

PROGEF® Natural



- Pipes
- Butt Fusion System

PROGEF® Natural (natural)

Pressure/temperature diagram for PP

PROGEF® Natural

The following pressure/temperature diagram for PROGEF® Natural pipes and fittings is valid for a lifetime of 25 years.

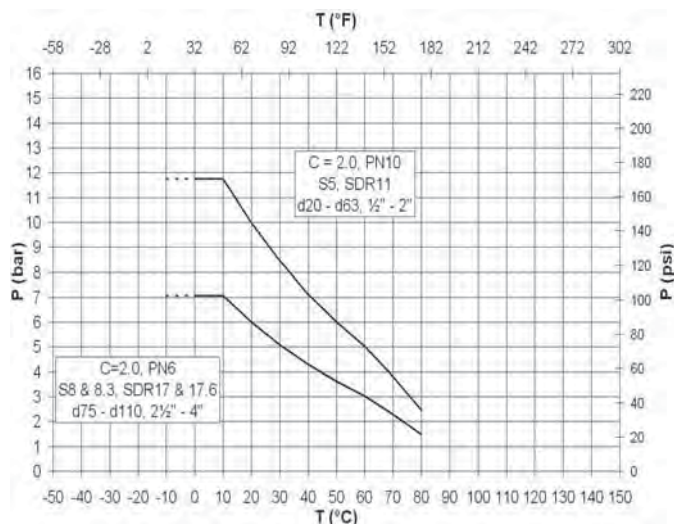
The design factor of 2.0 recommended by GF is incorporated.

It can be used for water or media resembling water, in other words, media which have no derating factor regarding the chemical resistance.

Remark: Please take into account the pressure/temperature diagrams for valves and special fittings. Because of the construction and/or sealing material used, differences are possible when compared with pipes and fittings. This information can be found in the planning fundamentals of the relevant types of valves, respectively special fittings.

Remark: Using PROGEF® Natural at higher temperatures can lead to a discoloration of the material.

In case of applications with temperatures in the range of the dotted lines please contact your GF representative.



P Permissible pressure in bar, psi
T Temperature in °C, °F

PROGEF Natural – System Specification





| | |
|---|---|
| Material | Polypropylene Random Copolymer |
| Colour | Unpigmented, translucent |
| Density | ~0.90g/cm ³ [ISO 1183 / ASTM D 792] |
| Surface tension | 30–35mJ/m ² |
| Linear expansion coefficient | 0.15mm/m °K (DIN 53752) |
| E-modulus | 900N/mm ² [ISO 527/ASTM D 790] |
| Thermal conductivity | 0.23W/mK (EN 12664) |
| Surface resistivity | > 10 ¹⁶ Ω (IEC 60093) |
| Dimension | d20–d 110 in accordance with EN ISO 15494 |
| Pressure Rating | Pipes/Fittings/Diaphragm valves: d20–d 63 SDR11, PN10, c=2.0 d75–d 110 SDR17.6, PN6, c=2.0 |
| Temperature Rating | from 0 °C to 80 °C (<60 °C for valves) (32 °F–176 °F) |
| Production | Fittings/valves: injection moulded Pipes: extruded |
| Surface Finish | Inner surface Ra ≤ 1 µm (39 µin) |
| Marking | Fittings, pipes and valves are embossed with a permanent identification during the production process to ensure full traceability: Lot No Material Dimension Pressure Rating |
| Testing and Inspection (EN ISO 15494) | Inclusions Visual inspection Surface finish Dimension tolerance Pressure testing Full product range passed the Initial Type Test (ITT) |
| Approvals/Conformance ⁽¹⁾ | FDA CFR 21 177.1520 USP 25 class VI (physiological non-toxic) |
| Welding Technology | BCF Plus, bead and crevice free fusion IR Plus, infrared fusion (DVS 2207-6) Butt fusion (DVS 2207-11) |
| Documentation ⁽²⁾ | Certificate of Conformance with FDA, USP EN 10204 2.2 EN 10204 3.1 ASME BPE |
| Packing | Pipes: Capped & single bagged Fittings/valves: Multiple components single bagged in specified bag |
| Labeling | Brand Name Product Description Code Number Material Dimension CE-labeling ⁽³⁾ Approvals |
| Main Applications | Uses include cost effective, pure distribution of DI-water and critical biological fluids where chemical sanitisation is needed. Bead and Crevice Free jointing and minimal metallic leachout ensure the highest product quality. Highly resistant to impact, abrasion and many chemicals make it ideal for slurries transportation in the semiconductor industry. |

⁽¹⁾ For thermoplastic material only

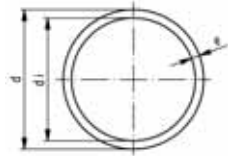
⁽²⁾ On request

⁽³⁾ From 2008 on

PROGEF Natural Pipes, Fittings, Unions, Flanges and Flange Adaptors

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68 48 01



Pipes

PROGEF Natural S5/SDR11 (PN10)

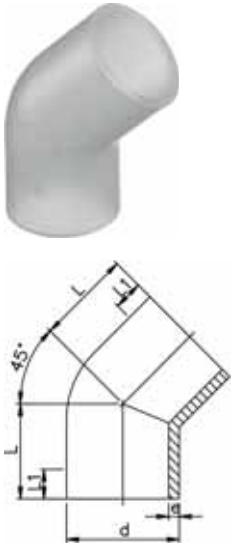
Model:

- Material: PP-R unpigmented
- Colour: natural
- Length: Lengths of 5 m
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Choose fusion parameters: PP-n (PP-R)
- Conventional butt-welding according to DVS 2207 part 11

| d [mm] | Code | kg/m | e [mm] | di [mm] |
|-----------|--------------------|-------|-----------|------------|
| 20 | 168 480 151 | 0.107 | 1.9 | 16.2 |
| 25 | 168 480 152 | 0.164 | 2.3 | 20.4 |
| 32 | 168 480 153 | 0.261 | 2.9 | 26.2 |
| 40 | 168 480 154 | 0.412 | 3.7 | 32.6 |
| 50 | 168 480 155 | 0.638 | 4.6 | 40.8 |
| 63 | 168 480 156 | 1.010 | 5.8 | 51.4 |

Fittings for Butt Fusion

PROGEF Natural elbow 45° S5/SDR11

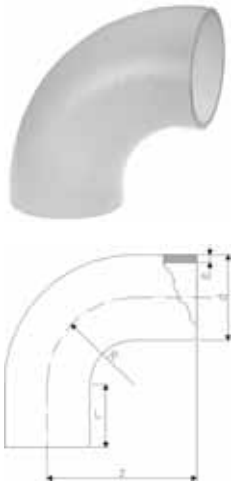


Model:

- Material: PP-R unpigmented
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Choose fusion parameters: PP-n (PP-R)
- Conventional butt-welding according to DVS 2207 part 11

| d [mm] | FM | Code | kg | L [mm] | L1 [mm] | e [mm] |
|-----------|---------|--------------------|-------|-----------|------------|-----------|
| 20 | BCF, IR | 728 158 506 | 0.007 | 32 | 24 | 1.9 |
| 25 | BCF, IR | 728 158 507 | 0.002 | 34 | 25 | 2.3 |
| 32 | BCF, IR | 728 158 508 | 0.019 | 36 | 25 | 2.9 |
| 40 | BCF, IR | 728 158 509 | 0.037 | 39 | 25 | 3.7 |
| 50 | BCF, IR | 728 158 510 | 0.054 | 42 | 26 | 4.6 |
| 63 | BCF, IR | 728 158 511 | 0.097 | 47 | 29 | 5.8 |

PROGEF Natural bend 90° S5/SDR11 - 0.75d



Model:

- Material: PP-R unpigmented
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Choose fusion parameters: PP-n (PP-R)
- Conventional butt-welding according to DVS 2207 part 11

| d [mm] | FM | Code | kg | z [mm] | L [mm] | R [mm] | e [mm] |
|-----------|---------|--------------------|-------|-----------|-----------|-----------|-----------|
| 20 | IR, BCF | 728 018 606 | 0.007 | 38 | 23 | 15 | 1.9 |
| 25 | IR, BCF | 728 018 607 | 0.012 | 42 | 23 | 19 | 2.3 |
| 32 | IR, BCF | 728 018 608 | 0.026 | 46 | 22 | 24 | 2.9 |
| 40 | IR, BCF | 728 018 609 | 0.038 | 51 | 21 | 30 | 3.7 |
| 50 | IR, BCF | 728 018 610 | 0.065 | 58 | 21 | 37 | 4.6 |
| 63 | IR, BCF | 728 018 611 | 0.115 | 66 | 21 | 45 | 5.8 |

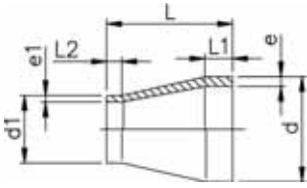
PROGEF Natural tee 90° equal S5/SDR11



Model:

- Material: PP-R unpigmented
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Choose fusion parameters: PP-n (PP-R)
- Conventional butt-welding according to DVS 2207 part 11

| d [mm] | FM | Code | kg | L [mm] | L1 [mm] | e [mm] |
|-----------|---------|--------------------|-------|-----------|------------|-----------|
| 20 | BCF, IR | 728 208 506 | 0.011 | 38 | 24 | 1.9 |
| 25 | BCF, IR | 728 208 507 | 0.019 | 42 | 26 | 2.3 |
| 32 | BCF, IR | 728 208 508 | 0.032 | 46 | 26 | 2.9 |
| 40 | BCF, IR | 728 208 509 | 0.059 | 51 | 23 | 3.7 |
| 50 | BCF, IR | 728 208 510 | 0.101 | 58 | 22 | 4.6 |
| 63 | BCF, IR | 728 208 511 | 0.182 | 66 | 20 | 5.8 |



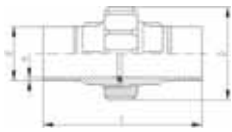
PROGEF Natural reducer S5/SDR11

Model:

- Material: PP-R unpigmented
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Choose fusion parameters: PP-n (PP-R)
- Conventional butt-welding according to DVS 2207 part 11

| d [mm] | d1 [mm] | FM | Code | kg | L [mm] | L1 [mm] | L2 [mm] | e [mm] | e1 [mm] |
|-----------|------------|---------|--------------------|-------|-----------|------------|------------|-----------|------------|
| 25 | 20 | BCF, IR | 728 908 537 | 0.007 | 50 | 20 | 20 | 2.3 | 1.9 |
| 32 | 20 | BCF, IR | 728 908 542 | 0.010 | 50 | 20 | 20 | 3.0 | 1.9 |
| 32 | 25 | BCF, IR | 728 908 541 | 0.011 | 50 | 20 | 20 | 3.0 | 2.3 |
| 40 | 20 | BCF, IR | 728 908 548 | 0.015 | 58 | 20 | 23 | 3.7 | 1.9 |
| 40 | 25 | BCF, IR | 728 908 547 | 0.016 | 55 | 20 | 20 | 3.7 | 2.3 |
| 40 | 32 | BCF, IR | 728 908 546 | 0.019 | 55 | 20 | 20 | 3.7 | 2.9 |
| 50 | 25 | BCF, IR | 728 908 554 | 0.025 | 60 | 20 | 20 | 4.6 | 2.3 |
| 50 | 32 | BCF, IR | 728 908 553 | 0.027 | 60 | 20 | 20 | 4.6 | 2.9 |
| 50 | 40 | BCF, IR | 728 908 552 | 0.030 | 60 | 20 | 20 | 4.6 | 3.7 |
| 63 | 32 | BCF, IR | 728 908 560 | 0.043 | 65 | 20 | 20 | 5.8 | 2.9 |
| 63 | 40 | BCF, IR | 728 908 559 | 0.047 | 65 | 20 | 20 | 5.8 | 3.7 |
| 63 | 50 | BCF, IR | 728 908 558 | 0.052 | 65 | 20 | 20 | 5.8 | 4.6 |

EPDM 28 51 85
FPM 28 52 85

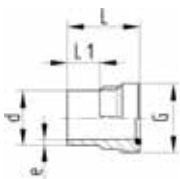


PROGEF Natural sanitary union S5/SDR11

Model:

- Material: PP-R unpigmented
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Choose fusion parameters: PP-n (PP-R)
- Conventional butt-welding according to DVS 2207 part 11
- Only EPDM codes meet FDA compliance.

| d [mm] | FM | EPDM Code | FPM Code | kg | D [mm] | L [mm] | L1 [mm] | L2 [mm] | e [mm] |
|-----------|---------|--------------------|--------------------|-------|-----------|-----------|------------|------------|-----------|
| 20 | BCF, IR | 728 518 526 | 728 528 526 | 0.048 | 48 | 107 | 53 | 25 | 1.9 |
| 25 | BCF, IR | 728 518 527 | 728 528 527 | 0.076 | 58 | 113 | 56 | 25 | 2.3 |
| 32 | BCF, IR | 728 518 528 | 728 528 528 | 0.106 | 65 | 119 | 59 | 25 | 2.9 |
| 40 | BCF, IR | 728 518 529 | 728 528 529 | 0.147 | 79 | 126 | 63 | 25 | 3.7 |
| 50 | BCF, IR | 728 518 530 | 728 528 530 | 0.194 | 91 | 131 | 65 | 25 | 4.6 |
| 63 | BCF, IR | 728 518 531 | 728 528 531 | 0.343 | 111 | 137 | 68 | 25 | 5.8 |



PROGEF Natural union bush S5/SDR11

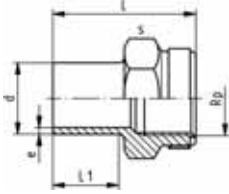
Model:

- Material: PP-R unpigmented
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Choose fusion parameters: PP-n (PP-R)
- Conventional butt-welding according to DVS 2207 part 11

| d [mm] | PN | FM | Code | kg | G [inch] | L [mm] | L1 [mm] | e [mm] |
|-----------|----|---------|--------------------|-------|-------------|-----------|------------|-----------|
| 20 | 10 | BCF, IR | 728 648 526 | 0.012 | 1 | 54 | 26 | 1.9 |
| 25 | 10 | BCF, IR | 728 648 527 | 0.020 | 1 1/4 | 57 | 26 | 2.3 |
| 32 | 10 | BCF, IR | 728 648 528 | 0.029 | 1 1/2 | 60 | 25 | 2.9 |
| 40 | 10 | BCF, IR | 728 648 529 | 0.047 | 2 | 63 | 25 | 3.7 |
| 50 | 10 | BCF, IR | 728 648 530 | 0.072 | 2 1/4 | 66 | 25 | 4.6 |
| 63 | 10 | BCF, IR | 728 648 531 | 0.104 | 2 3/4 | 69 | 25 | 5.8 |

Adaptor fittings for butt fusion

PROGEF Natural adaptor socket metric Rp

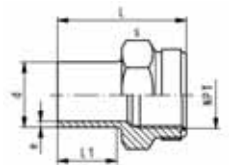


Model:

- Material: PP-R unpigmented
- With butt fusion spigot **SDR11** and BSP parallel female thread Rp, reinforced
- Connection to plastic or metal threads
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to PP

| d [mm] | FM | Rp [inch] | PN | Code | kg | L [mm] | L1 [mm] | s [mm] | e [mm] |
|-----------|---------|--------------|----|--------------------|-------|-----------|------------|-----------|-----------|
| 20 | BCF, IR | ½ | 10 | 728 918 056 | 0.014 | 49 | 28 | 32 | 1,9 |
| 25 | BCF, IR | ¾ | 10 | 728 918 057 | 0.022 | 51 | 28 | 36 | 2,3 |
| 32 | BCF, IR | 1 | 10 | 728 918 058 | 0.039 | 54 | 28 | 46 | 2,9 |
| 40 | BCF, IR | 1 ¼ | 10 | 728 918 059 | 0.057 | 56 | 28 | 55 | 3,7 |
| 50 | BCF, IR | 1 ½ | 10 | 728 918 060 | 0.085 | 60 | 28 | 64 | 4,6 |
| 63 | BCF, IR | 2 | 10 | 728 918 061 | 0.140 | 62 | 28 | 80 | 5,8 |

PROGEF Natural adaptor socket metric NPT

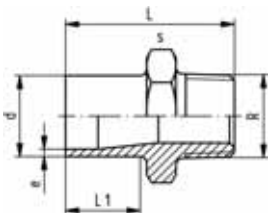


Model:

- Material: PP-R unpigmented
- With butt fusion spigot **SDR11** and NPT tapered female thread, reinforced
- Connection to plastic or metal threads
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to PP
- Install with low mechanical stress and avoid large cyclic temperature changes

| d [mm] | FM | NPT [inch] | PN | Code | kg | L [mm] | L1 [mm] | s [mm] | e [mm] |
|-----------|---------|---------------|----|--------------------|-------|-----------|------------|-----------|-----------|
| 20 | BCF, IR | ½ | 10 | 728 914 056 | 0.016 | 49 | 28 | 32 | 1,9 |
| 25 | BCF, IR | ¾ | 10 | 728 914 057 | 0.019 | 51 | 28 | 36 | 2,3 |
| 32 | BCF, IR | 1 | 10 | 728 914 058 | 0.039 | 54 | 28 | 46 | 2,9 |
| 40 | BCF, IR | 1 ¼ | 10 | 728 914 059 | 0.052 | 56 | 28 | 55 | 3,7 |
| 50 | BCF, IR | 1 ½ | 10 | 728 914 060 | 0.085 | 60 | 28 | 64 | 4,6 |
| 63 | BCF, IR | 2 | 10 | 728 914 061 | 0.140 | 62 | 28 | 80 | 5,8 |

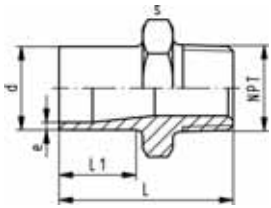
PROGEF Natural adaptor nipple metric R



Model:

- Material: PP-R unpigmented
- With butt fusion spigot **SDR11** and tapered male thread
- Connection to plastic threads only
- Do not use thread sealing pastes that are harmful to PP
- Install with low mechanical stress and avoid large cyclic temperature changes

| d [mm] | FM | R [inch] | PN | Code | kg | L [mm] | L1 [mm] | s [mm] | e [mm] |
|-----------|---------|-------------|----|--------------------|-------|-----------|------------|-----------|-----------|
| 20 | BCF, IR | ½ | 10 | 728 918 106 | 0.013 | 51 | 28 | 32 | 1,9 |
| 25 | BCF, IR | ¾ | 10 | 728 918 107 | 0.017 | 52 | 28 | 36 | 2,3 |
| 32 | BCF, IR | 1 | 10 | 728 918 108 | 0.027 | 55 | 28 | 46 | 2,9 |
| 40 | BCF, IR | 1 ¼ | 10 | 728 918 109 | 0.037 | 58 | 28 | 55 | 3,7 |
| 50 | BCF, IR | 1 ½ | 10 | 728 918 110 | 0.052 | 60 | 28 | 65 | 4,6 |
| 63 | BCF, IR | 2 | 10 | 728 918 111 | 0.092 | 67 | 28 | 80 | 5,8 |

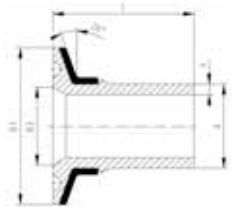


PROGEF Natural adaptor nipple metric NPT

Model:

- Material: PP-R unpigmented
- With butt fusion spigot **SDR11** and NPT tapered male thread
- Connection to plastic threads only
- Do not use thread sealing pastes that are harmful to PP
- Install with low mechanical stress and avoid large cyclic temperature changes

| d [mm] | NPT [inch] | PN | FM | Code | kg | L [mm] | L1 [mm] | s [mm] | e [mm] |
|-----------|---------------|----|---------|--------------------|-------|-----------|------------|-----------|-----------|
| 20 | ½ | 10 | BCF, IR | 728 914 106 | 0.013 | 51 | 28 | 32 | 1.9 |
| 25 | ¾ | 10 | BCF, IR | 728 914 107 | 0.017 | 52 | 28 | 36 | 2.3 |
| 32 | 1 | 10 | BCF, IR | 728 914 108 | 0.027 | 55 | 28 | 46 | 2.9 |
| 40 | 1 ¼ | 10 | BCF, IR | 728 914 109 | 0.039 | 58 | 28 | 55 | 3.7 |
| 50 | 1 ½ | 10 | BCF, IR | 728 914 110 | 0.054 | 60 | 28 | 65 | 4.6 |
| 63 | 2 | 10 | BCF, IR | 728 914 111 | 0.093 | 67 | 28 | 80 | 5.8 |

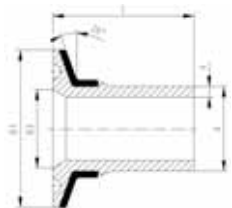


PROGEF Natural sanitary adaptor Connection to ISO 1127

Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Infrared-(IR Plus®) compatible. Choose fusion parameters: PP-n (PP-R)
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Stainless steel reinforcement ring

| d [mm] | FM | DN [mm] | PN | Code | kg | D1 [mm] | D3 [mm] | L [mm] | e [mm] |
|-----------|---------|------------|----|--------------------|-------|------------|------------|-----------|-----------|
| 20 | BCF, IR | 15 | 10 | 728 598 006 | 0.031 | 50 | 18 | 49.0 | 1,9 |
| 25 | BCF, IR | 20 | 10 | 728 598 008 | 0.029 | 50 | 23 | 49.5 | 2,3 |
| 25 | BCF, IR | 25 | 10 | 728 598 009 | 0.029 | 50 | 29 | 49.5 | 2,3 |
| 32 | BCF, IR | 25 | 10 | 728 598 010 | 0.030 | 50 | 29 | 53.0 | 2,9 |
| 40 | BCF, IR | 32 | 10 | 728 598 014 | 0.054 | 64 | 38 | 54.0 | 3,7 |
| 50 | BCF, IR | 40 | 10 | 728 598 016 | 0.064 | 64 | 44 | 61.0 | 4,6 |
| 63 | BCF, IR | 50 | 10 | 728 598 018 | 0.097 | 77 | 56 | 67.0 | 5,8 |

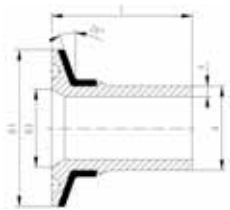


PROGEF Natural sanitary adaptor Connection to DIN 32676

Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Infrared-(IR Plus®) compatible. Choose fusion parameters: PP-n (PP-R)
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Stainless steel reinforcement ring

| d [mm] | FM | DN [mm] | PN | Code | kg | D1 [mm] | D3 [mm] | L [mm] | e [mm] |
|-----------|---------|------------|----|--------------------|-------|------------|------------|-----------|-----------|
| 20 | BCF, IR | 15 | 10 | 728 598 056 | 0.013 | 34 | 16 | 49.0 | 1,9 |
| 20 | BCF, IR | 20 | 10 | 728 598 057 | 0.013 | 34 | 20 | 49.0 | 1,9 |
| 25 | BCF, IR | 25 | 10 | 728 598 059 | 0.032 | 50 | 26 | 49.5 | 2,3 |
| 32 | BCF, IR | 32 | 10 | 728 598 062 | 0.031 | 50 | 32 | 53.0 | 2,9 |
| 40 | BCF, IR | 40 | 10 | 728 598 065 | 0.036 | 50 | 38 | 54.0 | 3,7 |
| 50 | BCF, IR | 50 | 10 | 728 598 067 | 0.060 | 64 | 50 | 61.0 | 4,6 |

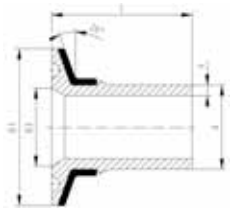


PROGEF Natural sanitary adaptor Connection to DIN 3017

Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Infrared-(IR Plus®) compatible. Choose fusion parameters: PP-n (PP-R)
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Stainless steel reinforcement ring

| d [mm] | FM | DN [mm] | PN | Code | kg | D1 [mm] | D3 [mm] | L [mm] | e [mm] |
|-----------|---------|------------|----|--------------------|-------|------------|------------|-----------|-----------|
| 25 | BCF, IR | 25 | 10 | 728 598 259 | 0.031 | 50 | 22 | 49.5 | 2,3 |
| 32 | BCF, IR | 32 | 10 | 728 598 262 | 0.031 | 50 | 32 | 53.0 | 2,9 |
| 40 | BCF, IR | 40 | 10 | 728 598 265 | 0.033 | 50 | 35 | 54.0 | 3,7 |
| 50 | BCF, IR | 50 | 10 | 728 598 267 | 0.061 | 64 | 49 | 61.0 | 4,6 |
| 63 | BCF, IR | 65 | 10 | 728 598 269 | 0.093 | 78 | 60 | 67.0 | 5,8 |

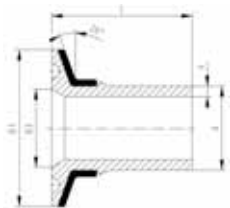


PROGEF Natural sanitary adaptor Connection to ISO 2852

Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Infrared-(IR Plus®) compatible. Choose fusion parameters: PP-n (PP-R)
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Stainless steel reinforcement ring

| d [mm] | FM | DN [mm] | PN | Code | kg | D1 [mm] | D3 [mm] | L [mm] | e [mm] |
|-----------|---------|------------|----|--------------------|-------|------------|------------|-----------|-----------|
| 25 | BCF, IR | 25 | 10 | 728 598 309 | 0.027 | 51 | 22 | 50 | 2,3 |
| 32 | BCF, IR | 32 | 10 | 728 598 312 | 0.031 | 51 | 32 | 53 | 2,9 |
| 40 | BCF, IR | 40 | 10 | 728 598 315 | 0.033 | 51 | 35 | 54 | 3,7 |
| 50 | BCF, IR | 50 | 10 | 728 598 317 | 0.061 | 64 | 49 | 61 | 4,6 |
| 63 | BCF, IR | 65 | 10 | 728 598 319 | 0.093 | 78 | 60 | 67 | 5,8 |



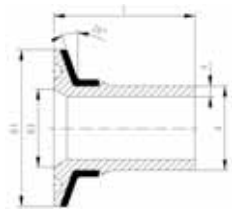
PROGEF Natural sanitary adaptor Connection to ASME BPE

Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Infrared-(IR Plus®) compatible. Choose fusion parameters: PP-n (PP-R)
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Stainless steel reinforcement ring

* Without stainless steel reinforcement ring

| d [mm] | FM | Inch | PN | Code | kg | D1 [mm] | D3 [mm] | L [mm] | e [mm] |
|-----------|---------|-------|----|--------------------|-------|------------|------------|-----------|-----------|
| * 20 | BCF, IR | 3/4 | 10 | 728 598 357 | 0.005 | 25 | 16 | 49 | 1.9 |
| 25 | BCF, IR | 1 | 10 | 728 598 359 | 0.029 | 51 | 22 | 50 | 2.3 |
| 32 | BCF, IR | 1 1/4 | 10 | 728 598 362 | 0.030 | 51 | 35 | 53 | 2.9 |
| 40 | BCF, IR | 1 1/2 | 10 | 728 598 365 | 0.037 | 51 | 35 | 54 | 3.7 |
| 50 | BCF, IR | 2 | 10 | 728 598 367 | 0.063 | 64 | 48 | 61 | 4.6 |
| 63 | BCF, IR | 2 1/2 | 10 | 728 598 369 | 0.096 | 78 | 60 | 67 | 5.8 |

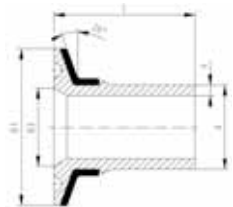


PROGEF Natural sanitary adaptor Connection to JIS G3447

Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Infrared-(IR Plus®) compatible. Choose fusion parameters: PP-n (PP-R)
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Stainless steel reinforcement ring

| d [mm] | FM | DN | PN | Code | kg | D1 [mm] | D3 [mm] | L [mm] | e [mm] |
|-----------|---------|---------|----|--------------------|-------|------------|------------|-----------|-----------|
| 20 | BCF, IR | 15 A | 10 | 728 598 406 | 0.014 | 34 | 18 | 49.0 | 1,9 |
| 25 | BCF, IR | 1 S | 10 | 728 598 408 | 0.032 | 50 | 23 | 49.5 | 2,3 |
| 32 | BCF, IR | 1 1/4 S | 10 | 728 598 410 | 0.033 | 50 | 30 | 53.0 | 2,9 |
| 40 | BCF, IR | 1 1/2 S | 10 | 728 598 414 | 0.033 | 50 | 35 | 54.0 | 3,7 |
| 50 | BCF, IR | 2 S | 10 | 728 598 416 | 0.061 | 64 | 48 | 61.0 | 4,6 |
| 63 | BCF, IR | 2 1/2 S | 10 | 728 598 418 | 0.093 | 78 | 60 | 67.0 | 5,8 |



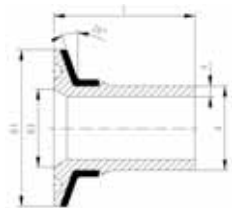
PROGEF Natural sanitary adaptor Connection to 3A standard

Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Infrared-(IR Plus®) compatible. Choose fusion parameters: PP-n (PP-R)
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Stainless steel reinforcement ring

* Without stainless steel reinforcement ring

| d [mm] | FM | Inch | PN | Code | kg | D1 [mm] | D3 [mm] | L [mm] | e [mm] |
|-----------|---------|-------|----|--------------------|-------|------------|------------|-----------|-----------|
| * 20 | BCF, IR | 3/4 | 10 | 728 598 207 | 0.006 | 25 | 16 | 49.0 | 1,9 |
| 25 | BCF, IR | 1 | 10 | 728 598 209 | 0.031 | 50 | 22 | 49.5 | 2,3 |
| 32 | BCF, IR | 1 1/2 | 10 | 728 598 213 | 0.032 | 50 | 35 | 53.0 | 2,9 |
| 40 | BCF, IR | 1 1/2 | 10 | 728 598 215 | 0.033 | 50 | 35 | 54.0 | 3,7 |
| 50 | BCF, IR | 2 | 10 | 728 598 217 | 0.062 | 64 | 48 | 61.0 | 4,6 |
| 63 | BCF, IR | 2 1/2 | 10 | 728 598 219 | 0.093 | 78 | 60 | 67.0 | 5,8 |



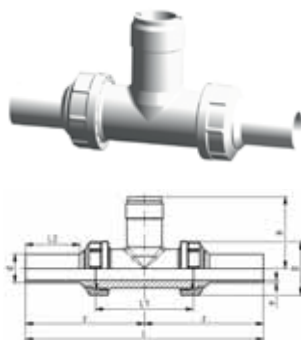
PROGEF Natural sanitary adaptor Connection to membrane manometer

Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Infrared-(IR Plus®) compatible. Choose fusion parameters: PP-n (PP-R)
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Stainless steel reinforcement ring

| d [mm] | FM | DN [mm] | PN | Code | kg | e [mm] | D1 [mm] | D3 [mm] | L [mm] |
|-----------|---------|------------|----|--------------------|-------|-----------|------------|------------|-----------|
| 20 | BCF, IR | 15 | 10 | 728 598 516 | 0.029 | 1,9 | 50 | 34 | 49 |
| 25 | BCF, IR | 20 | 10 | 728 598 518 | 0.027 | 2,3 | 50 | 34 | 50 |
| 32 | BCF, IR | 25 | 10 | 728 598 520 | 0.032 | 2,9 | 50 | 34 | 53 |

28 31 81



PROGEF Natural installation fitting type 318 For butt fusion systems metric

Model:

- Material: PP-H
- Threaded outlet 1 ¼" NPSM
- Union end with butt fusion spigot PP-R

Range of use:

- compatible signet flow sensors: type 2551, 2537, 515, 8510, 2536, 8512
- compatible signet pH/ORP sensors: type 2724, 2725, 2726

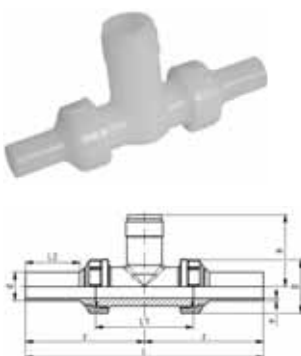
Attention:

- sensor length depends on installation fitting

| d [mm] | DN [mm] | PN | FM | EPDM Code | FPM Code | kg | |
|-----------|------------|----|---------|--------------------|--------------------|-------|--|
| 20 | 15 | 10 | BCF, IR | 728 318 106 | 728 318 136 | 0.250 | |
| 25 | 20 | 10 | BCF, IR | 728 318 107 | 728 318 137 | 0.190 | |
| 32 | 25 | 10 | BCF, IR | 728 318 108 | 728 318 138 | 0.250 | |
| 40 | 32 | 10 | BCF, IR | 728 318 109 | 728 318 139 | 0.356 | |
| 50 | 40 | 10 | BCF, IR | 728 318 110 | 728 318 140 | 0.510 | |
| 63 | 50 | 10 | BCF, IR | 728 318 111 | 728 318 141 | 0.800 | |

| d [mm] | D [mm] | z [mm] | L [mm] | L1 [mm] | L2 [mm] | H [mm] | e [mm] | Sensor Type | |
|-----------|-----------|-----------|-----------|------------|------------|-----------|-----------|----------------|--|
| 20 | 45 | 99 | 198 | 90 | 38 | 76 | 1.9 | flow X0, pH XX | |
| 25 | 55 | 107 | 214 | 100 | 42 | 78 | 2.3 | flow X0, pH XX | |
| 32 | 62 | 115 | 230 | 110 | 41 | 81 | 2.9 | flow X0, pH XX | |
| 40 | 75 | 118 | 236 | 110 | 42 | 85 | 3.7 | flow X0, pH XX | |
| 50 | 84 | 126 | 252 | 120 | 44 | 89 | 4.6 | flow X0, pH XX | |
| 63 | 101 | 134 | 268 | 130 | 45 | 95 | 5.8 | flow X0, pH XX | |

27 31 80



PROGEF Natural installation fitting type 318 For butt fusion systems metric

Model:

- Body and union nut PVDF
- Threaded outlet 1 ¼" NPSM
- Union end with butt fusion spigot PP-R

Range of use:

- compatible signet flow sensors: type 2551, 2537, 515, 8510, 2536, 8512
- compatible signet pH/ORP sensors: type 2724, 2725, 2726

Attention:

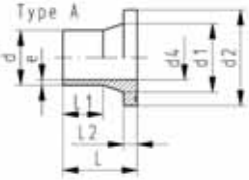
- sensor length depends on installation fitting

| d [mm] | DN [mm] | PN | FM | EPDM Code | FPM Code | kg | |
|-----------|------------|----|---------|--------------------|--------------------|-------|--|
| 20 | 15 | 10 | BCF, IR | 728 318 006 | 728 318 036 | 0.250 | |
| 25 | 20 | 10 | BCF, IR | 728 318 007 | 728 318 037 | 0.355 | |
| 32 | 25 | 10 | BCF, IR | 728 318 008 | 728 318 038 | 0.427 | |
| 40 | 32 | 10 | BCF, IR | 728 318 009 | 728 318 039 | 0.700 | |
| 50 | 40 | 10 | BCF, IR | 728 318 010 | 728 318 040 | 0.850 | |
| 63 | 50 | 10 | BCF, IR | 728 318 011 | 728 318 041 | 1.182 | |

| d [mm] | D [mm] | z [mm] | L [mm] | L1 [mm] | L2 [mm] | H [mm] | e [mm] | Sensor Type | |
|-----------|-----------|-----------|-----------|------------|------------|-----------|-----------|----------------|--|
| 20 | 45 | 99 | 198 | 90 | 38 | 76 | 1.9 | flow X0, pH XX | |
| 25 | 55 | 107 | 214 | 100 | 42 | 78 | 2.3 | flow X0, pH XX | |
| 32 | 62 | 115 | 230 | 110 | 41 | 81 | 2.9 | flow X0, pH XX | |
| 40 | 75 | 118 | 236 | 110 | 42 | 85 | 3.7 | flow X0, pH XX | |
| 50 | 84 | 126 | 252 | 120 | 44 | 89 | 4.6 | flow X0, pH XX | |
| 63 | 101 | 134 | 268 | 130 | 45 | 95 | 5.8 | flow X0, pH XX | |

Flange Adaptors, Flanges and Gaskets for Butt Fusion

PROGEF Natural flange adaptor S5/SDR11 Combined jointing face: flat and serrated

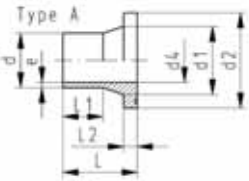


Model:

- Material: PP-R unpigmented
- Conventional butt-welding according to DVS 2207 part 11
- Bead and Crevice Free weldable with the new BCF® Plus fusion machine
- Infrared-(IR Plus®) compatible. Choose fusion parameters: PP-n (PP-R)
- Gasket: Profile flange gasket EPDM No. 48 44 07, FPM No. 49 44 07

| d [mm] | DN [mm] | FM | Code | kg | d1 [mm] | d2 [mm] | d4 [mm] | L [mm] | L1 [mm] | L2 [mm] | e [mm] |
|-----------|------------|--------|--------------------|-------|------------|------------|------------|-----------|------------|------------|-----------|
| 20 | 15 | WNF/IR | 728 798 706 | 0.015 | 27 | 45 | 16 | 50 | 29 | 7 | 1.9 |
| 25 | 20 | WNF/IR | 728 798 707 | 0.028 | 33 | 58 | 20 | 52 | 27 | 9 | 2.3 |
| 32 | 25 | WNF/IR | 728 798 708 | 0.042 | 40 | 68 | 26 | 54 | 28 | 10 | 3.0 |
| 40 | 32 | WNF/IR | 728 798 709 | 0.064 | 50 | 78 | 32 | 56 | 25 | 11 | 3.7 |
| 50 | 40 | WNF/IR | 728 798 710 | 0.092 | 61 | 88 | 40 | 62 | 32 | 12 | 4.6 |
| 63 | 50 | WNF/IR | 728 798 711 | 0.142 | 75 | 102 | 51 | 68 | 38 | 14 | 5.8 |

Flange Adapter - ANSI Serrated, PN 10, Natural PP



| d [mm] | FM | Code | kg | e [mm] | d1 [mm] | d2 [mm] | d4 [mm] | L [mm] | L1 [mm] | L2 [mm] |
|-----------|---------|--------------------|-------|-----------|------------|------------|------------|-----------|------------|------------|
| 20 | WNF/IR | 728 798 706 | 0.015 | 1.9 | 27 | 45 | 16 | 50 | 29 | 7 |
| 25 | BCF, IR | 728 798 657 | 0.028 | 2.3 | 33 | 54 | 20 | 52 | 27 | 9 |
| 32 | BCF, IR | 728 798 658 | 0.042 | 3.0 | 40 | 63 | 26 | 54 | 28 | 10 |
| 40 | BCF, IR | 728 798 659 | 0.064 | 3.7 | 50 | 73 | 32 | 56 | 25 | 11 |
| 50 | BCF, IR | 728 798 660 | 0.091 | 4.6 | 61 | 82 | 40 | 62 | 32 | 12 |
| 63 | WNF/IR | 728 798 711 | 0.142 | 5.8 | 75 | 102 | 51 | 68 | 38 | 14 |
| 75 | IR | 728 798 787 | 0.202 | 4.5 | 89 | 122 | 66 | 70 | 16 | |
| 90 | IR | 728 798 788 | 0.271 | 5.4 | 105 | 138 | 79 | 79 | 17 | |
| 110 | IR | 728 798 789 | 0.354 | 6.6 | 125 | 158 | 96 | 82 | 18 | |

27 70 04
27 70 05

Backing flange PP-V For butt fusion systems metric

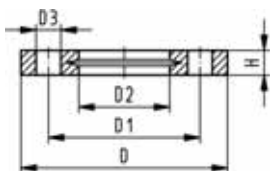
Model:

- Modern full-plastic flange PP-GF (30 % glass-fibre reinforced)
- With V-groove which applies force evenly on collar
- With integrated bolt retainers as an assembly aid
- UV-resistant. Applicable for outside applications
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- **Bolt circle PN 10**

* Combined version, metric-ANSI

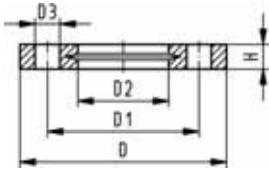
AL: number of holes

1) Suitable for socket- and butt fusion systems (no pictograph on flange)



| d [mm] | DN [mm] | PN | Code | kg | D [mm] | D1 [mm] | D2 [mm] | D3 [mm] | H [mm] | AL | SC |
|-----------|------------|----|--------------------|-------|-----------|------------|------------|------------|-----------|----|-----|
| 1) 20 | 15 | 16 | 727 700 406 | 0.093 | 95 | 65.0 | 28 | 14 | 16 | 4 | M12 |
| 1) 25 | 20 | 16 | 727 700 407 | 0.120 | 105 | 75.0 | 34 | 14 | 17 | 4 | M12 |
| 1) 32 | 25 | 16 | 727 700 408 | 0.151 | 115 | 85.0 | 42 | 14 | 18 | 4 | M12 |
| 1) 40 | 32 | 16 | 727 700 409 | 0.244 | 140 | 100.0 | 51 | 18 | 20 | 4 | M16 |
| 1) 50 | 40 | 16 | 727 700 410 | 0.297 | 150 | 110.0 | 62 | 18 | 22 | 4 | M16 |
| 1) 63 | 50 | 16 | 727 700 411 | 0.362 | 165 | 125.0 | 78 | 18 | 24 | 4 | M16 |

27 70 14
27 70 15



Backing flange PP-V For butt fusion systems Inch ANSI

Model:

- Modern full-plastic flange PP-GF (30 % glass-fibre reinforced)
- With V-groove which applies force evenly on collar
- With integrated bolt-fixing as an assembly aid
- UV-resistant. Applicable for outside applications
- Connecting dimension: ANSI/ASME B 16.5 class 150, ASTM D 4024, BS 1560, BS EN 1759
- **Bolt circle class 150**

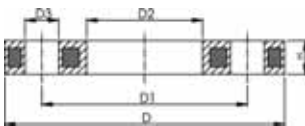
1) Suitable for socket- and butt fusion systems (no pictograph on flange)

AL: number of holes

* Combined version, metric-ANSI

| Inch | DN [mm] | d [mm] | PN | Code | kg | D [mm] | D1 [mm] | D2 [mm] | D3 [mm] | H [mm] | AL | SC |
|-------|------------|-----------|----|--------------------|-------|-----------|------------|------------|------------|-----------|----|-----|
| 1/2 | 15 | 20 | 16 | 727 701 406 | 0.091 | 95 | 60.0 | 28 | 16 | 16 | 4 | M12 |
| 3/4 | 20 | 25 | 16 | 727 701 407 | 0.120 | 105 | 70.0 | 34 | 16 | 17 | 4 | M12 |
| 1 | 25 | 32 | 16 | 727 701 408 | 0.147 | 115 | 79.0 | 42 | 16 | 18 | 4 | M12 |
| 1 1/4 | 32 | 40 | 16 | 727 701 409 | 0.246 | 140 | 89.0 | 51 | 16 | 20 | 4 | M16 |
| 1 1/2 | 40 | 50 | 16 | 727 701 410 | 0.299 | 150 | 98.0 | 62 | 16 | 22 | 4 | M16 |
| 2 | 50 | 63 | 16 | 727 701 411 | 0.361 | 165 | 121.0 | 78 | 19 | 24 | 4 | M16 |
| 2 1/2 | 65 | 75 | 16 | 727 701 412 | 0.492 | 185 | 140.0 | 92 | 19 | 26 | 4 | M16 |
| 3 | 80 | 90 | 16 | 727 701 513 | 0.607 | 200 | 152.0 | 108 | 19 | 27 | 4 | M16 |
| 4 | 100 | 110 | 16 | 727 701 514 | 0.736 | 229 | 190.0 | 128 | 19 | 28 | 8 | M16 |
| 10 | 250 | 250 | 16 | 727 701 521 | 2.241 | 406 | 362.0 | 288 | 26 | 38 | 12 | M20 |
| 10 | 250 | 280 | 16 | 727 701 522 | 2.173 | 406 | 362.0 | 294 | 26 | 38 | 12 | M20 |
| 12 | 300 | 315 | 16 | 727 701 523 | 3.627 | 483 | 432.0 | 338 | 26 | 42 | 12 | M20 |

27 70 02
27 70 03



Backing flange PP-Steel For butt fusion systems metric

Model:

- Material: PP (30 % glass-fibre reinforced) with steel ring
- UV-resistant. Applicable for outside applications
- Connecting dimension: ISO 7005, EN 1092, BS 4504, DIN 2501
- **Bolt circle PN 10**

AL: number of holes

| d [mm] | DN [mm] | PN | Code | kg | D [mm] | D1 [mm] | D2 [mm] | D3 [mm] | H [mm] | AL | SC |
|-----------|------------|----|--------------------|-------|-----------|------------|------------|------------|-----------|----|-----|
| 20 | 15 | 16 | 727 700 206 | 0.216 | 95 | 65 | 28 | 14 | 12 | 4 | M12 |
| 25 | 20 | 16 | 727 700 207 | 0.279 | 105 | 75 | 34 | 14 | 12 | 4 | M12 |
| 32 | 25 | 16 | 727 700 208 | 0.429 | 115 | 85 | 42 | 14 | 16 | 4 | M12 |
| 40 | 32 | 16 | 727 700 209 | 0.621 | 140 | 100 | 51 | 18 | 16 | 4 | M16 |
| 50 | 40 | 16 | 727 700 210 | 0.722 | 150 | 110 | 62 | 18 | 20 | 4 | M16 |
| 63 | 50 | 16 | 727 700 211 | 1.084 | 165 | 125 | 78 | 18 | 20 | 4 | M16 |

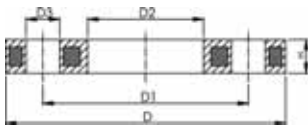
27 70 12

Backing flange PP-Steel For butt fusion systems Inch ANSI

Model:

- Material: PP (30 % glass-fibre reinforced) with steel ring
- UV-resistant. Applicable for outside applications
- Connecting dimension: ANSI/ASME B 16.5 class 150, ASTM D 4024, BS 1560, BS EN 1759
- **Bolt circle class 150**

AL: number of holes



| d [inch] | DN [mm] | d [mm] | PN | Code | kg | D1 [mm] | D2 [mm] | D3 [mm] | D [mm] | H [mm] | AL | SC |
|-------------|------------|-----------|----|--------------------|-------|------------|------------|------------|-----------|-----------|----|-----|
| 1/2 | 15 | 20 | 16 | 727 701 206 | 0.213 | 60 | 28 | 16 | 95 | 12 | 4 | M12 |
| 3/4 | 20 | 25 | 16 | 727 701 207 | 0.260 | 70 | 34 | 16 | 105 | 12 | 4 | M12 |
| 1 | 25 | 32 | 16 | 727 701 208 | 0.416 | 79 | 42 | 16 | 115 | 16 | 4 | M12 |
| 1 1/4 | 32 | 40 | 16 | 727 701 209 | 0.730 | 89 | 51 | 16 | 140 | 16 | 4 | M16 |
| 1 1/2 | 40 | 50 | 16 | 727 701 210 | 0.809 | 98 | 62 | 16 | 150 | 18 | 4 | M16 |
| 2 | 50 | 63 | 16 | 727 701 211 | 0.866 | 121 | 78 | 19 | 165 | 18 | 4 | M16 |
| 2 1/2 | 65 | 75 | 16 | 727 701 212 | 1.117 | 140 | 92 | 19 | 185 | 18 | 4 | M16 |
| 3 | 80 | 90 | 16 | 727 701 313 | 1.499 | 152 | 108 | 19 | 200 | 20 | 4 | M16 |
| 4 | 100 | 110 | 16 | 727 701 314 | 1.739 | 190 | 128 | 19 | 229 | 20 | 8 | M16 |
| 8 | 200 | 200 | 16 | 727 701 319 | 5.440 | 298 | 235 | 22 | 340 | 27 | 8 | M20 |
| 8 | 200 | 225 | 16 | 727 701 320 | 5.621 | 298 | 238 | 22 | 340 | 27 | 8 | M20 |

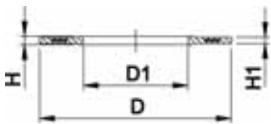
EPDM 48 44 07
FPM 49 44 07

Profile flange gasket metric

Model:



- For all metric GF Flange Adaptors
- Profile Gasket with steel insert (type G-ST-P/K)
- Hardness: 70° Shore **EPDM**, 75° Shore **FPM**
- **EPDM**: approved acc. to DVGW W 270, KTW recommendation
- Centering on the inner diameter of the screw crown
- material steel insert: carbon steel

di FA are the suitable inner diameters of flange adaptors



| d [mm] | DN [mm] | PN | EPDM Code | FPM Code | kg | D [mm] | D1 [mm] | H [mm] | H1 [mm] | di FA [mm] |
|-----------|------------|----|--------------------|--------------------|-------|-----------|------------|-----------|------------|---------------|
| 20 | 15 | 16 | 748 440 706 | 749 440 706 | 0.013 | 51 | 20 | 4 | 3 | 10 - 20 |
| 25 | 20 | 16 | 748 440 707 | 749 440 707 | 0.014 | 61 | 22 | 4 | 3 | 12 - 22 |
| 32 | 25 | 16 | 748 440 708 | 749 440 708 | 0.019 | 71 | 28 | 4 | 3 | 18 - 28 |
| 40 | 32 | 16 | 748 440 709 | 749 440 709 | 0.026 | 82 | 40 | 4 | 3 | 30 - 40 |
| 50 | 40 | 16 | 748 440 710 | 749 440 710 | 0.039 | 92 | 46 | 4 | 3 | 36 - 46 |
| 63 | 50 | 16 | 748 440 711 | 749 440 711 | 0.050 | 107 | 58 | 5 | 4 | 48 - 58 |

PROGEF Natural Hand-Operated and Actuated Valves

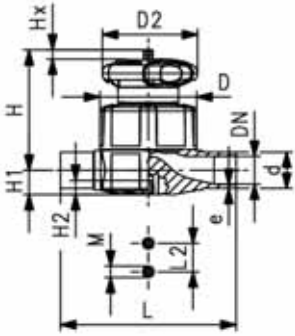
| | | Page |
|---|----------------------------|------|
|  | Diaphragm Valves | 338 |
|  | Diaphragm valves pneumatic | 340 |

Diaphragm Valves

PROGEF Natural

Diaphragm valve type 515

With butt fusion spigots SDR11 metric



Model:

- Material: PP-R unpigmented
- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Handwheel with built-in locking mechanism
- Overall length EN 558

Option:

- Individual configuration of the valve (see diagram)
- Self adjusting multifunctional module with integrated limit switches

| d [mm] | DN [mm] | PN | kv-value ($\Delta p=1$ bar) [l/min] | EPDM Code | PTFE/EPDM Code | kg |
|-----------|------------|----|--|--------------------|--------------------|-------|
| 20 | 15 | 10 | 125 | 168 515 112 | 168 515 132 | 0.308 |
| 25 | 20 | 10 | 271 | 168 515 113 | 168 515 133 | 0.393 |
| 32 | 25 | 10 | 481 | 168 515 114 | 168 515 134 | 0.969 |
| 40 | 32 | 10 | 759 | 168 515 115 | 168 515 135 | 1.125 |
| 50 | 40 | 10 | 1263 | 168 515 116 | 168 515 136 | 2.083 |
| 63 | 50 | 10 | 1728 | 168 515 117 | 168 515 137 | 2.630 |

| d [mm] | D [mm] | D2 [mm] | L [mm] | L2 [mm] | H [mm] | H1 [mm] | H2 [mm] | M | Lift = Hx [mm] |
|-----------|-----------|------------|-----------|------------|-----------|------------|------------|----|----------------------|
| 20 | 65 | 65 | 124 | 25 | 73 | 14 | 12 | M6 | 7 |
| 25 | 80 | 65 | 144 | 25 | 81 | 18 | 12 | M6 | 10 |
| 32 | 88 | 87 | 155 | 25 | 107 | 22 | 12 | M6 | 13 |
| 40 | 101 | 87 | 176 | 45 | 115 | 26 | 15 | M8 | 15 |
| 50 | 117 | 135 | 193 | 45 | 148 | 32 | 15 | M8 | 19 |
| 63 | 144 | 135 | 223 | 45 | 166 | 39 | 15 | M8 | 25 |



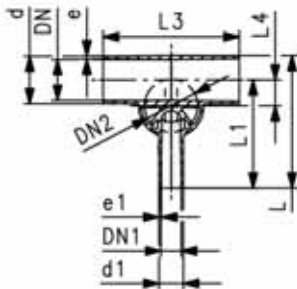
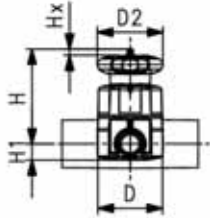
PROGEF Natural Diaphragm valve type 519 With butt fusion spigots SDR11 metric

Model:

- Material: PP-R unpigmented
- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Handwheel with built-in locking mechanism
- Smallest possible dead space

Option:

- Individual configuration of the valve (see diagram)
- Self adjusting multifunctional module with integrated limit switches



| d [mm] | d1 [mm] | Valve Size d [mm] | DN [mm] | DN1 [mm] | DN2 [mm] | PN | kv-value ($\Delta p=1$ bar) [l/min] | EPDM Code | PTFE/EPDM Code | kg |
|-----------|------------|-------------------------|------------|-------------|-------------|----|--|--------------------|--------------------|-------|
| 20 | 20 | 20 | 15 | 15 | 15 | 10 | 57 | 168 519 101 | 168 519 301 | 0.321 |
| 25 | 20 | 25 | 20 | 15 | 20 | 10 | 89 | 168 519 103 | 168 519 303 | 0.397 |
| 25 | 25 | 25 | 20 | 20 | 20 | 10 | 118 | 168 519 104 | 168 519 304 | 0.399 |
| 32 | 20 | 25 | 25 | 15 | 20 | 10 | 80 | 168 519 107 | 168 519 307 | 0.424 |
| 32 | 25 | 25 | 25 | 20 | 20 | 10 | 105 | 168 519 108 | 168 519 308 | 0.426 |
| 32 | 32 | 32 | 25 | 25 | 25 | 10 | 231 | 168 519 109 | 168 519 309 | 0.980 |
| 40 | 20 | 32 | 32 | 15 | 25 | 10 | 85 | 168 519 112 | 168 519 312 | 1.008 |
| 50 | 20 | 25 | 40 | 15 | 20 | 10 | 86 | 168 519 118 | 168 519 318 | 0.485 |
| 50 | 25 | 32 | 40 | 20 | 25 | 10 | 160 | 168 519 119 | 168 519 319 | 1.054 |
| 50 | 32 | 32 | 40 | 25 | 25 | 10 | 206 | 168 519 120 | 168 519 320 | 1.056 |
| 63 | 20 | 25 | 50 | 15 | 20 | 10 | 84 | 168 519 125 | 168 519 325 | 0.524 |
| 63 | 25 | 32 | 50 | 20 | 25 | 10 | 150 | 168 519 126 | 168 519 326 | 1.097 |
| 63 | 32 | 32 | 50 | 25 | 25 | 10 | 184 | 168 519 127 | 168 519 327 | 1.100 |

| d [mm] | D [mm] | D2 [mm] | L [mm] | L1 [mm] | L3 [mm] | L4 [mm] | H [mm] | Lift = Hx [mm] | e [mm] | e1 [mm] |
|-----------|-----------|------------|-----------|------------|------------|------------|-----------|----------------------|-----------|------------|
| 20 | 65 | 65 | 117 | 96 | 162 | 12 | 75 | 7 | 1.9 | 1.9 |
| 25 | 80 | 65 | 133 | 108 | 162 | 16 | 80 | 10 | 2.3 | 1.9 |
| 25 | 80 | 65 | 133 | 108 | 162 | 16 | 80 | 10 | 2.3 | 2.3 |
| 32 | 80 | 65 | 142 | 120 | 162 | 19 | 84 | 10 | 2.9 | 1.9 |
| 32 | 80 | 65 | 142 | 120 | 162 | 19 | 84 | 10 | 2.9 | 2.3 |
| 32 | 88 | 87 | 145 | 120 | 160 | 19 | 107 | 13 | 2.9 | 2.9 |
| 40 | 88 | 87 | 149 | 128 | 180 | 23 | 115 | 13 | 3.7 | 1.9 |
| 50 | 80 | 65 | 160 | 134 | 180 | 27 | 97 | 10 | 4.6 | 1.9 |
| 50 | 88 | 87 | 160 | 134 | 180 | 28 | 120 | 13 | 4.6 | 2.3 |
| 50 | 88 | 87 | 160 | 134 | 180 | 28 | 120 | 13 | 4.6 | 2.9 |
| 63 | 80 | 65 | 177 | 144 | 180 | 33 | 104 | 10 | 5.8 | 1.9 |
| 63 | 88 | 87 | 177 | 144 | 180 | 35 | 127 | 13 | 5.8 | 2.3 |
| 63 | 88 | 87 | 177 | 144 | 180 | 35 | 127 | 13 | 5.8 | 2.9 |

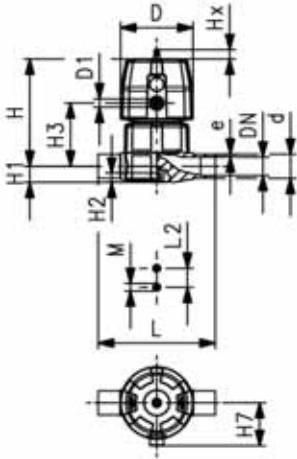
Diaphragm valves pneumatic

PROGEF Natural

Diaphragm valve DIASTAR Six

FC (Fail safe to close)

With butt fusion spigots SDR11 metric



Model:

- Material: PP-R unpigmented
- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals

Option:

- Individual configuration of the valve (see diagram)

| d [mm] | DN [mm] | PN | kv-value ($\Delta p=1$ bar) [l/min] | EPDM Code | kg |
|-----------|------------|----|--|--------------------|-------|
| 20 | 15 | 6 | 125 | 168 615 112 | 0.466 |
| 25 | 20 | 6 | 271 | 168 615 113 | 0.900 |
| 32 | 25 | 6 | 481 | 168 615 114 | 1.063 |
| 40 | 32 | 6 | 759 | 168 615 115 | 1.744 |
| 50 | 40 | 6 | 960 | 168 615 116 | 2.203 |
| 63 | 50 | 6 | 1181 | 168 615 117 | 2.979 |

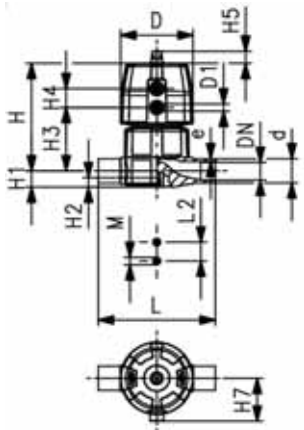
| d [mm] | D [mm] | D1_G [inch] | L [mm] | L2 [mm] | H [mm] | H1 [mm] | H2 [mm] | H3 [mm] | H7 [mm] | M | Lift = Hx [mm] | e [mm] |
|-----------|-----------|----------------|-----------|------------|-----------|------------|------------|------------|------------|----|----------------------|-----------|
| 20 | 68 | 1/8 | 124 | 25 | 101 | 14 | 12 | 60 | 43 | M6 | 7 | 1.9 |
| 25 | 96 | 1/8 | 144 | 25 | 132 | 18 | 12 | 73 | 57 | M6 | 10 | 2.3 |
| 32 | 96 | 1/8 | 154 | 25 | 143 | 22 | 12 | 84 | 57 | M6 | 13 | 2.9 |
| 40 | 120 | 1/8 | 174 | 45 | 173 | 26 | 15 | 99 | 69 | M8 | 14 | 3.7 |
| 50 | 120 | 1/8 | 194 | 45 | 193 | 32 | 15 | 119 | 69 | M8 | 16 | 4.6 |
| 63 | 120 | 1/8 | 224 | 45 | 205 | 39 | 15 | 132 | 69 | M8 | 16 | 5.8 |

PROGEF Natural

Diaphragm valve DIASTAR Ten

FC (Fail safe to close)

With butt fusion spigots SDR11 metric



Model:

- Material: PP-R unpigmented
- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals

Option:

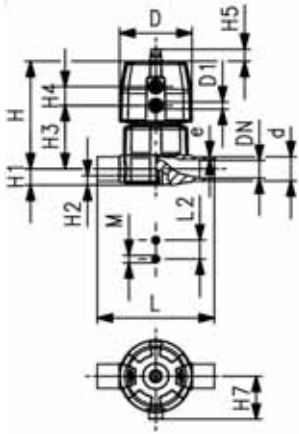
- Individual configuration of the valve (see diagram)
- Comprehensive range of accessories available

* PN: PTFE

Working Pressure: **one side**

| d [mm] | DN [mm] | PN* | kv-value ($\Delta p=1$ bar) [l/min] | EPDM Code | PTFE Code | kg |
|-----------|------------|-------|--|--------------------|--------------------|-------|
| 20 | 15 | 10/6* | 125 | 168 625 112 | 168 625 132 | 0.502 |
| 25 | 20 | 10/6* | 271 | 168 625 113 | 168 625 133 | 0.987 |
| 32 | 25 | 10/6* | 481 | 168 625 114 | 168 625 134 | 1.155 |
| 40 | 32 | 10/6* | 759 | 168 625 115 | 168 625 135 | 1.914 |
| 50 | 40 | 10/6* | 1263 | 168 625 116 | 168 625 136 | 3.371 |
| 63 | 50 | 10/5* | 1728 | 168 625 117 | 168 625 137 | 3.928 |

table continued next page



| d | D | D1_G | L | L2 | H | H1 | H2 | H3 | H4 | H5 | H7 | M | Lift = Hx | e |
|------|------|--------|------|------|------|------|------|------|------|------|------|----|-----------|------|
| [mm] | [mm] | [inch] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | | [mm] | [mm] |
| 20 | 68 | 1/8 | 124 | 25 | 101 | 14 | 12 | 60 | 24 | 16 | 43 | M6 | 7 | 1.9 |
| 25 | 96 | 1/8 | 144 | 25 | 132 | 18 | 12 | 73 | 25 | 16 | 57 | M6 | 10 | 2.3 |
| 32 | 96 | 1/8 | 154 | 25 | 143 | 22 | 12 | 84 | 25 | 16 | 57 | M6 | 13 | 2.9 |
| 40 | 120 | 1/4 | 174 | 45 | 173 | 26 | 15 | 99 | 26 | 26 | 69 | M8 | 15 | 3.7 |
| 50 | 150 | 1/4 | 194 | 45 | 214 | 32 | 15 | 119 | 36 | 26 | 88 | M8 | 19 | 4.6 |
| 63 | 150 | 1/4 | 224 | 45 | 226 | 39 | 15 | 132 | 36 | 26 | 88 | M8 | 23 | 5.8 |



PROGEF Natural Diaphragm valve DIASTAR Ten FO (Fail safe to open) With butt fusion spigots SDR11 metric

Model:

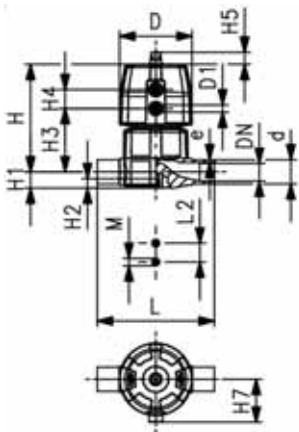
- Material: PP-R unpigmented
- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals

Option:

- Individual configuration of the valve (see diagram)
- Comprehensive range of accessories available

* PN: PTFE

Working Pressure: **one side**



| d | DN | PN* | kv-value | EPDM | kg |
|------|------|-------|---------------------|--------------------|-------|
| [mm] | [mm] | [bar] | ($\Delta p=1$ bar) | Code | |
| | | | [l/min] | | |
| 20 | 15 | 10/6* | 125 | 168 645 112 | 0.442 |
| 25 | 20 | 10/6* | 271 | 168 645 113 | 0.801 |
| 32 | 25 | 10/6* | 481 | 168 645 114 | 0.954 |
| 40 | 32 | 10/6* | 759 | 168 645 115 | 1.534 |
| 50 | 40 | 10/6* | 1263 | 168 645 116 | 3.251 |
| 63 | 50 | 10/5* | 1728 | 168 645 117 | 3.810 |

| d | D | D1_G | L | L2 | H | H1 | H2 | H3 | H4 | H5 | H7 | M | Lift = Hx | e |
|------|------|--------|------|------|------|------|------|------|------|------|------|----|-----------|------|
| [mm] | [mm] | [inch] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | | [mm] | [mm] |
| 20 | 68 | 1/8 | 124 | 25 | 101 | 14 | 12 | 60 | 24 | 16 | 43 | M6 | 7 | 1.9 |
| 25 | 96 | 1/8 | 144 | 25 | 132 | 18 | 12 | 73 | 25 | 16 | 57 | M6 | 10 | 2.3 |
| 32 | 96 | 1/8 | 154 | 25 | 143 | 22 | 12 | 84 | 25 | 16 | 57 | M6 | 13 | 2.9 |
| 40 | 120 | 1/4 | 174 | 45 | 173 | 26 | 15 | 99 | 26 | 26 | 69 | M8 | 15 | 3.7 |
| 50 | 150 | 1/4 | 194 | 45 | 214 | 32 | 15 | 119 | 36 | 26 | 88 | M8 | 19 | 4.6 |
| 63 | 150 | 1/4 | 224 | 45 | 226 | 39 | 15 | 132 | 36 | 26 | 88 | M8 | 23 | 5.8 |



PROGEF Natural

Diaphragm valve DIASTAR Ten

DA (Double acting)

With butt fusion spigots SDR11 metric

Model:

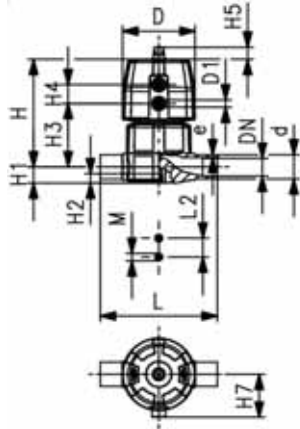
- Material: PP-R unpigmented
- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals

Option:

- Individual configuration of the valve (see diagram)
- Comprehensive range of accessories available

* PN: PTFE

Working Pressure: **one side**



| d [mm] | DN [mm] | PN* [bar] | kv-value ($\Delta p=1$ bar) [l/min] | EPDM Code | kg |
|-----------|------------|--------------|--|--------------------|-------|
| 20 | 15 | 10/6* | 125 | 168 655 112 | 0.426 |
| 25 | 20 | 10/6* | 271 | 168 655 113 | 0.765 |
| 32 | 25 | 10/6* | 481 | 168 655 114 | 0.924 |
| 40 | 32 | 10/6* | 759 | 168 655 115 | 1.474 |
| 50 | 40 | 10/6* | 1263 | 168 655 116 | 2.501 |
| 63 | 50 | 10/5* | 1728 | 168 655 117 | 3.060 |

| d [mm] | D [mm] | D1_G [inch] | L [mm] | L2 [mm] | H [mm] | H1 [mm] | H2 [mm] | H3 [mm] | H4 [mm] | H5 [mm] | H7 [mm] | M | Lift = Hx [mm] | e [mm] |
|-----------|-----------|----------------|-----------|------------|-----------|------------|------------|------------|------------|------------|------------|----|----------------------|-----------|
| 20 | 68 | 1/8 | 124 | 25 | 101 | 14 | 12 | 60 | 24 | 16 | 43 | M6 | 7 | 1.9 |
| 25 | 96 | 1/8 | 144 | 25 | 132 | 18 | 12 | 73 | 25 | 16 | 57 | M6 | 10 | 2.3 |
| 32 | 96 | 1/8 | 154 | 25 | 143 | 22 | 12 | 84 | 25 | 16 | 57 | M6 | 13 | 2.9 |
| 40 | 120 | 1/8 | 174 | 45 | 173 | 26 | 15 | 99 | 26 | 26 | 69 | M8 | 15 | 3.7 |
| 50 | 150 | 1/4 | 194 | 45 | 214 | 32 | 15 | 119 | 36 | 26 | 88 | M8 | 19 | 4.6 |
| 63 | 150 | 1/4 | 224 | 45 | 226 | 39 | 15 | 132 | 36 | 26 | 88 | M8 | 23 | 5.8 |



PROGEF Natural Diaphragm valve DIASTAR Ten FC (Fail safe to close) With butt fusion spigots SDR11 metric

Model:

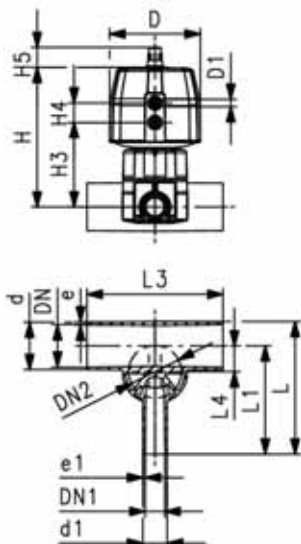
- Material: PP-R unpigmented
- Double flow rate compared to predecessor
- One housing nut replaces four screws
- Rotating air connection at 90° intervals
- Smallest possible dead space

Option:

- Individual configuration of the valve (see diagram)
- Comprehensive range of accessories available

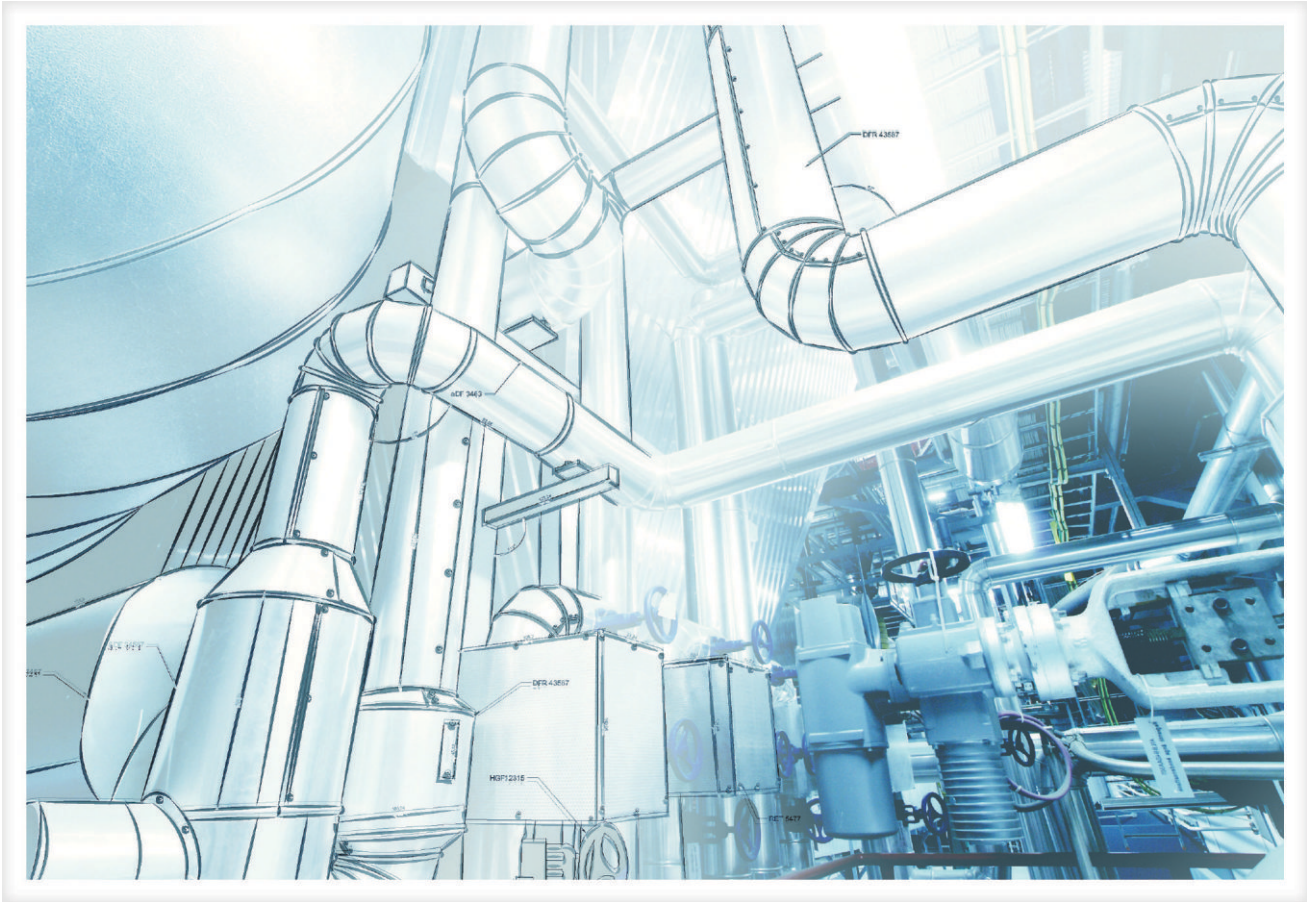
* PN: PTFE

Working Pressure: **one side**



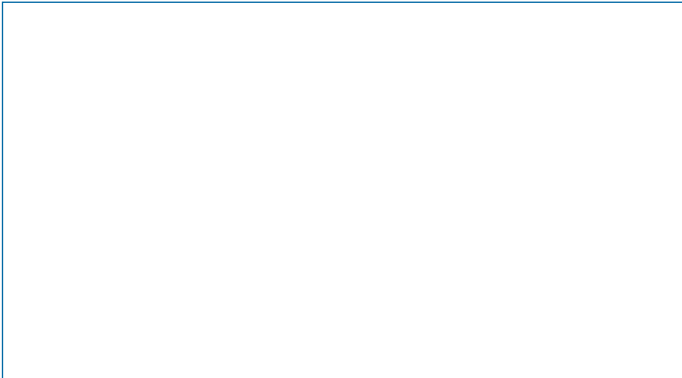
| d [mm] | d1 [mm] | Valve Size d [mm] | DN [mm] | DN1 [mm] | DN2 [mm] | PN* [bar] | kv-value ($\Delta p=1$ bar) [l/min] | EPDM Code | PTFE/EPDM Code |
|-----------|------------|-------------------------|------------|-------------|-------------|--------------|--|--------------|-------------------|
| 20 | 20 | 20 | 15 | 15 | 15 | 10/6* | 57 | 168 629 101 | 168 629 301 |
| 25 | 20 | 25 | 20 | 15 | 20 | 10/6* | 89 | 168 629 103 | 168 629 303 |
| 25 | 25 | 25 | 20 | 20 | 20 | 10/6* | 118 | 168 629 104 | 168 629 304 |
| 32 | 20 | 25 | 25 | 15 | 20 | 10/6* | 80 | 168 629 107 | 168 629 307 |
| 32 | 25 | 25 | 25 | 20 | 20 | 10/6* | 105 | 168 629 108 | 168 629 308 |
| 32 | 32 | 32 | 25 | 25 | 25 | 10/6* | 231 | 168 629 109 | 168 629 309 |
| 40 | 20 | 32 | 32 | 15 | 25 | 10/6* | 85 | 168 629 112 | 168 629 312 |
| 50 | 20 | 25 | 40 | 15 | 20 | 10/6* | 86 | 168 629 118 | 168 629 318 |
| 50 | 25 | 32 | 40 | 20 | 25 | 10/6* | 160 | 168 629 119 | 168 629 319 |
| 50 | 32 | 32 | 40 | 25 | 25 | 10/6* | 206 | 168 629 120 | 168 629 320 |
| 63 | 20 | 25 | 50 | 15 | 20 | 10/6* | 84 | 168 629 125 | 168 629 325 |
| 63 | 25 | 32 | 50 | 20 | 25 | 10/6* | 150 | 168 629 126 | 168 629 326 |
| 63 | 32 | 32 | 50 | 25 | 25 | 10/6* | 184 | 168 629 127 | 168 629 327 |

| d [mm] | D [mm] | D1 [inch] | L [mm] | L1 [mm] | L3 [mm] | L4 [mm] | H [mm] | H3 [mm] | H4 [mm] | H5 [mm] | Lift = Hx [mm] | e [mm] | e1 [mm] |
|-----------|-----------|--------------|-----------|------------|------------|------------|-----------|------------|------------|------------|----------------------|-----------|------------|
| 20 | 68 | 1/8 | 117 | 96 | 162 | 12 | 104 | 71 | 25 | 16 | 7 | 1.9 | 1.9 |
| 25 | 96 | 1/8 | 133 | 108 | 162 | 16 | 131 | 72 | 25 | 16 | 10 | 2.3 | 1.9 |
| 25 | 96 | 1/8 | 133 | 108 | 162 | 16 | 131 | 72 | 25 | 16 | 10 | 2.3 | 2.3 |
| 32 | 96 | 1/8 | 142 | 120 | 162 | 19 | 135 | 76 | 25 | 16 | 10 | 2.9 | 1.9 |
| 32 | 96 | 1/8 | 142 | 120 | 162 | 19 | 135 | 76 | 25 | 16 | 10 | 2.9 | 2.3 |
| 32 | 96 | 1/8 | 145 | 120 | 160 | 19 | 143 | 93 | 25 | 16 | 13 | 2.9 | 2.9 |
| 40 | 96 | 1/8 | 149 | 128 | 180 | 23 | 151 | 101 | 25 | 16 | 13 | 3.7 | 1.9 |
| 50 | 96 | 1/8 | 160 | 134 | 180 | 27 | 148 | 90 | 25 | 16 | 10 | 4.6 | 1.9 |
| 50 | 96 | 1/8 | 160 | 134 | 180 | 28 | 156 | 106 | 25 | 16 | 13 | 4.6 | 2.3 |
| 50 | 96 | 1/8 | 160 | 134 | 180 | 28 | 156 | 106 | 25 | 16 | 13 | 4.6 | 2.9 |
| 63 | 96 | 1/8 | 177 | 144 | 180 | 33 | 155 | 96 | 25 | 16 | 10 | 5.8 | 1.9 |
| 63 | 96 | 1/8 | 177 | 144 | 180 | 35 | 163 | 113 | 25 | 16 | 13 | 5.8 | 2.3 |
| 63 | 96 | 1/8 | 177 | 144 | 180 | 35 | 163 | 113 | 25 | 16 | 13 | 5.8 | 2.9 |



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