



KA30 ANSI 900 - 1500

Pneumatic & Electric Globe Control Valve ANSI std.

Manufactured under ISO 9001 quality assurance system, the OMC **KA30** series is a top guided globe valve construction, that can accomodate a wide range of different single stage trims.

KA30 series combines the advanced modular design and a wide range of actuators to satisfy the needs of industrial applications.

KA30 valves are designed to control a broad variety of fluids, including steam, water, air and liquid or gas hydrocarbons. The top guided construction of the **KA30** provides precise plug travel over entire stroke of the valve, which minimizing vibration and increases service life.



14/68/EU Directive (PED)
14/34/EU (ATEX)



EAC Conformity
CU TR 010 / CU TR 032



Safety Integrity Level
IEC EN 61508 - TÜV



Fugitive emissions
ISO 15848-1



- ◆ From 1/2" to 4" rating class
ANSI 900/1500
- ◆ Full Guided construction to ensure plug stability
- ◆ Designed and engineered for robustness in demanding applications
- ◆ CEI EN 60534-6-1 Clamp and Yoke Std.
- ◆ Std. self adjusting double packing spring loaded
- ◆ Shutoff capabilities : Class IV (std.), VI
- ◆ Balanced trims to handle high pressure drop & shutoff

OPTIONS

Reduced area trim to provide wide capabilities for all sizes

Hardened trims to handle high pressure drop applications

Low noise & anticavitation design cage

Bellows seal to meet zero emissions (ZEB20)

Bonnet for low temperature and for high temperature

Full St.Steel actuator construction

BW / SW / RTJ connections & special on request

Heating jacket



REFERENCE STANDARDS

| | |
|--|---|
| Quality system management certification | ISO 9001 |
| Design std. | ANSI B16.34 |
| Flange connection | ANSI B16.5 |
| Socket-Welding Ends | ANSI B16.11 |
| Buttwelding Ends | ANSI B16.25 |
| Pressure Rating | ANSI Classe 900 / 1500 |
| Face to face dimension | ANSI / ISA 75.08.06 |
| Seat tightness Class | ANSI FCI 70.2 - IEC 60534-4 |
| Positioner mounting | CEI EN 60534-6-1 |
| 2014/68/EU (PED) Certification | Modulo B + C2 |
| Mechanical resistance calculation method | UNI EN 12516-2 |
| Hydrostatic pressure test | ANSI B16.34 |
| Pressure / Temperature relationship | ANSI B16.34 |
| 2014/34/EU (ATEX) Conformity | II 2 G Ex h IIC T6...T1 Gb II 2 D Ex h IIIC T6...T1 Db |
| Non-electrical equipment for explosive atmospheres | EN ISO 80079-36 |
| Basic method and requirements | |
| Safety Integrity Level (SIL) | IEC EN 61508 |
| Safety Integrity Level (SIL) Approval | SIL 3 - (C–IS–722133629) |
| Fugitive emissions Certification | ISO 15848-1 |
| EAC Conformity | CU TR 010 / CU TR 032 |
| NACE | MR0175 |

STD VALVE BODY CHARACTERISTICS

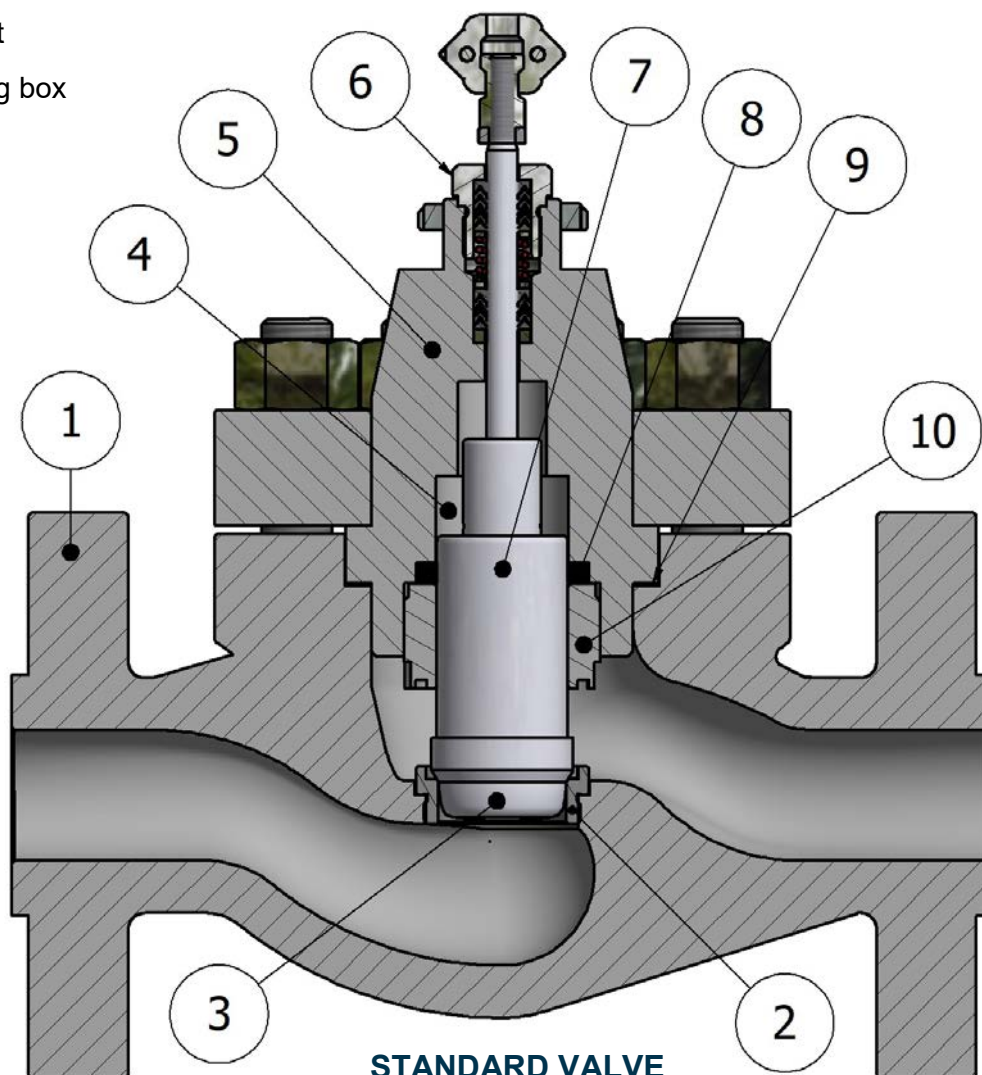
| | |
|-------------------------|--|
| Style | Top entry, single seated, globe valve |
| Sizes | da 1/2" a 4" |
| Pressure rating | ANSI Classe 900 / 1500 |
| Design std. | ANSI B16.34 |
| Flange connection | ANSI B16.5 - Raised Face - Phonography serrated 125-250 AARH |
| Face to face dimensions | ANSI / ISA 75.08.06 |

STD BODY & TRIM MATERIALS COMBINATION

| VALVE BODY (1) | BONNET (9) | TRIM (2 and 3) | TIE ROAD | NUTS | BODY GASKET (11) |
|---------------------------|----------------|-----------------|----------|---------|----------------------------|
| Carbon steel A216 WCC | ASTM A105 | ASTM A182 F316 | A193 B7 | A194 H2 | Graphite + Stainless steel |
| Stainless steel A351 CF8M | ASTM A182 F316 | ASTM A182 F316 | A193 B8M | A194 8M | Graphite + Stainless steel |

CONSTRUCTION EXAMPLES

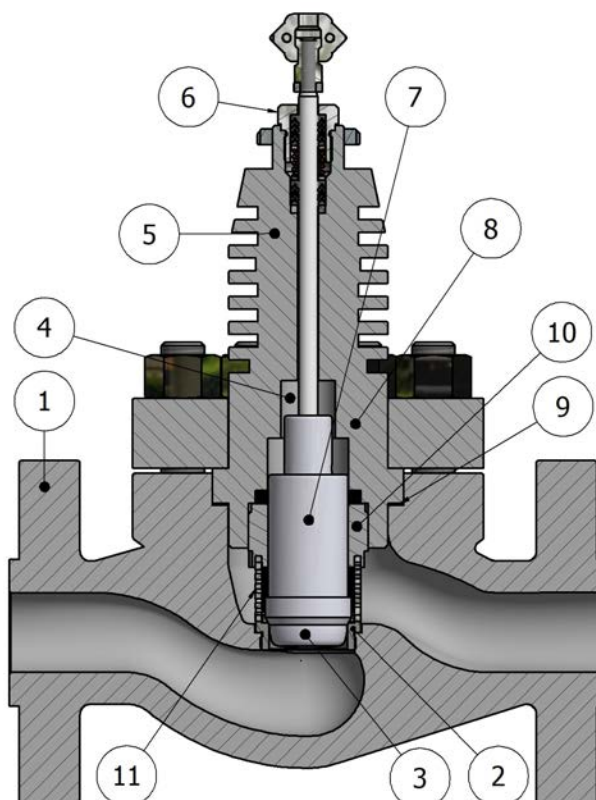
- | | |
|---------------------|--------------------------------|
| 1. Body Valve | 7. Full Guide balancing piston |
| 2. Seat Ring | 8. Balancing gasket |
| 3. Plug | 9. Body Gasket |
| 4. Balancing sleeve | 10. Full Guide stem |
| 5. Bonnet | |
| 6. Stuffing box | |



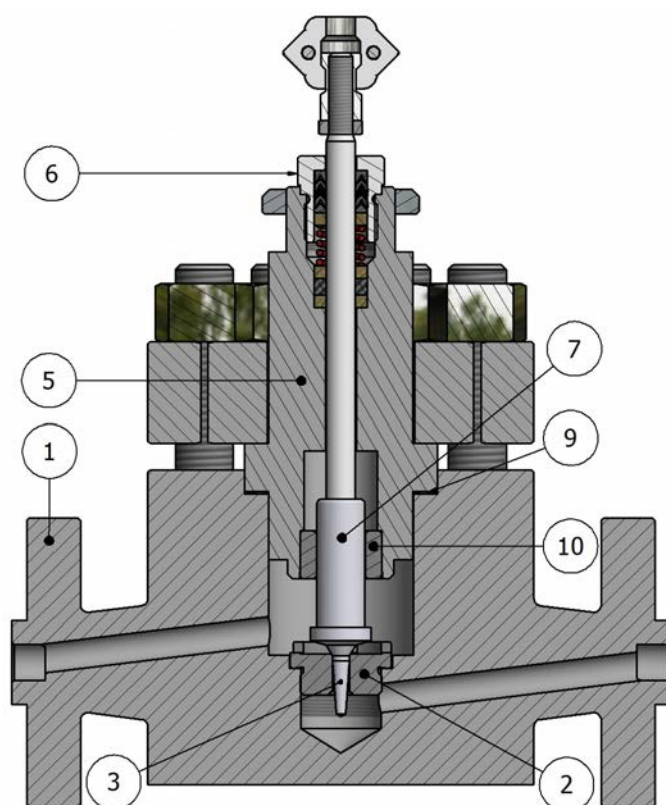
STANDARD VALVE

CONSTRUCTION EXAMPLES

1. Valve body
2. Seat ring
3. Plug
7. Balancing sleeve
5. Finned bonnet
6. Stuffing box
7. Full Guide balancing piston
8. Balancing gasket
9. Body Gasket
10. Full Guide stem
11. 1st stage low dB Cage



VALVE WITH FINNED BONNET AND LOW Db cage



MICROFLOW VALVE WITH FORGED BODY

1. Forged body valve
2. Seat ring
3. Microflow plug
5. Bonnet
6. Stuffing box
7. Full Guide tie rod
9. Body Gasket
10. Full Guide stem

WORKING PRESSURE BY CLASS STD MATERIALS (ASME B16.34)

| OPERATING TEMPERATURE | | ASTM A105 (-20.2° ÷ 797°F) | | ASTM A216 WCC (-20.2° ÷ 797°F) | | A351 CF8M / A182 F316 (-423.4° ÷ 1500°F) | |
|-----------------------|----------|-------------------------------|-----------------|-----------------------------------|-----------------|---|-----------------|
| °F | °C | ANSI 900 (bar) | ANSI 1500 (bar) | ANSI 900 (bar) | ANSI 1500 (bar) | ANSI 900 (bar) | ANSI 1500 (bar) |
| 100,4 | ... ÷ 38 | 153.2 | 255.3 | 155.1 | 258.6 | 148.9 | 248.2 |
| 122 | 50 | 150.4 | 250.6 | 155.1 | 258.6 | 144.3 | 240.6 |
| 212 | 100 | 139.8 | 233.0 | 154.6 | 257.6 | 126.6 | 211.0 |
| 302 | 150 | 135.2 | 225.4 | 150.5 | 250.8 | 115.5 | 192.5 |
| 392 | 200 | 131.4 | 219.0 | 145.8 | 243.2 | 107.0 | 175.3 |
| 482 | 250 | 125.8 | 209.7 | 139.0 | 231.8 | 100.1 | 166.9 |
| 572 | 300 | 119.5 | 199.1 | 128.6 | 214.4 | 94.9 | 158.1 |
| 617 | 325 | 116.1 | 193.6 | 124.0 | 206.6 | 92.7 | 154.4 |
| 662 | 350 | 112.7 | 187.8 | 120.1 | 200.1 | 91.0 | 151.6 |
| 707 | 375 | 109.1 | 181.8 | 113.5 | 189.2 | 89.6 | 149.4 |
| 752 | 400 | 104.2 | 173.6 | 104.2 | 173.6 | 88.3 | 147.2 |
| 797 | 425 | 86.3 | 143.8 | 86.3 | 143.8 | 87.4 | 145.7 |
| 842 | 450 | — | — | — | — | 86.5 | 144.2 |
| 887 | 475 | — | — | — | — | 86.0 | 143.4 |
| 932 | 500 | — | — | — | — | 84.7 | 140.9 |
| 1000 | 538 | — | — | — | — | 75.2 | 125.5 |
| 1022 | 550 | — | — | — | — | 74.8 | 124.9 |
| 1067 | 575 | — | — | — | — | 71.8 | 119.7 |
| 1112 | 600 | — | — | — | — | 59.7 | 99.5 |
| 1157 | 625 | — | — | — | — | 47.4 | 79.1 |
| 1202 | 650 | — | — | — | — | 38.0 | 63.3 |
| 1247 | 675 | — | — | — | — | 31.0 | 51.6 |
| 1292 | 700 | — | — | — | — | 25.1 | 41.9 |
| 1337 | 725 | — | — | — | — | 21.0 | 34.9 |
| 1382 | 750 | — | — | — | — | 17.6 | 29.3 |
| 1427 | 775 | — | — | — | — | 13.7 | 22.8 |
| 1472 | 800 | — | — | — | — | 10.5 | 17.4 |
| 1500 | 816 | — | — | — | — | 8.6 | 14.2 |

MATERIALS AVAILABLE ON REQUEST

| | |
|--|---|
| Carbon steel | A352 LC2; A352 LC3; A352 LCC; A352 LCB |
| Alloy Carbon Steel | A217 WC6; A217 WC9 |
| Austenitic Stainless Steel | A351 CF3; A351 CF8; A351 CF10; A351 CF3M; A351 CF8M; A351 CF10M |
| Ferritic Austenitic Stainless Steel (DUPLEX / SUPERDUPLEX) | A995 CD3MWCuN; A995 A6; A351 CK3MCuN; A351 CE8MC; A351 CD3MN; A351 CD4MCuN |
| Nickel Alloy Stainless Steel | A494 M35-1 (MONEL); A494 M35-2 (MONEL); A494 N-12MV (HASTELLOY B); A494 CW-12MW (HASTELLOY C) |
| TIES ROAD & NUTS | In according to the body material |

STANDARD PROTECTIVE COATING

| WORKING TEMPERATURE | VALVE BODY | BONNET |
|--|---|---|
| from -20° to 302°F from -29° to 150°C | <ul style="list-style-type: none"> • Bicomponent anticorrosive acrylic primer at high resistance • Finish with bicomponent aliphatic acrylic enamel RAL 7021 opaque | Electrolytic zinc coatings Fe/Zn 8 c1A UNI ISO 4520 |
| from 302° to 482°F from 150° to 250°C | <ul style="list-style-type: none"> • Siliconic primer • Finish with siliconic enamel RAL 9005 | Electrolytic zinc coatings Fe/Zn 8 c1A UNI ISO 4520 |
| from 482° to 752°F from 250° to 400°C | <ul style="list-style-type: none"> • Heat resistant siliconic primer • Finish with siliconic enamel RAL 9006 | |

PNEUMATIC ACTUATOR STANDARD PROTECTIVE COATING

CASING AND YOKE

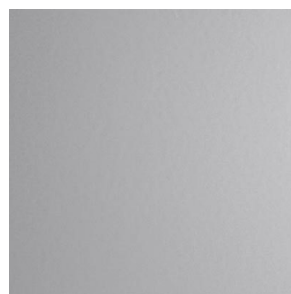
Polyester electrostatic epoxy powder coating - RAL 7032



RAL 7021



RAL 9005



RAL 9006



RAL 7032

Colors and shades shown in the figure are indicative

PROTECTIVE COATING ON REQUEST

Customer specification colors

Painting for see environment

Painting in according to ISO 12944

Painting in according to NORSOK M-501

NACE - FROSIO painting

Painting for see environment

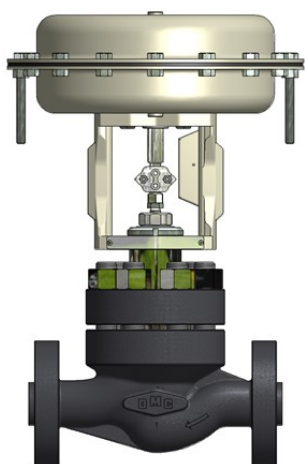


BONNET TYPES

STANDARD

The standard bonnet is cast or forged from the same or equivalent grade of material as the valve body. It is suitable for applications with temperatures between

23°F to 392°F
(-5°C to +200°C)

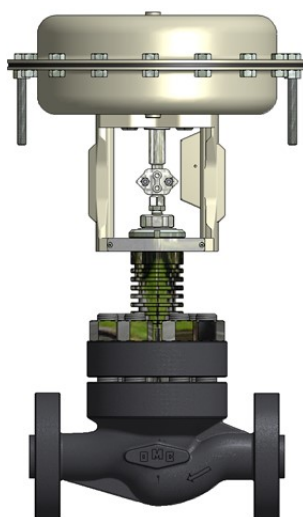


FINNED

The finned bonnet is cast or forged from the same or equivalent grade of material as the valve body.

Engineered for high temperature applications the fins dissipate heat and protect valve stem packing from extreme process temperatures up to 392°F (+200°C)

23°F ÷ 1112°F
(-5°C ÷ 600°C)



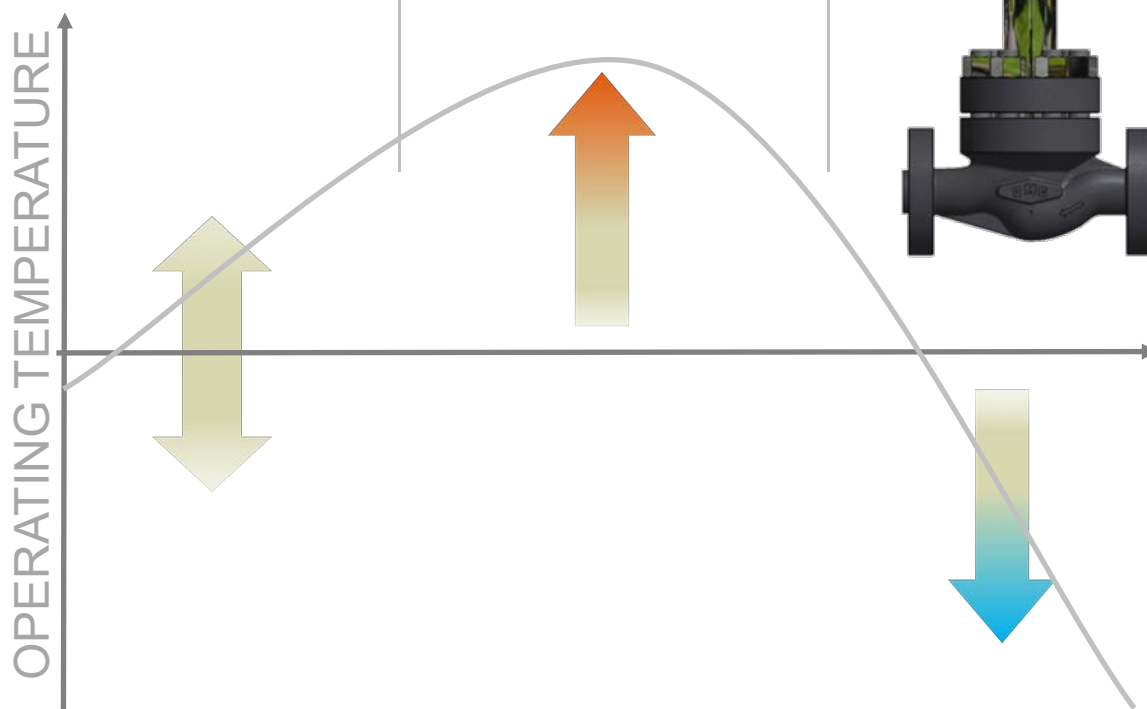
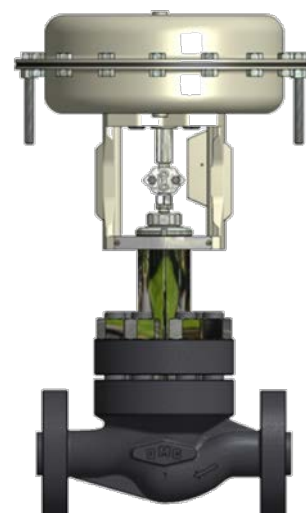
EXTENDED

The extended bonnet is cast or forged from the same or equivalent grade of material as the valve body.

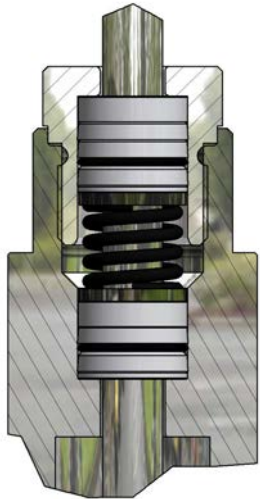
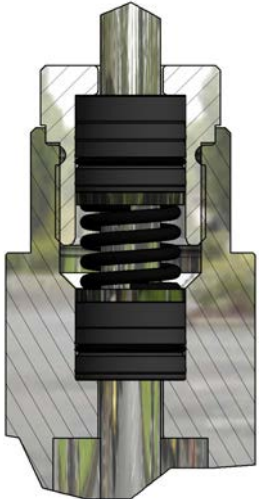
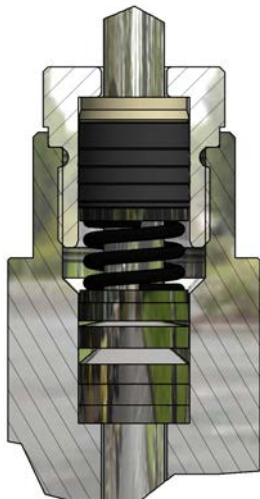
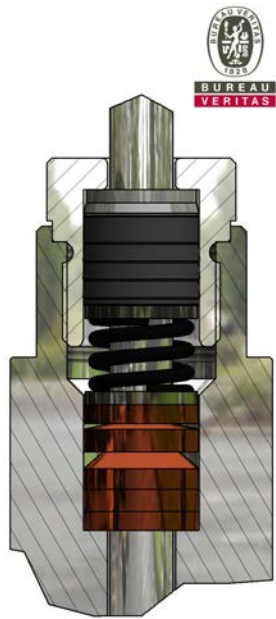
To protect the stem packing the extended bonnet traps some process fluid. This provides a thermal buffer between the packing and the low temperature process fluid.

Engineered for low temperatures, the extension length is manufactured to suit the applications where minimum temperature medium is below 23°F (-5°C).

-320°F ÷ 428°F
(-196°C ÷ 220°C)



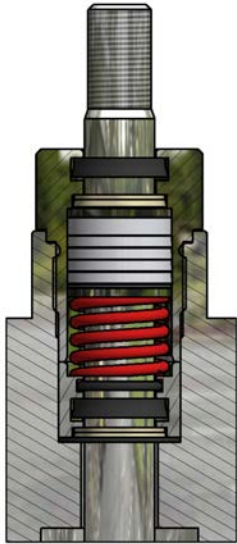
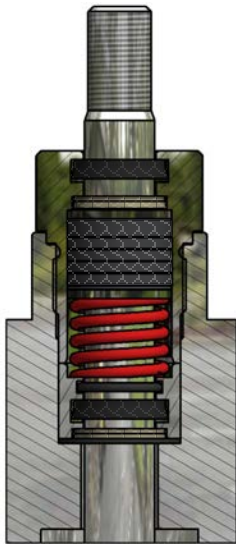

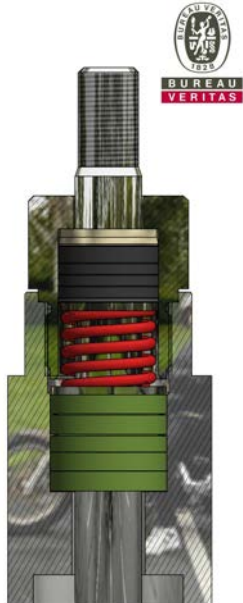
PACKING TYPES - VALVES FROM ½" UP TO 2"

| LP200 | SP200 | HP300 | ECOPACK 1 |
|---|---|--|---|
| <p>It consists of a series of energized V ring pack in Virgin PTFE and FKM, especially used with Oxygen and Cryogenic applications.</p> <p>Self-adjusting and maintenance free.</p> | <p>It consists of a series of energized V ring pack in PTFE base & FKM 75 Shore. Suitable for low & medium temperature application.</p> <p>Self-adjusting and maintenance free.</p> | <p>Directly in contact with the medium it consists of a series of energized V ring pack in Graphite and PTFE. Especially used for high temperature applications.</p> <p>Self-adjusting and maintenance free.</p> | <p>Made of a series of energized V ring pack in Graphite/PTFE. ISO 15848-1 Certified for Low emission fugitive test.</p> <p>Self-adjusting and maintenance free.</p> |
|  |  |  |  |

PACKING / BONNET TEMPERATURE CORRELATION

| | LP200 | SP200 | HP300 | ECOPACK 1 |
|------------------------|------------------------------|-----------------------------|--------------------------|------------------------------|
| CRYOGENIC BONNET | -320 ÷ 356°F -196 ÷ 180°C | /// | /// | -320 ÷ 356°F -196 ÷ 180°C |
| EXTENDED BONNET | -130 ÷ 356°F -90 ÷ 180°C | -130 ÷ 428°F -90 ÷ 220°C | /// | -130 ÷ 428°F -90 ÷ 220°C |
| STANDARD BONNET | 23 ÷ 356°F -5 ÷ 180°C | 23 ÷ 428°F -5 ÷ 220°C | /// | 23 ÷ 428°F -5 ÷ 220°C |
| FINNED BONNET | /// | 23÷500°F -5÷260°C | 23 ÷ 752°F -5 ÷ 400°C | 23 ÷ 752°F -5 ÷ 400°C |
| EXTENDED FINNED BONNET | /// | /// | 23 ÷ 1112F -5 ÷ 600°C | /// |

PACKING TYPES - VALVES FROM 3" UP TO 4"

| LP400 | SP400 | HP600 | ECOPACK 2 |
|---|---|--|--|
| <p>It consists of a series of energized V ring pack in Virgin PTFE and FKM, especially used with Oxygen and Cryogenic applications.</p> <p>Self-adjusting and maintenance free.</p> | <p>It consists of a series of energized V ring pack in PTFE base & FKM 75 Shore. Suitable for low & medium temperature application.</p> <p>Self-adjusting and maintenance free.</p> | <p>Directly in contact with the medium it consists of a series of energized V ring pack in Graphite and PTFE. Especially used for high temperature applications.</p> <p>Self-adjusting and maintenance free.</p> | <p>Made of a series of energized V ring pack in Graphite/PTFE. ISO 15848-1 Certified for Low emission fugitive test.</p> <p>Self-adjusting and maintenance free.</p> |
|  |  |  |  |

PACKING / BONNET TEMPERATURE CORRELATION

| | LP400 | SP400 | HP600 | ECOPACK 2 |
|------------------------|------------------------------|-----------------------------|---------------------------|------------------------------|
| CRYOGENIC BONNET | -320 ÷ 356°F -196 ÷ 180°C | /// | /// | -320 ÷ 356°F -196 ÷ 180°C |
| EXTENDED BONNET | -130 ÷ 356°F -90 ÷ 180°C | -130 ÷ 428°F -90 ÷ 220°C | /// | -130 ÷ 428°F -90 ÷ 220°C |
| STANDARD BONNET | 23 ÷ 356°F -5 ÷ 180°C | 23 ÷ 428°F -5 ÷ 220°C | /// | 23 ÷ 428°F -5 ÷ 220°C |
| FINNED BONNET | /// | 23 ÷ 500°F -5 ÷ 260°C | 23 ÷ 752°F -5 ÷ 400°C | 23 ÷ 752°F -5 ÷ 400°C |
| EXTENDED FINNED BONNET | /// | /// | 23 ÷ 1112°F -5 ÷ 600°C | /// |

ZEB20 BELLOWS FOR DANGEROUS FLUID

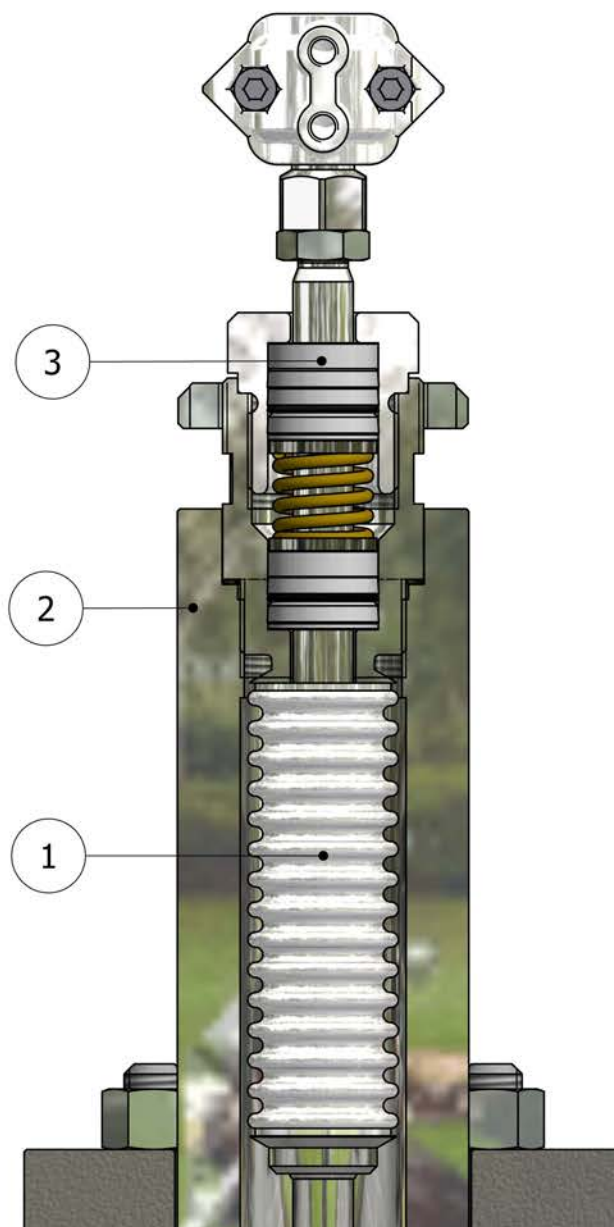
ZEB20 is specifically designed for industrial applications where the possible leakage of process fluid from the packing can cause environmental or personal damage and in extreme cases be hazardous to health.

The ZEB20 is manufactured by welding a bellows to the plug stem and valve bonnet. This removes potential leakage paths, while allowing full movement of the stem. The design provides total isolation of the fluid from the outside environment.

The ZEB20 also includes secondary stem seals as a safety function. These only operate in the unlikely event that a bellows ruptures. The secondary seals will provide reduced risk.

The standard of the bellows material is AISI 316L but, it is also available in other materials, including Inconel, Monel, Hastelloy, etc...

For safety critical applications the ZEB20 can be fitted with a test



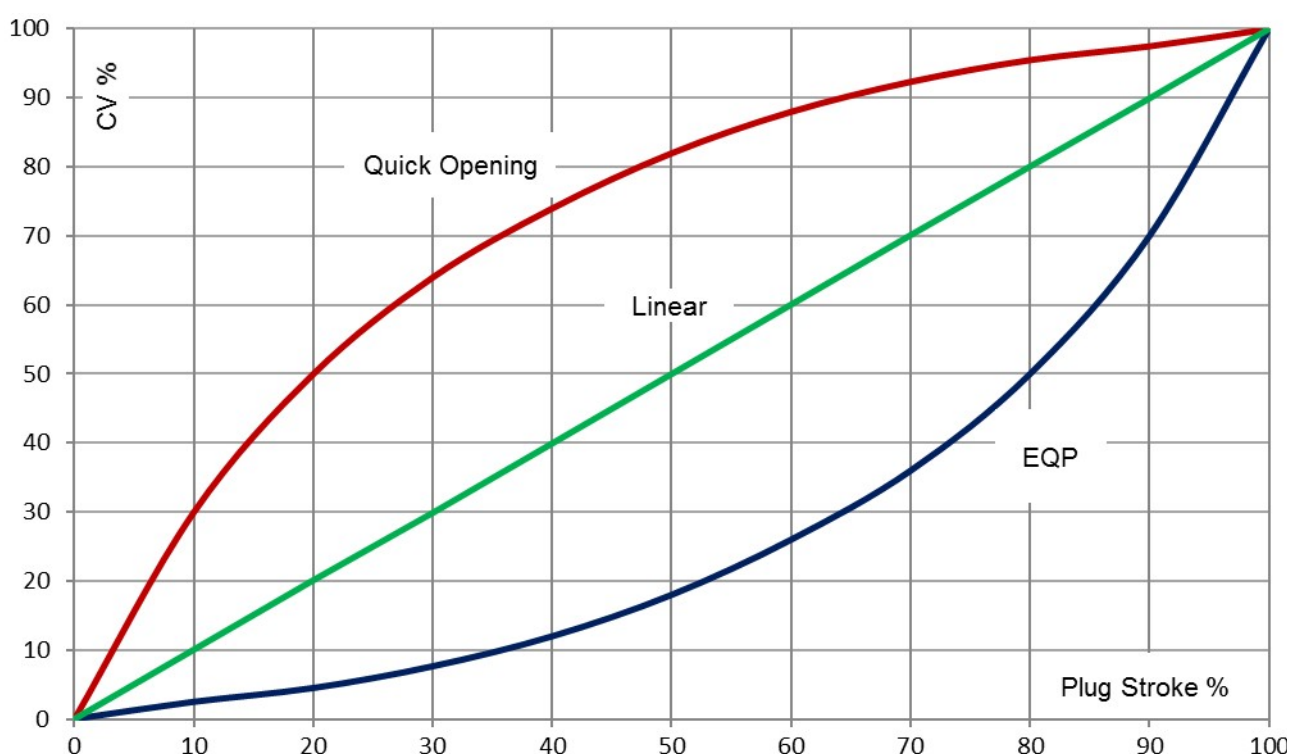
Fugitive emissions
ISO 15848-1

ZEB20 MATERIALS COMBINATION

| POS. | DESCRIPTION | STD MATERIALS | ON REQUEST |
|------|-------------|---------------|--|
| 1 | Bellows | AISI 316L | Inconel, Monel, Hastelloy, other materials |
| 2 | Bonnet | SP200 / SP400 | LP200 / HP300 / ECOPACK 1 LP400 / HP600 / ECOPACK 2 |

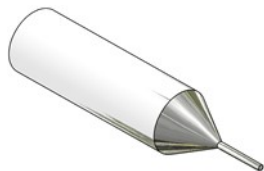



CONTROL CHARACTERISTICS

| QUICK OPENING | LINEAR | EQUAL PERCENTAGE |
|---|--|---|
| <p>A valve with quick opening flow characteristic provides a maximum change in flow rate at low travels and small changes when the valve plug is near maximum. Control valves with quick opening flow characteristics are often used for on/off applications where significant flow rate must be established quickly as the valve begins to open. Consequently they are often used in relief valve applications. Quick opening valves can also be selected for many of the same applications for which linear flow characteristics are recommended.</p> | <p>A valve with linear characteristic provide a flow rate directly proportional to travel. Linear characteristics are commonly specified for liquid-level and flow-control applications.</p> | <p>In equal percentage flow characteristic, equal increments of valve travel produce equal percentage changes in the existing flow. A valve with an inherent equal percentage flow characteristic provides precise throttling control through the lower portion of the travel range and rapidly increasing capacity as the valve plug nears the wide open position. Valves with equal percentage flow characteristics are used on pressure control applications, on applications where a large percentage of the pressure drop is normally absorbed by the system itself with only a relatively small percentage available at the control valve, and on applications where highly varying pressure drop conditions can be expected.</p> |



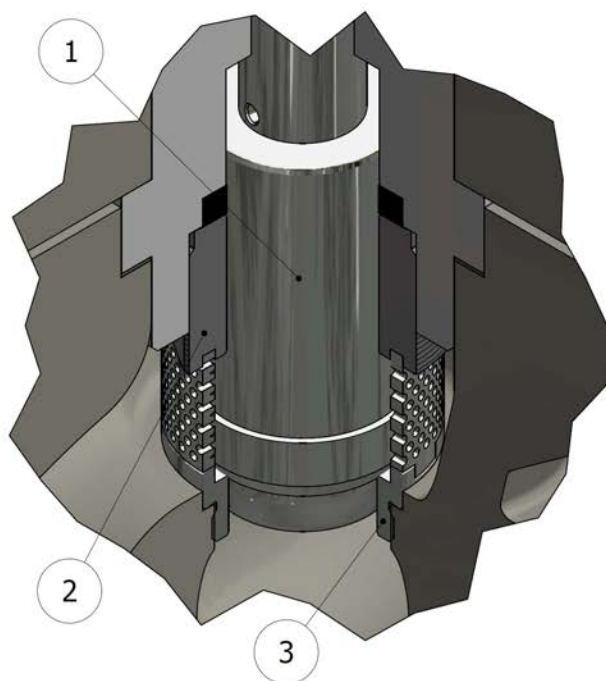
TRIMS CHARACTERISTICS

| | STANDARD | ON REQUEST |
|-------------------------|-------------------------------|---|
| CONTROL CHARACTERISTICS | Equal Percentage (EQP) | Quick opening (ON-OFF) |
| | | Linear (PL) |
| PORT | Full port | Reduced port |
| | | Microflow port |
| SEAL | Metal seat tightness Class IV | Stellite faced seat/plug Class IV |
| | | Saline nitriding (QPQ) seat/plug Class IV |
| | | PTFE soft seal <300°F (150°C) - Class VI |
| | | PTFE-GR soft seal <375°F (190°C) - Class VI |
| | | PEEK Soft seal <536°F (280°C) - Class VI |

| LINEAR SPLINE PLUG | QUICK OPENING PLUG | EQP PLUG METAL TIGHTNESS | EQP PLUG SOFT TIGHTNESS |
|---|---|--|---|
|  |  |  |  |

To ensure the best performance with high pressure drop, the diameter of the top guided plug of KA30 is equal or higher to the seat bore.

1. Balancing Plug
2. Full-guide stem
3. Seat Ring



CAVITATION, FLASHING EFFECT NOISE LEVEL

The globe valve allows the regulation of a parameter which can be the pressure or flow going to modify the flow of pressurized fluid in the system. The principle used is that of the Bernoulli law or the continuity of the fluids. In a globe valve, if I decrease the passage section, the speed increases while the pressure decreases. If this pressure falls below the vapor pressure of the bubbles could be created that could produce two flow disturbance phenomena:

Cavitation effect **Flashing effect**

Cavitation consists of rapid vaporization and condensation within a liquid. When local pressure falls to vapor pressure (approximately 0.25 psi / 0.018 bar absolute for cold water), vapor bubbles are formed and when these bubbles travel to an area of higher pressure, the bubbles collapse with phenomenal force and great localized stress. It is the violent collapse of these vapor bubbles near valve components or downstream piping surfaces, which cause cavitation damage and subsequent performance degradation. Typically, the reason for low pressure is that the pressure drop across a control valve has created very high velocity in the seat area and corresponding low pressure because potential (pressure) energy is reduced to compensate for the increase in kinetic energy. The principle can be applied to various types of fluid flow and simply states that when there is an increase in the velocity of fluids then it must be accompanied by a decrease in the fluid's pressure, the total energy associated with the flow must remain constant.

The **Flashing** effect is similar to cavitation, except that bubbles explode downstream of the valve.

In control valves, the pressure drop typically occurs at or near the seat area or just downstream. The shock waves and pressure fluctuations resulting from these high velocity bubble collapses can also cause noise, vibrations, accelerated corrosion, as well as limited valve flow. Typically the cavitation is formed in the valve throttling area, the pressure fluctuations radiate into the downstream pipe as noise

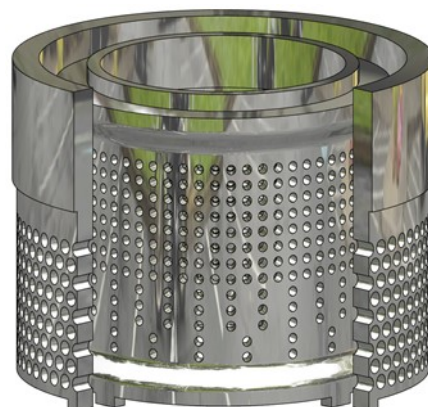
The KA30 Series can be equipped with anticavitation and or low noise trims to reduce the possibility of cavitation and noise.



Anticavitation Cage



Low dB Trim single stage



Low dB Trim double stage

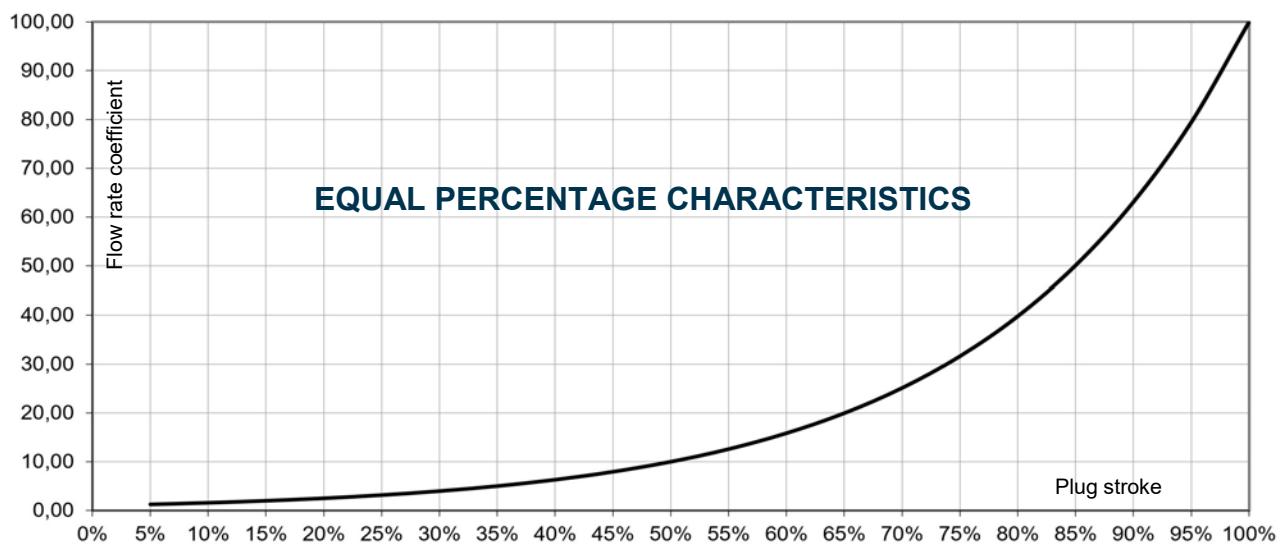
EQUAL PERCENTAGE PLUG FLOW RATE COEFFICIENTS SEAT BORE DIAMETER AND STROKE

| CV | Kv | Diametro sede | | Corsa orruttore | | Diametro Valvola | | | | | | |
|------|------|---------------|-----|-----------------|----|------------------|------|----|-----|----|----|----|
| | | inch | mm | inch | mm | 1/2" | 3/4" | 1" | 1½" | 2" | 3" | 4" |
| 0.08 | 0,07 | 0.12 | 3 | 0.79 | 20 | □ | □ | □ | □ | □ | — | — |
| 0.20 | 0,17 | 0.15 | 4 | | | □ | □ | □ | □ | □ | — | — |
| 0.60 | 0,51 | 0.20 | 5 | | | □ | □ | □ | □ | □ | — | — |
| 1.00 | 0,85 | 0.27 | 7 | | | □ | □ | □ | □ | □ | — | — |
| 1.3 | 1,11 | 0.31 | 8 | | | □ | □ | □ | □ | □ | — | — |
| 1.8 | 1,54 | 0.35 | 9 | | | □ | □ | □ | □ | □ | — | — |
| 2 | 1,7 | 0.39 | 10 | | | □ | □ | □ | □ | □ | — | — |
| 2.5 | 2,15 | 0.39 | 10 | | | □ | □ | □ | □ | □ | □ | — |
| 3 | 2,58 | 0.39 | 10 | | | □ | □ | □ | □ | □ | □ | — |
| 3.5 | 3 | 0.39 | 10 | | | □ | □ | □ | □ | □ | □ | — |
| 5.5 | 4.7 | 0,59 | 20 | | | ■ | □ | □ | □ | □ | □ | □ |
| 8 | 6,8 | 0,79 | 20 | | | — | ■ | □ | □ | □ | □ | □ |
| 13 | 11 | 0,98 | 25 | | | — | — | ■ | □ | □ | □ | □ |
| 19 | 16 | 1,18 | 30 | | | — | — | — | □ | □ | □ | □ |
| 29 | 25 | 1,50 | 38 | | | — | — | — | ■ | □ | □ | □ |
| 50 | 43 | 1,93 | 49 | | | — | — | — | — | ■ | □ | □ |
| 75 | 64 | 2,52 | 64 | 1.18 | 50 | — | — | — | — | — | □ | □ |
| 112 | 96 | 2,99 | 76 | | | — | — | — | — | — | ■ | □ |
| 190 | 162 | 3.94 | 100 | | | — | — | — | — | — | — | ■ |

— not available

■ standard

□ on request



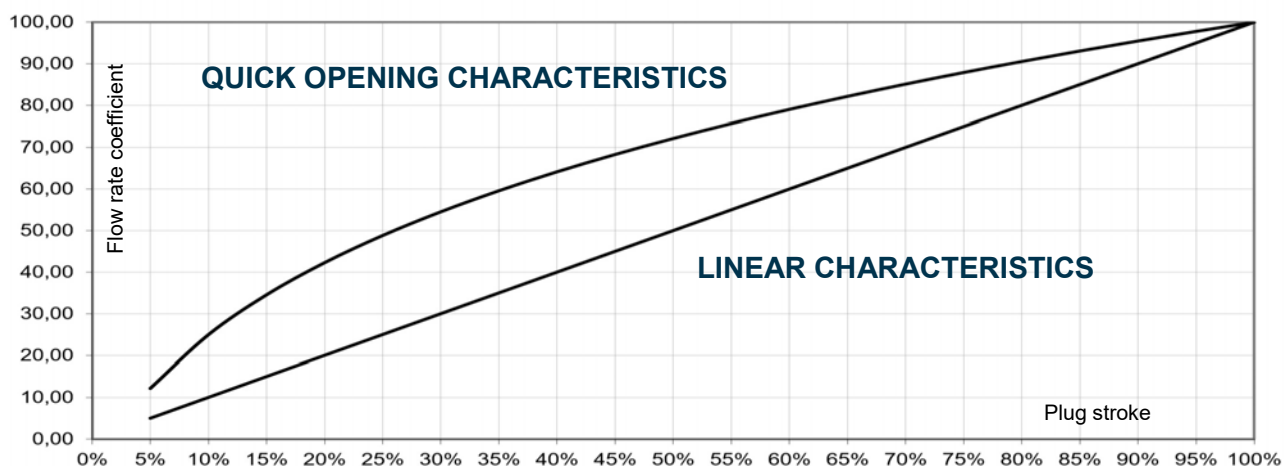
LINEAR & QUICK OPENING PLUG FLOW RATE COEFFICIENTS SEAT BORE DIAMETER AND STROKE

| CV | Kv | Seat bore diameter | | Std plug stroke | | Valve size | | | | | | |
|------|------|--------------------|-----|-----------------|----|------------|------|----|-----|----|----|----|
| | | inch | mm | inch | mm | 1/2" | 3/4" | 1" | 1"½ | 2" | 3" | 4" |
| 0.03 | 0,02 | 0.12 | 3 | 0.79 | 20 | □ | □ | □ | □ | □ | — | — |
| 0.05 | 0,04 | 0.12 | 3 | | | □ | □ | □ | □ | □ | — | — |
| 0.08 | 0,07 | 0.12 | 3 | | | □ | □ | □ | □ | □ | — | — |
| 0.20 | 0,17 | 0.15 | 4 | | | □ | □ | □ | □ | □ | — | — |
| 0.60 | 0,51 | 0.20 | 5 | | | □ | □ | □ | □ | □ | — | — |
| 0.75 | 0,65 | 0.23 | 6 | | | □ | □ | □ | □ | □ | — | — |
| 1.00 | 0,85 | 0.27 | 7 | | | □ | □ | □ | □ | □ | — | — |
| 1.3 | 1,11 | 0.31 | 8 | | | □ | □ | □ | □ | □ | — | — |
| 1.8 | 1,54 | 0.35 | 9 | | | □ | □ | □ | □ | □ | — | — |
| 2 | 1,7 | 0.39 | 10 | | | □ | □ | □ | □ | □ | — | — |
| 2.5 | 2,15 | 0.39 | 10 | | | □ | □ | □ | □ | □ | □ | — |
| 3 | 2,58 | 0.39 | 10 | | | □ | □ | □ | □ | □ | □ | — |
| 3.5 | 3 | 0.39 | 10 | | | □ | □ | □ | □ | □ | □ | — |
| 6 | 5,1 | 0.59 | 20 | | | ■ | □ | □ | □ | □ | □ | □ |
| 8 | 6,8 | 0,79 | 20 | | | — | ■ | □ | □ | □ | □ | □ |
| 13 | 11 | 0,98 | 25 | | | — | — | ■ | □ | □ | □ | □ |
| 19 | 16 | 1,18 | 30 | | | — | — | — | □ | □ | □ | □ |
| 29 | 25 | 1,50 | 38 | | | — | — | — | ■ | □ | □ | □ |
| 50 | 43 | 1,93 | 49 | | | — | — | — | — | ■ | □ | □ |
| 75 | 64 | 2,52 | 64 | 1.18 | 50 | — | — | — | — | — | □ | □ |
| 112 | 96 | 2,99 | 76 | | | — | — | — | — | — | ■ | □ |
| 190 | 162 | 3,94 | 100 | | | — | — | — | — | — | — | ■ |

— not available

■ standard

□ on request



AP SERIES PNEUMATIC ACTUATORS - SPECIFICATIONS

AP series pneumatic actuators are multi diaphragm actuators. They are Available with four (4) different sizes of internal diaphragms. They are extremely compact and they can guarantee a perfect linearity to satisfy the control needs of the valves at different working pressures. They are equipped with an industry standard yoke (CEI EN 60534-6-1), which ensures accessories can be fitted quickly and easily. A full range E/P positioners, solenoid valves, limit switch boxes and feedback devices are available as option. As you standard a mechanical travel indicator and index scale are included as standard on all actuators.

TECHNICAL DATA

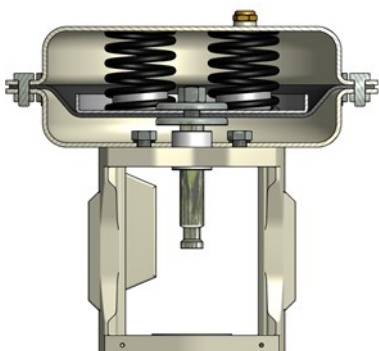
| | |
|-------------------------|---|
| TYPE | Diaphragm type - multispring |
| CONTROL SIGNAL | Direct Action (Air to close - valve normally open) 15÷60psi Reverse (Air to open - valve normally closed) 15÷60psi |
| MAX AIR SUPPLY PRESSURE | 87 psi (6 bar) |
| PNEUMATIC CONNECTION | 1/4" NPT-F |
| AMBIENT TEMPERATURE | -4÷160°F (-20÷70°C) |

MATERIALS

| | STANDARD | ON REQUEST |
|------------------------|--------------------------------|---------------------------------|
| YOKE AND CASING | Painted Carbon steel | Electropolished Stainless Steel |
| BOLTS AND NUTS | A193 B7 - A194 2H | Other materials |
| DIAPHRAGM | Nitrile butadiene rubber (NBR) | Other materials |
| SPLINDE | ASTM 182 F304 | // |
| VALVE CLAMP CONNECTION | ASTM A 351 CF8 | // |
| SPRING | EN 10270-1SH painted | Stainless steel |
| INTERNAL PARTS | Zinc plated carbon steel | Stainless steel |

PROTECTIVE COATING

| | |
|------------|--|
| STANDARD | Finish powder coat polyester RAL 7032 |
| ON REQUEST | Painting for see environment Customer specification |



ACCESSORIES

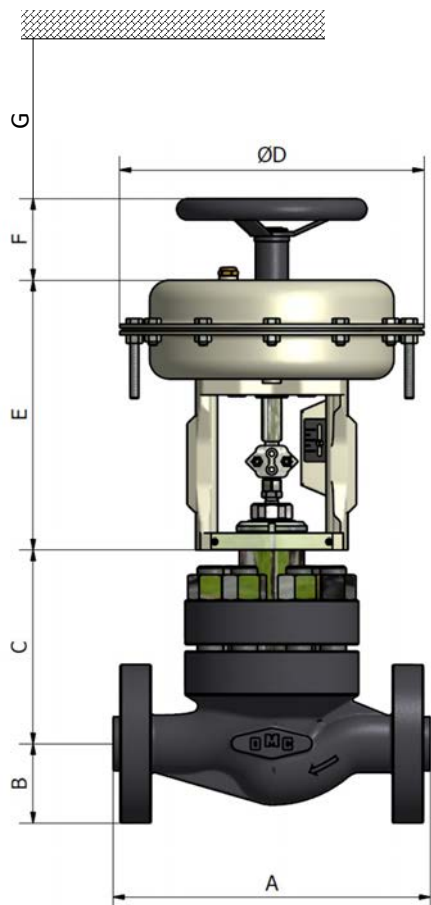
- ◆ Top mounted handwheel
- ◆ Pneumatic, Electropneumatic & Smart positioners
- ◆ I/P Converter
- ◆ 4÷20 mA position feedback
- ◆ Alarm contacts
- ◆ Air filter regulator
- ◆ Solenoid valves
- ◆ Lock-Up pneumatic device

MAXIMUM ADMISSIBLE PRESSURE DROPS IN bar

| AP46 | AP444 | AP35 | AP28 | ACTUATOR | |
|---------|---------|---------|---------|-----------------|------|
| 15÷60 | 15÷60 | 15÷60 | 15÷60 | SIGNAL (psi) | |
| 7.6 | 7.6 | 3.5 | 2.4 | THRUST kN | |
| | 260 bar | 245 bar | 170 bar | CV0.03÷0.08 | |
| | | 235 bar | 160 bar | CV 0.20 | |
| | | 220 bar | 150 bar | CV 0.60 | |
| | | 210 bar | 140 bar | CV 0.75 | |
| | | 195 bar | 130 bar | CV 1,00 | |
| | | 180 bar | 120 bar | CV 1,30 | |
| | | 165 bar | 110 bar | CV 1,80 | |
| | | 155 bar | 100 bar | CV 2,00÷3.50 | |
| | | 260 bar | 260 bar | 180 bar | CV 6 |
| | | | | | CV 8 |
| CV 13 | | | | | |
| 260 bar | CV 19 | | | | |
| | CV 29 | | | | |
| | | | CV 50 | | |
| | | | CV75 | | |
| | | | CV112 | | |
| | | | | CV190 | |

DIMENSIONS

| SIZE | A inches (mm) | | | | B inches (mm) | | C inches (mm) | | G inches (mm) |
|------|------------------------|-----------------------|------------------------|------------------------|---------------|-------------|---------------|-----------------|---------------|
| | ANSI 900 Short pattern | ANSI 900 Long pattern | ANS 1500 Short pattern | ANSI 1500 Long pattern | ANSI 900 | ANSI 1500 | Bonnet std. | Finned Extended | |
| 1/2" | 10.75 (273) | 11.50 (292) | 10.75 (273) | 11.50 (292) | 2.35 (60.3) | 2.35 (60.3) | 6.70 (170) | 9.00 (228) | 4.00 (100) |
| 3/4" | 10.75 (273) | 11.50 (292) | 10.75 (273) | 11.50 (292) | 2.55 (65) | 2.55 (65) | 6.70 (170) | 9.00 (228) | 4.00 (100) |
| 1" | — | 11.50 (292) | — | 11.50 (292) | 2.90 (75) | 2.90 (75) | 7.20 (182) | 9.50 (240) | 4.00 (100) |
| 1" ½ | — | 13.12 (333) | — | 13.10 (333) | 3.50 (89) | 3.50 (89) | 8.20 (207) | 11.7 (279) | 4.00 (100) |
| 2" | — | 14.75 (375) | — | 14.75 (375) | 4.3 (108) | 4.3 (108) | 7.90 (201) | 11.5 (291) | 4.00 (100) |
| 3" | — | 17.38 (441) | — | 18.12 (460) | 4.21 (107) | 5.23 (133) | 13.18 (335) | 17.12 (435) | 4,80 (120) |
| 4" | — | 20.12 (511) | — | 20.87 (530) | 5.74 (146) | 6.10 (155) | 14.44 (367) | 18.38 (467) | 4,80 (120) |



ACTUATOR

| TYPE | Ø D inches (mm) | E in- ches (mm) | F inches (mm) | | THRUS T AREA inches ² (cm ²) | THRUST VOLUME liter |
|------|-----------------------|--------------------------|----------------|----------------|--|---------------------------|
| | | | N.O. (DIR.) | N.C. (REV.) | | |
| AP28 | 10.82 (275) | 9.96 (253) | 5.3 (135) | 3,4 (85) | 47.12 (304) | ~ 3 |
| AP35 | 13.46 (342) | 10.86 (276) | 7,3 (185) | 3,4 (85) | 73.62 (475) | ~ 5.7 |
| AP44 | 16.93 (430) | 16.73 (425) | 11.8 (300) | 5,9 (150) | 115.32 (744) | ~ 11.5 |
| AP46 | 16.93 (430) | 16.73 (425) | 11.8 (300) | 5,9 (150) | 115.32 (744) | ~ 13.5 |

ELECTRIC ACTUATOR

The OMC control valves can be supplied with electric actuators of the best manufacturers to meet the most varied demands in the industrial processes.



AVAILABLE ENDS CONNECTIONS



RAISED FACE



RING JOINT FACE



MALE FACE



FEMALE FACE



FLAT FACE



BUTT-WELDING



SOCKET-WELDING



GROOVE FACE

VALVE BODY WEIGHT (Kg)

| SIZE | Standard | Finned / Extended |
|------|----------|-------------------|
| 1" | 30 | 34 |
| 1" ½ | 54 | 60 |
| 2" | 76 | 83 |
| 3" | | |
| 4" | | |

PNEUMATIC ACTUATOR WEIGHT (Kg)

| TYPE | SIGNAL | ACTUATOR | HAND WHEEL |
|------|--------|----------|------------|
| AP23 | 15÷60 | 8 | 1 |
| AP28 | 15÷60 | 10 | |
| AP46 | 15÷60 | 45 | // |

The contents of this publication are presented for information purpose only. We reserve to modify or improve the designs or specifications of such products at any time without notice



OMC S.p.A.

Via Galileo Galilei, 18 - 20060
Cassina de Pecchi (MI) - ITALY
Tel.: (+39) 02.95.28.468
Fax: (+39) 02.95.21.495
info@omcvalves.com
www.omcvalves.com