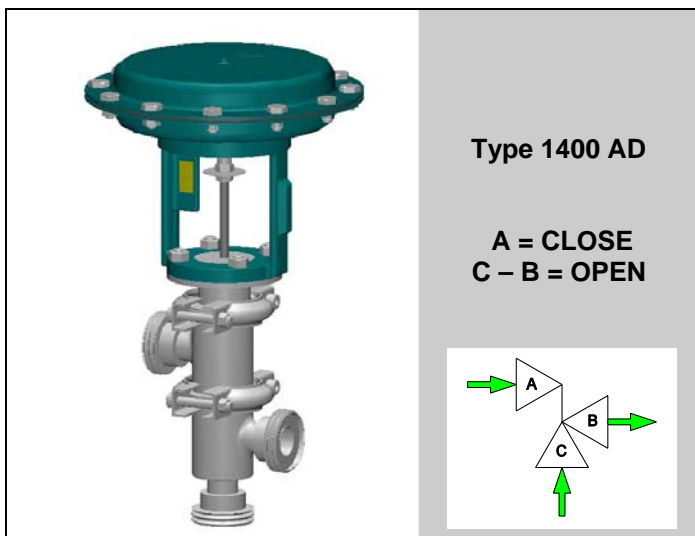


THREE WAY MIXING CONTROL VALVES PED 2014/68/UE



Type 1400 AD

**A = CLOSE
C – B = OPEN**

TIPO 1400 AD

Normally closed port “A” on air failure

DESCRIPTION

The 1400 “HYGIENIC” pneumatic control valves are with three way mixing body with revolving connections. They are suggested for modulating service in food and pharmaceutical where very high levels of flexibility and hygienic conditions are normally required. The three way mixing control valves are with two inlet ports and one outlet port with fluid opens. Modulating plug suitable for control of virtually all line media. Compact construction assembled with “UNIWORLD” multisprings pneumatic actuator having 3 - 15 psi ...6 - 18 psi...6 - 30 psi standard control signals. On request they can be equipped with a pneumatic or electro-pneumatic pilot positioner.

SIZES : from DN 15 to DN 100

BODY CONNECTIONS :

- Smooth welding caps according to DIN (Standard) A316 L
- Male tapped according to DIN 11851 A316L
- Female screwed according to DIN 11851 A316L
- Complete union according to DIN 11851 A316L
- Snap – clamp system according to DIN 405 A316L
- Flanged UNI 2277/78 PN 10-16 A316L

MATERIALS OF BODY GROUP :

- Stainless steel AISI 316 L – X2 Cr Ni Mo 1712 PN 10
Polished version or satin version

PLUG :

- PL = linear class IV°
- On request reduced bores and microflow

BONNET : Standard for temperature from -5 to + 160 °C

PACKING : N° 2 “O” rings FPM 70 ≤ 160°C

TECHNICAL CHARACTERISTICS OF PNEUMATIC ACTUATOR:

- Actuator : diaphragm type
- Control signals : 3-15 psi ...6-18 psi...6-30 psi
- Max air supply pressure : 35 psi (2,5 bar)
- Ambient temperature : -20 ... +70 °C
- Painted actuator casing mat. : Fe P11
- S.S. actuator casing material : Stainless steel AISI 304
- Diaphragm material : EPDM 70
- Painted yoke material : GGG 50
- S.S. yoke material : Stainless steel CF8 (AISI 304)
- Pneumatic connections : ISO 7 Rp – 1/8”

MAX WORKING CONDITIONS :

- Max inlet pressure and temperature : 10 bar –15°C...+ 160°C
- Valve sizing : see leaflet 100/VP
- Rangeability : see leaflet GRAFICI/I

ON REQUEST :

- Soft viton insert ≤160°C classe VI°
- Reduced bores (see below table)
- Pneumatic Pilot Positioner 3-15 psi ... 3-9 psi ... 9-15 psi
- Electro pneumatic pilot positioner 4-20 mA...4-12 mA...12-20 mA
- Air filter regulator
- Proximity limit switches
- 3-way solenoid valve
- Top – work manual handwheel

**CV = american unit (flowrate in US GPM
With 1 psi of differential pressure)**

**Kv = metric unit (flowrate in m3/h with
1 bar of differential pressure)**

Plug Full Bore	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	
	Ø 1/2”	Ø 3/4”	Ø 1”	Ø 1.1/4”	Ø 1.1/2”	Ø 2”	Ø 2.1/2”	Ø 3”	Ø 4”	
PL	CV	5	8	13	18	26	45	72	105	160
	KV	4.26	6.82	11.08	15.34	22.15	38.34	61.34	89.46	136.32
Reduced bore*	n.a.	1/2”	1/2” 3/4”	3/4” 1”	1” 1.1/4”	1.1/4” 1.1/2”	1.1/2” 2”	2” 2.1/2”	2.1/2” 3”	

n.a. = not applicable * CV and KV values are referred to the selected diameter and plug time (PL only)

Maximum permissible pressure drops in Kg/cm² (fluid opens) Strokes in mm – Signals in psi

Actuator Type	Signal psi	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
		Stroke 11	Stroke 11	Stroke 11	Stroke 19	Stroke 19	Stroke 19	Stroke 28	Stroke 28	Stroke 28
T200	3-15 psi	12	8	5	3	-	-	-	-	-
	6-18 psi	25	16	9	6	-	-	-	-	-
	6-30 psi	65	40	22	11	-	-	-	-	-
T250	3-15 psi	27	17	9	6	4	2.4	-	-	-
	6-18 psi	55	34	19	12	8	3	-	-	-
	6-30 psi	110	68	38	20	14.5	7	-	-	-
T310	3-15 psi	-	-	15.5	10	7	3.5	2.5	1.7	0.9
	6-18 psi	-	-	31	20	14	7	4.2	2.8	1.3
	6-30 psi	-	-	62	30	21	12	6.5	4.7	2.6
T400	3-15 psi	-	-	-	14.5	10.5	5	3.8	2.5	1.4
	6-18 psi	-	-	-	29.5	20.5	12	6.7	4	2.8
	6-30 psi	-	-	-	45	31.5	18	16	11	6.3
T500	3-15 psi	-	-	-	24.5	17.5	9.5	5.5	4.2	2.4
	6-18 psi	-	-	-	49	34.5	19.5	12.2	7	4.9
	6-30 psi	-	-	-	75	52.5	30.3	26	16	10.5

1. The values given are referred to the force of actuator and they can be used within the limit of the body rating.
2. The actuator DELTA-PI (PRESSURE DROPS with CLOSED VALVE) are obtained without a residual thrust of air into the actuator
3. The actuator DELTA-PI given in the column 6-30 psi are also valid for ON-OFF service with air supply at 30/35 psi

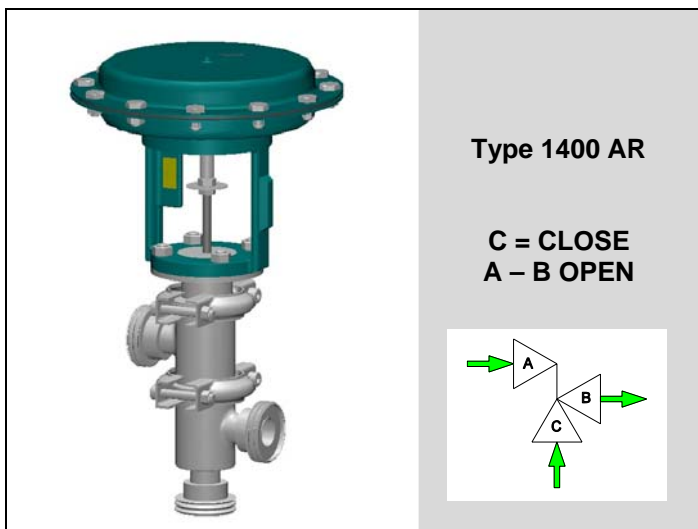
COMPONENT LIST AND MATERIALS

Actuator Type	Signal psi	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
		Stroke 11	Stroke 11	Stroke 11	Stroke 19	Stroke 19	Stroke 19	Stroke 28	Stroke 28	Stroke 28
T200	3-15 psi	12	8	5	3	-	-	-	-	-
	6-18 psi	25	16	9	6	-	-	-	-	-
	6-30 psi	65	40	22	11	-	-	-	-	-
T250	3-15 psi	27	17	9	6	4	2.4	-	-	-
	6-18 psi	55	34	19	12	8	3	-	-	-
	6-30 psi	110	68	38	20	14.5	7	-	-	-
T310	3-15 psi	-	-	15.5	10	7	3.5	2.5	1.7	0.9
	6-18 psi	-	-	31	20	14	7	4.2	2.8	1.3
	6-30 psi	-	-	62	30	21	12	6.5	4.7	2.6
T400	3-15 psi	-	-	-	14.5	10.5	5	3.8	2.5	1.4
	6-18 psi	-	-	-	29.5	20.5	12	6.7	4	2.8
	6-30 psi	-	-	-	45	31.5	18	16	11	6.3
T500	3-15 psi	-	-	-	24.5	17.5	9.5	5.5	4.2	2.4
	6-18 psi	-	-	-	49	34.5	19.5	12.2	7	4.9
	6-30 psi	-	-	-	75	52.5	30.3	26	16	10.5

COMPONENTS	MATERIALS
1. Lower body	1. AISI 316 L St. steel
1a. Upper body	1a. AISI 316 L St. steel
2. Metal seal plug	2. AISI 316 L St. steel
2a. Soft seal plug	2a. AISI 316 L St. steel
2b. Soft viton insert	2b. Viton FPM 70
2c. Upper plug profile	2c. AISI 316 L St. steel
3. Stem	3. AISI 316 L St. steel
4. Bonnet	4. AISI 316 L St. steel
5. Body gasket	5. Viton FPM 70
6. Clamp bolts	6. AISI 304 L St. steel
7. Clamp	7. AISI 304 L St. steel
8. Indicator bolts	8. AISI 304 L St. steel
9. Position indicator	9. AISI 304 L St. steel
10. Yoke gasket	10. Cork-rubber
11. Yoke bolts	11. DIN 933 galvanized steel or AISI 304 L St. steel
12. Lower diaphragm casing	12. P11 steel or AISI 304 L St. steel
13. Diaphragm	13. EPDM 70
14. Diaphragm casing locknuts	14. DIN 933 galvanized steel or AISI 304 L St. steel
15. Diaphragm plate	15. P01 steel
16. Upper diaphragm casing	16. P11 steel or AISI 304 L St. steel
17. Diaphragm bush	17. AISI 303 L St. steel
18. Diaphragm locknut	18. ISO 7380 galvanized steel
19. Springs	19. C98 UNI 3823
20. Diaphragm spacer	20. Galvanized steel
21. Diaphragm casing bolts	21. DIN 934 galvanized steel or AISI 304 L St. steel
22. Airtight	22. NBR
23. "O" ring	23. NBR
24. Diaphragm rod	24. AISI 303 L St. steel
25. Travel indicator plate	25. Polycarbonate
26. Yoke	26. SG Iron GGG50 or AISI 304 L St. steel
27. Stud-bolts	27. AISI 304 L St. steel
28. Yoke bolts	28. DIN 934 galvanized steel or AISI 304 L St. steel
29. "O" rings	29. Viton FPM 70

DIMENSIONS (See leaflet DIMHY/IE)

THREE WAY MIXING CONTROL VALVES PED 2014/68/UE



TYPE 1400 AR

Normally closed port "C" on air failure

DESCRIPTION

The 1400 "HYGIENIC" pneumatic control valves are with three way mixing body with revolving connections. They are suggested for modulating service in food and pharmaceutical where very high levels of flexibility and hygienic conditions are normally required. The three way mixing control valves are with two inlet ports and one outlet port with fluid opens. Modulating plug suitable for control of virtually all line media. Compact construction assembled with "UNIWORLD" multisprings pneumatic actuator having 3 - 15 psi ...6 - 18 psi...6 - 30 psi standard control signals. On request they can be equipped with a pneumatic or electro-pneumatic pilot positioner.

SIZES : from DN 15 to DN 100

BODY CONNECTIONS :

- Smooth welding caps according to DIN (Standard) A316 L
- Male tapped according to DIN 11851 A316L
- Female screwed according to DIN 11851 A316L
- Complete union according to DIN 11851 A316L
- Snap - clamp system according to DIN 405 A316L
- Flanged UNI 2277/78 PN 10-16 A316L

MATERIALS OF BODY GROUP :

- Stainless steel AISI 316 L - X2 Cr Ni Mo 1712 PN 10 Polished version or satin version

PLUG :

- PL = linear class IV°
- On request reduced bores and microflow

BONNET : Standard for temperature from -5 to + 160 °C

PACKING : N° 2 "O" rings FPM 70 ≤ 160°C

TECHNICAL CHARACTERISTICS OF PNEUMATIC ACTUATOR:

- Actuator : diaphragm type
- Control signals : 3-15 psi ...6-18 psi ...6-30 psi
- Max air supply pressure : 35 psi (2,5 bar)
- Ambient temperature : -20 ... +70 °C
- Painted actuator casing mat. : Fe P11
- S.S. actuator casing material : Stainless steel AISI 304
- Diaphragm material : EPDM 70
- Painted yoke material : GGG 50
- S.S. yoke material : Stainless steel CF8 (AISI 304)
- Pneumatic connections : ISO 7 Rp - 1/8"

MAX WORKING CONDITIONS :

- Max inlet pressure and temperature : 10 bar -15°C...+ 160°C
- Valve sizing : see leaflet 100/VP
- Rangeability : see leaflet GRAFICI/I

ON REQUEST :

- Soft viton insert ≤160°C classe VI°
- Reduced bores (see below table)
- Pneumatic Pilot Positioner 3-15 psi ... 3-9 psi ... 9-15 psi
- Electro pneumatic pilot positioner 4-20 mA...4-12 mA..12-20 mA
- Air filter regulator
- Proximity limit switches
- 3-way solenoid valve
- Top - work manual handweel

CV = american unit (flowrate in US GPM With 1 psi of differential pressure)

Kv = metric unit (flowrate in m3/h with 1 bar of differential pressure)

Plug		DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
Full bore		Ø 1/2"	Ø 3/4"	Ø 1"	Ø 1.1/4"	Ø 1.1/2"	Ø 2"	Ø 2.1/2"	Ø 3"	Ø 4"
PL	CV	5	8	13	18	26	45	72	105	160
	KV	4.26	6.82	11.08	15.34	22.15	38.34	61.34	89.46	136.32
Reduced bore*		n.a.	1/2"	1/2" 3/4"	3/4" 1"	1" 1.1/4"	1.1/4" 1.1/2"	1.1/2" 2"	2" 2.1/2"	2.1/2" 3"

n.a. = not applicable * CV and KV values are referred to the selected diameter and plug time (PL only)

Maximum permissible pressure drops in Kg/cm² (fluid opens) Strokes in mm – Signals in psi

Actuator Type	Signal psi	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
		Stroke 11	Stroke 11	Stroke 11	Stroke 19	Stroke 19	Stroke 19	Stroke 28	Stroke 28	Stroke 28
T200	3-15 psi	12	8	5	3	-	-	-	-	-
	6-18 psi	25	16	9	6	-	-	-	-	-
	6-30 psi	65	40	22	11	-	-	-	-	-
T250	3-15 psi	27	17	9	6	4	2.4	-	-	-
	6-18 psi	55	34	19	12	8	3	-	-	-
	6-30 psi	110	68	38	20	14.5	7	-	-	-
T310	3-15 psi	-	-	15.5	10	7	3.5	2.5	1.7	0.9
	6-18 psi	-	-	31	20	14	7	4.2	2.8	1.3
	6-30 psi	-	-	62	30	21	12	6.5	4.7	2.6
T400	3-15 psi	-	-	-	14.5	10.5	5	3.8	2.5	1.4
	6-18 psi	-	-	-	29.5	20.5	12	6.7	4	2.8
	6-30 psi	-	-	-	45	31.5	18	16	11	6.3
T500	3-15 psi	-	-	-	24.5	17.5	9.5	5.5	4.2	2.4
	6-18 psi	-	-	-	49	34.5	19.5	12.2	7	4.9
	6-30 psi	-	-	-	75	52.5	30.3	26	16	10.5

1. The values given are referred to the force of actuator and they can be used within the limit of the body rating.
2. The actuator DELTA-PI (PRESSURE DROPS with CLOSED VALVE) are obtained without a residual thrust of air into the actuator
3. The actuator DELTA-PI given in the column 6-30 psi are also valid for ON-OFF service with air supply at 30/35 psi

COMPONENT LIST AND MATERIALS

COMPONENTS		MATERIALS
1	Lower body	1. AISI 316 L St. steel
1a	Upper body	1a. AISI 316 L St. steel
2	Metal seal plug	2. AISI 316 L St. steel
2a	Soft seal plug	2a. AISI 316 L St. steel
2b	Soft viton insert	2b. Viton FPM 70
2c	Upper plug profile	2c. AISI 316 L St. steel
3	Stem	3. AISI 316 L St. steel
4	Bonnet	4. AISI 316 L St. steel
5	Body gasket	5. Viton FPM 70
6	Clamp bolts	6. AISI 304 L St. steel
7	Clamp	7. AISI 304 L St. steel
8	Indicator bolts	8. AISI 304 L St. steel
9	Position indicator	9. AISI 304 L St. steel
10	Yoke gasket	10. Cork-rubber
11	Yoke bolts	11. DIN 933 galvanized steel or AISI 304 L St. steel
12	Lower diaphragm casing	12. P11 steel or AISI 304 L St. steel
13	Diaphragm	13. EPDM 70
14	Diaphragm casing locknuts	14. DIN 933 galvanized steel or AISI 304 L St. steel
15	Diaphragm plate	15. P01 steel
16	Upper diaphragm casing	16. P11 steel or AISI 304 L St. steel
17	Diaphragm bush	17. AISI 303 L St. steel
18	Diaphragm locknut	18. ISO 7380 galvanized steel
19	Springs	19. C98 UNI 3823
20	Diaphragm spacer	20. Galvanized steel
21	Diaphragm casing bolts	21. DIN 934 galvanized steel or AISI 304 L St. steel
22	Airtight	22. NBR
23	"O" ring	23. NBR
24	Diaphragm rod	24. AISI 303 L St. steel
25	Travel indicator plate	25. Polycarbonate
26	Yoke	26. GGG50 or AISI 304 L St. steel
27	Stud-bolts	27. AISI 304 L St. steel
28	Yoke bolts	28. DIN 934 galvanized steel or AISI 304 L St. steel
29	"O" rings	29. Viton FPM 70

DIMENSIONS (See leaflet DIMHY/I/E)