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## VENTIL ZPĚTNÝ Z15/312 class 800 lbs



**Size :** DN 3/8" to 2"  
**Ends :** Female - Female BSP or NPT , Socket Welding  
**Min Temperature :** -30°C in SS and -20°C in carbon steel  
**Max Temperature :** + 440°C  
**Max Pressure :** 138 Bars  
**Specifications :** Piston or ball type  
Bolted bonnet and gland pack  
Reduce bore

**Materials :** Carbon steel or stainless steel



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**SPECIFICATIONS :**

- Reduce bore
- Piston type (with spring) or ball type (without spring)
- All positions for piston type (respect the flow direction indicated by the arrow)
- Horizontal position for ball type (respect the flow direction indicated by the arrow)
- Bolted bonnet
- Forged carbon steel or stainless steel
- ½ stellite ( Trim 8 ) for carbon steel types
- Trim 10 standard inox 316 for stainless steel types
- 800 lbs

**USE :**

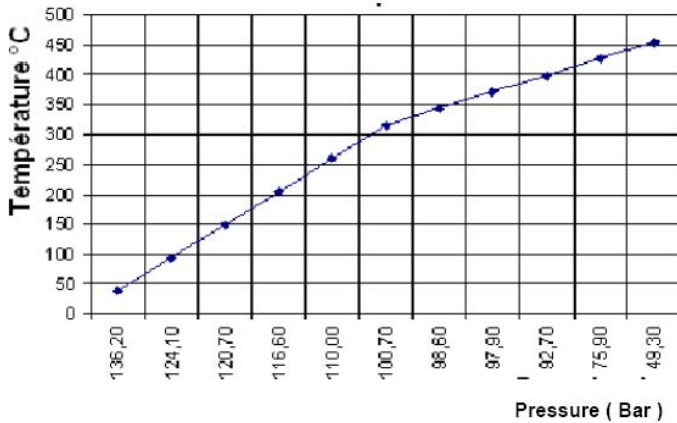
- For common fluids
- Min and max Temperature Ts : - 30°C to + 440°C for stainless steel types **Ref.358/359**
- Min and max Temperature Ts : - 20°C to + 440°C for carbon steel types **Ref. 312/313/314/318/319**
- Max Pressure PN : 138 bars ( see graph )

**FLOW COEFFICIENT Kv ( M<sup>3</sup> / h ) :**

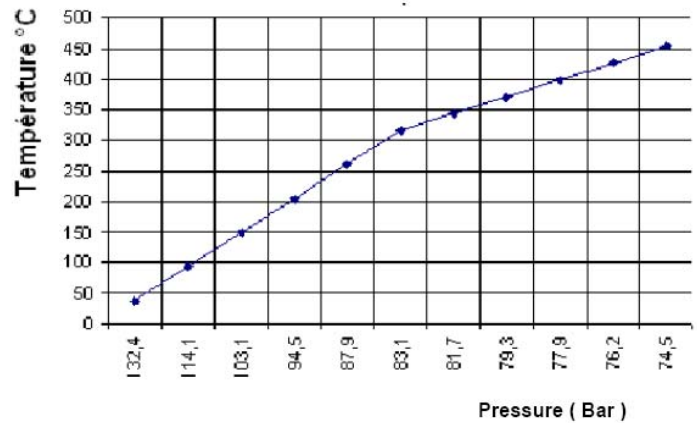
DN	3/8"	1/2"	3/4"	1"	1"1/4	1"1/2	2"
Kv ( m <sup>3</sup> /h )	0.95	0.86	2.4	5.2	8.2	9.5	15.6

**PRESSURE / TEMPERATURE GRAPH :**

FOR CARBON STEEL TYPES ( Ref. 312-313-314-318-319 )



FOR STAINLESS STEEL TYPES ( Ref. 358-359 )



**OPENING PRESSURE :**

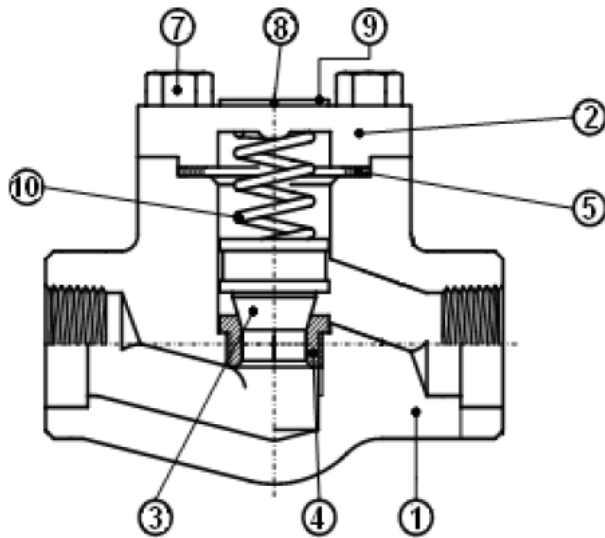
- Opening pressure between 300 and 600 mbar

**RANGE :**

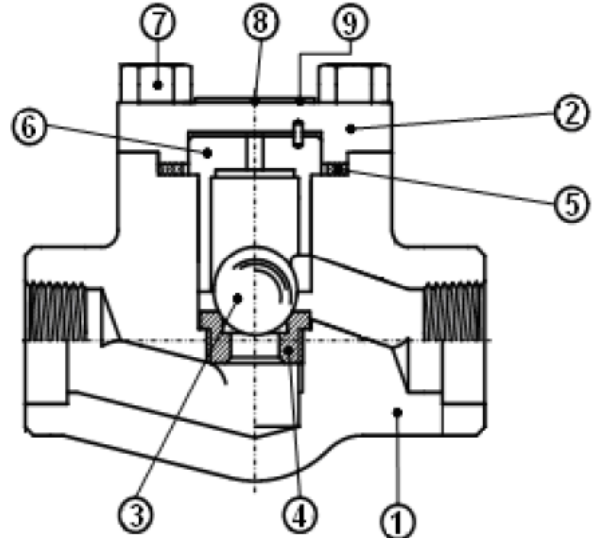
- Carbon steel piston type with spring Socket Welding ends **Ref. 312** DN 10 to DN 50
- Carbon steel piston type with spring threaded NPT cylindric **Ref.313** DN 3/8" to DN 2"
- Carbon steel piston type with spring threaded BSP cylindric **Ref.314** DN 3/8" to DN 2"
- Carbon steel ball type without spring Socket Welding ends **Ref.318** DN 10 to DN 50
- Carbon steel ball type without spring threaded NPT cylindric **Ref.319** DN 3/8" to DN 2"
- Stainless steel ball type without spring Socket Welding ends **Ref.358** DN 10 to DN 50
- Stainless steel ball type without spring threaded NPT cylindric **Ref.359** DN 3/8" to DN 2"

**MATERIALS:**

**Piston types**



**Ball types**

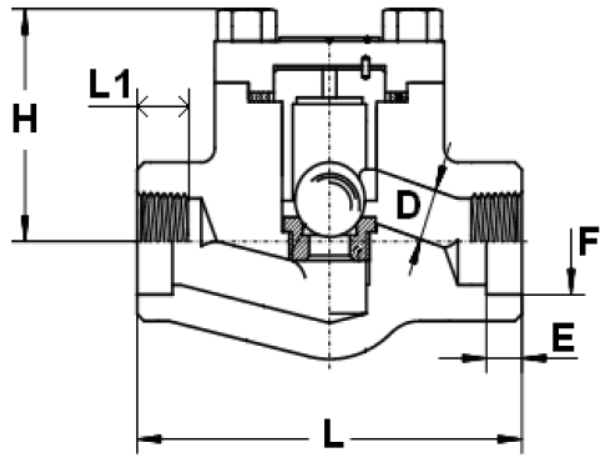
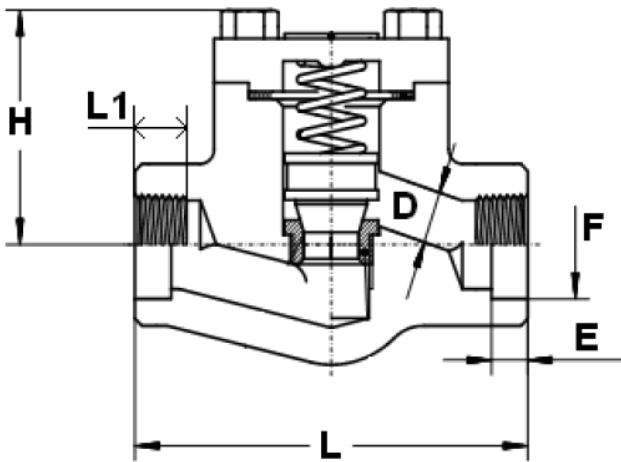


Item	Designation	Materials 312/313/314/318/319	Materials 358/359
1	Body	ASTM A105 N	ASTM A182 F316
2	Bonnet	ASTM A105 N	ASTM A182 F316
3	Ball ( or piston )	ASTM A276 type 410	ASTM A479 type 316
4	Seat	ASTM A276 TYPE 410+STELLITE GR.6'	ASTM A479 type 316
5	Gasket	SS 316 + graphite spiral wound	SS 316 + graphite spiral wound
6	Ball guide	ASTM A276 type 410	ASTM A479 type 316
7	Bolts	ASTM A193 B7	ASTM A193 B8
8	Rivet	Carbon steel	Carbon steel
9	Nameplate	Aluminium	Aluminium
10	Spring ( for piston )	SS 302	-



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SIZE ( in mm ) :



REF.	DN	3/8"	1/2"	3/4"	1"	1"1/4	1"1/2	2"
312/313/314	Ø D	7	9	13	17.5	22.5	29.5	35
318/319	L	80	80	90	110	127	155	170
358/359	H	53	53	60	73	80	98	118
313/314/319/359	L1	13	15	18	19	20	21	21
312/318/358	E ( SW )	11.1	12.7	14.5	16	17.5	19	22
	Ø F ( SW )	17.6	21.72	27.05	33.78	42.54	48.64	61.11
312/313/314/318/319	Weight ( Kg )	1.3	1.2	1.4	2.4	3.6	5.4	8
358/359	Weight ( Kg )	1.3	1.2	1.48	2.5	3.7	5.63	8.3



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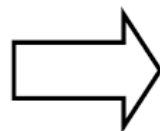
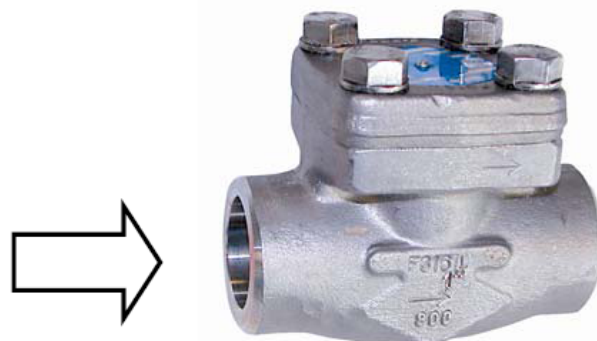
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STANDARDS :

- Fabrication according to ISO 9001 : 2008
- DIRECTIVE 97/23/CE : CE N° 0036  
Risk category III module H
- Conception according to API 6D
- Tests according to API 598
- Approval certificate Russian Federation **GOST-R**
- Check valves approved by the main oil industries ( certificates on request )
- ATEX Group II Category 2 G/2D Zone 1 & 21 Zone 2 & 22 ( optional marking )

INSTALLATION POSITIONS ( for ball type ) :

Horizontal position





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## **INSTALLATION INSTRUCTIONS**

### **GENERAL GUIDELINES :**

- Ensure that the check valves to be used are appropriate for the conditions of the installation (type of fluid, pressure and temperature).
- Be sure to have enough valves to be able to isolate the sections of piping as well as the appropriate equipment for maintenance and repair.
- Ensure that the check valves to be installed are of correct strength to be able to support the capacity of their usage.
- Installation of all circuits should ensure that their function can be automatically tested on a regular basis (at least two times a year).

### **INSTALLATION INSTRUCTIONS :**

- **Before installing the check valves, clean and remove any objects from the pipes** (in particular bits of sealing and metal) which could obstruct and block the check valves.
  - **Ensure that both connecting pipes either side of the check valve (upstream and downstream) are aligned** (if they're not, the valves may not work correctly).
  - **Make sure that the two sections of the pipe (upstream and downstream) match, the check valve unit will not absorb any gaps. Any distortions in the pipes may affect the tightness of the connection, the working of the check valve and can even cause a rupture.** To be sure, place the kit in position to ensure the assembling will work.
  - **During welding operation, for S.W. types be sure to not exceed 350-400°C**
  - **If sections of piping do not have their final support in place, they should be temporarily fixed. This is to avoid unnecessary strain on the check valve.**
  - **Fluids in the check valve must not contain solid objects ( it could damaged the seat ).**
  - **If there is a direction changing or if there's another material, it's better to take away the check valve so that it is outside the turbulence area ( between 3 and 5 times the ND before and after ).**
  - **After a pump please refer to norm NF CR 13932 to install the check valve.**
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