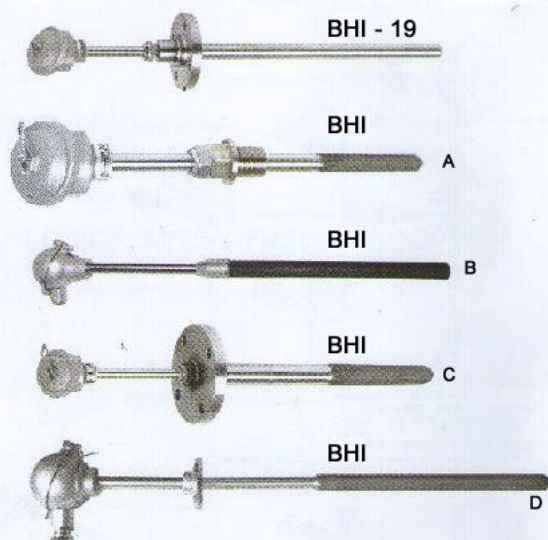


THERMOCOUPLE

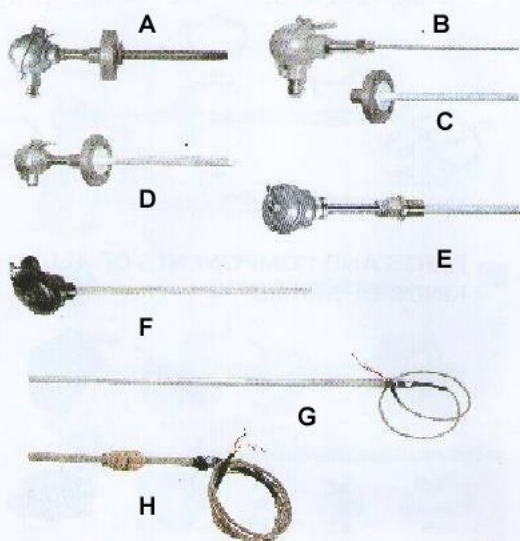
High accurate Thermocouples for variety of application

JTM BASE METAL THERMOCOUPLE / TYPE - DESIGN



Type	: J, K, T, E, N
Element size (MI)	: 0.25, 0.5, 1, 1.5, 3, 4.5, 6, 8 (mm), other sizes on request
(Non-MI)	: 1.2, 1.6, 2, 2.5, 3.2 (mm), other sizes on request
Protection Sheath	: Seamless SS304, SS 321, SS316, SS 310, HRS 446, INCONEL 600/800, Nickel, Hastalloy, Titanium, Ceramic 610 & C-799, Silicon Carbide Monel etc.
Configuration	: Simplex / Duplex / Multipoints

JTM NOBLE METAL THERMOCOUPLE / TYPE - DESIGN



BHI -17	
Type	: R, S, B
Element size	: 0.30, 0.35, 0.4, 0.45, 0.5 (mm) other on request
Protection Sheath	: Ceramic (C-799), 610, Inconel, Silicon carbide, etc.
Configuration	: Simplex / Duplex / Multipoints.
Special	: Tri level Thermocouples, Special cladding (Thimble) etc. Hot Blast & Stove dome Thermocouples, Furnace Temperature Thermocouples

SPECIAL THERMOCOUPLE



- BHI - 16
- Miniature Thermocouples with minimum 0.25mm Dia
 - Squeezd Thermocouples with small tip dia
 - Trilevel Thermocouples
 - Coated Thermocouples (PTFE, Tungsten Carbide, Ceramic, Steatite etc.
 - Thermocouple with IBR Approved Thermowells
 - High Temperature Ceramic Spouts Limit.
 - Special sensors as per ASTM-E235

RESISTANCE TEMPERATURE DETECTORS

High accurate RTDs for General and Critical applications

JTM MINERAL INSULATED RTDs

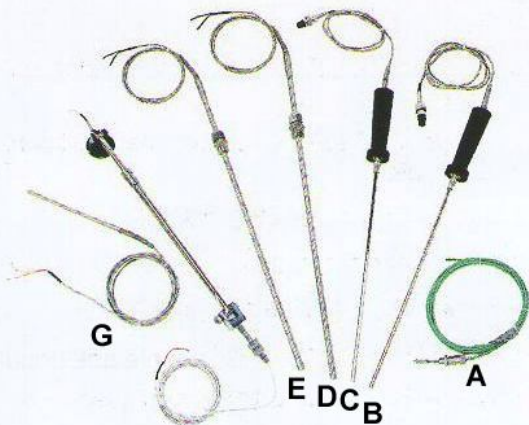
BHI - 20



Type	:	Pt 100, 200, 500, 1000, copper 50,53. etc
Element size (MI)	:	Wire wound ceramic encapsulated Wire wound Glass encapsulated Thin film ceramic encapsulated
Connection	:	2, 3, 4 wire
Accuracy	:	Class A, B 1/2, 1/3, 1/5, 1/10 DIN
Protection Sheath	:	SS 304, SS 321, SS 316, SS 310, Inconel 600/800, HRS 446, Hastalloy, Monel Etc

JTM SPECIAL RTDs

BHI - 19



- Slide shoe Bearing RTDs
- Vibration proof RTDs for Bearing & DG sets
- Motor & Transformer winding temperature RTDs
- Handheld & Probe in various designs
- RTDs with IBR approved Thermowells
- Strap on RTDs for nuclear
- High Temperature RTDs upto 650°C
- High Accuracy RTDs upto 1/10 DIN
- Semi Standard PRTs.

THERMOWELLS AND PROTECTION TUBES

A wide choice of Thermowells and variety of Protection tubes like Refractory, Stainless Steel, special Ni alloy protection tubes are available for various applications

JTM THERMOWELLS

JTM-15



Material	:	SS304, SS 316, SS 316L, SS 321 HRS 446, INCONEL 600/800, 601 Hastalloy, Monel, Alloy 20 Titanium etc
Type	:	Drilled barstock, Fabricated
Construction	:	Tapered, Straight
Process connection	:	Screwed, Flanged

PROTECTION TUBES

BHI-12



CeramTec
Germany

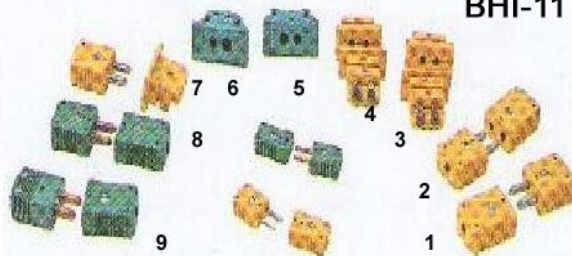
CERAMICS

Material	: Recrystallised Alumina 99.7%
Type	: KER 710 (C-799)
Length	: 350, 530, 600, 650, 740, 900, 1030, 1200 1430 mm etc.
OD x ID	: 6x4, 8x5, 10x6, 12x8, 15x10, 20x15 24x18mm etc.
Insulating Tubes	: 2/4/6 Holes etc.
OD	: 2.8, 3.5, 5.5, 8.5, etc.

ACCESSORIES

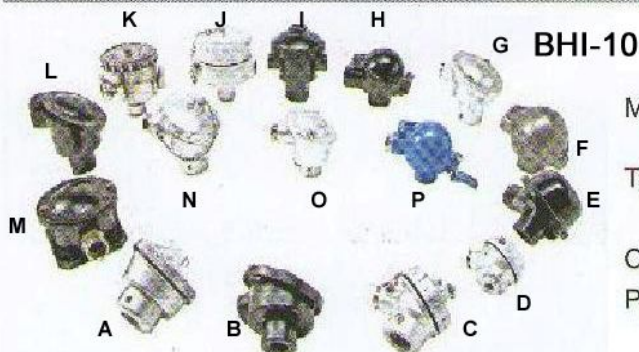
CONNECTORS

BHI-11



Plug and jack compensated connectors for thermocouples.
J,K,R,S,B,T,E Types
Standard, Miniature, Panel mounted, Simplex, Duplex
Material : Glass filled Nylon and Ceramic
Colour coding : various standards

CONNECTION HEADS



Material	: Die cast Aluminium, Stainless Steel, Plastic etc.
Type	: A, B, AA, DNAG, KNE etc. Single entry, double entry, miniature
Cable entry	: 3/4" ET, 1/2" NPT/BSP
Protection class	: IP 67, Ex-proof II A/B, II C

ELECTRONICS

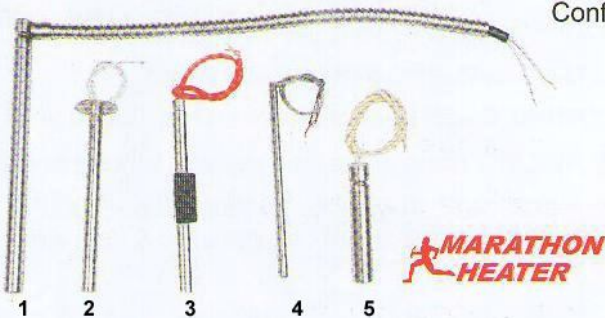


- Temperature indicators - Panel mounted, hand held
- Temperature controllers
- Universal controllers
- Signal Isolators
- Signal Converters RS 232 / 485
- Head mounted transmitters
- Temperature Scanners
- Recorders etc.

INDUSTRIAL HEATERS

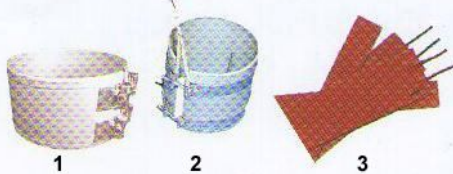
Marathon Heater (I) Pvt. is Joint Venture between Marathon Heater Inc.,USA & Tempsens Instruments for manufacturing of high quality Industrial Heaters. Marathon Heater is the largest manufacturer of Industrial heaters in USA.

HIGH WATT DENSITY CARTRIDGE HEATER



Configurations : Swaged in Leads, Crimped on Leads, Post terminals, Right Angle Leads, Teflon Seal, Silicon Rubber Seal, Epoxy Seal, Swaged in Braid, Right Angle Stainless Steel Braid, SS Flexible Conduit, Hex head pipe fittings, Flanges etc.

MICA BAND AND SILICON RUBBER HEATER HEATERS



High quality Mica Band and Silicon Rubber Heater. Custom orders as well as carrying a large variety of stock items available for immediate shipping.

CABLES FOR TEMPERATURE SENSORS & INSTRUMENTATION

BHI-21



Compensating and Extension Cables for thermocouples J,K,T,E,N,R,S,B Types. RTD Cables in three wire & four wire configuration for simplex and six & eight wire for duplex are available.

Wire Gauge : 14 to 36 gauge (AWG/SWG)
Conductor : Solid / Multistrand
Insulation : Single and double fibre glass, teflon, ceramic fibre, silica fibre, SS braided, PVC etc.
Protection : Armored / Unarmored

Other Cables for Signal, Control and Instrumentation are available with variety of insulation and various configurations

WIRE INSULATION IDENTIFICATION AND APPLICATION GUIDE

INSULATION CODE	INSULATION		APPEARANCE OF THERMOCOUPLE GRADE WIRE	TEMP. RANGE INSULATION	ABRASION RESISTANCE	FLEXIBILITY	WATER SUBMERSION	RESISTANCE TO:	
	OVERALL	CONDUCTORS						FLAME	HUMIDITY
P	Polyvinyl Chloride (PVC)	Polyvinyl Chloride (PVC)		40 to 105°C	GOOD	EXCELLENT	GOOD	GOOD	GOOD
T	PTFE or PFA/FEP	PTFE or PFA/FEP		267 to 260°C	EXCELLENT	GOOD	EXCELLENT	EXCELLENT	EXCELLENT
K	Kapton	Kapton		267 to 316°C	EXCELLENT	GOOD	EXCELLENT	EXCELLENT	EXCELLENT
S	Silicon	Silicon		40 to 200°C	GOOD	GOOD	EXCELLENT	GOOD	EXCELLENT
F	Fiber Glass Braid	FTFE/PFA or Fiber Glass		73 to 260°C	GOOD	GOOD	EXCELLENT	EXCELLENT	EXCELLENT
CF	Ceramic Fiber	Ceramic Fiber		73 to 871°C	POOR	GOOD	POOR	EXCELLENT	EXCELLENT
SF	Silica	Silica		73 to 1038°C	POOR	GOOD	POOR	EXCELLENT	FAIR