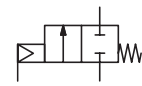




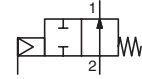
# MINI-VALVES

pressure operated  
stainless steel body  
threaded ports, G 1/2 to 1

NC



NO



**2/2**  
Series  
**U290**

## FEATURES

- High flow due to angled seat design
- Anti-waterhammer design (fluid entry under the disc)
- External threads to ISO 228/1 for industrial applications
- Vacuum operation up to  $10^{-2}$  mbar
- Piston-type operators 32 mm dia. rotatable through 360°
- High performance, maintenance-free stuffing box
- The valves satisfy Pressure Equipment Directive 2014/68/EU, article 4.3
- The valves in conformity with IEC 61508 Standard (2010 route 2<sub>H</sub> version) certified with integrity levels: SIL 2 for HFT = 0

## GENERAL

<b>Differential pressure</b>	See «SPECIFICATIONS» [1 bar =100 kPa]
<b>Maximum allowable pressure</b>	16 bar
<b>Ambient temperature range</b>	-10°C to +60°C
<b>Maximum viscosity</b>	600 cSt (mm <sup>2</sup> /s)
<b>Pilot fluid</b>	Filtered air or water <sup>(1)</sup>
<b>Max. pilot pressure</b>	10 bar
<b>Min. pilot pressure</b>	See below
<b>Pilot fluid temperature</b>	-10°C to +60°C
<b>Response time</b>	See page 7 ( <a href="http://www.asco.com">www.asco.com</a> )

fluids (*)	temperature range	disc seal (*)
air and gas groups 1 & 2 water, oil, liquids groups 1 & 2 and steam	- 10°C to + 184°C	PTFE

## MATERIALS IN CONTACT WITH FLUID

(\*) Ensure that the compatibility of the fluids in contact with the materials is verified

<b>Valve body</b>	AISI 316L
<b>Stuffing box housing</b>	AISI 316L
<b>Stem</b>	Stainless steel
<b>Disc</b>	Stainless steel
<b>Stuffing box packing</b>	PTFE chevrons
<b>Wiper seal</b>	FPM
<b>Disc seal</b>	PTFE
<b>Valve body seal</b>	PTFE

## OTHER MATERIALS

<b>Operator</b>	Glass fibre filled PA
<b>Optical position indicator</b>	Optional on NC valves

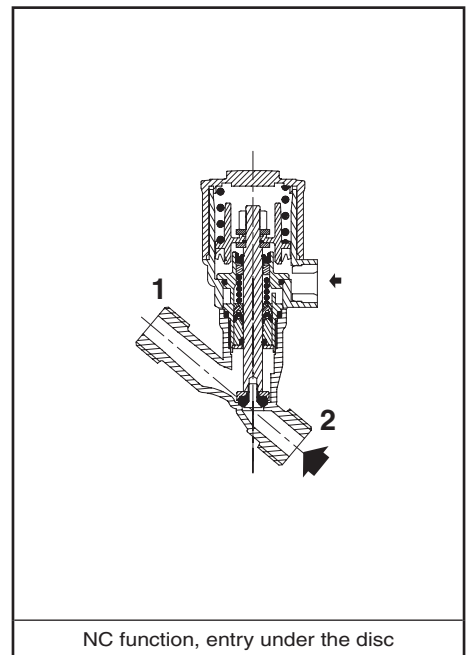
<sup>(1)</sup> For dia. 32 operators: At service fluid temperatures inside the valve body above 100°C, it is prohibited to pilot the valve with water.

## SPECIFICATIONS

piping (ISO 6708)		flow coefficient Kv		pilot pressure (bar)		operating pressure differential (bar)				operator diameter (mm)	catalogue number	
pipe size (G)	DN	(m <sup>3</sup> /h)	(l/min)	min.	max.	min..	max.					
								air, inert gas, aggressive fluids (*)	water, oil, liquids, aggressive liquids (*)	steam (*) (≤184°C)		
<b>NC - Normally closed, entry under the disc <sup>(3)</sup></b>												
1/2	10	2,8	47	4	10	0	16	16	10	32	<b>U290A791</b>	
3/4	15	4,1	68	4	10	0	12	12	10	32	<b>U290A792</b>	
1	20	6,5	108	4	10	0	6	6	6	32	<b>U290A793</b>	
<b>NO - Normally open, entry under the disc</b>												
1/2	10	2,8	47	IX (*)	10	0	16	16	10	32	<b>U290A794</b>	
3/4	15	4,1	68	IX (*)	10	0	16	16	10	32	<b>U290A795</b>	
1	20	6,5	108	IX (*)	10	0	16	16	10	32	<b>U290A796</b>	
<b>NC - Normally closed, entry above the disc (version recommended for rapid-cycling steam applications)</b>												
1/2	10	2,8	47	X (*)	10	0	10	-	10	32	<b>U290A797</b>	
3/4	15	4,1	68	X (*)	10	0	10	-	10	32	<b>U290A798</b>	
1	20	6,5	108	X (*)	10	0	10	-	10	32	<b>U290A799</b>	

(\*) Minimum pilot pressure varies with differential pressure, see page: 7 ([www.asco.com](http://www.asco.com))

<sup>(3)</sup> Calculation of the minimum pilot pressure at max. ΔP with allowable backpressure, contact us (backpressure not recommended with liquids as waterhammer may occur).



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### OPTIONS AND ACCESSORIES [see pages: 37 ([www.asco.com](http://www.asco.com)) / 43 ([www.asco.com](http://www.asco.com))]

- Optical position indicator, NC function
- Oxygen service, pressure limited to 15 bar, temperature limited to + 60°C
- Vacuum applications up to 1,33 10<sup>-3</sup> mbar
- NET-INOX passivation treatment
- ATEX 2014/34/EU versions for potentially explosive atmospheres ([www.asco.com](http://www.asco.com))
- Other pipe connections are available on request

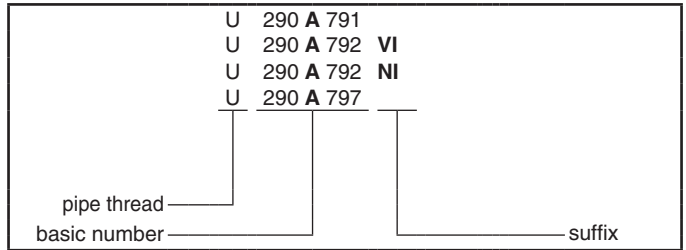
### INSTALLATION

- The valves can be mounted in any position without affecting operation
- Compatible with ASTM 1, 2 and 3 oils
- Check temperature range of valve body and solenoid pilot valves for suitability. For probability of failure, contact us
- Pipe connection identifier is G = G (ISO 228/1)
- Installation/maintenance instructions are included with each valve

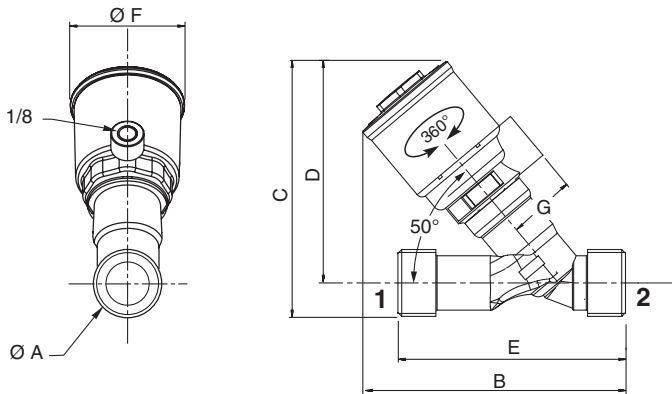
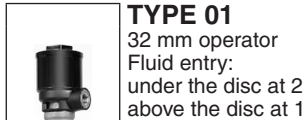
### SPARE PARTS KITS

DN	spare parts kit no.	
		Ø 32 mm
10	C140100	
15	C140101	
20	C140102	

### ORDERING EXAMPLES:



### DIMENSIONS (mm), WEIGHT (kg)



type	operator diameter	ØA	B	C	D	E	ØF	G	weight <sup>(1)</sup>
01	32 mm	1/2	102,5	98,2	87,7	80	43,5	27	0,36
		3/4	104,9	102	88,8	90	43,5	27	0,43
		1	109,5	104,9	88,4	110	43,5	27	0,54

<sup>(1)</sup> Weight of valve without pilot.  
Solenoid pilot valves, see page: 49 ([www.asco.com](http://www.asco.com)) [32 mm operator]

