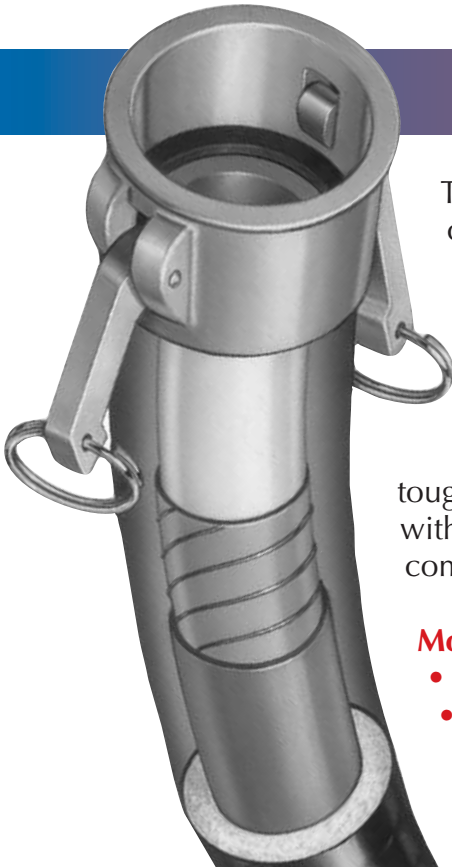


TECHNICAL HEATERS

ELECTRICALLY HEATED SERIES 600 RUBBER HOSES



The Model 600 incorporates various core materials designed to be compatible with the product being conveyed. The most common cores are EPDM, SBR and neoprene. The hose features a built-in electric heating element which is machine-wound to close tolerances to assure the uniform heating so important in the efficient transfer of thick, viscous substances. In most freeze protection applications, thermal insulation is not required, thus eliminating a compressible exterior surface and adding to overall durability. These hoses feature a tough, scuff-resistant jacket. They are available in any length up to 1000 feet with one voltage input, and are supplied hydraulically and electrically complete, ready for use.

Model 600 Hoses are in daily use in a wide variety of applications,

- Water and waste treatment plants.
- Dust suppression systems for bulk transfer of coal, iron ore, limestone and other commodities being conveyed in cold climates.
- Mild acids and chemical transfer.
- Recreational parks and vehicles.

- Liquid sugar, animal fats, vegetable oil and other food by-products. Please note: FDA approved cores are used in all food handling and potable water applications.
- Chemicals and petroleum products.
- Tars and asphalts.
- Urethane coatings and packaging.

WATER AND WASTE
FDA FOOD TRANSFER
ACIDS TRANSFER



TECHNICAL HEATERS, INC.

CONSTRUCTION

CORE	Natural or Synthetic rubber	ELECTRICAL INSULATION	Reinforced Ribber
HEATING ELEMENT	Spiral Wound resistance Wire	THERMAL INSULATION	High Temp Fiberglass (not required for freeze protection)
		EXTERNAL JACKET	Abrasion Resistant Sleeving, Extruded Polyurethane Jacket or EPDM Jacket

ELECTRICAL SPECIFICATIONS

OPERATING VOLTAGE:

Any single phase voltage to 480 VAC. Depending on length, hoses may be ordered to operate on 240 or 480 VAC, 3 phase.

POWER DENSITY:

Power density is based on the desired operating temperature, ambient temperature and size of hose. Our engineering staff will help you determine wattage necessary to maintain temperature required for your application.

POWER/CONTROL CABLE:

Standard length is 4 feet. Longer lengths are available.

TEMPERATURE CONTROL:

Series 600 heat/Line Hoses must be controlled to maintain the desired operating temperature and to ensure operation within design limits. A sensor for the controller is installed in the hose during construction, and unless otherwise specified, is located 2 ft. from the lead end. For very close temperature control, a solid state proportional controller is recommended.

In freeze protection applications, the hose maybe controlled using a built-in thermostat. If the hose current does not exceed 12 amps, the thermostat maybe wired in series with the heater circuit, and will turn power on when the temperature drops to 45°F (7°C). In higher current applications the thermostat is used to signal an auxiliary control relay/contractor.

AVAILABLE OPTIONS



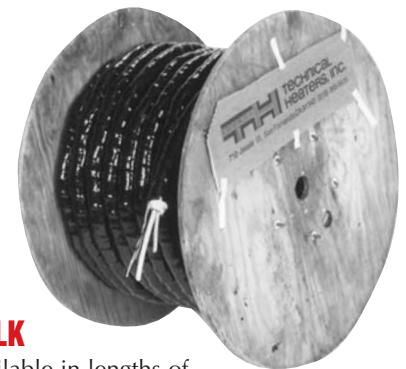
SELF-REGULATING HOSE:

Custom designed to maintain your minimum operating temperature without the need of a controller.



MODULAR:

Hydraulically in series, electrically in parallel. Suitable for individual use or in combinations.



BULK

Available in lengths of 100 feet or more, to be cut to length as required.

- Messenger wires available in different gauges & colors.

- Multiple Sensors
- Bulk

- Color coded
- Varied watt density
- Other types Teflon core

MODEL 600 • Physical Characteristics

HOSE SIZE I.D.	NOMINAL O.D.	MINIMUM BEND RADIUS	MAXIMUM WORKING PRESSURE	NOMINAL WEIGHT
1/4" 6.35MM	3/4" 19.05MM	3" 7.62CM	200 PSI 14.06Kg/CM ²	.24 lb/ft. .35 kg/m
3/8" 9.52MM	7/8" 22.32MM	3-1/2" 8.89CM	200 PSI 14.06Kg/CM ²	.26 lb/ft. .39 kg/m
1/2" 12.7MM	13/16" 20.64MM	4" 10.16CM	200 PSI 14.06Kg/CM ²	.29 lb/ft. .43 kg/m
1/2" 12.70MM	1-1/4" 31.75MM	5" 12.70CM	200 PSI 14.06Kg/CM ²	.42 lb/ft. .62 kg/m
3/4" 19.00MM	1-1/2" 3.81CM	6" 15.24CM	200 PSI 14.06Kg/CM ²	.63 lb/ft. .93 kg/m
1" 25.4MM	1-3/4" 4.45CM	7" 17.78CM	150 PSI 10.55Kg/CM ²	.73 lb/ft. 1.09 kg/m
1-1/4" 31.75MM	2" 5.08CM	8" 20.32CM	150 PSI 10.55Kg/CM ²	.84 lb/ft. 1.25 kg/m
1-1/2" 3.80CM	2-1/2" 6.35CM	9" 22.86CM	150 PSI 10.55Kg/CM ²	1.08 lb/ft. 1.61 kg/m
2-1/2" 6.35CM	3-1/4" 8.26CM	12" 30.48CM	150 PSI 10.55Kg/CM ²	1.70 lb/ft. 2.53 kg/m
3" 7.62CM	3-1/2" 8.89CM	18" 45.72CM	150 PSI 10.55Kg/CM ²	2.10 lb/ft. 3.13 kg/m
4" 10.16CM	4-1/2" 11.43CM	24" 60.96CM	150 PSI 10.55Kg/CM ²	3.22 lb/ft. 4.79 kg/m

WATT DENSITY REFERENCE

PROCESS CONTROL With Insulation				
ΔT	WATTS/FT. HOSE SIZE			
	1/2"	1"	2"	3"
75°F (24°C)	4	6	9	12
100°F (38°C)	6	8	11	15
125°F (52°C)	8	10	13	19
150°F (66°C)	10	12	16	23
175°F (79°C)	12	14	19	29
200°F (93°C)	14	16	23	37

WATT DENSITY REFERENCE

FREEZE PROTECTION No Thermal Insulation				
ΔT	WATTS/FT. HOSE SIZE			
	1/2"	1"	2"	3"
50°F (10°C)	10	20	35	45
75°F (24°C)	15	25	40	55
100°F (38°C)	20	30	45	65
125°F (52°C)	25	35	50	75



TEMPERATURE CONTROLLERS

SPECIFICATIONS	MODEL 7000	MODEL 8000 and 8001
Line Supply Voltage	120/241 VAC +10%-15% 50/60 HZ	120/241 VAC +10%-15% 50/60 HZ
Thermocouple Input	Type J (Iron/Constantsin)	Type J (Iron/Constantsin) Type K (Chromel/Alumel)
Control Output	25 amps (SCR Design)	25 amps (SCR Design)
Temperature Range	Dual Scale: 0-800°F -17 - 425°C	Model 8000: 0 -999°F Model 8001: 0 - 500°C
Meter Indication	Deviation Meter ±50°F ±30°C	Filter LED Digital Display
Calibration Accuracy	±0.6% of span @ calibrated points	±0.4% of span @ calibrated points
Set Point Repeatability	±0.3% of span	±0.1 to 0.2% of span
Adjustment Proportional Band (gain)	5° to 40°F	0 -5% of span
Operating Ambient	30°F to 130°F	30°F to 130°F
T/C Break Protection	Built-in Fail Safe Open Sensor	Upscale. Built-in Fail Safe Open Sensor. Zero Output

CHOICE OF FITTINGS



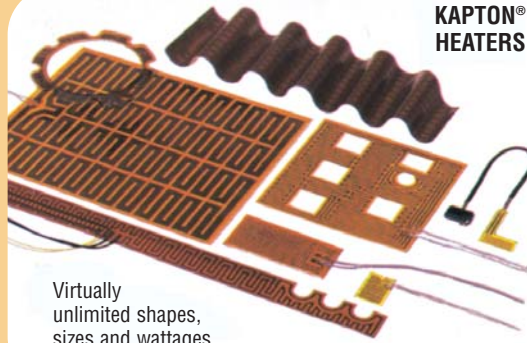
Anyone of the following couplings may be specified when ordering our Model 600 Hoses. Cam & Groove Quick Disconnects are also available upon request. Available materials include steel, brass, aluminum and stainless steel.

3-DIMENSIONAL HEATERS



Fit the contour of your part or product perfectly.

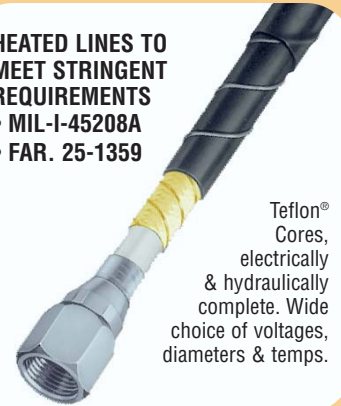
KAPTON® HEATERS



Virtually unlimited shapes, sizes and wattages.

HEATED LINES TO MEET STRINGENT REQUIREMENTS

- MIL-I-45208A
- FAR. 25-1359



Teflon® Cores, electrically & hydraulically complete. Wide choice of voltages, diameters & temps.

HEATERS BONDED TO MATING METAL PARTS



Provide a perfect fit between heater and part for complete sub-assemblies of high efficiency.

Leaders in the development of electrically heated products since 1968

Since 1968, we have pioneered the creation of a wide spectrum of the electrically heated products that have become indispensable elements in today's industrial world. Our broad line of electrically heated hoses and tubing has made us an industry leader in that field: with such products prominently employed in pollution monitoring and control, gas sampling, freeze protection and the efficient transfer of viscous products in the petrochemical, food processing and chemical fields.

We have been in the forefront of the heater and flexible circuit industry since its inception. Working with the engineering staffs of the world's leading corporations, we have played a leading role in developing the materials, technologies and manufacturing techniques that have brought these products from a few simple devices to the almost limitless array of sophisticated units that now play a vital role in contemporary space exploration, advanced medical research and the electronic processing of information.

MODULAR UNITS...hydraulically in series and electrically in parallel...use them individually or in combinations.

REPLACEMENT OR REPAIR, in fast turn-around times!

HOT MELT HOSES

Built to your spec's or off-the-shelf. Unequaled inventories.



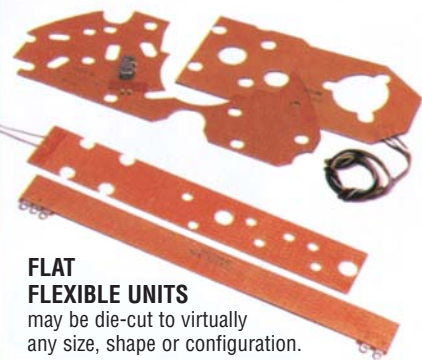
SILICONE RUBBER HEATERS



Single, rugged and economical, in a wide range of shapes, sizes, and insulations.

FLAT FLEXIBLE UNITS

may be die-cut to virtually any size, shape or configuration.



LARGE DIAMETER HEATED HOSE

With smooth or convoluted cores for:

- WASTE WATER
- FREEZE PROTECTION

SAMPLING HOSE

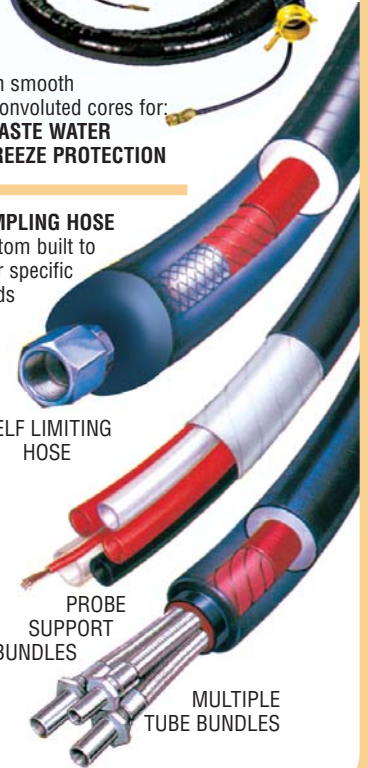
Custom built to your specific needs



SELF LIMITING HOSE

PROBE SUPPORT BUNDLES

MULTIPLE TUBE BUNDLES



BULK HOSE

In high and low temperature designs and in lengths of 100 ft. or more. Parallel circuitry allows you to cut the hose to the exact lengths you need.



Technical Heaters, Inc. / THERMOLAB

710 Jessie St., San Fernando, CA 91340 • 818/365-9435 • 800/394-9435 • Fax: 818/361-2788

www.TechHeat.com • E-Mail: sales@TechHeat.com

