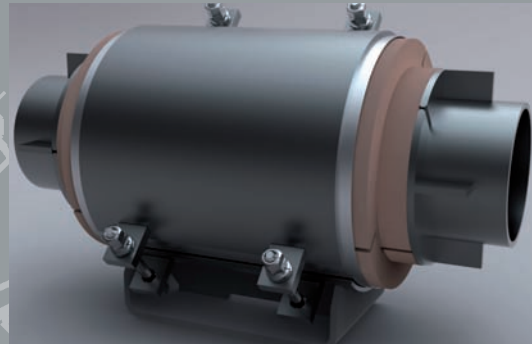


# HIPAC™

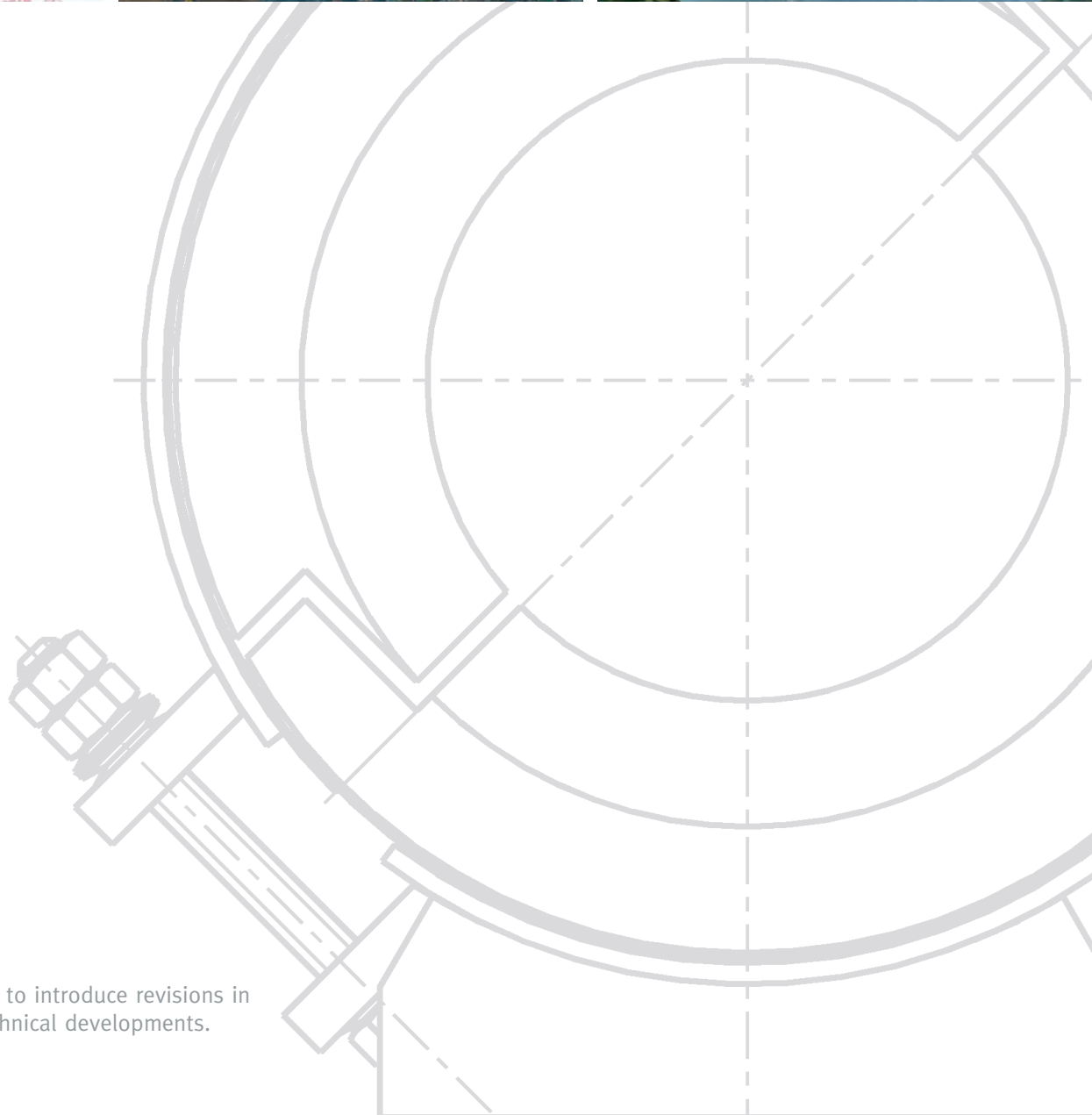


## Cryogenic Pipe Supports

Type 56 / Type 57



**LISEGA**



**Edition January 2010**

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

## Table of Contents

Supports for Cold and Cryogenic Applications	4
Cryogenic Pipe Support Base / Design	5
Type Designation System	6
Double and Multiple Clamp Base Pipe Supports	7
Special Design	7
Type 56 01 .0 to 56 97 .9	8
Type 57 01 .0 to 57 97 .9	19

# 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.

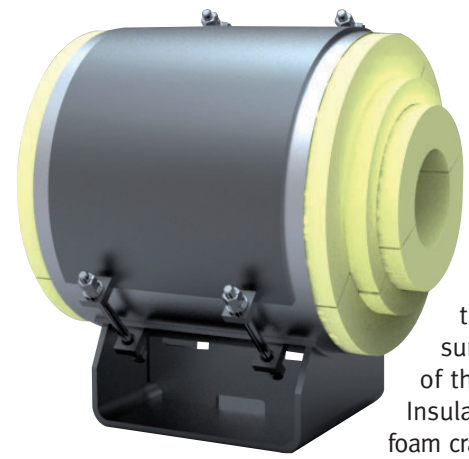
The LISEGA cryogenic pipe supports are standardized and designed according to recognized international technical codes and standards. They cover pipe sizes ranging from OD 21.3mm to OD 965.2mm, with insulation thicknesses from 25mm to 250mm. The supports are made from materials suitable for the specified 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.

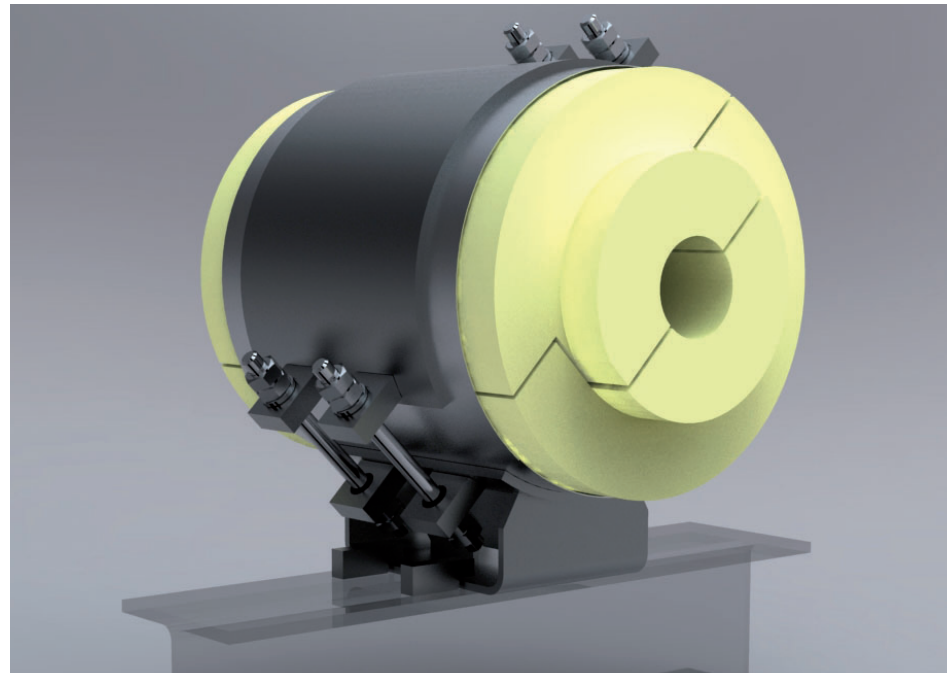
Material qualities, welding and surface treatment correspond to the LISEGA standard specification (see pages 0.9 and 0.10 in the main catalog "Standard Supports 2010").

In the production and preassembly of the clamp bases the integrated LISEGA quality assurance system is applied, as described on page 0.15 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.

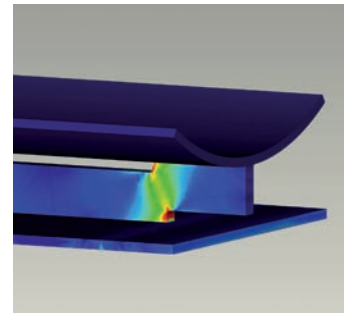


Type 56 used as axial guide with lift-off restraints, available with two standard shoe lengths.

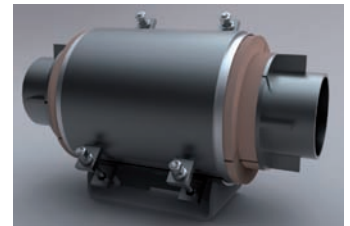
### Design

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. The thrust rings on the piping consist of two half-rings which are welded together on site to become a single ring. These rings, which can be moved along the piping, are then fixed with shear lugs welded to the piping.

This patented design offers the advantage of fixing the clamp base to the piping after final positioning. There is no need to disassemble the existing or already installed steelwork. The thrust rings are made of stainless steel (Gr. 316) and are already included in the scope of supply.



FE-analysis of special design



Standard pipe support type 57

### Material Properties of the HD-PUF Insulation

		Unit	Test Standard			
Density		kg/m <sup>3</sup>	ASTM D1622	160	224	320
Ultimate Compressive * Strength	20°C	MPa	ASTM D1621	≤ 2.0	≤ 4.0	≤ 7.0
	-165°C			≤ 3.6	≤ 6.0	≤ 11.0
Thermal Conductivity	20°C	W/mK	ASTM C177	≤ 0.032	≤ 0.035	≤ 0.041
	-165°C			≤ 0.022	≤ 0.025	≤ 0.034
Linear Coefficient of Expansion		1/K	BS 4370	≤ 65 x 10 <sup>-6</sup>	≤ 65 x 10 <sup>-6</sup>	≤ 65 x 10 <sup>-6</sup>

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



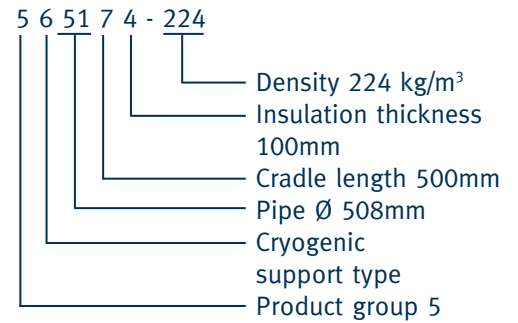
Preassembled cryogenic pipe supports

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			

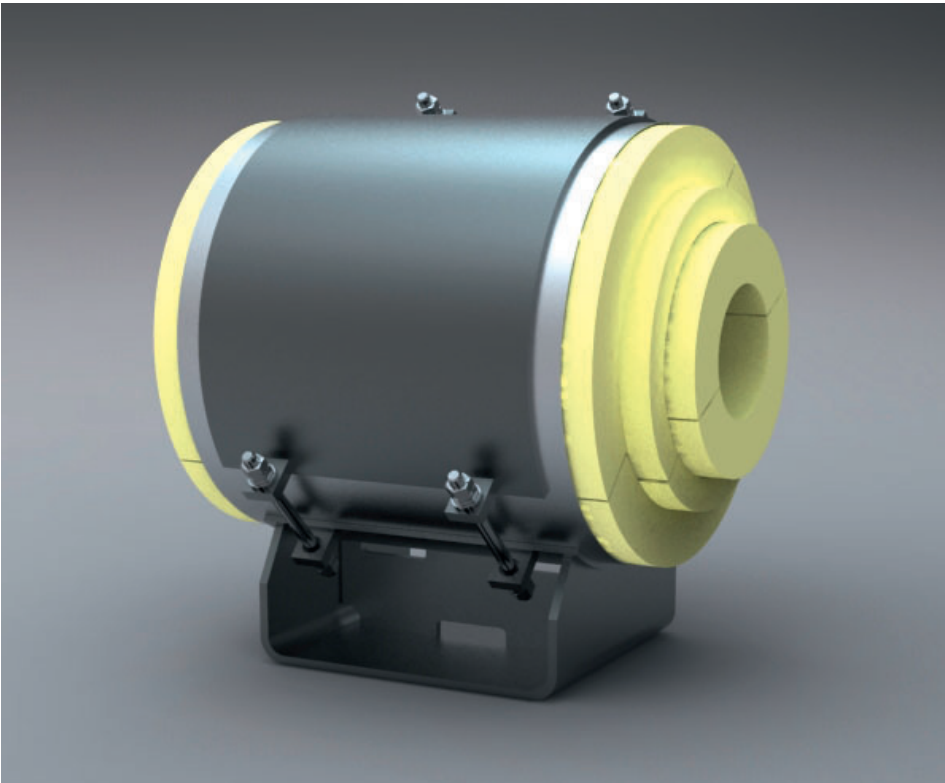
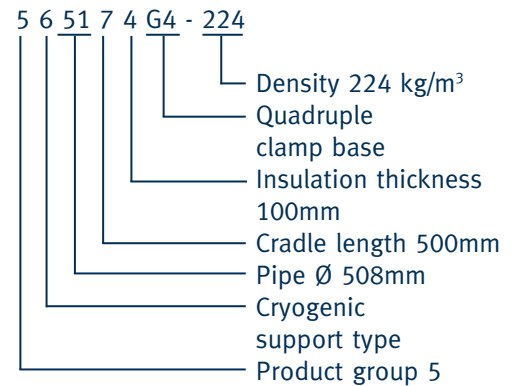
## Type Designation System

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:



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

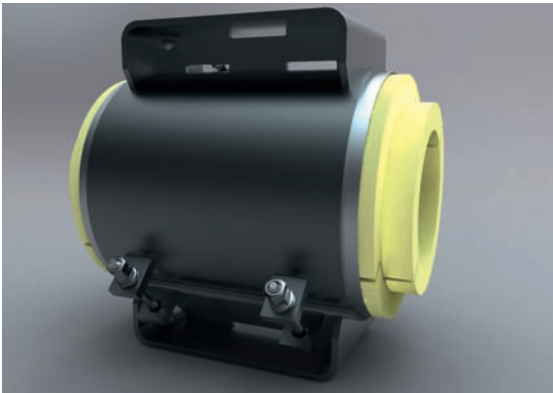
## Double and Multiple Clamp Base Pipe Supports

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.

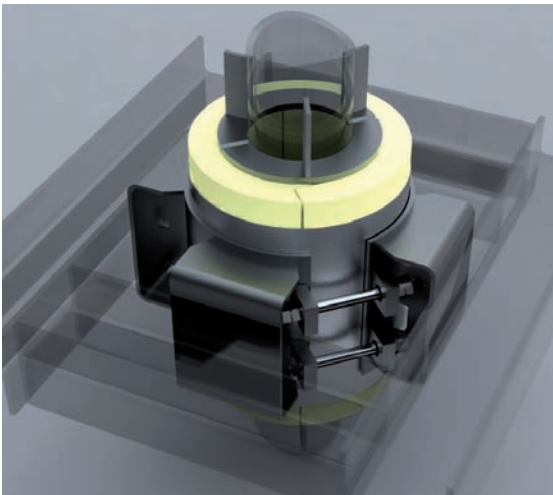
Each variant is given a supplementary number after the 6th digit which describes the type of guide. The pipe support can be ordered in the following designs:

- 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.



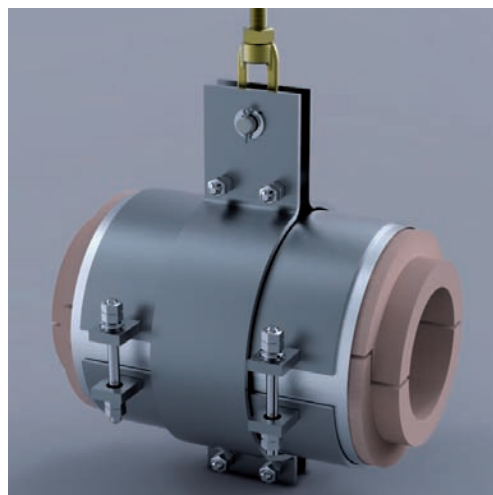
Type 56 double clamp base support for high upward loads.



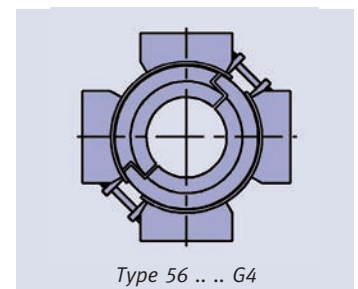
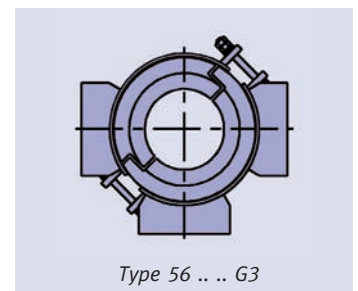
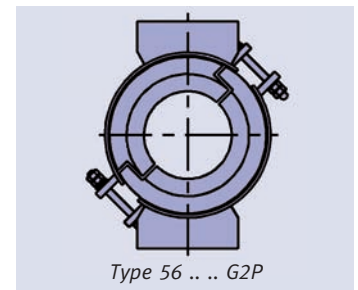
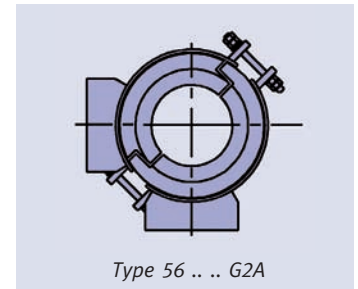
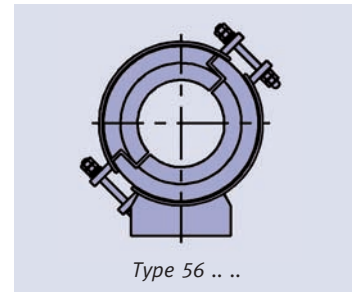
Type 57 used as guided quadruple pipe support for vertical pipes with thrust rings to keep the support in place. Same configuration but with additional lugs underneath the shoe can be used as a vertical line stop.

## 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.

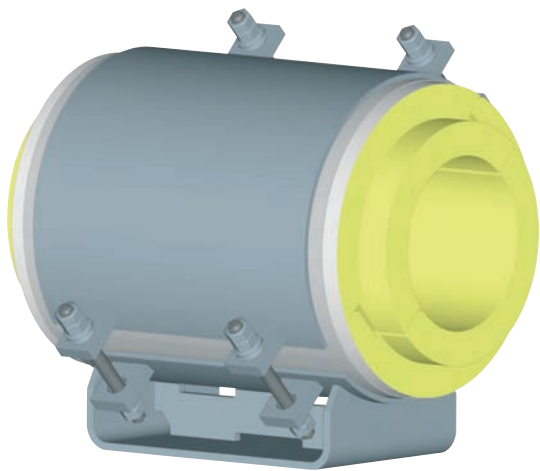


Type designation system for double and multiple clamp base pipe supports

# GUIDE SUPPORTS

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

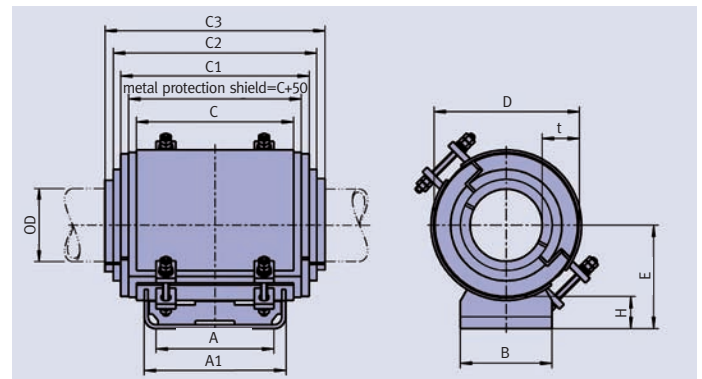
The HIPAC range of supports is designed to operate at temperatures down to -196°C. Shrinkage in the pipe and HD-PUF is compensated by the disc spring clamping mechanism to prevent possible relative movement between the clamp base and the pipe. A maximum temperature difference for each insulation thickness 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.

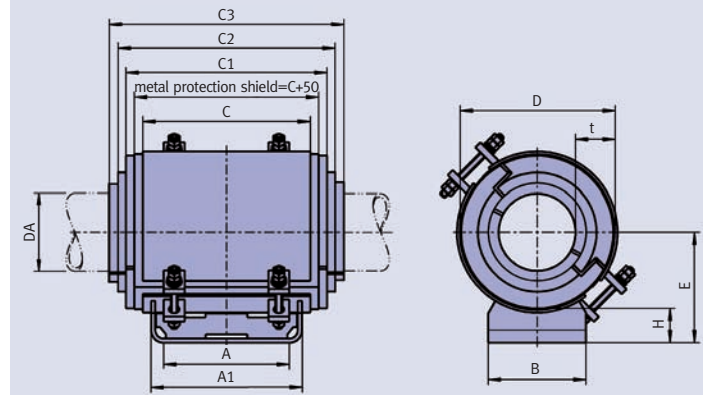


### Selection Table OD 21.3 - OD 26.9

	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 (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 (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



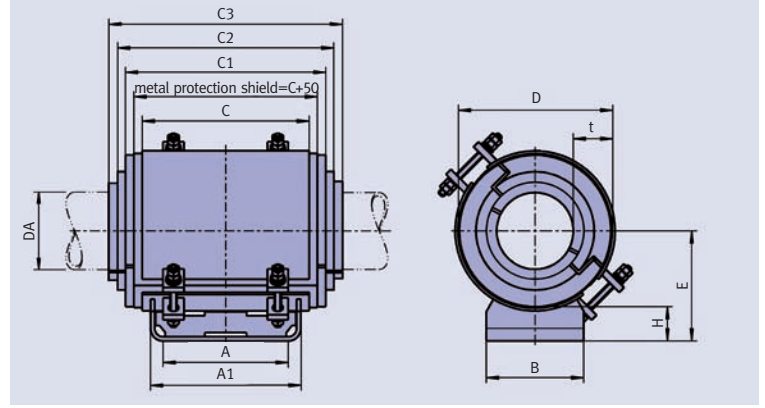


## Selection Table OD 33.7 - OD 60.3

	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 (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 (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 (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

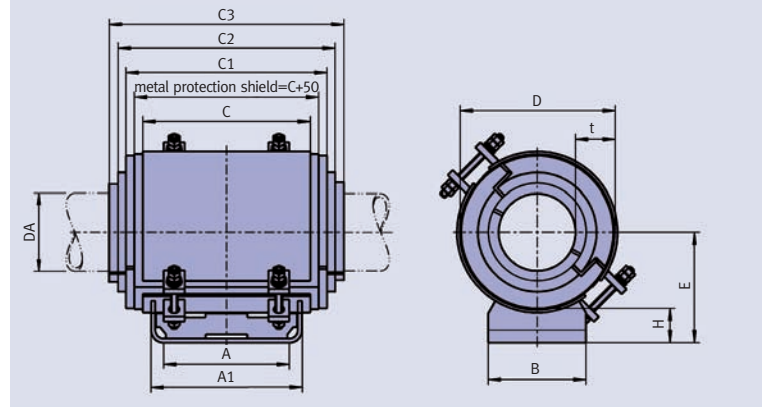
①②③ remarks see page 8

## Selection Table OD 88.9 - OD 168.3



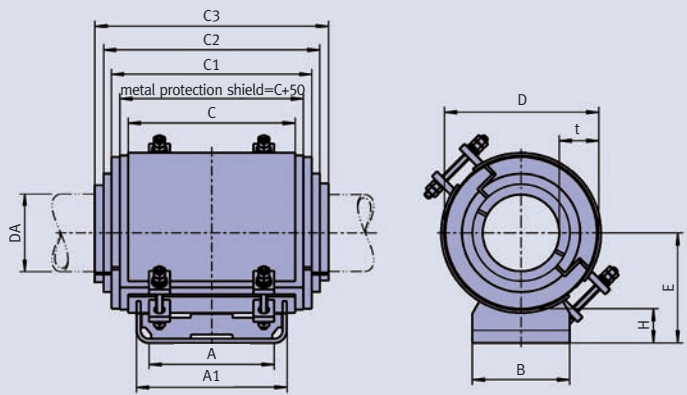
	Type	t	D	E	H	A	A1	B	C	C1 <sup>③</sup>	C2	C3	Max. vertical load [kN] at density <sup>①②</sup>			Weight [kg] at density				
													160	224	320	160	224	320		
OD 88.9 (ND 80)	560930					111	135		150	250	-	-	4.6	9.2	16	4.1	4.2	4.5		
	560950	25	140	121	50	261	285	100	300	400	-	-	7.9	15	27	7.3	7.6	7.9		
	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		200	300	400	450	500	9.9	19	34	28	30	34	
	560975	130	350	226	50	449	485	200	300	400	650	700	13	27	48	43	47	52		
560956					237	285		250	300	400	450	500	9.9	19	34	36	39	44		
560976	150	390	296	100	437	485	250	300	400	650	700	13	27	48	55	60	67			
OD 114.3 (ND 100)	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		200	300	400	450	-	-	11	22	40	25	27	29
	561174	100	315	209	50	449	485	200	300	400	650	-	-	16	33	57	39	41	45	
	561155					237	285		250	300	400	450	500	12	25	44	34	37	41	
	561175	130	375	289	100	437	485	250	300	400	650	700	17	35	62	53	57	63		
	561156					237	285		250	300	400	450	500	12	25	44	44	47	53	
	561176	150	415	309	100	437	485	250	300	400	650	700	17	35	62	68	73	81		
561157					225	285		300	300	400	450	500	12	25	44	54	59	66		
561177	180	475	339	100	425	485	300	300	400	650	700	17	35	62	84	91	102			
OD 168.3 (ND 150)	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		200	300	400	450	-	-	16	33	59	25	27	29
	561773	80	330	216	50	449	485	200	300	400	650	-	-	24	48	85	40	42	46	
	561754					237	285		250	300	400	450	-	-	16	33	59	32	35	38
	561774	100	370	286	100	437	485	250	300	400	650	-	-	24	48	85	50	54	59	
	561755					237	285		250	300	400	450	500	18	37	65	44	48	53	
	561775	130	430	316	100	437	485	250	300	400	650	700	26	52	92	69	74	82		
	561756					225	285		300	300	400	450	500	18	37	65	53	57	64	
	561776	150	470	336	100	425	485	300	300	400	650	700	26	52	92	82	88	98		
561757					225	285		300	300	400	450	500	18	37	65	70	75	84		
561777	180	530	366	100	425	485	300	300	400	650	700	26	52	92	108	116	128			

①②③ remarks see page 8



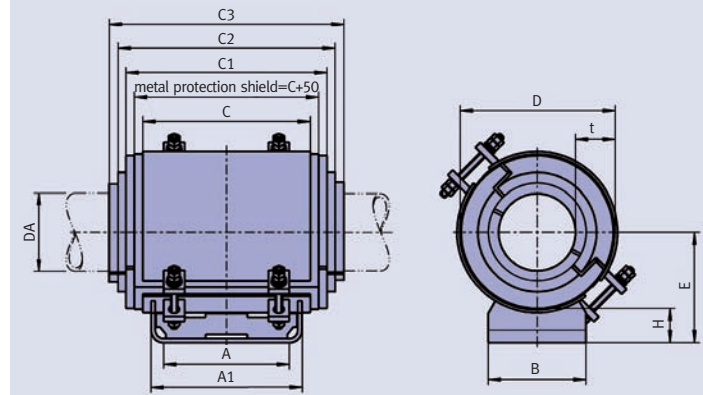
## Selection Table OD 219.1 - OD 273

	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	
OD 219.1 (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 (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

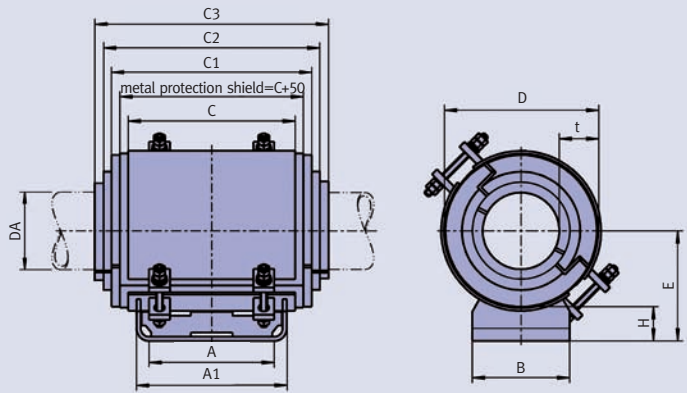
	Type	t	D	E	H	A	A1	B	C	C1③	C2	C3	Max. vertical load [kN] at density ① ②			Weight [kg] at density			
													160	224	320	160	224	320	
OD 323.9 (ND 300)	563250	25	376	289	100	237	285	250	300	400	-	-	24	49	86	29	29	31	
	563270					437	485		500	600	-	-	41	83	145	45	46	47	
	563251	40	406	304	100	237	285	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 (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>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 406.4 (ND 400)</b>	564151	40	489	346	100
	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 (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

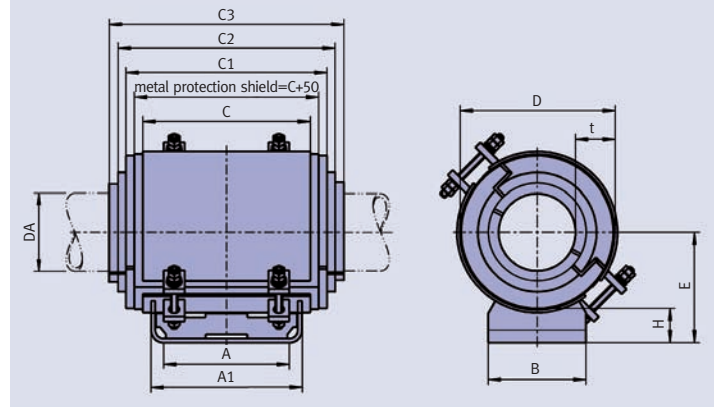
①②③ remarks see page 8



### Selection Table OD 508 - OD 558.8

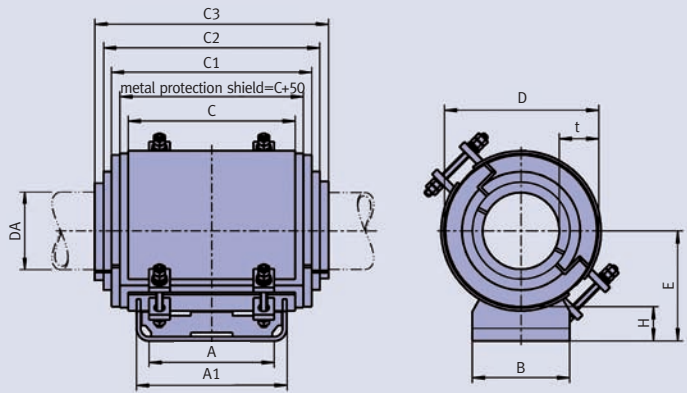
	Type	t	D	E	H	A	A1	B	C	C1③	C2	C3	Max. vertical load [kN] at density ① ②			Weight [kg] at density		
													160	224	320	160	224	320
													<b>OD 508 (ND 500)</b>	565151	40	591	397	100
	565171					425	485	300	500	600	-	-	65	130	228	102	104	108
	565152	50	611	407	100	206	280	400	300	400	-	-	40	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

	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 558.8 (ND 550)</b>	565652	50	662	432	100
	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

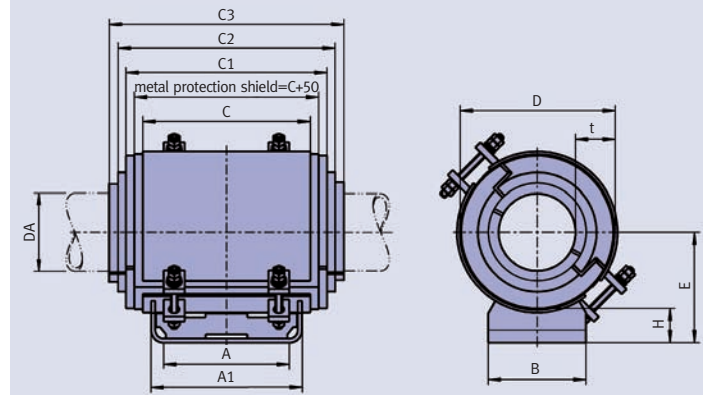


## Selection Table OD 711.2 - OD 762

	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 711.2 (ND 700)	567152	50	814	508	100	206	280	400	300	400	-	-	54	108	189	110	113	118
	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

	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 762 (ND 750)	567653	80	925	614	150	188	280	500	300	400	450	-	61	122	214	142	148	156
	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

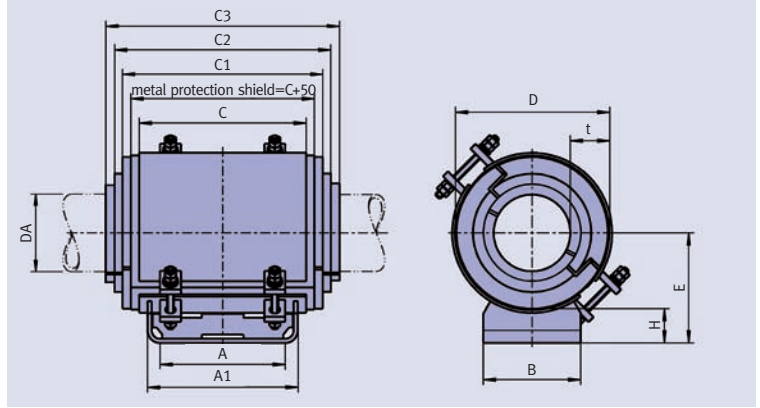




## Selection Table OD 812.8 - OD 914.4

	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 (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 (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	C1①	C2	C3	Max. vertical load [kN] at density ① ②			Weight [kg] at density		
												160	224	320	160	224	320
569773	80	1130	716	150	376	480	600	500	600	650	-	124	249	437	298	308	324
569783					626	730		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		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		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		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		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		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		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 N/mm<sup>2</sup> with fillet welds of a= 4mm (throat size).

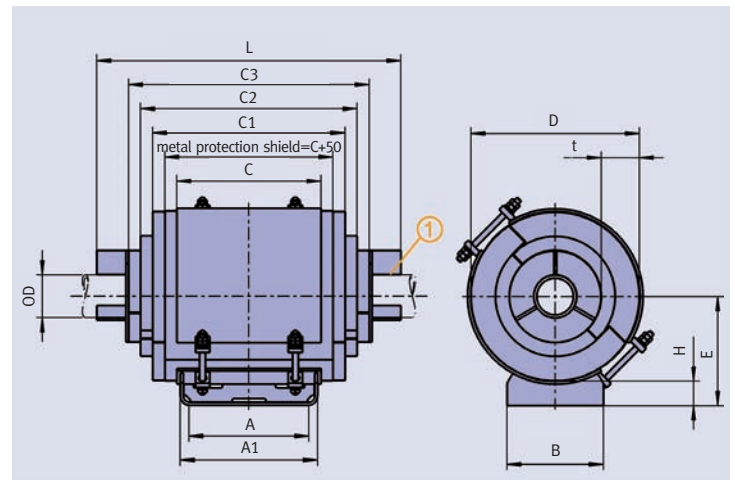
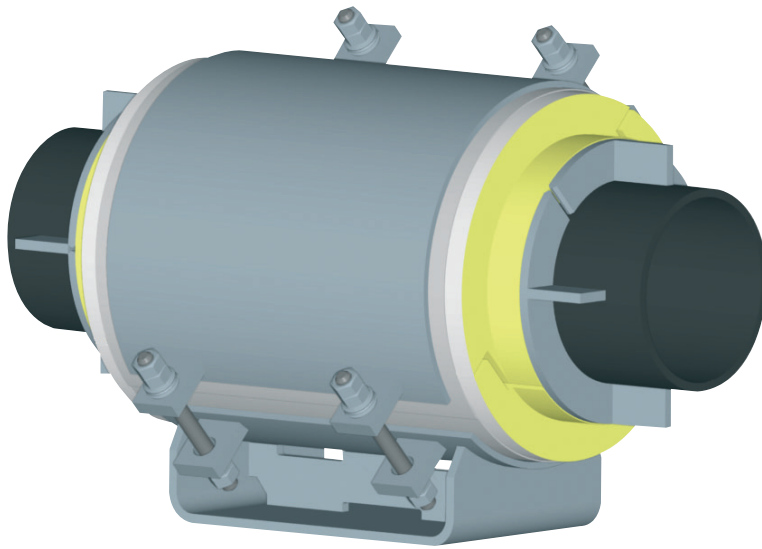
② The geometry and the allowable normal loads are equal to those of type 56. After selection of the respective type 56, the required foam density is to be selected from the axial load table and the type designation to be changed to type 57.

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 (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 (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

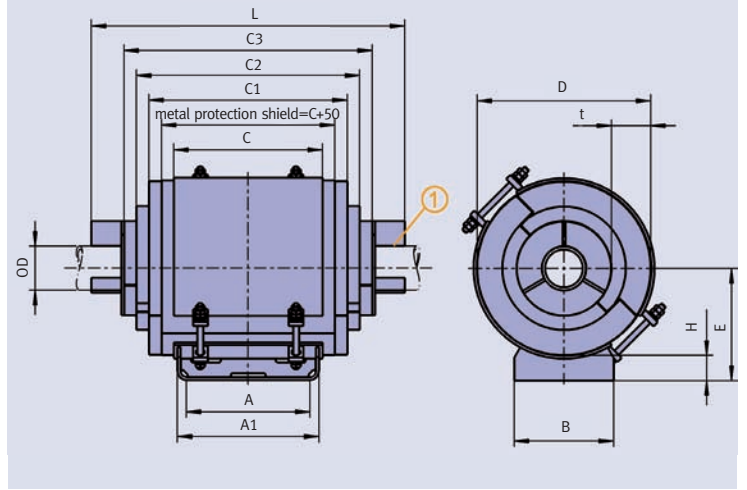
OD 33.7 (ND 25)	Type	t	Lmax ④	Max. axial load [kN] at density ②③		
				160	224	320
	5703.2	50	382 / 532	0.9	1.8	3.1
	5703.3	80	432 / 582	1.8	3.7	6.5
	5703.4	100	432 / 582	2.6	5.2	9.2
	5703.5	130	482 / 632	2.6	5.2	9.2

OD 48.3 (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 (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 (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 (ND 100)	Type	t	Lmax ④	Max. axial load [kN] at density ②③		
				160	224	320
				5711.2	50	390 / 540
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 (ND 150)	Type	t	Lmax ④	Max. axial load [kN] at density ②③		
				160	224	320
				5717.2	50	434 / 584
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 (ND 200)	Type	t	Lmax ④	Max. axial load [kN] at density ②③		
				160	224	320
				5722.2	50	588 / 788
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 (ND 250)	Type	t	Lmax ④	Max. axial load [kN] at density ②③		
				160	224	320
				5727.2	50	592 / 792
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	

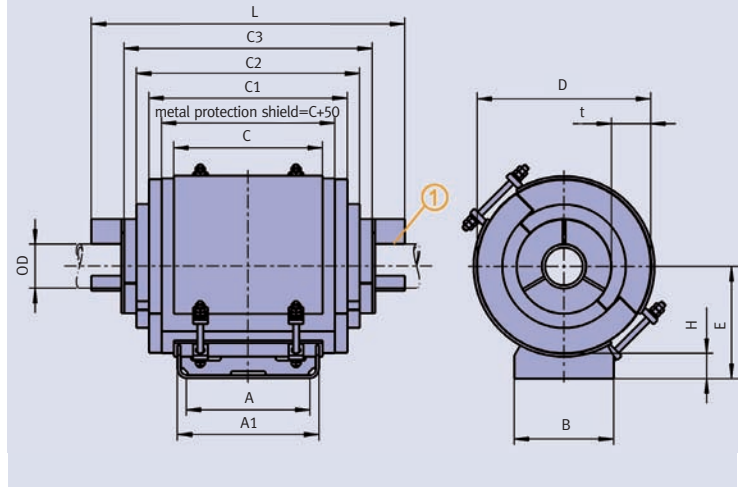
OD 323.9 (ND 300)	Type	t	Lmax ④	Max. axial load [kN] at density ②③		
				160	224	320
				5732.2	50	588 / 788
5732.3	80	638 / 838	7.4	14	25	
5732.4	100	638 / 838	10	20	36	
5732.5	130	688 / 888	11	23	41	
5732.6	150	688 / 888	11	23	41	
5732.7	180	688 / 888	11	23	41	
5732.8	200	688 / 888	11	23	41	

OD 355.6 (ND 350)	Type	t	Lmax ④	Max. axial load [kN] at density ②③		
				160	224	320
				5736.2	50	588 / 788
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 (ND 400)	Type	t	Lmax ④	Max. axial load [kN] at density ②③		
				160	224	320
				5741.2	50	632 / 832
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 (ND 450)	Type	t	Lmax ④	Max. axial load [kN] at density ②③		
				160	224	320
				5746.2	50	636 / 836
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

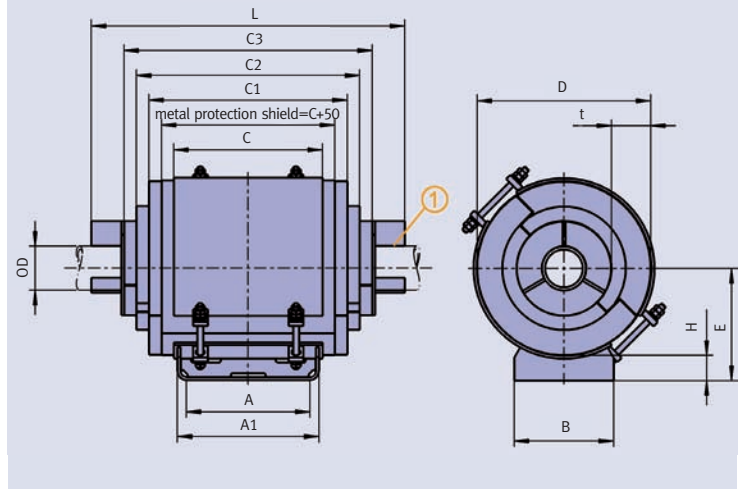
	Type	t	Lmax ④	Max. axial load [kN] at density ②③		
				160	224	320
				<b>OD 762 (ND 750)</b>	5776.3	80
	5776.4	100	694 / 894	20	41	71
	5776.5	130	944 / 1194	21	43	76
	5776.6	150	944 / 1194	22	45	79
	5776.7	180	944 / 1194	24	48	84
	5776.8	200	944 / 1194	25	50	87
	5776.9	250	944 / 1194	25	50	87

	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

OD 965.2 (ND 950)	Type	t	Lmax ④	Max. axial load [kN] at density ②③		
				160	224	320
	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.

**Imprint**

**Concept & Text**  
LISEGA

**Layout, Illustration & Production**  
MouseDesign Medien AG, Zeven

**Photos**  
LISEGA, Photos.com

**Printing**  
Druckerei Rosebrock GmbH, Sottrum

**LISEGA SE - Germany**

Hochkamp 5  
27404 Zeven  
Postfach 1357  
27393 Zeven  
Tel.: +49 (0) 42 81 - 713 - 0  
Fax: +49 (0) 42 81 - 713 - 214  
E-Mail: [info@de.lisega.com](mailto:info@de.lisega.com)  
[www.lisega.de](http://www.lisega.de)



**LISEGA SAS - France**

Z.I. La Marinière  
21, Rue Gutenberg  
91919 Bondoufle, Cedex  
Tel.: +33 (0)1 60 86 40 21  
Fax: +33 (0)1 60 86 48 28  
E-Mail: [info@fr.lisega.com](mailto:info@fr.lisega.com)  
[www.lisega.fr](http://www.lisega.fr)

**LISEGA Inc. - USA**

370 East Dumplin Valley Rd.  
Kodak, TN 37764  
Tel.: +1 (0) 865 940 5200  
Fax: +1 (0) 865 940 5140  
E-Mail: [info@us.lisega.com](mailto:info@us.lisega.com)  
[www.lisega.com](http://www.lisega.com)

**LISEGA Ltd. - Great Britain**

Unit 3, Washington Centre  
Halesowen Road  
Netherton  
West Midlands, DY2 9RE  
Tel.: +44 (0) 13 84 458 660  
Fax: +44 (0) 13 84 213 301  
E-Mail: [info@uk.lisega.com](mailto:info@uk.lisega.com)  
[www.lisega.co.uk](http://www.lisega.co.uk)

**LISEGA - China**

LISEGA Pipe Support Technologies  
(Shanghai) Co., Ltd.  
7800 Songze Av., Qingpu Industrial Zone  
Shanghai, ZIP 201700, PR China  
Tel.: +86 (0) 21 69 21 2888  
Fax: +86 (0) 21 69 21 2999  
E-Mail: [info@cn.lisega.com](mailto:info@cn.lisega.com)  
[www.lisega.com.cn](http://www.lisega.com.cn)