

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	<p>LOGSTOR comprises production companies in Denmark, Poland, Sweden, and Finland as well as sales companies and service units in all major markets worldwide</p>
Worldwide service	<p>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.</p> <p>A central management of product data, specifications, marketing, installation instructions and user manuals ensures a uniform understanding and use of our products worldwide.</p>
Technical service	<p>LOGSTOR is a system supplier. Part of the system is Technical service before, during and after the implementation of a project.</p> <p>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.</p>
Training	<p>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.</p> <p>Due to the introduction of new techniques, new environmental demands etc. the traditional, preinsulated pipe system has developed into a rather high-technological product.</p> <p>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.</p> <p>LOGSTOR continuously carry out training courses at our Academy 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.</p>
Development	<p>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.</p>

- 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)

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.

References to European standards must be perceived as references to the latest revision, provided nothing else is explicitly stated.

General

The Product Catalogue

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. The English version shall always prevail in case of any discrepancy or inconsistency between the linguistic versions.

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

The latest edition will always be available on 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

Introduction	<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>
Certification ISO 9001	<p>The quality management system is prepared and certified in accordance with ISO 9001:2015.</p>
Quality Manual	<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"> - Policies and objectives - Organisation charts - Procedures and instructions for processes, affecting the quality. They cover administrative and production processes e.g. order processing, inspection etc. - Process and inspection plans
Inspection routines in the production	<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>
External inspection	<p>LOGSTOR's preinsulated pipes and fittings are i.a. certified in accordance with the Euroheat & 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>
Documentation for the customers	<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>
Identification	<p>The marking on casings complies with the requirements in the European standard EN 253.</p>

Quality Control and Environmental Management

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.

Reference to European standards References to European standards are references to valid versions of the European standards.

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 ∅ 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	PerFlextra	PE-RT	10	70-80	95 mal-function	Single pipe	x	x	25-63	
					TwinPipe	x	x	25-63		
	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		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

General	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
Preinsulated products	First PUR-foam, PE-casing, service pipe, surveillance wires shall be separated.
PUR foam	If possible, the PUR-foam shall be reused or burned at a waste incineration plant under controlled conditions according to local regulations.
HDPE-material	HDPE-material can be regranulated and recycled.
Service pipe	<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>Multilayer pipe PE-RT/aluminium/PE-RT:</p> <p>Separate the layers.</p> <p>Aluminium and PE-RT can be reused.</p> <p>PEX:</p> <p>PEX shall be burned at a waste incineration plant under controlled conditions according to local regulations or be recycled in a chemical recycling plant.</p> <p>PE-RT:</p> <p>Separate the layers.</p> <p>PE-RT and aluminium can be reused.</p>
Surveillance wires and cables	<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>
Cross-linked material	Cross-linked material shall be burned at a waste incineration plant under controlled conditions according to local regulations.

Waste treatment and recycling

Valves	If possible valves shall be reused. Valve parts which cannot be reused shall be treated as waste in accordance with local regulations.
Electronic components	Electronic components like detectors, connecting boxes i.e. shall be treated as electronic waste according to local regulations.
Chemicals	<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>
Brass couplings	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, EN 17415-1, EN17415-2, EN17415-3 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.

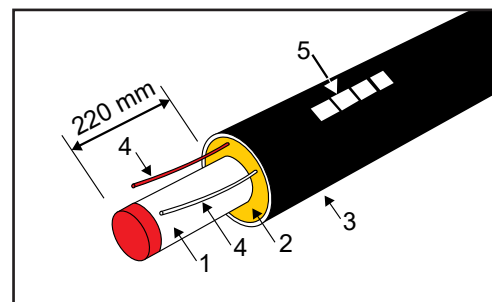
For temperature profiles which deviate from above standards we can - on request - calculate the estimated service life on the basis of the actual expected temperature set during a year.

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 mm² 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 insulation 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.

In the opti production process the pipe is foamed in a mould by injecting foam at 6 positions distributed along the pipe length. Hereafter the casing is extruded onto the foam in a spiral movement. The method applies to casing dimensions $\varnothing 355 - \varnothing 1400$ mm. The smallest steel pipe dimension is $\varnothing 406$ mm.

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° angle, root face 1.6 mm ± 0.8 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

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/opti pipes (50°C): 0.025 W/m K.

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

The updated values are always included in the calculation program "Calculator".
See 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 ≤ 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 ± 10 mm

Lengths delivered: 6, 12, and 16 m

The Bonded Single Pipe

General

Surveillance system

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

Wires:

1.5 mm² 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

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.

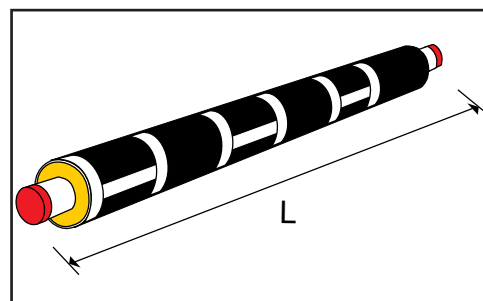
The Bonded Single Pipe

District heating single pipes - Zebra Pipe

Application Zebra pipes are used to facilitate the removal of insulation when adjusting pipe lengths.

Description Depending on the length of the pipe the zebra pipe is divided into sections of 0.5 - 1.5 m, marked with transverse tape.

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



Dimensions The zebra pipes, which traditionally are foamed pipes, are available in 12 m length.

The dimensions of insulation series 2 and 3 are the same as for straight pipes.

Max. steel pipe dimension is \varnothing 508 mm.

Component overview/data Component No. 2490

Materials 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.

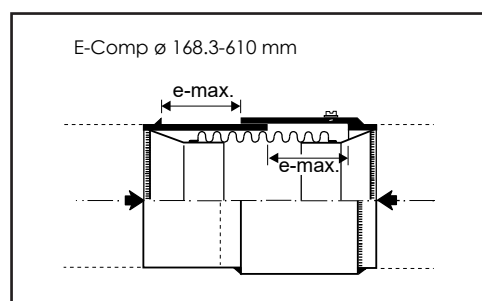
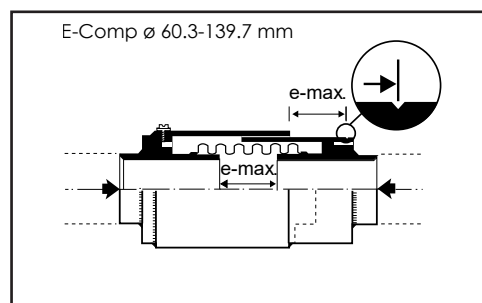
E-Comps are designed for 250 full load cycles in project class B up to and including DN300 and project class C for larger dimensions according to EN13941-1.

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

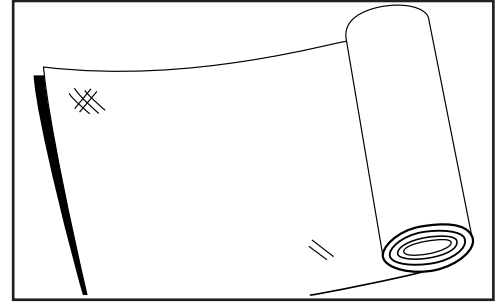
Accessories

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

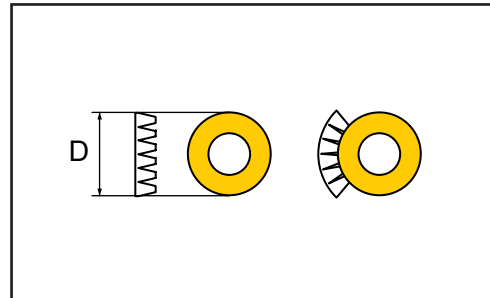
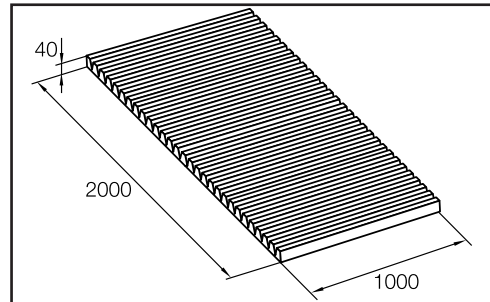
Foam pads are used for partial absorption/distribution of expansion movements. The application is restricted to first time expansion movements of max. 84 mm and a max. continuous surface temperature of the outer casing of 50° C.

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: λ (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 - Foam pad

Accessories

Component No. 1997

Product No. 1997 0000 016 000

Cross-linked foil laminate to be wrapped around the foam pads to prevent sand from coming between pad and outer casing.

Delivered in coils of 160 m

Width: 1000 mm

Thickness: 5 mm

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

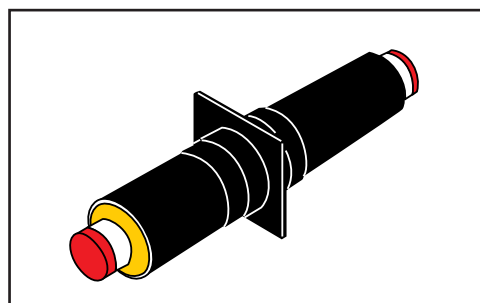
Preinsulated anchor.

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

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

Contents

- General
- BandJoint
- EWJoint
- SX-WPJoint
- BXJoint
- BXSJoint
- B2SJoint
- BSJoint
- C2LJoint

The Bonded Single Pipe Casing joints - General

Joints	<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>
Weld joints	<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.</p> <p>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.</p> <p>Weld strips are delivered separately and is 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> <p>When crossing rivers, harbours, lakes or the like it is recommended to install a double EWJoint. Please contact our Technical Department.</p>
Cross-linked joints	<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>
HDPE shrink joints	<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 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

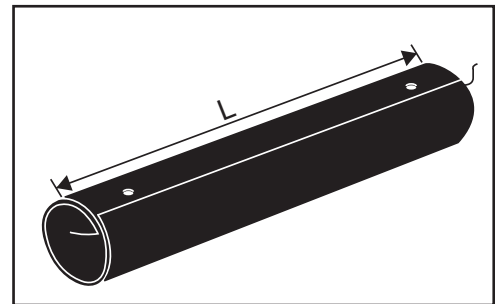
LOGSTOR WeldMaster is used to weld BandJoints.

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

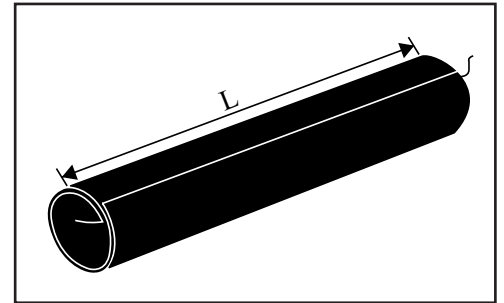
BandJoint length L, mm	Casing dimension, mm	
	90-125	140-200
570 (STD)	x	x
830 (XL)*	x	x

*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 installation.
 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	x
1020*	x	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.

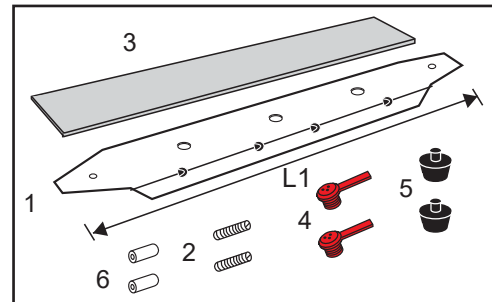
When ordering state insulation series, and that foam pack must be included in the delivery.

The Bonded Single Pipe Casing joints - BandJoint

Depth guard

The accessory set contains:

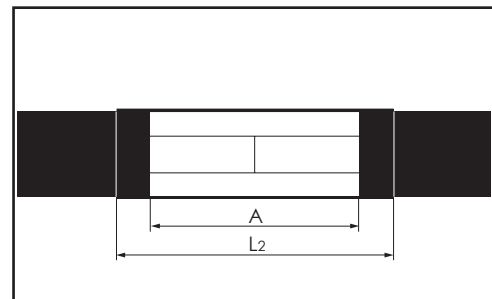
1. Depth guard
2. Screws
3. Felt pad
4. Venting plugs
5. Weld plugs
6. Insulator feet



The length of the depth guard L_1 is determined by the length of the cut.

A = cut length

L_2 = BandJoint length



Component overview/data

Component No. 5606

Depth guard

Width, mm	Casing dimension, mm	A mm	L_2 mm	L_1 mm	No. of screws and insulator feet per depth guard
Depth guard STD (40)	90-200	420-455	570	500	2
Depth guard XL* (40)	90-200	680-715	830	760	4
Depth guard STD (70)	225-1400	420-455	630	500	2
Depth guard XXL** (70)	225-1400	810-845	1020	890	4

* 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

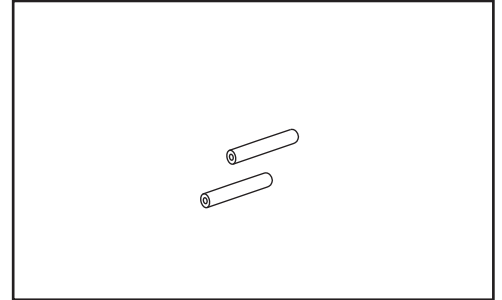
Screws: PPS or steel

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.

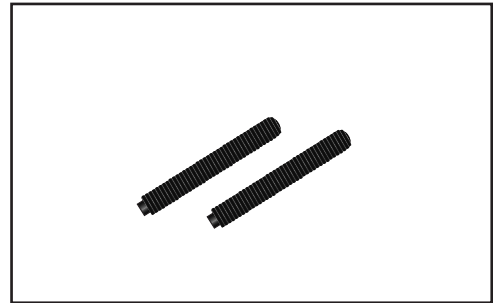
Materials

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 0010 002 100 120 mm long screw: 1995 0010 002 120 150 mm long screw: 1995 0010 002 150

Materials

Screws: Steel

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.

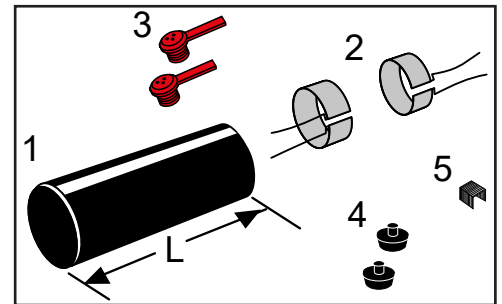
The joint is welded together with the outer casing by means of a loose weld strip between the joint and the outer casing. LOGSTOR WeldMaster is used to weld the EWJoint.

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 $\geq \varnothing 250$ 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.

The Bonded Single Pipe Casing joints - EWJoint

Weld strip Is used to weld together the joint and the outer casing.
Weld strips, venting and weld plugs for 1 joint are delivered together in a bucket.

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, \varnothing out. mm	Product Nos.
90-400	9050 0000 031 053
$\geq \varnothing$ 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 for dimensions \varnothing 90-450 mm and shrinkable in the entire length for dimensions \varnothing 500-710 mm. 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 \varnothing 90-450 mm

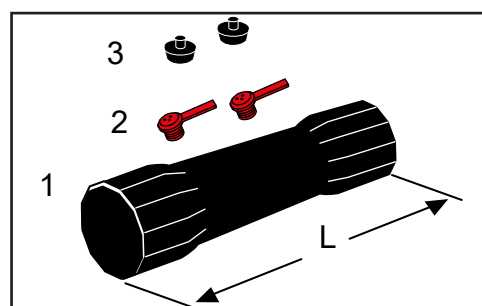
The SX-WPJoint consists of:

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 \varnothing 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

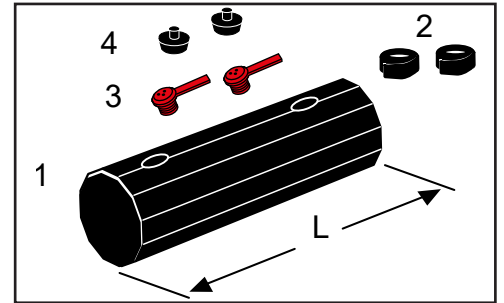
The SX-WPJoint consists of:

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:

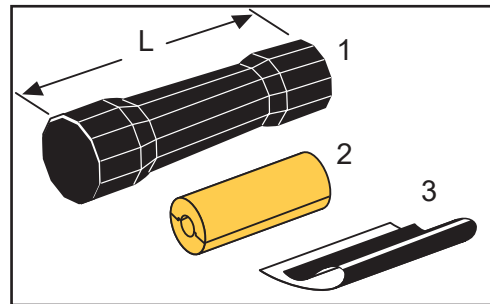
1. PEX shrink sleeve with integrated hot-melt and mastic
2. Insulation shells
3. Shrink film

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, L: 780 mm.

The Bonded Single Pipe Casing joints - BXJoint

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

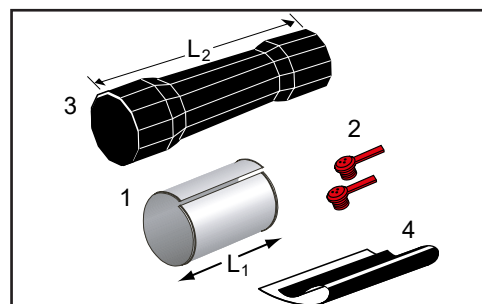
BXSJoint consists of:

1. Wrap for foaming
2. Venting plugs
3. Shrink sleeve with integrated hotmelt and 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, L2: 780 mm.

Wrap length L1: 500 mm.

The Bonded Single Pipe 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.

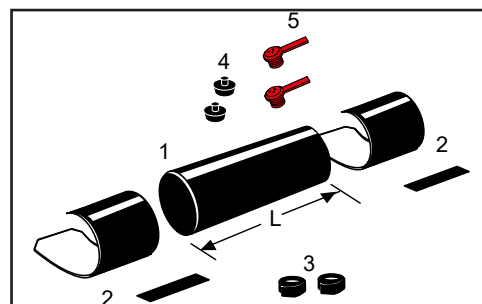
When ordering state insulation series, and that foam pack must be included in the delivery.

The Bonded Single Pipe Casing joints - B2SJoint

Application The B2SJoint is used for outer casing dimensions \varnothing 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 $\geq \varnothing$ 250 mm in standard length can be extrusion welded.

Materials

Shrink sleeve: HDPE
 Wrap: PEX with PIB-based mastic and hotmelt
 Sealing tape: PIB-based mastic
 Venting plugs: Polypropylene
 Weld plugs: HDPE

The Bonded Single Pipe Casing joints - B2SJoint

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.

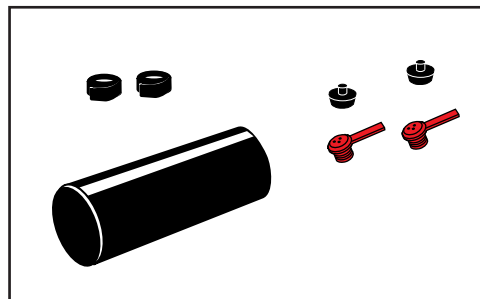
Description The BSJoint set consists of:

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 mastic

Venting plugs: Polypropylene

Weld plugs: HDPE

The Bonded Single Pipe Casing joints - BSJoint

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:

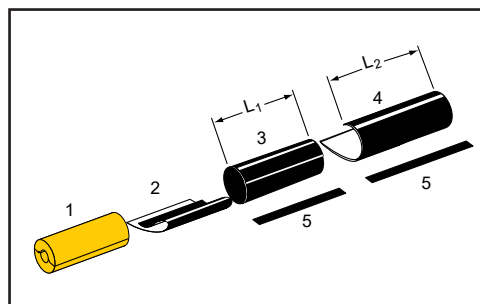
1. Insulation shells
2. Shrink film
3. Shrink sleeve with integrated hotmelt
4. Shrink wrap
5. Closure patches

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 - C2Joint 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.

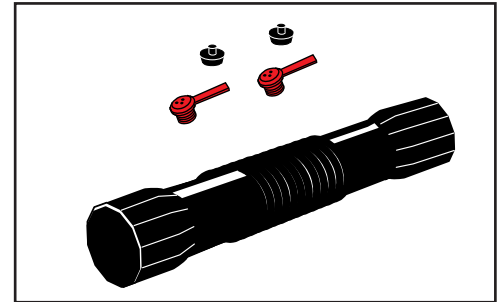
Description A SXB-WPJoint consists of:

1. Shrink sleeve with a flexible bending zone. The sleeve ends contain hotmelt and 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)

Mastic: PIB-based mastic

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.

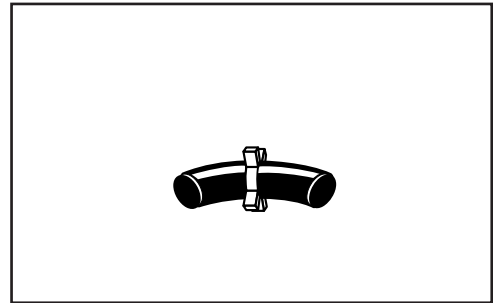
To be foamed with foam pack, component No. 0700. When ordering state insulation series, and that foam pack must be included in the delivery.

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	<p>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.</p> <p>90° bends can be used for all installation methods.</p> <p>For 45° certain restrictions apply. See Design.</p>
Description	<p>As a standard available in 45° and 90°.</p> <p>All preinsulated bends have embedded copper wires for surveillance.</p> <p>Bends in other angles is available to order in 5° intervals.</p> <p>Bends in 5°-40° angles have the same leg length as 45° bends.</p> <p>Bends in 50° - 85° angles have the same leg length as 90° bends.</p>
Materials	<p>All materials are like for straight pipes: Steel/PUR/PE-HD.</p>

The Bonded Single Pipe Directional changes - Preinsulated bend

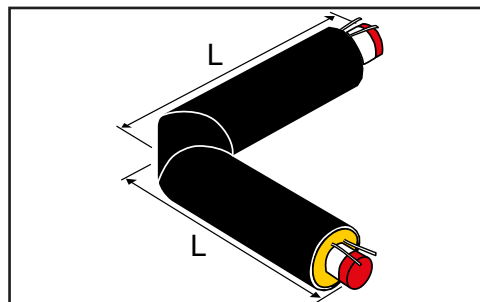
Bend 90°

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 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	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

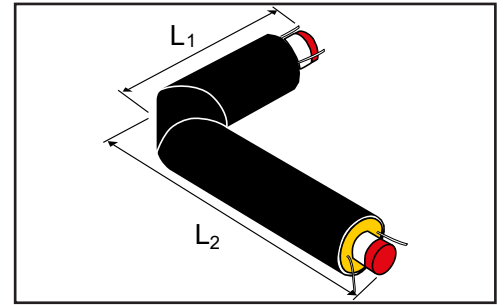
The Bonded Single Pipe Directional changes - Preinsulated bend

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	1000	1500
33.7	90	110	125	1000	1500
42.4	110	125	140	1000	1500
48.3	110	125	140	1000	1500
60.3	125	140	160	1000	1500
76.1	140	160	180	1000	1500
88.9	160	180	200	1000	1500
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

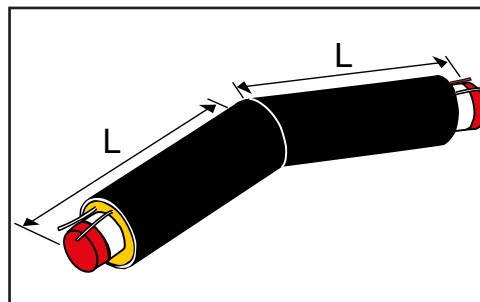
Bend 45°

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

The Bonded Single Pipe

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

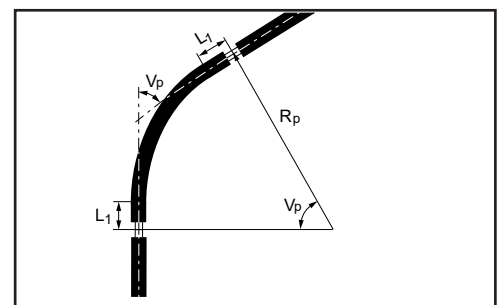
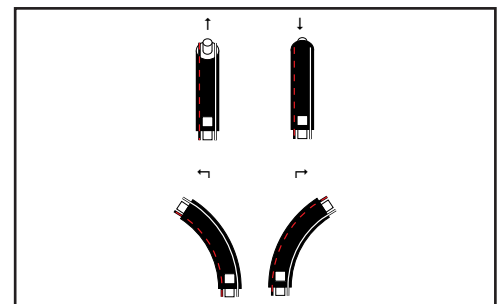
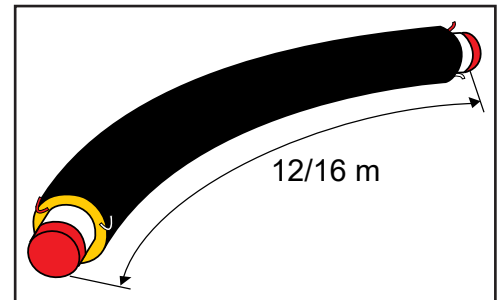
Tol = Tolerance of angle, degrees

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° intervals.

However, for dimensions larger than DN500 with 1 decimal place.

In addition the max. bending angle, v_p must be determined in relation to the stress level under which it is being installed, see Design.



The Bonded Single Pipe

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

Contents

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:

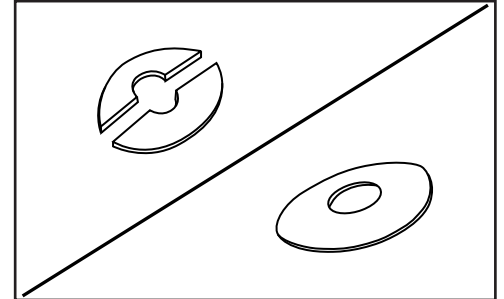
- T-piece with dimensional offset (45°)
- T-piece parallel (90°)
- T-piece straight

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.

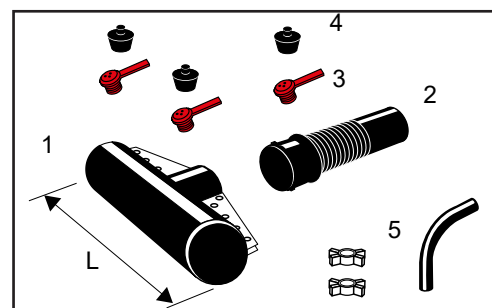
The SXT-WPJoint can be used together with a hot tapping valve. The insulation thickness around the valve casing will be thinner.

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 (to be ordered separately)



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	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

L = 680 mm, if branch is 90 - 140 mm and L = 720 mm, if branch is 160 - 200 mm

The Bonded Single Pipe Branches - SXT-WPJoint

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

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

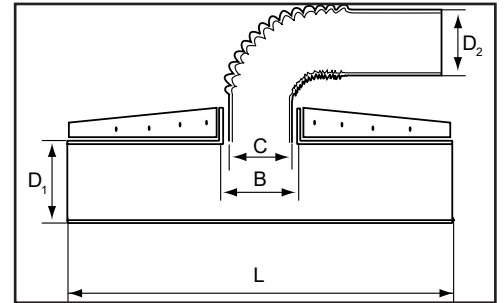
The Bonded Single Pipe Branches - SXT-WPJoint

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.

Measurements B and C are external diameters.



Component overview/data

Component No. 5210

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

Main pipe joint			Branch pipe joint D ₂ , mm					
D ₁ mm	B mm	L mm	77-90	90-110	110-125	125-140	140-160	180-200
			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 - 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.

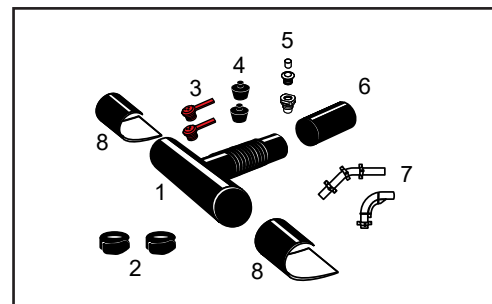
The TSJoint can be used together with a hot tapping valve. The insulation thickness around the valve casing will be thinner.

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

Description

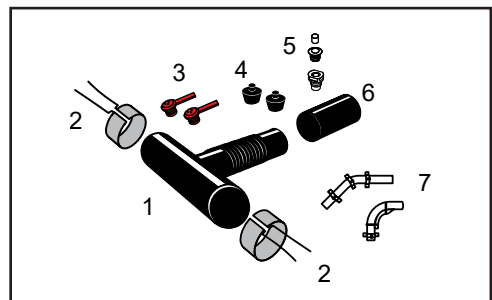
The TSJoint with mastic consists of:

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 (to be ordered separately)
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 (to be ordered separately)



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 D ₂ mm	Main pipe D ₁ mm															
	90	110	125	140	160	180	200	225	250	280	315	355	400	450	500	560
90-125	x*	x**	x	x	x	x	x	x	x	x	x	x	x	x	x	x
140-160					x***	x***	x	x	x	x	x	x	x	x	x	x

Length T-joint main pipe = 650 mm

* Max branch ø90 mm.

** Max branch ø110 mm*** Max branch ø140 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.
Weld strips, venting and weld plugs for 1 joint are delivered together in a bucket.

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

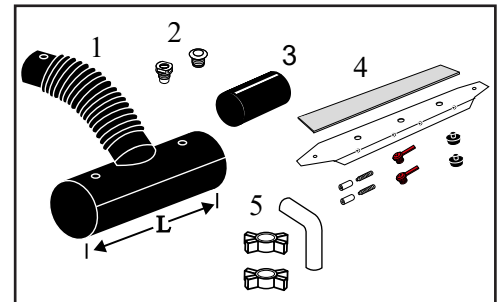
Application A BandJoint-branch Flextra is welded onto the main pipe. The branch is sealed with mastic and a collar.

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 (to be ordered separately)



Component overview/data Component No. 5640

BandJoint-branch Flextra

Branch	Main pipe, ø mm								
	125	140	160	180	200	225	250	280	315
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

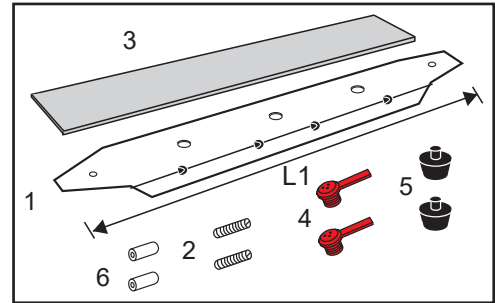
Accessories To be foamed with foam packs, component No. 0700.
 When ordering state insulation series, and that delivery must include foam packs.
 Reinforcement plate to reinforce the main pipe, if necessary, component No. 5426.

The Bonded Single Pipe Branches - BandJoint-branch Flextra

Depth guard

The set contains:

1. Depth guard
2. Screws
3. Felt pad
4. Venting plugs
5. Weld plugs
6. Insulator feet



Component overview/data

Component No. 5606

Depth guard

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

Materials

Depth guard: Hot galvanised plate

Felt pad: Felt

Screws: 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.

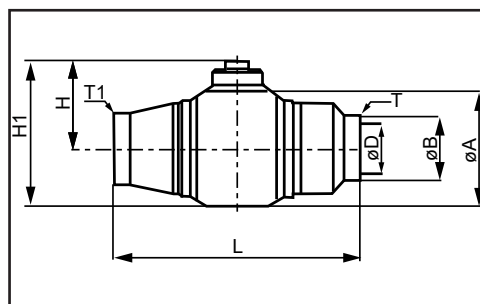
Max. pressure closed valve 16 bar. Operating pressure after establishment of branch: 25 bar.

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

For further details, please see the product data sheet of the valve supplier.

Danfoss JIP

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



Component overview/data

Component No. 4280

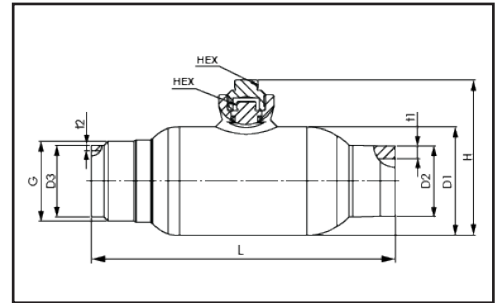
Danfoss JIP - Reduced passage

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	D3 mm	Wall thickness, mm		Bore mm	H mm	L mm	D1 mm	D2 mm	G	HEX key
		t2	t1							
20	26.9	2.3	5.4	15	64.5	130	42.4	26.8	G 7/8	10*
25	33.7	2.6	6.0	20	73.1	143	51.0	33	G 1 1/8	10*
32	42.4	2.6	6.0	25	79.8	150	57.0	38	G 1 1/2	10*
40	48.3	2.6	6.9	32	99.3	188	76.1	47.8	G 1 3/4	10*
50	60.3	2.9	7.0	39	111.0	230	88.9	56	G 2 1/4	10*
65	76.1	2.9	7.5	49	131.0	271	108.0	64	M80x3/ M64x2	13
80	88.9	3.2	8.0	63	151.1	260	127.0	80.5	M95x3/ M76x2	13
100	114.3	3.6	9.0	78	179.3	284	152.4	97	M120x3/ M95x2	19
*10 mm hexagon key operates pipe plug. 12 mm key operates valve.										
Full passage										
DN	D3 mm	Wall thickness, mm		Bore mm	H mm	L mm	D1 mm	D2 mm	G	HEX key
		t2	t1							
20	26.9	2.3	6.0	20	73.1	143	51	33	G 1 1/8	10
25	33.7	2.6	6.0	25	79.8	150	57	38	G 1 1/2	10
32	42.4	2.6	6.9	32	99.3	188	76.1	47.8	G 1 3/4	10
40	48.3	2.6	7.0	39	111.0	230	88.9	58	G 2 1/4	10

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.

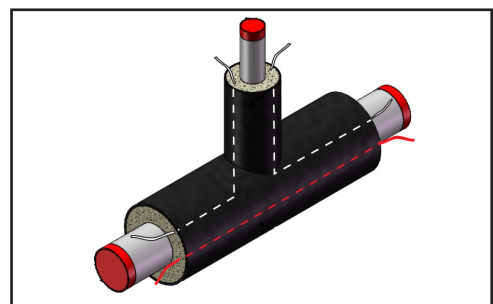
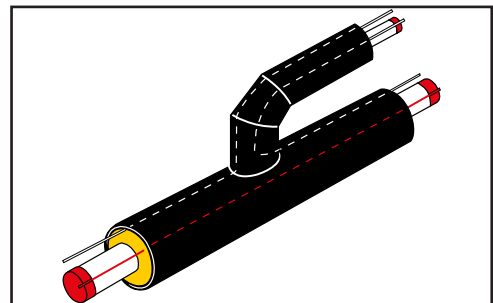
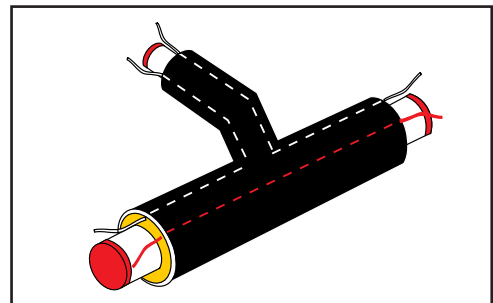
Preinsulated T-pieces are produced in accordance with EN 448.

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 finned wire.

The finned 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, 3500, 3600

Collared main pipe

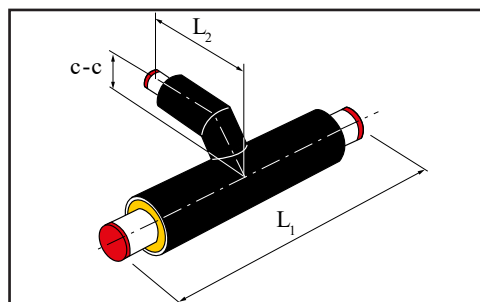
ød1 mm	Wall thick. mm
33.7	3.6
42.4	4.0
48.3	4.0
60.3	4.5
76.1	4.5
88.9	5.0
114.3	5.6
139.7	5.6
168.3	6.3
219.1	7.1
273.0	8.0
323.9	8.0

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	670							
		170							
33.7/90	1000	670	670						
		170	170						
42.4/110	1000	678	678	685					
		178	178	185					
48.3/110	1000	678	678	685	685				
		178	178	185	185				
60.3/125	1200	685	685	693	693	700			
		185	185	193	193	200			
76.1/140	1200	695	695	703	703	710	720		
		195	195	203	203	210	220		
88.9/160	1200	705	705	713	713	720	730	740	
		205	205	213	213	220	230	240	
114.3/200	1200	728	728	735	735	743	753	763	835
		228	228	235	235	243	253	263	285
139.7/225	1200	740	740	748	748	755	765	775	848
		240	240	248	248	255	265	275	298
168.3/250	1200	755	755	763	763	770	780	790	863
		255	255	263	263	270	280	290	313
219.1/315	1500	793	793	800	800	808	818	828	900
		293	293	300	300	308	318	328	350
273.0/400	1500	840	840	848	848	855	865	875	948
		340	340	348	348	355	365	375	398
323.9/450	1500	865	865	873	873	880	890	900	973
		365	365	373	373	380	390	400	423
355.6/500	1500	895	895	903	903	910	920	930	1003
		395	395	403	403	410	420	430	453
406.4/560	1600	930	930	938	938	945	955	965	1038
		430	430	438	438	445	455	465	488
457.0/630	2000	970	970	978	978	985	995	1005	1078
		470	470	478	478	485	495	505	528
508.0/710	2000	1015	1015	1023	1023	1030	1040	1050	1123
		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	860								
		310								
168.3/250	1200	875	890							
		325	340							
219.1/315	1500	912	927	1015						
		363	378	415						
273.0/400	1500	960	975	1063	1218					
		410	425	463	510					
323.9/450	1500	985	1000	1088	1243	1229				
		435	450	488	535	560				
355.6/500	1500	1015	1030	1118	1243	1239	1301			
		465	480	518	565	590	620			
406.4/560	1600	1050	1065	1153	1268	1264	1326	1353		
		500	515	553	600	625	655	690		
457.0/630	2000	1090	1105	1193	1288	1294	1346	1373	1454	
		540	555	593	640	665	695	730	770	
508.0/710	2000	1135	1150	1238	1303	1299	1379	1414	1505	1549
		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 $\varnothing d_2$, series 2								
		26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3	
$\varnothing d_1/D_1$ mm	L1 mm	Length L2, mm C-C mm								
26.9/110	1000	670								
		170								
33.7/110	1000	670	670							
		170	170							
42.4/125	1000	678	678	685						
		178	178	185						
48.3/125	1000	678	678	685	685					
		178	178	185	185					
60.3/140	1200	685	685	693	693	700				
		185	185	193	193	200				
76.1/160	1200	695	695	703	703	710	720			
		195	195	203	203	210	220			
88.9/180	1200	705	705	713	713	720	730	740		
		205	205	213	213	220	230	240		
114.3/225	1200	728	728	735	735	743	753	763	835	
		228	228	235	235	243	253	263	285	
139.7/250	1200	740	740	748	748	755	765	775	848	
		240	240	248	248	255	265	275	298	
168.3/280	1200	755	755	763	763	770	780	790	863	
		255	255	263	263	270	280	290	313	
219.1/355	1500	793	793	800	800	808	818	828	900	
		293	293	300	300	308	318	328	350	
273.0/450	1500	840	840	848	848	855	865	875	949	
		340	340	348	348	355	365	375	398	
323.9/500	1500	865	865	873	873	880	890	900	973	
		365	365	373	373	380	390	400	423	
355.6/560	1500	895	895	903	903	910	920	930	1003	
		395	395	403	403	410	420	430	453	
406.4/630	1600	930	930	938	938	945	955	965	1038	
		430	430	438	438	445	455	465	488	
457.0/710	2000	970	970	978	978	985	995	1005	1078	
		470	470	478	478	485	495	505	528	
508.0/800	2000	1015	1015	1023	1023	1030	1040	1050	1123	
		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	860								
		310								
168.3/280	1200	875	890							
		325	340							
219.1/355	1500	912	927	1015						
		363	378	415						
273.0/450	1500	960	975	1063	1218					
		410	425	463	510					
323.9/500	1500	985	1000	1088	1243	1229				
		435	450	488	535	560				
355.6/560	1500	1015	1030	1118	1243	1239	1301			
		465	480	518	565	590	620			
406.4/630	1600	1050	1065	1153	1268	1264	1326	1353		
		500	515	553	600	625	655	690		
457.0/710	2000	1090	1105	1193	1288	1294	1346	1373	1455	
		540	555	593	640	665	695	730	770	
508.0/800	2000	1135	1150	1238	1303	1299	1379	1414	1504	1549
		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 $\varnothing d_2$, series 3							
		26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3
$\varnothing d_1/D_1$ mm	L1 mm	Length L2, mm C-C mm							
26.9/125	1000	690							
		190							
33.7/125	1000	690	690						
		190	190						
42.4/140	1000	697	697	705					
		198	198	205					
48.3/140	1000	697	697	705	705				
		198	198	205	205				
60.3/160	1200	707	707	715	715	725			
		208	208	215	215	225			
76.1/180	1200	717	717	725	725	735	745		
		218	218	225	225	235	245		
88.9/200	1200	727	727	735	735	745	755	765	
		228	228	235	235	245	255	265	
114.3/250	1200	752	752	760	760	770	780	790	865
		253	253	260	260	270	280	290	315
139.7/280	1200	767	767	775	775	785	795	805	880
		268	268	275	275	285	295	305	330
168.3/315	1200	785	785	792	792	802	812	822	897
		285	285	293	293	303	313	323	348
219.1/400	1500	827	827	835	835	845	855	865	940
		328	328	335	335	345	355	365	390
273.0/500	1500	877	877	885	885	895	905	915	990
		378	378	385	385	395	405	415	440
323.9/560	1500	908	908	915	915	925	935	945	1020
		408	408	415	415	425	435	445	470
355.6/630	1500	943	945	950	950	960	970	980	1055
		443	443	450	450	460	470	480	505
406.4/710	1600	983	983	990	990	1000	1010	1020	1095
		483	483	490	490	500	510	520	545
457.0/800	2000	1028	1028	1035	1035	1045	1055	1065	1140
		528	528	535	535	545	555	565	590
508.0/900	2000	1078	1078	1085	1085	1095	1105	1115	1190
		578	578	585	585	595	605	615	640

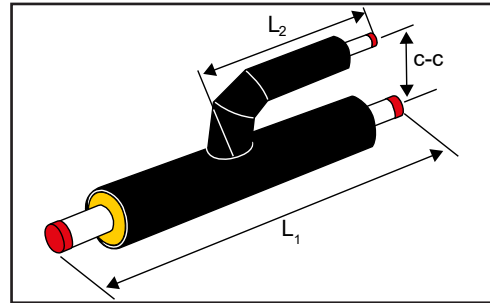
The Bonded Single Pipe Branches - Preinsulated T-piece 45°

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	895								
		345								
168.3/315	1200	912	930							
		363	380							
219.1/400	1500	955	972	1065						
		405	423	465						
273.0/500	1500	1005	1023	1115	1273					
		455	473	515	565					
323.9/560	1500	1035	1053	1145	1303	1294				
		485	503	545	595	625				
355.6/630	1500	1070	1088	1170	1308	1309	1376			
		520	538	570	630	660	695			
406.4/710	1600	1110	1128	1220	1338	1339	1406	1438		
		560	578	620	670	700	735	775		
457.0/800	2000	1155	1173	1265	136	1374	1431	1463	1549	
		605	623	665	715	745	780	820	865	
508.0/900	2000	1205	1223	1315	1383	1384	1469	1509	1604	1654
		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	585	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**

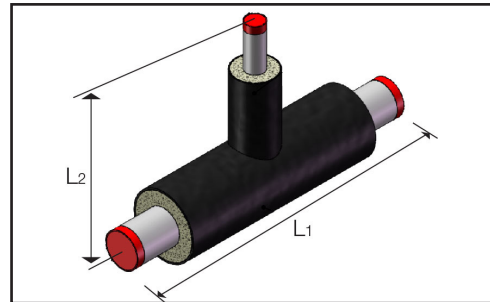
Component No. 3600

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

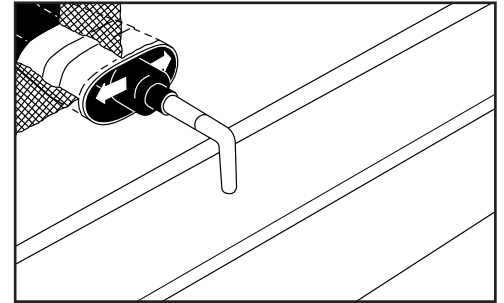
Main pipe				Branch d2 series 1, 2, and 3														
d1 mm	Outer casing D1, mm Series			L1 mm	26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3	139.7	168.3	219.1	273.0	323.9	
	1	2	3		L2, mm													
26.9	90	110	125	1000	500													
33.7	90	110	125	1000	500	500												
42.4	110	125	140	1000	500	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	800
355.6	500	560	630	1500	800	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	800
457.0	630	710	800	2000	900	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	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

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

Valve arrangements	<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> <p>Enquiry may be made for valves with full passage.</p>
Isolation valve	<p>Isolation valve for \varnothing 33.7 - 323.9 mm. Larger dimensions are made to order.</p> <p>Component No. 4200.</p>
Isolation valve with 1 service valve	<p>Isolation valve for \varnothing 48.3 - 323.9 mm.</p> <p>Larger dimensions are made to order.</p> <p>Component No. 4220.</p>
Isolation valve with 2 service valves	<p>Isolation valve for \varnothing 48.3 - 323.9 mm.</p> <p>Larger dimensions are made to order.</p> <p>Component No. 4240.</p>
Extension spindle	<p>Permanent extension spindle for \varnothing 33.7 - 323.9 mm.</p> <p>Component No. 4285.</p>
Covers	<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>
Separate venting and draining	<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>
Disposable valve	<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/mm². Working pressure: 25 bar.

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

As a standard preinsulated isolation valves are delivered with the surveillance wires, extracted into a loop as an isolated wire under the end cap at the spindle top. Where the isolated wire exits under the end-cap it is coated with 25 mm mastic on the outer as well as the inner side.

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.

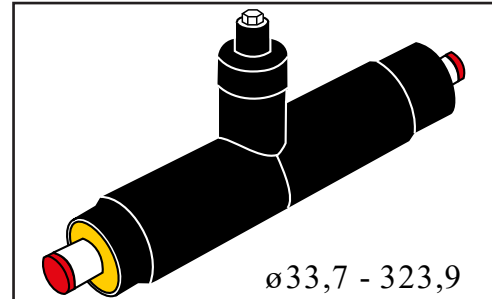
As a standard valves with reduced passage are delivered. On enquiry valves with full passage may be delivered.

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

The Bonded Single Pipe Isolation valve

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.

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

The Bonded 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/mm².

Working pressure: 25 bar.

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

As a standard preinsulated isolation valves are delivered with the surveillance wires, extracted into a loop as an isolated wire under the end cap at the spindle top. Where the isolated wire exits under the end-cap it is coated with 25 mm mastic on the outer as well as the inner side.

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.

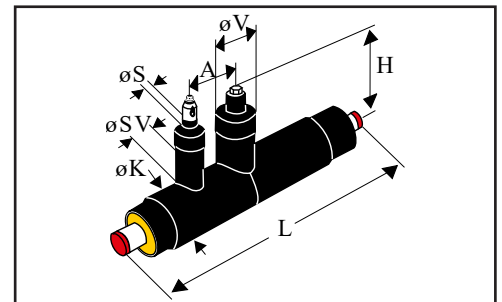
As a standard valves with reduced passage are delivered. On enquiry valves with full passage may be delivered.

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

The Bonded Single Pipe Isolation valve with 1 service valve

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.

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
42.4	110	1500	485	125	110	175	33.7/110	19	
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
42.4	125	1500	485	125	110	175	33.7/110	19	
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 1 service valve

Component overview/data

Component No. 4220

Isolation valve with 1 service valve - 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
42.4	140	1500	485	125	110	175	33.7/110	19	
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/mm².

Working pressure: 25 bar.

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

As a standard preinsulated isolation valves are delivered with the surveillance wires, extracted into a loop as an isolated wire under the end cap at the spindle top. Where the isolated wire exits under the end-cap it is coated with 25 mm mastic on the outer as well as the inner side.

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.

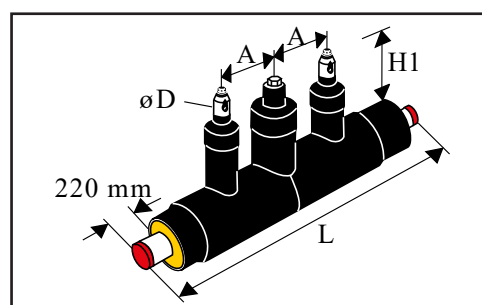
As a standard valves with reduced passage are delivered. On enquiry valves with full passage may be delivered.

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

The Bonded Single Pipe Isolation valve with 2 service valves

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.

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
42.4	110	1500	485	125	110	175	33.7/110	19	
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
42.4	125	1500	485	125	110	175	33.7/110	19	
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

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
42.4	140	1500	485	125	110	175	33.7/110	19	
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.

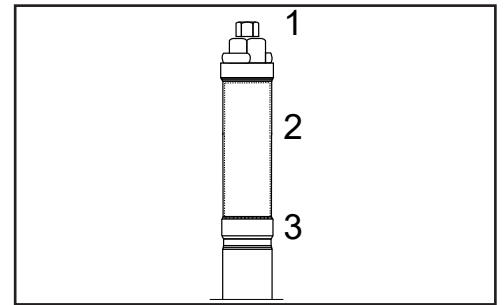
Description For isolation valves in dimensions \varnothing 33.7 - 323.9 mm the permanent extension arrangement consists of:

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.

For 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

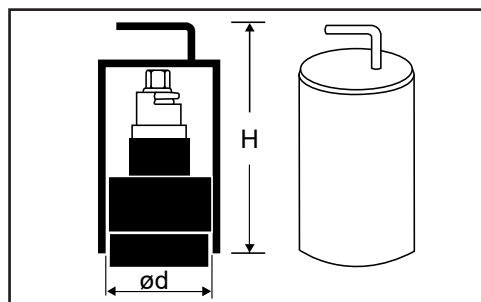
The galvanized cover is used in water-logged areas.

At periodic floodings the cover effectively prevents water from penetrating into the spindle top and the venting/draining valves and exposing these to corrosion or deposits.

Description

The cover is not fixed, but simply placed over the spindle top or the venting/draining arrangement.

The weight of the cover prevents it from being lifted by floods.



Component overview/data

Component No. 4315

Cover

Product No.	Spindle top \varnothing mm	Vent./drain. arrangement \varnothing mm	$\varnothing d$ 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

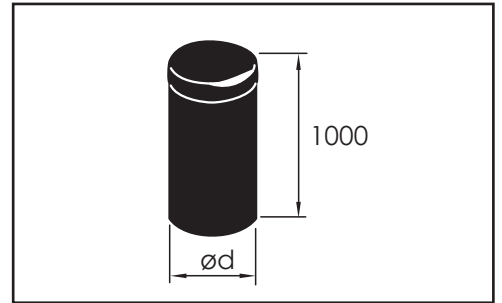
Materials

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.



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.

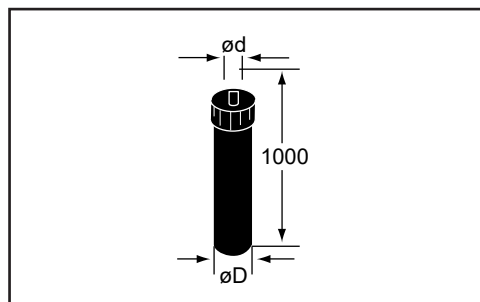
This simplifies the design, saves special components and means less joints.

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

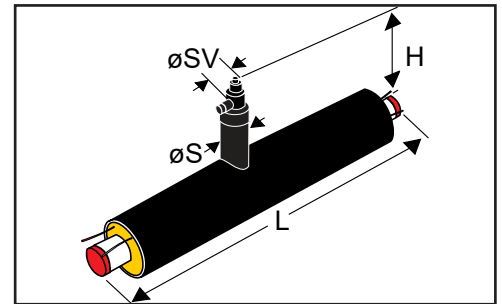
Application Preinsulated service valves are used for venting or drainage in wanted spots in the pipe system.

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.

Surveillance wires go straight through the preinsulated service valve.



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.

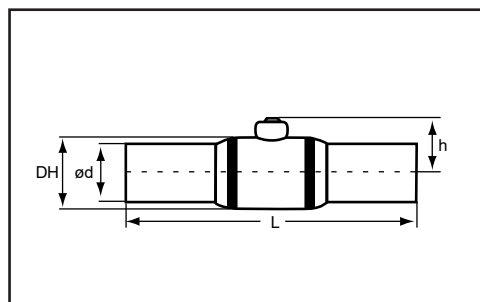
When the pipeline is extended and the valve is opened the spindle is fully welded.

Please have the internal space requirements in mind, when choosing the dimension of the temporary end fitting and the later permanent casing joint. This depends on whether the valve has a reduced or a full passage.

For further details, see the product data sheet of the valve supplier.

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	43	42	26.9	230	47	51
33.7	230	48	51	33.7	230	52	57
42.4	260	52	57	42.4	260	62	76
48.3	260	61	76	48.3	260	67	89
60.3	300	67	89	60.3	300	77	108
76.1	360	77	108	76.1	360	88	127
88.9	370	88	127	88.9	370	103	153
114.3	390	103	153	114.3	390	120	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 chamber 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/mm²

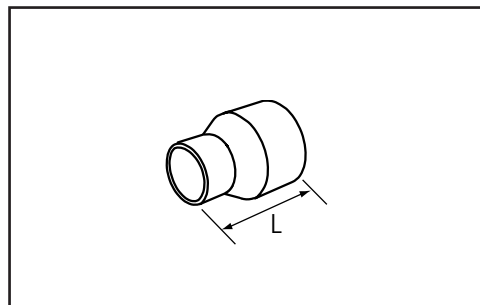
2 dimensional offset: max. axial stress 150 N/mm²

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:

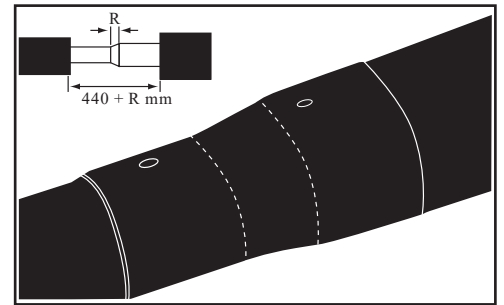
Component No. 5028.

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

Weld strip	Is used to weld together the joint and the outer casing. Weld strips, venting and weld plugs for 1 joint are delivered together in a bucket.
Component overview/data	Component No. 5556
Materials	Weld strip: Electro-plated mesh

The Bonded Single Pipe Reductions - SX-WPJoint reduction

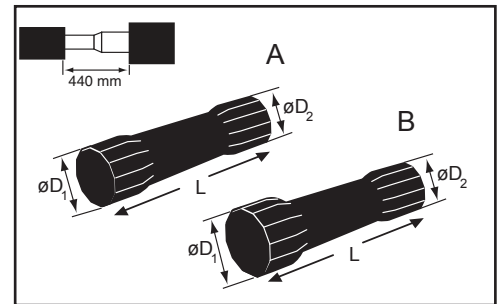
Application

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

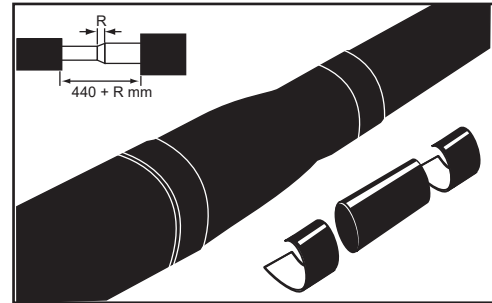
The Bonded Single Pipe Reductions - B2SJoint reduction

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.



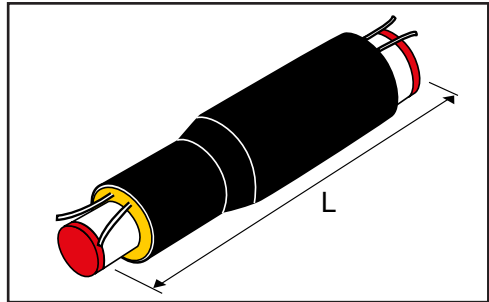
Component overview/data

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

Application	<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/mm²</p> <p>2 dimensional offsets: max. axial stress 150 N/mm²</p> <p>In connection with a reductions the design instructions must be complied with.</p>	
Description	<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>	
Component overview/data	Component No. 4900	
Materials	<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			

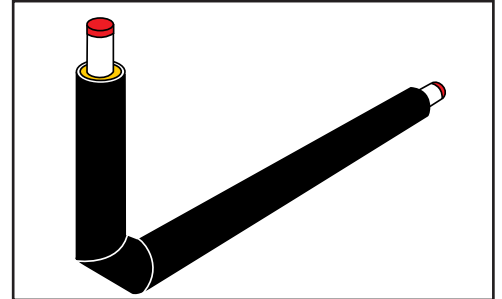
The Bonded Single Pipe Terminations - Overview

Description	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.
Contents	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

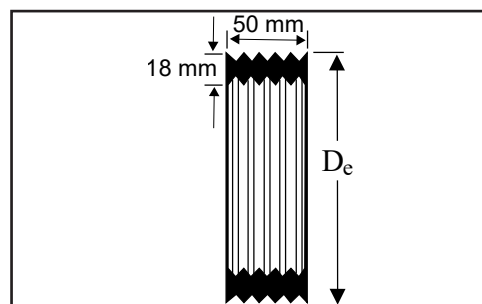
Where pipes are installed through masonry - at wells, footings etc. - wall entry sleeves are installed as a seal against water ingress.

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 are required, please contact LOGSTOR.

Description

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		

Materials

NR-SBR rubber

The Bonded Single Pipe Terminations - Radon-tight 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.

Description This wall entry sleeve is radon-tight.
The wall entry sleeve can withstand a water pressure of 4 m, if there is no movement.
If there are minor movements ± 5 mm, the wall entry sleeve can withstand a water pressure of 1 m.

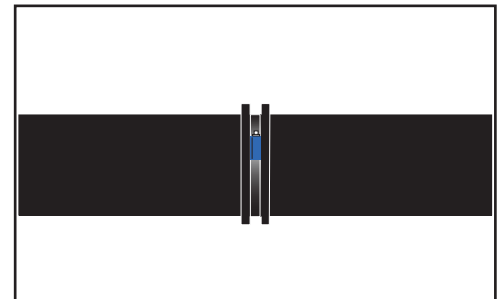
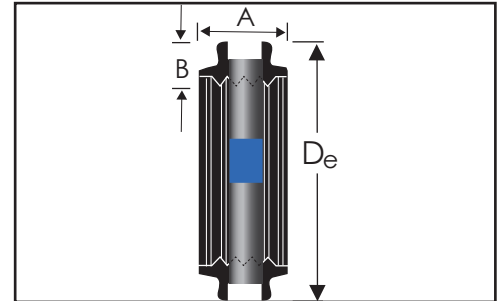
Dimensions:

110 – 180 mm:

- A = 40 mm and B = 22 mm

200 - 900 mm:

- A = 50 mm and B = 27 mm



Component overview/data

Component No. 5800

Materials

Rubber: EPDM

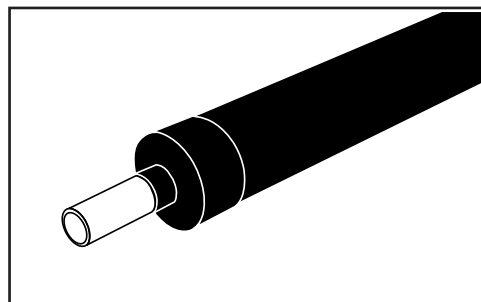
Strap: Steel (Aluzink)

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

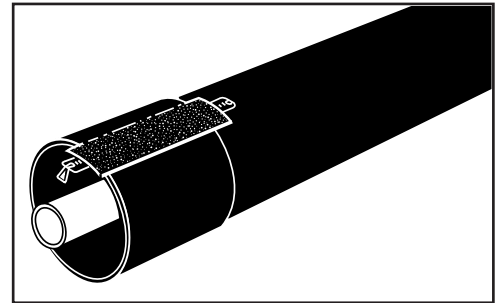
Steel pipe ø out. mm	Outer casing, mm DHEC No.													
	90	110	125	140	160	180	200	225	250	280	315	355	400	450
26.9	2100	2200	2200	2300										
33.7	2100	2200	2200	2300	2340									
42.4		2200	2200	2300	2340									
48.3		2300	2300	2300	2340									
60.3			2400	2400	2500	2500								
76.1				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
355.0														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

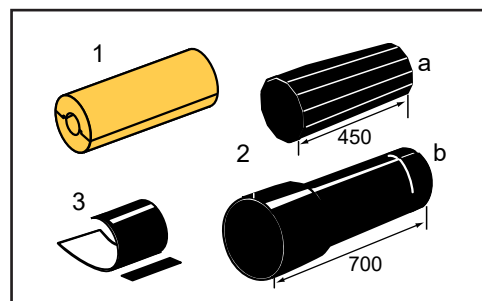
Application

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.

In connection with disposable valves end fittings for foaming are used.

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:

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

∅ 180-630 mm: Drifted PEHD

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

Accessories

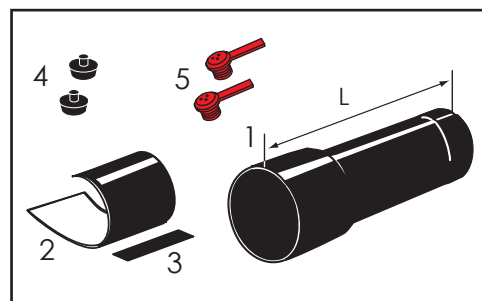
In connection with termination with end fitting use weld-on end, component number 1008.

The Bonded Single Pipe Terminations - End fitting for foaming

Application To terminate a pipe system with a \varnothing 90-630 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.

At disposable valves long end fittings are used.

Please pay attention to the required space in connection with disposable valves with full passage.

Component overview/data

Component No. 5700

End fitting for foaming

Outer casing \varnothing out. mm	L, mm	
	700	1000
90	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
500	x	x
560	x	x
630	x	x
710	x	
800	x	
900	x	

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.

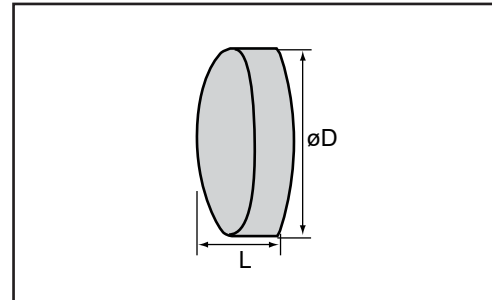
To be foamed with foam pack, component No. 0700.

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.

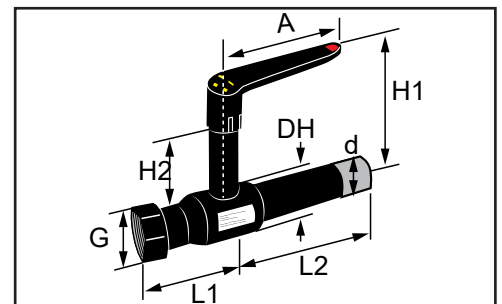
The operating handle is designed, so there is sufficient space for the insulation around the valve itself.

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

The handle can be turned 180°.

Description

Isolation valves with reduced and full passage.



Component overview/data

Component No. 4261

Valve with handle

Isolation valve with weld ends, reduced passage							
Dimension, d mm	L mm	H1 mm	H2 mm	A mm	DH mm		
26.9 x 2.3	230	47	115	140	42		
33.7 x 2.6	230	47	140	140	51		
42.4 x 2.6	260	48	124	140	57		
48.3 x 2.6	260	41	129	180	76		
60.3 x 2.9	300	41	135	180	89		
76.1 x 2.9	360	66	144	275	108		
88.9 x 3.2	370	66	154	275	127		
114.3 x 3.6	390	81	193	365	152		
Isolation valve with weld ends, full passage							
Dimension, d mm	L mm	H1 mm	H2 mm	A mm	DH mm		
26.9 x 2.3	230	111	54	75	38		
33.7 x 2.6	230	125	52	100	45		
42.4 x 2.6	260	131	52	100	56.5		
48.3 x 2.6	260	156	63	120	68		
60.3 x 2.9	290	165	63	120	85		

The Bonded Single Pipe Terminations - Valve with handle

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
33.7 x 2.6	1	56	115	125	52	100	45
42.4 x 2.6	1¼	67	130	131	52	100	56.5
48.3 x 2.6	1½	78	134	156	63	120	68
60.3 x 2.9	2	96	145	165	63	120	85

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 contiguously produced with diffusion barrier for insulating gases.

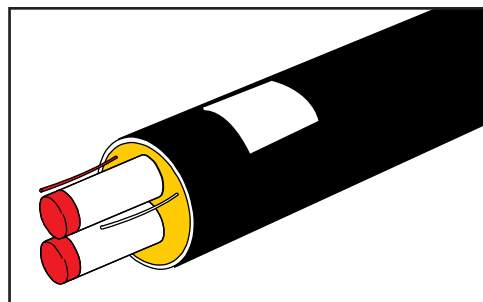
TwinPipes traditionally produced are delivered in casing dimension 125 mm to 710 mm.

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.

TwinPipe pipes and fittings are according to EN15698-1 and EN 15698-2.



The Bonded TwinPipe

General

Steel pipe	<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 $S < 3.2$ mm is supplied with straight ends. Wall thickness $S \geq 3.2$ is supplied with bevelled ends in a 30° angle, root face $1.6 \text{ mm} \pm 0.8 \text{ mm}$. 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>
Insulation	<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"> - Traditionally manufactured pipes (50°C): 0.027 W/m K. - Axial conti pipes (50°C): 0.023 W/m K. <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 www.logstor.com/Calculator.</p>
Outer casing	<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 $\leq 0.5 \text{ g/10 min}$</p> <p>Thermal stability: Oxydation induction time (OIT): $> 20 \text{ min}$ at 210° C</p> <p>Resistance against crack formation: Slow crack formation (notch sensitivity): $> 300 \text{ h}$ (notch, $4 \text{ MP}\alpha$, 80°C, 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>
Finished pipes	<p>Free service pipe end: $220 \text{ mm} \pm 10 \text{ mm}$</p> <p>Lengths, delivered: 6, 12 and 16 m</p>

The Bonded TwinPipe Pipes - Overview

Contents

Pipes

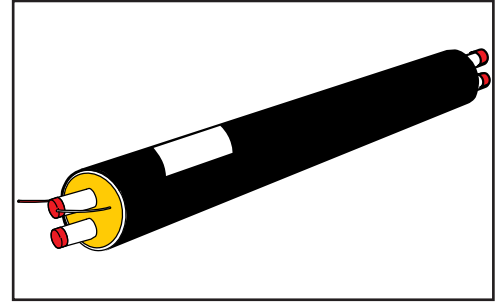
Zebra pipes

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

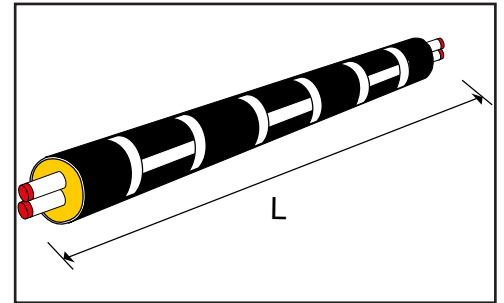
* 6 m TwinPipes are delivered traditionally produced.

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

Contents

General
BandJoint
EWJoint
SX-WPJoint
BXJoint
BXSJoint
B2SJoint
BSJoint
C2LJoint for foaming

The Bonded TwinPipe Casing Joints - General

Joints	<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>
Weld joints	<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>
Cross-linked joints	<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>
HDPE shrink joints	<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

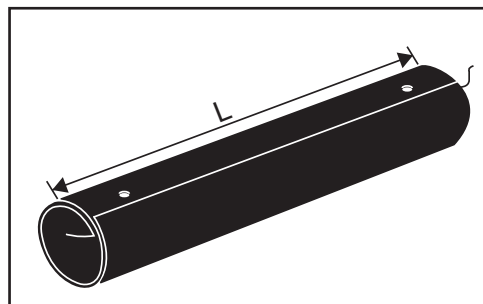
LOGSTOR WeldMaster is used to weld BandJoints.

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

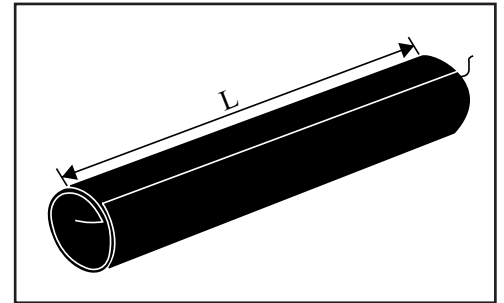
BandJoint length L, mm	Casing dimension, mm	
	90-125	140-200
570 (STD)	x	x
830 (XL)*	x	x

*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 ≥ 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

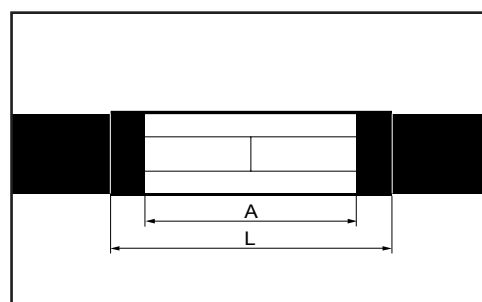
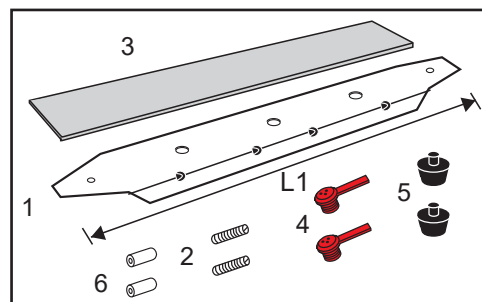
The accessory set contains:

1. Depth guard
2. Screws
3. Felt pad
4. Venting plugs
5. Weld plugs
6. Insulator feet

The length of the depth guard, L_1 , is determined by the length of the cut.

A = cut length

L_2 = BandJoint length



Component overview/data

Component No. 5606

Depth guard

Width, mm	Casing dimension, mm	A, mm	L_2 mm	L_1 mm	No. of screws and insulator feet per depth guard
Depth guard STD (40)	90-200	420-455	570	500	2
Depth guard XL* (40)	90-200	680-715	830	760	4
Depth guard STD (70)	225-710	420-455	630	500	2
Depth guard XXL** (70)	225-710	810-845	1020	890	4

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

Materials

Depth guard: Hot galvanised plate

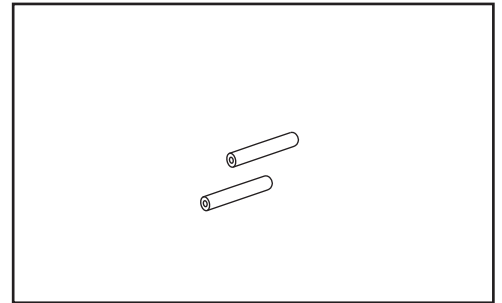
Felt pad: Felt

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

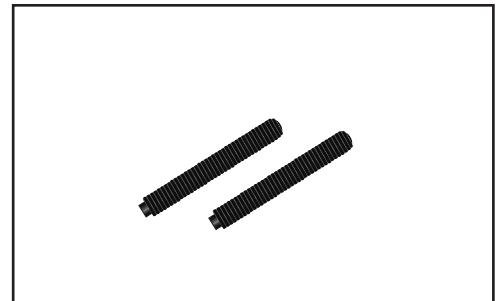
Long insulator feet

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

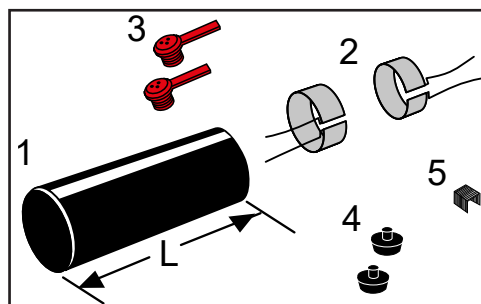
Materials Screws: Steel

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 sleeve is delivered wrapped in white PE foil.

The accessories 2-4 for one EWJoint 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

Shrink sleeve ≥ 250 mm standard length can be extrusion welded

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.
Weld strips, venting and weld plugs for 1 joint are delivered together in a bucket.

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, \varnothing out. mm	Product Nos.
90-400	9050 0000 031 053
$\geq \varnothing$ 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 for dimensions \varnothing 90-450 mm and shrinkable in the entire length for dimensions \varnothing 500-710 mm. 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 \varnothing 90-450 mm

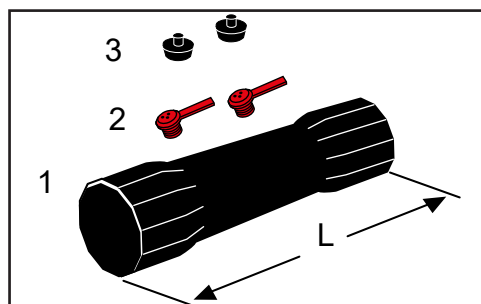
The SX-WPJoint consists of:

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 \varnothing 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

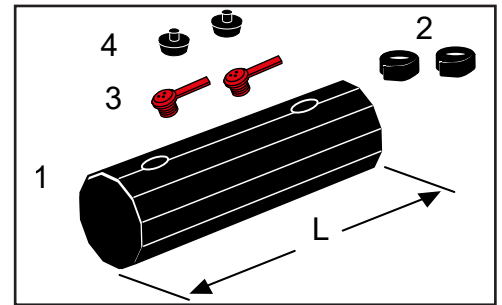
The SX-WPJoint consists of:

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

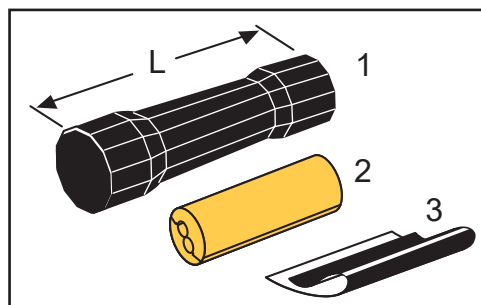
The BXJoint consists of:

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

Materials

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

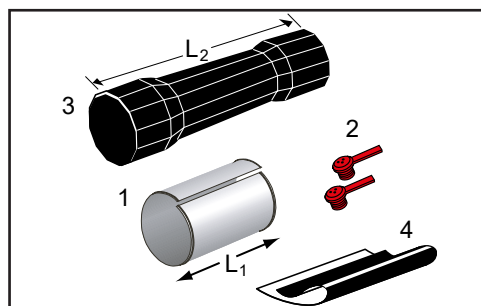
BXSJoint consists of:

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

Shrink sleeve and shrink film are delivered in 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															
	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

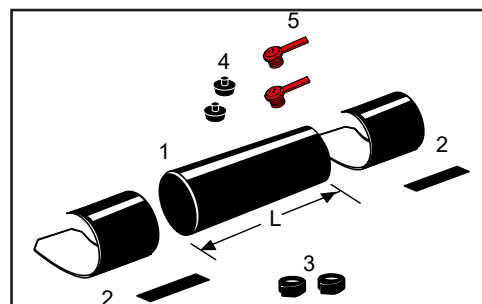
Delivered in white PE foil.

Store the sleeve vertically.

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

B2SJoint for E-Comp has a wall thickness for extrusion welding.

Shrink sleeve $\geq \varnothing$ 250 mm can be extrusion welded.



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 mastic
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.

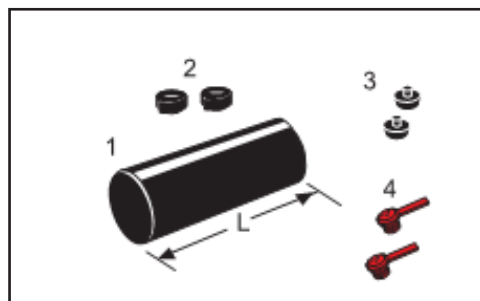
Description The BSJoint set consists of:

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 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.

The Bonded TwinPipe Directional changes

Contents

- 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 hotmelt and mastic

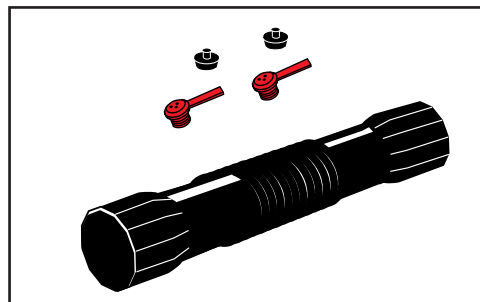
2. Venting plugs

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)

Mastic: PIB-based mastic

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.

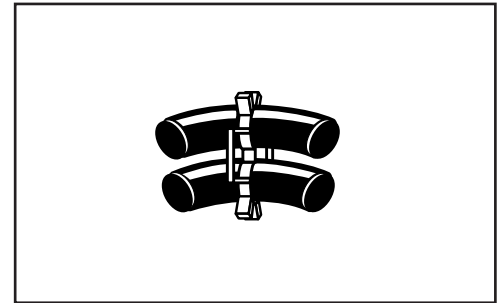
To be foamed with foam pack, component No. 0700. When ordering state insulation series, and that foam pack must be included in the delivery.

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

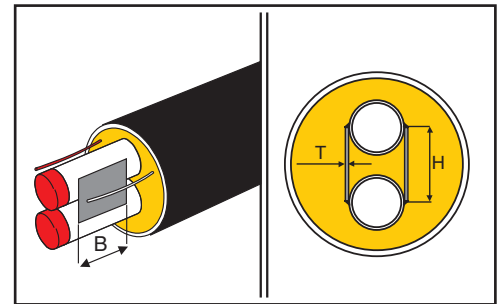
Series	Dimensions ød, mm										
	26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3	139.7	168.3	219.1
	Radius, mm										
1	140	140	140	145	160	175*	207.5*	270*	-	-	-
2	140	140	140	145	160	175*	222	-	-	-	-
3	140	140	140	145	160	190	222	-	-	-	-

*) 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

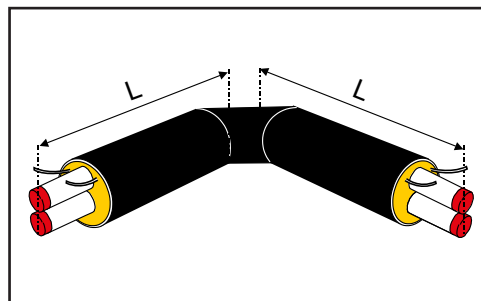
The Bonded TwinPipe

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

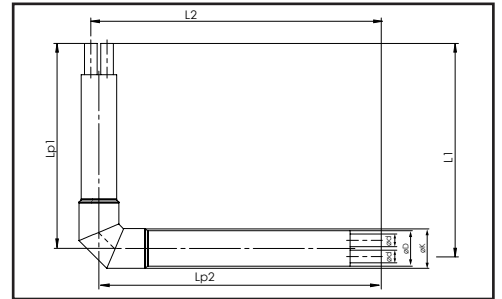
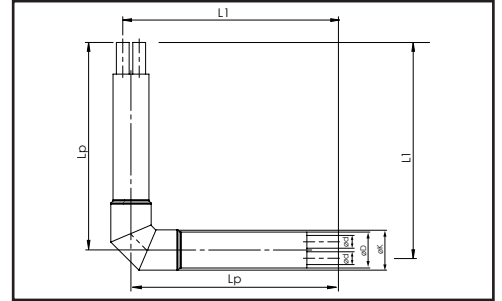
Directional changes - Vertical bend 90°

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.

1 x 1 m and 1.5 x 1.5 m:

1.5 x 4 m:



Component overview/data

Component No. 2591

Vertical bend

1 x 1 m								
d mm	Series 1		Series 2	Series 3	L1 mm	Lp mm		
	D, mm	K, mm	D, mm	D, mm				
2x26.9	125	-	140	160	1000	977		
2x33.7	140	-	160	180	1000	974		
2x42.4	160	-	180	200	1000	969		
2x48.3	160	-	180	200	1000	966		
2x60.3	200	-	225	250	1000	960		
2x76.1	225	-	250	280	1000	952		
2x88.9	250	280	280	315	1000	943		
2x114.3	315	-	355	400	1000	930		
2x139.7	400	-	450	500	1000	915		

The Bonded TwinPipe

Directional changes - Vertical bend 90°

**Component
overview/data
continued**

1.5 x 1.5 m								
d mm	Series 1		Series 2	Series 3	L1 mm	Lp mm		
	D, mm	K, mm	D, mm	D, mm				
2x26.9	125	-	140	160	1500	1477		
2x33.7	140	-	160	180	1500	1474		
2x42.4	160	-	180	200	1500	1469		
2x48.3	160	-	180	200	1500	1466		
2x60.3	200	-	225	250	1500	1460		
2x76.1	225	-	250	280	1500	1452		
2x88.9	250	280	280	315	1500	1443		
2x114.3	315	-	355	400	1500	1430		
2x139.7	400	-	450	500	1500	1415		
2x168.3	450	-	500	560	1500	1396		
2x219.1	560	630	630	710	1500	1368		
1.5 x 4 m								
d mm	Series 1		Series 2	Series 3	L1 mm	L2 mm	Lp1 mm	Lp2 mm
	D, mm	K, mm	D, mm	D, mm				
2x26.9	125	-	140	160	1500	4000	1477	3977
2x33.7	140	-	160	180	1500	4000	1473	3974
2x42.4	160	-	180	200	1500	4000	1469	3969
2x48.3	160	-	180	200	1500	4000	1466	3966
2x60.3	200	-	225	250	1500	4000	1460	3960
2x76.1	225	-	250	280	1500	4000	1452	3952
2x88.9	250	280	280	315	1500	4000	1443	3943
2x114.3	315	-	355	400	1500	4000	1430	3930
2x139.7	400	-	450	500	1500	4000	1415	3915
2x168.3	450	-	500	560	1500	4000	1396	3896
2x219.1	560	630	630	710	1500	4000	1368	3868

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

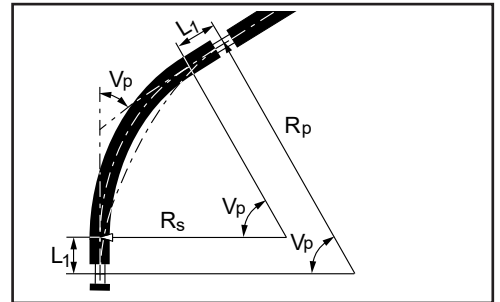
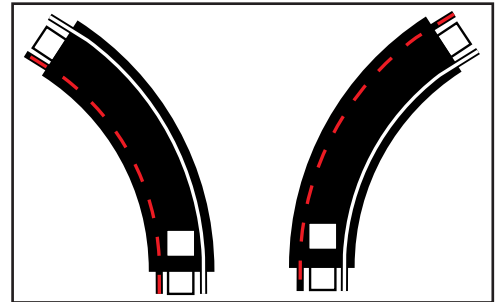
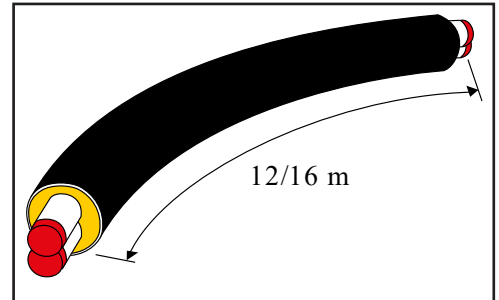
L_1 = length of straight pipe ends, m

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° intervals.

In addition max. bending angle, v_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 pipe				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	40	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

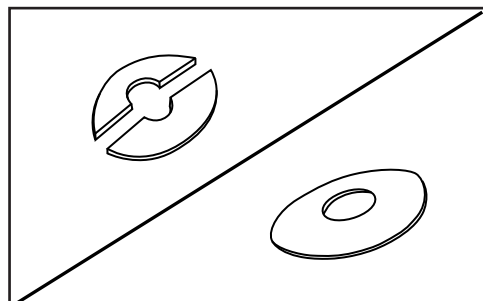
Contents

- 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.

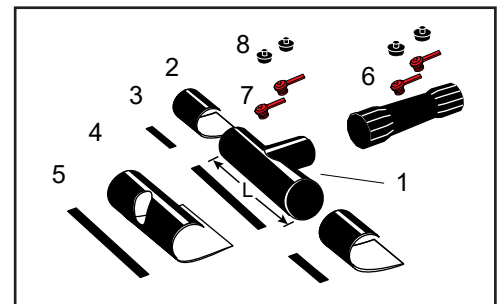
Installation on pipes with corrugated casing requires that the branch be sealed with an extra collar, which is ordered separately.

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. T-shoe including PERP tape
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.

The Bonded TwinPipe Branches - TXJoint

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
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

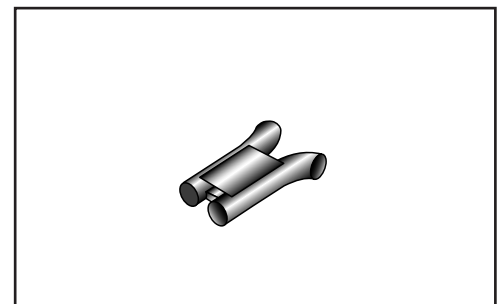
TXJoint - hot tapping

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
L, mm	360	347	344	365	352	377	390
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.

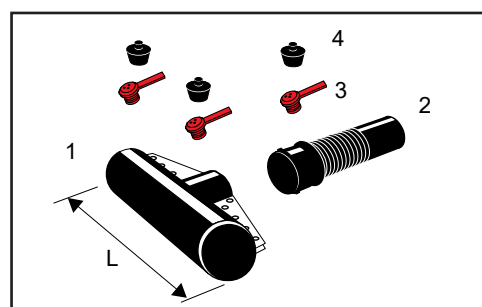
The SXT-WPJoint can be used together with a hot tapping valve in dimensions according to the table. The insulation thickness around the valve chamber will be smaller.

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

L= 680 mm, if branch is 90 - 140 mm and 720 mm, if branch is 160 - 200 mm

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.

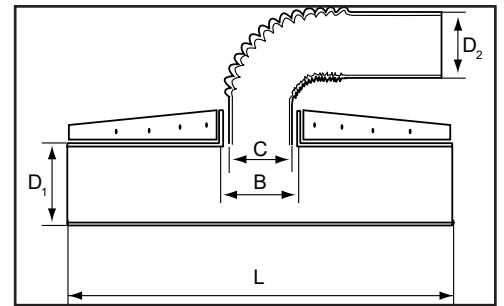
Reinforcement plate to reinforce the main pipe, if necessary, component No. 5426.

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

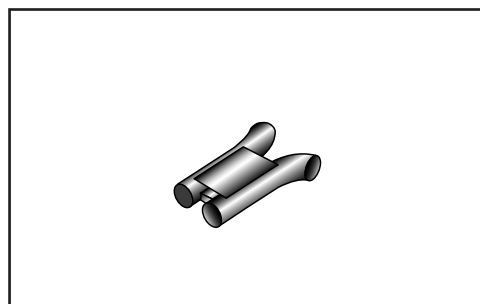
Component No. 5210

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
L, mm	360	347	344	365	352	377	390
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.

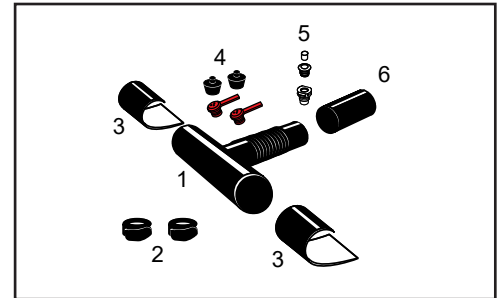
The main pipe is extrusion welded longitudinally and then the ends are shrunk and sealed with mastic tape and open shrink wraps or welded with weld strips. The branch is sealed with mastic and a collar.

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

Description

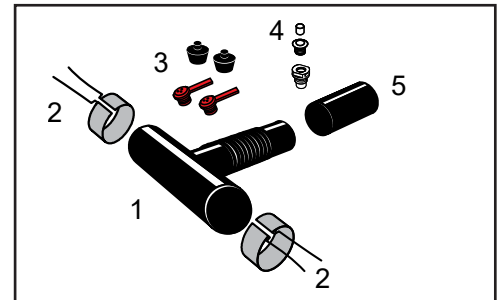
The TSJoint with mastic consists of:

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 mm	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	x
140-160			x*	x*	x	x	x	x	x	x	x	x	x

X* = Max. branch ø 140 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

Materials

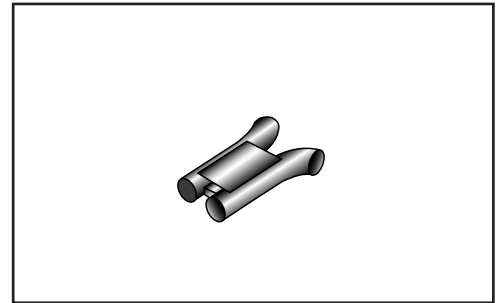
T-shoe, base pipe: HDPE
T-shoe, branch: Cross-linked PE, PEX
Venting plug, base pipe: Polypropylene
Venting plug, branch: LDPE
Weld plugs: HDPE
Collar: PEX with PIB-based mastic
Shrink wrap: PEX with PIB-based mastic and hotmelt
Sealing strip: PIB-based

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 - 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
L, mm	360	347	344	365
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.

Weld strips, venting and weld plugs for 1 joint are delivered together in a bucket.

Component overview/data

Component No. 5556

Materials

Weld strip: Electro-plated mesh

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

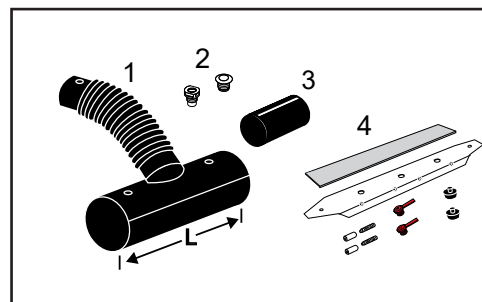
Application T-joint for foaming, used to branch with flexible pipe perpendicular to the main pipe.

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
 $\varnothing 125 - 200 \text{ mm} = 570 \text{ mm}$

Length, T-joint, main pipe, dimension
 $\varnothing 225 - 710 \text{ mm} = 630 \text{ mm}$

Length, T-joint, branch = 700 mm

Component overview/data

Component No. 5640

BandJoint-branch Flextra

Branch D2	Main pipe D1, 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 $\varnothing 110 \text{ mm}$ **x = Max. branch $\varnothing 140 \text{ mm}$

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

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

Accessories

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

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

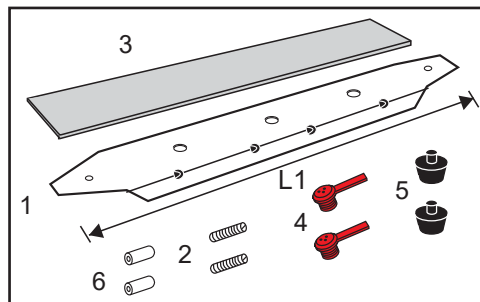
Reinforcement plate to reinforce the main pipe, if necessary, component No. 5426.

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
6. Insulator feet



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

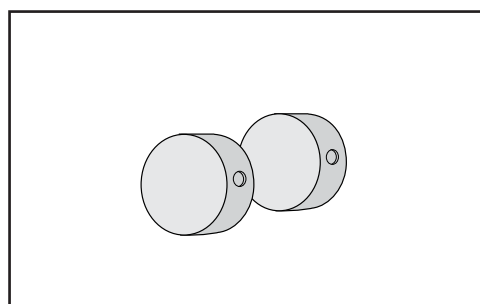
Weld plugs: HDPE

Depth guard: Hot galvanised plate

Felt pad: Felt

Supporting blocks

For TwinPipe outer casing 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

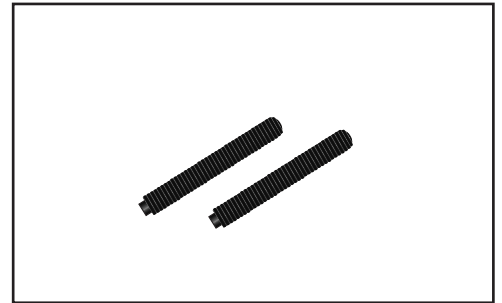
Supporting block

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

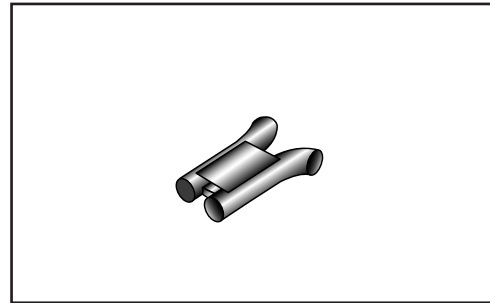
Long screws

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: Steel

The Bonded TwinPipe 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
L, mm	360	347	344	365
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.

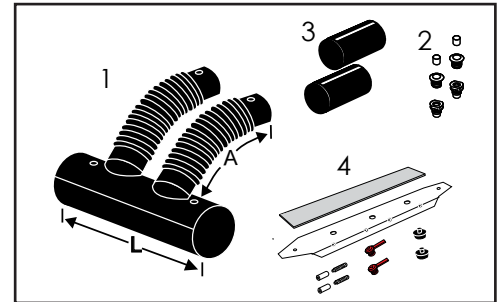
The main pipe joint is made of PE with embedded copper wires for welding. The branch is made of cross-linked PE (PEX) and sealed with mastic and a collar.

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

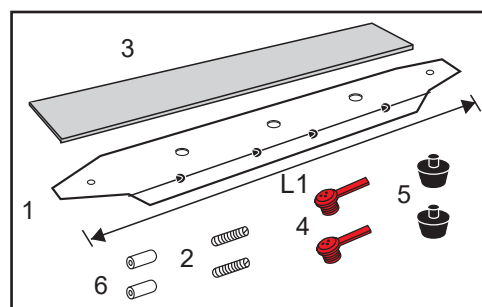
The Bonded TwinPipe Branches - BandJoint-branch Flextra Twin/Single

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
6. Insulator feet



Component overview/data Component No. 5606

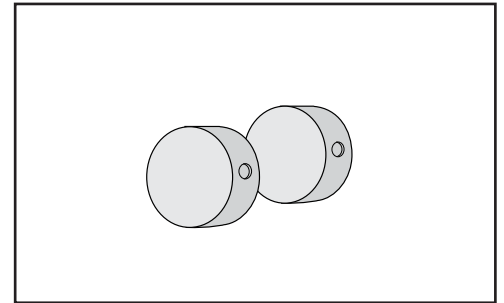
Depth guard

	Dimension	
	Depth guard	125-200
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: 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 TwinPipe outer casing 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

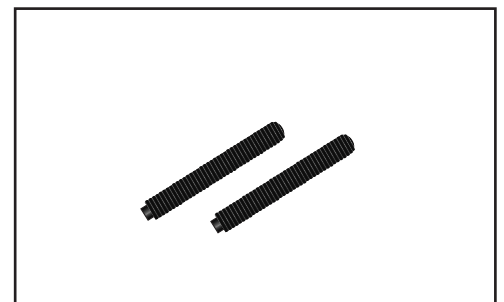
Supporting block

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: Steel

The Bonded TwinPipe Branches - T-joint straight double

Application

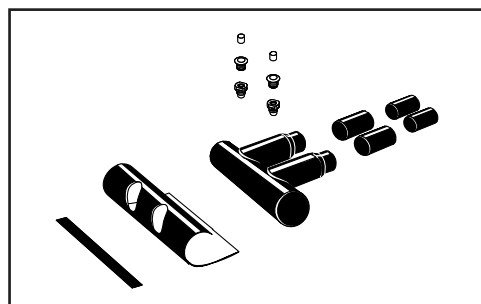
T-joint with 2 branches is used to branch from TwinPipe to single pipe, primarily FlexPipe.

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

L = 700 mm

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.

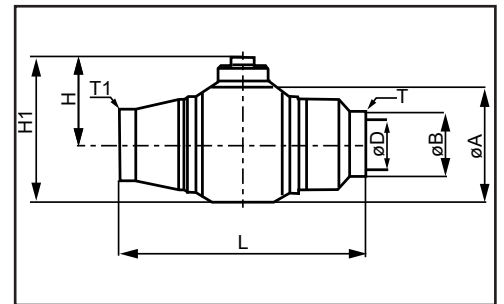
Max. pressure closed valve 16 bar. Operating pressure after establishment of branch: 25 bar.

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

For further details, see the product data sheet of the valve supplier.

Danfoss JIP

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



Component overview/data

Component No. 4280

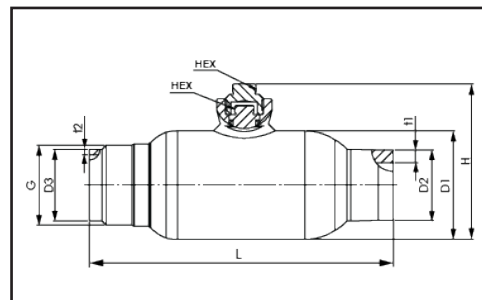
Danfoss JIP - Reduced passage

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	D3 mm	Wall thickness, mm		Bore mm	H mm	L mm	D1 mm	D2 mm	G	HEX key
		t2	t1							
20	26.9	2.3	5.4	15	64.5	130	42.4	26.8	G 7/8	10*
25	33.7	2.6	6.0	20	73.1	143	51.0	33	G 1 1/8	10*
32	42.4	2.6	6.0	25	79.8	150	57.0	38	G 1 1/2	10*
40	48.3	2.6	6.9	32	99.3	188	76.1	47.8	G 1 3/4	10*
50	60.3	2.9	7.0	39	111.0	230	88.9	56	G 2 1/4	10*
65	76.1	2.9	7.5	49	131.0	271	108.0	64	M80x3/ M64x2	13
80	88.9	3.2	8.0	63	151.1	260	127.0	80.5	M95x3/ M76x2	13

*10 mm hexagon key operates pipe plug.
12 mm key operates valve.

Full passage

DN	D3 mm	Wall thickness, mm		Bore mm	H mm	L mm	D1 mm	D2 mm	G	HEX key
		t2	t1							
15	21.3	2.0	5.4	15	64.5	130	42.4	26.8	G 7/8	10
20	26.9	2.3	6.0	20	73.1	143	51	33	G 1 1/8	10
25	33.7	2.6	6.0	25	79.8	150	57	38	G 1 1/2	10
32	42.4	2.6	6.9	32	99.3	188	76.1	47.8	G 1 3/4	10
40	48.3	2.6	7.0	39	111.0	230	88.9	58	G 2 1/4	10

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.

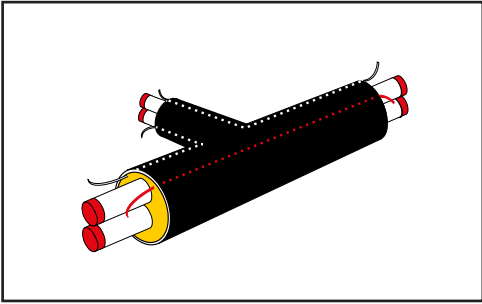
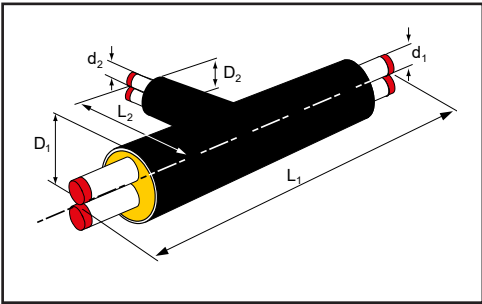
However, in case the main pipe and the branch have the same dimension, T-pieces can only withstand axial forces corresponding to 190 MPa.

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	L1	D1-D2, mm													
mm	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			
2x168.3	1600	450	500	560	800	800	800	800	800	800	800	800	800		
2x219.1	1700	560	630	710	1000	1000	1000	1000	1000	1000	1000	1000	1000		

Internal pressure = 25 bar (grey = 16 bar)

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

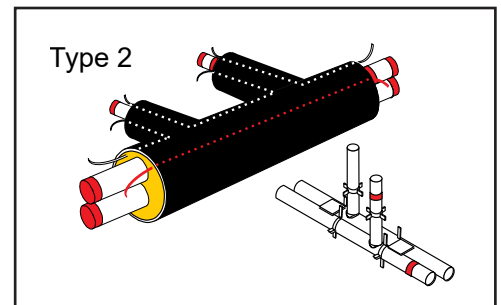
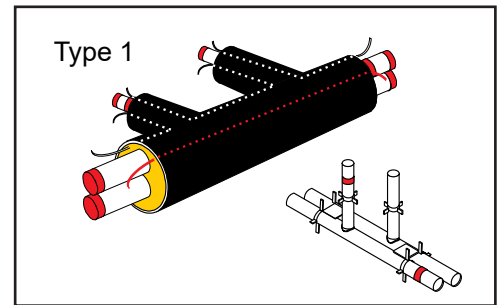
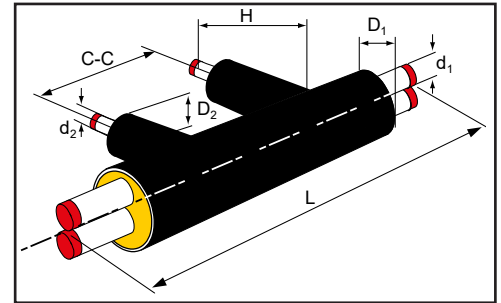
T-piece straight with 2 separate branches are reinforced.

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

Contents

Merge pipe

F-bend

The Bonded TwinPipe Transition pipes - Merge pipe

Application

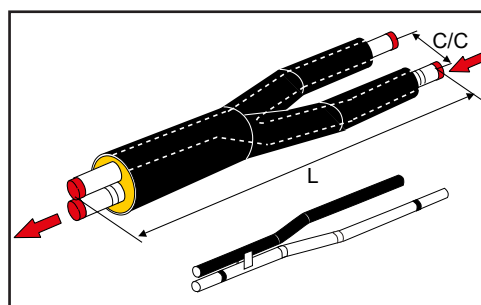
Merge pipes are used for transition from a single pipe to a TwinPipe.

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

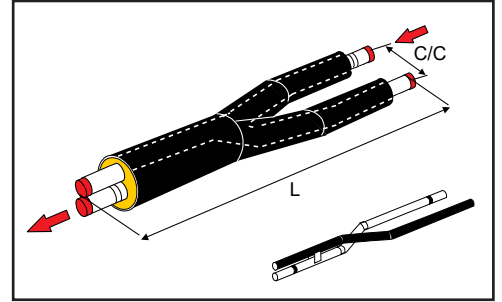
Merge pipe - type 1

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 - Merge pipe

Type 2

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



**Component
overview/data**

Component No. 3071

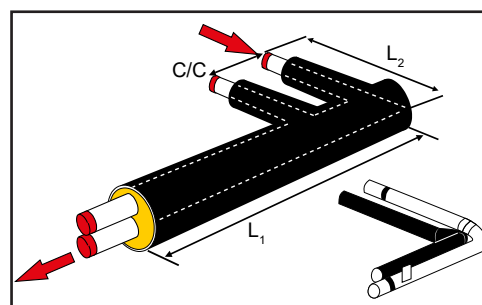
Merge pipe - type 2

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

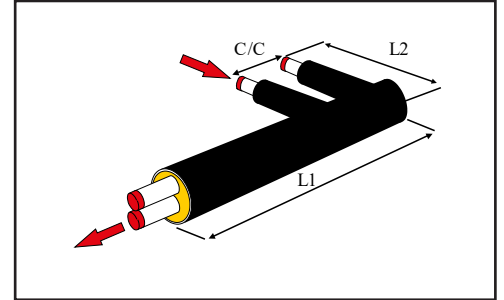
F-bend - type 1

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

Contents

Stop valve
Stop valve with 1 service valve
Stop valve with 2 service valves
Service valve
Spindle extension
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.

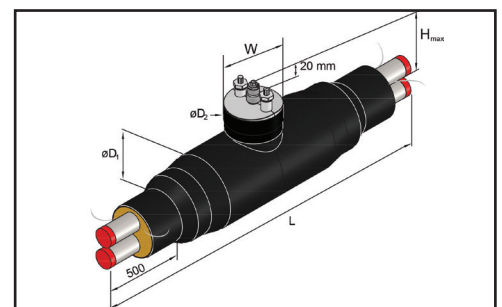
LOGSTOR standard preinsulated isolation valve is either a Vexve valve or a Broen valve. The geometry, spanner width of the spindle and of the backstop are the same regardless of which valve is delivered.

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. 4290

Stop valve

Dimension			L mm	øD1 mm	øD2 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.

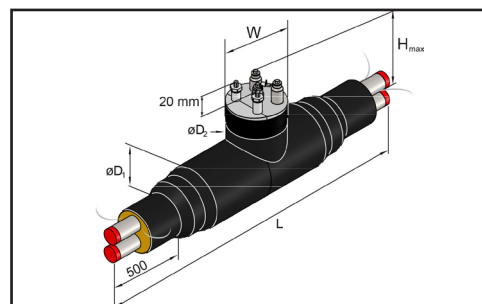
LOGSTOR standard preinsulated isolation valve is either a Vexve valve or a Broen valve. The geometry, spanner width of the spindle and of the backstop are the same regardless of which valve is delivered.

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	øD1 mm	øD2 mm	Service valve ø 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.

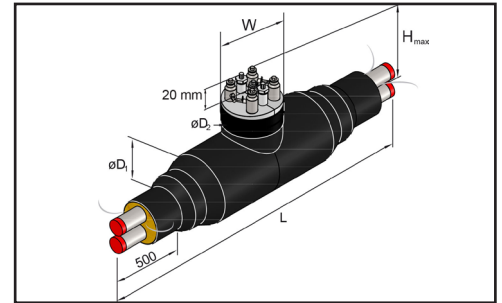
LOGSTOR standard preinsulated isolation valve is either a Vexve valve or a Broen valve. The geometry, spanner width of the spindle and of the backstop are the same regardless of which valve is delivered.

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	øD1 mm	øD2 mm	Service valve ø 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

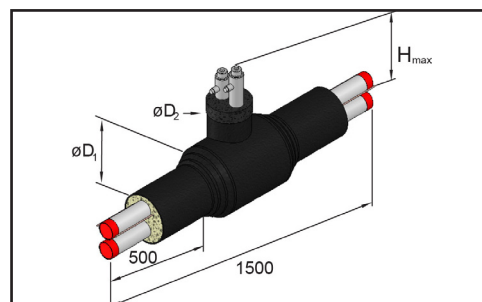
Preinsulated service valves are used for venting or drainage at wanted points in the pipe section.

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	$\varnothing D_1$ mm	$\varnothing D_2$ mm	Service valve \varnothing 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

Spindle extension 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 spindle extension 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:

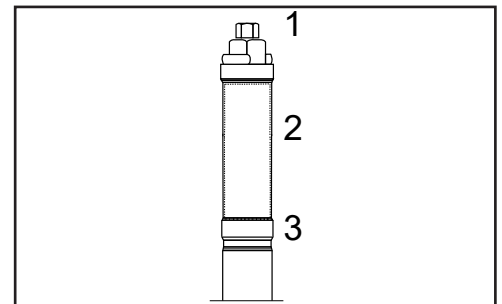
1. Spindle
2. Spindle housing
3. Adapter

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.

Sealing is carried out with Nitto 57GO and Nitto 51 tape.



Component overview/data

Component No. 4285

Spindle extension

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 spindle extension 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.

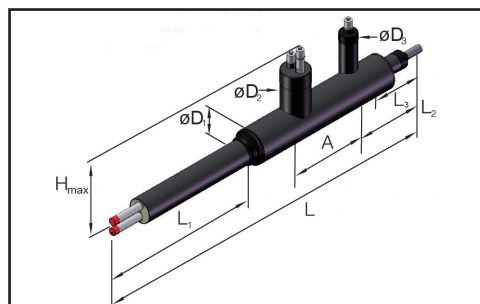
They are usually installed on a short house connection.

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.

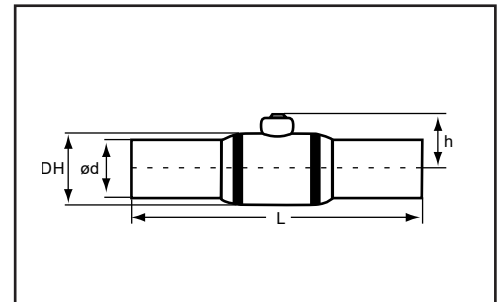
When the pipeline is extended and the valve is opened the spindle is fully welded.

Please have the internal space requirements in mind, when choosing the dimension of the temporary end fitting and the later permanent casing joint. This depends on whether the valve has a reduced or a full passage.

For further details, see the product data sheet of the valve supplier.

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	43	42	26.9	230	47	51
33.7	230	48	51	33.7	230	52	57
42.4	260	52	57	42.4	260	62	76
48.3	260	61	76	48.3	260	67	89
60.3	300	67	89	60.3	300	77	108
76.1	360	77	108	76.1	360	88	127
88.9	370	88	127	88.9	370	103	153
114.3	390	103	153	114.3	390	120	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 chamber and weld-on ends: Standard steel like straight pipes

Balls and valve spindle: Stainless steel AISI 304.

The Bonded TwinPipe Reductions - Overview

Contents

Weld reduction eccentric

EWJoint reduction

SX-WPJoint reduction

B2SJoint reduction

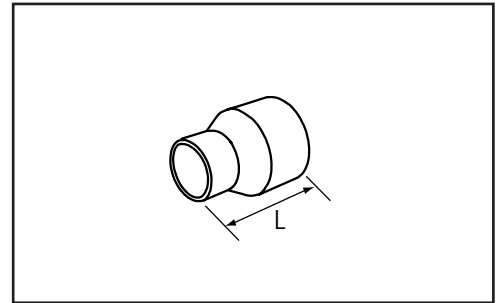
Preinsulated reductions

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:

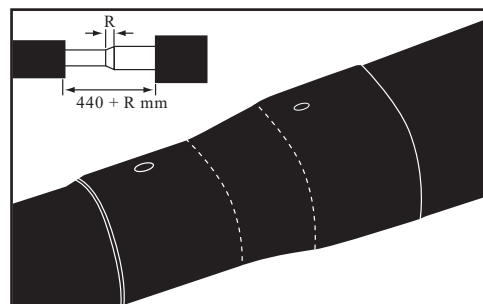
Component No. 5028.

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.

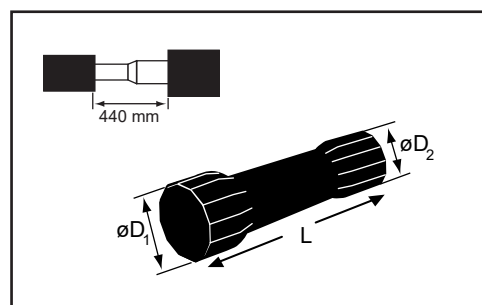
The Bonded TwinPipe Reductions - EWJoint reduction

Weld strip	Is used to weld together the joint and the outer casing. Weld strips, venting and weld plugs for 1 joint are delivered together in a bucket.
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.

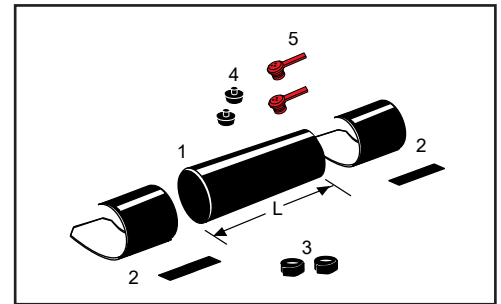
Fixing bars must always be installed on the large dimension.

The design rules must be observed in connection with reductions.

Description

Reduction with B2SJoint:

1. PE reduction shrink sleeve
2. Open shrink wraps with closure patches
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
2x42.4	180				x		900
2x48.3	180				x		900
2x60.3	225					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

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.

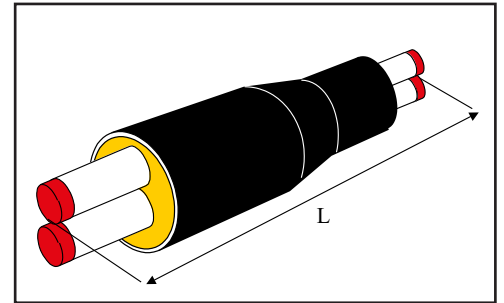
The Bonded TwinPipe Preinsulated reduction

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 - Overview

Contents	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.

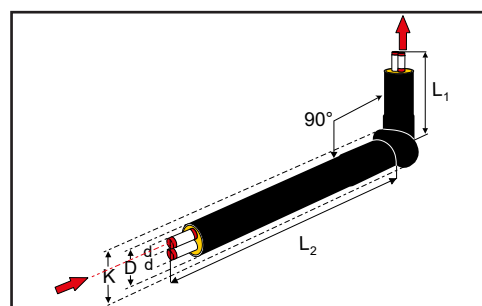
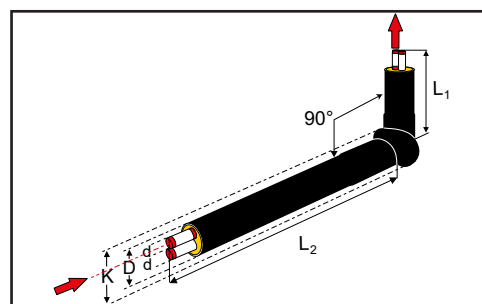
Description

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	140	160	160	1500x2500	1500x4000
2x33.7	140	160	160	160	180	180	1500x2500	1500x4000
2x42.4	160	200	180	180	200	200	1500x2500	1500x4000
2x48.3	160	200	180	180	200	200	1500x2500	1500x4000
2x60.3	200	225	225	225	250	250	1500x2500	1500x4000
2x76.1	225	280	250	250	280	280	1500x2500	1500x4000
2x88.9	250	315	280	280	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	500	560	560	1500x2500	1500x4000
2x219.1	560	630	630	630	710	710	2000x2500	2000x4000

Materials

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

The Bonded TwinPipe Terminations - Wall entry sleeve

Application

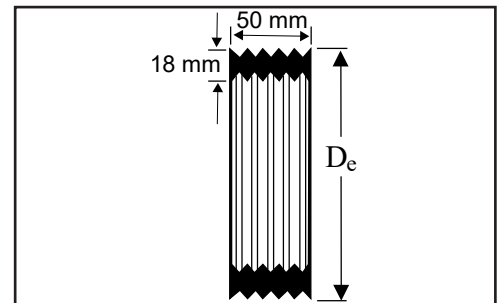
Where pipes are installed through masonry - at wells, footings etc. - wall entry sleeves are installed as a seal against water ingress.

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 are required, please contact LOGSTOR.

Description

Note! $D_e - 2 \times 18 \text{ mm}$ 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 D_e 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 - Radon-tight 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.

Description This wall entry sleeve is radon-tight.
The wall entry sleeve can withstand a water pressure of 4 m, if there is no movement.
If there are minor movements ± 5 mm, the wall entry sleeve can withstand a water pressure of 1 m.

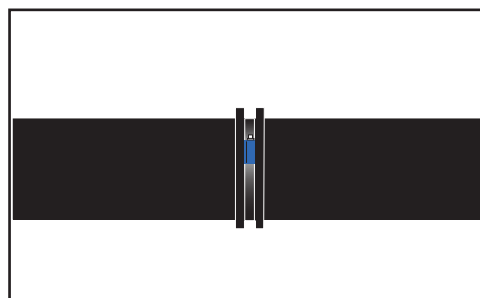
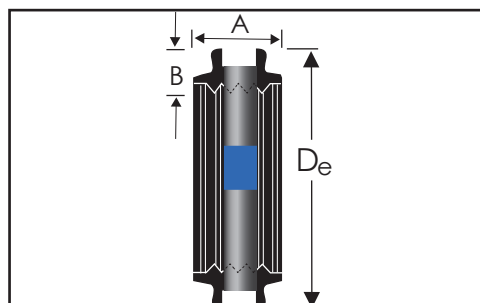
Dimensions:

110 – 180 mm:

- A = 40 mm and B = 22 mm

200 - 900 mm:

- A = 50 mm and B = 27 mm



Component overview/data Component No. 5800

Materials Rubber: EPDM
Strap: Steel (Aluzink)

The Bonded TwinPipe Terminations - End cap

Application

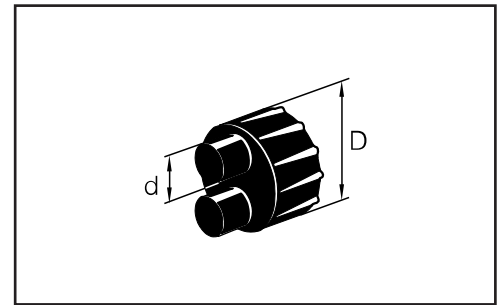
The end cap is used to seal the pipes in order to prevent moisture from penetrating into the insulation.

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

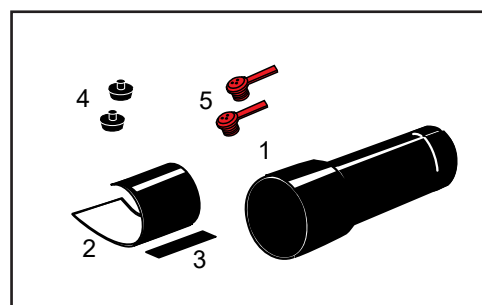
Steel pipe \varnothing mm	Casing dimension Series 1, 2, 3	Series 1	Series 2	Series 3
2x26.9	125-140-160	DHEC 3280	DHEC3280	DHEC 3350-01
2x33.7	140-160-180	DHEC 3280	DHEC 3350-02	DHEC 3350-02
2x42.4	160-180-200	DHEC 3350-03	DHEC 3350-03	DHEC 3350-03
2x48.3	160-180-200	DHEC 3350-03	DHEC 3350-03	DHEC 3350-03
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	ECDP 630-200	-

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.
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

Venting plugs: Propylene

Weld plugs: HDPE

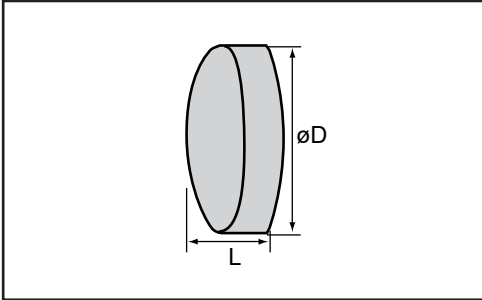
Accessories When terminating with an end fitting weld-on ends, component No. 1008 are used.

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 \varnothing 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

PertFlextra

PexFlextra

AluFlextra

CuFlex

SteelFlex

Casing joints

Branches

Y-Joint

Terminations

The FlexPipe PerFlextra - Contents

Contents	General
	Pipes - corrugated casings
	Preinsulated fittings
	Press couplings, type JT
	Compression couplings

The FlexPipe

PertFlextra - General

Application

The LOGSTOR flexible PE-RT system is used within District Heating for distribution and service pipelines.

Due to the properties of the 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. PertFlextra is especially suitable for:

- distribution networks
- branch pipes without joints
- passage of vegetation and other obstacles
- hilly areas

The pipe system complies with the requirements in prEN17878-1 and prEN17878-2 for a minimum design service life of 50 years at the following operational conditions:

Operating temperature:

70°C for 49 years

Maximum operating temperature:

80°C for 7760 hours

Malfunction:

95°C for 100 hours

Maximum operating pressure:

10 bar

Other pressure and temperature profiles than the above are possible. Please contact LOGSTOR for a calculation of the estimated service life.

If temperature profile is calculated like in EN15632-2 or prEN17878-2, the service life will be 30 years with pressure 8 bar instead of 6 bar. Calculation according to Miner's rule EN13760.

PertFlextra can be combined with the other LOGSTOR systems provided that the above temperatures and pressure are observed.

To join PE-RT 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.

Always delivered without free ends.

The max coil width is 2.4 m.

All pipes are produced in accordance with prEN17878-1 and prEN17878-2.

The FlexPipe PerFlextra - General

Materials

Service pipe: PE-RT type II SDR 7,4 with an aluminum diffusion barrier and a PE-RT protection layer.

The aluminum diffusion barrier is a barrier for oxygen diffusing from the outside into the media, and for water vapor diffusing from the media out into the insulation. This ensures that the insulation stays dry over lifetime.

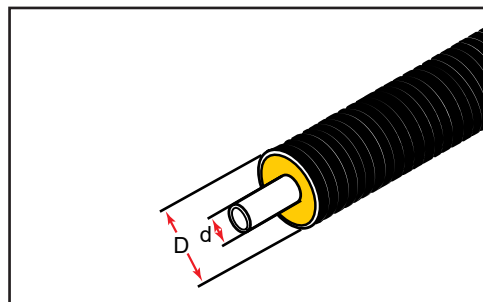
Insulation: Polyurethane foam. Average thermal conductivity $\lambda_{50} = 0.022 \text{ W/mK}$

Outer casing: Polyethylene, PE-HD with co-extruded polymer diffusion barrier ensuring that the insulation gases stay in the PUR-foam during the service life.

The FlexPipe

PertFlextra - Corrugated casing

PertFlextra single pipe



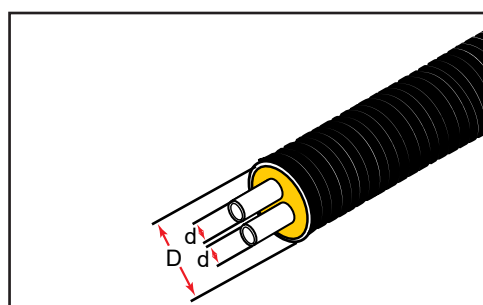
Component overview/data

Component No. 2100

Single pipe

PE-RT service pipe		Volume l/m	Series 2		
d mm	Wall thk mm		Outer casing		
			D mm	Wall thk mm	Weight kg/m
25	3.5	0.260	90	1.5	1.2
32	4.4	0.423	90	1.5	1.3
40	5.5	0.661	110	1.5	1.8
50	6.9	1.029	125	1.5	2.3
63	8.6	1.647	140	1.5	3.1

PertFlextra TwinPipe



Component overview/data

Component No. 2190

TwinPipe

PE-RT service pipe		Volume l/m	Series 1			Series 2		
d mm	Wall thk mm		Outer casing			Outer casing		
			D mm	Wall thk mm	Weight kg/m	D mm	Wall thk mm	Weight kg/m
25/25	3.5	0.520				125	1.5	2.1
32/32	4.4	0.845				125	1.5	2.2
40/40	5.5	1.321				140	1.5	3.0
50/50	6.9	2.058				180	1.5	4.4
63/63	8.6	3.295	180	1.5	5.0			

Distance between service pipes: 12 mm

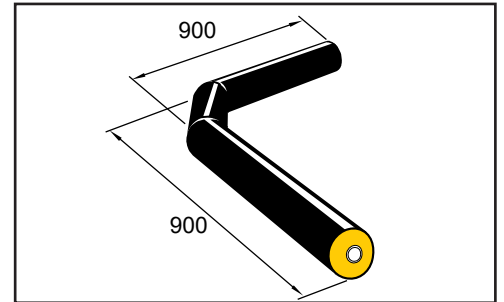
The FlexPipe

PertFlextra - Preinsulated fittings

General

For PertFlextra preinsulated fittings with service pipes in PE-RT can be used.
 Preinsulated fittings with PE-RT service pipe are delivered without free pipe ends.
 The service pipe must not be shortened.

90° bend, single pipe



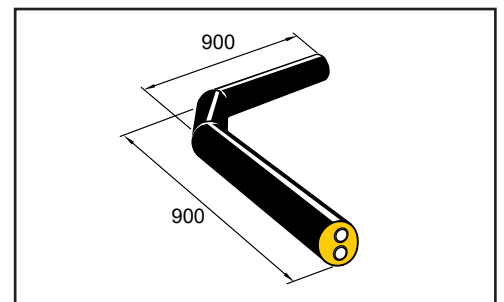
Component overview/data

Component No. 2500

90° bend - single pipe

d mm	D mm Series 2
25	90
32	90
40	110
50	125
63	140

90° bend, TwinPipe



Component overview/data

Component No. 2590

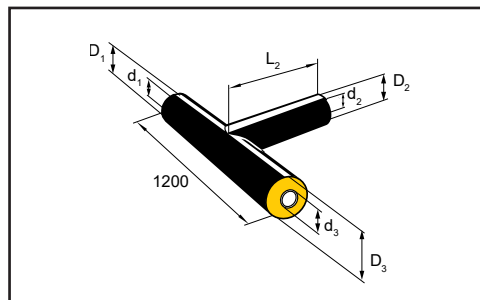
90° bend - TwinPipe

d mm	D mm	
	Series 1	Sereis 2
25/25		125
32/32		125
40/40		140
50/50		180
63/63	180	

The FlexPipe

PerFlextra - Preinsulated fittings

T-piece, straight, single pipe



Component overview/data

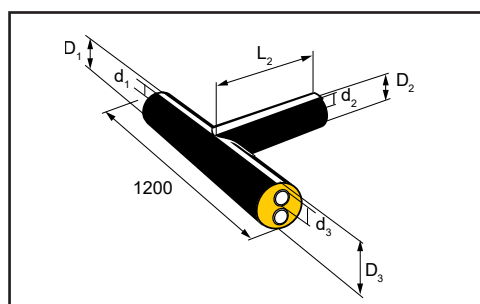
Component No. 3400

T-piece, straight - Single pipe

Main pipe, mm		Branch pipe, mm					
d1	D1	d2	25	32	40	50	63
		D2	90	90	110	125	140
25	90		x				
32	90		x	x			
40	110		x	x	x		
50	125		x	x	x	x	
63	140		x	x	x	x	x

T-pieces straight can be produced on request. T-pieces with PE-RT service pipe are made with press couplings embedded in the insulation.

T-piece, straight, TwinPipe



Component overview/data

Component No. 3490

T-piece, straight - TwinPipe

Main pipe, mm		Branch pipe, mm					
d1	D1	d2	25x25	32x32	40x40	50x50	63x63
		D2	125	125	140	180	180
25x25	125		x				
32x32	125		x	x			
40x40	140		x	x	x		
50x50	180		x	x	x	x	
63x63	180		x	x	x	x	x

T-pieces straight can be produced on request. T-pieces with PE-RT service pipe are made with press couplings embedded in the insulation.

The FlexPipe

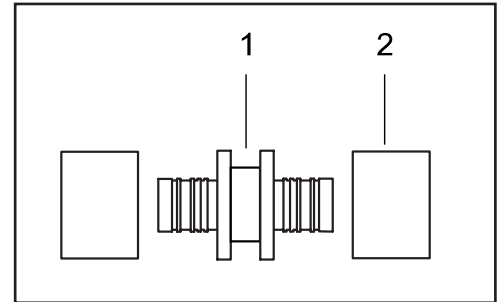
PertFlextra - Press coupling, type JT

Application Used to connect PE-RT 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 PE-RT - PE-RT connections:

1. Supporting bush
2. Press ring



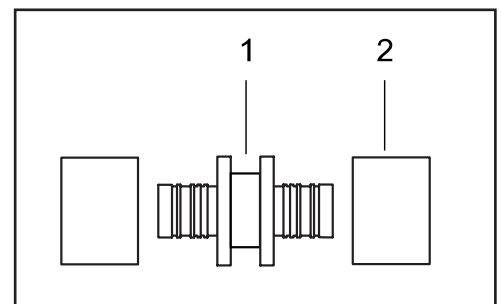
Component overview/data Component No. 6006

Press coupling straight

Coupling end 1	Coupling end 2				
	25	32	40	50	63
25	x				
32	x	x			
40		x	x		
50		x	x	x	
63			x	x	x

Press coupling, straight, closed Press coupling for straight PE-RT - PE-RT connections:

1. Supporting bush
2. Press ring



Component overview/data Component No. 6006

Press coupling, straight, closed

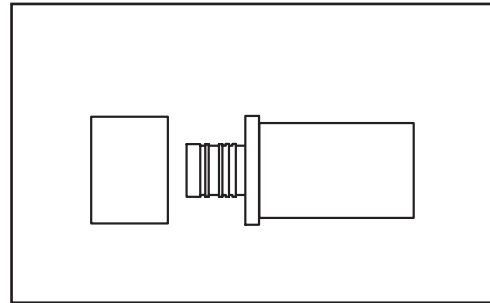
Coupling end 1	Coupling end 2	
	25	32
25	x	
32		x

The FlexPipe

PertFlextra - Press coupling, type JT

Press coupling, weld

Press coupling with weld end for transition to steel pipe.



Component overview/data

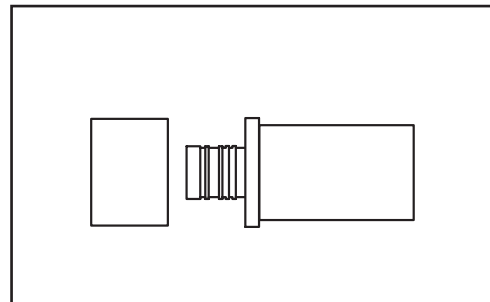
Component No. 6006

Press coupling, weld

Steel	PE-RT				
	25	32	40	50	63
26.9	x				
33.7	x	x			
42.4			x		
48.3				x	
60.3					x

Press coupling, weld, closed

Closed press coupling with weld end



Component overview/data

Component No. 6006

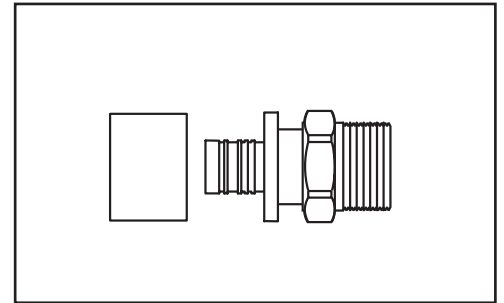
Press coupling, weld, closed

Steel	PE-RT	
	25	32
26.9	x	
33.7	x	x

PerFlextra - Press coupling, type JT

Press coupling, male

Press coupling with male thread for termination in a cabinet or a building.



Component overview/data

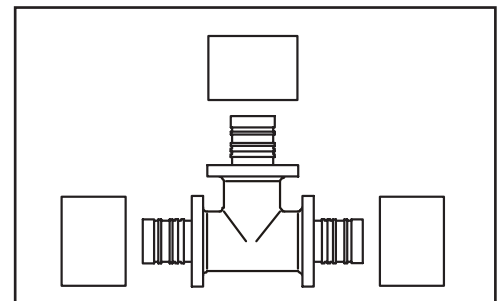
Component No. 6006

Press coupling, male

Thread	PE-RT				
	25	32	40	50	63
3/4"	x				
1"		x			
1 1/4"			x	x	
1 1/2"				x	
2"					x

Press coupling, tee

The base unit of the press coupling is made in one piece.



Component overview/data

Component No. 6066

Press coupling, tee

Main pipe d1-d3 mm	Branch d2 mm				
	25	32	40	50	63
25-25	x				
32-32	x	x			
40-40	x	x	x		
50-50	x	x	x	x	
63-63	x	x	x	x	x

Other combinations of dimensions, e.g. reduction on the main pipe, can be delivered on request.

Materials

Press couplings are made of brass or red brass.

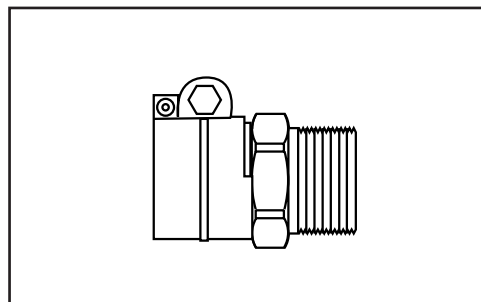
Weld ends for transition to steel is made of S235JR.

The FlexPipe PertFlextra - Compression coupling

Compression coupling, male

Compression coupling with male end for termination in a cabinet or a building.

Dimension 25-63 mm.



Component overview/data

Component No. 6101

Compression coupling, male

Thread	PE-RT				
	25	32	40	50	63
3/4"	x				
1"		x			
1 1/4"			x		
1 1/2"				x	
2"					x

Materials

Compression couplings are made of brass.

The FlexPipe PexFlextra - Contents

Contents

- General
- Pipes - corrugated casings
- Preinsulated fittings
- Press couplings, type MP
- Press couplings, type JT
- Compression couplings

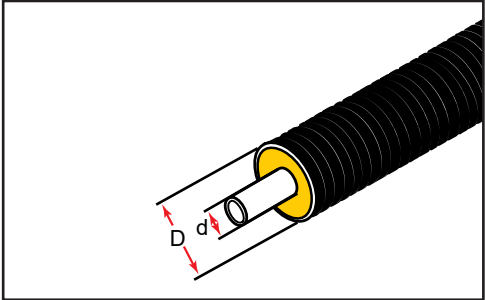
The FlexPipe

PexFlextra - General

Application	<p>The LOGSTOR flexible PEX system is used within District Heating for distribution and transmission pipelines.</p> <p>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:</p> <ul style="list-style-type: none"> - branch pipes without joints - passage of vegetation and other obstacles - hilly areas <p>The pipe system complies with the requirements in EN15632-2 for a minimum design service life of 30 years at the following operational conditions:</p> <p>Operating temperature: 80°C for 29 years</p> <p>Maximum operating temperature:</p> <p>90°C for 7760 hours</p> <p>95°C for 1000 hours</p> <p>Malfunction: 100°C for 100 hours</p> <p>Maximum operating pressure: 6 bar</p> <p>Other pressure and temperature profiles than the above are possible. Please contact LOGSTOR for a calculation of the estimated service life.</p> <p>PexFlextra can be combined with the other LOGSTOR systems provided that the above temperatures and pressure are observed.</p> <p>To join PEX service pipes in buried systems press couplings are used. For jointing in buildings, chambers, and cabinets compression couplings can be used.</p>
Description	<p>The standard coil length is 100 m.</p> <p>Fixed lengths can be ordered to measure in lengths of min. 10 m and max. 90 m.</p> <p>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.</p> <p>Always delivered without free ends.</p> <p>The max coil width is 2.4 m.</p> <p>All pipes are produced in accordance with EN15632-1 and EN15632-2.</p>
Materials	<p>Service pipe: PEXa with external EVOH oxygen diffusion barrier, preventing oxygen ingress. The diffusion barrier is not a barrier for water vapour diffusion. The material complies with the requirements in EN ISO 15875.</p> <p>Insulation: Polyurethane foam. Average thermal conductivity $\lambda_{50} = 0.022 \text{ W/mK}$</p> <p>Outer casing: Polyethylene, PE-HD with co-extruded polymer diffusion barrier for insulating gases.</p>

The FlexPipe PexFlextra - Corrugated casing

PexFlextra single pipe



Component overview/data

Component No. 2100

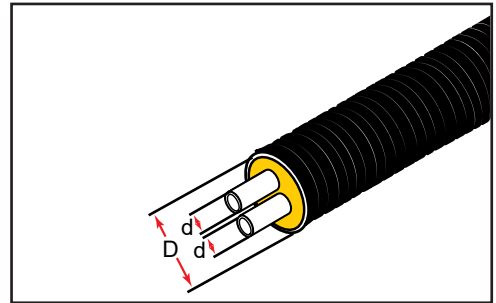
Single pipe

PEX service pipe		Volume l/m	Series 1			Series 2		
d mm	Wall thk mm		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			

The FlexPipe

PexFlextra - Corrugated casing

PexFlextra TwinPipe



Component overview/data

Component No. 2190

TwinPipe

PEX service pipe		Volume l/m	Series 1			Series 2		
d mm	Wall thk mm		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

The FlexPipe

PexFlextra - Preinsulated fittings

General

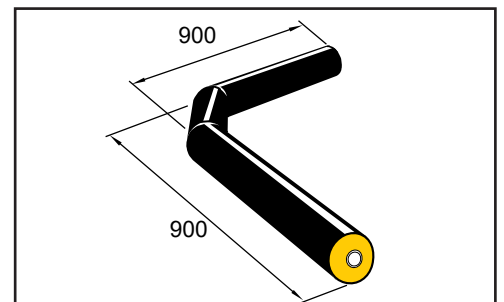
For PexFlextra preinsulated fittings with service pipes in PEX can be used.

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

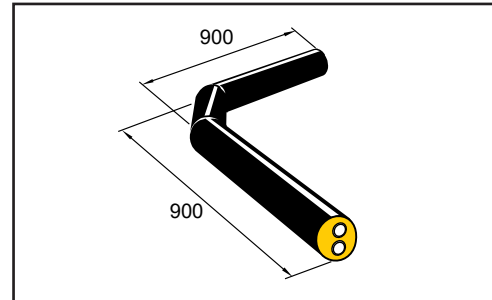
90° bend - single pipe

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

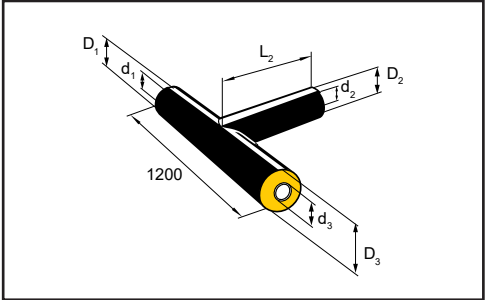
Component No. 2590

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

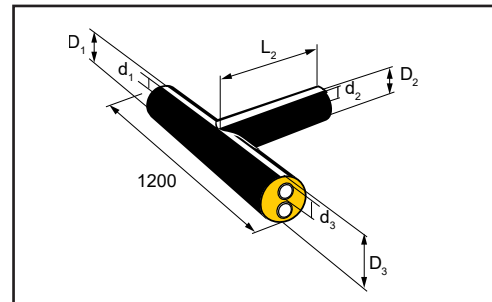
T-piece, straight - Single pipe

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

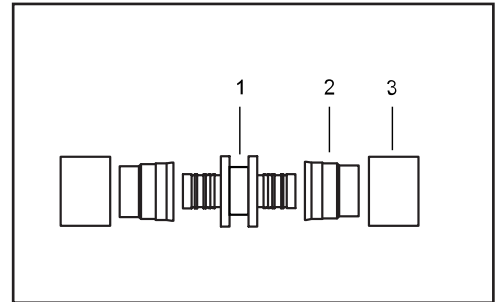
The FlexPipe

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

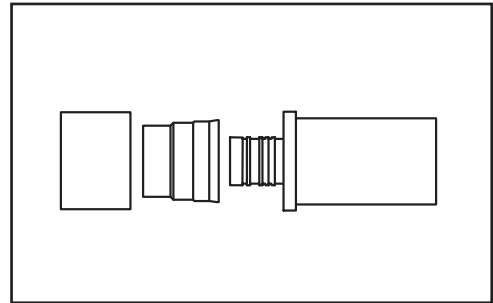
Press coupling, straight

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 transition to steel pipe.



Component overview/data

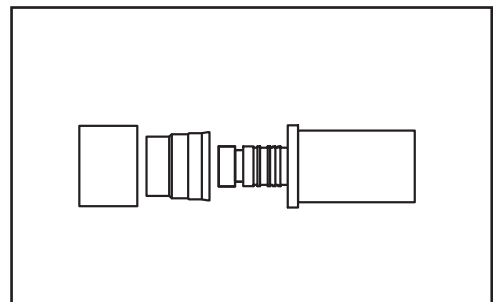
Component No. 6000

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

Press coupling, weld, closed

Closed press coupling with weld end.



Component overview/data

Component No. 6000

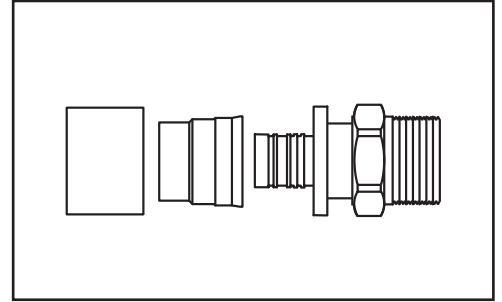
Press coupling, weld, closed

Steel	PEX					
	20	25	32	40	50	63
26.9	x	x				
33.7			x			
42.4				x		
48.3					x	
60.3						x

PexFlextra - Press coupling, type MP

Press coupling, male

Press coupling with male end for termination in a cabinet or a building.



Component overview/data

Component No. 6000

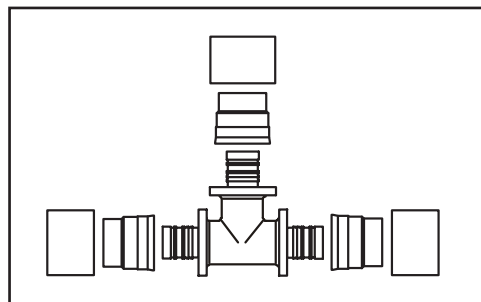
Press coupling, male

Thread	PEX								
	20	25	32	40	50	63	75	90	110
3/4"	x	x	x						
1"		x	x						
1 1/4"				x					
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.

The FlexPipe

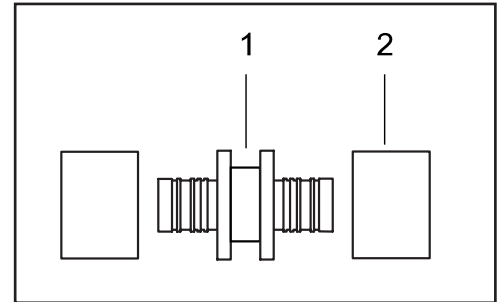
PexFlextra - Press coupling, type JT

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

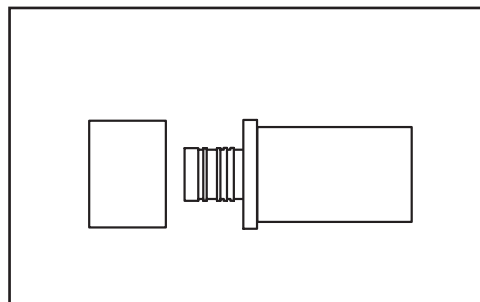
Coupling end 1	Coupling end 2							
	25	32	40	50	63	75	90	110
25	x							
32	x	x						
40	x	x	x					
50		x	x	x				
63		x	x	x	x			
75			x	x	x	x		
90					x	x	x	
110					x	x	x	x

The FlexPipe

PexFlextra - Press coupling, type JT

Press coupling, weld

Press coupling with weld end for transition to steel pipe.



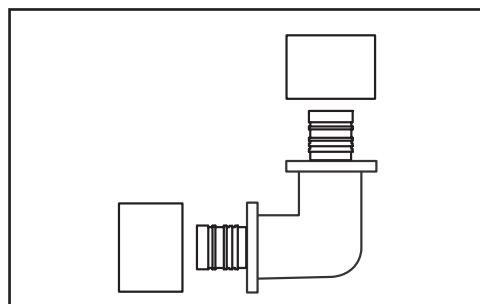
Component overview/data

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

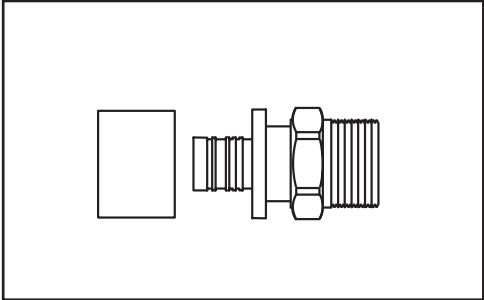
Press coupling, 90°

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

The FlexPipe
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

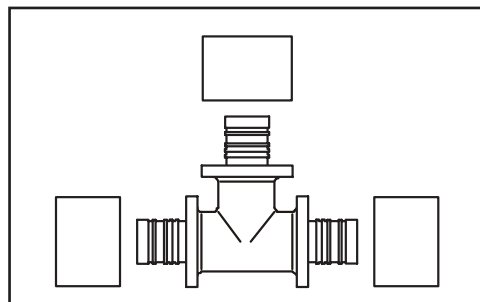
Press coupling, male

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

The FlexPipe

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.

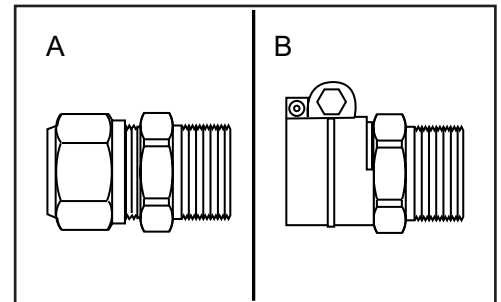
PexFlextra - Compression coupling

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

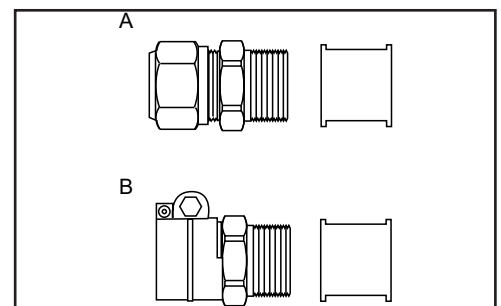
Thread	PEX								
	20	25	32	40	50	63	75	90	110
3/4"	x	x							
1"		x	x						
1 1/4"			x	x					
1 1/2"					x				
2"						x	x		
3"								x	x

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

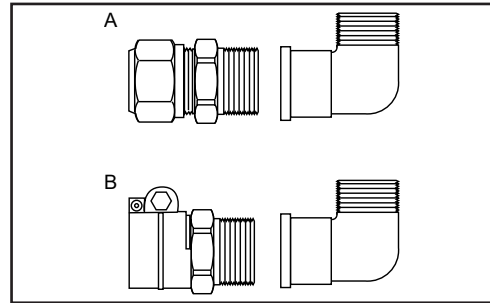
Compression coupling, female

Thread	PEX								
	25	32	40	50	63	75	90	110	
1"	x	x							
1 1/4"			x						
1 1/2"				x					
2"					x	x			
3"							x	x	

PexFlextra - Compression coupling

Compression coupling, union elbow, male

A. Dimension 20-32 mm
B. Dimension 40-110 mm



Component overview/data

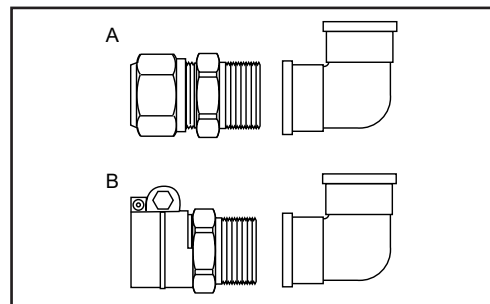
Component No. 6100

Compression coupling, union elbow, male

Thread	PEX								
	20	25	32	40	50	63	75	90	110
3/4"	x								
1"		x	x						
1 1/4"			x	x					
1 1/2"					x				
2"						x	x		
3"								x	x

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						
1 1/4"			x					
1 1/2"				x				
2"					x	x		
3"							x	x

The FlexPipe AluFlextra - Contents

Contents

- General
- Pipes - corrugated casing
- Press couplings, type MP
- Merge pipe

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.

Other pressure and temperature profiles than the above are possible. Please contact LOGSTOR for calculation of the estimated service life.

The PE-RT/aluminium/PE-RT 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

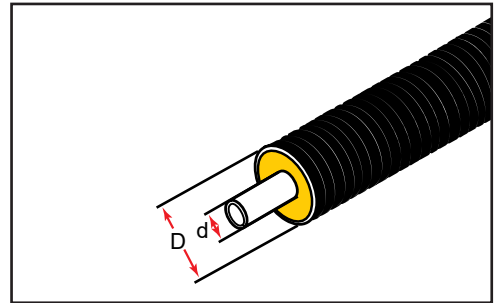
Average thermal conductivity $\lambda_{50} = 0.022$ W/mK

Outer casing:

Polyethylene, PE-HD with co-extruded polymer diffusion barrier for insulating gases.

The FlexPipe AluFlextra - Corrugated casing

AluFlextra single pipe



Component overview/data

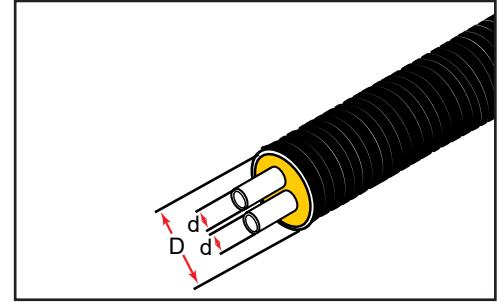
Component No. 2100

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 l/m	Series 1			Series 2			Series 3		
d mm	Wall thk mm		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
20/20*	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		
d mm	Wall thk mm	Outer casing			Outer casing		
		D mm	Wall thk mm	Weight kg/m	D mm	Wall thk mm	Weight kg/m
26/20	3.0/2.5	125	1.5	2.2	140	1.5	2.8

Distance between service pipes: 12 mm.

The FlexPipe

AluFlextra - Press coupling, type MP

Application

Used for permanent jointing of PE-RT/aluminium/PE-RT service pipes.

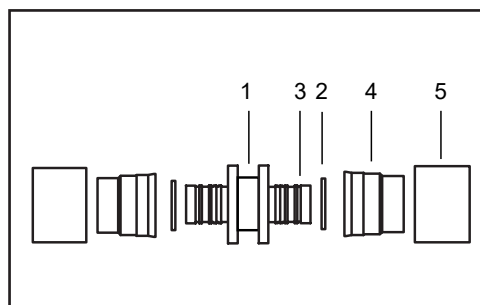
Use special tools to install the press couplings, type MP (Multipress), see section "Tools for FlexPipe".

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

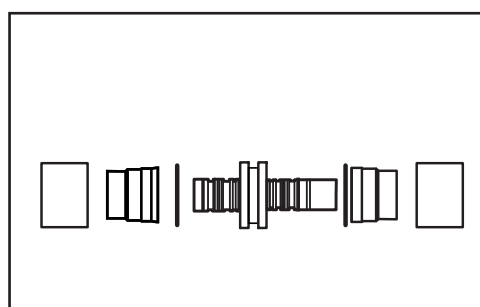
Press coupling, straight

Coupling end 1	Coupling end 2		
	20	26	32
20	x		
26		x	x
32		x	x

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

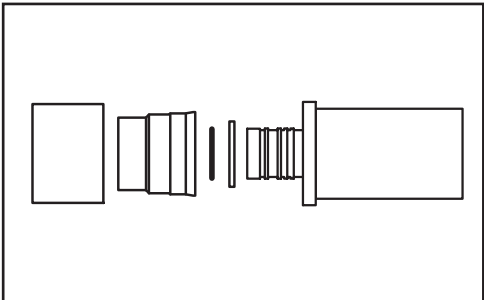
Press coupling, straight, closed

Coupling end 1	Coupling end 2		
	20	26	32
20	x		
26		x	
32			x

AluFlextra - Press coupling, type MP

Press coupling, weld

Press coupling with weld end for transition to steel pipe.



Component overview/data

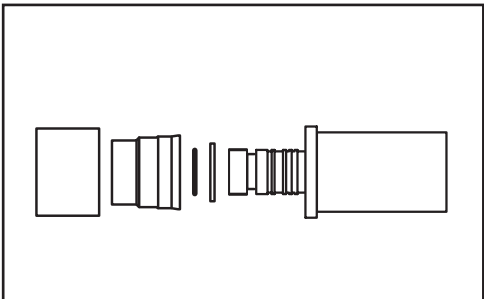
Component No. 6001

Press coupling, weld

PE-RT/aluminium/PE-RT	Steel	
	26.9	33.7
20	x	
26	x	x
32		x

Press coupling, weld, closed

Closed press coupling with weld end.



Component overview/data

Component No. 6001

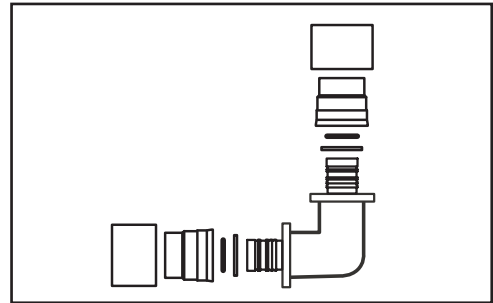
Press coupling, weld, closed

PE-RT/aluminium/PE-RT	Steel	
	26.9	33.7
20	x	
26	x	
32		x

The FlexPipe

AluFlextra - Press coupling, type MP

Press coupling, 90° 90° elbow with press coupling in both ends.



Component overview/data

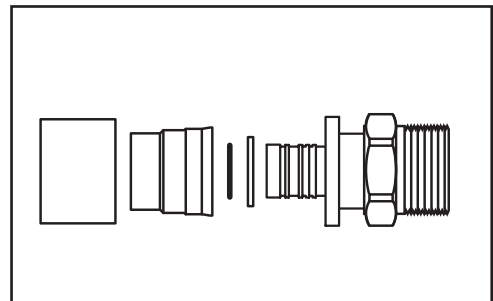
Component No. 6001

Press coupling, 90°

Coupling end 1	Coupling end 2		
	20	26	32
20	x		
26		x	
32			x

Press coupling, male

Press coupling with male thread for termination in a cabinet or a building.



Component overview/data

Component No. 6001

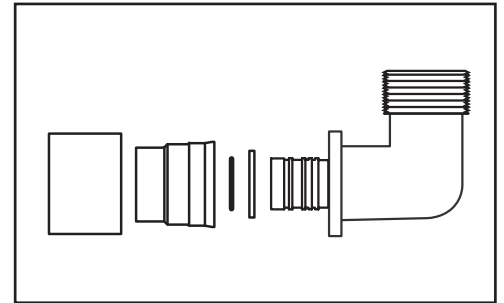
Press coupling, male

PE-RT/aluminium/PE-RT	Thread	
	3/4"	1"
20	x	x
26		x
32		x

AluFlextra - Press coupling, type MP

Press coupling, 90°, male

Press coupling with male thread for termination in a cabinet or a building.



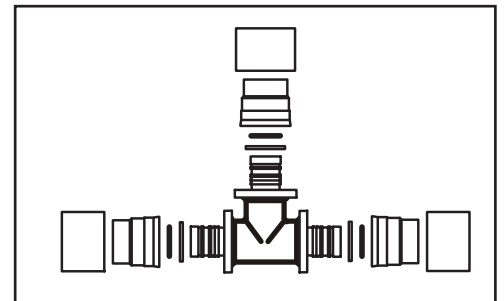
Component overview/data

Component No. 6001

Press coupling, 90°, male

PE-RT/aluminium/PE-RT	Thread	
	3/4"	1"
20	x	
26		x
32		x

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		
	20	26	32
20-20	x	x	x
26-20	x	x	x
26-26	x	x	x
32-20		x	x
32-26		x	x
32-32	x	x	x

Materials

Press coupling are made of brass or red brass.

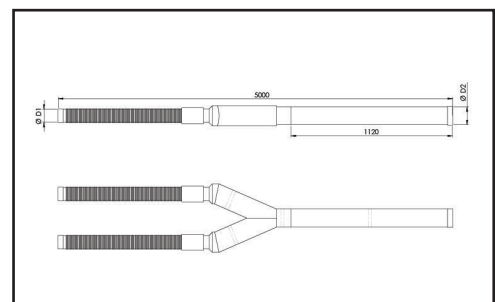
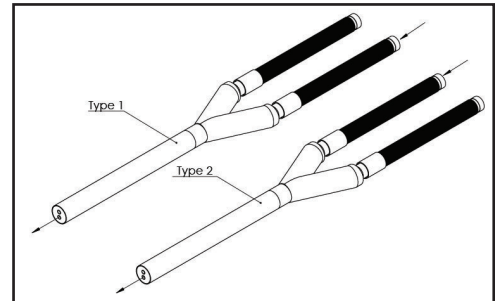
Weld ends for transition to steel are made in S355J2.

The FlexPipe

AluFlextra - Merge pipe

Application

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



Component overview/data

Component No. 3071

Merge pipe for AluFlextra

d mm	D1 mm	D2 mm	L mm
20	110	125	5000
26	110	125	5000
32	110	125	5000

The FlexPipe CuFlex - Contents

Contents	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.

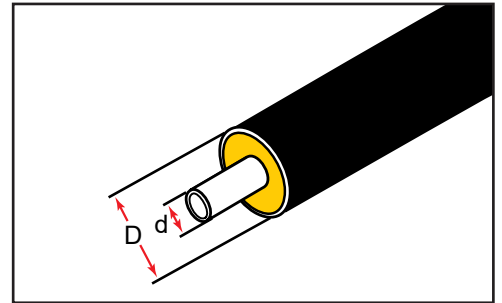
Insulation: Polyurethane foam

Blowing agent: Cyclopentane. Average thermal conductivity $\lambda_{50} = 0.022$ W/mK

Outer casing: Polyethylene, PE-LD with internal aluminium diffusion barrier for insulating gases.

The FlexPipe CuFlex - Pipe

Single pipe



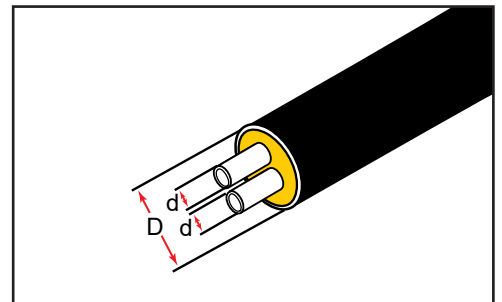
Component overview/data

Component No. 2100

Single pipe

Service pipe		Volume l/m	Series 1			Series 2		
d mm	Wall thk mm		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 l/m	Series 1			Series 2		
d mm	Wall thk mm		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

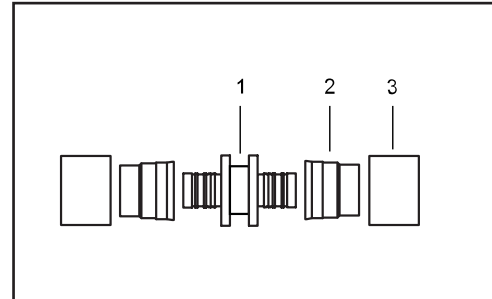
Application

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

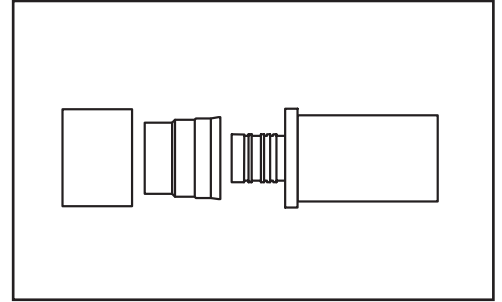
Press coupling, straight

Coupling end 1	Coupling end 2				
	15	18	22	28	35
15	x				
18		x			
22		x	x		
28		x	x	x	
35					x

CuFlex / Cu pipe - Press coupling, type MP

Press coupling, weld

Press coupling with weld end for transition to steel pipe.



Component overview/data

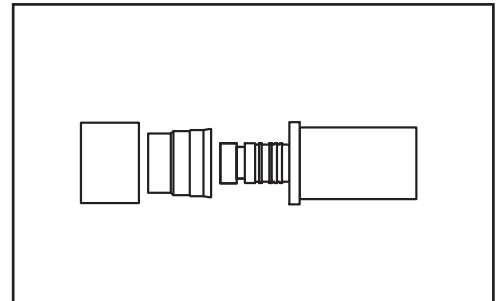
Component No. 6000

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

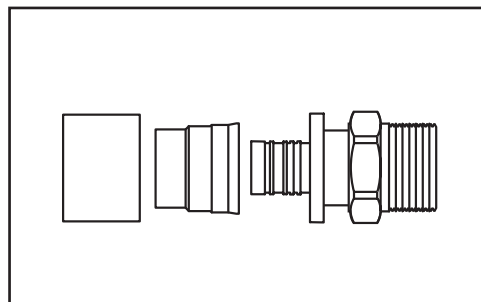
Press coupling, weld, closed

Steel	Copper		
	18	22	28
26.9	x	x	
33.7			x

CuFlex / Cu pipe - 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. 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.

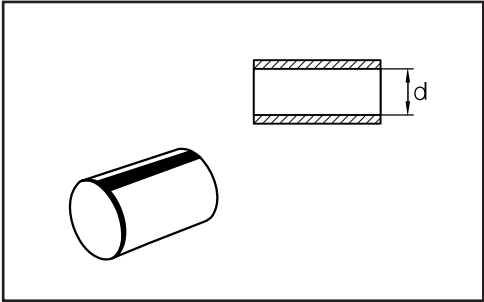
Weld ends are made in S355J2.

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

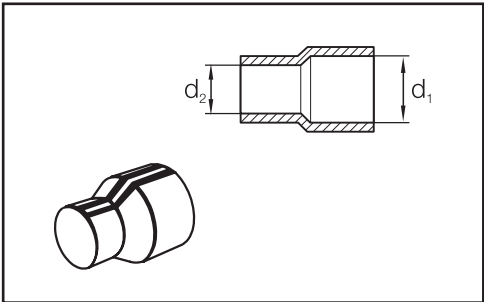


Component overview/data Component No. 1100

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

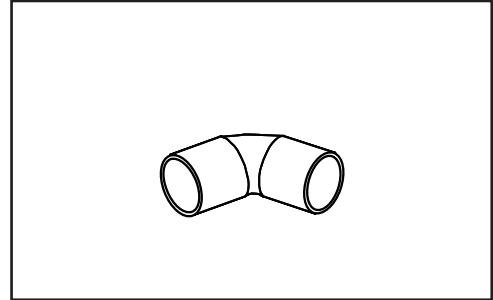
d, mm	18	22	28	35
d2, mm	15	18	22	28

The FlexPipe

CuFlex - Solder joint fittings

Solder elbow fitting

45° and 90° angle.



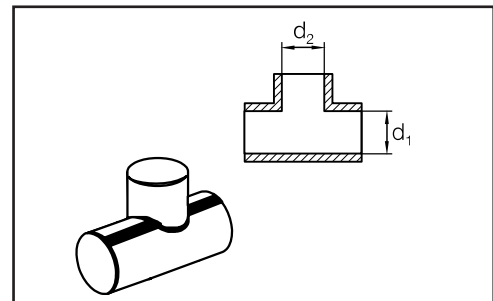
Component overview/data

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

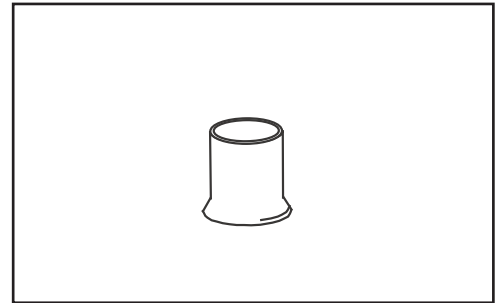
Solder tee fitting

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

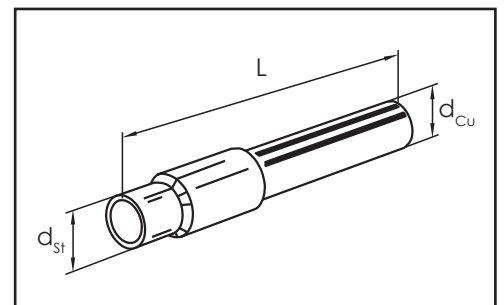
Component No. 1100

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
L, mm	92	92	92	120	134

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 P235GH in accordance with EN 20117-2.

The FlexPipe SteelFlex - Contents

Contents

General

Pipes

Weld fittings

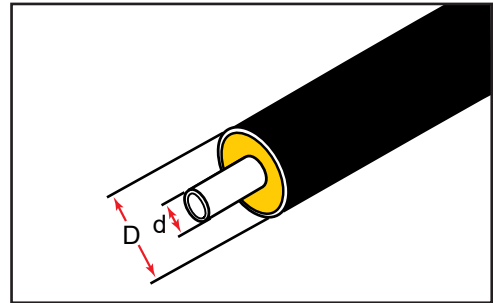
The FlexPipe

SteelFlex - General

Application	<p>SteelFlex is used within District Heating for distribution and transmission pipelines.</p> <p>The long lengths make SteelFlex especially suitable for:</p> <ul style="list-style-type: none"> - branch pipes without joints - passage of vegetation and other obstacles - hilly areas <p>The pipe system complies with the requirements in EN15632-4 for a minimum design service life of 30 years at the following operational conditions:</p> <p>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.</p> <p>Operating pressure max.: 25 bar</p> <p>SteelFlex can be combined with the other LOGSTOR systems.</p> <p>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.</p> <p>For dimensional changes weld reductions are used.</p>
Description	<p>The standard coil length is 50 or 100 m.</p> <p>SteelFlex is as a standard delivered with embedded copper wires for surveillance.</p> <p>Always delivered without free ends.</p> <p>The max coil width is 2.4 m.</p> <p>All pipes are produced in accordance with EN15632-4.</p>
Materials	<p>Service pipe: Welded steel pipe E195 or E155, + N, S2 in accordance with EN 10305-3.</p> <p>Insulation: Polyurethane foam</p> <p>Blowing agent: Cyclopentane</p> <p>Average thermal conductivity $\lambda_{50} = 0.022 \text{ W/mK}$</p> <p>Outer casing: Polyethylene, PE-LD with internal aluminium diffusion barrier for insulating gases.</p>

The FlexPipe SteelFlex - Pipe

Pipes



Component overview/data

Component No. 2100

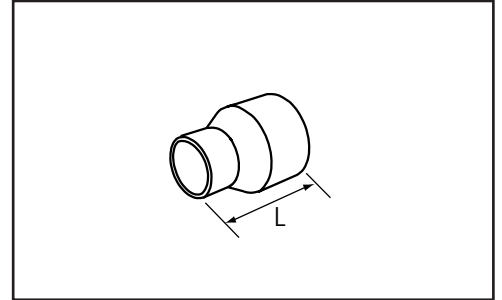
Single pipe

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

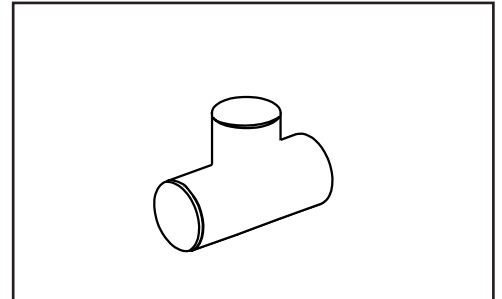
Component No. 1006

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

Contents

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.

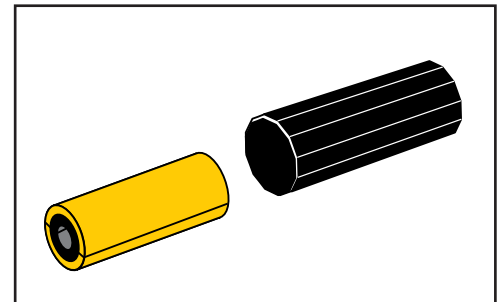
Major reductions can be carried out by combining two sleeves – a small and a big one

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

FXJointComponent 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			66-125			125-180		
Sleeve length, mm			555			565		
Service pipe, mm								
PertFlextra	PexFlextra	AluFlextra						
	20	20	x					
	25	26	x					
	32	32	x					
	40			x				
	50			x	x			
	63				x	x		
	75					x	x	
	90						x	x
								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.

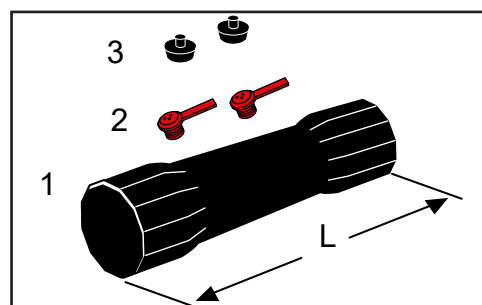
Description The SX-WPJoint consists of:

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.

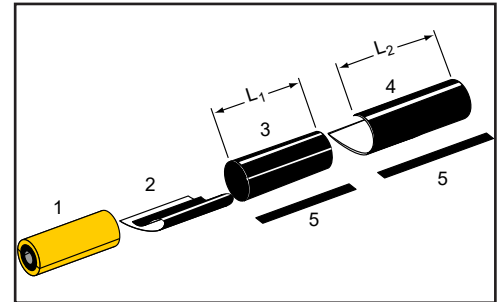
The FlexPipe

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

Contents

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 from a bonded steel pipe system.

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.

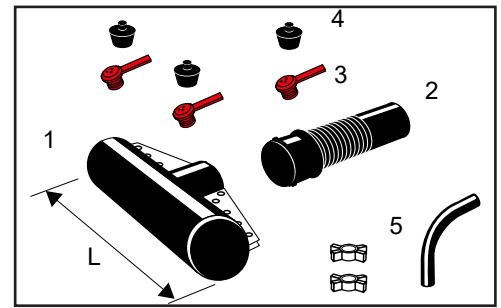
The SXT-WPJoint can be used together with a hot tapping valve. The insulation thickness around the valve casing will be thinner.

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
(to be ordered separately)



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

L= 680 mm, if the branch is 90-140 mm and 720 mm, if the branch is 160-200 mm.

The FlexPipe Branches - SXT-WPJoint

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

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.

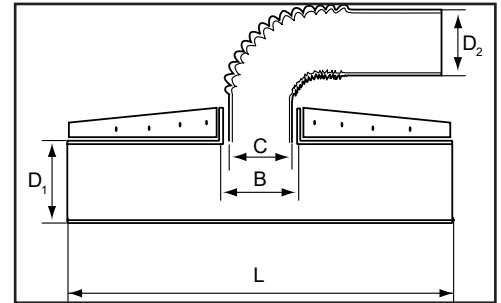
The FlexPipe Branches - SXT-WPJoint

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.

Measurements B and C are external diameters.



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					
D1 mm	B mm	L mm	77-90	90-110	110-125	125-140	140-160	180-200
			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

The FlexPipe 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.

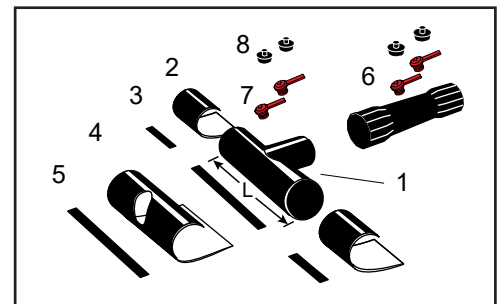
As a standard TXJoint is double sealed on the T-shoe. The branch can be double sealed by installing open shrink wrap on transition between T-shoe and SX-WPJoint and collar towards the flexible pipe.

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. Weld 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.



The FlexPipe Branches - TXJoint

Component overview/data

Component No. 5191

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
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

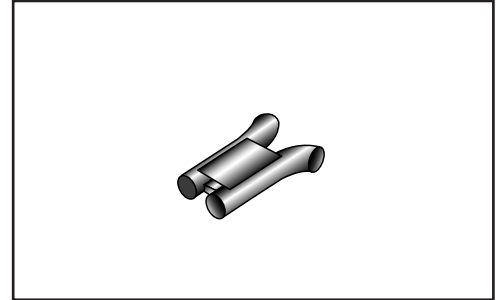
To be foamed with foam packs, component No. 0700.

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
L, mm	360	347	344	365	352	377	390
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.

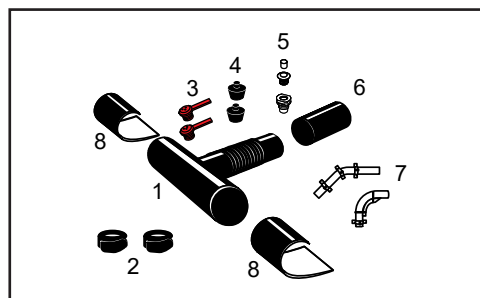
The TSJoint can be used together with a hot tapping valve. The insulation thickness around the valve casing will be thinner.

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

Description

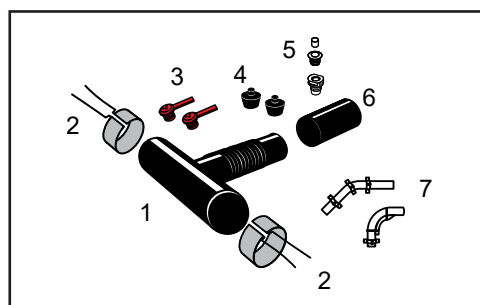
The TSJoint with mastic consists of:

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 (to be ordered separately)
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 (to be ordered separately)



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

The FlexPipe Branches - TSJoint

Component overview/data

Component No. 5202

TSJoint

Branch D ₂ mm	Main pipe D ₁ mm															
	90	110	125	140	160	180	200	225	250	280	315	355	400	450	500	560
90-125	x*	x**	x	x	x	x	x	x	x	x	x	x	x	x	x	x
140-160					x***	x***	x	x	x	x	x	x	x	x	x	x

Length T-joint main pipe = 650 mm

* Max branch ø90 mm

** Max branch ø110 mm*** Max branch ø140 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.

Weld strips, venting and weld plugs for 1 joint are delivered together in a bucket.

Component overview/data

Component No. 5556

Materials

Weld strip: Electro-plated mesh

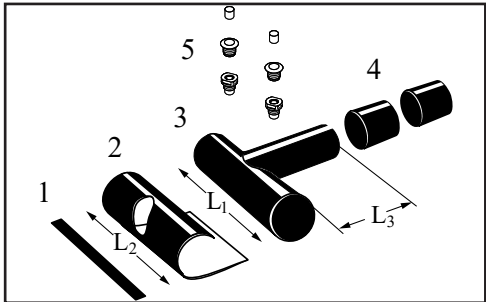
The FlexPipe Branches - T-joint straight

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,

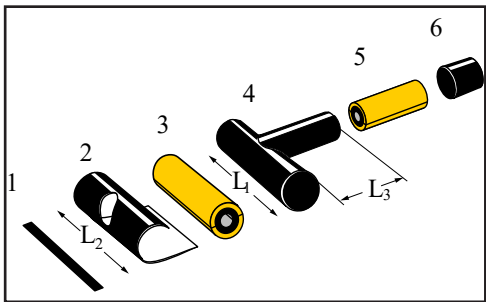
Description T-joint straight with insulation shells consists of:

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

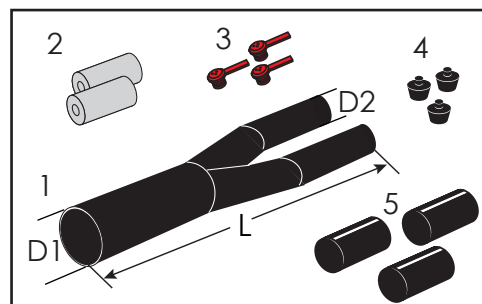
Accessories To be foamed with foam packs, component No. 0700.
When ordering state insulation series, and that delivery must include foam packs.

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
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

Contents	End fitting
	Wall entry sleeve
	InletPipe Recycled HDPE
	Sealing reduction
	Inlet box
	Protective cap
	End cap
	Valves and mountings

The FlexPipe Terminations - End fitting

Application

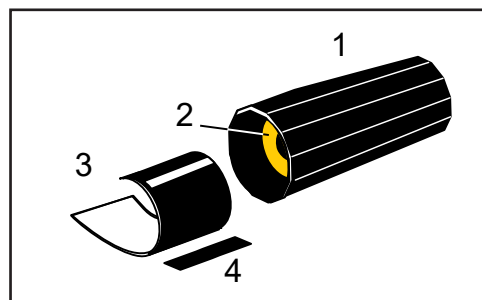
End fitting with closed end for temporary termination in the ground. The outmost part of the end fitting is shrinkable.

End fitting with insulation shells can be used for single pipes, whereas TwinPipes and double pipes must be foamed.

Description

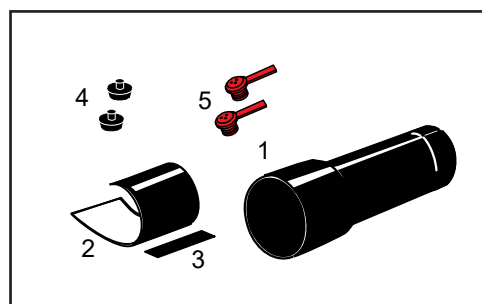
End fitting with insulation shells consists of:

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-linked 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.

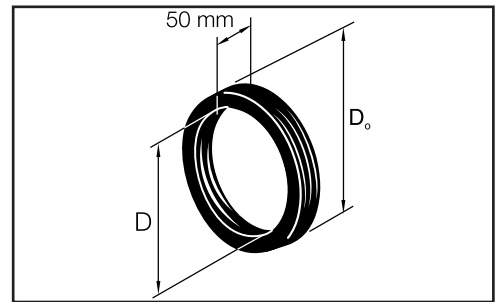
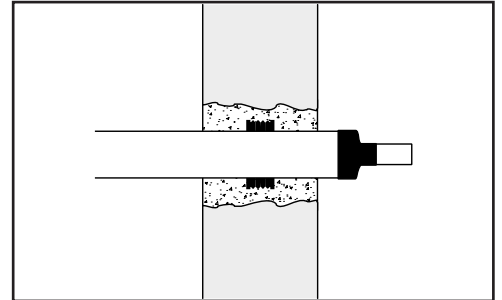
Exposed to groundwater pressure the wall entry sleeves may not be watertight. In such cases please contact LOGSTOR.

If sealing rings which can withstand large axial movements, please contact LOGSTOR.

Description

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

Note! $D_e - 2 \times 18 \text{ mm}$ 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 _o , mm	124	142	158	173	191	209

The FlexPipe Terminations - InletPipe Recycled HDPE

Application

For embedding in new constructions to enable later introduction of FlexPipes without disadvantages to the construction.

InletPipes are made of HDPE.

Expanded end to ensure a good connection to any extension pipe.

Component overview/data

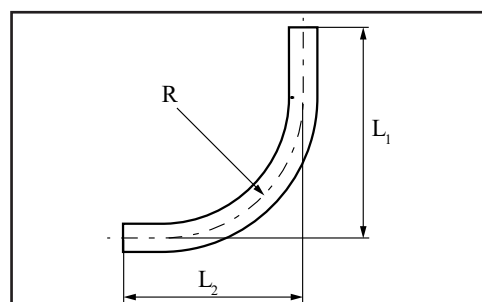
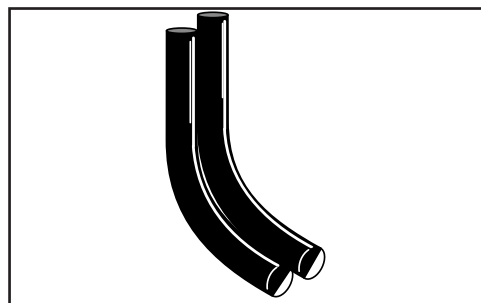
Component No. 1236

Inlet pipe

Outer casing D mm	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 InletPipe - fix

The pipes are fixed side by side at a fixed distance of approx. 15 mm.



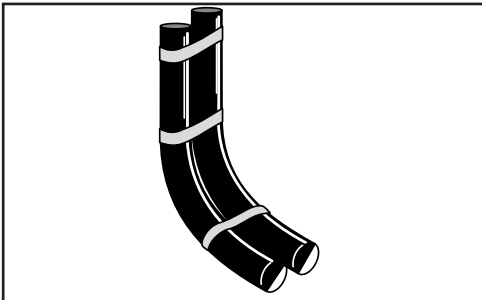
Component overview/data

Component No. 1236

Terminations - InletPipe Recycled HDPE

Double InletPipe - flexible

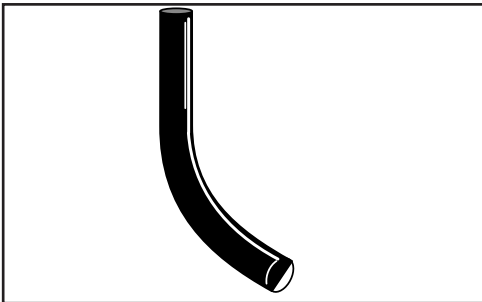
The InletPipes are joined with flexible rubber bands and can therefore be placed at random in relation to each other.



Component overview/data

Component No. 1236

Single InletPipe



Component overview/data

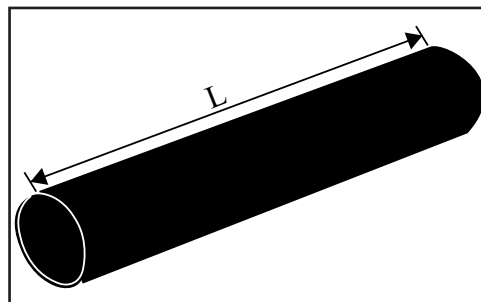
Component No. 1236

The FlexPipe

Terminations - InletPipe Recycled HDPE

Extension pipe

Used to extend InletPipe.
Adjusted on site.
The minimum wall thickness is 4.8 mm.



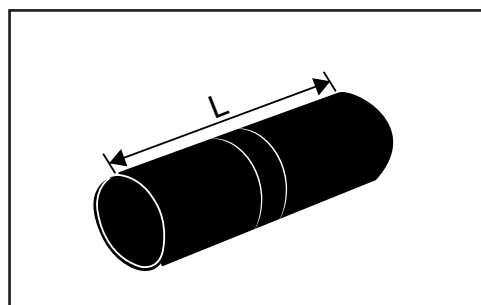
Component overview/data

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.



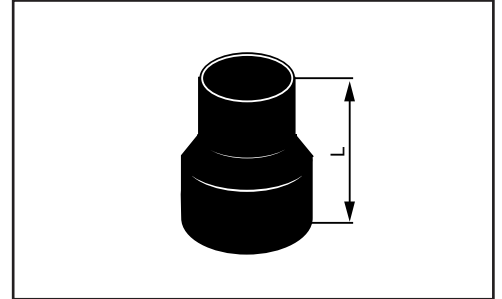
Component overview/data

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 InletPipe and outer casing.



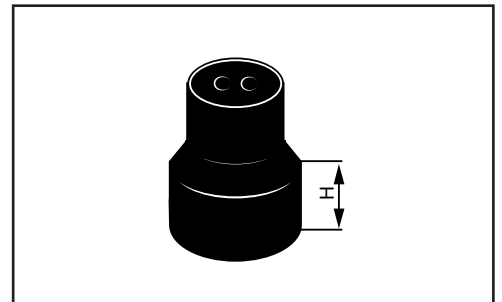
Component overview/data

Component No. 1236

Sealing reduction

For outer casing D mm	For InletPipe 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	InletPipe mm	H mm
20-20	110	140	200
20-20	125	160	200
26-26	125	160	200

The FlexPipe Terminations - Inlet box

Application

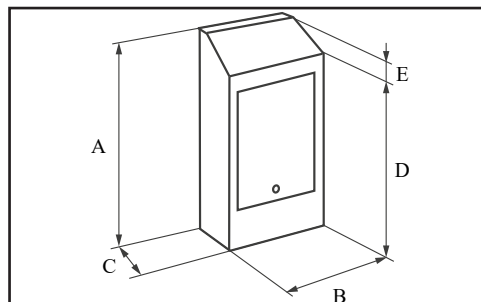
For sealing external pipe introduction through wall.

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

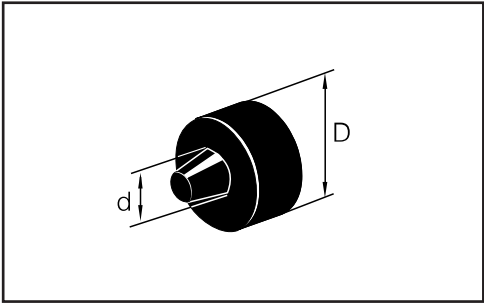
Inlet box

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



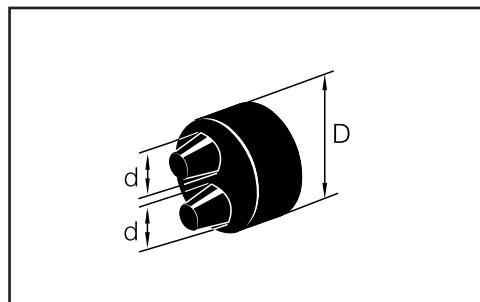
Component overview/data Component No. 1230

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

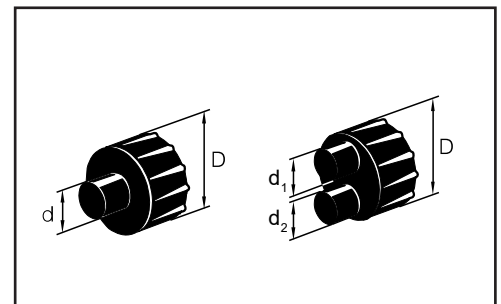
The FlexPipe Terminations - End cap

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

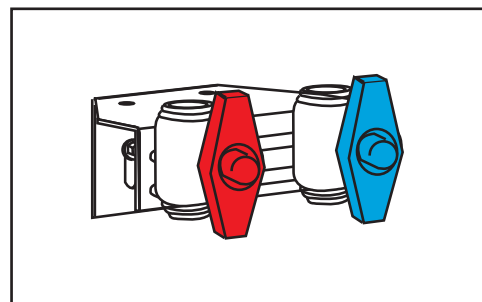
End cap: Cross-linked PE with embedded mastic

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



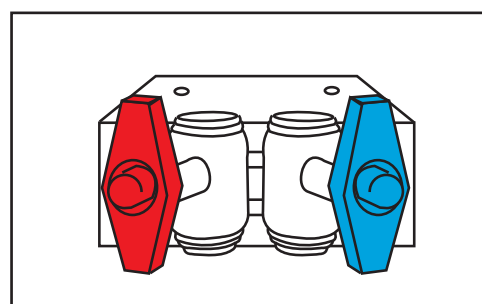
Component overview/data

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

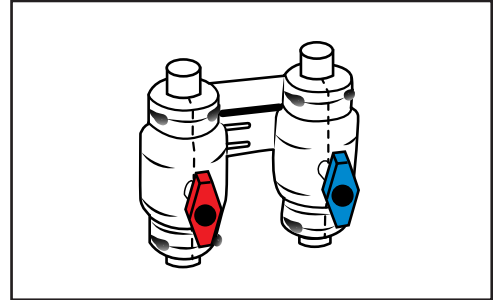
Insulation shells for Broen Ballomax

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

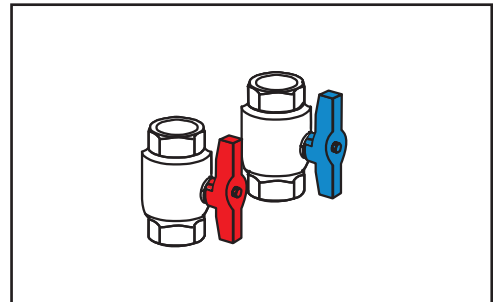
Component No. 4262

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

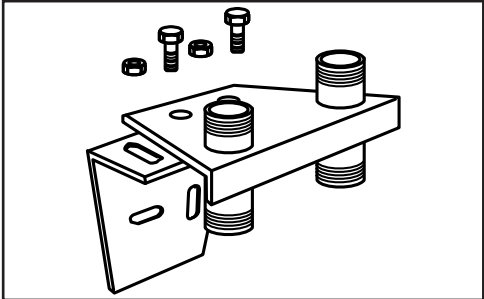
Single valve

Male thread	3/4"	1"	1 1/4"

The FlexPipe Terminations - Valves and mountings

Mounting for single 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

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

All specifications in this catalogue section are based on:

Max. operating pressure = 16 bar

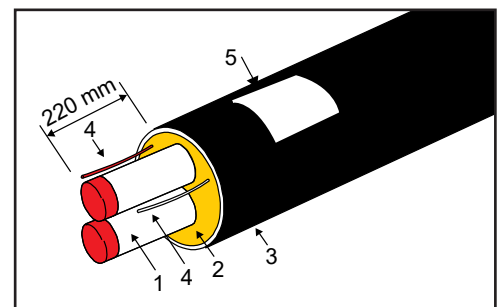
Continuous operating temperature = 120°C

Peak load temperature = Max. 140 °C. The sum of the various time intervals must not exceed 300 h per year.

Max. external temperature load (casings) = 50°C

Description A preinsulated copper pipe consists of:

1. Service pipe (1 or 2): Copper
2. Insulation: Polyurethane foam
3. Outer casing: Polyethylene, PE-HD
4. Wires for surveillance: Copper (one is tinned)
5. Pipe label



Copper pipe Type: Soft, drawn, seamless pipes designed for capillary soldering

Dimensions: In accordance with EN 12449

Material: In accordance with EN 12449

Copper content: 99.85% weight

P-content: 0.015 - 0.040% weight

Ultimate stress: 210-270 N/mm²

Elongation at break: Min. 40%

Hardness: Vicker's hardness, approx. 55 HV

Inspection certificate: EN 10204 - 3.1.

Insulation Polyurethane foam: Properties: Minimum as required in EN 253

Blowing agent: Cyclopentane

Insulating property: Thermal conductivity (50°C): < 0.027 W/mK*

*)These lambda values are based on an average of the continuous measurements.

The calculation program Calculator always include the updated values. See www.logstor.com/Calculator.

Outer casing	<p>Polyethylene:</p> <p>PEHD, 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 ≤ 0.5 g/10 min</p> <p>Thermal stability:</p> <p>Oxydation induction time (OIT): > 30 min at 210° C</p> <p>Resistance against crack formation:</p> <p>Stress crack resistance (notch sensibility): > 300 h (full notch, 4 MPa, 80°, EN 253)</p> <p>Internal surface treatment:</p> <p>All outer casings are corona treated during production. This ensures an optimum adhesion between casing and insulation.</p>
Finished pipes	<p>Free service pipe end: 220 mm ± 10 mm</p> <p>Lengths delivered: 12 m</p>
Surveillance system	<p>The copper pipes are delivered with 2 copper wires, embedded in insulation (Nordic System).</p> <p>Wires: 1.5 mm² copper wires (one is tinned)</p> <p>Distance to service pipe: 15 mm</p> <p>Position in top: $\pm 3-20$ cm from 12 o'clock position</p> <p>The embedded copper wires are the backbone of the electronic surveillance systems which are available for most of our pipelines.</p> <p>See description in the Surveillance Handbook.</p>

The Copper Pipe Pipe

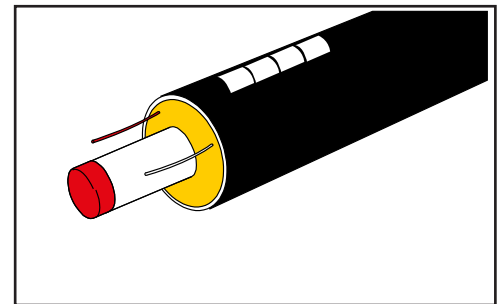
Application

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

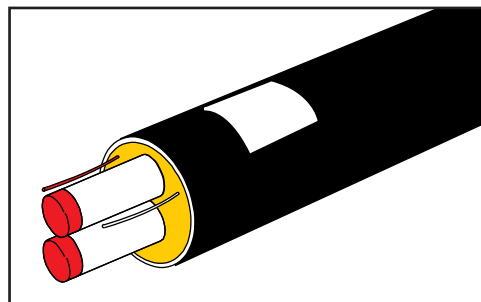
Component No. 2000

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

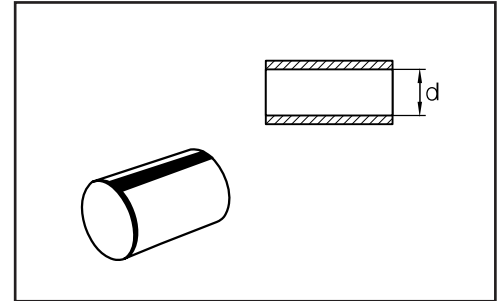
Component No. 2090

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 Solder joint fittings

Application Used to join straight copper pipes and reductions.

Solder joint fitting, straight

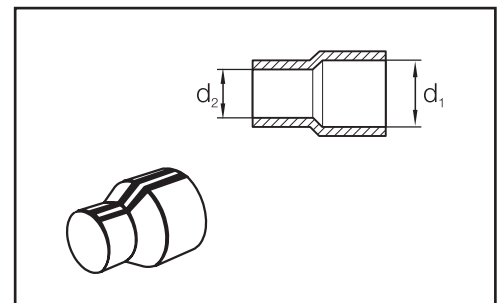


Component overview/data Component No. 1100

Solder joint fitting, straight

Copper pipe d, mm	15	18	22	28	35	42	54	70
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Solder joint fitting, reduction Never reduce more than a single dimension.



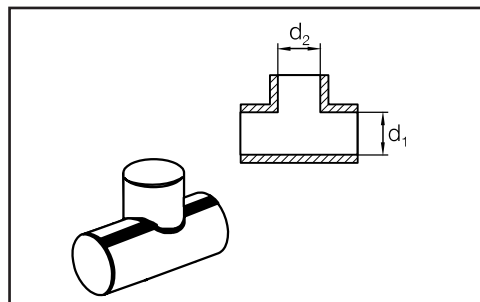
Component overview/data Component No. 1100

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 Solder joint fittings

Solder joint fitting, tee



Component overview/data

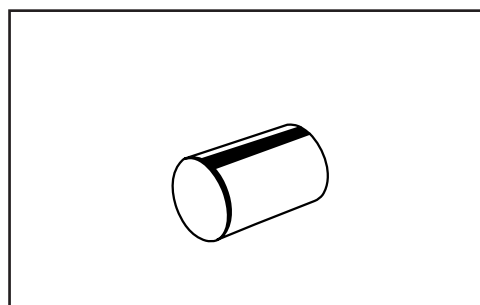
Component No. 1100

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

Solder end fitting

Used to terminate copper pipe ends.



Component overview/data

Component No. 1100

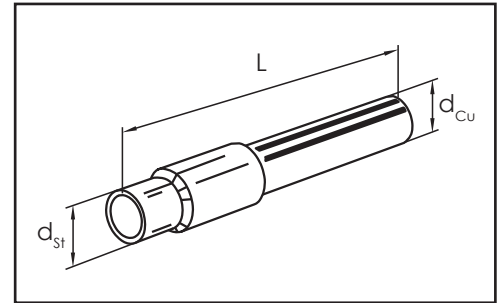
Solder end fitting

Copper pipe d, mm	15	18	22	28	35	42	54	70
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The Copper Pipe Solder joint fittings

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

d_{Cu} , mm	15	18	22	28	35	42	54	70
d_{St} , mm	26.9	26,9	26.9	33.7	42.4	48.3	60.3	76.1
L, mm	92	92	92	120	134	144	153	250

Materials

The material is Cu-DHP after EN 12449.

Dimensions and tolerances are in accordance with EN1254-1.

Soldered with silver solder with at least 5% silver. Prior to soldering a calibration mandrel is used to calibrate the copper pipes.

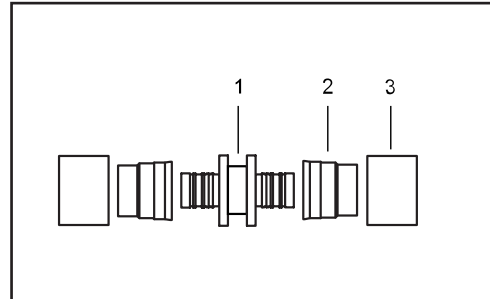
The Copper Pipe

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

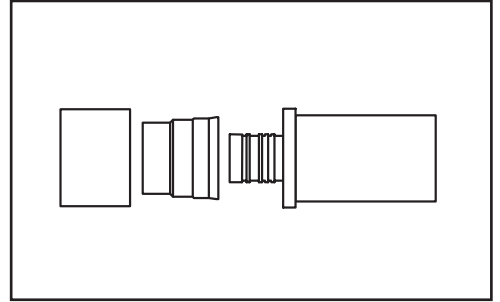
Coupling end 1	Coupling end 2				
	15	18	22	28	35
15	x				
18		x			
22		x	x		
28		x	x	x	
35					x

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

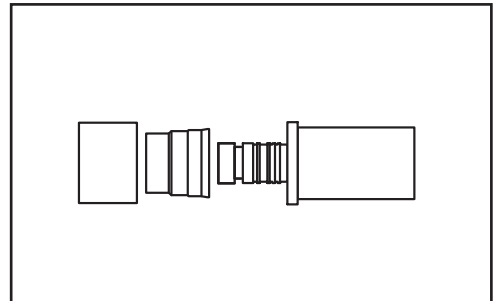
Component No. 6000

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

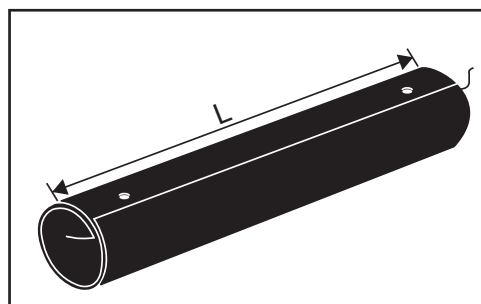
LOGSTOR WeldMaster is used to weld BandJoints.

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

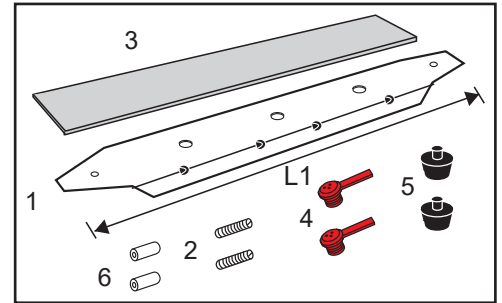
*is used for E-Comp and repairs.

The Copper Pipe Casing joints - BandJoint

Depth guard

Accessories, 1 set contains:

1. Depth guard
2. Screws
3. Felt pad
4. Venting plugs
5. Welding plugs
6. Insulator feet

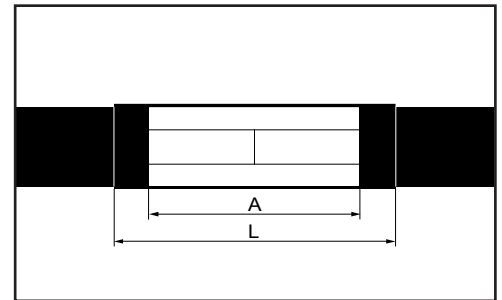


Length of depth guard:

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.

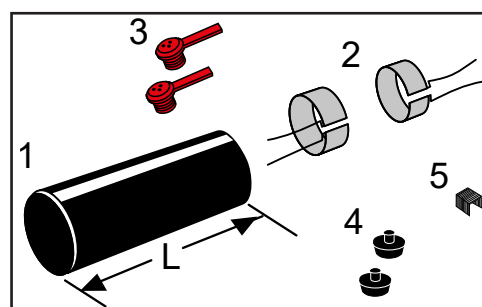
The joint is welded together with the outer casing by means of a loose weld strip between the joint and the outer casing. LOGSTOR WeldMaster is used to weld the EWJoint.

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 for one EWJoint 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.
Weld strips, venting and weld plugs for 1 joint are delivered together in a bucket.

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

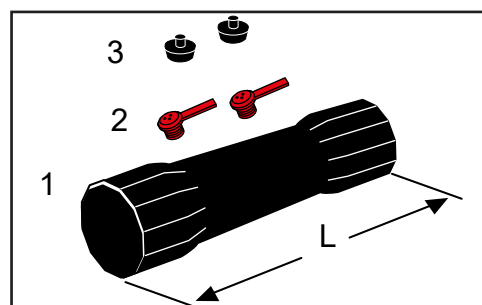
The SX-WPJoint consists of:

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.

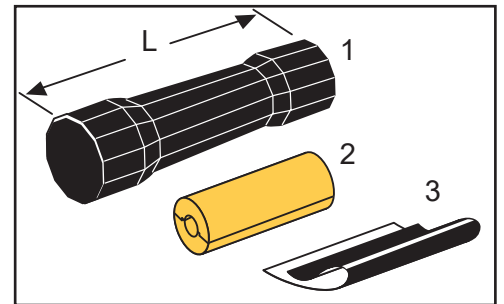
The Copper Pipe Casing joints - BXJoint

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 series 1, 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

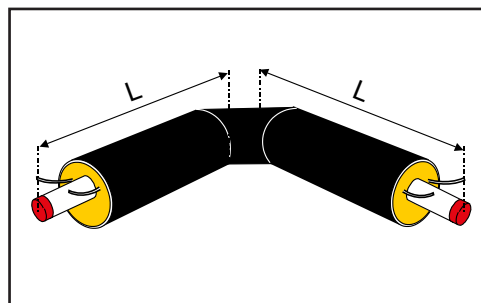
The preinsulated 90° bends in this section are used for directional changes.

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

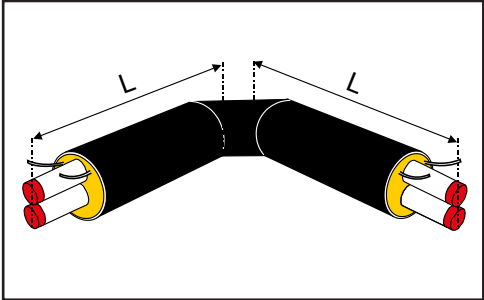
Copper pipe ø out. mm	Outer casing ø mm	L mm
22	90	1000
28	90	1000
35	90	1000
42	110	1000
54	125	1000
70	140	1000

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

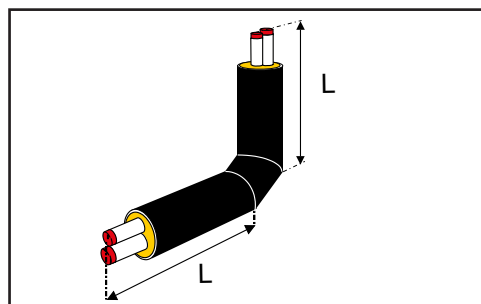
Preinsulated vertical 90° bends are used for vertical directional changes e.g. terrain offset or introduction into buildings.

As a standard they are available in 90°. If other degree 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.

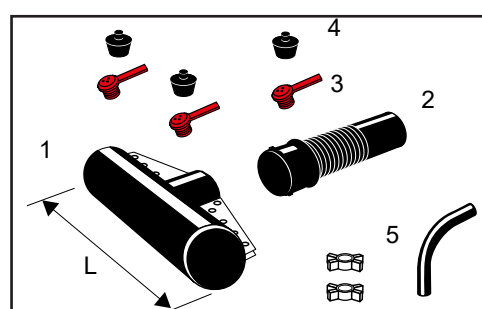
Installation on FlextraPipe with corrugated casing requires that the branch be secured with an extra collar, which is ordered separately.

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		
200	x	x	x	x	x	x	x

L= 680 mm, if branch is 90 - 140 mm and 720 mm, if branch is 160 - 200 mm

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.

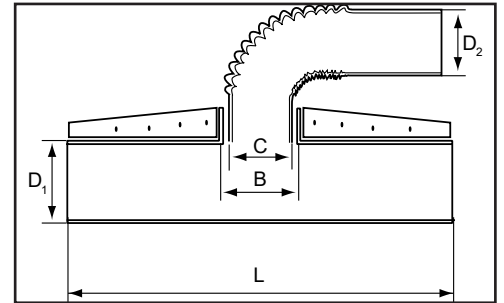
When ordering state insulation series, and that delivery must include foam packs.

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.

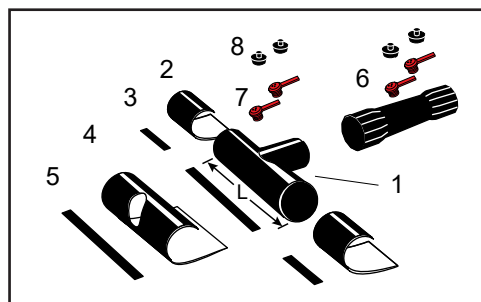
Installation on pipes with corrugated casing requires that the branch be sealed with an extra collar, which is ordered separately.

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

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.

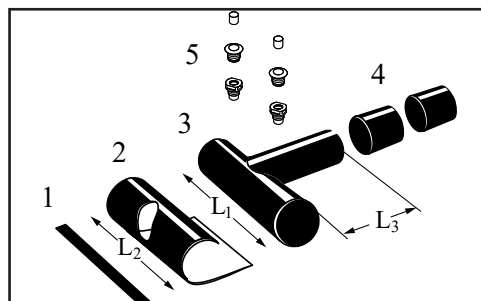
Reinforcement plate to reinforce the main pipe, if necessary, component No. 5426.

The 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

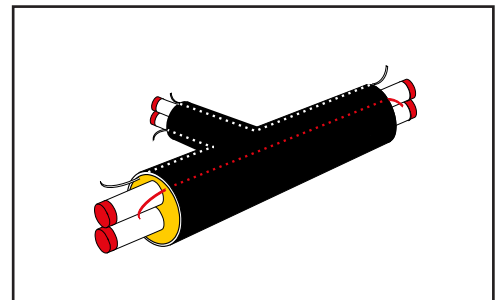
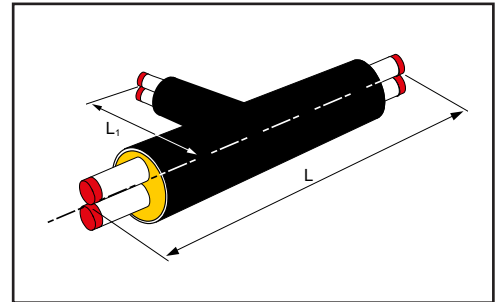
To be foamed with foam packs, component No. 0700..

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.



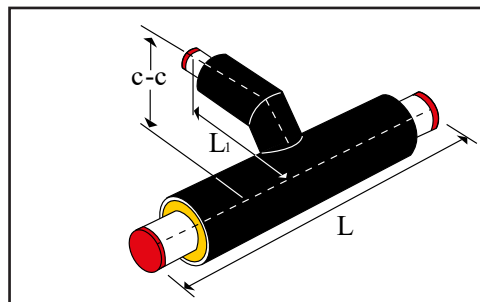
Component overview/data Component No. 3490

Main pipe ød, mm	Branch ød, mm				
	22-22/125	28-28/140	35-35/140	42-42/160	54-54/200
22-22/125	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**

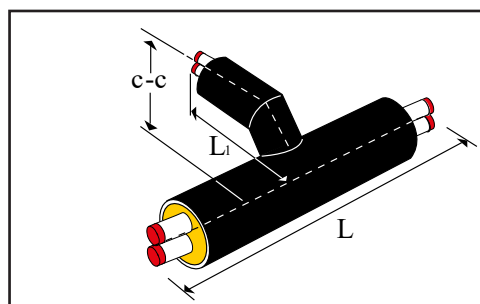
Component No. 3000

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.



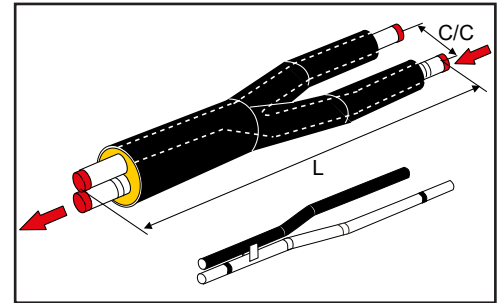
**Component
overview/data**

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

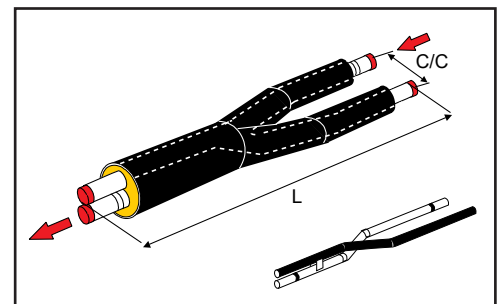
Merge pipe - type 1

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.

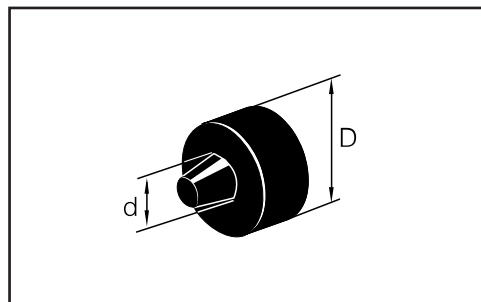
The Copper Pipe Terminations

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

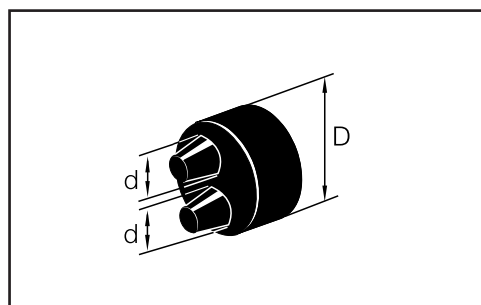
Service pipe d mm	Outer casing D mm			
	90	110	125	140
16-40	x			
16-50		x		
20-63			x	
50-75				x

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

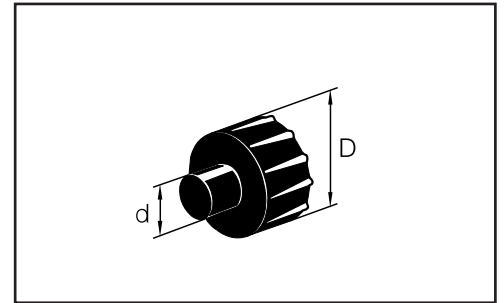
Service pipe d1/ d2 mm	Outer casing D mm				
	90	110	125	140	160
15-25/15-25	x				
15-32/15-32		x			
16-40/16-40			x		
20-40/20-40				x	
32-50/32-50					x

The Copper Pipe Terminations

End cap

Used to protect foam ends against moisture ingress.

Applicable for 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		
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 pipe ø out. mm	Casing ø out. mm	DHEC No.
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

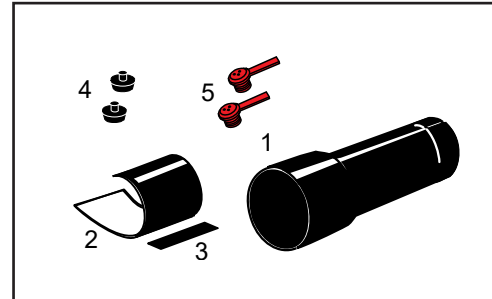
To terminate a pipe system a PE end fitting is used.

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

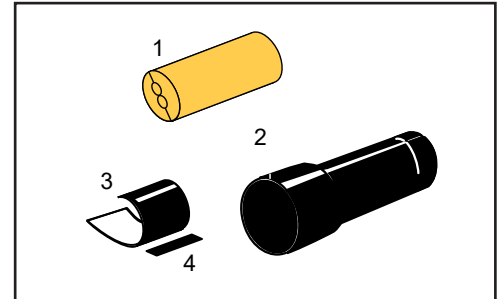
To terminate a pipe system a PE end fitting is used.

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.

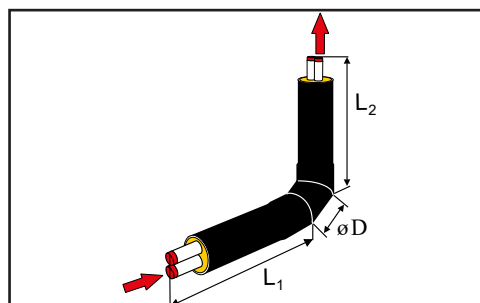
Description The bends are available for operating pressure: 16 bar.
The copper pipes are bent mechanically.

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

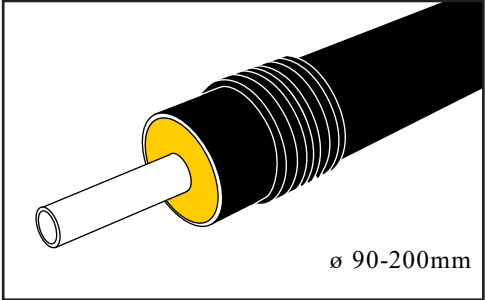
House entry pipe - TwinPipe

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

Description	<p>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.</p> <p>The work with foam packs requires a valid isocyanate training.</p>
Contents	<p>Foam pack</p> <p>Other insulation methods</p>

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 18 months counting from the stated production week, provided they are stored correctly.

Description

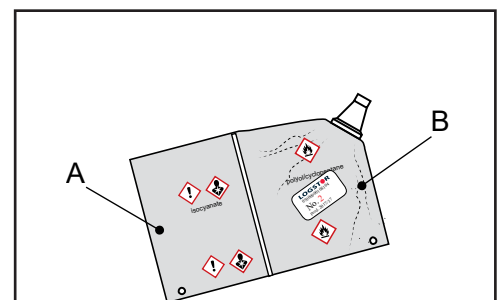
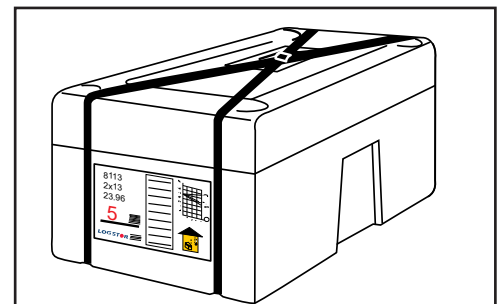
Foam packs are supplied in insulation boxes. The box i.a. contains a foam pack folder, from which it appears which foam pack size to use for which casing joint, as well as a leaflet with addresses and safety instructions.

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.

Product No., foam pack No., and production week also appear from the bag.



Safety information/folder

One side of the bag contains separate safety information about the polyol/cyclopentane part of the bag and a separate safety information about the isocyanate part of the bag. The safety information is available in multiple languages.

This complies with the requirements in the EU-REACH CLP regulation.

The safety information is in folders, glued onto the bag. The folders can be opened, so the different languages appear.

Each insulation box also includes a printed version of the safety information.

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 MSDS for foam pack is available on our website www.logstor.com.

The MSDS contains 16 items of information.

Scanning the QR code on the bag with a mobile phone gives direct access to safety information about isocyanate and polyol/cyclopentane respectively on our website www.logstor.com.

Insulating joints

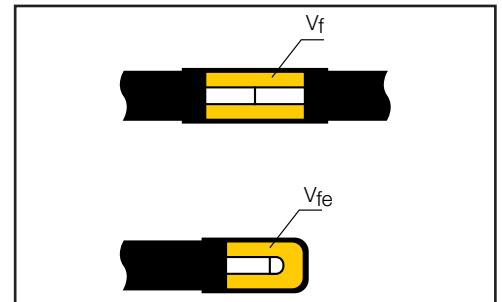
Foam pack

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 and in the insulation box.



Component overview/data

Component No. 0700

Foam volume

Foam pack	Litre	kg	Alternative			Foam volume, litre			
						V _f		V _{fe}	
						min.	max.	min.	max.
No.	per	per							
	bag	bag							
0.5	0.21	0.25				1.5	2.6	2.7	4.6
1	0.30	0.34				2.6	3.7	4.6	6.7
2	0.37	0.42				3.7	4.6	6.7	8.3
3	0.45	0.52				4.6	5.8	8.3	10.4
4	0.55	0.64	2x1			5.7	6.9	10.4	12.5
5	0.68	0.78	1+2	2x2		6.9	8.6	12.5	15.4
6	0.83	0.96	2+3	2x3	1+4	8.6	10.6	15.4	19.1
7	1.02	1.17	3+4	1+5	2+5	10.5	12.9	19.1	23.2
8	1.28	1.43	4+5	2+6	3+6	12.9	15.9	23.2	28.6
9	1.52	1.74	5+6	3+7	4+7	15.9	19.4	28.6	35.0
2x6	1.66	1.92	5+7	3+8	0+9	17.3	21.9	34.7	38.2
10	1.88	2.17	6+7	5+8	2+9	19.8	25.1	38.2	43.7
11	2.35	2.71	6+9	3+10	4+10	25.0	32.4	43.7	55.1
2x9	3.04	3.48	8+10	5+11	6+11	31.8	41.2	55.1	70.0
12	3.52	4.06	8+11			38.0	49.2	70.0	83.6
10+11	4.23	4.88	5+12			44.9	58.1	83.6	98.7
13	4.70	5.42	2x11	8+12		51.0	65.9	98.7	112.1
10+12	5.40	6.23	5+13			57.8	74.9	112.1	127.3
10+13	6.58	7.59	2x9+12			70.8	91.6	127.3	155.8
12+13	8.22	9.48				89.0	115.1	155.8	195.7
2x13	9.40	10.84	11+2x12			101.9	131.9	195.7	224.2
2x12+13	11.74	13.54				127.0	164.3	224.2	279.3
3x13	14.10	16.26				152.9	197.8	279.3	336.3
2x12+2x13	16.44	18.96				177.9	230.2	336.3	391.4
4x13	18.80	21.68				203.8	263.8	391.4	448.4

Other insulation methods - General

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

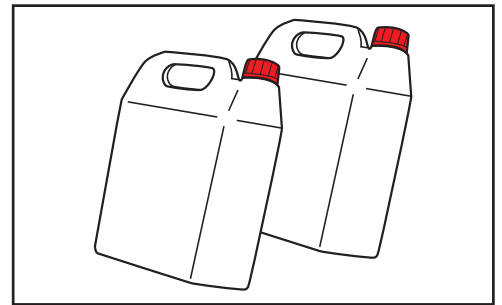
Other insulations methods - Can foam *

Other insulations methods - Machine foam

*) Not allowed in all countries

Other insulation methods - Can foam

Application	<p>The can foam - containing the 2 foam liquids, isocyanate and polyol/cyclopentane - are apportioned and mixed in open cans.</p> <p>Can foam has a time limit for use of 12 months counting from the stated production week, provided it is stored correctly.</p>
Description	<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! The use of 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>
Foam quantities	<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>
Component overview/data	<p>Component No. 0700</p>



Other insulation methods - Can foam

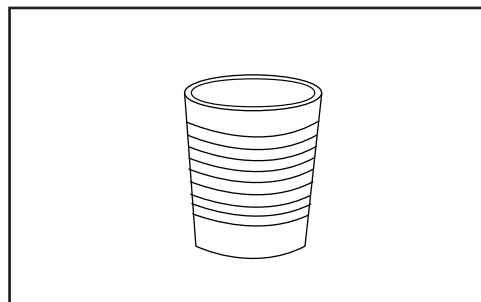
Mixing cup

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

Other insulation methods - Machine foam

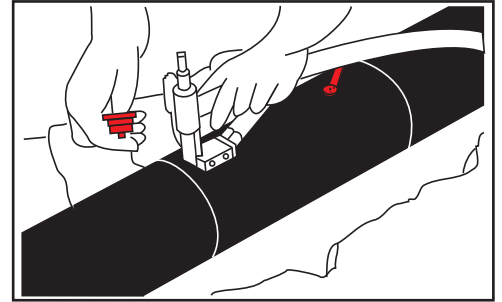
Application When foaming joints it is advantageous to use machine foam when large foam quantities will be filled e.g. into large transmission lines

However, the application of machine foam requires passable space along the trench.

To use the foam machine a specific education is required.

Description 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.

If LOGSTOR is not involved in the installation work, LOGSTOR does not give any guarantee for correct dosage and implementation.



Component overview/data Component No. 0700

Materials Polyol and isocyanate must be purchased according to LOGSTOR's specifications and from recommended suppliers.

For further information contact your local LOGSTOR contact person.

LOGSTOR Detect Overview

Description

Please refer to the Surveillance Manual, which is available on our website 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.

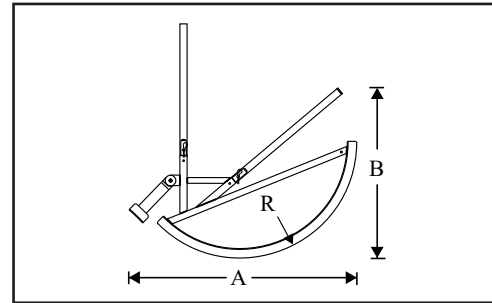
Contents

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

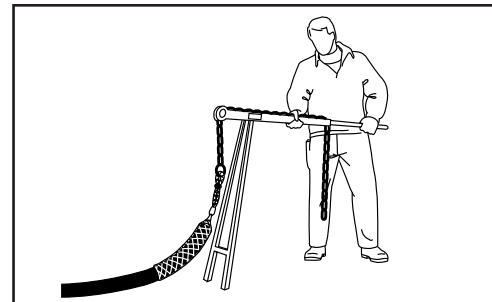
For house entry with FlexPipe through InletPipe embedded in concrete or tilted bore in the base pulling tool and pulling sleeve are used.

Outer casing dimension 90 mm

Product Nos:

Pulling tool: 9050 0000 007 887

Pulling sleeve: 9050 0000 047 001

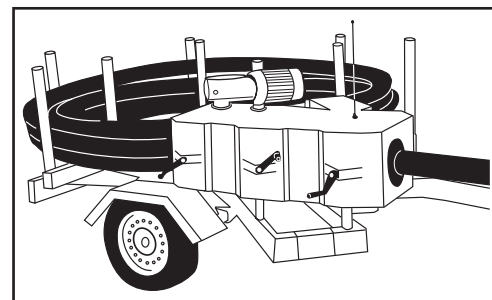
**Component overview/data**

Component No. 9050

Transport and uncoiling

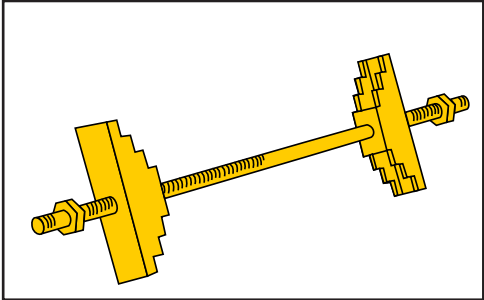
For transport and uncoiling major dimensions and a high number of house entries the FlexPipe wagon with motorized straightener and remote control is recommended.

For supplier details please contact LOGSTOR.

**Component overview/data**

Component No. xxx

Compression tool For compressing E-Comp prior to welding it into the pipe system.



Component overview/data Component No. 9050

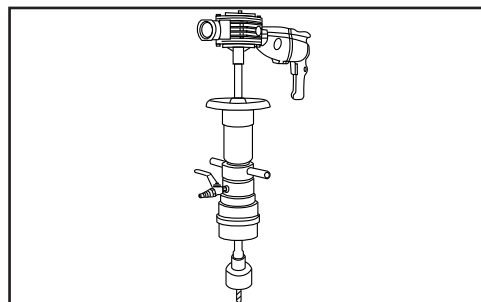
Compression tool

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

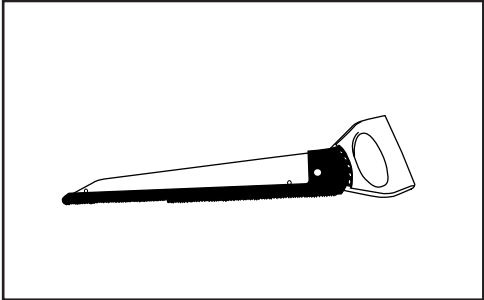
Eclipse saw

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

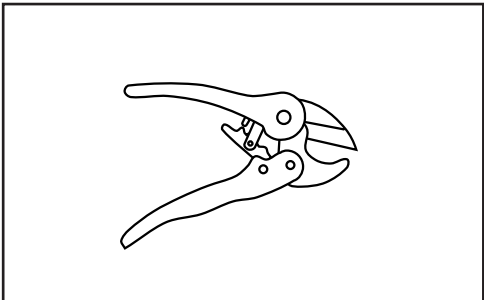


Component overview/data

Component No. 9000

PEX scissors

For perpendicular cutting PEX, PE-RT and PE-RT/aluminium/PE-RT service pipes.



Component overview/data

Component No. 9000

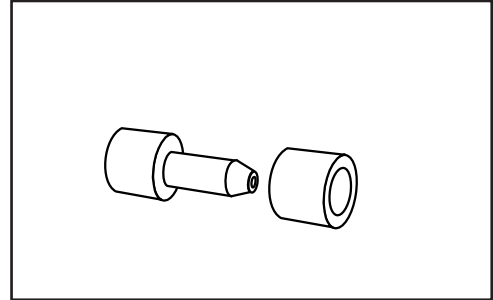
PEX scissors

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 mandrel

For CuFlex to calibrate copper pipes before soldering.



Component overview/data

Component No. 9050

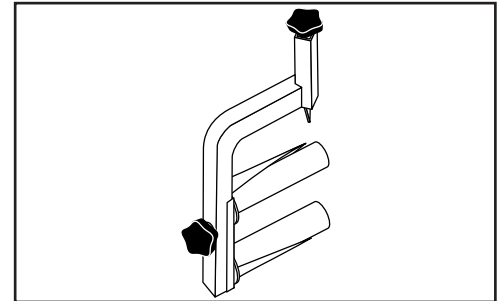
Calibration mandrel

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

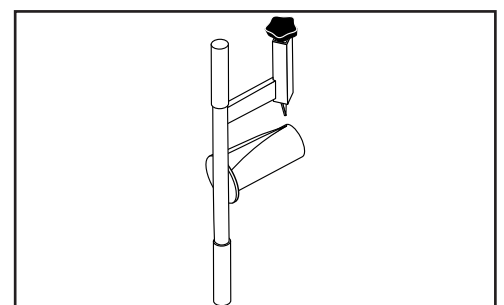
For removal of insulation from single pipes with PEX and PE-RT/aluminium/PE-RT service pipes to prevent that the service pipe is damaged.

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

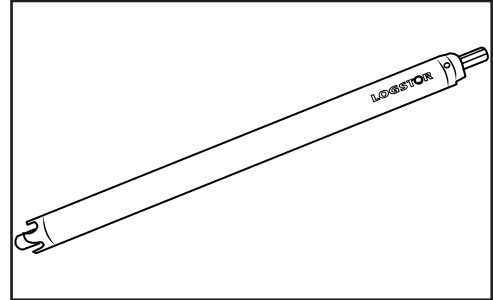
Stripping tool - large

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 tools

Stripping tool for AluFlextra

Stripping tool for AluFlextra to use with drilling machine:

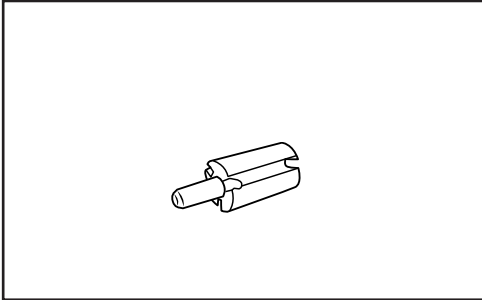
**Component overview/data**

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



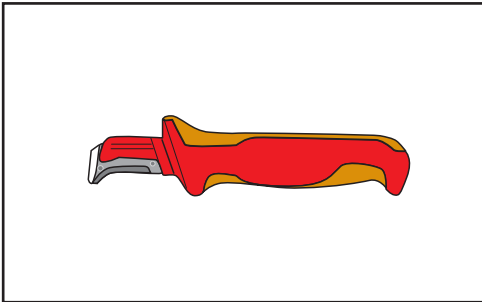
Component overview/data

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

Protection layer remover for PE-RT pipes

Tool for removal of the protection layer and the aluminum diffusion barrier, where couplings are installed.



Component overview/data

Component No. 9000

Material No. 9000 0000 007 005

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

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

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

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

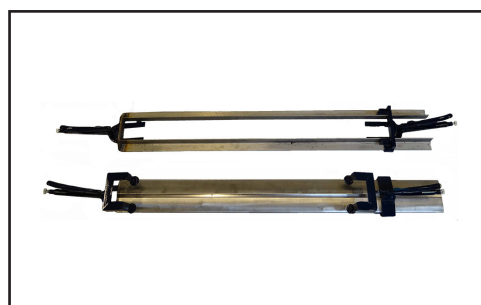
Hand tools necessary to install EWJoints.

**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**

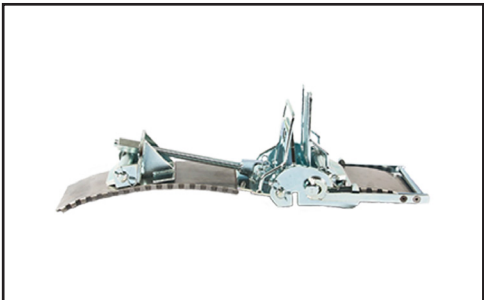


**Component
overview/data**

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**

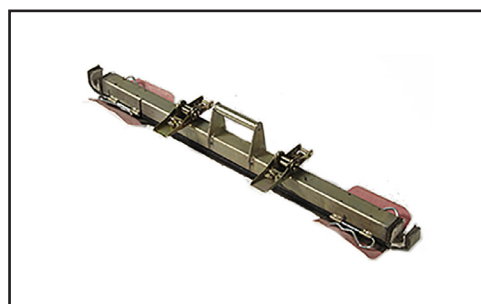


**Component
overview/data**

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.

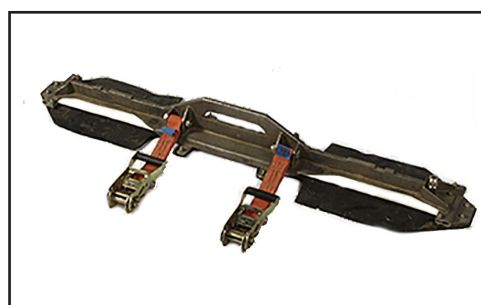


**Component
overview/data**

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.



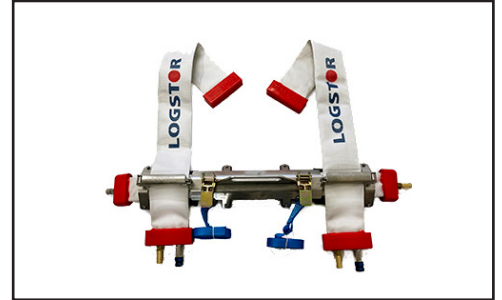
**Component
overview/data**

Component No. 9050

Installation equipment for BandJoint

**Flexible pressure
tool ø90-200 mm**

Product No. 9050 0000 000 032

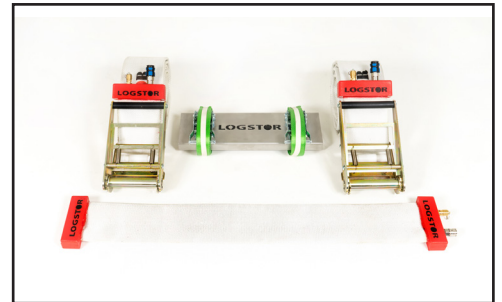


**Component
overview/data**

Component No. 9050

**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**

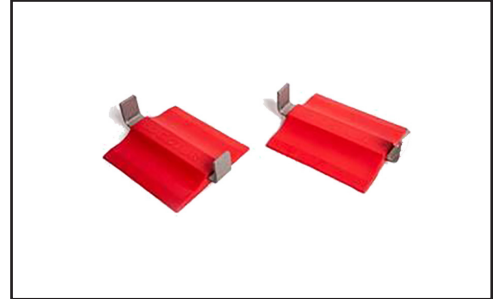
Component No. 9050

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 $\varnothing 225 - 800$ mm.

Product No. 9050 0000 000 021



Component overview/data Component No. 9050

EW band Pressure band to install EWJoint in dimensions $\varnothing 90-1400$ 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

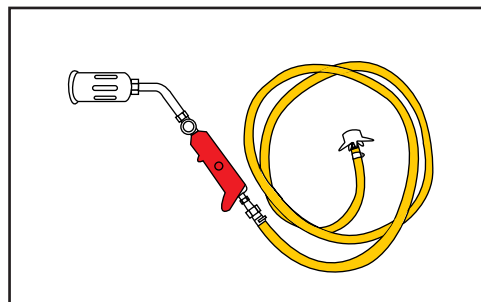
**Component overview/data**

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

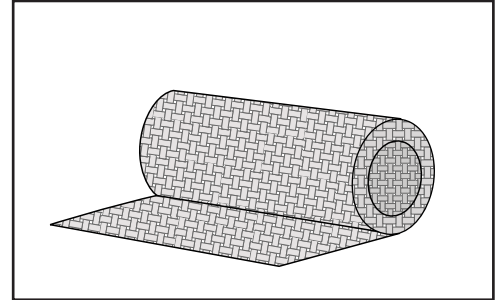
Heat shield

For protecting corrugated casings when shrinking sleeves.

Width: 150mm

Length: 1000 mm

Product No. 9050 0150 031 000.

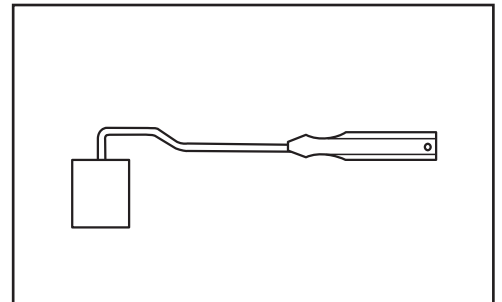


Component overview/data

Component No. 9050

Roller

For compressing overlap on open shrink wraps and collars.



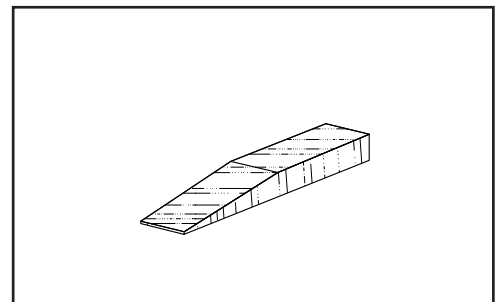
Component overview/data

Component No. 9000

Wooden wedge

For centering shrink sleeves during installation.

Delivered in bags with 24 pcs.



Component overview/data

Component No. 1997

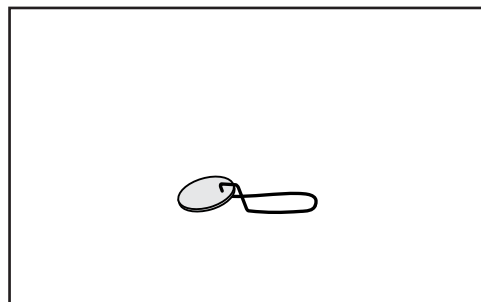
Wooden wedge

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

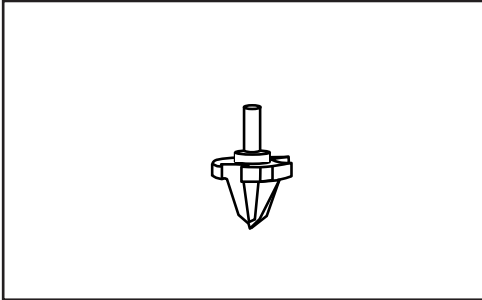
**Component
overview/data**

Component No. 9050

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.
∅ 35 mm	9050 0035 023 001
∅ 43 mm*	9050 0043 023 001

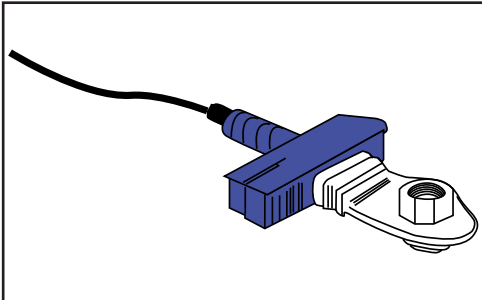
* For repair use.

Socket welder

Socket welder HHSW-63-W for replaceable cones. Cones are ordered separately.

Delivered in a box.

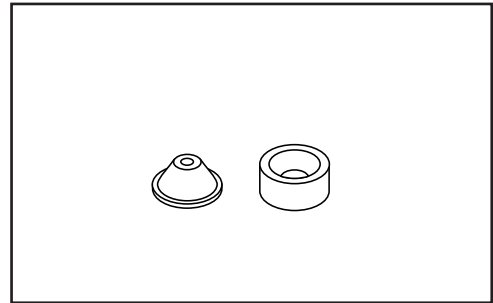
Product No. 9050 0000 023 013.



Component overview/data

Component No. 9050

Tools for weld plugs

Cones for socket
welderComponent
overview/data

Component No. 9050

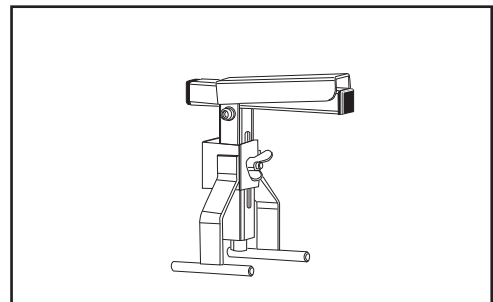
Cones for socket welder

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

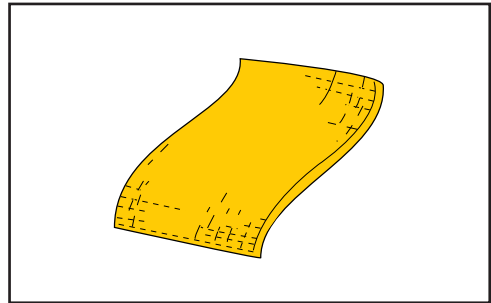
Tools for LOGSTOR Detect

Synthetic cloth

For cleaning wire ends before connection and soldering.

Delivered in packages of 10 pcs.

Product No. 1998 0000 002 002 (10 pcs.)

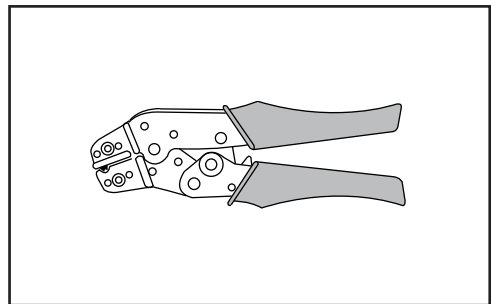
**Component overview/data**

Component No. 1998

Crimping pliers

Special pliers to compress crimp connectors for connection of copper wires.

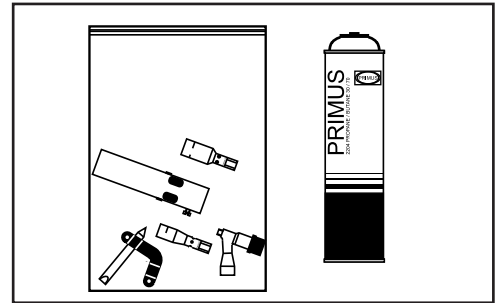
Product No. 9000 0000 029 001

**Component overview/data**

Component No. 9000

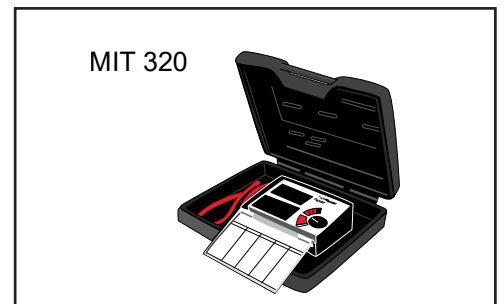
Tools for LOGSTOR Detect

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

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.

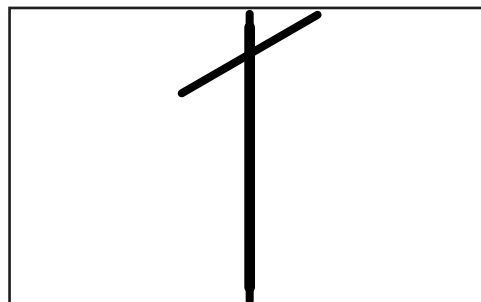


Component overview/data Component No. 8000

Operating tools for valves

Tee key

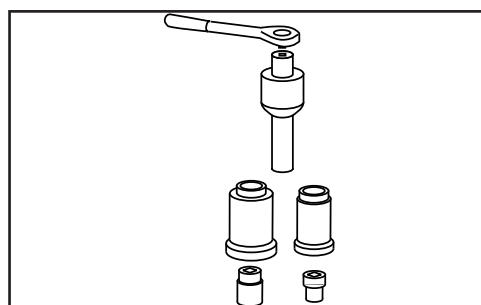
For operating ball valves
ø 33.7 - 168.3 mm.
Key width: 19 mm and 27 mm
Length 1 m.
Product No. 4300 0000 004 001

**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**

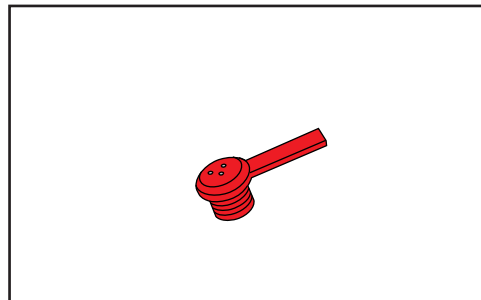
Component No. 4300

Accessories Overview

Description This section primarily describes the products which are normally delivered together with or as part of other products.

- Contents**
- Plugs
 - Sealing tape
 - Shrink materials
 - Diffusion barrier - alu wrap with mastic
 - Tape
 - Warning tape
 - Foaming

**Loose venting
plug: ø 17.5 mm**

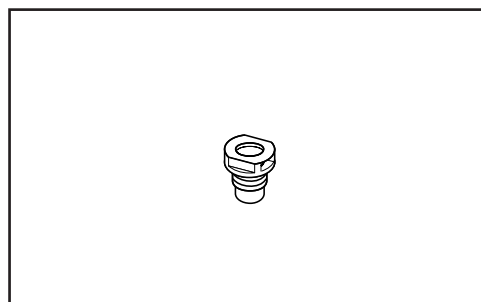


Pcs. per bag 25 pcs. in bag, product No. 1220 0000 035 750

**Component
overview/data** Component No. 1220

Materials Venting plug ø 17.5 mm: Polypropylene

**Loose venting
plug: ø 24 mm**

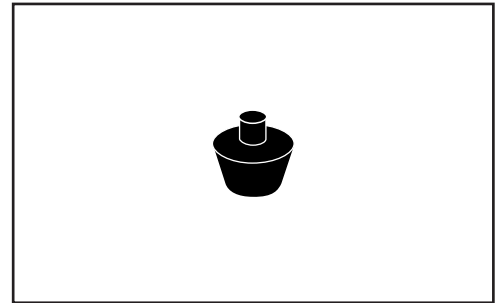


Pcs. per bag 50 pcs. in bag, product No. 1220 0000 020 009

**Component
overview/data** Component No. 1220

Materials Venting plug ø 24 mm: LDPE

**Welding plug: \varnothing 35
or 43 mm**

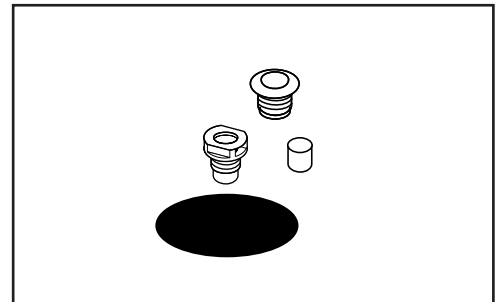


Pcs. per bag \varnothing 35 mm, t = 12.5 mm, 25 pcs. in a bag, product No. 1220 0000 035 002
 \varnothing 43 mm, t = 12.5 mm, 50 pcs. in a bag, product No. 1220 0000 043 004
 \varnothing 43 mm, t = 22.5 mm, 25 pcs. in a bag, product No. 1220 0000 043 005

Component overview/data Component No. 1220

Materials Welding plug: HDPE

**Expansion plug,
wedge plug and
patch incl. \varnothing 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

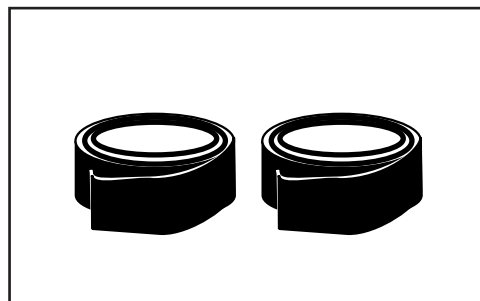
Materials Expansion plug: PEX with a ring of butyl mastic
Wedge plug: PEX
Patch: PEX with water-resistant hotmelt
Venting plug \varnothing 24 mm: LDPE

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, because the casing joints are delivered complete including sealing tape.

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

Accessories

Shrink materials

Application For jointing, post-installation, and repairs a number of shrink materials for various purposes are delivered.

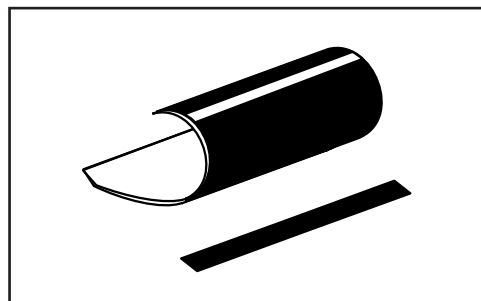
Shrink wrap A shrink wrap is an open joint which is used to obtain an additional seal e.g. of SX-WPJoint and BXJoint.

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

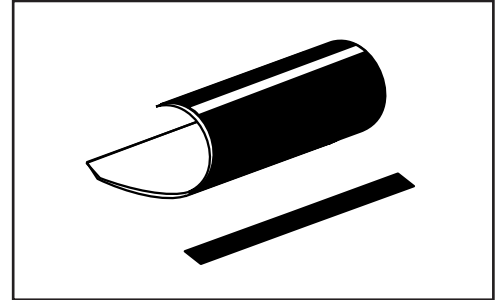
From the table it appears which widths are used as open wraps for different outer casing dimensions.

Accessories

Shrink materials

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

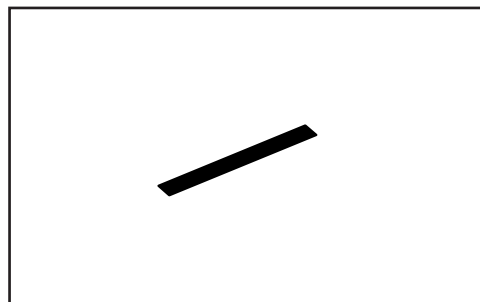
Product No.	Width mm	Length mm
5500 0155 017 010	155	30
5500 0230 017 010	230	30
5500 0300 017 010	300	30
5500 0640 010 030	640	30
5500 0900 017 010	900	20

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 lmm
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

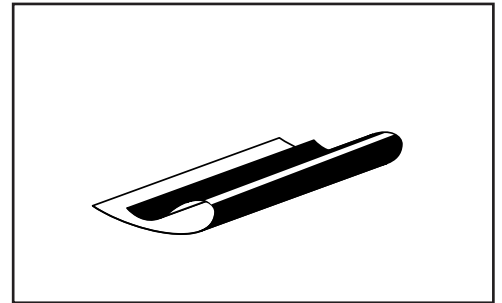
A shrink film is used for the first seal of outer casing joints.

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

Accessories

Shrink materials

Shrink wrap for T-joint

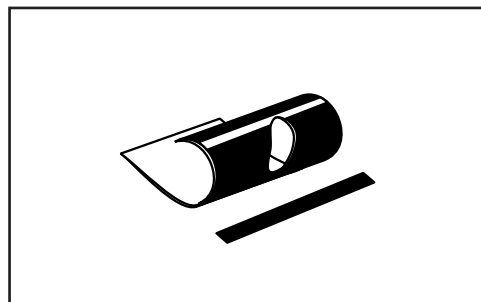
Shrink wrap for T-joint is with mastic.

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

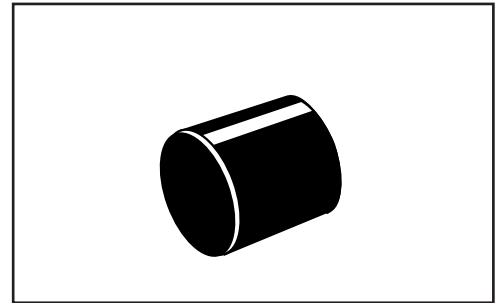
A shrink collar is primarily used to seal outer casings joints on flexible pipes.

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

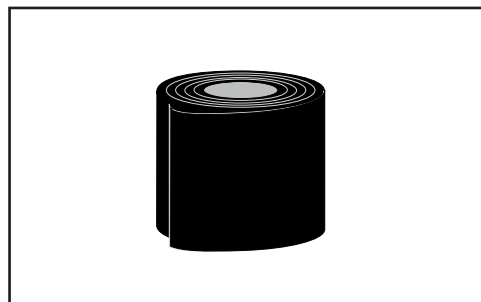
Accessories

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.



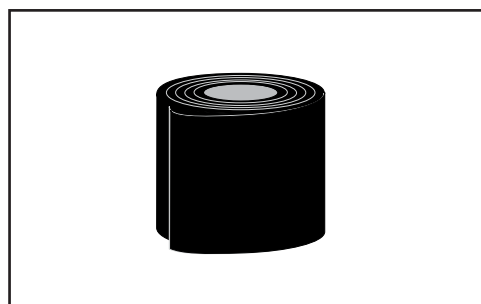
Component overview/data

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

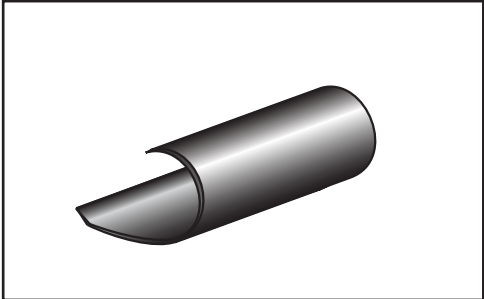
Shrink tape - NW 1250

Product No.	Width mm	Shrinkability
5514 0100 001 010	100	50%
5514 0400 001 010	400	50%

Diffusion barrier for couplings

Application To be wrapped around the coupling where aluminum layer and protection layer are removed from the service pipe in connection with installation of the coupling.

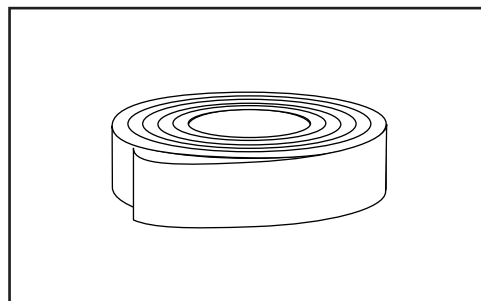
**Diffusion barrier
alu wrap w/mastic** 170 x 585 mm
25 pcs. in a box
Product No. 5500 0000 585 025



**Component
overview/data** Component No. 5500

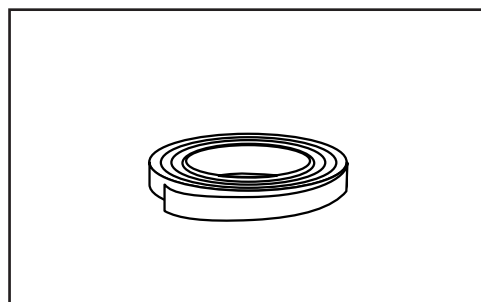
Application For casing joint installation and corrosion protection a number of types for various purposes are available.

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



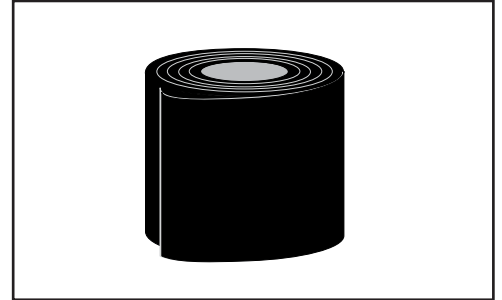
Component overview/data Component No. 7100

Accessories

Tape

Anti-corrosion tape, Nitto 57 GO

There are 3 types of anti-corrosion tape.



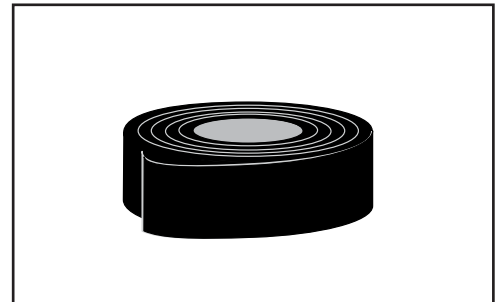
Component overview/data

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



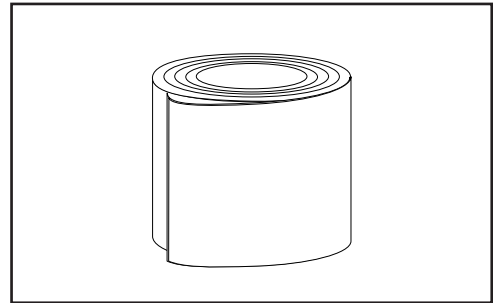
Component overview/data

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

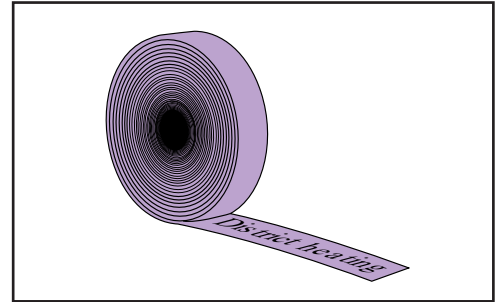
Product No.	Application	Type	Measurements
1997 0100 061 018	Used to protect steel pipes e.g. when using 2 wall entry sleeves in connection with a house entry	Denso - FEU or Densyl TDC	100 mm x 10 m

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



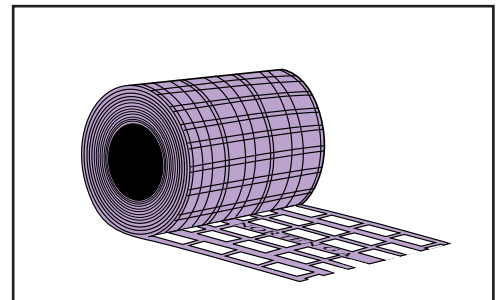
Component overview/data Component No. 7150

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

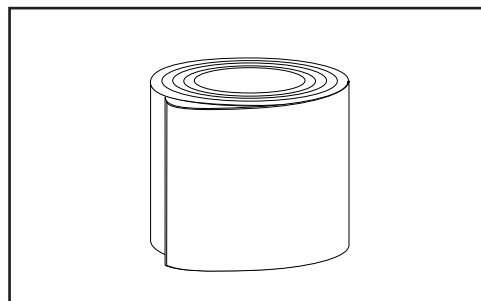
Product No.	W mm	L m	Text
7150 0200 050 000	200	100	District Heating
7150 0500 050 000	500	100	District Heating

PUR-foam layer For foaming at service pipe temperatures $< +10\text{ °C}$ or $> +50\text{ °C}$ 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.

Contact details

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