



**FITTINGS
FOR SOCKET WELDING**
PVDF

Fittings, metric series ISO-UNI

FITTINGS FOR SOCKET WELDING

Series of fittings designed for conveying fluids under pressure with a hot weld connection system (socket welding)

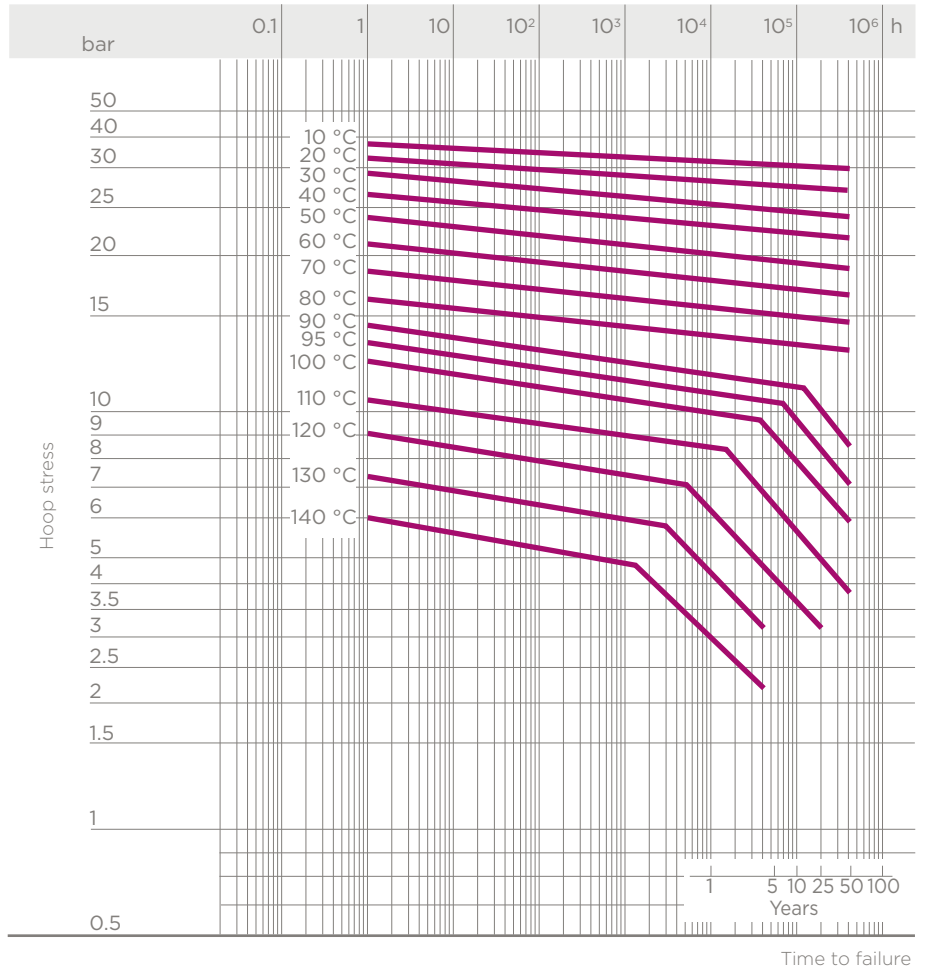
FITTINGS, METRIC SERIES ISO-UNI

| Technical specifications | |
|----------------------------|---|
| Size range | d 16 ÷ d 110 (mm) |
| Nominal pressure | PN 16 with water at 20° C |
| Temperature range | -40 °C ÷ 140 °C |
| Coupling standards | Welding: EN ISO 10931. Can be coupled to pipes according to EN ISO 10931 Flanging system: ISO 7005-1, EN ISO 10931, EN 558-1, DIN 2501, ANSI B.16.5 cl. 150 |
| Reference standards | Construction criteria: EN ISO 10931 Test methods and requirements: EN ISO 10931 Installation criteria: DVS 2201-1, DVS 2207-15, DVS 2208-1 |
| Fitting material | PVDF |
| Seal material | FPM |

TECHNICAL DATA

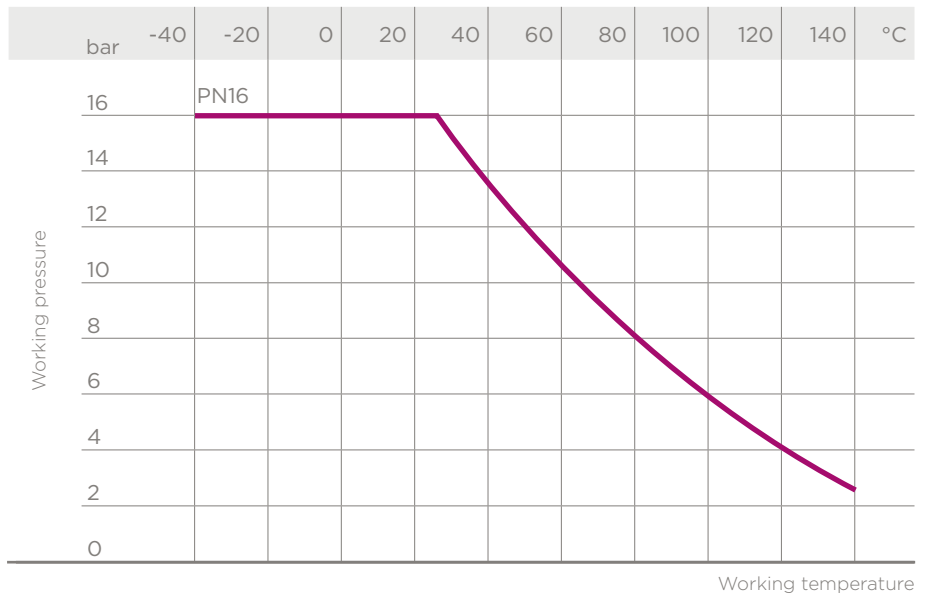
REGRESSION CURVES FOR FITTINGS IN PVDF

Regression coefficients according to ISO 10931 for MRS (minimum) = 25 N/mm² (MPa)



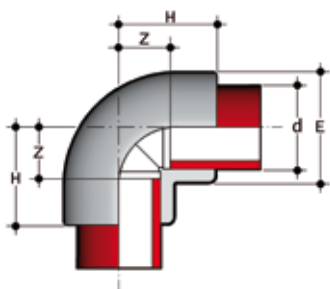
PRESSURE VARIATION ACCORDING TO TEMPERATURE

For water and non-hazardous fluids for which the material is classified as CHEMICALLY RESISTANT (life expectancy 25 years). In other cases, a reduction of the nominal pressure PN is required.



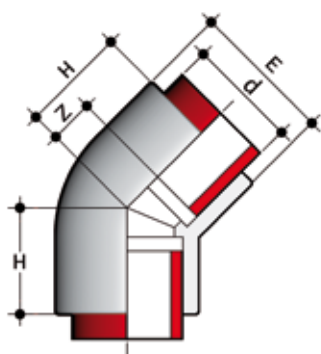
The information in this leaflet is provided in good faith. No liability will be accepted concerning technical data that is not directly covered by recognised international standards. FIP reserves the right to carry out any modification. Products must be installed and maintained by qualified personnel.

DIMENSIONS



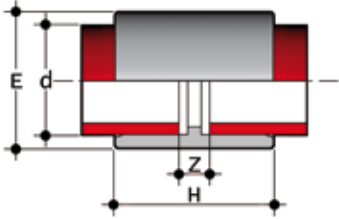
GIF
90° elbow for socket welding

| d | PN | E | H | Z | g | Code |
|-----|----|-----|----|----|------|--------|
| 16 | 16 | 22 | 23 | 10 | 14 | GIF016 |
| 20 | 16 | 28 | 27 | 13 | 28 | GIF020 |
| 25 | 16 | 33 | 32 | 16 | 43 | GIF025 |
| 32 | 16 | 41 | 37 | 19 | 65 | GIF032 |
| 40 | 16 | 52 | 43 | 23 | 125 | GIF040 |
| 50 | 16 | 63 | 51 | 27 | 195 | GIF050 |
| 63 | 16 | 77 | 61 | 34 | 340 | GIF063 |
| 75 | 16 | 92 | 73 | 42 | 575 | GIF075 |
| 90 | 16 | 110 | 83 | 47 | 850 | GIF090 |
| 110 | 16 | 133 | 99 | 58 | 1470 | GIF110 |



HIF
45° elbow for socket welding

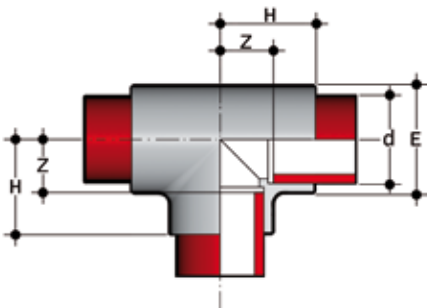
| d | PN | E | H | Z | g | Code |
|-----|----|-----|----|----|------|--------|
| 20 | 16 | 28 | 22 | 7 | 24 | HIF020 |
| 25 | 16 | 33 | 25 | 9 | 37 | HIF025 |
| 32 | 16 | 42 | 30 | 12 | 63 | HIF032 |
| 40 | 16 | 51 | 37 | 16 | 110 | HIF040 |
| 50 | 16 | 63 | 43 | 19 | 202 | HIF050 |
| 63 | 16 | 79 | 52 | 25 | 337 | HIF063 |
| 75 | 16 | 88 | 61 | 30 | 395 | HIF075 |
| 90 | 16 | 105 | 73 | 37 | 645 | HIF090 |
| 110 | 16 | 127 | 87 | 46 | 1095 | HIF110 |



MIF

Double socket for socket welding

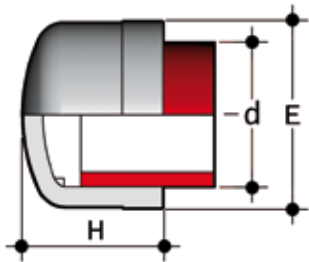
| d | PN | E | H | Z | g | Code |
|-----|----|-----|----|----|-----|--------|
| 20 | 16 | 28 | 36 | 7 | 20 | MIF020 |
| 25 | 16 | 33 | 40 | 8 | 28 | MIF025 |
| 32 | 16 | 42 | 44 | 8 | 48 | MIF032 |
| 40 | 16 | 51 | 49 | 8 | 70 | MIF040 |
| 50 | 16 | 63 | 55 | 8 | 120 | MIF050 |
| 63 | 16 | 77 | 64 | 9 | 185 | MIF063 |
| 75 | 16 | 90 | 72 | 10 | 275 | MIF075 |
| 90 | 16 | 108 | 79 | 8 | 415 | MIF090 |
| 110 | 16 | 131 | 94 | 11 | 710 | MIF110 |



TIF

90° Tee for socket welding

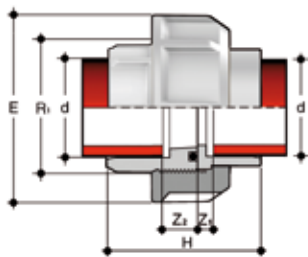
| d | PN | E | H | Z | g | Code |
|-----|----|-----|----|----|------|--------|
| 16 | 16 | 22 | 23 | 10 | 18 | TIF016 |
| 20 | 16 | 28 | 27 | 13 | 35 | TIF020 |
| 25 | 16 | 33 | 32 | 16 | 55 | TIF025 |
| 32 | 16 | 41 | 37 | 19 | 90 | TIF032 |
| 40 | 16 | 51 | 43 | 22 | 150 | TIF040 |
| 50 | 16 | 63 | 52 | 29 | 270 | TIF050 |
| 63 | 16 | 79 | 63 | 35 | 470 | TIF063 |
| 75 | 16 | 93 | 71 | 40 | 665 | TIF075 |
| 90 | 16 | 109 | 82 | 46 | 1025 | TIF090 |
| 110 | 16 | 133 | 99 | 58 | 1800 | TIF110 |



CIF

End cap for socket welding

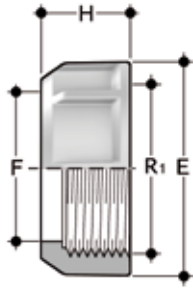
| d | PN | H | E | g | Code |
|-----|----|----|-----|-----|--------|
| 16 | 16 | 20 | 23 | 7 | CIF016 |
| 20 | 16 | 23 | 28 | 11 | CIF020 |
| 25 | 16 | 27 | 33 | 19 | CIF025 |
| 32 | 16 | 31 | 41 | 32 | CIF032 |
| 40 | 16 | 36 | 50 | 47 | CIF040 |
| 50 | 16 | 43 | 61 | 75 | CIF050 |
| 63 | 16 | 51 | 76 | 135 | CIF063 |
| 75 | 16 | 58 | 90 | 215 | CIF075 |
| 90 | 16 | 68 | 109 | 400 | CIF090 |
| 110 | 16 | 81 | 130 | 630 | CIF110 |



BIGF

Union for socket welding

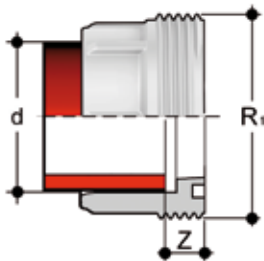
| d | R1 | PN | E | H | Z ₁ | Z ₂ | g | Code |
|----|--------|----|-----|------|----------------|----------------|-----|----------|
| 20 | 1" | 16 | 47 | 45.5 | 12 | 5.5 | 59 | BIGF020F |
| 25 | 1 1/4" | 16 | 58 | 49.5 | 12 | 5.5 | 99 | BIGF025F |
| 32 | 1 1/2" | 16 | 65 | 53.5 | 12 | 5.5 | 141 | BIGF032F |
| 40 | 2" | 16 | 78 | 59.5 | 14 | 5.5 | 218 | BIGF040F |
| 50 | 2 1/4" | 16 | 85 | 67.5 | 16 | 5.5 | 290 | BIGF050F |
| 63 | 2 3/4" | 16 | 103 | 79.5 | 20 | 5.5 | 476 | BIGF063F |



EFGF

Union nut with BSP thread for union types BIGF, BIFXF and BIRXF

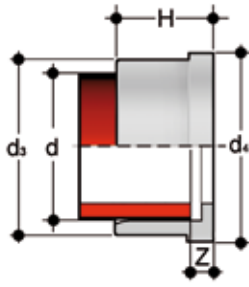
| R1 | d BIGF | E | F | H | g | Code |
|--------|--------|-----|----|----|-----|---------|
| 1" | 20 | 47 | 28 | 22 | 30 | EFGF100 |
| 1 1/4" | 25 | 58 | 36 | 25 | 46 | EFGF114 |
| 1 1/2" | 32 | 65 | 42 | 27 | 63 | EFGF112 |
| 2" | 40 | 78 | 53 | 30 | 90 | EFGF200 |
| 2 1/4" | 50 | 85 | 59 | 33 | 117 | EFGF214 |
| 2 3/4" | 63 | 103 | 74 | 38 | 188 | EFGF234 |



F/BIGF

Union bush for socket welding, metric series

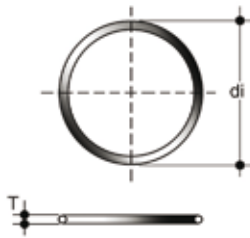
| d | R1 | PN | Z | g | Code |
|----|--------|----|----|-----|----------|
| 20 | 1" | 16 | 12 | 16 | FBIGF020 |
| 25 | 1 1/4" | 16 | 12 | 27 | FBIGF025 |
| 32 | 1 1/2" | 16 | 12 | 38 | FBIGF032 |
| 40 | 2" | 16 | 14 | 62 | FBIGF040 |
| 50 | 2 1/4" | 16 | 16 | 74 | FBIGF050 |
| 63 | 2 3/4" | 16 | 18 | 141 | FBIGF063 |



Q/BIGF

Union end for socket welding, metric series

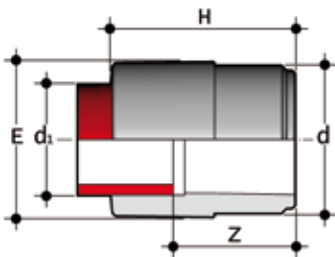
| d | PN | d ₃ | d ₄ | H | Z | g | Code |
|----|----|----------------|----------------|------|-----|----|----------|
| 20 | 16 | 27.5 | 30.1 | 19.5 | 5.5 | 13 | QBIGF020 |
| 25 | 16 | 36 | 38.8 | 21.5 | 5.5 | 27 | QBIGF025 |
| 32 | 16 | 41.5 | 44.7 | 23.5 | 5.5 | 32 | QBIGF032 |
| 40 | 16 | 53 | 56.5 | 25.5 | 5.5 | 57 | QBIGF040 |
| 50 | 16 | 59 | 62.6 | 28.5 | 5.5 | 57 | QBIGF050 |
| 63 | 16 | 74 | 78.4 | 32.5 | 5.5 | 97 | QBIGF063 |



O-Ring

Seals for union types BIGF, BIFXF and BIRXF

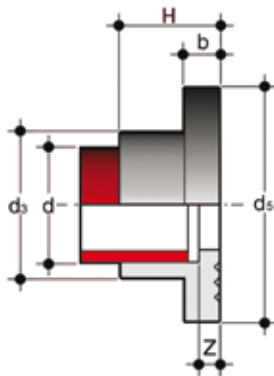
| d Union | C | di | T | EPDM Code | FPM Code |
|---------|------|--------|------|-----------|----------|
| 16 | 3062 | 15.54 | 2.62 | OR3062E | OR3062F |
| 20 | 4081 | 20.22 | 3.53 | OR4081E | OR4081F |
| 25 | 4112 | 28.17 | 3.53 | OR4112E | OR4112F |
| 32 | 4131 | 32.93 | 3.53 | OR4131E | OR4131F |
| 40 | 6162 | 40.65 | 5.34 | OR6162E | OR6162F |
| 50 | 6187 | 47 | 5.34 | OR6187E | OR6187F |
| 63 | 6237 | 59.69 | 5.34 | OR6237E | OR6237F |
| 75 | 6300 | 75.57 | 5.34 | OR6300E | OR6300F |
| 90 | 6362 | 91.45 | 5.34 | OR6362E | OR6362F |
| 110 | 6450 | 113.67 | 5.34 | OR6450E | OR6450F |



RIF

Reducer: spigot (d), reduced socket for socket welding (d₁)

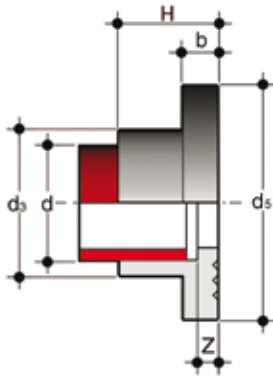
| d X d ₁ | PN | H | E | Z | g | Code |
|--------------------|----|-----|-----|----|-----|-----------|
| 20x16 | 16 | 35 | 20 | 22 | 11 | RIF020016 |
| 25x20 | 16 | 40 | 26 | 26 | 15 | RIF025020 |
| 32x25 | 16 | 46 | 32 | 30 | 28 | RIF032025 |
| 40x25 | 16 | 51 | 32 | 35 | 40 | RIF040025 |
| 40x32 | 16 | 54 | 40 | 36 | 47 | RIF040032 |
| 50x32 | 16 | 59 | 39 | 41 | 55 | RIF050032 |
| 50x40 | 16 | 63 | 47 | 43 | 70 | RIF050040 |
| 63x32 | 16 | 67 | 40 | 49 | 100 | RIF063032 |
| 63x50 | 16 | 76 | 60 | 53 | 130 | RIF063050 |
| 75x63 | 16 | 89 | 75 | 61 | 220 | RIF075063 |
| 90x63 | 16 | 97 | 73 | 70 | 280 | RIF090063 |
| 90x75 | 16 | 104 | 87 | 73 | 335 | RIF090075 |
| 110x90 | 16 | 121 | 103 | 85 | 520 | RIF110090 |



QRNF

Stub with serrated face (according to DIN standards) for socket welding, for use with backing rings ODB

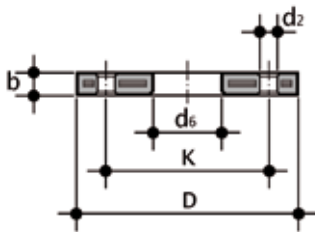
| d | DN | PN | b | d ₃ | d ₅ | H | Z | g | Code |
|-----|-----|----|----|----------------|----------------|----|---|-----|---------|
| 20 | 15 | 16 | 7 | 27 | 45 | 20 | 6 | 23 | QRNF020 |
| 25 | 20 | 16 | 9 | 34 | 58 | 22 | 6 | 46 | QRNF025 |
| 32 | 25 | 16 | 10 | 41 | 68 | 25 | 6 | 58 | QRNF032 |
| 40 | 32 | 16 | 11 | 50 | 78 | 27 | 6 | 91 | QRNF040 |
| 50 | 40 | 16 | 12 | 61 | 88 | 30 | 6 | 122 | QRNF050 |
| 63 | 50 | 16 | 14 | 76 | 102 | 34 | 6 | 181 | QRNF063 |
| 75 | 65 | 16 | 16 | 90 | 122 | 38 | 7 | 288 | QRNF075 |
| 90 | 80 | 16 | 17 | 108 | 138 | 44 | 8 | 411 | QRNF090 |
| 110 | 100 | 16 | 18 | 131 | 158 | 50 | 8 | 573 | QRNF110 |



QRAF

Stub with serrated face for socket welding, for used with backing rings OAB (for other dimensions use QRNF)

| d | DN | OAB size | PN | b | d ₃ | d ₅ | H | Z | g | Code |
|----|----|----------|----|----|----------------|----------------|----|---|-----|---------|
| 25 | 20 | 3/4" | 16 | 9 | 34 | 58 | 22 | 6 | 46 | QRAF034 |
| 32 | 25 | 1" | 16 | 10 | 41 | 68 | 25 | 6 | 58 | QRAF100 |
| 40 | 32 | 1"1/4 | 16 | 11 | 50 | 78 | 27 | 6 | 91 | QRAF114 |
| 50 | 40 | 1"1/2 | 16 | 12 | 61 | 88 | 30 | 6 | 122 | QRAF112 |
| 90 | 80 | 3" | 16 | 17 | 108 | 138 | 44 | 8 | 411 | QRAF300 |



ODB

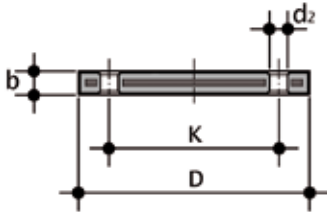
Steel core backing ring, PP/FRP coated, according to EN/ISO/DIN for stub QRNF.
Drilling: PN 10/16

| d | DN | *PMA (bar) | b | d ₂ | d ₆ | D | K | M | n | ** (Nm) | g | Code |
|--------|-----|------------|----|----------------|----------------|-----|-----|-----|---|---------|------|--------|
| 20 | 15 | 16 | 12 | 14 | 28 | 95 | 65 | M12 | 4 | 15 | 290 | ODB020 |
| 25 | 20 | 16 | 14 | 14 | 34 | 105 | 75 | M12 | 4 | 15 | 410 | ODB025 |
| 32 | 25 | 16 | 16 | 14 | 42 | 115 | 85 | M12 | 4 | 15 | 610 | ODB032 |
| 40 | 32 | 16 | 16 | 18 | 51 | 140 | 100 | M16 | 4 | 20 | 880 | ODB040 |
| 50 | 40 | 16 | 16 | 18 | 62 | 150 | 110 | M16 | 4 | 30 | 810 | ODB050 |
| 63 | 50 | 16 | 19 | 18 | 78 | 165 | 125 | M16 | 4 | 35 | 940 | ODB063 |
| 75 | 65 | 16 | 19 | 18 | 92 | 188 | 145 | M16 | 4 | 40 | 1210 | ODB075 |
| 90 | 80 | 16 | 21 | 18 | 109 | 200 | 160 | M16 | 8 | 40 | 1480 | ODB090 |
| ***125 | 100 | 16 | 20 | 18 | 134 | 220 | 180 | M16 | 8 | 45 | 1570 | ODB125 |

*PMA maximum admissible working pressure

**nominal tightening torque

***d125: for stubs QRNF d 110

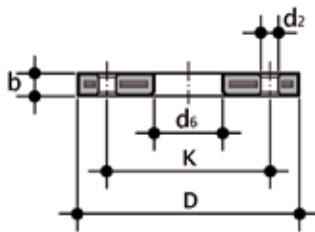


ODBC

Steel core blind flange, PP/FRP according to EN/ISO/DIN Drilling: PN 10/16

| d | DN | *PMA (bar) | b | d ₂ | D | K | M | n | ** (Nm) | g | Code |
|-----|-----|------------|----|----------------|-----|-----|-----|---|---------|------|---------|
| 20 | 15 | 16 | 12 | 14 | 95 | 65 | M12 | 4 | 15 | 290 | ODBC020 |
| 25 | 20 | 16 | 12 | 14 | 105 | 75 | M12 | 4 | 15 | 390 | ODBC025 |
| 32 | 25 | 16 | 16 | 14 | 115 | 85 | M12 | 4 | 15 | 550 | ODBC032 |
| 40 | 32 | 16 | 16 | 18 | 140 | 100 | M16 | 4 | 25 | 820 | ODBC040 |
| 50 | 40 | 16 | 16 | 18 | 150 | 110 | M16 | 4 | 35 | 900 | ODBC050 |
| 63 | 50 | 16 | 16 | 18 | 165 | 125 | M16 | 4 | 35 | 1150 | ODBC063 |
| 75 | 65 | 16 | 18 | 18 | 185 | 145 | M16 | 4 | 40 | 1680 | ODBC075 |
| 90 | 80 | 16 | 18 | 18 | 200 | 160 | M16 | 8 | 40 | 2240 | ODBC090 |
| 110 | 100 | 16 | 20 | 18 | 220 | 180 | M16 | 8 | 45 | 2800 | ODBC110 |

*PMA maximum admissible working pressure
 **nominal tightening torque

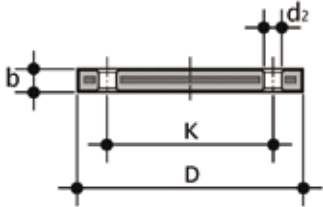


OAB

Steel core backing ring, PP/FRP coated according to ANSI B16.5 cl.150 for stubs QRNF and QRAF

| Size | DN | *PMA (bar) | b | d ₂ mm | d ₂ inch | d ₆ | D | K mm | K mm | n | ** (Nm) | g | Code |
|--------|-----|------------|----|-------------------|---------------------|----------------|-----|--------|--------|---|---------|------|--------|
| 1/2" | 15 | 16 | 12 | 16 | 5/8" | 28 | 95 | 60.45 | 2 3/8" | 4 | 15 | 220 | OAB012 |
| 3/4" | 20 | 16 | 12 | 16 | 5/8" | 34 | 102 | 69.85 | 2 3/4" | 4 | 15 | 240 | OAB034 |
| 1" | 25 | 16 | 16 | 16 | 5/8" | 42 | 114 | 79.25 | 3 1/8" | 4 | 15 | 390 | OAB100 |
| 1 1/4" | 32 | 16 | 16 | 16 | 5/8" | 51 | 130 | 88.9 | 3 1/2" | 4 | 25 | 510 | OAB114 |
| 1 1/2" | 40 | 16 | 18 | 16 | 5/8" | 62 | 133 | 98.55 | 3 7/8" | 4 | 35 | 580 | OAB112 |
| 2" | 50 | 16 | 18 | 20 | 3/4" | 78 | 162 | 120.65 | 4 3/4" | 4 | 35 | 860 | OAB200 |
| 2 1/2" | 65 | 16 | 18 | 20 | 3/4" | 92 | 184 | 139.7 | 5 1/2" | 4 | 40 | 1100 | OAB212 |
| 3" | 80 | 16 | 18 | 20 | 3/4" | 111 | 194 | 152.4 | 6" | 4 | 40 | 1040 | OAB300 |
| 4" | 100 | 16 | 18 | 20 | 3/4" | 133 | 229 | 190.5 | 7 1/2" | 8 | 40 | 1620 | OAB400 |

*PMA maximum admissible working pressure
 **nominal tightening torque



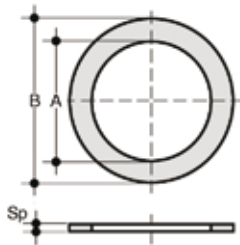
OABC

Steel core blind flange, PP/FRP coated according to ANSI B16.5 cl.150

| Size | DN | *PMA (bar) | b | d ₂ mm | d ₂ inch | D | K mm | K inch | n | ** (Nm) | g | Code |
|--------|-----|------------|----|-------------------|---------------------|-----|--------|--------|---|---------|------|---------|
| 1/2" | 15 | 16 | 12 | 16 | 5/8" | 95 | 60.45 | 2 3/8" | 4 | 15 | 200 | OABC012 |
| 3/4" | 20 | 16 | 12 | 16 | 5/8" | 102 | 69.85 | 2 3/4" | 4 | 15 | 240 | OABC034 |
| 1" | 25 | 16 | 16 | 16 | 5/8" | 114 | 79.25 | 3 1/8" | 4 | 15 | 370 | OABC100 |
| 1 1/4" | 32 | 16 | 16 | 16 | 5/8" | 130 | 88.90 | 3 1/2" | 4 | 25 | 530 | OABC114 |
| 1 1/2" | 40 | 16 | 18 | 16 | 5/8" | 133 | 98.55 | 3 7/8" | 4 | 35 | 560 | OABC112 |
| 2" | 50 | 16 | 18 | 20 | 3/4" | 162 | 120.65 | 4 3/4" | 4 | 35 | 810 | OABC200 |
| 2 1/2" | 65 | 16 | 18 | 20 | 3/4" | 184 | 139.70 | 5 1/2" | 4 | 40 | 1070 | OABC212 |
| 3" | 80 | 16 | 18 | 20 | 3/4" | 194 | 152.40 | 6" | 4 | 40 | 1030 | OABC300 |
| 4" | 100 | 16 | 18 | 20 | 3/4" | 229 | 190.50 | 7 1/2" | 8 | 40 | 1570 | OABC400 |

*PMA maximum admissible working pressure

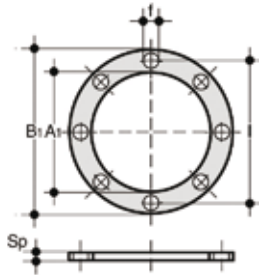
**nominal tightening torque



QHV/X

Flat gasket in EPDM and FPM for flanges according to DIN 2501, EN 1092

| d | DN | A | B | Sp | EPDM Code | FPM Code |
|-------------|-----|-----|------|----|-----------|----------|
| 20 - 1/2" | 15 | 20 | 32 | 2 | QHVX020E | QHVX020F |
| 25 - 3/4" | 20 | 24 | 38.5 | 2 | QHVX025E | QHVX025F |
| 32 - 1" | 25 | 32 | 48 | 2 | QHVX032E | QHVX032F |
| 40 - 1 1/4" | 32 | 40 | 59 | 2 | QHVX040E | QHVX040F |
| 50 - 1 1/2" | 40 | 50 | 71 | 2 | QHVX050E | QHVX050F |
| 63 - 2" | 50 | 63 | 88 | 2 | QHVX063E | QHVX063F |
| 75 - 2 1/2" | 65 | 75 | 104 | 2 | QHVX075E | QHVX075F |
| 90 - 3" | 80 | 90 | 123 | 2 | QHVX090E | QHVX090F |
| 110 - 4" | 100 | 110 | 148 | 3 | QHVX110E | QHVX110F |



QHV/Y

Flat gasket in EPDM for flanges according to DIN 2501, EN 1092, self-centring for flanges drilled PN 10/16

| d | DN | A ₁ | B ₁ | f | l | U | Sp | Code |
|-------------|-----|----------------|----------------|----|-------|---|----|----------|
| 20 - 1/2" | 15 | 17 | 95 | 14 | 65 | 4 | 2 | QHVY020E |
| 25 - 3/4" | 20 | 22 | 107 | 14 | 76.3 | 4 | 2 | QHVY025E |
| 32 - 1" | 25 | 28 | 117 | 14 | 86.5 | 4 | 2 | QHVY032E |
| 40 - 1" 1/4 | 32 | 36 | 142.5 | 18 | 101 | 4 | 2 | QHVY040E |
| 50 - 1" 1/2 | 40 | 45 | 153.3 | 18 | 111 | 4 | 2 | QHVY050E |
| 63 - 2" | 50 | 57 | 168 | 18 | 125.5 | 4 | 2 | QHVY063E |
| 75 - 2" 1/2 | 65 | 71 | 187.5 | 18 | 145.5 | 4 | 3 | QHVY075E |
| 90 - 3" | 80 | 84 | 203 | 18 | 160 | 8 | 3 | QHVY090E |
| 110 - 4" | 100 | 102 | 223 | 18 | 181 | 8 | 3 | QHVY110E |