

WIDE RANGE FLANGE ADAPTERS TECHNICAL DATA

TECHNICAL OVERVIEW

WELBRO FLANGE ADAPTERS

Application

Flange Adapters are used to connect plain ended pipes to flanged pipeline components. These products are available with the same wide range end rings and gaskets that allow pipes of a wide range of diameters to fit a single flange adapter. They are suitable for use in water, sewer, air and water pipelines. Any flange drilling and pressure rating can be specified up to 40 bar.

Range

WELBRO Steel Flange Adapters are available from 50mm to 600mm. Larger sizes can be accommodated upon request. WELBRO Steel Flange Adapters are available in the same wide range tolerance as WELBRO Wide Range Couplings.

Angular Deflection

For pipe sizes between 50mm and 450mm:

- Angular deflections of up to 3 degrees. For pipe sizes between 500 to 600mm:
- Angular deflection of up to 2.5 degrees.

Pipe Setting Gap

For couplings up to 250mm nominal bore, a minimum setting gap of 16mm will be required. The setting gap may not exceed 32mm.

For couplings between 300mm and 600mm nominal bore, a minimum setting gap of 20mm will be required. The setting gap may not exceed 40mm.

Pressure Rating

WELBRO Flange Adapters up to 600mm are designed for a standard working pressure of 16 bar, and a test pressure of 24 bar. Larger pressure ratings can be accommodated upon request.

Temperature

WELBRO Flange Adapters can be used in applications of between -40°C and 90°C, but are not recommended for use in heating systems

Location

Above or below ground, subject to certain limitations according to product type and pipe material. Factories or any other pipe installation such as pump stations or treatment plants.

Lateral Displacement



Pipe End Preparation

In order to ensure proper sealing and operation of an WELBRO Flange Adapters, the pipe ends must be properly prepared to ensure that the pipe is smooth, clean, without grooves, weld beads or other protrusions or irregularities. This must be for a distance of at least 100mm for nominal bores up to 250mm, and 160mm for nominal bores above 250mm. Also ensure that the pipe is properly round as site handling often leads to pipe ovality

Expansion and Contraction

The gasket on WELBRO Couplings allows for a significant amount of pipe movement due to thermal expansion and contraction. Up to 9mm of movement can be accommodated on a mechanical coupling without affecting sealing performance.



1. End Rings:

- Mild Steel to BS EN 10025:2004 or Grade CQ

2. Adapter Body:

- Mild Steel to BS EN 10025:2004 or Grade CQ
- Flanges: Full size SABS 1123 -no reduced thickness flanges used

3. Spigot:

- Spigot - Steel to SANS 1431 Grade 300WA

4. Rubber Gasket:

- EPDM Grade E to BS 2494 1990 or SANS974 Related ISO4633

5. Studs:

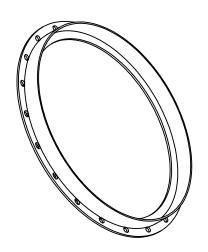
- Stainless Steel Grade 304 as standard
- Steel to BS970 Grade 070 or Steel to SANS1143 Grade 8.8

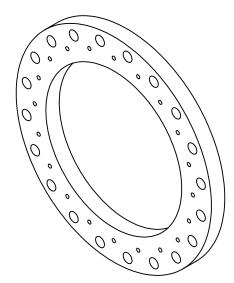
6. Coating

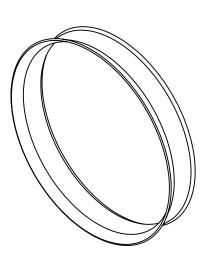
- Fusion Bonded Epoxy to SABS 1217 to a minimum thickness of 250 microns or client specifications
- Bolts are hot dip galvanised to SANS 763

7. SABS Standard

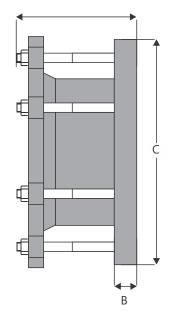
- Compliant with SANS1808-2: 2017

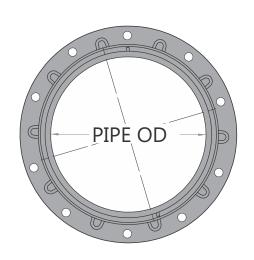






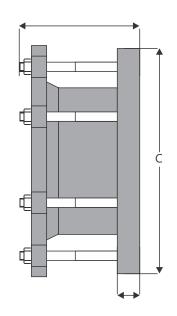


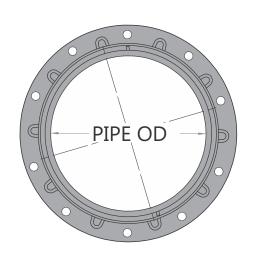




| FLANGE ADAPTORS | | | | | HDG FASTENERS | | | |
|-----------------|-------|-----------------|-----------------------|--------|---------------|--------|--------|--|
| NB | ID | Carrelina Banas | nge Product Code | Flange | | | Length | |
| IND | | Coupling Range | | Size | Thick (B) | OD (C) | Α | |
| 50 | 60 | 57 - 67 | WBF0500x50T1000/1600 | 50 | 12 | 165 | 130 | |
| 50 | 68 | 57-67 | WBF0500x50T2500/4000 | 50 | 20 | 165 | 130 | |
| 65 | 81 | 59 - 79 | WBF0650x65T1000/1600 | 65 | 12 | 185 | 130 | |
| 65 | 81 | 59 - 79 | WBF0650x65T2500/4000 | 65 | 22 | 185 | 130 | |
| 80 | 95 | 74 - 93 | WBF0800x80T1000/1600 | 80 | 14 | 200 | 130 | |
| 80 | 95 | 74 - 93 | WBF0800x80T2500/4000 | 80 | 22 | 200 | 130 | |
| 00/2 | 100 | 06 104 | WBF0802x80T1000/1600 | 80 | 14 | 200 | 130 | |
| 80/2 | 106 | 86 - 104 | WBF0802x80T2500/4000 | 80 | 22 | 200 | 130 | |
| 100 | 121 | 00 110 | WBF1000x100T1000/1600 | 100 | 14 | 220 | 130 | |
| 100 | 121 | 98 - 118 | WBF1000x100T2500/4000 | 100 | 22 | 250 | 130 | |
| 100/2 | 121 | 100, 120 | WBF1002x100T1000/1600 | 100 | 14 | 220 | 130 | |
| 100/2 | 131 | 108 -128 | WBF1002x100T2500/4000 | 100 | 22 | 250 | 130 | |
| 125 | 156 | 122 154 | WBF1250x125T1000/1600 | 125 | 16 | 250 | 130 | |
| 125 | 156 | 132 - 154 | WBF1250x125T2500/4000 | 125 | 28 | 270 | 130 | |
| 150 | 472.5 | 150 170 | WBF1500x150T1000/1600 | 150 | 18 | 285 | 130 | |
| 150 | 173.5 | 150 - 170 | WBF1500x150T2500/4000 | 150 | 30 | 300 | 130 | |
| 150/2 | 101 | 150 107 | WBF1502x150T1000/1600 | 150 | 18 | 285 | 130 | |
| 150/2 | 191 | 191 159 - 187 | WBF1502x150T2500/4000 | 150 | 30 | 300 | 130 | |
| 150/2 | 202 | 100 300 | WBF1503x150T1000/1600 | 150 | 18 | 285 | 130 | |
| 150/3 | 202 | 202 180 - 200 | WBF1503x150T2500/4000 | 150 | 30 | 300 | 130 | |

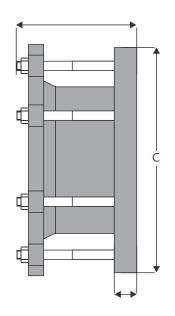


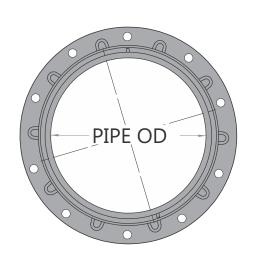




| | | HDG FASTENERS | | | | | |
|-------|-----|------------------------|-----------------------------|------------|-----------|--------|--------|
| NB | ID | Coupling Range | Coupling Range Product Code | Flange | | | Length |
| IND | טו | | | Size | Thick (B) | OD (C) | Α |
| | | | WBF2502x250T1000 | 250 | 20 | 395 | 140 |
| 250/2 | 280 | 275 - 295 | WBF2502x250T1600 | 250 2 | 25 | 405 | 140 |
| 250/2 | 280 | 2/5 - 295 | WBF2502x250T2500 | 250 | 30 | 425 | 140 |
| | | | WBF2502x250T4000 | 250 | 38 | 450 | 140 |
| | | | WBF2750x300T1000 | 300 | 22 | 445 | 140 |
| 275 | 200 | 202 240 | WBF2750x300T1600 | 300 | 28 | 460 | 140 |
| 275 | 299 | 302 - 318 | WBF2750x300T2500 | 300 | 32 | 485 | 140 |
| | | | WBF2750x300T4000 | 300 | 40 | 515 | 140 |
| | | | WBF300x300T1000 | 300 | 22 | 445 | 140 |
| 200 | 221 | 245 220 | WBF300x300T1600 | 300 300 | 28 | 460 | 140 |
| 300 | 321 | 315 -328 | WBF300x300T2500 | | 32 | 485 | 140 |
| | | | WBF300x300T4000 | 300 | 40 | 515 | 140 |
| | | | WBF3002x300T1000 | 300 | 22 | 445 | 178 |
| 200/2 | 254 | 224 250 | WBF3002x300T1600 | 300 | 28 | 460 | 178 |
| 300/2 | 354 | 334 - 350 | WBF3002x300T2500 | 300 | 32 | 485 | 183 |
| | | | WBF3002x300T4000 | 300 | 40 | 515 | 183 |
| | | | WBF3003x300T1000 | 300 | 22 | 445 | 178 |
| 200/2 | 275 | 256 272 | WBF3003x300T1600 | 300 | 28 | 460 | 178 |
| 300/3 | 3/5 | 375 356 - 372 - | WBF3003x300T2500 | 300 | 32 | 485 | 183 |
| | | | WBF3003x300T4000 | 300 | 40 | 515 | 183 |

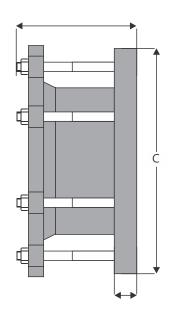


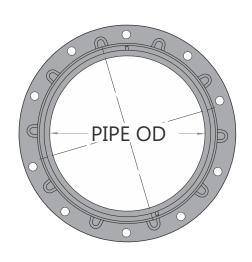




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|---------|------|----------------|------------------|-----------|-----------|--------|-------------|
| NB | ID | Coupling Range | Product Code | Flange | | | Length Δ |
| | | | | Size | Thick (B) | OD (C) | |
| 350 | 363 | 344 - 360 | WBF3500x350T1000 | 350 | 25 | 505 | 178 |
| | | | WBF3500x350T1600 | 350 | 30 | 520 | 178 |
| | | | WBF3500x350T2500 | 350 | 35 | 555 | 183 |
| | | | WBF3500x350T4000 | 350 | 45 | 580 | 183 |
| 350/2 | 394 | 374-391 | WBF3502x350T1000 | 350 | 25 | 505 | 178 |
| | | | WBF3502x350T1600 | 350 | 30 | 520 | 178 |
| | | | WBF3502x350T2500 | 350 | 35 | 555 | 183 |
| | | | WBF3502x350T4000 | 350 | 45 | 580 | 183 |
| 400 | 413 | 391-410 | WBF4000x400T1000 | 400 | 25 | 565 | 178 |
| | | | WBF4000x400T1600 | 400 | 35 | 580 | 178 |
| | | | WBF4000x400T2500 | 400 | 40 | 620 | 183 |
| | | | WBF4000x400T4000 | 400 | 50 | 660 | 183 |
| 400/2 | 421 | 401-417 | WBF4002x400T1000 | 400 | 25 | 565 | 178 |
| | | | WBF4002x400T1600 | 400 | 35 | 580 | 178 |
| | | | WBF4002x400T2500 | 400 | 40 | 620 | 183 |
| | | | WBF4002x400T4000 | 400 | 50 | 660 | 183 |
| 400/3 | 440 | 417-437 | WBF4003x400T1000 | 400 | 25 | 565 | 178 |
| | | | WBF4003x400T1600 | 400 | 35 | 580 | 178 |
| | | | WBF4003x400T2500 | 400 | 40 | 620 | 183 |
| | | | WBF4003x400T4000 | 400 | 50 | 660 | 183 |

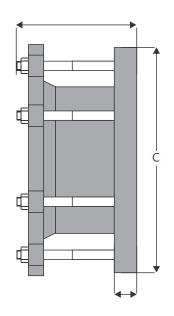


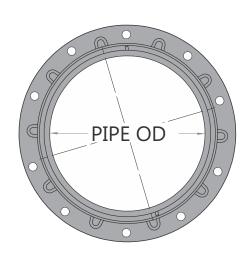




| GE ADAP | TORS | | н | OG FASTENERS | | | | |
|---------|------|----------------|------------------|--------------|-----------|--------|------------------------|--|
| NB | ID | Coupling Range | Product Code | Flange | | | Length _A | |
| | | | | Size | Thick (B) | OD (C) | | |
| 400/4 | 449 | 430-446 | WBF4004x400T1000 | 400 | 25 | 565 | 178 | |
| | | | WBF4004x400T1600 | 400 | 35 | 580 | 178 | |
| | | | WBF4004x400T2500 | 400 | 40 | 620 | 183 | |
| | | | WBF4004x400T4000 | 400 | 50 | 660 | 183 | |
| 450 | 463 | 444-460 | WBF4500x450T1000 | 450 | 30 | 615 | 178 | |
| | | | WBF4500x450T1600 | 450 | 40 | 640 | 178 | |
| | | | WBF4500x450T2500 | 450 | 45 | 670 | 183 | |
| | | | WBF4500x450T4000 | 450 | 60 | 685 | 183 | |
| 450/2 | 478 | 458-474 | WBF4502x450T1000 | 450 | 30 | 615 | 178 | |
| | | | WBF4502x450T1600 | 450 | 40 | 640 | 178 | |
| | | | WBF4502x450T2500 | 450 | 45 | 670 | 183 | |
| | | | WBF4502x450T4000 | 450 | 60 | 685 | 183 | |
| 450/3 | 496 | 477-493 | WBF4503x450T1000 | 450 | 30 | 615 | 178 | |
| | | | WBF4503x450T1600 | 450 | 40 | 640 | 178 | |
| | | | WBF4503x450T2500 | 450 | 45 | 670 | 183 | |
| | | | WBF4503x450T4000 | 450 | 60 | 685 | 183 | |
| 450/4 | 537 | 518-534 | WBF4504x450T1600 | 450 | 30 | 615 | 178 | |
| | | | WBF4504x450T1600 | 450 | 40 | 640 | 178 | |
| | | | WBF4504x450T2500 | 450 | 45 | 670 | 183 | |
| | | | WBF4504x450T4000 | 450 | 60 | 685 | 183 | |





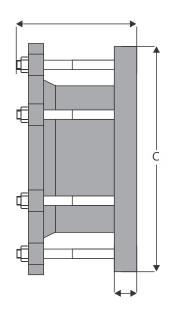


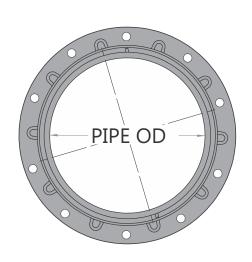
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|-----------|-----|----------------|------------------|--------|-----------|--------|------------------------|
| NB | ID | Coupling Range | Product Code | Flange | | | Length _A |
| | | | | Size | Thick (B) | OD (C) | |
| 500 | 513 | 494-510 | WBF5000x500T1600 | 500 | 32 | 670 | 178 |
| | | | WBF5000x500T1600 | 500 | 40 | 715 | 178 |
| | | | WBF5000x500T2500 | 500 | 50 | 730 | 183 |
| | | | WBF5000x500T4000 | 500 | 70 | 755 | 183 |
| 500/2 | 549 | 535-545 | WBF5002x500T1600 | 500 | 32 | 670 | 178 |
| | | | WBF5002x500T1600 | 500 | 40 | 715 | 178 |
| | | | WBF5002x500T2500 | 500 | 50 | 730 | 183 |
| | | | WBF5002x500T4000 | 500 | 70 | 755 | 183 |
| 500/3 | 596 | 583-593 | WBF5003x500T1600 | 500 | 32 | 670 | 178 |
| | | | WBF5003x500T1600 | 500 | 40 | 715 | 178 |
| | | | WBF5003x500T2500 | 500 | 50 | 730 | 183 |
| | | | WBF5003x500T4000 | 500 | 70 | 755 | 183 |
| 550 | 575 | 559-571 | WBF5500x500T1600 | 500 | 32 | 670 | 178 |
| | | | WBF5500x500T1600 | 500 | 40 | 715 | 178 |
| | | | WBF5500x500T2500 | 500 | 50 | 730 | 183 |
| | | | WBF5500x500T4000 | 500 | 70 | 755 | 183 |



DIMENSIONS

WELBRO FLANGE ADAPTERS





| GE ADAP | TORS | | HDG FASTENERS | | | | | |
|---------|------|----------------|------------------|--------|-----------|--------|-------------|--|
| NB | ID | Coupling Range | Product Code | Flange | | | Length ^ | |
| | | | | Size | Thick (B) | OD (C) | | |
| 600 | 620 | 606-616 | WBF6000x600T1600 | 600 | 3 | 780 | 178 | |
| | | | WBF6000x600T1600 | 600 | 50 | 840 | 178 | |
| | | | WBF6000x600T2500 | 600 | 60 | 845 | 183 | |
| | | | WBF6000x600T4000 | 600 | 84 | 890 | 183 | |
| 600/2 | 642 | 629-638 | WBF6002x600T1600 | 600 | 3 | 780 | 178 | |
| | | | WBF6002x600T1600 | 600 | 50 | 840 | 178 | |
| | | | WBF6002x600T2500 | 600 | 60 | 845 | 183 | |
| | | | WBF6002x600T4000 | 600 | 84 | 890 | 183 | |



WELBRO TECHNICAL DATA

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