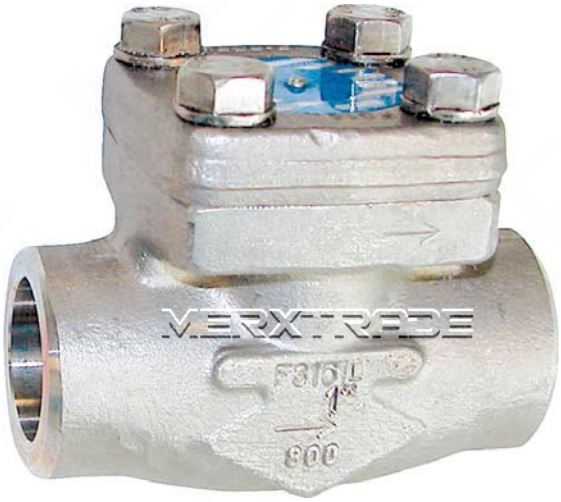
FORGED BALL CHECK VALVE CLASS 800 F316 TRIM10

ISO 9001 : 2015

PED 2014/68/EU

Certificate 3.1



Size :	DN 10 to 50 (NPS 3/8" to 2")
Ends :	Female - Female NPT, Socket Welding
Min Temperature :	- 49°C
Max Temperature :	+ 538°C
Max Pressure :	132 Bars (Class 800)
Specifications :	Ball type Bolted bonnet and gland pack Standard port
Materials :	Stainless steel A182 F316

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SPECIFICATIONS :

- Standard port
- Ball type with spring
- Horizontal position only (respect the flow direction indicated by the arrow)
- Easy maintenance thanks to the bolted bonnet
- Stainless steel A182 F316
- Trim 10 standard SS 316 for stainless steel types
- Metal / metal seat
- High temperature thanks to the stainless steel + graphite bonnet gasket
- Class 800

USE :

- Petroleum industry, steam, high pressure
- Min and max Temperature Ts : - 49°C to + 538°C
- Max Pressure Ps : 132 bars (see graph)

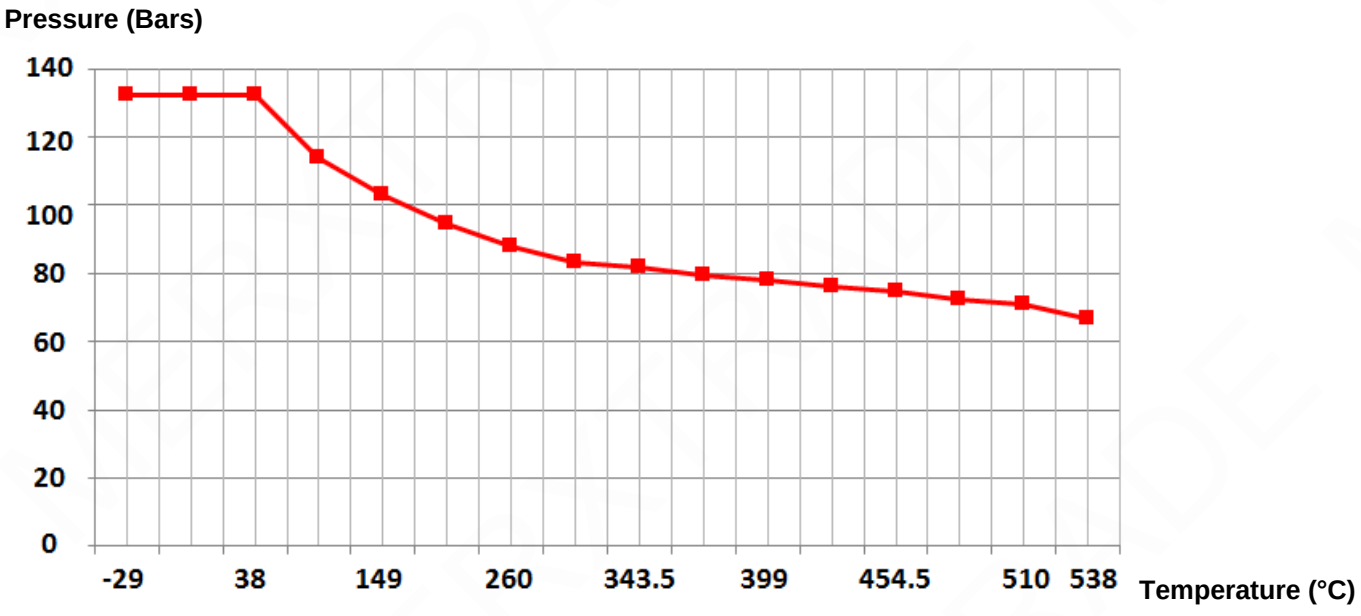
FLOW COEFFICIENT Kvs (M3 / h) :

DN	10	15	20	25	32	40	50
NPS	3/8“	1/2“	3/4“	1“	1“1/4	1“1/2	2“
Kvs (m3/h)	0.95	0.86	2.4	5.2	8.2	9.5	15.6

PRESSURE / TEMPERATURE RELATION :

Pressure (bar)	132.4	132.4	132.4	114.1	103.1	94.5	87.9	83.1	81.7	79.3	77.9	76.2	74.5	72.4	71	66.9
Temperature (°C)	-49	0	38	93,5	149	204,5	260	315,5	343,5	371	399	425	454.5	482	510	538

PRESSURE / TEMPERATURE GRAPH :



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OPENING PRESSURE :

- Opening pressure between 300 and 600 mbar

RANGE :

- Forged A182 F316 stainless steel ball check valve type TRIM 10 with spring Socket Welding ends **Ref.358** DN 10 to DN 50 (NPS 3/8“ to DN 2“)
- Forged A182 F316 stainless steel ball check valve type TRIM 10 with spring threaded NPT ends **Ref.359** DN 10 to DN 50 (NPS 3/8“ to DN 2“)

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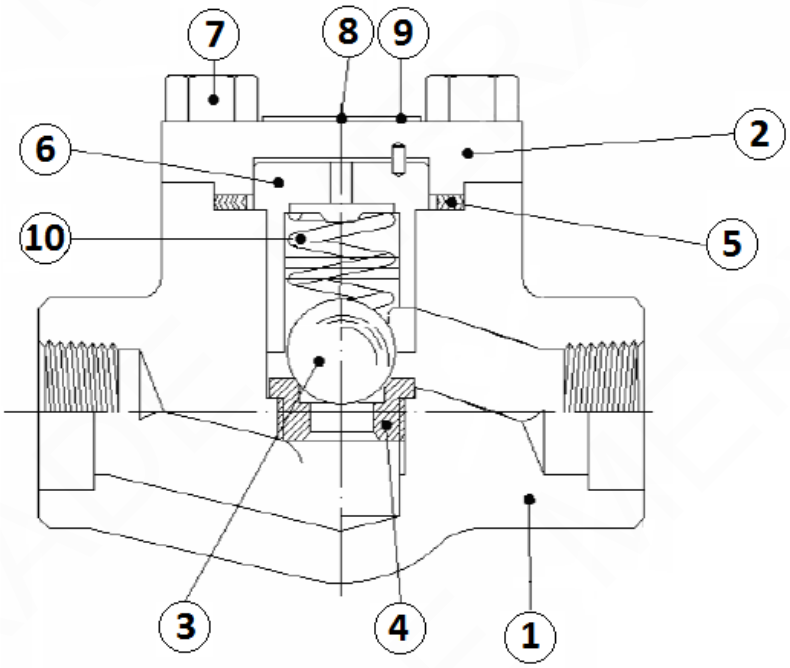
MATERIALS:



Item	Designation	Materials
1	Body	ASTM A182 F316
2	Bonnet	ASTM A182 F316
3	Ball (or piston)	ASTM A479 type 316
4	Seat	ASTM A479 type 316
5	Gasket	AISI 316 + graphite spiral wound
6	Ball guide	ASTM A479 type 316
7	Bolts	ASTM A193 B8
8	Rivet	Carbon steel
9	Nameplate	Aluminium
10	Spring	Inconel X-750

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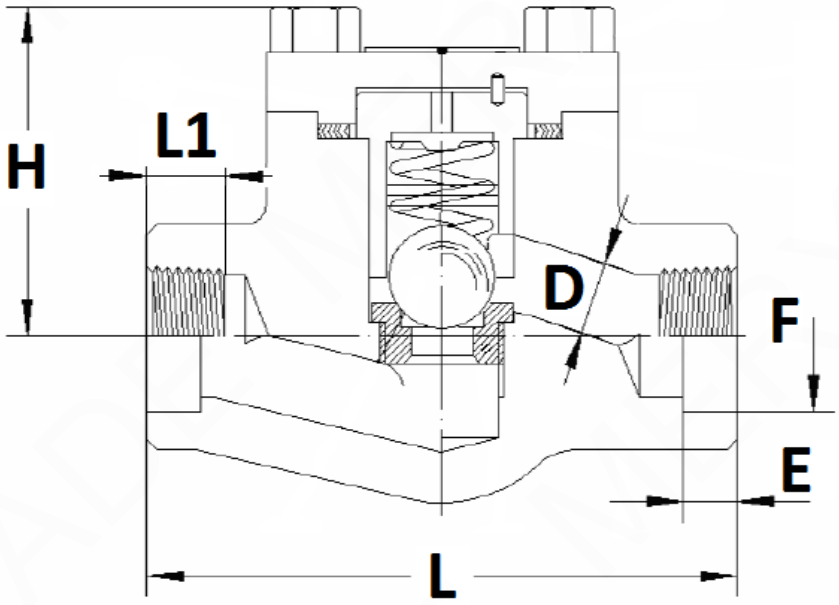
SIZE (in mm) :



Ref.	DN (mm)	10	15	20	25	32	40	50
	NPS (")	3/8"	1/2"	3/4"	1"	1"1/4	1"1/2	2"
358/359	Ø D	7	9	13	17.5	22.5	29.5	35
	L	80	80	90	110	127	155	170
	H	53	53	60	73	80	98	118
359	L1	13	15	18	19	20	21	21
358	E (SW)	11.1	12.7	14.5	16	17.5	19	22
	Ø F (SW)	17.6	21.8	27.2	33.9	42.7	48.8	61.2
358/359	Weight (Kg)	1.3	1.2	1.48	2.5	3.7	5.63	8.3

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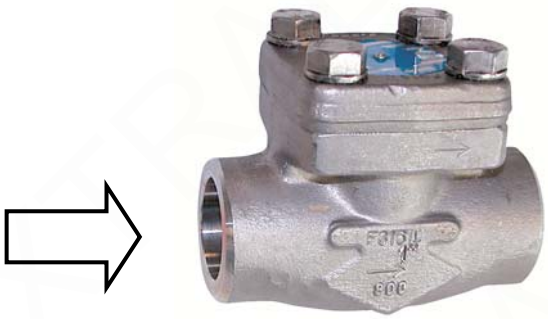
STANDARDS :

- Fabrication according to **ISO 9001 : 2015**
- DIRECTIVE 2014/68/EU : **CE N° 0036**
  Risk category III module H
- Certificate 3.1 on request
- Designing according to **ISO 15761** and **API 602** 8th
- Pressure tests according to **API 598, table 6**
- Check valves approved by the main oil industries (certificates on request)
- ATEX Group II Category 2 GD T3 Zone 1 & 21 Zone 2 &22 (optional marking) according to directive 2014/34/EU
- Threaded female NPT ends according to **ANSI B1.20.1**
- Socket Welding ends according to **ISO 15761**

INSTALLATION POSITION :

Horizontal position



ADVICE : Our opinion and our advice are not guaranteed and MXT shall not be liable for the consequences of damages. The customer must check the right choice of the products with the real service conditions.

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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 strenght 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 thightness 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 **FD CEN/TR 13932** to install the check valve :
  - If it is essential to keep priming the pump, a non-return check valve can be fitted to the suction pipe at a distance **L1 (straight length suction) > 10xD1 (diameter suction)**
    The check valve is designed to meet the maximum flow rate in service
  - In other cases, the non-return check valve is mounted on the discharge pipe at a distance of **L2 (straight length at discharge) > 3xD2 (diameter at discharge)**