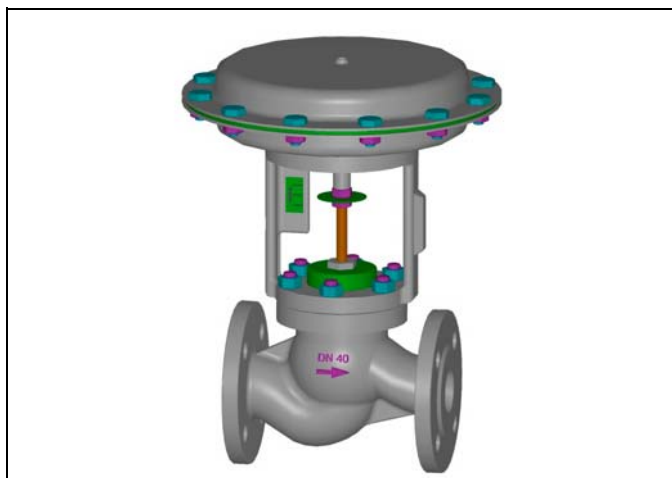


SINGLE SEAT TWO WAY CONTROL VALVES €



TYPE 2000 AD

Normally open – air closes

Face-to-face EN 558-1 (DIN 3202)

DESCRIPTION

The "UNIWORLD" series type 2000 AD are equipped with DIN "straight-through" pattern bodies with UNI / DIN flanges. Modulating plug suitable for control of virtually all line media. Compact construction assembled with multisprings pneumatic actuator having 3-15 psi ...6-30 psi standard control signals. On request can be equipped with a pneumatic or electro-pneumatic pilot positioner.

SIZES : from DN 15 to DN 100

BODY CONNECTIONS : flanged UNI 2223 – DIN 2501 PN16 PN40

MATERIALS OF BODY GROUP (1) :

- **Cast iron G25 PN 16**
AISI 316 st. st. trim - C40 nickel plated steel bonnet
- **Carbon steel GS-C25 (1.0619) PN 16 ... PN 40**
AISI 316 st. st. trim - C40 nickel plated steel bonnet
- **Stainless steel AISI 316 CF8M (1.4408) PN 16 ... PN 40**
AISI 316 st. st. trim – AISI 316 st. st. bonnet

PLUG :

- **EQP** (DN15-50) **EQV** (DN65-100) = equal percentage class IV°
- **PL** (DN15-50) **LV** (DN65-100) = linear class IV°
- **PT** (DN15-50) **VPT** (DN65-100) = quick lift class IV°

BONNET (2) :

- Standard : -5 to + 200 °C
- Finned : > 200 °C
- Extended : below - 5 °C
- Bellows sealed : for thermal oil or hazardous media with (PN 16 - 25 - 40) standard safety gland arrangement

GLAND ARRANGEMENT (PACKING) (3) with safety "0-rings" :

- PTFE 100% for temperatures ≤150 °C
- PTFE 85% + GRAPHITE 15% for temperatures ≤ 200 °C
- PURE GRAPHITE 100% for temperatures from 200° to 400 °C to be used with finned bonnet

CV = american unit (flowrate in USGPM with 1 psi of differential pressure)

TECHNICAL CHARACTERISTICS OF PNEUMATIC ACTUATOR :

- Actuator : diaphragm type
- Control signals : 3-15 psi ...6-30 psi
- Max air supply pressure : 35 psi (2,5 bar)
- Ambient temperature : -20 ... +70 °C
- Actuator casings material : Fe P11 carbon steel
- Diaphragm material : EPDM 70
- Yoke material : GGG 50 Spheroidal cast iron
- Pneumatic connections : ISO 7 Rp – 1/8"

MAX WORKING CONDITIONS :

- Max inlet pressure and temperature : see leaflet n° 101/VP
- Valve sizing : see leaflet n° 100/VP
- Rangeability : see leaflet n° GRAFICI/I

ON REQUEST :

- PTFE/GR soft seal ≤190°C class VI°
- PTFE soft seal ≤150°C class VI°
- Lapping on seat and plug class V°
- Stellite (degree 6°) on seat and plug and guide bush
- Reduced bore (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
- Lubrifier on finned bonnet for temperatures ≥ 250 °C
- Top-work manual handwheel

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 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"	
EQP	CV	3.4		6.6		10.8		17		23.8		50		70.2		87.9		118.5	
	KV	2.9		5.7		9.3		14.7		20.5		43		60.5		75.2		102.1	
PL	CV	3.4		6.6		11.2		17.6		23.9		51.2		72.7		89.3		123.8	
	KV	2.9		5.7		9.6		15.2		20.6		44		62.7		77		106.7	
PT	CV	3.4		6.6		12.1		19		24		52.7		107.3		129.3		175.4	
	KV	2.9		5.7		10.4		16.4		20.7		45.3		92.5		111.5		151.2	
Reduced bore *		•	•	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"	3"

• DN 15-20	MFP 1/8"	MFP 3/16"	MFP 1/4"	MFP 3/8"	MFS1SG 1/4"	MFS2SG 1/4"	MFS1SG 3/8"	MFS2SG 3/8"
CV	0.26	0.71	1.28	2.62	0.65	1.21	1.22	2.25
KV	0.22	0.61	1.10	2.26	0.56	1.04	1.05	1.94

MFP = Linear..MFS = Equal percentage

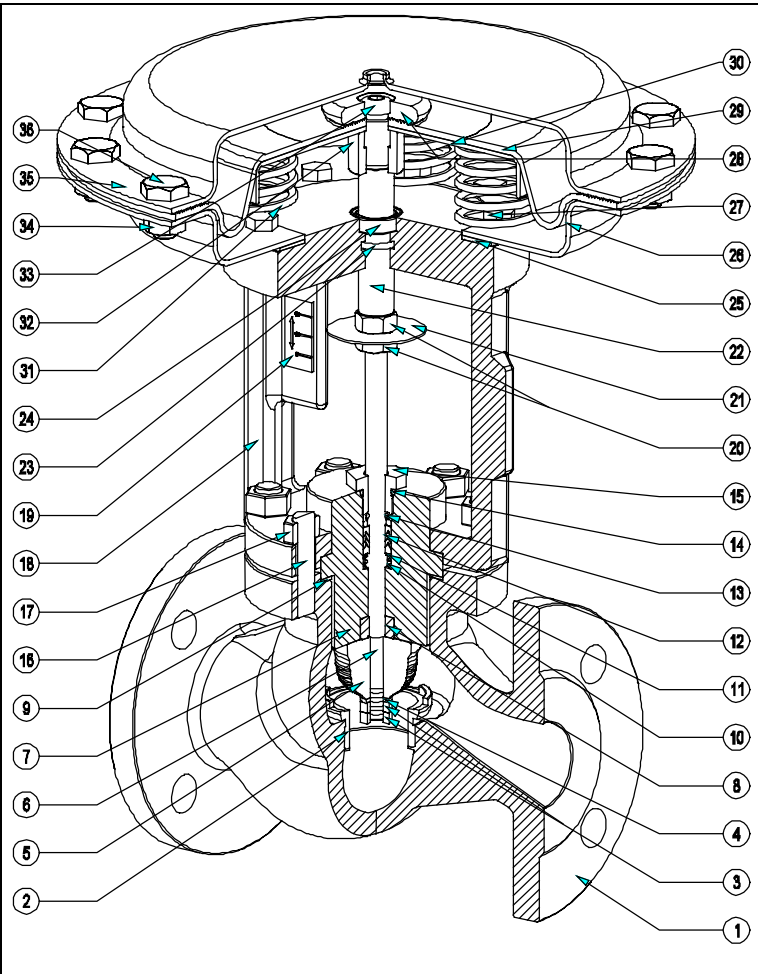
* CV and KV values are referred to the selected diameter and plug type (EQP/EQV–PL/LV only)

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	-	-	-	-	-
	6-30 psi	52	32	18	11	-	-	-	-	-
T250	3-15 psi	27	17	9	6	4	2.4	-	-	-
	6-30 psi	113	69	39	25	17	10	-	-	-
T310	3-15 psi	-	-	15.5	10	7	3.5	2.5	1.7	0.9
	6-30 psi	-	-	63	41	28	16	10	7	4
T400	3-15 psi	-	-	-	14.5	10.5	5.5	3.8	2.5	1.4
	6-30 psi	-	-	-	60	42	24	15	10.5	5.9
T500	3-15 psi	-	-	-	24.5	17.5	9.5	6.2	4.2	2.4
	6-30 psi	-	-	-	101	70	40	25.3	17.5	9.9
T200	Signal	MFP 1/8 "	MFP 3/16 "	MFP 1/4 "	MFP 3/8 "	MFS1SG 1/4 "	MFS2SG 1/4 "	MFS1SG 3/8 "	MFS2SG 3/8 "	
DN15-20 Microflow	3-15 psi	200	90	50	30	50	50	30	30	
	6-30 psi	1080	470	270	130	270	270	130	130	

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) given in the column 3-15 psi are obtained with a thrust of 18 psi
3. The actuator DELTA-PI (PRESSURE DROPS with CLOSED VALVE) given in the column 6-30 psi are obtained with a thrust of 30 psi
4. 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

COMPONENTS LIST AND MATERIALS

		COMPONENTS LIST	MATERIALS
	1	Body	1. See note (1) at page 1
	2	Seat	2. AISI 316 stainless steel
	3	Plug locknuts	3. AISI 304 stainless steel
	4	Spring washer	4. AISI 304 stainless steel
	5	Plug	5. AISI 316 stainless steel
	6	Stem	6. AISI 316 stainless steel
	7	Bonnet	7. See notes (1)-(2) at page 1
	8	Guide bush	8. AISI 304 stainless steel
	9	Body gasket	9. Europil WS 3640 or PTFE
	10	Packing spring	10. AISI 302 stainless steel
	11	Packing washer	11. AISI 304 stainless steel
	12	Packing rings	12. See note (3) at page 1
	13	Internal "O" ring	13. Viton FPM 70
	14	External "O" ring	14. Viton FPM 70
	15	Packing adjusting nut	15. AISI 303 stainless steel
	16	Stud-bolts	16. Galvanized steel
	17	Body locknuts	17. DIN 934 galvanized steel
	18	Yoke	18. GGG50 spheroidal c. iron
	19	Travel indicator plate	19. Polycarbonate
	20	Position indicator locknuts	20. DIN 936 galvanized steel
	21	Position indicator	21. Aluminium
	22	Diaphragm rod	22. AISI 303 stainless steel
	23	"O" ring	23. NBR
	24	Airtight	24. NBR
	25	Yoke gasket	25. Cork – rubber
	26	Lower diaphragm casing	26. P11 steel
	27	Lower diaphragm casing internal bolts	27. DIN 933 galvanized steel
	28	Diaphragm spacer	28. Galvanized steel
	29	Diaphragm	29. EPDM 70
	30	Diaphragm plate	30. P01 steel
	31	Springs	31. C98 UNI 3823
	32	Diaphragm bush	32. AISI 303 stainless steel
	33	Diaphragm locknut	33. ISO 7380 galvanized steel
	34	Diaphragm casing bolts	34. DIN 934 galvanized steel
	35	Upper diaphragm casing	35. P11 steel
	36	Diaphragm casing locknuts	36. DIN 933 galvanized steel

DIMENSIONS in mm.

DN	Ø	A	B	C - Bonnet			D	V	V1
				Std	Finned	Bellows			
15	1/2 "	130	47.5	49	181	181	147	166	11
20	3/4 "	150	52.5	58	190	190	147	166	11
25	1 "	160	57.5	68	200	200	147	166	11
32	1.1/4 "	180	70	70	202	202	147	166	19
40	1.1/2 "	200	75	82	214	214	160	166	19
50	2 "	230	82.5	86	218	218	160	166	19
65	2.1/2 "	290	92.5	111	309	309	160	166	28
80	3 "	310	100	135	333	333	160	166	28
100	4 "	350	118	160	363	363	204	166	28

Actuator.	E	Ø F
T200	70	210
T250	70	292
T310	95	336
T400	119	408
T500	119	520

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