

Product

Selection Guide

Microflex System

A better
approach to
energy-efficient,
insulated Pipes



ComfortPro Systems
MICROFLEX

Insulated pipe and fitting products

Product Properties

HDPE Outer Jacket

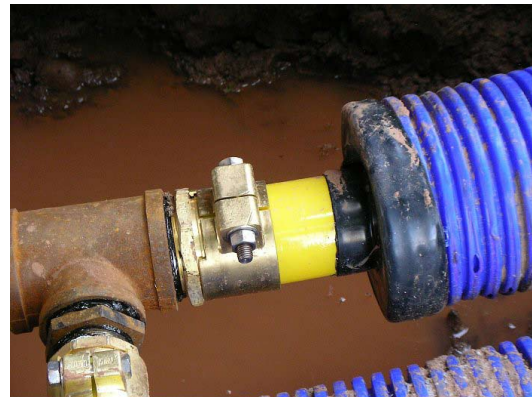
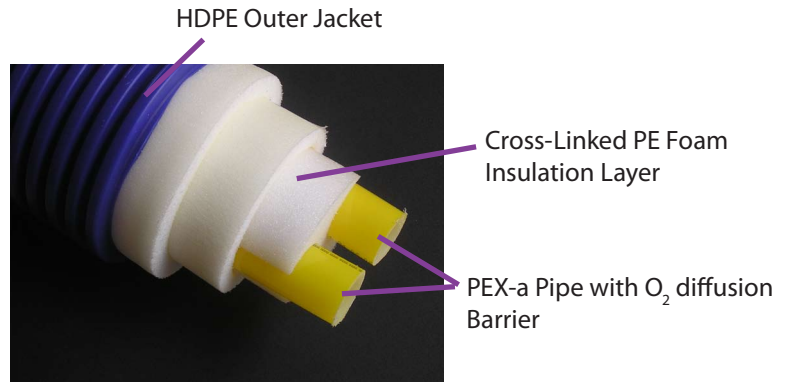
This corrugated high density polyethylene casing provides the necessary mechanical protection and water sealant properties, and is shock-resistant, even at sub-zero temperatures

Insulation Properties

The insulation of Microflex pipes is fully composed of micro-cellular cross linked polyethylene foam with a closed cellular structure, permitting low water vapor diffusion, good insulation and resistance to extreme temperatures and is not water soluble like competition using polyurethane.

Pex-A Pipe

Plastic pipes have more than proved their quality in recent years. They are flexible, heat and pressure resistant, non-corrosive and lightweight. The Microflex pipe is supplied with pipes manufactured according to the Engel process.



Applications

MicroFlex® Piping Systems are a complete line of flexible piping from 1" to 4" in size with all required accessories for cost effective and permanent installations of:

- District Heating and Cooling running hydronic lines between buildings with minimal energy losses, through unheated spaces, and for extending traditional distribution systems easily and economically
- Underground Piping Systems direct burial of lines up to 328' in length without joints for chilled water, condenser water, or any sub-terranean system requiring minimal heat gains/losses
- Plumbing Systems for networked cold, hot, and recirculated water lines between buildings, to external or remote facilities such as barns, animal sheds, etc.
- Radiant & Snowmelting Systems for feeding remote manifold boxes or adding onto existing systems
- Interior Building Piping to provide the quickest and most guaranteed installation of piping systems with no couplings or joints, already insulated to save time and money at the jobsite, and allow maximum flexibility of carrier pipes through difficult spaces.

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Microflex Insulated Pipes are the ideal solution for delivery of hot and chilled where the energy preservation is key. Microflex insulated piping provides the highest bending flexibility in the industry and thus minimizes overhead in project related pipe system considerations.

We differentiate Microflex insulated pipes with either single (UNO) or dual (DUO) carrier pipes for convenient supply and return piping based on project needs.

MicroFlex insulated pex-A pipe can be delivered in any length required up to full coils of 328 feet. ComfortPro Systems provides a cut-to-length quick ship service for your project's needs. With a wide selection of pipe diameters in stock CPS can provide the right solution for your application requirements.

ComfortPro Systems also offers a full selection of pipe matching brass fittings 1" to 4" (110mm)

Energy Efficiency of Microflex Pipes (R-Value)

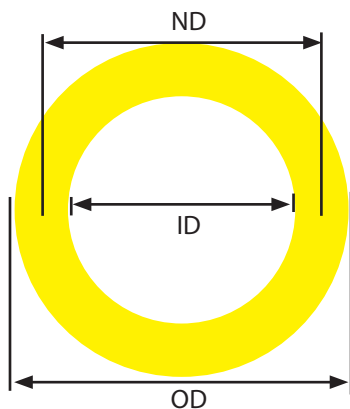
Insulation Efficiency is commonly referred to as R-value. The tables below show R-Values for Microflex UNO and DUO pipes.

UNO (Single)	Pipe Size	BTU/h.ft	d (in) Insulation Thickness	R - Value
M751C	1"	17.80	0.68	2.44
M12540C	40mm	15.80	1.30	4.76
M12550C	50mm	19.20	1.10	4.00
M12563C	63mm	25.40	0.84	3.00
M16040C	40mm	12.40	1.93	7.14
M16050C	50mm	15.10	1.73	6.25
M16063C	63mm	19.20	1.47	5.26
M16075C	75mm	23.30	1.24	4.55
M20090C	90mm	22.65	1.61	5.88
M200110C	110mm	30.20	1.22	4.35

DUO (DUAL)	Pipe Size	BTUH/ft	d(in) Insulation Thickness	R-Value (d/L)
MD1251c	1"	24.80	1.06	3.80
MD12532C	32mm	24.80	1.06	3.80
MD16040C	40mm	20.60	1.42	5.08
MD16050C	50mm	28.00	1.14	4.06
MD20063C	63mm	28.80	1.30	4.65

Average $T_{fluid}=170^{\circ}F$, Average $T_{soil}=50^{\circ}F$, $\Delta T=120^{\circ}F$

Nomenclature Diameters

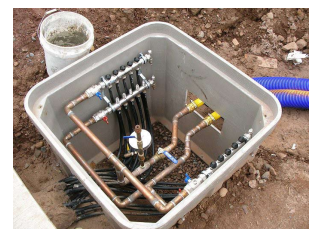


ND = Nominal Diameter
 ID = Internal Diameter
 OD = Outer Diameter

Quick Installation

1. Simply dig a trench (Minimum 24" deep)
2. Place 6" of sand into trench
3. Lay the MicroFlex pipe in the trench
4. Cover over with fine earth or sand
5. Connect to appliance or wall outlet, e.g. boiler or heat exchanger

No compensation elements needed since the pipe moves inside the HDPE jacket with temperature.



Microflex UNO Pipes



Part #	Carrier Pipe ND	Description
M751C	1"	MF UNO pipe with 1" Carrier PEX pipe, 75mm outer HDPE Jacket
M12540C	40mm	MF UNO pipe with 1 1/4" Carrier PEX pipe, 125mm outer HDPE Jacket
M16040C	40mm	MF UNO pipe with 1 1/4" Carrier PEX pipe, 160mm outer HDPE Jacket
M12550C	50mm	MF UNO pipe with 1 1/2" Carrier PEX pipe, 125mm outer HDPE Jacket
M16050C*	50mm	MF UNO pipe with 1 1/2" Carrier PEX pipe, 160mm outer HDPE Jacket
M12563C	63mm	MF UNO pipe with 2" Carrier PEX pipe, 125mm outer HDPE Jacket
M16063C	63mm	MF UNO pipe with 2" Carrier PEX pipe, 160mm outer HDPE Jacket
M16075C	75mm	MF UNO pipe with 2 1/2" Carrier PEX pipe, 160mm outer HDPE Jacket
M20090C	90mm	MF UNO pipe with 3" Carrier PEX pipe, 200mm outer HDPE Jacket
M200110C	110mm	MF UNO pipe with 4" Carrier PEX pipe, 200mm outer HDPE Jacket

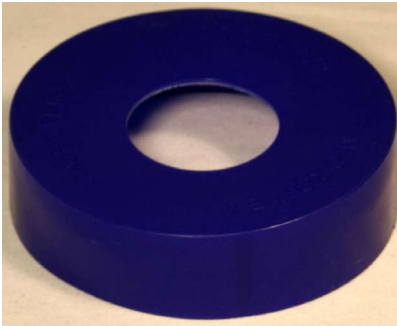
Note: * items are a special order

Microflex DUO Pipes



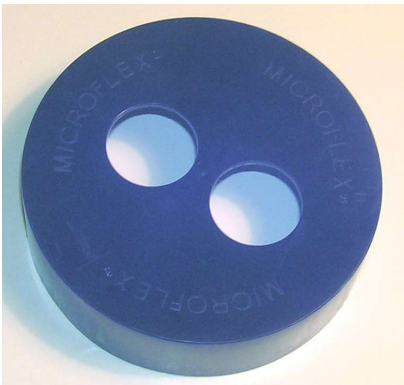
Part #	Carrier Pipe ND	Description
MD1251C	1"	MF DUO pipe with 2x 1" Carrier PEX pipe, 125mm outer HDPE Jacket
MD12532C	32mm	MF DUO pipe with 2x 32mm Carrier PEX pipe, 125mm outer HDPE Jacket
MD16040C	40mm	MF DUO pipe with 2x 1 1/4" (40mm) Carrier PEX pipe, 160mm outer HDPE Jacket
MD16050C	50mm	MF DUO pipe with 2x 1 1/2" (50mm) Carrier PEX pipe, 160mm outer HDPE Jacket
MD20063C	63mm	MF DUO pipe with 2x 2" (63mm) Carrier PEX pipe, 200mm outer HDPE Jacket

Microflex UNO Pipe Dust Caps



Part #	Carrier Pipe ND	Description
MS7532	1" & (32mm)	MF UNO pipe Dust Caps for 1" & (32mm) Carrier PEX pipe, 75mm outer HDPE Jacket
MS12540	1 1/4" (40mm)	MF UNO pipe Dust Caps for 1 1/4" Carrier PEX pipe, 125mm outer HDPE Jacket
MS12550	1 1/2" (50mm)	MF UNO pipe Dust Caps for 1 1/2" Carrier PEX pipe, 125mm outer HDPE Jacket
MS12563	2" (63mm)	MF UNO pipe Dust Caps for 1" Carrier PEX pipe, 125mm outer HDPE Jacket
MS16040	1 1/4" (40mm)	MF UNO pipe Dust Caps for 1 1/4" Carrier PEX pipe, 160mm outer HDPE Jacket
MS16050	1 1/2" (50mm)	MF UNO pipe Dust Caps for 1 1/2" Carrier PEX pipe, 160mm outer HDPE Jacket
MS20063	2" (63mm)	MF UNO pipe Dust Caps for 1 1/2" Carrier PEX pipe, 200mm outer HDPE Jacket

Microflex DUO Pipe Dust Caps



Part #	Carrier Pipe ND	Description
MSD12532	1" & (32mm)	MF DUO pipe Dust Caps for 1" Carrier PEX pipe, 125mm outer HDPE Jacket
MSD16040	1 1/4" (40mm)	MF DUO pipe Dust Caps for 1 1/4" Carrier PEX pipe, 160mm outer HDPE Jacket
MSD16050	1 1/2" (50mm)	MF DUO pipe Dust Caps for 1 1/2" Carrier PEX pipe, 160mm outer HDPE Jacket
MSD20063	2" (63mm)	MF DUO pipe Dust Caps for 1 1/2" Carrier PEX pipe, 200mm outer HDPE Jacket

Microflex UNO Pipe Shrink Caps



Part #	Carrier Diameter	Description
MK2100	1" & 1 1/4"	MF UNO pipe Shrink Caps for 1" & 1 1/4" Carrier PEX pipe, 125mm outer HDPE Jacket
MK2200	1 1/2" (50mm)	MF UNO pipe Shrink Caps for 1 1/2" Carrier PEX pipe, 125mm outer HDPE Jacket
MK2400	2" (63mm)	MF UNO pipe Shrink Caps for 2" Carrier PEX pipe, 125mm outer HDPE Jacket
MK2500	2" - 3"	MF UNO pipe Shrink Caps for 2" to 3" Carrier PEX pipe, 160mm outer HDPE Jacket
MK2600	2 1/2" - 4"	MF UNO pipe Shrink Caps for 2 1/2" to 4" Carrier PEX pipe, 200mm outer HDPE Jacket

Microflex DUO Pipe Shrink Caps



Part #	Carrier Diameter	Description
MK3280	1" & (32mm)	MF DUO pipe Shrink Caps for 1" Carrier PEX pipe, 125mm outer HDPE Jacket
MK3350-02	1 1/4" (40mm)	MF DUO pipe Shrink Caps for 1 1/4" Carrier PEX pipe, 160mm outer HDPE Jacket
MK3350-03	1 1/2" (50mm)	MF DUO pipe Shrink Caps for 1 1/2" Carrier PEX pipe, 200mm outer HDPE Jacket

Microflex Pipe Shrink Sleeves (MHM series)

Microflex UNO and DUO pipe Shrink Sleeve for HDPE jacket repair. An easy to use way to seal small cuts or damages to the outer jacket. The Microflex shrink sleeve provides leakage protection into the insulation layer.



Part #	Description
MHM125	Microflex UNO and DUO pipe Shrink Sleeve for 125mm HDPE jacket repair.
MHM160	Microflex UNO and DUO pipe Shrink Sleeve for 160mm HDPE jacket repair.
MHM200	Microflex UNO and DUO pipe Shrink Sleeve for 200mm HDPE jacket repair.

Microflex Pipe Micro-Seal Wall Link Belts and Feed-Throughs

Microflex UNO and DUO pipe Micro-Seal Wall Feed-Through and Link Belts allow to securely anchor Microflex pipe outer jackets or large diameter PEX piping in wall openings. Easy on-site assembly.



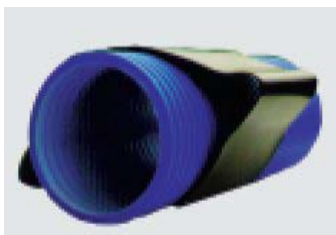
Part #	Description
M9LS200*	Microflex UNO and DUO Pipe Micro-Seal Wall Link Belt for 75mm Outer Jacket or PEX pipes.
M7LS475*	Microflex UNO and DUO pipe Micro-Seal Wall Link Belt for 125mm Outer Jacket (MCS8) or 110mm PEX pipes.
M10LS575*	Microflex UNO and DUO pipe Micro-Seal Wall Link Belt for Wall Feed-Through MCS12



Part #	Description
MCS4*	Microflex UNO and DUO Pipe Micro-Seal Wall Feed-Through for 75mm Outer Jacket or PEX pipes.
MCS8*	Microflex UNO and DUO Pipe Micro-Seal Wall Feed-Through for 125mm and 160mm Outer Jackets.
MCS12*	Microflex UNO and DUO pipe Micro-Seal Wall Feed Through for 200mm Outer Jackets.

Microflex Pipe Wall Feed-Through Sleeve (MMDV)

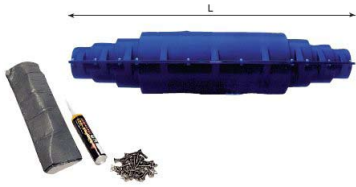
Microflex UNO and DUO pipe (Not waterproof) Wall Feed-Through to hold Microflex pipe jackets in place for wall openings, etc.



Part #	Description
MMDV75*	Microflex UNO / DUO pipe Wall Sleeve for 75mm Outer-Jacket
MMDV125*	Microflex UNO / DUO pipe Wall Sleeve for 125mm Outer-Jacket
MMDV160	Microflex UNO / DUO pipe Wall Sleeve for 160mm Outer Jacket
MMDV200*	Microflex UNO / DUO pipe Wall Sleeve for 200mm Outer-jacket

Note: * items are a special order

Microflex Pipe Insulation Box Sleeves (MM series)



Microflex UNO and DUO pipe Insulation Box Sleeve allows for straight connection of two Microflex pipes. An easy to use way to seal the outer jacket against ground water penetration. May also be used for pipe diameter reduction pieces.

Part #	Description
MM129075	Microflex UNO and DUO pipe Installation Box Sleeves for 125mm/90mm/75mm HDPE outer jackets.
MM201612	Microflex UNO and DUO pipe Installation Box Sleeves for 200mm/160mm/125mm HDPE outer jackets.

Microflex Pipe Insulation Box Tees (MT series)



Microflex UNO and DUO pipe Insulation Box Tees protect pipe tees. An easy to use way to seal the outer jacket against ground water penetration. May also be used for pipe diameter reduction tee pieces.

Part #	Description
MT129075	Microflex UNO and DUO pipe Installation Box Tees for 125mm/90mm/75mm HDPE outer jackets.
MT201612	Microflex UNO and DUO pipe Installation Box Tees for 200mm/160mm/125mm HDPE outer jackets.

Microflex Pipe Insulation Box Elbow (MH series)



Microflex UNO and DUO pipe Insulation box elbow for tight turns around obstacles. Box fits all diameter pipes. Securely anchors PEX pipe elbow fittings within the box. Protects Microflex pipes from ground water penetration to the crosslinked PE foam material.

Part #	Description
MH201612	Microflex UNO and DUO pipe Installation Box Elbow for 200mm/160mm/125mm HDPE outer jackets.

Microflex Pipe Insulation Box Trousers (MBR series)



Microflex Pipe Insulation Box Trousers provide an easy splitter function for UNO and DUO pipes. Unit effectively seals pipe insulation from ground water penetration. Unit fits all Microflex HDPE Jacket sizes.

Part #	Description
MBR20612	Microflex UNO and DUO pipe Installation Box Trouser for 200mm/160mm/125mm HDPE outer jackets.

Microflex Pipe Insulation Box Inspection Chamber (MIS)



Microflex Inspection chamber allows to inspect and control UNO and DUO pipe Tees and/or shut off functions for pipes burried in a trench. MIS fits all HDPE jacket sizes. Unit seals piping jacket against ground water penetration.

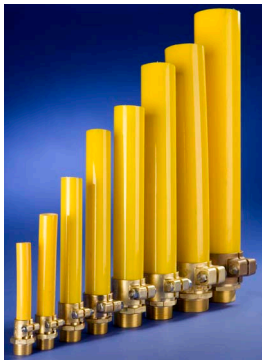
Part #	Description
MIS	Microflex UNO and DUO pipe Inspection Chamber for 200mm/160mm/125mm HDPE outer jackets.

MICROFLEX NPT Connectors

Microflex PEX couplings are professional fittings for central heating, plumbing, and industrial installations. They are available in straight versions with male NPT thread for:

- Pressures of up to 87 Psi in heating applications with PEX piping from 1" to 4" diameter
- Pressure of up to 140 Psi in plumbing applications with PEX piping from 1" to 2 1/2" diameter

Microflex couplings can be combined with other brass accessories to make T- and knee couplings, connecting pieces, etc.



Part #	Pipe ND	Description
MJ341441	1"	NPT PEX Connector for carrier Pipes size 1", NPT 1"
MJ34144432/29	32mm	NPT PEX Connector for Carrier Pipes size 32mm
MJ3415440/37	40mm	NPT PEX Connector for Carrier Pipes size 40mm, NPT 1 1/4"
MJ3415450/46	50mm	NPT PEX Connector for Carrier Pipes size 50mm, NPT 1 1/4"
MJ3416450/46	50mm	NPT PEX Connector for Carrier Pipes size 50mm, NPT 1 1/2"
MJ341263/58	63mm	NPT PEX Connector for Carrier Pipes size 63mm, NPT 2"
MJ341275/68	75mm	NPT PEX Connector for Carrier Pipes size 75mm, NPT 2 1/2"
MJ341390/82	90mm	NPT PEX Connector for Carrier Pipes size 90mm, NPT 3"
MJ3413110/10	110mm	NPT PEX Connector for Carrier Pipes size 110mm, NPT 3"

Microflex Connectors compatibility reference

Part #	Pipe ND in (mm)	NPT thread diameter	Pipe ID in (mm)	Pipe OD in (mm)	Fits w/ Microflex Pipe
MJ341441	1" (25.4)	1"	7/8" (22.2)	1 1/8"(28.6)	M751C, MD1251C
MJ34144432/29	1 1/4" (32)	1"	1 1/8" (29.1)	1 3/8"(34.9)	MD12532C
MJ3415440/37	1 1/2"(40)	1 1/4"	1 7/16" (36.4)	1 11/16"(43.7)	M12540C, M16040C,MD16040C
MJ3415450/46	2" (50)	1 1/4"	1 7/8" (55.4)	2 1/8"(54.6)	M12550C, M16050C,MD16050C
MJ3416450/46	2" (50)	1 1/2"	1 7/8" (55.4)	2 1/8"(54.6)	M12550C, M16050C,MD16050C
MJ341263/58	2 1/2" (63)	2"	2 1/4" (57.2)	2 11/16"(68.8)	M12563C, M16063C,MD20063C
MJ341275/68	3" (75)	2 1/2"	2 11/16" (68.2)	3 1/4" (81.8)	M16075C, M20075C
MJ341390/82	3 1/2" (90)	3"	3 3/16" (81.8)	3 7/8" (98.2)	M20090C
MJ3413110/10	4 3/8" (110)	3"	3 15/16" (100)	4 3/4" (120)	M200110C

Male NPT Compression/Flanged Adapter Series 3000



Part #	Pipe ND in (mm)	Description
30028	1" (28)	PRO 28mm PEX X 1" MPT Compression Adapter
30032	(32)	PRO 32mm PEX X 1" MPT Compression Adapter
30128	1" (28)	PRO 28mm PEX X 1" FPT Compression Adapter
30132	(32)	PRO 32mm PEX X 1" FPT Compression Adapter



Part #	Pipe ND in (mm)	Description
30007	2 1/2" (75)	PRO MPT PEX Flanged Adapter for Carrier Pipes size 75mm x MPT 2 1/2"
30009	3" (90)	PRO MPT PEX Flanged Adapter for Carrier Pipes size 90mm x MPT 3"
30001	4" (110)	PRO MPT PEX Flanged Adapter for Carrier Pipes size 110mm x MPT 4"

Female NPT Compression/Flanged Adapter Series 3005



Part #	Pipe ND in (mm)	Description
30054	1 1/4" (40)	PRO FPT PEX Compression Adapter for Carrier Pipes size 40mm x FPT 1 1/4"
30055	1 1/2" (50)	PRO FPT PEX Compression Adapter for Carrier Pipes size 50mm x FPT 1 1/2"
30056	2" (63)	PRO FPT PEX Compression Adapter for Carrier Pipes size 63mm x FPT 2"



Part #	Pipe ND in (mm)	Description
30057	2 1/2" (75)	PRO FPT PEX Flanged Adapter for Carrier Pipes size 75mm x FPT 2 1/2"
30059	3" (90)	PRO FPT PEX Flanged Adapter for Carrier Pipes size 90mm x FPT 3"
30051	4" (110)	PRO FPT PEX Flanged Adapter for Carrier Pipes size 110mm x FPT 4"

Compression/Flanged Coupling Series 3015



Part #	Pipe ND in (mm)	Description
30153	(32)	PRO PEX Compression Couplings for Carrier Pipes size 32mm
30154	1 1/4" (40)	PRO PEX Compression Couplings for Carrier Pipes size 40mm (1 1/4")
30155	1 1/2" (50)	PRO PEX Compression Couplings for Carrier Pipes size 50mm (1 1/2")
30156	2" (63)	PRO PEX Compression Couplings for Carrier Pipes size 63mm (2")



Part #	Pipe ND in (mm)	Description
30157	2 1/2" (75)	PRO Flanged Coupling for Carrier PEX Pipes size 75mm (2 1/2")
30158	3" (90)	PRO Flanged Coupling for Carrier PEX Pipes size 90mm (3")
30151	4" (110)	PRO Flanged Coupling for Carrier PEX Pipes size 110mm (4")

Compression Straight Tee Series 3030



Part #	Pipe ND in (mm)	Description
30304	1 1/4" (40)	PRO Compression PEX straight Tee for Carrier Pipes size 40mm (1 1/4")
30305	1 1/2" (50)	PRO Compression PEX straight Tee for Carrier Pipes size 50mm (1 1/2")
30306	2" (63)	PRO Compression PEX straight Tee for Carrier Pipes size 63mm (2")



Part #	Pipe Nominal Diameter in. (mm)	Description
30307	2 1/2" (75)	PRO Flanged Straight Tee for PEX Carrier pipes size 75mm (2 1/2")
30309	3" (90)	PRO Flanged Straight Tee for PEX Carrier pipes size 75mm (2 1/2")

Male NPT Compression/Flanged Reducing Tees Series 3020



Part #	Pipe ND in (mm)	Description
30204	1 1/4" (40)	PRO Male NPT x Compression PEX Reducing Tee for Microflex Carrier Pipes size 40mm x 1 1/4" x 40mm
30205	1 1/2" (50)	PRO Male NPT x Compression PEX Reducing Tee for Microflex Carrier Pipes size 50mm x 1 1/2" x 50mm
30206	2" (63)	PRO Male NPT x Compression PEX Reducing Tee for Microflex Carrier Pipes size 63mm x 2" x 63mm



Part #	Pipe ND in (mm)	Description
30207	2 1/2" (75)	PRO Male NPT x Flanged PEX Reducing Tee for Microflex Carrier Pipes size 75mm x 2 1/2" x 75mm
30209	3" (90)	PRO Male NPT x Flanged PEX Reducing Tee for Microflex Carrier Pipes size 90mm x 3" x 90mm

Flanged x Female NPT Reducing Tee Series 3025



Part #	Pipe ND in (mm)	Description
30257	2 1/2" (75)	PRO Flanged Straight Tee for Microflex PEX carrier pipes size 75mm (2 1/2") x 2" FPT x 75mm flanged PEX
30259	3" (90)	PRO Flanged Straight Tee for Microflex PEX carrier pipes size 90mm (3") x 2 1/2" FPT x 90mm flanged PEX





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Insulated pipe and fitting products

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