Roth

Roth catalogue

Products and installation manuals

Floor Heating System

MultiPex® Pipe System

Alu-LaserPlus® Pipe System

SnowFlex® Pipe System

Tank System

Solar Heating System

Additional Products

Roth MultiPex® Pipe System – modern installation technique for water and heating systems

Roth MultiPex® is an electron beam crosslinked polyethylene pipe with oxygen stop for heating, cooling, and domestic water systems. The system is based on a PEX-c pipe in the well-known standard dimensions of 12 x 2.0 mm, 15 x 2.5 mm, 18 x 2.5 mm, 22 x 3.0 mm, 28 x 4.0 mm, and 32 x 4.4 mm.
Max. operating temperature: 95°C (203° F.)
Max. operating pressure: 10 bar (145 PSI)
VA (Water and Drainage) approval: 1.14/ 18077

The Roth QuickBox™ coupling canister for walls and drywall can be used for 12 mm as well as 15 and 18 mm PEX pipes with 20, 25, or 28 mm casing pipes. The coupling canister is manufactured from transparent, solid cast plastic with a pre-installed brass elbow and a pressure test plug, as well as a rubber seal between the coupling canister and the casing pipe, which is approved pursuant to NT VVS 129 and fulfils the requirements of the SBI 200 guidelines.

The QuickBox™ is available as either a single or dual canister with a TT plunge coupling for 12, 15, or 18 mm. The TT plunge coupling ensures a fast and secure assembly

Roth Pipe Overview
– For domestic water, heating, and cooling systems

Roth is one of Europe's largest manufacturers of pipes for domestic water systems and heating systems. The production is ISO 9001 compliant, and it is monitored by a variety of external testing institutions. Through innovative and qualitative product development, the following well-known and renowned brand names have been developed.
In-house pipe production – the heart of our installation systems – makes up an important part of what our company is based on. Roth produces more than 80 mill. meters of pipes on an annual basis.

Roth X-PERT S5® ®
floor heating pipe – the result of an innovative and qualitative product development

Roth LinPex®
floor heating pipe – a well-known quality product developed to meet even the strictest requirements.

Roth Alu-LaserPlus®
– a VA (Water and Drainage) approved pipe and thereby suitable for both domestic water and heating systems.

Roth MultiPex®
– a PE-Xc VA (Water and Drainage) approved pipe, equipped with an EVOH.

Roth SnowFlex®
– a highly flexible PE-RT pipe for snow melt.

Control and Safety

Internal control

At Roth Nordic, internal control is an essential, high-priority activity. Internal control starts with a comprehensive inspection of the raw material and does not end until the moment the product is delivered to the customer. For Roth Nordic, internal control is not just something that has to do with the organization; it is about attitude, priorities, and long-term thinking.

External control

At Roth Nordic, external control and monitoring take place on a continuous basis and in close cooperation with well-known international institutions such as DIN, TUV, ISO, Lloyd's Register, DVGW, KIWA, and several others.

Roth MultiPex® Pipe System

Product Range

... living full of energy!

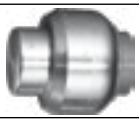
Roth MultiPex® Pipes

ITEM	DESCRIPTION		UNIT	PACK	HVAC No.
	**Roth MultiPex® pipes** Polyethylene pipe with oxygen stop and cross-linked with an electron beam. For heating, cooling, and domestic water systems. Max. operating temperature: 95°C Max. operating pressure: 10 bar (145 PSI)				
	Roth MultiPex® pipe 15 x 2.5 mm	5 m	lgth	1/22	087311.215
	Roth MultiPex® pipe 18 x 2.5 mm	5 m	lgth	1/20	087311.218
	Roth MultiPex® pipe 22 x 3.0 mm	5 m	lgth	1/13	087311.222
	Roth MultiPex® pipe 28 x 4.0 mm	5 m	lgth	1/8	087311.228
	Roth MultiPex® pipe 32 x 4.4 mm	5 m	lgth	1/6	087311.232
	Roth MultiPex® pipe 12 x 2.0 mm	60 m	roll	1/6	087365.228
	Roth MultiPex® pipe 12 x 2.0 mm	120 m	roll	1/6	087365.229
	Roth MultiPex® pipe 15 x 2.5 mm	60 m	roll	1/6	087365.233
	Roth MultiPex® pipe 15 x 2.5 mm	120 m	roll	1/6	087365.234
	Roth MultiPex® pipe 18 x 2.5 mm	120 m	roll	1/6	087365.241
	Roth MultiPex® pipe 22 x 3.0 mm	120 m	roll	1/6	087365.252
	Roth MultiPex® pipe 28 x 4.0 mm	60 m	roll	1/6	087365.255
	Roth MultiPex® pipe 32 x 4.4 mm	60 m	roll	1/4	087365.259
	**Roth MultiPex® pipe in pipe**				
	Roth MultiPex® pipe in pipe 12 x 2.0 mm Casing pipe: Dpth/Diam. in mm = 25/20	60 m	roll	1/6	087367.228
	Roth MultiPex® pipe in pipe 15 x 2.5 mm Casing pipe: Dpth/Diam. in mm = 25/20	60 m	roll	1/6	087367.233
	Roth MultiPex® pipe in pipe 15 x 2.5 mm Casing pipe: Dpth/Diam. in mm = 25/20	180 m	roll	1/6	087367.235
	Roth MultiPex® pipe in pipe 18 x 2.5 mm Casing pipe: Dpth/Diam. in mm = 28/23	60 m	roll	1/6	087367.241
	Roth MultiPex® pipe in pipe 22 x 3.0 mm Casing pipe: Dpth/Diam. in mm = 34/29	60 m	roll	1/6	087367.251
	Roth MultiPex® pipe in pipe 28 x 4.0 mm Casing pipe: Dpth/Diam. in mm = 42/36	60 m	roll	1/4	087367.258
	Roth MultiPex® pipe in pipe 32 x 4.4 mm Casing pipe: Dpth/Diam. in mm = 42/36	60 m	roll	1/4	087367.262
	Roth MultiPex® pipe in pipe 12 x 2.0 mm "Mini" Casing pipe: Dpth/Diam. in mm = 20/16	60 m	roll	1/6	087367.128
	**Roth MultiPex® pipe-in-pipe, with insulation**				
	Roth MultiPex® pipe PLUS 12 x 2.0 mm Insulation: Dpth/Diam. in mm = 35/17	60 m	roll	1/4	087366.228
	Roth MultiPex® pipe PLUS 15 x 2.5 mm Insulation: Dpth/Diam. in mm = 38/20	60 m	roll	1/4	087366.233
	Roth MultiPex® pipe PLUS 18 x 2.5 mm Insulation: Dpth/Diam. in mm = 45/27	60 m	roll	1/4	087366.241
	Roth MultiPex® pipe PLUS 22 x 3.0 mm Insulation: Dpth/Diam. in mm = 50/32	60 m	roll	1/4	087366.251
	Roth MultiPex® pipe PLUS 28 x 4.0 mm Insulation: Dpth/Diam. in mm = 52/32	60 m	roll	1/4	087366.258
	Roth MultiPex® pipe PLUS 32 x 4,4 mm Insulation: Dpth/Diam. in mm = 64/38	60 m	roll	1/4	087366.262
	Roth MultiPex® pipe X-PLUS 28 x 4.0 mm, 20 mm Insulation: Dpth/Diam. in mm = 72/32	60 m	roll	1/4	087204.228
	Roth MultiPex® pipe X-PLUS 32 x 4.4 mm, 20 mm Insulation: Dpth/Diam. in mm = 78/38	60 m	roll	1/4	087204.232

Roth MultiPex® Pipes

ITEM	DESCRIPTION	UNIT	PACK	HVAC No.
	**Roth MultiPex® pipe-in-pipe, with insulation**			
	Roth MultiPex® pipe-in-pipe PLUS 12 x 2.0 mm 60 m Insulation: Dpth/Diam. in mm = 45/27	roll	1/4	087368.228
	Roth MultiPex® pipe-in-pipe PLUS 15 x 2.5 mm 60 m Insulation: Dpth/Diam. in mm = 45/27	roll	1/4	087368.233
	Roth MultiPex® pipe-in-pipe PLUS 18 x 2.5 mm 60 m Insulation: Dpth/Diam. in mm = 50/32	roll	1/4	087368.241
	Roth MultiPex® pipe-in-pipe PLUS 22 x 3.0 mm 60 m Insulation: Dpth/Diam. in mm = 55/37	roll	1/4	087368.251
	Roth MultiPex® pipe-in-pipe PLUS 28 x 4.0 mm 60 m Insulation: Dpth/Diam. in mm = 74/48	roll	1/4	087368.258
	Roth MultiPex® pipe-in-pipe PLUS 32 x 4.4 mm 60 m Insulation: Dpth/Diam. in mm = 74/48	roll	1/4	087368.262
	**Roth MultiPex® pipe-in-pipe, with insulation X-PLUS**			
	Roth MultiPex® pipe-in-pipe X-PLUS 15 x 2.5 mm 60 m Insulation: Dpth/Diam. in mm = 68/28	roll	1/4	087205.215
	Roth MultiPex® pipe-in-pipe X-PLUS 18 x 2.5 mm 60 m Insulation: Dpth/Diam. in mm = 72/32	roll	1/4	087205.218
	Roth MultiPex® pipe-in-pipe X-PLUS 22 x 3.0 mm 60 m Insulation: Dpth/Diam. in mm = 78/38	roll	1/4	087205.222
	Roth MultiPex® pipe-in-pipe X-PLUS 28 x 4.0 mm 60 m Insulation: Dpth/Diam. in mm = 88/48	roll	1/4	087205.228
	Roth MultiPex® pipe-in-pipe X-PLUS 32 x 4.4 mm 60 m Insulation: Dpth/Diam. in mm = 88/48	roll	1/4	087205.232
	**Roth Casing pipe**			
	Casing pipe for MultiPex® pipe in HD polyethylene **Color: white**			
	Roth Casing pipe, Dpth/Diam 25/20 mm 60 m	roll	1/6	087261.225
	Roth Casing pipe, Dpth/Diam 28/23 mm 60 m	roll	1/6	087261.228
	Roth Casing pipe, Dpth/Diam 34/29 mm 60 m	roll	1/6	087261.534
	Roth Casing pipe, Dpth/Diam 42/36 mm 60 m	roll	1/6	087261.542
	Roth Casing pipe, Dpth/Diam 54/44 mm 50 m	roll	1/4	087261.254

Roth Manifolds & Accessories

ITEM	DESCRIPTION	UNIT	PACK	HVAC No.
	**Roth Pipe Manifold Type TT** Complete Manifold pipe TT 22 mm with TT outlets that are 12, 15, and 18 mm. All including support bushing			
	Roth Manifold Pipe TT 1 x 12 mm	ea.	1/20	046221.212
	Roth Manifold Pipe TT 1 x 15 mm	ea.	1/20	046221.215
	Roth Manifold Pipe TT 1 x 18 mm	ea.	1/20	046221.218
	Roth Manifold Pipe TT 2 x 12 mm	ea.	1/20	046222.212
	Roth Manifold Pipe TT 2 x 15 mm	ea.	1/20	046222.215
	Roth Manifold Pipe TT 2 x 18 mm	ea.	1/20	046222.218
	Roth Manifold Pipe TT 3 x 12 mm	ea.	1/20	046223.212
	Roth Manifold Pipe TT 3 x 15 mm	ea.	1/20	046223.215
	Roth Manifold Pipe TT 2 x 2 x 15 mm,	ea.	1/20	046224.215
	**Roth TT Ball Valve** The Roth TT Ball Valve is used in conjunction with the Roth TT Manifold Pipe. An elbow is achieved by using Roth Elbow 22 mm TT, HVAC no. 047120.022			
	Roth TT Ball Valve 15 mm M/N	ea.	1/10	046220.215
	Roth TT Ball Valve 18 mm M/N	ea.	1/10	046220.218
	Roth TT Ball Valve 22 mm M/N	ea.	1/10	046220.222
	**Roth End Socket for Manifold pipe TT** For end of Manifold TT 22 mm.	ea.	1/10	047187.022
	**Roth Plug for TT Manifold pipe**			
	For plugging Manifold, TT 15 mm.	ea.	1/10	046219.220
	For plugging Manifold, TT 22 mm.	ea.	1/10	046219.222
	**Roth Manifold EURO 3/4"**			
	Roth Manifold EURO 2 outlets	ea.	1/25	046215.230
	Roth Manifold EURO 3 outlets	ea.	1/25	046216.230
	Roth Manifold EURO 4 outlets	ea.	1/25	046217.230
	**Roth Manifold Coupling EURO 3/4"**			
	Roth Manifold Coupling 12 mm x 3/4" EURO	ea.	1/50	401974.812
	Roth Manifold Coupling 15 mm x 3/4" EURO	ea.	1/50	401974.815
	Roth Manifold Coupling 18 mm x 3/4" EURO	ea.	1/50	401974.818

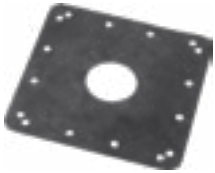
Roth Pipe Manifolds & Accessories

ITEM	DESCRIPTION	UNIT	PACK	HVAC No.
	**Roth End Socket 3/4"** Roth End Socket 3/4" incl. gasket	ea.	1/10	048300.106
	**Roth End Socket 3/4"** Roth End Socket 3/4"	ea.	1/10	046615.006
	**Roth Mounting Kit 3/4"** Roth Mounting Kit 3/4", for walls and cabinets For TT and EURO.	kit	1/10	046269.206

Coupling Canisters & Accessories

ITEM	DESCRIPTION	UNIT	PACK	HVAC No.
	**Roth QuickBox™** Used in pipe-in-pipe systems, providing a water damage proof and replaceable system. The QuickBox is available ready-assembled, including pressure test plug and TT coupling for 12/20, 15/25, and 18/28 mm MultiPex pipes. QuickBox for wallboard includes wallboard mounting kit. See below.			
	Roth QuickBox for wall 12 mm TT	ea.	1/20	087274.212
	Roth QuickBox for wall 15 mm TT	ea.	1/20	087274.215
	Roth QuickBox for wall 18 mm TT	ea.	1/20	087274.218
	Roth QuickBox for drywall 12 mm TT	ea.	1/20	087277.212
	Roth QuickBox for drywall 15 mm TT	ea.	1/20	087277.215
	Roth QuickBox for drywall 18 mm TT	ea.	1/20	087277.218
	Roth QuickBox for wall 15 mm TT, double	ea.	1/20	087274.315
	Roth QuickBox for drywall 15 mm TT, double	ea.	1/20	087277.315
	**Roth Mounting Kit for drywall** Used for QuickBox for drywall canister if it is to be changed from wall canister to wallboard canister. Consists of flange and half-fitting.	ea.	1	087277.470
	**Roth QuickBox Fitting, c/c 150** Used for embedding double QuickBox. Screws and plugs provided.	ea.	1/40	087288.250
	**Roth QuickBox Mounting Rail for cross beams** Used for mounting between cross beams. The mounting rail is intended for 600 c/c cross beams and can be shortened as needed.. Fittings for right and left sides and screws provided.	ea.	1/10	087277.465
	**Roth QuickBox Flange or Vinyl/PVC mm** Used in connection with installed wallboards.	ea.	10/80	087274.490

Coupling Canisters & Accessories

ITEM	DESCRIPTION	UNIT	PACK	HVAC No.
	**Roth Coatning Collar** Used for walls **Roth Coatning Collar for Roth QuickBox** **Roth Coatning Collar for Roth Multi-Pipe Sleeve** **Roth Coatning Collar for Roth Coupling Canisters 087281.xxx**	 ea. ea. ea.	 1/10 1/10 1/10	 087289.290 087289.286 087289.285
	**Roth QuickBox Extender**	ea.	1	087274.495
	**Roth Coupling Canister for wall** Approved pursuant to NT Build 448. **Roth Canister for wall ½" x 15 mm, PX**	 ea.	 1/10	 087281.245
	**Roth Coupling Canister for wall, double** Center distance 153 mm. **Roth Coupling Canister for wall ½" x 15 mm, PX**	 ea.	 1/20	 087281.285
	**Roth Coupling Canister for drywall** Approved pursuant to NT Build 448. **Roth Coupling Canister for drywall ½" x 15 mm, PX**	 ea.	 1/10	 087282.245

Coupling Canisters & Accessories

ITEM	DESCRIPTION	UNIT	PACK	HVAC No.
	**Roth Coupling Canister for drywall, double** Center distance 153 mm. **Roth Coupling Canister for drywall ½" x 15 mm, PX**	ea.	1/20	087282.285
	**Roth Front Flange** Used for bolting Roth Coupling Canisters onto drywall. **Roth Front Flange for drywall**	ea.	1/10	087276.298
	**Roth Fitting** **Roth Fitting, single** **Roth Fitting, double**	ea. ea.	1/10 1/10	087288.210 087288.220
	**Roth Coupling Canisters for Special Tasks** **Roth Coupling Canister 40 degr. ½" x 15 mm, PX** **Roth Dual-pipe Coupling Canister ½" x 15 mm, PX** (The canister does not meet the water standard requirements for exchangeable assemblies; see separate brochure).	ea. ea.	1/10 1/10	087284.215 087286.245
	**Roth Multi Sleeve** Used for placing 15 mm pipe-in-pipe through wall or floor.	ea.	1/10	087255.255

Coupling Canisters & Accessories

ITEM	DESCRIPTION	UNIT	PACK	HVAC No.
	**Roth End Gasket** For Multi pipe sleeves. Used as gasket between pipe and Casing pipe.	ea.	1/10	087255.265
	**Roth Wall Attachment 15 mm x ¾" with chrome** Used in connection with installation of Multi Pipe Sleeve when attaching equipment such as a shower battery.	ea.	1/40	728275.045
	Roth Wall Attachment 15 mm x 15 mm with rosette Used for placing 15 mm pipe-in-pipe through wall or floor in connection with installation of Multi Sleeve.	ea.	1/40	728275.115
	Roth Wall Attachment 15 mm x 15 mm without rosette Used for placing 15 mm pipe-in-pipe through wall or floor in connection with installation of Multi Sleeve.	ea.	1/40	728275.145
	**Roth Intake Piece, chrome**			
	Roth Intake Piece, straight ½" x ½" N/N, with rosette	ea.	1/40	728211.004
	Roth Intake Piece, straight ½" x ½" N/M, with rosette	ea.	1/40	728213.004
	**Roth Intake Piece, Straight ¾" x ½" N/N, with rosette**	ea.	1/40	728211.033
	Roth Intake Piece, straight ¾" x ½" N/N, with rosette and shut-off.	ea.	1/40	728257.033
	**Roth Connecting Piece, elbow ½" x 10 mm, with rosette**	ea.	1/40	728427.023
	Roth Connecting Piece, elbow ½" x 10 mm, with rosette and shut-off	ea.	1/40	728428.023
	Roth Connecting Piece, elbow ½" x 12 mm, with rosette and shut-off	ea.	1/40	728428.033

Coupling Canisters & Accessories

ITEM	DESCRIPTION	UNIT	PACK	HVAC No.
	**Roth ball valve, 15 mm x 10 mm compression nut/ring**	ea.	1	743780.115
	**Roth rosette with chrome**			
	Roth rosette 75 mm x ½" with chrome Low version	ea.	1	728970.000
	Roth rosette 75 mm x ¾" with chrome High version	ea.	1	728970.100
	**Roth Stainless Steele protecting tube and rosette** Used for pipe-in-pipe system. The protecting tube hides and protects the PEX pipe. The rosette ensures sealing between the rosette and the Casing pipe. manufactured in polished, stainless steel.			
	Roth Rosette for 25 mm Casing pipe	ea.	1/10	087269.225
	Roth Rosette for 25 mm Casing pipe with 150 mm protecting tube	ea.	1/10	087269.245
	Roth Rosette for 25 mm Casing pipe with 800 mm protecting tube	ea.	1/10	087269.248

Roth Cabinets & Accessories

ITEM	DESCRIPTION	UNIT	PACK	HVAC No.
	**Roth Manifold Cabinets, Waterproof, Plastic**			
	Roth Manifold Cabinets 400x550x96 mm int.	ea.	1	046297.504
	Roth Manifold Cabinets 550x550x96 mm int.	ea.	1	046297.506
	Roth Manifold Cabinets 800x550x96 mm int.	ea.	1	046297.508
	The Cabinets comes complete with pipe sleeve, bracket for manifold and drain. Pipe sleeve are pre-essembled.			
	**Roth frame and door for Manifold Cabinets, Plastic. Frame and door in steel**			
	Roth Frame and door for 400 mm Cabinets	ea.	1	046297.514
	Roth Frame and door for 550 mm Cabinets	ea.	1	046297.516
	Roth Frame and door for 800 mm Cabinets	ea.	1	046297.518
	**Roth Pipe Sleeve for Manifold Cabinets, Plastic**			
	Roth Pipe Sleeve, 16-25 mm	ea.	10	046297.525
	Roth Pipe Sleeve, 25-34 mm	ea.	10	046297.534
	Roth Pipe Sleeve, 42 mm	ea.	4	046297.542
	**Roth Manifold Cabinets, typ Mini. Waterproof, Plastic**			
	Typ Mini 222x272x70 mm	ea.	1	046297.520
	**Manifold for typ Mini. Manifold 3/8" x ½"**	ea.	1	046297.603
	without fittings			
	**Manifold 3/8" x ½" with fittings and shut-off**	ea.	1	046297.613
	**Manifold 3/8" x ½" with fittings**	ea.	1	046297.623

Roth Cabinets & Accessories

ITEM	DESCRIPTION	UNIT	PACK	HVAC No.
	**Roth Manifold Cabinet in plastic** Manufactured in polyester with a white gate in ABS. Incl. rack for EURO/ TT and Giacomini Manifolds. **Roth Manifold Cabinet, 520x300x90 mm, for EURO and TT** **Roth Manifold Cabinet, 520x300x90 mm, for Giacomini**	ea. ea.	1 1	046297.106 046297.105
	**Roth End Sleeves** **Roth End Sleeves, red** **Roth End Sleeves, blue**	ea. ea.	1/10 1/10	087254.275 087254.278
	**Roth overflow for waterproof cabinets** For mounting on the wall below the cabinet. To be connected to the cabinet drain with a 25 mm Casing pipe.	ea.	1	046297.840

MultiPex® Pipe System

Mounting Accessories

ITEM	DESCRIPTION	UNIT	PACK	HVAC No.
	**Roth Building Kit**	kit	1	404744.925
	**Roth Pipe Bend**			
	Roth Pipe Bend, plastic 25 mm	ea.	1/50	087249.225
	Roth Pipe Bend, plastic 28 mm	ea.	1/50	087249.228
	Roth Pipe Bend, plastic 28 mm with fitting	ea.	1/50	087249.258
	Roth Pipe Bend, plastic flex 25 mm	ea.	1/50	087249.325
	Roth Pipe Bend, steel 12 mm	ea.	1/50	087251.212
	Roth Pipe Bend, steel 15 mm	ea.	1/60	087251.215
	Roth Pipe Bend, steel 18 mm	ea.	1/40	087251.218
	Roth Pipe Bend, steel 25 mm	ea.	1/20	087251.225
	Roth Pipe Bend, steel 34 mm	ea.	1/20	087251.234
	Roth Pipe Bend, steel 42 mm	ea.	1/20	087251.242
	**Roth Pipe Bend Support**			
	Roth Pipe Bend Support, PVC 25/29 mm	ea.	1/20	087255.275
	Roth Pipe Bend Support, PVC 33/37 mm	ea.	1/20	087255.284
	**Roth Straight-through joint** Used for joining Casing pipes.			
	Roth Straight-through Joint 25 mm	ea.	1/10	087262.225
	Roth Straight-through Joint 28 mm	ea.	1/10	087262.228
	Roth Straight-through Joint 34 mm	ea.	1/10	087262.234
	**Roth Nail Shield for pipe-in-pipe 20, 25, 28, and 34 mm** Used where the pipe intersects with wood beams, etc. Comes with a single fixation bracket.	ea.	1/10	087289.239
	**Roth Attachment Bracket** Used for placing 15 mm pipe-in-pipe in beams and joisting.	ea.	1/50/400	087289.234

Mounting Accessories and Ion Traps

ITEM	DESCRIPTION	UNIT	PACK	HVAC No.
	**Roth Brackets** System brackets that are hooked together independent from the dimension, and which are used for securing pipes-in-pipe in accordance with the installation manual.			
	Roth Brackets 20 mm	ea.	1/50/500	087250.220
	Roth Brackets 25 mm	ea.	1/50/400	087250.225
	Roth Brackets 28 mm	ea.	1/50/400	087250.228
	Roth Brackets 34 mm	ea.	1/50/300	087250.234
	**Roth Pipe Hook** Used for securing pipe-in-pipe in concrete decks.			
	Roth Pipe Hook 80 mm, single, for 14 - 34 mm pipes	ea.	1/50	087253.288
	Roth Pipe Hook 100 mm, single, for 14 - 34 mm pipes	ea.	1/50	087253.290
	Roth Pipe Hook 60 mm, double, for 14 - 34 mm pipes	ea.	1/25	087253.292
	**Roth Protective Cap for PEX Pipes** Used for keeping the PEX pipes clean during installation.			
	Roth Protective Cap 12 mm	ea.	1/100	087243.212
	Roth Protective Cap 15 mm	ea.	1/100	087243.215
	Roth Protective Cap 18 mm	ea.	1/100	087243.218
	Roth Protective Cap 22 mm	ea.	1/100	087243.222
	Roth Protective Cap 28 mm	ea.	1/100	087243.228
	**Roth Ion Trap with support bushing** Used for separating CU pipes from steel pipes.			
	Roth Ion Trap 12 mm	ea.	1	087257.212
	Roth Ion Trap 15 mm	ea.	1	087257.215
	Roth Ion Trap 18 mm	ea.	1	087257.218
	Roth Ion Trap 22 mm	ea.	1	087257.222

Fittings, push

ITEM	DESCRIPTION	UNIT	PACK	HVAC No.
	**Roth Union, TT**			
	Roth Union 12 mm TT	ea.	1/5/50	047170.012
	Roth Union 15 mm TT	ea.	1/5/50	047170.015
	Roth Union 18 mm TT	ea.	1/5/50	047170.018
	**Roth Transition Socket, TT**			
	Roth Transition Socket 12 x ½", TT	ea.	1/5/50	047165.132
	Roth Transition Socket 15 x ½", TT	ea.	1/5/50	047165.015
	Roth Transition Socket 18 x ¾", TT	ea.	1/5/50	047165.232
	Roth Transition Socket 22 x ¾", TT	ea.	1/5/50	047165.022
	Roth Transition Socket 22 x 1", TT	ea.	1/5/50	047165.291
	Roth Transition Socket 28 x 1", TT	ea.	1/5/50	047165.028
	**Roth Transition Nipple, TT**			
	Roth Transition Nipple 12 x 3/8", TT	ea.	1/5/50	047160.012
	Roth Transition Nipple 12 x ½", TT	ea.	1/5/50	047160.132
	Roth Transition Nipple 15 x 3/8", TT	ea.	1/5/50	047160.166
	Roth Transition Nipple 15 x ½", TT	ea.	1/5/50	047160.015
	Roth Transition Nipple 18 x ¾", TT	ea.	1/5/50	047160.232
	Roth Transition Nipple 22 x ¾", TT	ea.	1/5/50	047160.022
	Roth Transition Nipple 22 x 1", TT	ea.	1/5/50	047160.291
	Roth Transition Nipple 28 x 1", TT	ea.	1/5/50	047160.028
	**Roth Elbow, TT**			
	Roth Elbow 12 mm, TT	ea.	1/5/50	047120.012
	Roth Elbow 15 mm, TT	ea.	1/5/50	047120.015
	Roth Elbow 18 mm, TT	ea.	1/5/50	047120.018
	Roth Elbow 22 mm, TT	ea.	1/5/50	047120.022
	Roth Street elbow, TT			
	Roth Street elbow 15 mm, TT	ea.	1/5/50	047140.015
	Roth Street elbow 18 mm, TT	ea.	1/5/50	047140.018
	Roth Street elbow 22 mm, TT	ea.	1/5/50	047140.022
	**Roth Elbow with connector, TT**			
	Roth Elbow 15 x ½" connector, TT	ea.	1/5/50	047124.015
	Roth Elbow 18 x ¾" connector, TT	ea.	1/5/50	047124.232
	Roth Elbow 22 x ¾" connector, TT	ea.	1/5/50	047124.022
	**Roth Elbow with nipple, TT**			
	Roth Elbow 15 x ½" nipple, TT	ea.	1/5/50	047122.015
	Roth Elbow 18 x ¾" nipple, TT	ea.	1/5/50	047122.232
	Roth Elbow 22 x ¾" nipple, TT	ea.	1/5/50	047122.022
	Roth Elbow 28 x 1" nipple, TT	ea.	1/5/50	047122.028

Fittings, push

ITEM	DESCRIPTION	UNIT	PACK	HVAC No.
	**Roth T-pipe**			
	Roth T-pipe 22 mm, TT	ea.	1/5/50	047130.022
	Roth T-pipe 28 x 22 x 28 mm, TT	ea.	1/5/50	047130.339
	**Roth Reducer**			
	Roth Reducer 15 x 12 mm, TT	ea.	1/5/50	047151.166
	Roth Reducer 22 x 15 mm, TT	ea.	1/5/50	047151.263
	Roth Reducer 22 x 18 mm, TT	ea.	1/5/50	047151.272
	Roth Reducer 28 x 22 mm, TT	ea.	1/5/50	047151.339
	**Roth Sealing Cap, TT**			
	Roth Sealing Cap 12 mm, TT	ea.	5/50	047187.012
	Roth Sealing Cap 15 mm, TT	ea.	5/50	047187.015
	Roth Sealing Cap 18 mm, TT	ea.	5/50	047187.018
	Roth Sealing Cap 22 mm, TT	ea.	5/50	047187.022
	**Roth Support Bushing**			
	Roth Support Bushing 12 x 2,0 mm	ea.	5/50	047194.012
	Roth Support Bushing 15 x 2,5 mm	ea.	5/50	047194.015
	Roth Support Bushing 18 x 2,5 mm	ea.	5/50	047194.018
	Roth Support Bushing 22 x 3,0 mm	ea.	5/50	047194.022
	Roth Support Bushing 28 x 4,0 mm	ea.	5/50	047194.028

Tools for Coupling Canisters & Accessories

ITEM	DESCRIPTION	UNIT	PACK	HVAC No.
	**Roth TT Dismantling Tool** Roth TT Dismantling Tool 12 mm Roth TT Dismantling Tool 15 mm Roth TT Dismantling Tool 18 mm Roth TT Dismantling Tool 22 mm Roth TT Dismantling Tool 28 mm	 ea. ea. ea. ea. ea.	 1 1 1 1 1	 047198.012 047198.015 047198.018 047198.022 047198.028
	**Roth Assembly Tool** Used for installing connector in coupling canister 087281.2xx og 087282.2xx.	ea.	1	087289.204
	**Roth Assembly Tool** Used for mounting front flange against drywall 087282.2xx.	ea.	1	087289.214
	**Roth Miller for drywall coupling canister** Used in connection with installing QuickBox.	ea.	1	087289.210
	**Roth Replacement Joint** Used for replacing 15 mm PEX pipe.	ea.	1	087289.220
	**Roth Pipe Cutter** Used for shortening PEX pipes.	ea.	1	087393.220
	**Roth MultiPex® Pliers** Used for 12, 15, and 18 mm PEX pipes.	ea.	1	087289.200
	**Mounting-tool for QuickBox™, concrete/stone-wall, distance: 150 mm** Comes with 2 pcs. QuickBox flange Used for mounting of QuickBox in concrete/stone walls.	ea.	1	087289.225

Roth MultiPex® Pipe System

Planning and Project Design

... living full of energy!

Roth MultiPex® Pipe System

... a modern installation technique for water and heating systems

The Roth MultiPex® pipe system is intended for the installation of both water and heating systems. The system is based on a Pex C-pipe in the well-known 12 x 2.0 mm,15 x 2.5 mm, 18 x 2.5 mm, 22 x 3.0 mm, 28 x 4.0 mm, and 32 x 4.4 mm standard dimensions.

A new fitting program has been developed for the system with coupling canisters and Manifold pipes with insertion couplings that are easily assembled without the use of expensive tools, and that feature the option of separating the coupling.

Of course, it is also possible to use all other approved PEX couplings for Roth MultiPex® pipes. The Roth MultiPex® system contains a variety of components that simplify and improve the pipe system (see separate product range).

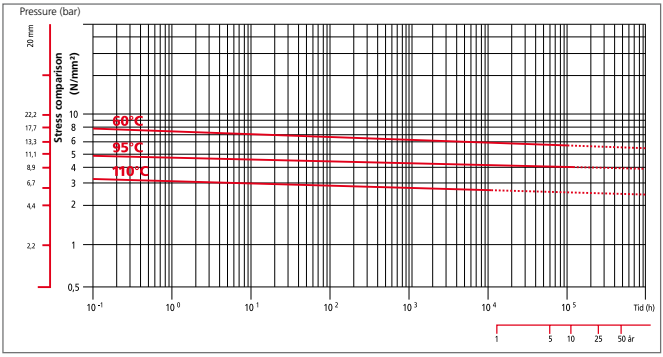
The MultiPex® pipe is a quality product that has been developed for water and heating systems. The production is ISO 9001 compliant, and it is monitored by a variety of independent testing institutions. One interesting point is the so-called time constant curve, which shows how the pipe behaves during its useful life.

The MultiPex® pipe only shows minimal drop in value, including during long-term testing at high temperatures. The curve does not show any abrupt deviations or and rapidly falling values. Even after 50 years, a MultiPex® pipe has a safety factor that far exceeds the minimum requirement for a PEX pipe.
Ongoing testing is perforwith pursuant to DIN 16892.

Physical characteristics for MultiPex® pipes.

Characteristic	Measured value	Norm
Cross-linking method	Electron beam	DIN 16892
Cross-linking degree	65- 70 %	DIN 16892
Density	0.946 g/cm³	DIN 53479
Ultimate stress	24 N/mm²	DIN 53455
Elongation after fracture	65- 600 %	DIN 53455
E-module, at 2% expansion	300 N/mm²	DIN 53457
Impact resistant at -20°C	Zero fractures	DIN 53453
Impact strength when notched at -20°C	Zero fractures	DIN 53453
Stress corrosion	Zero cracks	ASTM DIN 1693
Thermal conductivity	0.33 W/K m	DIN 52612
Coefficient of linear expansion	1.4 x 10-4 K-1	DIN 52328
Diffusion at 40°C	<0.1 mg /l d	DIN 4726
Minimum bending radius at 20°C	5 x diameter	DIN 4726
Relaxation	1.3 cm/m	
Insulation value on MultiPex insulation	0,040 W/m K (Δt 40°)	

The time constant for Roth MultiPex® pipes (internal pressure experiment)

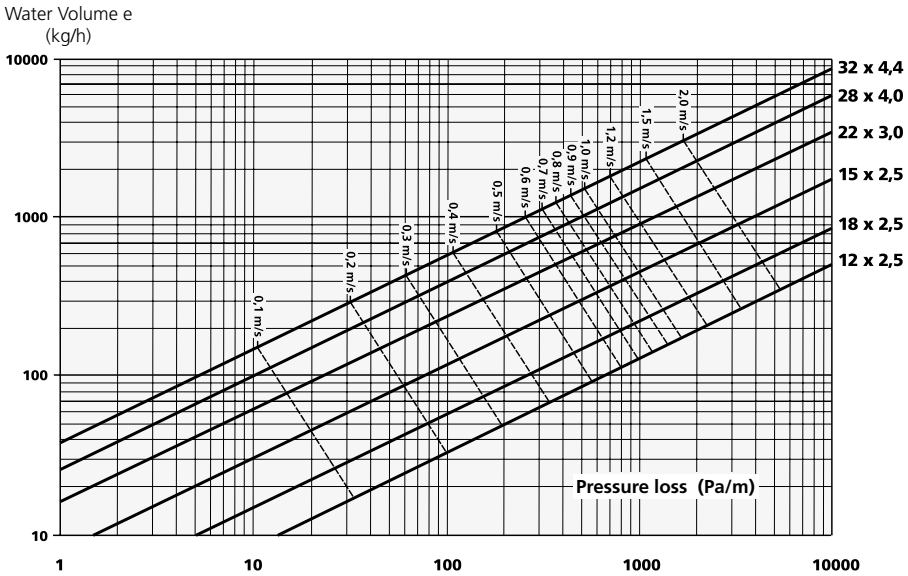


The Roth MultiPex® pipe has several advantages:

- Long durability
- Great aging resistance (slow corrosive effect on pipe)
- Great heat stability Allowed operating temperature up to 95 degrees C. (100 degrees C for short periods of time) with an operating pressure of 6 bar (87 PSI).
- Low loss of pressure, no deposits, and no galvanic or chemical corrosion
- Ability to withstand "construction site treatment"
- Ability to withstand embedding in concrete
- Great impact resistance, including during cold conditions
- Great flexibility that makes it easy to work with, including during cold conditions
- DIN 4726-compliant diffusion tightness
- VA (Water and Drainage) approved 1.14/18077 for 95 degrees at 10 bar (145 PSI).
- System approved pursuant to NT VVS 129

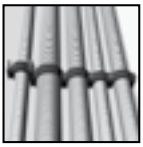
Roth MultiPex® Pipe System

Pressure loss diagram for Roth MultiPex® pipes



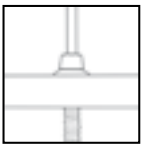
The Roth MultiPex® is a durable pipe in itself when observing the operating area of 10 bar/95o C (145 PSI/95o C). In addition, there are some rules and issues to be aware of and adhere to when working with PEX pipes.

Always cut the pipe with a PEX pipe cutter. This cut must be at a straight angle; any uneven cuts may cause the coupling to leak. Be aware that the pipe surface must be smooth and undamaged.



The pipe must be fastened to the building using an appropriately sized Roth Pipe Bracket. The use of different types of braces may result in the Casing pipe becoming crushed and damaged, rendering impossible a subsequent replacement of the PEX pipe. This also applies when running pipes under partitions, etc.

Only use fittings approved for use with PEX pipes. Always follow the manufacturer's installation guide for the individual coupling. Make sure to place the coupling on straight pipe sections; never where the pipes bend. Avoid embedding assemblies in walls and floors.



After installing the PEX pipes, it is important to protect the exposed pipes against the ultraviolet rays of the sun. In the case of the radiators, this is done by using a Roth rosette with a protecting tube. This can also be used for the Manifold if it is not located within the protection of a dark cabinet.

It is highly essential to build the connection to Manifold pipes or elsewhere in such a way that the pipe goes straight into the coupling The easiest way to do this is to install the Manifold at a min. height of 300 mm above the floor. This facilitates the installation itself and thus also the possibility of a straight pipe section.

Avoid putting the PEX pipe in contact with products that contain solvents. These include varnish, paint, permanent markers, tape, cleaning detergents, etc. The resulting damages will not show up until much later and will not be covered by the warranty. Furthermore, the MultiPex system components must not be exposed to gas leaks.

Planning

one pipe for both water and heating...

General information for both systems.

When planning an installation according to the Manifold pipe principle, it is important to place the Manifold in a central location in relation to tap locations/ radiators and as close to the individual outlet as possible.

It is beneficial to place the Manifolds at the bottom of cabinet set-ups or, if this is not feasible, inside Roth Manifold Cabinets, for embedding or free-standing installation.

The MultiPex® meets the requirements set forth in "DS 439 for water systems," as well as "DS 469 for water-based heating systems".

Planning MultiPex® heating systems.

From the water heater and the plug, two MultiPex® pipes-in-pipe serving as feeder pipes are installed up to the Manifold pipes for cold and hot water, respectively.

If the assembly needs circulation, this is achieved by running a pipe from the Manifold and back to the water heater. Please refer to section titled Circulation.

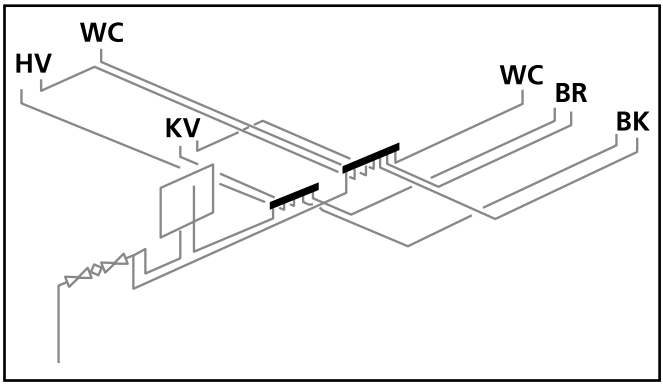
When the pipes are rolled out, they need to be placed using the smoothest bends possible and with a maximum of three sharp 90o elbows on a single stretch. In constructions where the pipes are not sealed, such as below a wooden floor, it is important to place the Casing pipes in a fixed position at each change of direction; otherwise, the Casing pipe will work as a spring in the event that the PEX pipe is replaced (see illustration).

If the installation involves running pipes from the Manifold pipe horizontally across the floor and then up to a coupling canister, a 25 mm pipe bend should be placed both by the Manifold as well as by the coupling canister.

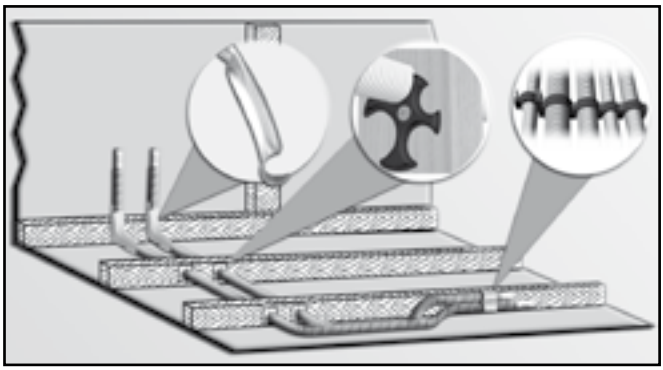
An appropriately sized Roth Pipe Bracket should be used when fastening pipes-in-pipe. The use of nails, perforated strip, etc. will cause the Casing pipe to be crushed flat, making it impossible to replace the interior pipe.

The system is completed by the faucet by using a Roth coupling canister, which is available in single as well as double versions for both wall and drywall.

MultiPex® pipe-in-pipe water system principle



Placing and fastening of Roth MultiPex® pipe-in-pipe in light structures



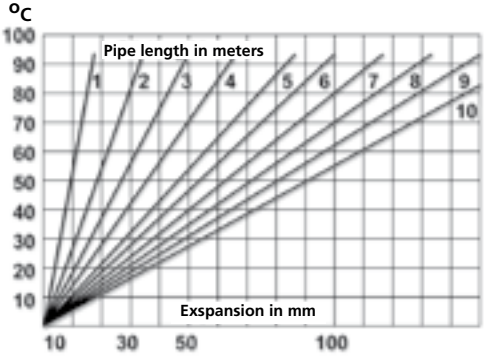
Further information is available in the NT VVS 129 instructions, which provide a thorough description of how to perform the installation.

Roth MultiPex® Pipe System

Expansion and shrinkage

Like all plastic pipes, the MultiPex® has a relatively high expansion coefficient. A certain counteracting factor is also that PEX pipes generally can shrink by up to 1.3% in length after the system is put into operation. In order to absorb this shrinkage as well as the normal length expansions, it is important to lay the pipes properly. This can be done by laying the pipes using two 90-degree bends between the radiator and the Manifold. In the even to a pipe-in-pipe system, this recommendation can generally be ignored since there is adequate space between the MultiPex pope and the Casing pipe.

The thermal expansion is illustrated in the chart below.



Type approval

The MultiPex® pipe is Water and Drainage approved. The approval is based on strict toxicological tests that reflect that the pipe material does not affect the odour and taste of the water, and that it does not emit any substances that are hazardous to the health.

Frost protection

The DS 439 standard for water systems describes how to protect systems against frost. The MultiPex® pipe has been tested at several laboratories and has a great resistance ability in terms of both internal and external mechanical, chemical, and microbiological attacks.

Water damage proof

The MultiPex pipe system is a complete pipe system that meets the requirements for a water damage proof system as long as it is built pursuant to NT VVS 129.

Damage prevention

The system must be built so that any leakage is easily and rapidly detected and damage is prevented.

Replacement ability

The pipes must be laid in such a way that leakages are prevented and so that they are easy to replace.

Roth MultiPex® Pipe System

Replaceable

The pipes must be mounted in a way that prevents leaks and facilitates replacement.

Fire requirements

Where MultiPex is used in structures covered by fire requirementsp, the regulations from Danish Institute of Fire and Security Technology (DBI) should be observed closely. In multi-storey buildings with dwellings, fire protection may usually be omitted for pipe dimensions up to 32 mm, but please refer to DBI guideline 31
Where MultiPex is used as feeding pipe for hose wheels, the pipes must be insulated to ensure that water supply for fire fighting may be upheld for at least 30 minutes. Please refer to DBI guideline 15.

Planning MultiPex® water installations.

Water systems must be designed and dimensioned according to the Danish Society of Engineers standard for water systems, DS 439.

Systems can be designed by performing either a full calculation or a simple calculation. A full calculation requires excellent design knowledge and should be left to an engineer.

The simplified calculation is somewhat easier and may be used for dwellings and office buildings, etc., under certain conditions, cf. item 2.4 of the standard. For the purpose of facilitating dimensioning, Roth has prepared some tables that make it easy and safe to dimension a system according to the simplified calculation method.

Table 1, Service Pipes

kPa	mWc	Qs	Max m. PEL pipe	
		l / s	32 mm	40 mm
50	5	0,51	15	42
100	10	0,51	74	215

The table shows how many meters of a given dimension of PEL/PEM pipe can be laid without the pressure loss on this section exceeding 50 kPa and 100 kPa, respectively.

Table 2, Coupling Pipes

Water flow qf (l/s)	Tap location	15 mm Max m.
0,1	Sink, toilet	32,0 (12,5)
0,2	Other	9,2
0,3	Bath tub	4,1

The table indicates the maximum length of a coupling pipe in meters in order for the pressure loss not to exceed 50 kPa. The figures in parentheses should apply to warm water systems to prevent the wait time from exceeding 10 sec.

Example of dimensioning:

To be able to dimension our feeder pipes, we need to know the available pressure loss in the system. The pressure loss at the rough bore location is usually disclosed by the water company; in our example, it is stated at 350 kPa, the service pipe is 15 m long, the height between the supply point (1.2 m down) and the most dangerous point (2.5 m up) is 3.7, the fitting in the pressure group is 150, there is a bath tub on the Manifold pipe, and the length of the feeder pipe is 10 m with an overall water flow of 0.6 l/s.
We can now calculate what is available for the rest of the system:

Supply point pressure	350 kPa
Height to most dangerous point (m x 10)	-37 kPa
Available pressure	313 kPa
Pressure loss in outlet (15 m, 32 mm PEM)	-50 kPa
Pressure loss in coupling pipe	-50 kPa
Pressure loss in fitting (x 0.5)	-75 kPa
Pressure loss for use in feeder pipe	138 kPa

Go to Table 3a under 100 kPa and find the pipe dimension where the length of the feeder pipe is greater than or equal to 10 m. In this case, an 18 mm MultiPex® pipe is selected.

Roth MultiPex® Pipe System

Table 3, Feeder Pipes
(without bathtub)

Pt		Total Σ qf	Dimension			
kPa	mWs	(l / s)	15	18	22	28
50	5	0,2	4,3	18	50	148
		0,3	2,3	11	31	93
		0,4	1,8	9	27	81
		0,6	1,3	7	22	67
		0,8	1,0	6	19	57
100	10	0,2	9,9	37	102	297
		0,3	5,6	23	63	187
		0,4	4,7	20	55	164
		0,6	3,7	16	46	136
		0,8	3,0	13	39	115
150	15	0,2	15,0	56	153	447
		0,3	8,9	34	96	281
		0,4	7,6	30	84	247
		0,6	6,1	25	70	206
		0,8	5,0	21	59	174
200	20	0,2	20,3	75	204	
		0,3	12,2	47	128	
		0,4	10,5	41	112	
		0,6	8,6	33	93	
		0,8	7,0	28	78	

The table indicates which dimension to choose when Pt and pipe length are known. When calculating, Σ qf is converted to qd.

Table 3a, Feeder Pipes
(with bathtub)

Pt		Total Σ qf	Dimension			
kPa	mWs	(l / s)	15	18	22	28
50	5	0,3	1,5	8	24	72
		0,4	0,8	5	17	52
		0,6	0,4	4	14	42
		0,8	0,2	4	12	37
100	10	0,3	4,2	17	49	147
		0,4	2,7	12	35	106
		0,6	2,0	10	29	87
		0,8	1,6	9	25	77
150	15	0,3	6,9	27	75	221
		0,4	4,6	19	54	160
		0,6	3,6	15	44	132
		0,8	3,0	13	38	116
200	20	0,3	9,6	37	101	296
		0,4	6,5	26	72	214
		0,6	5,2	21	59	177
		0,8	4,4	18	52	156

The table indicates which dimension to choose when Pt and pipe length are known.

Roth MultiPex® Pipe System

Circulation of hot domestic water

When planning the water system, a decision needs to be made whether or not to establish circulation. As prescribed by the water standard, the maximum wait time should not exceed 10 sec., making it necessary to calculate the system wait time.

The wait time is calculated by first measuring the pipe that leads from the water heater to the Manifold pipe. The length is entered in the table, and the wait time can be read from the pipe dimension in question. After that, the pipe that runs from the Manifold pipe to the farthest tap location is measured, and again the wait time is read from the table. The two results are then added together to obtain the total wait time. If the wait time exceeds 10 sec., circulation should be created.

When creating circulation, a circulation pump needs to be installed. For this purpose a Vortex circulation pump is utilized. This pump has certain advantages such as low performance and a short built-in length.

Insulation for water systems

According to the DS 452 insulation standard, feeder pipes must be fully insulated. This applies to both cold and hot water.

Coupling pipes should only be insulated in the section located outside the room where the fitting is placed. When insulation is required, a MultiPex® pipe-in-pipe Plus or X-Plus equipped with foam insulation is selected.

Tightness test

Before putting into use a water system built with Roth MultiPex® pipe-in-pipe, the system should always be tested for leaks. The test should be perforwith with water, and the water pressure should be 1.5 times the estimated operating pressure for a duration of 2 hours.. After the pressure is turned on, the pressure may rise. This is perfectly normal. If the system is filled during the pressure test, a subsequent stable period must be achievable.

The pressure should be monitored throughout the tightness test. Be aware of the risk of subsequent freezing. Documentation for the tightness test must be made available.

Flushing the system

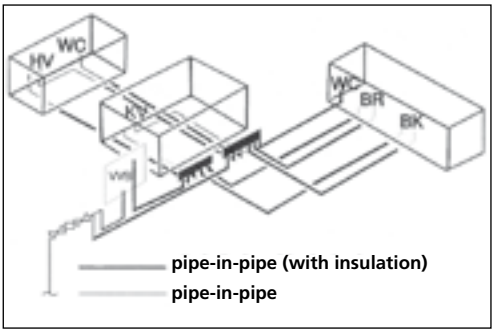
Roth MultiPex® systems contaminate less than other types of systems since no pipe and fitting assemblies are used.

GA full system rinse must take place in accordance to the requirements for water systems provided by DS 439.

Waiting time for MultiPex® pipe.

Amount l / s	Pipe dimension			
	28 x 4,0 s / m	22 x 3,0 s / m	18 x 2,5 s / m	15 x 2,5 s / m
0,1	3,14	2,01	1,32	0,79
0,2	1,57	1,00	0,66	0,40
0,3	1,04	0,67	0,44	0,27
0,4	0,78	0,50	0,33	0,20
0,5	0,63	0,40	0,26	
0,6	0,52	0,33		
0,7	0,45	0,29		
0,8	0,39	0,25		
0,9	0,35			
1,0	0,31			
1,1	0,28			
1,2	0,26			

Example of insulation of water system



Roth MultiPex® Pipe System

Definition of requirements for pipe insulation

	Class 0	Class 1	Class 2	Class 3	Class 4
Application	Rarely used pipe	Heating pipes in heated rooms	Heating pipe in not heated rooms	Pipes for hot tap water	Main pipe

Requirements for pipe insulation i mm.
Ambient tempeture is 20°C and watertemperature is 60°C.

Pipe dia. in mm	Class of insulation			
	Class 1	Class 2	Class 3	Class 4
12	20	20	20	30
15	20	20	20	30
18	20	20	20	30
22	20	20	30	30
28	20	20	30	40
32	20	30	30	40

Insulation as Rockwool, universal

Roth MultiPex® Pipe System

Planning MultiPex® heating systems.

From the boiler, two MultiPex® pipes-in-pipe serving as feed pipes are installed up to the Manifold pipes for in-flow and out-flow, respectively. The system can be built as either a dual-string system according to the Manifold pipe system or a conventional single-string system.

It is a good idea to place the Manifold pipe in a central location between the radiators so the sections are as short as possible. In the case of a very large system, or if zone divisions are desired, it is possible to set up Manifolds in different parts of the construction.

For example, MultiPex® pipes-in-pipe are installed form the Manifold and out to each individual radiator, allowing for a water damage proof system. However, this is not a requirement in the standard. When the pipes are rolled out, they need to be placed along the walls of the building with the smoothest bends possible and with a maximum of three sharp 90o elbows on a single stretch. In constructions where the pipes are not sealed, such as below a wooden floor, it is important to place the casing pipes in a fixed position at each change of direction; otherwise, the casing pipe will work as a spring in the event that the PEX pipe is replaced. In order to absorb movements of the pipe caused by heating and cooling, it is very important to lay the pipe properly (see drawing).
"Placing MultiPex® Pipes".

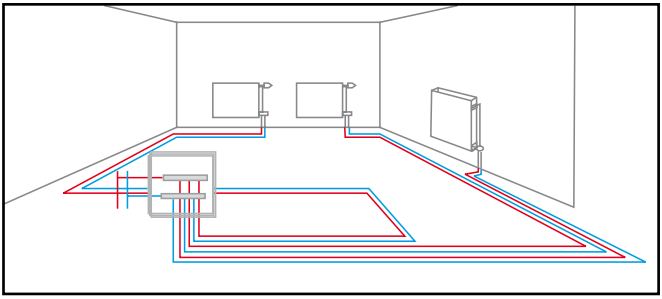
If the installation involves running pipes from the Manifold pipe horizontally across the floor and then up to a radiator or a coupling canister, a 25 mm pipe bend should be placed by both the Manifold as well as by the coupling canister. When fastening a pipe-in-pipe, an appropriately sized Roth pipe hook or pipe bracket must be used.

The use of nails, perforated strip, etc. will cause the casing pipe to be squeezed flat, making it impossible to replace the interior pipe.

An option is to complete the system by the radiator by using a Roth coupling canister, which is available in a single as well as a double version for both walls and drywalls.

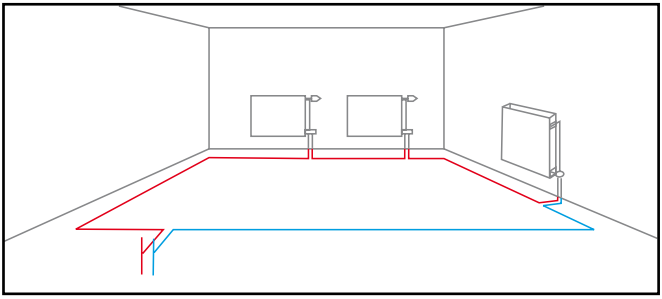
If the end of the MultiPex® pipe is visible above the floor, it needs to be protected against ultraviolet solar rays and mechanical overload . This is done by using a Roth Rosette with a protecting tube.

As a dual-string system



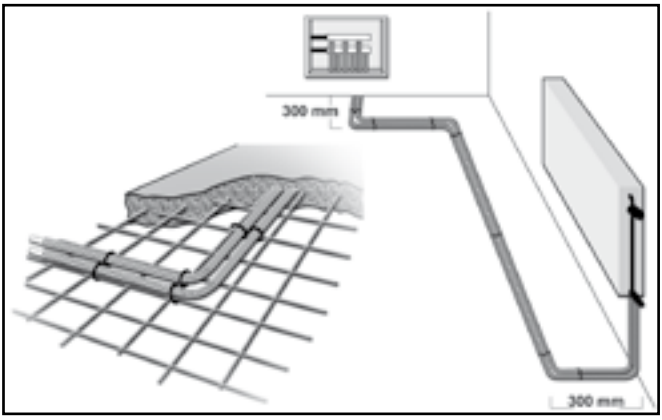
The MultiPex® is built as a dual-string system according to the Manifold pipe principle. The pipe is led from a centrally located Manifold pipe out to each individual radiator, and then back again.

As a single-string system



The MultiPex® system built as a single-string system where the pipe is led from radiator to radiator and is connected through single-string valve systems. The system can also be built as a dual-string system by using dual-string valves.

Placing MultiPex® Pipes.



Two 90° elbows are installed by the Manifold and the radiator, respectively. The elbows must meet the minimum bend radius of 5 x the outside pipe diameter There must be a minimum distance of 300 mm between the two elbows. On straight pipe sections, the pipes must be fastened every meter at a minimum.

Roth MultiPex® Pipe System

Planning MultiPex® Pipes heating systems.

Water systems must be designed and dimensioned according to DS 469, the Danish Society of Engineers standard for water systems, using water as heating element.

Systems can be designed by performing either a full calculation or a simple calculation. A full calculation requires excellent design knowledge and should be left to an engineer.

In order to facilitate dimensioning for simple calculation, Roth has created schedules (for dual-string systems) where pipe length and the desired heat level can be used as factors to find the proper dimension.

Two schedules have been created: one for feeder pipes and one for radiator outlets. Remember to use the calculated heat loss for the room, and not the radiator Watts!!

This is how it is done:

1. Select a schedule according to the pipe type (feeder or radiator outlet)
2. Enter the performance category "Watts" on the horizontal line.
3. Proceed vertically to the length that is at least equal to the current length and read off the dimension on the left.

NOTE! Only the one-way stretch needs to be measured; the return stretch in included in the schedules.

Feeder pipe schedule (35° C cooling)
The numbers in the fields indicate the max. length in meters.

Performance (Watt)	2000	3000	4000	5000	6000	7000	8000	9000	10000
15 mm (m)	55,3	27,6	16,8	11,2	7,8	6,2	4,9	3,9	3,1
18 mm (m)			58,7	37,6	29,3	22,3	17,7	13,8	11,7
22 mm (m)					78,3	62,6	47,0	37,6	31,3

Radiator outlet schedule (35° C cooling)
The numbers in the fields indicate the max. length in meters.

Performance (Watt)	500	1000	1500	2000	2500	3000	3500	4000
12 mm (m)		75,0	30,1	20,4	12,8	9,0	7,5	5,2
15 mm (m)				52,7	34,6	26,4	20,4	15,2

Preconditions for preparing the schedules:

Selected components:

Pump: Grundfos Alpha+ 25 - 40 0/1.4 mVc- 1 m³/h
Valves: Dual-string, as TA or Danfoss
System: Dual-string according to the Manifold pipe principle
Boiler: Unit with built-in pump

Pre-configured pressure loss:

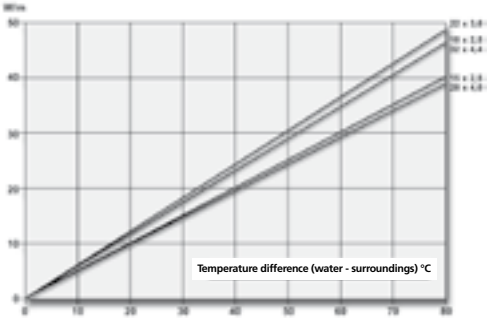
Valves: 2.5 kPa (max 3,000 Watts)
Boiler: 1.0 kPa (max 10,000 Watts)
Fittings: 0,0 kPa (incl. Manifold)
Radiator: 0.5 kPa (max 3,000 Watts)

Roth MultiPex® Pipe System

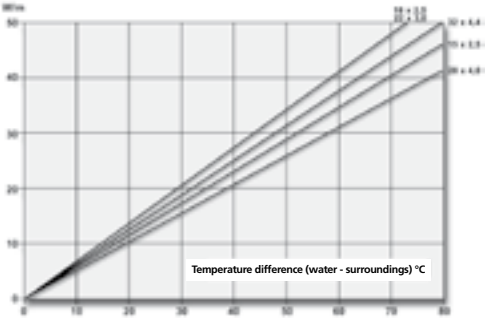
Heat emission from MultiPex® pipes.

Please refer to DS 452 for requirements and standards. The MultiPex® has a good insulation ability against heat emission and condensation when installing pipes-in-pipe as well as insulated pipes-in-pipe.

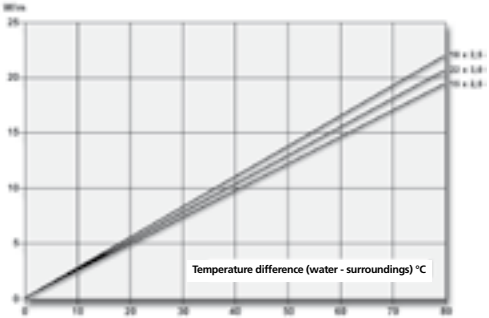
Roth MultiPex® pipe-in-pipe laid freely



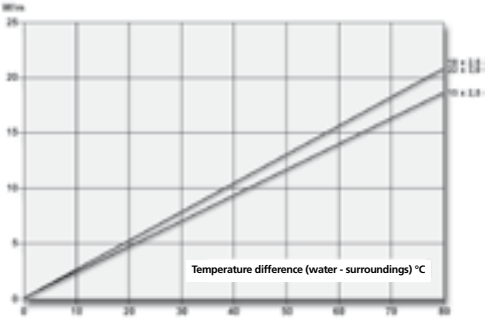
Roth MultiPex® pipe-in-pipe, cast in 50 mm concrete



Roth MultiPex® pipe-in-pipe, insulated, laid freely



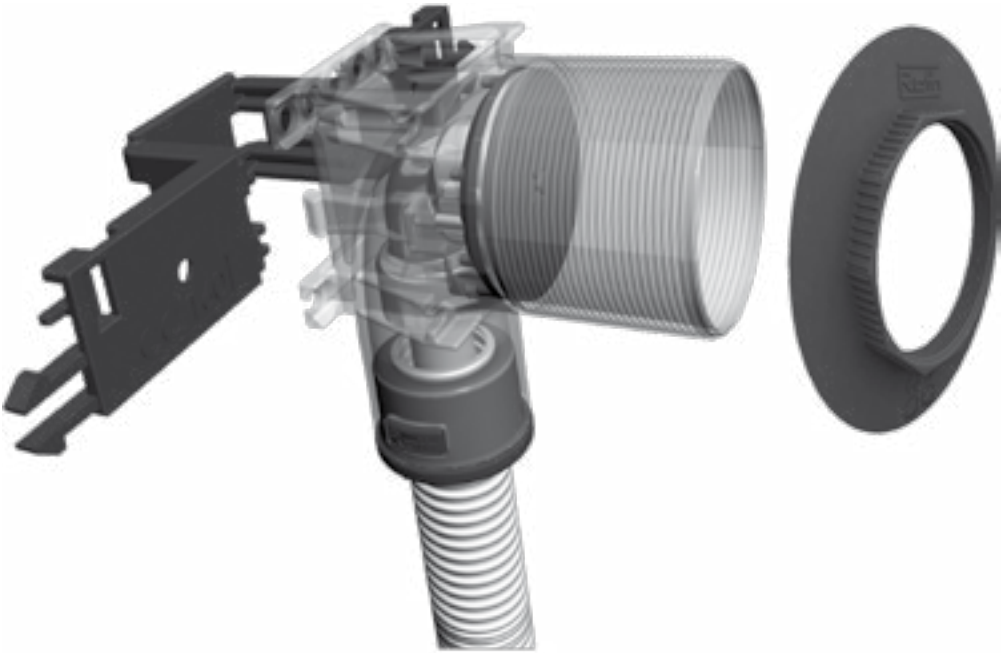
Roth MultiPex® pipe i pipe, insulated, cast in 50 mm concrete



NOTE! When placing pipes freely in the air without casing pipe compared with pipe-in-pipe without insulation, heat emission increases by approx. 30%. When insulated and embedded, heat emission increases approx. 20% compared with insulated and embedded pipe-in-pipe.

Roth QuickBox™ Coupling Canister

for walls and drywall



Description

The Roth QuickBox™ coupling canister for walls and drywall can be used for 12 mm as well as 15 and 18 mm PEX pipes in 20, 25, or 28 mm casing pipe.

The coupling canister is manufactured in transparent, solid cast plastic with a pre-installed brass elbow and a pressure test plug, as well as a rubber seal between the coupling canister and the casing pipe, which is approved pursuant to NT VVS 129 and fulfils the requirements of the SBI 200 guidelines.

The QuickBox™ is available as either a double canister with a TT plunge coupling for 12, 15, or 18 mm. The TT plunge coupling ensures a fast and secure assembly.

Application

- all types of heavy wall structures
- all types of drywalls with a thickness of 10-45 mm

Measurements:

Width:	50 mm
Height:	88 mm
Min. built-in length:	38 mm
Max. built-in length:	88 mm
Outside diameter of Canister neck:	52 mm

Roth QuickBox™ Coupling Canister

Technical description

The QuickBox™ coupling canister is solid cast in transparent plastic with a pre-installed brass elbow with a TT plunge coupling featuring a pressure test plug. In addition, the rubber seal between the canister and the casing pipe is likewise pre-installed. QuickBox™ can be used for heave wall structures as well as for light drywall structures.
For drywall structures, the front flange is used. It is screwed onto the thread of the canister neck, which thus squeezes the canister tight against the wallboard. In addition, the plastic fitting can be mounted on the back side of the drywall. QuickBox™ can be used for wall board that is from 10-45 mm thick. In the case of wall covering made of vinyl, PVC, etc., a special flange can be used, HVAC No.
087274.490.
Included with QuickBox™ coupling canisters for 12 mm PEX are rubber seals for both 20 and 25 mm casing pipes. QuickBox™ for 15 mm PEX is for 25 mm casing pipe, and QuickBox™ for 18 mm PEX is for 28 mm casing pipe.

Technical data

HVAC no.	Single QuickBox™ Coupling Canisters
087274.212	Roth QuickBox™ for wall, 12 mm TT
087274.215	Roth QuickBox™ for wall, 15 mm TT
087274.218	Roth QuickBox™ for wall, 18 mm TT
087277.212	Roth QuickBox™ for drywall, 12 mm TT
087277.215	Roth QuickBox™ for drywall, 15 mm TT
087277.218	Roth QuickBox™ for drywall, 18 mm TT

HVAC no.	Double QuickBox™ Coupling Canisters
087274.315	Roth QuickBox™ for wall, 15 mm TT, double
087277.315	Roth QuickBox™ for drywall, 15 mm TT, double

Accessories

HVAC no.
087288.250 QuickBox™ Roth QuickBox Fitting C/C 150 mm
087277.470 QuickBox™ Roth Mounting Kit for drywall
087277.465 QuickBox™ Roth QuickBox Mounting Rail
087289.290 QuickBox™ Roth Coatning Collar
087274.490 QuickBox™ Roth QuickBox Flange or Vinyl/PVC

Water & Drainage approval no.: VA 1.22/ 17364

Approved pursuant to NT VVS 129.

Tested by SBI pursuant to NT Build 448; meets the requirements of SBI Directive 180.

The plastic case is solid cast in transparent polycarbonate (PC), and the flange is cast in ABS.

The TT Elbow is made from dezincification brass with 1/2" fem. thread and TT plunge couplings for 12, 15, and 18 mm PEX pipes, respectively.

The cone is made of stainless steel, the washer is made of EPDM rubber, and the support is made of acetal plastic.

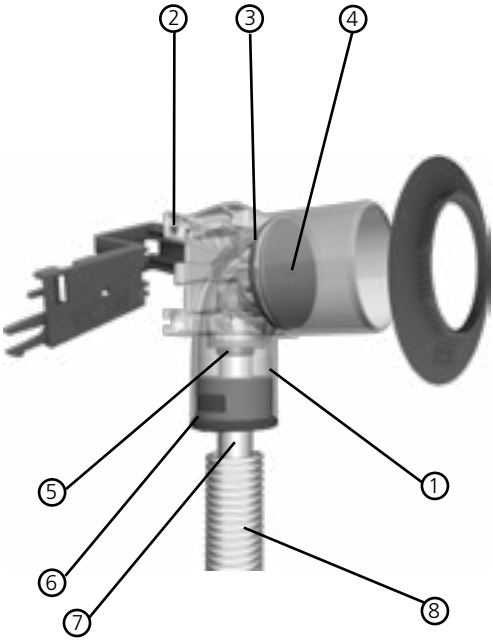
QuickBox™ Installation tips

The QuickBox™ coupling canister comes ready-made. Thus, the coupling canister has a very short installation time. Always make sure that the pipe is inserted far enough into the TT coupling. It can be a good idea to mark the pipe 23 mm from the end since this is the optimal insertion depth. Since the plastic case is transparent, it is easy to check whether the pipe is inserted deep enough.

The plastic box for the QuickBox™ for wall and drywall is the same. This is a great advantage since it allows for rapid moving of a coupling canister from wall to drywall by also purchasing the QuickBox™ installation kit for drywall This means that the neck can be too long. However, the neck can quite easily be cut down to an appropriate length using Roth Miller, HVAC no. 087289.210.

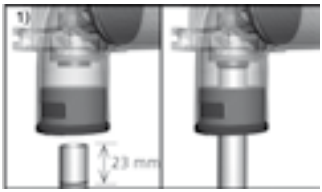
It is important that the cut on the end of the pipe is straight and without grooves. For this reason, a PEX cutter should always be used for cutting the pipes.

Do not expose Quickbox coupling canisters to gas leaks and highly corrosive environments.

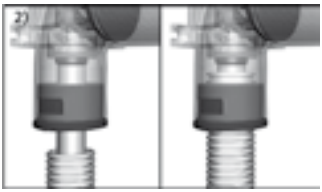


1. QuickBox™ transparent coupling canister
2. Hole for mounting rail for beams
3. ½" RG
4. Pressure test plug
5. TT coupling
6. Rubber gasket
7. PEX pipe
8. Casing pipe

Mounting Instructions for Roth QuickBox™ for walls



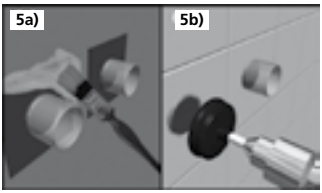
The pipes is cut with PEX cutter, and the casing pipe is cut 30 mm shorter than the PEX pipe. If the PEX pipe is already coupled to the Manifold, the installation will be facilitated by temporarily loosening the Manifold.
Mount the support bushing and mark the pipe 23 mm from the end. Insert the pipe into the coupling with a rotating movement and check that the insertion depth is 23 mm. Pull on the pipe to make sure it is tight.



The casing pipe needs to be cut fairly far down into the furrow. Make sure it does not have any sharp edges or burrs, and then insert the casing pipe straight into the rubber seal on the coupling canister with a slightly rotating movement until 1 or 2 grooves are visible inside the coupling canister. Do not use lubricant or any other helping tools.

The fitting is simple to mount on the coupling canisters, and it ensures a distance between of c-c 150 mm between two coupling canisters. The coupling canisters are pushed into the fitting until a light click is heard. The fitting can be disassembled by pushing in the two locking notches.

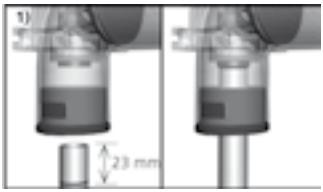
The fitting is installed with screws (included). It is always a good idea to perform a pressure test of the system. This is easy with QuickBox™ since it already features an installed pressure test plug. The pressure test plug is only intended for short pressure tests and as protection of the thread during the building phase.



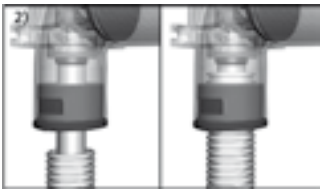
If the coupling canisters are installed in an area with dampness, a QuickBox™ coating collar will need to be installed (6a). When the wall covering is complete, the neck of the coupling canister can be shortened to an appropriate length by using a Roth miller (6b).

Mounting tool for QuickBox can be used. HVAC no. 087289.225

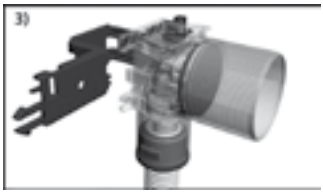
Mounting Instructions for Roth QuickBox™ for drywalls



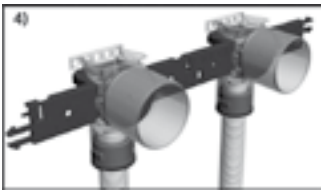
The pipe is cut with a PEX cutter, and the casing pipe is cut 30 mm shorter than the PEX pipe. If the PEX pipe is already connected to the Manifold, the installation will be facilitated by temporarily loosening the Manifold. Mount the support bushing and mark the pipe 23 mm from the end. Insert the pipe into the coupling with a rotating movement and check that the insertion depth is 23 mm. Pull on the pipe to make sure it is tight.



The casing pipe needs to be cut fairly far down into the furrow. Make sure it does not have any sharp edges or burrs, and then insert the casing pipe straight into the rubber seal on the coupling canister with a slightly rotating movement until 1 or 2 grooves are visible inside the coupling canister. Do not use lubricant or any other helping tools.

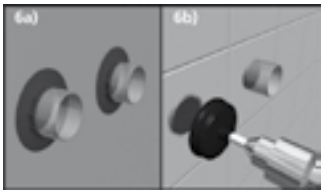


The plastic fitting can be used for supporting and possibly fastening the coupling canister to the drywall. In addition, two plastic fittings can be joined and used as a double fitting with a c-c distance of 150 mm or 160 mm, respectively. The coupling canisters are pushed into the fitting until a slight click is heard. The fitting can be disassembled again by pushing in the two locking notches.



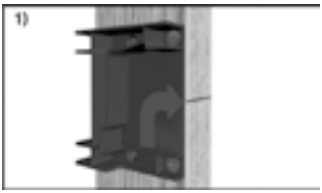
Two or more coupling canisters can be joined together with the plastic fitting, but always check that they are joined at the correct c-c distance. The fitting can be disassembled again by pushing in the two locking notches.

The QuickBox™ coupling canister is intended for boards that are 10-45 mm thick. Holes will need to be drilled using a Ø 52 mm hollow drill at the desired c-c distance, if applicable. The coupling canister is placed in the hole from the back side and is fastened using the provided screws. Use different screws when mounting on thin drywall.

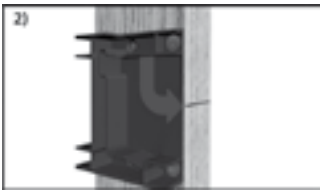


The front flange is attached by hand, or carefully with a pair of water pump pliers if necessary. It is always a good idea to pressure test the system. This is easy with QuickBox™ since it already features an installed pressure test plug. The pressure test plug is only intended for short pressure tests and as protection of the thread during the building phase (6a). When a wet room membrane and tiles are installed (if applicable), the neck of the coupling canister can be shortened to an appropriate length by using a Roth cutter (6b).

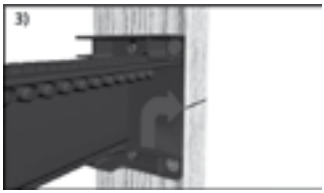
Mounting Instructions for Roth QuickBox™ for drywalls with mounting rail for beams



First, mark the beam at the height where the centre of the coupling canister is to be located. The end brackets are mounted using the provided screws with the arrow pointing at the mark for the centre height. The end brackets come in pairs with a right and a left version.

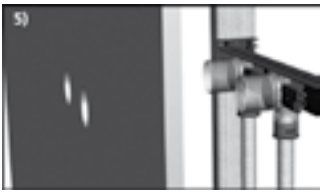


If the pipes come from above, the end brackets are simply turned upside-down. The brackets feature several holes so they can be used for wood as well as for metal beams The end brackets are 0 mm wide, but they can be shortened down to 50 mm.

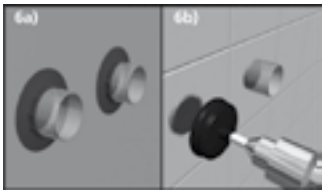


The actual mounting rail fits a beam distance of c-c 600 mm, but of course this can be reduced, of course. The mounting rail must be shortened to a length that is 6-8 mm shorter than the edge distance of the beams. The mounting rail is pushed into the end brackets until it is locked in place and a click is heard. It can be disassembled again by pushing down or up, depending on the mounting direction.

When the rail is mounted, the QuickBox ™ coupling canisters can be locked in place in the rails at the desired c-c distance. On the back side of the coupling canister there are holes that fit the pins in the mounting rail. The coupling canisters can be moved sideways at 10 mm intervals. A final adjustment can be made by moving the entire rail in the end brackets.

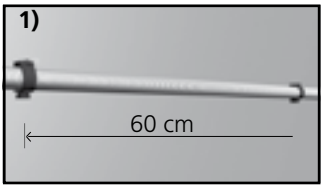


It is always a good idea to pressure test the system. This is easy with QuickBox™ since it already features an installed pressure test plug. The pressure test plug is only intended for short pressure tests and as protection of the thread during the building phase. The drywalls can now be installed after marking and drilling holes using a Ø 52 mm hollow drill.

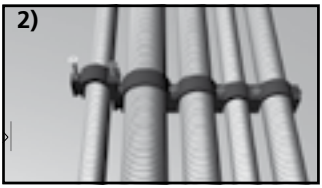


The front flange can now be attached by hand, or carefully with a pair of water pump pliers if necessary. When a wet room membrane and tiles are installed (if applicable), the neck of the coupling canister can be shortened to an appropriate length by using a Roth cutter (6b). In the case of wall covering made of vinyl, PVC, etc., a special flange can be used, HVAC No. 087274.490.

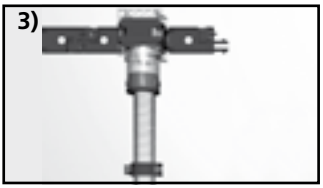
Mounting Instructions
Roth Brackets / Roth Fixation Plates



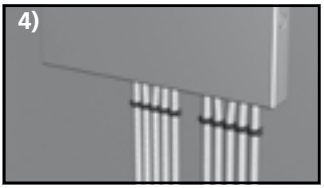
In order to facilitate any replacement of the PEX pipe in a casing pipe system, fixation of the casing pipe is important when the system is used for light structures. This is done by using fixation brackets that are adjusted to the casing pipe, locking it in place. The distance between the fixation brackets should not exceed 60 cm. Push the fixation brackets into the groove on the casing pipe, then screw into place (screw provided).



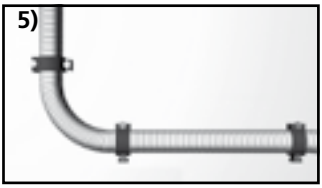
The brackets come in 20, 25, 28, and 34 mm and are designed in such a way that conditional dimensions can be squeezed together. The first bracket is pressed onto the pipe and is screwed tight. Then the next bracket can be pressed on to the first brackets and tightened, etc. All dimensions can be pressed together; hence, the order makes no difference.



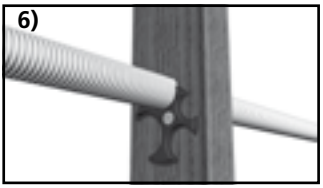
The fixation brackets need to be as close to the coupling canisters as possible. (15-30 cm).



Fixation is also important close to the Manifold/mounting case. (15-30 cm).



For pipe bends, one bracket is placed on each side of and as close to the bend as possible.



The fixation plate should be used for all pipe sleeves in light structures and is available in 20, 25, 28, and 34 mm. Find the right dimension and push the fixation plate into the groove on the casing pipe, then screw into place (screw provided).

Roth Multi Sleeve

Roth Multi Pipe Sleeves ensure proper and stable fixation of 15 mm MultiPex® pipes-in-pipe (25 mm casing pipe) through walls or floors. The Multi Sleeve comes equipped with screw holes, enabling fastening in all directions, with a built-in length of only 70 mm.

A wide array of mounting rails and mounting plates have been developed for the Multi Sleeve, making mounting in light structures, etc., fast and easy. The mounting rails are available with a hole distance c/c 40 or 50 mm. The mounting allows for hole distances of c/c 40, 50, 60, 100, 110, and 150 mm

Approved pursuant to Nordtestmetoden NT VVS 129.

Technical data

Roth Multi Sleeve
HVAC no. 087255.255
The sleeve is manufactured from black plastic (PA+GF). Approved pursuant to Nordtestmetoden NT VVS 129.

Accessories

Roth Multi End Seal
HVAC no. 087255.265
Used as a seal between the PEX pipe and the casing pipe when finishing with a fitting plate.

Roth Multi Mounting Rail c/c 40 mm
HVAC no. 087255.290
Length 600 mm

Roth Multi Mounting Rail c/c 50 mm
HVAC no. 087255.291
Length 600 mm

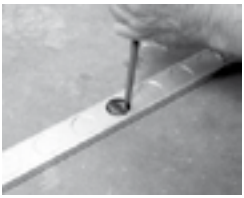
Roth Multi Coating Collar
HVAC no. 087289.286
Used as a seal for the Multi Sleeve in connection with the wet room membrane.

Roth Wall Attachment 15 mm x 3/4” w/ rosette
HVAC no. 728275.045
Used for connecting a shower head, among other devices.

Roth Wall Attachment 15 mm x 15 mm w/ rosette
HVAC no. 728275.115
Used for securing pipes out through the wall.

Roth Wall Attachment 15 mm x 15 mm w/o rosette
HVAC no. 728275.145
Used for securing pipes out through the wall.

Mounting Instructions Roth Multi Pipe Sleeve



Beat out the desired number of pellets with the desired distance (c/c 40 or c/c 50 mm) on the mounting rail.

Bend the ends of the rail so the total length matches the centre distance between the cross beams.

Screw the rail into the cross beams through the screw holes.

Place the MultiPex® pipe into the Sleeve as shown Make sure that the casing pipe sticks out far enough for it to penetrate the wall.

Twist the MultiPex® pipe into the 90° bend in the Sleeve.

The Multi Sleeve is placed on the rail and is pushed in until the locking springs lock in place. If the Sleeve is to be mounted on a wall that is thinner than 26 mm, it must be shortened before inserting the pipe.

If the Multi Sleeve is serve a wet room, the Sleeve must be equipped with a coating collar.

An end seal is used if a fitting disk is desired in the end. The end seal is rubbed with some silicone to facilitate mounting of the end seal.

The mounting of the fitting disk is completed by screwing it tight. Remember to pre-drill with a 4 mm drill bit.

The wall attachment provides an alternative completion and features a washer that fits snugly against the PEX pipe and the casing pipe. The casing pipe should stick approx. 5 mm outside the finished casing. The wall attachment is "turned" in place in the casing pipe so the washer is properly positioned.

A pre-drilling is perforwith in the tiles using a 4 mm bit before the wall attachment is screwed tight through the Mounting Rail. Make sure that the screws do not enter the pipe in the wall.

A tightening ring and a support bushing are pushed onto the PEX pipe Make sure that they are all the way in before screwing on the threaded nut. The transparent ball race is placed on the rosette prior to mounting. Be aware that the drain hole must face down.

Roth QuickSkab™ manifold cabinet

For safe pex installations.

Description

The Roth QuickSkab™ cabinet can be used together with Roth Manifolds for domestic water and heating installations. The waterproof cabinets have been certified together with Roth MultiPex® piping system according to NT 129 and meet the requirements of DS439 and BR10. The cabinets come with ready-assembled, waterproof ducts in top and bottom and side knock-out holes for supply pipes. The specially-designed, pull-resistant ducts allow for extremely easy and safe mounting of the casing pipes. Further, the cabinet has no steel parts that can get into contact with water, so no corrosion risk exists. Roth QuickSkab™ can be mounted in its basic version or with door and frame in painted metal, where special, attractive finish is needed.

Technical description

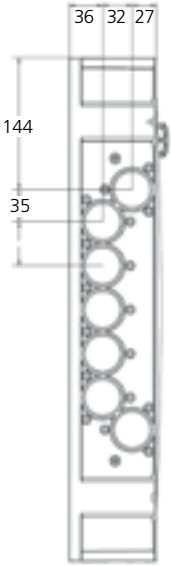
Roth QuickSkab™ is made from ABS plastic in RAL 9010 white with lockable door. The cabinets are available in three widths, 400, 550 and 800 mm, all 550 mm high. Cabinet depth is 95 mm. The waterproof cabinets come with ready-assembled ducts for casing pipes in both top and bottom, side knock-outs, Roth Quick brackets for mounting of all Roth Manifold pipe types and overflow. The cabinets accommodate manifolds with both 5, 8 and 13 cross-mounted ramifications (400, 550, 800) or individual layout. The cabinet rear wall carries a hole template that allows easy and flexible mounting of bearings/Roth Quick brackets. Furthermore, pipes can be led into the cabinet from both top and bottom.

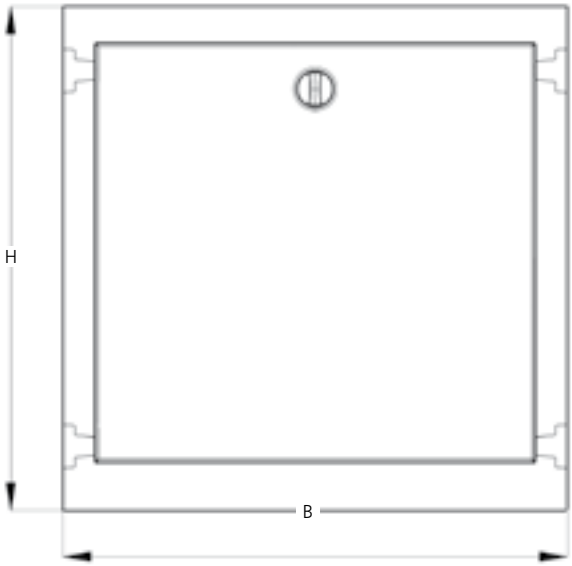
Areas of use

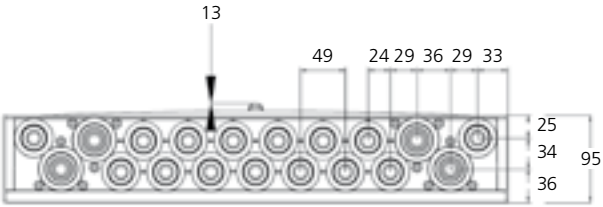
- Floor heating systems
- Domestic water
- Radiator facilities

Roth QuickSkab™ manifold cabinet

Dimension sketch in mm







Number of ready-assembled pipe ducts

Cabinet size	B	H	D	Dim. 16-28 mm	Dim. 25-34 mm
400	400	550	95	18	8
550	550	550	95	30	8
800	800	550	95	50	8

* where Roth pipe ducts, HVAC no. 046297.542, are used, 42 mm casing pipes can be used.

Technical data:

Roth waterproof cabinet	400 x 550 mm
HVAC no.	046297.504
Roth waterproof cabinet	550 x 550 mm
HVAC no.	046297.506
Roth waterproof cabinet	800 x 550 mm
HVAC no.	046297.508

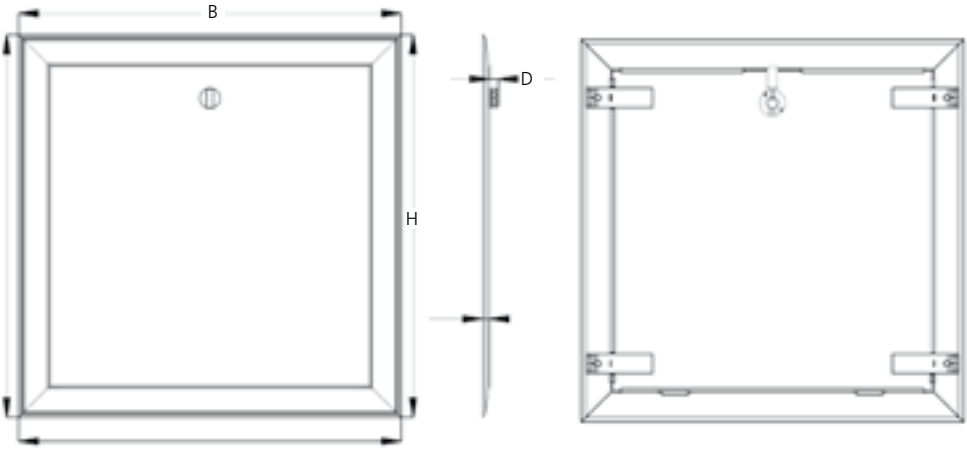
Accessories:

Steel frame/door ..... see next page
Roth duct 16-28 mm
HVAC no. 046297.525
Roth duct 25-34 mm
HVAC no. 046297.534
Roth duct 42 mm
HVAC no. 046297.542

Roth QuickSkab™ manifold cabinet

Frame and door for Roth QuickSkab™

Dimension sketch
Measurements in mm

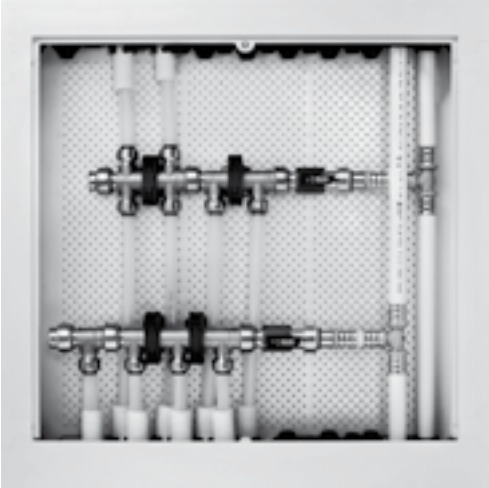


Cabinet size	B	H	D
400	440	590	11
550	590	590	11
800	840	590	11

The frame and the door are adjustable and can be mounted directly in the QuickSkab™ with distances of 0-60 mm. Where deep cabinet mounting is needed, the frame and door can be mounted on beams.

Technical data:

Roth frame/door HVAC no.	400 x 550 mm 046297.514
Roth frame/door HVAC no.	550 x 550 mm 046297.516
Roth frame/door HVAC no.	800 x 550 mm 046297.518



Example of installation with MultiPex and Alu-LaserPlus piping systems

Roth Quickskab™ – mini manifold cabinet

Description

Roth waterproof Quickskab™ - mini is installable as a waterproof solution in kitchen cupboards, etc., and can accommodate all couplings in standard kitchen installations, including ramifications for dishwashers, etc. The waterproof Quickskab™ meets the requirements of DS439, BR10 and the Norwegian TEK10.

The Quickskab comes with ready-assembled, waterproof ducts at the bottom and coupling facilities for hoses or pipes at the sides and top.
The specially-designed, pull-resistant ducts at the bottom allow for extremely easy and safe mounting of the casing pipes and overflow. Rubber seals are delivered in a bag with the cabinet, allowing for flexible connections of pipes and hoses at the top and sides (sizes 8, 10, 12 and 15 mm).

The Quickskab has no steel parts that can get into contact with water, so no corrosion risk exists.

Areas of use
- Domestic water
- Floor heating systems

Roth Quickskab™ – mini manifold cabinet

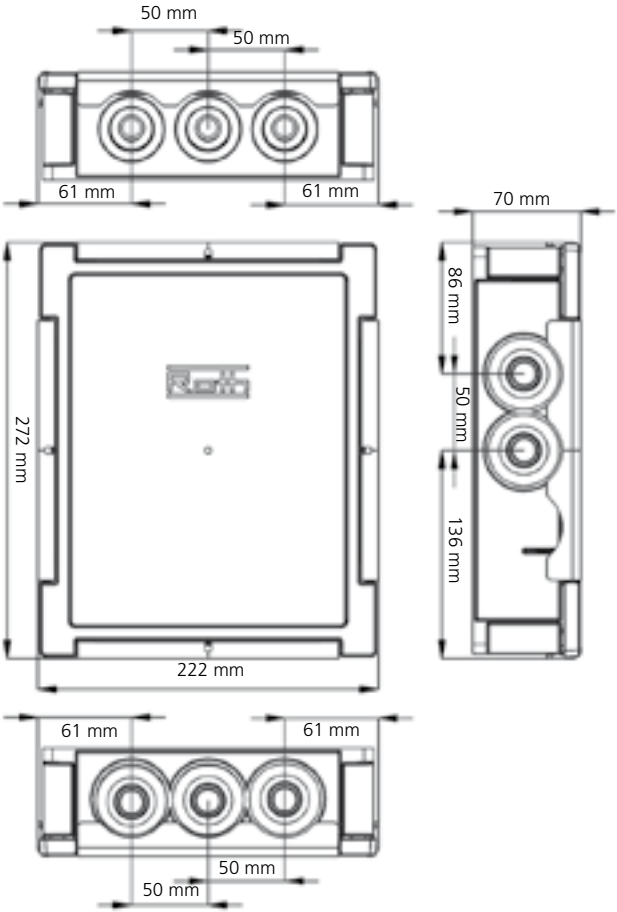
Technical description

Roth waterproof QuickSkab™ - mini is made from ABS plastic in RAL 9010 white and is lockable with four "click" brackets. The cabinets come with ready-assembled ducts for casing pipes in the bottom and ducts at the top and sides. Easily removable knock-outs and flexible Roth Quick brackets are also pre-mounted. The cabinet rear wall carries a hole template that allows easy and flexible mounting of bearings/Roth Quick brackets.

Extra selectable accessories are separate miniManifold and complete mounting kit for hot and cold domestic water connections. The kits contain Roth miniManifold, pipe fixation plates, plugs, support bushings and Roth transition nipples TT or Roth ball valve TT.

Technical data:

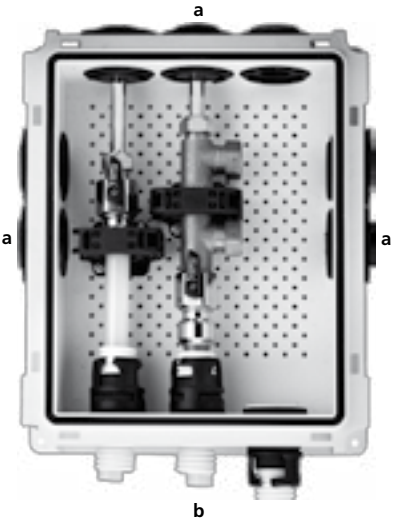
Roth waterproof Quickskab™ - mini
220 x 270 mm
HVAC no. 046297.520



Roth Quickskab™ – mini manifold cabinet

Roth Quickskab™ - mini
mounted with miniManifold kits with isolation

Cabinet type	Holes (a) 8-15 mm	Pipe - ducts (a) 8, 10, 12, 15 mm	Pipe - ducts (b) 16 - 28 mm
Roth waterproof Quickskab™ - mini	7 items	4 x 4 items	3 items



As extra accessories, Roth Nordic has developed a short miniManifold pipe in dezincification brass in the optimum dimensions. The MiniManifold pipe can be ordered separately or as a kit in two versions.

MiniManifold

MiniManifold kit w. shut off (Kit 1)
HVAC no. 046297.613
1 Roth miniManifold 3/8”x1/2”
2 Pipe fixations 3/8” x 10 mm
2 Roth ball valves 3/8”x15 mm,
2 Roth support bushings for 15 mm PEX
2 plugs 1/2”

MiniManifold kit (Kit 2)
HVAC no. 046297.623
1 Roth miniManifold 3/8”x1/2”
2 Pipe fixations 3/8” x 10 mm
2 Roth insertion coupling 3/8” x 15 mm
2 Roth support bushings for 15 mm PEX
2 plugs 1/2”

MiniManifold
HVAC no. 046297.603
1 Roth miniManifold 3/8”x1/2”

Roth TT Manifold

Roth TT Manifold pipes are manufactured in non-dezincification brass. With their 1, 2, 3, and 2+2 splits, they provide the opportunity to always assemble a Manifold pipe with the desired number of splits.

The Manifold pipe can be used for both domestic water and heating systems, as well as cooling systems. TT Manifold pipe splits are available for 12, 15, and 18 mm pipes.

The ends of the Manifold pipe are a 22 mm insertion connector and a 22 mm spigot end, respectively.

Several Manifold pipes are easily joined by inserting the spigot ends into the insertion connectors.

Technical description

Roth TT Manifold pipes with a fixed insertion connector are used for connecting MultiPex® pipes as well as CU pipes.

The Manifold pipes come with PEX pipe support bushings on the splits.

The ends of the Manifold pipe consist of a 22 mm insertion connector and a 22 mm spigot end, respectively.

Several Manifold pipes are easily joined by inserting the spigot ends into the insertion connectors.

Technical data

HVAC no.
Roth TT Manifold 1 split.x12 mm,
incl. support bushing 046221.212
Roth TT Manifold 1 split.x15 mm,
incl. support bushing 046221.215
Roth TT Manifold 1 split.x18 mm,
incl. support bushing 046221.218
Roth TT Manifold 2 split.x12 mm,
incl. support bushing 046222.212
Roth TT Manifold 2 split.x15 mm,
incl. support bushing 046222.215
Roth TT Manifold 2 split.x18 mm,
incl. support bushing 046222.218
Roth TT Manifold 3 split.x12 mm,
incl. support bushing 046223.212
Roth TT Manifold 3 split.x15 mm,
incl. support bushing 046223.215
Roth TT Manifold 2x2 split.x15 mm kryds,
incl. support bushing 46224.215

Operating pressure: ..... max. 10 bar (145 PSI)
Operating temperature: ..... max. 100 °C

Water & Drainage approval no.: 1.22/19348.

The Manifold pipes are manufactured from dezincification brass. The cone is made of stainless steel, the washer is made of EPDM rubber, and the support is made of acetal plastic. The main pipe consists of a 22 mm insertion connector and a 22 mm spigot end, respectively.

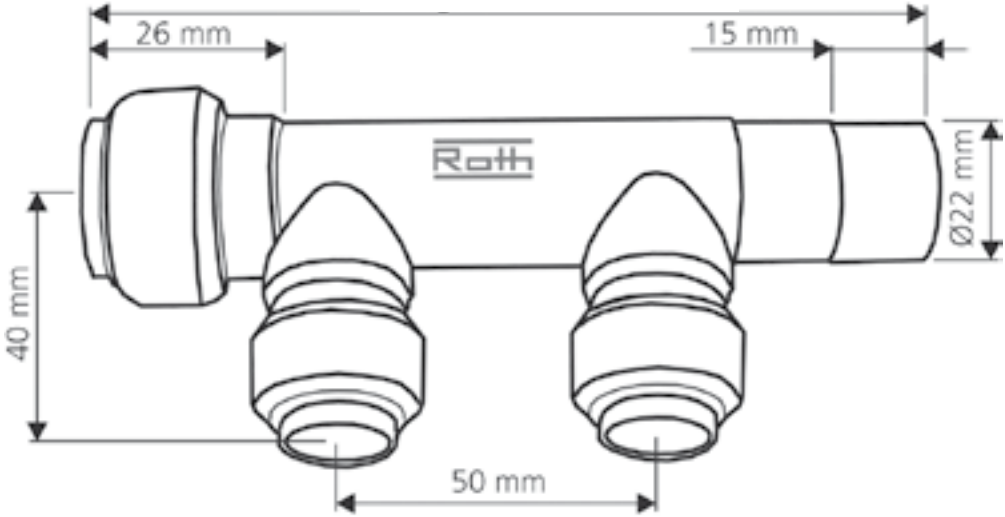
Roth TT Manifold

Accessories

HVAC no.
Mounting kit 3/4" 046296.206
22 mm TT sealing cap 047187.022
22 mm TT plug 046219.222
15 mm TT plug 046219.220
22 mm TT Ball Valve M/N 046220.222
18 mm TT Ball Valve M/N 046220.218
15 mm TT Ball Valve M/N 046220.215
22 x 18 mm TT Reducer 047151.272
22 x ¾" TT Transition, nipple 047160.022
22 x ¾" TT Transition, socket 047165.022

Sketch of dimensions

Ramifications:
1 ..... = 81 mm
2 x 2 and 2 ..... = 131 mm
3 ..... = 181 mm



Roth EURO Manifold

Roth TT Manifold pipes are manufactured from non-dezincification brass. With their 2, 3, and 4splits, they provide the opportunity to always assemble a Manifold pipe with the desired number of splits.

The Manifold pipe can be used for both domestic water and heating systems.

The splits on the EURO Manifold pipe feature a 3/4" EURO thread. PEX EURO Manifold couplings are available in the following sizes: 10.5, 12, 15, 16, 17, 18, and 20 mm. The Manifold couplings have to be ordered separately.

The Manifold pipes come equipped with a 3/4" nipple and a socket so they can be easily joined. Regular packing yarn/ joint paste, etc. is used for this purpose.

Technical description

Roth EURO Manifold pipes are used for connecting PEX pipes, with or without oxygen stop, as well as Alu-LaserPLUS.

The Manifold pipes come equipped with a 3/4" RG nipple in one end and a 3/4" socket RG in the other end. The Manifold pipes can be joined with the desired number of splits.

Technical data

HVAC no.
Roth EURO Manifold pipe, 2 outlets 046215.230
Roth EURO Manifold pipe, 3 outlets 046216.230
Roth EURO Manifold pipe, 4 outlets 046217.230
Operating pressure: ..... max. 16 bar (145 PSI)
Operating temperature: ..... max. 100 °C

Roth Manifold Coupling for PEX:
HVAC no.
Roth Manifold Coupling 10.5 mm x 3/4" EURO* 401974.810
Roth Manifold Coupling 12 mm x 3/4" EURO ... 401974.812
Roth Manifold Coupling 15 mm x 3/4" EURO ... 401974.815
Roth Manifold Coupling 16 mm x 3/4" EURO ... 401974.816
Roth Manifold Coupling 17 mm x 3/4" EURO* . 401974.817
Roth Manifold Coupling 18 mm x 3/4" EURO ... 401974.818
Roth Manifold Coupling 20 mm x 3/4" EURO ... 401974.820

* The Roth Manifold Coupling 10.5 mm x 3/4" and 17 mm x 3/4" is not Water and Drainage approved.

Roth Manifold Couplings for 16 and 20 mm can be used on both PEX and Alu-LaserPLUS and are included in the system approval of Roth Alu-LaserPLUS.

Water & Drainage approval no.: 1.22/19990 for the compression couplings.

The Manifold pipes are manufactured from dezincification brass. The main pipe comes with a 3/4" RG nipple and a 3/4" RG connector. The splits feature a 3/4" EURO thread.

The fitting is fastened according to the following instructions: Pull the connector tight by hand and tighten all the way around once using an appropriately-sized tool.

Roth EURO Manifold

Accessories

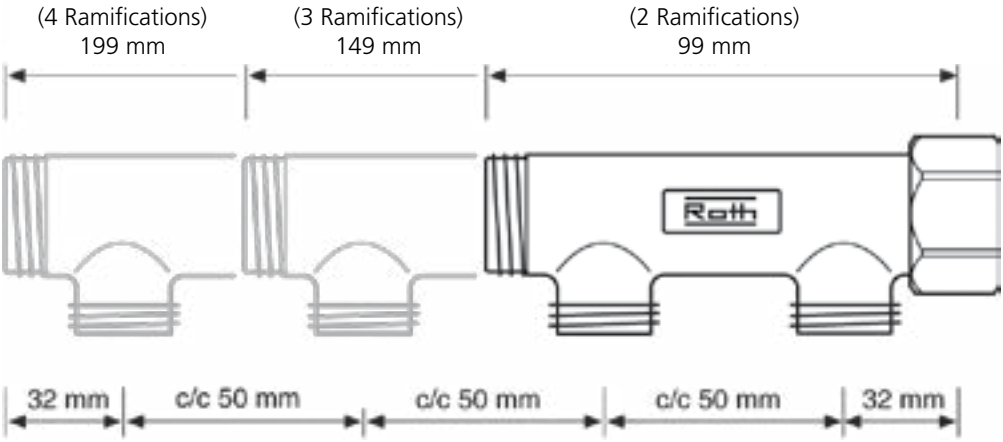
HVAC no.
Roth Sealing Cap for EURO Manifold pipe 048300.106

Mounting kit 3/4" 046296.206

Manifold Cabinets are available in steel as well as plastic.
Note that Roth's Waterproof Manifold Cabinets come with an integrated mounting kit.

See the special brochure for further information.

Sketch of dimensions



Roth Roth MultiUnit™

Installation unit for floor heat and domestic water

Roth MultiUnit™ is used in conjunction with Roth MultiPex® systems and Roth floor heating systems. Roth MultiUnit™ allows for a simple, inexpensive installation of the Manifold pipes, either at the construction site or as prefab.

The MultiUnit™ system is manufactured from 1.2 mm galvanized steel, and it is therefore suitable for the humid climate of a construction site. The MultiUnit™ comes complete with pipe brackets for 18 mm pipes, as well as bolts/nuts for mounting the domestic water Manifold and the floor heat Manifold, in addition to strips for fastening any spikes.

The mounting rails are shaped as sliding rails, making the mounting flexible since the bolts for the bearings are able to slide horizontally.

Technical data

HVAC no.	402000.200
Width	560 mm
Height	590 mm
Depth	155 mm
Depth (with Manifold without shunt)	235 mm
Depth (with shunt placed perpendicular to Manifold)	520 mm

Accessories

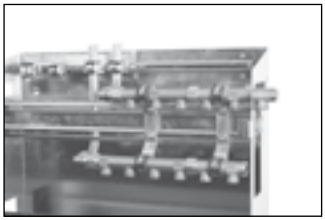
All-stainless steel pipe kit in 18 mm with couplings
HVAC no. 402000.918

Roth Roth MultiUnit™

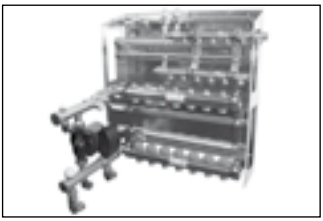
Assembly Instructions

The installation is easily perforwith with screws (provided). Spikes can be used if there is no wall for installation. The corners of the MultiUnit™ feature holes for attaching the spikes.

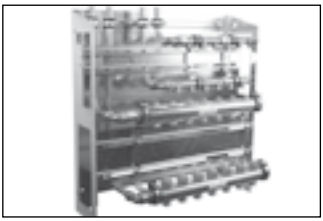
Prior to mounting the Manifolds, the detachable rail must be removed. Lift up on the rail and push it away from the attachment.



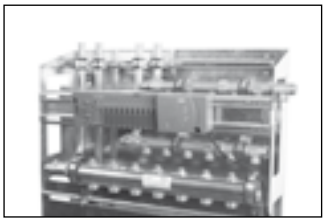
The Manifolds are easily mounted in the rails with T-bolts (provided). The Multi- Unit™ is stamped out on the sides, enabling the Manifolds to be extended out over the sides of the MultiUnit™ (as illustrated).
The pipes from the pipe kit and the PEX pipes can now be connected.
The width of the MultiUnit™ allows for room for 7 and 8 outlets, respectively, for domestic water.



If a shunt needs to be installed, this is done perpendicular to the Manifold with the pipe elbows from the pipe kit. A tap extension from the pipe kit is attached to the flow of the shunt, allowing outflow pipes and return pipes to be placed above/below each other.
Prior to attaching the shunt to the Manifold, the 25 mm brass extension is detached from the bottom section of the shunt and is then attached to the top part of the shunt.
Of course, the floor heat Manifold can be extended out over the sides of the Multi- Unit™.
The shunt can also be installed on the right side of the Manifold.



If no shunt is to be installed, hexagon nipples and tap extensions from the pipe kit are used (as illustrated). The tap extension is installed on the Manifold pipe, the connection pipe for which needs to be placed the farthest toward the corner.
If no shunt is used, the pipes from the pipe kit will need to be shortened. The floor heating pipes and, if applicable, the 18 x 3/4" transitions can now be installed and brought to the boiler, the water heater, etc.
The width of the MultiUnit™ leaves room for 7 outlets to the floor heater.



When the last pipe work has been completed, the detachable rail can be installed again and on top of that the Touchline™ regulator (nuts and bolts provided).

Roth Ion Trap

Used for separating CU pipes from steel pipes.

Application:

Roth ion traps are used in domestic water systems to reduce the risk of corrosion by the splits from steel to copper pipes.

Roth ion traps can be used for both cold and hot water.

Roth ion traps are available in the following sizes: 12, 15, 18, 18, and 22 mm. They include 2 support bushings.

Technical data:

Roth Ion trap ..... 087257 xxx
Operating pressure max. ..... 10 bar (145 PSI)
Operating temperature max. ..... 90°C

Roth ion traps are manufactured from Water & Drainage approved pipes, approval no. VA 1.14/18077

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