

## **General**

When installing an expansion joint by welding or brazing, the bellows element must be protected by covering it up. When using flanges, the bolts must be tightened crosswise. The gasket must be centered and the bolt holes aligned. The expansion joint must not be subjected to torsion through piping stresses during installation or later in use. The bellows must be protected against severe mechanical stress such as hard knocks etc. After installation the bellows must be cleaned of dirt and foreign particles. When in use, hard pressure shocks must be avoided.

## **Axial expansion joints**

Pipe supports are fitted at suitable distances in such a way that the moving pipe sections are in line. Only one axial expansion joint can be installed between two anchors. When several axial expansion joints are installed, the straight section must be subdivided by light intermediate anchors. Correct presetting must be ensured, taking into account the installation temperature. The piping must not be subjected either to test pressure or static pressure before the anchors and guides have been fixed. Otherwise the expansion joint will stretch and may be damaged beyond repair. A protective or guide sleeve, if fitted, protects and/or stabilizes the internally pressurized bellows; it never replaces pipe guides or supports.

## **Angular and lateral expansion joints**

The tables show axial movements only. All the bellows can also be used for angular or lateral movement, usually equipped with a hinge system. Inner or outer sleeves are not normally used with this kind of expansion joints.

Hinge parts are usually designed to carry axial pressure loads only. If there will be other substantial loads on the hinge parts (e.g. the weight of vertical pipeline) this should be mentioned in connection with other design data.

# CALCULATING THE PIPE EXPANSION

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The approximate axial movement needed can be calculated by using the following formula:

$$X = L (T_1 - T_2) \alpha$$

where

- $X$  = Expansion needed
- $L$  = Distance between anchors (fixed points)
- $T_1$  = Highest temperature in the piping
- $T_2$  = Lowest temperature in the piping
- $\alpha$  = Thermal expansion coefficient (table 1)

**TABLE 1** Thermal expansion coefficients  $\alpha$  ( mm / m°C )

| Material        | Temperature range +20°C ... |       |       |       |       |
|-----------------|-----------------------------|-------|-------|-------|-------|
|                 | 100°C                       | 200°C | 300°C | 400°C | 500°C |
| Carbon steel    | 0,012                       | 0,012 | 0,013 | 0,014 | 0,014 |
| Stainless steel | 0,016                       | 0,017 | 0,017 | 0,018 | 0,018 |

*Example:*

Distance between anchors                      70 m  
 Highest temperature                              140°C  
 Lowest temperature                                10°C  
 Thermal expansion coefficient for carbon steel    0,012  
 → The expansion needed is 109,2 mm.

## MATERIALS

The bellows element is usually made of stainless steel; some examples of the materials we use are shown in the table below. Connecting parts are made of carbon steel or stainless steel.

Other materials, like titanium or heat-resisting steel (e.g. INCOLOY), can also be used if necessary.

Different material standards can be compared by using the table below.

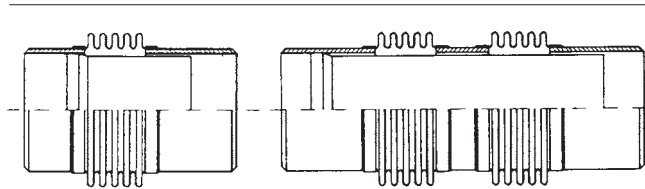
**TABLE 2** Approximate correspondence between material standards.

| AISI<br>ASTM | SIS         | W. Nr         | BS            | SFS        | AVESTA |
|--------------|-------------|---------------|---------------|------------|--------|
| <b>304</b>   | <b>2333</b> | <b>1.4301</b> | <b>304S15</b> | <b>725</b> |        |
| 304L         | 2352        | 1.4306        | 304S12        | 720        |        |
| <b>316</b>   | <b>2343</b> | <b>1.4436</b> | <b>316S31</b> | <b>757</b> |        |
| 316L         | 2348        | 1.4435        | 316S13        | 752        |        |
| 316Ti        | 2350        | 1.4571        | 320S31        | 761        |        |
| <b>321</b>   | <b>2337</b> | <b>1.4541</b> | <b>321S12</b> | <b>731</b> |        |
| S30815       | 2368        | 1.4893        | -             | -          | 253MA  |
| S31254       | 2378        | -             | -             | 778        | 254SMO |
| N08904       | 2562        | 1.4539        | 904S13        | 774        | 904L   |

# RANGE OF PRODUCTS

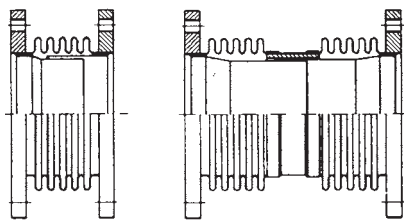
This catalogue presents the standard range of our axial expansion joints. Other dimensions (up to DN 1200), various connecting parts and materials, as well as greater nominal pressures are also possible.

All our axial expansion joints can also be used for absorption of angular and lateral movements.



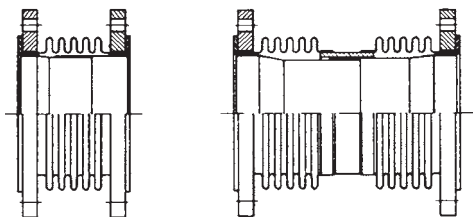
**PRRA** Expansion joint with welding ends

Mainly for axial movement, also usable for angular or lateral movements.



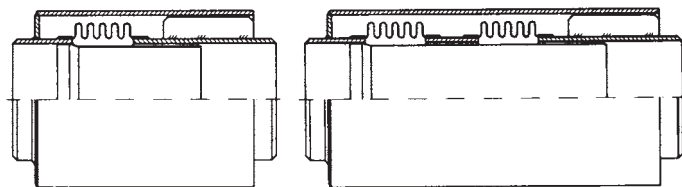
**PRFA** Expansion joint with fixed flanges

Mainly for axial movement, also usable for angular or lateral movements.



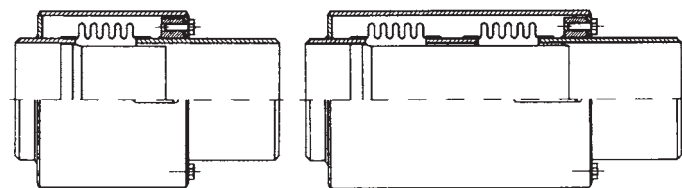
**PRFI** Expansion joint with floating flanges

Mainly for axial movement, also usable for angular or lateral movements.



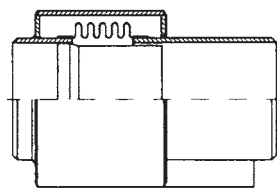
**PRRO** Expansion joint with external guide sleeve

For axial movement only.



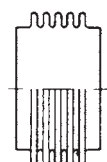
**PRRS** Pre-stressed expansion joint

For axial movement only. The required length is secured by screws, which need not be removed after the installation, because they will break off when the pipes start to move.



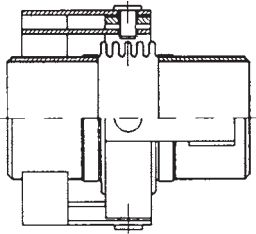
**PRRK** Assembly expansion joint

For axial movement only. The joint is designed for one single movement, after which the flange of protective sleeve is welded to the pipe end.



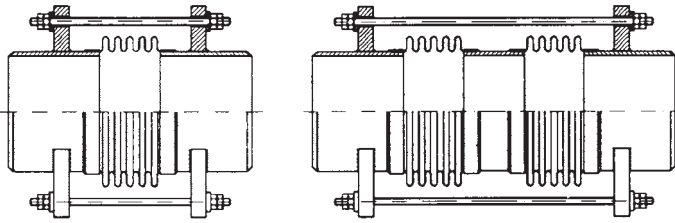
**PRPE (PRPS)** Bellows element

Bellows element only, no end fittings. (PRPS Bellows element with two-part internal guide sleeve.)



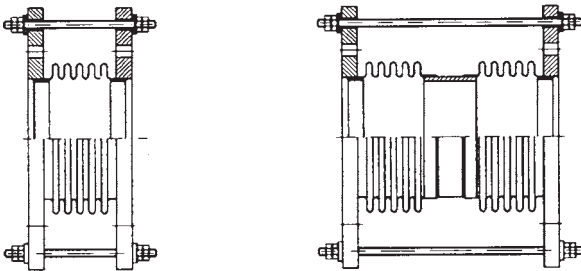
**PRRC (PRFC)** *Gimbal expansion joint with welding ends*

Only for angular movement on any plane.  
(PRFC The same joint as above but with flanges.)



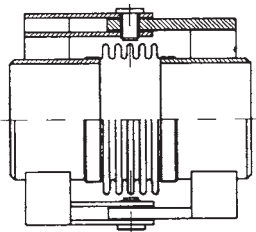
**PRRV** *Expansion joint with tie rods and welding ends*

Mainly for lateral movement on any plane, but axial compression is also possible.



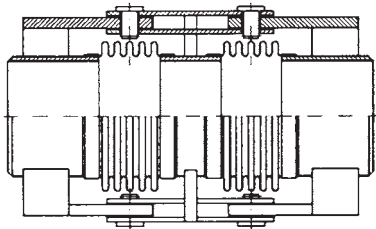
**PRFV** *Expansion joint with tie rods and flanges*

Mainly for lateral movement on any plane, but axial compression is also possible.



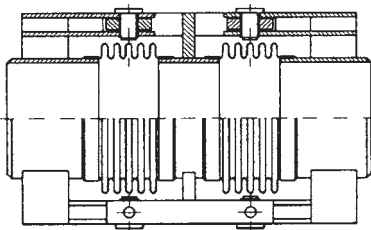
**PRRN-1 (PRFN-1)** *Hinged expansion joint with welding ends*

Only for angular movement on one plane.  
(PRFN-1 The same joint as above but with flanges.)



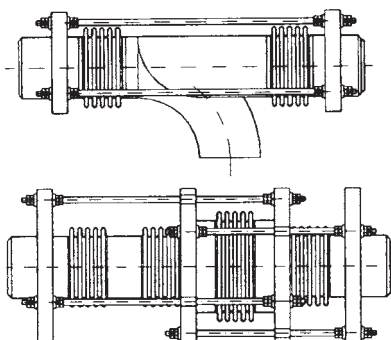
**PRRN-2 (PRFN-2)** *Hinged double expansion joint with welding ends*

Mainly for lateral movement on one plane only, but extensive angular movement on one plane is also possible.  
(PRFN-2 The same joint as above but with flanges.)



**PRRL (PRFL)** *Hinged double expansion joint with gimbals and welding ends*

For lateral movement on any plane.  
(PRFL The same joint as above but with flanges.)



**PRPB** *Pressure-balanced expansion joint for axial and/or lateral movements*

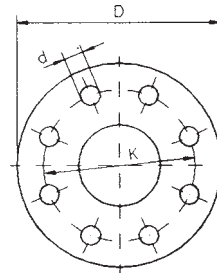
Absorbs pressure load on pipe supports. The only remaining load is that of the spring rate of the bellows, in lateral movement also the forces of hinge friction. The pipes may run parallel or at 90° angle. Two alternative arrangements are illustrated.

# FLANGE DIMENSIONS

In the tables below connection dimensions of expansion joints with flanges

## PN 6 (DIN 2501)

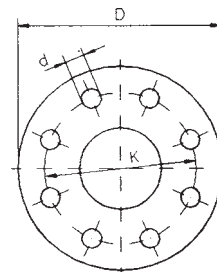
| DN   | D<br>mm | K<br>mm | pcs | Bolts   |              | s<br>mm |
|------|---------|---------|-----|---------|--------------|---------|
|      |         |         |     | d<br>mm | Thread<br>mm |         |
| 200  | 320     | 280     | 8   | 18      | M16          | 20      |
| 250  | 375     | 335     | 12  | 18      | M16          | 20      |
| 300  | 440     | 395     | 12  | 22      | M20          | 20      |
| 350  | 490     | 445     | 12  | 22      | M20          | 20      |
| 400  | 540     | 495     | 16  | 22      | M20          | 20      |
| 450  | 595     | 550     | 16  | 22      | M20          | 27      |
| 500  | 645     | 600     | 20  | 22      | M20          | 27      |
| 600  | 755     | 705     | 20  | 26      | M24          | 27      |
| 650  | 810     | 760     | 20  | 26      | M24          | 27      |
| 700  | 860     | 810     | 24  | 26      | M24          | 27      |
| 800  | 975     | 920     | 24  | 30      | M27          | 27      |
| 900  | 1075    | 1020    | 24  | 30      | M27          | 27      |
| 1000 | 1175    | 1120    | 28  | 30      | M27          | 27      |
| 1200 | 1405    | 1340    | 32  | 33      | M30          | 27      |



- DN** Nominal size of flange
- D** Outer diameter
- K** Diameter of bolt circle
- pcs** Number of bolt holes
- d** Diameter of bolt hole
- s** Thickness of the flange (directive dimension)

## PN 10 (DIN 2501)

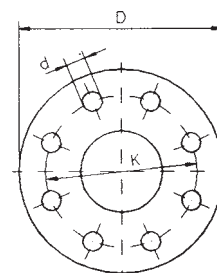
| DN   | D<br>mm | K<br>mm | pcs | Bolts   |              | s<br>mm |
|------|---------|---------|-----|---------|--------------|---------|
|      |         |         |     | d<br>mm | Thread<br>mm |         |
| 200  | 340     | 295     | 8   | 22      | M20          | 20      |
| 250  | 395     | 350     | 12  | 22      | M20          | 20      |
| 300  | 445     | 400     | 12  | 22      | M20          | 25      |
| 350  | 505     | 460     | 16  | 22      | M20          | 25      |
| 400  | 565     | 515     | 16  | 26      | M24          | 25      |
| 450  | 615     | 565     | 20  | 26      | M24          | 27      |
| 500  | 670     | 620     | 20  | 26      | M24          | 27      |
| 600  | 780     | 725     | 20  | 30      | M27          | 32      |
| 650  | 835     | 780     | 24  | 30      | M27          | 32      |
| 700  | 895     | 840     | 24  | 30      | M27          | 32      |
| 800  | 1015    | 950     | 24  | 33      | M30          | 32      |
| 900  | 1115    | 1050    | 28  | 33      | M30          | 37      |
| 1000 | 1230    | 1160    | 28  | 36      | M33          | 37      |
| 1200 | 1455    | 1380    | 32  | 39      | M36          | 37      |



- DN** Nominal size of flange
- D** Outer diameter
- K** Diameter of bolt circle
- pcs** Number of bolt holes
- d** Diameter of bolt hole
- s** Thickness of the flange (directive dimension)

## DIN 86044

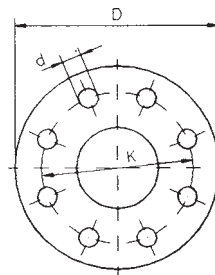
| DN   | D<br>mm | K<br>mm | pcs | Bolts   |              | s<br>mm |
|------|---------|---------|-----|---------|--------------|---------|
|      |         |         |     | d<br>mm | Thread<br>mm |         |
| 200  | 320     | 280     | 8   | 18      | M16          | 16      |
| 250  | 375     | 335     | 12  | 18      | M16          | 16      |
| 300  | 440     | 395     | 12  | 22      | M20          | 16      |
| 350  | 490     | 445     | 12  | 22      | M20          | 16      |
| 400  | 540     | 495     | 16  | 22      | M20          | 16      |
| 450  | 595     | 550     | 16  | 22      | M20          | 16      |
| 500  | 645     | 600     | 20  | 22      | M20          | 16      |
| 600  | 754     | 700     | 20  | 22      | M20          | 20      |
| 650  | 805     | 750     | 20  | 22      | M20          | 20      |
| 700  | 856     | 800     | 24  | 22      | M20          | 20      |
| 800  | 958     | 900     | 24  | 22      | M20          | 20      |
| 900  | 1060    | 1010    | 28  | 22      | M20          | 20      |
| 1000 | 1162    | 1110    | 32  | 22      | M20          | 20      |
| 1200 | 1366    | 1310    | 36  | 22      | M20          | 20      |



- DN** Nominal size of flange
- D** Outer diameter
- K** Diameter of bolt circle
- pcs** Number of bolt holes
- d** Diameter of bolt hole
- s** Thickness of the flange (directive dimension)

**PN 16 (DIN 2501)**

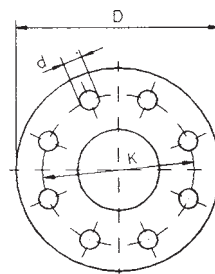
| DN   | D<br>mm | K<br>mm | pcs | Bolts   |              |         |
|------|---------|---------|-----|---------|--------------|---------|
|      |         |         |     | d<br>mm | Thread<br>mm | s<br>mm |
| 32   | 140     | 100     | 4   | 18      | M16          | 16      |
| 40   | 150     | 110     | 4   | 18      | M16          | 16      |
| 50   | 165     | 125     | 4   | 18      | M16          | 16      |
| 65   | 185     | 145     | 4   | 18      | M16          | 16      |
| 80   | 200     | 160     | 8   | 18      | M16          | 18      |
| 100  | 220     | 180     | 8   | 18      | M16          | 18      |
| 125  | 250     | 210     | 8   | 18      | M16          | 18      |
| 150  | 285     | 240     | 8   | 22      | M20          | 20      |
| 200  | 340     | 295     | 12  | 22      | M20          | 20      |
| 250  | 405     | 355     | 12  | 26      | M24          | 25      |
| 300  | 460     | 410     | 12  | 26      | M24          | 25      |
| 350  | 520     | 470     | 16  | 26      | M24          | 30      |
| 400  | 580     | 525     | 16  | 30      | M27          | 30      |
| 450  | 640     | 585     | 20  | 30      | M27          | 32      |
| 500  | 715     | 650     | 20  | 33      | M30          | 37      |
| 600  | 840     | 770     | 20  | 36      | M33          | 37      |
| 650  | 860     | 790     | 24  | 36      | M33          | 37      |
| 700  | 910     | 840     | 24  | 36      | M33          | 37      |
| 800  | 1025    | 950     | 24  | 39      | M36          | 37      |
| 900  | 1125    | 1050    | 28  | 39      | M36          | 42      |
| 1000 | 1255    | 1170    | 28  | 42      | M39          | 42      |
| 1200 | 1485    | 1390    | 32  | 48      | M45          | 47      |



- DN** Nominal size of flange
- D** Outer diameter
- K** Diameter of bolt circle
- pcs** Number of bolt holes
- d** Diameter of bolt hole
- s** Thickness of the flange (directive dimension)

**PN 25 (DIN 2501)**

| DN  | D<br>mm | K<br>mm | pcs | Bolts   |              |         |
|-----|---------|---------|-----|---------|--------------|---------|
|     |         |         |     | d<br>mm | Thread<br>mm | s<br>mm |
| 32  | 140     | 100     | 4   | 18      | M16          | 18      |
| 40  | 150     | 110     | 4   | 18      | M16          | 18      |
| 50  | 165     | 125     | 4   | 18      | M16          | 20      |
| 65  | 185     | 145     | 8   | 18      | M16          | 20      |
| 80  | 200     | 160     | 8   | 18      | M16          | 20      |
| 100 | 235     | 190     | 8   | 22      | M20          | 20      |
| 125 | 270     | 220     | 8   | 26      | M24          | 20      |
| 150 | 300     | 250     | 8   | 26      | M24          | 20      |
| 200 | 360     | 310     | 12  | 26      | M24          | 20      |
| 250 | 425     | 370     | 12  | 30      | M27          | 25      |
| 300 | 485     | 430     | 16  | 30      | M27          | 25      |
| 350 | 555     | 490     | 16  | 33      | M30          | 30      |
| 400 | 620     | 550     | 16  | 36      | M33          | 35      |
| 450 | 670     | 600     | 20  | 36      | M33          | 37      |
| 500 | 730     | 660     | 20  | 36      | M33          | 37      |
| 600 | 845     | 770     | 20  | 39      | M36          | 37      |
| 650 | 895     | 820     | 24  | 39      | M36          | 42      |
| 700 | 960     | 875     | 24  | 42      | M39          | 42      |
| 800 | 1085    | 990     | 24  | 48      | M45          | 47      |
| 900 | 1185    | 1090    | 28  | 48      | M45          | 47      |



- DN** Nominal size of flange
- D** Outer diameter
- K** Diameter of bolt circle
- pcs** Number of bolt holes
- d** Diameter of bolt hole
- s** Thickness of the flange (directive dimension)

# HOW TO READ THE TABLES

The movements are calculated for 1000 load cycles at nominal pressure and a temperature of 120°C. If the operating conditions differ from these nominal values, the calculation must be corrected accordingly. When the temperature rises the allowed values of movement and pressure decrease. The tables show axial movements only.

For all types, except for PRRS and PRRK, the movement given in the table refers to total movement in axial direction. An expansion joint can be stretched and compressed by one half of this measure, the distance between the extreme positions is the total movement. If the total movement is e.g. needed for compression, the expansion joint must be pre-elongated before installation.

***In types PRRS and PRRK the whole movement is designed for compression.***

The tables are grouped according to end fittings. The joint types are presented in the following order: ***PRRA, PRFA, PRFI, PRRO, PRRS ja PRRK.***

Legend: Column heads in the tables

|                                   |   |
|-----------------------------------|---|
| <b>Code</b>                       | Type code of Prospero. Please mention this code when ordering. You can also order by giving the code number only.   |
| <b>DN</b>                         | Nominal size of expansion joint.  |
| <b>PN</b>                         | Nominal pressure class of expansion joint. Equals to the design pressure (bar) at 120°C temperature. (1 bar = 0,1 MPa).   |
| <b>Movement</b>                   | Total axial movement of expansion joint.  |
| <b>Length</b>                     | Length of expansion joint as supplied, without presetting.  |
| <b>SL</b>                         | With inner sleeve=1, without=0.   |
| <b>Fx</b>                         | Axial spring rate of expansion joint. Due to the strongly non-linear spring force/movement ratio of an expansion joint, this is just an approximate (+/-35 %) spring rate measured in the middle point of total movement. |
| <b>Fig. No.</b>                   | Refers to the figure numbers of the drawings at the top of the page. Also indicates the number of bellows.  |
| <b>Ap</b>                         | Effective cross-section area of expansion joint.  |
| <b>Du</b>                         | Outside diameter of bellows (in types PRRO, PRRS and PRRK this refers to the outside diameter of the protective sleeve).  |
| <b>Connection</b>                 | Dimensions of connecting pipes (diameter x wall thickness).   |
| <b>Flange nom. pressure class</b> | Pressure class of flange, see connection dimensions in the tables on the previous page.   |
| <b>Weight</b>                     | Approximate total weight of the expansion joint and end fittings.   |

In some tables the last digit of type code is marked with "#". This should be replaced with a material code number from the top of the page.

***Subject to changes without notice.***

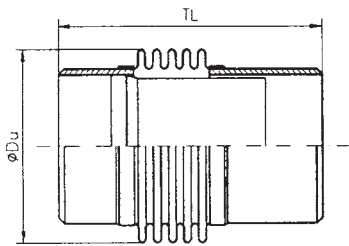


Figure 1, PRRA-1

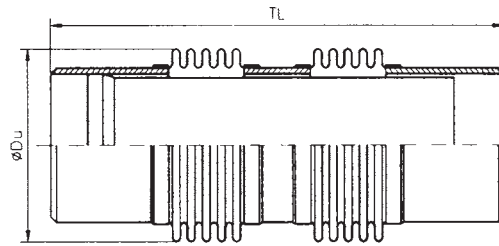


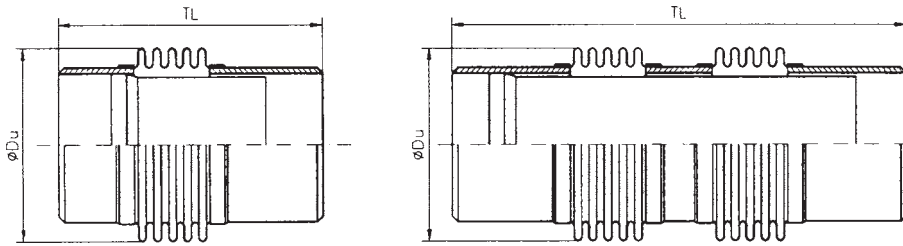
Figure 2, PRRA-2

Bellows SS 2333  
Welding ends St 37

“Connection” =  
outer diameter of the pipe  
and wall thickness.

| Code   | DN  | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Connection Ømm x mm | Weight kg |
|--------|-----|-----|-------------|-------|----|---------|----------|--------------------|--------|---------------------|-----------|
| PB0111 | 32  | 16  | 30          | 265   | 0  | 83      | 1        | 21,2               | 61     | 42,4 x 2,6          | 0,62      |
| PB4111 | 32  | 16  | 30          | 265   | 1  | 83      | 1        | 21,2               | 61     | 42,4 x 2,6          | 0,91      |
| PB0121 | 32  | 16  | 60          | 454   | 0  | 42      | 2        | 21,2               | 61     | 42,4 x 2,6          | 1,0       |
| PB4121 | 32  | 16  | 60          | 454   | 1  | 42      | 2        | 21,2               | 61     | 42,4 x 2,6          | 1,6       |
| PB0131 | 32  | 25  | 25          | 255   | 0  | 91      | 1        | 21,2               | 61     | 42,4 x 2,6          | 0,61      |
| PB4131 | 32  | 25  | 25          | 255   | 1  | 91      | 1        | 21,2               | 61     | 42,4 x 2,6          | 0,88      |
| PC0111 | 40  | 16  | 30          | 270   | 0  | 78      | 1        | 26,2               | 67     | 48,3 x 2,6          | 0,72      |
| PC4111 | 40  | 16  | 30          | 270   | 1  | 78      | 1        | 26,2               | 67     | 48,3 x 2,6          | 1,2       |
| PC0121 | 40  | 16  | 60          | 460   | 0  | 39      | 2        | 26,2               | 67     | 48,3 x 2,6          | 1,2       |
| PC4121 | 40  | 16  | 60          | 460   | 1  | 39      | 2        | 26,2               | 67     | 48,3 x 2,6          | 2,1       |
| PC0131 | 40  | 25  | 25          | 260   | 0  | 86      | 1        | 26,2               | 67     | 48,3 x 2,6          | 0,7       |
| PC4131 | 40  | 25  | 25          | 260   | 1  | 86      | 1        | 26,2               | 67     | 48,3 x 2,6          | 1,1       |
| PD0111 | 50  | 16  | 40          | 280   | 0  | 101     | 1        | 38,9               | 81     | 60,3 x 2,9          | 1,1       |
| PD5111 | 50  | 16  | 40          | 280   | 1  | 101     | 1        | 38,9               | 81     | 60,3 x 2,9          | 1,9       |
| PD0121 | 50  | 16  | 80          | 480   | 0  | 56      | 2        | 38,9               | 81     | 60,3 x 2,9          | 2,0       |
| PD5121 | 50  | 16  | 80          | 480   | 1  | 56      | 2        | 38,9               | 81     | 60,3 x 2,9          | 3,3       |
| PD0111 | 50  | 25  | 40          | 280   | 0  | 101     | 1        | 38,9               | 81     | 60,3 x 2,9          | 1,1       |
| PD5111 | 50  | 25  | 40          | 280   | 1  | 101     | 1        | 38,9               | 81     | 60,3 x 2,9          | 1,9       |
| PE0111 | 65  | 16  | 40          | 258   | 0  | 93      | 1        | 61,2               | 101    | 76,1 x 2,9          | 1,4       |
| PE5111 | 65  | 16  | 40          | 258   | 1  | 93      | 1        | 61,2               | 101    | 76,1 x 2,9          | 2,3       |
| PE0121 | 65  | 16  | 80          | 436   | 0  | 46      | 2        | 61,2               | 101    | 76,1 x 2,9          | 2,3       |
| PE5121 | 65  | 16  | 80          | 436   | 1  | 46      | 2        | 61,2               | 101    | 76,1 x 2,9          | 3,6       |
| PE0131 | 65  | 25  | 40          | 268   | 0  | 111     | 1        | 61,2               | 101    | 76,1 x 2,9          | 1,6       |
| PE5131 | 65  | 25  | 40          | 268   | 1  | 111     | 1        | 61,2               | 101    | 76,1 x 2,9          | 2,4       |
| PF0111 | 80  | 16  | 70          | 335   | 0  | 72      | 1        | 83,8               | 118    | 88,9 x 3,2          | 2,6       |
| PF3111 | 80  | 16  | 70          | 335   | 1  | 72      | 1        | 83,8               | 118    | 88,9 x 3,2          | 3,0       |
| PF0121 | 80  | 16  | 140         | 550   | 0  | 36      | 2        | 83,8               | 118    | 88,9 x 3,2          | 4,3       |
| PF2121 | 80  | 16  | 140         | 550   | 1  | 36      | 2        | 83,8               | 118    | 88,9 x 3,2          | 5,2       |
| PF0131 | 80  | 25  | 55          | 312   | 0  | 110     | 1        | 83,8               | 118    | 88,9 x 3,2          | 2,6       |
| PF3131 | 80  | 25  | 55          | 312   | 1  | 110     | 1        | 83,8               | 118    | 88,9 x 3,2          | 3,1       |
| PG0112 | 100 | 16  | 65          | 335   | 0  | 114     | 1        | 137                | 149    | 114,3 x 3,6         | 3,4       |
| PG3112 | 100 | 16  | 65          | 335   | 1  | 114     | 1        | 137                | 149    | 114,3 x 3,6         | 4,0       |
| PG0122 | 100 | 16  | 130         | 550   | 0  | 57      | 2        | 137                | 149    | 114,3 x 3,6         | 5,5       |
| PG3122 | 100 | 16  | 130         | 550   | 1  | 57      | 2        | 137                | 149    | 114,3 x 3,6         | 6,7       |
| PG0132 | 100 | 25  | 68          | 355   | 0  | 227     | 1        | 137                | 149    | 114,3 x 3,6         | 4,7       |
| PG3132 | 100 | 25  | 68          | 355   | 1  | 227     | 1        | 137                | 149    | 114,3 x 3,6         | 5,3       |
| PH0112 | 125 | 2,5 | 70          | 347   | 0  | 114     | 1        | 201                | 179    | 139,7 x 3,6         | 4,1       |
| PH2112 | 125 | 2,5 | 70          | 347   | 1  | 114     | 1        | 201                | 179    | 139,7 x 3,6         | 4,9       |
| PH0122 | 125 | 2,5 | 125         | 551   | 0  | 64      | 2        | 201                | 179    | 139,7 x 3,6         | 6,5       |
| PH2122 | 125 | 2,5 | 125         | 551   | 1  | 64      | 2        | 201                | 179    | 139,7 x 3,6         | 7,8       |
| PH0132 | 125 | 16  | 75          | 360   | 0  | 156     | 1        | 201                | 179    | 139,7 x 3,6         | 5,2       |
| PH2132 | 125 | 16  | 75          | 360   | 1  | 156     | 1        | 201                | 179    | 139,7 x 3,6         | 6,0       |
| PH0142 | 125 | 16  | 150         | 600   | 0  | 78      | 2        | 201                | 179    | 139,7 x 3,6         | 8,9       |
| PH2142 | 125 | 16  | 150         | 600   | 1  | 78      | 2        | 201                | 179    | 139,7 x 3,6         | 10        |
| PH0152 | 125 | 25  | 70          | 360   | 0  | 208     | 1        | 201                | 179    | 139,7 x 3,6         | 6,1       |
| PH2152 | 125 | 25  | 70          | 360   | 1  | 208     | 1        | 201                | 179    | 139,7 x 3,6         | 6,9       |
| PJ0112 | 150 | 2,5 | 70          | 343   | 0  | 114     | 1        | 284                | 212    | 168,3 x 4,0         | 5,3       |
| PJ2112 | 150 | 2,5 | 70          | 343   | 1  | 114     | 1        | 284                | 212    | 168,3 x 4,0         | 6,3       |





Bellows SS 2333  
Welding ends St 37

“Connection” =  
outer diameter of the pipe  
and wall thickness.

| Code   | DN  | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Connection Ømm x mm | Weight kg |
|--------|-----|-----|-------------|-------|----|---------|----------|--------------------|--------|---------------------|-----------|
| PJ0122 | 150 | 2,5 | 140         | 566   | 0  | 57      | 2        | 284                | 212    | 168,3 x 4,0         | 8,6       |
| PJ2122 | 150 | 2,5 | 140         | 566   | 1  | 57      | 2        | 284                | 212    | 168,3 x 4,0         | 9,9       |
| PJ0132 | 150 | 16  | 70          | 360   | 0  | 154     | 1        | 284                | 212    | 168,3 x 4,0         | 6,6       |
| PJ2132 | 150 | 16  | 70          | 360   | 1  | 154     | 1        | 284                | 212    | 168,3 x 4,0         | 7,6       |
| PJ0142 | 150 | 16  | 140         | 600   | 0  | 77      | 2        | 284                | 212    | 168,3 x 4,0         | 11        |
| PJ2142 | 150 | 16  | 140         | 600   | 1  | 77      | 2        | 284                | 212    | 168,3 x 4,0         | 13        |
| PJ0152 | 150 | 25  | 70          | 360   | 0  | 257     | 1        | 284                | 212    | 168,3 x 4,0         | 8,7       |
| PJ2152 | 150 | 25  | 70          | 360   | 1  | 257     | 1        | 284                | 212    | 168,3 x 4,0         | 9,8       |
| PK0222 | 200 | 6   | 65          | 340   | 0  | 132     | 1        | 456                | 265    | 219,1 x 4,5         | 7,2       |
| PK4222 | 200 | 6   | 65          | 340   | 1  | 132     | 1        | 456                | 265    | 219,1 x 4,5         | 8,5       |
| PK0232 | 200 | 6   | 119         | 500   | 0  | 77      | 1        | 456                | 265    | 219,1 x 4,5         | 10        |
| PK4232 | 200 | 6   | 119         | 500   | 1  | 77      | 1        | 456                | 265    | 219,1 x 4,5         | 12        |
| PK0242 | 200 | 6   | 195         | 770   | 0  | 46      | 2        | 456                | 265    | 219,1 x 4,5         | 16        |
| PK4242 | 200 | 6   | 195         | 770   | 1  | 46      | 2        | 456                | 265    | 219,1 x 4,5         | 18        |
| PK0252 | 200 | 10  | 64          | 340   | 0  | 198     | 1        | 456                | 265    | 219,1 x 4,5         | 8,4       |
| PK4252 | 200 | 10  | 64          | 340   | 1  | 198     | 1        | 456                | 265    | 219,1 x 4,5         | 9,7       |
| PK0262 | 200 | 10  | 118         | 500   | 0  | 115     | 1        | 456                | 265    | 219,1 x 4,5         | 12        |
| PK4262 | 200 | 10  | 118         | 500   | 1  | 115     | 1        | 456                | 265    | 219,1 x 4,5         | 14        |
| PK0272 | 200 | 10  | 193         | 770   | 0  | 69      | 2        | 456                | 265    | 219,1 x 4,5         | 19        |
| PK4272 | 200 | 10  | 193         | 770   | 1  | 69      | 2        | 456                | 265    | 219,1 x 4,5         | 21        |
| PK0282 | 200 | 16  | 63          | 340   | 0  | 264     | 1        | 456                | 265    | 219,1 x 4,5         | 9,5       |
| PK4282 | 200 | 16  | 63          | 340   | 1  | 264     | 1        | 456                | 265    | 219,1 x 4,5         | 11        |
| PK0292 | 200 | 16  | 115         | 500   | 0  | 154     | 1        | 456                | 265    | 219,1 x 4,5         | 14        |
| PK4292 | 200 | 16  | 115         | 500   | 1  | 154     | 1        | 456                | 265    | 219,1 x 4,5         | 16        |
| PK0302 | 200 | 16  | 189         | 770   | 0  | 92      | 2        | 456                | 265    | 219,1 x 4,5         | 22        |
| PK4302 | 200 | 16  | 189         | 770   | 1  | 92      | 2        | 456                | 265    | 219,1 x 4,5         | 24        |
| PK0312 | 200 | 25  | 62          | 340   | 0  | 396     | 1        | 456                | 265    | 219,1 x 4,5         | 12        |
| PK4312 | 200 | 25  | 62          | 340   | 1  | 396     | 1        | 456                | 265    | 219,1 x 4,5         | 13        |
| PK0322 | 200 | 25  | 114         | 500   | 0  | 231     | 1        | 456                | 265    | 219,1 x 4,5         | 18        |
| PK4322 | 200 | 25  | 114         | 500   | 1  | 231     | 1        | 456                | 265    | 219,1 x 4,5         | 20        |
| PL0242 | 250 | 2,5 | 200         | 720   | 0  | 56      | 2        | 697                | 323    | 273,0 x 5,0         | 20        |
| PL4242 | 250 | 2,5 | 200         | 720   | 1  | 56      | 2        | 697                | 323    | 273,0 x 5,0         | 22        |
| PL0222 | 250 | 6   | 70          | 335   | 0  | 144     | 1        | 697                | 323    | 273,0 x 5,0         | 9,7       |
| PL4222 | 250 | 6   | 70          | 335   | 1  | 144     | 1        | 697                | 323    | 273,0 x 5,0         | 11        |
| PL0232 | 250 | 6   | 128         | 495   | 0  | 84      | 1        | 697                | 323    | 273,0 x 5,0         | 14        |
| PL4232 | 250 | 6   | 128         | 495   | 1  | 84      | 1        | 697                | 323    | 273,0 x 5,0         | 16        |
| PL0252 | 250 | 6   | 210         | 760   | 0  | 50      | 2        | 697                | 323    | 273,0 x 5,0         | 21        |
| PL4252 | 250 | 6   | 210         | 760   | 1  | 50      | 2        | 697                | 323    | 273,0 x 5,0         | 23        |
| PL0262 | 250 | 10  | 69          | 335   | 0  | 215     | 1        | 697                | 323    | 273,0 x 5,0         | 11        |
| PL4262 | 250 | 10  | 69          | 335   | 1  | 215     | 1        | 697                | 323    | 273,0 x 5,0         | 13        |
| PL0272 | 250 | 10  | 127         | 495   | 0  | 126     | 1        | 697                | 323    | 273,0 x 5,0         | 16        |
| PL4272 | 250 | 10  | 127         | 495   | 1  | 126     | 1        | 697                | 323    | 273,0 x 5,0         | 18        |
| PL0282 | 250 | 10  | 208         | 760   | 0  | 75      | 2        | 697                | 323    | 273,0 x 5,0         | 25        |
| PL4282 | 250 | 10  | 208         | 760   | 1  | 75      | 2        | 697                | 323    | 273,0 x 5,0         | 27        |
| PL0292 | 250 | 16  | 67          | 335   | 0  | 287     | 1        | 697                | 323    | 273,0 x 5,0         | 13        |
| PL4292 | 250 | 16  | 67          | 335   | 1  | 287     | 1        | 697                | 323    | 273,0 x 5,0         | 14        |
| PL0302 | 250 | 16  | 124         | 495   | 0  | 168     | 1        | 697                | 323    | 273,0 x 5,0         | 19        |
| PL4302 | 250 | 16  | 124         | 495   | 1  | 168     | 1        | 697                | 323    | 273,0 x 5,0         | 21        |

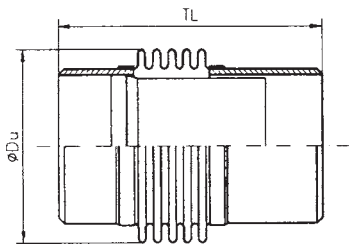


Figure 1, PRRA-1

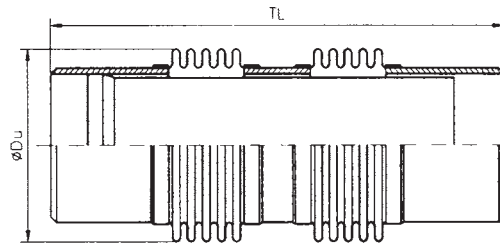


Figure 2, PRRA-2

Bellows SS 2333  
Welding ends St 37

“Connection” =  
outer diameter of the pipe  
and wall thickness.

| Code   | DN  | PN | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Connection Ømm x mm | Weight kg |
|--------|-----|----|-------------|-------|----|---------|----------|--------------------|--------|---------------------|-----------|
| PL0312 | 250 | 16 | 203         | 760   | 0  | 101     | 2        | 697                | 323    | 273,0 x 5,0         | 29        |
| PL4312 | 250 | 16 | 203         | 760   | 1  | 101     | 2        | 697                | 323    | 273,0 x 5,0         | 32        |
| PL0322 | 250 | 25 | 68          | 349   | 0  | 503     | 1        | 697                | 323    | 273,0 x 5,0         | 17        |
| PL4322 | 250 | 25 | 68          | 349   | 1  | 503     | 1        | 697                | 323    | 273,0 x 5,0         | 18        |
| PL0332 | 250 | 25 | 126         | 519   | 0  | 293     | 1        | 697                | 323    | 273,0 x 5,0         | 26        |
| PL4332 | 250 | 25 | 126         | 519   | 1  | 293     | 1        | 697                | 323    | 273,0 x 5,0         | 28        |
| PM0222 | 300 | 6  | 69          | 340   | 0  | 168     | 1        | 952                | 373    | 323,9 x 5,6         | 12        |
| PM4222 | 300 | 6  | 69          | 340   | 1  | 168     | 1        | 952                | 373    | 323,9 x 5,6         | 14        |
| PM0232 | 300 | 6  | 126         | 500   | 0  | 98      | 1        | 952                | 373    | 323,9 x 5,6         | 17        |
| PM4232 | 300 | 6  | 126         | 500   | 1  | 98      | 1        | 952                | 373    | 323,9 x 5,6         | 20        |
| PM0252 | 300 | 6  | 206         | 770   | 0  | 59      | 2        | 952                | 373    | 323,9 x 5,6         | 26        |
| PM4252 | 300 | 6  | 206         | 770   | 1  | 59      | 2        | 952                | 373    | 323,9 x 5,6         | 30        |
| PM0262 | 300 | 10 | 68          | 340   | 0  | 251     | 1        | 952                | 373    | 323,9 x 5,6         | 14        |
| PM4262 | 300 | 10 | 68          | 340   | 1  | 251     | 1        | 952                | 373    | 323,9 x 5,6         | 16        |
| PM0272 | 300 | 10 | 125         | 500   | 0  | 147     | 1        | 952                | 373    | 323,9 x 5,6         | 20        |
| PM4272 | 300 | 10 | 125         | 500   | 1  | 147     | 1        | 952                | 373    | 323,9 x 5,6         | 23        |
| PM0282 | 300 | 10 | 204         | 770   | 0  | 88      | 2        | 952                | 373    | 323,9 x 5,6         | 31        |
| PM4282 | 300 | 10 | 204         | 770   | 1  | 88      | 2        | 952                | 373    | 323,9 x 5,6         | 34        |
| PM0292 | 300 | 16 | 66          | 340   | 0  | 335     | 1        | 952                | 373    | 323,9 x 5,6         | 16        |
| PM4292 | 300 | 16 | 66          | 340   | 1  | 335     | 1        | 952                | 373    | 323,9 x 5,6         | 18        |
| PM0302 | 300 | 16 | 121         | 500   | 0  | 195     | 1        | 952                | 373    | 323,9 x 5,6         | 23        |
| PM4302 | 300 | 16 | 121         | 500   | 1  | 195     | 1        | 952                | 373    | 323,9 x 5,6         | 26        |
| PM0312 | 300 | 16 | 199         | 770   | 0  | 117     | 2        | 952                | 373    | 323,9 x 5,6         | 36        |
| PM4312 | 300 | 16 | 199         | 770   | 1  | 117     | 2        | 952                | 373    | 323,9 x 5,6         | 39        |
| PM0322 | 300 | 25 | 67          | 340   | 0  | 586     | 1        | 952                | 373    | 323,9 x 5,6         | 21        |
| PM4322 | 300 | 25 | 67          | 340   | 1  | 586     | 1        | 952                | 373    | 323,9 x 5,6         | 23        |
| PM0332 | 300 | 25 | 124         | 500   | 0  | 342     | 1        | 952                | 373    | 323,9 x 5,6         | 32        |
| PM4332 | 300 | 25 | 124         | 500   | 1  | 342     | 1        | 952                | 373    | 323,9 x 5,6         | 35        |
| PN0222 | 350 | 6  | 68          | 340   | 0  | 182     | 1        | 1138               | 406    | 355,6 x 5,6         | 14        |
| PN4222 | 350 | 6  | 68          | 340   | 1  | 182     | 1        | 1138               | 406    | 355,6 x 5,6         | 16        |
| PN0232 | 350 | 6  | 124         | 500   | 0  | 106     | 1        | 1138               | 406    | 355,6 x 5,6         | 19        |
| PN4232 | 350 | 6  | 124         | 500   | 1  | 106     | 1        | 1138               | 406    | 355,6 x 5,6         | 22        |
| PN0252 | 350 | 6  | 203         | 770   | 0  | 64      | 2        | 1138               | 406    | 355,6 x 5,6         | 29        |
| PN4252 | 350 | 6  | 203         | 770   | 1  | 64      | 2        | 1138               | 406    | 355,6 x 5,6         | 32        |
| PN0262 | 350 | 10 | 67          | 340   | 0  | 274     | 1        | 1138               | 406    | 355,6 x 5,6         | 16        |
| PN4262 | 350 | 10 | 67          | 340   | 1  | 274     | 1        | 1138               | 406    | 355,6 x 5,6         | 18        |
| PN0272 | 350 | 10 | 123         | 500   | 0  | 160     | 1        | 1138               | 406    | 355,6 x 5,6         | 22        |
| PN4272 | 350 | 10 | 123         | 500   | 1  | 160     | 1        | 1138               | 406    | 355,6 x 5,6         | 25        |
| PN0282 | 350 | 10 | 201         | 770   | 0  | 96      | 2        | 1138               | 406    | 355,6 x 5,6         | 34        |
| PN4282 | 350 | 10 | 201         | 770   | 1  | 96      | 2        | 1138               | 406    | 355,6 x 5,6         | 38        |
| PN0292 | 350 | 16 | 65          | 340   | 0  | 365     | 1        | 1138               | 406    | 355,6 x 5,6         | 17        |
| PN4292 | 350 | 16 | 65          | 340   | 1  | 365     | 1        | 1138               | 406    | 355,6 x 5,6         | 19        |
| PN0302 | 350 | 16 | 120         | 500   | 0  | 213     | 1        | 1138               | 406    | 355,6 x 5,6         | 26        |
| PN4302 | 350 | 16 | 120         | 500   | 1  | 213     | 1        | 1138               | 406    | 355,6 x 5,6         | 29        |
| PN0312 | 350 | 16 | 218         | 810   | 0  | 116     | 2        | 1138               | 406    | 355,6 x 5,6         | 42        |
| PN4312 | 350 | 16 | 218         | 810   | 1  | 116     | 2        | 1138               | 406    | 355,6 x 5,6         | 45        |
| PN0322 | 350 | 25 | 66          | 340   | 0  | 638     | 1        | 1138               | 406    | 355,6 x 5,6         | 23        |
| PN4322 | 350 | 25 | 66          | 340   | 1  | 638     | 1        | 1138               | 406    | 355,6 x 5,6         | 25        |

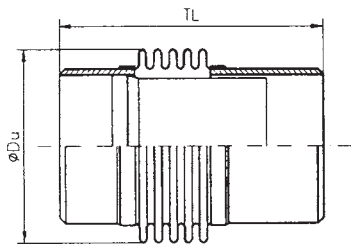


Figure 1, PRRA-1

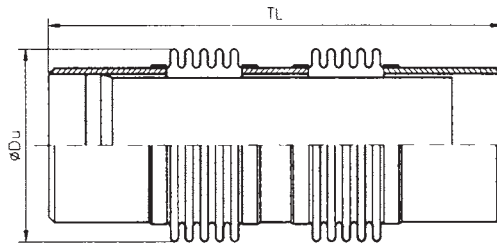


Figure 2, PRRA-2

Bellows SS 2333  
Welding ends St 37

“Connection” =  
outer diameter of the pipe  
and wall thickness.

| Code   | DN  | PN  | Movement<br>mm | TL<br>mm | SP | Fx<br>N/mm | Fig.<br>no. | Ap<br>cm <sup>2</sup> | ØDu<br>mm | Connection<br>Ømm x mm | Weight<br>kg |
|--------|-----|-----|----------------|----------|----|------------|-------------|-----------------------|-----------|------------------------|--------------|
| PN0332 | 350 | 25  | 122            | 500      | 0  | 372        | 1           | 1138                  | 406       | 355,6 x 5,6            | 35           |
| PN4332 | 350 | 25  | 122            | 500      | 1  | 372        | 1           | 1138                  | 406       | 355,6 x 5,6            | 38           |
| PP0222 | 400 | 2,5 | 73             | 340      | 0  | 198        | 1           | 1462                  | 458       | 406,4 x 6,3            | 17           |
| PP4222 | 400 | 2,5 | 73             | 340      | 1  | 198        | 1           | 1462                  | 458       | 406,4 x 6,3            | 19           |
| PP0232 | 400 | 2,5 | 131            | 496      | 0  | 119        | 1           | 1462                  | 458       | 406,4 x 6,3            | 23           |
| PP4232 | 400 | 2,5 | 131            | 496      | 1  | 119        | 1           | 1462                  | 458       | 406,4 x 6,3            | 27           |
| PP0242 | 400 | 2,5 | 204            | 746      | 0  | 74         | 2           | 1462                  | 458       | 406,4 x 6,3            | 34           |
| PP4242 | 400 | 2,5 | 204            | 746      | 1  | 74         | 2           | 1462                  | 458       | 406,4 x 6,3            | 38           |
| PP0252 | 400 | 6   | 82             | 364      | 0  | 170        | 1           | 1462                  | 458       | 406,4 x 6,3            | 17           |
| PP4252 | 400 | 6   | 82             | 364      | 1  | 170        | 1           | 1462                  | 458       | 406,4 x 6,3            | 20           |
| PP0262 | 400 | 6   | 136            | 520      | 0  | 108        | 1           | 1462                  | 458       | 406,4 x 6,3            | 24           |
| PP4262 | 400 | 6   | 136            | 520      | 1  | 108        | 1           | 1462                  | 458       | 406,4 x 6,3            | 27           |
| PP0272 | 400 | 6   | 218            | 794      | 0  | 66         | 2           | 1462                  | 458       | 406,4 x 6,3            | 36           |
| PP4272 | 400 | 6   | 218            | 794      | 1  | 66         | 2           | 1462                  | 458       | 406,4 x 6,3            | 40           |
| PP0282 | 400 | 10  | 81             | 364      | 0  | 255        | 1           | 1462                  | 458       | 406,4 x 6,3            | 20           |
| PP4282 | 400 | 10  | 81             | 364      | 1  | 255        | 1           | 1462                  | 458       | 406,4 x 6,3            | 22           |
| PP0292 | 400 | 10  | 134            | 520      | 0  | 162        | 1           | 1462                  | 458       | 406,4 x 6,3            | 27           |
| PP4292 | 400 | 10  | 134            | 520      | 1  | 162        | 1           | 1462                  | 458       | 406,4 x 6,3            | 31           |
| PP0302 | 400 | 10  | 215            | 794      | 0  | 99         | 2           | 1462                  | 458       | 406,4 x 6,3            | 42           |
| PP4302 | 400 | 10  | 215            | 794      | 1  | 99         | 2           | 1462                  | 458       | 406,4 x 6,3            | 46           |
| PP0312 | 400 | 16  | 81             | 364      | 0  | 425        | 1           | 1462                  | 458       | 406,4 x 6,3            | 25           |
| PP4312 | 400 | 16  | 81             | 364      | 1  | 425        | 1           | 1462                  | 458       | 406,4 x 6,3            | 27           |
| PP0322 | 400 | 16  | 135            | 520      | 0  | 270        | 1           | 1462                  | 458       | 406,4 x 6,3            | 35           |
| PP4322 | 400 | 16  | 135            | 520      | 1  | 270        | 1           | 1462                  | 458       | 406,4 x 6,3            | 38           |
| PP0332 | 400 | 16  | 216            | 794      | 0  | 165        | 2           | 1462                  | 458       | 406,4 x 6,3            | 54           |
| PP4332 | 400 | 16  | 216            | 794      | 1  | 165        | 2           | 1462                  | 458       | 406,4 x 6,3            | 58           |
| PP0342 | 400 | 25  | 80             | 364      | 0  | 595        | 1           | 1462                  | 458       | 406,4 x 6,3            | 29           |
| PP4342 | 400 | 25  | 80             | 364      | 1  | 595        | 1           | 1462                  | 458       | 406,4 x 6,3            | 32           |
| PP0352 | 400 | 25  | 133            | 520      | 0  | 379        | 1           | 1462                  | 458       | 406,4 x 6,3            | 42           |
| PP4352 | 400 | 25  | 133            | 520      | 1  | 379        | 1           | 1462                  | 458       | 406,4 x 6,3            | 46           |
| PQ0252 | 450 | 6   | 76             | 353      | 0  | 191        | 1           | 1798                  | 505       | 457,0 x 6,3            | 19           |
| PQ4252 | 450 | 6   | 76             | 353      | 1  | 191        | 1           | 1798                  | 505       | 457,0 x 6,3            | 22           |
| PQ0262 | 450 | 6   | 126            | 503      | 0  | 121        | 1           | 1798                  | 505       | 457,0 x 6,3            | 26           |
| PQ4262 | 450 | 6   | 126            | 503      | 1  | 121        | 1           | 1798                  | 505       | 457,0 x 6,3            | 30           |
| PQ0242 | 450 | 6   | 202            | 766      | 0  | 74         | 2           | 1798                  | 505       | 457,0 x 6,3            | 39           |
| PQ4242 | 450 | 6   | 202            | 766      | 1  | 74         | 2           | 1798                  | 505       | 457,0 x 6,3            | 44           |
| PQ0282 | 450 | 10  | 75             | 353      | 0  | 286        | 1           | 1798                  | 505       | 457,0 x 6,3            | 22           |
| PQ4282 | 450 | 10  | 75             | 353      | 1  | 286        | 1           | 1798                  | 505       | 457,0 x 6,3            | 25           |
| PQ0292 | 450 | 10  | 125            | 503      | 0  | 182        | 1           | 1798                  | 505       | 457,0 x 6,3            | 30           |
| PQ4292 | 450 | 10  | 125            | 503      | 1  | 182        | 1           | 1798                  | 505       | 457,0 x 6,3            | 34           |
| PQ0302 | 450 | 10  | 200            | 766      | 0  | 111        | 2           | 1798                  | 505       | 457,0 x 6,3            | 46           |
| PQ4302 | 450 | 10  | 200            | 766      | 1  | 111        | 2           | 1798                  | 505       | 457,0 x 6,3            | 50           |
| PQ0312 | 450 | 16  | 75             | 353      | 0  | 477        | 1           | 1798                  | 505       | 457,0 x 6,3            | 27           |
| PQ4312 | 450 | 16  | 75             | 353      | 1  | 477        | 1           | 1798                  | 505       | 457,0 x 6,3            | 30           |
| PQ0322 | 450 | 16  | 125            | 503      | 0  | 303        | 1           | 1798                  | 505       | 457,0 x 6,3            | 38           |
| PQ4322 | 450 | 16  | 125            | 503      | 1  | 303        | 1           | 1798                  | 505       | 457,0 x 6,3            | 42           |
| PQ0332 | 450 | 16  | 201            | 766      | 0  | 186        | 2           | 1798                  | 505       | 457,0 x 6,3            | 59           |
| PQ4332 | 450 | 16  | 201            | 766      | 1  | 186        | 2           | 1798                  | 505       | 457,0 x 6,3            | 63           |

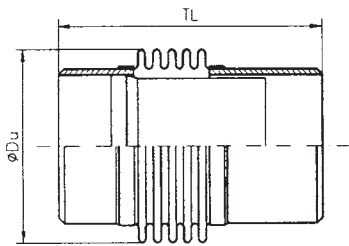


Figure 1, PRRA-1

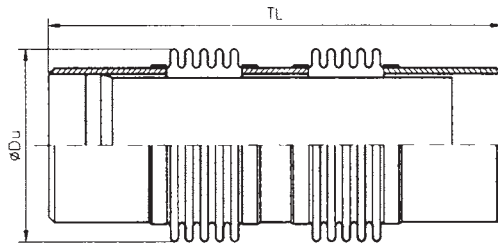


Figure 2, PRRA-2

Bellows SS 2333  
Welding ends St 37

“Connection” =  
outer diameter of the pipe  
and wall thickness.

| Code   | DN  | PN | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Connection Ømm x mm | Weight kg |
|--------|-----|----|-------------|-------|----|---------|----------|--------------------|--------|---------------------|-----------|
| PQ0342 | 450 | 25 | 74          | 367   | 0  | 668     | 1        | 1798               | 505    | 457,0 x 6,3         | 32        |
| PQ4342 | 450 | 25 | 74          | 367   | 1  | 668     | 1        | 1798               | 505    | 457,0 x 6,3         | 35        |
| PQ0352 | 450 | 25 | 123         | 525   | 0  | 425     | 1        | 1798               | 505    | 457,0 x 6,3         | 46        |
| PQ4352 | 450 | 25 | 123         | 525   | 1  | 425     | 1        | 1798               | 505    | 457,0 x 6,3         | 51        |
| PR0252 | 500 | 6  | 79          | 365   | 0  | 212     | 1        | 2240               | 560    | 508,0 x 6,3         | 22        |
| PR4252 | 500 | 6  | 79          | 365   | 1  | 212     | 1        | 2240               | 560    | 508,0 x 6,3         | 25        |
| PR0262 | 500 | 6  | 131         | 525   | 0  | 135     | 1        | 2240               | 560    | 508,0 x 6,3         | 30        |
| PR4262 | 500 | 6  | 131         | 525   | 1  | 135     | 1        | 2240               | 560    | 508,0 x 6,3         | 34        |
| PR0272 | 500 | 6  | 210         | 800   | 0  | 82      | 2        | 2240               | 560    | 508,0 x 6,3         | 44        |
| PR4272 | 500 | 6  | 210         | 800   | 1  | 82      | 2        | 2240               | 560    | 508,0 x 6,3         | 50        |
| PR0282 | 500 | 10 | 78          | 365   | 0  | 318     | 1        | 2240               | 560    | 508,0 x 6,3         | 25        |
| PR4282 | 500 | 10 | 78          | 365   | 1  | 318     | 1        | 2240               | 560    | 508,0 x 6,3         | 28        |
| PR0292 | 500 | 10 | 130         | 525   | 0  | 202     | 1        | 2240               | 560    | 508,0 x 6,3         | 34        |
| PR4292 | 500 | 10 | 130         | 525   | 1  | 202     | 1        | 2240               | 560    | 508,0 x 6,3         | 39        |
| PR0302 | 500 | 10 | 207         | 800   | 0  | 124     | 2        | 2240               | 560    | 508,0 x 6,3         | 52        |
| PR4302 | 500 | 10 | 207         | 800   | 1  | 124     | 2        | 2240               | 560    | 508,0 x 6,3         | 57        |
| PR0312 | 500 | 16 | 78          | 365   | 0  | 530     | 1        | 2240               | 560    | 508,0 x 6,3         | 31        |
| PR4312 | 500 | 16 | 78          | 365   | 1  | 530     | 1        | 2240               | 560    | 508,0 x 6,3         | 34        |
| PR0322 | 500 | 16 | 130         | 525   | 0  | 337     | 1        | 2240               | 560    | 508,0 x 6,3         | 43        |
| PR4322 | 500 | 16 | 130         | 525   | 1  | 337     | 1        | 2240               | 560    | 508,0 x 6,3         | 48        |
| PR0332 | 500 | 16 | 208         | 800   | 0  | 206     | 2        | 2240               | 560    | 508,0 x 6,3         | 67        |
| PR4332 | 500 | 16 | 208         | 800   | 1  | 206     | 2        | 2240               | 560    | 508,0 x 6,3         | 72        |
| PR0342 | 500 | 25 | 77          | 365   | 0  | 742     | 1        | 2240               | 560    | 508 x 8             | 41        |
| PR4342 | 500 | 25 | 77          | 365   | 1  | 742     | 1        | 2240               | 560    | 508 x 8             | 44        |
| PR0352 | 500 | 25 | 128         | 525   | 0  | 472     | 1        | 2240               | 560    | 508 x 8             | 58        |
| PR4352 | 500 | 25 | 128         | 525   | 1  | 472     | 1        | 2240               | 560    | 508 x 8             | 63        |
| PS0222 | 600 | 6  | 74          | 354   | 0  | 247     | 1        | 3099               | 655    | 610 x 8             | 30        |
| PS4222 | 600 | 6  | 74          | 354   | 1  | 247     | 1        | 3099               | 655    | 610 x 8             | 34        |
| PS0262 | 600 | 6  | 123         | 510   | 0  | 157     | 1        | 3099               | 655    | 610 x 8             | 41        |
| PS4262 | 600 | 6  | 123         | 510   | 1  | 157     | 1        | 3099               | 655    | 610 x 8             | 47        |
| PS0272 | 600 | 6  | 222         | 822   | 0  | 87      | 2        | 3099               | 655    | 610 x 8             | 63        |
| PS4272 | 600 | 6  | 222         | 822   | 1  | 87      | 2        | 3099               | 655    | 610 x 8             | 70        |
| PS0282 | 600 | 10 | 75          | 354   | 0  | 495     | 1        | 3099               | 655    | 610 x 8             | 38        |
| PS4282 | 600 | 10 | 75          | 354   | 1  | 495     | 1        | 3099               | 655    | 610 x 8             | 41        |
| PS0292 | 600 | 10 | 126         | 510   | 0  | 315     | 1        | 3099               | 655    | 610 x 8             | 53        |
| PS4292 | 600 | 10 | 126         | 510   | 1  | 315     | 1        | 3099               | 655    | 610 x 8             | 58        |
| PS0302 | 600 | 10 | 202         | 774   | 0  | 192     | 2        | 3099               | 655    | 610 x 8             | 80        |
| PS4302 | 600 | 10 | 202         | 774   | 1  | 192     | 2        | 3099               | 655    | 610 x 8             | 86        |
| PS0312 | 600 | 16 | 75          | 354   | 0  | 742     | 1        | 3099               | 655    | 610 x 8             | 45        |
| PS4312 | 600 | 16 | 75          | 354   | 1  | 742     | 1        | 3099               | 655    | 610 x 8             | 48        |
| PS0322 | 600 | 16 | 125         | 510   | 0  | 472     | 1        | 3099               | 655    | 610 x 8             | 63        |
| PS4322 | 600 | 16 | 125         | 510   | 1  | 472     | 1        | 3099               | 655    | 610 x 8             | 69        |
| PS0332 | 600 | 16 | 200         | 774   | 0  | 289     | 2        | 3099               | 655    | 610 x 8             | 97        |
| PS4332 | 600 | 16 | 200         | 774   | 1  | 289     | 2        | 3099               | 655    | 610 x 8             | 103       |
| PS0342 | 600 | 25 | 74          | 375   | 0  | 1113    | 1        | 3099               | 655    | 610 x 10            | 61        |
| PS4342 | 600 | 25 | 74          | 375   | 1  | 1113    | 1        | 3099               | 655    | 610 x 10            | 65        |
| PS0352 | 600 | 25 | 124         | 543   | 0  | 708     | 1        | 3099               | 655    | 610 x 10            | 86        |
| PS4352 | 600 | 25 | 124         | 543   | 1  | 708     | 1        | 3099               | 655    | 610 x 10            | 92        |

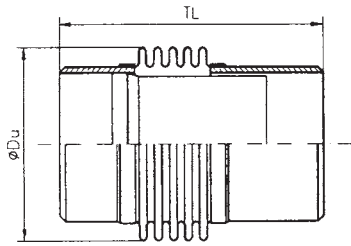


Figure 1, PRRA-1

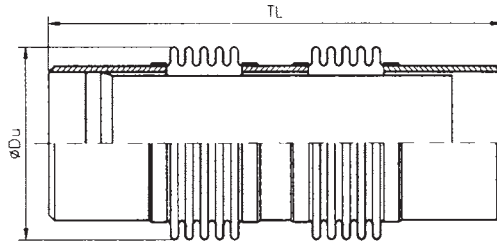


Figure 2, PRRA-2

Bellows SS 2333  
Welding ends St 37

“Connection” =  
outer diameter of the pipe  
and wall thickness.

| Code   | DN  | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Connection Ømm x mm | Weight kg |
|--------|-----|-----|-------------|-------|----|---------|----------|--------------------|--------|---------------------|-----------|
| PU0222 | 700 | 2,5 | 71          | 360   | 0  | 331     | 1        | 4278               | 764    | 711 x 8,8           | 38        |
| PU4222 | 700 | 2,5 | 71          | 360   | 1  | 331     | 1        | 4278               | 764    | 711 x 8,8           | 42        |
| PU0232 | 700 | 2,5 | 128         | 528   | 0  | 199     | 1        | 4278               | 764    | 711 x 8,8           | 52        |
| PU4232 | 700 | 2,5 | 128         | 528   | 1  | 199     | 1        | 4278               | 764    | 711 x 8,8           | 58        |
| PU0242 | 700 | 2,5 | 200         | 798   | 0  | 124     | 2        | 4278               | 764    | 711 x 8,8           | 76        |
| PU4242 | 700 | 2,5 | 200         | 798   | 1  | 124     | 2        | 4278               | 764    | 711 x 8,8           | 83        |
| PU0252 | 700 | 6   | 80          | 387   | 0  | 284     | 1        | 4278               | 764    | 711 x 8,8           | 39        |
| PU4252 | 700 | 6   | 80          | 387   | 1  | 284     | 1        | 4278               | 764    | 711 x 8,8           | 44        |
| PU0262 | 700 | 6   | 134         | 555   | 0  | 181     | 1        | 4278               | 764    | 711 x 8,8           | 53        |
| PU4262 | 700 | 6   | 134         | 555   | 1  | 181     | 1        | 4278               | 764    | 711 x 8,8           | 60        |
| PU0272 | 700 | 6   | 214         | 852   | 0  | 110     | 2        | 4278               | 764    | 711 x 8,8           | 78        |
| PU4272 | 700 | 6   | 214         | 852   | 1  | 110     | 2        | 4278               | 764    | 711 x 8,8           | 86        |
| PU0282 | 700 | 10  | 79          | 387   | 0  | 426     | 1        | 4278               | 764    | 711 x 8,8           | 44        |
| PU4282 | 700 | 10  | 79          | 387   | 1  | 426     | 1        | 4278               | 764    | 711 x 8,8           | 49        |
| PU0292 | 700 | 10  | 132         | 555   | 0  | 271     | 1        | 4278               | 764    | 711 x 8,8           | 60        |
| PU4292 | 700 | 10  | 132         | 555   | 1  | 271     | 1        | 4278               | 764    | 711 x 8,8           | 67        |
| PU0302 | 700 | 10  | 212         | 852   | 0  | 166     | 2        | 4278               | 764    | 711 x 8,8           | 91        |
| PU4302 | 700 | 10  | 212         | 852   | 1  | 166     | 2        | 4278               | 764    | 711 x 8,8           | 99        |
| PU0312 | 700 | 16  | 80          | 387   | 0  | 852     | 1        | 4278               | 764    | 711 x 8,8           | 57        |
| PU4312 | 700 | 16  | 80          | 387   | 1  | 852     | 1        | 4278               | 764    | 711 x 8,8           | 62        |
| PU0322 | 700 | 16  | 133         | 555   | 0  | 542     | 1        | 4278               | 764    | 711 x 8,8           | 79        |
| PU4322 | 700 | 16  | 133         | 555   | 1  | 542     | 1        | 4278               | 764    | 711 x 8,8           | 86        |
| PU0332 | 700 | 16  | 213         | 852   | 0  | 331     | 2        | 4278               | 764    | 711 x 8,8           | 123       |
| PU4332 | 700 | 16  | 213         | 852   | 1  | 331     | 2        | 4278               | 764    | 711 x 8,8           | 130       |
| PU0342 | 700 | 25  | 80          | 408   | 0  | 1278    | 1        | 4278               | 764    | 711 x 11            | 72        |
| PU4342 | 700 | 25  | 80          | 408   | 1  | 1278    | 1        | 4278               | 764    | 711 x 11            | 76        |
| PU0352 | 700 | 25  | 133         | 588   | 0  | 813     | 1        | 4278               | 764    | 711 x 11            | 106       |
| PU4352 | 700 | 25  | 133         | 588   | 1  | 813     | 1        | 4278               | 764    | 711 x 11            | 114       |
| PV0222 | 800 | 2,5 | 75          | 324   | 0  | 392     | 1        | 5619               | 872    | 813 x 8,8           | 43        |
| PV4222 | 800 | 2,5 | 75          | 324   | 1  | 392     | 1        | 5619               | 872    | 813 x 8,8           | 47        |
| PV0232 | 800 | 2,5 | 126         | 528   | 0  | 235     | 1        | 5619               | 872    | 813 x 8,8           | 58        |
| PV4232 | 800 | 2,5 | 126         | 528   | 1  | 235     | 1        | 5619               | 872    | 813 x 8,8           | 66        |
| PV0242 | 800 | 2,5 | 201         | 706   | 0  | 147     | 2        | 5619               | 872    | 813 x 8,8           | 86        |
| PV4242 | 800 | 2,5 | 201         | 706   | 1  | 147     | 2        | 5619               | 872    | 813 x 8,8           | 93        |
| PV0252 | 800 | 6   | 73          | 324   | 0  | 589     | 1        | 5619               | 872    | 813 x 8,8           | 47        |
| PV4252 | 800 | 6   | 73          | 324   | 1  | 589     | 1        | 5619               | 872    | 813 x 8,8           | 51        |
| PV0262 | 800 | 6   | 122         | 472   | 0  | 353     | 1        | 5619               | 872    | 813 x 8,8           | 65        |
| PV4262 | 800 | 6   | 122         | 472   | 1  | 353     | 1        | 5619               | 872    | 813 x 8,8           | 71        |
| PV0272 | 800 | 6   | 220         | 750   | 0  | 196     | 2        | 5619               | 872    | 813 x 8,8           | 99        |
| PV4272 | 800 | 6   | 220         | 750   | 1  | 196     | 2        | 5619               | 872    | 813 x 8,8           | 107       |
| PV0282 | 800 | 10  | 72          | 324   | 0  | 785     | 1        | 5619               | 872    | 813 x 8,8           | 51        |
| PV4282 | 800 | 10  | 72          | 324   | 1  | 785     | 1        | 5619               | 872    | 813 x 8,8           | 56        |
| PV0292 | 800 | 10  | 119         | 472   | 0  | 471     | 1        | 5619               | 872    | 813 x 8,8           | 72        |
| PV4292 | 800 | 10  | 119         | 472   | 1  | 471     | 1        | 5619               | 872    | 813 x 8,8           | 79        |
| PV0302 | 800 | 10  | 215         | 750   | 0  | 262     | 2        | 5619               | 872    | 813 x 8,8           | 113       |
| PV4302 | 800 | 10  | 215         | 750   | 1  | 262     | 2        | 5619               | 872    | 813 x 8,8           | 121       |
| PV0312 | 800 | 16  | 72          | 324   | 0  | 1373    | 1        | 5619               | 872    | 813 x 8,8           | 63        |
| PV4312 | 800 | 16  | 72          | 324   | 1  | 1373    | 1        | 5619               | 872    | 813 x 8,8           | 67        |

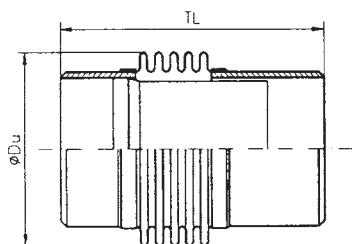


Figure 1, PRRA-1

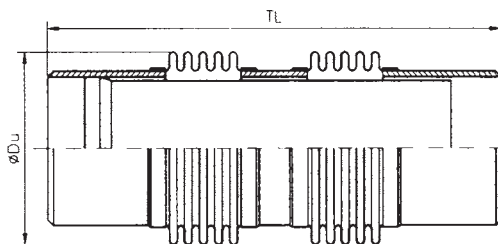


Figure 2, PRRA-2

Bellows SS 2333  
Welding ends St 37

“Connection” =  
outer diameter of the pipe  
and wall thickness.

| Code   | DN   | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Connection Ømm x mm | Weight kg |
|--------|------|-----|-------------|-------|----|---------|----------|--------------------|--------|---------------------|-----------|
| PV0322 | 800  | 16  | 121         | 472   | 0  | 824     | 1        | 5619               | 872    | 813 x 8,8           | 91        |
| PV4322 | 800  | 16  | 121         | 472   | 1  | 824     | 1        | 5619               | 872    | 813 x 8,8           | 97        |
| PV0332 | 800  | 16  | 217         | 750   | 0  | 458     | 2        | 5619               | 872    | 813 x 8,8           | 147       |
| PV4332 | 800  | 16  | 217         | 750   | 1  | 458     | 2        | 5619               | 872    | 813 x 8,8           | 155       |
| PV0342 | 800  | 25  | 72          | 342   | 0  | 1962    | 1        | 5619               | 872    | 813 x 12,5          | 90        |
| PV4342 | 800  | 25  | 72          | 342   | 1  | 1962    | 1        | 5619               | 872    | 813 x 12,5          | 94        |
| PV0352 | 800  | 25  | 120         | 502   | 0  | 1177    | 1        | 5619               | 872    | 813 x 12,5          | 130       |
| PV4352 | 800  | 25  | 120         | 502   | 1  | 1177    | 1        | 5619               | 872    | 813 x 12,5          | 137       |
| PW0222 | 900  | 2,5 | 70          | 325   | 0  | 508     | 1        | 6996               | 970    | 914 x 10            | 52        |
| PW4222 | 900  | 2,5 | 70          | 325   | 1  | 508     | 1        | 6996               | 970    | 914 x 10            | 57        |
| PW0232 | 900  | 2,5 | 126         | 485   | 0  | 282     | 1        | 6996               | 970    | 914 x 10            | 71        |
| PW4232 | 900  | 2,5 | 126         | 485   | 1  | 282     | 1        | 6996               | 970    | 914 x 10            | 79        |
| PW0212 | 900  | 2,5 | 196         | 720   | 0  | 181     | 2        | 6996               | 970    | 914 x 10            | 104       |
| PW4212 | 900  | 2,5 | 196         | 720   | 1  | 181     | 2        | 6996               | 970    | 914 x 10            | 113       |
| PW0252 | 900  | 6   | 81          | 350   | 0  | 635     | 1        | 6996               | 970    | 914 x 10            | 58        |
| PW4252 | 900  | 6   | 81          | 350   | 1  | 635     | 1        | 6996               | 970    | 914 x 10            | 64        |
| PW0262 | 900  | 6   | 122         | 485   | 0  | 423     | 1        | 6996               | 970    | 914 x 10            | 78        |
| PW4262 | 900  | 6   | 122         | 485   | 1  | 423     | 1        | 6996               | 970    | 914 x 10            | 86        |
| PW0272 | 900  | 6   | 218         | 770   | 0  | 238     | 2        | 6996               | 970    | 914 x 10            | 120       |
| PW4272 | 900  | 6   | 218         | 770   | 1  | 238     | 2        | 6996               | 970    | 914 x 10            | 129       |
| PW0282 | 900  | 10  | 80          | 350   | 0  | 847     | 1        | 6996               | 970    | 914 x 10            | 64        |
| PW4282 | 900  | 10  | 80          | 350   | 1  | 847     | 1        | 6996               | 970    | 914 x 10            | 69        |
| PW0292 | 900  | 10  | 120         | 485   | 0  | 564     | 1        | 6996               | 970    | 914 x 10            | 83        |
| PW4292 | 900  | 10  | 120         | 485   | 1  | 564     | 1        | 6996               | 970    | 914 x 10            | 91        |
| PW0302 | 900  | 10  | 214         | 770   | 0  | 317     | 2        | 6996               | 970    | 914 x 10            | 132       |
| PW4302 | 900  | 10  | 214         | 770   | 1  | 317     | 2        | 6996               | 970    | 914 x 10            | 141       |
| PX0312 | 900  | 16  | 119         | 514   | 0  | 1414    | 1        | 7178               | 986    | 914 x 10            | 125       |
| PX4312 | 900  | 16  | 119         | 514   | 1  | 1414    | 1        | 7178               | 986    | 914 x 10            | 133       |
| PX0322 | 900  | 16  | 178         | 700   | 0  | 943     | 1        | 7178               | 986    | 914 x 10            | 170       |
| PX4322 | 900  | 16  | 178         | 700   | 1  | 943     | 1        | 7178               | 986    | 914 x 10            | 182       |
| PX0342 | 900  | 25  | 118         | 514   | 0  | 1697    | 1        | 7178               | 986    | 914 x 14,2          | 162       |
| PX4342 | 900  | 25  | 118         | 514   | 1  | 1697    | 1        | 7178               | 986    | 914 x 14,2          | 170       |
| PX0352 | 900  | 25  | 177         | 700   | 0  | 1131    | 1        | 7178               | 986    | 914 x 14,2          | 220       |
| PX4352 | 900  | 25  | 177         | 700   | 1  | 1131    | 1        | 7178               | 986    | 914 x 14,2          | 232       |
| PY0222 | 1000 | 2,5 | 80          | 350   | 0  | 470     | 1        | 8652               | 1076   | 1016 x 11           | 65        |
| PY4222 | 1000 | 2,5 | 80          | 350   | 1  | 470     | 1        | 8652               | 1076   | 1016 x 11           | 71        |
| PY0232 | 1000 | 2,5 | 134         | 510   | 0  | 282     | 1        | 8652               | 1076   | 1016 x 11           | 88        |
| PY4232 | 1000 | 2,5 | 134         | 510   | 1  | 282     | 1        | 8652               | 1076   | 1016 x 11           | 96        |
| PY0242 | 1000 | 2,5 | 214         | 770   | 0  | 176     | 2        | 8652               | 1076   | 1016 x 11           | 129       |
| PY4242 | 1000 | 2,5 | 214         | 770   | 1  | 176     | 2        | 8652               | 1076   | 1016 x 11           | 139       |
| PY0252 | 1000 | 6   | 78          | 350   | 0  | 705     | 1        | 8652               | 1076   | 1016 x 11           | 70        |
| PY4252 | 1000 | 6   | 78          | 350   | 1  | 705     | 1        | 8652               | 1076   | 1016 x 11           | 76        |
| PY0262 | 1000 | 6   | 130         | 510   | 0  | 423     | 1        | 8652               | 1076   | 1016 x 11           | 96        |
| PY4262 | 1000 | 6   | 130         | 510   | 1  | 423     | 1        | 8652               | 1076   | 1016 x 11           | 105       |
| PY0272 | 1000 | 6   | 208         | 770   | 0  | 264     | 2        | 8652               | 1076   | 1016 x 11           | 142       |
| PY4272 | 1000 | 6   | 208         | 770   | 1  | 264     | 2        | 8652               | 1076   | 1016 x 11           | 152       |
| PY0282 | 1000 | 10  | 76          | 350   | 0  | 940     | 1        | 8652               | 1076   | 1016 x 11           | 76        |
| PY4282 | 1000 | 10  | 76          | 350   | 1  | 940     | 1        | 8652               | 1076   | 1016 x 11           | 82        |

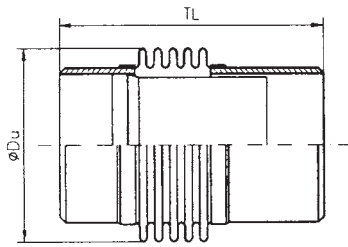


Figure 1, PRRA-1

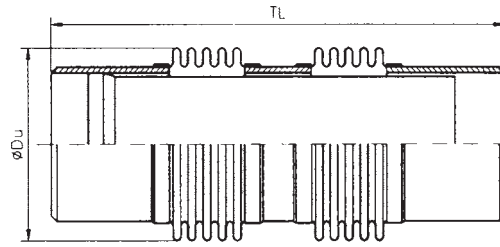


Figure 2, PRRA-2

Bellows SS 2333  
Welding ends St 37

“Connection” =  
outer diameter of the pipe  
and wall thickness.

| Code   | DN   | PN  | Movement<br>mm | TL<br>mm | SP | Fx<br>N/mm | Fig.<br>no. | Ap<br>cm <sup>2</sup> | ØDu<br>mm | Connection<br>Ømm x mm | Weight<br>kg |
|--------|------|-----|----------------|----------|----|------------|-------------|-----------------------|-----------|------------------------|--------------|
| PY0292 | 1000 | 10  | 127            | 510      | 0  | 564        | 1           | 8652                  | 1076      | 1016 x 11              | 105          |
| PY4292 | 1000 | 10  | 127            | 510      | 1  | 564        | 1           | 8652                  | 1076      | 1016 x 11              | 114          |
| PY0302 | 1000 | 10  | 204            | 770      | 0  | 352        | 2           | 8652                  | 1076      | 1016 x 11              | 157          |
| PY4302 | 1000 | 10  | 204            | 770      | 1  | 352        | 2           | 8652                  | 1076      | 1016 x 11              | 167          |
| PZ0222 | 1200 | 2,5 | 118            | 514      | 0  | 357        | 1           | 12390                 | 1286      | 1220 x 6               | 65           |
| PZ4222 | 1200 | 2,5 | 118            | 514      | 1  | 357        | 1           | 12390                 | 1286      | 1220 x 6               | 78           |
| PZ0232 | 1200 | 2,5 | 177            | 700      | 0  | 238        | 1           | 12390                 | 1286      | 1220 x 6               | 87           |
| PZ4232 | 1200 | 2,5 | 177            | 700      | 1  | 238        | 1           | 12390                 | 1286      | 1220 x 6               | 105          |
| PZ0252 | 1200 | 6   | 118            | 514      | 0  | 894        | 1           | 12390                 | 1286      | 1220 x 8               | 106          |
| PZ4252 | 1200 | 6   | 118            | 514      | 1  | 894        | 1           | 12390                 | 1286      | 1220 x 8               | 119          |
| PZ0262 | 1200 | 6   | 177            | 700      | 0  | 596        | 1           | 12390                 | 1286      | 1220 x 8               | 144          |
| PZ4262 | 1200 | 6   | 177            | 700      | 1  | 596        | 1           | 12390                 | 1286      | 1220 x 8               | 163          |
| PZ0282 | 1200 | 10  | 118            | 514      | 0  | 1430       | 1           | 12390                 | 1286      | 1220 x 10              | 149          |
| PZ4282 | 1200 | 10  | 118            | 514      | 1  | 1430       | 1           | 12390                 | 1286      | 1220 x 10              | 162          |
| PZ0292 | 1200 | 10  | 177            | 700      | 0  | 953        | 1           | 12390                 | 1286      | 1220 x 10              | 202          |
| PZ4292 | 1200 | 10  | 177            | 700      | 1  | 953        | 1           | 12390                 | 1286      | 1220 x 10              | 220          |
| PZ0312 | 1200 | 16  | 118            | 514      | 0  | 2145       | 1           | 12390                 | 1286      | 1220 x 12              | 199          |
| PZ4312 | 1200 | 16  | 118            | 514      | 1  | 2145       | 1           | 12390                 | 1286      | 1220 x 12              | 212          |
| PZ0322 | 1200 | 16  | 176            | 700      | 0  | 1430       | 1           | 12390                 | 1286      | 1220 x 12              | 271          |
| PZ4322 | 1200 | 16  | 176            | 700      | 1  | 1430       | 1           | 12390                 | 1286      | 1220 x 12              | 290          |



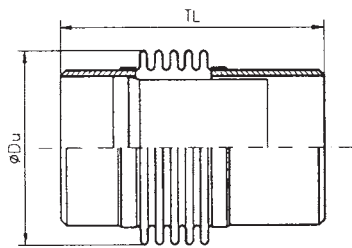


Figure 1, PRRA-1

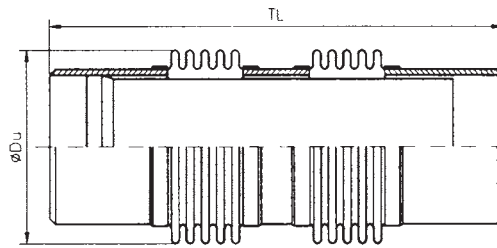


Figure 2, PRRA-2

- ... DN 80
- #=1 Bellows SS 2333  
Welding ends SS 2343

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- DN 100 ...
- #=2 Bellows SS 2333  
Welding ends SS 2333

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- ... DN 80
- #=3 Bellows SS 2343  
Welding ends SS 2343

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- DN 100 ...
- #=4 Bellows SS 2343  
Welding ends SS 2343

“Connection”= outer diameter of the pipe and wall thickness.

| Code   | DN  | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Connection Ømm x mm | Weight kg |
|--------|-----|-----|-------------|-------|----|---------|----------|--------------------|--------|---------------------|-----------|
| PB031# | 32  | 16  | 30          | 265   | 0  | 83      | 1        | 21,2               | 61     | 42,4 x 2            | 0,53      |
| PB631# | 32  | 16  | 30          | 265   | 1  | 83      | 1        | 21,2               | 61     | 42,4 x 2            | 0,82      |
| PB032# | 32  | 16  | 60          | 454   | 0  | 42      | 2        | 21,2               | 61     | 42,4 x 2            | 0,91      |
| PB632# | 32  | 16  | 60          | 454   | 1  | 42      | 2        | 21,2               | 61     | 42,4 x 2            | 1,5       |
| PB033# | 32  | 25  | 25          | 255   | 0  | 91      | 1        | 21,2               | 61     | 42,4 x 2            | 0,52      |
| PB633# | 32  | 25  | 25          | 255   | 1  | 91      | 1        | 21,2               | 61     | 42,4 x 2            | 0,79      |
| PC031# | 40  | 16  | 30          | 270   | 0  | 78      | 1        | 26,2               | 67     | 48,3 x 2            | 0,62      |
| PC631# | 40  | 16  | 30          | 270   | 1  | 78      | 1        | 26,2               | 67     | 48,3 x 2            | 1,0       |
| PC032# | 40  | 16  | 60          | 460   | 0  | 39      | 2        | 26,2               | 67     | 48,3 x 2            | 1,1       |
| PC632# | 40  | 16  | 60          | 460   | 1  | 39      | 2        | 26,2               | 67     | 48,3 x 2            | 1,8       |
| PC033# | 40  | 25  | 25          | 260   | 0  | 86      | 1        | 26,2               | 67     | 48,3 x 2            | 0,6       |
| PC633# | 40  | 25  | 25          | 260   | 1  | 86      | 1        | 26,2               | 67     | 48,3 x 2            | 0,96      |
| PD031# | 50  | 16  | 40          | 280   | 0  | 101     | 1        | 38,9               | 81     | 60,3 x 2            | 0,94      |
| PD631# | 50  | 16  | 40          | 280   | 1  | 101     | 1        | 38,9               | 81     | 60,3 x 2            | 1,5       |
| PD032# | 50  | 16  | 80          | 480   | 0  | 56      | 2        | 38,9               | 81     | 60,3 x 2            | 1,7       |
| PD632# | 50  | 16  | 80          | 480   | 1  | 56      | 2        | 38,9               | 81     | 60,3 x 2            | 2,6       |
| PD031# | 50  | 25  | 40          | 280   | 0  | 101     | 1        | 38,9               | 81     | 60,3 x 2            | 0,94      |
| PD631# | 50  | 25  | 40          | 280   | 1  | 101     | 1        | 38,9               | 81     | 60,3 x 2            | 1,5       |
| PE031# | 65  | 16  | 40          | 258   | 0  | 93      | 1        | 61,2               | 101    | 76,1 x 2            | 1,1       |
| PE631# | 65  | 16  | 40          | 258   | 1  | 93      | 1        | 61,2               | 101    | 76,1 x 2            | 1,8       |
| PE032# | 65  | 16  | 80          | 436   | 0  | 46      | 2        | 61,2               | 101    | 76,1 x 2            | 1,9       |
| PE632# | 65  | 16  | 80          | 436   | 1  | 46      | 2        | 61,2               | 101    | 76,1 x 2            | 2,8       |
| PE033# | 65  | 25  | 40          | 268   | 0  | 111     | 1        | 61,2               | 101    | 76,1 x 2            | 1,3       |
| PE633# | 65  | 25  | 40          | 268   | 1  | 111     | 1        | 61,2               | 101    | 76,1 x 2            | 1,9       |
| PF031# | 80  | 16  | 70          | 335   | 0  | 72      | 1        | 83,8               | 118    | 88,9 x 2            | 2,1       |
| PF331# | 80  | 16  | 70          | 335   | 1  | 72      | 1        | 83,8               | 118    | 88,9 x 2            | 2,6       |
| PF032# | 80  | 16  | 140         | 550   | 0  | 36      | 2        | 83,8               | 118    | 88,9 x 2            | 3,6       |
| PF232# | 80  | 16  | 140         | 550   | 1  | 36      | 2        | 83,8               | 118    | 88,9 x 2            | 4,5       |
| PF033# | 80  | 25  | 55          | 312   | 0  | 110     | 1        | 83,8               | 118    | 88,9 x 2            | 2,1       |
| PF333# | 80  | 25  | 55          | 312   | 1  | 110     | 1        | 83,8               | 118    | 88,9 x 2            | 2,6       |
| PG031# | 100 | 16  | 65          | 335   | 0  | 114     | 1        | 137                | 149    | 114,3 x 2           | 2,5       |
| PG331# | 100 | 16  | 65          | 335   | 1  | 114     | 1        | 137                | 149    | 114,3 x 2           | 3,2       |
| PG032# | 100 | 16  | 130         | 550   | 0  | 57      | 2        | 137                | 149    | 114,3 x 2           | 4,3       |
| PG332# | 100 | 16  | 130         | 550   | 1  | 57      | 2        | 137                | 149    | 114,3 x 2           | 5,5       |
| PG033# | 100 | 25  | 68          | 355   | 0  | 227     | 1        | 137                | 149    | 114,3 x 2           | 3,8       |
| PG333# | 100 | 25  | 68          | 355   | 1  | 227     | 1        | 137                | 149    | 114,3 x 2           | 4,5       |
| PH031# | 125 | 2,5 | 70          | 347   | 0  | 114     | 1        | 201                | 179    | 139,7 x 2           | 3,1       |
| PH231# | 125 | 2,5 | 70          | 347   | 1  | 114     | 1        | 201                | 179    | 139,7 x 2           | 3,9       |
| PH032# | 125 | 2,5 | 125         | 551   | 0  | 64      | 2        | 201                | 179    | 139,7 x 2           | 5,0       |
| PH232# | 125 | 2,5 | 125         | 551   | 1  | 64      | 2        | 201                | 179    | 139,7 x 2           | 6,4       |
| PH033# | 125 | 16  | 75          | 360   | 0  | 156     | 1        | 201                | 179    | 139,7 x 2           | 4,1       |
| PH233# | 125 | 16  | 75          | 360   | 1  | 156     | 1        | 201                | 179    | 139,7 x 2           | 5,0       |
| PH034# | 125 | 16  | 150         | 600   | 0  | 78      | 2        | 201                | 179    | 139,7 x 2           | 7,4       |
| PH234# | 125 | 16  | 150         | 600   | 1  | 78      | 2        | 201                | 179    | 139,7 x 2           | 9,0       |
| PH035# | 125 | 25  | 70          | 360   | 0  | 208     | 1        | 201                | 179    | 139,7 x 2           | 5,0       |
| PH235# | 125 | 25  | 70          | 360   | 1  | 208     | 1        | 201                | 179    | 139,7 x 2           | 5,9       |
| PJ031# | 150 | 2,5 | 70          | 343   | 0  | 114     | 1        | 284                | 212    | 168,3 x 2           | 3,7       |
| PJ231# | 150 | 2,5 | 70          | 343   | 1  | 114     | 1        | 284                | 212    | 168,3 x 2           | 4,7       |



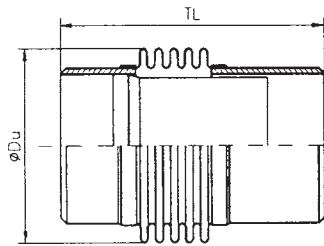


Figure 1, PRRA-1

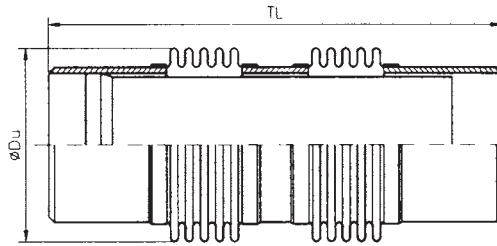


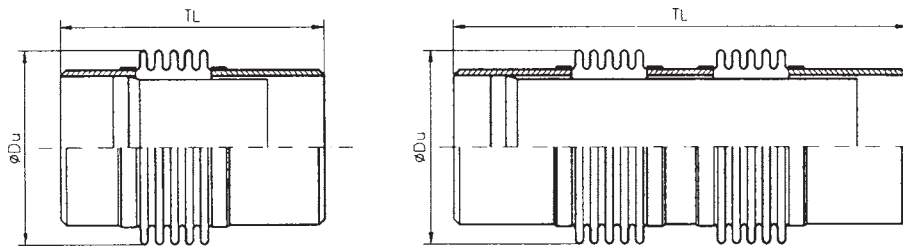
Figure 2, PRRA-2

#=2 Bellows SS 2333  
Welding ends SS 2333

#=4 Bellows SS 2343  
Welding ends SS 2343

“Connection”= outer diameter of the pipe and wall thickness.

| Code   | DN  | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Connection Ømm x mm | Weight kg |
|--------|-----|-----|-------------|-------|----|---------|----------|--------------------|--------|---------------------|-----------|
| PJ032# | 150 | 2,5 | 140         | 566   | 0  | 57      | 2        | 284                | 212    | 168,3 x 2           | 6,4       |
| PJ232# | 150 | 2,5 | 140         | 566   | 1  | 57      | 2        | 284                | 212    | 168,3 x 2           | 7,6       |
| PJ033# | 150 | 16  | 70          | 360   | 0  | 154     | 1        | 284                | 212    | 168,3 x 2           | 5,0       |
| PJ233# | 150 | 16  | 70          | 360   | 1  | 154     | 1        | 284                | 212    | 168,3 x 2           | 6,0       |
| PJ034# | 150 | 16  | 140         | 600   | 0  | 77      | 2        | 284                | 212    | 168,3 x 2           | 8,9       |
| PJ234# | 150 | 16  | 140         | 600   | 1  | 77      | 2        | 284                | 212    | 168,3 x 2           | 10        |
| PJ035# | 150 | 25  | 70          | 360   | 0  | 257     | 1        | 284                | 212    | 168,3 x 2,5         | 7,5       |
| PJ235# | 150 | 25  | 70          | 360   | 1  | 257     | 1        | 284                | 212    | 168,3 x 2,5         | 8,6       |
| PK082# | 200 | 6   | 65          | 340   | 0  | 132     | 1        | 456                | 265    | 219,1 x 2,5         | 5,1       |
| PK482# | 200 | 6   | 65          | 340   | 1  | 132     | 1        | 456                | 265    | 219,1 x 2,5         | 6,4       |
| PK083# | 200 | 6   | 119         | 500   | 0  | 77      | 1        | 456                | 265    | 219,1 x 2,5         | 7,5       |
| PK483# | 200 | 6   | 119         | 500   | 1  | 77      | 1        | 456                | 265    | 219,1 x 2,5         | 9,5       |
| PK084# | 200 | 6   | 195         | 770   | 0  | 46      | 2        | 456                | 265    | 219,1 x 2,5         | 12        |
| PK484# | 200 | 6   | 195         | 770   | 1  | 46      | 2        | 456                | 265    | 219,1 x 2,5         | 14        |
| PK085# | 200 | 10  | 64          | 340   | 0  | 198     | 1        | 456                | 265    | 219,1 x 2,5         | 6,3       |
| PK485# | 200 | 10  | 64          | 340   | 1  | 198     | 1        | 456                | 265    | 219,1 x 2,5         | 7,6       |
| PK086# | 200 | 10  | 118         | 500   | 0  | 115     | 1        | 456                | 265    | 219,1 x 2,5         | 9,5       |
| PK486# | 200 | 10  | 118         | 500   | 1  | 115     | 1        | 456                | 265    | 219,1 x 2,5         | 12        |
| PK087# | 200 | 10  | 193         | 770   | 0  | 69      | 2        | 456                | 265    | 219,1 x 2,5         | 15        |
| PK487# | 200 | 10  | 193         | 770   | 1  | 69      | 2        | 456                | 265    | 219,1 x 2,5         | 17        |
| PK088# | 200 | 16  | 63          | 340   | 0  | 264     | 1        | 456                | 265    | 219,1 x 2,5         | 7,4       |
| PK488# | 200 | 16  | 63          | 340   | 1  | 264     | 1        | 456                | 265    | 219,1 x 2,5         | 8,8       |
| PK089# | 200 | 16  | 115         | 500   | 0  | 154     | 1        | 456                | 265    | 219,1 x 2,5         | 11        |
| PK489# | 200 | 16  | 115         | 500   | 1  | 154     | 1        | 456                | 265    | 219,1 x 2,5         | 13        |
| PK090# | 200 | 16  | 189         | 770   | 0  | 92      | 2        | 456                | 265    | 219,1 x 2,5         | 18        |
| PK490# | 200 | 16  | 189         | 770   | 1  | 92      | 2        | 456                | 265    | 219,1 x 2,5         | 20        |
| PK091# | 200 | 25  | 62          | 340   | 0  | 396     | 1        | 456                | 265    | 219,1 x 3           | 10        |
| PK491# | 200 | 25  | 62          | 340   | 1  | 396     | 1        | 456                | 265    | 219,1 x 3           | 12        |
| PK092# | 200 | 25  | 114         | 500   | 0  | 231     | 1        | 456                | 265    | 219,1 x 3           | 16        |
| PK492# | 200 | 25  | 114         | 500   | 1  | 231     | 1        | 456                | 265    | 219,1 x 3           | 18        |
| PL084# | 250 | 2,5 | 200         | 720   | 0  | 56      | 2        | 697                | 323    | 273,0 x 3           | 15        |
| PL484# | 250 | 2,5 | 200         | 720   | 1  | 56      | 2        | 697                | 323    | 273,0 x 3           | 17        |
| PL082# | 250 | 6   | 70          | 335   | 0  | 144     | 1        | 697                | 323    | 273,0 x 3           | 7,0       |
| PL482# | 250 | 6   | 70          | 335   | 1  | 144     | 1        | 697                | 323    | 273,0 x 3           | 8,5       |
| PL083# | 250 | 6   | 128         | 495   | 0  | 84      | 1        | 697                | 323    | 273,0 x 3           | 10        |
| PL483# | 250 | 6   | 128         | 495   | 1  | 84      | 1        | 697                | 323    | 273,0 x 3           | 13        |
| PL085# | 250 | 6   | 210         | 760   | 0  | 50      | 2        | 697                | 323    | 273,0 x 3           | 16        |
| PL485# | 250 | 6   | 210         | 760   | 1  | 50      | 2        | 697                | 323    | 273,0 x 3           | 18        |
| PL086# | 250 | 10  | 69          | 335   | 0  | 215     | 1        | 697                | 323    | 273,0 x 3           | 8,5       |
| PL486# | 250 | 10  | 69          | 335   | 1  | 215     | 1        | 697                | 323    | 273,0 x 3           | 9,9       |
| PL087# | 250 | 10  | 127         | 495   | 0  | 126     | 1        | 697                | 323    | 273,0 x 3           | 13        |
| PL487# | 250 | 10  | 127         | 495   | 1  | 126     | 1        | 697                | 323    | 273,0 x 3           | 15        |
| PL088# | 250 | 10  | 208         | 760   | 0  | 75      | 2        | 697                | 323    | 273,0 x 3           | 20        |
| PL488# | 250 | 10  | 208         | 760   | 1  | 75      | 2        | 697                | 323    | 273,0 x 3           | 22        |
| PL089# | 250 | 16  | 67          | 335   | 0  | 287     | 1        | 697                | 323    | 273,0 x 3           | 10        |
| PL489# | 250 | 16  | 67          | 335   | 1  | 287     | 1        | 697                | 323    | 273,0 x 3           | 11        |
| PL090# | 250 | 16  | 124         | 495   | 0  | 168     | 1        | 697                | 323    | 273,0 x 3           | 15        |
| PL490# | 250 | 16  | 124         | 495   | 1  | 168     | 1        | 697                | 323    | 273,0 x 3           | 17        |



- #=2 Bellows SS 2333  
Welding ends SS 2333
- #=4 Bellows SS 2343  
Welding ends SS 2343

Figure 1, PRRA-1

Figure 2, PRRA-2

“Connection”= outer diameter of the pipe and wall thickness.

| Code   | DN  | PN | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Connection Ømm x mm | Weight kg |
|--------|-----|----|-------------|-------|----|---------|----------|--------------------|--------|---------------------|-----------|
| PL091# | 250 | 16 | 203         | 760   | 0  | 101     | 2        | 697                | 323    | 273,0 x 3           | 24        |
| PL491# | 250 | 16 | 203         | 760   | 1  | 101     | 2        | 697                | 323    | 273,0 x 3           | 27        |
| PL092# | 250 | 25 | 68          | 349   | 0  | 503     | 1        | 697                | 323    | 273,0 x 4           | 16        |
| PL492# | 250 | 25 | 68          | 349   | 1  | 503     | 1        | 697                | 323    | 273,0 x 4           | 17        |
| PL093# | 250 | 25 | 126         | 519   | 0  | 293     | 1        | 697                | 323    | 273,0 x 4           | 24        |
| PL493# | 250 | 25 | 126         | 519   | 1  | 293     | 1        | 697                | 323    | 273,0 x 4           | 27        |
| PM082# | 300 | 6  | 69          | 340   | 0  | 168     | 1        | 952                | 373    | 323,9 x 3           | 8,4       |
| PM482# | 300 | 6  | 69          | 340   | 1  | 168     | 1        | 952                | 373    | 323,9 x 3           | 10        |
| PM083# | 300 | 6  | 126         | 500   | 0  | 98      | 1        | 952                | 373    | 323,9 x 3           | 12        |
| PM483# | 300 | 6  | 126         | 500   | 1  | 98      | 1        | 952                | 373    | 323,9 x 3           | 15        |
| PM085# | 300 | 6  | 206         | 770   | 0  | 59      | 2        | 952                | 373    | 323,9 x 3           | 19        |
| PM485# | 300 | 6  | 206         | 770   | 1  | 59      | 2        | 952                | 373    | 323,9 x 3           | 22        |
| PM086# | 300 | 10 | 68          | 340   | 0  | 251     | 1        | 952                | 373    | 323,9 x 3           | 10        |
| PM486# | 300 | 10 | 68          | 340   | 1  | 251     | 1        | 952                | 373    | 323,9 x 3           | 12        |
| PM087# | 300 | 10 | 125         | 500   | 0  | 147     | 1        | 952                | 373    | 323,9 x 3           | 17        |
| PM487# | 300 | 10 | 125         | 500   | 1  | 147     | 1        | 952                | 373    | 323,9 x 3           | 18        |
| PM088# | 300 | 10 | 204         | 770   | 0  | 88      | 2        | 952                | 373    | 323,9 x 3           | 24        |
| PM488# | 300 | 10 | 204         | 770   | 1  | 88      | 2        | 952                | 373    | 323,9 x 3           | 27        |
| PM089# | 300 | 16 | 66          | 340   | 0  | 335     | 1        | 952                | 373    | 323,9 x 3           | 12        |
| PM489# | 300 | 16 | 66          | 340   | 1  | 335     | 1        | 952                | 373    | 323,9 x 3           | 14        |
| PM090# | 300 | 16 | 121         | 500   | 0  | 195     | 1        | 952                | 373    | 323,9 x 3           | 18        |
| PM490# | 300 | 16 | 121         | 500   | 1  | 195     | 1        | 952                | 373    | 323,9 x 3           | 21        |
| PM091# | 300 | 16 | 199         | 770   | 0  | 117     | 2        | 952                | 373    | 323,9 x 3           | 29        |
| PM491# | 300 | 16 | 199         | 770   | 1  | 117     | 2        | 952                | 373    | 323,9 x 3           | 32        |
| PM092# | 300 | 25 | 67          | 340   | 0  | 586     | 1        | 952                | 373    | 323,9 x 4           | 19        |
| PM492# | 300 | 25 | 67          | 340   | 1  | 586     | 1        | 952                | 373    | 323,9 x 4           | 20        |
| PM093# | 300 | 25 | 124         | 500   | 0  | 342     | 1        | 952                | 373    | 323,9 x 4           | 29        |
| PM493# | 300 | 25 | 124         | 500   | 1  | 342     | 1        | 952                | 373    | 323,9 x 4           | 31        |
| PN082# | 350 | 6  | 68          | 340   | 0  | 182     | 1        | 1138               | 406    | 355,6 x 3           | 9,2       |
| PN482# | 350 | 6  | 68          | 340   | 1  | 182     | 1        | 1138               | 406    | 355,6 x 3           | 11        |
| PN083# | 350 | 6  | 124         | 500   | 0  | 106     | 1        | 1138               | 406    | 355,6 x 3           | 13        |
| PN483# | 350 | 6  | 124         | 500   | 1  | 106     | 1        | 1138               | 406    | 355,6 x 3           | 16        |
| PN085# | 350 | 6  | 203         | 770   | 0  | 64      | 2        | 1138               | 406    | 355,6 x 3           | 21        |
| PN485# | 350 | 6  | 203         | 770   | 1  | 64      | 2        | 1138               | 406    | 355,6 x 3           | 24        |
| PN086# | 350 | 10 | 67          | 340   | 0  | 274     | 1        | 1138               | 406    | 355,6 x 4           | 13        |
| PN486# | 350 | 10 | 67          | 340   | 1  | 274     | 1        | 1138               | 406    | 355,6 x 4           | 15        |
| PN087# | 350 | 10 | 123         | 500   | 0  | 160     | 1        | 1138               | 406    | 355,6 x 4           | 19        |
| PN487# | 350 | 10 | 123         | 500   | 1  | 160     | 1        | 1138               | 406    | 355,6 x 4           | 22        |
| PN088# | 350 | 10 | 201         | 770   | 0  | 96      | 2        | 1138               | 406    | 355,6 x 4           | 29        |
| PN488# | 350 | 10 | 201         | 770   | 1  | 96      | 2        | 1138               | 406    | 355,6 x 4           | 33        |
| PN089# | 350 | 16 | 65          | 340   | 0  | 365     | 1        | 1138               | 406    | 355,6 x 4           | 15        |
| PN489# | 350 | 16 | 65          | 340   | 1  | 365     | 1        | 1138               | 406    | 355,6 x 4           | 17        |
| PN090# | 350 | 16 | 120         | 500   | 0  | 213     | 1        | 1138               | 406    | 355,6 x 4           | 22        |
| PN490# | 350 | 16 | 120         | 500   | 1  | 213     | 1        | 1138               | 406    | 355,6 x 4           | 25        |
| PN091# | 350 | 16 | 218         | 810   | 0  | 116     | 2        | 1138               | 406    | 355,6 x 4           | 37        |
| PN491# | 350 | 16 | 218         | 810   | 1  | 116     | 2        | 1138               | 406    | 355,6 x 4           | 40        |
| PN092# | 350 | 25 | 66          | 340   | 0  | 638     | 1        | 1138               | 406    | 355,6 x 6           | 24        |
| PN492# | 350 | 25 | 66          | 340   | 1  | 638     | 1        | 1138               | 406    | 355,6 x 6           | 26        |

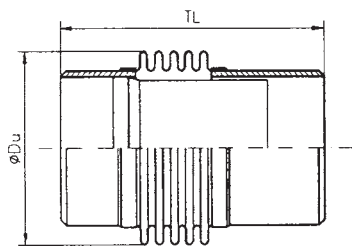


Figure 1, PRRA-1

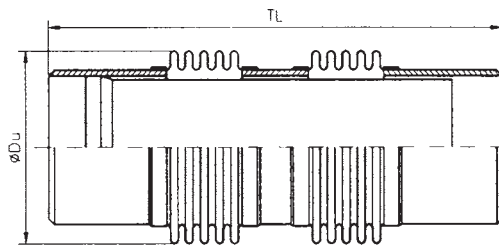


Figure 2, PRRA-2

#=2 Bellows SS 2333  
Welding ends SS 2333

#=4 Bellows SS 2343  
Welding ends SS 2343

“Connection”= outer diameter of the pipe and wall thickness.

| Code   | DN  | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Connection Ømm x mm | Weight kg |
|--------|-----|-----|-------------|-------|----|---------|----------|--------------------|--------|---------------------|-----------|
| PN093# | 350 | 25  | 122         | 500   | 0  | 372     | 1        | 1138               | 406    | 355,6 x 6           | 36        |
| PN493# | 350 | 25  | 122         | 500   | 1  | 372     | 1        | 1138               | 406    | 355,6 x 6           | 39        |
| PP082# | 400 | 2,5 | 73          | 340   | 0  | 198     | 1        | 1462               | 458    | 406,4 x 3           | 10        |
| PP482# | 400 | 2,5 | 73          | 340   | 1  | 198     | 1        | 1462               | 458    | 406,4 x 3           | 13        |
| PP083# | 400 | 2,5 | 131         | 496   | 0  | 119     | 1        | 1462               | 458    | 406,4 x 3           | 15        |
| PP483# | 400 | 2,5 | 131         | 496   | 1  | 119     | 1        | 1462               | 458    | 406,4 x 3           | 18        |
| PP084# | 400 | 2,5 | 204         | 746   | 0  | 74      | 2        | 1462               | 458    | 406,4 x 3           | 22        |
| PP484# | 400 | 2,5 | 204         | 746   | 1  | 74      | 2        | 1462               | 458    | 406,4 x 3           | 26        |
| PP085# | 400 | 6   | 82          | 364   | 0  | 170     | 1        | 1462               | 458    | 406,4 x 3           | 11        |
| PP485# | 400 | 6   | 82          | 364   | 1  | 170     | 1        | 1462               | 458    | 406,4 x 3           | 13        |
| PP086# | 400 | 6   | 136         | 520   | 0  | 108     | 1        | 1462               | 458    | 406,4 x 3           | 15        |
| PP486# | 400 | 6   | 136         | 520   | 1  | 108     | 1        | 1462               | 458    | 406,4 x 3           | 19        |
| PP087# | 400 | 6   | 218         | 794   | 0  | 66      | 2        | 1462               | 458    | 406,4 x 3           | 24        |
| PP487# | 400 | 6   | 218         | 794   | 1  | 66      | 2        | 1462               | 458    | 406,4 x 3           | 27        |
| PP088# | 400 | 10  | 81          | 364   | 0  | 255     | 1        | 1462               | 458    | 406,4 x 4           | 15        |
| PP488# | 400 | 10  | 81          | 364   | 1  | 255     | 1        | 1462               | 458    | 406,4 x 4           | 18        |
| PP089# | 400 | 10  | 134         | 520   | 0  | 162     | 1        | 1462               | 458    | 406,4 x 4           | 21        |
| PP489# | 400 | 10  | 134         | 520   | 1  | 162     | 1        | 1462               | 458    | 406,4 x 4           | 25        |
| PP090# | 400 | 10  | 215         | 794   | 0  | 99      | 2        | 1462               | 458    | 406,4 x 4           | 33        |
| PP490# | 400 | 10  | 215         | 794   | 1  | 99      | 2        | 1462               | 458    | 406,4 x 4           | 37        |
| PP091# | 400 | 16  | 81          | 364   | 0  | 425     | 1        | 1462               | 458    | 406,4 x 4           | 20        |
| PP491# | 400 | 16  | 81          | 364   | 1  | 425     | 1        | 1462               | 458    | 406,4 x 4           | 22        |
| PP092# | 400 | 16  | 135         | 520   | 0  | 270     | 1        | 1462               | 458    | 406,4 x 4           | 29        |
| PP492# | 400 | 16  | 135         | 520   | 1  | 270     | 1        | 1462               | 458    | 406,4 x 4           | 33        |
| PP093# | 400 | 16  | 216         | 794   | 0  | 165     | 2        | 1462               | 458    | 406,4 x 4           | 45        |
| PP493# | 400 | 16  | 216         | 794   | 1  | 165     | 2        | 1462               | 458    | 406,4 x 4           | 49        |
| PP094# | 400 | 25  | 80          | 364   | 0  | 595     | 1        | 1462               | 458    | 406,4 x 6           | 29        |
| PP494# | 400 | 25  | 80          | 364   | 1  | 595     | 1        | 1462               | 458    | 406,4 x 6           | 31        |
| PP095# | 400 | 25  | 133         | 520   | 0  | 379     | 1        | 1462               | 458    | 406,4 x 6           | 41        |
| PP495# | 400 | 25  | 133         | 520   | 1  | 379     | 1        | 1462               | 458    | 406,4 x 6           | 45        |
| PQ085# | 450 | 6   | 76          | 353   | 0  | 191     | 1        | 1798               | 505    | 457 x 3             | 12        |
| PQ485# | 450 | 6   | 76          | 353   | 1  | 191     | 1        | 1798               | 505    | 457 x 3             | 14        |
| PQ086# | 450 | 6   | 126         | 503   | 0  | 121     | 1        | 1798               | 505    | 457 x 3             | 17        |
| PQ486# | 450 | 6   | 126         | 503   | 1  | 121     | 1        | 1798               | 505    | 457 x 3             | 21        |
| PQ084# | 450 | 6   | 202         | 766   | 0  | 74      | 2        | 1798               | 505    | 457 x 3             | 26        |
| PQ484# | 450 | 6   | 202         | 766   | 1  | 74      | 2        | 1798               | 505    | 457 x 3             | 30        |
| PQ088# | 450 | 10  | 75          | 353   | 0  | 286     | 1        | 1798               | 505    | 457 x 4             | 17        |
| PQ488# | 450 | 10  | 75          | 353   | 1  | 286     | 1        | 1798               | 505    | 457 x 4             | 19        |
| PQ089# | 450 | 10  | 125         | 503   | 0  | 182     | 1        | 1798               | 505    | 457 x 4             | 24        |
| PQ489# | 450 | 10  | 125         | 503   | 1  | 182     | 1        | 1798               | 505    | 457 x 4             | 28        |
| PQ090# | 450 | 10  | 200         | 766   | 0  | 111     | 2        | 1798               | 505    | 457 x 4             | 37        |
| PQ490# | 450 | 10  | 200         | 766   | 1  | 111     | 2        | 1798               | 505    | 457 x 4             | 41        |
| PQ091# | 450 | 16  | 75          | 353   | 0  | 477     | 1        | 1798               | 505    | 457 x 5             | 24        |
| PQ491# | 450 | 16  | 75          | 353   | 1  | 477     | 1        | 1798               | 505    | 457 x 5             | 27        |
| PQ092# | 450 | 16  | 125         | 503   | 0  | 303     | 1        | 1798               | 505    | 457 x 5             | 35        |
| PQ492# | 450 | 16  | 125         | 503   | 1  | 303     | 1        | 1798               | 505    | 457 x 5             | 39        |
| PQ093# | 450 | 16  | 201         | 766   | 0  | 186     | 2        | 1798               | 505    | 457 x 5             | 54        |
| PQ493# | 450 | 16  | 201         | 766   | 1  | 186     | 2        | 1798               | 505    | 457 x 5             | 58        |

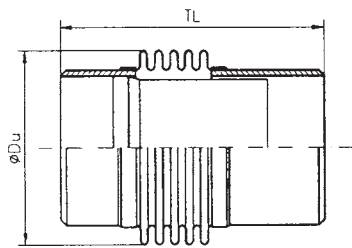


Figure 1, PRRA-1

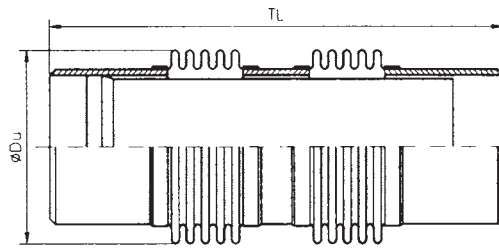


Figure 2, PRRA-2

- #=2 Bellows SS 2333  
Welding ends SS 2333
- #=4 Bellows SS 2343  
Welding ends SS 2343

“Connection”= outer diameter of the pipe and wall thickness.

| Code   | DN  | PN | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Connection Ømm x mm | Weight kg |
|--------|-----|----|-------------|-------|----|---------|----------|--------------------|--------|---------------------|-----------|
| PQ094# | 450 | 25 | 74          | 367   | 0  | 668     | 1        | 1798               | 505    | 457 x 6             | 32        |
| PQ494# | 450 | 25 | 74          | 367   | 1  | 668     | 1        | 1798               | 505    | 457 x 6             | 35        |
| PQ095# | 450 | 25 | 123         | 525   | 0  | 425     | 1        | 1798               | 505    | 457 x 6             | 46        |
| PQ495# | 450 | 25 | 123         | 525   | 1  | 425     | 1        | 1798               | 505    | 457 x 6             | 50        |
| PR085# | 500 | 6  | 79          | 365   | 0  | 212     | 1        | 2240               | 560    | 508 x 3             | 13        |
| PR485# | 500 | 6  | 79          | 365   | 1  | 212     | 1        | 2240               | 560    | 508 x 3             | 16        |
| PR086# | 500 | 6  | 131         | 525   | 0  | 135     | 1        | 2240               | 560    | 508 x 3             | 19        |
| PR486# | 500 | 6  | 131         | 525   | 1  | 135     | 1        | 2240               | 560    | 508 x 3             | 23        |
| PR087# | 500 | 6  | 210         | 800   | 0  | 82      | 2        | 2240               | 560    | 508 x 3             | 30        |
| PR487# | 500 | 6  | 210         | 800   | 1  | 82      | 2        | 2240               | 560    | 508 x 3             | 35        |
| PR088# | 500 | 10 | 78          | 365   | 0  | 318     | 1        | 2240               | 560    | 508 x 4             | 19        |
| PR488# | 500 | 10 | 78          | 365   | 1  | 318     | 1        | 2240               | 560    | 508 x 4             | 22        |
| PR089# | 500 | 10 | 130         | 525   | 0  | 202     | 1        | 2240               | 560    | 508 x 4             | 27        |
| PR489# | 500 | 10 | 130         | 525   | 1  | 202     | 1        | 2240               | 560    | 508 x 4             | 31        |
| PR090# | 500 | 10 | 207         | 800   | 0  | 124     | 2        | 2240               | 560    | 508 x 4             | 42        |
| PR490# | 500 | 10 | 207         | 800   | 1  | 124     | 2        | 2240               | 560    | 508 x 4             | 47        |
| PR091# | 500 | 16 | 78          | 365   | 0  | 530     | 1        | 2240               | 560    | 508 x 5             | 27        |
| PR491# | 500 | 16 | 78          | 365   | 1  | 530     | 1        | 2240               | 560    | 508 x 5             | 31        |
| PR092# | 500 | 16 | 130         | 525   | 0  | 337     | 1        | 2240               | 560    | 508 x 5             | 39        |
| PR492# | 500 | 16 | 130         | 525   | 1  | 337     | 1        | 2240               | 560    | 508 x 5             | 44        |
| PR093# | 500 | 16 | 208         | 800   | 0  | 206     | 2        | 2240               | 560    | 508 x 5             | 61        |
| PR493# | 500 | 16 | 208         | 800   | 1  | 206     | 2        | 2240               | 560    | 508 x 5             | 66        |
| PR094# | 500 | 25 | 77          | 365   | 0  | 742     | 1        | 2240               | 560    | 508 x 8             | 41        |
| PR494# | 500 | 25 | 77          | 365   | 1  | 742     | 1        | 2240               | 560    | 508 x 8             | 44        |
| PR095# | 500 | 25 | 128         | 525   | 0  | 472     | 1        | 2240               | 560    | 508 x 8             | 58        |
| PR495# | 500 | 25 | 128         | 525   | 1  | 472     | 1        | 2240               | 560    | 508 x 8             | 63        |
| PS082# | 600 | 6  | 74          | 354   | 0  | 247     | 1        | 3099               | 655    | 610 x 3             | 16        |
| PS482# | 600 | 6  | 74          | 354   | 1  | 247     | 1        | 3099               | 655    | 610 x 3             | 20        |
| PS086# | 600 | 6  | 123         | 510   | 0  | 157     | 1        | 3099               | 655    | 610 x 3             | 23        |
| PS486# | 600 | 6  | 123         | 510   | 1  | 157     | 1        | 3099               | 655    | 610 x 3             | 28        |
| PS087# | 600 | 6  | 222         | 822   | 0  | 87      | 2        | 3099               | 655    | 610 x 3             | 37        |
| PS487# | 600 | 6  | 222         | 822   | 1  | 87      | 2        | 3099               | 655    | 610 x 3             | 43        |
| PS088# | 600 | 10 | 75          | 354   | 0  | 495     | 1        | 3099               | 655    | 610 x 4             | 26        |
| PS488# | 600 | 10 | 75          | 354   | 1  | 495     | 1        | 3099               | 655    | 610 x 4             | 30        |
| PS089# | 600 | 10 | 126         | 510   | 0  | 315     | 1        | 3099               | 655    | 610 x 4             | 37        |
| PS489# | 600 | 10 | 126         | 510   | 1  | 315     | 1        | 3099               | 655    | 610 x 4             | 43        |
| PS090# | 600 | 10 | 202         | 774   | 0  | 192     | 2        | 3099               | 655    | 610 x 4             | 58        |
| PS490# | 600 | 10 | 202         | 774   | 1  | 192     | 2        | 3099               | 655    | 610 x 4             | 64        |
| PS091# | 600 | 16 | 75          | 354   | 0  | 742     | 1        | 3099               | 655    | 610 x 6             | 39        |
| PS491# | 600 | 16 | 75          | 354   | 1  | 742     | 1        | 3099               | 655    | 610 x 6             | 43        |
| PS092# | 600 | 16 | 125         | 510   | 0  | 472     | 1        | 3099               | 655    | 610 x 6             | 56        |
| PS492# | 600 | 16 | 125         | 510   | 1  | 472     | 1        | 3099               | 655    | 610 x 6             | 61        |
| PS093# | 600 | 16 | 200         | 774   | 0  | 289     | 2        | 3099               | 655    | 610 x 6             | 87        |
| PS493# | 600 | 16 | 200         | 774   | 1  | 289     | 2        | 3099               | 655    | 610 x 6             | 93        |
| PS094# | 600 | 25 | 74          | 375   | 0  | 1113    | 1        | 3099               | 655    | 610 x 8             | 55        |
| PS494# | 600 | 25 | 74          | 375   | 1  | 1113    | 1        | 3099               | 655    | 610 x 8             | 59        |
| PS095# | 600 | 25 | 124         | 543   | 0  | 708     | 1        | 3099               | 655    | 610 x 8             | 79        |
| PS495# | 600 | 25 | 124         | 543   | 1  | 708     | 1        | 3099               | 655    | 610 x 8             | 85        |

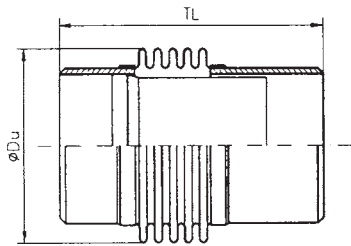


Figure 1, PRRA-1

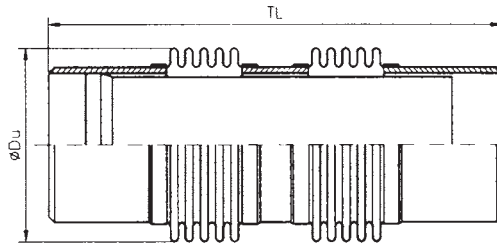


Figure 2, PRRA-2

- #=2 Bellows SS 2333  
Welding ends SS 2333
- #=4 Bellows SS 2343  
Welding ends SS 2343

“Connection”= outer diameter of the pipe and wall thickness.

| Code   | DN  | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Connection Ømm x mm | Weight kg |
|--------|-----|-----|-------------|-------|----|---------|----------|--------------------|--------|---------------------|-----------|
| PU082# | 700 | 2,5 | 71          | 360   | 0  | 331     | 1        | 4278               | 764    | 711 x 3             | 18        |
| PU482# | 700 | 2,5 | 71          | 360   | 1  | 331     | 1        | 4278               | 764    | 711 x 3             | 22        |
| PU083# | 700 | 2,5 | 128         | 528   | 0  | 199     | 1        | 4278               | 764    | 711 x 3             | 26        |
| PU483# | 700 | 2,5 | 128         | 528   | 1  | 199     | 1        | 4278               | 764    | 711 x 3             | 33        |
| PU084# | 700 | 2,5 | 200         | 798   | 0  | 124     | 2        | 4278               | 764    | 711 x 3             | 39        |
| PU484# | 700 | 2,5 | 200         | 798   | 1  | 124     | 2        | 4278               | 764    | 711 x 3             | 47        |
| PU085# | 700 | 6   | 80          | 387   | 0  | 284     | 1        | 4278               | 764    | 711 x 4             | 23        |
| PU485# | 700 | 6   | 80          | 387   | 1  | 284     | 1        | 4278               | 764    | 711 x 4             | 28        |
| PU086# | 700 | 6   | 134         | 555   | 0  | 181     | 1        | 4278               | 764    | 711 x 4             | 32        |
| PU486# | 700 | 6   | 134         | 555   | 1  | 181     | 1        | 4278               | 764    | 711 x 4             | 39        |
| PU087# | 700 | 6   | 214         | 852   | 0  | 110     | 2        | 4278               | 764    | 711 x 4             | 48        |
| PU487# | 700 | 6   | 214         | 852   | 1  | 110     | 2        | 4278               | 764    | 711 x 4             | 56        |
| PU088# | 700 | 10  | 79          | 387   | 0  | 426     | 1        | 4278               | 764    | 711 x 5             | 31        |
| PU488# | 700 | 10  | 79          | 387   | 1  | 426     | 1        | 4278               | 764    | 711 x 5             | 36        |
| PU089# | 700 | 10  | 132         | 555   | 0  | 271     | 1        | 4278               | 764    | 711 x 5             | 43        |
| PU489# | 700 | 10  | 132         | 555   | 1  | 271     | 1        | 4278               | 764    | 711 x 5             | 50        |
| PU090# | 700 | 10  | 212         | 852   | 0  | 166     | 2        | 4278               | 764    | 711 x 5             | 65        |
| PU490# | 700 | 10  | 212         | 852   | 1  | 166     | 2        | 4278               | 764    | 711 x 5             | 73        |
| PU091# | 700 | 16  | 80          | 387   | 0  | 852     | 1        | 4278               | 764    | 711 x 6             | 47        |
| PU491# | 700 | 16  | 80          | 387   | 1  | 852     | 1        | 4278               | 764    | 711 x 6             | 52        |
| PU092# | 700 | 16  | 133         | 555   | 0  | 542     | 1        | 4278               | 764    | 711 x 6             | 67        |
| PU492# | 700 | 16  | 133         | 555   | 1  | 542     | 1        | 4278               | 764    | 711 x 6             | 74        |
| PU093# | 700 | 16  | 213         | 852   | 0  | 331     | 2        | 4278               | 764    | 711 x 6             | 105       |
| PU493# | 700 | 16  | 213         | 852   | 1  | 331     | 2        | 4278               | 764    | 711 x 6             | 113       |
| PU094# | 700 | 25  | 80          | 408   | 0  | 1278    | 1        | 4278               | 764    | 711 x 10            | 74        |
| PU494# | 700 | 25  | 80          | 408   | 1  | 1278    | 1        | 4278               | 764    | 711 x 10            | 78        |
| PU095# | 700 | 25  | 133         | 588   | 0  | 813     | 1        | 4278               | 764    | 711 x 10            | 105       |
| PU495# | 700 | 25  | 133         | 588   | 1  | 813     | 1        | 4278               | 764    | 711 x 10            | 113       |
| PV082# | 800 | 2,5 | 75          | 324   | 0  | 392     | 1        | 5619               | 872    | 813 x 3             | 20        |
| PV482# | 800 | 2,5 | 75          | 324   | 1  | 392     | 1        | 5619               | 872    | 813 x 3             | 24        |
| PV083# | 800 | 2,5 | 126         | 528   | 0  | 235     | 1        | 5619               | 872    | 813 x 3             | 29        |
| PV483# | 800 | 2,5 | 126         | 528   | 1  | 235     | 1        | 5619               | 872    | 813 x 3             | 36        |
| PV084# | 800 | 2,5 | 201         | 706   | 0  | 147     | 2        | 5619               | 872    | 813 x 3             | 44        |
| PV484# | 800 | 2,5 | 201         | 706   | 1  | 147     | 2        | 5619               | 872    | 813 x 3             | 51        |
| PV085# | 800 | 6   | 73          | 324   | 0  | 589     | 1        | 5619               | 872    | 813 x 4             | 28        |
| PV485# | 800 | 6   | 73          | 324   | 1  | 589     | 1        | 5619               | 872    | 813 x 4             | 32        |
| PV086# | 800 | 6   | 122         | 472   | 0  | 353     | 1        | 5619               | 872    | 813 x 4             | 40        |
| PV486# | 800 | 6   | 122         | 472   | 1  | 353     | 1        | 5619               | 872    | 813 x 4             | 47        |
| PV087# | 800 | 6   | 220         | 750   | 0  | 196     | 2        | 5619               | 872    | 813 x 4             | 65        |
| PV487# | 800 | 6   | 220         | 750   | 1  | 196     | 2        | 5619               | 872    | 813 x 4             | 73        |
| PV088# | 800 | 10  | 72          | 324   | 0  | 785     | 1        | 5619               | 872    | 813 x 5             | 36        |
| PV488# | 800 | 10  | 72          | 324   | 1  | 785     | 1        | 5619               | 872    | 813 x 5             | 41        |
| PV089# | 800 | 10  | 119         | 472   | 0  | 471     | 1        | 5619               | 872    | 813 x 5             | 52        |
| PV489# | 800 | 10  | 119         | 472   | 1  | 471     | 1        | 5619               | 872    | 813 x 5             | 59        |
| PV090# | 800 | 10  | 215         | 750   | 0  | 262     | 2        | 5619               | 872    | 813 x 5             | 85        |
| PV490# | 800 | 10  | 215         | 750   | 1  | 262     | 2        | 5619               | 872    | 813 x 5             | 93        |
| PV091# | 800 | 16  | 72          | 324   | 0  | 1373    | 1        | 5619               | 872    | 813 x 8             | 60        |
| PV491# | 800 | 16  | 72          | 324   | 1  | 1373    | 1        | 5619               | 872    | 813 x 8             | 64        |

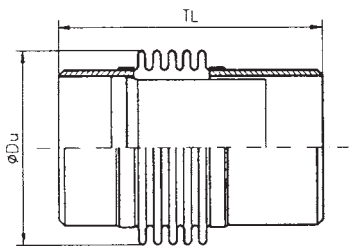


Figure 1, PRRA-1

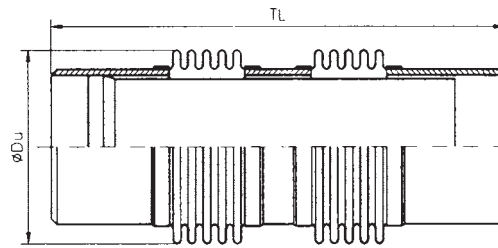


Figure 2, PRRA-2

- #=2 Bellows SS 2333  
Welding ends SS 2333
- #=4 Bellows SS 2343  
Welding ends SS 2343

“Connection”= outer diameter of the pipe and wall thickness.

| Code   | DN   | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Connection Ømm x mm | Weight kg |
|--------|------|-----|-------------|-------|----|---------|----------|--------------------|--------|---------------------|-----------|
| PV092# | 800  | 16  | 121         | 472   | 0  | 824     | 1        | 5619               | 872    | 813 x 8             | 87        |
| PV492# | 800  | 16  | 121         | 472   | 1  | 824     | 1        | 5619               | 872    | 813 x 8             | 93        |
| PV093# | 800  | 16  | 217         | 750   | 0  | 458     | 2        | 5619               | 872    | 813 x 8             | 141       |
| PV493# | 800  | 16  | 217         | 750   | 1  | 458     | 2        | 5619               | 872    | 813 x 8             | 149       |
| PV094# | 800  | 25  | 72          | 342   | 0  | 1962    | 1        | 5619               | 872    | 813 x 12            | 88        |
| PV494# | 800  | 25  | 72          | 342   | 1  | 1962    | 1        | 5619               | 872    | 813 x 12            | 92        |
| PV095# | 800  | 25  | 120         | 502   | 0  | 1177    | 1        | 5619               | 872    | 813 x 12            | 127       |
| PV495# | 800  | 25  | 120         | 502   | 1  | 1177    | 1        | 5619               | 872    | 813 x 12            | 134       |
| PW082# | 900  | 2,5 | 70          | 325   | 0  | 508     | 1        | 6996               | 970    | 914 x 3             | 22        |
| PW482# | 900  | 2,5 | 70          | 325   | 1  | 508     | 1        | 6996               | 970    | 914 x 3             | 26        |
| PW083# | 900  | 2,5 | 126         | 485   | 0  | 282     | 1        | 6996               | 970    | 914 x 3             | 32        |
| PW483# | 900  | 2,5 | 126         | 485   | 1  | 282     | 1        | 6996               | 970    | 914 x 3             | 39        |
| PW081# | 900  | 2,5 | 196         | 720   | 0  | 181     | 2        | 6996               | 970    | 914 x 3             | 47        |
| PW481# | 900  | 2,5 | 196         | 720   | 1  | 181     | 2        | 6996               | 970    | 914 x 3             | 56        |
| PW085# | 900  | 6   | 81          | 350   | 0  | 635     | 1        | 6996               | 970    | 914 x 4             | 33        |
| PW485# | 900  | 6   | 81          | 350   | 1  | 635     | 1        | 6996               | 970    | 914 x 4             | 38        |
| PW086# | 900  | 6   | 122         | 485   | 0  | 423     | 1        | 6996               | 970    | 914 x 4             | 44        |
| PW486# | 900  | 6   | 122         | 485   | 1  | 423     | 1        | 6996               | 970    | 914 x 4             | 52        |
| PW087# | 900  | 6   | 218         | 770   | 0  | 238     | 2        | 6996               | 970    | 914 x 4             | 70        |
| PW487# | 900  | 6   | 218         | 770   | 1  | 238     | 2        | 6996               | 970    | 914 x 4             | 79        |
| PW088# | 900  | 10  | 80          | 350   | 0  | 847     | 1        | 6996               | 970    | 914 x 5             | 41        |
| PW488# | 900  | 10  | 80          | 350   | 1  | 847     | 1        | 6996               | 970    | 914 x 5             | 47        |
| PW089# | 900  | 10  | 120         | 485   | 0  | 564     | 1        | 6996               | 970    | 914 x 5             | 57        |
| PW489# | 900  | 10  | 120         | 485   | 1  | 564     | 1        | 6996               | 970    | 914 x 5             | 65        |
| PW090# | 900  | 10  | 214         | 770   | 0  | 317     | 2        | 6996               | 970    | 914 x 5             | 91        |
| PW490# | 900  | 10  | 214         | 770   | 1  | 317     | 2        | 6996               | 970    | 914 x 5             | 100       |
| PX091# | 900  | 16  | 119         | 514   | 0  | 1414    | 1        | 7178               | 986    | 914 x 10            | 125       |
| PX491# | 900  | 16  | 119         | 514   | 1  | 1414    | 1        | 7178               | 986    | 914 x 10            | 133       |
| PX092# | 900  | 16  | 178         | 700   | 0  | 943     | 1        | 7178               | 986    | 914 x 10            | 170       |
| PX492# | 900  | 16  | 178         | 700   | 1  | 943     | 1        | 7178               | 986    | 914 x 10            | 182       |
| PX094# | 900  | 25  | 118         | 514   | 0  | 1697    | 1        | 7178               | 986    | 914 x 14            | 161       |
| PX494# | 900  | 25  | 118         | 514   | 1  | 1697    | 1        | 7178               | 986    | 914 x 14            | 169       |
| PX095# | 900  | 25  | 177         | 700   | 0  | 1131    | 1        | 7178               | 986    | 914 x 14            | 219       |
| PX495# | 900  | 25  | 177         | 700   | 1  | 1131    | 1        | 7178               | 986    | 914 x 14            | 230       |
| PY082# | 1000 | 2,5 | 80          | 350   | 0  | 470     | 1        | 8652               | 1076   | 1016 x 3            | 26        |
| PY482# | 1000 | 2,5 | 80          | 350   | 1  | 470     | 1        | 8652               | 1076   | 1016 x 3            | 32        |
| PY083# | 1000 | 2,5 | 134         | 510   | 0  | 282     | 1        | 8652               | 1076   | 1016 x 3            | 37        |
| PY483# | 1000 | 2,5 | 134         | 510   | 1  | 282     | 1        | 8652               | 1076   | 1016 x 3            | 46        |
| PY084# | 1000 | 2,5 | 214         | 770   | 0  | 176     | 2        | 8652               | 1076   | 1016 x 3            | 56        |
| PY484# | 1000 | 2,5 | 214         | 770   | 1  | 176     | 2        | 8652               | 1076   | 1016 x 3            | 66        |
| PY085# | 1000 | 6   | 78          | 350   | 0  | 705     | 1        | 8652               | 1076   | 1016 x 5            | 41        |
| PY485# | 1000 | 6   | 78          | 350   | 1  | 705     | 1        | 8652               | 1076   | 1016 x 5            | 47        |
| PY086# | 1000 | 6   | 130         | 510   | 0  | 423     | 1        | 8652               | 1076   | 1016 x 5            | 58        |
| PY486# | 1000 | 6   | 130         | 510   | 1  | 423     | 1        | 8652               | 1076   | 1016 x 5            | 67        |
| PY087# | 1000 | 6   | 208         | 770   | 0  | 264     | 2        | 8652               | 1076   | 1016 x 5            | 88        |
| PY487# | 1000 | 6   | 208         | 770   | 1  | 264     | 2        | 8652               | 1076   | 1016 x 5            | 98        |
| PY088# | 1000 | 10  | 76          | 350   | 0  | 940     | 1        | 8652               | 1076   | 1016 x 6            | 51        |
| PY488# | 1000 | 10  | 76          | 350   | 1  | 940     | 1        | 8652               | 1076   | 1016 x 6            | 57        |



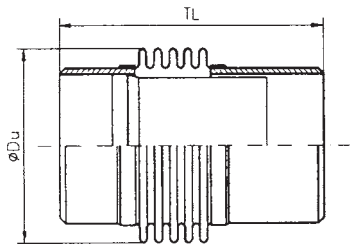


Figure 1, PRRA-1

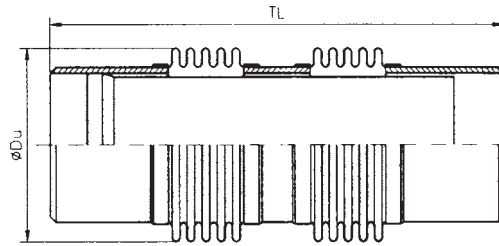


Figure 2, PRRA-2

#=2 Bellows SS 2333  
Welding ends SS 2333

#=4 Bellows SS 2343  
Welding ends SS 2343

“Connection”= outer diameter of the pipe and wall thickness.

| Code   | DN   | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Connection Ømm x mm | Weight kg |
|--------|------|-----|-------------|-------|----|---------|----------|--------------------|--------|---------------------|-----------|
| PY089# | 1000 | 10  | 127         | 510   | 0  | 564     | 1        | 8652               | 1076   | 1016 x 6            | 73        |
| PY489# | 1000 | 10  | 127         | 510   | 1  | 564     | 1        | 8652               | 1076   | 1016 x 6            | 83        |
| PY090# | 1000 | 10  | 204         | 770   | 0  | 352     | 2        | 8652               | 1076   | 1016 x 6            | 111       |
| PY490# | 1000 | 10  | 204         | 770   | 1  | 352     | 2        | 8652               | 1076   | 1016 x 6            | 122       |
| PZ082# | 1200 | 2,5 | 118         | 514   | 0  | 357     | 1        | 12390              | 1286   | 1220 x 4            | 49        |
| PZ482# | 1200 | 2,5 | 118         | 514   | 1  | 357     | 1        | 12390              | 1286   | 1220 x 4            | 62        |
| PZ083# | 1200 | 2,5 | 177         | 700   | 0  | 238     | 1        | 12390              | 1286   | 1220 x 4            | 66        |
| PZ483# | 1200 | 2,5 | 177         | 700   | 1  | 238     | 1        | 12390              | 1286   | 1220 x 4            | 85        |
| PZ085# | 1200 | 6   | 118         | 514   | 0  | 894     | 1        | 12390              | 1286   | 1220 x 6            | 91        |
| PZ485# | 1200 | 6   | 118         | 514   | 1  | 894     | 1        | 12390              | 1286   | 1220 x 6            | 104       |
| PZ086# | 1200 | 6   | 177         | 700   | 0  | 596     | 1        | 12390              | 1286   | 1220 x 6            | 124       |
| PZ486# | 1200 | 6   | 177         | 700   | 1  | 596     | 1        | 12390              | 1286   | 1220 x 6            | 142       |
| PZ088# | 1200 | 10  | 118         | 514   | 0  | 1430    | 1        | 12390              | 1286   | 1220 x 8            | 133       |
| PZ488# | 1200 | 10  | 118         | 514   | 1  | 1430    | 1        | 12390              | 1286   | 1220 x 8            | 146       |
| PZ089# | 1200 | 10  | 177         | 700   | 0  | 953     | 1        | 12390              | 1286   | 1220 x 8            | 182       |
| PZ489# | 1200 | 10  | 177         | 700   | 1  | 953     | 1        | 12390              | 1286   | 1220 x 8            | 200       |
| PZ091# | 1200 | 16  | 118         | 514   | 0  | 2145    | 1        | 12390              | 1286   | 1220 x 10           | 184       |
| PZ491# | 1200 | 16  | 118         | 514   | 1  | 2145    | 1        | 12390              | 1286   | 1220 x 10           | 197       |
| PZ092# | 1200 | 16  | 176         | 700   | 0  | 1430    | 1        | 12390              | 1286   | 1220 x 10           | 251       |
| PZ492# | 1200 | 16  | 176         | 700   | 1  | 1430    | 1        | 12390              | 1286   | 1220 x 10           | 270       |

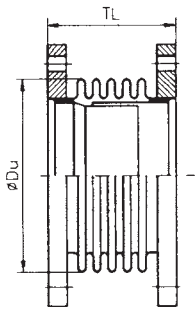


Figure 1, PRFA-1

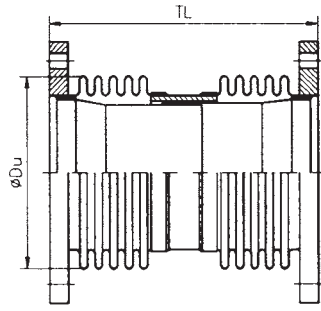


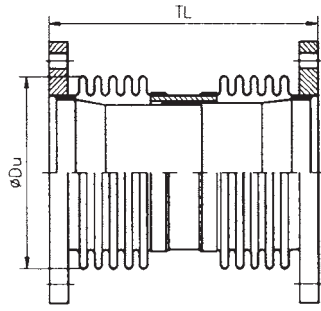
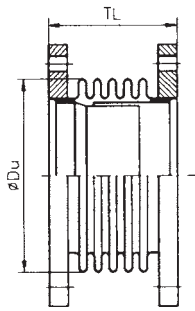
Figure 2, PRFA-2

Bellows SS 2333  
Flanges St 37

| Code   | DN   | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Flange nom. pressure class | Weight kg |
|--------|------|-----|-------------|-------|----|---------|----------|--------------------|--------|----------------------------|-----------|
| PK5212 | 200  | 2,5 | 100+20      | 600   | 1  | 66      | 2        | 456                | 265    | DIN 86044                  | 18        |
| PK5222 | 200  | 2,5 | 50          | 240   | 1  | 132     | 1        | 456                | 265    | DIN 86044                  | 13        |
| PK5232 | 200  | 2,5 | 100         | 350   | 1  | 77      | 1        | 456                | 265    | DIN 86044                  | 16        |
| PL5212 | 250  | 2,5 | 100+20      | 600   | 1  | 72      | 2        | 697                | 323    | DIN 86044                  | 21        |
| PL5222 | 250  | 2,5 | 50          | 240   | 1  | 144     | 1        | 697                | 323    | DIN 86044                  | 16        |
| PL5232 | 250  | 2,5 | 100         | 350   | 1  | 84      | 1        | 697                | 323    | DIN 86044                  | 19        |
| PM5212 | 300  | 2,5 | 100+20      | 600   | 1  | 84      | 2        | 952                | 373    | DIN 86044                  | 27        |
| PM5222 | 300  | 2,5 | 50          | 240   | 1  | 168     | 1        | 952                | 373    | DIN 86044                  | 21        |
| PM5232 | 300  | 2,5 | 100         | 350   | 1  | 98      | 1        | 952                | 373    | DIN 86044                  | 25        |
| PN5212 | 350  | 2,5 | 100+20      | 600   | 1  | 91      | 2        | 1138               | 406    | DIN 86044                  | 33        |
| PN5222 | 350  | 2,5 | 50          | 240   | 1  | 182     | 1        | 1138               | 406    | DIN 86044                  | 27        |
| PN5232 | 350  | 2,5 | 100         | 350   | 1  | 106     | 1        | 1138               | 406    | DIN 86044                  | 31        |
| PP5212 | 400  | 2,5 | 100+20      | 600   | 1  | 170     | 2        | 1462               | 458    | DIN 86044                  | 38        |
| PP5252 | 400  | 2,5 | 50          | 240   | 1  | 170     | 1        | 1462               | 458    | DIN 86044                  | 30        |
| PP5262 | 400  | 2,5 | 100         | 350   | 1  | 108     | 1        | 1462               | 458    | DIN 86044                  | 34        |
| PQ5212 | 450  | 2,5 | 100+20      | 600   | 1  | 95      | 2        | 1798               | 505    | DIN 86044                  | 43        |
| PQ5252 | 450  | 2,5 | 50          | 240   | 1  | 191     | 1        | 1798               | 505    | DIN 86044                  | 34        |
| PQ5262 | 450  | 2,5 | 100         | 350   | 1  | 121     | 1        | 1798               | 505    | DIN 86044                  | 39        |
| PR5212 | 500  | 2,5 | 100+20      | 600   | 1  | 106     | 2        | 2240               | 560    | DIN 86044                  | 48        |
| PR5252 | 500  | 2,5 | 50          | 240   | 1  | 212     | 1        | 2240               | 560    | DIN 86044                  | 38        |
| PR5262 | 500  | 2,5 | 100         | 350   | 1  | 135     | 1        | 2240               | 560    | DIN 86044                  | 43        |
| PS5212 | 600  | 2,5 | 100+20      | 600   | 1  | 124     | 2        | 3099               | 655    | DIN 86044                  | 66        |
| PS5222 | 600  | 2,5 | 50          | 240   | 1  | 247     | 1        | 3099               | 655    | DIN 86044                  | 56        |
| PS5262 | 600  | 2,5 | 100         | 350   | 1  | 157     | 1        | 3099               | 655    | DIN 86044                  | 62        |
| PU5212 | 700  | 2,5 | 100+20      | 600   | 1  | 142     | 2        | 4278               | 764    | DIN 86044                  | 78        |
| PU5252 | 700  | 2,5 | 50          | 240   | 1  | 284     | 1        | 4278               | 764    | DIN 86044                  | 66        |
| PU5262 | 700  | 2,5 | 100         | 350   | 1  | 181     | 1        | 4278               | 764    | DIN 86044                  | 74        |
| PV5212 | 800  | 2,5 | 100+20      | 600   | 1  | 168     | 2        | 5619               | 872    | DIN 86044                  | 86        |
| PV5222 | 800  | 2,5 | 50          | 240   | 1  | 392     | 1        | 5619               | 872    | DIN 86044                  | 71        |
| PV5232 | 800  | 2,5 | 100         | 350   | 1  | 235     | 1        | 5619               | 872    | DIN 86044                  | 78        |
| PW5212 | 900  | 2,5 | 100+20      | 600   | 1  | 181     | 2        | 6996               | 970    | DIN 86044                  | 99        |
| PW5222 | 900  | 2,5 | 50          | 240   | 1  | 508     | 1        | 6996               | 970    | DIN 86044                  | 79        |
| PW5232 | 900  | 2,5 | 100         | 350   | 1  | 282     | 1        | 6996               | 970    | DIN 86044                  | 88        |
| PY5212 | 1000 | 2,5 | 100+20      | 600   | 1  | 201     | 2        | 8652               | 1076   | DIN 86044                  | 108       |
| PY5222 | 1000 | 2,5 | 50          | 240   | 1  | 470     | 1        | 8652               | 1076   | DIN 86044                  | 88        |
| PY5232 | 1000 | 2,5 | 100         | 350   | 1  | 282     | 1        | 8652               | 1076   | DIN 86044                  | 99        |
| PZ5242 | 1200 | 2,5 | 100+20      | 600   | 1  | 179     | 2        | 12390              | 1286   | DIN 86044                  | 158       |
| PZ5222 | 1200 | 2,5 | 50          | 240   | 1  | 357     | 1        | 12390              | 1286   | DIN 86044                  | 119       |
| PZ5232 | 1200 | 2,5 | 100         | 350   | 1  | 238     | 1        | 12390              | 1286   | DIN 86044                  | 131       |

The movement of the dual bellows is ± 50 mm axial and ± 10 mm lateral.



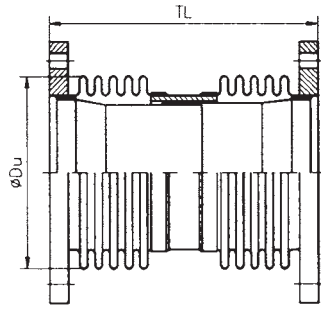
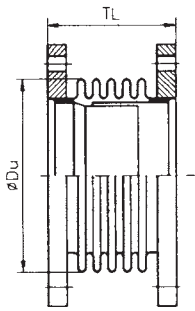


Bellows SS 2333  
Flanges St 37

Figure 1, PRFA-1

Figure 2, PRFA-2

| Code   | DN  | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Flange nom. pressure class | Weight kg |
|--------|-----|-----|-------------|-------|----|---------|----------|--------------------|--------|----------------------------|-----------|
| PB0411 | 32  | 16  | 30          | 150   | 0  | 83      | 1        | 21,2               | 61     | PN 16                      | 3,5       |
| PB3411 | 32  | 16  | 30          | 150   | 1  | 83      | 1        | 21,2               | 61     | PN 16                      | 3,5       |
| PB0421 | 32  | 16  | 60          | 340   | 0  | 42      | 2        | 21,2               | 61     | PN 16                      | 4,2       |
| PB2421 | 32  | 16  | 60          | 340   | 1  | 42      | 2        | 21,2               | 61     | PN 16                      | 4,4       |
| PB0431 | 32  | 25  | 25          | 138   | 0  | 91      | 1        | 21,2               | 61     | PN 25                      | 3,8       |
| PB3431 | 32  | 25  | 25          | 138   | 1  | 91      | 1        | 21,2               | 61     | PN 25                      | 3,9       |
| PC0411 | 40  | 16  | 30          | 156   | 0  | 78      | 1        | 26,2               | 67     | PN 16                      | 4,0       |
| PC3411 | 40  | 16  | 30          | 156   | 1  | 78      | 1        | 26,2               | 67     | PN 16                      | 4,1       |
| PC0421 | 40  | 16  | 60          | 346   | 0  | 39      | 2        | 26,2               | 67     | PN 16                      | 4,4       |
| PC2421 | 40  | 16  | 60          | 346   | 1  | 39      | 2        | 26,2               | 67     | PN 16                      | 4,6       |
| PC0431 | 40  | 25  | 25          | 146   | 0  | 86      | 1        | 26,2               | 67     | PN 25                      | 4,4       |
| PC3431 | 40  | 25  | 25          | 146   | 1  | 86      | 1        | 26,2               | 67     | PN 25                      | 4,5       |
| PD0411 | 50  | 16  | 40          | 166   | 0  | 101     | 1        | 38,9               | 81     | PN 16                      | 4,8       |
| PD3411 | 50  | 16  | 40          | 166   | 1  | 101     | 1        | 38,9               | 81     | PN 16                      | 5,0       |
| PD0421 | 50  | 16  | 80          | 366   | 0  | 56      | 2        | 38,9               | 81     | PN 16                      | 5,5       |
| PD3421 | 50  | 16  | 80          | 366   | 1  | 56      | 2        | 38,9               | 81     | PN 16                      | 5,8       |
| PD0411 | 50  | 25  | 40          | 166   | 0  | 101     | 1        | 38,9               | 81     | PN 25                      | 4,8       |
| PD3411 | 50  | 25  | 40          | 166   | 1  | 101     | 1        | 38,9               | 81     | PN 25                      | 5,0       |
| PE0411 | 65  | 16  | 40          | 144   | 0  | 93      | 1        | 61,2               | 101    | PN 16                      | 5,7       |
| PE2411 | 65  | 16  | 40          | 144   | 1  | 93      | 1        | 61,2               | 101    | PN 16                      | 6,3       |
| PE0421 | 65  | 16  | 80          | 324   | 0  | 46      | 2        | 61,2               | 101    | PN 16                      | 6,7       |
| PE2421 | 65  | 16  | 80          | 324   | 1  | 46      | 2        | 61,2               | 101    | PN 16                      | 7,1       |
| PE0431 | 65  | 25  | 40          | 154   | 0  | 111     | 1        | 61,2               | 101    | PN 25                      | 7,0       |
| PE2431 | 65  | 25  | 40          | 154   | 1  | 111     | 1        | 61,2               | 101    | PN 25                      | 7,2       |
| PF0411 | 80  | 16  | 70          | 181   | 0  | 72      | 1        | 83,8               | 118    | PN 16                      | 7,6       |
| PF3411 | 80  | 16  | 70          | 181   | 1  | 72      | 1        | 83,8               | 118    | PN 16                      | 8,0       |
| PF0421 | 80  | 16  | 140         | 396   | 0  | 36      | 2        | 83,8               | 118    | PN 16                      | 9,3       |
| PF2421 | 80  | 16  | 140         | 396   | 1  | 36      | 2        | 83,8               | 118    | PN 16                      | 10        |
| PF0431 | 80  | 25  | 55          | 158   | 0  | 110     | 1        | 83,8               | 118    | PN 25                      | 8,4       |
| PF3431 | 80  | 25  | 55          | 158   | 1  | 110     | 1        | 83,8               | 118    | PN 25                      | 8,7       |
| PG0412 | 100 | 16  | 65          | 181   | 0  | 114     | 1        | 137                | 149    | PN 16                      | 8,5       |
| PG3412 | 100 | 16  | 65          | 181   | 1  | 114     | 1        | 137                | 149    | PN 16                      | 9,1       |
| PG0422 | 100 | 16  | 130         | 396   | 0  | 57      | 2        | 137                | 149    | PN 16                      | 11        |
| PG2422 | 100 | 16  | 130         | 396   | 1  | 57      | 2        | 137                | 149    | PN 16                      | 12        |
| PG0432 | 100 | 25  | 68          | 201   | 0  | 227     | 1        | 137                | 149    | PN 25                      | 12        |
| PG3432 | 100 | 25  | 68          | 201   | 1  | 227     | 1        | 137                | 149    | PN 25                      | 12        |
| PH0412 | 125 | 2,5 | 70          | 193   | 0  | 114     | 1        | 201                | 179    | PN 16                      | 10        |
| PH2412 | 125 | 2,5 | 70          | 193   | 1  | 114     | 1        | 201                | 179    | PN 16                      | 11        |
| PH0422 | 125 | 2,5 | 125         | 397   | 0  | 64      | 2        | 201                | 179    | PN 16                      | 13        |
| PH2422 | 125 | 2,5 | 125         | 397   | 1  | 64      | 2        | 201                | 179    | PN 16                      | 14        |
| PH0432 | 125 | 16  | 75          | 206   | 0  | 156     | 1        | 201                | 179    | PN 16                      | 11        |
| PH2432 | 125 | 16  | 75          | 206   | 1  | 156     | 1        | 201                | 179    | PN 16                      | 12        |
| PH0442 | 125 | 16  | 150         | 446   | 0  | 78      | 2        | 201                | 179    | PN 16                      | 15        |
| PH2442 | 125 | 16  | 150         | 446   | 1  | 78      | 2        | 201                | 179    | PN 16                      | 17        |
| PH0452 | 125 | 25  | 70          | 206   | 0  | 208     | 1        | 201                | 179    | PN 25                      | 15        |
| PH2452 | 125 | 25  | 70          | 206   | 1  | 208     | 1        | 201                | 179    | PN 25                      | 16        |
| PJ0412 | 150 | 2,5 | 70          | 215   | 0  | 114     | 1        | 284                | 212    | PN 16                      | 14        |
| PJ2412 | 150 | 2,5 | 70          | 215   | 1  | 114     | 1        | 284                | 212    | PN 16                      | 15        |

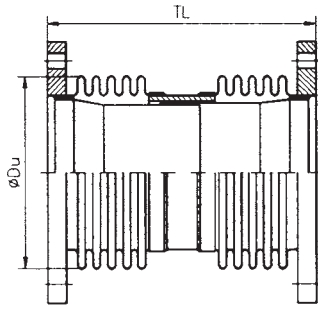
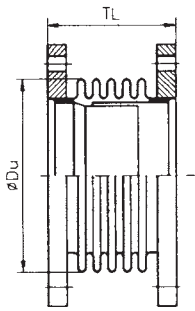


Bellows SS 2333  
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Figure 1, PRFA-1

Figure 2, PRFA-2

| Code   | DN  | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Flange nom. pressure class | Weight kg |
|--------|-----|-----|-------------|-------|----|---------|----------|--------------------|--------|----------------------------|-----------|
| PJ0422 | 150 | 2,5 | 140         | 438   | 0  | 57      | 2        | 284                | 212    | PN 16                      | 17        |
| PJ2422 | 150 | 2,5 | 140         | 438   | 1  | 57      | 2        | 284                | 212    | PN 16                      | 18        |
| PJ0432 | 150 | 16  | 70          | 232   | 0  | 154     | 1        | 284                | 212    | PN 16                      | 15        |
| PJ2432 | 150 | 16  | 70          | 232   | 1  | 154     | 1        | 284                | 212    | PN 16                      | 16        |
| PJ0442 | 150 | 16  | 140         | 472   | 0  | 77      | 2        | 284                | 212    | PN 16                      | 20        |
| PJ2442 | 150 | 16  | 140         | 472   | 1  | 77      | 2        | 284                | 212    | PN 16                      | 21        |
| PJ0452 | 150 | 25  | 70          | 232   | 0  | 257     | 1        | 284                | 212    | PN 25                      | 19        |
| PJ2452 | 150 | 25  | 70          | 232   | 1  | 257     | 1        | 284                | 212    | PN 25                      | 20        |
| PK1022 | 200 | 6   | 65          | 220   | 0  | 132     | 1        | 456                | 265    | PN 6                       | 14        |
| PK5022 | 200 | 6   | 65          | 220   | 1  | 132     | 1        | 456                | 265    | PN 6                       | 16        |
| PK1032 | 200 | 6   | 119         | 320   | 0  | 77      | 1        | 456                | 265    | PN 6                       | 16        |
| PK5032 | 200 | 6   | 119         | 320   | 1  | 77      | 1        | 456                | 265    | PN 6                       | 18        |
| PK1042 | 200 | 6   | 195         | 530   | 0  | 46      | 2        | 456                | 265    | PN 6                       | 20        |
| PK5042 | 200 | 6   | 195         | 530   | 1  | 46      | 2        | 456                | 265    | PN 6                       | 22        |
| PK1052 | 200 | 10  | 64          | 220   | 0  | 198     | 1        | 456                | 265    | PN 10                      | 19        |
| PK5052 | 200 | 10  | 64          | 220   | 1  | 198     | 1        | 456                | 265    | PN 10                      | 20        |
| PK1062 | 200 | 10  | 118         | 320   | 0  | 115     | 1        | 456                | 265    | PN 10                      | 21        |
| PK5062 | 200 | 10  | 118         | 320   | 1  | 115     | 1        | 456                | 265    | PN 10                      | 23        |
| PK1072 | 200 | 10  | 193         | 530   | 0  | 69      | 2        | 456                | 265    | PN 10                      | 26        |
| PK5072 | 200 | 10  | 193         | 530   | 1  | 69      | 2        | 456                | 265    | PN 10                      | 28        |
| PK1082 | 200 | 16  | 63          | 220   | 0  | 264     | 1        | 456                | 265    | PN 16                      | 19        |
| PK5082 | 200 | 16  | 63          | 220   | 1  | 264     | 1        | 456                | 265    | PN 16                      | 20        |
| PK1092 | 200 | 16  | 115         | 320   | 0  | 154     | 1        | 456                | 265    | PN 16                      | 22        |
| PK5092 | 200 | 16  | 115         | 320   | 1  | 154     | 1        | 456                | 265    | PN 16                      | 24        |
| PK1102 | 200 | 16  | 189         | 530   | 0  | 92      | 2        | 456                | 265    | PN 16                      | 29        |
| PK5102 | 200 | 16  | 189         | 530   | 1  | 92      | 2        | 456                | 265    | PN 16                      | 31        |
| PK1112 | 200 | 25  | 62          | 220   | 0  | 396     | 1        | 456                | 265    | PN 25                      | 24        |
| PK5112 | 200 | 25  | 62          | 220   | 1  | 396     | 1        | 456                | 265    | PN 25                      | 26        |
| PK1122 | 200 | 25  | 114         | 320   | 0  | 231     | 1        | 456                | 265    | PN 25                      | 29        |
| PK5122 | 200 | 25  | 114         | 320   | 1  | 231     | 1        | 456                | 265    | PN 25                      | 31        |
| PL1042 | 250 | 2,5 | 200         | 480   | 0  | 56      | 2        | 697                | 323    | PN 6                       | 24        |
| PL5042 | 250 | 2,5 | 200         | 480   | 1  | 56      | 2        | 697                | 323    | PN 6                       | 26        |
| PL1022 | 250 | 6   | 70          | 215   | 0  | 144     | 1        | 697                | 323    | PN 6                       | 18        |
| PL5022 | 250 | 6   | 70          | 215   | 1  | 144     | 1        | 697                | 323    | PN 6                       | 19        |
| PL1032 | 250 | 6   | 128         | 315   | 0  | 84      | 1        | 697                | 323    | PN 6                       | 20        |
| PL5032 | 250 | 6   | 128         | 315   | 1  | 84      | 1        | 697                | 323    | PN 6                       | 22        |
| PL1052 | 250 | 6   | 210         | 520   | 0  | 50      | 2        | 697                | 323    | PN 6                       | 25        |
| PL5052 | 250 | 6   | 210         | 520   | 1  | 50      | 2        | 697                | 323    | PN 6                       | 27        |
| PL1062 | 250 | 10  | 69          | 215   | 0  | 215     | 1        | 697                | 323    | PN 10                      | 22        |
| PL5062 | 250 | 10  | 69          | 215   | 1  | 215     | 1        | 697                | 323    | PN 10                      | 24        |
| PL1072 | 250 | 10  | 127         | 315   | 0  | 126     | 1        | 697                | 323    | PN 10                      | 25        |
| PL5072 | 250 | 10  | 127         | 315   | 1  | 126     | 1        | 697                | 323    | PN 10                      | 28        |
| PL1082 | 250 | 10  | 208         | 520   | 0  | 75      | 2        | 697                | 323    | PN 10                      | 32        |
| PL5082 | 250 | 10  | 208         | 520   | 1  | 75      | 2        | 697                | 323    | PN 10                      | 34        |
| PL1092 | 250 | 16  | 67          | 225   | 0  | 287     | 1        | 697                | 323    | PN 16                      | 30        |
| PL5092 | 250 | 16  | 67          | 225   | 1  | 287     | 1        | 697                | 323    | PN 16                      | 32        |
| PL1102 | 250 | 16  | 124         | 325   | 0  | 168     | 1        | 697                | 323    | PN 16                      | 34        |
| PL5102 | 250 | 16  | 124         | 325   | 1  | 168     | 1        | 697                | 323    | PN 16                      | 37        |

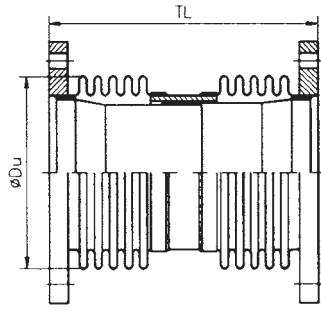
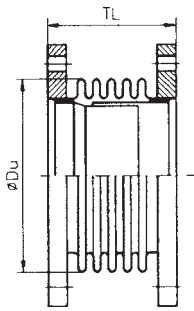


Bellows SS 2333  
Flanges St 37

Figure 1, PRFA-1

Figure 2, PRFA-2

| Code   | DN  | PN | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Flange nom. pressure class | Weight kg |
|--------|-----|----|-------------|-------|----|---------|----------|--------------------|--------|----------------------------|-----------|
| PL1112 | 250 | 16 | 203         | 530   | 0  | 101     | 2        | 697                | 323    | PN 16                      | 42        |
| PL5112 | 250 | 16 | 203         | 530   | 1  | 101     | 2        | 697                | 323    | PN 16                      | 44        |
| PL1122 | 250 | 25 | 68          | 239   | 0  | 503     | 1        | 697                | 323    | PN 25                      | 39        |
| PL5122 | 250 | 25 | 68          | 239   | 1  | 503     | 1        | 697                | 323    | PN 25                      | 40        |
| PL1132 | 250 | 25 | 126         | 349   | 0  | 293     | 1        | 697                | 323    | PN 25                      | 46        |
| PL5132 | 250 | 25 | 126         | 349   | 1  | 293     | 1        | 697                | 323    | PN 25                      | 48        |
| PM1022 | 300 | 6  | 69          | 220   | 0  | 168     | 1        | 952                | 373    | PN 6                       | 23        |
| PM5022 | 300 | 6  | 69          | 220   | 1  | 168     | 1        | 952                | 373    | PN 6                       | 25        |
| PM1032 | 300 | 6  | 126         | 320   | 0  | 98      | 1        | 952                | 373    | PN 6                       | 26        |
| PM5032 | 300 | 6  | 126         | 320   | 1  | 98      | 1        | 952                | 373    | PN 6                       | 29        |
| PM1052 | 300 | 6  | 206         | 530   | 0  | 59      | 2        | 952                | 373    | PN 6                       | 32        |
| PM5052 | 300 | 6  | 206         | 530   | 1  | 59      | 2        | 952                | 373    | PN 6                       | 34        |
| PM1062 | 300 | 10 | 68          | 230   | 0  | 251     | 1        | 952                | 373    | PN 10                      | 31        |
| PM5062 | 300 | 10 | 68          | 230   | 1  | 251     | 1        | 952                | 373    | PN 10                      | 33        |
| PM1072 | 300 | 10 | 125         | 330   | 0  | 147     | 1        | 952                | 373    | PN 10                      | 35        |
| PM5072 | 300 | 10 | 125         | 330   | 1  | 147     | 1        | 952                | 373    | PN 10                      | 38        |
| PM1082 | 300 | 10 | 204         | 540   | 0  | 88      | 2        | 952                | 373    | PN 10                      | 43        |
| PM5082 | 300 | 10 | 204         | 540   | 1  | 88      | 2        | 952                | 373    | PN 10                      | 45        |
| PM1092 | 300 | 16 | 66          | 230   | 0  | 335     | 1        | 952                | 373    | PN 16                      | 36        |
| PM5092 | 300 | 16 | 66          | 230   | 1  | 335     | 1        | 952                | 373    | PN 16                      | 38        |
| PM1102 | 300 | 16 | 121         | 330   | 0  | 195     | 1        | 952                | 373    | PN 16                      | 41        |
| PM5102 | 300 | 16 | 121         | 330   | 1  | 195     | 1        | 952                | 373    | PN 16                      | 44        |
| PM1112 | 300 | 16 | 199         | 540   | 0  | 117     | 2        | 952                | 373    | PN 16                      | 51        |
| PM5112 | 300 | 16 | 199         | 540   | 1  | 117     | 2        | 952                | 373    | PN 16                      | 54        |
| PM1122 | 300 | 25 | 67          | 230   | 0  | 586     | 1        | 952                | 373    | PN 25                      | 47        |
| PM5122 | 300 | 25 | 67          | 230   | 1  | 586     | 1        | 952                | 373    | PN 25                      | 49        |
| PM1132 | 300 | 25 | 124         | 330   | 0  | 342     | 1        | 952                | 373    | PN 25                      | 55        |
| PM5132 | 300 | 25 | 124         | 330   | 1  | 342     | 1        | 952                | 373    | PN 25                      | 58        |
| PN1022 | 350 | 6  | 68          | 188   | 0  | 182     | 1        | 1138               | 406    | PN 6                       | 30        |
| PN5022 | 350 | 6  | 68          | 188   | 1  | 182     | 1        | 1138               | 406    | PN 6                       | 32        |
| PN1032 | 350 | 6  | 124         | 288   | 0  | 106     | 1        | 1138               | 406    | PN 6                       | 33        |
| PN5032 | 350 | 6  | 124         | 288   | 1  | 106     | 1        | 1138               | 406    | PN 6                       | 36        |
| PN1052 | 350 | 6  | 203         | 498   | 0  | 64      | 2        | 1138               | 406    | PN 6                       | 39        |
| PN5052 | 350 | 6  | 203         | 498   | 1  | 64      | 2        | 1138               | 406    | PN 6                       | 42        |
| PN1062 | 350 | 10 | 67          | 200   | 0  | 274     | 1        | 1138               | 406    | PN 10                      | 42        |
| PN5062 | 350 | 10 | 67          | 200   | 1  | 274     | 1        | 1138               | 406    | PN 10                      | 44        |
| PN1072 | 350 | 10 | 123         | 300   | 0  | 160     | 1        | 1138               | 406    | PN 10                      | 46        |
| PN5072 | 350 | 10 | 123         | 300   | 1  | 160     | 1        | 1138               | 406    | PN 10                      | 50        |
| PN1082 | 350 | 10 | 201         | 510   | 0  | 96      | 2        | 1138               | 406    | PN 10                      | 55        |
| PN5082 | 350 | 10 | 201         | 510   | 1  | 96      | 2        | 1138               | 406    | PN 10                      | 58        |
| PN1092 | 350 | 16 | 65          | 212   | 0  | 365     | 1        | 1138               | 406    | PN 16                      | 56        |
| PN5092 | 350 | 16 | 65          | 212   | 1  | 365     | 1        | 1138               | 406    | PN 16                      | 58        |
| PN1102 | 350 | 16 | 120         | 312   | 0  | 213     | 1        | 1138               | 406    | PN 16                      | 61        |
| PN5102 | 350 | 16 | 120         | 312   | 1  | 213     | 1        | 1138               | 406    | PN 16                      | 65        |
| PN1112 | 350 | 16 | 218         | 562   | 0  | 116     | 2        | 1138               | 406    | PN 16                      | 74        |
| PN5112 | 350 | 16 | 218         | 562   | 1  | 116     | 2        | 1138               | 406    | PN 16                      | 77        |
| PN1122 | 350 | 25 | 66          | 212   | 0  | 638     | 1        | 1138               | 406    | PN 25                      | 73        |
| PN5122 | 350 | 25 | 66          | 212   | 1  | 638     | 1        | 1138               | 406    | PN 25                      | 75        |



Bellows SS 2333  
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Figure 1, PRFA-1

Figure 2, PRFA-2

| Code   | DN  | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Flange nom. pressure class | Weight kg |
|--------|-----|-----|-------------|-------|----|---------|----------|--------------------|--------|----------------------------|-----------|
| PN1132 | 350 | 25  | 122         | 312   | 0  | 372     | 1        | 1138               | 406    | PN 25                      | 82        |
| PN5132 | 350 | 25  | 122         | 312   | 1  | 372     | 1        | 1138               | 406    | PN 25                      | 85        |
| PP1022 | 400 | 2,5 | 73          | 196   | 0  | 198     | 1        | 1462               | 458    | PN 6                       | 33        |
| PP5022 | 400 | 2,5 | 73          | 196   | 1  | 198     | 1        | 1462               | 458    | PN 6                       | 35        |
| PP1032 | 400 | 2,5 | 131         | 292   | 0  | 119     | 1        | 1462               | 458    | PN 6                       | 35        |
| PP5032 | 400 | 2,5 | 131         | 292   | 1  | 119     | 1        | 1462               | 458    | PN 6                       | 39        |
| PP1042 | 400 | 2,5 | 204         | 482   | 0  | 74      | 2        | 1462               | 458    | PN 6                       | 43        |
| PP5042 | 400 | 2,5 | 204         | 482   | 1  | 74      | 2        | 1462               | 458    | PN 6                       | 45        |
| PP1052 | 400 | 6   | 82          | 220   | 0  | 170     | 1        | 1462               | 458    | PN 6                       | 33        |
| PP5052 | 400 | 6   | 82          | 220   | 1  | 170     | 1        | 1462               | 458    | PN 6                       | 36        |
| PP1062 | 400 | 6   | 136         | 316   | 0  | 108     | 1        | 1462               | 458    | PN 6                       | 36        |
| PP5062 | 400 | 6   | 136         | 316   | 1  | 108     | 1        | 1462               | 458    | PN 6                       | 40        |
| PP1072 | 400 | 6   | 218         | 530   | 0  | 66      | 2        | 1462               | 458    | PN 6                       | 44        |
| PP5072 | 400 | 6   | 218         | 530   | 1  | 66      | 2        | 1462               | 458    | PN 6                       | 47        |
| PP1082 | 400 | 10  | 81          | 224   | 0  | 255     | 1        | 1462               | 458    | PN 10                      | 50        |
| PP5082 | 400 | 10  | 81          | 224   | 1  | 255     | 1        | 1462               | 458    | PN 10                      | 53        |
| PP1092 | 400 | 10  | 134         | 320   | 0  | 162     | 1        | 1462               | 458    | PN 10                      | 54        |
| PP5092 | 400 | 10  | 134         | 320   | 1  | 162     | 1        | 1462               | 458    | PN 10                      | 58        |
| PP1102 | 400 | 10  | 215         | 534   | 0  | 99      | 2        | 1462               | 458    | PN 10                      | 65        |
| PP5102 | 400 | 10  | 215         | 534   | 1  | 99      | 2        | 1462               | 458    | PN 10                      | 68        |
| PP1112 | 400 | 16  | 81          | 234   | 0  | 425     | 1        | 1462               | 458    | PN 16                      | 69        |
| PP5112 | 400 | 16  | 81          | 234   | 1  | 425     | 1        | 1462               | 458    | PN 16                      | 71        |
| PP1122 | 400 | 16  | 135         | 330   | 0  | 270     | 1        | 1462               | 458    | PN 16                      | 75        |
| PP5122 | 400 | 16  | 135         | 330   | 1  | 270     | 1        | 1462               | 458    | PN 16                      | 79        |
| PP1132 | 400 | 16  | 216         | 544   | 0  | 165     | 2        | 1462               | 458    | PN 16                      | 90        |
| PP5132 | 400 | 16  | 216         | 544   | 1  | 165     | 2        | 1462               | 458    | PN 16                      | 93        |
| PP1142 | 400 | 25  | 80          | 260   | 0  | 595     | 1        | 1462               | 458    | PN 25                      | 101       |
| PP5142 | 400 | 25  | 80          | 260   | 1  | 595     | 1        | 1462               | 458    | PN 25                      | 103       |
| PP1152 | 400 | 25  | 133         | 356   | 0  | 379     | 1        | 1462               | 458    | PN 25                      | 110       |
| PP5152 | 400 | 25  | 133         | 356   | 1  | 379     | 1        | 1462               | 458    | PN 25                      | 114       |
| PQ1052 | 450 | 6   | 76          | 225   | 0  | 191     | 1        | 1798               | 505    | PN 6                       | 49        |
| PQ5052 | 450 | 6   | 76          | 225   | 1  | 191     | 1        | 1798               | 505    | PN 6                       | 52        |
| PQ1062 | 450 | 6   | 126         | 315   | 0  | 121     | 1        | 1798               | 505    | PN 6                       | 52        |
| PQ5062 | 450 | 6   | 126         | 315   | 1  | 121     | 1        | 1798               | 505    | PN 6                       | 57        |
| PQ1042 | 450 | 6   | 202         | 518   | 0  | 74      | 2        | 1798               | 505    | PN 6                       | 61        |
| PQ5042 | 450 | 6   | 202         | 518   | 1  | 74      | 2        | 1798               | 505    | PN 6                       | 64        |
| PQ1082 | 450 | 10  | 75          | 225   | 0  | 286     | 1        | 1798               | 505    | PN 10                      | 58        |
| PQ5082 | 450 | 10  | 75          | 225   | 1  | 286     | 1        | 1798               | 505    | PN 10                      | 61        |
| PQ1092 | 450 | 10  | 125         | 315   | 0  | 182     | 1        | 1798               | 505    | PN 10                      | 62        |
| PQ5092 | 450 | 10  | 125         | 315   | 1  | 182     | 1        | 1798               | 505    | PN 10                      | 67        |
| PQ1102 | 450 | 10  | 200         | 518   | 0  | 111     | 2        | 1798               | 505    | PN 10                      | 74        |
| PQ5102 | 450 | 10  | 200         | 518   | 1  | 111     | 2        | 1798               | 505    | PN 10                      | 77        |
| PQ1112 | 450 | 16  | 75          | 237   | 0  | 477     | 1        | 1798               | 505    | PN 16                      | 83        |
| PQ5112 | 450 | 16  | 75          | 237   | 1  | 477     | 1        | 1798               | 505    | PN 16                      | 86        |
| PQ1122 | 450 | 16  | 125         | 327   | 0  | 303     | 1        | 1798               | 505    | PN 16                      | 90        |
| PQ5122 | 450 | 16  | 125         | 327   | 1  | 303     | 1        | 1798               | 505    | PN 16                      | 94        |
| PQ1132 | 450 | 16  | 201         | 530   | 0  | 186     | 2        | 1798               | 505    | PN 16                      | 107       |
| PQ5132 | 450 | 16  | 201         | 530   | 1  | 186     | 2        | 1798               | 505    | PN 16                      | 110       |

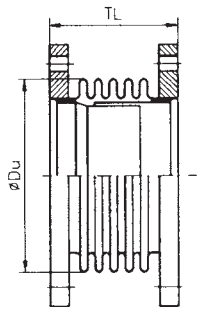


Figure 1, PRFA-1

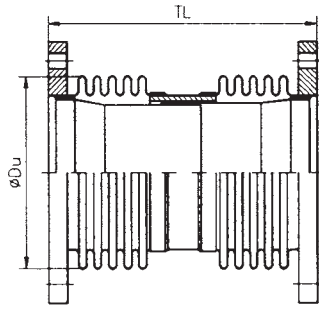


Figure 2, PRFA-2

Bellows SS 2333  
Flanges St 37

| Code   | DN  | PN | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Flange nom. pressure class | Weight kg |
|--------|-----|----|-------------|-------|----|---------|----------|--------------------|--------|----------------------------|-----------|
| PQ1142 | 450 | 25 | 74          | 281   | 0  | 668     | 1        | 1798               | 505    | PN 25                      | 114       |
| PQ5142 | 450 | 25 | 74          | 281   | 1  | 668     | 1        | 1798               | 505    | PN 25                      | 117       |
| PQ1152 | 450 | 25 | 123         | 379   | 0  | 425     | 1        | 1798               | 505    | PN 25                      | 123       |
| PQ5152 | 450 | 25 | 123         | 379   | 1  | 425     | 1        | 1798               | 505    | PN 25                      | 128       |
| PR1052 | 500 | 6  | 79          | 249   | 0  | 212     | 1        | 2240               | 560    | PN 6                       | 54        |
| PR5052 | 500 | 6  | 79          | 249   | 1  | 212     | 1        | 2240               | 560    | PN 6                       | 57        |
| PR1062 | 500 | 6  | 131         | 349   | 0  | 135     | 1        | 2240               | 560    | PN 6                       | 57        |
| PR5062 | 500 | 6  | 131         | 349   | 1  | 135     | 1        | 2240               | 560    | PN 6                       | 62        |
| PR1072 | 500 | 6  | 210         | 564   | 0  | 82      | 2        | 2240               | 560    | PN 6                       | 67        |
| PR5072 | 500 | 6  | 210         | 564   | 1  | 82      | 2        | 2240               | 560    | PN 6                       | 71        |
| PR1082 | 500 | 10 | 78          | 249   | 0  | 318     | 1        | 2240               | 560    | PN 10                      | 66        |
| PR5082 | 500 | 10 | 78          | 249   | 1  | 318     | 1        | 2240               | 560    | PN 10                      | 70        |
| PR1092 | 500 | 10 | 130         | 349   | 0  | 202     | 1        | 2240               | 560    | PN 10                      | 71        |
| PR5092 | 500 | 10 | 130         | 349   | 1  | 202     | 1        | 2240               | 560    | PN 10                      | 76        |
| PR1102 | 500 | 10 | 207         | 564   | 0  | 124     | 2        | 2240               | 560    | PN 10                      | 84        |
| PR5102 | 500 | 10 | 207         | 564   | 1  | 124     | 2        | 2240               | 560    | PN 10                      | 88        |
| PR1112 | 500 | 16 | 78          | 279   | 0  | 530     | 1        | 2240               | 560    | PN 16                      | 118       |
| PR5112 | 500 | 16 | 78          | 279   | 1  | 530     | 1        | 2240               | 560    | PN 16                      | 121       |
| PR1122 | 500 | 16 | 130         | 379   | 0  | 337     | 1        | 2240               | 560    | PN 16                      | 126       |
| PR5122 | 500 | 16 | 130         | 379   | 1  | 337     | 1        | 2240               | 560    | PN 16                      | 131       |
| PR1132 | 500 | 16 | 208         | 594   | 0  | 206     | 2        | 2240               | 560    | PN 16                      | 145       |
| PR5132 | 500 | 16 | 208         | 594   | 1  | 206     | 2        | 2240               | 560    | PN 16                      | 149       |
| PR1142 | 500 | 25 | 77          | 279   | 0  | 742     | 1        | 2240               | 560    | PN 25                      | 132       |
| PR5142 | 500 | 25 | 77          | 279   | 1  | 742     | 1        | 2240               | 560    | PN 25                      | 135       |
| PR1152 | 500 | 25 | 128         | 379   | 0  | 472     | 1        | 2240               | 560    | PN 25                      | 143       |
| PR5152 | 500 | 25 | 128         | 379   | 1  | 472     | 1        | 2240               | 560    | PN 25                      | 149       |
| PS1022 | 600 | 6  | 74          | 248   | 0  | 247     | 1        | 3099               | 655    | PN 6                       | 67        |
| PS5022 | 600 | 6  | 74          | 248   | 1  | 247     | 1        | 3099               | 655    | PN 6                       | 71        |
| PS1062 | 600 | 6  | 123         | 344   | 0  | 157     | 1        | 3099               | 655    | PN 6                       | 71        |
| PS5062 | 600 | 6  | 123         | 344   | 1  | 157     | 1        | 3099               | 655    | PN 6                       | 77        |
| PS1072 | 600 | 6  | 222         | 596   | 0  | 87      | 2        | 3099               | 655    | PN 6                       | 83        |
| PS5072 | 600 | 6  | 222         | 596   | 1  | 87      | 2        | 3099               | 655    | PN 6                       | 88        |
| PS1082 | 600 | 10 | 75          | 238   | 0  | 495     | 1        | 3099               | 655    | PN 10                      | 99        |
| PS5082 | 600 | 10 | 75          | 238   | 1  | 495     | 1        | 3099               | 655    | PN 10                      | 103       |
| PS1092 | 600 | 10 | 126         | 334   | 0  | 315     | 1        | 3099               | 655    | PN 10                      | 106       |
| PS5092 | 600 | 10 | 126         | 334   | 1  | 315     | 1        | 3099               | 655    | PN 10                      | 112       |
| PS1102 | 600 | 10 | 202         | 538   | 0  | 192     | 2        | 3099               | 655    | PN 10                      | 125       |
| PS5102 | 600 | 10 | 202         | 538   | 1  | 192     | 2        | 3099               | 655    | PN 10                      | 129       |
| PS1112 | 600 | 16 | 75          | 248   | 0  | 742     | 1        | 3099               | 655    | PN 16                      | 160       |
| PS5112 | 600 | 16 | 75          | 248   | 1  | 742     | 1        | 3099               | 655    | PN 16                      | 164       |
| PS1122 | 600 | 16 | 125         | 344   | 0  | 472     | 1        | 3099               | 655    | PN 16                      | 171       |
| PS5122 | 600 | 16 | 125         | 344   | 1  | 472     | 1        | 3099               | 655    | PN 16                      | 177       |
| PS1132 | 600 | 16 | 200         | 548   | 0  | 289     | 2        | 3099               | 655    | PN 16                      | 198       |
| PS5132 | 600 | 16 | 200         | 548   | 1  | 289     | 2        | 3099               | 655    | PN 16                      | 203       |
| PS1142 | 600 | 25 | 74          | 269   | 0  | 1113    | 1        | 3099               | 655    | PN 25                      | 172       |
| PS5142 | 600 | 25 | 74          | 269   | 1  | 1113    | 1        | 3099               | 655    | PN 25                      | 176       |
| PS1152 | 600 | 25 | 124         | 377   | 0  | 708     | 1        | 3099               | 655    | PN 25                      | 189       |
| PS5152 | 600 | 25 | 124         | 377   | 1  | 708     | 1        | 3099               | 655    | PN 25                      | 195       |

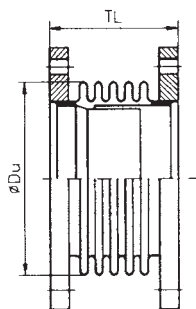


Figure 1, PRFA-1

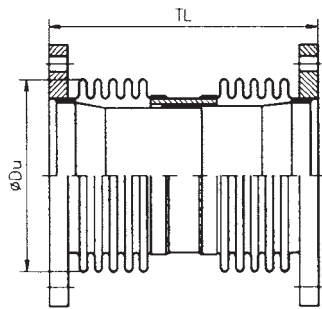


Figure 2, PRFA-2

Bellows SS 2333  
Flanges St 37

| Code   | DN  | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Flange nom. pressure class | Weight kg |
|--------|-----|-----|-------------|-------|----|---------|----------|--------------------|--------|----------------------------|-----------|
| PU1022 | 700 | 2,5 | 71          | 254   | 0  | 331     | 1        | 4278               | 764    | PN 6                       | 78        |
| PU5022 | 700 | 2,5 | 71          | 254   | 1  | 331     | 1        | 4278               | 764    | PN 6                       | 83        |
| PU1032 | 700 | 2,5 | 128         | 362   | 0  | 199     | 1        | 4278               | 764    | PN 6                       | 83        |
| PU5032 | 700 | 2,5 | 128         | 362   | 1  | 199     | 1        | 4278               | 764    | PN 6                       | 91        |
| PU1042 | 700 | 2,5 | 200         | 572   | 0  | 124     | 2        | 4278               | 764    | PN 6                       | 94        |
| PU5042 | 700 | 2,5 | 200         | 572   | 1  | 124     | 2        | 4278               | 764    | PN 6                       | 100       |
| PU1052 | 700 | 6   | 80          | 281   | 0  | 284     | 1        | 4278               | 764    | PN 6                       | 80        |
| PU5052 | 700 | 6   | 80          | 281   | 1  | 284     | 1        | 4278               | 764    | PN 6                       | 85        |
| PU1062 | 700 | 6   | 134         | 389   | 0  | 181     | 1        | 4278               | 764    | PN 6                       | 84        |
| PU5062 | 700 | 6   | 134         | 389   | 1  | 181     | 1        | 4278               | 764    | PN 6                       | 93        |
| PU1072 | 700 | 6   | 214         | 626   | 0  | 110     | 2        | 4278               | 764    | PN 6                       | 97        |
| PU5072 | 700 | 6   | 214         | 626   | 1  | 110     | 2        | 4278               | 764    | PN 6                       | 103       |
| PU1082 | 700 | 10  | 79          | 291   | 0  | 426     | 1        | 4278               | 764    | PN 10                      | 119       |
| PU5082 | 700 | 10  | 79          | 291   | 1  | 426     | 1        | 4278               | 764    | PN 10                      | 125       |
| PU1092 | 700 | 10  | 132         | 399   | 0  | 271     | 1        | 4278               | 764    | PN 10                      | 126       |
| PU5092 | 700 | 10  | 132         | 399   | 1  | 271     | 1        | 4278               | 764    | PN 10                      | 135       |
| PU1102 | 700 | 10  | 212         | 636   | 0  | 166     | 2        | 4278               | 764    | PN 10                      | 145       |
| PU5102 | 700 | 10  | 212         | 636   | 1  | 166     | 2        | 4278               | 764    | PN 10                      | 151       |
| PU1112 | 700 | 16  | 80          | 301   | 0  | 852     | 1        | 4278               | 764    | PN 16                      | 157       |
| PU5112 | 700 | 16  | 80          | 301   | 1  | 852     | 1        | 4278               | 764    | PN 16                      | 162       |
| PU1122 | 700 | 16  | 133         | 409   | 0  | 542     | 1        | 4278               | 764    | PN 16                      | 171       |
| PU5122 | 700 | 16  | 133         | 409   | 1  | 542     | 1        | 4278               | 764    | PN 16                      | 179       |
| PU1132 | 700 | 16  | 213         | 646   | 0  | 331     | 2        | 4278               | 764    | PN 16                      | 204       |
| PU5132 | 700 | 16  | 213         | 646   | 1  | 331     | 2        | 4278               | 764    | PN 16                      | 210       |
| PU1142 | 700 | 25  | 80          | 332   | 0  | 1278    | 1        | 4278               | 764    | PN 25                      | 230       |
| PU5142 | 700 | 25  | 80          | 332   | 1  | 1278    | 1        | 4278               | 764    | PN 25                      | 236       |
| PU1152 | 700 | 25  | 133         | 452   | 0  | 813     | 1        | 4278               | 764    | PN 25                      | 251       |
| PU5152 | 700 | 25  | 133         | 452   | 1  | 813     | 1        | 4278               | 764    | PN 25                      | 260       |
| PV1022 | 800 | 2,5 | 75          | 218   | 0  | 392     | 1        | 5619               | 872    | PN 6                       | 94        |
| PV5022 | 800 | 2,5 | 75          | 218   | 1  | 392     | 1        | 5619               | 872    | PN 6                       | 99        |
| PV1032 | 800 | 2,5 | 126         | 306   | 0  | 235     | 1        | 5619               | 872    | PN 6                       | 99        |
| PV5032 | 800 | 2,5 | 126         | 306   | 1  | 235     | 1        | 5619               | 872    | PN 6                       | 108       |
| PV1042 | 800 | 2,5 | 201         | 480   | 0  | 147     | 2        | 5619               | 872    | PN 6                       | 112       |
| PV5042 | 800 | 2,5 | 201         | 480   | 1  | 147     | 2        | 5619               | 872    | PN 6                       | 117       |
| PV1052 | 800 | 6   | 73          | 218   | 0  | 589     | 1        | 5619               | 872    | PN 6                       | 98        |
| PV5052 | 800 | 6   | 73          | 218   | 1  | 589     | 1        | 5619               | 872    | PN 6                       | 103       |
| PV1062 | 800 | 6   | 122         | 306   | 0  | 353     | 1        | 5619               | 872    | PN 6                       | 106       |
| PV5062 | 800 | 6   | 122         | 306   | 1  | 353     | 1        | 5619               | 872    | PN 6                       | 113       |
| PV1072 | 800 | 6   | 220         | 524   | 0  | 196     | 2        | 5619               | 872    | PN 6                       | 127       |
| PV5072 | 800 | 6   | 220         | 524   | 1  | 196     | 2        | 5619               | 872    | PN 6                       | 133       |
| PV1082 | 800 | 10  | 72          | 228   | 0  | 785     | 1        | 5619               | 872    | PN 10                      | 148       |
| PV5082 | 800 | 10  | 72          | 228   | 1  | 785     | 1        | 5619               | 872    | PN 10                      | 153       |
| PV1092 | 800 | 10  | 119         | 316   | 0  | 471     | 1        | 5619               | 872    | PN 10                      | 158       |
| PV5092 | 800 | 10  | 119         | 316   | 1  | 471     | 1        | 5619               | 872    | PN 10                      | 165       |
| PV1102 | 800 | 10  | 215         | 534   | 0  | 262     | 2        | 5619               | 872    | PN 10                      | 186       |
| PV5102 | 800 | 10  | 215         | 534   | 1  | 262     | 2        | 5619               | 872    | PN 10                      | 192       |
| PV1112 | 800 | 16  | 72          | 238   | 0  | 1373    | 1        | 5619               | 872    | PN 16                      | 185       |
| PV5112 | 800 | 16  | 72          | 238   | 1  | 1373    | 1        | 5619               | 872    | PN 16                      | 190       |

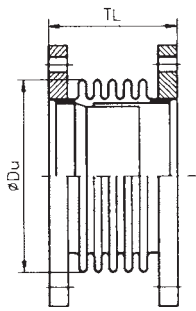


Figure 1, PRFA-1

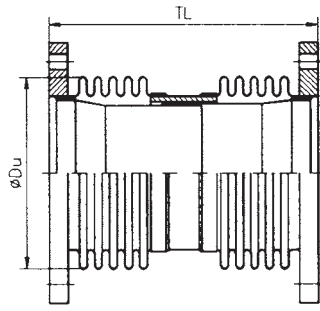


Figure 2, PRFA-2

Bellows SS 2333  
Flanges St 37

| Code   | DN   | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Flange nom. pressure class | Weight kg |
|--------|------|-----|-------------|-------|----|---------|----------|--------------------|--------|----------------------------|-----------|
| PV1122 | 800  | 16  | 121         | 326   | 0  | 824     | 1        | 5619               | 872    | PN 16                      | 203       |
| PV5122 | 800  | 16  | 121         | 326   | 1  | 824     | 1        | 5619               | 872    | PN 16                      | 210       |
| PV1132 | 800  | 16  | 217         | 544   | 0  | 458     | 2        | 5619               | 872    | PN 16                      | 248       |
| PV5132 | 800  | 16  | 217         | 544   | 1  | 458     | 2        | 5619               | 872    | PN 16                      | 254       |
| PV1142 | 800  | 25  | 72          | 276   | 0  | 1962    | 1        | 5619               | 872    | PN 25                      | 302       |
| PV5142 | 800  | 25  | 72          | 276   | 1  | 1962    | 1        | 5619               | 872    | PN 25                      | 307       |
| PV1152 | 800  | 25  | 120         | 376   | 0  | 1177    | 1        | 5619               | 872    | PN 25                      | 327       |
| PV5152 | 800  | 25  | 120         | 376   | 1  | 1177    | 1        | 5619               | 872    | PN 25                      | 335       |
| PW1022 | 900  | 2,5 | 70          | 219   | 0  | 508     | 1        | 6996               | 970    | PN 6                       | 105       |
| PW5022 | 900  | 2,5 | 70          | 219   | 1  | 508     | 1        | 6996               | 970    | PN 6                       | 110       |
| PW1032 | 900  | 2,5 | 126         | 319   | 0  | 282     | 1        | 6996               | 970    | PN 6                       | 110       |
| PW5032 | 900  | 2,5 | 126         | 319   | 1  | 282     | 1        | 6996               | 970    | PN 6                       | 119       |
| PW1012 | 900  | 2,5 | 196         | 494   | 0  | 181     | 2        | 6996               | 970    | PN 6                       | 123       |
| PW5012 | 900  | 2,5 | 196         | 494   | 1  | 181     | 2        | 6996               | 970    | PN 6                       | 130       |
| PW1052 | 900  | 6   | 81          | 244   | 0  | 635     | 1        | 6996               | 970    | PN 6                       | 111       |
| PW5052 | 900  | 6   | 81          | 244   | 1  | 635     | 1        | 6996               | 970    | PN 6                       | 116       |
| PW1062 | 900  | 6   | 122         | 319   | 0  | 423     | 1        | 6996               | 970    | PN 6                       | 117       |
| PW5062 | 900  | 6   | 122         | 319   | 1  | 423     | 1        | 6996               | 970    | PN 6                       | 126       |
| PW1072 | 900  | 6   | 218         | 544   | 0  | 238     | 2        | 6996               | 970    | PN 6                       | 138       |
| PW5072 | 900  | 6   | 218         | 544   | 1  | 238     | 2        | 6996               | 970    | PN 6                       | 145       |
| PW1082 | 900  | 10  | 80          | 264   | 0  | 847     | 1        | 6996               | 970    | PN 10                      | 187       |
| PW5082 | 900  | 10  | 80          | 264   | 1  | 847     | 1        | 6996               | 970    | PN 10                      | 193       |
| PW1092 | 900  | 10  | 120         | 339   | 0  | 564     | 1        | 6996               | 970    | PN 10                      | 196       |
| PW5092 | 900  | 10  | 120         | 339   | 1  | 564     | 1        | 6996               | 970    | PN 10                      | 204       |
| PW1102 | 900  | 10  | 214         | 564   | 0  | 317     | 2        | 6996               | 970    | PN 10                      | 224       |
| PW5102 | 900  | 10  | 214         | 564   | 1  | 317     | 2        | 6996               | 970    | PN 10                      | 231       |
| PX1112 | 900  | 16  | 119         | 378   | 0  | 1414    | 1        | 7178               | 986    | PN 16                      | 263       |
| PX5112 | 900  | 16  | 119         | 378   | 1  | 1414    | 1        | 7178               | 986    | PN 16                      | 272       |
| PX1122 | 900  | 16  | 178         | 484   | 0  | 943     | 1        | 7178               | 986    | PN 16                      | 291       |
| PX5122 | 900  | 16  | 178         | 484   | 1  | 943     | 1        | 7178               | 986    | PN 16                      | 303       |
| PX1142 | 900  | 25  | 118         | 388   | 0  | 1697    | 1        | 7178               | 986    | PN 25                      | 367       |
| PX5142 | 900  | 25  | 118         | 388   | 1  | 1697    | 1        | 7178               | 986    | PN 25                      | 376       |
| PX1152 | 900  | 25  | 177         | 494   | 0  | 1131    | 1        | 7178               | 986    | PN 25                      | 400       |
| PX5152 | 900  | 25  | 177         | 494   | 1  | 1131    | 1        | 7178               | 986    | PN 25                      | 413       |
| PY1022 | 1000 | 2,5 | 80          | 244   | 0  | 470     | 1        | 8652               | 1076   | PN 6                       | 115       |
| PY5022 | 1000 | 2,5 | 80          | 244   | 1  | 470     | 1        | 8652               | 1076   | PN 6                       | 121       |
| PY1032 | 1000 | 2,5 | 134         | 344   | 0  | 282     | 1        | 8652               | 1076   | PN 6                       | 121       |
| PY5032 | 1000 | 2,5 | 134         | 344   | 1  | 282     | 1        | 8652               | 1076   | PN 6                       | 132       |
| PY1042 | 1000 | 2,5 | 214         | 544   | 0  | 176     | 2        | 8652               | 1076   | PN 6                       | 137       |
| PY5042 | 1000 | 2,5 | 214         | 544   | 1  | 176     | 2        | 8652               | 1076   | PN 6                       | 145       |
| PY1052 | 1000 | 6   | 78          | 244   | 0  | 705     | 1        | 8652               | 1076   | PN 6                       | 120       |
| PY5052 | 1000 | 6   | 78          | 244   | 1  | 705     | 1        | 8652               | 1076   | PN 6                       | 126       |
| PY1062 | 1000 | 6   | 130         | 344   | 0  | 423     | 1        | 8652               | 1076   | PN 6                       | 130       |
| PY5062 | 1000 | 6   | 130         | 344   | 1  | 423     | 1        | 8652               | 1076   | PN 6                       | 140       |
| PY1072 | 1000 | 6   | 208         | 544   | 0  | 264     | 2        | 8652               | 1076   | PN 6                       | 152       |
| PY5072 | 1000 | 6   | 208         | 544   | 1  | 264     | 2        | 8652               | 1076   | PN 6                       | 160       |
| PY1082 | 1000 | 10  | 76          | 264   | 0  | 940     | 1        | 8652               | 1076   | PN 10                      | 218       |
| PY5082 | 1000 | 10  | 76          | 264   | 1  | 940     | 1        | 8652               | 1076   | PN 10                      | 224       |



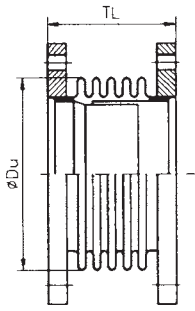


Figure 1, PRFA-1

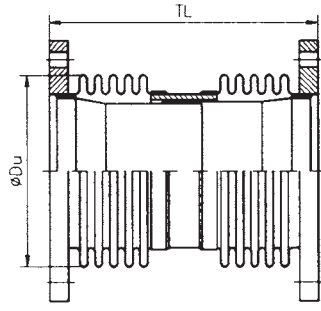


Figure 2, PRFA-2

Bellows SS 2333  
Flanges St 37

| Code   | DN   | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Flange nom. pressure class | Weight kg |
|--------|------|-----|-------------|-------|----|---------|----------|--------------------|--------|----------------------------|-----------|
| PY1092 | 1000 | 10  | 127         | 364   | 0  | 564     | 1        | 8652               | 1076   | PN 10                      | 231       |
| PY5092 | 1000 | 10  | 127         | 364   | 1  | 564     | 1        | 8652               | 1076   | PN 10                      | 231       |
| PY1102 | 1000 | 10  | 204         | 564   | 0  | 352     | 2        | 8652               | 1076   | PN 10                      | 262       |
| PY5102 | 1000 | 10  | 204         | 564   | 1  | 352     | 2        | 8652               | 1076   | PN 10                      | 270       |
| PZ1022 | 1200 | 2,5 | 118         | 348   | 0  | 357     | 1        | 12390              | 1286   | PN 6                       | 175       |
| PZ5022 | 1200 | 2,5 | 118         | 348   | 1  | 357     | 1        | 12390              | 1286   | PN 6                       | 186       |
| PZ1032 | 1200 | 2,5 | 177         | 454   | 0  | 238     | 1        | 12390              | 1286   | PN 6                       | 182       |
| PZ5032 | 1200 | 2,5 | 177         | 454   | 1  | 238     | 1        | 12390              | 1286   | PN 6                       | 198       |
| PZ1052 | 1200 | 6   | 118         | 348   | 0  | 894     | 1        | 12390              | 1286   | PN 6                       | 201       |
| PZ5052 | 1200 | 6   | 118         | 348   | 1  | 894     | 1        | 12390              | 1286   | PN 6                       | 212       |
| PZ1062 | 1200 | 6   | 177         | 454   | 0  | 596     | 1        | 12390              | 1286   | PN 6                       | 219       |
| PZ5062 | 1200 | 6   | 177         | 454   | 1  | 596     | 1        | 12390              | 1286   | PN 6                       | 236       |
| PZ1082 | 1200 | 10  | 118         | 368   | 0  | 1430    | 1        | 12390              | 1286   | PN 10                      | 351       |
| PZ5082 | 1200 | 10  | 118         | 368   | 1  | 1430    | 1        | 12390              | 1286   | PN 10                      | 362       |
| PZ1092 | 1200 | 10  | 177         | 474   | 0  | 953     | 1        | 12390              | 1286   | PN 10                      | 380       |
| PZ5092 | 1200 | 10  | 177         | 474   | 1  | 953     | 1        | 12390              | 1286   | PN 10                      | 396       |
| PZ1112 | 1200 | 16  | 118         | 388   | 0  | 2145    | 1        | 12390              | 1286   | PN 16                      | 513       |
| PZ5112 | 1200 | 16  | 118         | 388   | 1  | 2145    | 1        | 12390              | 1286   | PN 16                      | 524       |
| PZ1122 | 1200 | 16  | 176         | 494   | 0  | 1430    | 1        | 12390              | 1286   | PN 16                      | 556       |
| PZ5122 | 1200 | 16  | 176         | 494   | 1  | 1430    | 1        | 12390              | 1286   | PN 16                      | 573       |



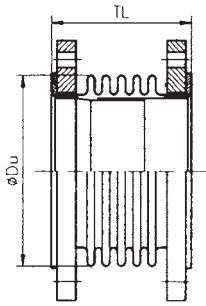


Figure 1, PRFI-1

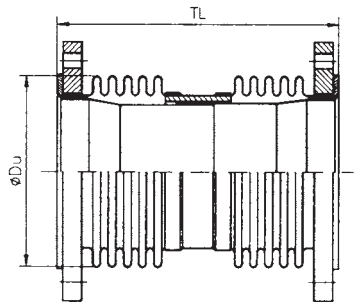


Figure 2, PRFI-2

- ... DN 80
- #=1 Bellows SS 2333  
Flanges St 37/Znk

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- DN 100 ...
- #=2 Bellows SS 2333  
Flanges St 37/Znk

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- ... DN 80
- #=3 Bellows SS 2343  
Flanges St 37/Znk

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- DN 100 ...
- #=4 Bellows SS 2343  
Flanges St 37/Znk

| Code   | DN  | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Flange nom. pressure class | Weight kg |
|--------|-----|-----|-------------|-------|----|---------|----------|--------------------|--------|----------------------------|-----------|
| PB051# | 32  | 16  | 30          | 161   | 0  | 83      | 1        | 21,2               | 61     | PN 16                      | 3,8       |
| PB351# | 32  | 16  | 30          | 161   | 1  | 83      | 1        | 21,2               | 61     | PN 16                      | 3,9       |
| PB052# | 32  | 16  | 60          | 346   | 0  | 42      | 2        | 21,2               | 61     | PN 16                      | 3,8       |
| PB252# | 32  | 16  | 60          | 346   | 1  | 42      | 2        | 21,2               | 61     | PN 16                      | 4,0       |
| PB053# | 32  | 25  | 25          | 152   | 0  | 91      | 1        | 21,2               | 61     | PN 25                      | 4,2       |
| PB353# | 32  | 25  | 25          | 152   | 1  | 91      | 1        | 21,2               | 61     | PN 25                      | 4,3       |
| PC051# | 40  | 16  | 30          | 166   | 0  | 78      | 1        | 26,2               | 67     | PN 16                      | 4,2       |
| PC351# | 40  | 16  | 30          | 166   | 1  | 78      | 1        | 26,2               | 67     | PN 16                      | 4,4       |
| PC052# | 40  | 16  | 60          | 356   | 0  | 39      | 2        | 26,2               | 67     | PN 16                      | 4,7       |
| PC252# | 40  | 16  | 60          | 356   | 1  | 39      | 2        | 26,2               | 67     | PN 16                      | 4,9       |
| PC053# | 40  | 25  | 25          | 156   | 0  | 86      | 1        | 26,2               | 67     | PN 25                      | 4,7       |
| PC353# | 40  | 25  | 25          | 156   | 1  | 86      | 1        | 26,2               | 67     | PN 25                      | 4,8       |
| PD051# | 50  | 16  | 40          | 176   | 0  | 101     | 1        | 38,9               | 81     | PN 16                      | 5,2       |
| PD351# | 50  | 16  | 40          | 176   | 1  | 101     | 1        | 38,9               | 81     | PN 16                      | 5,4       |
| PD052# | 50  | 16  | 80          | 376   | 0  | 56      | 2        | 38,9               | 81     | PN 16                      | 5,9       |
| PD352# | 50  | 16  | 80          | 376   | 1  | 56      | 2        | 38,9               | 81     | PN 16                      | 6,2       |
| PD051# | 50  | 25  | 40          | 176   | 0  | 101     | 1        | 38,9               | 81     | PN 25                      | 5,2       |
| PD351# | 50  | 25  | 40          | 176   | 1  | 101     | 1        | 38,9               | 81     | PN 25                      | 5,4       |
| PE051# | 65  | 16  | 40          | 154   | 0  | 93      | 1        | 61,2               | 101    | PN 16                      | 6,3       |
| PE351# | 65  | 16  | 40          | 154   | 1  | 93      | 1        | 61,2               | 101    | PN 16                      | 6,9       |
| PE052# | 65  | 16  | 80          | 332   | 0  | 46      | 2        | 61,2               | 101    | PN 16                      | 7,2       |
| PE252# | 65  | 16  | 80          | 332   | 1  | 46      | 2        | 61,2               | 101    | PN 16                      | 7,6       |
| PE053# | 65  | 25  | 40          | 164   | 0  | 111     | 1        | 61,2               | 101    | PN 25                      | 7,6       |
| PE353# | 65  | 25  | 40          | 164   | 1  | 111     | 1        | 61,2               | 101    | PN 25                      | 7,8       |
| PF051# | 80  | 16  | 70          | 195   | 0  | 72      | 1        | 83,8               | 118    | PN 16                      | 8,3       |
| PF351# | 80  | 16  | 70          | 195   | 1  | 72      | 1        | 83,8               | 118    | PN 16                      | 8,7       |
| PF052# | 80  | 16  | 140         | 410   | 0  | 36      | 2        | 83,8               | 118    | PN 16                      | 10        |
| PF252# | 80  | 16  | 140         | 410   | 1  | 36      | 2        | 83,8               | 118    | PN 16                      | 11        |
| PF053# | 80  | 25  | 55          | 172   | 0  | 110     | 1        | 83,8               | 118    | PN 25                      | 9,0       |
| PF353# | 80  | 25  | 55          | 172   | 1  | 110     | 1        | 83,8               | 118    | PN 25                      | 9,3       |
| PG051# | 100 | 16  | 65          | 195   | 0  | 114     | 1        | 137                | 149    | PN 16                      | 9,2       |
| PG351# | 100 | 16  | 65          | 195   | 1  | 114     | 1        | 137                | 149    | PN 16                      | 9,8       |
| PG052# | 100 | 16  | 130         | 410   | 0  | 57      | 2        | 137                | 149    | PN 16                      | 11        |
| PG252# | 100 | 16  | 130         | 410   | 1  | 57      | 2        | 137                | 149    | PN 16                      | 12        |
| PG053# | 100 | 25  | 68          | 215   | 0  | 227     | 1        | 137                | 149    | PN 25                      | 13        |
| PG353# | 100 | 25  | 68          | 215   | 1  | 227     | 1        | 137                | 149    | PN 25                      | 13        |
| PH051# | 125 | 2,5 | 70          | 211   | 0  | 114     | 1        | 201                | 179    | PN 16                      | 11        |
| PH251# | 125 | 2,5 | 70          | 211   | 1  | 114     | 1        | 201                | 179    | PN 16                      | 12        |
| PH052# | 125 | 2,5 | 125         | 414   | 0  | 64      | 2        | 201                | 179    | PN 16                      | 14        |
| PH252# | 125 | 2,5 | 125         | 414   | 1  | 64      | 2        | 201                | 179    | PN 16                      | 15        |
| PH053# | 125 | 16  | 75          | 224   | 0  | 156     | 1        | 201                | 179    | PN 16                      | 12        |
| PH253# | 125 | 16  | 75          | 224   | 1  | 156     | 1        | 201                | 179    | PN 16                      | 13        |
| PH054# | 125 | 16  | 150         | 464   | 0  | 78      | 2        | 201                | 179    | PN 16                      | 16        |
| PH254# | 125 | 16  | 150         | 464   | 1  | 78      | 2        | 201                | 179    | PN 16                      | 17        |
| PH055# | 125 | 25  | 70          | 224   | 0  | 208     | 1        | 201                | 179    | PN 25                      | 16        |
| PH255# | 125 | 25  | 70          | 224   | 1  | 208     | 1        | 201                | 179    | PN 25                      | 17        |
| PJ051# | 150 | 2,5 | 70          | 207   | 0  | 114     | 1        | 284                | 212    | PN 16                      | 15        |
| PJ251# | 150 | 2,5 | 70          | 207   | 1  | 114     | 1        | 284                | 212    | PN 16                      | 16        |

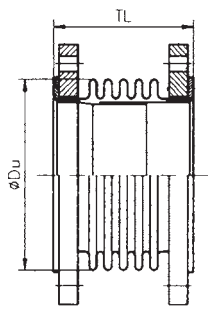


Figure 1, PRFI-1

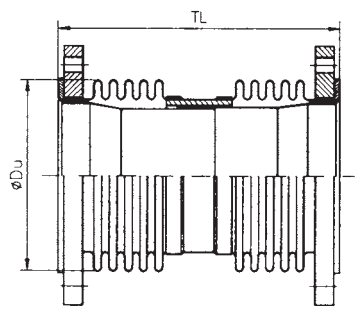


Figure 2, PRFI-2

- #=2 Bellows SS 2333  
Flanges St 37/Znk
- #=4 Bellows SS 2343  
Flanges St 37/Znk

| Code   | DN  | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Flange nom. pressure class | Weight kg |
|--------|-----|-----|-------------|-------|----|---------|----------|--------------------|--------|----------------------------|-----------|
| PJ052# | 150 | 2,5 | 140         | 430   | 0  | 57      | 2        | 284                | 212    | PN 16                      | 18        |
| PJ252# | 150 | 2,5 | 140         | 430   | 1  | 57      | 2        | 284                | 212    | PN 16                      | 19        |
| PJ053# | 150 | 16  | 70          | 224   | 0  | 154     | 1        | 284                | 212    | PN 16                      | 16        |
| PJ253# | 150 | 16  | 70          | 224   | 1  | 154     | 1        | 284                | 212    | PN 16                      | 17        |
| PJ054# | 150 | 16  | 140         | 464   | 0  | 77      | 2        | 284                | 212    | PN 16                      | 20        |
| PJ254# | 150 | 16  | 140         | 464   | 1  | 77      | 2        | 284                | 212    | PN 16                      | 22        |
| PJ055# | 150 | 25  | 70          | 224   | 0  | 257     | 1        | 284                | 212    | PN 25                      | 20        |
| PJ255# | 150 | 25  | 70          | 224   | 1  | 257     | 1        | 284                | 212    | PN 25                      | 21        |
| PK142# | 200 | 6   | 65          | 204   | 0  | 132     | 1        | 456                | 265    | PN 6                       | 15        |
| PK542# | 200 | 6   | 65          | 204   | 1  | 132     | 1        | 456                | 265    | PN 6                       | 17        |
| PK143# | 200 | 6   | 119         | 304   | 0  | 77      | 1        | 456                | 265    | PN 6                       | 17        |
| PK543# | 200 | 6   | 119         | 304   | 1  | 77      | 1        | 456                | 265    | PN 6                       | 19        |
| PK144# | 200 | 6   | 195         | 514   | 0  | 46      | 2        | 456                | 265    | PN 6                       | 21        |
| PK544# | 200 | 6   | 195         | 514   | 1  | 46      | 2        | 456                | 265    | PN 6                       | 23        |
| PK145# | 200 | 10  | 64          | 204   | 0  | 198     | 1        | 456                | 265    | PN 10                      | 20        |
| PK545# | 200 | 10  | 64          | 204   | 1  | 198     | 1        | 456                | 265    | PN 10                      | 21        |
| PK146# | 200 | 10  | 118         | 304   | 0  | 115     | 1        | 456                | 265    | PN 10                      | 22        |
| PK546# | 200 | 10  | 118         | 304   | 1  | 115     | 1        | 456                | 265    | PN 10                      | 24        |
| PK147# | 200 | 10  | 193         | 514   | 0  | 69      | 2        | 456                | 265    | PN 10                      | 27        |
| PK547# | 200 | 10  | 193         | 514   | 1  | 69      | 2        | 456                | 265    | PN 10                      | 29        |
| PK148# | 200 | 16  | 63          | 204   | 0  | 264     | 1        | 456                | 265    | PN 16                      | 20        |
| PK548# | 200 | 16  | 63          | 204   | 1  | 264     | 1        | 456                | 265    | PN 16                      | 22        |
| PK149# | 200 | 16  | 115         | 304   | 0  | 154     | 1        | 456                | 265    | PN 16                      | 23        |
| PK549# | 200 | 16  | 115         | 304   | 1  | 154     | 1        | 456                | 265    | PN 16                      | 25        |
| PK150# | 200 | 16  | 189         | 514   | 0  | 92      | 2        | 456                | 265    | PN 16                      | 30        |
| PK550# | 200 | 16  | 189         | 514   | 1  | 92      | 2        | 456                | 265    | PN 16                      | 32        |
| PK151# | 200 | 25  | 62          | 204   | 0  | 396     | 1        | 456                | 265    | PN 25                      | 25        |
| PK551# | 200 | 25  | 62          | 204   | 1  | 396     | 1        | 456                | 265    | PN 25                      | 27        |
| PK152# | 200 | 25  | 114         | 304   | 0  | 231     | 1        | 456                | 265    | PN 25                      | 30        |
| PK552# | 200 | 25  | 114         | 304   | 1  | 231     | 1        | 456                | 265    | PN 25                      | 32        |
| PL144# | 250 | 2,5 | 200         | 464   | 0  | 56      | 2        | 697                | 323    | PN 6                       | 27        |
| PL544# | 250 | 2,5 | 200         | 464   | 1  | 56      | 2        | 697                | 323    | PN 6                       | 29        |
| PL142# | 250 | 6   | 70          | 199   | 0  | 144     | 1        | 697                | 323    | PN 6                       | 20        |
| PL542# | 250 | 6   | 70          | 199   | 1  | 144     | 1        | 697                | 323    | PN 6                       | 22        |
| PL143# | 250 | 6   | 128         | 299   | 0  | 84      | 1        | 697                | 323    | PN 6                       | 22        |
| PL543# | 250 | 6   | 128         | 299   | 1  | 84      | 1        | 697                | 323    | PN 6                       | 25        |
| PL145# | 250 | 6   | 210         | 504   | 0  | 50      | 2        | 697                | 323    | PN 6                       | 28        |
| PL545# | 250 | 6   | 210         | 504   | 1  | 50      | 2        | 697                | 323    | PN 6                       | 30        |
| PL146# | 250 | 10  | 69          | 199   | 0  | 215     | 1        | 697                | 323    | PN 10                      | 25        |
| PL546# | 250 | 10  | 69          | 199   | 1  | 215     | 1        | 697                | 323    | PN 10                      | 27        |
| PL147# | 250 | 10  | 127         | 299   | 0  | 126     | 1        | 697                | 323    | PN 10                      | 28        |
| PL547# | 250 | 10  | 127         | 299   | 1  | 126     | 1        | 697                | 323    | PN 10                      | 31        |
| PL148# | 250 | 10  | 208         | 504   | 0  | 75      | 2        | 697                | 323    | PN 10                      | 35        |
| PL548# | 250 | 10  | 208         | 504   | 1  | 75      | 2        | 697                | 323    | PN 10                      | 37        |
| PL149# | 250 | 16  | 67          | 199   | 0  | 287     | 1        | 697                | 323    | PN 16                      | 33        |
| PL549# | 250 | 16  | 67          | 199   | 1  | 287     | 1        | 697                | 323    | PN 16                      | 34        |
| PL150# | 250 | 16  | 124         | 299   | 0  | 168     | 1        | 697                | 323    | PN 16                      | 37        |
| PL550# | 250 | 16  | 124         | 299   | 1  | 168     | 1        | 697                | 323    | PN 16                      | 39        |

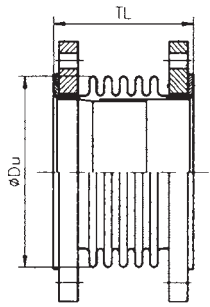


Figure 1, PRFI-1

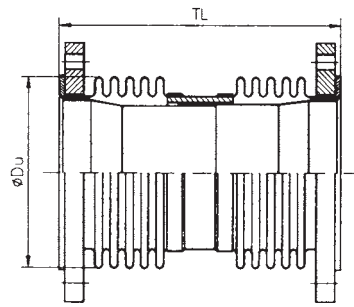


Figure 2, PRFI-2

- #=2 Bellows SS 2333  
Flanges St 37/Znk
- #=4 Bellows SS 2343  
Flanges St 37/Znk

| Code   | DN  | PN | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Flange nom. pressure class | Weight kg |
|--------|-----|----|-------------|-------|----|---------|----------|--------------------|--------|----------------------------|-----------|
| PL151# | 250 | 16 | 203         | 504   | 0  | 101     | 2        | 697                | 323    | PN 16                      | 45        |
| PL551# | 250 | 16 | 203         | 504   | 1  | 101     | 2        | 697                | 323    | PN 16                      | 47        |
| PL152# | 250 | 25 | 68          | 213   | 0  | 503     | 1        | 697                | 323    | PN 25                      | 41        |
| PL552# | 250 | 25 | 68          | 213   | 1  | 503     | 1        | 697                | 323    | PN 25                      | 43        |
| PL153# | 250 | 25 | 126         | 323   | 0  | 293     | 1        | 697                | 323    | PN 25                      | 48        |
| PL553# | 250 | 25 | 126         | 323   | 1  | 293     | 1        | 697                | 323    | PN 25                      | 51        |
| PM142# | 300 | 6  | 69          | 204   | 0  | 168     | 1        | 952                | 373    | PN 6                       | 26        |
| PM542# | 300 | 6  | 69          | 204   | 1  | 168     | 1        | 952                | 373    | PN 6                       | 28        |
| PM143# | 300 | 6  | 126         | 304   | 0  | 98      | 1        | 952                | 373    | PN 6                       | 29        |
| PM543# | 300 | 6  | 126         | 304   | 1  | 98      | 1        | 952                | 373    | PN 6                       | 32        |
| PM145# | 300 | 6  | 206         | 514   | 0  | 59      | 2        | 952                | 373    | PN 6                       | 35        |
| PM545# | 300 | 6  | 206         | 514   | 1  | 59      | 2        | 952                | 373    | PN 6                       | 37        |
| PM146# | 300 | 10 | 68          | 204   | 0  | 251     | 1        | 952                | 373    | PN 10                      | 34        |
| PM546# | 300 | 10 | 68          | 204   | 1  | 251     | 1        | 952                | 373    | PN 10                      | 36        |
| PM147# | 300 | 10 | 125         | 304   | 0  | 147     | 1        | 952                | 373    | PN 10                      | 38        |
| PM547# | 300 | 10 | 125         | 304   | 1  | 147     | 1        | 952                | 373    | PN 10                      | 41        |
| PM148# | 300 | 10 | 204         | 514   | 0  | 88      | 2        | 952                | 373    | PN 10                      | 46        |
| PM548# | 300 | 10 | 204         | 514   | 1  | 88      | 2        | 952                | 373    | PN 10                      | 48        |
| PM149# | 300 | 16 | 66          | 204   | 0  | 335     | 1        | 952                | 373    | PN 16                      | 39        |
| PM549# | 300 | 16 | 66          | 204   | 1  | 335     | 1        | 952                | 373    | PN 16                      | 41        |
| PM150# | 300 | 16 | 121         | 304   | 0  | 195     | 1        | 952                | 373    | PN 16                      | 44        |
| PM550# | 300 | 16 | 121         | 304   | 1  | 195     | 1        | 952                | 373    | PN 16                      | 47        |
| PM151# | 300 | 16 | 199         | 514   | 0  | 117     | 2        | 952                | 373    | PN 16                      | 54        |
| PM551# | 300 | 16 | 199         | 514   | 1  | 117     | 2        | 952                | 373    | PN 16                      | 57        |
| PM152# | 300 | 25 | 67          | 204   | 0  | 586     | 1        | 952                | 373    | PN 25                      | 50        |
| PM552# | 300 | 25 | 67          | 204   | 1  | 586     | 1        | 952                | 373    | PN 25                      | 52        |
| PM153# | 300 | 25 | 124         | 304   | 0  | 342     | 1        | 952                | 373    | PN 25                      | 58        |
| PM553# | 300 | 25 | 124         | 304   | 1  | 342     | 1        | 952                | 373    | PN 25                      | 61        |
| PN142# | 350 | 6  | 68          | 204   | 0  | 182     | 1        | 1138               | 406    | PN 6                       | 33        |
| PN542# | 350 | 6  | 68          | 204   | 1  | 182     | 1        | 1138               | 406    | PN 6                       | 35        |
| PN143# | 350 | 6  | 124         | 304   | 0  | 106     | 1        | 1138               | 406    | PN 6                       | 36        |
| PN543# | 350 | 6  | 124         | 304   | 1  | 106     | 1        | 1138               | 406    | PN 6                       | 39        |
| PN145# | 350 | 6  | 203         | 514   | 0  | 64      | 2        | 1138               | 406    | PN 6                       | 43        |
| PN545# | 350 | 6  | 203         | 514   | 1  | 64      | 2        | 1138               | 406    | PN 6                       | 46        |
| PN146# | 350 | 10 | 67          | 204   | 0  | 274     | 1        | 1138               | 406    | PN 10                      | 46        |
| PN546# | 350 | 10 | 67          | 204   | 1  | 274     | 1        | 1138               | 406    | PN 10                      | 48        |
| PN147# | 350 | 10 | 123         | 304   | 0  | 160     | 1        | 1138               | 406    | PN 10                      | 49        |
| PN547# | 350 | 10 | 123         | 304   | 1  | 160     | 1        | 1138               | 406    | PN 10                      | 53        |
| PN148# | 350 | 10 | 201         | 514   | 0  | 96      | 2        | 1138               | 406    | PN 10                      | 59        |
| PN548# | 350 | 10 | 201         | 514   | 1  | 96      | 2        | 1138               | 406    | PN 10                      | 61        |
| PN149# | 350 | 16 | 65          | 204   | 0  | 365     | 1        | 1138               | 406    | PN 16                      | 59        |
| PN549# | 350 | 16 | 65          | 204   | 1  | 365     | 1        | 1138               | 406    | PN 16                      | 61        |
| PN150# | 350 | 16 | 120         | 304   | 0  | 213     | 1        | 1138               | 406    | PN 16                      | 64        |
| PN550# | 350 | 16 | 120         | 304   | 1  | 213     | 1        | 1138               | 406    | PN 16                      | 68        |
| PN151# | 350 | 16 | 218         | 514   | 0  | 116     | 2        | 1138               | 406    | PN 16                      | 78        |
| PN551# | 350 | 16 | 218         | 514   | 1  | 116     | 2        | 1138               | 406    | PN 16                      | 80        |
| PN152# | 350 | 25 | 66          | 204   | 0  | 638     | 1        | 1138               | 406    | PN 25                      | 76        |
| PN552# | 350 | 25 | 66          | 204   | 1  | 638     | 1        | 1138               | 406    | PN 25                      | 78        |

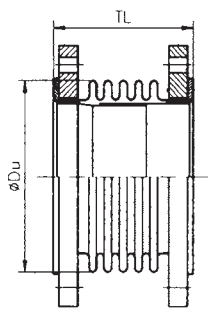


Figure 1, PRFI-1

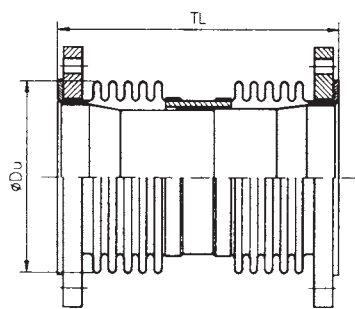


Figure 2, PRFI-2

#=2 Bellows SS 2333  
Flanges St 37/Znk

#=4 Bellows SS 2343  
Flanges St 37/Znk

| Code   | DN  | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Flange nom. pressure class | Weight kg |
|--------|-----|-----|-------------|-------|----|---------|----------|--------------------|--------|----------------------------|-----------|
| PN153# | 350 | 25  | 122         | 304   | 0  | 372     | 1        | 1138               | 406    | PN 25                      | 85        |
| PN553# | 350 | 25  | 122         | 304   | 1  | 372     | 1        | 1138               | 406    | PN 25                      | 89        |
| PP142# | 400 | 2,5 | 73          | 204   | 0  | 198     | 1        | 1462               | 458    | PN 6                       | 36        |
| PP542# | 400 | 2,5 | 73          | 204   | 1  | 198     | 1        | 1462               | 458    | PN 6                       | 39        |
| PP143# | 400 | 2,5 | 131         | 300   | 0  | 119     | 1        | 1462               | 458    | PN 6                       | 39        |
| PP543# | 400 | 2,5 | 131         | 300   | 1  | 119     | 1        | 1462               | 458    | PN 6                       | 43        |
| PP144# | 400 | 2,5 | 204         | 490   | 0  | 74      | 2        | 1462               | 458    | PN 6                       | 46        |
| PP544# | 400 | 2,5 | 204         | 490   | 1  | 74      | 2        | 1462               | 458    | PN 6                       | 49        |
| PP145# | 400 | 6   | 82          | 228   | 0  | 170     | 1        | 1462               | 458    | PN 6                       | 37        |
| PP545# | 400 | 6   | 82          | 228   | 1  | 170     | 1        | 1462               | 458    | PN 6                       | 40        |
| PP146# | 400 | 6   | 136         | 324   | 0  | 108     | 1        | 1462               | 458    | PN 6                       | 40        |
| PP546# | 400 | 6   | 136         | 324   | 1  | 108     | 1        | 1462               | 458    | PN 6                       | 44        |
| PP147# | 400 | 6   | 218         | 538   | 0  | 66      | 2        | 1462               | 458    | PN 6                       | 48        |
| PP547# | 400 | 6   | 218         | 538   | 1  | 66      | 2        | 1462               | 458    | PN 6                       | 51        |
| PP148# | 400 | 10  | 81          | 228   | 0  | 255     | 1        | 1462               | 458    | PN 10                      | 54        |
| PP548# | 400 | 10  | 81          | 228   | 1  | 255     | 1        | 1462               | 458    | PN 10                      | 57        |
| PP149# | 400 | 10  | 134         | 324   | 0  | 162     | 1        | 1462               | 458    | PN 10                      | 58        |
| PP549# | 400 | 10  | 134         | 324   | 1  | 162     | 1        | 1462               | 458    | PN 10                      | 62        |
| PP150# | 400 | 10  | 215         | 538   | 0  | 99      | 2        | 1462               | 458    | PN 10                      | 68        |
| PP550# | 400 | 10  | 215         | 538   | 1  | 99      | 2        | 1462               | 458    | PN 10                      | 71        |
| PP151# | 400 | 16  | 81          | 228   | 0  | 425     | 1        | 1462               | 458    | PN 16                      | 72        |
| PP551# | 400 | 16  | 81          | 228   | 1  | 425     | 1        | 1462               | 458    | PN 16                      | 75        |
| PP152# | 400 | 16  | 135         | 324   | 0  | 270     | 1        | 1462               | 458    | PN 16                      | 79        |
| PP552# | 400 | 16  | 135         | 324   | 1  | 270     | 1        | 1462               | 458    | PN 16                      | 83        |
| PP153# | 400 | 16  | 216         | 538   | 0  | 165     | 2        | 1462               | 458    | PN 16                      | 94        |
| PP553# | 400 | 16  | 216         | 538   | 1  | 165     | 2        | 1462               | 458    | PN 16                      | 97        |
| PP154# | 400 | 25  | 80          | 270   | 0  | 595     | 1        | 1462               | 458    | PN 25                      | 112       |
| PP554# | 400 | 25  | 80          | 270   | 1  | 595     | 1        | 1462               | 458    | PN 25                      | 115       |
| PP155# | 400 | 25  | 133         | 366   | 0  | 379     | 1        | 1462               | 458    | PN 25                      | 121       |
| PP555# | 400 | 25  | 133         | 366   | 1  | 379     | 1        | 1462               | 458    | PN 25                      | 125       |
| PQ145# | 450 | 6   | 76          | 217   | 0  | 191     | 1        | 1798               | 505    | PN 6                       | 53        |
| PQ545# | 450 | 6   | 76          | 217   | 1  | 191     | 1        | 1798               | 505    | PN 6                       | 56        |
| PQ146# | 450 | 6   | 126         | 307   | 0  | 121     | 1        | 1798               | 505    | PN 6                       | 56        |
| PQ546# | 450 | 6   | 126         | 307   | 1  | 121     | 1        | 1798               | 505    | PN 6                       | 60        |
| PQ144# | 450 | 6   | 202         | 510   | 0  | 74      | 2        | 1798               | 505    | PN 6                       | 65        |
| PQ544# | 450 | 6   | 202         | 510   | 1  | 74      | 2        | 1798               | 505    | PN 6                       | 68        |
| PQ148# | 450 | 10  | 75          | 217   | 0  | 286     | 1        | 1798               | 505    | PN 10                      | 62        |
| PQ548# | 450 | 10  | 75          | 217   | 1  | 286     | 1        | 1798               | 505    | PN 10                      | 65        |
| PQ149# | 450 | 10  | 125         | 307   | 0  | 182     | 1        | 1798               | 505    | PN 10                      | 66        |
| PQ549# | 450 | 10  | 125         | 307   | 1  | 182     | 1        | 1798               | 505    | PN 10                      | 70        |
| PQ150# | 450 | 10  | 200         | 510   | 0  | 111     | 2        | 1798               | 505    | PN 10                      | 77        |
| PQ550# | 450 | 10  | 200         | 510   | 1  | 111     | 2        | 1798               | 505    | PN 10                      | 81        |
| PQ151# | 450 | 16  | 75          | 259   | 0  | 477     | 1        | 1798               | 505    | PN 16                      | 98        |
| PQ551# | 450 | 16  | 75          | 259   | 1  | 477     | 1        | 1798               | 505    | PN 16                      | 101       |
| PQ152# | 450 | 16  | 125         | 349   | 0  | 303     | 1        | 1798               | 505    | PN 16                      | 106       |
| PQ552# | 450 | 16  | 125         | 349   | 1  | 303     | 1        | 1798               | 505    | PN 16                      | 110       |
| PQ153# | 450 | 16  | 201         | 552   | 0  | 186     | 2        | 1798               | 505    | PN 16                      | 122       |
| PQ553# | 450 | 16  | 201         | 552   | 1  | 186     | 2        | 1798               | 505    | PN 16                      | 125       |

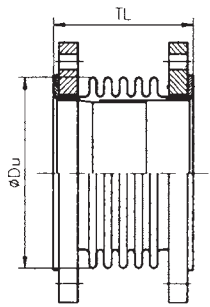


Figure 1, PRFI-1

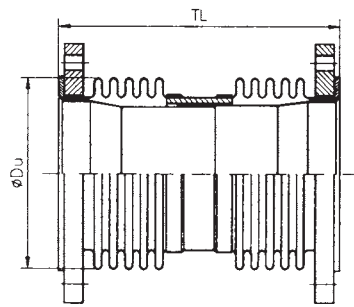


Figure 2, PRFI-2

- #=2 Bellows SS 2333  
Flanges St 37/Znk
- #=4 Bellows SS 2343  
Flanges St 37/Znk

| Code   | DN  | PN | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Flange nom. pressure class | Weight kg |
|--------|-----|----|-------------|-------|----|---------|----------|--------------------|--------|----------------------------|-----------|
| PQ154# | 450 | 25 | 74          | 273   | 0  | 668     | 1        | 1798               | 505    | PN 25                      | 127       |
| PQ554# | 450 | 25 | 74          | 273   | 1  | 668     | 1        | 1798               | 505    | PN 25                      | 130       |
| PQ155# | 450 | 25 | 123         | 371   | 0  | 425     | 1        | 1798               | 505    | PN 25                      | 137       |
| PQ555# | 450 | 25 | 123         | 371   | 1  | 425     | 1        | 1798               | 505    | PN 25                      | 141       |
| PR145# | 500 | 6  | 79          | 229   | 0  | 212     | 1        | 2240               | 560    | PN 6                       | 58        |
| PR545# | 500 | 6  | 79          | 229   | 1  | 212     | 1        | 2240               | 560    | PN 6                       | 61        |
| PR146# | 500 | 6  | 131         | 329   | 0  | 135     | 1        | 2240               | 560    | PN 6                       | 61        |
| PR546# | 500 | 6  | 131         | 329   | 1  | 135     | 1        | 2240               | 560    | PN 6                       | 66        |
| PR147# | 500 | 6  | 210         | 544   | 0  | 82      | 2        | 2240               | 560    | PN 6                       | 71        |
| PR547# | 500 | 6  | 210         | 544   | 1  | 82      | 2        | 2240               | 560    | PN 6                       | 75        |
| PR148# | 500 | 10 | 78          | 229   | 0  | 318     | 1        | 2240               | 560    | PN 10                      | 70        |
| PR548# | 500 | 10 | 78          | 229   | 1  | 318     | 1        | 2240               | 560    | PN 10                      | 74        |
| PR149# | 500 | 10 | 130         | 329   | 0  | 202     | 1        | 2240               | 560    | PN 10                      | 75        |
| PR549# | 500 | 10 | 130         | 329   | 1  | 202     | 1        | 2240               | 560    | PN 10                      | 80        |
| PR150# | 500 | 10 | 207         | 544   | 0  | 124     | 2        | 2240               | 560    | PN 10                      | 88        |
| PR550# | 500 | 10 | 207         | 544   | 1  | 124     | 2        | 2240               | 560    | PN 10                      | 92        |
| PR151# | 500 | 16 | 78          | 271   | 0  | 530     | 1        | 2240               | 560    | PN 16                      | 135       |
| PR551# | 500 | 16 | 78          | 271   | 1  | 530     | 1        | 2240               | 560    | PN 16                      | 139       |
| PR152# | 500 | 16 | 130         | 371   | 0  | 337     | 1        | 2240               | 560    | PN 16                      | 143       |
| PR552# | 500 | 16 | 130         | 371   | 1  | 337     | 1        | 2240               | 560    | PN 16                      | 149       |
| PR153# | 500 | 16 | 208         | 586   | 0  | 206     | 2        | 2240               | 560    | PN 16                      | 162       |
| PR553# | 500 | 16 | 208         | 586   | 1  | 206     | 2        | 2240               | 560    | PN 16                      | 166       |
| PR154# | 500 | 25 | 77          | 271   | 0  | 742     | 1        | 2240               | 560    | PN 25                      | 149       |
| PR554# | 500 | 25 | 77          | 271   | 1  | 742     | 1        | 2240               | 560    | PN 25                      | 153       |
| PR155# | 500 | 25 | 128         | 371   | 0  | 472     | 1        | 2240               | 560    | PN 25                      | 161       |
| PR555# | 500 | 25 | 128         | 371   | 1  | 472     | 1        | 2240               | 560    | PN 25                      | 166       |
| PS142# | 600 | 6  | 74          | 218   | 0  | 247     | 1        | 3099               | 655    | PN 6                       | 72        |
| PS542# | 600 | 6  | 74          | 218   | 1  | 247     | 1        | 3099               | 655    | PN 6                       | 76        |
| PS146# | 600 | 6  | 123         | 314   | 0  | 157     | 1        | 3099               | 655    | PN 6                       | 76        |
| PS546# | 600 | 6  | 123         | 314   | 1  | 157     | 1        | 3099               | 655    | PN 6                       | 82        |
| PS147# | 600 | 6  | 222         | 566   | 0  | 87      | 2        | 3099               | 655    | PN 6                       | 88        |
| PS547# | 600 | 6  | 222         | 566   | 1  | 87      | 2        | 3099               | 655    | PN 6                       | 93        |
| PS148# | 600 | 10 | 75          | 260   | 0  | 495     | 1        | 3099               | 655    | PN 10                      | 119       |
| PS548# | 600 | 10 | 75          | 260   | 1  | 495     | 1        | 3099               | 655    | PN 10                      | 123       |
| PS149# | 600 | 10 | 126         | 356   | 0  | 315     | 1        | 3099               | 655    | PN 10                      | 127       |
| PS549# | 600 | 10 | 126         | 356   | 1  | 315     | 1        | 3099               | 655    | PN 10                      | 133       |
| PS150# | 600 | 10 | 202         | 560   | 0  | 192     | 2        | 3099               | 655    | PN 10                      | 145       |
| PS550# | 600 | 10 | 202         | 560   | 1  | 192     | 2        | 3099               | 655    | PN 10                      | 150       |
| PS151# | 600 | 16 | 75          | 260   | 0  | 742     | 1        | 3099               | 655    | PN 16                      | 185       |
| PS551# | 600 | 16 | 75          | 260   | 1  | 742     | 1        | 3099               | 655    | PN 16                      | 189       |
| PS152# | 600 | 16 | 125         | 356   | 0  | 472     | 1        | 3099               | 655    | PN 16                      | 196       |
| PS552# | 600 | 16 | 125         | 356   | 1  | 472     | 1        | 3099               | 655    | PN 16                      | 203       |
| PS153# | 600 | 16 | 200         | 560   | 0  | 289     | 2        | 3099               | 655    | PN 16                      | 223       |
| PS553# | 600 | 16 | 200         | 560   | 1  | 289     | 2        | 3099               | 655    | PN 16                      | 228       |
| PS154# | 600 | 25 | 74          | 281   | 0  | 1113    | 1        | 3099               | 655    | PN 25                      | 208       |
| PS554# | 600 | 25 | 74          | 281   | 1  | 1113    | 1        | 3099               | 655    | PN 25                      | 212       |
| PS155# | 600 | 25 | 124         | 389   | 0  | 708     | 1        | 3099               | 655    | PN 25                      | 225       |
| PS555# | 600 | 25 | 124         | 389   | 1  | 708     | 1        | 3099               | 655    | PN 25                      | 231       |

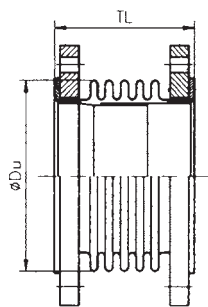


Figure 1, PRFI-1

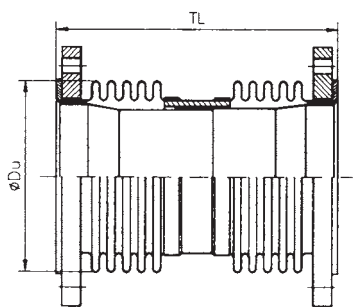


Figure 2, PRFI-2

#=2 Bellows SS 2333  
Flanges St 37/Znk

#=4 Bellows SS 2343  
Flanges St 37/Znk

| Code   | DN  | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Flange nom. pressure class | Weight kg |
|--------|-----|-----|-------------|-------|----|---------|----------|--------------------|--------|----------------------------|-----------|
| PU142# | 700 | 2,5 | 71          | 224   | 0  | 331     | 1        | 4278               | 764    | PN 6                       | 84        |
| PU542# | 700 | 2,5 | 71          | 224   | 1  | 331     | 1        | 4278               | 764    | PN 6                       | 89        |
| PU143# | 700 | 2,5 | 128         | 332   | 0  | 199     | 1        | 4278               | 764    | PN 6                       | 88        |
| PU543# | 700 | 2,5 | 128         | 332   | 1  | 199     | 1        | 4278               | 764    | PN 6                       | 96        |
| PU144# | 700 | 2,5 | 200         | 542   | 0  | 124     | 2        | 4278               | 764    | PN 6                       | 100       |
| PU544# | 700 | 2,5 | 200         | 542   | 1  | 124     | 2        | 4278               | 764    | PN 6                       | 105       |
| PU145# | 700 | 6   | 80          | 251   | 0  | 284     | 1        | 4278               | 764    | PN 6                       | 85        |
| PU545# | 700 | 6   | 80          | 251   | 1  | 284     | 1        | 4278               | 764    | PN 6                       | 90        |
| PU146# | 700 | 6   | 134         | 362   | 0  | 181     | 1        | 4278               | 764    | PN 6                       | 90        |
| PU546# | 700 | 6   | 134         | 362   | 1  | 181     | 1        | 4278               | 764    | PN 6                       | 98        |
| PU147# | 700 | 6   | 214         | 596   | 0  | 110     | 2        | 4278               | 764    | PN 6                       | 102       |
| PU547# | 700 | 6   | 214         | 596   | 1  | 110     | 2        | 4278               | 764    | PN 6                       | 108       |
| PU148# | 700 | 10  | 79          | 293   | 0  | 426     | 1        | 4278               | 764    | PN 10                      | 140       |
| PU548# | 700 | 10  | 79          | 293   | 1  | 426     | 1        | 4278               | 764    | PN 10                      | 145       |
| PU149# | 700 | 10  | 132         | 401   | 0  | 271     | 1        | 4278               | 764    | PN 10                      | 147       |
| PU549# | 700 | 10  | 132         | 401   | 1  | 271     | 1        | 4278               | 764    | PN 10                      | 156       |
| PU150# | 700 | 10  | 212         | 638   | 0  | 166     | 2        | 4278               | 764    | PN 10                      | 165       |
| PU550# | 700 | 10  | 212         | 638   | 1  | 166     | 2        | 4278               | 764    | PN 10                      | 171       |
| PU151# | 700 | 16  | 80          | 293   | 0  | 852     | 1        | 4278               | 764    | PN 16                      | 177       |
| PU551# | 700 | 16  | 80          | 293   | 1  | 852     | 1        | 4278               | 764    | PN 16                      | 184       |
| PU152# | 700 | 16  | 133         | 401   | 0  | 542     | 1        | 4278               | 764    | PN 16                      | 191       |
| PU552# | 700 | 16  | 133         | 401   | 1  | 542     | 1        | 4278               | 764    | PN 16                      | 200       |
| PU153# | 700 | 16  | 213         | 638   | 0  | 331     | 2        | 4278               | 764    | PN 16                      | 224       |
| PU553# | 700 | 16  | 213         | 638   | 1  | 331     | 2        | 4278               | 764    | PN 16                      | 230       |
| PU154# | 700 | 25  | 80          | 314   | 0  | 1278    | 1        | 4278               | 764    | PN 25                      | 267       |
| PU554# | 700 | 25  | 80          | 314   | 1  | 1278    | 1        | 4278               | 764    | PN 25                      | 273       |
| PU155# | 700 | 25  | 133         | 434   | 0  | 813     | 1        | 4278               | 764    | PN 25                      | 288       |
| PU555# | 700 | 25  | 133         | 434   | 1  | 813     | 1        | 4278               | 764    | PN 25                      | 297       |
| PV142# | 800 | 2,5 | 75          | 188   | 0  | 392     | 1        | 5619               | 872    | PN 6                       | 100       |
| PV542# | 800 | 2,5 | 75          | 188   | 1  | 392     | 1        | 5619               | 872    | PN 6                       | 105       |
| PV143# | 800 | 2,5 | 126         | 332   | 0  | 235     | 1        | 5619               | 872    | PN 6                       | 105       |
| PV543# | 800 | 2,5 | 126         | 332   | 1  | 235     | 1        | 5619               | 872    | PN 6                       | 114       |
| PV144# | 800 | 2,5 | 201         | 450   | 0  | 147     | 2        | 5619               | 872    | PN 6                       | 117       |
| PV544# | 800 | 2,5 | 201         | 450   | 1  | 147     | 2        | 5619               | 872    | PN 6                       | 123       |
| PV145# | 800 | 6   | 73          | 188   | 0  | 589     | 1        | 5619               | 872    | PN 6                       | 104       |
| PV545# | 800 | 6   | 73          | 188   | 1  | 589     | 1        | 5619               | 872    | PN 6                       | 109       |
| PV146# | 800 | 6   | 122         | 276   | 0  | 353     | 1        | 5619               | 872    | PN 6                       | 112       |
| PV546# | 800 | 6   | 122         | 276   | 1  | 353     | 1        | 5619               | 872    | PN 6                       | 119       |
| PV147# | 800 | 6   | 220         | 494   | 0  | 196     | 2        | 5619               | 872    | PN 6                       | 133       |
| PV547# | 800 | 6   | 220         | 494   | 1  | 196     | 2        | 5619               | 872    | PN 6                       | 139       |
| PV148# | 800 | 10  | 72          | 230   | 0  | 785     | 1        | 5619               | 872    | PN 10                      | 172       |
| PV548# | 800 | 10  | 72          | 230   | 1  | 785     | 1        | 5619               | 872    | PN 10                      | 176       |
| PV149# | 800 | 10  | 119         | 318   | 0  | 471     | 1        | 5619               | 872    | PN 10                      | 182       |
| PV549# | 800 | 10  | 119         | 318   | 1  | 471     | 1        | 5619               | 872    | PN 10                      | 189       |
| PV150# | 800 | 10  | 215         | 536   | 0  | 262     | 2        | 5619               | 872    | PN 10                      | 209       |
| PV550# | 800 | 10  | 215         | 536   | 1  | 262     | 2        | 5619               | 872    | PN 10                      | 215       |
| PV151# | 800 | 16  | 72          | 230   | 0  | 1373    | 1        | 5619               | 872    | PN 16                      | 208       |
| PV551# | 800 | 16  | 72          | 230   | 1  | 1373    | 1        | 5619               | 872    | PN 16                      | 212       |

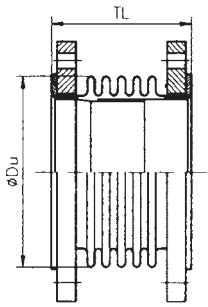


Figure 1, PRFI-1

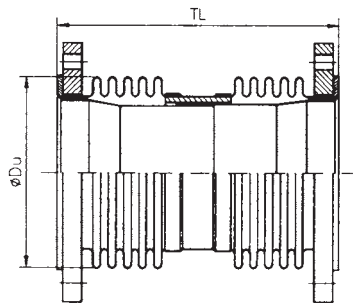


Figure 2, PRFI-2

- #=2 Bellows SS 2333  
Flanges St 37/Znk
- #=4 Bellows SS 2343  
Flanges St 37/Znk

| Code   | DN   | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Flange nom. pressure class | Weight kg |
|--------|------|-----|-------------|-------|----|---------|----------|--------------------|--------|----------------------------|-----------|
| PV152# | 800  | 16  | 121         | 318   | 0  | 824     | 1        | 5619               | 872    | PN 16                      | 225       |
| PV552# | 800  | 16  | 121         | 318   | 1  | 824     | 1        | 5619               | 872    | PN 16                      | 232       |
| PV153# | 800  | 16  | 217         | 536   | 0  | 458     | 2        | 5619               | 872    | PN 16                      | 271       |
| PV553# | 800  | 16  | 217         | 536   | 1  | 458     | 2        | 5619               | 872    | PN 16                      | 277       |
| PV154# | 800  | 25  | 72          | 248   | 0  | 1962    | 1        | 5619               | 872    | PN 25                      | 352       |
| PV554# | 800  | 25  | 72          | 248   | 1  | 1962    | 1        | 5619               | 872    | PN 25                      | 357       |
| PV155# | 800  | 25  | 120         | 348   | 0  | 1177    | 1        | 5619               | 872    | PN 25                      | 377       |
| PV555# | 800  | 25  | 120         | 348   | 1  | 1177    | 1        | 5619               | 872    | PN 25                      | 385       |
| PW142# | 900  | 2,5 | 70          | 189   | 0  | 508     | 1        | 6996               | 970    | PN 6                       | 111       |
| PW542# | 900  | 2,5 | 70          | 189   | 1  | 508     | 1        | 6996               | 970    | PN 6                       | 116       |
| PW143# | 900  | 2,5 | 126         | 289   | 0  | 282     | 1        | 6996               | 970    | PN 6                       | 117       |
| PW543# | 900  | 2,5 | 126         | 289   | 1  | 282     | 1        | 6996               | 970    | PN 6                       | 125       |
| PW141# | 900  | 2,5 | 196         | 464   | 0  | 181     | 2        | 6996               | 970    | PN 6                       | 129       |
| PW541# | 900  | 2,5 | 196         | 464   | 1  | 181     | 2        | 6996               | 970    | PN 6                       | 136       |
| PW145# | 900  | 6   | 81          | 214   | 0  | 635     | 1        | 6996               | 970    | PN 6                       | 117       |
| PW545# | 900  | 6   | 81          | 214   | 1  | 635     | 1        | 6996               | 970    | PN 6                       | 123       |
| PW146# | 900  | 6   | 122         | 289   | 0  | 423     | 1        | 6996               | 970    | PN 6                       | 123       |
| PW546# | 900  | 6   | 122         | 289   | 1  | 423     | 1        | 6996               | 970    | PN 6                       | 132       |
| PW147# | 900  | 6   | 218         | 514   | 0  | 238     | 2        | 6996               | 970    | PN 6                       | 144       |
| PW547# | 900  | 6   | 218         | 514   | 1  | 238     | 2        | 6996               | 970    | PN 6                       | 151       |
| PW148# | 900  | 10  | 80          | 256   | 0  | 847     | 1        | 6996               | 970    | PN 10                      | 211       |
| PW548# | 900  | 10  | 80          | 256   | 1  | 847     | 1        | 6996               | 970    | PN 10                      | 217       |
| PW149# | 900  | 10  | 120         | 331   | 0  | 564     | 1        | 6996               | 970    | PN 10                      | 220       |
| PW549# | 900  | 10  | 120         | 331   | 1  | 564     | 1        | 6996               | 970    | PN 10                      | 228       |
| PW150# | 900  | 10  | 214         | 556   | 0  | 317     | 2        | 6996               | 970    | PN 10                      | 248       |
| PW550# | 900  | 10  | 214         | 556   | 1  | 317     | 2        | 6996               | 970    | PN 10                      | 255       |
| PX151# | 900  | 16  | 119         | 360   | 0  | 1414    | 1        | 7178               | 986    | PN 16                      | 304       |
| PX551# | 900  | 16  | 119         | 360   | 1  | 1414    | 1        | 7178               | 986    | PN 16                      | 314       |
| PX152# | 900  | 16  | 178         | 466   | 0  | 943     | 1        | 7178               | 986    | PN 16                      | 342       |
| PX552# | 900  | 16  | 178         | 466   | 1  | 943     | 1        | 7178               | 986    | PN 16                      | 355       |
| PX154# | 900  | 25  | 118         | 360   | 0  | 1697    | 1        | 7178               | 986    | PN 25                      | 424       |
| PX554# | 900  | 25  | 118         | 360   | 1  | 1697    | 1        | 7178               | 986    | PN 25                      | 433       |
| PX155# | 900  | 25  | 177         | 466   | 0  | 1131    | 1        | 7178               | 986    | PN 25                      | 457       |
| PX555# | 900  | 25  | 177         | 466   | 1  | 1131    | 1        | 7178               | 986    | PN 25                      | 470       |
| PY142# | 1000 | 2,5 | 80          | 214   | 0  | 470     | 1        | 8652               | 1076   | PN 6                       | 122       |
| PY542# | 1000 | 2,5 | 80          | 214   | 1  | 470     | 1        | 8652               | 1076   | PN 6                       | 129       |
| PY143# | 1000 | 2,5 | 134         | 314   | 0  | 282     | 1        | 8652               | 1076   | PN 6                       | 129       |
| PY543# | 1000 | 2,5 | 134         | 314   | 1  | 282     | 1        | 8652               | 1076   | PN 6                       | 139       |
| PY144# | 1000 | 2,5 | 214         | 514   | 0  | 176     | 2        | 8652               | 1076   | PN 6                       | 145       |
| PY544# | 1000 | 2,5 | 214         | 514   | 1  | 176     | 2        | 8652               | 1076   | PN 6                       | 152       |
| PY145# | 1000 | 6   | 78          | 214   | 0  | 705     | 1        | 8652               | 1076   | PN 6                       | 127       |
| PY545# | 1000 | 6   | 78          | 214   | 1  | 705     | 1        | 8652               | 1076   | PN 6                       | 134       |
| PY146# | 1000 | 6   | 130         | 314   | 0  | 423     | 1        | 8652               | 1076   | PN 6                       | 137       |
| PY546# | 1000 | 6   | 130         | 314   | 1  | 423     | 1        | 8652               | 1076   | PN 6                       | 147       |
| PY147# | 1000 | 6   | 208         | 514   | 0  | 264     | 2        | 8652               | 1076   | PN 6                       | 159       |
| PY547# | 1000 | 6   | 208         | 514   | 1  | 264     | 2        | 8652               | 1076   | PN 6                       | 167       |
| PY148# | 1000 | 10  | 76          | 256   | 0  | 940     | 1        | 8652               | 1076   | PN 10                      | 254       |
| PY548# | 1000 | 10  | 76          | 256   | 1  | 940     | 1        | 8652               | 1076   | PN 10                      | 260       |



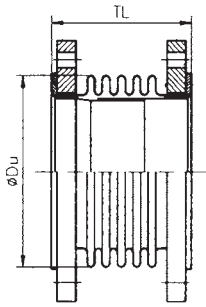


Figure 1, PRFI-1

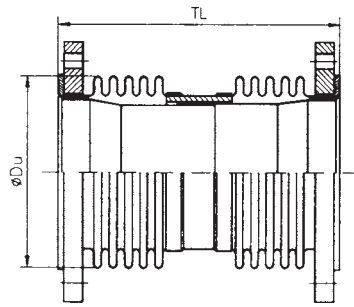


Figure 2, PRFI-2

- #=2 Bellows SS 2333  
Flanges St 37/Znk
- #=4 Bellows SS 2343  
Flanges St 37/Znk

| Code   | DN   | PN  | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Flange no. pressure class | Weight kg |
|--------|------|-----|-------------|-------|----|---------|----------|--------------------|--------|---------------------------|-----------|
| PY149# | 1000 | 10  | 127         | 356   | 0  | 564     | 1        | 8652               | 1076   | PN 10                     | 267       |
| PY549# | 1000 | 10  | 127         | 356   | 1  | 564     | 1        | 8652               | 1076   | PN 10                     | 277       |
| PY150# | 1000 | 10  | 204         | 556   | 0  | 352     | 2        | 8652               | 1076   | PN 10                     | 299       |
| PY550# | 1000 | 10  | 204         | 556   | 1  | 352     | 2        | 8652               | 1076   | PN 10                     | 306       |
| PZ142# | 1200 | 2,5 | 118         | 320   | 0  | 357     | 1        | 12390              | 1286   | PN 6                      | 191       |
| PZ542# | 1200 | 2,5 | 118         | 320   | 1  | 357     | 1        | 12390              | 1286   | PN 6                      | 202       |
| PZ143# | 1200 | 2,5 | 177         | 426   | 0  | 238     | 1        | 12390              | 1286   | PN 6                      | 198       |
| PZ543# | 1200 | 2,5 | 177         | 426   | 1  | 238     | 1        | 12390              | 1286   | PN 6                      | 214       |
| PZ145# | 1200 | 6   | 118         | 320   | 0  | 894     | 1        | 12390              | 1286   | PN 6                      | 217       |
| PZ545# | 1200 | 6   | 118         | 320   | 1  | 894     | 1        | 12390              | 1286   | PN 6                      | 228       |
| PZ146# | 1200 | 6   | 177         | 426   | 0  | 596     | 1        | 12390              | 1286   | PN 6                      | 235       |
| PZ546# | 1200 | 6   | 177         | 426   | 1  | 596     | 1        | 12390              | 1286   | PN 6                      | 252       |
| PZ148# | 1200 | 10  | 118         | 418   | 0  | 1430    | 1        | 12390              | 1286   | PN 10                     | 392       |
| PZ548# | 1200 | 10  | 118         | 418   | 1  | 1430    | 1        | 12390              | 1286   | PN 10                     | 403       |
| PZ149# | 1200 | 10  | 177         | 524   | 0  | 953     | 1        | 12390              | 1286   | PN 10                     | 421       |
| PZ549# | 1200 | 10  | 177         | 524   | 1  | 953     | 1        | 12390              | 1286   | PN 10                     | 437       |
| PZ151# | 1200 | 16  | 118         | 438   | 0  | 2145    | 1        | 12390              | 1286   | PN 16                     | 560       |
| PZ551# | 1200 | 16  | 118         | 438   | 1  | 2145    | 1        | 12390              | 1286   | PN 16                     | 572       |
| PZ152# | 1200 | 16  | 176         | 544   | 0  | 1430    | 1        | 12390              | 1286   | PN 16                     | 604       |
| PZ552# | 1200 | 16  | 176         | 544   | 1  | 1430    | 1        | 12390              | 1286   | PN 16                     | 620       |



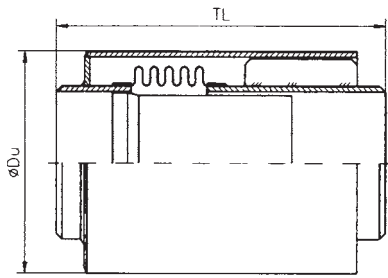


Figure 1, PRRO-1

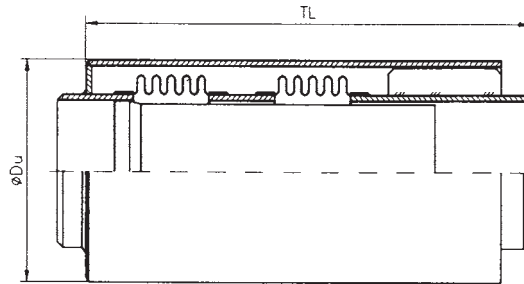


Figure 2, PRRO-2

Bellows SS 2333  
Welding ends St 37

“Connection” =  
outer diameter of the pipe  
and wall thickness.

| Code   | DN  | PN | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Connection Ømm x mm | Weight kg |
|--------|-----|----|-------------|-------|----|---------|----------|--------------------|--------|---------------------|-----------|
| PB8711 | 32  | 16 | 30          | 485   | 1  | 83      | 1        | 21,2               | 76,1   | 42,4 x 2,6          | 4,0       |
| PB8721 | 32  | 16 | 60          | 650   | 1  | 42      | 2        | 21,2               | 76,1   | 42,4 x 2,6          | 5,6       |
| PC8711 | 40  | 16 | 30          | 490   | 1  | 78      | 1        | 26,2               | 88,9   | 48,3 x 2,6          | 5,0       |
| PC8721 | 40  | 16 | 60          | 660   | 1  | 39      | 2        | 26,2               | 88,9   | 48,3 x 2,6          | 7,0       |
| PD8711 | 50  | 16 | 40          | 500   | 1  | 101     | 1        | 38,9               | 88,9   | 60,3 x 2,9          | 5,9       |
| PD8721 | 50  | 16 | 80          | 680   | 1  | 56      | 2        | 38,9               | 88,9   | 60,3 x 2,9          | 8,4       |
| PE8711 | 65  | 16 | 40          | 478   | 1  | 93      | 1        | 61,2               | 115    | 76,1 x 2,9          | 7,8       |
| PE8721 | 65  | 16 | 80          | 636   | 1  | 46      | 2        | 61,2               | 115    | 76,1 x 2,9          | 11        |
| PF8711 | 80  | 16 | 70          | 515   | 1  | 72      | 1        | 83,8               | 140    | 88,9 x 3,2          | 10        |
| PF8721 | 80  | 16 | 140         | 710   | 1  | 36      | 2        | 83,8               | 140    | 88,9 x 3,2          | 15        |
| PG8712 | 100 | 16 | 65          | 515   | 1  | 114     | 1        | 137                | 168,3  | 114,3 x 3,6         | 14        |
| PG8722 | 100 | 16 | 130         | 710   | 1  | 57      | 2        | 137                | 168,3  | 114,3 x 3,6         | 19        |
| PH8732 | 125 | 16 | 75          | 540   | 1  | 156     | 1        | 201                | 219    | 139,7 x 3,6         | 21        |
| PH8742 | 125 | 16 | 150         | 760   | 1  | 78      | 2        | 201                | 219    | 139,7 x 3,6         | 29        |
| PJ8732 | 150 | 16 | 70          | 540   | 1  | 154     | 1        | 284                | 219    | 168,3 x 4,0         | 23        |
| PJ8742 | 150 | 16 | 140         | 760   | 1  | 77      | 2        | 284                | 219    | 168,3 x 4,0         | 33        |
| PK8092 | 200 | 16 | 115         | 620   | 1  | 154     | 1        | 456                | 323,9  | 219,1 x 4,5         | 46        |
| PK8102 | 200 | 16 | 189         | 830   | 1  | 92      | 2        | 456                | 323,9  | 219,1 x 4,5         | 62        |
| PL8102 | 250 | 16 | 124         | 615   | 1  | 168     | 1        | 697                | 355,6  | 273,0 x 5,0         | 54        |
| PL8112 | 250 | 16 | 203         | 820   | 1  | 101     | 2        | 697                | 355,6  | 273,0 x 5,0         | 73        |
| PM8102 | 300 | 16 | 121         | 620   | 1  | 195     | 1        | 952                | 406,4  | 323,9 x 5,6         | 68        |
| PM8112 | 300 | 16 | 199         | 830   | 1  | 117     | 2        | 952                | 406,4  | 323,9 x 5,6         | 91        |
| PN8102 | 350 | 16 | 120         | 620   | 1  | 213     | 1        | 1138               | 457    | 355,6 x 5,6         | 77        |
| PN8112 | 350 | 16 | 196         | 870   | 1  | 116     | 2        | 1138               | 457    | 355,6 x 5,6         | 108       |
| PP8122 | 400 | 16 | 135         | 680   | 1  | 270     | 1        | 1462               | 508    | 406,4 x 6,3         | 99        |
| PP8132 | 400 | 16 | 216         | 894   | 1  | 165     | 2        | 1462               | 508    | 406,4 x 6,3         | 132       |
| PQ8122 | 450 | 16 | 125         | 663   | 1  | 303     | 1        | 1798               | 610    | 457,0 x 6,3         | 130       |
| PQ8132 | 450 | 16 | 201         | 900   | 1  | 186     | 2        | 1798               | 610    | 457,0 x 6,3         | 175       |
| PR8122 | 500 | 16 | 130         | 685   | 1  | 337     | 1        | 2240               | 610    | 508,0 x 6,3         | 136       |
| PR8132 | 500 | 16 | 208         | 900   | 1  | 206     | 2        | 2240               | 610    | 508,0 x 6,3         | 181       |
| PS8122 | 600 | 16 | 125         | 670   | 1  | 472     | 1        | 3099               | 711    | 610 x 8             | 181       |
| PS8132 | 600 | 16 | 200         | 874   | 1  | 289     | 2        | 3099               | 711    | 610 x 8             | 239       |
| PU8122 | 700 | 16 | 133         | 715   | 1  | 542     | 1        | 4278               | 813    | 711 x 8,8           | 225       |
| PU8132 | 700 | 16 | 213         | 952   | 1  | 331     | 2        | 4278               | 813    | 711 x 8,8           | 302       |
| PV8122 | 800 | 16 | 121         | 632   | 1  | 824     | 1        | 5619               | 914    | 813 x 8,8           | 251       |
| PV8132 | 800 | 16 | 217         | 850   | 1  | 458     | 2        | 5619               | 914    | 813 x 8,8           | 347       |
| PX8112 | 900 | 16 | 119         | 674   | 1  | 1414    | 1        | 7178               | 1016   | 914 x 10            | 333       |
| PX8132 | 900 | 16 | 220         | 978   | 1  | 707     | 2        | 7178               | 1016   | 914 x 10            | 496       |

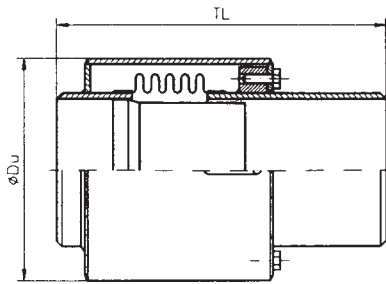


Figure 1, PRRS-1

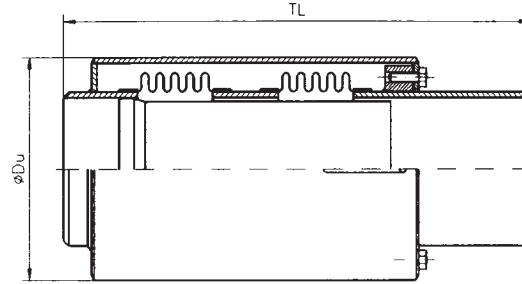


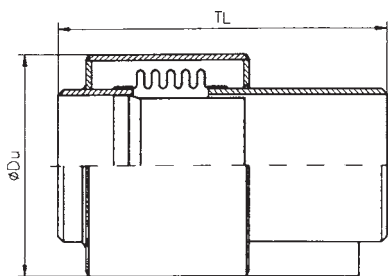
Figure 2, PRRS-2

Bellows SS 2333  
Welding ends St 37

“Connection” =  
outer diameter of the pipe  
and wall thickness.

| Code   | DN  | PN | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Connection Ømm x mm | Weight kg |
|--------|-----|----|-------------|-------|----|---------|----------|--------------------|--------|---------------------|-----------|
| PB8811 | 32  | 16 | 30          | 320   | 1  | 83      | 1        | 21,2               | 76,1   | 42,4 x 2,6          | 3,1       |
| PB8821 | 32  | 16 | 60          | 530   | 1  | 42      | 2        | 21,2               | 76,1   | 42,4 x 2,6          | 4,8       |
| PC8811 | 40  | 16 | 30          | 325   | 1  | 78      | 1        | 26,2               | 88,9   | 48,3 x 2,6          | 4,2       |
| PC8821 | 40  | 16 | 60          | 540   | 1  | 39      | 2        | 26,2               | 88,9   | 48,3 x 2,6          | 6,4       |
| PD8811 | 50  | 16 | 40          | 350   | 1  | 101     | 1        | 38,9               | 88,9   | 60,3 x 2,9          | 4,7       |
| PD8821 | 50  | 16 | 80          | 590   | 1  | 56      | 2        | 38,9               | 88,9   | 60,3 x 2,9          | 7,5       |
| PE8811 | 65  | 16 | 40          | 328   | 1  | 93      | 1        | 61,2               | 115    | 76,1 x 2,9          | 6,4       |
| PE8821 | 65  | 16 | 80          | 546   | 1  | 46      | 2        | 61,2               | 115    | 76,1 x 2,9          | 9,6       |
| PF8811 | 80  | 16 | 70          | 410   | 1  | 72      | 1        | 83,8               | 140    | 88,9 x 3,2          | 9,5       |
| PF8821 | 80  | 16 | 140         | 710   | 1  | 36      | 2        | 83,8               | 140    | 88,9 x 3,2          | 15        |
| PG8812 | 100 | 16 | 65          | 400   | 1  | 114     | 1        | 137                | 168,3  | 114,3 x 3,6         | 11        |
| PG8822 | 100 | 16 | 130         | 690   | 1  | 57      | 2        | 137                | 168,3  | 114,3 x 3,6         | 18        |
| PH8832 | 125 | 16 | 75          | 440   | 1  | 156     | 1        | 201                | 219    | 139,7 x 3,6         | 18        |
| PH8842 | 125 | 16 | 150         | 770   | 1  | 78      | 2        | 201                | 219    | 139,7 x 3,6         | 28        |
| PJ8832 | 150 | 16 | 70          | 430   | 1  | 154     | 1        | 284                | 219    | 168,3 x 4,0         | 22        |
| PJ8842 | 150 | 16 | 140         | 750   | 1  | 77      | 2        | 284                | 219    | 168,3 x 4,0         | 34        |
| PK8292 | 200 | 16 | 115         | 582   | 1  | 154     | 1        | 456                | 323,9  | 219,1 x 4,5         | 43        |
| PK8302 | 200 | 16 | 189         | 920   | 1  | 92      | 2        | 456                | 323,9  | 219,1 x 4,5         | 63        |
| PL8302 | 250 | 16 | 124         | 591   | 1  | 168     | 1        | 697                | 355,6  | 273,0 x 5,0         | 49        |
| PL8312 | 250 | 16 | 203         | 920   | 1  | 101     | 2        | 697                | 355,6  | 273,0 x 5,0         | 73        |
| PM8302 | 300 | 16 | 121         | 591   | 1  | 195     | 1        | 952                | 406,4  | 323,9 x 5,6         | 62        |
| PM8312 | 300 | 16 | 199         | 930   | 1  | 117     | 2        | 952                | 406,4  | 323,9 x 5,6         | 91        |
| PN8302 | 350 | 16 | 120         | 590   | 1  | 213     | 1        | 1138               | 457    | 355,6 x 5,6         | 72        |
| PN8312 | 350 | 16 | 196         | 970   | 1  | 116     | 2        | 1138               | 457    | 355,6 x 5,6         | 109       |
| PP8322 | 400 | 16 | 135         | 670   | 1  | 270     | 1        | 1462               | 508    | 406,4 x 6,3         | 91        |
| PP8332 | 400 | 16 | 210         | 1000  | 1  | 165     | 2        | 1462               | 508    | 406,4 x 6,3         | 132       |
| PQ8322 | 450 | 16 | 125         | 640   | 1  | 303     | 1        | 1798               | 610    | 457,0 x 6,3         | 122       |
| PQ8332 | 450 | 16 | 201         | 966   | 1  | 186     | 2        | 1798               | 610    | 457,0 x 6,3         | 174       |
| PR8322 | 500 | 16 | 130         | 670   | 1  | 337     | 1        | 2240               | 610    | 508,0 x 6,3         | 123       |
| PR8332 | 500 | 16 | 208         | 1004  | 1  | 206     | 2        | 2240               | 610    | 508,0 x 6,3         | 179       |
| PS8322 | 600 | 16 | 125         | 647   | 1  | 472     | 1        | 3099               | 711    | 610 x 8             | 161       |
| PS8332 | 600 | 16 | 200         | 974   | 1  | 289     | 2        | 3099               | 711    | 610 x 8             | 234       |
| PU8322 | 700 | 16 | 133         | 693   | 1  | 542     | 1        | 4278               | 813    | 711 x 8,8           | 201       |
| PU8332 | 700 | 16 | 210         | 1060  | 1  | 331     | 2        | 4278               | 813    | 711 x 8,8           | 298       |
| PV8322 | 800 | 16 | 121         | 603   | 1  | 824     | 1        | 5619               | 914    | 813 x 8,8           | 218       |
| PV8332 | 800 | 16 | 210         | 958   | 1  | 458     | 2        | 5619               | 914    | 813 x 8,8           | 340       |
| PX8312 | 900 | 16 | 119         | 643   | 1  | 1414    | 1        | 7178               | 1016   | 914 x 10            | 290       |
| PX8332 | 900 | 16 | 210         | 1088  | 1  | 707     | 2        | 7178               | 1016   | 914 x 10            | 486       |

The whole movement is designed for compression.



Bellows SS 2333  
Welding ends St 37

“**Connection**” =  
outer diameter of the pipe  
and wall thickness.

| Code   | DN  | PN | Movement mm | TL mm | SP | Fx N/mm | Fig. no. | Ap cm <sup>2</sup> | ØDu mm | Connection Ømm x mm | Weight kg |
|--------|-----|----|-------------|-------|----|---------|----------|--------------------|--------|---------------------|-----------|
| PB8952 | 32  | 16 | 100         | 410   | 1  | 150     | 1        | 21,2               | 76,1   | 42,4 x 2,6          | 2,7       |
| PC8952 | 40  | 16 | 100         | 410   | 1  | 143     | 1        | 26,2               | 88,9   | 48,3 x 2,6          | 3,5       |
| PD8952 | 50  | 16 | 150         | 500   | 1  | 127     | 1        | 38,9               | 88,9   | 60,3 x 2,9          | 4,6       |
| PE8952 | 65  | 16 | 150         | 500   | 1  | 102     | 1        | 61,2               | 115    | 76,1 x 2,9          | 5,9       |
| PF8952 | 80  | 16 | 150         | 530   | 1  | 71      | 1        | 83,8               | 140    | 88,9 x 3,2          | 7,6       |
| PG8912 | 100 | 16 | 150         | 520   | 1  | 114     | 1        | 137                | 168,3  | 114,3 x 3,6         | 11        |
| PH8912 | 125 | 16 | 150         | 535   | 1  | 114     | 1        | 201                | 219    | 139,7 x 3,6         | 16        |
| PJ8912 | 150 | 16 | 150         | 540   | 1  | 114     | 1        | 284                | 219    | 168,3 x 4,0         | 20        |
| PK8432 | 200 | 16 | 150         | 620   | 1  | 77      | 1        | 456                | 323,9  | 219,1 x 4,5         | 36        |
| PL8432 | 250 | 16 | 150         | 587   | 1  | 84      | 1        | 697                | 355,6  | 273,0 x 5,0         | 40        |
| PM8432 | 300 | 16 | 150         | 590   | 1  | 98      | 1        | 952                | 406,4  | 323,9 x 5,6         | 50        |
| PN8432 | 350 | 16 | 150         | 590   | 1  | 106     | 1        | 1138               | 457    | 355,6 x 5,6         | 58        |
| PP8462 | 400 | 16 | 150         | 635   | 1  | 108     | 1        | 1462               | 508    | 406,4 x 6,3         | 72        |
| PQ8462 | 450 | 16 | 150         | 615   | 1  | 121     | 1        | 1798               | 610    | 457,0 x 6,3         | 98        |
| PR8462 | 500 | 16 | 150         | 630   | 1  | 135     | 1        | 2240               | 610    | 508,0 x 6,3         | 98        |

*The whole movement is designed for compression.*

*The expansion joint is designed for one load cycle only.*