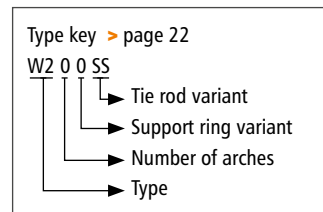


**W200SS W300SS**  $\varnothing$  25 - 6,000 mm  
 $\varnothing$  up to 4,000 x 4,000 mm  
 $\varnothing$  up to 6,000 x 3,000 mm



> **Type W200SS**  
without steam barrier

> **Type W300SS**  
with steam barrier



## Penetration seal membrane

**Design:** Straight or folded penetration seal membranes with excellent all-directional movement capability, available in slip-on or flanged designs, standard made from extremely flexible thin silicone materials, and with multi-part backing flanges or fixing clamps. Type W300SS/FS for cold water lines optional with steam diffusion barrier. Available customised round or rectangular styles, also offset designs for pipe misalignment and split wrap designs available for field installation around existing penetrating pipe applications.

**Dimensions:**  $\varnothing$  25 to 6,000 mm  
 $\varnothing$  up to 4,000 x 4,000 mm or 6,000 x 3,000 mm  
 Custom diameters/rectangular cross-sections possible

**Length:** Standard  $L_e = 60$  mm (> page 314–315)  
 Custom length on request

**Pressure:** Up to  $\pm 20$  mbar

**Movement:** For axial, lateral and angular movements



**Application:**  
**Power plants, plant construction, turbine houses, e.g. for building / ground settlements for pipe or vessel penetrations, noise absorption, vibration, pipe misalignment, thermal movements, seismic displacements or as airtight seal or splash protection of pipe penetrations, seals for district heating pipelines**

Suitability verifications for nuclear power plant



Request assembly instructions at:  
[www.ditec-adam.de/en/contact](http://www.ditec-adam.de/en/contact)

## Bellows elastomers

| Elastomers                  |                          |                                  | Carrier |
|-----------------------------|--------------------------|----------------------------------|---------|
| up to 200 °C:               | Silicon (Q)              | Air, water, saltwater atmosphere | without |
|                             | Silicon special compound | Nuclear applications             |         |
|                             | FPM                      | Tank pit seals                   | Aramid  |
| Other elastomers on request |                          |                                  |         |

## Clamps

- Design:** Screw thread belt or small clamps
- Width:** Screw thread belt: 1/2"  
Small clamp: depending on Ø: 9–12 mm
- Materials:** Screw thread belt with threaded screw lug: 1.4310  
Small clamp, belt and housing: 1.4016 (Screw steel galvanised)

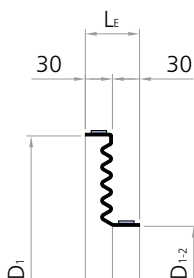
## Backing flanges

- 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

## Installation variants

| TYPE             |  | Wall pipe fixing | Medium pipe fixing | Pressure | Dimensions  |
|------------------|--|------------------|--------------------|----------|---|
| W200SS<br>W300SS |  | Sleeve           | Sleeve             | Low      | Wall pipe / duct up to Ø 6,000 mm, Ø 4,000 x 4,000 mm or Ø 6,000 x 3,000 mm   |
| W200FS<br>W300FS |  | Flange           | Sleeve             | Low      | Medium pipe / duct up to Ø 6,000 mm, Ø 4,000 x 4,000 mm or Ø 6,000 x 3,000 mm |

Cross section W200SS





## W200SS

> without steam barrier

| Potential combinations |                        | Movement |    |      |
|------------------------|------------------------|----------|----|------|
| Wall pipe<br>∅<br>mm   | Medium pipe<br>∅<br>mm |          |    |      |
|                        |                        | mm       | mm | ± mm |
| 50                     | 10                     | 15       | 15 | 13   |
|                        | 15                     | 14       | 14 | 12   |
|                        | 20                     | 12       | 12 | 10   |
|                        | 25                     | 9        | 9  | 8    |
|                        | 32                     | 6        | 6  | 5    |
| 65                     | 15                     | 19       | 19 | 16   |
|                        | 20                     | 17       | 17 | 15   |
|                        | 25                     | 15       | 15 | 13   |
|                        | 32                     | 12       | 12 | 10   |
|                        | 40                     | 10       | 10 | 8    |
| 80                     | 20                     | 22       | 22 | 19   |
|                        | 25                     | 19       | 19 | 17   |
|                        | 32                     | 16       | 16 | 14   |
|                        | 40                     | 14       | 14 | 12   |
|                        | 50                     | 10       | 10 | 9    |
| 100                    | 25                     | 28       | 28 | 24   |
|                        | 32                     | 25       | 25 | 22   |
|                        | 40                     | 23       | 23 | 20   |
|                        | 50                     | 19       | 19 | 16   |
|                        | 65                     | 13       | 13 | 11   |
| 125                    | 32                     | 34       | 34 | 29   |
|                        | 40                     | 32       | 32 | 27   |
|                        | 50                     | 28       | 28 | 24   |
|                        | 65                     | 22       | 22 | 19   |
|                        | 80                     | 18       | 18 | 15   |
| 150                    | 40                     | 42       | 42 | 36   |
|                        | 50                     | 38       | 38 | 32   |
|                        | 65                     | 32       | 32 | 28   |
|                        | 80                     | 28       | 28 | 24   |
|                        | 100                    | 19       | 19 | 16   |
| 200                    | 65                     | 50       | 50 | 43   |
|                        | 80                     | 46       | 46 | 39   |
|                        | 100                    | 37       | 37 | 31   |
|                        | 125                    | 28       | 28 | 24   |
|                        | 150                    | 18       | 18 | 15   |
| 250                    | 80                     | 64       | 64 | 55   |
|                        | 100                    | 56       | 56 | 48   |
|                        | 125                    | 47       | 47 | 40   |
|                        | 150                    | 37       | 37 | 31   |
|                        | 200                    | 19       | 19 | 16   |
| 300                    | 100                    | 73       | 73 | 63   |
|                        | 125                    | 64       | 64 | 55   |
|                        | 150                    | 54       | 54 | 47   |
|                        | 200                    | 37       | 37 | 31   |
|                        | 250                    | 18       | 18 | 15   |
| 350                    | 125                    | 76       | 76 | 65   |
|                        | 150                    | 66       | 66 | 56   |
|                        | 200                    | 48       | 48 | 41   |
|                        | 250                    | 29       | 29 | 25   |
|                        | 300                    | 11       | 11 | 10   |
| 400                    | 150                    | 83       | 83 | 71   |
|                        | 200                    | 66       | 66 | 56   |
|                        | 250                    | 47       | 47 | 40   |
|                        | 300                    | 29       | 29 | 25   |
|                        | 350                    | 18       | 18 | 15   |

| Potential combinations |                        | Movement |     |      |
|------------------------|------------------------|----------|-----|------|
| Wall pipe<br>∅<br>mm   | Medium pipe<br>∅<br>mm |          |     |      |
|                        |                        | mm       | mm  | ± mm |
| 450                    | 200                    | 83       | 83  | 71   |
|                        | 250                    | 64       | 64  | 55   |
|                        | 300                    | 47       | 47  | 40   |
|                        | 350                    | 36       | 36  | 30   |
|                        | 400                    | 18       | 18  | 15   |
| 500                    | 250                    | 82       | 82  | 71   |
|                        | 300                    | 64       | 64  | 55   |
|                        | 350                    | 53       | 53  | 46   |
|                        | 400                    | 36       | 36  | 30   |
|                        | 450                    | 18       | 18  | 15   |
| 550                    | 300                    | 82       | 82  | 70   |
|                        | 350                    | 71       | 71  | 61   |
|                        | 400                    | 53       | 53  | 46   |
|                        | 450                    | 36       | 36  | 30   |
|                        | 500                    | 18       | 18  | 15   |
| 600                    | 350                    | 89       | 89  | 76   |
|                        | 400                    | 71       | 71  | 61   |
|                        | 450                    | 53       | 53  | 46   |
|                        | 500                    | 36       | 36  | 30   |
|                        | 550                    | 18       | 18  | 15   |
| 650                    | 400                    | 89       | 89  | 76   |
|                        | 450                    | 71       | 71  | 61   |
|                        | 500                    | 53       | 53  | 46   |
|                        | 550                    | 36       | 36  | 30   |
|                        | 600                    | 18       | 18  | 15   |
| 700                    | 450                    | 89       | 89  | 76   |
|                        | 500                    | 71       | 71  | 61   |
|                        | 550                    | 53       | 53  | 46   |
|                        | 600                    | 36       | 36  | 30   |
|                        | 650                    | 18       | 18  | 15   |
| 750                    | 500                    | 89       | 89  | 76   |
|                        | 550                    | 71       | 71  | 61   |
|                        | 600                    | 53       | 53  | 46   |
|                        | 650                    | 36       | 36  | 30   |
|                        | 700                    | 18       | 18  | 15   |
| 800                    | 400                    | 142      | 142 | 122  |
|                        | 450                    | 124      | 124 | 107  |
|                        | 500                    | 107      | 107 | 91   |
|                        | 600                    | 71       | 71  | 61   |
|                        | 700                    | 36       | 36  | 30   |
| 900                    | 450                    | 160      | 160 | 137  |
|                        | 500                    | 142      | 142 | 122  |
|                        | 600                    | 107      | 107 | 91   |
|                        | 700                    | 71       | 71  | 61   |
|                        | 800                    | 36       | 36  | 30   |
| 1000                   | 500                    | 178      | 178 | 152  |
|                        | 600                    | 142      | 142 | 122  |
|                        | 700                    | 107      | 107 | 91   |
|                        | 800                    | 71       | 71  | 61   |
|                        | 900                    | 36       | 36  | 30   |

For wall pipes use nominal diameters if possible.  
For medium pipes, all diameters can be delivered.  
Other combinations possible.

Customised products available



# W300SS

> with steam barrier



| Potential combinations |                        | Movement |    |     |
|------------------------|------------------------|----------|----|-----|
| Wall pipe<br>∅<br>mm   | Medium pipe<br>∅<br>mm |          |    |     |
|                        |                        | mm       | mm | ±mm |
| 50                     | 10                     | 5        | 5  | 3   |
|                        | 15                     | 5        | 5  | 3   |
|                        | 20                     | 4        | 4  | 3   |
|                        | 25                     | 3        | 3  | 2   |
|                        | 32                     | 2        | 2  | 1   |
| 65                     | 15                     | 7        | 7  | 4   |
|                        | 20                     | 6        | 6  | 4   |
|                        | 25                     | 5        | 5  | 3   |
|                        | 32                     | 4        | 4  | 3   |
| 80                     | 40                     | 3        | 3  | 2   |
|                        | 20                     | 8        | 8  | 5   |
|                        | 25                     | 7        | 7  | 4   |
|                        | 32                     | 6        | 6  | 3   |
| 100                    | 40                     | 5        | 5  | 3   |
|                        | 50                     | 4        | 4  | 2   |
|                        | 25                     | 10       | 10 | 6   |
|                        | 32                     | 9        | 9  | 5   |
| 125                    | 40                     | 8        | 8  | 5   |
|                        | 50                     | 7        | 7  | 4   |
|                        | 65                     | 5        | 5  | 3   |
|                        | 32                     | 12       | 12 | 7   |
| 150                    | 40                     | 11       | 11 | 7   |
|                        | 50                     | 10       | 10 | 6   |
|                        | 65                     | 8        | 8  | 5   |
|                        | 80                     | 6        | 6  | 4   |
| 200                    | 40                     | 15       | 15 | 9   |
|                        | 50                     | 14       | 14 | 8   |
|                        | 65                     | 12       | 12 | 7   |
|                        | 80                     | 10       | 10 | 6   |
| 250                    | 100                    | 7        | 7  | 4   |
|                        | 65                     | 18       | 18 | 11  |
|                        | 80                     | 16       | 16 | 10  |
|                        | 100                    | 13       | 13 | 8   |
| 300                    | 125                    | 10       | 10 | 6   |
|                        | 150                    | 6        | 6  | 4   |
|                        | 80                     | 23       | 23 | 14  |
|                        | 100                    | 20       | 20 | 12  |
| 350                    | 125                    | 17       | 17 | 10  |
|                        | 150                    | 13       | 13 | 8   |
|                        | 200                    | 7        | 7  | 4   |
|                        | 100                    | 26       | 26 | 16  |
| 400                    | 125                    | 23       | 23 | 14  |
|                        | 150                    | 19       | 19 | 12  |
|                        | 200                    | 13       | 13 | 8   |
|                        | 250                    | 6        | 6  | 4   |
| 450                    | 125                    | 27       | 27 | 16  |
|                        | 150                    | 23       | 23 | 14  |
|                        | 200                    | 17       | 17 | 10  |
|                        | 250                    | 10       | 10 | 6   |
| 500                    | 300                    | 4        | 4  | 2   |
|                        | 150                    | 30       | 30 | 18  |
|                        | 200                    | 23       | 23 | 14  |
|                        | 250                    | 17       | 17 | 10  |
| 550                    | 300                    | 10       | 10 | 6   |
|                        | 350                    | 6        | 6  | 4   |
|                        | 400                    | 8        | 8  | 5   |
|                        | 450                    | 6        | 6  | 4   |
| 600                    | 400                    | 18       | 18 | 10  |
|                        | 450                    | 15       | 15 | 8   |
|                        | 500                    | 11       | 11 | 6   |
|                        | 550                    | 8        | 8  | 5   |
| 650                    | 600                    | 6        | 6  | 4   |
|                        | 400                    | 32       | 32 | 19  |
|                        | 450                    | 25       | 25 | 15  |
|                        | 500                    | 19       | 19 | 11  |
| 700                    | 550                    | 13       | 13 | 8   |
|                        | 600                    | 6        | 6  | 4   |
|                        | 450                    | 32       | 32 | 19  |
|                        | 500                    | 25       | 25 | 15  |
| 750                    | 550                    | 19       | 19 | 11  |
|                        | 600                    | 13       | 13 | 8   |
|                        | 650                    | 6        | 6  | 4   |
|                        | 700                    | 6        | 6  | 4   |
| 800                    | 500                    | 32       | 32 | 19  |
|                        | 550                    | 25       | 25 | 15  |
|                        | 600                    | 19       | 19 | 11  |
|                        | 650                    | 13       | 13 | 8   |
| 850                    | 700                    | 6        | 6  | 4   |
|                        | 400                    | 51       | 51 | 30  |
|                        | 450                    | 44       | 44 | 27  |
|                        | 500                    | 38       | 38 | 23  |
| 900                    | 600                    | 25       | 25 | 15  |
|                        | 700                    | 13       | 13 | 8   |
|                        | 450                    | 57       | 57 | 34  |
|                        | 500                    | 51       | 51 | 30  |
| 950                    | 600                    | 38       | 38 | 23  |
|                        | 700                    | 25       | 25 | 15  |
|                        | 800                    | 13       | 13 | 8   |
|                        | 500                    | 64       | 64 | 38  |
| 1000                   | 600                    | 51       | 51 | 30  |
|                        | 700                    | 38       | 38 | 23  |
|                        | 800                    | 25       | 25 | 15  |
|                        | 900                    | 13       | 13 | 8   |

| Potential combinations |                        | Movement |    |     |
|------------------------|------------------------|----------|----|-----|
| Wall pipe<br>∅<br>mm   | Medium pipe<br>∅<br>mm |          |    |     |
|                        |                        | mm       | mm | ±mm |
| 450                    | 200                    | 30       | 30 | 18  |
|                        | 250                    | 23       | 23 | 14  |
|                        | 300                    | 17       | 17 | 10  |
|                        | 350                    | 13       | 13 | 8   |
|                        | 400                    | 6        | 6  | 4   |
| 500                    | 250                    | 29       | 29 | 18  |
|                        | 300                    | 23       | 23 | 14  |
|                        | 350                    | 19       | 19 | 11  |
|                        | 400                    | 13       | 13 | 8   |
| 550                    | 450                    | 6        | 6  | 4   |
|                        | 300                    | 29       | 29 | 18  |
|                        | 350                    | 25       | 25 | 15  |
|                        | 400                    | 19       | 19 | 11  |
| 600                    | 450                    | 13       | 13 | 8   |
|                        | 500                    | 6        | 6  | 4   |
|                        | 350                    | 32       | 32 | 19  |
|                        | 400                    | 25       | 25 | 15  |
| 650                    | 450                    | 19       | 19 | 11  |
|                        | 500                    | 13       | 13 | 8   |
|                        | 550                    | 6        | 6  | 4   |
|                        | 400                    | 32       | 32 | 19  |
| 700                    | 450                    | 25       | 25 | 15  |
|                        | 500                    | 19       | 19 | 11  |
|                        | 600                    | 13       | 13 | 8   |
|                        | 650                    | 6        | 6  | 4   |
| 750                    | 450                    | 32       | 32 | 19  |
|                        | 500                    | 25       | 25 | 15  |
|                        | 600                    | 19       | 19 | 11  |
|                        | 650                    | 13       | 13 | 8   |
| 800                    | 700                    | 6        | 6  | 4   |
|                        | 500                    | 32       | 32 | 19  |
|                        | 550                    | 25       | 25 | 15  |
|                        | 600                    | 19       | 19 | 11  |
| 850                    | 650                    | 13       | 13 | 8   |
|                        | 700                    | 6        | 6  | 4   |
|                        | 400                    | 51       | 51 | 30  |
|                        | 450                    | 44       | 44 | 27  |
| 900                    | 500                    | 38       | 38 | 23  |
|                        | 600                    | 25       | 25 | 15  |
|                        | 700                    | 13       | 13 | 8   |
|                        | 800                    | 13       | 13 | 8   |
| 950                    | 500                    | 64       | 64 | 38  |
|                        | 600                    | 51       | 51 | 30  |
|                        | 700                    | 38       | 38 | 23  |
|                        | 800                    | 25       | 25 | 15  |
| 1000                   | 900                    | 13       | 13 | 8   |

For wall pipes use nominal diameters if possible.  
For medium pipes, all diameters can be delivered.  
Other combinations possible.

Customised products available