

KM-EL 軟式電熱加熱布包係將電熱線，溫控開關，及測溫熱電偶等排繞安裝於耐高溫布上，再與軟質之耐高溫布及毯等材料車縫成一體，由外層出線與控制器連接而成。

KM-EL 特點:

- 依被加熱物之形體將電熱及保溫製作一體，以粘扣帶或束帶固定，以接頭直接與控制器連接即可，安裝簡易，
- 保溫隔熱效果明顯，低表面溫度，高電熱效率，低電能損耗，依呎吋需求訂製，加熱面緊貼被加熱元件，溫度分佈平均，
- 加熱溫度可設計至 1000°C，
- 內外層高溫布及車縫線，黏扣帶均可用於無塵室環境，
- 高溫布，保溫材及車縫線均為不可燃材，或耐燃材質。
- 可依需求提供具防潮防濕功能之電熱層，且厚度可薄至約 1.2mm，
- 備有多種不同材質之電熱線，高溫布，保溫毯，車縫線等，可依使用條件靈活選用最適切之組合，

KM-EL Flexible Heating Jackets are composed of Heating element, thermostat, thermocouple, high temperature fabrics, and Insulation blanket (as an integral part by sewing) and power cable/connector for connecting to electric controller.

BENEFITS AND FEATURES OF KM-EL:

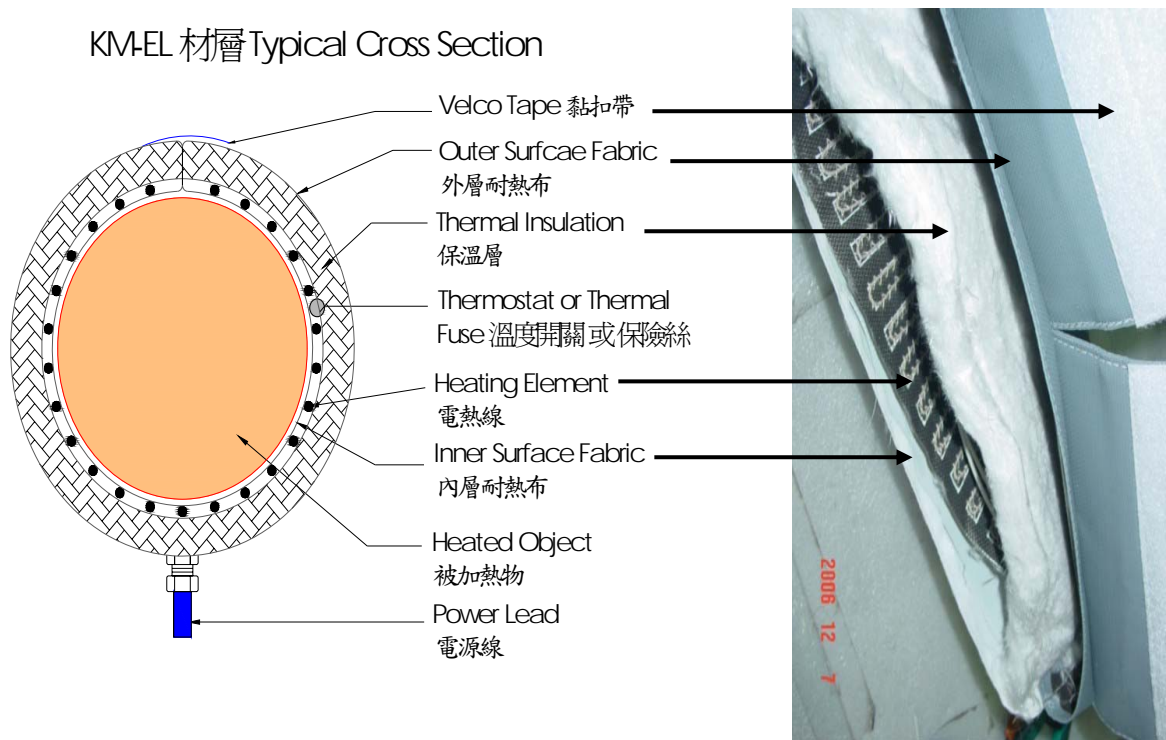
- By integrating heating and thermal insulation into one part, KM-EL are fabricated to fit contour of heated objects with Velco or fastening belts/D-rings for easy installation.
- Good thermal insulation and electric energy efficiency, low surface temperature, and uniform heat distribution,
- All materials used are either non-combustible or, at least, flame-resistant,
- High temperature capability to 1000°C,
- Selection from Comprehensive materials of heating element, fabrics, Insulation blanket, sewing thread for most appropriate Combination of KM-EL
- **Clean room compatible**
- **Heating pad can be supplied with moisture/splash proof with 1.2mm thick only.**



安全保護及電源 Built-in security devices and Power

電源	100 to 240Vac	功能
溫度開關	80 to 160 °C (每 5 °C 一級), 200 °C , 550 °C, 710 °C	當測溫熱電偶或控制器異常時, 確保加熱溫度不過熱
溫度保險絲	220 °C 或 270 °C 依需求選用	當測溫熱電偶或控制器異常時, 自動斷線, 防止持續加熱及意外
LED 斷電指示燈	綠色或橘色	閃爍表正常加熱, 如持續不亮, 表加熱布包損壞
Power	100 to 240Vac	Function
Thermostat	80 to 160 °C (5 °C per increment), 200 °C, 550 °C, 710 °C	Open (disconnect) the power circuit at preset temperature, to eliminate over heating. Close (reconnect) the circuit when temperature drop.
Thermal Fuse	220 °C, 270 °C,	Will disconnect the power circuit permanently At pre-set temperature.
LED Power Indicator	Green or Orange colored	Blinking for normal. Off for failure

KM-EL 材層 Typical Cross Section



使用材質 Materials Used

依使用條件(操作溫度及環境要求---例:無塵) 選用適合者.

名稱	材質	耐溫 °C	特性
電熱線	Ni-Cr Alloy	--	選用世界知名品牌及合適等級, 以加工成所需之阻值(0.8Ω/m to 4000Ω/m) 並確保其耐用性, 依選用電熱線阻值及排繞電熱線密度, 單位面積功率可在 0.1W/cm² 至 0.8W/cm²
電熱線絕緣批覆	特級玻纖	650	不含高溫易劣化之成份(如矽膠), 並經多次驗證其耐溫及適用性
	KM1100 fiber	900	
	KM1200 fiber	1100	

使用材質 Materials Used 依使用條件(溫度及環境要求--例:無塵)選用適合者.

名稱及材質	耐溫 °C	特性	適用位置		
			內層	外層	保溫層
100% 鐵氟龍布	290	難燃, 符合 Class 10 無塵等級, 不發煙/味及其它異物, 僅 0.08mm 厚, 適形性佳, 耐候, 耐 UV, 不沾黏粉塵外物, 防水, 可輕易保養擦拭恢復外觀, 耐強酸鹼	◎	◎	X
鐵氟龍玻纖布	290	難燃, 符合 Class 1 或 Class 10 無塵等級, 不發煙/味及其它異物, 柔軟, 適形性佳, 耐候, 耐 UV, 不沾黏粉塵外物, 防水, 可輕易保養擦拭恢復外觀, 耐一般酸鹼	◎	◎	X
鍍鋁玻纖布	200	難燃, 符合 Class 1 無塵等級, 表面鍍鋁品質及貼合性遠優於其它同類產品(皺摺少, 不易剝落), 不沾黏粉塵外物, 防水, 可輕易保養擦拭恢復外觀	X	◎	X
KM1200 布	1200	不燃, 在 1200°C 仍保有所需之強度, 韌性及絕緣	◎	△	X
KM700 布	650	不燃, 在 650°C 仍保有所需之強度, 韌性及絕緣	◎	△	X
KM600 毯	500	不燃, 低熱傳, 保溫隔熱性佳, 初次加熱會產生煙及異味	X	X	◎
KM1000 毯	900	不燃, 低熱傳, 保溫隔熱性佳, 特殊處理使其高溫下之煙及異味量遠低於其它品牌,	X	X	◎

◎ : 非常合適 △: 尚可 X: 不適

Materials selected based on the operation temperature and other requirements (ie: clean room)

Part Name	Material	Temp. Resistance	Features		
Heating Element	Ni-Cr	--	Select the appropriate material from world leading manufacturer for required durability and Resistance (from 0.8Ω/m to 4000Ω/m), By selection the element Resistance and winding pitch, the wattage of KM-EL can be from 0.1W/cm ² 至 0.8W/cm ²		
Outer Braided Insulation for Heating element	Special formulated Glass fiber	650°C	Contain no material (ie. Silicone) that will de-grade at high temperature,		
	KM1100 fiber	900°C			
	KM1200 fiber	1100°C			
Material	Temp. °C	Features	Applications		
			Inner Layer	Outer Layer	Insul-at ion
100% PTFE Film	290	Flame Resistance, Class 10 Cleanroom Standard, No smoke/odor at high temperature, 0.08mmthick, soft , weathering and UV resistance, non-stick surface, water Oil resistance, easy for cleaning, excellent chemical resistance	◎	◎	X
PTFE coated glassfiber cloth	290	Flame Resistance, Class 1 or Class 10 Cleanroom Standard, No smoke/odor at high temperature,, soft , weathering and UV resistance, non-stick surface, water & Oil resistance, easy for cleaning, chemical resistance	◎	◎	X
Aluminized glassfiber cloth	200	Flame Resistance, Class 1 Cleanroom Standard, superior surface aluminization (no de-lamination, smooth surface) non-stick surface, water & Oil resistance, easy for cleaning,	X	◎	X
KM1200 Cloth	1200	Non-combustible, Retain required strength , flexibility , insulation at 1200°C	◎	△	X
KM700 布	650	Non-combustible, Retain required strength , flexibility , insulation at 650°C	◎	△	X
KM600 毯	500	Non-combustible, good thermal insulation, off smoke and smell when being heat up (one time only)	X	X	◎
KM1000 毯	900	Non-combustible, good thermal insulation, much less off smoke and smell than other brands.	X	X	◎

◎ : Excellent △: Fair X: Not Suitable



KM-EL for Elbow 5



KM-EL for 6mm Tube



Liquid Nitrogen Vaporizer
1.4m(H) x 270mm (Dia.)
350C-6KW



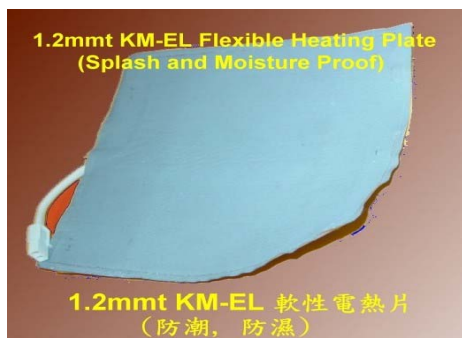
KM-EL 電熱軟管 Heating Hose



KM-EL for Pump



LED 斷電指示燈
LED Power Indicator



1.2mmt KM-EL Flexible Heating Plate
(Splash and Moisture Proof)
1.2mmt KM-EL 軟性電熱片
(防潮, 防濕)



KM-EL Heating Tape