

Mark 60 Series

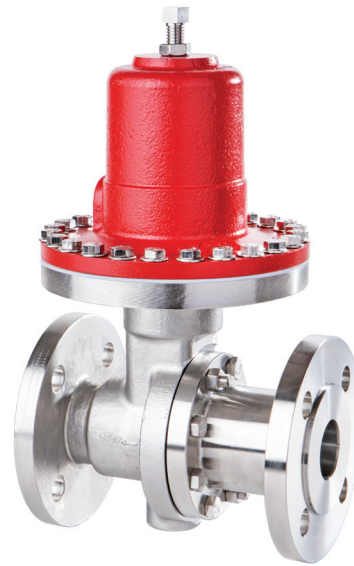
Self Operated Pressure Regulators

The Mark 60 Sliding Gate Pressure Regulator is used to regulate the downstream pressure to a predetermined setpoint. The spring in the Mark 60 holds the sliding gate seats in their normally open position to allow the process media to pass through the seats.

The downstream pressure is sensed beneath the diaphragm. **(A sensing line is required on sizes: 2-1/2", 3", and 4")**. As the downstream pressure exceeds the setpoint, pressure is exerted on the diaphragm which raises the stem to modulate the disc (the moveable component on the sliding gate seat set) toward the closed position. As the seats close, downstream pressure will be reduced to the required setpoint. A decrease in pressure relaxes the spring and diaphragm to move the seats toward the open position.

This brochure includes the following Series:

- **MK60:** a line of self-operating pressure regulators designed with Jordan Valve's sliding gate seats
- **MK61:** The MK61 features a larger diaphragm than a standard MK60 to provide even greater sensitivity and minimum offset from a required setpoint
- **MK60QC:** The MK60QC features a "Quick Change" dome for simple range spring replacements. Ideal for facilities with multiple pressure reducing applications - stock one valve with several spare springs to cover a wide range of needs
- **MK60H:** The MK60H features a handwheel that replaces the adjusting screw for easy changes to the setpoint
- **MK60HP:** Working pressure fully rated to ANSI Class 600 pressures, the HP options permits setpoints as high as 450 psi
- **MK60GP:** The MK60GP option requires grain processing modification for starch cookers and other viscous services
- **MK601/602:** The MK601 and MK602 meet higher capacity requirements than standard regulators



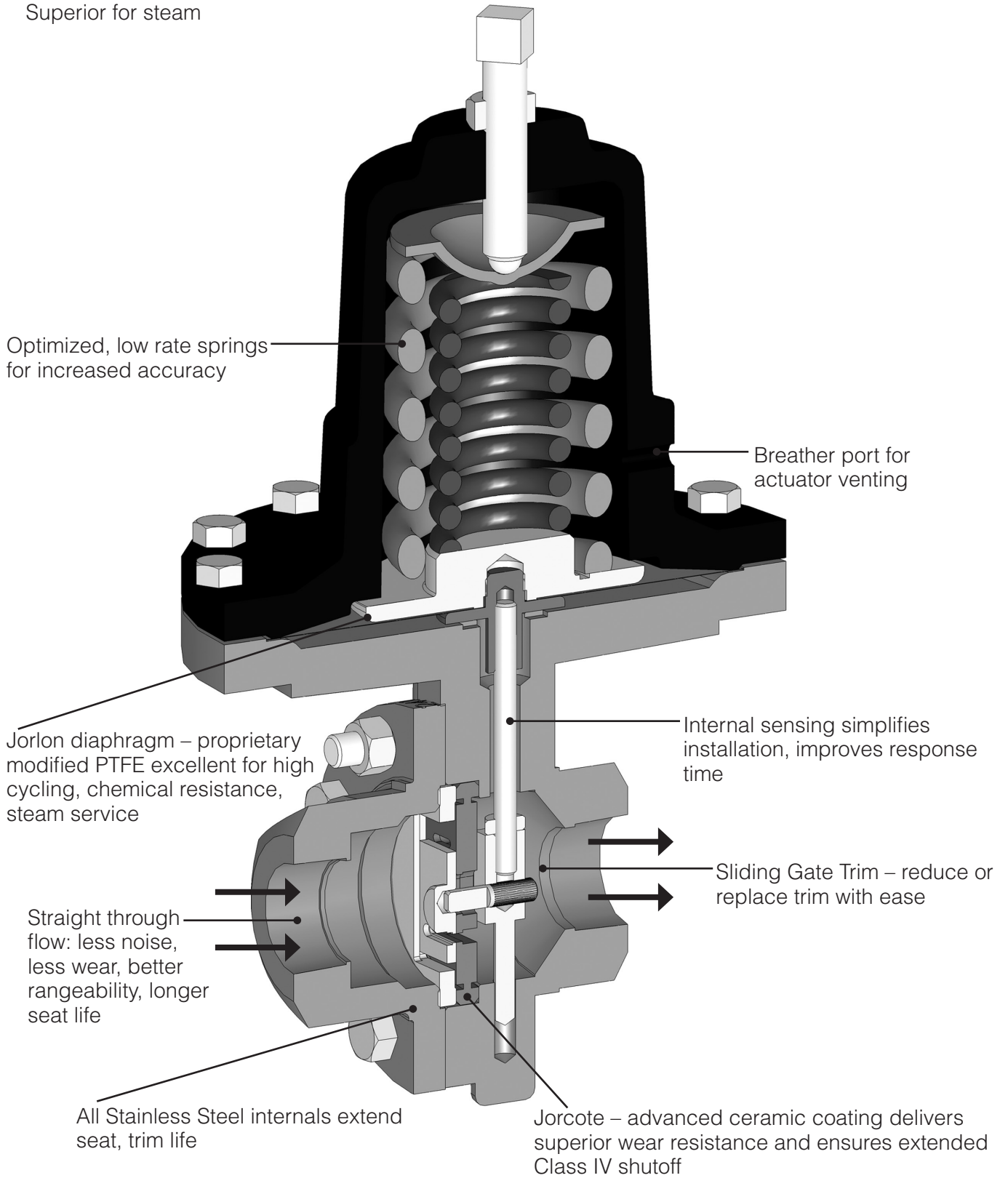
Mark 60 Features

- **Sliding Gate Trim** – unique seat design for unsurpassed trim life and accuracy
- **Jorcote Seat Coating** – ceramic composite for liquids, gases and especially steam. Very low friction with outstanding wear resistance and a temperature rating of up to 550°F. Steam tested to 1,000,000 cycles and still maintained Class IV leakage.
- **Jorlon Diaphragm** – extremely durable, virtually universally applicable up to 450°F. Tested without failure to over 1,000,000 full stroke cycles. Ideal for steam, gases and liquids. 316SST diaphragm applicable up to 550°F.
- **Straight-through Flow** – The flow is straight through the valve seats and body. Direction of the disc travel is perpendicular to the flow, not opposed to the direction of the flow. Thus, the flow does not unbalance the seats. The MK60 can use a wider range of its stroke to give accurate control; less offset
- **Quiet Operation** – typically 5-10 dB less than conventional globe style regulators. The disc and plate are always in contact, which eliminates chattering. Straight-through flow minimizes turbulence. Multiple orifices in the plate and disc divide the flow stream into smaller flow components
- **Minimum Maintenance** – The MK60 sliding gate seats require no special tools for disassembly. The seats are pre-lapped at the factory and are self-lapping while in operation ensuring a continual tight shutoff



FEATURES & BENEFITS

Ideal for gas and liquids
Superior for steam



SPECIFICATIONS – MK60/60QC/61/60HP

Sizes: (note: 1/4" & 3/8" sizes use 1/2" body with reducers)

- Mark 60: 1/4" – 4" (DN8 – DN100)
- Mark 60QC: 1/4" – 2" (DN8 – DN50)
- Mark 61: 1/4" – 3/4" (DN8 – DN20)
- Mark 60HP: 1/4" – 4" (DN8 – DN100)

End Connections:

- Threaded – FNPT, BSPT, BSPP (1/2" – 2" only)
- ANSI Flanges (150#, 300#)
- DIN Flanges (PN 10/16, PN 25/40)

Spring Housing:

- DI – 1/4" – 2" (DN8 – DN50)
- DI/Steel – 2-1/2" – 4" (DN65 – DN100)

Body Materials:

- Ductile Iron
- Bronze (1/2" – 2"; DN15 – DN50)
- Carbon Steel (A216 WCB)
- Stainless Steel (A351/CF8M)

Trim Materials:

- 303SST – Standard on Ductile Iron, Bronze, Carbon Steel valves
- 316SST – Standard on Stainless Steel valves
- Monel, Hastelloy and other Alloys available

Reduced Pressure Control Ranges: Select a range to match your setpoint. For optimal performance, your setpoint should fall in the upper portion of the selected range.

Seat Materials:

- Jorcote on SST – Standard
- Other materials available – Consult factory

Diaphragm Materials:

- Jorlon - Standard
- Stainless Steel - Standard
- Buna-N - Standard
- Viton – Optional

Service: Steam, water, oil, gas, air and chemicals

Shutoff: ANSI Class IV

Options:

- **Double Bolting:** increases the pressure rating of the valve and ensures a tight seal between the spring housing and the body for services with high inlet pressures
- **High Pressure Spring Housing:** The HP option is an elongated spring housing that features a large spring for high pressure setpoints (up to 450 psi/31bar)
- **Handwheel:** the H option is a handwheel that is mounted on the adjusting screw to allow for easy setpoint changes
- **Exotic Alloys:** where service conditions dictate the use of specialty materials, the Mark 60 Series can be produced with bodies, trim and seats in Monel, Alloy 20, Hastelloy B, Hastelloy C, Titanium and others
- **GP Option:** grain processing modification for starch cookers and other viscous services. Available on Stainless Steel valves in 1/4" – 2" sizes only (DN8 – DN50)
- **Cryogenic Service:** CR option is a special spring housing for use if valve is in cryogenic service

CV Values & Maximum Differential Pressures

| Cv (Kv) | Size (DN) | Seat Material | Max. ΔP PSI (bar) |
|-------------|---------------------------|---------------|-------------------|
| 0.84 (0,74) | 1/4" (DN8) | Jorcote | 400 (27,6) |
| 1.6 (1,4) | 3/8" (DN12) | Jorcote | 400 (27,6) |
| 2.5 (2,2) | 1/2" & 3/4" (DN15 & DN20) | Jorcote | 400 (27,6) |
| 4.4 (3,8) | | | |
| 6.4 (5,5) | 1" & 1-1/4" (DN25 & DN32) | Jorcote | 400 (27,6) |
| 9.5 (8,2) | | | |
| 15 (12,9) | 1-1/2" (DN40) | Jorcote | 325 (22,4) |
| 25 (21,5) | 2" (DN50) | Jorcote | 325 (22,4) |
| 30 (25,8) | | | |
| 55 (47,3) | 2-1/2" (DN65) | Jorcote | 150 (10,34) |
| 115 (99) | 3" (DN75) | Jorcote | 150 (10,34) |
| 200 (172) | 4" (DN100) | Jorcote | 150 (10,34) |

Low Flow Cv's: reduced Cv's (Kv's) are available. Cv (Kv) ratings of smaller sized valves can be supplied in a larger valve size

| | | | | |
|---------------|---------------|---------------|-----------------|-------------|
| 0.42 (0,36) | 0.21 (0,18) | 0.08 (0,07) | 0.04 (0,03) | 0.02 (0,02) |
| 0.008 (0,007) | 0.004 (0,003) | 0.002 (0,002) | 0.0008 (0,0007) | |

| Model | Size (DN) | Spring Ranges | |
|-----------|----------------------------|---------------|--------------|
| | | PSI | Bar |
| 60 & 60QC | 1/4" – 3/4" (DN8 – DN20) | 2 – 20 | 0,14 1,38 |
| | | 2 – 23 | 0,14 – 1,59 |
| | | 10 – 38 | 0,69 – 2,62 |
| | | 20 – 55 | 1,38 – 3,79 |
| | | 30 – 85 | 2,07 – 5,86 |
| | | 35 – 160 | 2,41 – 11,03 |
| | 1" – 2" (DN25 – DN50) | 95 – 220 | 6,55 – 15,17 |
| | | 1 – 5 | 0,07 – 0,34 |
| | | 3 – 8 | 0,21 – 0,55 |
| | | 5 – 20 | 0,34 – 1,38 |
| | | 10 – 30 | 0,69 – 2,07 |
| | | 20 – 45 | 1,38 – 3,10 |
| | 2-1/2" – 4" (DN65 – DN100) | 30 – 95 | 2,07 – 6,55 |
| | | 60 – 160 | 4,14 – 11,03 |
| | | 7 – 18 | 0,48 – 1,24 |
| | | 10 – 25 | 0,69 – 1,72 |
| | | 15 – 35 | 1,03 – 2,41 |
| | | 75 – 190 | 5,2 – 13,1 |
| 60HP | 1/2" – 2" (DN15 – DN40) | 100 – 320 | 6,9 – 22,1 |
| | | 150 – 450 | 10,3 – 31,0 |
| | 2-1/2" – 4" (DN65 – DN100) | 30 – 75 | 2,07 – 5,17 |
| | | 65 – 110 | 4,5 – 7,6 |
| 61 | 1/4" – 3/4" (DN8 – DN20) | 1 – 5 | 0,07 – 0,34 |
| | | 2 – 12 | 0,14 – 0,83 |
| | | 2 – 25 | 0,14 – 1,72 |
| | | 10 – 35 | 0,7 – 2,41 |
| | | 20 – 55 | 1,38 – 3,8 |
| | | 20 – 80 | 1,38 – 5,51 |
| | | 40 – 115 | 2,76 – 7,93 |
| | | 25 – 160 | 1,72 – 11,03 |
| | | 30 – 180 | 2,06 – 12,41 |

MAXIMUM WORKING PRESSURE, PSI

- Mark 60 Size Range: 1/4" – 2"

| Temp °F | DI Body | | | BRZ Body | | |
|------------|---------|------|-----------|----------|------|-----------|
| | 150# | 300# | TE | 150# | 300# | TE |
| -20 to 100 | 250 | 600 | 300 [600] | 225 | 500 | 300 [500] |
| 200 | 235 | 600 | 300 [600] | 215 | 475 | 300 [475] |
| 300 | 215 | 565 | 300 [600] | 195 | 425 | 300 [425] |
| 400 | 200 | 525 | 300 [600] | 170 | 375 | 300 [375] |
| 500 | 170 | 495 | 300 [600] | 150 | 325 | 300 [325] |

- Mark 60 Size Range: 1/4" – 2"

| Temp °F | CS Body | | | SS Body | | |
|------------|---------|------|-----------|---------|------|-----------|
| | 150# | 300# | TE | 150# | 300# | TE |
| -20 to 100 | 285 | 740 | 300 [950] | 275 | 720 | 300 [950] |
| 200 | 260 | 675 | 300 [950] | 240 | 620 | 300 [950] |
| 300 | 230 | 655 | 300 [950] | 215 | 560 | 300 [950] |
| 400 | 200 | 635 | 300 [950] | 195 | 515 | 300 [950] |
| 500 | 170 | 600 | 300 [950] | 170 | 480 | 300 [950] |

- Mark 60 Size Range: 2-1/2" – 4"

| Temp °F | DI Body | | CS Body | | SS Body | |
|------------|---------|------|---------|------|---------|------|
| | 150# | 300# | 150# | 300# | 150# | 300# |
| -20 to 100 | 250 | 500 | 285 | 500 | 275 | 500 |
| 200 | 235 | 500 | 260 | 500 | 240 | 500 |
| 300 | 215 | 500 | 230 | 500 | 215 | 500 |
| 400 | 200 | 500 | 200 | 500 | 195 | 500 |
| 500 | 170 | 495 | 170 | 500 | 170 | 500 |

MAXIMUM WORKING PRESSURE, BAR

- Mark 60 Size Range: DN8 – DN50

| Temp °C | DI Body | | | BRZ Body | | |
|-----------|---------|------|---------|----------|------|---------|
| | 150# | 300# | TE | 150# | 300# | TE |
| -29 to 38 | 17 | 41 | 21 [41] | 16 | 34 | 21 [34] |
| 93 | 16 | 41 | 21 [41] | 15 | 33 | 21 [33] |
| 149 | 15 | 39 | 21 [41] | 13 | 29 | 21 [29] |
| 204 | 14 | 36 | 21 [41] | 12 | 26 | 21 [26] |
| 260 | 12 | 34 | 21 [41] | 10 | 22 | 21 [22] |

- Mark 60 Size Range: DN8 – DN50

| Temp °C | CS Body | | | SS Body | | |
|-----------|---------|------|---------|---------|------|---------|
| | 150# | 300# | TE | 150# | 300# | TE |
| -29 to 38 | 20 | 51 | 21 [66] | 19 | 49 | 21 [66] |
| 93 | 18 | 47 | 21 [66] | 17 | 43 | 21 [66] |
| 149 | 16 | 45 | 21 [66] | 15 | 39 | 21 [66] |
| 204 | 14 | 44 | 21 [66] | 13 | 36 | 21 [66] |
| 260 | 12 | 41 | 21 [66] | 12 | 33 | 21 [66] |

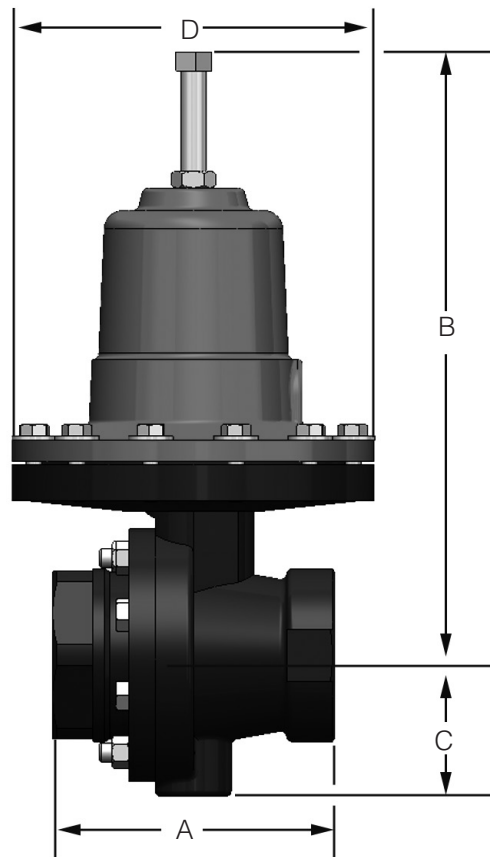
- Mark 60 Size Range: DN65 – DN100

| Temp °C | DI Body | | CS Body | | SS Body | |
|-----------|---------|------|---------|------|---------|------|
| | 150# | 300# | 150# | 300# | 150# | 300# |
| -29 to 38 | 17 | 34 | 20 | 34 | 19 | 34 |
| 93 | 16 | 34 | 18 | 34 | 17 | 34 |
| 149 | 15 | 34 | 16 | 34 | 15 | 34 |
| 204 | 14 | 34 | 14 | 34 | 13 | 34 |
| 260 | 12 | 34 | 12 | 34 | 12 | 34 |

Notes:

1. For threaded end (TE), double bolting option is required to reach pressures indicated in Brackets [].
2. If weld flanges are supplied, use ratings in "TE" column or flange rating, whichever is less (i.e. ANSI 600/900 flanges or PN64/100 flanges).
3. Consult factory for availability of ANSI/DIN/JIS flanges not indicated above.
4. Refer to Mark 60HP bulletin for Mark 60HP maximum working pressures.

DIMENSIONS – MARK 60/MARK 60QC



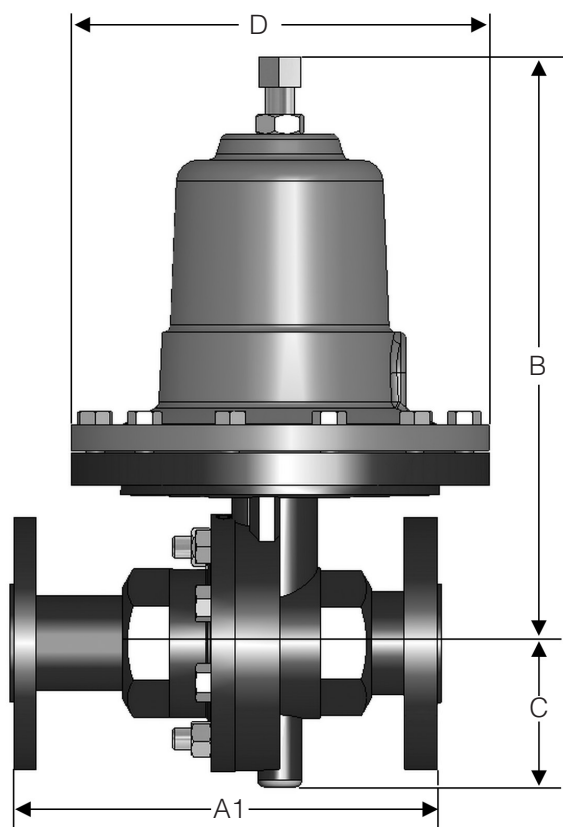
• Threaded & FSW Ends, Inches

| Size | Material | A | B | C | D | Weight (lbs) |
|-------------|----------|------|-------|------|------|--------------|
| 1/4" - 3/8" | DI/BRZ | 4.12 | 8.50 | 1.69 | 5.12 | 10 |
| | CS/SS | 4.12 | 8.50 | 1.69 | 5.12 | 12 |
| 1/2" | DI/BRZ | 3.62 | 8.50 | 1.69 | 5.12 | 10 |
| | CS/SS | 3.62 | 8.50 | 1.69 | 5.12 | 12 |
| 3/4" | DI/BRZ | 3.62 | 8.50 | 1.69 | 5.12 | 10 |
| | CS/SS | 3.62 | 8.50 | 1.69 | 5.12 | 12 |
| 1" | DI/BRZ | 4.12 | 10.00 | 2.62 | 7.09 | 21 |
| | CS/SS | 4.18 | 10.75 | 2.62 | 7.09 | 25 |
| 1-1/4" | DI/BRZ | 4.12 | 10.00 | 2.62 | 7.09 | 21 |
| 1-1/2" | DI/BRZ | 4.50 | 10.25 | 2.31 | 7.09 | 23 |
| | CS/SS | 4.81 | 11.00 | 2.25 | 7.09 | 31 |
| 2" | DI/BRZ | 4.50 | 10.25 | 2.75 | 7.09 | 26 |
| | CS/SS | 5.50 | 11.00 | 2.75 | 7.09 | 35 |

• Threaded & FSW Ends, Metric

| Size | Material | A | B | C | D | Weight (kgs) |
|------------|----------|-----|-----|----|-----|--------------|
| DN8 - DN12 | DI/BRZ | 105 | 216 | 43 | 130 | 4,5 |
| | CS/SS | 105 | 216 | 43 | 130 | 5,4 |
| DN15 | DI/BRZ | 92 | 216 | 43 | 130 | 4,4 |
| | CS/SS | 92 | 216 | 43 | 130 | 5,4 |
| DN20 | DI/BRZ | 92 | 216 | 43 | 130 | 4,5 |
| | CS/SS | 92 | 216 | 43 | 130 | 5,4 |
| DN25 | DI/BRZ | 105 | 254 | 67 | 180 | 9,5 |
| | CS/SS | 106 | 273 | 67 | 180 | 11,3 |
| DN32 | DI/BRZ | 105 | 254 | 67 | 180 | 9,5 |
| DN40 | DI/BRZ | 114 | 260 | 59 | 180 | 10,4 |
| | CS/SS | 122 | 279 | 57 | 180 | 14,0 |
| DN50 | DI/BRZ | 114 | 260 | 70 | 180 | 11,8 |
| | CS/SS | 140 | 279 | 70 | 180 | 15,9 |

DIMENSIONS – MARK 60



- Flanged Ends, ANSI, Inches

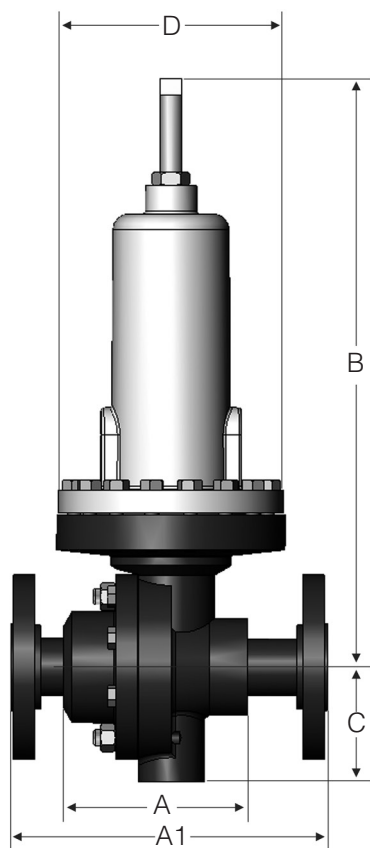
| Size | ANSI Flange | A1 | | B | | C | | D | | Weight (lbs) | |
|-------------------|-------------|--------------------|-------------------|--------|-------|------|------|--------|-------|--------------|--|
| | | DI/BRZ | CS/SS | DI/BRZ | CS/SS | ALL | ALL | DI/BRZ | CS/SS | | |
| 1/2" | 150# | 7.25 | 7.25 | 9.00 | 9.00 | 1.69 | 5.12 | 13 | 15 | | |
| | 300# | 7.50 | 7.50 | 9.00 | 9.00 | 1.69 | 5.12 | 14 | 16 | | |
| 3/4" | 150# | 7.25 | 7.25 | 9.00 | 9.00 | 1.69 | 5.12 | 14 | 16 | | |
| | 300# | 7.62 | 7.62 | 9.00 | 9.00 | 1.69 | 5.12 | 16 | 17 | | |
| 1" | 150# | 7.25 | 7.25 | 11.25 | 11.75 | 2.62 | 7.09 | 26 | 34 | | |
| | 300# | 8.75 ¹ | 7.75 ² | 11.25 | 11.75 | 2.62 | 7.09 | 28 | 37 | | |
| 1-1/4" | 150# | 7.87 | — | 11.25 | — | 2.62 | 7.09 | 28 | — | | |
| | 300# | 8.37 | — | 11.25 | — | 2.62 | 7.09 | 31 | — | | |
| 1-1/2" | 150# | 8.75 | 8.75 | 11.25 | 13.00 | 2.31 | 7.09 | 42 | 46 | | |
| | 300# | 10.25 ¹ | 9.25 ² | 11.25 | 13.00 | 2.31 | 7.09 | 45 | 52 | | |
| 2" | 150# | 10.00 | 10.00 | 11.50 | 13.25 | 2.75 | 7.09 | 46 | 50 | | |
| | 300# | 10.50 | 10.50 | 11.50 | 13.25 | 2.75 | 7.09 | 49 | 55 | | |
| Flanged End CS/SS | | | | | | | | | | | |
| Larger Sizes | | A1 | | B | | C | | D | | Weight (lbs) | |
| 2-1/2" | 125-150# | 10.88 | | 18.75 | | 6.95 | | 12.75 | | 165 | |
| | 250-300# | 11.50 | | 18.75 | | 6.95 | | 12.75 | | 165 | |
| 3" | 125-150# | 11.75 | | 18.75 | | 6.95 | | 12.75 | | 185 | |
| | 250-300# | 12.50 | | 18.75 | | 6.95 | | 12.75 | | 185 | |
| 4" | 125-150# | 13.88 | | 18.75 | | 8.00 | | 12.75 | | 215 | |
| | 250-300# | 14.50 | | 18.75 | | 8.00 | | 12.75 | | 215 | |

- Flanged Ends, Metric

① Not IFE and NOT per DIN3202

| Size DN | ANSI Flange | A1 | | B | | C | | D | | Weight (kgs) | |
|-------------------|-------------|----------|-------|--------|-------|-----|-----|--------|-------|--------------|--|
| | | DI/BRZ ① | CS/SS | DI/BRZ | CS/SS | ALL | ALL | DI/BRZ | CS/SS | | |
| 15 | 10/16 | 184 | 130 | 229 | 229 | 43 | 130 | 5,9 | 6,8 | | |
| | 25/40 | 184 | 130 | 229 | 229 | 43 | 130 | 6,4 | 7,3 | | |
| 20 | 10/16 | 184 | 150 | 229 | 229 | 43 | 130 | 6,4 | 7,3 | | |
| | 25/40 | 184 | 150 | 229 | 229 | 43 | 130 | 7,3 | 7,7 | | |
| 25 | 10/16 | 222 | 160 | 286 | 298 | 67 | 180 | 11,8 | 15,4 | | |
| | 25/40 | 222 | 160 | 286 | 298 | 67 | 180 | 12,7 | 16,8 | | |
| 32 | 10/16 | 222 | — | 286 | — | 67 | 180 | 12,7 | — | | |
| | 25/40 | 222 | — | 286 | — | 67 | 180 | 14,1 | — | | |
| 40 | 10/16 | 222 | 200 | 286 | 330 | 59 | 180 | 19,1 | 20,9 | | |
| | 25/40 | 222 | 200 | 286 | 330 | 59 | 180 | 20,4 | 23,6 | | |
| 50 | 10/16 | 254 | 230 | 292 | 337 | 70 | 180 | 20,9 | 22,7 | | |
| | 25/40 | 254 | 230 | 292 | 337 | 70 | 180 | 22,2 | 24,9 | | |
| Flanged End CS/SS | | | | | | | | | | | |
| Larger Sizes | | A1 | | B | | C | | D | | Weight (kgs) | |
| 65 | 10/16 | 287 | | 476 | | 177 | | 324 | | 75 | |
| | 25/40 | 293 | | 476 | | 177 | | 324 | | 75 | |
| 80 | 10/16 | 313 | | 476 | | 177 | | 324 | | 84 | |
| | 25/40 | 313 | | 476 | | 177 | | 324 | | 84 | |
| 100 | 10/16 | 353 | | 507 | | 203 | | 324 | | 98 | |
| | 25/40 | 353 | | 507 | | 203 | | 324 | | 98 | |

DIMENSIONS – MARK 60HP



• Flanged Ends, Inches

| Size | ANSI Flange | A1 | | B | C | D | Weight (lbs) |
|--------|-------------|--------|-------|-------|------|------|--------------|
| | | DI/BRZ | CS/SS | ALL | ALL | ALL | |
| 1/2" | 150# | 7.25 | 7.25 | 12.75 | 1.69 | 5.20 | 21 • |
| | 300# | 7.50 | 7.50 | 12.75 | 1.69 | 5.20 | |
| | •600# | 8.00 | 8.00 | 12.25 | 1.69 | 5.20 | |
| 3/4" | 150# | 7.25 | 7.25 | 12.75 | 1.69 | 5.20 | 22 • |
| | 300# | 7.62 | 7.62 | 12.75 | 1.69 | 5.20 | |
| | •600# | 8.12 | 8.12 | 12.25 | 1.69 | 5.20 | |
| 1" | 150# | 7.25 | 7.25 | 13.25 | 2.62 | 5.20 | 37 |
| | 300# | 7.75 | 7.75 | 13.25 | 2.62 | 5.20 | |
| | •600# | 8.25 | 8.25 | 12.75 | 2.62 | 5.20 | |
| 1-1/4" | 150# | 7.87 | — | 12.75 | 2.62 | 5.20 | 37 |
| | 300# | 8.37 | — | 12.75 | 2.62 | 5.20 | |
| 1-1/2" | 150# | 8.75 | 8.75 | 13.75 | 2.31 | 5.20 | 45 |
| | 300# | 9.25 | 9.25 | 13.75 | 2.31 | 5.20 | |
| | •600# | 9.87 | 9.87 | 13.25 | 2.31 | 5.20 | |
| 2" | 150# | 10.00 | 10.00 | 14.00 | 2.75 | 5.20 | 49 |
| | 300# | 10.50 | 10.50 | 14.00 | 2.75 | 5.20 | |
| | •600# | 11.25 | 11.25 | 13.50 | 2.75 | 5.20 | |

•600# are not IFE
•For IFE, add 1" to all "B" dimensions (1" – 2" sizes only)

• Threaded & FSW Ends, Inches

| Size | Material | A | B | C | D | Weight (lbs) |
|-------------|----------|------|-------|------|------|--------------|
| 1/2" - 3/4" | DI/BRZ | 3.62 | 12.75 | 1.75 | 5.12 | 15 |
| | CS/SS | 3.62 | 12.75 | 1.75 | 5.12 | 17 |
| 1" | DI/BRZ | 4.12 | 13.00 | 2.12 | 5.20 | 21 |
| | CS/SS | 4.18 | 13.25 | 2.12 | 5.20 | 25 |
| 1-1/4" | DI/BRZ | 4.12 | 13.00 | 2.12 | 5.20 | 21 |
| 1-1/2" | DI/BRZ | 4.50 | 13.25 | 2.31 | 5.20 | 23 |
| | CS/SS | 4.81 | 13.75 | 2.50 | 5.20 | 31 |
| 2" | DI/BRZ | 4.50 | 13.25 | 2.50 | 5.20 | 26 |
| | CS/SS | 5.50 | 14.00 | 2.50 | 5.20 | 35 |

• Threaded & FSW Ends, Metric

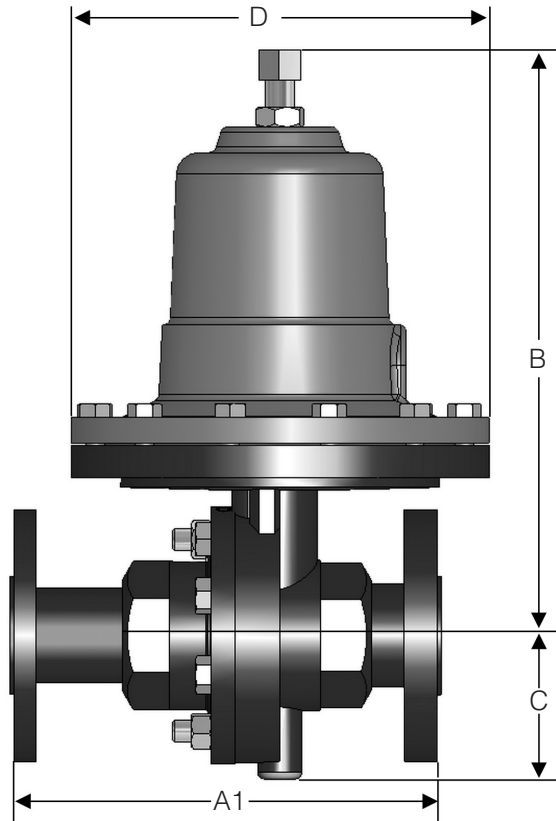
| Size | Material | A | B | C | D | Weight (lbs) |
|-----------|----------|-----|-----|----|-----|--------------|
| DN15 & 20 | DI/BRZ | 92 | 324 | 45 | 130 | 6,8 |
| | CS/SS | 92 | 324 | 45 | 130 | 7,7 |
| DN25 | DI/BRZ | 105 | 330 | 54 | 132 | 9,5 |
| | CS/SS | 106 | 337 | 54 | 132 | 11,3 |
| DN32 | DI/BRZ | 105 | 330 | 54 | 132 | 9,5 |
| DN40 | DI/BRZ | 114 | 337 | 59 | 132 | 10,4 |
| | CS/SS | 122 | 349 | 64 | 132 | 14,1 |
| DN50 | DI/BRZ | 114 | 337 | 64 | 132 | 11,8 |
| | CS/SS | 140 | 356 | 64 | 132 | 15,9 |

• Flanged Ends, Metric³

| Size | ANSI Flange | A1 | | B ² | C | D | Weight (kgs) |
|------|-------------|---------------------|-------|----------------|-----|-----|--------------|
| | | DI/BRZ ¹ | CS/SS | ALL | ALL | ALL | |
| 15 | 10/16 | 184 | 130 | 324 | 43 | 132 | 9,5 |
| | 25/40 | 184 | 130 | 324 | 43 | 132 | |
| 20 | 10/16 | 184 | 150 | 324 | 43 | 132 | 10 |
| | 25/40 | 184 | 150 | 324 | 43 | 132 | |
| 25 | 10/16 | 184 | 160 | 337 | 67 | 132 | 17 |
| | 25/40 | 184 | 160 | 337 | 67 | 132 | |
| 32 | 10/16 | 200 | — | 324 | 67 | 132 | 17 |
| | 25/40 | 200 | — | 324 | 67 | 132 | |
| 40 | 10/16 | 222 | 200 | 349 | 59 | 132 | 20 |
| | 25/40 | 222 | 200 | 349 | 59 | 132 | |
| 50 | 10/16 | 254 | 230 | 356 | 70 | 132 | 22 |
| | 25/40 | 254 | 230 | 356 | 70 | 132 | |

¹ Not IFE and not per DIN3202
² For IFE, add 25,4 mm
³ For all DIN flanges, please consult factory
⁴ Consult factory for dimensions on 2-1/2" - 4" (DN65 - DN100) Mark 60HP

DIMENSIONS – MARK 61



• Threaded & FSW Ends, Inches

| Size | Material | A | B | C | D | Weight (lbs) |
|-------------|----------|------|-------|------|------|--------------|
| 1/4" - 3/8" | DI/BRZ | 4.12 | 10.25 | 2.25 | 7.12 | 12 |
| | CS/SS | 4.12 | 10.25 | 2.25 | 7.12 | 13 |
| 1/2" - 3/4" | DI/BRZ | 3.62 | 10.25 | 2.25 | 7.12 | 12 |
| | CS/SS | 3.62 | 10.25 | 2.25 | 7.12 | 13 |

• Flanged Ends, ANSI, Inches

| Size | ANSI Flange | A1 | | B | | C | D | Weight (lbs) | |
|-------------|-------------|--------|-------|--------|-------|------|------|--------------|-------|
| | | DI/BRZ | CS/SS | DI/BRZ | CS/SS | ALL | ALL | DI/BRZ | CS/SS |
| 1/2" & 3/4" | 150# | 9.62 | 9.62 | 10.25 | 10.25 | 2.25 | 7.12 | 26 | 26 |
| | 300# | 10.25 | 10.25 | 10.25 | 10.25 | 2.25 | 7.12 | 29 | 29 |

• Threaded & FSW Ends, Metric

| Size | Material | A | B | C | D | Weight (kgs) |
|-----------|----------|-----|-----|----|-----|--------------|
| DN8 - 10 | DI/BRZ | 105 | 260 | 57 | 181 | 5,4 |
| | CS/SS | 105 | 260 | 57 | 181 | 5,9 |
| DN15 - 20 | DI/BRZ | 92 | 260 | 57 | 181 | 5,4 |
| | CS/SS | 92 | 260 | 57 | 181 | 5,9 |

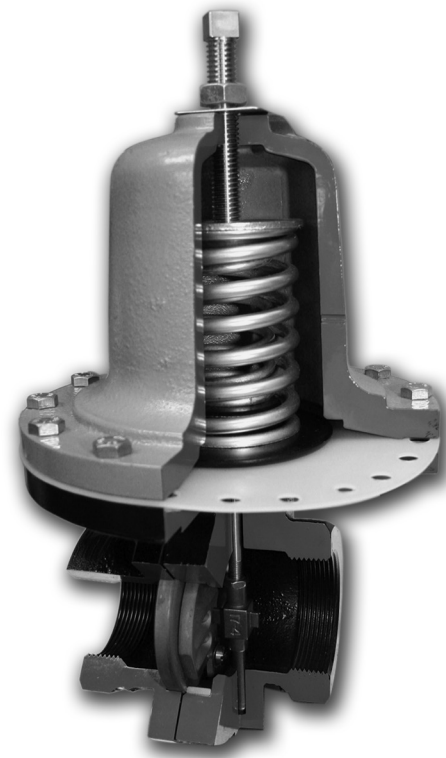
• Flanged Ends, ANSI, Metric

| Size | ANSI Flange | A1 ¹ | | B | | C | D | Weight (kgs) | |
|-----------|-------------|-----------------|-------|--------|-------|-----|-----|--------------|-------|
| | | DI/BRZ | CS/SS | DI/BRZ | CS/SS | ALL | ALL | DI/BRZ | CS/SS |
| DN15 & 20 | 10/16 | 244 | 244 | 260 | 260 | 57 | 181 | 12 | 12 |
| | 25/40 | 260 | 260 | 260 | 260 | 57 | 181 | 13 | 13 |

¹ Not per DIN 3202

JORLON DIAPHRAGM - REVOLUTIONARY DIAPHRAGM SETS NEW STANDARD

- Easily retrofitted – Jorlon can be easily retrofitted in the field with no additional parts. For regulators purchased after the fall of 1991, only the diaphragm needs to be changed to retrofit either SST or elastomer diaphragms.
- Chemical compatibility – Jorlon is PTFE based, so it is compatible with most media except fluorinated gases and halogenated fluorocarbons. Whether the application is steam, process gases or fluids, Jorlon should be your choice.
- High pressure limits – Jorlon has been pressure tested in the Mark 60/60HP to pressures well in excess of the maximum allowable pressures of the valve. The outstanding performance of the Mark 60 is a combination of Jorlon diaphragm and sliding gate seat technology.
- Improved droop performance – A metal diaphragm is much more rigid than an elastomer diaphragm. As such, metal diaphragms have decreased sensitivity thereby diminishing performance and accuracy in a self-operated regulator. Jorlon will improve droop performance when used instead of a SST diaphragm as its properties are more similar to those of elastomer materials.
- Less expensive – Jorlon is less expensive than many other diaphragm materials, further increasing its customer value.
- High steam pressure capability – Extensive steam testing of Jorlon in the Mark 60/60HP pressure regulator has shown that Jorlon material is ideal for high pressure steam service. For the Mark 60/60HP in Sizes 2" (DN50) and below, Jorlon may be used up to 405 psi saturated steam service (405 psi / 28 bar @ 450°F / 232°C). For larger Mark 60/60HP's, it may be used up to 125 psi saturated steam service (125 psi / 8,6 bar @ 353°F / 178°C) saturated steam.
- Fast delivery – Rely on our 36 hour delivery with Jorlon as the diaphragm material.
- Extremely long life – Under 300 psi air, Jorlon surpasses 1,000,000 full stroke cycles without failure. The harshest test was on 450°F saturated steam, where Jorlon exceeded the cycle count for stainless steel by over 150 times - the test was stopped and the Jorlon diaphragm had yet to fail.
- Lower cost of ownership – Less droop provides more accuracy, improving efficiency and productivity. Extremely long life results in more production up-time, fewer spare parts expenses and less repair labor.



ORDERING SCHEMATIC

| Model No | Size | Body Mat'l | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|----------|------|------------|---|---|---|---|---|---|---|---|---|----|----|----|
| | | | | | | | | | | | | | | |

| | Model |
|------|------------------------------------|
| 60 | Standard |
| 60HP | High Pressure |
| 60QC | Quick Change |
| 61 | Large Diaphragm (1/4" - 3/4" only) |

| | Size |
|-----|--------------------------------|
| 025 | 1/4" (DN8) |
| 038 | 3/8" (DN10) |
| 050 | 1/2" (DN15) |
| 075 | 3/4" (DN20) |
| 100 | 1" (DN25) |
| 125 | 1-1/4" (DN32) (BR & DI only) |
| 150 | 1-1/2" (DN40) |
| 200 | 2" (DN50) |
| 250 | 2-1/2" (DN65) (MK60/60HP only) |
| 300 | 3" (DN80) (MK60/60HP only) |
| 400 | 4" (DN100) (MK60/60HP only) |

MK61 available in 1/4" through 3/4" only

| | Body Material |
|----|-----------------------------|
| DI | Ductile Iron |
| BR | Bronze (1/4" - 2") |
| CS | Carbon Steel (No 1 1/4") |
| S6 | Stainless Steel (No 1 1/4") |
| CI | Cast Iron (2-1/2" - 4') |

| 1 & 2 | End Connections |
|-------|--------------------------------|
| | 1/4" - 2" MK60/61 |
| PT | NPT |
| BT | BSPT |
| BP | BSPP |
| SW | FSW |
| F1 | 125# IFE (Except IFE) |
| I5 | 150# IFE |
| F5 | 150# FE (Except IFE) |
| F2 | 250#FE (Except IFE) |
| I3 | 300# IFE |
| F3 | 300# FE (Except IFE) |
| | 2-1/2" - 4" MK60 |
| I1 | 125# IFE |
| I5 | 150# IFE |
| I2 | 250# IFE |
| I3 | 300# IFE |
| I7 | PN10 DIN IFE (CS/S6) DN15-150 |
| I6 | PN16 DIN IFE (CS/S6) DN15-150 |
| I8 | PN25 DIN IFE (CS/S6) DN15-150 |
| I4 | PN 40 DIN IFE (CS/S6) DN15-150 |

| 3 & 4 | Trim |
|-------|-----------------------|
| S3 | 303SS |
| S6 | 316SS |
| I3 | 303SS IFE (1/2" - 2") |
| I6 | 316SS IFE (1/2" - 2") |

| 5 | Seat Material |
|---|----------------------|
| A | 303SST (1/4" - 2") |
| B | 316SST (1/4" - 2") |
| Q | 303SST/Teflon Coated |
| R | 316SST/Teflon Coated |
| V | 303SS/Jorcote |
| W | 316SS/Jorcote |

| 6 | Cv (Kv) | | |
|---|-------------|--------------------|------------|
| 1 | 0.21 (0,28) | 9 | 15 (12,9) |
| 2 | 0.42 (0,36) | A | 25 (21,6) |
| 3 | 0.84 (0,72) | B | 30 (25,9) |
| 4 | 1.6 (1,4) | D* | 55 (47,4) |
| 5 | 2.5 (2,2) | F* | 85 (73,3) |
| 6 | 4.4 (3,8) | G* | 115 (99,1) |
| 7 | 6.4 (5,5) | I* | 200 (172) |
| 8 | 9.5 (8,2) | * 2-1/2" - 4" only | |

| 7&8 MK 60 Spring Range PSI (Bar) | | | | | |
|----------------------------------|---------------------|---------|---------------------|-------------|-------------------|
| 1/4" - 3/4" | | 1" - 2" | | 2-1/2" - 4" | |
| 15 | 2-20 (0,14-1,38) | 05 | 1-5 (0,07-0,34) | 29 | 7-18 (0,48-1,24) |
| 16 | 2-23 (0,14-1,59) | 20 | 3-8 (0,21-0,55) | 32 | 10-25 (0,69-1,72) |
| 37 | 10-38 (0,69-2,62) | 28 | 5-20 (0,34-1,38) | 42 | 15-35 (1,03-2,41) |
| 56 | 20-55 (1,38-3,79) | 34 | 10-30 (0,69-2,07) | | |
| 81 | 35-160 (2,41-11,03) | 53 | 20-45 (1,38-3,10) | | |
| A6 | 95-220 (6,55-15,17) | 75 | 30-95 (2,07- 6,55) | | |
| D8 | 30-85 (2,07-5,86) | 97 | 60-160 (4,14-11,03) | | |

| 7 & 8 MK60HP Spring Range PSI (Bar) | | | |
|-------------------------------------|-----------------|-------------|--------------|
| 1/2" - 2" | | 2-1/2" - 4" | |
| A1 | 75-190 (5-13) | 71 | 30-75 (2-5) |
| A7 | 100-320 (7-22) | 98 | 65-110 (4-8) |
| A9 | 150-450 (10-31) | | |

| 7 & 8 MK61 Spring Range PSI (Bar) | | | |
|-----------------------------------|--------------------|----|-----------------------|
| 05 | 1-5 (0,07 - 0,34) | 56 | 20-55 (1,38 -3,8) |
| 10 | 2-12 (0,14 - 0,8) | 63 | 20-80 (1,38 - 5,51) |
| 17 | 2-25 (0,14 - 1,72) | 87 | 40-115 (2,76 - 7,93) |
| 36 | 10-35 (0,7 - 2,41) | 70 | 25-160 (1,72 - 11,03) |
| | | 80 | 30-180 (2,06 - 12,41) |

| 9 & 10 | Diaphragm |
|--------|----------------------------|
| S6 | 316SST |
| VI | Viton |
| BN | Buna-N (standard above 2") |
| JL | Jorlon |

| 11 & 12 | Actuator |
|---------|-----------------------------|
| MD | DI for Metal Diaphragm |
| ED | DI for Elastomer Diaphragm |
| SM | 316 for Metal Diaphragm |
| SE | 316 for Elastomer Diaphragm |

Mark 601/602 Series

High Flow Pressure Regulators

The Mark 601 and 602 meet higher capacity requirements than standard regulators. The High Flow Mark 601 has Cv's as high as 50 (43 Kv) and the Super High Flow Mark 602 has Cv's up to 70 (60,2 Kv). Each valve is standard with Jordan's Sliding Gate Seats, which helps to reduce the droop commonly associated with high flow regulators.

Jordan's unique self-operated sliding gate pressure regulator offers:

- Shorter stroke than a globe or plug-style valve
 - Faster response
 - Less offset
 - Smaller and lighter weight than globe-style valves
 - Longer diaphragm life
- Straight-through flow
 - Less turbulence, erosion and noise
 - Improved rangeability
 - Longer seat life
- Ease of maintenance
 - Interchangeable seats and Cv's
 - Fewer spare parts
 - Self-cleaning seats
 - No gaskets or o-rings

SPECIFICATIONS

Sizes: 1-1/2" & 2" (DN40 & DN50)

End Connections:

- Threaded – NPT, BSPT, BSPP
- ANSI Flanges (150#, 300#)
- DIN Flanges (PN 10/16, PN 25/40)

Body Materials

- Ductile Iron
- Bronze
- Carbon Steel (A216 WCB)
- Stainless Steel (A351/CF8M)

Trim Materials

- 303SST – Standard on Ductile Iron, Bronze, Carbon Steel valves
- 316SST – Standard on Stainless Steel valves
- Monel, Hastelloy and other Alloys available



Seat Materials

- Jorcote on SST – Standard

Diaphragm Materials

- Stainless Steel – standard
- Jorlon – standard
- Buna-N – optional
- Viton – optional

Service: Steam, water, oil, gas, air and chemicals

Shutoff: ANSI Class IV

Reduced Pressure Control Ranges: Select a range to match your setpoint. For optimal performance, your setpoint should fall in the upper portion of the selected range.

| Model | Size (DN) | Spring Ranges | |
|-----------|------------------------------|---------------|------------|
| | | PSI | Bar |
| 601 & 602 | 1-1/2" – 2" (DN40 – DN50) | 20 – 45 | 1,4 – 3,1 |
| | | 30 – 95 | 2,1 – 6,6 |
| | | 60 – 160 | 4,1 – 11,0 |

Cv Values & Maximum Differential Pressures

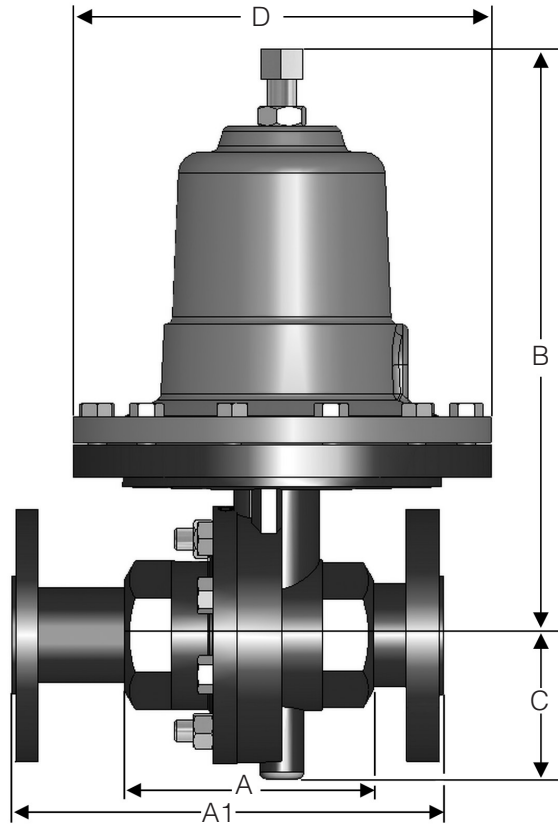
- Mark 601

| Cv (Kv) | Size (DN) | Seat Material | Maximum ΔP PSI (BAR) |
|-----------|------------------------------|---------------|-------------------------|
| 25 (21,5) | 1-1/2" & 2" (DN40 & DN50) | Jorcote | 150 (10,3) |
| 30 (25,8) | 1-1/2" & 2" (DN40 & DN50) | Jorcote | 150 (10,3) |
| 35 (30,1) | 1-1/2" & 2" (DN40 & DN50) | Jorcote | 150 (10,3) |
| 45 (38,7) | 1-1/2" (DN40) | Jorcote | 150 (10,3) |
| 50 (43,0) | 2" (DN50) | Jorcote | 150 (10,3) |

- Mark 602

| Cv (Kv) | Size (DN) | Seat Material | Maximum ΔP PSI (BAR) |
|---------|---------------|---------------|-------------------------|
| 65 (56) | 1-1/2" (DN40) | Jorcote | 150 (10,3) |
| 70 (60) | 2" (DN50) | Jorcote | 150 (10,3) |

DIMENSIONS – MARK 601/602



• Threaded & FSW Ends, Inches

| Size | Material | A | B | C | D | Weight (lbs) |
|-------------|----------|------|-------|------|------|--------------|
| 1-1/2" & 2" | DI/BRZ | 4.50 | 11.50 | 2.75 | 7.09 | 26 |
| | CS/SS | 5.50 | 11.75 | 2.75 | 7.09 | 35 |

• Threaded & FSW Ends, Metric

| Size | Material | A | B | C | D | Weight (kgs) |
|-----------|----------|-----|-----|----|-----|--------------|
| DN40 - 50 | DI/BRZ | 114 | 292 | 70 | 180 | 11,7 |
| | CS/SS | 140 | 298 | 70 | 180 | 15,9 |

• Flanged Ends, Inches

| Size | ANSI Flange | A1 | | B | | C | D | Weight (lbs) | |
|------------------------|-------------|--------|-------|--------|--------------------|------|------|--------------|-------|
| | | DI/BRZ | CS/SS | DI/BRZ | CS/SS | ALL | ALL | DI/BRZ | CS/SS |
| 1-1/2" ¹ | 150# | 10.00 | 10.00 | 11.50 | 11.75 | 2.31 | 7.09 | 42 | 46 |
| | 300# | 10.25 | 10.62 | 11.50 | 11.75 | 2.31 | 7.09 | 45 | 52 |
| 2" | 150# | 10.00 | 10.00 | 11.50 | 13.25 ² | 2.75 | 7.09 | 46 | 50 |
| | 300# | 10.50 | 10.50 | 11.50 | 13.25 ² | 2.75 | 7.09 | 49 | 55 |

¹ Not ANSI Standard

² IFE only

• Flanged Ends, Metric

| Size | ANSI Flange | A1 | | B | | C | D | Weight (kgs) | |
|----------------------|-------------|---------------------|------------------|--------|------------------|-----|-----|--------------|-------|
| | | DI/BRZ ² | CS/SS | DI/BRZ | CS/SS | ALL | ALL | DI/BRZ | CS/SS |
| DN40 ¹ | 10/16 | 254 | 254 | 292 | 298 | 70 | 180 | 19,1 | 20,9 |
| | 25/40 | 260 | 260 | 292 | 298 | 70 | 180 | 20,4 | 23,6 |
| DN50 | 10/16 | 254 | 230 ² | 292 | 336 ² | 70 | 180 | 20,9 | 22,7 |
| | 25/40 | 268 | 230 ² | 292 | 336 ² | 70 | 180 | 22,2 | 24,9 |

¹ Not per DIN3202

² IFE only

ORDERING SCHEMATIC

| Model No | Size | Body Mat'l | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|----------|------|------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|
| | | | | | | | | | | | | | | | | | |

| Model | |
|-------|-----------------|
| 601 | High Flow |
| 602 | Super High Flow |

| Size | |
|------|---------------|
| 150 | 1-1/2" (DN40) |
| 200 | 2" (DN50) |

| Body Material | |
|---------------|-----------------|
| DI | Ductile Iron |
| BR | Bronze |
| CS | Carbon Steel |
| S6 | Stainless Steel |

| 1 & 2 | End Connections |
|-------|----------------------|
| PT | NPT |
| BT | BSPT |
| I5 | 150# IFE, CS or SST* |
| F5 | 150# FE, DI or BR |
| I7 | PN10 IFE, CS or SST* |
| F7 | PN10 FE, DI or BR |
| I6 | PN16 IFE, CS or SST* |
| F6 | PN16 FE, DI or BR |
| BP | BSPP |
| SW | FSW |
| I3 | 300# IFE, CS or SST* |
| F3 | 300# FE, DI or BR |
| I8 | PN25 IFE, CS or SST* |
| F8 | PN25 FE, DI or BR |
| I4 | PN40 IFE, CS or SST* |
| F4 | PN40 FE, DI or BR |

| 3 & 4 | Trim |
|-------|-------|
| S3 | 303SS |
| S6 | 316SS |

| 5 | Seat Material |
|---|----------------------|
| Q | 303SST/Teflon Coated |
| R | 316SST/Teflon Coated |
| V | 303SS/Jorcote |
| W | 316SS/Jorcote |

| 6 | Cv (Kv) |
|---|---------|
| A | 25 (22) |
| B | 30 (26) |
| V | 35 (30) |
| W | 45 (39) |
| C | 50 (43) |
| Y | 65 (56) |
| E | 70 (60) |

| 7 & 8 | Spring Range PSI (Bar) |
|-------|------------------------|
| 53 | 20 - 45 (1,4 - 3,0) |
| 75 | 30 - 95 (2,1 - 6,6) |
| 97 | 60 - 160 (4,1 - 11,0) |

| 9 & 10 | Diaphragm |
|----------------|-----------|
| S6 | 316SST |
| V _I | Viton |
| BN | Buna-N |
| JL | Jorlon |

| 11 & 12 | Actuator |
|---------|-----------------------------|
| MD | DI for Metal Diaphragm |
| ED | DI for Elastomer Diaphragm |
| SM | 316 for Metal Diaphragm |
| SE | 316 for Elastomer Diaphragm |

| 13 & 14 | Double Bolting |
|---------|----------------|
| 00 | None |
| ZZ | Non-Standard |

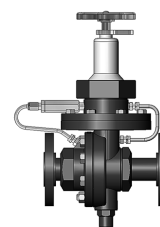
| 15 | Accessories |
|----|------------------------|
| 0 | None |
| 6 | 316SS Bolting |
| 7 | Hi-temperature Bolting |
| Z | Non-Standard |

MARK 601 HIGH FLOW SELF-OPERATED PRESSURE REGULATORS

Jordan Valve offers a full range of pressure regulators in addition to the Mark 60 Self-Operated Pressure Regulator

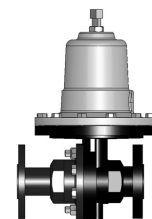
Mark 62 Internally Piloted Pressure Regulator

The Mark 62 is a specialty valve designed for critical application regulation in locations where space is limited. Small and lightweight in design, the Mark 62 valve provides the accuracy of a piloted valve with the size, weight, and appearance of a single, self-operated valve.



Mark 63/64 Differential Pressure Regulators

The Mark 63 is designed to maintain a constant differential between the pressure on the discharge side of the regulator and the signal pressure loaded on the diaphragm. The Mark 64 provides the same flow capacity as the Mark 63 but with less offset in controlled pressure due to a larger diaphragm.



Mark 65 Vacuum Regulators

The Mark 65 vacuum regulators control very accurately and shutoff tightly to maintain the proper vacuum setting. They are used to maintain vacuums at predetermined settings and to regulate vacuums on evaporators, cookers, grinding fixtures, milking machines, altitude chambers and other vacuum systems.



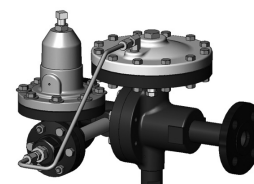
Mark 66 Air-Loaded Pressure Regulators

The Mark 66 is a highly accurate and economical air loaded pressure regulator that provides regulation from a local station or from a remote station. The operation of the MK66 requires no control spring or pilot. Instead, a static signal is applied to the top of the diaphragm to determine the setpoint.



Mark 67 Pilot-Operated Pressure Regulators

The Mark 67 is for critical pressure reducing applications and provides a greater accuracy and lower offset than can be achieved with a self-operated regulator. Because of its versatility in control, and its accuracy, the Mark 67 can be used in a wide variety of applications including: controlling the pressure of gaseous oxygen to furnaces at steel mills, controlling pressure of sealing oil on turbines, and pressure control on steam mains and distribution lines.



Mark 68G Pressure Regulator

The Mark 68G is a globe-style pressure reducing regulating valve that offers high capacity, accurate regulation, and easy servicing, making it the ideal choice for your industrial-grade pressure reducing applications.



Mark 68HP High Pressure Regulating Valve

The Mark 68HP is designed primarily for high pressure steam service as commonly found in power plants, refineries, pulp & paper mills, and other high pressure process applications.



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