

ASCO™ Pneumatic Straight Seat Valves

2-way, Pressure Operated, Stainless Steel Body

Aluminium Actuator, with Flanges PN40, DIN and ANSI Class 300, DN 15 to 50

2/2
Series
T298

Features and Benefits

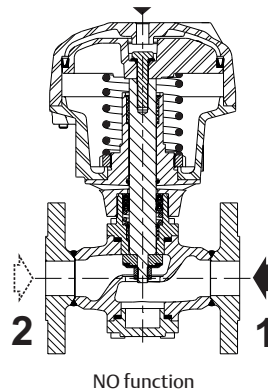
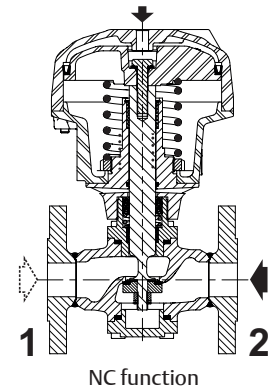
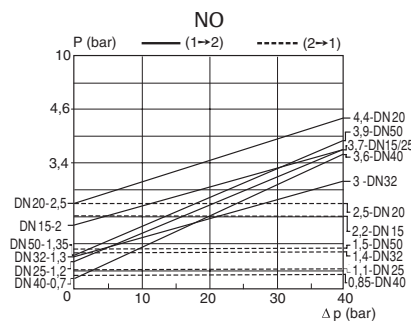
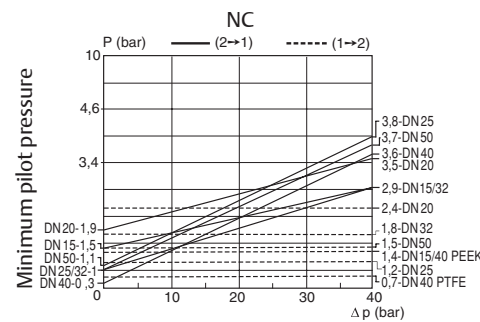
- Ruggedly built valve, particularly recommended for use with steam, superheated water, corrosive fluids
- High-performance, maintenance-free stuffing box, resistant to thermal shock
- Pressure can be applied to any port as needed by the process
- Anti-waterhammer design (fluid entry at orifice 1), recommended 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 (mm ² /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	-10°C to +233°C	PEEK
all DN: water, oil, liquids groups 1 and 2 and steam	-10°C to +250°C	metal-to-metal
	-10°C to +180°C	PTFE



Specifications

Connection	Flanges PN40, type 21 (ISO 7005 / EN 1092-1) ANSI Class 300 ANSI B16-5
Face-to-face dimensions	EN 558-1
Face de joint	Type B

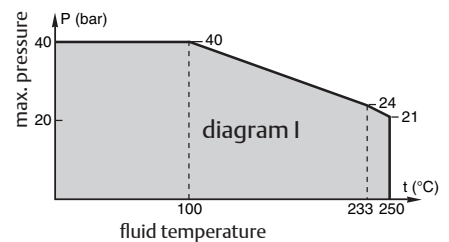
Materials of components in contact with fluid

(*) 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	Orifice size (mm)	Flow coefficient Kv				Pilot pressure (bar)		Operating pressure differential (bar)	Actuator diameter (mm)	Catalog number		
		1 → 2		2 → 1		min.	max.			Disc sealing		
		(m³/h)	(l/min)	(m³/h)	(l/min)					PTFE	PEEK	Metal-to-Metal
NC - Normally closed										Flanges DIN EN 1092-1		
15	15	4.4	73	5	83	*	10	40	80	T298B037DTA0000	T298B037DVA0000	T298B037DEA0000
20	20	7.7	128	8.5	142	*	10	40	100	T298B04DDTA0000	T298B04DDVA0000	T298B04DDEA0000
25	25	11.5	192	12	200	*	10	40	100	T298B05DDTA0000	T298B05DDVA0000	T298B05DDEA0000
32	32	18	300	18	300	*	10	40	150	T298B06KDTA0000	T298B06KDVA0000	T298B06KDEA0000
40	40	29	483	29	483	*	10	40	150	T298B07KDTA0000	T298B07KDVA0000	T298B07KDEA0000
50	50	57	950	57	950	*	10	40	200	T298B08MDTA0000	T298B08MDVA0000	T298B08MDEA0000
Flanges ANSI 300										Flanges ANSI 300		
15	15	4.4	73	5	83	*	10	40	80	T298B038PTA0000	T298B038PVA0000	T298B038PEA0000
20	20	7.7	128	8.5	142	*	10	40	100	T298B04EPTA0000	T298B04EPVA0000	T298B04EPEA0000
25	25	11.5	192	12	200	*	10	40	100	T298B05EPTA0000	T298B05EPVA0000	T298B05EPEA0000
32	32	18	300	18	300	*	10	40	150	T298B06LPTA0000	T298B06LPVA0000	T298B06LPEA0000
40	40	29	483	29	483	*	10	40	150	T298B07LPTA0000	T298B07LPVA0000	T298B07LPEA0000
50	50	57	950	57	950	*	10	40	200	T298B08NPTA0000	T298B08NPVA0000	T298B08NPEA0000
NO - Normally open										Flanges DIN EN 1092-1		
15	15	3.5	58	3.5	58	*	10	40	80	T298B137DTA0000	T298B137DVA0000	T298B137DEA0000
20	20	7.2	120	7	117	*	10	40	100	T298B14DDTA0000	T298B14DDVA0000	T298B14DDEA0000
25	25	11	183	11	183	*	10	40	100	T298B15DDTA0000	T298B15DDVA0000	T298B15DDEA0000
32	32	18	300	15	250	*	10	40	150	T298B16KDTA0000	T298B16KDVA0000	T298B16KDEA0000
40	40	28.2	470	28.2	470	*	10	40	150	T298B17KDTA0000	T298B17KDVA0000	T298B17KDEA0000
50	50	53	883	53	883	*	10	40	200	T298B18MDTA0000	T298B18MDVA0000	T298B18MDEA0000
Flanges ANSI 300										Flanges ANSI 300		
15	15	3.5	58	3.5	58	*	10	40	80	T298B138PTA0000	T298B138PVA0000	T298B138PEA0000
20	20	7.2	120	7	117	*	10	40	100	T298B14EPTA0000	T298B14EPVA0000	T298B14EPEA0000
25	25	11	183	11	183	*	10	40	100	T298B15EPTA0000	T298B15EPVA0000	T298B15EPEA0000
32	32	18	300	15	250	*	10	40	150	T298B16LPTA0000	T298B16LPVA0000	T298B16LPEA0000
40	40	28.2	470	28.2	470	*	10	40	150	T298B17LPTA0000	T298B17LPVA0000	T298B17LPEA0000
50	50	53	883	53	883	*	10	40	200	T298B18NPTA0000	T298B18NPVA0000	T298B18NPEA0000

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

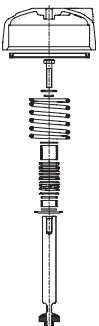

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Product selection guide

Configurator - CAD Files

PRODUCT CODE	
T 298 B 0 3 7 D V A00 00	
Connection T = Flanges	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
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	Disc Seal Material T = PTFE E = Metal-to-metal (stainless steel) V = PEEK
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⁾	Port Type D = Flanges DIN EN 1092-1 (ISO 7005) Standard P = Flanges ANSI Class 300

⁽¹⁾ Connection = NPTF (ANSI B1.20.3) / Flanges ANSI Class 300

		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

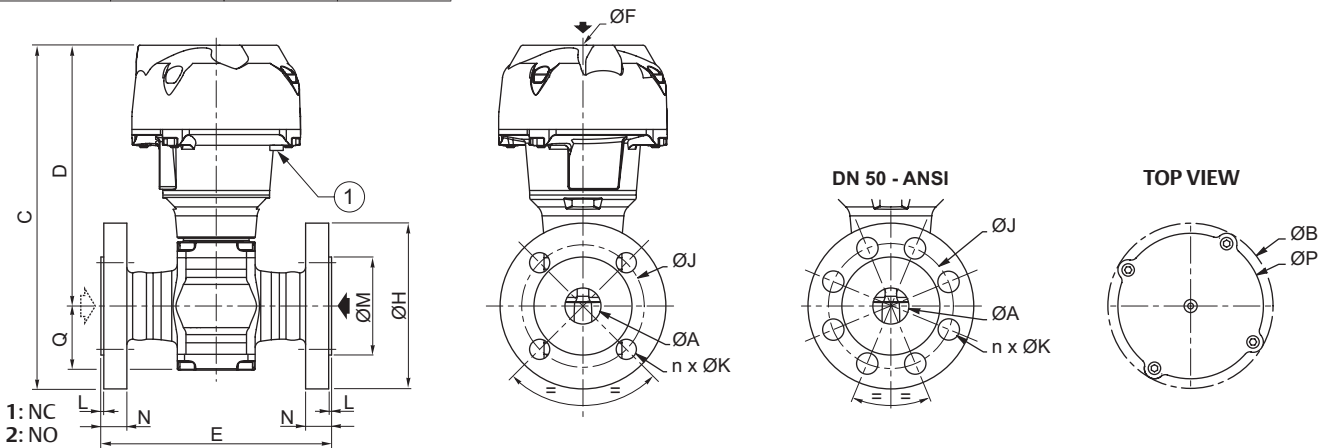
Dimensions (mm), Weight (kg)



Configurator - CAD Files



TYPE 01-02-03-04
"T" flanges connection



① Optical position indicator

Type	DN	Actuator diameter	ØA	ØB	C		D	E	ØF	
					DIN	ANSI			DIN	ANSI
01	15	80	15	110	199.1		151.6	130	G 1/8"	NPT 1/8"
02	20	100	20	132.5	223.4	230.9	170.9	150	G 1/8"	NPT 1/8"
	25	100	25	132.5	238.4	243.4	180.9	160	G 1/8"	NPT 1/8"
03	32	150	32	191	307.2	304.7	237.2	180	G* 1/4"	NPT 1/4"
	40	150	40	191	334.2	336.7	259.2	200	G* 1/4"	NPT 1/4"
04	50	200	50	247	411		328.5	230	G* 1/4"	NPT 1/4"

Type	DN	Actuator diameter	ØH		ØJ		n x ØK		L		ØM		N		ØP	Q
			DIN	ANSI	DIN	ANSI	DIN	ANSI	DIN	ANSI	DIN	ANSI	DIN	ANSI		
01	15	80	95		65	66.5	4 x 14	4 x 16	2	1.6	45	35	16	14.2	95	32.5
02	20	100	105	115	75	82.5	4 x 14	4 x 19	2	1.6	58	43	18	17.2	117	39
	25	100	115	125	85	89	4 x 14	4 x 19	2	1.6	68	51	18	17.5	117	44.5
03	32	150	140	135	100	98.5	4 x 18	4 x 19	2	1.6	78	64	18	19.1	172.5	54
	40	150	150	155	110	114.5	4 x 18	4 x 22	3	1.6	88	73	18	20.6	172.5	66.5
04	50	200	165		125	127	4 x 18	8 x 19	3	1.6	102	92	20	23.4	230	80.5

Type	DN	Actuator diameter	Weight			
			DIN		ANSI	
			NC	NO	NC	NO
01	15	80	3.3	3.3	3.2	3.2
02	20	100	5.6	5.6	5.9	5.9
	25	100	6.8	6.7	7.2	7.1
03	32	150	13.2	13.2	13.2	13.3
	40	150	16.4	16.4	17.2	17.2
04	50	200	30.5	28.7	30.8	29