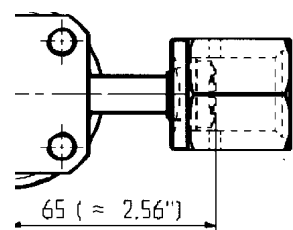
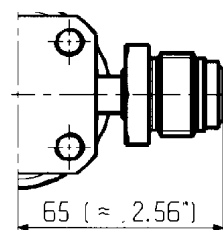


| PART NUMBER |       |    |     |   |   |   |            |
|-------------|-------|----|-----|---|---|---|------------|
| Example :   | M20 U | MT | 2V1 | I | / | K | A/B : B3/4 |
|             | 1     | 2  | 3   | 4 |   | 5 | 6          |
|             |       |    |     |   |   |   | 7          |

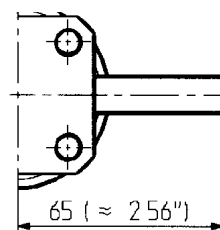
| 1 - Valve Series         |                                                              | 2 - Valve Actuation                                                                                                                                                                                                                                                                                              |                                                    |
|--------------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| M20-U                    | UHP - Ra 0.15µm Ep. (6 Ra)                                   | MT                                                                                                                                                                                                                                                                                                               | Multi-Turn Handwheel                               |
| M20-V                    | HP/UHP - Ra 0.25µm Ep. (10 Ra)                               | PP2                                                                                                                                                                                                                                                                                                              | Pneumatically actuated<br>(Normally close version) |
| M20-S                    | HP Version - Ra 0.4µm (15 Ra) non EP                         |                                                                                                                                                                                                                                                                                                                  |                                                    |
| 3 - Valve Configurations |                                                              | Standard colour for handles: white (other colours on request)<br>for pneumatic actuators: blue                                                                                                                                                                                                                   |                                                    |
| 2V1                      | 2 ports in line                                              | 4 - Body Material                                                                                                                                                                                                                                                                                                |                                                    |
| 2VPEG                    | 2 Ports in line, upstream purge port - left side             |                                                                                                                                                                                                                                                                                                                  |                                                    |
| 2VPSG                    | 2 Ports in line, downstream purge port - left side           |                                                                                                                                                                                                                                                                                                                  |                                                    |
| 2V1P2                    | 2 Ports in line, 2 purge ports upstream/downstream/left side |                                                                                                                                                                                                                                                                                                                  |                                                    |
| 5 - Seat Material        |                                                              | 6 - End Connections for 2VPEG/2VPSG/2V1P2/2V1                                                                                                                                                                                                                                                                    |                                                    |
| K                        | PCTFE (Kel-F®)                                               |                                                                                                                                                                                                                                                                                                                  |                                                    |
| V                        | PI (VespeI®)                                                 |                                                                                                                                                                                                                                                                                                                  |                                                    |
| P                        | PVDF                                                         |                                                                                                                                                                                                                                                                                                                  |                                                    |
| 7 - Options              |                                                              | V 3/4-F VAC-U-FAST® 3/4" - Female (Face Seal*)<br>V 3/4-M VAC-U-FAST® 3/4" - Male (Face Seal*)<br>B 3/4 BWO 3/4" (Butt Orbital Weld)<br>B1 BWO 1" (Butt Orbital Weld)<br>V1-M VAC-U-FAST® 1" - Male (Face Seal*)<br>Double ring fittings on request<br>Purge port available as BWO 1/4" or VAC-U-FAST® 1/4" male |                                                    |
| FT                       | Panel Mounting                                               |                                                                                                                                                                                                                                                                                                                  |                                                    |
| —                        | Back Mounting                                                |                                                                                                                                                                                                                                                                                                                  |                                                    |
| CI                       | Electric Limit Switch (PP2 actuators)                        |                                                                                                                                                                                                                                                                                                                  |                                                    |



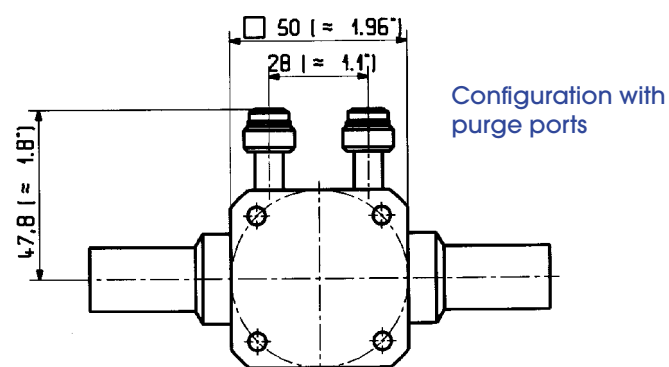
VAC-U-FAST® -Female  
(face seal)\*



VAC-U-FAST® -Male  
(face seal)\*



BWO for standard  
welding heads



Configuration with  
purge ports

\* All VAC-U-FAST® Face Seals are VCR® compatible. VCR® is a registered trade mark of CAJON CO., HASTELLOY® is a registered trade mark of CABOT Corp., Kel-F® is a registered trade mark of 3M company, VespeI® is a registered trade mark of DUPONT, ELGILOY® is a registered trade mark of ELGILOY Company.



# SELFA

## Valves & Fittings

A total component solution, from source to process

### M20

#### SPRINGLESS DIAPHRAGM VALVES FOR HP AND UHP APPLICATIONS (STANDARD AND GAS SPECIFIC)



FEATURE
a unique proven design

M20

TECHNICAL DATA

M20

Tied diaphragm design for positive seat opening and retraction

Low particle emission

Fully swept flow path

Reduced gas absorption and desorption from seat material

Clean operation, no rubbing

Fully contained Seat

Small internal volume

Easy purgeability

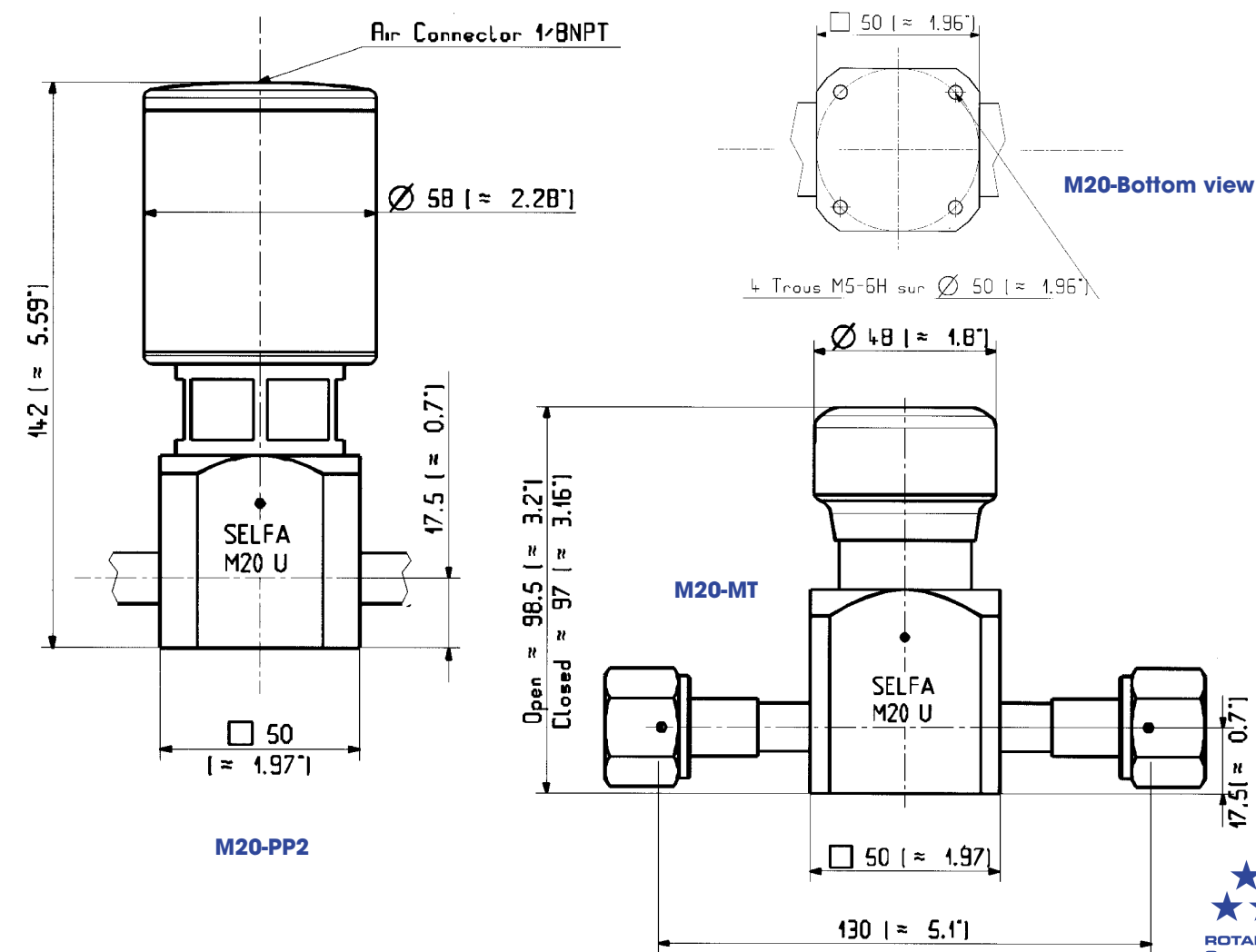
Selected Stainless Steels for low sulfur content as well as optimized impurity levels

Excellent flow coefficient

Metal to Metal sealing to atmosphere

| TECHNICAL DATA                                              |                   |                                                               |
|-------------------------------------------------------------|-------------------|---------------------------------------------------------------|
| Fluid Media                                                 |                   | High and Ultra High Purity, corrosive and non-corrosive gases |
| Max operating pressure                                      | M20 MT manual     | 15 bar (215 PSI)                                              |
|                                                             | M20 PP2 pneumatic | 15 bar (215 PSI)                                              |
| Min. operating pressure                                     |                   | Vacuum (for manual only)                                      |
| Actuator opening pressure                                   |                   | 5 to 7 bar (75 to 105 PSI)                                    |
| Temperature range                                           |                   | -20°C to + 80°C (-4°F to 176°F)                               |
| Flow Coefficient                                            |                   | Cv = 3,5                                                      |
| Certified max. Helium inboard leak rate (at max. pressure)  |                   | < 10 <sup>-9</sup> mbar.l/sec                                 |
| Certified max. Helium outboard leak rate (at max. pressure) |                   | < 10 <sup>-9</sup> mbar.l/sec                                 |
| Nominal Seat Diameter                                       |                   | 20 mm (0.79")                                                 |

DIMENSIONS



CONSTRUCTION MATERIALS

|                  |                     | Valve Grade & Materials                      |                      |                     |
|------------------|---------------------|----------------------------------------------|----------------------|---------------------|
|                  | Parts               | S                                            | V                    | U                   |
| Wetted parts     | Body                | Stainless Steel 316L                         |                      |                     |
|                  | Body Surface Finish | <0,4µm (15Ra) non EP                         | < 0,25 µm (10 Ra) EP | < 0,15 µm (6 Ra) EP |
|                  | Diaphragms          | Elgiloy®                                     |                      |                     |
|                  | Seat material       | PCTFE (Kel-F®) / PVDF or Vespel (on request) |                      |                     |
| Non-wetted parts | Backup diaphragm    | Elgiloy®                                     |                      |                     |
|                  | All others          | Stainless Steel or alloys                    |                      |                     |

Manual Actuation

| Upper Spindle | Stainless Steel           |
|---------------|---------------------------|
| Handle        | Aluminum                  |
| All others    | Stainless Steel or Alloys |

Pneumatic Actuation

| Parts         | PP2               |
|---------------|-------------------|
| O-ring        | NBR               |
| Actuator Body | Aluminum Anodized |