

Philmac Fittings

Polyethylene (PE) Pressure Solutions



Philmac

The connection you can trust.

Wide range of fittings and valves to cover most of PE pipe application from OD 20-110mm metric pipe sizes.

Fittings are manufactured from lightweight, high performance thermoplastic material with outstanding impact, UV and corrosion resistance.

The range consists of:

3G Metric™ Compression fittings

- › Slide and Tighten™ technology. Each fitting is pre-assembled and ready to use so there's no need to disassemble the fittings or prepare the pipe prior to use.
- › No loose components.
- › Fitting is ideal to use in compact spaces.
- › Designed to minimise pipe twist, reducing the risk of untightening joints.

Universal Transition (UTC®) Fittings

- › Slide and Tighten™ technology. Range of mechanical compression fittings that provides the ultimate in pipe connection flexibility. Without modification the same fitting connects to a variety of materials including PVC, copper, galvanised iron, ABS, lead, stainless steel and polyethylene.
- › Fully integrated with no loose components.
- › The design of the UTC means that once the nut is backed off the pipe can easily be removed from the fitting.

Threaded fittings

- › Threaded fittings from ½" to 4", they provide precision BSP tapered threads that have been engineered to maximise sealing performance.
- › The hexagonal body makes them extremely simple to install.
- › Suitable for working pressures up to PN16 for sizes up to 2", PN12 for 2-1/2" and PN10 for 3" and 4" sized fittings.

Valves

- › Blue handled ball valve, for sizes ½" to 2", are based on a simple on/off action and is quick and easy to install allowing the user full control of water distribution.
- › Non-return valves are designed to allow water to flow in only one direction to avoid loss of water, prevent backflow and ensure pipelines do not drain. Available in sizes from ¾" to 2".

Applications

The range provide cost effective solution for the transfer, control, repair and application of water, compressed air or other fluids across plumbing, civil-Infrastructure, and rural-irrigation markets.

The range conforms to institutionalised specifications written to have a minimum life of 50 years, but its compression fittings are intentionally developed to exceed the expectations of these specifications.

Components of the system

Philmac 3G Compression Fittings

CODE	SIZE
Joiner	
MM301.20	20mm
MM301.25	25mm
MM301.32	32mm
MM301.40	40mm
MM301.50	50mm
MM301.63	63mm
MM301.75	75mm
MM301.90	90mm
MM301.110	110mm
Male Adaptor	
MM302.20.15	20 x ½ BSP
MM302.20.20	20 x ¾ BSP
MM302.20.25	20 x 1 BSP
MM302.25.15	25 x ½ BSP
MM302.25.20	25 x ¾ BSP
MM302.25.25	25 x 1 BSP
MM302.32.20	32 x ¾ BSP
MM302.32.25	32 x 1 BSP
MM302.32.32	32 x 1¼ BSP
MM302.32.40	32 x 1½ BSP
MM302.40.25	40 x 1 BSP
MM302.40.32	40 x 1¼ BSP
MM302.40.40	40 x 1½ BSP
MM302.40.50	40 x 2 BSP
MM302.50.40	50 x 1½ BSP
MM302.50.50	50 x 2 BSP
MM302.63.40	63 x 1½ BSP
MM302.63.50	63 x 2 BSP
MM302.75.50	75 x 2 BSP
MM302.75.75	75 x 3 BSP
MM302.90.75	90 x 3 BSP
MM302.110.100	110 x 4 BSP
Female Adaptor	
MM303.20.15	20 x ½BSP
MM303.20.20	20 x ¾ BSP
MM303.20.25	20 x 1 BSP
MM303.25.15	25 x ½ BSP
MM303.25.20	25 x ¾ BSP
MM303.25.25	25 x 1 BSP
MM303.32.25	32 x 1 BSP
MM303.32.32	32 x 1¼ BSP
MM303.40.32	40 x 1¼ BSP
MM303.40.40	40 x 1½ BSP
MM303.50.40	50 x 1½ BSP
MM303.50.50	50 x 2 BSP
MM303.63.50	63 x 2 BSP
MM303.75.50	75 x 2 BSP
MM303.90.75	90 x 3 BSP
MM303.110.100	110 x 4 BSP

CODE	SIZE
Reducing Joiner	
MM304.25.20	25 x 20 mm
MM304.32.20	32 x 20 mm
MM304.32.25	32 x 25 mm
MM304.40.25	40 x 25 mm
MM304.40.32	40 x 32 mm
MM304.50.25	50 x 25 mm
MM304.50.32	50 x 32 mm
MM304.50.40	50 x 40 mm
MM304.63.32	63 x 32 mm
MM304.63.40	63 x 40 mm
MM304.63.50	63 x 50 mm
MM304.75.63	75 x 63 mm
MM304.90.75	90 x 75 mm
MM304.110.90	110 x 90 mm
Tee Female Thread	
MM306.20.15	20 x ½ BSP
MM306.20.20	20 x ¾ BSP
MM306.25.15	25 x ½ BSP
MM306.25.20	25 x ¾ BSP
MM306.25.25	25 x 1 BSP
MM306.32.20	32 x ¾ BSP
MM306.32.25	32 x 1 BSP
MM306.32.32	32 x 1¼ BSP
MM306.40.32	40 x 1¼ BSP
MM306.40.40	40 x 1½ BSP
MM306.50.40	50 x 1½ BSP
MM306.50.50	50 x 2 BSP
MM306.63.50	63 x 2 BSP
MM306.75.50	75 x 2 BSP
MM306.75.63	75 x 2½ BSP
MM306.90.75	90 x 3 BSP
MM306.110.100	110 x 4 BSP
Tee	
MM305.20	20mm
MM305.25	25mm
MM305.32	32mm
MM305.40	40mm
MM305.50	50mm
MM305.63	63mm
MM305.75	75mm
MM305.90	90mm
MM305.110	110mm
Reducing Tee	
MM305.25.20	25 x 20 mm
MM305.25.32	25 x 32 mm
MM305.32.25	32 x 25 mm
MM305.50.40	50 x 40 mm
MM305.63.32	63 x 32 mm
MM305.63.50	63 x 50 mm

CODE	SIZE
Elbow Male Thread	
MM309.20	20 x ½ BSP
MM309.25	25 x ¾ BSP
MM309.32	32 x 1 BSP
MM309.20.20	20 x 1¾" BSP
MM309.25.15	25 x ½" BSP
MM309.25.25	25 x 1" BSP
MM309.32.32	32 x 1¼" BSP
MM309.40.25	40 x 1" BSP
MM309.40.32	40 x 1¼" BSP
MM309.40.40	40 x 1½" BSP
MM309.50.40	50 x 1½" BSP
MM309.63.50	63 x 2" BSP
MM309.75.75	75 x 3" BSP
Elbow Female Thread	
MM307.20.15	20 x ½ BSP
MM307.20.20	20 x ¾ BSP
MM307.25.15	25 x ½ BSP
MM307.25.20	25 x ¾ BSP
MM307.25.25	25 x 1 BSP
MM307.32.25	32 x 1 BSP
MM307.32.32	32 x 1¼ BSP
MM307.40.32	40 x 1¼ BSP
MM307.40.40	40 x 1½ BSP
MM307.50.40	50 x 1½ BSP
MM307.50.50	50 x 2 BSP
MM307.63.50	63 x 2 BSP
MM307.75.50	75 x 2 BSP
MM307.90.75	90 x 3 BSP
MM307.110.100	110 x 4 BSP
Elbow 90°	
MM308.20	20mm
MM308.25	25mm
MM308.32	32mm
MM308.40	40mm
MM308.50	50mm
MM308.63	63mm
MM308.75	75mm
MM308.90	90mm
MM308.110	110mm
End Cap	
MM310.20	20mm
MM310.25	25mm
MM310.32	32mm
MM310.40	40mm
MM310.50	50mm
MM310.63	63mm
MM310.75	75mm
MM310.90	90mm
MM310.110	110mm
End Plug Set	
MM334.20	20mm
MM334.25	25mm
MM334.32	32mm
MM334.40	40mm
MM334.50	50mm
MM334.63	63mm

CODE	SIZE
Slip Coupling	
MM301.20S	20mm
MM301.25S	25mm
MM301.32S	32mm
MM301.40S	40mm
MM301.50S	50mm
MM301.63S	63mm
Slip Tee	
MM305.20S	20mm
MM305.25S	25mm
MM305.32S	32mm
MM305.50S	50mm
MM305.63S	63mm
Tapping Saddles	
MM325.25.20	25mm x ¾ BSP
MM325.32.20	32mm x ¾ BSP
MM325.32.25	32mm x 1 BSP
MM325.40.20	40mm x ¾ BSP
MM325.40.25	40mm x 1 BSP
MM325.50.20	50mm x ¾ BSP
MM325.50.25	50mm x 1 BSP
MM325.63.20	63mm x ¾ BSP
MM325.63.25	63mm x 1 BSP
MM325.63.40	63mm x 1½ BSP
MM325.75.25	75mm x 1 BSP
MM325.75.40	75mm x 1½ BSP
MM325.75.50	75mm x 2 BSP
MM325.90.25	90mm x 1 BSP
MM325.90.40	90mm x 1½ BSP
MM325.90.50	90mm x 2 BSP
MM325.110.25	110mm x 1 BSP
MM325.110.40	110mm x 1½ BSP
MM325.110.50	110mm x 2" BSP
Flanged Adaptor	
MM311.50.50	50mm x 2"
MM311.63.50	63mm x 2"
MM311.90.75	90mm x 3"
MM311.110.100	110mm x 4"
Wall Plates	
MM311.20.15	20mm x ½"
MM311.25.20	25mm x ¾"
Tee Male Thread	
MM346.25.15	25mm x ½ BSP
MM346.25.20	25mm x ¾ BSP
Elbow 45°	
MM347.20	20mm
MM347.25	25mm
MM347.32	32mm
MM347.40	40mm
MM347.63	63mm
Metric Spanners	
MM343.20.32	20-32mm
MM343.32.63	32-63mm
MM343.50.110	50-110mm

Philmac Universal Transition Fittings

CODE	SIZE
Transition Coupling	
MM331.20.15.21	20 x 15-21 mm
MM331.20.21.27	20 x 21-27 mm
MM331.25.15.21	25 x 15-21 mm
MM331.25.21.27	25 x 21-27 mm
MM331.25.27.34	25 x 27-34 mm
MM331.32.27.34	32 x 27-34 mm
MM331.32.34.39	32 x 34-39 mm
MM331.32.39.43	32 x 39-43 mm
MM331.50.47.49	50 x 47-49 mm
MM331.63.47.49	63 x 47-49 mm
MM331.63.59.61	63 x 59-61 mm
Transition Elbow	
MM340.25.15.21	25 x 15-21 mm
MM340.25.21.27	25 x 21-27 mm
MM340.25.27.34	25 x 27-34 mm
MM340.32.21.27	32 x 21-27 mm
MM340.32.27.34	32 x 27-34 mm
Transition Double Ended Elbow Repair Fittings	
MM348.15.21	15-21 x 15-21 mm
MM348.21.27	21-27 x 21-27 mm
Transition Male Connector Repair Fittings	
MM341.20.15.21	15-21mm x ¾"
MM341.20.21.27	21-27mm x ¾"
MM341.20.27.34	27-34mm x ¾"
MM341.25.27.34	27-34mm x 1"
Transition Tee Repair Fittings	
MM349.15.21	15-21 x 15-21 mm
Transition Reducing Double Ended Repair Fittings	
MM345.21.15	21-27 x 15-21 mm
MM345.27.21	27-34 x 21-27 mm
MM345.27.15	27-34 x 15-21 mm
MM345.39.27	39-43 x 27-34 mm
Transition Tee Female Thread Repair Fittings	
MM350.15.20	15-25 x ¾"
MM350.15.25	15-21 x 1"
MM350.21.20	21-27 x ¾"
MM350.21.25	21-27 x 1"
Transition Double Ended Repair Fittings	
MM344.15.21	15-21 x 15-21 mm
MM344.21.27	21-27 x 21-27 mm
MM344.27.34	27-34 x 27-34 mm
MM344.39.43	39-43 x 39-43 mm
MM344.34.39	34-39 x 34-39 mm
MM344.47.49	47-49 x 47-49 mm
MM344.59.61	59-61 x 59-61 mm

Philmac Valves

CODE	SIZE
Trough Valve	
AQ 400 P	¾" Plastic valve with float
AQ 500 P	1" Plastic valve with float
Non Return Valve FI x FI	
MM.20.BVNR	¾" Non Return Valve FI x FI BSP
MM.25.BVNR	1" Non Return Valve FI x FI BSP
MM.32.BVNR	1¼" Non Return Valve FI x FI BSP
MM.40.BVNR	1½" Non Return Valve FI x FI BSP
MM.50.BVNR	2" Non Return Valve FI x FI BSP
Ball Valve FI x FI	
MM 15.BV	½" Ball valve FI x FI BSP
MM 20.BV	¾" Ball valve FI x FI BSP
MM 25.BV	1" Ball valve FI x FI BSP
MM 32.BV	1¼" Ball valve FI x FI BSP
MM 40.BV	1½" Ball valve FI x FI BSP
MM 50.BV	2" Ball valve FI x FI BSP

Philmac Fittings

Nipple MI	
328.15	½" x ½"
328.20	¾" x ¾"
328.25	1" x 1"
328.32	1¼" x 1¼"
328.40	1½" x 1½"
328.50	2" x 2"
Reducing Nipple MI	
328.20.15	¾" x ½"
328.25.20	1" x ¾"
328.32.20	1¼" x ¾"
328.32.25	1¼" x 1"
328.40.25	1½" x 1"
328.40.32	1½" x 1¼"
328.50.25	2" x 1"
328.50.32	2" x 1¼"
328.50.40	2" x 1½"
Reducing Bush FI/MI	
327.20.15	¾" x ½"
327.25.15	1" x ½"
327.25.20	1" x ¾"
327.32.20	1¼" x ¾"
327.32.25	1¼" x 1"
327.40.20	1½" x ¾"
327.40.25	1½" x 1"
327.40.32	1½" x 1¼"
327.50.20	2" x ¾"
327.50.25	2" x 1"
327.50.32	2" x 1¼"
327.50.40	2" x 1½"

CODE	SIZE
Reducing Socket FI/FI	
329.20.15	¾" x ½"
329.25.15	1" x ½"
329.25.20	1" x ¾"
329.32.20	1¼" x ¾"
329.32.25	1¼" x 1"
329.40.25	1½" x 1"
329.40.32	1½" x 1¼"
329.50.25	2" x 1"
329.50.32	2" x 1¼"
329.50.40	2" x 1½"
Socket FI/FI	
329.15	½" x ½"
329.20	¾" x ¾"
329.25	1" x 1"
329.32	1¼" x 1¼"
329.40	1½" x 1½"
329.50	2" x 2"
Tee FI	
332.15	½" x ½" x ½"
332.20	¾" x ¾" x ¾"
332.25	1" x 1" x 1"
332.32	1¼" x 1¼" x 1¼"
332.40	1½" x 1½" x 1½"
332.50	2" x 2" x 2"

CODE	SIZE
Elbow FI/FI	
333.15	½" x ½"
333.20	¾" x ¾"
333.25	1" x 1"
333.32	1¼" x 1¼"
333.40	1½" x 1½"
333.50	2" x 2"
Elbow MI/FI	
336.15	½"
336.20	¾"
336.25	1"
Plug MI	
334.15	½"
334.20	¾"
334.25	1"
334.32	1¼"
334.40	1½"
334.50	2"
Cap FI	
335.15	½"
335.20	¾"
335.25	1"
335.32	1¼"
335.40	1½"
335.50	2"

Manufacturer

The range of fittings and valves are distributed by Marley and manufactured by a sister company.

Philmac Pty Ltd

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Relevant Building Code Clauses

Philmac fittings and valves when used, installed, and maintained in accordance with the requirements outlined in this document, will meet or contribute to meeting:

- › NZBC Clause B2: Durability.
- › NZBC Clause G12: Water supplies
- › NZBC Clause F2: Hazardous Building Materials.

Limitations on the use

Temperature

- › UTC® fittings are designed for cold water applications only. Exposure to elevated temperatures has a significant impact on the lifetime of the fittings. UTC® is pressure rated to 12.5 bar (180psi) at 23 °C (73 °F) to meet the needs of high-pressure systems and projected lifetime.

Fluids other than Water

- › 3G Metric™ may convey a wide variety of fluids. Refer to [Chemical Resistance Table on the Technical Manual](#), as a guide only for the compatibility of various chemicals. Contact Marley for advice on specific applications.
- › Blue handled Ball Valves are primarily designed to convey water. However, there may be occasions where the water contains chemicals and/or alternative fluids need to be controlled. The mixing together of chemical might affect the compatibility of the valve, refer to the [Chemical Resistance Table on the Technical Manual](#) as a guide only for compatibility of various chemicals. These valves are NOT suited for acids.

Design

3G Metric™ range is developed and designed to comply with the requirements of the following standards:

- › AS/NZS 4129 - Fittings for polyethylene (PE) pipes for pressure applications.
- › AS/NZS 4020 – Testing of products for use in contact with drinking water.
- › ISO 7.1 & BS21 Pipe threads where pressure joints are made on the threads.
- › PE Pipes - AS/NZS 4130, ISO 4427, EN 12201 Polyethylene pipes for pressure applications.
- › Copper Pipes - AS1432 Copper tubes for plumbing, gas fitting and drainage applications.

UTC® is designed to accommodate a range of different diameters on most pipe material (including PVC, copper, galvanized iron, ABS, lead, stainless steel, steel, polyethylene and PEX) and hold certificates for the following standards:

- › AS/NZS 4129 - Fittings for polyethylene (PE) pipes for pressure applications.
- › AS/NZS 4020 - Testing of products for use in contact with drinking water.
- › Watermark BS6920 - Fitting materials approved for use in potable water applications.
- › ISO 7.1 Pipe threads where pressure joints are made on the threads.

Blue handed Ball Valves are designed to comply with the following standards.

- › AS/NZ 4020 - Testing of products for use in contact with drinking water.
- › ISO 7.1 Pipe threads where pressure tight joints are made on the threads.
- › Tests Shut Off Test: Blue handled ball valves are tested for shut off against a hydrostatic water pressure of 2000 kPa (290 psi) or 20 bar.

Installation

All fittings shall be installed according to the manufacturer installation procedures and guidelines.

3G Metric™

No pipe preparation is needed and no force is required to push the pipe past the seal, so installation is fast and easy.

Insert the pipe into the fitting until the stop is felt, and then tighten the nut; installation can be done under live conditions.

No special tools are required, and there is no need to disassemble the fitting before use because the 3G Metric™ compression fitting is supplied pre-assembled and ready to use.

For more information refer to [Installation Instructions](#)

UTC®

Witness mark the pipe against the flange on the fitting, and then insert the pipe to the correct depth. The nut can then be tightened using a wrench.

The UTC® is fully installed when the nut can no longer be tightened with reasonable force.

No special tools are required and the UTC® is supplied ready to use.

For more information refer to [Installation Instructions](#)

Blue handled ball valves

Operates by using a handle to turn a ball located in a body through 90°. The ball has a hole through the centre of it which allows water to pass through when in the open position.

To turn the valve on, the blue handle needs to be turned 90° until the blue handle sits in-line with the body of the valve.

To turn the valve off rotate the handle through 90° until it is at right angles to the valve body.

Care should be taken when closing the valve. It should not be closed too quickly or water hammer may result.

For more information refer to [Installation Instructions](#)

Maintenance requirements

Once fittings are correctly installed, according to the manufacturer installation procedures and guidelines, there is no specific maintenance required.

Warning and/or Bans

Fittings and valves are not subject to any warning or ban.