<table>
<thead>
<tr>
<th><strong>Model</strong></th>
<th>Description</th>
<th>Material</th>
<th>Thread</th>
<th>Gasket</th>
<th>For Hose</th>
<th>Options</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>11752-1</td>
<td>10-32 to 1/8” ID Hose Fitting</td>
<td>Brass</td>
<td>10-32</td>
<td>Buna-N</td>
<td>1/8” ID</td>
<td>(-NP)</td>
<td>One piece ferrule and nut for fast, easy insertion of tube</td>
</tr>
<tr>
<td>11752-2</td>
<td>10-32 to 1/16” ID Hose Fitting</td>
<td>Brass</td>
<td>10-32</td>
<td>Buna-N</td>
<td>1/16” ID</td>
<td>(-NP), (-M5)</td>
<td></td>
</tr>
<tr>
<td>11752-3</td>
<td>10-32 to 1/8” ID Hose Fitting</td>
<td>Brass</td>
<td>10-32</td>
<td>Buna-N</td>
<td>1/8” ID</td>
<td>(-NP), (-M5)</td>
<td></td>
</tr>
<tr>
<td>11752-4</td>
<td>10-32 to 1/8” ID Hose Fitting</td>
<td>Brass</td>
<td>10-32</td>
<td>Buna-N</td>
<td>1/8” ID</td>
<td>(-NP), (-M5)</td>
<td></td>
</tr>
<tr>
<td>11752-5</td>
<td>10-32 to 1/16” ID Hose Fitting</td>
<td>Brass</td>
<td>10-32</td>
<td>Buna-N</td>
<td>1/16” ID</td>
<td>(-NP), (-M5)</td>
<td></td>
</tr>
<tr>
<td>11923</td>
<td>10-32 to 1/8” OD Tube Compression Fitting</td>
<td>Brass</td>
<td>10-32</td>
<td>Buna-N</td>
<td>1/8” OD</td>
<td>(-NP)</td>
<td></td>
</tr>
</tbody>
</table>

**For Tubing:**
- 3811-1 copper
- 3814-2 nylon

**Replacement Ferrule & Nut:** #15155
**BRASS BARB FITTINGS**

**11924-1**
1/8 NPT to 1/8" ID Hose Fitting

- **Material:** Brass
- **Thread:** 1/8 NPT
- **Use:** Joins standard pipe to 1/8" ID hose
- **Options:** (-NP), (-MG)

**11924-2**
1/16 NPT to 1/8" ID Hose Fitting

- **Material:** Brass
- **Thread:** 1/16 NPT
- **Use:** Joins standard pipe to 1/16" ID hose
- **Options:** (-NP)

**C 4**
NPT to 1/8" ID Hose Connector

- **Material:** Brass
- **Use:** Joins standard pipe to 1/8" ID hose
- **Options:** (-NP), (-MG)

**C 2**
NPT to 1/16" ID Hose Connector

- **Material:** Brass
- **Use:** Joins standard pipe to 1/16" ID hose
- **Options:** (-NP)

**12841**
10-32 to 1/16" ID hose fitting

- **Material:** Brass
- **Thread:** 10-32
- **Seals:** Gasket not required; use thread sealant
- **Use:** Tighten by hand for flush mounting in 10-32 threaded holes
- **Options:** (-NP)

**12842**
10-32 to 1/8" ID hose fitting

- **Material:** Brass
- **Thread:** 10-32
- **Seals:** Gasket not required; use thread sealant
- **Use:** Tighten by hand for flush mounting in 10-32 threaded holes
- **Options:** (-NP)
**MINIMATIC® X T L FITTINGS**

### 15002-1

**Adjustable “L” Fitting**

- **Material:** Brass body, stainless steel stud
- **Stud:** Stainless steel hex head with screwdriver slot (12292)
- **Thread:** 10-32
- **Seals:** Buna-N o-ring furnished
- **Use:** Permits port to be aimed 360° in one plane, then secured by tightening screw. Also useful in connecting and disconnecting hose in hard-to-reach locations.
- **Options:** (-NP)

### 15002-2

**“L” Fitting**

- **Material:** Brass
- **Thread:** 10-32
- **Gasket:** Buna-N gasket furnished in package only. Not included when ordered in bulk.
- **Use:** Allows ports to be brought out 90° to the side. For exact positioning use thread sealant
- **Options:** (-NP)

### 15002-3

**“T” Fitting**

- **Material:** Brass
- **Thread:** 10-32
- **Gasket:** Buna-N gasket furnished in package only. Not included when ordered in bulk.
- **Use:** May be used as a miniature manifold, or “L” or “T” fitting by plugging unused ports with screw plug 11755. For precise positioning use thread sealant
- **Options:** (-NP)

### 15002-4

**“X” Fitting**

- **Material:** Brass
- **Thread:** 10-32
- **Gasket:** Buna-N gasket furnished in package only. Not included when ordered in bulk.
- **Use:** Like the “L” fitting, except ports out both sides. For precise positioning use thread sealant
- **Options:** (-NP)

### 15002-5

**“X” Coupling**

- **Material:** Brass
- **Thread:** 10-32
- **Use:** Ideal as small manifold
- **Options:** (-NP)

### 15002-6

**Adjustable “T” Fitting**

- **Material:** Brass
- **Stud:** Stainless steel hex head with screwdriver slot (12292)
- **Seals:** Buna-N o-ring furnished
- **Use:** Permits ports to be aimed in any direction 360° in one plane then secured by tightening screw. Also useful for connecting or disconnecting hose in tight spots.
- **Note:** Same dimensions as 15002-1 “L” fitting, except length, which is 5/8”
- **Options:** (-NP)
MINIMATIC® CONNECTOR FITTINGS

**15453**

**Male 10-32 Coupling**

- **Material:** Stainless steel
- **Thread:** 10-32
- **Seal:** Loctite necessary
- **Use:** Excellent for a surface to surface connection of female 10-32 products

**15010**

**10-32 Extension Fitting**

- **Material:** Brass
- **Thread:** 10-32
- **Gasket:** Buna-N gasket furnished in package only. Not included when ordered in bulk.
- **Use:** To provide extension for convenience in assembling components
- **Options:** (-NP)

**15004**

**10-32 Female Hex Coupling**

- **Material:** Brass
- **Thread:** 10-32 tapped
- **Use:** For coupling two 10-32 male fittings
- **Options:** (-NP)

**11999**

**10-32 Male Connector**

- **Material:** Brass
- **Thread:** 10-32 both ends
- **Gasket:** (2) Buna-N gaskets furnished in package only. Not included when ordered in bulk.
- **Use:** For coupling cylinders directly to valves, and many other coupling arrangements
- **Options:** (-NP)

**3810-1**

**1/8 NPT to 1/8" OD Tube Compression Fitting**

- **Material:** Brass
- **Thread:** 1/8 NPT
- **Use:** Joins standard size pipe to 3811-1 copper or 3814-2 nylon tubing
- **Replacement Ferrule & Nut:** 15155
- **Options:** (-NP)
- **Features:** One piece ferrule and nut for fast, easy insertion of tube

**3810-2**

**1/16 NPT to 1/8" OD Tube Compression Fitting**

- **Material:** Brass
- **Thread:** 1/16 NPT
- **Use:** Joins standard size pipe to 3811-1 copper or 3814-2 nylon tubing
- **Replacement Ferrule & Nut:** #15155
- **Options:** (-NP)
- **Features:** One piece ferrule and nut for fast, easy insertion of tube
Minimatic® swivel connector fittings are very efficient in applications where joints need to be disconnected and reconnected frequently. Made with a threaded connection on one end and a swivel connection on the other, these fittings provide a true cost savings on pneumatic circuit designs. They are valuable also where short lengths of hose are being connected.

Note: These are not rotating joints. They are assembly benefits... not to be used as a constant rotation junction.

<table>
<thead>
<tr>
<th>Material: Brass</th>
<th>Thread: 10-32</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasket: Buna-N gasket furnished in package only. Not included when ordered in bulk.</td>
<td></td>
</tr>
<tr>
<td>Use: Allows connection to rotate for tightening in confined spaces</td>
<td></td>
</tr>
<tr>
<td>Note: Used for positioning not for rotary connector</td>
<td></td>
</tr>
<tr>
<td>Options: (-NP)</td>
<td></td>
</tr>
</tbody>
</table>

**10-32 Swivel Fitting**

<table>
<thead>
<tr>
<th>Material: Brass</th>
<th>Thread: 10-32</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasket: Buna-N gasket furnished in package only. Not included when ordered in bulk.</td>
<td></td>
</tr>
<tr>
<td>Use: Allows connection to rotate for tightening in confined spaces</td>
<td></td>
</tr>
<tr>
<td>Note: Used for positioning not for rotary connector</td>
<td></td>
</tr>
<tr>
<td>Options: (-NP)</td>
<td></td>
</tr>
</tbody>
</table>

**10-32 to 1/8” ID Hose Swivel Fitting**

<table>
<thead>
<tr>
<th>Material: Brass</th>
<th>Thread: 10-32</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasket: Buna-N gasket furnished in package only. Not included when ordered in bulk.</td>
<td></td>
</tr>
<tr>
<td>Use: Allows connection to rotate for tightening in confined spaces</td>
<td></td>
</tr>
<tr>
<td>Hose Barb: 1/8” ID hose</td>
<td></td>
</tr>
<tr>
<td>Note: Used for positioning not for rotary connector</td>
<td></td>
</tr>
<tr>
<td>Options: (-NP)</td>
<td></td>
</tr>
</tbody>
</table>

**1/8 NPT to 10-32 Swivel Adaptor**

<table>
<thead>
<tr>
<th>Material: Brass</th>
<th>Thread: 1/8-27 NPT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seals: Buna-N o-ring</td>
<td></td>
</tr>
<tr>
<td>Use: Allows connection to rotate for tightening in confined spaces</td>
<td></td>
</tr>
<tr>
<td>Hose Barb: 1/8” ID hose</td>
<td></td>
</tr>
<tr>
<td>Note: Used for positioning not for rotary connector</td>
<td></td>
</tr>
<tr>
<td>Options: (-NP)</td>
<td></td>
</tr>
</tbody>
</table>

**1/8 NPT to 1/8” ID Hose Swivel Fitting**

<table>
<thead>
<tr>
<th>Material: Brass</th>
<th>Thread: 1/8-27 NPT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seals: Buna-N o-ring</td>
<td></td>
</tr>
<tr>
<td>Use: Allows connection to rotate for tightening in confined spaces</td>
<td></td>
</tr>
<tr>
<td>Hose Barb: 1/8” ID hose</td>
<td></td>
</tr>
<tr>
<td>Note: Used for positioning not for rotary connector</td>
<td></td>
</tr>
<tr>
<td>Options: (-NP)</td>
<td></td>
</tr>
</tbody>
</table>

**1/8 NPT to 10-32 Swivel Adapter**

<table>
<thead>
<tr>
<th>Material: Brass</th>
<th>Thread: 1/8-27 NPT male and 10-32 tapped</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seals: Buna-N o-ring</td>
<td></td>
</tr>
<tr>
<td>Use: Allows connection to rotate for tightening in confined spaces</td>
<td></td>
</tr>
<tr>
<td>Note: Used for positioning not for rotary connector</td>
<td></td>
</tr>
<tr>
<td>Options: (-NP)</td>
<td></td>
</tr>
</tbody>
</table>
The machine consists of a rotating center carousel with eight stations. The individual components of each slip-on fitting are loaded into clamp fixtures mounted on the carousel.

The carousel indexes to each of the process stations: load, heat, cool, quench, and unload. The control and timing of the machine is accomplished using Clippard modular valves and brass limit valves. Each clamp fixture has its own control circuit for manual and automatic control. Sensors are also incorporated at each clamp fixture to sense the presence of a part.

The heat station uses MFC-3AK2’s to meter propane, while PAV-2’s turn the propane on and off. In addition, the torches are connected to cylinders so they are able to rotate for the heat cycle.
### Gasket Tips

Gaskets are recommended for use with Clippard fittings. They provide snug, dependable seals without extra effort or materials. The most popular gasket for static sealing of 10-32 threads is the 11761-2 Buna-N Gasket. This gasket is included with packaged fittings and comes installed on a variety of Minimatic® slip-on fittings. Overtightening fittings with gaskets may have a tendency to extrude the gasket. While this may be a concern, the actual sealing is being accomplished by a small piece of the gasket at the base of the threads.

### Sealants

There are a number of brands of anaerobic sealants that may be used with Clippard fittings. Anaerobic sealants are applied wet and harden when no longer exposed to air, their proper use results in a very effective, low cost seal. There are several alternate sealing methods:

1. sealant alone
2. gasket alone
3. home alone (just kidding)
4. gasket and sealant combination

The first two methods will provide adequate sealing for normal air pressures. When extra resistance to vibration is necessary or a permanent orientation of the fitting is required, use of the combination of both gasket and sealant is recommended.

---

<table>
<thead>
<tr>
<th>Gasket</th>
<th>11761-2</th>
<th>11761-3</th>
<th>11761-4</th>
<th>11761-7</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Buna-N Gasket</strong></td>
<td>Material: Buna-N</td>
<td>Use: Buna-N gasket is designed for use with 10-32 threads, included with packaged Clippard fittings; replaces 11761-5</td>
<td>Temperature Range: -40 to +250°F</td>
<td></td>
</tr>
<tr>
<td><strong>Fiber Gasket</strong></td>
<td>Material: Cellulose fiber &amp; SBR latex</td>
<td>Use: Designed for use with 10-32 threads in high temperature applications</td>
<td>Temperature Range: -40 to +350°F</td>
<td></td>
</tr>
<tr>
<td><strong>Nylon Gasket</strong></td>
<td>Material: Nylon</td>
<td>Use: Designed for use with 10-32 threads in applications that require nylon for chemical compatibility</td>
<td>Temperature Range: +40 to +200°F</td>
<td></td>
</tr>
<tr>
<td><strong>EPDM</strong></td>
<td>Material: EPDM</td>
<td>Use: Designed for use with 10-32 threads in applications that require EPDM for low temperature or chemical compatibility; do not use with petroleum-based lubricants</td>
<td>Temperature Range: -60 to +300°F</td>
<td></td>
</tr>
</tbody>
</table>
### ADAPTER FITTINGS

**11750-2**

**Material:** Brass  
**Thread:** M2.5 - 0.45 (3-56 US equiv.)  
**Use:** Threads into Clippard subminiature cylinder; fits 1/16” I.D. hose

**11749-1**

**Material:** Nickel plated brass body sintered stainless steel muffler (60 micron)  
**Thread:** 10-32  
**Gasket:** Buna-N gasket furnished in package only. Not included when ordered in bulk.  
**Use:** To muffle exhausts for quiet system operation

**11749-2**

**Material:** Solid brass body; sintered stainless steel insert (100 micron)  
**Thread:** 1/8 NPT  
**Use:** To muffle exhaust for quiet system operation  
**Options:** (-NP)

**11749-3**

**Material:** Solid brass body; sintered stainless steel insert (100 micron)  
**Thread:** 10-32  
**Gasket:** Buna-N gasket furnished in package only. Not included when ordered in bulk.  
**Use:** For plugging unused ports in manifolds, air lines and other devices  
**Options:** (-NP), (M5)

**15070**

**10-32 Muffler**  
**Material:** Nickel plated brass body sintered stainless steel muffler (60 micron)  
**Thread:** 10-32  
**Gasket:** Buna-N gasket furnished in package only. Not included when ordered in bulk.  
**Use:** To muffle exhausts for quiet system operation

**15080**

**1/8 NPT Muffler**  
**Material:** Solid brass body; sintered stainless steel insert (100 micron)  
**Thread:** 1/8 NPT  
**Use:** To muffle exhaust for quiet system operation  
**Options:** (-NP)

**11755**

**10-32 Screw Plug**  
**Material:** Brass  
**Thread:** 10-32  
**Gasket:** Buna-N gasket furnished in package only. Not included when ordered in bulk.  
**Use:** For plugging unused ports in manifolds, air lines and other devices  
**Options:** (-NP), (M5)

**0035-2**

**10-32 Headless Screw Plug**  
**Material:** Stainless Steel screw plug  
**Thread:** 10-32  
**Use:** For plugging unused ports in manifold, air lines and other devices that require a flush surface plug; use 3/32 Allen hex wrench to install  
**Note:** Thread sealant recommended
**BUSHINGS**

### 15036

1/8" NPT to 10-32 Female Bushing

- **Material:** Nickel plated brass
- **Thread:** 1/8 NPT & 10-32 female
- **Use:** To convert 1/8" NPT to 10-32 flush thread use thread sealant.

### C F

NPT to 10-32 Female Bushing

- **Material:** Brass
- **Thread:** NPT & 10-32 female
- **Use:** Will adapt standard pipe to 10-32 fittings and Clippard miniature components
- **Options:** (-NP)

### C K

NPT to 1/16 NPT Female Bushing

- **Material:** Brass
- **Thread:** NPT & 1/16 NPT female
- **Use:** Will adapt standard pipe to 1/16 NPT fittings and Clippard miniature components
- **Options:** (-NP)

### C N

NPT to 1/8 NPT Female Bushing

- **Material:** Brass
- **Thread:** NPT & 1/8 NPT female
- **Use:** Will adapt standard pipe to 1/8 NPT fittings and Clippard miniature components
- **Options:** (-NP)

### C Y

NPT to 1/4 NPT Female Bushing

- **Material:** Brass
- **Thread:** NPT & 1/4 NPT female
- **Use:** Will adapt standard pipe to 1/4 NPT fittings and Clippard miniature components
- **Seals:** Buna-N o-ring and gasket furnished
- **Options:** (-NP)

### 8 C Z D

1/2" NPT to 3/8" NPT Female Bushing

- **Material:** Brass
- **Thread:** 1/2 NPT & 3/8 NPT female
- **Seals:** Buna-N o-ring and gasket furnished
- **Use:** Will adapt standard pipe to 3/8 NPT fittings and Clippard miniature components
- **Options:** (-NP)

---

Documents Provided by Coast Pneumatics
**ADAPTER & BULKHEAD FITTINGS**

**Material:** Brass

**15090-1**

1/8 NPT to 10-32 “L” Fitting

- Thread: 1/8 NPT to 10-32
- Use: To provide connections between the two thread sizes with mounting convenience
- Options: (-NP)

**15090-2**

1/8 NPT to 10-32 “T” Fitting

- Thread: 1/8 NPT to 10-32
- Use: To provide connections between the two thread sizes with extra mounting convenience
- Options: (-NP)

**15090-3**

1/8 NPT to 10-32 “X” Cross Fitting

- Thread: 1/8 NPT to 10-32
- Use: To provide connections between the two thread sizes; can be used as a miniature manifold
- Options: (-NP)

**15027**

10-32 Bulkhead Fitting

- Material: Brass
- Thread: 10-32 tapped both ends
- Locking Nut: 9/16” furnished with 2 steel lockwashers
- Use: Provides rigid connection thru panels or bulkheads up to 1/4” thick; use with any Clippard 10-32 threaded fitting or connector
- Options: (-NP)

**15029-1**

1/8 NPT Bulkhead Fitting

- OD - 3/4 - 20, I.D. 1/8 NPT
- Locking Nut: 7/8” hex furnished with 2 steel lockwashers
- Use: Provides rigid connection thru panels or bulkheads up to 1/2” thick
- Options: (-NP)

**15029-2**

1/4 NPT Bulkhead Fitting

- OD - 3/4 - 20, I.D. 1/4 NPT
- Locking Nut: 7/8” hex furnished with 2 steel lockwashers
- Use: Provides rigid connection thru panels or bulkheads up to 1/2” thick
- Options: (-NP)
**MAN-12**

**12-Port Manifold**

- **Material:** Brass
- **Thread:** Tapped ports: 1/8" standard pipe tapped inlet
- **Mounting:** 13/64" diameter mounting hole
- **Use:** May be mounted on jigs, fixtures or machinery to provide up to 12 convenient 10-32 outlets from one standard 1/8" pipe connection; may be used with any Clippard 10-32 fittings, quick connects and many other devices. Unused ports can be plugged with screw plug 11755.

- **Options:** (-NP)

---

**MRM-6**

**6-Port Rotary Manifold**

- **Material:** Brass and stainless steel
- **Thread:** 1/8 NPT for inlet is also tapped 10-32; outlet consists of 6 ports tapped 10-32.
- **Seals:** Buna-N o-ring furnished
- **Working Range:** 250 psi max.
- **Air Flow:** 5.9 scfm @ 50 psig
- **Use:** May be used either as a rotary joint or as a stationary manifold; ideal for distributing air or liquid from center column onto a rotary index table; unused ports may be plugged with screw plug 11755 and gasket.

**Low RPM applications**

---

**15028-□**

**Miniature Terminal Blocks**

- **Material:** Anodized aluminum
- **Thread:** 10-32 tapped ports
- **Mounting:** With two 7/32" diameter mounting holes
- **Use:** To help organize connections in circuit boxes, control panels and machine piping; cross drilled mounting holes permit mounting of “T” in any direction; use screw plug 11755 to plug unused ports.

**Tips On Using Minimatic® Fittings**

**Hose or Tubing Size**

The use of different sizes of hose or tubing in your circuits deserves some care and consideration. In general, follow this guide for the size of hose or tubing you use.

- For air logic circuits, we recommend:
  - 1/16" ID for pilots
  - 1/8" ID for supplies and outputs
The BHH series has mounting holes for #8 screws at each end. One of the stations must be used as the air supply to the manifold.

The BTT series has 10-32 holes at each end for inline mounting. One end may be used as the air supply to the manifold and the other end plugged.