

# **LOGSTOR** Product Catalogue



# Product Catalogue

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**Introduction**      This section is a description of some general and important pieces of information about LOGSTOR and its pipe systems.

**Contents**            LOGSTOR  
The Product Catalogue  
Quality control and environmental management  
Pipe systems and their field of application  
Waste treatment and recycling

## LOGSTOR

LOGSTOR comprises production companies in Denmark, Poland, Sweden, and Finland as well as sales companies and service units in all major markets worldwide

## Worldwide service

The fact that LOGSTOR is operating in accordance with the same strict internal and international guidelines everywhere ensures uniform products with high quality as well as uniform guidelines for the installation and use of our products all over the world.

A central management of product data, specifications, marketing, installation instructions and user manuals ensures a uniform understanding and use of our products worldwide.

## Technical service

LOGSTOR is a system supplier. Part of the system is Technical service before, during and after the implementation of a project.

LOGSTOR's know-how is to the benefit of all parties on system choice, system optimization, design, training, installation, taking into operation and maintenance. To the benefit of the total economy of the project and of the safety for customers and consumers.

## Training

LOGSTOR has an extensive training program for new employees which ensures that our staff will at any time be able to answer questions concerning the use of our products for all purposes where liquids and gases are to be carried from point A to B.

Due to the introduction of new techniques, new environmental demands etc. the traditional, preinsulated pipe system has developed into a rather high-technological product.

It is therefore extremely important to handle this product correctly, not only in order to ensure the best possible economy of the individual products, but also in consideration of the environmental impact on our mutual global future.

LOGSTOR continuously carry out training courses for the people who are to work with the system, comprising decision makers, consulting engineers, contractors, pipe and joint fitters, supervisors, quality controllers, operation staff and of course the employees of LOGSTOR.

## Development

LOGSTOR focuses on product and process development on the basis of our products being long-term investment goods and the lowest service life costs being of vital importance to our customers.

LOGSTOR is present where people from the industry meet and decision makers are in search of information on the future energy systems - of benefit to a rational and environmentally friendly exploitation of scarce energy resources.

## The Product Catalogue

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**Documentation**

LOGSTOR's documentation consists of:

- Design manuals (single pipe and TwinPipe)
- Handling & Installation
- Weld Joint Manual
- The surveillance manual LOGSTOR Detect
- Foam pack folders (single pipe and TwinPipe)
- FlexPipe handbook

**The Product Catalogue**

The Product Catalogue is a tool, serving the following purposes:

- Enable decision makers to choose the system and the products suitable for their demands and requirements by reading the general descriptions.
- Enable purchasers, consultants, order managers and customers in general to find general information about a specific product.

All product pages are structured in the same way, which facilitates finding the same kind of information about more products.

Application: What is the product useful for and under which conditions?

Description: What does the product look like, which parts does it consist of?

Materials: Which materials is the product made or composed of?

Component No./measurements: What component Nos. - which principal measurements?

Accessories: If the product requires accessories of one kind or another, it is stated here.

References: Contains references to relevant sections with additional information in this catalogue and the two other manuals.

The Product Catalogue and manuals are independent works. Consequently, the numbering of the volumes lacks coherence.

## General

# The Product Catalogue

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### Use of the Product Catalogue

No part of this catalogue may be reproduced for external use without the express written permission of LOGSTOR.

The information/instructions are general. Application and implementation must take place with due respect to local conditions.

Additional/specific information can be achieved from our technicians.

All rights reserved. The English version of the LOGSTOR catalogue is the master/pattern copy whereas the other versions are translations, made according to the best knowledge of the translators.

The information in this document is subject to change without notice.

The latest edition will always be available on [www.logstor.com/Documentation](http://www.logstor.com/Documentation).

LOGSTOR reserves the right to change or improve its products and to make changes in the contents without obligation to notify any person or organization of such changes.

LOGSTOR is a trademark which may not be used without the express written permission of LOGSTOR.

## Quality Control and Environmental Management

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<b>Introduction</b>	<p>Order processing and production of products take place in accordance with a quality and environment management system, which i.a. contains LOGSTOR's quality and environment policies. The system is administered by the local Quality and Environment Department, which is an independent staff function.</p> <p>The Quality Department is authorised to stop production or delivery of products which do not comply with the established specifications.</p>
<b>Certification ISO 9001</b>	<p>The quality management system is prepared and certified in accordance with ISO 9001:2015.</p>
<b>Quality Manual</b>	<p>The quality management system is documented in quality manuals for each company/country. The quality management system includes:</p> <ul style="list-style-type: none"> <li>- Policies and objectives</li> <li>- Organisation charts</li> <li>- Procedures and instructions for processes, affecting the quality. They cover administrative and production processes e.g. order processing, inspection etc.</li> <li>- Process and inspection plans</li> </ul>
<b>Inspection routines in the production</b>	<p>The production of the pipe systems is subject to extensive inspection routines. This ensures the compliance with established standards and specifications and a homogeneous, high production quality, irrespective of the place of origin, which are conditions of a dependable system with a long service time.</p> <p>The inspection routines are described in the process and inspection plans which include receipt of raw materials and semi-products, qualification test, the production process and finished products.</p>
<b>External inspection</b>	<p>LOGSTOR's preinsulated pipes and fittings are i.a. certified in accordance with the Euroheat &amp; Power, EHP Certification guidelines.</p> <p>This means that production processes and products are subjected to type test and control, based on valid EN standards. It is verified at annual inspection visits at which test results are examined and product samples are taken for external testing.</p>
<b>Documentation for the customers</b>	<p>Steel pipes and fittings, granulate for outer casings, polyol and isocyanate for PUR are ordered with a 3.1 certificate which LOGSTOR files for at least 5 years.</p> <p>Normally, the customer does not receive documentation of the delivered products. However, the customer may according to a previous arrangement order documentation of delivered pipes and fittings for each order.</p>
<b>Identification</b>	<p>The marking on casings complies with the requirements in the European standard EN 253.</p>

## Quality Control and Environmental Management

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**Environment ISO  
14001**

Compliance with environmental requirements, optimization of resource consumption and minimization of environmental strains are ensured by means of an environmental management system, based on the environmental management standard ISO 14001:2015.

**Reference**

To see all relevant LOGSTOR certificates visit: [www.logstor.com/certificate](http://www.logstor.com/certificate).



## Pipe systems and their field of application

Pipe system		Service pipe, material	Operating pressure, bar	Operating temperature, °C	Peak temperature, °C	Pipe type	Fields of application		Dimensional range ø mm	Surveillance
							District Heating	District Cooling		
Bonded pipe system		Steel	16/25	120	140	Single pipe	x	x	26.9-1219	x
						TwinPipe	x	x	26.9-219.1	x
FlexPipes	PexFlextra	PEX	6	80-95	100 mal- function	Single pipe	x	x	20-110	
						TwinPipe	x	x	20-63	
	AluFlextra	pe-rt/ aluminium/ PE-RT	10	80-95	100 mal- function	Single pipe	x	x	20-32	
						TwinPipe	x	x	16-32	
						Double pipe	x		20/16-26/20	
	SteelFlex	Steel	25	120	140	Single pipe	x	x	20-28	x
CuFlex	Copper	16	120	140	Single pipe	x		15-35	x	
					TwinPipe	x		18-28	x	
Copper pipe system		Copper	16	120	140	Single pipe	x		22-88	x
						TwinPipe	x		22-54	x

## Waste treatment and recycling

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<b>General</b>	When installing a new preinsulated pipe system or replacing parts of an old pipe system, different types of waste materials shall be treated according to below instructions or local regulations
<b>Preinsulated products</b>	First PUR-foam, PE-casing, service pipe, surveillance wires shall be separated.
<b>PUR foam</b>	If possible, the PUR-foam shall be reused or burned at a waste incineration plant under controlled conditions according to local regulations.
<b>HDPE-material</b>	HDPE-material can be regranulated and recycled.
<b>Service pipe</b>	<p>Steel pipes:</p> <p>If possible, steel pipes shall be reused or melted down and then recycled.</p> <p>Copper pipes:</p> <p>If possible, copper pipes shall be reused or melted down and then recycled.</p> <p>Alupex:</p> <p>Separate PEX/aluminium.</p> <p>Aluminium can be reused and PEX is burned at a waste incineration plant under controlled conditions according to local regulations.</p> <p>PEX:</p> <p>PEX shall be burned at a waste incineration plant under controlled conditions according to local regulations.</p>
<b>Surveillance wires and cables</b>	<p>Copper wires:</p> <p>Copper wires can be melted down and recycled.</p> <p>Plastic-coated surveillance wires and cables:</p> <p>Plastic-coated surveillance wires and cables are handled in accordance with local regulations about handling electric surveillance wire and cable waste.</p>
<b>Cross-linked material</b>	Cross-linked material shall be burned at a waste incineration plant under controlled conditions according to local regulations.
<b>Valves</b>	If possible valves shall be reused. Valve parts which cannot be reused shall be treated as waste in accordance with local regulations.

## Waste treatment and recycling

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<b>Electronic components</b>	Electronic components like detectors, connecting boxes i.e. shall be treated as electronic waste according to local regulations.
<b>Chemicals</b>	<p>If possible, polyole and isocyanate shall be reused otherwise they shall be treated as chemical waste in accordance with local regulations.</p> <p>Alternatively foaming is done under controlled conditions according to regulations and the PUR foam is handled as stated previously</p>
<b>Brass couplings</b>	Brass couplings can be melted down and recycled.

## The Bonded Single Pipe

### General

#### Application

The pipe system is a complete transmission and distribution system for district heating.

In general the bonded pipe system from LOGSTOR complies with the European standards EN253, EN448, EN488, EN489, EN13941, and EN14419.

All specifications in section 2 of this catalogue are based on:

Service life = min. 30 years.

Max. operating pressure = 25 bar. The pressure class for large T-pieces and bends of standard design may however be lower.

The pipe system fulfills the requirements of EN 253 as well as EN 13941 for continuous operation with hot water at various temperatures up to 120 °C and at individual time intervals with a peak temperature up to 140 °C. The sum of these individual time intervals shall, in average, not exceed 300 hours a year.

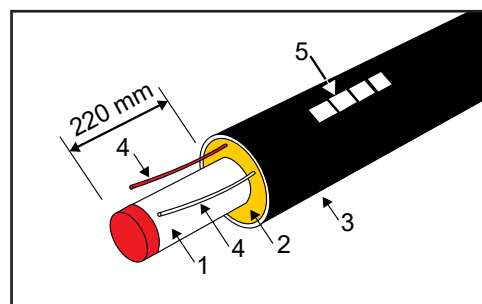
For temperature references which deviate from above standards we can - on request - calculate the estimated service life on the basis of the actual expected temperature set during a year.

Please contact LOGSTOR, if your conditions differ from the limit values in EN 253.

#### Description

A preinsulated pipe consists of:

1. Service pipe made of steel
2. Insulation made of polyurethane foam
3. Outer casing made of polyethylene, HDPE
4. Two 1.5 mm<sup>2</sup> copper wires for surveillance. One wire is tinned
5. Pipe label



## The Bonded Single Pipe

### General

#### Production methods

LOGSTOR uses various production methods to manufacture pipes which all comply with EN 253, but still have different application properties.

Traditionally foamed pipes are manufactured by injecting the insulating foam between the service pipe and the outer casing, which is produced in another process. In this process one pipe is manufactured at a time. The process applies to all pipe dimensions.

In the axial conti process pipes are made by casting the insulation onto the service pipe in a moving mould, after which the casing is extruded onto the insulation. The production takes place in a continuous process.

An effective diffusion barrier foil, preventing diffusion of insulating gases is embedded between the insulation and the casing.

Consequently, continuously produced pipes with diffusion barrier foil do not age.

The method is used for pipes with casing dimensions  $\varnothing 90 - \varnothing 315$  mm.

The total heat loss over a 30 years' period is 10-25% lower than that of a corresponding, traditionally manufactured pipe. The smallest dimensions yield the greatest savings.

In the spiral conti process the insulation is sprayed onto the service pipe or it is cast in a mould around the service pipe, after which the casing is extruded onto the insulation in a spiral movement.

The method applies to casing dimensions  $\varnothing 355 - \varnothing 1200$  mm. They are available with diffusion barrier foil as special products.

#### Steel pipe

Dimensions and tolerances:

According to EN 253 and EN13941.

Standard pipes:

Longitudinally or spirally welded P235GH according to EN 10217-2 or EN 10217-5.

Inspection certificate:

EN 10204 - 3.1

Bevelling:

Wall thickness  $S < 3.2$  mm is supplied with straight ends.

Wall thickness  $S \geq 3.2$  is supplied with bevelled ends in a  $30^\circ$  angle, root face  $1.6 \text{ mm} \pm 0.8 \text{ mm}$ . EN10217-2 option 10 or EN 10217-5 option 7.

Surface quality:

Prior to foaming the pipe make sure that the surface of the steel pipe is of a quality, which guarantees an optimum adhesion between pipe and insulation.

## The Bonded Single Pipe

### General

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#### Insulation

Polyurethane foam:

Properties: Minimum as required in EN 253.

Blowing agent:

Cyclopentane.

Thermal conductivity:

- Traditionally manufactured pipes (50°C): 0.027 W/m K.\*)

- Axial conti pipes (50°C): 0.023 W/m K.\*)

- Spiral conti pipes (50°C): 0.025 W/m K.

\*) These lambda values are based on an average of the continuous internal and external  $\lambda$ -measurements.

The updated values are always included in the calculation program "Calculator".  
See [www.logstor.com/Calculator](http://www.logstor.com/Calculator).

#### Outer casing

Polyethylene:

HDPE, bimodal (Minimum PE 80, ISO 12162).

Properties: Minimum as required in EN 253.

All parts are fully weldable within the melt flow index:

MFR variation  $\leq 0.5$  g/10 min.

Thermal stability:

Oxydation induction time (OIT):  $> 20$  min. at 210° C.

Resistance against crack formation: Slow crack formation (notch sensitivity)  $> 300$  h (notch, 4 MPa, 80°C, EN 253).

Internal surface treatment:

All traditionally produced outer casings are corona-treated during production. This ensures an optimum adhesion between outer casing and insulation. As for conti pipes the adhesion is ensured by a corona-treated PE foil between the casing and the foam.

#### Finished pipes

Free service pipe end:  $220 \pm 10$  mm

Lengths delivered: 6, 12, and 16 m

## The Bonded Single Pipe

### General

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#### **Surveillance system**

The pipes are supplied with 2 copper wires, embedded in the insulation, Nordic System.

Wires:

1.5 mm<sup>2</sup> copper wires (one is tinned)

Distance to steel pipe:

15 mm. -5/+40 mm dependent on dimension and type of pipe.

Position in top:

± 3-20 cm from 12 o'clock position

The embedded copper wires are the backbone of the electronic surveillance systems which is available for most of our pipe systems.

See description in the Surveillance Handbook.

# The Bonded Single Pipe

## Pipe - Overview

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Description	This section contains a description of the preinsulated single pipes which LOGSTOR offers.
Contents	District heating pipes - Insulation series 1 District heating pipes - Insulation series 2 District heating pipes - Insulation series 3 District heating pipes - Zebra pipe
Alternatives	Pipes in other dimensions and according to other specifications can be delivered as special orders.



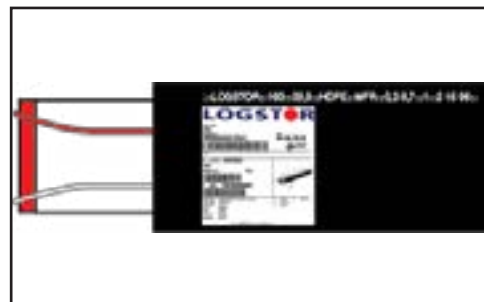
## The Bonded Single Pipe

### District heating single pipe

#### Description

All preinsulated pipes are delivered with embedded copper wires for surveillance.

Single pipes in outer casing 90 - 315 mm are available with diffusion barrier in 12 and 16 m length.



#### Component overview/data

Component No. 2000

Single pipe, series 1

Steel Pipe			Outer casing					Pipe	Water content
ø nom.	ø out. mm	Wall thick. mm	ø out. mm	Wall thick. mm	6 m pipe	12 m pipe	16 m pipe	Weight kg/m	l/m
20	26.9	2.6	90	3.0	x	x		2.9	0.4
25	33.7	2.6	90	3.0	x	x		3.3	0.6
32	42.4	2.6	110	3.0	x	x		4.2	1.1
40	48.3	2.6	110	3.0	x	x		4.6	1.5
50	60.3	2.9	125	3.0	x	x		6.1	2.3
65	76.1	2.9	140	3.0	x	x		7.5	3.9
80	88.9	3.2	160	3.0	x	x		9.4	5.3
100	114.3	3.6	200	3.2	x	x	x	14	9.0
125	139.7	3.6	225	3.4	x	x	x	16	14
150	168.3	4.0	250	3.6	x	x	x	21	20
200	219.1	4.5	315	4.1	x	x	x	31	35
250	273	5.0	400	4.8	x	x	x	45	54
300	323.9	5.6	450	5.2		x	x	58	77
350	355.6	5.6	500	5.6		x	x	66	93
400	406.4	6.3	560	6.0		x	x	81	120
450	457	6.3	630	6.6		x	x	93	160
500	508	6.3	710	7.2		x	x	108	190
600	610	7.1	800	7.9		x	x	142	280
700	711	8.0	900	8.7		x	x	180	380
800	813	8.8	1000	9.4		x	x	230	500
900	914	10.0	1100	10.2		x	x	280	630
1000	1016	11.0	1200	11.0		x	x	340	780
1100	1118	11.0	1300	11.8		x	x	378	943
1200	1219	12.5	1400	12.5		x	x	460	1120

## The Bonded Single Pipe

### District heating single pipe

#### Component overview/data

Component No. 2000

Single pipe, series 2

Steel Pipe			Outer casing					Pipe	Water content
ø nom.	ø out. mm	Wall thick. mm	ø out. mm	Wall thick. mm	6 m pipe	12 m pipe	16 m pipe	Weight kg/m	l/m
20	26.9	2.6	110	3.0	x	x		3.3	0.4
25	33.7	2.6	110	3.0	x	x		3.7	0.6
32	42.4	2.6	125	3.0	x	x		4.6	1.1
40	48.3	2.6	125	3.0	x	x		5.0	1.5
50	60.3	2.9	140	3.0	x	x		6.5	2.3
65	76.1	2.9	160	3.0	x	x		8.0	3.9
80	88.9	3.2	180	3.0	x	x		10	5.3
100	114.3	3.6	225	3.4	x	x	x	15	9.0
125	139.7	3.6	250	3.6	x	x	x	18	14
150	168.3	4.0	280	3.9	x	x	x	23	20
200	219.1	4.5	355	4.5	x	x	x	34	35
250	273	5.0	450	5.2	x	x	x	49	54
300	323.9	5.6	500	5.6		x	x	63	77
350	355.6	5.6	560	6.0		x	x	70	93
400	406.4	6.3	630	6.6		x	x	89	120
450	457	6.3	710	7.2		x	x	104	160
500	508	6.3	800	7.9		x	x	120	190
600	610	7.1	900	8.7		x	x	156	280

Larger series 2 dimensions may be available on enquiry.

## The Bonded Single Pipe

### District heating single pipe

#### Component overview/data

Component No. 2000

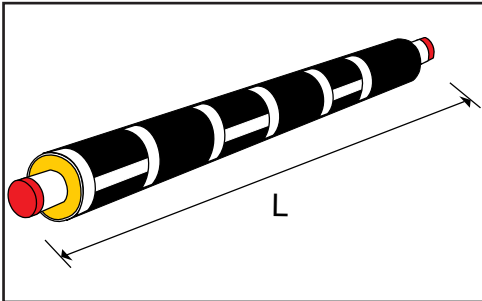
Single pipes, series 3

Steel Pipe			Outer casing					Pipe	Water content
ø nom.	ø out. mm	Wall thick. mm	ø out. mm	Wall thick. mm	6 m pipe	12 m pipe	16 m pipe	Weight kg/m	l/m
20	26.9	2.6	125	3.0	x	x		3.7	0.4
25	33.7	2.6	125	3.0	x	x		4.1	0.6
32	42.4	2.6	140	3.0	x	x		5.0	1.1
40	48.3	2.6	140	3.0	x	x		5.4	1.5
50	60.3	2.9	160	3.0	x	x		7.0	2.3
65	76.1	2.9	180	3.0	x	x		8.6	3.9
80	88.9	3.2	200	3.2	x	x		11	5.3
100	114.3	3.6	250	3.6	x	x	x	16	9.0
125	139.7	3.6	280	3.9	x	x	x	19	14
150	168.3	4.0	315	4.1	x	x	x	25	20
200	219.1	4.5	400	4.8	x	x	x	38	35
250	273	5.0	500	5.6	x	x	x	54	54
300	323.9	5.6	560	6.0		x	x	67	77
350	355.6	5.6	630	6.6		x	x	78	93
400	406.4	6.3	710	7.2		x	x	99	120
450	457	6.3	800	7.9		x	x	116	160
500	508	6.3	900	8.7		x	x	136	190

Larger series 3 dimensions may be available on enquiry.

## The Bonded Single Pipe

### District heating single pipes - Zebra Pipe

<b>Application</b>	Zebra pipes are used to facilitate the removal of insulation when adjusting pipe lengths.	
<b>Description</b>	<p>Depending on the length of the pipe the zebra pipe is divided into sections of 0.5 - 1.5 m, marked with transverse tape.</p> <p>Every second section has no adhesion between the insulation and the service pipe. These sections are marked with longitudinal tape.</p>	
<b>Dimensions</b>	<p>The zebra pipes, which traditionally are foamed pipes, are available in 12 m length.</p> <p>The dimensions of insulation series 2 and 3 are the same as for straight pipes.</p> <p>Max. steel pipe dimension is <math>\varnothing</math> 508 mm.</p>	
<b>Component overview/data</b>	Component No. 2490	
<b>Materials</b>	Zebra pipes are produced according to the same specifications as other straight pipes.	

The Bonded Single Pipe  
Expansion and anchoring - Overview

---

Description	This section is a description of the expansion and anchor elements, employed in connection with one or more of our installation methods.
Contents	E-Comps Foam pads Anchors

## The Bonded Single Pipe Expansion and anchoring - E-Comp

### Application

The E-Comp is a compensator which operates only once and is used in pipe systems, where temperature variations are absorbed as stresses in the steel pipe instead of being converted into expansion movements.

### Description

E-Comps are designed for a max. operating pressure of 25 bar (37.5 bar test pressure at 20°C).

Max. design temperature: 130°C.

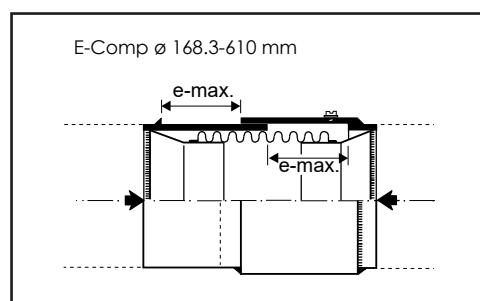
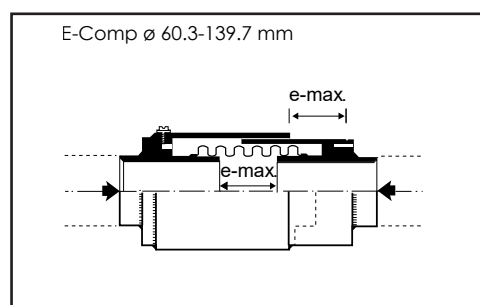
E-Comps are designed for 250 full load cycles in project class B up to and including DN300 and project class C for larger dimensions according to EN13941-1.

L is the length of the E-Comp in compressed state.

$e_{\max}$  is the highest compression length.

E-Comps in major dimensions are made to order.

On request E-Comp can be delivered pre-adjusted via component No. 4150



### Component overview/data

Component No. 0006

E-Comp

Steel pipe ø out. mm	$e_{\max}$ mm	L mm
60.3	50	218
76.1	65	228
88.9	70	217
114.3	80	239
139.7	95	289
168.3	105	214
219.1	120	309
273	125	336
323.9	135	312
355.6	135	295
406.4	150	288
457	150	392
508	150	331
610	150	332

### Materials

The service pipe and skirt of the E-Comp: Like straight steel service pipes

Bellows: Stainless steel, AISI 321.

# The Bonded Single Pipe

## Expansion and anchoring - E-Comp

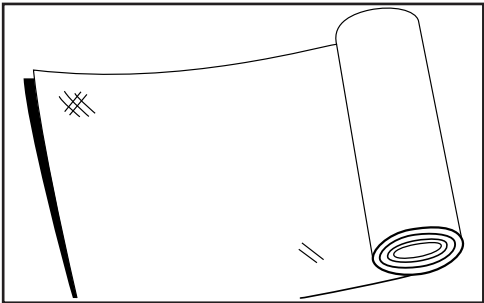
Accessories

Plastic film for pipe sections with E-Comps.

Available in coils.

Foil thickness: 0.1 mm.

Foil thickness in connection with 2500 mm and 3000 mm width: 0.15 mm.



Component overview/data

Component No. 1270

Plastic film

Outer casing ø out. mm	Width mm	Length m
110-160	500	100
200-315	1000	100
355-450	1500	100
500-630	2000	100
710	2500	50
≥ 800	3000	50

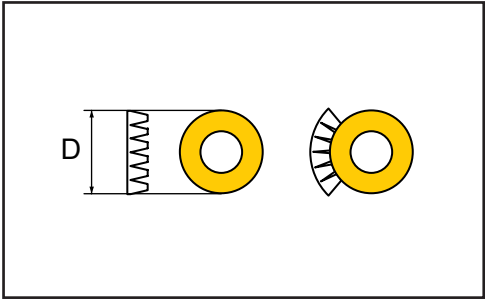
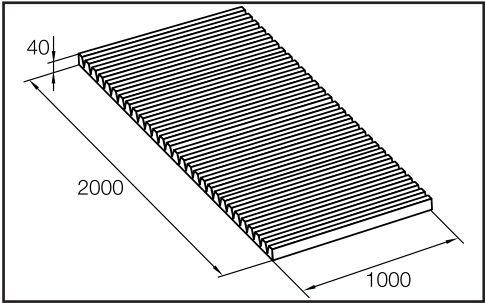
The Bonded Single Pipe  
Expansion and anchoring - Foam pad

Application

Foam pads are used for partial absorption/distribution of expansion movements.  
The application is restricted to first time expansion movements of max. 84 mm and a max.  
continuous surface temperature of the outer casing of 50° C.

Description

The foam pads are available in one size which is adjusted to the actual casing diameter.  
Product No. 7000 2000 005 001.  
  
The casing diameter determines the height of the foam pad.



Component overview/data

Component No. 7000

Foam pad

Deformation, %	Compressive strength, kPa
40	60 ±15%
50	90 ±15%
75	275 ±15%

Materials

Foam pads are made of polyethylene foam with closed cells. Non-decomposable.  
Thermal conductivity:  $\lambda$  (50°C) = > 0,05 W/mK  
Delivered as type 2 after EN 13941-1 with the properties which appear from the table.



## The Bonded Single Pipe

### Expansion and anchoring - Anchor

**Application** Preinsulated anchors are used to fix the pipeline for absorption of expansive forces in order to avoid undesirable expansion movements.

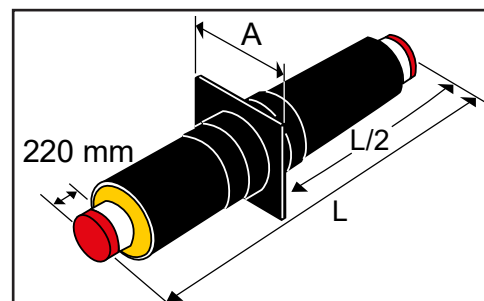
**Description** Preinsulated anchor.

Max. operating pressure: 25 bar

Max. axial tension on the anchor plate corresponding to a differential stress of 150 MPa from the two sides.

All preinsulated anchors are delivered with embedded copper wires for surveillance.

If you consider using anchors in major dimensions or with major stresses, please contact the Technical Department with specific project information.



#### Component overview/data

Component No. 4000

Anchor

Steel pipe ø out. mm	Series 1			Series 2			Series 3		
	Casing ø mm	L mm	A mm	Casing ø mm	L mm	A mm	Casing ø mm	L mm	A mm
26.9	90	2000	140	110	2000	160	125	2000	160
33.7	90	2000	140	110	2000	160	125	2000	165
42.4	110	2000	170	125	2000	180	140	2000	190
48.3	110	2000	170	125	2000	180	140	2000	190
60.3	125	2000	200	140	2000	200	160	2000	220
76.1	140	2000	220	160	2000	225	180	2000	250
88.9	160	2000	235	180	2000	260	200	2000	275
114.3	200	2000	300	225	2000	310	250	2000	340
139.7	225	2000	320	250	2000	350	280	2000	370
168.3	250	2000	370	280	2000	390	315	2000	425
219.1	315	2000	450	355	2000	480	400	2000	525
273	400	2500	550	450	2500	590	500	2500	630
323.9	450	2500	600	500	2500	650	560	2500	710
355.6	500	2500	650	560	2500	710	630	2500	780
406.4	560	2500	730	630	2500	800	710	2500	880
457	630	3000	800	710	3000	880	800	3000	980
508	710	3000	880	800	3000	980	900	3000	1100
610	800	3000	1000	900	3000	1100	-	-	-

## The Bonded Single Pipe Expansion and anchoring - Anchor

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### Materials

Pipe part: Like straight pipes: P 235 GH/PUR/PE-HD

Flange: Coated steel, S 235 JR.

Inner skirt: Stainless steel

Preinsulated anchors are produced according to EN 448.

# The Bonded Single Pipe Casing Joints - Overview

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<b>Contents</b>	General
	BandJoint
	EWJoint
	SX-WPJoint
	BXJoint
	BXSJoint
	B2SJoint
	BSJoint
	C2LJoint

## The Bonded Single Pipe Casing joints - General

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### Joints

LOGSTOR supplies three different casing joint types:

Weld joints

Cross-linked shrink joints

HDPE shrink joints

All casing joint types have been tested and approved according to EN 489.

### Weld joints

LOGSTOR has two weld joint types:

The BandJoint, which is an open weld joint, installed after the steel pipe has been welded together.

The BandJoint has integrated copper wires in the welding zone.

The EWJoint, which is a closed HDPE shrink joint, which are pre-installed, before the steel pipe is welded together.

Weld strips are delivered separately and is installed just before the joint is to be shrunk.

Weld joints can be used in all soil types - also when the groundwater table is more than 0.5 m over the pipes e.g. crossing streams and in oil-polluted soil as well as strongly acid soil, bacterially active dumps and lake or sea deposits

### Cross-linked joints

Closed shrink joints, which are pre-installed, before the steel pipe is welded together.

Available for foaming or with insulation shells.

Foam holes are sealed with weld plugs.

Cross-linked joints can be used in all normal soil types, where the groundwater table is constantly less than 0.5 m over the pipes.

### HDPE shrink joints

Closed HDPE shrink joints, which are pre-installed, before the steel pipe is welded together.

Available for foaming.

Foam holes are sealed with weld plugs.

HDPE shrink joints can be used in all normal soil types, where the groundwater table is constantly less than 0.5 m over the pipes.

# The Bonded Single Pipe Casing joints - BandJoint

**Application**

The BandJoint is an open PE weld joint with integrated copper wires in the weld zone.

Can be used for reduction when the difference in casing diameter is max. 25 mm. See the section "Reduktions".

LOGSTOR WeldMaster is used to weld the BandJoint.

Not applicable for flexible pipes.

**BandJoint ø 90-200 mm**

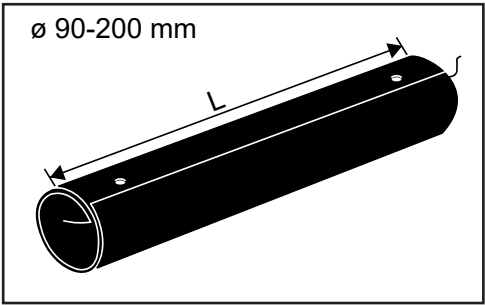
LOGSTOR WeldMaster is used to weld BandJoints.

Delivered with pre-drilled holes for foaming.

Delivered 2 pcs., packed in white PE foil.

To be stored vertically.

Max. temperature during transport and storage: 60°C.



**Component overview/data**

Component No. 5610

BandJoint ø 90-200 mm

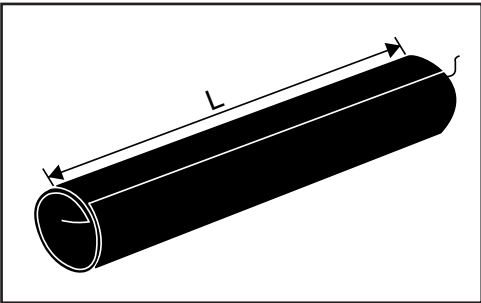
BandJoint length L, mm	Casing dimension, mm	
	90-125	140-200
570 (STD)	x	x
830(XL)*	x	x

\* 830 mm (XL) is used for E-Comp and repairs.

The Bonded Single Pipe  
Casing joints - BandJoint

BandJoint ø 225-  
1400 mm

Delivered 1 pc., packed in white foil.  
As a standard delivered rolled.  
Dimensions  
≥ 355 mm can be delivered flat on a  
pallet with frames on request.  
If the BandJoints are delivered flat, they  
must be rolled the day before installa-  
tion.  
Max. temperature during transport and  
storage: 60°C.



Component  
overview/data

Component No. 5612

BandJoint ø 225-1400 mm

L mm	Casing dimension, mm																	
	225	250	280	315	355	400	450	500	560	630	710	800	900	1000	1100	1200	1300	1400
630	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
1020*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

\* Length 1020 mm is used for E-Comps and repairs.

Materials

Casing joint: HDPE

Accessories

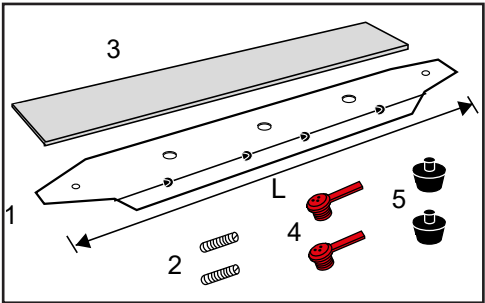
To be foamed with foam pack, component No. 0700.  
Machine foam is used for major dimensions.  
When ordering state insulation series, and that foam pack must be included in the  
delivery.

# The Bonded Single Pipe Casing joints - BandJoint

**Depth guard**

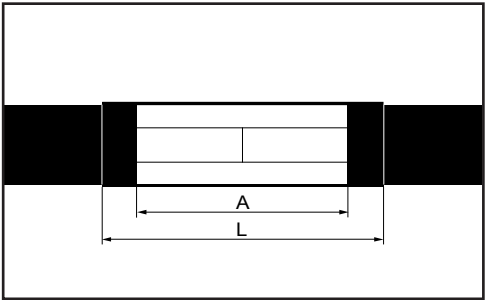
The accessory set contains:

- 1. Depth guard
- 2. Adjusting screws
- 3. Felt pad
- 4. Venting plugs
- 5. Weld plugs



The length of the depth guard is determined by the length of the cut.

- A = cut length
- L = BandJoint length



**Component  
overview/data**

Component No. 5606

Depth guard

Width, mm	Casing dimension, mm	Cut A, mm	BandJoint, L mm	Depth guard length, L mm
Depth guard STD (40)	90-200	420-455	570	500
Depth guard XL* (40)	90-200	680-715	830	760
Depth guard STD (70)	225-1400	420-455	630	500
Depth guard XXL** (70)	225-1400	810-845	1020	890

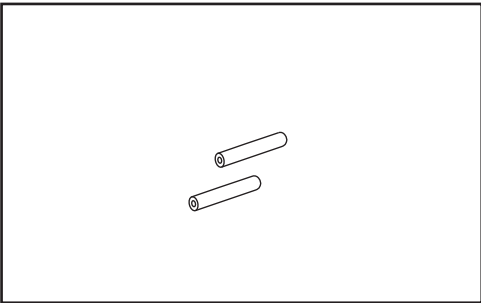
\* Depth guard XL is used for E-Comp. \*\* Depth guard XXL is used for E-Comp and repairs.

**Materials**

- Depth guard: Hot galvanised plate
- Felt pad: Felt
- Screws: PPS or steel
- Venting plugs: Propylene
- Weld plugs: HDPE

# The Bonded Single Pipe Casing joints - BandJoint

**Long insulator feet** In connection with insulation thicknesses > 85 mm 70 mm long insulator feet must be used for the adjusting screws.



**Component  
overview/data**

Component No. 5606

Long insulator feet

Depth guard	Casing, mm		
	Series 1	Series 2	Series 3
STD and XXL	630-1400	450-1400	400-1400

25 pcs. insulator feet in a bag: Product No. 5606 0000 010 000.

**Materials**

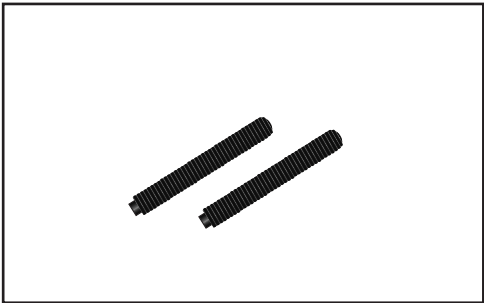
Insulator foot: Etronite, high-pressure laminate



The Bonded Single Pipe  
Casing joints - BandJoint

Long screws

For major dimensions extra long screws are used in addition to the 70 mm insulator feet.



Component  
overview/data

Component No. 1995

Long screws

Dimension, ø mm	Screw length		
	100 mm	120 mm	150 mm
355.6/630	x		
406.4/710	x		
457.0/800		x	
508.0/800	x		
508.0/900			x
610.0/900	x		
610.0/1000			x
711.1/1000	x		
711.1/1100			x
813.0/1100	x		
813.0/1300			x
914.0/1200	x		
914.0/1300			x
1016.0/1300	x		
1016.0/1400			x
1118.0/1400	x		

Product Nos.: 100 mm long screw: 1995 0100 002 100 120 mm long screw: 1995 0100 002 120 150 mm long screw: 1995 0100 002 150

Materials

Screws: PPS or steel

No. per depth  
guard

Number of screws and insulator feet per depth guard.

Component  
overview/data

Component No. 1995

Depth guard	No. per depth guard
STD	2
XL	4
XXL	4

## The Bonded Single Pipe Casing joints - EWJoint

### Application

Applicable for casing diameters  $\varnothing 90 - 1400$  mm.

Pre-install the joint prior to welding the service pipe together.

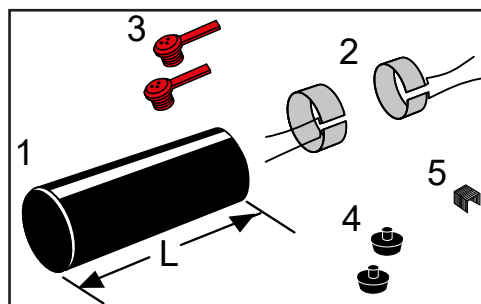
The joint is welded together with the outer casing by means of a loose weld strip between the joint and the outer casing. LOGSTOR WeldMaster is used to weld the EWJoint.

Not applicable for flexible pipes.

### Description

The EWJoint consists of:

1. Shrink sleeve
2. Weld strip
3. Venting plugs
4. Weld plugs
5. Staples to fix weld strips



The sleeves are delivered wrapped in white PE foil.

The accessories 2-4 are delivered separately in a plastic bucket.

Staples (5) are ordered separately

Store the sleeve vertically.

Max. temperature during transportation and storage: 40°C.

### Component overview/data

Component No. 5027

EWJoint

Casing dimension 90-400 mm			Casing dimension 450-1400 mm		
Casing dimension $\varnothing$ mm	L mm	L, for E-Comp mm	Casing dimension $\varnothing$ mm	L mm	L, for E-Comp mm
90	700	-	450	700	1300
110	700	1050	500	700	1300
125	700	1050	560	700	1300
140	700	1050	630	750	1300
160	700	1050	710	750	1300
180	700	1050	800	750	1300
200	700	1050	900	800	1300
225	700	1050	1000	800	1300
250	700	1050	1100	800	-
280	700	1050	1200	800	-
315	700	1050	1300	800	-
355	700	1050	1400	800	-
400	700	1050	-	-	-

EWJoint for E-Comp has a wall thickness for extrusion welding. Shrink sleeve  $\geq \varnothing 280$  mm in standard length can be extrusion welded.

The Bonded Single Pipe  
Casing joints - EWJoint

Materials	Sleeve: HDPE Venting plugs: Polypropylene Weld plugs: HDPE
Accessories	To be foamed with foam pack, component No. 0700. Machine foam is used for major dimensions. When ordering state insulation series, and that foam pack must be included in the delivery.
Weld strip	Is used to weld together the joint and the outer casing.
Component overview/data	Component No. 5556
Materials	Weld strip: Electro-plated mesh
Staple	Is used to fix weld strips
Component overview/data	Component No. 9050

Staples

Outer casing, ø out. mm	Product Nos.
90-400	9050 0000 031 053
≥ ø 450	9050 0000 031 052

## The Bonded Single Pipe Casing joints - SX-WPJoint

### Application

Shrink sleeve made of cross-linked PE (PEX) for foaming. The sleeve is shrinkable at both ends, and the foam holes are sealed with weld plugs.

Pre-install the shrink sleeve on the pipe prior to welding the service pipe together.

The shrink sleeve can as a standard be reduced by one dimensional offset. See below table.

When installed on pipes with corrugated casing the sleeve ends are sealed with additional collars to be ordered separately.

### Description ø 90-450 mm

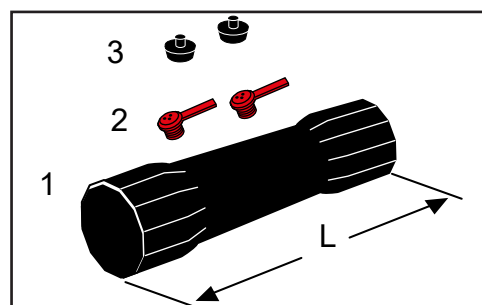
The SX-WPJoint consists of:

1. Shrink sleeve with integrated mastic
2. Venting plugs
3. Weld plugs

Delivered in white PE-foil.

Store the shrink sleeve vertically.

Max. temperature during transport and storage: 60° C



### Component overview/data

Component No. 5031

SX-WPJoint ø 90-450 mm

D1	D2, mm															
	L = 650 mm												L = 750			
	66	77	90	110	125	140	160	180	200	225	250	280	315	355	400	450
90	x	x	x													
110			x	x												
125				x	x											
140					x	x										
160						x	x									
180							x	x								
200								x	x							
225									x	x						
250										x	x					
280											x	x				
315												x	x			
355													x	x		
400														x	x	
450															x	x

# The Bonded Single Pipe Casing joints - SX-WPJoint

**Description**  
ø 500-710 mm

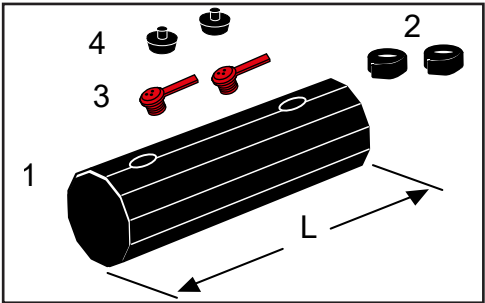
The SX-WPJoint consists of:

1. Shrink sleeve
2. Sealing tape
3. Venting plugs
4. Weld plugs

Delivered in white PE-foil.

Store the shrink sleeve vertically.

Max. temperature during transport and storage: 60° C.



**Component  
overview/data**

Component No. 5031

SX-WPJoint ø 500-710 mm

D1 mm	D2, mm				
	450	500	560	630	710
500	x	x			
560		x	x		
630			x	x	
710				x	x

**Materials**

Sleeve: Cross-linked PE (PEX)

Mastic: PIB-based mastic

Venting plugs: Polypropylene

Weld plugs: HDPE

**Accessories**

To be foamed with foam pack, component No. 0700.

When ordering state insulation series, and that foam pack must be included in the delivery.

Collar for corrugated casing, component No. 5500. Order 2 pcs. per joint.

## The Bonded Single Pipe Casing joints - BXJoint

### Application

Shrink sleeve made in cross-linked PE (PEX) with insulation shells of polyurethane (PUR).

BXJoint is double sealed. Applicable for casing dimensions  $\varnothing$  90-630 mm.

Pre-install the shrink sleeve on the pipe prior to welding the service pipe together.

Can be used for reduction. The dimensional limits appear from the table. Due to the insulation shells the largest dimension is ordered.

### Description

The BXJoint consists of:

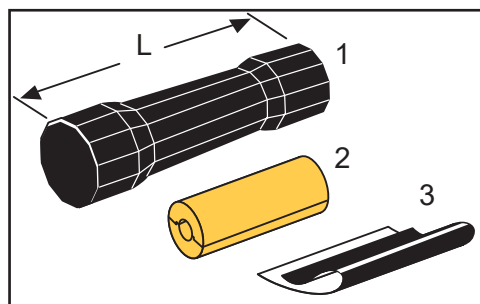
1. PEX shrink sleeve with integrated hot-melt and mastic
2. Insulation shells
3. Shrink film

Delivered in white PE foil.

Store the shrink sleeve vertically.

Max. temperature during transport and storage: 60°C.

Available with insulation shells for series 1, 2, and 3.



### Component overview/data

Component No. 5022

BXJoint

D1 mm	D2 mm																			
	66	77	90	110	125	140	160	180	200	225	250	280	315	355	400	450	500	560	630	
90	x	x	x																	
110		x	x	x																
125			x	x	x															
140				x	x	x														
160					x	x	x													
180						x	x	x												
200							x	x	x											
225								x	x	x										
250									x	x	x									
280										x	x	x								
315											x	x	x							
355													x	x						
400														x	x					
450															x	x				
500																x	x			
560																	x	x		
630																		x	x	

Shrink sleeve length: 780 mm.

## The Bonded Single Pipe Casing joints - BXJoint

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### Materials

Shrink sleeve: Crosslinked PE (PEX)

Mastic: PIB-based mastic

Insulation shells: PUR

Shrink film: PEX with PIB-based mastic

## The Bonded Single Pipe Casing joints - BXSJoint

### Application

Shrink sleeve made of cross-linked PE (PEX) used for outer casing dimensions  $\varnothing$  90-630 mm.

BXSJoint is double sealed.

The shrink sleeve can be used for reduction. The dimensional limits appear from the table. Pre-install the shrink sleeve prior to welding the service pipe together.

The Alu-wrap can be used several times or remain in the joint as a diffusion barrier.

### Description

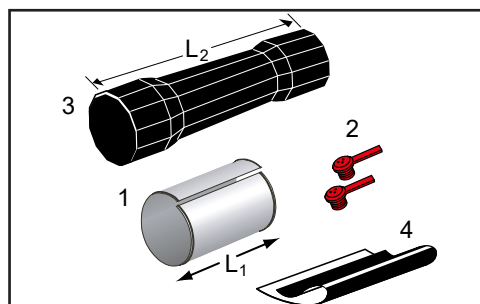
BXSJoint consists of:

1. Wrap for foaming
2. Venting plugs
3. Shrink sleeve with integrated mastic
4. Shrink film

The shrink sleeve and the shrink film are delivered in strong white PE foil.

Store the sleeve vertically.

Max. temperature during transport and storage: 60°C.



### Component overview/data

Component No. 5029

BXSJoint

D1 mm	D2 mm																			
	66	77	90	110	125	140	160	180	200	225	250	280	315	355	400	450	500	560	630	
90	x	x	x																	
110		x	x	x																
125			x	x	x															
140				x	x	x														
160					x	x	x													
180						x	x	x												
200							x	x	x											
225								x	x	x										
250									x	x	x									
280										x	x	x								
315											x	x	x							
355													x	x						
400														x	x					
450															x	x				
500																x	x			
560																	x	x		
630																		x	x	

Shrink sleeve length: 780 mm.



## The Bonded Single Pipe Casing joints - BXSJoint

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**Materials**

Shrink sleeve: Crosslinked PE (PEX)

Mastic: PIB-based mastic

Wrap: Aluminium

Venting plug: Polypropylene

Shrink film: PEX with PIB-based mastic

**Accessories**

To be foamed with foam pack, component No. 0700.

When ordering state insulation series, and that foam pack must be included in the delivery.

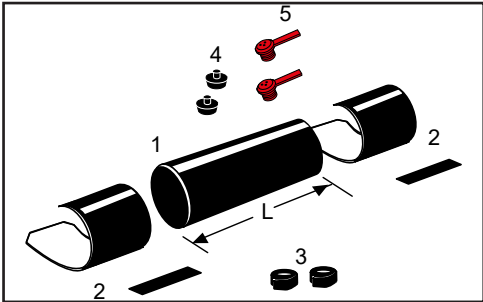
The Bonded Single Pipe  
Casing joints - B2SJoint

**Application**      The B2SJoint is used for outer casing dimensions ø 90-1000 mm.  
Pre-install the joints prior to welding the service pipe together.  
The B2SJoint is double sealed.

**Description**      The B2SJoint consists of:

- 1. Shrink sleeve
- 2. Open shrink wraps with closure patches
- 3. Sealing tape
- 4. Weld plugs
- 5. Venting plugs

Delivered in white PE foil.  
Store the sleeve vertically.  
Max. temperature during transport and storage: 40°C.



**Component overview/data**      Component No. 5010

B2SJoint

Casing dimension mm	L mm	E-Comp, L mm	Casing dimension mm	L mm	E-Comp, L mm
90	700	1050	355	700	1050
110	700	1050	400	700	1050
125	700	1050	450	700	1300
140	700	1050	500	700	1300
160	700	1050	560	700	1300
180	700	1050	630	750	1300
200	700	1050	710	750	1300
225	700	1050	800	750	1300
250	700	1050	900	800	1300
280	700	1050	1000	800	1300
315	700	1050			

B2SJoint for E-Comp has a wall thickness for extrusion welding.  
Shrink sleeve ≥ ø280 mm in standard length can be extrusion welded.

**Materials**

Shrink sleeve: HDPE

Wrap: PEX with PIB-based mastic and hotmelt

Sealing tape: PIB-based

Venting plugs: Polypropylene

Weld plugs: HDPE

## The Bonded Single Pipe Casing joints - B2SJoint

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### Accessories

To be foamed with foam pack, component No. 0700.

Machine foam is used for major dimensions.

When ordering state insulation series, and that foam pack must be included in the delivery.

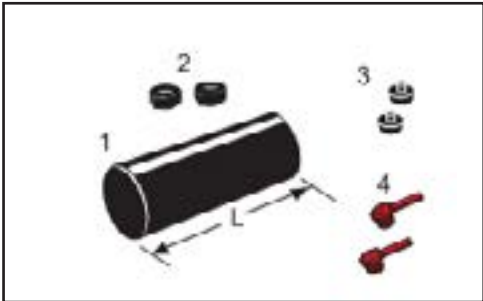
The Bonded Single Pipe  
Casing joints - BSJoint

**Application**                    The BSJoint is used for outer casing dimensions  $\varnothing$  90-560 mm.  
Pre-install the joints prior to welding the service pipe together.

**Description**                    The BSJoint set consists of:

- 1. Shrink sleeve
- 2. Sealing tape
- 3. Weld plugs
- 4. Venting plugs

Delivered in white PE foil.  
Store the sleeve vertically.  
Max. temperature during transport and storage: 40°C.



**Component overview/data**                    Component No. 5005

BSJoint

Outer casing D mm	L mm
90	700
110	700
125	700
140	700
160	700
180	700
200	700
225	700
250	700
280	700
315	700
355	700
400	700
450	700
500	700
560	700

**Materials**                    Shrink sleeve: HDPE  
Sealing tape: PIB-based  
Venting plugs: Polypropylene  
Weld plugs: HDPE

**Accessories**                    To be foamed with foam pack, component No. 0700.  
When ordering state insulation series, and that foam pack must be included in the delivery.

## The Bonded Single Pipe

### Casing joints - C2LJoint with insulation shells

#### Application

The shrink joint C2L is an open joint for outer casing dimensions  $\varnothing$  90-630 mm.

C2LJoint is double sealed.

Open shrink sleeve in PE with insulation shells in PUR. The shrink sleeve is cut longitudinally prior to installation.

Used to repair pipes with steel service pipe.

#### Description

The C2LJoint consists of:

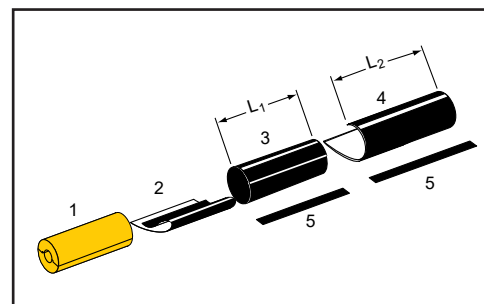
1. Insulation shells
2. Shrink film
3. Shrink sleeve with integrated hotmelt
4. Shrink wrap
5. Closure patches

Delivered in a white PE foil.

Store the sleeve vertically.

Max. temperature during transport and storage: 40°C.

Available with insulation series for series 1, 2, and 3.



#### Component overview/data

Component No. 5035

C2LJoint

d mm	D, mm																
	90	110	125	140	160	180	200	225	250	280	315	355	400	450	500	560	630
26.9	x	x	x														
33.7	x	x	x														
42.4		x	x	x													
48.3		x	x	x													
60.3			x	x	x												
76.1				x	x	x											
88.9					x	x	x										
114.3							x	x	x								
139.7								x	x	x							
168.3									x	x	x						
219.1										x	x	x					
273.0												x	x	x			
323.9														x	x	x	
355.6															x	x	x
406.4																x	x

L1 = 670 mm

L2 = 900 mm

## The Bonded Single Pipe

### Casing joints - C2LJoint with insulation shells

---

**Materials**

Shrink sleeve: HDPE

Insulation shells: PUR

Shrink film: PEX with PIB-based mastic

Shrink wrap: PEX with PIB-based mastic and hotmelt

## The Bonded Single Pipe

### Directional changes - Overview

---

#### Contents

SXB-WP joints

Preinsulated bends

Curved pipes

The Bonded Single Pipe  
Directional changes - SXB-WPJoint

**Application** SXBJoint is used for directional changes of 0-90°. The sleeve is made of crosslinked PE (PEX)

This joint can be used under all common soil conditions and for all installation methods.

The SXBJoint can as a standard be reduced according to below table.

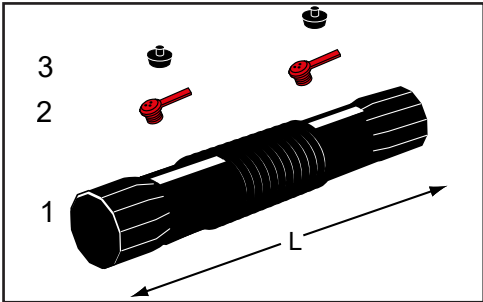
**Description** A SXB-WPJoint consists of:

- 1. Shrink sleeve with a flexible bending zone. The sleeve ends contain mastic
- 2. Venting plugs
- 3. Weld plugs

The joint is wrapped in a white foil on delivery.

Store the sleeve vertically.

Max. temperature during transportation and storage: 60°C.



**Component overview/data** Component No. 5033

SXB-WPJoint

Outer casing D mm	Shrinkable to ø mm		L mm
90	90	77	815
110	110	90	865
125	125	110	865
140	140	125	865
160	160	140	865
180-200	200	180	975
225-250	250	225	980
280-315	315	280	1225

**Materials** Casing joint: Cross-linked PE (PEX)

Venting plugs: Polypropylene

Weld plugs: HDPE

**Accessories** To ensure centering bends for SXB-WPJoint, component No 5252 are used.

Wooden wedges are used to fix the bend fitting during installation, component No. 1997. See the Tools section.

To be foamed with foam pack, component No. 0700. When ordering state insulation series, and that foam pack must be included in the delivery.



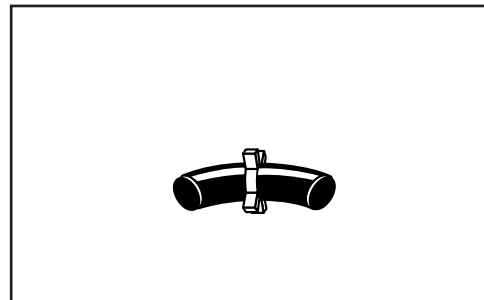
## The Bonded Single Pipe

### Directional changes - SXB-WPJoint

#### Steel bend

Steel bend with bending radius, especially adjusted to the SXB-WP bend fitting.

Due to the centering in the joint, steel bends with other radii must not be used.



#### Component overview/data

Component No. 5252

Steel joint for SXB-WPJoint

Series	Dimensions ød, mm										
	26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3	139.7	168.3	219.1
	Radius, mm										
1	90	90	92.5**	107.5**	135**	175**	114*	152*	190*	229*	305*
2	90	90	92.5**	107.5**	135**	175**	207.5**	228	190*	435	-
3	90	90	92.5**	107.5**	135**	175**	207.5**	228	330*	435	-

\*) Alternative radius = 1.5xd

\*\*) Alternative radius = 2.5xd

## The Bonded Single Pipe

### Directional changes - Preinsulated bend

---

**Application**

Preinsulated bends comply with the requirements in EN 448 and can be used for a max. operating pressure of 25 bar up to and including DN400. Larger dimension are as a standard for max. operating pressure of 16 bar. However, on request they are available for an operating pressure of 25 bar.

90° bends can be used for all installation methods.

For 45° certain restrictions apply. See Design.

**Description**

As a standard available in 45° and 90°.

All preinsulated bends have embedded copper wires for surveillance.

Bends in other angles is available to order in 5° intervals.

Bends in 5°-40° angles have the same leg length as 45° bends.

Bends in 50° - 85° angles have the same leg length as 90° bends.

**Materials**

All materials are like for straight pipes: Steel/PUR/PE-HD.

## The Bonded Single Pipe

### Directional changes - Preinsulated bend

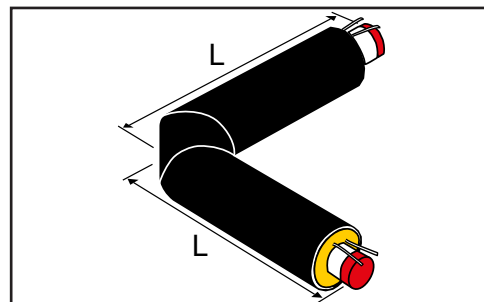
#### Bend 90°

90° bends in dimensions  $\leq \varnothing 406.4$  mm have a bending radius of  $2.5 \times d$  and are made by means of cold bending.

90° bends in dimensions  $\geq \varnothing 457.0$  mm have a bending radius of  $1.5 \times d$  and are made by means of a weld elbow.

Preinsulated bend with same leg lengths.

On request available in major dimensions.



#### Component overview/data

Component No. 2500

Bend 90°

Steel pipe, d mm	Outer casing, D mm			L
	series 1	series 2	series 3	mm
26.9	90	110	125	1000
33.7	90	110	125	1000
42.4	110	125	140	1000
48.3	110	125	140	1000
60.3	125	140	160	1000
76.1	140	160	180	1000
88.9	160	180	200	1000
114.3	200	225	250	1000
139.7	225	250	280	1000
168.3	250	280	315	1000
219.1	315	355	400	1000
273.0	400	450	500	1300
323.9	450	500	560	1500
355.6	500	560	630	1600
406.4	560	630	710	1600
457.0	630	710	800	1200
508.0	710	800	900	1200
610.0	800	900	-	1300

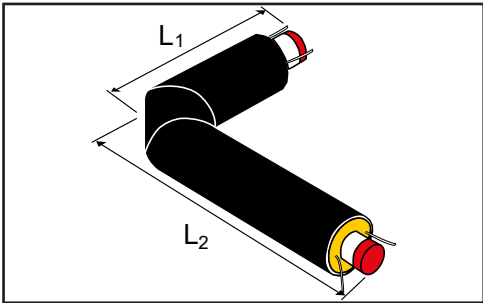
The Bonded Single Pipe  
Directional changes - Preinsulated bend

Bend 90° with different leg lengths

Preinsulated bend with different leg lengths.

90° bends with different leg lengths are used when pre-installation of the casing joint on the bend is required. In so on the longest leg.

The wires are placed in 3 and 9 o'clock position, so the bend can be turned upside down.



Component overview/data

Component No. 2500

Bend 90°

Steel pipe d	Outer casing D, mm			Leg L, mm	
	series 1	series 2	series 3	L1	L2
26.9	90	110	125	750	1250
33.7	90	110	125	750	1250
42.4	110	125	140	750	1250
48.3	110	125	140	750	1250
60.3	125	140	160	750	1250
76.1	140	160	180	750	1250
88.9	160	180	200	750	1250
114.3	200	225	250	1000	1500
139.7	225	250	280	1000	1500
163.3	250	280	315	1000	1500
219.1	315	355	400	1000	1500

## The Bonded Single Pipe

### Directional changes - Preinsulated bend

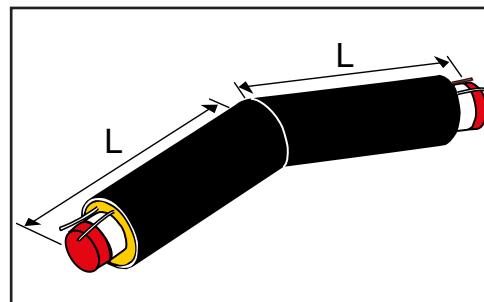
#### Bend 45°

45° bends in dimensions  $\leq \varnothing 219.1$  mm have a bending radius of  $2.5 \times d$  and are made by means of cold bending.

45° bends in dimensions  $\geq \varnothing 273.0$  mm have a bending radius of  $1.5 \times d$  and are made by means of a weld elbow.

Preinsulated bend with same leg length.

On request available in major dimensions.



#### Component overview/data

Component No. 2500

Bend 45°

Steel pipe, d mm	Outer casing, D mm			L mm
	series 1	series 2	series 3	
26.9	90	110	125	1000
33.7	90	110	125	1000
42.4	110	125	140	1000
48.3	110	125	140	1000
60.3	125	140	160	1000
76.1	140	160	180	1000
88.9	160	180	200	1000
114.3	200	225	250	1000
139.7	225	250	280	1000
168.3	250	280	315	1000
219.1	315	355	400	1000
273.0	400	450	500	600
323.9	450	500	560	600
355.6	500	560	630	800
406.4	560	630	710	800
457.0	630	710	800	800
508.0	710	800	900	800
610.0	800	900	-	800

## Directional changes - Curved pipe

### Application

Curved pipes are made by bending whole lengths of preinsulated pipes.

Max. operating pressure: 25 bar,

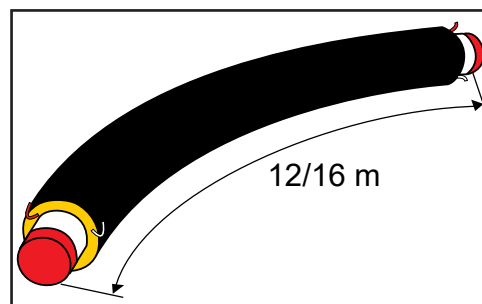
Further information about the application of curved pipes, see Design Manual.

### Description

Delivered in lengths of 12 and 16 m.

Curved pipes are supplied with embedded copper wires for surveillance.

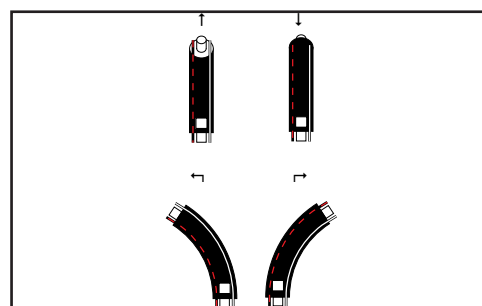
When ordering please state length, bending angle, and bending directions.



Direction:

When ordering please state the direction in which the pipes must be bent:

↑	up
↓	down
←	left
→	right



The direction is defined on the assumption that the tinned wire is to the right and the bare copper wire to the left.

Geometry:

$v_p$  = Bending angle, degrees

$R_p$  = Design radius, m

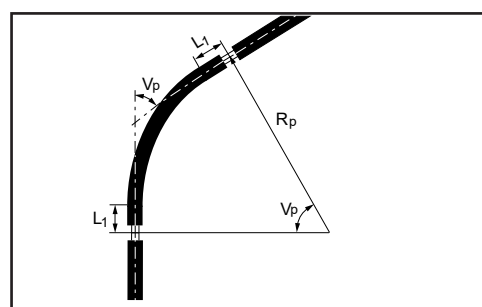
$L_1$  = Length of straight pipe ends, m

Tol = Tolerance of angle, degrees

The tolerance is calculated as a 1/3 of the elastic angle of the steel pipe.

Manufactured curved pipes are delivered in angles in whole  $1^\circ$  intervals. However, for dimensions larger than DN500 with 1 decimal place.

In addition the max. bending angle,  $v^{\circ}p$  must be determined in relation to the stress level under which it is being installed, see Design.



## Directional changes - Curved pipe

### Component overview/data

Component No. 2005

Curved pipe

Steel pipe d	12 m pipe				16 m pipe			
	Vmin V°	V°p max V°	L1 m	Tol ±V°	Vmin V°	V°p max V°	L1 m	Tol ±V°
76.1 x 2.9	6	25	0.60	5.6	-	-	-	-
88.9 x 3.2	5	33	0.60	4.8	-	-	-	-
114.3 x 3.6	4	38	0.56	3.8	6	13	2.49	5.1
139.7 x 3.6	4	43	0.63	3.1	5	16	2.47	4.1
168.3 x 4.0	3	45	0.67	2.6	4	19	2.45	3.5
219.1 x 4.5	3	41	0.89	2.0	3	19	2.42	2.7
273.0 x 5.0	2	36	1.02	1.6	3	17	2.38	2.1
323.9 x 5.6	2	29	1.21	1.4	2	17	2.36	1.9
355.6 x 5.6	2	25	1.16	1.2	2	18	2.35	1.6
406.4 x 6.3	2	18	1.47	1.1	2	17	2.34	1.5
457.0 x 6.3	1	8	1.48	0.9	2	10	2.33	1.2
508.0 x 6.3	1	3	1.38	0.8	1	4	2.29	1.1
610.0 x 7.1	-	-	-	-	1	1.3	2.26	0.9

Dimension DN 450 and larger may be delivered with longitudinally welded service pipe in higher wall thickness and so be more bendable. If higher angles than stated in the table are required, please contact LOGSTOR Technical Sales Support.

The Bonded Single Pipe  
Branches - Overview

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<b>Contents</b>	General
	Reinforcement plates in T-pieces
	SXT-WPJoint
	TSJoint
	BandJoint-branch Flextra
	Hot tapping valves
	Preinsulated T-piece - General
	Preinsulated T-piece - 45°
	Preinsulated T-piece - 90°
	Preinsulated T-piece - straight
	Branching from concrete duct - Adaptor pipe



## The Bonded Single Pipe Branches - General

---

### Branch types

LOGSTOR supplies 4 different types of branches:

- Weld joint branch (is welded onto the main pipe and shrunk onto the branch)
- Shrink joint branch
- Preinsulated T-piece
- Branch for concrete trench

### T-joints

LOGSTOR has 3 types of T-joints in its product assortment:

- BandJoint-branch Flextra
- TSJoint
- SXT-WPJoint

BandJoint-branch Flextra, where the main pipe is welded. The cross-linked branch is shrunk onto the mastic and sealed with a collar.

The TSJoint can be welded onto the main pipe or be shrunk on the mastic tape and sealed with a shrink sleeve. The branch is cross-linked and shrunk on the mastic tape and sealed with a collar.

The SXT-WPJoint is made of cross-linked material with embedded mastic. Is shrunk onto the main pipe and branch.

T-joints with mastic-sealed solutions can be used in all normal soil types, where the groundwater table is < 0.5 m above the pipes.

### Pre-insulated branches

Preinsulated T-pieces are available in 3 different designs:

- T-piece with dimensional offset (45°)
- T-piece parallel (90°)
- T-piece straight

Preinsulated T-pieces are produced in accordance with EN 448.

## The Bonded Single Pipe Branches - Reinforcement plate

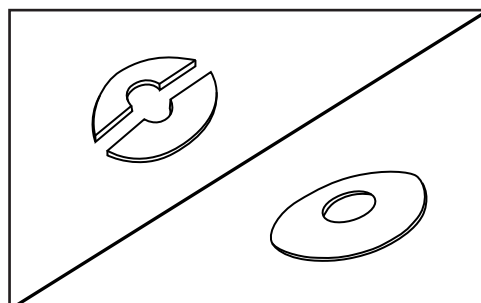
### Application

Used in connection with branches to reinforce the main pipe in T-pieces, if necessary according to LOGSTOR Design Manual.

### Description

The reinforcement plate is either 2-part or one plate.

The combinations, marked in below table are available.



### Component overview/data

Component No. 5426

Reinforcement plate

Branch ø mm Main pipe ø mm	26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3	139.7	168.3	219.1
33.7	x										
42.4	x	x									
48.3	x	x	x								
60.3	x	x	x	x							
76.1	x	x	x	x	x						
88.9	x	x	x	x	x	x					
114.3	x	x	x	x	x	x	x				
139.7	x	x	x	x	x	x	x	x			
168.3	x	x	x	x	x	x	x	x	x		
219.1	x	x	x	x	x	x	x	x	x	x	
273.0	x	x	x	x	x	x	x	x	x	x	x
323.9	x	x	x	x	x	x	x	x	x	x	x
355.6	x	x	x	x	x	x	x	x	x	x	x
406.4	x	x	x	x	x	x	x	x	x	x	x
457.0	x	x	x	x	x	x	x	x	x	x	x
508.0	x	x	x	x	x	x	x	x	x	x	x

## The Bonded Single Pipe Branches - SXT-WPJoint

### Application

T-joint for foaming. Made of cross-linked PE (PEX) with flanges and bolts in acid-resistant steel AISI 316 L. The T-joint is shrinkable and the foam holes are sealed with weld plugs.

The SXT-WPJoint can be used to branch perpendicular to or parallel with the main pipe.

The SXT-WPJoint can be used together with a hot tapping valve. The insulation thickness around the valve casing will be thinner.

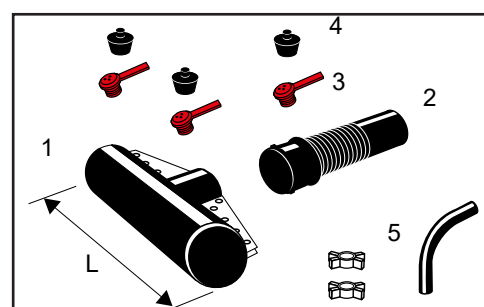
Installation on FlextraPipe with corrugated casing requires that the branch be secured with an extra collar, which is ordered separately.

### Description

The SXT-WPJoint consists of:

1. Main pipe joint
2. Branch pipe joint
3. Venting plugs
4. Weld plugs
5. Connecting piece with spacers

Max. temperature during transport and storage: 60°C.



### Component overview/data

Component No. 5210

SXT-WPJoint - Component Nos.: Main pipe joint 5210 - Branch pipe joint 5211

Main pipe, D1	Branch, D2 mm						
	90	110	125	140	160	180	200
90	x						
110	x	x					
125	x	x	x				
140	x	x	x	x			
160	x	x	x	x			
180	x	x	x	x	x		
200	x	x	x	x	x	x	
225	x	x	x	x	x	x	x
250	x	x	x	x	x	x	x
280	x	x	x	x	x	x	x
315	x	x	x	x	x	x	x

### Materials

T-shoe: Cross-linked PE, PEX

Branch joint: Cross-linked PE, PEX

Mastic: PIB-based mastic

Venting plugs: Polypropylene

Weld plugs: HDPE.

Flanges and bolts: Acid-resistant steel AISI 316L

## The Bonded Single Pipe Branches - SXT-WPJoint

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### Accessories

Collar for branch with corrugated casing, component No. 5500. Order 1 pc. per casing joint.

To be foamed with foam packs, component No. 0700.

When ordering state insulation series, and that delivery must include foam packs.

Reinforcement plate to reinforce the main pipe, if necessary, component No. 5426.

Hot tapping valve, component No. 4280.

The Bonded Single Pipe  
Branches - SXT-WPJoint

**Connecting piece**    Is used to branch from the main pipe.

**Component overview/data**        Component No. 5251

Connecting piece for SXT-WPJoint

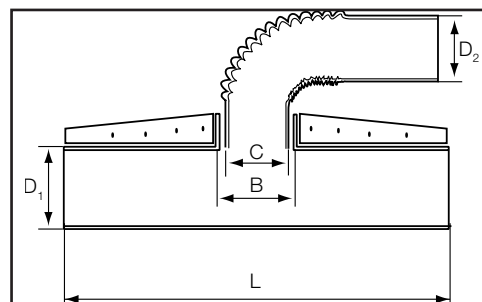
Connecting piece ø mm	Radius mm	
	45°	90°
26.9	140	140
33.7	140	140
42.4	140	140
48.3	140	140
60.3	150	150
76.1	190	190
88.9	222	165
114.3	170	170

## The Bonded Single Pipe Branches - SXT-WPJoint

### Measurements and combinations

The connecting piece of the main pipe fits several branch pipe joints and the branch pipe joint fits several branch dimensions.

The possible combinations appear from below table.



### Component overview/data

Component No. 5210

Possible combinations with connecting piece for SXT-WPJoint    Component Nos. 5210/5211

Main pipe joint			Branch pipe joint D2, mm					
			77-90	90-110	110-125	125-140	140-160	180-200
D1 mm	B mm	L mm	C mm					
90	115	680	105					
110	135	680	125	125				
125	155	680	144		144			
140	170	680	160		160	160		
160	170	680	160		160	160		
180	190	680	180		180	180	180	
200	170	680	160		160	160		
	230	720					220	220
225	170	680	160		160	160		
	230	720					220	220
250	170	680	160		160	160		
	230	720					220	220
280	170	680	160		160	160		
	230	720					220	220
315	170	680	160		160	160		
	230	720					220	220

## The Bonded Single Pipe Branches - SXT-WPJoint

### Application

T-joint for foaming, used to branch perpendicular to or parallel with the main pipe. The main pipe is made of weldable PE and the branch of cross-linked PE (PEX). The T-joint is shrinkable.

The main pipe is extrusion welded longitudinally, and then the ends are either shrunk onto the mastic tape and sealed with open shrink sleeves or welded with weld strips like the EWJoint.

The branch is shrunk onto the embedded mastic and sealed with a collar.

Foam holes are sealed with weld plugs in the main pipe and with expansion plugs in the branch.

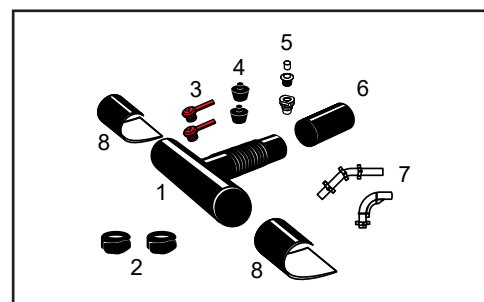
The TSJoint can be used together with a hot tapping valve. The insulation thickness around the valve casing will be thinner.

TSJoint main pipe  $\varnothing 450$  mm can be used as a saddle solution for outer casing  $\varnothing 355$  -  $\varnothing 560$  mm.

### Description

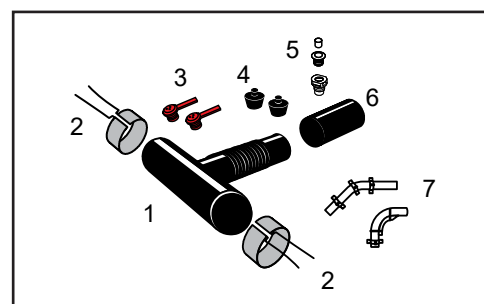
The TSJoint with mastic consists of:

1. T-joint
2. Mastic tape
3. Venting plugs
4. Weld plugs
5. Venting and expansion plugs
6. Collar
7. 45° or 90° connecting piece
8. Open shrink wraps



The TSJoint EW consists of:

1. T-joint
2. Weld strips
3. Venting plugs
4. Weld plugs
5. Venting and expansion plugs
6. Collar
7. 45° or 90° connecting piece



The accessories 2-4 are delivered separately in a plastic bucket.

Max. temperature during transport and storage: 40°C.

The Bonded Single Pipe  
Branches - TSJoint

Component  
overview/data

Component No. 5202

TSJoint

Branch D2	Main pipe D1, mm											
	125	140	160	180	200	225	250	280	315	355	400	450
90-125	x*	x	x	x	x	x	x	x	x	x	x	x
140-160					x	x	x	x	x	x	x	x

Length T-joint main pipe = 650 mm  
\* Max branch ø110 mm.

Materials

- T-shoe, base pipe: HDPE
- T-shoe, branch: Cross-linked PE, PEX
- Venting plug, base pipe: Polypropylene
- Venting plug, branch: LDPE
- Weld plugs: HDPE
- Collar: PEX with PIB-based mastic
- Sealing strip: PIB-based

Accessories

- To be foamed with foam packs, component No. 0700.
- When ordering state insulation series, and that delivery must include foam packs.
- Reinforcement plate to reinforce the main pipe, if necessary, component No. 5426.



The Bonded Single Pipe  
Branches - TSJoint

**Weld strip** Is used to weld together the joint and the outer casing.

**Component overview/data** Component No. 5556

**Materials** Weld strip: Electro-plated mesh

**Connecting piece** To ensure correct positioning of the branch pipe joint the connecting piece is delivered with spacers, fitting the relevant branch pipe. Outer casing dimension D2 is therefore to be stated when ordering.

**Component overview/data** Component No. 5250

Connecting piece

Connecting piece	For branch casing D2	Radius, mm	
mm	mm	45°	90°
26.9	90 110 125	140	140
33.7	90 110 125	140	140
42.4	110 125	140	140
48.3	110 125	140	140
60.3	125	150	150

**Component overview/data** Component No. 5251

Connecting piece

Connecting piece ø mm	For branch casing D2 mm	Radius, mm	
		45°	90°
42.4	140	140	140
48.3	140	140	140
60.3	140 160	150	150
76.1	140 160	190	190
88.9	160	222	165

## The Bonded Single Pipe Branches - BandJoint-branch Flextra

### Application

A BandJoint-branch Flextra is welded onto the main pipe. The branch is sealed with mastic and a collar.

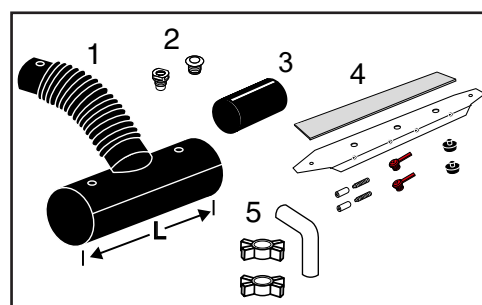
The main pipe joint is made of weldable PE with embedded welding wires. The branch is made of cross-linked material with embedded mastic for sealing. Can be used perpendicular to or parallel with the main pipe.

BandJoint-branch Flextra can be used together with a hot tapping valve. The insulation thickness around the valve casing will be thinner.

### Description

A BandJoint-branch Flextra set consists of:

1. BandJoint-branch
2. Venting and expansion plug for the branch
3. Collar for the branch
4. Accessories set
5. 45° or 90° connecting piece



### Component overview/data

Component No. 5640

BandJoint-branch Flextra

Branch	Main pipe, ø mm								
ø mm	125	140	160	180	200	225	250	280	315
L, mm	570	570	570	570	570	630	630	630	630
90-125	x*	x	x	x	x	x	x	x	x
140-160			x**	x**	x	x	x	x	x

\* Max branch ø 110 mm\*\* Max branch ø 140 mm

### Materials

T-shoe, base pipe HDPE

T-shoe, branch: Cross-linked PE, PEX

Venting plugs, base pipe: Polypropylene

Collar: PEX with PIB-based mastic

### Accessories

To be foamed with foam packs, component No. 0700.

When ordering state insulation series, and that delivery must include foam packs.

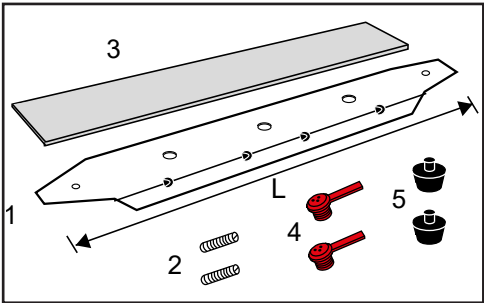
Reinforcement plate to reinforce the main pipe, if necessary, component No. 5426.

# The Bonded Single Pipe Branches - BandJoint-branch Flextra

**Depth guard**

The set contains:

- 1. Depth guard
- 2. Adjusting bolts
- 3. Felt pad
- 4. Venting plugs
- 5. Weld plugs



**Component  
overview/data**

Component No. 5606

Depth guard

	Dimension	
	90-200	225-315
Depth guard		
Covering length, mm	440	440
W, mm	40	70
L, mm	500	500

**Materials**

- Depth guard: Hot galvanised plate
- Felt pad: Felt
- Screws: PPS or steel
- Venting plug, branch: LDPE
- Weld plugs: HDPE

The Bonded Single Pipe  
Branches - BandJoint-branch Flextra

**Connecting piece** To ensure correct positioning of the branch pipe joint the connecting piece is delivered with spacers, fitting the relevant branch pipe. Outer casing dimension D2 is therefore to be stated when ordering.

**Component overview/data** Component No. 5250

Connecting piece

Connecting piece	For branch casing D2	Radius, mm	
mm	mm	45°	90°
26.9	90 110 125	140	140
33.7	90 110 125	140	140
42.4	110 125	140	140
48.3	110 125	140	140
60.3	125	150	150

**Component overview/data** Component No. 5251

Connecting piece

Connecting piece ø mm	For branch casing D2 mm	Radius, mm	
		45°	90°
42.4	140	140	140
48.3	140	140	140
60.3	140 160	150	150
76.1	140 160	190	190
88.9	160	222	165

## The Bonded Single Pipe Branches - Hot tapping valve

### Application

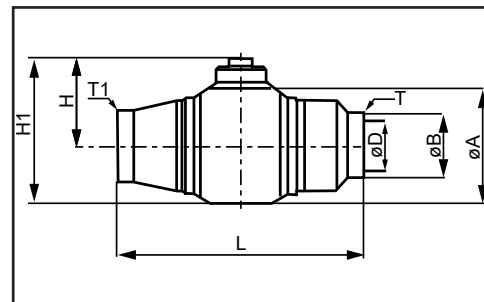
Hot tapping valves are used to establish branches on pipelines in operation.

Max. pressure closed valve 16 bar. Operating pressure after establishment of branch: 25 bar.

Please note that reinforcement of the main pipe may be necessary, cf. LOGSTOR Design Manual.

### Danfoss JIP

All hot tapping valves have a hexagon spindle and a hexagon plug.



### Component overview/data

Component No. 4280

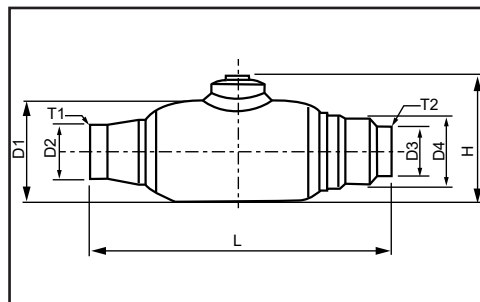
Danfoss JIP - Reduced passage

DN	ø mm	T mm	Bore, D mm	H mm	H1 mm	L mm	ø chamber, A mm	T1 mm	Thread	Operating key
20	26.9 (24)	2.5	15.5	42.0	63.2	128	42.4	3.9	G 3/4	8
20	26.9*	3.1	20.6	44.5	69	140	48.3	4.3	M 36x1.5	8
25	33.7	3.2	25.6	54.1	84.3	145	60.3	4.3	G 1 1/2	12
25	33.7*	3.2	20.6	42	66.2	140	48.3	4.6	M 36x1.5	8
32	42.4	3.2	25.6	54.1	84.3	145	60.3	4.6	G 1 1/2	12
40	48.3	3.2	40.5	64.4	108.9	200	88.9	4	G 2 1/2	12
40	48.3*	3.2	32.5	59.0	97.1	172	76.1	4	G 2	12
50	60.3	3.2	40.5	64.4	108.9	200	88.9	6.3	G 2 1/2	12
65	76.1	3	51.6	72.0	122.8	260	101.6	5.5	G 2 1/4	18
80	88.9	3.5	66.3	84.0	147.5	265	127.0	6	Rp 2 3/4	18
100	114.3	3.7	81.8	101.0	180.5	275	159.0	7.5	G 3 1/2	18

\* Can be used in LOGSTOR T-joints for optimum insulation around the valve chamber.

## The Bonded Single Pipe Branches - Hot tapping valve

Broen



### Component overview/data

Component No. 4280

Broen

Reduced passage									
DN	D2, ø	Wall thickness, mm		Bore, D3	H mm	L mm	ø chamber, D1 mm	Thread, D4	Operating key
		T2	T1						
15	21.3	2.0	3.5	15	53	127	42.4	G 7/8	5
20	26.9	2.3	3.5	15	53	127	42.4	G 7/8	5
25	33.7	2.6	3.5	20	63	135	51.0	G 1 1/8	5
32	42.4	2.6	3.5	25	68	145	57.0	G 1 1/2	5
40	48.3	2.6	4.0	32	96	178	76.1	G 1 3/4	7
50	60.3	2.9	4.0	39	107	198	88.9	G 2 1/4	7
65	76.1	2.9	7.5	49	118	205	108.0	M 64X2	8
80	88.9	3.2	8.0	63	137	200	127.0	M 76X2	8
100	114.3	3.6	9.0	78	163	225	152.0	M95X2	10/12*
10 mm hexagon key operates pipe plug. 12 mm key operates valve.									
Full passage									
DN	d2, ø	Wall thickness, mm		Bore, D3	H mm	L mm	ø chamber, D1 mm	Thread, D4	Operating key
		T2	T1						
20	26.9	2.3	3.5	20	60	143	51.2	G 1 1/8	5
25	33.7	2.6	3.5	25	67	145	56.0	G 1 1/2	5
32	42.4	2.6	4.0	32	92	178	76.0	G 1 3/4	5
40	48.3	2.6	5.0	39	103	198	88.0	G 2 1/4	7

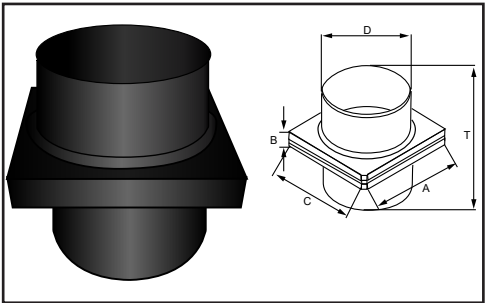
# The Bonded Single Pipe Branches - Hot tapping valve

**Tonisco ≥ Ø 139  
mm**

Hot tapping valve with stop plate. Hot tapping can be carried out with full passage.

The hot tapping valve is delivered with a steel weld ring.

Stop plate is included in the tool.



**Component  
overview/data**

Component No. 4280

Tonisco

DN	Dimension mm	Wall thickness mm	Bore mm	T mm	A x C x B mm
125	139.7	4.0	125	215.0	195 x 180 x 33
150	168.3	6.3	148	244	220 x 200 x 34
200	219.1	6.3	200	284	285 x 268 x 44
250	273	6.3	242	284	350 x 332 x 44

The steel plate is included in the tool.

Spacers between main pipe and Tonisco hot tapping valve are not included in the hot tapping valve. In these dimensions.

T-joints are made as special solutions.

**Accessories**

Hot tapping tools see the Tools section.

## The Bonded Single Pipe Branches - Preinsulated T-piece - General

### Application

Main pipes and branches up to dimension 323.9 mm are delivered in reinforced designs in order to withstand axial forces corresponding to stresses of 330 MPa, if the branch dimension is smaller than the main pipe dimension.

In case main pipe and branch have the same dimension, T-pieces can withstand axial forces corresponding to stresses of 190 MPa. If the main pipe and branch pipe dimension the same, a weld-T-piece is used according to EN 10253-2

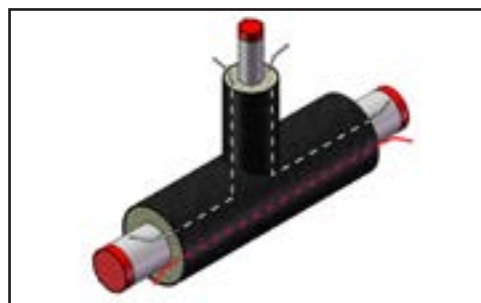
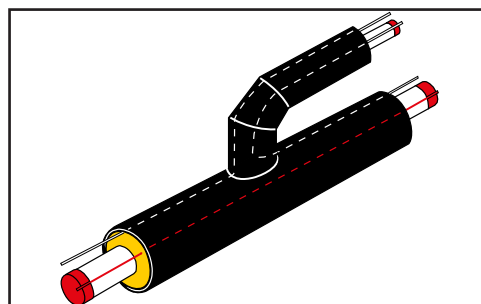
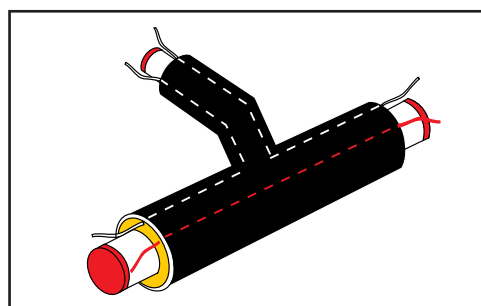
Preinsulated T-pieces are produced in accordance with EN 448.

T-pieces >  $\varnothing 323.9$  must always be documented by the design responsible person specifically as regards project class C after EN13941-1.

### Description

All preinsulated T-pieces are delivered with 2 embedded wires. A copper wire and a tinned wire.

The tinned wire always runs into the branch, whereas the copper wire runs straight through.





## The Bonded Single Pipe Branches - Preinsulated T-piece - General

### Wall thickness

ø 33,7-323,9:

T-pieces are made by collaring on base pipes in large wall thickness, cf. table, with the following exceptions:

T-pieces with main pipe and branch in the same dimension are made with weld-T-piece in accordance with EN 10253-2.

T-pieces for main pipe dimension ø 139.7-323.9 and branch in one dimension smaller than the main pipe dimension will be carried out with direct branch on pipes with larger wall thickness.

ø 355,6-508,0:

For dimension  $\geq \text{ø}355,6$  the direct branch will be carried out with reinforcement plate, if necessary.

T-pieces with the same main pipe dimension and branch dimension are made with weld-T-piece according to EN10253-2.

### Component overview/data

Component No. 3400

Collared main pipe

ød1 mm	Wall thick. mm
33.7	3.6
42.4	4.0
48.3	4.0
60.3	4.5
76.1	4.5
88.9	5.0
114.3	5.6
139.7	5.6
168.3	6.3
219.1	7.1
273.0	8.0
323.9	8.0

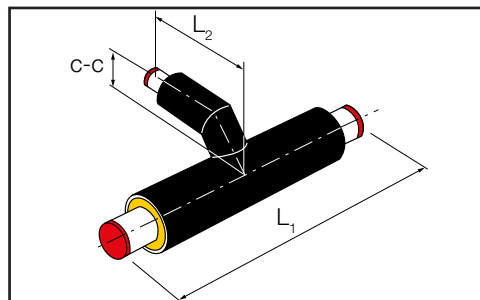
### Materials

All materials are like for straight pipes: Steel/PUR/PE-HD.

## The Bonded Single Pipe Branches - Preinsulated T-piece 45°

### Application

Internal pressure = 25 bar (grey = 16 bar)



### Component overview/data

Component No. 3500

Preinsulated T-piece, 45° - series 1

Main pipe		Branch ød2, series 1							
		26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3
ø d1/D1 mm	L1 mm	Length L2, mm C-C mm							
26.9/90	1000	700							
		170							
33.7/90	1000	700	700						
		170	170						
42.4/110	1000	700	700	700					
		178	178	185					
48.3/110	1000	700	700	700	700				
		178	178	185	185				
60.3/125	1200	700	700	700	700	700			
		185	185	193	193	200			
76.1/140	1200	700	700	700	700	700	700		
		195	195	203	203	210	220		
88.9/160	1200	700	700	700	700	700	700	700	
		205	205	213	213	220	230	240	
114.3/200	1200	700	700	700	700	700	800	800	800
		228	228	235	235	243	253	263	285
139.7/225	1200	700	700	700	700	800	800	800	800
		240	240	248	248	255	265	275	298
168.3/250	1200	800	800	800	800	800	800	800	900
		255	255	263	263	270	280	290	313
219.1/315	1500	800	800	800	800	800	800	800	900
		293	293	300	300	308	318	328	350
273.0/400	1500	800	800	800	800	900	900	900	900
		340	340	348	348	355	365	375	398
323.9/450	1500	900	900	900	900	900	900	900	1000
		365	365	373	373	380	390	400	423
355.6/500	1500	900	900	900	900	900	900	900	1000
		395	395	403	403	410	420	430	453
406.4/560	1600	900	900	900	900	900	1000	1000	1000
		430	430	438	438	445	455	465	488
457.0/630	2000	1000	1000	1000	1000	1000	1000	1000	1100
		470	470	478	478	485	495	505	528
508.0/710	2000	1000	1000	1000	1000	1000	1000	1100	1100
		515	515	523	523	530	540	550	573

## The Bonded Single Pipe Branches - Preinsulated T-piece 45°

Main pipe		Branch ød 2, series 1								
		139.7	168.3	219.1	273.0	323.9	355.6	406.4	457.0	508.0
ø d1/D1 mm	L1 mm	Length L2 mm C-C mm								
139.7/225	1200	900								
		310								
168.3/250	1200	900	900							
		325	340							
219.1/315	1500	900	900	1000						
		363	378	415						
273.0/400	1500	1000	1000	1100	1200					
		410	425	463	510					
323.9/450	1500	1000	1000	1100	1200	1200				
		435	450	488	535	560				
355.6/500	1500	1000	1000	1100	1200	1200	1300			
		465	480	518	565	590	620			
406.4/560	1600	1100	1100	1200	1300	1300	1300	1400		
		500	515	553	600	625	655	690		
457.0/630	2000	1100	1100	1200	1300	1300	1300	1400	1500	
		540	555	593	640	665	695	730	770	
508.0/710	2000	1100	1200	1200	1300	1300	1400	1400	1500	1500
		585	600	638	685	710	740	775	815	860

## The Bonded Single Pipe Branches - Preinsulated T-piece 45°

### Series 2

Internal pressure = 25 bar (grey = 16 bar)

### Component overview/data

Component No. 3500

Preinsulated T-piece, 45° - series 2

Main pipe		Branch ød2, series 2								
		26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3	
ø d1/D1 mm	L1 mm	Length L2, mm C-C mm								
26.9/110	1000	700								
		170								
33.7/110	1000	700	700							
		170	170							
42.4/125	1000	700	700	700						
		178	178	185						
48.3/125	1000	700	700	700	700					
		178	178	185	185					
60.3/140	1200	700	700	700	700	700				
		185	185	193	193	200				
76.1/160	1200	700	700	700	700	700	700			
		195	195	203	203	210	220			
88.9/180	1200	700	700	700	700	700	700	700		
		205	205	213	213	220	230	240		
114.3/225	1200	700	700	700	700	700	800	800	800	
		228	228	235	235	243	253	263	285	
139.7/250	1200	700	700	700	700	800	800	800	800	
		240	240	248	248	255	265	275	298	
168.3/280	1200	800	800	800	800	800	800	800	900	
		255	255	263	263	270	280	290	313	
219.1/355	1500	800	800	800	800	800	800	800	900	
		293	293	300	300	308	318	328	350	
273.0/450	1500	800	800	800	800	900	900	900	900	
		340	340	348	348	355	365	375	398	
323.9/500	1500	900	900	900	900	900	900	900	1000	
		365	365	373	373	380	390	400	423	
355.6/560	1500	900	900	900	900	900	900	900	1000	
		395	395	403	403	410	420	430	453	
406.4/630	1600	900	900	900	900	900	1000	1000	1000	
		430	430	438	438	445	455	465	488	
457.0/710	2000	1000	1000	1000	1000	1000	1000	1000	1100	
		470	470	478	478	485	495	505	528	
508.0/800	2000	1000	1000	1000	1000	1000	1000	1100	1100	
		515	515	523	523	530	540	550	573	

## The Bonded Single Pipe Branches - Preinsulated T-piece 45°

Main pipe		Branch ød 2, series 2								
		139.7	168.3	219.1	273.0	323.9	355.6	406.4	457.0	508.0
ø d1/D1 mm	L1 mm	Length L2 mm C-C mm								
139.7/250	1200	900								
		310								
168.3/280	1200	900	900							
		325	340							
219.1/355	1500	900	900	1000						
		363	378	415						
273.0/450	1500	1000	1000	1100	1200					
		410	425	463	510					
323.9/500	1500	1000	1000	1100	1200	1200				
		435	450	488	535	560				
355.6/560	1500	1000	1000	1100	1200	1200	1300			
		465	480	518	565	590	620			
406.4/630	1600	1100	1100	1200	1300	1300	1300	1400		
		500	515	553	600	625	655	690		
457.0/710	2000	1100	1100	1200	1300	1300	1300	1400	1500	
		540	555	593	640	665	695	730	770	
508.0/800	2000	1100	1200	1200	1300	1300	1400	1400	1500	1500
		585	600	638	685	710	740	775	815	860

## The Bonded Single Pipe Branches - Preinsulated T-piece 45°

### Series 3

Internal pressure = 25 bar (grey = 16 bar)

### Component overview/data

Component No. 3500

Preinsulated T-piece, 45° - series 3

Main pipe		Branch ød2, series 3								
		26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3	
ø d1/D1 mm	L1 mm	Length L2, mm C-C mm								
26.9/125	1000	700								
		190								
33.7/125	1000	700	700							
		190	190							
42.4/140	1000	700	700	700						
		198	198	205						
48.3/140	1000	700	700	700	700					
		198	198	205	205					
60.3/160	1200	700	700	700	700	700				
		208	208	215	215	225				
76.1/180	1200	700	700	700	700	700	700			
		218	218	225	225	235	245			
88.9/200	1200	700	700	700	700	700	800	800		
		228	228	235	235	245	255	265		
114.3/250	1200	800	800	800	800	800	800	800	900	
		253	253	260	260	270	280	290	315	
139.7/280	1200	800	800	800	800	800	800	800	900	
		268	268	275	275	285	295	305	330	
168.3/315	1200	800	800	800	800	800	800	800	900	
		285	285	293	293	303	313	323	348	
219.1/400	1500	800	800	800	800	800	900	900	900	
		328	328	335	335	345	355	365	390	
273.0/500	1500	900	900	900	900	900	900	900	1000	
		378	378	385	385	395	405	415	440	
323.9/560	1500	900	900	900	900	900	900	900	1000	
		408	408	415	415	425	435	445	470	
355.6/630	1500	900	900	1000	1000	1000	1000	1000	1100	
		443	443	450	450	460	470	480	505	
406.4/710	1600	1000	1000	1000	1000	1000	1000	1000	1100	
		483	483	490	490	500	510	520	545	
457.0/800	2000	1000	1000	1000	1000	1000	1100	1100	1100	
		528	528	535	535	545	555	565	590	
508.0/900	2000	1100	1100	1100	1100	1100	1100	1100	1200	
		578	578	585	585	595	605	615	640	

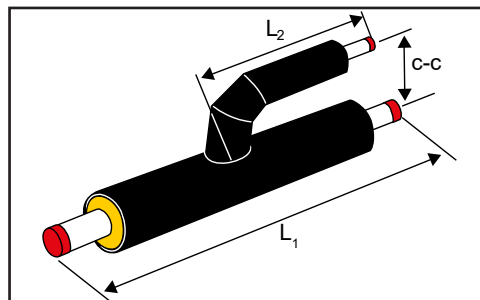
## The Bonded Single Pipe Branches - Preinsulated T-piece 45°

Main pipe		Branch ød 2, series 3								
		139.7	168.3	219.1	273.0	323.9	355.6	406.4	457.0	508.0
ø d1/D1 mm	L1 mm	Length L2 mm C-C mm								
139.7/280	1200	900								
		345								
168.3/315	1200	900	900							
		363	380							
219.1/400	1500	1000	1000	1100						
		405	423	465						
273.0/500	1500	1000	1000	1100	1200					
		455	473	515	565					
323.9/560	1500	1000	1100	1200	1300	1300				
		485	503	545	595	625				
355.6/630	1500	1100	1100	1200	1300	1300	1400			
		520	538	570	630	660	695			
406.4/710	1600	1100	1100	1200	1300	1300	1400	1400		
		560	578	620	670	700	735	775		
457.0/800	2000	1200	1200	1300	1400	1400	1400	1500	1500	
		605	623	665	715	745	780	820	865	
508.0/900	2000	1200	1200	1300	1400	1400	1500	1500	1600	1700
		655	673	715	765	795	830	870	915	965

## The Bonded Single Pipe Branches - Preinsulated T-piece - 90°

### Series 1

Internal pressure = 25 bar (grey = 16 bar)



### Component overview/data

Component No. 3600

Preinsulated T-piece, 90° - series 1

Main pipe ød mm		Branch ød2 series 1								
		26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3	
		L2 mm								
		550	550	550	550	600	600	650	700	
ød1/øD1 mm	L1 mm	C-C mm								
26.9/90	1000	270								
33.7/90	1000	270	270							
42.4/110	1000	278	278	285						
48.3/110	1000	278	278	285	285					
60.3/125	1200	285	285	293	293	300				
76.1/140	1200	295	295	303	303	310	320			
88.9/160	1200	305	305	313	313	320	330	340		
114.3/200	1200	328	328	335	335	343	353	363	406	
139.7/225	1200	340	340	348	347	355	365	375	403	
168.3/250	1200	355	355	363	363	370	380	390	415	
219.1/315	1500	393	393	400	400	408	418	428	450	
273.0/400	1500	440	440	448	447	455	465	475	498	
323.9/450	1500	465	465	473	473	480	490	500	523	
355.6/500	1500	495	495	503	503	510	520	530	560	
406.4/560	1600	530	530	538	538	545	555	565	588	
457.0/630	2000	570	570	578	578	535	595	605	628	
508.0/710	2000	605	605	613	613	630	640	650	673	



## The Bonded Single Pipe Branches - Preinsulated T-piece - 90°

Main pipe ød mm		Branch ød2 series 1								
		139.7	168.3	219.1	273.0	323.9	355.6	406.4	457.0	508.0
		L2 mm								
		700	700	800	800	850	900	1000	1050	1100
ød1/D1 mm	L1 mm	C-C mm								
139.7/225	1200	413								
168.3/250	1200	426	489							
219.1/315	1500	463	499	626						
273.0/400	1500	510	545	627	647					
323.9/450	1500	535	570	653	635	711				
355.6/500	1500	565	601	697	665	728	852			
406.4/560	1600	600	636	722	700	753	842	985		
457.0/630	2000	640	676	757	740	793	872	977	1109	
508.0/710	2000	685	721	802	785	838	912	1022	1094	1233

## The Bonded Single Pipe Branches - Preinsulated T-piece - 90°

### Series 2

Internal pressure = 25 bar (grey = 16 bar)

### Component overview/data

Component No. 3600

Preinsulated T-piece, 90° - series 2

Main pipe ød mm		Branch ød2 series 2								
		26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3	
		L2 mm								
		550	550	550	550	600	600	650	700	
ød1/øD1 mm	L1 mm	C-C mm								
26.9/110	1000	270								
33.7/110	1000	270	270							
42.4/125	1000	278	278	285						
48.3/125	1000	278	278	285	285					
60.3/140	1200	285	285	293	293	300				
76.1/160	1200	295	295	303	303	310	320			
88.9/180	1200	305	305	313	313	320	330	340		
114.3/225	1200	328	328	335	335	343	353	363	406	
139.7/250	1200	340	340	348	347	355	365	375	403	
168.3/280	1200	355	355	363	363	370	380	390	415	
219.1/355	1500	393	393	400	400	408	418	428	450	
273.0/450	1500	440	440	448	447	455	465	475	498	
323.9/500	1500	465	465	473	473	480	490	500	523	
355.6/560	1500	495	495	503	503	510	520	530	560	
406.4/630	1600	530	530	538	538	545	555	565	588	
457.0/710	2000	570	570	578	578	585	595	605	628	
508.0/800	2000	605	605	613	613	630	640	650	673	
Main pipe ød mm		Branch ød2 series 2								
		139.7	168.3	219.1	273.0	323.9	355.6	406.4	457.0	508.0
		L2 mm								
		700	700	800	800	850	900	1000	1050	1100
ød1/D1 mm	L1 mm	C-C mm								
139.7/250	1200	413								
168.3/280	1200	426	489							
219.1/355	1500	463	499	626						
273.0/450	1500	510	545	627	647					
323.9/500	1500	535	570	653	635	711				
355.6/560	1500	565	601	697	665	728	852			
406.4/630	1600	600	636	722	700	753	842	985		
457.0/710	2000	640	676	757	740	793	872	977	1109	
508.0/800	2000	685	721	802	785	838	912	1022	1094	1233

## The Bonded Single Pipe Branches - Preinsulated T-piece - 90°

### Series 3

Internal pressure = 25 bar (grey = 16 bar)

### Component overview/data

Component No. 3600

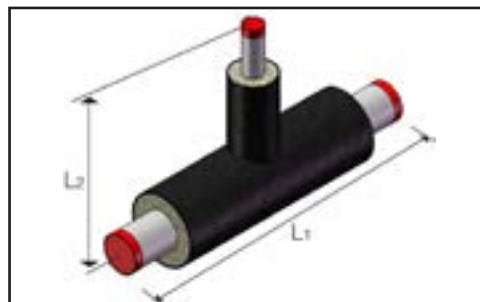
Preinsulated T-piece, 90° - series 3

Main pipe ød mm		Branch ød2 series 3								
		26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3	
		L2 mm								
		550	550	550	550	600	600	650	700	
ød1/øD1 mm	L1 mm	C-C mm								
26.9/125	1000	285								
33.7/125	1000	285	285							
42.4/140	1000	293	293	300						
48.3/140	1000	293	293	300	300					
60.3/160	1200	303	303	311	311	320				
76.1/180	1200	312	312	320	321	330	340			
88.9/200	1200	322	322	331	330	340	350	360		
114.3/250	1200	348	348	355	355	366	376	386	415	
139.7/280	1200	363	363	371	370	380	390	400	430	
168.3/315	1200	380	380	388	388	398	408	418	447	
219.1/400	1500	423	423	430	430	441	451	461	490	
273.0/500	1500	473	473	480	480	490	500	510	540	
323.9/560	1500	503	503	511	510	520	530	540	570	
355.6/630	1500	538	538	546	546	555	565	575	605	
406.4/710	1600	578	578	586	586	595	605	615	645	
457.0/800	2000	623	623	630	630	640	650	660	690	
508.0/900	2000	673	673	680	680	690	700	710	740	
Main pipe ød mm		Branch ød2 series 3								
		139.7	168.3	219.1	273.0	323.9	355.6	406.4	457.0	508.0
		L2 mm								
		700	700	800	800	850	900	1000	1050	1100
ød1/D1 mm	L1 mm	C-C mm								
139.7/280	1200	440								
168.3/315	1200	458	489							
219.1/400	1500	501	529	627						
273.0/500	1500	550	579	677	660					
323.9/560	1500	580	609	707	690	751				
355.6/630	1500	615	644	742	725	792	882			
406.4/710	1600	655	686	782	765	832	910	995		
457.0/800	2000	700	729	827	810	877	955	1027	1119	
508.0/900	2000	750	779	877	860	927	1005	1077	1149	1263

## The Bonded Single Pipe Branches - Preinsulated T-piece straight

### Application

Internal pressure = 25 bar (grey = 16 bar)



### Component overview/data

Component No. 3400

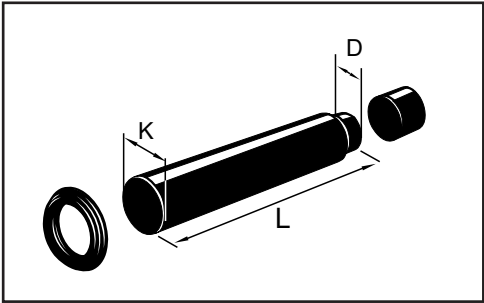
Preinsulated T-piece straight

Main pipe					Branch d2 series 1, 2, and 3													
d1 mm	Outer casing D1, mm Series			L1 mm	26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3	139.7	168.3	219.1	273.0	323.9	
	1	2	3		L2, mm													
26.9	90	110	125	1000	500													
33.7	90	110	125	1000	500	500												
42.4	110	125	140	1000	500	500	500											
48.3	110	125	140	1000	500	500	500	500										
60.3	125	140	160	1200	600	600	600	600	600									
76.1	140	160	180	1200	600	600	600	600	600	600								
88.9	160	180	200	1200	600	600	600	600	600	600	600							
114.3	200	225	250	1200	600	600	600	600	600	600	600	600						
139.7	225	250	280	1200	600	600	600	600	600	600	600	600	600					
168.3	250	280	315	1200	600	600	600	600	600	600	600	600	600	600				
219.1	315	355	400	1500	700	700	700	700	700	700	700	700	700	700	700			
273.0	400	450	500	1500	700	700	700	700	700	700	700	700	700	700	700	700		
323.9	450	500	560	1500	800	800	800	800	800	800	800	800	800	800	800	800	800	
355.6	500	560	630	1500	800	800	800	800	800	800	800	800	800	800	800	800	800	
406.4	560	630	710	1600	800	800	800	800	800	800	800	800	800	800	800	800	800	
457.0	630	710	800	2000	900	900	900	900	900	900	900	900	900	900	900	900	900	
508.0	710	800	900	2000	900	900	900	900	900	900	900	900	900	900	900	900	900	

# The Bonded Single Pipe Branches - Adaptor pipe

**Application**      Used when branching from pipe in concrete duct. Ensures a water-proof introduction into the concrete duct and allows the branch to follow the movement of the main pipe in the concrete duct.

- Description**      The set consists of:
- Connecting pipe
  - Shrink sleeve
  - Wall entry sleeve



**Component overview/data**      Component No. 5900

Adaptor pipe

D mm	K mm	L mm
90	140	1000
110	160	1000
125	180	1000
140	200	1000
160	225	1000
180	250	1000
200	280	1500
225	315	1500
250	355	1500
280	400	1500
315	450	1500
355	500	1500
400	560	1500
450	630	1500

The Bonded Single Pipe  
Valve arrangements - Overview

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Description	This section contains a description of the valve arrangements, used in connection with isolation, venting and draining the pipe systems.
Contents	General Isolation valve Isolation valve with 1 service valve Isolation valve with 2 service valves Permanent spindle extension Cover Preinsulated pipe with service valve Preinsulated service valve Disposable valve

## The Bonded Single Pipe Valve arrangements - General

<b>Valve arrangements</b>	<p>The preinsulated isolation valves can be installed at any point in the pipe system and are installed directly in the ground during pipe installation.</p> <p>Preinsulated isolation valves are applicable to all installation methods.</p> <p>The isolation valve is a ball valve, consisting of an all-welded casing and a polished stainless steel ball, fitted with spring loaded teflon seats which make the valve watertight even at low pressures.</p> <p>All LOGSTOR standard valves are with reduced passage.</p>
<b>Isolation valve</b>	<p>Isolation valve for <math>\varnothing</math> 33.7 - 323.9 mm. Larger dimensions are made to order.</p> <p>Component No. 4200.</p>
<b>Isolation valve with 1 service valve</b>	<p>Isolation valve for <math>\varnothing</math> 48.3 - 323.9 mm.</p> <p>Larger dimensions are made to order.</p> <p>Component No. 4220.</p>
<b>Isolation valve with 2 service valves</b>	<p>Isolation valve for <math>\varnothing</math> 48.3 - 323.9 mm.</p> <p>Larger dimensions are made to order.</p> <p>Component No. 4240.</p>
<b>Extension spindle</b>	<p>Permanent extension spindle for <math>\varnothing</math> 33.7 - 323.9 mm.</p> <p>Component No. 4285.</p>
<b>Covers</b>	<p>Two types of covers are available:</p> <p>A. Galvanized metal cover for protection against high groundwater level</p> <p>Component No. 4315.</p> <p>B. PE-cover</p> <p>Component No. 5716.</p>
<b>Separate venting and draining</b>	<p>There are two different, separate venting and draining possibilities available:</p> <p>A: Preinsulated connecting piece with service valve for on-site installation.</p> <p>Component No. 4270.</p> <p>B: Preinsulated service valve</p> <p>Component No. 3400.</p>
<b>Disposable valve</b>	<p>A disposable valve is used for temporary shut-off of house connections. It is placed in an end fitting.</p> <p>Component No. 4264.</p>

## The Bonded Single Pipe Isolation valve

### Application

Preinsulated isolation valves can be installed at any point in the pipe system. They can be used for all installation methods. Max. axial stress 300 N/mm<sup>2</sup>. Working pressure: 25 bar.

### Description

All preinsulated isolation valves have embedded copper wires for surveillance.

As a standard the wires go straight through the main pipe, but on enquiry preinsulated isolation valves with surveillance wires, exiting the end cap at the spindle top in a loop are available.

They are available in dimensions  $\varnothing$  33.7 - 323.9 mm. Larger dimensions are made to order.

LOGSTOR standard preinsulated isolation valve is either a Vexve valve or a Broen valve. The geometry, spanner width of the spindle and of the back-stop are the same regardless of which valve is delivered.

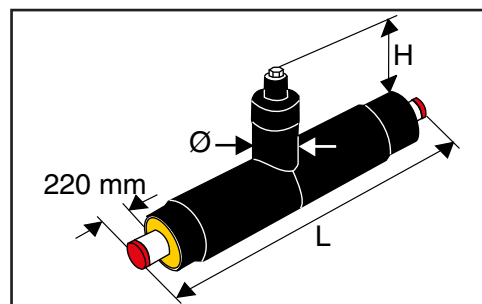
As a standard valves with reduced passage are delivered. On enquiry valves with full passage may be delivered.

For steel dimensions  $\geq$  219.1 mm the valve must be operated by means of a gear. To be ordered separately. See Tools section.

Valves  $\varnothing$ 33.7 - 168.3 mm can be operated by means of a tee key.

Valves  $\varnothing$ 114.3 -  $\varnothing$ 406 mm can be operated by means of a portable gear.

Valves  $\geq$   $\varnothing$ 168.3 mm can be delivered with a fix gear on enquiry. Hydraulic or electric actuator is available on enquiry.



### Component overview/data

Component No. 4200

### Materials

Preinsulated isolation valves comply with the requirements in EN 488.

The isolation valve is a ball valve, consisting of an all-welded casing and a polished stainless steel ball, fitted with spring loaded teflon seat.

The spindle top is made of stainless steel.

Other materials as for straight pipes.



## The Bonded Single Pipe Isolation valve

### Component overview/data

Component No. 4200

Isolation valve - series 1

Steel pipe ø out. mm	Outer casing ø out. mm	L mm	H mm	øK mm	øV mm	NV spindle mm	NV backstop mm
33.7	90	1500	480	125	110	19	
42.4	110	1500	485	125	110	19	
48.3	110	1500	495	125	110	19	
60.3	125	1500	500	140	110	19	
76.1	140	1500	505	160	110	19	
88.9	160	1500	515	200	110	19	
114.3	200	1500	525	225	140	27	70
139.7	225	1500	545	250	140	27	70
168.3	250	1500	565	280	140	27	70
219.1	315	1500	585	355	140	50	90
273.0	400	1500	559	450	200	50	90
323.9	450	1800	610	560	200	50	90

### Component overview/data

Component No. 4200

Isolation valve - series 2

Steel pipe ø out. mm	Outer casing ø out. mm	L mm	H mm	øK mm	øV mm	NV spindle mm	NV backstop mm
33.7	110	1500	480	125	110	19	
42.4	125	1500	485	125	110	19	
48.3	125	1500	495	125	110	19	
60.3	140	1500	500	140	110	19	
76.1	160	1500	505	180	110	19	
88.9	180	1500	515	200	110	19	
114.3	225	1500	525	250	140	27	70
139.7	250	1500	545	280	140	27	70
168.3	280	1500	565	315	140	27	70
219.1	355	1500	585	355	140	50	90
273.0	450	1500	559	500	200	50	90
323.9	500	1800	610	560	200	50	90

The Bonded Single Pipe  
Isolation valve

Component  
overview/data

Component No. 4200

Isolation valve - series 3

Steel pipe ø out. mm	Outer casing ø out. mm	L mm	H mm	øK mm	øV mm	NV spindle mm	NV backstop mm
33.7	125	1500	480	125	110	19	
42.4	140	1500	485	140	110	19	
48.3	140	1500	495	140	110	19	
60.3	160	1500	500	160	110	19	
76.1	180	1500	505	180	110	19	
88.9	200	1500	515	225	110	19	
114.3	205	1500	525	250	140	27	70
139.7	280	1500	545	280	140	27	70
168.3	315	1500	565	315	140	27	70
219.1	400	1500	585	400	140	50	90
273.0	500	1500	559	500	200	50	90
323.9	560	1800	610	630	200	50	90

## Preinsulated Single Pipe Isolation valve with 1 service valve

**Application** Preinsulated isolation valve with service valve for venting and draining arrangements can be installed at any point in the pipe system.

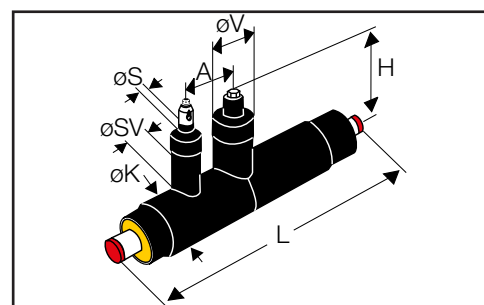
They can be used for all installation methods. Max. axial stress 300 N/mm<sup>2</sup>.

Working pressure: 25 bar.

**Description** All preinsulated isolation valves have embedded copper wires for surveillance.

As a standard the wires go straight through the main pipe, but on enquiry preinsulated isolation valves with surveillance wires, exiting the end cap at the spindle top in a loop are available.

They are available in dimensions  $\varnothing$  48.3 - 323.9 mm. Larger dimensions are made to order.



LOGSTOR standard preinsulated isolation valve is either a Vexve valve or a Broen valve. The geometry, spanner width of the spindle and of the back-stop are the same regardless of which valve is delivered.

As a standard valves with reduced passage are delivered. On enquiry valves with full passage may be delivered.

For steel dimensions  $\geq$  219.1 mm the valve must be operated by means of a gear. To be ordered separately. See Tools section.

Valves  $\varnothing$  33.7 - 168.3 mm can be operated by means of a tee key.

Valves  $\varnothing$  114.3 -  $\varnothing$  406 mm can be operated by means of a portable gear.

Valves  $\geq$   $\varnothing$  168.3 mm can be delivered with a fix gear on enquiry. Hydraulic or electric actuator is available on enquiry.

### Component overview/data

Component No. 4220

### Materials

Preinsulated isolation valves comply with the requirements in EN 488.

The isolation valve is a ball valve, consisting of an all-welded casing and a polished stainless steel ball, fitted with spring loaded teflon seats.

Spindle top and service valves are made of stainless steel.

Other materials as for straight pipes.

## he Bonded Single Pipe Isolation valve with 1 service valve

### Component overview/data

Component No. 4220

Isolation valve with 1 service valve - series 1

Steel pipe ø out. mm	Outer casing ø out. mm	L mm	H mm	øK mm	øV mm	A mm	øS/øSV mm	NV spindle mm	NV backstop mm
48.3	110	1500	495	125	110	175	42.4/110	19	
60.3	125	1500	500	140	110	175	42.4/110	19	
76.1	140	1500	505	160	110	175	42.4/110	19	
88.9	160	1500	515	200	110	175	42.4/110	19	
114.3	200	1500	525	225	140	175	48.3/125	27	70
139.7	225	1500	545	250	140	175	48.3/125	27	70
168.3	250	1500	565	280	140	175	48.3/125	27	70
219.1	315	2000	585	355	140	250	60.3/140	50	90
273.0	400	2000	559	450	200	330	60.3/140	50	90
323.9	450	2500	610	560	200	350	60.3/140	50	90

### Component overview/data

Component No. 4220

Isolation valve with 1 service valve - series 2

Steel pipe ø out. mm	Outer casing ø out. mm	L mm	H mm	øK mm	øV mm	A mm	øS/øSV mm	NV spindle mm	NV backstop mm
48.3	125	1500	495	125	110	175	42.4/110	19	
60.3	140	1500	500	140	110	175	42.4/110	19	
76.1	160	1500	505	180	110	175	42.4/110	19	
88.9	180	1500	515	200	110	175	42.4/110	19	
114.3	225	1500	525	250	140	175	48.3/125	27	70
139.7	250	1500	545	280	140	175	48.3/125	27	70
168.3	280	1500	565	315	140	175	48.3/125	27	70
219.1	355	2000	585	355	140	250	60.3/140	50	90
273.0	450	2000	559	500	200	330	60.3/140	50	90
323.9	500	2500	610	560	200	350	60.3/140	50	90

he Bonded Single Pipe  
Isolation valve with 1 service valve

Component  
overview/data

Component No. 4220

Isolation valve with 2 service valves - series 3

Steel pipe ø out. mm	Outer casing ø out. mm	L mm	H mm	øK mm	øV mm	A mm	øS/øSV mm	NV spindle mm	NV backstop mm
48.3	140	1500	495	140	110	175	42.4/110	19	
60.3	160	1500	500	160	110	175	42.4/110	19	
76.1	180	1500	505	180	110	175	42.4/110	19	
88.9	200	1500	515	225	110	175	42.4/110	19	
114.3	250	1500	525	250	140	175	48.3/125	27	70
139.7	280	1500	545	280	140	175	48.3/125	27	70
168.3	315	1500	565	315	140	175	48.3/125	27	70
219.1	400	2000	585	400	140	250	60.3/140	50	90
273.0	500	2000	559	500	200	330	60.3/140	50	90
323.9	560	2500	610	630	200	350	60.3/140	50	90

## The Bonded Single Pipe Isolation valve with 2 service valves

### Application

Preinsulated isolation valve with service valves for venting and draining can be installed at any point in the pipe system.

They can be used for all installation methods. Max. axial stress 300 N/mm<sup>2</sup>.

Working pressure: 25 bar.

### Description

All preinsulated isolation valves have embedded copper wires for surveillance.

As a standard the wires go straight through the main pipe, but on enquiry preinsulated isolation valves with surveillance wires, exiting the end cap at the spindle top in a loop are available.

They are available in dimensions  $\varnothing 48.3$  - 323.9 mm. Larger dimensions are made to order.

LOGSTOR standard preinsulated isolation valve is either a Vexve valve or a Broen valve. The geometry, spanner width of the spindle and of the back-stop are the same regardless of which valve is delivered.

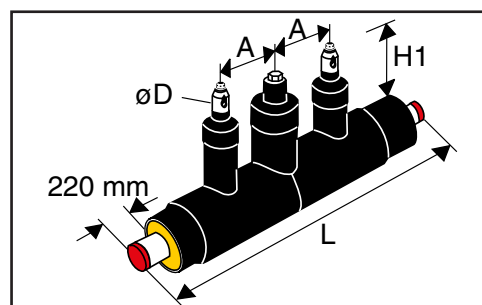
As a standard valves with reduced passage are delivered. On enquiry valves with full passage may be delivered.

For steel dimensions  $\geq 219.1$  mm the valve must be operated by means of a gear. To be ordered separately. See Tools section.

Valves  $\varnothing 33.7$  - 168.3 mm can be operated by means of a tee key.

Valves  $\varnothing 114.3$  -  $\varnothing 406$  mm can be operated by means of a portable gear.

Valves  $\geq \varnothing 168.3$  mm can be delivered with a fix gear on enquiry. Hydraulic or electric actuator is available on enquiry.



### Component overview/data

Component No. 4240

### Materials

Preinsulated isolation valves comply with the requirements in EN 488.

The isolation valve is a ball valve, consisting of an all-welded casing and a polished stainless steel ball, fitted with spring loaded teflon seats.

Spindle top and service valves are made of stainless steel.

Other materials as for straight pipes.

## The Bonded Single Pipe

### Isolation valve with 2 service valves

#### Component overview/data

Component No. 4240

Isolation valve with 2 service valves - series 1

Steel pipe ø out. mm	Outer casing ø out. mm	L mm	H mm	øK mm	øV mm	A mm	øS/øSV mm	NV spindle mm	NV backstop mm
48.3	110	1500	495	125	110	175	42.4/110	19	
60.3	125	1500	500	140	110	175	42.4/110	19	
76.1	140	1500	505	160	110	175	42.4/110	19	
88.9	160	1500	515	200	110	175	42.4/110	19	
114.3	200	1500	525	225	140	175	48.3/125	27	70
139.7	225	1500	545	250	140	175	48.3/125	27	70
168.3	250	1500	565	280	140	175	48.3/125	27	70
219.1	315	2000	585	355	140	250	60.3/140	50	90
273.0	400	2000	559	450	200	330	60.3/140	50	90
323.9	450	2500	610	560	200	350	60.3/140	50	90

#### Component overview/data

Component No. 4240

Isolation valve with 2 service valves - series 2

Steel pipe ø out. mm	Outer casing ø out. mm	L mm	H mm	øK mm	øV mm	A mm	øS/øSV mm	NV spindle mm	NV backstop mm
48.3	125	1500	495	125	110	175	42.4/110	19	
60.3	140	1500	500	140	110	175	42.4/110	19	
76.1	160	1500	505	180	110	175	42.4/110	19	
88.9	180	1500	515	200	110	175	42.4/110	19	
114.3	225	1500	525	250	140	175	48.3/125	27	70
139.7	250	1500	545	280	140	175	48.3/125	27	70
168.3	280	1500	565	315	140	175	48.3/125	27	70
219.1	355	2000	585	355	140	250	60.3/140	50	90
273.0	450	2000	559	500	200	330	60.3/140	50	90
323.9	500	2500	610	560	200	350	60.3/140	50	90

The Bonded Single Pipe  
Isolation valve with 2 service valves

Component  
overview/data

Component No. 4240

Series 3

Steel pipe ø out. mm	Outer casing ø out. mm	L mm	H mm	øK mm	øV mm	A mm	øS/øSV mm	NV spindle mm	NV backstop mm
48.3	140	1500	495	140	110	175	42.4/110	19	
60.3	160	1500	500	160	110	175	42.4/110	19	
76.1	180	1500	505	180	110	175	42.4/110	19	
88.9	200	1500	515	225	110	175	42.4/110	19	
114.3	250	1500	525	250	140	175	48.3/125	27	70
139.7	280	1500	545	280	140	175	48.3/125	27	70
168.3	315	1500	565	315	140	175	48.3/125	27	70
219.1	400	2000	585	400	140	250	60.3/140	50	90
273.0	500	2000	559	500	200	330	60.3/140	50	90
323.9	560	2500	665	630	200	350	60.3/140	50	90



## The Bonded Single Pipe Permanent spindle extension

**Application** Spindle extension for installation on installed isolation valves whose spindle should be permanently extended.

It is applicable for LOGSTOR valve arrangements in dimensions  $\varnothing$  26.9 mm up to and incl.  $\varnothing$  323.9 mm.

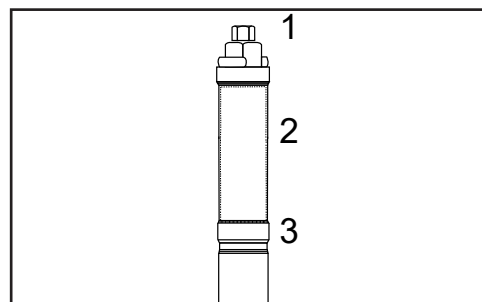
**Description** For isolation valves in dimensions  $\varnothing$  33.7 - 323.9 mm the permanent extension arrangement consists of:

1. Spindle
2. Spindle housing
3. Adapter

All external parts are made of AISI 316 steel.

The seal is made of rubber (NBR).

In connection with permanent spindle extension the stop of the valve is repositioned in the extension. The indicator for open/shut is positioned at the top of the extension.



**Protection against water ingress** The transition between spindle top on the preinsulated valve and spindle extension must be protected against water ingress.

For spindle extension for valve  $\varnothing$  33.7 - 88.9 end-cap DHEC No. 2300 is used.

For spindle extension  $\varnothing$  114.3 - 219.1 LOGSTOR collar 63 - 160 with mastic, product No. 5550 0063 160 000 is used.

or spindle extension  $\varnothing$  273 - 323.9 FXJoint, product No. 5057 0125 180 000 is used.

**Component overview/data** Component No. 4285

Spindle extension

Product No.	Valve $\varnothing$ mm	Dimension (hexagon) mm	L mm
4285 1000 011 001	33.7 - 88.9	19	1000
4285 0500 011 001	33.7 - 88.9	19	500
4285 1000 012 001	114.3 - 168.3	27	1000
4285 0500 012 001	114.3 - 168.3	27	500
4285 1000 013 001	219.1 - 323.9	50/90	1000
4285 0500 013 001	219.1 - 323.9	50/90	500

On enquiry spindle extension is available at intervals of 250 mm from length 500 mm to 2000 mm.

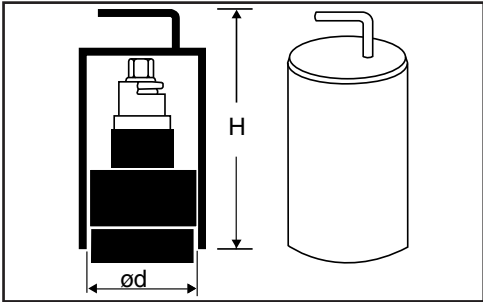
# The Bonded Single Pipe Cover

Application

The galvanized cover is used in water-logged areas.  
  
At periodic floodings the cover effectively prevents water from penetrating into the spindle top and the venting/drainage valves and exposing these to corrosion or deposits.

Description

The cover is not fixed, but simply placed over the spindle top or the venting/drainage arrangement.  
  
The weight of the cover prevents it from being lifted by floods.



Component overview/data

Component No. 4315

Cover

Product No.	Spindle top ø mm	Vent./drain. arrangement ø mm	ød mm	H mm
4315 0033 021 004	110		132	330
4315 0048 021 004	140	125	160	370
4315 0219 021 004	180	140	210	380

Materials

The cover is designed as shown in the picture and made of galvanized steel plates with a lifting handle.

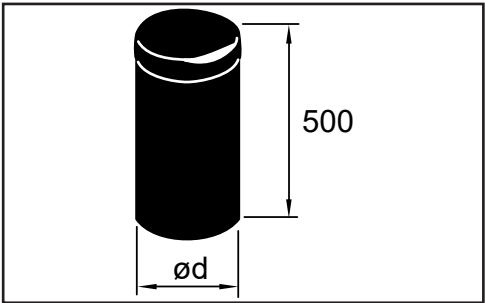
# The Bonded Single Pipe Cover

**Alternative**

Alternatively, a PE sealing cap can be used. The sealing cap must be so long that it still covers the casing of the spindle, when it comes into contact with the well cover during rising water levels.

Other designs made to order:

- L = 1000 mm
- With handle
- With screw top for dimensions ø 110, 125, and 140 mm



**Component  
overview/data**

Component No. 5716

PE sealing cap

Product No.	Spindle top ø mm	ød mm
5716 0125 005 001	110	125
5716 0160 005 001	140	160
5716 0200 005 001	180	200

## The Bonded Single Pipe Preinsulated pipe with service valve

### Application

A separate venting or draining arrangement can be installed at any point in a pipe system by application of a standard venting/draining component together with a vertical branch joint.

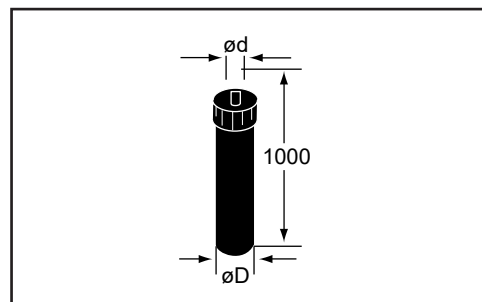
This simplifies the design, saves special components and means less joints.

If the construction is placed in an open inspection chamber, it must be well-drained.

### Preinsulated connecting piece with service valve

The component consists of a standard preinsulated pipe with a service valve in stainless steel welded onto it.

Sealing has been carried out with PE-end cap.



### Alternative

A valve arrangement may also be made of a piece of preinsulated pipe, a loose service valve, and an end cap.

Note! All parts outside the insulation/end cap must be protected against corrosion.

### Component overview/data

Component No. 4270

Connecting piece with service valve

ød	øD
33.7	110
42.4	125
48.3	125
60.3	140

# The Bonded Single Pipe Preinsulated service valve

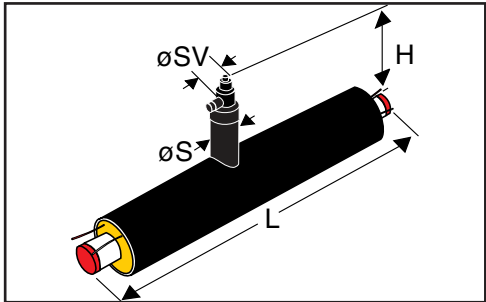
**Application** Preinsulated service valves are used for venting or drainage in wanted spots in the pipe system.

Applicable for all installation methods.

All shown dimension combinations are in reinforced design, allowing axial stress corresponding to 300 MPa.

**Description** The preinsulated service valves have embedded copper wires for surveillance.

(In branches wires are optional).



**Component overview/data** Component No. 3400

Preinsulated service valve

Steel pipe ø d, mm	Outer casing, ø mm			L mm	H mm	øSV/S mm
	Series 1	Series 2	Series 3			
33.7	90	110	125	1000	520	26.9/110
42.4	110	125	140	1000	525	33.7/110
48.3	110	125	140	1000	528	42.4/110
60.3	125	140	160	1200	536	42.4/110
67.1	140	160	180	1200	544	42.4/110
88.9	160	180	200	1200	551	42.4/110
114.3	200	225	250	1200	567	48.3/125
139.7	225	250	280	1200	582	48.3/125
168.3	250	280	315	1200	597	48.3/125
219.1	315	355	400	1500	624	60.3/140
273.0	400	450	500	1500	652	60.3/140
323.9	450	500	560	1500	677	60.3/140
355.6	500	560	630	1500	693	60.3/140
406.4	560	630	710	1600	718	60.3/140
457.0	630	710	800	2000	727	60.3/140
508.0	710	800	900	2000	752	60.3/140

**Materials** Service valves comply with the requirements in EN 448.

Service valve units are made of stainless steel.

Materials of other components like straight pipes.

## The Bonded Single Pipe Disposable valve

### Application

Disposable valves are e.g. used in connection with branches and terminations where pipelines will not be extended until later.

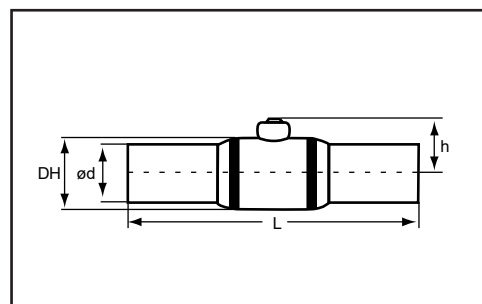
The valve is temporarily covered with a foamed end fitting.

When the pipeline is extended and the valve is opened the spindle is fully welded.

Please have the internal space requirements in mind, when choosing the dimension of the temporary end fitting and the later permanent casing joint.

### Description

Rustproof ball valve with weld-on ends.



### Technical

In connection with TwinPipes it may be necessary to displace the valves in relation to each other.

### Component overview/data

Component No. 4264

Disposable valve

Broen, reduced passage				Broen, full passage			
Dimension ød mm	L mm	H mm	Diameter valve body DH mm	Dimension ød mm	L mm	H mm	Diameter valve body DH mm
26.9	230	35	42	26.9	230		51
33.7	230	39	51	33.7	230		57
42.4	260	54	57	42.4	260		76
48.3	260	59	76	48.3	260		89
60.3	300	71	89	60.3	300		108
76.1	360	71	108	76.1	360	81	127
88.9	370	81	127	88.9	370	87	152
114.3	390	87	153	114.3	390	121	178
139.7	390	121	178	139.7	390	148	219
168.3	390	143	219	168.3	390	169	267
219.1	390	169	267				

### Materials

Valve box and weld-on ends: Standard steel like straight pipes

Balls and valve spindle: Stainless steel AISI 304.

# The Bonded Single Pipe Reductions - Overview

---

Description	This section shows, how to make reductions between outer casings and service pipes.
Contents	Weld reductions Weld joints Shrink joints Preinsulated reduction

## The Bonded Single Pipe Reductions - Weld reduction

### Application

All service pipe reductions must be carried out by means of a steel reduction.

1 dimensional offset: max. axial stress 300 N/mm<sup>2</sup>

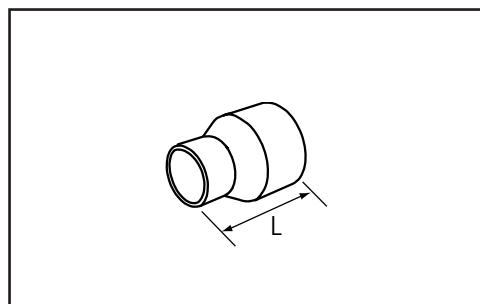
2 dimensional offset: max. axial stress 150 N/mm<sup>2</sup>

In connection with a reduction of the steel service pipe, the design instructions must be complied with.

### Description

Transition between two steel pipe dimensions is made with weld reductions.

Steel quality according to EN 10253-2



### Component overview/data

Component No. 1006

#### Weld reduction

From steel pipe ø mm	To steel pipe ø mm	L mm
33.7	26.9	51
42.4	33.7	51
48.3	42.4	64
60.3	48.3	76
76.1	60.3	89
88.9	76.1	89
114.3	88.9	102
139.7	114.3	127
168.3	139.7	140
219.1	168.3	152
273	219.1	178
323.9	273	203
355	323.9	330
406	355	356
457	406	381

Reductions for more dimensional offsets are available to order.



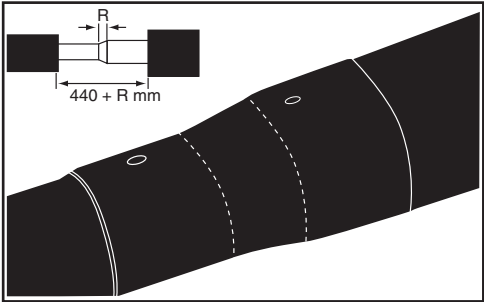
# The Bonded Single Pipe

## Reductions - EWJoint reduction

**Application** Reduction with weld joints can be carried out with EWJoint reduction in dimensions and dimensional offsets as described below.

It is also possible to use BandJoint as a reduction joint. Dimensional offsets for different dimensions are described in the section "Casing Joints"

**Description** EWJoint reduction:  
 Component No. 5028.  
 Accessories set:  
 - EW welding strips and plugs,  
 Component No. 5556.  
 Order 1 set for each dimension. The two sets cover two reductions.



**Component overview/data** Component No. 5028

EWJoint reduction - Dimensional offsets and lengths:

From ø mm	To ømm	Joint length mm
110	90	800
125	110	800
140	125	800
160	140	800
180	160	800
200	180	800
225	200	800
250	225	1000
280	250	1000
315	280	1000
355	315	1000
400	355	1000
450	400	1000
500	450	1000
560	500	1000
630	560	1200
710	630	1200
800	710	1200
900	800	1200
1000	900	1200

Also available with 2 or 3 dimensional offsets.

## The Bonded Single Pipe Reductions - EWJoint reduction

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**Weld strip** Is used to weld together the joint and the outer casing.

**Component  
overview/data** Component No. 5556

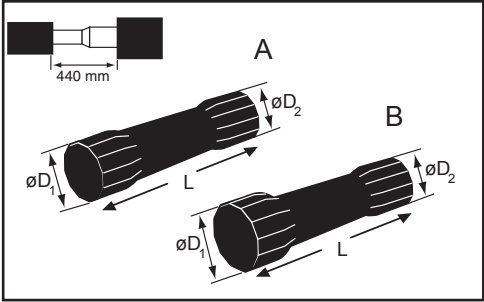
**Materials** Weld strip: Electro-plated mesh

# The Bonded Single Pipe Reductions - SX-WPJoint reduction

**Application** Reduction with shrink joints can be carried out with SX-WPJoint reduction and B2SJoint reduction in dimensions and dimensional offsets as described below.

It is also possible to use standard joints SX-WPJoint and SXB-WPJoint and BXJoint as reduction joints. Dimensional offsets for different dimensions are described in the section "Casing Joints" and "Directional Changes"

**Description** 1 or 2 dimensional offsets (see table)



**Component overview/data** Component No. 5032

SX-WPJoint reduction

$\varnothing D_1$ From-to	$\varnothing D_2$ From-to	L mm
125-90	110-90	650
140-110	125-110	650
160-125	140-125	650
180-140	160-140	650
200-160	180-160	650
225-180	200-180	650
250-200	225-200	660
280-225	250-225	660
315-250	280-250	680
355-280	315-280	720

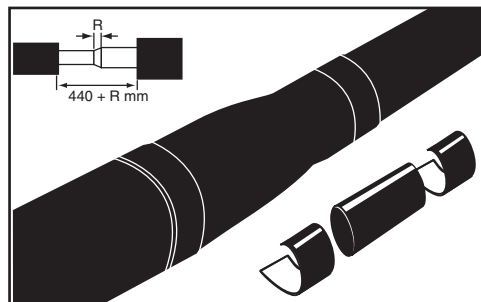
## The Bonded Single Pipe Reductions - B2SJoint reduction

### Description

B2SJoint reduction for foaming.

The joint can be used for 1 dimensional offset.

The B2SJoint reduction is also available with 2 or 3 dimensional offsets.



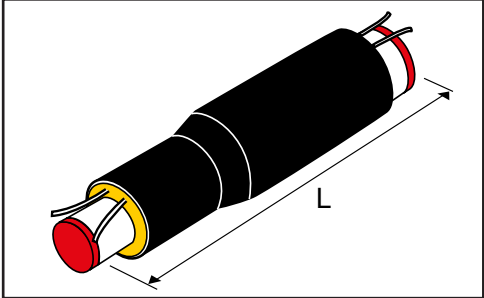
### Component overview/data

Component No. 5011

B2SJoint reduction

From ø mm	To ømm	Joint length mm
110	90	800
125	110	800
140	125	800
160	140	800
180	160	800
200	180	800
225	200	800
250	225	1000
280	250	1000
315	280	1000
355	315	1000
400	355	1000
450	400	1000
500	450	1000
560	500	1000
630	560	1200
710	630	1200
800	710	1200
900	800	1200
1000	900	1200

## The Bonded Single Pipe Reductions - Preinsulated reduction

<b>Application</b>	<p>The preinsulated reduction is used for reduction with one or two dimensional offsets.</p> <p>Max. operating pressure: 25 bar</p> <p>1 dimensional offset: max. axial stress 300 N/mm<sup>2</sup></p> <p>2 dimensional offsets: max. axial stress 150 N/mm<sup>2</sup></p> <p>In connection with a reductions the design instructions must be complied with.</p>
<b>Description</b>	<p>Preinsulated reductions are available with one or two reducing offsets.</p> <p>All preinsulated reductions are supplied with embedded copper wires for surveillance.</p> 
<b>Component overview/data</b>	Component No. 4900
<b>Materials</b>	<p>Weld reduction: Steel quality: According to EN 10253-2.</p> <p>Steel pipe/PUR-foam/PE-HD outer casing like for steel-in-plastic pipes.</p> <p>Preinsulated reductions comply with the requirements in EN 448.</p>

## The Bonded Single Pipe Reductions - Preinsulated reduction

### Component overview/data

Component No. 4900

Preinsulated reduction - series 1

From ø mm	To ø mm	L mm	From ø mm	To ø mm	L mm
33.7/90	26.9/90	900	219.1/315	139.7/225	1100
42.4/110	26.9/90	900	219.1/315	168.3/250	1100
42.4/110	33.7/90	900	273.0/400	168.3/250	1500
48.3/110	33.7/90	900	273.0/400	219.1/315	1500
48.3/110	42.4/110	900	323.9/450	219.1/315	1500
60.3/125	42.4/110	900	323.9/450	273.0/400	1500
60.3/125	48.3/110	900	355.6/500	273.0/400	1500
76.1/140	48.3/110	1000	355.6/500	323.9/450	1500
76.1/140	60.3/125	1000	406.4/560	323.9/450	1500
88.9/160	60.3/125	1000	406.4/560	355.6/500	1500
88.9/160	76.1/140	1000	457.0/630	355.6/500	1500
114.3/200	76.1/140	1000	457.0/630	406.4/560	1500
114.3/200	88.9/160	1000	508.0/710	406.4/560	1500
139.7/225	88.9/160	1000	508.0/710	457.0/630	1500
139.7/225	114.3/200	1000	610.0/800	508.0/710	1500
168.3/250	114.3/200	1000			
168.3/250	139.7/225	1000			

### Component overview/data

Component No. 4900

Preinsulated reduction - series 2

From ø mm	To ø mm	L mm	From ø mm	To ø mm	L mm
33.7/110	26.9/110	900	219.1/355	139.7/250	1100
42.4/125	26.9/110	900	219.1/355	168.3/280	1100
42.4/125	33.7/110	900	273.0/450	168.3/280	1500
48.3/125	33.7/110	900	273.0/450	219.1/355	1500
48.3/125	42.4/125	900	323.9/500	219.1/355	1500
60.3/140	42.4/125	900	323.9/500	273.0/450	1500
60.3/140	48.3/125	900	355.6/560	273.0/450	1500
76.1/160	48.3/125	1000	355.6/560	323.9/500	1500
76.1/160	60.3/140	1000	406.4/630	323.9/500	1500
88.9/180	60.3/140	1000	406.4/630	355.6/560	1500
88.9/180	76.1/160	1000	457.0/710	355.6/560	1500
114.3/225	76.1/160	1000	457.0/710	406.4/630	1500
114.3/225	88.9/180	1000	508.0/800	406.4/630	1500
139.7/250	88.9/180	1000	508.0/800	457.0/710	1500
139.7/250	114.3/225	1000			
168.3/280	114.3/225	1000			
168.3/280	139.7/250	1000			

## The Bonded Single Pipe Reductions - Preinsulated reduction

### Component overview/data

Component No. 4900

Preinsulated reduction - series 3

From ø mm	To ø mm	L mm	From ø mm	To ø mm	L mm
33.7/125	26.9/125	900	219.1/400	139.7/280	1100
42.4/140	26.9/125	900	219.1/400	168.3/315	1100
42.4/140	33.7/125	900	273.0/500	168.3/315	1500
48.3/140	33.7/125	900	273.0/500	219.1/400	1500
48.3/140	42.4/140	900	323.9/560	219.1/400	1500
60.3/160	42.4/140	900	323.9/560	273.0/500	1500
60.3/160	48.3/140	900	355.6/630	273.0/500	1500
76.1/180	48.3/140	1000	355.6/630	323.9/560	1500
76.1/180	60.3/160	1000	406.4/710	323.9/560	1500
88.9/200	60.3/160	1000	406.4/710	355.6/630	1500
88.9/200	76.1/180	1000	457.0/800	355.6/630	1500
114.3/250	76.1/180	1000	457.0/800	406.4/710	1500
114.3/250	88.9/200	1000	508.0/900	406.4/710	1500
139.7/280	88.9/200	1000	508.0/900	457.0/800	1500
139.7/280	114.3/250	1000			
168.3/315	114.3/250	1000			
168.3/315	139.7/280	1000			

## The Bonded Single Pipe Terminations - Overview

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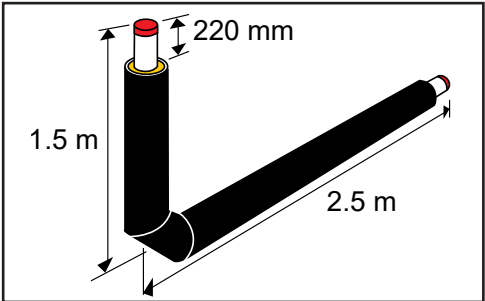
<b>Description</b>	This section contains a description of the components which are delivered by LOGSTOR for terminations e.g. in connection with foundations, cellars, house entries and concrete ducts.
<b>Contents</b>	House entry pipe Wall entry sleeve End cap End fitting Valve with handle



# The Bonded Single Pipe Terminations - House entry pipe

**Application** Prefabricated house entry pipes facilitate the installation of district heating pipes in buildings without cellars.

**Description** The bend is cold bent with bending radius  $R = 2,5 \times d$ .  
The tinned copper wires for surveillance are placed inside the bends.



**Component overview/data** Component No. 2501

House entry pipe

Steel pipe ø out. mm	House entry pipe 1.5 x 2.5 m		
	Outer casing, ø mm		
	Series 1	Series 2	Series 3
26.9	90	110	125
33.7	90	110	125
42.4	110	125	140
48.3	110	125	140
60.3	125	140	160
76.1	140	160	180
88.9	160	180	200
114.3	200	225	250
139.7	225	250	280
168.3	250	280	315
219.1	315	355	400

Larger dimensions are available as special house entry bends.  
A house entry bend 1.5 x 4.5 m is available to order.  
Alternatively, a vertical bend 1.5 x 1.5 m can be used.

**Materials** All materials are the same as those for straight pipes: steel/PUR/PE-HD.

## The Bonded Single Pipe Terminations - Wall entry sleeve

### Application

Where pipes are installed through masonry - at wells, footings etc. - wall entry sleeves are installed as a seal against water ingress.

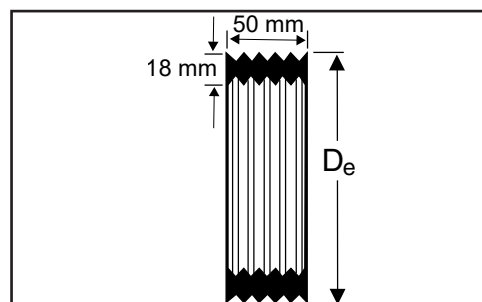
Exposed to groundwater pressure the wall entry sleeves may not be watertight. In such cases please contact LOGSTOR.

If sealing rings which can withstand large axial movements or radon-tight sealing rings are required, please contact LOGSTOR.

### Description

The wall entry sleeves allow minor axial expansion movements at the entry point.

Note! De - 2x18 mm is smaller than the nominal diameter, so the sleeve fits tightly around the outer casing.



### Component overview/data

Component No. 5800

Wall entry sleeve

Outer casing ø out. mm	Outside diameter De approx. ø mm	Outer casing ø out. mm	Outside diameter De approx. ø mm
90	124	450	480
110	142	500	530
125	158	560	590
140	173	630	660
160	191	710	740
180	209	800	830
200	229	900	930
225	255	1000	1030
250	281	1100	1130
280	312	1200	1230
315	345	1300	1330
355	385	1400	1430
400	430	1500	1530

### Materials

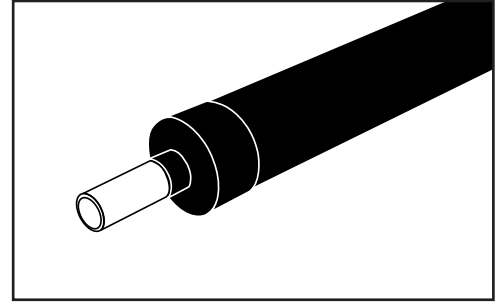
NR-SBR rubber

## The Bonded Single Pipe Terminations - Standard end cap

### Application

The end cap is used to seal the pipes in order to prevent moisture from penetrating into the insulation.

End caps are used in connection with house entries, terminations in chambers, connections to concrete ducts, in cellars etc. Can be used at continuous operating temperature up to 120°C and a peak temperature (short-term) of up to 130°C.



### Component overview/data

Component No. 5600

Standard end cap

Steel pipe ø out. mm	Outer casing, mm DHEC No.														
	90	110	125	140	160	180	200	225	250	280	315	355	400	450	500
26.9	2100	2200	2200	2300											
33.7	2100	2200	2200	2300	2340										
42.4		2200	2200	2300	2340										
48.3		2300	2300	2300	2340										
60.3			2400	2400	2500	2500									
76.1				2400	2500	2500									
88.9					2500	2500	2600								
114.3						2600	2600	2630							
139.7							2630	2630	2700						
168.3									2700	2700	2800				
219.1											2800	2900			
273.0												2900	2900	3000	
323.9													3000	3000	3000
355.0														3000	3000

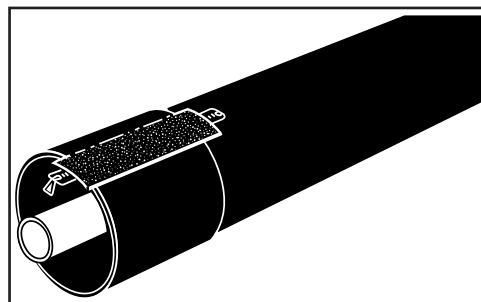
### Materials

Crosslinked PE with mastic.

## The Bonded Single Pipe Terminations - Open end cap

### Application

The open end cap is used as a standard end-cap and for repairs.



### Component overview/data

Component No. 5601

Open end cap

Steel pipe ø out. mm	Outer casing, mm - CCS - DHEC No.										
	90	110	125	140	160	180	200	225	250	280	315
26.9	110/26	110/26									
33.7	110/26	110/26									
42.4	110/26	110/26									
48.3		128/48	128/48								
60.3		128/48	128/48	163/60	163/60						
76.1				163/60	163/60	186/70	200/76				
88.9				163/60	163/60	186/70	200/76	225/89			
114.3							200/76	225/89	250/108		
139.7									250/108	280/133	
168.3										280/133	315/168
219.1											315/168
273.0											315/168

Steel pipe ø out. mm	Outer casing, mm - CCS - DHEC No.										
	355	400	450	500	560	630	710	800	900	1000	1200
219.1	400/219	400/219									
273.0	400/219	400/219	560/273	560/273	560/273						
323.9	400/219	400/219	560/273	560/273	560/273						
355.0		400/219	560/273	560/273	560/273	710/355	710/355				
406.0			560/273	560/273	560/273	710/355	710/355				
457.0					560/273	710/355	710/355	900/457	900/457		
508.0					560/273	710/355	710/355	900/457	900/457		
610.0							710/355	900/457	900/457	1200/610	1200/610
813.0									900/457	1200/610	1200/610
1016.0											1200/610

### Materials

Crosslinked PE with mastic.

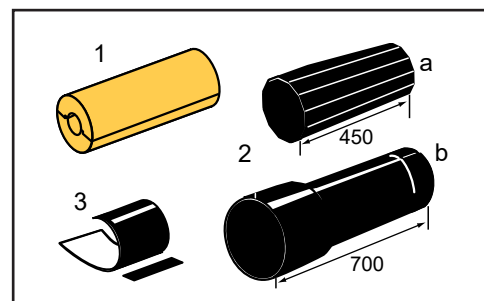
## The Bonded Single Pipe

### Terminations - End fitting with insulation shells

**Application** To temporarily terminate a pipe system a PE end fitting is used. Which end fitting to use depends on the dimension.

**Description** An end fitting set consists of:

1. Insulation shells
2. End fitting:
  - a.  $\varnothing$  90-160 mm, expanded
  - b.  $\varnothing$  180-630 mm, drifted
3. Open shrink wrap with closure patch



Irrespective of the service pipe dimension the end fitting is ordered according to the outer casing dimension. This means, that sometimes there will be a little gap between the service pipe and the insulation shell. This is of no practical importance.

700 mm end fittings are always used in connection with temporary, disposable valves.

**Component overview/data** Component No. 5700

End fitting with insulation shells

Casing $\varnothing$ out. mm	Insul. shells $\varnothing$ int./out. mm	Service pipe range $\varnothing$ out. mm	L, mm	
			450	700
90	33/90	26.9-33.7	x	x
110	48/110	26.9-48.3	x	x
125	60/125	26.9-60.3	x	x
140	76/140	26.9-76.1	x	x
160	88/160	42.4-88.9	x	x
180	114/180	60.3-114.3		x
200	139/200	76.1-139.7		x
225	168/225	88.9-168.3		x
250	168/250	114.3-168.3		x
280	219/280	114.3-219.1		x
315	219/315	139.7-219.1		x
355	219/355	219.1		x
400	323/400	219.1-273.0		x
450	323/450	273.0-323.9		x
500	355/500	273.0-355.0		x
560	406/560	323.9-406.0		x
630	457/630	355.0-457.0		x

## The Bonded Single Pipe

### Terminations - End fitting with insulation shells

---

**Materials**

Insulation shells: Polyurethane (PUR)

End fitting:

Ø 90-160 mm: Crosslinked and finger-expanded PE

Ø 180-630 mm: Drifted PEHD

Open shrink wrap with closure patch: PEX with PIB mastic and hotmelt

**Accessories**

In connection with termination with end fitting use weld-on end, component number 1008.

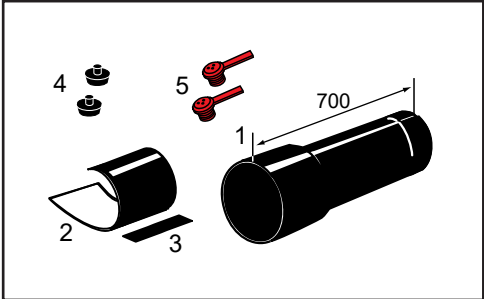
# The Bonded Single Pipe Terminations - End fitting for foaming

**Application** To terminate a pipe system with a  $\varnothing$  90-1000 mm outer casing PE end fittings for foaming are used.

**Description** The end fitting for foaming consists of:

1. Closed shrink sleeve
2. Open shrink wrap
3. Closure patch
4. Weld plugs
5. Venting plugs

Irrespective of the service pipe dimension the end fitting is ordered according to the outer casing dimension.



**Component overview/data** Component No. 5700

End fitting for foaming

Outer casing $\varnothing$ out. mm	Service pipe range $\varnothing$ out. mm
90	26.9-33.7
110	26.9-48.3
125	26.9-60.3
140	42.2-76.1
160	42.2-88.9
180	76.1-88.9
200	88.9-114.3
225	114.3-139.7
250	114.3-168.3
280	139.7-168.3
315	168.3-219.1
355	219.1
400	219.1-273.0
450	273.0-323.3
500	273.0-323.3
560	323.3-406.4
630	406.4
710	406.4-508.0
800	457.0-610.0
900	508.0-711.0
1000	610.0-813.0

## The Bonded Single Pipe Terminations - End fitting for foaming

---

**Materials**

End fitting: Drifted PEHD

Open shrink wrap with closure patch: PEX with PIB mastic and hotmelt

Venting plug: Polypropylene

Weld plug: HDPE

**Accessories**

In connection with termination with end fitting use weld-on end, component No. 1008.

To be foamed with foam pack, component No. 0700.

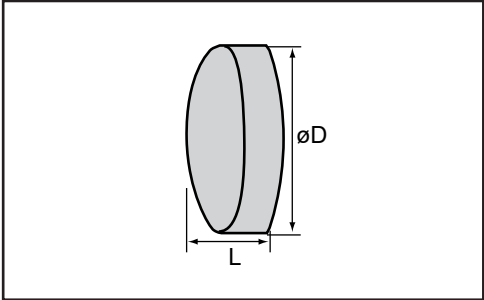
Machine foam is used for major dimensions.

When ordering state insulation series, and that foam pack must be included in the delivery.



# The Bonded Single Pipe Terminations - Weld-on end

Description



Component  
overview/data

Component No. 1008

Weld-on end

Steel pipe ø out. mm	L mm
26.9	14
33.7	15
42.4	17
48.3	18
60.3	20
76.1	23
88.9	36
114.3	40
139.7	45
168.3	50
219.1	65
273.0	75
323.9	85
355.6	95
406.4	105
457.0	115
508.0	125
610.0	149

Materials

Weld-on end: Steel P 265 GH according to EN 10253-2

## The Bonded Single Pipe Terminations - Valve with handle

### Application

Valves with handle are used in buildings. The valves are delivered with weld ends at both ends or internal thread and weld end.

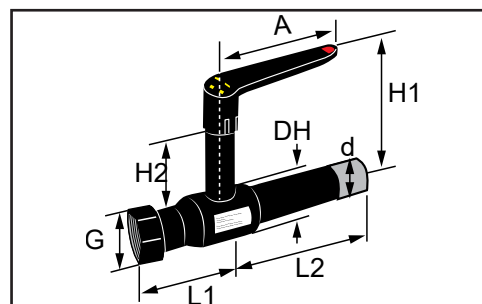
The operating handle is designed, so there is sufficient space for the insulation around the valve itself.

All valves with handle for installation in buildings have full passage.

The handle can be turned 180°.

### Description

Isolation valves with full passage.



### Component overview/data

Component No. 4261

Valve with handle

Isolation valve with weld ends							
Dimension, d mm	L mm	H1 mm	H2 mm	A mm	DH mm		
26.9 x 2.3	230	111	54	75	38.0		
33.7 x 2.6	230	125	52	100	45.0		
42.4 x 2.6	260	131	52	100	56.5		
48.3 x 2.6	260	156	63	120	68.0		
60.3 x 2.9	290	165	63	120	85.0		
76.1 x 2.9	360	155	66	275	127.0		
88.9 x 3.2	370	192	81	365	152.0		
114.3 x 3.6	390	218	91	365	178.0		
Isolation valve with thread							
Dimension, d mm	Thread, G "	L1 mm	L2 mm	H1 mm	H2 mm	A mm	DH mm
26.9 x 2.3	¾"	52	115	111	54	75	38.0
33.7 x 2.6	1"	56	115	125	52	100	45.0
42.4 x 2.6	1 ¼"	67	130	131	52	100	56.5
48.3 x 2.6	1 ½"	78	134	156	63	120	86.0
60.3 x 2.9	2"	96	145	165	63	120	85.0

# The Bonded Single Pipe Terminations - Valve with handle

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Materials	Weld ends: Like for straight steel pipes
	Ball: Stainless steel (AISI304L)
	Spindle: Stainless steel (ASTM420)
	Handle: Steel
	Surface treatment: Protective coating

## The Bonded TwinPipe Overview

---

### Contents

General  
Pipes  
Casing joints  
Directional changes  
Branches  
Transition pipes  
Valves  
Reductions  
Terminations

## The Bonded TwinPipe

### General

#### Application

LOGSTOR TwinPipes are used for distribution pipelines within district heating systems.

The TwinPipe system is dimensioned for a temperature difference between flow and return pipeline of 60 K.

Max. operating pressure = 25 bar

Continuous operating temperature = 120°C

Max. temperature (short-term) = 140°C

Fixing bars are dimensioned for a temperature difference between the flow and return pipeline of 60 K.

The TwinPipe system fulfills the requirements of EN 253 as well as EN 13941 for continuous operation with hot water at various temperatures up to 120 °C, and at individual time intervals with a peak temperature up to 140 °C. The sum of these individual time intervals shall, in average, not exceed 300 hours a year.

For temperature references which deviate from above standards we can - on request - calculate the estimated service life on the basis of the actual expected temperature set during a year.

Please contact LOGSTOR, if your conditions differ from the limit values in EN 253.

#### Description

TwinPipes are delivered in lengths of 6 m, 12 m, or 16 m dependent on the dimension.

TwinPipes in casing dimension 125 mm to 315 mm can be delivered counter-produced with diffusion barrier.

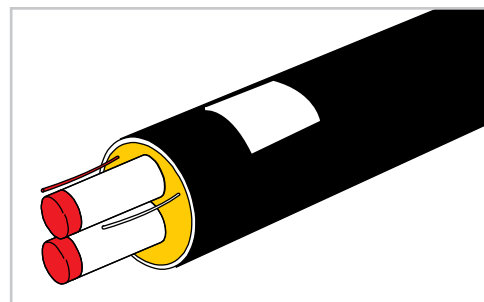
TwinPipes traditionally produced are delivered in casing dimension 125 mm to 710 mm.

For a description of the two production methods please refer to section 2.0

Delivered with a 220 mm ±10 mm free end.

Pipes and fittings are delivered with 2 copper wires, embedded in the insulation.

Dimensions and tolerances according to EN15698-1.



## The Bonded TwinPipe

### General

<b>Steel pipe</b>	<p>Dimensions and tolerances: According to 15698-1, 15698-2, and EN253</p> <p>Standard pipes: Longitudinally welded. P235GH after EN 10217-2.</p> <p>Works test certificate: EN 10204 - 3.1</p> <p>Bevelling: Wall thickness <math>S &lt; 3.2</math> mm is supplied with straight ends. Wall thickness <math>S \geq 3.2</math> is supplied with bevelled ends in a <math>30^\circ</math> angle, root face <math>1.6 \text{ mm} \pm 0.8 \text{ mm}</math>. EN10217-2 option 10 or EN 10217-5 option 7.</p> <p>Surface quality: Prior to foaming the pipe make sure that the surface of the steel pipe is of a quality, which guarantees an optimum adhesion between pipe and insulation.</p>
<b>Insulation</b>	<p>Polyurethane foam:</p> <p>Properties: Minimum as required in EN 253</p> <p>Blowing agent: Cyclopentane</p> <p>Thermal conductivity:</p> <ul style="list-style-type: none"> <li>- Traditionally manufactured pipes (<math>50^\circ\text{C}</math>): <math>0.027 \text{ W/m K}</math>.</li> <li>- Axial conti pipes (<math>50^\circ\text{C}</math>): <math>0.023 \text{ W/m K}</math>.</li> </ul> <p>The lambda values are based on an average of the continuous measurements.</p> <p>The updated values are always included in the calculation program "Calculator". See <a href="http://www.logstor.com/Calculator">www.logstor.com/Calculator</a>.</p>
<b>Outer casing</b>	<p>Polyethylene:</p> <p>HDPE bimodal (min. PE 80, ISO 12162)</p> <p>Properties: Minimum as required in EN 253</p> <p>All parts are fully weldable within the melt flow index: MFR variation <math>\leq 0.5 \text{ g/10 min}</math></p> <p>Thermal stability: Oxydation induction time (OIT): <math>&gt; 20 \text{ min}</math> at <math>210^\circ \text{C}</math></p> <p>Resistance against crack formation: Slow crack formation (notch sensitivity): <math>&gt; 300 \text{ h}</math> (notch, 4 MPa, <math>80^\circ\text{C}</math>, EN 253)</p> <p>Internal surface treatment: All traditionally manufactured outer casings are corona-treated during production. This ensures an optimum adhesion between outer casing and insulation. As for conti pipes the adhesion is ensured by means of a corona-treated PE foil between outer casing and foam.</p>
<b>Finished pipes</b>	<p>Free service pipe end: <math>220 \text{ mm} \pm 10 \text{ mm}</math></p> <p>Lengths, delivered: 6, 12 and 16 m</p>

# The Bonded TwinPipe Pipes - Overview

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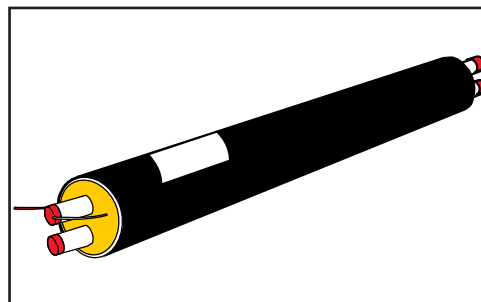
<b>Contents</b>	Pipes
	Zebra pipes

## The Bonded TwinPipe Pipes

### Description

TwinPipes in outer casing 125 mm to 315 mm are available with diffusion barrier in 12 m or 16 m lengths.

Larger dimensions are available on enquiry.



### Component overview/data

Component No. 2090

TwinPipe - series 1

Steel pipe			Outer casing		Distance btw steel pipes mm	L			Weight kg/m	Water content l/m
DN mm	d mm	Wall thk mm	D mm	Wall thk mm		6 m*	12 m	16 m		
20	26.9	2.6	125	3.0	19	x	x		5.2	0.7
25	33.7	2.6	140	3.0	19	x	x		6.5	1.3
32	42.4	2.6	160	3.0	19	x	x		8.1	2.1
40	48.3	2.6	160	3.0	19	x	x		8.8	2.9
50	60.3	2.9	200	3.2	20	x	x		12.4	4.7
65	76.1	2.9	225	3.4	20	x	x		15.4	7.8
80	88.9	3.2	250	3.6	25	x	x		19.5	10.7
100	114.3	3.6	315	4.1	25	x	x	x	28.4	18.0
125	139.7	3.6	400	4.8	30	x	x	x	38.2	27.6
150	168.3	4.0	450	5.2	40	x	x	x	49.4	40.4
200	219.1	4.5	560	6.0	45		x	x	72.5	69.3

\* 6 m TwinPipes are delivered traditionally produced.



# The Bonded TwinPipe Pipes

## Component overview/data

Component No. 2090

TwinPipe - series 2

Steel pipe			Outer casing		Distance btw steel pipes mm	L			Weight kg/m	Water content l/m
DN mm	d mm	Wall thk mm	D mm	Wall thk mm		6 m*	12 m	16 m		
20	26.9	2.6	140	3.0	19	x	x		5.7	0.7
25	33.7	2.6	160	3.0	19	x	x		7.1	1.3
32	42.4	2.6	180	3.0	19	x	x		8.7	2.1
40	48.3	2.6	180	3.0	19	x	x		9.4	2.9
50	60.3	2.9	225	3.4	20	x	x		13.4	4.7
65	76.1	2.9	250	3.6	20	x	x		16.7	7.8
80	88.9	3.2	280	3.9	25	x	x		21.0	10.7
100	114.3	3.6	355	4.5	25	x	x	x	31.2	18.0
125	139.7	3.6	450	5.2	30	x	x	x	42.2	27.6
150	168.3	4.0	500	5.6	40	x	x	x	53.8	40.4
200	219.1	4.5	630	6.6	45		x	x	80.4	69.3

\* 6 m TwinPipes are delivered traditionally produced.

## Component overview/data

Component No. 2090

TwinPipe - series 3

Steel pipe			Outer casing		Distance btw steel pipes mm	L			Weight kg/m	Water content l/m
DN mm	d mm	Wall thk mm	D mm	Wall thk mm		6 m*	12 m	16 m		
20	26.9	2.6	160	3.0	19	x	x		6.2	0.7
25	33.7	2.6	180	3.0	19	x	x		7.6	1.3
32	42.4	2.6	200	3.0	19	x	x		9.4	2.1
40	48.3	2.6	200	3.2	19	x	x		10.1	2.9
50	60.3	2.9	250	3.6	20	x	x		14.6	4.7
65	76.1	2.9	280	3.9	20	x	x		18.1	7.8
80	88.9	3.2	315	4.1	25	x	x		22.7	10.7
100	114.3	3.6	400	4.8	25	x	x	x	34.1	18.0
125	139.7	3.6	500	5.6	30	x	x	x	46.2	27.6
150	168.3	4.0	560	6.0	40	x	x	x	59.1	40.4
200	219.1	4.5	710	7.2	45		x	x	89.6	69.3

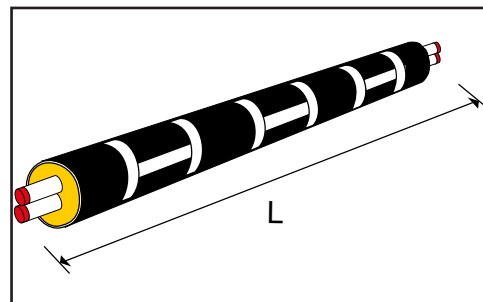
\* 6 m TwinPipes are delivered traditionally produced.

## The Bonded TwinPipe Zebra pipe

### Description

The zebra pipe is divided into sections of 0.5-1.5 m, marked with transverse tapes.

Every second section has no adhesion between the insulation and the service pipe. These sections are marked with longitudinal tape.



### Component overview/data

Component No. 2496

Zebra pipe

Steel pipe			Outer casing D, mm			Distance	Length
DN	d mm	Wall thk. mm	Series 1	Series 2	Series 3	X mm	12 m
20	2x26.0	2.6	125	140	160	19	x
25	2x33.7	2.6	140	160	180	19	x
32	2x42.4	2.6	160	180	200	19	x
40	2x48.3	2.6	160	180	200	19	x
50	2x60.3	2.9	200	225	250	20	x
65	2x76.1	2.9	225	250	280	20	x
80	2x88.9	3.2	250	280	315	25	x
100	2x114.3	3.6	315	355	400	25	x
125	2x139.7	3.6	400	450	500	30	x
150	2x139.7	4	450	500	560	40	x
200	2x219.1	4.5	560	630	710	45	x

The Bonded TwinPipe  
Casing joints

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<b>Contents</b>	General
	BandJoint
	EWJoint
	SX-WPJoint
	BXJoint
	BXSJoint
	B2SJoint
	BSJoint
	C2LJoint for foaming

## The Bonded TwinPipe Casing Joints - General

---

<b>Joints</b>	<p>LOGSTOR supplies three different casing joint types:</p> <p>Weld joints</p> <p>Cross-linked shrink joints</p> <p>HDPE shrink joints</p> <p>All casing joint types have been tested and approved according to EN 489.</p>
<b>Weld joints</b>	<p>LOGSTOR has two weld joint types:</p> <p>The BandJoint, which is an open weld joint, installed after the steel pipe has been welded together. The BandJoint has integrated copper wires in the welding zone.</p> <p>The EWJoint, which is a closed HDPE shrink joint, which are pre-installed, before the steel pipe is welded together. Weld strips are delivered separately and installed just before the joint is to be shrunk.</p> <p>Weld joints can be used in all soil types - also when the groundwater table is more than 0.5 m over the pipes e.g. crossing streams and in oil-polluted soil as well as strongly acid soil, bacterially active dumps and lake or sea deposits</p>
<b>Cross-linked joints</b>	<p>Closed shrink joints, which are pre-installed, before the steel pipe is welded together.</p> <p>Available for foaming or with insulation shells.</p> <p>Foam holes are sealed with weld plugs.</p> <p>Cross-linked joints can be used in all normal soil types, where the groundwater table is constantly less than 0.5 m over the pipes.</p>
<b>HDPE shrink joints</b>	<p>Closed HDPE shrink joints, which are pre-installed, before the steel pipe is welded together.</p> <p>Available for foaming.</p> <p>Foam holes are sealed with weld plugs.</p> <p>HDPE shrink joints can be used in all normal soil types, where the groundwater table is constantly less than 0.5 m over the pipes.</p>

# The Bonded TwinPipe

## Casing joints - BandJoint

**Application**

The BandJoint is an open PE weld joint with integrated copper wires in the weld zone.

Can be used for reduction when the difference in casing diameter is max. 25 mm. See the section "Reduktions".

LOGSTOR WeldMaster is used to weld the BandJoint.

Not applicable for flexible pipes.

**BandJoint ø 90-200 mm**

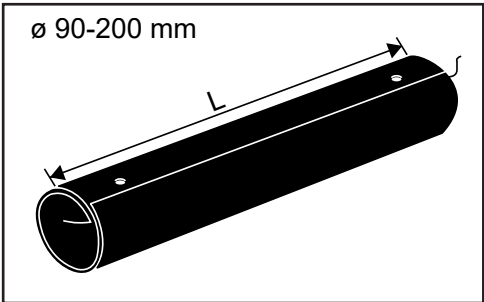
LOGSTOR WeldMaster is used to weld BandJoints.

Delivered with pre-drilled holes for foaming.

Delivered 2 pcs., packed in white PE foil.

To be stored vertically.

Max. temperature during transport and storage: 60°C.



**Component overview/data**

Component No. 5610

BandJoint ø 90-200 mm

BandJoint length L, mm	Casing dimension, mm	
	90-125	140-200
570 (STD)	x	x
830(XL)*	x	x

\* 830 mm (XL) is used for E-Comp and repairs.

## The Bonded TwinPipe Casing joints - BandJoint

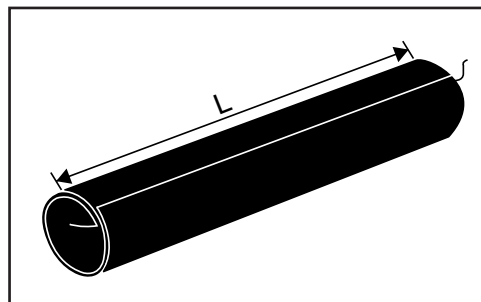
### BandJoint dimensions ø 225-710 mm.

Delivered 1 pc., packed in white foil.

As a standard delivered rolled for dimensions  $\geq 355$  mm. Can be delivered flat on a pallet with frames on request.

If the BandJoints are delivered flat, they must be rolled the day before installation.

Max. temperature during transport and storage: 60°C.



### Component overview/data

Component No. 5612

BandJoint ø 225-710 mm

L mm	Casing dimension, mm										
	225	250	280	315	355	400	450	500	560	630	710
630	x	x	x	x	x	x	x	x	x	x	x
1020*	x	x	x	x	x	x	x	x	x	x	x

\* Length 1020 mm is used for repairs.

### Materials

Casing joint: HDPE

### Accessories

To be foamed with foam pack, component No. 0700.

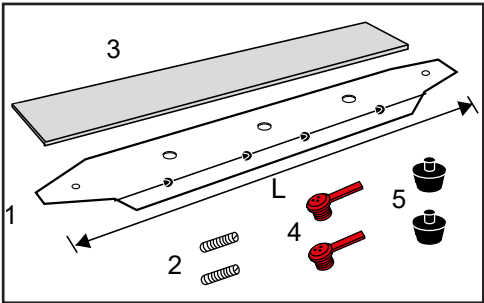
When ordering state insulation series, and that foam pack must be included in the delivery.

The Bonded TwinPipe  
Casing joints - BandJoint

Depth guard

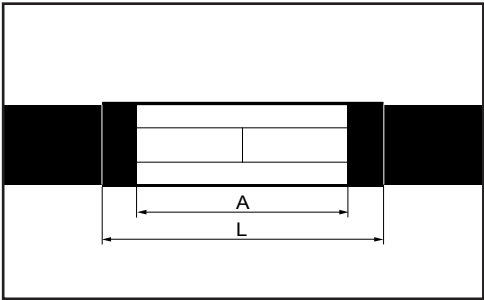
The accessory set contains:

- 1. Depth guard
- 2. Adjusting screws
- 3. Felt pad
- 4. Venting plugs
- 5. Weld plugs



The length of the depth guard is determined by the length of the cut.

- A = cut length
- L = BandJoint length



Component  
overview/data

Component No. 5606

Depth guard

Width, mm	Casing dimension, mm	Cut A, mm	BandJoint, L mm	Depth guard length, L mm
Depth guard STD (40)	90-200	420-455	570	500
Depth guard XL* (40)	90-200	680-715	830	760
Depth guard STD (70)	225-710	420-455	630	500
Depth guard XXL** (70)	225-710	810-845	1020	890

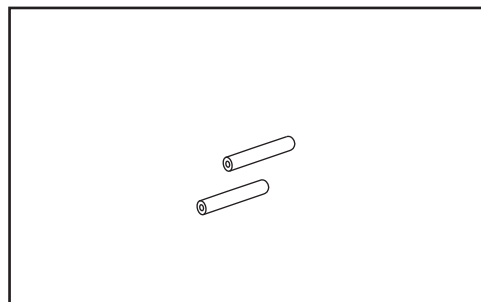
\* Depth guard XL is used for repairs.  
\*\* Depth guard XXL is used for repairs.

Materials

- Depth guard: Hot galvanised plate
- Felt pad: Felt
- Venting plugs: Propylene
- Weld plugs: HDPE

## The Bonded TwinPipe Casing joints - BandJoint

**Long insulator feet** In connection with insulation thicknesses > 85 mm 70 mm long insulator feet must be used for the adjusting screws.



### Component overview/data

Component No. 5606

Long insulator feet

Depth guard	Casing, mm		
	Series 1	Series 2	Series 3
STD and XXL	630-710	450-710	400-710

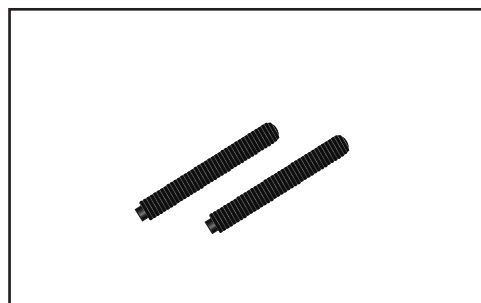
25 pcs. insulator feet in a bag: Product No. 5606 0000 010 000.

### Materials

Insulator foot: Etronite, high-pressure laminate

### Long screws

For major dimensions extra long screws are used in addition to the 70 mm insulator feet.



### Component overview/data

Component No. 1995

### Materials

Screws: PPS or steel



The Bonded TwinPipe  
Casing joints - BandJoint

**No. per depth guard**      Number of screws and insulator feet per depth guard.

**Component overview/data**      Component No. 1995

Depth guard	No. per depth guard
STD	2
XL	4
XXL	4

The Bonded TwinPipe  
Casing joints - EWJoint

**Application**

Applicable for casing diameters  $\varnothing 90 - 710$  mm.

Pre-install the joint prior to welding the service pipe together.

The joint is welded together with the outer casing by means of a loose weld strip between the joint and the outer casing. LOGSTOR WeldMaster is used to weld the EWJoint.

Not applicable for flexible pipes.

**Description**

The EWJoint consists of:

- 1. Shrink sleeve
- 2. Weld strip
- 3. Venting plugs
- 4. Weld plugs
- 5. Staples to fix weld strips

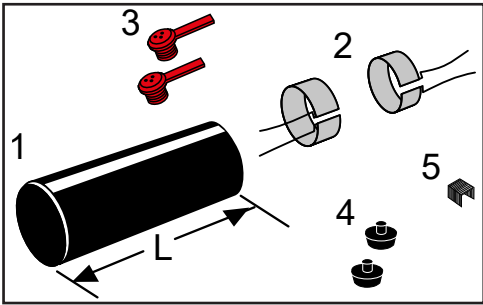
The sleeves are delivered wrapped in white PE foil.

The accessories 2-4 are delivered separately in a plastic bucket.

Staples (5) are ordered separately

Store the sleeve vertically.

Max. temperature during transportation and storage: 40°C.



**Component overview/data**

Component No. 5027

EWJoint

L mm	EWJoint dimensions, mm															
	125	140	160	180	200	225	250	280	315	355	400	450	500	560	630	710
700	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
750															x	x

**Materials**

Sleeve: HDPE

Venting plugs: Polypropylene

Weld plugs: HDPE

**Accessories**

To be foamed with foam pack, component No. 0700.

When ordering state insulation series, and that foam pack must be included in the delivery.

The Bonded TwinPipe  
Casing joints - EWJoint

**Weld strip** Is used to weld together the joint and the outer casing.

**Component overview/data** Component No. 5556

**Materials** Weld strip: Electro-plated mesh

**Staple** Is used to fix weld strips

**Component overview/data** Component No. 9050

Staples

Outer casing, ø out. mm	Product Nos.
90-400	9050 0000 031 053
≥ ø 450	9050 0000 031 052

## The Bonded TwinPipe Casing joints - SX-WPJoint

### Application

Shrink sleeve made of cross-linked PE (PEX) for foaming. The sleeve is shrinkable at both ends, and the foam holes are sealed with weld plugs.

Pre-install the shrink sleeve on the pipe prior to welding the service pipe together.

The shrink sleeve can as a standard be reduced by one dimensional offset. See below table.

When installed on pipes with corrugated casing the sleeve ends are sealed with additional collars to be ordered separately.

### Description ø 90-450 mm

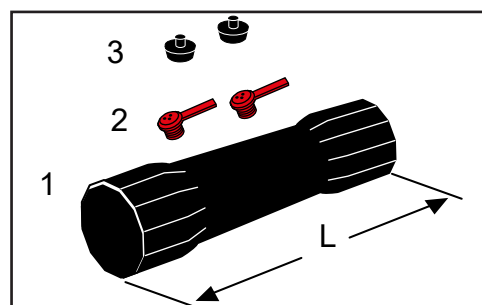
The SX-WPJoint consists of:

1. Shrink sleeve with integrated mastic
2. Venting plugs
3. Weld plugs

Delivered in white PE-foil.

Store the shrink sleeve vertically.

Max. temperature during transport and storage: 60° C



### Component overview/data

Component No. 5031

SX-WPJoint ø 90-450 mm

D1	D2, mm															
	L = 650 mm												L = 750			
	66	77	90	110	125	140	160	180	200	225	250	280	315	355	400	450
90	x	x	x													
110			x	x												
125				x	x											
140					x	x										
160						x	x									
180							x	x								
200								x	x							
225									x	x						
250										x	x					
280											x	x				
315												x	x			
355													x	x		
400														x	x	
450															x	x

# The Bonded TwinPipe Casing joints - SX-WPJoint

**Description**  
ø 500-710 mm

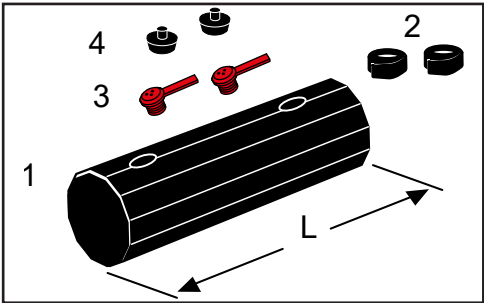
The SX-WPJoint consists of:

1. Shrink sleeve
2. Sealing tape
3. Venting plugs
4. Weld plugs

Delivered in white PE-foil.

Store the shrink sleeve vertically.

Max. temperature during transport and storage: 60° C.



**Component  
overview/data**

Component No. 5031

SX-WPJoint ø 500-710 mm

D1 mm	D2, mm				
	450	500	560	630	710
500	x	x			
560		x	x		
630			x	x	
710				x	x

**Materials**

Sleeve: Cross-linked PE (PEX)

Mastic: PIB-based mastic

Venting plugs: Polypropylene

Weld plugs: HDPE

**Accessories**

To be foamed with foam pack, component No. 0700.

When ordering state insulation series, and that foam pack must be included in the delivery.

Collar for corrugated casing, component No. 5500. Order 2 pcs. per joint.

## The Bonded TwinPipe Casing joints - BXJoint

### Application

Shrink joint made of cross-linked PE (PEX) with insulation shells of polyurethane (PUR).

For TwinPipe series 2

This shrink joint can be used for reduction. The dimensional limits appear from the table. Due to the insulation shells the largest dimension is ordered.

If BXJoint is used as a reduction, fixing bars must be installed on the biggest service pipe.

### Description

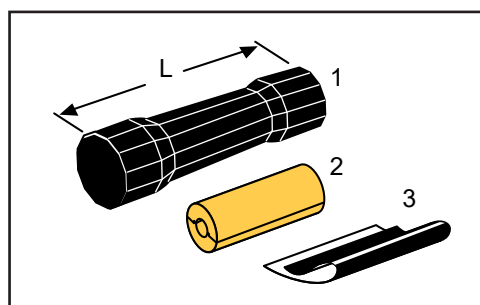
The BXJoint consists of:

1. PEX shrink sleeve with integrated hot-melt and mastic
2. Insulation shells
3. Shrink film

Delivered in white PE foil.

Store the shrink sleeve vertically.

Max. temperature during transport and storage: 60°C.



### Component overview/data

Component No. 5022

BXJoint

Outer casing D1 mm	Outer casing D2, mm															
	110	125	140	160	180	200	225	250	280	315	355	400	450	500	560	630
110	x															
125	x	x														
140	x	x	x													
160		x	x	x												
180			x	x	x											
200				x	x	x										
225					x	x	x									
250						x	x	x								
280							x	x	x							
315								x	x	x						
355										x	x					
400											x	x				
450												x	x			
500													x	x		
560														x	x	
630															x	x

L = 780 mm

# The Bonded TwinPipe Casing joints - BXJoint

---

<b>Materials</b>	Shrink sleeve:	Crosslinked PE (PEX)
	Mastic:	PIB-based mastic
	Insulation shells:	PUR
	Shrink film:	PEX with PIB-based mastic

## The Bonded TwinPipe Casing joints - BXSJoint

### Application

Shrink sleeve made of cross-linked PE (PEX) used for outer casing dimensions  $\varnothing$  90-630 mm.

BXSJoint is double sealed.

The shrink sleeve can be used for reduction. The dimensional limits appear from the table. Pre-install the shrink sleeve prior to welding the service pipe together.

The Alu-wrap can be used several times or remain in the joint as a diffusion barrier.

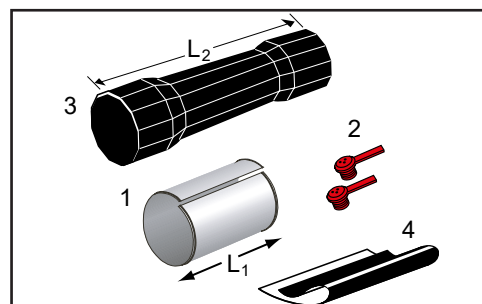
### Description

BXSJoint consists of:

1. Wrap for foaming
2. Venting plug
3. Shrink sleeve with integrated mastic
4. Shrink film

Store the sleeve vertically.

Max. temperature during transport and storage: 60°C.



### Component overview/data

Component No. 5029

BXSJoint

D1 mm	D2 mm															
	110	125	140	160	180	200	225	250	280	315	355	400	450	500	560	630
110	x															
125	x	x														
140	x	x	x													
160		x	x	x												
180			x	x	x											
200				x	x	x										
225					x	x	x									
250						x	x	x								
280							x	x	x							
315								x	x	x						
355										x	x					
400											x	x				
450												x	x			
500													x	x		
560														x	x	
630															x	x

L = 780 mm



The Bonded TwinPipe  
Casing joints - BXSJoint

---

Materials	Shrink sleeve:	Crosslinked PE (PEX)
	Mastic:	PIB-based mastic
	Wrap:	Aluminium
	Venting plug:	Polypropylene
	Shrink film:	PEX with PIB-based mastic
Accessories	To be foamed with foam pack, component No. 0700.	
	When ordering state insulation series, and that foam pack must be included in the delivery.	
	Fixing bars, component No. 1998.	
	Weld reductions eccentric, component No. 1006.	

## The Bonded TwinPipe Casing joints - B2SJoint

### Application

The B2SJoint is used for outer casing dimensions  $\varnothing$  90-710 mm.  
Pre-install the joints prior to welding the service pipe together.  
The B2SJoint is double sealed.

### Description

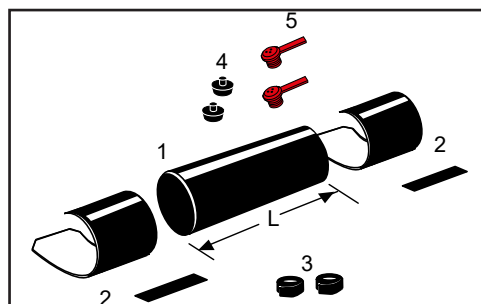
The B2SJoint consists of:

1. Shrink sleeve
2. Shrink wrap with closure patches
3. Sealing tape
4. Weld plugs
5. Venting plugs

Delivered in white PE foil.

Store the sleeve vertically.

Max. temperature during transport and storage: 40°C.



### Component overview/data

Component No. 5010

B2SJoint

Dimension, mm	L, mm
90	700
110	700
125	700
140	700
160	700
180	700
200	700
225	700
250	700
280	700
315	700
355	700
400	700
450	700
500	700
560	700
630	750
710	750

B2SJoint for E-Comp has a wall thickness for extrusion welding.  
Shrink sleeve  $\geq \varnothing$ 280 mm can be extrusion welded.

The Bonded TwinPipe  
Casing joints - B2SJoint

---

Materials	Shrink sleeve:	HDPE
	Wrap:	PEX with PIB-based mastic and hotmelt
	Sealing tape:	PIB-based
	Venting plugs:	Polypropylene
	Weld plugs:	HDPE
Accessories	To be foamed with foam pack, component No. 0700.	
	Machine foam is used for major dimensions.	
	When ordering state insulation series, and that foam pack must be included in the delivery.	

# The Bonded TwinPipe Casing joints - BSJoint

**Application**      The BSJoint is used for outer casing dimensions  $\varnothing$  90-560 mm.  
Pre-install the joints prior to welding the service pipe together.

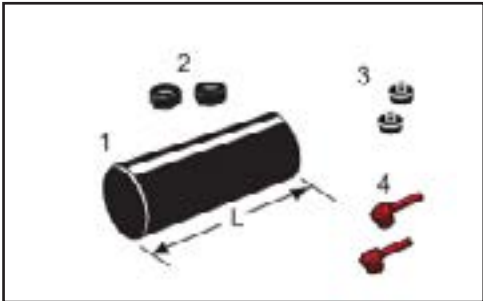
**Description**      The BSJoint set consists of:

- 1. Shrink sleeve
- 2. Sealing tape
- 3. Weld plugs
- 4. Venting plugs

Delivered in white PE foil.

Store the sleeve vertically.

Max. temperature during transport and storage: 40°C.



**Component overview/data**      Component No. 5005

BSJoint

Outer casing D mm	L mm
90	700
110	700
125	700
140	700
160	700
180	700
200	700
225	700
250	700
280	700
315	700
355	700
400	700
450	700
500	700
560	700

**Materials**

Shrink sleeve: HDPE

Sealing tape: PIB-based

Venting plugs: Polypropylene

Weld plugs: HDPE

**Accessories**      To be foamed with foam pack, component No. 0700.

When ordering state insulation series, and that foam pack must be included in the delivery.

# The Bonded TwinPipe

## Directional changes

---

<b>Contents</b>	Bend fitting SXB-WPJoint
	Preinsulated bends
	Curved pipes

# The Bonded TwinPipe

## Directional changes - SXB-WPJoint

**Application**

SXBJoint is used for directional changes of 0-90°. The sleeve is made of crosslinked PE (PEX)

This joint can be used under all common soil conditions and for all installation methods.

The SXBJoint can as a standard be reduced according to below table.

**Description**

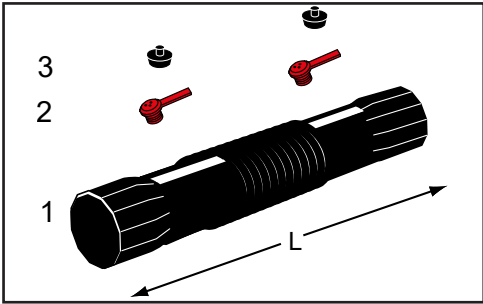
A SXB-WPJoint consists of:

1. Shrink sleeve with a flexible bending zone. The sleeve ends contain mastic
2. Venting plugs
3. Weld plugs

The joint is wrapped in a white foil on delivery.

Store the sleeve vertically.

Max. temperature during transportation and storage: 60°C.



**Component overview/data**

Component No. 5033

SXB-WPJoint

Outer casing D mm	Shrinkable to ø mm		L mm
90	90	77	815
110	110	90	865
125	125	110	865
140	140	125	865
160	160	140	865
180-200	200	180	975
225-250	250	225	980
280-315	315	280	1225

**Materials**

Casing joint: Cross-linked PE (PEX)

Venting plugs: Polypropylene

Weld plugs: HDPE

**Accessories**

To ensure centering bends for SXB-WPJoint, component No 5252 are used.

Wooden wedges are used to fix the bend fitting during installation, component No. 1997. See the Tools section.

To be foamed with foam pack, component No. 0700. When ordering state insulation series, and that foam pack must be included in the delivery.

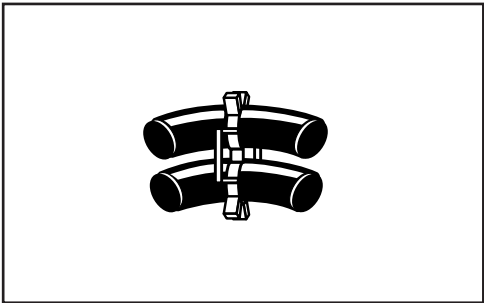
# The Bonded TwinPipe

## Directional changes - SXB-WPJoint

### Steel bend

Steel bend with bending radius, especially adjusted to the SXB-WP bend fitting.

Due to the centering in the joint, steel bends with other radii must not be used.



### Component overview/data

Component No. 5252

Steel bend

Series	Dimensions ød, mm										
	26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3	139.7	168.3	219.1
	Radius, mm										
1	140	140	140	145	160	175*	207.5*	270*	-	-	-
2	140	140	140	145	160	175*	222	-	-	-	-
3	140	140	140	145	160	190	222	-	-	-	-

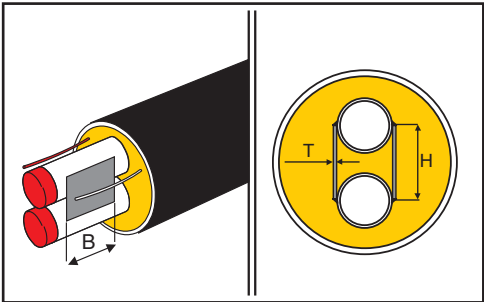
\*) Alternative radius = 2.5xd

### Fixing bars

The fixing bars are welded onto both sides of the bend.

Fixing bars consist of:

2 steel plates



### Component overview/data

Component No. 1998

Fixing bars

d	2x26.9	2x33.7	2x42.4	2x48.3	2x60.3	2x76.1	2x88.9	2x114.3	2x139.7	2x168.3	2x219.1
B, mm	45	65	80	85	110	135	125	165	205	260	305
H, mm	46	53	61	67	80	96	114	139	170	208	264
t, mm	4	4	4	4	4	4	6	6	6	6	8

## The Bonded TwinPipe

### Directional changes - Horizontal bend

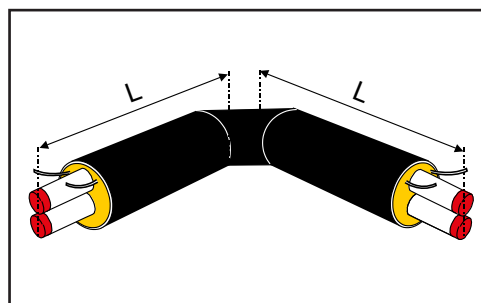
#### Application

Preinsulated, horizontal bends comply with the requirements in EN15698-2 and can be used for a max. operating pressure of 25 bar.

#### Description

The steel bends are cold-bent with a bending radius  $R = 2.5 \times d$  in accordance with EN448

The bends have fixing bars welded onto both ends.



#### Component overview/data

Component No. 2590

Horizontal bend

d mm	D, mm			L mm
	Series 1	Series 2	Series 3	
2x26.9	125	140	160	1000
2x33.7	140	160	180	1000
2x42.4	160	180	200	1000
2x48.3	160	180	200	1000
2x60.3	200	225	250	1000
2x76.1	225	250	280	1000
2x88.9	250	280	315	1000
2x114.3	315	355	400	1000
2x139.7	400	450	500	1000
2x168.3	450	500	560	1500
2x219.1	560	630	710	1500

Other angles with offsets of 5° are available to order.

#### Materials

All materials are the same as for straight pipes: steel/PUR/PE-HD.



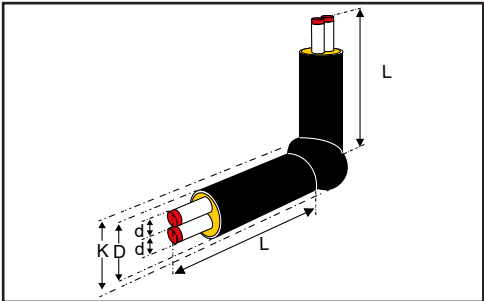
The Bonded TwinPipe

Directional changes - Vertical bend 90°

**Application** Preinsulated, vertical bends comply with the requirements in EN15698-2 and can be used for a max. operating pressure of 25 bar.

**Description** Dependent on dimension and angle either cold-bent bends or weld bends are used.

The bends have fixing bars welded onto both ends.



**Component overview/data** Component No. 2591

Vertical bend

d mm	Series 1		Series 2		Series 3		L mm
	D mm	K mm	D mm	K mm	D mm	K mm	
2x26.9	125	140	140	140	160	160	1000
2x33.7	140	160	160	160	180	180	1000
2x42.4	160	180	180	180	200	200	1000
2x48.3	160	180	180	180	200	200	1000
2x60.3	200	225	225	225	250	250	1000
2x76.1	225	250	250	250	280	280	1000
2x88.9	250	280	280	280	315	315	1000
2x114.3	315	355	355	355	400	400	1000
2x139.7	400	450	450	450	500	500	1000
2x168.3	450	500	500	500	560	560	1500
2x219.1	560	630	630	630	710	710	1500

Other angles with offsets of 5° are available as special orders.

**Materials** All materials are the same as for straight pipes: steel/PUR/PE-HD.

## The Bonded TwinPipe

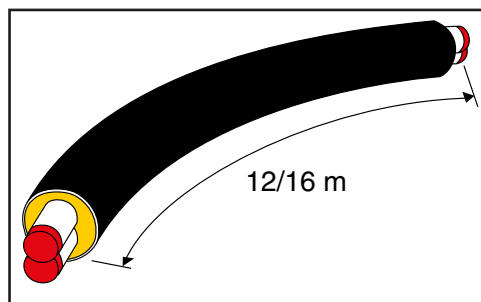
### Directional changes - Curved TwinPipe

#### Description

Are delivered in lengths of 12 and 16 m.

Curved pipes are delivered with embedded copper wires for surveillance.

When ordering please state length, bending angle, and bending direction.

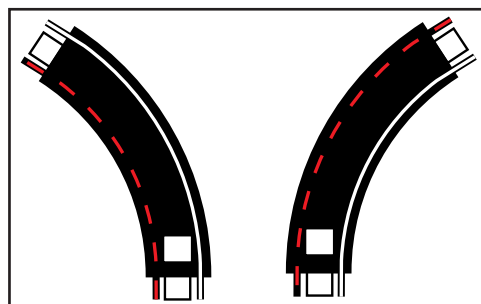


#### Direction:

When ordering it is stated in which direction the pipes must be bent:

← left  
→ right

The direction is defined on the basis of the tinned wire being to the right, and the blank copper wire to the left.



#### Geometry:

$v_p$  = bending angle, degrees

$R_p$  = design radius, m

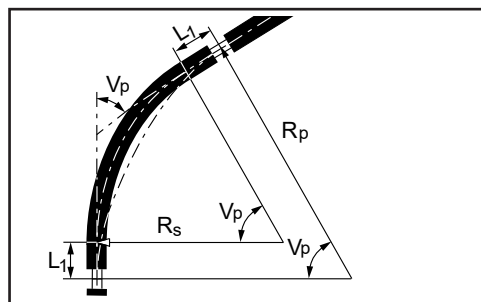
$L_1$  = length of straight pipe ends, m

Tol = tolerance of angle, degrees

The tolerance is calculated as 1/3 of the elastic angle of the steel pipe.

Manufactured curved pipes are delivered in angles in whole  $1^\circ$  intervals.

In addition max. bending angle,  $v^\circ p$  must be determined in relation to the stress level, under which it is being installed, see Design for TwinPipes.



## The Bonded TwinPipe

### Directional changes - Curved TwinPipe

#### Component overview/data

Component No. 2095

Curved pipe

Steel pipe d	12 m ppe				16 m pipe			
	Vmin V°	V°p max V°	L1 m	Tol ±V°	Vmin V°	V°p max V°	L1 m	Tol ±V°
2 x 60.3	8	16	0.60	7.6	-	-	-	-
2 x 76.1	6	25	0.60	5.6	-	-	-	-
2 x 88.9	5	33	0.60	4.8	-	-	-	-
2 x 114.3	4	38	0.56	3.8	6	13	2.49	5.1
2 x 139.7	4	43	0.63	3.1	5	16	2.47	4.1
2 x 168.3	3	45	0.67	2.6	4	19	2.45	3.5
2 x 219.1*	3	41	0.89	2.0	3	19	2.42	2.7

If larger angles than stated in the table are required, please contact LOGSTOR Technical Sales Support.

\*When bending 219x219/710 the max angle for 12 m is 18°.

#### Materials

Curved pipes are produced of materials according to standard material specifications for straight pipes.

## The Bonded TwinPipe Branches

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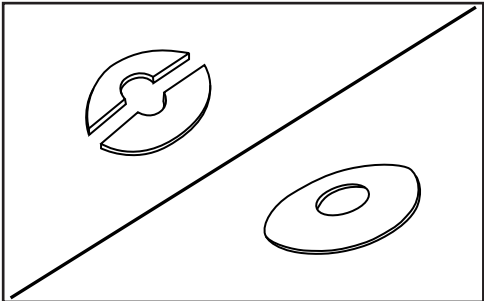
### Contents

Reinforcement plates in T-fittings  
TXJoint  
SXT-WPJoint  
TSJoint  
BandJoint-branch Flextra Twin/Twin  
BandJoint-branch Flextra Twin/Single  
T-joint straight double  
T-piece straight  
T-piece straight with 2 branches

# The Bonded TwinPipe Branches - Reinforcement plate

**Application**      Used in connection with branches to reinforce the main pipe in T-pieces, if necessary according to LOGSTOR Design Manual.

**Description**      The reinforcement plate is either 2-part or one plate.  
  
The combinations, marked in below table are available.



**Component overview/data**      Component No. 5426

Reinforcement plate

Branch ø mm Main pipe ø mm	26.9	33.7	42.4	48.3	60.3	76.1	88.9
33.7	x						
42.4	x	x					
48.3	x	x	x				
60.3	x	x	x	x			
76.1	x	x	x	x	x		
88.9	x	x	x	x	x	x	
114.3	x	x	x	x	x	x	x
139.7	x	x	x	x	x	x	x
168.3	x	x	x	x	x	x	x
219.1	x	x	x	x	x	x	x

## The Bonded TwinPipe Branches - TXJoint

### Application

T-joint for foaming, used to branch perpendicular to the main pipe.

The T-joint is made of PE and the shrink sleeve of cross-linked PE (PEX).

If it is to be used in connection with hot tapping, this must be stated when ordering.

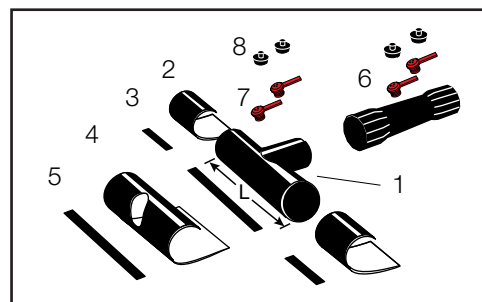
Installation on pipes with corrugated casing requires that the branch be sealed with an extra collar, which is ordered separately.

As a standard TXJoint is double sealed on the T-shoe. The branch can be double sealed by installing an open shrink wrap on one end of the SX-WPJoint towards the main pipe and a collar at the other end.

### Description

The TXJoint consists of:

1. Main pipe joint
2. Open shrink wraps
3. Closure patches
4. Shrink wrap
5. Closure patch
6. SX-WPJoint
7. Venting plugs
8. Weld plugs



The branch piece of the T-shoe is one dimension larger than the dimension of the pipe which is connected to.

SX-WPJoint now reduces to the dimension of the pipe which is connected to.

### Component overview/data

Component No. 5191

TXJoint

Main pipe D1 mm	Branch dimension mm									
	90	110	125	140	160	180	200	225	250	280
125	x	x								
140	x	x	x							
160	x	x	x	x						
180	x	x	x	x	x					
200	x	x	x	x	x	x				
225	x	x	x	x	x	x	x			
250	x	x	x	x	x	x	x	x		
280	x	x	x	x	x	x	x	x	x	
315	x	x	x	x	x	x	x	x	x	x
355	x	x	x	x	x	x	x	x	x	x
400	x	x	x	x	x	x	x	x	x	x
450	x	x	x	x	x	x	x	x	x	x

## The Bonded TwinPipe Branches - TXJoint

Main pipe D1 mm	Branch dimension mm									
	90	110	125	140	160	180	200	225	250	280
500	x	x	x	x	x	x	x	x	x	x
560	x	x	x	x	x	x	x	x	x	x
630	x	x	x	x	x	x	x	x	x	x
710	x	x	x	x	x	x	x	x	x	x

Length of main pipe joint = 600 mm

Length of shrink wrap = 900 mm

Length of shrink sleeve = 650 mm

### Materials

T-shoe: HDPE

SX-WPJoint: Cross-linked PE, PEX

Mastic: PIB-based mastic

Venting plugs: Polypropylene

Weld plugs: HDPE

Shrink wrap: PEX with PIB-based mastic and hotmelt

### Accessories

Shrink wrap incl. closure patch to double-seal the branch, component No. 5400.  
Order 1 pc. per casing joint.

When connecting to FlextraPipe, order 1 pc. collar per casing joint for the branch with corrugated casing, component No. 5500.

Hot tapping valve, component No. 4280

To be foamed with foam packs, component No. 0700.

When ordering state insulation series, and that delivery must include foam packs.

Reinforcement plate to reinforce the main pipe, if necessary, component No. 5426.

## The Bonded TwinPipe Branches - TXJoint

### Hot tapping

TXJoint can also be used for hot tapping in connection with the branch. When ordering state, that the T-joint will be used for hot tapping.

The connecting pipe is welded in continuation of the hot tapping.

From below table the dimensions which can be used with TXJoint and hot tapping valve appear.

### Component overview/data

Component No. 5191

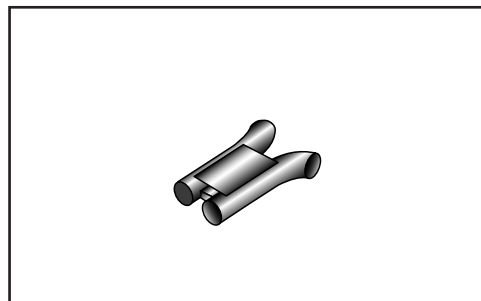
TXJoint - hot tapping

Main pipe	2x48.3/160	2x60.3/200	2x76.1/225	2x88.9/250	2x114.3/315	2x139.7/400	2x168.3/450
Branch							
2x26.9/125	x	x	x	x	x	x	x
2x33.7/140	x	x	x	x	x	x	x
2x42.4/160		x	x	x	x	x	x
2x48.3/160				x	x	x	x
2x60.3/200				x	x	x	x
2x76.1/225						x*	x*
2x88.9/250						x*	x*

\* Special solution, requiring a T-shoe with a long connecting piece.

### Connecting pipe

The connecting pipe ensures the correct distance between the service pipes of the branch.



### Component overview/data

Component No. 0262

Connecting pipe

Main pipe d1	Branch d2, mm						
	2x26.9	2x33.7	2x42.4	2x48.3	2x60.3	2x76.1	2x88.9
2x42.4	x	x					
2x48.3	x	x	x				
2x60.3	x	x	x	x			
2x76.1	x	x	x	x	x		
2x88.9	x	x	x	x	x	x	
2x114.3	x	x	x	x	x	x	x
2x139.7	x	x	x	x	x	x	x
2x168.3	x	x	x	x	x	x	x
2x219.1	x	x	x	x	x	x	x



# The Bonded TwinPipe Branches - SXT-WPJoint

**Application**

T-joint for foaming. Made of cross-linked PE (PEX) with flanges and bolts in acid-resistant steel AISI 316 L. The T-joint is shrinkable and the foam holes are sealed with weld plugs.

The SXT-WPJoint can be used to branch perpendicular to or parallel with the main pipe.

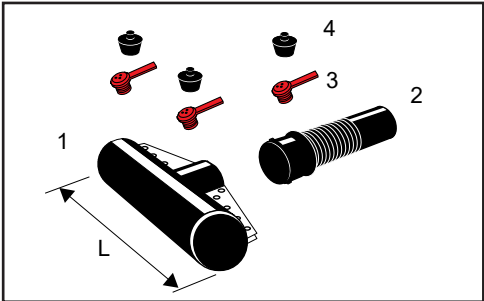
The SXT-WPJoint can be used together with a hot tapping valve in dimensions according to the table. The insulation thickness around the valve chamber will be smaller.

Installation on FlextraPipe with corrugated casing requires that the branch be sealed with an extra collar, which is ordered separately.

**Description**

The SXT-WPJoint consists of:

1. Main pipe joint
2. Branch pipe joint
3. Venting plugs
4. Weld plugs



**Component overview/data**

Component No. 5210

SXT-WPJoint  
Component Nos.: Main pipe joint 5210 - Branch pipe joint 5211

Main pipe D1 mm	Branch D2 mm						
	90	110	125	140	160	180	200
125	x	x	x				
140	x	x	x	x			
160	x	x	x	x			
180	x	x	x	x	x		
200	x	x	x	x	x	x	x
225	x	x	x	x	x	x	x
250	x	x	x	x	x	x	x
280	x	x	x	x	x	x	x
315	x	x	x	x	x	x	x

**Materials**

T-shoe: Cross-linked PE, PEX

Branch joint: Cross-linked PE, PEX

Mastic: PIB-based mastic

Venting plugs: Polypropylene

Weld plugs: HDPE

Flanges and bolts: Acid-proof steel AISI 316L

## The Bonded TwinPipe Branches - SXT-WPJoint

### Accessories

Collar for branch with corrugated casing, component No. 5500. Order 1 pc. per casing joint.

To be foamed with foam packs, component No. 0700.

When ordering state insulation series, and that delivery must include foam packs.

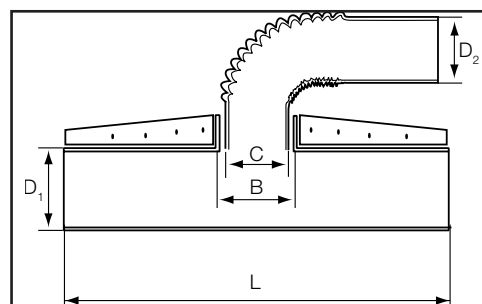
Reinforcement plate to reinforce the main pipe, if necessary, component No. 5426.

Hot tapping valve, component No. 4280.

### Measurements and combinations

The connecting piece of the main pipe fits several branch pipe joints and the branch pipe joint fits several branch dimensions.

The possible combinations appear from below table.



### Component overview/data

Component No. 5210

Possible combinations with connecting piece for SXT-WPJoint    Component Nos. 5210/5211

Main pipe joint			Branch pipe joint D2, mm					
			77-90	90-110	110-125	125-140	140-160	180-200
D1 mm	B mm	L mm	C mm					
125	155	680	144		144			
140	170	680	160		160	160		
160	170	680	160		160	160		
180	190	680	180		180	180	180	
200	170	680	160		160	160		
	230	720					220	220
225	170	680	160		160	160		
	230	680					220	220
250	170	680	160		160	160		
	230	720					220	220
280	170	680	160		160	160		
	230	720					220	220
315	170	680	160		160	160		
	230	720					220	220

# The Bonded TwinPipe Branches - SXT-WPJoint

Combinations for  
hot tapping valve

Component  
overview/data

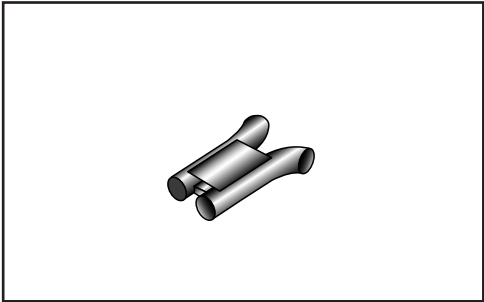
Component No. 5210

SXT-WPJoint - hot tapping

Main pipe d1 mm	Branch D2 mm		
	2x26.9	2x33.7	2x42.4
2x42.4	x		
2x48.3	x		
2x60.3	x	x	
2x76.1	x	x	x
2x88.9	x	x	x
2x114.3	x	x	x

Connecting pipe

The connecting pipe ensures the correct distance between the service pipes of the branch.



Component  
overview/data

Component No. 0262

Connecting pipe

Main pipe d1	Branch d2, mm						
	2x26.9	2x33.7	2x42.4	2x48.3	2x60.3	2x76.1	2x88.9
2x42.4	x	x					
2x48.3	x	x	x				
2x60.3	x	x	x	x			
2x76.1	x	x	x	x	x		
2x88.9	x	x	x	x	x	x	
2x114.3	x	x	x	x	x	x	x

## The Bonded TwinPipe Branches - TSJoint

### Application

T-joint for foaming, used to branch perpendicular to the main pipe.

The main pipe is made of weldable PE and the branch of cross-linked PE (PEX). The T-joint is shrinkable.

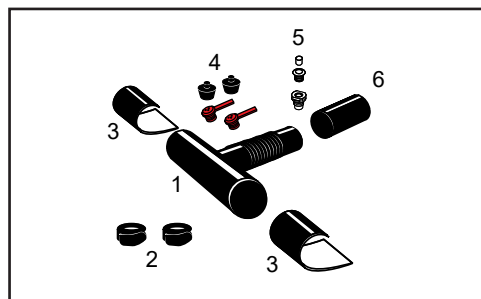
The main pipe is extrusion welded longitudinally and then the ends are shrunk and sealed with mastic tape and open shrink wraps or welded with weld strips. The branch is sealed with mastic and a collar.

The foam holes are sealed with a weld plug on the main pipe and an expansion plug on the branch.

### Description

The TSJoint with mastic consists of:

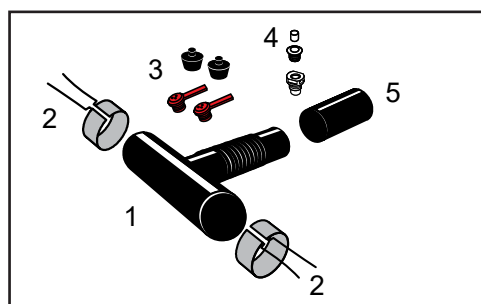
1. T-joint
2. Mastic tape
3. Open shrink wraps
4. Venting and weld plugs
5. Venting and expansion plugs
6. Collar



The TSJoint EW consists of:

1. T-joint
2. Weld strips
3. Venting and weld plugs
4. Venting and expansion plugs
5. Collar

Weld strips are ordered separately.



### Component overview/data

Component No. 5202

TSJoint

Branch D2	Main pipe D1, mm											
	125	140	160	180	200	225	250	280	315	355	400	450
90-125	x*	x	x	x	x	x	x	x	x	x	x	x
140-160					x	x	x	x	x	x	x	x

X\* = Max. branch ø 110 mm

Length, T-joint, main pipe: 650 mm

Length, T-joint, branch, dimension 90-125 mm: 710 mm

Length, T-joint, branch, dimension 140-160 mm: 740 mm

The Bonded TwinPipe  
Branches - TSJoint

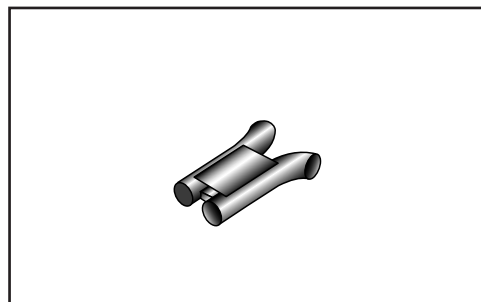
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<b>Materials</b>	T-shoe, base pipe: HDPE
	T-shoe, branch: Cross-linked PE, PEX
	Venting plug, base pipe: Polypropylene
	Venting plug, branch: LDPE
	Weld plugs: HDPE
	Collar: PEX with PIB-based mastic
	Sealing strip: PIB-based
<b>Accessories</b>	To be foamed with foam pack, component No. 0700.
	When ordering state insulation series, and that foam pack must be included in the delivery.
	Reinforcement plate to reinforce the main pipe, if necessary, component No. 5426.

## The Bonded TwinPipe Branches - TSJoint

### Connecting pipe

The connecting pipe ensures the correct distance between the service pipes of the branch.



### Component overview/data

Component No. 0262

Connecting pipe

Main pipe d1	Branch d2, mm			
	2x26.9	2x33.7	2x42.4	2x48.3
2x42.4	x	x		
2x48.3	x	x	x	
2x60.3	x	x	x	x
2x76.1	x	x	x	x
2x88.9	x	x	x	x
2x114.3	x	x	x	x
2x139.7	x	x	x	x
2x168.3	x	x	x	x

### Weld strip

Is used to weld together the joint and the outer casing.

### Component overview/data

Component No. 5556

### Materials

Weld strip: Electro-plated mesh

# The Bonded TwinPipe

## Branches - BandJoint-branch Flextra Twin/Twin

**Application**

T-joint for foaming, used to branch with flexible pipe perpendicular to the main pipe.

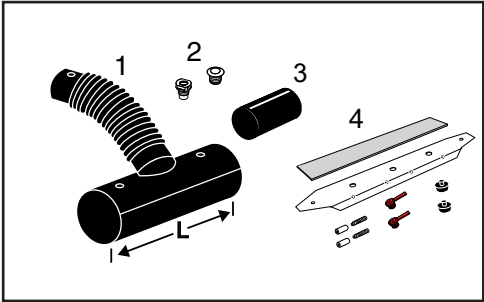
The main pipe joint is made of PE with embedded copper wires for welding. The branch is made of cross-linked PE (PEX) and sealed with mastic and a collar.

The foam holes in the main pipe are sealed with welding plugs, in the branch with expansion plug and collar.

**Description**

BandJoint-branch Flextra for foaming consists of:

1. Branch with flexible connecting piece (PEX)
2. Venting and expansion plug for the branch
3. Branch collar
4. Accessories set for main pipe, delivered separately



Length, T-joint, main pipe, dimension  
 ø125 – 200 mm = 570 mm

Length, T-joint, main pipe, dimension  
 ø225 – 710 mm = 630 mm

Length, T-joint, branch = 700 mm

**Component overview/data**

Component No. 5640

BandJoint-branch Flextra

Branch D2	Main pipe D1, mm								
mm	125	140	160	180	200	225	250	280	315
90-125	*x	x	x	x	x	x	x	x	x
140-160			**x	**x	x	x	x	x	x
	BandJoint-branch Flextra Twin								
	355	400	450	500	560	630	710		
90-125	x	x	x	x	x	x	x		
140-160	x	x	x	x	x	x	x		

\*x = Max. branch ø 110 mm

\*\*x = Max. branch ø 140 mm

## The Bonded TwinPipe Branches - BandJoint-branch Flextra Twin/Twin

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**Materials**

T-shoe, base pipe: HDPE

T-shoe, branch: Cross-linked PE, PEX

Venting plug, branch pipe: LDPE

Collar: PEX with PIB-based mastic

Insulator foot: Etronite, high-pressure laminate

**Accessories**

To be foamed with foam packs, component No. 0700.

When ordering state insulation series, and that delivery must include foam packs.

Reinforcement plate to reinforce the main pipe, if necessary, component No. 5426.



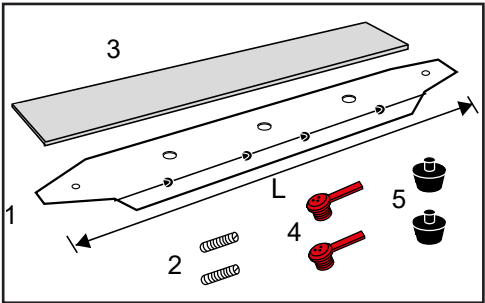
# The Bonded TwinPipe

## Branches - BandJoint-branch Flextra Twin/Twin

**Depth guard**

Accessories set used for support at the longitudinal weld on the main pipe.

- 1. Felt
- 2. Depth guard
- 3. Screws
- 4. Venting plugs
- 5. Weld plugs



**Component overview/data**

Component No. 5606

Depth guard

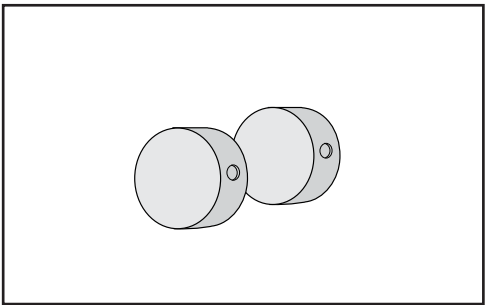
Depth guard	Dimension, mm	
	125-200	225-710
Covering length, mm	440	440
W, mm	40	70
L, mm	500	500

**Materials**

Venting plug, base pipe: Polypropylene  
 Weld plugs: HDPE  
 Depth guard: Hot galvanised plate  
 Felt pad: Felt

**Supporting blocks**

For TwinPipes dimension  $\varnothing$  225-710 mm supporting blocks with hole for the adjusting screw between the two service pipes are used.



**Component overview/data**

Component No. 5606

Supporting block

Supporting block D mm	Outer casing dimension, $\varnothing$ mm	
	225-250	280-710
50	x	
70		x

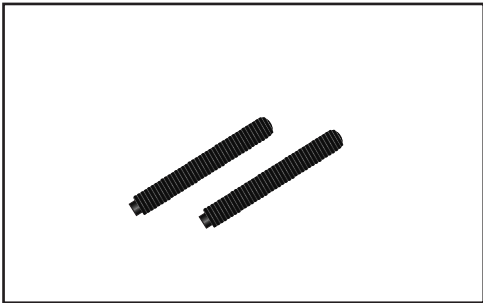
Delivered in sets, containing 2 pcs.

The Bonded TwinPipe

Branches - BandJoint-branch Flextra Twin/Twin

**Extra long screws**    Extra long screws must be used for the supporting block. The length of the screw depends on the outer casing dimension.

2 screws are used per BandJoint.



**Component overview/data**    Component No. 1995

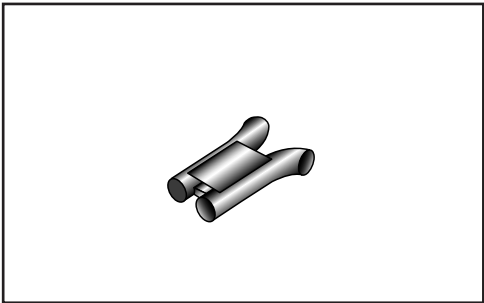
Long screws

Outer casing	Screw length				
	M10x100 mm	M10x120 mm	M10x150 mm	M10x220 mm	M10x250 mm
250	x				
280	x				
315		x			
355	x				
400			x		
450				x	
500				x	
560				x	
630					x
710					x

**Materials**    Screws: PPS or steel

Branches - BandJoint-branch Flextra Twin/Twin

**Connecting pipe**      The connecting pipe ensures the correct distance between the service pipes of the branch.



**Component overview/data**      Component No. 0262

Connecting pipe

Main pipe d1	Branch d2, mm			
	2x26.9	2x33.7	2x42.4	2x48.3
2x42.4	x	x		
2x48.3	x	x	x	
2x60.3	x	x	x	x
2x76.1	x	x	x	x
2x88.9	x	x	x	x
2x114.3	x	x	x	x
2x139.7	x	x	x	x
2x168.3	x	x	x	x

## The Bonded TwinPipe Branches - BandJoint-branch Flextra Twin/Single

### Application

T-joint for foaming, used to branch with flexible pipe perpendicular to the main pipe.

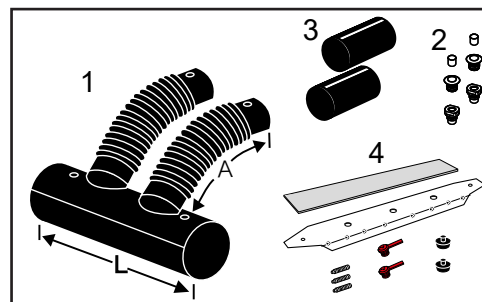
The main pipe joint is made of PE with embedded copper wires for welding. The branch is made of cross-linked PE (PEX) and sealed with mastic and a collar.

The foam holes in the main pipe are sealed with welding plugs, in the branch with expansion plug and collar.

### Description

BandJoint-branch Flextra Twin/Single consists of:

1. Branch with flexible connecting pieces (PEX)
2. Venting and expansion plugs for branches
3. Branch collars
4. Accessories set for main pipe, delivered separately



Lengths:

Dimension 125 – 200 mm L = 830 mm

Dimension 225 – 710 mm L = 1020 mm

Length of T-joint branch = 700 mm

### Component overview/data

Component No. 5640

BandJoint-branch Flextra - Twin/single

Main pipe D1 mm	Branch dimension 90-125 mm
125	*x
140	x
160	x
180	x
200	x
225	x
250	x
280	x
315	x
355	x
400	x
450	x
500	x
560	x
630	x
710	x

\*x = Max branch ø 110 mm

# The Bonded TwinPipe

## Branches - BandJoint-branch Flextra Twin/Single

**Materials**

T-shoe, base pipe HDPE

T-shoe, branch: Cross-linked PE, PEX

Venting plug, branch: LDPE

Collar: PEX with PIB-based mastic

**Accessories**

To be foamed with foam packs, component No. 0700.

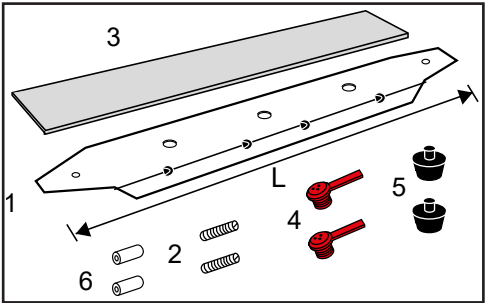
When ordering state insulation series, and that delivery must include foam packs.

Reinforcement plate to reinforce the main pipe, if necessary, component No. 5426.

**Depth guard**

Accessories set used for support at the longitudinal weld on the main pipe.

1. Felt
2. Depth guard
3. Screws
4. Venting plugs
5. Weld plugs



**Component overview/data**

Component No. 5606

Depth guard

	Dimension	
Depth guard	125-200	225-710
Covering length, mm	550-585	550-585
W, mm	40	70
L, mm	700	720

**Materials**

Depth guard: Hot galvanised plate

Felt pad: Felt

Screws: PPS or steel

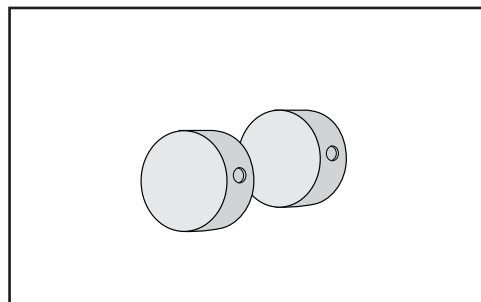
Venting plug, base pipe: Polypropylene

Weld plugs: HDPE

Insulator foot: Etronite, high-pressure laminate

## The Bonded TwinPipe Branches - BandJoint-branch Flextra Twin/Single

**Supporting blocks** For TwinPipes dimension  $\varnothing$  225-710 mm supporting blocks with hole for the adjusting screw between the two service pipes are used.



### Component overview/data

Component No. 5606

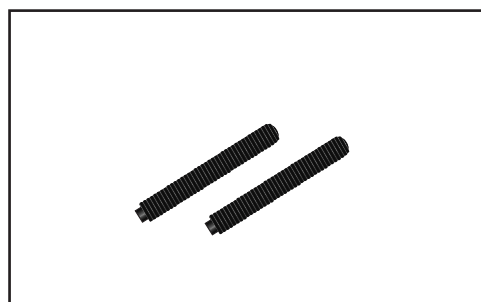
Supporting block

Supporting block D mm	Outer casing dimension, $\varnothing$ mm	
	225-250	280-710
50	x	
70		x

Delivered in sets, containing 2 pcs.

**Extra long screws** Extra long screws must be used for the supporting block. The length of the screw depends on the outer casing dimension.

4 screws are used per BandJoint-branch.



### Component overview/data

Component No. 1995

Long screws

Outer casing	Screw length				
	M10x100 mm	M10x120 mm	M10x150 mm	M10x220 mm	M10x250 mm
250	x				
280	x				
315		x			
355	x				
400			x		
450				x	
500				x	
560				x	
630					x
710					x

Order 4 pcs. per BandJoint-branch.

### Materials

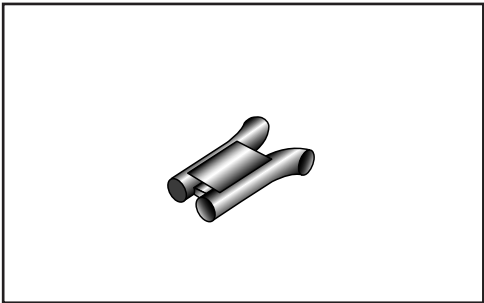
Screws: PPS or steel

The Bonded TwinPipe

Branches - BandJoint-branch Flextra Twin/Single

Connecting pipe

The connecting pipe ensures the correct distance between the service pipes of the branch.



Component overview/data

Component No. 0262

Connecting pipe

Main pipe d1	Branch d2, mm			
	2x26.9	2x33.7	2x42.4	2x48.3
2x42.4	x	x		
2x48.3	x	x	x	
2x60.3	x	x	x	x
2x76.1	x	x	x	x
2x88.9	x	x	x	x
2x114.3	x	x	x	x
2x139.7	x	x	x	x
2x168.3	x	x	x	x

## The Bonded TwinPipe Branches - T-joint straight double

### Application

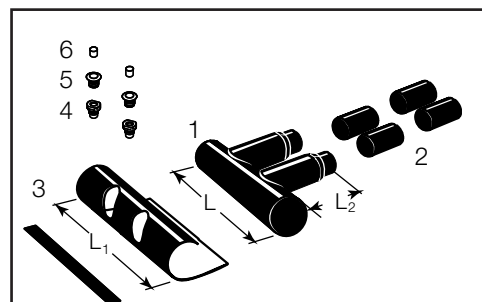
T-joint with 2 branches is used to branch from TwinPipe to single pipe, primarily FlexPipe.

If the T-joint will be used in connection with a hot tapping valve, please state this when ordering.

### Description

A complete T-joint straight consists of:

1. Main pipe joint with 2 branches
2. Collars for the 2 branches (4 pcs. in total)
3. Shrink wrap for main pipe joint incl. closure patch
4. Venting plugs
5. Expansion plugs
6. Wedge plugs



### Component overview/data

Component No. 5190

T-Joint straight double

Main pipe D1 mm	Branch dimension mm	
	90	110
140	x	x
160	x	x
180	x	x
200	x	x
225	x	x
250	x	x
280	x	x
315	x	x
355	x	x
400	x	x
450	x	x
500	x	x
560	x	x
630	x	x
710	x	x

### Accessories

To be foamed with foam pack, component No. 0700.

When ordering state insulation series, and that foam pack must be included in the delivery.

Reinforcement plate to reinforce the main pipe, if necessary, component No. 5426.



## The Bonded TwinPipe Branches - Hot tapping

### Application

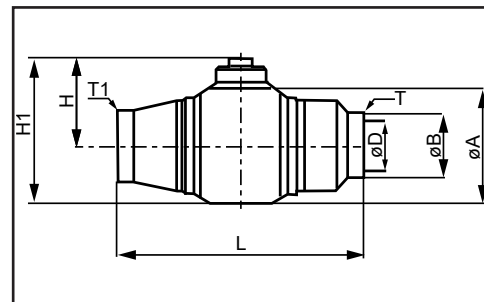
Hot tapping valves are used to establish branches on pipelines in operation.

Max. pressure closed: valve 16 bar. Operating pressure after establishment of branch: 25 bar.

Please note that reinforcement of the main pipe may be necessary, cf. LOGSTOR Design Manual.

### Danfoss JIP

All hot tapping valves have a hexagon spindle and a hexagon plug.



### Component overview/data

Component No. 4280

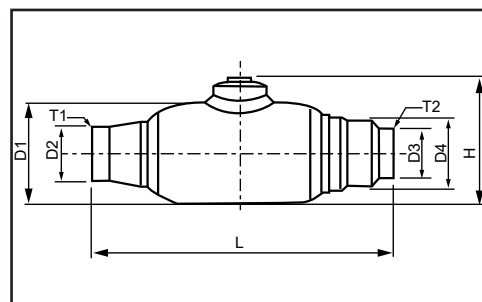
Danfoss JIP - Reduced passage

DN	Ø mm	T mm	Bore, D mm	H mm	H1 mm	L mm	Ø chamber, A mm	T1 mm	Thread	Operating key
20	26.9 (24)	2.5	15.5	42.0	63.2	128	42.4	3.9	G 3/4	8
20	26.9*	3.1	20.6	44.5	69	140	48.3	4.3	M 36x1.5	8
25	33.7	3.2	25.6	54.1	84.3	145	60.3	4.3	G 1 1/2	12
25	33.7*	3.2	20.6	42	66.2	140	48.3	4.6	M 36x1.5	8
32	42.4	3.2	25.6	54.1	84.3	145	60.3	4.6	G 1 1/2	12
40	48.3	3.2	40.5	64.4	108.9	200	88.9	4	G 2 1/2	12
40	48.3*	3.2	32.5	59.0	97.1	172	76.1	4	G 2	12
50	60.3	3.2	40.5	64.4	108.9	200	88.9	6.3	G 2 1/2	12
65	76.1	3	51.6	72.0	122.8	260	101.6	5.5	G 2 1/4	18
80	88.9	3.5	66.3	84.0	147.5	265	127.0	6	Rp 2 3/4	18

\*) Can be used in LOGSTOR T-joints for optimum insulation around the valve chamber.

## The Bonded TwinPipe Branches - Hot tapping

Broen



### Component overview/data

Component No. 4280

Broen

Reduced passage									
DN	D2, ø	Wall thickness, mm		Bore, D3	H mm	L mm	ø chamber, D1 mm	Thread, D4	Operating key
		T2	T1						
15	21.3	2.0	3.5	15	53	127	42.4	G 7/8	5
20	26.9	2.3	3.5	15	53	127	42.4	G 7/8	5
25	33.7	2.6	3.5	20	64	143	51.0	G 1 1/8	5
32	42.4	2.6	3.5	25	68	145	57.0	G 1 1/2	5
40	48.3	2.6	4.0	32	96	178	76.1	G 1 3/4	7
50	60.3	2.9	4.0	39	107	198	88.9	G 2 1/4	7
65	76.1	2.9	7.5	49	118	205	108.0	M 64X2	8
80	88.9	3.2	8.0	63	137	200	127.0	M 76X2	8
10 mm hexagon key operates pipe plug. 12 mm key operates valve.									
Full passage									
DN	d2,ø	Wall thickness, mm		Bore, D3	H mm	L mm	ø chamber, D1 mm	Thread, D4	Operating key
		T2	T1						
20	26.9	2.3	3.5	20	60	143	51.2	G 1 1/8	5
25	33.7	2.6	3.5	25	67	145	56.0	G 1 1/2	5
32	42.4	2.6	4.0	32	92	178	76.0	G 1 3/4	5
40	48.3	2.6	5.0	39	103	198	88.0	G 2 1/4	7

## The Bonded TwinPipe Branches - T-piece straight

### Application

T-pieces straight for TwinPipe are reinforced to withstand axial forces corresponding to stresses of 330 MPa.

However, in case the main pipe and the branch have the same dimension, T-pieces can only withstand axial forces corresponding to 190 MPa.

If the main pipe and branch dimension are the same, a weld-T-piece is used according to EN10253-2

### Description

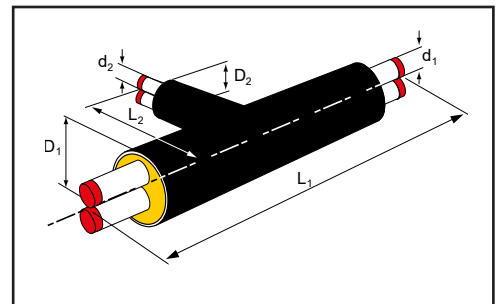
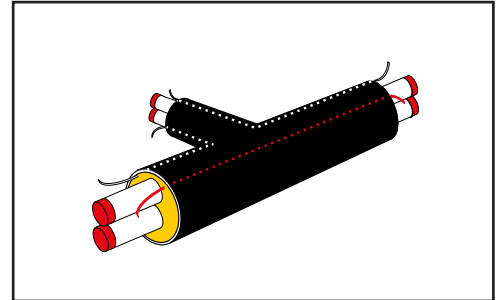
The branch of the T-piece has a fixing bar welded onto it.

If the T-piece is installed at the end of a section, fixing bar must be welded onto the main pipe.

Wires for surveillance are embedded.

All preinsulated T-pieces are as a standard delivered with 2 embedded wires: a copper wire and a tinned wire.

The tinned wire always runs into the branch, whereas the copper wire runs straight through.



### Component overview/data

Component No. 3490

T-piece straight

d2, mm					2x26.9	2x33.7	2x42.4	2x48.3	2x60.3	2x76.1	2x88.9	2x114.3	2x139.7	2x168.3	2x219.1
					L2, mm										
d1 mm	L1 mm	D1-D2, mm													
		Series 1	Series 2	Series 3											
2x26.9	1100	125	140	160	700										
2x33.7	1100	140	160	180	700	700									
2x42.4	1100	160	180	200	700	700	700								
2x48.3	1100	160	180	200	700	700	700	700							
2x60.3	1200	200	225	250	700	700	700	700	700						
2x76.1	1200	225	250	280	700	700	700	700	700	700					
2x88.9	1300	250	280	315	700	700	700	700	700	700	700				
2x114.3	1300	315	355	400	700	700	700	700	700	700	700	700			
2x139.7	1500	400	450	500	750	750	750	750	750	750	750	750	750		
2x168.3	1600	450	500	560	800	800	800	800	800	800	800	800	800	800	
2x219.1	1700	560	630	710	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

## The Bonded TwinPipe Branches - T-piece straight

### Wall thickness

ø 33.7-219.1:

T-pieces are made by collaring on base pipes with large wall thickness, cf. table with the following exceptions:

T-pieces with the same main pipe and branch dimension are made with weld-T-piece in accordance with EN 10253-2.

T-pieces for main pipe dimension ø 139.7-219.1 and branch one dimension smaller than the main pipe dimension will be carried out with direct branch on pipes with larger wall thickness.

### Component overview/data

Component No. 3490

Collared main pipe	
ød1 mm	Wall thickness mm
33.7	3.6
42.4	4.0
48.3	4.0
60.3	4.5
76.1	4.5
88.9	5.0
114.3	5.6
139.7	5.6
168.3	6.3
219.1	7.1

## The Bonded TwinPipe

### Branches - T-piece straight with 2 branches

#### Description

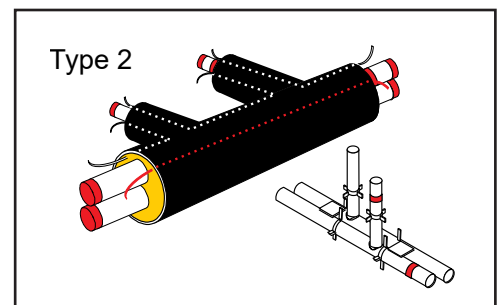
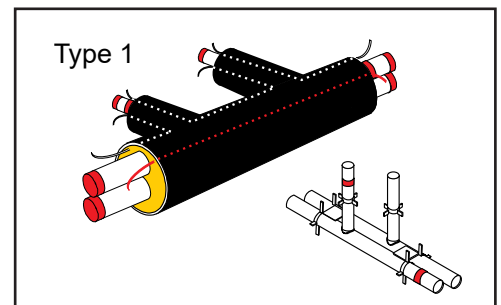
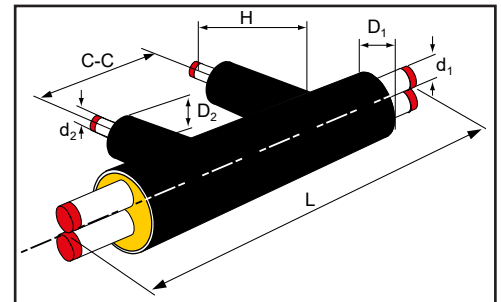
T-piece straight with 2 separate branches are reinforced.

If the T-piece is installed at the end of a section, fixing bar must be welded onto the main pipe.

Wires for surveillance are embedded.

All preinsulated T-pieces are as a standard delivered with 2 embedded wires: a copper wire and a tinned wire.

The tinned wire always runs into the branch, whereas the copper wire runs straight through.



#### Component overview/data

Component No. 3492

T-piece straight with 2 branches

d1, mm		2x26.9	2x33.7	2x42.4	2x48.3	2x60.3	2x76.1	2x88.9	2x114.3	2x139.7	2x168.3	2x219.1
Series 2		140	160	180	180	225	250	280	355	450	500	630
Series 3		160	180	200	200	250	280	315	400	500	560	710
L1, mm		1300	1300	1300	1300	1300	1400	1400	1600	1600	1600	1600
d2, mm	D2, mm Series 3	H, mm C-C, mm										
26.9 + 26.9	125 + 125	600	600	600	600	600	600	650	650	700	750	800
		300	300	300	300	300	350	350	350	300	300	300
33.7 + 33.7	125 + 125		600	600	600	600	600	650	650	700	750	800
			300	300	300	300	350	350	350	300	300	300
42.4 + 42.4	140 + 140			600	600	600	600	650	650	700	750	800
				300	300	300	350	350	350	300	300	300
48.3 + 48.3	140 + 140				600	600	600	650	650	700	750	800
					300	300	350	350	350	300	300	300
60.3 + 60.3	160 + 160					600	600	650	650	700	750	800
						300	350	350	350	300	300	300

## The Bonded TwinPipe

### Branches - T-piece straight with 2 branches

d1, mm		2x26.9	2x33.7	2x42.4	2x48.3	2x60.3	2x76.1	2x88.9	2x114.3	2x139.7	2x168.3	2x219.1
Series 2		140	160	180	180	225	250	280	355	450	500	630
Series 3		160	180	200	200	250	280	315	400	500	560	710
L1, mm		1300	1300	1300	1300	1300	1400	1400	1600	1600	1600	1600
d2, mm	D2, mm Series 3	H, mm C-C, mm										
76.1 + 76.1	180 + 180						600	650	650	700	750	800
							350	350	350	300	300	300
88.9 + 88.9	200 + 200							650	650	700	750	800
								350	350	300	300	300
114.3 + 114.3	250 + 250								650	700	750	800
									500	300	300	300

The Bonded TwinPipe  
Transition pipes

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<b>Contents</b>	Merge pipe
	F-bend

## The Bonded TwinPipe Transition pipes - Merge pipe

### Application

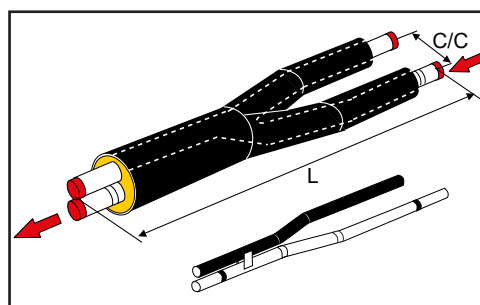
Merge pipes are used for transition from a single pipe to a TwinPipe.

Merge pipes are available in a type 1 and a type 2, both have fixing bar at the TwinPipe end.

The flow pipe is always placed at the bottom.

### Type 1

In merge pipe type 1 the flow of the single pipe is placed to the left.



### Component overview/data

Component No. 3071

Merge pipe - type 1

Series 1		Series 2		Series 3		L	C/C
TwinPipe d mm	Single pipe d, mm	TwinPipe d mm	Single pipe d, mm	TwinPipe d mm	Single pipe d, mm		
2x26.9/125	26.9/90	2x26.9/140	26.9/110	2x26.9/160	26.9/125	2309	275
2x33.7/140	33.7/90	2x33.7/160	33.7/110	2x33.7/180	33.7/125	2348	275
2x42.4/160	42.4/110	2x42.4/180	42.4/125	2x42.4/200	42.4/140	2386	290
2x48.3/160	48.3/110	2x48.3/180	48.3/125	2x48.3/200	48.3/140	2376	290
2x60.3/200	60.3/125	2x60.3/225	60.3/140	2x60.3/250	60.3/160	2428	325
2x76.1/225	76.1/140	2x76.1/250	76.1/160	2x76.1/280	76.1/180	2442	350
2x88.9/250	88.9/160	2x88.9/280	88.9/180	2x88.9/315	88.9/200	2485	390
2x114.3/315	114.3/200	2x114.3/355	114.3/225	2x114.3/400	114.3/250	2601	480
2x139.7/400	139.7/225	2x139.7/450	139.7/250	2x139.7/500	139.7/280	2874	580
2x168.3/450	168.3/250	2x168.3/500	168.3/280	2x168.3/560	168.3/315	2947	640
2x219.1/560	219.1/315	2x219.1/630	219.1/355	2x219.1/710	219.1/400	3149	790

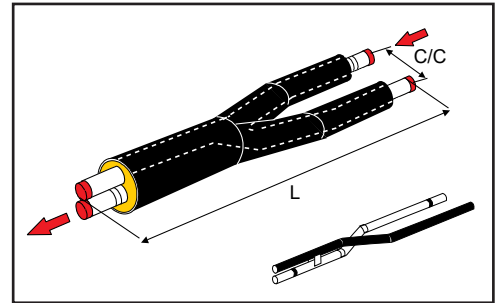


## The Bonded TwinPipe

### Transition pipes - Mergè pipè

#### Type 2

In merge pipe type 2 the flow of the single pipe is placed to the right.



#### Component overview/data

Component No. 3071

Merge pipe - type 2

Series 1		Series 2		Series 3		L mm	C/C mm
TwinPipe d mm	Single pipe d, mm	TwinPipe d mm	Single pipe d, mm	TwinPipe d mm	Single pipe d, mm		
2x26.9/125	26.9/90	2x26.9/140	26.9/110	2x26.9/160	26.9/125	2309	275
2x33.7/140	33.7/90	2x33.7/160	33.7/110	2x33.7/180	33.7/125	2348	275
2x42.4/160	42.4/110	2x42.4/180	42.4/125	2x42.4/200	42.4/140	2386	290
2x48.3/160	48.3/110	2x48.3/180	48.3/125	2x48.3/200	48.3/140	2376	290
2x60.3/200	60.3/125	2x60.3/225	60.3/140	2x60.3/250	60.3/160	2428	325
2x76.1/225	76.1/140	2x76.1/250	76.1/160	2x76.1/280	76.1/180	2442	350
2x88.9/250	88.9/160	2x88.9/280	88.9/180	2x88.9/315	88.9/200	2485	390
2x114.3/315	114.3/200	2x114.3/355	114.3/225	2x114.3/400	114.3/250	2601	480
2x139.7/400	139.7/225	2x139.7/450	139.7/250	2x139.7/500	139.7/280	2874	580
2x168.3/450	168.3/250	2x168.3/500	168.3/280	2x168.3/560	168.3/315	2947	640
2x219.1/560	219.1/315	2x219.1/630	219.1/355	2x219.1/710	219.1/400	3149	790

## The Bonded TwinPipe

### Transition pipes - F-bend

#### Application

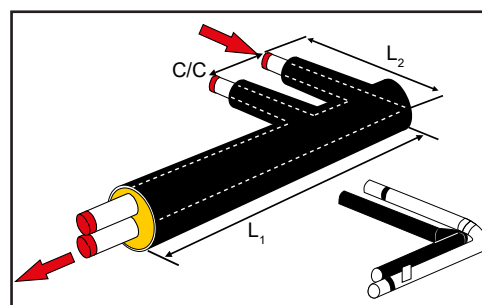
Transition bends are used for perpendicular transition from single pipe to TwinPipe.

Transition bends are available in type 1 and type 2, both have fixing bar at the TwinPipe end.

The flow pipe is always placed at the bottom.

#### Type 1

In transition bend, type 1 flow in the single pipe is placed to the left.



#### Component overview/data

Component No. 3072

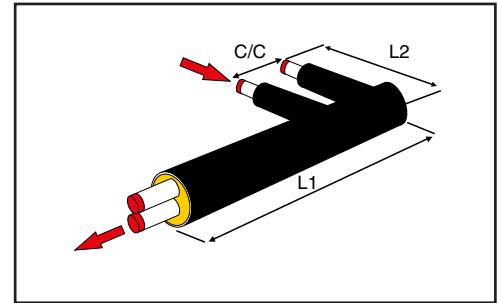
F-bend - type 1

Series 1		Series 2		Series 3		L1 mm	L2 mm	C/C mm
TwinPipe d mm	Single pipe d, mm	TwinPipe d mm	Single pipe d, mm	TwinPipe d mm	Single pipe d, mm			
2x26.9/125	26.9/90	2x26.9/140	26.9/110	2x26.9/160	26.9/125	1500	1100	265
2x33.7/140	33.7/90	2x33.7/160	33.7/110	2x33.7/180	33.7/125	1500	1100	265
2x42.4/160	42.4/110	2x42.4/180	42.4/125	2x42.4/200	42.4/140	1500	1100	280
2x48.3/160	48.3/110	2x48.3/180	48.3/125	2x48.3/200	48.3/140	1500	1100	280
2x60.3/200	60.3/125	2x60.3/225	60.3/140	2x60.3/250	60.3/160	1600	1200	295
2x76.1/225	76.1/140	2x76.1/250	76.1/160	2x76.1/280	76.1/180	1600	1200	315
2x88.9/250	88.9/160	2x88.9/280	88.9/180	2x88.9/315	88.9/200	1600	1200	335
2x114.3/315	114.3/200	2x114.3/355	114.3/225	2x114.3/400	114.3/250	1800	1200	430
2x139.7/400	139.7/225	2x139.7/450	139.7/250	2x139.7/500	139.7/280	1800	1400	460
2x168.3/450	168.3/250	2x168.3/500	168.3/280	2x168.3/560	168.3/315	2000	1400	535
2x219.1/560	219.1/315	2x219.1/630	219.1/355	2x219.1/710	219.1/400	2200	1600	615

## The Bonded TwinPipe Transition pipes - F-bend

### Type 2

In transition bend, type 2 flow in the single pipe is placed to the right.



### Component overview/data

Component No. 3072

F-bend - type 2

Series 1		Series 2		Series 3		L1 mm	L2 mm	C/C mm
TwinPipe d mm	Single pipe d, mm	TwinPipe d mm	Single pipe d, mm	TwinPipe d mm	Single pipe d, mm			
2x26.9/125	26.9/90	2x26.9/140	26.9/110	2x26.9/160	26.9/125	1500	1100	265
2x33.7/140	33.7/90	2x33.7/160	33.7/110	2x33.7/180	33.7/125	1500	1100	265
2x42.4/160	42.4/110	2x42.4/180	42.4/125	2x42.4/200	42.4/140	1500	1100	280
2x48.3/160	48.3/110	2x48.3/180	48.3/125	2x48.3/200	48.3/140	1500	1100	280
2x60.3/200	60.3/125	2x60.3/225	60.3/140	2x60.3/250	60.3/160	1600	1200	295
2x76.1/225	76.1/140	2x76.1/250	76.1/160	2x76.1/280	76.1/180	1600	1200	315
2x88.9/250	88.9/160	2x88.9/280	88.9/180	2x88.9/315	88.9/200	1600	1200	335
2x114.3/315	114.3/200	2x114.3/355	114.3/225	2x114.3/400	114.3/250	1800	1200	430
2x139.7/400	139.7/225	2x139.7/450	139.7/250	2x139.7/500	139.7/280	1800	1400	460
2x168.3/450	168.3/250	2x168.3/500	168.3/280	2x168.3/560	168.3/315	2000	1400	535
2x219.1/560	219.1/315	2x219.1/630	219.1/355	2x219.1/710	219.1/400	2200	1600	615

## The Bonded TwinPipe Valves

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### Contents

Stop valve  
Stop valve with 1 service valve  
Stop valve with 2 service valves  
Service valve  
Extension spindle  
Drainage valve  
Disposable valve

## The Bonded TwinPipe Stop valve

### Application

In isolation valves and service valves spindles are embedded in the same casing, which is sealed with a stainless top.

The transition between the stainless top and the casing is sealed with a BXJoint

Valves are delivered with caps.

As a standard delivered with a reference point where the surveillance wires are led through the stainless spindle top.

For the screw cover of the reference point spanner size 27 is used. Alternatively, spanner size 55 can be used.

The stop valve have fixing bars welded onto both sides.

### Description

Return spindles are approx. 20 mm higher than flow spindles.

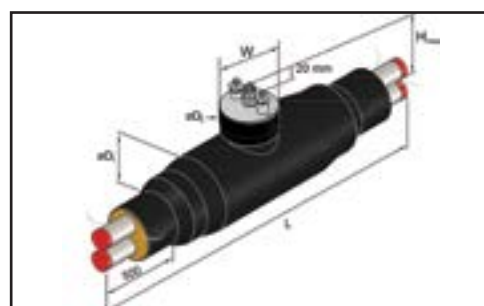
LOGSTOR standard preinsulated isolation valve is either a Vexve valve or a Broen valve. The geometry, spanner width of the spindle and of the back-stop are the same regardless of which valve is delivered.

As a standard valves with reduced passage are delivered. On enquiry valves with full passage may be delivered.

Valve  $\varnothing 219.1$  mm must be operated by means of a gear.

Valves  $\varnothing 33.7$  -  $168.3$  mm can be operated by means of a tee key.

Valves  $\varnothing 114.3$  -  $\varnothing 219.1$  mm can be operated by means of a portable gear.



### Component overview/data

Component No. 4290

Stop valve

Dimension			L mm	$\varnothing D1$ mm	$\varnothing D2$ mm	Hmax mm	W mm	NW spindle mm	NW backstop mm
Series 1	Series 2	Series 3							
2x26.9/125	2x26.9/140	2x26.9/160	1500	225	225	490	225	19	-
2x33.7/140	2x33.7/160	2x33.7/180	1500	225	225	490	225	19	-
2x42.4/160	2x42.4/180	2x42.4/200	1800	225	225	495	225	19	-
2x48.3/160	2x48.3/180	2x48.3/200	1680	225	225	505	225	19	-
2x60.3/200	2x60.3/225	2x60.3/250	1900	250	225	510	225	19	-
2x76.1/225	2x76.1/250	2x76.1/280	2080	315	225	515	225	19	-
2x88.9/250	2x88.9/280	2x88.9/315	2050	355	250	525	250	19	-
2x114.3/315	2x114.3/355	2x114.3/400	2285	450	315	535	315	27	70
2x139.7/400	2x139.7/450	2x139.7/500	2665	500	355	555	355	27	70
2x168.3/450	2x168.3/500	2x168.3/560	2970	560	400	575	400	27	70
2x219.1/560	2x219.1/630	2x219.1/710	2980	710	450	675	450	50	90

## The Bonded TwinPipe

### Stop valve with 1 service valve

#### Description

Return spindles are approx. 20 mm higher than the main spindle and service valves on the flow pipe.

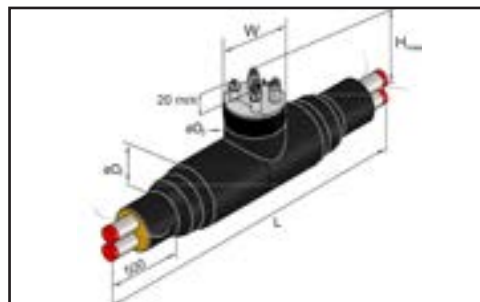
LOGSTOR standard preinsulated isolation valve is either a Vexve valve or a Broen valve. The geometry, spanner width of the spindle and of the backstop are the same regardless of which valve is delivered.

As a standard valves with reduced passage are delivered. On enquiry valves with full passage may be delivered.

Valve  $\varnothing$  219.1 mm must be operated by means of a gear.

Valves  $\varnothing$  33.7 - 168.3 mm can be operated by means of a tee key.

Valves  $\varnothing$  114.3 -  $\varnothing$  219.1 mm can be operated by means of a portable gear.



#### Component overview/data

Component No. 4291

Stop valve with 1 service valve

Dimension			L mm	$\varnothing$ D1 mm	$\varnothing$ D2 mm	Service valve $\varnothing$ mm	Hmax mm	W mm	NW spindle mm	NW backstop mm
Series 1	Series 2	Series 3								
2x26.9/125	2x26.9/140	2x26.9/160	1550	280	280	26.9	485	280	19	-
2x33.7/140	2x33.7/160	2x33.7/180	1600	280	280	26.9	490	280	19	-
2x42.4/160	2x42.4/180	2x42.4/200	1900	280	280	33.7	495	280	19	-
2x48.3/160	2x48.3/180	2x48.3/200	1800	315	315	42.4	505	315	19	-
2x60.3/200	2x60.3/225	2x60.3/250	2000	315	315	42.4	510	315	19	-
2x76.1/225	2x76.1/250	2x76.1/280	2200	315	315	42.4	515	315	19	-
2x88.9/250	2x88.9/280	2x88.9/315	2200	355	315	42.4	525	315	19	-
2x114.3/315	2x114.3/355	2x114.3/400	2500	450	400	48.3	645	400	27	70
2x139.7/400	2x139.7/450	2x139.7/500	2900	500	450	48.3	655	450	27	70
2x168.3/450	2x168.3/500	2x168.3/560	3200	560	450	48.3	665	450	27	70
2x219.1/560	2x219.1/630	2x219.1/710	3200	710	450	60.3	792	450	50	90

## The Bonded TwinPipe

### Stop valve with 2 service valves

#### Description

Return spindles are approx. 20 mm higher than the main spindle and the service valves on the flow pipe.

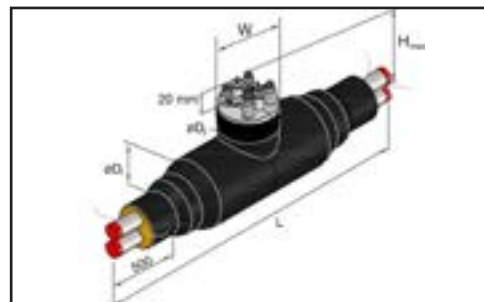
LOGSTOR standard preinsulated isolation valve is either a Vexve valve or a Broen valve. The geometry, spanner width of the spindle and of the backstop are the same regardless of which valve is delivered.

As a standard valves with reduced passage are delivered. On enquiry valves with full passage may be delivered.

Valve  $\varnothing 219.1$  mm must be operated by means of a gear.

Valves  $\varnothing 33.7$  - 168.3 mm can be operated by means of a tee key.

Valves  $\varnothing 114.3$  -  $\varnothing 219.1$  mm can be operated by means of a portable gear.



#### Component overview/data

Component No. 4292

Stop valve with 2 service valves

Dimension			L mm	$\varnothing D1$ mm	$\varnothing D2$ mm	Service valve $\varnothing$ mm	Hmax mm	W mm	NW spindle mm	NW backstop mm
Series 1	Series 2	Series 3								
2x26.9/125	2x26.9/140	2x26.9/160	1550	280	280	26.9	485	280	19	-
2x33.7/140	2x33.7/160	2x33.7/180	1600	280	280	26.9	490	280	19	-
2x42.4/160	2x42.4/180	2x42.4/200	1900	280	280	33.7	495	280	19	-
2x48.3/160	2x48.3/180	2x48.3/200	1800	315	315	42.4	505	315	19	-
2x60.3/200	2x60.3/225	2x60.3/250	2000	315	315	42.4	510	315	19	-
2x76.1/225	2x76.1/250	2x76.1/280	2200	355	355	42.4	515	355	19	-
2x88.9/250	2x88.9/280	2x88.9/315	2200	400	355	42.4	525	355	19	-
2x114.3/315	2x114.3/355	2x114.3/400	2500	500	400	48.3	645	400	27	70
2x139.7/400	2x139.7/450	2x139.7/500	2900	560	450	48.3	655	450	27	70
2x168.3/450	2x168.3/500	2x168.3/560	3200	560	450	48.3	665	450	27	70
2x219.1/560	2x219.1/630	2x219.1/710	3200	800	450	60.3	792	450	50	90

#### Materials

Preinsulated isolation valves comply with the requirements in EN 488.

The isolation valve is a ball valve, consisting of an all-welded casing and a polished stainless steel ball, fitted with spring loaded teflon seat.

The spindle top is made of stainless steel.

Other materials as for straight pipes.

#### Spare parts for reference point

Screw cover for fix reference point, product No.: 1220 0000 004 001

Brackets for fix reference point, product No.: 1997 0003 000 022

## The Bonded TwinPipe

### Service valve

#### Application

Preinsulated service valves are used for venting or drainage at wanted points in the pipe section.

If the components are installed at the end of a pipe section without e.g. a preinsulated bend, fixing bars must be welded on.

Service valves are delivered in series1 and 2.

#### Description

Return spindles are approx. 20 mm higher than the main spindle and the service valves on the flow pipe.



#### Component overview/data

Component No. 3790

Service valve

Dimension		L mm	øD1 mm	øD2 mm	Service valve ø mm	Hmax mm
Series 1	Series 2					
2x26.9/125	2x26.9/140	1500	225	140	26.9	460
2x33.7/140	2x33.7/160	1500	225	140	26.9	445
2x42.4/160	2x42.4/180	1500	250	160	33.7	455
2x48.3/160	2x48.3/180	1500	280	180	42.4	455
2x60.3/200	2x60.3/225	1500	280	180	42.4	470
2x76.1/225	2x76.1/250	1500	315	180	42.4	490
2x88.9/250	2x88.9/280	1500	315	180	42.4	505
2x114.3/315	2x114.3/355	1500	400	225	48.3	530
2x139.7/400	2x139.7/450	1500	500	225	48.3	560
2x168.3/450	2x168.3/500	1500	560	250	48.3	595
2x219.1/560	2x219.1/630	1500	630	280	60.3	735

#### Materials

Ball valves: Stainless steel.

Other materials as for straight TwinPipes.



# The Bonded TwinPipe Extension spindle

**Application**

Extension spindle for installation on installed valves whose spindle should be permanently extended.

In connection with permanent spindle extension the stop of the valve is repositioned in the extension.

The indicator for open/stop is positioned at the top of the extension.

The extension spindle can be used for valve dimensions 26.9 up to and including 219.1 mm on LOGSTOR preinsulated valves.

**Description**

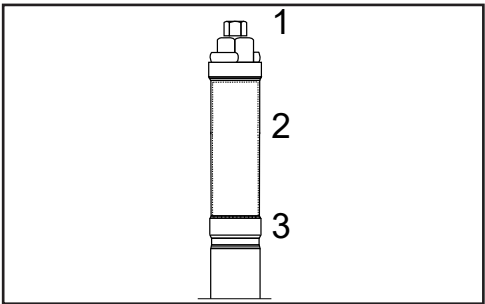
A permanent spindle extension arrangement consists of:

1. Spindle
2. Spindle housing
3. Adapter

All external parts are made of AISI 316 steel.

The seal is made of rubber (NBR).

Contact LOGSTOR to learn how to protect the transition between spindle top on the preinsulated valve and spindle extension against water ingress.



**Component overview/data**

Component No. 4285

Extension spindle

Product No.	Valve ø mm	Dimension (hexagon) mm	L mm
4285 1000 011 001	33.7 - 88.9	19	1000
4285 0500 011 001	33.7 - 88.9	19	500
4285 1000 012 001	114.3 - 168.3	27	1000
4285 0500 012 001	114.3 - 168.3	27	500
4285 1000 013 001	219.1	50/90	1000
4285 0500 013 001	219.1	50/90	500

On enquiry extension spindle is available in offsets of 250 mm in lengths from 500-2000 mm.

## The Bonded TwinPipe Drainage valve

### Application

Preinsulated drainage valves are used where a permanent draining possibility is wanted e.g. for an inspection chamber i.

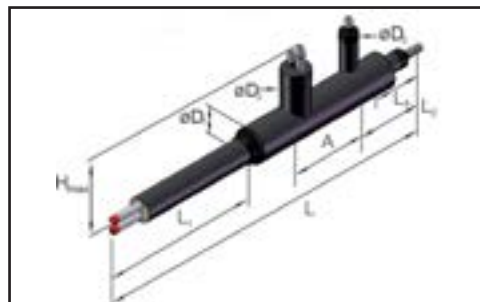
They are usually installed on a short house connection.

Drainage valves are delivered in series 1 and 2 with Nordic surveillance wires.

At the TwinPipe end fixing bars are welded on.

### Description

Return spindles are approx. 20 mm higher than the main spindle and the service valves on the flow pipe.



### Component overview/data

Component No. 4295

Drainage valve

Dimension		L mm	L1 mm	L2 mm	L3 mm	A mm	øD1 mm	øD2 mm	øD3 mm	Hmax mm
Series 1	Series 2									
2x26.9/125	2x26.9/140	2500	1020	644	350	460	180	160	110	480
2x33.7/140	2x33.7/160	2500	1020	665	350	450	180	160	110	480
2x42.4/160	2x42.4/180	2500	1020	570	350	460	225	180	110	485
2x48.3/160	2x48.3/180	2500	1020	569	350	460	225	180	110	495
2x60.3/200	2x60.3/225	2650	1030	687	350	480	250	180	110	500
2x76.1/225	2x76.1/250	2700	1030	713	350	470	315	200	110	505
2x88.9/250	2x88.9/280	2700	1030	546	350	570	355	200	110	515
2x114.3/315	2x114.3/355	2800	1030	517	350	610	450	250	140	595

# The Bonded TwinPipe Disposable valve

**Application**

Disposable valves are e.g. used in connection with branches and terminations where pipelines will not be extended until later.

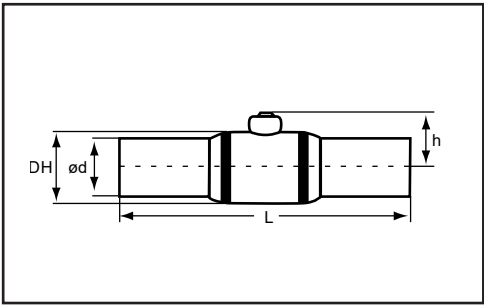
The valve is temporarily covered with a foamed end fitting.

When the pipeline is extended and the valve is opened the spindle is fully welded.

Please have the internal space requirements in mind, when choosing the dimension of the temporary end fitting and the later permanent casing joint.

**Description**

Rustproof ball valve with weld-on ends.



**Technical**

In connection with TwinPipes it may be necessary to displace the valves in relation to each other.

**Component overview/data**

Component No. 4264

Disposable valve

Broen, reduced passage				Broen, full passage			
Dimension ød mm	L mm	H mm	Diameter valve body DH mm	Dimension ød mm	L mm	H mm	Diameter valve body DH mm
26.9	230	35	42	26.9	230		51
33.7	230	39	51	33.7	230		57
42.4	260	54	57	42.4	260		76
48.3	260	59	76	48.3	260		89
60.3	300	71	89	60.3	300		108
76.1	360	71	108	76.1	360	81	127
88.9	370	81	127	88.9	370	87	152
114.3	390	87	153	114.3	390	121	178
139.7	390	121	178	139.7	390	148	219
168.3	390	143	219	168.3	390	169	267
219.1	390	169	267				

**Materials**

Valve box and weld-on ends: Standard steel like straight pipes

Balls and valve spindle: Stainless steel AISI 304.

## The Bonded TwinPipe Reductions - Overview

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### Contents

Weld reduction eccentric  
EWJoint reduction  
SX-WPJoint reduction  
B2SJoint reduction  
Preinsulated reductions

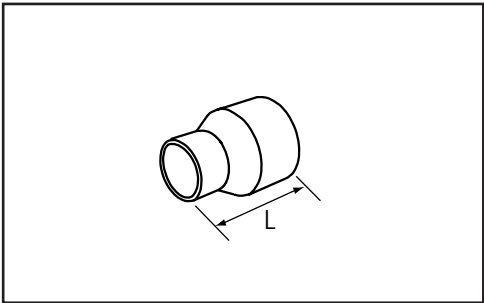
# The Bonded TwinPipe

## Reductions - Weld reduction eccentric

**Description**

For a few TwinPipe dimensions an eccentric weld reduction can be welded between the 2 dimensions.

Eccentric weld reduction complies with EN 10253-2.



**Component overview/data**

Component No. 1006

Weld reduction

d2	d1					
	2x33.7	2x42.4	2x48.3	2x60.3	2x76.1	2x114.3
2x26.9	x	x				
2x33.7		x	x			
2x42.4			x	x		
2x48.3				x		
2x60.3					x	
2x88.9						x

## The Bonded TwinPipe

### Reductions - EWJoint reduction

#### Application

Reduction with weld joints can be carried out with EWJoint reduction in dimensions and dimensional offsets as described below.

It is also possible to use BandJoint as a reduction joint. Dimensional offsets for different dimensions are described in the section "Casing Joints"

#### Description

EWJoint reduction:

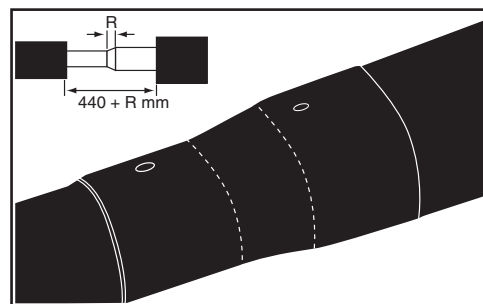
Component No. 5028.

Accessories set:

- EW welding strips and plugs,

Component No. 5556.

Order 1 set for each dimension. The two sets cover two reductions.



#### Component overview/data

Component No. 5028

EWJoint reduction - Dimensional offsets and lengths:

From ø mm	To ømm	Joint length mm
110	90	800
125	110	800
140	125	800
160	140	800
180	160	800
200	180	800
225	200	800
250	225	1000
280	250	1000
315	280	1000
355	315	1000
400	355	1000
450	400	1000
500	450	1000
560	500	1000
630	560	1200
710	630	1200
800	710	1200
900	800	1200
1000	900	1200

Also available with 2 or 3 dimensional offsets.

The Bonded TwinPipe  
Reductions - EWJoint reduction

---

Weld strip	Is used to weld together the joint and the outer casing.
Component overview/data	Component No. 5556
Materials	Weld strip: Electro-plated mesh

## The Bonded TwinPipe Reductions - SX-WPJoint reduction

### Application

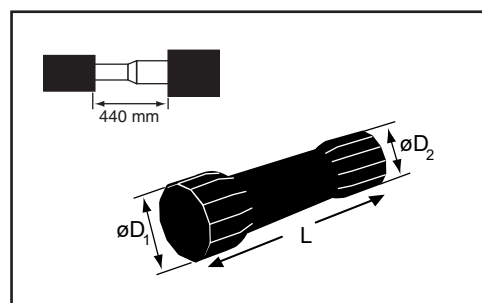
Reduction joint set for TwinPipe can be used for the steel pipe dimensions, described in below table.

Always install fixing bars on the large dimension.

The design rules must be observed in connection with reductions.

### Description

Reduction with SXJoint can be carried out with SX-WPJoint reduction.



### Component overview/data

Component No. 5032

#### SX-WPJoint reduction

Series 1					
d2	d1	2x42.4	2x60.3	2x114.3	L mm
	D1	160	200	315	
	D2				
2x26.9	125	x			650
2x42.4	140		x		650
2x48.3	160		x		650
2x88.9	250			x	650
Series 3					
d2	d1	2x42.4	2x60.3	L mm	
	D1	200	250		
	D2				
2x26.9	160	x		650	
2x42.4	200		x	650	
2x48.3	200		x	650	

### Accessories

To be foamed with foam pack, component No. 0700.

When ordering state insulation series, and that foam pack must be included in the delivery.

Weld reductions eccentric, component No. 1006

Fixing bars, component No. 1998.



## The Bonded TwinPipe Reductions - B2SJoint reduction

### Application

Reduction joint set for TwinPipe can be used, where the distance between the two service pipes is small. If the distance between the two service pipes are big, then the eccentric weld reduction cannot be installed.

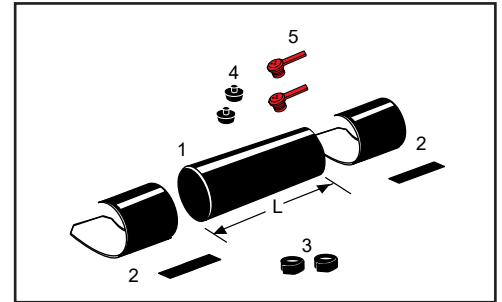
Fixing bars must always be installed on the large dimension.

The design rules must be observed in connection with reductions.

### Description

Reduction with B2SJoint:

1. PE reduction shrink sleeve
2. Open wrap
3. Mastic strips
4. Weld plugs
5. Venting plugs



### Component overview/data

Component No. 5011

B2SJoint reduction

Series 1							
d2	d1	2x33.7	2x42.4	2x48.3	2x76.1	L mm	
	D1	140	160	160	225		
	D2						
2x26.9	125	x				800	
2x33.7	140		x	x		800	
2x42.4	160			x		800	
2x60.3	200				x	900	
Series 2							
d2	d1	2x33.7	2x42.4	2x48.3	2x60.3	2x76.1	L mm
	D1	160	180	180	225	250	
	D2						
2x26.9	140	x	x				800
2x33.7	160		x	x			800
2x42.4	180			x			800
2x48.3	180				x		900
2x60.3	225				x		900
						x	900
Series 3							
d2	d1	2x33.7	2x42.4	2x48.3	2x76.1	L mm	
	D1	180	200	200	280		
	D2						
2x26.9	160	x				800	
2x33.7	180		x	x		900	
2x42.4	200			x		900	
2x60.3	250				x	900	

## The Bonded TwinPipe Reductions - B2SJoint reduction

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### Accessories

To be foamed with foam pack, component No. 0700.

When ordering state insulation series, and that foam pack must be included in the delivery.

Weld reductions eccentric, component No. 1006

Fixing bars, component No. 1998.

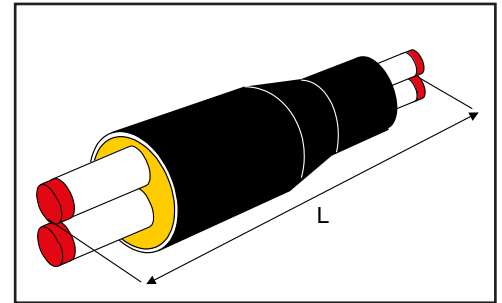
## The Bonded TwinPipe Preinsulated reduction

### Description

All preinsulated reduction fittings have welded fixing bars on the largest dimension.

The weld reduction is eccentric and in accordance with EN 10253-2.

The design rules must be observed in connection with reductions.



### Component overview/data

Component No. 4990

Reduction fitting - series 1

	d1	2x33.7	2x42.4	2x48.3	2x60.3	2x76.1	2x88.9	2x114.3	2x139.7	2x168.3	2x219.1
	D1	140	160	160	200	225	250	315	400	450	560
	L mm	1100	1100	1100	1200	1200	1200	1200	1500	1500	1500
d2	D2										
2x26.9	125	x	x								
2x33.7	140		x	x							
2x42.4	160			x	x						
2x48.3	160				x	x					
2x60.3	200					x	x				
2x76.1	225						x	x			
2x88.9	250							x	x		
2x114.3	315								x	x	
2x139.7	400									x	x
2x168.3	450										x

## The Bonded TwinPipe Preinsulated reduction

### Component overview/data

Component No. 4990

Reduction fitting - series 2

	d1	2x33.7	2x42.4	2x48.3	2x60.3	2x76.1	2x88.9	2x114.3	2x139.7	2x168.3	2x219.1
	D1	160	180	180	225	250	280	355	450	500	630
	L mm	1100	1100	1100	1200	1200	1200	1200	1500	1500	1500
d2	D2										
2x26.9	140	x	x								
2x33.7	160		x	x							
2x42.4	180			x	x						
2x48.3	180				x	x					
2x60.3	225					x	x				
2x76.1	250						x	x			
2x88.9	280							x	x		
2x114.3	355								x	x	
2x139.7	450									x	x
2x168.3	500										x

### Component overview/data

Component No. 4990

Reduction fitting - series 3

	d1	2x33.7	2x42.4	2x48.3	2x60.3	2x76.1	2x88.9	2x114.3	2x139.7	2x168.3	2x219.1
	D1	180	200	200	250	280	315	400	500	560	710
	L mm	1100	1100	1100	1200	1200	1200	1200	1500	1500	1500
d2	D2										
2x26.9	160	x	x								
2x33.7	180		x	x							
2x42.4	200			x	x						
2x48.3	200				x	x					
2x60.3	250					x	x				
2x76.1	280						x	x			
2x88.9	315							x	x		
2x114.3	400								x	x	
2x139.7	500									x	x
2x168.3	560										x

The Bonded TwinPipe  
Terminations

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<b>Contents</b>	House entry bend
	Wall entry sleeve
	End cap
	End fitting
	Weld-on end

## The Bonded TwinPipe Terminations - House entry pipe

### Application

Preinsulated house entry bends comply with the requirements in EN15698-2 and can be used for a max. operating pressure of 25 bar.

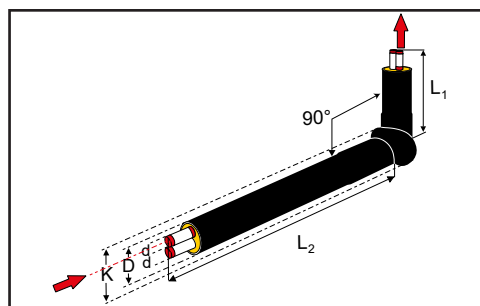
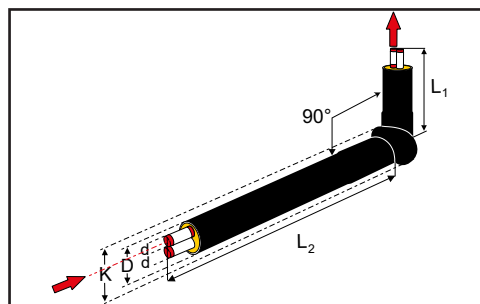
### Description

As a standard house entry bends are delivered with a pipe routing as it appears from the illustration, named type 1.

Fixing bars are welded onto the horizontal part of the bends.

One pipe is marked with tape at both ends.

House entry bends are also available as type 2.



### Component overview/data

Component No. 2592

House entry bend - type 1

d mm	Series 1		Series 2		Series 3		Length	
	D mm	K mm	D mm	K mm	D mm	K mm	L1 x L2 mm	L1 x L2 mm
2x26.9	125	160	140	160	160	160	1500x2500	1500x4000
2x33.7	140	160	160	160	180	180	1500x2500	1500x4000
2x42.4	160	200	180	200	200	200	1500x2500	1500x4000
2x48.3	160	200	180	200	200	200	1500x2500	1500x4000
2x60.3	200	225	225	225	250	250	1500x2500	1500x4000
2x76.1	225	280	250	280	280	280	1500x2500	1500x4000
2x88.9	250	315	280	315	315	315	1500x2500	1500x4000
2x114.3	315	355	355	355	400	400	1500x2500	1500x4000
2x139.7	400	450	450	450	500	500	1500x2500	1500x4000
2x168.3	450	500	500	560	560	560	1500x2500	1500x4000
2x219.1	560	710	630	710	710	710	1500x2500	1500x4000

### Materials

All materials are the same as for straight pipes: steel/PUR/PE-HD.

# The Bonded TwinPipe

## Terminations - Wall entry sleeve

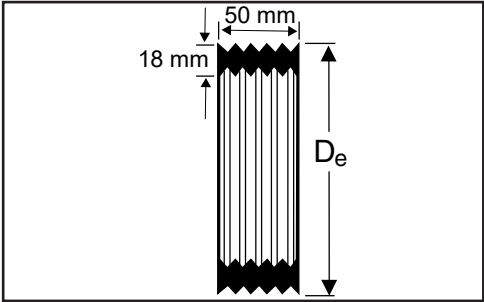
**Application**      Where pipes are installed through masonry - at wells, footings etc. - wall entry sleeves are installed as a seal against water ingress.

Exposed to groundwater pressure the wall entry sleeves may not be watertight. In such cases please contact LOGSTOR.

If sealing rings which can withstand large axial movements or radon-tight sealing rings are required, please contact LOGSTOR.

**Description**      The wall entry sleeves allow minor axial expansion movements at the entry point.

Note! De - 2 x 18 mm is smaller than the nominal diameter, so the sleeve fits tightly around the outer casing.



**Component overview/data**      Component No. 5800

Wall entry sleeve

Outer casing ø out. mm	Outside diameter De approx. ø mm
90	124
110	142
125	158
140	173
160	191
180	209
200	229
225	255
250	281
280	312
315	345
355	385
400	430
450	480
500	530
560	590
630	660
710	740

**Materials**      NR-SBR rubber

## The Bonded TwinPipe Terminations - End cap

### Application

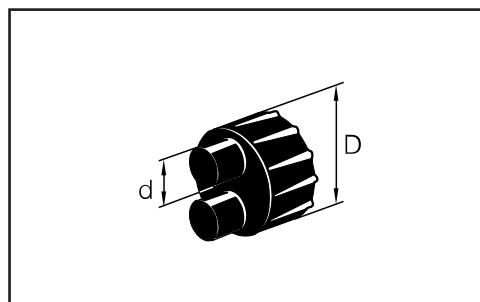
The end cap is used to seal the pipes in order to prevent moisture from penetrating into the insulation.

End caps are used in connection with house entries, terminations in chambers, connections to concrete ducts, in cellars etc.

### Description

The end cap has integrated mastic and is shrink onto the service pipe and outer casing.

It is made of cross-linked PE (PEX) and can be used at continuous operating temperature up to 120°C and a peak temperature (short-term) of up to 130°C.



### Component overview/data

Component No. 5600

End cap

Steel pipe ø mm	Casing dimension Series 1, 2, 3	Series 1	Series 2	Series 3
2x26.9	125-140-160	DHEC 3280	DHEC3280	DHEC 3350-01
2x33.7	140-160-180	DHEC 3280	DHEC 3350-02	DHEC 3350-02
2x42.4	160-180-200	DHEC 3350-03	DHEC 3350-03	DHEC 3350-03
2x48.3	160-180-200	DHEC 3350-03	DHEC 3350-03	DHEC 3350-03
2x60.3	200-225-250	DHEC 3350-05	CSS2-90	ECDPP-250-50
2x76.1	225-250-280	ECD 225-65	CSS2-100	ECDPP-280-65
2x88.9	250-280-315	CSS2-100	ECDP 280-80	ECDPP 315-80
2x114.3	315-355-400	ECD 315-100	ECDP 355-100	ECDPP 400-100
2x139.7	400-450-500	ECD 400-125	ECDP 450-125	ECDPP 500-125
2x168.3	450-500-560	ECD 450-150	ECDP 500-150	ECDPP 560-150
2x219.1	560-630-710	ECD 560-200	-	-



## The Bonded TwinPipe

### Terminations - End fitting for foaming

#### Application

End fitting with a closed end is used for temporary termination in the ground. The outmost part of the end fitting is shrinkable.

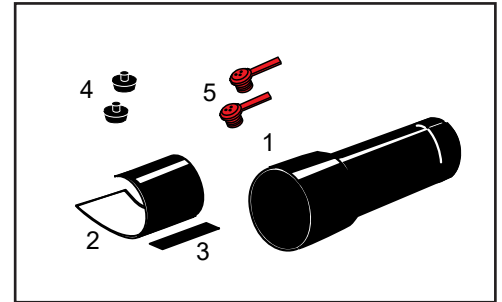
The end fitting for TwinPipe is foamed. However, for series 2 it can be delivered with insulation shells.

Fixing bars must be used, if the end fitting is on a straight pipe section.

#### Description

The end fitting for foaming consists of:

1. Closed shrink sleeve
2. Open shrink wrap
3. Closure patch
4. Weld plugs
5. Venting plugs



#### Component overview/data

Component No. 5700

End fitting for foaming

Outer casing D, mm	125	140	160	180	200	225	250	280
Sleeve length, mm	700	700	700	700	700	700	700	700
Sleeve length at disposable valve, mm	700	700	700	700	1000	1000	1000	1000
Outer casing D, mm	315	355	400	450	500	560	630	710
Sleeve length, mm	700	700	700	700	700	700	700	700
Sleeve length at disposable valve, mm	1000	1000	1000	1000	1000	1000	1000	1000

#### Materials

End fitting: Drifted PEHD

Open shrink wrap with closure patch: PEX with PIB mastic and hotmelt

Insulation shells: Polyurethane (PUR)

Venting plugs: Propylene

Weld plugs: HDPE

## The Bonded TwinPipe Terminations - End fitting for foaming

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### Accessories

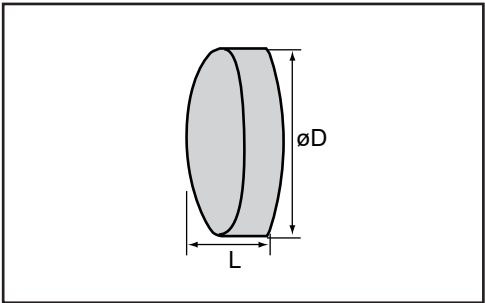
When terminating with an end fitting weld-on ends, component No. 1008 are used.

To be foamed with foam pack, component No. 0700.

When ordering state insulation series, and that foam pack must be included in the delivery.

The Bonded TwinPipe  
Terminations - Weld-on end

**Description** Weld-on end according to EN10253-2.



**Component overview/data** Component No. 1008

Weld-on end

Steel pipe ø out. mm	L mm
26.9	14
33.7	15
42.4	17
48.3	18
60.3	20
76.1	23
88.9	36
114.3	40
139.7	45
168.3	50
219.1	65

**Contents**

PexFlextra  
AluFlextra  
CuFlex  
SteelFlex  
Casing joints  
Branches  
Y-Joint  
Terminations

<b>Contents</b>	General
	Pipes - corrugated casings
	Preinsulated fittings
	Press couplings, type MP
	Press couplings, type JT
	Compression couplings

## The FlexPipe

### PexFlextra - General

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#### Application

The LOGSTOR flexible PEX system is used within District Heating for distribution and transmission pipelines.

Due to the properties of the PEX service pipe, expansion must not be taken into consideration. The flexibility, low weight, and long lengths make the installation quicker and more inexpensive. PexFlextra is especially suitable for:

- branch pipes without joints
- passage of vegetation and other obstacles
- hilly areas

The pipe system complies with the requirements in EN15632-2 for a minimum design service life of 30 years at the following operational conditions:

Operating temperature: 80°C for 29 years

Maximum operating temperature:

90°C for 7760 hours

95°C for 1000 hours

Malfunction: 100°C for 100 hours

Maximum operating pressure: 6 bar

Other pressure and temperature profiles than the above are possible. Please contact LOGSTOR for a calculation of the estimated service life.

PexFlextra can be combined with the other LOGSTOR systems provided that the above temperatures and pressure are observed.

To join PEX service pipes in buried systems press couplings are used. For jointing in buildings, chambers, and cabinets compression couplings can be used.

#### Description

The standard coil length is 100 m.

Fixed lengths can be ordered to measure in lengths of min. 10 m and max. 90 m.

Corrugated casings with 90 and 110 PEXa are, however, as a standard delivered in 30, 50, 70, and 100 m and are usually not delivered in fixed lengths.

Always delivered without free ends.

The max coil width is 2.4 m.

All pipes are produced in accordance with EN15632-1 and EN15632-2.

#### Materials

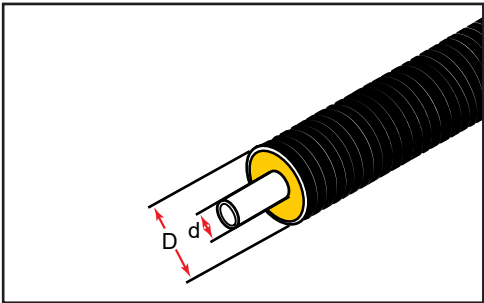
Service pipe: PEXa with external EVOH oxygen diffusion barrier, preventing oxygen ingress. The material complies with the requirements in EN ISO 15875.

Insulation: Polyurethane foam. Average thermal conductivity  $\lambda_{50} = 0.022 \text{ W/mK}$

Outer casing: Polyethylene, PE-HD with co-extruded EVOH diffusion barrier.

The FlexPipe  
PexFlextra - Corrugated casing

PexFlextra single  
pipe



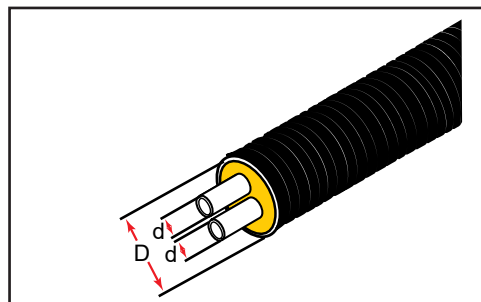
Component  
overview/data

Component No. 2100

Single pipe

PEX service pipe		Volume	Series 1			Series 2		
d mm	Wall thk mm	l/m	Outer casing			Outer casing		
			D mm	Wall thk mm	Weight kg/m	D mm	Wall thk mm	Weight kg/m
20	2.0	0.201				90	1.5	1.2
25	2.3	0.327				90	1.5	1.2
32	2.9	0.539				90	1.5	1.3
40	3.7	0.835	90	1.5	1.4	110	1.5	1.8
50	4.6	1.307	110	1.5	2.0	125	1.5	2.3
63	5.8	2.075	125	1.5	2.6	140	1.5	3.1
75	6.8	2.961	140	1.5	3.4	160	1.5	3.9
90	8.2	4.254	160	1.5	4.4	180	1.5	5.0
110	10.0	6.362	180	1.5	5.7			

## PexFlextra - Corrugated casing

PexFlextra  
TwinPipeComponent  
overview/data

Component No. 2190

TwinPipe

PEX service pipe		Volume	Series 1			Series 2		
d mm	Wall thk mm	l/m	Outer casing			Outer casing		
			D mm	Wall thk mm	Weight kg/m	D mm	Wall thk mm	Weight kg/m
20/20	2.0	0.402				110	1.5	1.7
25/25	2.3	0.654	110	1.5	1.7	125	1.5	2.1
32/32	2.9	1.078	110	1.5	1.9	125	1.5	2.2
40/40	3.7	1.669	125	1.5	2.4	140	1.5	3.0
50/50	4.6	2.615	160	1.5	3.8	180	1.5	4.4
63/63	5.8	4.150	180	1.5	5.0			

Distance between service pipes: 12 mm



# PexFlextra - Preinsulated fittings

**General**

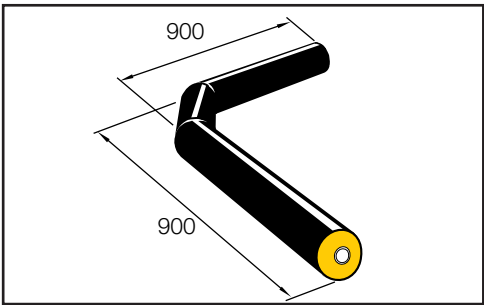
For PexFlextra and PexFlex preinsulated fittings with service pipes in PEX can be used.

Preinsulated fittings with PEX service pipe are delivered without free pipe ends. The service pipe must not be shortened.

T-pieces with PEX service pipe are made with press couplings, embedded in the insulation.

Alternatively, preinsulated fittings with steel service pipe from single pipe or TwinPipe can be used. Press couplings with weld end are bought separately and welded on site.

**90° bend, single pipe**



**Component overview/data**

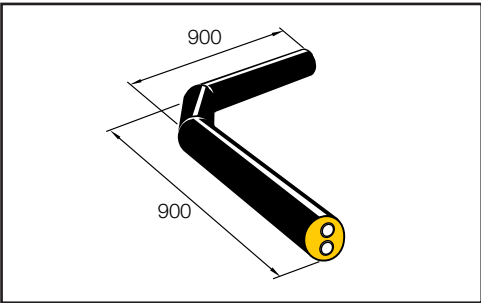
Component No. 2500

90° bend - single pipe

d mm	D mm	
	Series 1	Series 2
20		90
25		90
32		90
40	90	110
50	110	125
63	125	140
75	140	160
90	160	180
110	180	

The FlexPipe  
PexFlextra - Preinsulated fittings

90° bend, TwinPipe



Component  
overview/data

Component No. 2590

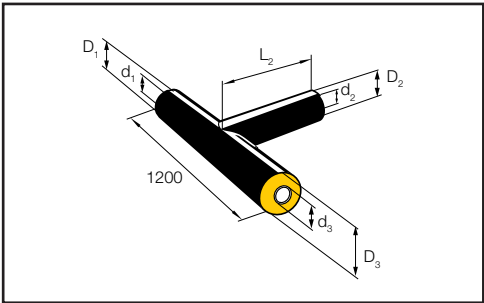
90° bend - TwinPipe

d mm	D mm	
	Series 1	Series 2
20/20		110
25/25	110	125
32/32	110	125
40/40	125	140
50/50	160	180
63/63	180	

# The FlexPipe

## PexFlextra - Preinsulated fittings

T-piece, straight,  
single pipe



Component  
overview/data

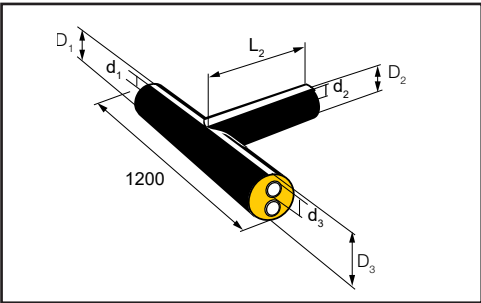
Component No. 3400

T-piece, straight - Single pipe

d1	D1	d2	D2	d3	D3	L2
32	90	32	90	25	90	450
40	110	32	90	32	90	500
50	125	40	110	40	110	500
63	140	50	125	50	125	500
75	140	63	125	63	125	500
75	160	63	140	75	160	500
90	180	63	140	63	140	500
90	180	63	140	90	180	500
90	180	90	180	90	180	500
110	180	110	180	110	180	500

The FlexPipe  
PexFlextra - Preinsulated fittings

T-piece, straight,  
TwinPipe



Component  
overview/data

Component No. 3490

T-piece, straight - TwinPipe

d1	D1	d2	D2	d3	D3	L2
40/40	140	32/32	125	32/32	125	500
50/50	180	40/40	140	40/40	140	500
63/63	180	40/40	140	40/40	140	600
63/63	180	50/50	180	50/50	180	500
63/63	180	25/25	125	63/63	180	600
63/63	180	40/40	140	63/63	180	600

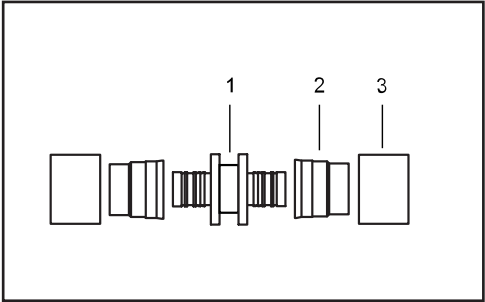
# PexFlextra - Press coupling, type MP

**Application**                      Used to connect PEX service pipes.

Use special tools to install the press coupling, type MP (Multipress), see section "Tools for FlexPipe".

**Press coupling, straight**                      Press coupling for straight PEX-PEX joints:

1. Supporting bush
2. Squeezing ring
3. Press ring



**Component overview/data**                      Component No. 6000

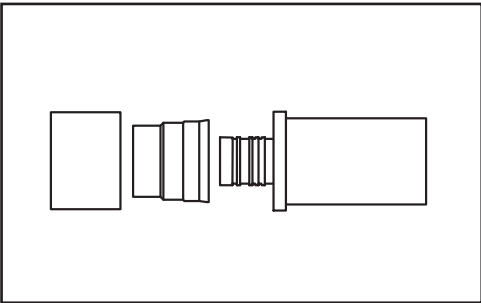
Press coupling, straight

Coupling end 1	Coupling end 2								
	20	25	32	40	50	63	75	90	110
20	x								
25	x	x							
32		x	x						
40			x	x					
50				x	x				
63					x	x			
75						x	x		
90							x	x	
110								x	x

PexFlextra - Press coupling, type MP

Press coupling,  
weld

Press coupling with weld end for transi-  
tion to steel pipe.



Component  
overview/data

Component No. 6000

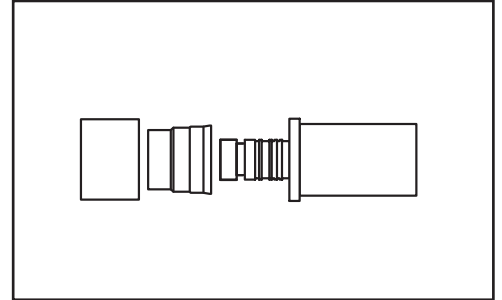
Press coupling, weld

Steel	PEX								
	20	25	32	40	50	63	75	90	110
26.9	x	x							
33.7	x	x	x						
42.4				x					
48.3				x	x				
60.3						x			
76.1							x		
88.9								x	
114.3									x

## PexFlextra - Press coupling, type MP

### Press coupling, weld, closed

Closed press coupling with weld end.



### Component overview/data

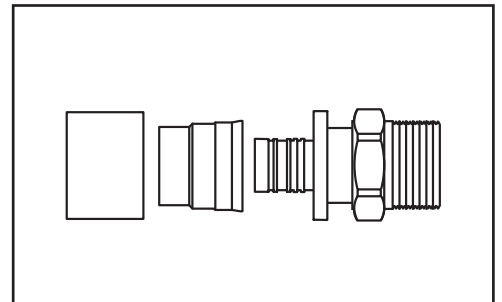
Component No. 6000

Press coupling, weld, closed

Steel	PEX							
	20	25	32	40	50	63	75	90
26.9	x	x						
33.7			x					
42.4				x				
48.3					x			
60.3						x		
76.1							x	
88.9								x

### Press coupling, male

Press coupling with male end for termination in a cabinet or a building.



### Component overview/data

Component No. 6000

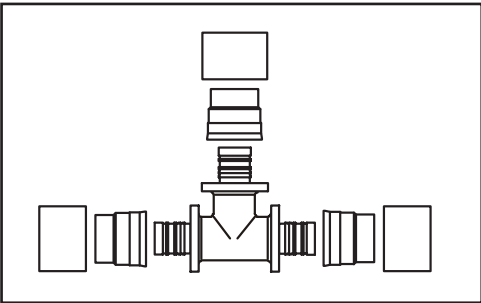
Press coupling, male

Thread	PEX								
	20	25	32	40	50	63	75	90	110
3/4"	x	x	x						
1"		x	x						
1 1/4"			x	x					
1 1/2"					x				
2"						x			
2 1/2"							x		
3"								x	
4"									x

The FlexPipe

PexFlextra - Press coupling, type MP

**Press coupling tee**    The base unit of the press coupling is made in one piece.



**Component overview/data**

Component No. 6060

Press coupling, tee

d1 mm	d2 mm					
	20	25	32	40	50	63
20	x					
25	x	x				
32	x	x	x			
40	x	x	x	x		
50	x	x	x	x	x	
63	x	x	x	x	x	x
75		x	x	x	x	x
90		x	x	x	x	x
110		x	x	x	x	x

**Materials**

Press coupling are made of brass or red brass.  
Weld ends for transition to steel are made in S235JR.



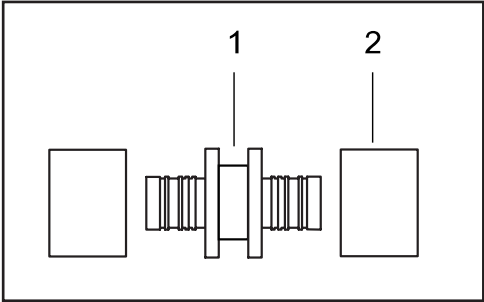
PexFlextra - Press coupling, type JT

Application

Used to connect PEX service pipes.  
Use special tools to install the press coupling, type JT (Jentro) see section "Tools for FlexPipe".

Press coupling, straight

Press coupling for straight PEX-PEX connections:  
1. Supporting bush  
2. Press ring



Component overview/data

Component No. 6008

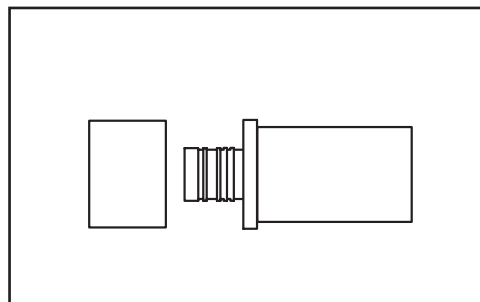
Press coupling, straight

Coupling end 1	Coupling end 2							
	25	32	40	50	63	75	90	110
25	x							
32	x	x						
40	x	x	x					
50		x	x	x				
63		x	x	x	x			
75			x	x	x	x		
90					x	x	x	
110					x	x	x	x

## PexFlextra - Press coupling, type JT

**Press coupling, weld**

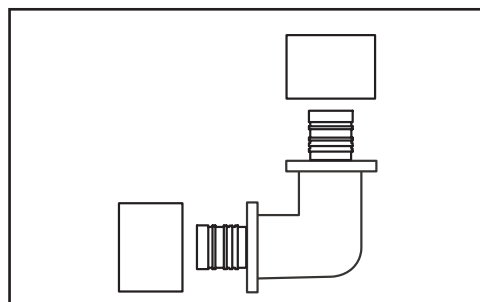
Press coupling with weld end for transition to steel pipe.

**Component overview/data**

Component No. 6008

Press coupling, weld

Steel	PEX							
	25	32	40	50	63	75	90	110
26.9	x							
33.7		x						
42.4			x					
48.3				x				
60.3					x			
76.1						x		
88.9							x	
114.3								x

**Press coupling, 90°** 90° elbow with press coupling in both ends.**Component overview/data**

Component No. 6008

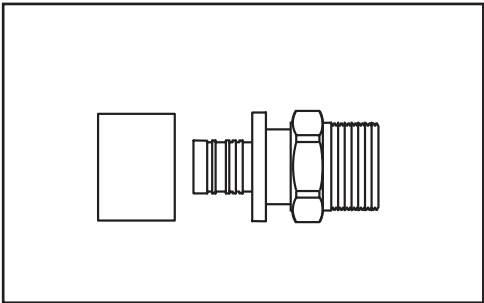
Press coupling, 90°

Coupling end 1	Coupling end 2							
	25	32	40	50	63	75	90	110
25	x							
32		x						
40			x					
50				x				
63					x			
75						x		
90							x	
110								x

PexFlextra - Press coupling, type JT

Press coupling,  
male

Press coupling with male thread for termination in a cabinet or a building.



Component  
overview/data

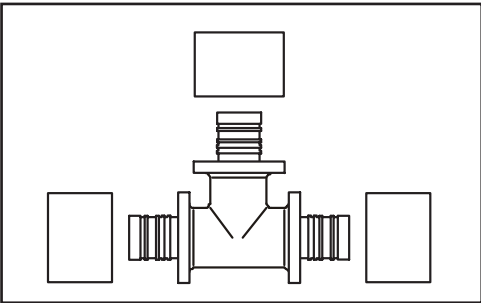
Component No. 6008

Press coupling, male

Thread	PEX							
	25	32	40	50	63	75	90	110
3/4"	x	x						
1"	x	x						
1 1/4"			x	x				
1 1/2"				x				
2"					x			
2 1/2"						x		
3"							x	
4"								x

PexFlextra - Press coupling, type JT

**Press coupling, tee** The base unit of the press coupling is made in one piece.



**Component overview/data**

Component No. 6068

Press coupling, tee

Main pipe d1-d3 mm	Branch d2 mm							
	25	32	40	50	63	75	90	110
25-25	x	x						
32-32	x	x						
40-40	x	x	x					
50-50	x	x	x	x				
63-63	x	x	x	x	x			
75-75	x	x	x	x	x	x		
90-90	x	x	x	x	x		x	
110-110	x	x	x	x	x			x

Other combinations of dimensions can be delivered.

**Materials**

Press couplings are made of brass or red brass.  
Weld ends for transition to steel is made in S235JR.

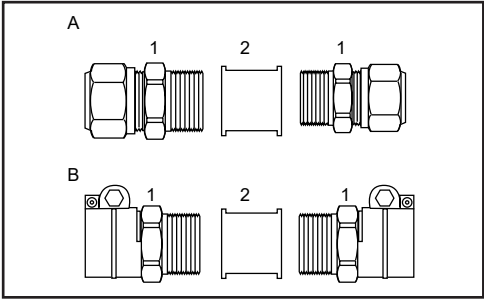
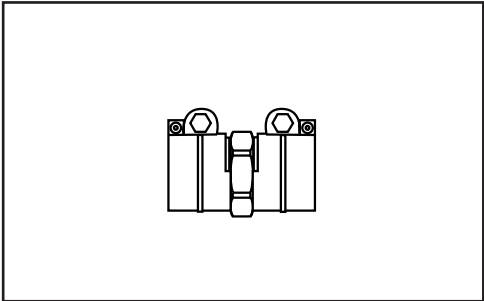
# PexFlextra - Compression coupling

**Application**                      Compression couplings are used to join PEX service pipes.

**Compression coupling, straight**      Compression coupling for PEX-PEX joints.  
Dimension 25-110 mm.

Compression coupling for reduction of PEX-PEX joints.

- 1. Coupling with male thread
- 2. Double female coupling
- A. Dimension 25-32
- B. Dimension 40-110



**Component overview/data**                      Component No. 6100

Compression coupling, straight

Coupling end 1	Coupling end 2							
	25	32	40	50	63	75	90	110
25	x							
32	x	x						
40	x	x	x					
50		x	x	x				
63			x	x	x			
75				x	x	x		
90					x	x	x	
110						x	x	x

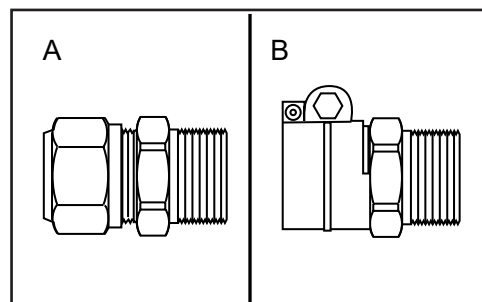
## PexFlextra - Compression coupling

### Compression coupling, male

Compression coupling with male end for termination in a cabinet or a building.

A. Dimension 20-32 mm

B. Dimension 40-110 mm



### Component overview/data

Component No. 6100

Compression coupling, male

Thread	PEX								
	20	25	32	40	50	63	75	90	110
¾"	x	x							
1"		x	x						
1¼"			x	x					
1½"					x				
2"						x	x		
3"								x	x

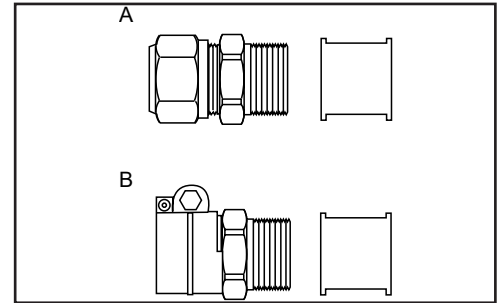
## PexFlextra - Compression coupling

### Compression coupling, female

Compression coupling with female end for termination in a cabinet or a building.

A. Dimension 25-32 mm

B. Dimension 40-110 mm



### Component overview/data

Component No. 6100

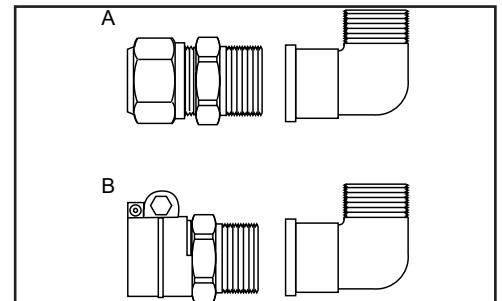
Compression coupling, female

Thread	PEX							
	25	32	40	50	63	75	90	110
1"	x	x						
1¼"			x					
1½"				x				
2"					x	x		
3"							x	x

### Compression coupling, union elbow, male

A. Dimension 20-32 mm

B. Dimension 40-110 mm



### Component overview/data

Component No. 6100

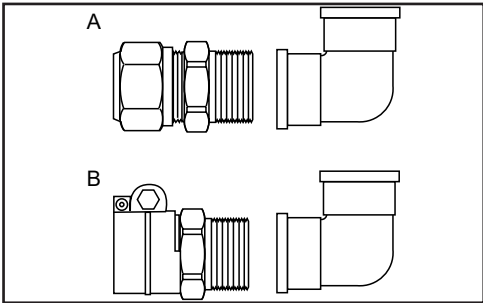
Compression coupling, union elbow, male

Thread	PEX								
	20	25	32	40	50	63	75	90	110
¾"	x								
1"		x	x						
1¼"			x	x					
1½"					x				
2"						x	x		
3"								x	x

PexFlextra - Compression coupling

Compression coupling, union elbow, female

- A. Dimension 25-32 mm
- B. Dimension 40-110 mm



Component overview/data

Component No. 6100

Compression coupling, union elbow, male

Thread	PEX							
	25	32	40	50	63	75	90	110
1"	x	x						
1¼"			x					
1½"				x				
2"					x	x		
3"							x	x

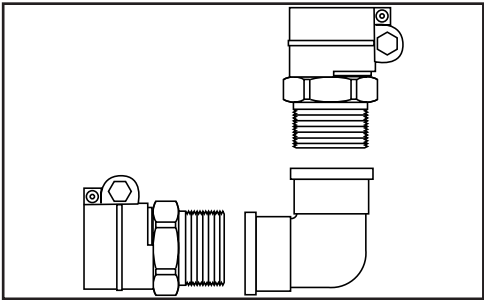
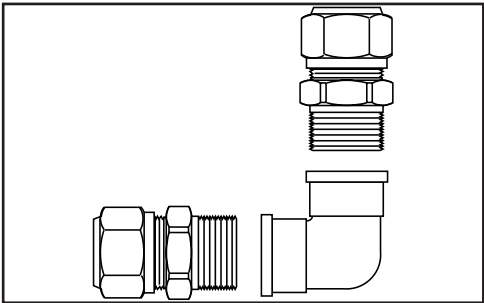


PexFlextra - Compression coupling

Compression coupling, union elbow, PEX

Dimension 25-32 mm

Dimension 40-110 mm



Component overview/data

Component No. 6100

Compression coupling, union elbow, PEX

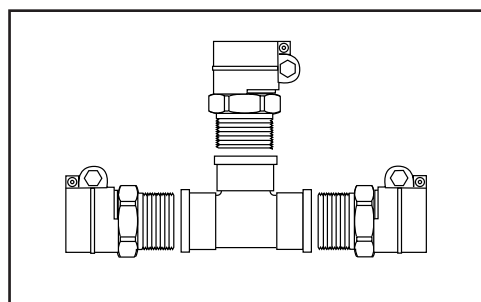
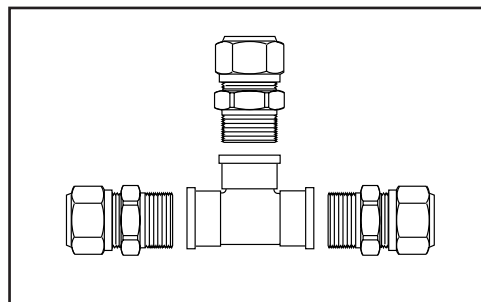
Coupling end 1	Coupling end 2							
	25	32	40	50	63	75	90	110
25	x							
32		x						
40			x					
50				x				
63					x			
75						x		
90							x	
110								x

## PexFlextra - Compression coupling

## Compression coupling, tee

Dimension 20-32 mm

Dimension 40-110 mm



## Component overview/data

Component No. 6160

Compression coupling, tee

Main pipe d1-d3 mm	Branch d2 mm								
	20	25	32	40	50	63	75	90	110
20-20	x								
25-20	x								
25-25	x	x							
32-20	x	x	x						
32-25	x	x	x						
32-32	x	x	x						
40-20	x	x	x	x					
40-25	x	x	x	x					
40-32	x	x	x	x					
40-40	x	x	x	x					
50-20	x	x	x	x	x				
50-25	x	x	x	x	x				
50-32	x	x	x	x	x				
50-40	x	x	x	x	x				
50-50	x	x	x	x	x				
63-25		x	x	x	x	x			
63-32		x	x	x	x	x			
63-40		x	x	x	x	x			
63-50		x	x	x	x	x			
63-63		x	x	x	x	x			
75-32			x	x	x	x	x		
75-40			x	x	x	x	x		

The FlexPipe  
Compression coupling T

Main pipe d1-d3 mm	Branch d2 mm								
	20	25	32	40	50	63	75	90	110
75-50			x	x	x	x	x		
75-63			x	x	x	x	x		
75-75			x	x	x	x	x		
90-40				x	x	x	x	x	
90-50				x	x	x	x	x	
90-63				x	x	x	x	x	
90-75				x	x	x	x	x	
90-90				x	x	x	x	x	
110-50					x	x	x	x	x
110-63					x	x	x	x	x
110-75					x	x	x	x	x
110-90					x	x	x	x	x
110-110					x	x	x	x	x

Materials

Compression couplings are made of brass.

## The FlexPipe

### AluFlextra - Contents

---

#### Contents

General

Pipes - corrugated casing

Press couplings, type MP

## The FlexPipe

### AluFlextra - General

#### Application

AluFlextra is used within District Heating for distribution and transmission pipelines.

Due to the properties of the PE-RT/aluminium/PE-RT service pipe, expansion must not be taken into consideration. The flexibility, low weight, and long lengths make the installation quicker and more inexpensive. AluFlextra is especially suitable for:

- branch pipes without joints
- passage of vegetation and other obstacles
- hilly areas

The pipe system complies with the requirements in EN15632-2 for a minimum design service life of 30 years at the following operational conditions:

Operating temperature: 80°C for 29 years

Maximum operating temperature:

90°C for 7760 hours

95°C for 1000 hours

Malfunction: 100°C for 100 hours

Maximum operating pressure: 10 bar

AluFlextra can be combined with the other LOGSTOR systems provided that the above temperatures and pressure are observed.

The multilayer service pipes are joined with press couplings.

For pipe systems with AluFlextra preinsulated steel fittings from the bonded pipe system or TwinPipes with press couplings which are welded onto one or more pipe ends can be used Press couplings with weld end are bought separately and welded on site.

#### Description

The standard coil length is 100 m.

Fixed lengths can be ordered to measure in lengths of min. 10 m and max. 90 m.

Delivered without free ends.

The max coil width is 2.4 m.

All pipes are produced in accordance with EN15632-1 and EN15632-2.

#### Materials

Service pipe:

Multilayer PE-RT/aluminium/PE-RT or PEX/aluminium/PEX

The material complies with the requirements in EN ISO 21003-2.

The 15,000 h thermal stability test according to EN15632-2:2022 is in progress, but not yet completed, so the test requirements are still fulfilled according to the previous version of EN15632-2

Insulation: Polyurethane foam

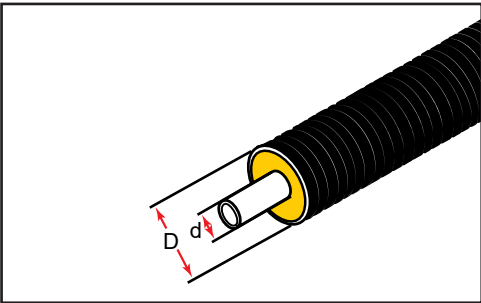
Average thermal conductivity  $\lambda_{50} = 0.022 \text{ W/mK}$

Outer casing:

Polyethylene, PE-HD with co-extruded EVOH diffusion barrier.

The FlexPipe  
AluFlextra - Corrugated casing

AluFlextra single  
pipe



Component  
overview/data

Component No. 2100

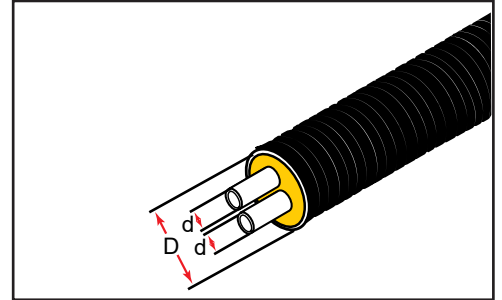
Single pipe

PE-RT/ aluminium/PE-RT service pipe		Volume	Series 1			Series 2			Series 3		
d mm	Wall thk mm	l/m	Outer casing			Outer casing			Outer casing		
			D mm	Wall thk mm	Weight kg/m	D mm	Wall thk mm	Weight kg/m	D mm	Wall thk mm	Weight kg/m
20	2.5	0.177				90	1.5	1.3	110	1.5	1.7
26	3.0	0.314				90	1.5	1.4	110	1.5	1.7
32	3.0	0.531	90	1.5	1.4	110	1.5	1.8	125	1.5	2.2

# The FlexPipe

## AluFlextra - Corrugated casing

### AluFlextra TwinPipe



### Component overview/data

Component No. 2190

TwinPipe

PE-RT/aluminium/ PE-RT service pipe		Volume	Series 1			Series 2			Series 3		
d mm	Wall thk mm	l/m	Outer casing			Outer casing			Outer casing		
			D mm	Wall thk mm	Weight kg/m	D mm	Wall thk mm	Weight kg/m	D mm	Wall thk mm	Weight kg/m
16/16	2.2	0.211				110	1.5	1.7	125	1.5	2.1
20/20*	2.5	0.353				110	1.5	1.9	125	1.5	2.3
26/26	3.0	0.628	110	1.5	2.0	125	1.5	2.4	140	1.5	2.8
32/32	3.0	1.062				125	1.5	2.5	140	1.5	3.0

Distance between service pipes: 12 mm.\* Also available in series 4 with casing diameter 140 mm.

### AluFlextra Double pipe

### Component overview/data

Component No. 2191

Double pipe

PE-RT/aluminium/PE-RT service pipe		Series 2			Series 3		
		Outer casing			Outer casing		
d mm	Wall thk mm	D mm	Wall thk mm	Weight kg/m	D mm	Wall thk mm	Weight kg/m
20/16*	2.5/2.2	110	1.5	1.8	125	1.5	2.1
26/20	3.0/2.5	125	1.5	2.2	140	1.5	2.8

Distance between service pipes: 12 mm.

\* Also available in series 4 with casing diameter 140 mm.

The FlexPipe

AluFlextra - Press coupling, type MP

Application

Used for permanent jointing of PE-RT/aluminium/PE-RT service pipes.  
Use special tools to install the press couplings, type MP (Multipress), see section "Tools for FlexPipe".  
Outer casings are joined with casing joints with insulation shells with flexible cores or casing joints for foaming.

Press coupling, straight

Press coupling for straight PE-RT/aluminium/PE-RT-PE-RT/aluminium/PE-RT joints:  
1. Supporting bush  
2. Insulating ring  
3. O-ring  
4. Squeezing ring  
5. Press ring

Component overview/data

Component No. 6001

Press coupling, straight

Coupling end 1	Coupling end 2			
	16	20	26	32
16	x			
20	x	x		
26		x	x	
32			x	x

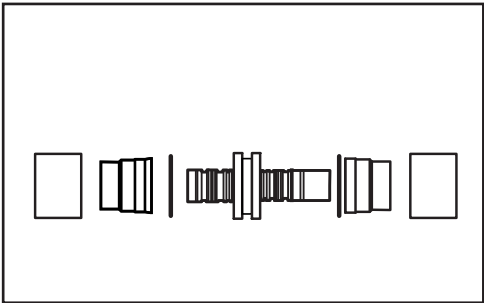


# AluFlextra - Press coupling, type MP

**Press coupling, straight, closed**

Press coupling for straight PE-RT/aluminium/PE-RT-PE-RT/aluminium/PE-RT closed joints.

The O-ring for the closed press end is delivered in a bag. The O-ring is installed at the end, when the closed end has been cut off.



**Component overview/data**

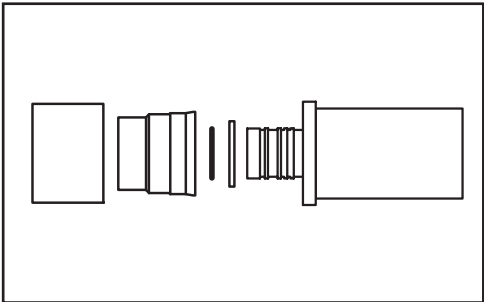
Component No. 6001

Press coupling, straight, closed

Coupling end 1	Coupling end 2			
	16	20	26	32
16	x			
20		x		
26			x	
32				x

**Press coupling, weld**

Press coupling with weld end for transition to steel pipe.



**Component overview/data**

Component No. 6001

Press coupling, weld

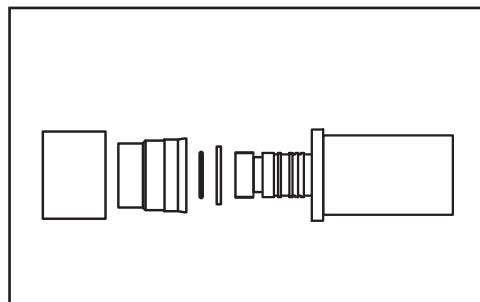
PE-RT/aluminium/PE-RT	Steel	
	26.9	33.7
16	x	
20	x	
26	x	x
32		x

## The FlexPipe

### AluFlextra - Press coupling, type MP

#### Press coupling, weld, closed

Closed press coupling with weld end.



#### Component overview/data

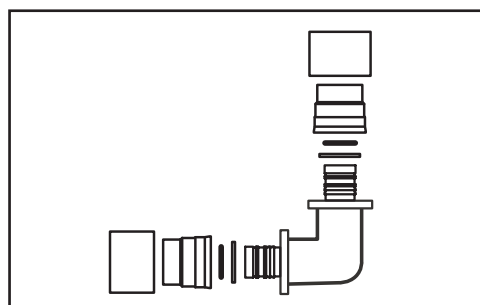
Component No. 6001

Press coupling, weld, closed

PE-RT/aluminium/PE-RT	Steel	
	26.9	33.7
16	x	
20	x	
26	x	
32		x

#### Press coupling, 90°

90° elbow with press coupling in both ends.



#### Component overview/data

Component No. 6001

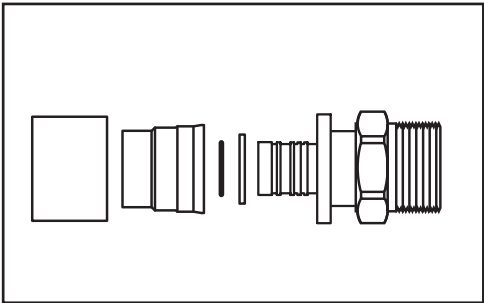
Press coupling, 90°

Coupling end 1	Coupling end 2			
	16	20	26	32
16	x			
20		x		
26			x	
32				x

# AluFlextra - Press coupling, type MP

**Press coupling, male**

Press coupling with male thread for termination in a cabinet or a building.



**Component overview/data**

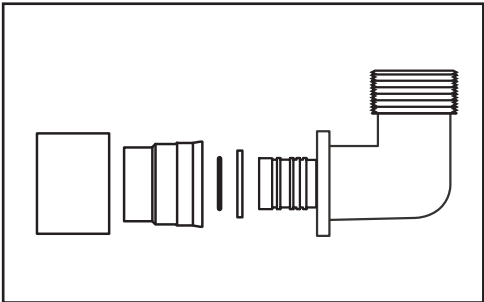
Component No. 6001

Press coupling, male

PE-RT/aluminium/PE-RT	Thread		
	1/2"	3/4"	1"
16	x	x	
20		x	
26		x	
32			x

**Press coupling, 90°, male**

Press coupling with male thread for termination in a cabinet or a building.



**Component overview/data**

Component No. 6001

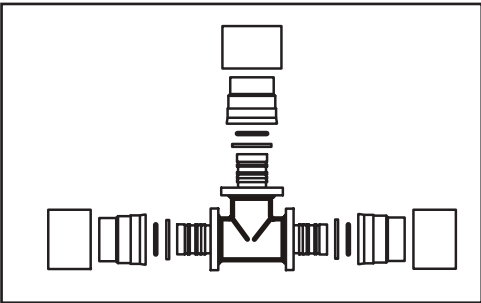
Press coupling, 90°, male

PE-RT/aluminium/PE-RT	Thread		
	1/2"	3/4"	1"
16	x		
20		x	
26		x	
32			x

The FlexPipe

AluFlextra - Press coupling, type MP

**Press coupling, tee**    The base unit of the press coupling is made in one piece.



**Component  
overview/data**

Component No. 6062

Press coupling, tee

Main pipe d1-d3 mm	Branch d2, mm			
	16	20	26	32
16-16	x	x		
20-20	x	x	x	x
26-20		x	x	x
26-26	x	x	x	x
32-20		x	x	
32-26		x	x	x
32-32	x	x	x	x

**Materials**

Press coupling are made of brass or red brass.  
Weld ends for transition to steel are made in S355J2.

The FlexPipe  
CuFlex - Contents

---

<b>Contents</b>	General
	Pipes
	Press couplings, type MP
	Solder joint fittings

## The FlexPipe

### CuFlex - General

---

#### Application

CuFlex is used within District Heating for distribution and transmission pipelines.

Due to the properties of the soft copper pipe, allowance must not be made for expansion. The flexibility, low weight, and long lengths make the installation quicker and more inexpensive. CuFlex is especially suitable for:

- branch pipes without joints
- passage of vegetation and other obstacles
- hilly areas

The pipe system complies with the requirements in EN15632-2 for a minimum design service life of 30 years at the following operational conditions:

Continuous operation with hot water at up to 120°C and at individual time intervals with a peak temperature up to 140°C. The sum of these individual time intervals shall not exceed 300 hours a year.

Operating pressure max.: 16 bar.

CuFlex can be combined with the other LOGSTOR systems.

As for preinsulated fittings with copper service pipe, see the copper pipe system.

Copper service pipes are joined with solder joint fittings or press couplings.

#### Description

The standard coil length is 100 m.

Fixed lengths can be ordered to measure in lengths of min. 10 m and max. 90 m.

CuFlex is as a standard delivered with embedded copper wires for surveillance.

Delivered without free ends.

The max coil width is 2.4 m.

All pipes are produced in accordance with EN15632-4.

#### Materials

Service pipe: Soft annealed copper Cu-DHP-CV024A-H40 after EN 12449.  
Tolerances after EN 1057.

Insulation: Polyurethane foam

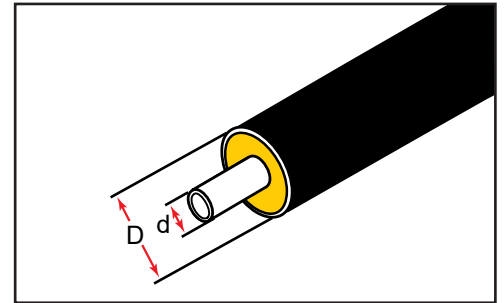
Blowing agent: Cyclopentane. Average thermal conductivity  $\lambda_{50} = 0.022 \text{ W/mK}$

Outer casing: Polyethylene, PE-LD with internal aluminium diffusion barrier.

# The FlexPipe

## CuFlex - Pipe

### Single pipe



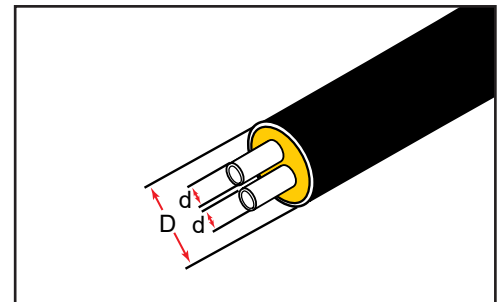
### Component overview/data

Component No. 2100

Single pipe

Service pipe		Volume	Series 1			Series 2		
d mm	Wall thk mm	l/m	Outer casing			Outer casing		
			D mm	Wall thk mm	Weight kg/m	D mm	Wall thk mm	Weight kg/m
15	1.0	0.133				90	2.5	1.5
18	1.0	0.201				90	2.5	1.6
22	1.0	0.314				90	2.5	1.7
28	1.2	0.515				90	2.5	2.0
35	1.5	0.835	90	2.5	2.4	110	2.5	2.8

### TwinPipe



### Component overview/data

Component No. 2190

TwinPipe

Service pipe		Volume	Series 1			Series 2		
d mm	Wall thk mm	l/m	Outer casing			Outer casing		
			D mm	Wall thk mm	Weight kg/m	D mm	Wall thk mm	Weight kg/m
18/18	1.0	0.402	90	2.5	2.0	110	2.5	2.4
22/22	1.0	0.628	90	2.5	2.2	110	2.5	2.6
28/28	1.2	1.029	110	2.5	3.2	125	2.5	3.6

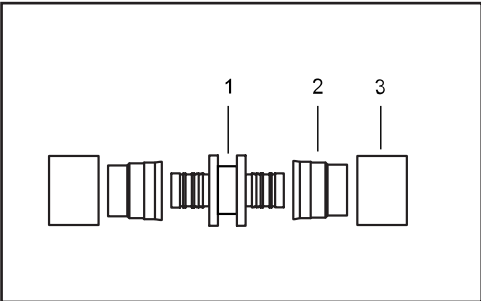
Distance between service pipes: 12 mm

CuFlex / Cu pipe - Press coupling, type MP

**Application** Copper service pipes are connected with press couplings. Use special tools to install the press coupling, see Tools for FlexPipe.

**Press coupling, straight** Press coupling for straight Cu-Cu joints:

- 1. Supporting bush
- 2. Squeezing ring
- 3. Press ring

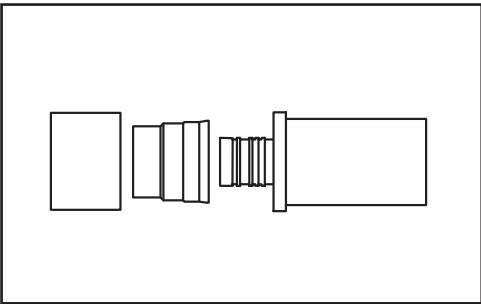


**Component overview/data** Component No. 6000

Press coupling, straight

Coupling end 1	Coupling end 2				
	15	18	22	28	35
15	x				
18		x			
22		x	x		
28		x	x	x	
35					x

**Press coupling, weld** Press coupling with weld end for transition to steel pipe.



**Component overview/data** Component No. 6000

Press coupling, weld

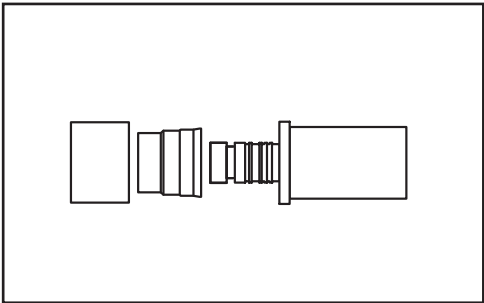
Steel	Copper				
	15	18	22	28	35
26.9	x	x	x	x	
33.7				x	
42.4					x



# CuFlex / Cu pipe - Press coupling, type MP

**Press coupling, weld, closed**

Closed press coupling with weld end.



**Component overview/data**

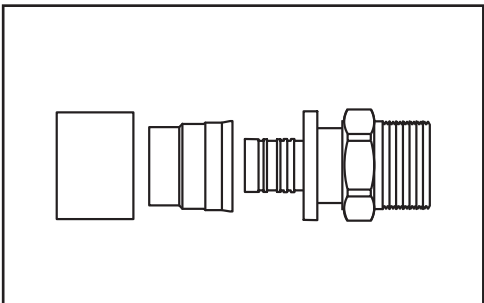
Component No. 6000

Press coupling, weld, closed

Steel	Copper		
	18	22	28
26.9	x	x	
33.7			x

**Press coupling, male**

Press coupling with male thread for termination in a cabinet or a building.



**Component overview/data**

Component No. 6000

Component No. 6000

Thread	Copper pipe			
	15	18	22	28
1/2"	x	x	x	
3/4"		x	x	
1"			x	x

**Materials**

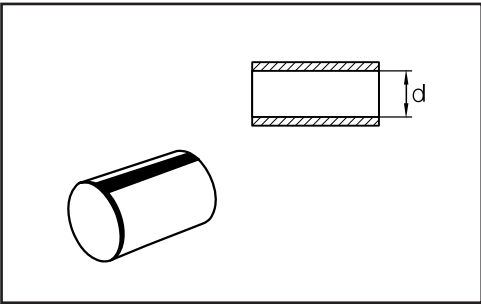
Press coupling are made of brass or red brass.  
Weld ends are made in S355J2.

The FlexPipe  
CuFlex - Solder joint fittings

**Application** Solder joint fittings for joining CuFlex service pipes are designed to transfer axial forces, arising in the pipe system.

The solder joint fittings have stop for the max insertion depth.

**Solder joint fitting,  
straight**

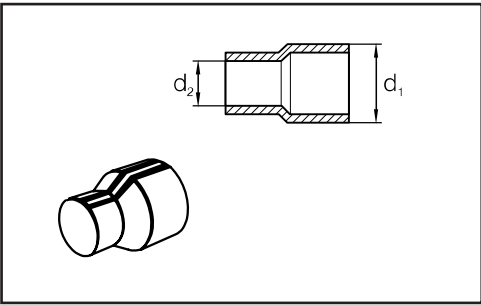


**Component  
overview/data** Component No. 1100

Solder joint fitting, straight

d, mm	15	18	22	28	35
-------	----	----	----	----	----

**Solder reduction,  
male/female** Never reduce more than a single  
dimension.



**Component  
overview/data** Component No. 1100

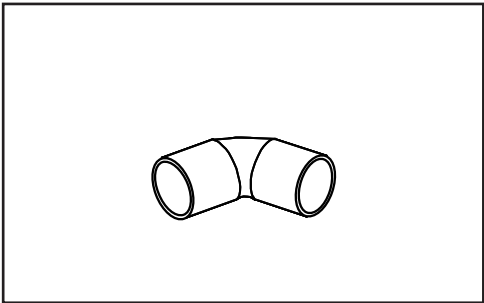
Solder reduction, male/female

d, mm	18	22	28	35
d2, mm	15	18	22	28

# The FlexPipe

## CuFlex - Solder joint fittings

**Solder elbow fitting**      45° and 90° angle.

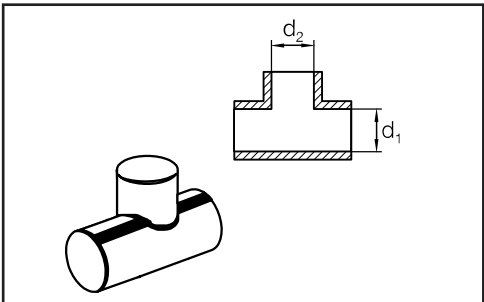


**Component overview/data**      Component No. 1100

Solder elbow fitting

d, mm	15	18	22	28	35
45°	x	x	x	x	x
90°	x	x	x	x	x

**Solder tee fitting**



**Component overview/data**      Component No. 1100

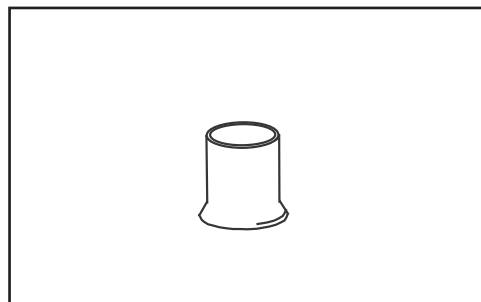
Solder tee fitting

Main pipe d1	Branch d2, mm				
	15	18	22	28	35
15	x				
18	x	x			
22	x	x	x		
28	x	x	x	x	
35	x	x	x	x	x

## The FlexPipe

### CuFlex - Solder joint fittings

**Saddle pipe piece** The saddle pipe piece is soldered directly onto the main pipe.



#### Component overview/data

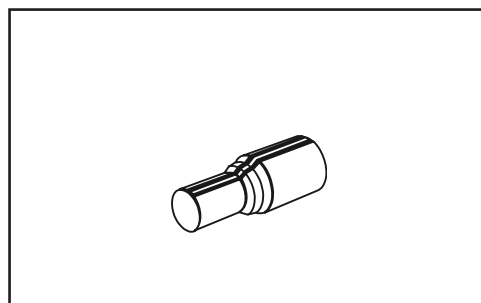
Component No. 1100

Saddle pipe piece

Main pipe d1 mm	Branch d2, mm			
	15	18	22	28
22	x	x		
28	x	x	x	
35		x	x	x

#### Transition fitting

Steel-copper transition fitting is welded onto the steel pipe and soldered on the copper pipe with a straight solder joint fitting.



#### Component overview/data

Component No. 6880

Transition fitting

dcu, mm	15	18	22	28	35
dst, mm	26.9	26.9	26.9	33.7	42.4

#### Materials

The material is Cu-DHP after EN 12449.

Dimensions and tolerances are in accordance with EN 1254-1.

Soldered with silver solder with at least 5% silver. Prior to soldering a calibration mandrel is used to calibrate the copper pipes.

Weld ends are made of P235 TR1/TR2 in accordance with EN 10217-1 or P235GH in accordance with EN 20117-2.

The FlexPipe  
SteelFlex - Contents

---

<b>Contents</b>	General
	Pipes
	Weld fittings

## The FlexPipe

### SteelFlex - General

---

#### Application

SteelFlex is used within District Heating for distribution and transmission pipelines.

The long lengths make SteelFlex especially suitable for:

- branch pipes without joints
- passage of vegetation and other obstacles
- hilly areas

The pipe system complies with the requirements in EN15632-4 for a minimum design service life of 30 years at the following operational conditions:

Continuous operation with hot water at up to 120°C and at individual time intervals with a peak temperature up to 140°C. The sum of these individual time intervals shall not exceed 300 hours a year.

Operating pressure max.: 25 bar

SteelFlex can be combined with the other LOGSTOR systems.

The steel service pipes are joined by means of welding. Branches which are at least one dimension smaller than the main pipe can be welded directly onto the main pipe.

For dimensional changes weld reductions are used.

#### Description

The standard coil length is 50 or 100 m.

SteelFlex is as a standard delivered with embedded copper wires for surveillance.

Always delivered without free ends.

The max coil width is 2.4 m.

All pipes are produced in accordance with EN15632-4.

#### Materials

Service pipe: Welded steel pipe E195 or E155, + N, S2 in accordance with EN 10305-3.

Insulation: Polyurethane foam

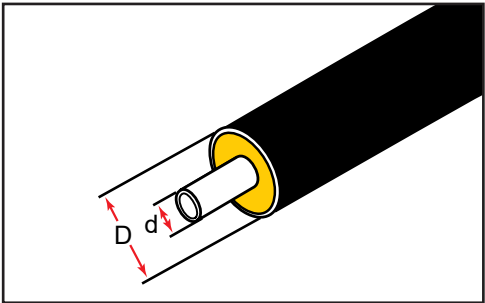
Blowing agent: Cyclopentane

Average thermal conductivity  $\lambda_{50} = 0.022 \text{ W/mK}$

Outer casing: Polyethylene, PE-LD with internal aluminium diffusion barrier.

The FlexPipe  
SteelFlex - Pipe

Pipes



Component  
overview/data

Component No. 2100

Single pipe

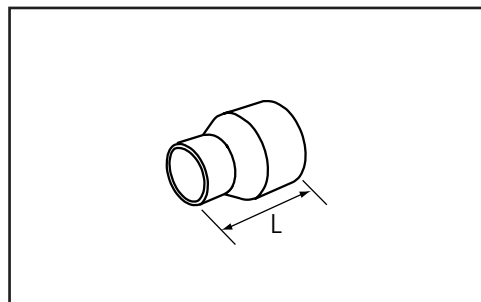
Service pipe		Volume l/m	Outer casing		
d mm	Wall thk mm		D mm	Wall thk mm	Weight kg/m
20	2.0	0.201	90	2.5	2.0
28	2.0	0.452	90	2.5	2.3

## The FlexPipe

### SteelFlex - Weld fittings

#### Weld reduction

For transition between SteelFlex and an ordinary steel pipe.



#### Component overview/data

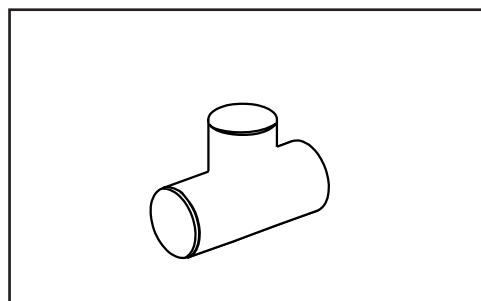
Component No. 1006

Weld reduction

Pipe end 1 Ord. steel pipe	Pipe end 2 SteelFlex	
	20	28
26.9	x	
33.7	x	x

#### Weld tee

Used with weld reductions for branching from SteelFlex to SteelFlex.



#### Component overview/data

Component No. 1007

Weld tee

Main pipe d1 mm	Branch d2 mm
33.7	33.7



The FlexPipe  
Casing joints - Contents

---

<b>Contents</b>	FXJoint
	SX-WPJoint
	C2LJoint
	C2FJoint

## The FlexPipe

### Casing joints - FXJoint

#### Application

Shrink sleeve in cross-linked PE with insulation shells in polyurethane (PUR).

The FXJoint is to be used for PexFlextra and AluFlextra. The insulation shell is with a flexible core to ensure space for the coupling.

The shrink sleeve can be used for reduction. The dimensional limits appear from below table.

Allowing for the insulation shells, order the largest dimension.

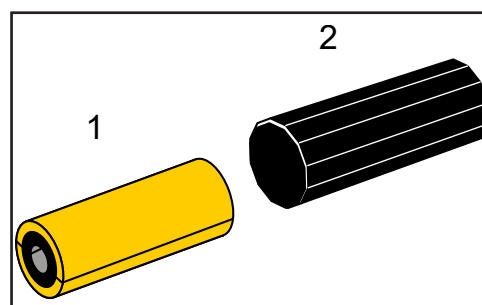
Major reductions can be carried out by combining two sleeves – a small and a big one

#### Description

The FXJoint consists of:

1. Insulation shells
2. Shrink sleeve with integrated mastic

Note! Insulation shells and shrink sleeve are ordered separately



#### Component overview/data

Component No. 5057

FXJoint

Component No. 5057, shrink sleeve with integrated mastic Component No. 5321, flexible insulation shells

Outer casing D, mm		90	110	125	140	160	180
Sleeve dimensional limits, mm		77-125			125-180		
Sleeve length, mm		555			565		
Service pipe, d,mm							
PexFlextra	AluFlextra						
20	20	x					
25	26	x					
32	32	x					
40		x	x				
50			x	x			
63				x	x		
75					x	x	
90						x	x
110							x

# The FlexPipe

## Casing joints - SX-WPJoint

**Application**

Shrink sleeve made of cross-linked PE (PEX) for foaming. The sleeve is shrinkable at both ends, and the foam holes are sealed with weld plugs.

Pre-install the shrink sleeve on the pipe prior to welding the service pipe together.

The shrink sleeve can as a standard be reduced by one dimensional offset. See below table.

When installed on pipes with corrugated casing the sleeve ends are sealed with additional collars to be ordered separately.

**Description**

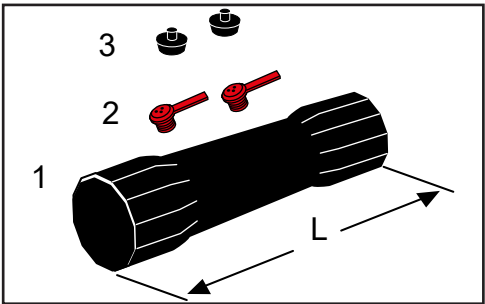
The SX-WPJoint consists of:

1. Shrink sleeve with integrated mastic
2. Venting plugs
3. Weld plugs

Delivered in white PE-foil.

Store the shrink sleeve vertically.

Max. temperature during transport and storage: 60° C



**Component overview/data**

Component No. 5031

SX-WPJoint

Outer casing D1 mm	Outer casing D2 mm					
	90	110	125	140	160	180
90	x					
110	x	x				
125		x	x			
140			x	x		
160				x	x	
180					x	x

L = 650 mm

**Materials**

Sleeve: Cross-linked PE (PEX)

Mastic: PIB-based mastic

Venting plugs: Polypropylene

Weld plugs: HDPE

**Accessories**

To be foamed with foam pack, component No. 0700.

When ordering state insulation series, and that foam pack must be included in the delivery.

Collar for corrugated casing, component No. 5500. Order 2 pcs. per joint.

## The FlexPipe

### Casing joints - C2FJoint

#### Application

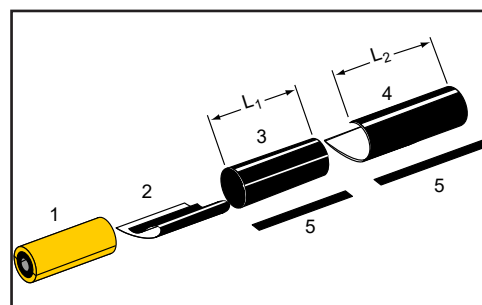
Open shrink sleeve in PE with insulation shells in PUR with flexible core. Prior to installation the shrink sleeve is cut longitudinally.

I.a. for repair of AluFlextra and PexFlextra.

#### Description

The C2FJoint consists of:

1. Insulation shell
2. Shrink film
3. Shrink sleeve
4. Shrink wrap
5. Closure patches



#### Component overview/data

Component No. 5060

C2FJoint

Service pipe d, mm		Outer casing D, mm					
PexFlextra	AluFlextra	90	110	125	140	160	180
20	20	x					
25	26	x					
32	32	x					
40		x	x				
50			x	x			
63				x	x		
75					x	x	
90						x	x
110							x

L1 = 500 mm

L2 = 640 mm

#### Materials

Shrink sleeve: HDPE

Insulation shells: PUR

Shrink film: PEX with PIB-based mastic

Shrink wrap: PEX with PIB-based mastic and hotmelt

The FlexPipe  
Branches - Contents

---

<b>Contents</b>	SXT-WPJoint
	TXJoint
	TSJoint
	T-Joint straight

## The FlexPipe Branches - SXT-WPJoint

### Application

T-joint for foaming. Made of cross-linked PE (PEX) with flanges and bolts in acid-resistant steel AISI 316 L. The T-joint is shrinkable and the foam holes are sealed with weld plugs.

The SXT-WPJoint can be used to branch perpendicular to or parallel with the main pipe.

The SXT-WPJoint cannot be used for installation of the T-shoe on a FlextraPipe.

The SXT-WPJoint can be used together with a hot tapping valve. The insulation thickness around the valve casing will be thinner.

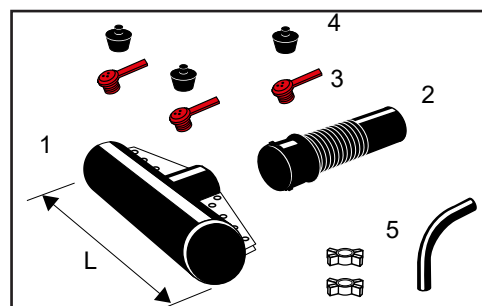
Installation on FlextraPipe with corrugated casing requires that the branch be secured with an extra collar, which is ordered separately.

### Description

The SXT-WPJoint consists of:

1. Main pipe joint
2. Branch pipe joint
3. Venting plugs
4. Weld plugs
5. Connecting piece with spacers

Max. temperature during transport and storage: 60°C.



### Component overview/data

Component No. 5210

SXT-WPJoint - Component Nos.: Main pipe joint 5210 - Branch pipe joint 5211

Main pipe, D1	Branch, D2 mm					
	90	110	125	140	160	180
90	x					
110	x	x				
125	x	x	x			
140	x	x	x	x		
160	x	x	x	x	x	
180	x	x	x	x	x	x
200	x	x	x	x	x	x
225	x	x	x	x	x	x
250	x	x	x	x	x	x
280	x	x	x	x	x	x
315	x	x	x	x	x	x

### Materials

Shrink sleeve: Crosslinked PE, PEX

Mastic: PIB-based mastic

Venting plugs: Polypropylene

Weld plugs: HDPE.

Flanges and bolts: Acid-resistant steel AISI 316L

## The FlexPipe Branches - SXT-WPJoint

### Accessories

When branching from steel main pipe with FlextraPipe with corrugated casing, order 1 pc. component No. 5500 per joint.

To be foamed with foam packs, component No. 0700.

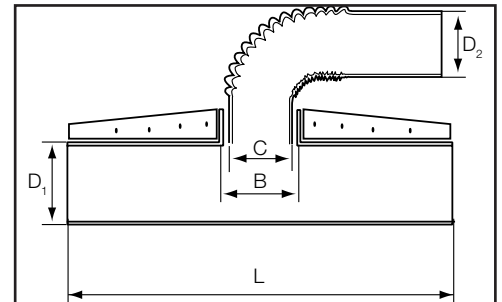
When ordering state insulation series, and that delivery must include foam packs.

Reinforcement plate to reinforce the main pipe, if necessary, component No. 5426.

### Measurements and combinations

The connecting piece of the main pipe fits several branch pipe joints and the branch pipe joint fits several branch dimensions.

The possible combinations appear from below table.



### Component overview/data

Component No. 5210

Possible combinations with connecting piece for SXT-WPJoint    Component Nos. 5210/5211

Main pipe joint			Branch pipe joint D2, mm					
			77-90	90-110	110-125	125-140	140-160	180-200
D1 mm	B mm	L mm	C mm					
90	115	680	105					
110	135	680	125	125				
125	155	680	144		144			
140	170	680	160		160	160		
160	170	680	160		160	160		
180	190	680	180		180	180	180	
200	170	680	160		160	160		
	230	720					220	220
225	170	680	160		160	160		
	230	720					220	220
250	170	680	160		160	160		
	230	720					220	220
280	170	680	160		160	160		
	230	720					220	220
315	170	680	160		160	160		
	230	720					220	220

The FlexPipe  
Branches - SXT-WPJoint

**Connecting piece**    Is used to branch from the main pipe.

**Component overview/data**    Component No. 5251

Connecting piece for SXT-WPJoint

Connecting piece ø mm	Radius mm	
	45°	90°
26.9	140	140
33.7	140	140
42.4	140	140
48.3	140	140
60.3	150	150
76.1	190	190
88.9	222	165
114.3	170	170



T-joint for foaming, used to branch perpendicular to the main pipe.

The T-joint is made of PE and the shrink sleeve of cross-linked PE (PEX).

If it is to be used in connection with hot tapping, this must be stated when ordering.

Installation on pipes with corrugated casing requires that the branch be sealed with an extra collar, which is ordered separately.

As a standard TXJoint is double sealed on the T-shoe. The branch can be double sealed by installing open shrink wrap on transition between T-shoe and SX-WPJoint and collar towards the flexible pipe.

[illegible]

## Component overview/data

TXJoint

Main pipe D1 mm	Branch dimension mm					
	90	110	125	140	160	180
125	x	x				
140	x	x	x			
160	x	x	x	x		
180	x	x	x	x	x	
200	x	x	x	x	x	x
225	x	x	x	x	x	x
250	x	x	x	x	x	x
280	x	x	x	x	x	x
315	x	x	x	x	x	x
355	x	x	x	x	x	x
400	x	x	x	x	x	x
450	x	x	x	x	x	x
500	x	x	x	x	x	x

## The FlexPipe Branches - TXJoint

Main pipe D1 mm	Branch dimension mm					
	90	110	125	140	160	180
560	x	x	x	x	x	x
630	x	x	x	x	x	x
710	x	x	x	x	x	x

Length of main pipe joint = 600 mm

Length of shrink wrap = 900 mm

Length of shrink sleeve = 650 mm

### Materials

T-shoe, base pipe: HDPE

SX-WP: Cross-linked PE, PEX

Mastic: PIB-based mastic

Venting plugs: Polypropylene

Weld plugs: HDPE

Shrink wrap: PEX with PIB-based mastic and hotmelt

### Accessories

Shrink wrap incl. closure patch for transition between T-shoe and SX-WPJoint, component No. 5400. Order 1 pc. per casing joint.

Collar for transition from SX-WPJoint to flexible pipe, component No. 5500. Order 1 pc.

Hot tapping valve, component No. 4280

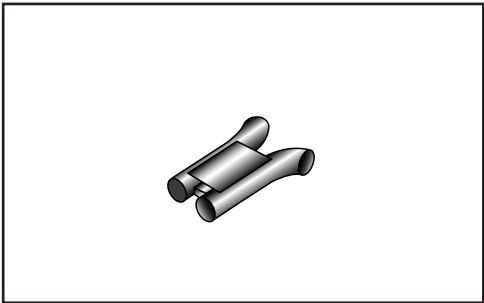
To be foamed with foam packs, component No. 0700.

When ordering state insulation series, and that delivery must include foam packs.

Reinforcement plate to reinforce the main pipe, if necessary, component No. 5426.

# The FlexPipe Branches - TXJoint

**Connecting pipe**      The connecting pipe ensures the correct distance between the service pipes of the branch.



**Component overview/data**      Component No. 0262

Connecting pipe

Main pipe d1	Branch d2, mm						
	2x26.9	2x33.7	2x42.4	2x48.3	2x60.3	2x76.1	2x88.9
2x42.4	x	x					
2x48.3	x	x	x				
2x60.3	x	x	x	x			
2x76.1	x	x	x	x	x		
2x88.9	x	x	x	x	x	x	
2x114.3	x	x	x	x	x	x	x
2x139.7	x	x	x	x	x	x	x
2x168.3	x	x	x	x	x	x	x
2x219.1	x	x	x	x	x	x	x

## The FlexPipe Branches - TSJoint

### Application

T-joint for foaming, used to branch perpendicular to or parallel with the main pipe. The main pipe is made of weldable PE and the branch of cross-linked PE (PEX). The T-joint is shrinkable.

The main pipe is extrusion welded longitudinally, and then the ends are either shrunk onto the mastic tape and sealed with open shrink sleeves or welded with weld strips like the EWJoint.

The branch is shrunk onto the embedded mastic and sealed with a collar.

Foam holes are sealed with weld plugs in the main pipe and with expansion plugs in the branch.

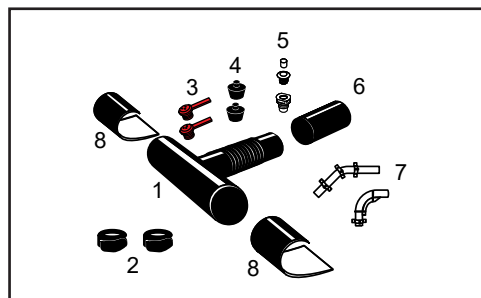
The TSJoint can be used together with a hot tapping valve. The insulation thickness around the valve casing will be thinner.

TSJoint main pipe  $\varnothing 450$  mm can be used as a saddle solution for outer casing  $\varnothing 355$  -  $\varnothing 560$  mm.

### Description

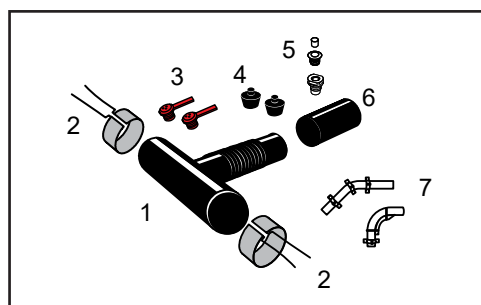
The TSJoint with mastic consists of:

1. T-joint
2. Mastic tape
3. Venting plugs
4. Weld plugs
5. Venting and expansion plugs
6. Collar
7. 45° or 90° connecting piece
8. Open shrink wraps



The TSJoint EW consists of:

1. T-joint
2. Weld strips
3. Venting plugs
4. Weld plugs
5. Venting and expansion plugs
6. Collar
7. 45° or 90° connecting piece



Max. temperature during transport and storage: 40°C.

## The FlexPipe Branches - TSJoint

### Component overview/data

Component No. 5202

TSJoint

Branch D2	Main pipe D1, mm											
	125	140	160	180	200	225	250	280	315	355	400	450
90-125	x*	x	x	x	x	x	x	x	x	x	x	x
140-160					x	x	x	x	x	x	x	x

Length T-joint main pipe = 650 mm

\* Max branch ø110 mm.

### Materials

T-shoe, base pipe: HDPE

T-shoe, branch: Cross-linked PE, PEX

Venting plug, base pipe: Polypropylene

Venting plug, branch: LDPE

Weld plugs: HDPE

Collar: PEX with PIB-based mastic

Sealing strip: PIB-based

Weld strip: Electro-plated net

### Accessories

To be foamed with foam packs, component No. 0700.

When ordering state insulation series, and that delivery must include foam packs.

Reinforcement plate to reinforce the main pipe, if necessary, component No. 5426.

## The FlexPipe Branches - TSJoint

### Component overview/data

Component No. 5251

Connecting piece

Connecting piece ø mm	For branch casing D2 mm	Radius, mm	
		45°	90°
42.4	140	140	140
48.3	140	140	140
60.3	140 160	150	150
76.1	140 160	190	190
88.9	160	222	165

### Weld strip

Is used to weld together the joint and the outer casing.

### Component overview/data

Component No. 5556

### Materials

Weld strip: Electro-plated mesh

# The FlexPipe

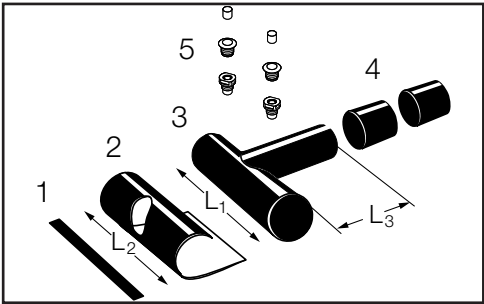
## Branches - T-joint straight

**Application** T-joint straight is used to branch on FlexPipes. Available with insulation shells or for foaming.

T-joint straight with insulation shells can be used for AluFlextra and PexFlextra,

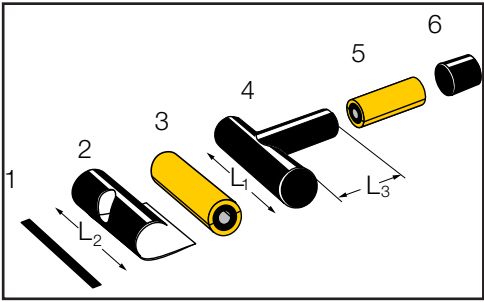
**Description** T-joint straight with insulation shells consists of:

- 1. Closure patch
- 2. Shrink wrap
- 3. Insulation shell
- 4. T-shoe
- 5. Insulation shell
- 6. Collar



T-joint straight for foaming consists of:

- 1. Closure patch
- 2. Shrink wrap
- 3. T-shoe
- 4. Collars
- 5. Venting and expansion plugs



**Component overview/data** Component No. 5140

Component No. 5140

Main pipe D1 mm	Branch D2 mm					
	90	110	125	140	160	180
90	x					
110	x	x				
125	x	x	x			
140	x	x	x	x		
160	x	x	x	x	x	
180	x	x	x	x	x	x

L1 = 400 mm  
L2 = 650 mm  
L3 = 300 mm

**Materials** T-shoe: HDPE

Venting plugs: Polypropylen

Collars: PEX with PIB-based mastic

Shrink wrap: PEX with PIB-based mastic and hotmelt

**Accessories** To be foamed with foam packs, component No. 0700.

When ordering state insulation series, and that delivery must include foam packs.

## The FlexPipe Y-Joint

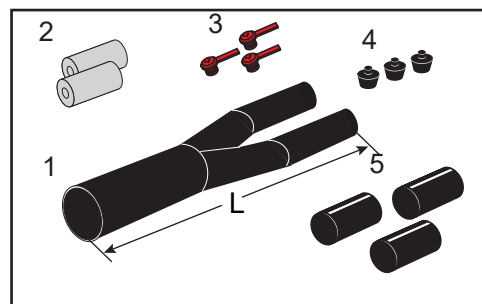
### Application

Y-Joint is used as a means of transition from TwinPipe to single pipe.  
All 3 ends of the joint are shrinkable and embedded with mastic.  
Y-Joint is double sealed.

### Description

Y-Joint consists off:

1. Sleeve with integrated sealing compound
2. Pipe insulation
3. Venting plugs
4. Weld plugs
5. Collars



Sleeve and accessories are delivered in a bag.

Max. temperature during transport and storage: 40°C.

### Component overview/data

Component No. 5930

Y-Joint

Outer casing, mm		Service pipe, mm			
D1	D2	16-22	25-28	32-35	40-42
90	66	x			
90	77	x			
90	90	x			
110	66	x			
110	77	x	x	x	
110	90	x	x	x	
110	110	x	x	x	
125	77		x	x	
125	90		x	x	x
125	110		x	x	x
140	90			x	x
140	110		x	x	x
140	125			x	

Y-Joint length: 900 mm - Pipe insulation length: 250 mm

### Materials

Y-Joint: HDPE

Venting plugs: Polypropylen

Weld plugs: HDPE

Collars: PEX with mastic

### Accessories

To be foamed with foam packs, component No. 0700.

When ordering state insulation series, and that delivery must include foam packs.



The FlexPipe  
Terminations - Contents

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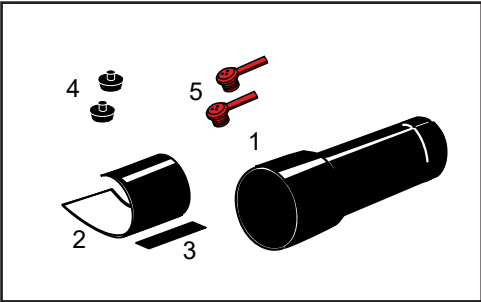
<b>Contents</b>	End fitting
	Wall entry sleeve
	Inlet pipe
	Sealing reduction
	Inlet box
	Protective cap
	End cap
	Valves and mountings

The FlexPipe  
Terminations - End fitting

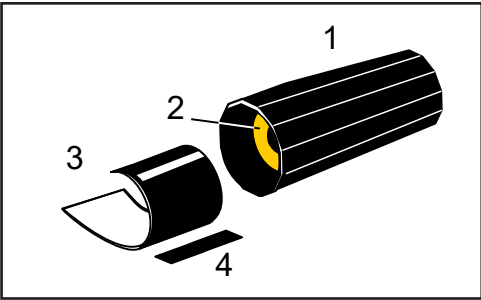
**Application** End fitting with closed end for temporary termination in the ground. The outmost part of the end fitting is shrinkable.

End fitting with insulation shells can be used for single pipes, whereas TwinPipes and double pipes must be foamed.

- Description** End fitting with insulation shells consists of:
- 1. End fitting expanded
  - 2. Insulation shells
  - 3. Open shrink wrap
  - 4. Closure patch



- End fitting for foaming consists of:
- 1. End fitting, drifted
  - 2. Open shrink wrap
  - 3. Closure patch
  - 4. Weld plugs
  - 5. Venting plugs



**Component  
overview/data**

Component No. 5700

End fitting

Outer casing D, mm	90	110	125	140	160	180
Fitting length, mm	450	450	450	450	450	700
Foaming + disposable valve	700	700	700	700	700	-

**Materials** End fitting with insulation shells: Cross-inked PE, PEX

End fitting for foaming: HDPE

Shrink wrap: PEX with PIB-based mastic and hotmelt

Venting plugs: Propylene

Weld plugs: HDPE

**Accessories** To be foamed with foam packs, component No. 0700.

When ordering state insulation series, and that delivery must include foam packs.

# Terminations - Wall entry sleeve

Application

Where pipes are installed through masonry - at wells, footings etc. - wall entry sleeves are installed as a seal against water ingress.

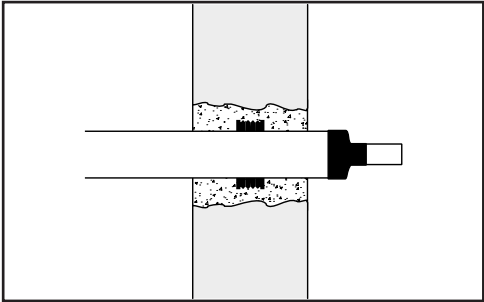
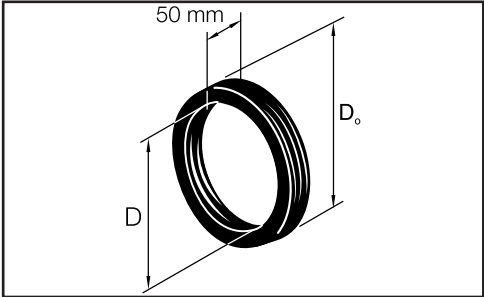
Exposed to groundwater pressure the wall entry sleeves may not be watertight. In such cases please contact LOGSTOR.

If sealing rings which can withstand large axial movements or radon-tight sealing rings are required, please contact LOGSTOR.

Description

The wall entry sleeves allow minor axial expansion movements at the entry point.

Note! De - 2x 18 mm is smaller than the nominal diameter, so the sleeve fits tightly around the outer casing.

Component overview/data

Component No. 5800

Wall entry sleeve

Outer casing D, mm	90	110	125	140	160	180
Outer diameter D <sub>o</sub> , mm	124	142	158	173	191	209

The FlexPipe  
Terminations - Inlet pipe

Application

For embedding in new constructions to enable later introduction of FlexPipes without disadvantages to the construction.  
Inlet pipes are made of HDPE.  
Expanded end to ensure a good connection to any extension pipe.

Component overview/data

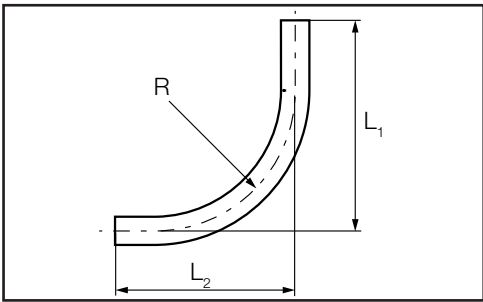
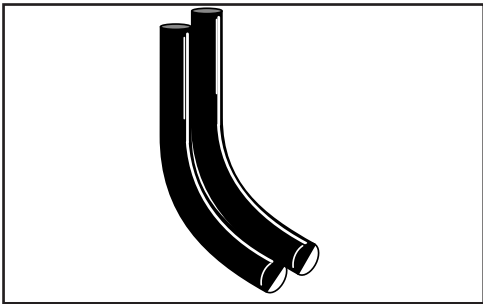
Component No. 1236

Inlet pipe

For casing D mm	For FlexPipe D mm	Radius R mm	L1 mm	L2 mm
125	90	800	1050	900
140	110	800-900	1250	1000
160	125	900-1000	1350	1100
180	140	1000-1100	1400	1250

Double inlet pipe  
- fix

The pipes are fixed side by side at a fixed distance of approx. 15 mm.

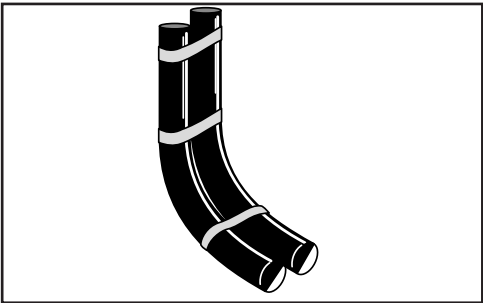


Component overview/data

Component No. 1236

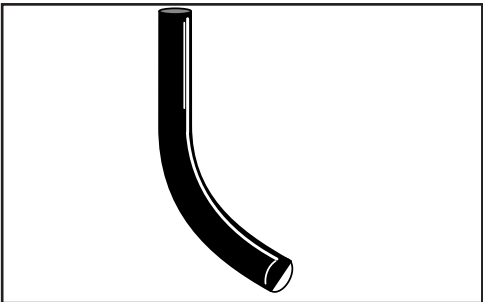
The FlexPipe  
Terminations - Inlet pipe

**Double inlet pipe - flexible**    The inlet pipes are joined with flexible rubber bands and can therefore be placed at random in relation to each other.



**Component overview/data**    Component No. 1236

**Single inlet pipe**

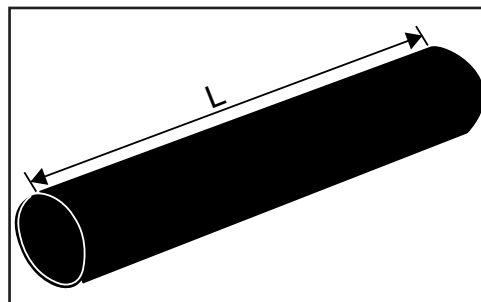


**Component overview/data**    Component No. 1236

## The FlexPipe Terminations - Inlet pipe

### Extension pipe

Used to extend inlet pipe. Adjusted on site.



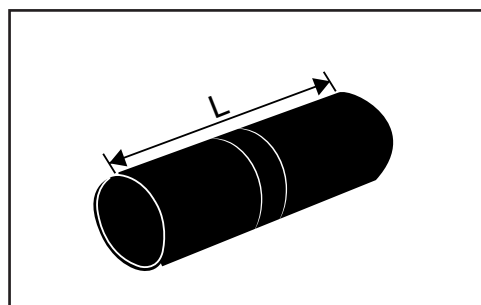
### Component overview/data

Component No. 1236

ø D mm	L mm
110	6
125	6
140	6
160	6
180	6

### HDPE sleeve for extension pipe

Used to join extension pipes, when more than one extension pipe is required.



### Component overview/data

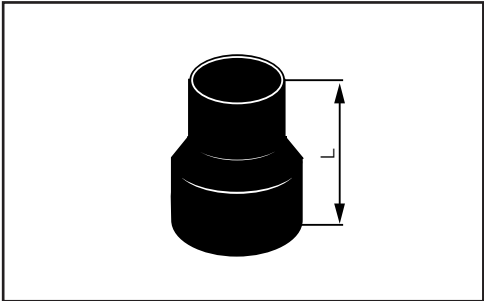
Component No. 1236

ø D mm	L mm ±5
110	220
125	220
140	220
160	220
180	260

# The FlexPipe

## Terminations - Sealing reduction

**Sealing reduction** For sealing between inlet pipe and outer casing.

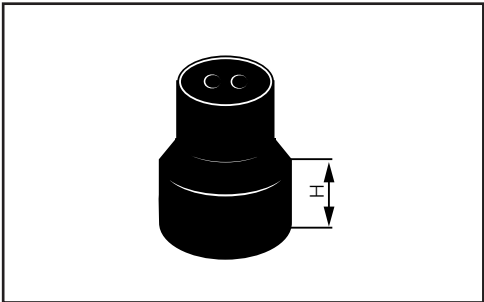


**Component overview/data** Component No. 1236

Sealing reduction

For outer casing D mm	For inlet pipe mm	L mm
90	125	200
110	140	200
125	160	200
140	180	200

**Sealing reduction  
incl protective  
cap**



**Component overview/data** Component No. 1236

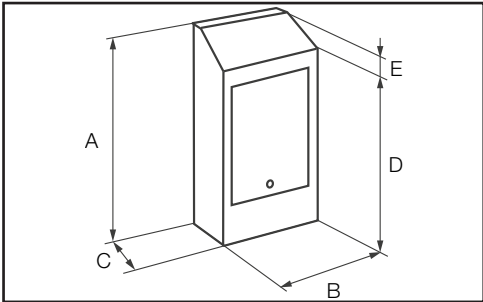
Sealing reduction incl. protective cap

Service pipe, d mm	Outer casing D mm	Inlet pipe mm	H mm
20-20	110	140	200
20-20	125	160	200
26-26	125	160	200

The FlexPipe  
Terminations - Inlet box

**Application** For sealing external pipe introduction through wall.  
The box has no back side and bottom.  
Box type with cover enables valve operation through external cover with lock.

**Description** Colour: light grey.



**Component overview/data** Component No. 8900

Inlet box

Type	Product No.	Measurements, mm		
		H	W	D
wo cover	8900 0800 340 000	825	350	200
with cover	8900 0600 290 000	600	290	160



The FlexPipe

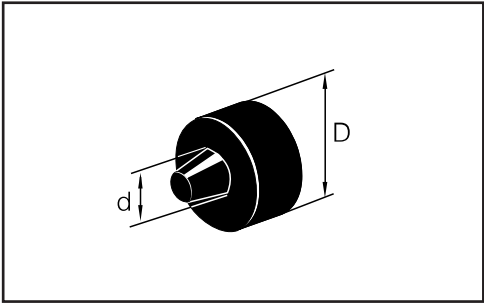
Terminations - Protective cap

**Application** For indoor sealing of the insulation end. Applicable on all FlexPipes.

Protective cap is delivered with a conical service pipe nozzle which is adjustable on location to the relevant service pipe.

Made of silicone and can be used at temperatures up to 140°C.

Single pipe



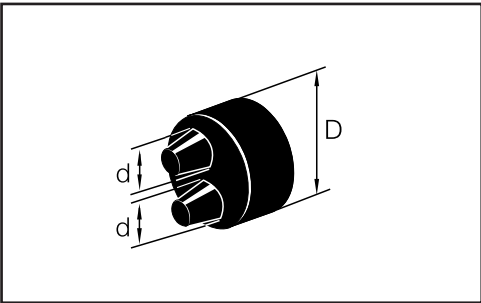
**Component overview/data** Component No. 1230

Protective cap - single pipe

Product No.	Service pipe d mm	Outer casing D, mm					
		90	110	125	140	160	180
1230 0090 000 000	16-40	x					
1230 0110 000 000	16-50		x				
1230 0125 000 000	20-63			x			
1230 0140 000 000	50-75				x		
1230 0160 000 000	75-90					x	
1230 0180 000 000	90-110						x

The FlexPipe  
Terminations - Protective cap

TwinPipe and double pipe



Component  
overview/data

Component No. 1230

Protective cap - TwinPipe and double pipe

Product No.	Service pipe d mm	Outer casing D, mm					
		90	110	125	140	160	180
1230 0090 000 001	15-28/15-28	x					
1230 0110 000 001	16-32/16-32		x				
1230 0125 000 001	16-50/16-50			x			
1230 0140 000 001	16-50/16-50				x		
1230 0160 000 001	32-50/32-50					x	
1230 0180 000 001	50-63/50-63						x

# The FlexPipe

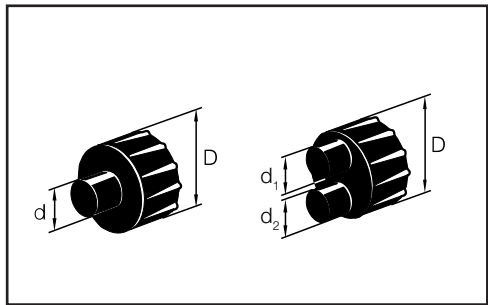
## Terminations - End cap

### Application

For termination in buildings, inspection chambers, concrete ducts etc. to protect the insulation end against moisture ingress. Applicable on pipes with steel or copper service pipe.

The end cap has embedded mastic and is shrunk onto the service pipe and outer casing.

Made of cross-linked PE (PEX) and can be used at a continuous operating temperature up to 120°C and a peak temperature (short term) of up to 130 °C.



### Component overview/data

Component No. 5600

End cap - single pipe, TwinPipe, and double pipe

Single pipe			
Service pipe d mm	Outer casing D, mm		
	90	110	125
12-26	x		
25-40	x		
25-50			x
26-42	x	x	
TwinPipe and double pipe			
Service pipe d1/d2 mm	Outer casing D, mm		
	90-128	125-140	
12-22/12-22	x		
28-54/22-42		x	

### Materials

End cap: Cross-linked PE with embedded mastic

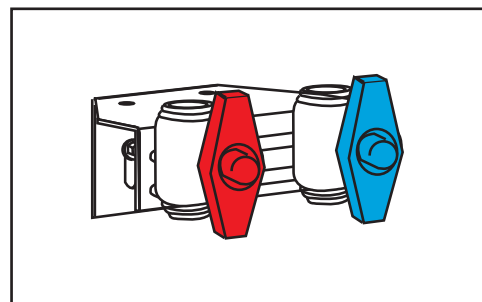
## The FlexPipe

### Terminations - Valves and mountings

#### Twin valves

Used in buildings, installed on adjustable wall mountings. The valves are delivered with internal thread at both ends or with internal thread and weld end with red and blue T-handle.

#### Broen Ballomax, single, PEX



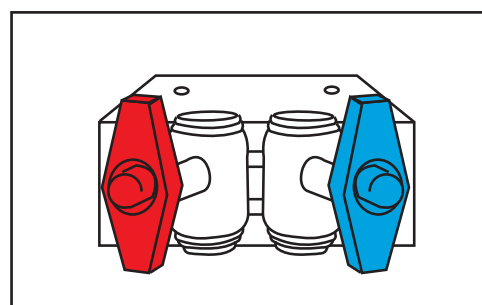
#### Component overview/data

Component No. 4260

Broen Ballomax - Single PEX

Dimension	Thread	Pipe, mm	Valve ends		
			Female/female	Weld female	Weld/weld
20	3/4"	26.9	x	x	x
25-32	1"	33.7	x	x	
40	1 1/4"	42.4	x	x	

#### Broen Ballomax, TwinPipe, PEX



#### Component overview/data

Component No. 4260

Broen Ballomax - TwinPipe PEX

Dimension	Thread	Pipe, mm	Valve ends	
			Female/female	Weld female
20	3/4"	26.9	x	x
25-32	1"	33.7	x	x
40	1 1/4"	42.4	x	x

# The FlexPipe

## Terminations - Valves and mountings

Broen Ballomax,  
single, CuFlex

Component  
overview/data

Component No. 4260

Broen Ballomax - Single copper

Dimension	Thread	Valve ends	
	Header	Copper/female	Copper/copper
18	1/2"	x	
22	3/4"	x	x
28	1"	x	

Broen Ballomax,  
TwinPipe, CuFlex

Component  
overview/data

Component No. 4260

Broen Ballomax - TwinPipe copper

Dimension	Thread	Valve ends copper/female
18	1/2"	x
22	3/4"	x
28	1"	x

The FlexPipe

Terminations - Valves and mountings

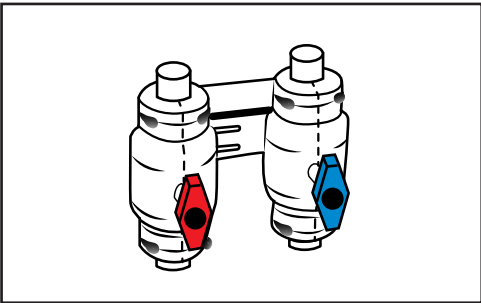
**Insulation shells for Broen Ballomax**

Insulation shells for Broen Ballomax are made of black polyurethane.

Max. temperature: 130°

Thermal conductivity: 0.029 W/mk

1 set consists of 2 + 2 shells and spacers for installation on the mounting.



**Component overview/data**

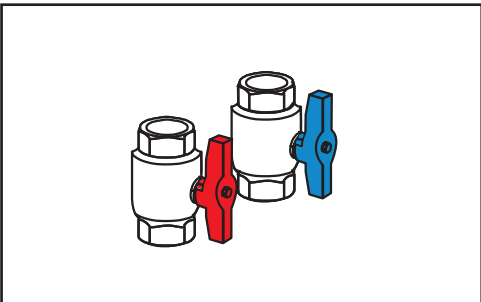
Component No. 4262

Broen Ballomax - Insulation shells

Product Nos.	Dimension
42620026000001	3/4" (26.9)
42620033000001	1" (33.7)

**Single valves**

Delivered with red or blue handle.



**Component overview/data**

Component No. 4261

Single valve

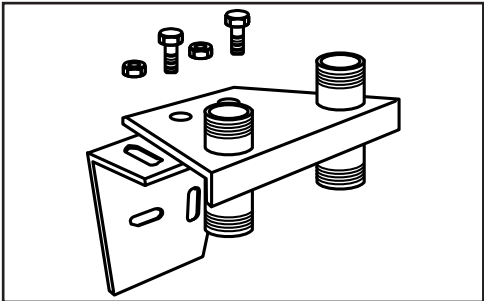
Male thread	3/4"	1"	1 1/4"
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The FlexPipe

Terminations - Valves and mountings

Mounting for sin-  
gle valves

Mounting for installing valves in buildings.



Component  
overview/data

Component No. 4262

Mounting

Male thread	3/4"	1"	1 1/4"
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## The Copper Pipe Overview

---

### Contents

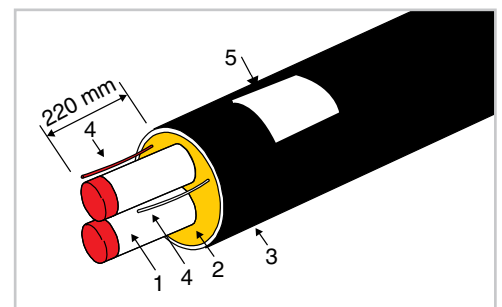
General  
Copper pipe  
Solder joint fittings  
Press couplings, type MP  
Casing joints  
Directional changes  
Branches  
Transition pipes  
Terminations



## The Copper Pipe General

<b>Application</b>	<p>The copper pipe system is a complete transmission and distribution system for district heating and cooling.</p> <p>All specifications in this catalogue section are based on:</p> <p>Max. operating pressure = 16 bar</p> <p>Continuous operating temperature = 120°C</p> <p>Peak load temperature = Max. 140 °C. The sum of the various time intervals must not exceed 300 h per year.</p> <p>Max. external temperature load (casings) = 50°C</p>
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<b>Description</b>	<p>A preinsulated copper pipe consists of:</p> <ol style="list-style-type: none"> <li>1. Service pipe (1 or 2): Copper</li> <li>2. Insulation: Polyurethane foam</li> <li>3. Outer casing: Polyethylene, PE-HD</li> <li>4. Wires for surveillance: Copper (one is tinned)</li> <li>5. Pipe label</li> </ol>
--------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



<b>Copper pipe</b>	<p>Type: Soft, drawn, seamless pipes designed for capillary soldering</p> <p>Dimensions: In accordance with EN 12449</p> <p>Material: In accordance with EN 12449</p> <p>Copper content: 99.85% weight</p> <p>P-content: 0.015 - 0.040% weight</p> <p>Ultimate stress: 210-270 N/mm<sup>2</sup></p> <p>Elongation at break: Min. 40%</p> <p>Hardness: Vicker's hardness, approx. 55 HV</p> <p>Inspection certificate: EN 10204 - 3.1.</p>
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<b>Insulation</b>	<p>Polyurethane foam: Properties: Minimum as required in EN 253</p> <p>Blowing agent: Cyclopentane</p> <p>Insulating property: Thermal conductivity (50°C): &lt; 0.027 W/mK*</p> <p>*)These lambda values are based on an average of the continuous measurements.</p> <p>The calculation program Calculator always include the updated values. See <a href="http://www.logstor.com/Calculator">www.logstor.com/Calculator</a>.</p>
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## The Copper Pipe

### General

---

#### Outer casing

Polyethylene:

PEHD, bimodal (min. PE 80, ISO 12162)

Properties: Minimum as required in EN 253

All parts are fully weldable within the melt flow index: MFR variation  $\leq 0.5$  g/10 min

Thermal stability:

Oxydation induction time (OIT):  $> 30$  min at  $210^{\circ}\text{C}$

Resistance against crack formation:

Stress crack resistance (notch sensibility):  $> 300$  h (full notch, 4 MPa,  $80^{\circ}$ , EN 253)

Internal surface treatment:

All outer casings are corona treated during production. This ensures an optimum adhesion between casing and insulation.

#### Finished pipes

Free service pipe end:  $220\text{ mm} \pm 10\text{ mm}$

Lengths delivered: 12 m

#### Surveillance system

The copper pipes are delivered with 2 copper wires, embedded in insulation (Nordic System).

Wires:  $1.5\text{ mm}^2$  copper wires (one is tinned)

Distance to service pipe: 15 mm

Position in top:  $\pm 3\text{-}20$  cm from 12 o'clock position

The embedded copper wires are the backbone of the electronic surveillance systems which are available for most of our pipelines.

See description in the Surveillance Handbook.

# The Copper Pipe Pipe

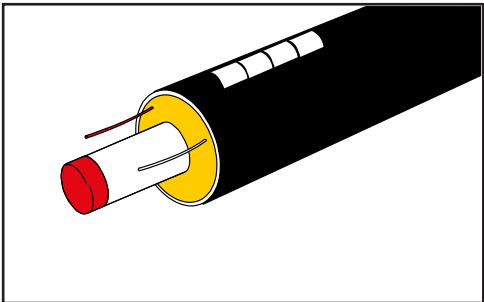
**Application**

Preinsulated copper pipes are available in two variants for common construction work within district heating and cooling.

- Single pipe; one service pipe in one casing
- TwinPipe; two service pipes of the same dimension in one casing

All preinsulated copper pipes are 12 m long and supplied with embedded copper wires for surveillance.

**Single pipe**



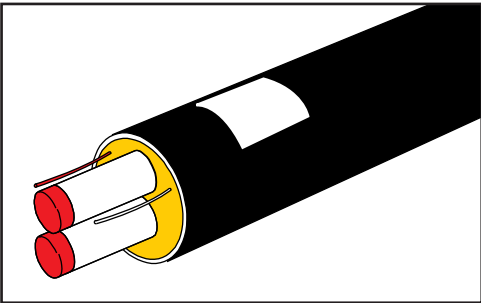
**Component overview/data**

Component No. 2000

Copper single pipe		Outer casing	
ø out. mm	Wall thk mm	ø out mm	Wall thk mm
22	1.0	90	3.0
28	1.2	90	3.0
35	1.5	90	3.0
42	1.5	110	3.0
54	1.5	125	3.0
70	2.0	140	3.0

The Copper Pipe  
Copper pipe

TwinPipe



Component  
overview/data

Component No. 2090

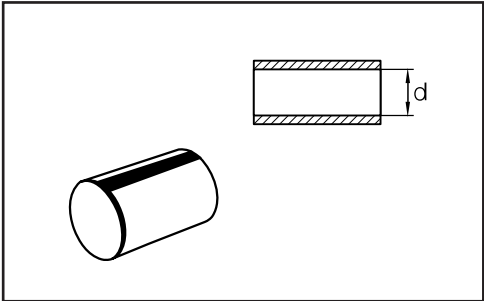
Copper TwinPipe		Outer casing		Distance btw pipes mm
ø out. mm	Wall thk mm	ø out mm	Wall thk mm	
22-22	1.0	125	3.0	10
28-28	1.2	140	3.0	10
35-35	1.5	140	3.0	10
42-42	1.5	160	3.0	10
54-54	1.5	200	3.0	10

# The Copper Pipe

## CuFlex - Solder joint fittings

**Application**                      Used to join straight copper pipes and reductions.

**Solder joint fitting,  
straight**

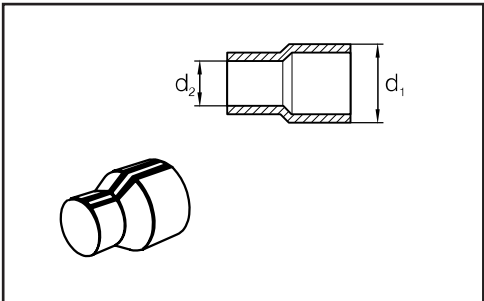


**Component  
overview/data**                      Component No. 1100

Solder joint fitting, straight

Copper pipe d, mm	15	18	22	28	35	42	54	70
-------------------	----	----	----	----	----	----	----	----

**Solder joint fitting,  
reduction**                      Never reduce more than a single dimension.



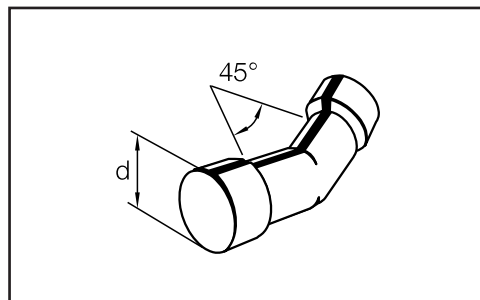
**Component  
overview/data**                      Component No. 1100

Solder joint fitting, reduction

d1, mm	18	22	28	35	42	54	70
d2, mm	15	18	22	28	35	42	54

## The Copper Pipe CuFlex - Solder joint fittings

Solder joint fitting,  
elbow, 45°



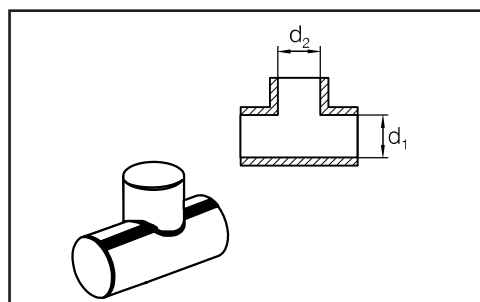
**Component  
overview/data**

Component No. 1100

Solder joint fitting, elbow, 45°

Copper pipe d, mm	15	18	22	28	35	42	54	70

Solder joint fitting,  
tee



**Component  
overview/data**

Component No. 1100

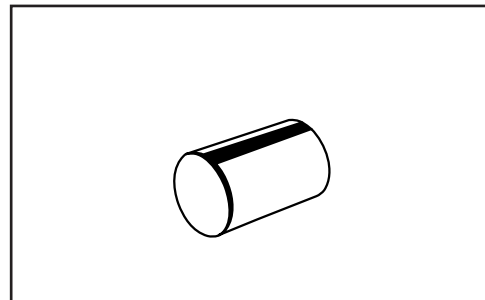
Solder joint fitting, tee

Main pipe d1, mm	Branch d2, mm							
	15	18	22	28	35	42	54	70
18		x						
22	x	x	x					
28	x	x	x	x				
35	x	x	x	x	x			
42		x	x	x	x	x		
54		x	x	x	x	x	x	
70				x	x	x	x	x

## The Copper Pipe

### CuFlex - Solder joint fittings

**Solder end fitting** Used to terminate copper pipe ends.



#### Component overview/data

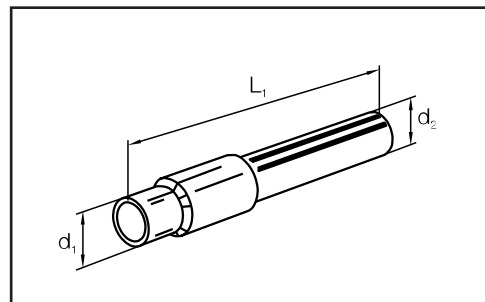
Component No. 1100

Solder end fitting

Copper pipe d, mm	15	18	22	28	35	42	54	70
-------------------	----	----	----	----	----	----	----	----

#### Steel/copper transition

Steel-copper transition fitting is welded onto the steel pipe and soldered on the copper pipe with a straight solder joint fitting.



#### Component overview/data

Component No. 6880

Steel/copper transition

Copper pipe d2, mm	18	22	28	35	42	54	70
Steel pipe d1, mm	26.9	26.9	33.7	42.4	48.3	60.3	76.1
L, mm	92	92	120	134	144	153	250

#### Materials

The material is Cu-DHP after EN 12449.

Dimensions and tolerances are in accordance with EN 1254-1.

Soldered with silver solder with at least 5% silver. Prior to soldering a calibration mandrel is used to calibrate the copper pipes.

The Copper Pipe

CuFlex / Cu pipe - Press coupling, type MP

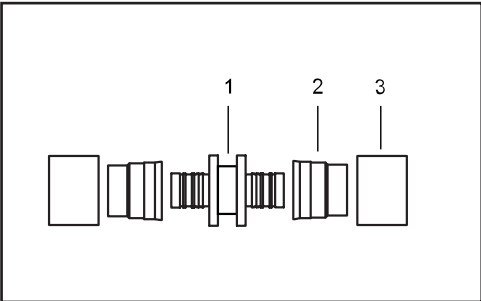
Application

Copper service pipes are connected with press couplings. Use special tools to install the press coupling, see Tools for FlexPipe.

- Press coupling, straight
- Press coupling for straight Cu-Cu joints:
1. Supporting bush

2. Squeezing ring

3. Press ring



Component overview/data

Component No. 6000

Press coupling, straight

Coupling end 1	Coupling end 2				
	15	18	22	28	35
15	x				
18		x			
22		x	x		
28		x	x	x	
35					x

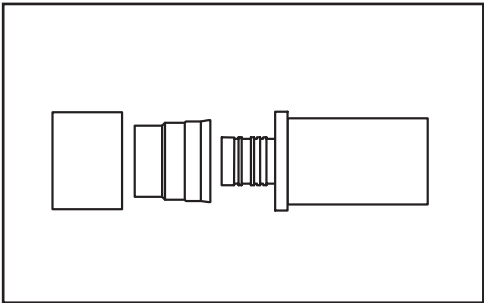


# The Copper Pipe

## CuFlex / Cu pipe - Press coupling, type MP

**Press coupling, weld**

Press coupling with weld end for transition to steel pipe.



**Component overview/data**

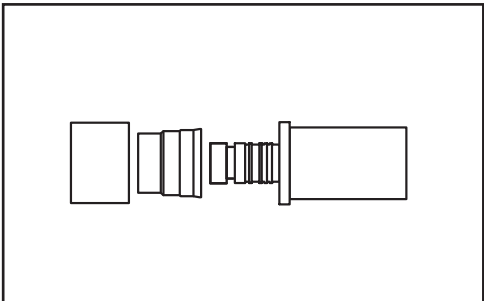
Component No. 6000

Press coupling, weld

Steel	Copper				
	15	18	22	28	35
26.9	x	x	x	x	
33.7				x	
42.4					x

**Press coupling, weld, closed**

Closed press coupling with weld end.



**Component overview/data**

Component No. 6000

Press coupling, weld, closed

Steel	Copper		
	18	22	28
26.9	x	x	
33.7			x

# The Copper Pipe

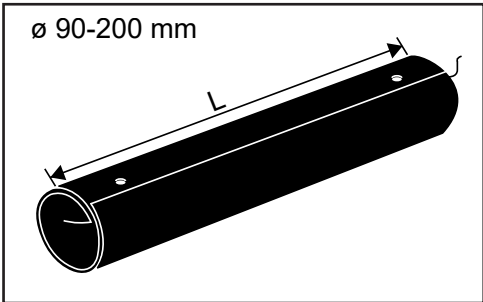
## Casing joints - BandJoint

Application

The BandJoint is an open PE weld joint with integrated copper wires in the weld zone.  
  
Can be used for reduction when the difference in casing diameter is max. 25 mm. See the section "Reduktions".  
  
LOGSTOR WeldMaster is used to weld the BandJoint.  
  
Not applicable for flexible pipes.

BandJoint ø 90-200 mm

LOGSTOR WeldMaster is used to weld BandJoints.  
  
Delivered with pre-drilled holes for foaming.  
  
Delivered 2 pcs., packed in white PE foil.  
  
To be stored vertically.  
  
Max. temperature during transport and storage: 60°C.



Component overview/data

Component No. 5610

BandJoint ø 90-200 mm

BandJoint length L, mm	Casing dimension, mm	
	90-125	140-200
570 (STD)	x	x
830(XL)*	x	x

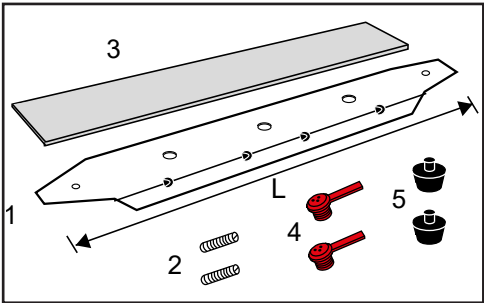
\* 830 mm (XL) is used for E-Comp and repairs.

# The Copper Pipe Casing joints - BandJoint

## Depth guard

Accessories, 1 set contains:

- 1. Depth guard
- 2. Adjusting bolts
- 3. Felt pad
- 4. Venting plugs
- 5. Welding plugs

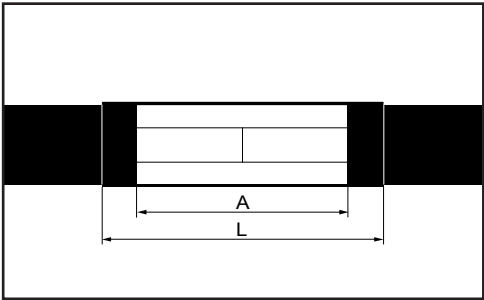


Length of depth guard:

The length of the depth guard is determined by the length of the cut.

A = cut length

L = BandJoint length



## Component overview/data

Component No. 5606

Depth guard

Width, 40 mm	Casing dimension, mm	Cut A, mm	BandJoint, L mm	Depth guard length, L mm
Depth guard STD	90-200	420-455	570	500
Depth guard XL*	90-200	680-715	830	760

\* Depth guard XL is used for repairs.

## The Copper Pipe Casing joints - EWJoint

### Application

Applicable for casing diameters  $\varnothing 125 - 200$  mm.

Pre-install the joint prior to welding the service pipe together.

The joint is welded together with the outer casing by means of a loose weld strip between the joint and the outer casing. LOGSTOR WeldMaster is used to weld the EWJoint.

Not applicable for flexible pipes.

### Description

The EWJoint consists of:

1. Shrink sleeve
2. Weld strip
3. Venting plugs
4. Weld plugs
5. Staples to fix weld strips

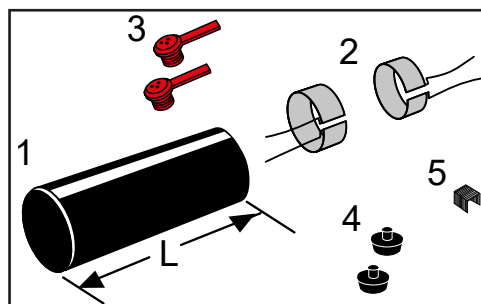
The sleeves are delivered wrapped in white PE foil.

The accessories 2-4 are delivered separately in a plastic bucket.

Staples (5) are ordered separately

Store the sleeve vertically.

Max. temperature during transportation and storage: 40°C.



### Component overview/data

Component No. 5027

EWJoint

Casing $\varnothing$ mm	L mm	L for E-Comp mm
125	700	1050
140	700	1050
160	700	1050
180	700	1050
200	700	1050

EWJoint for E-Comp has a wall thickness for extrusion welding.

### Materials

Sleeve: HDPE

Weld strip: Electro-plated mesh

Venting plugs: Polypropylene

Weld plugs: HDPE

The Copper Pipe  
Casing joints - EWJoint

**Accessories** To be foamed with foam pack, component No. 0700.  
Machine foam is used for major dimensions.  
When ordering state insulation series, and that foam pack must be included in the delivery.

**Weld strip** Is used to weld together the joint and the outer casing.

**Component overview/data** Component No. 5556

**Materials** Weld strip: Electro-plated mesh

**Staples**

**Component overview/data** Component No. 9050

Staples

Outer casing, ø out. mm	Product Nos.
90-400	9050 0000 031 053

## The Copper Pipe Casing joints - SX-WPJoint

### Application

Shrink sleeve made of cross-linked PE (PEX) for foaming. The sleeve is shrinkable at both ends, and the foam holes are sealed with weld plugs.

Pre-install the shrink sleeve on the pipe prior to welding the service pipe together.

The shrink sleeve can as a standard be reduced by one dimensional offset. See below table.

When installed on pipes with corrugated casing the sleeve ends are sealed with additional collars to be ordered separately.

### Description

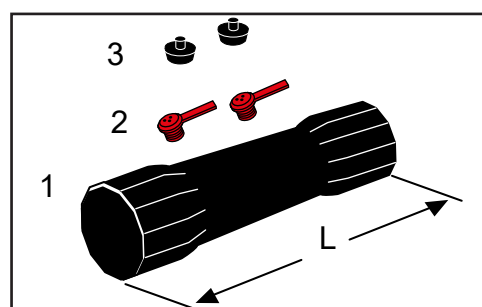
The SX-WPJoint consists of:

1. Shrink sleeve with integrated mastic
2. Venting plugs
3. Weld plugs

Delivered in white PE-foil.

Store the shrink sleeve vertically.

Max. temperature during transport and storage: 60° C



### Component overview/data

Component No. 5031

SX-WPJoint

Outer casing D1 mm	Outer casing D2 mm					
	90	110	125	140	160	180
90	x					
110	x	x				
125		x	x			
140			x	x		
160				x	x	
180					x	x

L = 650 mm

### Materials

Sleeve: Cross-linked PE (PEX)

Mastic: PIB-based mastic

Venting plugs: Polypropylene

Weld plugs: HDPE

### Accessories

To be foamed with foam pack, component No. 0700.

When ordering state insulation series, and that foam pack must be included in the delivery.

Collar for corrugated casing, component No. 5500. Order 2 pcs. per joint.

The Copper Pipe  
Casing joints - BXJoint

**Application**

Shrink sleeve made in cross-linked PE (PEX) with insulation shells of polyurethane (PUR).

BXJoint is double sealed. Applicable for casing dimensions  $\varnothing$  90-200 mm.

Pre-install the shrink sleeve on the pipe prior to welding the service pipe together.

Can be used for reduction. The dimensional limits appear from the table. Due to the insulation shells the largest dimension is ordered.

**Description**

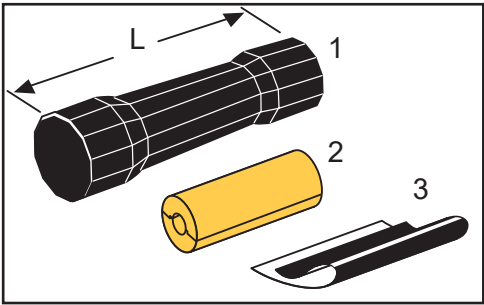
The BXJoint consists of:

- 1. PEX shrink sleeve with integrated hot-melt and mastic
- 2. Insulation shells
- 3. Shrink film

Delivered in white PE foil.

Store the shrink sleeve vertically.

Max. temperature during transport and storage: 60°C.



**Component overview/data**

Component No. 5022

BXJoint

Outer casing $\varnothing$ mm	Shrinkable to $\varnothing$ mm	L mm
90	77	780
110	77	780
125	90	780
140	110	780
160	125	780
180	140	780
200	160	780

Available with insulation shells for series1, 2, and 3.

**Materials**

Shrink sleeve: Crosslinked PE (PEX)

Mastic: PIB-based mastic

Insulation shells: PUR

Shrink film: PEX with PIB-based mastic

The Copper Pipe

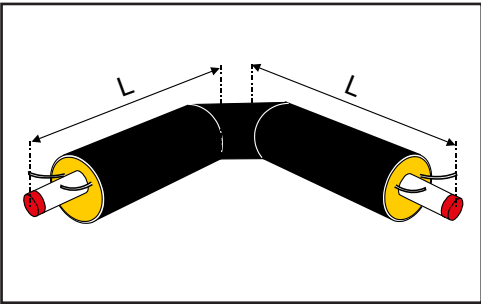
Directional changes - 90° bend

**Application**      The preinsulated 90° bends in this section are used for directional changes.

                              If preinsulated bends in other angles are used, it must be ascertained, that no harmful bending impacts arise.

**Description**      Preinsulated horizontal bends for single pipes are available for operating pressure: 16 bar.

                              All bends have embedded copper wires for surveillance.



**Component overview/data**      Component No. 2500

Bend 90° - single pipe

Copper pipe ø out. mm	Outer casing ø mm	L mm
22	90	1000
28	90	1000
35	90	1000
42	110	1000
54	125	1000
70	140	1000

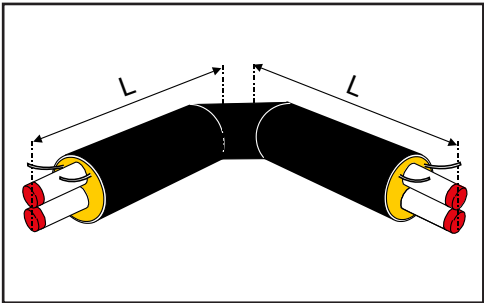


The Copper Pipe  
Directional changes - 90° bend

**Description**

Preinsulated horizontal bends for TwinPipes are available for operating pressure: 16 bar.

All bends have embedded copper wires for surveillance.



**Component overview/data**

Component No. 2590

Bend 90° - TwinPipe

Copper pipe ø out. mm	Outer casing ø mm	L mm
22-22	125	1000
28-28	140	1000
35-35	140	1000
42-42	160	1000
54-54	200	1000

The Copper Pipe

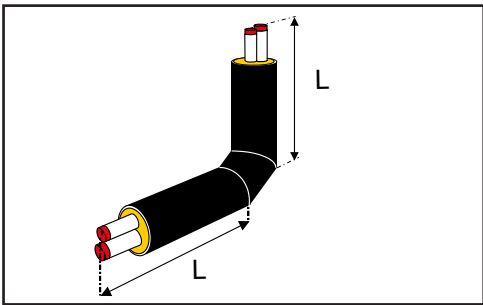
Directional changes - Vertical 90° bend

**Application** Preinsulated vertical 90° bends are used for vertical directional changes e.g. terrain offset or introduction into buildings.

As a standard they are available in 90°. if other degrees measurements are required, it must be ascertained, that no harmful bending impacts arise..

**Description** The preinsulated bends are available for operating pressure: 16 bar.

All bends have embedded copper wires for surveillance.



**Component overview/data** Component No. 2591

Bend 90° vertical - TwinPipe

Copper pipe ø out. mm	Outer casing ø mm	L mm
18-18	110	1500
22-22	125	1500
28-28	140	1500
35-35	140	1500
42-42	160	1500
54-54	200	1500

## The Copper Pipe Branches

---

**Description**

For the copper pipe system LOGSTOR can deliver a number of different branch types and combinations dependent on dimension, kind of project, and the customer's actual wishes:

- From single pipe to single pipe, TwinPipe to TwinPipe:

· SXT-WPJoint

· T-joint straight

· TXJoint

- Preinsulated branches

Connection with soldering-T:

- Dimension copper pipe, main pipe:

18 - 70 mm

- Dimension copper pipe, branch:

18 - 70 mm

## The Copper Pipe Branches - SXT-WPJoint

### Application

T-joint for foaming. Made of cross-linked PE (PEX) with flanges and bolts in acid-resistant steel AISI 316 L. The T-joint is shrinkable and the foam holes are sealed with weld plugs.

The SXT-WPJoint can be used to branch perpendicular to or parallel with the main pipe.

The SXT-WPJoint can be used together with a hot tapping valve. The insulation thickness around the valve casing will be thinner.

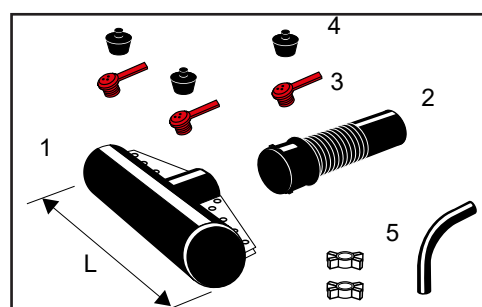
Installation on FlextraPipe with corrugated casing requires that the branch be secured with an extra collar, which is ordered separately.

### Description

The SXT-WPJoint consists of:

1. Main pipe joint
2. Branch pipe joint
3. Venting plugs
4. Weld plugs
5. Connecting piece with spacers

Max. temperature during transport and storage: 60°C.



### Component overview/data

Component No. 5210

Component Nos.: Main pipe joint: 5210 - Branch pipe joint: 5211

Main pipe D1 mm	Branch D2 mm						
	90	110	125	140	160	180	200
90	x						
110	x	x					
125	x	x	x				
140	x	x	x	x			
160	x	x	x	x			
180	x	x	x	x	x	x	
200	x	x	x	x	x	x	x

### Materials

Shrink sleeve: Crosslinked PE, PEX

Mastic: PIB-based mastic

Venting plugs: Polypropylene

Weld plugs: HDPE.

Flanges and bolts: Acid-resistant steel AISI 316L

### Accessories

To be foamed with foam packs, component No. 0700.

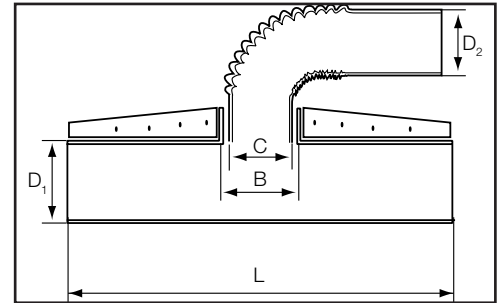
When ordering state insulation series, and that delivery must include foam packs.

## The Copper Pipe Branches - SXT-WPJoint

### Measurements and combinations

The connecting piece of the main pipe fits several branch pipe joints and the branch pipe joint fits several branch dimensions.

The possible combinations appear from below table.



### Component overview/data

Component No. 5210

Component No. 5210/5211

Main pipe joint			Branch pipe joint D2, mm				
			90-110	110-125	125-140	140-160	180-200
D1 mm	B mm	L mm	C mm				
90	115	680					
110	135	680	125				
125	155	680		144			
140	170	680		160	160		
160	170	680		160	160		
180	190	680		180	180	180	
200	170	680		160	160		
	230	720				220	220

The Copper Pipe  
Branches - TXJoint

Application

T-joint for foaming, used to branch perpendicular to the main pipe.

The T-joint is made of PE and the shrink sleeve of cross-linked PE (PEX).

If it is to be used in connection with hot tapping, this must be stated when ordering.

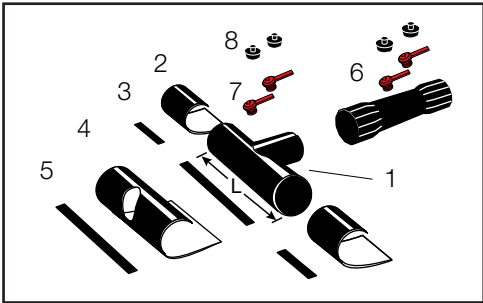
Installation on pipes with corrugated casing requires that the branch be sealed with an extra collar, which is ordered separately.

As a standard TXJoint is double sealed on the T-shoe. The branch can be double sealed by installing open shrink wrap on transition between T-shoe and SX-WPJoint and collar towards the flexible pipe.

Description

The TXJoint consists of:

- 1. Main pipe joint
- 2. Open shrink wraps
- 3. Closure patches
- 4. Shrink wrap
- 5. Closure patch
- 6. SX-WPJoint
- 7. Venting plugs
- 8. Expansion plugs



The branch pipe piece of the T-shoe is one dimension larger than the dimension of the pipe to connect to. The SX-WPJoint then reduces to the dimension of the pipe to connected to.

Component  
overview/data

Component No. 5191

Main pipe D1 mm	Branch D2 mm					
	90	110	125	140	160	180
125	x	x				
140	x	x	x			
160	x	x	x	x		
180	x	x	x	x	x	
200	x	x	x	x	x	x

Length of main pipe joint = 600 mm  
Length of shrink wrap = 900 mm  
Length of shrink sleeve = 650 mm

# The Copper Pipe Branches - TXJoint

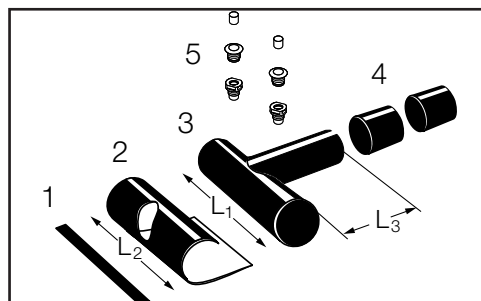
<b>Materials</b>	<p>T-shoe, base pipe: HDPE</p> <p>SX-WP: Cross-linked PE, PEX</p> <p>Mastic: PIB-based mastic</p> <p>Venting plugs: Polypropylene</p> <p>Weld plugs: HDPE</p> <p>Shrink wrap: PEX with PIB-based mastic and hotmelt</p>
<b>Accessories</b>	<p>Shrink wrap incl. closure patch for transition between T-shoe and SX-WPJoint, component No. 5400. Order 1 pc. per casing joint.</p> <p>Collar for transition from SX-WPJoint to flexible pipe, component No. 5500. Order 1 pc.</p> <p>Hot tapping valve, component No. 4280</p> <p>To be foamed with foam packs, component No. 0700.</p> <p>When ordering state insulation series, and that delivery must include foam packs.</p> <p>Reinforcement plate to reinforce the main pipe, if necessary, component No. 5426.</p>

## The Copper Pipe Branches - T-joint straight

**Application** T-joint straight is used to branch on copper pipes and FlexPipes.  
The T-joint is for foaming.

**Description** T-joint straight for foaming consists of:

1. Closure patch
2. Shrink wrap
3. T-shoe
4. Collars
5. Venting and expansion plugs



### Component overview/data

Component No. 5140

Main pipe D1 mm	Branch D2 mm						
	90	110	125	140	160	180	200
90	x						
110	x	x					
125	x	x	x				
140	x	x	x	x			
160	x	x	x	x	x		
180	x	x	x	x	x	x	
200	x	x	x	x	x	x	x

L1 = 400 mm  
L2 = 650 mm L3 = 300 mm

### Materials

T-shoe: HDPE

Venting plugs: Polypropylen

Collars: PEX with PIB-based mastic

Shrink wrap: PEX with PIB-based mastic and hotmelt

### Accessories

To be foamed with foam packs, component No. 0700..

When ordering state insulation series, and that delivery must include foam packs.



## The Copper Pipe Branches - Preinsulated T-fitting

### Application

Preinsulated branches are an alternative to branch fittings.

There are two types of branches:

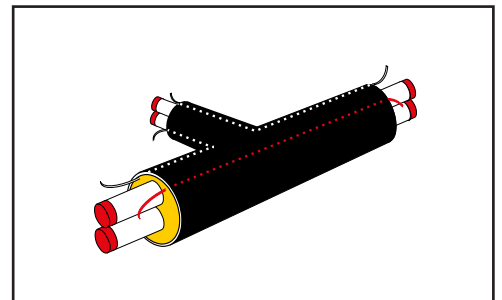
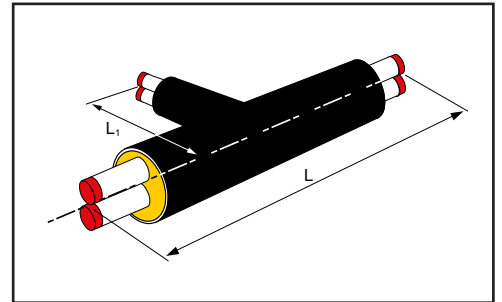
- straight horizontal branches in TwinPipe
- 45° branches in single pipe and TwinPipe

### Description

The branches are available for operating pressure: 16 bar.

All branches have embedded copper wires for surveillance.

The position of surveillance wires in TwinPipe straight branches appear from the illustration.



### Component overview/data

Component No. 3490

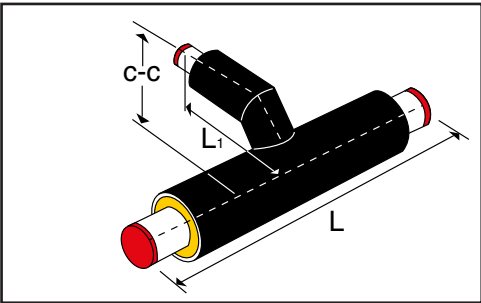
Main pipe ød, mm	Branch ød, mm						
	22-22/110	22-22/125	28-28/110	28-28/140	35-35/140	42-42/160	54-54/200
22-22/110	x						
22-22/125		x					
28-28/110			x				
28-28/140		x		x			
35-35/140		x			x		
42-42/160		x		x		x	
54-54/200		x			x		x

L = 1150 mm  
L1 = 700 mm

The Copper Pipe  
Branches - Preinsulated T-fitting

45° branches, single pipe

45° branch for single pipe.



Component  
overview/data

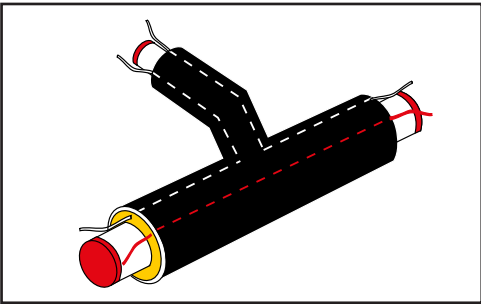
Component No. 3000

Main pipe ød, mm	Branch ød, mm					
	22/90	28/90	35/90	42/110	54/125	70/140
22/90	x					
28/90	x	x				
35/90	x		x			
42/110	x	x		x		
54/125	x	x		x	x	
70/140		x		x		x

L = 1150 mm  
L1 = 1000 mm

45° branches,  
TwinPipe

The position of surveillance wires in single pipe and TwinPipe 45° branches appear from the illustration.



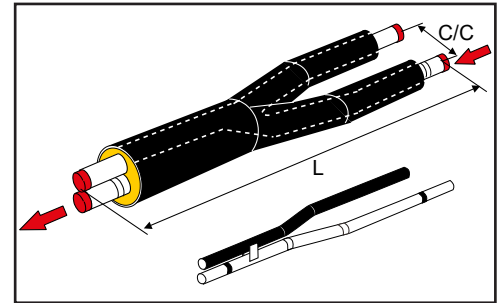
Component  
overview/data

Component No. 3090

## The Copper Pipe Transition pipe

### Type 1

In merge pipe type 1 the flow of the single pipe is placed to the left.



### Component overview/data

Component No. 3071

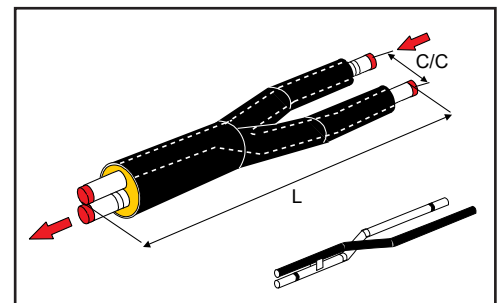
Merge pipe - type 1

Dimension		L mm	C/C mm
Twin ø out. mm	Single ø out. mm		
18/110	18/90	1700	245
22/125	22/90	1700	245
28/140	28/90	1700	245
35/140	35/90	1700	245
42/160	42/110	1800	260
54/200	54/125	1800	260

When ordering please state type 1 or 2.

### Type 2

In merge pipe type 2 the flow of the single pipe is placed to the right.



### Component overview/data

Component No. 3071

Merge pipe - type 2

Dimension		L mm	C/C mm
Twin ø out. mm	Single ø out. mm		
18/110	18/90	1700	245
22/125	22/90	1700	245
28/140	28/90	1700	245
35/140	35/90	1700	245
42/160	42/110	1800	260
54/200	54/125	1800	260

When ordering please state type 1 or 2.

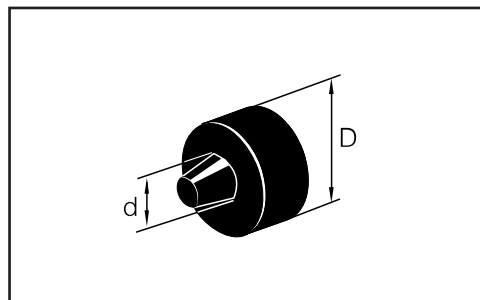
## The Copper Pipe Terminations

### Protective cap, single pipe

For indoor sealing of the insulation end. Applicable for all FlexPipes.

Protective caps are delivered with a conical service pipe nozzle, which is adjusted to the actual service pipe on location.

Made of silicone and can be used at temperatures up to 140°C.



### Component overview/data

Component No. 1230

Protective cap - single pipe

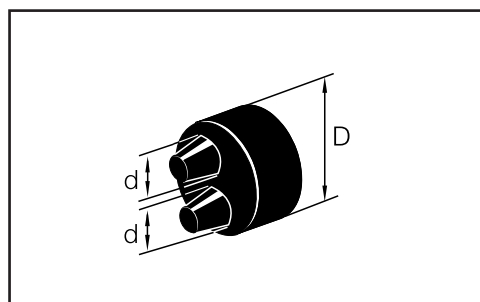
Service pipe d mm	Outer casing D mm			
	90	110	125	140
16-40	x			
16-50		x		
20-63			x	
50-75				x

### Protective cap, TwinPipe

For indoor sealing of the insulation end. Applicable for all FlexPipes.

Protective caps for outer casing dimensions  $\varnothing$  90 mm to 160 mm are delivered with a conical service pipe nozzle, which is adjusted to the actual service pipe on location.

Made of silicone and can be used at temperatures up to 140°C.



### Component overview/data

Component No. 1230

Protective cap - TwinPipe

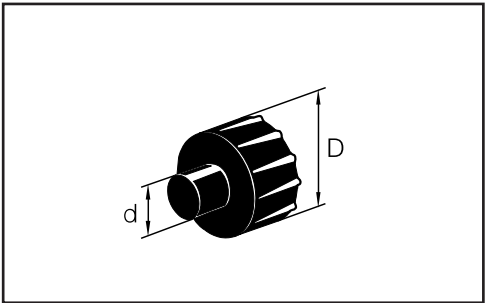
Service pipe d1/ d2 mm	Outer casing D mm				
	90	110	125	140	160
15-25/15-25	x				
15-32/15-32		x			
16-40/16-40			x		
20-40/20-40				x	
32-50/32-50					x

# The Copper Pipe Terminations

## End cap

Used to protect foam ends against moisture ingress.

Applicable for acontinuous operating temperature up to 120°C and a peak temperature (short term) of up to 130 °C.



## Component overview/data

Component No. 5600

End cap

Single pipe		
Service pipe ø out. mm	Casing ø out. mm	DHEC No.
22-28-35	90	2100
42	110	2200
54	125	2300
70	140	2400
TwinPipe		
Service pipeø out. mm	Casingø out. mm	DHECNo.
22-22	125	3250-P604
28-28	140	3280
42-42	160	3350-02
54-54	200	3350-03

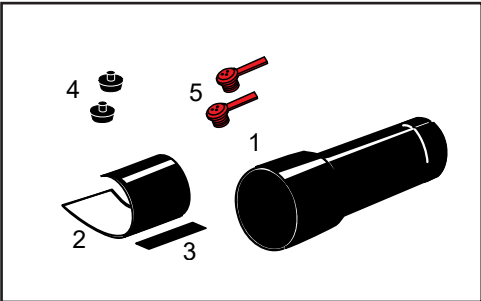
The Copper Pipe  
Terminations

**End fitting for foaming**      To terminate a pipe system a PE end fitting is used.

**Description**      The end fitting for foaming is used for TwinPipes.

It consists of:

- 1. End fitting, drifted
- 2. Open shrink wrap
- 3. Closure patch
- 4. Weld plugs
- 5. Venting plugs



**Component overview/data**      Component No. 5700

Casing ø out. mm	L = 700 mm
110	x
125	x
140	x
160	x
200	x

See foam pack table in the Foam Pack Folder.

## The Copper Pipe Terminations

### End fitting with insulation shells

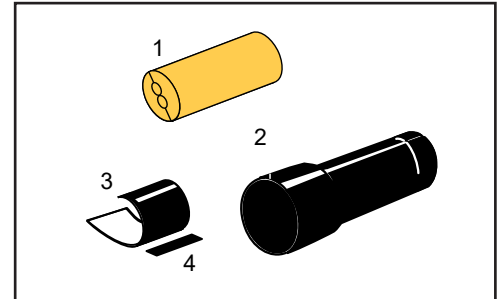
To terminate a pipe system a PE end fitting is used.

### Description

The end fitting with insulation shells are used for single pipes.

It consists of:

1. End fitting, expanded
2. Insulation shells
3. Open shrink wrap
4. Closure patch



### Dimension to order

The end fitting is ordered after the outer casing dimension regardless of service pipe dimension. In some casings this results in air between the service pipe and the insulation shell, but is not of practical significance.

700 mm end fittings are always used in connection with intermediate disposable valves.

### Component overview/data

Component No. 5700

Casing ø out. mm	Insul. shells ø in./out. mm	Service pipe ø out. mm	Lengths mm	
			450	700
90	33/90	22-35	x	(x)
110	48/110	42	x	(x)
125	60/125	54	x	(x)
140	75/140	70	x	(x)

(x) = not standard delivery.

# The Copper Pipe Terminations

**House entry pipe**      Preinsulated 90° house entry pipes are used for introduction into buildings without cellar.

**Description**      The bends are available for operating pressure: 16 bar.

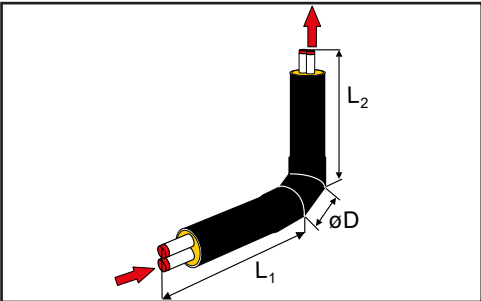
     The copper pipes are bent mechanical-ly.

     All bends are delivered with embedded copper wires for surveillance.

     In TwinPipe house entries the vertical pipes have been turned, so they are parallel with the wall.

     Matching pipe ends are marked with a colour code.

     The shown pipe route is the standard.



**Component overview/data**      Component No. 2592

House entry pipe - TwinPipe

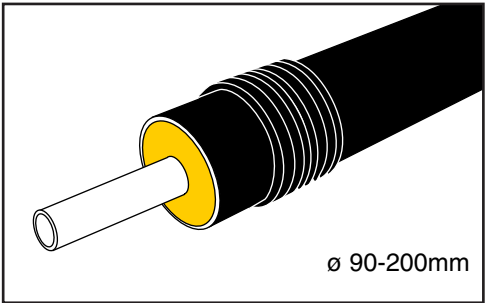
Copper pipe ø out. mm	Outer casing ø mm	L1 x L2 mm
18-18	110	1500x1500
22-22	125	1500x1500
28-28	140	1500x1500
35-35	140	1500x1500
42-42	160	1500x1500
54-54	200	1500x1500



# The Copper Pipe Terminations

**Wall entry sleeve** For sealing between outer casing and the surrounding concrete in connection with termination in wall, wall entry sleeves for all TwinPipe dimensions are available.

(Also see the Single Bonded Pipe System).



**Component overview/data** Component No. 5800

## Insulating joints

### Overview

---

<b>Description</b>	Joints in the pipe system are best insulated with foam packs. It is an easy-to-apply method according to which a two-component foam liquid, after mixing and filling, forms an effective insulation with the same properties as in the rest of the pipe system.
<b>Contents</b>	Foam pack Other insulation methods

## Insulating joints

### Foam pack

#### Application

Foam packs are used to insulate joints.

Foam packs are easy to apply and the fitter does not come into contact with the liquids.

After mixing and filling in the two foam liquids, an efficient insulation is formed which has the same properties as the rest of the pipe system. Foam packs comply with the requirements to materials in EN 253.

If 2 foam packs are required per casing joint, preparations must be made, so they can be filled into the joint immediately after each other. It may be an advantage to be 2 persons to carry out the task.

If 3 or 4 foam packs are required per casing joint, 2 foam packs must be filled in simultaneously. This requires that an additional venting hole be drilled. Remember to order an additional plug set.

Foam packs have a time limit for use of 12 months counting from the stated production week, provided they are stored correctly.

#### Description

Foam packs are supplied in insulation boxes. The box i.a. contains a foam pack folder, from which it appears which foam pack size to use for which casing joint, as well as a leaflet with addresses and safety instructions.

The total weight of the foam packs and the box is max. 20 kg.

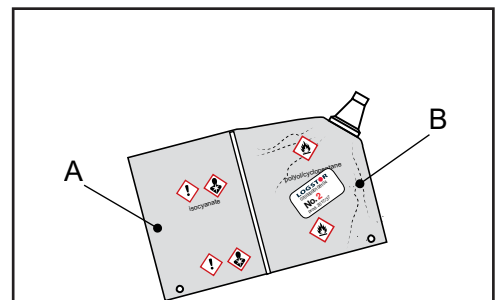
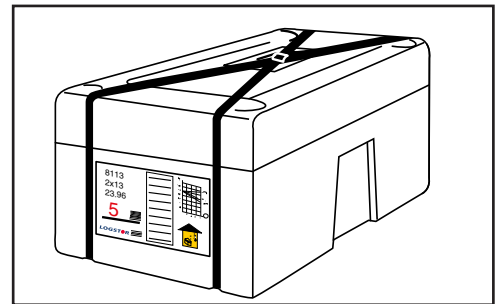
Foam packs are not returnable.

The foam pack is marked with isocyanate (A) and polyol/cyclopentane (B), respectively, as well as their hazard symbols.

Scanning the QR code on the bag with a mobile phone gives direct access to material safety data sheet..

Product No., foam pack No., and production week also appear from the bag.

On the other side of the foam pack there is a separate safety information for the polyol/cyclopentane part of the foam pack and a separate safety information for the Isocyanate part of the foam pack. The safety information is in multiple language. The safety information is a booklet that is glued onto the foam pack. The booklet can be opened, and all languages will appear



## Insulating joints

### Foam Pack

#### Component overview/data

Component No. 0700

Foam pack

Foam pack size	No. of packs per box
0.5	28
1	28
2	27
3	24
4	21
5	20
6	17
7	14
8	12
9	9
10	8
11	6
12	4
13	3

#### Materials

The insulation box:

Polystyrene foam (EPS)

Foam pack:

Multi-ply plastic bag with diffusion-tight aluminium foil for liquid A and B.

Liquid A: Isocyanate, MDI

Liquid B: Polyol and cyclopentane

#### Material Safety Data Sheet

A detailed material safety data sheet for foam pack is available on our website [www.logstor.com](http://www.logstor.com).

## Insulating joints

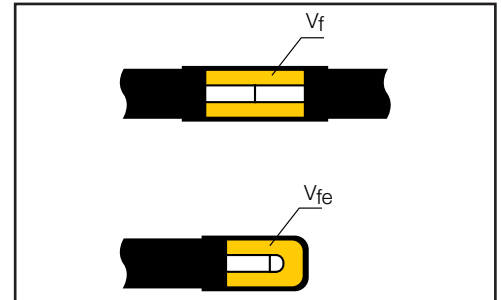
### Foam pack

#### Foam volume

The volume of the cavity to foam decides which foam pack size to choose.

To ensure the quality of the finished insulation the foam volume limits in below table must be observed.

Size and number of foam packs for a specific casing joint appear from the foam pack folder for single pipe and TwinPipe which is available on LOGSTOR's website [www.logstor.com](http://www.logstor.com) and in the insulation box.



#### Component overview/data

Component No. 0700

Foam volume

Foam pack No.	Liters per bag	Alternative			Foam volume litre			
					V <sub>f</sub>		V <sub>fe</sub>	
0.5	0.23				1.5	2.6	2.7	4.6
1	0.32				2.6	3.7	4.6	6.7
2	0.39				3.7	4.6	6.7	8.3
3	0.48				4.6	5.8	8.3	10.4
4	0.58	2x1			5.7	6.9	10.4	12.5
5	0.71	1+2	2x2		6.9	8.6	12.5	15.4
6	0.87	2+3	2x3	1+4	8.6	10.6	15.4	19.1
7	1.07	3+4	1+5	2+5	10.5	12.9	19.1	23.2
8	1.31	4+5	2+6	3+6	12.9	15.9	23.2	28.6
9	1.6	5+6	3+7	4+7	15.9	19.4	28.6	35.0
2x6		5+7	3+8	0+9	17.3	21.9	34.7	38.2
10	1.98	6+7	5+8	2+9	19.8	25.1	38.2	43.7
11	2.48	6+9	3+10	4+10	25.0	32.4	43.7	55.1
2x9		8+10	5+11	6+11	31.8	41.2	55.1	70.0
12	3.71	8+11			38.0	49.2	70.0	83.6
10+11		5+12			44.9	58.1	83.6	98.7
13	4.95	2x11	8+12		51.0	65.9	98.7	112.1
10+12		5+13			57.8	74.9	112.1	127.3
10+13		2x9+12			70.8	91.6	127.3	155.8
12+13					89.0	115.1	155.8	195.7
2x13		11+2x12			101.9	131.9	195.7	224.2
2x12+13					127.0	164.3	224.2	279.3
3x13					152.9	197.8	279.3	336.3
2x12+2x13					177.9	230.2	336.3	391.4
4x13					203.8	263.8	391.4	448.4

## Other insulation methods - General

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**Description**

LOGSTOR always recommends the use of foam pack to insulate joints, because the security of correct foaming is high.

However, there may be customers' requirements and markets for which alternative insulation methods are relevant.

The alternatives recommended by LOGSTOR are described in the following. However it is essential to make sure that:

- local environmental and safety requirements are complied with (responsibility of other employer)
- approved liquids are used
- fitters/operators comply with the instructions for foaming

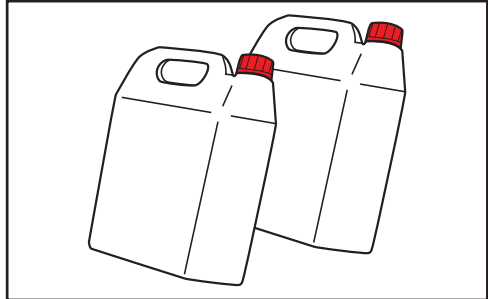
**Contents**

Other insulations methods - Can foam \*

Other insulations methods - Machine foam

\*) Not allowed in all countries

## Other insulation methods - Can foam

<b>Application</b>	The can foam - containing the 2 foam liquids, isocyanate and polyol/cyclopentane - are apportioned and mixed in open cans.	
<b>Description</b>	<p>Can foam is delivered with the same requirements to strength and insulation properties as the ones to foam pack.</p> <p>As dosage is often made without LOGSTOR's participation, LOGSTOR makes no guarantees.</p> <p>Please note! Can foam is not approved in all countries.</p> <p>Can foam is available in cans with 10 kg isocyanate and 10 kg polyol/cyclopentane respectively.</p> <p>Liquid A, isocyanate, MDI: product No. 0700 0000 007 002.</p> <p>Liquid B, polyol/cyclopentane: product No. 0700 0000 007 008.</p> <p>Can foam is not returnable!</p>	
<b>Foam quantities</b>	<p>As to volume liquid A (isocyanate) and liquid B (polyol/cyclopentane) is mixed in the relation 1.4:1. (A change in the foam recipe may change this).</p> <p>E.g.: A joint requires a total of 4.8 l foam liquids, i.e. 2.8 l liquid A and 2.0 l liquid B are measured.</p> <p>Regarding the total foam quantities contact LOGSTOR's technicians.</p>	
<b>Component overview/data</b>	Component No. 0700	

## Other insulation methods - Can foam

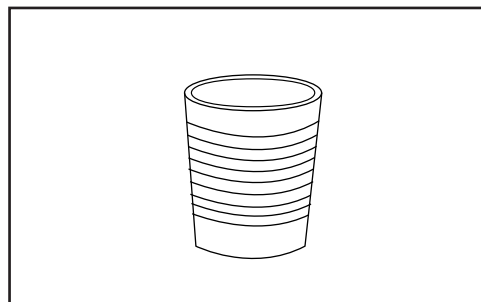
### Mixing cup

For minor quantities of foam 2 l mixing cups with volume marking are delivered:

Product No. 1L 1998 0000 036 564.

Product No. 2L 1998 0000 036 565.

In connection with major foam quantities 10 l buckets etc. are used.



### Component overview/data

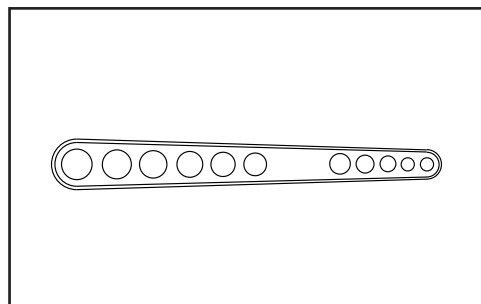
Component No. 1998

### Mixing stick

Use a mixing stick to mix the liquids.

Product No. 1998 0000 036 563.

For major jobs use the whisk for the drilling machine.



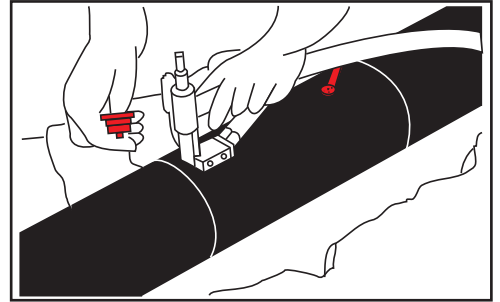
### Component overview/data

Component No. 1998



## Other insulation methods - Machine foam

<b>Application</b>	<p>When foaming joints it is advantageous to use machine foam when large foam quantities will be filled e.g. into large transmission lines</p> <p>However, the application of machine foam requires passable space along the trench.</p> <p>To use the foam machine a specific education is required.</p>
<b>Description</b>	<p>Foam liquids for machine foam, delivered in accordance with LOGSTOR's specifications, comply with the required strength and insulation properties like the foam pack does.</p> <p>If LOGSTOR is not involved in the installation work, LOGSTOR does not give any guarantee for correct dosage and implementation.</p>
<b>Component overview/data</b>	<p>Component No. 0700</p>
<b>Materials</b>	<p>Polyol and isocyanate must be purchased according to LOGSTOR's specifications and from recommended suppliers.</p> <p>For further information contact your local LOGSTOR contact person.</p>



## LOGSTOR Detect Overview

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**Description**

Please refer to the Surveillance Manual, which is available on our website [www.logstor.com](http://www.logstor.com).

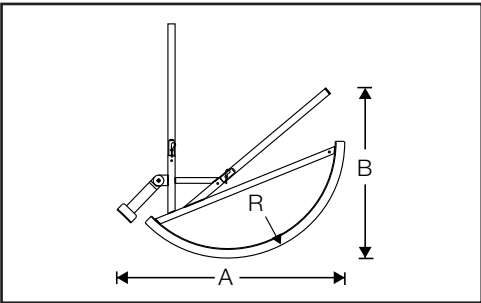
The Surveillance Manual describes segment choice, surveillance principles, wiring and reference points, active and passive surveillance system, components choice, jointing, LOGSTOR Hosting and Stand-Alone, service, documentation as well as connection to existing systems.

As regards installation please refer to Handling & Installation.

<b>Contents</b>	Laying - FlexPipes
	Tools for E-Comp
	Hot tapping tool
	Tools for shortening and calibration
	Stripping tools
	Press tool for coupling, type MP
	Press tool for coupling, type JT
	Welding machines for weld joints
	Tool boxes for weld joints
	Installation equipment for BandJoint
	Installation equipment for EWJoint
	Tools for shrink joints
	Tools for expansion plugs
	Tools for weld plugs
	Leakage test equipment
	Tools for LOGSTOR Detect
	Operating tools for valves

Laying FlexPipe

**Bending tool** For bending FlexPipes.  
The two handles can be dismantled.



**Component overview/data** Component No. 9050

Bending tool

Casing D mm	Product No.	A mm	B mm	R mm
90	9050 0000 019 013	1340	695	700

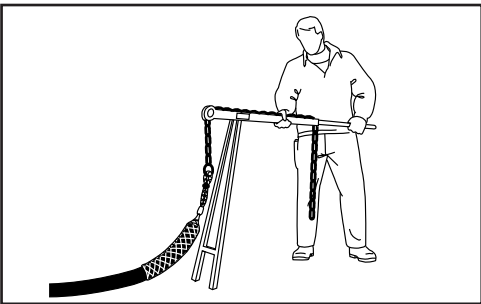
**Pulling tool** For house entry with FlexPipe through inlet pipe embedded in concrete or tilted bore in the base pulling tool and pulling sleeve are used.

Outer casing dimension 90 mm

Product Nos:

Pulling tool: 9050 0000 007 887

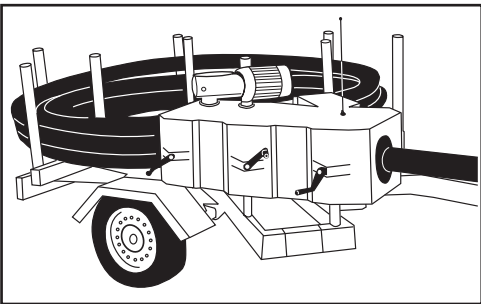
Pulling sleeve: 9050 0000 047 001



**Component overview/data** Component No. 9050

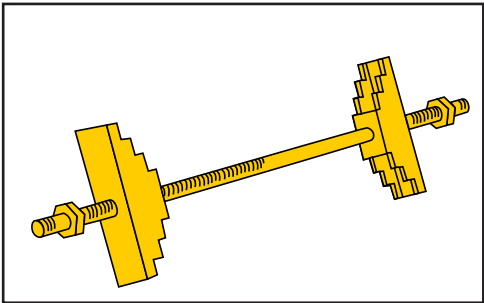
**Transport and uncoiling** For transport and uncoiling major dimensions and a high number of house entries the FlexPipe wagon with motorized straightener and remote control is recommended.

For supplier details please contact LOGSTOR.



**Component overview/data** Component No. xxxx

**Compression tool** For compressing E-Comp prior to welding it into the pipe system.



**Component overview/data** Component No. 9050

Compression tool

Steel pipe dimension mm	Product No.
48.3-168.3	9050 0000 044 000
219.1-323.9	9050 0219 045 000
355.6-508.0	9050 0000 044 001

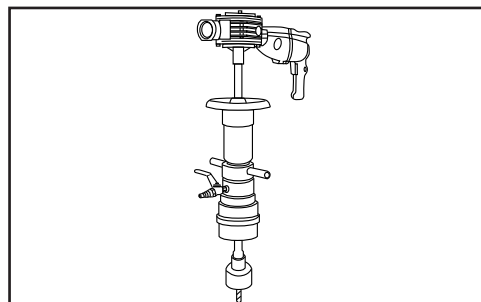
## Hot tapping tool

---

**Hot tapping tool**

Available for dimensions DN 20-100 mm.

To buy or hire please contact LOGSTOR Service Department.

**Component  
overview/data**

Component No. 9050

Tools for shortening and calibration

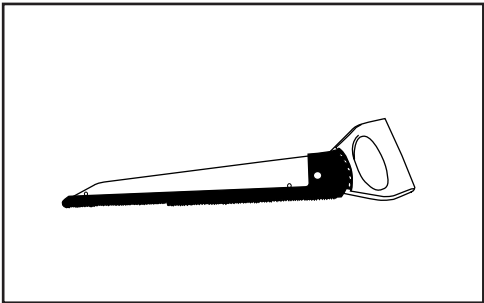
Eclipse saw

An eclipse saw with depth guard is used to cut outer casings and insulation.

The depth guard prevents that the service pipe and surveillance wires are damaged, when cutting the outer casing.

To shorten insulation shells the eclipse saw is used without depth guard.

Product No.:            9000 0000 003 002

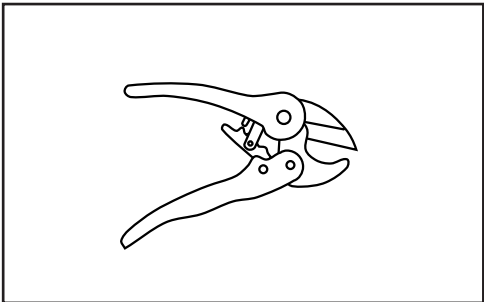


Component overview/data

Component No. 9000

PEX scissors

For perpendicular cutting PEX and PE-RT/aluminium/PE-RT service pipes.



Component overview/data

Component No. 9000

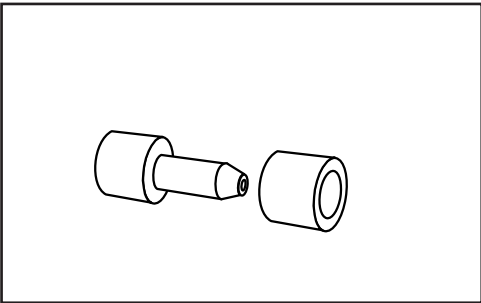
PEX scissors

Max diameter pipe mm	Product No.
28	9000 0000 006 001
32	9000 0000 006 002
63	9000 0000 006 003

Tools for shortening and calibration

Calibration man-  
drel

For CuFlex to calibrate copper pipes  
before soldering.



Component  
overview/data

Component No. 9050

Calibration mandel

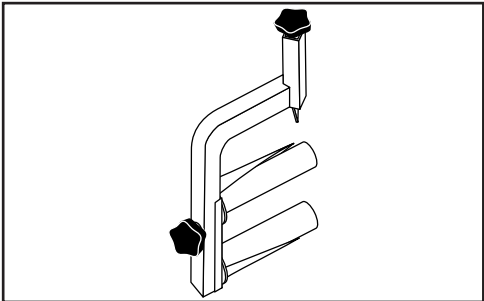
CuFlex service pipe d mm	Product No.
15	9050 0000 017 000
18	9050 0000 017 005
22	9050 0000 017 001
28	9050 0000 017 002
35	9050 0000 017 003
42	9050 0000 017 004
54	9050 0000 017 006
70	9050 0000 017 007



# Stripping tools

**Application** For removal of insulation from single pipes with PEX and PE-RT/aluminium/PE-RT service pipes to prevent that the service pipe is damaged.

**Stripping tool, small**



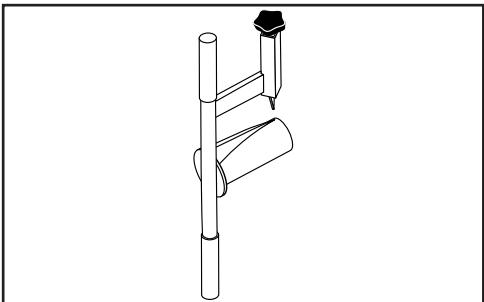
**Component overview/data**

Component No. 9000

Stripping tool - small

Service pipe	Service pipe d mm	Product No.
PEX	20-25	9000 0000 006 001
	32-40	9000 0000 006 011
	40-50	9000 0000 006 003
PE-RT/aluminium/PE-RT	16-20	9000 0000 006 020
	26-32	9000 0000 006 021

**Stripping tool, large**



**Component overview/data**

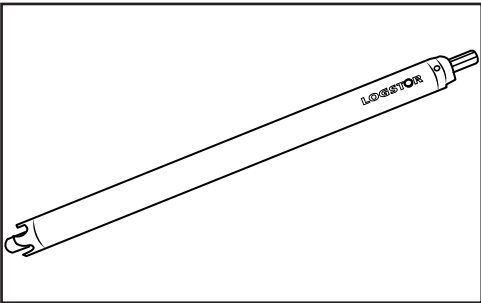
Component No. 9000

Stripping tool - large

Service pipe	Service pipe d mm	Product No.
PEX	63	9000 0000 006 004
	75	9000 0000 006 005
	90	9000 0000 006 006
	110	9000 0000 006 007

Stripping tool for AluFlextra

Stripping tool for AluFlextra to use with drilling machine:



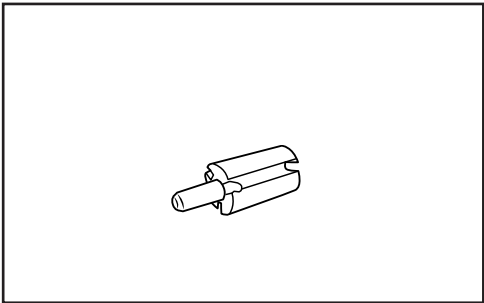
Component overview/data

Component No. 9000

Stripping tool for AluFlextra

Standard length 400 mm:	
Service pipe ø mm	Product No.
16	9000 0000 006 022
20	9000 0000 006 023
26	9000 0000 006 024
32	9000 0000 006 025
Standard length 700 mm:	
Service pipe ømm	Product No.
16	9000 0000 006 026
20	9000 0000 006 027
26	9000 0000 006 028
32	9000 0000 006 029

Deburring tool



Component  
overview/data

Component No. 9000

Cleaning/deburring tool:	
Service pipe ø mm	Product No.
16	9000 0000 006 030
20	9000 0000 006 031
26	9000 0000 006 032
32	9000 0000 006 033

## Press tool for coupling, type MP

---

**Application**

Hydraulic press tool for installing press coupling, type MP (Multipress).

Delivered as a complete set.

To buy or hire please contact LOGSTOR Service Department.

**AP63**

For dimension  $\varnothing 16 - \varnothing 63$

Product No. 9050 1430 063 000

**Component  
overview/data**

Component No. 9050

**AP110**

For dimension  $\varnothing 63 - \varnothing 110$

Product No. 9050 1430 110 000

**Component  
overview/data**

Component No. 9050

# Press tool for coupling, type MP

**Hydraulic pump**      Used for hydraulic press tool.  
 Product No. 9050 1420 000 000



**Component overview/data**      Component No. 9050

## Press tool for coupling, type JT

### Application

Press tool for installing press coupling, type JT (Jentro).

Delivered as a complete set.

To buy or hire please contact LOGSTOR Service Department.

### ø25 - ø32 mm

Product No. 9050 1460 032 000



### Component overview/data

Component No. 9050

### ø40 - ø63 mm

Product No. 9050 1460 063 000



### Component overview/data

Component No. 9050

Press tool for coupling, type JT

ø50 - ø110 mm      Product No. 9050 1460 110 000



Component overview/data      Component No. 9050

## Welding machines for weld joints

**Application** To buy or hire installation equipment for LOGSTOR weld joints please contact LOGSTOR Service Department.

**Weld trailer** Contains generator, air compressor, high-pressure hose, 400V + 230V cables and accessories.

L 4.5m x W 2.1m x H 2.1 m

Total weight: 2,000 kg

Power: 16A, 400V - 20 kWh



**Component overview/data** Component No. 9050

**WeldMaster** Contains 2 sets weld cables, drawbar, and transport wheels, hand-held computer (PDA). Applicable for all LOGSTOR weld joints.

L 750 x W 380 x H 560 mm

Total weight: 107 kg

Mains voltage: 3 x 230/400V AC +/- 4%  
50 Hz

Mains connection: 5-pole 16 A CEE plug  
(3 phase, neutral, earth)



**Component overview/data** Component No. 9050



Welding machines for weld joints

---

**WeldMaster Light**    L 740 x W 280 x H 340  
Total weight: 25 kg (excl. cables)  
Mains voltage: 3 x 230/400V AC +/- 4%  
50 Hz  
Mains connection: 5-pole 16 A CEE plug  
(3 phase, neutral, earth)



**Component  
overview/data**    Component No. 9050

## Tool boxes for weld joints

**Application** To buy or hire installation equipment for LOGSTOR weld joints please contact LOGSTOR Service Department.

**BandJoint** Basic set  
Contains hand tools necessary to install BandJoints in dimensions up to and including  $\varnothing 710$  mm.  
Product No. 9050 1650 000 000



**Component overview/data** Component No. 9050

Additional tools  
Additional tools for installing BandJoint in dimensions  $\geq \varnothing 800$  mm.  
To be used together with the basic set.  
Product No. 9050 1390 000 000



**Component overview/data** Component No. 9050

# Tool boxes for weld joints

## EWJoint

Hand tools necessary to install EWJoints.



## Component overview/data

Component No. 9050

## Extrusion welding

Milling guide and extrusion guide for longitudinal extrusion welding.



## Component overview/data

Component No. 9050

## Installation equipment for BandJoint

### Application

To install BandJoints two pressure bands and a pressure rail are used. To buy or hire installation equipment for weld joints please contact LOGSTOR Service Department.

### Pressure band $\varnothing 90$ - 200 mm



### Component overview/data

Component No. 9050

### Pressure band $\varnothing 225$ - 800 mm



### Component overview/data

Component No. 9050

### Pressure band $\varnothing 800$ -1400 mm, handles

Handles for pressure bands and straps.



### Component overview/data

Component No. 9050

# Installation equipment for BandJoint

**Pressure band  
ø800-1400 mm,  
bands and straps**



**Component  
overview/data**

Component No. 9050

**Pressure rail ø90 -  
200 mm**

Standard:  
Fits casing joint length 570 mm.  
Long:  
For E-Comp and repairs.  
Fits casing joint length 830 mm.



**Component  
overview/data**

Component No. 9050

**Pressure rail ø225 -  
1400 mm**

Standard:  
Fits casing joint lengths 630 mm.  
Long:  
For E-Comp and repairs.  
Fits casing joint length 1020 mm.



**Component  
overview/data**

Component No. 9050

## Installation equipment for BandJoint

---

**Flexible pressure  
tool ø225-800 mm**

Product No. 9050 0000 000 007



**Component  
overview/data**

Component No. 9050

**Guiding tool**

Auxiliary tool facilitating the installation of BandJoints in large dimensions ( $\geq \varnothing 630$  mm).



**Component  
overview/data**

Component No. 9900

Installation equipment for EWJoint

**Application** To buy or hire installation equipment for weld joints please contact LOGSTOR.

**EW wedge set** For use with flexible pressure tool ø225 - 800 mm.  
Product No. 9050 0000 000 021



**Component overview/data** Component No. 9050

**EW band** Pressure band to install EWJoint in dimensions ø90-1400 mm.  
One size per dimension.



**Component overview/data** Component No. 9050

## Installation equipment for EWJoint

---

**EW tightening clamp**

Tightening clamp for EW band.  
Small for  $\varnothing 90$ -560 mm  
Big for  $\varnothing 90$ -1400 mm

**Component overview/data**

Component No. 9050

**EW multi tool**

Pressure band for more dimensions:

- $\varnothing 140$ -160 mm
- $\varnothing 180$ -200 mm
- $\varnothing 225$ -280 mm
- $\varnothing 315$ -400 mm
- $\varnothing 450$ -560 mm
- $\varnothing 630$ -800 mm

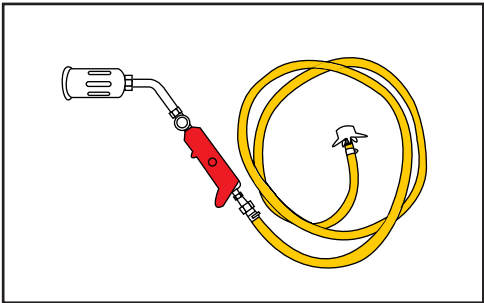
**Component overview/data**

Component No. 9050



# Tools for shrink joints

**Gas burner set** For installation of shrink sleeve.



**Component overview/data** Component No. 9000

Complete burner set for propane gas with a 10 m hose and a 50 mm burner head.

House union	Product No.
for regulator	9000 0000 001 943
with 1/2" thread	9000 0000 001 944

**Spare parts for gas burner set**

**Component overview/data** Component No. 9000

Spare parts for gas burner set

Spare part	Product No.
Burner head ø50 mm	9000 0000 010 001
Burner head ø60 mm	9000 0000 010 002
Burner pipe 200 mm	9000 0000 011 000
Burner handle	9000 0000 012 000
Gas hose 10 m	9000 0000 013 000
Hose union for regulator	9000 0000 017 000
Hose union with 1/2" thread	9000 0000 021 000

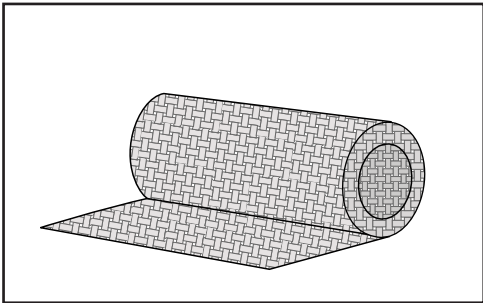
Tools for shrink joints

**Heat shield** For protecting corrugated casings when shrinking sleeves.

Width: 150mm

Length: 1000 mm

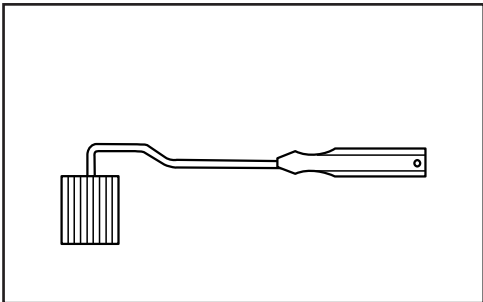
Product No. 9050 0150 031 000.



**Component overview/data** Component No. 9050

**Roller** For compressing overlap on open shrink wraps and collars.

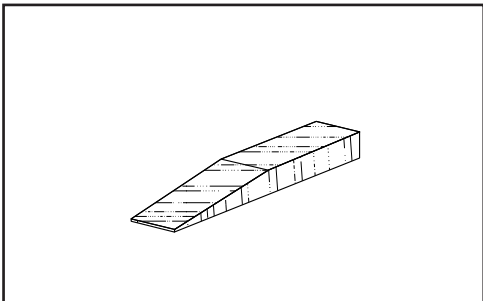
Product No. 9000 0000 008 000



**Component overview/data** Component No. 9000

**Wooden wedge** For centering shrink sleeves during installation.

Delivered in bags with 24 pcs.



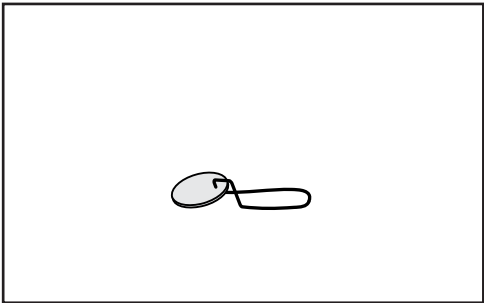
**Component overview/data** Component No. 1997

Wooden wedge

Type	L mm	H mm	W mm	Product No.
Small, type A	240	13	22	1997 0000 033 002
Big, type B	345	27	32	1997 0000 033 003

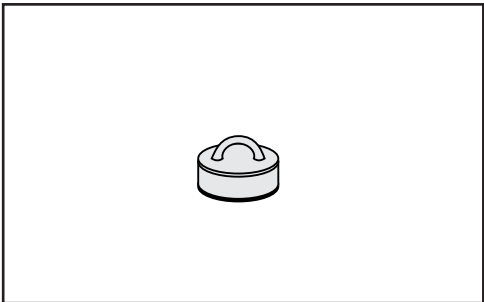
Tools for expansion plugs

**Patch spoon**                      Retaining tool for installation of patch.  
Product No. 9050 0000 025 002



**Component overview/data**                      Component No. 9050

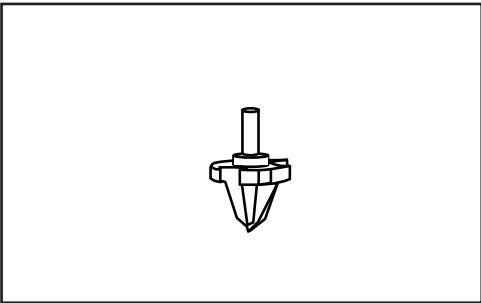
**Patch press**                      For compressing patch.  
Product No. 9050 0000 025 004



**Component overview/data**                      Component No. 9050

Tools for weld plugs

**Conical drill bit** For drilling the foam hole before installing weld plug.



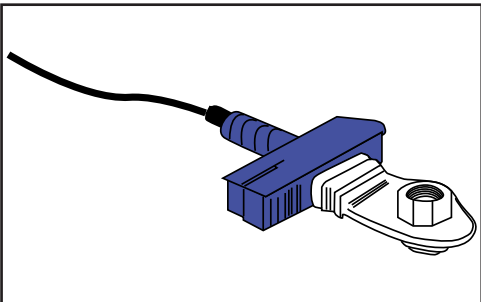
**Component overview/data** Component No. 9050

Conical drill bit

Hole size	Product No.
ø 35 mm	9050 0035 023 001
ø 43 mm*	9050 0043 023 001

\* For repair use.

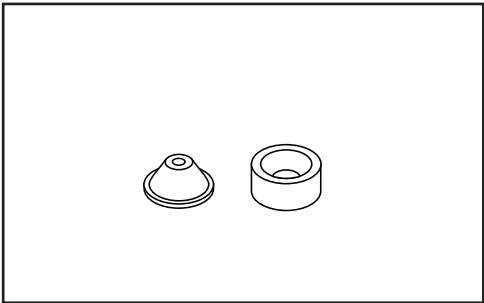
**Socket welder** Socket welder HHSW-63-W for replaceable cones. Cones are ordered separately.  
Delivered in a box.  
Product No. 9050 0000 023 013.



**Component overview/data** Component No. 9050

Tools for weld plugs

Cones for socket  
welder



Component  
overview/data

Component No. 9050

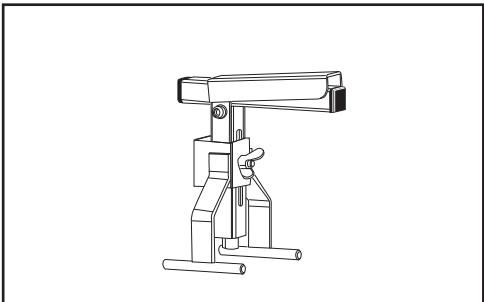
Cones for socket welder

Weld plug size	Product No.
ø 35 mm	9050 0000 023 010
ø 43 mm*	9050 0000 023 011

\* For repair use.

Retaining tool for  
weld plug

Product No. 9050 0000 025 008



Component  
overview/data

Component No. 9050

## Leakage test equipment

---

### Hand pump

Air pump to leakage test casing joints before foaming.

Product Nos. air pumps, complete:

Hole size 24 mm 9050 0000 027 000

Hole size 17.5 mm 9050 0000 027 007

Product Nos. manometer with plug:

Hole size 24 mm 9050 000 027 001

Hole size 17.5 mm 9050 0000 027 008

Product Nos. extra plug:

Hole size 24 mm 9050 0000 027 003

Hole size 17.5 mm 9050 0000 027 009



### Component overview/data

Component No. 9050

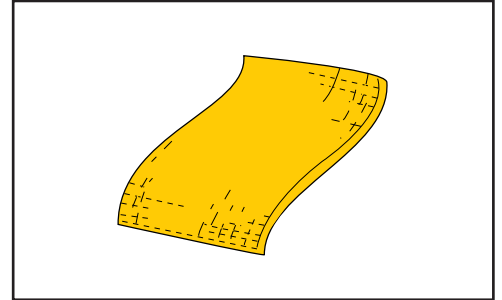
## Tools for LOGSTOR Detect

**Synthetic cloth**

For cleaning wire ends before connection and soldering.

Delivered in packages of 10 pcs.

Product No. 1998 0000 002 002 (10 pcs.)

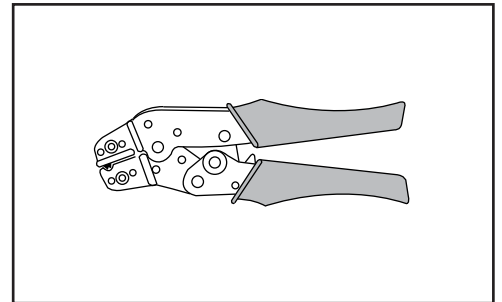
**Component overview/data**

Component No. 1998

**Crimping pliers**

Special pliers to compress crimp connectors for connection of copper wires.

Product No. 9000 0000 029 001

**Component overview/data**

Component No. 9000

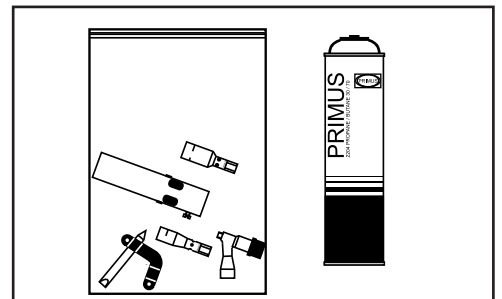
**Gas soldering iron**

For soldering copper wires after connection with crimp connector.

Product No. 9050 0000 040 001

Extra gas cartridge

Product No. 9050 0000 019 002

**Component overview/data**

Component No. 9050

## Tools for LOGSTOR Detect

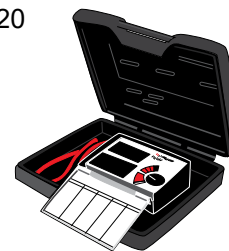
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**Megger**

For checking the copper wires.

The megger can be used for low as well as high ohmic systems with or without felt in the joints.

MIT 320

**Component  
overview/data**

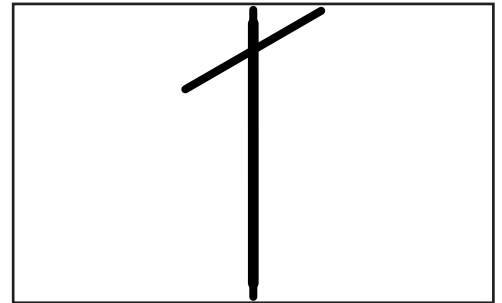
Component No. 8000



## Operating tools for valves

### Tee key

For operating ball valves  
 ø 33.7 - 168.3 mm.  
 Key width: 19 mm and 27 mm  
 Length 1 m.  
 Product No. 4300 0000 004 001

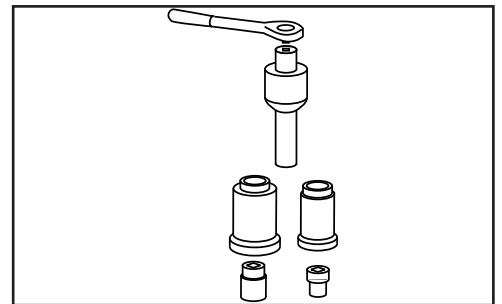


### Component overview/data

Component No. 4300

### Portable gear

For operating ball valves  
 ø 114.3 - 406 mm.  
 Delivered as a set in a carrying case.  
 Hexagon key widths: 27 mm and 50 mm  
 Backstop key widths: 70 mm and 90 mm  
 Product No. 4300 0000 010 003



### Component overview/data

Component No. 4300

## Accessories

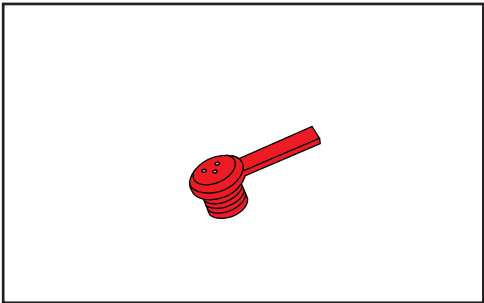
### Overview

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<b>Description</b>	This section primarily describes the products which are normally delivered together with or as part of other products.
<b>Contents</b>	<ul style="list-style-type: none"><li>Plugs</li><li>Sealing tape</li><li>Shrink materials</li><li>Tape</li><li>Warning tape</li><li>Foaming</li></ul>

Accessories  
Plugs

Loose venting  
plug: ø 17.5 mm

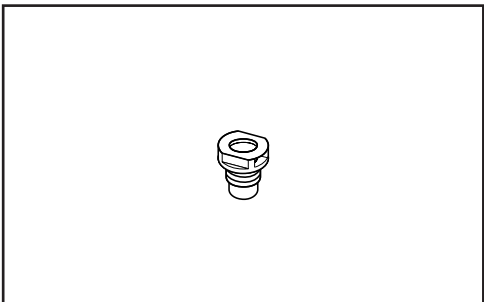


**Pcs. per bag** 25 pcs. in bag, product No. 1220 0000 035 750

**Component  
overview/data** Component No. 1220

**Materials** Venting plug ø 17.5 mm: Polypropylene

Loose venting  
plug: ø 24 mm



**Pcs. per bag** 50 pcs. in bag, product No. 1220 0000 020 009

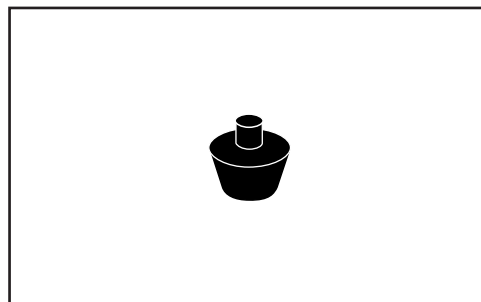
**Component  
overview/data** Component No. 1220

**Materials** Venting plug ø 24 mm: LDPE

## Accessories

### Plugs

**Welding plug: ø 35  
or 43 mm**



**Pcs. per bag**

ø 35 mm, t = 12.5 mm, 25 pcs. in a bag, product No. 1220 0000 035 002

ø 43 mm, t = 12.5 mm, 50 pcs. in a bag, product No. 1220 0000 043 004

ø 43 mm, t = 22.5 mm, 25 pcs. in a bag, product No. 1220 0000 043 005

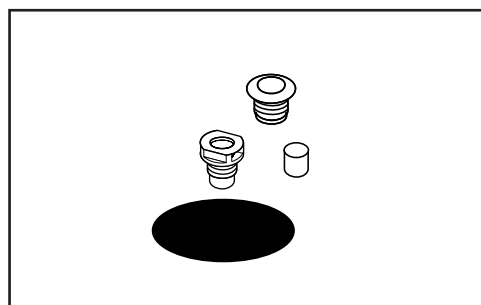
**Component  
overview/data**

Component No. 1220

**Materials**

Welding plug: HDPE

**Expansion plug,  
wedge plug and  
patch incl. ø 24  
mm venting plug**



**Pcs. per bag**

Expansion plugs, wedge plug patch incl. venting plug: 1 set in a bag  
product No. 1220 0000 010 005

**Component  
overview/data**

Component No. 1220

**Materials**

Expansion plug: PEX with a ring of butyl mastic

Wedge plug: PEX

Patch: PEX with water-resistant hotmelt

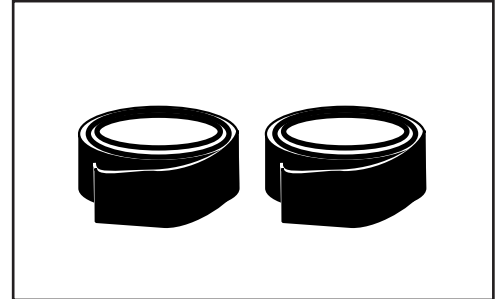
Venting plug ø 24 mm: LDPE

## Accessories

### Sealing tape

**Application** Sealing tape is used to seal between a casing joint and the outer casing in connection with the shrink joints B2S and BS as well as the T-joint TSJoint.

**Description** Sealing strip is delivered together with the casing joint in a packing with 2 pcs. for the casing joint in question.



**Component overview/data** Component No. 5435

Sealing tape

Cross section 40 x 1.0 mm			Cross section 40 x 3.0 mm		
Product No.	Outer casing mm	L mm	Product No.	Outer casing mm	L mm
5435 0090 008 010	90	320	5435 0400 008 020	400	1310
5435 0110 008 010	110	380	5435 0450 008 020	450	1495
5435 0125 008 010	125	430	5435 0500 008 020	500	1655
5435 0140 008 010	140	480	5435 0520 008 020	520	1720
5435 0160 008 010	160	540	5435 0560 008 020	560	1855
5435 0180 008 010	180	600	5435 0630 008 020	630	2080
5435 0200 008 010	200	665	5435 0710 008 020	710	2335
5435 0225 008 010	225	745	5435 0780 008 020	780	2560
5435 0250 008 010	250	830	5435 0800 008 020	800	2615
5435 0280 008 010	280	920	5435 0900 008 020	900	2925
5435 0315 008 010	315	1020	5435 1000 008 020	1000	3275
5435 0355 008 010	355	1170			

N.B! The tables are only necessary in case of subsequent ordering.

**Materials** PIB-based

## Accessories

### Sealing tape

---

**Sealing tape in coils**

Sealing tape is also available in coils

**Component overview/data**

Component No. 5435

Sealing tape in coils

Product No.	Dimension mm	L mm
5435 0040 008 104	40 x 1.0	30
5430 0040 003 000	40 x 3.0	30

**Application** For jointing, post-installation, and repairs a number of shrink materials for various purposes are delivered.

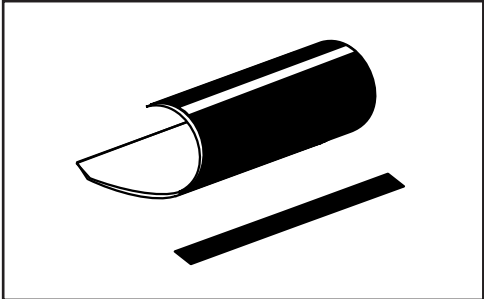
**Shrink wrap** A shrink wrap is an open joint which is used to obtain an additional seal e.g. of SX-WPJoint and BXJoint.

The shrink wrap is with mastic and hot-melt.

The shrink wrap is delivered cut to measure for the dimension with 2 bevelled corners in order to ensure sealing against outer casing and casing joint.

Is delivered with closure patch.

Shrinkability: 25%



**Component overview/data** Component No. 5400

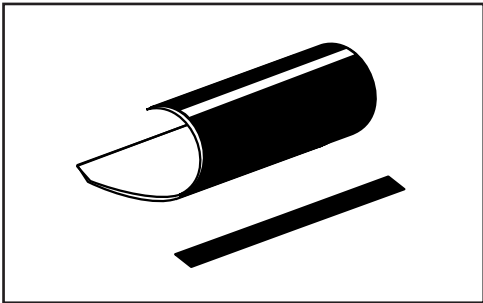
Shrink wrap

Outer casing mm	Width mm
77-355	155
400-710	230
800-1400	300

From the table it appears which widths are used as open wraps for different outer casing dimensions.

Shrink wrap set

Shrink wrap is available in the following widths incl. closure patch.



Component overview/data

Component No. 5400

Closure patch for shrink wrap

Shrink wrap width mm	Closure patch width mm	Closure patch length mm
155	100	153
230	150	200
300	200	298
640	100	638
900	100	898

Shrink wrap in coils

Shrink wrap is also available in coils.

Component overview/data

Component No. 5500

Shrink wrap in coil

Product No.	Width mm	Length mm
5500 0155 017 010	155	30
5500 0230 017 010	230	30
5500 0300 017 010	300	30
5500 0640 010 030	640	30
5500 0900 017 010	900	20

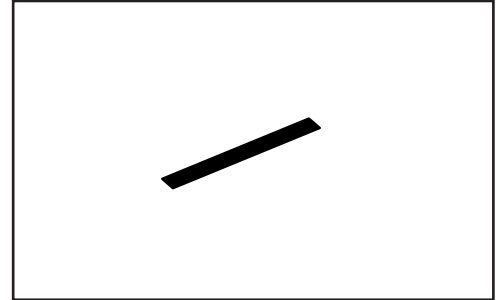


## Accessories

### Shrink materials

#### Closure patch

To fix the shrink wrap during shrinkage a closure patch is used which fits the width of the shrink wrap.



#### Component overview/data

Component No. 5505

Closure patch

Product No.	Closure patch mm	Shrink wrap width mm
5505 0100 000 153	100x153	155
5505 0150 002 228	150x228	230
5505 0200 002 298	200x298	300
5505 0100 002 638	100x638	640
5505 0100 002 898	100x898	900

#### Cutting lengths for shrink wrap

From the table the cutting lengths for the shrink wrap appears.

For correct installation 2 corners must be bevelled.

#### Component overview/data

Component No. 5500

Shrink wrap in coils, cutting L

Outer casing ø out. mm	Wrap l mm	Outer casing ø out. mm	Wrap l mm
77	350	315	1150
90	390	355	1340
110	460	400	1440
125	510	450	1600
140	560	500	1780
160	620	560	2000
180	690	630	2200
200	760	710	2450
225	850	800	2800
250	940	900	3100
280	1040	1000	3400

## Accessories

### Shrink materials

#### Shrink film

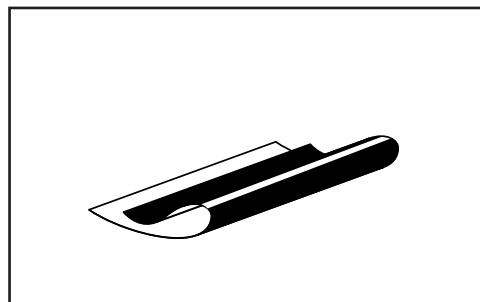
A shrink film is used for the first seal of outer casing joints.

Must always be covered by a wrap or a casing joint.

Shrinkability: 20%

Width of shrink film: 550 mm

Closure patch is not used for shrink film.



#### Component overview/data

Component No. 5325

Shrink film

Outer casing ø out. mm	Film L mm	Outer casing ø out. mm	Film L mm
77	340	315	1140
90	380	355	1265
110	445	400	1400
125	520	450	1560
140	560	500	1720
160	630	560	1960
180	690	630	2180
200	750	710	2430
225	830	800	2710
250	910	900	3030
280	1000	1000	3340

#### Shrink film in coils

Shrink film is also available in coils.

#### Component overview/data

Component No. 5500

Shrink film in coil

Product No.	W mm	L m
5500 0550 011 030	550	30

Shrink wrap for  
T-joint

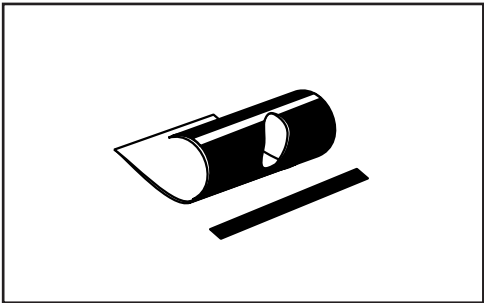
Shrink wrap for T-joint is with mastic.

The shrink wrap is delivered cut to measure for the dimension and with a hole for one or two branches.

Two corners are bevelled to ensure sealing against the outer casing and the T-joint.

Is delivered with closure patch.

Shrinkability: 30%.



Dimensions

Shrink wrap for T-joint is available in 2 widths dependent on the length of the base pipe of the T-joint.

Ordered to measurements and with hole(s) for one or two branches.

Component  
overview/data

Component No. 5405

Shrink wrap for T-joint

Shrink wrap width mm	T-joint width mm	Closure patch length mm
650	400	100x648
900	600-700	100x898

## Accessories

### Shrink materials

#### Shrink collar

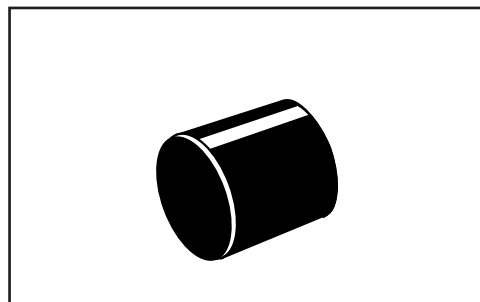
A shrink collar is primarily used to seal outer casings joints on flexible pipes.

Shrink collars are with mastic.

Sleeve length:

ø 77-315 mm = 150 mm

ø 355-630 mm = 225 mm



#### Component overview/data

Component No. 5500

Shrinkability of shrink collar

Product No	Outer casing ø out. mm	Shrinkability from/to mm	Product No.	Outer casing ø out. mm	Shrinkability from/to mm
5500 0095 010 150	77	95/65	5500 0290 010 150	250	290/185
5500 0115 010 150	90	115/80	5500 0330 010 150	280	330/210
5500 0130 010 150	110	130/90	5500 0370 010 150	315	370/235
5500 0155 010 150	125	155/100	5500 0395 010 225	355	395/250
5500 0170 010 150	140	170/110	5500 0450 010 225	400	450/285
5500 0190 010 150	160	190/125	5500 0505 010 225	450	505/315
5500 0210 010 150	180	210/135	5500 0555 010 225	500	555/350
5500 0225 010 150	200	225/145	5500 0625 010 225	560	625/385
5500 0260 010 150	225	260/165	5500 0775 010 225	630	775/480

Accessories

Shrink materials

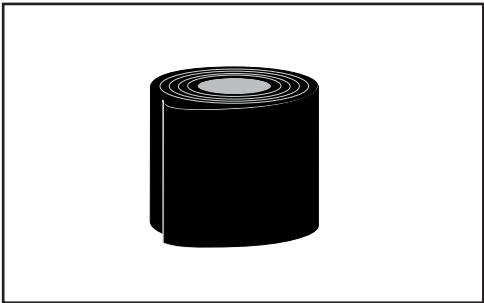
5514 Shrink tape,  
NW 1230

Shrink tape repairing Flex PE-casing.

Wind minimum 2 layers of shrink tape around the flexible outer casing and shrink them onto the outer casing.

Measurements: L = 10 m

Tape is available in two variants.



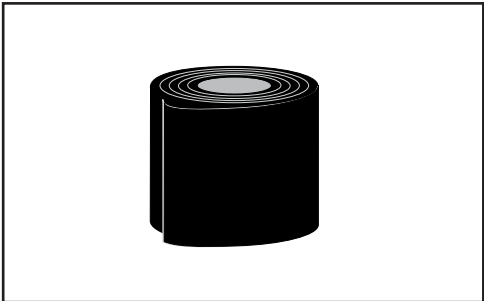
Component  
overview/data

Component No. 5514

Shrink tape - NW 1230

Product No.	Width mm	Shrinkability
5514 0100 002 010	100	30%
5514 0150 002 010	150	30%

5514 Shrink tape,  
NW 1250



Component  
overview/data

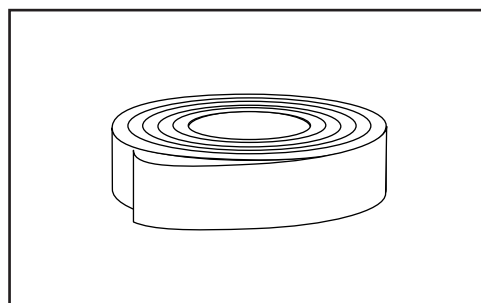
Component No. 5514

Shrink tape - NW 1250

Product No.	Width mm	Shrinkability
5514 0100 001 010	100	50%
5514 0400 001 010	400	50%

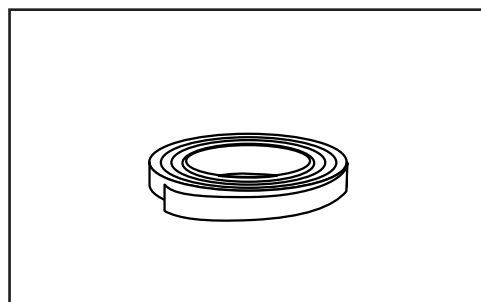
**Application** For casing joint installation and corrosion protection a number of types for various purposes are available.

**Linen tape** Linen tape is used to secure the insulation shells when installing casing joints.  
Measurements: W = 38 mm L = 10 m  
Product No. 7100 0038 001 000



**Component overview/data** Component No. 7100

**Filament tape** Filament tape is used to secure the casing joint during installation.  
Measurements:  
1) W = 19 mm L = 50 m  
Product No. 7100 0019 003 000  
2) W = 50 mm L = 50 m  
Product No. 7100 0050 003 000



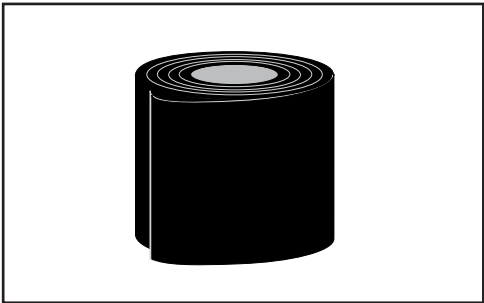
**Component overview/data** Component No. 7100

# Accessories

## Tape

### Anti-corrosion tape, Nitto 57 GO

There are 3 types of anti-corrosion tape.



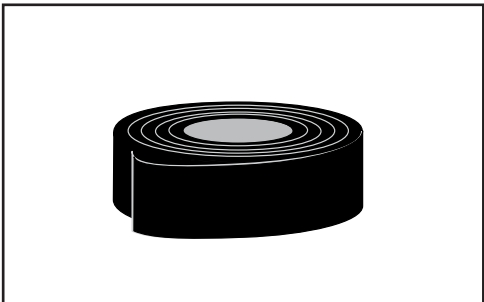
### Component overview/data

Component No. 5520

Anti-corrosion tape - Nitto 57 GO

Product No.	Application	Type	Measurements
5520 0150 002 020	Repair of smooth and corrugated outer casing without use of gas burner. The 57 GO tape is self vulcanizing.	Nitto 57 GO/C	150 mm x 2 mm x 2 m
5520 0150 002 100		Nitto 57 GO/CA	150 mm x 2 mm x 10 m
5520 0450 002 100		Nitto 57 GO/CA	450 mm x 2 mm x 10 m

### Anti-corrosion tape, Nitto 51



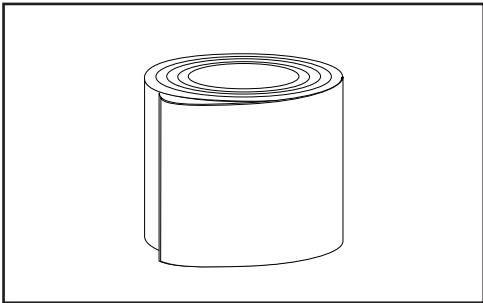
### Component overview/data

Component No. 5520

Anti-corrosion tape - Nitto 51

Product No.	Application	Type	Measurements
5520 0050 001 305	Used on the outside of Nitto "57 GO" to protect against corrosion	Nitto 51	50 mm x 30.5 m
5520 0100 001 305		Nitto 51	100 mm x 30.5 m

Anti-corrosion  
tape, Denso FEU or  
Densyl TDC



Component  
overview/data

Component No. 9000

Anti-corrosion tape - grease tape

Product No.	Application	Type	Measurements
1997 0100 061 018	Used to protect steel pipes e.g. when using 2 wall entry sleeves in connection with a house entry	Denso - FEU or Densyl TDC	100 mm x 10 m



# Accessories

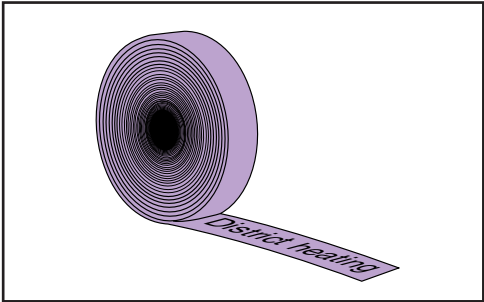
## Warning tape

**Application**      Uncoil the warning tape over the pipes e.g. on the compressed, minimum 10 cm thick sand layer which must cover the pipes

Two types of warning tape are available:

- a narrow one for small pipe dimensions (possibly a tape over each pipe)
- a wider tape in net shape for major dimensions

**Warning tape**      Warning tape with text.  
Colour: Violet



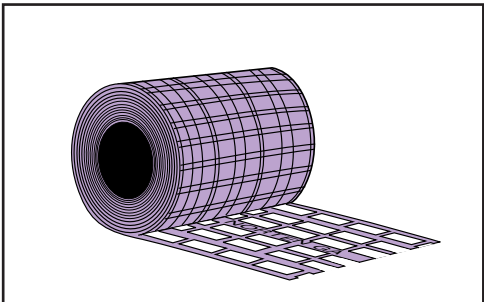
**Component overview/data**      Component No. 7150

Warning tape

Product No.	W mm	L m	Text
7150 0050 001 000	50	500	District Heating

**Materials**      Soft plastic

**Warning net**      Warning net with text.  
Colour: Violet



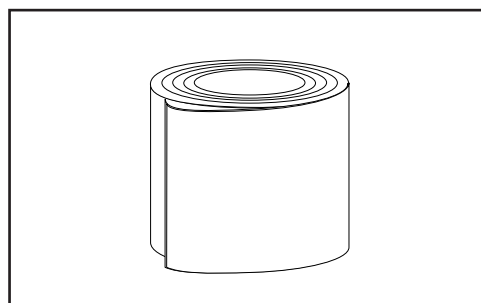
**Component overview/data**      Component No. 7150

Warning net

Product No.	W mm	L m	Text
7150 0200 050 000	200	100	District Heating
7150 0500 050 000	500	100	District Heating

**PUR-foam layer** For foaming at service pipe temperatures  $< +10\text{ }^{\circ}\text{C}$  or  $> +50\text{ }^{\circ}\text{C}$  a layer of PUR-foam around the service pipe is installed before foaming.

**Description** 5 mm thick cross-linked polyethylene foam.  
Product No. 9000 0000 023 156.  
W x L = 420 mm x 25 m



**Component overview/data** Component No. 9000

**Materials** Cross-linked polyethylene foam with closed cells.

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# Contact details

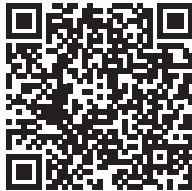
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