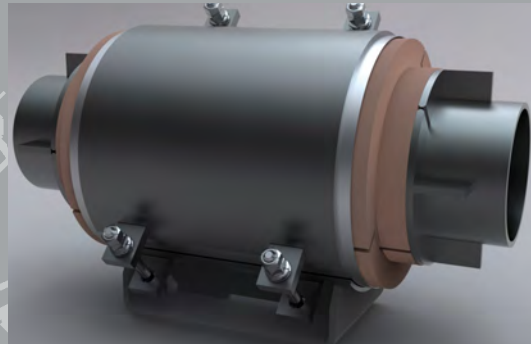


# HIPAC™



## Cryogenic Pipe Supports

Type 56 / Type 57



**LISEGA**



**Edition August 2018**

LISEGA reserves the right to introduce revisions in the interest of further technical developments.



# Cryogenic Pipe Supports

Type 56 Rest- and Guide Supports /

Type 57 Line Stop and Fixed Supports

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# CRYOGENIC PIPE SUPPORTS - TYPE 56 / TYPE 57



Warehouse for curing the foam



Preassembled cryogenic pipe supports



Special design for pipe diameter 1625,6mm

| Nominal thickness of insulation (mm) | Thickness of individual steps (mm) |
|--------------------------------------|------------------------------------|
| 80                                   | 40 / 40                            |
| 100                                  | 50 / 50                            |
| 130                                  | 50 / 40 / 40                       |
| 150                                  | 50 / 50 / 50                       |
| 180                                  | 50 / 80 / 50                       |
| 200                                  | 50 / 100 / 50                      |
| 250                                  | 75 / 100 / 75                      |

## Supports for Cold and Cryogenic Applications

LISEGA offers a complete range of insulated cryogenic pipe supports for all kinds of low temperature pipe systems. These products are normally used in industrial processes for the production, transport and distribution of liquefied gases. These can be propane and butane (LPG), methane (LNG), ethylene, nitrogen or ammonia.

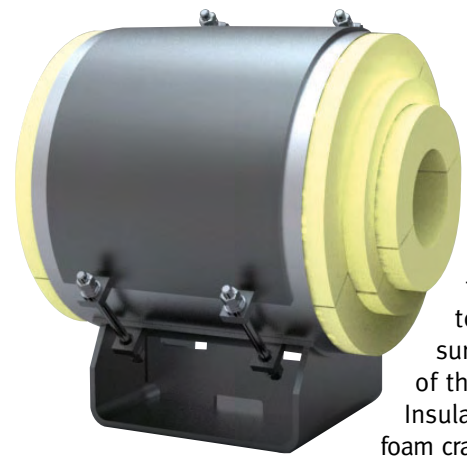
The LISEGA cryogenic pipe supports are standardized and designed according to recognized international technical codes and standards. They cover pipe sizes ranging from OD 21.3mm to OD 965.2mm, with insulation thicknesses from 25mm to 250mm. The supports are made from materials suitable for the specified loads and temperature range (operating temperature down to -196°C).

## Insulation Material

The insulation material of the cryogenic pipe supports is made from fire-retarding polyurethane foam of high density (HD-PUF) and forms an integral part of the piping insulation.

## Production of HD-PUF Shells

The HD-PUF is monolithically molded in heavy duty molds under carefully controlled conditions in respect of temperature and humidity. This process provides uniform properties and ensures dimensional stability with no warping. It also produces clean sharp edges that fit neatly with the adjacent line insulation material on site. To guarantee form stability, the insulation cradles are carefully stored for a fixed period of time in order to harden. The moldings incorporate carefully sized step joints (radial and longitudinal) to match the layering of the adjoining line insulation. This method, also known as „shiplapping“, provides a reliable interlocking interface with each layer and prevents a direct heat path from the surface of the insulation



through to the surface of the pipe. Insulation foam cradles with thicknesses

up to 50mm are supplied as single layer without a step. Foam cradles with a thickness of 80mm and 100mm are supplied as single layer with an extended step at either end. The foam cradles for type 56 with a thickness of 130mm and above are supplied in two layers with two steps. The insulation foam cradles for type 57 line stop & fixed supports will be supplied as monolithically molded segments to achieve axial load transmission. The single-layer as well as the double-layer HD-PUF insulation cradles have stepped, longitudinal gaps. The size of these joints must be adjusted during installation to a specified gap dimension, so that the clamping force applied by the disc spring bolting prevents a relative displacement between clamp base and piping. Once installed the longitudinal gaps shall be filled with a resilient foam insulation material.

A laminated aluminum/polyester foil is factory-bonded to the outermost surface of the outer layer of the HD-PUF assembly. This vapour barrier is supplied oversized to overlap the longitudinal joints and is sealed at site with adhesive tape of the same material. Directly after installation of the cryogenic pipe support, all exposed HD-PUF foam surfaces must be protected to prevent moisture ingress. As a rule, a cryogenic, fire-retarding vapor barrier of elastomer mastic is applied for this purpose.

The HD-PUF is available in three standard densities. They are supplied in different colors for ease of identification.

160 kg/m<sup>3</sup> - yellow  
224 kg/m<sup>3</sup> - red  
320 kg/m<sup>3</sup> - green



## Cryogenic Pipe Support Base

LISEGA’s standardized cryogenic pipe supports are designed in such a way that they clamp the pipe mechanically via disc spring bolting. The clamp base substructure that supports the HD-PUF foam is made of carbon steel and is hot-dip galvanized as a standard.

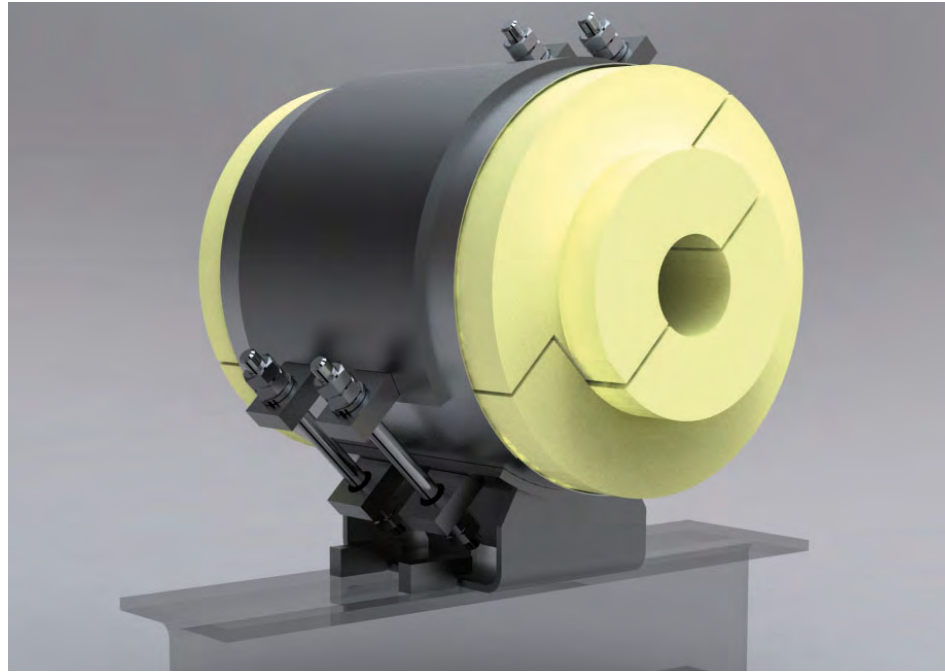
Material qualities, welding and surface treatment correspond to the LISEGA standard specification (see pages 0.9 and 0.10 in the main catalog “Standard Supports 2010”).

In the production and preassembly of the clamp bases the integrated LISEGA quality assurance system is applied, as described on page 0.16 of the main catalog. Inspection and testing procedures guarantee compliance with the required specifications.

The LISEGA standard cryogenic pipe supports are supplied with detailed installation instructions. Every support is clearly marked according to the LISEGA type numbering system (see page 6).

A kit of installation materials for on-site use can be provided on request. This contains cold-resistant adhesives, mastics and sealing materials to connect the insulation materials with each other professionally on site.

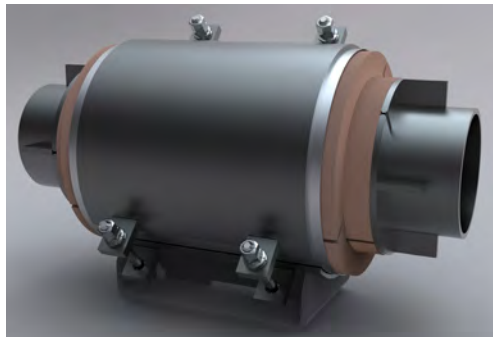
The LISEGA cryogenic pipe supports are completely preassembled and suitably packaged to protect the pipe supports from surface damage and humidity during transport and storage.



Type 56 used as axial guide with lift-off restraints, available with two standard shoe lengths.

## Design

Type 56 is a conventional cryogenic pipe support and functions as a rest & guide support. Type 57 is identical to type 56 but serves as an axial stop and can absorb increased axial loads by means of thrust rings.



Standard pipe support type 57



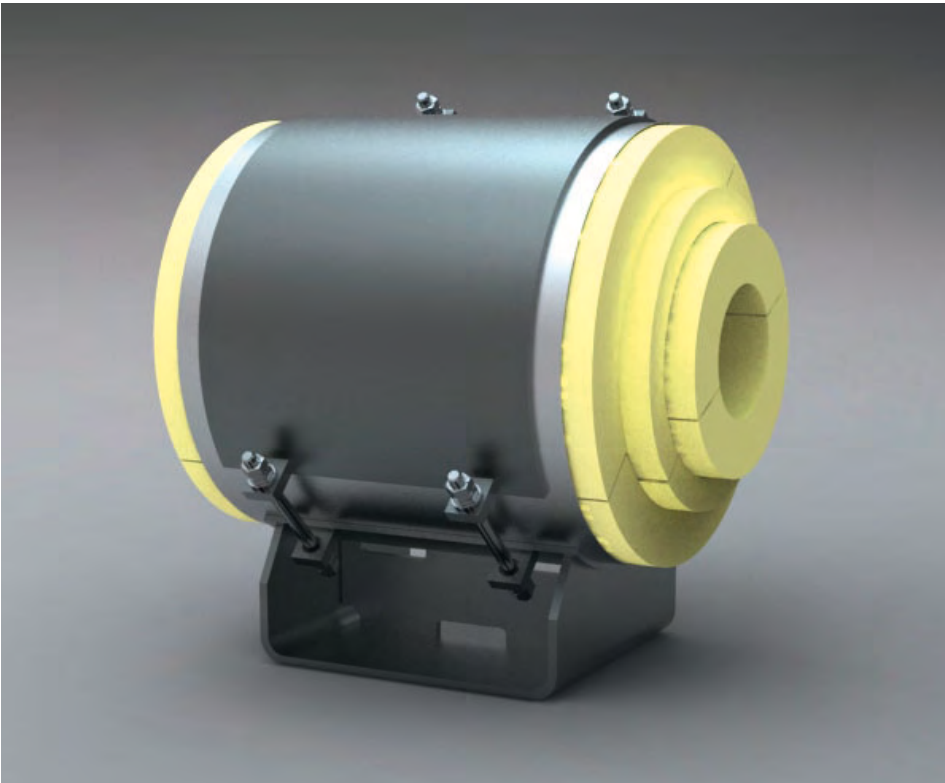
Preassembled cryogenic pipe supports

## Material Properties of the HD-PUF Insulation

|  |                | Unit              | Test Standard |   |                    |                    |
|--|----------------|-------------------|---------------|---|--------------------|--------------------|
| <b>Density</b>                         |                | kg/m <sup>3</sup> | ASTM D1622    | 160   | 224                | 320                |
| <b>Ultimate Compressive * Strength</b> | 20°C<br>-165°C | MPa               | ASTM D1621    | ≥ 2<br>≥ 4  | ≥ 3<br>≥ 7         | ≥ 6<br>≥ 9         |
| <b>Thermal Conductivity</b>            | 20°C<br>-165°C | W/mK              | ASTM C518     | ≤ 0.038<br>≤ 0.028  | ≤ 0.040<br>≤ 0.030 | ≤ 0.050<br>≤ 0.038 |
| <b>Linear Coefficient of Expansion</b> |                | 1/K               | ASTM D696     | ≤ 70.1 x 10 <sup>-6</sup> ≤ 70.1 x 10 <sup>-6</sup> ≤ 70.1 x 10 <sup>-6</sup> |                    |                    |

\* Design Compressive Strength Properties are based on a safety factor of 5

| Digit 1       | Digit 2                 | Digit 3+4     | Digit 5       | Digit 6              | Supplement |
|---------------|-------------------------|---------------|---------------|----------------------|------------|
| Product Group | Design                  | Pipe Diameter | Cradle Length | Insulation Thickness | Density    |
| 5             | 6=Rest- & Guide Support | 01=21.3mm     | 3=150mm       | 0=25mm               | -160       |
|               | 7=Line Stop Support     | 02=26.9mm     | 5=300mm       | 1=40mm               | -224       |
|               |                         | 03=33.7mm     | 7=500mm       | 2=50mm               | -320       |
|               |                         | 05=48.3mm     | 8=750mm       | 3=80mm               |            |
|               |                         | 06=60.3mm     |               | 4=100mm              |            |
|               |                         | 09=88.9mm     |               | 5=130mm              |            |
|               |                         | 11=114.3mm    |               | 6=150mm              |            |
|               |                         | 17=168.3mm    |               | 7=180mm              |            |
|               |                         | 22=219.1mm    |               | 8=200mm              |            |
|               |                         | 27=273.0mm    |               | 9=250mm              |            |
|               |                         | 32=323.9mm    |               |                      |            |
|               |                         | 36=355.6mm    |               |                      |            |
|               |                         | 41=406.4mm    |               |                      |            |
|               |                         | 46=457.2mm    |               |                      |            |
|               |                         | 51=508.0mm    |               |                      |            |
|               |                         | 56=558.8mm    |               |                      |            |
|               |                         | 61=609.6mm    |               |                      |            |
|               |                         | 66=660.4mm    |               |                      |            |
|               |                         | 71=711.2mm    |               |                      |            |
|               |                         | 76=762.0mm    |               |                      |            |
|               |                         | 81=812.8mm    |               |                      |            |
|               |                         | 91=914.4mm    |               |                      |            |
|               |                         | 97=965.2mm    |               |                      |            |

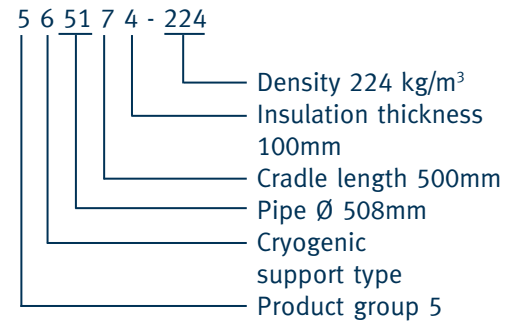


Type 56 single clamp base rest- and guide pipe support.

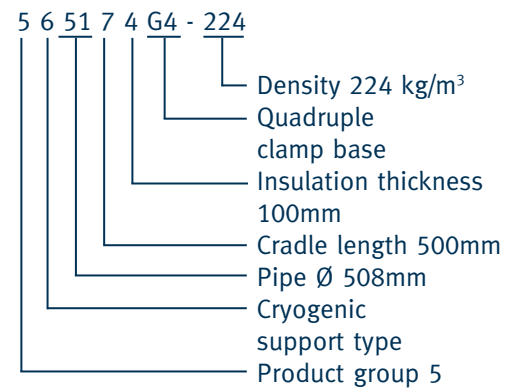
## Type Designation System

All cryogenic pipe supports can be clearly identified by code numbers. The 6 digits plus density supplement contain all the information required. The code number system facilitates the use of modern information technology and enables the unrestricted integration of the LISEGA modular system into the current CAD programs.

### Example 1:



### Example 2:



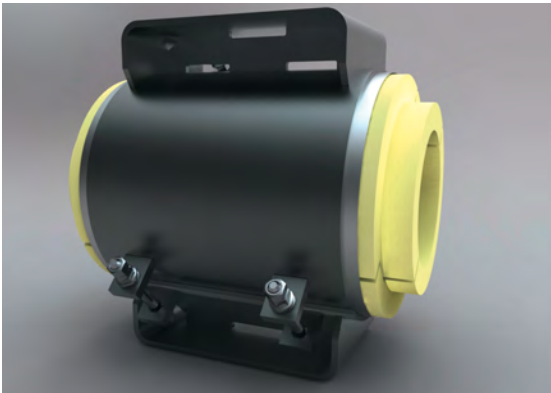
## Double and Multiple Clamp Base Pipe Supports

Double clamp base cryogenic pipe supports or guided supports are required for upward loads or high lateral loads. For this purpose the LISEGA cryogenic pipe supports can be extended as desired.

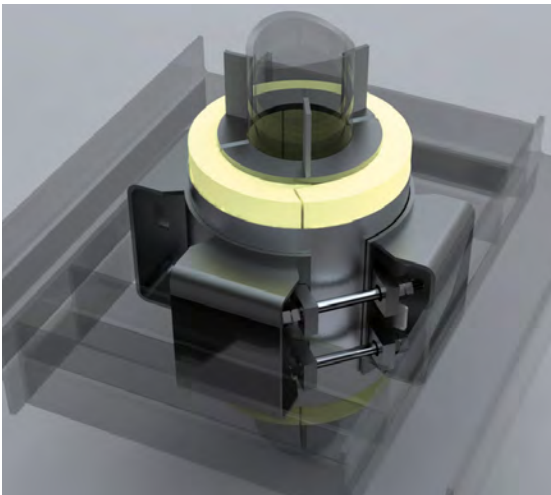
Each variant is given a supplementary number after the 6th digit which describes the type of guide. The pipe support can be ordered in the following designs:

- G2A: Angulated clamp base pipe support (laterally guided)
- G2P: Double clamp base pipe support
- G3: Triple clamp base pipe support
- G4: Quadruple clamp base pipe support

Type 56 as well as type 57 can be ordered with these guide options. For example, type 57 can be used as a quadruple cryogenic pipe support in vertical piping.



Type 56 double clamp base support for high upward loads.



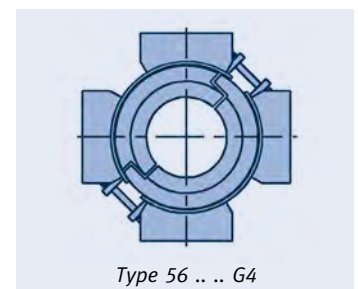
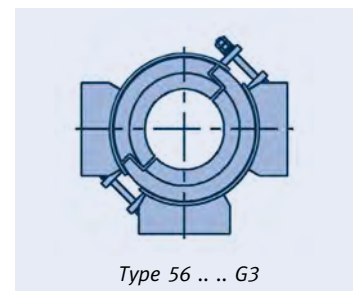
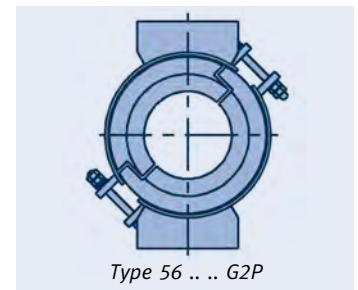
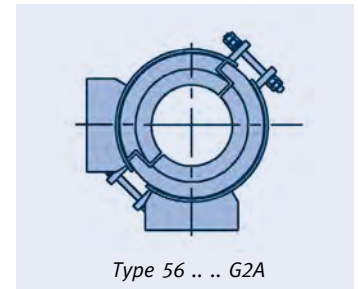
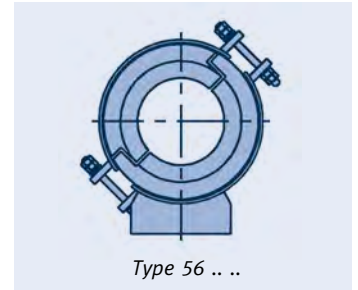
Type 57 used as guided quadruple pipe support for vertical pipes with thrust rings to keep the support in place. Same configuration but with additional lugs underneath the shoe can be used as a vertical line stop.

## Special Design

- Special pipe sizes can also be accommodated.
- For extremely large axial movements, special lengths can also be supplied.
- Use as a hanger (e.g. in combination with spring or constant hangers) is also possible. In this case the shoe of the clamp base is replaced by a special pipe clamp, type 43. The clamp is then designed for the particular conditions existing in each case.
- Deviations from the standard densities of the foam can be supplied, e.g. a density of 120kg/m<sup>3</sup>.
- Slide bearings can be incorporated by fixing a polished stainless steel plate to the underside of the pipe shoe.
- For special applications when increased loads have to be absorbed, laminated wood blocks can be utilized.
- The installation dimension 'E' can be adjusted if necessary. Increasing or decreasing the E-dimension may affect the design and the load capacity. Therefore, the actual operational loads have to be provided in case of order placement.
- LISEGA takes pride in servicing their clients and will gladly assist in any special inquiry.



Special articulated cryogenic horizontal hanger support with clamping mechanism.

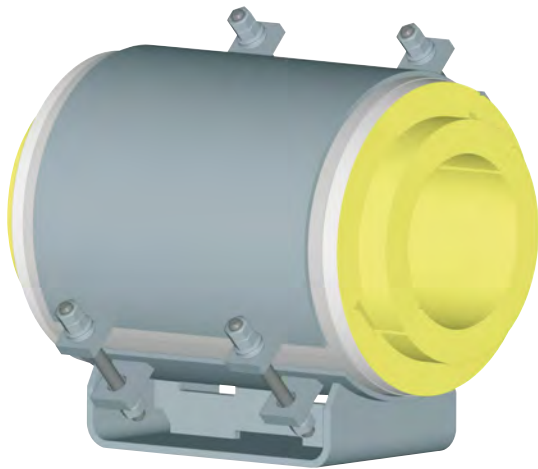


Type designation system for double and multiple clamp base pipe supports

# GUIDE SUPPORTS

## TYPE 56 01 .0 TO 56 97 .9

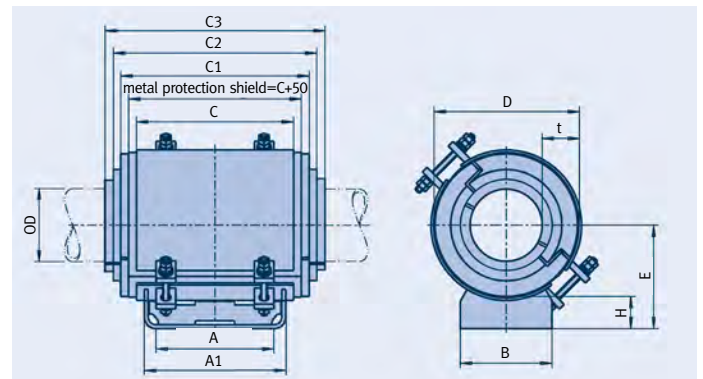
The HIPAC range of supports is designed to operate at temperatures down to -196°C. Shrinkage in the pipe and HD-PUF is compensated by the disc spring clamping mechanism to prevent possible relative movement between the clamp base and the pipe. A maximum temperature difference for each insulation thickness has been considered for the clamping force calculation. Therefore, the operating temperature of the piping system has to be provided with the order.



① The maximum lateral and axial load is limited to 30% of the actual vertical load. For increased lateral loads or occasional upward loads, multiple or double clamp bases should be used. For this purpose, the resulting load ( $F_{res} = \sqrt{F_V^2 + F_L^2}$ ) must not exceed the maximum vertical load given in the selection tables. For higher axial loads type 57 can be used. In instances where there is axial movement, the load capacity of the support can only be guaranteed if the center of the pipe shoe maintains contact with the supporting structure. The design compressive strength properties are based on a safety factor of 5.

② The density is to be stated when ordering.

③ A stepping of 50mm on both side(s) is also available on request. If required, please provide according information with the order.

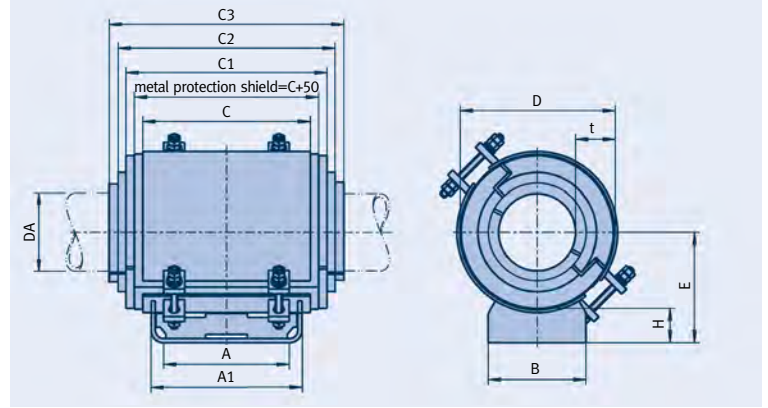


### Selection Table OD 21.3 - OD 26.9

|                    | Type   | t   | D   | E   | H   | A   | A1  | B   | C   | C1③ | C2  | C3 | Max. vertical load [kN] at density ① ② |     |     | Weight [kg] at density |     |     |     |
|--------------------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|--|-----|-----|------------------------|-----|-----|-----|
|                    |        |     |     |     |     |     |     |     |     |     |     |    | 160                                    | 224 | 320 | 160                    | 224 | 320 |     |
|                    |        |     |     |     |     |     |     |     |     |     |     |    | 160                                    | 224 | 320 | 160                    | 224 | 320 |     |
| OD 21.3<br>(ND 15) | 560130 | 25  | 72  | 87  | 50  | 111 | 135 | 75  | 150 | 250 | -   | -  | 1.1                                    | 2.3 | 4.2 | 2.4                    | 2.5 | 2.6 |     |
|                    | 560150 |     |     |     |     | 261 | 285 |     | 300 | 400 | -   | -  | 1.9                                    | 3.8 | 6.7 | 4.2                    | 4.3 | 4.5 |     |
|                    | 560131 | 40  | 102 | 102 | 50  | 111 | 135 | 75  | 150 | 250 | -   | -  | 1.1                                    | 2.3 | 4.2 | 3.2                    | 3.3 | 3.5 |     |
|                    | 560151 |     |     |     |     | 261 | 285 |     | 300 | 400 | -   | -  | 1.9                                    | 3.8 | 6.7 | 5.6                    | 5.8 | 6.1 |     |
|                    | 560132 | 50  | 122 | 112 | 50  | 111 | 135 | 100 | 150 | 250 | -   | -  | 1.1                                    | 2.3 | 4.2 | 3.8                    | 4.0 | 4.3 |     |
|                    | 560152 |     |     |     |     | 261 | 285 |     | 300 | 400 | -   | -  | 1.9                                    | 3.8 | 6.7 | 6.8                    | 7.1 | 7.5 |     |
|                    | 560133 | 80  | 182 | 142 | 50  | 111 | 135 | 100 | 150 | 250 | 300 | -  | -                                      | 1.4 | 2.8 | 5                      | 6.1 | 6.6 | 7.3 |
|                    | 560153 |     |     |     |     | 261 | 285 |     | 300 | 400 | 450 | -  | -                                      | 2.1 | 4.3 | 7.6                    | 10  | 11  | 12  |
| 560134             | 100    | 222 | 162 | 50  | 105 | 135 | 150 | 150 | 250 | 300 | -   | -  | 1.4                                    | 2.8 | 5   | 8.7                    | 9.4 | 10  |     |
| 560154             |        |     |     |     | 255 | 285 |     | 300 | 400 | 450 | -   | -  | 2.1                                    | 4.3 | 7.6 | 15                     | 16  | 18  |     |

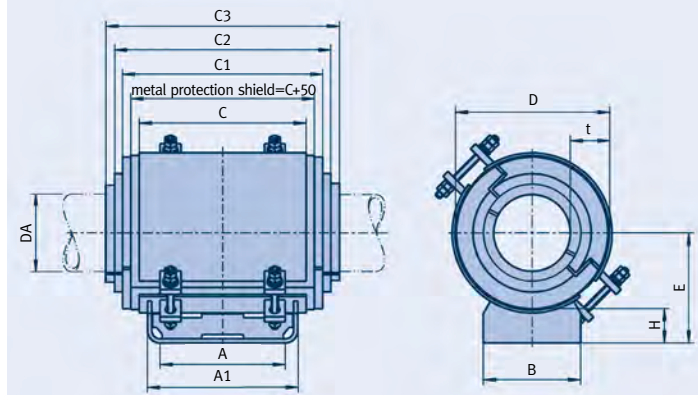
|                    | Type   | t   | D   | E   | H  | A   | A1  | B   | C   | C1③ | C2  | C3 | Max. vertical load [kN] at density ① ② |     |     | Weight [kg] at density |     |     |     |
|--------------------|--------|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|----|--|-----|-----|------------------------|-----|-----|-----|
|                    |        |     |     |     |    |     |     |     |     |     |     |    | 160                                    | 224 | 320 | 160                    | 224 | 320 |     |
|                    |        |     |     |     |    |     |     |     |     |     |     |    | 160                                    | 224 | 320 | 160                    | 224 | 320 |     |
| OD 26.9<br>(ND 20) | 560230 | 25  | 78  | 90  | 50 | 111 | 135 | 75  | 150 | 250 | -   | -  | 1.5                                    | 3   | 5.3 | 2.6                    | 2.6 | 2.7 |     |
|                    | 560250 |     |     |     |    | 261 | 285 |     | 300 | 400 | -   | -  | 2.4                                    | 4.9 | 8.6 | 4.5                    | 4.6 | 4.7 |     |
|                    | 560231 | 40  | 108 | 105 | 50 | 111 | 135 | 75  | 150 | 250 | -   | -  | 1.5                                    | 3   | 5.3 | 3.3                    | 3.5 | 3.7 |     |
|                    | 560251 |     |     |     |    | 261 | 285 |     | 300 | 400 | -   | -  | 2.4                                    | 4.9 | 8.6 | 5.8                    | 6.1 | 6.4 |     |
|                    | 560232 | 50  | 128 | 115 | 50 | 111 | 135 | 100 | 150 | 250 | -   | -  | 1.5                                    | 3   | 5.3 | 4.0                    | 4.2 | 4.5 |     |
|                    | 560252 |     |     |     |    | 261 | 285 |     | 300 | 400 | -   | -  | 2.4                                    | 4.9 | 8.6 | 7.1                    | 7.4 | 7.8 |     |
|                    | 560233 | 80  | 188 | 145 | 50 | 111 | 135 | 100 | 150 | 250 | 300 | -  | -                                      | 1.8 | 3.7 | 6.4                    | 6.3 | 6.8 | 7.5 |
|                    | 560253 |     |     |     |    | 261 | 285 |     | 300 | 400 | 450 | -  | -                                      | 2.7 | 5.5 | 9.6                    | 10  | 11  | 12  |
|                    | 560234 | 100 | 228 | 165 | 50 | 105 | 135 | 150 | 150 | 250 | 300 | -  | -                                      | 1.8 | 3.7 | 6.4                    | 9.0 | 9.7 | 11  |
|                    | 560254 |     |     |     |    | 255 | 285 |     | 300 | 400 | 450 | -  | -                                      | 2.7 | 5.5 | 9.6                    | 15  | 16  | 18  |





## Selection Table OD 33.7 - OD 60.3

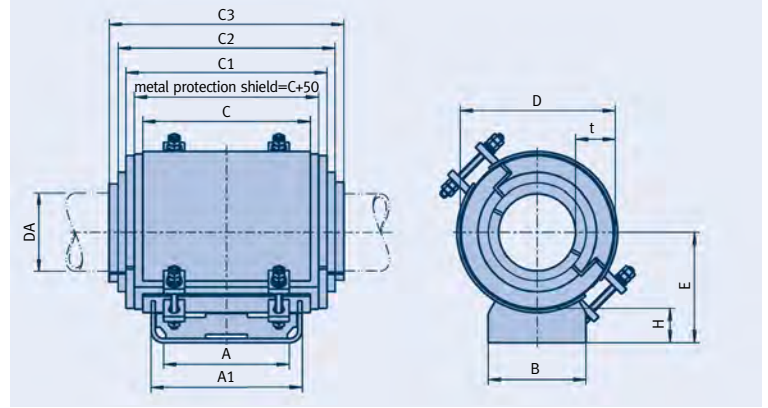
|                    | Type   | t   | D   | E   | H   | A   | A1  | B   | C   | C1 <sup>③</sup> | C2  | C3 | Max. vertical load [kN] at density <sup>①</sup> <sup>②</sup> |     |     | Weight [kg] at density |     |     |     |
|--------------------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----------------|-----|----|--|-----|-----|------------------------|-----|-----|-----|
|                    |        |     |     |     |     |     |     |     |     |                 |     |    | 160  | 224 | 320 | 160                    | 224 | 320 |     |
|                    |        |     |     |     |     |     |     |     |     |                 |     |    |  |     |     |                        |     |     |     |
| OD 33.7<br>(ND 25) | 560330 | 25  | 84  | 93  | 50  | 111 | 135 | 75  | 150 | 250             | -   | -  | 1.8  | 3.7 | 6.5 | 2.7                    | 2.8 | 2.9 |     |
|                    | 560350 |     |     |     |     | 261 | 285 |     | 300 | 400             | -   | -  | 3  | 6   | 10  | 4.7                    | 4.8 | 5.0 |     |
|                    | 560331 | 40  | 114 | 108 | 50  | 111 | 135 | 75  | 150 | 250             | -   | -  | 1.8  | 3.7 | 6.5 | 3.5                    | 3.6 | 3.8 |     |
|                    | 560351 |     |     |     |     | 261 | 285 |     | 300 | 400             | -   | -  | 3  | 6   | 10  | 6.1                    | 6.3 | 6.7 |     |
|                    | 560332 | 50  | 134 | 118 | 50  | 111 | 135 | 100 | 150 | 250             | -   | -  | 1.8  | 3.7 | 6.5 | 4.2                    | 4.4 | 4.7 |     |
|                    | 560352 |     |     |     |     | 261 | 285 |     | 300 | 400             | -   | -  | 3  | 6   | 10  | 7.3                    | 7.7 | 8.2 |     |
|                    | 560333 | 80  | 194 | 148 | 50  | 111 | 135 | 100 | 150 | 250             | 300 | -  | -  | 2.2 | 4.5 | 7.8                    | 6.5 | 7.0 | 7.7 |
|                    | 560353 |     |     |     |     | 261 | 285 |     | 300 | 400             | 450 | -  | -  | 3.3 | 6.7 | 11                     | 11  | 12  | 13  |
|                    | 560334 | 100 | 234 | 168 | 50  | 105 | 135 | 150 | 150 | 250             | 300 | -  | -  | 2.2 | 4.5 | 7.8                    | 9.2 | 9.9 | 11  |
|                    | 560354 |     |     |     |     | 255 | 285 |     | 300 | 400             | 450 | -  | -  | 3.3 | 6.7 | 11                     | 16  | 17  | 19  |
| 560335             | 130    | 294 | 198 | 50  | 99  | 135 | 200 | 150 | 250 | 300             | 350 |    | 2.6  | 5.2 | 9.1 | 13                     | 14  | 16  |     |
| 560355             |        |     |     |     | 249 | 285 |     | 300 | 400 | 450             | 500 |    | 3.7  | 7.5 | 13  | 22                     | 24  | 27  |     |
| OD 48.3<br>(ND 40) | 560530 | 25  | 99  | 101 | 50  | 111 | 135 | 75  | 150 | 250             | -   | -  | 2.6  | 5.4 | 9.4 | 3.1                    | 3.2 | 3.3 |     |
|                    | 560550 |     |     |     |     | 261 | 285 |     | 300 | 400             | -   | -  | 4.3  | 8.6 | 15  | 5.4                    | 5.5 | 5.7 |     |
|                    | 560531 | 40  | 129 | 116 | 50  | 111 | 135 | 100 | 150 | 250             | -   | -  | 2.6  | 5.4 | 9.4 | 4.0                    | 4.2 | 4.4 |     |
|                    | 560551 |     |     |     |     | 261 | 285 |     | 300 | 400             | -   | -  | 4.3  | 8.6 | 15  | 7.1                    | 7.4 | 7.8 |     |
|                    | 560532 | 50  | 149 | 126 | 50  | 111 | 135 | 100 | 150 | 250             | -   | -  | 2.6  | 5.4 | 9.4 | 4.5                    | 4.8 | 5.2 |     |
|                    | 560552 |     |     |     |     | 261 | 285 |     | 300 | 400             | -   | -  | 4.3  | 8.6 | 15  | 8.1                    | 8.5 | 9.1 |     |
|                    | 560533 | 80  | 209 | 156 | 50  | 111 | 135 | 100 | 150 | 250             | 300 | -  | -  | 3.2 | 6.4 | 11                     | 7.6 | 8.2 | 9.0 |
|                    | 560553 |     |     |     |     | 261 | 285 |     | 300 | 400             | 450 | -  | -  | 4.8 | 9.6 | 17                     | 13  | 14  | 15  |
|                    | 560534 | 100 | 249 | 176 | 50  | 105 | 135 | 150 | 150 | 250             | 300 | -  | -  | 3.2 | 6.4 | 11                     | 9.8 | 11  | 12  |
|                    | 560554 |     |     |     |     | 255 | 285 |     | 300 | 400             | 450 | -  | -  | 4.8 | 9.6 | 17                     | 17  | 18  | 20  |
| 560535             | 130    | 309 | 206 | 50  | 99  | 135 | 200 | 150 | 250 | 300             | 350 |    | 3.7  | 7.5 | 13  | 15                     | 16  | 18  |     |
| 560555             |        |     |     |     | 249 | 285 |     | 300 | 400 | 450             | 500 |    | 5.4  | 10  | 19  | 25                     | 27  | 30  |     |
| OD 60.3<br>(ND 50) | 560630 | 25  | 111 | 107 | 50  | 111 | 135 | 75  | 150 | 250             | -   | -  | 3.3  | 6.6 | 11  | 3.3                    | 3.4 | 3.6 |     |
|                    | 560650 |     |     |     |     | 261 | 285 |     | 300 | 400             | -   | -  | 5.3  | 10  | 18  | 5.9                    | 6.0 | 6.3 |     |
|                    | 560631 | 40  | 141 | 122 | 50  | 111 | 135 | 100 | 150 | 250             | -   | -  | 3.3  | 6.6 | 11  | 4.3                    | 4.5 | 4.8 |     |
|                    | 560651 |     |     |     |     | 261 | 285 |     | 300 | 400             | -   | -  | 5.3  | 10  | 18  | 7.6                    | 7.9 | 8.4 |     |
|                    | 560632 | 50  | 161 | 132 | 50  | 111 | 135 | 100 | 150 | 250             | -   | -  | 3.3  | 6.6 | 11  | 5.3                    | 5.6 | 6.0 |     |
|                    | 560652 |     |     |     |     | 261 | 285 |     | 300 | 400             | -   | -  | 5.3  | 10  | 18  | 8.8                    | 9.2 | 9.9 |     |
|                    | 560633 | 80  | 221 | 162 | 50  | 105 | 135 | 150 | 150 | 250             | 300 | -  | -  | 4   | 8   | 14                     | 8.6 | 9.2 | 10  |
|                    | 560653 |     |     |     |     | 255 | 285 |     | 300 | 400             | 450 | -  | -  | 6   | 12  | 21                     | 15  | 16  | 17  |
|                    | 560634 | 100 | 261 | 182 | 50  | 105 | 135 | 150 | 150 | 250             | 300 | -  | -  | 4   | 8   | 14                     | 10  | 11  | 13  |
|                    | 560654 |     |     |     |     | 255 | 285 |     | 300 | 400             | 450 | -  | -  | 6   | 12  | 21                     | 18  | 19  | 21  |
| 560655             | 130    | 321 | 212 | 50  | 249 | 285 | 200 | 300 | 400 | 450             | 500 |    | 6.7  | 13  | 23  | 26                     | 28  | 32  |     |
| 560675             |        |     |     |     | 449 | 485 |     | 500 | 600 | 650             | 700 |    | 9.4  | 18  | 33  | 41                     | 44  | 49  |     |
| 560656             | 150    | 361 | 282 | 100 | 237 | 285 | 250 | 300 | 400 | 450             | 500 |    | 6.7  | 13  | 23  | 33                     | 36  | 41  |     |
| 560676             |        |     |     |     | 437 | 485 |     | 500 | 600 | 650             | 700 |    | 9.4  | 18  | 33  | 51                     | 55  | 62  |     |



## Selection Table OD 88.9 - OD 168.3

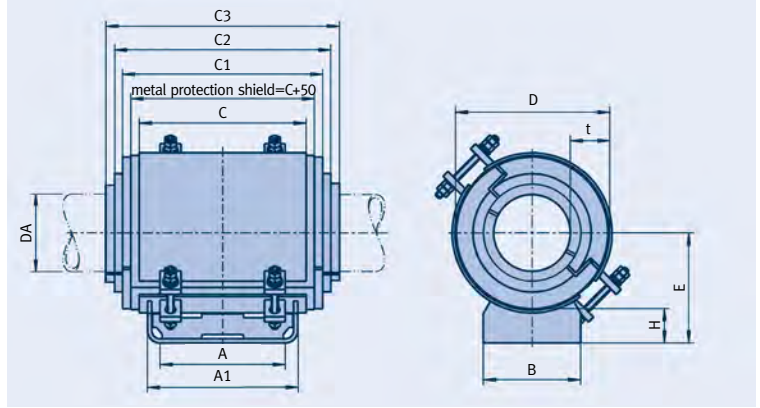
|                              | Type   | t   | D   | E   | H   | A   | A1  | B   | C   | C1③ | C2  | C3  | Max. vertical load [kN] at density ① ② |     |     | Weight [kg] at density |     |     |    |
|------------------------------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|------------------------|-----|-----|----|
|                              |        |     |     |     |     |     |     |     |     |     |     |     | 160                                    | 224 | 320 | 160                    | 224 | 320 |    |
|                              |        |     |     |     |     |     |     |     |     |     |     |     |  |     |     |                        |     |     |    |
| <b>OD 88.9<br/>(ND 80)</b>   | 560930 |     |     |     |     | 111 | 135 |     | 150 | 250 | -   | -   | 4.6                                    | 9.2 | 16  | 4.1                    | 4.2 | 4.5 |    |
|                              | 560950 | 25  | 140 | 121 | 50  | 261 | 285 | 100 | 300 | 400 | -   | -   | 7.9                                    | 15  | 27  | 7.3                    | 7.6 | 7.9 |    |
|                              | 560931 |     |     |     |     | 111 | 135 |     | 150 | 250 | -   | -   | 4.9                                    | 9.9 | 17  | 5.4                    | 5.7 | 6.1 |    |
|                              | 560951 | 40  | 170 | 136 | 50  | 261 | 285 | 100 | 300 | 400 | -   | -   | 7.9                                    | 15  | 27  | 9.0                    | 9.4 | 10  |    |
|                              | 560932 |     |     |     |     | 111 | 135 |     | 150 | 250 | -   | -   | 4.9                                    | 9.9 | 17  | 6.0                    | 6.4 | 6.9 |    |
|                              | 560952 | 50  | 190 | 146 | 50  | 261 | 285 | 100 | 300 | 400 | -   | -   | 7.9                                    | 15  | 27  | 10                     | 11  | 12  |    |
|                              | 560933 |     |     |     |     | 105 | 135 |     | 150 | 250 | 300 | -   | -                                      | 5.9 | 11  | 20                     | 9.9 | 11  | 12 |
|                              | 560953 | 80  | 250 | 176 | 50  | 255 | 285 | 150 | 300 | 400 | 450 | -   | -                                      | 8.8 | 17  | 31                     | 17  | 18  | 20 |
|                              | 560934 |     |     |     |     | 99  | 135 |     | 150 | 250 | 300 | -   | -                                      | 5.9 | 11  | 20                     | 12  | 13  | 15 |
|                              | 560954 | 100 | 290 | 196 | 50  | 249 | 285 | 200 | 300 | 400 | 450 | -   | -                                      | 8.8 | 17  | 31                     | 21  | 23  | 25 |
|                              | 560955 |     |     |     |     | 249 | 285 |     | 300 | 400 | 450 | 500 |  | 9.9 | 19  | 34                     | 28  | 30  | 34 |
|                              | 560975 | 130 | 350 | 226 | 50  | 449 | 485 | 200 | 500 | 600 | 650 | 700 |  | 13  | 27  | 48                     | 43  | 47  | 52 |
| 560956                       |        |     |     |     | 237 | 285 |     | 300 | 400 | 450 | 500 |     | 9.9                                    | 19  | 34  | 36                     | 39  | 44  |    |
| 560976                       | 150    | 390 | 296 | 100 | 437 | 485 | 250 | 500 | 600 | 650 | 700 |     | 13                                     | 27  | 48  | 55                     | 60  | 67  |    |
| <b>OD 114.3<br/>(ND 100)</b> | 561130 |     |     |     |     | 111 | 135 |     | 150 | 250 | -   | -   | 5.4                                    | 10  | 19  | 5.1                    | 5.3 | 5.6 |    |
|                              | 561150 | 25  | 165 | 134 | 50  | 261 | 285 | 100 | 300 | 400 | -   | -   | 10                                     | 20  | 35  | 8.5                    | 8.8 | 9.2 |    |
|                              | 561131 |     |     |     |     | 111 | 135 |     | 150 | 250 | -   | -   | 6.3                                    | 12  | 22  | 6.0                    | 6.3 | 6.8 |    |
|                              | 561151 | 40  | 195 | 149 | 50  | 261 | 285 | 100 | 300 | 400 | -   | -   | 10                                     | 20  | 35  | 10                     | 11  | 11  |    |
|                              | 561132 |     |     |     |     | 105 | 135 |     | 150 | 250 | -   | -   | 6.3                                    | 12  | 22  | 7.9                    | 8.3 | 9.0 |    |
|                              | 561152 | 50  | 215 | 159 | 50  | 255 | 285 | 150 | 300 | 400 | -   | -   | 10                                     | 20  | 35  | 14                     | 14  | 15  |    |
|                              | 561133 |     |     |     |     | 105 | 135 |     | 150 | 250 | 300 | -   | -                                      | 7.6 | 15  | 26                     | 11  | 12  | 13 |
|                              | 561153 | 80  | 275 | 189 | 50  | 255 | 285 | 150 | 300 | 400 | 450 | -   | -                                      | 11  | 22  | 40                     | 18  | 20  | 22 |
|                              | 561154 |     |     |     |     | 249 | 285 |     | 300 | 400 | 450 | -   | -                                      | 11  | 22  | 40                     | 25  | 27  | 29 |
|                              | 561174 | 100 | 315 | 209 | 50  | 449 | 485 | 200 | 500 | 600 | 650 | -   | -                                      | 16  | 33  | 57                     | 39  | 41  | 45 |
|                              | 561155 |     |     |     |     | 237 | 285 |     | 300 | 400 | 450 | 500 |  | 12  | 25  | 44                     | 34  | 37  | 41 |
|                              | 561175 | 130 | 375 | 289 | 100 | 437 | 485 | 250 | 500 | 600 | 650 | 700 |  | 17  | 35  | 62                     | 53  | 57  | 63 |
|                              | 561156 |     |     |     |     | 237 | 285 |     | 300 | 400 | 450 | 500 |  | 12  | 25  | 44                     | 44  | 47  | 53 |
|                              | 561176 | 150 | 415 | 309 | 100 | 437 | 485 | 250 | 500 | 600 | 650 | 700 |  | 17  | 35  | 62                     | 68  | 73  | 81 |
| 561157                       |        |     |     |     | 225 | 285 |     | 300 | 400 | 450 | 500 |     | 12                                     | 25  | 44  | 54                     | 59  | 66  |    |
| 561177                       | 180    | 475 | 339 | 100 | 425 | 485 | 300 | 500 | 600 | 650 | 700 |     | 17                                     | 35  | 62  | 84                     | 91  | 102 |    |
| <b>OD 168.3<br/>(ND 150)</b> | 561730 |     |     |     |     | 105 | 135 |     | 150 | 250 | -   | -   | 7.2                                    | 14  | 25  | 7.6                    | 7.9 | 8.2 |    |
|                              | 561750 | 25  | 220 | 161 | 50  | 255 | 285 | 150 | 300 | 400 | -   | -   | 14                                     | 29  | 35  | 13                     | 14  | 14  |    |
|                              | 561731 |     |     |     |     | 105 | 135 |     | 150 | 250 | -   | -   | 8.2                                    | 16  | 29  | 9.0                    | 9.5 | 10  |    |
|                              | 561751 | 40  | 250 | 176 | 50  | 255 | 285 | 150 | 300 | 400 | -   | -   | 15                                     | 30  | 52  | 16                     | 16  | 17  |    |
|                              | 561732 |     |     |     |     | 105 | 135 |     | 150 | 250 | -   | -   | 8.9                                    | 17  | 31  | 9.8                    | 10  | 11  |    |
|                              | 561752 | 50  | 270 | 186 | 50  | 255 | 285 | 150 | 300 | 400 | -   | -   | 15                                     | 30  | 52  | 17                     | 18  | 19  |    |
|                              | 561753 |     |     |     |     | 249 | 285 |     | 300 | 400 | 450 | -   | -                                      | 16  | 33  | 59                     | 25  | 27  | 29 |
|                              | 561773 | 80  | 330 | 216 | 50  | 449 | 485 | 200 | 500 | 600 | 650 | -   | -                                      | 24  | 48  | 85                     | 40  | 42  | 46 |
|                              | 561754 |     |     |     |     | 237 | 285 |     | 300 | 400 | 450 | -   | -                                      | 16  | 33  | 59                     | 32  | 35  | 38 |
|                              | 561774 | 100 | 370 | 286 | 100 | 437 | 485 | 250 | 500 | 600 | 650 | -   | -                                      | 24  | 48  | 85                     | 50  | 54  | 59 |
|                              | 561755 |     |     |     |     | 237 | 285 |     | 300 | 400 | 450 | 500 |  | 18  | 37  | 65                     | 44  | 48  | 53 |
|                              | 561775 | 130 | 430 | 316 | 100 | 437 | 485 | 250 | 500 | 600 | 650 | 700 |  | 26  | 52  | 92                     | 69  | 74  | 82 |
|                              | 561756 |     |     |     |     | 225 | 285 |     | 300 | 400 | 450 | 500 |  | 18  | 37  | 65                     | 53  | 57  | 64 |
|                              | 561776 | 150 | 470 | 336 | 100 | 425 | 485 | 300 | 500 | 600 | 650 | 700 |  | 26  | 52  | 92                     | 82  | 88  | 98 |
| 561757                       |        |     |     |     | 225 | 285 |     | 300 | 400 | 450 | 500 |     | 18                                     | 37  | 65  | 70                     | 75  | 84  |    |
| 561777                       | 180    | 530 | 366 | 100 | 425 | 485 | 300 | 500 | 600 | 650 | 700 |     | 26                                     | 52  | 92  | 108                    | 116 | 128 |    |

① ② ③ remarks see page 8



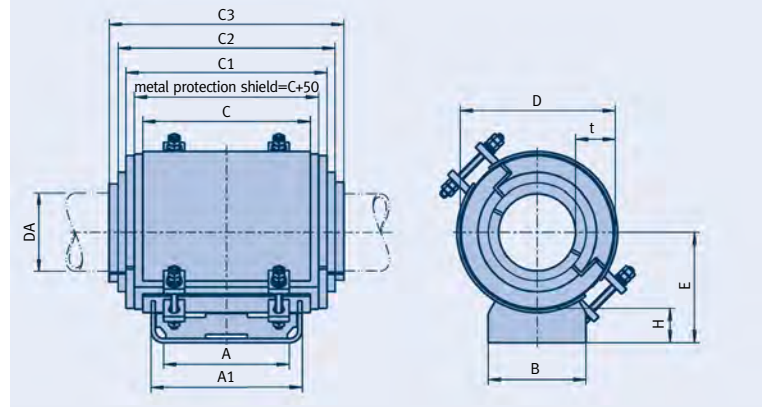
## Selection Table OD 219.1 - OD 273

|                      | Type   | t   | D   | E   | H   | A   | A1  | B   | C   | C1③ | C2  | C3  | Max. vertical load [kN] at density ① ② |     |     | Weight [kg] at density |     |     |    |
|----------------------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|------------------------|-----|-----|----|
|                      |        |     |     |     |     |     |     |     |     |     |     |     | 160                                    | 224 | 320 | 160                    | 224 | 320 |    |
|                      |        |     |     |     |     |     |     |     |     |     |     |     |  |     |     |                        |     |     |    |
| OD 219.1<br>(ND 200) | 562230 | 25  | 271 | 187 | 50  | 105 | 135 | 150 | 150 | 250 | -   | -   | 8.9                                    | 17  | 31  | 9.2                    | 9.5 | 10  |    |
|                      | 562250 |     |     |     |     | 255 | 285 |     | 300 | 400 | -   | -   | 17                                     | 35  | 62  | 16                     | 16  | 17  |    |
|                      | 562251 | 40  | 301 | 202 | 50  | 249 | 285 | 200 | 300 | 400 | -   | -   | 19                                     | 39  | 68  | 22                     | 22  | 24  |    |
|                      | 562271 |     |     |     |     | 444 | 480 |     | 500 | 600 | -   | -   | 29                                     | 58  | 102 | 34                     | 35  | 37  |    |
|                      | 562252 | 50  | 321 | 212 | 50  | 249 | 285 | 200 | 300 | 400 | -   | -   | 19                                     | 39  | 68  | 23                     | 24  | 26  |    |
|                      | 562272 |     |     |     |     | 444 | 480 |     | 500 | 600 | -   | -   | 29                                     | 58  | 102 | 37                     | 38  | 41  |    |
|                      | 562253 | 80  | 381 | 292 | 100 | 237 | 285 | 250 | 300 | 400 | 450 | -   | -                                      | 21  | 43  | 76                     | 32  | 35  | 38 |
|                      | 562273 |     |     |     |     | 437 | 485 |     | 500 | 600 | 650 | -   | -                                      | 31  | 63  | 111                    | 50  | 53  | 58 |
|                      | 562254 | 100 | 421 | 312 | 100 | 237 | 285 | 250 | 300 | 400 | 450 | -   | -                                      | 21  | 43  | 76                     | 42  | 45  | 49 |
|                      | 562274 |     |     |     |     | 437 | 485 |     | 500 | 600 | 650 | -   | -                                      | 31  | 63  | 111                    | 66  | 70  | 76 |
|                      | 562255 | 130 | 481 | 342 | 100 | 225 | 285 | 300 | 300 | 400 | 450 | 500 | 24                                     | 48  | 85  | 53                     | 57  | 63  |    |
|                      | 562275 |     |     |     |     | 425 | 485 |     | 500 | 600 | 650 | 700 | 34                                     | 68  | 119 | 82                     | 88  | 97  |    |
|                      | 562256 | 150 | 521 | 362 | 100 | 225 | 285 | 300 | 300 | 400 | 450 | 500 | 24                                     | 48  | 85  | 67                     | 72  | 80  |    |
|                      | 562276 |     |     |     |     | 425 | 485 |     | 500 | 600 | 650 | 700 | 34                                     | 68  | 119 | 104                    | 111 | 122 |    |
| 562257               | 180    | 581 | 392 | 100 | 225 | 285 | 300 | 300 | 400 | 450 | 500 | 24  | 48                                     | 85  | 76  | 82                     | 92  |     |    |
| 562277               |        |     |     |     | 425 | 485 |     | 500 | 600 | 650 | 700 | 34  | 68                                     | 119 | 117 | 127                    | 141 |     |    |
| OD 273<br>(ND 250)   | 562750 | 25  | 325 | 214 | 50  | 249 | 285 | 200 | 300 | 400 | -   | -   | 21                                     | 43  | 75  | 22                     | 23  | 24  |    |
|                      | 562770 |     |     |     |     | 444 | 480 |     | 500 | 600 | -   | -   | 35                                     | 71  | 105 | 35                     | 36  | 38  |    |
|                      | 562751 | 40  | 355 | 229 | 50  | 249 | 285 | 200 | 300 | 400 | -   | -   | 23                                     | 47  | 82  | 24                     | 25  | 27  |    |
|                      | 562771 |     |     |     |     | 444 | 480 |     | 500 | 600 | -   | -   | 36                                     | 72  | 115 | 38                     | 40  | 42  |    |
|                      | 562752 | 50  | 375 | 289 | 100 | 237 | 285 | 250 | 300 | 400 | -   | -   | 24                                     | 48  | 85  | 30                     | 32  | 34  |    |
|                      | 562772 |     |     |     |     | 437 | 485 |     | 500 | 600 | -   | -   | 36                                     | 72  | 127 | 47                     | 49  | 52  |    |
|                      | 562753 | 80  | 435 | 319 | 100 | 237 | 285 | 250 | 300 | 400 | 450 | -   | -                                      | 27  | 54  | 95                     | 42  | 44  | 48 |
|                      | 562773 |     |     |     |     | 437 | 485 |     | 500 | 600 | 650 | -   | -                                      | 39  | 79  | 138                    | 66  | 69  | 75 |
|                      | 562754 | 100 | 475 | 339 | 100 | 225 | 285 | 300 | 300 | 400 | 450 | -   | -                                      | 27  | 54  | 95                     | 50  | 54  | 58 |
|                      | 562774 |     |     |     |     | 425 | 485 |     | 500 | 600 | 650 | -   | -                                      | 39  | 79  | 138                    | 79  | 83  | 90 |
|                      | 562755 | 130 | 535 | 369 | 100 | 225 | 285 | 300 | 300 | 400 | 450 | 500 | 30                                     | 60  | 106 | 68                     | 72  | 80  |    |
|                      | 562775 |     |     |     |     | 425 | 485 |     | 500 | 600 | 650 | 700 | 42                                     | 85  | 149 | 105                    | 112 | 122 |    |
|                      | 562756 | 150 | 575 | 389 | 100 | 225 | 285 | 300 | 300 | 400 | 450 | 500 | 30                                     | 60  | 106 | 73                     | 79  | 88  |    |
|                      | 562776 |     |     |     |     | 425 | 485 |     | 500 | 600 | 650 | 700 | 42                                     | 85  | 149 | 114                    | 122 | 135 |    |
| 562757               | 180    | 635 | 419 | 100 | 206 | 280 | 400 | 300 | 400 | 450 | 500 | 30  | 60                                     | 106 | 89  | 96                     | 108 |     |    |
| 562777               |        |     |     |     | 406 | 480 |     | 500 | 600 | 650 | 700 | 42  | 85                                     | 149 | 137 | 148                    | 164 |     |    |
| 562758               | 200    | 675 | 439 | 100 | 206 | 280 | 400 | 300 | 400 | 450 | 500 | 30  | 60                                     | 106 | 95  | 104                    | 117 |     |    |
| 562778               |        |     |     |     | 406 | 480 |     | 500 | 600 | 650 | 700 | 42  | 85                                     | 149 | 147 | 159                    | 178 |     |    |



## Selection Table OD 323.9 - OD 355.6

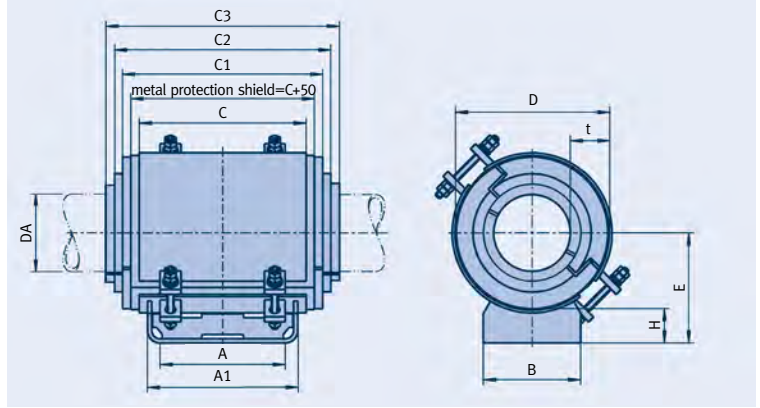
|                      | Type   | t   | D   | E   | H   | A   | A1  | B   | C   | C1③ | C2  | C3  | Max. vertical load [kN] at density ① ② |     |     | Weight [kg] at density |     |     |     |
|----------------------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|------------------------|-----|-----|-----|
|                      |        |     |     |     |     |     |     |     |     |     |     |     | 160                                    | 224 | 320 | 160                    | 224 | 320 |     |
|                      |        |     |     |     |     |     |     |     |     |     |     |     |  |     |     |                        |     |     |     |
| OD 323.9<br>(ND 300) | 563250 | 25  | 376 | 289 | 100 | 237 | 285 | 250 | 300 | 400 | -   | -   | 24                                     | 49  | 86  | 29                     | 29  | 31  |     |
|                      | 563270 |     |     |     |     | 437 | 485 |     | 500 | 600 | -   | -   | 41                                     | 83  | 145 | 45                     | 46  | 47  |     |
|                      | 563251 | 40  | 406 | 304 | 100 | 237 | 285 | 250 | 300 | 400 | -   | -   | 26                                     | 53  | 94  | 37                     | 38  | 40  |     |
|                      | 563271 |     |     |     |     | 437 | 485 |     | 500 | 600 | -   | -   | 43                                     | 86  | 151 | 58                     | 60  | 63  |     |
|                      | 563252 | 50  | 426 | 314 | 100 | 237 | 285 | 250 | 300 | 400 | -   | -   | 28                                     | 56  | 98  | 39                     | 41  | 43  |     |
|                      | 563272 |     |     |     |     | 437 | 485 |     | 500 | 600 | -   | -   | 43                                     | 86  | 151 | 62                     | 64  | 67  |     |
|                      | 563253 | 80  | 486 | 344 | 100 | 225 | 285 | 300 | 300 | 400 | 450 | -   | -                                      | 32  | 64  | 112                    | 50  | 53  | 57  |
|                      | 563273 |     |     |     |     | 425 | 485 | 300 | 500 | 600 | 650 | -   | -                                      | 46  | 93  | 164                    | 78  | 82  | 88  |
|                      | 563254 | 100 | 526 | 364 | 100 | 225 | 285 | 300 | 300 | 400 | 450 | -   | -                                      | 32  | 64  | 113                    | 64  | 68  | 73  |
|                      | 563274 |     |     |     |     | 425 | 485 | 300 | 500 | 600 | 650 | -   | -                                      | 46  | 93  | 164                    | 100 | 105 | 113 |
|                      | 563255 | 130 | 586 | 394 | 100 | 225 | 285 | 300 | 300 | 400 | 450 | 500 | 36                                     | 72  | 126 | 73                     | 78  | 86  |     |
|                      | 563275 |     |     |     |     | 425 | 485 | 300 | 500 | 600 | 650 | 700 | 50                                     | 100 | 176 | 114                    | 121 | 133 |     |
|                      | 563256 | 150 | 626 | 414 | 100 | 206 | 280 | 400 | 300 | 400 | 450 | 500 | 36                                     | 72  | 126 | 86                     | 92  | 102 |     |
|                      | 563276 |     |     |     |     | 406 | 480 | 400 | 500 | 600 | 650 | 700 | 50                                     | 100 | 176 | 133                    | 142 | 156 |     |
|                      | 563257 | 180 | 686 | 444 | 100 | 206 | 280 | 400 | 300 | 400 | 450 | 500 | 36                                     | 72  | 126 | 95                     | 103 | 116 |     |
|                      | 563277 |     |     |     |     | 406 | 480 | 400 | 500 | 600 | 650 | 700 | 50                                     | 100 | 176 | 147                    | 159 | 177 |     |
| 563258               | 200    | 726 | 464 | 100 | 206 | 280 | 400 | 300 | 400 | 450 | 500 | 36  | 72                                     | 126 | 111 | 121                    | 135 |     |     |
| 563278               |        |     |     |     | 406 | 480 | 400 | 500 | 600 | 650 | 700 | 50  | 100                                    | 176 | 174 | 188                    | 208 |     |     |
| OD 355.6<br>(ND 350) | 563650 | 25  | 408 | 305 | 100 | 237 | 285 | 250 | 300 | 400 | -   | -   | 27                                     | 54  | 94  | 36                     | 37  | 38  |     |
|                      | 563670 |     |     |     |     | 437 | 485 |     | 500 | 600 | -   | -   | 45                                     | 90  | 157 | 57                     | 58  | 60  |     |
|                      | 563651 | 40  | 438 | 320 | 100 | 237 | 285 | 250 | 300 | 400 | -   | -   | 29                                     | 58  | 101 | 39                     | 41  | 43  |     |
|                      | 563671 |     |     |     |     | 437 | 485 |     | 500 | 600 | -   | -   | 47                                     | 95  | 166 | 62                     | 64  | 67  |     |
|                      | 563652 | 50  | 458 | 330 | 100 | 225 | 285 | 300 | 300 | 400 | -   | -   | 30                                     | 60  | 106 | 45                     | 47  | 49  |     |
|                      | 563672 |     |     |     |     | 425 | 485 | 300 | 500 | 600 | -   | -   | 47                                     | 95  | 166 | 71                     | 74  | 77  |     |
|                      | 563653 | 80  | 518 | 360 | 100 | 225 | 285 | 300 | 300 | 400 | 450 | -   | -                                      | 34  | 68  | 120                    | 62  | 65  | 69  |
|                      | 563673 |     |     |     |     | 425 | 485 | 300 | 500 | 600 | 650 | -   | -                                      | 51  | 102 | 180                    | 96  | 101 | 107 |
|                      | 563654 | 100 | 558 | 380 | 100 | 225 | 285 | 300 | 300 | 400 | 450 | -   | -                                      | 35  | 71  | 124                    | 67  | 71  | 77  |
|                      | 563674 |     |     |     |     | 425 | 485 | 300 | 500 | 600 | 650 | -   | -                                      | 51  | 102 | 180                    | 105 | 111 | 119 |
|                      | 563655 | 130 | 618 | 410 | 100 | 206 | 280 | 400 | 300 | 400 | 450 | 500 | 39                                     | 79  | 138 | 83                     | 89  | 98  |     |
|                      | 563675 |     |     |     |     | 406 | 480 | 400 | 500 | 600 | 650 | 700 | 55                                     | 110 | 193 | 129                    | 137 | 150 |     |
|                      | 563656 | 150 | 658 | 430 | 100 | 206 | 280 | 400 | 300 | 400 | 450 | 500 | 39                                     | 79  | 138 | 89                     | 96  | 107 |     |
|                      | 563676 |     |     |     |     | 406 | 480 | 400 | 500 | 600 | 650 | 700 | 55                                     | 110 | 193 | 138                    | 148 | 163 |     |
|                      | 563657 | 180 | 718 | 460 | 100 | 206 | 280 | 400 | 300 | 400 | 450 | 500 | 39                                     | 79  | 138 | 109                    | 118 | 131 |     |
|                      | 563677 |     |     |     |     | 406 | 480 | 400 | 500 | 600 | 650 | 700 | 55                                     | 110 | 193 | 170                    | 183 | 202 |     |
| 563658               | 200    | 758 | 480 | 100 | 206 | 280 | 400 | 300 | 400 | 450 | 500 | 39  | 79                                     | 138 | 122 | 132                    | 148 |     |     |
| 563678               |        |     |     |     | 406 | 480 | 400 | 500 | 600 | 650 | 700 | 55  | 110                                    | 193 | 187 | 202                    | 224 |     |     |



## Selection Table OD 406.4 - OD 457.2

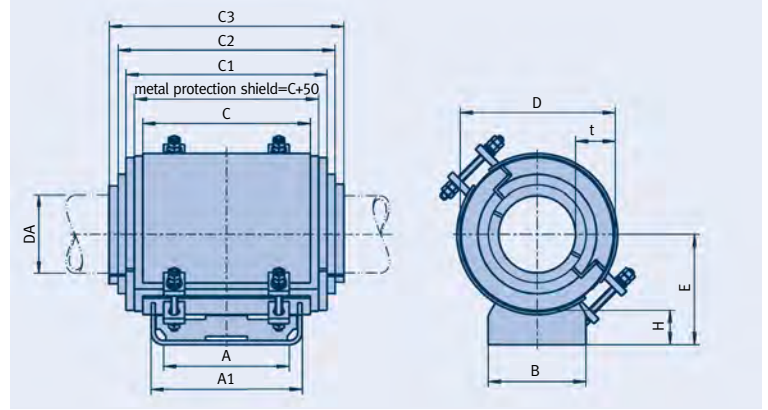
|                              | Type   | t   | D   | E   | H   | A   | A1  | B   | C   | C1 <sup>①</sup> | C2  | C3  | Max. vertical load [kN] at density <sup>①</sup> <sup>②</sup> |     |     | Weight [kg] at density |     |     |
|------------------------------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----------------|-----|-----|--|-----|-----|------------------------|-----|-----|
|                              |        |     |     |     |     |     |     |     |     |                 |     |     | 160  | 224 | 320 | 160                    | 224 | 320 |
|                              |        |     |     |     |     |     |     |     |     |                 |     |     |  |     |     |                        |     |     |
| <b>OD 406.4<br/>(ND 400)</b> | 564151 | 40  | 489 | 346 | 100 | 225 | 285 | 300 | 300 | 400             | -   | -   | 32   | 64  | 113 | 47                     | 48  | 51  |
|                              | 564171 |     |     |     |     | 425 | 485 | 300 | 500 | 600             | -   | -   | 53   | 108 | 189 | 74                     | 76  | 79  |
|                              | 564152 | 50  | 509 | 356 | 100 | 225 | 285 | 300 | 300 | 400             | -   | -   | 33   | 67  | 118 | 58                     | 60  | 63  |
|                              | 564172 |     |     |     |     | 425 | 485 | 300 | 500 | 600             | -   | -   | 54   | 108 | 189 | 91                     | 94  | 98  |
|                              | 564153 | 80  | 569 | 386 | 100 | 225 | 285 | 300 | 300 | 400             | 450 | -   | 37   | 75  | 132 | 67                     | 70  | 75  |
|                              | 564173 |     |     |     |     | 425 | 485 | 300 | 500 | 600             | 650 | -   | 58   | 117 | 205 | 104                    | 109 | 117 |
|                              | 564154 | 100 | 609 | 406 | 100 | 206 | 280 | 400 | 300 | 400             | 450 | -   | 40   | 80  | 141 | 79                     | 83  | 90  |
|                              | 564174 |     |     |     |     | 406 | 480 | 400 | 500 | 600             | 650 | -   | 58   | 117 | 205 | 123                    | 129 | 139 |
|                              | 564155 | 130 | 669 | 436 | 100 | 206 | 280 | 400 | 300 | 400             | 450 | 500 | 44   | 88  | 155 | 89                     | 95  | 105 |
|                              | 564175 |     |     |     |     | 406 | 480 | 400 | 500 | 600             | 650 | 700 | 63   | 126 | 221 | 138                    | 147 | 161 |
|                              | 564156 | 150 | 709 | 456 | 100 | 206 | 280 | 400 | 300 | 400             | 450 | 500 | 44   | 90  | 158 | 105                    | 113 | 124 |
|                              | 564176 |     |     |     |     | 406 | 480 | 400 | 500 | 600             | 650 | 700 | 63   | 126 | 221 | 164                    | 175 | 192 |
|                              | 564157 | 180 | 769 | 486 | 100 | 206 | 280 | 400 | 300 | 400             | 450 | 500 | 44   | 90  | 158 | 122                    | 132 | 146 |
|                              | 564177 |     |     |     |     | 406 | 480 | 400 | 500 | 600             | 650 | 700 | 63   | 126 | 221 | 187                    | 201 | 222 |
|                              | 564158 | 200 | 809 | 506 | 100 | 206 | 280 | 400 | 300 | 400             | 450 | 500 | 44   | 90  | 158 | 130                    | 141 | 157 |
|                              | 564178 |     |     |     |     | 406 | 480 | 400 | 500 | 600             | 650 | 700 | 63   | 126 | 221 | 199                    | 215 | 239 |
|                              | 564159 | 250 | 909 | 606 | 150 | 188 | 280 | 500 | 300 | 400             | 450 | 500 | 44   | 90  | 158 | 164                    | 178 | 201 |
|                              | 564179 |     |     |     |     | 388 | 480 | 500 | 500 | 600             | 650 | 700 | 63   | 126 | 221 | 248                    | 270 | 302 |
| <b>OD 457.2<br/>(ND 450)</b> | 564651 | 40  | 540 | 371 | 100 | 225 | 285 | 300 | 300 | 400             | -   | -   | 35   | 71  | 125 | 60                     | 62  | 64  |
|                              | 564671 |     |     |     |     | 425 | 485 | 300 | 500 | 600             | -   | -   | 59   | 119 | 209 | 94                     | 97  | 100 |
|                              | 564652 | 50  | 560 | 381 | 100 | 225 | 285 | 300 | 300 | 400             | -   | -   | 37   | 74  | 130 | 63                     | 65  | 68  |
|                              | 564672 |     |     |     |     | 425 | 485 | 300 | 500 | 600             | -   | -   | 61   | 122 | 213 | 94                     | 102 | 106 |
|                              | 564653 | 80  | 620 | 411 | 100 | 206 | 280 | 400 | 300 | 400             | 450 | -   | 41   | 82  | 143 | 78                     | 82  | 88  |
|                              | 564673 |     |     |     |     | 406 | 480 | 400 | 500 | 600             | 650 | -   | 66   | 132 | 231 | 122                    | 127 | 136 |
|                              | 564654 | 100 | 660 | 431 | 100 | 206 | 280 | 400 | 300 | 400             | 450 | -   | 43   | 82  | 143 | 84                     | 89  | 96  |
|                              | 564674 |     |     |     |     | 406 | 480 | 400 | 500 | 600             | 650 | -   | 66   | 132 | 231 | 131                    | 138 | 149 |
|                              | 564655 | 130 | 720 | 461 | 100 | 206 | 280 | 400 | 300 | 400             | 450 | 500 | 47   | 95  | 167 | 104                    | 111 | 122 |
|                              | 564675 |     |     |     |     | 406 | 480 | 400 | 500 | 600             | 650 | 700 | 71   | 142 | 249 | 164                    | 174 | 189 |
|                              | 564656 | 150 | 760 | 481 | 100 | 206 | 280 | 400 | 300 | 400             | 450 | 500 | 50   | 100 | 176 | 118                    | 126 | 139 |
|                              | 564676 |     |     |     |     | 406 | 480 | 400 | 500 | 600             | 650 | 700 | 71   | 142 | 249 | 181                    | 193 | 211 |
|                              | 564657 | 180 | 820 | 511 | 100 | 206 | 280 | 400 | 300 | 400             | 450 | 500 | 50   | 101 | 178 | 129                    | 139 | 155 |
|                              | 564677 |     |     |     |     | 406 | 480 | 400 | 500 | 600             | 650 | 700 | 71   | 142 | 249 | 198                    | 213 | 236 |
|                              | 564658 | 200 | 860 | 581 | 150 | 188 | 280 | 500 | 300 | 400             | 450 | 500 | 50   | 101 | 178 | 152                    | 164 | 182 |
|                              | 564678 |     |     |     |     | 388 | 480 | 500 | 500 | 600             | 650 | 700 | 71   | 142 | 249 | 230                    | 247 | 273 |
|                              | 564659 | 250 | 960 | 631 | 150 | 188 | 280 | 500 | 300 | 400             | 450 | 500 | 50   | 101 | 178 | 171                    | 187 | 211 |
|                              | 564679 |     |     |     |     | 388 | 480 | 500 | 500 | 600             | 650 | 700 | 71   | 142 | 249 | 260                    | 283 | 318 |

①②③ remarks see page 8



## Selection Table OD 508 - OD 558.8

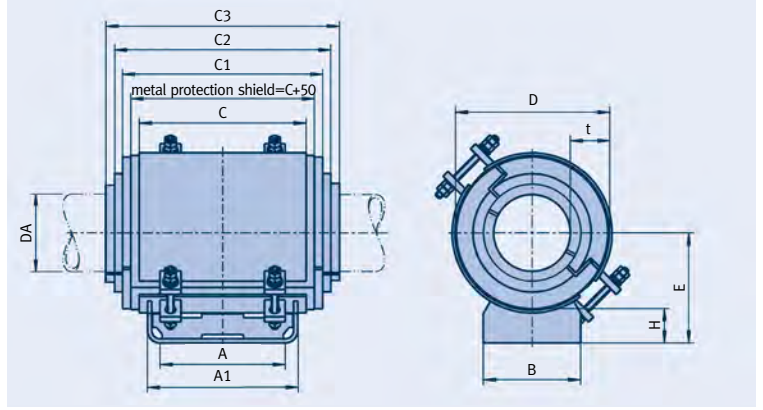
|                              | Type   | t    | D    | E   | H   | A   | A1  | B   | C   | C1③ | C2  | C3  | Max. vertical load [kN] at density ① ② |     |     | Weight [kg] at density |     |     |
|------------------------------|--------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|------------------------|-----|-----|
|                              |        |      |      |     |     |     |     |     |     |     |     |     | 160                                    | 224 | 320 | 160                    | 224 | 320 |
|                              |        |      |      |     |     |     |     |     |     |     |     |     |  |     |     |                        |     |     |
| <b>OD 508<br/>(ND 500)</b>   | 565151 | 40   | 591  | 397 | 100 | 225 | 285 | 300 | 300 | 400 | -   | -   | 39                                     | 78  | 137 | 64                     | 66  | 69  |
|                              | 565171 |      |      |     |     | 425 | 485 | 300 | 500 | 600 | -   | -   | 65                                     | 130 | 228 | 102                    | 104 | 108 |
|                              | 565152 | 50   | 611  | 407 | 100 | 206 | 280 | 400 | 300 | 400 | -   | -   | 40                                     | 81  | 141 | 74                     | 76  | 80  |
|                              | 565172 |      |      |     |     | 406 | 480 | 400 | 500 | 600 | -   | -   | 67                                     | 135 | 236 | 116                    | 119 | 124 |
|                              | 565153 | 80   | 671  | 437 | 100 | 206 | 280 | 400 | 300 | 400 | 450 | -   | 44                                     | 89  | 155 | 83                     | 87  | 93  |
|                              | 565173 |      |      |     |     | 406 | 480 | 400 | 500 | 600 | 650 | -   | 73                                     | 146 | 257 | 130                    | 136 | 145 |
|                              | 565154 | 100  | 711  | 457 | 100 | 206 | 280 | 400 | 300 | 400 | 450 | -   | 47                                     | 94  | 165 | 99                     | 104 | 112 |
|                              | 565174 |      |      |     |     | 406 | 480 | 400 | 500 | 600 | 650 | -   | 73                                     | 146 | 257 | 156                    | 164 | 176 |
|                              | 565155 | 130  | 771  | 487 | 100 | 206 | 280 | 400 | 300 | 400 | 450 | 500 | 51                                     | 102 | 179 | 117                    | 125 | 136 |
|                              | 565175 |      |      |     |     | 406 | 480 | 400 | 500 | 600 | 650 | 700 | 79                                     | 158 | 276 | 180                    | 191 | 208 |
|                              | 565156 | 150  | 811  | 507 | 100 | 206 | 280 | 400 | 300 | 400 | 450 | 500 | 53                                     | 107 | 188 | 125                    | 134 | 147 |
|                              | 565176 |      |      |     |     | 406 | 480 | 400 | 500 | 600 | 650 | 700 | 79                                     | 158 | 276 | 192                    | 205 | 224 |
|                              | 565157 | 180  | 871  | 587 | 150 | 188 | 280 | 500 | 300 | 400 | 450 | 500 | 56                                     | 113 | 197 | 151                    | 162 | 179 |
|                              | 565177 |      |      |     |     | 388 | 480 | 500 | 500 | 600 | 650 | 700 | 79                                     | 158 | 276 | 229                    | 245 | 270 |
|                              | 565158 | 200  | 911  | 607 | 150 | 188 | 280 | 500 | 300 | 400 | 450 | 500 | 56                                     | 113 | 197 | 159                    | 172 | 191 |
|                              | 565178 |      |      |     |     | 388 | 480 | 500 | 500 | 600 | 650 | 700 | 79                                     | 158 | 276 | 241                    | 260 | 287 |
|                              | 565179 | 250  | 1011 | 657 | 150 | 388 | 480 | 500 | 500 | 600 | 650 | 700 | 79                                     | 158 | 276 | 296                    | 321 | 358 |
|                              | 565189 |      |      |     |     | 638 | 730 | 500 | 750 | 850 | 900 | 950 | 107                                    | 214 | 375 | 427                    | 461 | 513 |
| <b>OD 558.8<br/>(ND 550)</b> | 565652 | 50   | 662  | 432 | 100 | 206 | 280 | 400 | 300 | 400 | -   | -   | 43                                     | 87  | 153 | 78                     | 81  | 85  |
|                              | 565672 |      |      |     |     | 406 | 480 | 400 | 500 | 600 | -   | -   | 73                                     | 146 | 256 | 123                    | 127 | 132 |
|                              | 565653 | 80   | 722  | 462 | 100 | 206 | 280 | 400 | 300 | 400 | 450 | -   | 47                                     | 95  | 167 | 98                     | 103 | 109 |
|                              | 565673 |      |      |     |     | 406 | 480 | 400 | 500 | 600 | 650 | -   | 79                                     | 159 | 279 | 155                    | 161 | 171 |
|                              | 565654 | 100  | 762  | 482 | 100 | 206 | 280 | 400 | 300 | 400 | 450 | -   | 50                                     | 101 | 176 | 112                    | 117 | 126 |
|                              | 565674 |      |      |     |     | 406 | 480 | 400 | 500 | 600 | 650 | -   | 80                                     | 161 | 282 | 172                    | 181 | 193 |
|                              | 565655 | 130  | 822  | 512 | 100 | 206 | 280 | 400 | 300 | 400 | 450 | 500 | 54                                     | 109 | 190 | 123                    | 132 | 144 |
|                              | 565675 |      |      |     |     | 406 | 480 | 400 | 500 | 600 | 650 | 700 | 87                                     | 174 | 304 | 190                    | 202 | 220 |
|                              | 565656 | 150  | 862  | 582 | 150 | 188 | 280 | 500 | 300 | 400 | 450 | 500 | 57                                     | 114 | 200 | 146                    | 156 | 170 |
|                              | 565676 |      |      |     |     | 388 | 480 | 500 | 500 | 600 | 650 | 700 | 87                                     | 174 | 304 | 222                    | 236 | 257 |
|                              | 565657 | 180  | 922  | 612 | 150 | 188 | 280 | 500 | 300 | 400 | 450 | 500 | 61                                     | 122 | 214 | 153                    | 170 | 188 |
|                              | 565677 |      |      |     |     | 388 | 480 | 500 | 500 | 600 | 650 | 700 | 87                                     | 174 | 304 | 240                    | 257 | 283 |
|                              | 565658 | 200  | 962  | 632 | 150 | 188 | 280 | 500 | 300 | 400 | 450 | 500 | 62                                     | 124 | 217 | 166                    | 179 | 200 |
|                              | 565678 |      |      |     |     | 388 | 480 | 500 | 500 | 600 | 650 | 700 | 87                                     | 174 | 304 | 252                    | 272 | 302 |
| 565679                       | 250    | 1062 | 682  | 150 | 388 | 480 | 500 | 500 | 600 | 650 | 700 | 87  | 174                                    | 304 | 310 | 336                    | 376 |     |
| 565689                       |        |      |      |     | 638 | 730 | 500 | 750 | 850 | 900 | 950 | 120 | 240                                    | 420 | 446 | 483                    | 538 |     |



## Selection Table OD 609.6 - OD 660.4

|                          | Type   | t   | D    | E   | H   | A   | A1  | B   | C   | C1 <sup>③</sup> | C2  | C3  | Max. vertical load [kN] at density <sup>① ②</sup> |        |     | Weight [kg] at density |     |     |
|--------------------------|--------|-----|------|-----|-----|-----|-----|-----|-----|-----------------|-----|-----|---|--------|-----|------------------------|-----|-----|
|                          |        |     |      |     |     |     |     |     |     |                 |     |     | 160   | 224    | 320 | 160                    | 224 | 320 |
|                          |        |     |      |     |     |     |     |     |     |                 |     |     | <b>OD 609.6 (ND 600)</b>                          | 566152 | 50  | 712                    | 457 | 100 |
|                          | 566172 |     |      |     |     | 406 | 480 | 400 | 500 | 600             | -   | -   | 78  | 157    | 275 | 147                    | 151 | 157 |
|                          | 566153 | 80  | 772  | 487 | 100 | 206 | 280 | 400 | 300 | 400             | 450 | -   | 51  | 102    | 179 | 110                    | 115 | 122 |
|                          | 566173 |     |      |     |     | 406 | 480 | 400 | 500 | 600             | 650 | -   | 85  | 170    | 298 | 170                    | 177 | 188 |
|                          | 566154 | 100 | 812  | 507 | 100 | 206 | 280 | 400 | 300 | 400             | 450 | -   | 53  | 107    | 188 | 117                    | 123 | 132 |
|                          | 566174 |     |      |     |     | 406 | 480 | 400 | 500 | 600             | 650 | -   | 87  | 175    | 307 | 182                    | 190 | 204 |
|                          | 566155 | 130 | 872  | 587 | 150 | 188 | 280 | 500 | 300 | 400             | 450 | 500 | 57  | 115    | 202 | 145                    | 153 | 167 |
|                          | 566175 |     |      |     |     | 388 | 480 | 500 | 500 | 600             | 650 | 700 | 94  | 189    | 331 | 220                    | 233 | 252 |
|                          | 566156 | 150 | 912  | 607 | 150 | 188 | 280 | 500 | 300 | 400             | 450 | 500 | 60  | 121    | 211 | 152                    | 163 | 178 |
|                          | 566176 |     |      |     |     | 388 | 480 | 500 | 500 | 600             | 650 | 700 | 94  | 189    | 331 | 232                    | 247 | 269 |
|                          | 566157 | 180 | 972  | 637 | 150 | 188 | 280 | 500 | 300 | 400             | 450 | 500 | 64  | 128    | 225 | 164                    | 177 | 196 |
|                          | 566177 |     |      |     |     | 388 | 480 | 500 | 500 | 600             | 650 | 700 | 94  | 189    | 331 | 250                    | 269 | 297 |
|                          | 566178 | 200 | 1012 | 657 | 150 | 388 | 480 | 500 | 500 | 600             | 650 | 700 | 94  | 189    | 331 | 287                    | 308 | 340 |
|                          | 566188 |     |      |     |     | 638 | 730 | 500 | 750 | 850             | 900 | 950 | 130   | 261    | 458 | 414                    | 444 | 488 |
|                          | 566179 | 250 | 1112 | 707 | 150 | 376 | 480 | 600 | 500 | 600             | 650 | 700 | 94  | 189    | 331 | 339                    | 367 | 409 |
|                          | 566189 |     |      |     |     | 626 | 730 | 600 | 750 | 850             | 900 | 950 | 130   | 261    | 458 | 487                    | 526 | 585 |
| <b>OD 660.4 (ND 650)</b> | 566652 | 50  | 763  | 483 | 100 | 206 | 280 | 400 | 300 | 400             | -   | -   | 50  | 101    | 177 | 105                    | 108 | 112 |
|                          | 566672 |     |      |     |     | 406 | 480 | 400 | 500 | 600             | -   | -   | 84  | 168    | 295 | 162                    | 167 | 173 |
|                          | 566653 | 80  | 823  | 513 | 100 | 206 | 280 | 400 | 300 | 400             | 450 | -   | 54  | 109    | 191 | 116                    | 121 | 128 |
|                          | 566673 |     |      |     |     | 406 | 480 | 400 | 500 | 600             | 650 | -   | 91  | 182    | 318 | 180                    | 187 | 198 |
|                          | 566654 | 100 | 863  | 583 | 150 | 188 | 280 | 500 | 300 | 400             | 450 | -   | 57  | 114    | 200 | 138                    | 145 | 155 |
|                          | 566674 |     |      |     |     | 388 | 480 | 500 | 500 | 600             | 650 | -   | 95  | 190    | 333 | 211                    | 221 | 235 |
|                          | 566655 | 130 | 923  | 613 | 150 | 188 | 280 | 500 | 300 | 400             | 450 | 500 | 61  | 122    | 214 | 151                    | 160 | 174 |
|                          | 566675 |     |      |     |     | 388 | 480 | 500 | 500 | 600             | 650 | 700 | 102   | 204    | 357 | 230                    | 244 | 264 |
|                          | 566656 | 150 | 963  | 633 | 150 | 188 | 280 | 500 | 300 | 400             | 450 | 500 | 63  | 127    | 223 | 159                    | 170 | 186 |
|                          | 566676 |     |      |     |     | 388 | 480 | 500 | 500 | 600             | 650 | 700 | 102   | 205    | 359 | 242                    | 258 | 282 |
|                          | 566677 | 180 | 1023 | 663 | 150 | 388 | 480 | 500 | 500 | 600             | 650 | 700 | 102   | 205    | 359 | 286                    | 306 | 336 |
|                          | 566687 |     |      |     |     | 638 | 730 | 500 | 750 | 850             | 900 | 950 | 141   | 283    | 496 | 413                    | 440 | 481 |
|                          | 566678 | 200 | 1063 | 683 | 150 | 388 | 480 | 500 | 500 | 600             | 650 | 700 | 102   | 205    | 359 | 300                    | 323 | 356 |
|                          | 566688 |     |      |     |     | 638 | 730 | 500 | 750 | 850             | 900 | 950 | 141   | 283    | 496 | 433                    | 464 | 511 |
|                          | 566679 | 250 | 1163 | 733 | 150 | 376 | 480 | 600 | 500 | 600             | 650 | 700 | 102   | 205    | 359 | 352                    | 382 | 427 |
|                          | 566689 |     |      |     |     | 626 | 730 | 600 | 750 | 850             | 900 | 950 | 141   | 283    | 496 | 507                    | 548 | 610 |

①②③ remarks see page 8

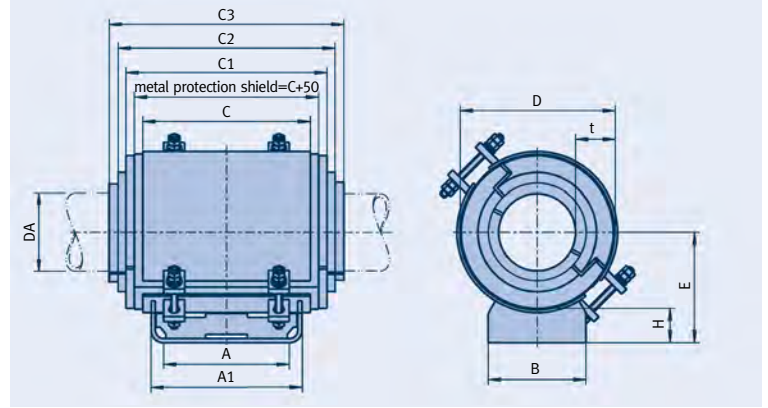


## Selection Table OD 711.2 - OD 762

| OD 711.2<br>(ND 700) | Type | t    | D   | E   | H   | A   | A1  | B   | C   | C1③ | C2  | C3  | Max. vertical load [kN] at density ① ② |     |     | Weight [kg] at density |     |     |
|----------------------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|------------------------|-----|-----|
|                      |      |      |     |     |     |     |     |     |     |     |     |     | 160                                    | 224 | 320 | 160                    | 224 | 320 |
|                      |      |      |     |     |     |     |     |     |     |     |     |     | 567152                                 | 50  | 814 | 508                    | 100 | 206 |
| 567172               |      |      |     |     | 406 | 480 | 400 | 500 | 600 | -   | -   | 90  | 180                                    | 315 | 171 | 176                    | 183 |     |
| 567153               | 80   | 874  | 588 | 150 | 188 | 280 | 500 | 300 | 400 | 450 | -   | 57  | 115                                    | 202 | 136 | 142                    | 150 |     |
| 567173               |      |      |     |     | 388 | 480 | 500 | 500 | 600 | 650 | -   | 96  | 193                                    | 338 | 209 | 217                    | 229 |     |
| 567154               | 100  | 914  | 608 | 150 | 188 | 280 | 500 | 300 | 400 | 450 | -   | 60  | 121                                    | 212 | 144 | 151                    | 161 |     |
| 567174               |      |      |     |     | 388 | 480 | 500 | 500 | 600 | 650 | -   | 101 | 202                                    | 353 | 220 | 231                    | 246 |     |
| 567155               | 130  | 974  | 638 | 150 | 188 | 280 | 500 | 300 | 400 | 450 | 500 | 64  | 129                                    | 226 | 157 | 167                    | 182 |     |
| 567175               |      |      |     |     | 388 | 480 | 500 | 500 | 600 | 650 | 700 | 107 | 215                                    | 377 | 240 | 254                    | 276 |     |
| 567176               | 150  | 1014 | 658 | 150 | 388 | 480 | 500 | 500 | 600 | 650 | 700 | 110 | 221                                    | 386 | 277 | 294                    | 319 |     |
| 567186               |      |      |     |     | 638 | 730 | 500 | 750 | 850 | 900 | 950 | 152 | 305                                    | 534 | 400 | 424                    | 459 |     |
| 567177               | 180  | 1074 | 688 | 150 | 388 | 480 | 500 | 500 | 600 | 650 | 700 | 110 | 221                                    | 386 | 298 | 319                    | 351 |     |
| 567187               |      |      |     |     | 638 | 730 | 500 | 750 | 850 | 900 | 950 | 152 | 305                                    | 534 | 431 | 460                    | 504 |     |
| 567178               | 200  | 1114 | 708 | 150 | 376 | 480 | 600 | 500 | 600 | 650 | 700 | 110 | 221                                    | 386 | 329 | 353                    | 388 |     |
| 567188               |      |      |     |     | 626 | 730 | 600 | 750 | 850 | 900 | 950 | 152 | 305                                    | 534 | 473 | 506                    | 556 |     |
| 567179               | 250  | 1214 | 758 | 150 | 376 | 480 | 600 | 500 | 600 | 650 | 700 | 110 | 221                                    | 386 | 366 | 397                    | 444 |     |
| 567189               |      |      |     |     | 626 | 730 | 600 | 750 | 850 | 900 | 950 | 152 | 305                                    | 534 | 526 | 570                    | 635 |     |

| OD 762<br>(ND 750) | Type | t    | D   | E   | H   | A   | A1  | B   | C   | C1③ | C2  | C3  | Max. vertical load [kN] at density ① ② |     |     | Weight [kg] at density |     |     |
|--------------------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|------------------------|-----|-----|
|                    |      |      |     |     |     |     |     |     |     |     |     |     | 160                                    | 224 | 320 | 160                    | 224 | 320 |
|                    |      |      |     |     |     |     |     |     |     |     |     |     | 567653                                 | 80  | 925 | 614                    | 150 | 188 |
| 567673             |      |      |     |     | 388 | 480 | 500 | 500 | 600 | 650 | -   | 102 | 204                                    | 358 | 218 | 227                    | 239 |     |
| 567654             | 100  | 965  | 634 | 150 | 188 | 280 | 500 | 300 | 400 | 450 | -   | 64  | 128                                    | 224 | 150 | 157                    | 168 |     |
| 567674             |      |      |     |     | 388 | 480 | 500 | 500 | 600 | 650 | -   | 106 | 213                                    | 373 | 230 | 241                    | 257 |     |
| 567675             | 130  | 1025 | 664 | 150 | 388 | 480 | 500 | 500 | 600 | 650 | 700 | 113 | 226                                    | 396 | 275 | 290                    | 313 |     |
| 567685             |      |      |     |     | 638 | 730 | 500 | 750 | 850 | 900 | 950 | 163 | 327                                    | 573 | 397 | 418                    | 450 |     |
| 567676             | 150  | 1065 | 684 | 150 | 388 | 480 | 500 | 500 | 600 | 650 | 700 | 117 | 235                                    | 412 | 289 | 307                    | 333 |     |
| 567686             |      |      |     |     | 638 | 730 | 500 | 750 | 850 | 900 | 950 | 163 | 327                                    | 573 | 417 | 442                    | 480 |     |
| 567677             | 180  | 1125 | 714 | 150 | 376 | 480 | 600 | 500 | 600 | 650 | 700 | 118 | 236                                    | 414 | 327 | 349                    | 382 |     |
| 567687             |      |      |     |     | 626 | 730 | 600 | 750 | 850 | 900 | 950 | 163 | 327                                    | 573 | 471 | 501                    | 548 |     |
| 567678             | 200  | 1165 | 734 | 150 | 376 | 480 | 600 | 500 | 600 | 650 | 700 | 118 | 236                                    | 414 | 341 | 366                    | 404 |     |
| 567688             |      |      |     |     | 626 | 730 | 600 | 750 | 850 | 900 | 950 | 163 | 327                                    | 573 | 492 | 527                    | 579 |     |
| 567679             | 250  | 1265 | 784 | 150 | 376 | 480 | 600 | 500 | 600 | 650 | 700 | 118 | 236                                    | 414 | 379 | 412                    | 462 |     |
| 567689             |      |      |     |     | 626 | 730 | 600 | 750 | 850 | 900 | 950 | 163 | 327                                    | 573 | 546 | 592                    | 661 |     |

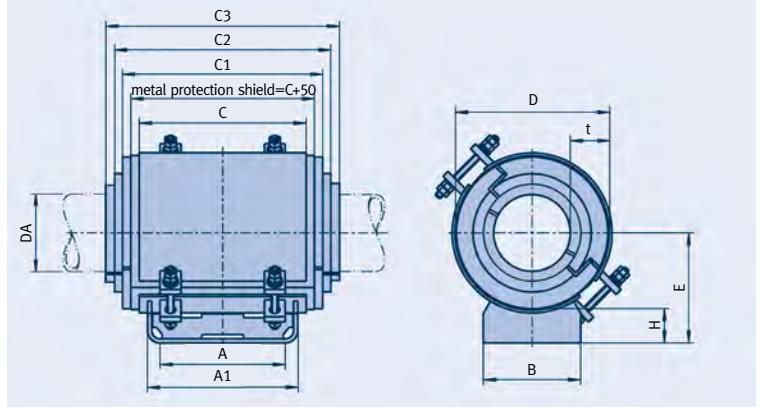




## Selection Table OD 812.8 - OD 914.4

|                              | Type   | t   | D    | E   | H   | A   | A1  | B   | C   | C1 <sup>③</sup> | C2  | C3  | Max. vertical load [kN] at density <sup>①</sup> <sup>②</sup> |        |     | Weight [kg] at density |     |     |
|------------------------------|--------|-----|------|-----|-----|-----|-----|-----|-----|-----------------|-----|-----|--|--------|-----|------------------------|-----|-----|
|                              |        |     |      |     |     |     |     |     |     |                 |     |     | 160  | 224    | 320 | 160                    | 224 | 320 |
|                              |        |     |      |     |     |     |     |     |     |                 |     |     | <b>OD 812.8<br/>(ND 800)</b>                                 | 568173 | 80  | 976                    | 639 | 150 |
|                              | 568183 |     |      |     |     | 638 | 730 | 500 | 750 | 850             | 900 | -   | 162  | 324    | 568 | 328                    | 340 | 359 |
|                              | 568174 | 100 | 1016 | 659 | 150 | 388 | 480 | 500 | 500 | 600             | 650 | -   | 112  | 224    | 393 | 264                    | 275 | 292 |
|                              | 568184 |     |      |     |     | 638 | 730 | 500 | 750 | 850             | 900 | -   | 162  | 324    | 568 | 382                    | 398 | 422 |
|                              | 568175 | 130 | 1076 | 689 | 150 | 388 | 480 | 500 | 500 | 600             | 650 | 700 | 119  | 238    | 416 | 286                    | 302 | 326 |
|                              | 568185 |     |      |     |     | 638 | 730 | 500 | 750 | 850             | 900 | 950 | 171  | 342    | 600 | 414                    | 436 | 469 |
|                              | 568176 | 150 | 1116 | 709 | 150 | 376 | 480 | 600 | 500 | 600             | 650 | 700 | 123  | 246    | 431 | 317                    | 336 | 364 |
|                              | 568186 |     |      |     |     | 626 | 730 | 600 | 750 | 850             | 900 | 950 | 171  | 342    | 600 | 456                    | 483 | 522 |
|                              | 568177 | 180 | 1176 | 739 | 150 | 376 | 480 | 600 | 500 | 600             | 650 | 700 | 126  | 252    | 442 | 339                    | 362 | 397 |
|                              | 568187 |     |      |     |     | 626 | 730 | 600 | 750 | 850             | 900 | 950 | 171  | 342    | 600 | 488                    | 520 | 569 |
|                              | 568178 | 200 | 1216 | 759 | 150 | 376 | 480 | 600 | 500 | 600             | 650 | 700 | 126  | 252    | 442 | 353                    | 380 | 420 |
|                              | 568188 |     |      |     |     | 626 | 730 | 600 | 750 | 850             | 900 | 950 | 171  | 342    | 600 | 510                    | 547 | 602 |
|                              | 568179 | 250 | 1316 | 809 | 150 | 376 | 480 | 600 | 500 | 600             | 650 | 700 | 126  | 252    | 442 | 392                    | 427 | 479 |
|                              | 568189 |     |      |     |     | 626 | 730 | 600 | 750 | 850             | 900 | 950 | 171  | 342    | 600 | 565                    | 614 | 686 |
| <b>OD 914.4<br/>(ND 900)</b> | 569173 | 80  | 1078 | 690 | 150 | 388 | 480 | 500 | 500 | 600             | 650 | -   | 119  | 238    | 417 | 271                    | 281 | 296 |
|                              | 569183 |     |      |     |     | 638 | 730 | 500 | 750 | 850             | 900 | -   | 182  | 364    | 630 | 394                    | 408 | 429 |
|                              | 569174 | 100 | 1118 | 710 | 150 | 376 | 480 | 600 | 500 | 600             | 650 | -   | 123  | 247    | 432 | 301                    | 314 | 333 |
|                              | 569184 |     |      |     |     | 626 | 730 | 600 | 750 | 850             | 900 | -   | 182  | 364    | 630 | 436                    | 454 | 481 |
|                              | 569175 | 130 | 1178 | 740 | 150 | 376 | 480 | 600 | 500 | 600             | 650 | 700 | 130  | 260    | 455 | 325                    | 342 | 369 |
|                              | 569185 |     |      |     |     | 626 | 730 | 600 | 750 | 850             | 900 | 950 | 192  | 385    | 650 | 469                    | 494 | 531 |
|                              | 569176 | 150 | 1218 | 760 | 150 | 376 | 480 | 600 | 500 | 600             | 650 | 700 | 134  | 269    | 471 | 340                    | 361 | 392 |
|                              | 569186 |     |      |     |     | 626 | 730 | 600 | 750 | 850             | 900 | 950 | 192  | 385    | 650 | 491                    | 520 | 563 |
|                              | 569177 | 180 | 1278 | 790 | 150 | 376 | 480 | 600 | 500 | 600             | 650 | 700 | 141  | 282    | 494 | 363                    | 389 | 427 |
|                              | 569187 |     |      |     |     | 626 | 730 | 600 | 750 | 850             | 900 | 950 | 192  | 385    | 650 | 524                    | 560 | 613 |
|                              | 569178 | 200 | 1318 | 810 | 150 | 376 | 480 | 600 | 500 | 600             | 650 | 700 | 142  | 284    | 497 | 378                    | 408 | 452 |
|                              | 569188 |     |      |     |     | 626 | 730 | 600 | 750 | 850             | 900 | 950 | 192  | 385    | 650 | 546                    | 587 | 647 |
|                              | 569179 | 250 | 1418 | 860 | 150 | 354 | 480 | 700 | 500 | 600             | 650 | 700 | 142  | 284    | 497 | 437                    | 475 | 532 |
|                              | 569189 |     |      |     |     | 604 | 730 | 700 | 750 | 850             | 900 | 950 | 192  | 385    | 650 | 629                    | 682 | 761 |

①②③ remarks see page 8



## Selection Table OD 965.2

|                      | Type   | t   | D    | E   | H   | A   | A1  | B   | C   | C1③ | C2  | C3  | Max. vertical load [kN] at density ①② |     |     | Weight [kg] at density |     |     |
|----------------------|--------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------------------------------|-----|-----|------------------------|-----|-----|
|                      |        |     |      |     |     |     |     |     |     |     |     |     | 160                                   | 224 | 320 | 160                    | 224 | 320 |
| OD 965.2<br>(ND 950) | 569773 | 80  | 1130 | 716 | 150 | 376 | 480 | 600 | 500 | 600 | 650 | -   | 124                                   | 249 | 437 | 298                    | 308 | 324 |
|                      | 569783 |     |      |     |     | 626 | 730 | 600 | 750 | 850 | 900 | -   | 190                                   | 381 | 668 | 431                    | 446 | 468 |
|                      | 569774 | 100 | 1170 | 736 | 150 | 376 | 480 | 600 | 500 | 600 | 650 | -   | 129                                   | 258 | 452 | 312                    | 326 | 346 |
|                      | 569784 |     |      |     |     | 626 | 730 | 600 | 750 | 850 | 900 | -   | 196                                   | 393 | 688 | 452                    | 471 | 499 |
|                      | 569775 | 130 | 1230 | 766 | 150 | 376 | 480 | 600 | 500 | 600 | 650 | 700 | 136                                   | 272 | 476 | 336                    | 355 | 383 |
|                      | 569785 |     |      |     |     | 626 | 730 | 600 | 750 | 850 | 900 | 950 | 207                                   | 415 | 726 | 486                    | 512 | 551 |
|                      | 569776 | 150 | 1270 | 786 | 150 | 376 | 480 | 600 | 500 | 600 | 650 | 700 | 140                                   | 280 | 491 | 352                    | 374 | 406 |
|                      | 569786 |     |      |     |     | 626 | 730 | 600 | 750 | 850 | 900 | 950 | 207                                   | 415 | 726 | 508                    | 539 | 584 |
|                      | 569777 | 180 | 1330 | 816 | 150 | 376 | 480 | 600 | 500 | 600 | 650 | 700 | 147                                   | 294 | 514 | 375                    | 402 | 443 |
|                      | 569787 |     |      |     |     | 626 | 730 | 600 | 750 | 850 | 900 | 950 | 207                                   | 415 | 726 | 542                    | 580 | 636 |
|                      | 569778 | 200 | 1370 | 836 | 150 | 376 | 480 | 600 | 500 | 600 | 650 | 700 | 150                                   | 300 | 525 | 391                    | 422 | 468 |
|                      | 569788 |     |      |     |     | 626 | 730 | 600 | 750 | 850 | 900 | 950 | 207                                   | 415 | 726 | 565                    | 608 | 671 |
|                      | 569779 | 250 | 1470 | 886 | 150 | 354 | 480 | 700 | 500 | 600 | 650 | 700 | 150                                   | 300 | 525 | 450                    | 490 | 550 |
|                      | 569789 |     |      |     |     | 604 | 730 | 700 | 750 | 850 | 900 | 950 | 207                                   | 415 | 726 | 649                    | 704 | 787 |

## Example: Selection Standard Type 56

### Example:

A rest & guide support with the following characteristics is specified:

Pipe OD = 406.4mm (16")  
 Insulation thickness = 130mm  
 Vertical load = 56kN  
 Axial movement = 0mm

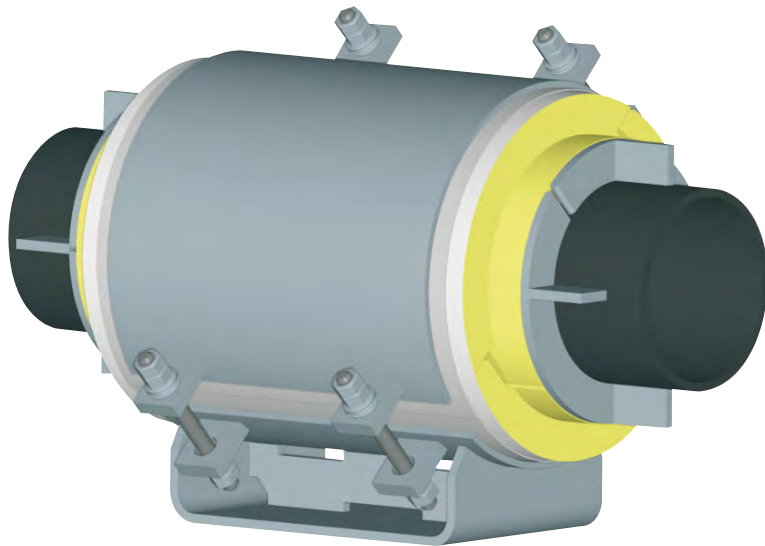
1. Choose the selection table for OD 406.4mm.
2. Select the relevant row for the insulation thickness of 130mm.
3. The specified load of 56kN can be achieved with both available shoe lengths. Select the shoe length according to the available steel structure and the axial movement.
4. Select rest & guide support **564155-224**.
5. The operating temperature for the support has to be indicated when ordering.

# LINE STOP SUPPORT

## TYPE 57 01 .0 TO 57 97 .9

① Maximum induced stress in the pipe wall by the welding seam  $< 50 \text{ N/mm}^2$  with fillet welds of  $a = 4 \text{ mm}$  (throat size).

② The geometry and the allowable normal loads are equal to those of type 56. After selection of the respective type 56, the required foam density is to be selected from the axial load table and the type designation to be changed to type 57.

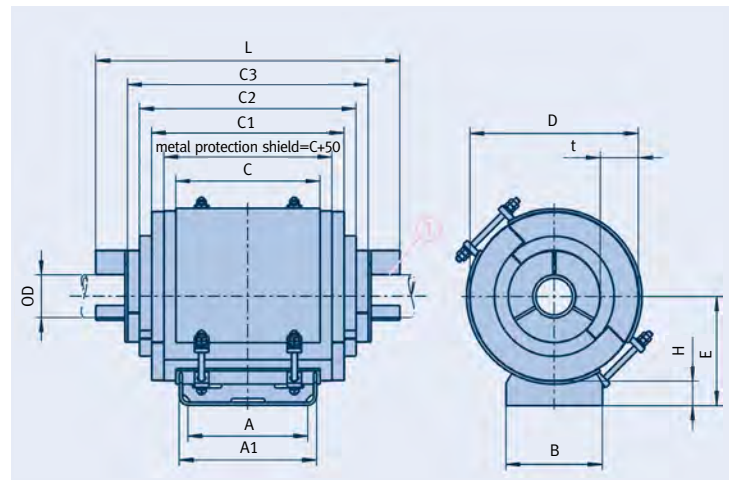


It is not possible to provide type 57 for insulation thicknesses of 25mm and 40mm.

In case of multiple clamp bases, the maximum axial load can be doubled.

③ The density is to be stated when ordering.

④ Length relating to the respective length of type 56. Weight equals approximately type 56 x 1.2.



### Selection Table OD 21.3 - OD 88.9

| OD 21.3<br>(ND 15) | Type   | t   | Lmax ④    | Max. axial load [kN] at density ②③ |     |     |
|--------------------|--------|-----|-----------|------------------------------------|-----|-----|
|                    |        |     |           | 160                                | 224 | 320 |
|                    | 5701.2 | 50  | 380 / 530 | 0.7                                | 1.4 | 2.5 |
|                    | 5701.3 | 80  | 430 / 580 | 1.5                                | 3.1 | 5.4 |
|                    | 5701.4 | 100 | 430 / 580 | 2.2                                | 4.5 | 7.9 |

| OD 26.9<br>(ND 20) | Type   | t   | Lmax ④    | Max. axial load [kN] at density ②③ |     |     |
|--------------------|--------|-----|-----------|------------------------------------|-----|-----|
|                    |        |     |           | 160                                | 224 | 320 |
|                    | 5702.2 | 50  | 382 / 532 | 0.8                                | 1.6 | 2.9 |
|                    | 5702.3 | 80  | 432 / 582 | 1.7                                | 3.4 | 5.9 |
|                    | 5702.4 | 100 | 432 / 582 | 2.4                                | 4.9 | 8.5 |

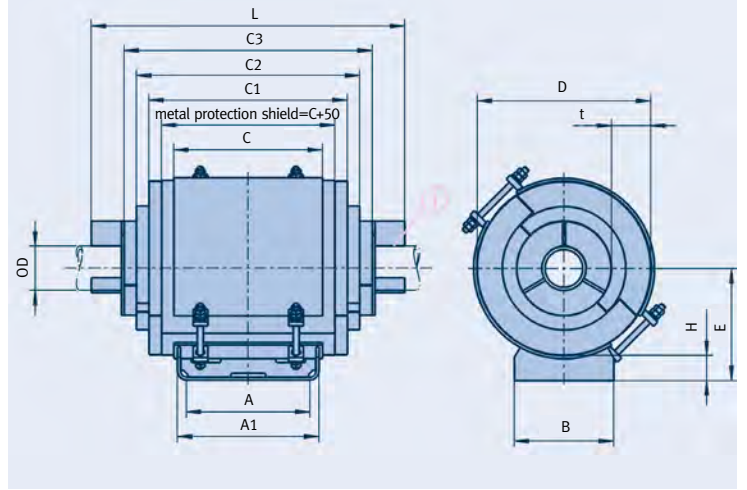
| OD 33.7<br>(ND 25) | Type   | t   | Lmax ④    | Max. axial load [kN] at density ②③ |     |     |
|--------------------|--------|-----|-----------|------------------------------------|-----|-----|
|                    |        |     |           | 160                                | 224 | 320 |
|                    | 5703.2 | 50  | 382 / 532 | 0.9                                | 1.8 | 3.1 |
|                    | 5703.3 | 80  | 432 / 582 | 1.8                                | 3.7 | 6.5 |
|                    | 5703.4 | 100 | 432 / 582 | 2.6                                | 5.2 | 9.2 |
|                    | 5703.5 | 130 | 482 / 632 | 2.6                                | 5.2 | 9.2 |

| OD 48.3<br>(ND 40) | Type   | t   | Lmax ④    | Max. axial load [kN] at density ②③ |     |     |
|--------------------|--------|-----|-----------|------------------------------------|-----|-----|
|                    |        |     |           | 160                                | 224 | 320 |
|                    | 5705.2 | 50  | 386 / 536 | 1.1                                | 2.2 | 3.9 |
|                    | 5705.3 | 80  | 436 / 586 | 2.2                                | 4.4 | 7.8 |
|                    | 5705.4 | 100 | 436 / 586 | 3.1                                | 6.2 | 10  |
|                    | 5705.5 | 130 | 486 / 636 | 3.1                                | 6.2 | 10  |

| OD 60.3<br>(ND 50) | Type   | t   | Lmax ④    | Max. axial load [kN] at density ②③ |     |     |
|--------------------|--------|-----|-----------|------------------------------------|-----|-----|
|                    |        |     |           | 160                                | 224 | 320 |
|                    | 5706.2 | 50  | 386 / 536 | 1                                  | 2   | 3.6 |
|                    | 5706.3 | 80  | 436 / 586 | 2.5                                | 5   | 8.8 |
|                    | 5706.4 | 100 | 436 / 586 | 3.4                                | 6.9 | 12  |
|                    | 5706.5 | 130 | 636 / 836 | 3.4                                | 6.9 | 12  |
|                    | 5706.6 | 150 | 636 / 836 | 3.4                                | 6.9 | 12  |

| OD 88.9<br>(ND 80) | Type   | t   | Lmax ④    | Max. axial load [kN] at density ②③ |     |     |
|--------------------|--------|-----|-----------|------------------------------------|-----|-----|
|                    |        |     |           | 160                                | 224 | 320 |
|                    | 5709.2 | 50  | 390 / 540 | 1.4                                | 2.9 | 5.1 |
|                    | 5709.3 | 80  | 440 / 590 | 3                                  | 6   | 10  |
|                    | 5709.4 | 100 | 440 / 590 | 4.3                                | 8.7 | 15  |
|                    | 5709.5 | 130 | 640 / 840 | 4.3                                | 8.7 | 15  |
|                    | 5709.6 | 150 | 640 / 840 | 4.3                                | 8.7 | 15  |

## Selection Table OD 114.3 - OD 457.2



| OD 114.3<br>(ND 100) | Type   | t         | Lmax ④    | Max. axial load [kN] at density ②③ |     |     |
|----------------------|--------|-----------|-----------|------------------------------------|-----|-----|
|                      |        |           |           | 160                                | 224 | 320 |
|                      | 5711.2 | 50        | 390 / 540 | 1.4                                | 2.8 | 5   |
| 5711.3               | 80     | 440 / 590 | 3.6       | 7.3                                | 12  |     |
| 5711.4               | 100    | 590 / 790 | 5.1       | 10                                 | 18  |     |
| 5711.5               | 130    | 640 / 840 | 5.1       | 10                                 | 18  |     |
| 5711.6               | 150    | 640 / 840 | 5.1       | 10                                 | 18  |     |
| 5711.7               | 180    | 640 / 840 | 5.1       | 10                                 | 18  |     |

| OD 168.3<br>(ND 150) | Type   | t         | Lmax ④    | Max. axial load [kN] at density ②③ |     |     |
|----------------------|--------|-----------|-----------|------------------------------------|-----|-----|
|                      |        |           |           | 160                                | 224 | 320 |
|                      | 5717.2 | 50        | 434 / 584 | 2                                  | 4   | 7   |
| 5717.3               | 80     | 634 / 834 | 4.8       | 9.6                                | 16  |     |
| 5717.4               | 100    | 634 / 834 | 6.5       | 13                                 | 22  |     |
| 5717.5               | 130    | 684 / 884 | 6.9       | 13                                 | 24  |     |
| 5717.6               | 150    | 684 / 884 | 6.9       | 13                                 | 24  |     |
| 5717.7               | 180    | 684 / 884 | 6.9       | 13                                 | 24  |     |

| OD 219.1<br>(ND 200) | Type   | t         | Lmax ④    | Max. axial load [kN] at density ②③ |     |     |
|----------------------|--------|-----------|-----------|------------------------------------|-----|-----|
|                      |        |           |           | 160                                | 224 | 320 |
|                      | 5722.2 | 50        | 588 / 788 | 2.5                                | 5.1 | 9   |
| 5722.3               | 80     | 638 / 838 | 5.2       | 10                                 | 18  |     |
| 5722.4               | 100    | 638 / 838 | 7.5       | 15                                 | 26  |     |
| 5722.5               | 130    | 688 / 888 | 8.5       | 17                                 | 29  |     |
| 5722.6               | 150    | 688 / 888 | 8.5       | 17                                 | 29  |     |
| 5722.7               | 180    | 688 / 888 | 8.5       | 17                                 | 29  |     |

| OD 273<br>(ND 250) | Type   | t         | Lmax ④    | Max. axial load [kN] at density ②③ |     |     |
|--------------------|--------|-----------|-----------|------------------------------------|-----|-----|
|                    |        |           |           | 160                                | 224 | 320 |
|                    | 5727.2 | 50        | 592 / 792 | 2.8                                | 5.6 | 9.9 |
| 5727.3             | 80     | 642 / 842 | 6.1       | 12                                 | 21  |     |
| 5727.4             | 100    | 642 / 842 | 9.3       | 18                                 | 32  |     |
| 5727.5             | 130    | 692 / 892 | 10        | 20                                 | 32  |     |
| 5727.6             | 150    | 692 / 892 | 10        | 20                                 | 32  |     |
| 5727.7             | 180    | 692 / 892 | 10        | 20                                 | 32  |     |
| 5727.8             | 200    | 692 / 892 | 10        | 20                                 | 32  |     |

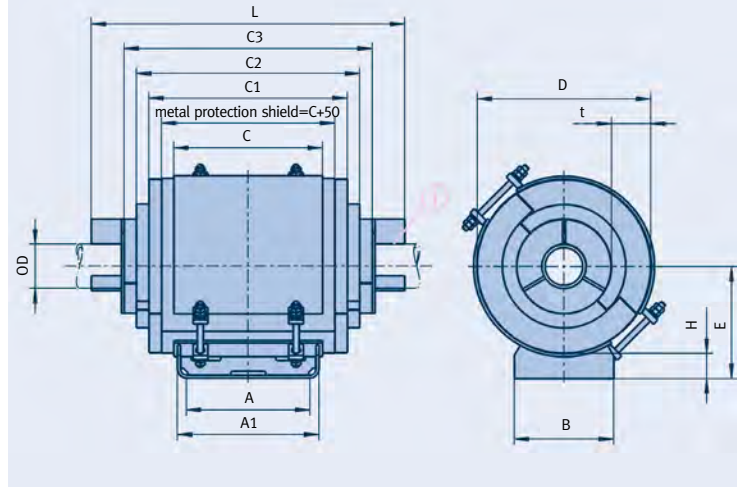
| OD 323.9<br>(ND 300) | Type   | t         | Lmax ④    | Max. axial load [kN] at density ②③ |     |     |
|----------------------|--------|-----------|-----------|------------------------------------|-----|-----|
|                      |        |           |           | 160                                | 224 | 320 |
|                      | 5732.2 | 50        | 588 / 788 | 3.2                                | 6.5 | 11  |
| 5732.3               | 80     | 638 / 838 | 7.4       | 14                                 | 25  |     |
| 5732.4               | 100    | 638 / 838 | 10        | 20                                 | 36  |     |
| 5732.5               | 130    | 688 / 888 | 11        | 23                                 | 41  |     |
| 5732.6               | 150    | 688 / 888 | 11        | 23                                 | 41  |     |
| 5732.7               | 180    | 688 / 888 | 11        | 23                                 | 41  |     |
| 5732.8               | 200    | 688 / 888 | 11        | 23                                 | 41  |     |

| OD 355.6<br>(ND 350) | Type   | t         | Lmax ④    | Max. axial load [kN] at density ②③ |     |     |
|----------------------|--------|-----------|-----------|------------------------------------|-----|-----|
|                      |        |           |           | 160                                | 224 | 320 |
|                      | 5736.2 | 50        | 588 / 788 | 3.7                                | 7.5 | 13  |
| 5736.3               | 80     | 638 / 838 | 7.9       | 15                                 | 27  |     |
| 5736.4               | 100    | 638 / 838 | 11        | 22                                 | 38  |     |
| 5736.5               | 130    | 688 / 888 | 12        | 24                                 | 43  |     |
| 5736.6               | 150    | 688 / 888 | 12        | 25                                 | 44  |     |
| 5736.7               | 180    | 688 / 888 | 12        | 25                                 | 44  |     |
| 5736.8               | 200    | 688 / 888 | 12        | 25                                 | 44  |     |

| OD 406.4<br>(ND 400) | Type   | t         | Lmax ④    | Max. axial load [kN] at density ②③ |     |     |
|----------------------|--------|-----------|-----------|------------------------------------|-----|-----|
|                      |        |           |           | 160                                | 224 | 320 |
|                      | 5741.2 | 50        | 632 / 832 | 4.2                                | 8.4 | 14  |
| 5741.3               | 80     | 682 / 882 | 8.7       | 17                                 | 30  |     |
| 5741.4               | 100    | 682 / 882 | 12        | 24                                 | 42  |     |
| 5741.5               | 130    | 732 / 932 | 13        | 27                                 | 47  |     |
| 5741.6               | 150    | 732 / 932 | 13        | 27                                 | 48  |     |
| 5741.7               | 180    | 732 / 932 | 14        | 28                                 | 50  |     |
| 5741.8               | 200    | 732 / 932 | 14        | 28                                 | 50  |     |
| 5741.9               | 250    | 732 / 932 | 14        | 28                                 | 50  |     |

| OD 457.2<br>(ND 450) | Type   | t         | Lmax ④    | Max. axial load [kN] at density ②③ |     |     |
|----------------------|--------|-----------|-----------|------------------------------------|-----|-----|
|                      |        |           |           | 160                                | 224 | 320 |
|                      | 5746.2 | 50        | 636 / 836 | 4.6                                | 9.3 | 16  |
| 5746.3               | 80     | 686 / 886 | 9.6       | 19                                 | 33  |     |
| 5746.4               | 100    | 686 / 886 | 13        | 26                                 | 46  |     |
| 5746.5               | 130    | 736 / 936 | 14        | 28                                 | 49  |     |
| 5746.6               | 150    | 736 / 936 | 14        | 29                                 | 52  |     |
| 5746.7               | 180    | 736 / 936 | 16        | 32                                 | 56  |     |
| 5746.8               | 200    | 736 / 936 | 16        | 32                                 | 56  |     |
| 5746.9               | 250    | 736 / 936 | 16        | 32                                 | 56  |     |

## Selection Table OD 508 - OD 914.4



|  | Type   | t   | Lmax ④     | Max. axial load [kN] at density ②③ |        |     |
|--|--------|-----|------------|------------------------------------|--------|-----|
|  |        |     |            | 160                                | 224    | 320 |
|  |        |     |            | <b>OD 508 (ND 500)</b>             | 5751.2 | 50  |
|  | 5751.3 | 80  | 690 / 890  | 10                                 | 20     | 36  |
|  | 5751.4 | 100 | 690 / 890  | 13                                 | 27     | 48  |
|  | 5751.5 | 130 | 740 / 940  | 15                                 | 30     | 53  |
|  | 5751.6 | 150 | 740 / 940  | 16                                 | 32     | 56  |
|  | 5751.7 | 180 | 740 / 940  | 17                                 | 34     | 60  |
|  | 5751.8 | 200 | 740 / 940  | 17                                 | 35     | 61  |
|  | 5751.9 | 250 | 940 / 1190 | 17                                 | 35     | 61  |

|  | Type   | t   | Lmax ④     | Max. axial load [kN] at density ②③ |        |     |
|--|--------|-----|------------|------------------------------------|--------|-----|
|  |        |     |            | 160                                | 224    | 320 |
|  |        |     |            | <b>OD 558.8 (ND 550)</b>           | 5756.2 | 50  |
|  | 5756.3 | 80  | 682 / 882  | 10                                 | 21     | 37  |
|  | 5756.4 | 100 | 682 / 882  | 15                                 | 30     | 52  |
|  | 5756.5 | 130 | 732 / 932  | 16                                 | 32     | 56  |
|  | 5756.6 | 150 | 732 / 932  | 17                                 | 34     | 59  |
|  | 5756.7 | 180 | 732 / 932  | 19                                 | 38     | 67  |
|  | 5756.8 | 200 | 732 / 932  | 19                                 | 38     | 67  |
|  | 5756.9 | 250 | 932 / 1182 | 19                                 | 38     | 67  |

|  | Type   | t   | Lmax ④     | Max. axial load [kN] at density ②③ |        |     |
|--|--------|-----|------------|------------------------------------|--------|-----|
|  |        |     |            | 160                                | 224    | 320 |
|  |        |     |            | <b>OD 609.6 (ND 600)</b>           | 5761.2 | 50  |
|  | 5761.3 | 80  | 686 / 886  | 11                                 | 23     | 40  |
|  | 5761.4 | 100 | 686 / 886  | 16                                 | 32     | 56  |
|  | 5761.5 | 130 | 736 / 936  | 17                                 | 34     | 60  |
|  | 5761.6 | 150 | 736 / 936  | 18                                 | 36     | 63  |
|  | 5761.7 | 180 | 736 / 936  | 20                                 | 41     | 72  |
|  | 5761.8 | 200 | 936 / 1186 | 20                                 | 41     | 72  |
|  | 5761.9 | 250 | 936 / 1186 | 20                                 | 41     | 72  |

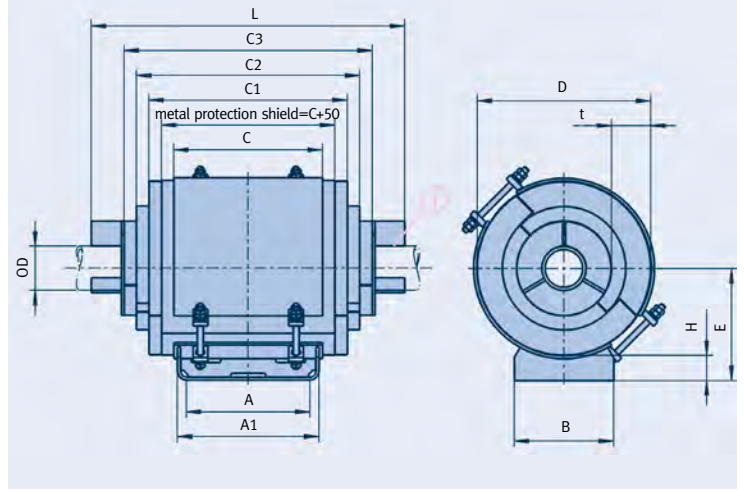
|  | Type   | t   | Lmax ④     | Max. axial load [kN] at density ②③ |        |     |
|--|--------|-----|------------|------------------------------------|--------|-----|
|  |        |     |            | 160                                | 224    | 320 |
|  |        |     |            | <b>OD 660.4 (ND 650)</b>           | 5766.2 | 50  |
|  | 5766.3 | 80  | 690 / 890  | 12                                 | 24     | 43  |
|  | 5766.4 | 100 | 690 / 890  | 17                                 | 34     | 59  |
|  | 5766.5 | 130 | 740 / 940  | 19                                 | 39     | 68  |
|  | 5766.6 | 150 | 740 / 940  | 20                                 | 41     | 71  |
|  | 5766.7 | 180 | 940 / 1190 | 21                                 | 43     | 76  |
|  | 5766.8 | 200 | 940 / 1190 | 22                                 | 44     | 78  |
|  | 5766.9 | 250 | 940 / 1190 | 22                                 | 44     | 78  |

|  | Type   | t   | Lmax ④     | Max. axial load [kN] at density ②③ |        |     |
|--|--------|-----|------------|------------------------------------|--------|-----|
|  |        |     |            | 160                                | 224    | 320 |
|  |        |     |            | <b>OD 711.2 (ND 700)</b>           | 5771.2 | 50  |
|  | 5771.3 | 80  | 690 / 890  | 13                                 | 26     | 46  |
|  | 5771.4 | 100 | 690 / 890  | 18                                 | 36     | 63  |
|  | 5771.5 | 130 | 740 / 940  | 20                                 | 41     | 72  |
|  | 5771.6 | 150 | 940 / 1190 | 21                                 | 43     | 75  |
|  | 5771.7 | 180 | 940 / 1190 | 23                                 | 46     | 80  |
|  | 5771.8 | 200 | 940 / 1190 | 23                                 | 47     | 83  |
|  | 5771.9 | 250 | 940 / 1190 | 23                                 | 47     | 83  |

|  | Type   | t   | Lmax ④     | Max. axial load [kN] at density ②③ |        |     |
|--|--------|-----|------------|------------------------------------|--------|-----|
|  |        |     |            | 160                                | 224    | 320 |
|  |        |     |            | <b>OD 762 (ND 750)</b>             | 5776.3 | 80  |
|  | 5776.4 | 100 | 694 / 894  | 20                                 | 41     | 71  |
|  | 5776.5 | 130 | 944 / 1194 | 21                                 | 43     | 76  |
|  | 5776.6 | 150 | 944 / 1194 | 22                                 | 45     | 79  |
|  | 5776.7 | 180 | 944 / 1194 | 24                                 | 48     | 84  |
|  | 5776.8 | 200 | 944 / 1194 | 25                                 | 50     | 87  |
|  | 5776.9 | 250 | 944 / 1194 | 25                                 | 50     | 87  |

|  | Type   | t   | Lmax ④     | Max. axial load [kN] at density ②③ |        |     |
|--|--------|-----|------------|------------------------------------|--------|-----|
|  |        |     |            | 160                                | 224    | 320 |
|  |        |     |            | <b>OD 812.8 (ND 800)</b>           | 5781.3 | 80  |
|  | 5781.4 | 100 | 894 / 1144 | 21                                 | 43     | 75  |
|  | 5781.5 | 130 | 944 / 1194 | 23                                 | 46     | 80  |
|  | 5781.6 | 150 | 944 / 1194 | 23                                 | 47     | 83  |
|  | 5781.7 | 180 | 944 / 1194 | 25                                 | 50     | 88  |
|  | 5781.8 | 200 | 944 / 1194 | 26                                 | 52     | 91  |
|  | 5781.9 | 250 | 944 / 1194 | 26                                 | 52     | 91  |

|  | Type   | t   | Lmax ④     | Max. axial load [kN] at density ②③ |        |     |
|--|--------|-----|------------|------------------------------------|--------|-----|
|  |        |     |            | 160                                | 224    | 320 |
|  |        |     |            | <b>OD 914.4 (ND 900)</b>           | 5791.3 | 80  |
|  | 5791.4 | 100 | 900 / 1150 | 23                                 | 47     | 83  |
|  | 5791.5 | 130 | 950 / 1200 | 25                                 | 50     | 88  |
|  | 5791.6 | 150 | 950 / 1200 | 26                                 | 52     | 91  |
|  | 5791.7 | 180 | 950 / 1200 | 27                                 | 55     | 96  |
|  | 5791.8 | 200 | 950 / 1200 | 28                                 | 56     | 99  |
|  | 5791.9 | 250 | 950 / 1200 | 28                                 | 56     | 99  |



## Selection Table OD 965.2

|                      | Type   | t   | Lmax ④     | Max. axial load [kN] at density ②③ |     |     |
|----------------------|--------|-----|------------|------------------------------------|-----|-----|
|                      |        |     |            | 160                                | 224 | 320 |
| OD 965.2<br>(ND 950) | 5797.3 | 80  | 900 / 1150 | 18                                 | 36  | 64  |
|                      | 5797.4 | 100 | 900 / 1150 | 25                                 | 50  | 88  |
|                      | 5797.5 | 130 | 950 / 1200 | 26                                 | 52  | 92  |
|                      | 5797.6 | 150 | 950 / 1200 | 27                                 | 54  | 95  |
|                      | 5797.7 | 180 | 950 / 1200 | 28                                 | 57  | 100 |
|                      | 5797.8 | 200 | 950 / 1200 | 29                                 | 59  | 103 |
|                      | 5797.9 | 250 | 950 / 1200 | 29                                 | 59  | 103 |

## Example: Selection Standard Type 57

### Example:

A line stop support with the following characteristics is specified:

|                      |                 |
|----------------------|-----------------|
| Pipe OD              | = 406,4mm (16") |
| Insulation thickness | = 130mm         |
| Vertical load        | = 6kN           |

1.

Axial load = 15.4kN

1. Choose the type **56** based on the specified characteristics from the type 56 selection tables.
2. The pre-selected type is type **564155-160**.
3. Use the selection tables for type 57 for choosing the respective type 57 based on the pre-selected type 56.
4. Choose the required density based on the specified axial load.
5. Change the pre-selected type **564155-160** to the line stop type 57 with the required density **574155-224**
6. The operating temperature for the support has to be indicated when ordering.

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