

**SteelFlex  
Overview**

**Application**

SteelFlex pipes form a complete FlexPipe system for district heating distribution networks and minor house entries.

The long FlexPipes make SteelFlex very usable for:

- branch pipes without joints
- passage of vegetation and other obstacles
- hilly areas
- tunnelling and thrust-bore methods

Continuous operating temperature 120°C

Max operating pressure 25 bar

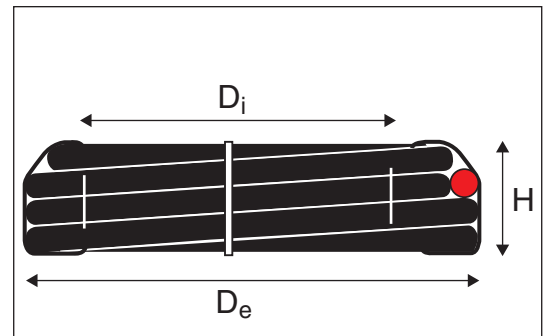
Applicable together with installation methods I-III and in connection with branching from pipes, installed according to installation method IV.

SteelFlex pipes comply with EN 15632-4.

**Description**

SteelFlex pipes are available in coils of 50 or 100 m.

Measure, approx.	Outer casing, ø out. mm	
	77	90
$D_i$	1600	1600
$D_e$	2200	2300
$H_{50}$	300	350
$H_{100}$	425	475



**Materials**

Steel pipe:	Welded steel pipe E 195 + N according to S2 EN 10305-3
Insulation:	Polyurethane foam Blowing agent: Cyclopentane Certified thermal conductivity. $\lambda_{50}$ : 0.022 W/mK
Diffusion barrier:	Aluminium foil
Outer casing:	Polyethylene, PE-LD

**Component overview/data**

Component No. 2100 SteelFlex, single pipe.

Steel pipe		Series 1		Series 2	
ø out. mm	wall thickn. mm	ø out. mm	wall thickn. mm	ø out. mm	wall thickn. mm
20	2.0	77	2.2	90	2.5
25	2.0	77	2.2	90	2.5
28	2.0	77	2.2	90	2.5

SteelFlex is available with embedded copper wires for surveillance (Nordic system). To be stated when ordering.

## SteelFlex Straight joints

### Joint types

There are 3 different kinds of joints in connection with SteelFlex pipes:

- straight joint, same dimension
- reduction
- connection to ordinary preinsulated pipes

### Straight joints

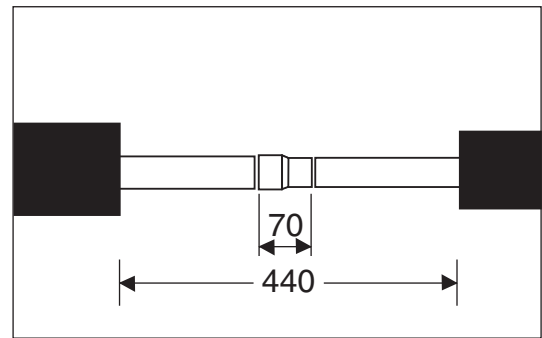
SteelFlex service pipes are joined by means of welding; consequently no special components are required.

### Reduction and connection

In connection with reductions between SteelFlex and/or major pipes weld reductions are used.

Component No. of weld reduction: 1006

Steel pipe $\varnothing$ out. From	Weld reduction To
25	20
26.9	20
28	20
28	25
33.7	20
33.7	25
33.7	28
42.4	25
42.4	28



### Casing joints

See section 3.5.

**SteelFlex  
Connection to main pipe**

**Branch types**

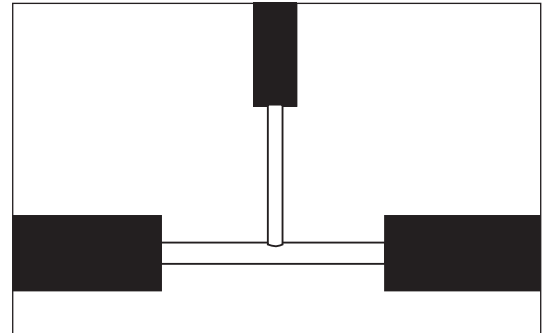
In principle there are three different ways to make connection to the main pipe.

The flexible steel fitting system also gives a number of combination possibilities and variants:

- Straight branch from FlexPipe and steel service pipe respectively
- 45° branch from steel service pipe
- 90° branch from steel service pipe

**Straight branch from FlexPipe by means of welding**

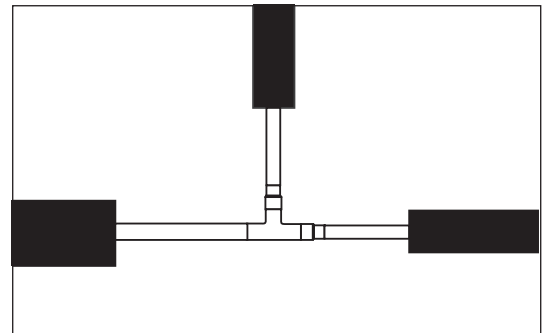
If the house entry dimension is at least one dimension smaller than the SteelFlex main pipe dimension, the branch can be directly welded on to the main SteelFlex pipe.



**Straight branch from FlexPipe by means of weld T-pieces**

SteelFlex service pipes can also be joined by means of weld T-pieces.

SteelFlex service pipe ø out. mm	T-piece Product No.
20-20-20	8-7880
25-25-25	8-8065
28-28-28	8-7859



**Reduction**

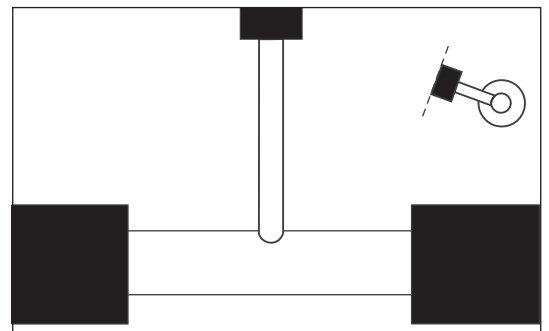
Reductions in connection with branching from FlexPipe to FlexPipe can be made with weld reductions.

Component No. 1006

SteelFlex service pipe ø out. mm
25-20
28-25
28-20

**Straight branch from ordinary preinsulated pipe**

SteelFlex pipes can be connected to the main pipe by direct welding.



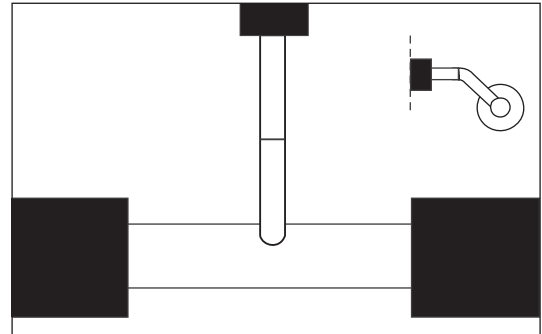
**SteelFlex  
Connection to main pipe**

**45° branch**

Branches with deflection perpendicular to the main pipe are carried out with 45° branch pipe pieces.

Product Nos. of 45° branch pipe piece

SteelFlex ø out. mm	45° branch pipe piece Product No.
20	8-4060
25	8-4061
28	8-4062

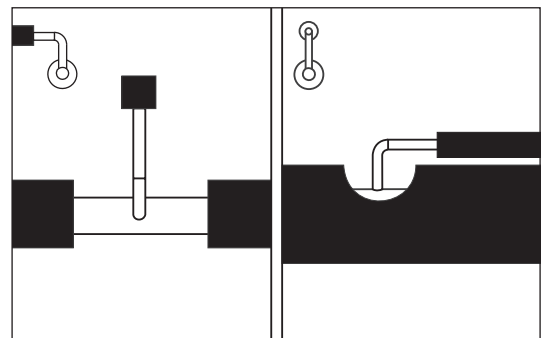


**90° branch**

Branches with deflection perpendicular to or parallel with the main pipe are carried out with 90° branch pipe pieces.

Product Nos. of 90° branch pipe piece

SteelFlex service pipe ø out. mm	90° branch pipe piece Product No.
20	8-7875
25	8-8062
28	8-7851



**Reinforcement**

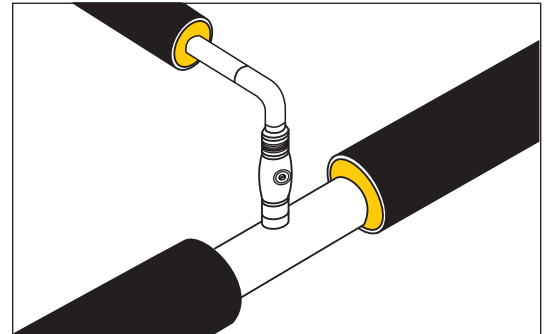
Please note that in connection with systems with high axial stresses (installation method IV) it may be necessary to reinforce the main pipe, if there is no or only a small dimensional difference.

**SteelFlex**

**Hot tapping, type 1**

**Application**

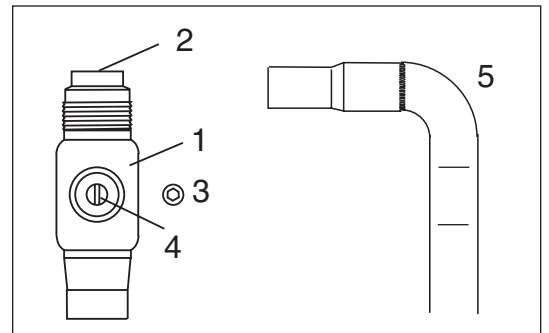
Branches with SteelFlex pipes can be installed on systems in operation with hot tapping valves.  
 The small dimensions of the valves mean that they can be fitted into the standard joints of e.g. the steel fittings system.  
 Max. operating pressure: 25 bar.



**Description**

The hot tapping valve, type 1, is adjusted to our FlexPipe system

1. Hot tapping valve
2. Pipe end for direct welding of 90° weld coupling
3. Conic pipe plug with hexagon socket
4. Operating screw with slot, acting as position indicator
5. Branch pipe piece (only for 90° steel joint branches)



**Materials**

Hot tapping valve:	Valve casing:	Steel
	Valve ball:	Stainless steel
	Sealing:	PTFE (Teflon)
Branch pipe piece:	Weldable steel quality	

**Component overview**

Parts for hot tapping with SteelFlex.  
 Hot tapping valve, component No. 4280.  
 Product No. of hot tapping tool 8-49915.

Branch pipe service pipe ø out. mm	Hot tapping valve	90° branch pipe piece Product no.
20	x	8-7866
25	x	8-7867
28	x	8-7868

