

UNITHERM™ HEATED HOSE PRODUCTS

SERIES 400 ELECTRICALLY HEATED CONVOLUTED CORE HOSE

MODEL 410- FLUOROPOLYMER CORE (TO 400°F)

MODEL 450/460 - STAINLESS STEEL CORE HOSE (TO 625°F)

Description –

UNITHERM's series 410 hoses feature a helical convoluted core, electrically heated for operation to 400°F (204°C). Model 450 & 460 feature helical convoluted stainless steel core electrically heated for operations to 625°F (329°C). All models feature good flexibility and can be operated in continuous movement conditions. The heating element is nickel alloy wire, spiral wound to extremely close tolerances, providing optimum temperature uniformity throughout the entire heated length. Hoses come standard with ½" thermal insulation and are available with a tough extruded polyurethane jacket for outdoor service or an abrasion resistant, braided polyester sleeve for indoor use. All hoses are supplied electrically and hydraulically complete, ready to use.

Electrical Specifications:

- Operating Voltage

Any single-phase voltage to 480 VAC. Depending on length hoses may be ordered to operate on 240 or 480 VA,C three-phase.

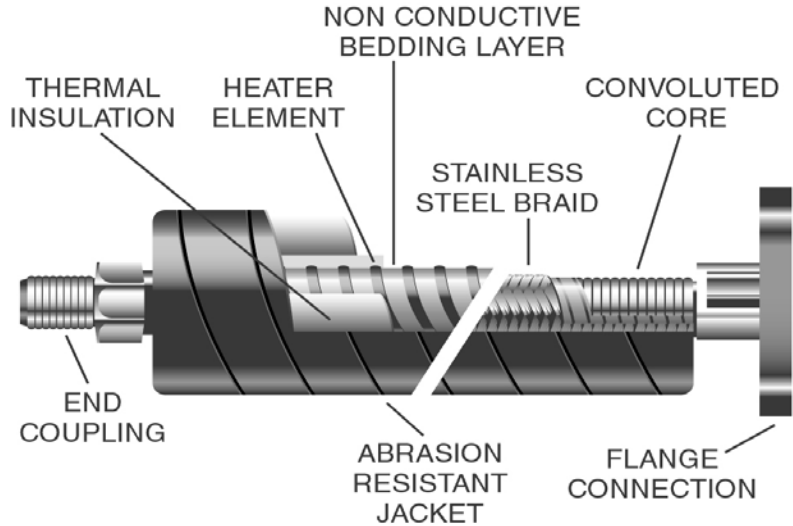
- Power Density

Up to 200 watts/ft. Power Density is based on the desired operating temperature, lowest ambient temperature and size of hose. Our engineering department, aided by computer programs determines the power density required for your application.

Temperature Control

Series 400 hoses must be controlled (except for the self-limiting (SL) version) to maintain the desired operating temperature. A temperature sensor is installed during construction and, unless otherwise specified, will be installed 3' from the power of the hose.

Dekoron/Unitherm's core expertise is thermal management. We build devices to maintain temperature or retard heat loss. Our expertise is what goes around the core. The expertise we attain in core material selection comes from successful use in similar applications. The ultimate responsibility for material selection is the customer's responsibility.



This is one of many constructions available - Consult factory for options.

How to order Series 400

Model No.	Tube Size	Hose Length Feet	Temperature Sensor	Operating Voltage	Fittings
410 Fluoropolymer Core	From Specification Chart	1ft. increments	J= Type J Thermocouple K= Type K Thermocouple T= Thermistor	Indicate actual Voltage	L=JIC female Swivel J/TA= JIC female swivel with tube adapter
450 S.S. Std. Pressure			R= RTD (100 OHM) N= No Sensor		M= Male Pipe (NPT) T=Tube for Compression Fitting
460 S.S. High Pressure					

EXAMPLE

410-8-10ft.K-115-J

Typical Application	
Application	Type of use
Product Transfer	Hot Melt Adhesives, Urethanes, Oil, Fats, Chemicals, Wax
Viscosity Control	Asphalt, Tar, Fats, Oil, Wax, Chemicals

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Model 410 CONVOLUTED FLUOROPOLYMER Low Pressure to 400°F (204°C)

Tube Size	Outside Diameter	Nominal Finished Diameter	Maximum Operating Pressure*	Minimum Bend Radius	Nominal Weight Lb/Ft.
8	1/2"	2.00"	1100 PSI	12"	.6
12	3/4"	2.35"	1000 PSI	14"	.7
16	1"	2.62"	1000 PSI	16"	.8
20	1 - 1/4"	3.00"	800 PSI	18"	1.0
24	1 - 1/2"	3.25"	600 PSI	20"	1.5
32	2"	3.75"	400 PSI	24"	1.9
48	3"	4.75"	225 PSI	30"	3.2
64	4"	5.75"	150 PSI	48"	4.5

Model 450 CONVOLUTED STAINLESS STEEL to 625°F (329°C)

Tube Size	Finished Diameter	Maximum Operating Pressure		Minimum Bend Radius	Nominal Weight Lb/Ft.
		400°F	625°F		
1/4"	1.75"	1600 PSI	1400 PSI	10"	.43
3/8"	1.85"	1600 PSI	1400 PSI	12"	.50
1/2"	2.10"	1160 PSI	1015 PSI	14"	.54
3/4"	2.30"	880 PSI	770 PSI	16"	.80
1"	2.50"	720 PSI	630 PSI	18"	1.10
1 - 1/4"	3.00"	680 PSI	595 PSI	20"	1.30
1 - 1/2"	3.25"	416 PSI	364 PSI	24"	1.60
2"	3.80"	384 PSI	336 PSI	26"	2.0
2 - 1/2"	4.30"	240 PSI	210 PSI	30"	2.4
3"	4.80"	200 PSI	175 PSI	34"	2.8
4"	5.80"	160 PSI	140 PSI	38"	3.3

Model 460 HIGH PRESSURE to 625°F (329°C)

Tube Size	Finished Diameter	Maximum Operating Pressure		Minimum Bend Radius	Nominal Weight Lb/Ft.
		400°F	625°F		
1/4"	1.75"	2400 PSI	1960 PSI	10"	.45
3/8"	1.85"	2240 PSI	1960 PSI	12"	.52
1/2"	2.10"	1680 PSI	1470 PSI	14"	.56
3/4"	2.30"	1200 PSI	1050 PSI	16"	.82
1"	2.50"	1000 PSI	875 PSI	18"	1.12
1 - 1/4"	3.00"	660 PSI	595 PSI	20"	1.32

Construction

Core Material	Model 410 CONVOLUTED FLUOROPOLYMER Model 450 & 460 STAINLESS STEEL
Reinforcement	Model 410 100% Stainless Steel Braid Model 450 100% Stainless Steel Braid Model 460 Multiple Stainless Steel Braids
Heating Element	Constant Power Density and Self-Limiting
Electrical Insulation	Model 410 Fiberglass reinforced, silicone rubber Model 450 & 460 Fiberglass/Polyamide Film
Thermal Insulation	1/2" reinforced fiberglass
External Jacket	Indoor Service – Abrasion resistant braided polyester sleeve Outdoor Service – tough, extruded flame-retardant polyurethane
Fittings	JIC Female Swivel (37° seat) Male pipe (NPT) Floating Flange
Power/Control Cable	Standard length is six (6) feet. Longer lengths are available. Optional electrical connectors can be provided.