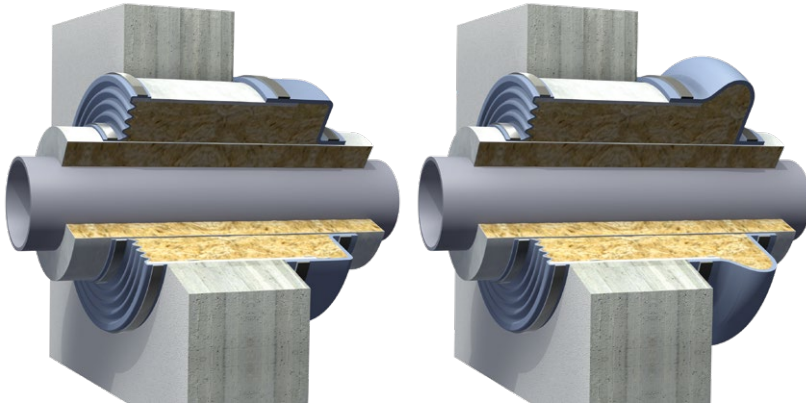
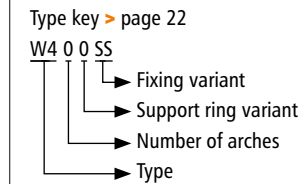


W200SS + W400SS W200SS + W410SS

for wall pipes up to \varnothing 900 mm, medium pipes up to \varnothing 600 mm



- > **Type W200SS + W400SS**
without arch for small movements
- > **Type W200SS + W410SS**
with arch for large movements




Fire penetration seal for wall tubes up to \varnothing 900 mm

Design: Air- and splash water-tight fire bulkhead sealing for 120 min fire resistance for pipe penetrations through walls and ceilings. Penetration seal membrane (type W200SS) and straight (type W400SS) or single-arch (type W410SS) expansion joint with all-directional movement capability, made from flexible silicone materials, and with fixing clamps (type W200SS / W400SS / W410SS) or multi-part backing flanges (type W200FS / W400FS / W410FS). Available round or rectangular styles, also offset designs for pipe misalignment and spilt wrap designs available for field installation around existing penetrating pipe applications. Fire resistance test acc. DIN EN 1366-3, approval acc. DIN 4102 part 11. Technical details according to Building Authority Approval.

Diameters: System approval for wall pipes up to \varnothing 900 mm and for medium pipes up to \varnothing 600 mm

Length: W200SS or FS standard 60 mm
W400SS or FS standard 180 mm
W410SS or FS standard 210 mm
Custom length on request

Pressure: Up to \pm 20 mbar

Movement: For axial and lateral movements 
(> page 332–333)

Wall pipe: Distance "a" between individual penetrations:
for wall pipes $\varnothing \leq 200$ mm $a \geq 100$ mm, $\varnothing > 200$ mm $a \geq 200$ mm
Wall pipe thickness (> page 332–333)

Application:
Power plants, plant construction, turbine houses, R120 fire penetration sealing for pipes with axial and lateral movements

Tested according to DIN 4102
Section 11 General
Building Supervision Certificate
MPA Braunschweig
No. P-3740/4280-MPA BS



Request assembly instructions at:
www.ditec-adam.de/en/contact

| | |
|--------------------------------|--|
| Medium pipe insulation: | Mineral wool insulation (materials class A1, melting point > 1000°C) The surface of this insulating material should be shielded with galvanised or stainless steel sheet with a thickness of 0.8 mm Length and thickness (> page 332-333) |
| Ring gap: | Distance between wall and medium pipe / medium pipe insulation from 10 mm to 100 mm Ring gap stuffing with mineral wool (materials class A1, melting point > 1000°C) Stuffing density $\geq 120 \text{ kg/m}^3$ (usually supplied by others) Ring gap insulation of ceiling penetrations must be secured against slippage using several brackets around the circumference |
| Pipe hanger: | Distance of next pipe hanger to wall / ceiling: 400 mm for $\leq \varnothing 150 \text{ mm}$ and 1,400 mm for $> \varnothing 150 \text{ mm}$ medium pipe diameter |
| Wall/ceiling thickness: | Min. 240 mm concrete, reinforced concrete or gas concrete |

Bellows elastomers

| Elastomers | | |
|-------------|--------------------|---|
| up to 200°C | Silicone Q | Air, water, saltwater atmosphere |
| | Silicone (special) | Special compound with certifications for nuclear applications |

Clamps

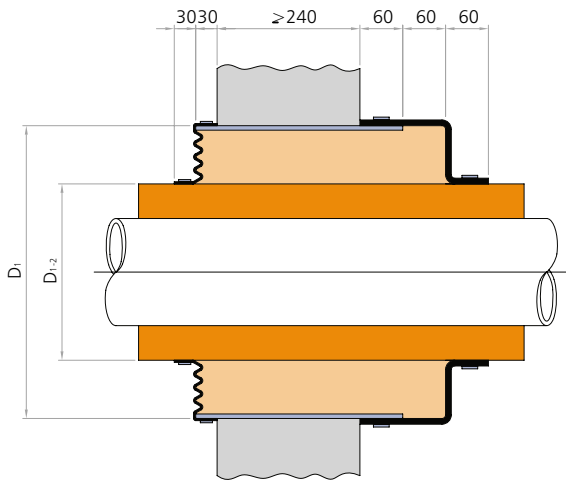
| | | |
|-------------------|---|---------------------------------------|
| Design: | Depending on pressure and diameter, endless clamp belt, screw thread belt, small clamps or hinge bolt clamps. At higher pressures, 2 parallel clamps per side | |
| Width: | Endless clamp belt: | $\frac{3}{4}$ " |
| | Screw thread belt: | $\frac{1}{2}$ " |
| | Small clamp: | depending on \varnothing : 9–12 mm |
| | Hinge bolt clamp: | depending on \varnothing : 18–30 mm |
| Materials: | Endless clamp belt with screw lugs (tongs): | 1.7300 |
| | Screw thread belt with threaded screw lugs: | 1.4310 |
| | Small clamp, belt and housing: | 1.4016 (Screw steel galvanised) |
| | Hinge bolt clamp, belt and housing: | 1.4016 (Screw steel galvanised) |

Backing flanges

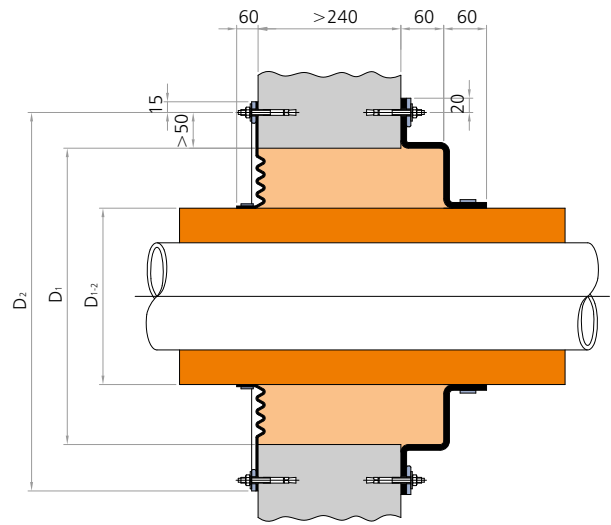
| | |
|----------------------|---|
| Design: | Multi-part clamping flange with clearance holes |
| Flange norms: | According to specification |
| Materials: | Carbon steel, stainless steel |
| Coating: | Primed, hot-dip galvanised, special paint |

330 Penetration seals

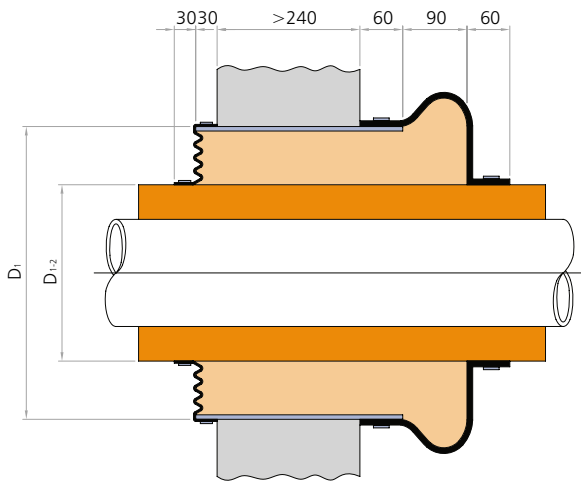
Cross section W200SS + W400SS



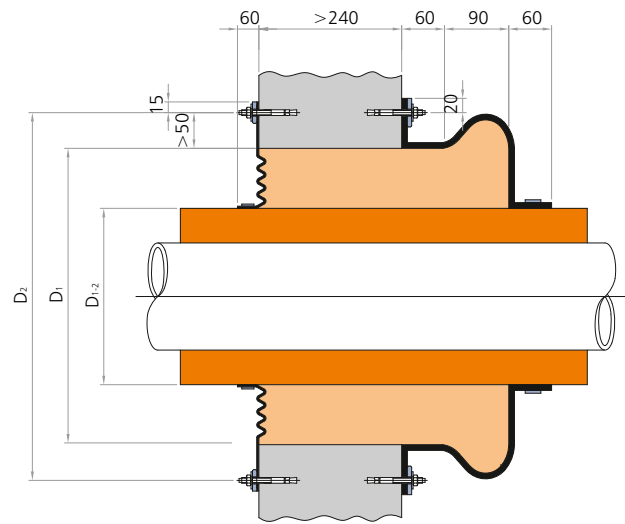
Cross section W200FS + W400FS



Cross section W200SS + W410SS

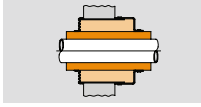


Cross section W200FS + W410FS





Fire protection bulkhead of type W200FS + W410FS
for large pipe movements between machines house and boiler house



W200SS + W400SS

> without arch for small movements

| Potential combinations | | Wall pipe Thickness mm | Required medium pipe insulation | | W200SS + W400SS Movement | | |
|--------------------------|--------------------------------|------------------------------|---------------------------------|-----------------|--------------------------|----|----|
| Wall pipe D_1 mm | Medium pipe D_{1-2} mm | | Length \geq mm | Thickness mm | | | |
| 350 | 200 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 6 | 6 | 5 |
| | | | | | | | |
| 400 | 200 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 15 | 15 | 13 |
| | 250 | | 1600 | 40 | 6 | 6 | 5 |
| 450 | 125 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 35 | 35 | 30 |
| | 150 | | 1600 | 40 | 35 | 35 | 30 |
| | 200 | | 1600 | 40 | 24 | 24 | 21 |
| | 250 | | 1600 | 40 | 15 | 15 | 13 |
| | 300 | | 1600 | 40 | 6 | 6 | 5 |
| 500 | 150 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 35 | 35 | 30 |
| | 200 | | 1600 | 40 | 33 | 33 | 28 |
| | 250 | | 1600 | 40 | 24 | 24 | 20 |
| | 300 | | 1600 | 40 | 15 | 15 | 13 |
| | 350 | | 1600 | 40 | 9 | 9 | 8 |
| 550 | 200 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 35 | 35 | 30 |
| | 250 | | 1600 | 40 | 33 | 33 | 28 |
| | 300 | | 1600 | 40 | 24 | 24 | 20 |
| | 350 | | 1600 | 40 | 18 | 18 | 15 |
| | 400 | | 1600 | 40 | 9 | 9 | 8 |
| 600 | 250 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 35 | 35 | 30 |
| | 300 | | 1600 | 40 | 32 | 32 | 28 |
| | 350 | | 1600 | 40 | 27 | 27 | 23 |
| | 400 | | 1600 | 40 | 18 | 18 | 15 |
| | 450 | | 1600 | 40 | 9 | 9 | 8 |
| 650 | 300 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 35 | 35 | 30 |
| | 350 | | 1600 | 40 | 35 | 35 | 30 |
| | 400 | | 1600 | 40 | 27 | 27 | 23 |
| | 450 | | 1600 | 40 | 18 | 18 | 15 |
| | 500 | | 1600 | 40 | 9 | 9 | 8 |
| 700 | 350 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 35 | 35 | 30 |
| | 400 | | 1600 | 40 | 35 | 35 | 30 |
| | 450 | | 1600 | 40 | 27 | 27 | 23 |
| | 500 | | 1600 | 40 | 18 | 18 | 15 |
| | 550 | | 1600 | 40 | 9 | 9 | 8 |
| 750 | 400 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 35 | 35 | 30 |
| | 450 | | 1600 | 40 | 35 | 35 | 30 |
| | 500 | | 1600 | 40 | 27 | 27 | 23 |
| | 550 | | 1600 | 40 | 18 | 18 | 15 |
| | 600 | | 1600 | 40 | 9 | 9 | 8 |
| 800 | 450 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 35 | 35 | 30 |
| | 500 | | 1600 | 40 | 35 | 35 | 30 |
| | 550 | | 1600 | 40 | 27 | 27 | 23 |
| | 600 | | 1600 | 40 | 18 | 18 | 15 |
| 850 | 450 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 35 | 35 | 30 |
| | 500 | | 1600 | 40 | 35 | 35 | 30 |
| | 550 | | 1600 | 40 | 27 | 27 | 23 |
| 900 | 450 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 35 | 35 | 30 |
| | 500 | | 1600 | 40 | 35 | 35 | 30 |

Above data refer to wall penetrations only; for ceiling penetration please contact our sales department.
Other combinations possible.

The movements listed are based on a concentric position of the medium pipe in relation to the wall pipe as well as minimal medium pipe insulation thicknesses and a maximum ring gap of 100 mm.

Larger movements on request.



W200SS + W410SS

> with arch for large movements

| Potential combinations | | Wall pipe Thickness mm | Required medium pipe insulation | | W200SS + W410SS Movement | | |
|--------------------------|--------------------------------|------------------------------|---------------------------------|-----------------|--------------------------|----|----|
| Wall pipe D_1 mm | Medium pipe D_{1-2} mm | | Length \geq mm | Thickness mm | | | |
| 350 | 200 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 12 | 12 | 10 |
| | | | | | | | |
| 400 | 200 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 31 | 31 | 26 |
| | | | | | | | |
| 450 | 125 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 70 | 70 | 60 |
| | 150 | | 1600 | 40 | 70 | 70 | 60 |
| | 200 | | 1600 | 40 | 48 | 48 | 41 |
| | 250 | | 1600 | 40 | 29 | 29 | 25 |
| | 300 | | 1600 | 40 | 12 | 12 | 10 |
| 500 | 150 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 70 | 70 | 60 |
| | 200 | | 1600 | 40 | 66 | 66 | 57 |
| | 250 | | 1600 | 40 | 47 | 47 | 41 |
| | 300 | | 1600 | 40 | 29 | 29 | 25 |
| | 350 | | 1600 | 40 | 18 | 18 | 16 |
| 550 | 200 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 70 | 70 | 60 |
| | 250 | | 1600 | 40 | 65 | 65 | 56 |
| | 300 | | 1600 | 40 | 47 | 47 | 40 |
| | 350 | | 1600 | 40 | 36 | 36 | 31 |
| | 400 | | 1600 | 40 | 18 | 18 | 16 |
| 600 | 250 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 70 | 70 | 60 |
| | 300 | | 1600 | 40 | 65 | 65 | 56 |
| | 350 | | 1600 | 40 | 54 | 54 | 46 |
| | 400 | | 1600 | 40 | 36 | 36 | 31 |
| | 450 | | 1600 | 40 | 18 | 18 | 16 |
| 650 | 300 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 70 | 70 | 60 |
| | 350 | | 1600 | 40 | 70 | 70 | 60 |
| | 400 | | 1600 | 40 | 54 | 54 | 46 |
| | 450 | | 1600 | 40 | 36 | 36 | 31 |
| | 500 | | 1600 | 40 | 18 | 18 | 16 |
| 700 | 350 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 70 | 70 | 60 |
| | 400 | | 1600 | 40 | 70 | 70 | 60 |
| | 450 | | 1600 | 40 | 54 | 54 | 46 |
| | 500 | | 1600 | 40 | 36 | 36 | 31 |
| | 550 | | 1600 | 40 | 18 | 18 | 16 |
| 750 | 400 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 70 | 70 | 60 |
| | 450 | | 1600 | 40 | 70 | 70 | 60 |
| | 500 | | 1600 | 40 | 54 | 54 | 46 |
| | 550 | | 1600 | 40 | 36 | 36 | 31 |
| | 600 | | 1600 | 40 | 18 | 18 | 16 |
| 800 | 450 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 70 | 70 | 60 |
| | 500 | | 1600 | 40 | 70 | 70 | 60 |
| | 550 | | 1600 | 40 | 54 | 54 | 46 |
| | 600 | | 1600 | 40 | 36 | 36 | 31 |
| 850 | 450 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 70 | 70 | 60 |
| | 500 | | 1600 | 40 | 70 | 70 | 60 |
| | 550 | | 1600 | 40 | 54 | 54 | 46 |
| 900 | 450 | $\geq 3,0$ $\leq 14,2$ | 1600 | 40 | 70 | 70 | 60 |
| | 500 | | 1600 | 40 | 70 | 70 | 60 |

Above data refer to wall penetrations only; for ceiling penetration please contact our sales department.
Other combinations possible.

The movements listed are based on a concentric position of the medium pipe in relation to the wall pipe as well as minimal medium pipe insulation thicknesses and a maximum ring gap of 100 mm.

Larger movements on request.