

Section Contents



Product Highlights

Kapton® and Teflon® — Insulated wires for HV and UHV vacuum applications.

Specialty and Thermocouple wire — T/C bare wire in matched pairs.

Wiring Accessories — complete assortment of pins, tools, components, etc.

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Kapton® Insulated Wire

UHV Bulk Cable and Wire Products

All materials are UHV compatible

Thirty Three different
Kapton® wire
configurations

UHV Ribbon cable provides
high-density wiring for tight spaces

Kapton Insulated Wire

Accu-Glass UHV cable and wire are insulated using a high mechanical strength Kapton® Type-F film that is applied and heat treated to minimize trapped gases. Our in-vacuum wiring has been optimized for high and ultrahigh vacuum environments to 1×10^{-10} Torr and are bakeable to 250°C.

Most conductors and braided coaxial cable shielding are made from silver plated copper wire, unless stated otherwise.

Multi-conductor cables are available in either flat ribbon or circular configurations that are bundled together with a PEEK (polyether ether ketone) monofilament weave. Since there is no wire marking or coding, glass identification beads are available in six easy to distinguish colors. See page 125 for glass color coded identification beads.

Did you know — Accu-Glass Products, Inc. is the only supplier to offer and ship Kapton® insulated wire on plastic spools instead of loose in a bag?



Features

- UHV compatible construction
- High temperature rated to 250°C
- Kapton® Type-F Insulating film
- Silver plated Copper conductors
- Solid, stranded and coaxial wire types
- Type-K thermocouple wire
- Custom solutions on request

Specifications

Electrical¹

Voltage	See Tables
Current, Maximum @ 20°C	See Tables

Material

Conductor	Ag Plated Cu
Insulation	Kapton® Type-F Film

Kapton® Properties²

Dielectric Constant	2.9
Dielectric Strength (V/mm)	80,000
Dissipation Factor, 1MHz	0.002
Initial Tear (kg/mm)	13.4
Elongation	150%
Moisture Absorption (at 50% RH)	0.4%

Vacuum Range²

UHV, Ultrahigh Vacuum	1×10^{-10} Torr
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Temperature Range³

Wire Insulation	-75° to 250°C
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Notes

1. Electrical ratings are maximum test values. Also, see 'glow discharge' information on page 270
2. Kapton and PEEK are susceptible to water absorption with prolonged exposure to atmospheric environments, especially in regions with high relative humidity. To mitigate water absorption and improve vacuum pump-down cycles, Kapton insulated wire and cable assemblies can be preconditioned for UHV service by baking (in a vacuum furnace) to 100-150°C before installing them inside a UHV system. Conditioned wire that is not immediately used can be stored in sealed containers. Optimally stored in a container that has been backfilled with a dry inert gas, but not necessary.
3. Overall ratings must be adjusted to that of the lowest rated component.

§ Unless specified otherwise, dimensional units in all sections of this catalog are expressed in inches.


Solid Wire — Radiation Resistance to 10^9 rad / UHV to 1×10^{-10} Torr

Wire		Insulation Diameter	Resistance Ω/km^1	Current Amp	Bend Radius	Part Number
AWG	Length					

Instrumentation Wire — 450VAC, 1.5kVDC / 250°C / Ag plated Cu

34	30'	0.0055	0.0065	—	0.25	0.10	110824
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Instrumentation Wire — 600VAC, 2kVDC / 250°C / Ag plated Cu

30	30'	0.010	0.020	377	1.5	0.15	100670
28	30'	0.013	0.022	229	3	0.15	112918
26	30'	0.016	0.025	146	3.5	0.16	112366
24	30'	0.020	0.030	88.3	4	0.16	112615
22	30'	0.024	0.034	64.3	5.5	0.16	100680
20	30'	0.032	0.041	43.6	11	0.16	100675
18	15'	0.041	0.051	21.9	14	0.16	112697

Cryogenic Wire — 1kVAC, 3kVDC / Liquid Nitrogen Service to -273°C / Stainless Steel Conductor

24	15'	0.020	0.062	3500	1	0.38	112746
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1. Maximum @ 20°C

Stranded Wire² — 600VAC, 2kVDC / 250°C / UHV to 1×10^{-10} Torr / Ag plated Cu

Wire		Strands x Dia.	Insulation Diameter	Resistance Ω/km^1	Current Amps	Bend Radius	Part Number
AWG	Length						

7 Strands

32	30'	7x.0032	0.0195	558	1.5	0.065	113094
30	30'	7x0.004	0.023	353	2	0.07	112739
28	30'	7x0.005	0.020	244	2	0.13	100690
26	30'	7x0.006	0.025	159	3	0.13	100685
24	30'	7x0.008	0.030	88.3	4	0.28	100693

19 Strands

22	30'	19x0.006	0.035	58.6	6	0.25	100712
20	30'	19x0.007	0.043	32.5	8	0.25	100713
18	15'	19x0.009	0.051	20.6	11	0.35	100714
16	15'	19x0.010	0.060	14.3	14	0.35	100696
14	15'	19x0.011	0.065	11.4	16	0.48	100715
12	15'	19x0.015	0.085	6.2	25	0.58	100700

1. Maximum @ 20°C 2. Flexible shielding options on page 122

High Voltage 7 Strand Wire — 250°C / UHV or AIR to 1×10^{-10} Torr / Ag plated Cu

Wire		Strands x Dia.	Insulation Diameter	Resistance Ω/km^1	Current Amps	Bend Radius	Part Number
AWG	Length						

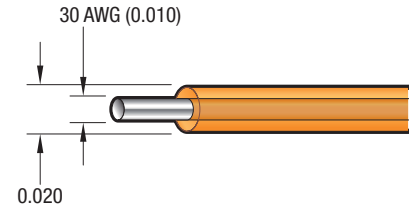
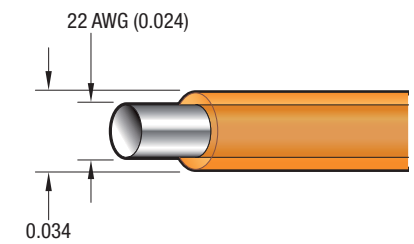
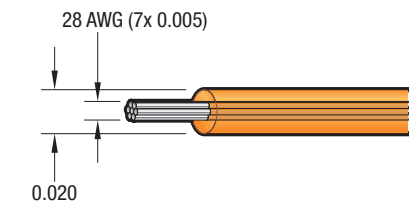
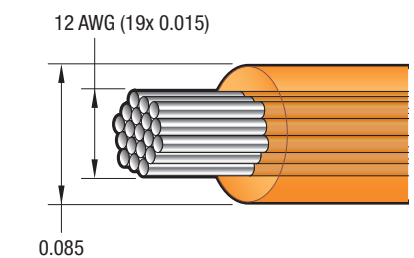
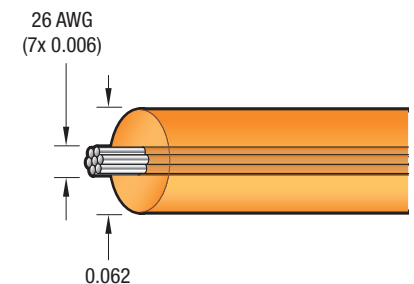
3kVAC, 10kVDC

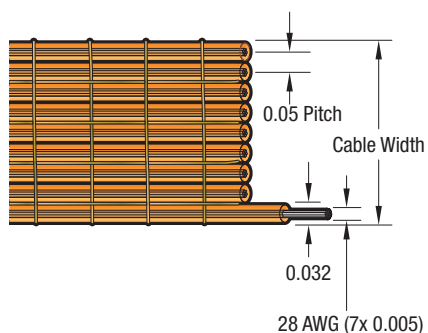
26	15'	7x0.006	0.062	159	3	0.55	100726
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10kVAC, 30kVDC²

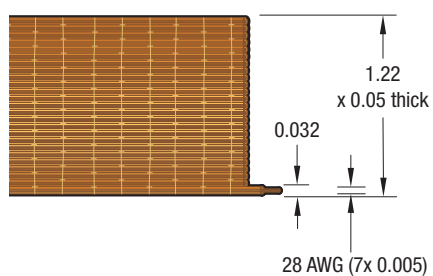
20	15'	7x0.013	0.090	32.18	11	0.66	112716
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1. Maximum @ 20°C 2. 30 kVDC Silicone insulated cable on page 105

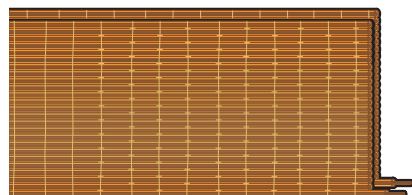

100670 / 30 AWG Solid Wire

100680 / 22 AWG Solid Wire

100690 / 28 AWG Stranded Wire

100700 / 12 AWG Stranded Wire

100726 / 26 AWG High Voltage Wire



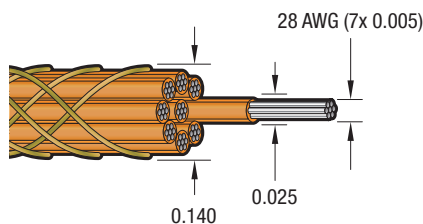
100740 / 28 AWG 9-Conductor Ribbon Cable



100760 / 28 AWG 25-Conductor Ribbon Cable



111400 / 28 AWG 50-Conductor Ribbon Cable



100730 / 28 AWG 9-Conductor Round Cable

Multi-conductor Ribbon Cable

Multi-conductor Ribbon Cable is 28 AWG Kapton® insulation wires with a PEEK weave. Nominal pitch is 0.050 inch.

Ribbon Cable — 600VAC, 2kVDC / 2A / 244Ω/km at 20°C max. / 250°C / UHV to 1x10⁻¹⁰ Torr

Number Wires	Cable Length	Cable Width	Cable Thickness	Insulation Diameter	Wire Diameter	Min. Bend Radius	Model Number	Part Number
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28 AWG — Stranded

9	19	0.41	0.05	0.032	7x 0.005	0.53	KAP-R9-19	100740
9	39	0.41	0.05	0.032	7x 0.005	0.53	KAP-R9-39	100741
9	96	0.41	0.05	0.032	7x 0.005	0.53	KAP-R9-96	100742
15	19	0.74	0.05	0.032	7x 0.005	0.53	KAP-R15-19	100750
15	39	0.74	0.05	0.032	7x 0.005	0.53	KAP-R15-39	100751
15	96	0.74	0.05	0.032	7x 0.005	0.53	KAP-R15-96	100752
19	19	0.93	0.05	0.032	7x 0.005	0.53	KAP-R19-19	104040
19	39	0.93	0.05	0.032	7x 0.005	0.53	KAP-R19-39	104041
19	96	0.93	0.05	0.032	7x 0.005	0.53	KAP-R19-96	104042
25	19	1.22	0.05	0.032	7x 0.005	0.53	KAP-R25-19	100760
25	39	1.22	0.05	0.032	7x 0.005	0.53	KAP-R25-39	100761
25	96	1.22	0.05	0.032	7x 0.005	0.53	KAP-R25-96	100762
50*	19	1.22	0.10	0.032	7x 0.005	0.88	KAP-R50-19	111400
50*	39	1.22	0.10	0.032	7x 0.005	0.88	KAP-R50-39	111401
50*	96	1.22	0.10	0.032	7x 0.005	0.88	KAP-R50-96	111402

* 50 conductor ribbon cable uses 2x 25 conductor ribbon cables.

Multi-conductor Round Cable

Multi-conductor Round Cable is nine 28 AWG Kapton® insulation wires with a PEEK weave in a round design.

Round Cable — 600VAC, 2kVDC / 2A / 244Ω/km at 20°C max. / 250°C / UHV to 1x10⁻¹⁰ Torr

Number Wires	Cable Length	Jacket Diameter	Insulation Diameter	Wire Diameter	Min. Bend Radius	Model Number	Part Number
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28 AWG — Stranded

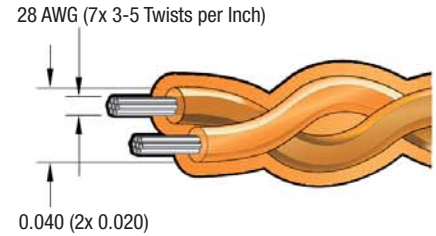
9	19	0.140	0.025	7x 0.005	0.35	KAP-C9-19	100730
9	39	0.140	0.025	7x 0.005	0.35	KAP-C9-39	100731
9	96	0.140	0.025	7x 0.005	0.35	KAP-C9-96	100732



Twisted Pair Cable — Multi-Strand / 600VAC, 2kVDC / 250°C / UHV to 1×10^{-10} Torr

Wire				Current Rating Per Wire	Min. Bend Radius	Model Number	Part Number
Wires	AWG	Length	Overall OD				
2	28	5-foot	0.04	2A	0.13	KAP-28AWG-TWST-5	112676
2	26	5-foot	0.05	3A	0.13	KAP-26AWG-TWST-5	112727
2	24	5-foot	0.06	4A	0.25	KAP-24AWG-TWST-5	112677
2	22	5-foot	0.07	6A	0.25	KAP-22AWG-TWST-5	112678
2	20	5-foot	0.09	11A	0.25	KAP-20AWG-TWST-5	113240
2	18	5-foot	0.10	11A	0.35	KAP-18AWG-TWST-5	112679

Silver-plated copper and stainless steel shielding options can be found on page 122. Multiple quantities will be shipped in one continuous length. Lengths over 10-foot long may delay shipment.



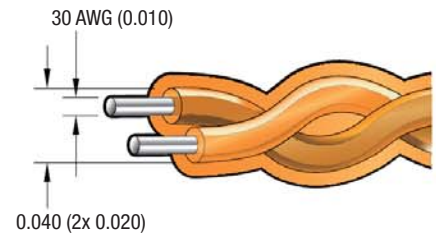
112676 / 28 AWG Twisted Pair

Thermocouple Wire, Type-K

Thermocouple Wire pairs consist of non-welded positive Chromel® and negative Alumel® legs. Kapton® is applied with a resin process to eliminate air pockets normally associated with Kapton® tape insulated thermocouple wire from other suppliers.

Twisted Pair Cable — Solid Core / 250°C / UHV to 1×10^{-10} Torr

Wire				Bend Radius	Part Number
Type	AWG	Length	Diameter		
K	30	19"	2x 0.010	0.28	100770
K	30	39"	2x 0.010	0.28	100771
K	30	96"	2x 0.010	0.28	100772
K	30	30'	2x 0.010	0.28	100773



100770 / Type-K Thermocouple Pair

Connector to User-Specified End Options

Fused thermocouple junction wire end append to Part Number and Price: **.40**

See pages 268 for Thermocouple Wire Reference Data, ANSI Type K.

Did you know — Accu-Glass Products, Inc. is the only supplier to offer and ship Kapton® insulated wire on plastic spools instead of loose in a bag?





Twisted Pair Cable, Shielded

Twisted Pair – Shielded Cables 2-Conductor, 1 Twisted Pair, 8-Conductor, 4 Twisted Pair and 24-Conductor, 12 Twisted Pair are ideally suited for use with our 9 and 25 pin Subminiature-D connectors. The shield of each of these wires can be “PINNED” and used as a separate conductor or grounding path.

Twisted Pair Cable, Shielded — Stranded / 600VAC, 2kVDC / 250°C / UHV to 1×10^{-10} Torr

Wire AWG	Length	Strands x Dia.	Shield Dia.	Resistance ¹ Ω/km	Current ² Amps	Min. Bend Radius	Model Number	Part Number
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2-Conductor — 1 Twisted Pair

28	15'	2x (7x0.005)	0.060	244	2	0.15	TYP3-2TW-15	100692
12	5'	2x (19x0.015)	0.20	6.2	25	0.50	TYP4-2TW-5	112680

4-Conductor — 2 Twisted Pairs

28	19"	4x (7x0.005)	0.100	244	2	0.17	TYP3-4TW-19	112734
28	39"	4x (7x0.005)	0.100	244	2	0.17	TYP3-4TW-39	112735
28	96"	4x (7x0.005)	0.100	244	2	0.17	TYP3-4TW-96	112736

8-Conductor — 4 Twisted Pairs

28	19"	8x (7x0.005)	0.110	244	2	0.19	TYP3-8TW-19	112140
28	39"	8x (7x0.005)	0.110	244	2	0.19	TYP3-8TW-39	112141
28	96"	8x (7x0.005)	0.110	244	2	0.19	TYP3-8TW-96	112142

12-Conductor — 6 Twisted Pairs

28	19"	12x (7x0.005)	0.150	244	2	0.25	TYP3-6TW-19	112738
28	39"	12x (7x0.005)	0.150	244	2	0.25	TYP3-6TW-39	112747
28	96"	12x (7x0.005)	0.150	244	2	0.25	TYP3-6TW-96	112748

24-Conductor — 12 Twisted Pairs

28	19"	24x (7x0.005)	0.184	244	2	0.43	TYP3-24TW-19	112143
28	39"	24x (7x0.005)	0.184	244	2	0.43	TYP3-24TW-39	112144
28	96"	24x (7x0.005)	0.184	244	2	0.43	TYP3-24TW-96	112145

1. Maximum @ 20°C 2. Current rating is per lead

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

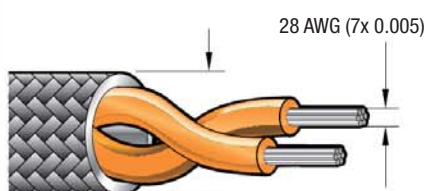
Cable Length	Outer Jacket Dia.	Outer Shield Dia.	Inner Jacket Dia.	Inner Shield Dia.	Insulation Dia.	Current Amps	Min. Bend Radius	Model Number	Part Number
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28 AWG — Solid Core / 1kVAC, 3kVDC / Kapton Jacket

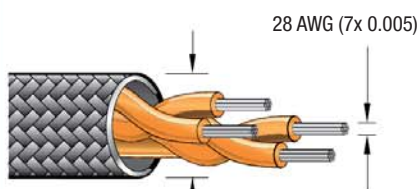
15'	0.095	0.085	0.073	0.064	0.052	2.5	0.67	KAP28-TRIAX-15	112745
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26 AWG — Stranded Core / 600VAC, 2kVDC / PEEK Jacket, Braided

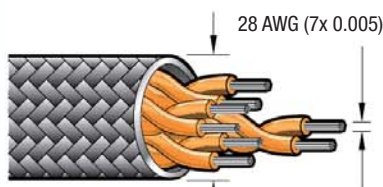
19"	0.170	0.125	0.090	0.079	0.062	3	0.60	KAP26-TRIAXp-19	112674
39"	0.170	0.125	0.090	0.079	0.062	3	0.60	KAP26-TRIAXp-39	112675



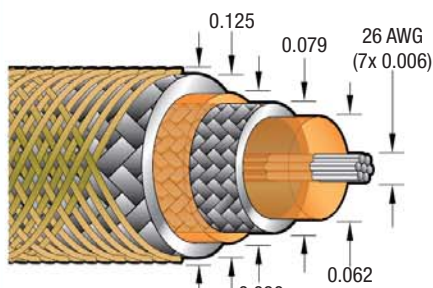
100692 / 28 AWG Shielded Cable



112734 / 4 Twisted Pair Shielded Cable



112140 / 28 AWG Shielded Cable



112674 / Triaxial Cable



Shielded Cable¹ — 600VAC, 2kVDC / 250°C / UHV to 1x10⁻¹⁰ Torr

Cable Length	Jacket Diameter	Shield Diameter	Internal Insulation Diameter	Wire Diameter	Current Rating	Bend Radius	Part Number
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30 AWG — Solid / 377 Ω/km at 20°C max. / 180 pF/m

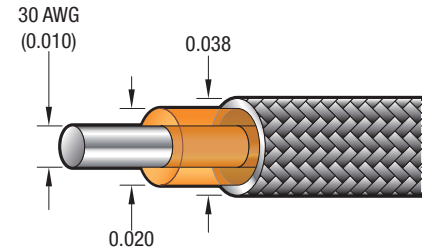
30'	None ²	0.038	0.020	0.010	1.5A	0.23	100705
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24 AWG — Stranded / 88.3 Ω/km at 20°C max. / 300 pF/m

15'	0.050	0.046	0.032	7x 0.008	4.5A	0.50	100710
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1. Not manufactured or tested as a coaxial cable. Recommended only for use where shielding of center conductor is required.

2. Does not have Kapton® insulation jacket.



100705 / 30 AWG Coaxial Cable

50 Ohm Coaxial Cable — Stranded / 250°C / UHV to 1x10⁻¹⁰ Torr

Cable Length	Jacket Diameter	Shield Diameter	Insulation Diameter	Strands x Dia.	Current Amps	Bend Radius	Part Number
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32 AWG — 600VAC, 2kVDC / 558 Ω/km at 20°C max. / 137 pF/m

15'	0.050	0.041	0.029	7x 0.0015	0.5	0.20	112129
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30 AWG — 600VAC, 2kVDC / 353 Ω/km at 20°C max. / 102 pF/m

15'	0.067	0.058	0.047	7x 0.004	1.5	0.23	112130
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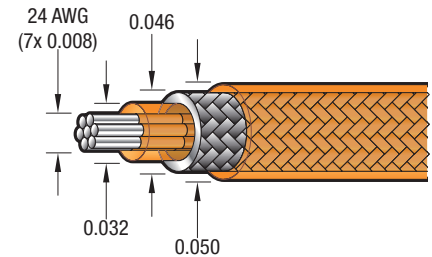
26 AWG — 3kVAC, 10kVDC / 159 Ω/km at 20°C max. / 95 pF/m

15'	0.090	0.079	0.062	7x 0.006	3	0.53	100720
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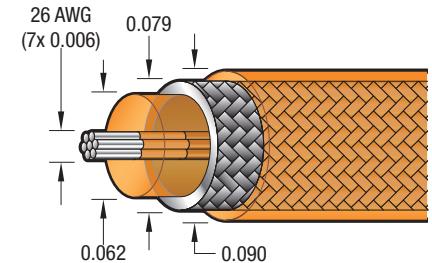
20 AWG¹ — 10kVAC, 30kVDC / 32.18 Ω/km at 20°C max.

15'	0.125	0.110	0.090	7x 0.0125	9	1.25	112717
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1. No connectors offered by Accu-Glass Products Inc. fit this cable.



100710 / 24 AWG Coaxial Cable



100720 / 26 AWG 50-Ohm Coaxial Cable

50 Ohm Coaxial Cable Specifications — for Part No. 112129, 112130, 100720 and 112717

Near Frequency MHz	32 AWG 112129	30 AWG 112130	26 AWG 100720	20 AWG 112717
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Attenuation — db¹

10	-12.79	-11.16	-8.93	—
100	-41.95	-39.42	-31.29	-26.0
200	-76.95	-59.54	-46.91	—
400	-53.05	-96.15	-62.02	—

Impedance — Ohms¹

200	65.40	55.07	48.31	—
400	60.58	55	47.25	—
Maximum	75.53	64.28	52.82	—
Minimum	55.65	52.52	46.61	—
Mean	62.34	55.74	48.48	37

Mutual Capacitance — nF¹

	8.31	10.24	11.78	14.5
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1. All values are per 100 meters of cable.



All materials are HV compatible

HV Teflon® Insulated Wire

High Vacuum Bulk Cable and Wire Products

Twenty different wire configurations

HV Ribbon cable provides high-density wiring for tight spaces

HV Teflon® Insulated Wire

Accu-Glass Products in-vacuum wiring is designed for high vacuum environments to 1×10^{-8} Torr and are bakeable to 200°C. All conductors are constructed with silver plated copper wire.

Insulation is a non-shrinking FEP extruded Teflon® that is applied and heat treated to minimize trapped gases.

Multi-conductor cables are available in flat ribbon. For non-coded wires, Accu-Glass Products offers colored glass identification beads in six easy to distinguish colors, shown on page 125.

Did you know — Accu-Glass Products, Inc. is the only supplier to offer and ship Kapton® insulated wire on plastic spools instead of loose in a bag?

Features

- HV compatible construction
- High temperature rated to 200°C
- Fluoropolymer Extruded Teflon® insulating film
- Silver Plated Copper Conductors
- Single and ribbon wire/cable types
- Custom solutions on request

Specifications

Electrical¹

Voltage	See Tables
Current, Maximum @ 20°C	See Tables

Material

Conductor	Ag plated Cu
Insulation	FEP Extruded Teflon® and TFE Teflon®

Teflon® Properties

Dielectric Constant	2.1
Dielectric Strength (V/.001 Inch)	600
Dissipation Factor	0.0003 - 0.0007
Tensile Strength (PSI)	3,000
Elongation	300%
Moisture Absorption (@50% RH)	0.1%
Radiation Resistance	5×10^5 Rads

Vacuum Range

HV, Ultrahigh Vacuum	1×10^{-8} Torr
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Temperature Range²

Wire	-65° to 200°C
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Notes

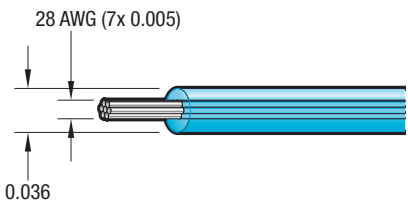
1. Electrical ratings are maximum test values. Also, see 'glow discharge' information on page 270
2. Overall assembly ratings must be adjusted to that of the lowest rated component.

§ Unless specified otherwise, dimensional units in all sections of this catalog are expressed in inches.

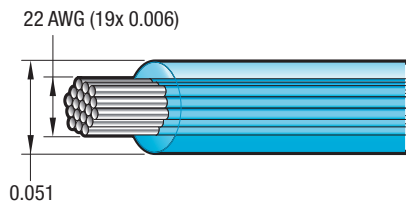


Stranded Wire — Stranded / 600VAC, 2kVDC / 200°C / UHV to 1×10^{-8} Torr

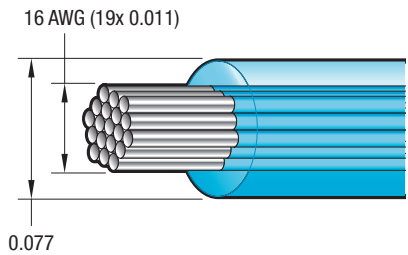
Wire		No. of Strands x Dia.	Insulation Diameter	Current Amps	Min. Bend Radius	Part Number
AWG	Length					
7 Strands						
30	30'	7x 0.004	0.028	1.5	0.10	112015
28	30'	7x 0.005	0.036	2	0.15	110330
26	30'	7x 0.006	0.040	3	0.15	110335
24	30'	7x 0.007	0.044	4	0.18	110340
19 Strands						
22	30'	19x 0.006	0.051	6	0.20	110345
20	30'	19x 0.007	0.059	8	0.28	110350
18	15'	19x 0.010	0.070	11	0.33	110355
16	15'	19x 0.011	0.077	14	0.33	110360



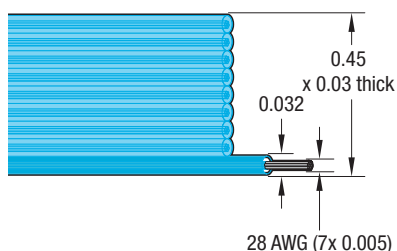
110330 / 28 AWG Stranded Wire



110345 / 22 AWG Stranded Wire



110360 / 16 AWG Stranded Wire



110010 / 28 AWG 9-Conductor Ribbon Cable



111403 / 28 AWG 50-Conductor Ribbon Cable



112705 / 28 AWG Color Coded FEP Ribbon Cable

Multi-conductor Ribbon Cable — Blue

Multi-conductor Ribbon Cable with a FEP extruded Teflon® jacket. Pitch of 0.050 with a blue polarity stripe.

Ribbon Cable — 600VAC, 2kVDC / 2A / 200°C / HV to 1x10⁻⁸ Torr

Number Wires	Cable Length	Cable Width	Cable Thickness	Insulation Diameter	Wire Diameter	Min. Bend Radius	Model Number	Part Number
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28 AWG — Stranded Silver Plated Copper

9	19	0.45	0.03	0.03	7x 0.005	0.45	HVB-R9-19	110010
9	39	0.45	0.03	0.03	7x 0.005	0.45	HVB-R9-39	110011
9	96	0.45	0.03	0.03	7x 0.005	0.45	HVB-R9-96	110012
15	19	0.75	0.03	0.03	7x 0.005	0.45	HVB-R15-19	110013
15	39	0.75	0.03	0.03	7x 0.005	0.45	HVB-R15-39	110014
15	96	0.75	0.03	0.03	7x 0.005	0.45	HVB-R15-96	110015
25	19	1.25	0.03	0.03	7x 0.005	0.45	HVB-R25-19	110016
25	39	1.25	0.03	0.03	7x 0.005	0.45	HVB-R25-39	110017
25	96	1.25	0.03	0.03	7x 0.005	0.45	HVB-R25-96	110018
50*	19	1.25	0.06	0.03	7x 0.005	0.75	HVB-R50-19	111403
50*	39	1.25	0.06	0.03	7x 0.005	0.75	HVB-R50-39	111404
50*	96	1.25	0.06	0.03	7x 0.005	0.75	HVB-R50-96	111405

* 50 conductor ribbon cable uses 2x 25 conductor ribbon cables.

Multi-conductor Ribbon Cable — Rainbow

Multi-conductor Ribbon Cable with a FEP extruded Teflon® jacket. Pitch of 0.050.

Ribbon Cable, FEP — 600 VAC, 2k VDC / 2A / 200°C / HV to 1x10⁻⁸ Torr

Number Wires	Cable Length	Cable Width	Cable Thickness	Insulation Diameter	Wire Diameter	Min. Bend Radius	Part Number
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28 AWG — Stranded Silver Plated Copper

9	19	0.46	0.03	0.03	7x 0.005	0.24	112705
9	39	0.46	0.03	0.03	7x 0.005	0.24	112706
9	96	0.46	0.03	0.03	7x 0.005	0.24	112707
15	19	0.75	0.03	0.03	7x 0.005	0.24	112761
15	39	0.75	0.03	0.03	7x 0.005	0.24	112762
15	96	0.75	0.03	0.03	7x 0.005	0.24	112763
25	19	1.25	0.03	0.03	7x 0.005	0.24	112764
25	39	1.25	0.03	0.03	7x 0.005	0.24	112765
25	96	1.25	0.03	0.03	7x 0.005	0.24	112766
50*	19	1.25	0.06	0.03	7x 0.005	0.48	112767
50*	39	1.25	0.06	0.03	7x 0.005	0.48	112768
50*	96	1.25	0.06	0.03	7x 0.005	0.48	112769

* 50 conductor ribbon cable uses 2x 25 conductor ribbon cables.



Multi-conductor Ribbon Cable — Clear / Silver

Multi-conductor Ribbon Cable with a FEP extruded Teflon® jacket. Pitch of 0.050.

Ribbon Cable, FEP — 600 VAC, 2k VDC / 2A / 200°C / HV to 1x10⁻⁸ Torr

Number Wires	Cable Length	Cable Width	Cable Thickness	Insulation Diameter	Wire Diameter	Min. Bend Radius	Part Number
24 AWG — Stranded Silver Plated Copper							
9	19	0.46	0.04	0.04	19x 0.0045	0.32	112749
9	39	0.46	0.04	0.04	19x 0.0045	0.32	112750
9	96	0.46	0.04	0.04	19x 0.0045	0.32	112751
15	19	0.75	0.04	0.04	19x 0.0045	0.32	112752
15	39	0.75	0.04	0.04	19x 0.0045	0.32	112753
15	96	0.75	0.04	0.04	19x 0.0045	0.32	112754
25	19	1.25	0.04	0.04	19x 0.0045	0.32	112755
25	39	1.25	0.04	0.04	19x 0.0045	0.32	112756
25	96	1.25	0.04	0.04	19x 0.0045	0.32	112757
50*	19	1.25	0.08	0.04	19x 0.0045	0.64	112758
50*	39	1.25	0.08	0.04	19x 0.0045	0.64	112759
50*	96	1.25	0.08	0.04	19x 0.0045	0.64	112760

* 50 conductor ribbon cable uses 2x 25 conductor ribbon cables.

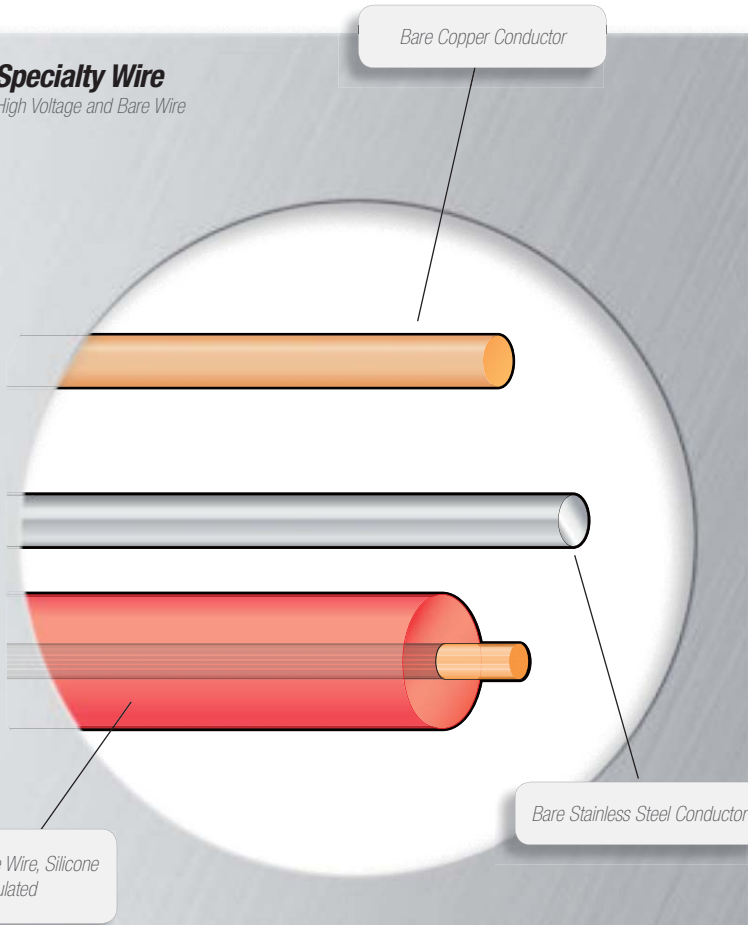


112749 / 24 AWG FEP Ribbon Cable



Specialty Wire

High Voltage and Bare Wire



Specialty Wire

Accu-Glass Products specialty wiring is designed for high and ultrahigh vacuum environments to 1×10^{-10} Torr and are bakeable to 250°C. As noted in the individual product descriptions, some products exceed the 250°C temperature or may exhibit trace amounts of outgassing at 1×10^{-10} Torr at elevated temperatures.

Silicone insulated wire offers high dielectric strength and flexibility. However, in some applications, outgassing may limit its use.

In-vacuum Oxygen Free Electronic grade (OFE) bare copper conductor is ideally suited for ultrahigh vacuum environments to 1×10^{-10} Torr and can operate to 400°C. Ceramic insulating beads are offered on page 115 for insulation of the bare copper conductor if desired. This combination is suited for situations in which Kapton®, Teflon® and Silicone insulated wires are not suitable due to temperature, vacuum level or other limiting factors.

Stainless steel bare conductor is also ideally suited for ultrahigh vacuum environments to 1×10^{-10} Torr and can operate at 250°C. Ceramic insulating beads are offered on page 115 for insulation of the bare stainless steel conductor if desired.

Features

- HV and UHV compatible construction
- Bare Metal Conductor rated up to 400°C
- Silicone or non-insulated
- Copper and Stainless Steel conductors
- Multi-stranded or solid core

Specifications

Electrical^{1,2}

Voltage / Current See Tables

Vacuum Range

HV, High Vacuum 1×10^{-8} Torr
UHV, Ultrahigh Vacuum 1×10^{-10} Torr

Temperature Range²

Bare Metal Conductors 400°C
Silicone Insulated 250°C

See each product table for complete specifications.

Notes

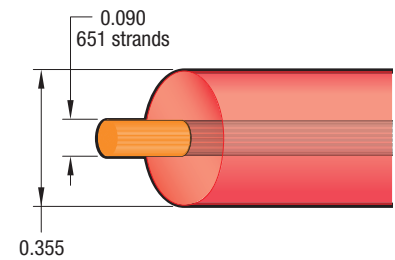
1. Electrical ratings are maximum test values. Also, see 'glow discharge' information on page 270
 2. Overall assembly ratings must be adjusted to that of its lowest rated component.
- § Unless specified otherwise, dimensional units in all sections of this catalog are expressed in inches.

**High Voltage Cable, Silicone Insulated**

High Voltage Wire is halogen-free silicone insulated with a dielectric strength of 30kVDC. This high voltage wire is suitable for most HV applications. See page 95 for 10kVDC Kapton® insulated wire.

High Voltage Cable — Stranded / 30kVDC / 250 to 300°C / HV to 1×10^{-8} Torr

Length Feet	Insulation Diameter	Insulation Thickness	Strands x Dia.	Voltage kVDC	Current Amp	Model Number	Part Number
15'	0.355	0.130	651x0.007	30	20	SIL-TYP26-15	111660

High Voltage Cable — 12 AWG

111660 / Silicone Insulated
High Voltage Wire

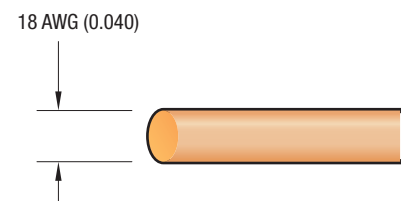
Bare Metal Conductors

Copper Conductor is an ultra-pure electronic grade copper. Suitable for ultrahigh vacuum and high temperature use. *Stainless Steel Conductor* is type 303 stainless steel. It is both ultrahigh and high vacuum compatible. Multiple quantities will be sold in one continuous length.

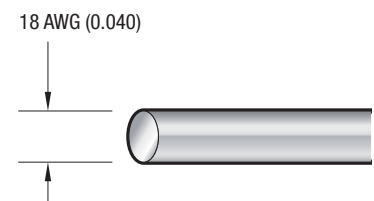
See pages 115, 207 and 208 for ceramic insulator beads, larger diameter copper, and stainless steel rod material respectively.

Bare Metal Conductors — 400°C / UHV to 1×10^{-10} Torr

Size AWG	Conductor Diameter	Length / Quantity Feet	Model Number	Part Number
Copper — Solid OFE Electronic Grade Bare Conductor				
34	0.006	1	CU-BC-006-1	112080
32	0.008	1	CU-BC-008-1	112081
30	0.010	1	CU-BC-010-1	112082
28	0.013	1	CU-BC-013-1	112083
26	0.016	1	CU-BC-016-1	112084
24	0.020	1	CU-BC-020-1	112085
22	0.025	1	CU-BC-025-1	112086
20	0.032	1	CU-BC-032-1	111320
18	0.040	1	CU-BC-040-1	112088
16	0.050	1	CU-BC-050-1	111321
14	0.064	1	CU-BC-064-1	112090
—	0.094	1	CU-BC-094-1	111322
Stainless Steel — Solid 303 Grade Bare Conductor				
26	0.015	1	SS-BC-015-1	112095
24	0.020	1	SS-BC-020-1	112096
20	0.032	1	SS-BC-032-1	112097
18	0.040	1	SS-BC-040-1	112098
16	0.050	1	SS-BC-050-1	112099
14	0.064	1	SS-BC-064-1	112100



112088 / Copper Bare Conductor



112098 / Stainless Steel Bare Conductor



Thermocouple Wire

Bare, Matched and Extension Grade Wire

Thermocouple
'Hot Junction' Option

Type C, E, J, K, R, S and T
Bare Thermocouple Wire

24 and 30 AWG
Wire Sizes

Thermocouple Wire

Accu-Glass thermocouple wire is prepared and packaged for use in ultrahigh vacuum applications to 1×10^{-10} Torr. Thermocouple wire is available in both matched and extension grade materials. Wire sizes from 0.010 to 0.032 inch diameters are stocked and available for quick delivery. Both positive and negative thermocouple legs are bare (non-insulated) and sold in paired lengths... by the 'Inch' or the 'Foot'. Dual-bore steatite ceramic insulators are available for use with bare thermocouple wire.

Matched thermocouple wire can be used with our 'standard' Subminiature-D feedthroughs, and where most applications will not register an error. For a detailed explanation on error compensation of non-thermocouple pins in our Subminiature-D feedthroughs, see page 267. Extension grade thermocouple wire is a low-cost alternative to matched materials, and ideal for long wire run applications.

For an added fee, a 'Hot Junction' option (temperature sensing point) is available with any thermocouple pair; where one end of a thermocouple wire-pair is fused (welded) together prior to shipping. For more information and price, see 'Hot Junction' option details on page 107.

Note that continuous lengths of paired thermocouple wire can be purchased. To do so, simply order multiple quantities of any part number and print 'Continuous Length' in the description of the part on your purchase order.

Features

- Bare, uninsulated wire material
- .010 to .032 Inch diameter wire
- UHV compatible material
- High temperature rated to 400°C
- TC positive and negative legs sold in pairs
- Optional 'Hot Junction'
- Custom solutions on request.

Specifications

Vacuum Range

HV, High Vacuum

1×10^{-8} Torr

UHV, Ultrahigh Vacuum

1×10^{-10} Torr

Temperature Range¹

Up to 400°C

Notes

1. Overall assembly ratings must be adjusted to that of its lowest rated component. For cryogenic service, the lowest recommended temperature is -80°C
- § Unless specified otherwise, dimensional units in all sections of this catalog are expressed in inches.



Matched Thermocouple Wire — Operating Temperature¹ / UHV to 1x10⁻¹⁰ Torr

ANSI Type	Matched Lead Materials		Pair Length ²	Wire Diameter	Nominal AWG	Model Number	Part Number
	(+) Positive	(-) Negative					

Matched TC Wire — Solid / Bare (non-insulated) / Supplied in Pairs, (+) and (-) Leads

C ³	W-5Re	W-26Re	1"	0.010	30	TCC-BC-010-1	112101
C ³	W-5Re	W-26Re	1"	0.020	24	TCC-BC-020-1	112102
E	Chromel	Constantan	1'	0.010	30	TCE-BC-010-1	112105
E	Chromel	Constantan	1'	0.020	24	TCE-BC-020-1	112106
E	Chromel	Constantan	1'	0.032	20	TCE-BC-032-1	112107
J	Iron	Constantan	1'	0.010	30	TCJ-BC-010-1	112109
J	Iron	Constantan	1'	0.020	24	TCJ-BC-020-1	112110
J	Iron	Constantan	1'	0.032	20	TCJ-BC-032-1	112111
K	Chromel	Alumel	1'	0.010	30	TCK-BC-010-1	112113
K	Chromel	Alumel	1'	0.020	24	TCK-BC-020-1	112114
K	Chromel	Alumel	1'	0.032	20	TCK-BC-032-1	112115
R ³	Pt-13Rh	Pt	1"	0.010	30	TCR-BC-010-1	112117
S ³	Pt-10Rh	Pt	1"	0.010	30	TCS-BC-010-1	112118
T	Copper	Constantan	1'	0.010	30	TCT-BC-010-1	112121
T	Copper	Constantan	1'	0.020	24	TCT-BC-020-1	112122
T	Copper	Constantan	1'	0.032	20	TCT-BC-032-1	112123

Hot Junction Option⁴ — Fused Thermocouple Leads (temperature sensing point)

Fuse leads at one end	Append to Part Number	.40
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1. Thermocouple operating temperatures on page 268. 2. Multiple quantities ship in one continuous length. 3. Refractory "Type-C" (Tungsten-Rhenium) and Noble metal "Type-R" and "S" (Platinum-Rhodium) TCs are sold in one inch increments. 4. Factory added option for listed thermocouple wires. Price is added to wire unit price. For example, part number 112101.40 would have a final price of \$27.

Extension Thermocouple Wire¹ — 425°C Maximum / UHV to 1x10⁻¹⁰ Torr

ANSI Type	Extension Lead Materials		Pair Length ¹	Wire Diameter	Nominal AWG	Model Number	Part Number
	(+) Positive	(-) Negative					

Extension TC Wire — Solid / Bare (non-insulated) / Supplied in Pairs, (+) and (-) Leads

EX-C	Alloy 405	Alloy 426	1'	0.010	30	TCEXC-BC-010-1	112103
EX-C	Alloy 405	Alloy 426	1'	0.020	24	TCEXC-BC-020-1	112104
EX-RS	Copper	Alloy 11	1'	0.020	24	TCEXRS-BC-020-1	112112

1. Extension grade wire is a low-cost alternative to matched thermocouple materials.

Ceramic Insulators — 400°C / UHV to 1x10⁻¹⁰ Torr

T/C Type	Material	Bore Diameter	OD	Qty. / Length	No. Holes	Nominal AWG	Model Number	Part Number
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Dual Bore — Steatite Ceramic Insulators

All	Ceramic	0.020	0.123	12 / 1ft	2	24	BC-CER-INS	112292
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30 AWG (0.010)



112101 / Type C Thermocouple Wire

24 AWG (0.020)



112106 / Type E Thermocouple Wire

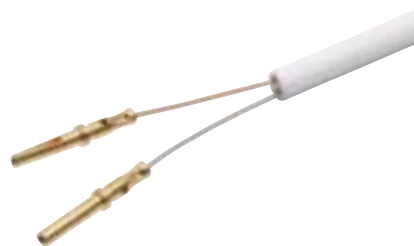
20 AWG (0.032)



112115 / Type K Thermocouple Wire



.40 Welded "Hot Junction"



Wire with Ceramic Insulators



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
---------	------------

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
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Standard Duty Cycle — Contacts for .040 Diameter Pins and Sockets

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

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

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

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
-----------------	--------	-----------------------	--------------	--------------	-------------

Standard Duty Cycle — Thermocouple Contacts

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

High Duty Cycle¹ — Thermocouple Contacts

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

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
1 Unit	Crimp Tool for Type-T1 Contacts	DCT-1	100190
1 Unit	Crimp Tool Positioner ¹	DCT-POS-T2	111315

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



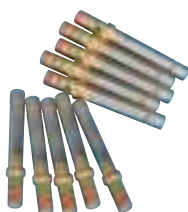
110008 and 110009 / Standard Contacts



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 1×10^{-10} Torr

Contacts / Pack	Gender	Wire Well ID	Model Number	Part Number
-----------------	--------	--------------	--------------	-------------

Standard Duty Cycle — Type-T2 / 10 Pack

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

Standard Duty Cycle — Type-T2 / 25 Pack

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

Tools — For wiring Type-T2 Contacts

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

.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 1×10^{-10} Torr

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

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

Tools — For wiring Type-T5i Contacts

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



.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
-----------------	--------	--------	----------	------------------	--------------	--------------	-------------

Standard Duty Cycle — 5 Per Pack

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



112777 / Gold Plated Contacts

.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
-----------------	--------	--------	----------	------------------	--------------	--------------	-------------

Standard Duty Cycle — 5 Per Pack

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



112771 / Thermocouple Contacts

.060 Power Contacts — Type-T5p

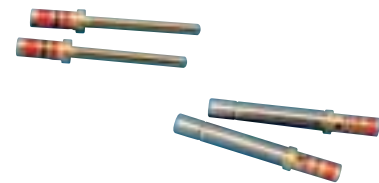
Mil-Spec. Contacts are made from a copper alloy and are gold-plated. These contacts are used in our Mil-DTL-5015 vacuum and air service connector, the female contacts are sleeved as standard. Male contacts are used only in our male Mil-DTL-5015 in-vacuum PEEK connectors.

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

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

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



110700 and 110701 / Power Contacts

Tools — For wiring Type-T5p Contacts

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

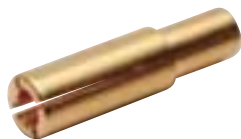


111613 / Insertion Tool
111614 / Extraction Tool



.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

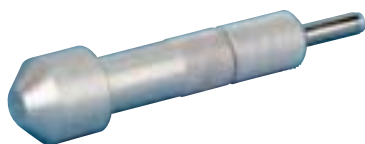


101001 / Power Male Contacts



101080 / Crimp Tool

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



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
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Standard Duty Cycle — Type T6

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

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

.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
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Standard Duty Cycle — Type T3

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

Tools — For wiring Type-T3 Contacts

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



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
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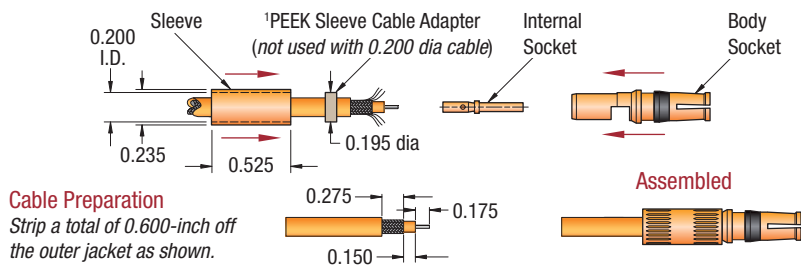
Coaxial Contacts — Type T4

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

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
1 Unit	Crimp Tool for outer sleeve of above Type-T4 Contacts	DCT-4/6	100908
1 Unit	Crimp Tool for inner contact of above Type-T4 Contacts	DCT-1	100190
1 Unit	Extraction Tool to remove Type-T4 contacts	CX-ET	100935



110963 / Coaxial Male Contact



100909 / Coaxial Female Contact

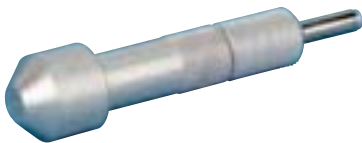


100908 / Crimp Tool



↖ Set Dial to #5

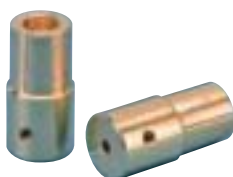
100190 / Crimp Tool



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

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

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

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
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Ring Terminals

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

Butt Terminals

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

Spade Terminals

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

Crimp Tool

Crimp tool for Ring and Butt Terminals	1	CT-RBST	111615
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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
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Ceramic — 500°C / HV to 1×10^{-8} Torr

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

PEEK — 250°C / UHV to 1×10^{-10} Torr

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

Ceramic Wire Nuts

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

Wire Nuts — 500°C / UHV to 1×10^{-10} Torr

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

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

Ceramic Insulating Beads

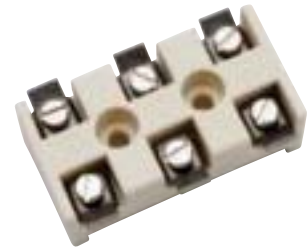
Ceramic Beads (L3 Steatite) are used to insulate bare wires in air or vacuum systems. Convex and concave ends allow easy stacking and provide continuous insulation along wire length. Also known as fish-spine beads. Priced per linear foot.

Ceramic Insulating Beads — 450°C / UHV to 1×10^{-10} Torr

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

Ceramic Beads

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



111621 / 3 Pole Terminal Block



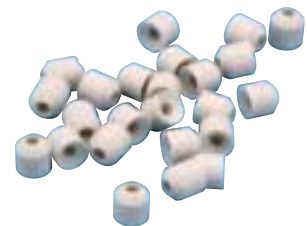
111850 / PEEK 1 Pole Terminal Block



111855 / PEEK 4 Pole Terminal Block



111623 / Ceramic Wire Nut



110300 / Ceramic Beads, L3 Steatite Insulators



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 1×10^{-10} Torr

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

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

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.

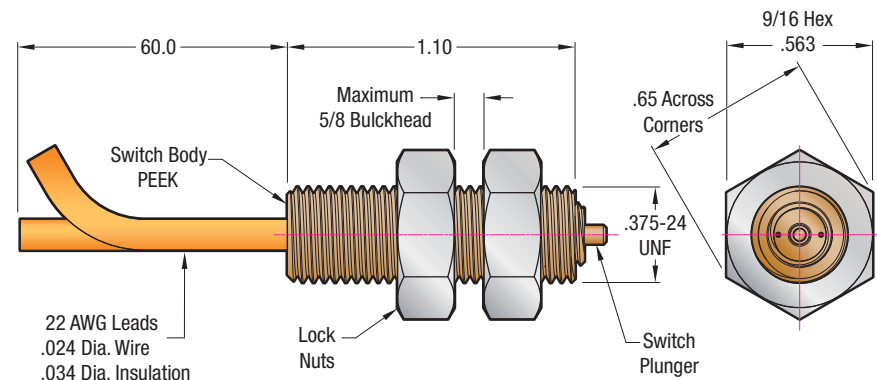
UHV Precision Switch — Normally Closed / 250°C / 2 kVDC¹, 2 Amp / UHV to 1×10^{-10} Torr

Unit Quantity	Size Length / Diameter	Description	Model Number	Part Number
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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
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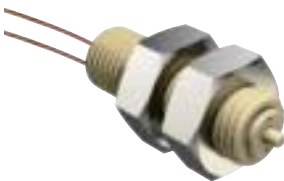
1. See 'Glow Discharge' information on page 270



111170 / Ceramic Standoff



111176 / Ceramic Standoff



113170 / UHV Precision Switch
'Normally Closed'



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
Chain / Track	5	1.00 x 0.75	6.25	PK-CBLCN-1000	114000
End-Mounts ¹	2	1.00 x 0.75	2.05	PK-CBLCN-EM1000	114001

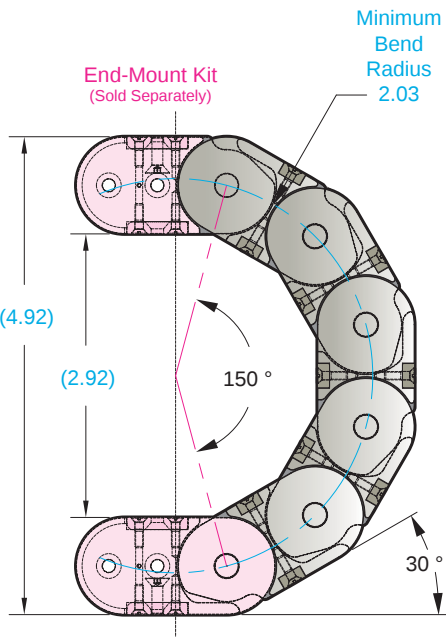
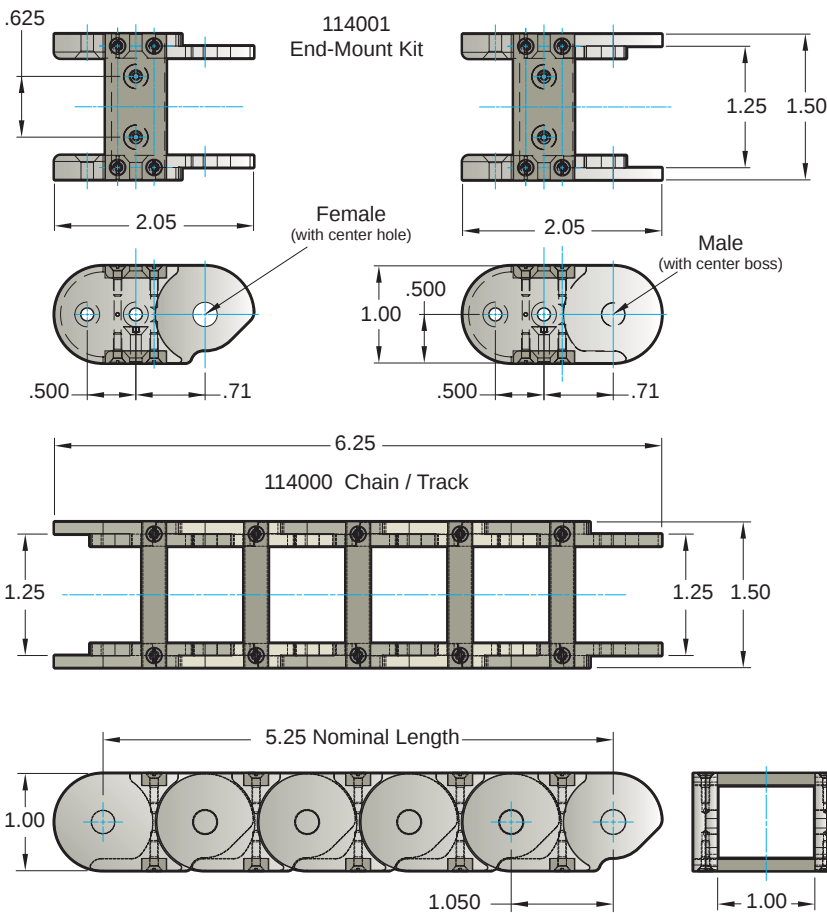
1. Includes one each male and female end-mount



114000 / PEEK Cable Chain / Rack



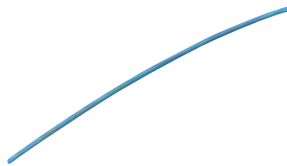
114001 / End-Mount Kit
Includes one male / female termination





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.



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)

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

Accepts Wire Gauge	Screw Hole	Qty	Model Number	Part Number
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Solder and Flux

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



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
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Conductive Epoxy — 150°C or 270°C, Silver Filled

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

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

.14	Two-Part Non-Conductive	250°C	FO-EPOXY-UHV	111785
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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
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Single Sided — Acrylic Adhesive / -30°C to 175°C

1	0.250	0.0025	36	KAP-TP-36-1/4A	110794
1	0.375	0.0025	36	KAP-TP-36-3/8A	111205
1	0.500	0.0025	36	KAP-TP-36-1/2A	110795
1	0.750	0.0025	36	KAP-TP-36-3/4A	111206
1	1.000	0.0025	36	KAP-TP-36-1A	110790
1	2.000	0.0025	36	KAP-TP-36-2A	111207

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
1	0.375	0.0035	36	KAP-TP-36-3/8S	111200
1	0.500	0.0035	36	KAP-TP-36-1/2S	110792
1	0.750	0.0035	36	KAP-TP-36-3/4S	111201
1	1.000	0.0035	36	KAP-TP-36-1S	110793
1	2.000	0.0035	36	KAP-TP-36-2S	111202
1	4.000	0.0035	36	KAP-TP-36-4S	111203
1	6.000	0.0035	36	KAP-TP-36-6S	111204

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
1	0.500	0.004	36	KAP-TP-36-1/2SD	112741
1	0.750	0.004	36	KAP-TP-36-3/4SD	112742
1	1.000	0.004	36	KAP-TP-36-1SD	112743

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.





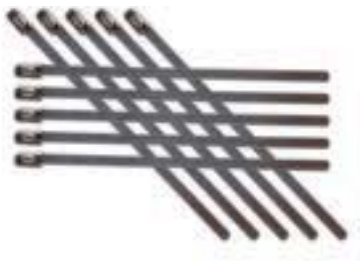
UHV Cable / Equipment Ties

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

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

Stainless Steel Cable — 538°C UHV / 1×10^{-11} Torr

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

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
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Installation Tools

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



111154 / PEEK Installation Tool



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
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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
Folded	.90	.40	.17	.10	.28	1/4"	.39	5	CBL-MNT-FLD	111152

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
PEEK Spacer	.57	.32	.32	.056	-	-	.20	5	CBL-SPACER-PK	111159

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
	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
0.125	0.080	0.110	0.280	0.310	15-feet	FS-1/8SS-15	110039
0.125	0.080	0.110	0.280	0.310	25-feet	FS-1/8SS-25	110041
0.250	0.130	0.160	0.370	0.400	5-feet	FS-1/4SS-5	110038
0.250	0.130	0.160	0.370	0.400	15-feet	FS-1/4SS-15	110040
0.250	0.130	0.160	0.370	0.400	25-feet	FS-1/4SS-25	110042

Silver-Plated Copper — Non-Magnetic

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

PEEK Braid

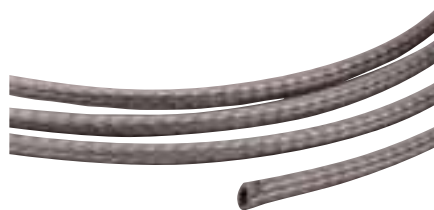
PEEK Braid is ideally suited for situations requiring an extra layer of abrasion resistance or electrical insulation. PEEK braid, combined with our vacuum cable and flexible shielding options, offers the user an almost endless variety of cable combinations.

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

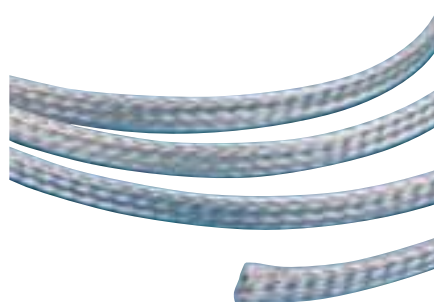
Resting		Expanded		Length	Model Number	Part Number
I.D.	O.D.	I.D.	O.D.			

PEEK Braid

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



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

100-feet	UHV	—	0.0075	—	PK-MONO-100	111199
500-feet	UHV	—	0.0075	—	PK-MONO-500	110956

PEEK Spiral Cut Cable Wrap — 250°C UHV / 1×10^{-10} Torr

19-inch	UHV	0.010	0.620	2.00	PK-SPCW-620-19	111140
39-inch	UHV	0.010	0.620	2.00	PK-SPCW-620-39	112654

Teflon® Spiral Cut Cable Wrap — 120°C HV / 1×10^{-8} Torr

19-inch	HV	0.030	0.250	0.75	PTFE-SPCW-250-19	113225
39-inch	HV	0.030	0.250	0.75	PTFE-SPCW-250-39	113226
19-inch	HV	0.030	0.500	1.50	PTFE-SPCW-500-19	113227
39-inch	HV	0.030	0.500	1.50	PTFE-SPCW-500-39	113228
19-inch	HV	0.030	0.620	2.00	PTFE-SPCW-620-19	112655
39-inch	HV	0.030	0.620	2.00	PTFE-SPCW-620-39	112656

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
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Mechanical Wire Stripper

1 Pocket Wire Stripper	26–36 AWG	2636AWG-STR	100191
1 Pocket Wire Stripper	20–30 AWG	2030AWG-STR	100192
1 Large Wire Stripper Pliers	10–22 AWG	1022AWG-KAP-STR	100194
1 Large Wire Stripper Pliers	16–26 AWG	1626AWG-KAP-STR	100195
1 Small Wire Stripper Pliers	24–30 AWG	2430AWG-KAP-STRC	100196

Thermal Wire Stripper — 117 VAC

1 Electric Wire Stripper	All wire sizes	THW-STR	112325
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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
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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
6	0.125	0.104	1	PK-SHRKT-125	111880
6	0.188	0.157	1	PK-SHRKT-188	111881
6	0.258	0.190	1	PK-SHRKT-258	111882

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

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

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

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

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

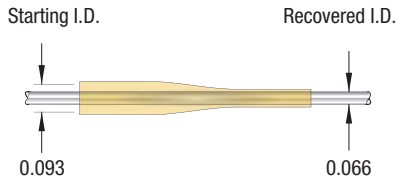
Tool	Heat Range	Pkg. Qty.	Model Number	Part Number
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General Purpose

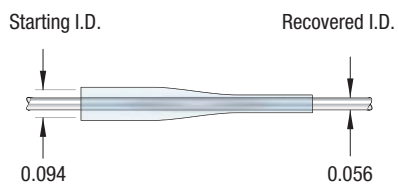
General Purpose Heat Gun	148°C to 260°C	1 each	HTG-260	111600
Replacement Heating Element		1 each	HTG-260-RHE	111601
Shrink-Tube Nozzle	1/8" to 3/4" O.D.	1 each	HTG-260-N3/4	111602
Shrink-Tube Nozzle	3/4" to 2" O.D.	1 each	HTG-260-N2	111603

Economy

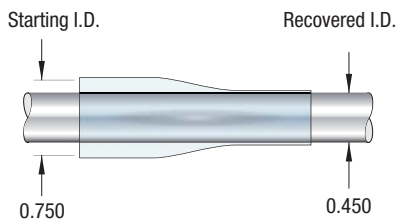
Economy Heat Gun	390°C and 530°C	1 each	HTG-530	111604
Heat Shrink Nozzle Kit		1 each	HTG-530-N	111605



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
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Stainless Steel Tags, 304

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

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
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Marking Tools — Alpha / Numeric Stamping Kits

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

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

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
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Identification Beads

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



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