



Linear Travel Feedthroughs

Manual / Motorized 1, 2 and 4 Inch Linear Travel Solutions



Features

- Precision bearings guides — no bushings
- 1, 2 and 4 inch linear travel
- High temperature rated to 250°C
- UHV compatible construction
- Conflat® and ISO compatible mounts
- Edge-welded metal bellows seal
- Manual actuators
- Linear travel position lock
- Optional AC or DC motor actuators

Specifications

Material

Body, Stainless Steel	304
Housing, Anodized Aluminum	2011
Bellows, Edge-Welded	AM-350

Vacuum Range

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

Temperature Range ¹

Feedthrough	250°C
Flange, Conflat®	450°C
Flange, ISO	150°C

Load

Axial, Maximum	5 lb
Lateral, Maximum at 2 Inch from flange face	5 lb

Resolution

Linear Scale	0.025 Inch
Rotary Scale	0.001 Inch

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.

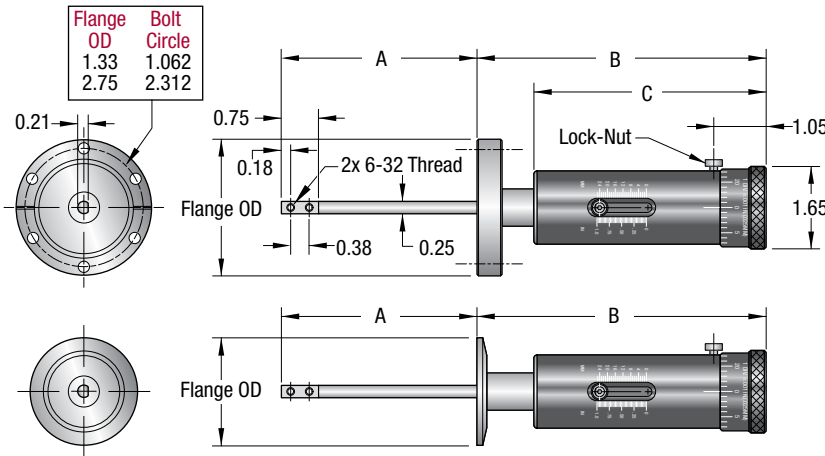
Linear Travel

Accu-Glass Products precision HTL series linear motion feedthroughs are designed to operate at temperatures as high as 250°C. Linear movement is measured in 0.001 inch increments on the rotary barrel scale and 0.025 inch increments on the linear body scale, which are laser etched into the black anodized aluminum finish.

Standard linear feedthroughs are fitted with a 1.65 diameter manual actuator, which can be fitted with an optional three-spoke Speed-Handle for faster actuation. Factory-converted motorized solutions are also available on request. Our motor options include a reversible constant speed AC motor, and two DC stepper motors, for medium and high torque applications respectively.

These precision motion instruments are constructed of aluminum and stainless steel, where only stainless steel surfaces are exposed to the vacuum environments. In-vacuum bearings are film lubricated with a UHV compatible Krytox® lubricant, while air side bearings are lubricated with high-temperature Krytox® lubricant. The linear shaft is sealed with an AM-350 edge-welded bellows.

Feedthroughs are available on Conflat® compatible, CF style metal seal or ISO-KF elastomer seal flanges.



102200 / UHV 1-Inch Linear Feedthrough



102280 / HV 2-Inch Linear Feedthrough



113086 / Speed-Handle Option

Linear Feedthrough — 1, 2 and 4 Inch Linear Travel

Linear Travel	Flange Model	Flange OD	A		B	C	Model Number	Part Number	Unit Price \$
			Min.	Max.					

CF Flange¹ — 250°C / UHV to 1x10⁻¹⁰ Torr

1	133 CF	1.33	3.55	4.55	5.50	4.38	HTL-133-1	102200	585
1	275 CF	2.73	3.55	4.55	5.50	4.38	HTL-275-1	102220	595
2	133 CF	1.33	3.55	5.55	6.90	5.78	HTL-133-2	102210	735
2	275 CF	2.73	3.55	5.55	6.90	5.78	HTL-275-2	102230	745
4	133 CF	1.33	3.55	7.55	9.66	8.52	HTL-133-4	113078	1035
4	275 CF	2.73	3.55	7.55	9.66	8.52	HTL-275-4	113079	1045

ISO KF Flange² — 150°C / HV to 1x10⁻⁸ Torr

1	NW16 KF	1.18	3.50	4.50	5.56	4.38	HTL-K16-1	102250	600
1	NW40 KF	2.16	3.60	4.60	5.46	4.38	HTL-K40-1	102270	610
2	NW16 KF	1.18	3.50	5.50	6.96	5.78	HTL-K16-2	102260	760
2	NW40 KF	2.16	3.60	5.60	6.86	5.78	HTL-K40-2	102280	770
4	NW16 KF	1.18	3.50	7.50	9.54	8.52	HTL-K16-4	113080	1030
4	NW40 KF	2.16	3.60	7.60	9.44	8.52	HTL-K40-4	113081	1035

1. Compatible with Conflat® flanges and hardware 2. Compatible with ISO 2861/1 specification flanges and hardware

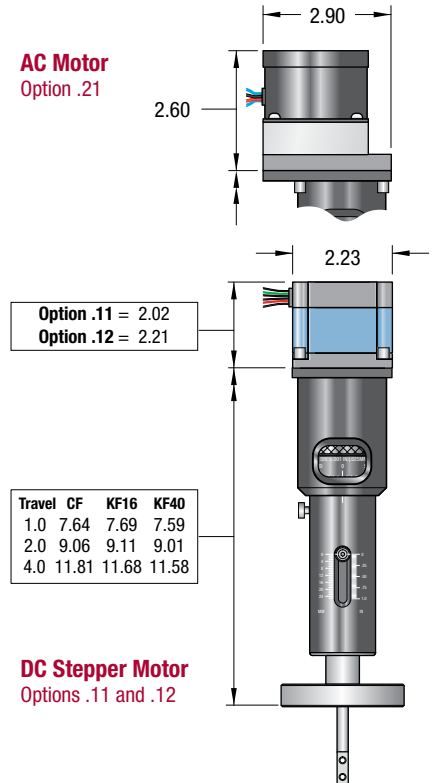
Actuator Options¹ — Dimensional diagram at right / See Page 176~178 for Option Specifications

Option Description	Model Number	Part Number	Unit Price \$
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Motors — Detailed motor specifications on pages 176 and 177

DC Motor, Stepper	Append to Part Number	.11	690
DC Motor, Stepper / High Torque	Append to Part Number	.12	635
AC Motor, Constant Speed / Reversible	Append to Part Number	.21	640
Speed-Handle, Anodized Aluminum	HTL-MSK	113086	95

1. When ordering motorized options, add the option number and price to the selected UHV or HV component part number and price listed above. For example, Part Number 102200.11 has a price of \$1,275. Call factory for Air Actuated solutions.



DC Stepper Motor Options .11 and .12