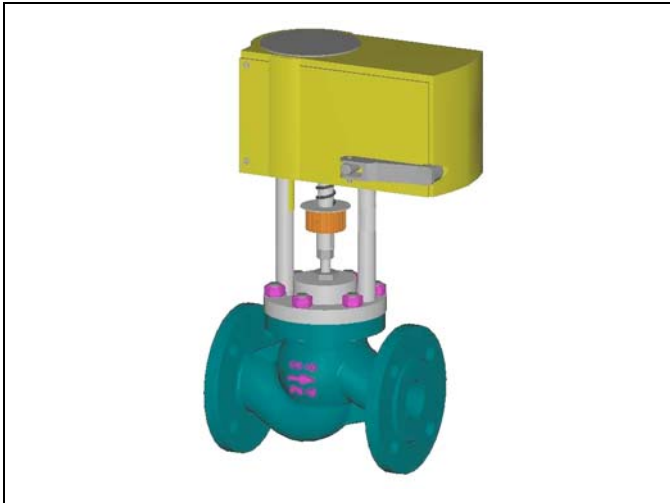


SINGLE SEAT TWO WAY CONTROL VALVES (C)



TYPE 2000 EPR

Closes without supply

Face to face EN 558-1

DESCRIPTION

The "UNIWORLD" series type 2000 EPR are equipped with DIN "straight-through" pattern bodies with EN flanges and an electric powered actuator which closes without supply. Modulating plug suitable for control of virtually all line media. Compact construction assembled with a linear spring return electric actuator fixed to the body by means of two steel columns. The electric actuator works with standard 3 points modulating control signal or 4 - 20 mA or 0 - 10 V control signal.

SIZES : from DN 15 to DN 100

BODY CONNECTIONS : flanged EN 1092-1 PN16 PN40

BODY GROUP MATERIALS (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 bonnet

PLUGS :

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

BONNET (2) :

- Standard for temperatures from -5 to + 200 °C
- Finned for temperatures > 200 °C
- Extended for temperatures < 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)

TECHNICAL CHARACTERISTICS OF ELECTRIC ACTUATOR

- Standard supply : 24V AC – 24V DC
- Degree of protection : IP 66 EN 60529
- Control signal : Three points modulating : 4-20 mA : 0-10 V
- Ambient temperature : -10 ... +55 °C
- Actuator case : yellow plastic
- Manual handwheel : included std
- Electrical connections : 2 x PG13 not included (connection M20x1.5 n°2 M16x1.5 n°1)

MAX WORKING CONDITIONS :

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

ON REQUEST :

- Soft seal PTFE/GR ≤190°C class VI°
- Soft seal PTFE ≤150°C class VI°
- Lapping plug-seat class V°
- Lapping gr. 6 on seat, plug, bush
- Reduced bores (see table CV e KV)
- Supply 220 V AC or 110 V

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

| Full bore plugs Class IV° | DIAMETER | | | | | | | | | | | | | | | | |
|---------------------------|----------|-----------|----------|----------|-------------|-------------|-------------|-------------|--------|--------|--------|--------|----|----|--------|--------|----|
| | 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" | | | | | | | | |
| 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 | 77.0 | 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 | | | | | | | |
| Pass.Ridotti* | • | • | 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 | 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 percentaee

* CV and KV values are referred to the selected diameter and plua tvoe (EQP/EQV-PL/LV onlv)

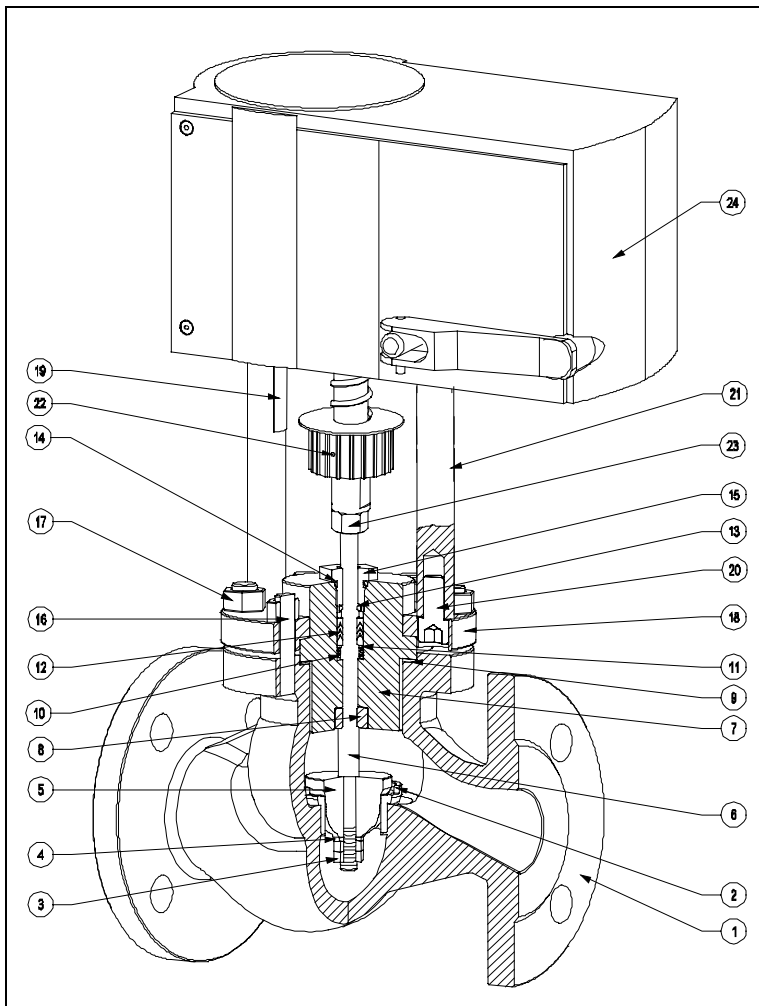
**Maximum permissible pressure drops in Kg/cm² (fluid opens) with alive motor
Power and Current absorbed – Speed in second for total stroke in mm**

| Actuator Type Power absorbed | | DIAMETER | | | | | | | | |
|---------------------------------|--------------------|----------|-------|-------|-------|-------|-------|-------|-------|--------|
| | | DN 15 | DN 20 | DN 25 | DN 32 | DN 40 | DN 50 | DN 65 | DN 80 | DN 100 |
| AVF234SF232 18 VA | Kg/cm ² | 102.0 | 64.0 | 36.0 | 23.0 | 16.0 | 9.3 | 5.8 | 4.0 | 2.3 |
| | Speed sec | 22 | 22 | 22 | 38 | 38 | 38 | 56 | 56 | 56 |
| | Stroke mm | 11 | 11 | 11 | 19 | 19 | 19 | 28 | 28 | 28 |

| Actuator Type Power absorbed | | DIAMETERS – REDUCED BORES | | | |
|---------------------------------|--------------------|---------------------------|---------|--------|--------|
| | | Ø 1/8" | Ø 3/16" | Ø 1/4" | Ø 3/8" |
| AVF234SF232 18 VA | Kg/cm ² | 2150.0 | 936.0 | 554.0 | 259.0 |
| | Speed sec | 22 | 22 | 22 | 22 |
| | Stroke mm | 11 | 11 | 11 | 11 |

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

COMPONENTS LIST and MATERIALS



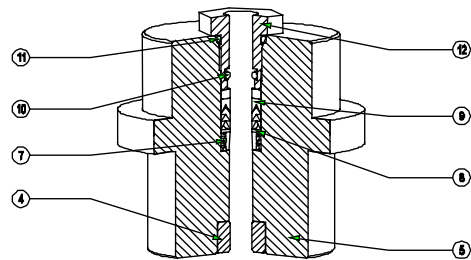
ELENCO COMPONENTI

1. Body
2. Seat
3. Plug locknuts
4. Plug washer
5. Plug
6. Stem
7. Bonnet
8. Bush
9. Body 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. Upper bonnet flange
19. Travel indicator plate
20. Columns fixing screws
21. Columns
22. Grub screw
23. Stem locknut
24. Actuator

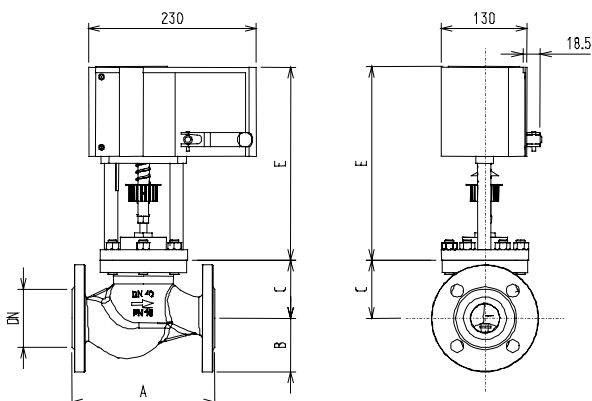
MATERIALI

1. See note (1) 1° pag.
2. Stainless steel AISI 316
3. Stainless steel AISI 304
4. Stainless steel AISI 304
5. Stainless steel AISI 316
6. Stainless steel AISI 316
7. See note (1) (2) 1° pag.
8. Stainless steel AISI 304
9. Europil WS 3640 or PTFE
10. Stainless steel AISI 302
11. Stainless steel AISI 304
12. See note (3) 1° pag.
13. Viton FPM 70
14. Viton FPM 70
15. Stainless steel AISI 303
16. Galvanized steel
17. Galvanized steel DIN 934
18. C40 polycarbonate
19. Galvanized steel DIN 912
20. Stainless steel AISI 430
21. Galvanized steel DIN 914
22. Galvanized steel 934
23. Galvanized steel 934
24. See 1° pag.

BONNET DETAIL



DIMENSIONS in mm.



| DN | Ø | A | B | E | C - Bonnet | | |
|-----|--------|-----|------|-----|------------|--------|---------|
| | | | | | Std | finned | bellows |
| 15 | 1/2" | 130 | 47.5 | 280 | 49 | 181 | 181 |
| 20 | 3/4" | 150 | 52.5 | 280 | 58 | 190 | 190 |
| 25 | 1" | 160 | 57.5 | 280 | 68 | 200 | 200 |
| 32 | 1.1/4" | 180 | 70 | 280 | 70 | 202 | 202 |
| 40 | 1.1/2" | 200 | 75 | 280 | 82 | 214 | 214 |
| 50 | 2" | 230 | 82.5 | 280 | 86 | 218 | 218 |
| 65 | 2.1/2" | 290 | 92.5 | 280 | 111 | 309 | 309 |
| 80 | 3" | 310 | 100 | 280 | 135 | 333 | 333 |
| 100 | 4" | 350 | 118 | 280 | 160 | 363 | 363 |

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.