

# PNEUMATIC VALVES **UNIWORLD Series**

## DOUBLE SEAT TWO WAY – CONTROL VALVES

5800AD/E

01 | 2021



PED 2014/68/UE



ATEX 2014/34/UE



## TYPE 5800 AD

Normally open – air closes

Face-to-face ASME / ANSI B16.10

### DESCRIPTION

The "UNIWORLD" series type 5800 AD are equipped with "straight-through" pattern bodies having ANSI face-to-face dimensions and EN – ANSI – JIS 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 and all accessories.

**SIZES :** from DN 50 to DN 200

**BODY CONNECTIONS :** flanged EN 1092-1 form B PN16 PN40  
flanged ANSI B 16.5 150 RF 300 RF  
flanged JIS B2220 10K 20K

**MATERIALS OF BODY GROUP (1) :**

- **Cast iron EN-GJL-250 UNI EN 1561 PN 16 ANSI 150 JIS 10**  
(available from DN 125 to DN 200 only)  
AISI 316 st. st. trim - C40 nickel plated steel bonnet
- **Carbon steel ASTM A216 WCB PN16/40 ANSI 150/300 JIS10/20**  
AISI 316 st. st. trim - C40 nickel plated steel bonnet
- **Stainless steel AISI 316 CF8M PN16/40 ANSI 150/300 JIS10/20**  
AISI 316 st. st. trim - AISI 316 st. st. bonnet

**PLUG :**

- **EQP** (DN50-100) **EQV** (DN125-200) = equal percentage class II°
- **PL** (DN50-200) = linear class II°
- **PT** (DN50-200) = quick lift class II°

**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 +200°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 carbon steel
- Diaphragm material : EPDM 70
- Yoke material : EN-GJS500-7 spheroidal cast iron
- Pneumatic connections : ISO 7 Rp – 1/8"

**MAX WORKING CONDITIONS :**

- Materials : see general data sheet UNIWORLD//E
- Valve Sizing : see general data sheet UNIWORLD//E
- Rangeability: see general data sheet UNIWORLD//E

**ON REQUEST :**

- 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
- Lubricator on finned bonnet for temperatures ≥ +250 °C
- Top-work manual handwheel
- ATEX 2014/34/UE dedicated configuration according to the fluid
- Kit diaphragm and actuator seals certified for a.t. ≥ -50 °C

**Kv = metric unit**

(flowrate in m<sup>3</sup>/h with 1 bar of differential pressure)

PLUG Full bore		DN50	DN65	DN80	DN100	DN125	DN150	DN200					
		Ø 2"	Ø 2.1/2"	Ø 3"	Ø 4"	Ø 5"	Ø 6"	Ø 8"					
EQP	CV	58.5	81.1	122.5	215.4	301	440	770					
	KV	50.4	69.9	105.6	185.7	259.4	379.3	663.7					
PL	CV	58.5	98.9	149.9	234.2	366	527	937					
	KV	50.4	85.3	129.2	201.9	315.5	454.3	807.7					
PT	CV	58.5	98.9	149.9	234.2	366	527	937					
	KV	50.4	85.3	129.2	201.9	315.5	454.3	807.7					
Reduced bore *		n.a.	2"	2"	2.1/2"	2.1/2"	3"	3"	4"	4"	5"	5"	6"

n.a. = not applicable

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

# CONFLOW s.p.a.

COMPANY WITH  
QUALITY SYSTEM  
CERTIFIED UNI EN ISO 9001

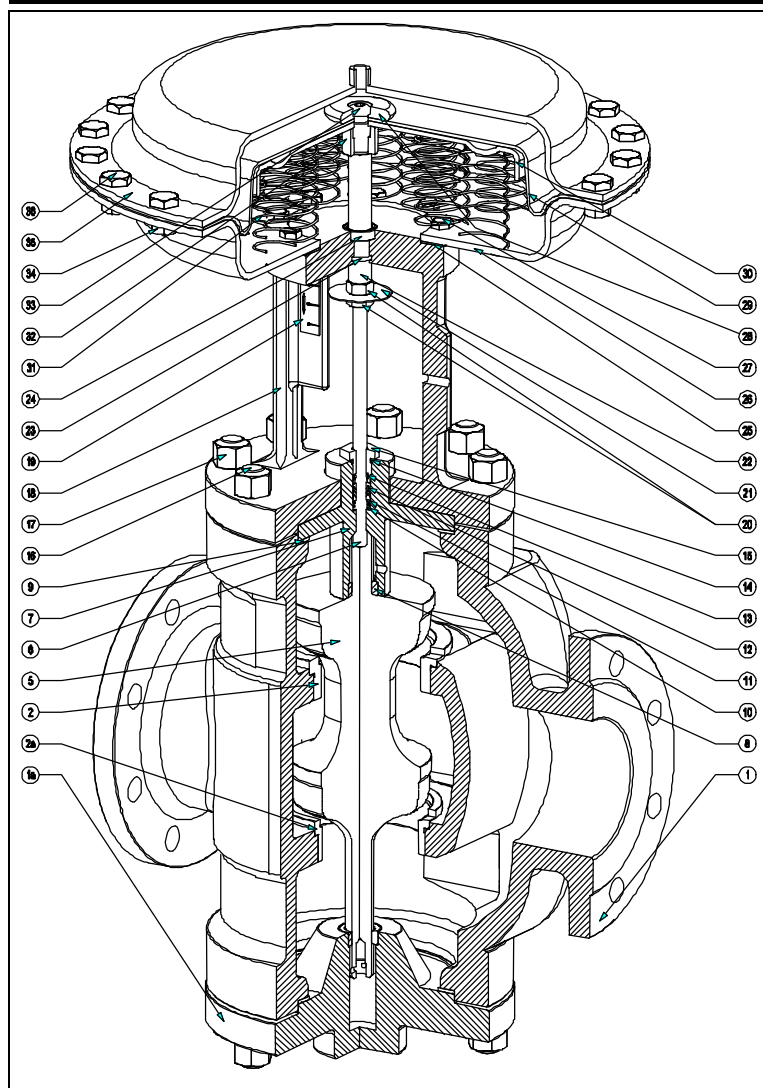
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## Maximum permissible pressure drops in Kg/cm<sup>2</sup> (fluid opens and closes, balanced) Strokes in mm – Signals in psi

Actuator type	Signal psi	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200
		Stroke 19	Stroke 28	Stroke 28	Stroke 28	Stroke 50	Stroke 50	Stroke 50
T310	3-15 psi	19	14	12	10	-	-	-
	6-30 psi	78	49	40	16.5	-	-	-
T400	3-15 psi	28	17	14	6	5	3.5	2.5
	6-30 psi	115	72	59	24.5	20.2	14.4	10.9
T500	3-15 psi	47	29	24	9.5	8.5	5.5	4.5
	6-30 psi	192	121	99	40	33.7	24.1	18.2

- The values given are referred to the force of actuator and they can be used within the limit of the body rating
- The actuator DELTA-PI (PRESSURE DROPS with CLOSED VALVE) given in the column 3-15 psi are obtained with a thrust of 18 psi
- The actuator DELTA-PI (PRESSURE DROPS with CLOSED VALVE) given in the column 6-30 psi are obtained with a thrust of 30 psi
- 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

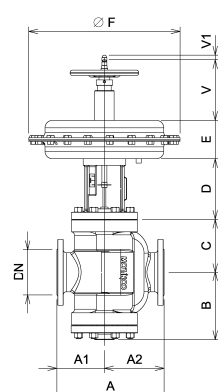


### COMPONENTS LIST

### MATERIALS

- |   |                               |
|---|-------------------------------|
| 1. Body                                   | 1. See note (1) at page 1     |
| 1a. Bottom flange                         | 1a. C40 carbon steel          |
| 2. Upper seat                             | 2. AISI 316 stainless steel   |
| 2a. Lower seat                            | 2a. AISI 316 stainless steel  |
| 5. Plug                                   | 5. AISI 316 stainless steel   |
| 6. Stem                                   | 6. AISI 316 stainless steel   |
| 7. Bonnet                                 | 7. See note (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.



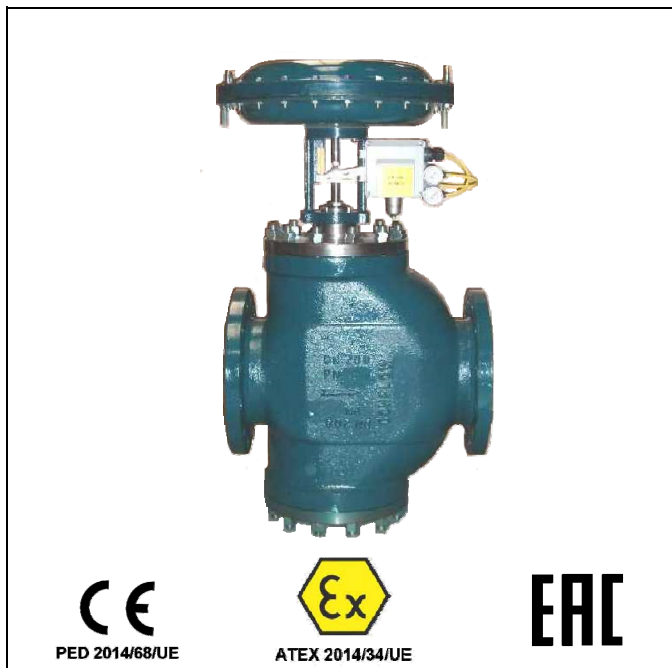
DN	Ø	A (1)	A (2)	A1	A2	B	C - Bonnet			D	V	V1
							Std	Finned	Bellows			
50	2"	-	266	133	133	144	86	218	218	160	166	19
65	2.1/2"	-	292	138	154	184	111	309	309	160	166	28
80	3"	-	317	174	143	194	135	333	333	160	166	28
100	4"	-	368	164	204	224	160	363	363	204	166	28
125	5"	425	425	186	239	271	252	435	435	213	166	50
150	6"	473	473	206	267	297	258	442	442	213	166	50
200	8"	568	568	234	334	351	283	565	565	213	166	50

A(1) cast iron = PN16 – ANSI150 – JIS10K

A(2) carbon and st. steel = PN16 – PN40 – ANSI150 – ANSI300 – JIS10K – JIS20K

Servomot.	E	Ø F
310	95	336
400	119	408
400 6-30 psi	144	408
500	119	520
500 6-30 psi	144	520

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).



## TYPE 5800 AR

Normally closed – air opens

Face-to-face ASME / ANSI B16.10

### DESCRIPTION

The "UNIWORLD" series type 5800 AR are equipped with "straight-through" pattern bodies having ANSI face-to-face dimensions and EN – ANSI – JIS 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 and all accessories.

SIZES : from DN 50 to DN 200

**BODY CONNECTIONS :** flanged EN 1092-1 form B PN16 PN40  
flanged ANSI B 16.5 150 RF 300 RF  
flanged JIS B2220 10K 20K

**MATERIALS OF BODY GROUP (1) :**

- **Cast iron EN-GJL-250 UNI EN 1561 PN 16 ANSI 150 JIS 10**  
(available from DN 125 to DN 200 only)  
AISI 316 st. st. trim - C40 nickel plated steel bonnet
- **Carbon steel ASTM A216 WCB PN16/40 ANSI 150/300 JIS10/20**  
AISI 316 st. st. trim - C40 nickel plated steel bonnet
- **Stainless steel AISI 316 CF8M PN16/40 ANSI 150/300 JIS10/20**  
AISI 316 st. st. trim - AISI 316 st. st. bonnet

**PLUG :**

- **EQP** (DN50-100) **EQV** (DN125-200) = equal percentage class II°
- **PL** (DN50-200) = linear class II°
- **PT** (DN50-200) = quick lift class II°

**BONNET (2) :**

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

**GLAND ARRANGEMENT (PACKING) (3) with safety "O-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)

PLUG		DN50	DN65	DN80	DN100	DN125	DN150	DN200					
Full bore		Ø 2"	Ø 2.1/2"	Ø 3"	Ø 4"	Ø 5"	Ø 6"	Ø 8"					
EQP	CV	58.5	81.1	122.5	215.4	301	440	770					
	KV	50.4	69.9	105.6	185.7	259.4	379.3	663.7					
PL	CV	58.5	98.9	149.9	234.2	366	527	937					
	KV	50.4	85.3	129.2	201.9	315.5	454.3	807.7					
PT	CV	58.5	98.9	149.9	234.2	366	527	937					
	KV	50.4	85.3	129.2	201.9	315.5	454.3	807.7					
Reduced bore *		n.a.	2"	2"	2.1/2"	2.1/2"	3"	3"	4"	4"	5"	5"	6"

n.a. = not applicable

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

**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 \*see on request
- Actuator casings material : Fe P11 carbon steel
- Diaphragm material : EPDM 70
- Yoke material : EN-GJS500-7 spheroidal cast iron
- Pneumatic connections : ISO 7 Rp – 1/8"

**MAX WORKING CONDITIONS :**

- Materials : see general data sheet UNIWORLD//E
- Valve Sizing : see general data sheet UNIWORLD//E
- Rangeability: see general data sheet UNIWORLD//E

**ON REQUEST :**

- 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
- Lubricator on finned bonnet for temperatures ≥ +250 °C
- Top-work manual handwheel
- ATEX 2014/34/UE dedicated configuration according to the fluid
- Kit diaphragm and actuator seals certified for a.t. ≥ - 50 °C

**Kv = metric unit**

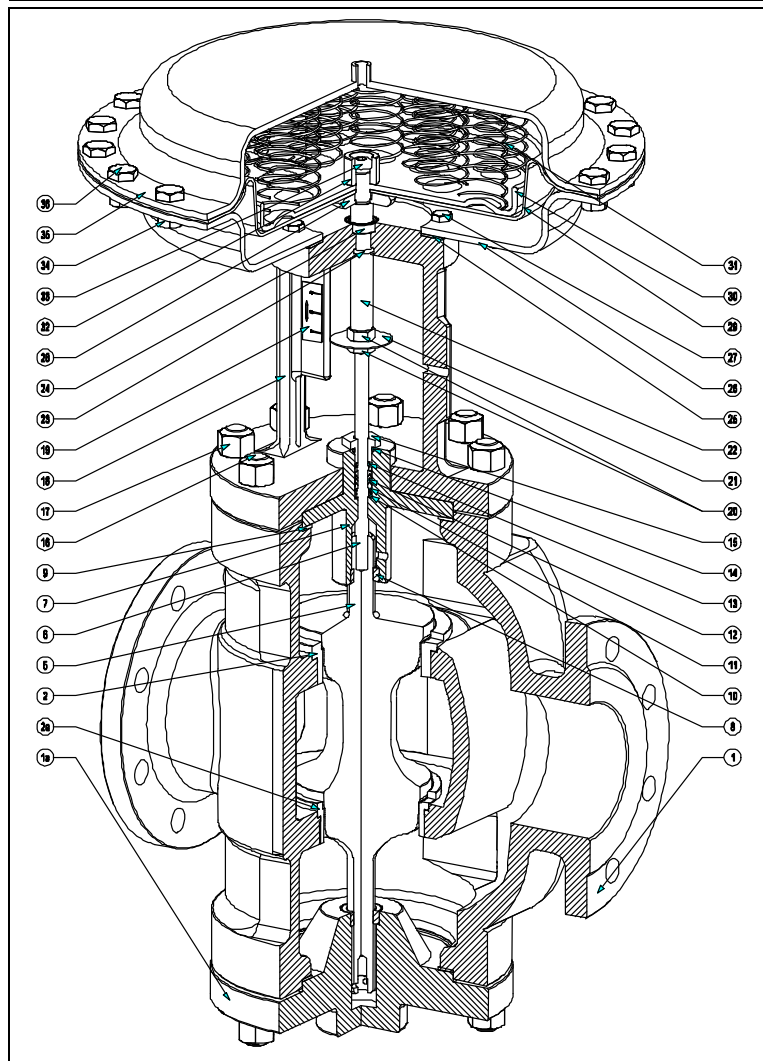
(flowrate in m3/h with 1 bar of differential pressure)

# Maximum permissible pressure drops in Kg/cm<sup>2</sup> (fluid opens and closes, balanced) Strokes in mm – Signals in psi

Actuator type	Signal psi	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200
		Stroke 19	Stroke 28	Stroke 28	Stroke 28	Stroke 50	Stroke 50	Stroke 50
T310	3-15 psi	19	11	9	4	-	-	-
	6-18 psi	38	24	19	10	-	-	-
	6-30 psi	58	32	26	11	-	-	-
T400	3-15 psi	28	17	14	6	5	3.5	2.5
	6-18 psi	56	35	29	12	10	7	5
	6-30 psi	86	78	64	27	23	16	12
T500	3-15 psi	47	29	24	9.5	8.5	5.5	4.5
	6-18 psi	94	59	48	19.5	16.5	11.5	9
	6-30 psi	143	140	116	47	30	21	16

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

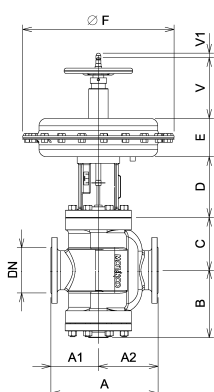


### COMPONENTS LIST

### MATERIALS

- |   |                               |
|---|-------------------------------|
| 1. Body                                   | 1. See note (1) at page 1     |
| 1a. Bottom flange                         | 1a. C40 carbon steel          |
| 2. Upper seat                             | 2. AISI 316 stainless steel   |
| 2a. Lower seat                            | 2a. AISI 316 stainless steel  |
| 5. Plug                                   | 5. AISI 316 stainless steel   |
| 6. Stem                                   | 6. AISI 316 stainless steel   |
| 7. Bonnet                                 | 7. See note (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 (1)	A (2)	A1	A2	B	C - Bonnet			D	V	V1
							Std	Finned	Bellows			
50	2"	-	266	133	133	144	86	218	218	160	166	19
65	2.1/2"	-	292	138	154	184	111	309	309	160	166	28
80	3"	-	317	174	143	194	135	333	333	160	166	28
100	4"	-	368	164	204	224	160	363	363	204	166	28
125	5"	425	425	186	239	271	252	435	435	213	166	50
150	6"	473	473	206	267	297	258	442	442	213	166	50
200	8"	568	568	234	334	351	283	565	565	213	166	50

A(1) cast iron = PN16 – ANSI150 – JIS10K

A(2) carbon and st. steel = PN16 – PN40 – ANSI150 – ANSI300 – JIS10K – JIS20K

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310	95	336
400	119	408
400 6-30 psi	144	408
500	119	520
500 6-30 psi	144	520