 发行日期:
DATE ·

东芝全封闭型压缩机承认规格书

TOSHIBA HERMETIC COMPRESSOR SPECIFICATION

机种名 (Model): PH400X3CS-4KU1 发行号(Issue NO.): GMCC-

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广东美芝制冷设备有限公司

广东省顺德市顺峰山工业开发区

GUANGDONG MEIZHI COMPRESSOR LIMITED

Shunfengshan Industrial Development Area Shunde City, Guangdong Province, P.R. CHINA

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TOSHIBA------广东美芝 PH400X3CS-4KU1

1.规格 SPECIFICATION

1-1、 压缩机要项 PRINCIPAL ITEMS OF COMPRESSOR

空调机的型式 AIR CONDITIONER TYPE	冷暖兼用型空调机 COOLING & HEATING			
压缩机的型式 COMPRESSOR TYPE	全封闭型电动压缩机 HERVETIC MOTOR COMPRESSOR			
压缩机方式 COMPRESSION TYPE	旋转式 ROTARY			
安全认证 Safety Approval	TUV			
使用冷媒 REFRICERANT	R22			
润滑油名·油量 OIL OIL CHARCE	SUNISO 4GSD 或	同等品 · 950 ml		
涂装 PAINTING	黑色 BLACK	COLOR PAINT		
总质量(含润滑油量) NET MASS(OIL INCLUDED)	23.0	kg		
排除容积 DISPLACEMENT	40.2	cm ³ /rev		
气缸直径高度 CYLINDER BOREx HEIGHT	60 < 40	mm		
偏心量 CRBITAL RADIUS	5.90	mm		
吸气管内径 SLCTION TUBE(I.D)	12.9	mm		
排气管内径 DISCHARCE TUBE(I.D)	9.8	mm		

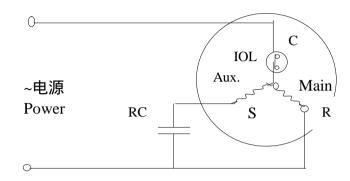
1-2电机 MOTOR

电机的型式· 起动方式	单相诱导电机· 运转电容型			
MOTOR TYPE STARTING TYPE	SINGLE PHASE INDUCTION MOTOR - PSC			
极数	极			
POLE	2 POLE			
额定电压频率	单相			
RATED VOLTAGE FREQUENCY	1 -50Hz-220/240V			
额定回转数	40.0/40.0 40/ 0.4			
RATED REVOLUTION	48.3/48.6 ± 1% S-1			
绝缘等级	类			
INSULATION GRADE	E GRADE			
绕组阻抗	主绕组 辅绕组			
WINDING RESISTANCE (20)	Main: 1.13 ± 5% Aux.: 2.10 ± 5%			
起动电流	(at 1 -50Hz-220/240V)			
STARTING CURRENT	53.0/58.0 +10% A			

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1-3 电气部品规格 配线接线图 ELECTRICAL COMPONENT & WIRING DIACRAM

品名 PARTS NAVE	规 格 SPECIFICATION
运转电容 RLNNING CAPACITOR	(用户自己准备 Out of Supply) 电容容量 Capacity: 50µ F 耐压 Withstanding Voltage: 400VAC
过载保护器 OVER LOAD PROTECTOR	内置 INTERNAL (IOL)



S:START(辅绕组 AUX WINDING)
R:RUN(主绕组 MAIN WINDING)

C:COMMON(共通)

RC: 运转电容 RUNNING CAPACITOR

IOL: 内置保护器 Internal Overload Protector

2. 压缩机及标准附属品一览 COMPRESSOR & STANDARD ACCESSORY

正是WANTENDER No COUNTRESSOR CONTRESSOR CONTR				
品 名 PARTS NAME	型 号 TYPE (MODEL)	个数 PIECES	图纸代号 DRAWING CODE	制品代号 PARTS CODE
外形图 DRAW EXTER	PF-1400X3CS-4KU1	1	1K22900315	1K22000746
橡胶垫 RUBBER CUSHION	176 底脚用 FOR BASE OF 176-TYPE	3	1K22910011	
端子盖 TERMINAL COVER	定速机共用 FOR FIXED FREQUENCY MODELS	1	1K14720013	
端子垫片 TERMINAL PACKING	定速机共用 FOR FIXED FREQUENCY MODELS	1	1K14720132	
端子螺母 TERMINAL NUT	M5	1	1K14300711	
接地螺钉 EARTHING BOLT	* 铜质镀镍螺钉 NI-PLATED COPPER BOLT	1	1K14300210	
接地螺钉垫片 WASHER FOR EARTHING BOLT	* 铜质镀镍垫片 NI-PLATED COPPER WASHER	1	1K14300310	

请用东芝指定之压缩机零部件和附属品。

USE COMPRESSOR PARTS AND ACCESSORIES SPECIFIED BY TOSHIBA

*! 请注意 ! Attention:

如使用压缩机底脚上的接地孔,务必将原压缩机上的防锈保护钢质螺钉与垫片卸下废弃,换上附件中的铜质螺钉与垫片或相当品。

If the Earthing Hole on the Base of Compressor will have been connected with Earthing Wire, Please Remove and throw away the Antirust Steel Bolt and Washer which has been installed on Compressor, and Use the Copper Bolt and Washer listed above or Equivalent.

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3. 运转标准 STANDARD OF PERFORMANCE

3-1、性能 RATED PERFORMANCE

		(参考)
		GB 条件时
		AT GB STANDARD
冷冻能力 CAPACITY W	6920/6945 ± 5%	
输入功率 MOTOR INPUT W	2245/2360± 5%	
电流 CURRENT A	10.52/11.13± 5%	
CCP WW %	308/294 ± 5%	
噪音 dB(A)		
SOUND LEVEL dB(A) (A RANGE)	69 以下	
SOUND POWER LEVEL	MAX	
振动 m/s ²	3.8 以下	
VIBRATION(法线方向振动实效值)	MAX	

测定条件 RATING CONDITIONS

RATED VOLTAGE :1 -50Hz-220/240V ·额定电压

:35

冷凝温度 COND.TEMP. :54.4 蒸发温度 EVAP.TEMP :7.2

·吸气温度 RETURN GAS TEMP :35

· 过冷却液温 LIQUID TEMP. :46.1 ·环境温度 AMBIENT TEMP.

・强制空冷 FORCED AIR

· 排气温度 DISCHARGED TEMP.:85

根据东芝量热标准

ACCORDING TO TOSHIBA'S CALCRIEMETER STANDARD

测定条件 RATING CONDITIONS

· 额定电压 RATED VOLTAGE: 1 -50Hz-220/240V

·冷凝温度 COND.TEMP. :54.4 ·蒸发温度 EVAP.TEMP :7.2 · 吸气温度 RETURN GAS TEMP :18 ·排气温度 DISCHARGE TUBE TEMP.: 80.0 环境温度 AMBIENT TEMP. :20.0

排气温度由冷媒回液量控制

DISCHARGE TUBE TEMP IS CONTROLLED BY FLOOD BACK

AMOUNT OF REFRIGERANT

运转停止电压 B.D.V	V	198 以下 MAX	Pd/Ps=2.60 / 0.69 MPa
起动电压	V	187 以下	Pd=Ps=0.98 ± 0.1 MPa
STARTING VOLTAGE		MAX	Pd-Ps 0.05 MPa

3-2、一般特性 CHARACTERISTICS

气密试验压力(AP)	高压侧 HIGHER PRESSURE SIDE	2.9 MPa
LEAK TIGHT PRESSURE	低压侧 LOWER PRESSURE SIDE	1.4 MPa
耐压试验压力(TP)	高压侧 HIGHER PRESSURE SIDE	4.2 MPa
HYDROSTATIC STRENGTH PREESSURE	低压侧 LOWER PRESSURE SIDE	2.0 MPa
绝缘阻抗(封入氮气时)		以上
INSULATION RESISTANCE (FIL	LLED WITH NITROGEN GAS)	20 M MIN
绝缘耐压 WITHSTAND VOLTAG	EE.	AC1500V-1min
残余水分量	· 含尘量	300mg 以下 · 45mg 以下
RESIDUAL MOITSTURE	· RESIDUAL IMPURITIES	MAX · MAX
接地阻抗 EARTHING RESISTAN	CE	以下 0.1 MAX

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4、使用条件范围 OPERATING CONDITIONS

项目 ITEMS 负荷 LOAD	标	准	最高
	STANDA	ARD	MAX.
排气压力 MPa(G)	2.06	以下	2.6 以下
DISCHARGE PRESSURE		MAX	MAX
吸气压力 MPa(G) SUCTION PRESSURE	0.29~0.	59	0.1~0.69
压缩比	8	以下	8 以下
COMPRESSION RATIO		MAX	MAX
绕组温度	100	以下	125 以下
MOTOR COIL TEMP.		MAX	MAX
排气管温度	100	以下	115 以下
DISCHARGE TUBE TEMP.		MAX	MAX

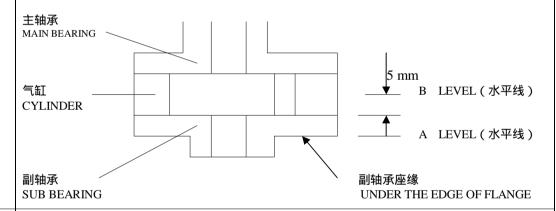
空调系统设计制造注意事项 SYSTEM DESIGN AND PROCESS LIMITATIONS

许容冷媒封入量 kg	
LIMIT OF REFRIGERANT 2.10 以下	
AMOUNT MAX	
连续液返回量 连续液在储液罐前的返回量不超过总冷媒循环量的 10%	
CONTINUOUS FLOOD BACK CONTINUOUS FLUID BACK BEFORE THE ACCUMULATOR NO	OT BE
MORE THAN 10% OF TOTAL CIRCULATION QUANTIT	Y OF
REFRIGERANT.	
异常音、异常电流 起动时和冷冻循环切换时没有异常音及异常电流发生	
ABNORMAL NOISE & KNOCKING NOISE OR OVERCURRENT SHOULD NOT OCCUR	AT
CURRENT START-UP OR REVERSING CYCLE.	
温差 T: 连续运转时(包含除霜、除湿)温差在5 以上。控制运转时在	
TEMP.DIFFERENT 0 以上。	
(T=売底部温度-冷凝温度) 5 OR MORE: CONTINUOUS OPERATION	
(T=CASE BOTTOM TEMP 5 OR MORE : DEFROSTING OPERATION	
-CONDENSING TEMP 5 OR MORE : DRY OPERATION	
0 OR MORE: CONTROLLED INTERMITTENT OPERATION	
断续运转间隔、次数 每一循环 5 分钟以上(ON2 分钟以上、OFF2 分钟以上)。20 万	次冷冻
INTERMITTENT OPERATION 循环以下。	
TIMES 200000 CYCLES OR LESS, 5 MINUTES OR MORE	
(ON: 2MINUTES OR MORE, OFF: 2MINUTES MORE)	
运转电压波动允许范围 220V-10% ~ 240V+10%(198 ~ 264V)以内	
SUPPLY VOLTAGE RANGE THE SUPPLY VOLTAGE SHOULD BE 220V-10% ~ 240V+10%	6(198 ~
264V)	0(1)0
运转频率允许范围 额定频率的±2%以内	
POWER FREQUENCY THE POWER FREQUENCY SHOULD BE THE RATED VALUE ±	- 2%
The foundation of the first of	
起动时的压力差 起动时高压侧和低压侧压力平衡	
PRESSURE DIFFERENCE AT THE PERSSURE SHOULD BE BALANCED THE HIGH-PRESSUR	RE
START-UP AND LOW-PRESSURE SIDES AT START-UP	
许容运转倾斜度 压缩机在倾斜角 5^0 以内可以正常运转	
TILT IN OPERATION COMPRESSOR SHOULD BE RUN AT A GRANDIENT OF UP TO	5°

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许容油面高度 LUBRICATION OIL LEVEL 压缩机润滑油面高度标准如下图,但是见到润滑油起泡时,起泡部份不计入在内。 THE LUBRICATION OIL LEVEL IN A COMPRESSOR SHOULD BE AS LISTED BELOW IF THE LUBRICATION OIL IS FOAMING FOAM SHOULD BE EXCLUDED FROM THE OIL LEVEL

运转条件 OPERATING CONDITION 连续运转时 IN CONTINUOUS OPERATION		润滑油面 OIL LEVEL B水平线以上 B LEVEL OR HIGHER
起动时 WHEN STARTING	动转起动时 CONTROLLED START 冷媒沉积时起动 AFTER SOAKING	B水平线以上 B LEVEL OR HIGHER B水平线以上。起动3分钟之后 油面在A水平线以上。 B LEVEL OR HIGHER, A LEVEL OR HIGHER WITHIN 3MINUTES AFTER START-UP
除霜时IN DEF- ROSTING	热气除霜 DEFROSTING-HOT GAS	B水平线以上 B LEVEL OR HIGHER
	逆向除霜 REVERSE CYCLE	B水平线以上 B LEVEL OR HIGHER



许容配管应力 TUBE STRESS

压缩机配管不要产生共振。对于配管施加之应力请控制在下表允许应力值之内,配管设计时考虑防止应力折损。

TUBE TO BE CONNECTED WITH A COMPRESSOR SHOULD BE FREE OF RESONANCE. THE TUBE STRESS SHOULD NOT EXCEED THE VALUES LISTED BELOW TUBE SHOULD NOT BREAK DURING OPERATION, AT START-UP, AND AT STOP

振动模式 VIBRATION MODE	许容应力值(ALLOWABLE TUI	半振副) BING STRESS(HALF AMPLITUDE)
运转时 OPERATING	20N/mm ²	以下 OR LESS
起动时、停止时 START-UP STOP	30N/mm ²	以下 OR LESS
运输时、装卸时 IN TRANSIT	30N/mm ²	以下 OR LESS

压缩机禁止横放、倒置 DO NOT PUT A COMPRESSOR ON ITS SIDE OR TURN OVER.

压缩机承受的冲击负荷在 590m/s²以下,此外,压缩机的附属品应免受冲击。(如端子盖等)

AN IMPACT TO COMPRESSOR SHOULD BE LIMITED TO 590m/s² OR LESS ,NOT GIVE A SHOCK TO ACCESSORIES

密封橡胶垫拔除后,请防止潮湿空气进入压缩机内部,请不要长时间放置。

DO NOT LEAVE THE PLUGS OF THE COMPRESSOR IN THE ATMOSPHERE FOR MANY HOURS AFTER OPEN FOR PREVENTING WATER FROM GETTING INSIDE.

空气运转时油质会加速劣化,绝对禁止。

AVOID OPERATION WITH AIR FOR PREVENTING THE LUBRICATION OIL'S DETERIORATION FROM ACCELERATING.

封入冷媒时请从冷凝器出口封入。

REFRIGERANT MUST ALWAYS BE FILLED FROM THE HIGHER SIDE OF THE REFRIGERATION CYCLE

绝对禁止压缩机逆向运转,逆运转过的压缩机不能再使用。

DO NOT REVERS COMPRESSOR OPERATION. DO NOT REUSE THE COMPRESSOR THAT ROTATED IN REVERS.

压缩机请不要放置在露天,请在-10~+65 室内保管。

DO NOT ALLOW COMPRESSOR TO BE WEATHERED; STORE COMPRESSORS INDOOR AT -10~+65

连接压缩机引出线的长度要充分考虑压缩机振动,应留有余量。

LEAD WIRE CONNECTED TO A COMPRESSOR SHOULD HAVE A SUFFICIENT ALLOWANCE AGAINST VIBRATIONS OF A COMPRESSOR.

压缩机壳体表面温度可能会达 150 高温,不容许配线或类似物接触压缩机表面。

SINCE THE COMPRESSOR TEMPERTURE MAY RISE AS HIGH AS 150 , DO NOT ALLOW ELECTRIC CABLES OR THE LIKE TO DIRECTLY TOUCH COMPRESSORS.

压缩机的终端盖内禁止水滴,灰尘进入,必须做适当 的防湿、防尘处理。

TAKE PRORER MOISTURE-PROOF OR DUST-PROOF MEASURES FOR THE COMPRESSOR TERMINAL BOX IF WATER DROPLETS , DUST , OR THE LIKE MAY OTHERWISE ENTER $_{\!\!\!\circ}$

请注意压缩机外壳应避免与吸湿性的材料接触,以防止腐蚀。另外,不要暴露在腐蚀气体或有机物之中。 TURN ATTENTION TO GATHERING RUST ON IT'S SHELL WHEN ALLOWED COMPRESSOR TO COME IN TOUCH WITH HYGROSCOPIC MATERIALS。NOT BE EXPOSED TO CORROSIVE GASES OR ORGANIC SUBSTANCES。

使用在分体机的场合,最长配管不超过 15m, 配管的高低落差最大 5m。除本规定情况外,有关使用条件范围也应满足。

FOR SPLIT TYPE AIR-CONDITIONERS , THE MAXIMUM PIPING LENGTH SHOULD BE $15\,\mathrm{m}$, AN ELEVATION DIFFERENCE SHOULD BE WITHIN $5\,\mathrm{m}$,

ALSO THE REQUIREMENTS HEREIN SHOULD BE MET.

ALSO THE REQUIREMENTS HEREIN SHOULD BE MET.

许容冷媒量超出使用状况,须另行协商决定压缩机规格(储液器容量、油量等)以及空调系统的规格(储液器、曲轴箱加热器、油分离器、控制装置等)。

IF GAS CHARGE AMOUNT OF REFRIGERANT SPECIFIED IS EXCEEDED, BOTH PARTIES SHOULD DISCUSS THE MATTER TO DETERMINE COMPRESSOR SPECIFICATION (ACCUMULATOR VOLUME, LUBRICATING OIL AMOUNT) AND SYSTEM SPECIFICATIONS (CRANK CASE HEATER, OIL SEPERATOR, ADDITONAL ACCUMULATOR, ETC.)

没得到 TOSHIBA 的授权请不要随意更改压缩机规格。R22 之外的冷媒禁止使用,否则有发生爆炸的可能。 (特别是绝对禁止空气压缩)

DO NOT MODIFY A COMPRESSOR WITHOUT TOSHIBA'S AUTHORIZATION. DO NOT FILL THE REFRIGERATION CYCLES WITH GAS EXCEPT R22, AS A COMPRESSOR MAY GO-UP IN A BLAST (ESPECIALY COMPRESSING AIR IS NOT PERMITTED)

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不准手拎排气管进行搬运、装卸。

DO NOT PROVIDE ANY FORCE ON DISCHARGE TUBE WHEN COMPRESSOR IS MOVED AND OR TRANSFERRED

5、 其它 THE OTHERS

5-1、充填 N2 气体 SEALING WITH NITROGEN GAS。

旋转式压缩机为防止生锈,填充有氮气。橡胶栓塞拔下时确认氮气吐气声。

THE ROTARY COMPPRESSOR ARE SEALED WITH NITROGEN GAS FOR RUST PREVENTION WHEN REMOVING THE RUBBER CAP , IT SHALL BE MADE SURE AUDIBLY THAT THE NITROGEN GAS REMAINS.

5-2、包装 CONTAINER

压缩机包装式样依据本公司之标准。

A STANDARD CONTAINER SPECIFFIED IN TOSHIBA IS USED.

5-3、规格书有效期限

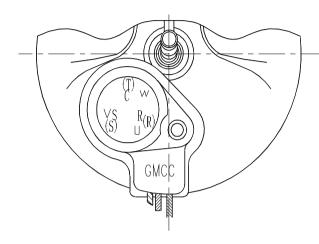
本规格书经贵公司承认之日后即生效。如更改须再发行承认生效,以前之规格书便自动失效。
THIS DOCUMENT WILL EFFECTIVE AFTER TOSHIBA'S RECEIPT WITH YOUR AUTHORIZED SIGNATURE WHEN DESIGN MODIFICATION IS APPROVED BY THE CUSTOMER , THE CURRENT DOCUMENT IS UNAVAILABLE.

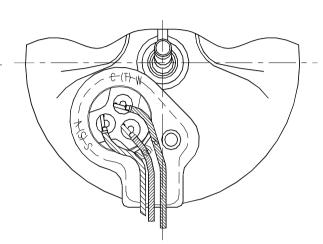
压缩机使用压力范围

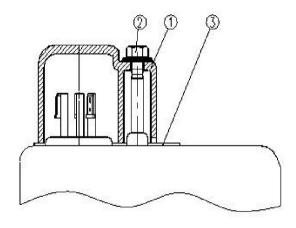
LIMITATION OF OPERATION PRESSURE 单位:MPa(表压) Unit :MPa(G) 2.60/0.24 2.60/0.69 2.60 2.45 压缩比=8 COMPRESSION RATIO=8 1.96 冷凝压力 DISCHARE RESSURE (MPa) 1.47/0.69 1.47 1.47/0.1 0.98 0.92/0.03 压缩比=2 COMPRESSION RATIO=2 A A:除霜及复位再起动时,3分钟内可使 0.49 用. В For 3 min., defrosting & re-starting B:冷媒沉积起动时,5分钟内可使用. 0.25/-0.05 0.29/0.1 For 5 min. After starting at soaking 0.25 0.25/0.03 0.25/0.08 out. 0 -0.1 0 0.1 0.2 0.3 0.39 0.49 0.59 0.69 蒸发压力 SUCTION PRESSURE

ELE COMPONENTS

Drawing No.1K14722114







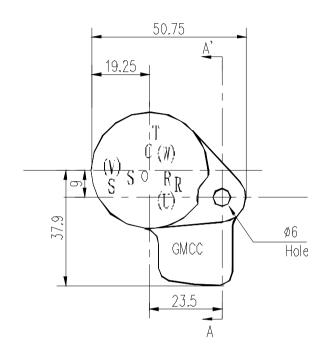
	TERMINAL PACKING	1K14720132
	TERMINAL NUT	1K14300612
	TERMINAL COVER	1K14720013
PART NO	TITLE	DRAWN NO

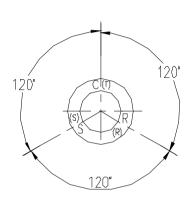
NOTES

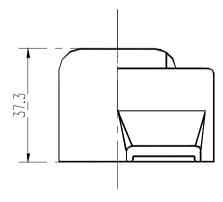
Tightening torque of terminal nut:1.2±0.2Nm

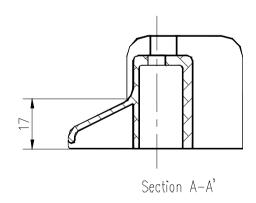
TERMINAL COVER

Drawing No.1K14720013







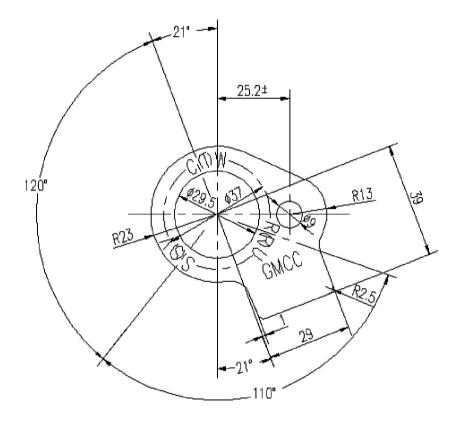


NOTES
MATERIAL:Polycarbonate
COLOR:BLACK

TERMI PACKING

Drawing No.1K14720132

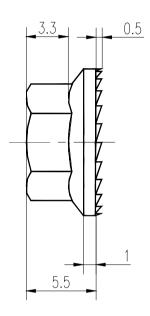
THICKNESS 1mm

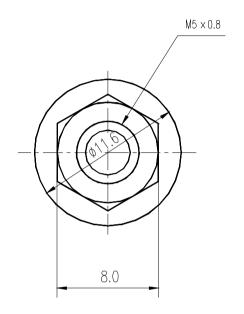


NOTES MATERIAL:SI COLOR:BLACK

TERMINAL NUT

Drawing No.1K14300711





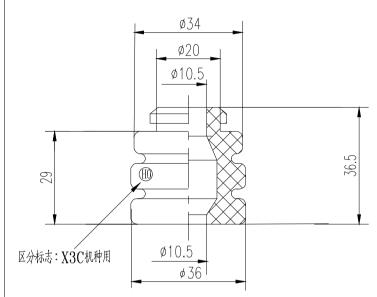
NOTES

MATERIAL:SWCH10

TREATMENT: WITHOUT HEXAVALENT CHROMIUM COMPOUNDS

RUBBER CUSHION

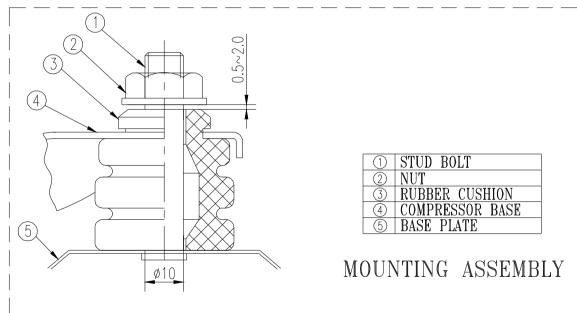
Drawing No. 1K22910011



NOTES

MATERIAL: EPDM

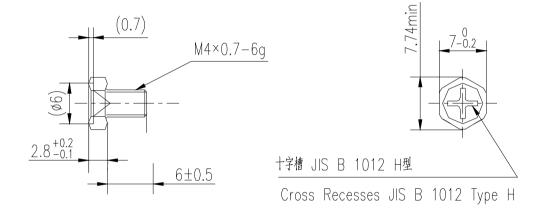
HARDNESS: HS=46



注意:X1C、X2C ϕ 176底脚机种用橡胶垫与X3C机种用橡胶垫(1K22910011)外形尺寸一样,仅硬度不同,请注意区分,X3橡胶垫侧面有区分标志"(H0)",X1C与X2C ϕ 176底脚用橡胶垫无"(H0)"标志。

HEX BOLT

Drawing No.1K14300210



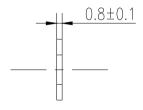
NOTES

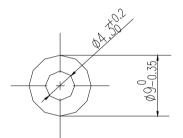
MATERIAL:C2700W-1/4H

TREATMENT:ELECTROPLATED COATINGS OF NICKEL(Ep-Cu/Ni 3 b)

WASHER

Drawing No.1K14300310





NOTES

MATERIAL:C2700W-1/4H

TREATMENT:ELECTROPLATED COATINGS OF NICKEL(Ep-Cu/Ni 3 b)

