

# Mark 66 Series

## 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 Mark 66 requires no control spring or pilot. Instead, a static air signal is applied to the top of the diaphragm to determine the setpoint.

The Mark 66 has a rangeability of approximately 40:1; the same as our pilot-type sliding gate regulator, the Mark 67. Because of its lack of a pilot valve, the Mark 66 is not as susceptible to problems caused by dirty service.

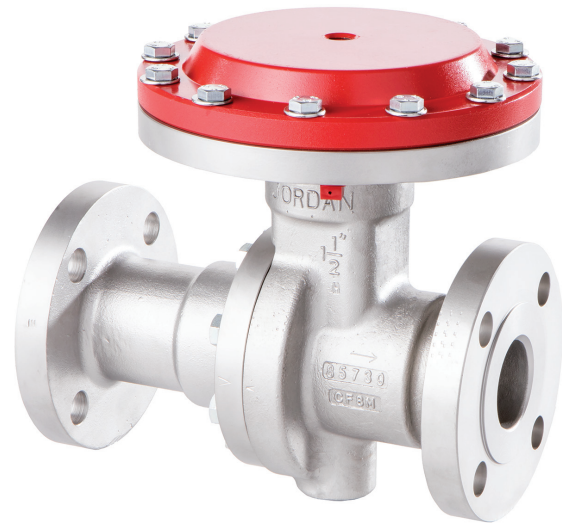
The Mark 66 setpoint is adjusted by controlling the air pressure supplied to the top of the diaphragm. This supplied air pressure opens the valve to allow the process media to pass through the seats. The downstream pressure is sensed beneath the diaphragm. As the downstream pressure exceeds the setpoint, pressure is exerted on the diaphragm which raises the stem to modulate the seats toward the closed position.

Our JR regulator (see LowFlow section) is ideal for controlling the pressure load to the top of the diaphragm.

### FEATURES

- All metal-to-metal contacts – no gaskets or o-rings to wear out (2"/DN50 and under)
- Versatile application – use on steam, air, gas, liquids or chemicals
- Sliding Gate Seats – all of Jordan Valve's differential regulators feature advanced sliding gate seat technology
  - Straight-through flow for reduced turbulence and quiet operation
  - Short stroke for fast response and accurate regulation
  - Easily interchangeable Cv's
  - Tight Shutoff

CRN Registration Number Available



### SPECIFICATIONS

**Sizes:** 1/2" through 6" (DN15 through DN150)

#### End Connections

- Threaded – FNPT, BSPT, BSPP
- ANSI Flanges – 150#, 300#
- DIN Flanges – PN10/16, PN25/40
- JIS Flanges – 10K, 20K

#### Body Materials

- Ductile Iron
- Bronze (1/2" to 2"/DN15 to DN50)
- Carbon Steel
- Stainless Steel
- Cast Iron (2-1/2" to 6" only/DN65 to DN150)

#### Trim Materials

- 303SS for DI, CI, BRZ & CS body valves
- 316 for SS body valves



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**SPECIFICATIONS**

**Seat Materials**

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

**Diaphragm Materials**

- Stainless Steel - Standard (450°F - 650°F (232°C -343°C) temp limit, depending on seat material)
- Buna-Nitrile (200°F (93°C) temp limit)
- Viton (450°F (232°C) temp limit)
- Jorlon (450°F (232°C) temp limit)

**Diaphragm Case**

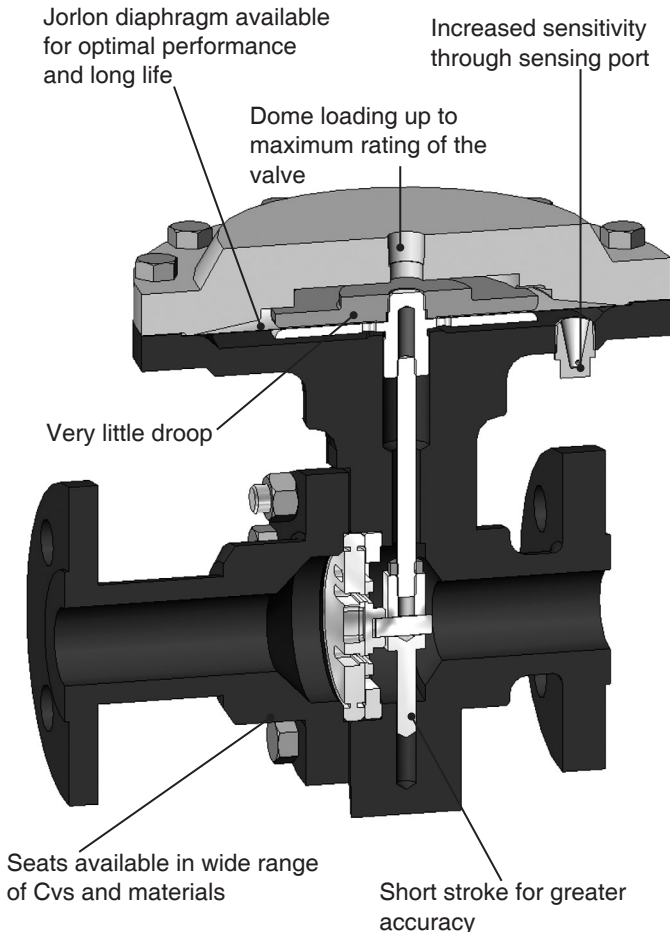
- DI (1/2" to 2" / DN15 to DN50)
- Steel (2-1/2" to 6" / DN65 to DN150)

**Dome Loading Pressure:** matches body pressure rating

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

**Shutoff:** ANSI Class IV

**FEATURES**



**Cv (Kv) VALUES & MAXIMUM DIFFERENTIAL PRESSURES**

| Cv* (Kv)    | Valve Size (DN)           | Seat Material | Max ΔP, PSI (Bar) |
|-------------|---------------------------|---------------|-------------------|
| 2.5 (2,2)   | 1/2" & 3/4" (DN15 & DN20) | SST           | 125 (8,6)         |
|             |                           | Jorcote       | 400 (27,6)        |
| 4.4 (3,8)   | 1/2" & 3/4" (DN15 & DN20) | SST           | 125 (8,6)         |
|             |                           | Jorcote       | 400 (27,6)        |
| 6.4 (5,5)   | 1" & 1-1/4" DN25 & DN32   | SST           | 125 (8,6)         |
|             |                           | Jorcote       | 400 (27,6)        |
| 9.5 (8,2)   | 1" & 1-1/4" (DN25 & DN32) | SST           | 125 (8,6)         |
|             |                           | Jorcote       | 400 (27,6)        |
| 15 (12,9)   | 1-1/2" (DN40)             | SST           | 75 (5,2)          |
|             |                           | Jorcote       | 325 (22,4)        |
| 25 (21,5)   | 2" (DN50)                 | SST           | 75 (5,2)          |
|             |                           | Jorcote       | 325 (22,4)        |
| 30 (25,8)   | 2" (DN50)                 | SST           | 75 (5,2)          |
|             |                           | Jorcote       | 325 (22,4)        |
| 55 (47,3)   | 2-1/2" (DN65)             | Jorcote       | 150 (10,3)        |
| 115 (98,9)  | 3" (DN80)                 | Jorcote       | 150 (10,3)        |
| 200 (172)   | 4" (DN100)                | Jorcote       | 150 (10,3)        |
| 395 (339,7) | 6" (DN165)                | Jorcote       | 150 (10,3)        |

\* **Low Flow Cv's (Kv's) available:** reduced Cv's (Kv's) can be placed in any size valve as long as it is a smaller value than the standard Cv (Kv) for that particular size. In addition, the following special low flows can be provided:

|             |               |               |               |                                |             |
|-------------|---------------|---------------|---------------|--------------------------------|-------------|
| 1.6 (1,4)   | 0.84 (0,7)    | 0.42 (0,4)    | 0.21 (0,2)    | 0.08 (0,07)                    | 0.04 (0,03) |
| 0.02 (0,12) | 0.008 (0,007) | 0.004 (0,003) | 0.002 (0,002) | 0.0008 (N/A in 316SS) (0,0007) |             |

**Body Rating**

■ **1/2" – 2"**

- Ductile Iron\* up to 600 psi (41,4 bar) @ 100°F (38°C) and 600 psi (41,4 bar) @ 650°F (343,3°C).
- Carbon Steel\* and Stainless Steel\* up to 950 psi (65,5 bar) @ 100°F (38°C) and 890 psi (61,4 bar) @ 650°F (343,3°C).
- Bronze\* up to 500 psi (34,5 bar) @ 100°F (38°C) and 325 psi (22,4 bar) @ 500°F (260°C)
- Temperature limit of -20°F (-28,9°C) on all materials; for other temperatures consult factory

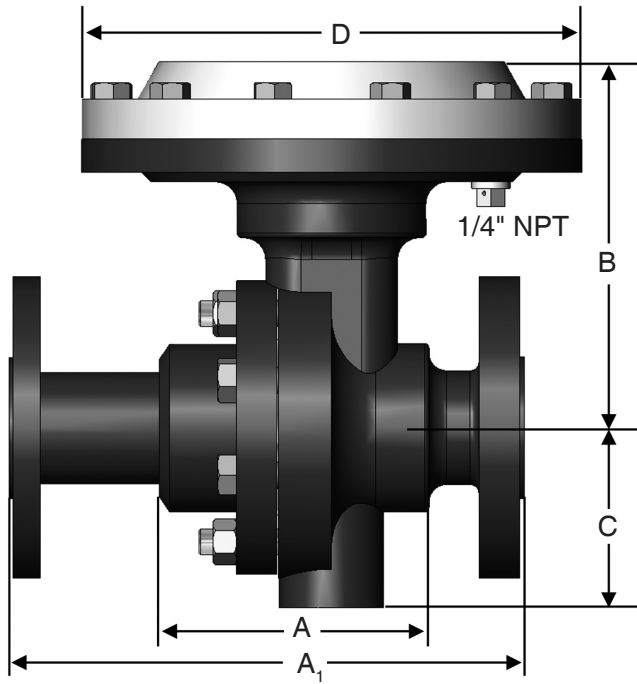
\* Note: Double bolting is required to reach these pressures. Consult factory for details.

■ **2-1/2" – 6"**

- Ductile Iron up to 500 psi (34,4 bar) @ 100°F (38°C) and 450 psi (31,0 bar) @ 650°F (343,3°C).
- Carbon Steel up to 500 psi (34,4 bar) @ 100°F (38°C) and 500 psi (34,5 bar) @ 650°F (343,3°C)
- Stainless Steel up to 500 psi (34,4 bar) @ 100°F (38°C) and 445 psi (30,7 bar) @ 650°F (343,3°C)
- Cast Iron up to 500 psi (34,4 bar) @ 100°F (38°C) and 250 psi (17,2 bar) @ 450°F (232,2°C)

# MARK 66 SERIES AIR LOADED PRESSURE REGULATOR

## DIMENSIONS



### FLANGED ENDS, DIN

| Valve Size (DN) | Flange (PN) | Dimensions (mm) |       |        |       |     |     | Weight Kgs |       |
|-----------------|-------------|-----------------|-------|--------|-------|-----|-----|------------|-------|
|                 |             | A <sub>1</sub>  |       | B      |       | C   | D   | DI/BRZ     | CS/SS |
|                 |             | DI/BRZ          | CS/SS | DI/BRZ | CS/SS | ALL | ALL |            |       |
| 15              | 10/16       | 244             | 244   | 104    | 102   | 43  | 181 | 8,2        | 9,5   |
|                 | 25/40       | 260             | 260   | 104    | 102   | 43  | 181 | 9,1        | 10,4  |
| 20              | 10/16       | 244             | 244   | 104    | 102   | 43  | 181 | 9,1        | 10,4  |
|                 | 25/40       | 260             | 260   | 104    | 102   | 43  | 181 | 10,0       | 11,3  |
| 25              | 10/16       | 184             | 160   | 109    | 117   | 67  | 181 | 10,0       | 12,2  |
|                 | 25/40       | 184             | 160   | 109    | 117   | 67  | 181 | 10,9       | 13,2  |
| 32              | 10/16       | 200             | —     | 109    | —     | 67  | 181 | 10,0       | —     |
|                 | 25/40       | 200             | —     | 109    | —     | 67  | 181 | 11,8       | —     |
| 40              | 10/16       | 222             | 200   | 108    | 123   | 59  | 181 | 11,8       | 13,6  |
|                 | 25/40       | 222             | 200   | 108    | 123   | 59  | 181 | 14,5       | 16,3  |
| 50              | 10/16       | 254             | 230   | 114    | 122   | 70  | 181 | 14,5       | 16,3  |
|                 | 25/40       | 254             | 230   | 114    | 122   | 70  | 181 | 16,3       | 18,1  |

Larger Sizes (Only for DI/CS/SS)

| Valve Size | ANSI Flange | Dimensions (mm) |       |     |     | Weight Kgs |        |       |
|------------|-------------|-----------------|-------|-----|-----|------------|--------|-------|
|            |             | A               |       | B   | C   | D          | DI/BRZ | CS/SS |
|            |             | DI/BRZ          | CS/SS | ALL | ALL |            |        |       |
| 65         | 10/16       | 287             | —     | 271 | 176 | 324        | 73     | —     |
|            | 25/40       | 293             | —     | 271 | 176 | 324        | 73     | —     |
| 80         | 10/16       | 313             | —     | 271 | 176 | 324        | 82     | —     |
|            | 25/40       | 313             | —     | 271 | 176 | 324        | 82     | —     |
| 100        | 10/16       | 353             | —     | 302 | 203 | 324        | 95     | —     |
|            | 25/40       | 353             | —     | 302 | 203 | 324        | 95     | —     |
| 150        | 10/16       | 474             | —     | 320 | 229 | 324        | 136    | —     |
|            | 25/40       | 474             | —     | 320 | 229 | 324        | 136    | —     |

### FLANGED ENDS

| Valve Size | ANSI Flange | Dimensions (inches) |       |        |       |      |      | Weight Lbs |       |
|------------|-------------|---------------------|-------|--------|-------|------|------|------------|-------|
|            |             | A <sub>1</sub>      |       | B      |       | C    | D    | DI/BRZ     | CS/SS |
|            |             | DI/BRZ              | CS/SS | DI/BRZ | CS/SS | ALL  | ALL  |            |       |
| 1/2"       | 150#        | 9.62                | 9.62  | 4.11   | 4.03  | 1.69 | 7.12 | 18         | 21    |
|            | 300#        | 10.25               | 10.25 | 4.11   | 4.03  | 1.69 | 7.12 | 20         | 23    |
| 3/4"       | 150#        | 9.62                | 9.62  | 4.11   | 4.03  | 1.69 | 7.12 | 20         | 23    |
|            | 300#        | 10.25               | 10.25 | 4.11   | 4.03  | 1.69 | 7.12 | 22         | 25    |
| 1"         | 150#        | 7.25                | 7.25  | 4.31   | 4.60  | 2.62 | 7.12 | 22         | 27    |
|            | 300#        | 8.75                | 7.75  | 4.31   | 4.60  | 2.62 | 7.12 | 24         | 29    |
| 1-1/4"     | 150#        | 7.87                | —     | 4.31   | —     | 2.22 | 7.12 | 22         | —     |
|            | 300#        | 8.37                | —     | 4.31   | —     | 2.22 | 7.12 | 26         | —     |
| 1-1/2"     | 150#        | 8.75                | 8.75  | 4.27   | 4.85  | 2.31 | 7.12 | 26         | 30    |
|            | 300#        | 10.25               | 9.25  | 4.27   | 4.85  | 2.31 | 7.12 | 32         | 36    |
| 2"         | 150#        | 10.00               | 10.00 | 4.49   | 4.82  | 2.75 | 7.12 | 32         | 36    |
|            | 300#        | 10.50               | 10.50 | 4.49   | 4.82  | 2.75 | 7.12 | 36         | 40    |

Larger Sizes (Only for DI/CS/SS)

| Valve Size | ANSI Flange | Dimensions (inches) |       |       |      | Weight Lbs |        |       |
|------------|-------------|---------------------|-------|-------|------|------------|--------|-------|
|            |             | A                   |       | B     | C    | D          | DI/BRZ | CS/SS |
|            |             | DI/BRZ              | CS/SS | ALL   | ALL  |            |        |       |
| 2-1/2"     | 125-150     | 10.87               | —     | 10.68 | 6.93 | 12.75      | 160    | —     |
|            | 250-300     | 11.50               | —     | 10.68 | 6.93 | 12.75      | 160    | —     |
| 3"         | 125-150     | 11.75               | —     | 10.68 | 6.93 | 12.75      | 180    | —     |
|            | 250-300     | 12.50               | —     | 10.68 | 6.93 | 12.75      | 180    | —     |
| 4"         | 125-150     | 13.87               | —     | 11.88 | 8.00 | 12.75      | 210    | —     |
|            | 250-300     | 14.50               | —     | 11.88 | 8.00 | 12.75      | 210    | —     |
| 6"         | 125-150     | 17.75               | —     | 12.57 | 9.00 | 12.75      | 300    | —     |
|            | 250-300     | 18.62               | —     | 12.57 | 9.00 | 12.75      | 300    | —     |

### THREADED ENDS

| Valve Size | Material | Dimensions (inches) |        |      |      | Weight Lbs |
|------------|----------|---------------------|--------|------|------|------------|
|            |          | A                   | B      | C    | D    |            |
|            |          | 1/2" & 3/4"         | DI/BRZ | 3.62 | 4.11 |            |
| 1"         | DI/BRZ   | 4.12                | 4.31   | 2.62 | 7.12 | 18         |
|            | CS/SS    | 4.18                | 4.60   | 2.62 | 7.12 | 23         |
| 1-1/4"     | DI/BRZ   | 4.12                | 4.31   | 2.62 | 7.12 | 18         |
| 1-1/2"     | DI/BRZ   | 4.50                | 4.27   | 2.31 | 7.12 | 20         |
|            | CS/SS    | 4.81                | 4.85   | 2.25 | 7.12 | 24         |
| 2"         | DI/BRZ   | 4.50                | 4.49   | 2.75 | 7.12 | 22         |
|            | CS/SS    | 5.50                | 4.82   | 2.75 | 7.12 | 26         |

### THREADED ENDS, DIN

| Valve Size (DN) | Material | Dimensions (mm) |        |    |     | Weight Kgs |
|-----------------|----------|-----------------|--------|----|-----|------------|
|                 |          | A               | B      | C  | D   |            |
|                 |          | 15 & 20         | DI/BRZ | 92 | 104 |            |
| 25              | DI/BRZ   | 105             | 109    | 67 | 181 | 8,2        |
|                 | CS/SS    | 106             | 117    | 67 | 181 | 10,4       |
| 32              | DI/BRZ   | 105             | 109    | 67 | 181 | 8,2        |
|                 | CS/SS    | 114             | 108    | 59 | 181 | 9,1        |
| 40              | DI/BRZ   | 114             | 108    | 59 | 181 | 10,9       |
|                 | CS/SS    | 122             | 123    | 59 | 181 | 10,0       |
| 50              | DI/BRZ   | 114             | 114    | 70 | 181 | 10,0       |
|                 | CS/SS    | 140             | 122    | 70 | 181 | 11,8       |

**ORDERING SCHEMATIC**

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

| Model |          |
|-------|----------|
| 66    | Standard |

| Size |               |
|------|---------------|
| 050  | 1/2" (DN15)   |
| 075  | 3/4" (DN20)   |
| 100  | 1" (DN25)     |
| 125  | 1-1/4" (DN32) |
| 150  | 1-1/2" (DN40) |
| 200  | 2" (DN50)     |
| 250  | 2-1/2" (DN65) |
| 300  | 3" (DN80)     |
| 400  | 4" (DN100)    |
| 600  | 6" (DN150)    |

| Body Material |                        |
|---------------|------------------------|
| DI            | Ductile Iron           |
| BR            | Bronze                 |
| CS            | Carbon Steel (WCB)     |
| S6            | Stainless Steel (CF8M) |
| CI            | Cast Iron              |

| 1 & 2 | End Connections      |
|-------|----------------------|
| PT    | NPT                  |
| BT    | BSPT                 |
| BP    | BSPP                 |
| SW    | FSW                  |
| I1    | 125# IFE             |
| F1    | 125# FE (Except IFE) |
| I5    | 150# IFE             |
| F5    | 150# FE (Except IFE) |
| I2    | 250# IFE             |
| F2    | 250# FE (Except IFE) |
| I3    | 300# IFE             |
| F3    | 300# FE (Except IFE) |
| ZZ    | Non-Standard         |

| 3 & 4 | Trim         |
|-------|--------------|
| S3    | 303SS        |
| S6    | 316SS        |
| I3    | 303SS F/IFE  |
| I6    | 316SS F/IFE  |
| ZZ    | Non-Standard |

| 5 | Seats                |
|---|----------------------|
| A | 303SST               |
| B | 316SST               |
| Q | 303SST/Teflon Coated |
| R | 316SST/Teflon Coated |
| V | 303SS/Jorcote        |
| W | 316SS/Jorcote        |

| 6 | Cv's (Kv's) |      |   |     |      |
|---|-------------|------|---|-----|------|
|   | Cv          | Kv   |   | Cv  | Kv   |
| 1 | 0.21        | 0,18 | A | 25  | 21,5 |
| 2 | 0.42        | 0,36 | B | 30  | 25,8 |
| 3 | 0.84        | 0,72 | D | 55  | 47,4 |
| 4 | 1.6         | 1,4  | F | 85  | 73,3 |
| 5 | 2.5         | 2,2  | G | 115 | 99,1 |
| 6 | 4.4         | 3,8  | H | 130 | 112  |
| 7 | 6.4         | 5,5  | I | 200 | 172  |
| 8 | 9.5         | 8,2  | J | 395 | 341  |
| 9 | 15          | 12,9 |   |     |      |

| 7 & 8 | Range |
|-------|-------|
| 00    | None  |

| 9 & 10 | Diaphragm    |
|--------|--------------|
| S6     | 316SST       |
| VI     | Viton        |
| BN     | Buna-N       |
| JL     | Jorlon       |
| ZZ     | Non-Standard |

| 11 & 12 | Actuator                |
|---------|-------------------------|
| MD      | For Metal Diaphragm     |
| ED      | For Elastomer Diaphragm |
| ZZ      | Non-Standard            |

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

| 15 | Accessories              |
|----|--------------------------|
| 0  | None                     |
| 6  | 316SS Bolting            |
| 8  | High Temperature Bolting |
| Z  | Non-Standard             |

