

Pulled Glass Needles and PEEK Tubing Connectors

Product Datasheet



Many delicate neuroscience, stem cell and chemical dispensing applications require the use of pulled glass needles, also known as glass capillary needles, or PEEK tubing with precision syringes, as opposed to stainless steel needles. Properly attaching a pulled glass needle or a length of PEEK tubing to a syringe is difficult, and the traditional use of wax or other workarounds often exposes the experiment or technique to inaccuracy or contamination.

Hamilton developed its line of pulled glass needle and PEEK tubing connectors to quickly and easily provide a reliable way of attaching pulled glass needles and PEEK tubing to syringes. The connectors create a tight, seamless link between the syringe and the output that protects the reliability of the application and minimizes the inherent risks associated with imperfect connections.

Hamilton connectors include compression fittings and adapters designed to connect Removable Needle (RN) and Knurled Hub (KH) precision syringes to the desired pulled glass needle or length of PEEK tubing. The connectors can be combined in a variety of different configurations to meet most connection needs.

Applications for Hamilton's line of connectors include:

- ▶ Neuroscience injections
- ▶ Mass spectrometer tuning
- ▶ Electrophysiology
- ▶ Non-metallic needle alternative
- ▶ Single-cell microinjections
- ▶ Patch clamp
- ▶ Stem cell research
- ▶ Corrosive chemical dispensing



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Connection Diagrams

The diagrams below depict different needle and tubing configurations using compression fittings with Hamilton syringes.

RN Compression Fitting 1 mm (p/n 55750-01)

- ▶ Adapts a Small Hub Removable Needle (RN) Termination to 1 mm Pulled Glass Needles



RN Compression Fitting 1/16 inch (p/n 55751-01)

- ▶ Adapts a Small Hub Removable Needle (RN) Termination to 1/16 inch PEEK tubing



Dual Small Hub RN Coupler (p/n 55752-01)

- ▶ Connects any Small Hub RN connection to another Small Hub RN Connection



Luer to Small Hub RN Adaptor (p/n 55753-01)

- ▶ Combines with the 55752-01 to convert a 25 gauge 7000 series Knurled Hub Termination to a Small Hub RN Termination



Compatible Syringes

This page shows which Hamilton syringes are compatible with the compression fittings.

Removable Needle Syringes (2.5 µL to 100 µL)

- ▶ This termination can be used with the 1 mm and 1/16 inch compression fittings



25 Gauge 7000 Series Syringe (0.5 µL to 2 µL)

- ▶ The Knurled Hub (KH) is specific to the 7000 series syringes. This termination must be converted to an RN connection before the 1 mm and 1/16 inch compression fittings can be used. This conversion requires the coupler (p/n 55752-01) and the Luer to the RN adapter (p/n 55753-01).



Compatible Syringes Ordering Information

	0.5 µL	1 µL	2 µL	2.5 µL	5 µL	10 µL	25 µL	50 µL	100 µL
600 RN (No needle)				7632-01	7633-01				
700 RN (No needle)					7634-01	7635-01	7636-01	7637-01	7638-01
1700 RN (No needle)						7653-01	7654-01	7655-01	7656-01
7000 KH (25 gauge needle)	86250	80100	88400						

Note: The 600, 700 and 7000 series syringes are Microliter™ syringes, and the 1700 series syringes are Gastight®.

Ordering Information



Priming Kit (p/n PRMKIT)

The Priming Kit provides the necessary tools to ensure that the syringe and needle connection is completely primed. Trapped air can cause inaccurate dispenses and standard priming techniques are not sufficient when using capillary tubing. The glass capillary tubing traps a large volume of air that can only be removed by using the Priming Kit.

The priming kit contains one 250 μ L syringe (p/n 81120), one 6 pack of 30 gauge needles (p/n 90030) and one pack of septa (p/n 75826).



RN Compression Fitting 1 mm for Pulled Glass Needles (p/n 55750-01)

The 1 mm connector is designed to attach pulled glass needles directly to a small hub RN connection. The RN nut compresses the conical PFA ferrule into the PEEK cup ferrule creating a seal between the syringe barrel and the glass capillary tubing. The connection requires no modifications to the glass capillary tubing.

The RN Compression Fitting 1 mm consists of one large bore RN nut, 5 PFA ferrules and 5 PEEK cup ferrules.



RN Compression Fitting 1/16 inch for PEEK Tubing (p/n 55751-01)

The 1/16 inch connector is designed to attach 1/16 inch PEEK tubing directly to a small hub RN connection. Tightening the RN nut compresses the conical PFA ferrule into the PEEK cup ferrule creating a seal between the syringe barrel and the PEEK tubing. The connection requires no modifications to the PEEK tubing.

The RN Compression Fitting 1/16 inch consists of one large bore RN nut, 5 PFA ferrules and 5 PEEK cup ferrules.



Dual Small Hub RN Coupler (p/n 55752-01)

The Dual RN Coupler is constructed from model 1702 glass with a small hub RN termination on either end. It uses a standard glass size for compatibility with most stereotaxic instrumentation. The coupler is ideal for remotely connecting a syringe to a needle via PEEK tubing. It is also used with the Luer to RN adaptor for connection of custom needles to a 7000 series syringe. The Dual RN Coupler consists of two large bore RN nuts and one dual RN barrel.



Luer to Small Hub RN Adaptor (p/n 55753-01)

The Luer to RN Adaptor consists of a Metal Luer Lock Hub and a Small Removable Needle Hub combined in a single needle. The Luer to RN Adaptor and the Dual RN Coupler can be used to connect a 7000 series syringe to any Small Hub Removable Needle or to a Pulled Glass Needle. The Adaptor creates a rigid connection between the syringe and the needle as well as a compatibility with stereotaxic instrumentation.

Note: The Luer to RN Adaptor consists of one RN to Luer Needle and a sealing ferrule for a 25 gauge 7000 series needle.

For more information on these connectors and the full portfolio of Hamilton syringes and needles or to order a product, please visit www.hamiltoncompany.com or refer to contact details on this page.

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