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Sample Manipulation and Motion > Rotary Motion > Ferro-Magnetic Solid Shafts >
Thread Mount Solid Shaft – KJLC Standard, Ferro-Magnetic Fluid Rotary Feedthroughs

[More Information](#)

Thread Mount Solid Shaft – KJLC Standard, Ferro-Magnetic Fluid Rotary Feedthroughs



https://www.lesker.com/newweb/sample_manipulation/rotary/ferrossolidshaft_threadmount.cfm

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These Ferro-Magnetic Fluids sealed rotary feedthroughs are sealed to a flat surface by a fluorocarbon o-ring. The operator mounts these drives to the vacuum chamber by screwing them into a corresponding threaded hole, or on some models by placing them in a suitable smooth-sided port in the chamber wall and using a capture nut. Some models are threaded only part way. They will accommodate various wall thicknesses when used with a sleeve or spacer over the unthreaded portion so that the nut compresses the o-ring.

In vacuum practice, the o-ring is compressed against the vacuum chamber's inner surface to limit virtual leaks. As shown in the dimensional drawings, most Ferro-Magnetic Fluid sealed feedthroughs are designed to be installed this way. A few, however, are intended to have the o-ring sealing against the atmosphere side surface. To reduce the virtual leaks associated with the thread, the feedthrough has a flat machined along the length of its threaded portion.

Please refer to the technical notes about loading, temperature, and other relevant information before specifying a feedthrough.

Features

- > Use a special magnetic fluid (ferrofluid) in place of an o-ring seal around dynamic parts
- > Fluid hermetically seals the shaft, making a liquid o-ring while a permanent magnet keeps the fluid in place
- > Ferrofluid magnetically held in stages formed by grooves machined into either the shaft or pole pieces
- > Unlike regular o-rings, the ferrofluid o-ring remains intact for years of operation despite the shaft's motion

Applications

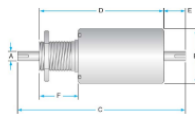
- > Rotary stages
- > Barrels
- > Platens
- > Planetaries
- > Web coater rollers used in thin film deposition and etching processes

Specifications Table

Mounting	Water Cooling (locations)	Shaft O.D.	Face Seal O-Ring
Standard			
1-14 UNS-2A Thread *	No	3/4"	O-V128
1-14 UNS-2A Thread *	Yes (0.89", 1.74")	1/2"	O-V128
1-14 UNS-2A Thread *	No	1/2"	O-V128
1-14 UNS-2A Thread *	Yes (0.89", 1.74")	3/4"	O-V128
5/16-24 UNF-2A Thread	No	3/16"	O-V012
7/16-20 UNF-2A Thread	No	1/4"	O-V015
Metric			
M12 X 1.5 Thread	No	4mm	O-V015
M12 X 1.5 Thread	No	5mm	O-V015
M12 X 1.5 Thread	No	6mm	O-V015
M25 X 1.5 Thread	No	12mm	O-V220
M25 X 1.5 Thread	Yes	12mm	O-V220
M30 X 1.5 Thread	No	30mm	O-V226
M30 X 1.5 Thread	Yes	30mm	O-V226

NOTE: * Supplied with nut and washer.

Dimensional Drawings



Drawing: Dwg-UH-KLFDTM018516

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Ordering Table

Model	Dim A	Dim B	Dim C	Dim D	Dim E	Dim F	PartNo	Price	Add To Cart
Standard (in.) 0.1875" 0.63" 2.562" 1.58" 0.482" 0.28" KLFDTM018516								\$625.00	Add to Cart
Standard (in.) 0.25" 0.75" 3.437" 1.937" 0.75" 0.375" KLFDTM025716								\$710.00	Add to Cart
Standard (in.) 0.50" 2.87" 8.812" 5.072" 1.25" 1.51" KLFDTM050114								\$940.00	Add to Cart
Standard (in.) 0.50" 2.87" 8.812" 5.072" 1.25" 1.51" KLFDTM050114W								\$1,300.00	Add to Cart
Standard (in.) 0.75" 2.87" 8.812" 5.072" 1.25" 1.51" KLFDTM075114								\$1,240.00	Add to Cart
Standard (in.) 0.75" 2.87" 8.812" 5.072" 1.25" 1.51" KLFDTM075114W								\$1,420.00	Add to Cart

NOTE: * Shaft mount measured 1" from process side face of feedthrough.