

Technical data sheet

Type 291NF

EA anti-pollution non-return valve

01 System

Applications and special features



- Operates in any position
- Minimum head loss
- Silent and robust
- Does not generate hammering
- Closing system : double axial guiding with return spring
- Excellent sealing at high as well as at low pressure ensured by a specially designed lip ring-seal.
- Drilled bosses 1/4" with plug

Technical description

DN		PFA (bar)	PS (bar)				Cat.	References	Vvs-nr
mm	"		L1	L2	G1	G2			
15/21	1/2	10	10	10	10	10	3.3	149B 2220	
20/27	3/4	10	10	10	10	10	3.3	149B 2212	
26/34	1	10	10	10	10	10	3.3	149B 2222	
33/42	1 1/4	10	10	10	X	10	3.3	149B 2213	
40/49	1 1/2	10	10	10	X	10	3.3	149B 2214	
50/60	2	10	10	10	X	10	3.3	149B 2215	

Important notice :

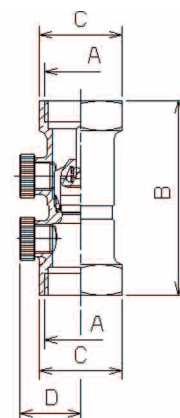
The indicated pressure for the different categories of fluids (L1/L2/G1/G2) is under no condition a guarantee of use. Therefore, it is essential to validate the use of products under given operating conditions.

The operating instructions are available on our web site www.danfoss-socla.com or by requesting from our sales department.

- **Connection** : female/female, BSP thread
- **Permissible operating pressure PFA - water-** (for supply, distribution and disposal of water) : See table
- **Maximum permissible pressure PS - other mediums** : See table
- **T°** : Mini. -10 °C
Maxi. 80 °C
- **Mediums** : Clear liquids, gas
- **Approvals** : NF Antipollution - VERITAS - ACS (France)
Belgaqua (Belgium)
- **International construction Standards** : NF Antipollution according to NFP 43 007
Thread connection according to NF E 03-005 ISO 228

Overall dimensions

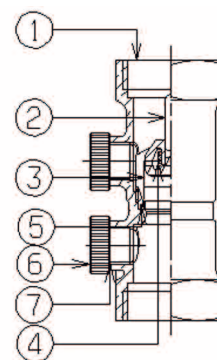
Connections A		B	C	D	Weight
"	mm	mm	mm	mm	kg
1/2	15/21	65	26	26	0,160
3/4	20/27	75	30	30	0,289
1	26/34	90	38	38	0,290
1 1/4	33/42	110	47	47	0,630
1 1/2	40/49	120	54	54	0,780
2	50/60	150	66	66	1,360



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Spare parts list and materials

Nb	Description	Materials	EURO	ANSI
1	CASING	Brass	CuZn39Pb2	
2	CLOSING SYSTEM	POM (polyacetal)		
3	GUIDE - DN 1/2" Other DN	POM (polyacetal) PPO (Polyphenylene oxyde)		
4	SPRING	Stainless steel	X10CrNi18-8	AISI 302
5	SEAL DN 1/2" Other DN	EPDM NBR (Nitrile)		
6	PLUG	POM (polyacetal)		
7	SEAL	EPDM		

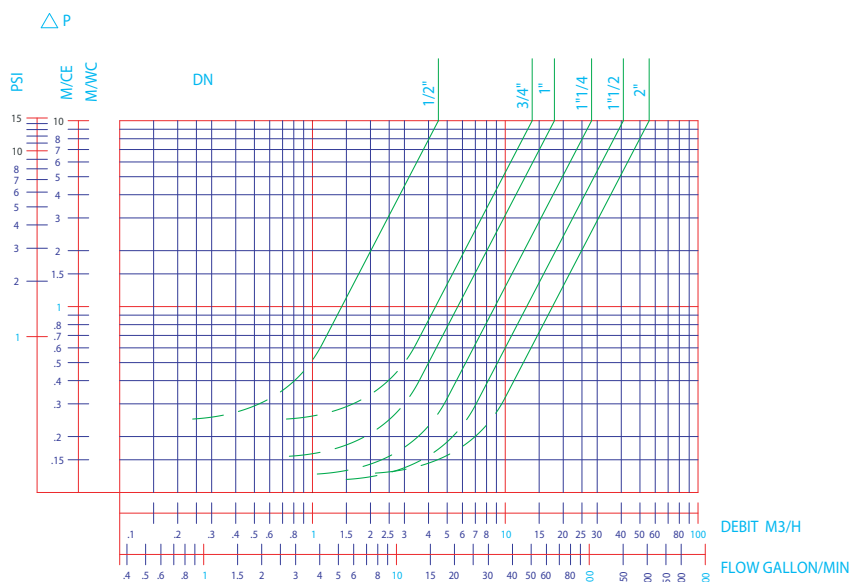


Working principle

DN		Opening pressure (in mm WC)	Kv	ζ
"	mm			
		 between 50 and 200	m ³ /H	
1/2	15/21		4,2	4,5
3/4	20/27		13,8	1,3
1	26/34		18,0	1,6
1 1/4	33/42		28,0	2,1
1 1/2	40/49		41,0	2,4
2	50/60		55,8	3,1

Direction for use :

- Solid line : Valve completely open
- Dotted line : opening stage of valve



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Technical data sheet

Type 296

Backflow preventer

Type CA

Applications and special features



- For the protection of installations to lower risk or with temporary risk but nevertheless needing a backflow preventer device : domestic heating units < 70 kw, vending machines, certain laboratory equipment ...
- The CA 296 backflow preventer is a device with 2 check valves separated with a zone connected to the atmosphere. The closing of this chamber is due to a closing system linked to the upstream valve.
- In case of upstream pressure drop or downstream overpressure with leaking second check valve, the middle section is open to the atmosphere, this separates the upstream and downstream circuits and prohibits any polluted water backflow in the device.

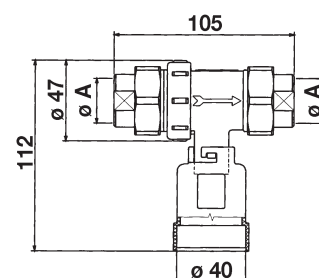
Technical description

"	DN		References	Vvs-nr
	mm			
1/2	15/21		149B2885	
3/4	20/27		149B2886	

- **Connection** : Female/Female 1/2" or 3/4" BSP
- **Permissible operating pressure PFA - water-** : 10 bar
- **T° maxi** : 65°C
- **Mediums** : Clear water
- **Approvals** : NF Antipollution - Bureau Véritas and ACS (France) - BELGAQUA (Belgium) - WRAS (UK) KIWA (Holland)
- **International construction Standards** :
EN 1717 - NF P43-009 - Thread connection according to NFE 03-005 ISO 228

Overall dimensions

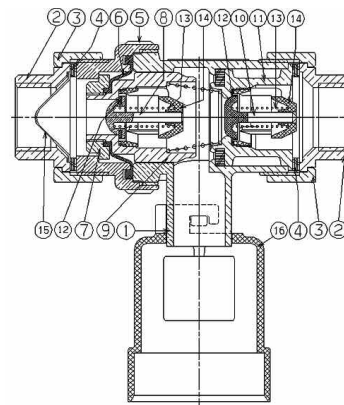
DN	A	B	C	D	E	Weight
"	mm	mm	mm	mm	mm	kg
1/2	15/21	105	112	40	47	0,595
3/4	20/27	105	112	40	47	0,580



Technical data sheet Type 296 - Backflow preventer CA

Spare parts list and materials

Nb	Description	Materials	EURO	ANSI
1	CASING	Brass	CuZn40Pb2	
2	NUTS	Brass	CuZn39Pb3	
3	BOLTS	Brass	CuZn40Pb2	
4	SEAL	EPDM		
5	CONNECTION	Brass	CuZn40Pb2	
6	MEMBRANE	NBR (nitrile)		
7	BOLTS	Brass	CuZn39Pb3	
8	UPSTREAM CLOS SYSTEM	Brass	CuZn39Pb3	
9	SEAT	Brass	CuZn39Pb3	
10	DOWNSTREAM CLOS. SYSTEM	POM (polyacetal)		
11	SEAT	Brass	CuZn39Pb3	
12	SEAL	EPDM - NBR		
13	SPRING	Stainless steel	X10CrNi18-8	
14	GUIDE	PPO		
15	FILTER	Stainless steel	X5CrNi18-10	
16	FUNNEL	PA (Polyamid)		



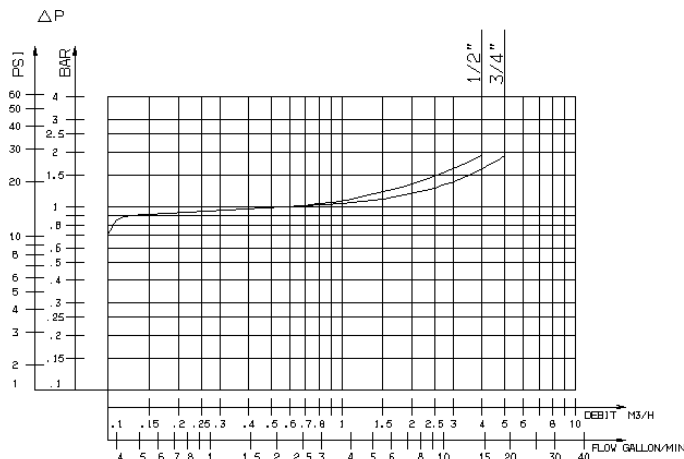
Installation and maintenance

Spare parts : 4 ; 6 ; 10 ; 12 ; 14 ; 16

A clear area of 150 mm around the valve should be maintained to allow ease maintenance and installation. The valve should not be installed where there is any possibility of the air gap becoming submerged or flooded.

- Directions for installation :
 - Total accessibility
 - non-submersible installation
 - purge carefully all air from the installation (non polluted atmosphere)
 - the discharge valve must be able to get the discharge flow rate.
 - protection against frost or extreme temperatures .

Working principle



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