

## NanoPort Assemblies

- ▶ For lab-on-a-chip applications
- ▶ Options to connect 360 µm, MicroTight® tubing sleeves, 1/32" OD or 1/16" OD tubing
- ▶ Wetted materials: PEEK and perfluoroelastomer

Upchurch Scientific® NanoPort Assemblies provide consistent fluid connections for chip-based analyses. Once attached, NanoPort connections can withstand pressures to 1,000 psi (69 bar).\* NanoPorts will adhere to silicon, quartz, glass and some polymers.

All NanoPort components are made of inert, biocompatible PEEK polymer (nuts and ports) and Perlast® perfluoroelastomer (ferrules and gaskets). These products bond easily to chip surfaces with the provided Preformed Adhesive Rings (see Application Note below). Their unique design also prevents adhesive contamination of the fluid path. And NanoPort connections add no additional volume to the fluid path, virtually eliminating dead volume traditionally associated with chip-based fluid connections.

Our NanoPort Reservoir Assembly is designed for open well applications, such as CE.

\*Except the N-333 NanoPort Assembly, which is rated to 500 psi (34 bar).

### APPLICATION NOTE

#### NanoPort Adhesive Cure Requirements

- ▶ Preformed Adhesive Rings (included with each order).

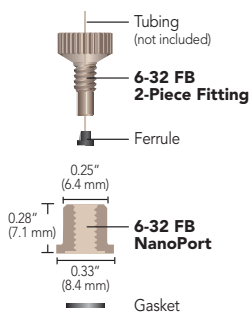
Cure Temperature	Cure Time
165–177 °C (330–350 °F)	1 hour

- ▶ Place clamped Ports in oven at a temperature of 165–177 °C (330–350 °F) for one hour to develop a complete bond between the Port and the substrate.
- ▶ Due to differences in thermal expansion rates, IDEX Health & Science does not recommend the use of the Preformed Adhesive Rings when connecting NanoPorts to metal substrates. For information on this, for information regarding the adherence of NanoPorts to other polymer substrates, or for information on other adhesive options, please contact us or your authorized Distributor directly.

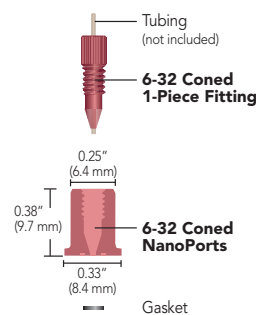
#### NanoPort Reservoir Applications

- ▶ Sample reservoir.
- ▶ Open wells for capillary electrophoresis.
- ▶ Syringe injection or flushing/priming, using our P-604 Luer Adapter, page 55, and luer syringe (such as our B-310) on page 55.

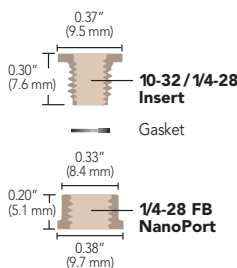
#### 6-32 Flat-Bottom Assemblies



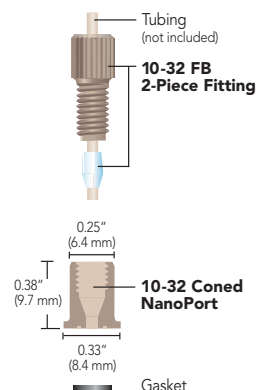
#### 6-32 Coned Assemblies



#### Reservoir Assembly



#### 10-32 Coned Assembly



➔ See following page for replacement parts

Part No.	Nut	Ferrule	For Chip Hole (dia. x depth)	For Tubing OD	Qty.
<b>NANOPORT ASSEMBLIES</b>					
<b>6-32 Flat-Bottom NanoPort Assemblies</b>					
N-121S	F-123S	N-123-04	0.04" x 0.04" (1.0 mm x 1.0 mm)	360 µm	ea.
N-123H	F-123H	N-123-03	0.04" (1.0 mm) dia. or less	360 µm	ea.
N-123S	F-123S	N-123-03	0.04" (1.0 mm) dia. or less	360 µm	ea.
<b>6-32 Coned NanoPort Assemblies</b>					
N-124S	F-124S	None	Up to 0.063" (1.6 mm)	360 µm	ea.
N-125S	F-125	None	Up to 0.063" (1.6 mm)	70–520 µm <sup>1</sup>	ea.
N-126H	F-126H	None	Up to 0.063" (1.6 mm)	1/32"	ea.
N-126S	F-126S	None	Up to 0.063" (1.6 mm)	1/32"	ea.
<b>10-32 Coned NanoPort Assembly</b>					
★ N-333	F-333N	F-142N	Up to 0.063" (1.6 mm)	1/16"	ea.
<b>NanoPort Reservoir Assembly</b>					
N-131	80 µL Reservoir with Insert				ea.

<sup>1</sup> Designed to use our MicroTight® Tubing Sleeves (page 19) to connect tubing OD sizes from 70–520 µm.

## NanoPort Assemblies (cont.)



### NOTE

To select the appropriate NanoPort assembly you will need to consider:

- ▶ Size of tubing you are connecting
- ▶ Dimensions of the chip hole
- ▶ Fitting style (one-piece or two-piece fittings)
- ▶ Nut head style (standard or headless nut)

*Please Note: Each NanoPort Assembly includes a fitting (one- or two-piece), a NanoPort, gasket, a 2-pack of preformed adhesive rings, and a clamp for holding the port in place while the adhesive cures.*



Full NanoPort Assemblies can be found on the previous page

Part No.	Description	Threads	For Chip Hole	Tubing OD	Qty.
<b>NANOPORT REPLACEMENT PARTS</b>					
<b>Fittings</b>					
F-123Hx	Headless Nuts	6-32 FB	N/A	360 µm	10-pk
F-1235x	Standard Head Nuts	6-32 FB	N/A	360 µm	10-pk
F-1245x	Standard Head Fittings	6-32 C	N/A	360 µm	10-pk
★ F-125x	Standard Head Fittings	6-32 C	N/A	70–520 µm <sup>1</sup>	10-pk
F-126Hx	Headless Fittings	6-32 C	N/A	1/32"	10-pk
F-1265x	Standard Head Fittings	6-32 C	N/A	1/32"	10-pk
F-333Nx	Headless Fittings	10-32 C	Up to 0.063" (1.6 mm)	1/16"	10-pk
F-142Nx	Ferrules	10-32 C	Up to 0.063" (1.6 mm)	1/16"	10-pk
★ N-123-03x	Ferrules	6-32 FB	0.04" (1.0 mm) dia. or less	360 µm	10-pk
★ N-123-04x	Ferrules	6-32 FB	0.04" x 0.04" (1.0 mm x 1.0 mm)	360 µm	10-pk
N-123-05x	Ferrules	6-32 FB	0.04" x 0.06" (1.0 mm x 1.5 mm)	360 µm	10-pk
<b>Gaskets</b>					
N-123-02	Gasket, For all assemblies except 6-32 Coned Assemblies		N/A	N/A	ea.
N-124-02	Gasket, For 6-32 Coned Assemblies		N/A	N/A	ea.
<b>Adhesives and Clamp</b>					
N-006	Clamp		N/A	N/A	ea.
★ N-100-01	Preformed Adhesive Rings		N/A	N/A	2-pk

<sup>1</sup> Designed to use our MicroTight® Tubing Sleeves (page 19) to connect tubing OD sizes from 70–520 µm.  
Abbreviation Definitions: FB = Flat-Bottom; C = Coned; N/A = Not Applicable