

## Butterfly Valve VZAV

**FESTO**



## Butterfly Valve VZAV

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## Reliable shut-off!

**Butterfly Valves the way you want them to be:**

**highly functional, sturdy, wear resistant, reliable, and non-corroding.**

**Making our solutions for you even more impressive. Together with the top-quality drives from Festo, the result is excellent shut-off solutions for all industrial applications with an extremely wide range of media.**

### Ready for selection

The correct shut-off cap for each application, e.g. when safety-relevant applications are involved. For neutral or slightly aggressive liquids and gases in industrial applications, in building systems or for water treatment: VZAV.

### Technically superb, numerous variants

The manufacturer's expertise and many years of experience can be seen. Their primary features are high quality and a wide range variant for all possible applications.

### Sales and service worldwide

Wherever in the world you use solutions with butterfly valves, we are close at hand. Our vast sales and service network can support you in over 190 countries and is fast, knowledgeable, and reliable.

#### Highlights

- Modular, versatile range
- Highly functional, sturdy, wear resistant, reliable, non-corroding
- Optimized system solutions through effective joint venture
- Everything from a single source
- Vast global sales and service network
- Many approvals, e.g. for drinking water, FDA EC 1935/2004



#### Note:

Festo is only a retailer of this product, not the manufacturer

# For standard applications with neutral or mildly aggressive liquids and gases: VZAV

The basic model of the balanced butterfly valve for shut-off and control comes in a wide variety of materials, so it can be used in most industrial applications, as well as in building services engineering and water treatment.

Typical areas of application are neutral or mildly aggressive liquids and gases, water treatment and water supply.

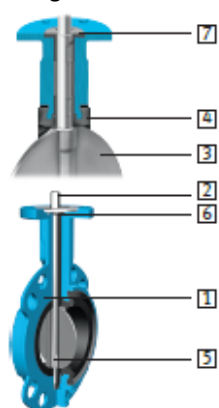


- Mining
- Paper and pulp industry
- Variants free of PWIS substances, e.g. for the automotive industry
- Free of grease, e.g. for oxygen or ultrapure water applications
- Shipbuilding
- Pneumatic transport of powders and granulates

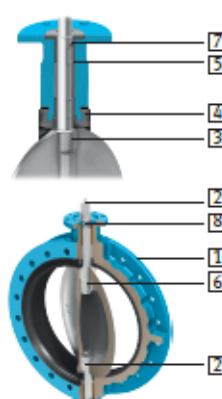
## Advantages at a glance

- Suitable for most shut-off applications
- Large variety of materials and coatings for disc and liner
- Highly resistant to corrosion due to excellent body coating
- One-piece shaft ( $\leq$ DN400): corrosion-proof because there is no pinned
- shaft-disc connection
- Reliable blowout protection
- Ultralene Coating<sup>TM</sup> for outstanding resistance to wear, shock
- resistance, high chemical resistance, and non-stick properties
- Replaceable liner for long life
- Modular actuation system

## Design



- 1 Body
- 2 One-piece shaft with visual position indication
- 3 Disc
- 4 Liner
- 5 Square disc drive
- 6 External shaft sealing with O-ring
- 7 Retaining washer (blowout protection)



- 1 Body
- 2 Two-piece shaft with Visual position indication
- 3 Disc
- 4 Liner
- 5 Shaft bearing
- 6 Square disc drive
- 7 External shaft sealing with O-ring
- 8 Retaining washer (blow-out protection)

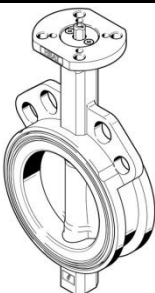
## Features

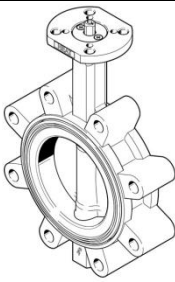
|                         |                                                                                  |
|-------------------------|----------------------------------------------------------------------------------|
| Body types              | Wafer DN 25-1000 Lug DN 25-600 U shape DN 150-1600                               |
| Installation length     | ISO 5752/20, EN 558-1/20                                                         |
| Mounting flange         | EN ISO 5211                                                                      |
| Max. operating pressure | 16 bar with selected materials                                                   |
| Ratings                 | PN6, 10 and 16 / ANSI class 150 / additional ratings on request                  |
| Temperature range       | -55°C ... 210°C, depending on material                                           |
| Materials               | EN-GJL-400-15<br>Disc: ductile cast iron, stainless steel, and special materials |

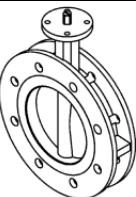
## Butterfly Valve VZAV

|                 |                                                                                                                                                   |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | Liner: EPDM, NBR, FPM and further available on request                                                                                            |
| Leakage rate    | EN 12266-1/P12 rate A, test medium water                                                                                                          |
| Safety features | The butterfly valves VZAV meet the safety requirements of the Pressure Equipment Directive 2014/68/EC (PED) Annex 1 for fluids of groups 1 and 2. |
| SIL             | The butterfly valves VZAV are suitable for use in safety systems according to IEC 61508/61511, safety integrity level SIL 2.                      |

## Connection types

| Wafer Type                                                                       |        |                       |                                                                       |
|----------------------------------------------------------------------------------|--------|-----------------------|-----------------------------------------------------------------------|
|                                                                                  | Type   | Nominal diameter [mm] | Rating standard                                                       |
|  | VZAV-C | DN32 ... DN300        | PN6 covered by PN16                                                   |
|                                                                                  |        | DN350 ... DN1000      | PN6                                                                   |
|                                                                                  |        | DN25 ... DN400        | PN10 covered by PN16                                                  |
|                                                                                  |        | DN450 ... DN1000      | PN10                                                                  |
|                                                                                  |        | DN25 ... DN1000       | PN16                                                                  |
|                                                                                  |        | DN32 ... DN400        | ANSI cl. 150 covered by PN16                                          |
|                                                                                  |        | DN450 ... DN1000      | ANSI cl. 150                                                          |
|                                                                                  |        | DN25 ... DN600        | JIS B2220 und AS2129 covered by multiple standards and pressure rates |
|                                                                                  |        | DN100 ... DN400       | AWWA C207 Class D covered by PN16                                     |
|                                                                                  |        | DN450 ... DN600       | AWWA C207 Class D covered by ANSI cl. 150                             |

| Lug Type                                                                           |        |                       |                                           |
|------------------------------------------------------------------------------------|--------|-----------------------|-------------------------------------------|
|                                                                                    | Type   | Nominal diameter [mm] | Rating standard                           |
|  | VZAV-L | DN32 ... DN600        | PN6 covered by PN16                       |
|                                                                                    |        | DN400 ... DN600       | PN6                                       |
|                                                                                    |        | DN25 ... DN150        | PN10 covered by PN16                      |
|                                                                                    |        | DN200 ... DN600       | PN10                                      |
|                                                                                    |        | DN25 ... DN600        | PN16                                      |
|                                                                                    |        | DN32 ... DN600        | ANSI cl. 150                              |
|                                                                                    |        | DN50 ... DN600        | JIS B2220 5K, 10K 16K                     |
|                                                                                    |        | DN50 ... DN600        | AS2129 Table D und Table E                |
|                                                                                    |        | DN100 ... DN600       | AWWA C207 Class D covered by ANSI cl. 150 |

| U Shape Type                                                                       |        |                       |                      |
|------------------------------------------------------------------------------------|--------|-----------------------|----------------------|
|                                                                                    | Type   | Nominal diameter [mm] | Rating standard      |
|  | VZAV-U | DN150 ... DN1400      | PN6                  |
|                                                                                    |        | DN150                 | PN10 covered by PN16 |
|                                                                                    |        | DN200 ... DN1600      | PN10                 |
|                                                                                    |        | DN200 ... DN1600      | PN16                 |

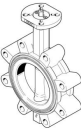
## Butterfly Valve VZAV

## Possible Flange connection

| Wafer (C)                                                                        |                     | EN 1092-1 / -2 |        |        |        | ASME B16.5/B16.47<br>Series A | JIS B 2220 |        |        | AS 2129 |         |
|----------------------------------------------------------------------------------|---------------------|----------------|--------|--------|--------|-------------------------------|------------|--------|--------|---------|---------|
|                                                                                  |                     | PN6            | PN10   | PN16   | PN25   | cl. 150 Series A              | 5K         | 10K    | 16K    | Table D | Table E |
|  | DN 25               | S8PN6          | S8PN16 | S8PN16 | S8PN16 | S9                            | S8PN6      | S8PN16 | S8PN16 | S8PN16  | S8PN16  |
|                                                                                  | DN 32               | S8PN16         | S8PN16 | S8PN16 | S8PN16 | S8PN16                        | S8PN16     | S8PN16 | S8PN16 | S8PN16  | S8PN16  |
|                                                                                  | DN 40               | S8PN16         | S8PN16 | S8PN16 | S8PN16 | S8PN16                        | S8PN16     | S8PN16 | S8PN16 | S8PN16  | S8PN16  |
|                                                                                  | DN 50               | S8PN16         | S8PN16 | S8PN16 | S8PN16 | S8PN16                        | S165K      | S8PN16 | S1616K | S8PN16  | S8PN16  |
|                                                                                  | DN 65 <sup>1)</sup> | S8PN16         | S8PN16 | S8PN16 | S8PN16 | S8PN16                        | S8PN16     | S8PN16 | S1616K | S17TE   | S17TE   |
|                                                                                  | DN 80               | S8PN16         | S8PN16 | S8PN16 | S8PN16 | S8PN16                        | S8PN16     | S1610K | S1616K | S17TE   | S17TE   |
|                                                                                  | DN 100              | S8PN16         | S8PN16 | S8PN16 | S8PN16 | S8PN16                        | S165K      | S1610K | S8PN16 | S8PN16  | S8PN16  |
|                                                                                  | DN 125              | S8PN16         | S8PN16 | S8PN16 | S8PN16 | S8PN16                        | S8PN16     | S8PN16 | S8PN16 | S8PN16  | S8PN16  |
|                                                                                  | DN 150              | S8PN6          | S8PN16 | S8PN16 | S8PN16 | S8PN16                        | S8PN16     | S8PN16 | S1616K | S8PN16  | S8PN16  |
|                                                                                  | DN 200              | S8PN16         | S8PN16 | S8PN16 | S8PN16 | S8PN16                        | S165K      | S1610K | S8PN16 | S8PN16  | S8PN16  |
|                                                                                  | DN 250              | S8PN6          | S8PN16 | S8PN16 | S8PN16 | S8PN16                        | S8PN16     | S8PN16 | S1616K | S17TD   | S8PN16  |
|                                                                                  | DN 300              | S8PN16         | S8PN16 | S8PN16 | S8PN16 | S8PN16                        | S8PN16     | S1610K | S8PN16 | S8PN16  | S8PN16  |
|                                                                                  | DN 350              | S8PN16         | S8PN16 | S8PN16 | S8PN16 | S8PN16                        | S165K      | S1610K | S8PN16 | S8PN16  | S8PN16  |
|                                                                                  | DN 400              | S8PN6          | S8PN16 | S8PN16 | S8PN16 | S8PN16                        | S165K      | S8PN16 | S8PN16 | S17TE   | S17TE   |
|                                                                                  | DN 450              | S8PN6          | S8PN10 | S8PN16 |        | S9                            | S165K      | S8PN10 | S1616K | S17TD   | S17TE   |
|                                                                                  | DN 500              | S8PN6          | S8PN10 | S8PN16 |        | S9                            | S165K      | S8PN10 | S1616K | S17TE   | S17TE   |
|                                                                                  | DN 600              | S8PN6          | S8PN10 | S8PN16 |        | S9                            | S165K      |        |        | S17TD   | S17TE   |
|                                                                                  | DN 700              | S8PN6          | S8PN10 | S8PN16 |        | S9                            | S165K      | S1610K |        | S17TD   | S17TE   |
|                                                                                  | DN 800              | S8PN6          | S8PN10 | S8PN16 |        | S9                            | S165K      | S1610K |        | S17TE   | S17TE   |
|                                                                                  | DN 900              | S8PN6          | S8PN10 | S8PN16 |        | S9                            | S165K      | S8PN10 |        | S17TE   | S17TE   |
|                                                                                  | DN 1000             | S8PN6          | S8PN10 | S8PN16 |        | S9                            | S165K      | S1610K |        | S17TD   | S17TE   |

<sup>1)</sup> DN65 PN10/16 with 4 screws according EN 1092-2

\* For 2A bodies please consult the technical document "Possible\_flange\_connections\_Desponia\_Plus\_Index"

| LUG (L)                                                                           |                     | EN 1092-1 / -2<br>Metric threads |        |        |        | ASME B16.5/B16.47<br>Series A UNC Threads | JIS B 2220<br>Metric threads |        |        | AS 2129<br>Metric threads |         |
|-----------------------------------------------------------------------------------|---------------------|----------------------------------|--------|--------|--------|-------------------------------------------|------------------------------|--------|--------|---------------------------|---------|
|                                                                                   |                     | PN6                              | PN10   | PN16   | PN25   | cl. 150 Series A                          | 5K                           | 10K    | 16K    | Table D                   | Table E |
|  | DN 25               | S8PN6                            | S8PN16 | S8PN16 | S8PN16 | S9                                        | S165K                        | S1616K | S1616K | S17TE                     | S17TE   |
|                                                                                   | DN 32               | S8PN6                            | S8PN16 | S8PN16 | S8PN16 | S9                                        | S8PN6                        | S8PN16 | S8PN16 | S17TE                     | S17TE   |
|                                                                                   | DN 40               | S8PN6                            | S8PN16 | S8PN16 | S8PN16 | S9                                        | S165K                        | S1616K | S1616K | S17TE                     | S17TE   |
|                                                                                   | DN 50               | S8PN6                            | S8PN16 | S8PN16 | S8PN16 | S9                                        | S165K                        | S1610K |        | S17TE                     | S17TE   |
|                                                                                   | DN 65 <sup>1)</sup> | S8PN6                            | S8PN16 | S8PN16 |        | S9                                        | S8PN6                        | S1610K | S1616K | S17TE                     | S17TE   |
|                                                                                   | DN 80               | S8PN6                            | S8PN16 | S8PN16 | S8PN16 | S9                                        | S165K                        | S1610K | S1616K | S17TE                     | S17TE   |
|                                                                                   | DN 100              |                                  | S8PN16 | S8PN16 |        | S9                                        | S165K                        | S1610K | S1616K | S17TD                     | S17TE   |
|                                                                                   | DN 125              | S8PN6                            | S8PN16 | S8PN16 |        | S9                                        | S165K                        | S1610K | S1616K | S17TE                     | S17TE   |
|                                                                                   | DN 150              | S8PN6                            | S8PN16 | S8PN16 |        | S9                                        | S165K                        | S1610K |        | S17TD                     | S17TE   |
|                                                                                   | DN 200              | S8PN6                            | S8PN10 | S8PN16 |        | S9                                        | S165K                        | S1610K | S1616K | S17TD                     | S17TE   |
|                                                                                   | DN 250              | S8PN6                            | S8PN10 | S8PN16 |        | S9                                        | S165K                        | S1610K |        | S17TD                     | S17TE   |
|                                                                                   | DN 300              | S8PN6                            | S8PN10 | S8PN16 |        | S9                                        | S165K                        |        |        | S17TD                     | S17TE   |
|                                                                                   | DN 350              | S8PN6                            | S8PN10 | S8PN16 |        | S9                                        | S165K                        | S1610K | S1616K | S17TE                     | S17TE   |
|                                                                                   | DN 400              | S8PN6                            | S8PN10 | S8PN16 |        | S9                                        | S165K                        | S1610K | S1616K | S17TE                     | S17TE   |
|                                                                                   | DN 450              | S8PN6                            | S8PN10 | S8PN16 |        | S9                                        | S165K                        | S8PN10 | S1616K | S17TD                     | S17TE   |
|                                                                                   | DN 500              | S8PN6                            | S8PN10 | S8PN16 |        | S9                                        | S165K                        | S8PN10 | S1616K | S17TE                     | S17TE   |
|                                                                                   | DN 600              | S8PN6                            | S8PN10 | S8PN16 |        | S9                                        | S165K                        |        |        | S17TD                     | S17TE   |

<sup>1)</sup> DN65 PN10/16 with 4 screws according EN 1092-2

\* For 2A bodies please consult the technical document "Possible\_flange\_connections\_Desponia\_Plus\_Index"

| U Shape (D4)                                                                       |         | EN 1092-1 / -2 |        |        |  | ASME B16.5/B16.47<br>Series A | JIS B 2220 |        |        | AS 2129 |         |
|------------------------------------------------------------------------------------|---------|----------------|--------|--------|--|-------------------------------|------------|--------|--------|---------|---------|
|                                                                                    |         | PN6            | PN10   | PN16   |  | cl. 150 Series A              | 5K         | 10K    | 16K    | Table D | Table E |
|  | DN 150  | S8PN6          | S8PN16 | S8PN16 |  | S9                            | S165K      | S1610K |        | S17TD   | S17TE   |
|                                                                                    | DN 200  | S8PN6          | S8PN10 | S8PN16 |  | S9                            | S165K      | S1610K | S1616K | S17TD   | S17TE   |
|                                                                                    | DN 250  | S8PN6          | S8PN10 | S8PN16 |  | S9                            | S165K      | S1610K |        | S17TD   | S17TE   |
|                                                                                    | DN 300  | S8PN6          | S8PN10 | S8PN16 |  | S9                            | S165K      | S1610K | S1616K | S17TD   | S17TE   |
|                                                                                    | DN 350  | S8PN6          | S8PN10 | S8PN16 |  | S9                            | S165K      | S1610K | S1616K | S17TE   | S17TE   |
|                                                                                    | DN 400  | S8PN6          | S8PN10 | S8PN16 |  | S9                            | S165K      | S1610K | S1616K | S17TE   | S17TE   |
|                                                                                    | DN 450  | S8PN6          | S8PN10 | S8PN16 |  | S9                            | S165K      | S1610K |        | S17TD   | S17TE   |
|                                                                                    | DN 500  | S8PN6          | S8PN10 | S8PN16 |  | S9                            | S165K      | S8PN10 | S1616K | S17TE   | S17TE   |
|                                                                                    | DN 600  | S8PN6          | S8PN10 | S8PN16 |  | S9                            | S165K      | S1610K | S1616K | S17TD   | S17TE   |
|                                                                                    | DN 700  | S8PN6          | S8PN10 | S8PN16 |  | S9                            | S165K      | S1610K |        | S17TD   | S17TE   |
|                                                                                    | DN 750  |                |        |        |  | S9                            | S165K      | S1610K |        | S17TD   | S17TE   |
|                                                                                    | DN 800  | S8PN6          | S8PN10 | S8PN16 |  | S9                            | S165K      | S1610K |        | S17TE   | S17TE   |
|                                                                                    | DN 900  | S8PN6          | S8PN10 | S8PN16 |  | S9                            | S165K      | S8PN10 |        | S17TE   | S17TE   |
|                                                                                    | DN 1000 | S8PN6          | S8PN10 | S8PN16 |  | S9                            | S165K      | S1610K |        | S17TD   | S17TE   |
|                                                                                    | DN 1100 |                | S8PN10 | S8PN16 |  | S9                            | S165K      | S1610K |        |         |         |
|                                                                                    | DN 1200 | S8PN6          | S8PN10 | S8PN16 |  | S9                            | S165K      | S8PN10 |        | S17TD   | S17TE   |
|                                                                                    | DN 1400 | S8PN6          | S8PN10 | S8PN16 |  | S9                            |            |        |        | S17TD   |         |
|                                                                                    | DN 1600 |                | S8PN10 | S8PN16 |  |                               |            |        |        | S17TD   |         |

Standard ASME B16.1 cl. 125 meets ASME B16.5 cl. 150 for drillings

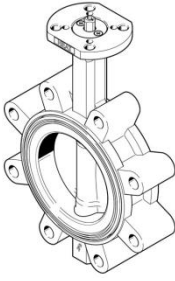
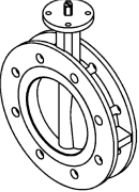
|  |                                                                                       |
|--|---------------------------------------------------------------------------------------|
|  | Direct connection possible                                                            |
|  | Connection possible, special machining, longer delivery time and extra-charge         |
|  | Connection possible by removing centering ears, longer delivery time and extra-charge |
|  | Connection not possible                                                               |
|  | No standard available                                                                 |

Ordercode: VZAV-x-xx-xx-SXXX-...

|          |          |            |               |
|----------|----------|------------|---------------|
| S8PN6 =  | PN6      | S17TD/TE = | AS 2129 table |
| S8PN10 = | PN10     | S165K =    | JIS B2220 5K  |
| S8PN16 = | PN16     | S1610K =   | JIS B2220 10K |
| S9 =     | ANSI 150 | S1616K =   | JIS B2220 16K |
| S18 =    |          |            | AWWA C.207 C  |

## Order information for VZAV

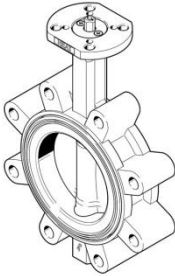
Individual selection by modular system, tailored for specific customer needs scale of over 750.000 varieties.  
The configuration will occur by part number.

|                                                                                    | Type                          | Part Number<br>Modular system | Nominal diameter<br>[mm] | Varieties                                                                                                                                                               |
|------------------------------------------------------------------------------------|-------------------------------|-------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <b>Wafer type</b><br>VZAV-C   | 8062128                       | DN25 ... DN1000          | All available <ul style="list-style-type: none"> <li>• Liner</li> <li>• Pressure rates</li> <li>• Surfaces</li> </ul> Detailed information:<br><a href="#">→ page 9</a> |
|   | <b>Lug type</b><br>VZAV-L     |                               | DN25 ... DN600           |                                                                                                                                                                         |
|  | <b>U shape type</b><br>VZAV-U |                               | DN150 ... DN1600         |                                                                                                                                                                         |

## Butterfly Valve VZAV

## Order information for Wafer and Lug

We have listed about 230 Top Seller of VZAV with distinguished part number – ready to order.  
For more information consider the corresponding pages.

|                                                                                   | Type                        | Nominal diameter<br>[mm]             | Varieties                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------|-----------------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <b>Wafer type</b><br>VZAV-C | DN25 ... DN300<br>(EPDM HT ...DN600) | <ul style="list-style-type: none"> <li>• ISO</li> <li>• Ductile cast iron / epoxy coated</li> <li>• Working pressure: 10bar / 16bar</li> <li>• Liner: EPDM / EPDM KTW / EPDM HT / SBRA / NBR</li> </ul> <p>Detailed information:<br/><a href="#">→ page 20</a></p> |
|  | <b>Lug type</b><br>VZAV-L   | DN25 ... DN300                       | <ul style="list-style-type: none"> <li>• ISO</li> <li>• Ductile cast iron / epoxy coated</li> <li>• Working pressure: 10bar / 16bar</li> <li>• Liner: EPDM / NBR</li> </ul> <p>Detailed information:<br/><a href="#">→ page 25</a></p>                             |

## Order Code VZAV

|      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 001  | 002 | 003 | 004 | 005 | 006 | 007 | 008 | 009 | 010 | 011 | 012 | 013 | 014 | 015 |
| VZAV | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   |

|      |                 |
|------|-----------------|
| 001  | Type            |
| VZAV | Butterfly Valve |

|     |              |
|-----|--------------|
| 002 | Feature      |
| ML  | Manual lever |

|     |                                          |
|-----|------------------------------------------|
| 003 | Design                                   |
| C   | Ring housing with centring holes (Wafer) |
| L   | Ring housing with threaded flange (Lug)  |
| U   | U shape housing                          |

|      |                     |
|------|---------------------|
| 004  | Nominal Diameter DN |
| 25   | 25 mm               |
| ...  | ...                 |
| 1600 | 1600 mm             |

|     |                  |
|-----|------------------|
| 005 | Nominal pressure |
| 2,5 | 2.5 bar          |
| 6   | 6 bar            |
| 10  | 10 bar           |
| 16  | 16 bar           |

|     |                     |
|-----|---------------------|
| 006 | Connection standard |
| S8  | DIN EN 1092-1       |
| S9  | ANSI Class 150      |
| S16 | JIS B2220           |
| S17 | AS 2129             |
| S18 | AWWAC207            |

|           |                                            |
|-----------|--------------------------------------------|
| 007       | Nominal pressure connection standard       |
| PN6       | PN6                                        |
| PN10      | PN10                                       |
| PN16      | PN16                                       |
| 5K        | 5K                                         |
| 10K       | 10K                                        |
| 16K       | 16K                                        |
| Tabelle D | TD                                         |
| Tabelle E | TE                                         |
| Class D   | CD                                         |
|           | Standard and only with [S9] ANSI Class 150 |

|     |                                  |
|-----|----------------------------------|
| 008 | Housing material                 |
| H1  | Ductile cast iron; EN-GJS-400-15 |

|       |                           |
|-------|---------------------------|
| 009   | Surface finish housing    |
| PU70  | Polyurethane coated 70 µ  |
| EP200 | Epoxy coated 200 µ        |
| PU250 | Polyurethane coated 250 µ |

|     |                        |
|-----|------------------------|
| 010 | Shaft material         |
| V5  | Stainless Steel 1.4021 |
| V7  | Stainless Steel 1.4542 |

|     |                                  |
|-----|----------------------------------|
| 011 | Shut-off element material        |
| H1  | Ductile cast iron, EN-GJS-400-15 |
| H5  | Cast steel, GS-C25 1.6019        |
| H6  | Cast steel, GS-52 1.0552         |
| H7  | Cast steel, ASTM A494 CW-12MW    |
| H8  | Aluminium bronze ASTM B14        |
| V3  | Stainless steel 1.4408           |
| V9  | Stainless steel 1.4588           |

|       |                                 |
|-------|---------------------------------|
| 012   | Surface finish shut-off element |
| -     | none                            |
| CR    | Chrome coated                   |
| PL    | Polished                        |
| PE3   | Polyethylene coated 3mm         |
| PU70  | Polyurethane coated 70 µ        |
| HL600 | Halar coated 600 µ              |
| PA250 | Polyamide coated 250 µ          |

|      |                                 |
|------|---------------------------------|
| 013  | Liner                           |
| E    | EPDM                            |
| E3   | EPDM KTW                        |
| E4   | EPDM HT                         |
| E5   | EPDM for abrasive media         |
| E6   | EPDM white (EC 1935/2004 & FDA) |
| E7   | Epichlorhydrin rubber (ECO)     |
| E8   | EPDM, blue (EC 1935/2004 & FDA) |
| E9   | EPDM for high temperature       |
| FC   | Flucast FX                      |
| N    | NBR                             |
| N1   | NBR-hydrogenated (Biogas)       |
| N2   | NBR Gas (EN 682)                |
| N5   | NBR for abrasive media          |
| NR   | NBR, white (EC 1935/2004 & FDA) |
| S    | Silicone                        |
| S1   | Silicone, transparent (FDA)     |
| SBRA | SBR for abrasive media          |
| V    | FPM                             |
| V1   | FPM GF for oxygen-rich fuel     |

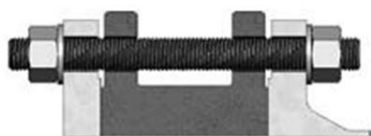
|     |              |
|-----|--------------|
| 014 | PWIS-content |
| -   | None         |
| C   | PWIS-free    |

|     |                                                            |
|-----|------------------------------------------------------------|
| 015 | Usage in potentially explosive areas                       |
| -   | None                                                       |
| 135 | Zone 1 (o) IIB / T6...T3 Zone 21 (o) IIIC / 85...200°C     |
| 112 | Zone 1 (o) IIC / T6...T3 Zone 21 (o) IIIC / 85...200°C     |
| 278 | Zone 0 (i), 1 (o) IIB / T6...T3 Zone 20 (i), 21 (o) IIIC / |
| 246 | Zone 0 (i), 1 (o) IIC / T6...T3 Zone 20 (i), 21 (o) IIIC / |

## Butterfly Valve VZAV

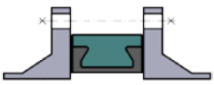
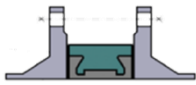
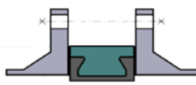
## Technical Data

| Process valve function            |                                                           |
|-----------------------------------|-----------------------------------------------------------|
| Valve function                    | 2/2 way                                                   |
| Design                            | Butterfly valve in Wafer, Lug type and U shape            |
| Sealing principle                 | Soft                                                      |
| Actuation type                    | Mechanical / automated via ISO5211 interface              |
| Manual override                   | None                                                      |
| Approved for use in food industry | Yes                                                       |
| Switching position display        | Slot direction = disc direction                           |
| Direction of flow                 | Reversible                                                |
| Bare shaft position               | 45°                                                       |
| Type of mounting                  | In line installation                                      |
| Mounting position                 | ... < DN400 any direction / > DN400 horizontal            |
| Based on connection standard      | EN 1092-1 / ANSI cl. 150 / AS 2129 / AWWAC207 / SANS 1123 |

| Mounting instructions at the end of a pipe |                                                                                      |
|--------------------------------------------|--------------------------------------------------------------------------------------|
| Body type                                  | Wafer type (C) not possible                                                          |
|                                            | Lug type (L) possible without counter flange                                         |
|                                            | U shape (U) only with counter flange                                                 |
|                                            | Example of the counter flange:                                                       |
|                                            |  |
| Body material                              | H1 - EN - GJS - 400 - 15                                                             |
| Media                                      | Only for liquid media, 10°C ... +30°C                                                |
| Max. working pressure                      | DN25-DN200      Wafer<br>DN250-DN600      Lug<br>DN700-DN1400    U-Shape             |
|                                            | No water hammer!                                                                     |

| Operating and environmental conditions |                                   |                                                                                |
|----------------------------------------|-----------------------------------|--------------------------------------------------------------------------------|
| Nominal pressure                       | DIN EN 1333                       | PN6; PN 10; PN16                                                               |
|                                        | ASME B16.5                        | ANSI class 150                                                                 |
|                                        | JIS B2220                         | 5K; 10K; 16K                                                                   |
|                                        | AS2129                            | Table D; Table E                                                               |
|                                        | AWWAC207                          | Class D                                                                        |
| Temperature of media                   | -55°C ... 210°C / -67°F ... 410°F | <b>Depending on:</b><br>sealing material, disc material and working conditions |
| Vacuum [mbarA]                         | 200 (higher vacuum on request)    |                                                                                |
| Conditions:                            | Max. nominal diameter             | DN300 (bigger sizes on request)                                                |
|                                        | Liner                             | EPDM / NBR                                                                     |
|                                        | Media                             | neutral media, max. 80°C                                                       |
|                                        | Installation                      | please consider table for mounting flanges                                     |

## Flange diameter – assembly notes

| Nominal diameter [mm] | Inner diameter [mm]                                                               |                                                                                    |                                                                                     |
|-----------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                       | D min <sup>1</sup>                                                                | D opt <sup>2</sup>                                                                 | D max <sup>3</sup>                                                                  |
|                       |  |  |  |
| 32                    | 19                                                                                | 34                                                                                 | 47                                                                                  |
| 40                    | 32                                                                                | 42                                                                                 | 57                                                                                  |
| 50                    | 35                                                                                | 53                                                                                 | 68                                                                                  |
| 65                    | 53                                                                                | 68                                                                                 | 87                                                                                  |
| 80                    | 74                                                                                | 83                                                                                 | 104                                                                                 |
| 100                   | 93                                                                                | 103                                                                                | 126                                                                                 |
| 125                   | 119                                                                               | 128                                                                                | 154                                                                                 |
| 150                   | 147                                                                               | 153                                                                                | 174                                                                                 |
| 200                   | 198                                                                               | 202                                                                                | 226                                                                                 |
| 250                   | 247                                                                               | 253                                                                                | 277                                                                                 |
| 300                   | 297                                                                               | 303                                                                                | 328                                                                                 |
| 350                   | 340                                                                               | 345                                                                                | 370                                                                                 |
| 400                   | 384                                                                               | 395                                                                                | 421                                                                                 |
| 450                   | 325                                                                               | 453                                                                                | 462                                                                                 |
| 500                   | 490                                                                               | 505                                                                                | 514                                                                                 |
| 600                   | 585                                                                               | 605                                                                                | 617                                                                                 |
| 700                   | 680                                                                               | 696                                                                                | 715                                                                                 |
| 800                   | 790                                                                               | 810                                                                                | 817                                                                                 |
| 900                   | 880                                                                               | 900                                                                                | 918                                                                                 |
| 1000                  | 980                                                                               | 997                                                                                | 1019                                                                                |
| 1200                  | 1175                                                                              | 1195                                                                               | 1225                                                                                |
| 1400                  | 1348                                                                              | 1387                                                                               | 1430                                                                                |
| 1600                  | 1560                                                                              | 1602                                                                               | 1640                                                                                |

1) Minimum diameter of the flange enabling to move the disc (in case of a perfectly centred valve)

2) Diameter of the flange for optimal mounting

3) Maximum diameter of the flange

## Butterfly Valve VZAV

## Liner Material

| Code | Name DIN              | Material                                          | Field of application                                                                                                                                                                                                                                                 | Temperature range |
|------|-----------------------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| E    | EPDM                  | Ethylene-Propylene Terpolymer                     | Weak mineral acids and basis, air, water, ketones, and ester                                                                                                                                                                                                         | 0°C ... 95°C      |
| E3   | EPDM KTW              | Ethylene-Propylene Terpolymer                     | With drinking water approval ACS, DVGW, WRAS, NSF-61 and EN681-1<br>With NSF-61 approval when used in combination with H1PA250 disc (Up to DN700 size) or with V3 disc (for all sizes available)                                                                     | 0°C ... 95°C      |
| E4   | EPDM-HT               | Ethylene-Propylene Terpolymer                     | Weak mineral acids and basis, air, water, ketones, and ester                                                                                                                                                                                                         | 0°C ... 130°C     |
| E5   | Flucast FT            | Ethylene-Propylene Terpolymer/EPDM based          | Specially designed for the resistance to water solutions with suspensions solids. Is adequate to support weak mineral acids, weak mineral bases, alcohols, ketones, and esters.                                                                                      | 0°C ... 130°C     |
| E6   | EPDM white            | Ethylene-Propylene Terpolymer                     | Weak minerals acids and basis, air, water, ketones, and esters, especially for food applications                                                                                                                                                                     | 0°C ... 95°C      |
| E7   | ECO                   | Epichloridrine ethylene oxide copolymer           | Resistance to brine and moderate to oil, fuel                                                                                                                                                                                                                        | -40°C ... 90°C    |
| E8   | EPDM blue             | Ethylene-Propylene Terpolymer                     | Weak mineral acids and basis, air, water, ketones, and esters, especially for food applications, EC 1935/2004 and FDA                                                                                                                                                | 0°C ... 95°C      |
| E9   | EPDM high temperature | Ethylene-Propylene Terpolymer/EPDM based          | For general industrial applications, heating and low pressure steam applications up to 150°C                                                                                                                                                                         | 0°C ... 150°C     |
| FC   | Flucast FX            | FPM based                                         | Abrasive applications such as acids and concentrated bases at high temperatures, a good behavior with water steam (up to 160 °C) and an excellent resistance to abrasion at high temperatures (> 130 °C). It presents twice the abrasion resistance of standard FPM  | 0°C ... 200°C     |
| N    | NBR                   | Acrylonitrile – butadiene copolymer               | Oils, greases, fuel, gas oil, CO2, CO, H2                                                                                                                                                                                                                            | 0°C ... 90°C      |
| NR   | NBR white             |                                                   | Special for food applications                                                                                                                                                                                                                                        | 0°C ... 90°C      |
| N1   | NBR-H                 |                                                   | Raw biogas, CO2, CO, H2S                                                                                                                                                                                                                                             | 0°C ... 90°C      |
| N2   | NBR                   |                                                   | natural gas with DVGW gas approval DIN EN 682                                                                                                                                                                                                                        | 0°C ... 90°C      |
| N5   | NBR                   | NBR based                                         | Especially designed to resist to the highest abrasive products, still providing an excellent resistance to oils and greases. This material is the alternative where Carboxylic Nitrile was used or Flucast® AB/P, it is recommended for the most aggressive products | 0°C ... 90°C      |
| S    | MVQ                   | Poly (methyl vinyl) siloxane                      | Highest and lowest temperature resistance                                                                                                                                                                                                                            | -55°C ... 200°C   |
| SBRA | SBR                   | SBR based                                         | Especially designed for the resistance to chemically inert powdered products, such as: flours, cements, plasters, concrete mortars, powdered sugar, etc. This material is the alternative where natural rubber was used                                              | 0°C ... 70°C      |
| S1   | MVQ transparent       | Poly (methyl vinyl) siloxane                      | Especially for food applications                                                                                                                                                                                                                                     | -55°C ... 200°C   |
| V    | FPM                   | Hexafluoropropylene vinylidene fluoride copolymer | Very good resistance to high temperature, light, weathering, hydraulic liquids, hydrocarbons, benzene solvent, acids, bases, oxygen                                                                                                                                  | 0°C ... 210°C     |
| V1   | FPM                   | HFP-VDF-TFE-CSM Tetra polymer                     | Specially designed for oxygenated gasolines                                                                                                                                                                                                                          | 0°C ... 210°C     |

## Actuating Torques

### Standard conditions

Liquids between 20°C ... 80°C. For other media the actuating torque could change. Please see below safety factor or contact your responsible sales partner.

### Safety factor

The specification of a safety factor is recommended when configuring a quarter turn actuator because this increases the available torque reserve.

- Pipeline medium liquid 1.35
- Pipeline medium sticky/viscous 1.75
- Pipeline medium gaseous 1.5

These values are reference values and must be reviewed according to the application.

| Nominal Diameter [mm] | Torque [Nm]<br>with disc for max. nominal pressure of: |       |        |        |
|-----------------------|--------------------------------------------------------|-------|--------|--------|
|                       | 2,5 bar                                                | 6 bar | 10 bar | 16 bar |
| DN25                  |                                                        |       |        | 17     |
| DN32                  |                                                        |       |        | 17     |
| DN40                  |                                                        |       |        | 17     |
| DN50                  |                                                        |       |        | 30     |
| DN65                  |                                                        |       |        | 33     |
| DN80                  |                                                        |       | 39     | 51     |
| DN100                 |                                                        |       | 56     | 65     |
| DN125                 |                                                        |       | 68     | 113    |
| DN150                 |                                                        |       | 90     | 122    |
| DN200                 |                                                        |       | 150    | 218    |
| DN250                 | 126 (extended delivery time)                           |       | 197    | 263    |
| DN300                 | 204 (extended delivery time)                           |       | 332    | 392    |
| DN350                 | 273                                                    | 375   | 593    | 720    |
| DN400                 | 582                                                    | 794   | 882    | 1103   |
| DN450                 | 878                                                    | 1229  | 1470   | 1818   |
| DN500                 | 1053                                                   | 1370  | 1478   | 2024   |
| DN600                 | 1944                                                   | 2306  | 2770   | 4050   |
| DN700                 | 2106                                                   | 2970  | 3861   | 4590   |
| DN750                 | 2430                                                   | 3494  | 4320   | 5400   |
| DN800                 | 2633                                                   | 3510  | 4533   | 5893   |
| DN900                 | 3443                                                   | 4388  | 5603   | 7020   |
| DN1000                | 4388                                                   | 5535  | 7020   | 8505   |
| DN1100                | 5670                                                   | 7088  | 8775   | 10395  |
| DN1200                | 7425                                                   | 8910  | 10530  | 12690  |
| DN1400                | 9315                                                   | 13500 | 20536  |        |
| DN1600                | 12420                                                  | 17955 | 33210  |        |

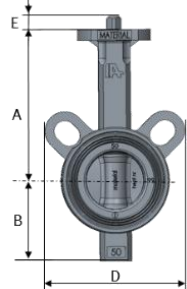
## Butterfly Valve VZAV

## KV-Values

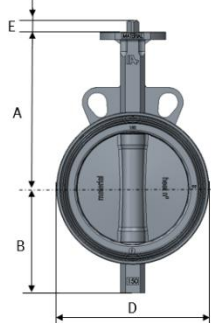
| Nominal diameter<br>[mm] | KV-Values [m³/h] depending on the opening angle of the valve |       |       |       |       |        |        |        |
|--------------------------|--------------------------------------------------------------|-------|-------|-------|-------|--------|--------|--------|
|                          | 20°                                                          | 30°   | 40°   | 50°   | 60°   | 70°    | 80°    | 90°    |
| DN25 / DN32              |                                                              | 1,5   | 5     | 10    | 15    | 26     | 34     | 40     |
| DN40                     |                                                              | 2,7   | 8,5   | 16    | 25    | 37     | 46     | 50     |
| DN50                     | 2                                                            | 7     | 15    | 28    | 45    | 68     | 88     | 100    |
| DN65                     | 3                                                            | 11    | 24    | 48    | 85    | 138    | 180    | 210    |
| DN80                     | 8                                                            | 22    | 50    | 83    | 134   | 230    | 312    | 360    |
| DN100                    | 15                                                           | 35    | 70    | 130   | 225   | 410    | 585    | 650    |
| DN125                    | 28                                                           | 70    | 135   | 230   | 360   | 600    | 920    | 1050   |
| DN150                    | 33                                                           | 95    | 205   | 320   | 580   | 980    | 1410   | 1620   |
| DN200                    | 60                                                           | 175   | 355   | 580   | 910   | 1600   | 2450   | 2800   |
| DN250                    | 132                                                          | 340   | 590   | 940   | 1480  | 2550   | 3950   | 4480   |
| DN300                    | 200                                                          | 505   | 890   | 1450  | 2100  | 3800   | 5960   | 6800   |
| DN350                    | 280                                                          | 680   | 1200  | 2050  | 3150  | 5050   | 8100   | 9200   |
| DN400                    | 365                                                          | 860   | 1500  | 2490  | 3980  | 6600   | 10200  | 11700  |
| DN450                    | 465                                                          | 1080  | 1900  | 3150  | 5050  | 8700   | 13300  | 15200  |
| DN500                    | 580                                                          | 1200  | 2300  | 3740  | 6150  | 11000  | 16800  | 18900  |
| DN600                    | 820                                                          | 1600  | 2780  | 5200  | 8940  | 14500  | 23500  | 26800  |
| DN700                    | 890                                                          | 2050  | 3450  | 6050  | 11050 | 18800  | 31500  | 37100  |
| DN750                    | 1150                                                         | 2250  | 4350  | 7700  | 12500 | 20700  | 34800  | 42750  |
| DN800                    | 1300                                                         | 2550  | 4950  | 8750  | 14200 | 23500  | 39500  | 48500  |
| DN900                    | 1650                                                         | 3300  | 6400  | 11800 | 19400 | 31500  | 52500  | 61300  |
| DN1000                   | 2150                                                         | 4250  | 8200  | 15100 | 23500 | 39400  | 65500  | 80500  |
| DN1100                   | 2950                                                         | 5950  | 10100 | 16400 | 28200 | 46100  | 81500  | 98500  |
| DN1200                   | 4000                                                         | 7500  | 12500 | 19800 | 34000 | 55400  | 98300  | 119200 |
| DN1400                   | 5200                                                         | 10120 | 18200 | 32500 | 51500 | 89500  | 142000 | 162000 |
| DN1600                   | 7100                                                         | 14210 | 26050 | 45000 | 71200 | 118500 | 196200 | 228500 |

## Dimension Wafer Type

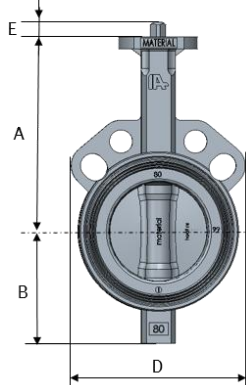
DN25 ... DN50



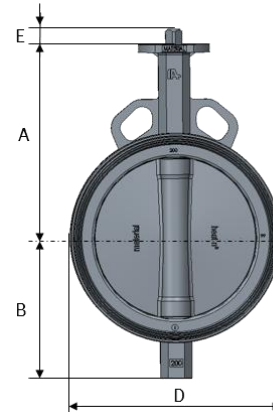
DN65 ... DN100



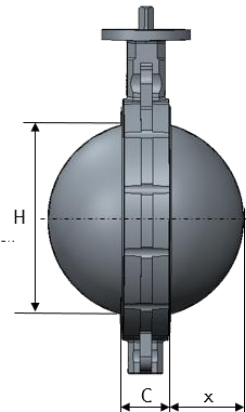
DN125 ... DN150



DN200 ... DN400



DN25 ... DN1000

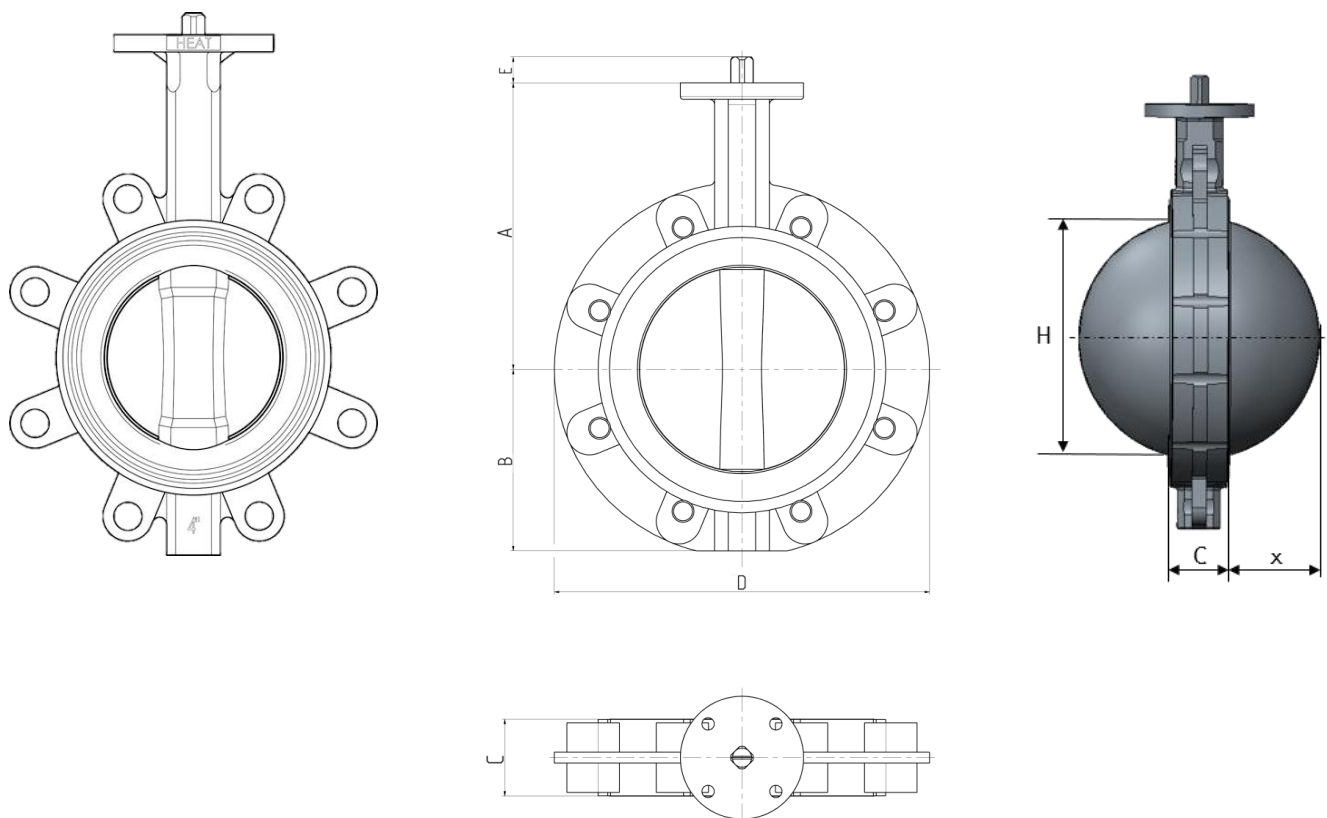


| Nominal diameter [DN] | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] ±0,5 | H <sup>1</sup> [mm] | X <sup>1</sup> [mm] | weight [kg] |
|-----------------------|--------|--------|--------|--------|-------------|---------------------|---------------------|-------------|
| 25                    | 110    | 51     | 30     | 101    | 12          | 19                  | 3                   | 1,0         |
| 32                    | 110    | 51     | 30     | 101    | 12          | 19                  | 3                   | 1,0         |
| 40                    | 130    | 55     | 33     | 108    | 12          | 28                  | 6                   | 1,3         |
| 50                    | 135    | 72     | 43     | 123    | 12          | 32                  | 6                   | 1,8         |
| 65                    | 150    | 82     | 46     | 138    | 12          | 50                  | 11                  | 2,3         |
| 80                    | 160    | 92     | 46     | 143    | 12          | 69                  | 19                  | 2,3         |
| 100                   | 180    | 110    | 52     | 161    | 12          | 88                  | 26                  | 3,9         |
| 125                   | 195    | 128    | 56     | 181    | 16          | 115                 | 36                  | 5,0         |
| 150                   | 210    | 141    | 56     | 205    | 16          | 141                 | 48                  | 5,9         |
| 200                   | 240    | 174    | 60     | 260    | 19          | 194                 | 72                  | 9,3         |
| 250                   | 279    | 201    | 68     | 310    | 24          | 240                 | 91                  | 17,0        |
| 300                   | 315    | 234    | 78     | 362    | 24          | 290                 | 112                 | 23,7        |
| 350                   | 330    | 268    | 80     | 425    | 22          | 330                 | 130                 | 41,5        |
| 400                   | 365    | 299    | 102    | 475    | 27          | 377                 | 145                 | 57,2        |
| 450                   | 397    | 355    | 113    | 538    | 36          | 425                 | 164                 | 95          |
| 500                   | 437    | 393    | 126    | 595    | 36          | 474                 | 182                 | 125         |
| 600                   | 522    | 464    | 153    | 695    | 46          | 569                 | 218                 | 180         |
| 700                   | 565    | 503    | 168    | 800    | 80          | 660                 | 257                 | 280         |
| 800                   | 627    | 577    | 190    | 908    | 80          | 774                 | 304                 | 387         |
| 900                   | 696    | 643    | 204    | 1015   | 100         | 855                 | 337                 | 502         |
| 1000                  | 745    | 693    | 218    | 1133   | 100         | 960                 | 383                 | 710         |

1) When using plastic stubs please check dimension H / x to avoid damaging of disc

## Butterfly Valve VZAV

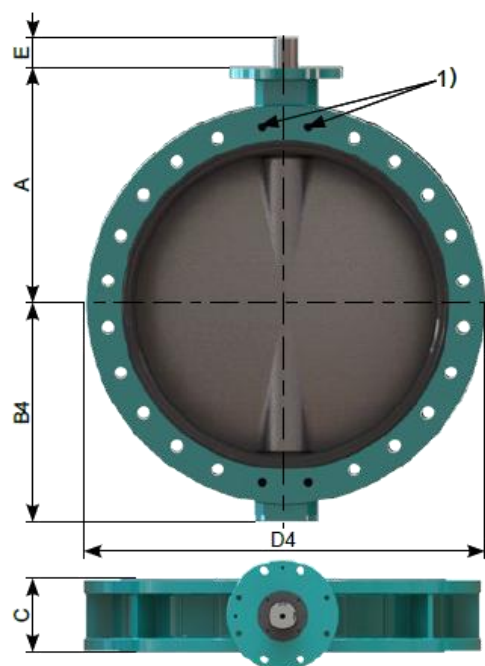
## Dimension Lug Type



| Nominal diameter [DN] | A [mm] | B [mm] | C [mm] | D [mm] | E [mm] ±0,5 | H <sup>1</sup> [mm] | x <sup>1</sup> [mm] | weight [kg] |
|-----------------------|--------|--------|--------|--------|-------------|---------------------|---------------------|-------------|
| 25                    | 110    | 51     | 30     | 101    | 12          | 19                  | 3                   | 1,4         |
| 32                    | 110    | 51     | 30     | 101    | 12          | 19                  | 3                   | 1,4         |
| 40                    | 130    | 54     | 33     | 108    | 12          | 28                  | 6                   | 2           |
| 50                    | 135    | 72     | 43     | 116    | 12          | 32                  | 6                   | 3,2         |
| 65                    | 150    | 82     | 46     | 131    | 12          | 50                  | 11                  | 4           |
| 80                    | 160    | 88     | 46     | 188    | 12          | 69                  | 19                  | 6,1         |
| 100                   | 180    | 102    | 52     | 219    | 12          | 88                  | 26                  | 8,5         |
| 125                   | 195    | 116    | 56     | 248    | 16          | 115                 | 36                  | 10          |
| 150                   | 210    | 128    | 56     | 274    | 16          | 141                 | 48                  | 11          |
| 200                   | 240    | 161    | 60     | 332    | 19          | 194                 | 72                  | 19,6        |
| 250                   | 279    | 199    | 68     | 402    | 24          | 240                 | 91                  | 28,7        |
| 300                   | 315    | 234    | 78     | 472    | 24          | 290                 | 112                 | 41,2        |
| 350                   | 330    | 258    | 80     | 520    | 27          | 330                 | 130                 | 55          |
| 400                   | 365    | 290    | 102    | 584    | 27          | 377                 | 145                 | 75          |
| 450                   | 397    | 355    | 113    | 655    | 36          | 425                 | 164                 | 150         |
| 500                   | 437    | 393    | 126    | 712    | 36          | 474                 | 182                 | 170         |
| 600                   | 522    | 464    | 153    | 829    | 46          | 569                 | 218                 | 240         |

1) When using plastic stubs please check dimension H / x to avoid damaging of disc

## Dimension U Shape



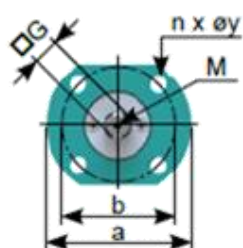
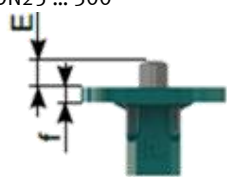
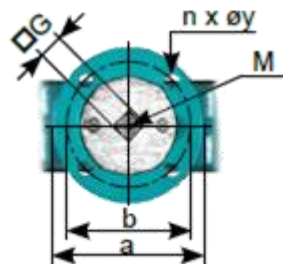
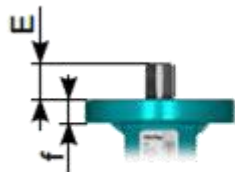
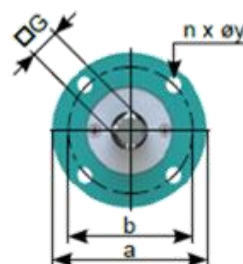
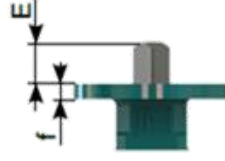
| Nominal diameter<br>[DN] | A<br>[mm] | B<br>[mm] | C<br>[mm] | D<br>[mm] | E<br>[mm] ±0,5 | H <sup>1</sup><br>[mm] | x <sup>1</sup><br>[mm] | weight<br>[kg] |
|--------------------------|-----------|-----------|-----------|-----------|----------------|------------------------|------------------------|----------------|
| 150                      | 210       | 143       | 56        | 285       | 141            | 48                     | 16                     | 15             |
| 200                      | 240       | 170       | 60        | 340       | 194            | 72                     | 19                     | 19,5           |
| 250                      | 279       | 200       | 68        | 406       | 240            | 91                     | 24                     | 30,5           |
| 300                      | 315       | 239       | 78        | 482       | 290            | 112                    | 24                     | 44             |
| 350                      | 330       | 265       | 80        | 533       | 330            | 130                    | 22                     | 59             |
| 400                      | 365       | 296       | 102       | 597       | 377            | 145                    | 27                     | 82             |
| 450 <sup>2</sup>         | 397       | 355       | 113       | 640       | 425            | 164                    | 36                     | 118            |
| 500 <sup>2</sup>         | 437       | 393       | 126       | 715       | 474            | 182                    | 36                     | 175            |
| 600 <sup>2</sup>         | 522       | 464       | 153       | 840       | 569            | 218                    | 46                     | 260            |
| 700 <sup>2</sup>         | 565       | 503       | 168       | 927       | 660            | 257                    | 80                     | 345            |
| 750 <sup>2</sup>         | 590       | 541       | 170       | 985       | 709            | 272                    | 80                     | 435            |
| 800 <sup>2</sup>         | 627       | 577       | 190       | 1060      | 774            | 304                    | 80                     | 510            |
| 900 <sup>2</sup>         | 696       | 643       | 204       | 1170      | 855            | 337                    | 100                    | 660            |
| 1000 <sup>2</sup>        | 745       | 693       | 218       | 1255      | 960            | 383                    | 100                    | 790            |
| 1100 <sup>2</sup>        | 820       | 738       | 218       | 1395      | 1054           | 429                    | 100                    | 850            |
| 1200 <sup>2</sup>        | 881       | 806       | 254       | 1485      | 1149           | 462                    | 120                    | 1180           |
| 1400 <sup>2</sup>        | 990       | 908       | 280       | 1746      | 1336           | 543                    | 120                    | 1700           |
| 1600 <sup>2</sup>        | 1117      | 1048      | 318       | 1924      | 1553           | 634                    | 155                    | 2600           |

1) When using plastic stubs please check dimension H / x to avoid damaging of disc

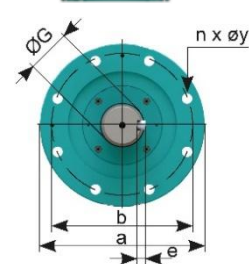
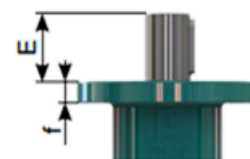
2) DN 450- 1600, 2 x threads on neck and bottom

## Butterfly Valve VZAV

## Dimension ISO 5211 Flange

Wafer und Lug  
DN25 ... 300U Shape  
DN25 ... 300Wafer, Lug and U shape  
DN350 ... 600

DN700 ... 1600



| Nominal diameter [DN]         | E [mm] | G<br>Ø [mm] | M<br>[mm]    | f<br>[mm] | ISO              | a<br>[mm] | b<br>[mm] | n x Ø y   | e<br>[mm] |
|-------------------------------|--------|-------------|--------------|-----------|------------------|-----------|-----------|-----------|-----------|
| <b>Wafer und Lug</b>          |        |             |              |           |                  |           |           |           |           |
| 25-40                         | 12     | □8          | M4           | 10        | F05 <sup>1</sup> | 65        | 50        | 4 x 7     | -         |
| 50-80                         | 12     | □11         | M6           | 10        | F05              | 65        | 50        | 4 x 7     | -         |
| 100                           | 12     | □11         | M6           | 10/10     | F05/F07          | 65/89     | 50/70     | 4x7/4x9,5 | -         |
| 125                           | 16     | □14         | M6           | 10/10     | F05/F07          | 65/89     | 50/70     | 4x7/4x9,5 | -         |
| 150                           | 16     | □14         | M6           | 10        | F07              | 89        | 70        | 4 x 9,5   | -         |
| 200                           | 19     | □17         | M6           | 10        | F07              | 89        | 70        | 4 x 9,5   | -         |
| 250-300                       | 24     | □22         | <sup>2</sup> | 18        | F10/F12          | 150       | 102/125   | 4x11/4x13 | -         |
| <b>U Shape</b>                |        |             |              |           |                  |           |           |           |           |
| 150                           | 16     | □14         | M6           | 12        | F07              | 90        | 70        | 4x9       | -         |
| 200                           | 19     | □17         | M6           | 12        | F07              | 90        | 70        | 4x9       | -         |
| 250-300                       | 24     | □22         | <sup>2</sup> | 18        | F10/F12          | 150       | 102/125   | 4x11/4x13 | -         |
| <b>Wafer, LUG und U Shape</b> |        |             |              |           |                  |           |           |           |           |
| 350                           | 27     | □22         | <sup>2</sup> | 18        | F12              | 155       | 125       | 4 x 13    | -         |
| 400                           | 27     | □27         | <sup>2</sup> | 18        | F12              | 155       | 125       | 4 x 13    | -         |
| 450-500                       | 36     | □36         | <sup>2</sup> | 25        | F14              | 175       | 140       | 4 x 18    | -         |
| 600                           | 46     | □46         | <sup>2</sup> | 25        | F16              | 220       | 165       | 4 x 22    | -         |
| 700                           | 80     | Ø70         | M16          | 25        | F25              | 300       | 254       | 8 x 18    | 12        |
| (750)                         | 80     | Ø70         | M16          | 30        | F25              | 300       | 254       | 8 x 18    | 12        |
| 800                           | 80     | Ø70         | M16          | 30        | F25              | 300       | 254       | 8 x 18    | 12        |
| 900                           | 100    | Ø80         | M16          | 30        | F30              | 350       | 298       | 8 x 22    | 14        |
| 1000                          | 100    | Ø80         | M16          | 30        | F30              | 350       | 298       | 8 x 22    | 14        |
| (1100)                        | 100    | Ø80         | M16          | 30        | F30              | 350       | 298       | 8 x 22    | 14        |
| 1200                          | 120    | Ø100        | M16          | 30        | F30              | 350       | 298       | 8 x 22    | 16        |
| 1400                          | 120    | Ø120        | M16          | 35        | F30              | 350       | 298       | 8 x 22    | 18        |
| 1600                          | 165    | Ø130        | M18          | 40        | F35              | 418       | 356       | 8 x 33,5  | 18        |

1) F04 on request 2) no thread in the shaft

## Usage in potentially explosive areas

| Usage in potentially explosive areas                                     | Festo Code | Liner                                  | Disc           | Surface finish shut-off element | Surface finish housing      |
|--------------------------------------------------------------------------|------------|----------------------------------------|----------------|---------------------------------|-----------------------------|
| Zone 1 (o) IIB / T6...T3<br>Zone 21 (o) IIIC / 85...200°C                | 135        | All                                    |                |                                 | EP200<br>PU250 <sup>1</sup> |
| Zone 1 (o) IIC / T6...T3<br>Zone 21 (o) IIIC / 85...200°C                | 112        |                                        |                |                                 | PU70 <sup>2</sup>           |
| Zone 0 (i), 1 (o) IIB / T6...T3<br>Zone 20 (i), 21 (o) IIIC / 85...200°C | 278        | E<br>E4<br>E6                          | H8<br>V3<br>V9 | CR<br>PL                        | EP200<br>PU250 <sup>1</sup> |
| Zone 0 (i), 1 (o) IIC / T6...T3<br>Zone 20 (i), 21 (o) IIIC / 85...200°C | 246        | N<br>N1<br>N2<br>NR<br>SBRA<br>V<br>V1 |                |                                 | PU70 <sup>2</sup>           |

1) The surface coating EP200 is available up to size DN 400. For sizes bigger than DN450 please select PU250

2) The PU70 surface coating is available from size DN450

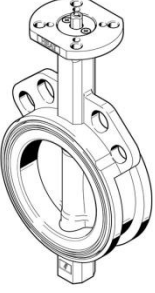
The classification of butterfly valve's temperature class is between T3 and T6 and the maximum surface temperature between T85 °C and T200 °C. Both are dependent on the temperature of the medium flowing through the pipe.

## Butterfly Valve VZAV

## Order information - Wafer Type – Liner EPDM (E)

Housing material: Ductile cast iron epoxy coated

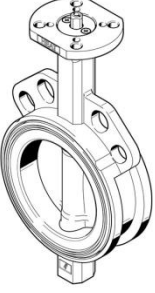
Liner Type EPDM

| Design                                                                           | Nominal pressure | Surface finish shut-off element | Nominal Diameter DN | Part number | Order Code                                |
|----------------------------------------------------------------------------------|------------------|---------------------------------|---------------------|-------------|-------------------------------------------|
|  | 16               | Ductile iron polyamide coated   | 25                  | 8061965     | VZAV-C-25-16-S8PN16-H1EP200-V5-H1PA250-E  |
|                                                                                  |                  |                                 | 32                  | 8061966     | VZAV-C-32-16-S8PN16-H1EP200-V5-H1PA250-E  |
|                                                                                  |                  |                                 | 40                  | 8061967     | VZAV-C-40-16-S8PN16-H1EP200-V5-H1PA250-E  |
|                                                                                  |                  |                                 | 50                  | 8061968     | VZAV-C-50-16-S8PN16-H1EP200-V5-H1PA250-E  |
|                                                                                  |                  |                                 | 65                  | 8061969     | VZAV-C-65-16-S8PN16-H1EP200-V5-H1PA250-E  |
|                                                                                  |                  |                                 | 80                  | 8061970     | VZAV-C-80-16-S8PN16-H1EP200-V5-H1PA250-E  |
|                                                                                  |                  |                                 | 100                 | 8061971     | VZAV-C-100-16-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 125                 | 8061972     | VZAV-C-125-16-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 150                 | 8061973     | VZAV-C-150-16-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 200                 | 8061974     | VZAV-C-200-16-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 250                 | 8061975     | VZAV-C-250-16-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 300                 | 8061976     | VZAV-C-300-16-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  | 10               | Ductile iron polyamide coated   | 80                  | 8061951     | VZAV-C-80-10-S8PN16-H1EP200-V5-H1PA250-E  |
|                                                                                  |                  |                                 | 100                 | 8061952     | VZAV-C-100-10-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 125                 | 8061953     | VZAV-C-125-10-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 150                 | 8061954     | VZAV-C-150-10-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 200                 | 8061955     | VZAV-C-200-10-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 250                 | 8061956     | VZAV-C-250-10-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 300                 | 8061957     | VZAV-C-300-10-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  | 16               | Stainless steel 1.4408          | 25                  | 8062003     | VZAV-C-25-16-S8PN16-H1EP200-V5-V3-E       |
|                                                                                  |                  |                                 | 32                  | 8062004     | VZAV-C-32-16-S8PN16-H1EP200-V5-V3-E       |
|                                                                                  |                  |                                 | 40                  | 8062005     | VZAV-C-40-16-S8PN16-H1EP200-V5-V3-E       |
|                                                                                  |                  |                                 | 50                  | 8062006     | VZAV-C-50-16-S8PN16-H1EP200-V5-V3-E       |
|                                                                                  |                  |                                 | 65                  | 8062007     | VZAV-C-65-16-S8PN16-H1EP200-V5-V3-E       |
|                                                                                  |                  |                                 | 80                  | 8062008     | VZAV-C-80-16-S8PN16-H1EP200-V5-V3-E       |
|                                                                                  |                  |                                 | 100                 | 8062009     | VZAV-C-100-16-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 125                 | 8062010     | VZAV-C-125-16-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 150                 | 8062011     | VZAV-C-150-16-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 200                 | 8062012     | VZAV-C-200-16-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 250                 | 8062013     | VZAV-C-250-16-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 300                 | 8062014     | VZAV-C-300-16-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  | 10               | Stainless steel 1.4408          | 80                  | 8061989     | VZAV-C-80-10-S8PN16-H1EP200-V5-V3-E       |
|                                                                                  |                  |                                 | 100                 | 8061990     | VZAV-C-100-10-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 125                 | 8061991     | VZAV-C-125-10-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 150                 | 8061992     | VZAV-C-150-10-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 200                 | 8061993     | VZAV-C-200-10-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 250                 | 8061994     | VZAV-C-250-10-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 300                 | 8061995     | VZAV-C-300-10-S8PN16-H1EP200-V5-V3-E      |

## Order information – Wafer Type – Liner EPDM KTW (E3)

Housing material: Ductile cast iron epoxy coated

Liner Type EPDM KTW

| Design                                                                           | Nominal pressure | Surface finish shut-off element | Nominal Diameter DN | Part number | Order Code                                 |
|----------------------------------------------------------------------------------|------------------|---------------------------------|---------------------|-------------|--------------------------------------------|
|  | 16               | Ductile iron polyamide coated   | 25                  | 8104430     | VZAV-C-25-16-S8PN16-H1EP200-V5-H1PA250-E3  |
|                                                                                  |                  |                                 | 32                  | 8104431     | VZAV-C-32-16-S8PN16-H1EP200-V5-H1PA250-E3  |
|                                                                                  |                  |                                 | 40                  | 8104432     | VZAV-C-40-16-S8PN16-H1EP200-V5-H1PA250-E3  |
|                                                                                  |                  |                                 | 50                  | 8104433     | VZAV-C-50-16-S8PN16-H1EP200-V5-H1PA250-E3  |
|                                                                                  |                  |                                 | 65                  | 8104434     | VZAV-C-65-16-S8PN16-H1EP200-V5-H1PA250-E3  |
|                                                                                  |                  |                                 | 80                  | 8104435     | VZAV-C-80-16-S8PN16-H1EP200-V5-H1PA250-E3  |
|                                                                                  |                  |                                 | 100                 | 8104436     | VZAV-C-100-16-S8PN16-H1EP200-V5-H1PA250-E3 |
|                                                                                  |                  |                                 | 125                 | 8104437     | VZAV-C-125-16-S8PN16-H1EP200-V5-H1PA250-E3 |
|                                                                                  |                  |                                 | 150                 | 8104438     | VZAV-C-150-16-S8PN16-H1EP200-V5-H1PA250-E3 |
|                                                                                  |                  |                                 | 200                 | 8104439     | VZAV-C-200-16-S8PN16-H1EP200-V5-H1PA250-E3 |
|                                                                                  |                  |                                 | 250                 | 8104440     | VZAV-C-250-16-S8PN16-H1EP200-V5-H1PA250-E3 |
|                                                                                  |                  |                                 | 300                 | 8104441     | VZAV-C-300-16-S8PN16-H1EP200-V5-H1PA250-E3 |
|                                                                                  | 10               | Ductile iron polyamide coated   | 80                  | 8104449     | VZAV-C-80-10-S8PN16-H1EP200-V5-H1PA250-E3  |
|                                                                                  |                  |                                 | 100                 | 8104450     | VZAV-C-100-10-S8PN16-H1EP200-V5-H1PA250-E3 |
|                                                                                  |                  |                                 | 125                 | 8104451     | VZAV-C-125-10-S8PN16-H1EP200-V5-H1PA250-E3 |
|                                                                                  |                  |                                 | 150                 | 8104452     | VZAV-C-150-10-S8PN16-H1EP200-V5-H1PA250-E3 |
|                                                                                  |                  |                                 | 200                 | 8104453     | VZAV-C-200-10-S8PN16-H1EP200-V5-H1PA250-E3 |
|                                                                                  |                  |                                 | 250                 | 8104454     | VZAV-C-250-10-S8PN16-H1EP200-V5-H1PA250-E3 |
|                                                                                  |                  |                                 | 300                 | 8104455     | VZAV-C-300-10-S8PN16-H1EP200-V5-H1PA250-E3 |
|                                                                                  | 16               | Stainless steel 1.4408          | 25                  | 8104456     | VZAV-C-25-16-S8PN16-H1EP200-V5-V3-E3       |
|                                                                                  |                  |                                 | 32                  | 8104457     | VZAV-C-32-16-S8PN16-H1EP200-V5-V3-E3       |
|                                                                                  |                  |                                 | 40                  | 8104458     | VZAV-C-40-16-S8PN16-H1EP200-V5-V3-E3       |
|                                                                                  |                  |                                 | 50                  | 8104459     | VZAV-C-50-16-S8PN16-H1EP200-V5-V3-E3       |
|                                                                                  |                  |                                 | 65                  | 8104460     | VZAV-C-65-16-S8PN16-H1EP200-V5-V3-E3       |
|                                                                                  |                  |                                 | 80                  | 8104461     | VZAV-C-80-16-S8PN16-H1EP200-V5-V3-E3       |
|                                                                                  |                  |                                 | 100                 | 8104462     | VZAV-C-100-16-S8PN16-H1EP200-V5-V3-E3      |
|                                                                                  |                  |                                 | 125                 | 8104463     | VZAV-C-125-16-S8PN16-H1EP200-V5-V3-E3      |
|                                                                                  |                  |                                 | 150                 | 8104464     | VZAV-C-150-16-S8PN16-H1EP200-V5-V3-E3      |
|                                                                                  |                  |                                 | 200                 | 8104465     | VZAV-C-200-16-S8PN16-H1EP200-V5-V3-E3      |
|                                                                                  |                  |                                 | 250                 | 8104466     | VZAV-C-250-16-S8PN16-H1EP200-V5-V3-E3      |
|                                                                                  |                  |                                 | 300                 | 8104467     | VZAV-C-300-16-S8PN16-H1EP200-V5-V3-E3      |
|                                                                                  | 10               | Stainless steel 1.4408          | 80                  | 8104442     | VZAV-C-80-10-S8PN16-H1EP200-V5-V3-E3       |
|                                                                                  |                  |                                 | 100                 | 8104443     | VZAV-C-100-10-S8PN16-H1EP200-V5-V3-E3      |
|                                                                                  |                  |                                 | 125                 | 8104444     | VZAV-C-125-10-S8PN16-H1EP200-V5-V3-E3      |
|                                                                                  |                  |                                 | 150                 | 8104445     | VZAV-C-150-10-S8PN16-H1EP200-V5-V3-E3      |
|                                                                                  |                  |                                 | 200                 | 8104446     | VZAV-C-200-10-S8PN16-H1EP200-V5-V3-E3      |
|                                                                                  |                  |                                 | 250                 | 8104447     | VZAV-C-250-10-S8PN16-H1EP200-V5-V3-E3      |
|                                                                                  |                  |                                 | 300                 | 8104448     | VZAV-C-300-10-S8PN16-H1EP200-V5-V3-E3      |

## Butterfly Valve VZAV

## Order information – Wafer Type – Liner EPDM HT (E4)

Housing material: Ductile cast iron epoxy coated

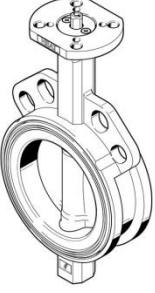
Liner Type EPDM HT

| Design                                                                           | Nominal pressure | Surface finish shut-off element | Nominal Diameter DN | Part number | Order Code                            |
|----------------------------------------------------------------------------------|------------------|---------------------------------|---------------------|-------------|---------------------------------------|
|  | 16               | Stainless steel 1.4408          | 32                  | 8066877     | VZAV-C-32-16-S8PN16-H1EP200-V5-V3-E4  |
|                                                                                  |                  |                                 | 40                  | 8066878     | VZAV-C-40-16-S8PN16-H1EP200-V5-V3-E4  |
|                                                                                  |                  |                                 | 50                  | 8066879     | VZAV-C-50-16-S8PN16-H1EP200-V5-V3-E4  |
|                                                                                  |                  |                                 | 65                  | 8066880     | VZAV-C-65-16-S8PN16-H1EP200-V5-V3-E4  |
|                                                                                  |                  |                                 | 80                  | 8066881     | VZAV-C-80-16-S8PN16-H1EP200-V5-V3-E4  |
|                                                                                  |                  |                                 | 100                 | 8066882     | VZAV-C-100-16-S8PN16-H1EP200-V5-V3-E4 |
|                                                                                  |                  |                                 | 125                 | 8066883     | VZAV-C-125-16-S8PN16-H1EP200-V5-V3-E4 |
|                                                                                  |                  |                                 | 150                 | 8066884     | VZAV-C-150-16-S8PN16-H1EP200-V5-V3-E4 |
|                                                                                  |                  |                                 | 200                 | 8066885     | VZAV-C-200-16-S8PN16-H1EP200-V5-V3-E4 |
|                                                                                  |                  |                                 | 250                 | 8066886     | VZAV-C-250-16-S8PN16-H1EP200-V5-V3-E4 |
|                                                                                  |                  |                                 | 300                 | 8066887     | VZAV-C-300-16-S8PN16-H1EP200-V5-V3-E4 |
|                                                                                  | 10               | Stainless steel 1.4408          | 80                  | 610184      | VZAV-C-80-10-S8PN16-H1EP200-V5-V3-E4  |
|                                                                                  |                  |                                 | 100                 | 610185      | VZAV-C-100-10-S8PN16-H1EP200-V5-V3-E4 |
|                                                                                  |                  |                                 | 125                 | 610895      | VZAV-C-125-10-S8PN16-H1EP200-V5-V3-E4 |
|                                                                                  |                  |                                 | 150                 | 610896      | VZAV-C-150-10-S8PN16-H1EP200-V5-V3-E4 |
|                                                                                  |                  |                                 | 200                 | 610897      | VZAV-C-200-10-S8PN16-H1EP200-V5-V3-E4 |
|                                                                                  |                  |                                 | 250                 | 610898      | VZAV-C-250-10-S8PN16-H1EP200-V5-V3-E4 |
|                                                                                  |                  |                                 | 300                 | 610899      | VZAV-C-300-10-S8PN16-H1EP200-V5-V3-E4 |
|                                                                                  |                  |                                 | 350                 | 610900      | VZAV-C-350-10-S8PN16-H1EP200-V5-V3-E4 |
|                                                                                  |                  |                                 | 400                 | 610901      | VZAV-C-400-10-S8PN16-H1EP200-V5-V3-E4 |
|                                                                                  |                  |                                 | 450                 | 610902      | VZAV-C-450-10-S8PN16-H1PU70-V5-V3-E4  |
|                                                                                  |                  |                                 | 500                 | 610903      | VZAV-C-500-10-S8PN16-H1PU70-V5-V3-E4  |
|                                                                                  |                  |                                 | 600                 | 610904      | VZAV-C-600-10-S8PN16-H1PU70-V5-V3-E4  |

## Order information – Wafer Type – Liner NBR (N)

Housing material: Ductile cast iron epoxy coated

Liner Type NBR

| Design                                                                           | Nominal pressure | Surface finish shut-off element | Nominal Diameter DN | Part number | Order Code                                |
|----------------------------------------------------------------------------------|------------------|---------------------------------|---------------------|-------------|-------------------------------------------|
|  | 16               | Ductile iron polyamide coated   | 25                  | 8061977     | VZAV-C-25-16-S8PN16-H1EP200-V5-H1PA250-N  |
|                                                                                  |                  |                                 | 32                  | 8061978     | VZAV-C-32-16-S8PN16-H1EP200-V5-H1PA250-N  |
|                                                                                  |                  |                                 | 40                  | 8061979     | VZAV-C-40-16-S8PN16-H1EP200-V5-H1PA250-N  |
|                                                                                  |                  |                                 | 50                  | 8061980     | VZAV-C-50-16-S8PN16-H1EP200-V5-H1PA250-N  |
|                                                                                  |                  |                                 | 65                  | 8061981     | VZAV-C-65-16-S8PN16-H1EP200-V5-H1PA250-N  |
|                                                                                  |                  |                                 | 80                  | 8061982     | VZAV-V-80-16-S8PN16-H1EP200-V5-H1PA250-N  |
|                                                                                  |                  |                                 | 100                 | 8061983     | VZAV-C-100-16-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 125                 | 8061984     | VZAV-C-125-16-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 150                 | 8061985     | VZAV-C-150-16-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 200                 | 8061986     | VZAV-C-200-16-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 250                 | 8061987     | VZAV-C-250-16-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 300                 | 8061988     | VZAV-C-300-16-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  | 10               | Ductile iron polyamide coated   | 80                  | 8061958     | VZAV-C-80-10-S8PN16-H1EP200-V5-H1PA250-N  |
|                                                                                  |                  |                                 | 100                 | 8061959     | VZAV-C-100-10-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 125                 | 8061960     | VZAV-C-125-10-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 150                 | 8061961     | VZAV-C-150-10-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 200                 | 8061962     | VZAV-C-200-10-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 250                 | 8061963     | VZAV-C-250-10-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 300                 | 8061964     | VZAV-C-300-10-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  | 16               | Stainless steel 1.4408          | 25                  | 8062015     | VZAV-C-25-16-S8PN16-H1EP200-V5-V3-N       |
|                                                                                  |                  |                                 | 32                  | 8062016     | VZAV-C-32-16-S8PN16-H1EP200-V5-V3-N       |
|                                                                                  |                  |                                 | 40                  | 8062017     | VZAV-C-40-16-S8PN16-H1EP200-V5-V3-N       |
|                                                                                  |                  |                                 | 50                  | 8062018     | VZAV-C-50-16-S8PN16-H1EP200-V5-V3-N       |
|                                                                                  |                  |                                 | 65                  | 8062019     | VZAV-C-65-16-S8PN16-H1EP200-V5-V3-N       |
|                                                                                  |                  |                                 | 80                  | 8062020     | VZAV-C-80-16-S8PN16-H1EP200-V5-V3-N       |
|                                                                                  |                  |                                 | 100                 | 8062021     | VZAV-C-100-16-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 125                 | 8062022     | VZAV-C-125-16-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 150                 | 8062023     | VZAV-C-150-16-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 200                 | 8062024     | VZAV-C-200-16-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 250                 | 8062025     | VZAV-C-250-16-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 300                 | 8062026     | VZAV-C-300-16-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  | 10               | Stainless steel 1.4408          | 80                  | 8061996     | VZAV-C-80-10-S8PN16-H1EP200-V5-V3-N       |
|                                                                                  |                  |                                 | 100                 | 8061997     | VZAV-C-100-10-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 125                 | 8061998     | VZAV-C-125-10-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 150                 | 8061999     | VZAV-C-150-10-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 200                 | 8062000     | VZAV-C-200-10-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 250                 | 8062001     | VZAV-C-250-10-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 300                 | 8062002     | VZAV-C-300-10-S8PN16-H1EP200-V5-V3-N      |

## Butterfly Valve VZAV

## Order information – Wafer Type – Liner SBR (SBRA)

Housing material: Ductile cast iron epoxy coated

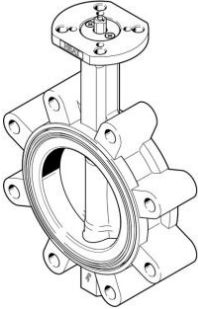
Liner Type SBR

| Design                                                                                 | Nominal pressure | Surface finish shut-off element | Nominal Diameter DN | Part number | Order Code                              |
|----------------------------------------------------------------------------------------|------------------|---------------------------------|---------------------|-------------|-----------------------------------------|
| <br>80 | 16               | Stainless steel 1.4408          | 50                  | 610884      | VZAV-C-50-16-S8PN16-H1EP200-V5-V3-SBRA  |
|                                                                                        |                  |                                 | 65                  | 610885      | VZAV-C-65-16-S8PN16-H1EP200-V5-V3-SBRA  |
|                                                                                        |                  |                                 | 80                  | 610886      | VZAV-C-80-16-S8PN16-H1EP200-V5-V3-SBRA  |
|                                                                                        |                  |                                 | 100                 | 610887      | VZAV-C-100-16-S8PN16-H1EP200-V5-V3-SBRA |
|                                                                                        |                  |                                 | 125                 | 610888      | VZAV-C-125-16-S8PN16-H1EP200-V5-V3-SBRA |
|                                                                                        |                  |                                 | 150                 | 610889      | VZAV-C-150-16-S8PN16-H1EP200-V5-V3-SBRA |
|                                                                                        |                  |                                 | 200                 | 610890      | VZAV-C-200-16-S8PN16-H1EP200-V5-V3-SBRA |
|                                                                                        |                  |                                 | 250                 | 610891      | VZAV-C-250-16-S8PN16-H1EP200-V5-V3-SBRA |
|                                                                                        |                  |                                 | 300                 | 610892      | VZAV-C-300-16-S8PN16-H1EP200-V5-V3-SBRA |
|                                                                                        | 10               | Stainless steel 1.4408          | 80                  | 8167432     | VZAV-C-80-10-S8PN16-H1EP200-V5-V3-SBRA  |
|                                                                                        |                  |                                 | 100                 | 8167433     | VZAV-C-100-10-S8PN16-H1EP200-V5-V3-SBRA |
|                                                                                        |                  |                                 | 125                 | 8167434     | VZAV-C-125-10-S8PN16-H1EP200-V5-V3-SBRA |
|                                                                                        |                  |                                 | 150                 | 8167435     | VZAV-C-150-10-S8PN16-H1EP200-V5-V3-SBRA |
|                                                                                        |                  |                                 | 200                 | 604060      | VZAV-C-200-10-S8PN16-H1EP200-V5-V3-SBRA |
|                                                                                        |                  |                                 | 250                 | 8167437     | VZAV-C-250-10-S8PN16-H1EP200-V5-V3-SBRA |
|                                                                                        |                  |                                 | 300                 | 8167438     | VZAV-C-300-10-S8PN16-H1EP200-V5-V3-SBRA |

## Order information - Lug Type DIN EN 1092/1 – Liner EPDM (E)

Housing material: Ductile cast iron epoxy coated

Liner Type EPDM

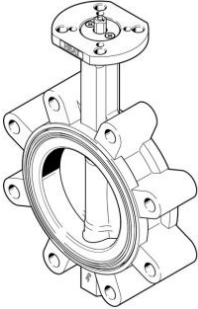
| Design                                                                           | Nominal pressure | Surface finish shut-off element | Nominal Diameter DN | Part number | Order Code                                |
|----------------------------------------------------------------------------------|------------------|---------------------------------|---------------------|-------------|-------------------------------------------|
|  | 16               | Ductile iron polyamide coated   | 25                  | 8062041     | VZAV-L-25-16-S8PN16-H1EP200-V5-H1PA250-E  |
|                                                                                  |                  |                                 | 32                  | 8062042     | VZAV-L-32-16-S8PN16-H1EP200-V5-H1PA250-E  |
|                                                                                  |                  |                                 | 40                  | 8062043     | VZAV-L-40-16-S8PN16-H1EP200-V5-H1PA250-E  |
|                                                                                  |                  |                                 | 50                  | 8062044     | VZAV-L-50-16-S8PN16-H1EP200-V5-H1PA250-E  |
|                                                                                  |                  |                                 | 65                  | 8062045     | VZAV-L-65-16-S8PN16-H1EP200-V5-H1PA250-E  |
|                                                                                  |                  |                                 | 80                  | 8062046     | VZAV-L-80-16-S8PN16-H1EP200-V5-H1PA250-E  |
|                                                                                  |                  |                                 | 100                 | 8062047     | VZAV-L-100-16-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 125                 | 8062048     | VZAV-L-125-16-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 150                 | 8062049     | VZAV-L-150-16-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 200                 | 8062050     | VZAV-L-200-16-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 250                 | 8062051     | VZAV-L-250-16-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 300                 | 8062052     | VZAV-L-300-16-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  | 10               | Ductile iron polyamide coated   | 80                  | 8062027     | VZAV-L-80-10-S8PN16-H1EP200-V5-H1PA250-E  |
|                                                                                  |                  |                                 | 100                 | 8062028     | VZAV-L-100-10-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 125                 | 8062029     | VZAV-L-125-10-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 150                 | 8062030     | VZAV-L-150-10-S8PN16-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 200                 | 8062031     | VZAV-L-200-10-S8PN10-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 250                 | 8062032     | VZAV-L-250-10-S8PN10-H1EP200-V5-H1PA250-E |
|                                                                                  |                  |                                 | 300                 | 8062033     | VZAV-L-300-10-S8PN10-H1EP200-V5-H1PA250-E |
|                                                                                  | 16               | Stainless steel 1.4408          | 25                  | 8062079     | VZAV-L-25-16-S8PN16-H1EP200-V5-V3-E       |
|                                                                                  |                  |                                 | 32                  | 8062080     | VZAV-L-32-16-S8PN16-H1EP200-V5-V3-E       |
|                                                                                  |                  |                                 | 40                  | 8062081     | VZAV-L-40-16-S8PN16-H1EP200-V5-V3-E       |
|                                                                                  |                  |                                 | 50                  | 8062082     | VZAV-L-50-16-S8PN16-H1EP200-V5-V3-E       |
|                                                                                  |                  |                                 | 65                  | 8062083     | VZAV-L-65-16-S8PN16-H1EP200-V5-V3-E       |
|                                                                                  |                  |                                 | 80                  | 8062084     | VZAV-L-80-16-S8PN16-H1EP200-V5-V3-E       |
|                                                                                  |                  |                                 | 100                 | 8062085     | VZAV-L-100-16-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 125                 | 8062086     | VZAV-L-125-16-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 150                 | 8062087     | VZAV-L-150-16-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 200                 | 8062088     | VZAV-L-200-16-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 250                 | 8062089     | VZAV-L-250-16-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 300                 | 8062090     | VZAV-L-300-16-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  | 10               | Stainless steel 1.4408          | 80                  | 8062065     | VZAV-L-80-10-S8PN16-H1EP200-V5-V3-E       |
|                                                                                  |                  |                                 | 100                 | 8062066     | VZAV-L-100-10-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 125                 | 8062067     | VZAV-L-125-10-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 150                 | 8062068     | VZAV-L-150-10-S8PN16-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 200                 | 8062069     | VZAV-L-200-10-S8PN10-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 250                 | 8062070     | VZAV-L-250-10-S8PN10-H1EP200-V5-V3-E      |
|                                                                                  |                  |                                 | 300                 | 8062071     | VZAV-L-300-10-S8PN10-H1EP200-V5-V3-E      |

## Butterfly Valve VZAV

## Order information - Lug Type DIN EN 1092/1 – Liner NBR (N)

Housing material: Ductile cast iron epoxy coated

Liner Type NBR

| Design                                                                           | Nominal pressure | Surface finish shut-off element | Nominal Diameter DN | Part number | Order Code                                |
|----------------------------------------------------------------------------------|------------------|---------------------------------|---------------------|-------------|-------------------------------------------|
|  | 16               | Ductile iron polyamide coated   | 25                  | 8062053     | VZAV-L-25-16-S8PN16-H1EP200-V5-H1PA250-N  |
|                                                                                  |                  |                                 | 32                  | 8062054     | VZAV-L-32-16-S8PN16-H1EP200-V5-H1PA250-N  |
|                                                                                  |                  |                                 | 40                  | 8062055     | VZAV-L-40-16-S8PN16-H1EP200-V5-H1PA250-N  |
|                                                                                  |                  |                                 | 50                  | 8062056     | VZAV-L-50-16-S8PN16-H1EP200-V5-H1PA250-N  |
|                                                                                  |                  |                                 | 65                  | 8062057     | VZAV-L-65-16-S8PN16-H1EP200-V5-H1PA250-N  |
|                                                                                  |                  |                                 | 80                  | 8062058     | VZAV-L-80-16-S8PN16-H1EP200-V5-H1PA250-N  |
|                                                                                  |                  |                                 | 100                 | 8062059     | VZAV-L-100-16-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 125                 | 8062060     | VZAV-L-125-16-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 150                 | 8062061     | VZAV-L-150-16-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 200                 | 8062062     | VZAV-L-200-16-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 250                 | 8062063     | VZAV-L-250-16-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 300                 | 8062064     | VZAV-L-300-16-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  | 10               | Ductile iron polyamide coated   | 80                  | 8062034     | VZAV-L-80-10-S8PN16-H1EP200-V5-H1PA250-N  |
|                                                                                  |                  |                                 | 100                 | 8062035     | VZAV-L-100-10-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 125                 | 8062036     | VZAV-L-125-10-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 150                 | 8062037     | VZAV-L-150-10-S8PN16-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 200                 | 8062038     | VZAV-L-200-10-S8PN10-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 250                 | 8062039     | VZAV-L-250-10-S8PN10-H1EP200-V5-H1PA250-N |
|                                                                                  |                  |                                 | 300                 | 8062040     | VZAV-L-300-10-S8PN10-H1EP200-V5-H1PA250-N |
|                                                                                  | 16               | Stainless steel 1.4408          | 25                  | 8062091     | VZAV-L-25-16-S8PN16-H1EP200-V5-V3-N       |
|                                                                                  |                  |                                 | 32                  | 8062092     | VZAV-L-32-16-S8PN16-H1EP200-V5-V3-N       |
|                                                                                  |                  |                                 | 40                  | 8062093     | VZAV-L-40-16-S8PN16-H1EP200-V5-V3-N       |
|                                                                                  |                  |                                 | 50                  | 8062094     | VZAV-L-50-16-S8PN16-H1EP200-V5-V3-N       |
|                                                                                  |                  |                                 | 65                  | 8062095     | VZAV-L-65-16-S8PN16-H1EP200-V5-V3-N       |
|                                                                                  |                  |                                 | 80                  | 8062096     | VZAV-L-80-16-S8PN16-H1EP200-V5-V3-N       |
|                                                                                  |                  |                                 | 100                 | 8062097     | VZAV-L-100-16-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 125                 | 8062098     | VZAV-L-125-16-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 150                 | 8062099     | VZAV-L-150-16-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 200                 | 8062100     | VZAV-L-200-16-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 250                 | 8062101     | VZAV-L-250-16-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 300                 | 8062102     | VZAV-L-300-16-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  | 10               | Stainless steel 1.4408          | 80                  | 8062072     | VZAV-L-80-10-S8PN16-H1EP200-V5-V3-N       |
|                                                                                  |                  |                                 | 100                 | 8062073     | VZAV-L-100-10-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 125                 | 8062074     | VZAV-L-125-10-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 150                 | 8062075     | VZAV-L-150-10-S8PN16-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 200                 | 8062076     | VZAV-L-200-10-S8PN10-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 250                 | 8062077     | VZAV-L-250-10-S8PN10-H1EP200-V5-V3-N      |
|                                                                                  |                  |                                 | 300                 | 8062078     | VZAV-L-300-10-S8PN10-H1EP200-V5-V3-N      |

## Spare parts and Accessories

## Handlever

|                                                                                  | Nominal diameter<br>[DN] | Part number | Type                           |
|----------------------------------------------------------------------------------|--------------------------|-------------|--------------------------------|
|  | 25 / 32 / 40             | 8222655     | VAOH-F11-F05-8-210-H9-RA10-AL  |
|                                                                                  | 50 / 65/80               | 8222654     | VAOH-F11-F05-11-210-H9-RA10-AL |
|                                                                                  | 100                      | 8222658     | VAOH-F11-F07-11-340-H9-RA10-AL |
|                                                                                  | 125 / 150                | 8222656     | VAOH-F11-F07-14-340-H9-RA10-AL |
|                                                                                  | 200                      | 8222657     | VAOH-F11-F07-17-340-H9-RA10-AL |

## Liner

| Nominal diameter<br>[DN] | Part number | Order Code | Type                                             | Feature                                                                                             |
|--------------------------|-------------|------------|--------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 25/32                    | 8188282     | VZAS-32-E  | <b>EPDM</b><br>(Ethylen-Propylene<br>Terpolymer) | 0°C - 95°C<br>For applications with weak mineral acids and basis, air,<br>water, ketones, and ester |
| 40                       | 8044186     | VZAS-40-E  |                                                  |                                                                                                     |
| 50                       | 8044187     | VZAS-50-E  |                                                  |                                                                                                     |
| 65                       | 8044188     | VZAS-65-E  |                                                  |                                                                                                     |
| 80                       | 8044189     | VZAS-80-E  |                                                  |                                                                                                     |
| 100                      | 8044190     | VZAS-100-E |                                                  |                                                                                                     |
| 125                      | 8044191     | VZAS-125-E |                                                  |                                                                                                     |
| 150                      | 8044192     | VZAS-150-E |                                                  |                                                                                                     |
| 200                      | 8044193     | VZAS-200-E |                                                  |                                                                                                     |
| 250                      | 8044194     | VZAS-250-E |                                                  |                                                                                                     |
| 300                      | 8044195     | VZAS-300-E |                                                  |                                                                                                     |

|       |         |             |                                                      |                                                                                                                                    |
|-------|---------|-------------|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| 25/32 | 8116028 | VZAS-32-E3  | <b>EPDM KTW</b><br>(Ethylen-Propylene<br>Terpolymer) | 0°C - 95°C<br>Drinking water approvals Normative WRAS, ACS, W270, KTW,<br>Regulation (EC) 1935/2004                                |
| 40    | 8116029 | VZAS-40-E3  |                                                      |                                                                                                                                    |
| 50    | 8116030 | VZAS-50-E3  |                                                      | With NSF-61 approval when used in combination with<br>H1PA250 disc (Up to DN700 size) or with V3 disc<br>(for all sizes available) |
| 65    | 8116031 | VZAS-65-E3  |                                                      |                                                                                                                                    |
| 80    | 8116032 | VZAS-80-E3  |                                                      |                                                                                                                                    |
| 100   | 8116033 | VZAS-100-E3 |                                                      |                                                                                                                                    |
| 125   | 8116034 | VZAS-125-E3 |                                                      |                                                                                                                                    |
| 150   | 8116035 | VZAS-150-E3 |                                                      |                                                                                                                                    |
| 200   | 8116036 | VZAS-200-E3 |                                                      |                                                                                                                                    |
| 250   | 8116037 | VZAS-250-E3 |                                                      |                                                                                                                                    |
| 300   | 8116038 | VZAS-300-E3 |                                                      |                                                                                                                                    |
| 350   | 8116039 | VZAS-350-E3 |                                                      |                                                                                                                                    |
| 400   | 8116040 | VZAS-400-E3 |                                                      |                                                                                                                                    |
| 450   | 8116041 | VZAS-450-E3 |                                                      |                                                                                                                                    |
| 500   | 8116042 | VZAS-500-E3 |                                                      |                                                                                                                                    |
| 600   | 8116043 | VZAS-600-E3 |                                                      |                                                                                                                                    |

## Butterfly Valve VZAV

## Spare parts and Accessories

| Liner                    |             |             |                                                                  |                                                                                                                                                                                                      |
|--------------------------|-------------|-------------|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nominal diameter<br>[DN] | Part number | Order Code  | Type                                                             | Feature                                                                                                                                                                                              |
| 25/32                    | 8116022     | VZAS-32-E4  | <b>EPDM HT</b><br>(Ethylene-Propylene<br>Terpolymer)             | 0°C - 130°C<br>High Temperature<br>For applications with weak mineral acids and basis, air,<br>water, ketones, and ester                                                                             |
| 40                       | 8044206     | VZAS-40-E4  |                                                                  |                                                                                                                                                                                                      |
| 50                       | 8044207     | VZAS-50-E4  |                                                                  |                                                                                                                                                                                                      |
| 65                       | 8044208     | VZAS-65-E4  |                                                                  |                                                                                                                                                                                                      |
| 80                       | 8044209     | VZAS-80-E4  |                                                                  |                                                                                                                                                                                                      |
| 100                      | 8044210     | VZAS-100-E4 |                                                                  |                                                                                                                                                                                                      |
| 125                      | 8044211     | VZAS-125-E4 |                                                                  |                                                                                                                                                                                                      |
| 150                      | 8044212     | VZAS-150-E4 |                                                                  |                                                                                                                                                                                                      |
| 200                      | 8044213     | VZAS-200-E4 |                                                                  |                                                                                                                                                                                                      |
| 250                      | 8044214     | VZAS-250-E4 |                                                                  |                                                                                                                                                                                                      |
| 300                      | 8044215     | VZAS-300-E4 |                                                                  |                                                                                                                                                                                                      |
| 350                      | 8116023     | VZAS-350-E4 |                                                                  |                                                                                                                                                                                                      |
| 400                      | 8116024     | VZAS-400-E4 |                                                                  |                                                                                                                                                                                                      |
| 450                      | 8116025     | VZAS-450-E4 |                                                                  |                                                                                                                                                                                                      |
| 500                      | 8116026     | VZAS-500-E4 |                                                                  |                                                                                                                                                                                                      |
| 600                      | 8116027     | VZAS-600-E4 |                                                                  |                                                                                                                                                                                                      |
| 25/32                    | 8188283     | VZAS-32-E5  | <b>EPDM HT</b><br>Ethylene-Propylene<br>Terpolymer/EPDM<br>based | 0°C - 130°C<br>Specially designed for the resistance to water solutions with<br>suspensions solids. Is adequate to support weak mineral<br>acids, weak mineral bases, alcohols, ketones, and esters. |
| 40                       | 8188284     | VZAS-40-E5  |                                                                  |                                                                                                                                                                                                      |
| 50                       | 8188285     | VZAS-50-E5  |                                                                  |                                                                                                                                                                                                      |
| 65                       | 8188286     | VZAS-65-E5  |                                                                  |                                                                                                                                                                                                      |
| 80                       | 8188287     | VZAS-80-E5  |                                                                  |                                                                                                                                                                                                      |
| 100                      | 8188288     | VZAS-100-E5 |                                                                  |                                                                                                                                                                                                      |
| 125                      | 8188289     | VZAS-125-E5 |                                                                  |                                                                                                                                                                                                      |
| 150                      | 8188290     | VZAS-150-E5 |                                                                  |                                                                                                                                                                                                      |
| 200                      | 8188291     | VZAS-200-E5 |                                                                  |                                                                                                                                                                                                      |
| 250                      | 8188292     | VZAS-250-E5 |                                                                  |                                                                                                                                                                                                      |
| 300                      | 8188293     | VZAS-300-E5 |                                                                  |                                                                                                                                                                                                      |
| 25/32                    | 8188404     | VZAS-32-E6  | <b>EPDM</b><br>(Ethylene-Propylene<br>Terpolymer)                | 0°C - 95°C<br>Especially for Food Applications and for applications<br>(Regulation (EC) 1935/2004 Normative FDA ) with weak<br>mineral acids and basis, air, water, ketones and ester                |
| 40                       | 8044216     | VZAS-40-E6  |                                                                  |                                                                                                                                                                                                      |
| 50                       | 8044217     | VZAS-50-E6  |                                                                  |                                                                                                                                                                                                      |
| 65                       | 8044218     | VZAS-65-E6  |                                                                  |                                                                                                                                                                                                      |
| 80                       | 8044219     | VZAS-80-E6  |                                                                  |                                                                                                                                                                                                      |
| 100                      | 8044220     | VZAS-100-E6 |                                                                  |                                                                                                                                                                                                      |
| 125                      | 8044221     | VZAS-125-E6 |                                                                  |                                                                                                                                                                                                      |
| 150                      | 8044222     | VZAS-150-E6 |                                                                  |                                                                                                                                                                                                      |
| 200                      | 8044223     | VZAS-200-E6 |                                                                  |                                                                                                                                                                                                      |
| 250                      | 8044224     | VZAS-250-E6 |                                                                  |                                                                                                                                                                                                      |
| 300                      | 8044225     | VZAS-300-E6 |                                                                  |                                                                                                                                                                                                      |
| 350                      | 8044226     | VZAS-350-E6 |                                                                  |                                                                                                                                                                                                      |
| 400                      | 8044227     | VZAS-400-E6 |                                                                  |                                                                                                                                                                                                      |

## Butterfly Valve VZAV

|       |         |             |                                                         |                                                                 |
|-------|---------|-------------|---------------------------------------------------------|-----------------------------------------------------------------|
| 25/32 | 8188294 | VZAS-32-E7  | <b>ECO</b><br>Epichloridine ethylene<br>oxide copolymer | -40°C ... 90°C<br>Resistance to brine and moderate to oil, fuel |
| 40    | 8188295 | VZAS-40-E7  |                                                         |                                                                 |
| 50    | 8188296 | VZAS-50-E7  |                                                         |                                                                 |
| 65    | 8188297 | VZAS-65-E7  |                                                         |                                                                 |
| 80    | 8188298 | VZAS-80-E7  |                                                         |                                                                 |
| 100   | 8188299 | VZAS-100-E7 |                                                         |                                                                 |
| 125   | 8188300 | VZAS-125-E7 |                                                         |                                                                 |
| 150   | 8188301 | VZAS-150-E7 |                                                         |                                                                 |
| 200   | 8188302 | VZAS-200-E7 |                                                         |                                                                 |
| 250   | 8188303 | VZAS-250-E7 |                                                         |                                                                 |
| 300   | 8188304 | VZAS-300-E7 |                                                         |                                                                 |

|       |         |               |                          |                                                                                                                                                                                                                                                           |
|-------|---------|---------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 25/32 | 8188328 | VZAS-32-SBRA  | <b>SBRA</b><br>SBR based | 0°C ... 70°C<br>Dry abrasion resistance<br>Especially designed for the resistance to chemically inert powdered products, such as: flours, cements, plasters, concrete mortars, powder, etc. This material is the alternative where natural rubber is used |
| 40    | 8188329 | VZAS-40-SBRA  |                          |                                                                                                                                                                                                                                                           |
| 50    | 8188330 | VZAS-50-SBRA  |                          |                                                                                                                                                                                                                                                           |
| 65    | 8188331 | VZAS-65-SBRA  |                          |                                                                                                                                                                                                                                                           |
| 80    | 8188332 | VZAS-80-SBRA  |                          |                                                                                                                                                                                                                                                           |
| 100   | 8188333 | VZAS-100-SBRA |                          |                                                                                                                                                                                                                                                           |
| 125   | 8188334 | VZAS-125-SBRA |                          |                                                                                                                                                                                                                                                           |
| 150   | 8188335 | VZAS-150-SBRA |                          |                                                                                                                                                                                                                                                           |
| 200   | 8188336 | VZAS-200-SBRA |                          |                                                                                                                                                                                                                                                           |
| 250   | 8188337 | VZAS-250-SBRA |                          |                                                                                                                                                                                                                                                           |
| 300   | 8188338 | VZAS-300-SBRA |                          |                                                                                                                                                                                                                                                           |

|       |         |            |                                                                       |                                                                                                                                                      |
|-------|---------|------------|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 25/32 | 8188339 | VZAS-32-V  | <b>FPM</b><br>Hexafluoropropylene<br>vinylidene fluoride<br>copolymer | 0°C ... 210°C<br>Very good resistance to high temperature, light, weathering, hydraulic liquids, hydrocarbons, benzene solvent, acids, bases, oxygen |
| 40    | 8188340 | VZAS-40-V  |                                                                       |                                                                                                                                                      |
| 50    | 8188341 | VZAS-50-V  |                                                                       |                                                                                                                                                      |
| 65    | 8188342 | VZAS-65-V  |                                                                       |                                                                                                                                                      |
| 80    | 8188343 | VZAS-80-V  |                                                                       |                                                                                                                                                      |
| 100   | 8188344 | VZAS-100-V |                                                                       |                                                                                                                                                      |
| 125   | 8188345 | VZAS-125-V |                                                                       |                                                                                                                                                      |
| 150   | 8188346 | VZAS-150-V |                                                                       |                                                                                                                                                      |
| 200   | 8188347 | VZAS-200-V |                                                                       |                                                                                                                                                      |
| 250   | 8188348 | VZAS-250-V |                                                                       |                                                                                                                                                      |
| 300   | 8188349 | VZAS-300-V |                                                                       |                                                                                                                                                      |

## Butterfly Valve VZAV

|       |         |            |                                                     |                                                                                                        |
|-------|---------|------------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| 25/32 | 8188305 | VZAS-32-N  | <b>NBR</b><br>Acrylonitrile- Butadiene<br>Copolymer | 0°C - 90°C<br>For applications with oils, greases, fuel, gas oil, CO <sub>2</sub> , CO, H <sub>2</sub> |
| 40    | 8044196 | VZAS-40-N  |                                                     |                                                                                                        |
| 50    | 8044197 | VZAS-50-N  |                                                     |                                                                                                        |
| 65    | 8044198 | VZAS-65-N  |                                                     |                                                                                                        |
| 80    | 8044199 | VZAS-80-N  |                                                     |                                                                                                        |
| 100   | 8044200 | VZAS-100-N |                                                     |                                                                                                        |
| 125   | 8044201 | VZAS-125-N |                                                     |                                                                                                        |
| 150   | 8044202 | VZAS-150-N |                                                     |                                                                                                        |
| 200   | 8044203 | VZAS-200-N |                                                     |                                                                                                        |
| 250   | 8044204 | VZAS-250-N |                                                     |                                                                                                        |
| 300   | 8044205 | VZAS-300-N |                                                     |                                                                                                        |

|       |         |             |                                                            |                                                                                             |
|-------|---------|-------------|------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| 25/32 | 8188306 | VZAS-32-NR  | <b>NBR white</b><br>Acrylonitrile – butadiene<br>copolymer | 0°C ... 90°C<br>Especially for food applications<br>Regulation (EC) 1935/2004 Normative FDA |
| 40    | 8188307 | VZAS-40-NR  |                                                            |                                                                                             |
| 50    | 8188308 | VZAS-50-NR  |                                                            |                                                                                             |
| 65    | 8188309 | VZAS-65-NR  |                                                            |                                                                                             |
| 80    | 8188310 | VZAS-80-NR  |                                                            |                                                                                             |
| 100   | 8188311 | VZAS-100-NR |                                                            |                                                                                             |
| 125   | 8188312 | VZAS-125-NR |                                                            |                                                                                             |
| 150   | 8188313 | VZAS-150-NR |                                                            |                                                                                             |
| 200   | 8188314 | VZAS-200-NR |                                                            |                                                                                             |
| 250   | 8188315 | VZAS-250-NR |                                                            |                                                                                             |
| 300   | 8188316 | VZAS-300-NR |                                                            |                                                                                             |

|       |         |             |                                                           |                                                     |
|-------|---------|-------------|-----------------------------------------------------------|-----------------------------------------------------|
| 25/32 | 8188317 | VZAS-32-S1  | <b>MVQ transparent</b><br>Poly (methyl vinyl)<br>siloxane | -55°C ... 200°C<br>Especially for food applications |
| 40    | 8188318 | VZAS-40-S1  |                                                           |                                                     |
| 50    | 8188319 | VZAS-50-S1  |                                                           |                                                     |
| 65    | 8188320 | VZAS-65-S1  |                                                           |                                                     |
| 80    | 8188321 | VZAS-80-S1  |                                                           |                                                     |
| 100   | 8188322 | VZAS-100-S1 |                                                           |                                                     |
| 125   | 8188323 | VZAS-125-S1 |                                                           |                                                     |
| 150   | 8188324 | VZAS-150-S1 |                                                           |                                                     |
| 200   | 8188325 | VZAS-200-S1 |                                                           |                                                     |
| 250   | 8188326 | VZAS-250-S1 |                                                           |                                                     |
| 300   | 8188327 | VZAS-300-S1 |                                                           |                                                     |

Additional seals can be ordered as followed as a customer solution (GSS):

VZAS-**XXX-YY**

**XXX** = Nominal diameter of the butterfly valve

**YY** = Liner material code

Festo is a distributor, not the manufacturer, of this product.

## Reference list

|                                             | Interapp  | Festo | Name                                     |
|---------------------------------------------|-----------|-------|------------------------------------------|
| <b>Type</b>                                 | Desponia  | VZAV  | Butterfly Valve                          |
| <b>Feature</b>                              | -         | -     | Standard                                 |
|                                             | HLA       | ML    | Manual lever                             |
| <b>Design</b>                               | D1        | C     | Ring housing with centring holes (Wafer) |
|                                             | D3        | L     | Ring housing with threaded flange (Lug)  |
|                                             | D4        | U     | U shape housing                          |
| <b>Nominal Diameter DN</b>                  | 0025      | 25    | 25 mm                                    |
|                                             | ...       | ...   | ...                                      |
|                                             | 1600      | 1600  | 1600 mm                                  |
| <b>Nominal pressure</b>                     | 0         | 2,5   | 2.5 bar                                  |
|                                             | 1         | 6     | 6 bar                                    |
|                                             | 2         | 10    | 10 bar                                   |
|                                             | 3         | 16    | 16 bar                                   |
| <b>Connection standard</b>                  | 1 / 2 / 3 | S8    | DIN EN 1092-1                            |
|                                             | A         | S9    | ASME B16.5/B16.47 Serie A                |
|                                             | N / G / Q | S16   | JIS B2220                                |
|                                             | D / E     | S17   | AS 2129                                  |
|                                             | W         | S18   | AWWAC207                                 |
| <b>Specification of connection standard</b> | A         | -     | ANSI Class 150                           |
|                                             | 1         | PN6   | PN 6                                     |
|                                             | 2         | PN10  | PN 10                                    |
|                                             | 3         | PN16  | PN 16                                    |
|                                             | N         | 5K    | 5K                                       |
|                                             | G         | 10K   | 10K                                      |
|                                             | D         | TD    | Tabelle D                                |
|                                             | E         | TE    | Tabelle E                                |
|                                             | W         | CD    | Class D                                  |
| <b>Housing material</b>                     | 2         | H1    | Ductile cast iron; EN-GJS-400-15; GGG40  |
| <b>Surface finish housing</b>               | AE        | PU70  | Polyurethan coated 70 µ                  |
|                                             | KR / AR   | EP200 | Epoxy coated 200 µ                       |
|                                             | AN        | PU250 | Polyurethan coated 250 µ                 |
| <b>Shaft material</b>                       | 41 / 4A   | V5    | Stainless Steel 1.4021                   |
|                                             | 42 / 4L   | V7    | Stainless Steel 1.4542                   |
| <b>Shut-off element material</b>            | 2A        | H1    | Ductile cast iron, EN-GJS-400-15         |
|                                             | 30        | H6    | Cast steel, GS-52 1.0552                 |
|                                             | 7H        | H7    | Cast steel, ASTM A494 CW-12MW            |
|                                             | 5C        | H8    | Aluminium bronze ASTM B14                |
|                                             | 4C        | V3    | Stainless steel 1.4408                   |

## Butterfly Valve VZAV

|                                                         |     |       |                                                                   |
|---------------------------------------------------------|-----|-------|-------------------------------------------------------------------|
|                                                         | 4S  | V9    | Stainless steel 1.4588                                            |
| <b>Surface finish<br/>shut-off<br/>element</b>          | 0   | -     | None                                                              |
|                                                         | C   | CR    | Chrome coated                                                     |
|                                                         | P   | PL    | Polished                                                          |
|                                                         | D   | PE3   | Polyethylene coated 3mm                                           |
|                                                         | E   | PU70  | Polyurethane coated 70 µ                                          |
|                                                         | H   | HL600 | Halar coated 600 µ                                                |
|                                                         | R   | PA250 | Polyamide coated 250 µ                                            |
| <b>Liner</b>                                            | E   | E     | EPDM                                                              |
|                                                         | EE  | E3    | EPDM KTW                                                          |
|                                                         | EC  | E4    | EPDM HT                                                           |
|                                                         | FT  | E5    | EPDM for abrasive media / Flurcast (AB/T)                         |
|                                                         | EF  | E6    | EPDM white (FDA)                                                  |
|                                                         | EP  | E7    | Epichlorhydrin rubber (ECO)                                       |
|                                                         | EM  | E8    | EPDM, blue (EC 1935/2004 & FDA)                                   |
|                                                         | ET  | E9    | EPDM for high temperatures                                        |
|                                                         | FX  | FC    | Flurcast FX                                                       |
|                                                         | N   | N     | NBR                                                               |
|                                                         | NH  | N1    | NBR-hydrogenated (Biogas)                                         |
|                                                         | NG  | N2    | NBR Gas (EN 682)                                                  |
|                                                         | FN  | N5    | NBR for abrasive media                                            |
|                                                         | NF  | NR    | NBR, white (FDA)                                                  |
|                                                         | S   | S     | Silicone                                                          |
|                                                         | SA  | S1    | Silicone, transparent (FDA)                                       |
|                                                         | FP  | SRBA  | SBR for abrasive media                                            |
|                                                         | V   | V     | FPM                                                               |
|                                                         | VA  | V1    | FPM GF for oxygen-rich fuel                                       |
| <b>PWIS-content</b>                                     | -   | -     | None                                                              |
|                                                         | LF  | C     | PWIS-free                                                         |
| <b>Usage in<br/>potentially<br/>explosive<br/>areas</b> | -   | -     | None                                                              |
|                                                         | 135 | 135   | Zone 1 (o) IIB / T6...T3 Zone 21(o) IIIC / 85...200°C             |
|                                                         | 112 | 112   | Zone 1 (o) IIC / T6...T3 Zone 21(o) IIIC / 85...200°C             |
|                                                         | 278 | 278   | Zone 0 (i),1(o) IIB / T6...T3 Zone 20(i), 21(o) IIIC / 85...200°C |
|                                                         | 246 | 246   | Zone 0 (i),1(o) IIC / T6...T3 Zone 20(i), 21(o) IIIC / 85...200°C |

→ Internet: <https://www.interapp.net/en-de/products/butterfly-valves/metal-butterfly-valves/desponia>