



## SAFOX® penstock

made of stainless steel

### PENSTOCK WITH CIRCULAR, ROUND OPENING, ALL-SIDED SEAL

#### Opening dimensions and pressure stages

Opening dimensions DN 150 to DN 3000

Standard pressure stages for pressure on the front or back sides of the penstock plate:

- DN 150 to DN 300: 10 mWC
- DN 400 to DN 800: 8 mWC
- DN 900 to DN 1200: 7 mWC
- More than DN 1200: 6 mWC
- Higher pressure stages possible

#### Frame and panel

- Supplied as pre-assembled fitting which does not require assembly, setting and adjusting works up to 1200 mm  
Design as self-supporting frame construction made of stainless steel with integrated spindle bearing
- Welded frame and slide panel made of stainless steel, optimised for maximum safety and durability by means of FEM certification
- Bridge screwed on, thereby all wear parts (spindle, spindle nut, spindle bearing and seal) can be exchanged in the installed condition without dismantling the fitting from the structure
- Exchangeable closing wedges in bronze frame resistant to seawater and wastewater
- Welding certificate in accordance with DIN EN 1090-2 EXC2

#### Materials

- Stainless steel 1.4301 (304) / 1.4404 (316L) / 1.4410 (507) / 1.4462 (318LN) / 1.4539 (904L)

#### Spindle

- Spindle protection made of stainless steel
- Spindle with rolled stainless steel trapezoidal thread, opening size DN 150-1300
- Spindle with whirled trapezoidal thread made of stainless steel, opening size DN 1400-3000
- Single spindle design or twin spindle design
- Spindle nut made of sea and wastewater resistant bronze  
Optional: Spindle outside the medium rising or non-rising (easier to lubricate)

#### Seal

- Factory-fitted profile sealing ring suspended freely in the frame, floating bearing, sealing both to the wall and also to the slide, additional sealing to the wall not permissible
- Made of wastewater and UV-resistant EPDM or oil-resistant NBR with welded BÜSCH UNO push joint
- Seal line larger than the masonry opening to prevent leaks on masonry spalling
  - DN 150 to DN 600: + 12 mm
  - DN 700 to DN 1200: + 32 mm
  - DN 1400 to DN 3000: + 50 mm

\*(multiple frame as of 1300 mm)



SAFOX® penstock DN 1000

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### YOUR ADVANTAGES

- **ABSOLUTELY TIGHT**  
According to drinking water standard DIN EN 12266-2
- **IMMEDIATELY READY FOR USE**  
Penstock is delivered ready for installation\*
- **QUICKEST POSSIBLE INSTALLATION**  
Minimum number of anchor rods, no dowels required on the underside
- **DURABLE**  
Only one seal - UNO-vulcanized seal connection
- **PERFECT CORROSION PROTECTION**  
All welded stainless steel parts from our own pickling plant
- **OPTIONAL EX-PROTECTION**  
On request, the penstock can be proven to comply with the ATEX Directive 2014/34/EU

### Leak tightness classclass

- SAFOX® Leak rate according to drinking water standard DIN EN 12266-2, Part 2, Table A.5:
- Pressure on the backside: leak rate C

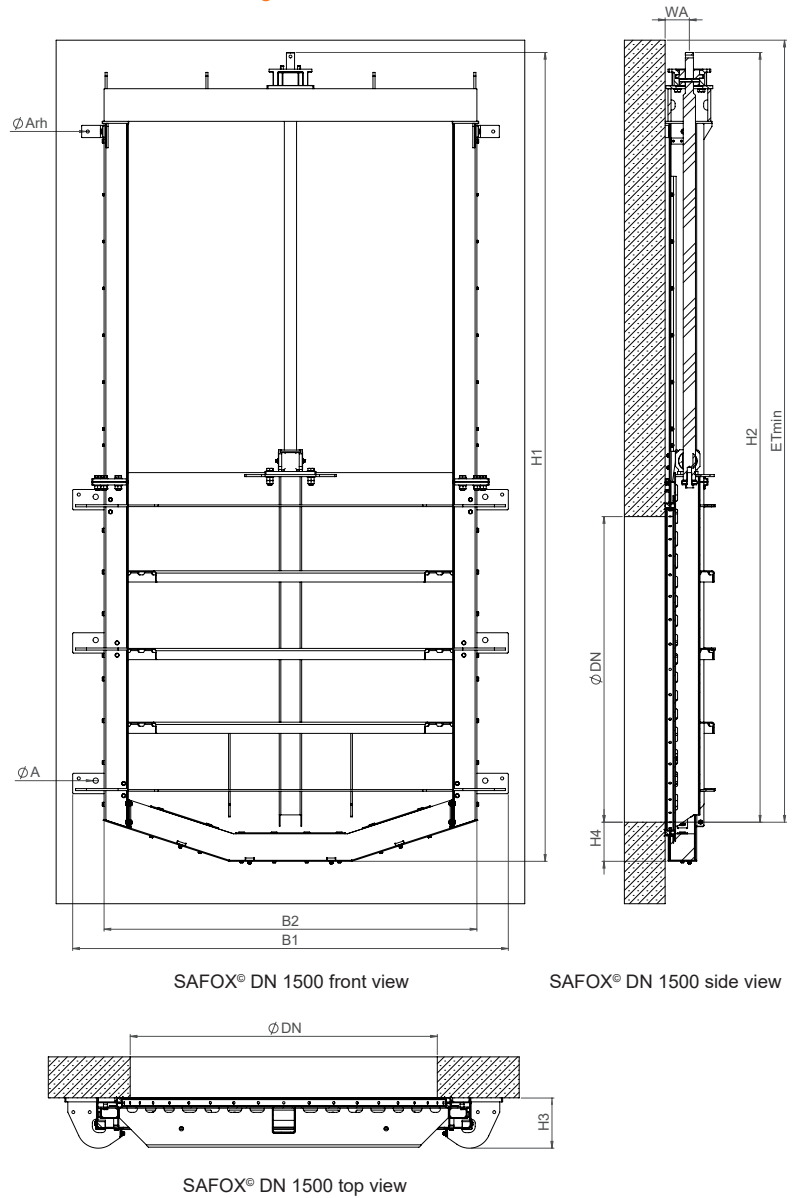
### Mounting

- Dowelling to the wall in front of the opening  
No fixing needed on the bottom side
- Fastening in the base  
Concreting in recess -> corresponds to SAFOX® G

### Actuation of the penstock by

- Stainless steel handwheel on transverse yoke
- Lateral actuation with gearbox with BÜSCH stainless steel gearbox with stainless steel handwheel or stainless steel crank handle
- BÜSCH All-in-one control key via square cap
- BÜSCH MOBITORQ electric or accu - mobile actuators via square stem cap
- BEA®servo stainless steel electric actuator assembled on transverse yoke, optional with BÜSCH weather protection roof
- Pneumatic actuator assembled on transverse yoke
- Hydraulic actuator assembled on transverse yoke
- E-actuator

### Dimensional drawing



### Dimensions in mm

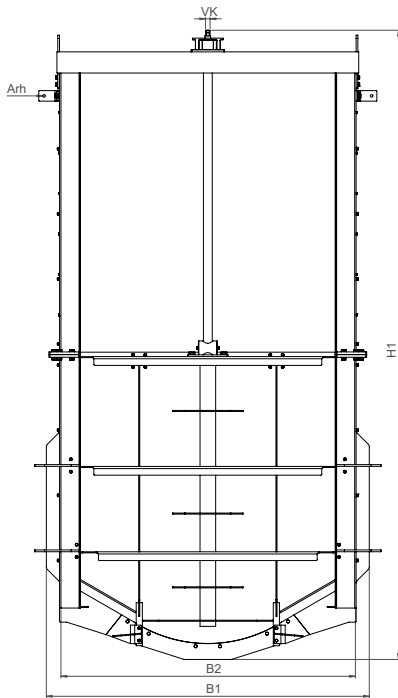
| DN          | 150                   | 200 | 250 | 300 | 400                   | 500  | 600  | 700                   | 800  | 900                   | 1000 | 1200 | 1400                  | 1500                  | 1600    | 1800                      | 2000    | 2200      | 2400    | 2600    | 2800    | 3000    |
|-------------|-----------------------|-----|-----|-----|-----------------------|------|------|-----------------------|------|-----------------------|------|------|-----------------------|-----------------------|---------|---------------------------|---------|-----------|---------|---------|---------|---------|
| B1          | 412                   | 462 | 512 | 562 | 674                   | 774  | 874  | 1070                  | 1170 | 1304                  | 1404 | 1604 | 2038                  | 2138                  | 2238    | 2462                      | 2638    | 2862      | 3260    | 3460    | 3660    | 3860    |
| B2          | 272                   | 322 | 372 | 422 | 534                   | 634  | 734  | 830                   | 930  | 1064                  | 1164 | 1364 | 1730                  | 1830                  | 1930    | 2150                      | 2330    | 2550      | 2860    | 3060    | 3260    | 3460    |
| H1          | 623                   | 728 | 828 | 928 | 1141                  | 1341 | 1541 | 1902                  | 2102 | 2313                  | 2501 | 2901 | 3712                  | 3970                  | 4170    | 4546                      | 4911    | 5366      | 6315    | 6715    | 7115    | 7515    |
| H2          | 558                   | 658 | 758 | 858 | 1063                  | 1264 | 1464 | 1797                  | 1997 | 2192                  | 2396 | 2796 | 3577                  | 3835                  | 4035    | 4411                      | 4776    | 5231      | 6180    | 6580    | 6980    | 7380    |
| H3          | 100                   | 100 | 100 | 100 | 125                   | 125  | 125  | 173                   | 183  | 188                   | 198  | 228  | 246                   | 246                   | 246     | 320                       | 320     | 380       | 380     | 380     | 450     | 500     |
| H4          | 65                    | 70  | 70  | 70  | 78                    | 77   | 77   | 105                   | 105  | 121                   | 105  | 105  | 135                   | 135                   | 135     | 135                       | 135     | 135       | 135     | 135     | 135     | 135     |
| ETmin       | 618                   | 718 | 818 | 918 | 1123                  | 1324 | 1524 | 1857                  | 2057 | 2252                  | 2456 | 2856 | 3637                  | 3895                  | 4095    | 4471                      | 4836    | 5291      | 6240    | 6640    | 7040    | 7440    |
| WA          | 49                    | 49  | 49  | 49  | 49                    | 49   | 49   | 68                    | 68   | 68                    | 68   | 68   | 103                   | 119                   | 119     | 119                       | 119     |           |         |         |         |         |
| ØA          | "2 × Ø 13<br>M10x130" |     |     |     | "4 × Ø 13<br>M10x130" |      |      | "4 × Ø 19<br>M16x190" |      | "6 × Ø 19<br>M16x190" |      |      | "6 × Ø 26<br>M20x260" |                       |         | 10 × Ø 35<br>M20<br>x260" |         | On demand |         |         |         |         |
| ØArh        | -                     | -   | -   | -   | -                     | -    | -    | "2 × Ø 13<br>M10x130" |      |                       |      |      |                       | "2 × Ø 15<br>M12x160" |         |                           |         |           |         |         |         |         |
| Rev./stroke | 38                    | 48  | 58  | 68  | 90                    | 110  | 130  | 157                   | 177  | 198                   | 218  | 258  | ca. 192               | ca. 200               | ca. 220 | ca. 210                   | ca. 235 | ca. 226   | ca. 260 | ca. 280 | ca. 300 | ca. 320 |

Dimensions for other nominal sizes on request.

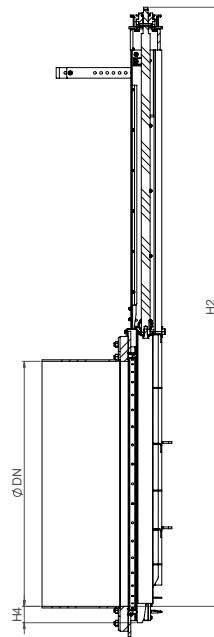
# SAFOX® F VARIANT\* FROM SAFOX®

WITH FLANGE, PENSTOCK WITH CIRCULAR-SHAPED OPENING, ALL-ROUND SEALING

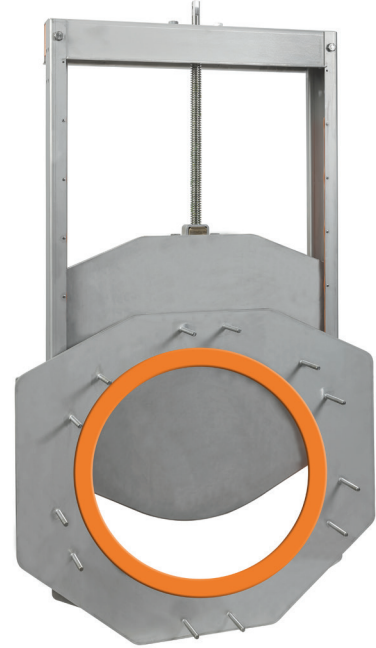
## Dimensional drawing



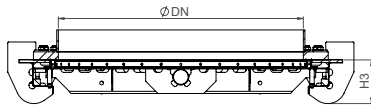
SAFOX® F DN 1500 front view



SAFOX® F DN 1500 side view



SAFOX® F penstock DN 600 with flange



SAFOX® F DN 1500 top view

## SPECIAL FEATURES

- **FLANGE**  
up to DN 600: flange adapter  
from DN 700: fixed flange connection

\*STANDARD DATA:  
please refer SAFOX® penstock

## Dimensions in mm

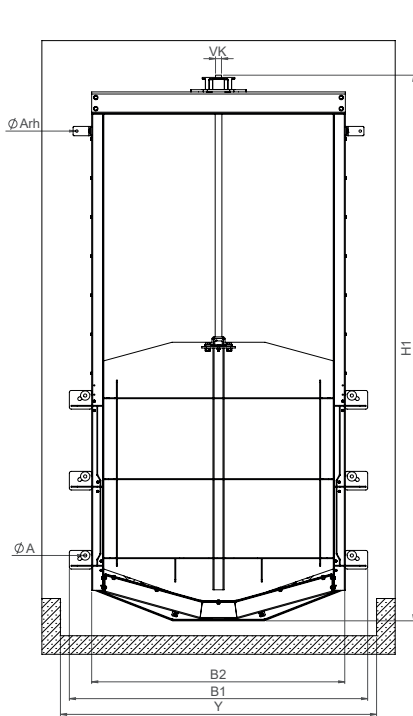
| DN          | 150 | 200 | 250 | 300 | 400  | 500  | 600  | 700                   | 800  | 900  | 1000 | 1200 | 1400    | 1500    | 1600    | 1800                  | 2000    |                       |
|-------------|-----|-----|-----|-----|------|------|------|-----------------------|------|------|------|------|---------|---------|---------|-----------------------|---------|-----------------------|
| B1          | 412 | 462 | 512 | 562 | 674  | 774  | 874  | 1070                  | 1170 | 1304 | 1404 | 1604 | 2038    | 2138    | 2238    | 2462                  | 2638    |                       |
| B2          | 272 | 322 | 372 | 422 | 534  | 634  | 734  | 830                   | 930  | 1064 | 1164 | 1364 | 1730    | 1830    | 1930    | 2150                  | 2330    |                       |
| H1          | 623 | 728 | 828 | 928 | 1141 | 1341 | 1541 | 1902                  | 2102 | 2313 | 2501 | 2901 | 3712    | 3970    | 4170    | 4546                  | 4911    |                       |
| H2          | 558 | 658 | 758 | 858 | 1063 | 1264 | 1464 | 1797                  | 1997 | 2192 | 2396 | 2796 | 3577    | 3835    | 4035    | 4411                  | 4776    |                       |
| H3          | 100 | 100 | 100 | 100 | 115  | 115  | 115  | 132                   | 132  | 132  | 152  | 152  | 246     | 246     | 246     | 246                   | 246     |                       |
| H4          | 65  | 70  | 70  | 70  | 78   | 77   | 77   | 105                   | 105  | 121  | 105  | 105  | 135     | 135     | 135     | 135                   | 135     |                       |
| ØArh        | -   | -   | -   | -   | -    | -    | -    | "2 × Ø 13<br>M10x130" |      |      |      |      |         |         |         | "2 × Ø 15<br>M12x160" |         | "2 × Ø 15<br>M12x160" |
| Rev./stroke | 38  | 48  | 58  | 68  | 90   | 110  | 130  | 157                   | 177  | 198  | 218  | 258  | ca. 192 | ca. 200 | ca. 220 | ca. 210               | ca. 235 |                       |

Dimensions for other nominal sizes on request.

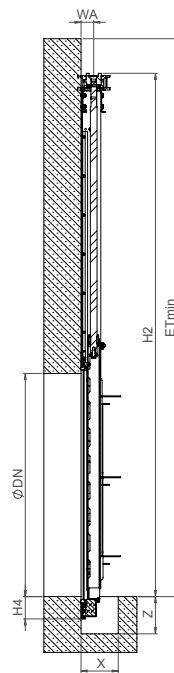
# SAFOX® G VARIANT\* FROM SAFOX®

WITH SMOOTH SOLE PASSAGE, ALL-ROUND SEALING

## Dimensional drawing



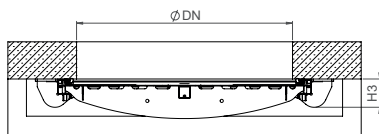
SAFOX® G DN 1200 front view



SAFOX® G DN 1200 side view



SAFOX® G penstock DN 300 with smooth sole passage



SAFOX® G DN 1200 top view

## SPECIAL FEATURES

- **SMOOTH SOLE PASSAGE**  
Easy concreting into the channel, water flows at the same level as the bottom

\* **STANDARD DATA:**  
please refer SAFOX® penstock

## Dimensions in mm

| DN            | 150                   | 200 | 250 | 300                   | 400  | 500  | 600                   | 700                   | 800                   | 900  | 1000     | 1200 |
|---------------|-----------------------|-----|-----|-----------------------|------|------|-----------------------|-----------------------|-----------------------|------|----------|------|
| B1            | 412                   | 462 | 512 | 562                   | 674  | 774  | 874                   | 1070                  | 1170                  | 1304 | 1404     | 1604 |
| B2            | 272                   | 322 | 372 | 422                   | 534  | 634  | 734                   | 830                   | 930                   | 1064 | 1164     | 1364 |
| H1            | 623                   | 728 | 828 | 928                   | 1141 | 1341 | 1541                  | 1902                  | 2102                  | 2313 | 2501     | 2901 |
| H2            | 558                   | 658 | 758 | 858                   | 1063 | 1264 | 1464                  | 1797                  | 1997                  | 2192 | 2396     | 2796 |
| H3            | 100                   | 100 | 100 | 100                   | 115  | 115  | 115                   | 132                   | 132                   | 132  | 152      | 152  |
| H4            | 65                    | 70  | 70  | 70                    | 78   | 77   | 77                    | 121                   | 121                   | 121  | 121      | 121  |
| ETmin         | 618                   | 718 | 818 | 918                   | 1123 | 1324 | 1524                  | 1857                  | 2057                  | 2252 | 2456     | 2856 |
| ØA            | "2 × Ø 13<br>M10x130" |     |     | "4 × Ø 13<br>M10x130" |      |      | "4 × Ø 19<br>M16x190" |                       | "6 × Ø 19<br>M16x190" |      | 6 × Ø 19 |      |
| ØArh          | -                     | -   | -   | -                     | -    | -    | -                     | "2 × Ø 13<br>M10x130" |                       |      |          |      |
| Umdr./<br>Hub | 38                    | 48  | 58  | 68                    | 90   | 110  | 130                   | 157                   | 177                   | 198  | 218      | 258  |
| X min         | 350                   | 350 | 350 | 350                   | 350  | 350  | 350                   | 350                   | 350                   | 350  | 350      | 350  |
| Y min         | 500                   | 550 | 600 | 650                   | 750  | 850  | 950                   | 1150                  | 1250                  | 1350 | 1450     | 1670 |
| Z min         | 120                   | 120 | 120 | 120                   | 150  | 150  | 150                   | 150                   | 150                   | 150  | 150      | 150  |
| Ø             | 240                   | 295 | 350 | 400                   | 515  | 620  | 725                   | 840                   | 950                   | 1050 | 1160     | 1380 |

Dimensions for other nominal sizes on request.