

## Ductile Iron Swing Check Valve (Resilient Seat)

PN16

Size 2½" to 12"

### Specifications:

IVAL® Swing check valve with ductile Iron body and bonnet to BS EN-GJS-450-10, ductile iron disk to BS EN-GJS-450-10 with bronze seat to BS EN 1982 CC491K.

Valve is full bore and manufactured in accordance with BS EN 12334 and rated PN16 with -10 to 100°C temperature range.

Valve is supplied with drilled flanges in accordance with BS EN 1092-2 PN16.

Valve has C550 corrosion level epoxy coating and shall be categorized in accordance with the Pressure Equipment Directive 2014/68/EU.

**WRAS approved.**

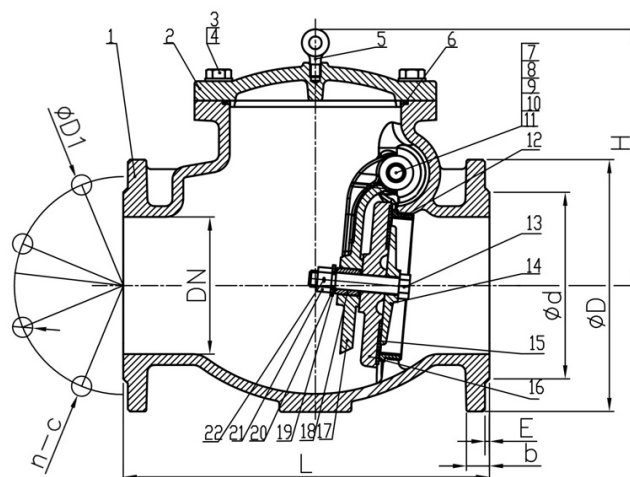
### Features:

- Entirely automatic in action, depending upon pressure and velocity of flow within the line to perform their functions of opening and closing.
- Swing pattern, bronze trim, resilient seated.
- Fusion Bonded Epoxy coating suitable for C550 environment.

### Materials:

No.	Description	Material	Specification
1	Body	Ductile Iron	EN-GJS-450-10
2	Bonnet	Ductile Iron	EN-GJS-450-10
3	Bolts	Carbon Steel	Zinc Plated
4	Washer	Carbon Steel	Zinc Plated
5	Eye Bolt	Carbon Steel	Zinc Plated
6	O Ring	EPDM	-
7	Plug	Stainless Steel	AISI 304
8	O Ring	EPDM	-
9	Hinge Pin	Stainless Steel	AISI 304
10	Washer	Brass	EN12164 CW614N
11	Hinge Bushing	Brass	EN12164 CW614N
12	Seat Ring	Bronze	EN 1982 CC491K
13	Disc Seat Bolt	Stainless Steel	AISI 304
14	Retainer Washer	Bronze	EN 1982 CC491K
15	Disc Seat Ring	EPDM	-
16	Disc	Ductile Iron	EN-GJS-450-10
17	Clapper Arm	Ductile Iron	EN-GJS-450-10
18	Stud Bushing	Brass	EN12164 CW614N
19	O Ring	EPDM	-
20	Washer	Brass	EN12164 CW614N
21	Nut	Stainless Steel	AISI 304
22	Pin	Stainless Steel	AISI 304

## TECHNICAL DATASHEET



### Pressure/Temperature Ratings:

Temperature (°C)	-10 to +110
Pressure (Bar)	16

### Test Pressures:

Each valve is individually hydrostatically tested at the following test:

**(HYDRAULIC) Shell:** 24 bar - **Seat:** 17.6 bar

This valve is not suitable for use on Gases Group 1 & 2 or unstable fluids Group 1, as defined by the Pressure Equipment Directive 2014/68/EU.



## Dimensions:

DN		Dimensions (mm)							Weight (Kg)
Inch	mm	L	D	D1	d	b	H	n-Ød	
2.5"	65	216	185	145	118	19	150	4-Ø19	16.6
3"	80	241	200	160	132	19	160	8-Ø19	19.3
4"	100	292	220	180	156	19	218	8-Ø19	27.7
5"	125	330	250	210	184	19	257	8-Ø19	39.8
6"	150	356	285	240	211	19	290	8-Ø23	47.8
8"	200	495	340	295	266	20	330	12-Ø23	71.7
10"	250	622	405	355	319	22	350	12-Ø28	119.0
12"	300	698	460	410	370	24.5	376	12-Ø28	172.6

## Flow Characteristics:

Size	Kv (m³/h)
DN65 – 2.1/2"	165.8
DN80 – 3"	457.43
DN100 – 4"	754.12
DN125 – 5"	1,178.3
DN150 – 6"	1,696.8
DN200 – 8"	2,982.18
DN250 – 10"	4,516.58
DN300 – 12"	6,700.81

Formula linking flow **Q (in l/s)** and theoretical valve head loss **ΔP (in kPa)**:

$$\Delta P = \left( \frac{36 \cdot Q}{K_v} \right)^2$$

## Pressure Loss vs. Flow Rate Chart:

