

# 产品目录表 STOCK RANGE 2008

工业加热应用的  
明智的解决方案

*Intelligent solutions  
for industrial heating tasks*



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根据工厂库存发货，我们有权更改技术细节。  
可按要求加工其它尺寸和产品。

*Delivery ex stock. We reserve the right to change technical details.  
Other dimensions and product varieties on request.*



hotrod®

加热棒  
(HHP型)

Cartridge Heaters  
(type HHP)

### 技术数据/ Technical Data

剖面 Ø [mm] <i>profile Ø [mm]</i>	6,5; 8,0; 10,0; 12,5; 16,0; 20,0
剖面 Ø ["] <i>profile Ø ["]</i>	1/4, 3/8, 1/2, 5/8
外套材料 <i>sheath material</i>	不锈钢 <i>stainless steel</i>
加热元件最高外套温度 <i>max. sheath temperature of heating element</i>	750 °C
电阻材料 <i>resistance material</i>	NiCr 8020
高压稳定性 (室温) <i>high voltage stability (at room temperature)</i>	额定电压 <i>at nominal voltage</i> ≤ 24 V 500 V-AC > 24 V 1500 V-AC
绝缘电阻(500 [V-DC] 未加热) <i>insulation resistance (cold at 500 [V-DC])</i>	≥ 5 MΩ
最大漏电流(253 [V-AC] 未加热) <i>max. leakage current (cold at 253 [V-AC])</i>	≤ 0,5 mA
长度误差 <i>length tolerance</i>	± 1,5 % <sup>min.</sup> ± 1 mm
功率误差(未加热) <i>wattage tolerance (cold)</i>	± 10 %
输入电压 <i>input supply voltage</i>	230 V
接线端不加热区长度 <i>length unheated zone connection side</i>	4 – 20 mm
非接线端不加热区长度 <i>length unheated zone bottom side</i>	4 – 9 mm
连接导线选项 <i>connection option</i>	a: 1000 mm 连续玻璃棉绝缘镍导线 b: 1000 mm PTFE-绝缘镍导线压接 c: 1000 mm 硅绝缘镍芯压接 d: 1000 mm 玻璃棉绝缘镍导线压接 a: 1000 mm continuous glass silk insulated Ni-leads b: 1000 mm PTFE-insulated Ni-leads crimped-on c: 1000 mm silicon insulated Ni-leads crimped-on d: 1000 mm glass silk insulated Ni-leads crimped-on

**hotrod® (HHP型/type HHP) Ø 6,5 mm**

产品编号 stock-I.D.	长度 length [mm]	功率/Watt wattage	公差配合 tool scheduling	连接导线* connection leads*
4010404	40	100	H7-孔/H7-hole	a
5010404	40	100	H7-孔/H7-hole	b, c, d
4010405	40	125	紧配合**/tight fit**	a
5010405	40	125	紧配合**/tight fit**	b, c, d
4010410	40	160	紧配合**/tight fit**	a
5010410	40	160	紧配合**/tight fit**	b, c, d
4010411	40	175	紧配合**/tight fit**	a
5010411	40	175	紧配合**/tight fit**	b, c, d
4010415	40	200	紧配合**/tight fit**	a
5010415	40	200	紧配合**/tight fit**	b, c, d
4010504	50	100	H7-孔/H7-hole	a
5010504	50	100	H7-孔/H7-hole	b, c, d
5010505	50	125	H7-孔/H7-hole	b, c, d
4010510	50	160	H7-孔/H7-hole	a
5010510	50	160	H7-孔/H7-hole	b, c, d
4010515	50	200	紧配合**/tight fit**	a
4010517	50	250	紧配合**/tight fit**	a
4010605	60	125	H7-孔/H7-hole	a
5010605	60	125	H7-孔/H7-hole	b, c, d
4010615	60	200	H7-孔/H7-hole	a
5010615	60	200	H7-孔/H7-hole	b, c, d
4010617	60	250	紧配合**/tight fit**	a
5010622	60	315	紧配合**/tight fit**	b, c, d
4010805	80	125	H7-孔/H7-hole	a
5010805	80	125	H7-孔/H7-hole	b, c, d
4010815	80	200	H7-孔/H7-hole	a
4010817	80	250	H7-孔/H7-hole	a
5010818	80	280	H7-孔/H7-hole	b, c, d
4010822	80	315	紧配合**/tight fit**	a
5010822	80	315	紧配合**/tight fit**	b, c, d
5010823	80	350	紧配合**/tight fit**	b, c, d
5011004	100	100	H7-孔/H7-hole	b, c, d
4011010	100	160	H7-孔/H7-hole	a
4011017	100	250	H7-孔/H7-hole	a
4011023	100	350	H7-孔/H7-hole	a
5011026	100	400	紧配合**/tight fit**	b, c, d
4011316	130	220	H7-孔/H7-hole	a
4011323	130	350	H7-孔/H7-hole	a

\*参见第3页/see page 3    \*\*特别针对DIN 286-1/especially to DIN 286-1

**hotrod® (HHP 型/type HHP) Ø 8,0 mm**

产品编号 stock-I.D.	长度 length [mm]	功率/Watt wattage	公差配合 tool scheduling	连接导线* connection leads*
4020404	40	100	H7-孔/H7-hole	a
5020404	40	100	H7-孔/H7-hole	b, c, d
5020407	40	140	H7-孔/H7-hole	b, c, d
4020410	40	160	紧配合**/tight fit**	a
4020415	40	200	紧配合**/tight fit**	a
5020415	40	200	紧配合**/tight fit**	b, c, d
4020417	40	250	紧配合**/tight fit**	a
4020505	50	125	H7-孔/H7-hole	a
4020515	50	200	H7-孔/H7-hole	a
5020515	50	200	H7-孔/H7-hole	b, c, d
4020517	50	250	紧配合**/tight fit**	a
5020517	50	250	紧配合**/tight fit**	b, c, d
4020522	50	315	紧配合**/tight fit**	a
5020522	50	315	紧配合**/tight fit**	b, c, d
5020604	60	100	H7-孔/H7-hole	b, c, d
4020605	60	125	H7-孔/H7-hole	a
5020610	60	160	H7-孔/H7-hole	b, c, d
4020615	60	200	H7-孔/H7-hole	a
5020615	60	200	H7-孔/H7-hole	b, c, d
4020617	60	250	H7-孔/H7-hole	a
5020617	60	250	H7-孔/H7-hole	b, c, d
5220617	60	250	H7-孔/H7-hole	a
4020618	60	280	紧配合**/tight fit**	a
5020622	60	315	紧配合**/tight fit**	b, c, d
5020810	80	160	H7-孔/H7-hole	b, c, d
4020815	80	200	H7-孔/H7-hole	a
5020815	80	200	H7-孔/H7-hole	b, c, d
5020817	80	250	H7-孔/H7-hole	b, c, d
4020822	80	315	H7-孔/H7-hole	a
5020822	80	315	H7-孔/H7-hole	b, c, d
4020826	80	400	紧配合**/tight fit**	a
5020826	80	400	紧配合**/tight fit**	b, c, d
5020830	80	500	紧配合**/tight fit**	b, c, d
5021012	100	180	H7-孔/H7-hole	b, c, d
4021015	100	200	H7-孔/H7-hole	a
4021017	100	250	H7-孔/H7-hole	a
4021022	100	315	H7-孔/H7-hole	a
4021026	100	400	H7-孔/H7-hole	a

\*参见第3页/see page 3    \*\*特别针对DIN 286-1/especially to DIN 286-1

**hotrod® (HHP 型/type HHP) Ø 8,0 mm**

产品编号 stock-I.D.	长度 length [mm]	功率/Watt wattage	公差配合 tool scheduling	连接导线* connection leads*
4021317	130	250	H7-孔/H7-hole	a
5021317	130	250	H7-孔/H7-hole	b, c, d
4021322	130	315	H7-孔/H7-hole	a
4021326	130	400	H7-孔/H7-hole	a
5021326	130	400	H7-孔/H7-hole	b, c, d
4021615	160	200	H7-孔/H7-hole	a

**hotrod® (类型 HHP/type HHP) Ø 10,0 mm**

产品编号 stock-I.D.	长度 length [mm]	功率/Watt wattage	公差配合 tool scheduling	连接导线* connection leads*
4030404	40	100	H7-孔/H7-hole	a
4030405	40	125	H7-孔/H7-hole	a
5030410	40	160	H7-孔/H7-hole	b, c, d
4030415	40	200	紧配合**/tight fit**	a
5030415	40	200	紧配合**/tight fit**	b, c, d
5030417	40	250	紧配合**/tight fit**	b, c, d
4030422	40	315	紧配合**/tight fit**	a
4030504	50	100	H7-孔/H7-hole	a
4030510	50	160	H7-孔/H7-hole	a
4030515	50	200	H7-孔/H7-hole	a
4030517	50	250	H7-孔/H7-hole	a
5030517	50	250	H7-孔/H7-hole	b, c, d
5030522	50	315	紧配合**/tight fit**	b, c, d
4030526	50	400	紧配合**/tight fit**	a
5030526	50	400	紧配合**/tight fit**	b, c, d
4030605	60	125	H7-孔/H7-hole	a
4030612	60	180	H7-孔/H7-hole	a
4030617	60	250	H7-孔/H7-hole	a
5030617	60	250	H7-孔/H7-hole	b, c, d
4030622	60	315	紧配合**/tight fit**	a
5030622	60	315	紧配合**/tight fit**	b, c, d
4030626	60	400	紧配合**/tight fit**	a
4030630	60	500	紧配合**/tight fit**	a
5030630	60	500	紧配合**/tight fit**	b, c, d
4030810	80	160	H7-孔/H7-hole	a
5030815	80	200	H7-孔/H7-hole	b, c, d
5030816	80	220	H7-孔/H7-hole	b, c, d

\*参见第3页/see page 3 \*\*特别针对DIN 286-1/especially to DIN 286-1

**hotrod® (HHP 型/type HHP) Ø 10,0 mm**

产品编号 stock-I.D.	长度 length [mm]	功率/Watt wattage	公差配合 tool scheduling	连接导线* connection leads*
4030817	80	250	H7-孔/H7-hole	a
5030817	80	250	H7-孔/H7-hole	b, c, d
4030822	80	315	H7-孔/H7-hole	a
4030826	80	400	H7-孔/H7-hole	a
4030830	80	500	紧配合**/tight fit**	a
4030835	80	630	紧配合**/tight fit**	a
5031005	100	125	H7-孔/H7-hole	b, c, d
4031016	100	220	H7-孔/H7-hole	a
4031017	100	250	H7-孔/H7-hole	a
5031017	100	250	H7-孔/H7-hole	b, c, d
4031022	100	315	H7-孔/H7-hole	a
5031022	100	315	H7-孔/H7-hole	b, c, d
4031023	100	350	H7-孔/H7-hole	a
4031026	100	400	H7-孔/H7-hole	a
5031026	100	400	H7-孔/H7-hole	b, c, d
4031030	100	500	H7-孔/H7-hole	a
5031030	100	500	H7-孔/H7-hole	b, c, d
4031035	100	630	紧配合**/tight fit**	a
4031044	100	850	紧配合**/tight fit**	a
4031322	130	315	H7-孔/H7-hole	a
5031322	130	315	H7-孔/H7-hole	b, c, d
4031326	130	400	H7-孔/H7-hole	a
4031330	130	500	H7-孔/H7-hole	a
4031335	130	630	H7-孔/H7-hole	a
5031335	130	630	H7-孔/H7-hole	b, c, d
4031343	130	800	紧配合**/tight fit**	a
5031343	130	800	紧配合**/tight fit**	b, c, d
4031626	160	400	H7-孔/H7-hole	a
4031635	160	630	H7-孔/H7-hole	a
5031635	160	630	H7-孔/H7-hole	b, c, d
5031643	160	800	H7-孔/H7-hole	b, c, d
4032026	200	400	H7-孔/H7-hole	a
4032035	200	630	H7-孔/H7-hole	a
5032035	200	630	H7-孔/H7-hole	b, c, d
5032535	250	630	H7-孔/H7-hole	b, c, d
5032543	250	800	H7-孔/H7-hole	b, c, d
5032550	250	1000	H7-孔/H7-hole	b, c, d

**hotrod® (HHP 型/type HHP) Ø 12,5 mm**

产品编号 stock-I.D.	长度 length [mm]	功率/Watt wattage	公差配合 tool scheduling	连接导线* connection leads*
5050415	40	200	H7-孔/H7-hole	b, c, d
4050417	40	250	紧配合**/tight fit**	a
4050426	40	400	紧配合**/tight fit**	a
5050517	50	250	H7-孔/H7-hole	b, c, d
5050522	50	315	H7-孔/H7-hole	b, c, d
4050615	60	200	H7-孔/H7-hole	a
5050615	60	200	H7-孔/H7-hole	b, c, d
5050617	60	250	H7-孔/H7-hole	b, c, d
4050622	60	315	H7-孔/H7-hole	a
5050626	60	400	紧配合**/tight fit**	b, c, d
5050630	60	500	紧配合**/tight fit**	b, c, d
5050815	80	200	H7-孔/H7-hole	b, c, d
4050817	80	250	H7-孔/H7-hole	a
5050817	80	250	H7-孔/H7-hole	b, c, d
4050822	80	315	H7-孔/H7-hole	a
5050822	80	315	H7-孔/H7-hole	b, c, d
4050830	80	500	H7-孔/H7-hole	a
5050830	80	500	H7-孔/H7-hole	b, c, d
4050835	80	630	紧配合**/tight fit**	a
4050843	80	800	紧配合**/tight fit**	a
5050843	80	800	紧配合**/tight fit**	b, c, d
5051022	100	315	H7-孔/H7-hole	b, c, d
4051026	100	400	H7-孔/H7-hole	a
5051026	100	400	H7-孔/H7-hole	b, c, d
4051030	100	500	H7-孔/H7-hole	a
4051035	100	630	H7-孔/H7-hole	a
4051043	100	800	紧配合**/tight fit**	a
5051043	100	800	紧配合**/tight fit**	b, c, d
4051326	130	400	H7-孔/H7-hole	a
4051330	130	500	H7-孔/H7-hole	a
4051335	130	630	H7-孔/H7-hole	a
5051335	130	630	H7-孔/H7-hole	b, c, d
4051343	130	800	H7-孔/H7-hole	a
5051350	130	1000	紧配合**/tight fit**	b, c, d
4051352	130	1250	紧配合**/tight fit**	a
4051630	160	500	H7-孔/H7-hole	a
5051630	160	500	H7-孔/H7-hole	b, c, d

\*参见第3页/see page 3    \*\*特别针对DIN 286-1/especially to DIN 286-1



**hotrod® (HHP 型/type HHP) Ø 12,5 mm**

产品编号 stock-I.D.	长度 length [mm]	功率/Watt wattage	公差配合 tool scheduling	连接导线* connection leads*
4051635	160	630	H7-孔/H7-hole	a
4051643	160	800	H7-孔/H7-hole	a
5051650	160	1000	H7-孔/H7-hole	b, c, d
4051836	180	670	H7-孔/H7-hole	a
4051850	180	1000	H7-孔/H7-hole	a
4052035	200	630	H7-孔/H7-hole	a
5052035	200	630	H7-孔/H7-hole	b, c, d
4052043	200	800	H7-孔/H7-hole	a
5052043	200	800	H7-孔/H7-hole	b, c, d
4052047	200	900	H7-孔/H7-hole	a
4052543	250	800	H7-孔/H7-hole	a
4052547	250	900	H7-孔/H7-hole	a
5053034	300	600	H7-孔/H7-hole	b, c, d
5053054	300	1500	H7-孔/H7-hole	b, c, d

**hotrod® (HHP 型/type HHP) Ø 16,0 mm**

产品编号 stock-I.D.	长度 length [mm]	功率/Watt wattage	公差配合 tool scheduling	连接导线* connection leads*
4060417	40	250	H7-孔/H7-hole	a
5060417	40	250	H7-孔/H7-hole	b, c, d
4060615	60	200	H7-孔/H7-hole	a
4060622	60	315	H7-孔/H7-hole	a
4060626	60	400	H7-孔/H7-hole	a
5060630	60	500	紧配合**/tight fit**	b, c, d
4060635	60	630	紧配合**/tight fit**	a
4060826	80	400	H7-孔/H7-hole	a
4060830	80	500	H7-孔/H7-hole	a
4060835	80	630	H7-孔/H7-hole	a
4060843	80	800	紧配合**/tight fit**	a

**hotrod® (HHP 型/type HHP) Ø 16,0 mm**

产品编号 stock-I.D.	长度 length [mm]	功率/Watt wattage	公差配合 tool scheduling	连接导线* connection leads*
4061026	100	400	H7-孔/H7-hole	a
4061030	100	500	H7-孔/H7-hole	a
4061035	100	630	H7-孔/H7-hole	a
4061043	100	800	H7-孔/H7-hole	a
5061043	100	800	H7-孔/H7-hole	b, c, d
4061050	100	1000	紧配合**/tight fit**	a
5061050	100	1000	紧配合**/tight fit**	b, c, d
4061052	100	1250	紧配合**/tight fit**	a
4061330	130	500	H7-孔/H7-hole	a
4061335	130	630	H7-孔/H7-hole	a
4061343	130	800	H7-孔/H7-hole	a
4061347	130	1000	H7-孔/H7-hole	a
5061347	130	1000	H7-孔/H7-hole	b, c, d
4061635	160	630	H7-孔/H7-hole	a
5061635	160	630	H7-孔/H7-hole	b, c, d
4061643	160	800	H7-孔/H7-hole	a
4061650	160	1000	H7-孔/H7-hole	a
4061652	160	1250	H7-孔/H7-hole	a
5061655	160	1600	紧配合**/tight fit**	b, c, d
4061852	180	1250	H7-孔/H7-hole	a
4062030	200	500	H7-孔/H7-hole	a
4062043	200	800	H7-孔/H7-hole	a
5062043	200	800	H7-孔/H7-hole	b, c, d
4062050	200	1000	H7-孔/H7-hole	a
5062050	200	1000	H7-孔/H7-hole	b, c, d
4062052	200	1250	H7-孔/H7-hole	a
4062061	200	2000	紧配合**/tight fit**	a
4062550	250	1000	H7-孔/H7-hole	a
5062550	250	1000	H7-孔/H7-hole	b, c, d
4062552	250	1250	H7-孔/H7-hole	a
4062555	250	1600	H7-孔/H7-hole	a
4063050	300	1000	H7-孔/H7-hole	a
5063050	300	1000	H7-孔/H7-hole	b, c, d
4063052	300	1250	H7-孔/H7-hole	a
5063052	300	1250	H7-孔/H7-hole	b, c, d
4063054	300	1500	H7-孔/H7-hole	a
4063056	300	1800	H7-孔/H7-hole	a

\*参见第3页/see page 3 \*\*特别针对DIN 286-1/especially to DIN 286-1

**hotrod® (HHP 型/type HHP) Ø 20,0 mm**

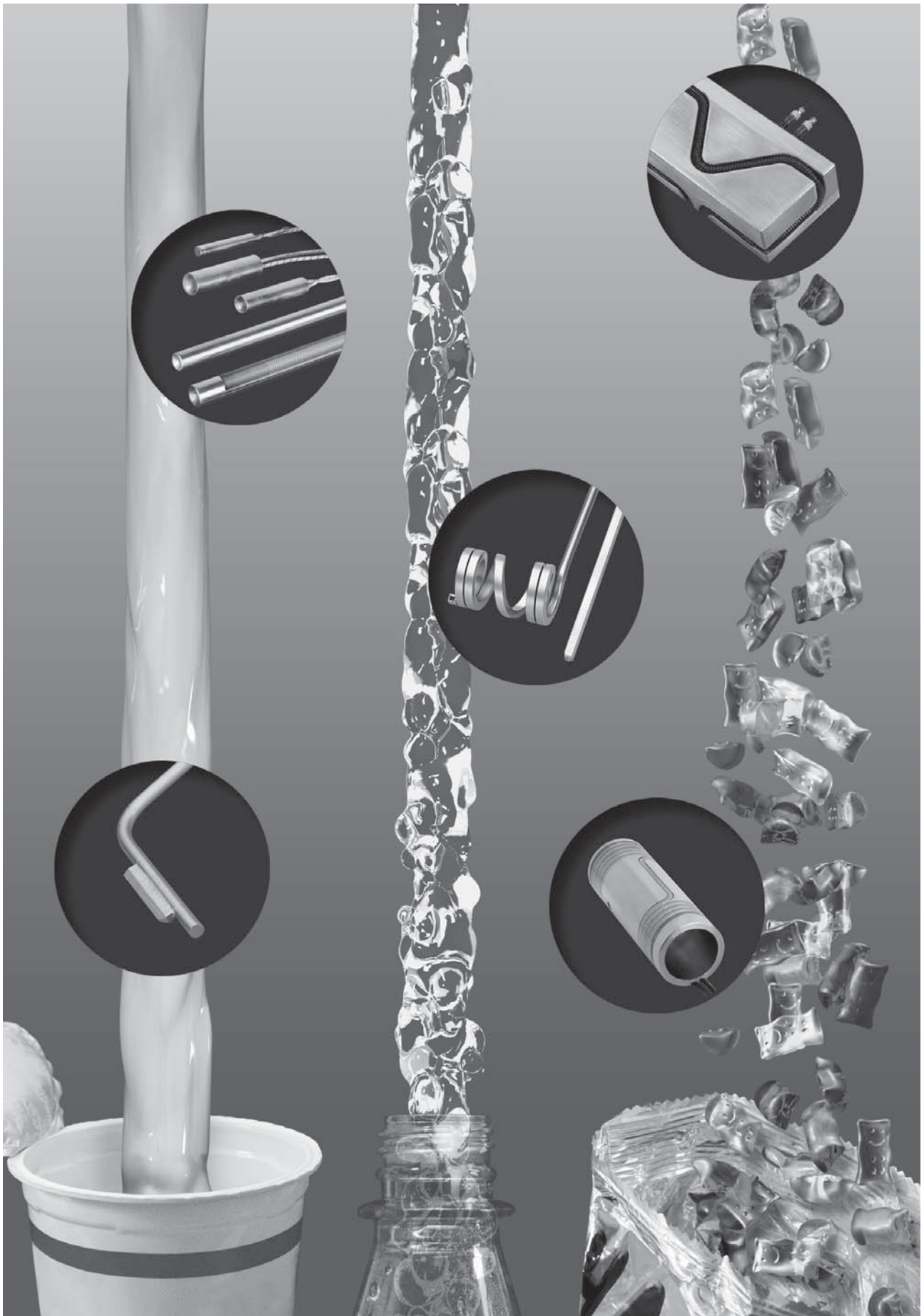
产品编号 stock-I.D.	长度 length [mm]	功率/Watt wattage	公差配合 tool scheduling	连接导线* connection leads*
4070622	60	315	H7-孔/H7-hole	a
5070630	60	500	H7-孔/H7-hole	b, c, d
5070635	60	630	紧配合**/tight fit**	b, c, d
5070643	60	800	紧配合**/tight fit**	b, c, d
4070843	80	800	H7-孔/H7-hole	a
4071050	100	1000	H7-孔/H7-hole	a
5071052	100	1250	紧配合**/tight fit**	b, c, d
4071347	130	900	H7-孔/H7-hole	a
4071643	160	800	H7-孔/H7-hole	a
4071650	160	1000	H7-孔/H7-hole	a
4071652	160	1250	H7-孔/H7-hole	a
4071656	160	1800	紧配合**/tight fit**	a
5071656	160	1800	紧配合**/tight fit**	b, c, d
4072050	200	1000	H7-孔/H7-hole	a
4072055	200	1600	H7-孔/H7-hole	a
5072055	200	1600	H7-孔/H7-hole	b, c, d
4072552	250	1250	H7-孔/H7-hole	a
4072561	250	2000	H7-孔/H7-hole	a
5072561	250	2000	H7-孔/H7-hole	b, c, d
4073055	300	1600	H7-孔/H7-hole	a
4073062	300	2200	H7-孔/H7-hole	a
5073563	350	2500	H7-孔/H7-hole	b, c, d

产品编号 <i>stock-I.D.</i>	长度 <i>length</i> [" (mm)]	功率/ <i>Watt</i> <i>wattage</i>	公差配合 <i>tool scheduling</i>	连接导线* <i>connection leads*</i>
<b>hotrod® (HHP 型/type HHP) Ø 1/4 " (Ø 6,3 mm)</b>				
5110304	1 1/2" (38,1)	100	H7-孔/H7-hole	b, c, d
4110305	1 1/2" (38,1)	125	紧配合**/tight fit**	a
4110311	1 1/2" (38,1)	175	紧配合**/tight fit**	a
4110315	1 1/2" (38,1)	200	紧配合**/tight fit**	a
4110505	2" (50,8)	125	H7-孔/H7-hole	a
4110515	2" (50,8)	200	紧配合**/tight fit**	a
4110617	2 1/2" (63,5)	250	紧配合**/tight fit**	a
4111023	4" (101,6)	350	H7-孔/H7-hole	a
<b>hotrod® (HHP 型/type HHP) Ø 3/8 " (Ø 9,46 mm)</b>				
4130315	1 1/2" (38,1)	200	紧配合**/tight fit**	a
4130317	1 1/2" (38,1)	250	紧配合**/tight fit**	a
4130504	2" (50,8)	100	H7-孔/H7-hole	a
4130517	2" (50,8)	250	紧配合**/tight fit**	a
5130605	2 1/2" (63,5)	125	H7-孔/H7-hole	b, c, d
4130617	2 1/2" (63,5)	250	H7-孔/H7-hole	a
4130726	3" (76,2)	400	紧配合**/tight fit**	a
4131030	4" (101,6)	500	H7-孔/H7-hole	a
4131230	5" (127,0)	500	H7-孔/H7-hole	a
4131530	6" (152,4)	500	H7-孔/H7-hole	a
<b>hotrod® (HHP 型/type HHP) Ø 1/2 " (Ø 12,61 mm)</b>				
5150515	2" (50,8)	200	H7-孔/H7-hole	b, c, d
4150630	2 1/2" (63,5)	500	紧配合**/tight fit**	a
4150726	3" (76,2)	400	H7-孔/H7-hole	a
4150730	3" (76,2)	500	H7-孔/H7-hole	a
4150734	3" (76,2)	600	紧配合**/tight fit**	a
4151026	4" (101,6)	400	H7-孔/H7-hole	a
4151030	4" (101,6)	500	H7-孔/H7-hole	a
4151040	4" (101,6)	750	紧配合**/tight fit**	a
4151230	5" (127,0)	500	H7-孔/H7-hole	a
4151240	5" (127,0)	750	H7-孔/H7-hole	a
4151530	6" (152,4)	500	H7-孔/H7-hole	a
4151534	6" (152,4)	600	H7-孔/H7-hole	a
4151540	6" (152,4)	750	H7-孔/H7-hole	a
4151550	6" (152,4)	1000	H7-孔/H7-hole	a
5151630	6 1/2" (165,1)	500	H7-孔/H7-hole	b, c, d

\*参见第3页/see page 3 \*\*特别针对DIN 286-1/especially to DIN 286-1

产品编号 <i>stock-I.D.</i>	长度 <i>length</i> [" (mm)]	功率/ Watt <i>wattage</i>	公差配合 <i>tool scheduling</i>	连接导线* <i>connection leads*</i>
<b>hotrod® (HHP型/type HHP) Ø 1/2 " (Ø 12,61 mm)</b>				
4151734	7" (177,8)	600	H7-孔/H7-hole	a
5151734	7" (177,8)	600	H7-孔/H7-hole	b, c, d
4152050	8" (203,2)	1000	H7-孔/H7-hole	a
5152050	8" (203,2)	1000	H7-孔/H7-hole	b, c, d
4152554	10" (254,0)	1500	H7-孔/H7-hole	a
4153054	12" (304,8)	1500	H7-孔/H7-hole	a
<b>hotrod® (HHP 型/type HHP) Ø 5/8 " (Ø 15,81 mm)</b>				
4160322	1 1/2" (38,1)	315	紧配合**/tight fit**	a
4160730	3" (76,2)	500	H7-孔/H7-hole	a
4161240	5" (127,0)	750	H7-孔/H7-hole	a
4161250	5" (127,0)	1000	H7-孔/H7-hole	a
5161351	5 1/4" (133,3)	1100	H7-孔/H7-hole	b, c, d
5161353	5 1/4" (133,3)	1400	紧配合**/tight fit**	b, c, d
4161550	6" (152,4)	1000	H7-孔/H7-hole	a
4161750	7" (177,8)	1000	H7-孔/H7-hole	a

<b>hotrod® 配备热电偶 Fe-CuNi (J 型)/with thermocouple Fe-CuNi (type J)</b>					
产品编号 <i>stock-I.D.</i>	类型 <i>type</i>	长度 <i>length</i>	功率/Watt <i>wattage</i> [mm]	公差配备 <i>tool scheduling</i>	连接导线* <i>connection</i>
5210404	Ø 6,5 mm	40	100	H7-孔/H7-hole	a
5210515		50	200	紧配合**/tight fit**	a
5210615		60	200	H7-孔/H7-hole	a
5210617		60	250	紧配合**/tight fit**	a
5211023		100	350	H7-孔/H7-hole	a
5220404	Ø 8,0 mm	40	100	H7-孔/H7-hole	a
5220517		50	250	紧配合**/tight fit**	a
5220617		60	250	H7-孔/H7-hole	a
5220822		80	315	H7-孔/H7-hole	a
5221022		100	315	H7-孔/H7-hole	a
5221326		130	400	H7-孔/H7-hole	a
5230415	Ø 10,0 mm	40	200	紧配合**/tight fit**	a
5230517		50	250	H7-孔/H7-hole	a
5230617		60	250	H7-孔/H7-hole	a
5230817		80	250	H7-孔/H7-hole	a
5231023		100	350	H7-孔/H7-hole	a
5231626		160	400	H7-孔/H7-hole	a
5231635		160	630	H7-孔/H7-hole	a
5251030	Ø 12,5 mm	100	500	H7-孔/H7-hole	a
5310304	Ø 1/4"	1 1/2" (38,1)	100	H7-孔/H7-hole	a
5310311		1 1/2" (38,1)	175	紧配合**/tight fit**	a
5310515		2" (50,8)	200	紧配合**/tight fit**	a
5310617		2 1/2" (63,5)	250	紧配合**/tight fit**	a
5310721		3" (76,2)	300	紧配合**/tight fit**	a
5330315	Ø 3/8"	1 1/2" (38,1)	200	紧配合**/tight fit**	a





## hotspring® Mini/F/1,3 x 2,3

### 加热圈 (WRP型)

### Coil Heaters (type WRP)

近似公式  
用于计算加热圈所展开的加热长度 [mm]

$$(\varnothing_{\text{盘管}} + 1,8) \cdot \pi \cdot \text{圈数} \cdot 2$$

= 加热长度<sub>直向</sub>

**Approximate formula**  
for calculation of the stretched heated length  
of coiled heaters [mm]

$$(\varnothing_{\text{coiled}} + 1.8) \cdot \pi \cdot \text{number of windings} \cdot 2$$

= heated length<sub>straight</sub>

#### 技术数据/ Technical Data

剖面 <i>profile</i>	1,3 x 2,3 mm
外形 <i>layout</i>	u形 <i>u-shaped</i>
外套材料 <i>sheath material</i>	不锈钢 <i>stainless steel</i>
加热导体化合物 <i>heating conductor compound</i>	NiCr 8020
加热元件外套温度 <i>sheath temperature of heating element</i>	最大值750 °C
电压 <i>voltage</i>	230 V
功率误差 (未加热) <i>power tolerance (cold)</i>	± 10 %
高压强度 (未加热) <i>high voltage strength (cold)</i>	最小值 800 V-AC
绝缘电阻 (未加热) 于500 V-DC <i>insulation resistance (cold)</i> at 500 V-DC	≥ 5 MΩ
漏电流 (未加热) 于 253 V-AC <i>leakage current (cold) at 253 V-AC</i>	≤ 0,5 mA
长度直向误差 <i>length tolerance straight</i>	± 5 %
加热器外套最大表面载荷 <i>max. surface load on heater sheath</i>	10 W/cm <sup>2</sup>
加热和不加热区最小弯曲半径 (内部) <i>minimum bending radius (internal)</i> <i>heated and unheated zone</i>	3 mm

产品编号 <i>stock-I.D.</i>	总长 <i>total length</i> [mm]	功率 <i>power</i> [W]	加热长度 <i>heated length</i> [mm]	不加热 + 连接 <i>unheated + connection</i> [mm]
7580469	426	120	296	65/65+25
7580510	537	160	382	65/65+25
7580671	630	210	475	65/65+25
7580772	730	250	575	65/65+25
7580845	855	300	700	65/65+25
7581057	1005	350	850	65/65+25
7581273	1201	450	1046	65/65+25





## hotspring® Mini/F/1,3 x 2,3

附带管夹与切向螺旋  
with clamping band and  
tangential screwing

### 加热圈 (WRP型)

### Coil Heaters (type WRP)

#### 技术数据/ Technical Data

直径 diameter	1,3 x 2,3 mm
螺旋 screwing	切向/tangential
外套材料 sheath material	不锈钢 stainless steel
加热导体化合物 heating conductor compound	NiCr 8020
加热元件外套温度 sheath temperature of heating element	最大值750 °C
电压 voltage	230 V
功率误差 (未加热) power tolerance (cold)	± 10 %
高压强度 (未加热) high voltage strength (cold)	最小值 800 V-AC
绝缘电阻 (未加热) 于 500 V-DC insulation resistance (cold) at 500 V-DC	≥ 5 MΩ
漏电流 (未加热) 于253 V-AC leakage current (cold) at 253 V-AC	≤ 0,5 mA
不加热区长度 近似值 [mm] length unheated zone approx. [mm]	130±25/180±25
指定喷嘴直径的 可伸展内径误差 inner diameter tolerance tensible at specified nozzle diameter	
加热器外套最大表面载荷 max. surface load on heater sheath	10 W/cm <sup>2</sup>
加热和不加热区最小弯曲半径 (内部) heated and unheated zone minimum bending radius (internal)	3 mm
单独连接头 separate connection heads	
连接导线长度 connection length	1000 mm
连接导线类型 connection type	PTFE 绝缘 铜镍导线 (多线式) PTFE-insulated CuNi-leads (multistranded)

产品编号 stock-I.D.	总长 total length [mm]	功率 power [W]	内径-Ø inner-Ø [mm]	高度 height [mm]
7603017	30,5	250	19,05	~IØ + 10
7603018	30,5	250	22,2	~IØ + 10

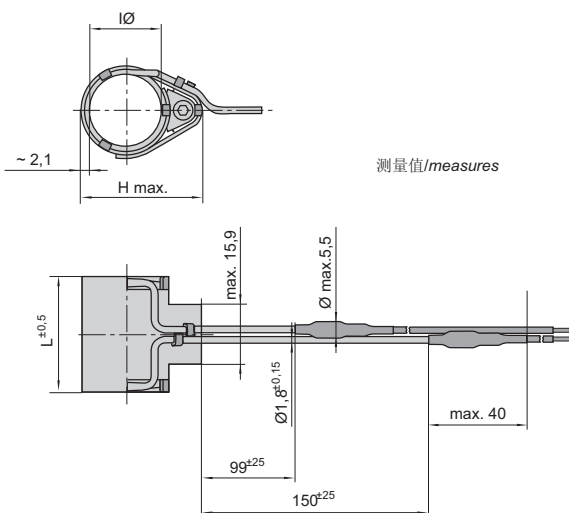


## hotspring® Mini/F/1,3 x 2,3

附带管夹与轴向螺旋  
with clamping band and  
axial screwing

### 加热圈 (WRP型)

### Coil Heaters (type WRP)



测量值/measures

#### 技术数据/ Technical Data

直径  
diameter 1,3 x 2,3 mm

螺旋  
screwing 轴向/axial

外套材料  
sheath material 不锈钢  
stainless steel

加热导体化合物  
heating conductor compound NiCr 8020

加热元件外套温度  
sheath temperature of heating element 最大值750 °C

电压  
voltage 240 V

功率误差 (未加热)  
power tolerance (cold) ± 10 %

高压强度 (未加热)  
high voltage strength (cold) 最小值 800 V-AC

绝缘电阻 (未加热) 于 500 V-DC  
insulation resistance (cold) at 500 V-DC ≥ 5 MΩ

漏电流 (未加热) 于 253 V-AC  
leakage current (cold) at 253 V-AC ≤ 0,5 mA

指定喷嘴直径的  
可伸展内径误差  
inner diameter tolerance  
tensible at specified nozzle diameter

加热器外套最大表面载荷  
max. surface load on heater sheath 10 W/cm<sup>2</sup>

加热和不加热区  
最小弯曲半径 (内部)  
minimum bending radius (internal)  
heated and unheated zone 3 mm

单独接头  
separate connection heads

产品编号 stock-I.D.	总长 total length [mm]	功率 power [W]	内径-Ø inner-Ø [mm]	高度最大值 height max. [mm]
7603007	30,5	149	19,05	32,3
7603019	30,5	268	19,05	32,3
7603020	30,5	250	22,20	36,4



## hotspring® F/1,8 x 3,2

加热圈  
(WRP型)



## Coil Heaters (type WRP)

近似公式

用于计算加热圈所展开的加热长度 [mm]

$$(I\varnothing_{\text{盘管}} + 1,8) \cdot ? \cdot \text{圈数} \\ = \text{加热长度}_{\text{直向}}$$

### Approximate formula

for calculation of the stretched heated length of coiled heaters [mm]

$$(I\varnothing_{\text{coiled}} + 1,8) \cdot ? \cdot \text{number of windings} \\ = \text{heated length}_{\text{straight}}$$

### 技术数据/ Technical Data

抗湿型 hotspring® (WRP) 扁平截面 humidity resistant hotspring® (WRP) with flat cross-section	1,8 x 3,2 mm
外套材料 sheath material	不锈钢 stainless steel
加热导体化合物 heating conductor compound	NiCr 8020
加热元件外套温度 sheath temperature of heating element	最大值750 °C
电压/voltage	230 V
功率误差 (未加热) power tolerance (cold)	± 10 %
高压强度 (未加热) high voltage strength (cold)	最小值 800 V-AC
绝缘电阻 (未加热) 于500 V-DC insulation resistance (cold) at 500 V-DC	≥ 5 MΩ
漏电流 (未加热) 于253 V-AC leakage current (cold) at 253 V-AC	≤ 0,5 mA
长度直向误差 length tolerance straight	± 5%
加热区 heated zone	± 3%
不加热区 unheated zone	± 5%
加热器外套最大表面载荷 max. surface load on heater sheath	7,5 W/cm <sup>2</sup>
加热和不加热区 最小弯曲半径 (内部) minimum bending radius (internal) heated and unheated zone	4 mm
连接导线 connection leads	1000 mm PTFE- 绝缘铜镍导线(多线式) 1000 mm PTFE- insulated CuNi-leads (multistranded)

产品编号 stock-I.D.	附带热电偶 (Fe-CuNi) with thermocouple (Fe-CuNi) (J 型/type J)	总长 total length [mm]	功率 power [W]	加热长度 heated length [mm]
7540300	7840300	340	130	250
7540301	7840301	390	160	300
7540302	7840302	440	190	350
7540303	7840303	490	220	400
7540304	7840304	540	250	450
7540305	7840305	590	275	500
7540306	7840306	690	330	600
7540307	7840307	840	400	750



## hotspring® F/2,2 x 4,2

### 加热圈 (WRP型)



### Coil Heaters (type WRP)

#### 近似公式

用于计算加热圈所展开的加热长度 [mm]

$$(d_{\text{盘管}} + 2,2) \cdot \pi \cdot \text{圈数} \\ = \text{加热长度}_{\text{直向}}$$

#### Approximate formula

for calculation of the stretched heated length of coiled heaters [mm]

$$(d_{\text{coiled}} + 2,2) \cdot \pi \cdot \text{number of windings} \\ = \text{heated length}_{\text{straight}}$$

#### 技术数据/ Technical Data

抗湿型 hotspring® (WRP) 扁平截面 <i>humidity resistant hotspring® (WRP) with flat cross-section</i>	2,2 x 4,2 mm
外套材料 <i>sheath material</i>	不锈钢 <i>stainless steel</i>
加热导体化合物 <i>heating conductor compound</i>	NiCr 8020
加热元件外套温度 <i>sheath temperature of heating element</i>	最大值750 °C
电压/voltage	230 V
功率误差 (未加热) <i>power tolerance (cold)</i>	± 10 %
高压强度 (未加热) <i>high voltage strength (cold)</i>	最小值 800 V-AC
绝缘电阻 (未加热) 于500 V-DC <i>insulation resistance (cold) at 500 V-DC</i>	≥ 5 MΩ
漏电流 (未加热) 于 253 V-AC <i>leakage current (cold) at 253 V-AC</i>	≤ 0,5 mA
长度直向误差 <i>length tolerance straight</i>	± 5%
加热区 <i>heated zone</i>	± 1%
不加热区 <i>unheated zone</i>	± 5%
加热器外套最大表面载荷 <i>max. surface load on heater sheath</i>	7,5 W/cm <sup>2</sup>
加热和不加热区 最小弯曲半径 (内部) <i>minimum bending radius (internal) heated and unheated zone</i>	4 mm
附带内藏热电偶 <i>with integrated thermocouple</i>	Fe-CuN (J 型) (未接地) Fe-CuNi (type J) (ungrounded)
连接导线 <i>connection leads</i>	1000 mm PTFE- 绝缘铜镍导线(多线式) 1000 mm PTFE- insulated CuNi-leads (multistranded)

**hotspring® F/2,2 x 4,2**

产品编号 <i>stock-I.D.</i>	总长 <i>total length</i> [mm]	功率 <i>power</i> [W]	加热长度 <i>heated length</i> [mm]	热电偶 (Fe-CuNi) <i>thermocouple (Fe-CuNi)</i> (J 型/type J)
7732519	340	195	250	
7832519	340	195	250	x
7732821	370	215	280	
7832821	370	215	280	x
7733324	425	240	335	
7833524	425	240	335	x
7733829	475	295	385	
7833829	475	295	385	x
7734635	550	350	460	
7834635	550	350	460	x
7735240	610	400	520	
7835240	610	400	520	x
7736046	690	460	600	
7836046	690	460	600	x
7737661	850	610	760	
7837601	850	610	760	x
7739069	990	690	900	
7839069	990	690	900	x
7731185	1200	850	1110	
7831185	1200	850	1110	x
7731395	1400	950	1310	
7831395	1400	950	1310	x



## hotspring® Q/3,0 x 3,0

加热圈  
(WRP型)



### Coil Heaters (type WRP)

近似公式

用于计算加热圈所展开的加热长度 [mm]

$$(I\varnothing_{\text{盘管}} + 3,0) \cdot ? \cdot \text{圈数} \\ = \text{加热长度}_{\text{直向}}$$

#### Approximate formula

for calculation of the stretched heated length  
of coiled heaters [mm]

$$(I\varnothing_{\text{coiled}} + 3,0) \cdot ? \cdot \text{number of windings} \\ = \text{heated length}_{\text{straight}}$$

#### 技术数据/ Technical Data

抗湿型 hotspring® (WRP) 方形截面 humidity resistant hotspring® (WRP) with square cross-section	3,0 x 3,0 mm
外套材料 sheath material	不锈钢 stainless steel
加热导体化合物/heating conductor compound	NiCr 8020
加热元件外套温度 sheath temperature of heating element	最大值750 °C
电压/voltage	230 V
功率误差 (未加热) /power tolerance (cold)	± 10 %
高压强度 (未加热) high voltage strength (cold)	min. 800 V-AC
绝缘电阻 (未加热) 于 500 V-DC insulation resistance (cold) at 500 V-DC	≥ 5 MΩ
漏电流 (未加热) 于253 V-AC leakage current (cold) at 253 V-AC	≤ 0,5 mA
长度直向误差/length tolerance straight	± 5 %
加热区/heated zone	± 1 %
不加热区/unheated zone	± 5 %
加热器外套最大表面载荷 max. surface load on heater sheath	7,5 W/cm <sup>2</sup>
加热和不加热区 最小弯曲半径 (内部) minimum bending radius (internal) heated and unheated zone	4 mm
附带内藏热电偶 with integrated thermocouple	Fe-CuNi (J 型) (未接地) Fe-CuNi (type J) (ungrounded)
连接导线 connection leads	1000 mm PTFE- 绝缘铜镍导线(多线式) 1000 mm PTFE- insulated CuNi-leads (multistranded)

产品编号 stock-I.D.	总长 total length [mm]	功率/Watt power [W]	加热长度 heated length [mm]	热电偶 (Fe-CuNi) thermocouple (Fe-CuNi) (类型 J/type J)
7930316	390	215	300	
7940316	390	215	300	x
7930422	540	325	450	
7940422	540	325	450	x
7930627	740	470	650	
7940627	740	470	650	x
7930835	940	610	850	
7940835	940	610	850	x
7931043	1140	630	1050	
7941035	1140	630	1050	x
7931395	1400	950	1310	



hotspring®  
Ø 3,3

加热圈  
(WRP型)

Coil Heaters  
(type WRP)



近似公式  
用于计算加热圈所展开的加热长度 [mm]

$$(I\varnothing_{\text{盘管}} + 3,3) \cdot ? \cdot \text{圈数} \\ = \text{加热长度}_{\text{直向}}$$

**Approximate formula**  
for calculation of the stretched heated length  
of coiled heaters [mm]

$$(I\varnothing_{\text{coiled}} + 3,3) \cdot ? \cdot \text{number of windings} \\ = \text{heated length}_{\text{straight}}$$

### 技术数据/ Technical Data

抗湿型 hotspring® (WRP) 方形截面 humidity resistant hotspring® (WRP) with square cross-section	Ø 3,3 mm
外套材料 sheath material	不锈钢 stainless steel
加热导体化合物/heating conductor compound	NiCr 8020
加热元件外套温度 sheath temperature of heating element	最大值750 °C
电压/voltage	230 V
功率误差 (未加热) /power tolerance (cold)	± 10 %
高压强度 (未加热) high voltage strength (cold)	min. 800 V-AC
绝缘电阻 (未加热) 于500 V-DC insulation resistance (cold) at 500 V-DC	≥ 5 MΩ
漏电流 (未加热) 于 253 V-AC leakage current (cold) at 253 V-AC	≤ 0,5 mA
长度直向误差/length tolerance straight 加热区/heated zone 不加热区/unheated zone	± 5 % ± 2,5 % ± 5 %
加热器外套最大表面载荷 max. surface load on heater sheath	6 W/cm <sup>2</sup>
加热和不加热区 最小弯曲半径 (内部) minimum bending radius (internal) heated and unheated zone	4 mm
附带内藏热电偶 with integrated thermocouple	Fe-CuNi (J 型) (未接地) Fe-CuNi (type J) (ungrounded)
连接导线 connection leads	1000 mm PTFE- 绝缘铜镍导线 (多线式) 1000 mm PTFE- insulated CuNi-leads (multistranded)

产品编号 stock-I.D.	总长 total length [mm]	功率/Watt power [W]	加热长度 heated length [mm]	热电偶(Fe-CuNi) thermocouple (Fe-CuNi) (J 型/type J)
7903012	390	180	300	x
7905519	540	270	450	x
7007537	740	390	650	
7907537	740	390	650	x
7009530	940	500	850	
7909530	940	500	850	x
7011535	1140	630	1050	
7911535	1140	630	1050	x
7941395	1400	950	1310	x



## hotspring® Maxi/4,6 x 8,6

附带接头用于连接温度  
> 260°C

with connection-head  
for connection-temperatures  
> 260°C

### 加热圈 (WRP型)

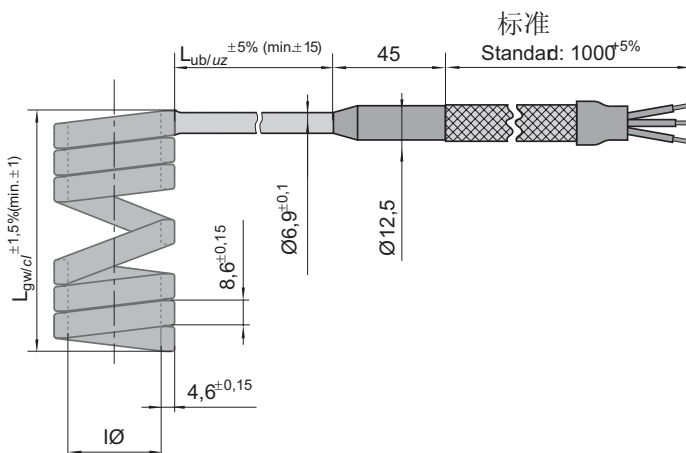
### Coil Heaters (type WRP)

#### 技术数据/ Technical Data

hotspring® 加热圈 扁平截面 hotspring® coil heater with flat cross-section	4,6 x 8,6 mm
外套材料 sheath material	不锈钢 stainless steel
加热导体化合物 heating conductor compound	NiCr 8020
加热元件外套温度 sheath temperature of heating element	最大值750 °C
电压/voltage	最大值440 V, Standard: 230 V
功率误差 (未加热) power tolerance (cold)	± 10 % (<按要求) ± 10 % (< on request)
高压强度 (未加热) high voltage strength (cold)	1250 V-AC
绝缘电阻 (未加热) insulation resistance (cold)	≥ 5 MΩ 于500 V-DC ≥ 5 MΩ at 500 V-DC
漏电流 (未加热) leakage current (cold)	≤ 0,5 mA 于 253 V-AC ≤ 0.5 mA at 253 V-AC
长度误差 length tolerance	加热区: ± 1% 不加热区: ± 5% heated zone: ± 1% unheated zone: ± 5%
内径误差 不带反射管 带反射管 Inner diameter tolerances without reflection tube with reflection tube	高达IØ 30 mm -0,10/-0,30 高达IØ 50 mm -0,20/-0,40 > IØ 50 mm 按要求 +0,05/+0,15 up to IØ 30 mm -0,10/-0,30 up to IØ 50 mm -0,20/-0,40 > IØ 50 mm on request +0.05/+0.15
最小弯曲半径 (内部) minimum bending radius (internal)	10 mm
连接导线 connection leads	1500 mm 玻璃棉绝缘- 镍导线 (多线式) 1500 mm glass silk insulated Ni-leads (multistranded)
可与内藏热电偶一起供应 Fe-CuNi (J 型), Fe-CuNi (L 型) 或者 NiCr-Ni (K 型) (未接地, 标准) deliverable with integrated thermocouple Fe-CuNi (type J), Fe-CuNi (type L) or NiCr-Ni (type K) (ungrounded, standard)	
可与反射管一起供应/deliverable with reflection tube 可与管夹一起供应/deliverable with clamping band	



产品编号 stock-I.D.	总长 total length [mm]	加热长度 heated length [mm]	不加热区 unheated zone [mm]	连接导线 connection [mm]	功率 wattage [W]	电压 voltage [V]	热电偶 (NiCr-Ni) (K型) thermocouple (NiCr-Ni) (type K)
7508551	605	505	55	45	550	230	x
7508557	770	670	55	45	750	230	x
7508564	700	600	55	45	700	230	x
7508552	800	700	55	45	700	230	x
7508558	900	800	55	45	900	230	x
7508565	980	880	55	45	1500	230	x
7508566	1000	900	55	45	1000	230	x
7508567	1100	1000	55	45	1100	230	x
7508553	1215	1115	55	45	1300	230	x
7508554	1300	1200	55	45	1500	230	x
7508568	1347	1247	55	45	1700	230	x
7508559	1370	1270	55	45	1600	230	x
7508569	1500	1400	55	45	1700	230	x
7508555	1625	1525	55	45	1800	230	x
7508560	1700	1600	55	45	1900	230	x
7508570	1737	1637	55	45	1700	230	x
7508571	1800	1700	55	45	2000	400	x
7508572	1874	1774	55	45	1700	230	x
7508556	2310	2210	55	45	2600	230	x
7508561	2460	2360	55	45	2800	230	x



测量值 [mm]  
 $L_{gw}$  = 盘管长度  
 $L_{ub}$  = 不加热区长度  
 Measures [mm]  
 $L_{cl}$  = coiled length  
 $L_{uz}$  = length unheated zone

近似公式  
 用于计算加热圈所展开的加热长度 [mm]

$$(I\varnothing + 4.6) \cdot ? \cdot \text{圈数} = \text{加热长度}_{\text{直向}}$$

Approximate formula  
 for calculation of the stretched heated length  
 of coiled heaters [mm]

$$(I\varnothing + 4.6) \cdot ? \cdot \text{number of windings} = \text{heated length}_{\text{straight}}$$



## hotspring® Maxi/4,6 x 8,6

不带接头用于连接温度高达260°C

without connection-head  
for temperatures at connection section  
up to 260°C

### 加热圈 (WRP型)

### Coil Heaters (type WRP)

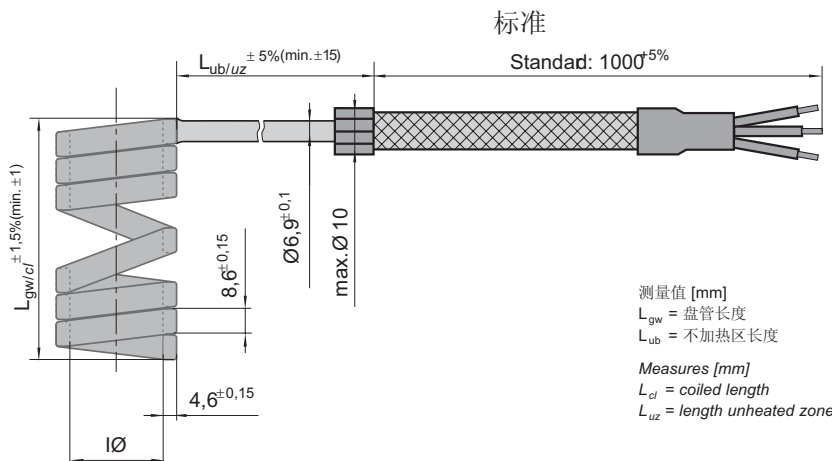
#### 技术数据/ Technical Data

hotspring® 加热圈 扁平截面 hotspring® coil heater with flat cross-section	4,6 x 8,6 mm
外套材料 sheath material	不锈钢 stainless steel
加热导体化合物 heating conductor compound	NiCr 8020
加热元件外套温度 sheath temperature of heating element	最大值750 °C
电压/voltage	最大值440 V, Standard: 230 V
功率误差 (未加热) power tolerance (cold)	± 10 % (< 按要求) ± 10 % (< on request)
高压强度 (未加热) high voltage strength (cold)	1250 V-AC
绝缘电阻 (未加热) insulation resistance (cold)	≥ 5 MΩ 于 500 V-DC ≥ 5 MΩ at 500 V-DC
漏电流 (未加热) leakage current (cold)	≤ 0,5 mA 于 253 V-AC ≤ 0.5 mA at 253 V-AC
长度误差 length tolerance	加热区: ± 1% 不加热区: ± 5% heated zone: ± 1% unheated zone: ± 5%
内径误差 无反射管 带反射管 inner diameter tolerances without reflection tube with reflection tube	高达IØ 30 mm -0,10/-0,30 高达IØ 50 mm -0,20/-0,40 > IØ 50 mm 按要求 +0,05/+0,15 up to IØ 30 mm -0.10/-0.30 up to IØ 50 mm -0.20/-0.40 > IØ 50 mm on request +0.05/+0.15
最小弯曲半径 (内部) minimum bending radius (internal)	10 mm
连接导线 connection leads	1000 mm PTFE- 绝缘铜镍导线(多线式) 1000 mm PTFE-insulated CuNi-leads (multistranded)

可与/或不与内藏热电偶一起供应  
Fe-CuNi (J 型), Fe-CuNi (L 型) oder NiCr-Ni (K 型)  
(未接地, 标准)  
deliverable with or without integrated thermocouple  
Fe-CuNi (type J), Fe-CuNi (type L) or NiCr-Ni (type K)  
(ungrounded, standard)

可与反射管一起供应/deliverable with reflection tube  
可与管夹一起供应/deliverable with clamping band

产品编号 stock-I.D.	总长 total length [mm]	加热长度 heated length [mm]	不加热区 unheated zone [mm]	功率 wattage [W]	电压 voltage [V]	热电偶 (Fe-CuNi) (J型) thermocouple (Fe-CuNi) (type J)
7302521	315	250	65	300	230	
7402521	315	250	65	300	230	x
7303527	415	350	65	450	230	
7403527	415	350	65	450	230	x
7304531	515	450	65	550	230	
7404531	515	450	65	550	230	x
7306543	715	650	65	800	230	
7406543	715	650	65	800	230	x
7308550	915	850	65	1000	230	
7408550	915	850	65	1000	230	x



#### 近似公式

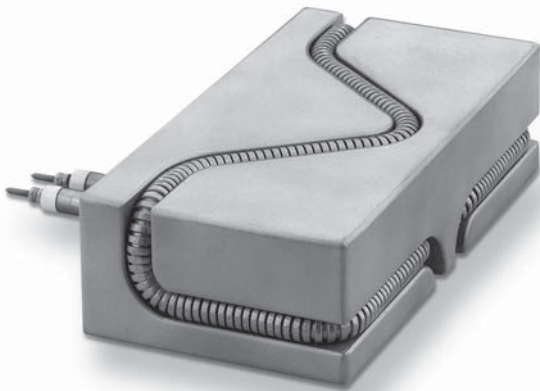
用于计算加热圈所展开的加热长度 [mm]

$$(I\varnothing + 4.6) \cdot ? \cdot \text{圈数} = \text{加热长度}_{\text{直向}}$$

#### Approximate formula

for calculation of the stretched heated length of coiled heaters [mm]

$$(I\varnothing + 4.6) \cdot ? \cdot \text{number of windings} = \text{heated length}_{\text{straight}}$$



hotflex®  
Ø 6,5

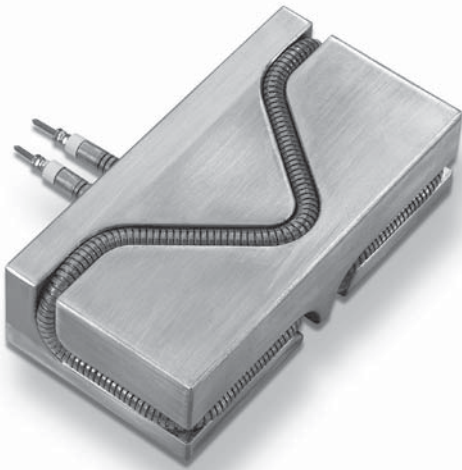
柔性易弯曲加热管

Flexible tubular heater

#### 技术数据/ Technical Data

外套材料 <i>sheath material</i>	不锈钢 <i>stainless steel</i>
加热元件外套温度 <i>sheath temperature of heating element</i>	最大值700°C
电压/voltage	230 V
功率误差 (未加热) <i>power tolerance (cold)</i>	± 10 %
高压强度 (未加热) 直向条件 <i>high voltage strength (cold) in straight condition</i>	1000 V-AC
绝缘电阻 (未加热) 于500 V-DC <i>insulation resistance (cold) at 500 V-DC</i>	≥ 5 MΩ
漏电流 (未加热) 于 253 V-AC <i>leakage current (cold) at 253 V-AC</i>	≤ 0,5 mA
最大直向长度 <i>max. length straight</i>	1500 mm
长度直向误差 <i>length tolerance straight</i>	± 1,5 %
外套表面载荷 <i>sheath surface load</i>	最大值10 W/cm <sup>2</sup> 依照应用/ <i>according to application</i>
最小弯曲半径 (内部) <i>minimum bending radius (internal)</i>	R = 6,5 mm
不加热区 <i>unheated zones</i>	最小值 30mm/30mm ± 5 mm
不可弯曲区 <i>not bendable zones</i>	最小值 35mm/35mm ± 3 mm
连接导线选项 <i>connection options</i>	M 2,5 不锈钢螺母和垫圈 <i>with set of nuts and washers made of stainless steel</i>
扩展系数 <i>extension factors</i>	通过弯曲和公差配合 hotflex®, 其稍微变长. 该扩展可重复. www.hotset.de网站提供扩展 系数的计算公式. <i>By bending and fitting the hotflex® it becomes slightly longer. This extension is reproduceable. You will find a calculation programm for the extension factors on www.hotset.de</i>
注释 <i>note</i>	在同一点重复弯曲, 可能破坏hotflex®! <b>Multi bending at the same point could damage the hotflex®!</b>

<b>hotflex® Ø 6,5</b>		
产品编号 <i>stock-I.D.</i>	长度 <i>length</i> [mm] (± 1,5 %)	功率 <i>wattage</i> [W] (±10 % 于 /at 230 V)
6500300	300	350
6500350	350	400
6500400	400	500
6500450	450	600
6500500	500	650
6500550	550	700
6500600	600	800
6500650	650	850
6500700	700	900
6500750	750	1000
6500800	800	1100
6500850	850	1200
6500900	900	1300
6500950	950	1350
6501000	1000	1400
6501050	1050	1450
6501100	1100	1500
6501150	1150	1550
6501200	1200	1600
6501250	1250	1650
6501300	1300	1700
6501350	1350	1800
6501400	1400	1900
6501450	1450	2000
6501500	1500	2100



**hotflex®**  
**Ø 8,5**

柔性易弯曲加热管

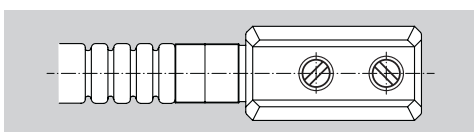
*Flexible tubular heater*

### 技术数据/ Technical Data

外套材料 <i>sheath material</i>	不锈钢 <i>stainless steel</i>
加热元件外套温度 <i>sheath temperature of heating element</i>	最大值700 °C
电压/ <i>voltage</i>	230 V
功率误差（未加热） <i>power tolerance (cold)</i>	± 10 %
高压强度（未加热） 直向条件 <i>high voltage strength (cold) in straight condition</i>	1000 V-AC
绝缘电阻（未加热）于500 V-DC <i>insulation resistance (cold) at 500 V-DC</i>	≥ 5 MΩ
漏电流（未加热）于253 V-AC <i>leakage current (cold) at 253 V-AC</i>	≤ 0,5 mA
最大直向长度 <i>max. length straight</i>	2600 mm
长度直向误差 <i>length tolerance straight</i>	± 1,5 %
外套表面载荷 <i>sheath surface load</i>	最大值15 W/cm <sup>2</sup> 依照应用/ <i>according to application</i>
最小弯曲半径（内部） <i>minimum bending radius (internal)</i>	R = 10 mm
不加热区 <i>unheated zones</i>	最小值30 mm/30 mm ± 5 mm
不可弯曲区 <i>not bendable zones</i>	最小值35 mm/35 mm ± 3 mm
连接导线选项 <i>connection options</i>	M 2,5 不锈钢螺母和垫圈 <i>with set of nuts and washers made of stainless steel</i>
扩展系数 <i>extension factors</i>	通过弯曲和公差配合 hotflex®, 其稍微变长。 该扩展可重复。 www.hotset.de网站提供扩展系数的 计算公式。 <i>By bending and fitting the hotflex® it becomes slightly longer. This extension is reproduceable. You will find a calculation programm for the extension factors on www.hotset.de</i>
注释 <i>note</i>	在同一点重复弯曲, 可能破坏hotflex®! <b>Multi bending at the same point could damage the hotflex®!</b>

hotflex® Ø 8,5					
产品编号 stock-I.D.	长度 length [mm] (± 1,5 %)	功率 wattage [W] (± 10 % 于/at 230 V)	产品编号 stock-I.D.	长度 length [mm] (± 1,5 %)	功率 wattage [W] (± 10 % 于/at 230 V)
6100300	300	650			
6100350	350	750			
6100400	400	900			
6100450	450	1050			
6100500	500	1150	6110500	500	700
6100550	550	1300	6110550	550	780
6100600	600	1450	6110600	600	860
6100650	650	1600	6110650	650	950
6100700	700	1750	6110700	700	1000
6100750	750	1900	6110750	750	1100
6100800	800	2050	6110800	800	1190
6100850	850	2200	6110850	850	1250
6100900	900	2350	6110900	900	1350
6100950	950	2500	6110950	950	1430
6101000	1000	2650	6111000	1000	1500
6101050	1050	2800	6111050	1050	1590
6101100	1100	2930	6111100	1100	1650
6101150	1150	3060	6111150	1150	1750
6101200	1200	3190	6111200	1200	1830
6101250	1250	3320	6111250	1250	1900
6101300	1300	3450	6111300	1300	1990
6101350	1350	3580	6111350	1350	2070
6101400	1400	3710	6111400	1400	2150
6101450	1450	3840	6111450	1450	2230
6101500	1500	3970	6111500	1500	2300

陶瓷端子连接器“plug'n heat”  
Ceramic terminal connector  
"plug'n heat"



技术数据/ Technical Data

陶瓷端子连接器可随时安装

*This ceramic terminal connector is ready for installation*

而不需要其他的绝缘措施

*no additional insulation necessary*

连续作业热阻抗高达230 °C

(最高温度达 280 °C)

*heat resistant up to 230 °C in continuous operation*

*(max. up to 280 °C)*

产品编号 stock-I.D.	尺寸 [mm] dimensions [mm]
229005	14 x 21 x 25



## hotcast®

### 密封铸模加热器 (GMH 型)

### Sealed Heater (type GMH)

#### 技术数据/ Technical Data

不占空间的密封系统/compact, sealed system

操作简便/easy handling

集成hotcontrol® 热电偶 NiCr-Ni (K 型)

integrated hotcontrol® thermocouple NiCr-Ni (type K)

保护免受渗透材料腐蚀

protection against penetrating material

hotspring® 加热圈/Maxi/4,6 x 8,6

焊接在不锈钢外套中

hotspring® coil heater/Maxi/4.6 x 8.6

welded in stainless steel sheath

载体材料: 不锈钢

carrier material: stainless steel

因其小外圆和额外长度, 可深度浸入模具

deep immersion into the mould by small outer diameter  
and extra length

持久耐用/long life

高度节能/high energy savings

最优的温度控制/optimal temperature control

1500 mm 玻璃棉绝缘镍导线, 接地并带有不锈钢套管

1500 mm glass silk insulated nickel leads with ground wire  
and stainless steel sleeving

产品编号 stock-I.D.	类型 type	内孔 Ø innerhole Ø	A Ø O Ø	长度 length	加热 长度 heated length	功率 wattage	电压 voltage
		[mm]	[mm]	[mm]	[mm]	[W]	[V]
5630133	GMH 5	7,0	42,0	149	81	550	230
5630139	GMH 20	9,5	42,0	178	110	700	230
5640165	GMH 50	11,0	55,2	257	167	1300	230
5640154	GMH 80	11,0	55,2	286	196	1500	230
5650258	GMH 125	18,0	62,2	330	240	1800	230
5650365	GMH 200	18,0	77,2	422	302	2600	400
5630135	GMH 5-T	7,0	42,0	169	101	750	230
5630144	GMH 20-T	9,5	42,0	208	140	900	230
5640154	GMH 50-T	11,0	55,2	286	196	1500	230
5630254	GMH 80-T	11,0	55,2	316	226	1600	230
5630256	GMH 125-T	18,0	62,2	370	281	1900	230
5630257	GMH 200-T	18,0	77,2	462	342	2800	400
5630258	GMH 20-TT	9,5	30,8	228	160	900	230
5630260	GMH 50-TT	11,0	42,0	310	220	1600	230
5630259	GMH 80-TT	11,0	55,2	339	246	1600	230
5630261	GMH 125-TT	18,0	62,2	380	290	1900	230



## 绝缘管

### Insulation tube



### 技术数据/ Technical Data

减少高达60%的热散发/60% reduced heat emission

减少加热时间/shorter heating-up time

提高热流行为和温度分布/improved flow behaviour and temperature distribution

产品编号 stock-I.D.	用于GMH型 for GMH type	A Ø/O Ø [mm] ± 0,5	I Ø [mm]
36217	GMH 50	66,2	56,2 ± 0,3
36217	GMH 80	66,2	56,2 ± 0,3
36218	GMH 125	73,2	63,2 ± 0,5
36219	GMH 200	88,2	78,2 ± 0,5

### 技术数据/ Technical Data

平衡从喷嘴体到喷嘴头的温度

for balancing the decrease in temperature from the nozzle body to nozzle tip

以多管道降未加热度

lower temperature in mass channel

电压: 230 V/voltage: 230 V

## 喷嘴

### Nozzle tip



产品编号 stock-I.D.	用于GMH型 for GMH type	螺旋尺寸 screw dimension [mm]	槽I Ø canal I Ø [mm]
253004	GMH 50	m 24 x 1,5	6
253005	GMH 80	m 24 x 1,5	8
253011	GMH 125	m 39 x 1,5	12
253012	GMH 200	m 39 x 1,5	14

## 六边形螺母便于拆卸

### Hexagon nut for removal



产品编号 stock-I.D.	用于GMH型 for GMH type	螺钉 screw [mm]
177014	GMH 50	50
177014	GMH 80	80
177015	GMH 125	125
177015	GMH 200	200

## 退卸螺母

### Withdrawal nut

产品编号 stock-I.D.	用于GMH型 for GMH type
252000	GMH 5/20
252001	GMH 50/80/120
252002	GMH 200



### 技术数据/ Technical Data

操作简便

*easy handling*

hotspring® 加热圈/Maxi/4,6 x 8,6 带有管夹和端环，用于紧密公差配合，从而保护免受渗透材料的侵蚀

*hotspring® coil heater/Maxi/4.6 x 8.6 with special clamping band and endrings for tight fit and as protection against penetrating material*

1500 mm 玻璃棉绝缘镍导线，多线型，带有接地线和弹性金属套管

*1500 mm glass silk insulated nickel leads, multistranded, with ground wire and flexible metal sleeving*

内藏热电偶NiCr-Ni (K 型)

*integrated thermocouple NiCr-Ni (type K)*

不加热区

55 + 45 mm

*unheated zone*

## hotcast®

### 开端铸模加热器 ( OMH型)

### Open ended Heater (type OMH)

产品编号 stock-I.D.	类型 type	I Ø [mm]	A Ø O Ø [mm]	长度 length [mm]	功率 wattage [W]	电压 voltage [V]
5730130*	OMH 5	31,5	49,2	78	500	230
5730139*	OMH 20	31,5	49,2	105	700	230
5740165*	OMH 50	42,0	59,7	172	1300	230
5740153	OMH 80	42,0	59,7	190	1400	230
5750258*	OMH 125	50,0	67,7	235	1700	230
5760270*	OMH 200	64,0	81,7	295	2400	400

\*无库存，发货时间大约 4 星期

\*not on stock, deliverytime approx. 4 weeks



## hotrod®

用于压铸业的  
加热棒  
(HHP/G 型)

**Cartridge Heaters  
for the Die-Casting  
Industry  
(type HHP/G)**

### 技术数据/ Technical Data

剖面 Ø [mm] <i>profile Ø [mm]</i>	6,5; 8,0; 10,0; 12,5; 16,0; 20,0
外套材料 <i>sheath material</i>	不锈钢 <i>stainless steel</i>
加热元件外套最大温度值 <i>max. sheath temperature of heating element</i>	750 °C
加热导体化合物 <i>heating conductor compound</i>	NiCr 8020
高压强度 (室温) <i>high voltage strength (at room temperature)</i>	额定电压/ <i>at nominal voltage</i> ≤ 24 V 500 V-AC > 24 V 1500 V-AC
绝缘阻抗未加热 (500 [V-DC] 未加热) <i>insulation resistance (cold at 500 [V-DC])</i>	≥ 5 MΩ
漏电流最大值 (253 [V-AC] 未加热) <i>max. leakage current (cold at 253 [V-AC])</i>	≤ 0,5 mA
长度误差 <i>length tolerance</i>	± 1,5 % min. ± 1 mm
功率误差 (未加热) <i>power tolerance (cold)</i>	± 10 %
输入电压 <i>input supply voltage</i>	230 V
底部按钉便于拆卸 <i>stud at the bottom for easy removal</i>	
带角度块、管和弹性金属套管 <i>with angular block, tube and flexible metal sleeving</i>	
连接长度/ <i>connection length</i>	1500 mm

产品编号 <i>stock-I.D.</i>	额定 Ø <i>nominal Ø</i> [mm]	长度 <i>length</i> [mm]	功率 <i>power</i> [W]
9906100	10,0	80	250
9906101	12,5	60	200
9906104	12,5	90	350
9906103	16,0	80	315
9906106	16,0	100	500



## hotcase®

箱式加热器  
(SHZ型)

Cabinet Heater  
(type SHZ)

### 技术数据/ Technical Data

hotrod® (HHP 型)

hotrod® (type HHP)

电压  
voltage 230 V

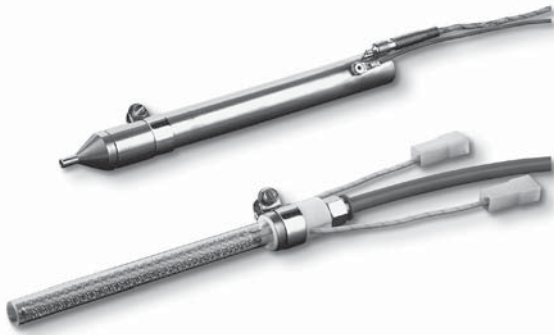
温度范围  
temperature range 0 – 50 °C

单独自动调温器  
separate thermostat

自动调温器依照 VDE, test section 2  
thermostat according to VDE, test section 2

连接  
connection 500 mm无张力电缆  
500 mm cabel  
nontension

产品编号 stock-I.D.	类型 type	功率 wattage [W]
9000970	SHZ	70
9000990	SHZ	90



## hotstream®

### 空气加热器 (LSE型)

### Air Stream Heater (type LSE)

#### 技术数据/ Technical Data

额定电压/nominal voltage	230 V (AC/DC)
操作电压/operating voltage	0 – 250 V (AC/DC)
额定输入功率/ nominal input power	1000 W 于/at 230 V 额定电压/ nominal voltage
最大操作压力 maximum operating pressure	1 bar
最小空气流 minimum air stream	2,6 m <sup>3</sup> n/h 于/at 230 V (250 小时期间) (at a durability of 250 hours)
最大拉紧力矩 max. tightening torque	1 Nm (对圆柱线 G 1/4) 1 Nm (for cylindrical threads G 1/4)
连接导线选项 connection option	带有绝缘管的连接插头 1/4" 扁平插头， 用于环境温度高达 95 °C (基于安全考 虑，该用具中仅用绝缘管) connection plug 1/4" flat plug with insulation tube for surrounding temper- atures up to 95 °C (for safety reasons only use insulati- on tube inside the appliance)
连接 connection	100 mm 玻璃棉绝缘导线用于环境温 度高达 230 °C 100 mm glass silk insulated leads for surrounding temperatures up to 230 °C
连接转接器 connecting adapter	Ø 20 mm (无导线)，用于环境温度高 达 230 °C Ø 20 mm (without leads), for surrounding temperatures up to 230 °C
重量/weight	40 – 50 g
包括保护管和温度传感器 incl. protective tube and temperature sensor	

产品编号 stock-I.D.	类型 type	功率 wattage [W]
6510150	LSE	1000
130100	hotstream® 空气加热器 (LSE 型) 外套管，附带热电偶，长度 190 mm sheath tube for hotstream® air stream heater (type LSE) with thermocouple, length 190 mm	
130200	hotstream® 空气加热器 (LSE 型) 外套管，长度 190 mm 用于螺纹喷嘴和热电偶 sheath tube for hotstream® air stream heater (type LSE), length 190 mm, for nozzle tip with screw and thermocouple	
327005	用于 hotstream® 的表面热电偶 Fe-CuNi (J 型)，长度 240 mm surface thermocouple Fe-CuNi (type J) for hotstream®, length 240 mm	
327006	用于 hotstream® 的表面热电偶 NiCr-Ni (K 型)，长度 240 mm surface thermocouple NiCr-Ni (type K) for hotstream®, length 240 mm	



hotcontrol®

温度控制器

C 248, C 296

Temperature  
Controllers

C 248, C 296

### 技术数据/ Technical Data

安装在控制或前面板上

*Mounting in control or front panel, etc.*

键盘带有四个按钮/Keypad with four pushbuttons

手动模式/Manual model斜坡函数/Ramp function

自动传感器中断检测/Automatic sensor break detection

四个计时器可用于灵活调整计时功能

(例如起始模式)

*Flexible and adjustable timer function with four timers  
(e. g. for start up mode)*

识别: 全自动适配控制参数到连接控制区

*Identification: fully automatic adaption of control parameters to connected control zone*

监控加热电路中的真实值、传感器、热流以及促动器

*Monitoring of real value, sensor, heat current  
and the actuator in the heat circuit*

2-/3-点控制器/2-/3-point controllers

通用热电偶 (可配置)/

电阻温度计

*One universal input thermocouple (configurable)/  
resistance thermometer*

使用外部电流变压器监控加热电路

*Monitoring of heat circuit with external current transformer*

数码数字界面RS 485 和 CAN-Bus (总线主线) 允许控制器和处理器之间的交流

*Digital data interface RS 485 and CAN-Bus enable communication  
between controller and processor*

操作时间表/Operating hour meter

依照RS 485 间表更新固件/Update of firmware by RS 485

更多详情请参照hotcontrol®产品介绍

**More information can be found in the brochure hotcontrol®**

产品编号 stock-I.D.	类型 type	尺寸 dimensions [mm]	电压 voltage [V]-AC	注释 note
8804800	C 248	48 x 48 x 120	85 – 264 V-AC 50 – 60 Hz	incl. RS 485 interface, MODBUS
8804801	C 248	48 x 48 x 120	24 V AC/DC	incl. RS 485 interface, MODBUS
8804820	C 248	48 x 48 x 120	85 – 264 V-AC 50 – 60 Hz	incl. CAN Bus
8809600	C 296	48 x 96 x 120	85 – 264 V-AC 50 – 60 Hz	incl. RS 485 interface, MODBUS
8809601	C 296	48 x 96 x 120	24 V AC/DC	incl. RS 485 interface, MODBUS
8809620	C 296	48 x 96 x 120	85 – 264 V-AC 50 - 60 Hz	incl. CAN Bus
8809630	C 296	48 x 96 x 120	85 – 264 V-AC 50 – 60 Hz	模拟输出 (额定输出0 – 5 V-DC) <i>analoge output (norm output 0 – 5 V-DC)</i>



CM 24

## hotcontrol®

### 温度控制器CM

### Temperature Controllers CM

#### 技术数据/ Technical Data

简约设计的控制系列

*Control series in compact design*

6个区域单位中高达30个控制区域

*Up to 30 control zones in 6 zone units*

液晶显示, 简便易读

*Easy reading LED display*

直接操作按键: 快速并直接获取所有重要参数

*Direct operating keys: fast and direct access to all important parameter*

自适精密控制处理

*Precise control with self adaption to process*

加热电流控制

*Heating current control*

每个控制区域的卸载负荷

*Load shedding for each zone*

限制值控制

*Limit value control*

全功能范围

*Complete functional range*

无电压警报接点

*Voltage-free alarm contact*

按用户要求配置接头

*Connector configuration on demand user-specific*

串行数据接口依照RS485依照和总线 (可选)

*Serial data interfaces RS485 and CAN (option)*

电源线电压 3 x 400 V + N + PE/50 Hz

*Mains voltage 3 x 400 V + N + PE/50 Hz*



CM 12



CM 06

产品编号 stock-I.D.	类型 type	控制区 control area	区域最大 载荷 zones max. load	退出插头 exit plug	主插头 mains plug	尺寸 (B/H/T) dimensions (w/h/d) [mm]	最大功率 [kW] max. power [kW]	重量 weight [kg]
8800006	CM 06	6	6 x 16 A	1 x 24	CEE 16A	230 x 220 x 300	11	9
8800012	CM 12	12	12 x 16 A	2 x 24	CEE 32A	380 x 220 x 480	22	22
8800018	CM 18	18	18 x 16 A	3 x 24	CEE 63A	380 x 220 x 480	22	24
8800024	CM 24	24	24 x 16 A	4 x 24	CEE 63A	480 x 220 x 480	43	27
8800030	CM 30	30	30 x 16 A	5 x 24	CEE 63A	480 x 220 x 480	43	29



## hotcontrol®

### 桌面式温度控制器 C 448 以及 C 248

#### Tabletop unit C 448 with C 248

#### 技术数据/ Technical Data

装备hotcontrol C 248 单频温度控制器

提取技术规格参见第38页

*equipped with hotcontrol C 248 single-channel temperature controller  
exact technical specifications see page 38*

装置前端有备用计数器

*standby-counter at unit front*

主接头/main connector 230 V P/N(PE)

颜色: 银色/colour: silver anodised

接头 hotcontrol®-桌面式温度控制器包括:

*connector-set hotcontrol® tabletop unit composed of:*

10钉凸接头

*10-pins for male-connector*

4钉警报

*4-pins for alarm*

产品编号/stock-I.D. 9600000

产品编号 stock-I.D.	类型 type	控制区 zonen control area	区域 最大载荷 zones max. load	尺寸 (B/H/T) dimensions (w/h/d) [mm]	最大功率 max. power [kW]	重量 weight [kg]	注释 note
8844810	C 448/1 Fe-CuNi	1	1 x 16 A	110 x 110 x 200	3,6	9	90 – 264 V-AC 50 – 60 Hz
8844811	C 448/1 Fe-CuNi	1	1 x 16 A	110 x 110 x 200	3,6	9	90 – 264 V-AC 50 – 60 Hz 附带集成电流变 压器/ with integrated current- transformer
8844812	C 448/1 NiCr-Ni	1	1 x 16 A	110 x 110 x 200	3,6	9	90 – 264 V-AC 50 – 60 Hz
8844813	C 448/1 Pt 100	1	1 x 16 A	110 x 110 x 200	3,6	9	90 – 264 V-AC 50 – 60 Hz
8844820	C 448/2 Fe-CuNi	2	2 x 16 A	110 x 110 x 200	3,6	9	90 – 264 V-AC 50 – 60 Hz
8844821	C 448/2 Fe-CuNi	2	2 x 16 A	110 x 110 x 200	3,6	9	90 – 264 V-AC 50 – 60 Hz 附带集成电流变 压器/ with integrated current- transformer
8844822	C 448/2 NiCr-Ni	2	2 x 16 A	110 x 110 x 200	3,6	9	90 – 264 V-AC 50 – 60 Hz
8844823	C 448/2 Pt 100	2	2 x 16 A	110 x 110 x 200	3,6	9	90 – 264 V-AC 50 – 60 Hz



## 附件 CM/Accessoires CM

产品编号 <i>stock-I.D.</i>	类型 <i>type</i>
9612400	凸接头24 pol盒子/ <i>case for male connector 24 pol.</i>
9642400	24 钉凸接头/ <i>24-pins male connector</i>

## 桌面式温度控制器附件/Accessoires Tabletops

产品编号 <i>stock-I.D.</i>	类型 <i>type</i>
9600000	接头装置/ <i>connector-set</i>

## 附件 C 248/296/Accessoires C 248/296

产品编号 <i>stock-I.D.</i>	类型 <i>type</i>
264004	半导体继电器/ <i>semi-conductor relay D 2425, 240 V, 16 A</i>
264006	半导体继电器/ <i>semi-conductor relay D 2450, 240 V, 25 A</i>
264008	半导体继电器/ <i>semi-conductor relay D 4825, 400 V, 16 A</i>
264009	半导体继电器/ <i>semi-conductor relay D 4850, 400 V, 25 A</i>
264012	罩盖/ <i>cover cap</i>
264013	盖板/ <i>cover plate C 296 96 x 96 mm</i> 断流器/ <i>cutout</i>

表面热电偶  
*Surface thermocouple*  
**MT 1,0**



**技术数据/ Technical Data**

测点 <i>measuring point</i>	底部未接地 <i>at bottom ungrounded</i>
连接管套 <i>connection sleeve</i>	Ø 4,5 x 21 mm
温度范围 <i>temperature range</i>	最大值300 °C
允差 <i>tolerance</i>	2级/class 2
导线截面 <i>lead cross-section</i>	0,22 mm <sup>2</sup>
导线长度/ <i>lead length</i>	2000 mm
导线结构 <i>structure of leads</i>	玻璃棉绝缘附带保护性金属套管 <i>glass silk insulated with protective metal sleeve</i>
传感器结构 <i>structure of sensor</i>	弹簧用作弯曲保护Ø 5,6 x 50 mm <i>spring for bending protection Ø 5,6 x 50 mm</i>

产品编号 <i>stock-I.D.</i>	规格 <i>term</i> [mm]	测量方法 <i>measuring method</i>	标准 <i>norm</i>	外套材料 <i>sheath material</i>	最小弯曲半径 (近似值) <i>smallest bending radius (approx.)</i> [mm]
8512090	Ø 1,0 x 90	Fe-CuNi (J 型/type J) (黑/白)/(black/white)	DIN EN 60584	不锈钢 <i>stainless steel</i>	5,0
8512091	Ø 1,0 x 90	Fe-CuNi (L 型/type L) (蓝/红)/(blue/red)	DIN 43710	不锈钢 <i>stainless steel</i>	5,0
8512150	Ø 1,0 x 150	Fe-CuNi (J 型/type J) (黑/白)/(black/white)	DIN EN 60584	不锈钢 <i>stainless steel</i>	5,0
8512151	Ø 1,0 x 150	Fe-CuNi (L 型/type L) (蓝/红)/(blue/red)	DIN 43710	不锈钢 <i>stainless steel</i>	5,0
8501090	Ø 1,5 x 90	Fe-CuNi (J 型/type J) (黑/白)/(black/white)	DIN EN 60584	不锈钢 <i>stainless steel</i>	7,5
8501091	Ø 1,5 x 90	Fe-CuNi (L 型/type L) (蓝/红)/(blue/red)	DIN 43710	不锈钢 <i>stainless steel</i>	7,5
8501150	Ø 1,5 x 150	Fe-CuNi (L 型/type L) (蓝/红)/(blue/red)	DIN 43710	不锈钢 <i>stainless steel</i>	7,5
8501151	Ø 1,5 x 150	Fe-CuNi (J 型/type J) (黑/白)/(black/white)	DIN EN 60584	不锈钢 <i>stainless steel</i>	7,5
8501240	Ø 1,5 x 240	Fe-CuNi (J 型/type J) (黑/白)/(black/white)	DIN EN 60584	不锈钢 <i>stainless steel</i>	7,5
8501241	Ø 1,5 x 240	Fe-CuNi (L 型/type L) (蓝/红)/(blue/red)	DIN 43710	不锈钢 <i>stainless steel</i>	7,5
8511090	Ø 1,5 x 90	NiCr-Ni (K 型/type K) (红/绿)/(red/green)	DIN 43710	镍 <i>nickel</i>	7,5
8511091	Ø 1,5 x 90	NiCr-Ni (K 型/type K) (绿/白)/(green/white)	DIN EN 60584	镍 <i>nickel</i>	7,5
8511150	Ø 1,5 x 150	NiCr-Ni (K 型/type K) (绿/白)/(green/white)	DIN EN 60584	镍 <i>nickel</i>	7,5
8511152	Ø 1,5 x 150	NiCr-Ni (K 型/type K) (红/绿)/(red/green)	DIN 43710	镍 <i>nickel</i>	7,5

## 角度传感器

### Angle sensor

#### PWF 1



产品编号  
stock-I.D.

8700203

## 技术数据/ Technical Data

PWF/Pt 100	
传感器头直径 <i>diameter sensor tip</i>	6,0 mm
传感器头长度 <i>length sensor tip</i>	60 mm
温度最大值/ <i>max. temperature</i>	400 °C
传感器/ <i>sensor</i>	Pt 100; 2-导体-电路/ <i>2-conductor-circuit</i>
导线长度/ <i>lead length</i>	2000 mm 至/ <i>to</i> 400 °C
导线结构 <i>structure of leads</i>	保护性金属套管 <i>protective metal sleeving</i>
传感器结构 <i>structure of sensor</i>	弹簧用作弯曲保护100 mm 包括M10x1 Ermeto-螺纹, 矩形退口 <i>spring for bending protection 100 mm incl. M10x1 Ermeto-screwing with rectangular exit</i>
DIN 43710	

## 插入式表面热电偶

### Insert surface thermocouple

#### TEF 2



## 技术数据/ Technical Data

测点 <i>measuring point</i>	底部接地 (半球形) <i>at bottom grounded (hemispherical)</i>
温度范围 <i>temperature range</i>	0 °C ... +400 °C
允差 <i>tolerance</i>	2 级 <i>class 2</i>
导线截面 <i>lead cross-section</i>	0,5 mm <sup>2</sup>
导线长度/ <i>lead length</i>	2000 mm
导线结构 <i>structure of leads</i>	多线式玻璃棉绝缘, 玻璃棉绝缘外套长度45 mm <i>multistranded glass silk insulated, with glass silk insulated sleeving 45 mm length</i>

产品编号 stock-I.D.	规格 term	测量方法 measuring method	标准 norm	外套材料 sheath material
8600200	Ø 3,5 x 30 mm	Fe-CuNi (L 型/type L) (蓝/红)/(blue/red)	DIN 43710	不锈钢 stainless steel
8600210	Ø 3,5 x 30 mm	Fe-CuNi (J 型/type J) (黑/白)/(black/white)	DIN EN 60584	不锈钢 stainless steel
8600201*	Ø 3,5 x 30 mm	Fe-CuNi (L 型/type L) (蓝/红)/(blue/red)	DIN 43710	不锈钢 stainless steel
8600211*	Ø 3,5 x 30 mm	Fe-CuNi (J 型/type J) (黑/白)/(black/white)	DIN EN 60584	不锈钢 stainless steel
8600202*	Ø 3,5 x 40 mm	Fe-CuNi (L 型/type L) (蓝/红)/(blue/red)	DIN 43710	不锈钢 stainless steel
8600212*	Ø 3,5 x 40 mm	Fe-CuNi (J 型/type J) (黑/白)/(black/white)	DIN EN 60584	不锈钢 stainless steel
8600203	Ø 3,5 x 40 mm	Fe-CuNi (L 型/type L) (蓝/红)/(blue/red)	DIN 43710	不锈钢 stainless steel
8600213	Ø 3,5 x 40 mm	Fe-CuNi (J 型/type J) (黑/白)/(black/white)	DIN EN 60584	不锈钢 stainless steel
8600204	Ø 3,5 x 30 mm	NiCr-Ni (K 型/type K) (红/绿)/(red/green)	DIN 43710	不锈钢 stainless steel
8600214	Ø 3,5 x 30 mm	NiCr-Ni (K 型/type K) (绿/白)/(green/white)	DIN EN 60584	不锈钢 stainless steel
8600207*	Ø 3,5 x 30 mm	NiCr-Ni (K 型/type K) (红/绿)/(red/green)	DIN 43710	不锈钢 stainless steel
8600217*	Ø 3,5 x 30 mm	NiCr-Ni (K 型/type K) (绿/白)/(green/white)	DIN EN 60584	不锈钢 stainless steel

\*固定板/fixing plate 8 x 15 mm/Ø 5 mm

## 插入式表面热电偶

### Insert surface thermocouple

#### PWF 2



## 技术数据/Technical Data

Pt 100, B级/Pt 100, class B

传感器/sensor

Pt 100;  
2-导体-电路/2-conductor-circuit

温度范围  
temperature range

0 °C ... +400 °C

直径/diameter

3,5 mm

长度/length

30 mm

导线截面  
lead cross-section

2 x 0,22 mm<sup>2</sup> 至/to 400 °C

导线长度/lead length

2000 mm

导线结构  
structure of leads

玻璃棉绝缘, 仅玻璃棉绝缘套管  
glass silk insulated, bared with glass  
silk insulated sleeving

产品编号 stock-I.D.	标准 norm	外套材料 sheath material	板/plate [mm]	孔/hole [mm]
8700200	DIN EN 60751	不锈钢/stainless steel		
8700201		不锈钢/stainless steel	8 x 15	5

## 表面热电偶

### Surface thermocouple

#### TEF 4



### 技术数据/ Technical Data

测点 <i>measuring point</i>	底部接地 <i>at bottom grounded</i>
直径/ <i>diameter</i>	8,0 x 12 mm
传感器/ <i>sensor</i>	Ø 8,0 mm/118°
温度范围 <i>temperature range</i>	0 °C ... +400 °C
允差 <i>tolerance</i>	2 级 <i>class 2</i>
导线截面 <i>lead cross-section</i>	0,35 mm <sup>2</sup> 至/to 最大值350 °C
导线长度/ <i>lead length</i>	2000 mm
导线结构 <i>structure of leads</i>	玻璃棉绝缘保护性金属套管 <i>glass silk insulated with protective metal sleeving</i>
传感器结构 <i>structure of sensor</i>	卡口盖上的公差配合深度可用压缩弹簧上的螺纹调整 <i>fitting depth of bayonet-cap can be adjusted with screws on a compression spring</i>

产品编号 <i>stock-I.D.</i>	规格 <i>term</i>	测量方法 <i>measuring method</i>	标准 <i>norm</i>	外套材料 <i>sheath material</i>
8600400	Ø 8,0 x 12 mm	Fe-CuNi (L 型/type L) (蓝/红)/(blue/red)	DIN 43710	不锈钢 <i>stainless steel</i>
8600401	Ø 8,0 x 12 mm	Fe-CuNi (J 型/type J) (黑/白)/(black/white)	DIN EN 60584	不锈钢 <i>stainless steel</i>

## 传感器

### Sensor

#### PWF 4



### 技术数据/ Technical Data

PWF/Pt 100	
传感器直径 <i>sensor diameter</i>	8,0 mm
长度/ <i>length</i>	10,5 mm
附带传感器/ <i>with sensor</i>	Ø 8,0 mm, 118°
温度最大值/ <i>max. temperature</i>	400 °C
传感器/ <i>sensor</i>	Pt 100; 3-导体-电路/3-conductor-circuit
允差 <i>tolerance</i>	B 级 <i>class B</i>
导线长度/ <i>lead length</i>	2000 mm至/to 400°C
导线结构 <i>structure of leads</i>	保护性金属套管 <i>protective metal sleeving</i>
传感器结构 <i>structure of sensor</i>	卡口盖上的公差配合深度可用压缩弹簧上的螺纹调整，拧入式螺纹接套接套R 3/8" <i>fitting depth of bayonet-cap can be adjusted with screws on a compression spring with screw-in nipple R 3/8"</i>

产品编号  
*stock-I.D.*

8700205

DIN 43710

## 圆柱热电偶

### Cylindrical thermocouple

#### TEF 11



### 技术数据/ Technical Data

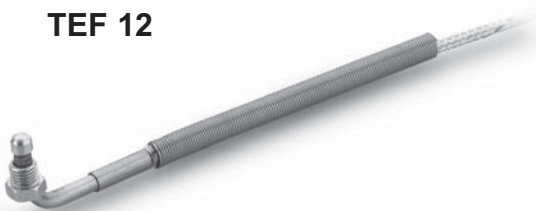
测点 <i>measuring point</i>	底部接地 <i>at bottom grounded</i>
温度范围 <i>temperature range</i>	0 °C ... +350 °C
允差/tolerance	2 级/class 2
导线截面 <i>lead cross-section</i>	0,22 mm <sup>2</sup> 至/to 最大值350 °C
导线长度/lead length	2000 mm
导线结构 <i>structure of leads</i>	玻璃棉绝缘保护性金属套管 <i>glass silk insulated protective metal sleeving</i>
传感器结构 <i>structure of sensor</i>	卡口盖上的公差配合深度可用压缩弹簧上的螺纹调整, 拧入式螺纹接套N 11 <i>fitting depth of bayonet-cap can be adjusted with screws on a compression spring for screw-in nipple N 11</i>

产品编号 <i>stock-I.D.</i>	规格 <i>term</i>	测量方法 <i>measuring method</i>	标准 <i>norm</i>	外套材料 <i>sheath material</i>
8701211	Ø 8,0 x 6,0 mm 附带传感器/ <i>with sensor</i> Ø 5,0 x 10 mm	NiCr-Ni (K 型/type K) (红/绿)/(red/green)	DIN 43710	不锈钢 <i>stainless steel</i>
8701235	Ø 8,0 x 6,0 mm 附带传感器/ <i>with sensor</i> Ø 5,0 x 40 mm	NiCr-Ni (K 型/type K) (绿/白)/(green/white)	DIN EN 60584	不锈钢 <i>stainless steel</i>

## 角度热电偶

### Angle thermocouple

#### TEF 12



### 技术数据/ Technical Data

测点 <i>measuring point</i>	底部接地 (半球形) <i>at bottom grounded (hemispherical)</i>
温度范围 <i>temperature range</i>	0 °C ... +400 °C
允差 <i>tolerance</i>	1 级 <i>class 1</i>
导线截面 <i>lead cross-section</i>	0,35 mm <sup>2</sup> 至/to 最大值350 °C
导线长度/lead length	2000 mm
导线结构 <i>structure of leads</i>	玻璃棉绝缘保护性金属套管 <i>glass silk insulated with protective metal sleeving</i>
传感器结构 <i>structure of sensor</i>	弹簧用于弯曲保护, 拧入式螺纹接套接套 M8 x 1 <i>spring for bending protection 100 mm incl. screw-in nipple M8 x 1</i>

### 角度热电偶/Angle thermocouple TEF 12

产品编号 stock-I.D.	规格 term	测量方法 measuring method	标准 norm	外套材料 sheath material	允差 tolerance
8601200	Ø 6,0 x 10 mm	Fe-CuNi (型/type L)	DIN 43710	不锈钢 stainless steel	2 级/class 2
8601201	Ø 6,0 x 10 mm	Fe-CuNi (型/type J) (黑/白) (black/white)	DIN EN 60584	不锈钢 stainless steel	1 级/class 1

### 热电偶

### Thermocouple

### TEF 13



### 技术数据/ Technical Data

测点 measuring point	底部接地 at bottom grounded
允差/tolerance	2级/class 2
导线截面 lead cross-section	0,22 mm <sup>2</sup> 至/to 350 °C
导线长度/lead length	2000 mm
导线结构 structure of leads	多线式玻璃棉绝缘保护性金属套管，玻璃棉套管长度70 mm multistranded glass silk insulated with protective metal sleeving and glass silk sleeving 70 mm long

产品编号 stock-I.D.	规格 term	测量方法 measuring method	标准 norm	外套材料 sheath material	温度范围 temperature range
8601300	14,0 x 10 mm 同心孔 M4/ with concentrical bore M4	Fe-CuNi (L 型/type L) (蓝/红)/ (blue/red)	DIN 43710	不锈钢 stainless steel	0 °C ... +350 °C
8601301	14,0 x 10 mm 同心孔 M4/ with concentrical bore M4	Fe-CuNi (J 型/type J) (黑/白)/ (black/white)	DIN EN 60584	不锈钢 stainless steel	0 °C ... +350 °C
8701213	14,0 x 10 mm 同心孔 M4/ with concentrical bore M4	NiCr-Ni (K 型/type K) (红/绿)/ (red/green)	DIN 43710	不锈钢 stainless steel	0 °C ... +350 °C
8701232	14,0 x 10 mm 同心孔 M4/ with concentrical bore M4	NiCr-Ni (K 型/type K) (绿/白)/ (green/white)	DIN EN 60584	不锈钢 stainless steel	0 °C ... +350 °C

## 表面热电偶

### Surface thermocouple

#### TEF 16



### 技术数据/ Technical Data

测点 <i>measuring point</i>	底部接地 <i>at bottom grounded</i>
附带传感器/ <i>with sensor</i>	Ø 8,0 mm, 118°
温度范围 <i>temperature range</i>	0 °C ... +400 °C
导线截面 <i>lead cross-section</i>	0,35 mm <sup>2</sup> 至/to 最大值350 °C
导线长度/ <i>lead length</i>	2000 mm
导线结构 <i>structure of leads</i>	玻璃棉绝缘保护性金属 <i>glass silk insulated with metal protective</i>
传感器结构 <i>structure of sensor</i>	卡口盖 (D 12,4 mm) 上的公差配合深度可用压缩弹簧上的螺纹调整, 不用拧入式螺纹接套 <i>fitting depth of bayonet-cap can be adjusted with screws on a compression spring. Without screw-in nipple</i>

产品编号 <i>stock-I.D.</i>	规格 <i>term</i>	测量方法 <i>measuring method</i>	标准 <i>norm</i>	外套材料 <i>sheath material</i>	允差 <i>tolerance</i>
8601600	Ø 8,0 x 12 mm	Fe-CuNi (L 型/type L) (蓝/红)/(blue/red)	DIN 43710	不锈钢 <i>stainless steel</i>	2 级/class 2
8601601	Ø 8,0 x 12 mm	Fe-CuNi (J 型/type J) (黑/白)/ (black/white)	DIN EN 60584	不锈钢 <i>stainless steel</i>	1 级/class 1

## 圆柱传感器

### Cylindrical sensor

#### PWF 16



### 技术数据/ Technical Data

PWF/Pt 100	
附带传感器/ <i>with sensor</i>	118°
<i>potentialfrei/ungrounded</i>	
传感器直径 <i>sensor diameter</i>	8,0 mm
长度/ <i>length</i>	10,5 mm
温度最大值/ <i>max. temperature</i>	400 °C
导线长度/ <i>lead length</i>	2000 mm 至/to 350 °C
导线结构 <i>structure of leads</i>	保护性金属套管 <i>protective metal sleeving</i>
传感器结构 <i>structure of sensor</i>	卡口盖上的公差配合深度可用压缩弹簧上的螺纹调整 <i>fitting depth of bayonet-cap can be adjusted with screws on a compression spring</i>

产品编号  
*stock-I.D.*

8700209



## 表面热电偶

### Surface thermocouple

#### TEF 16



### 技术数据/ Technical Data

测点 <i>measuring point</i>	底部接地 <i>at bottom grounded</i>
附带传感器/ <i>with sensor</i>	Ø 8,0 mm, 118°
温度范围 <i>temperature range</i>	0 °C ... +350 °C
允差 <i>tolerance</i>	2 级 <i>class 2</i>
导线长度/ <i>lead length</i>	2000 mm
导线结构 <i>structure of leads</i>	玻璃棉绝缘保护性金属套管 <i>glass silk insulated with protective metal sleeving</i>
传感器结构 <i>structure of sensor</i>	卡口盖上的公差配合深度可用压缩弹簧上的螺纹调整, 不用拧入式螺纹接套 <i>fitting depth of bayonet-cap can be adjusted with screws on a compression spring. Without screw-in nipple</i>

产品编号 <i>stock-I.D.</i>	规格 <i>term</i>	测量方法 <i>measuring method</i>	标准 <i>norm</i>	外套材料 <i>sheath material</i>	导线截面 <i>lead cross-section</i>
8701216	Ø 8,0 x 12 mm	NiCr-Ni (型/type K) (红/绿)/(red/green)	DIN 43710	不锈钢 <i>stainless steel</i>	0,22 m <sup>2</sup> 最大值350 °C
8701233	Ø 8,0 x 12 mm	NiCr-Ni (型/type K) (绿/白)/ (green/white)	DIN EN 60584	不锈钢 <i>stainless steel</i>	0,35 m <sup>2</sup> 最大值350 °C

## 传感器

### Sensor

#### PWF 20



### 技术数据/ Technical Data

PWF/Pt 100	
传感器直径 <i>sensor diameter</i>	5,0 mm
长度/ <i>length</i>	19 mm
温度最大值/ <i>max. temperature</i>	400 °C
传感器/ <i>sensor</i>	Pt 100; 2-导体-电路/2-conductor-circuit
传感器头/ <i>sensor tip</i>	Ø 4,0 mm
有效传感区 <i>effective sensor area</i>	Ø 4,0 mm (± 0,06 mm)
导线长度/ <i>lead length</i>	2000 mm至/to 400°C
导线结构 <i>structure of leads</i>	保护性金属套管 <i>protective metal sleeving</i>
传感器结构 <i>structure of sensor</i>	卡口盖Ø 12.3 mm, 卡口盖上的公差配合深度可用压缩弹簧上的螺纹调整, 拧入式螺纹接套EN 20/21 <i>bayonet-cap Ø 12.3 mm, fitting depth of bayonet-cap can be adjusted with screws on a compression spring, for screw-in nipple EN 20/21</i>
DIN 43710	

产品编号  
*stock-I.D.*

8700207

## 圆柱热电偶

### Cylindrical thermocouple

#### TEF 20



### 技术数据/ Technical Data

测点 <i>measuring point</i>	底部接地 <i>at bottom grounded</i>
附带传感器/ <i>with sensor</i>	Ø 4,0 x 6 mm
温度范围 <i>temperature range</i>	0 °C ... +350 °C
允差/ <i>tolerance</i>	2 级/ <i>class 2</i>
导线截面 <i>lead cross-section</i>	0,22 mm <sup>2</sup> 至/to 最大值350 °C
导线长度/ <i>lead length</i>	2000 mm
导线结构 <i>structure of leads</i>	玻璃棉绝缘保护性金属套管 <i>glass silk insulated protective metal sleeving</i>
传感器结构 <i>structure of sensor</i>	卡口盖(D 11.6 mm), 卡口盖上的公差配合深度可用压缩弹簧上的螺纹调整, 拧入式螺纹接套EN 20/21 <i>with bayonet-cap (D 11.6 mm), fitting depth of bayonet-cap can be adjusted with screws on a compression spring, for screw-in nipple EN 20/21</i>

产品编号 <i>stock-I.D.</i>	规格 <i>term</i>	测量方法 <i>measuring method</i>	标准 <i>norm</i>	外套材料 <i>sheath material</i>
8602000	Ø 5,0 x 25 mm	Fe-CuNi (L 型/type L) (蓝/红)/(blue/red)	DIN 43710	不锈钢 <i>stainless steel</i>
8602001	Ø 5,0 x 25 mm	Fe-CuNi (J 型/type J) (黑/白)/(black/white)	DIN EN 60584	不锈钢 <i>stainless steel</i>

## 圆柱热电偶

### Cylindrical thermocouple

#### TEF A



### 技术数据/ Technical Data

测点 <i>measuring point</i>	底部接地 <i>at bottom grounded</i>
附带传感器/ <i>with sensor</i>	Ø 6,0 x 40 mm
温度范围/ <i>temperature range</i>	0 °C ... +350 °C
允差/ <i>tolerance</i>	2 级/ <i>class 2</i>
导线截面 <i>lead cross-section</i>	0,22 mm <sup>2</sup> 至/to 最大值350 °C
导线长度/ <i>lead length</i>	2000 mm
弹簧用于弯曲保护 <i>with spring for bending protection</i>	ca. 70 mm 长度 <i>ca. 70 mm</i>
附带支持盘 <i>with holding plate</i>	15 x 30 x 0,5 mm, 弯曲l Ø 100 mm (±5 mm) <i>15 x 30 x 0.5 mm, bent l Ø 100 mm (±5 mm)</i>
导线结构 <i>structure of leads</i>	玻璃棉绝缘, 保护性金属套管 <i>glass silk insulated, protective metal sleeving</i>

### 圆柱热电偶/Cylindrical thermocouple TEF A

产品编号 stock-I.D.	规格 term	测量方法 measuring method	标准 norm	外套材料 sheath material
8608815	Ø 6,0 x 40 mm	Fe-CuNi (L 型/type L) (蓝/红)/(blue/red)	DIN 43710	不锈钢 stainless steel
8608816	Ø 6,0 x 40 mm	Fe-CuNi (J 型/type J) (黑/白)/(black/white)	DIN EN 60584	不锈钢 stainless steel
8701224	Ø 6,0 x 40 mm	NiCr-Ni (K 型/type K) (红/绿)/(red/green)	DIN 43710	不锈钢 stainless steel
8701236	Ø 6,0 x 40 mm	NiCr-Ni (K 型/type K) (绿/白)/(green/white)	DIN EN 60584	不锈钢 stainless steel

### 管夹式传感器

#### Clamping band sensor

#### TEF SP



### 技术数据/Technical Data

测点 measuring point	底部接地带管夹 at bottom grounded with clamping band
管夹宽度 clamping band width	9 mm
允差/tolerance	2 级/class 2
导线截面 lead cross-section	0,22 mm <sup>2</sup> 至/to 最大值350 °C
导线长度/lead length	2000 mm
导线结构 structure of leads	玻璃棉绝缘保护性金属套管，弹簧用于弯曲保护，长度60 mm glass silk insulated with protective metal sleeving and spring for bending protection 60 mm

产品编号 stock-I.D.	规格 term	测量方法 measuring method	标准 norm	外套材料 sheath material	管夹直径 clamping diameters
8609925		Fe-CuNi (L 型/type L) (蓝/红)/(blue/red)	DIN 43710	不锈钢 stainless steel	25 – 40 mm
8609926		Fe-CuNi (J 型/type J) (黑/白)/ (black/white)	DIN EN 60584	不锈钢 stainless steel	25 – 40 mm
8609940		Fe-CuNi (L 型/type L) (蓝/红)/(blue/red)	DIN 43710	不锈钢 stainless steel	40 – 60 mm
8609941		Fe-CuNi (J 型/type J) (黑/白)/ (black/white)	DIN EN 60584	不锈钢 stainless steel	40 – 60 mm
8701226		NiCr-Ni (K 型/type K) (红/绿)/(red/green)	DIN 43710	不锈钢 stainless steel	40 – 60 mm
8701229		NiCr-Ni (K 型/type K) (绿/白)/(green/white)	DIN EN 60584	不锈钢 stainless steel	40 – 60 mm
8701227		NiCr-Ni (K 型/type K) (红/绿)/(red/green)	DIN 43710	不锈钢 stainless steel	50 – 70 mm
8701230		NiCr-Ni (K 型/type K) (绿/白)/(green/white)	DIN EN 60584	不锈钢 stainless steel	50 – 70 mm
8701228		NiCr-Ni (K 型/type K) (红/绿)/(red/green)	DIN 43710	不锈钢 stainless steel	70 – 90 mm
8701231		NiCr-Ni (K 型/type K) (绿/白)/(green/white)	DIN EN 60584	不锈钢 stainless steel	70 – 90 mm

## 圆柱热电偶

### Cylindrical thermocouple

#### TEF 68



### 技术数据/ Technical Data

测点 <i>measuring point</i>	底部非接地(半球形) <i>at bottom ungrounded (hemispherical)</i>
附带传感器/ <i>with sensor</i>	Ø 4,0 x 12 mm
温度范围 <i>temperature range</i>	0 °C ... +350 °C
允差/ <i>tolerance</i>	2级/ <i>class 2</i>
导线截面 <i>lead cross-section</i>	0,22 mm <sup>2</sup> 至/to 最大值350 °C
导线长度/ <i>lead length</i>	2000 mm
导线结构 <i>structure of leads</i>	玻璃棉绝缘保护性金属套管 <i>glass silk insulated protective metal sleeving</i>
传感器结构 <i>structure of sensor</i>	公差配合与传感器夹角 90°, 螺钉M4与 弹簧安装, 用于弯曲保护大约70 mm <i>mounting, plate 90° to the sensor and a screw M4 for mounting with spring for bending protection aprox. 70 mm</i>

产品编号 <i>stock-I.D.</i>	规格 <i>term</i>	测量方法 <i>measuring method</i>	标准 <i>norm</i>	外套材料 <i>sheath material</i>
8606800	Ø 4,0 x 12 mm	Fe-CuNi (L 型/ <i>type L</i> ) (蓝/红)/( <i>blue/red</i> )	DIN EN 60584	不锈钢 <i>stainless steel</i>
8606801	Ø 4,0 x 12 mm	Fe-CuNi (J 型/ <i>type J</i> ) (黑/白)/( <i>black/white</i> )	DIN EN 60584	不锈钢 <i>stainless steel</i>

## 圆柱热电偶

### Cylindrical thermocouple

#### TEF 68



### 技术数据/ Technical Data

测点 <i>measuring point</i>	底部非接地(半球形) <i>at bottom ungrounded (hemispherical)</i>
附带传感器/ <i>with sensor</i>	Ø 4,0 x 12 mm
温度范围 <i>temperature range</i>	0 °C ... +400 °C
允差/ <i>tolerance</i>	1级/ <i>class 1</i>
导线截面 <i>lead cross-section</i>	0,35 mm <sup>2</sup> 至/to 最大值400 °C
导线长度/ <i>lead length</i>	2000 mm
导线结构 <i>structure of leads</i>	玻璃棉绝缘保护性金属套管 <i>glass silk insulated, protective metal sleeving</i>
传感器结构 <i>structure of sensor</i>	公差配合与传感器夹角 90°, 螺钉M4与 弹簧安装, 用于弯曲保护 <i>mounting plate 90° to the sensor and a screw M4 for mounting with spring for bending protection</i>

产品编号 <i>stock-I.D.</i>	规格 <i>term</i>	测量方法 <i>measuring method</i>	标准 <i>norm</i>	外套材料 <i>sheath material</i>
8701223	Ø 4,0 x 12 mm	NiCr-Ni (K 型/ <i>type K</i> ) (红/绿)/( <i>red/green</i> )	DIN 43710	不锈钢 <i>stainless steel</i>
8701234	Ø 4,0 x 12 mm	NiCr-Ni (K 型/ <i>type K</i> ) (绿/白)/( <i>green/white</i> )	DIN EN 60584	不锈钢 <i>stainless steel</i>

喷雾器  
Sprays



产品编号 stock-I.D.	规格 term
9400002	Isolite-Spray

VE = 12 Dosen/packaging Unit = 12 aerosol cans

压接套管  
Crimp sleeves

产品编号 stock-I.D.	规格 term
221001	2 x 0,2 x 5 mm
221002	2,0 x 0,2 x 10 mm
221003	2,3 x 0,2 x 5 mm
221004	3 x 0,6 x 12 mm
221005	3 x 0,3 x 7 mm
221006	3 x 0,3 x 12 mm
221007	4 x 0,5 x 7 mm
221008	4 x 0,5 x 12 mm
221009	4,5 x 0,5 x 7 mm
221010	5 x 0,5 x 6 mm
221011	5 x 0,5 x 12 mm

最少购买量1000 件/minimum purchase quantity: 1000 pieces

拧入式螺纹接套  
Screw in nipple

依照/according to DIN 43710

产品编号 stock-I.D.	规格 term	长度 length [mm]	心轴 mandrel Ø [mm]
8700404	N 16 M 12 x 1 用于/for TEF 16	25	
8700408	EN 32 M 12 x 1	40	14,0

RB 机用绞刀  
RB Machine Reamer

技术数据/Technical Data

材料/material	HSS
钻孔依照 for bore holes according to 莫氏圆锥(MK)/morse cone (MK)	ISO H7

产品编号 stock-I.D.	用于 for HHP Ø	类型 type	绞刀 reamer Ø H [mm]	护套长度 cotting length [mm]	钻孔深度 ream depth [mm]	总长 total length [mm]
9203005	10	5	10,00	40	80	220
9205008	12,5	8	12,50	45	200	300

玻璃棉绝缘保护套管

*Glass silk insulated protective sleeving*

产品编号 <i>stock-I.D.</i>	壁厚度 <i>wall thickness</i> [mm]	内径-Ø <i>inner-Ø</i> [mm]
381000	0,35	0,50
381001	0,35	1,00
381002	0,35	1,30
381004	0,35	2,00
381005	0,35	2,50
381006	0,35	4,00
381007	0,35	5,00
381008	0,35	6,00
381009	0,35	7,00
382000	1,00	2,00
382001	1,00	3,00
382002	1,00	4,00
382003	1,00	5,00
382008	1,20	5,50
382005	1,00	8,00

最少购买数量: 50 m/minimum purchase quantity: 50 m

导线/Leads				
产品编号 <i>stock-I.D.</i>	规格 <i>term</i>	设计 <i>dispatch</i>	截面 <i>cross-section</i> [mm <sup>2</sup> ]	温度持续 <i>temperature continuance</i> [°C]
271300	玻璃棉绝缘镍导线 <i>glass silk insulated Ni-lead</i>	黑色/black KF	0,22	至/to 320
272300	玻璃棉绝缘镍导线 <i>glass silk insulated Ni-lead</i>	黄色/yellow KF	0,22	至/to 320
271301	玻璃棉绝缘镍导线 <i>glass silk insulated Ni-lead</i>	黑色/black KF	0,50	至/to 320
272301	玻璃棉绝缘镍导线 <i>glass silk insulated Ni-lead</i>	黄色/yellow KF	0,50	至/to 320
271302	玻璃棉绝缘镍导线 <i>glass silk insulated Ni-lead</i>	黑色/black KF	0,75	至/to 320
272302	玻璃棉绝缘镍导线 <i>glass silk insulated Ni-lead</i>	黄色/yellow KF	0,75	至/to 320
271303	玻璃棉绝缘镍导线 <i>glass silk insulated Ni-lead</i>	黑色/black KF	1,00	至/to 320
272303	玻璃棉绝缘镍导线 <i>glass silk insulated Ni-lead</i>	黄色/yellow KF	1,00	至/to 320
271304	玻璃棉绝缘镍导线 <i>glass silk insulated Ni-lead</i>	黑色/black KF	1,50	至/to 320
272304	玻璃棉绝缘镍导线 <i>glass silk insulated Ni-lead</i>	黄色/yellow KF	1,50	至/to 320
271305	玻璃棉绝缘镍导线	黑色/black KF	2,50	至/to 320

最少购买数量: 50 m/minimum-purchase quantity: 50 m

导线/Leads				
产品编号 stock-I.D.	规格 term	设计 dispatch	截面 cross-section [mm <sup>2</sup> ]	温度持续 temperature continuance [°C]
272305	玻璃棉绝缘镍导线 <i>glass silk insulated Ni-lead</i>	黄/yellow KF	2,50	至/to 320
272006	玻璃棉绝缘镍导线 <i>glass silk insulated Ni-lead</i>	无/without KF	4,00	至/to 320
272007	玻璃棉绝缘镍导线 <i>glass silk insulated Ni-lead</i>	无/without KF	6,00	至/to 320
273100	玻璃棉绝缘 高热抗镍导线 <i>glas silk insulated high heat resistant Ni-lead</i>		0,22	至/to 600
273101	玻璃棉绝缘 高热抗镍导线 <i>glas silk insulated high heat resistant Ni-lead</i>		0,50	至/to 600
273102	玻璃棉绝缘 高热抗镍导线 <i>glas silk insulated high heat resistant Ni-lead</i>		0,75	至/to 600
273103	玻璃棉绝缘 高热抗镍导线 <i>glas silk insulated high heat resistant Ni-lead</i>		1,00	至/to 600
273104	玻璃棉绝缘 高热抗镍导线 <i>glas silk insulated high heat resistant Ni-lead</i>		1,50	至/to 600
273105	玻璃棉绝缘 高热抗镍导线 <i>glas silk insulated high heat resistant Ni-lead</i>		2,50	至/to 600

<b>导线/Leads</b>			
产品编号 <i>stock-I.D</i>	规格 <i>term</i>	截面 <i>cross-section</i> [mm <sup>2</sup> ]	温度持续 <i>temperature continuance</i> [°C]
301000	PTFE绝缘镍导线 <i>PTFE insulated Ni-lead</i>	0,22	至/to 260
301004	PTFE绝缘镍导线 <i>PTFE insulated Ni-lead</i>	0,50	至/to 260
301001	PTFE绝缘镍导线 <i>PTFE insulated Ni-lead</i>	0,75	至/to 260
301008	PTFE绝缘镍导线 <i>PTFE insulated Ni-lead</i>	1,00	至/to 260
301003	PTFE绝缘镍导线 <i>PTFE insulated Ni-lead</i>	1,50	至/to 260
314000	高弹性硅绝缘镍导线 <i>high flexible silicon insulated Ni-lead</i>	0,25	至/to 180
314001	高弹性硅绝缘镍导线 <i>high flexible silicon insulated Ni-lead</i>	0,50	至/to 180
314002	高弹性硅绝缘镍导线 <i>high flexible silicon insulated Ni-lead</i>	0,75	至/to 180



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