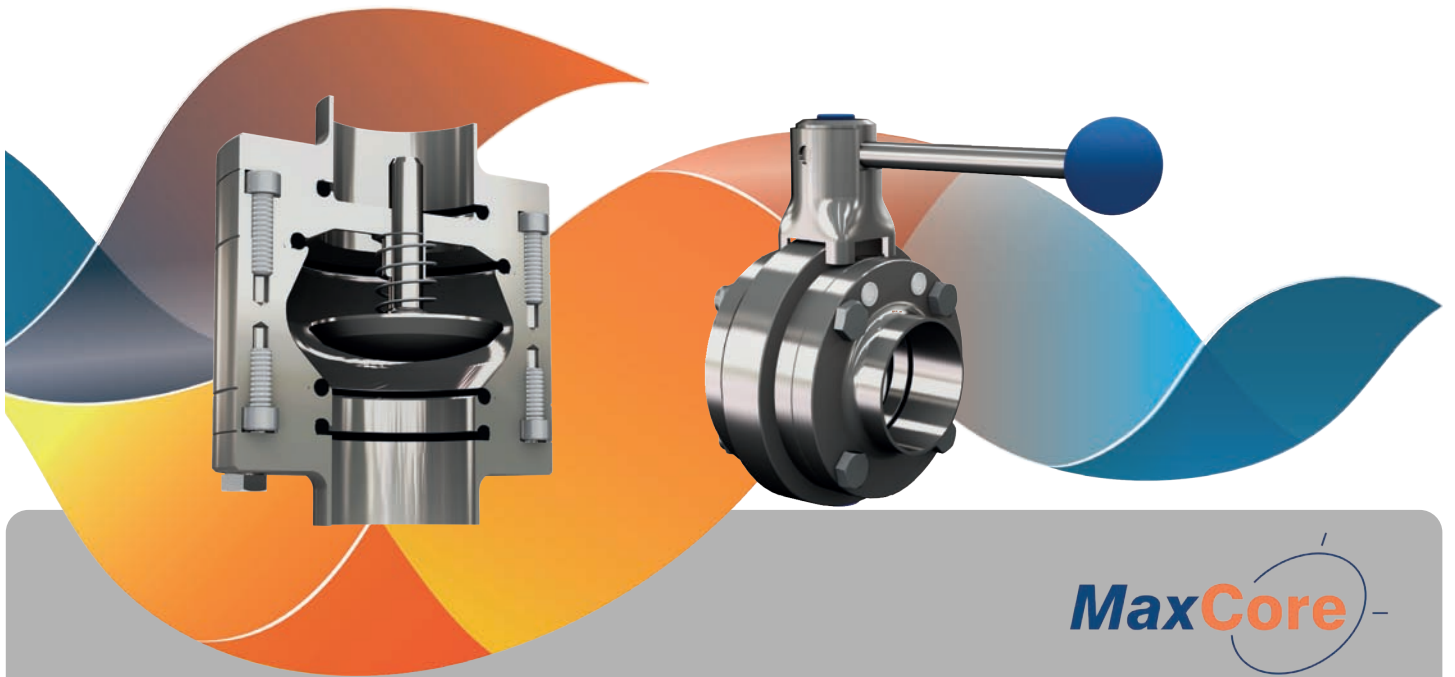


Data sheet for special materials for valves



MaxCore

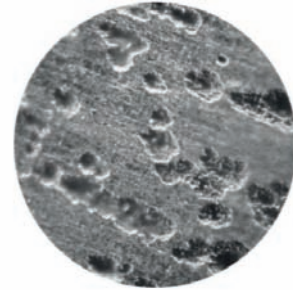
General

Stainless steel special alloys for butterfly valves and non-return valves

So-called "special alloy" materials are being used more and more not only in chemistry, but also in the cosmetics and food industries. Often it is the concentrates, which occur in the end product only in highly diluted form, that require the use of special steels and increase the service life of valves and pipelines many times over. The higher investment in these steels often pays off quickly.

The AWH special alloys program offers three of the most frequently requested steels on the market.

Critical media are, for example, chlorides / salt solutions, vinegar concentrate, active pharmaceutical ingredients (API), ketchup raw materials, chemical cleaning agents and raw materials of the beverage industry, etc.



Chemical corrosion of stainless steel

| | |
|---------------------------|---------------------------|
| AWH special steels | 1,4529 similar to AL6XN® |
| | 1,4539 904L |
| | 2,4602 Hastelloy C22 |

Butterfly Valves



The AWH compact intermediate flange butterfly valve can be manufactured in dimensions up to DN100 / 4". The Hastelloy material is an exception here. Butterfly valves up to DN65 / 3" can only be manufactured in this material.

When using aggressive media, frequent seal changes are to be expected. The AWH intermediate flange butterfly valve is characterized by its maintenance-friendly properties. With this type of valve, it is not necessary to dismantle the pipe system during maintenance.

AWH catalog butterfly valve variants with two flange halves are also available, but in a limited variety.

You can choose between silicone, HNBR, FKM and EPDM as sealing materials.

Non-Return Valves



The hygienic intermediate flange check valve can be manufactured up to DN 100/4" with welding ends.

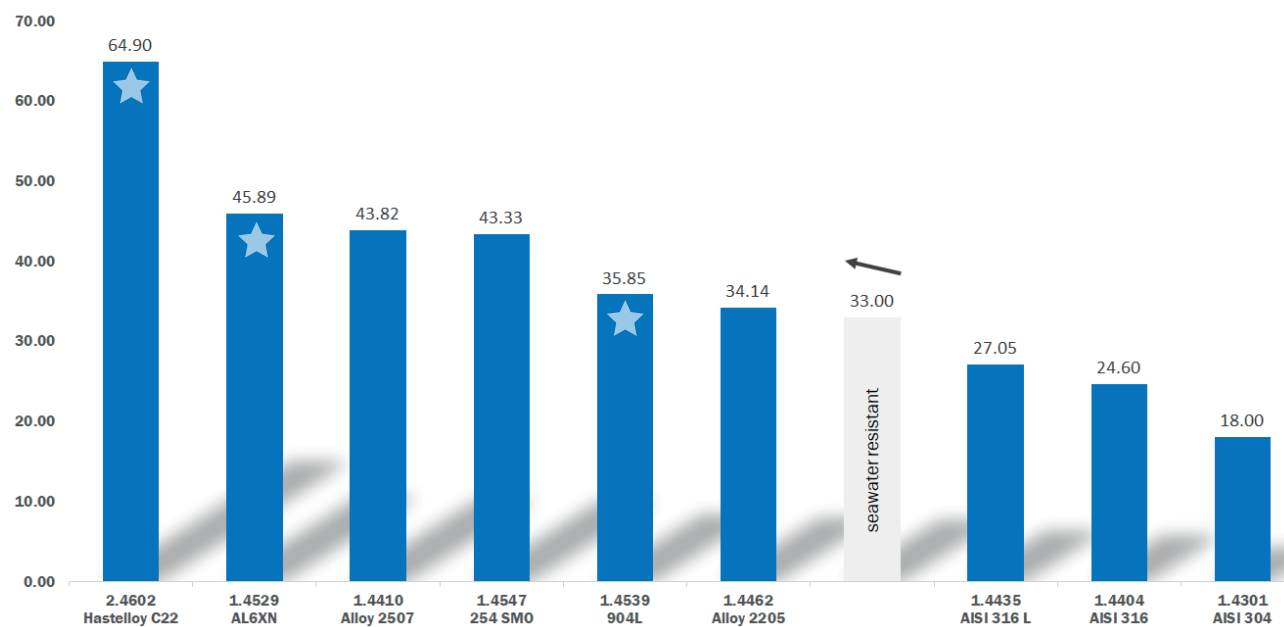
The check valve offers the same ease of maintenance when replacing gaskets as the compact intermediate flange butterfly valve. EPDM, FKM and silicone are available as sealing materials.

PREN value

PREN value as a decision aid

The PREN number is decisive for the resistance of the stainless steels to the product medium. The higher this value, the better the resistance to the medium used.

In the PREN classification, the material is evaluated according to its general pitting behavior. Processes should be adjusted so that the temperature and contact time for critical media are kept as low as possible.



The PREN value stands for the abbreviation **Pitting Resistance Equivalent Number** and provides information about the corrosion resistance of a material.

From a PREN value of 33, stainless steel is considered to be resistant to sea water.

Formula for PREN calculation: $= 1 \times \%Cr + 3.3 \times Mo + 20 \times \%N$

The materials marked "★" above are the AWH special alloy standard materials, some of which we can stock or procure at short notice.

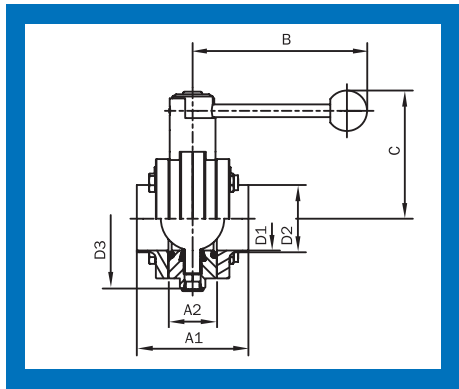
If the material costs are not taken into account, the all-rounder is the Hastelloy C22 steel, which has the best properties in all the applications mentioned above.

Components made from the materials mentioned are only made to order.

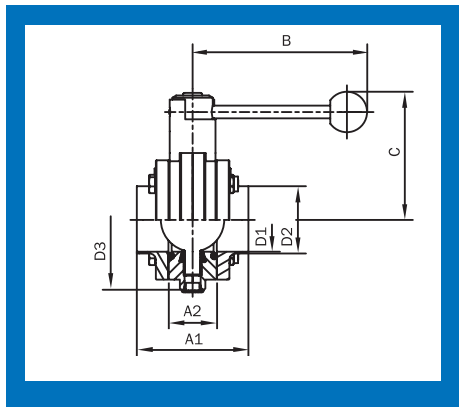
Please contact your local AWH sales representative for delivery times for the desired components.

If material costs are not taken into account, the all-rounder is the Hastelloy C22 steel, which has the best properties in all the applications mentioned above.

AWH stainless steel for the special alloys product portfolio: Butterfly Valves

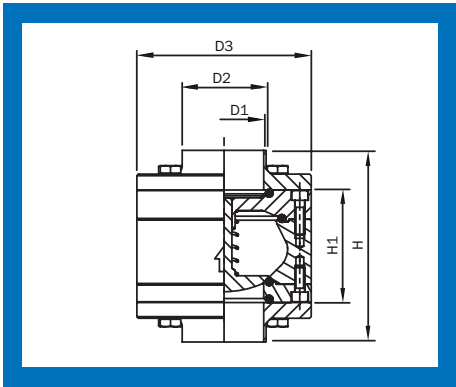


| Compact Intermediate Flange Butterfly Valve DIN | | | | | | | | |
|---|-----|----|-------|-------|-----|-----|-----|-------------|
| DN DIN | A1 | A2 | B | C | D1 | D2 | D3 | Weight [kg] |
| 25 | 78 | 38 | 107.5 | 90 | 26 | 29 | 78 | 2.4 |
| 32 | 78 | 38 | 107.5 | 92.5 | 32 | 35 | 78 | 2.5 |
| 40 | 88 | 38 | 137.5 | 94.5 | 38 | 41 | 97 | 2.6 |
| 50 | 88 | 38 | 137.5 | 101 | 50 | 53 | 110 | 3.1 |
| 65 | 88 | 38 | 137.5 | 110 | 66 | 70 | 127 | 3.7 |
| 80 | 105 | 45 | 171 | 124.5 | 81 | 85 | 142 | 6.1 |
| 100 | 105 | 45 | 171 | 135 | 100 | 104 | 162 | 7.6 |

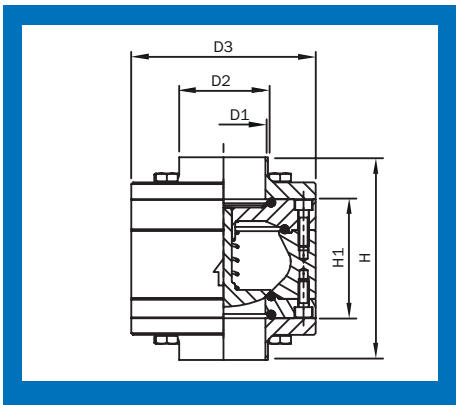


| Compact Intermediate Flange Butterfly Valve Inch (Series B) | | | | | | | | |
|---|-----|----|-------|-------|-------|-------|-----|-------------|
| DN Inch | A1 | A2 | B | C | D1 | D2 | D3 | Weight [kg] |
| 1" | 78 | 38 | 107.5 | 90 | 22.1 | 25.4 | 87 | 2.4 |
| 1 1/2" | 88 | 38 | 137.5 | 94.5 | 34.8 | 38.1 | 97 | 2.6 |
| 2" | 88 | 38 | 137.5 | 101 | 47.5 | 50.8 | 110 | 3.1 |
| 2 1/2" | 88 | 38 | 137.5 | 110 | 60.2 | 63.5 | 127 | 3.6 |
| 3" | 105 | 45 | 171 | 124.5 | 72.9 | 76.2 | 142 | 6.7 |
| 4" | 105 | 45 | 171 | 135.5 | 97.38 | 101.6 | 162 | 7.6 |

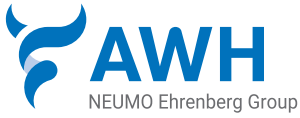
AWH stainless steel for the special alloys product portfolio: Non-return valves



| Intermediate Flange Non-Return Valve DIN | | | | | | | | |
|--|-----|-----|-----|------|------|------------------|------------------------|-------------|
| DN DIN | D1 | D2 | D3 | H | H1 | Kvs value [m3/h] | V [m3/h] at Δp=0.3 bar | Weight [kg] |
| 25 | 26 | 29 | 87 | 96.5 | 56.5 | 11.8 | 6.2 | 3.2 |
| 32 | 32 | 35 | 92 | 100 | 60 | 20.7 | 11.8 | 3.6 |
| 40 | 38 | 41 | 97 | 113 | 63 | 26.2 | 13.5 | 3.8 |
| 50 | 50 | 53 | 110 | 121 | 71 | 45.4 | 23.8 | 4.8 |
| 65 | 66 | 70 | 127 | 131 | 81 | 63 | 34.1 | 6.8 |
| 80 | 81 | 85 | 142 | 154 | 94 | 113.5 | 63.2 | 9.6 |
| 100 | 100 | 104 | 162 | 157 | 97 | 174 | 97.6 | 11.3 |



| Intermediate Flange Non-Return Valve Inch | | | | | | | | |
|---|------|-------|-----|------|------|------------------|------------------------|-------------|
| DN Inch | D1 | D2 | D3 | H | H1 | Kvs value [m3/h] | V [m3/h] at Δp=0.3 bar | Weight [kg] |
| 1" | 22.2 | 25.4 | 87 | 96.5 | 56.5 | 10.1 | 5.3 | 3.2 |
| 1 1/2" | 34.8 | 38.1 | 97 | 113 | 63 | 18.9 | 10.8 | 3.9 |
| 2" | 47.6 | 50.8 | 110 | 121 | 71 | 43.2 | 22.7 | 4.8 |
| 2 1/2" | 60.3 | 63.5 | 127 | 131 | 81 | 58.6 | 31.2 | 6.8 |
| 3" | 72.1 | 76.1 | 142 | 154 | 94 | 102.3 | 56.9 | 9.8 |
| 4" | 97.4 | 101.6 | 162 | 157 | 97 | 169.5 | 95.1 | 11.3 |



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