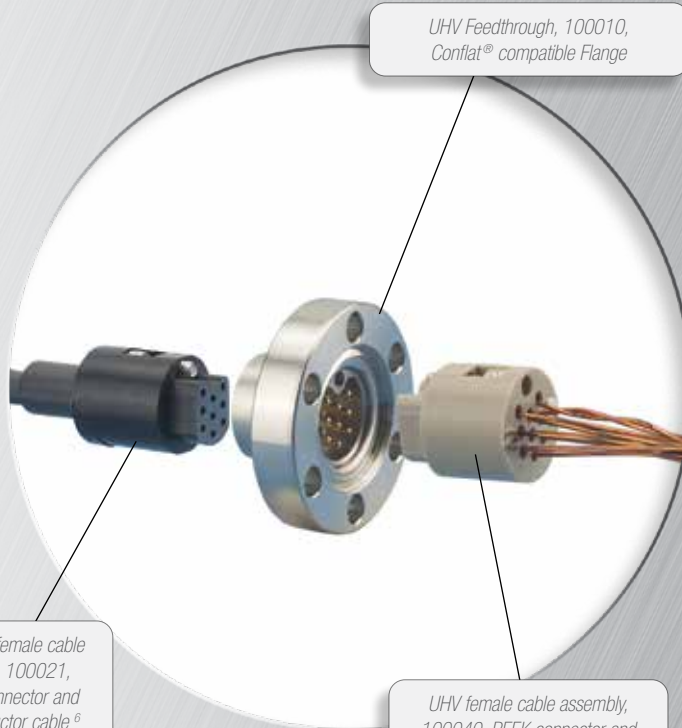




Subminiature-C™

Accu-Glass 9-Pin Feedthrough



UHV Feedthrough, 100010, Conflat® compatible Flange

Air-service female cable assembly, 100021, Delrin® connector and nine conductor cable⁶

UHV female cable assembly, 100040, PEEK connector and Kapton® insulated wire⁶

Subminiature-C™ Interface

Accu-Glass Products Subminiature-C™ multipin hermetic feedthroughs are designed for applications where space is limited or where Subminiature-D connections will not fit. This compact and unique 9-pin design allows installation into 1.33 inch CF metal seal and ISO NW16 KF elastomer seal flanges. Nine gold-plated pins are arranged in a straight through pin-to-pin design and are hermetically sealed and electrically insulated in a stainless steel shell using the latest in glass-ceramic bonding technology.

Subminiature-C™ feedthroughs and cables are sold individually or as kits, where each kit contains a feedthrough and both vacuum and air side cable assemblies.

Air and vacuum side connectors are fitted with captured stainless steel socket head screws that provide a means of securely locking them to their mating feedthroughs. On the vacuum side, Kapton® insulated cable assemblies fitted with PEEK connectors are available to meet the rigorous demands of ultrahigh vacuum environments. In-vacuum connector screws are vented where required and the feedthrough's screw-boss functions as a connection polarizing key. Air to vacuum pin position is identified with a permanent surface mark, which clearly locates pin assignments.

Features

- Subminiature-C™ 9-Pin Interface
- High temperature rated to 250°C
- UHV compatible construction
- Conflat® and ISO NW compatible mounts
- Kapton® Insulated Vacuum Cables
- PEEK or Macor® Connectors with Locking Screws
- Air Service Cables / Connectors
- Custom Solutions on Request

Specifications

Electrical

Voltage ¹ , Maximum	500 VDC
Current ² , Per Pin Maximum @ 20°C	5 A

Material

Shell	304 Stainless Steel
Pins	Au plated, Ni-Fe alloy
Seal / Insulator	Glass-Ceramic
Connector, Air	Delrin®
Connector, Vacuum ³	PEEK
Connector, Vacuum, High Temperature	Macor® Ceramic

Vacuum Range⁴

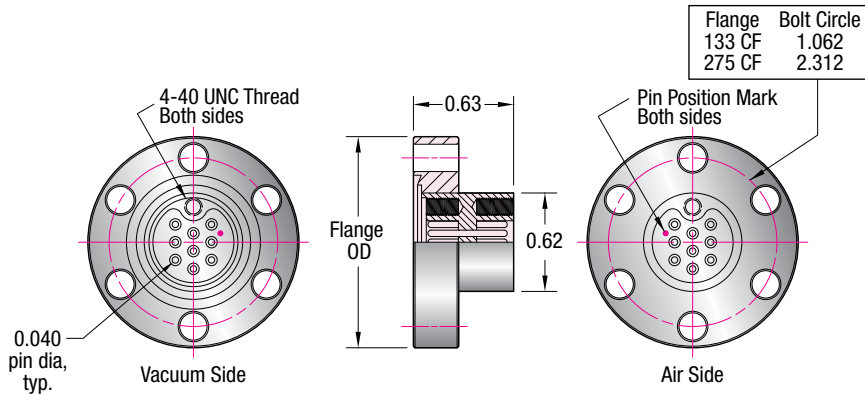
UHV, Ultrahigh vacuum	1x10 ⁻¹⁰ Torr
HV, High vacuum	1x10 ⁻⁸ Torr

Temperature Range⁵

Feedthrough	-200 to 250°C
Flange Mount, Conflat®	-200 to 450°C
Flange Mount, ISO	-26 to 150°C
Connector / Cable, Air	80°C
Connector / Cable, Vacuum	250°C
Connector, Ceramic	400°C
Thermal Gradient	25°C / Minute Maximum

Notes

1. Electrical ratings are maximum test values, with feedthrough's vacuum side at $\leq 1 \times 10^{-4}$ Torr. Feedthroughs are intended for instrumentation applications carrying low level signal voltage and current.
 2. For proper heat dissipation, a maximum of 20% of the pins on a feedthrough may carry the maximum pin current at any given time.
 3. PEEK is a polyether ether ketone thermoplastic.
 4. Leak tested to 5×10^{-10} Standard cc/sec of He.
 5. Overall assembly ratings must be adjusted to that of its lowest rated component. For cryogenic service, the lowest recommended temperature is -200°C
 6. Unless designated a 'kit,' connectors and cable assemblies are not included with feedthrough and must be purchased separately.
- § Unless specified otherwise, dimensional units in all sections of this catalog are expressed in inches.



• Pin position mark reverses position from vacuum side to air side.

CF Flange — 9-Pin Circular / 500 VDC, 5 Amp / 250°C / UHV to 1×10^{-10} Torr

Number Contacts	Flange Type	OD	Kit Cable Lengths	Model Number	Part Number
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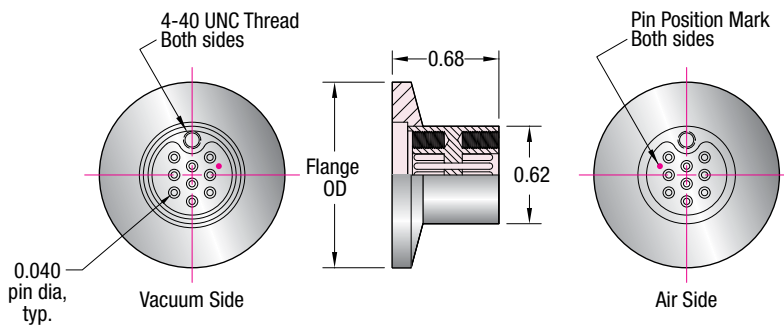
Kit — Feedthrough with Female Cable Assemblies

9	133 CF	1.33	96 Inch Air / 19 Inch Vacuum	9C-KIT-133	100000
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Feedthrough — Feedthrough without Cables

9	133 CF	1.33	—	9C-133	100010
9	275 CF	2.73	—	9C-275	100013
18	275 CF	2.73	Two 9-Pins on 0.750 Centers	9C2-275	100012

Compatible with Coniflat® flanges and hardware



• Pin position mark reverses position from vacuum side to air side.

ISO KF Flange — 9-Pin Circular / 500 VDC, 5 Amp / 150°C / HV to 1×10^{-9} Torr

Number Contacts	Flange Type	OD	Kit Cable Lengths	Model Number	Part Number
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Kit — Feedthrough with Female Cable Assemblies

9	NW16 KF	1.18	96 Inch Air / 19 Inch Vacuum	9C-KIT-K16	100001
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Feedthrough — Feedthrough without Cables

9	NW16 KF	1.18	—	9C-K16	100011
9	NW25 KF	1.57	—	9C-K25	100016
9	NW40 KF	2.16	—	9C-K40	100015
18	NW40 KF	2.16	Two 9-Pins on 0.710 Centers	9C2-K40	100014

Compatible with ISO 2861/1 specification flanges and hardware



100000 / UHV CF 9-Pin Complete Kit



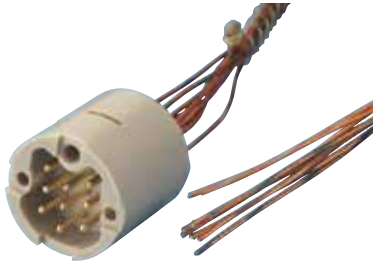
100012 / UHV CF 2 x 9-Pin Feedthrough (Vacuum Side)



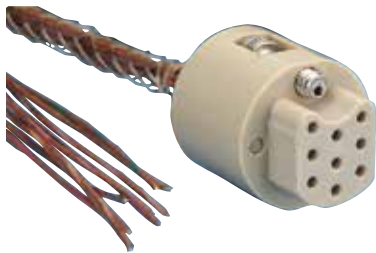
100001 / HV ISO-KF 9-Pin Complete Kit



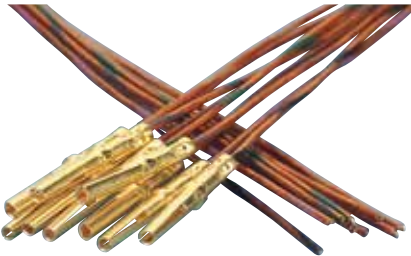
100011 / HV ISO-KF 9-Pin Feedthrough (Vacuum Side)



100030 / Male Pin UHV
Connector to Cable



100040 / Female Socket UHV
Connector to Cable



100060 / Female Socket UHV
Contact to Cable



100120 / Female Socket UHV
Connector to Connector Extension Cable

Ultrahigh Vacuum Round Cable Assemblies

Connector to Cable UHV round cable assemblies are fitted with PEEK Subminiature-C™ female or male connectors at one end and nine, non-terminated, Kapton® insulated wires at the other. The female cable connectors mate directly onto the vacuum-side of nine-pin Subminiature-C™ feedthroughs shown on page 9, or with the male in-vacuum cable connectors. The cable jacket is a PEEK braid with a nominal diameter of 0.14 inches. The nine wires are Kapton® insulated 28 AWG silver plated copper conductors, stranded 7 x 0.005.

Contact to Cable UHV round cable assemblies include male or female contacts on one end and nine, non-terminated, Kapton® insulated cable at the other.

Connector to Connector Extension Cables are fitted with PEEK Subminiature-C™ female connectors on both ends of a 19-inch UHV round cable.

Round Cable Assemblies — 9-Pin Circular / 250°C / UHV to 1x10⁻¹⁰ Torr

Number Contacts	Wire		Connector			Model Number	Part Number
	Length	Dia.	Gender	OD	Length		
Connector to Cable							
9	19	7x 0.005	M	0.60	0.65	CKAP-C9-19PC	100030
9	39	7x 0.005	M	0.60	0.65	CKAP-C9-39PC	100031
9	19	7x 0.005	F	0.60	0.75	CKAP-C9-19SC	100040
9	39	7x 0.005	F	0.60	0.75	CKAP-C9-39SC	100041
Contact to Cable¹							
9	19	7x 0.005	M	—	—	CKAP-C9-19P	100050
9	39	7x 0.005	M	—	—	CKAP-C9-39P	100051
9	19	7x 0.005	F	—	—	CKAP-C9-19S	100060
9	39	7x 0.005	F	—	—	CKAP-C9-39S	100061
Connector to Connector Extension							
9	19	7x 0.005	F / F	0.60	0.75	CKAP-C9-192SC	100120

¹. They do not include PEEK connectors and will not allow subsequent connector installation. Wires must be threaded through the connector back-piece before crimping contacts

See page 8 for **Specifications**