



Wiring Accessories



Wiring Accessories

Accu-Glass Products' line of wiring accessories provides numerous cable management options constructed from UHV and HV compatible materials.

Crimp and solder style gold plated instrumentation pin and socket contacts from .040 through .250 inch diameter sizes, are presented on the following pages. Specialized contacts for Type-K thermocouple applications are also offered herein. In addition to their listing here, these contacts are also found in respective mating feedthrough and cable assembly sections throughout this catalog.

Electrical terminals including ring, butt, spade, push-on, and in-line types are presented on page 114... followed by PEEK and ceramic terminal blocks, and ceramic wire nuts. Ceramic electrical standoffs are on page 116, followed by PEEK cable chain / track system. Vacuum compatible solder, flux, and conductive epoxy adhesive are also offered alongside single and double-sided adhesive Kapton® insulating tape. PEEK and stainless steel cable ties and mounts, shielding and braiding, PEEK, PTFE and FEP shrink tubing, and Kapton® tape, as well as many other cable management accessories.

Accu-Glass Products recognizes that every UHV and HV application has different specifications and requirements. Because of this, we try to provide numerous wiring accessories to fit the needs of our clients.

If you require a product that is not available here, please call us at 818-365-4215 and we will try to locate it for you.

Features

- Contacts, Pin and Socket
- Connectors, Push-on and In-Line
- Terminals, Ring, Butt and Spade Type
- Terminal Blocks, PEEK and Ceramic
- Wire Nuts and Beads, Ceramic
- Electrical Standoffs, Ceramic
- Cable Chain / Track System, PEEK
- Solder, Flux, Conductive Glue and Epoxy
- Kapton® Adhesive Tape, Single and Double sided
- Cable Ties, PEEK and Stainless
- Cable Tie Mounts, PEEK and Stainless
- Braided Shield, PEEK, Stainless, Copper
- Monofilament, PEEK
- Cable Wrap, Spiral-cut PEEK
- Wire Strippers, Mechanical and Thermal
- Heat Shrink Tubing, PEEK, PTFE and FEP
- Heat Guns
- Tags, PEEK and Stainless Identification
- Marking Tools, Alpha and Numerical
- Beads, Color Glass Identification

Specifications

Electrical^{1,2}

Voltage / Current	See Tables
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Material

Various	See Tables
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Vacuum Range

UHV, Ultrahigh vacuum	1x10 ⁻¹⁰ Torr
HV, High vacuum	1x10 ⁻⁸ Torr

Temperature Range

Various	See Tables
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Notes

1. Electrical ratings are maximum test values. Also, see 'glow discharge' information on page 270
 2. Overall assembly ratings must be adjusted to that of its lowest rated component.
- § Unless specified otherwise, dimensional units in all sections of this catalog are expressed in inches.



.040 Instrumentation Contacts — Type-T1

Standard Duty Cycle Contacts are made from a copper alloy and are gold-plated. Recommended for use in our PEEK Subminiature-D and Subminiature-C connectors.

High Duty Cycle Contacts are made with a stainless steel sleeve and are used as equivalents to the standard contacts. Recommended for use in PEEK connectors where plug-in cycles exceed 3 cycles per day.

Contacts, Type-T1 — 250°C / Air Service and UHV to 1x10⁻¹⁰ Torr

Contacts / Pack	Gender	Wire Well ID	Model Number	Part Number	Unit Price \$
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Standard Duty Cycle — Contacts for .040 Diameter Pins and Sockets

10	M	.043-.046 (20-24AWG)	GP-10	100170	24
10	M	.023-.027 (26-30AWG)	GP2-10	100171	24
10	F	.043-.046 (20-24AWG)	GS-10	100180	24
10	F	.023-.027 (26-30AWG)	GS2-10	100181	24
25	F	.043-.046 (20-24AWG)	GS-25	111500	60
25	F	.023-.027 (26-30AWG)	GS2-25	111501	60

High Duty Cycle¹ — Contacts for .040 Diameter Pins and Sockets

10	F	.043-.046 (20-24AWG)	GS-10-S	110908	35
10	F	.023-.027 (26-30AWG)	GS2-10-S	110909	35

1. High-duty cycle stainless steel contacts require a positioner on DCT-1 crimp tool. See Tools below.

.040 Thermocouple Contacts — Type-T1tc

Thermocouple Contacts are made with Type-K thermocouple material: Chromel® and Alumel®; and for use in our PEEK Subminiature-D thermocouple connectors.

High Duty Cycle Thermocouple Contacts are made by adding a stainless steel sleeve over our thermocouple contacts and are used as equivalents to the thermocouple contacts. Recommended for use in PEEK connectors where plug-in cycles exceed 3 cycles per day.

Contacts, Type-T1tc — 250°C / Air Service and UHV to 1x10⁻¹⁰ Torr

Contacts / Pack	Gender	Material / (Polarity)	Wire Well ID	Model Number	Part Number	Unit Price \$
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Standard Duty Cycle — Thermocouple Contacts

5	M	Chromel (+)	.043-.046 (20-24AWG)	CP-5	100981	55
5	M	Alumel (-)	.043-.046 (20-24AWG)	AP-5	100991	55
5	F	Chromel (+)	.043-.046 (20-24AWG)	CS-5	100980	55
5	F	Alumel (-)	.043-.046 (20-24AWG)	AS-5	100990	55

High Duty Cycle¹ — Thermocouple Contacts

5	F	Chromel (+)	.043-.046 (20-24AWG)	CS-5-S	111323	65
5	F	Alumel (-)	.043-.046 (20-24AWG)	AS-5-S	111324	65

1. High duty cycle stainless steel contacts require positioner DCT-P-2 on DCT-1 crimp tool.

Tools — For wiring Type-T1 Contacts

Contents	Description	Model Number	Part Number	Unit Price \$
1 Unit	Crimp Tool for Type-T1 Contacts	DCT-1	100190	454
1 Unit	Crimp Tool Positioner ¹	DCT-POS-T2	111315	69

1. Used only with high duty cycle stainless steel contacts, fits DCT-1 part number 100190



100170 / Instrumentation Male Contacts



100180 / Instrumentation Female Contacts



100980 / Thermocouple Female Chromel® Contacts



↖ Set Dial to #5

100190 / Contact Crimp Tool



111315 / Type-T2 Positioner



110008 and 110009 / Standard Contacts



111315 / Type-T2 Positioner



100193 / Crimp Tool



110235 / Mil Spec. Female Contacts

↖ Set First Dial to #20 / Red



↖ Set Second Dial to #24

110702 / Crimp Tool

.040 Instrumentation Contacts — Type-T2

Standard Duty Cycle Contacts are made from a copper alloy and are gold-plated. These contacts are used in our DAP Subminiature-D and our 19-pin circular PEEK connectors. The female contacts come sleeved as standard.

Contacts, Type-T2 — 250°C / Air Service and UHV to 1x10⁻¹⁰ Torr

Contacts / Pack	Gender	Wire Well ID	Model Number	Part Number	Unit Price \$
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Standard Duty Cycle — Type-T2 / 10 Pack

10	M	.043-.046 (20-24AWG)	HVGP-10	110008	28
10	M	.023-.027 (26-30AWG)	HVGP2-10	110036	28
10	F	.043-.046 (20-24AWG)	HVGS-10	110009	28
10	F	.023-.027 (26-30AWG)	HVGS2-10	110035	28

Standard Duty Cycle — Type-T2 / 25 Pack

25	M	.043-.046 (20-24AWG)	HVGP-25	111650	70
25	M	.023-.027 (26-30AWG)	HVGP2-25	111651	70
25	F	.043-.046 (20-24AWG)	HVGS-25	111652	70
25	F	.023-.027 (26-30AWG)	HVGS2-25	111653	70

Tools — For wiring Type-T2 Contacts

Contents	Description	Model Number	Part Number	Unit Price \$
1 Unit	Crimp Tool for all of the above Type-T2 contacts	DCT-2	100193	454
1 Unit	Extraction Tool to remove Type-T2 contacts	HV-ET	100936	28
1 Unit	Positioner for DCT-1 to make it a DCT-2	DCT-POS-T2	111315	69

.040 MIL-SPEC Contacts — Type-T5i

Standard Duty Cycle Mil-Spec. Contacts are made from a copper alloy and are gold-plated. These female contacts are used only in our Mil-DTL-26482 air side connector and are sleeved as standard. Male contacts are offered here only as an additional option. These male contacts are not used in any connectors offered by Accu-Glass Products.

MIL-SPEC Contacts — 250°C / Air Service and UHV to 1x10⁻¹⁰ Torr

Contacts / Pack	Gender	Wire Well ID	Model Number	Part Number	Unit Price \$
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Standard Duty Cycle — Type-T5i

10	M	.048-.050 (20-24AWG)	GP-M40-10	111610	28
10	F	.048-.050 (20-24AWG)	GS-M40-10	110235	28

Tools — For wiring Type-T5i Contacts

Contents	Description	Model Number	Part Number	Unit Price \$
1 Unit	Crimp Tool for all of the above Type-T5i contacts	DCT-5	110702	494
1 Unit	Insertion Tool to install Type-T5i	IT-M40	111611	52
1 Unit	Extraction Tool to remove Type-T5i contacts	ET-M40	111612	57



.050, .056, and .062 Miscellaneous Contacts

These contacts are recommended for straight wire hookups or where a mating male center conductor is available.

.050, .056, .062 Gold Plated Contacts — 250°C / Air Service and UHV to 1x10⁻¹⁰ Torr

Contacts / Pack	Gender	Length	Material	Accepts Pin Size	Wire Well ID	Model Number	Part Number	Unit Price \$
5	F	0.750"	BeCu	0.050"	0.067"	BeCuGS-050-5	112777	20
5	F	0.750"	BeCu	0.056"	0.067"	BeCuGS-056-5	112778	20
5	F	0.750"	BeCu	0.062"	0.067"	BeCuGS-062-5	112779	20

Standard Duty Cycle — 5 Per Pack

5	F	0.750"	BeCu	0.050"	0.067"	BeCuGS-050-5	112777	20
5	F	0.750"	BeCu	0.056"	0.067"	BeCuGS-056-5	112778	20
5	F	0.750"	BeCu	0.062"	0.067"	BeCuGS-062-5	112779	20

.056 Thermocouple Contacts — 250°C / Air Service and UHV to 1x10⁻¹⁰ Torr

Contacts / Pack	Gender	Length	Material	Accepts Pin Size	Wire Well ID	Model Number	Part Number	Unit Price \$
5	F	1.32	Chromel	0.056"	0.050	CS-056-5	112771	75
5	F	1.32	Alumel	0.056"	0.050	AS-056-5	112772	75
5	F	1.32	Iron	0.056"	0.050	IS-056-5	112773	89
5	F	1.32	Nickel	0.056"	0.050	NS-056-5	112774	75
5	F	1.32	Constantan-J	0.056"	0.050	ConJS-056-5	112775	89
5	F	1.32	Constantan-E/T	0.056"	0.050	ConETS-056-5	112776	89

Standard Duty Cycle — 5 Per Pack

5	F	1.32	Chromel	0.056"	0.050	CS-056-5	112771	75
5	F	1.32	Alumel	0.056"	0.050	AS-056-5	112772	75
5	F	1.32	Iron	0.056"	0.050	IS-056-5	112773	89
5	F	1.32	Nickel	0.056"	0.050	NS-056-5	112774	75
5	F	1.32	Constantan-J	0.056"	0.050	ConJS-056-5	112775	89
5	F	1.32	Constantan-E/T	0.056"	0.050	ConETS-056-5	112776	89

.060 Power Contacts — Type-T5p

Mil-Spec. Contacts are made from a copper alloy and are gold-plated. These contacts are used in our Mil-DTL-5015 vacuum and air service connector, the female contacts are sleeved as standard. Male contacts are used only in our male Mil-DTL-5015 in-vacuum PEEK connectors.

MIL-SPEC Contacts — 250°C / Air Service and UHV to 1x10⁻¹⁰ Torr

Contents / Pack	Gender	Wire Well ID	Model Number	Part Number	Unit Price \$
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Standard Duty Cycle — Type T5p

10	M	0.066 max.	GP-M60-10	110700	28
10	F	0.066 max.	GS-M60-10	110701	28

Tools — For wiring Type-T5p Contacts

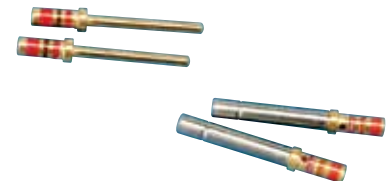
Contents	Description	Model Number	Part Number	Unit Price \$
1 Unit	Crimp Tool for all of the above Type-T5p contacts	DCT-5	110702	494
1 Unit	Insertion Tool to install Type-T5p	IT-M60	111613	50
1 Unit	Extraction Tool to remove Type-T5p contacts	ET-M60	111614	54



112777 / Gold Plated Contacts



112771 / Thermocouple Contacts



110700 and 110701 / Power Contacts



111613 / Insertion Tool
111614 / Extraction Tool



.094 Power Contacts — Type-T6

Power Contacts are made from beryllium copper and are gold-plated. These contacts are ideally suited for use to push onto the vacuum side of our single-ended coaxial BNC, MHV and SHV-5 feedthroughs.



112421 / Power Female Contacts



101000 / Power Female Contacts

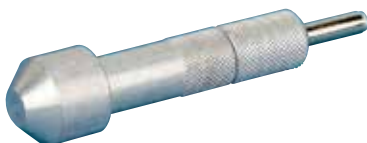


101001 / Power Male Contacts



➤
Set Dial to...
#6 for 12AWG
#3 for 16AWG

101080 / Crimp Tool



100935 / Extraction Tool

Power Contacts — .094 Inch Diameter / 250°C / UHV to 1x10⁻¹⁰ Torr

Contacts / Pack	Used For	Gender	Contact Size	Well Wire ID	Model Number	Part Number	Unit Price \$
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Standard Duty Cycle — Type T6

1	UHV/Air	Female	0.094	0.073 13AWG	POC94-1-CRP	112421	75
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Tools — For wiring Type-T6 Contacts

Contents	Description	Model Number	Part Number	Unit Price \$
1 Unit	Crimp Tool for all of the above Type-T6 contacts	DCT-4/6	100908	535

.142 Power Contacts — Type-T3

Power Contacts are made from a brass alloy and are gold-plated. These contacts are used in our Subminiature Power-D™ PEEK vacuum and air service connectors only.

Power Contacts — .142 Inch Diameter / 250°C / UHV to 1x10⁻¹⁰ Torr

Contacts / Pack	Used For	Gender	Contact Size	Well Wire ID	Model Number	Part Number	Unit Price \$
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Standard Duty Cycle — Type T3

5	UHV/Air	Male	0.142	0.100 12AWG	PP-5	101001	38
5	UHV/Air	Female	0.142	0.100 12AWG	PS-5	101000	38
5	UHV/Air	Male	0.142	0.065 16AWG	PP2-5	112718	38
5	UHV/Air	Female	0.142	0.065 16AWG	PS2-5	112719	38

Tools — For wiring Type-T3 Contacts

Contents	Description	Model Number	Part Number	Unit Price \$
1 Unit	Crimp Tool for all of the above Type-T3 contacts	DCT-3	101080	464
1 Unit	Extraction Tool to remove Type-T3 contacts	CX-ET	100935	80

Coaxial Contacts — Type-T4

Coaxial Contacts are made from a copper alloy and are gold-plated. These contacts are used in our coaxial Subminiature-D PEEK vacuum and air service connectors. Gender is determined by the innermost contact type.

Coaxial Contacts — 250°C / UHV to 1x10⁻¹⁰ Torr

Quantity	Used For	Gender	Model Number	Part Number	Unit Price \$
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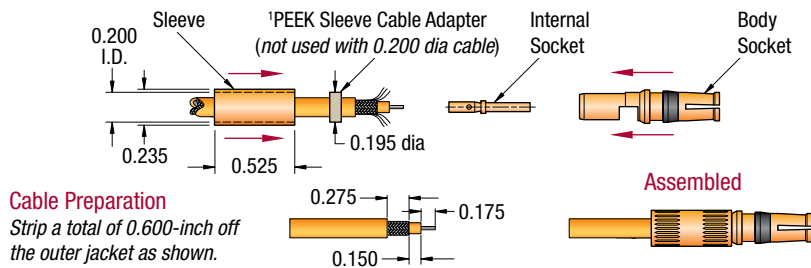
Coaxial Contacts — Type T4

1	UHV/Air	Male	0.092 PEEK Sleeve Cable Adapter	CXP-1	110963	45
1	UHV/Air	Female	0.092 PEEK Sleeve Cable Adapter	CXS-1	100909	45

PEEK Sleeve Cable Adapter Options: Append cable diameter to be used to part number.
Example: 0.064 insulation diameter of coaxial cable, order part number 110963.064

Contacts — Coaxial

- Assembly requires two (2) crimp tools, Body Socket (p/n 100908) and Internal Socket (p/n 100190).
- PEEK sleeve cable adapter¹ drilled for 100720 50-ohm Kapton® cable, 0.200-inch cable diameter, maximum.
- Includes all components in drawing except coaxial cable.



Tools — For wiring Type-T4 Contacts

Contents	Description	Model Number	Part Number	Unit Price \$
1 Unit	Crimp Tool for outer sleeve of above Type-T4 Contacts	DCT-4/6	100908	535
1 Unit	Crimp Tool for inner contact of above Type-T4 Contacts	DCT-1	100190	454
1 Unit	Extraction Tool to remove Type-T4 contacts	CX-ET	100935	80



110963 / Coaxial Male Contact



100909 / Coaxial Female Contact



100908 / Crimp Tool



↖ Set Dial to #5

100190 / Crimp Tool



100935 / Extraction Tool



110102 / Push-On Connector



110104 / Push-On Connector



110111 / In-Line Connector



111411 / Ring Terminal



111421 / Butt Terminal

Contacts / Connectors — Push-On / In-Line

Push-On Connectors are available to accept a range of standard pin sizes. They are constructed of UHV compatible gold-plated beryllium-copper material, and the included set screw is stainless steel.

In-Line Connectors are available to accept a range of standard pin sizes. They are constructed of UHV compatible gold-plated beryllium-copper material, and the two included screws are stainless steel.

Connectors — UHV to 1×10^{-10} Torr

Accepts Pin Size	Well Wire ID	Maximum OD	Overall Length	Qty / Pack	Model Number	Part Number	Unit Price \$
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Push-On Connectors — 200°C UHV / 150°C Air Service

0.040	0.052	0.250	0.69	5	POC40-5	110100	38
0.050	0.052	0.250	0.69	5	POC50-5	110101	38
0.060	0.052	0.250	0.69	5	POC60-5	110102	38
0.094	0.052	0.250	0.69	5	POC94-5	110103	38
0.250	0.096	0.500	1.00	1	POC250-1	110104	40

In-Line Connectors — 400°C UHV / 150°C Air Service

0.059	0.059	0.187	0.500	5	ILC59-5	110110	39
0.072	0.072	0.187	0.500	5	ILC72-5	110111	39
0.120	0.120	0.250	0.560	5	ILC120-5	110112	39
0.134	0.134	0.250	0.630	5	ILC134-5	110113	58
0.260	0.260	0.500	1.000	5	ILC260-5	110114	65

Ring, Spade and Butt Terminals

Ring and Spade Terminals and Butt Connectors are constructed from a steel-nickel alloy and are gold-plated. They are ideally suited for ultrahigh vacuum environments.

Terminals — 480°C / UHV to 1×10^{-10} Torr

Accepts Wire Gauge	Screw Hole	Qty / Pack	Model Number	Part Number	Unit Price \$
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Ring Terminals

18-22 AWG	#6	10	RT-1822-6-10	111410	24
14-16 AWG	#6	10	RT-1416-6-10	111411	24
10-12 AWG	#6	10	RT-1012-6-10	111412	24

Butt Terminals

18-22 AWG	—	10	BC-1822-10	111420	24
14-16 AWG	—	10	BC-1416-10	111421	24
10-12 AWG	—	10	BC-1012-10	111422	24

Spade Terminals

18-22 AWG	—	10	ST-1822-10	111852	24
14-16 AWG	—	10	ST-1416-10	111853	24
10-12 AWG	—	10	ST-1012-10	111854	24

Crimp Tool

Crimp tool for Ring and Butt Terminals	1	CT-RBST	111615	50
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UHV solder available on page 118.



Ceramic and PEEK Terminal Blocks

Ceramic Terminal Blocks are rated to 30 Amps and are fitted with stainless steel terminals.

PEEK Terminal Blocks are ideal for UHV environments. Available in 1, 2 or 4 pole configurations, these unique blocks can be mounted side by side or stacked to create an unlimited combination of connector terminals. The body is made with PEEK and the internal connectors are gold-plated beryllium-copper with stainless steel set screws. Each block has two through holes for secure mounting and stacking.

Terminal Blocks — Ceramic and PEEK Configurations

Number Poles	Conductor Diameter Max	Amps Max	L x W x H	Qty	Model Number	Part Number	Unit Price \$
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Ceramic — 500°C / HV to 1x10⁻⁸ Torr

2	—	30	1.55 x 1.50 x 0.83	1	CER-TB-2P	111620	30
3	—	30	2.40 x 1.50 x 0.83	1	CER-TB-3P	111621	40

PEEK — 250°C / UHV to 1x10⁻¹⁰ Torr

1	0.072	10	0.55 x 0.55 x 0.35	1	PEEK-TB-1P	111850	44
2	0.072	10	0.80 x 0.55 x 0.35	1	PEEK-TB-2P	111851	60
4	0.072	10	1.32 x 0.55 x 0.35	1	PEEK-TB-4P	111855	77
8	0.072	10	2.64 x 0.55 x 0.35	1	PEEK-TB-8P	112695	150

Ceramic Wire Nuts

Ceramic Wire Nuts are ideally suited for UHV environments to 500°C and 1x10⁻¹⁰ Torr. These twist-on wire connectors are ideal for quick connections of wire and cables.

Wire Nuts — 500°C / UHV to 1x10⁻¹⁰ Torr

Wire Gauge	L x W x H	Qty	Model Number	Part Number	Unit Price \$
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Ceramic — 16 and 12 AWG

16 to 20	Ceramic	10/pkg	CER-WN-1620	111622	24
12 to 18	Ceramic	10/pkg	CER-WN-1218	111623	26

Ceramic Insulating Beads

Ceramic Beads (L3 Steatite) are used to insulate bare wires in air or vacuum systems. Convex and concave ends allow easy stacking and provide continuous insulation along wire length. Also known as fish-spine beads. Priced per linear foot.

Ceramic Insulating Beads — 450°C / UHV to 1x10⁻¹⁰ Torr

Approximate number of beads per foot	Bead Dimensions			Accepts Wire Dia.	Model Number	Part Number	Unit Price \$
	Length	O.D.	I.D.				

Ceramic Beads

85	0.170	0.170	0.068	0.050	CAB-068	110300	40
75	0.200	0.200	0.098	0.085	CAB-098	110310	40
55	0.260	0.260	0.156	0.128	CAB-156	110320	40



111621 / 3 Pole Terminal Block



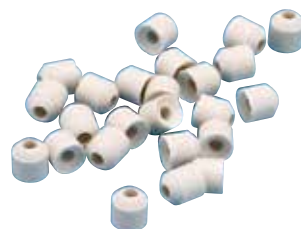
111850 / PEEK 1 Pole Terminal Block



111855 / PEEK 4 Pole Terminal Block



111623 / Ceramic Wire Nut



110300 / Ceramic Beads, L3 Steatite Insulators



111170 / Ceramic Standoff



111176 / Ceramic Standoff



113170 / UHV Precision Switch
'Normally Closed'

Ceramic (Steatite) Standoffs

Ceramic Standoffs made from glazed steatite provide electrical isolation and resistance to thermal extremes, high-wear conditions and corrosion. Glazing provides an aesthetically pleasing finish, but its primary function is ease of cleaning, which helps prevent surface conduction via contaminants. Ceramic Standoffs are threaded on both ends and come complete with two 18-8 stainless steel vented socket head cap screws and two stainless steel washers.

Ceramic (Steatite) Standoffs — 400°C / UHV to 1x10⁻¹⁰ Torr

Ceramic Length	O.D.	Air VDC	Vacuum VDC	SHCS Size	Pkg. Qty.	Model Number	Part Number	Unit Price \$
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Ceramic Standoffs

0.50	0.375	4 kV	10 kV	6-32	1	CSST-632-500	111170	32
0.75	0.375	5 kV	12 kV	6-32	1	CSST-632-750	111171	34
1.00	0.375	8 kV	20 kV	6-32	1	CSST-632-1000	111172	36
1.25	0.375	10 kV	25 kV	6-32	1	CSST-632-1250	111173	38
1.50	0.375	12 kV	30 kV	6-32	1	CSST-632-1500	111174	39
2.00	0.375	14 kV	35 kV	6-32	1	CSST-632-2000	111175	39
1.25	1.000	10 kV	25 kV	1/4-20	1	CSST-1420-1250	111176	45
1.50	1.000	12 kV	30 kV	1/4-20	1	CSST-1420-1500	111177	55
2.00	1.000	14 kV	35 kV	1/4-20	1	CSST-1420-2000	111178	60

UHV Precision Switch, 'Normally Closed'

Accu-Glass' 'Normally Closed' UHV Precision Switch is constructed using UHV compatible materials, including PEEK polymer (polyether etherketone) switch body, cap and plunger, gold plated BeCu electrical contacts, silver plated 22 AWG solid core Cu wire with Kapton® insulation, and stainless steel nuts and spring. Standard switch assembly is supplied with two, 60 inch electrical leads.

This switch is designed for plate or bracket mounting inside a UHV chamber, which requires a .375 inch clearance, or .375-24 UNF threaded hole for installation. Note that the maximum bracket or plate thickness this switch will accommodate is 5/8 of an inch. The two stainless steel nuts (supplied) are used to securely lock the switch assembly in place. Custom solutions are available on request. Contact factory for more information.

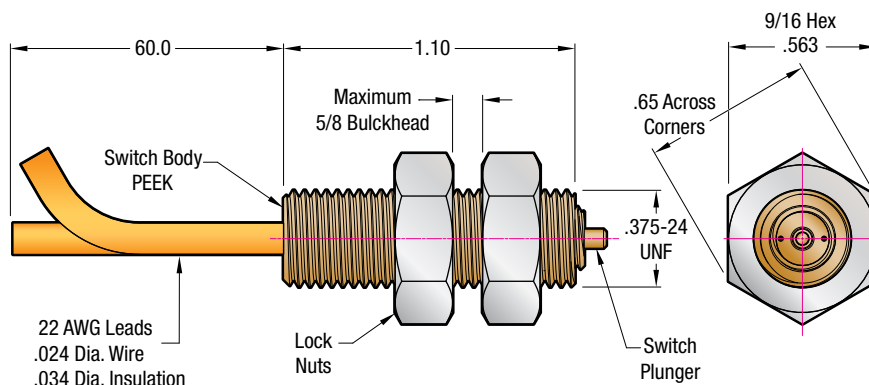
UHV Precision Switch — Normally Closed / 250°C / 2 kVDC¹, 2 Amp / UHV to 1x10⁻¹⁰ Torr

Unit Quantity	Size Length / Diameter	Description	Model Number	Part Number	Unit Price \$
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UHV Precision Switch — with 22 AWG, 60 Inch Kapton® Insulated Leads

1	60 / .375	Normally Closed Switch	SWITCH-UHV-NC	113170	275
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1. See 'Glow Discharge' information on page 270



Ultrahigh Vacuum — Cable Chain / Track

Vacuum compatible, PEEK *Cable Chain / Track* components are designed for service in high and ultrahigh vacuum cable management applications. They're ideally suited at guiding UHV cable bundles on long travel devices located inside a vacuum vessel. Constructed with interlocking modular PEEK links, they are sold in unit assemblies of five (5) links, or about 5.25" inches in length (measured center-to-center). A two-piece end-mount kit is available (sold separately) for terminating and fixing both cable chain / track ends. The end-mount kit includes one (1) each male and female terminations, and all necessary fastening hardware. These can be secured to user system with two socket drive screws on any one of the end-mounts four sides. Note that cable chain / track's minimum bend radius is 2.03 inches.

PEEK Cable Chain / Track — 250°C / UHV to 1x10⁻¹⁰ Torr

Type	Quantity Links	Cable Path Dimensions	Length	Model Number	Part Number	Unit Price \$
Chain / Track	5	1.00 x 0.75	6.25	PK-CBLCN-1000	114000	475
End-Mounts ¹	2	1.00 x 0.75	2.05	PK-CBLCN-EM1000	114001	225

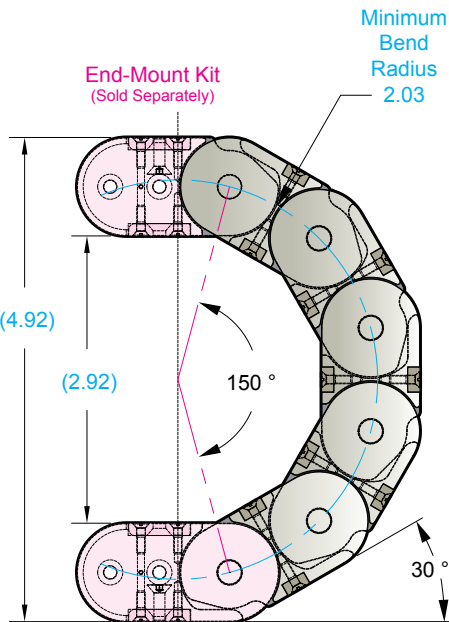
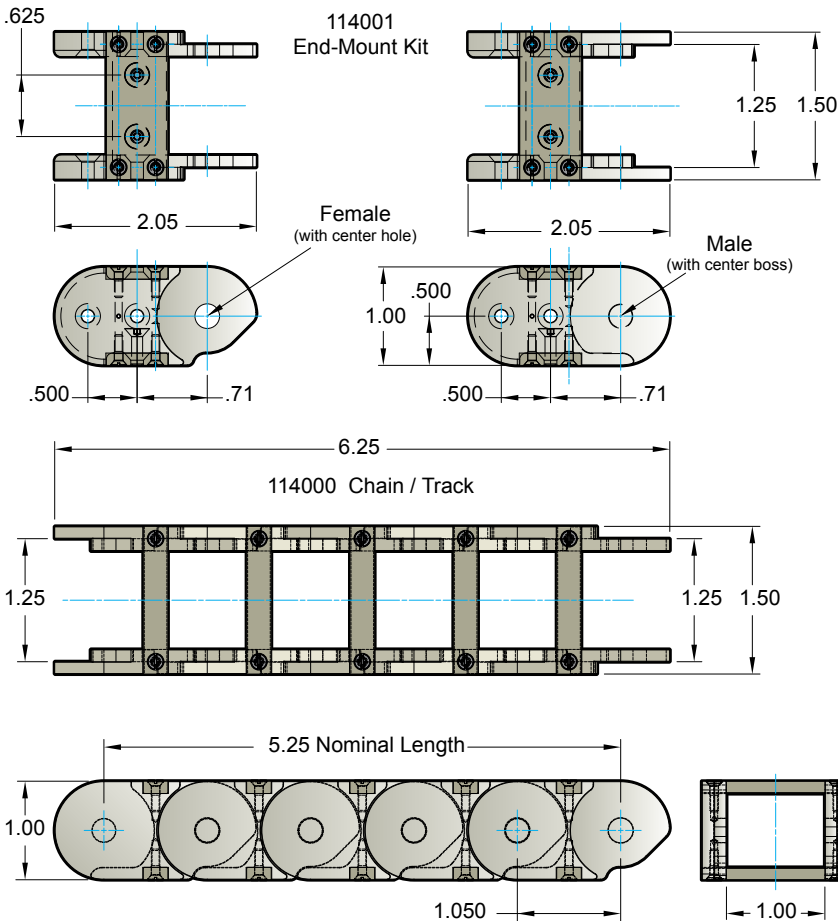
1. Includes one each male and female end-mount

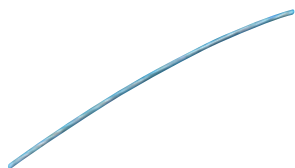


114000 / PEEK Cable Chain / Rack



114001 / End-Mount Kit
Includes one male / female termination





110796 / UHV Solder



110797 / UHV Solder Flux



113255 / Conductive Glue
H21D 150°C



113256 / Conductive Glue
H27D 270°C



111785 / Hi Temperature Epoxy
250°C (400°C Intermittent)

Ultrahigh Vacuum Solder, Flux and Iron

Accu-Glass solder provides a clean, positive electrical connection that does not outgas. The melting/flow temperature is 280°C. It is suitable for use in ultrahigh vacuum applications. This is an 85% gold and 15% proprietary alloy.

Solder Specification — 480°C / UHV to 1×10^{-10} Torr

Accepts Wire Gauge	Screw Hole	Qty	Model Number	Part Number	Unit Price \$
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Solder and Flux

1	1 inch x 0.020 dia	Accu-Glass alloy	UHV-SOLDER	110796	39
1 ¹	1/2 oz.	Solder flux ²	S-FLUX	110797	45
1	—	Soldering iron, butane	S-IRON	110800	155
1 ¹	4.5 oz.	Butane refill bottle	S-IBREF	110804	24



1. Hazardous material; cannot be shipped by air. No express or international delivery available.
2. Soluble in isopropyl alcohol. Recommended cleaning after use: 5 minutes in ultrasonic bath of isopropyl alcohol.

Ultrahigh Vacuum Epoxy

Conductive Epoxy — Epo-Tek H21D and H27D conductive glue / epoxy is a two component, silver filled epoxy adhesive designed for semiconductor, hybrid-microelectronics, and is ideally suited for joining fine instrumentation wires. These epoxies pass NASA's low outgassing standard ASTM E595 (with proper cure), for more information on this, visit NASA's website at <https://outgassing.nasa.gov/>

Non-Conductive Epoxy — High temperature UHV compatible epoxy is ideal for use with SMA 905 fiber optic connectors. It is supplied in single, two part, 4 gram packs eliminating the need for measuring and cup mixing. Ideally suited for UHV environments to 1×10^{-10} Torr and an operating temperature of 250°C (and up to 400°C for brief periods).

UHV Epoxy — See Below / UHV to 1×10^{-10} Torr

Qty Ounce / Part	Type	Maximum Temperature	Model Number	Part Number	Unit Price \$
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Conductive Epoxy — 150°C or 270°C, Silver Filled

1	Two-Part Conductive	150°C	EPOXY-H21D	113255	180
1	Two-Part Conductive	270°C	EPOXY-H27D	113256	195

Non-Conductive Epoxy — 250°C (400°C intermittent)

.14	Two-Part Non-Conductive	250°C	FO-EPXY-UHV	111785	18
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**Kapton® Tape**

Kapton® Tape provides a clean, flexible electrical insulation with low outgassing characteristics. It has a dielectric strength of 7500 volts and a tensile strength of 30 lbs/inch-width. It is suitable for use in ultrahigh vacuum applications. Available with acrylic or silicone adhesive.

Kapton® Tape — See Above / UHV to 1×10^{-10} Torr

Qty. (Rolls)	Width	Thickness	Length (Yards)	Model Number	Part Number	Unit Price \$
Single Sided — Acrylic Adhesive / -30°C to 175°C						
1	0.250	0.0025	36	KAP-TP-36-1/4A	110794	37
1	0.375	0.0025	36	KAP-TP-36-3/8A	111205	48
1	0.500	0.0025	36	KAP-TP-36-1/2A	110795	55
1	0.750	0.0025	36	KAP-TP-36-3/4A	111206	78
1	1.000	0.0025	36	KAP-TP-36-1A	110790	100
1	2.000	0.0025	36	KAP-TP-36-2A	111207	193

Single Sided — Silicone Adhesive / -75°C to 260°C, with minimal outgassing above 120°C

1	0.250	0.0035	36	KAP-TP-36-1/4S	110791	48
1	0.375	0.0035	36	KAP-TP-36-3/8S	111200	57
1	0.500	0.0035	36	KAP-TP-36-1/2S	110792	75
1	0.750	0.0035	36	KAP-TP-36-3/4S	111201	108
1	1.000	0.0035	36	KAP-TP-36-1S	110793	140
1	2.000	0.0035	36	KAP-TP-36-2S	111202	278
1	4.000	0.0035	36	KAP-TP-36-4S	111203	550
1	6.000	0.0035	36	KAP-TP-36-6S	111204	795

Double Sided¹ — Silicone Adhesive / -75°C to 260°C, with minimal outgassing above 120°C

1	0.250	0.004	36	KAP-TP-36-1/4SD	112740	54
1	0.500	0.004	36	KAP-TP-36-1/2SD	112741	95
1	0.750	0.004	36	KAP-TP-36-3/4SD	112742	148
1	1.000	0.004	36	KAP-TP-36-1SD	112743	167

1. 1.5 mil silicone adhesive on both sides of 1 mil thick Kapton film



110794 and 110793 /
1/4 and 1 Inch Kapton® Tape, with Acrylic
and Silicone Adhesive, respectively

Did you know — Accu-Glass Products, Inc. supplies Kapton® tape on plastic spools? Be wary of other suppliers who offer it on cardboard spools — Cardboard fibers contaminate vacuum chambers and work areas.





UHV Cable / Equipment Ties

PEEK Cable/Equipment Ties are ideal for ultrahigh vacuum, high temperature and harsh chemical environments. The uses for these PEEK cable ties are virtually unlimited.

Stainless Steel Cable/Equipment Ties are also ideally suited for ultrahigh vacuum, high temperature and harsh chemical environments. SS ties have a much greater loop tensile strength than PEEK and are constructed with fully rounded edges and smooth surfaces to protect cables and equipment.



111155 / PEEK Ties



111150 / Stainless Steel Ties

Cable Ties — See Types Below

Length	Width	Thick.	Head Height	Head Width	Max. Bundle Dia.	Min Loop Tensile Str.(lbs)	Use Tool	Pkg. Qty.	Model Number	Part Number	Unit Price \$
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PEEK Cable — 250°C UHV / 1x10⁻¹⁰ Torr

3.9	.098	.048	.131	.188	0.87	35	111154	10	CT-PK-3.9	111156	42
5.8	.098	.048	.131	.188	1.38	35	111154	10	CT-PK-5.8	111157	46
7.4	.190	.055	.240	.320	1.88	150	111154	10	CT-PK-7.4	111155	48

Stainless Steel Cable — 538°C UHV / 1x10⁻¹¹ Torr

5	.180	.010	—	—	1.00	200	111153	10	CBL-TIE-SS5	111150	40
7.9	.180	.010	—	—	2.00	200	111153	10	CBL-TIE-SS8	111318	42
10.2	.180	.010	—	—	2.70	200	111153	10	CBL-TIE-SS10	111319	45



111154 / PEEK Installation Tool

Installation Tools

The Accu-Glass Products' line of ergonomic cable tie installation tools has a lightweight design to speed installation and reduce repetitive stress injuries. These installation tools provide a flush tie cut off, **eliminating sharp edges that could cut into adjacent wire bundles.**

Tools — for Tie Installation / Cut-off

Tie Tool	Tie Type	Uses Tie P/N	Pkg. Qty.	Model Number	Part Number	Unit Price \$
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Installation Tools

Use with PEEK cable/equipment tie	PEEK	111155	1	CBL-TOOL-PK	111154	295
Use with Stainless Steel cable/equipment tie	SS	111150	1	CBL-TOOL-SS	111153	925

UHV Tie Mounts and Spacers

Stainless Steel Tie Mounts allow stainless steel or PEEK ties to be inserted from either of two sides, providing a low profile attachment for minimum space requirements.

PEEK Tie Mounts and Spacers provide additional in-vacuum cable and wire management options. Our wire and cable spacers are ideal for electrical applications requiring consistent spacing between leads or bundles, and can be used/arranged in three different configurations as shown below.

Tie Mounts and Spacers — Stainless Steel / PEEK

Type	Length	Width	Thick.	Slot Height	Hole Dia.	Mounting Method	Slot Width	Pkg. Qty.	Model Number	Part Number	Unit Price \$
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Stainless Steel Tie Mounts — 538°C / UHV to 1x10⁻¹¹ Torr

Two-Way	.71	.71	.30	.06	.17	#8	.35	5	CBL-MNT-2WY	111151	52
Folded	.90	.40	.17	.10	.28	1/4"	.39	5	CBL-MNT-FLD	111152	25

PEEK Tie Mounts and Spacers — 250°C / UHV to 1x10⁻¹⁰ Torr

PEEK Mount	.64	.43	.28	.07	.19	#8	.22	5	CBL-MNT-PK	111158	32
PEEK Spacer	.57	.32	.32	.056	-	-	.20	5	CBL-SPACER-PK	111159	38

PEEK Spacer Configurations



Parallel Short Direction



Perpendicular Cross Direction



Parallel Long Direction



111151 and 111152 / Two-Way and Folded Mounts (Cable Tie Not Included)



111158 / PEEK Tie Mount (Cable Tie Not Included)



111159 / PEEK Spacer



Ultrahigh Vacuum — Flexible Shielding

Accu-Glass Products' flexible shielding provides signal protection within a UHV environment. Materials of construction are either stainless steel or silver-plated copper, 36 AWG with 98% coverage. Selection depends on whether the application environment requires magnetic or non-magnetic materials. The stainless steel shielding is made from 304 SS. Two internal diameters are available.

Flexible Shielding — 250°C / UHV to 1×10^{-10} Torr

Nominal I.D.	Resting		Expanded		Length	Model Number	Part Number	Unit Price \$
	I.D.	O.D.	I.D.	O.D.				

Stainless Steel — Magnetic

0.125	0.080	0.110	0.280	0.310	5-feet	FS-1/8SS-5	110037	24
0.125	0.080	0.110	0.280	0.310	15-feet	FS-1/8SS-15	110039	70
0.125	0.080	0.110	0.280	0.310	25-feet	FS-1/8SS-25	110041	115
0.250	0.130	0.160	0.370	0.400	5-feet	FS-1/4SS-5	110038	30
0.250	0.130	0.160	0.370	0.400	15-feet	FS-1/4SS-15	110040	90
0.250	0.130	0.160	0.370	0.400	25-feet	FS-1/4SS-25	110042	150

Silver-Plated Copper — Non-Magnetic

0.125	0.080	0.110	0.280	0.310	15-feet	FS-1/8SPC-15	110200	55
0.125	0.080	0.110	0.280	0.310	25-feet	FS-1/8SPC-25	110201	90
0.250	0.130	0.160	0.370	0.400	15-feet	FS-1/4SPC-15	110205	70
0.250	0.130	0.160	0.370	0.400	25-feet	FS-1/4SPC-25	110206	115

PEEK Braid

PEEK Braid is ideally suited for situations requiring an extra layer of abrasion resistance or electrical insulation. PEEK braid, combined with our vacuum cable and flexible shielding options, offers the user an almost endless variety of cable combinations.

Braid — 250°C / UHV to 1×10^{-10} Torr

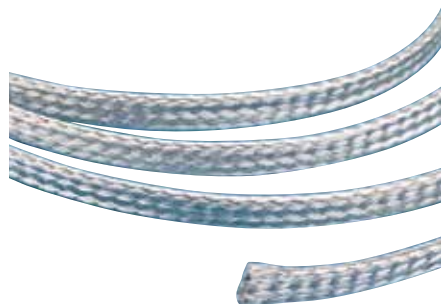
Resting		Expanded		Length	Model Number	Part Number	Unit Price \$
I.D.	O.D.	I.D.	O.D.				

PEEK Braid

0.187	0.200	0.250	0.310	5-foot	PK-BRD-187-5	111167	30
0.250	0.290	0.500	0.540	5-foot	PK-BRD-250-5	111165	35



110037 / Stainless Steel
Flexible Shielding



110205 / Silver Plated Copper
Flexible Shielding



111165 / PEEK Braid 0.250 ID



Cable Accessories

PEEK Monofilament is suitable for many ultrahigh vacuum uses.

PEEK Spiral Cut Cable Wrap is an expandable, abrasion resistant wrap for harnessing and insulating wires, cable and bundles. PEEK cable wrap is extruded to close tolerances and then precision cut.

Teflon® Spiral Cut Cable Wrap is similar to the PEEK wrap, but with different specifications and a lower cost.

Cable Accessories — See Types Below

Length	Service	Wall Thickness	O.D.	Max. Bundle Dia.	Model Number	Part Number	Unit Price \$
PEEK Monofilament — 250°C UHV / 1x10⁻¹⁰ Torr							
100-feet	UHV	—	0.0075	—	PK-MONO-100	111199	20
500-feet	UHV	—	0.0075	—	PK-MONO-500	110956	74
PEEK Spiral Cut Cable Wrap — 250°C UHV / 1x10⁻¹⁰ Torr							
19-inch	UHV	0.010	0.620	2.00	PK-SPCW-620-19	111140	40
39-inch	UHV	0.010	0.620	2.00	PK-SPCW-620-39	112654	75
Teflon® Spiral Cut Cable Wrap — 120°C HV / 1x10⁻⁸ Torr							
19-inch	HV	0.030	0.250	0.75	PTFE-SPCW-250-19	113225	9
39-inch	HV	0.030	0.250	0.75	PTFE-SPCW-250-39	113226	18
19-inch	HV	0.030	0.500	1.50	PTFE-SPCW-500-19	113227	12
39-inch	HV	0.030	0.500	1.50	PTFE-SPCW-500-39	113228	29
19-inch	HV	0.030	0.620	2.00	PTFE-SPCW-620-19	112655	18
39-inch	HV	0.030	0.620	2.00	PTFE-SPCW-620-39	112656	34

Wire Strippers

Wire Strippers are a fast and convenient way to strip Kapton® insulated wire and cable.

Thermal Wire Stripper is available for high volume wire stripping. It melts Kapton® insulation from wire in 2–3 seconds and leaves the conductor clean and free of nicks that are sometimes caused by other methods of wire stripping.

Wire Strippers — Mechanical or Thermal

Quantity Each	Gauge	Model Number	Part Number	Unit Price \$
Mechanical Wire Stripper				
1 Pocket Wire Stripper	26–36 AWG	2636AWG-STR	100191	95
1 Pocket Wire Stripper	20–30 AWG	2030AWG-STR	100192	95
1 Large Wire Stripper Pliers	10–22 AWG	1022AWG-KAP-STR	100194	120
1 Large Wire Stripper Pliers	16–26 AWG	1626AWG-KAP-STR	100195	125
1 Small Wire Stripper Pliers	24–30 AWG	2430AWG-KAP-STRC	100196	295
Thermal Wire Stripper — 117 VAC				
1 Electric Wire Stripper	All wire sizes	THW-STR	112325	425



111199 / PEEK Monofilament



112655, 111140 / Teflon® and PEEK Spiral Cut Cable Wrap



100191 / Pocket Wire Stripper



100195 / Wire Stripper Pliers



112325 / Thermal Wire Stripper



Heat Shrink Tubing

PEEK Shrink Tubing is a high performance thermoplastic material due to its ability to withstand temperatures to 400°C, high pressure and chemical fluids. PEEK shrink tubing provides a “shrink to fit” layer of protection for critical components in ultrahigh vacuum applications.

PTFE Shrink Tubing offers a higher dielectric strength than PEEK and a shrink ratio of almost 2 to 1. It's limited to a temperature of 200°C and vacuum of 1×10^{-8} Torr.

FEP Shrink Tubing offers a higher dielectric strength than PEEK. It's limited to a temperature of 200°C and vacuum of 1×10^{-8} Torr.

Heat Shrink Tubing — See Types Below

Length (inches)	Starting I.D.	Recovered I.D.	Pkg. Qty.	Model Number	Part Number	Unit Price \$
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PEEK — Shrink Temperature 340 – 385°C / 1×10^{-10} Torr, 3,570 V / mil

6	0.093	0.066	1	PK-SHRKT-093	111130	24
6	0.125	0.104	1	PK-SHRKT-125	111880	24
6	0.188	0.157	1	PK-SHRKT-188	111881	24
6	0.258	0.190	1	PK-SHRKT-258	111882	26

PTFE — Shrink Temperature 210°C / 1×10^{-8} Torr

6	0.050	0.027	6	PTFE-SHRKT-050	111317	18
6	0.055	0.032	6	PTFE-SHRKT-055	111316	18

FEP — Shrink Temperature 210°C / 1×10^{-8} Torr

6	0.094	0.056	6	FEP-SHRKT-094	111010	40
6	0.125	0.075	6	FEP-SHRKT-125	111011	40
6	0.188	0.115	6	FEP-SHRKT-188	111012	40
6	0.250	0.150	6	FEP-SHRKT-250	111013	40
6	0.375	0.225	3	FEP-SHRKT-375	111014	35
6	0.500	0.300	3	FEP-SHRKT-500	111018	40
6	0.750	0.450	3	FEP-SHRKT-750	111019	74
6	1.000	0.600	2	FEP-SHRKT-1000	111030	85
6	1.500	0.900	2	FEP-SHRKT-1500	111031	100
6	2.000	1.200	2	FEP-SHRKT-2000	111032	110

Heat Shrink Tools

General Purpose Heat Gun has a comfort-grip handle for hand use plus a nonslip rubber-backed base plate for bench and tabletop use. *Economy Heat Gun* is designed for easy handheld operation.

Heat Guns

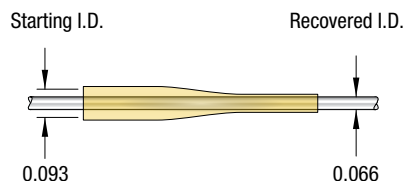
Tool	Heat Range	Pkg. Qty.	Model Number	Part Number	Unit Price \$
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General Purpose

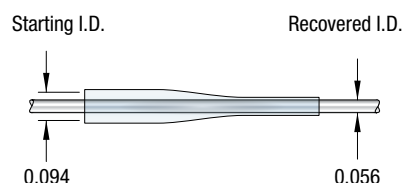
General Purpose Heat Gun	148°C to 260°C	1 each	HTG-260	111600	165
Replacement Heating Element		1 each	HTG-260-RHE	111601	40
Shrink-Tube Nozzle	1/8" to 3/4" O.D.	1 each	HTG-260-N3/4	111602	30
Shrink-Tube Nozzle	3/4" to 2" O.D.	1 each	HTG-260-N2	111603	38

Economy

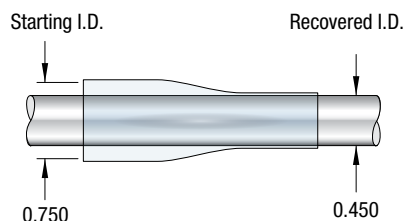
Economy Heat Gun	390°C and 530°C	1 each	HTG-530	111604	85
Heat Shrink Nozzle Kit		1 each	HTG-530-N	111605	25



111130 / PEEK Shrink Tubing
0.093 I.D.



111010 / FEP Shrink Tubing
0.094 I.D.



111019 / FEP Shrink Tubing
0.750 I.D.



111600 / Heat Shrink Gun



111604 / Heat Shrink Gun



Identification Tags and Marking Tools

Accu-Glass stainless steel or PEEK tags are a practical and durable means of marking or identifying in-vacuum wires and/or cable bundles. Made from 0.024 inch thick 304 stainless steel, or .060 inch thick PEEK, these blank tags can be custom marked using our number or letter stamping kits.

Alpha characters 'A' through 'Z' plus the '&' ampersand symbol, and numbers '1' through '8' (6 doubles as 9) metal stamps are made from 95% hardened carbon tool steel and are sold as individual kits. Both are a sharp-face Gothic font with a 0.25 inch character height.

Identification Tags — Blanks / Air and UHV to 1×10^{-10} Torr

Qty. / Package	Size Square	Thickness	Tie Hole / Slot	Model Number	Part Number	Unit Price \$
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Stainless Steel Tags, 304

2	1.50 x 1.50	0.024	.187	SSiB-1.50	113230	9
1	2.00 x 2.00	0.024	.187	SSiB-2.00	113231	10

PEEK Tags — 250°C / UHV to 1×10^{-10} Torr

1	1.00 x 0.80	0.060 Nominal	.375 x .064	PK-TAG-0.063	113235	10
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Marking Tools — Alpha / Numeric Stamping Kits

Stamp Type	Nominal Size	Character Height	Number Stamps	Model Number	Part Number	Unit Price \$
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Stamping Kits — Alpha or Numeric

Alpha	1/4	0.25	27 ¹	SK-A	113232	150
Numeric	1/4	0.25	9 ²	SK-N	113233	60

1. Alpha kit includes letters A through Z plus '&' symbol. 2. Numeric kit includes numbers 0 through 8, and '6' doubles as '9'

Ultrahigh Vacuum Color-Coded Identification Beads

Identification Beads are vacuum compatible colored glass-ceramic beads used to identify unmarked Kapton® and FEP insulated vacuum wiring. Bead kit consists of six packs of 50 each green, grey, blue, white, brown and black beads (300 beads total).

Color Coded Identification Beads — 250°C / UHV to 1×10^{-10} Torr

Wire Type	Inside Diameter	Outside Diameter	Bead Length	Maximum Wire Diameter	Model Number	Part Number	Unit Price \$
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Identification Beads

All	0.04	0.080	0.09	0.040	CiB-1	100780	42
All	0.08	0.130	0.10	0.080	CiB-2	100781	46
All	0.12	0.200	0.10	0.120	CiB-3	112596	58
All	0.20	0.295	0.10	0.200	CiB-4	112597	70



113230 and 113231 / 1.50 and 2.00 Inch,
Blank Metal Identification Tags



113235 / PEEK
Blank Identification Tag



113232 / Alpha 0.25 inch
Character Marking Stamps



100780 / Color Coded Identification Beads