ASCO™ Pneumatic Straight Seat Valves

2-way, Pressure Operated, Stainless Steel Body
Aluminium Actuator, with Socket Welding Ends PN40, DN 15 to 50

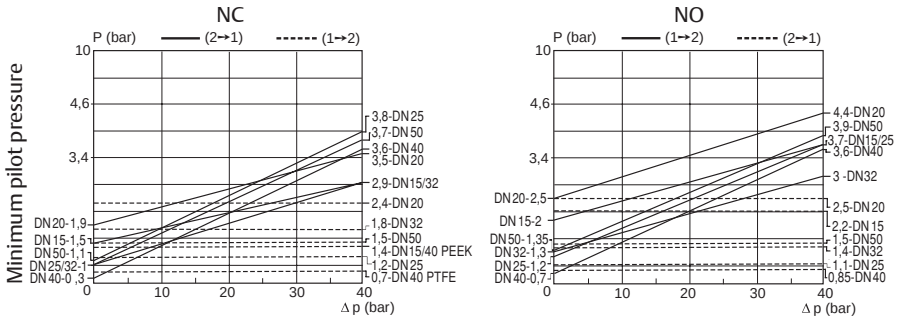
Features and Benefits

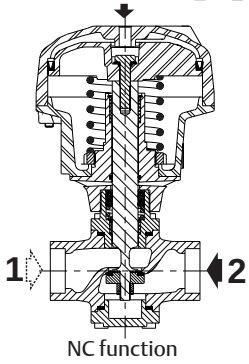
- *Ruggedly built valve, particularly recommended for use with steam, superheated water, corrosive fluids*
- *High-performance, maintenance-free stuffing box, resistant to thermal shock*
- *Pressure can be applied to any port as needed by the process*
- *Anti-waterhammer design (fluid entry at orifice 1), recommended for use with liquids*
- *Vacuum operation up to 10^{-2} mbar (PTFE and PEEK discs)*
- *Optical position indicator as standard*
- *Autoclavable valve for use at high ambient temperatures (up to 180°C)*
- *The valves satisfy Pressure Equipment Directive 2014/64/EU*
- *The valves in conformity with IEC 61508 Standard (2010 route 2_H version) certified with integrity levels: SIL 2 for HFT = 0*

General

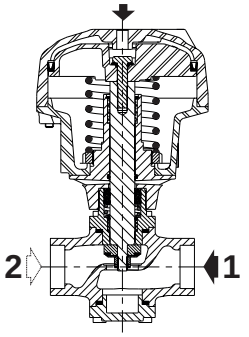
Differential pressure	0 to 40 bar [1 bar =100 kPa]
Maximum allowable pressure	40 bar (within the specified limits, see diagram I)
Maximum back pressure	40 bar / 20 bar for PEEK sealing
Ambient temperature range	-20°C to +180°C [Option: -55°C to +70°C]
Maximum viscosity	5000 cSt (mm²/s)
Pilot fluid	Air
Max. pilot pressure	10 bar
Min. pilot pressure	See graphs below

Fluids (∗)	Temperature range	Disc seal (∗)
DN 15-20-25: air and gas groups 1 and 2 DN 32-40-50: air and gas group 2 all DN: water, oil, liquids groups 1 and 2 and steam	-10°C to +233°C	PEEK
	-10°C to +250°C	metal-to-metal
	-10°C to +180°C	PTFE





NC function



NO function

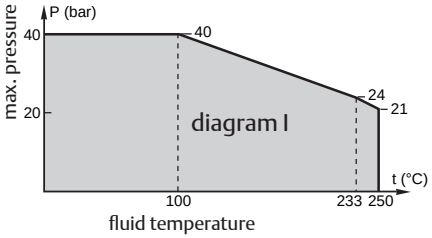
Specifications

Socket welding ends	EN 12760

Materials of components in contact with fluid

(∗) Ensure that compatibility of materials in contact with fluids is verified.

Body and plug	304 stainless steel
Stuffing box housing	304 stainless steel
Stem, disc	431 stainless steel, 304 stainless steel
Stuffing box packing	PTFE chevrons
Disc seals	PEEK or PTFE or Stainless steel
Valve body seal	PTFE



Other components

Actuator	Aluminium, nickel plated
Screws	Galvanized steel

Options

- Low temperature (media and ambient temperature), PTFE disc seal (-55°C to +70°C), see "PRODUCT CODE" (∗) [1]
- Oxygen service, max. fluid pressure 15 bar, max. fluid temperature 150°C, PTFE disc, see "PRODUCT CODE"
- Signalling box, see "PRODUCT CODE":
  - Dual mechanical contacts or dual inductive contacts (PNP 3 wires)
  - Dual inductive contacts ATEX Ex ia (NAMUR 2 wires)
  - Dual mechanical contact ATEX Ex d IIC T6 (Crouzet contacts type 83101-I-W1, ambient temperature -20°C to +80°C)
  - Dual mechanical contact ATEX Ex d IIC T6 (Honeywell contact type 1HS1, ambient temperature -55°C to +70°C). Use for low temperature option
- For use in explosive atmospheres, zones 1/21-2/22, categories 2-3 to ATEX Directive 2014/34/EU: Ex IIC 2GD c x°C (Tx)
- CUTR Certification for ATEX 1/21, see "PRODUCT CODE"
- Valve seat leakage class VI as defined by FCI-2 ANSI B16.104 or Class A or B following EN 12266-1, contact us
- Manual override on the top of the actuator (Manual safety device), contact us
- Other flange types are available on request
- Re-buildable valve program; rebuild services, contact us

(∗) Ensure that compatibility of materials in contact with fluids is verified.
[1] The minimum ambient temperature of the valve is determined by the limitations of minimum temperature indicated.

Specifications

DN	ext. pipe diameter	Flow coefficient Kv				Pilot pressure (bar)		Operating pressure differential	Actuator diameter	Catalog number		
		1 → 2		2 → 1						Disc sealing		
	(mm)	(m^3/h)	(l/min)	(m^3/h)	(l/min)	min.	max.			PTFE	PEEK	Metal-to-Metal
NC - Normally closed												
15	15	4.4	73	5	83	❋	10	40	80	W298B037ATA0000	W298B037AVA0000	W298B037AEA0000
20	20	7.7	128	8.5	142	❋	10	40	100	W298B04DATA0000	W298B04DAVA0000	W298B04DAEA0000
25	25	11.5	192	12	200	❋	10	40	100	W298B05DATA0000	W298B05DAVA0000	W298B05DAEA0000
32	32	18	300	18	300	❋	10	40	150	W298B06KATA0000	W298B06KAVA0000	W298B06KAEA0000
40	40	29	483	29	483	❋	10	40	150	W298B07KATA0000	W298B07KAVA0000	W298B07KAEA0000
50	50	57	950	57	950	❋	10	40	200	W298B08MATA0000	W298B08MAVA0000	W298B08MAEA0000
NO - Normally open												
15	15	3.5	58	3.5	58	❋	10	40	80	W298B137ATA0000	W298B137AVA0000	W298B137AEA0000
20	20	7.2	120	7	117	❋	10	40	100	W298B14DATA0000	W298B14DAVA0000	W298B14DAEA0000
25	25	11	183	11	183	❋	10	40	100	W298B15DATA0000	W298B15DAVA0000	W298B15DAEA0000
32	32	18	300	15	250	❋	10	40	150	W298B16KATA0000	W298B16KAVA0000	W298B16KAEA0000
40	40	28.2	470	28.2	470	❋	10	40	150	W298B17KATA0000	W298B17KAVA0000	W298B17KAEA0000
50	50	53	883	53	883	❋	10	40	200	W298B18MATA0000	W298B18MAVA0000	W298B18MAEA0000

❋ Minimum pilot pressure varies with differential pressure. See piloting chart preceding page.

ASCO™ Pneumatic Straight Seat Valves

Product selection guide

Configurator - CAD Files

PRODUCT CODE

W	298	B	0	3	7	A	V	A00	00

Connection
W= Socket Welded

Product series
298

Revision letter
B = New Stuffing Box and Disc Materials

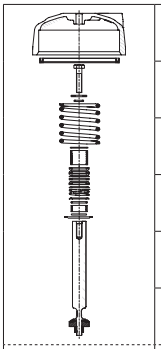
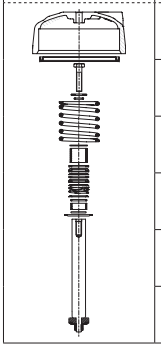
Function
0 = Normally closed
1 = Normally open

Diameter (mm)
3 = 15 mm
4 = 20 mm
5 = 25 mm
6 = 32 mm
7 = 40 mm
8 = 50 mm

Operator Dia. - Piloting Connection Dia.
7 = Ø80 mm - G 1/8”
8 = Ø80 mm - NPT 1/8” (1)
D = Ø100 mm - G 1/8”
E = Ø100 mm - NPT 1/8” (1)
K = Ø150 mm - G 1/4”
L = Ø150 mm - NPT 1/4” (1)
M = Ø200 mm - G 1/4”
N = Ø200 mm - NPT 1/4” (1)
(1) Connection = 8 [NPTF (ANSI B1.20.3)]

Options
A00 = Without
AT1 = ATEX zones 1/21
AT2 = ATEX zones 2/22
LTP = PTFE disc for low temperature (-55°C to +70°C)
MC2 = Dual mechanical Contacts
AD2 = Dual position Contact ATEX Ex d
1S2 = Dual position Contact NAMUR ATEX Ex i
1C2 = Dual inductive contacts PNP 3 wires
02S = PTFE disc for Oxygen service
125 = CUTR Certification for ATEX 1/21
LT1 = AT1 + LTP
LT2 = AT2 + LTP

Disc Seal Material
T = PTFE
E = Metal-to-metal (stainless steel)
V = PEEK

		Spare parts kits no. (*)	
		PTFE disc seal	PEEK disc version
	DN 15 NC	M29852671700100	M29852671400100
	DN 20 NC	M29852671700400	M29852671400400
	DN 25 NC	M29852671700700	M29852671400700
	DN 32 NC	M29852671701000	M29852671401000
	DN 40 NC	M29852671701300	M29852671401300
	DN 50 NC	M29852671701600	M29852671401600
	DN 15 NO	M29852671700200	M29852671400200
	DN 20 NO	M29852671700500	M29852671400500
	DN 25 NO	M29852671700800	M29852671400800
	DN 32 NO	M29852671701100	M29852671401100
	DN 40 NO	M29852671701400	M29852671401400
	DN 50 NO	M29852671701700	M29852671401700

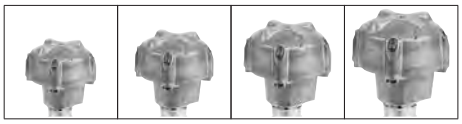
(*) Ensure that compatibility of the fluids in contact with the materials is verified.

Installation

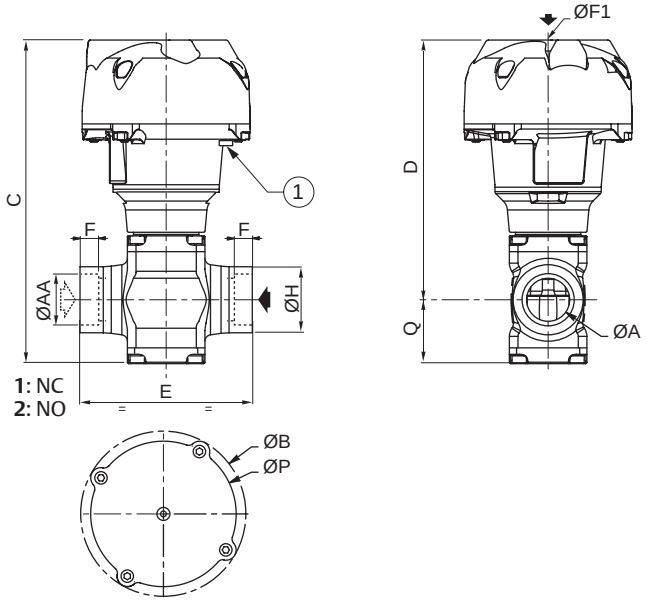
- The valves can be mounted in any position without affecting operation
- Compatible with ASTM 1, 2 and 3 oils
- Check temperature range of valve body and solenoid pilot valves for suitability. For probability of failure, contact us
- Piloting thread connection: Pipe connections (G*) have standard thread according to ISO 228/1 and ISO 7/1. Pipe connections (G) have standard thread according to ISO 228/1
- Piloting thread connections have standard thread = NPTF (ANSI B1.20.3)
- Declarations of conformity are available on request
- Installation/maintenance instructions are included with each valve

Dimensions (mm), **Weight** (kg)

Configurator - CAD Files



TYPE 01-02-03-04
"W" socked welded ends



(1) Optical position indicator

Type	DN	Actuator diameter	ØA	ØAA	ØB	C	D	E	F	ØF1	ØH	ØP	Q	weight	
														NC	NO
01	15	80	15	22.4	110	184.1	151.6	85	9.5	G 1/8"	33	95	32.5	1.81	1.79
02	20	100	20	27.7	132.5	209.9	170.9	110	11	G 1/8"	40	117	39	3.43	3.45
	25	100	25	34.5	132.5	225.4	180.9	120	12.5	G 1/8"	46	117	44.5	4.15	4.11
03	32	150	32	43.2	191	291.2	237.2	145	14.5	G* 1/4"	57	172.5	54	9.31	9.25
	40	150	40	49.5	191	325.7	259.2	150	16	G* 1/4"	65	172.5	66.5	11.38	11.36
04	50	200	50	62	247	409	328.5	190	17.5	G* 1/4"	75	230	80.5	23.48	21.68