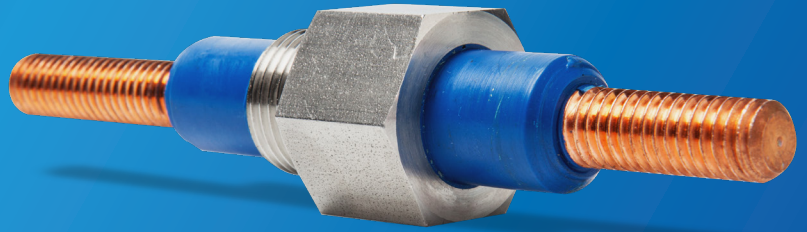




Douglas Electrical Components

# STUDSEAL HIGH-CURRENT FEEDTHROUGHS



## STANDARD AND CUSTOM DESIGNS

### FEATURES

- Transmit high currents in vacuum and pressure systems
- Hermetically sealed and 100% tested
- Variety of standard configurations and custom designs

### APPLICATIONS

- HVAC/R Compressors
- Power Distribution
- Semiconductor / Vacuum
- Immersion Cooling / Data Centers
- Batteries / Fuel Cells
- Cryogenic Pumps

## STUDSEAL HERMETIC FEEDTHROUGHS

Douglas Electrical Components has established itself as the leading manufacturer of sealed conductors for penetration of vacuum and pressure vessels. In particular, Douglas has emerged as the market leader in high current, high voltage penetrations of air conditioning and refrigeration compressors. Our reputation for custom designing high reliability, easy to install, high volume motor terminals and plates is unsurpassed in the industry. Manufactured in Randolph, NJ, our NPT and Faceseal feedthrough line offers standard configurations to drop into various applications.

Furthermore, Douglas Electrical manufactures a complete line of custom-designed stud penetrations for semiconductor manufacturing equipment, vacuum furnaces, and power distribution equipment.

## PERFORMANCE

- Pressures to 10,000 PSI
- Temperatures > +200°C
- Voltage capability to 30kV

## QUALITY

- ISO9001/140001
- RoHS/REACH compliant
- < 1x10<sup>-9</sup> scc/s, standard

## PERFORMANCE CAPABILITIES

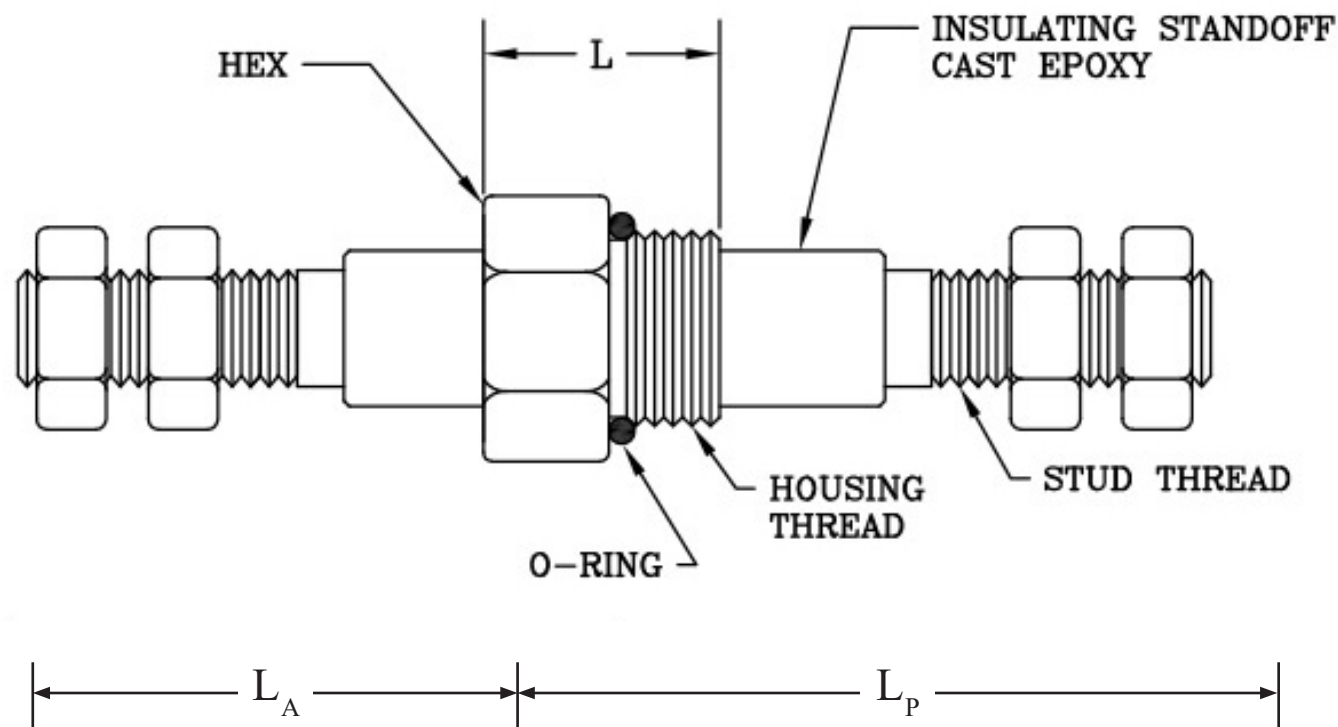
<b>Housing material</b>	Brass, stainless steel, other options include aluminum and Ryton
<b>Insulation &amp; standoff material</b>	Epoxy
<b>Conductor</b>	Brass or Copper standard; virtually any metal possible
<b>Nuts</b>	Brass standard; other materials available
<b>Pressure rating</b>	10 <sup>-9</sup> Torr to 10,000 PSI
<b>Voltage</b>	Designs up to 30kV
<b>Current</b>	Designs up to 1,000 amps
<b>Leak Rate</b>	< 1x10 <sup>-9</sup> Std cc He/sec. Contact factory for more options.
<b>Operating temperature</b>	-160°C to over +200°C
<b>Current rating</b>	See size table

## ALSO AVAILABLE

- Multi-pin plates
- Sealed buss bars
- Any conductor 0.030" to 1.5" diameter
- Housing sizes as small as 1/4" and as large as 3.5" diameter
- Radial O-ring Designs

DIMENSIONAL DATA

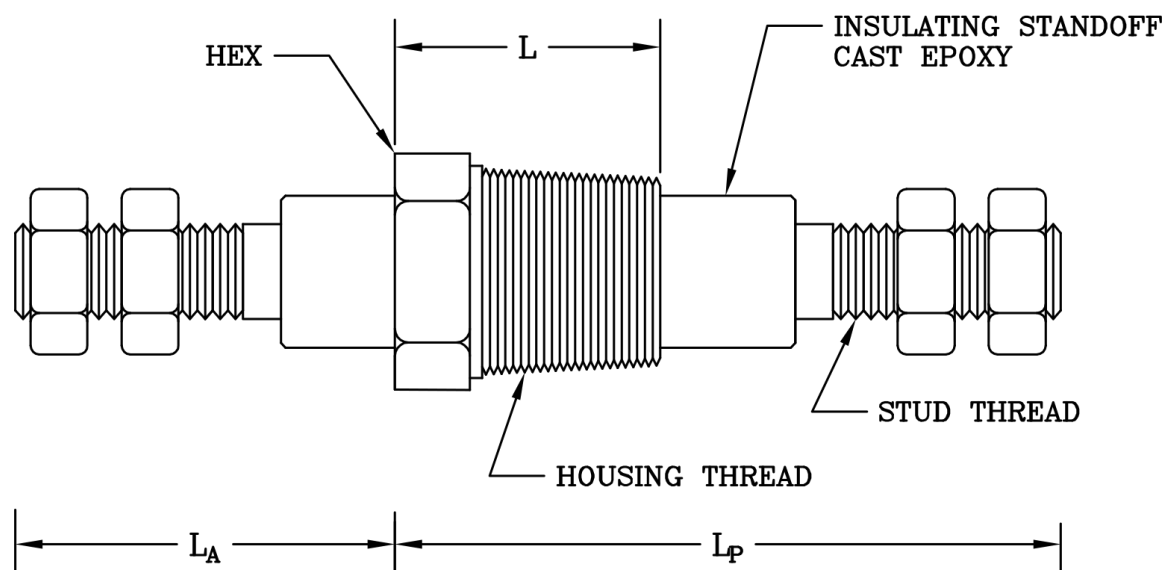
Standard SAE Designs



Stud Thread	Housing Thread	L <sub>A</sub>	L <sub>P</sub>	L	Hex	Maximum Current	Catalog Number
1/4"-20	3/4"-16	1.95"	3.14"	1.19"	1"	105 amps	27404
3/8"-16	3/4"-16	1.95"	3.14"	1.19"	1"	275 amps	27405
1/2"-13	7/8"-14	2"	3.36"	1.34"	1 3/16"	500 amps	27406
5/8"-11	1 1/16"-12	4.36"	3.31"	1.27"	1 3/8"	750 amps	27407

Douglas Electrical offers the widest range of sealed conductors for high pressure and vacuum applications. Please review the details offered in the Douglas Electrical catalog on pages 44 thru 47 for more information. Standard voltage rating for all catalog parts is 5kV. Multi-pin plates from 1.5" to 9" square have been manufactured in volume, with current capacities from 10 to 1200 amps. Our flexible technology affords far greater design latitude than our competitors and provides customers with custom solutions at off-the-shelf prices.

NPT Feedthroughs



Stud Thread	Housing Thread	L <sub>A</sub>	L <sub>P</sub>	L	Hex	Maximum Current	Catalog Number
1/4"-20	1/2" NPT	2"	3.09"	1.09"	7/8"	105 amps	27408
3/8"-16	3/4" NPT	2"	3.17"	1.17"	1 1/8"	275 amps	27409
1/2"-13	1" NPT	2"	3.36"	1.36"	1 3/8"	500 amps	27410
5/8"-11	1" NPT	3.38"	4.29"	1.36"	1 3/8"	750 amps	26212

Douglas Electrical offers the widest range of sealed conductors for high pressure and vacuum applications. Please review the details offered in the Douglas Electrical catalog on pages 44 thru 47 for more information. Standard voltage rating for all catalog parts is 5kV. Multi-pin plates from 1.5" to 9" square have been manufactured in volume, with current capacities from 10 to 1200 amps. Our flexible technology affords far greater design latitude than our competitors and provides customers with custom solutions at off-the-shelf prices.

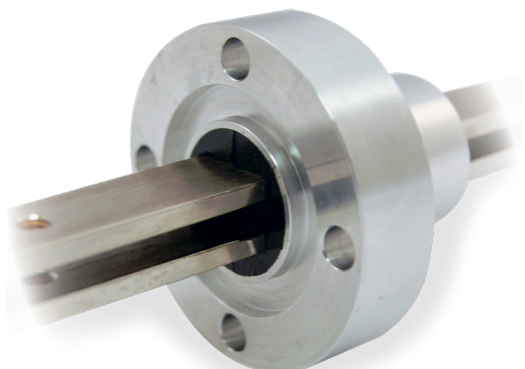
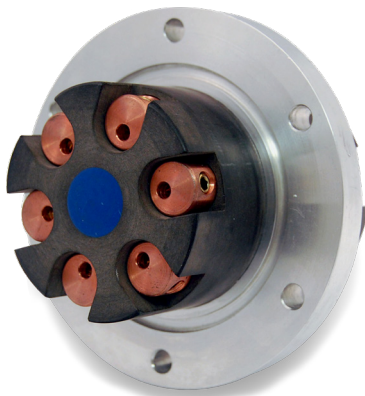
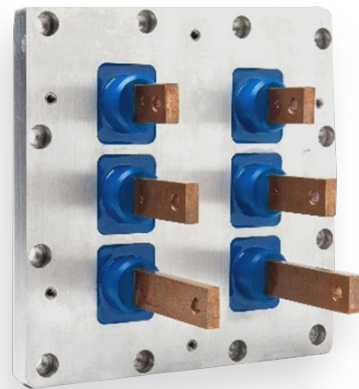
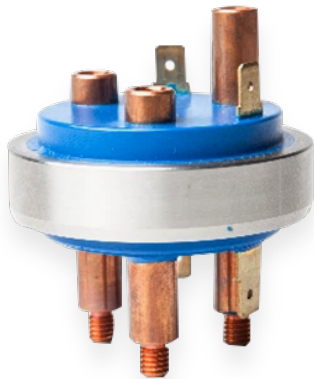
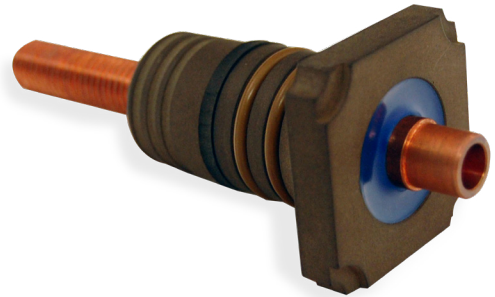
Alterative NPT Designs

Stud Thread	Housing Thread	Maximum Current
2-56	1/8" NPT	18 amps
4-40	1/8" NPT	24 amps
6-32	1/4" NPT	33 amps
8-32	1/8" NPT	45 amps
10-24	3/8" NPT	58 amps
1/4"-20	3/4" NPT	105 amps

*\*Please call with application details to ensure proper selection of housing and conductor.  
\*Radial "O" ring designs are also available.*

## CUSTOMIZE TO YOUR NEEDS

Customization is our specialty. We are able to utilize metric connectors. Contact a sales engineer today to start designing a custom solution to your exact specifications.





## To Order

You may place an order directly with our sales staff at +1 973.627.8230.

## Technical Questions or Design Assistance

Please call our Product Engineering Department +1 973.627.8230.

## Standard Terms and Conditions

Domestic shipments: All products are shipped F.O.B. Randolph, NJ, USA. We offer a prompt payment discount of 1% 10 days, Net Cash 30 days to customers who have had their credit approved. Prices and specifications are subject to change without notice. Foreign shipments: All terms and conditions will be negotiated at time of order placement.

## Note to Purchaser

While we believe all statements, representations, and recommendations are correct and reliable, we cannot guarantee accuracy or completeness. It is the user's responsibility to determine and confirm suitability for use. All sales of Douglas Electrical Components' products are subject to our Standard Terms and Conditions. A copy of our Standard Terms and Conditions may be obtained by calling

our Sales Administration Office at +1 973.627.8230. Douglas Electrical will provide Special Certificates of Compliance, Test Reports, and certificates of origin but only if they are requested at the time of order.

## Warranty

All products are warranted to be free of defects in materials and workmanship for a period of twelve months from date of shipment. Our liability, unless explicitly changed by us, is strictly limited to the repair or replacement (at our option) of defective parts. Any defective parts must be returned to us to receive credit or replacement. Returned product must be accompanied by an RMA number. RMA numbers may be obtained by calling our Sales Administration Office at +1 973.627.8230.

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