

Instrument-Grade Tubing



ordering note

Required length in meters
x 3.2808 = length in feet.

Instrument-Grade Welded and Drawn 304 Grade Stainless Steel Tubing

Clean tubing is critical to ensure the delivery of pure gas to your instrument. Restek's stainless steel tubing is specially cleaned for inertness by using the procedure for processing our Silcosteel® and Siltek®-treated products, because scrupulously clean parts are a prerequisite for a quality coating.

Tubing Dimensions		Length (per-foot pricing on 26 feet or more)		
ID (in.)	OD (in.)	25 Feet	26–100 Feet	>100 Feet*
0.01" ID	3/16" OD	cat.# 21500	cat.# 21501	cat.# 21502
0.02" ID	1/16" OD	21503	21504	21505
0.03" ID	3/16" OD	21506	21507	21508
0.04" ID	1/16" OD	21509	21510	21511
0.085" ID	3/8" OD	21512	21513	21514
0.21" ID	1/4" OD	21515	21516	21517

*The availability of long lengths (continuous lengths up to 500 feet) is subject to inventory constraints. Please inquire before ordering.

ordering note

An extra charge is applied for cutting and/or straightening stainless steel and/or copper tubing, calculated from the total number of pieces produced for each line item

precleaned

All tubing is precleaned and ready to use.

Cleaned Copper Tubing

- Adheres to ASTM B-280.
- Precleaned and ready to use.
- Use for plumbing GC systems.

ID	OD	Wall	qty.	cat.#
0.065"	1/8"	0.030"	50 ft.	21590
0.190"	3/4"	0.030"	50 ft.	21592

GC Installation Kit

This kit contains the tubing and fittings needed to add an additional GC to your lab bench. Also included are four 1/8-inch tees, so carrier, fuel, and other GC gases can be routed to the new inlet or detector from existing gas lines. Order additional parts, such as gas purifiers or regulators, separately to customize the GC installation to your specifications. Kit includes: one tubing cutter, one 1/8-inch x 1/4-inch reamer, one 7/16-inch wrench, one 1/2-inch wrench, four 1/8-inch brass tees, ten 1/8-inch brass nuts, ten brass front and back ferrules, and 50 feet (15.2 meters) of our instrument-grade cleaned 1/8-inch copper tubing.

Description	qty.	cat.#
GC Installation Kit	kit	21325

tech tip

Plumbing a GC

It is essential to use clean chromatographic-grade tubing to plumb a GC. Standard-grade tubing contains residual hydrocarbon contaminants from the drawing process. These contaminants migrate into the carrier gas stream, elevating background noise and causing down time.



1/16-Inch Tubing Cutter

- Produces square, smooth cuts in 1/16-inch tubing.
- Eliminates tubing distortion.
- Replaceable cutting wheel.

Description	qty.	cat.#
1/16" Tubing Cutter	ea.	20192
Replacement Cutting Wheels	3-pk.	20185



Ridgid® Tubing Cutter

- Excellent for cutting 1/8- or 1/4-inch metal tubing.
- Compact size is ideal for tight spaces.
- Replaceable cutting wheel.

Description	qty.	cat.#
Ridgid® Tubing Cutter for 1/8" or 1/4" metal tubing	ea.	23011
Replacement Cutting Wheels	2-pk.	23012



Tubing Reamer

- Removes burrs from stainless steel tubing.
- For 1/4- or 1/8-inch tubing.
- Non-slip safety design.

Description	qty.	cat.#
Tubing Reamer	ea.	20134



SSI TC-20 Tube Cutting Machine

- Cuts 1/16", 1/8", or 1/4" tubing with inside diameter as small as 0.008".
- Electrically operated bench-top model.
- Handy dressing tool on the swing arm removes burrs and reams tubing.
- Voltage selectable 110–120/220–240 volts, 50–60Hz.*

Description	qty.	cat.#
SSI Tubing Cutter Machine	ea.	23029
SSI Replacement Cutting Wheels	3-pk.	23030

*Unit shipped set for 110–120 operating voltage. Switch to 220–240 volts by using alternate fuse and power cord (included).



CE

8" x 6 1/4" x 4 1/4"
(20.3 x 15.9 x 10.8 cm)
Weight: 11 lbs. (5.0 kg)

Tubing Dressing Tool

Same tool as included with the SSI tube cutting machine.

Description	qty.	cat.#
1/16" Tubing Dressing Tool	ea.	20188
Replacement Insert for 1/16" Tubing Dressing Tool	ea.	20189
1/8" Tubing Dressing Tool	ea.	20190
Replacement Insert for 1/8" Tubing Dressing Tool	ea.	20191



Tubing Bender

- Bends 1/8-inch, 3/16-inch, or 1/4-inch tubing.
- Accurate left-hand, right-hand, or offset bends.

Description	qty.	cat.#
Tubing Bender	ea.	23009



1/16-Inch Tubing Cutting Pliers

- Ideal for cutting 1/16-inch tubing.
- Cuts quickly, reducing distortion.
- Cuts clean, eliminating need for deburring.

Description	qty.	cat.#
1/16" Tubing Cutting Pliers	ea.	20193



Tube & Pipe Fittings

also available

For Siltek®/Sulfinert® and Silcosteel®-CR-treated fittings, see pages 392-393.

Tube & Pipe Fittings

The Instrumentation Group of Parker Balston® Corporation designs and manufactures a top-quality line of components and systems for use in process instrumentation, semiconductor manufacturing, and analytical instrumentation. Parker's product quality and delivery have made them a world-wide leader—and this is the level of quality and service Restek wants to deliver to you.

Fitting Type	Parker #	Similar to Swagelok® #	Size	qty.	Brass cat.#	316 Grade Stainless Steel	
						qty.	cat.#
nut 	1 Nu 1	102-1	1/16"	20-pk.	21800	5-pk.	21900
	2 Nu 2	202-1	1/8"	40-pk.	21801	10-pk.	21901
	4 Nu 4	402-1	1/4"	40-pk.	21802	10-pk.	21902
front ferrule 	1 FF 1	103-1	1/16"	20-pk.	21803	10-pk.	21903
	2 FF 2	203-1	1/8"	40-pk.	21804	20-pk.	21904
	4 FF 4	403-1	1/4"	40-pk.	21805	20-pk.	21905
back ferrule 	1 BF 1	104-1	1/16"	20-pk.	21806	10-pk.	21906
	2 BF 2	204-1	1/8"	40-pk.	21807	20-pk.	21907
	4 BF 4	404-1	1/4"	40-pk.	21808	20-pk.	21908
nut & ferrule set 	—	—	1/16"	10-pk.	21809	2-pk.	21909
	—	—	1/8"	20-pk.	21810	5-pk.	21910
	—	—	1/4"	20-pk.	21811	5-pk.	21911
plug 	1 BLP 1	100-P	1/16"	5-pk.	21815	2-pk.	21915
	2 BLP 2	200-P	1/8"	10-pk.	21816	4-pk.	21916
	4 BLP 4	400-P	1/4"	10-pk.	21817	4-pk.	21917
union 	1 SC 1	100-6	1/16"	3-pk.	21818	ea.	21918
	2 SC 2	200-6	1/8"	5-pk.	21819	2-pk.	21919
	4 SC 4	400-6	1/4"	5-pk.	21820	2-pk.	21920
reducing union 	2 RU 1	200-6-1	1/8" to 1/16"	5-pk.	21823	ea.	21923
	4 RU 1	400-6-1	1/4" to 1/16"	5-pk.	21824	2-pk.	21924
	4 RU 2	400-6-2	1/4" to 1/8"	5-pk.	21825	2-pk.	21925

Parker's (A-Lok) two-piece ferrules and NPT fittings are ideal for installing new equipment, modifying existing instrumentation, or replacing worn connections.

Size	Parker #	Similar to Swagelok®	qty.	Brass cat.#	316 Grade Stainless Steel		Fitting Type
					qty.	cat.#	
1/16"	1 ET 1	100-3	2-pk.	21826	ea.	21926	 tee
1/8"	2 ET 2	200-3	2-pk.	21827	ea.	21927	
1/4"	4 ET 4	400-3	2-pk.	21828	ea.	21928	
1/8"	2 ECR 2	200-4	2-pk.	21829	ea.	21929	 cross
1/4"	4 ECR 4	400-4	2-pk.	21830	ea.	21930	
^A 1/8" tube to ^B 1/16"	2 TUR 1	100-R-2	5-pk.	21831	2-pk.	21931	 A B tube end reducer
1/4" tube to 1/16"	4 TUR 1	100-R-4	5-pk.	21832	2-pk.	21932	
1/8" tube to 1/4"	2 TUR 4	400-R-2	5-pk.	21833	2-pk.	21933	
1/4" tube to 1/8"	4 TUR 2	200-R-4	5-pk.	21834	2-pk.	21934	
1/8"	2 PC 2	201-PC	5-pk.	21835	2-pk.	21935	 port connector
1/4"	4 PC 4	401-PC	10-pk.	21836	2-pk.	21936	
1/8" tube to 1/4"	2 PC 4	401-PC-2	5-pk.	21837	2-pk.	21937	
^A 1/8" to ^B 1/8" NPT	2 MSC 2N	200-1-2	10-pk.	21841	2-pk.	21941	 A B male connector
1/4" to 1/4" NPT	4 MSC 4N	400-1-4	10-pk.	21842	2-pk.	21942	
1/16" to 1/8" NPT	1 MSC 2N	100-1-2	5-pk.	21843	2-pk.	21943	
1/8" to 1/4" NPT	2 MSC 4N	200-1-4	10-pk.	21844	2-pk.	21944	
1/4" to 1/8" NPT	4 MSC 2N	400-1-2	10-pk.	21845	2-pk.	21945	
^A 1/8" to ^B 1/8" NPT	2 FSC 2N	200-7-2	5-pk.	21846	2-pk.	21946	 A B female connector
1/4" to 1/4" NPT	4 FSC 4N	400-7-4	5-pk.	21847	2-pk.	21947	
1/4" to 1/8" NPT	4 FSC 2N	400-7-2	5-pk.	21848	2-pk.	21948	
1/8" male*	2A-Q4VN	QC4D-200	—	—	ea.	21957	 male & female quick couplings
1/8" male	2A-Q4P	QC4S-200	—	—	ea.	21958	
1/8" female*	2A-Q4CN	QC4B-200	—	—	ea.	21959	
1/4" male*	4A-Q4VN	QC4D-400	—	—	ea.	21960	
1/4" male	4A-Q4P	QC4S-400	—	—	ea.	21961	
1/4" female*	4A-Q4CN	QC4B-400	—	—	ea.	21962	

*Includes self-sealing shut-off valve.

Gas Valves, Leak Detector, GC Installation Kit



Toggle valve—
instant on/off
control



Ball valve—leak-free
bidirectional sealing



Plug valve—leak-free at
wide temperature
swings



cat.# 22202

cat.# 22200



cat.# 22209
Optional knob
for accurate
control of low
flow

Parker Balston® Shut-Off Gas Valves

Parker toggle gas valves are ideal for applications in which instant on/off gas control is necessary. They are rated to 200psig at 21°C and have a maximum operating temperature of 148°C. Ball valves have a floating ball to assist sealing and to reduce operating torque, and dual seats to provide leak-tight bidirectional sealing. They are rated to 1500psig at 21°C and have a maximum operating temperature of 177°C. Perfect for instrument supply lines, plug valves work well in any application requiring throttling or on/off operations. Parker plug valves remain leak-free even when subjected to wide temperature swings. They are rated to 3000psig at 21°C and have a maximum operating temperature of 205°C.

Valve Type	1/8" Brass		1/4" Brass		1/8" Stainless Steel		1/4" Stainless Steel	
	cat.#	ea.	cat.#	ea.	cat.#	ea.	cat.#	ea.
Toggle	22188		22189		22190		22191	
Ball	22192		22193		22194		22195	
Plug	22196		22197		22198		22199	

Parker Balston® Precision Metering Gas Valves

Precision metering gas valves provide accurate, stable control of low gas and liquid flow rates. The valve stem threads do not contact the fluid stream, making these valves ideal for high-purity applications. The O-ring seal and stem threads are coated with a low vapor pressure, silicone lubricant for optimum performance. An optional vernier turn-counter knob allows repeatable flow settings for standardized operating processes.

Valve Type	1/8" Nickel-Plated Brass		1/4" Nickel-Plated Brass		1/8" Stainless Steel		1/4" Stainless Steel	
	cat.#	ea.	cat.#	ea.	cat.#	ea.	cat.#	ea.
Metering, straight	22200		22201		22204		22205	
Metering, right angle	22202		22203		22206		22207	

Vernier Knob for Metering Valve: cat.# 22209 (ea.)

Restek Electronic Leak Detector

- Reliable thermal conductivity leak detector.
- Responds to leaks in less than 2 seconds.
- Audible alarm plus LED readout.
- Auto zeros with the touch of a button.
- Built-in rechargeable 7.2-volt battery.



Easy-to-clean probe
assembly.



Description	qty.	cat.#
Leak Detector with 110Volt Battery Charger	ea.	22451
Leak Detector with 220Volt European Battery Charger	ea.	22451-EUR
Leak Detector with 220Volt UK Battery Charger	ea.	22451-UK

Caution: The Restek Electronic Leak Detector is NOT designed for determining leaks of combustible gases. A combustible gas detector should be used for determining combustible gas leaks under any condition. The Restek Electronic Leak Detector may be used for determining trace amounts of hydrogen in a GC environment only.

Leak Detector Accessory Kit

The kit includes an adaptor fitting to detect leaks in hard-to-reach locations, and a mounting bracket that can be affixed to the wall or GC.

Description	qty.	cat.#
Leak Detector Accessory Kit (adaptor fitting for probe, mounting bracket)	kit	22453

GC Installation Kit

This kit contains the tubing and fittings needed to add an additional GC to your lab bench. Also included are four 1/8-inch tees, so carrier, fuel, and other GC gases can be routed to the new inlet or detector from existing gas lines. Order additional parts, such as purifiers or regulators, separately to customize the GC installation to your specifications. Kit includes: one tubing cutter, one 1/8-inch x 1/4-inch reamer, one 7/16-inch wrench, one 1/2-inch wrench, four 1/8-inch brass tees, ten 1/8-inch brass nuts, ten brass front and back ferrules, and 50 feet (15.2 meters) of our instrument-grade cleaned 1/8-inch copper tubing.

Description	qty.	cat.#
GC Installation Kit	kit	21325