

# Mark 675 Series

## Self-Operated Pressure Regulators

The Mark 675 Wafer Style Sliding Gate Pressure Regulator is used to regulate the downstream pressure to a predetermined setpoint. The spring in the Mark 675 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). 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 allows the spring and diaphragm to move the seats toward the open position.



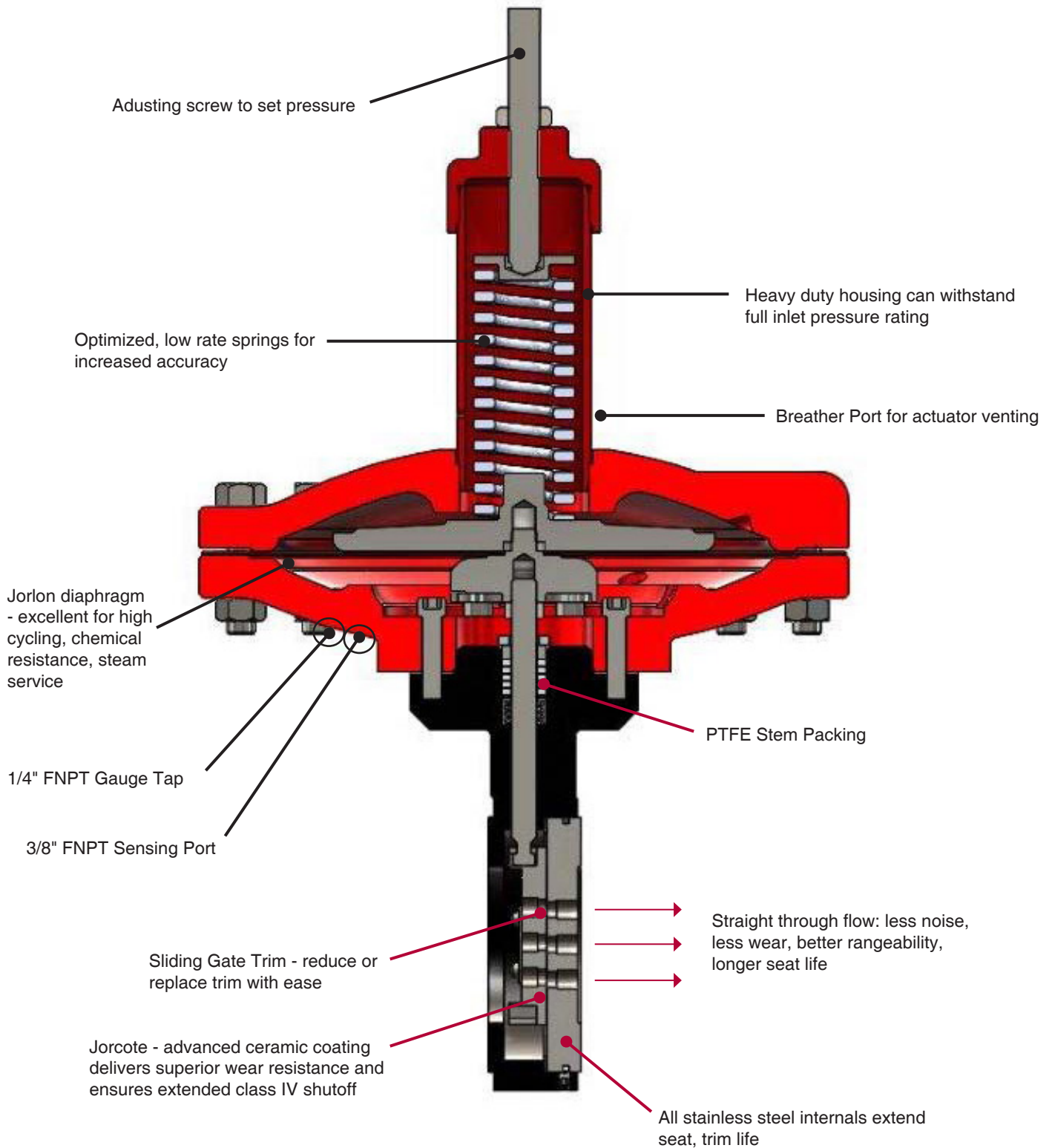
### MARK 675 FEATURES

- **Wafer Style Body** — reduces weight
- **High Capacity** — 6" (DN150) provides 400 Cv (345Kv)
- **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 (288°C). 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 MK675 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 MK675 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.



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**MARK 675 SERIES - SUPERIOR ON STEAM APPLICATIONS, IDEAL FOR GAS AND LIQUIDS**



**SPECIFICATIONS**

**Sizes:** 3" (DN80) through 6" (DN150)  
ANSI 150# / 300# (PN25/40) Class Wafer Style Valves (bolt-around)

**Body Materials:**

- Carbon Bar (A105)
- Carbon Steel (WCB)
- Stainless Steel (CF8M)
- Stainless Steel Bar (SA-479)
- Others on application – Consult Factory

**Body Seals**

- Jorlon Body Gasket
- Fiber Gasket for Body/Bonnet

**Diaphragm**

- Jorlon
- EPDM
- Neoprene/Nylon
- Viton
- Buna-N
- Others on application – Consult Factory

**Trim**

- 316SS/TFE
- Monel/TFE
- Alloy 20/TFE
- Hastelloy C/TFE
- Others on application – Consult Factory

**Seats:** 316SS/Jorcote; Others on application – Consult Factory

**Pressure Ranges:**

- 7-18psi (0,48-1,24bar)
- 10-25psi (0,69-1,72bar)
- 15-35psi (1,03-2,41bar)

**Max Delta P:** 150 psi

**Cv (Kv):**

- 9.5 (8,2)
- 33 (28)
- 38 (33)
- 72 (62)
- 76 (66)
- 103 (89)
- 180 (155)
- 400 (345)

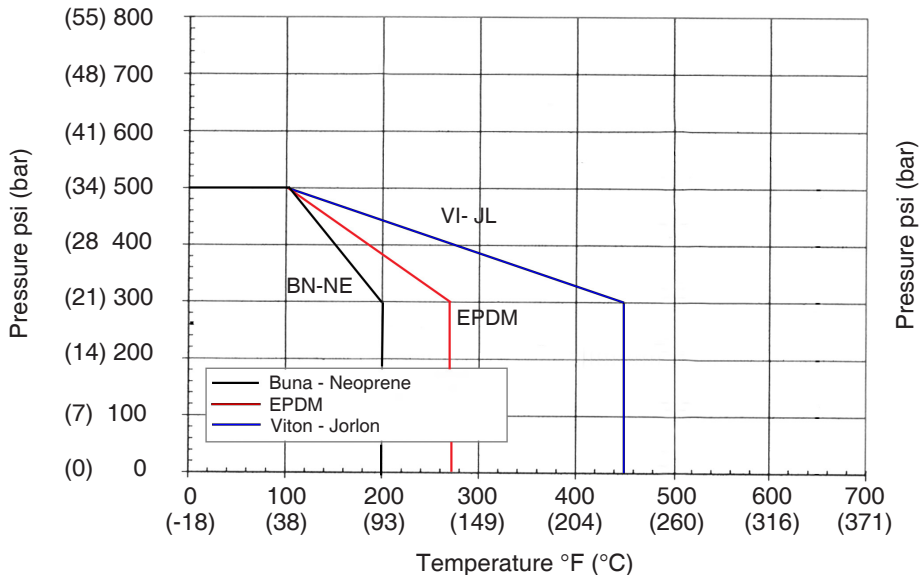
**Shutoff:** ANSI Class IV

**Options:**

- Closing Cap
- Handwheel
- Bleed Port
- Stainless Bolting
- Clean for Oxygen Service
- Clean for Oil Free Service

**PRESSURE/TEMPERATURE CHART**

**Carbon and Stainless 300#**



## SLIDING GATE FEATURES & BENEFITS

### Jordan Valve's Sliding Gate Seats

Installed in the widest range of gas, chemical and steam applications the world over, our pressure regulators, temperature regulators and control valves have been providing the following benefits for over fifty years.

### Shorter stroke length than globe or cage designs

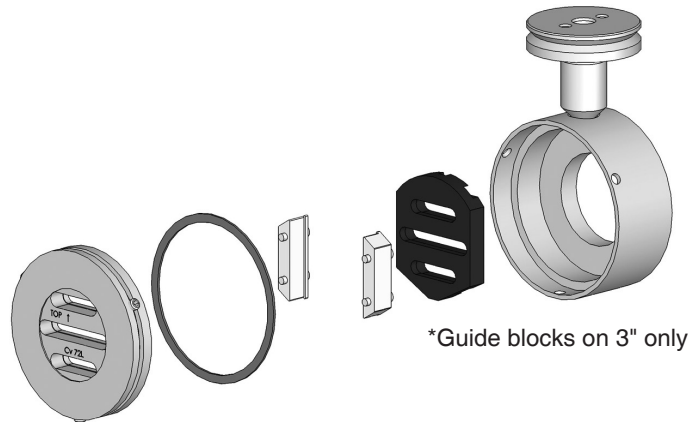
- Provides faster response to input signal changes
- Significantly extends packing and diaphragm life
- Allows for more compact valve/actuator assembly

### Straight-through flow

- Significantly reduces turbulence, thereby reducing noise and erosion
- Markedly increases rangeability associated with "flow to open" and "flow to close" designs
- Eliminate valve "chatter" commonly observed when valve is partially open

### Ease of maintenance

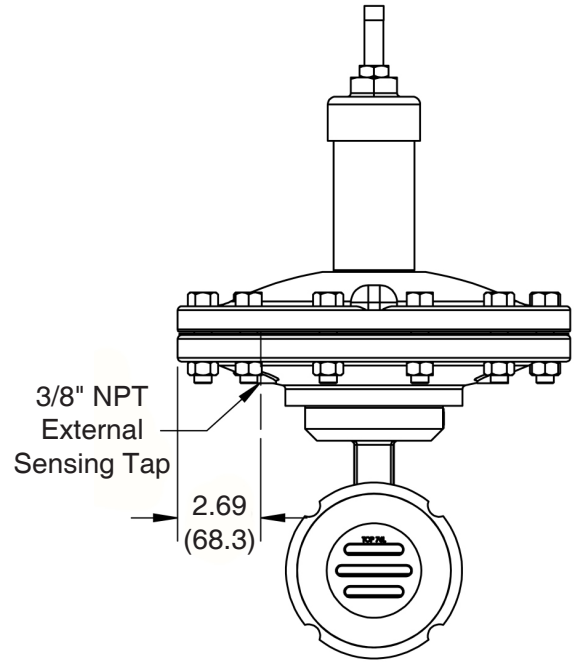
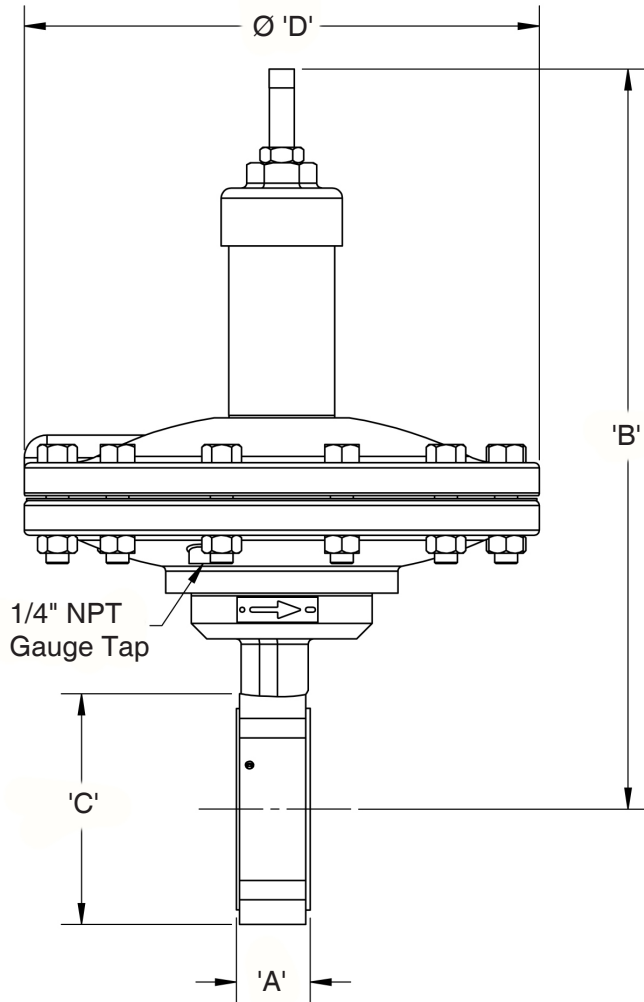
- During seat/Cv change (seats are not screwed or pressed in body)
- Attributable to lightweight, compact design
- Fewer trim components



### Features

- Easy installation between flanges with wafer body
- High flow rates
- Self cleaning, self lapping seats
- Reduced noise compared to conventional globe/cage valves
- More resistant to cavitation / flashing with straight through, wafer design

**DIMENSIONS – MK675**



**INCHES**

Size	A	B	C	D	Weight
3"	1.81	18.5	5.25	12.75	90 lbs
4"	2.06	19.6	6.46	12.75	110 lbs
6"	2.23	20.6	8.62	12.75	113 lbs

**METRIC (MM)**

Size	A	B	C	D	Weight
DN80	46.0	469.9	133.4	323.4	41 kg
DN100	52.3	497.8	164.1	323.9	50 kg
DN150	56.6	523.2	218.9	323.9	51 kg

**ORDERING SCHEMATIC MK675**

Model No	Size	Body Mat'l	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Model	
675	Wafer Style

Size	
300	3"
400	4"
600	6"

Body Material	
CB	Carbon Bar (A105)
SB	Stainless Steel Bar (SA-479)
CS	Carbon Steel (WCB)
S6	Stainless Steel (CF8M)

End Connections	
I3	150# / 300# IFE
ZZ	Non-Standard

Trim	
MN	Monel / TFE
A2	Alloy 20 / TFE
HC	Hastelloy C / TFE
T6	316SS / TFE
ZZ	Non-Standard

Seats			
5 & 6	Material	Cv	
		W	316SS / Jorcote
		A	33
		B	38
		E	72
		F	76
		H	103
		I	180
		J	400
		K	600
ZZ	Non-Standard		

Ranges	
29	7-18
32	10-25
42	15-35
ZZ	Non-Standard

Diaphragm	
JL	Jorlon
NN	Neoprene / Nylon
VI	Viton
BN	Buna-N
ZZ	Non-Standard

Actuator (Diaph. mat'l ref.)	
ED	For Elastomer Diaph. (NN, VI, BN)
ZZ	Non-Standard

Double Bolting Option			
13 & 14	Accessories		Actuator Option
	End Conn. Option		
00	None		
DM	Double Bolting For	I3	ED
ZZ	Non-Standard		

Accessories	
0	None
3	Bleed Port w/Va
4	Bleed Port Plugged
5	I8-8SS Bolting
6	316SS Bolting
8	Oxygen Clean
9	Oil-Free Clean
Z	Non-Standard

PED Compliance	
0	Not Required
F	PED Category 1
Z	Non-Standard

