

# PUSH-IN FITTINGS

Metal Work fittings are the best elements for connecting pipes and actuators. Quick and easy to use, the Metal Work push-in fittings can be re-used thousands of times without affecting the pneumatic and mechanical seal in any way. It comes in various configurations and guarantees a virtually unlimited, highly flexible use. The clamping spring with its special shape grips the pipe without scratching or deforming it, which facilitates release. In the fittings, the release bushing has patented screwdriver slots to facilitate release in applications not accessible by hand. The seal of the thread is guaranteed due to a special, captivated, O-ring integral to the fitting.



## FITTINGS

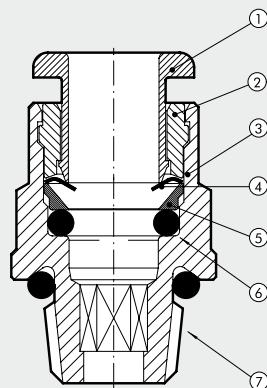
## PUSH-IN FITTINGS

### TECHNICAL DATA

|                        |  |
|------------------------|--|
| Threaded coupling      | 10/32 UNF - 1/8 NPT - 1/4 NPT - 3/8 NPT - 1/2 NPT                                |
| Diameter               | 1/8 - 5/32 - 1/4 - 5/16 - 3/8 - 1/2  |
| Temperature range      | -20 to 80 °C<br>-4 to 176 °F   |
| Pressure range         | -14... to ...232 psi<br>-0.99... to ...16 bar                                    |
| Recommended pipe Fluid | Rilsan PA 11 - Nylon 6 - Polyamide 12 - Polypropylene<br>Vacuum - Compressed air |

### COMPONENTS

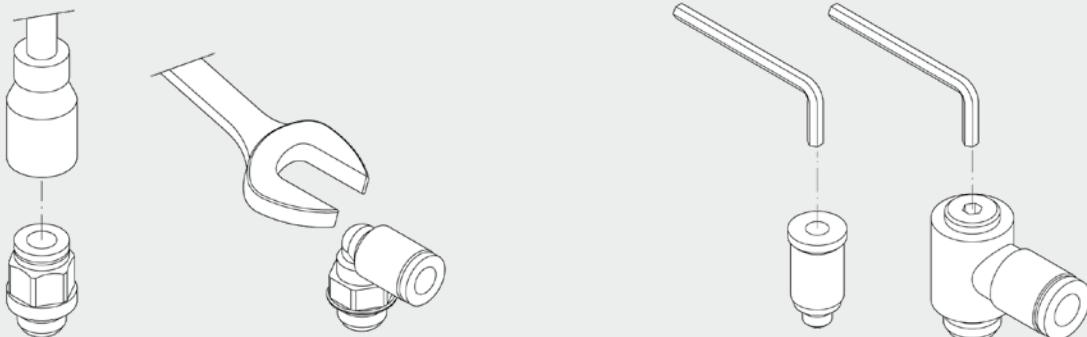
- ① Release button: technopolymer
- ② Stop button: technopolymer (brass for Ø 1/4 and 3/8)
- ③ Body: nickel-plated brass
- ④ Spring: stainless steel (for pipes Ø 1/8: brass gripper)
- ⑤ Spring ring: technopolymer
- ⑥ O-ring Seals: Buna-N
- ⑦ NPT thread



### O-RING BELOW R FITTINGS

| Thread    | Initials | Dimensions of O-ring [mm] |
|-----------|----------|---------------------------|
| 10/32 UNF | .....    | 3.5 x 1.2                 |
| 1/8 NPT   | 2031     | 7.66 x 1.78               |
| 1/4 NPT   | 2043     | 10.82 x 1.78              |
| 3/8 NPT   | 2056     | 14 x 1.78                 |
| 1/2 NPT   | 3068     | 17.13 x 2.62              |

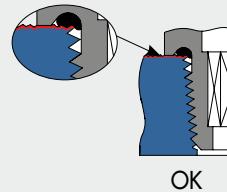
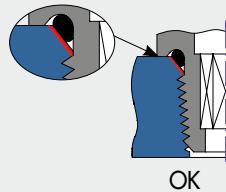
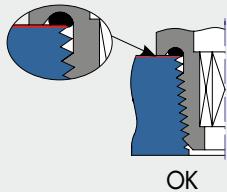
## SCREWING METHOD



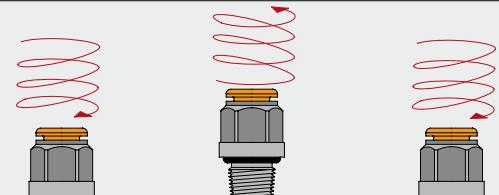
| Thread   | Max. Torque [lb f ft] |
|----------|-----------------------|
| 10/32    | 1.33                  |
| 1/8" NPT | 4.43                  |
| 1/4" NPT | 5.90                  |
| 3/8" NPT | 7.38                  |
| 1/2" NPT | 11.06                 |

| CH         |        | Max. Torque [lb f ft]  |
|------------|--------|--|
| Inc        | mm     |  |
| 5/64       | 2      | 0.50   |
| 0.118      | 3      | 1.84   |
| 0.157      | 4      | 3.68   |
| 0.197      | 5      | 5.90   |
| Over 0.197 | Over 5 | See the values concerning threads<br>NB: When using a socket spanner, the torque must not exceed that of the thread<br>(e.g. fitting RU1 5/32 1/8 NPT, with a 0.118 inc socket, has a maximum torque of 4.43 lb f ft<br>highest value of the thread) |

## THE METAL WORK SOLUTION WITH CAPTIVATED O-RING



- Perfect seal even on flat, conical and raw surfaces.



- Can be re-used thousands of times.

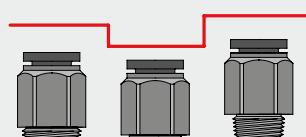


- The pneumatic seal is obtained by simply screwing the fitting in by hand. Tighten firmly without forcing to prevent unscrewing.

### METAL WORK



### CONVENTIONAL FITTINGS

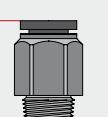


- Constant height of the mounted fitting regardless of the tolerance of the thread, or to the torque.

### METAL WORK



### CONVENTIONAL FITTINGS

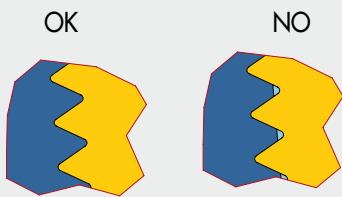


- Reduced fitting height.

## THE NEW SOLUTION OFFERS NUMEROUS ADVANTAGES OVER CONVENTIONAL SOLUTIONS:

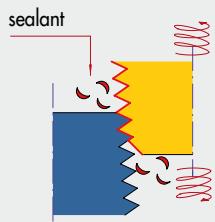
### Solution with **NPTF Dry seal thread**

- It operates correctly if the male and female thread are made exactly to standard, otherwise there will be air leaks.



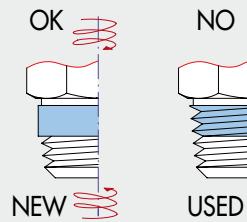
### Solution with **thread coated with teflon or other sealant**

- A limited number of assemblies is possible after which there will be no seal.
- Particles of sealant detach from the fitting or enter the compressed air system, which affects cleanliness of the compressed air.



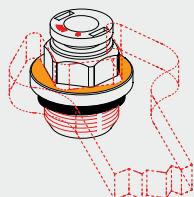
### Solution with **teflon or rubber ring on the thread**

- Guaranteed seal with just a few turns.

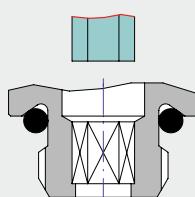


## OTHER ADVANTAGES OF METAL WORK FITTINGS

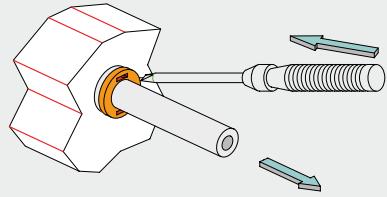
Tighten by open end or box wrench



Tighten by allen wrench, available in straight configuration



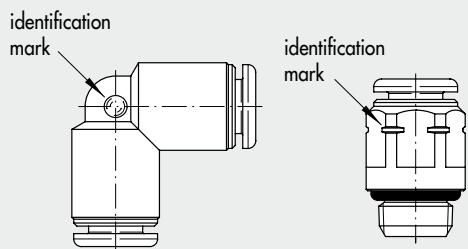
Slot to facilitate release with a screw driver



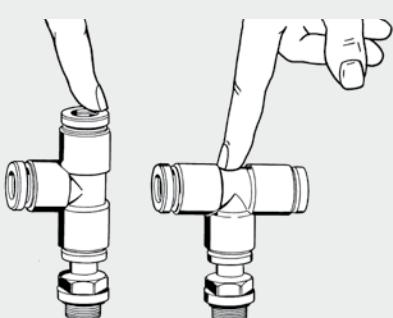
## GENERAL FEATURES

Identification mark for fractional pipe fittings in inches or with NPT thread.

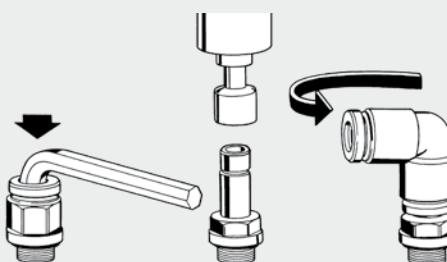
NB: threadless fittings for 1/8, 5/32 and 5/16 pipes do not bear an identification mark as they are used in Europe.



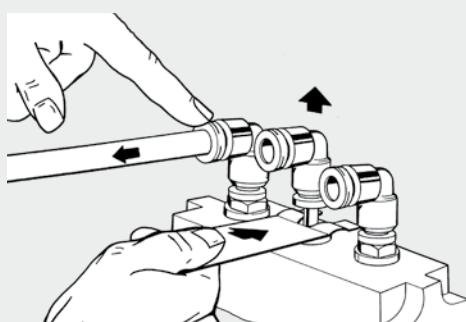
A single tee can give central tees and lateral tees.



Mounting fittings with an Allen wrench or pneumatic tool. All the elbows and tees are rotary. Drastic reduction in assembly times.

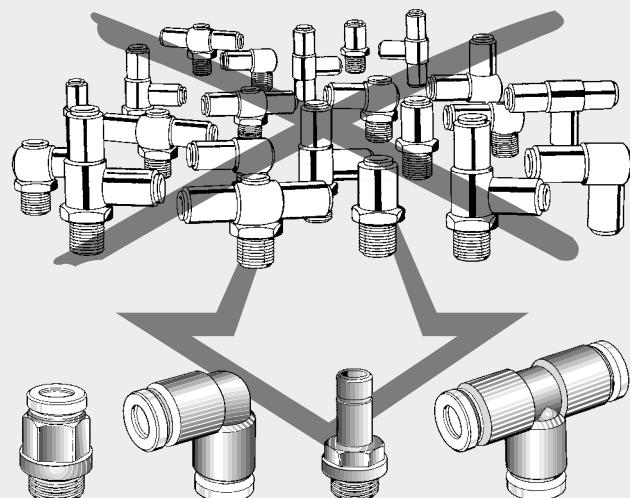


The pipe is easy to assemble by pressing lightly on the pusher ring. To remove the fitting, merely push radially on the key.



## FROM AN IDEA, A SYSTEM

- Four basic fittings can be used to make all possible connections in a pneumatic circuit.
- Sharp drop in the number of fittings to be stocked and hence reduced operating costs.

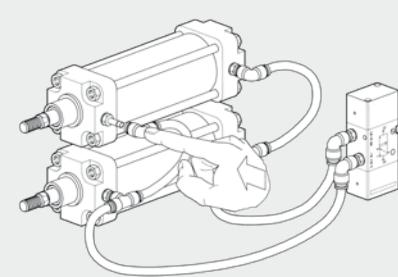
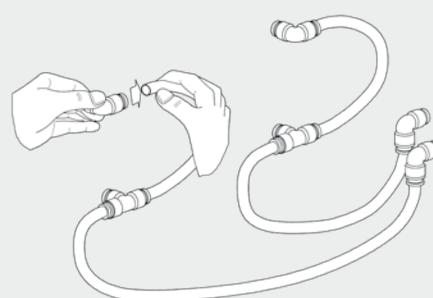
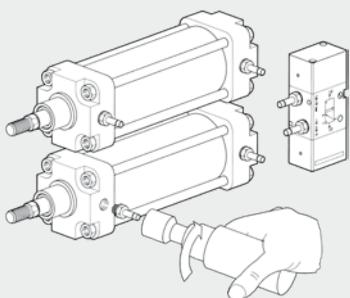


## ASSEMBLY DIAGRAM

Pre-assembling fittings on the workbench with a pneumatic tool even with very close center distances.

Pre-assembling fittings and pipe sections on the workbench. Pre-assembled configurations can be stocked for assembly in series.

Quick connection and completion of the pneumatic circuit.

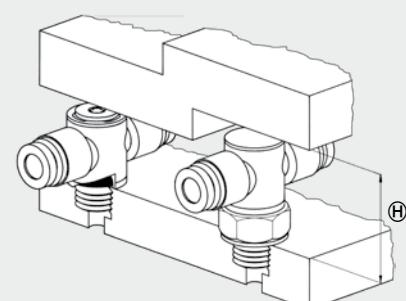
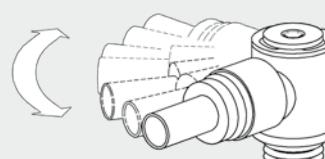
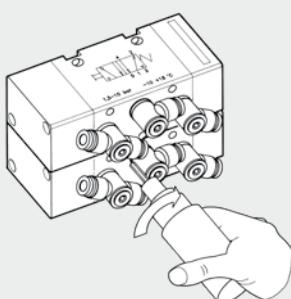


## FROM A SYSTEM, INNOVATION

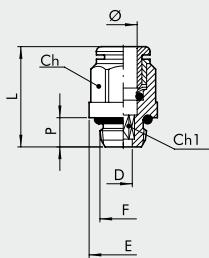
An Allen wrench is used to assemble rotary fittings even with very close center distances.

The special configuration with two O-rings allows maximum orientation so as to follow pipe movement in the specific application.

Fittings with a built-in gasket and reduced height (H) with the same threaded coupling and pipe diameter.

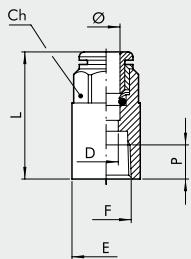


## RU1 - MALE CONNECTORS



| Code    | Ref | $\emptyset$ | F         | Ch    |    | Ch    |    | P     | L    | D    | E    |
|---------|-----|-------------|-----------|-------|----|-------|----|-------|------|------|------|
|         |     |             |           | Inch  | mm | Inch  | mm |       |      |      |      |
| 2U01A02 | RU1 | 1/8         | 10/32 UNF | —     | —  | 5/64  | 2  | 0.140 | 0.51 | 0.08 | 0.23 |
| 2U01A03 | RU1 | 1/8         | 1/8 NPT   | 5/16  | 8  | 5/64  | 2  | 0.24  | 0.54 | 0.08 | 0.51 |
| 2U01001 | RU1 | 5/32        | 10/32 UNF | —     | —  | 5/64  | 2  | 0.16  | 0.80 | 0.08 | 0.35 |
| 2U01002 | RU1 | 5/32        | 1/8 NPT   | 0.394 | 10 | 0.118 | 3  | 0.24  | 0.71 | 0.12 | 0.51 |
| 2U01003 | RU1 | 5/32        | 1/4 NPT   | 0.394 | 10 | 0.118 | 3  | 0.31  | 0.78 | 0.12 | 0.65 |
| 2U01000 | RU1 | 1/4         | 10/32 UNF | —     | —  | 5/64  | 2  | 0.16  | 0.87 | 0.08 | 0.43 |
| 2U01007 | RU1 | 1/4         | 1/8 NPT   | 0.472 | 12 | 0.157 | 4  | 0.24  | 0.86 | 0.16 | 0.51 |
| 2U01008 | RU1 | 1/4         | 1/4 NPT   | 0.472 | 12 | 0.157 | 4  | 0.31  | 0.81 | 0.16 | 0.65 |
| 2U01020 | RU1 | 1/4         | 3/8 NPT   | 0.472 | 12 | 0.157 | 4  | 0.35  | 0.85 | 0.16 | 0.79 |
| 2U01009 | RU1 | 5/16        | 1/8 NPT   | 0.512 | 13 | 0.197 | 5  | 0.24  | 1    | 0.20 | 0.55 |
| 2U01010 | RU1 | 5/16        | 1/4 NPT   | 0.551 | 14 | 0.236 | 6  | 0.31  | 0.96 | 0.24 | 0.65 |
| 2U01011 | RU1 | 5/16        | 3/8 NPT   | 0.551 | 14 | 0.236 | 6  | 0.35  | 0.90 | 0.24 | 0.79 |
| 2U01012 | RU1 | 3/8         | 1/4 NPT   | 5/8   | 16 | 0.276 | 7  | 0.31  | 1.15 | 0.28 | 0.69 |
| 2U01013 | RU1 | 3/8         | 3/8 NPT   | 5/8   | 16 | 5/16  | 8  | 0.35  | 1.05 | 0.32 | 0.79 |
| 2U01021 | RU1 | 3/8         | 1/2 NPT   | 5/8   | 16 | 5/16  | 8  | 0.43  | 1.18 | 0.32 | 0.96 |
| 2U01014 | RU1 | 1/2         | 3/8 NPT   | 0.866 | 22 | 0.394 | 10 | 0.35  | 1.28 | 0.4  | 0.79 |
| 2U01015 | RU1 | 1/2         | 1/2 NPT   | 0.866 | 22 | 0.394 | 10 | 0.43  | 1.18 | 0.4  | 0.96 |

## RU2 - FEMALE CONNECTORS

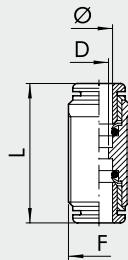


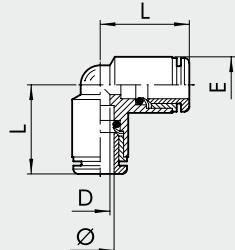
| Code    | Ref | $\emptyset$ | F       | Ch    |    | Ch   |      | P    | L    | D | E |
|---------|-----|-------------|---------|-------|----|------|------|------|------|---|---|
|         |     |             |         | Inch  | mm | Inch | mm   |      |      |   |   |
| 2U02A03 | RU2 | 1/8         | 1/8 NPT | 5/16  | 8  | 0.28 | 0.82 | 0.09 | 0.55 | — | — |
| 2U02001 | RU2 | 5/32        | 1/8 NPT | 0.394 | 10 | 0.28 | 1.05 | 0.12 | 0.55 | — | — |
| 2U02002 | RU2 | 5/32        | 1/4 NPT | 0.394 | 10 | 0.28 | 1.14 | 0.12 | 0.67 | — | — |
| 2U02005 | RU2 | 1/4         | 1/8 NPT | 0.472 | 12 | 0.28 | 1.08 | 0.20 | 0.55 | — | — |
| 2U02006 | RU2 | 1/4         | 1/4 NPT | 0.472 | 12 | 0.28 | 1.16 | 0.20 | 0.67 | — | — |
| 2U02007 | RU2 | 5/16        | 1/8 NPT | 0.512 | 13 | 0.28 | 1.11 | 0.28 | 0.55 | — | — |
| 2U02008 | RU2 | 5/16        | 1/4 NPT | 0.551 | 14 | 0.28 | 1.18 | 0.28 | 0.67 | — | — |

## RU3 - STRAIGHT UNION

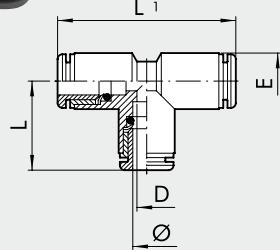


| Code    | Ref. | $\emptyset$ | F       | L    | D    |
|---------|------|-------------|---------|------|------|
| 2003A01 | R3   | 1/8         | M8X0.75 | 0.72 | 0.08 |
| 2L03001 | RL3  | 5/32        | M11X1   | 1.13 | 0.10 |
| 2U03003 | RU3  | 1/4         | M13X1   | 1.32 | 0.18 |
| 2L03004 | RL3  | 5/16        | M15X1   | 1.33 | 0.26 |
| 2U03005 | RU3  | 3/8         | M17X1   | 1.58 | 0.31 |
| 2U03006 | RU3  | 1/2         | M22X1   | 1.7  | 0.39 |

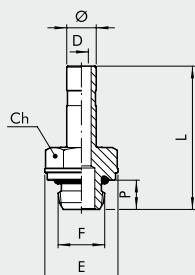


**RU4 - UNION ELBOWS**


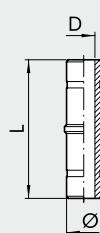
| Code    | Ref. | $\emptyset$ | L    | D    | E    |
|---------|------|-------------|------|------|------|
| 2004A01 | R4   | 1/8         | 0.41 | 0.08 | 0.25 |
| 2L04001 | RL4  | 5/32        | 0.63 | 0.10 | 0.37 |
| 2U04003 | RU4  | 1/4         | 0.76 | 0.18 | 0.45 |
| 2L04004 | RL4  | 5/16        | 0.81 | 0.26 | 0.53 |
| 2U04005 | RU4  | 3/8         | 0.94 | 0.31 | 0.63 |
| 2U04006 | RU4  | 1/2         | 1.07 | 0.43 | 0.81 |

**RU5 - UNION TEES**


| Code    | Ref. | $\emptyset$ | L    | L1   | D    | E    |
|---------|------|-------------|------|------|------|------|
| 2005A01 | R5   | 1/8         | 0.41 | 0.82 | 0.08 | 0.25 |
| 2L05001 | RL5  | 5/32        | 0.63 | 1.26 | 0.10 | 0.37 |
| 2U05003 | RU5  | 1/4         | 0.76 | 1.52 | 0.18 | 0.45 |
| 2L05004 | RL5  | 5/16        | 0.81 | 1.62 | 0.26 | 0.53 |
| 2U05005 | RU5  | 3/8         | 0.94 | 1.88 | 0.31 | 0.63 |
| 2U05006 | RU5  | 1/2         | 1.07 | 2.14 | 0.43 | 0.81 |

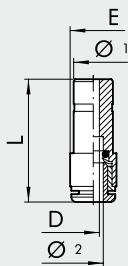
**RU6 - STEM ADAPTORS**


| Code    | Ref. | $\emptyset$ | F         | $Ch$  |    | P    | L    | D    | E    |
|---------|------|-------------|-----------|-------|----|------|------|------|------|
|         |      |             |           | Inch  | mm |      |      |      |      |
| 2U06A01 | RU6  | 1/8         | 10/32 UNF | 0.197 | 5  | 0.14 | 0.73 | 0.08 | 0.23 |
| 2U06A02 | RU6  | 1/8         | 1/8 NPT   | 0.472 | 12 | 0.24 | 0.89 | 0.08 | 0.51 |
| 2U06001 | RU6  | 5/32        | 10/32 UNF | 5/16  | 8  | 0.16 | 0.99 | 0.08 | 0.35 |
| 2U06002 | RU6  | 5/32        | 1/8 NPT   | 0.472 | 12 | 0.24 | 1.09 | 0.10 | 0.51 |
| 2U06003 | RU6  | 5/32        | 1/4 NPT   | 0.551 | 14 | 0.31 | 1.19 | 0.10 | 0.65 |
| 2U06000 | RU6  | 1/4         | 10/32 UNF | 5/16  | 8  | 0.16 | 1.01 | 0.08 | 0.35 |
| 2U06007 | RU6  | 1/4         | 1/8 NPT   | 0.472 | 12 | 0.24 | 1.11 | 0.16 | 0.51 |
| 2U06008 | RU6  | 1/4         | 1/4 NPT   | 0.551 | 14 | 0.31 | 1.20 | 0.16 | 0.65 |
| 2U06020 | RU6  | 1/4         | 3/8 NPT   | 0.669 | 17 | 0.35 | 1.31 | 0.16 | 0.79 |
| 2U06009 | RU6  | 5/16        | 1/8 NPT   | 0.472 | 12 | 0.24 | 1.15 | 0.22 | 0.51 |
| 2U06010 | RU6  | 5/16        | 1/4 NPT   | 0.551 | 14 | 0.31 | 1.24 | 0.24 | 0.65 |
| 2U06011 | RU6  | 5/16        | 3/8 NPT   | 0.669 | 17 | 0.35 | 1.35 | 0.24 | 0.79 |
| 2U06012 | RU6  | 3/8         | 1/4 NPT   | 0.551 | 14 | 0.31 | 1.37 | 0.29 | 0.65 |
| 2U06013 | RU6  | 3/8         | 3/8 NPT   | 0.669 | 17 | 0.35 | 1.48 | 0.29 | 0.79 |
| 2U06022 | RU6  | 3/8         | 1/2 NPT   | 0.748 | 19 | 0.43 | 1.62 | 0.29 | 0.96 |
| 2U06014 | RU6  | 1/2         | 3/8 NPT   | 0.669 | 17 | 0.35 | 1.55 | 0.41 | 0.79 |
| 2U06015 | RU6  | 1/2         | 1/2 NPT   | 0.748 | 19 | 0.43 | 1.72 | 0.41 | 0.96 |

**RU7 - STRAIGHT CONNECTORS**


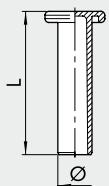
| Code    | Ref. | $\emptyset$ | L    | D    |
|---------|------|-------------|------|------|
| 2007001 | R7   | 5/32        | 1.34 | 0.08 |
| 2U07003 | RU7  | 1/4         | 1.40 | 0.16 |
| 2L07004 | RL7  | 5/16        | 1.48 | 0.24 |
| 2U07005 | RU7  | 3/8         | 1.73 | 0.29 |
| 2U07006 | RU7  | 1/2         | 2    | 0.41 |

## RU8 - PLUG IN REDUCERS



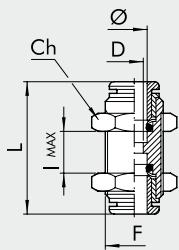
| Code    | Ref. | $\varnothing 1$ | $\varnothing 2$ | L    | D    | E    |
|---------|------|-----------------|-----------------|------|------|------|
| 2008A02 | R8   | 5/32            | 1/8             | 1.02 | 0.08 | 0.25 |
| 2U08002 | RU8  | 1/4             | 5/32            | 1.18 | 0.10 | 0.39 |
| 2L08004 | RL8  | 5/16            | 5/32            | 1.10 | 0.10 | 0.37 |
| 2U08006 | RU8  | 5/16            | 1/4             | 1.27 | 0.18 | 0.46 |
| 2U08007 | RU8  | 3/8             | 1/4             | 1.40 | 0.20 | 0.46 |
| 2U08010 | RU8  | 1/2             | 1/4             | 1.54 | 0.20 | 0.51 |
| 2U08011 | RU8  | 1/2             | 5/16            | 1.41 | 0.28 | 0.57 |
| 2U08015 | RU8  | 1/2             | 3/8             | 1.63 | 0.31 | 0.63 |

## RU9 BLANKING PLUGS IN PLASTIC



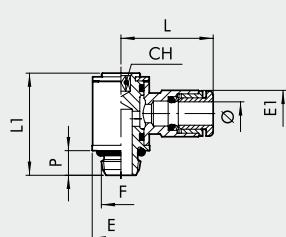
| Code    | Rif. | $\varnothing$ | L    |
|---------|------|---------------|------|
| 2L10A01 | RL9T | 1/8           | 0.77 |
| 2L10001 | RL9T | 5/32          | 1.06 |
| 2U10003 | RU9  | 1/4           | 1.17 |
| 2L10004 | RL9T | 5/16          | 1.32 |
| 2U10005 | RU9  | 3/8           | 1.45 |
| 2U10006 | RU9  | 1/2           | 1.54 |

## RU10 - BULKHEAD UNIONS

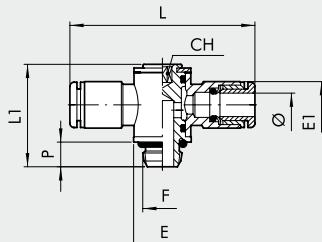


| Code    | Ref  | $\varnothing$ | F       | Ch    |    | L    | D    | lmax |
|---------|------|---------------|---------|-------|----|------|------|------|
|         |      |               |         | Inc   | mm |      |      |      |
| 2011A01 | R10  | 1/8           | M8X0.75 | 0.394 | 10 | 0.72 | 0.08 | 0.20 |
| 2L11001 | RL10 | 5/32          | M11X1   | 0.512 | 13 | 1.13 | 0.10 | 0.43 |
| 2U11003 | RU10 | 1/4           | M13X1   | 5/8   | 16 | 1.32 | 0.18 | 0.47 |
| 2L11004 | RL10 | 5/16          | M15X1   | 0.669 | 17 | 1.33 | 0.26 | 0.53 |
| 2U11005 | RU10 | 3/8           | M17X1   | 0.787 | 20 | 1.58 | 0.31 | 0.67 |
| 2U11006 | RU10 | 1/2           | M22X1   | 0.984 | 25 | 1.7  | 0.39 | 0.74 |

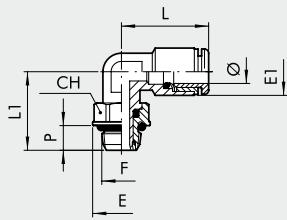
## RU15 - ROTARY FITTINGS SINGLE



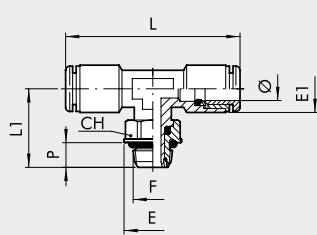
| Code    | Ref  | $\varnothing$ | F         | Ch    |    | P    | L    | L1   | E    | E1   |
|---------|------|---------------|-----------|-------|----|------|------|------|------|------|
|         |      |               |           | Inc   | mm |      |      |      |      |      |
| 2U14004 | RU15 | 1/8           | 10/32 UNF | 5/64  | 2  | 0.16 | 0.50 | 0.55 | 0.23 | 0.28 |
| 2U14001 | RU15 | 5/32          | 10/32 UNF | 5/64  | 2  | 0.16 | 0.76 | 0.74 | 0.31 | 0.37 |
| 2U14002 | RU15 | 5/32          | 1/8 NPT   | 0.118 | 3  | 0.24 | 0.80 | 1.01 | 0.51 | 0.37 |
| 2U14106 | RU15 | 1/4           | 10/32 UNF | 5/64  | 2  | 0.16 | 0.94 | 0.74 | 0.31 | 0.46 |
| 2U14005 | RU15 | 1/4           | 1/8 NPT   | 0.118 | 3  | 0.24 | 0.92 | 1.01 | 0.51 | 0.46 |
| 2U14007 | RU15 | 1/4           | 1/4 NPT   | 5/32  | 4  | 0.31 | 0.98 | 1.17 | 0.65 | 0.46 |
| 2U14006 | RU15 | 5/16          | 1/8 NPT   | 0.118 | 3  | 0.24 | 0.97 | 1.01 | 0.51 | 0.54 |
| 2U14008 | RU15 | 5/16          | 1/4 NPT   | 5/32  | 4  | 0.31 | 1.03 | 1.17 | 0.65 | 0.54 |
| 2U14013 | RU15 | 5/16          | 3/8 NPT   | 0.197 | 5  | 0.35 | 1.11 | 1.40 | 0.79 | 0.54 |
| 2U14009 | RU15 | 3/8           | 1/4 NPT   | 5/32  | 4  | 0.31 | 1.25 | 1.17 | 0.65 | 0.65 |
| 2U14014 | RU15 | 3/8           | 3/8 NPT   | 0.197 | 5  | 0.35 | 1.31 | 1.40 | 0.79 | 0.63 |
| 2U14011 | RU15 | 1/2           | 3/8 NPT   | 0.197 | 5  | 0.35 | 1.44 | 1.4  | 0.79 | 0.79 |
| 2U14012 | RU15 | 1/2           | 1/2 NPT   | 0.315 | 8  | 0.43 | 1.5  | 1.6  | 0.96 | 0.8  |

**RU16 - ROTARY FITTINGS DOUBLE**


| Code    | Ref  | $\varnothing$ | F         | Ch    |    | P    | L    | L1   | E    | E1   |
|---------|------|---------------|-----------|-------|----|------|------|------|------|------|
|         |      |               |           | Inch  | mm |      |      |      |      |      |
| 2U15001 | RU16 | 5/32          | 10/32 UNF | 5/64  | 2  | 0.16 | 1.52 | 0.74 | 0.31 | 0.37 |
| 2U15002 | RU16 | 5/32          | 1/8 NPT   | 5/64  | 2  | 0.24 | 1.60 | 1.01 | 0.51 | 0.37 |
| 2U15006 | RU16 | 1/4           | 10/32 UNF | 0.118 | 3  | 0.16 | 1.87 | 0.74 | 0.31 | 0.46 |
| 2U15005 | RU16 | 1/4           | 1/8 NPT   | 5/64  | 2  | 0.24 | 1.83 | 1.01 | 0.51 | 0.46 |
| 2U15007 | RU16 | 1/4           | 1/4 NPT   | 0.118 | 3  | 0.31 | 1.95 | 1.17 | 0.65 | 0.46 |
| 2U15006 | RU16 | 5/16          | 1/8 NPT   | 5/32  | 4  | 0.24 | 1.94 | 1.01 | 0.51 | 0.54 |
| 2U15008 | RU16 | 5/16          | 1/4 NPT   | 0.118 | 3  | 0.31 | 2.06 | 1.17 | 0.65 | 0.54 |
| 2U15013 | RU16 | 5/16          | 3/8 NPT   | 5/32  | 4  | 0.35 | 2.22 | 1.40 | 0.79 | 0.54 |
| 2U15009 | RU16 | 3/8           | 1/4 NPT   | 0.197 | 5  | 0.31 | 2.51 | 1.17 | 0.65 | 0.65 |
| 2U15014 | RU16 | 3/8           | 3/8 NPT   | 5/32  | 4  | 0.35 | 2.62 | 1.40 | 0.79 | 0.63 |
| 2U15011 | RU16 | 1/2           | 3/8 NPT   | 0.197 | 5  | 0.35 | 2.88 | 1.4  | 0.79 | 0.79 |
| 2U15012 | RU16 | 1/2           | 1/2 NPT   | 0.315 | 8  | 0.43 | 3    | 1.6  | 0.96 | 0.8  |

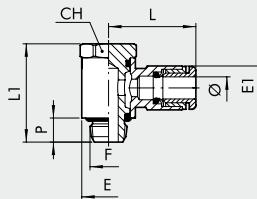
**RU31 - MALE ELBOWS**


| Code    | Ref  | $\varnothing$ | F         | Ch    |    | P    | L    | L1   | E    | E1   |
|---------|------|---------------|-----------|-------|----|------|------|------|------|------|
|         |      |               |           | Inch  | mm |      |      |      |      |      |
| 2U31001 | RU31 | 5/32          | 10/32 UNF | 0.354 | 9  | 0.16 | 0.70 | 0.60 | 0.39 | 0.37 |
| 2U31002 | RU31 | 5/32          | 1/8 NPT   | 0.472 | 12 | 0.24 | 0.70 | 0.75 | 0.51 | 0.37 |
| 2U31003 | RU31 | 5/32          | 1/4 NPT   | 0.551 | 14 | 0.31 | 0.70 | 0.83 | 0.65 | 0.37 |
| 2U31007 | RU31 | 1/4           | 10/32 UNF | 0.354 | 9  | 0.16 | 0.87 | 0.60 | 0.39 | 0.46 |
| 2U31008 | RU31 | 1/4           | 1/8 NPT   | 0.472 | 12 | 0.24 | 0.87 | 0.75 | 0.51 | 0.46 |
| 2U31009 | RU31 | 1/4           | 1/4 NPT   | 0.551 | 14 | 0.31 | 0.87 | 0.83 | 0.65 | 0.46 |
| 2U31010 | RU31 | 5/16          | 1/8 NPT   | 0.472 | 12 | 0.24 | 0.96 | 0.75 | 0.51 | 0.54 |
| 2U31011 | RU31 | 5/16          | 1/4 NPT   | 0.551 | 14 | 0.31 | 0.96 | 0.83 | 0.65 | 0.54 |
| 2U31012 | RU31 | 5/16          | 3/8 NPT   | 0.669 | 17 | 0.35 | 0.93 | 1.07 | 0.79 | 0.54 |
| 2U31013 | RU31 | 3/8           | 1/4 NPT   | 0.551 | 14 | 0.31 | 1.09 | 0.86 | 0.65 | 0.63 |
| 2U31014 | RU31 | 3/8           | 3/8 NPT   | 0.669 | 17 | 0.35 | 1.09 | 1.07 | 0.79 | 0.63 |
| 2U31015 | RU31 | 3/8           | 1/2 NPT   | 0.866 | 22 | 0.43 | 1.09 | 1.18 | 0.96 | 0.63 |
| 2U31017 | RU31 | 1/2           | 3/8 NPT   | 0.67  | 17 | 0.35 | 1.19 | 1.11 | 0.79 | 0.79 |
| 2U31018 | RU31 | 1/2           | 1/2 NPT   | 0.866 | 22 | 0.43 | 1.19 | 1.2  | 0.96 | 0.79 |

**RU32 - BRANCH TEES**


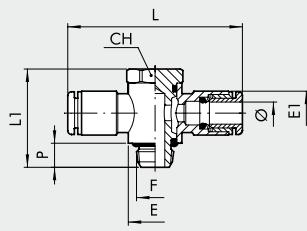
| Code    | Ref  | $\varnothing$ | F         | Ch    |    | P    | L    | L1   | E    | E1   |
|---------|------|---------------|-----------|-------|----|------|------|------|------|------|
|         |      |               |           | Inch  | mm |      |      |      |      |      |
| 2U32002 | RU32 | 5/32          | 1/8 NPT   | 0.472 | 12 | 0.24 | 1.4  | 0.75 | 0.51 | 0.37 |
| 2U32003 | RU32 | 5/32          | 1/4 NPT   | 0.551 | 14 | 0.31 | 1.4  | 0.83 | 0.65 | 0.37 |
| 2U32007 | RU32 | 1/4           | 10/32 UNF | 0.354 | 9  | 0.16 | 1.80 | 0.60 | 0.39 | 0.46 |
| 2U32008 | RU32 | 1/4           | 1/8 NPT   | 0.472 | 12 | 0.24 | 1.74 | 0.75 | 0.51 | 0.46 |
| 2U32009 | RU32 | 1/4           | 1/4 NPT   | 0.551 | 14 | 0.31 | 1.74 | 0.83 | 0.65 | 0.46 |
| 2U32010 | RU32 | 5/16          | 1/8 NPT   | 0.472 | 12 | 0.24 | 1.92 | 0.75 | 0.51 | 0.54 |
| 2U32011 | RU32 | 5/16          | 1/4 NPT   | 0.551 | 14 | 0.31 | 1.92 | 0.83 | 0.65 | 0.54 |
| 2U32012 | RU32 | 5/16          | 3/8 NPT   | 0.669 | 17 | 0.35 | 1.86 | 1.07 | 0.79 | 0.54 |
| 2U32013 | RU32 | 3/8           | 1/4 NPT   | 0.551 | 14 | 0.31 | 2.18 | 0.86 | 0.65 | 0.63 |
| 2U32014 | RU32 | 3/8           | 3/8 NPT   | 0.669 | 17 | 0.35 | 2.18 | 1.07 | 0.79 | 0.63 |
| 2U32015 | RU32 | 3/8           | 1/2 NPT   | 0.866 | 22 | 0.43 | 2.18 | 1.18 | 0.96 | 0.63 |
| 2U32017 | RU32 | 1/2           | 3/8 NPT   | 0.67  | 17 | 0.35 | 2.38 | 1.11 | 0.79 | 0.79 |
| 2U32018 | RU32 | 1/2           | 1/2 NPT   | 0.866 | 22 | 0.43 | 2.38 | 1.2  | 0.96 | 0.79 |

## RU54 - SINGLE BANJO



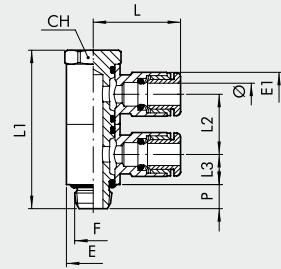
| Code    | Ref  | $\varnothing$ | F         | Ch    |    | P    | L    | L1   | E    | E1   |
|---------|------|---------------|-----------|-------|----|------|------|------|------|------|
|         |      |               |           | Inch  | mm |      |      |      |      |      |
| 2U54001 | RU54 | 5/32          | 10/32 UNF | 0.354 | 9  | 0.18 | 0.76 | 0.74 | 0.37 | 0.37 |
| 2U54002 | RU54 | 5/32          | 1/8 NPT   | 0.512 | 13 | 0.24 | 0.80 | 0.99 | 0.55 | 0.37 |
| 2U54007 | RU54 | 1/4           | 10/32 UNF | 0.354 | 9  | 0.18 | 0.94 | 0.74 | 0.37 | 0.46 |
| 2U54008 | RU54 | 1/4           | 1/8 NPT   | 0.512 | 13 | 0.24 | 0.92 | 0.99 | 0.55 | 0.46 |
| 2U54009 | RU54 | 1/4           | 1/4 NPT   | 5/8   | 16 | 0.32 | 0.98 | 1.15 | 0.71 | 0.46 |
| 2U54010 | RU54 | 5/16          | 1/8 NPT   | 0.512 | 13 | 0.24 | 0.97 | 0.99 | 0.55 | 0.54 |
| 2U54011 | RU54 | 5/16          | 1/4 NPT   | 5/8   | 16 | 0.32 | 1.03 | 1.15 | 0.71 | 0.54 |
| 2U54012 | RU54 | 5/16          | 3/8 NPT   | 0.787 | 20 | 0.35 | 1.11 | 1.39 | 0.83 | 0.54 |
| 2U54013 | RU54 | 3/8           | 1/4 NPT   | 5/8   | 16 | 0.32 | 1.25 | 1.15 | 0.71 | 0.63 |
| 2U54014 | RU54 | 3/8           | 3/8 NPT   | 0.787 | 20 | 0.35 | 1.31 | 1.39 | 0.83 | 0.63 |
| 2U54016 | RU54 | 1/2           | 3/8 NPT   | 0.787 | 20 | 0.39 | 1.44 | 1.39 | 0.83 | 0.8  |
| 2U54017 | RU54 | 1/2           | 1/2 NPT   | 0.984 | 25 | 0.49 | 1.5  | 1.57 | 1.02 | 0.8  |

## RU55 - DOUBLE BANJO

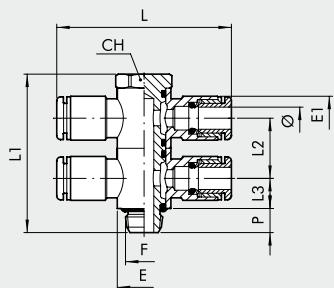


| Code    | Ref  | $\varnothing$ | F         | Ch    |    | P    | L    | L1   | E    | E1   |
|---------|------|---------------|-----------|-------|----|------|------|------|------|------|
|         |      |               |           | Inch  | mm |      |      |      |      |      |
| 2U55001 | RU55 | 5/32          | 10/32 UNF | 0.354 | 9  | 0.18 | 1.52 | 0.74 | 0.37 | 0.37 |
| 2U55002 | RU55 | 5/32          | 1/8 NPT   | 0.512 | 13 | 0.24 | 1.60 | 0.99 | 0.55 | 0.37 |
| 2U55007 | RU55 | 1/4           | 10/32 UNF | 0.354 | 9  | 0.18 | 1.87 | 0.74 | 0.37 | 0.46 |
| 2U55008 | RU55 | 1/4           | 1/8 NPT   | 0.512 | 13 | 0.24 | 1.83 | 0.99 | 0.55 | 0.46 |
| 2U55009 | RU55 | 1/4           | 1/4 NPT   | 5/64  | 16 | 0.32 | 1.95 | 1.15 | 0.71 | 0.46 |
| 2U55010 | RU55 | 5/16          | 1/8 NPT   | 0.512 | 13 | 0.24 | 1.94 | 0.99 | 0.55 | 0.54 |
| 2U55011 | RU55 | 5/16          | 1/4 NPT   | 5/64  | 16 | 0.32 | 2.06 | 1.15 | 0.71 | 0.54 |
| 2U55012 | RU55 | 5/16          | 3/8 NPT   | 0.787 | 20 | 0.35 | 2.22 | 1.39 | 0.83 | 0.54 |
| 2U55013 | RU55 | 3/8           | 1/4 NPT   | 5/64  | 16 | 0.32 | 2.51 | 1.15 | 0.71 | 0.63 |
| 2U55014 | RU55 | 3/8           | 3/8 NPT   | 0.787 | 20 | 0.35 | 2.62 | 1.39 | 0.83 | 0.63 |
| 2U55016 | RU55 | 1/2           | 3/8 NPT   | 0.787 | 20 | 0.39 | 2.88 | 1.39 | 0.83 | 0.8  |
| 2U55017 | RU55 | 1/2           | 1/2 NPT   | 0.984 | 25 | 0.49 | 3    | 1.57 | 1.02 | 0.8  |

## RU56 - DOUBLE STACKING BANJO, 2 PIPE CONNECTIONS



| Code    | Ref  | $\varnothing$ | F         | Ch    |    | P    | L    | L1   | L2   | L3   | E    | E1   |
|---------|------|---------------|-----------|-------|----|------|------|------|------|------|------|------|
|         |      |               |           | Inch  | mm |      |      |      |      |      |      |      |
| 2U56001 | RU56 | 5/32          | 10/32 UNF | 0.354 | 9  | 0.18 | 0.76 | 1.19 | 0.45 | 0.23 | 0.37 | 0.37 |
| 2U56002 | RU56 | 5/32          | 1/8 NPT   | 0.512 | 13 | 0.24 | 0.80 | 1.60 | 0.61 | 0.31 | 0.55 | 0.37 |
| 2U56007 | RU56 | 1/4           | 10/32 UNF | 0.354 | 9  | 0.18 | 0.94 | 1.19 | 0.45 | 0.23 | 0.37 | 0.46 |
| 2U56008 | RU56 | 1/4           | 1/8 NPT   | 0.512 | 13 | 0.24 | 0.92 | 1.60 | 0.61 | 0.31 | 0.55 | 0.46 |
| 2U56009 | RU56 | 1/4           | 1/4 NPT   | 5/8   | 16 | 0.32 | 0.98 | 1.83 | 0.68 | 0.34 | 0.71 | 0.46 |
| 2U56010 | RU56 | 5/16          | 1/8 NPT   | 0.512 | 13 | 0.24 | 0.97 | 1.60 | 0.61 | 0.31 | 0.55 | 0.54 |
| 2U56011 | RU56 | 5/16          | 1/4 NPT   | 5/8   | 16 | 0.32 | 1.03 | 1.83 | 0.68 | 0.34 | 0.71 | 0.54 |
| 2U56012 | RU56 | 5/16          | 3/8 NPT   | 0.787 | 20 | 0.35 | 1.11 | 2.24 | 0.84 | 0.42 | 0.83 | 0.54 |
| 2U56013 | RU56 | 3/8           | 1/4 NPT   | 5/8   | 16 | 0.32 | 1.25 | 1.83 | 0.68 | 0.34 | 0.71 | 0.63 |
| 2U56014 | RU56 | 3/8           | 3/8 NPT   | 0.787 | 20 | 0.35 | 1.31 | 2.24 | 0.84 | 0.42 | 0.83 | 0.63 |
| 2U56016 | RU56 | 1/2           | 3/8 NPT   | 0.787 | 20 | 0.39 | 1.44 | 2.24 | 0.84 | 0.42 | 0.83 | 0.8  |
| 2U56017 | RU56 | 1/2           | 1/2 NPT   | 0.984 | 25 | 0.49 | 1.5  | 2.52 | 0.94 | 0.47 | 1.02 | 0.8  |

**RU57 - DOUBLE STACKING BANJO, 4 PIPE CONNECTIONS**


| Code    | Ref  | $\varnothing$ | F         | Ch    |    | P    | L    | L1   | L2   | L3   | E    | E1   |
|---------|------|---------------|-----------|-------|----|------|------|------|------|------|------|------|
|         |      |               |           | Inc   | mm |      |      |      |      |      |      |      |
| 2U57001 | RU57 | 5/32          | 10/32 UNF | 0.354 | 9  | 0.18 | 1.52 | 1.19 | 0.45 | 0.23 | 0.37 | 0.37 |
| 2U57002 | RU57 | 5/32          | 1/8 NPT   | 0.512 | 13 | 0.24 | 1.60 | 1.60 | 0.61 | 0.31 | 0.55 | 0.37 |
| 2U57007 | RU57 | 1/4           | 10/32 UNF | 0.354 | 9  | 0.18 | 1.87 | 1.19 | 0.45 | 0.23 | 0.37 | 0.46 |
| 2U57008 | RU57 | 1/4           | 1/8 NPT   | 0.512 | 13 | 0.24 | 1.83 | 1.60 | 0.61 | 0.31 | 0.55 | 0.46 |
| 2U57009 | RU57 | 1/4           | 1/4 NPT   | 5/8   | 16 | 0.32 | 1.95 | 1.83 | 0.68 | 0.34 | 0.71 | 0.46 |
| 2U57010 | RU57 | 5/16          | 1/8 NPT   | 0.512 | 13 | 0.24 | 1.94 | 1.60 | 0.61 | 0.31 | 0.55 | 0.54 |
| 2U57011 | RU57 | 5/16          | 1/4 NPT   | 5/8   | 16 | 0.32 | 2.06 | 1.83 | 0.68 | 0.34 | 0.71 | 0.54 |
| 2U57012 | RU57 | 5/16          | 3/8 NPT   | 0.787 | 20 | 0.35 | 2.22 | 2.24 | 0.84 | 0.42 | 0.83 | 0.54 |
| 2U57013 | RU57 | 3/8           | 1/4 NPT   | 5/8   | 16 | 0.32 | 2.51 | 1.83 | 0.68 | 0.34 | 0.71 | 0.63 |
| 2U57014 | RU57 | 3/8           | 3/8 NPT   | 0.787 | 20 | 0.35 | 2.62 | 2.24 | 0.84 | 0.42 | 0.83 | 0.63 |
| 2U57016 | RU57 | 1/2           | 3/8 NPT   | 0.787 | 20 | 0.39 | 2.89 | 2.24 | 0.84 | 0.42 | 0.83 | 0.8  |
| 2U57017 | RU57 | 1/2           | 1/2 NPT   | 0.984 | 25 | 0.49 | 3    | 2.52 | 0.94 | 0.47 | 1.02 | 0.8  |

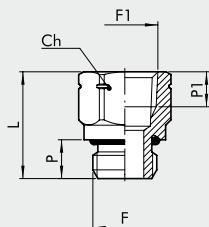
**ACCESSORIES**
**R17 – DISASSEMBLY KEY**


| Code    | Ref. | Lenght | $\varnothing$ Tube                          |
|---------|------|--------|---|
| 2L17001 | RL17 | 5.51   | from $\varnothing$ 1/8 to $\varnothing$ 3/8 |

**NOTES**

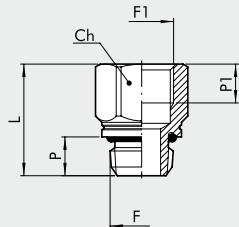
# FITTINGS SERIES A

## AU5/G - NPT FEMALE BSP MALE ADAPTORS



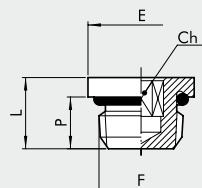
| Code     | Ref   | F        | F1        | Ch    |    | P    | P1   | L    |
|----------|-------|----------|-----------|-------|----|------|------|------|
|          |       |          |           | Inch  | mm |      |      |      |
| 2105100U | AU5/G | M5       | 10/32 UNF | 5/16  | 8  | 0.16 | 0.18 | 0.46 |
| 2105101U | AU5/G | BSPP 1/8 | 1/8 NPT   | 0.551 | 14 | 0.24 | 0.28 | 0.73 |
| 2105103U | AU5/G | BSPP 1/4 | 1/4 NPT   | 0.669 | 17 | 0.31 | 0.28 | 0.87 |
| 2105105U | AU5/G | BSPP 3/8 | 3/8 NPT   | 0.866 | 22 | 0.35 | 0.37 | 1.03 |
| 2105107U | AU5/G | BSPP 1/2 | 1/2 NPT   | 0.984 | 25 | 0.43 | 0.37 | 1.16 |

## AU5/N - NPT MALE BSP FEMALE ADAPTORS



| Code     | Ref   | F         | F1       | Ch    |    | P    | P1   | L    |
|----------|-------|-----------|----------|-------|----|------|------|------|
|          |       |           |          | Inch  | mm |      |      |      |
| 2105200U | AU5/N | 10/32 UNF | M5       | 5/16  | 8  | 0.16 | 0.18 | 0.46 |
| 2105201U | AU5/N | 1/8 NPT   | BSPP 1/8 | 0.551 | 14 | 0.24 | 0.26 | 0.73 |
| 2105203U | AU5/N | 1/4 NPT   | BSPP 1/4 | 0.669 | 17 | 0.31 | 0.31 | 0.91 |
| 2105205U | AU5/N | 3/8 NPT   | BSPP 3/8 | 0.866 | 22 | 0.35 | 0.39 | 1.05 |
| 2105207U | AU5/N | 1/2 NPT   | BSPP 1/2 | 0.984 | 25 | 0.43 | 0.43 | 1.23 |

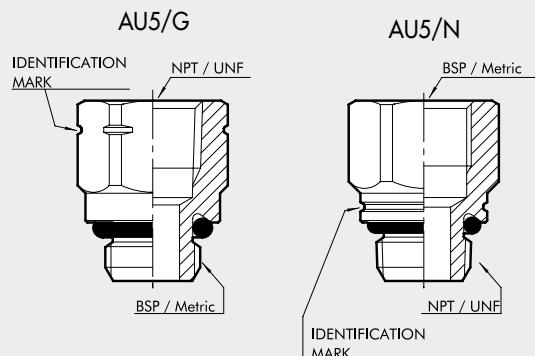
## AU7 - BLANKING PLUGS



| Code     | Ref | F         | Ch    |    | P    | L    | E    |
|----------|-----|-----------|-------|----|------|------|------|
|          |     |           | Inch  | mm |      |      |      |
| 2107000U | AU7 | 10/32 UNF | 0.079 | 2  | 0.16 | 0.26 | 0.31 |
| 2107001U | AU7 | 1/8 NPT   | 0.118 | 3  | 0.24 | 0.33 | 0.51 |
| 2107002U | AU7 | 1/4 NPT   | 0.236 | 6  | 0.31 | 0.43 | 0.65 |
| 2107003U | AU7 | 3/8 NPT   | 5/16  | 8  | 0.35 | 0.49 | 0.79 |
| 2107004U | AU7 | 1/2 NPT   | 0.394 | 10 | 0.43 | 0.57 | 0.96 |

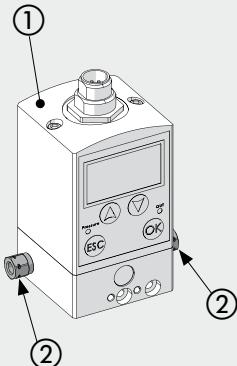
## IDENTIFICATION MARK FOR AU5

An identification mark near the NPT thread is used to distinguish it from the BSP thread.

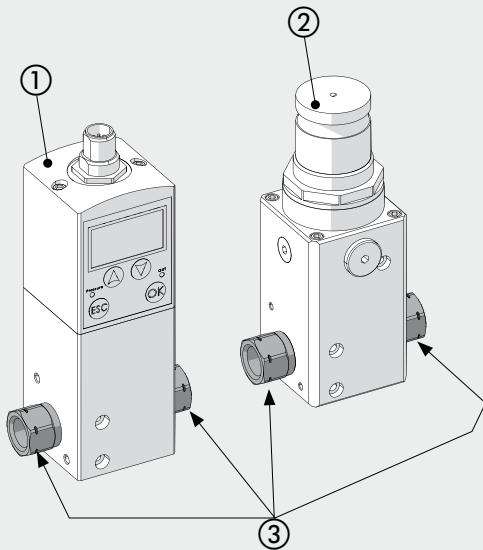


**EXAMPLE**
**TRANSFORMATION FROM M5 TO 10/32 UNF**

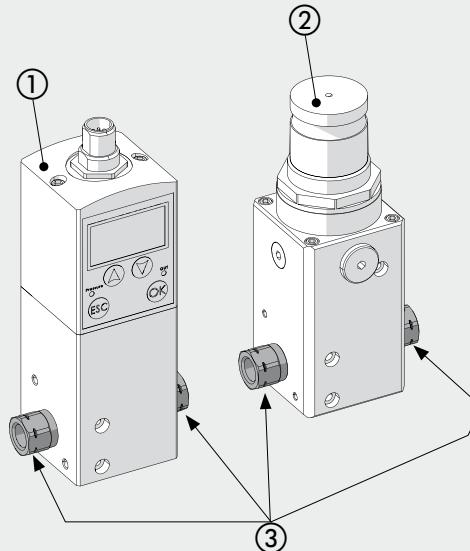
- ① REGTRONIC M5 with display code **5520500**  
 REGTRONIC M5 remote control code **5520502**
- ② AU5/G M5 10/32 UNF code **2105100U**


**TRANSFORMATION FROM 1/4 BSPP TO 1/4 NPT**

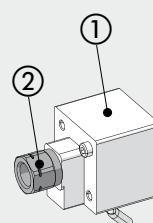
- ① REGTRONIC 1/4 BSPP with display code **5522500**  
 REGTRONIC 1/4 BSPP remote control code **5522502**
- ② REG. GS 1/4 BSPP 02 code **5512200**  
 REG. GS 1/4 BSPP 04 code **5512300**  
 REG. GS 1/4 BSPP 08 code **5512400**
- ③ AU5/G 1/4 BSPP - 1/4 NPT code **2105103U**


**TRANSFORMATION FROM 1/8 BSPP TO 1/8 NPT**

- ① REGTRONIC 1/8 BSPP with display code **5521500**  
 REGTRONIC 1/8 BSPP remote control code **5521502**
- ② REG. GS 1/8 BSPP 02 code **5511200**  
 REG. GS 1/8 BSPP 04 code **5511300**  
 REG. GS 1/8 BSPP 08 code **5511400**
- ③ AU5/G 1/8 BSPP - 1/8 NPT code **2105101U**



- ① Digital pressure switch series 600 code **9000600**
- ② AU5/G 1/8 BSPP - 1/8 NPT code **2105101U**



- ① Digital pressure switch series 640 code **9000640**
- ② AU5/N 1/8 NPT - BSPP 1/8 code **2105201U**

