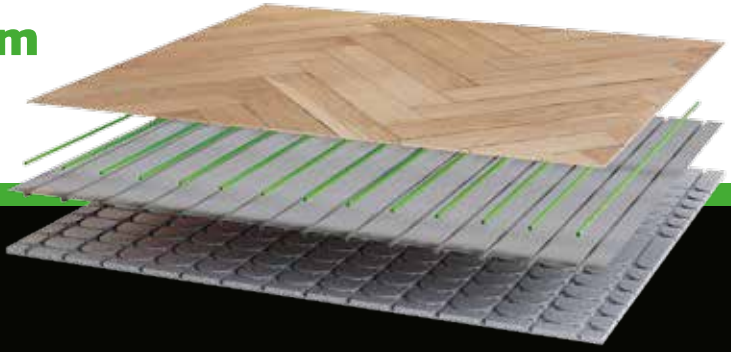
WARP SYSTEMS

TECHNICAL PRODUCT INFORMATION

UNDERFLOOR HEATING | WALL HEATING | CEILING HEATING

SpeeTile

SpeeTherm



The most versatile and complete system for heating and cooling any room

THIN QUICK LIGHT WATER SUSTAINABLE

SpeeTile 10

PRODUCT DESCRIPTION

The 120 x 75 cm mats are just 12.75 mm thin and consist of 40 modular tiles measuring 15 x 15 cm, which are made of recycled plastic and have an open structure. With the patented click-break-slide system, the tiles are extendible in length and width. Pre-measuring is no longer necessary, and you always achieve a perfect fit quickly and easily without cutting or trimming. That means you eliminate waste and save time! Each tile is fitted with a break-out masonry anchor to secure the system to the substrate.

SpeeTile 10 mat	
material and colour	polypropylene recycled black
length x width	120 x 75 cm
height	12.75 mm
surface area	0,9 m²
SpeeTile components in one mat	8 x 5 = 40 (15 x 15 cm) pcs
extendibility	130 mm over 4 metres
pipe	Ø 10 x 1.3 mm (WARP SpeeTube)
C-to-C distance between pipes	75 mm
installation height including levelling compound	15 - 20 mm total
weight mat, pipe, water, levelling compound	from 30 kg/m²
Group	
pipe length per group	maximum 80 metres
surface area per group	maximum 5 m²
pattern	double-meander or spiral
Masonry anchor	
hole size	Ø 5.0 mm (depending on substrate)
diameter masonry anchor	Ø 7.0 mm
SpeeTile component	
length x width	150 x 150 mm
extendibility	5 mm per component
Final flooring	
floor	SpeeTop (levelling mortar)
wall / ceiling	plaster or cob

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Heat emission table

HEATING

Heat emission table WARP SpeeTile system finished with SpeeTop levelling mortar * 10 x 1.3 mm pipe at maximum flow rate of 75 l/h and 75 mm C-to-C distance between pipes						
Average temperature of supply water °C	Room temperature °C					Floor/wall temperature °C
	24	22	20	18	15	
27.5	0 W/m²	24 W/m²	51 W/m²	72 W/m²	108 W/m²	24
30	10 W/m²	35 W/m²	58 W/m²	82 W/m²	117 W/m²	24.8
32.5	24 W/m²	48 W/m²	73 W/m²	96 W/m²	132 W/m²	26
35	33 W/m²	56 W/m²	80 W/m²	104 W/m²	140 W/m²	26.7
37.5	40 W/m²	64 W/m²	88 W/m²	112 W/m²	147 W/m²	27.3
40	48 W/m²	72 W/m²	95 W/m²	120 W/m²	156 W/m²	28

COOLING

Heat absorption table (cooling) with WARP SpeeTile system without final flooring.* 10 x 1.3 mm pipe at maximum flow rate of 75 l/h and 75 mm C-to-C distance between pipes						
Average temperature of supply water °C	Room temperature °C					Floor/wall temperature °C
	22	24	26	28	30	
22	-	3 W/m²	15 W/m²	27 W/m²	39 W/m²	23.5
20.75	-	6 W/m²	18 W/m²	30 W/m²	42 W/m²	23
19.5	-	12 W/m²	24 W/m²	36 W/m²	48 W/m²	22
18.25	3 W/m²	15 W/m²	27 W/m²	39 W/m²	51 W/m²	21.5
17	6 W/m²	18 W/m²	30 W/m²	42 W/m²	54 W/m²	21
15.75	9 W/m²	21 W/m²	33 W/m²	45 W/m²	57 W/m²	20.5

Correction factors *			
Tiles 5 mm thick	0.99	Tiles 10 mm thick	0.95
Linoleum 2.5 mm thick	0.87		
Laminate 10 mm thick	0.82	Parquet 15 mm thick	0.77
Carpet 5 mm thick	0.75	Carpet 10 mm thick	0.61

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SpeeTherm 15

PRODUCT DESCRIPTION

The **SpeeTherm** 14 mm boards consist of EPS (Expanded PolyStyrene) with a compressive strength of 200 kPa. The SpeeTherm boards are 80 x 60 cm with a height of 14 mm and are sold in packages of 11 boards. This equates to 5 m² per box. The preformed EPS boards (10 cm C-to-C) have an insulation value of 0.48 Rd and are designed for use with AluTherm heat conduction profiles and SpeeTube Ø10 mm heating pipe. The EPS boards are laid (floating) on a completely flat subfloor (it does not have to be level) with a 3 mm gap at the walls.

SpeeTherm 15 dry construction board			
material and colour		EPS (Expanded PolyStyrene) 200 grey	
length x width		80 x 60 cm	
height		14 mm	
surface area		0.48 m²	
compressive strength (BRL 1306)		200 kPa	
pipe		Ø10 x 1.3 mm (WARP SpeeTube 10)	
C-to-C distance between pipes		100 mm	
thermal coefficient (λ)		0.030 W/mk	
thermal resistance (Rd)		0.47 m²K/W	
installation		floating, 3 mm gap from walls	
Box contents		**Group**	
number of boards in box	11 pieces	Pipe length per group	maximum 80 metres
number of m² in box	5.28 m²	Surface area per group	maximum 7 m²
box dimensions	80.5 x 60.5 x 16.2 cm	Pattern	dubbel meander
In combination with			
dry		AluTherm profile (0.5 mm thick)	
pipe		Ø10 x 1.3 mm (WARP SpeeTube 10)	
pipe connection at manifold via		¾" Ø10 mm PushFit connectors	
total system installation height		15 mm	
total system weight EPS, AluTherm, SpeeTube pipe and water		2.8 kg/m²	
Final flooring			
• Option: sound-insulating, vapour-inhibiting foam film suitable for underfloor heating (e.g. heat foil).* • Rigid, non-resilient, floating final floors (e.g. laminate, parquet).* * For installation of the final floor, follow the instructions from the supplier of the final floor.			

No rights can be derived from this product sheet.

Heat emission table

Before commissioning the underfloor heating, first install your floating final flooring with self-supporting pressure-distributing underlay and then commission the system.

HEATING

Heat emission table WARP SpeeTherm system*
10 x 1.3 mm pipe at maximum flow rate of 75 l/h and 100 mm C-to-C distance between pipes

Average temperature of supply water °C	Room temperature °C					Floor/wall temperature °C
	24	22	20	18	15	
27.5	7 W/m²	31 W/m²	55 W/m²	79 W/m²	115 W/m²	24.6
30	18 W/m²	42 W/m²	66 W/m²	90 W/m²	126 W/m²	25.5
32.5	29 W/m²	53 W/m²	77 W/m²	101 W/m²	137 W/m²	26.4
35	40 W/m²	66 W/m²	88 W/m²	112 W/m²	148 W/m²	27.3
37.5	50 W/m²	75 W/m²	98 W/m²	122 W/m²	158 W/m²	28.2
40	62 W/m²	86 W/m²	110 W/m²	134 W/m²	170 W/m²	29.2

COOLING

Heat absorption table (cooling) with WARP SpeeTherm system.*
10 x 1.3 mm pipe at maximum flow rate of 75 l/h and 100 mm C-to-C distance between pipes

Average temperature of supply water °C	Room temperature °C					Floor/wall temperature °C
	22	24	26	28	30	
22	-	6 W/m²	12 W/m²	30 W/m²	42 W/m²	23
20.75	1.5 W/m²	14 W/m²	26 W/m²	38 W/m²	50 W/m²	21.75
19.5	9 W/m²	21 W/m²	33 W/m²	45 W/m²	57 W/m²	20.5
18.25	17 W/m²	29 W/m²	41 W/m²	53 W/m²	65 W/m²	19.25
17	24 W/m²	36 W/m²	48 W/m²	60 W/m²	72 W/m²	18
15.75	32 W/m²	44 W/m²	56 W/m²	68 W/m²	80 W/m²	16.75

Correction factors *			
Laminate 10 mm thick	0.82	Parquet 15 mm thick	0.77

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SpeeTile 12

PRODUCT DESCRIPTION

The 120 x 80 cm mats are just 15 mm thin and consist of 24 modular tiles measuring 20 x 20 cm, which are made of recycled plastic and have an open structure. With the patented click-break-slide system, the tiles are extendible in length and width. Pre-measuring is no longer necessary, and you always achieve a perfect fit quickly and easily without cutting or trimming. That means you eliminate waste and save time! Each tile is fitted with a break-out masonry anchor to secure the system to the substrate.

SpeeTile 12 mat	
material and colour	polypropylene recycled black
length x width	120 x 80 cm
height	15 mm
surface area	0,96 m²
SpeeTile components in one mat	6 x 4 = 24 (20 x 20 cm) pcs
extendibility	200 mm over 4 metres
pipe	Ø 12 x 1.5 mm (WARP SpeeTube)
C-to-C distance between pipes	100 mm
installation height including levelling compound	from 35 mm, depending on the final flooring
weight mat, pipe, water, levelling compound	from 75 kg/m²
Group	
pipe length per group	maximum 100 metres
surface area per group	maximum 10 m²
pattern	double-meander or spiral
Masonry anchor	
hole size	Ø 5.0 mm (depending on substrate)
diameter masonry anchor	Ø 7.0 mm
SpeeTile component	
length x width	200 x 200 mm
extendibility	10 mm per component
Final flooring	
floor	cement or anhydrite
wall / ceiling	plaster or cob

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Heat emission table

Plastic mats measuring 120 x 80 cm with a height of 15 mm. Fitted with SpeeTube 12 mm underfloor heating pipe with a 100 mm C-to-C distance between pipes.

HEATING

Heat emission table WARP SpeeTile 12 system without final flooring.*
SpeeTube 12 x 1.5 mm pipe at maximum flow rate of 75 l/h and 100 mm C-to-C distance between pipes

Average temperature of supply water °C	Room temperature °C					Floor/wall temperature °C
	24	22	20	18	15	
27.5	0 W/m²	24 W/m²	51 W/m²	72 W/m²	108 W/m²	24
30	10 W/m²	35 W/m²	58 W/m²	82 W/m²	117 W/m²	24.8
32.5	24 W/m²	48 W/m²	73 W/m²	96 W/m²	132 W/m²	26
35	33 W/m²	56 W/m²	80 W/m²	104 W/m²	140 W/m²	26.7
37.5	40 W/m²	64 W/m²	88 W/m²	112 W/m²	147 W/m²	27.3
40	48 W/m²	72 W/m²	95 W/m²	120 W/m²	156 W/m²	28

COOLING

Heat absorption table (cooling) with WARP SpeeTile 12 system without final flooring.*
12 x 1.5 mm pipe at maximum flow rate of 75 l/h and 100 mm C-to-C distance between pipes

Average temperature of supply water °C	Room temperatur °C					Floor/wall temperature °C
	22	24	26	28	30	
22	-	3 W/m²	15 W/m²	27 W/m²	39 W/m²	23.5
20.75	-	6 W/m²	18 W/m²	30 W/m²	42 W/m²	23
19.5	-	12 W/m²	24 W/m²	36 W/m²	48 W/m²	22
18.25	3 W/m²	15 W/m²	27 W/m²	39 W/m²	51 W/m²	21.5
17	6 W/m²	18 W/m²	30 W/m²	42 W/m²	54 W/m²	21
15.75	9 W/m²	21 W/m²	33 W/m²	45 W/m²	57 W/m²	20.5

Correction factors *			
Tiles 5 mm thick	0.99	Tiles 10 mm thick	0.95
Linoleum 2.5 mm thick	0.87		
Laminate 10 mm thick	0.82	Parquet 15 mm thick	0.77
Carpet 5 mm thick	0.75	Carpet 10 mm thick	0.61

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SpeeTherm 30

PRODUCT DESCRIPTION

The **SpeeTherm** 29 mm boards consist of EPS (Expanded PolyStyrene) with a compressive strength of 200 kPa. The SpeeTherm boards are 80 x 60 cm with a height of 29 mm and are sold in packages of 11 boards. This equates to 5 m² per box. The preformed EPS boards (10 cm C-to-C) have an insulation value of 1 Rd and are designed for use with AluTherm heat conduction profiles and SpeeTube Ø10 mm heating pipe. The EPS boards are laid (floating) on a completely flat subfloor (it does not have to be level) with a 3 mm gap at the walls.

SpeeTherm 30 dry construction board			
material and colour		EPS (Expanded PolyStyrene) 200 grey	
length x width		80 x 60 cm	
height		29 mm	
surface area		0.48 m²	
compressive strength (BRL 1306)		200 kPa	
pipe		Ø10 x 1.3 mm (WARP SpeeTube 10)	
C-to-C distance between pipes		100 mm	
thermal coefficient (λ)		0.030 W/mk	
thermal resistance (Rd)		1 m²K/W	
installation		floating, 3 mm gap from walls	
Box contents		**Group**	
number of boards in box	11 pieces	pipe length per group	maximum 80 metres
number of m² in box	5.28 m²	surface area per group	maximum 7m²
box dimensions	80.5 x 60.5 x 34 cm	pattern	dubbel meander
In combination with			
dry		AluTherm profile (0.5 mm thick)	
pipe		Ø10 x 1.3 mm (WARP SpeeTube 10)	
pipe connection at manifold via		¾" Ø10 mm PushFit connectors	
total system installation height		30 mm	
total system weight (EPS, AluTherm, SpeeTube pipe and water)		3.3 kg/m²	
Final flooring			
• Option: sound-insulating, vapour-inhibiting foam film suitable for underfloor heating (e.g. heat foil).* • Rigid, non-resilient, floating final floors (e.g. laminate, parquet).* * For installation of the final floor, follow the instructions from the supplier of the final floor.			

No rights can be derived from this product sheet.

Heat emission table

Before commissioning the underfloor heating, first install your floating final flooring with self-supporting pressure-distributing underlay and then commission the system.

HEATING

Heat emission table WARP SpeeTherm system.*
10 x 1.3 mm pipe at maximum flow rate of 75 l/h and 100 mm C-to-C distance between pipes

Average temperature of supply water °C	Room temperature °C					Floor/wall temperature °C
	24	22	20	18	15	
27.5	7 W/m²	31 W/m²	55 W/m²	79 W/m²	115 W/m²	24.6
30	18 W/m²	42 W/m²	66 W/m²	90 W/m²	126 W/m²	25.5
32.5	29 W/m²	53 W/m²	77 W/m²	101 W/m²	137 W/m²	26.4
35	40 W/m²	66 W/m²	88 W/m²	112 W/m²	148 W/m²	27.3
37.5	50 W/m²	75 W/m²	98 W/m²	122 W/m²	158 W/m²	28.2
40	62 W/m²	86 W/m²	110 W/m²	134 W/m²	170 W/m²	29.2

COOLING

Heat absorption table (cooling) with WARP SpeeTherm system.*
10 x 1.3 mm pipe at maximum flow rate of 75 l/h and 100 mm C-to-C distance between pipes

Average temperature of supply water °C	Room temperature °C					Floor/wall temperature °C
	22	24	26	28	30	
22	-	6 W/m²	12 W/m²	30 W/m²	42 W/m²	23
20.75	1.5 W/m²	14 W/m²	26 W/m²	38 W/m²	50 W/m²	21.75
19.5	9 W/m²	21 W/m²	33 W/m²	45 W/m²	57 W/m²	20.5
18.25	17 W/m²	29 W/m²	41 W/m²	53 W/m²	65 W/m²	19.25
17	24 W/m²	36 W/m²	48 W/m²	60 W/m²	72 W/m²	18
15.75	32 W/m²	44 W/m²	56 W/m²	68 W/m²	80 W/m²	16.75

Correction factors *			
Laminate 10 mm thick	0.82	Parquet 15 mm thick	0.77

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SpeeTube 10

PRODUCT DESCRIPTION

The green **SpeeTube 10** is an oxygen diffusion-tight 5-layer PE-RT (PolyEthylene of Raised Temperature-resistance) plastic pipe suitable for heating and cooling. The pipe is SKZ and KOMO certified with a 30-year warranty. The available roll lengths are 80, 240, 480 and 800 m. Use a pipe reel when installing the pipe – the pipe unwinds easily and without tension, in the direction favoured by the pipe.

SpeeTube Ø10 mm	
material	PE-RT 5-layer oxygen diffusion-tight
colour	WARP green
outer diameter	(Ø) 10 mm
wall thickness	1.3 mm
thermal conductivity coefficient	0,41 W/mK
KOMO certification	KOMO K 84463 Cl.4/ 5 6 bar
SKZ certification	SKZ A666 DIN 16833, ISO 24033 / 22391
oxygen diffusion-tight	KOMO DIN 4726 & SKZ DIN 16833
oxygen diffusion at 40 °C	Less than 0.1 mg/lxd
roll lengths	80, 240, 480, 800 metres
suitable for dry construction	SpeeTherm 15 & SpeeTherm 30 systems
suitable for wet construction	SpeeTile 10 system
manifold connection	3/4" Ø10 mm PushFit connectors
maximum group length of pipe	80 metres
warranty	30 years

PRESSURE LOSS TABLE

Pressure loss per metre SpeeTube Ø10 mm x 1.3 mm pipe*

Metres [m]	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5
Water speed [m/s]	0.49	0.45	0.42	0.39	0.36	0.32	0.29	0.26	0.23	0,19	0.16	0.13	0.1	0.06	0.03
Pressure loss [mBar/m]	6.58	5.85	5.16	4.5	3.89	3.31	1.7	1.51	1.33	1,14	0.95	0.76	0.57	0.38	0.19
Pressure loss in [kPa/m]	0.658	0.585	0.516	0.45	0.389	0.331	0.17	0.151	0.133	0,114	0.095	0.076	0.057	0.038	0.019

* The values in the table are estimates. No rights can be derived from the values in the table.

Example calculation 65 metres of Ø10 x 1.3 mm pipe
Flow rate 72 l/h = 72 kg/h
Water speed approximately 0.47 m/s
Pressure loss across the group = approximately (6.58+5.85)/2*65 m = 404 mbar or 40.4 kPa.

No rights can be derived from this product sheet.

SpeeTube 12

PRODUCT DESCRIPTION

The green **SpeeTube 12** is an oxygen diffusion-tight 5-layer PE-RT (PolyEthylene of Raised Temperature-resistance) plastic heating pipe suitable for heating and cooling. The heating pipe is SKZ and KOMO certified with a 30-year warranty.
The available roll lengths are 100, 300 and 600 m. Use a pipe reel when installing the pipe – the pipe unwinds easily and without tension, in the direction favoured by the pipe.

SpeeTube Ø12 mm	
material	PE-RT 5-layer oxygen diffusion-tight
colour	WARP green
outer diameter	Ø12 mm
wall thickness	1.5 mm
thermal conductivity coefficient	0.41 W/mK
KOMO certification	KOMO K13788 DIN4726 Cl.4/ 5 6bar
SKZ certification	SKZ 220 DIN 16833, ISO 24033 / 22391
oxygen diffusion-tight	KOMO DIN 4726 & SKZ DIN 16833
oxygen diffusion at 40 °C	Less than 0.1 mg/lxd
roll lengths	100, 300, 600 metres
suitable for wet construction	SpeeTile 12 system
manifold connection	3/4" Ø12 mm PushFit connectors
maximum group length of pipe	100 metres
warranty	30 years

PRESSURE LOSS TABLE

Pressure loss per metre SpeeTube Ø12 mm x 1.5 mm pipe*

Metres [m]	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5
Water speed [m/s]	0.30	0.28	0.26	0.24	0.22	0.20	0.18	0.16	0.14	0.12	0.10	0.08	0.06	0.04	0.02
Pressure loss [mBar/m]	2.35	1.94	1.59	1.28	1.01	0.86	0.78	0.69	0.60	0.52	0.43	0.34	0.26	0.17	0.09
Pressure loss in [kPa/m]	0.235	0.194	0.159	0.128	0.101	0.086	0.078	0.069	0.060	0.052	0.043	0.034	0.026	0.017	0.009

* The values in the table are estimates. No rights can be derived from the values in the table.

Example calculation 65 metres of Ø12 x 1.5 mm pipe
Flow rate 72 l/h = 72 kg/h
Water speed approximately 0.29 m/s
Pressure loss across the group = approximately (2.35+1.94)/2*65 m = 139.43 mbar or 13.9 KPa.

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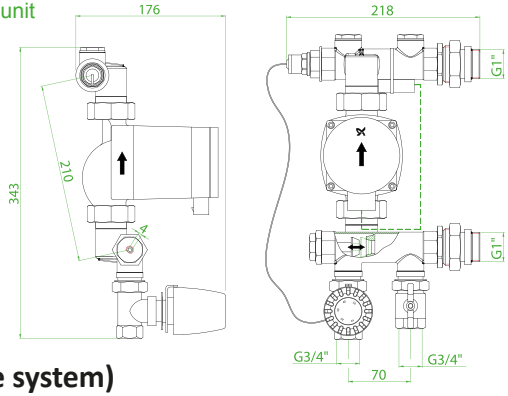
Manifold

Table of dimensions open manifold incl. pump unit and ball valves

Number of groups	Length [mm]	Height [mm]	Depth [mm]
2	465	575	200
3	520	575	200
4	575	575	200
5	630	575	200
6	685	575	200
7	740	575	200
8	795	575	200
9	850	575	200
10	905	575	200
11	960	575	200
12	1015	575	200
13	1070	575	200
14	1125	575	200
15	1180	575	200
16	1235	575	200
17	1290	575	200
18	1345	575	200

DIMENSIONS
pump unit



GRADUAL HEATING PROTOCOL (only for the SpeeTile system)

The curing time before starting the gradual heating protocol after levelling depends on the ambient temperature: **> 15 °C after 48 hours** **< 15 °C after 72 hours**

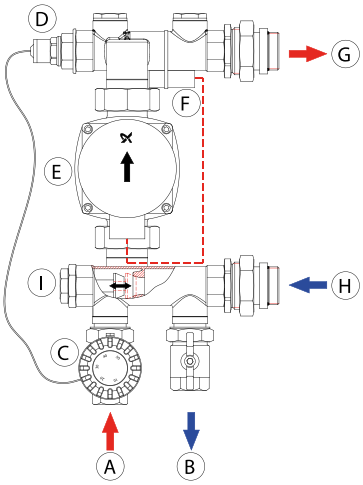
When the heating system is started for the first time, the gradual heating protocol must be followed. Ask your plasterer (for wall or ceiling applications with plaster or cob) about drying times before you start the system.
Using the thermostat head on the pump unit, set the water temperature of the heating system to 20 °C for 24 hours. The temperature can be read from the thermomanometer on the manifold's supply rail. Every 24 hours thereafter, the temperature can be increased by 5 °C until a temperature of 40 °C is reached, after which the temperature is reduced by 5 °C daily until 20 °C is reached. The SpeeTile heating system is now ready to be covered and for use.

Pump unit

COMPONENT DESCRIPTIONS

Pump unit LTH (Low Temperature Heating)

A. Supply, primary
B. Return, primary
C. Thermostat head
D. Capillary tube and sensor pocket, thermostat head
E. Pump, arrow indicates water flow towards supply rail
F. Maximum thermostat protection
G. Supply rail, manifold
H. Return rail, manifold
I. Low temperature valve (LTH)



Installation

- Connect the supply rail of the manifold to position G.
- Connect the return rail of the manifold to position H.
- Connect the primary supply line to position A and the primary return line to position B.
- Mount maximum thermostat F on the supply side after the pump unit before the manifold supply rail with a tie-wrap on the silver-coloured brass.
- Attach thermostat knob C to the thermostatic valve after removing the black protective cap, and set it to the lowest setting.
- Place the capillary tube in sensor pocket D, and close it with the black cap open.
- Use mixing valve I to set the mixing ratio. Turning anti-clockwise opens the valve more. Turning clockwise reduces the mixing ratio, which means more supply water will be pumped to the supply rail (G) unmixed.

Pump unit

The Grundfos Alpha Pump unit is an economical pump with an ‘A’ energy label rating.

SpeeTools

SpeeTurn 10

The **SpeeTurn** is a corner guide, made of recycled plastic, that is used to create a 90° bend in a SpeeTube Ø10 mm heating pipe. By combining two SpeeTurn corner guides, the SpeeTube can be run from floor to wall, from wall to wall and from wall to ceiling, without kinks. This makes drilling or chiselling in corners a thing of the past. The SpeeTurn has three attachment points; the two lateral ones can be adjusted and folded in, to fit the application. The masonry anchors from the SpeeTile system can be used to secure them in place. Because the height of the SpeeTurn is the same as the height of the SpeeTile and SpeeTherm systems through which the heating pipe runs, it can be finished smoothly, completely hidden from view, without drilling or chiselling. Because the SpeeTile system is suitable for floors, walls and ceilings, it is important to be able quickly and easily make connections between these surfaces. This way, an entire room can easily be connected to the same manifold.

- ✔ Make connections from floor to wall, wall to wall and wall to ceiling
- ✔ A pass-through bend to the manifold
- ✔ Pipe guidance without kinking
- ✔ Total installation height floor 15 mm including SpeeTop levelling mortar
- ✔ Total installation height wall/ceiling 20 mm including plaster/cob

SpeeTrap 10 and 12

These are mounting aids made of recycled plastic and are available for the SpeeTube Ø10 mm and Ø12 mm. You use them to easily attach two SpeeTube heating pipes parallel to each other on the floor, wall or ceiling. This is handy in places where there are no SpeeTile mats, such as at the manifold or the points at which the SpeeTube has to be fed through the wall. At the manifold there is no room for SpeeTile mats, as there would not be enough space to guide the SpeeTube heating pipes to the manifold. The SpeeTrap solves this problem. It neatly secures the heating pipes in position, at the right height, so they do not remain floating on the surface. This makes it possible to finish the area in a neat, smooth, professional manner.

- ✔ Minimum installation height
- ✔ Interconnectable
- ✔ Balanced minimum C-to-C pipe spacing of 28 mm
- ✔ Fixes the SpeeTube Ø10 mm in position
- ✔ Mount with the masonry anchor from the SpeeTile every 25 cm

The **SpeeTrap** has one mounting point in the middle. The masonry anchors from the SpeeTile system can be used to secure them in place. The SpeeTraps can also be interconnected by clicking them together to neatly guide many heating pipes in a small area.

SpeeTools

Calibration Tool

After cutting off the SpeeTube heating pipe, the **Calibration Tool** is used to make it round again and bevel the edges. This makes it easy to insert the SpeeTube heating pipe in the PushFit connectors.

- ✔ Calibrates SpeeTube Ø10 x 1.3 mm and Ø12 x 1.5 SpeeTube heating pipe
- ✔ Prevents ovality of the SpeeTube heating pipe
- ✔ Deburrs and bevels the edges
- ✔ Perfectly sized for PushFit system connectors

PushFit connector 10 mm and 12 mm

PushFit 10 mm cone 1 group 3/4" 10 x 1.3 and 12 mm cone 1 group 3/4" 12 x 1.5. The PushFit system is a quick, professional way to connect the supply and return pipes of the SpeeTube heating pipe to the manifold. One of the benefits of the PushFit connector is that it encloses the heating pipe instead of squeezing it the way a compression connector does. Because the heating pipe is not constricted, there is less resistance. The lower resistance allows a higher rate of flow and prevents blockages.

The PushFit system can be connected and disconnected quickly, just like the SpeeTube heating pipe. It can be easily removed by pressing the red plastic ring and simultaneously pulling the heating pipe out of the coupling. The PushFit system consists of a single coupling, a double (splitter) coupling and a repair coupling.

SpeeTrace

Heat detection sticker used for tracing a warm SpeeTube heating pipe in a wall or ceiling. Attach the SpeeTrace sticker to the cooled wall in a location in which you want to detect pipes. Then switch on the heating system so that warm water flows through the heating pipes. The sticker will become green in colour where the heating pipes run behind it. Do not drill in these areas.

- ✔ Easily trace heating pipe in wall or ceiling
- ✔ Drill in the correct location

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