

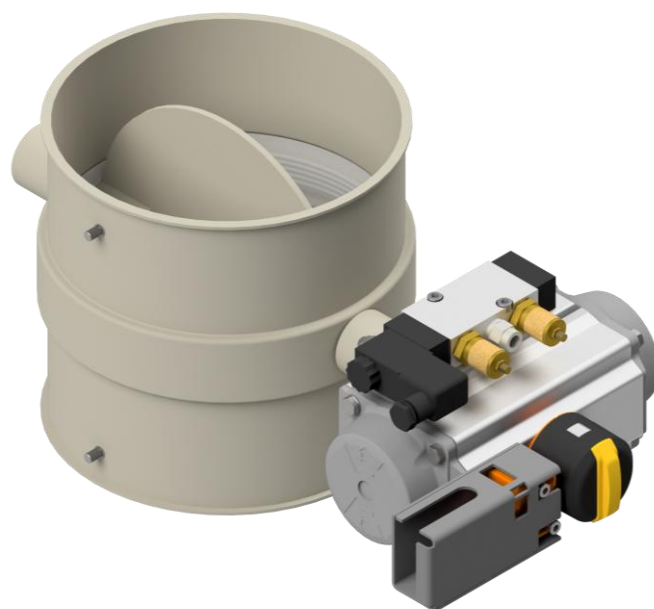
## EN- Technical data sheet

# Stop valve with seal, pneumatically operated, rotary actuator, ATEX

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## Article code

|           |          |          |             |              |
|-----------|----------|----------|-------------|--------------|
| <b>20</b> | <b>2</b> | <b>1</b> | <b>2138</b> | <b>/ATEX</b> |
|-----------|----------|----------|-------------|--------------|

①

②

③

④

①

### Diameter

|           |        |
|-----------|--------|
| <b>08</b> | DN 80  |
| <b>10</b> | DN 100 |
| <b>12</b> | DN 120 |
| ...       |        |
| <b>63</b> | DN 630 |

②

### Thickness

|          |                              |
|----------|------------------------------|
| <b>1</b> | 1.5 mm ( <i>DN 80 only</i> ) |
| <b>2</b> | 2.0 mm                       |

③

### Surface

|          |                       |
|----------|-----------------------|
| <b>1</b> | 1.0330, powder-coated |
| <b>3</b> | 1.4301, shot-blasted  |

④

### Article group

|             |                                                                     |
|-------------|---------------------------------------------------------------------|
| <b>2138</b> | Stop valve with seal,<br>pneumatically operated,<br>rotary actuator |
|-------------|---------------------------------------------------------------------|

# 1 Technical data

|                                    |                                                                                                                                                                                                                                                                                                                |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Area of application and use</b> | Dust-tight shut-off (OPEN / CLOSED) of air volume flows in ventilation systems (overpressure max. 0.03 bar) as well as free-flowing, powdery or granular bulk materials (KSt value max. 160 bar m/sec) by actuating the flap<br>The actuation time depends on the drive. <i>(see table 1.1 Actuation, p.3)</i> |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                   |                                                                  |
|-------------------|------------------------------------------------------------------|
| <b>Connection</b> | Both sides with shaped flanged edge for clamping ring connection |
|-------------------|------------------------------------------------------------------|

| <b>Materials</b>  |                                                                                                   |
|-------------------|---------------------------------------------------------------------------------------------------|
| <b>Case</b>       | According to article number 1.0330 (DC01) or 1.4301 (X5CrNi18-10) in specified material thickness |
| <b>Flap</b>       | Made of 1.0038 (S235JR) or 1.4301 (X5CrNi18-10) in thickness t = 4 mm                             |
| <b>Flap seal</b>  | Silicone profile seal, transparent, 60 ±5 Shore A                                                 |
| <b>Shaft seal</b> | Flat sealing ring made of silicone, transparent, 60 ±5 Shore A                                    |

| <b>Surfaces and temperature</b> |                                                                                                                                                                            |                                               |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| <b>Surface treatment</b>        | <b>Powder Coating (1.0330)</b>                                                                                                                                             | <b>Stainless Steel Shot Blasting (1.4301)</b> |
|                                 | Standard colour: RAL 7032 ("pebble grey");<br>smooth, satin-gloss, electrostatically dissipative;<br>Food physiologically harmless;<br>Average layer thickness: 30 - 60 µm | Surface roughness Ra: 1.3 µm                  |
| <b>Ambient temperature</b>      | -10°C to +50°C                                                                                                                                                             |                                               |
| <b>Product temperature</b>      | -20°C to +120°C<br><i>(from +80°C impairment of the appearance is to be expected)</i>                                                                                      | -10°C to +180°C                               |

| <b>ATEX approval</b>         |                                                  |
|------------------------------|--------------------------------------------------|
| <b>Application</b>           | Group II, Category 3D Zone 22                    |
| <b>Marking</b>               | Ⓔ II 3 D c T 130°C                               |
| <b>Equipotential bonding</b> | with welded earthing bolts for on-site grounding |

*\*Note: If product temperatures exceed 50°C, the manual control or drive must be insulated against heat conduction on site.*

## 1.1 Actuation

| Pneumatic rotary actuator, ATEX |                                                                     |                 |                 |                 |
|---------------------------------|---------------------------------------------------------------------|-----------------|-----------------|-----------------|
| Diameter                        | DN 80 – DN 160                                                      | DN 175 – DN 300 | DN 315 – DN 450 | DN 500 – DN 630 |
| Make                            | Air Torque                                                          |                 |                 |                 |
| Type                            | DR00030U                                                            | DR00060U        | DR00100U        | DR00150U        |
| Compressed air supply           | 5 bar                                                               |                 |                 |                 |
| Torque (at 5 bar)               | 29.3 Nm                                                             | 58.2 Nm         | 91.5 Nm         | 133 Nm          |
| A/F double square               | 14 mm                                                               |                 | 17 mm           |                 |
| Air volume per double stroke    | 0.42 L                                                              | 0.8 L           | 1.29 L          | 1.82 L          |
| Actuation time (90°)            | < 3 seconds                                                         |                 |                 |                 |
| Mode of action                  | double-acting                                                       |                 |                 |                 |
| Ambient temperature             | -40°C to +80°C                                                      |                 |                 |                 |
| ATEX approval                   | II 2 G Ex h IIC T6... T5 Gb X<br>II 2 D Ex h IIIC T85°C... T95°C Db |                 |                 |                 |

| 5/2-way solenoid valve, monostable |                                                 |
|------------------------------------|-------------------------------------------------|
| Make                               | Hafner / Joyner                                 |
| Type                               | MNH 510 701 Ex                                  |
| Mode of action                     | monostable (with air spring return)             |
| Flow                               | 1250L/min                                       |
| Ambient temperature                | -10° to +50°C                                   |
| ATEX approval                      | II 3 G Ex h IIC T6 Gb<br>II 3 D Ex h IIIC T80°C |
| Pneumatic connection               | Push-in connection for 8 mm hose diameter       |

| <b>Solenoid</b>             |                                                      |
|-----------------------------|------------------------------------------------------|
| <b>Voltage</b>              | 24 V DC                                              |
| <b>Make</b>                 | <b>Amisco</b>                                        |
| <b>Type</b>                 | 0709SD02403AX                                        |
| <b>Current</b>              | max. 120mA                                           |
| <b>Degree of protection</b> | IP65                                                 |
| <b>Ambient temperature</b>  | -10° to +50°C                                        |
| <b>ATEX approval</b>        | II 3 G Ex ec IIC T5 Gc<br>II 3 D Ex tc IIIC T95°C Dc |

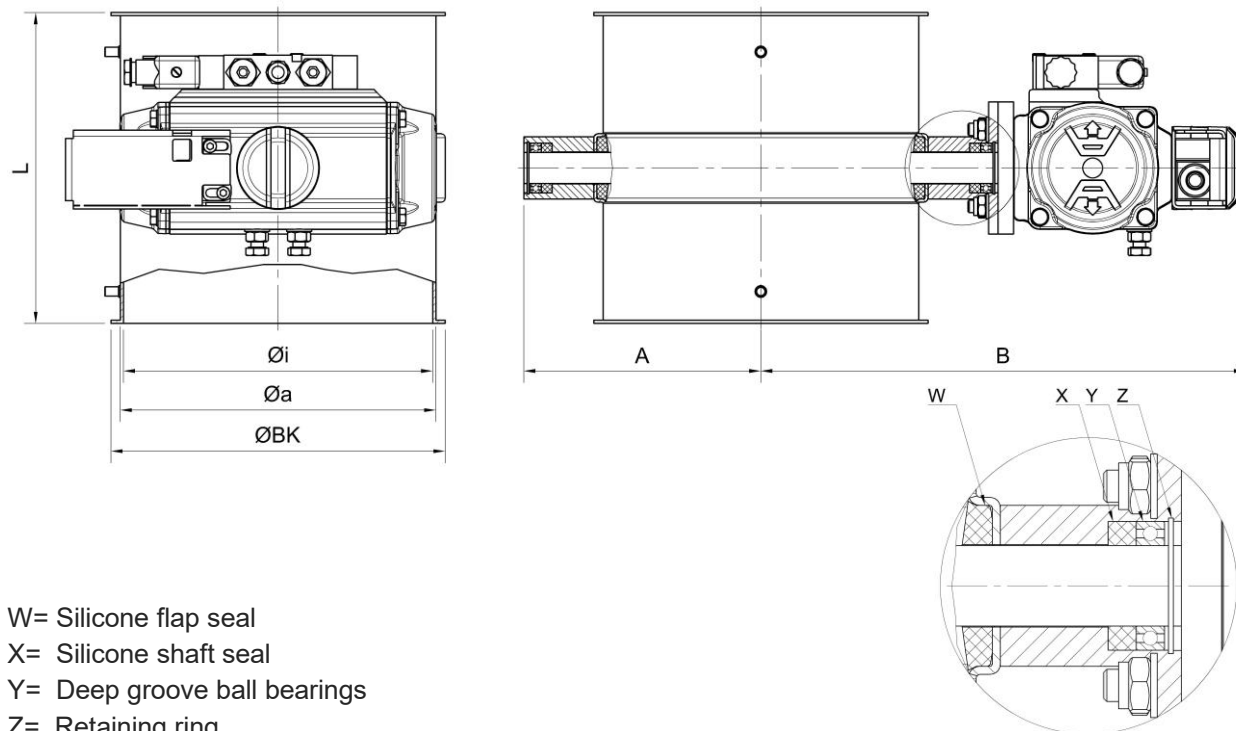
| <b>Power cord</b>            |                                                       |
|------------------------------|-------------------------------------------------------|
| <b>Voltage</b>               | max. 300 V DC (230 V AC)                              |
| <b>Make</b>                  | <b>H.T.P.</b>                                         |
| <b>Type</b>                  | M1NS2000-ATEX                                         |
| <b>Construction</b>          | B-Industry                                            |
| <b>Current</b>               | max. 10A                                              |
| <b>Degree of protection</b>  | IP65 / IP67                                           |
| <b>ATEX approval</b>         | II 2 G Ex eb IIC T5 Gb<br>II 2 D Ex tb IIIC T100°C Db |
| <b>Electrical connection</b> | Cable gland PG9<br>Cable diameter: 6-8mm              |

| <b>Sensor</b>                |                                                             |
|------------------------------|-------------------------------------------------------------|
| <b>Voltage</b>               | 10 - 30V DC                                                 |
| <b>Make</b>                  | <b>Ifm</b>                                                  |
| <b>Type</b>                  | IN507A                                                      |
| <b>Output</b>                | PNP                                                         |
| <b>Current</b>               | max. 15 mA                                                  |
| <b>Degree of protection</b>  | IP67                                                        |
| <b>ATEX approval</b>         | II 3G Ex ec IIC T6 Gc X<br>II 3D Ex tc IIIC T80°C Dc IP67 X |
| <b>Ambient temperature</b>   | -20°C to +60°C                                              |
| <b>Electrical Connection</b> | M12 connector, coding: A                                    |

## 2 Dimensions

### Dimension table

*pictured version: DN 200*



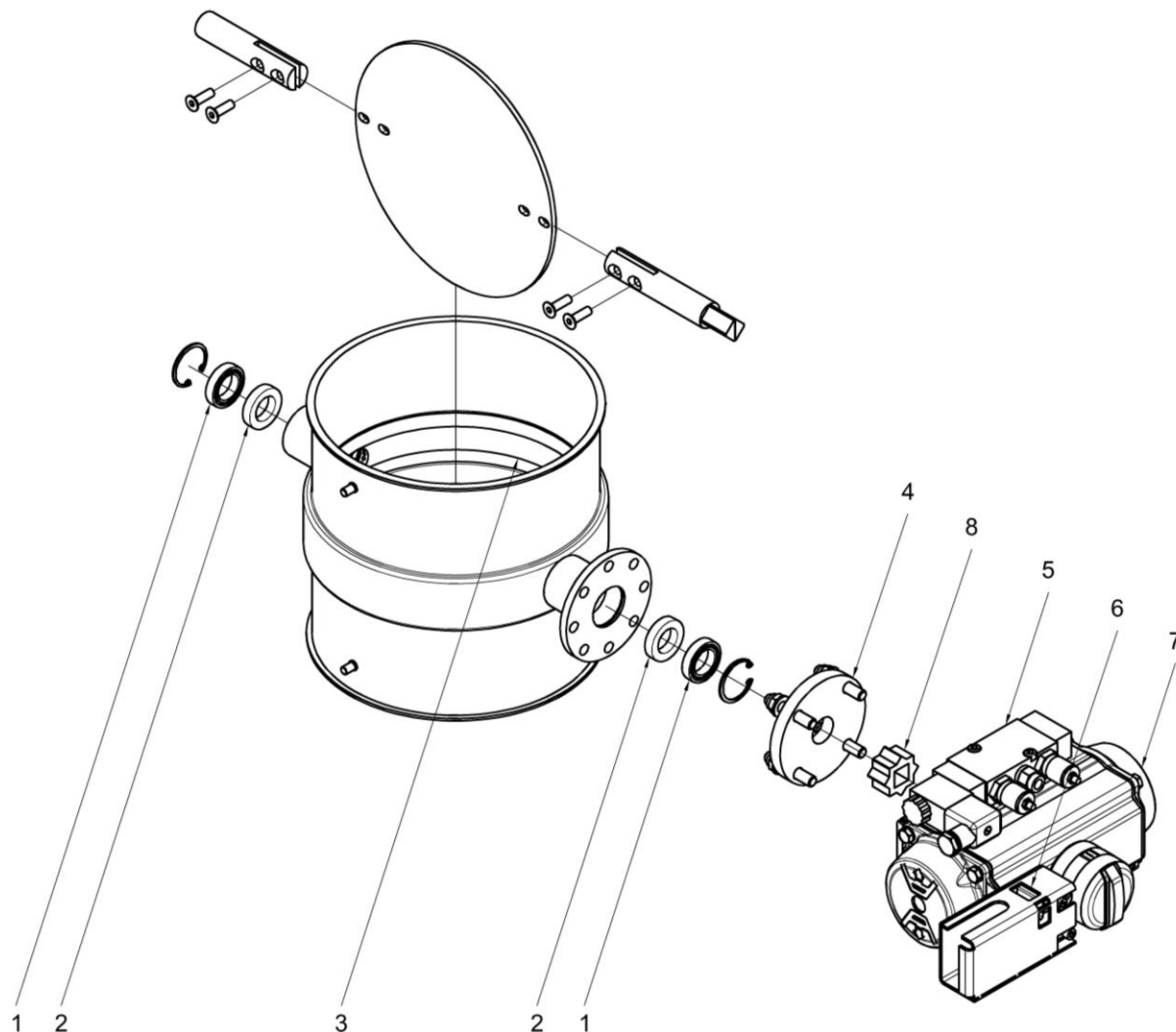
W= Silicone flap seal  
 X= Silicone shaft seal  
 Y= Deep groove ball bearings  
 Z= Retaining ring

| DN  | t<br>[mm] | Øi<br>[mm] | Øa<br>[mm] | ØBK<br>[mm] | A<br>[mm] | B<br>[mm] | L<br>[mm] | m<br>[kg] |
|-----|-----------|------------|------------|-------------|-----------|-----------|-----------|-----------|
| 80  | 1,5       | 77,5       | 80,5       | 92,5        | 94,3      | 237       | 80        | 4,3       |
| 100 | 2         | 99         | 103        | 115         | 105,5     | 247,9     | 100       | 4,6       |
| 120 |           | 119        | 123        | 135         | 113       | 255,4     | 120       | 4,8       |
| 140 |           | 135        | 139        | 151         | 123,5     | 265,9     | 140       | 5,5       |
| 150 |           | 149        | 153        | 165         | 128       | 270,4     | 150       | 5,4       |
| 160 |           | 159        | 163        | 175         | 135,5     | 277,9     | 160       | 6,1       |
| 175 |           | 174        | 178        | 190         | 143       | 302,5     | 175       | 8         |
| 200 |           | 199        | 203        | 215         | 153       | 312,5     | 200       | 8,3       |
| 224 |           | 219        | 223        | 235         | 165,5     | 32        | 200       | 8,1       |
| 250 |           | 249        | 253        | 265         | 178       | 337,5     | 200       | 9,3       |
| 280 |           | 278        | 282        | 294         | 195       | 354,5     | 200       | 10,7      |
| 300 |           | 299        | 303        | 315         | 203       | 362,5     | 200       | 10,5      |
| 315 |           | 313        | 317        | 329         | 212,5     | 384,9     | 200       | 12,8      |
| 350 |           | 349        | 353        | 365         | 230,5     | 402,9     | 200       | 13,8      |
| 400 |           | 399        | 403        | 415         | 255,5     | 427,9     | 200       | 15,3      |
| 450 |           | 449        | 453        | 465         | 280,5     | 452,9     | 200       | 17,8      |
| 500 |           | 499        | 503        | 515         | 300,5     | 519,9     | 200       | 21,4      |
| 560 |           | 558        | 562        | 574         | 330       | 549,4     | 200       | 23,6      |
| 630 |           | 628        | 632        | 644         | 365       | 584,4     | 200       | 26,7      |

|                   |                                                                                                                                                             |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tolerances</b> | Pipe diameter and roundness according to DIN EN 10296-1:2004<br>Length and angular dimensions according to DIN ISO 2768-v (very coarse)<br>Lips: 6 mm ± 1mm |
| <b>3D-Models</b>  | All 3D-models are available for download in our <a href="#">CAD portal</a> in the common file formats.                                                      |

### 3 Spare parts list

#### Exploded view



| No. | Naming                                                      | Quantity | DN 80 – DN 160          |           |
|-----|-------------------------------------------------------------|----------|-------------------------|-----------|
|     |                                                             |          | 1.0330                  | 1.4301    |
| 1   | Deep groove ball bearings <i>(for shaft diameter 20 mm)</i> | 2        | SO0128616               | SO0118470 |
| 2   | Shaft seal <i>(for shaft diameter 20 mm)</i>                | 2        | SO0118471               |           |
| 3   | Flap seal                                                   |          | <i>(see table, p.9)</i> |           |
| 4   | Spacer flange <i>(for shaft diameter 20 mm)</i>             | 1        | SO0105946               | SO0123370 |
| 5   | 5/2-way solenoid valve, monostable, ATEX                    | 1        | SO0126850               |           |
| 6   | Position sensor, ATEX                                       | 1        | SO0118518               |           |
| 7   | Rotary actuator <i>(DR00030U)</i>                           | 1        | SO0131326               |           |

EN- Technical data sheet  
**Stop valve without seal, pneumatically operated,  
 rotary actuator, ATEX**



| No. | Naming                                                      | Quantity | DN 175 – DN 300         |           |
|-----|-------------------------------------------------------------|----------|-------------------------|-----------|
|     |                                                             |          | 1.0330                  | 1.4301    |
| 1   | Deep groove ball bearings <i>(for shaft diameter 20 mm)</i> | 2        | SO0128616               | SO0118470 |
| 2   | Shaft seal <i>(for shaft diameter 20 mm)</i>                | 2        | SO0118471               |           |
| 3   | Flap seal                                                   |          | <i>(see table, p.9)</i> |           |
| 4   | Spacer flange <i>(for shaft diameter 20 mm)</i>             | 1        | SO0105946               | SO0123370 |
| 5   | 5/2-way solenoid valve, monostable, ATEX                    | 1        | SO0126850               |           |
| 6   | Position sensor, ATEX                                       | 1        | SO0118518               |           |
| 7   | Rotary actuator <i>(DR00060U)</i>                           | 1        | SO0131327               |           |

| No. | Naming                                                      | Quantity | DN 315 – DN 450         |           |
|-----|-------------------------------------------------------------|----------|-------------------------|-----------|
|     |                                                             |          | 1.0330                  | 1.4301    |
| 1   | Deep groove ball bearings <i>(for shaft diameter 20 mm)</i> | 2        | SO0128616               | SO0118470 |
| 2   | Shaft seal <i>(for shaft diameter 20 mm)</i>                | 2        | SO0118471               |           |
| 3   | Flap seal                                                   |          | <i>(see table, p.9)</i> |           |
| 4   | Spacer flange <i>(for shaft diameter 20 mm)</i>             | 1        | SO0105946               | SO0123370 |
| 5   | 5/2-way solenoid valve, monostable, ATEX                    | 1        | SO0126850               |           |
| 6   | Position sensor, ATEX                                       | 1        | SO0118518               |           |
| 7   | Rotary actuator <i>(DR00100U)</i>                           | 1        | SO0131328               |           |
| 8   | Reducing sleeve <i>(17 / 14)</i>                            | 1        | SO0106392               |           |

| No. | Naming                                                      | Quantity | DN 500 – DN 630         |           |
|-----|-------------------------------------------------------------|----------|-------------------------|-----------|
|     |                                                             |          | 1.0330                  | 1.4301    |
| 1   | Deep groove ball bearings <i>(for shaft diameters 30mm)</i> | 2        | SO0131354               | SO0130364 |
| 2   | Shaft seal <i>(for shaft diameter 30 mm)</i>                | 2        | SO0130363               |           |
| 3   | Flap seal                                                   |          | <i>(see table, p.9)</i> |           |
| 4   | Spacer flange <i>(for shaft diameter 30 mm)</i>             | 1        | SO0131383               | SO0131384 |
| 5   | 5/2-way solenoid valve, monostable, ATEX                    | 1        | SO0126850               |           |
| 6   | Position sensor, ATEX                                       | 1        | SO0118518               |           |
| 7   | Rotary actuator <i>(DR00150U)</i>                           | 1        | SO0131329               |           |

| Flap seal (item no.: 3) |                      |                  |           |
|-------------------------|----------------------|------------------|-----------|
| DN                      | Required length [mm] | Quantity*<br>[m] | Article   |
| 80                      | 281                  | 1                | SO0116014 |
| 100                     | 352                  |                  |           |
| 120                     | 415                  |                  |           |
| 140                     | 465                  |                  |           |
| 150                     | 509                  |                  |           |
| 160                     | 540                  |                  |           |
| 175                     | 587                  |                  |           |
| 200                     | 666                  |                  |           |
| 224                     | 738                  |                  |           |
| 250                     | 823                  |                  |           |
| 280                     | 914                  |                  |           |
| 300                     | 980                  |                  |           |
| 315                     | 1024                 | 2                |           |
| 350                     | 1137                 |                  |           |
| 400                     | 1294                 |                  |           |
| 450                     | 1451                 |                  |           |
| 500                     | 1608                 |                  |           |
| 560                     | 1794                 |                  |           |
| 630                     | 2014                 | 3                |           |

\*Note: Flap seal is offered by the meter.