

DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

Waverley brownall

A photograph of an industrial refinery or chemical plant at dusk. The sky is a deep, vibrant purple and pink. The facility is illuminated with numerous lights, highlighting various distillation columns, towers, and piping. The overall scene is a complex industrial landscape.

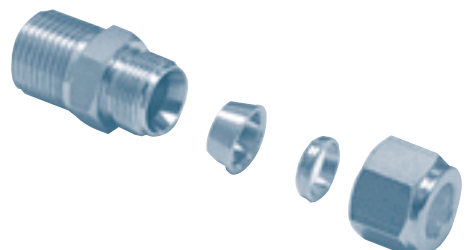
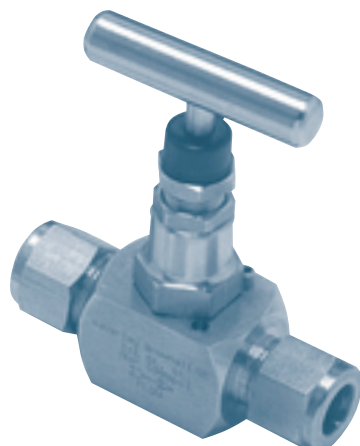
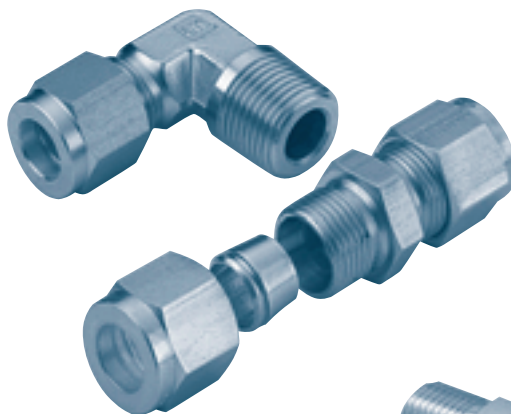
THE COMPANY

Waverley brownall has progressed to become a leading supplier of pipeline components, valves and instrumentation products; providing solutions for the most demanding applications.

Our philosophy is dominated by quality. Each Waverley brownall product is designed using state-of-the-art CAD technology and is subjected to rigorous quality control procedures.

Waverley has built its reputation for quality instrumentation among the largest industrial companies. Our products are used on systems where corrosion resistance, high pressures, clean room environments and high temperatures are critical factors.

A range of over 2000 standard products, manufactured in the UK or sourced from approved suppliers are available ex-stock to assure you of immediate delivery whilst our engineers provide complete technical support and can assist in the design and development of custom-made solutions.

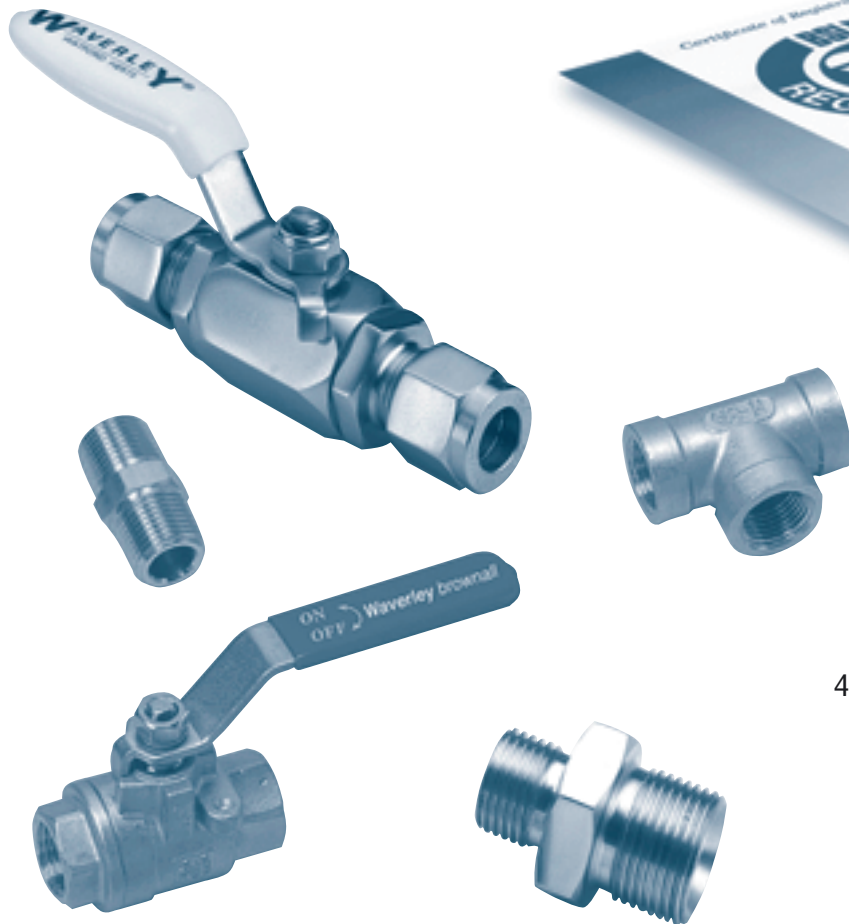


APPROVALS

Our dedication to quality has led to us being awarded and maintaining BS EN ISO 9001 since 1986.

We also hold certificates of product conformance and approvals which include:

- LLOYDS** type approval to BS part 4
- LLOYDS** general approval for classified installations
- TUV** type approval
- CONOCOPHILLIPS** approved supplier
- AF KONTROLL** design approval
- BRITISH GAS** approved supplier
- BRITISH PETROLEUM** approved supplier
- BRITISH NUCLEAR FUELS** approved supplier
- SHELL** approved supplier
- TEXACO** approved supplier
- CEGB** approval
- POWERGEN** approved supplier
- EUROPEAN GAS TURBINES** approved supplier
- AMERICAN BUREAU OF SHIPPING** type approval
- B.O.L.** approved supplier

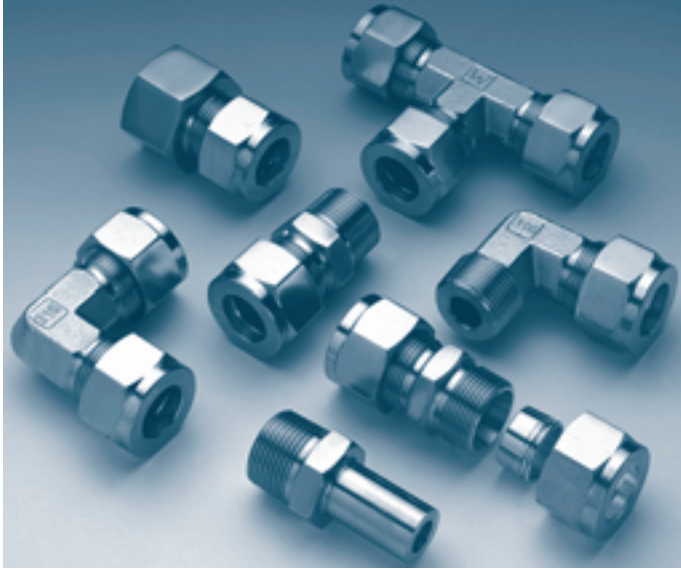


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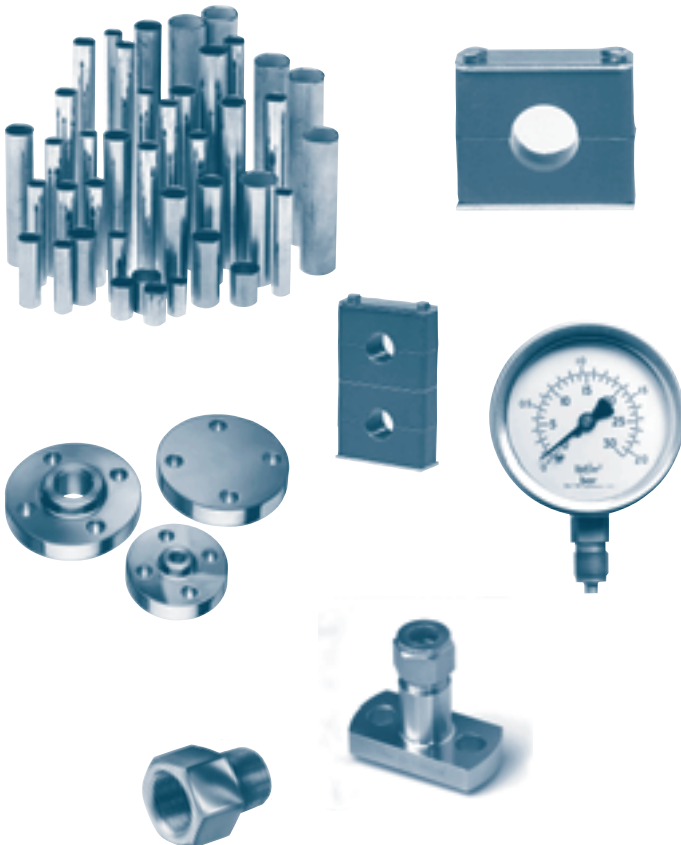
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DUOLC SINGLE FERRULE OD COMPRESSION FITTINGS



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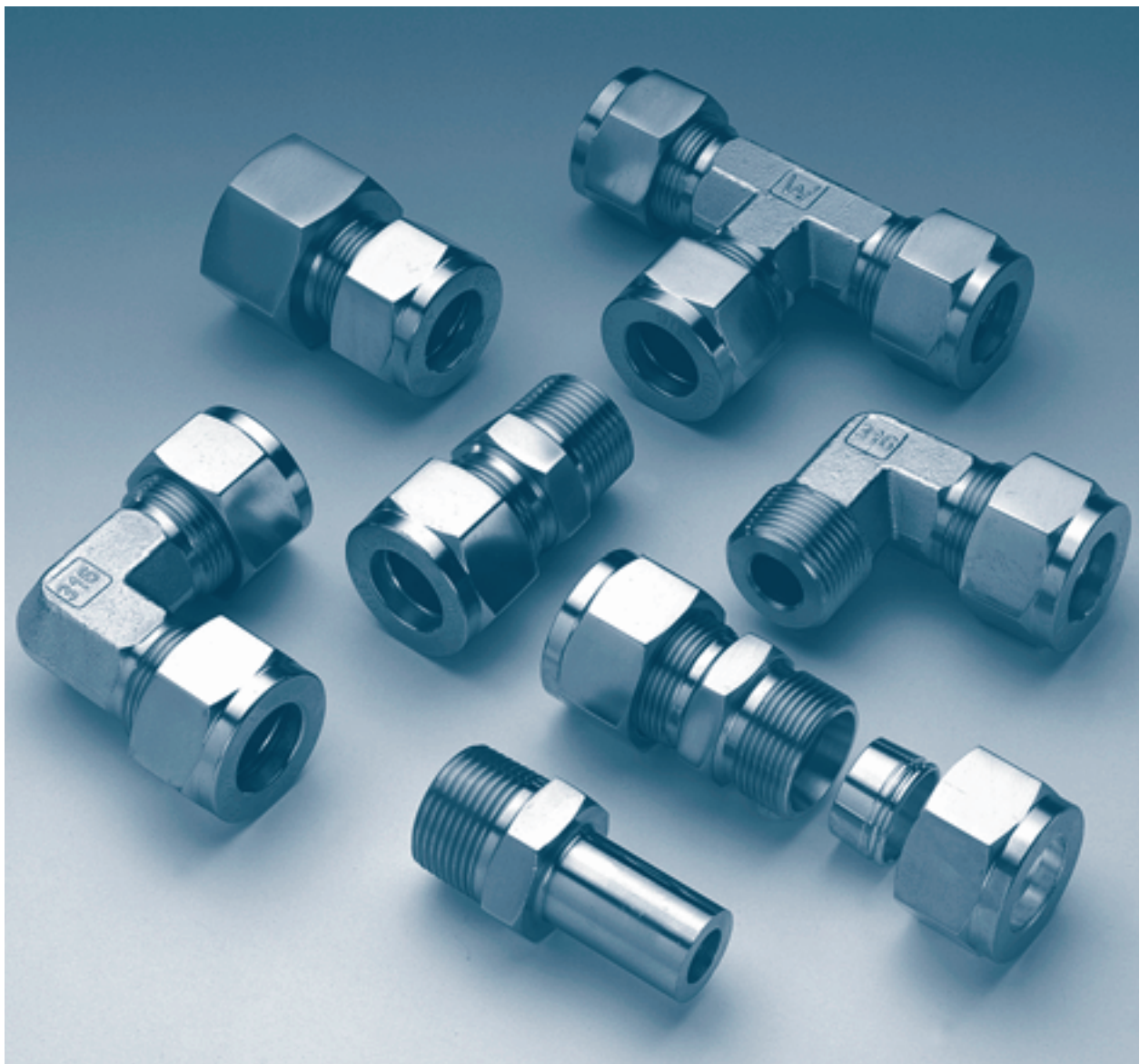
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

Duoloc single ferrule OD compression fittings are designed to be robust, yet quick and easy to assemble and have been extensively used for onshore applications for over 35 years. These include instrumentation for gas control systems, gas R&D systems, process control for chemical plant and general hydraulic industries.

The fittings are resistant to vibration, providing ease of assembly (controlled bite), break and remake facility and offer full material cast code traceability.

The Duoloc product is available in 316 stainless steel and a comprehensive range of metric and imperial sizes and thread forms. Most Duoloc fittings can be adapted to work with glass or PVC tube and can be modified to suit thermocoupling applications.

The Duoloc product is produced within the control systems approved by BSEN ISO 9001, and in accordance with BS4368



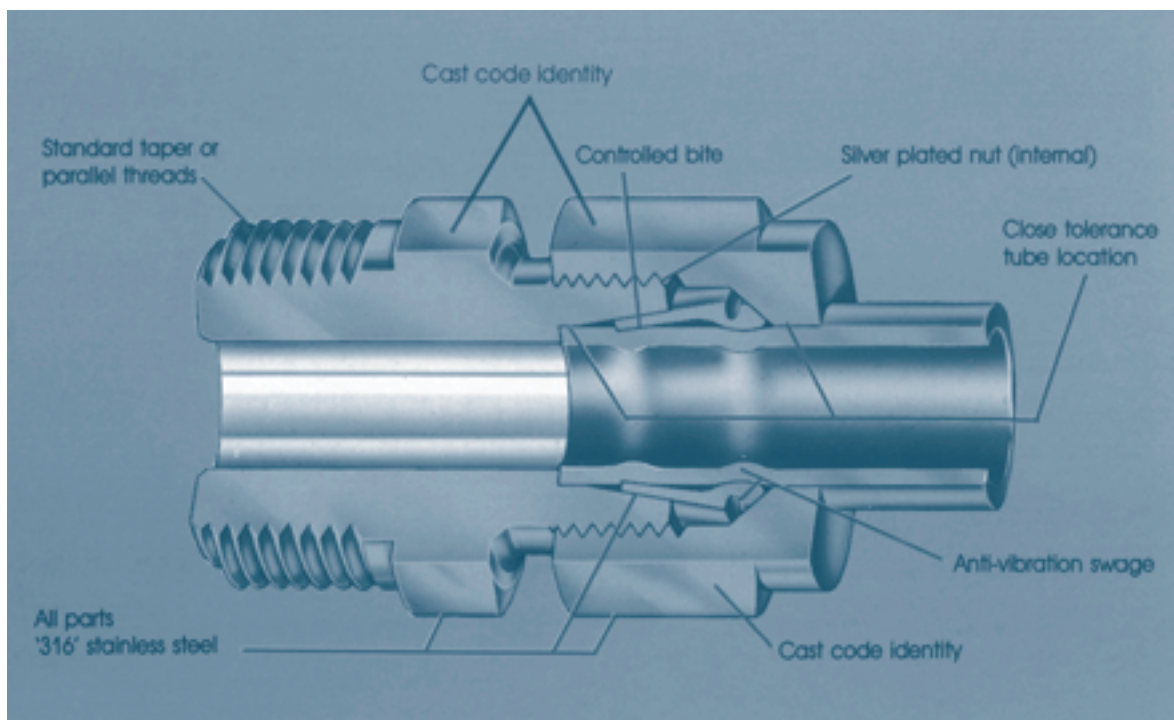
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

Applications

For use with stainless steel and carbon steel tube especially in conditions of high vibration.

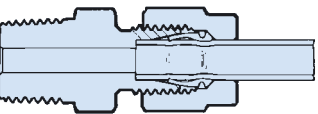
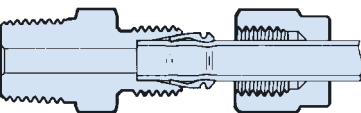
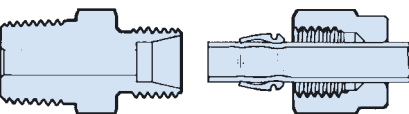
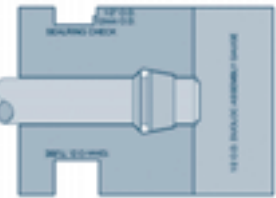
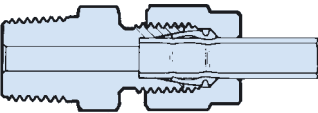
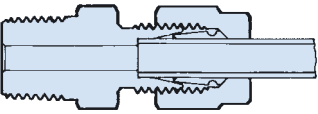
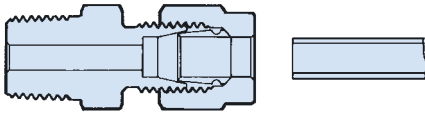
Benefits and Features

- Easy and safe make-up of joint with no galling of the threads during assembly. Provides repeated break and remake of fitting without thread damage.
- The tube end is positively located in the tube abutment, thus preventing excessive misalignment of the joint during installation.
- Low assembly torque.
- The ferrule swage protects the tube bite from vibration and prevents excessive stress being transmitted to the tube.
- All exposed threads are protected with colour coded plastic caps.
- The Duoloc gauging system ensures the fitting has been assembled correctly and that the tube has been fully inserted into the abutment.
- All materials are traceable to original mill certs.
- All materials are 316 Stainless Steel with a hard casing to the ferrule.
- The close tolerance manufacture ensures full interchangeability of Duoloc components.
- The Duoloc fitting fully complies with the Transco F9 specification.



DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

Assembly instructions



- 1 Cut the tube to the required length, leaving the ends square to the tube axis, remove all burrs.
- 2 Ensure that the fitting body, nut and ferrule assembly is clean and lubricated. Insert the prepared tube into the body of the fitting making sure that the tube butts firmly on to the abutment step and the nut is finger tight.
- 3 Tighten the nut 1 1/4 turns to complete the assembly.

Caution

Mixing components may not provide reliable joint assemblies and leakage could occur. Use only Waverley components for safety and reliability.

Waverley fittings are supplied as a complete assembly of body, ring and compression nut and ready for use.

For blanking plugs use only 1/6 turn from the finger tight position.

Re-assembly instructions

Fittings can be broken and remade without impairing the function and efficiency of the joints.

Disassemble and Gauge the Assembly

- 1 Prior to re-assembly ensure that the fitting body and tube assembly are free from any contaminant or damage.
- 2 Insert the tube assembly into the fitting body until the ferrule seats firmly.
- 3 Tighten the nut until the original assembly position is reached then tighten the nut a further small amount to ensure the assembly is positively sealed.

DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

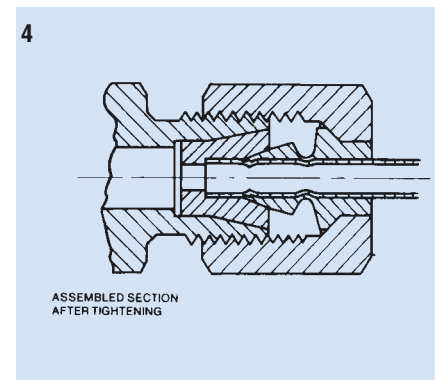
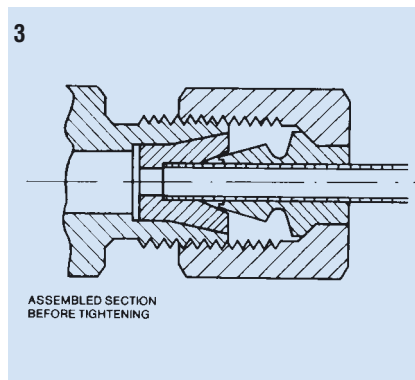
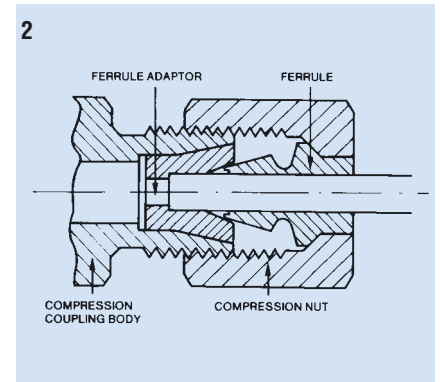
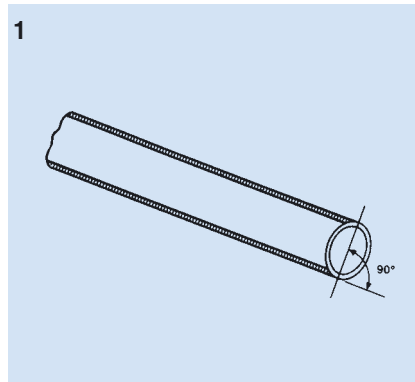
Assembly instructions for 316 stainless steel 1/8" OD and 3/16" OD compression couplings for stainless and nylon tubing

Adherence to the following simple instructions for the assembly of Waverley compression couplings will result in a sound pressure joint being formed. Pre-determination of the correct gauge, quality and material of the tube in relation to the medium to be contained and the pressure and temperature of that medium shall be the user's responsibility. It is also necessary to ensure that the general working conditions, pipework design and fixings are suitable.

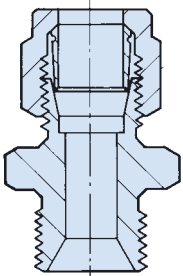
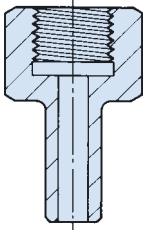
These fittings must be lubricated prior to assembly.

Tube to be seamless, annealed to max hardness of HRB 90.

- 1 Tube should be cut to length with ends prepared as square as possible, all burrs removed.
- 2 Prior to assembly, the nut and the ferrule should be removed from the body, placed over the end of the prepared tube and the ferrule face that contacts the ferrule adaptor lubricated.
- 3 The end of the tube should then be inserted into the body of the coupling, taking care to ensure that the tube butts firmly onto the abutment shoulder.
- 4 Tighten the nut until the ferrule is felt to grip the tube enough to prevent it from being turned. Then tighten the nut a further 1 turn.



Gauge adaptors

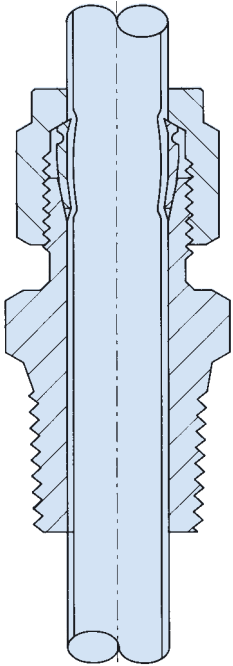


Waverley are able to offer a wide range of gauge adaptors with most combinations of male and female threads available to be supplied ex-stock. Any items not available as standard can be manufactured as specials.

Our recommendation is that as a majority of gauges are supplied with a male thread, screw a female standpipe adaptor on to the gauge. Then, depending on the other connection, either a male or female stud coupling can be assembled to the standpipe to leave the required thread.

This gives you the added benefit that by loosening the compression joint the gauge can be positioned facing the required direction.

Thermocouple connectors



Most of Waverley's range of male and female stud couplings are suitable for use with thermocouples or any other type of probe that needs to pass right through the fitting before being locked in place by the compression ferrule.

At the time of order just inform our sales staff that the fittings are required for use with thermocouples. A slight modification is then required to the standard component. This modification only adds one or two days to the delivery time.

The only instance where this modification is not possible is if the thread at the opposite side to the compression fitting is too small to allow a sufficient bore through the fitting.

NB Boring through compression fittings in the above way can reduce pressure ratings. Please contact our sales team for information.

Metric and Imperial OD Tubing

Waverley brownall stock a wide range of 316 Stainless Steel Seamless tubing to ASTM A-269 in both metric and imperial sizes. The range of tube coincides with the Duoloc range of Single Ferrule Compression Fittings and can be cut to any length subject to a minimum of 1m.

Stainless Steel 316 Tube Selection

The tubing should be solid drawn and fully annealed to ASTM A-269 or equivalent. A maximum hardness of HRB 80 is preferred, but if harder tube is used the HRB 90 should be the maximum allowed and specified.

Working Pressures

The working pressures in the following tables are for Duoloc Single Ferrule connectors and are based on tubing rated at 75,000 psi minimum UTS and allowable working stress of 20,000 psi as specified in ANSI B31.3 1987, for a temperature range of -29° to + 38°C.

Imperial Sizes

Tube OD	Tube Wall Thickness (inches)											
	0.010	0.012	0.014	0.016	0.020	0.028	0.035	0.049	0.065	0.083	0.095	0.109
1/16	5944	7142	8823	10240	13492							
1/8					5841	8664	11320					
3/16						5523	7100	10539	Pressures in lbf/in			
1/4						4071	5194	7588	10426			
3/8							3370	4849	6548			
1/2							2495	3564	4772	6336		
5/8								2959	4049	5263	6130	
3/4								2445	3334	4316	5013	5793
1									2464	3174	3674	4230

Metric Tubing Sizes

Tube OD	Tube Wall Thickness (metric)						
	0.5	0.7	1.0	1.5	2.0	2.5	3.0
3	428	638					
4		646	671				
6		298	424	686	Pressures in bar		
8			310	492			
10			244	384	527		
12			202	315	436		
16				247	338	430	
20				195	266	336	
25				154	210	264	323



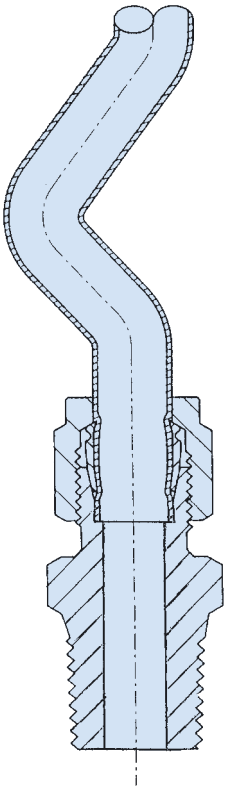
Tubing used within this shaded area is not recommended for gas service.



It is recommended that tubing used within this shaded area be pre-assembled in a pre-assembly tool prior to installation.

DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

Using single ferrule OD compression fittings with nylon and other soft tubing



Waverley's single ferrule OD compression fittings have a unique design feature which allows you to assemble the compression joint in the normal way without the need for a tube insert.

Single ferrule compression fittings will work perfectly well with most types of soft tubing as long as the tube has a wall thickness of 1mm or above.

If the compression fittings are to be used with glass tubing, PTFE ferrules can be supplied.

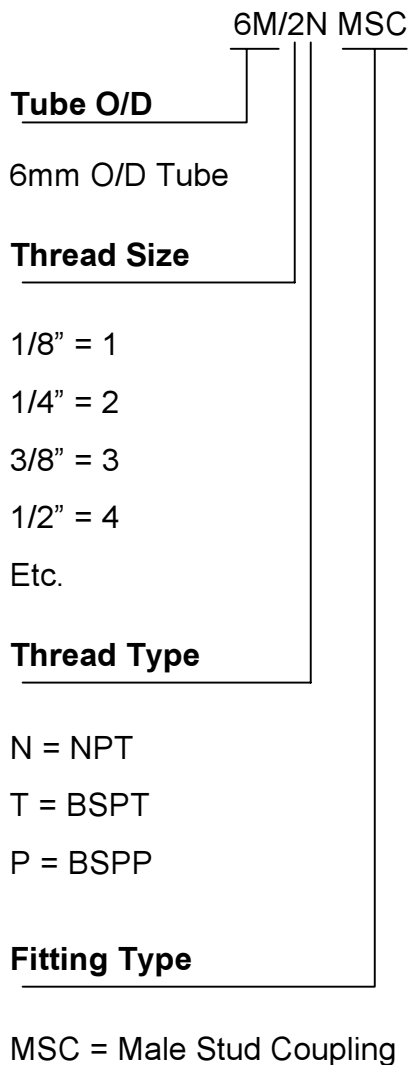
NB Wall thickness of soft tubing must be a minimum of 1mm.

DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

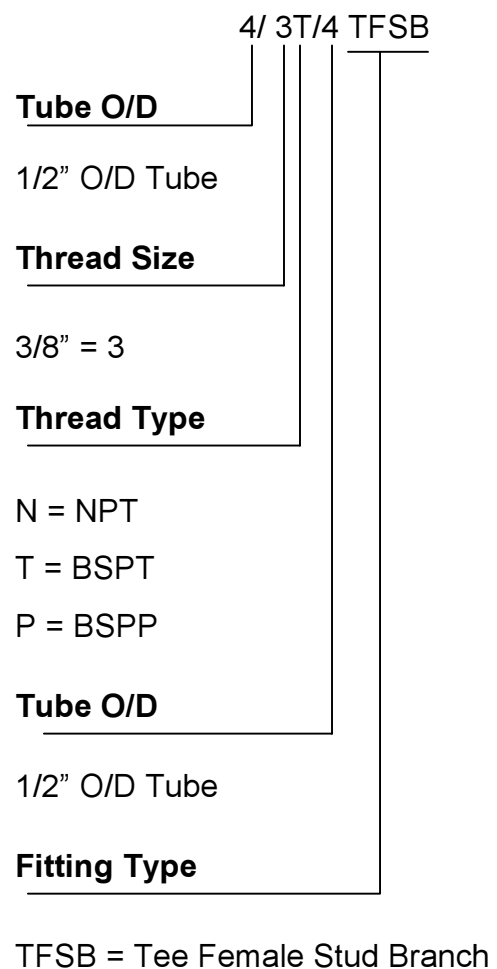
How to order

When ordering Duoloc fittings always quote the part number. This is built up from the fitting description, tube o.d, connecting thread size (this is made up from multiples of 1/8 ths), material and thread type. In the metric ordering example below a fitting for 6mm o.d tube is required to a 1/4" NPT male end. In the imperial ordering example below a Tee fitting is required for 1/2" o.d tube with a 3/8" BSPT female outlet branch.

Metric ordering example



Imperial ordering example



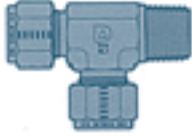
TUBE TO MALE THREAD

Male Stud Coupling



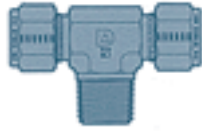
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Male Run Tee



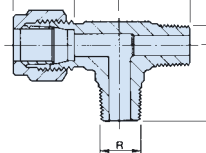
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Male Branch Tee



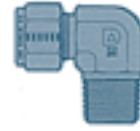
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Male Run Male Branch



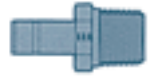
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Male Stud Elbow



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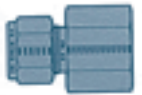
Male Stud Standpipe



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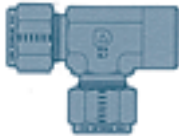
TUBE TO FEMALE THREAD

Female Stud Coupling



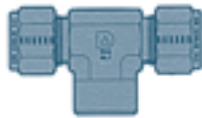
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Female Run Tee



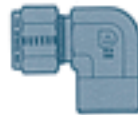
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Female Branch Tee



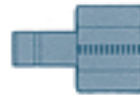
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Female Stud Elbow



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Female Stud Standpipe



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TUBE TO TUBE

Straight Coupling



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Reducing Coupling



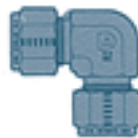
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Bulkhead Coupling



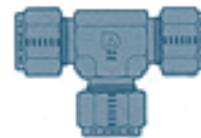
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Equal Elbow



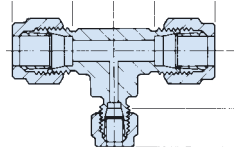
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Equal Tee



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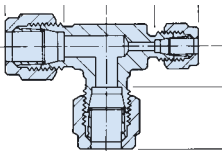
Tee - Unequal Branch



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TUBE TO TUBE

Tee - Unequal Run



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Equal Cross



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ALTERNATIVE CONNECTIONS

Thermo Coupling



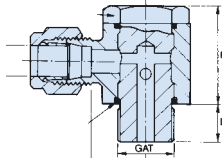
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Reducing Adaptor



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BSP Banjo Coupling



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ACCESSORIES

Blanking Plug



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Blanking End



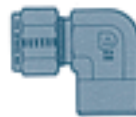
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Compression Nut



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OD Ferrule



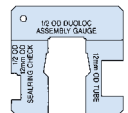
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Pre-Assembly Tool



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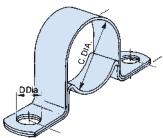
Assembly Check Gauge



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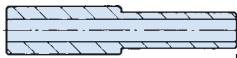
ACCESSORIES

Page Clips



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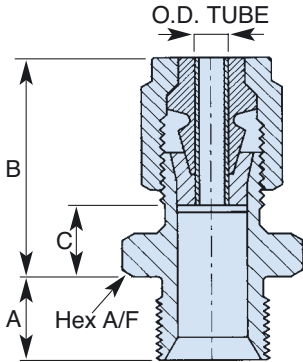
Reducing Standpipe



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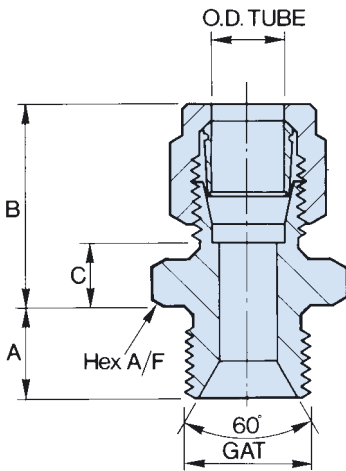
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

BSP parallel male stud coupling



OD tube	thread size GAT	part number	A	B	C	hex A/F
1/8"	1/8" BSP	1/1P MSC	0.450"	0.970"	0.370"	0.562"
1/8"	1/4" BSP	1/2P MSC	0.450"	1.033"	0.370"	0.750"
1/8"	3/8" BSP	1/3P MSC	0.530"	1.064"	0.370"	0.875"
1/8"	1/2" BSP	1/4P MSC	0.600"	1.095"	0.432"	1.125"
3/16"	1/8" BSP	3/16/1P MSC	0.450"	1.003"	0.370"	0.562"
3/16"	1/4" BSP	3/16/2P MSC	0.450"	1.066"	0.370"	0.750"
3/16"	3/8" BSP	3/16/3P MSC	0.530"	1.097"	0.370"	0.875"
3/16"	1/2" BSP	3/16/4P MSC	0.600"	1.128"	0.432"	1.125"

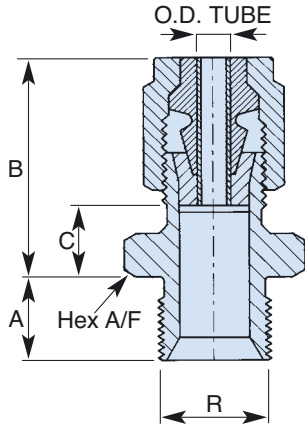
BSP parallel male stud coupling



OD tube	thread size GAT	part number	A	B	C	hex A/F
1/4"	1/8" BSP	2/1P MSC	0.450"	0.906"	0.370"	0.562"
1/4"	1/4" BSP	2/2P MSC	0.450"	0.969"	0.370"	0.750"
1/4"	3/8" BSP	2/3P MSC	0.530"	1.000"	0.370"	0.875"
1/4"	1/2" BSP	2/4P MSC	0.600"	1.031"	0.432"	1.125"
3/8"	1/8" BSP	3/1P MSC	0.450"	1.062"	0.402"	0.750"
3/8"	1/4" BSP	3/2P MSC	0.450"	1.062"	0.402"	0.750"
3/8"	3/8" BSP	3/3P MSC	0.530"	1.094"	0.402"	0.875"
3/8"	1/2" BSP	3/4P MSC	0.600"	1.125"	0.464"	1.125"
1/2"	1/4" BSP	4/2P MSC	0.450"	1.188"	0.402"	0.875"
1/2"	3/8" BSP	4/3P MSC	0.530"	1.188"	0.402"	0.875"
1/2"	1/2" BSP	4/4P MSC	0.600"	1.218"	0.464"	1.125"
1/2"	3/4" BSP	4/6P MSC	0.750"	1.218"	0.527"	1.300"
1/2"	1" BSP	4/8P MSC	0.800"	1.218"	0.527"	1.670"
3/4"	3/8" BSP	6/3P MSC	0.530"	1.406"	0.588"	1.125"
3/4"	1/2" BSP	6/4P MSC	0.600"	1.406"	0.535"	1.125"
3/4"	3/4" BSP	6/6P MSC	0.750"	1.406"	0.588"	1.300"
3/4"	1" BSP	6/8P MSC	0.800"	1.406"	0.588"	1.670"
1"	1/2" BSP	8/4P MSC	0.600"	1.625"	0.588"	1.500"
1"	3/4" BSP	8/6P MSC	0.750"	1.625"	0.588"	1.500"
1"	1" BSP	8/8P MSC	0.800"	1.625"	0.588"	1.670"

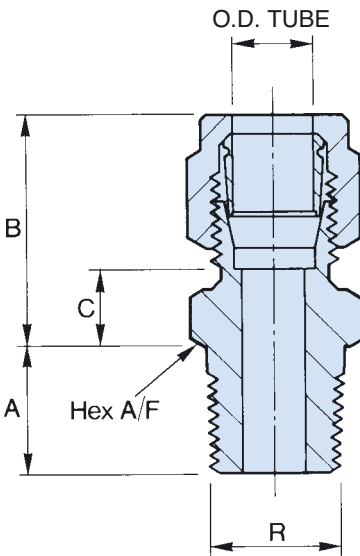
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

BSPT male stud coupling



OD tube	thread size R	part number	A	B	C	hex A/F
1/8"	1/8" BSPT	1/1T MSC	0.375"	0.970"	0.370"	0.562"
1/8"	1/4" BSPT	1/2T MSC	0.500"	1.033"	0.370"	0.562"
1/8"	3/8" BSPT	1/3T MSC	0.562"	1.064"	0.370"	0.750"
1/8"	1/2" BSPT	1/4T MSC	0.687"	1.095"	0.432"	0.875"
3/16"	1/8" BSPT	3/16/1T MSC	0.375"	1.003"	0.370"	0.562"
3/16"	1/4" BSPT	3/16/2T MSC	0.500"	1.066"	0.370"	0.562"
3/16"	3/8" BSPT	3/16/3T MSC	0.562"	1.097"	0.370"	0.750"
3/16"	1/2" BSPT	3/16/4T MSC	0.687"	1.128"	0.432"	0.875"

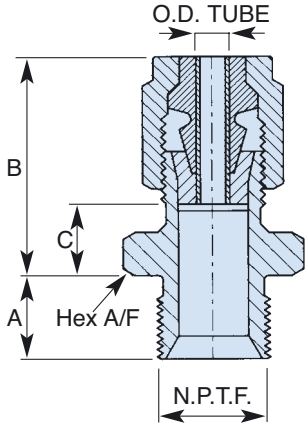
BSPT male stud coupling



OD tube	thread size R	part number	A	B	C	hex A/F
1/4"	1/8" BSPT	2/1T MSC	0.375"	0.906"	0.370"	0.562"
1/4"	1/4" BSPT	2/2T MSC	0.500"	0.969"	0.370"	0.562"
1/4"	3/8" BSPT	2/3T MSC	0.562"	1.000"	0.370"	0.750"
1/4"	1/2" BSPT	2/4T MSC	0.687"	1.031"	0.432"	1.875"
3/8"	1/8" BSPT	3/1T MSC	0.375"	1.062"	0.402"	0.750"
3/8"	1/4" BSPT	3/2T MSC	0.500"	1.062"	0.402"	0.750"
3/8"	3/8" BSPT	3/3T MSC	0.562"	1.094"	0.402"	0.750"
3/8"	1/2" BSPT	3/4T MSC	0.687"	1.125"	0.464"	0.875"
3/8"	3/4" BSPT	3/6T MSC	0.750"	1.125"	0.527"	1.125"
1/2"	1/8" BSPT	4/1T MSC	0.375"	1.188"	0.402"	0.875"
1/2"	1/4" BSPT	4/2T MSC	0.500"	1.188"	0.402"	0.875"
1/2"	3/8" BSPT	4/3T MSC	0.562"	1.188"	0.402"	0.875"
1/2"	1/2" BSPT	4/4T MSC	0.687"	1.218"	0.464"	0.875"
1/2"	3/4" BSPT	4/6T MSC	0.750"	1.218"	0.527"	1.125"
1/2"	1" BSPT	4/8T MSC	0.875"	1.218"	0.527"	1.375"
3/4"	3/8" BSPT	6/3T MSC	0.562"	1.406"	0.588"	1.125"
3/4"	1/2" BSPT	6/4T MSC	0.687"	1.406"	0.535"	1.125"
3/4"	3/4" BSPT	6/6T MSC	0.750"	1.406"	0.588"	1.125"
3/4"	1" BSPT	6/8T MSC	0.875"	1.406"	0.588"	1.375"
1"	1/2" BSPT	8/4T MSC	0.687"	1.625"	0.588"	1.500"
1"	3/4" BSPT	8/6T MSC	0.750"	1.625"	0.588"	1.500"
1"	1" BSPT	8/8T MSC	0.875"	1.625"	0.585"	1.500"

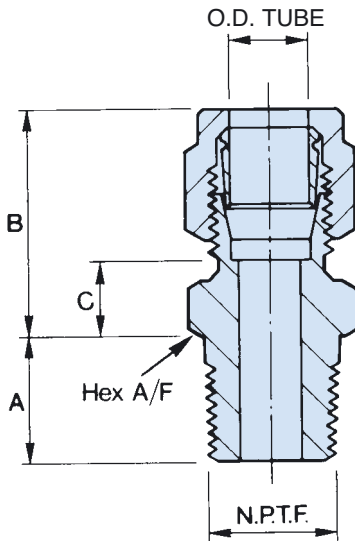
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

NPTF male stud coupling



OD tube	thread size NPTF	part number	A	B	C	hex A/F
1/8"	1/8" NPTF	1/1N MSC	0.375"	0.970"	0.370"	0.562"
1/8"	1/4" NPTF	1/2N MSC	0.500"	1.033"	0.370"	0.562"
1/8"	3/8" NPTF	1/3N MSC	0.562"	1.064"	0.370"	0.750"
1/8"	1/2" NPTF	1/4N MSC	0.687"	1.095"	0.432"	0.875"
3/16"	1/8" NPTF	3/16/1N MSC	0.375"	1.003"	0.370"	0.562"
3/16"	1/4" NPTF	3/16/2N MSC	0.500"	1.066"	0.370"	0.562"
3/16"	3/8" NPTF	3/16/3N MSC	0.562"	1.097"	0.370"	0.750"
3/16"	1/2" NPTF	3/16/4N MSC	0.687"	1.128"	0.432"	0.875"

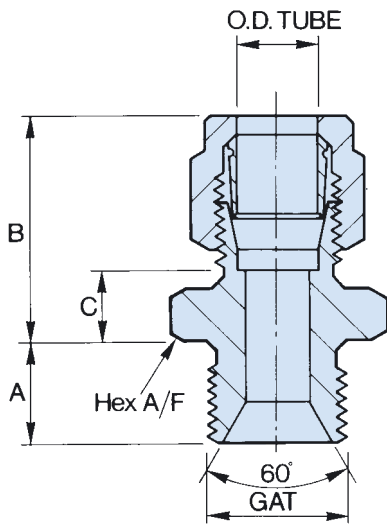
NPTF male stud coupling



OD tube	thread size NPTF	part number	A	B	C	hex A/F
1/4"	1/8" NPTF	2/1N MSC	0.375"	0.906"	0.370"	0.562"
1/4"	1/4" NPTF	2/2N MSC	0.500"	0.969"	0.370"	0.562"
1/4"	3/8" NPTF	2/3N MSC	0.562"	1.000"	0.370"	0.750"
1/4"	1/2" NPTF	2/4N MSC	0.687"	1.031"	0.432"	0.875"
3/8"	1/8" NPTF	3/1N MSC	0.375"	1.062"	0.402"	0.750"
3/8"	1/4" NPTF	3/2N MSC	0.500"	1.062"	0.402"	0.750"
3/8"	3/8" NPTF	3/3N MSC	0.562"	1.094"	0.402"	0.750"
3/8"	1/2" NPTF	3/4N MSC	0.687"	1.125"	0.464"	0.875"
1/2"	1/8" NPTF	4/1N MSC	0.375"	1.188"	0.402"	0.875"
1/2"	1/4" NPTF	4/2N MSC	0.500"	1.188"	0.402"	0.875"
1/2"	3/8" NPTF	4/3N MSC	0.562"	1.188"	0.402"	0.875"
1/2"	1/2" NPTF	4/4N MSC	0.687"	1.218"	0.464"	0.875"
1/2"	3/4" NPTF	4/6N MSC	0.750"	1.218"	0.527"	1.125"
1/2"	1" NPTF	4/8N MSC	0.875"	1.218"	0.526"	1.375"
3/4"	3/8" NPTF	6/3N MSC	0.562"	1.406"	0.535"	1.125"
3/4"	1/2" NPTF	6/4N MSC	0.687"	1.406"	0.535"	1.125"
3/4"	3/4" NPTF	6/6N MSC	0.750"	1.406"	0.588"	1.125"
3/4"	1" NPTF	6/8N MSC	0.875"	1.406"	0.588"	1.375"
1"	1/2" NPTF	8/4N MSC	0.687"	1.625"	0.588"	1.500"
1"	3/4" NPTF	8/6N MSC	0.750"	1.625"	0.588"	1.500"
1"	1" NPTF	8/8N MSC	0.875"	1.625"	0.585"	1.500"

DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

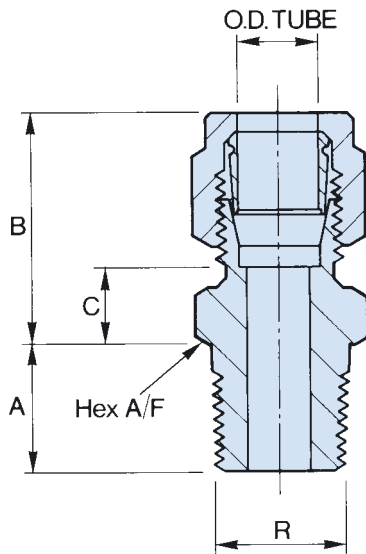
BSP parallel male stud coupling



OD tube	thread size GAT	part number	A	B	C	hex A/F
6mm	1/8" BSP	6m/1P MSC	11.5mm	24.0mm	9.5mm	14.0mm
6mm	1/4" BSP	6m/2P MSC	11.5mm	24.0mm	9.5mm	19.0mm
6mm	3/8" BSP	6m/3P MSC	13.5mm	24.0mm	9.5mm	22.0mm
6mm	1/2" BSP	6m/4P MSC	15.0mm	24.0mm	11.0mm	28.5mm
8mm	1/8" BSP	8m/1P MSC	11.5mm	27.0mm	8.5mm	17.0mm
8mm	1/4" BSP	8m/2P MSC	11.5mm	27.0mm	8.5mm	19.0mm
8mm	3/8" BSP	8m/3P MSC	13.5mm	27.0mm	8.5mm	22.0mm
8mm	1/2" BSP	8m/4P MSC	15.0mm	27.0mm	10.0mm	28.5mm
10mm	1/8" BSP	10m/1P MSC	11.5mm	27.0mm	9.0mm	19.0mm
10mm	1/4" BSP	10m/2P MSC	11.5mm	27.0mm	9.0mm	19.0mm
10mm	3/8" BSP	10m/3P MSC	13.5mm	27.0mm	9.0mm	22.0mm
10mm	1/2" BSP	10m/4P MSC	15.0mm	27.0mm	10.5mm	28.5mm
12mm	1/4" BSP	12m/2P MSC	11.5mm	27.0mm	9.0mm	19.0mm
12mm	3/8" BSP	12m/3P MSC	13.5mm	27.0mm	9.0mm	22.0mm
12mm	1/2" BSP	12m/4P MSC	15.0mm	27.0mm	10.5mm	28.5mm
12mm	3/4" BSP	12m/6P MSC	19.0mm	27.0mm	12.0mm	33.0mm
15mm	1/4" BSP	15m/2P MSC	11.5mm	29.0mm	9.5mm	19.0mm
15mm	3/8" BSP	15m/3P MSC	13.5mm	29.0mm	9.5mm	24.0mm
15mm	1/2" BSP	15m/4P MSC	15.0mm	29.0mm	11.0mm	28.5mm
15mm	3/4" BSP	15m/6P MSC	19.0mm	29.0mm	12.5mm	33.0mm
16mm	1/2" BSP	16m/4P MSC	15.0mm	32.5mm	11.0mm	28.5mm
16mm	3/4" BSP	16m/6P MSC	19.0mm	32.5mm	11.0mm	33.0mm
18mm	3/4" BSP	18m/6P MSC	19.0mm	35.0mm	13.5mm	33.0mm
20mm	1/2" BSP	20m/4P MSC	15.0mm	35.8mm	14.5mm	33.0mm
20mm	3/4" BSP	20m/6P MSC	19.0mm	35.8mm	14.5mm	33.0mm
20mm	1" BSP	20m/8P MSC	20.5mm	35.8mm	14.5mm	42.5mm
22mm	1/2" BSP	22m/4P MSC	15.0mm	38.0mm	14.5mm	33.0mm
22mm	3/4" BSP	22m/6P MSC	19.0mm	38.0mm	14.5mm	33.0mm
22mm	1" BSP	22m/8P MSC	20.5mm	38.0mm	14.5mm	42.5mm
25mm	1" BSP	25m/8P MSC	20.5mm	39.8mm	14.5mm	42.5mm

DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

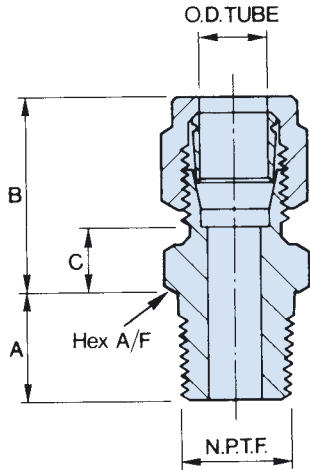
BSPT male stud coupling



OD tube	thread size R	part number	A	B	C	hex A/F
6mm	1/8" BSPT	6m/1T MSC	9.5mm	24.0mm	9.5mm	14.0mm
6mm	1/4" BSPT	6m/2T MSC	12.5mm	24.0mm	9.5mm	14.0mm
6mm	3/8" BSPT	6m/3T MSC	14.0mm	24.0mm	9.5mm	19.0mm
6mm	1/2" BSPT	6m/4T MSC	17.5mm	24.0mm	11.0mm	22.0mm
8mm	1/8" BSPT	8m/1T MSC	9.5mm	27.0mm	8.5mm	17.0mm
8mm	1/4" BSPT	8m/2T MSC	12.5mm	27.0mm	8.5mm	17.0mm
8mm	3/8" BSPT	8m/3T MSC	14.0mm	27.0mm	8.5mm	19.0mm
8mm	1/2" BSPT	8m/4T MSC	17.5mm	27.0mm	10.0mm	22.0mm
10mm	1/8" BSPT	10m/1T MSC	9.5mm	27.0mm	9.0mm	19.0mm
10mm	1/4" BSPT	10m/2T MSC	12.5mm	27.0mm	9.0mm	19.0mm
10mm	3/8" BSPT	10m/3T MSC	14.0mm	27.0mm	9.0mm	19.0mm
10mm	1/2" BSPT	10m/4T MSC	17.5mm	27.0mm	10.5mm	22.0mm
12mm	1/4" BSPT	12m/2T MSC	12.5mm	27.0mm	9.0mm	19.0mm
12mm	3/8" BSPT	12m/3T MSC	14.0mm	27.0mm	9.0mm	19.0mm
12mm	1/2" BSPT	12m/4T MSC	17.5mm	27.0mm	10.5mm	22.0mm
12mm	3/4" BSPT	12m/6T MSC	19.0mm	27.0mm	12.0mm	28.5mm
15mm	1/4" BSPT	15m/2T MSC	12.5mm	29.0mm	10.5mm	24.0mm
15mm	3/8" BSPT	15m/3T MSC	14.0mm	29.0mm	10.5mm	24.0mm
15mm	1/2" BSPT	15m/4T MSC	17.5mm	29.0mm	11.0mm	24.0mm
15mm	3/4" BSPT	15m/6T MSC	19.0mm	29.0mm	12.5mm	28.5mm
16mm	1/2" BSPT	16m/4T MSC	17.5mm	32.5mm	11.0mm	27.0mm
16mm	3/4" BSPT	16m/6T MSC	19.0mm	32.5mm	11.0mm	28.5mm
18mm	3/4" BSPT	18m/6T MSC	19.0mm	35.0mm	13.5mm	28.5mm
20mm	1/2" BSPT	20m/4T MSC	17.5mm	35.8mm	14.5mm	33.0mm
20mm	3/4" BSPT	20m/6T MSC	19.0mm	35.8mm	14.5mm	33.0mm
20mm	1" BSPT	20m/8T MSC	22.0mm	35.8mm	14.5mm	35.0mm
22mm	3/8" BSPT	22m/3T MSC	14.0mm	38.0mm	14.5mm	33.0mm
22mm	1/2" BSPT	22m/4T MSC	17.5mm	38.0mm	14.5mm	33.0mm
22mm	3/4" BSPT	22m/6T MSC	19.0mm	38.0mm	14.5mm	33.0mm
22mm	1" BSPT	22m/8T MSC	22.0mm	38.0mm	14.5mm	35.0mm
25mm	3/4" BSPT	25m/6T MSC	19.0mm	39.8mm	14.5mm	38.0mm
25mm	1" BSPT	25m/8T MSC	22.0mm	39.8mm	14.5mm	38.0mm

DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

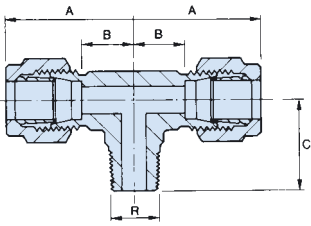
NPTF male stud coupling



OD tube	thread size NPTF	part number	A	B	C	hex A/F
6mm	1/8" NPTF	6m/1N MSC	9.5mm	24.0mm	9.5mm	14.0mm
6mm	1/4" NPTF	6m/2N MSC	12.5mm	24.0mm	9.5mm	14.0mm
6mm	3/8" NPTF	6m/3N MSC	14.0mm	24.0mm	9.5mm	19.0mm
6mm	1/2" NPTF	6m/4N MSC	17.5mm	24.0mm	11.0mm	22.0mm
8mm	1/8" NPTF	8m/1N MSC	9.5mm	27.0mm	8.5mm	17.0mm
8mm	1/4" NPTF	8m/2N MSC	12.5mm	27.0mm	8.5mm	17.0mm
8mm	3/8" NPTF	8m/3N MSC	14.0mm	27.0mm	8.5mm	19.0mm
8mm	1/2" NPTF	8m/4N MSC	17.5mm	27.0mm	10.0mm	22.0mm
10mm	1/8" NPTF	10m/1N MSC	9.5mm	27.0mm	9.0mm	19.0mm
10mm	1/4" NPTF	10m/2N MSC	12.5mm	27.0mm	9.0mm	19.0mm
10mm	3/8" NPTF	10m/3N MSC	14.0mm	27.0mm	9.0mm	19.0mm
10mm	1/2" NPTF	10m/4N MSC	17.5mm	27.0mm	10.5mm	22.0mm
12mm	1/4" NPTF	12m/2N MSC	17.5mm	27.0mm	9.0mm	19.0mm
12mm	3/8" NPTF	12m/3N MSC	14.0mm	27.0mm	9.0mm	19.0mm
12mm	1/2" NPTF	12m/4N MSC	17.5mm	27.0mm	10.5mm	22.0mm
12mm	3/4" NPTF	12m/6N MSC	19.0mm	27.0mm	12.0mm	24.0mm
15mm	1/4" NPTF	15m/2N MSC	12.5mm	29.0mm	9.5mm	24.0mm
15mm	3/8" NPTF	15m/3N MSC	14.0mm	29.0mm	9.5mm	24.0mm
15mm	1/2" NPTF	15m/4N MSC	17.5mm	29.0mm	11.0mm	28.5mm
15mm	3/4" NPTF	15m/6N MSC	19.0mm	29.0mm	12.5mm	28.5mm
16mm	1/2" NPTF	16m/4N MSC	17.5mm	32.5mm	11.0mm	27.0mm
16mm	3/4" NPTF	16m/6N MSC	19.0mm	32.5mm	11.0mm	28.5mm
18mm	3/4" NPTF	18m/6N MSC	19.0mm	35.0mm	13.5mm	28.5mm
20mm	1/2" NPTF	20m/4N MSC	17.5mm	35.8mm	14.5mm	33.0mm
20mm	3/4" NPTF	20m/6N MSC	19.0mm	35.8mm	14.5mm	33.0mm
20mm	1" NPTF	20m/8N MSC	22.0mm	35.8mm	14.5mm	35.0mm
22mm	1/2" NPTF	22m/4N MSC	17.5mm	38.0mm	14.5mm	33.0mm
22mm	3/4" NPTF	22m/6N MSC	19.0mm	38.0mm	14.5mm	33.0mm
22mm	1" NPTF	22m/8N MSC	22.0mm	38.0mm	14.5mm	33.0mm
25mm	3/4" NPTF	25m/6N MSC	19.0mm	39.8mm	14.5mm	38.0mm
25mm	1" NPTF	25m/8N MSC	22.0mm	39.8mm	14.5mm	38.0mm

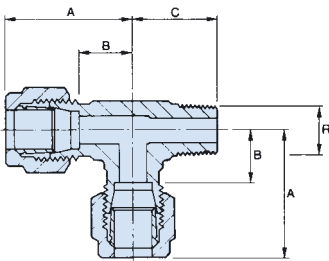
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

Tee – BSPT male stud branch



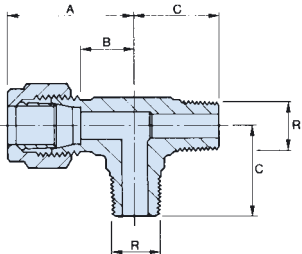
run OD	branch R	run OD	part number	A	B	C
1/4"	1/8" BSPT	1/4"	2/1T/2 TMSB	1.156"	0.567"	0.826"
1/4"	1/4" BSPT	1/4"	2/2T/2 TMSB	1.156"	0.567"	0.937"
3/8"	1/4" BSPT	3/8"	3/2T/3 TMSB	1.250"	0.593"	0.937"
3/8"	3/8" BSPT	3/8"	3/3T/3 TMSB	1.250"	0.593"	1.125"
1/2"	1/4" BSPT	1/2"	4/2T/4 TMSB	1.437"	0.687"	0.937"
1/2"	3/8" BSPT	1/2"	4/3T/4 TMSB	1.437"	0.687"	1.125"
1/2"	1/2" BSPT	1/2"	4/4T/4 TMSB	1.437"	0.687"	1.375"

Tee – BSPT male stud run



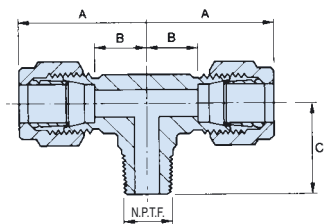
run OD	branch OD	run R	part number	A	B	C
1/4"	1/4"	1/8" BSPT	2/2/1T TMSR	1.156"	0.567"	0.826"
1/4"	1/4"	1/4" BSPT	2/2/2T TMSR	1.156"	0.567"	0.937"
3/8"	3/8"	1/4" BSPT	3/3/2T TMSR	1.250"	0.593"	0.937"
3/8"	3/8"	3/8" BSPT	3/3/3T TMSR	1.250"	0.593"	1.125"
1/2"	1/2"	1/4" BSPT	4/4/2T TMSR	1.437"	0.687"	0.937"
1/2"	1/2"	3/8" BSPT	4/4/3T TMSR	1.437"	0.687"	1.125"

Tee – BSPT male stud run and BSPT male branch



run OD	branch R	run R	part number	A	B	C
1/4"	1/8" BSPT	1/8" BSPT	2/1T/1T MBMR	1.156"	0.567"	0.826"
1/4"	1/4" BSPT	1/4" BSPT	2/2T/2T MBMR	1.156"	0.567"	0.937"
3/8"	1/4" BSPT	1/4" BSPT	3/2T/2T MBMR	1.250"	0.593"	0.937"
1/2"	1/4" BSPT	1/4" BSPT	4/2T/2T MBMR	1.437"	0.687"	0.937"
1/2"	3/8" BSPT	3/8" BSPT	4/3T/3T MBMR	1.437"	0.687"	1.125"

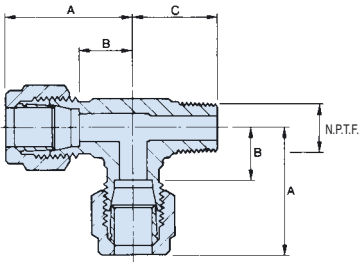
Tee – NPTF male stud branch



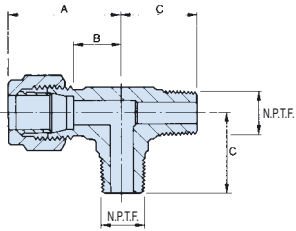
run OD	branch NPTF	run OD	part number	A	B	C
1/4"	1/8" NPTF	1/4"	2/1N/2 TMSB	1.156"	0.567"	0.826"
1/4"	1/4" NPTF	1/4"	2/2N/2 TMSB	1.156"	0.567"	0.937"
3/8"	1/4" NPTF	3/8"	3/2N/3 TMSB	1.250"	0.593"	0.937"
3/8"	3/8" NPTF	3/8"	3/3N/3 TMSB	1.250"	0.593"	1.125"
1/2"	1/4" NPTF	1/2"	4/2N/4 TMSB	1.437"	0.687"	0.937"
1/2"	3/8" NPTF	1/2"	4/3N/4 TMSB	1.437"	0.687"	1.125"
1/2"	1/2" NPTF	1/2"	4/4N/4 TMSB	1.437"	0.687"	1.375"

DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

Tee – NPTF male stud run



Tee – NPTF male stud run and NPTF male branch

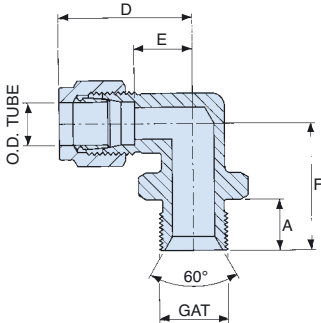


run OD	branch OD	run NPTF	part number	A	B	C
1/4"	1/4"	1/8" NPTF	2/2/1N TMSR	1.156"	0.567"	0.826"
1/4"	1/4"	1/4" NPTF	2/2/2N TMSR	1.156"	0.567"	0.937"
3/8"	3/8"	1/4" NPTF	3/3/2N TMSR	1.250"	0.593"	0.937"
3/8"	3/8"	3/8" NPTF	3/3/3N TMSR	1.250"	0.593"	1.125"
1/2"	1/2"	1/4" NPTF	4/4/2N TMSR	1.437"	0.687"	0.937"
1/2"	1/2"	3/8" NPTF	4/4/3N TMSR	1.437"	0.687"	1.125"

run OD	branch NPTF	run NPTF	part number	A	B	C
1/4"	1/8" NPTF	1/8" NPTF	2/1N/1N MBMR	1.156"	0.567"	0.826"
1/4"	1/4" NPTF	1/4" NPTF	2/2N/2N MBMR	1.156"	0.567"	0.937"
3/8"	1/4" NPTF	1/4" NPTF	3/2N/2N MBMR	1.250"	0.593"	0.937"
1/2"	1/4" NPTF	1/4" NPTF	4/2N/2N MBMR	1.437"	0.687"	1.937"
1/2"	3/8" NPTF	3/8" NPTF	4/3N/3N MBMR	1.437"	0.687"	1.125"

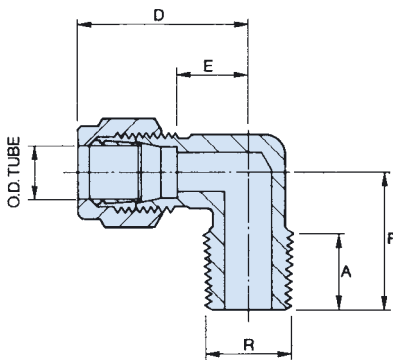
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

BSPP male stud elbow



OD tube	thread size GAT	part number	A	D	E	F
1/8"	1/8" BSP	1/1P MSE	0.450"	1.220"	0.562"	1.063"
1/8"	1/4" BSP	1/2P MSE	0.450"	1.220"	0.562"	1.063"
3/16"	1/8" BSP	3/16/1P MSE	0.450"	1.253"	0.562"	1.063"
3/16"	1/4" BSP	3/16/2P MSE	0.450"	1.253"	0.562"	1.063"
For 1/8" & 3/16" see Assembly Page 7						
1/4"	1/8" BSP	2/1P MSE	0.450"	1.156"	0.562"	1.063"
1/4"	1/4" BSP	2/2P MSE	0.450"	1.156"	0.562"	1.063"
3/8"	1/4" BSP	3/2P MSE	0.450"	1.250"	0.593"	1.063"
3/8"	3/8" BSP	3/3P MSE	0.530"	1.250"	0.593"	1.500"
1/2"	1/4" BSP	4/2P MSE	0.450"	1.437"	0.687"	1.500"
1/2"	3/8" BSP	4/3P MSE	0.530"	1.437"	0.687"	1.500"
1/2"	1/2" BSP	4/4P MSE	0.600"	1.437"	0.687"	1.500"

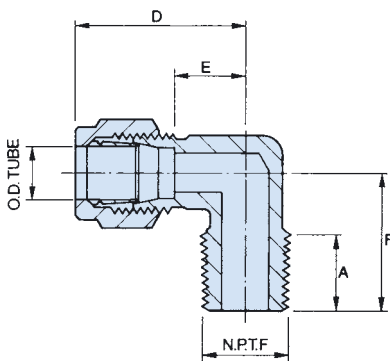
BSPT male stud elbow



OD tube	thread size R	part number	A	D	E	F
1/8"	1/8" BSPT	1/1T MSE	0.375"	1.220"	0.562"	0.868"
1/8"	1/4" BSPT	1/2T MSE	0.500"	1.220"	0.562"	0.958"
1/8"	3/8" BSPT	1/3T MSE	0.562"	1.220"	0.562"	1.187"
1/8"	1/2" BSPT	1/4T MSE	0.687"	1.220"	0.707"	1.311"
3/16"	1/8" BSPT	3/16/1T MSE	0.375"	1.253"	0.562"	0.868"
3/16"	1/4" BSPT	3/16/2T MSE	0.500"	1.253"	0.562"	0.958"
3/16"	3/8" BSPT	3/16/3T MSE	0.562"	1.253"	0.562"	1.187"
3/16"	1/2" BSPT	3/16/4T MSE	0.687"	1.253"	0.707"	1.311"
For 1/8" & 3/16" see Assembly Page 7						
1/4"	1/8" BSPT	2/1T MSE	0.375"	1.156"	0.562"	0.868"
1/4"	1/4" BSPT	2/2T MSE	0.500"	1.156"	0.562"	0.958"
1/4"	3/8" BSPT	2/3T MSE	0.562"	1.156"	0.562"	1.187"
1/4"	1/2" BSPT	2/4T MSE	0.687"	1.274"	0.707"	1.311"
3/8"	1/4" BSPT	3/2T MSE	0.500"	1.250"	0.593"	1.125"
3/8"	3/8" BSPT	3/3T MSE	0.562"	1.250"	0.593"	1.187"
3/8"	1/2" BSPT	3/4T MSE	0.687"	1.437"	0.777"	1.311"
1/2"	1/4" BSPT	4/2T MSE	0.500"	1.437"	0.687"	1.125"
1/2"	3/8" BSPT	4/3T MSE	0.562"	1.437"	0.687"	1.375"
1/2"	1/2" BSPT	4/4T MSE	0.687"	1.437"	0.687"	1.375"
3/4"	1/2" BSPT	6/4T MSE	0.687"	1.843"	1.000"	1.625"
3/4"	3/4" BSPT	6/6T MSE	0.750"	1.843"	1.000"	1.688"
1"	3/4" BSPT	8/6T MSE	0.750"	2.501"	1.085"	1.594"
1"	1" BSPT	8/8T MSE	0.875"	2.407"	0.991"	1.556"

DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

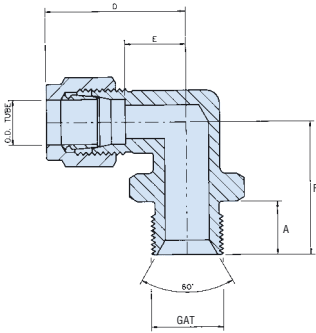
NPTF male stud elbow



OD tube	thread size NPTF	part number	A	D	E	F
1/8"	1/8" NPTF	1/1N MSE	0.375"	1.220"	0.562"	0.868"
1/8"	1/4" NPTF	1/2N MSE	0.500"	1.220"	0.562"	0.958"
1/8"	3/8" NPTF	1/3N MSE	0.562"	1.220"	0.562"	1.187"
1/8"	1/2" NPTF	1/4N MSE	0.687"	1.220"	0.707"	1.311"
3/16"	1/8" NPTF	3/16/1N MSE	0.375"	1.253"	0.562"	0.868"
3/16"	1/4" NPTF	3/16/2N MSE	0.500"	1.253"	0.562"	0.958"
3/16"	3/8" NPTF	3/16/3N MSE	0.562"	1.253"	0.562"	1.187"
3/16"	1/2" NPTF	3/16/4N MSE	0.687"	1.253"	0.707"	1.311"
For 1/8" & 3/16" see Assembly Page 7						
1/4"	1/8" NPTF	2/1N MSE	0.375"	1.156"	0.562"	0.868"
1/4"	1/4" NPTF	2/2N MSE	0.500"	1.156"	0.562"	0.958"
1/4"	3/8" NPTF	2/3N MSE	0.562"	1.156"	0.562"	1.187"
1/4"	1/2" NPTF	2/4N MSE	0.687"	1.274"	0.707"	1.311"
3/8"	1/4" NPTF	3/2N MSE	0.500"	1.250"	0.593"	1.125"
3/8"	3/8" NPTF	3/3N MSE	0.562"	1.250"	0.593"	1.187"
3/8"	1/2" NPTF	3/4N MSE	0.687"	1.437"	0.777"	1.311"
1/2"	1/4" NPTF	4/2N MSE	0.500"	1.437"	0.687"	1.125"
1/2"	3/8" NPTF	4/3N MSE	0.562"	1.437"	0.687"	1.375"
1/2"	1/2" NPTF	4/4N MSE	0.687"	1.437"	0.687"	1.375"
3/4"	1/2" NPTF	6/4N MSE	0.687"	1.843"	1.000"	1.625"
3/4"	3/4" NPTF	6/6N MSE	0.750"	1.843"	1.000"	1.688"
1"	3/4" NPTF	8/6N MSE	0.750"	2.501"	1.085"	1.594"
1"	1" NPTF	8/8N MSE	0.875"	2.407"	0.991"	1.566"

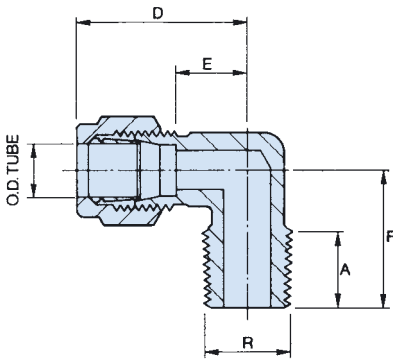
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

BSPP male stud elbow



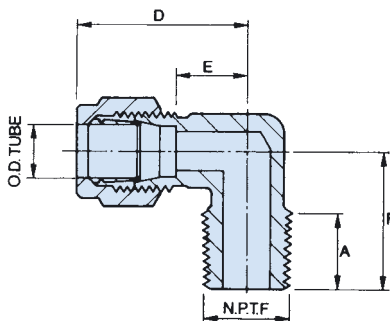
OD tube	thread size GAT	part number	A	D	E	F
6mm	1/8" BSP	6m/1P MSE	11.5mm	30.0mm	15.0mm	27.0mm
6mm	1/4" BSP	6m/2P MSE	11.5mm	30.0mm	15.0mm	27.0mm
8mm	1/4" BSP	8m/2P MSE	11.5mm	33.0mm	15.0mm	27.0mm
10mm	1/4" BSP	10m/2P MSE	11.5mm	33.0mm	15.0mm	27.0mm
10mm	3/8" BSP	10m/3P MSE	13.5mm	33.0mm	15.0mm	38.0mm
10mm	1/2" BSP	10m/4P MSE	15.0mm	33.0mm	17.0mm	38.0mm
12mm	1/4" BSP	12m/2P MSE	11.5mm	36.0mm	17.0mm	38.0mm
12mm	3/8" BSP	12m/3P MSE	13.5mm	36.0mm	17.0mm	38.0mm
12mm	1/2" BSP	12m/4P MSE	15.0mm	36.0mm	17.0mm	38.0mm

BSPT male stud elbow



OD tube	thread size R	part number	A	D	E	F
6mm	1/8" BSPT	6m/1T MSE	10.0mm	30.0mm	15.0mm	23.0mm
6mm	1/4" BSPT	6m/2T MSE	13.0mm	30.0mm	15.0mm	26.0mm
8mm	1/8" BSPT	8m/1T MSE	10.0mm	33.0mm	15.0mm	24.0mm
8mm	1/4" BSPT	8m/2T MSE	13.0mm	33.0mm	15.0mm	26.0mm
10mm	1/4" BSPT	10m/2T MSE	13.0mm	33.0mm	15.0mm	26.0mm
10mm	3/8" BSPT	10m/3T MSE	14.0mm	33.0mm	15.0mm	26.0mm
10mm	1/2" BSPT	10m/4T MSE	17.0mm	33.0mm	15.0mm	35.0mm
12mm	1/4" BSPT	12m/2T MSE	13.0mm	36.0mm	17.0mm	29.0mm
12mm	3/8" BSPT	12m/3T MSE	14.0mm	36.0mm	17.0mm	30.0mm
12mm	1/2" BSPT	12m/4T MSE	17.0mm	36.0mm	17.0mm	35.0mm
12mm	3/4" BSPT	12m/6T MSE	19.0mm	36.0mm	17.0mm	38.0mm
15mm	1/2" BSPT	15m/4T MSE	17.0mm	46.0mm	26.0mm	38.0mm
15mm	3/4" BSPT	15m/6T MSE	19.0mm	46.0mm	26.0mm	38.0mm
16mm	1/2" BSPT	16m/4T MSE	17.0mm	48.0mm	26.0mm	38.0mm
18mm	3/4" BSPT	18m/6T MSE	19.0mm	48.0mm	26.0mm	38.0mm
20mm	3/4" BSPT	20m/6T MSE	19.0mm	48.0mm	26.0mm	38.0mm
22mm	1/2" BSPT	22m/4T MSE	17.0mm	52.0mm	28.0mm	38.0mm
22mm	3/4" BSPT	22m/6T MSE	19.0mm	52.0mm	28.0mm	38.0mm
25mm	3/4" BSPT	25m/6T MSE	19.0mm	56.0mm	28.0mm	38.0mm

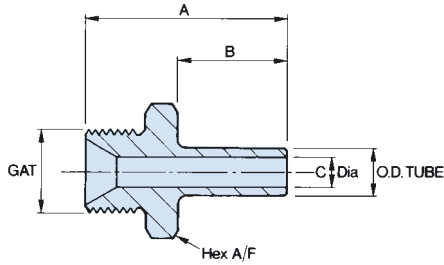
NPTF male stud elbow



OD tube	thread size NPTF	part number	A	D	E	F
6mm	1/8" NPTF	6m/1N MSE	10.0mm	30.0mm	15.0mm	23.0mm
6mm	1/4" NPTF	6m/2N MSE	13.0mm	30.0mm	15.0mm	26.0mm
8mm	1/4" NPTF	8m/2N MSE	13.0mm	33.0mm	15.0mm	26.0mm
10mm	1/4" NPTF	10m/2N MSE	13.0mm	33.0mm	15.0mm	26.0mm
10mm	3/8" NPTF	10m/3N MSE	14.0mm	33.0mm	15.0mm	26.0mm
10mm	1/2" NPTF	10m/4N MSE	17.0mm	30.0mm	15.0mm	35.0mm
12mm	1/4" NPTF	12m/2N MSE	13.0mm	36.0mm	17.0mm	29.0mm
12mm	3/8" NPTF	12m/3N MSE	14.0mm	36.0mm	17.0mm	30.0mm
12mm	1/2" NPTF	12m/4N MSE	17.0mm	36.0mm	17.0mm	35.0mm
12mm	3/4" NPTF	12m/6N MSE	19.0mm	36.0mm	17.0mm	38.0mm
15mm	1/2" NPTF	15m/4N MSE	17.0mm	46.0mm	26.0mm	38.0mm
15mm	3/4" NPTF	15m/6N MSE	19.0mm	46.0mm	26.0mm	38.0mm
16mm	1/2" NPTF	16m/4N MSE	17.0mm	48.0mm	26.0mm	38.0mm
18mm	3/4" NPTF	18m/6N MSE	19.0mm	48.0mm	26.0mm	38.0mm
20mm	3/4" NPTF	20m/6N MSE	19.0mm	48.0mm	26.0mm	38.0mm
22mm	1/2" NPTF	22m/4N MSE	17.0mm	52.0mm	28.0mm	38.0mm
22mm	3/4" NPTF	22m/6N MSE	19.0mm	52.0mm	28.0mm	38.0mm
25mm	3/4" NPTF	25m/6N MSE	19.0mm	56.0mm	28.0mm	38.0mm

DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

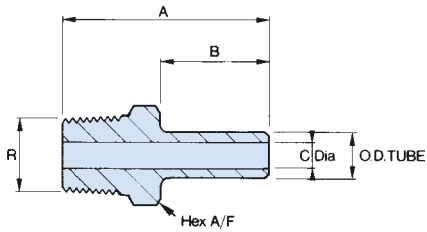
BSP parallel male standpipe adaptor



OD	thread size GAT	part number	A	B	C	hex A/F
1/4"	1/8" BSP	2/1P MSA	1.793"	1.093"	0.100"	0.562"
1/4"	1/4" BSP	2/2P MSA	1.793"	1.093"	0.100"	0.750"
1/4"	3/8" BSP	2/3P MSA	1.873"	1.093"	0.100"	0.875"
1/4"	1/2" BSP	2/4P MSA	2.000"	1.093"	0.100"	1.125"
3/8"	1/4" BSP	3/2P MSA	1.793"	1.093"	0.157"	0.750"
3/8"	3/8" BSP	3/3P MSA	1.873"	1.093"	0.157"	0.875"
3/8"	1/2" BSP	3/4P MSA	2.000"	1.093"	0.157"	1.125"
1/2"	1/4" BSP	4/2P MSA	1.793"	1.093"	0.312"	0.750"
1/2"	3/8" BSP	4/3P MSA	1.873"	1.093"	0.312"	0.875"
1/2"	1/2" BSP	4/4P MSA	2.000"	1.093"	0.312"	1.125"
3/4"	1/2" BSP	6/4P MSA	2.162"	1.250"	0.437"	1.125"
3/4"	3/4" BSP	6/6P MSA	2.375"	1.250"	0.437"	1.300"
1"	3/4" BSP	8/6P MSA	2.625"	1.500"	0.437"	1.300"
1"	1" BSP	8/8P MSA	2.675"	1.500"	0.750"	1.670"
6mm	1/4" BSP	6M/2P MSA	45.5mm	28mm	2.5mm	19mm
10mm	1/4" BSP	10M/2P MSA	45.5mm	28mm	6mm	19mm
10mm	3/8" BSP	10M/3P MSA	47.5mm	28mm	6mm	22mm
10mm	1/2" BSP	10M/4P MSA	50mm	28mm	6mm	28.5mm
12mm	1/4" BSP	12M/2P MSA	45.5mm	28mm	8mm	19mm
12mm	3/8" BSP	12M/3P MSA	47.5mm	28mm	8mm	22mm
12mm	1/2" BSP	12M/4P MSA	50mm	28mm	8mm	28.5mm
15mm	3/8" BSP	15M/3P MSA	50mm	30mm	9.5mm	22mm
15mm	1/2" BSP	15M/4P MSA	53mm	30mm	10mm	28.5mm
16mm	1/2" BSP	16M/4P MSA	53mm	30mm	10mm	28.5mm
18mm	1/2" BSP	18M/4P MSA	53mm	30mm	10mm	28.5mm
20mm	3/4" BSP	20M/6P MSA	59mm	30mm	10mm	33.0mm
22mm	3/4" BSP	22M/6P MSA	62mm	33.5mm	16mm	33.0mm
25mm	3/4" BSP	25M/6P MSA	62mm	33.5mm	16mm	33.0mm

DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

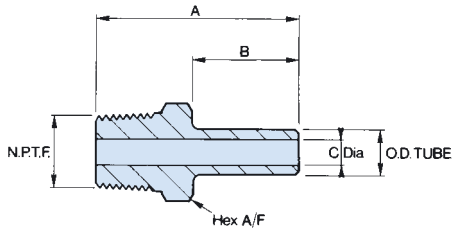
BSPT parallel male standpipe adaptor



OD	thread size R	part number	A	B	C	hex A/F
1/4"	1/8" BSPT	2/1T MSA 1.718"	1.093"	0.100"	0.437"	
1/4"	1/4" BSPT	2/2T MSA 1.843"	1.093"	0.100"	0.562"	
1/4"	3/8" BSPT	2/3T MSA 1.905"	1.093"	0.100"	0.750"	
1/4"	1/2" BSPT	2/4T MSA 2.093"	1.093"	0.100"	0.875"	
3/8"	1/4" BSPT	3/2T MSA 1.843"	1.093"	0.157"	0.562"	
3/8"	3/8" BSPT	3/3T MSA 1.905"	1.093"	0.157"	0.750"	
3/8"	1/2" BSPT	3/4T MSA 2.093"	1.093"	0.157"	0.875"	
1/2"	1/4" BSPT	4/2T MSA 1.843"	1.093"	0.312"	0.562"	
1/2"	3/8" BSPT	4/3T MSA 1.905"	1.093"	0.312"	0.750"	
1/2"	1/2" BSPT	4/4T MSA 2.093"	1.093"	0.312"	0.875"	
3/4"	1/2" BSPT	6/4T MSA 2.250"	1.250"	0.437"	0.875"	
3/4"	3/4" BSPT	6/6T MSA 2.375"	1.250"	0.437"	1.125"	
1"	3/4" BSPT	8/6T MSA 2.625"	1.500"	0.750"	1.125"	
1"	1" BSPT	8/8T MSA 2.750"	1.500"	0.750"	1.375"	
6mm	1/4" BSPT	6M/2T MSA	47mm	26mm	2.5mm	14mm
8mm	1/4" BSPT	8M/2T MSA	47mm	26mm	4mm	14mm
10mm	1/4" BSPT	10M/2T MSA	47mm	26mm	5.5mm	14mm
10mm	3/8" BSPT	10M/3T MSA	47.5mm	26mm	5.5mm	19mm
10mm	1/2" BSPT	10M/4T MSA	51mm	26mm	6mm	22mm
12mm	1/4" BSPT	12M/2T MSA	45mm	26mm	5.5mm	14mm
12mm	3/8" BSPT	12M/3T MSA	48mm	26mm	8mm	19mm
12mm	1/2" BSPT	12M/4T MSA	51mm	26mm	8mm	22mm
15mm	1/2" BSPT	15M/4T MSA	55mm	30mm	11mm	22mm
16mm	1/2" BSPT	16M/4T MSA	55mm	30mm	11mm	22mm
18mm	1/2" BSPT	18M/4T MSA	55mm	30mm	11mm	22mm
20mm	3/4" BSPT	20M/6T MSA	59mm	30mm	11mm	28.5mm
22mm	3/4" BSPT	22M/6T MSA	62mm	33.5mm	16mm	33mm
25mm	3/4" BSPT	25M/6T MSA	62mm	33.5mm	16mm	33mm

DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

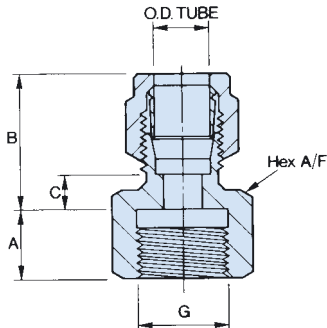
NPTF male standpipe adaptor



OD	thread size NPTF	part number	A	B	C	hex A/F
1/4"	1/8" NPTF	2/1N MSA	1.718"	1.093"	0.100"	0.437"
1/4"	1/4" NPTF	2/2N MSA	1.843"	1.093"	0.100"	0.562"
1/4"	3/8" NPTF	2/3N MSA	1.905"	1.093"	0.100"	0.750"
1/4"	1/2" NPTF	2/4N MSA	2.093"	1.093"	0.100"	1.875"
3/8"	1/4" NPTF	3/2N MSA	1.843"	1.093"	0.235"	0.562"
3/8"	3/8" NPTF	3/3N MSA	1.905"	1.093"	0.235"	0.750"
3/8"	1/2" NPTF	3/4N MSA	2.093"	1.093"	0.235"	0.875"
1/2"	1/4" NPTF	4/2N MSA	1.843"	1.093"	0.250"	0.562"
1/2"	3/8" NPTF	4/3N MSA	1.905"	1.093"	0.312"	0.750"
1/2"	1/2" NPTF	4/4N MSA	2.093"	1.093"	0.312"	0.875"
3/4"	1/2" NPTF	6/4N MSA	2.250"	1.250"	0.500"	0.875"
3/4"	3/4" NPTF	6/6N MSA	2.375"	1.250"	0.500"	1.125"
1"	3/4" NPTF	8/6N MSA	2.625"	1.250"	0.750"	1.125"
1"	1" NPTF	8/8N MSA	2.750"	1.500"	0.750"	1.375"
6mm	1/4" NPTF	6M/2N MSA	44mm	26mm	2.5mm	14mm
8mm	1/4" NPTF	8M/2N MSA	47mm	26mm	4mm	14mm
10mm	1/4" NPTF	10M/2N MSA	47mm	26mm	5.5mm	14mm
10mm	3/8" NPTF	10M/3N MSA	47.5mm	26mm	5.5mm	19mm
10mm	1/2" NPTF	10M/4N MSA	51mm	26mm	6mm	22mm
12mm	1/4" NPTF	12M/2N MSA	45mm	26mm	5.5mm	14mm
12mm	3/8" NPTF	12M/3N MSA	48mm	26mm	8mm	19mm
12mm	1/2" NPTF	12M/4N MSA	51mm	26mm	8mm	22mm
15mm	1/2" NPTF	15M/4N MSA	55mm	30mm	11mm	22mm
16mm	1/2" NPTF	16M/4N MSA	55mm	30mm	11mm	22mm
18mm	1/2" NPTF	18M/4N MSA	55mm	30mm	11mm	22mm
20mm	3/4" NPTF	20M/6N MSA	59mm	30mm	11mm	28.5mm
22mm	3/4" NPTF	22M/6N MSA	62mm	33.5mm	16mm	33mm
25mm	3/4" NPTF	25M/6N MSA	62mm	33.5mm	16mm	33mm

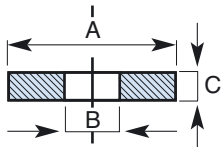
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

BSP parallel female stud coupling



OD tube	thread size G	part number	A	B	C	hex A/F
1/8"	1/8" BSP	1/1P FSC	0.375"	0.970"	0.334"	0.562"
1/8"	1/4" BSP	1/2P FSC	0.437"	0.970"	0.330"	0.750"
1/8"	3/8" BSP	1/3P FSC	0.500"	0.970"	0.340"	0.875"
1/8"	1/2" BSP	1/4P FSC	0.625"	0.970"	0.340"	1.125"
3/16"	1/8" BSP	3/16/1P FSC	0.375"	1.003"	0.334"	0.562"
3/16"	1/4" BSP	3/16/2P FSC	0.437"	1.003"	0.330"	0.750"
3/16"	3/8" BSP	3/16/3P FSC	0.500"	1.003"	0.340"	0.875"
3/16"	1/2" BSP	3/16/4P FSC	0.625"	1.003"	0.340"	1.125"
For 1/8" & 3/16" see Assembly Page 7						
1/4"	1/8" BSP	2/1P FSC	0.375"	0.906"	0.334"	0.562"
1/4"	1/4" BSP	2/2P FSC	0.437"	0.906"	0.330"	0.750"
1/4"	3/8" BSP	2/3P FSC	0.500"	0.906"	0.340"	0.875"
1/4"	1/2" BSP	2/4P FSC	0.625"	0.906"	0.340"	1.125"
3/8"	1/4" BSP	3/2P FSC	0.437"	1.000"	0.340"	0.750"
3/8"	3/8" BSP	3/3P FSC	0.500"	1.000"	0.340"	0.875"
3/8"	1/2" BSP	3/4P FSC	0.625"	1.000"	0.360"	1.125"
1/2"	1/4" BSP	4/2P FSC	0.437"	1.093"	0.360"	0.875"
1/2"	3/8" BSP	4/3P FSC	0.500"	1.093"	0.360"	0.875"
1/2"	1/2" BSP	4/4P FSC	0.625"	1.093"	0.400"	1.125"
3/4"	1/2" BSP	6/4P FSC	0.625"	1.437"	0.400"	1.125"
3/4"	3/4" BSP	6/6P FSC	0.750"	1.437"	0.473"	1.300"
1"	1/2" BSP	8/4P FSC	0.625"	1.625"	0.473"	1.500"
1"	3/4" BSP	8/6P FSC	0.750"	1.625"	0.473"	1.500"
1"	1" BSP	8/8P FSC	0.875"	1.625"	0.473"	1.670"

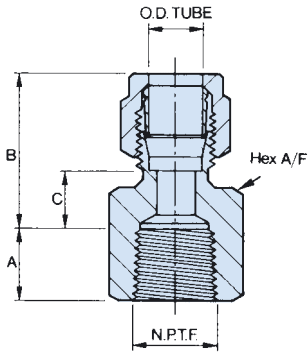
BSP parallel gauge washer PTFE



thread size G	part number	A	B	C
1/8"	GW1	0.339"	0.157"	0.102"
1/4"	GW2	0.453"	0.165"	0.102"
3/8"	GW3	0.583"	0.236"	0.102"
1/2"	GW4	0.728"	0.236"	0.126"
3/4"	GW6	0.945"	0.500"	0.126"
1"	GW8	1.200"	0.669"	0.126"

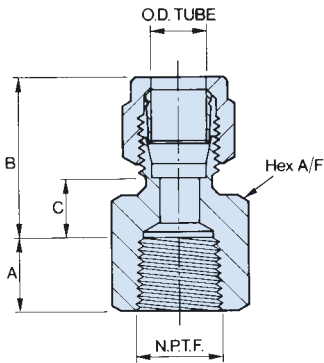
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

BSPT female stud coupling



OD tube	thread size Rc	part number	A	B	C	hex A/F
1/8"	1/8" BSPT	1/1T FSC	0.500"	0.970"	0.300"	0.562"
1/8"	1/4" BSPT	1/2T FSC	0.656"	0.970"	0.300"	0.750"
1/8"	3/8" BSPT	1/3T FSC	0.703"	0.970"	0.300"	0.875"
1/8"	1/2" BSPT	1/4T FSC	0.750"	0.970"	0.300"	1.125"
3/16"	1/8" BSPT	3/16/1T FSC	0.500"	1.003"	0.300"	0.562"
3/16"	1/4" BSPT	3/16/2T FSC	0.656"	1.003"	0.300"	0.750"
3/16"	3/8" BSPT	3/16/3T FSC	0.703"	1.003"	0.300"	0.875"
3/16"	1/2" BSPT	3/16/4T FSC	0.750"	1.003"	0.300"	1.125"
For 1/8" & 3/16" see Assembly Page 7						
1/4"	1/8" BSPT	2/1T FSC	0.500"	0.906"	0.300"	0.562"
1/4"	1/4" BSPT	2/2T FSC	0.656"	0.906"	0.300"	0.750"
1/4"	3/8" BSPT	2/3T FSC	0.703"	0.906"	0.300"	0.875"
1/4"	1/2" BSPT	2/4T FSC	0.750"	0.906"	0.300"	1.125"
3/8"	1/4" BSPT	3/2T FSC	0.656"	1.000"	0.300"	0.750"
3/8"	3/8" BSPT	3/3T FSC	0.703"	1.000"	0.350"	0.875"
3/8"	1/2" BSPT	3/4T FSC	0.750"	1.000"	0.350"	1.125"
1/2"	1/4" BSPT	4/2T FSC	0.656"	1.093"	0.350"	0.875"
1/2"	3/8" BSPT	4/3T FSC	0.703"	1.093"	0.350"	0.875"
1/2"	1/2" BSPT	4/4T FSC	0.750"	1.093"	0.350"	1.125"
3/4"	1/2" BSPT	6/4T FSC	0.750"	1.250"	0.350"	1.125"
3/4"	3/4" BSPT	6/6T FSC	0.800"	1.250"	0.400"	1.300"
1"	1/2" BSPT	8/4T FSC	0.750"	1.375"	0.400"	1.500"
1"	3/4" BSPT	8/6T FSC	0.800"	1.375"	0.400"	1.500"
1"	1" BSPT	8/8T FSC	1.050"	1.375"	0.500"	1.670"

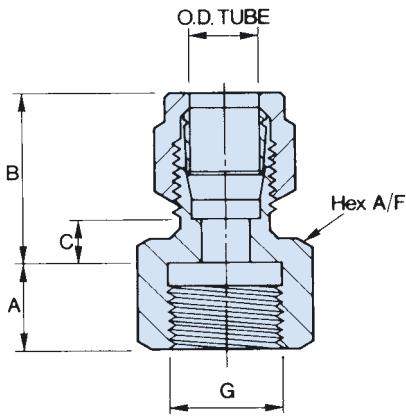
NPTF female stud coupling



OD tube	thread size NPTF	part number	A	B	C	hex A/F
1/8"	1/8" NPTF	1/1N FSC	0.500"	0.970"	0.300"	0.562"
1/8"	1/4" NPTF	1/2N FSC	0.656"	0.970"	0.300"	0.750"
1/8"	3/8" NPTF	1/3N FSC	0.703"	0.970"	0.300"	0.875"
1/8"	1/2" NPTF	1/4N FSC	0.750"	0.970"	0.300"	1.125"
3/16"	1/8" NPTF	3/16/1N FSC	0.500"	1.003"	0.300"	0.562"
3/16"	1/4" NPTF	3/16/2N FSC	0.656"	1.003"	0.300"	0.750"
3/16"	3/8" NPTF	3/16/3N FSC	0.703"	1.003"	0.300"	0.875"
3/16"	1/2" NPTF	3/16/4N FSC	0.750"	1.003"	0.300"	1.125"
For 1/8" & 3/16" see Assembly Page 7						
1/4"	1/8" NPTF	2/1N FSC	0.500"	0.906"	0.300"	0.562"
1/4"	1/4" NPTF	2/2N FSC	0.656"	0.906"	0.300"	0.750"
1/4"	3/8" NPTF	2/3N FSC	0.703"	0.906"	0.300"	0.875"
1/4"	1/2" NPTF	2/4N FSC	0.750"	0.906"	0.300"	1.125"
3/8"	1/4" NPTF	3/2N FSC	0.656"	1.000"	0.300"	0.750"
3/8"	3/8" NPTF	3/3N FSC	0.703"	1.000"	0.350"	0.875"
3/8"	1/2" NPTF	3/4N FSC	0.750"	1.000"	0.350"	1.125"
1/2"	1/4" NPTF	4/2N FSC	0.656"	1.093"	0.350"	0.875"
1/2"	3/8" NPTF	4/3N FSC	0.703"	1.093"	0.350"	0.875"
1/2"	1/2" NPTF	4/4N FSC	0.750"	1.093"	0.350"	1.125"
3/4"	1/2" NPTF	6/4N FSC	0.750"	1.250"	0.350"	1.125"
3/4"	3/4" NPTF	6/6N FSC	0.800"	1.250"	0.400"	1.300"
1"	1/2" NPTF	8/4N FSC	0.750"	1.375"	0.400"	1.500"
1"	3/4" NPTF	8/6N FSC	0.800"	1.375"	0.400"	1.500"
1"	1" NPTF	8/8N FSC	1.050"	1.375"	0.500"	1.670"

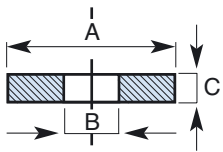
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

BSP parallel female stud coupling



OD tube	thread size G	part number	A	B	C	hex A/F
6mm	1/8" BSP	6m/1P FSC	12.0mm	24.0mm	9.0mm	14.0mm
6mm	1/4" BSP	6m/2P FSC	12.0mm	24.0mm	9.0mm	19.0mm
6mm	3/8" BSP	6m/3P FSC	13.0mm	24.0mm	9.0mm	22.0mm
6mm	1/2" BSP	6m/4P FSC	16.0mm	24.0mm	9.0mm	27.0mm
8mm	1/4" BSP	8m/2P FSC	12.0mm	27.0mm	9.0mm	19.0mm
8mm	1/2" BSP	8m/4P FSC	16.0mm	27.0mm	9.0mm	27.0mm
10mm	1/4" BSP	10m/2P FSC	12.0mm	27.0mm	9.0mm	19.0mm
10mm	3/8" BSP	10m/3P FSC	14.0mm	27.0mm	9.0mm	22.0mm
10mm	1/2" BSP	10m/4P FSC	16.0mm	27.0mm	9.0mm	27.0mm
12mm	1/4" BSP	12m/2P FSC	12.0mm	27.0mm	9.0mm	19.0mm
12mm	3/8" BSP	12m/3P FSC	14.0mm	27.0mm	9.0mm	22.0mm
12mm	1/2" BSP	12m/4P FSC	16.0mm	27.0mm	9.0mm	27.0mm
15mm	1/2" BSP	15m/4P FSC	16.0mm	29.0mm	10.0mm	27.0mm
16mm	1/2" BSP	16m/4P FSC	16.0mm	31.0mm	10.0mm	28.5mm
18mm	3/4" BSP	18m/6P FSC	19.0mm	31.5mm	10.0mm	33.0mm
20mm	3/4" BSP	20m/6P FSC	19.0mm	32.0mm	11.0mm	33.0mm
22mm	1/2" BSP	22m/4P FSC	16.0mm	36.0mm	11.0mm	33.0mm
22mm	3/4" BSP	22m/6P FSC	19.0mm	36.0mm	11.0mm	33.0mm
25mm	3/4" BSP	25m/6P FSC	19.0mm	36.0mm	11.0mm	38.0mm

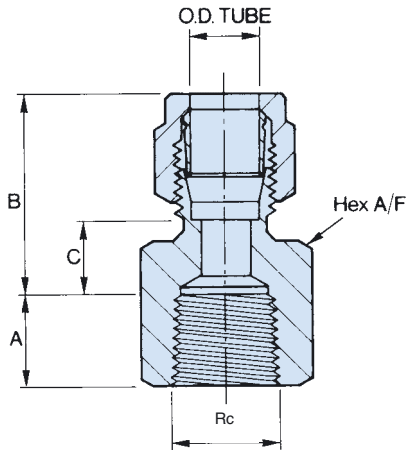
BSP parallel gauge washer PTFE



thread size G	part number	A	B	C
1/8"	GW1	8.6mm	4.0mm	2.6mm
1/4"	GW2	11.5mm	4.1mm	2.6mm
3/8"	GW3	14.8mm	6.0mm	2.6mm
1/2"	GW4	18.5mm	6.0mm	3.2mm
3/4"	GW6	24.0mm	12.7mm	3.2mm
1"	GW8	30.4mm	17.0mm	3.2mm

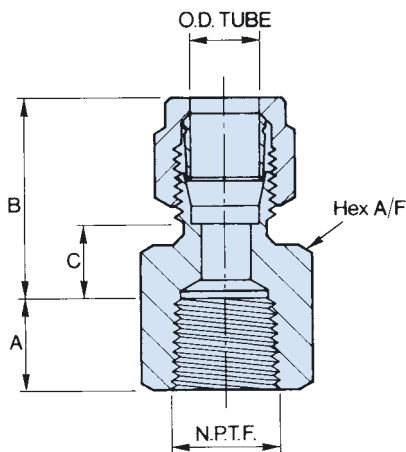
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

BSPT female stud coupling



OD tube	thread size Rc	part number	A	B	C	hex A/F
6mm	1/8" BSPT	6m/1T FSC	13.0mm	24.0mm	9.0mm	19.0mm
6mm	1/4" BSPT	6m/2T FSC	17.0mm	24.0mm	9.0mm	19.0mm
6mm	1/2" BSPT	6m/4T FSC	19.0mm	24.0mm	9.0mm	27.0mm
8mm	1/4" BSPT	8m/2T FSC	17.0mm	27.0mm	9.0mm	19.0mm
8mm	1/2" BSPT	8m/4T FSC	19.0mm	27.0mm	9.0mm	27.0mm
10mm	1/8" BSPT	10m/1T FSC	13.0mm	27.0mm	9.0mm	19.0mm
10mm	1/4" BSPT	10m/2T FSC	17.0mm	27.0mm	9.0mm	19.0mm
10mm	3/8" BSPT	10m/3T FSC	18.0mm	27.0mm	9.0mm	22.0mm
10mm	1/2" BSPT	10m/4T FSC	19.0mm	27.0mm	9.0mm	27.0mm
12mm	1/4" BSPT	12m/2T FSC	17.0mm	27.0mm	9.0mm	19.0mm
12mm	3/8" BSPT	12m/3T FSC	18.0mm	27.0mm	9.0mm	22.0mm
12mm	1/2" BSPT	12m/4T FSC	19.0mm	27.0mm	9.0mm	27.0mm
15mm	1/2" BSPT	15m/4T FSC	19.0mm	29.0mm	10.0mm	27.0mm
16mm	1/2" BSPT	16m/4T FSC	19.0mm	36.0mm	14.0mm	28.5mm
18mm	3/4" BSPT	18m/6T FSC	19.0mm	38.5mm	17.0mm	33.0mm
20mm	3/4" BSPT	20m/6T FSC	19.0mm	39.0mm	18.0mm	33.0mm
22mm	1/2" BSPT	22m/4T FSC	19.0mm	41.0mm	16.0mm	33.0mm
22mm	3/4" BSPT	22m/6T FSC	19.0mm	43.0mm	18.0mm	33.0mm
25mm	3/4" BSPT	25m/6T FSC	19.0mm	43.0mm	18.0mm	38.0mm

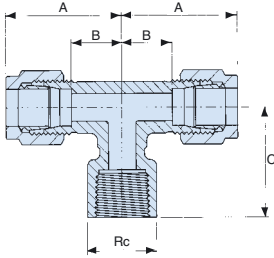
NPTF female stud coupling



OD tube	thread size NPTF	part number	A	B	C	hex A/F
6mm	1/8" NPTF	6m/1N FSC	13.0mm	24.0mm	9.0mm	19.0mm
6mm	1/4" NPTF	6m/2N FSC	17.0mm	24.0mm	9.0mm	19.0mm
6mm	1/2" NPTF	6m/4N FSC	19.0mm	24.0mm	9.0mm	27.0mm
8mm	1/4" NPTF	8m/2N FSC	17.0mm	27.0mm	9.0mm	19.0mm
8mm	1/2" NPTF	8m/4N FSC	19.0mm	27.0mm	9.0mm	27.0mm
10mm	1/8" NPTF	10m/1N FSC	13.0mm	27.0mm	9.0mm	19.0mm
10mm	1/4" NPTF	10m/2N FSC	17.0mm	27.0mm	9.0mm	19.0mm
10mm	3/8" NPTF	10m/3N FSC	18.0mm	27.0mm	9.0mm	22.0mm
10mm	1/2" NPTF	10m/4N FSC	19.0mm	27.0mm	9.0mm	27.0mm
12mm	1/4" NPTF	12m/2N FSC	17.0mm	27.0mm	9.0mm	19.0mm
12mm	3/8" NPTF	12m/3N FSC	18.0mm	27.0mm	9.0mm	22.0mm
12mm	1/2" NPTF	12m/4N FSC	19.0mm	27.0mm	9.0mm	27.0mm
15mm	1/2" NPTF	15m/4N FSC	19.0mm	29.0mm	10.0mm	27.0mm
16mm	1/2" NPTF	16m/4N FSC	19.0mm	36.0mm	14.0mm	28.5mm
18mm	3/4" NPTF	18m/6N FSC	19.0mm	38.5mm	17.0mm	33.0mm
20mm	3/4" NPTF	20m/6N FSC	19.0mm	39.0mm	18.0mm	33.0mm
22mm	1/2" NPTF	22m/4N FSC	19.0mm	41.0mm	16.0mm	33.0mm
22mm	3/4" NPTF	22m/6N FSC	19.0mm	43.0mm	18.0mm	33.0mm
25mm	3/4" NPTF	25m/6N FSC	19.0mm	43.0mm	18.0mm	38.0mm

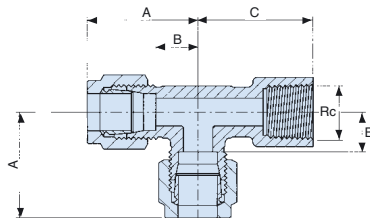
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

Tee – BSPT female stud branch



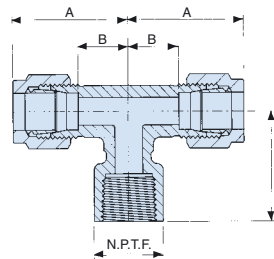
run OD	branch Rc	run OD	part number	A	B	C
1/4"	1/8" BSPT	1/4"	2/1T/2 TF SB	1.156"	0.567"	1.063"
1/4"	1/4" BSPT	1/4"	2/2T/2 TF SB	1.156"	0.567"	1.063"
3/8"	1/4" BSPT	3/8"	3/2T/3 TF SB	1.250"	0.593"	1.063"
3/8"	3/8" BSPT	3/8"	3/3T/3 TF SB	1.250"	0.593"	1.500"
1/2"	1/4" BSPT	1/2"	4/2T/4 TF SB	1.437"	0.687"	1.500"
1/2"	3/8" BSPT	1/2"	4/3T/4 TF SB	1.437"	0.687"	1.500"
1/2"	1/2" BSPT	1/2"	4/4T/4 TF SB	1.437"	0.687"	1.500"

Tee – BSPT female stud run



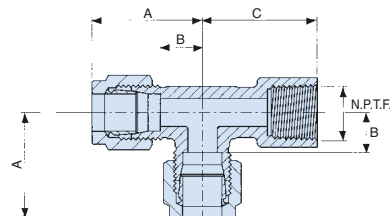
run OD	branch OD	run Rc	part number	A	B	C
1/4"	1/4"	1/8" BSPT	2/2/1T TF SR	1.156"	0.567"	1.063"
1/4"	1/4"	1/4" BSPT	2/2/2T TF SR	1.156"	0.567"	1.063"
3/8"	3/8"	1/4" BSPT	3/3/2T TF SR	1.250"	0.593"	1.063"
3/8"	3/8"	3/8" BSPT	3/3/3T TF SR	1.250"	0.593"	1.500"
1/2"	1/2"	1/4" BSPT	4/4/2T TF SR	1.437"	0.687"	1.500"
1/2"	1/2"	3/8" BSPT	4/4/3T TF SR	1.437"	0.687"	1.500"
1/2"	1/2"	1/2" BSPT	4/4/4T TF SR	1.437"	0.687"	1.500"

Tee – NPTF female stud branch



run OD	branch NPTF	run OD	part number	A	B	C
1/4"	1/8" NPTF	1/4"	2/1N/2 TF SB	1.156"	0.567"	1.063"
1/4"	1/4" NPTF	1/4"	2/2N/2 TF SB	1.156"	0.567"	1.063"
3/8"	1/4" NPTF	3/8"	3/2N/3 TF SB	1.250"	0.593"	1.063"
3/8"	3/8" NPTF	3/8"	3/3N/3 TF SB	1.250"	0.593"	1.500"
1/2"	1/4" NPTF	1/2"	4/2N/4 TF SB	1.437"	0.687"	1.500"
1/2"	3/8" NPTF	1/2"	4/3N/4 TF SB	1.437"	0.687"	1.500"
1/2"	1/2" NPTF	1/2"	4/4N/4 TF SB	1.437"	0.687"	1.500"

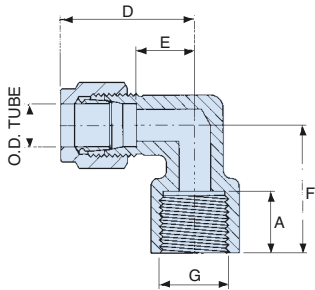
Tee – NPTF female stud run



run OD	branch OD	run NPTF	part number	A	B	C
1/4"	1/4"	1/8" NPTF	2/2/1N TF SR	1.156"	0.567"	1.063"
1/4"	1/4"	1/4" NPTF	2/2/2N TF SR	1.156"	0.567"	1.063"
3/8"	3/8"	1/4" NPTF	3/3/2N TF SR	1.250"	0.593"	1.063"
3/8"	3/8"	3/8" NPTF	3/3/3N TF SR	1.250"	0.593"	1.500"
1/2"	1/2"	1/4" NPTF	4/4/2N TF SR	1.437"	0.687"	1.500"
1/2"	1/2"	3/8" NPTF	4/4/3N TF SR	1.437"	0.687"	1.500"
1/2"	1/2"	1/2" NPTF	4/4/4N TF SR	1.437"	0.687"	1.500"

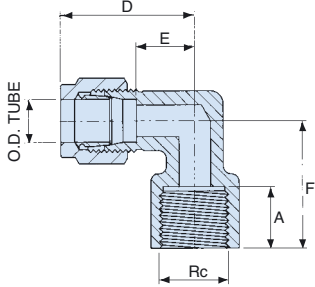
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

BSPP female stud elbow



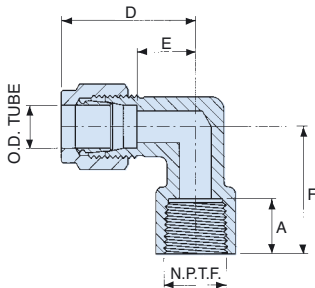
OD tube	thread size GAT	part number	A	D	E	F
1/8"	1/8" BSP	1/1P FSE	0.375"	1.220"	0.562"	1.063"
1/8"	1/4" BSP	1/2P FSE	0.437"	1.220"	0.562"	1.063"
3/16"	1/8" BSP	3/16/1P FSE	0.375"	1.253"	0.562"	1.063"
3/16"	1/4" BSP	3/16/2P FSE	0.437"	1.253"	0.562"	1.063"
For 1/8" & 3/16" see Assembly Page 7						
1/4"	1/8" BSP	2/1P FSE	0.375"	1.156"	0.562"	1.063"
1/4"	1/4" BSP	2/2P FSE	0.437"	1.156"	0.562"	1.063"
3/8"	1/4" BSP	3/2P FSE	0.437"	1.250"	0.593"	1.063"
3/8"	3/8" BSP	3/3P FSE	0.500"	1.250"	0.593"	1.500"
1/2"	1/4" BSP	4/2P FSE	0.437"	1.437"	0.687"	1.500"
1/2"	3/8" BSP	4/3P FSE	0.500"	1.437"	0.687"	1.500"
1/2"	1/2" BSP	4/4P FSE	0.625"	1.437"	0.687"	1.500"

BSPT female stud elbow



OD tube	thread size Rc	part number	A	D	E	F
1/8"	1/8" BSPT	1/1T FSE	0.500"	1.220"	0.562"	1.063"
1/8"	1/4" BSPT	1/2T FSE	0.656"	1.220"	0.562"	1.063"
3/16"	1/8" BSPT	3/16/1T FSE	0.500"	1.253"	0.562"	1.063"
3/16"	1/4" BSPT	3/16/2T FSE	0.656"	1.253"	0.562"	1.063"
For 1/8" & 3/16" see Assembly Page 7						
1/4"	1/8" BSPT	2/1T FSE	0.500"	1.156"	0.562"	1.063"
1/4"	1/4" BSPT	2/2T FSE	0.656"	1.156"	0.562"	1.063"
3/8"	1/4" BSPT	3/2T FSE	0.656"	1.250"	0.593"	1.063"
3/8"	3/8" BSPT	3/3T FSE	0.703"	1.250"	0.593"	1.500"
1/2"	1/4" BSPT	4/2T FSE	0.656"	1.437"	0.687"	1.500"
1/2"	3/8" BSPT	4/3T FSE	0.703"	1.437"	0.687"	1.500"
1/2"	1/2" BSPT	4/4T FSE	0.750"	1.437"	0.687"	1.500"

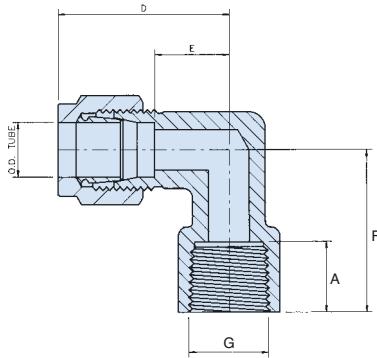
NPTF female stud elbow



OD tube	thread size NPTF	part number	A	D	E	F
1/8"	1/8" NPTF	1/1N FSE	0.500"	1.220"	0.562"	1.063"
1/8"	1/4" NPTF	1/2N FSE	0.656"	1.220"	0.562"	1.063"
3/16"	1/8" NPTF	3/16/1N FSE	0.500"	1.253"	0.562"	1.063"
3/16"	1/4" NPTF	3/16/2N FSE	0.656"	1.253"	0.562"	1.063"
For 1/8" & 3/16" see Assembly Page 7						
1/4"	1/8" NPTF	2/1N FSE	0.500"	1.156"	0.562"	1.063"
1/4"	1/4" NPTF	2/2N FSE	0.656"	1.156"	0.562"	1.063"
3/8"	1/4" NPTF	3/2N FSE	0.656"	1.250"	0.593"	1.063"
3/8"	3/8" NPTF	3/3N FSE	0.703"	1.250"	0.593"	1.500"
1/2"	1/4" NPTF	4/2N FSE	0.656"	1.437"	0.687"	1.500"
1/2"	3/8" NPTF	4/3N FSE	0.703"	1.437"	0.687"	1.500"
1/2"	1/2" NPTF	4/4N FSE	0.750"	1.437"	0.687"	1.500"

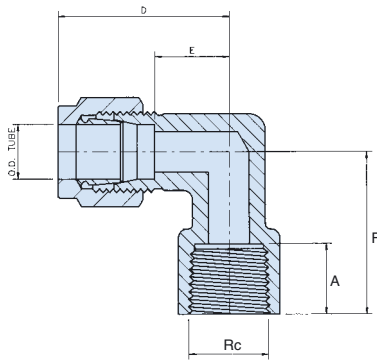
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

BSPP female stud elbow



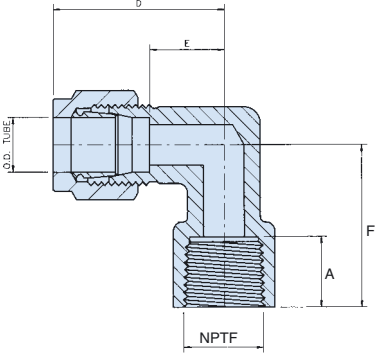
OD tube	thread size G	part number	A	D	E	F
6mm	1/4" BSP	6m/2P FSE	12.0mm	30.0mm	15.0mm	27.0mm
8mm	1/4" BSP	8m/2P FSE	12.0mm	33.0mm	15.0mm	27.0mm
10mm	1/4" BSP	10m/2P FSE	12.0mm	33.0mm	15.0mm	27.0mm
10mm	3/8" BSP	10m/3P FSE	14.0mm	33.0mm	15.0mm	38.0mm
12mm	1/4" BSP	12m/2P FSE	12.0mm	36.0mm	17.0mm	38.0mm
12mm	3/8" BSP	12m/3P FSE	14.0mm	36.0mm	17.0mm	38.0mm
12mm	1/2" BSP	12m/4P FSE	16.0mm	36.0mm	17.0mm	38.0mm

BSPT female stud elbow



OD tube	thread size Rc	part number	A	D	E	F
6mm	1/4" BSPT	6m/2T FSE	17.0mm	30.0mm	15.0mm	27.0mm
8mm	1/4" BSPT	8m/2T FSE	17.0mm	33.0mm	15.0mm	27.0mm
10mm	1/4" BSPT	10m/2T FSE	17.0mm	33.0mm	15.0mm	27.0mm
10mm	3/8" BSPT	10m/3T FSE	18.0mm	33.0mm	15.0mm	38.0mm
10mm	1/2" BSPT	10m/4T FSE	19.0mm	33.0mm	15.0mm	38.0mm
12mm	1/4" BSPT	12m/2T FSE	17.0mm	36.0mm	17.0mm	38.0mm
12mm	3/8" BSPT	12m/3T FSE	18.0mm	36.0mm	17.0mm	38.0mm
12mm	1/2" BSPT	12m/4T FSE	19.0mm	36.0mm	17.0mm	38.0mm

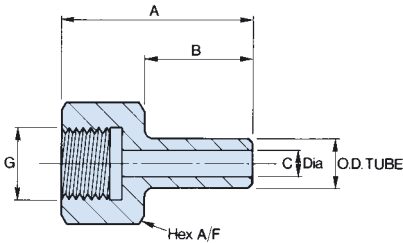
NPTF female stud elbow



OD tube	thread size NPTF	part number	A	D	E	F
6mm	1/4" NPTF	6m/2N FSE	17.0mm	30.0mm	15.0mm	27.0mm
8mm	1/4" NPTF	8m/2N FSE	17.0mm	33.0mm	15.0mm	27.0mm
10mm	1/4" NPTF	10m/2N FSE	17.0mm	33.0mm	15.0mm	27.0mm
10mm	3/8" NPTF	10m/3N FSE	18.0mm	33.0mm	15.0mm	38.0mm
10mm	1/2" NPTF	10m/4N FSE	19.0mm	33.0mm	15.0mm	38.0mm
12mm	1/4" NPTF	12m/2N FSE	17.0mm	36.0mm	17.0mm	38.0mm
12mm	3/8" NPTF	12m/3N FSE	18.0mm	36.0mm	17.0mm	38.0mm
12mm	1/2" NPTF	12m/4N FSE	19.0mm	36.0mm	17.0mm	38.0mm

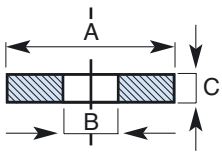
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

BSP parallel female standpipe adaptor



OD	thread size G	part number	A	B	C	hex A/F
1/4"	1/4" BSP	2/2P FSA	1.893"	1.093"	0.100"	0.750"
1/4"	3/8" BSP	2/3P FSA	1.905"	1.093"	0.100"	0.875"
1/4"	1/2" BSP	2/4P FSA	2.000"	1.093"	0.100"	1.125"
3/8"	1/4" BSP	3/2P FSA	1.893"	1.093"	0.235"	0.750"
3/8"	3/8" BSP	3/3P FSA	1.905"	1.093"	0.235"	0.875"
3/8"	1/2" BSP	3/4P FSA	2.000"	1.093"	0.235"	1.125"
1/2"	1/4" BSP	4/2P FSA	1.893"	1.093"	0.312"	0.750"
1/2"	3/8" BSP	4/3P FSA	1.905"	1.093"	0.312"	0.875"
1/2"	1/2" BSP	4/4P FSA	2.000"	1.093"	0.312"	1.125"
3/4"	1/2" BSP	6/4P FSA	2.135"	1.250"	0.437"	1.125"
6mm	1/4" BSP	6M/2P FSA	42mm	26mm	2.5mm	19mm
8mm	1/4" BSP	8M/2P FSA	42mm	26mm	4mm	19mm
10mm	3/8" BSP	10M/3P FSA	45mm	26mm	6mm	22mm
10mm	1/2" BSP	10M/4P FSA	48mm	26mm	6mm	28.5mm
12mm	3/8" BSP	12M/3P FSA	45mm	26mm	8mm	22mm
12mm	1/2" BSP	12M/4P FSA	48mm	26mm	8mm	28.5mm
15mm	1/2" BSP	15M/4P FSA	52mm	26mm	8mm	28.5mm
16mm	1/2" BSP	16M/4P FSA	52mm	30mm	8mm	28.5mm
18mm	1/2" BSP	18M/4P FSA	52mm	30mm	8mm	28.5mm

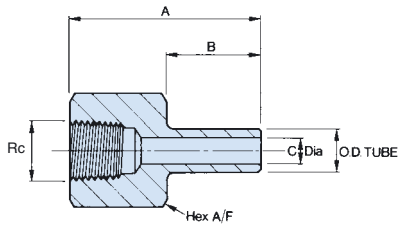
BSP parallel gauge washer PTFE



thread size G	part number	A	B	C
1/8"	GW1	0.339"	0.157"	0.102"
1/4"	GW2	0.453"	0.165"	0.102"
3/8"	GW3	0.583"	0.236"	0.102"
1/2"	GW4	0.728"	0.236"	0.126"
3/4"	GW6	0.945"	0.500"	0.126"
1"	GW8	1.200"	0.669"	0.126"

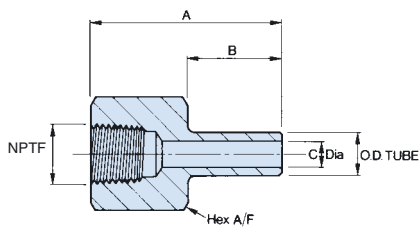
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

BSPT female standpipe adaptors



OD	thread size Rc	part number	A	B	C	hex A/F
1/4"	1/4" BSPT	2/2T FSA	2.000"	1.093"	0.100"	0.750"
1/4"	3/8" BSPT	2/3T FSA	2.125"	1.093"	0.100"	0.875"
1/4"	1/2" BSPT	2/4T FSA	2.250"	1.093"	0.100"	1.125"
3/8"	1/4" BSPT	3/2T FSA	2.000"	1.093"	0.235"	0.750"
3/8"	3/8" BSPT	3/3T FSA	2.125"	1.093"	0.235"	0.875"
3/8"	1/2" BSPT	3/4T FSA	2.250"	1.093"	0.235"	1.125"
1/2"	1/4" BSPT	4/2T FSA	2.000"	1.093"	0.312"	0.750"
1/2"	3/8" BSPT	4/3T FSA	2.125"	1.093"	0.312"	0.875"
1/2"	1/2" BSPT	4/4T FSA	2.250"	1.093"	0.312"	1.125"
3/4"	1/2" BSPT	6/4T FSA	2.350"	1.250"	0.437"	1.125"
6mm	1/4" BSPT	6M/2T FSA	50mm	26mm	2.5mm	19mm
8mm	1/4" BSPT	8M/2T FSA	50mm	26mm	4mm	19mm
10mm	3/8" BSPT	10M/3T FSA	53mm	26mm	6mm	22mm
10mm	1/2" BSPT	10M/4T FSA	55mm	26mm	6mm	28.5mm
12mm	3/8" BSPT	12M/3T FSA	53mm	26mm	8mm	22mm
12mm	1/2" BSPT	12M/4T FSA	55mm	26mm	8mm	28.5mm
15mm	1/2" BSPT	15M/4T FSA	59mm	30mm	11mm	28.5mm
16mm	1/2" BSPT	16M/4T FSA	59mm	30mm	11mm	28.5mm
18mm	1/2" BSPT	18M/4T FSA	59mm	30mm	11mm	28.5mm

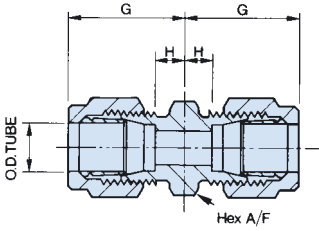
NPTF female standpipe adaptors



OD	thread size NPTF	part number	A	B	C	hex A/F
1/4"	1/4" NPTF	2/2N FSA	2.000"	1.093"	0.100"	0.750"
1/4"	3/8" NPTF	2/3N FSA	2.125"	1.093"	0.100"	0.875"
1/4"	1/2" NPTF	2/4N FSA	2.250"	1.093"	0.100"	1.125"
3/8"	1/4" NPTF	3/2N FSA	2.000"	1.093"	0.235"	0.750"
3/8"	3/8" NPTF	3/3N FSA	2.125"	1.093"	0.235"	0.875"
3/8"	1/2" NPTF	3/4N FSA	2.250"	1.093"	0.235"	1.125"
1/2"	1/4" NPTF	4/2N FSA	2.000"	1.093"	0.312"	0.750"
1/2"	3/8" NPTF	4/3N FSA	2.125"	1.093"	0.312"	0.875"
1/2"	1/2" NPTF	4/4N FSA	2.250"	1.093"	0.312"	1.125"
3/4"	1/2" NPTF	6/4N FSA	2.350"	1.250"	0.437"	1.125"
6mm	1/4" NPTF	6M/2N FSA	50mm	26mm	2.5mm	19mm
8mm	1/4" NPTF	8M/2N FSA	50mm	26mm	4mm	19mm
10mm	3/8" NPTF	10M/3N FSA	53mm	26mm	6mm	22mm
10mm	1/2" NPTF	10M/4N FSA	55mm	26mm	6mm	28.5mm
12mm	3/8" NPTF	12M/3N FSA	53mm	26mm	8mm	22mm
12mm	1/2" NPTF	12M/4N FSA	55mm	26mm	8mm	28.5mm
15mm	1/2" NPTF	15M/4N FSA	59mm	30mm	11mm	28.5mm
16mm	1/2" NPTF	16M/4N FSA	59mm	30mm	11mm	28.5mm
18mm	1/2" NPTF	18M/4N FSA	59mm	30mm	11mm	28.5mm

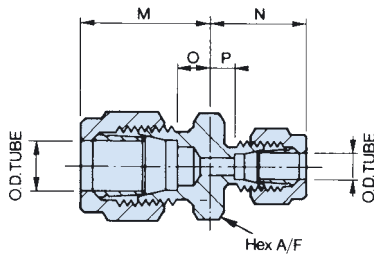
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

Straight coupling



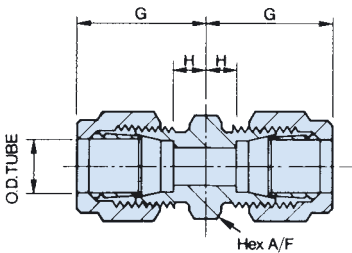
OD tube	part number	G	H	hex A/F
1/8"	1/1 SC	0.876"	0.218"	0.562"
3/16"	3/16 SC	0.909"	0.218"	0.562"
For 1/8" & 3/16" see Assembly Page 7				
1/4"	2/2 SC	0.812"	0.218"	0.562"
3/8"	3/3 SC	0.937"	0.281"	0.750"
1/2"	4/4 SC	1.046"	0.296"	0.875"
3/4"	6/6 SC	1.234"	0.390"	1.125"
1"	8/8 SC	1.406"	0.437"	1.500"

Reducing coupling



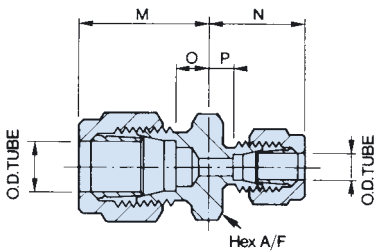
OD tube 1	OD tube 2	part number	M	N	O	P	hex A/F
1/4"	1/8"	2/1 RC	0.812"	0.876"	0.218"	0.218"	0.562"
1/4"	3/16"	2/3/16 RC	0.812"	0.909"	0.218"	0.218"	0.562"
For 1/8" & 3/16" see Assembly Page 7							
3/8"	1/4"	3/2 RC	0.937"	0.843"	0.281"	0.250"	0.750"
1/2"	1/4"	4/2 RC	1.046"	0.859"	0.296"	0.265"	0.875"
1/2"	3/8"	4/3 RC	1.046"	0.953"	0.296"	0.296"	0.875"
3/4"	1/2"	6/4 RC	1.234"	1.078"	0.390"	0.328"	1.300"
1"	1/2"	8/4 RC	1.406"	1.125"	0.437"	0.375"	1.500"
1"	3/4"	8/6 RC	1.406"	1.281"	0.437"	0.437"	1.500"

Straight coupling



OD tube	part number	G	H	hex A/F
6mm	6m/6m SC	23.0mm	5.0mm	14.0mm
8mm	8m/8m SC	25.0mm	4.5mm	17.0mm
10mm	10m/10m SC	27.0mm	5.0mm	19.0mm
12mm	12m/12m SC	28.0mm	6.0mm	19.0mm
15mm	15m/15m SC	28.0mm	6.0mm	24.0mm
16mm	16m/16m SC	29.0mm	6.8mm	27.0mm
18mm	18m/18m SC	30.0mm	8.5mm	28.5mm
20mm	20m/20m SC	31.0mm	9.8mm	33.0mm
22mm	22m/22m SC	35.0mm	9.8mm	33.0mm
25mm	25m/25m SC	35.0mm	9.8mm	38.0mm

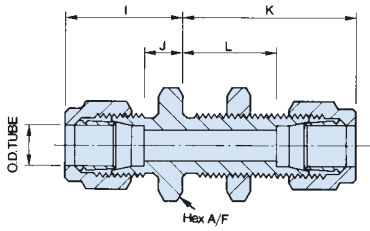
Reducing coupling



OD tube 1	OD tube 2	part number	M	N	O	P	hex A/F
8mm	6mm	8m/6m RC	22.0mm	22.0mm	6.0mm	6.0mm	17.0mm
10mm	6mm	10m/6m RC	22.0mm	25.0mm	6.0mm	6.0mm	19.0mm
10mm	8mm	10m/8m RC	25.0mm	22.0mm	6.0mm	6.0mm	19.0mm
12mm	6mm	12m/6m RC	25.0mm	22.0mm	6.0mm	6.0mm	22.0mm
12mm	8mm	12m/8m RC	25.0mm	22.0mm	6.0mm	6.0mm	22.0mm
12mm	10mm	12m/10m RC	25.0mm	22.0mm	6.0mm	6.0mm	22.0mm
15mm	6mm	15m/6m RC	26.0mm	22.0mm	6.0mm	6.0mm	24.0mm
15mm	10mm	15m/10m RC	26.0mm	22.0mm	6.0mm	6.0mm	24.0mm
15mm	12mm	15m/12m RC	30.0mm	26.0mm	6.0mm	6.0mm	24.0mm
22mm	15mm	22m/15m RC	30.0mm	26.0mm	8.0mm	6.0mm	33.0mm

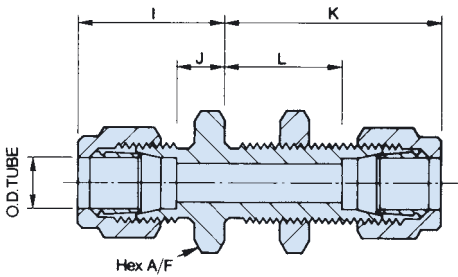
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

Bulkhead coupling



OD tube	part number	I	J	K	L	hex A/F	clearance bore in bulkhead
1/8"	1/1 BULK	0.970"	0.312"	1.626"	0.968"	0.750"	0.468"
3/16"	3/16 BULK	1.003"	1.312"	1.659"	0.968"	0.750"	0.468"
For 1/8" & 3/16" see Assembly Page 7							
1/4"	2/2 BULK	0.906"	0.312"	1.562"	0.968"	0.750"	0.468"
3/8"	3/3 BULK	1.062"	0.406"	1.687"	1.031"	0.875"	0.656"
1/2"	4/4 BULK	1.187"	0.437"	1.875"	1.125"	1.125"	0.781"
3/4"	6/6 BULK	1.406"	0.562"	2.093"	1.250"	1.300"	1.093"
1"	8/8 BULK	1.625"	0.656"	2.187"	1.218"	1.500"	1.343"

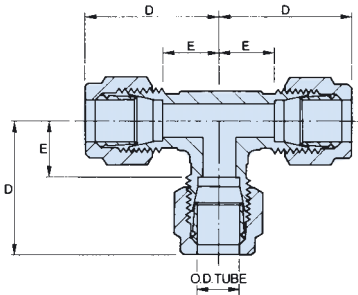
Bulkhead coupling



OD tube	part number	I	J	K	L	hex A/F	bulkhead bore dia
6mm	6m/6m BULK	23.0mm	8.0mm	42.0mm	25.0mm	17.0mm	12.2mm
8mm	8m/8m BULK	25.0mm	8.0mm	42.0mm	27.0mm	19.0mm	14.2mm
10mm	10m/10m BULK	27.0mm	10.0mm	42.0mm	27.0mm	22.0mm	16.2mm
12mm	12m/12m BULK	28.0mm	9.0mm	43.0mm	27.0mm	24.0mm	18.2mm
15mm	15m/15m BULK	28.0mm	9.0mm	47.0mm	29.0mm	28.0mm	22.3mm
16mm	16m/16m BULK	32.5mm	11.0mm	53.0mm	31.0mm	32.0mm	24.3mm
18mm	18m/18m BULK	35.0mm	13.5mm	56.0mm	35.0mm	32.0mm	26.3mm
20mm	20m/20m BULK	35.8mm	14.5mm	57.0mm	35.0mm	36.0mm	28.3mm
22mm	22m/22m BULK	38.0mm	14.5mm	60.0mm	35.0mm	36.0mm	30.2mm
25mm	25m/25m BULK	39.8mm	14.5mm	60.5mm	35.0mm	42.5mm	33.2mm

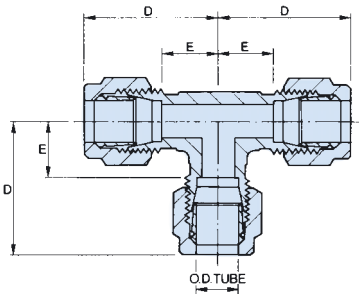
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

Equal tee



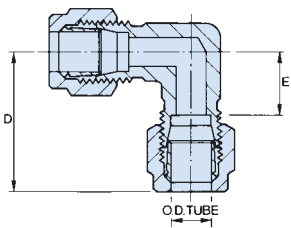
OD tube	part number	D	E
1/8"	1/1/1T	1.220"	0.562"
3/16"	3/16 T	1.253"	0.562"
For 1/8" & 3/16" see Assembly Page 7			
1/4"	2/2/2T	1.156"	0.562"
3/8"	3/3/3T	1.250"	0.593"
1/2"	4/4/4T	1.437"	0.687"
3/4"	6/6/6T	1.843"	1.000"
1"	8/8/8T	2.031"	1.062"

Equal tee



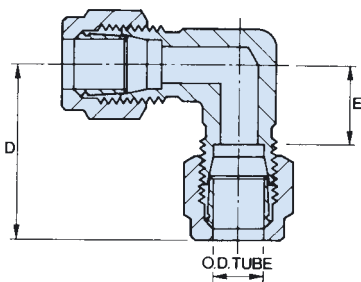
OD tube	part number	D	E
6mm	6m T	30.0mm	15.0mm
8mm	8m T	33.0mm	15.0mm
10mm	10m T	33.0mm	15.0mm
12mm	12m T	36.0mm	17.0mm
15mm	15m T	46.0mm	26.0mm
16mm	16m T	48.0mm	26.0mm
18mm	18m T	48.0mm	26.0mm
20mm	20m T	48.0mm	26.0mm
22mm	22m T	53.0mm	30.0mm
25mm	25m T	53.0mm	30.0mm

Equal elbow



OD tube	part number	D	E
1/8"	1/1 E	1.220"	0.562"
3/16"	3/16 E	1.253"	0.562"
For 1/8" & 3/16" see Assembly Page 7			
1/4"	2/2 E	1.156"	0.562"
3/8"	3/3 E	1.250"	0.593"
1/2"	4/4 E	1.437"	0.687"
3/4"	6/6 E	1.843"	1.000"
1"	8/8 E	2.031"	1.062"

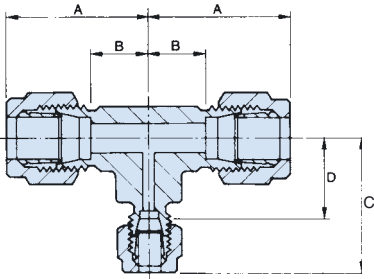
Equal elbow



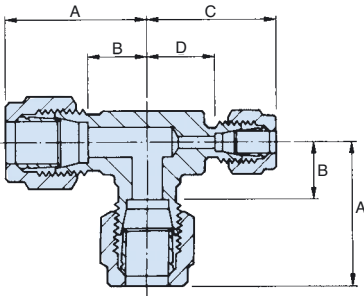
OD tube	part number	D	E
6mm	6m/6m E	30.0mm	15.0mm
8mm	8m/8m E	33.0mm	15.0mm
10mm	10m/10m E	33.0mm	15.0mm
12mm	12m/12m E	36.0mm	17.0mm
15mm	15m/15m E	46.0mm	26.0mm
16mm	16m/16m E	48.0mm	26.0mm
18mm	18m/18m E	48.0mm	26.0mm
20mm	20m/20m E	48.0mm	26.0mm
22mm	22m/22m E	52.0mm	28.0mm
25mm	25m/25m E	56.0mm	28.0mm

DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

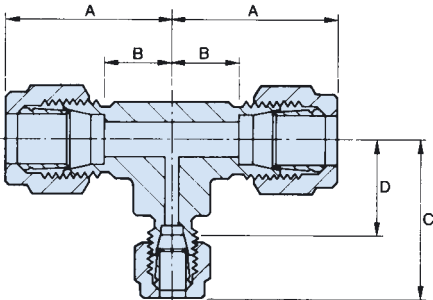
Tee – unequal branch



Tee – unequal run



Reducing branch tee



run OD	branch OD	run OD	part number	A	B	C	D
1/4"	1/8"	1/4"	2/1/2 TUB	1.220"	0.562"	1.284"	0.562"
1/4"	3/16"	1/4"	2/3/16/2 TUB	1.220"	0.562"	1.317"	0.562"
For 1/8" & 3/16" see Assembly Page 7							
3/8"	1/4"	3/8"	3/2/3 TUB	1.250"	0.593"	1.156"	0.562"
1/2"	1/4"	1/2"	4/2/4 TUB	1.437"	0.687"	1.156"	0.562"
1/2"	3/8"	1/2"	4/3/4 TUB	1.437"	0.687"	1.250"	0.593"
3/4"	3/8"	3/4"	6/3/6 TUB	1.843"	1.000"	1.250"	0.593"
3/4"	1/2"	3/4"	6/4/6 TUB	1.843"	1.000"	1.437"	0.687"
1"	1/2"	1"	8/4/8 TUB	2.032"	1.062"	1.437"	0.687"
1"	3/4"	1"	8/6/8 TUB	2.032"	1.062"	1.843"	1.000"

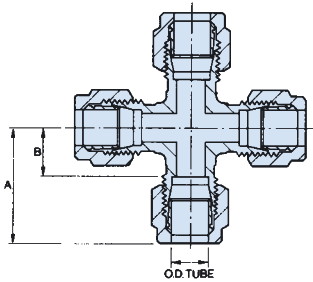
run OD	branch OD	run OD	part number	A	B	C	D
1/4"	1/4"	1/8"	2/2/1 TUR	1.220"	0.562"	1.284"	0.562"
1/4"	1/4"	3/16"	2/2/3/16 TUR	1.220"	0.562"	1.317"	0.562"
For 1/8" & 3/16" see Assembly Page 7							
3/8"	3/8"	1/4"	3/3/2 TUR	1.250"	0.593"	1.156"	0.562"
1/2"	1/2"	1/4"	4/4/2 TUR	1.437"	0.687"	1.156"	0.562"
1/2"	1/2"	3/8"	4/4/3 TUR	1.437"	0.687"	1.250"	0.593"
3/4"	3/4"	3/8"	6/6/3 TUR	1.843"	1.000"	1.250"	0.593"
3/4"	3/4"	1/2"	6/6/4 TUR	1.843"	1.000"	1.437"	0.687"
1"	1"	1/2"	8/8/4 TUR	2.032"	1.062"	1.437"	0.687"
1"	1"	3/4"	8/8/6 TUR	2.032"	1.062"	1.843"	1.000"

run OD	branch OD	run OD	part number	A	B	C	D
10mm	6mm	10mm	10m/6m RBT	30.0mm	15.0mm	30.0mm	15.0mm
12mm	6mm	12mm	12m/6m RBT	36.0mm	17.0mm	36.0mm	17.0mm
15mm	10mm	15mm	15m/10m RBT	46.0mm	26.0mm	46.0mm	26.5mm

Other reducing tees on request

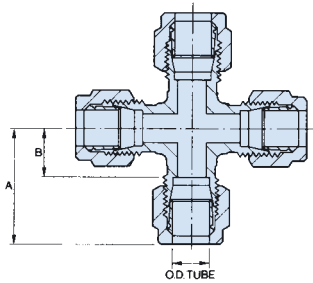
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

Equal cross



OD tube	part number	A	B
1/8"	1/1 CR	1.220"	0.562"
3/16"	3/16 CR	1.253"	0.562"
For 1/8" & 3/16" see Assembly Page 7			
1/4"	2/2 CR	1.156"	0.562"
3/8"	3/3 CR	1.250"	0.593"
1/2"	4/4 CR	1.437"	0.687"

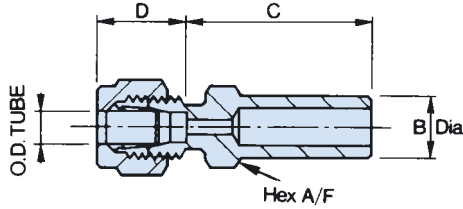
Equal cross



OD tube	part number	D	E
6mm	6m CR	30.0mm	15.0mm
8mm	8m CR	33.0mm	15.0mm
10mm	10m CR	33.0mm	15.0mm
12mm	12m CR	36.0mm	17.0mm

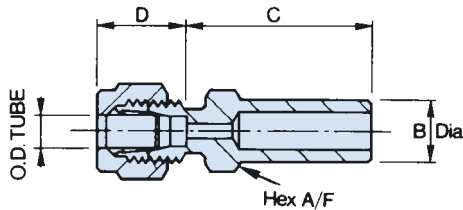
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

Reducing adaptor



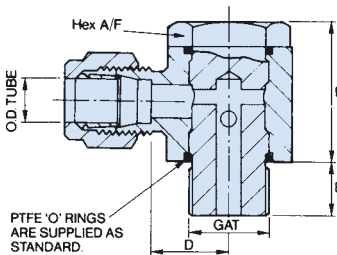
OD tube	B dia	part number	C	D	hex A/F
1/8"	3/8"	1/3 RA	1.187"	0.657"	0.562"
1/8"	1/2"	1/4 RA	1.281"	0.657"	0.562"
3/16"	3/8"	3/16/3 RA	1.187"	0.690"	0.562"
3/16"	1/2"	3/16/4 RA	1.281"	0.690"	0.562"
For 1/8" & 3/16" see Assembly Page 7					
1/4"	3/8"	2/3 RA	1.187"	0.593"	0.562"
1/4"	1/2"	2/4 RA	1.281"	0.593"	0.562"
3/8"	1/2"	3/4 RA	1.375"	0.656"	0.750"
1/2"	3/4"	4/6 RA	1.625"	0.750"	0.875"
1/2"	1"	4/8 RA	1.781"	0.750"	1.125"
3/4"	1"	6/8 RA	1.906"	0.843"	1.125"

Reducing adaptor



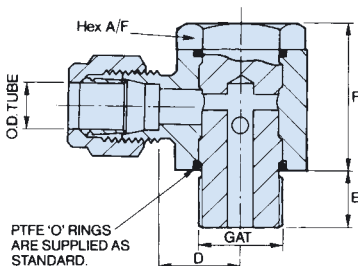
OD tube	B dia	part number	C	D	hex A/F
1/8"	3/8"	1/3 RA	1.187"	0.657"	0.562"
1/8"	1/2"	1/4 RA	1.281"	0.657"	0.562"
3/16"	3/8"	3/16/3 RA	1.187"	0.690"	0.562"
3/16"	1/2"	3/16/4 RA	1.281"	0.690"	0.562"
For 1/8" & 3/16" see Assembly Page 7					
1/4"	3/8"	2/3 RA	1.187"	0.593"	0.562"
1/4"	1/2"	2/4 RA	1.281"	0.593"	0.562"
3/8"	1/2"	3/4 RA	1.375"	0.656"	0.750"
1/2"	3/4"	4/6 RA	1.625"	0.750"	0.875"
1/2"	1"	4/8 RA	1.781"	0.750"	1.125"
3/4"	1"	6/8 RA	1.906"	0.843"	1.125"

BSP banjo coupling



OD tube	thread size GAT	part number	square body A/F	D	E	F	hex bolt A/F
1/8"	1/8" BSP	1/1P BC	1.000"	0.620"	0.354"	1.125"	17 mm
1/8"	1/4" BSP	1/2P BC	1.000"	0.620"	0.450"	1.125"	22 mm
3/16"	1/8" BSP	3/16/1P BC	1.000"	0.620"	0.354"	1.125"	17 mm
3/16"	1/4" BSP	3/16/2P BC	1.000"	0.620"	0.450"	1.125"	22 mm
For 1/8" & 3/16" see Assembly Page 7							
1/4"	1/8" BSP	2/1P BC	1.000"	0.620"	0.354"	1.125"	17 mm
1/4"	1/4" BSP	2/2P BC	1.000"	0.620"	0.450"	1.125"	0.750"
3/8"	1/4" BSP	3/2P BC	1.250"	0.652"	0.450"	1.125"	22 mm
3/8"	3/8" BSP	3/3P BC	1.250"	0.652"	0.530"	1.250"	0.875"
1/2"	3/8" BSP	4/3P BC	1.500"	0.776"	0.530"	1.250"	0.875"
1/2"	1/2" BSP	4/4P BC	1.500"	0.776"	0.625"	1.375"	1.125"

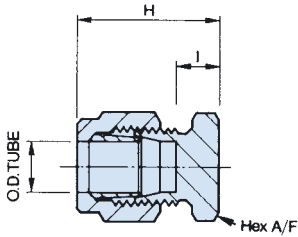
BSP Banjo coupling



OD tube	thread size GAT	part number	square body A/F	D	E	F	A/F bolt
6mm	1/8" BSP	6m/1P BC	22.0mm	16.0mm	9.0mm	28.0mm	17.0mm
6mm	1/4" BSP	6m/2P BC	22.0mm	16.0mm	10.5mm	28.5mm	19.0mm
8mm	1/4" BSP	8m/2P BC	24.5mm	16.0mm	10.5mm	28.5mm	19.0mm
10mm	1/4" BSP	10m/2P BC	31.0mm	19.0mm	10.5mm	30.0mm	19.0mm
10mm	3/8" BSP	10m/3P BC	31.0mm	19.0mm	13.5mm	32.0mm	22.0mm
12mm	3/8" BSP	12m/3P BC	38.0mm	20.0mm	13.5mm	34.0mm	22.0mm
12mm	1/2" BSP	12m/4P BC	38.0mm	20.0mm	16.0mm	35.0mm	28.5mm

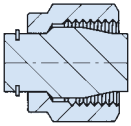
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

Blanking end



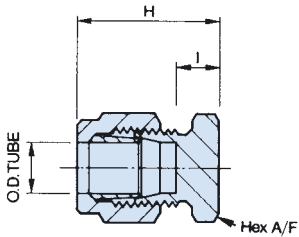
OD tube	part number	H	I	hex A/F
1/8"	BE1	0.970"	0.312"	0.562"
3/16"	BE3/16	1.003"	0.312"	0.562"
For 1/8" & 3/16" see Assembly Page 7				
1/4"	BE2	0.906"	0.312"	0.562"
3/8"	BE3	1.062"	0.406"	0.750"
1/2"	BE4	1.187"	0.437"	0.875"
3/4"	BE6	1.406"	0.562"	1.125"
1"	BE8	1.625"	0.656"	1.500"

Blanking plug



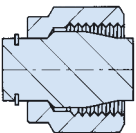
OD tube	part number
For 1/8" & 3/16" use Part No. BP2.	
1/4"	BP2
3/8"	BP3
1/2"	BP4
3/4"	BP6
1"	BP8

Blanking end



OD tube	part number	H	I	hex A/F
6mm	BE6m	25.0mm	9.3mm	14.0mm
8mm	BE8m	25.0mm	8.3mm	17.0mm
10mm	BE10m	27.0mm	8.8mm	19.0mm
12mm	BE12m	28.0mm	8.8mm	22.0mm
15mm	BE15m	30.0mm	10.5mm	24.0mm
16mm	BE16m	33.0mm	10.5mm	27.0mm
18mm	BE18m	34.5mm	13.0mm	28.5mm
20mm	BE20m	36.0mm	14.5mm	33.0mm
22mm	BE22m	36.0mm	14.5mm	33.0mm
25mm	BE25m	40.0mm	14.5mm	38.0mm

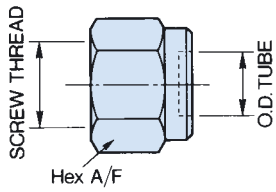
Blanking plug



OD tube	part number
6mm	BP6m
8mm	BP8m
10mm	BP10m
12mm	BP12m
15mm	BP15m
16mm	BP16m
18mm	BP18m
20mm	BP20m
22mm	BP22m
25mm	BP25m

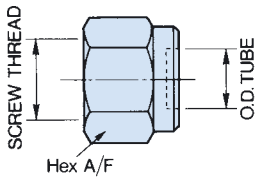
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

Compression nut



OD tube	part number	hex A/F	screw thread
For 1/8" OD & 3/16" OD use 1/4" nut 2N.			
1/4"	2N	0.562"	7/16" x 20 T.P.I.U.N.F.
3/8"	3N	0.750"	5/8" x 16 T.P.I.U.N.F.
1/2"	4N	0.875"	3/4" x 16 T.P.I.U.N.F.
3/4"	6N	1.312"	11/16" x 16 T.P.I.U.N.F.
1"	8N	1.500"	15/16" x 16 T.P.I.U.N.F.

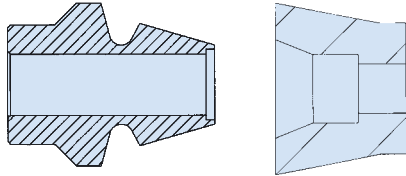
Compression nut



O.D. tube	part number	hex A/F	screw thread
6mm	6M N	14.0mm	M12mm x 1.5mm PITCH
8mm	8M N	17.0mm	M14mm x 1.5mm PITCH
10mm	10M N	19.0mm	M16mm x 1.5mm PITCH
12mm	12M N	22.0mm	M18mm x 1.5mm PITCH
15mm	15M N	27.0mm	M22mm x 1.5mm PITCH
16mm	16M N	28.5mm	M24mm x 1.5mm PITCH
18mm	18M N	33.0mm	M26mm x 1.5mm PITCH
20mm	20M N	36.0mm	M28mm x 1.5mm PITCH
22mm	22M N	36.0mm	M30mm x 2.0mm PITCH
25mm	25M N	38.0mm	M33mm x 2.0mm PITCH

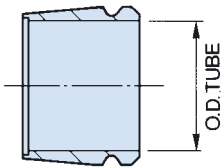
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

1/8" and 3/16" OD ferrule



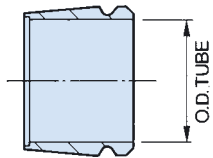
tube OD	part number
1/8"	1F
3/16"	3/16F

OD ferrule



tube OD	part number
1/4"	2F
3/8"	3F
1/2"	4F
3/4"	6F
1"	8F

OD ferrule

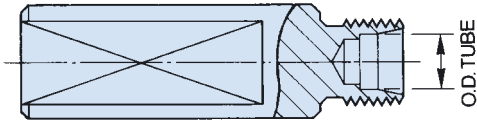


tube OD	part number
6mm	6M F
8mm	8M F
10mm	10M F
12mm	12M F
15mm	15M F
16mm	16M F
18mm	18M F
20mm	20M F
22mm	22M F
25mm	25M F

DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

Ferrule pre-forming tool

Material steel case hardened



Pre-assembly is recommended:

when fittings are to be installed in confined spaces, or in locations where accessibility for in-situ assembly presents difficulties;

where thick wall tubes or stand pipe adaptors are to be used;

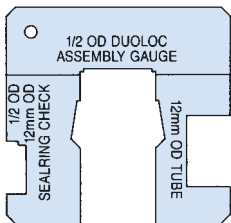
when using forged fittings where in-situ spannering of the forging body may present difficulties;

to reduce installation stresses when tube sizes exceed 1/2" OD (12mm);

as an aid to checking joints are made correctly as described and illustrated on page 6.

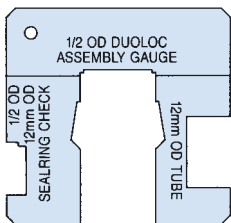
tube OD	part number
1/4"	PFT2
3/8"	PFT3
1/2"	PFT4
3/4"	PFT6
1"	PFT8
6mm	6M PFT
8mm	8M PFT
10mm	10M PFT
12mm	12M PFT
15mm	15M PFT
16mm	16M PFT
18mm	18M PFT
20mm	20M PFT
22mm	22M PFT
25mm	25M PFT

Assembly check gauge



tube OD	part number
1/4"	DAG-2
3/8"	DAG-3
1/2"	DAG-4
5/8"	DAG-5
3/4"	DAG-6
1"	DAG-8

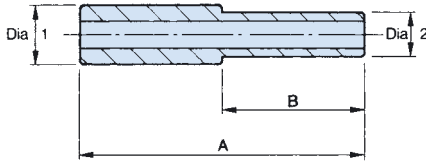
Assembly check gauge



tube OD	part number
6mm	DAG-M6
8mm	DAG-M8
10mm	DAG-M10
12mm	DAG-M12
15mm	DAG-M15
18mm	DAG-M18
22mm	DAG-M22
25mm	DAG-M25

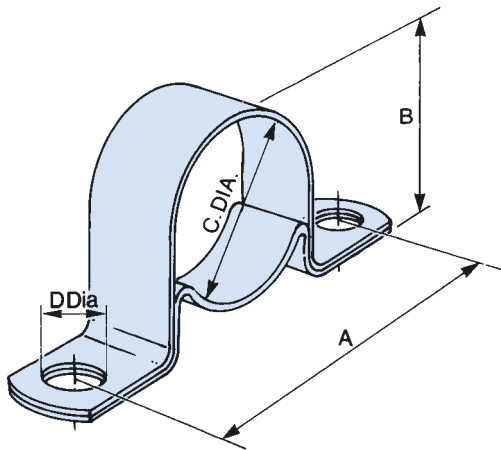
DUOLOC SINGLE FERRULE OD COMPRESSION FITTINGS

Reducing standpipe



dia 1	dia 2	part number	A	B	C
3/8"	1/4"	3/2 RS	2.186"	1.093"	0.100"
1/2"	1/4"	4/2 RS	2.186"	1.093"	0.100"
1/2"	3/8"	4/3 RS	2.186"	1.093"	0.235"
3/4"	1/2"	6/4 RS	2.343"	1.093"	0.312"
1"	1/2"	8/4 RS	2.593"	1.093"	0.312"

Pipe clips



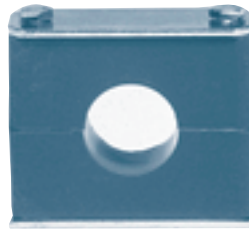
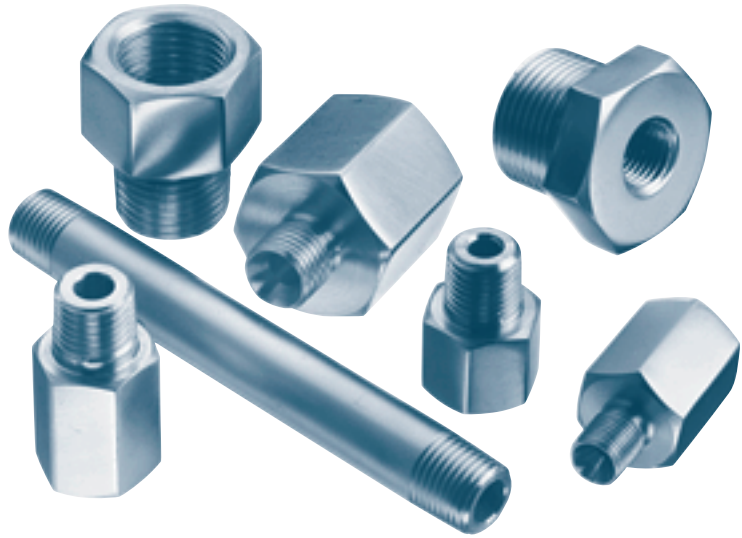
part number	A	B	C dia	D dia
PC 2	0.675"	0.510"	0.250"	0.225"
PC 3	0.875"	0.675"	0.375"	0.225"
PC 4	1.000"	0.840"	0.500"	0.225"
PC 6	1.312"	1.200"	0.750"	0.225"
PC 8	1.675"	1.550"	1.000"	0.225"

PC 6M	17.0mm	13.0mm	6.0mm	5.7mm
PC 8M	19.5mm	16.0mm	8.0mm	5.7mm
PC 10M	22.0mm	17.0mm	10.0mm	5.7mm
PC 12M	25.5mm	21.3mm	12.0mm	5.7mm
PC 15M	29.5mm	26.8mm	15.0mm	5.7mm
PC 16M	29.5mm	27.0mm	16.0mm	5.7mm
PC 18M	33.5mm	30.5mm	18.0mm	5.7mm
PC 20M	33.5mm	30.5mm	20.0mm	5.7mm
PC 22M	36.5mm	34.5mm	22.0mm	5.7mm
PC 25M	42.5mm	39.4mm	25.0mm	5.7mm

This section of the brochure is designed to offer a selection of products that are required to complete an instrumentation system.

Our wide product range offers a single source supply of complete instrumentation packages or a one off requirement.

Experience with supplying customer specials means that we can effectively source complementary products to provide your solution with our bespoke product design, development and manufacturing programme.



Special screwed adaptors

Waverley can offer a wide range of Special Screwed Adaptors with an excellent turn around on small or large quantities.

Many combinations of Male/Female hex adaptors are now stocked. Others available within a few days.

If your requirements have to be machined as a complete special then our standard delivery is two weeks.

Under special circumstances our workshops can rearrange the work load of machines to push specials through.

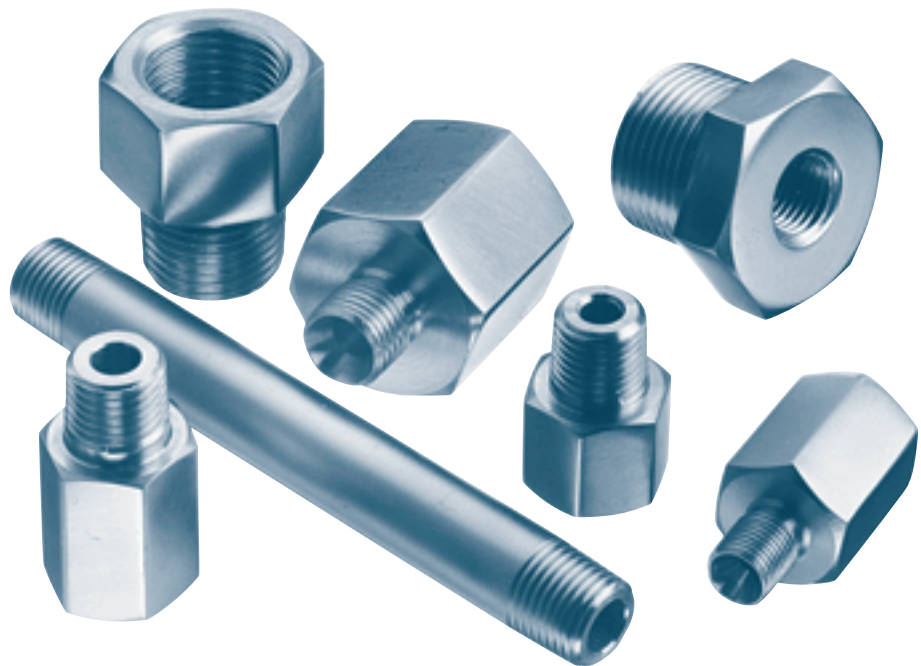
Products available

Male/Female hex adaptors, Female/Female hex adaptors and Male/Male adaptors. Any special compression fitting not shown. Special length barrel nipples and weld nipples.

NB. All special items can have any combination of threads. (eg BSPP x NPT, BSPT x NPT)

Material

316 Stainless Steel.



Nominal bore piping

Waverley offer a range of stainless steel nominal bore pipe.

The pipe is stocked in 6m randoms, but for ease of transport tube can be cut in half (random length is between 5 and 7m).

Tube can be supplied in any length at no extra cost (minimum length 1m).

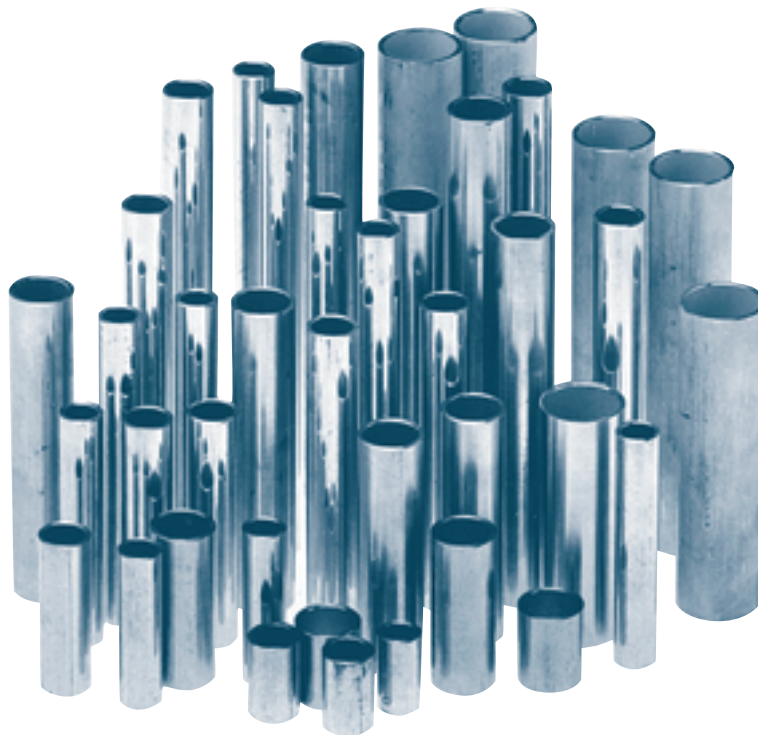
Nominal bore pipe only supplied in Schedule 10, 40 and 80.

Material

316 Stainless Steel

Sizes available

1/8"-2" schedule 10 and 40 stocked. Other sizes up to 12" schedule 10, 40 and 80 are available to order.



Flanges

Waverley can supply a full range of standard or special flanges.

All orders should be delivered in 7–10 days.

Products available

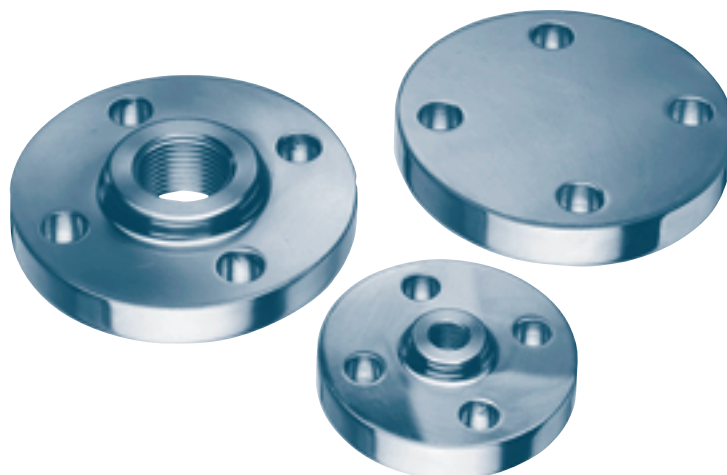
Slip On Flanges
Blind Flanges
Screwed Flanges
Weld Neck Flanges

All Flanges can be supplied to the following standards: BS 10, BS 4504 and BS1560.

If you require any special flanges these can be manufactured to your specifications or drawings.

Material

316 Stainless Steel (other grades available).



Gauges

Waverley are able to offer a range of stainless steel gauges from stock. The specifications cover the standard gauges available. Other threaded connections and pressure ranges are available on request.

Technical specifications

case	AISI 304 stainless steel
bezel	AISI 304 stainless steel bayonet fixing
window	Laminated safety glass
dial	Aluminium
pointer	Mild steel with black finish
socket	AISI 316 stainless steel
accuracy	1%
case size	2 1/2" - 63mm and 4" - 100mm
thread	1/4" BSPP
connection	1/2" BSPP Male
pressure	0-160psi
range	0-1000psi 0-3000psi 0-6000psi



Quick connect couplings

Waverley are able to offer a range of quick connect couplings.

The couplings can be supplied in two ways:

Both halves valved
(when disconnected complete shut off both ways)

One half valved
(when disconnected only one way is shut off)

Safe working pressure
1050psi

Temperature range
-30°C to +210°C

Seal material
Viton

Metal parts
316 Stainless Steel

End connections and sizes available
1/4", 3/8", 1/2", 3/4" and 1" all with BSPP Female threads.



Pipe clamps

Clamp diameters range from 1/4" to 3 1/2".

Waverley's response to demand

All hardware material 316 stainless steel.

Modular design allows any combination

of stacking/hanging.

Multiple mounting options for ease of installation.

Plastic blocks available in Polypropylene or Santoprene.



STW/standard weld plate for weld mount



Modular stacking arrangement using STB/stacking bolts



CMP/Ceiling mounting plate for bolting or welding hanging assembly



BAP/slotted base plate for bolted mount



Modular stacking arrangement using TRP/transfer plate to achieve stacking of different group numbers



8" or 16" saddles available to help support soft wall hose or tube that might otherwise sag



RAL/rail mounted for easy lateral adjustment



Ral/Rail mount allows for easy installation of multiple tandem runs of tube



Modular hanging arrangement, which is offset to allow tubes to run in different directions

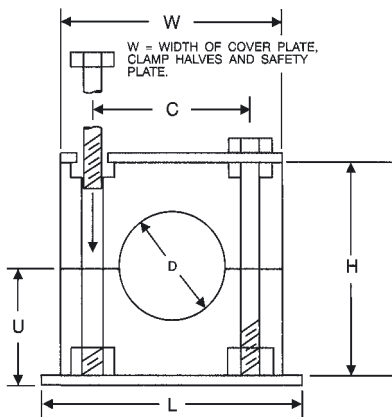
Pipe clamps

Group no	nom size	plastic order number	D	W	H	C	L	U	K
3	1/4" T	SB 3025-**	.250	1.875	1.375	1.300	2.000	0.813	3.500
3	3/8" T	OSB 30375-**	.375	1.875	1.375	1.300	2.000	0.813	3.500
3	1/2" T	SB 3050-**	.500	1.875	1.375	1.300	2.000	0.813	3.500
3	3/4" T	SB 3075-**	.750	1.875	1.375	1.300	2.000	0.813	3.500
3	1/2" P	OSB 30840-**	.840	1.875	1.375	1.300	2.000	0.813	3.500
3	1" T	SB 3100-**	1.0000	1.875	1.375	1.300	2.000	0.813	3.500
6	1/4" T	SB 6025-**	.250	3.375	2.625	2.600	3.375	1.438	4.875
6	3/8" T	OSB 60375-**	.375	3.375	2.625	2.600	3.375	1.438	4.875
6	1/2" T	SB 6050-**	.500	3.375	2.625	2.600	3.375	1.438	4.875
6	5/8" T	OSB 60625-**	.625	3.375	2.625	2.600	3.375	1.438	4.875
6	3/4" T	SB 6075-**	.750	3.375	2.625	2.600	3.375	1.438	4.875
6	1/2" P	OSB 60840-**	.840	3.375	2.625	2.600	3.375	1.438	4.875
6	7/8" T	OSB 60875-**	.875	3.375	2.625	2.600	3.375	1.438	4.875
6	1" T	SB 6100-**	1.0000	3.375	2.625	2.600	3.375	1.438	4.875
6	3/4" P	OSB 61050-**	1.0500	3.375	2.625	2.600	3.375	1.438	4.875
6	1 1/4" T	SB 6125-**	1.2500	3.375	2.625	2.600	3.375	1.438	4.875
6	1" P	OSB 61315-**	1.3150	3.375	2.625	2.600	3.375	1.438	4.875
6	1 1/2" T	SB 6150-**	1.5000	3.375	2.625	2.600	3.375	1.438	4.875
6	1 1/4" P	OSB 61660-**	1.6600	3.375	2.625	2.600	3.375	1.438	4.875
6	1 1/2" P	OSB 61900-**	1.9000	3.375	2.625	2.600	3.375	1.438	4.875
6	2" T	SB 6200-**	2.0000	3.375	2.625	2.600	3.375	1.438	4.875
7	2" T	SB 7200-**	2.0000	5.000	4.375	4.250	5.000	2.312	6.500
7	2" P	OSB 72375-**	2.3750	5.000	4.375	4.250	5.000	2.312	6.500
7	2 1/2" T	SB 7250-**	2.5000	5.000	4.375	4.250	5.000	2.312	6.500
7	2 1/2" P	OSB 72875-**	2.8750	5.000	4.375	4.250	5.000	2.312	6.500
7	3" T	SB 7300-**	3.0000	5.000	4.375	4.250	5.000	2.312	6.500
7	3 1/2" T - 3" P	SB 7350-**	3.5000	5.000	4.375	4.250	5.000	2.312	6.500

** insert material PP Polypropylene SP Santoprene

recommended spacing between clamps

tube/pipe diameter	up to 3000 psi	over 3000 psi
1/4" - 5/8"	4' - 6'	3' - 4'
5/8" - 1"	5' - 6'	3' - 4'
1" - 1 1/2"	6' - 7'	4' - 5'
1 1/2" - 2 1/2"	7' - 8'	4' - 5'
2 1/2" - 3 1/2"	8' - 9'	5' - 6'



Pipe clamps

Waverley clamp components can be quickly and effectively secured and are virtually maintenance free. Our modular clamp design assures greater flexibility in assembly adjustment and stacking as compared to other clamping systems. Waverley clamps offer an endless variety of application configurations to suit your every need.

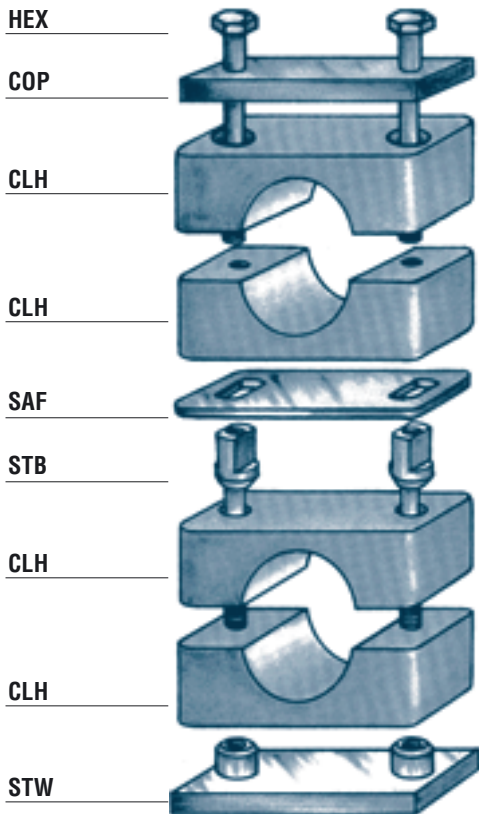
Important specifications

Polypropylene clamp halves (CLH) have a maximum operating temperature of 212°F.

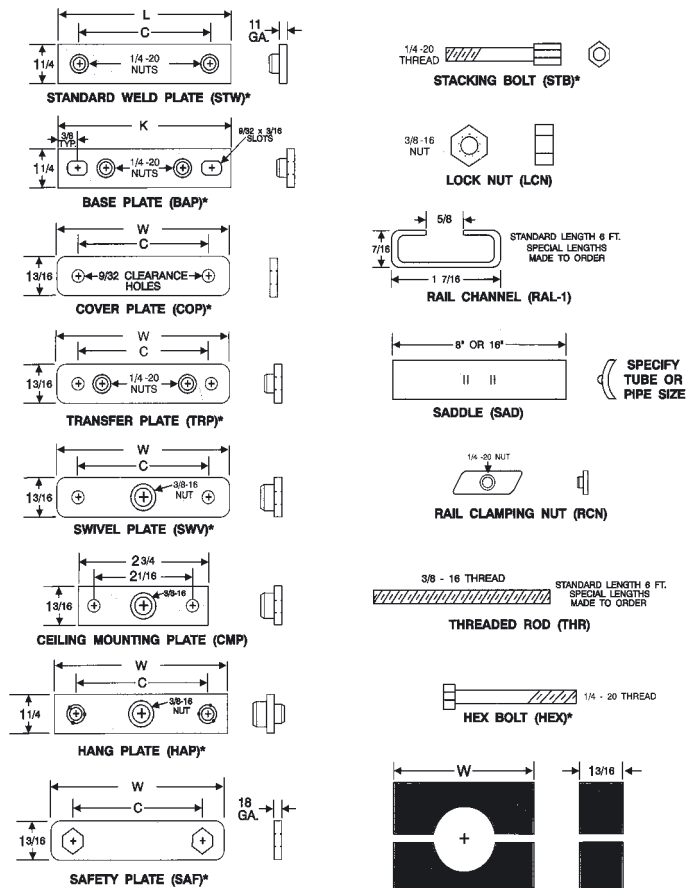
Santoprene clamp halves (CLH) have a maximum operating temperature of 302°F.

All clamp hardware is supplied in type 316 Stainless Steel.

Basic assembly stack-of-two



Ordering components



*SPECIFY GROUP NO.

CLAMP HALVES (SEE TABLE FOR PLASTICS ORDERING INFORMATION)

FLANGE FITTINGS

Waverley brownall flange connectors are for use at the primary isolation point of piping systems. Designed for ease of use, flange fittings easily connect process piping to instrumentation tubing. The flange adapter (kidney type) provides a direct connection of tube OD compression couplings for instrument transmitters.

Quality engineered for instrumentation and process applications.

Working pressure in accordance with piping code ANSI B31.1 and refinery piping code NASI B31.3.

Material 316 stainless steel other materials and NACE hardness available to order).

All fittings are cast coded for complete traceability.

All materials conform to ASTM specifications.



OTHER WAVERLEY BROWNALL PRODUCTS



RINGLOK TWIN FERRULE OD COMPRESSION FITTINGS

Ringlok Twin Ferrule fittings offer one of the widest ranges in the World being primarily used with high pressure, elevated or cryogenic temperatures, vibration, impulse loading and corrosive or hazardous environments. The Ringlok product is highly approved with an unmatched service record. Manufactured in 316 Stainless steel, 6MO, Titanium, Monel, Incoloy and Inconel.



BALL VALVES

Waverley Brownall's extensive range of 316 ball valves are available in 1000lb, 3000lb and 6000lb classes, in a multitude of thread forms and connections that can be assembled to your required combination.

Manufactured in the UK to exacting standards, our valves are designed for compactness, reliability and long service life and able to endure the rigours of a vast number of industrial applications.



CONTROL VALVES

CV Check Valves

The CV series check valves are designed to give unidirectional flow of liquids and gases with a minimal pressure drop.

Mini Check Valves

MCV & ACV series check valves are miniature one-piece body check valves, used for unidirectional control of flow up to 6000psi.

Proportional Relief Valves

When in operation, if the inline pressure exceeds the force exerted by the spring, the valve opens.

Inline Tee Filter

The Waverley inline tee filter is designed to provide a simple solution for removing system contamination from flow medi

OTHER WAVERLEY BROWNALL PRODUCTS



NEEDLE VALVES

Waverley Brownall needle valves are manufactured in the UK to the highest standards - designed to meet the requirements of the rigorous engineering applications anticipated for this type of valve.

Available in 316 stainless steel and a range of exotic alloys for applications up to 10,000psi and temperatures of 400°C



MANIFOLD VALVES

Waverley Brownall 316 stainless steel Manifolds are available as 2-way, 3-way and 5-way, in either direct or remote format. Connections are 1/2" NPT as standard with an extended operating pressure up to 10,000psi.



HIGH PRESSURE PRECISION PIPE FITTINGS

Manufactured from high quality 316 stainless steel bar and forgings.

Available in NPT and BSPT for pressures up to 10,000psi.

OTHER WAVERLEY BROWNALL PRODUCTS



HOSE COMPONENTS AND UNIONS

Waverley brownall offer an extensive range of Hose connectors and Unions with BSP, BSPT and NPT thread sizes up to 2". This product is entirely manufactured in our UK factory from the highest quality 316 stainless steel.



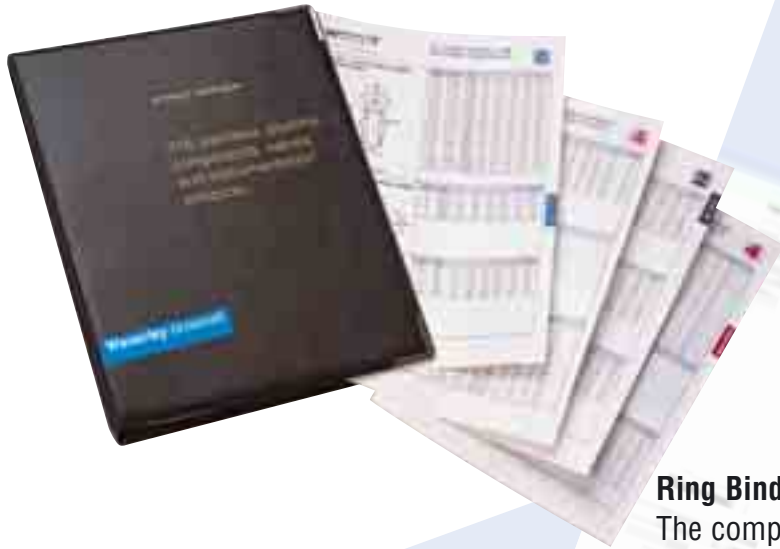
LOW PRESSURE CAST RANGE OF PIPE FITTINGS

These BSP and BSPT fittings are available ex stock in sizes ranging from 1/8" to 2" and have a safe working pressure of 150psi.



PLUGS, BUSHES AND SEALS

The Waverley brownall range of BSP plugs, bushes and caps manufactured from large size hexagons to allow for the use of seals. Screw seal assemblies are stocked to suit all threads from 1/8" to 2" BSP suitable for a safe working pressure of 3000psi.



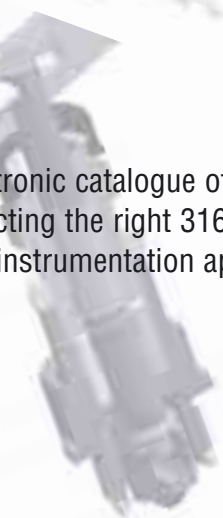
Ring Binder Book

The complete Waverley brownall range is also shown in detail in a ring binder for ease of reference.



Electronic Catalogue

The Waverley brownall electronic catalogue offers you a fast and accurate means of selecting the right 316 stainless steel fittings and valves for your instrumentation applications.



Precision Valve Catalogue

Shows the complete Waverley Brownall valve range including Ball Valves, Check Valves, Needle Valves and Manifolds.



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