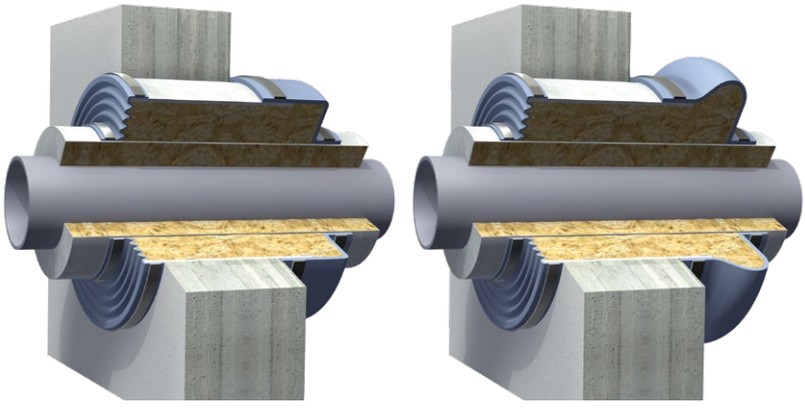
W200SS + W400SS W200SS + W410SS

for wall pipes up to ⌀ 900 mm, medium pipes up to ⌀ 600 mm



> **Type W200SS + W400SS**
without arch for small movements

> **Type W200SS + W410SS**
with arch for large movements

Type key > page 22
W4 0 0 SS
- Fixing variant
- Support ring variant
- Number of arches
- Type

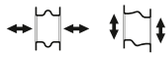
Fire penetration seal for wall tubes up to ⌀ 900 mm

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 ⌀ 900 mm and for medium pipes up to ⌀ 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 ± 20 mbar

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

Wall pipe: Distance "a" between individual penetrations:
for wall pipes Ø ≤ 200 mm a ≥ 100 mm, Ø > 200 mm a ≥ 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 ≥ 120 kg/m³ (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 ≤ ∅ 150 mm and 1,400 mm for > ∅ 150 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

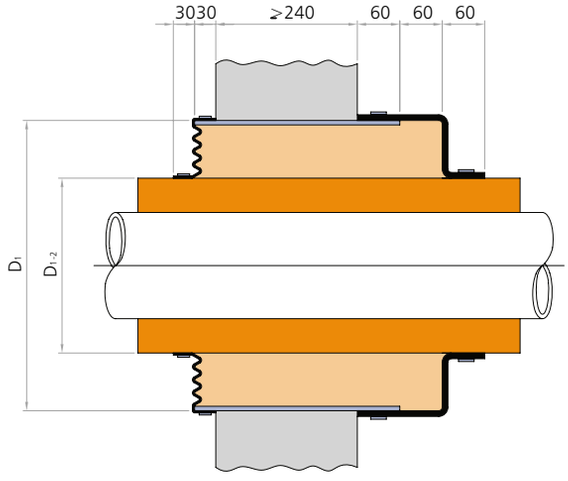
Clamps

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:	¾“
	Screw thread belt:	½“
	Small clamp:	depending on Ø: 9–12 mm
	Hinge bolt clamp:	depending on Ø: 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)

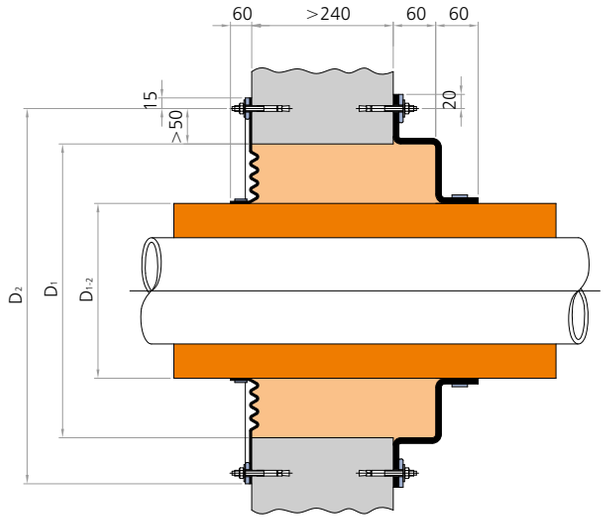
Backing flanges

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

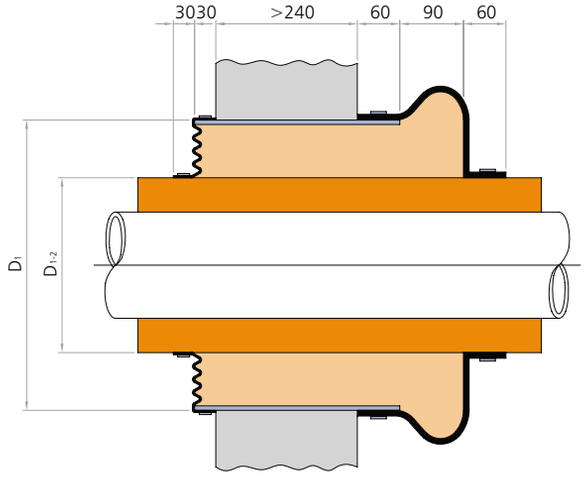
Cross section W200SS + W400SS



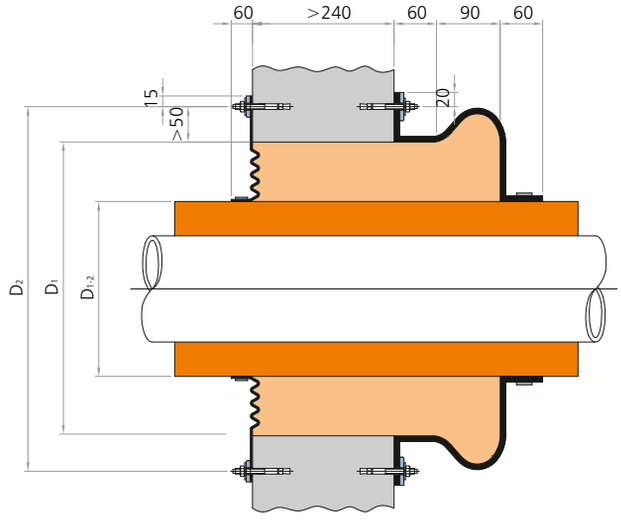
Cross section W200FS + W400FS



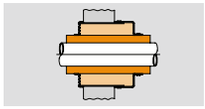
Cross section W200SS + W410SS



Cross section W200FS + W410FS



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

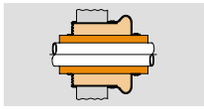


W200SS + W400SS

> without arch for small movements

Potential combinations		Wall pipe	Required medium pipe insulation		W200SS + W400SS Movement		
Wall pipe D_1	Medium pipe D_{1-2}	Thickness	Length ≥	Thickness			
mm	mm	mm	mm	mm	mm	mm	mm
350	200	≥ 3,0 ≤ 14,2	1600	40	6	6	5
400	200	≥ 3,0 ≤ 14,2	1600	40	15	15	13
	250		1600	40	6	6	5
450	125	≥ 3,0 ≤ 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	≥ 3,0 ≤ 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	≥ 3,0 ≤ 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	≥ 3,0 ≤ 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	≥ 3,0 ≤ 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	≥ 3,0 ≤ 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	≥ 3,0 ≤ 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	≥ 3,0 ≤ 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	≥ 3,0 ≤ 14,2	1600	40	35	35	30
	500		1600	40	35	35	30
	550		1600	40	27	27	23
900	450	≥ 3,0 ≤ 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	Required medium pipe insulation		W200SS + W410SS Movement		
Wall pipe D_1	Medium pipe D_{1-2}	Thickness	Length ≥	Thickness			
mm	mm	mm	mm	mm	mm	mm	mm
350	**200**	≥ 3,0 ≤ 14,2	1600	40	12	12	10
400	**200**	≥ 3,0 ≤ 14,2	1600	40	31	31	26
	250		1600	40	12	12	10
450	**125**	≥ 3,0 ≤ 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**	≥ 3,0 ≤ 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**	≥ 3,0 ≤ 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**	≥ 3,0 ≤ 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**	≥ 3,0 ≤ 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**	≥ 3,0 ≤ 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**	≥ 3,0 ≤ 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**	≥ 3,0 ≤ 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**	≥ 3,0 ≤ 14,2	1600	40	70	70	60
	500		1600	40	70	70	60
	550		1600	40	54	54	46
900	**450**	≥ 3,0 ≤ 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.