

GAS COMPRESSION FITTINGS RANGE

**Easy, safe
and secure
connections.**



Philmac®

The connection you can trust.



Committed to sustainable development, Philmac is well renowned for quality products and services. Philmac manufactures pipe fittings and valves under a Quality Assurance System assessed and approved to ISO 9001-2000 and has obtained the prestigious environmental management certification ISO 14000. Philmac has a NATA accredited laboratory and tests fittings and valves to international and national standards. Third party accreditation is carried out by SAI Global.

INTRODUCTION

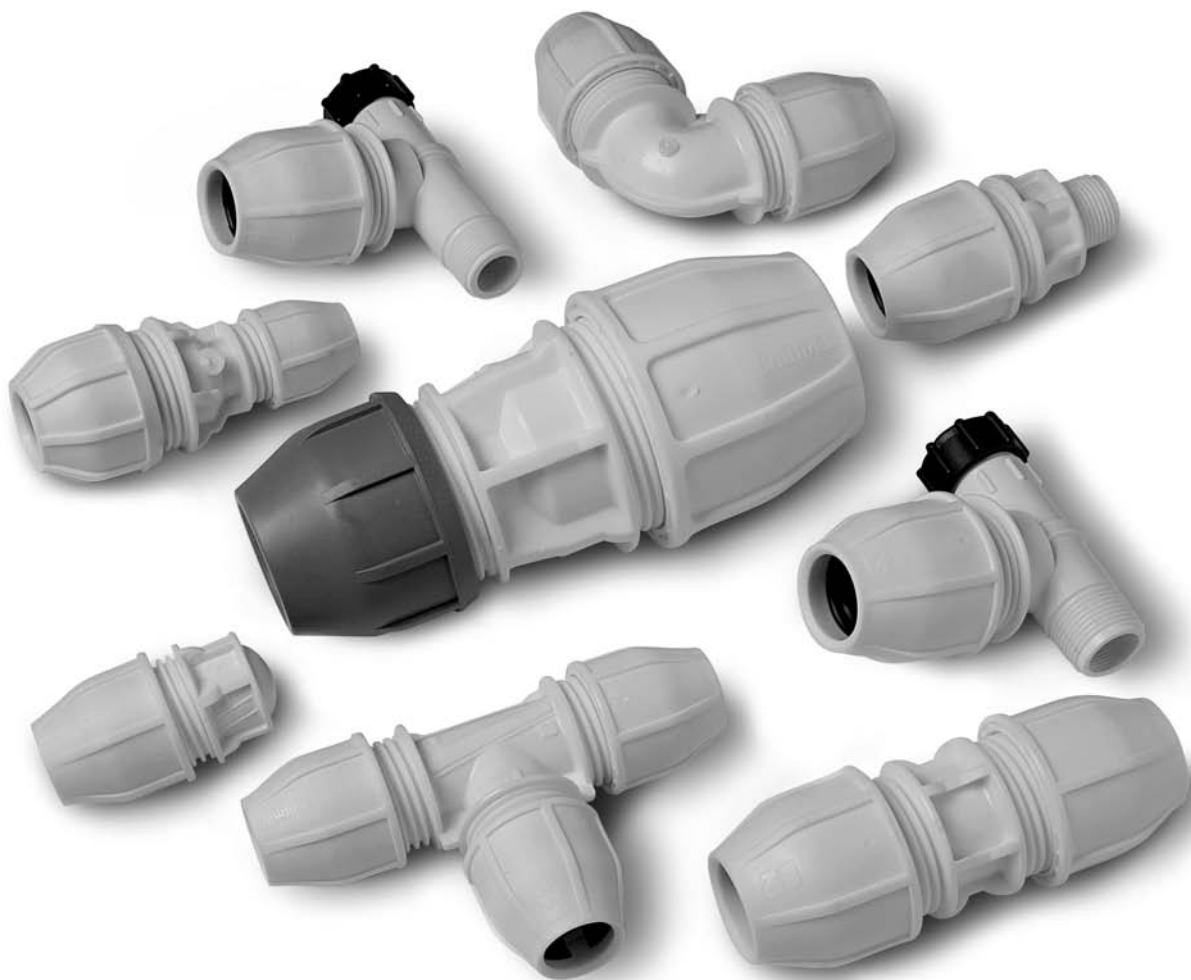
Philmac's dedicated range of gas compression fittings is a revolutionary step forward in pipe jointing technology for the gas industry. The innovative design significantly reduces installation times, provides a high degree of security and offers a cost effective alternative to traditional jointing methods.

The installation of new and the repair of existing gas pipework can be done quickly and easily even in extremely difficult conditions, including inclement weather and confined spaces. There is also no need for electrical power or special tooling.

The Philmac range of gas compression fittings are manufactured from advanced lightweight thermoplastic materials which provide a high degree of impact and corrosion resistance.

Designed to make the job at hand so much easier, the Philmac gas compression fitting range is the product of Philmac's unrelenting commitment to continuous improvement and a culture based on innovation and ingenuity.

THE RANGE



BENEFITS OF PE GAS RANGE

Fast and Easy Installation

- **Slide & Tighten™ technology:** Philmac PE Gas incorporates all the benefits of Philmac's Slide & Tighten™ technology. Simply insert the liner into the pipe and then insert the pipe into the fitting until the first point of resistance is felt. Then tighten the nut up to the flange of the fitting body. No pipe preparation is needed and no force is required to push the pipe past the seal, so installation couldn't be faster or easier. The advantage becomes even more significant in the larger sizes due to the cumbersome nature of large diameter pipes.
- **Ease of Repair:** There is no need for cumbersome equipment and no need to let the joint cure once repaired. Simply make the repair and as soon as the joint is completed the gas supply can be switched back on.

Complete Security

- **Dynamic Sealing Method:** The mechanical advantage of the nut thread is used to push the seal into a compressed position, eliminating resistance when inserting the pipe into the fitting, so there is no risk of seal distortion or displacement.
- **Visual stop:** The flange on the body of the Philmac PE Gas fitting provides a visual stop to indicate when the nut is fully tightened. This removes any uncertainty from the installation process.
- **No Loose Components:** Although disassembly of the fitting is not required for installation, if the nut is removed there is no danger of losing components as they are all retained within the nut. Losing components in the trench becomes a thing of the past.
- **Designed to minimize pipe twist:** The fitting has been designed to minimize pipe twist as the nut is tightened. Maximum pipe twist is approximately three quarters of a turn compared to one and a half turns with many other fittings. Pipe twist can impact not only on the connection you have just made but also on the connection at the other end of the line.
- **Approvals:** The Philmac PE Gas fitting conforms to AS/NZS 4129:2000 and is approved for use by Alinta, Origin Energy, S&P Ausnet in Australia and Transco in the UK. The fittings are also manufactured to the highest standards in accordance with the Company's ISO9001:2000 Quality Endorsed status.
- **Strength of Connection:** The Philmac PE Gas fitting has been designed to ensure that the connection, when properly formed and when a liner is used, will exceed the strength of the PE pipe.

High Performance Materials

- **Made from advanced thermoplastic materials:** The Philmac PE Gas range is manufactured from lightweight high performance thermoplastic materials with outstanding impact, chemical and corrosion resistance.
- **Rated to 550KPa (5.5 Bar):** Philmac PE Gas Range is pressure rated to 550KPa (5.5 bar; PN5.5) to meet the needs of Gas pressure systems.
- **50 year + design life:** Built to withstand the toughest conditions to ensure longevity and durability, Philmac PE Gas has a 50 year+ design life.

Complete Coverage

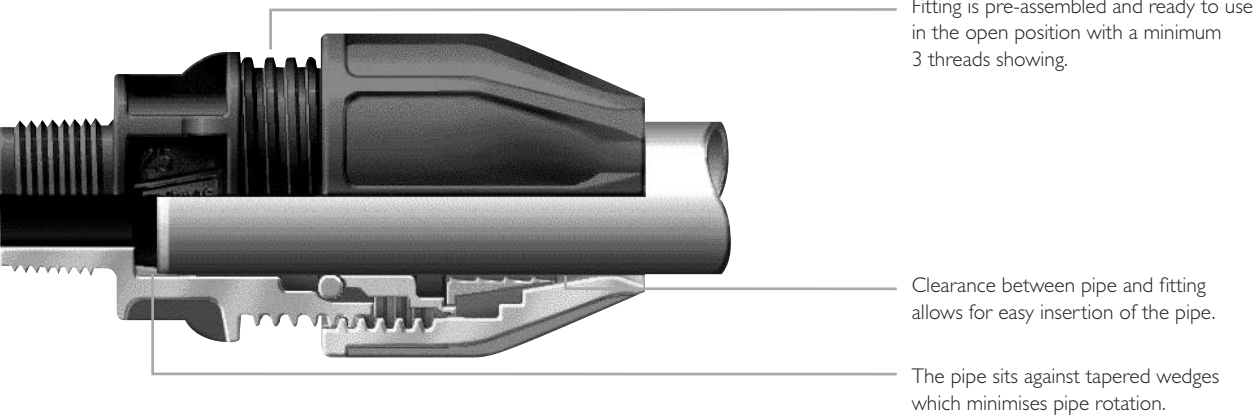
- **Wide range:** The Philmac PE Gas range is comprehensive; straight and reducing joiners, tees, elbows, threaded connectors and end caps ranging from 16 – 63mm.
- **Flexibility in connection:** The Philmac PE Gas range provides connections for both Metric and British Imperial sized PE. Connection methodology is exactly the same for both connections. Identification is easy with a grey nut signifying an Imperial connection and a yellow nut signifying a Metric connection.



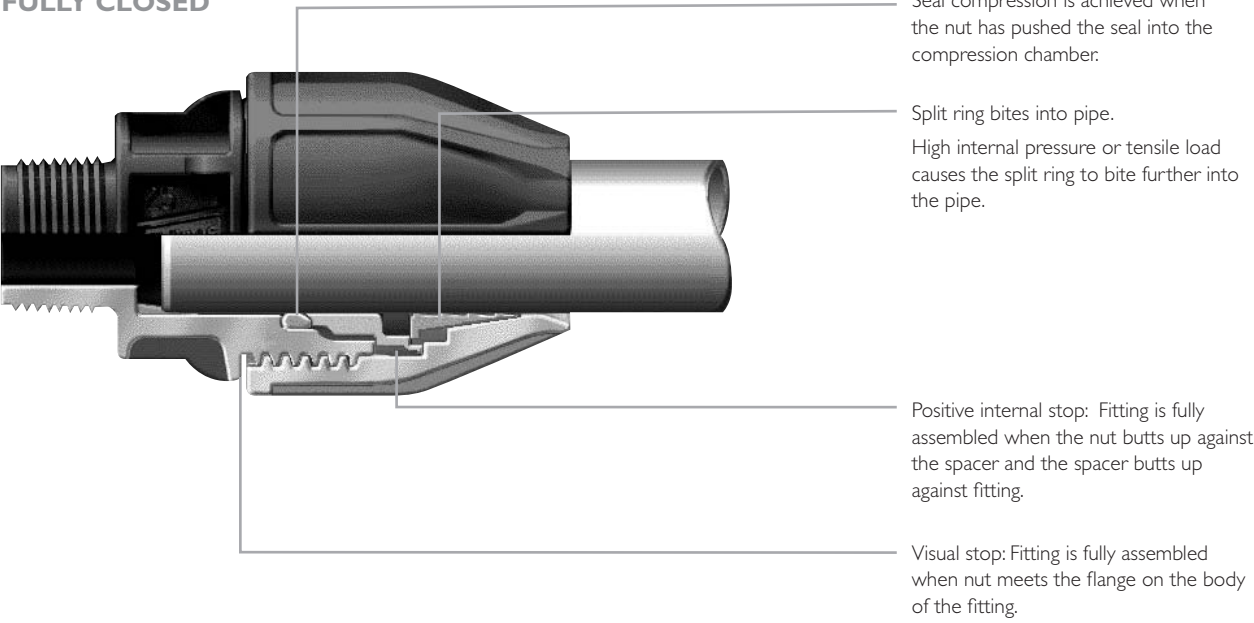
HOW IT WORKS - PE GAS

PRINCIPALS OF OPERATION – COMPRESSION FITTINGS

FULLY OPEN



FULLY CLOSED



BENEFITS OF UTC GAS RANGE

Complete Flexibility

- **Universal Design:** Through its wide tolerance, the Philmac UTC® Gas is designed to accommodate a range of pipes with varying pipe diameters including copper, PE, PVC, lead, steel, galvanized iron, ABS and stainless steel.

Fast and Easy Installation

- **Slide & Tighten™ technology:** The Philmac UTC® Gas incorporates all the benefits of Philmac's Slide & Tighten™ technology.

Simply 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 Philmac UTC® Gas is supplied ready to use.

- **Easy Disassembly:** The design of the Philmac UTC® Gas means that once the nut is backed off, the pipe can easily be removed from the fitting

Complete Security

- **Dynamic Sealing Method:** The mechanical advantage of the nut thread compresses the seal into position, eliminating resistance when inserting the pipe into the fitting, so there is no risk of seal distortion or displacement.

** Pipes at the top end of the fitting tolerance may incur minimum resistance.*

- **Approvals:** The Philmac UTC® Gas conforms to ATSS5200.458 and is approved for use by Alinta, Origin Energy and S&P Ausnet. The fittings are also manufactured to the highest standards in accordance with the Company's ISO9001:2000 Quality Endorsed status.

High Performance Materials

- **Made from advanced thermoplastic materials:** The Philmac UTC® Gas is manufactured from lightweight high performance thermoplastic materials with outstanding impact, UV, chemical and corrosion resistance. The UTC® end contains hard stainless steel grippers which provide superior end load resistance.
- **Rated to 550KPa (5.5 Bar):** The Philmac UTC® Gas is pressure rated to 550KPa (5.5 bar) to meet the needs of gas pressure systems.
- **50 year + design life:** Built to withstand the toughest conditions to ensure longevity and durability, Philmac UTC® Gas has a 50 year+ design life.

Complete Coverage

- **The Philmac UTC® Gas range is comprehensive:** Straight joiners, endcaps and elbows in both transition (PE to UTC®) and double ended versions (UTC® to UTC®) ranging from 15mm to 27mm.



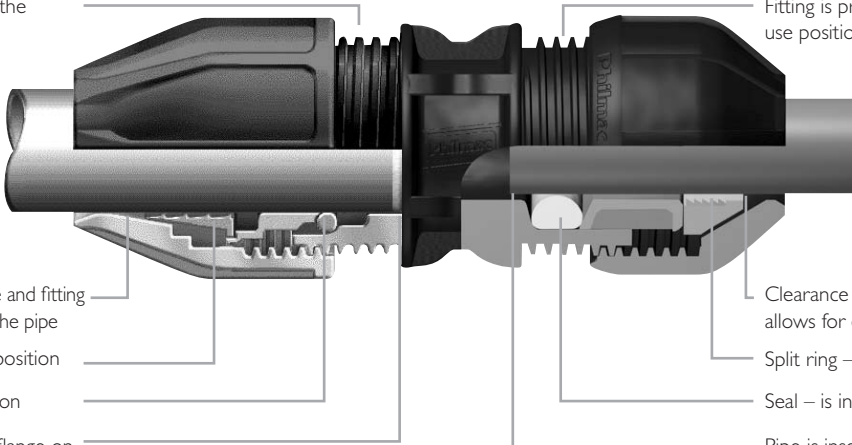
HOW IT WORKS - UTC GAS

PRINCIPALS OF OPERATION – COMPRESSION FITTINGS

FULLY OPEN – PE END

Fitting is pre-assembled in the ready to use position with 3 threads showing

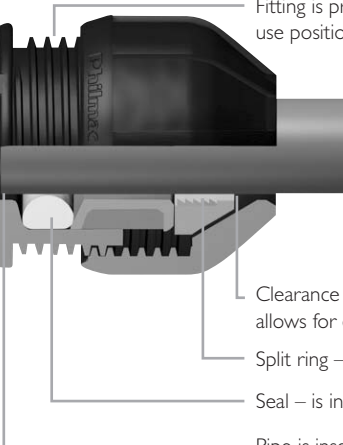
Clearance between the pipe and fitting allows for easy insertion of the pipe
Split ring – is in a relaxed position
Seal – is in a relaxed position
Pipe is inserted up to the flange on the fitting



FULLY OPEN – UTC® END

Fitting is pre-assembled in the ready to use position with 3 threads showing

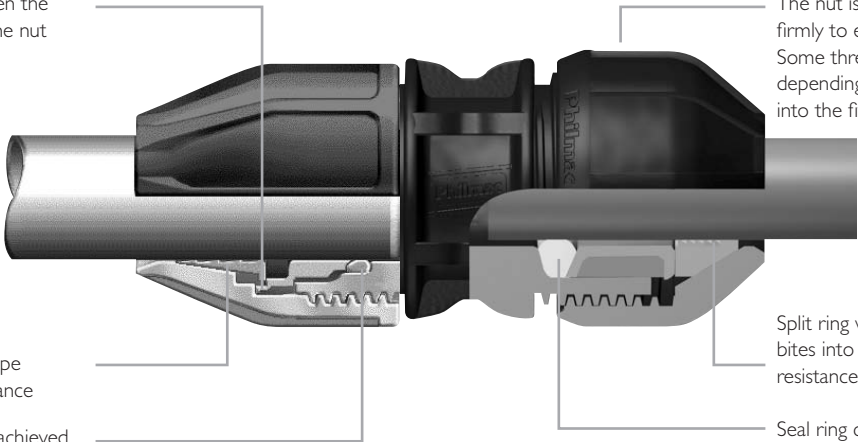
Clearance between the pipe and fitting allows for easy insertion of the pipe
Split ring – is in a relaxed position
Seal – is in a relaxed position
Pipe is inserted up to the flange on the fitting



FULLY CLOSED – PE END

Positive internal stop when the spacer butts up against the nut and fitting

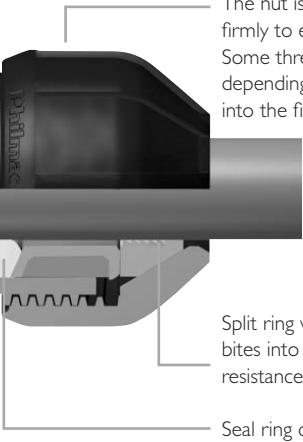
Split ring bites into the pipe providing end load resistance
Seal ring compression is achieved by exploiting the mechanical advantage of the thread



FULLY CLOSED – UTC® END

The nut is tightened with a wrench firmly to ensure proper installation. Some threads may be exposed, depending on the size of pipe inserted into the fitting.

Split ring with the stainless grippers bites into the pipe providing end load resistance
Seal ring compression is achieved by exploiting the mechanical advantage of the thread



BENEFITS OF SERVICE TEE GAS RANGE

Fast and Easy Installation

- **Slide & Tighten™ technology:** The Philmac Service Tee Gas incorporates the Metric compression fitting Slide & Tighten™ technology. Simply insert the liner into the pipe and then insert the pipe into the fitting until the first point of resistance is felt. Then tighten the nut up to the flange of the fitting body. No pipe preparation is needed and no force is required to push the pipe past the seal, so installation couldn't be faster or easier.
- **Deploying the Plug / Cutter:** Both the Philmac Service Tee Gas Plug and Cutter incorporates a simple socked head drive. This allows for fast and easy installation as the Plug or Cutter can be driven into position inside the Service Tee very quickly, using an Allen Key.

Complete Security

- **Cutter:** The steel cutter maintains its sharpness to ensure the PE pipe is cut in a clean manner. The cutter also retains the pipe plug, which is withdrawn from the pipe when the cutter is returned to its original position.
- **Conforms to tapping machine:** The Philmac Service Tee Gas has been designed to be compatible with industry standard tapping machines.
- **Dynamic Sealing Method:** The mechanical advantage of the nut thread is used to push the seal into a compressed position, eliminating resistance when inserting the PE pipe into the fitting so there is no risk of seal distortion or displacement.
- **Visual stop:** The flange on the body of the Philmac Service Tee Gas provides a visual stop to indicate when the nut is fully tightened. This removes any uncertainty from the installation process.
- **No loose components:** The Philmac Service Tee Gas comes fully assembled in the ready to use position. If the yellow nut is removed there is no danger of losing components as they are all retained within the nut.

High Performance Materials

- **Made from advanced thermoplastic materials:** The Philmac Service Tee Gas is manufactured from lightweight high performance thermoplastic materials offering outstanding impact resistance.

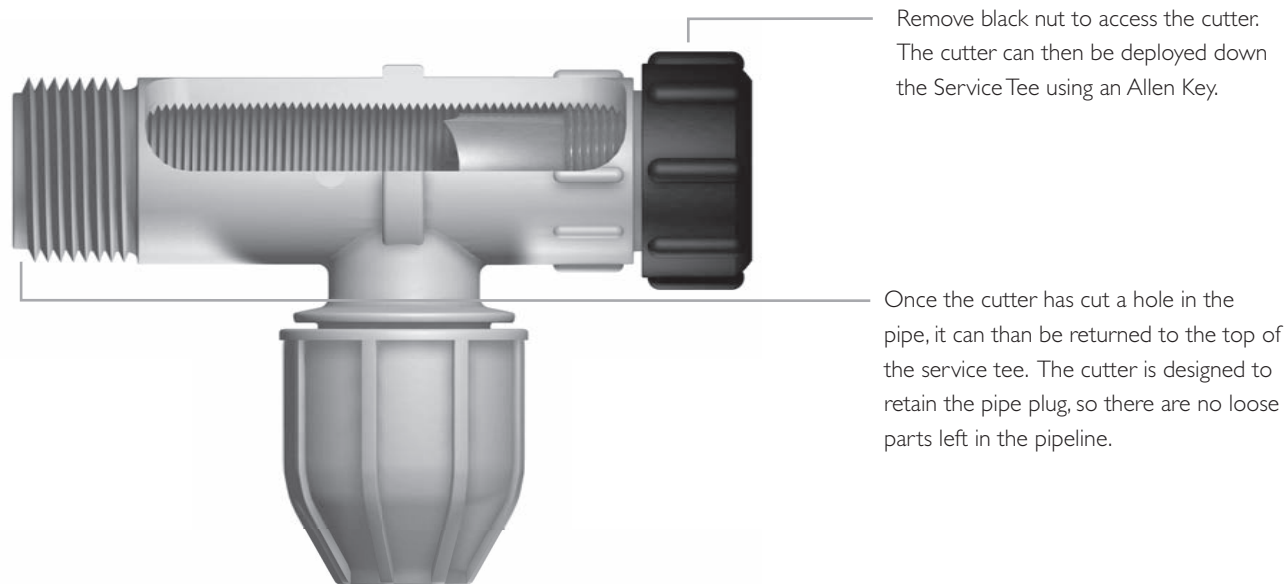
Complete Coverage

- The Philmac Service Tee Gas is available with either a Plug or Cutter in sizes 16mm – 40mm.

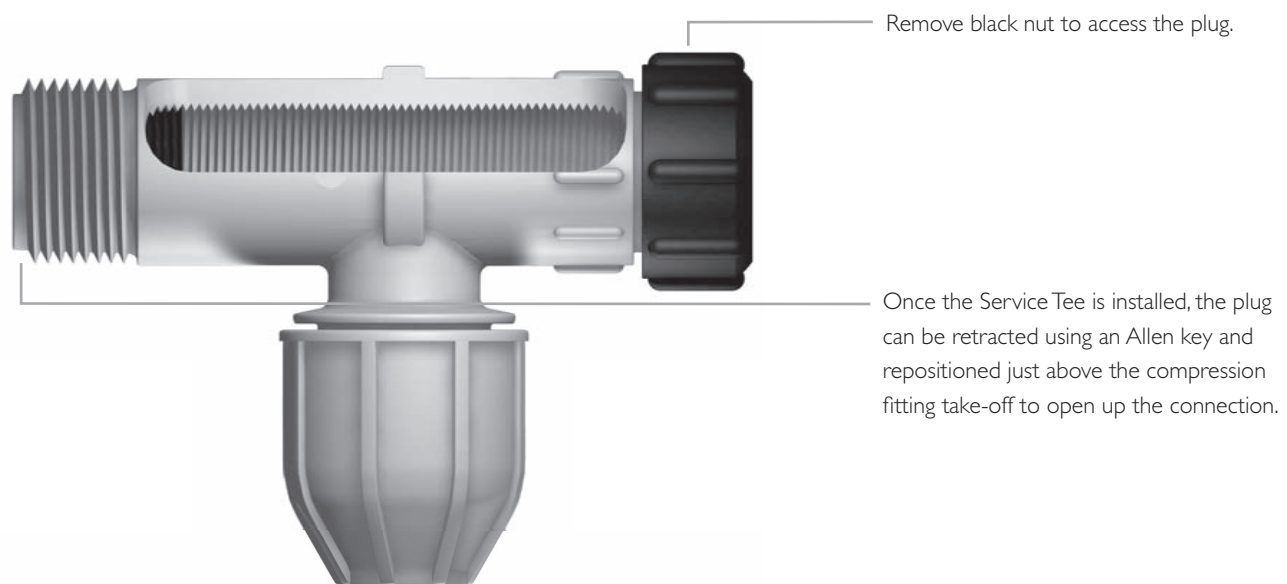


HOW IT WORKS - SERVICE TEE GAS

SERVICE TEE (CUTTER)



SERVICE TEE (PLUG)



PHILMAC GAS COMPRESSION FITTINGS RANGE

PE GAS JOINER	PART NO.	STANDARD PK
16mm with liners included for SDR 17.6 pipe	96211100	
20mm with liners included for SDR 17.6 pipe	96212200	
25mm with liners included for SDR 17.6 pipe	96213300	
32mm with dedicated liners for SDR 11 pipe	96214400	
40mm with dedicated liners for SDR 11 pipe	96215500	
50mm with dedicated liners for SDR 11 pipe	96216600	
63mm with dedicated liners for SDR 11 pipe	96217700	
PE GAS REDUCING JOINERS	PART NO.	STANDARD PK
25mm x 16mm with liners included for SDR 17.6 pipe	96213100	
PE GAS TEES	PART NO.	STANDARD PK
16mm with liners included for SDR 17.6 pipe	96231100	
20mm with liners included for SDR 17.6 pipe	96232200	
25mm with liners included for SDR 17.6 pipe	96233300	
32mm with dedicated liners for SDR 11 pipe	96234400	
40mm with dedicated liners for SDR 11 pipe	96235500	
50mm with dedicated liners for SDR 11 pipe	96236600	
63mm with dedicated liners for SDR 11 pipe	96237700	
PE GAS END CAPS	PART NO.	STANDARD PK
16mm with liner included for SDR 17.6 pipe	96201910	
20mm with liner included for SDR 17.6 pipe	96202910	
25mm with liner included for SDR 17.6 pipe	96203910	
32mm with dedicated liner for SDR 11 pipe	96204910	
40mm with dedicated liner for SDR 11 pipe	96205910	
50mm with dedicated liner for SDR 11 pipe	96206910	
63mm with dedicated liner for SDR 11 pipe	96207910	
PE GAS ELBOW	PART NO.	STANDARD PK
16mm with liners included for SDR 17.6 pipe	96251100	
20mm with liners included for SDR 17.6 pipe	96252200	
25mm with liners included for SDR 17.6 pipe	96253300	
32mm with dedicated liners for SDR 11 pipe	96254400	
40mm with dedicated liners for SDR 11 pipe	96255500	
50mm with dedicated liners for SDR 11 pipe	96256600	
63mm with dedicated liners for SDR 11 pipe	96257700	
PE GAS MALE END CONNECTORS	PART NO.	STANDARD PK
25mm x 3/4" BSP with liner included for SDR 17.6 pipe	96223200	
32mm x 1" BSP with dedicated liner for SDR 11 pipe	96224300	
40mm x 1-1/4" BSP with dedicated liner for SDR 11 pipe	96225400	
METRIC TO IMPERIAL GAS PE PIPE JOINERS	PART NO.	STANDARD PK
63mm SDR11 x 2" Imp SDR 9.9 pipe	96217710	
63mm SDR11 x 1-1/2" Imp SDR 9.9 pipe	96217610	
63mm SDR11 x 1-1/4" Imp SDR 9.9 pipe	96217510	
UTC GAS JOINER - PE X UTC	PART NO.	STANDARD PK
20mm PE with liner for SDR 17.6 x 21-27 UTC (18NB)	96104200	
20mm PE with liner for SDR 17.6 x 27-34 UTC	96105200	
25mm PE with liner for SDR 17.6 x 21-27 UTC (18NB)	96104300	
32mm PE with liner for SDR 11 x 21-27 UTC (18NB)	96104400	
UTC GAS ELBOW - PE X UTC	PART NO.	STANDARD PK
UTC Elb 20 SDR 17.6 x 15-21	96152300	
UTC GAS JOINER - UTC X UTC	PART NO.	STANDARD PK
21-27mm x 15-21mm	96114310	
21-27mm x 21-27mm	96114410	
UTC GAS ELBOW - UTC X UTC	PART NO.	STANDARD PK
21-27mm x 15-21mm	96154310	
21-27mm x 21-27mm	96154410	
UTC GAS END CAP	PART NO.	STANDARD PK
UTC End Cap 21-27	96104910	
GAS SERVICE TEES	PART NO.	STANDARD PK
16mm Service Tee Plug Gas w/ liner SDR17.6	96181711	
20mm Service Tee Plug Gas w/ liner SDR17.6	96181911	
25mm Service Tee Plug Gas w/ liner SDR17.6	96182111	
32mm Service Tee Plug Gas w/ liner SDR11	96180811	
40mm Service Tee Plug Gas w/ liner SDR11	96182311	
16mm Service Tee Cutter Gas w/ liner SDR17.6	96181811	
20mm Service Tee Cutter Gas w/ liner SDR17.6	96182011	
25mm Service Tee Cutter Gas w/ liner SDR17.6	96182211	
32mm Service Tee Cutter Gas w/ liner SDR11	96180911	
40mm Service Tee Cutter Gas w/ liner SDR11	96182411	



PE GAS INSTALLATION INSTRUCTIONS



1. Preparation of pipe end. Cut Pipe Square. There is no need to chamfer the pipe end, however always ensure a liner is inserted into the end of the pipe.



2. Ready to use position: The fitting is pre-assembled and ready to use, however always ensure the nut is backed off with 3 threads showing to allow pipe to pass freely.



3. Pipe insertion: Gently insert the pipe until the first point of resistance is felt.



4. Nut tightening: The nut should be tightened by hand and then firmly with a wrench. Tighten the nut all the way to the flange on the body of the fitting.

- Always use a pipe liner for PE Gas connections



5. Fully installed: The fitting is fully installed when the nut butts against the flange of the body.



6. Disassembly: To disassemble the fitting, simply loosen the nut using a wrench until 3 threads are showing. Pipe will be released and can be pulled out of the fitting.

UTC® GAS INSTALLATION INSTRUCTIONS



1. Cut pipe to length: Cut pipe square and to length using the flange on the central body as a guide. Ensure end of connecting pipe is undamaged and clean.



2. Ready to use position: The fitting is pre-assembled and ready to use, however always ensure the nut is backed off and 3 threads are showing. Pipes at the top end of the fitting tolerance may require 5 threads showing.



3. Pipe insertion: To ensure adequate insertion depth, witness mark the pipe to the flange on the fitting. Then insert pipe to the correct depth.



4. Nut tightening: Tighten nut firmly with a wrench. Nut will not butt against the body flange when the pipe size is at the top end of the fitting tolerance.



5. Fully Installed: The fitting is fully installed when the nut cannot be tightened any further with reasonable force.



6. Disassembly: Unscrew the nut with a wrench. Pipe will be released and can be pulled out of the fitting.

- Use a pipe measuring gauge if there are doubts on pipe outside diameter (OD) size.
- Installation instructions are also applicable for the PE end however always ensure a liner is used on PE pipe.

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