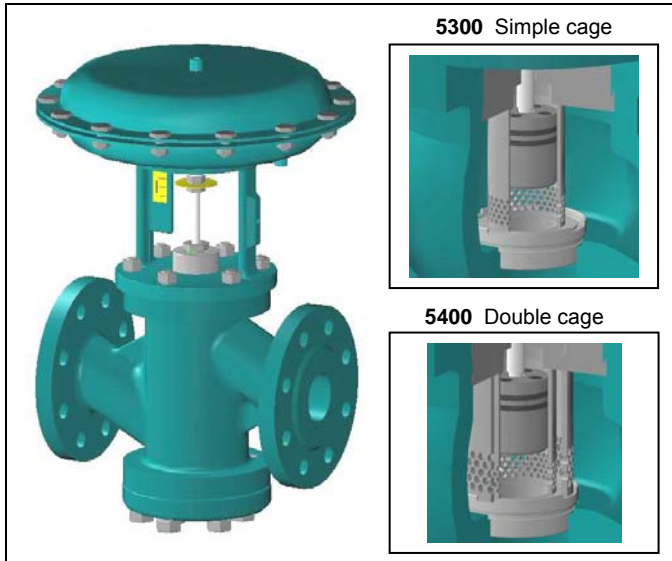


## SINGLE SEAT TWO WAY CONTROL VALVES – LOW NOISE $\text{CE}$ PED 97/23/CE / ATEX 94/9/CE / MACHINERY DIRECTIVE 2006/42/CE



TYPE **5300 AD** Simple Cage

TYPE **5400 AD** Double Cage

Normally closed – air opens  
 Face-to-face ASME / ANSI B16.10

### DESCRIPTION

The UNIWORLD series type 5300/5400 AD are equipped with “straight-through” pattern bodies having ANSI face-to-face dimensions and EN – ANSI – JIS flanges.

Modulating balanced piston plug (low-noise), with high temperature sealing rings made of carbon graphite with antimony, self lapping, sliding in a single or double cage suitable for regulation of all type of 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 65 to DN 200

**BODY CONNECTIONS** : flanged EN 1092-1 PN16 PN40  
 : flanged ANSI B16.5 150RF 300RF  
 : flanged JIS B2220 10K 20K

### MATERIALS OF BODY GROUP (1) :

- Cast iron EN-GJL-250 UNI EN 1561 PN 16 ANSI 150 JIS 10  
 AISI 316 st. st. trim - C40 nickel plated steel bonnet
- Carbon st. ASTM A216 WCB PN 16/40 ANSI 150/300 JIS10/20  
 AISI 316 st. st. trim - C40 nickel plated steel bonnet
- Stainless steel AISI 316 PN 16/40 ANSI 150/300 JIS10/20  
 AISI 316 st. st. trim – AISI 316 st. st. bonnet

### PLUG :

- **SIMPLE CAGE** = linear class IV°
- **RANGEABILITY DN 65/100** = 1/100  
**DN 125/200** = 1/160

### 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  $\leq 150$  °C
- PTFE 85% + GRAPHITE 15% for temperatures  $\leq 200$  °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 \*see on request
- Actuator casings material : Fe P11
- Diaphragm material : EPDM 70
- Yoke material : EN-GJS500-7 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

### ON REQUEST :

- PTFE/GR soft seal  $\leq 190$ °C class VI°
- PTFE soft seal  $\leq 150$ °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  $\geq 250$  °C
- Top-work manual handwheel
- Diaphragm and Actuator sealing kit certified for ambient temperature  $\leq -50$  °C
- ATEX 94/9/CE dedicated configuration according to the fluid
- Kit diaphragm and actuator seals certified for a.t.  $\geq -50$  °C

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

PLUG Full bore	DN 65		DN 80		DN 100		DN 125		DN 150		DN 200	
	Ø 2.1/2”		Ø 3”		Ø 4”		Ø 5”		Ø 6”		Ø 8”	
CV	56.79		75.31		129.91		255.76		304.38		473.49	
KV	48.44		64.24		110.81		217.51		259.64		403.89	
CV	Ø 2” *	40.82	Ø 2.1/2”	56.79	Ø 3”	75.31	Ø 4”	129.91	Ø 5”	255.76	Ø 6”	304.38
KV	Ø 2” *	34.82	Ø 2.1/2”	48.44	Ø 3”	64.24	Ø 4”	110.81	Ø 5”	218.16	Ø 6”	259.64
CV	Ø 1.1/2” *	24.15	Ø 2”	40.82	Ø 2.1/2”	56.79	Ø 3”	75.31	Ø 4”	129.91	Ø 5”	255.76
KV	Ø 1.1/2” *	20.60	Ø 2”	34.82	Ø 2.1/2”	48.44	Ø 3”	64.24	Ø 4”	110.81	Ø 5”	218.16
CV	Ø 1.1/4” *	16.77	Ø 1.1/2”	24.15	Ø 2” *	40.82	Ø 2.1/2”	56.79	Ø 3”	75.31	Ø 4”	129.91
KV	Ø 1.1/4” *	14.30	Ø 1.1/2”	20.60	Ø 2” *	34.82	Ø 2.1/2”	48.44	Ø 3”	64.24	Ø 4”	110.81
CV									Ø 2.1/2”	56.79	Ø 3”	75.31
KV									Ø 2.1/2”	48.44	Ø 3”	64.24
CV											Ø 2.1/2”	56.79
KV											Ø 2.1/2”	48.44

\* Integral cage version, available with simple cage only (see leaflet 5200AD/E)

# CONFLOW s.p.a.

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**Maximum permissible pressure drops in Kg/cm<sup>2</sup> (fluid opens)  
Strokes in mm – Signals in psi**

Actuator Type	Signal psi	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200
		Stroke 28	Stroke 28	Stroke 28	Stroke 50	Stroke 50	Stroke 50
T310	3-15 psi	26	21	10	n.a.	n.a.	n.a.
	6-30 psi	187	149	74	n.a.	n.a.	n.a.
T400	3-15 psi	39	31	15	11.8	7.8	3.9
	6-30 psi	276	220	110	82	55	27
T500	3-15 psi	65	52	26	19.7	13.1	6.5
	6-30 psi	460	368	184	138	92	46

n.a. = not applicable

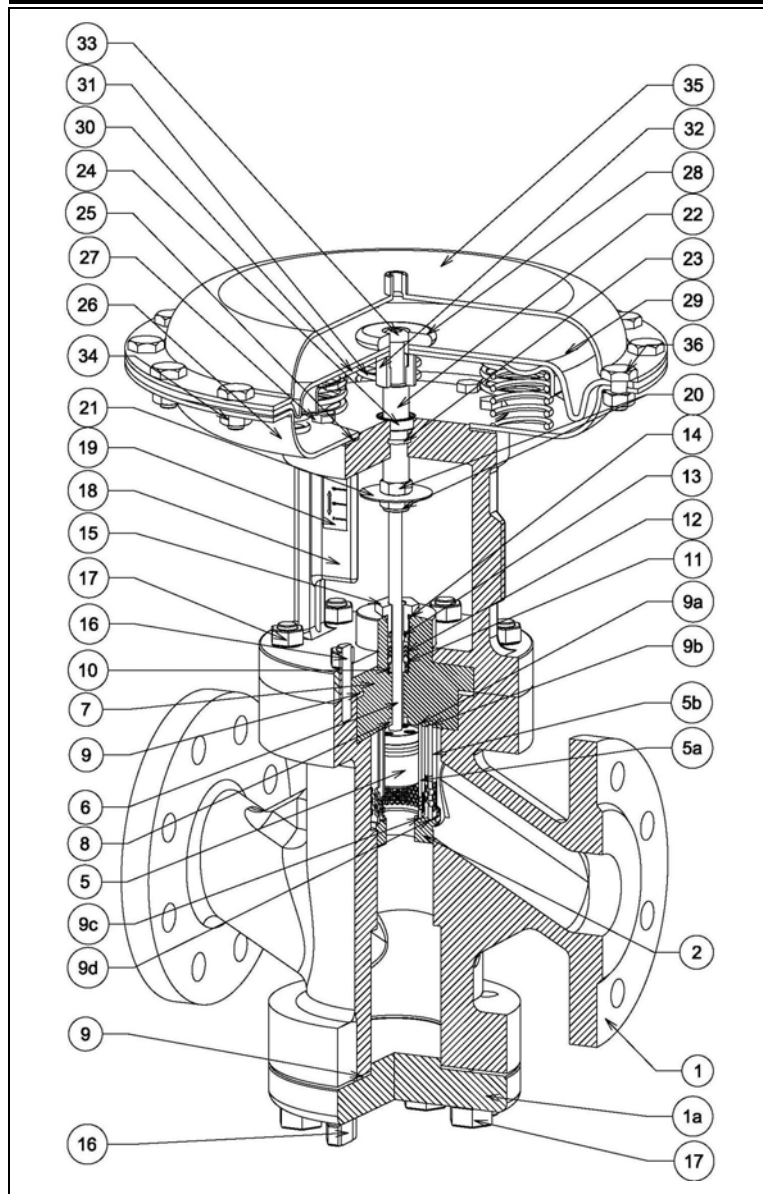
1. The values given are referred to the force of actuator and they can be used within the limit of the body rating

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. For the reduced passage valve consider the DELTA-PI given in the right column.

**COMPONENTS LIST AND MATERIALS**



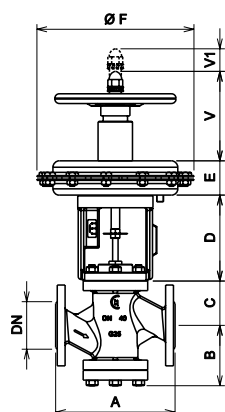
**COMPONENT LIST**

1. Body
2. seat
5. Piston plug with sealing rings
- 5a Internal Simple Cage
- 5b External Double Cage
6. Stem
7. Bonnet
8. Guide bush
9. Body gaskets
- 9a. Upper internal cage gasket
- 9b. Upper external cage gasket
- 9c. Lower internal cage gasket
- 9d. Lower external cage gasket
10. Packing spring
11. Packing washer
12. Packing rings
13. Internal "O" ring
14. External "O" ring
15. Packing adjusting nut
16. Stud-bolts
17. Body locknuts
18. Yoke
19. Travel indicator plate
20. Position indicator nuts
21. Position indicator
22. Diaphragm rod
23. "O" ring
24. Airtight
25. Yoke gasket
26. Lower diaphragm casing
27. Yoke locknuts
28. Diaphragm spacer
29. Diaphragm
30. Diaphragm plate
31. Springs
32. Diaphragm bush
33. Diaphragm locknut
34. Diaphragm casing bolts
35. Upper diaphragm casing
36. Diaphragm casing locknuts

**MATERIALS**

1. See note (1) at pag.1
2. AISI 316 stainless steel
5. AISI 316 st.st.+ n°2 rings EK 3245
- 5a AISI 316 stainless steel
- 5b AISI 316 stainless steel
6. AISI 316 stainless steel
7. See notes (1) (2)at pag.1
8. AISI 304
9. Europil WS 3640 or PTFE
- 9a. WS 3640/C-4500 or PTFE
- 9b. WS 3640/C-4500 or PTFE
- 9c. WS 3640/C-4500 or PTFE
- 9d. WS 3640/C-4500 or PTFE
10. AISI 302 stainless steel
11. AISI 304 stainless steel
12. See note (3) at pag.1
13. Viton FPM 70
14. Viton FPM 70
15. AISI 303 stainless steel
16. Galvanized steel
17. DIN 934 galvanized steel
18. GGG50 spheroidal c. iron
19. Polycarbonate
20. DIN 936 galvanized steel
21. Aluminium
22. AISI 303 stainless steel
23. NBR
24. NBR
25. Cork – rubber
26. P11 steel
27. DIN 933 galvanized steel
28. Galvanized steel
29. EPDM 70
30. P01 steel
31. C98 UNI 3823
32. AISI 303 stainless steel
33. ISO 7380 galvanized steel
34. DIN 934 galvanized steel
35. P11 steel
36. DIN 933 galvanized steel

**DIMENSIONS in mm.**

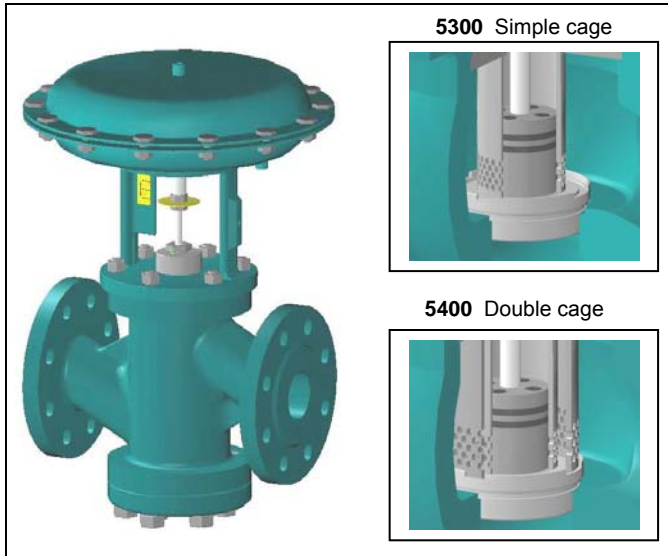


DN	Ø	A(1)	A(2)	B	C - Bonnet			D	V	V1
					Std	Finned	Bellows			
65	2.1/2"	276	292	148	111	309	309	160	166	28
80	3"	298	317	148	135	333	333	160	166	28
100	4"	352	368	176	160	363	363	204	166	28
125	5"	403	425	223	252	435	435	213	166	50
150	6"	450	473	229	258	442	442	213	166	50
200	8"	543	568	254	283	465	465	213	166	50

Actuator	E	Ø F
T300	95	336
T400	119	408
T500	119	520

A(1) cast iron = PN16 – ANSI150 – JIS10K A(2) carbon st. = PN16 – PN40 – ANSI150 – ANSI300 – JIS10K – JIS20K  
Specifications given are only indicative and not binding for the manufacturer who reserve the right to carry-out any modifications deemed necessary without prior notice. All data sheets by CONFLOW SpA, are available last update on our internet web site [www.conflo.it](http://www.conflo.it).

## SINGLE SEAT TWO WAY CONTROL VALVES – LOW NOISE C€ PED 97/23/CE / ATEX 94/9/CE / MACHINERY DIRECTIVE 2006/42/CE



**TIPO 5300 AR** Simple cage

**TIPO 5400 AR** Double cage

Normally closed – air opens  
Face-to-face ASME / ANSI B16.10

### DESCRIPTION

The UNIWORLD series type 5300/5400 AD are equipped with “straight-through” pattern bodies having ANSI face-to-face dimensions and EN – ANSI – JIS flanges.

Modulating balanced piston plug (low-noise), with high temperature sealing rings made of carbon graphite with antimony, self lapping, sliding in a single or double cage suitable for regulation of all type of 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 :** froml DN 65 to DN 200

**BODY CONNECTIONS :**  
flanged EN 1092-1 PN16 PN40  
flanged ANSI B16.5 150RF 300RF  
flanged JIS B2220 10K 20K

### MATERIALS OF BODY GROUP (1) :

- Cast iron EN-GJL-250 UNI EN 1561 PN 16 ANSI 150 JIS 10  
AISI 316 st. st. trim - C40 nickel plated steel bonnet
- Carbon st. ASTM A216 WCB PN 16/40 ANSI 150/300 JIS10/20  
AISI 316 st. st. trim - C40 nickel plated steel bonnet
- Stainless steel AISI 316 PN 16/40 ANSI 150/300 JIS10/20  
AISI 316 st. st. trim – AISI 316 st. st. bonnet

### PLUG :

- SIMPLE CAGE** = linear class IV°
- RANGEABILITY DN 65/100** = 1/100  
**DN 125/200** = 1/160

### 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 : a diaframma
- 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 \*see on request
- Actuator casings material : Fe P11
- Diaphragm material : EPDM 70
- Yoke material : EN-GJS500-7 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

### 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
- Diaphragm and Actuator sealing kit certified for ambient temperature ≤ -50 °C
- ATEX 94/9/CE dedicated configuration according to the fluid
- Kit diaphragm and actuator seals certified for a.t. ≥ -50 °C

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

PLUG Full bore	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200	
	Ø 2.1/2”	Ø 3”	Ø 4”	Ø 5”	Ø 6”	Ø 8”	
CV	56.79	75.31	129.91	255.76	304.38	473.49	
KV	48.44	64.24	110.81	217.51	259.64	403.89	
CV	Ø 2” *	40.82	Ø 2.1/2” 56.79	Ø 3” 75.31	Ø 4” 129.91	Ø 5” 255.76	Ø 6” 304.38
KV	Ø 2” *	34.82	Ø 2.1/2” 48.44	Ø 3” 64.24	Ø 4” 110.81	Ø 5” 218.16	Ø 6” 259.64
CV	Ø1.1/2” *	24.15	Ø 2” 40.82	Ø 2.1/2” 56.79	Ø 3” 75.31	Ø 4” 129.91	Ø 5” 255.76
KV	Ø1.1/2” *	20.60	Ø 2” 34.82	Ø 2.1/2” 48.44	Ø 3” 64.24	Ø 4” 110.81	Ø 5” 218.16
CV	Ø1.1/4” *	16.77	Ø 1.1/2” 24.15	Ø 2” * 40.82	Ø 2.1/2” 56.79	Ø 3” 75.31	Ø 4” 129.91
KV	Ø1.1/4” *	14.30	Ø 1.1/2” 20.60	Ø 2” * 34.82	Ø 2.1/2” 48.44	Ø 3” 64.24	Ø 4” 110.81
CV					Ø 2.1/2” 56.79	Ø 3” 75.31	
KV					Ø 2.1/2” 48.44	Ø 3” 64.24	
CV						Ø 2.1/2” 56.79	
KV						Ø 2.1/2” 48.44	

\* Integral cage version. available with simple cage only (see leaflet 5200AD/E)

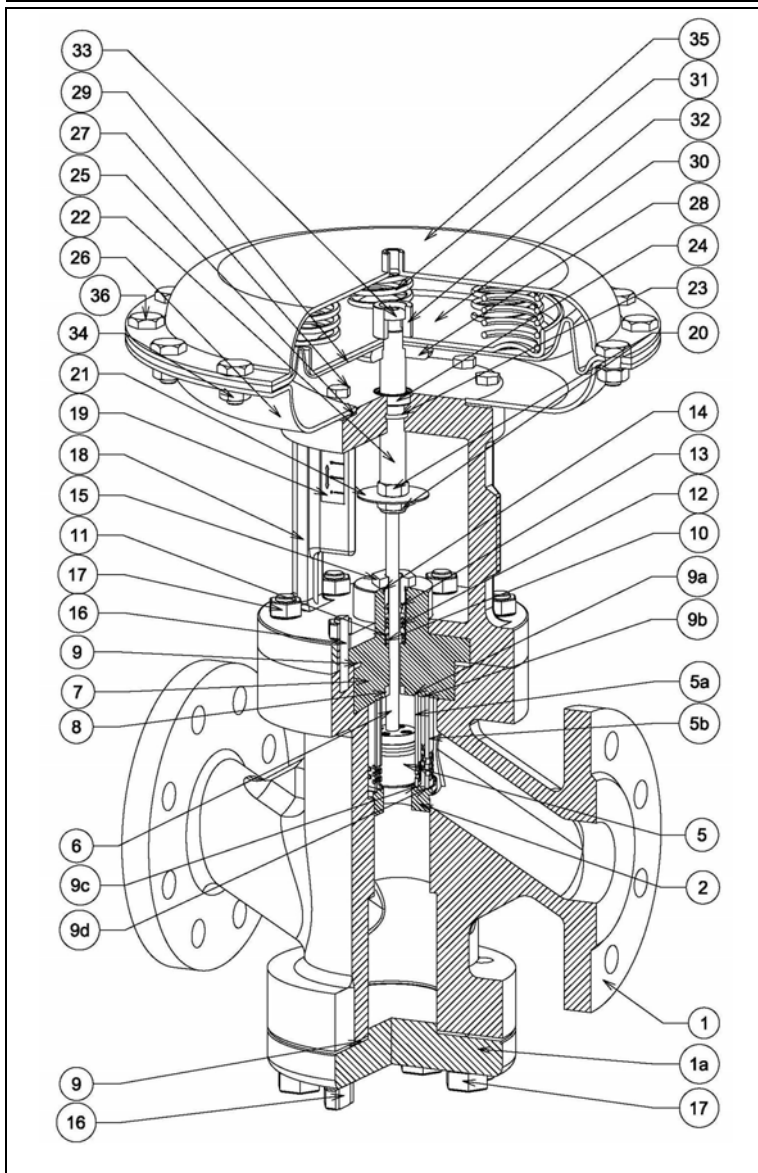
**Maximum permissible pressure drops in Kg/cm<sup>2</sup> (fluid opens)  
Strokes in mm – Signals in psi**

Actuator Type	Segnals psi	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200
		Stroke 28	Stroke 28	Stroke 28	Stroke 50	Stroke 50	Stroke 50
T310	3-15 psi	26	21	10	n.a.	n.a.	n.a.
	6-18 psi	53	42	21	n.a.	n.a.	n.a.
	6-30 psi	80	64	32	n.a.	n.a.	n.a.
T400	3-15 psi	39	31	15	11.8	7.8	3.9
	6-18 psi	78	63	31	23.6	15.7	7.8
	6-30 psi	177	141	70	59	39	19
T500	3-15 psi	65	52	26	19.7	13.1	6.5
	6-18 psi	131	105	52	39.5	26	13
	6-30 psi	329	263	131	98	65	32

n.a. = not applicable

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
4. For the reduced passage valve consider the DELTA-PI given in the right column.

**COMPONENTS LIST AND MATERIALS**



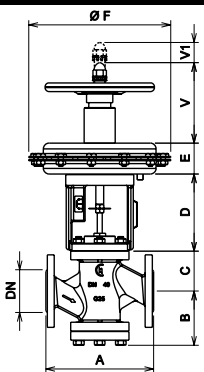
**COMPONENT LIST**

1. Body
2. seat
5. Piston plug with sealing rings
- 5a Internal Simple Cage
- 5b External Double Cage
6. Stem
7. Bonnet
8. Guide bush
9. Body gaskets
- 9a. Upper internal cage gasket
- 9b. Upper external cage gasket
- 9c. Lower internal cage gasket
- 9d. Lower external cage gasket
10. Packing spring
11. Packing washer
12. Packing rings
13. Internal "O" ring
14. External "O" ring
15. Packing adjusting nut
16. Stud-bolts
17. Body locknuts
18. Yoke
19. Travel indicator plate
20. Position indicator nuts
21. Position indicator
22. Diaphragm rod
23. "O" ring
24. Airtight
25. Yoke gasket
26. Lower diaphragm casing
27. Yoke locknuts
28. Diaphragm spacer
29. Diaphragm
30. Diaphragm plate
31. Springs
32. Diaphragm bush
33. Diaphragm locknut
34. Diaphragm casing bolts
35. Upper diaphragm casing
36. Diaphragm casing locknuts

**MATERIALS**

1. See note (1) at pag.1
2. AISI 316 stainless steel
5. AISI 316 st.st.+ n°2 rings EK 3245
- 5a AISI 316 stainless steel
- 5b AISI 316 stainless steel
6. AISI 316 stainless steel
7. See notes (1) (2)at pag.1
8. AISI 304
9. Europil WS 3640 or PTFE
- 9a WS 3640/C-4500 or PTFE
- 9b. WS 3640/C-4500 or PTFE
- 9c. WS 3640/C-4500 or PTFE
- 9d. WS 3640/C-4500 or PTFE
10. AISI 302 stainless steel
11. AISI 304 stainless steel
12. See note (3) at pag.1
13. Viton FPM 70
14. Viton FPM 70
15. AISI 303 stainless steel
16. Galvanized steel
17. DIN 934 galvanized steel
18. GGG50 spheroidal c. iron
19. Polycarbonate
20. DIN 936 galvanized steel
21. Aluminium
22. AISI 303 stainless steel
23. NBR
24. NBR
25. Cork – rubber
26. P11 steel
27. DIN 933 galvanized steel
28. Galvanized steel
29. EPDM 70
30. P01 steel
31. C98 UNI 3823
32. AISI 303 stainless steel
33. ISO 7380 galvanized steel
34. DIN 934 galvanized steel
35. P11 steel
36. DIN 933 galvanized steel

**DIMENSIONS in mm.**



DN	Ø	A(1)	A(2)	B	C - Bonnet			D	V	V1
					Std	Finned	Bellows			
65	2.1/2"	276	292	148	111	309	309	160	166	28
80	3"	298	317	148	135	333	333	160	166	28
100	4"	352	368	176	160	363	363	204	166	28
125	5"	403	425	223	252	435	435	213	166	50
150	6"	450	473	229	258	442	442	213	166	50
200	8"	543	568	254	283	465	465	213	166	50

Actuator	E	Ø F
T300	95	336
T400	119	408
T500	119	520

A(1) cast iron = PN16 – ANSI150 – JIS10K A(2) carbon st. = PN16 – PN40 – ANSI150 – ANSI300 – JIS10K – JIS20K  
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