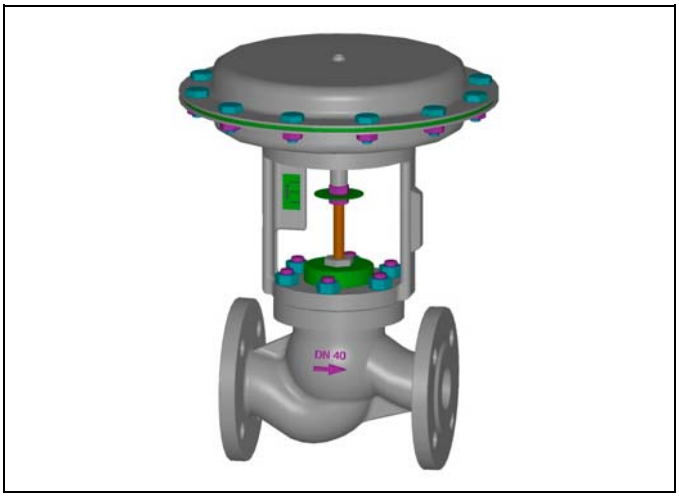
SINGLE SEAT TWO WAY CONTROL VALVES CE



TYPE 2000 AR

Normally closed – air opens

Face-to-face EN 558-1

DESCRIPTION

The "UNIWORLD" series type 2000 AR are equipped with EN "straight-through" pattern bodies with EN flanges.
Modulating plug suitable for control of virtually all line media.
Compact construction assembled with multisprings pneumatic actuator having 3-15 psi … 6.18 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 EN 1092-1 PN16 PN40

MATERIALS OF BODY GROUP (1) :

- **Cast iron EN-GJL-250 UNI EN 1561 PN 16**
  AISI 316 st. st. trim - C40 nickel plated steel bonnet
- **Carbon steel 1.0619 PN 16 … PN 40**
  AISI 316 st. st. trim - C40 nickel plated steel bonnet
- **Stainless steel AISI 316 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 (PN 16 - 25 - 40) : for thermal oil or hazardous media with 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

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
- 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
- Lubrificator on finned bonnet for temperatures ≥ 250 °C
- Top-work manual handwheel

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

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

PLUG Full bore		DN 15 Ø 1/2"	DN 20 Ø 3/4"	DN 25 Ø 1"	DN 32 Ø 1.1/4"	DN 40 Ø 1.1/2"	DN 50 Ø 2"	DN 65 Ø 2.1/2"	DN 80 Ø 3"	DN 100 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"

• 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)

CONFLOW s.p.a.

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV ISO 9001

Via Lecco, 69/71
20041 AGRATE BRIANZA (MI)
Tel. 039/651.705 - 650.397
Fax 039/654.018

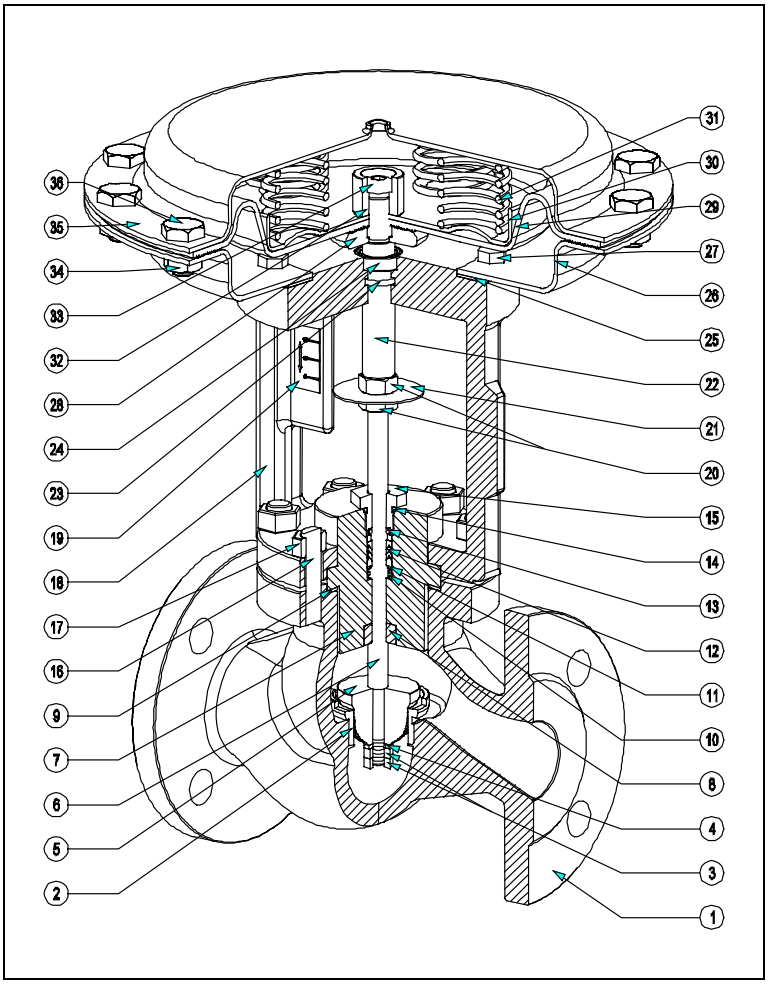
Maximum permissible pressure drops in Kg/cm2 (fluid opens)
Strokes in mm – Signals in psi

Actuator type	Signal psi	DN 15 stroke 11	DN 20 stroke 11	DN 25 stroke 11	DN 32 stroke 19	DN 40 stroke 19	DN 50 stroke 19	DN 65 stroke 28	DN 80 stroke 28	DN 100 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

T200 DN15-20 Microflow	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 "
	3-15 psi	200	90	50	30	50	50	30	30
	6-18 psi	400	180	100	60	100	100	60	60
	6-30 psi	1300	580	340	160	340	340	160	160

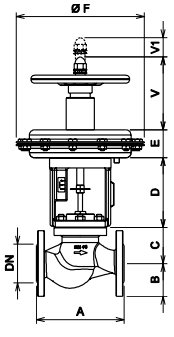
1. The values given are referred to the force of actuator and they can be used within the limit of the body rating
2. The actuator DELTA-PI (PRESSURE DROPS with CLOSED VALVE) are obtained without a residual thrust of air into the actuator
3. The actuator DELTA-PI given in the column 6-30 psi are also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

COMPONENTS LIST AND MATERIALS



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

DIMENSIONS in mm.

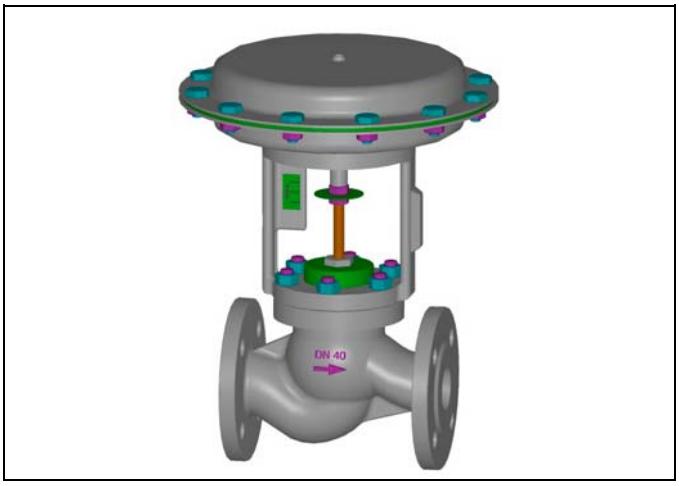


DN	Ø	A	B	C - Bonnet Std	C - Bonnet Finned	C - Bonnet Bellows	D	V	V1
15	1/2 "	130	47.5	49	181	181	147	166	11
20	3/4 "	150	52.5	58	190	190	147	166	11
25	1 "	160	57.5	68	200	200	147	166	11
32	1.1/4 "	180	70	70	202	202	147	166	19
40	1.1/2 "	200	75	82	214	214	160	166	19
50	2 "	230	82.5	86	218	218	160	166	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

Specifications given are only indicative and not binding for the manufacturer who reserve the right to carry-out any modification deemed necessary without prior notice.

SINGLE SEAT TWO WAY CONTROL VALVES CE



TYPE 2000 AD

Normally open – air closes

Face-to-face EN 558-1

DESCRIPTION

The "UNIWORLD" series type 2000 AD are equipped with EN "straight-through" pattern bodies with EN 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 EN 1092-1 PN16 PN40

MATERIALS OF BODY GROUP (1) :

- **Cast iron EN-GJL-250 UNI EN 1561 PN 16**
  AISI 316 st. st. trim - C40 nickel plated steel bonnet
- **Carbon steel 1.0619 PN 16 … PN 40**
  AISI 316 st. st. trim - C40 nickel plated steel bonnet
- **Stainless steel AISI 316 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 (PN 16 - 25 - 40) : for thermal oil or hazardous media with 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

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
- Lubrificator on finned bonnet for temperatures ≥ 250 °C
- Top-work manual handwheel

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

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

PLUG Full bore		DN 15 Ø 1/2"	DN 20 Ø 3/4"	DN 25 Ø 1"	DN 32 Ø 1.1/4"	DN 40 Ø 1.1/2"	DN 50 Ø 2"	DN 65 Ø 2.1/2"	DN 80 Ø 3"	DN 100 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"

• 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)

CONFLOW s.p.a.

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV ISO 9001

Via Lecco, 69/71
20041 AGRATE BRIANZA (MI)
Tel. 039/651.705 - 650.397
Fax 039/654.018

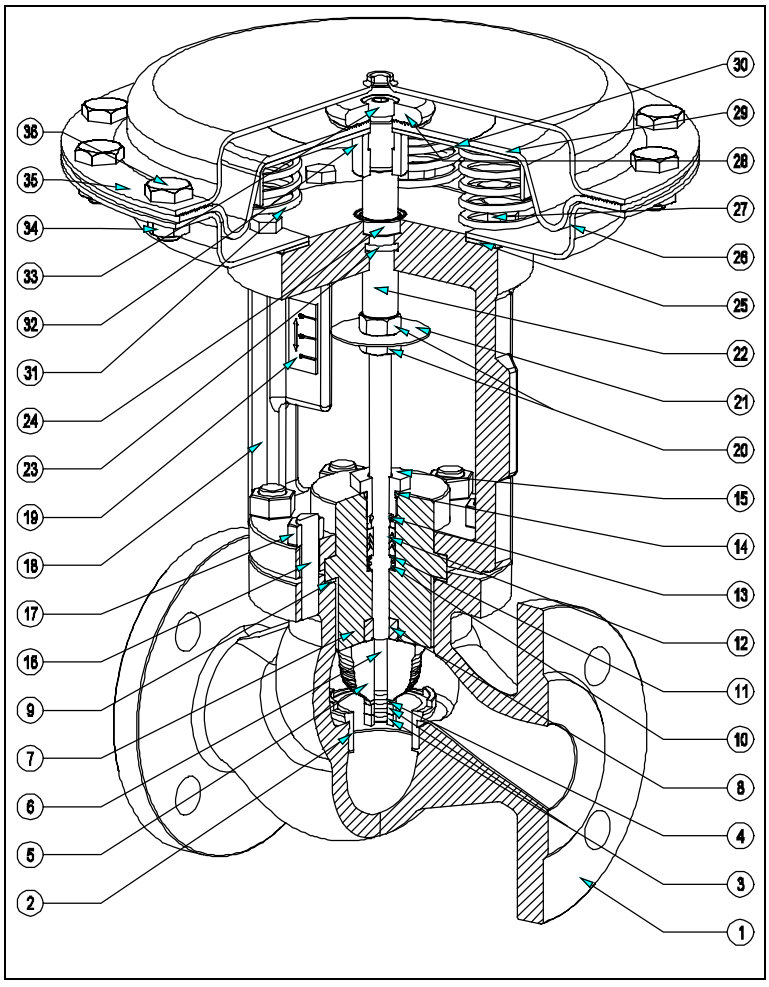
Maximum permissible pressure drops in Kg/cm2 (fluid opens)
Strokes in mm – Signals in psi

Actuator type	Signal psi	DN 15 stroke 11	DN 20 stroke 11	DN 25 stroke 11	DN 32 stroke 19	DN 40 stroke 19	DN 50 stroke 19	DN 65 stroke 28	DN 80 stroke 28	DN 100 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 DN15-20 Microflow	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 "
	3-15 psi	200	90	50	30	50	50	30	30
	6-30 psi	1080	470	270	130	270	270	130	130

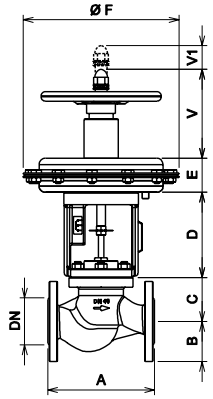
1. The values given are referred to the force of actuator and they can be used within the limit of the body rating
2. The actuator DELTA-PI (PRESSURE DROPS with CLOSED VALVE) given in the column 3-15 psi are obtained with a thrust of 18 psi
3. The actuator DELTA-PI (PRESSURE DROPS with CLOSED VALVE) 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	See note (1) at page 1
2.	Seat	AISI 316 stainless steel
3.	Plug locknuts	AISI 304 stainless steel
4.	Spring washer	AISI 304 stainless steel
5.	Plug	AISI 316 stainless steel
6.	Stem	AISI 316 stainless steel
7.	Bonnet	See notes (1)-(2) at page 1
8.	Guide bush	AISI 304 stainless steel
9.	Body gasket	Europil WS 3640 or PTFE
10.	Packing spring	AISI 302 stainless steel
11.	Packing washer	AISI 304 stainless steel
12.	Packing rings	See note (3) at page 1
13.	Internal "O" ring	Viton FPM 70
14.	External "O" ring	Viton FPM 70
15.	Packing adjusting nut	AISI 303 stainless steel
16.	Stud-bolts	Galvanized steel
17.	Body locknuts	DIN 934 galvanized steel
18.	Yoke	GGG50 spheroidal c. iron
19.	Travel indicator plate	Policarbonate
20.	Position indicator locknuts	DIN 936 galvanized steel
21.	Position indicator	Aluminium
22.	Diaphragm rod	AISI 303 stainless steel
23.	"O" ring	NBR
24.	Airtight	NBR
25.	Yoke gasket	Cork – rubber
26.	Lower diaphragm casing	P11 steel
27.	Lower diaphragm casing internal bolts	DIN 933 galvanized steel
28.	Diaphragm spacer	Galvanized steel
29.	Diaphragm	EPDM 70
30.	Diaphragm plate	P01 steel
31.	Springs	C98 UNI 3823
32.	Diaphragm bush	AISI 303 stainless steel
33.	Diaphragm locknut	ISO 7380 galvanized steel
34.	Diaphragm casing bolts	DIN 934 galvanized steel
35.	Upper diaphragm casing	P11 steel
36.	Diaphragm casing locknuts	DIN 933 galvanized steel

DIMENSIONS in mm.



DN	Ø	A	B	C - Bonnet Std	C - Bonnet Finned	C - Bonnet Bellows	D	V	V1
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

Specifications given are only indicative and not binding for the manufacturer who reserve the right to carry-out any modification deemed necessary without prior notice.