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| 版本号 Edition No. :  | REV.0 |
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# 压缩机承认规格书

COMPRESSOR SPECIFICATION SHEET

型号 (MODEL) :GPS290PAA (临时)

客 户 (CUSTOMER) : CANTAS

审核 (Checked By) : \_\_\_\_\_

审定 (Approved By) : \_\_\_\_\_

供 方 (SUPPLIER): LG Electronics Inc.

销售经理 (Sales Manager) : \_\_\_\_\_

技术经理 (Engineering Manager) : \_\_\_\_\_

请将承认本封面副本返回

Please Return 1 Copy on Your Approval.

LG电子(天津)电器有限公司

Air Conditioning Compressor Division (Tianjin) LG Electronics Inc.

电话 (Tel) :022-86999978

传真 (Fax):022-26902210



1.额定规格(Specification)

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1.1 压缩机(Compressor)

|    |                                        |                                              |
|----|----------------------------------------|----------------------------------------------|
| 1  | 压缩机型号名<br>Compressor Model Name        | GPS290PAA （临时承认愿）                            |
| 2  | 压缩机类型<br>Compressor Type               | 密封电动机-压缩机<br>Hermetic Motor Compressor       |
| 3  | 压缩方式<br>Compression Type               | 旋转式(滚动转子式)<br>Rotary ( Rolling Piston Type ) |
| 4  | 排气量<br>Displacement                    | 29.0 cc/rev.                                 |
| 5  | 制冷剂<br>Refrigerant                     | R410A                                        |
| 6  | 冷冻机油/注油量<br>Oil / Oil Charging Amount  | PVE or POE / 700±10cc                        |
| 7  | 充氮压力<br>Nitrogen Gas Holding Pressure  | 0.4±0.2 kg/cm <sup>2</sup> G                 |
| 8  | 喷涂<br>Painting                         | 黑色<br>Black                                  |
| 9  | 净重(含油)<br>Net Weight ( Including Oil ) | 22.1 kg                                      |
| 10 | 吸气管内径<br>Suction Tube I.D.             | Φ16.0 <sup>+0.15</sup> <sub>0</sub> mm       |
| 11 | 排气管内径<br>Discharge Tube I.D.           | Φ9.7 ±0.15 mm                                |

1.2 电机(Motor)



|   |                                            |                                                  |                  |
|---|--------------------------------------------|--------------------------------------------------|------------------|
| 1 | 电机类型/启动类型<br>Motor Type / Starting Type    | 单相感应电机/PSC<br>Single Phase Induction Motor / PSC |                  |
| 2 | 电极/额定输出<br>Pole / Rated Output             | 2极(POLE ) / 2,150[W]                             |                  |
| 3 | 电源<br>Power Source                         | 单相 (1 PH ) 220/240V~ 50Hz                        |                  |
| 4 | 额定转速<br>Rated Revolution                   | 2,848 rpm                                        |                  |
| 5 | 绝缘等级<br>Insulation Class                   | E 级(CLASS)                                       |                  |
| 6 | 绕线电阻(75℃)<br>Winding Resistance ( at 75℃ ) | 主绕组(Main)                                        | 1.50 ± 7 % [ Ω ] |
|   |                                            | 副绕组 (Sub)                                        | 3.14 ± 7 % [ Ω ] |



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1.3 性能(Performance)

额定性能( Rated Performance)

| 电 压 Voltage                      | at 220 V / 240V                       |
|----------------------------------|---------------------------------------|
| 制冷量 Cooling Capacity (95% ↑ )    | 7,122/ 7,151 W (24,300/24,400 Btu/h ) |
| 输入功率 Power Input (105% ↓ )       | 2,430 / 2,520 W                       |
| E.E.R (95% ↑ )                   | 2.93/2.84 W/W ( 10.0 / 9.7 Btu/W·h )  |
| 工作电流 Running Current             | 11.5 /11.3[A]                         |
| 堵转电流 Locked Rotor Ampere         | 60 [A]                                |
| 噪音 Noise (Sound Pressure Level ) | 70 dB (A) ↓                           |
| 振动 Vibration / 加速度 Acceleration  | 200μm / 2,000 gal ↓                   |

\* BASE ON ASHRAE TEST CONDITION

1.4 启动性能(Starting Performance )

| 启 动<br>Starting Condition      | 启动电压<br>Starting Voltage                              | 压力条件<br>Pressure Condition  |
|--------------------------------|-------------------------------------------------------|-----------------------------|
| 标准启动<br>at Normal Condition    | 额定电压的85%<br>start at 85% of Rated Voltage<br>(187 V)  | Ps/Pd= 9.12 / 33.45 kg/cm²G |
| 超负荷启动<br>at Overload Condition | 额定电压的 90%<br>start at 90% of Rated Voltage<br>(198 V) | Ps/Pd= 10.14 /41.38 kg/cm²G |

※ 制冷量测试工况(Rating Conditions)

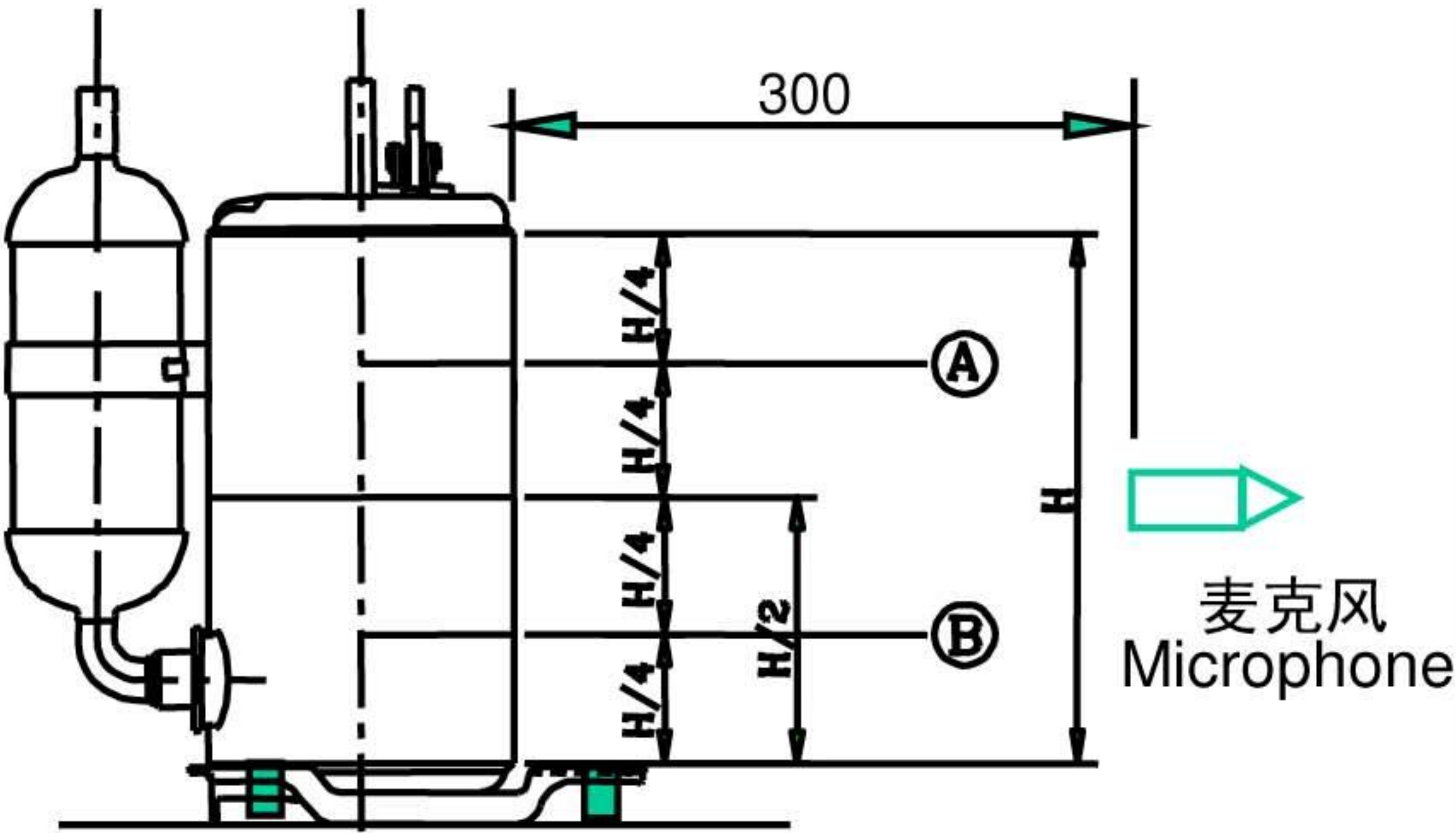
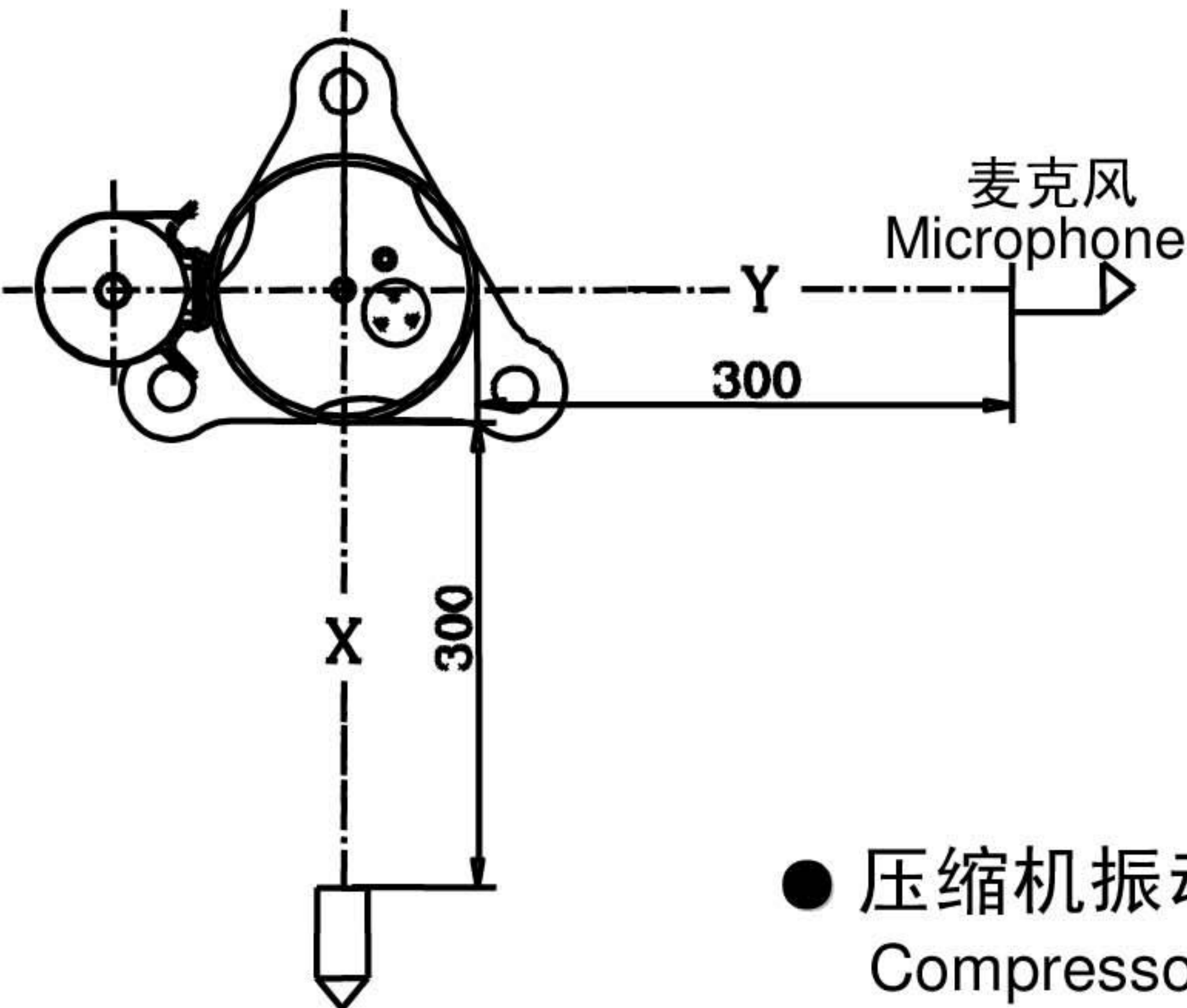
☞ 标准工况 (Standard Conditions)

|                                  |                                      |
|----------------------------------|--------------------------------------|
| Cond. Temp. : 54.4 °C ( 130 °F ) | Return Gas Temp. : 35.0 °C ( 95 °F ) |
| Evap. Temp. : 7.2 °C ( 45 °F )   | Liquid Temp. : 46.1 °C ( 115 °F )    |
|                                  | Ambient Temp. : 35.0 °C ( 95 °F )    |

☞ 过负荷工况 (Overload Conditions)

|                                   |                                      |
|-----------------------------------|--------------------------------------|
| Cond. Temp. : 65.0 °C ( 149 °F )  | Return Gas Temp. : 25.0 °C ( 77 °F ) |
| Evap. Temp. : 13.0 °C ( 55.4 °F ) | Ambient Temp. : 43.0 °C ( 109.4 °F ) |

噪音与振动测量点 Noise & Vibration Measuring Points



● 压缩机振动通过与机体A，B两点接触的振动计来测量。  
Compressor vibration is measured by a vibration meter which is contacted compressor body's ① ②



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1.5 其 它 ( Others )

|                                                                                |                         |                                                                                                                   |
|--------------------------------------------------------------------------------|-------------------------|-------------------------------------------------------------------------------------------------------------------|
| 泄漏强度压力<br>Leak Tight Pressure                                                  | 高压端 High Pressure Side  | 40 kg/cm <sup>2</sup> G                                                                                           |
|                                                                                | 低压端 Lower Pressure Side | - kg/cm <sup>2</sup> G                                                                                            |
| 液压强度压力<br>Hydrostatic Strength Pressure                                        | 高压端 High Pressure Side  | 180 kg/cm <sup>2</sup> G                                                                                          |
|                                                                                | 低压端 Lower Pressure Side | 69 kg/cm <sup>2</sup> G                                                                                           |
| 绝缘电阻 (采用 DC 500V Mega测试仪)<br>Insulation Resistance (with 500V D.C Mega Tester) |                         | 50 M Ω Min.                                                                                                       |
| 耐电压<br>Withstand Voltage                                                       |                         | 1,800V 下 1分钟 (2,200V 下 1秒钟)泄漏电流小于5mA<br>at 1,800V - 1 min.(2,200 V- 1 sec.)<br>Leakage Current is less than 5mA . |
| 残余水分量/残余污物量<br>Residual Moisture / Residual Impurities                         |                         | 最大 100mg / 最大 70mg<br>100 mg Max./ 70 mg Max.                                                                     |

1.6 电气零件 (Electrical Component)

|                         |                       |
|-------------------------|-----------------------|
| 零 件 名(Part Name)        | 规 格 ( Specification ) |
| 运转电容(RUNNING CAPACITOR) | 50MFD, 400 VAC        |
| 过载保护器(O.L.P)            | Internal Type         |

2.部 件 清 单 (Delivered Parts List)

| 部 件 名<br>Parts Name   | 类 型 (型号)<br>Type ( Model ) | 数 量<br>Quantity | 部件图纸号码 (LG)<br>Parts Dwg. NO.( LG ) | 提 供<br>Supply |    |
|-----------------------|----------------------------|-----------------|-------------------------------------|---------------|----|
| 压缩机(COMPRESSOR ASSY)  | GPS290PAA                  | 1               | -                                   | YES           | NO |
| 过载保护器(O.L.P)          | Internal Type              | 1               | -                                   | 内置 (Internal) |    |
| 接线保护盒(COVER TERMINAL) | -                          | 1               | 3550U-L005B                         | YES           | NO |
| 保护盒衬垫(GASKET)         | -                          | 1               | 4986UTL004B                         | YES           | NO |
| 六角法兰螺母(NUT,DRAWING)   | -                          | 1               | 1NZZUTL001A                         | YES           | NO |
| 平垫圈(WASHER DRAWING)   | -                          | 1               | 1WZZUTL001A                         | YES           | NO |
| 防振胶垫(GROMMET)         | -                          | 3               | 4022UTL005A                         | YES           | NO |
| 安装螺钉(BOLT,DRAWING)    | -                          | 3               | 1BZZUTL003B                         | YES           | NO |
| 垫圈(WASHER DRAWING)    | -                          | 3               | 1WZZUTL002D                         | YES           | NO |
| 安装螺母(NUT DRAWING)     | -                          | 3               | 1NZZUTL002A                         | YES           | NO |
| 螺栓护套 (HOUSING,BOLT)   | -                          | 1               | MEK47325901                         | YES           | NO |

※ 参考附录 (附件图)    Refer to Attachments ( Accessory Parts Drawings. )



### 3.使用界限 (Operating Limit)

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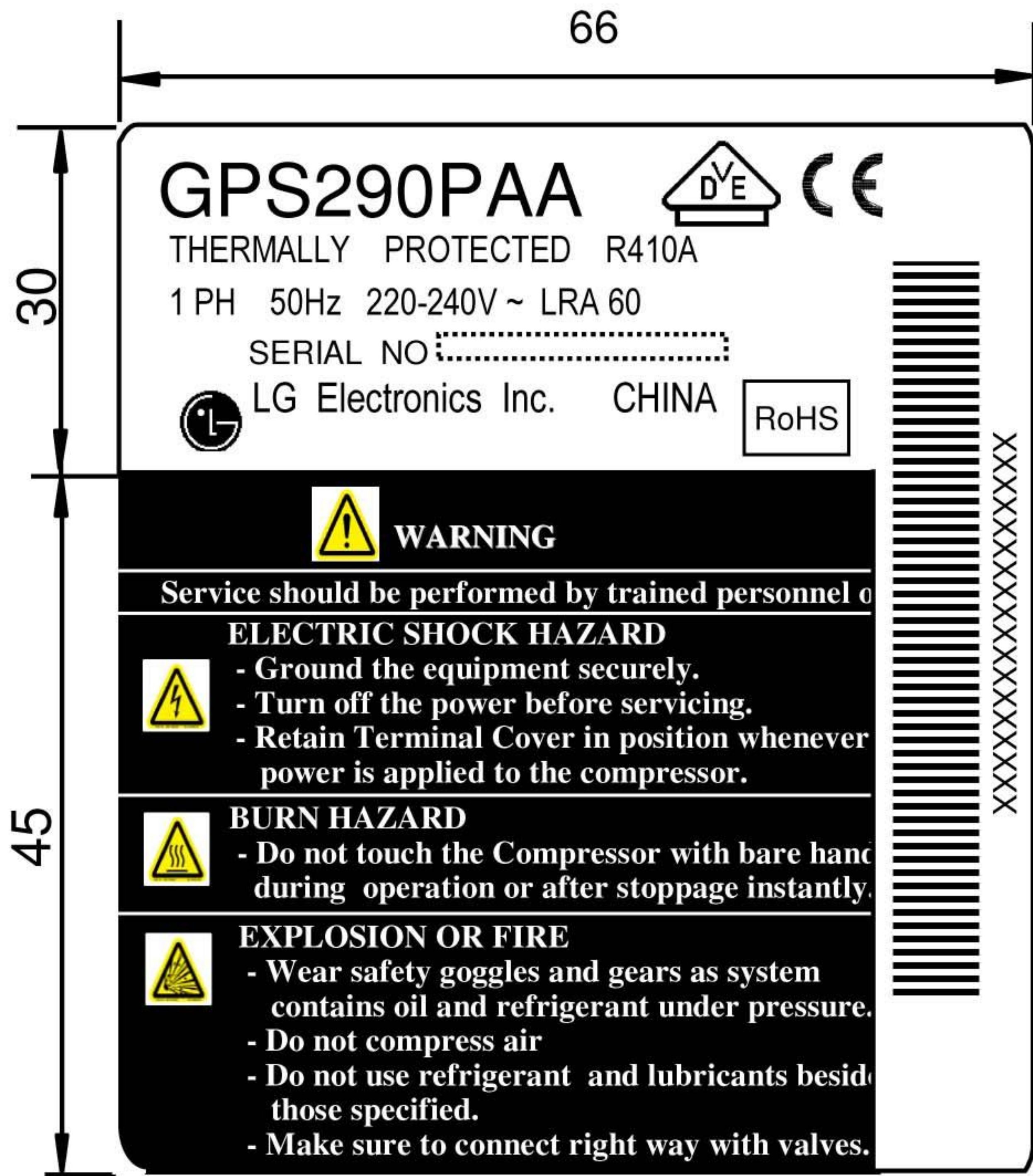
|                                                  |          |
|--------------------------------------------------|----------|
| 排气压力[kg/cm <sup>2</sup> G]<br>Discharge Pressure | 42.0 MAX |
| 吸气压力[kg/cm <sup>2</sup> G]<br>Suction Pressure   | 4.0～12.0 |
| 电机绕组温度[℃]<br>Motor Coil Temp.                    | 135 MAX  |

|                                            |                                                                                                                                                                                            |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 制冷剂注入量[g]<br>Refrigerant Charge Limit      | 1,200 g MAX (Split Type for Heat Pump)<br>( 若冷媒量超过规格值，压缩机出现异常，LG不承担责任 )<br>If refrigerant charge exceed max. LG Company would NOT answer for the consequences when compressor is abnormal. |
| 回流液体<br>Continuous Flood Back              | 储液器前的回流液体量不应超过制冷循环系统中制冷剂总量的10%<br>Continuous Flood Back before the accumulator should not be more than 10% of the total circulation quantity of refrigerant.                               |
| 开 / 停 间歇与次数<br>On/Off Interval & Cycles    | 间歇：开 / 停 = 3分钟 / 3分钟 次数：20,000次以下<br>On / Off = 3 Minutes / 3 Minutes 20,000 Cycles or less                                                                                                |
| 电压范围<br>Voltage Range                      | 额定电压 ± 10%<br>Rated Voltage ± 10 %                                                                                                                                                         |
| 频率范围<br>Frequency Range                    | 额定频率 ± 2%<br>Rated Frequency ± 2 %                                                                                                                                                         |
| 运转时压力差<br>Pressure Difference in Operating | 运转时压力差应在0.49MPa以上,但3分钟启动的情况除外<br>The Pressure Difference in operating shall be 0.49 MPa or more, but 3 minutes starting excluded.                                                          |
| 启动时压力差<br>Pressure Difference at Starting  | 启动时, 排气压力与吸气压力相平衡<br>When starting, discharge pressure is balanced with suction pressure.                                                                                                  |
| 倾斜<br>Tilt in Operation                    | 使用时, 压缩机的倾斜角度应在5° 以内<br>The allowable tilt of the compressor in operation shall be 5° or less                                                                                              |



4.产品标签 (Label)

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附 页

Attachment

1.

压缩机外形图  
Compressor Drawing

:

A-1
2.

电气接线图  
Wiring Diagram

:

A-2
3.

附件安装图  
Accessory Fitting

:

A-3
4.

附件图  
Part Drawings

:

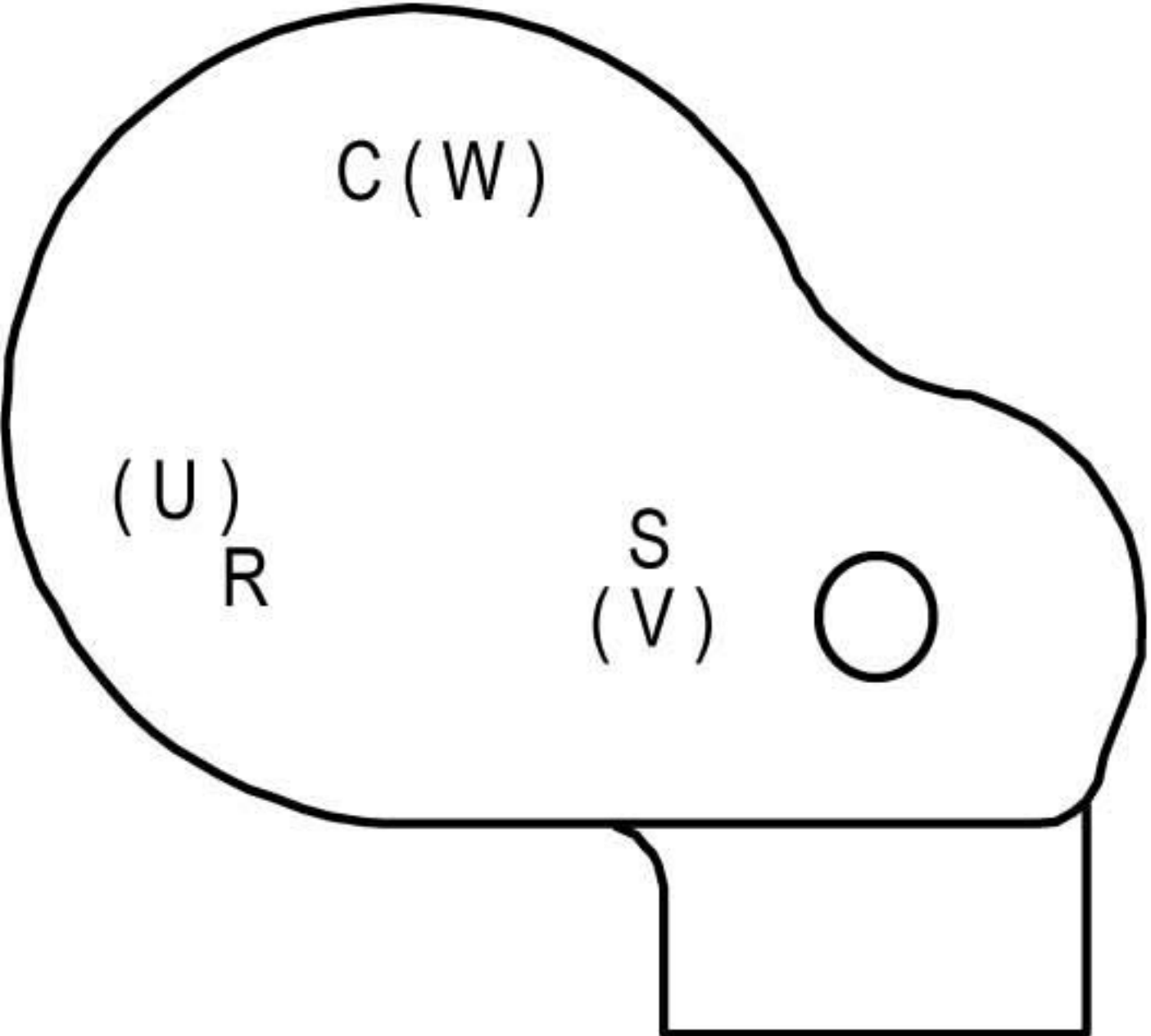
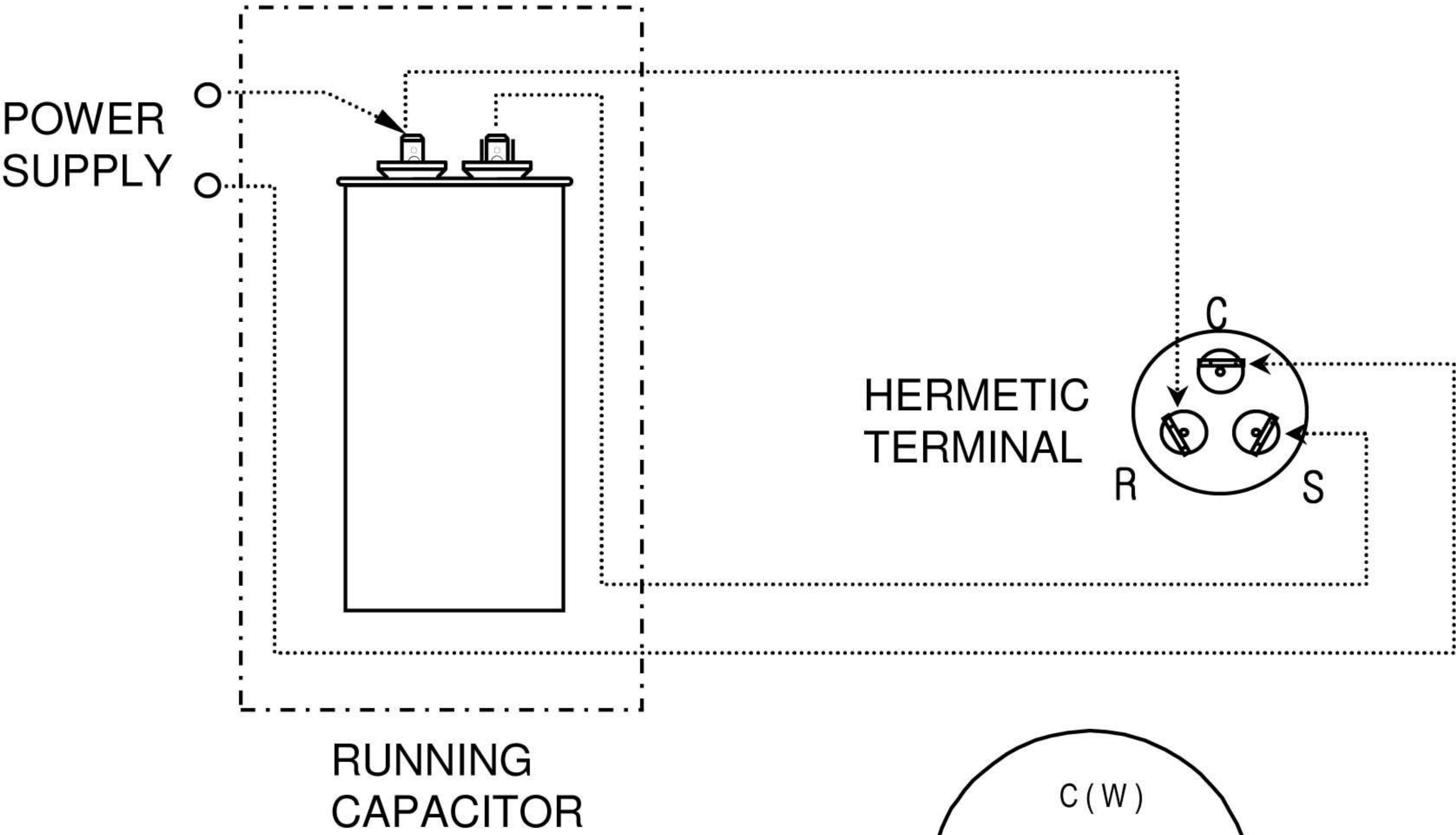
A-4~A-9



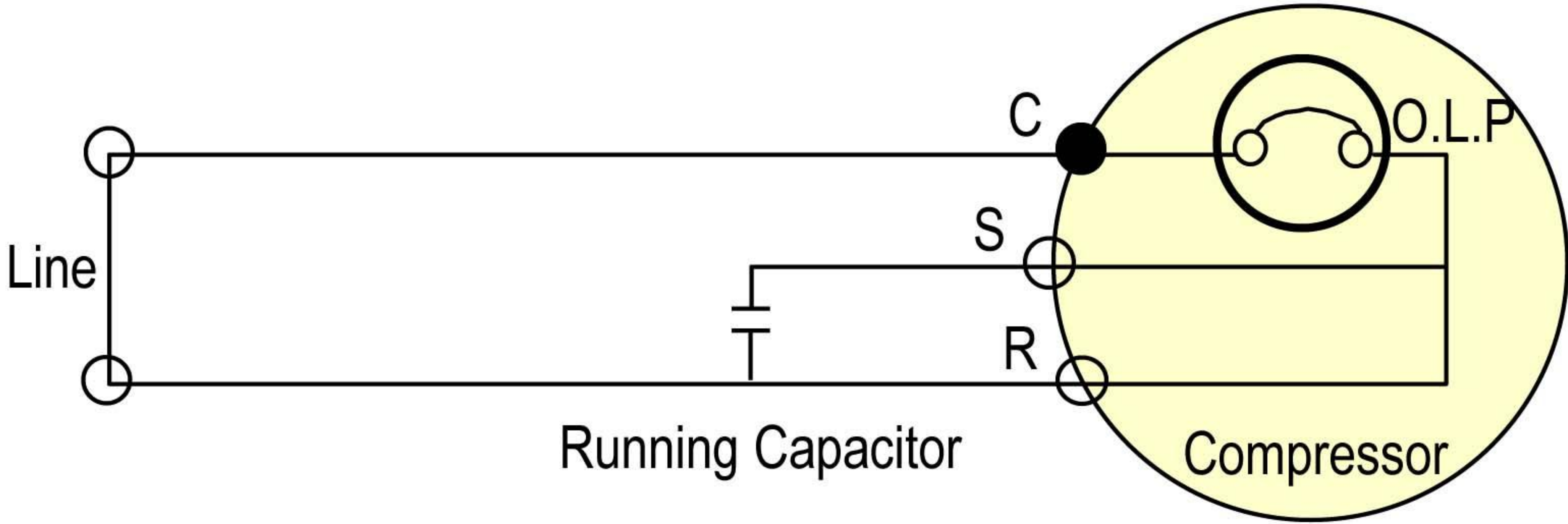




# Wiring diagram



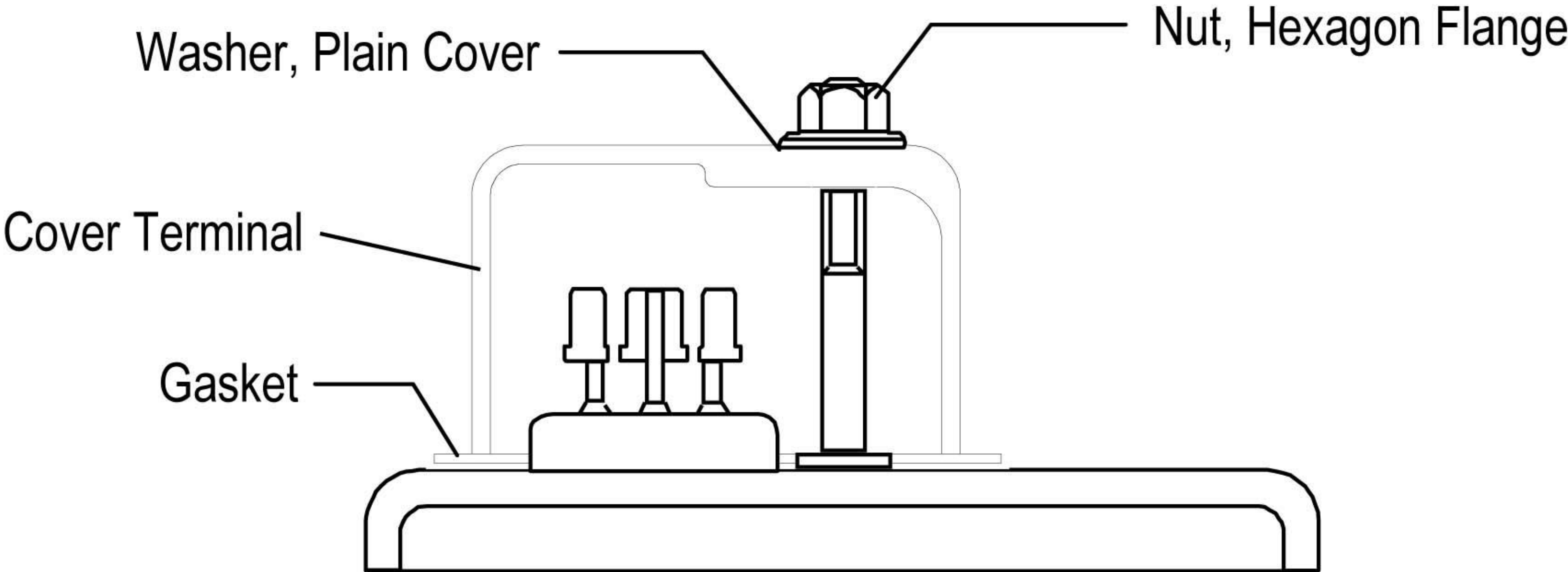
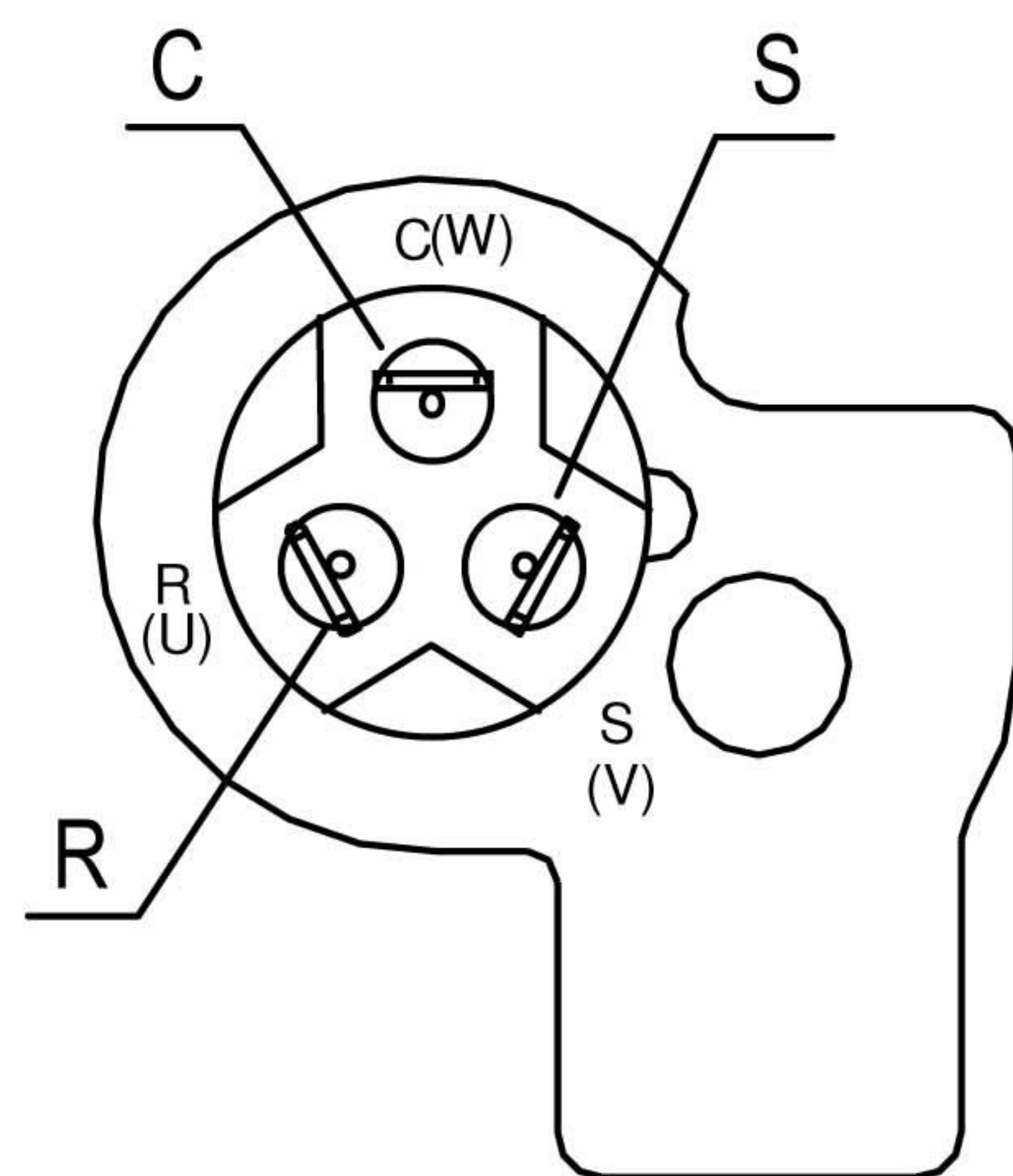
Cover Terminal



C,S,R Mark Embossed on Cover Terminal

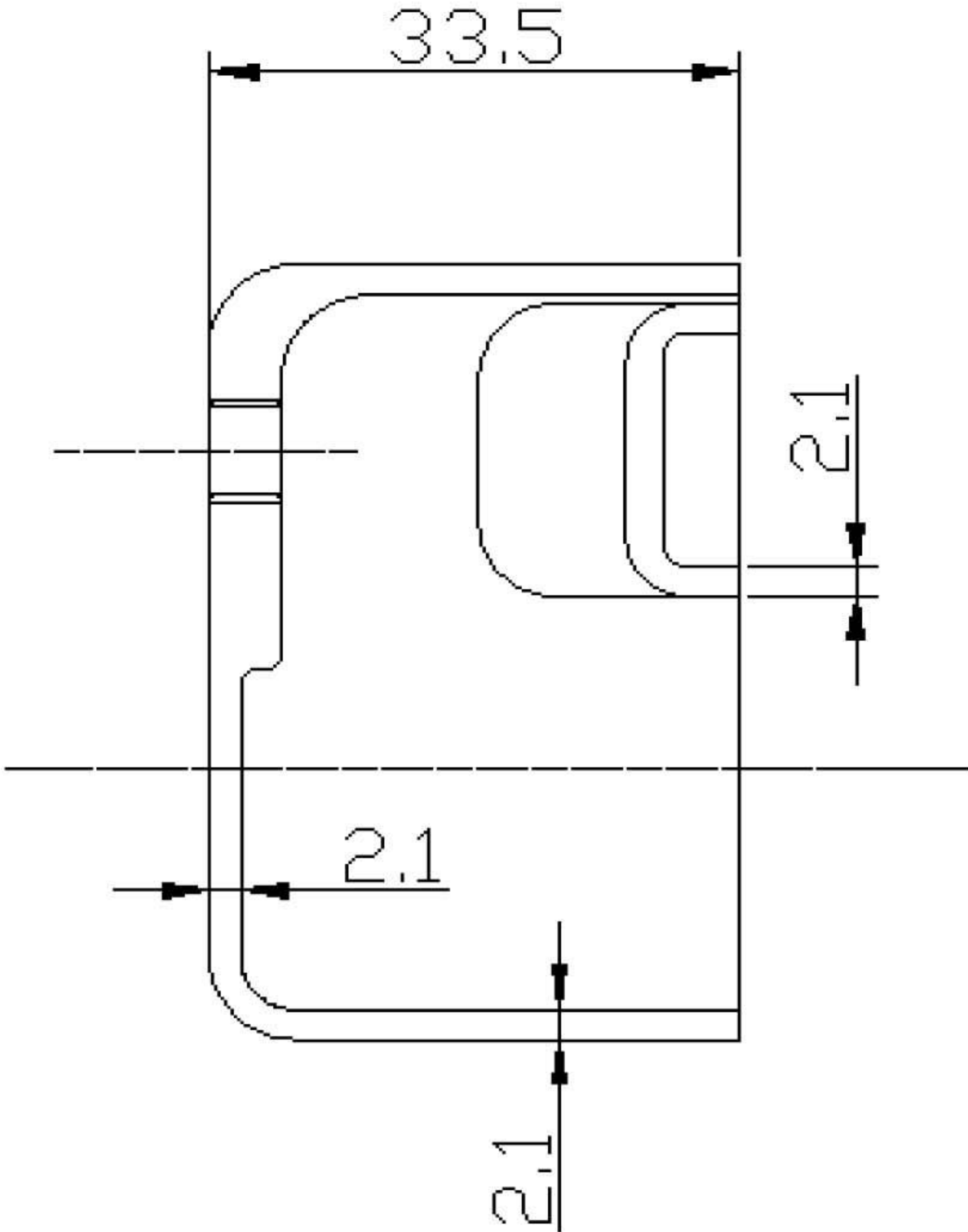
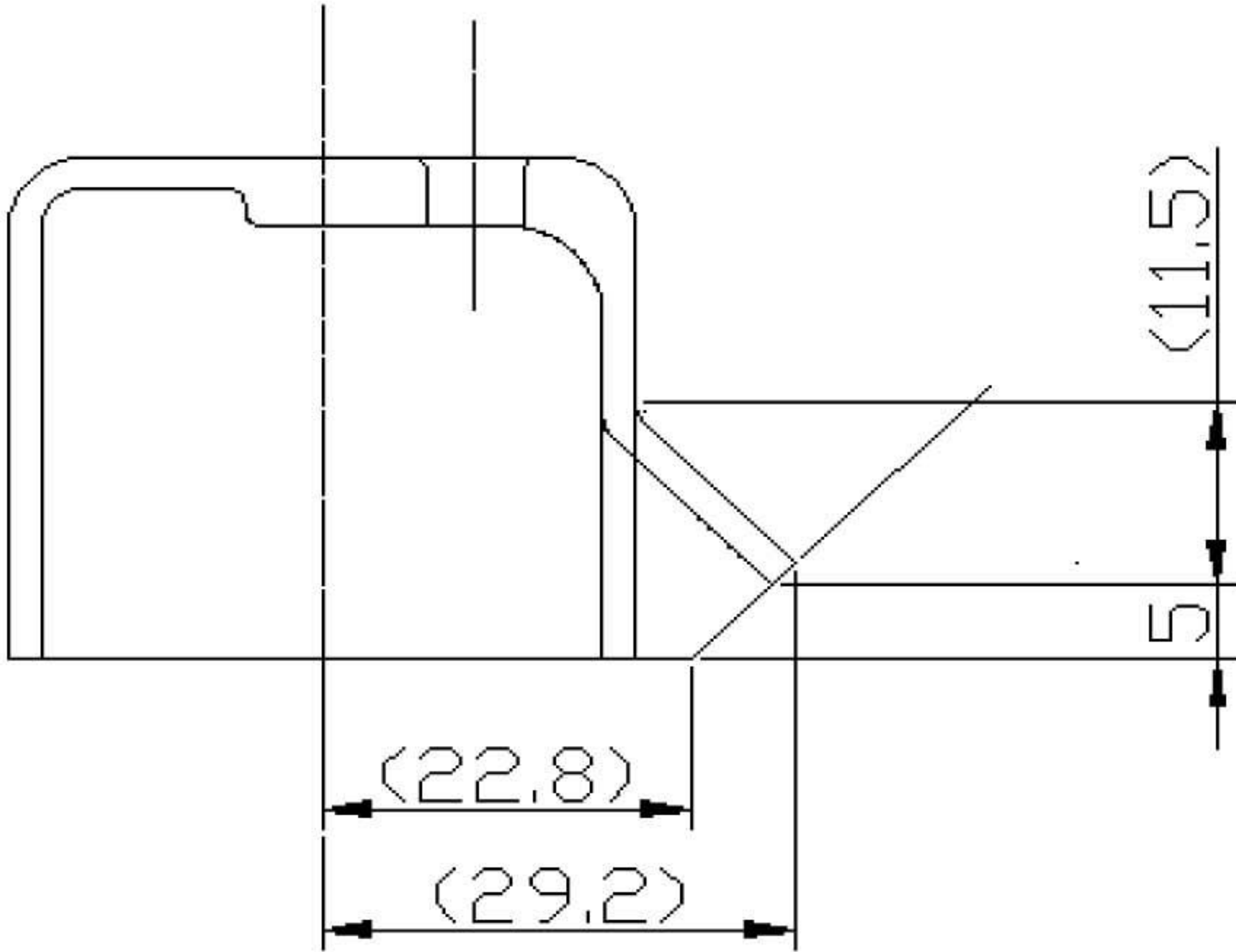
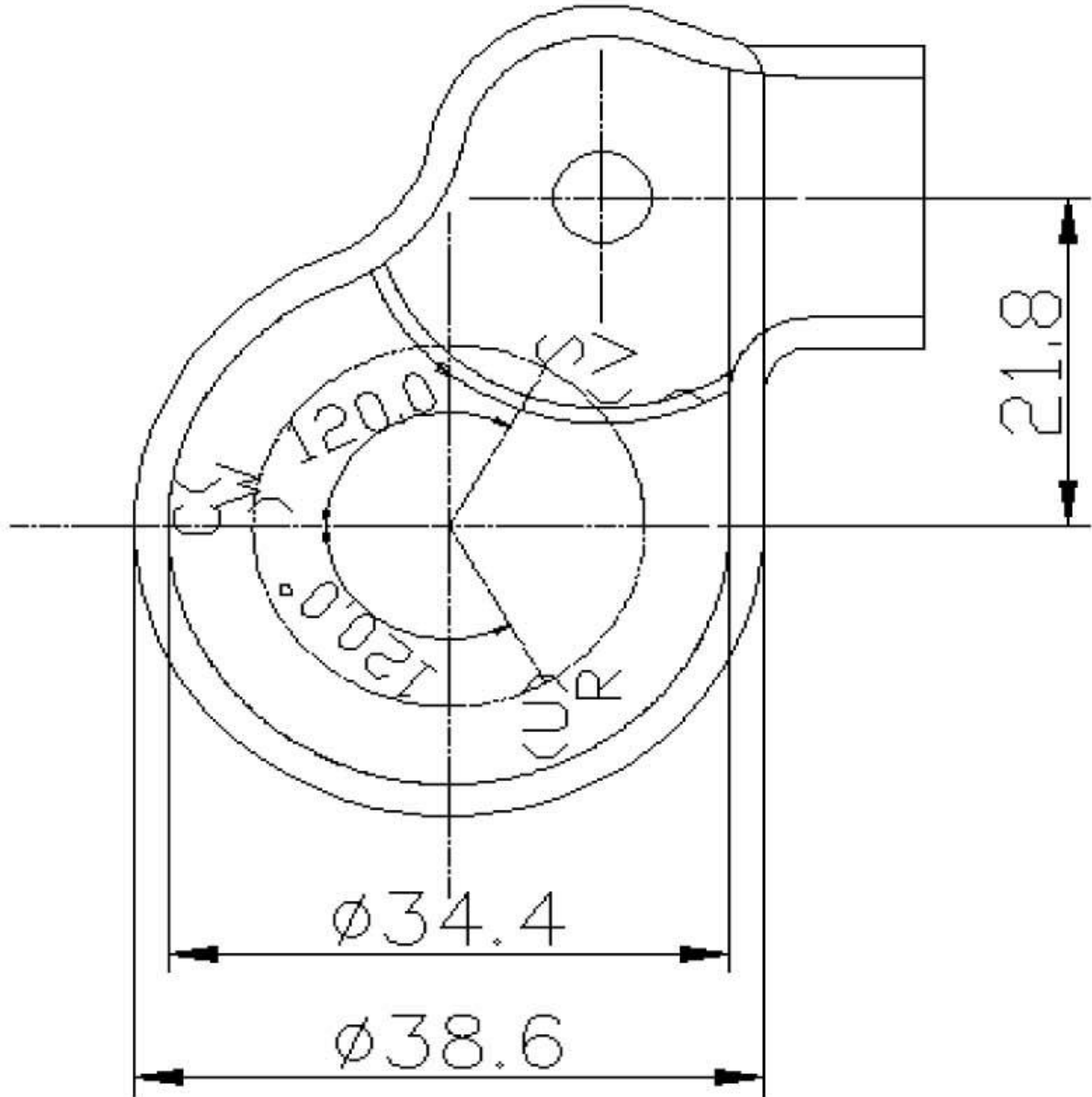


# Accessory Fitting



C,S,R Mark Embossed on Cover Terminal

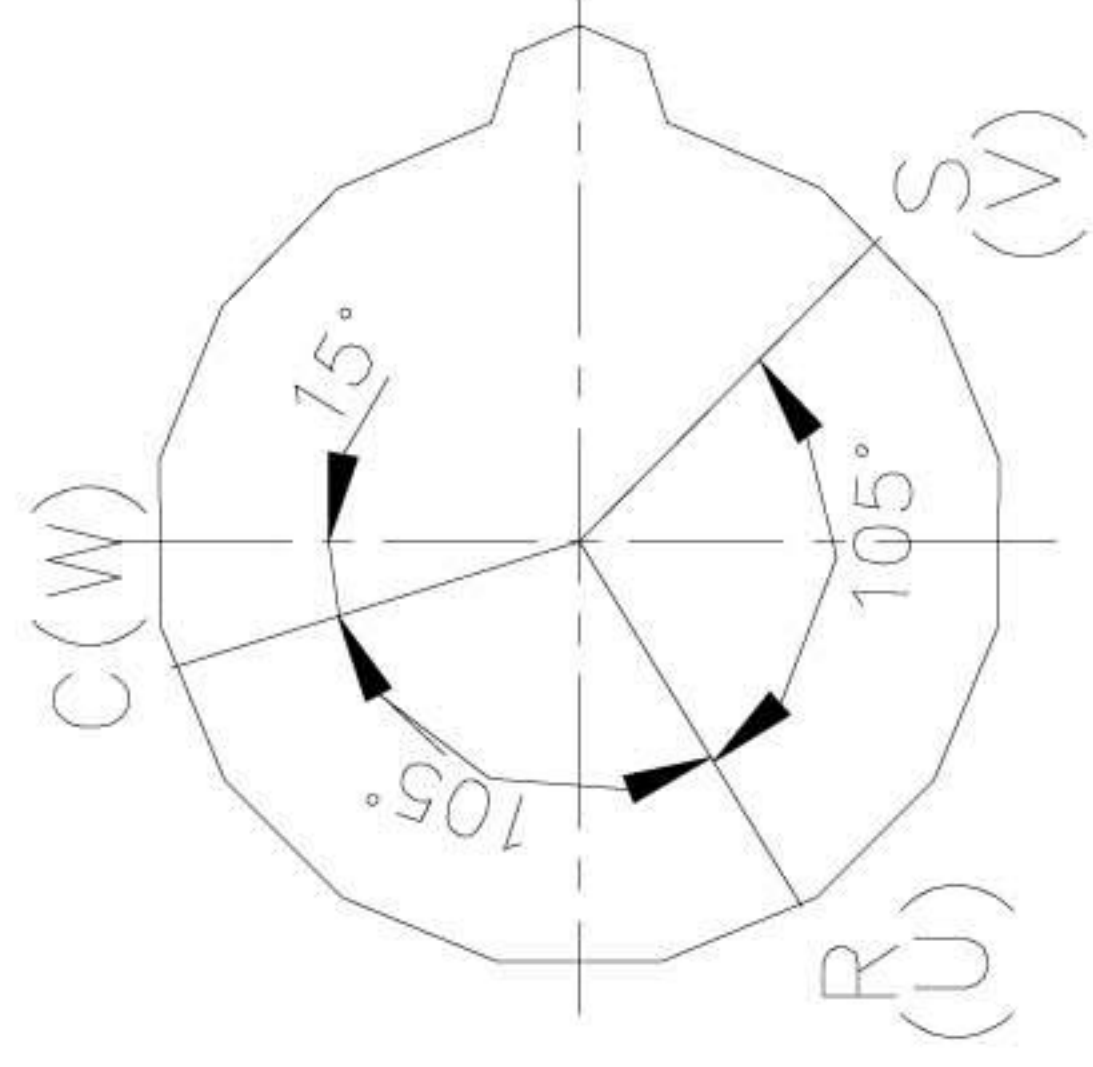
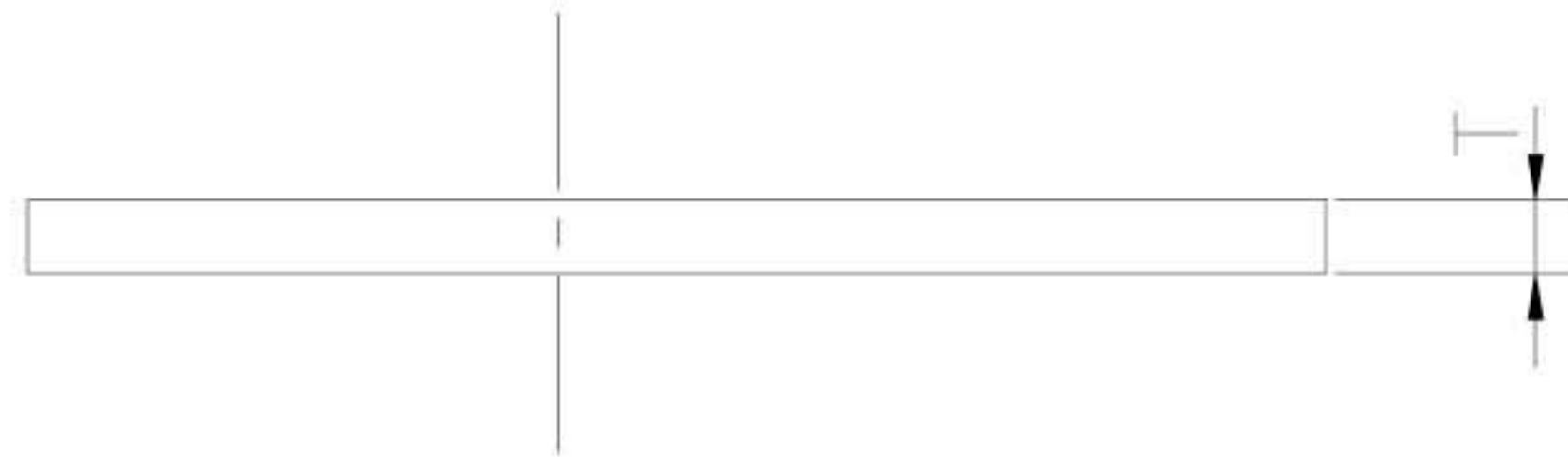
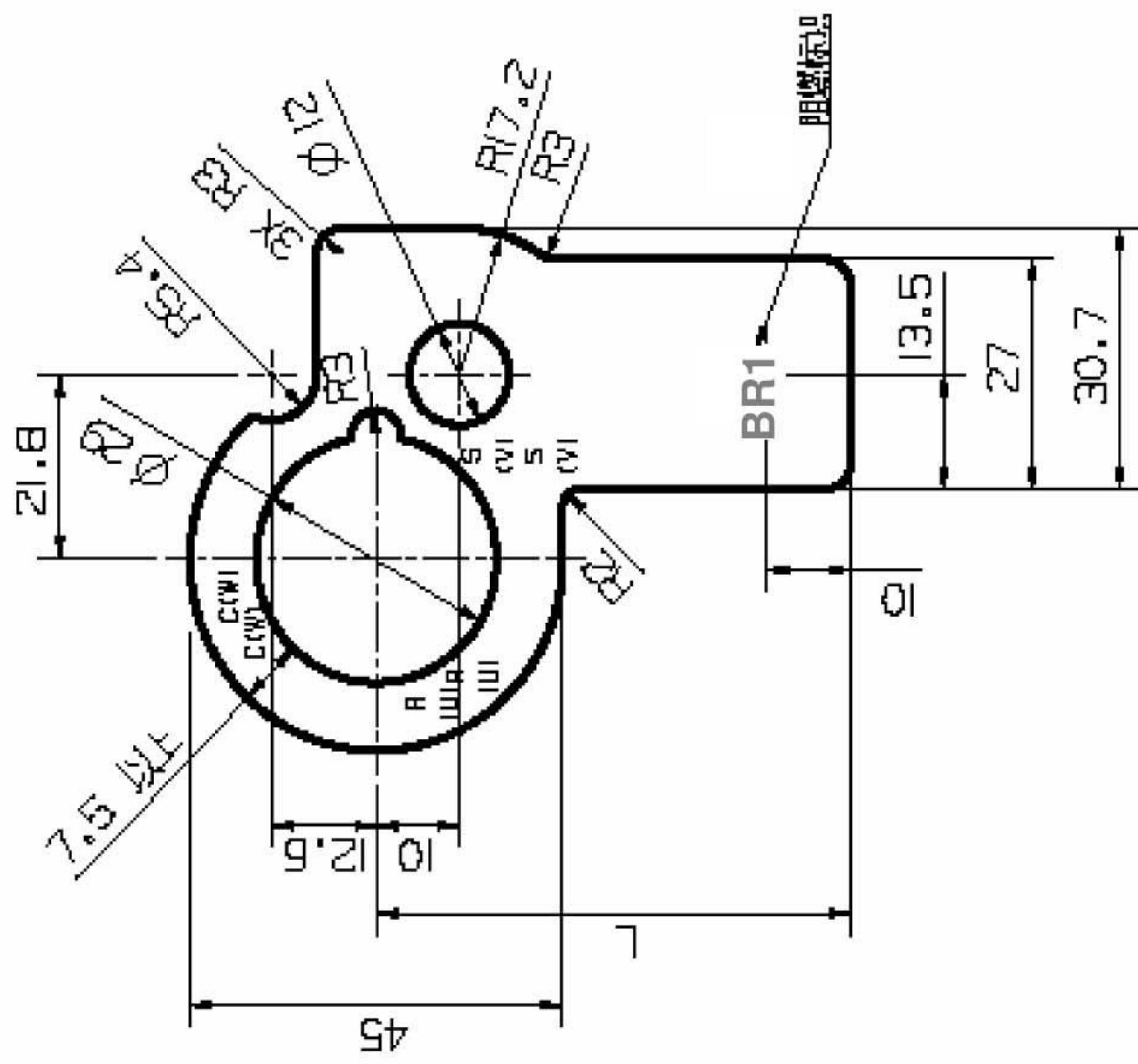




|          |       |                       |
|----------|-------|-----------------------|
| MATERIAL | COLOR | REMARK                |
| LUPOX    | BLACK | MARKS(C(W),R(U),S(V)) |

|                                              |    |            |       |                 |  |
|----------------------------------------------|----|------------|-------|-----------------|--|
| UNIT                                         | mm | SCALE      | N / S | COVER, TERMINAL |  |
| DES. ENGR.                                   |    | CHF. ENGR. |       |                 |  |
| -                                            |    | -          | -     |                 |  |
| LG Electronics(Tianjin)<br>Appliance Co.,Ltd |    | CUSTOMER   |       | 3550U-L005B     |  |
|                                              |    | CANTAS     |       |                 |  |



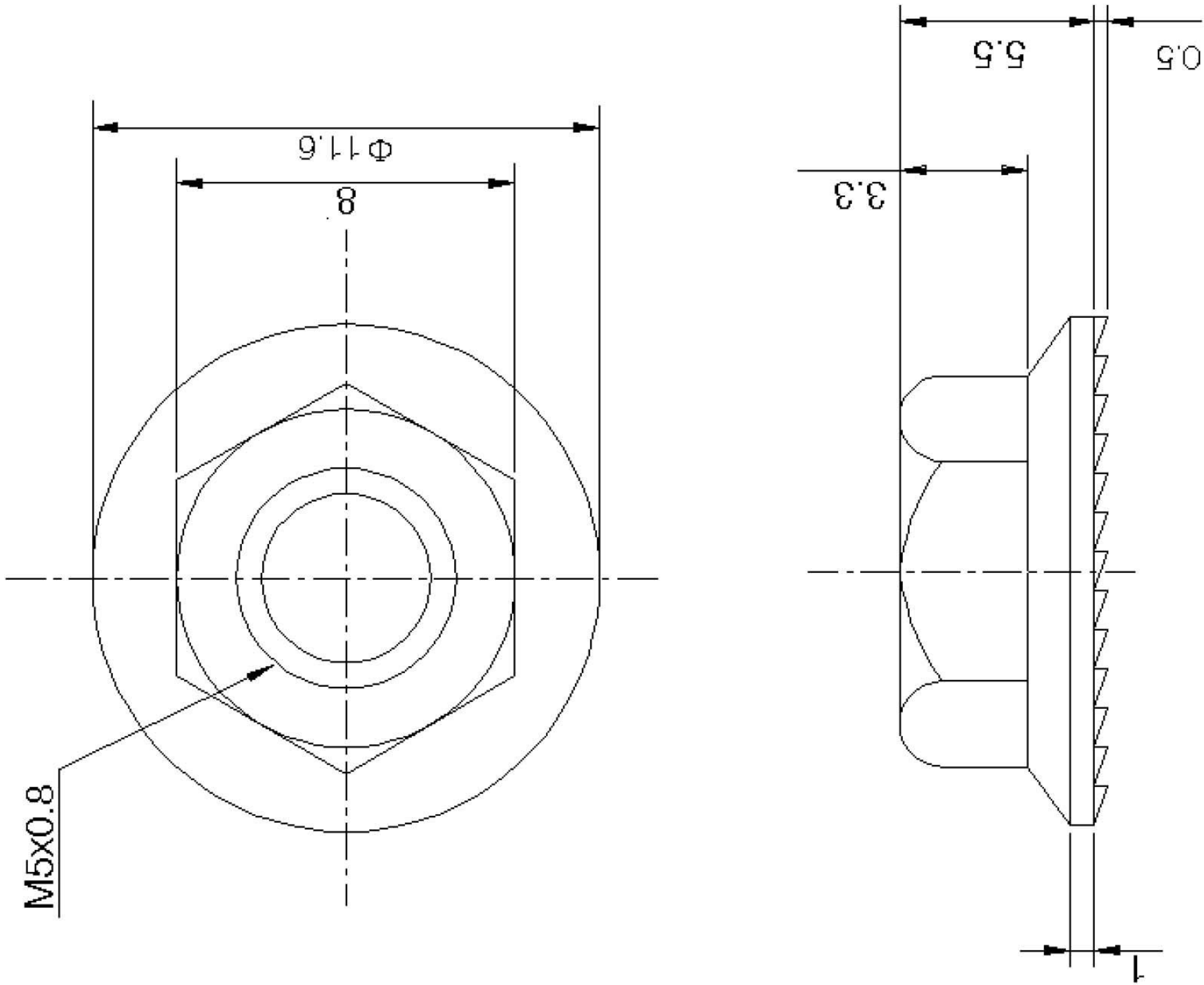


端子MARK位置

| DIV | T(Thickness)                     | MATERIAL | Remark                            | L    |
|-----|----------------------------------|----------|-----------------------------------|------|
| A   | 1.0 <sup>+0.2</sup> <sub>0</sub> | EPDM     | Marks<br>(C (W) , R (U) , S (V) ) | 57.2 |

|                                                |       |                    |       |
|------------------------------------------------|-------|--------------------|-------|
| UNIT                                           | mm    | SCALE              | N / S |
| DES.                                           | ENGR. | CHF.               | ENGR. |
| -                                              |       | -                  |       |
| -                                              |       | -                  |       |
| LG Electronics (Tianjin)<br>Appliance Co., Ltd |       | customer<br>CANTAS |       |
| GASKET                                         |       |                    |       |
| 4986UTL004B                                    |       |                    |       |

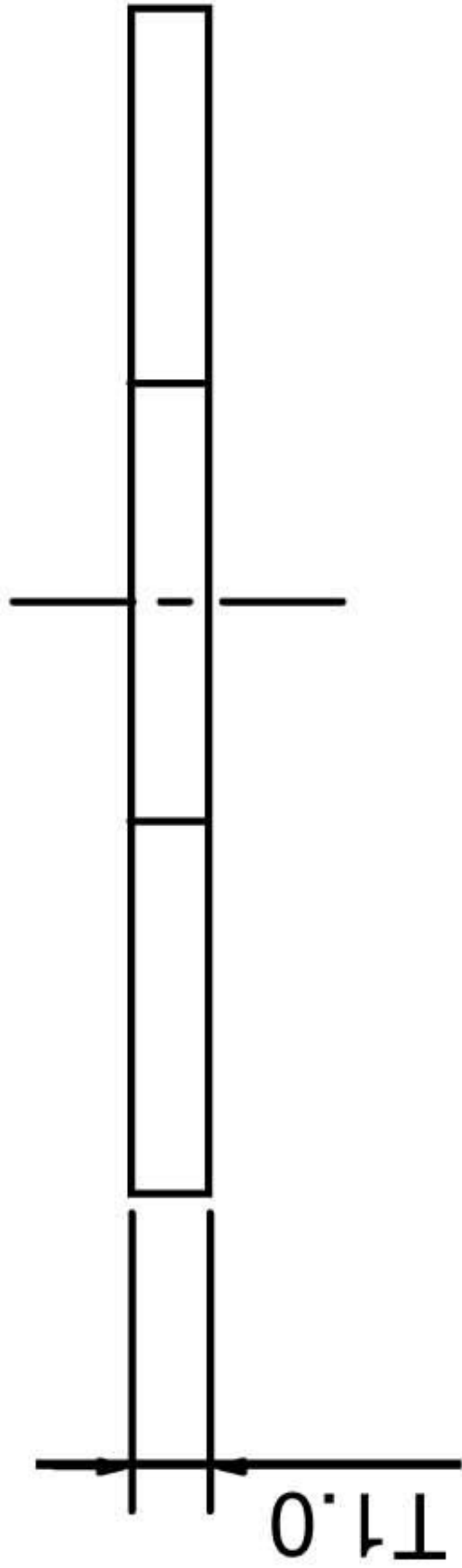
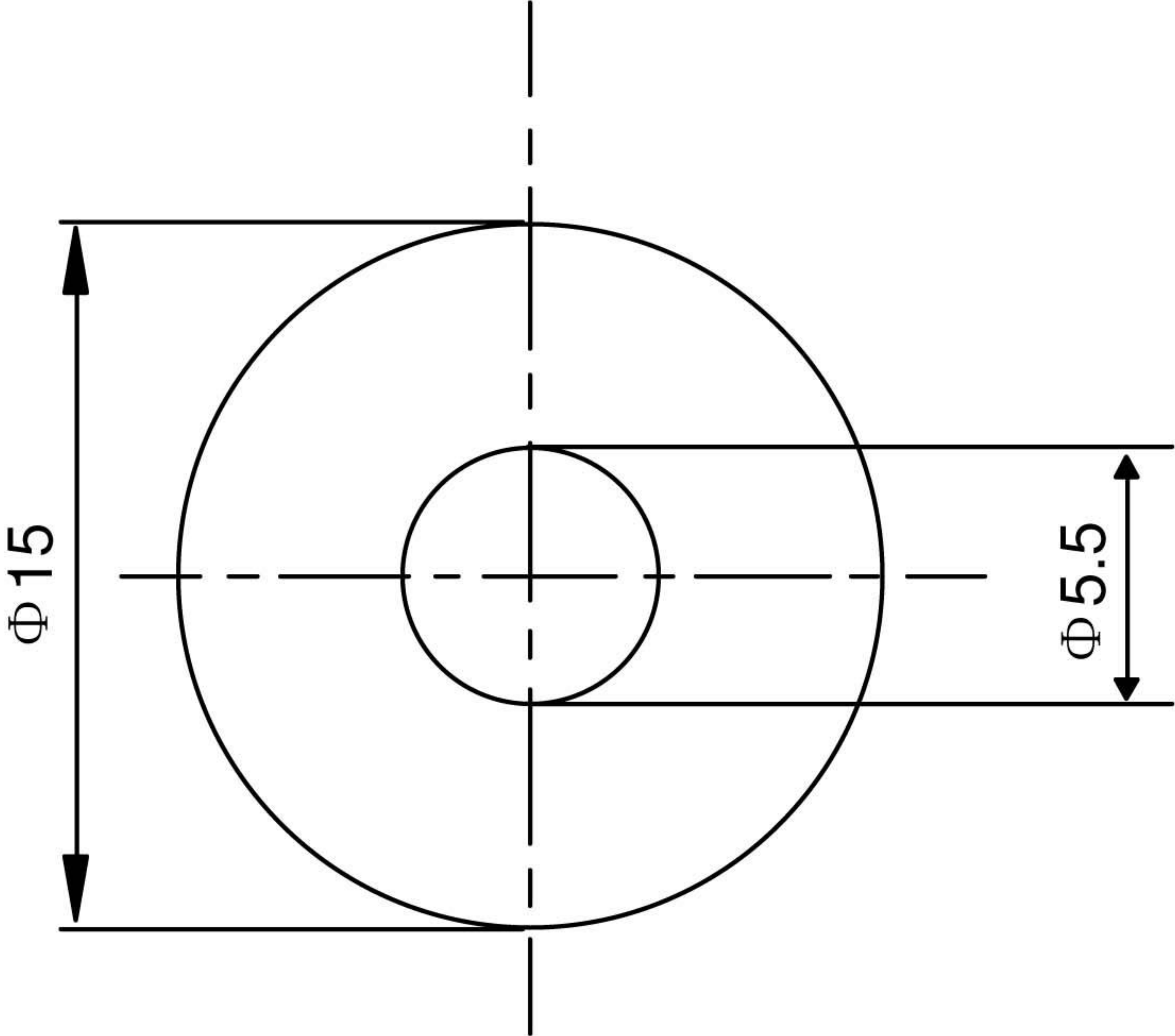




\* MATERIAL : STEEL ( ELECTRIC PLATING OF ZINC )

| UNIT                                         |  | mm    | SCALE              | N / S | NUT,DRAWING |
|----------------------------------------------|--|-------|--------------------|-------|-------------|
| DES.                                         |  | ENGR. | CHF.               | ENGR. |             |
| -                                            |  |       | -                  |       | 1NZZUTL001A |
| -                                            |  |       | -                  |       |             |
| LG Electronics(Tianjin)<br>Appliance Co.,Ltd |  |       | customer<br>CANTAS |       |             |

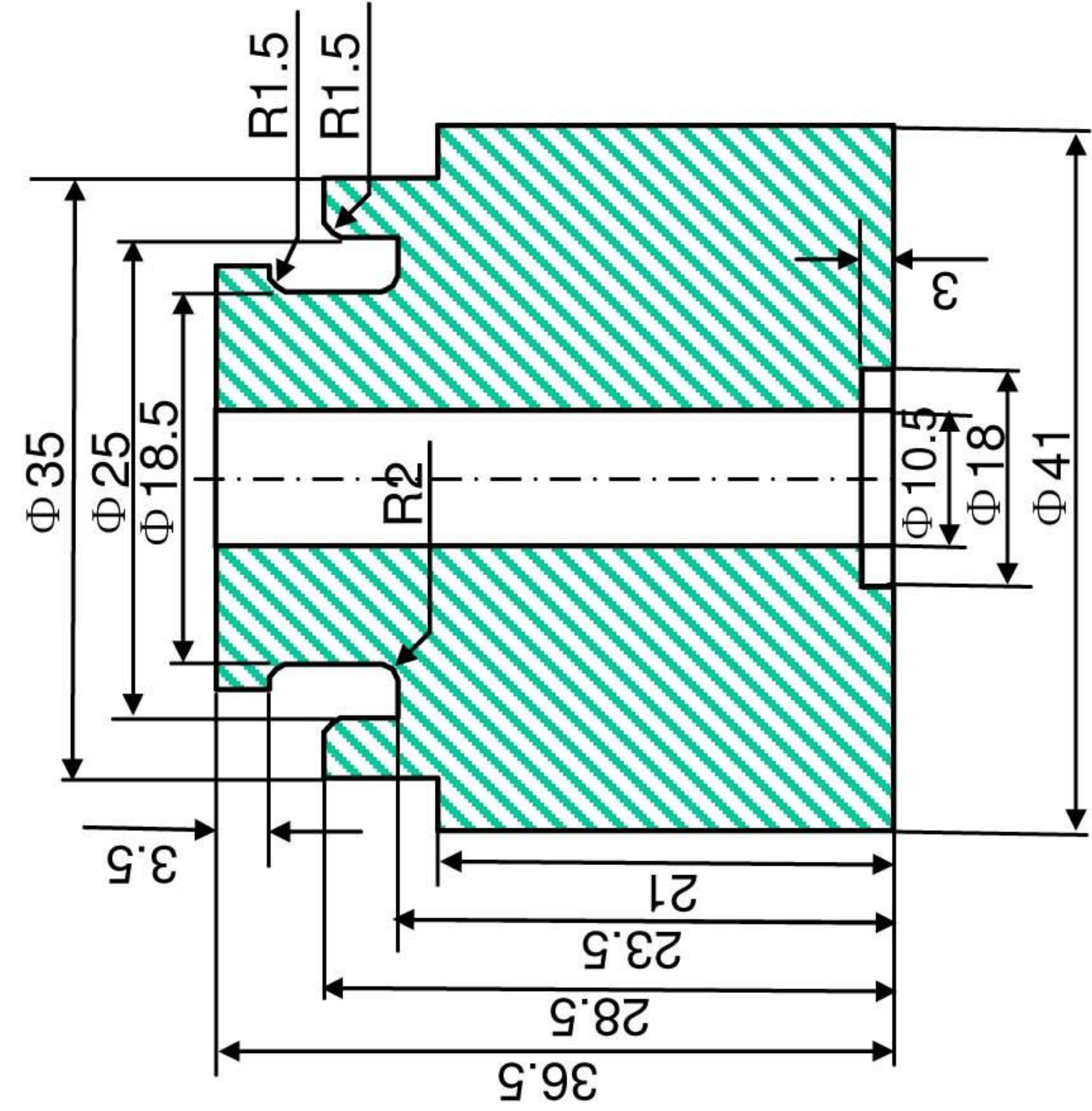
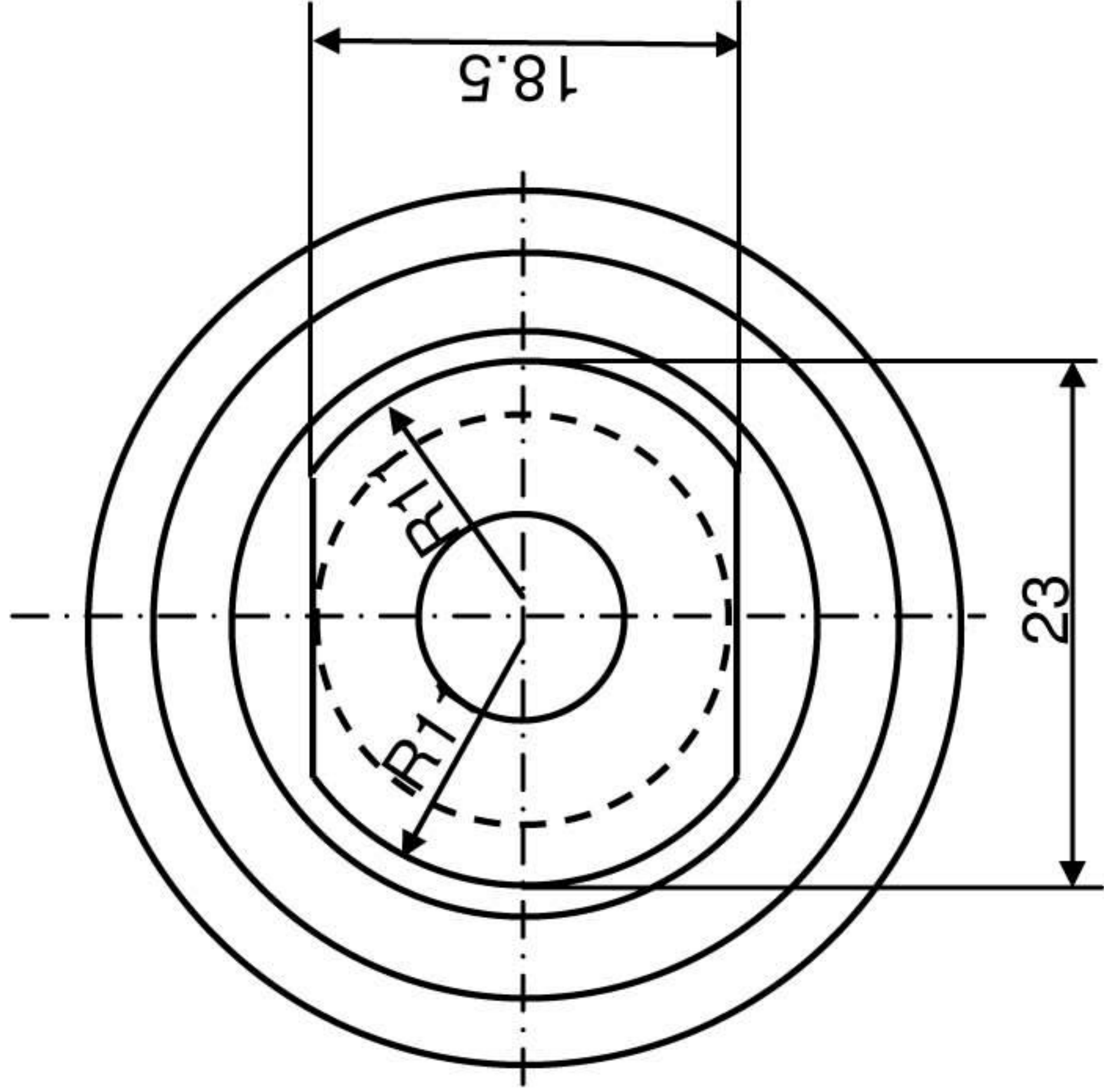




\* MATERIAL : POLYAMIDE ( NYLON )

|                                              |  |       |                    |       |                 |
|----------------------------------------------|--|-------|--------------------|-------|-----------------|
| UNIT                                         |  | mm    | SCALE              | N / S | WASHER, DRAWING |
| DES.                                         |  | ENGR. | CHF.               | ENGR. |                 |
| -                                            |  |       | -                  |       | 1WZZUTL001A     |
| -                                            |  |       | -                  |       |                 |
| LG Electronics(Tianjin)<br>Appliance Co.,Ltd |  |       | customer<br>CANTAS |       |                 |





\* MATERIAL : NATURAL RUBBER

|                                              |  |       |                    |       |             |
|----------------------------------------------|--|-------|--------------------|-------|-------------|
| UNIT                                         |  | mm    | SCALE              | N / S | GROMMET     |
| DES. ENGR.                                   |  | ENGR. | CHF. ENGR.         | ENGR. |             |
| -                                            |  |       | -                  |       | 4022UTL005A |
| -                                            |  |       | -                  |       |             |
| LG Electronics(Tianjin)<br>Appliance Co.,Ltd |  |       | CUSTOMER<br>CANTAS |       |             |