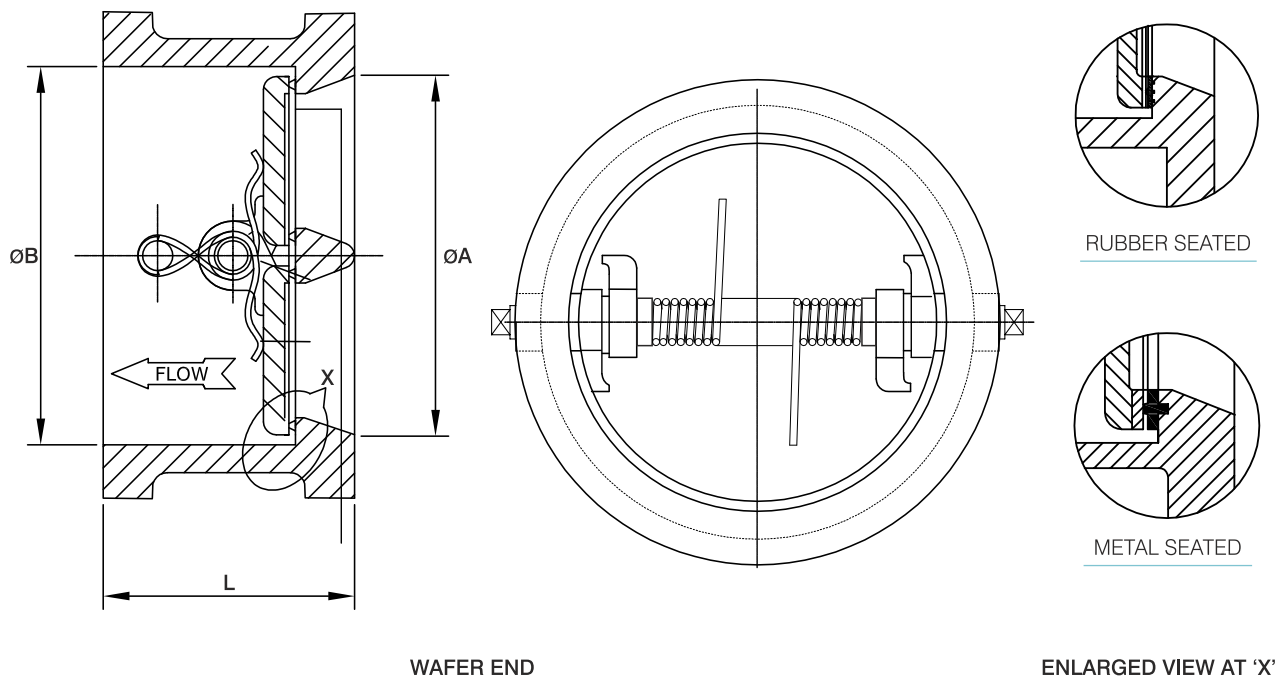
RUBBER SEATED



METAL SEATED

ENLARGED VIEW AT 'X'

### General Outline Drawing :



### General Outline Dimensions :

Valve Size	$\varnothing A$	$\varnothing B$	L	
			Class 125	Class 150
50	50	60	54	60
65	65	78	60	67
80	80	90	67	73
100	100	114	67	73
125	125	135	83	83
150	150	168	95	98
200	200	218	127	127
250	250	270	140	146
300	300	319	181	181
350	350	370	184	184
400	400	410	191	191
450	450	455	203	203
500	500	508	213	219
600	600	605	222	222
700	700	710	305	305
800	800	802	368	368
900	900	910	368	368
1000	1000	1000	432	432
1100	1100	1111	432	432
1200	1200	1200	524	524

Note: \* All Dimensions are in 'mm' otherwise stated.

## End Connection :

Scope	Flange Drilling Standard
Standard Supply	IS : 1538 Table IV and VI
Optional	BSEN 1092 - 2 PN 10, PN 16
	BS: 10 - Table D / E / F
	IS : 1538 Table V
	ANSI B 16.1 / 16.5 / 16.47
	IS : 6392

Note: \* Wafer end connection valves suitable for above drilling standards are also available on request.

## Accessories :

- Companion Flange
- Bypass Arrangement

## Hydrostatic Test Pressures :

Size Range	Material of Construction	Pressure Rating	Body Test : Bar (Kgf/Cm2)	Seat Test : Bar (Kgf/Cm2)
50 mm to 300 mm	CI/SGI/CS/SS	Class-125	25 (25.49)	14 (14.27)
350 mm to 1200 mm	CI/SGI/CS/SS	Class-125	19 (19.37)	11 (11.21)
50 mm to 1200 mm	Ductile Iron	Class-150	26 (26.51)	17 (17.33)
50 mm to 1200 mm	Steel	Class-150	30 (30.59)	22 (22.43)

Note: \* Body Test : 01 Minutes (Below 350 mm) and 05 Minutes (Above 300 mm)

\* Seat Test : 01 Minutes (Below 350 mm) and 02 Minutes (Above 300 mm)

# OUR GLOBAL PRESENCE



## ABOUT KBL

Kirloskar Brothers Limited (KBL) is a world class pump manufacturing company with expertise in engineering and manufacture of systems for fluid management. Established in 1888 and incorporated in 1920, KBL is the flagship company of the \$ 2.1 billion Kirloskar Group. As the market leader in fluid management, KBL provides complete fluid management solutions for large infrastructure projects in the areas of water supply, power plants, irrigation, oil & gas and marine & defence. We engineer and manufacture industrial, agriculture & domestic pumps, valves and hydro turbines.

In 2003 KBL acquired SPP Pumps, United Kingdom and established SPP Inc., Atlanta, USA, as a wholly owned subsidiary of SPP, UK and expanded its international presence. In 2007, Kirloskar Brothers International B.V., The Netherlands and Kirloskar Brothers (Thailand) Ltd, a wholly owned subsidiary in Thailand were incorporated. In 2008, KBL incorporated Kirloskar Brothers Europe BV (Kirloskar Pompen BV since June 2014), a joint venture between Kirloskar Brothers International BV and Industrial Pump Group, The Netherlands. In 2010 KBL further consolidated its global position by acquiring Braybar Pumps, South Africa. SPP MENA was established in Egypt in 2012. KBL has a joint venture company with Ebara Corporation, Japan since 1988 for the manufacture of API 610 standard pumps. Kirloskar Corrocoat Private Limited is joint venture cooperation with Corrocoat Ltd., UK since 2006. KBL acquired The Kolhapur Steel Limited in 2007 and Hematic Motors in 2010. In 2014, KBL acquired SyncroFlo. Inc, the largest independent fabricator of commercial and municipal domestic water.

KBL has eight manufacturing facilities in India at Kirloskarvadi, Dewas, Kondhapuri, Shirval, Sanand, Kaniyur, Kolhapur and Karad. In addition, KBL has seven manufacturing and packaging facilities in Egypt, South Africa, Thailand, The Netherlands, United Arab Emirates, United Kingdom and United States of America. KBL has 12,700 channel partners in India and 80 overseas and is supported by best in class network of Authorised Centres and Authorised Refurbishment Centres across the country.

All plants of KBL are ISO 9001, ISO 14001 and OHSAS 18001 standards certified. They apply Total Quality Management tools using European Foundation for Quality Management (EFQM) model. The Kirloskarvadi plant of KBL is a state of art integrated manufacturing facility having one of Asia's largest hydraulic research centre with testing facility up to 5000 kW and 50,000 m<sup>3</sup>/hour.

KBL is the only pump manufacturing company in India and ninth in the world to be accredited with the N and NPT certification by American Society of Mechanical Engineers (ASME).



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As we are constantly endeavouring to improve the performance of our products / equipment, we reserve the right to make alterations from time to time and as such our products / equipments may differ from that detailed in this publication. For latest information you may get in touch with our Regional Sales Offices.



Enriching Lives

### KIRLOSKAR BROTHERS LIMITED

A Kirloskar Group Company

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#### Our Group Companies



KIRLOSKAR BROTHERS LIMITED  
DPCV-08-2014-00

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