

ASCO™ Pneumatic Straight Seat Valves

3-way, Pressure Operated, Stainless Steel Body

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

3/2
Series
T398

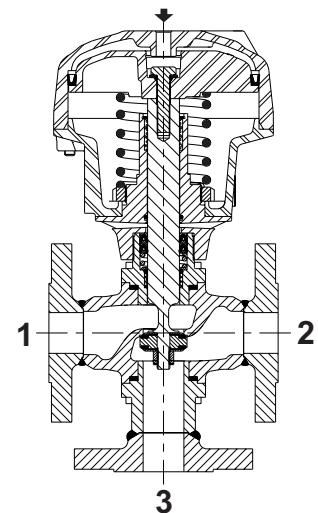
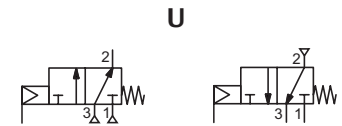
Features and Benefits

- Ruggedly built valve, particularly recommended for use with steam, superheated water, corrosive fluids
- High-performance, maintenance-free stuffing box, resistant to thermal shock
- Mixer function (two pressure inlets at 1 or 3, one outlet at 2) or distributor function (one pressure inlet at 2, two outlets at 1 and 3)
- 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

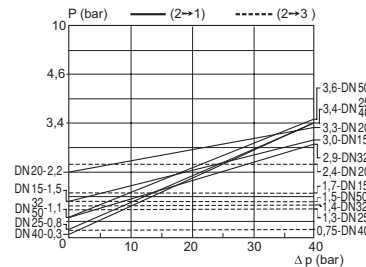
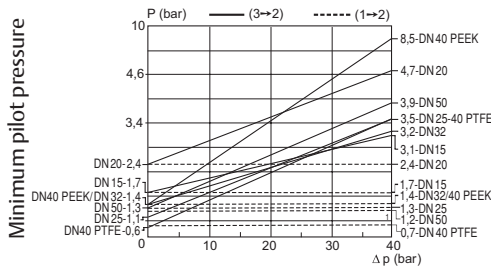
Differential pressure	0 to 40 bar [1 bar = 100 kPa]
Maximum allowable pressure	40 bar (within the specified limits, see diagram I)
Maximum back pressure	40 bar / 20 bar for PEEK sealing
Ambient temperature range	-20°C to +180°C [Option: -55°C to +70°C]
Maximum viscosity	5000 cSt (mm ² /s)
Pilot fluid	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 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



mixer function

distributor function



Specifications

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

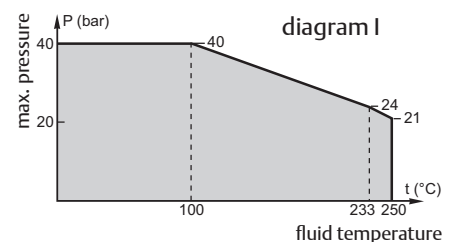
Materials of components in contact with fluid

(*) 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



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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”
- Signaling 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 the fluids in contact with the materials is verified.

⁽¹⁾ The minimum ambient temperature of the valve is determined by the limitations of minimum temperature indicated.

Specifications

DN	Orifice size	Flow coefficient Kv								Pilot pressure (bar)		Operating pressure differential (bar)	Actuator diameter (mm)	Catalog number		
		Mixer				Distributor				Min.	Max.			Disc sealing		
		3 → 2	1 → 2	2 → 3	2 → 1	(m³/h)	(l/min)	(m³/h)	(l/min)					PTFE	PEEK	Metal-to-Metal
U - Universal																
Flanges DIN EN 1092-1																
15	15	3.3	54	4.4	73	3.5	59	4.6	78	*	10	40	80	T398B237DTA0000	T398B237DVA0000	T398B237DEA0000
20	20	8.0	133	7.4	123	8.1	136	7.7	129	*	10	40	100	T398B24DDTA0000	T398B24DDVA0000	T398B24DDEA0000
25	25	11.4	190	11.6	194	12.1	203	11.9	199	*	10	40	100	T398B25DDTA0000	T398B25DDVA0000	T398B25DDEA0000
32	32	18.9	316	16.6	278	17.9	299	16.6	278	*	10	40	150	T398B26KDTA0000	T398B26KDVA0000	T398B26KDEA0000
40	40	27	450	27	450	27	450	27	450	*	10	40	150	T398B27KDTA0000	T398B27KDVA0000	T398B27KDEA0000
50	50	51	850	51	850	51	850	51	850	*	10	40	200	T398B28MDTA0000	T398B28MDVA0000	T398B28MDEA0000
Flanges ANSI 300																
15	15	3.3	54	4.4	73	3.5	59	4.6	78	*	10	40	80	T398B238PTA0000	T398B238PVA0000	T398B238PEA0000
20	20	8.0	133	7.4	123	8.1	136	7.7	129	*	10	40	100	T398B24EPTA0000	T398B24EPVA0000	T398B24EPEA0000
25	25	11.4	190	11.6	194	12.1	203	11.9	199	*	10	40	100	T398B25EPTA0000	T398B25EPVA0000	T398B25EPEA0000
32	32	18.9	316	16.6	278	17.9	299	16.6	278	*	10	40	150	T398B26LPTA0000	T398B26LPVA0000	T398B26LPEA0000
40	40	27	450	27	450	27	450	27	450	*	10	40	150	T398B27LPTA0000	T398B27LPVA0000	T398B27LPEA0000
50	50	51	850	51	850	51	850	51	850	*	10	40	200	T398B28NPTA0000	T398B28NPVA0000	T398B28NPEA0000

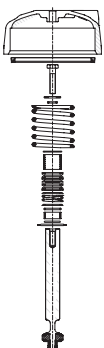
* Minimum pilot pressure varies with differential pressure. See piloting chart preceding page.

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ASCO™ Pneumatic Straight Seat Valves

Product selection guide

PRODUCT CODE	
T	398 B 0 3 7 D V A00 00
Connection T = Flanges	
Product series 398	
Revision letter B = New Stuffing Box and Disc Materials	
Function 2 = Universal	
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 = NPTF (ANSI B1.20.3) / Flanges ANSI Class 300	
	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
	Port Type D = Flanges DIN EN 1092-1 (ISO 7005) Standard P = Flanges ANSI Class 300 E = Flanges DIN EN 1092-1 + Third way port threaded Gaz + Rp S = Flanges ANSI Class 300 + Third way port threaded NPT

		Spare parts kits no. (*)	
		PTFE disc seal	PEEK disc version
	DN 15	M39852671700300	M39852671400300
	DN 20	M39852671700600	M39852671400600
	DN 25	M39852671700900	M39852671400900
	DN 32	M39852671701200	M39852671401200
	DN 40	M39852671701500	M39852671401500
	DN 50	M39852671701800	M39852671401800

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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

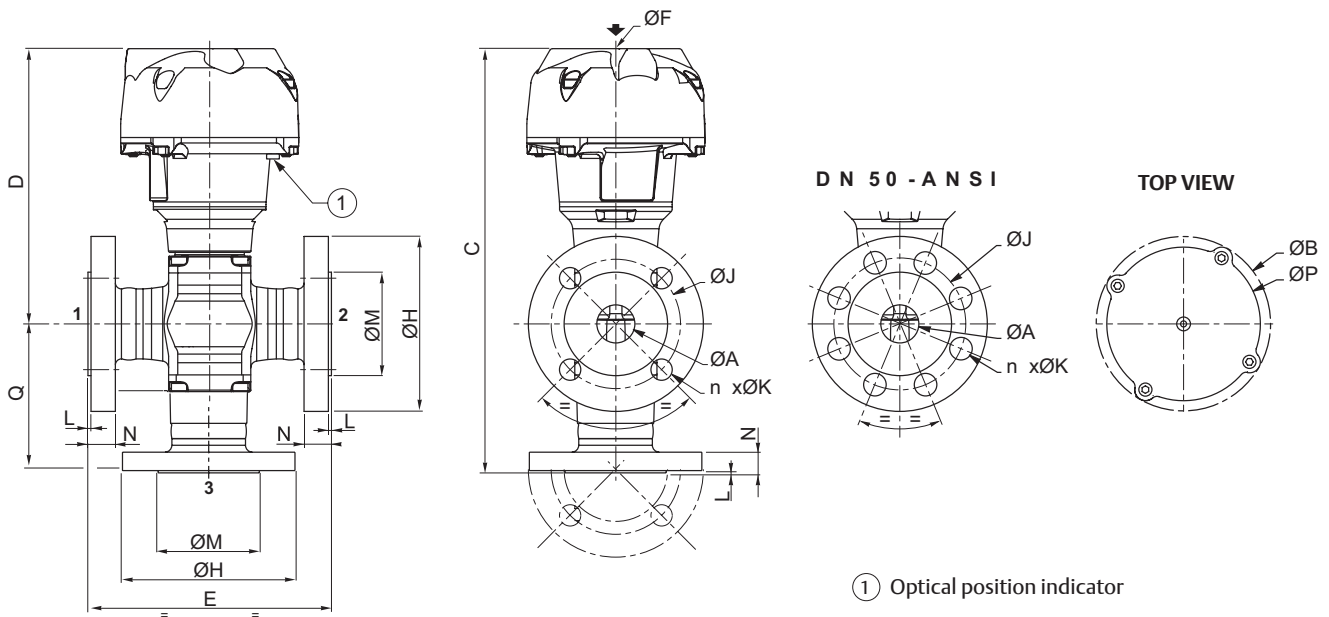
Dimensions (mm), Weight (kg)



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	ØF		
					DIN	ANSI				DIN	ANSI	NPT
01	15	80	15	110	225.6	231.5	151.6	130	G 1/8"	G 1/8"	NPT 1/8"	
	20	100	20	132.5	256.9		170.9	150	G 1/8"	G 1/8"	NPT 1/8"	
02	25	100	25	132.5	275.9	280.9	180.9	160	G 1/8"	G 1/8"	NPT 1/8"	
	32	150	32	191	346.2	351.2	237.2	180	G* 1/4"	G* 1/4"	NPT 1/4"	
03	40	150	40	191	396.2		259.2	200	G* 1/4"	G* 1/4"	NPT 1/4"	
	04	50	200	50	247	474	328.5	230	G* 1/4"	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		DIN	ANSI	
01	15	80	95		65	66.5	4 x 14	4 x 16	2	1.6	45	35	16	14.2	95	75	80	
	02	20	100	105	115	75	82.5	4 x 14	4 x 19	2	1.6	58	43	18	17.2	117	86	
02	25	100	115	125	85	89	4 x 14	4 x 19	2	1.6	68	51	18	17.5	117	95	100	
	03	32	150	140	135	100	98.5	4 x 18	4 x 19	2	1.6	78	64	18	19.1	172.5	109	114
03	40	150	150	155	110	114.5	4 x 18	4 x 22	3	1.6	88	73	18	20.6	172.5	137		
	04	50	200	165		125	127	4 x 18	8 x 19	3	1.6	102	92	20	23,4	230	145.5	

Type	DN	Actuator diameter	Weight	
			DIN	ANSI
01	15	80	4.1	3.9
	02	20	100	6.7
02	25	100	8.1	8.7
	03	32	150	15.1
03	40	150	20.1	20.9
	04	50	200	33.9

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