

Solutions for Fluid Technology



油箱加热器

TANK HEATERS

油箱加热器

- 标准加热器有 0.25 kW–5 kW
- 带防爆保护等级或特殊的加热器可按客户要求
- 可提供油箱加热器选型计算软件

应用领域

应用于液压单元中预热矿物基液压油,使其快速达到所需温度.理想的介质粘度可以降低液压元件的磨损

VR



VR 型带磁力固定的浸入式加热器,无须安装,保护等级 IP 68.集成了温度调节装置,标准型在达到 40°C 时自动关断.

Immersion heaters with magnetic clamp, no mounting effort, ideal solution to retrofit existing installations. Protection IP 68. Integrated thermostat with switch-off temperature 40°C (standard).


PTHK 90



PTHK 90型插入式筒状加热器(筒内带有一个插入式加热棒),保护等级 IP 65.这种加热棒更换时,无需放油.连接螺纹型号 G 1 1/2" 和 G 2".

Cartridge screwed-in tank heater with tube insert. Protection IP 65. This type of heating insert can be changed without evacuation of the oil tank. Screwed thread G 1 1/2" and G 2".

TANK HEATERS

- Standard devices of 0.25 kW–5 kW available
- Devices for -protection and special devices on request
- A calculation programme for determination of the required tank heater is available

FIELD OF APPLICATION

Preheating of hydraulic oil on mineral basis for a fast reaching of the operating temperature at hydraulic units. The optimum viscosity decreases the wear of the hydraulic components.

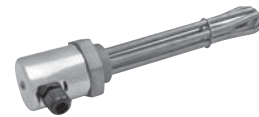
PTHK 91 TH



PTHK 91 TH型带温度控制的插入式筒状加热器,有内部调温和外部调温两种.标准的可调温度范围 0°C 到 85°C.保护等级 IP54.这种加热管的更换,无需放油.连接螺纹型号 G 2".

Cartridge screwed-in tank heater with temperature adjustment, external or internal regulation. Standard adjustable 0°C up to 85°C. Protection IP 54. This type of heating insert can be changed without evacuation of the oil tank. Screwed thread G 2".

RHK



RHK 型插入式管状加热器,保护等级 IP 54.连接螺纹型号 G 1 1/2".

Tube screwed-in heater, protection IP 54. Screwed thread G 1 1/2".

RHK-TH



RHK-TH 型带温度控制的插入式管状加热器,有内部调温和外部调温两种.标准的可调温度范围 0°C 到 85°C.保护等级 IP 54.连接螺纹型号 G 1 1/2".

Tube screwed-in heater with temperature adjustment, external or internal regulation. Standard adjustable 0°C up to 85°C. Protection IP 54. Screwed thread G 1 1/2".

VR型带磁力固定的浸入式加热器



- 用于预热液压油
- 无需安装, 是对已有液压系统改造的理想方案
- 水平或立式安装, 最低液位可以很低
- 需要与介质接触的部分, 分别用不锈钢 (14571), 黄铜和塑料作为材质
- 本体为焊接而成
- 通过磁力固定, 可以安装在油箱的底部或侧壁上
- 保护等级 IP 68
- 集成的温度控制器, 标准型可在 40°C 时自动关断
- 集成了温度限制器
- 表面负荷: 介质为HLP时, 1.2 W/cm²
介质为HFA/HFC/HFD-R时, 0.6 W/cm²
- 耐温达 -20°C

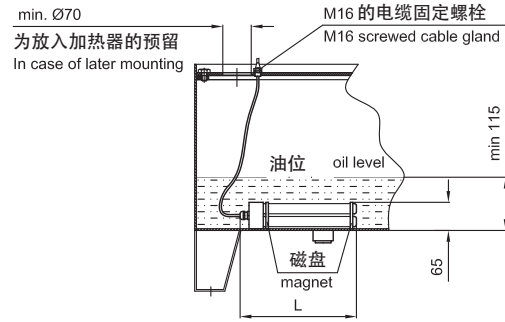
结构与材料

- 电加热元件外部有不锈钢管 (1.4571) 作为保护
- 电缆接头材质为黄铜
- 三相塑料电缆, 4 米长, 带 M16 的电缆固定螺栓, 适用于矿物油, 植物油, 以及 HFA 和 HFC 溶液。

安装

将加热器水平安装在油箱底部, 或者立式安装在油箱的侧壁。可通过磁力固定。电缆必须从液面以上高度引出油箱, 比如, 可将电缆通过 M16 的支撑螺母, 固定在油箱或者箱盖上, 然后从箱盖上引出油箱。油箱加热器在工作时, 必须保证在介质液面 15 mm 以下, 否则加热器和介质都有可能被破坏。在系统改造时, 如果加热器要从油箱盖放入, 那么油箱盖上的开孔直径至少要达到 70 mm。安装必须到位, 不可以吊在电缆上。另外, 加热器的磁力固定装置也会将油箱内铁质颗粒积聚起来。

VR IMMERSION HEATERS WITH MAGNETIC CLAMP



- For preheating of hydraulic oil
- No mounting effort, ideal solution to retrofit existing installations
- Horizontal or vertical arrangement, low minimum oil level
- Medium touched pieces stainless steel (14571), brass and plastics respectively
- Welded type
- Magnetic clamps for fixing at tank bottom/partition wall
- Protection IP 68
- Integrated thermostat with switch-off temperature 40°C (standard)
- Integrated temperature limiter
- Surface charge: 1.2 W/cm² for HLP
0.6 W/cm² for HFA/HFD-R
- Temperature resistant up to -20°C

CONSTRUCTION/MATERIALS

- Heating elements protected by tubes made of stainless steel (14571)
- Cable connection made of brass
- Three-pole plastic cable, length 4m, with screwed cable gland M16 resistant to mineral oil, vegetable oil and lubricants as well as HFA and HFC liquids

MOUNTING

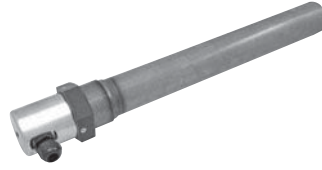
Insert the heater either horizontally to the bottom or vertically towards the tank wall. Fixation by magnetic clamp. The cable must be led outside above the oil level, e.g. through the cover and fixed at the tank or the cover by a screwed cable gland M16. During operation the tank heater must be covered by at least 15 mm of the medium, otherwise the medium and/or the heater might be damaged or destroyed. In case of retrofitting, the opening of the tank cover which the heater is led through, must amount to 70 mm at least. On no account it should be hung up on the connection cable. Additionally a "gathering" of iron particles in the tank will be achieved by the integrated magnetic clamps.

产品代码 PART NO.	型号 TYPE	功率 POWER Watt	L mm	电压 VOLTAGE Volt	表面负荷 W/cm ²	自动调温器 THERMOSTAT
1955	VR 125 W/0,6-M	125	200	230 V/AC	0,6 HFA/HFD-R	关断温度40°C (标准) Switch-off temperature 40°C (standard)
1956	VR 250 W/0,6-M	250	300		0,6 HFA/HFD-R	
1957	VR 500 W/0,6-M	500	500		0,6 HFA/HFD-R	
1960	VR 250 W/1,2-M	250	200		1,2 HLP	
1961	VR 500 W/1,2-M	500	300		1,2 HLP	
1962	VR 1000 W/1,2-M	1000	500		1,2 HLP	
1963	VR 250 W/1,2-M	250	300	24 V/DC	1,2 HLP	

- 交货时间短
- 也可以根据要求提供特殊设计
- 也可以提供其他附件, 比如
 - 电源线的保护管
 - 加热进程指示器
- Short term delivery
- Special designs on request
- Accessories on request
 - Protection tube for supply pipe
 - Indicator heating process/ disturbance in external case

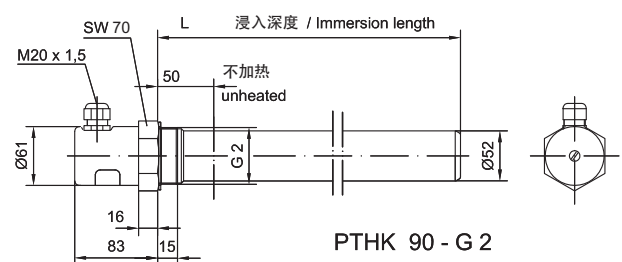
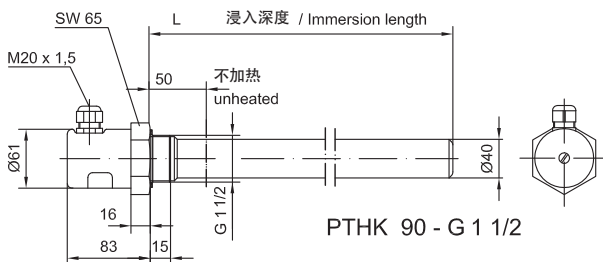
PTHK 90 型插入式筒状加热器

CARTRIDGE SCREWED-IN HEATERS



- 插入式筒状加热器用于预热液压油
- 可替换的陶瓷加热棒 (拆装时, 无需放油)
- 镀锌得钢制端盖
- 用于液位下卧式安装
- 材质: 钢质 (其他材料可根据要求提供)
- 表面负荷: 液压油 1.5 W/cm²
- 保护等级 IP 65
- 不同电源电压的配线图可按要求提供

- Cartridge heaters for preheating of hydraulic oil
- Exchangeable ceramic heating insert (mounting/dismounting possible without evacuation of oil)
- Bright galvanized steel cap
- For horizontal mounting under oil level
- Material: Steel (further materials on request)
- Surface charge 1.5 W/cm² for hydraulic oils
- Protection IP 65
- Wiring schemes for different mains voltages on request



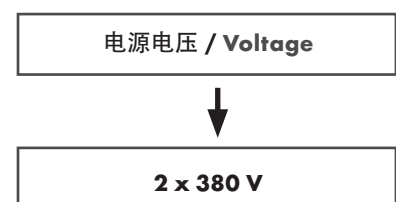
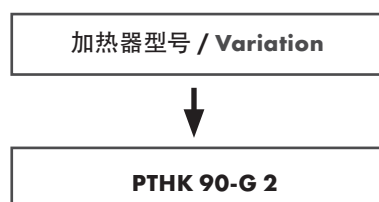
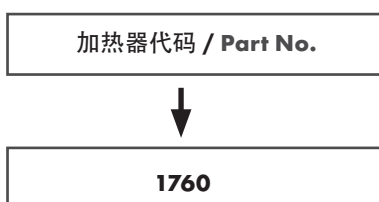
加热器代码 PART NO.	型号 TYPE	功率 POWER Watt	L= 浸入深度 L= IMM. DEPTH mm	电源电压 VOLTAGE Volt
1705*	PTHK 90-G 1 1/2"	400	200	订货时请注明电源电压: In case of order please specify: Variante 1: 1 x 230 V Variante 2: 2 x 380 V Variante 3: 3 x 380 V Variante 4: 2 x 400 V Variante 5: 3 x 400 V
1707*		600	300	
1709*		800	400	
1711*		1000	500	
1713*		1200	600	
1715*		1400	700	
1717		1600	800	
1719		1800	900	
1721		2000	1000	
1723		2200	1100	
1725		2400	1200	
1727		2800	1400	
1729		3200	1600	
1731		3600	1800	
1733		4000	2000	

加热器代码 PART NO.	型号 TYPE	功率 POWER Watt	L= 浸入深度 L= IMM. DEPTH mm	电源电压 VOLTAGE Volt
1750*	PTHK 90-G 2"	500	200	订货时请注明电源电压: In case of order please specify: Variante 1: 1 x 230 V Variante 2: 2 x 380 V Variante 3: 3 x 380 V Variante 4: 2 x 400 V Variante 5: 3 x 400 V
1752*		750	300	
1754		1000	400	
1756		1250	500	
1758		1450	600	
1760		1700	700	
1762		1950	800	
1764		2200	900	
1766		2450	1000	
1768		2700	1100	
1770		2950	1200	
1772		3450	1400	
1774		3900	1600	
1776		4400	1800	
1778		4900	2000	

*) 最多只能接两相电

Voltage two-phase max.

加热器订货示例



ORDERING CODE

如需要油箱加热器的计算软件, 请联系我们:
info@hbe-hydraulics.com

A calculation programme for determination of the required tank heater is available on CD. Please contact us at
info@hbe-hydraulics.com

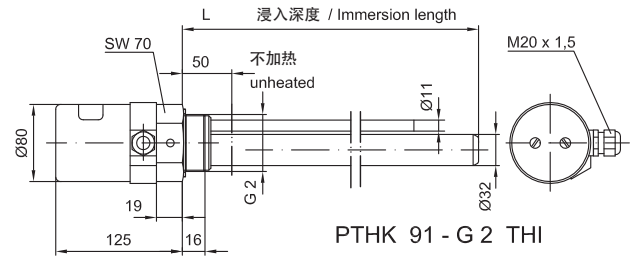
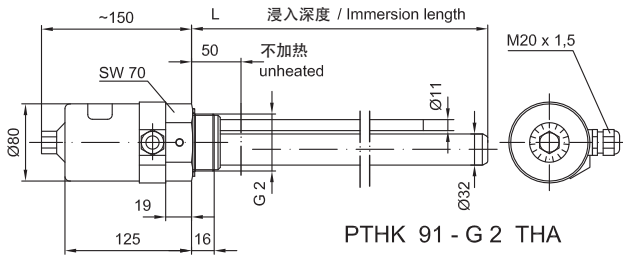
PTHK 91 TH 型带温度控制的插入式筒状加热器

CARTRIDGE SCREWED-IN HEATERS WITH TEMPERATURE ADJUSTMENT



- 用于预热液压油的插入式筒状加热器
- 内置(THI)和外置(THA) 单相温度调控装置, 0°-85°C, 16 安培
- 可替换的陶瓷加热棒 (拆装时无需放油)
- 镀锌的钢制端盖
- 要求液位下卧式安装
- 材质: 钢制(其他材料可按要求提供)
- 表面负荷: 对于液压油 1.5 W/cm²
- 对于THA, 保护等级 IP 54; 对于THI, 保护等级 IP 65
- 不同电源电压的配线图可按要求提供

- Cartridge heaters for preheating of hydraulic oil
- Temperature adjustment for internal (THI) and external regulation (THA), single-pole 0°-85°C, 16 amp
- Exchangeable ceramic heating insert (mounting/dismounting possible without evacuation of oil)
- Bright galvanized steel cap
- For horizontal mounting under oil level
- Material: Steel (further materials on request)
- Surface charge 1.5 W/cm² for hydraulic oils
- Protection IP 54 for THA, IP 65 for THI
- Wiring schemes for different mains voltages on request



加热器代码 PART NO.	型号 TYPE	功率 POWER Watt	L= 浸入深度 L= IMM. DEPTH mm	电源电压 VOLTAGE Volt
1800*	PTHK 91-G 2" THA (外置温度装置) (external regulation)	450	300	订货时请注明电源电压: In case of order please specify: Variante 1: 1 x 230 V Variante 2: 2 x 380 V Variante 3: 3 x 380 V Variante 4: 2 x 400 V Variante 5: 3 x 400 V
1802*		600	400	
1804*		750	500	
1806*		900	600	
1808*		1050	700	
1810		1200	800	
1812		1350	900	
1814		1500	1000	
1816		1580	1100	
1818		1730	1200	
1820		1880	1300	
1822		2030	1400	
1824		2180	1500	
1826	2330	1600		

加热器代码 PART NO.	型号 TYPE	功率 POWER Watt	L= 浸入深度 L= IMM. DEPTH mm	电源电压 VOLTAGE Volt
1801*	PTHK 91-G 2" THI (内部调温) (internal regulation)	450	300	订货时请注明电源电压: In case of order please specify: Variante 1: 1 x 230 V Variante 2: 2 x 380 V Variante 3: 3 x 380 V Variante 4: 2 x 400 V Variante 5: 3 x 400 V
1803*		600	400	
1805*		750	500	
1807*		900	600	
1809*		1050	700	
1811*		1200	800	
1813		1350	900	
1815		1500	1000	
1817		1580	1100	
1819		1730	1200	
1821		1880	1300	
1823		2030	1400	
1825		2180	1500	
1827		2330	1600	

*) 最多只能接两相电 Voltage two-phase max.

加热器订货示例



ORDERING CODE

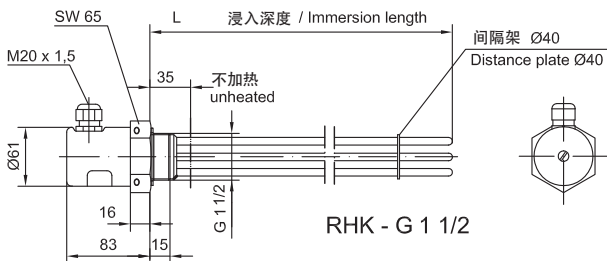
如需要油箱加热器的计算软件, 请联系我们:
info@hbe-hydraulics.com

A calculation programme for determination of the required tank heater is available on CD. Please contact us at
info@hbe-hydraulics.com



- 管式插入加热器用于预热液压油
- 镀锌的钢制端盖
- 液位下卧式安装
- 材质: 钢制 (其他材料可按要求提供)
- 表面负荷: 对于液压油 1.5 W/cm²
- 保护等级 IP 65
- 不同电源电压的配线图可按要求提供

- Tube screwed-in heater for preheating of hydraulic oil
- Bright galvanized steel cap
- For horizontal mounting under oil level
- Material: Steel (further materials on request)
- Surface charge 1.5 W/cm² for hydraulic oils
- Protection IP 65
- Wiring schemes for different mains voltages on request

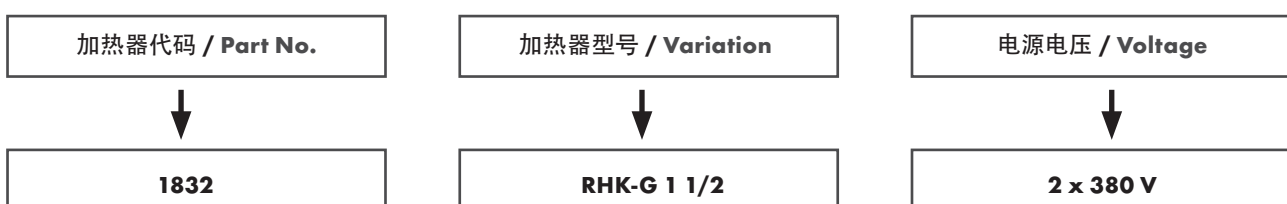


加热器代码 PART NO.	加热器型号 TYPE	功率 POWER Watt	L= 浸入深度 L= IMM. DEPTH mm	电源电压 VOLTAGE Volt
1830*	RHK-G 1 1/2"	380	200	订货时请注明电源电压: In case of order please specify: Variante 1: 1 x 230 V Variante 2: 2 x 380 V Variante 3: 3 x 380 V Variante 4: 2 x 400 V Variante 5: 3 x 400 V
1832*		500	250	
1834		750	350	
1836		990	450	
1838		1450	650	
1840		1825	800	
1842		2300	1000	

*) 最多只能接两相电 Voltage two-phase max.

加热器订货示例

ORDERING CODE



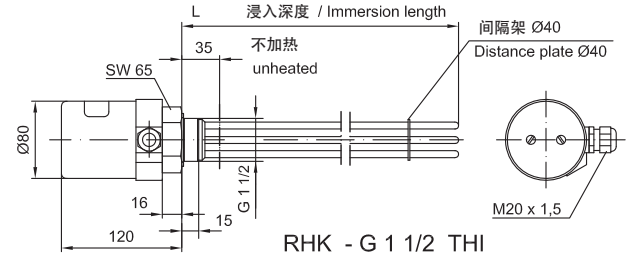
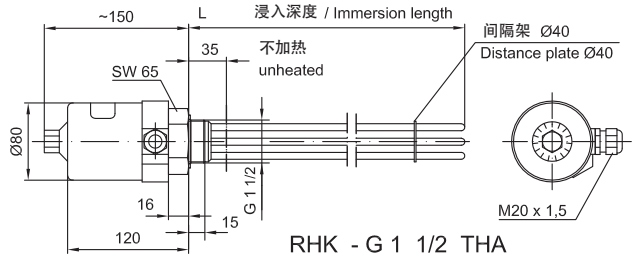
如需要油箱加热器的计算软件, 请联系我们:
info@hbe-hydraulics.com

A calculation programme for determination of the required tank heater is available on CD. Please contact us at
info@hbe-hydraulics.com



- 管式插入加热器用于预热液压油
- 内置(THI)和外置(THA) 单相温度调控装置, 0°-85°C, 16 安培
- 镀锌的钢制端盖
- 液位下卧式安装
- 材质: 钢制 (其他材料可按要求提供)
- 表面负荷: 对于液压油 1,5 W/cm²
- 保护等级 IP 54
- 不同电源电压的配线图可按要求提供

- Tube screwed-in heater for preheating of hydraulic oil
- Temperature adjustment for internal (THI) and external regulation (THA), single-pole 0-85°C, 16 amp
- Bright galvanized steel cap
- For horizontal mounting under oil level
- Material: Steel (further materials on request)
- Surface charge 1.5 W/cm² for hydraulic oils
- Protection IP 54
- Wiring schemes for different mains voltages on request



加热器代码 PART NO.	型号 TYPE	功率 POWER Watt	L= 浸入深度 L= IMM. DEPTH mm	电源电压 VOLTAGE Volt
1860*	RHK-G 1 1/2" THA (外置调温装置) (external regulation)	380	200	订货时请注明电源电压: In case of order please specify: Variante 1: 1 x 230 V Variante 2: 2 x 380 V Variante 3: 3 x 380 V Variante 4: 2 x 400 V Variante 5: 3 x 400 V
1862*		500	250	
1864		750	350	
1866		990	450	
1868		1460	650	
1870		1825	800	
1872		2300	1000	





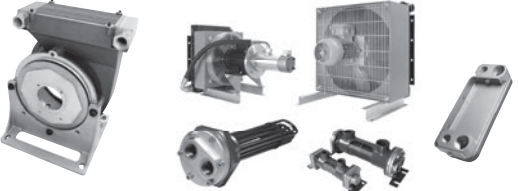


加热器代码 PART NO.	型号 TYPE	功率 POWER Watt	L= 浸入深度 L= IMM. DEPTH mm	电源电压 VOLTAGE Volt
1861*	RHK-G 1 1/2" THI (内部调温) (internal regulation)	380	200	订货时请注明电源电压: In case of order please specify: Variante 1: 1 x 230 V Variante 2: 2 x 380 V Variante 3: 3 x 380 V Variante 4: 2 x 400 V Variante 5: 3 x 400 V
1863*		500	250	
1865		750	350	
1867		990	450	
1869		1460	650	
1871		1825	800	
1873		2300	1000	

*) 最多只能接两相电 Voltage two-phase max.

加热器订货示例

ORDERING CODE



<p>铝制油箱 Oil tanks made of aluminium</p>	
<p>清洗端盖和附件 液位计和温度计 Cleaning covers and further tank accessories Level- and temperature indicators</p>	
<p>油箱加热器 Tank heaters</p>	
<p>钟罩和附件 Bellhousings and accessories</p>	
<p>带冷却器的钟罩 各类换热器 DOC® 钎焊板式换热器 Bellhousing with oil-cooler Heat exchangers DOC® Brazed plate heat exchanger</p>	
<p>SOFTEX® 弹性和无背隙联轴器 SOFTEX® elastic and no backlash shaft couplings</p>	
<p>STAREX® 齿面联轴器 STAREX® flexible couplings</p>	
<p>内燃机联轴器 Diesel engine couplings</p>	