

## Valve Key

BUTTERFLY, SINGLE SEAT, MIX PROOF, ASEPTIC, REGULATING, PROCESS VALVES



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# SV & SVS Butterfly Valves



The order code is constructed as follows:

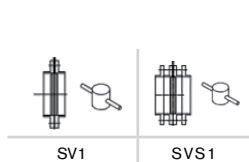
| POSITION | 1   | 2    | 3 | 4   | 5  | 6    | 7  | 8 | 9 | 10 | 11 |
|----------|-----|------|---|-----|----|------|----|---|---|----|----|
| CODE     | SV1 | 316L | T | T20 | A1 | C41Y | 30 | R | E | 10 | A0 |

\* Add multiple options to the end of code (i.e. -A1A3)

## (1) VALVE TYPE

**SV1** Standard (2-piece design)

**SVS1** Intermediate Flanged (4-piece design)



## (2) MATERIAL OF CONSTRUCTION

**316L** Housing Material

## (3) PORT CONNECTIONS

**F** Hygienic Flange (SVS1 only)

**T** Clamp (DIN 32676)

**W** Buttweld

**G** DIN Male Thread (DIN 11851)

**R** RJT Ring Joint Type (BS 4825-5)

**S** SMS Swedish Milk Standard (SMS 1145)

**K** DIN Female Liner and Nut (DIN 11851)

**I** IDF/ISS (International Dairy Fitting)

**X** Without Counter Flanges (SVS1 only)

For mixed port connections, specify both key

identifiers. Example: TS or GK

Additional port connections available upon request.

Please contact factory.

## (4) PORT SIZES

|              |         |            |           |
|--------------|---------|------------|-----------|
| <b>DN25</b>  | DN 25   | <b>T10</b> | 1.0" Tube |
| <b>DN40</b>  | DN 40   | <b>T15</b> | 1.5" Tube |
| <b>DN50</b>  | DN 50   | <b>T20</b> | 2.0" Tube |
| <b>DN65</b>  | DN 65   | <b>T25</b> | 2.5" Tube |
| <b>DN80</b>  | DN 80   | <b>T30</b> | 3.0" Tube |
| <b>DN100</b> | DN 100  | <b>T40</b> | 4.0" Tube |
| <b>DN125</b> | DN 125  |            |           |
| <b>DN150</b> | DN 150  |            |           |
| <b>DN200</b> | DN 200* |            |           |
| <b>DN250</b> | DN 250* |            |           |

\*SVS1 only

## (5) ACTUATOR

| NORMALLY CLOSED | NORMALLY OPEN | AIR TO AIR | MANUAL | ACTUATOR SIZE                                                                   | NOMINAL VALVE SIZE    | OPTIONAL VALVE SIZE |
|-----------------|---------------|------------|--------|---------------------------------------------------------------------------------|-----------------------|---------------------|
| A1              | A2            | A3         |        | 80 mm diameter                                                                  | DN25-DN100 or T10-T40 |                     |
| B1              | B2            | B3         |        | 125 mm diameter                                                                 | DN125-DN150 or T60    | DN100 or T40        |
| C1              | C2            | C3         |        | 180 mm diameter                                                                 | DN200-DN250           | DN125, DN150        |
|                 |               |            |        | Standard Manual Handle Open/Closed Position                                     | DN25-DN100 or T10-T40 |                     |
|                 |               |            |        | Lockable Manual Handle Open/Closed Position                                     | DN25-DN100 or T10-T40 |                     |
|                 |               |            |        | Infinite Position Adjustment Manual Handle                                      | DN25-DN100 or T10-T40 |                     |
|                 |               |            |        | Manual Handle with yoke, coupling, and indicator for position feedback*         | DN25-DN100 or T10-T40 |                     |
|                 |               |            |        | Metal Multi-position Handle                                                     | DN25-DN250 or T10-T60 |                     |
|                 |               |            |        | Manual Handle with compact yoke, coupling, and indicator for position feedback* | DN25-DN100 or T10-T40 |                     |

\* Position feedback sensor sold separately.

## (6) CONTROL UNIT / FEEDBACK

See page 29 for most common control unit configurations. **BOLD** indicates standard control unit options. Use identifier "AA0A" as default for valves without control unit or sensor feedback.

### CU Identifier Positions 1 & 2

| CONTROL UNIT TYPE |                                     |
|-------------------|-------------------------------------|
| <b>C4</b>         | <b>CU4</b>                          |
| CP                | CU4plus                             |
| C3                | CU3                                 |
| CX                | ATEX/IECEX CU                       |
| BE                | TC 8692 Electropneumatic Positioner |

### CU Identifier Position 3

| SOLENOID |                          |
|----------|--------------------------|
| <b>1</b> | <b>1 Solenoid</b>        |
| 9        | 1 Solenoid + NOT Element |

### CU Identifier Position 4

| COMMUNICATION TYPE |                       |               | CU UNITS AVAILABLE           |
|--------------------|-----------------------|---------------|------------------------------|
|                    | COMMUNICATION         | VOLTAGE       |                              |
| <b>W</b>           | <b>Direct Connect</b> | <b>24V DC</b> | <b>CU4</b> , TC8692, ATEX CU |
| U                  | Direct Connect        | 110 V AC      | CU4                          |
| T                  | AS-i 31               |               | CU4                          |
| <b>Y</b>           | <b>AS-i 62</b>        |               | <b>CU4</b> , CU4plus         |
| Z                  | DeviceNet™            |               | CU3, TC 8692                 |
| V                  | Profibus DP           |               | CU3, TC 8692                 |
| S                  | Direct Connect        | 12V DC        | ATEX CU                      |

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| 6 MM AIR FITTINGS | 1/4" AIR FITTINGS | ELECTRICAL CONNECTION |
|-------------------|-------------------|-----------------------|
| XX                | N/A               | Manual Handle Only    |
| 2X                | 3X                | No CU / Feedback      |
| <b>20</b>         | <b>30</b>         | <b>Cable Gland</b>    |
| 24                | 34                | 4-pin M12 Connector*  |

For additional pin connector options on CU, please contact Factory

\*Only available on CU with AS-i communication from Delavan factory

## (8) SEAT TYPE

**TR** Elastomeric Profile Seal

## (9) SEAL MATERIAL

**E** EPDM  
**V** FPM  
**H** HNBR  
**S** VMQ

## (10) SURFACE FINISH

| GLASS BLASTED ACTUATOR OD | POLISHED ACTUATOR OD | INSIDE POLISH                              |
|---------------------------|----------------------|--------------------------------------------|
| 10                        | 20                   | 1.6 µm (63 µ-in) Ra ID                     |
| 11                        | 21                   | 0.8 µm (32 µ-in) Ra ID                     |
| 12                        | 22                   | 0.5 µm (20 µ-in) Ra ID with Electro-Polish |

**Note: Base valve always has machine finish OD**

## (11) OPTIONS

**A0** None  
**A1S** 3.1 Inspection certificate (3.1 certification on housing halves; 2.2 certification on flap/disc)  
**A3** ATEX  
**C6** Assembled (standard manual handle valve supplied dis-assembled for easier installation into pipeline; standard actuated valve supplied assembled)

# SW Series Single Seat Valves



The order code is constructed as follows:

| POSITION | 1  | 2  | 3 | 4   | 5  | 6    | 7  | 8  | 9 | 10 | 11 |
|----------|----|----|---|-----|----|------|----|----|---|----|----|
| CODE     | SW | 41 | W | T30 | C1 | CP1Y | 30 | TR | E | 10 | A0 |

**NOTE:** Add multiple options to the end of code (i.e. -A1A3)

## (1) VALVE TYPE

**SW** Single Seat Valves

## (2) HOUSING COMBINATIONS

### Shut-off Valves

|    |    |     |     |       |       |
|----|----|-----|-----|-------|-------|
|    |    |     |     |       |       |
| 41 | 42 | E41 | E42 | E43** | E44** |

**\*\*E-style manifold housings are one-piece fully welded**

### Tank Outlet Valves\*

|     |     |
|-----|-----|
|     |     |
| T41 | T42 |

**\*Tank flanges ordered separately**

### Change-over Valves

|    |    |    |    |     |     |     |     |     |     |      |
|----|----|----|----|-----|-----|-----|-----|-----|-----|------|
|    |    |    |    |     |     |     |     |     |     |      |
| 43 | 44 | 47 | 48 | E45 | E46 | E47 | E48 | S45 | S46 | SE45 |

## (3) PORT CONNECTIONS

**W** Butt weld

**T** Clamp (DIN 32676)

Additional and mixed port connections available upon request on certain housing combinations.  
Please contact factory.

## (4) PORT SIZES

|              |        |            |           |
|--------------|--------|------------|-----------|
| <b>DN25</b>  | DN 25  | <b>T10</b> | 1.0" Tube |
| <b>DN40</b>  | DN 40  | <b>T15</b> | 1.5" Tube |
| <b>DN50</b>  | DN 50  | <b>T20</b> | 2.0" Tube |
| <b>DN65</b>  | DN 65  | <b>T25</b> | 2.5" Tube |
| <b>DN80</b>  | DN 80  | <b>T30</b> | 3.0" Tube |
| <b>DN100</b> | DN 100 | <b>T40</b> | 4.0" Tube |
| <b>DN125</b> | DN 125 |            |           |
| <b>DN150</b> | DN 150 | <b>T60</b> | 6.0" Tube |

For availability of mixed sizes on E-style matrix housings, please contact Factory

## (5) ACTUATOR

| NORMALLY CLOSED | NORMALLY OPEN | AIR TO AIR | MANUAL | ACTUATOR SIZE               | NOMINAL VALVE SIZE <sup>1</sup> |
|-----------------|---------------|------------|--------|-----------------------------|---------------------------------|
| A1              | A2            | A3         |        | 74 mm diameter              | DN25, DN40, T10, T15            |
| B1              | B2            | B3         |        | 110 mm diameter             | DN50, DN65, T20, T25            |
| C1              | C2            | C3         |        | 165 mm diameter             | DN80, DN100, T30, T40           |
| D1              | D2            | D3         |        | 255 mm diameter             | Only DN125, D150, T60           |
| E1              | E2            |            |        | 110 mm diameter Long Stroke | Only DN50 to DN65 & T20 to T25  |
| F1              | F2            |            |        | 165 mm diameter Long Stroke | Only DN80, DN100, T30, T40      |
|                 |               |            | H1     | Manual Hand Actuator        | DN25-DN150 or T10-T60           |

Add "L" to actuator identifier for stroke limiting mid-position actuator (example "B1L"). Only available on A1, B1, C1.

<sup>1</sup> A, B & C sizes can be used beyond the nominal valve sizes DN25-DN100. See instruction manual for holding pressures.

For change-over valves, "Normally Closed" = "Fail Down" and "Normally Open" = "Fail Up"

## (6) CONTROL UNIT / FEEDBACK

See page 29 for most common control unit configurations. **BOLD** indicates standard control unit options. Use identifier “HP0N” as default for valves without control unit. Use identifier “AA0A” for valves with manual handle.

### CU Identifier Positions 1 & 2

| CONTROL UNIT TYPE |               |
|-------------------|---------------|
| <b>C4</b>         | <b>CU4</b>    |
| CP                | CU4plus       |
| C3                | CU3           |
| CX                | ATEX/IECEX CU |

### CU Identifier Position 3

| SOLENOID |                           |
|----------|---------------------------|
| <b>1</b> | <b>1 Solenoid</b>         |
| 9        | 1 Solenoid + NOT Element* |
| 3        | 3 Solenoid                |

\*Only available up to DN100/T40 size

### CU Identifier Position 4

| COMMUNICATION TYPE |                       |               | CU UNITS AVAILABLE  |
|--------------------|-----------------------|---------------|---------------------|
|                    | COMMUNICATION         | VOLTAGE       |                     |
| <b>W</b>           | <b>Direct Connect</b> | <b>24V DC</b> | <b>CU4, ATEX CU</b> |
| U                  | Direct Connect        | 110 V AC      | CU4                 |
| T                  | AS-i 31               |               | CU4                 |
| <b>Y</b>           | <b>AS-i 62</b>        |               | <b>CU4, CU4plus</b> |
| Z                  | DeviceNet™            |               | CU3                 |
| V                  | Profibus DP           |               | CU3                 |
| S                  | Direct Connect        | 12V DC        | ATEX CU             |

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| 6 MM AIR FITTINGS | 1/4" AIR FITTINGS | ELECTRICAL CONNECTION |
|-------------------|-------------------|-----------------------|
| XX                | N/A               | Manual Handle Only    |
| 2X                | 3X                | No CU / Feedback      |
| <b>20</b>         | <b>30</b>         | <b>Cable Gland</b>    |
| 24                | 34                | 4-pin M12 Connector*  |

For additional pin connector options on CU, please contact Factory

\*Only available on CU with AS-i communication from Delavan factory

## (8) SEAT TYPE

**TR** Elastomeric Profile Seal

## (9) SEAL MATERIAL

**E** EPDM  
**V** FPM  
**H** HNBR  
**S** VMQ

## (10) SURFACE FINISH

| GLASS BLASTED OD | POLISHED OD | INSIDE POLISH                              |
|------------------|-------------|--------------------------------------------|
| 10               | 20          | 1.6 µm (63 µ-in) Ra ID                     |
| 11               | 21          | 0.8 µm (32 µ-in) Ra ID with Electro-Polish |

## (11) OPTIONS

**A0** None  
**A1S** 3.1 Inspection certificate  
**A3** ATEX  
**B1** 3-A certification (at minimum with 0.8 µm (32 µ-in) Ra ID finish)  
**C1** Steam Barrier (DPF)  
**C7** Elastomer shaft seal

For high pressure (hp) options, please contact factory

# SWmini Series Fractional Size Single Seat Valves



The order code is constructed as follows:

| POSITION | 1      | 2  | 3 | 4   | 5  | 6    | 7  | 8  | 9 | 10 | 11 |
|----------|--------|----|---|-----|----|------|----|----|---|----|----|
| CODE     | SWmini | 41 | W | T30 | C1 | C41W | 20 | TR | E | 10 | A0 |

\* Add multiple options to the end of code (i.e. -A1A3)

## (1) VALVE TYPE

**SWmini** Single Seat Fractional

## (2) HOUSING COMBINATIONS

| Shut-off Valves |    | Change-over Valves |    |    |    |
|-----------------|----|--------------------|----|----|----|
|                 |    |                    |    |    |    |
| 41              | 42 | 43                 | 44 | 47 | 48 |

## (3) PORT CONNECTIONS

**W** Butt weld  
**T** Clamp (DIN 32676)

## (4) PORT SIZES

**DN10** DN 10      **T050** 0.5" Tube  
**DN15** DN 15      **T075** 0.75" Tube  
**DN20** DN 20      **T10** 1.0" Tube

## (5) ACTUATOR

| NORMALLY CLOSED | NORMALLY OPEN | AIR TO AIR | MANUAL | ACTUATOR SIZE   | NOMINAL VALVE SIZE         |
|-----------------|---------------|------------|--------|-----------------|----------------------------|
| G1              | G2            | G3         |        | 50 mm           | Only Used On SWmini Valves |
|                 |               |            | H1     | Manual Actuator |                            |

For change-over valves, "Normally Closed" = "Fail Down" and "Normally Open" = "Fail Up"

## (6) CONTROL UNIT / FEEDBACK

See page 29 for most common control unit configurations. **BOLD** indicates standard control unit options. Use identifier "HPON" as default for valves without control unit. Use identifier "AA0A" for valves with manual handle.

### CU Identifier Positions 1 & 2

| CONTROL UNIT TYPE |            |
|-------------------|------------|
| <b>C4</b>         | <b>CU4</b> |
| CP                | CU4plus    |
| C3                | CU3        |

### CU Identifier Position 3

| SOLENOID |                          |
|----------|--------------------------|
| <b>1</b> | <b>1 Solenoid</b>        |
| 9        | 1 Solenoid + NOT Element |
| 3        | 3 Solenoid               |

### CU Identifier Position 4

| COMMUNICATION TYPE |                       |               | CU UNITS AVAILABLE  |
|--------------------|-----------------------|---------------|---------------------|
|                    | COMMUNICATION         | VOLTAGE       |                     |
| <b>W</b>           | <b>Direct Connect</b> | <b>24V DC</b> | <b>CU4</b>          |
| U                  | Direct Connect        | 110 V AC      | CU4                 |
| T                  | AS-i 31               |               | CU4                 |
| <b>Y</b>           | <b>AS-i 62</b>        |               | <b>CU4, CU4plus</b> |
| Z                  | DeviceNet™            |               | CU3                 |
| V                  | Profibus DP           |               | CU3                 |

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| 6 MM AIR FITTINGS | 1/4" AIR FITTINGS | ELECTRICAL CONNECTION |
|-------------------|-------------------|-----------------------|
| XX                | N/A               | Manual Handle Only    |
| 2X                | 3X                | No CU / Feedback      |
| <b>20</b>         | <b>30</b>         | <b>Cable Gland</b>    |
| 24                | 34                | 4-pin M12 Connector*  |

For additional pin connector options on CU, please contact Factory  
 \*Only available on CU with AS-i communication from Delavan factory

## (8) SEAT TYPE

**TR** Elastomeric Profile Seat

## (9) SEAL MATERIAL

**E** EPDM  
**V** FPM  
**H** HNBR  
**S** VMQ

## (10) SURFACE FINISH

| POLISHED OD | INSIDE POLISH             |
|-------------|---------------------------|
| 21          | 0.8 µm<br>(32 µ-in) Ra ID |

## (11) OPTIONS

**A0** None

Note: 3-A certified design is standard

# MS Series Aseptic Diaphragm Single Seat Valves

The order code is constructed as follows:



| POSITION | 1  | 2  | 3 | 4   | 5  | 6    | 7  | 8  | 9 | 10 | 11 |
|----------|----|----|---|-----|----|------|----|----|---|----|----|
| CODE     | MS | 41 | T | T20 | B1 | C41U | 30 | TR | E | 11 | A0 |

\* Add multiple options to the end of code (i.e. -A1A3)

## (1) VALVE TYPE

**MS** Diaphragm Style with Metal Stem and Elastomeric Seat Seal

**MSP** Diaphragm Style with PTFE Stem

## (2) HOUSING COMBINATIONS

### Shut-off Valves

|    |    |     |     |     |     |
|----|----|-----|-----|-----|-----|
|    |    |     |     |     |     |
| 41 | 42 | E41 | E42 | E43 | E44 |

### Tank Outlet Valves\*

|     |     |
|-----|-----|
|     |     |
| T41 | T42 |

\*Tank flanges ordered separately

### Change-over Valves\*

|      |      |      |      |
|------|------|------|------|
|      |      |      |      |
| ES45 | ES46 | ES47 | ES48 |

\*Change-over valves only available as MS type

## (3) PORT CONNECTIONS

**W** Butt weld

**T** Clamp (DIN 32676)

## (4) PORT SIZES

|              |        |            |           |
|--------------|--------|------------|-----------|
| <b>DN25</b>  | DN 25  | <b>T10</b> | 1.0" Tube |
| <b>DN40</b>  | DN 40  | <b>T15</b> | 1.5" Tube |
| <b>DN50</b>  | DN 50  | <b>T20</b> | 2.0" Tube |
| <b>DN65</b>  | DN 65  | <b>T25</b> | 2.5" Tube |
| <b>DN80</b>  | DN 80  | <b>T30</b> | 3.0" Tube |
| <b>DN100</b> | DN 100 | <b>T40</b> | 4.0" Tube |

## (5) ACTUATOR

| NORMALLY CLOSED | NORMALLY OPEN | AIR TO AIR | MANUAL | ACTUATOR SIZE        | NOMINAL VALVE SIZE <sup>1</sup>  |
|-----------------|---------------|------------|--------|----------------------|----------------------------------|
| A1              | A2            | A3         |        | 74 mm diameter       | DN25, T10                        |
| B1              | B2            | B3         |        | 110 mm diameter      | DN40, DN50, T15, T20             |
| C1              | C2            | C3         |        | 165 mm diameter      | DN65, DN80, DN100, T25, T30, T40 |
|                 |               |            | H1     | Manual Hand Actuator | DN25-DN100 or T10-T40            |

Add "L" to actuator identifier for stroke limiting mid-position actuator (example "B1L"). Only available on A1, B1, C1.

<sup>1</sup> A, B & C sizes can be used beyond the nominal valve sizes DN25-DN100. See instruction manual for holding pressures.

For change-over valves, "Normally Closed" = "Fail Down" and "Normally Open" = "Fail Up"

## (6) CONTROL UNIT / FEEDBACK

See page 29 for most common control unit configurations. **BOLD** indicates standard control unit options. Use identifier “HP0N” as default for valves without control unit. Use identifier “AA0A” for valves with manual handle.

### CU Identifier Positions 1 & 2

| CONTROL UNIT TYPE |                |
|-------------------|----------------|
| <b>C4</b>         | <b>CU4</b>     |
| CP                | CU4plus        |
| C3                | CU3            |
| CX                | ATEX/IECEX CU* |

\*Not available with MSP type

### CU Identifier Position 3

| SOLENOID |                           |
|----------|---------------------------|
| <b>1</b> | <b>1 Solenoid</b>         |
| 9        | 1 Solenoid + NOT Element* |
| 3        | 3 Solenoid                |

\*Not available with MSP type

### CU Identifier Position 4

| COMMUNICATION TYPE |                       |               | CU UNITS AVAILABLE  |
|--------------------|-----------------------|---------------|---------------------|
|                    | COMMUNICATION         | VOLTAGE       |                     |
| <b>W</b>           | <b>Direct Connect</b> | <b>24V DC</b> | <b>CU4, ATEX CU</b> |
| U                  | Direct Connect        | 110 V AC      | CU4                 |
| T                  | AS-i 31               |               | CU4                 |
| <b>Y</b>           | <b>AS-i 62</b>        |               | <b>CU4, CU4plus</b> |
| Z                  | DeviceNet™            |               | CU3                 |
| V                  | Profibus DP           |               | CU3                 |
| S                  | Direct Connect        | 12V DC        | ATEX CU             |

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| 6 MM AIR FITTINGS | 1/4" AIR FITTINGS | ELECTRICAL CONNECTION |
|-------------------|-------------------|-----------------------|
| XX                | N/A               | Manual Handle Only    |
| 2X                | 3X                | No CU / Feedback      |
| <b>20</b>         | <b>30</b>         | <b>Cable Gland</b>    |
| 24                | 34                | 4-pin M12 Connector*  |

For additional pin connector options on CU, please contact Factory

\*Only available on CU with AS-i communication from Delavan factory

## (8) SEAT TYPE

|           |                          |
|-----------|--------------------------|
| <b>TR</b> | Elastomeric Profile Seat |
| <b>PT</b> | PTFE Stem (MSP only)     |

## (9) SEAL MATERIAL

|          |                 |
|----------|-----------------|
| <b>E</b> | EPDM            |
| <b>V</b> | FPM             |
| <b>H</b> | HNBR            |
| <b>T</b> | PTFE (MSP only) |

## (10) SURFACE FINISH

| GLASS BLASTED OD | POLISHED OD | INSIDE POLISH                              |
|------------------|-------------|--------------------------------------------|
| 10*              | 20*         | 1.6 µm (63 µ-in) Ra ID                     |
| 11               | 21          | 0.8 µm (32 µ-in) Ra ID with Electro-Polish |

\*Not available with MSP type

## (11) OPTIONS

|            |                                                                           |
|------------|---------------------------------------------------------------------------|
| <b>A0</b>  | None                                                                      |
| <b>A1S</b> | 3.1 Inspection certificate                                                |
| <b>A3</b>  | ATEX (unavailable with MSP type)                                          |
| <b>B1</b>  | 3-A certification (at minimum with 0.8 µm (32 µ-in) Ra ID surface finish) |

# AP Series Fractional Size Aseptic Diaphragm Single Seat Valves



The order code is constructed as follows:

| POSITION | 1  | 2  | 3 | 4    | 5   | 6    | 7  | 8  | 9 | 10 | 11 |
|----------|----|----|---|------|-----|------|----|----|---|----|----|
| CODE     | AP | 11 | W | DN10 | EC1 | AA0A | 2X | PT | T | 11 | A0 |

\* Add multiple options to the end of code (i.e. -A1A3)

## (1) VALVE TYPE

**AP** Fractional Size Diaphragm Style with PTFE Stem

## (2) HOUSING COMBINATIONS

| Shut-off Valves |    | Tank Outlet Valves* |     |
|-----------------|----|---------------------|-----|
|                 |    |                     |     |
| 11              | 12 | T41                 | T42 |

\*Tank flanges ordered separately

## (3) PORT CONNECTIONS

**W** Buttweld  
**T** Clamp (DIN 32676)

## (4) PORT SIZES

**DN10** DN 10      **T005** 0.5" Tube  
**DN15** DN 15  
**DN20** DN 20

## (5) ACTUATOR

| NORMALLY CLOSED | NORMALLY OPEN | AIR TO AIR | MANUAL | ACTUATOR             |
|-----------------|---------------|------------|--------|----------------------|
| EC1             | EC2           | EC3        |        | Econo Air Actuator   |
| TC1             | TC2           | TC3        |        | Techno Air Actuator  |
|                 |               |            | HE     | Econo Hand Actuator  |
|                 |               |            | HT     | Techno Hand Actuator |

## (6) FEEDBACK

| IDENTIFIER | DESCRIPTION                                           |
|------------|-------------------------------------------------------|
| AA0A       | No CU                                                 |
| HP0N       | 2 Prox (open/closed) - Prox Holder only (no switches) |

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| 4 MM AIR FITTINGS | CONNECTION TYPE    |
|-------------------|--------------------|
| XX                | Manual Handle Only |
| 2X                | No CU / Feedback   |

## (8) SEAT TYPE

**PT** PTFE Stem

## (9) SEAL MATERIAL

**T** PTFE

## (10) SURFACE FINISH

| POLISHED OD | INSIDE POLISH                                            |
|-------------|----------------------------------------------------------|
| 21          | Econo Only - 0.8 µm (32 µ-in) Ra ID with Electro-Polish  |
| 22          | Techno Only - 0.5 µm (20 µ-in) Ra ID with Electro-Polish |

## (11) OPTIONS

**A0** None  
**A1** 3.1 Certification (only with Techno)

**Note: 3-A certified design is standard**

# D4 Series Double Seat Mix Proof Valve

**A**  
**3**



The order code is constructed as follows:

| POSITION | 1  | 2  | 3 | 4   | 5  | 6    | 7  | 8  | 9 | 10 | 11* |
|----------|----|----|---|-----|----|------|----|----|---|----|-----|
| CODE     | D4 | 44 | W | T30 | SL | C43W | 20 | TR | E | 11 | A0  |

\* Add multiple options to the end of code (i.e. -A1A3)

## (1) VALVE TYPE

**D4** Double Seat Mix Proof

## (2) HOUSING COMBINATIONS

### Shut-off Valves



## (3) PORT CONNECTIONS

**W** Buttweld

Additional and mixed port connections available upon request. Please contact factory.

## (4) PORT SIZES

|              |        |            |           |
|--------------|--------|------------|-----------|
| <b>DN40</b>  | DN 40  | <b>T15</b> | 1.5" Tube |
| <b>DN50</b>  | DN 50  | <b>T20</b> | 2.0" Tube |
| <b>DN65</b>  | DN 65  | <b>T25</b> | 2.5" Tube |
| <b>DN80</b>  | DN 80  | <b>T30</b> | 3.0" Tube |
| <b>DN100</b> | DN 100 | <b>T40</b> | 4.0" Tube |

For mixed size valves, indicate lower ports first.

Example: 1.5" Lower Housing by 2" Upper Housing is T15T20.

To verify availability of mixed sizes, please contact Factory

## (5) ACTUATOR

| IDENTIFIER | DESCRIPTION      |
|------------|------------------|
| NSL        | Non Seat Lifting |
| SL         | Seat Lifting     |

## (6) CONTROL UNIT / FEEDBACK

See page 29 for most common control unit configurations. **BOLD** indicates standard control unit options. Use identifier "HP0N" as default for valves without control unit.

### CU Identifier Positions 1 & 2

| CONTROL UNIT TYPE |            |
|-------------------|------------|
| <b>C4</b>         | <b>CU4</b> |
| CP                | CU4plus    |

### CU Identifier Position 3

| SOLENOID |             |
|----------|-------------|
| 1        | 1 Solenoid* |
| 3        | 3 Solenoids |

\*Not available with seat lift actuator

### CU Identifier Position 4

| COMMUNICATION TYPE |                       |               | CU UNITS AVAILABLE  |
|--------------------|-----------------------|---------------|---------------------|
|                    | COMMUNICATION         | VOLTAGE       |                     |
| <b>W</b>           | <b>Direct Connect</b> | <b>24V DC</b> | <b>CU4</b>          |
| <b>Y</b>           | <b>AS-i 62</b>        |               | <b>CU4, CU4plus</b> |
| T                  | AS-i 31               |               | CU4                 |

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| 6 MM AIR FITTINGS | 1/4" AIR FITTINGS | ELECTRICAL CONNECTION |
|-------------------|-------------------|-----------------------|
| 2X                | 3X                | No CU                 |
| <b>20</b>         | <b>30</b>         | <b>Cable Gland</b>    |
| 24                | 34                | 4-pin M12 Connector   |

For additional pin connector options on CU, please contact Factory

## (8) SEAT TYPE

**TR** Elastomeric Profile Seal

## (9) SEAL MATERIAL

**E** EPDM

**V** FPM

**H** HNBR

## (10) SURFACE FINISH

| GLASS BLASTED OD | INSIDE POLISH          |
|------------------|------------------------|
| 11               | 0.8 µm (32 µ-in) Ra ID |

## (11) OPTIONS

**A0** None

**NOTE: 3-A certified design is standard**

# DA4 Double Seat Mix Proof Valve



The order code is constructed as follows:

| POSITION | 1   | 2  | 3 | 4    | 5  | 6    | 7  | 8  | 9 | 10 | 11* |
|----------|-----|----|---|------|----|------|----|----|---|----|-----|
| CODE     | DA4 | 44 | W | DN50 | SL | C43Y | 20 | TR | E | 11 | A0  |

\* Add multiple options to the end of code (i.e. -A1A3)

## (1) VALVE TYPE

**DA4** Advanced Ultra-Hygienic Double Seat Mix Proof

## (2) HOUSING COMBINATIONS

### Shut-off Valves



Use identifier "40" for replacement insert (less housing) to upgrade an existing DA3+ valve. New control unit is required to adapt to D4 series valves.

## (3) PORT CONNECTIONS

**W** Buttweld

Additional and mixed port connections available upon request. Please contact factory.

## (4) PORT SIZES

|              |        |            |           |
|--------------|--------|------------|-----------|
| <b>DN40</b>  | DN 40  | <b>T15</b> | 1.5" Tube |
| <b>DN50</b>  | DN 50  | <b>T20</b> | 2.0" Tube |
| <b>DN65</b>  | DN 65  | <b>T25</b> | 2.5" Tube |
| <b>DN80</b>  | DN 80  | <b>T30</b> | 3.0" Tube |
| <b>DN100</b> | DN 100 | <b>T40</b> | 4.0" Tube |

For mixed size valves, indicate lower ports first.

Example: 1.5" Lower Housing by 2" Upper Housing is T15T20.

To verify availability of mixed sizes, please contact Factory

## (5) ACTUATOR

| IDENTIFIER | DESCRIPTION                                                                                                           |
|------------|-----------------------------------------------------------------------------------------------------------------------|
| SL         | Seat Lifting (Includes Integrated Upper and Lower Shaft Flush for extensive cleaning and minimal CIP losses to drain) |

## (6) CONTROL UNIT / FEEDBACK

See page 29 for most common control unit configurations. **BOLD** indicates standard control unit options. Use identifier "HP0N" as default for valves without control unit.

### CU Identifier Positions 1 & 2

| CONTROL UNIT TYPE |            |
|-------------------|------------|
| <b>C4</b>         | <b>CU4</b> |
| CP                | CU4plus    |

### CU Identifier Position 3

| SOLENOID |             |
|----------|-------------|
| 3        | 3 Solenoids |

### CU Identifier Position 4

| COMMUNICATION TYPE |                       |               | CU UNITS AVAILABLE  |
|--------------------|-----------------------|---------------|---------------------|
|                    | COMMUNICATION         | VOLTAGE       |                     |
| <b>W</b>           | <b>Direct Connect</b> | <b>24V DC</b> | <b>CU4</b>          |
| <b>Y</b>           | <b>AS-i 62</b>        |               | <b>CU4, CU4plus</b> |
| <b>T</b>           | AS-i 31               |               | CU4                 |

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| 6 MM AIR FITTINGS | 1/4" AIR FITTINGS | ELECTRICAL CONNECTION |
|-------------------|-------------------|-----------------------|
| 2X                | 3X                | No CU                 |
| <b>20</b>         | <b>30</b>         | <b>Cable Gland</b>    |
| 24                | 34                | 4-pin M12 Connector   |

For additional pin connector options on CU, please contact Factory

## (8) SEAT TYPE

**TR** Elastomeric Profile Seal

## (9) SEAL MATERIAL

|          |      |
|----------|------|
| <b>E</b> | EPDM |
| <b>V</b> | FPM  |
| <b>H</b> | HNBR |

## (10) SURFACE FINISH

| GLASS BLASTED OD | INSIDE POLISH          |
|------------------|------------------------|
| 11               | 0.8 µm (32 µ-in) Ra ID |

## (11) OPTIONS

**A0** None

**NOTE: 3-A certified design is standard**

# DE Series Double Seat Mix Proof Valves



The order code is constructed as follows:

| POSITION | 1  | 2  | 3 | 4    | 5   | 6    | 7  | 8  | 9 | 10 | 11* |
|----------|----|----|---|------|-----|------|----|----|---|----|-----|
| CODE     | DE | 34 | W | DN50 | NSL | C41W | 20 | TR | E | 11 | A0  |

\* Add multiple options to the end of code (i.e. -A1A3)

## (1) VALVE TYPE

**DE** Double Seat Mix Proof

## (2) HOUSING COMBINATIONS

### Shut-off Valves

|        |        |        |    |    |    |
|--------|--------|--------|----|----|----|
|        |        |        |    |    |    |
| 31(16) | 31(17) | 31(18) | 32 | 33 | 34 |

### Change-over Valves

|     |     |     |     |
|-----|-----|-----|-----|
|     |     |     |     |
| U35 | U36 | U37 | U38 |

### Tank Outlet Valves\*

|     |
|-----|
|     |
| T32 |

\*Tank flanges ordered separately

## (3) PORT CONNECTIONS

**W** Buttweld

Additional and mixed port connections available upon request. Please contact Factory.

## (4) PORT SIZES

|              |        |            |           |            |                        |
|--------------|--------|------------|-----------|------------|------------------------|
| <b>DN40</b>  | DN 40  | <b>T15</b> | 1.5" Tube |            |                        |
| <b>DN50</b>  | DN 50  | <b>T20</b> | 2.0" Tube | <b>P20</b> | 2" IPS Schedule 5 Pipe |
| <b>DN65</b>  | DN 65  | <b>T25</b> | 2.5" Tube |            |                        |
| <b>DN80</b>  | DN 80  | <b>T30</b> | 3.0" Tube | <b>P30</b> | 3" IPS Schedule 5 Pipe |
| <b>DN100</b> | DN 100 | <b>T40</b> | 4.0" Tube | <b>P40</b> | 4" IPS Schedule 5 Pipe |
| <b>DN125</b> | DN 125 |            |           |            |                        |
| <b>DN150</b> | DN 150 | <b>T60</b> | 6.0" Tube | <b>P60</b> | 6" IPS Schedule 5 Pipe |

For mixed size valves, indicate lower ports first.

Example: 1.5" Lower Housing by 2" Upper Housing is T15T20.

To verify availability of mixed sizes, please contact Factory

## (5) ACTUATOR

| IDENTIFIER | DESCRIPTION                                                                 |
|------------|-----------------------------------------------------------------------------|
| NSL        | Non Seat Lifting (Includes External Flush to clean atmospheric vent cavity) |

## (6) CONTROL UNIT / FEEDBACK

See page 29 for most common control unit configurations. **BOLD** indicates standard control unit options. Use identifier "HP0N" as default for valves without control unit.

### CU Identifier Positions 1 & 2

| CONTROL UNIT TYPE |               |
|-------------------|---------------|
| <b>C4</b>         | <b>CU4</b>    |
| CP                | CU4plus       |
| C3                | CU3           |
| CX                | ATEX/IECEx CU |

### CU Identifier Position 3

| SOLENOID |            |
|----------|------------|
| 1        | 1 Solenoid |

### CU Identifier Position 4

| COMMUNICATION TYPE |                       |               | CU UNITS AVAILABLE  |
|--------------------|-----------------------|---------------|---------------------|
|                    | COMMUNICATION         | VOLTAGE       |                     |
| <b>W</b>           | <b>Direct Connect</b> | <b>24V DC</b> | <b>CU4, ATEX CU</b> |
| U                  | Direct Connect        | 110 V AC      | CU4                 |
| T                  | AS-i 31               |               | CU4                 |
| <b>Y</b>           | <b>AS-i 62</b>        |               | <b>CU4, CU4plus</b> |
| Z                  | DeviceNet™            |               | CU3                 |
| V                  | Profibus DP           |               | CU3                 |
| S                  | Direct Connect        | 12V DC        | ATEX CU             |

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| 6 MM AIR FITTINGS | 1/4" AIR FITTINGS | ELECTRICAL CONNECTION |
|-------------------|-------------------|-----------------------|
| 2X                | 3X                | No CU / Feedback      |
| <b>20</b>         | <b>30</b>         | <b>Cable Gland</b>    |
| 24                | 34                | 4-pin M12 Connector*  |

For additional pin connector options on CU, please contact Factory

\*Only available on CU with AS-i communication from Delavan factory

## (8) SEAT TYPE

**TR** Elastomeric Profile Seal

## (9) SEAL MATERIAL

|          |      |
|----------|------|
| <b>E</b> | EPDM |
| <b>V</b> | FPM  |
| <b>H</b> | HNBR |
| <b>S</b> | VMQ  |

## (10) SURFACE FINISH

| GLASS BLASTED OD | POLISHED OD | INSIDE POLISH          |
|------------------|-------------|------------------------|
| 10               | 20          | 1.6 µm (63 µ-in) Ra ID |
| 11               | 21          | 0.8 µm (32 µ-in) Ra ID |

## (11) OPTIONS

|           |                                   |
|-----------|-----------------------------------|
| <b>A0</b> | None                              |
| <b>A3</b> | ATEX                              |
| <b>D9</b> | M12x1 proximity sensor compatible |

# DA Double Seat Mix Proof Valve with Seat Lift



The order code is constructed as follows:

| POSITION | 1  | 2  | 3 | 4    | 5  | 6    | 7  | 8  | 9 | 10 | 11* |
|----------|----|----|---|------|----|------|----|----|---|----|-----|
| CODE     | DA | 34 | W | DN50 | SL | C43Y | 20 | TR | E | 11 | A0  |

\* Add multiple options to the end of code (i.e. -A1A3)

## (1) VALVE TYPE

**DA** Double Seat Mix Proof

## (2) HOUSING COMBINATIONS

### Shut-off Valves

|        |        |        |    |    |    |
|--------|--------|--------|----|----|----|
|        |        |        |    |    |    |
| 31(16) | 31(17) | 31(18) | 32 | 33 | 34 |

## (3) PORT CONNECTIONS

**W** Buttweld

Additional and mixed port connections available upon request.  
Please contact factory.

## (4) PORT SIZES

|              |        |            |           |            |                        |
|--------------|--------|------------|-----------|------------|------------------------|
| <b>DN40</b>  | DN 40  | <b>T15</b> | 1.5" Tube |            |                        |
| <b>DN50</b>  | DN 50  | <b>T20</b> | 2.0" Tube | <b>P20</b> | 2" IPS Schedule 5 Pipe |
| <b>DN65</b>  | DN 65  | <b>T25</b> | 2.5" Tube |            |                        |
| <b>DN80</b>  | DN 80  | <b>T30</b> | 3.0" Tube | <b>P30</b> | 3" IPS Schedule 5 Pipe |
| <b>DN100</b> | DN 100 | <b>T40</b> | 4.0" Tube | <b>P40</b> | 4" IPS Schedule 5 Pipe |
| <b>DN125</b> | DN 125 |            |           |            |                        |
| <b>DN150</b> | DN 150 | <b>T60</b> | 6.0" Tube | <b>P60</b> | 6" IPS Schedule 5 Pipe |

For mixed size valves, indicate lower ports first.

Example: 1.5" Lower Housing by 2" Upper Housing is T15T20.

To verify availability of mixed sizes, please contact Factory

## (5) ACTUATOR

| IDENTIFIER | DESCRIPTION                                                                                                           |
|------------|-----------------------------------------------------------------------------------------------------------------------|
| SL         | Seat Lifting (Includes Integrated Upper and Lower Shaft Flush for extensive cleaning and minimal CIP losses to drain) |

## (6) CONTROL UNIT / FEEDBACK

See page 29 for most common control unit configurations. **BOLD** indicates standard control unit options. Use identifier "HP0N" as default for valves without control unit.

### CU Identifier Positions 1 & 2

| CONTROL UNIT TYPE |                                        |
|-------------------|----------------------------------------|
| <b>C4</b>         | <b>CU4</b>                             |
| CP                | CU4plus with Seat Lift Detection (SLD) |
| C3                | CU3                                    |
| CX                | ATEX/IECEx CU                          |

### CU Identifier Position 3

| SOLENOID |                   |
|----------|-------------------|
| <b>3</b> | <b>3 Solenoid</b> |

### CU Identifier Position 4

| COMMUNICATION TYPE |                       |               | CU UNITS AVAILABLE      |
|--------------------|-----------------------|---------------|-------------------------|
|                    | COMMUNICATION         | VOLTAGE       |                         |
| <b>W</b>           | <b>Direct Connect</b> | <b>24V DC</b> | <b>CU4, ATEX CU, CS</b> |
| U                  | Direct Connect        | 110 V AC      | CU4                     |
| T                  | AS-i 31               |               | CU4                     |
| <b>Y</b>           | <b>AS-i 62</b>        |               | <b>CU4, CU4plus</b>     |
| Z                  | DeviceNet™            |               | CU3                     |
| V                  | Profibus DP           |               | CU3                     |
| S                  | Direct Connect        | 12V DC        | ATEX CU                 |

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| 6 MM AIR FITTINGS | 1/4" AIR FITTINGS | ELECTRICAL CONNECTION |
|-------------------|-------------------|-----------------------|
| 2X                | 3X                | No CU / Feedback      |
| <b>20</b>         | <b>30</b>         | <b>Cable Gland</b>    |
| 24                | 34                | 4-pin M12 Connector*  |

For additional pin connector options on CU, please contact Factory

\*Only available on CU with AS-i communication from Delavan factory

## (8) SEAT TYPE

**TR** Elastomeric Profile Seal

## (9) SEAL MATERIAL

|          |      |
|----------|------|
| <b>E</b> | EPDM |
| <b>V</b> | FPM  |
| <b>H</b> | HNBR |
| <b>S</b> | VMQ  |

## (10) SURFACE FINISH

| GLASS BLASTED OD | POLISHED OD | INSIDE POLISH                              |
|------------------|-------------|--------------------------------------------|
| 11               | 21          | 0.8 µm (32 µ-in) Ra ID with Electro-Polish |

## (11) OPTIONS

|           |                                             |
|-----------|---------------------------------------------|
| <b>A0</b> | None                                        |
| <b>A2</b> | Middle vent cavity seal for water hammering |
| <b>A3</b> | ATEX                                        |
| <b>D9</b> | M12x1 proximity sensor compatible           |

# SWcip Series Double Seal Mix Proof CIP Valves



The order code is constructed as follows:

| POSITION | 1     | 2  | 3 | 4   | 5  | 6    | 7  | 8  | 9 | 10 | 11 |
|----------|-------|----|---|-----|----|------|----|----|---|----|----|
| CODE     | SWcip | 41 | W | T25 | B1 | C41W | 30 | TR | E | 10 | A0 |

## (1) VALVE TYPE

**SWcip** Double Seal Mix Proof CIP Valve

## (2) HOUSING COMBINATIONS

| Shut-off Valves |    |
|-----------------|----|
|                 |    |
| 41              | 42 |

## (3) PORT CONNECTIONS

**W** Buttweld

## (4) PORT SIZES

|              |        |            |           |
|--------------|--------|------------|-----------|
| <b>DN25</b>  | DN 25  | <b>T10</b> | 1.0" Tube |
| <b>DN40</b>  | DN 40  | <b>T15</b> | 1.5" Tube |
| <b>DN50</b>  | DN 50  | <b>T20</b> | 2.0" Tube |
| <b>DN65</b>  | DN 65  | <b>T25</b> | 2.5" Tube |
| <b>DN80</b>  | DN 80  | <b>T30</b> | 3.0" Tube |
| <b>DN100</b> | DN 100 | <b>T40</b> | 4.0" Tube |
| <b>DN125</b> | DN 125 |            |           |
| <b>DN150</b> | DN 150 | <b>T60</b> | 6.0" Tube |

## (5) ACTUATOR

| NORMALLY CLOSED | ACTUATOR SIZE   | STANDARD VALVE SIZE <sup>1</sup> |
|-----------------|-----------------|----------------------------------|
| A1              | 74 mm diameter  | DN25, DN40, T10, T15             |
| B1              | 110 mm diameter | DN50, DN65, T20, T25             |
| C1              | 165 mm diameter | DN80, DN100, T30, T40            |
| D1              | 255 mm diameter | DN125, DN150, T60                |

<sup>1</sup>See instruction manual pressure data chart for holding pressures

## (6) CONTROL UNIT / FEEDBACK

See page 29 for most common control unit configurations. **BOLD** indicates standard control unit options. Use identifier "HP0N" as default for valves without control unit.

### CU Identifier Positions 1 & 2

| CONTROL UNIT TYPE |               |
|-------------------|---------------|
| <b>C4</b>         | <b>CU4</b>    |
| CP                | CU4plus       |
| C3                | CU3           |
| CX                | ATEX/IECEX CU |

### CU Identifier Position 3

| SOLENOID |            |
|----------|------------|
| 1        | 1 Solenoid |

### CU Identifier Position 4

| COMMUNICATION TYPE |                       |               | CU UNITS AVAILABLE  |
|--------------------|-----------------------|---------------|---------------------|
|                    | COMMUNICATION         | VOLTAGE       |                     |
| <b>W</b>           | <b>Direct Connect</b> | <b>24V DC</b> | <b>CU4, ATEX CU</b> |
| U                  | Direct Connect        | 110 V AC      | CU4                 |
| T                  | AS-i 31               |               | CU4                 |
| <b>Y</b>           | <b>AS-i 62</b>        |               | <b>CU4, CU4plus</b> |
| Z                  | DeviceNet™            |               | CU3                 |
| V                  | Profibus DP           |               | CU3                 |
| S                  | Direct Connect        | 12V DC        | ATEX CU             |

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| 6 MM AIR FITTINGS | 1/4" AIR FITTINGS | ELECTRICAL CONNECTION |
|-------------------|-------------------|-----------------------|
| 2X                | 3X                | No CU / Feedback      |
| <b>20</b>         | <b>30</b>         | <b>Cable Gland</b>    |
| 24                | 34                | 4-pin M12 Connector*  |

For additional pin connector options on CU, please contact Factory

\*Only available on CU with AS-i communication from Delavan factory

## (8) SEAT TYPE

**TR** Elastomeric Profile Seal

## (9) SEAL MATERIAL

**E** EPDM

## (10) SURFACE FINISH

| GLASS BLASTED OD | POLISHED OD | INSIDE POLISH                              |
|------------------|-------------|--------------------------------------------|
| 10               | N/A         | 1.6 µm (63 µ-in) Ra ID                     |
| 11               | N/A         | 0.8 µm (32 µ-in) Ra ID with Electro-Polish |

## (11) OPTIONS

**A0** None

**A1S** 3.1 Inspection certificate

# SD Series Double Seal Mix Proof Valves



The order code is constructed as follows:

| POSITION | 1  | 2  | 3 | 4    | 5  | 6    | 7  | 8  | 9 | 10 | 11 |
|----------|----|----|---|------|----|------|----|----|---|----|----|
| CODE     | SD | 41 | W | DN65 | B1 | C49Y | 20 | TR | E | 10 | A0 |

\* Add multiple options to the end of code (i.e. -A1A3)

## (1) VALVE TYPE

**SD** Double Seal Mix Proof

**SDMS** Aseptic Double Seal Mix Proof

## (2) HOUSING COMBINATIONS

### Shut-off Valves

|    |    |     |     |
|----|----|-----|-----|
|    |    |     |     |
| 41 | 42 | E43 | E44 |

### Tank Outlet Valves\*

|     |     |
|-----|-----|
|     |     |
| T41 | T42 |

\*Tank flanges ordered separately

### Change-over Valves

|     |     |     |     |
|-----|-----|-----|-----|
|     |     |     |     |
| U45 | U46 | U47 | U48 |

## (3) PORT CONNECTIONS

**W** Buttweld

Additional and mixed port connections available upon request.  
Please contact factory.

## (4) PORT SIZES

|              |        |            |           |
|--------------|--------|------------|-----------|
| <b>DN25</b>  | DN 25  | <b>T10</b> | 1.0" Tube |
| <b>DN40</b>  | DN 40  | <b>T15</b> | 1.5" Tube |
| <b>DN50</b>  | DN 50  | <b>T20</b> | 2.0" Tube |
| <b>DN65</b>  | DN 65  | <b>T25</b> | 2.5" Tube |
| <b>DN80</b>  | DN 80  | <b>T30</b> | 3.0" Tube |
| <b>DN100</b> | DN 100 | <b>T40</b> | 4.0" Tube |

For mixed size valves, indicate lower ports first.

Example: 1.5" Lower Housing by 2" Upper Housing is T15T20.

To verify availability of mixed sizes on E-style matrix housings,  
please contact Factory

## (5) ACTUATOR

| NORMALLY CLOSED | ACTUATOR SIZE                  | NOMINAL VALVE SIZE <sup>1</sup> |
|-----------------|--------------------------------|---------------------------------|
| A1              | 74 mm diameter                 | DN25, DN40, T10, T15            |
| B1              | 110 mm diameter                | DN50, DN65, T20, T25            |
| C1              | 165 mm diameter                | DN80, DN100, T30, T40           |
| E1              | 110 mm diameter<br>Long Stroke | Only DN50 to DN65 & T20 to T25  |
| F1              | 165 mm diameter<br>Long Stroke | Only DN80, DN100, T30, T40      |

<sup>1</sup> A, B & C sizes are available on all sizes DN25-DN100 see instruction manual for holding pressures

For change-over valves, "Normally Closed" = "Fail Down" and "Normally Open" = "Fail Up"

For SDMS type, nominal actuator sizes will vary and long stroke not available. Please confirm configuration with factory.

## (6) CONTROL UNIT / FEEDBACK

See page 29 for most common control unit configurations. **BOLD** indicates standard control unit options. Use identifier "HP0N" as default for valves without control unit.

### CU Identifier Positions 1 & 2

| CONTROL UNIT TYPE |               |
|-------------------|---------------|
| <b>C4</b>         | <b>CU4</b>    |
| CP                | CU4plus       |
| C3                | CU3           |
| CX                | ATEX/IECEX CU |

### CU Identifier Position 3

| SOLENOID |                                 |
|----------|---------------------------------|
| 1        | 1 Solenoid                      |
| <b>9</b> | <b>1 Solenoid + NOT Element</b> |

### CU Identifier Position 4

| COMMUNICATION TYPE |                       |               | CU UNITS AVAILABLE  |
|--------------------|-----------------------|---------------|---------------------|
|                    | COMMUNICATION         | VOLTAGE       |                     |
| <b>W</b>           | <b>Direct Connect</b> | <b>24V DC</b> | <b>CU4, ATEX CU</b> |
| U                  | Direct Connect        | 110 V AC      | CU4                 |
| T                  | AS-i 31               |               | CU4                 |
| <b>Y</b>           | <b>AS-i 62</b>        |               | <b>CU4, CU4plus</b> |
| Z                  | DeviceNet™            |               | CU3                 |
| V                  | Profibus DP           |               | CU3                 |
| S                  | Direct Connect        | 12V DC        | ATEX CU             |

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| 6 MM AIR FITTINGS | 1/4" AIR FITTINGS | ELECTRICAL CONNECTION |
|-------------------|-------------------|-----------------------|
| 2X                | 3X                | No CU / Feedback      |
| <b>20</b>         | <b>30</b>         | <b>Cable Gland</b>    |
| 24                | 34                | 4-pin M12 Connector*  |

For additional pin connector options on CU, please contact Factory

\*Only available on CU with AS-i communication from Delavan factory

## (8) SEAT TYPE

**TR** Elastomeric Profile Seal

## (9) SEAL MATERIAL

**E** EPDM  
**V** FPM  
**H** HNBR  
**S** VMQ

## (10) SURFACE FINISH

| GLASS BLASTED OD | POLISHED OD | INSIDE POLISH                              |
|------------------|-------------|--------------------------------------------|
| 10               | 20          | 1.6 µm (63 µ-in) Ra ID                     |
| 11               | 21          | 0.8 µm (32 µ-in) Ra ID with Electro-Polish |

## (11) OPTIONS

**A0** None  
**A1S** 3.1 Inspection certificate  
**A3** ATEX  
**C1** Steam barrier (DPF)\*  
**C7** Elastomer shaft seal\*

\*Not available with SDMS type

Note: 3-A certified design is standard with minimum 0.8 µm (32 µ-in) Ra ID surface finish

# DKR Series Double Seat Mix Proof Ball Valves



The order code is constructed as follows:

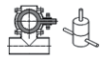
| POSITION | 1   | 2 | 3  | 4    | 5  | 6    | 7  | 8  | 9 | 10 | 11 |
|----------|-----|---|----|------|----|------|----|----|---|----|----|
| CODE     | DKR | S | FG | DN65 | A1 | C41Y | 20 | PT | E | 10 | A0 |

\* Add multiple options to the end of code (i.e. -A1A3)

## (1) VALVE TYPE

**DKR** Double Seat Mix Proof Ball Valve

## (2) HOUSING COMBINATIONS

| Standard                                                                               | High Pressure                                                                           | Tank Outlet                                                                              |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| <br>S | <br>H* | <br>T** |

\* Only available in sizes DN50 and DN80

\*\* Only available in sizes DN50, DN80, and DN100.

Tank flanges sold separately

## (3) PORT CONNECTIONS

**F** Hygienic Flange  
**X** Without Counter Flanges

## (4) PORT SIZES

|              |        |            |           |
|--------------|--------|------------|-----------|
| <b>DN25</b>  | DN 25  | <b>T10</b> | 1.0" Tube |
| <b>DN40</b>  | DN 40  | <b>T15</b> | 1.5" Tube |
| <b>DN50</b>  | DN 50  | <b>T20</b> | 2.0" Tube |
| <b>DN65</b>  | DN 65  | <b>T25</b> | 2.5" Tube |
| <b>DN80</b>  | DN 80  | <b>T30</b> | 3.0" Tube |
| <b>DN100</b> | DN 100 | <b>T40</b> | 4.0" Tube |
| <b>DN125</b> | DN 125 |            |           |

## (5) ACTUATOR

| NORMALLY CLOSED | ACTUATOR SIZE   | STANDARD VALVE SIZE   |
|-----------------|-----------------|-----------------------|
| A1              | 80 mm diameter  | DN25-DN65 or T10-T25  |
| B1              | 125 mm diameter | DN80-DN100 or T30-T40 |
| C1              | 180 mm diameter | DN125                 |

## (6) CONTROL UNIT / FEEDBACK

See page 29 for most common control unit configurations. **BOLD** indicates standard control unit options. Use identifier "AA0A" as default for valves without control unit.

### CU Identifier Positions 1 & 2

| CONTROL UNIT TYPE |            |
|-------------------|------------|
| <b>C4</b>         | <b>CU4</b> |
| CP                | CU4plus    |
| C3                | CU3        |

### CU Identifier Position 3

| SOLENOID |                   |
|----------|-------------------|
| <b>1</b> | <b>1 Solenoid</b> |

### CU Identifier Position 4

| COMMUNICATION TYPE |                       |               | CU UNITS AVAILABLE  |
|--------------------|-----------------------|---------------|---------------------|
|                    | COMMUNICATION         | VOLTAGE       |                     |
| <b>W</b>           | <b>Direct Connect</b> | <b>24V DC</b> | <b>CU4</b>          |
| U                  | Direct Connect        | 110 V AC      | CU4                 |
| T                  | AS-i 31               |               | CU4                 |
| <b>Y</b>           | <b>AS-i 62</b>        |               | <b>CU4, CU4plus</b> |
| Z                  | DeviceNet™            |               | CU3                 |
| V                  | Profibus DP           |               | CU3                 |

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| 6 MM AIR FITTINGS | 1/4" AIR FITTINGS | ELECTRICAL CONNECTION |
|-------------------|-------------------|-----------------------|
| 2X                | 3X                | No CU / Feedback      |
| <b>20</b>         | <b>30</b>         | <b>Cable Gland</b>    |
| 24                | 34                | 4-pin M12 Connector*  |

For additional pin connector options on CU, please contact Factory

\*Only available on CU with AS-i communication from Delavan factory

## (8) SEAT TYPE

**PT** PTFE Seal

## (9) SEAL MATERIAL

**E** EPDM  
**V** FPM  
**H** HNBR  
**S** VMQ

## (10) SURFACE FINISH

| GLASS BLASTED OD | POLISHED OD | INSIDE POLISH                              |
|------------------|-------------|--------------------------------------------|
| 10               | 20          | 1.6 µm (63 µ-in) Ra ID                     |
| 11               | 21          | 0.8 µm (32 µ-in) Ra ID with Electro-Polish |

## (11) OPTIONS

**A0** None  
**A3** ATEX (2D rating for dust only)  
**C8** Leakage Reduction  
**C9** Leakage Guidance

Note: For horizontal valve installation in horizontal or vertical pipelines, please contact factory for special drain options

# UF Series Pressure Relief Valves



The order code is constructed as follows:

| POSITION | 1  | 2  | 3 | 4    | 5   | 6    | 7  | 8  | 9 | 10 | 11 |
|----------|----|----|---|------|-----|------|----|----|---|----|----|
| CODE     | UF | 31 | W | DN40 | NSL | HP0N | 2X | TR | E | 11 | L1 |

\* Add multiple options to the end of code (i.e. -A1A3)

## (1) VALVE TYPE

**UF** Pressure Relief Valve  
**UFR** Pressure Relief Valve with Tapered Stem

## (2) HOUSING COMBINATIONS

### Shut-off Valves

|    |    |     |     |     |     |
|----|----|-----|-----|-----|-----|
|    |    |     |     |     |     |
| 31 | 32 | E31 | E32 | E33 | E34 |

## (3) PORT CONNECTIONS

**W** Buttweld  
 Additional and mixed port connections available upon request.  
 Please contact factory.

## (4) PORT SIZES

|              |        |            |           |
|--------------|--------|------------|-----------|
| <b>DN25</b>  | DN 25  | <b>T10</b> | 1.0" Tube |
| <b>DN40</b>  | DN 40  | <b>T15</b> | 1.5" Tube |
| <b>DN50</b>  | DN 50  | <b>T20</b> | 2.0" Tube |
| <b>DN65</b>  | DN 65  | <b>T25</b> | 2.5" Tube |
| <b>DN80</b>  | DN 80  | <b>T30</b> | 3.0" Tube |
| <b>DN100</b> | DN 100 | <b>T40</b> | 4.0" Tube |
| <b>DN125</b> | DN125  |            |           |

For availability of mixed sizes on E-style matrix housings, please contact Factory

## (5) ACTUATOR

| IDENTIFIER | DESCRIPTION      |
|------------|------------------|
| NSL        | Non Seat Lifting |
| SL         | Seat Lifting     |

## (6) CONTROL UNIT / FEEDBACK

| IDENTIFIER | DESCRIPTION       |
|------------|-------------------|
| AA0A       | No CU / Feedback* |

\*Prox holder brackets and sensors ordered separately

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| 6 MM AIR FITTINGS | 1/4" AIR FITTINGS | ELECTRICAL CONNECTION |
|-------------------|-------------------|-----------------------|
| 2X                | 3X                | No CU / Feedback      |

## (8) SEAT TYPE

**TR** Elastomeric Profile Seal

## (9) SEAL MATERIAL

**E** EPDM  
**V** FPM  
**H** HNBR  
**S** VMQ

## (10) SURFACE FINISH

| GLASS BLASTED OD | POLISHED OD | INSIDE POLISH                              |
|------------------|-------------|--------------------------------------------|
| 10               | 20          | 1.6 µm (63 µ-in) Ra ID                     |
| 11               | 21          | 0.8 µm (32 µ-in) Ra ID with Electro-Polish |

## (11a) PRESSURE RELIEF RANGE IN BAR (REQUIRED)

| UF         |                             |           |           |           |
|------------|-----------------------------|-----------|-----------|-----------|
| VALVE SIZE | PRESSURE RELIEF RANGE (BAR) |           |           |           |
| T10        | <b>LP</b>                   | <b>L1</b> |           |           |
| DN25       | 0-6.8                       | 0-10      |           |           |
| T15        | <b>LM</b>                   | <b>LR</b> | <b>L1</b> |           |
| DN40       | 0-3.5                       | 0-7.5     | 0-10      |           |
| T20        | <b>LK</b>                   | <b>LN</b> | <b>L1</b> |           |
| DN50       | 0-2.1                       | 0-4.5     | 0-10      |           |
| T25        | <b>LK</b>                   | <b>LL</b> | <b>LS</b> | <b>L1</b> |
| DN65       | 0-2.1                       | 0-2.7     | 0-7.6     | 0-10      |
| T30        | <b>LY</b>                   | <b>L3</b> | <b>LZ</b> | <b>L1</b> |
| DN80       | 0-0.9                       | 0-1.8     | 0-5.2     | 0-10      |
| T40        | <b>LW</b>                   | <b>LH</b> | <b>LM</b> | <b>LT</b> |
| DN100      | 0-0.6                       | 0-1.2     | 0-3.5     | 0-8.3     |

| UFR        |                             |           |           |           |
|------------|-----------------------------|-----------|-----------|-----------|
| VALVE SIZE | PRESSURE RELIEF RANGE (BAR) |           |           |           |
| T10        | <b>L8</b>                   | <b>L1</b> |           |           |
| DN25       | 0-5.4                       | 0-10      |           |           |
| T15        | <b>L5</b>                   | <b>L9</b> | <b>L1</b> |           |
| DN40       | 0-2.9                       | 0-6.3     | 0-10      |           |
| T20        | <b>L3</b>                   | <b>L6</b> | <b>L1</b> |           |
| DN50       | 0-1.8                       | 0-4.0     | 0-10      |           |
| T25        | <b>L2</b>                   | <b>L4</b> | <b>LA</b> | <b>L1</b> |
| DN65       | 0-1.1                       | 0-2.4     | 0-7.0     | 0-10      |
| T30        | <b>LX</b>                   | <b>LJ</b> | <b>L7</b> | <b>L1</b> |
| DN80       | 0-0.8                       | 0-1.7     | 0-4.8     | 0-10      |
| T40        | <b>LU</b>                   | <b>L2</b> | <b>LQ</b> | <b>LB</b> |
| DN100      | 0-0.5                       | 0-1.1     | 0-3.2     | 0-7.7     |

The minimum response pressure can be > 0 bar depending on the valve mounting position and the friction on the shaft seal  
 For higher relief pressure options, please contact Factory

## (11b) OPTIONS

**A3** ATEX  
**B1** 3-A certification (at minimum with 0.8 µm (32 µ-in) Ra ID surface finish)

# RG/RGE Series Modulating Valves



The order code is constructed as follows:

| POSITION | 1  | 2  | 3  | 4           | 5  | 6    | 7  | 8  | 9 | 10 | 11 |
|----------|----|----|----|-------------|----|------|----|----|---|----|----|
| CODE     | RG | 41 | FG | T30<br>(63) | C1 | S20W | 30 | LL | E | 10 | A9 |

\* Add multiple options to the end of code (i.e. -A1A3)

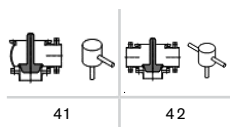
For sizing of new modulating valve applications, please [CLICK HERE](#) to complete the RG specification sheet

## (1) VALVE TYPE

- RG** Regulating  
**RGE** Regulating Economical  
**RGMS** Aseptic Membrane Regulating

## (2) HOUSING COMBINATIONS

### Shut-off Valves



For additional housing combinations, please contact factory

## (3) PORT CONNECTIONS

- F** Hygienic Flange (standard on RG/RGMS)  
**W** Buttweld (standard on RGE)  
**X** Without Counter Flanges

Additional connections available upon request. Please contact factory.

## (4) PORT SIZES (FLOW COEFFICIENT)

| PORT SIZES (FLOW COEFFICIENT) |        |            |           | RG KV VALUE (M <sup>3</sup> /H) <sup>1</sup> | RGE KV VALUE (M <sup>3</sup> /H) <sup>1</sup> |
|-------------------------------|--------|------------|-----------|----------------------------------------------|-----------------------------------------------|
| <b>DN25</b>                   | DN 25  | <b>T10</b> | 1.0" Tube | 0.25, 0.4, 0.63, 1.0, 1.6, 2.5, 4.0, 6.3, 10 | 6.3, 10                                       |
| <b>DN40</b>                   | DN 40  | <b>T15</b> | 1.5" Tube | 2.5, 4.0, 6.3, 10, 16, 25                    | 2.5, 4.0, 6.3, 10, 16, 25                     |
| <b>DN50</b>                   | DN 50  | <b>T20</b> | 2.0" Tube | 4.0, 6.3, 10, 16, 25, 40                     | 40                                            |
| <b>DN65</b>                   | DN 65  | <b>T25</b> | 2.5" Tube | 16, 25, 40, 63                               | 63                                            |
| <b>DN80</b>                   | DN 80  | <b>T30</b> | 3.0" Tube | 40, 63, 100                                  | 80                                            |
| <b>DN100</b>                  | DN 100 | <b>T40</b> | 4.0" Tube | 63, 100, 160                                 | 160                                           |
| <b>DN125</b>                  | DN 125 |            |           | 100, 160, 250                                | N/A                                           |
| <b>DN150</b>                  | DN 150 | <b>T60</b> | 6.0" Tube | 160, 250, 400                                | N/A                                           |

<sup>1</sup>For key use port size with (Kv) in parentheses. Example: T20(6.3).

Kv chart shows all possible combinations of Kv based on valve size

## (5) ACTUATOR

| SPRING CLOSING MFS | SPRING OPENING MFH | MANUAL | ACTUATOR SIZE                        | RECOMMENDED KV-VALUES (M <sup>3</sup> /H)                |
|--------------------|--------------------|--------|--------------------------------------|----------------------------------------------------------|
| A1                 |                    |        | 120cm <sup>2</sup> actuating surface | 0.25, 0.4, 0.63, 1.0, 1.6, 2.5, 4.0, 6.3, 10             |
| B1                 |                    |        | 240cm <sup>2</sup> actuating surface | 16, 25                                                   |
| C1                 |                    |        | 350cm <sup>2</sup> actuating surface | 40, 63, 80                                               |
| D1                 |                    |        | 700cm <sup>2</sup> actuating surface | 100, 160, 250, 400                                       |
|                    | A2                 |        | 120cm <sup>2</sup> actuating surface | 0.25, 0.4, 0.63, 1.0, 1.6, 2.5, 4.0, 6.3, 10, 16, 25, 40 |
|                    | B2                 |        | 240cm <sup>2</sup> actuating surface | 63, 80                                                   |
|                    | C2                 |        | 350cm <sup>2</sup> actuating surface | 100                                                      |
|                    | D2                 |        | 700cm <sup>2</sup> actuating surface | 160, 250, 400                                            |
|                    |                    | H1     | Manual Hand Actuator                 | Full range: 0.25-160                                     |

For special requests, please fill out the specification sheet and contact factory.

For holding pressures on actuators, please see instruction manual.

For actuator and Kv combinations that are not displayed, please contact factory for verification or fill out specification sheet.

## (6) POSITIONER

**BOLD** indicates standard positioner option. Use identifier "AA0A" for valves without positioners (manual hand actuator)

| IDENTIFIER                   | DESCRIPTION                                                                                   |
|------------------------------|-----------------------------------------------------------------------------------------------|
| <b>INTEGRATED DESIGN</b>     |                                                                                               |
| S00W                         | Samson EP I/P (4-20mA) Model IP3725                                                           |
| S10W                         | Samson EP I/P (4-20mA) Model IP3730-0 (non Auto-tune)                                         |
| <b>S20W</b>                  | <b>Samson EP I/P (4-20mA) Model IP3730-1 (Auto-tune) - standard</b>                           |
| S30W                         | Samson EP I/P (4-20mA) Model IP3730-2 (Auto-tune & Self diagnostics)                          |
| S40W                         | Samson EP I/P (4-20mA) Model IP3767 (analog)                                                  |
| S30H                         | Samson EP I/P (4-20mA) Model IP3730-3 with Hart Protocol (Auto-tune & Self diagnostics)       |
| S30V                         | Samson EP I/P Model IP3730-4 with Profibus PA (Auto-tune & Self diagnostics)                  |
| S30F                         | Samson EP I/P (4-20mA) Model IP3730-5 with Foundation Fieldbus (Auto-tune & Self diagnostics) |
| SP0W                         | Samson Pneumatic PP (3-15 psi) Model P3766                                                    |
| <b>EXTERNAL MOUNT DESIGN</b> |                                                                                               |
| SN0W                         | Samson Namur mount EP I/P (4-20mA) Model IP763                                                |
| SM0W                         | Samson Namur mount PP (0.2-1bar/3-15 psi) Model P765                                          |

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| 6 MM AIR FITTINGS | 1/4" AIR FITTINGS | ELECTRICAL CONNECTION |
|-------------------|-------------------|-----------------------|
| XX                | N/A               | Manual Handle Only    |
| 2X                | 3X                | No Positioner         |
| <b>20</b>         | <b>30</b>         | <b>Cable Gland</b>    |

## (8) STEM TYPE

**LL** Linear

**EP** Equal Percentage

All seats contain elastomer seat seal except DN25/T10 with 0.25-1.6 Kv values

## (9) SEAL MATERIAL

**E** EPDM

**V** FPM

**H** HNBR

**S** VMQ

## (10) SURFACE FINISH

| GLASS BLASTED OD | POLISHED OD | INSIDE POLISH                              |
|------------------|-------------|--------------------------------------------|
| 10               | 20          | 1.6 µm (63 µ-in) Ra ID*                    |
| 11               | 21          | 0.8 µm (32 µ-in) Ra ID with Electro-Polish |

\*Only available with RGE type

## (11) OPTIONS

**A0** None

**A3** ATEX\*

**A8** Noise Reducer\*

**B1** 3-A certification (only with 0.8 µm (32 µ-in) Ra ID surface finish)

**D4** No Seat Seal

\*Only available with RG/RGMS types

# CPV Constant Pressure Valve



The order code is constructed as follows:

| POSITION | 1   | 2 | 3 | 4   | 5   | 6    | 7  | 8 | 9 | 10 | 11 |
|----------|-----|---|---|-----|-----|------|----|---|---|----|----|
| CODE     | CPV | O | W | T20 | STD | AA0A | 2X | M | E | 10 | A0 |

\* Add multiple options to the end of code (i.e. -A1A3)

## (1) VALVE TYPE

**CPV** Constant Pressure Valve

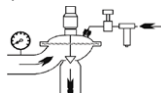
## (8) SEAT TYPE

**M** Metal

## (2) APPLICATION

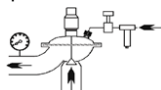
**Constant Pressure Before Valve**

**O**  
(increasing product pressure acts to open the valve)



**Constant Pressure After Valve**

**C**  
(increasing product pressure acts to close the valve)



## (9) SEAL MATERIAL

**T** PTFE/EPDM (standard)

**E** EPDM

## (10) SURFACE FINISH

| GLASS BLASTED OD | POLISHED OD | INSIDE POLISH          |
|------------------|-------------|------------------------|
| 11               | 21          | 0.8 µm (32 µ-in) Ra ID |

## (11) OPERATING RANGE (REQUIRED)

**B9** 0.8-7.0 bar (11.6-101.5 psi) only with PTFE/EPDM seal material standard

**B8** 0.3-3.0 bar (4.4-43.5 psi) only with EPDM seal material

**Note: 3-A certified design is standard**

## (3) PORT CONNECTIONS

**W** Buttweld

## (4) PORT SIZES (FLOW COEFFICIENT)

| APPLICATION | PORT SIZES (FLOW COEFFICIENT) |       |                  |           | MAXIMUM FLOW (M <sup>3</sup> /H) |
|-------------|-------------------------------|-------|------------------|-----------|----------------------------------|
| <b>-O</b>   | <b>DN50(25)</b>               | DN 50 | <b>T20(25)</b>   | 1.0" Tube | 25                               |
| <b>-C</b>   | <b>DN50(22.5)</b>             | DN 50 | <b>T20(22.5)</b> | 1.5" Tube | 22.5                             |

**Note: Additional flow coefficient (Kvs) values available upon request. Please contact Factory.**

## (5) ACTUATOR

| IDENTIFIER | DESCRIPTION |
|------------|-------------|
| STD        | Standard    |
| BT         | Booster*    |

\*Use booster when air supply is insufficient for desired constant pressure. See instruction manual for more details.

## (6) CONTROL UNIT / FEEDBACK

| IDENTIFIER | DESCRIPTION     |
|------------|-----------------|
| AA0A       | No CU available |

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| 6 MM AIR FITTINGS | 1/4" AIR FITTINGS | CONNECTION TYPE  |
|-------------------|-------------------|------------------|
| 2X                | N/A               | No CU / Feedback |

# RUF Spring Check Valve



The order code is constructed as follows:

| POSITION | 1   | 2 | 3  | 4   | 5  | 6    | 7  | 8  | 9 | 10 | 11 |
|----------|-----|---|----|-----|----|------|----|----|---|----|----|
| CODE     | RUF | S | FG | T30 | NA | AA0A | XX | TR | E | 10 | A0 |

\* Add multiple options to the end of code (i.e. -A1A3)

## (1) VALVE TYPE

**RUF** Spring Check Non-Return Valve

## (8) SEAT TYPE

**TR** Elastomeric Profile Seal

## (2) HOUSING COMBINATIONS

**S** Standard

## (9) SEAL MATERIAL

**E** EPDM

**V** FPM

**H** HNBR

**S** VMQ

## (3) PORT CONNECTIONS

**F** Hygienic Flange

**X** Without Counter Flanges

## (10) SURFACE FINISH

| GLASS BLASTED OD | POLISHED OD | INSIDE POLISH                              |
|------------------|-------------|--------------------------------------------|
| 11               | 21          | 0.8 µm (32 µ-in) Ra ID with Electro-Polish |

## (4) PORT SIZES

**DN25** DN 25 **T10** 1.0" Tube

**DN40** DN 40 **T15** 1.5" Tube

**DN50** DN 50 **T20** 2.0" Tube

**DN65** DN 65 **T25** 2.5" Tube

**DN80** DN 80 **T30** 3.0" Tube

**DN100** DN 100 **T40** 4.0" Tube

**DN125** DN 125

**DN150** DN 150 **T60** 6.0" Tube

## (11) OPTIONS

**A0** None

**A1S** 3.1 Inspection certificate

Note: 3-A certified design is standard

Schedule 5 and 10 pipe sizes available upon request. Please contact Factory

## (5) ACTUATOR

| IDENTIFIER | DESCRIPTION |
|------------|-------------|
| NA         | N/A         |

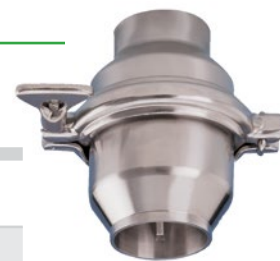
## (6) CONTROL UNIT / FEEDBACK

| IDENTIFIER | DESCRIPTION           |
|------------|-----------------------|
| AA0A       | No feedback available |

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| IDENTIFIER | DESCRIPTION |
|------------|-------------|
| XX         | N/A         |

# VPN Spring Check Valve



The order code is constructed as follows:

| POSITION | 1   | 2 | 3 | 4   | 5  | 6    | 7  | 8  | 9 | 10 | 11 |
|----------|-----|---|---|-----|----|------|----|----|---|----|----|
| CODE     | VPN | S | W | T10 | NA | AA0A | XX | TR | E | 10 | A0 |

## (1) VALVE TYPE

**VPN** Spring Check Non-Return Valve

## (2) HOUSING COMBINATIONS

**S** Standard

## (3) PORT CONNECTIONS

**W** Buttweld

**T** Clamp (DIN 32676)

## (4) PORT SIZES

**DN25** DN 25      **T10** 1.0" Tube

**DN40** DN 40      **T15** 1.5" Tube

**DN50** DN 50      **T20** 2.0" Tube

**DN65** DN 65      **T25** 2.5" Tube

**DN80** DN 80      **T30** 3.0" Tube

**DN100** DN 100      **T40** 4.0" Tube

## (5) ACTUATOR

| IDENTIFIER | DESCRIPTION |
|------------|-------------|
| NA         | N/A         |

## (6) CONTROL UNIT / FEEDBACK

| IDENTIFIER | DESCRIPTION           |
|------------|-----------------------|
| AA0A       | No feedback available |

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| IDENTIFIER | DESCRIPTION |
|------------|-------------|
| XX         | N/A         |

## (8) SEAT TYPE

**TR** Elastomeric Profile Seat

## (9) SEAL MATERIAL

**E** EPDM

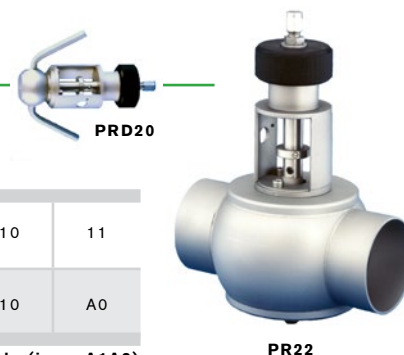
## (10) SURFACE FINISH

| GLASS BLASTED OD | MACHINE FINISH OD | INSIDE POLISH             |
|------------------|-------------------|---------------------------|
| 10               | Standard          | 1.6 µm<br>(63 µ-in) Ra ID |

## (11) OPTIONS

**A0** None

# PR Sample Valve



The order code is constructed as follows:

| POSITION | 1  | 2  | 3 | 4    | 5  | 6    | 7  | 8 | 9 | 10 | 11 |
|----------|----|----|---|------|----|------|----|---|---|----|----|
| CODE     | PR | 21 | W | DN25 | G4 | AA0A | 2X | M | E | 10 | A0 |

\* Add multiple options to the end of code (i.e. -A1A3)

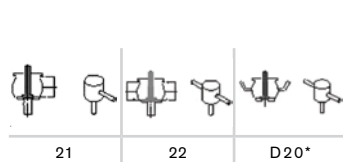
## (1) VALVE TYPE

**PR** Sample Valve

## (8) SEAT TYPE

**PT** PTFE

## (2) HOUSING COMBINATIONS



\*Only available in size DN25

## (9) SEAL MATERIAL

**E** EPDM

**V** FPM

**H** HNBR

**S** VMQ

## (3) PORT CONNECTIONS

**W** Buttweld

## (10) SURFACE FINISH

| GLASS BLASTED OD | POLISHED OD | INSIDE POLISH                              |
|------------------|-------------|--------------------------------------------|
| 10               | 20          | 1.6 µm (63 µ-in) Ra ID                     |
| 11               | 21          | 0.8 µm (32 µ-in) Ra ID with Electro-Polish |

## (4) PORT SIZES

**DN25** DN 25      **T10** 1.0" Tube

**DN40** DN 40      **T15** 1.5" Tube

**DN50** DN 50      **T20** 2.0" Tube

**DN65** DN 65      **T25** 2.5" Tube

**DN80** DN 80      **T30** 3.0" Tube

**DN100** DN 100      **T40** 4.0" Tube

**DN125** DN 125

## (11) OPTIONS

**A0** None

## (5) ACTUATOR

| IDENTIFIER | DESCRIPTION                                      |
|------------|--------------------------------------------------|
| G4         | Manual Handle                                    |
| G5         | Pneumatic Actuator and Manual Handle Combination |

## (6) CONTROL UNIT / FEEDBACK

| IDENTIFIER | DESCRIPTION       |
|------------|-------------------|
| AA0A       | No CU / Feedback* |

\*Prox holder brackets and sensors ordered separately

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| 6 MM AIR FITTINGS | 1/4" AIR FITTINGS | ELECTRICAL CONNECTION |
|-------------------|-------------------|-----------------------|
| XX                | N/A               | Manual Handle Only    |
| 2X                | N/A               | No CU / Feedback      |

# VRA Vacuum Relief Valve



The order code is constructed as follows:

| POSITION | 1   | 2  | 3 | 4    | 5  | 6    | 7  | 8  | 9 | 10 | 11 |
|----------|-----|----|---|------|----|------|----|----|---|----|----|
| CODE     | VRA | 11 | W | DN50 | SL | AA0A | 2X | TR | E | 11 | A0 |

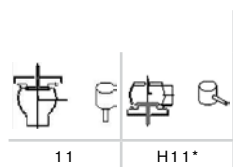
\* Add multiple options to the end of code (i.e. -A1A3)

For assistance sizing of new vacuum relief valve applications, please contact factory or local sales agent.

## (1) VALVE TYPE

**VRA** Vacuum Relief

## (2) HOUSING COMBINATIONS



\*Only available in size DN100

## (3) PORT CONNECTIONS

**W** Buttweld

## (4) PORT SIZES

**DN50** DN 50

**DN100** DN 100

**DN150** DN 150

## (5) ACTUATOR

| TYPE | DESCRIPTION  |
|------|--------------|
| SL   | Seat Lifting |

## (6) CONTROL UNIT / FEEDBACK

| TYPE | DESCRIPTION       |
|------|-------------------|
| AA0A | No CU / Feedback* |

\*Prox holder brackets and sensors ordered separately

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| 6 MM AIR FITTINGS | 1/4" AIR FITTINGS | ELECTRICAL CONNECTION |
|-------------------|-------------------|-----------------------|
| 2X                | N/A               | No CU / Feedback      |

## (8) SEAT TYPE

**TR** Elastomeric Profile Seal

## (9) SEAL MATERIAL

**E** EPDM

**V** FPM

**H** HNBR

## (10) SURFACE FINISH

| GLASS BLASTED OD | POLISHED OD | INSIDE POLISH                              |
|------------------|-------------|--------------------------------------------|
| 10               | 20          | 1.6 µm (63 µ-in) Ra ID                     |
| 11               | 21          | 0.8 µm (32 µ-in) Ra ID with Electro-Polish |

## (11) OPTIONS

**A0** None

**B7** Large outlet port (only with VRA11)

# SI Safety Valve



The order code is constructed as follows:

| POSITION | 1  | 2  | 3  | 4    | 5  | 6    | 7  | 8  | 9 | 10 | 11 |
|----------|----|----|----|------|----|------|----|----|---|----|----|
| CODE     | SI | 21 | FG | DN65 | SL | AA0A | 2X | TR | E | 11 | A1 |

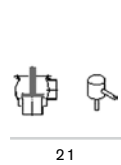
\* Add multiple options to the end of code (i.e. -A1A3)

For assistance sizing of new safety relief valve applications, please contact factory or local sales agent.

## (1) VALVE TYPE

**SI** Safety Valve

## (2) HOUSING COMBINATIONS



## (3) PORT CONNECTIONS

**F** Hygienic Flange

## (4) PORT SIZES

**DN25** DN 25  
**DN40** DN 40  
**DN50** DN 50  
**DN65** DN 65  
**DN80** DN 80  
**DN100** DN 100

## (5) ACTUATOR

| TYPE | DESCRIPTION                |
|------|----------------------------|
| HSL  | Manual Handle Seat Lifting |
| SL   | Pneumatic Seat Lifting     |

## (6) CONTROL UNIT / FEEDBACK

| TYPE | DESCRIPTION       |
|------|-------------------|
| AA0A | No CU / Feedback* |

\*Prox holder brackets and sensors ordered separately

## (7) CONTROL UNIT / ACTUATOR CONNECTORS

| 6 MM AIR FITTINGS | ELECTRICAL CONNECTION |
|-------------------|-----------------------|
| 2X                | No CU / Feedback      |

## (8) SEAT TYPE

**TR** Elastomeric Profile Seat

## (9) SEAL MATERIAL

**E** EPDM  
**V** FPM  
**H** HNBR  
**S** VMQ

## (10) SURFACE FINISH

| GLASS BLASTED OD | INSIDE POLISH          |
|------------------|------------------------|
| 11               | 0.8 µm (32 µ-in) Ra ID |

## (11a) OPTIONS

**A1** 3.1 Certification (required)

## (11b) PRESSURE RELIEF RANGE (REQUIRED)

| VALVE SIZE | PRESSURE RELIEF RANGE (BAR) FOR FLUID AND GAS |              |             |             |            |                          |                          |            |             |             |              |             |            |
|------------|-----------------------------------------------|--------------|-------------|-------------|------------|--------------------------|--------------------------|------------|-------------|-------------|--------------|-------------|------------|
| DN25       | <b>E1</b>                                     | <b>E2</b>    | <b>E3</b>   | <b>E4</b>   | <b>E5</b>  | <b>E6</b>                | <b>E7</b>                | <b>E8</b>  |             |             |              |             |            |
|            | 0.3-1.5 FG                                    | 1.5-2.1 FG   | 2.1-2.3 F   | 2.3-3.2 F   | 3.2-4.3 F  | 4.3-6.0 F                | 6.0-7.8 F                | 7.8-10.0 F |             |             |              |             |            |
| DN40       | <b>F1</b>                                     | <b>F2</b>    | <b>F3</b>   | <b>F4</b>   | <b>F5</b>  | <b>F6</b>                | <b>F7</b>                | <b>F8</b>  | <b>F9</b>   | <b>FA</b>   |              |             |            |
|            | 0.3-0.75 FG                                   | 0.75-1.2 FG  | 1.2-2.1 FG  | 2.1-3.5 FG  | 3.5-4.0 FG | 4.0-4.6 F                | 4.6-5.4 F                | 5.4-7.2 F  | 7.2-9.2 F   | 9.2-10.0 F  |              |             |            |
| DN50       | <b>G1</b>                                     | <b>GC</b>    | <b>G2</b>   | <b>G3</b>   | <b>G4</b>  | <b>G5</b>                | <b>G6</b>                | <b>G7</b>  | <b>G8</b>   | <b>G9</b>   | <b>GA</b>    | <b>GB</b>   |            |
|            | 0.3-0.55 FG                                   | 0.55-0.85 FG | 0.85-1.5 FG | 1.5-2.5 FG  | 2.5-2.7 FG | 2.7-3.5 FG               | 3.5-4.1 F                | 4.1-5.25 F | 5.25-6.0 F  | 6.0-7.4 F   | 7.4-8.9 F    | 8.9-10.0 F  |            |
| DN65       | <b>H1</b>                                     | <b>H2</b>    | <b>H3</b>   | <b>H4</b>   | <b>H5</b>  | <b>HD</b>                | <b>HC</b>                | <b>H6</b>  | <b>H7</b>   | <b>HB</b>   | <b>H8</b>    | <b>H9</b>   | <b>HA</b>  |
|            | 0.3-0.6 FG                                    | 0.6-0.9 FG   | 0.9-1.4 FG  | 1.4-1.7 FG  | 1.7-2.2 FG | 2.2-2.6 FG               | 2.6-3.0 FG               | 3.0-3.5 F  | 3.5-4.3 F   | 4.3-4.95 F  | 4.95-5.75 F  | 5.75-6.95 F | 6.95-7.8 F |
| DN80       | <b>J1</b>                                     | <b>J2</b>    | <b>J3</b>   | <b>J4</b>   | <b>J5</b>  | <b>J6</b>                | <b>J9</b>                | <b>J7</b>  | <b>JA</b>   | <b>JB</b>   | <b>J8</b>    | <b>JC</b>   |            |
|            | 0.3-0.65 FG                                   | 0.65-0.9 FG  | 0.9-1.15 FG | 1.15-1.5 FG | 1.5-1.8 FG | 1.8-2.3 FG               | 2.3-2.8 FG               | 2.8-3.1 FG | 3.1-3.5 F   | 3.5-4.1 F   | 4.1-5.05 F   | 5.05-5.9 F  |            |
| DN100      | <b>K9</b>                                     | <b>K1</b>    | <b>K2</b>   | <b>K3</b>   | <b>K4</b>  | <b>K5</b>                | <b>K6</b>                | <b>KB</b>  | <b>K7</b>   | <b>KA</b>   | <b>K8</b>    |             |            |
|            | 0.45-0.60 F<br>0.45-0.50 G                    | 0.75-0.95 F  | 0.95-1.2 F  | 1.2-1.6 F   | 1.6-2.0 F  | 0.3-0.45 F<br>0.4-0.45 G | 0.6-0.75 F<br>0.5-0.70 G | 2.0-2.35 F | 2.35-2.75 F | 2.75-3.35 F | >3.35-3.80 F |             |            |

**Note: Exact relief set point is required when order submitted to factory. Certificate of pressure setting is supplied with valve.**

**F = Rated for fluid pressure relief**

**G = Rated for gas pressure relief**

# Control Units for all Valves



Control Units are identified with a 4 digit code.

For valve models available with control units, please specify the four digit code per the below example:

| IDENTIFIER POSITION    | 1 & 2                               | 3 | 4 |
|------------------------|-------------------------------------|---|---|
| EXAMPLE CODE           | C4                                  | 1 | Y |
| EXAMPLE VALVE KEY CODE | SV1-316L-T-T20-A1-C41Y-30-R-E-10-A0 |   |   |

## COMMON CONFIGURATIONS

| CONTROL UNIT IDENTIFIER | CU TYPE             | COMMUNICATION TYPE     | SOLENOIDS                | COMMON VALVE TYPE AVAILABLE                                             |
|-------------------------|---------------------|------------------------|--------------------------|-------------------------------------------------------------------------|
| AA0A                    | None                | None                   | 0 solenoids              | AP, CPV, DKR, MS/MSP, PR, RUF, SI, SV/SVS, SW, SWmini, UF/UFR, VPN, VRA |
| HP0N                    | Prox Holder Bracket | None                   | 0 solenoids              | AP, D4NSL, D4SL, DA4, DA, DE, MS/MSP, SD/SDMS, SW, SWcip, SWmini        |
| C41W                    | CU4                 | Direct Connect 24V DC  | 1 solenoids              | D4NSL, DE, DKR, MS/MSP, SV/SVS, SW, SWcip, SWmini                       |
| C49W                    | CU4                 | Direct Connect 24V DC  | 1 solenoid w/NOT Element | MS, SV/SVS, SD/SDMS, SW                                                 |
| C43W                    | CU4                 | Direct Connect 24V DC  | 3 solenoids              | D4SL, DA4, DA                                                           |
| C41U                    | CU4                 | Direct Connect 110V AC | 1 solenoids              | DE, DKR, MS/MSP, SV/SVS, SW, SWcip, SWmini                              |
| C49U                    | CU4                 | Direct Connect 110V AC | 1 solenoid w/NOT Element | MS, SV/SVS, SD/SDMS, SW                                                 |
| C43U                    | CU4                 | Direct Connect 110V AC | 3 solenoids              | DA                                                                      |
| C41T                    | CU4                 | AS-i 31                | 1 solenoids              | D4NSL, DE, DKR, MS/MSP, SV/SVS, SW, SWcip, SWmini                       |
| C49T                    | CU4                 | AS-i 31                | 1 solenoid w/NOT Element | MS, SV/SVS, SD/SDMS, SW                                                 |
| C43T                    | CU4                 | AS-i 31                | 3 solenoids              | D4SL, DA4, DA                                                           |
| C41Y                    | CU4                 | AS-i 62                | 1 solenoids              | D4NSL, DE, DKR, MS/MSP, SV/SVS, SW, SWcip, SWmini                       |
| C49Y                    | CU4                 | AS-i 62                | 1 solenoid w/NOT Element | MS, SD/SDMS, SW                                                         |
| C43Y                    | CU4                 | AS-i 62                | 3 solenoids w/SLD        | D4SL, DA4, DA                                                           |
| CP1Y                    | CU4plus             | AS-i 62                | 1 solenoids              | D4NSL, DE, DKR, MS, MSP, SV/SVS, SW, SWcip, SWmini                      |
| CP9Y                    | CU4plus             | AS-i 62                | 1 solenoid w/NOT Element | MS, SV/SVS, SD/SDMS, SW                                                 |
| CP3Y                    | CU4plus             | AS-i 62                | 3 solenoids              | D4SL, DA4, DA                                                           |
| C31Z                    | CU3                 | DeviceNet™             | 1 solenoids              | DE, DKR, MS/MSP, SV/SVS, SW, SWcip, SWmini                              |
| C39Z                    | CU3                 | DeviceNet™             | 1 solenoid w/NOT Element | MS, SV/SVS, SD/SDMS, SW                                                 |
| C33Z                    | CU3                 | DeviceNet™             | 3 solenoids              | DA                                                                      |
| C31V                    | CU3                 | Profibus               | 1 solenoids              | DE, MS/MSP, SV/SVS, SW, SWcip, SWmini                                   |
| C39V                    | CU3                 | Profibus               | 1 solenoid w/NOT Element | MS, SV/SVS, SD/SDMS, SW                                                 |
| C33V                    | CU3                 | Profibus               | 3 solenoids              | DA                                                                      |
| CX1W                    | ATEX/IECEX CU       | Direct Connect 24V DC  | 1 solenoids              | DE, MS/MSP, SV/SVS, SW, SWcip                                           |
| CX9W                    | ATEX/IECEX CU       | Direct Connect 24V DC  | 1 solenoid w/NOT Element | MS, SV/SVS, SD/SDMS, SW                                                 |
| CX3W                    | ATEX/IECEX CU       | Direct Connect 24V DC  | 3 solenoids              | DA                                                                      |

| CONTROL UNIT TYPE | DESCRIPTION                                                                                    |
|-------------------|------------------------------------------------------------------------------------------------|
| C4                | CU4 model with 2 Hall sensors for feedback                                                     |
| CP                | CU4plus model with Teach-in/Linear sensor for feedback and SLD (only for AS-i 62)              |
| C3                | CU3 model with 2 Hall sensors for feedback (only for DeviceNet™ and Profibus)                  |
| CX                | ATEX and IECEX certified CU model with 2 sensors for feedback (only for Direct Connect 24V DC) |
| HP                | Prox holder bracket compatible with 1 or 2 feedback positions. Sensors ordered separately      |

**SLD = Seat Lift Detection for Mix Proof Valves**

To order spare control units, it is necessary to provide the valve model and size. Please contact factory or local sales agent.



## Global locations

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