

Note: Document originally drafted in the English language.  
注释：文件最初用英语起草。

**Product Description**

The GS-5076 is a 6.9" (175 mm) 150 kV, 3.7 MJ (5.0 MHU) maximum anode heat content, rotating anode insert. This insert is specifically designed for CT Scanners. The insert features a 7° tungsten-rhenium facing on molybdenum with a graphite backed target and is available with the following nominal focal spot:

0.4 x 0.7  
0.6 x 1.3  
IEC 60336

**Loading Factor for slit focal:**

Small - 120 kV, 100 mA  
Large - 120 kV, 200 mA

**Maximum Anode Cooling Rate:**

7,100 W (10 kHU/sec)

**Continuous Anode Input Power:**

7,100 W (10 kHU/sec)

**Nominal Anode Input Power:  
Load Time 1 Second (120 Hz)**

Small - 28 kW IEC 60613:2010  
Large - 48 kW IEC 60613:2010

**Nominal CT Anode Input Power:  
60 HZ**

Small - 20.4 kW IEC 60613:2010  
Large - 36 kW IEC 60613:2010

**120 HZ**

Small - 28 kW IEC 60613:2010  
Large - 48 kW IEC 60613:2010

**Nominal CT Scan Power Index:  
60 HZ**

Small - 20.4 kW IEC 60613:2010  
Large - 36 kW IEC 60613:2010

**120 HZ**

Small - 28 kW IEC 60613:2010  
Large - 47.2 kW IEC 60613:2010

**Reference Axis:**

Perpendicular to port face.

This insert is intended for use in a Varex Imaging B-590H housing.

**产品说明**

GS-5076 是一款具有 6.9" (175 mm) 靶盘, 150 kV, 3.7 MJ, 5.0 MHU, 最大阳极热含量的旋转阳极 X 线管芯。该管芯专门针对 CT 扫描仪而设计。该管芯的靶盘结构为 7° 靶角, 铼钨钼合金靶材, 石墨基底, 可提供下列尺寸的标称焦点:

0.4 x 0.7  
0.6 x 1.3  
IEC 60336

狭缝焦点的测量条件:  
小焦点 - 120 kV, 100 mA  
大焦点 - 120 kV, 200 mA

最大阳极冷却速率:  
7,100 W (10 kHU/sec)

连续阳极输入功率:  
7,100 W (10 kHU/sec)

标称阳极输入功率:  
加载时间1秒 (120 Hz)  
小焦点 - 28 kW IEC 60613:2010  
大焦点 - 48 kW IEC 60613:2010

标称CT阳极输入功率:  
**60 Hz**  
小焦点 - 20.4 kW IEC 60613:2010  
大焦点 - 36 kW IEC 60613:2010

**120 Hz**  
小焦点 - 28 kW IEC 60613:2010  
大焦点 - 48 kW IEC 60613:2010

标称 CT 扫描功率指数:  
**60 Hz**  
小焦点 - 20.4 kW IEC 60613:2010  
大焦点 - 36 kW IEC 60613:2010  
**120 Hz**  
小焦点 - 28 kW IEC 60613:2010  
大焦点 - 47.2 kW IEC 60613:2010

参考轴:  
垂直于窗口面。

该管芯适用于 万睿视影像 B-590H 管套。

**3Ø 50 Hz**

0.4 x 0.7 Focal Spot 7°  
 0.4 x 0.7 焦点 7°

Volume scan time (seconds)	Maximum allowed tube current (mA) as a function of the following starting heat storage and tube voltages								
	Starting heat storage = 40 %			Starting heat storage = 55 %			Starting heat storage = 70 %		
	80 kV	100 kV	120 kV	80 kV	100 kV	120 kV	80 kV	100 kV	120 kV
1	220	180	150	220	180	150	220	180	150
2	220	180	150	220	180	150	220	180	150
4	220	180	150	220	180	150	220	180	150
10	220	180	150	220	180	150	220	180	150
20	220	180	150	220	180	150	220	180	150
30	220	180	150	220	180	150	220	180	150
40	220	180	150	220	180	150	220	180	150
50	220	180	150	220	180	150	210	170	140
60	220	180	150	220	180	150	190 (a)	150 (a)	130 (a)
70	220	180	150	220	180	150	170 (a)	140 (a)	110 (a)

0.6 x 1.3 Focal Spot 7°  
 0.6 x 1.3 焦点 7°

Volume scan time (seconds)	Maximum allowed tube current (mA) as a function of the following starting heat storage and tube voltages								
	Starting heat storage = 40 %			Starting heat storage = 55 %			Starting heat storage = 70 %		
	80 kV	100 kV	120 kV	80 kV	100 kV	120 kV	80 kV	100 kV	120 kV
1	390	310	260	390	310	260	390	310	260
2	390	310	260	390	310	260	390	310	260
4	390	310	260	390	310	260	390	310	260
10	390	310	260	390	310	260	390	310	260
20	390	310	260	390	310	260	380	300	250
30	390	310	260	390	310	260	340 (a)	270 (a)	230 (a)
40	390	310	260	380	300	250	270 (a)	210 (a)	180 (a)
50	390	310	260	350 (a)	280 (a)	230 (a)	220 (a)	180 (a)	150 (a)
60	390	310	260	290 (a)	230 (a)	190 (a)	190 (a)	150 (a)	130 (a)
70	340 (a)	270 (a)	230 (a)	260 (a)	200 (a)	170 (a)	170 (a)	140 (a)	110 (a)

**3Ø 120 Hz**

0.4 x 0.7 Focal Spot 7°  
 0.4 x 0.7 焦点 7°

Volume scan time (seconds)	Maximum allowed tube current (mA) as a function of the following starting heat storage and tube voltages								
	Starting heat storage = 40 %			Starting heat storage = 55 %			Starting heat storage = 70 %		
	80 kV	100 kV	120 kV	80 kV	100 kV	120 kV	80 kV	100 kV	120 kV
1	350 (c)	280	240	350 (c)	280	240	350 (c)	280	240
2	350 (c)	280	240	350 (c)	280	240	350 (c)	280	240
4	350 (c)	280	240	350 (c)	280	240	350 (c)	280	240
10	350 (c)	280	240	350 (c)	280	240	350 (c)	280	240
20	350 (c)	280	240	350 (c)	280	240	350	280	230
30	350 (c)	280	240	350 (c)	280	240	330	260	220
40	350 (c)	280	240	350 (c)	280	230	270 (a)	210 (a)	180 (a)
50	350 (c)	280	240	340	270	230	220 (a)	180 (a)	150 (a)
60	350 (c)	280	240	290 (a)	230 (a)	190 (a)	190 (a)	150 (a)	130 (a)
70	340 (a)	270 (a)	230 (a)	260 (a)	200 (a)	170 (a)	170 (a)	140 (a)	110 (a)

0.6 x 1.3 Focal Spot 7°  
 0.6 x 1.3 焦点 7°

Volume scan time (seconds)	Maximum allowed tube current (mA) as a function of the following starting heat storage and tube voltages								
	Starting heat storage = 40 %			Starting heat storage = 55 %			Starting heat storage = 70 %		
	80 kV	100 kV	120 kV	80 kV	100 kV	120 kV	80 kV	100 kV	120 kV
1	610	480	400	610	480	400	610	480	400
2	610	480	400	610	480	400	610	480	400
4	610	480	400	610	480	400	610	480	400
10	610	480	400	610	480	400	570	460	380
20	610	480	400	580	460	380	490 (a)	390 (a)	320 (a)
30	590	470	390	540	430	360	340 (a)	270 (a)	230 (a)
40	560	450	370	420 (a)	340 (a)	280 (a)	270 (a)	210 (a)	180 (a)
50	470 (a)	380 (a)	310 (a)	350 (a)	280 (a)	230 (a)	220 (a)	180 (a)	150 (a)
60	400 (a)	320 (a)	260 (a)	290 (a)	230 (a)	190 (a)	190 (a)	150 (a)	130 (a)
70	340 (a)	270 (a)	230 (a)	260 (a)	200 (a)	170 (a)	170 (a)	140 (a)	110 (a)

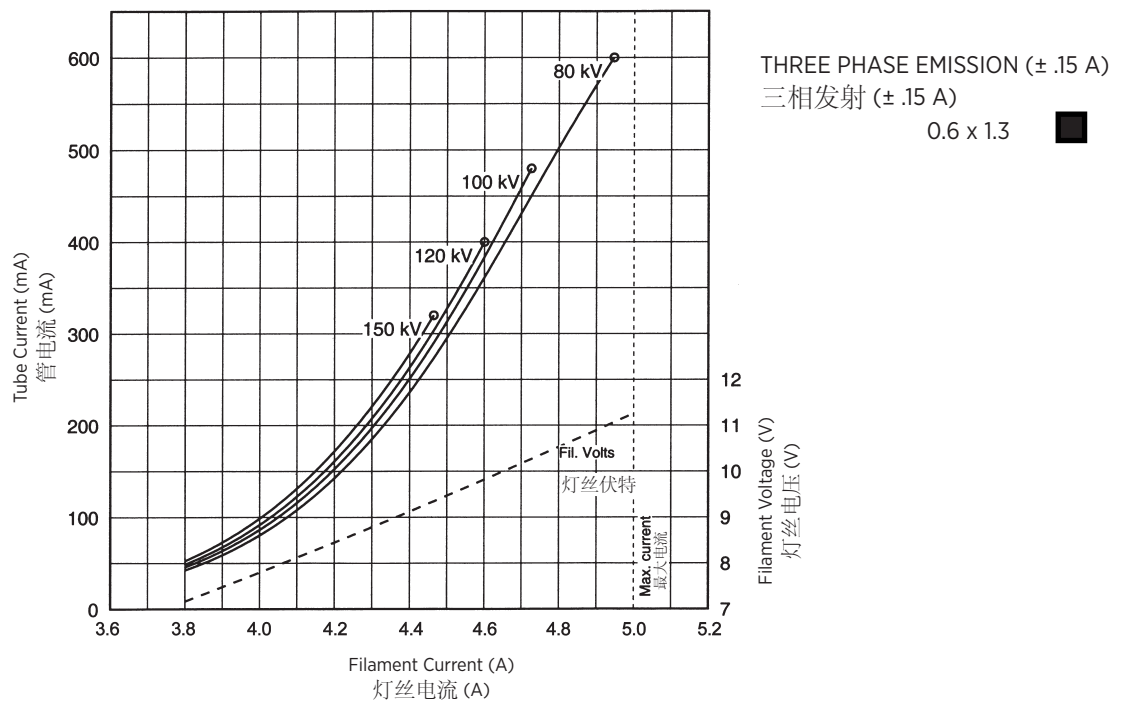
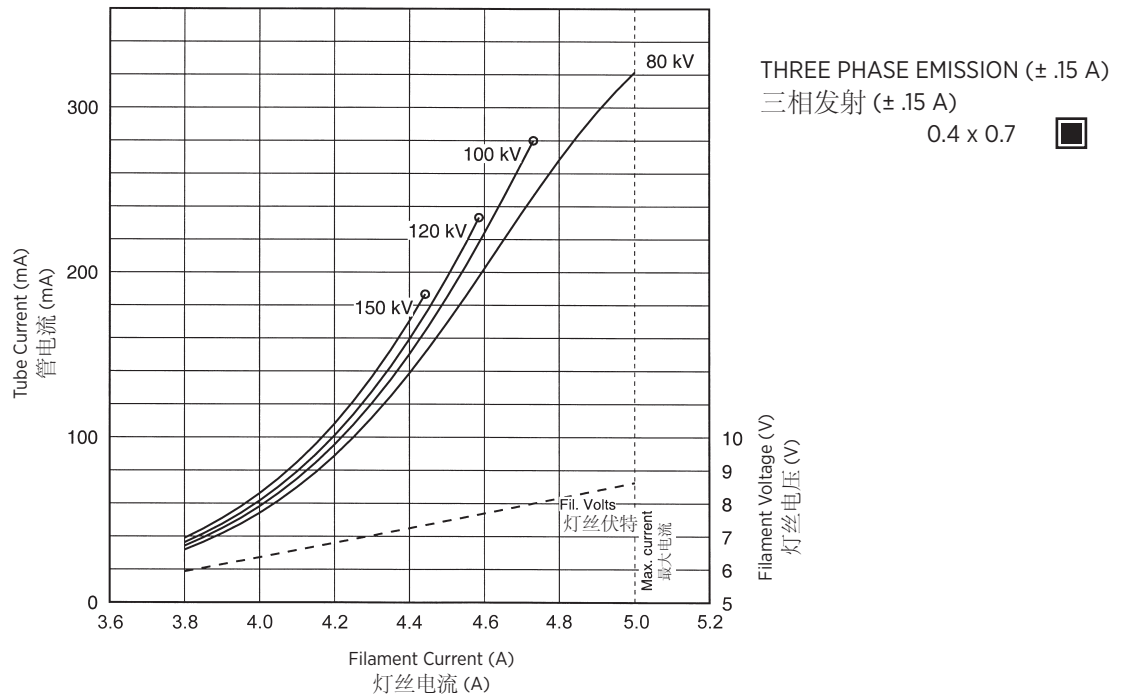
**Note:**  
 1. Limits are based on maximum track rating except for the following codes:  
 a - Limited by available heat storage.  
 b - Limited by window heating.  
 c - Limited by filament emission.  
 2. H.S. = Heat Storage  
 kV = Tube Voltage

**注释**  
 1. 除如下所列规则外，限制均以最大轨道额定值为依据：  
 a - 受有效热容量限制。  
 b - 受窗口加热限制。  
 c - 受灯丝放射限制。  
 2. H.S. = 热容量  
 kV = 管电压

**Note:**  
 Rating charts reflect maximum tube performance. Tube operation is ultimately limited by system software.

**注释**  
 额定值表反映最大管性能。管的工作状况最终受系统软件的限制。

3 Ø ≡



**Product Description**

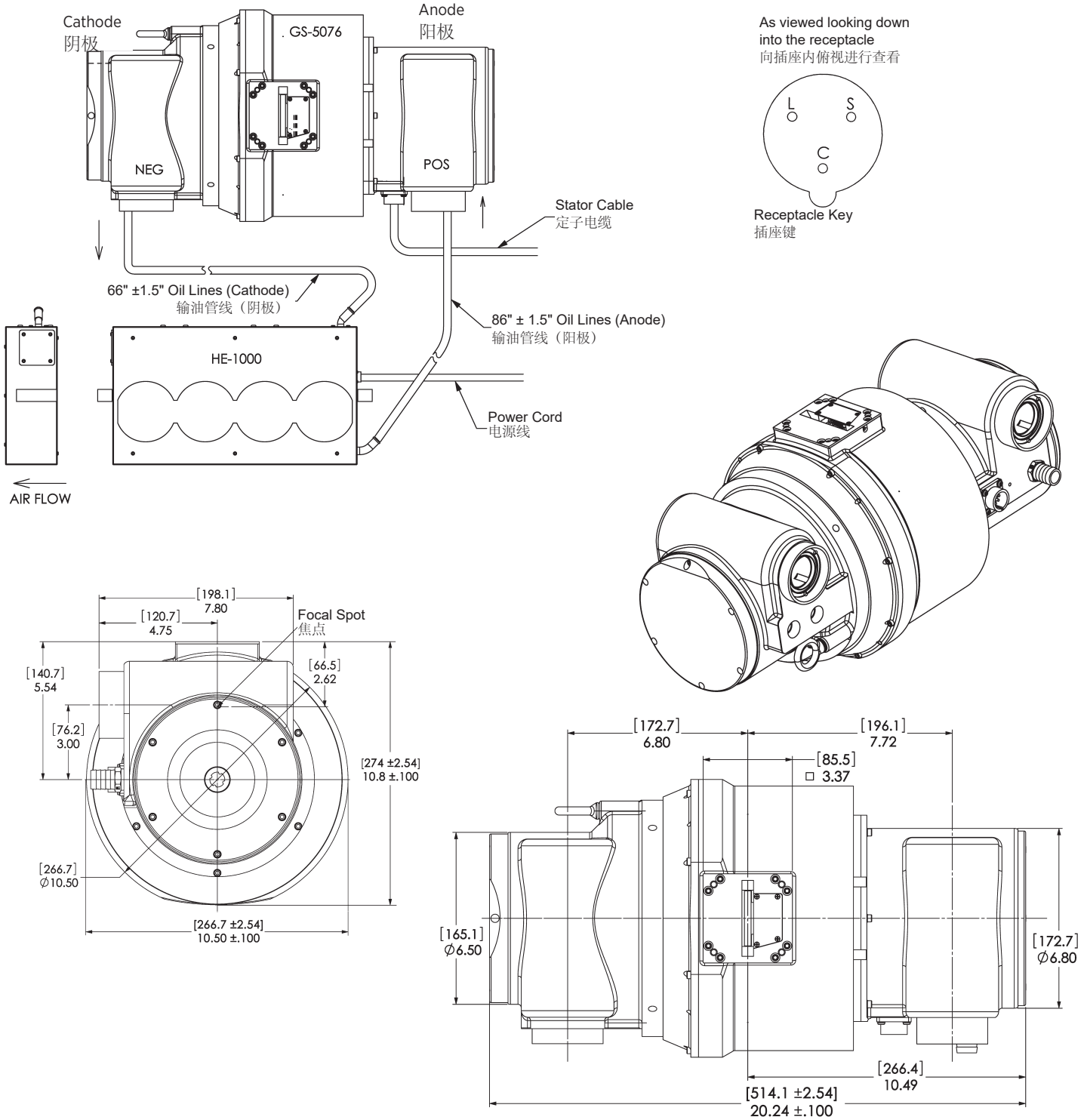
Maximum Peak Voltage .....	150 kV
Anode to Ground .....	75 kV
Cathode to Ground .....	75 kV
Maximum X-ray Tube Assembly Heat Content .....	4.6 MJ (6.5 MHU)
Nominal Continuous Input Power .....	7.1 kW (9.9 kHU/sec)
	IEC 60613:2010
Maximum Housing Temperature .....	78°C
Maximum Heat Exchanger Dissipation	
HE-1000 .....	9.0 kW (12.6 kHU/sec)
HE-547 .....	6.3 kW (8.8 kHU/sec)
Focal Point Position (Central Ray) Within 1mm (X, Y Direction from the center of radiation port.)	
X-Ray Tube Assembly	
Permanent filtration .....	1.5 mm Al IEC 60522
Loading Factors for Leakage Radiation .....	150 kV, 47 mA
High Voltage Cable Receptacles .....	Per IEC 60526
Ambient Air Temperature Limits for Operation .....	5°C to 40°C
Temperature Limits for Storage and Transport .....	-20°C to +75°C
Humidity .....	10% to 90%
Atmospheric Pressure Range .....	70 kPa to 106 kPa
Weight - Tube, Housing, and HE assembly	
Housing with HE-1000 .....	72.1 kg (159 lbs)
Housing with HE-547 .....	67.1 kg (148 lbs)
IEC Classification .....	Class 1
Safety Devices - Thermal Switch	
Normally Closed Contact .....	Opening at 85°C ±4°C
Pressure Switch - Normally Open Contact	
.....	Contacts close with adequate oil flow.
Filament Frequency Limits .....	50 Hz - 25 kHz
Power Supply .....	DC

**产品说明**

最大峰值电压 .....	150 kV
阳极到地 .....	75 kV
阴极到地 .....	75 kV
最大 X 射线管组件热容量 .....	4.6 MJ (6.5 MHU)
标称连续输入功率 .....	7.1 kW (9.9 kHU/sec)
	IEC 60613:2010
最大管套温度 .....	78°C
交换器最大热耗散	
HE-1000 .....	9.0 kW (12.6 kHU/sec)
HE-547 .....	6.3 kW (8.8 kHU/sec)
焦点位置（中心射线）在 1 mm 内 （源于辐射端口中心的 X、Y 方向）	
X 射线管组件	
固有滤过 .....	1.5 mm Al IEC 60522
泄漏辐射测试条件 .....	150 kV, 47 mA
高压电缆插座 .....	IEC 60526
环境气温工作限值 .....	5°C 到 40°C
存储与运输温度限值 .....	-20°C 到 +75°C
湿度 .....	10% 到 90%
大气压范围 .....	70 kPa 到 106 kPa
重量：X 射线管组件和换热器	
管套 含 HE-1000 .....	72.1 kg (159 lbs)
管套 含 HE-547 .....	67.1 kg (148 lbs)
IEC 分级 .....	1 类
安全性装置：热控开关	
正常情况下为闭合接点 .....	在 85°C ±4°C 时开启
压力开关 — 正常情况下为打开接点	
.....	油流适当，接点打开。
灯丝频率限值 .....	50 Hz - 25 kHz
电源 .....	直流

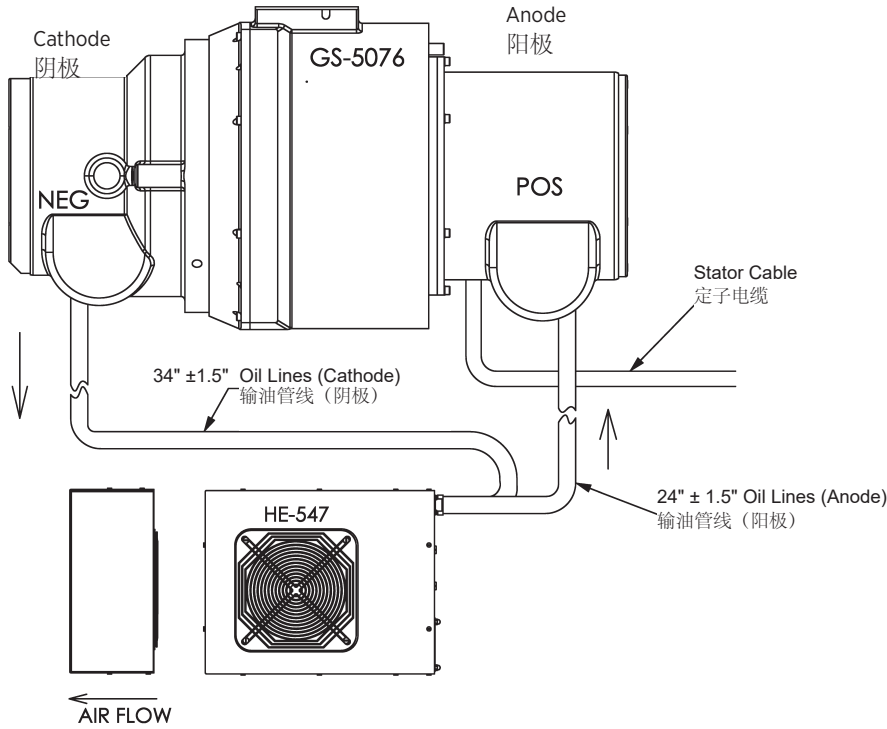
with HE-1000  
与 HE-1000

Dimensions are for reference only  
维度是供仅供参考

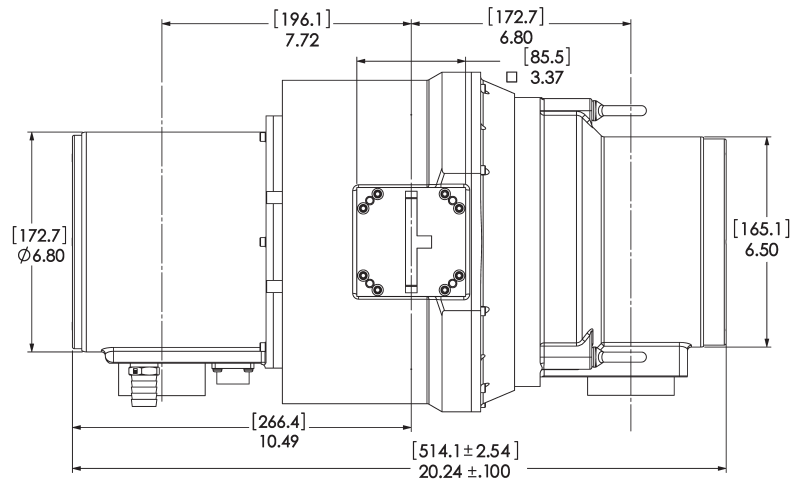
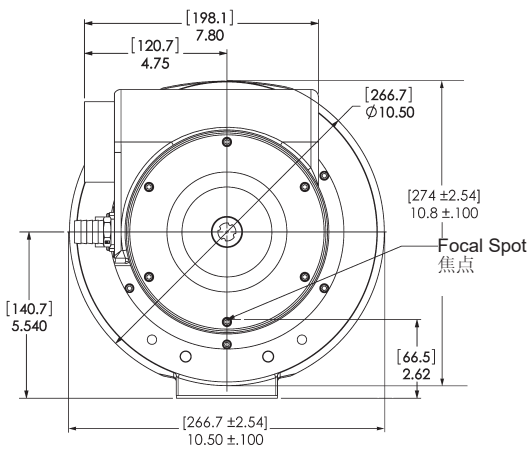
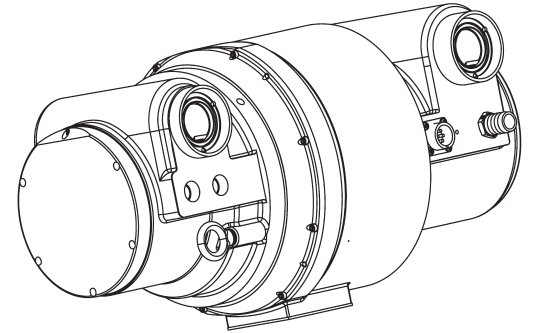
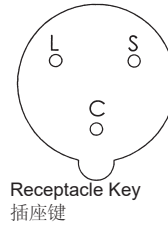


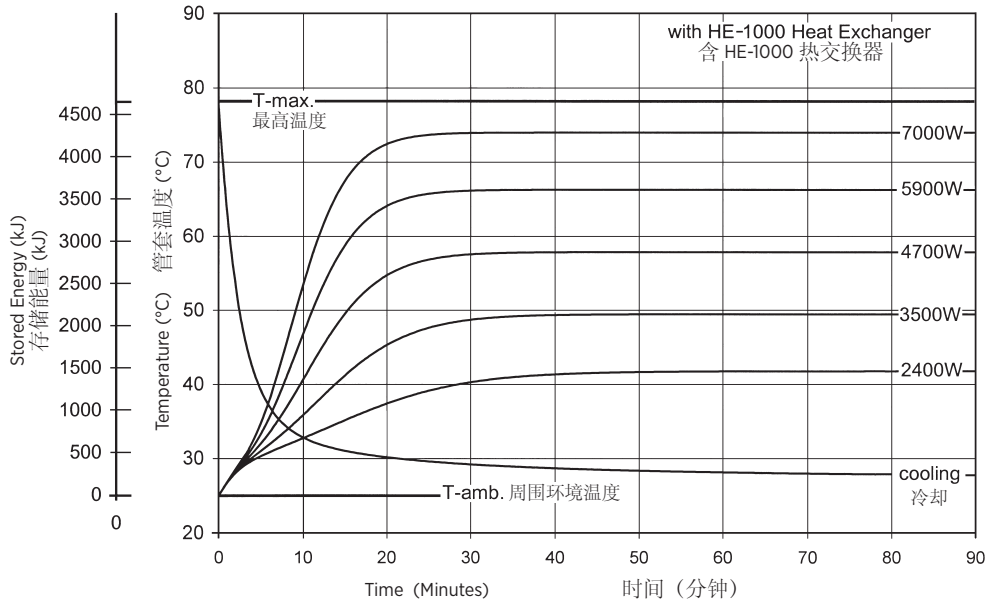
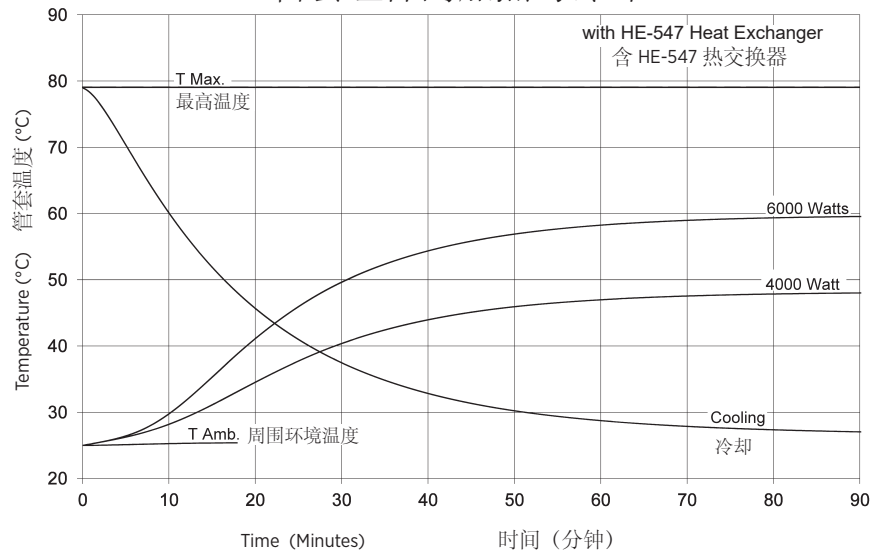
with HE-547  
与 HE-547

Dimensions are for reference only  
维度是供仅参考



As viewed looking down  
into the receptacle  
向插座内俯视进行查看



**GS-5076/B-590H**  
**管套组件的加热与冷却**

**管套组件的加热与冷却**

**Note:**

- Heat input into housing includes all power sources; tube, filament, stator and circulating pump.
- Heating curves based on no restrictions to air flow through heat exchanger, or natural convection around tube housing assembly.
- Heating and cooling curves reflect maximum tube performance. Tube operation is ultimately limited by system software control.

**注释:**

- 输入外壳的热量包括所有电源;管,灯丝,定子和循环泵。
- 加热曲线基于对通过热交换器的空气流动没有限制,或管壳体组件周围的自然对流。
- 加热与冷却曲线反映了管的最高性能。管的工作状况最终受系统软件控制的限制。

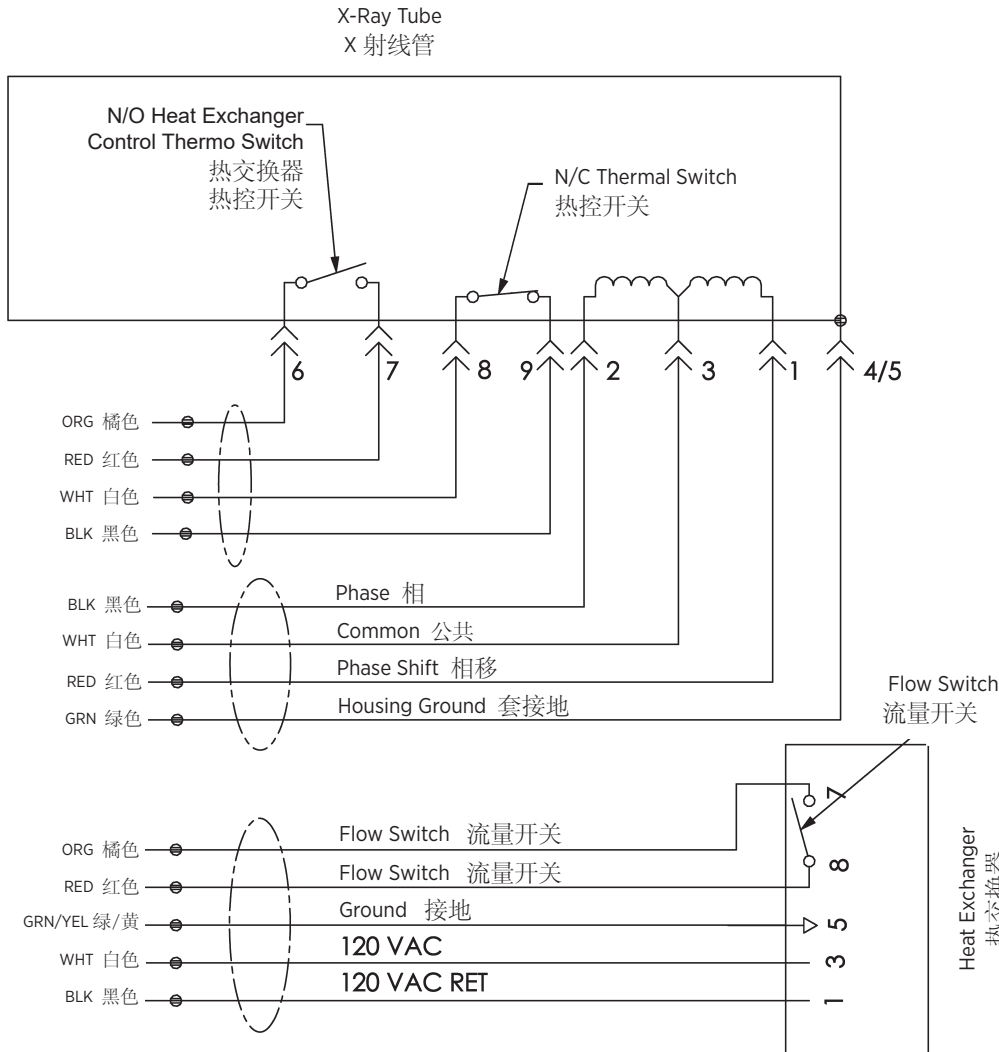


with HE-1000  
与 HE-1000

Terminal / Wire Color Chart  
终端 / 导线颜色图

Wire Color 导线颜色	Description 描述
1 Red 红色	Phase Shift 相移
2 Black 黑色	Phase 相
3 White 白色	Common 公共
4/5 Green 绿色	Housing Ground 管套接地
6 Orange 红色	Thermal Switch 热控开关
7 Red 红色	Thermal Switch 热控开关
8 White 白色	Thermal Switch 热控开关
9 Black 黑色	Thermal Switch 热控开关

Wire Color 导线颜色	Description 描述
7 Orange 红色	Flow Switch 流量开关
8 Red 红色	Flow Switch 流量开关
5 Green/Yellow 绿色/黄色	Ground 接地
3 White 白色	120 VAC
1 Black 黑色	120 VAC Ret



Stator Drive Frequency 定子驱动频率	RPM
120 Hz	6120 - 7480

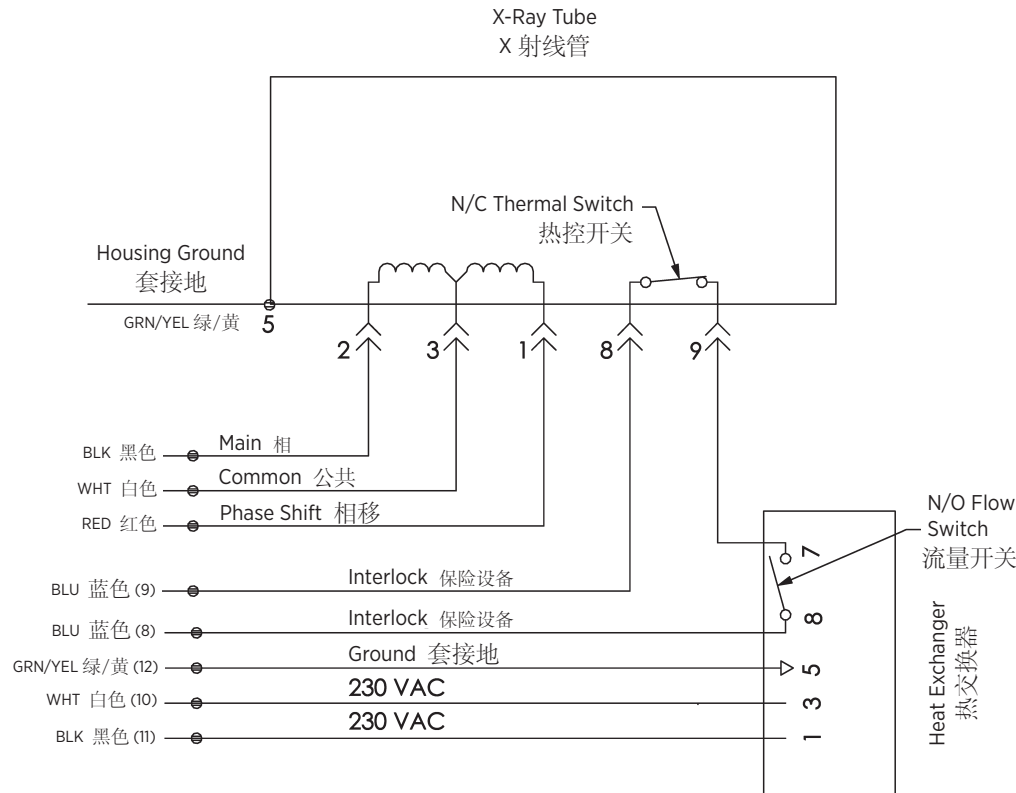
<b>Stator Coil Resistance:</b>	
Black to White	6.0 Ω ±15%
Green to White	5.7 Ω ±15%
<b>Starter Voltage:</b>	
	<b>Start</b> <b>Run</b>
120 Hz	215 - 245 VAC      80 VAC
<b>Time to Full Speed:</b>	
120 Hz	0 - 6600 RPM      10 Sec.
<b>X-Ray Tube Assembly:</b>	
GS-5076/B-590H IEC 60601-2-28	

<b>定子线圈电阻:</b>	
黑色到白色	6.0 Ω ±15%
绿色到白色	5.7 Ω ±15%
<b>启动器电压:</b>	
	<b>启动</b> <b>运行</b>
120 Hz	215 - 245 VAC      80 VAC
<b>达到全速的时间:</b>	
120 Hz	0 - 6600 RPM      10 Sec.
<b>X 射线管组件:</b>	
GS-5076/B-590H IEC 60601-2-28	



with HE-547  
与 HE-547

Terminal / Wire Color Chart  
端子 — 连线图



Wire Color 导线颜色	Description 描述
1 Red 红色	Phase Shift 相移
2 Black 黑色	Main 相
3 White 白色	Common 公共
5 Green/Yellow 绿色/黄色	Housing Ground 管套接地
8/9 White 白色	Thermal Switch 热控开关

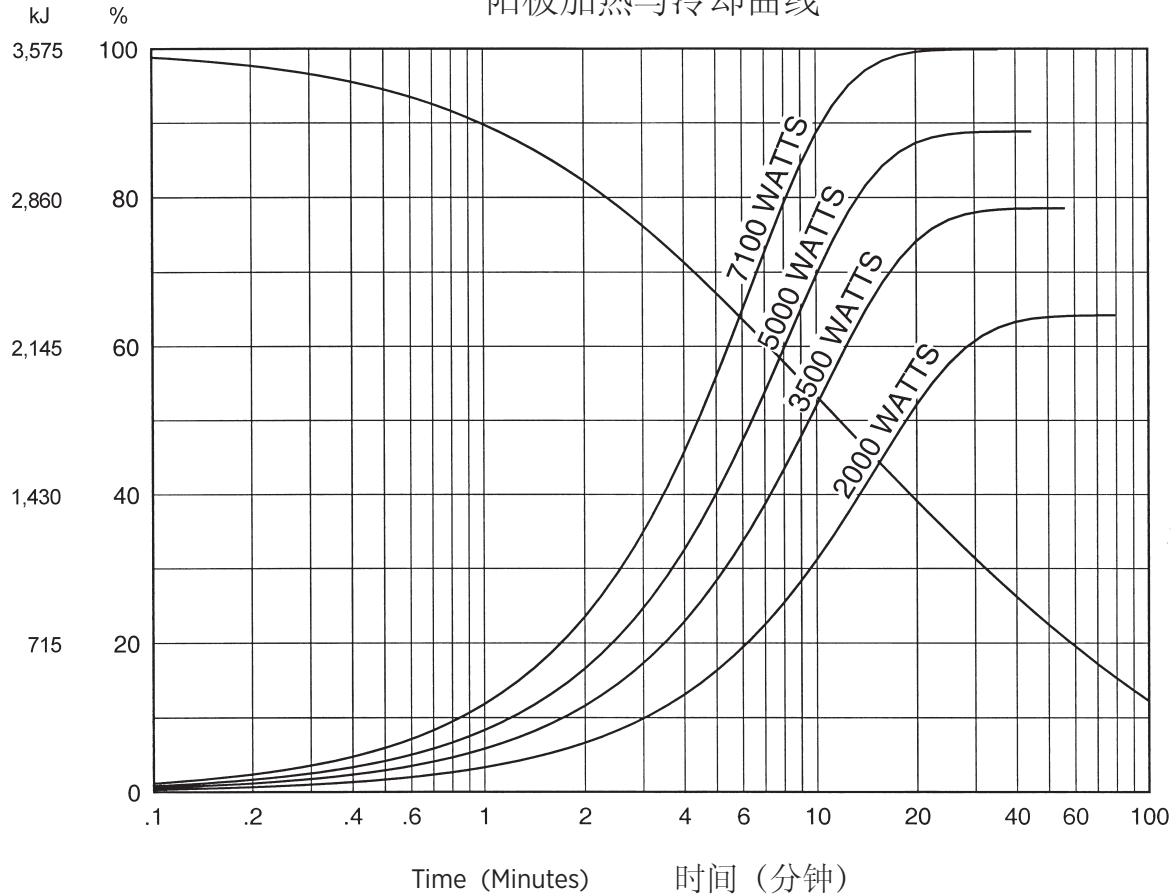
Wire Color 导线颜色	Description 描述
7 Blue (9) 红色	Flow Switch 流量开关
8 Blue (8) 红色	Flow Switch 流量开关
5 Green/Yellow (12) 绿色/黄色	Ground 套接地
3 White (10) 白色	230 VAC
1 Black (11) 黑色	230 VAC Ret

Stator Drive Frequency 定子驱动频率	RPM
2896 定子 50/60 Hz	2520-3080/3060-3740
7579 定子 120 Hz	6120-7480

<b>"R" Stator - 2896</b>	
<b>Stator Coil Resistance:</b>	
Black to White	14 Ω ±15%
Green to White	46 Ω ±15%
<b>Starter Voltage: Start Run</b>	
50/60 Hz	220 VAC 85 VAC
<b>Time to Full Speed:</b>	
50/60 Hz	0 - 2800/3400 RPM 10 Sec.
<b>"Q" Stator - 7579</b>	
<b>Stator Coil Resistance:</b>	
Black to White	6.0 Ω ±15%
Green to White	5.7 Ω ±15%
<b>Starter Voltage: Start Run</b>	
120 Hz	215 - 245 VAC 80 VAC
<b>Time to Full Speed:</b>	
120 Hz	0 - 6600 RPM 10 Sec.
<b>X-Ray Tube Assembly:</b>	
GS-5076/B-590H	IEC 60601-2-28

<b>"R" 定子 - 2896</b>	
<b>定子线圈电阻:</b>	
黑色到白色	14 Ω ±15%
绿色到白色	46 Ω ±15%
<b>启动器电压: 启动 运行</b>	
50/60 Hz	220 VAC 85 VAC
<b>达到全速的时间:</b>	
50/60 Hz	0 - 2800/3400 RPM 10 Sec.
<b>"Q" 定子 - 7579</b>	
<b>定子线圈电阻:</b>	
黑色到白色	6.0 Ω ±15%
绿色到白色	5.7 Ω ±15%
<b>启动器电压: 启动 运行</b>	
120 Hz	215 - 245 VAC 80 VAC
<b>达到全速的时间:</b>	
120 Hz	0 - 6600 RPM 10 Sec.
<b>X 射线管组件:</b>	
GS-5076/B-590H	IEC 60601-2-28

Heating and Cooling Curves  
阳极加热与冷却曲线



**Note:**  
Heating and cooling curves reflect maximum tube performance. Tube operation is ultimately limited by system software control.

**注释:**  
加热与冷却曲线反映了管的最高性能。管的工作状况最终受系统软件控制的限制。