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HD SERIES ■ HIGH DENSITY MULTIPLE WIRE FEEDTHROUGHS



Conax Technologies' HD Series high density mechanically sealed feedthrough assemblies allow multiple insulated wires to be installed through a single port. These assemblies consist of a stainless steel tube swaged over bundled 24 AWG solid Teflon-insulated thermocouple wire or copper wires. The thermocouple pairs are available with or without junctions. HD assemblies provide an excellent means to pass numerous thermocouple, RTD and low voltage instrumentation wires through a vessel wall without breaching the wall in multiple locations.

HD assemblies can be supplied with or without a Conax Technologies' "soft seal" gland for pressure/vacuum sealing. When equipped with a gland, the tube passes through the sealing gland, providing a continuous wire feedthrough. Assemblies configured with a PG gland can accommodate up to 60 conductor wires or 30 thermocouple pairs. An MHM gland can accommodate multiple HD assemblies to seal up to 240 conductors or 120 thermocouple pairs. Assemblies can also be furnished with split glands or MK glands.

The stainless steel tube is provided with a 4-1/2" nominal length standard. These feedthroughs are normally furnished with 24 inches of leadwire on each end. Longer lengths may be furnished as required.

- Temperature Range: -112° F to +250° F (-80° C to +120° C)
- Vacuum Rating: 5×10^{-6} mmHg @ 68° F (20° C)

- Leak Rate: 1×10^{-9} He scc/sec @ 68° F (20° C)
- Voltage Rating: 100 Vdc
- Amperage Rating: 500mA
- Feedthrough Pressure Rating @ 68° F (20° C): 5000 psig (345 bar). For gland pressure ratings, see the applicable gland section. The Assembly Pressure Rating is limited by the lowest element in the assembly (gland or feedthrough).

Conax Technologies can provide numerous options for the management of wires in our sealing assemblies:

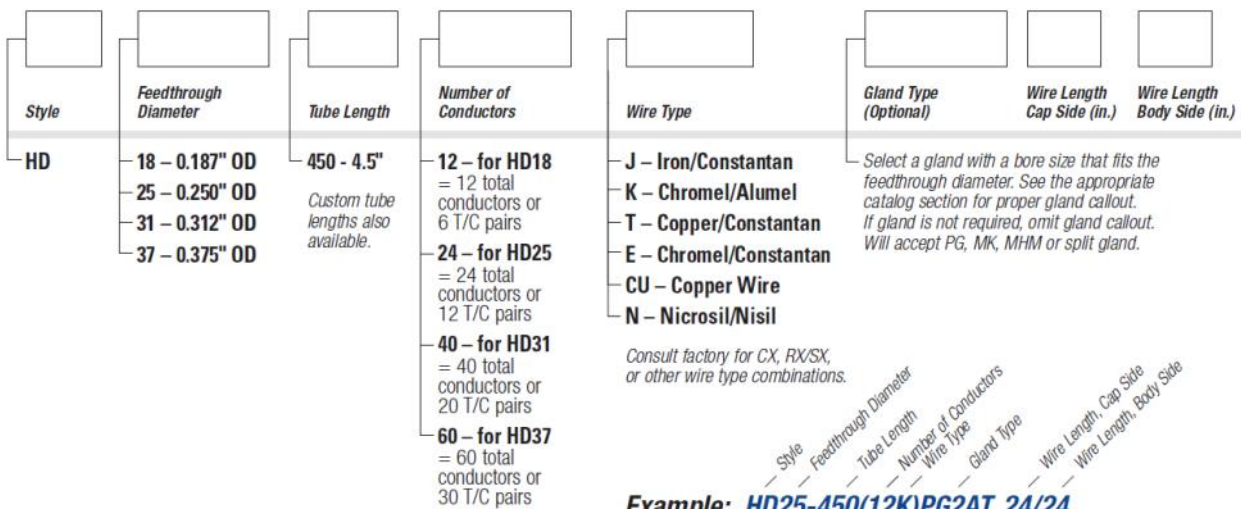
- Wire Markers with customer nomenclature for easy wire identification of multiple wires
- Twisting of wires in pairs or other groupings for easier identification and management
- Wire Jackets/Sleeving
- Hot Junctions – exposed or encapsulated

Please consult your Conax Technologies sales engineer for details.

HD Capacities

Model	Feedthrough Diameter		Number of Conductors
	IN	MM	
HD18	0.19	4.7	12
HD25	0.25	6.4	24
HD31	0.31	7.9	40
HD37	0.38	9.5	60

Catalog Numbering System



Example: HD25-450(12K)PG2AT, 24/24 (with gland)

Example: HD25-450(12K), 24/24 (without gland)

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HIGH DENSITY MULTIPLE WIRE FEEDTHROUGHS ■ HD SERIES



High density assemblies with a PG or MK gland provide a continuous sealed wire feedthrough accommodating up to 60 wires or 30 thermocouple pairs.



High density assemblies can be fitted with thermocouple junctions and/or connectors as demonstrated in this assembly for the pharmaceutical industry.



Multiple high density units passing through the multiple holes of an MHM gland produce an assembly capable of accommodating hundreds of wires or thermocouple pairs.

High density gland assemblies can be fitted with KF, CF, SFA and ASME/ANSI style flanges for use in sanitary, vacuum or industrial applications.



Conductor Capacity per Gland

Sealing Gland	Feedthroughs per Gland	HD18	HD25	HD31	HD37
MPG-187	1	12			
PG2-187	1	12			
PG2-250	1		24		
PG4-187	1	12			
PG4-250	1		24		
PG4-312	1			40	
PG4-375	1				60
PG5-375	1				60
MHM5-187	2	24			
	3	36			
	4	48			
	5	60			
	6	72			
MHM5-250	2		48		
	3		72		
	4		96		
MHM6-187	8	96			
	10	120			
	12	144			
	14	168			
MHM6-250	5		120		
	6		144		
	7		168		
MHM6-312	2			80	
	3			120	
	4			160	
MHM6-375	2				120
	3				180
	4				240

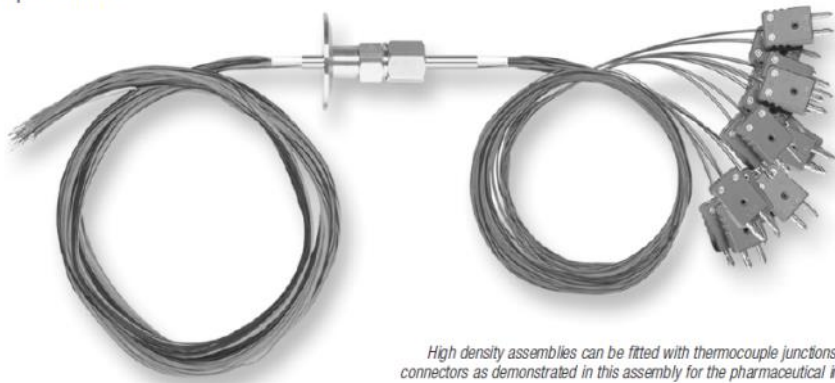
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High Density (HD) Thermocouple Feedthrough for Thermal Validation or Mapping of a Pharmaceutical Freeze Dryer, Sterilizer or Lyophilizer

Conax Technologies' High Density (HD) feedthrough assembly is designed to provide a sealed penetration into Freeze Dryers, Sterilizer or Lyophilizer for thermal mapping and operational / performance qualification of the process.

The High Density Validation Assembly design has been tested for use in pharmaceutical applications where seal integrity is maintained when thermally cycled to -72°C (-97.6°F). It allows multiple insulated thermocouple wires to be installed through a single port. These assemblies consist of a stainless steel tube swaged over bundled 24 AWG solid Teflon-insulated thermocouple or copper wires. Thermocouple pairs are available with or without junctions. The HD design provides an un-equalled means to pass numerous thermocouple, RTD or low voltage instrumentation wires through a vessel wall without breaching the wall in multiple locations.

Smaller 30 AWG wires can be welded to the process side pigtail for enhanced thermal response.



High density assemblies can be fitted with thermocouple junctions and/or connectors as demonstrated in this assembly for the pharmaceutical industry.

HD Assemblies can be supplied with or without a Conax 'soft seal' gland for pressure/vacuum sealing. When equipped with a gland, the tube passes through the compression seal fitting, providing a continuous mechanically sealed wire feedthrough. Assemblies configured with a PG gland can accommodate up to 60 conductors or 30 thermocouple pairs. An MHM gland can accommodate multiple HD assemblies to seal up to 240 conductors or 120 thermocouple pairs.