Hitachi Highly

Rollkolbenverdichter

Rotary Compressors

Spezifikation

Installation Manual

WHP08750VCDNC9AU

R 410A - R 134a - R 513A

23,2 cm3/rev

1000 - 7200 min-1

DC /BLDC

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1. SCOPE

This specification is applied to SHANGHAI HIGHLY Heat pump water heater compressor.

2. SPECIFICATION OF THE MODEL

Item	Spec		
2.1 Model Type	WHP08750VCDNC9AU		
2.2 Power source input to HITACHI inverter (SHEC	Rated voltage 220V Rated frequency 50 Hz Phase 1phase		
2.3 Output	2200W(at R410A 3300rpm)		
2.4 Application	Heat pump water heater		
2.5 Refrigerant	R410A/R134a/*R513A		
2.6 Displacement	23.2ml/rev		
2.7 Allowable frequency range	1000～7200min^{-1}		
2.8 Oil	HAF68D1C or equivalent 630±20ml		
2.9 Allowable amount of refrigerant charge	Below 2100g		
2.10 Compressor cooling	Forced air		
2.11 Hermetic Terminal	1/4" quick connect type		
2.12 Space volume of inner case	1145cm^3		
2.13 Compressor weight	13.6 kg incl. Oil		
2.14 Motor Type Insulation class	Direct current brushless motor E class		
	R410A	R134a	*R513A
2.15 Nominal Heating Capacity (see *)	8750	4100	4212
2.16 Compressor Rated Input (see *)	2150	900	932
2.17 COP	4.05	4.56	4.52

Item	Spec
2.18 Current (A)	12/4.9/4.9 (compressor input)
2.19 Noise (dB (A)) (see appendix)	Below 78
2.20 Vibration (m/s^2) (see appendix)	Below 5
2.21 Natural frequencies of the compressor	13Hz/20Hz/21Hz (Should try to avoid or pass quickly)
2.22 Capacity measuring conditions and noise & vibration measuring condition	Rotational speed 3300min^{-1} Evaporating temp. 7.2 ℃ Condensing temp. 54.4℃ Liquid temp. 46.1℃ Ambient temp. 35.0℃ Return gas temp. 35.0℃ Wind speed 2 m/s

*.Nominal heating capacity equals refrigerant capacity adding motor input. Refrigerant capacity and motor input are measured by secondary. Refrigerant calorimeter Methods of GB5773 by Shanghai Hitachi Electrical Appliances Co.,Ltd. Allowable heating capacity should be more than 95% of the nominal heating capacity and allowable motor input should be less than 107% of nominal motor input.

3. MOTOR PARAMETER

Item	数 Spec	Explanation
3.1 Rotor Pole (Pole)	4	——
3.2 Rated Frequency Range (Hz)	30-240	Electrical Frequency, Relating to VDCmax of Inverter
3.3 Demagnetizing Curren (A)	32.0A	Peak Current, at 120℃, -5% Demagnetizing Rate
3.4 Inductance Ld (mH)	Sheet 1	——
3.5 Inductance Lq (mH) q	Sheet 1	——

Item	Spec	explanation
3.6 Winding Resistance(Ω) (20℃)	0.856	Line-to-Line
3.7 Voltage Constant (Vrms/krpm)	33.50	Line-to-Line
3.8 Torque Constant (N・m/Arms)	0.52	Torque/Current
3.9 Inertia (Kg・m2)	0.000361	——
3.10 Flux Φa (Wb)	0.1310	Φ (Per Phase, Peak) $= \frac{\sqrt{2} \times E0}{2\pi f \sqrt{3}}$
3.11 Magnet Material	NdFeB	

1

(RMS)	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0
Lq(mH)	9.55	9.27	8.77	8.34	8.00	7.72	7.49	7.29	7.12	6.97	6.83	6.70
Ld(mH)	5.69	5.61	5.53	5.44	5.35	5.27	5.20	5.12	5.05	4.97	4.90	4.82

4. CHARACTERISTICS

4.1The surface of the compressor is painted to black, without obvious flaw ,impact scar, paint peel off, rust and so on.

4.2. Indication

Compressor model type, manufacturing data are clearly indicated on the surface of compressor。

4.3. Residual moisture 250mg MAX

4.4. Residual impurities 150mg MAX

5 PARTS AND DRAWING LIST

PARTS NAME		QTY/SET	DRAWING NO.	REMARKS
Compressor		1	4CYCL0051	Dimensioned sketch
Mounting Parts	Rubber grommet	3	4CYC00754	
	Bolt	--	4CYC00791	*
	Nut	--	M8	*
Electrical Parts	Thermostat	1	4CYC01036	
	Terminal cover	1	4CYC00988	
	Gasket	1	4CYC01047	
	Nut	1	3CYC00004	
	Rubber washer	1	4CYC00174	
	Sleeve	1	4CYC01042	
			4CYC01039	Lead routing
			1	Pressure guarantee Chart
				Oil level datum
			2	Notes for rotational
			3	speed change
				Performance curse
				Appendix

*. Out of supply, for reference.

COMPRESSOR CRITERIA

1 Strictly observe the specification

The compressor should be used in specifications written in this “compressor specification” and not be used in specifications outside it. Moreover, accessories should be specified parts used in specified way, service must use specified parts too. The main circuit must link up with fuse or breaker.

2 Source voltage

Specified inverter is linked up with compressor terminals . Applied voltage of this inverter should be voltage specified in this “compressor specification”. Alternating voltage should never be applied on terminals (for example：commercial alternating voltage of 1ϕ100V,200V,3ϕ200V).This is because that if applied alternating current the direct current motor will demagnetize.

3 Operating voltage range

The compressor should be operated in the range of rated voltage 10% , under standard condition and overload condition of rated frequency (applied voltage to inverter).

It must be satisfied with item 5, 6, 7 and the overload condition should not be continuous.

But the standard condition and overload condition mentioned here refer to condition that specified in GB/T 7725. (The standard condition refers to the rating cooling condition and the overload condition refers to the maximum operating condition.)

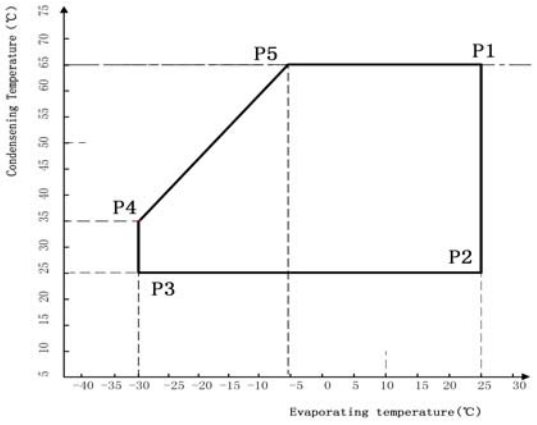
4 Operating temperatures and pressures

The operating temperatures and pressures of a compressor should be within the range shown in the table 1.

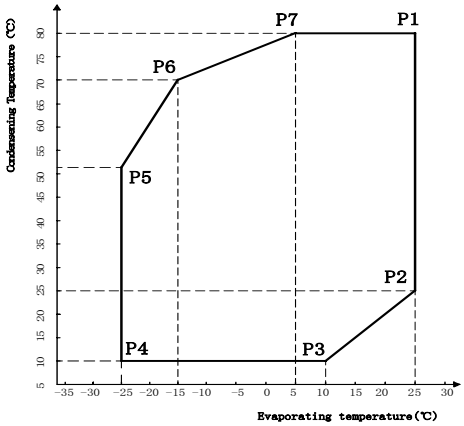
Table 1

Item	Operating Envelope	
Refrigerant	R410A （see graph 1a）	R134a （see graph 1b）
Discharge pressure MPa{kgf/cm^{2}G}	4.2 MPa {41.8} MAX （condensing temperature : 65℃） In the range mentioned in chart 2(a).	2.63MPa {25.85} MAX （condensing temperature : 80℃） In the range mentioned in chart 2(b).
Suction Pressure MPa{kgf/cm^{2}G}	0.272~1.652 MPa {1.8 ~ 15.5kgf/cm^{2}G} It can also be 0.101～ 0.272 MPa{0 ~ 1.8kgf/cm^{2}G} when in transition , but should not be used when it is less than 0.101MPa{0kgf/cm^{2}G}.	0.106~ 0.665MPa{0.08~ 5.78kgf/cm^{2}G} It can also be 0.101 ~ 0.106MPa {0 ~ 0.08kgf/cm^{2}G}when in transition , but should not be used when it is less than 0.101MPa{0kgf/cm^{2}G}.
Compressor case bottom temp	99℃or below and 6 degrees higher than condensing temperature	
Motor winding temp.	Standard load condition:	overload condition:
	Rated voltage:: 105℃ MAX R.Voltage±10%:	R.Voltage±10%: 120℃ MAX
Accumulator temp	Higher than outlet pipe of evaporator	

Notes: Overload condition should not be continuous.



G raph 1a



Graph 1b

	P1	P2	P3	P4	P5		P1	P2	P3	P4	P5	P6	P7
Condensing temperature	65℃	25℃	25℃	35℃	65℃		80℃	25℃	10℃	10℃	52℃	70℃	80℃
Evaporation Temperature	25℃	25℃	-30℃	-30℃	-5℃		25℃	25℃	10℃	-25℃	-25℃	-15℃	5℃

5 Pressure difference between suction and discharge

In all allowable rotational speed range, the difference of pressure should be more than 0. 39MPa{4kgf/cm^2}. But if there is no problem of noise when assembled in air conditioner, it can also below this value.

6 Discharge pipe temperature

Discharge pipe temperature is measured at a distance 300mm from the surface of compressor and should be less than 110℃. The tip of the thermocouple is fixed by soldering when measuring discharge pipe temperature .Furthermore, soldering point is covered with urethane foam to prevent the effect of wind.

7 Air leakage test pressure

The pressure should be less than 4.32MPa{42kgf/cm^{2}G}.

8 Oil back and oil level

The oil should be returned continuously to the compressor and the structure of the refrigerating system should not make oil stay in the system. The oil level in compressor should be satisfied with chart 2.If not keep the oil level, the shortage will occur, and influence the reliability of the compressor.(please check the oil level in the compressor with the sight glass which supplied form SHEC.

9 Dust of compressor hermetic terminals

Compressor hermetic terminals should be mounted with specified cover in right way to prevent dust entering, and should be used in direction which dust is hard to enter in.

10 Lead wire of compressor hermetic terminals

Measuring the temperature of hermetic terminals , lead wire should be resist to the temperature and be clamped so as not in touch with the surface of compressor and pipe.

11 Start-stop frequency

The frequency should be less than 6 times per hour. Operating time from start to stop should be more than 3 minutes. Stopping time should be more than 3minutes. But oil level should be met to item 8. Suction and discharge pressure should balance completely before restarting.

12 Rate of rotational speed change

The rate of compressor rotational speed (acceleration) should be less than 133min^{-1}/s, But if The variable range is below 120min^{-1}, rate can also be less than 600min^{-1} when rotational Speed is reduced to avoid temporary over- current. The change of compressor rotational speed is referred to chart 3.

13 Air and moisture in refrigerating system

The degree of vacuum in refrigerating system should be less than 20Pa (150×10^{-3}mmHg) at room temperature just before charging refrigerant. The quantity of water should be less than 0.2ml.

14 Impurities in refrigerating system

(1) The weight of residue on the inside surface of the heat exchanger and tube should be less than 0.08g/m^2. But metallic dust should not be permitted in the system. This value means the weight of foreign residue collected by filer paper after washing inside surface of the heat exchanger tubes with R-11.

(2) Prevent the impurities from entering into the enclosed unit system used R410A. When the impurities entered into the enclosed system, it will damage the moving mechanism parts and result in the capillary depositing.

(3) Eliminate all system contaminants such as trichlorethylene, alkalies, soaps, oil, acids & washing fluid used at machining heat exchanger and tubes.

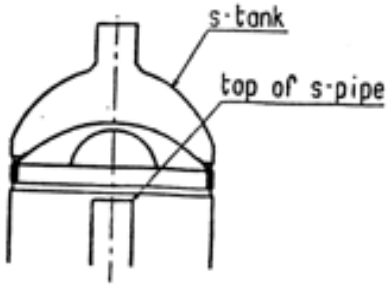
15 Compressor vacuum operation

Compressor should never be operated while under vacuum. Otherwise, internal arcing can cause damaging parts.

16 The compressor should be operated for more than 20 seconds within 15 minutes after charging refrigerant into the system so proper lubrication results.

17 Liquid refrigerant return limitations

(1) Liquid refrigerant level in s-tank should be lower than the top of s-pipe in s-tank.(see chart at right)



(2) There should not exist noise of the liquid refrigerant compression, current and vibrancy increase. System can append the assistant stank or reduce the amount of refrigerant to prevent from liquid refrigerant compression. Refrigerant system forbid liquid refrigerant from flowing back compressor in any case. In normal condition the overheat gas refrigerant should flow back compressor.

18 Purge parts with dry nitrogen or dry air to remove remains in parts (dust, detergent, etc.) before assembly of system. Time fur purging: over one second for pipe; over three seconds for heat exchanger. Purging pressure: 0.9±0.1MpaG. Dew point of dry air: Below -20° C

Dry nitrogen should be charged in compressor before assembly of system. Welding should be finished within one minute after charge of nitrogen. Dry nitrogen needs to be charged again and weld if over one minute. Always purge the compressor with dry nitrogen during assembly of system.

The motor winding temperature should be less than 149℃
and hermetic terminal body temperature should be less than 177℃ in process of manufacturing.

19 Apply for vehicle

The compressor should not be used on moving equipment such as automobiles, trains, ships, etc.

20 Installation

The rotational axis of compressor should be kept vertical during operation. But in actual application the axis incline must be within 5° at all directions during operation

21 Pipe vibration

The displacement of the pipes, which connect from the compressor to other parts of the refrigerate-or systems, should be less than 0.8mm(1/32")when the compressor is operating at allowable rotational speed range and voltage range of rated ±10%.

Displacement in excess of 0.8mm(1/32") will require changing tube length and/or routing.

22 Connecting tube desigh

In designing and routing tubing that connect from the comprssor to the other parts of the air conditioner, following should be considered.

Moving tubes to the moving parts; minimum clearance 12.7mm(1/2")

Moving tubes to non-moving parts; minimum clearance 9.5mm((3/8")

Moving tubes never touch to lead wire.

23 Miscellany

(1) The compressor should be carried carefully to avoid drop, drag ,impact and should not apply partial force on projection parts such as pipe, hermetic terminals, foot during carrying and processing.

(2) The compressor should not be operated to form a vacuum and to absorb air. The compressor only can run in one direction which according to lead routing wiring diagram. Never reversion otherwise the compressor will be in trouble.

(3) The compressor should not be left opened in the atmosphere for more than 5 minutes.

When the air entered into the unit system with refrigerant R410A orR134a or R1234yf, it will expedite the deterioration of the oil and result in the capillary depositing and the reducing of insulation resistance.

(4) Electric pulse should not be applied to compressor when it is in vacuum.

(5) The compressor should be kept in the place with low-dust, low-moisture.

(6) The compressor can't be used in the place with corrosive atmosphere such as hot spring and chemical warehouse. It should not be the structure often splash water on the surface of the compressor forcibly.

(7) The trouble of cross valve, electromagnetic valve, defroster, refrigerant controller, fan motor used in refrigerating system may cause compressor accident .So their reliability should be ensured completely. Moreover, the way of design, manufacture, application of refrigeration cycle with less-leak should be adopted.

(8) The main electric circuit should be equipped with fuse or breaker.

(9) Refrigerant should be charged from the end of condenser of refrigerating systems. Never Charge refrigerant to the compressor directly.

The refrigerant should always be charged in liquid state. When the refrigerant is charged in gas state, The percent component will possibly be changed. Do not recharge with the remaining refrigerant in the system when leakage happened. Because the percent component of the refrigerant in the unit system had possibly been changed.

(10) Temperatures within systems during stable compressor operation should not be less than -35℃ to prevent wax precipitation from the oil.

(11) Compressor mounting

Rubber grommets are designed soft to provide the noise isolation and to lessen vibration Energy transmission. Stud bolt should be designed to provide sufficient clearance for noise and vibration isolation and to prevent compressor from coming off its mount.

(12) The units of refrigerating system should be connected to earth.

(13) There should be adequate clearance between the OD23-under-surface of Push-Nut and the upper surface of rubber grommets.

(14) SHEC will not take any responsibility against accident that is caused by the accessories equipped by yourselves.

(15) The hermetic terminals of compressor should not be inserted slantingly and not be applied twisting force after inserting so as to avoid reducing of terminal fixed force.

(16) The pipe and hermetic pens attached to the compressor should not be bent.

(17) The dropped compressor can't be used anymore.

(18) Compressor can be used when ambient temperature is higher than -10℃. Confirm the start-up of compressor if the temperature of compressor surface is below -10℃. Heat up compressor to reach the temperature higher than -10℃ with heater if the ambient temperature is below -10℃.

(19) Set a thermistor on the case cover of compressor to prevent from accident of leakage of refrigerant. The thermistror can stop the operation of compressor when compressor in abnormal temperature. The lead wires of thermostat is enveloped with tube, as same as that of the terminals, to avoid direct contact with the compressor and pipe.

(20) The compressor should not be splashed with water intentionally. Prevent moisture from entering into the enclosed unit system. When the moisture entered into the unit of the refrigerant R410A, the refrigerant oil and the organic compound material presented in the hermetic motor will possibly decompose on the affecting of water. It will result in the capillary depositing and the reducing of insulation resistance.

It is necessary to install a dryer to dehumidify the residual moisture mixed in the refrigerant in the cycling system. The specially defined molecular-sieve dryer is advised.

(21) Use the refrigerant of specified brand. When the refrigerant not specified used, it will possibly cause trouble of the performance and reliability of the compressor by the impurities in the refrigerant.

(22) The lead wires should be connected to hermetic terminals without being touched on the surface of the compressor.

(23) Be careful of avoiding oxide scale while soldering during assembly of refrigerating system.

(for example: flow or fulfill dry nitrogen)

(24) The quantity and kind of contamination (the process materials) in the cycle should be grasped and managed. Carry on reliability test that input contamination a lot than anticipated contamination quantity.

(25) To avoid water and impurity into he refrigeration system and make sure no leakage of refrigerant during the operating course. It's required to direct the erector and maintenance man of air-conditioner.

The below substances shall be provided on the final appliance's accessing parts to be subject to this maintenance and in the instruction sheet(s) of the final appliance:expected

WARNING:

When recharge the refrigerant, the processing must be done by the manufacturer or manufacturer appointed repair shop* or service agent* because correct type of refrigerant must be ensured.

Provide the contact and address of the repair shops/agent.
Prohibition of mixing the refrigerants

(26) The start-up current and torsion of compressor

Adjust the start-up torsion of the compressor to above 0.55Nm by inverter.

Confirm and measure the start-up current if change the parts and design.

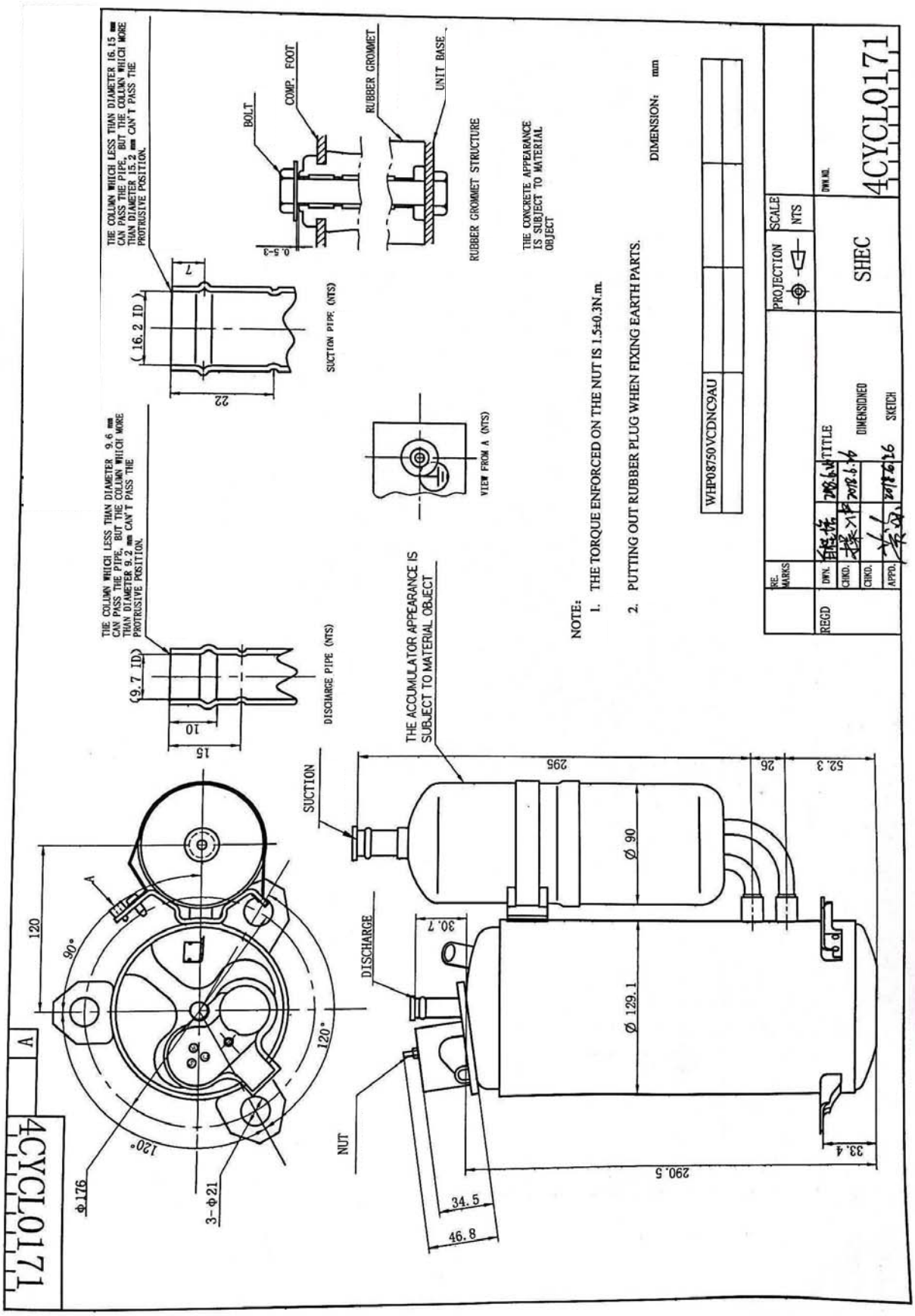
1. Basis for Checking upon Delivery

The Performance test will be carried out in accordance with this “compressor Specification”.

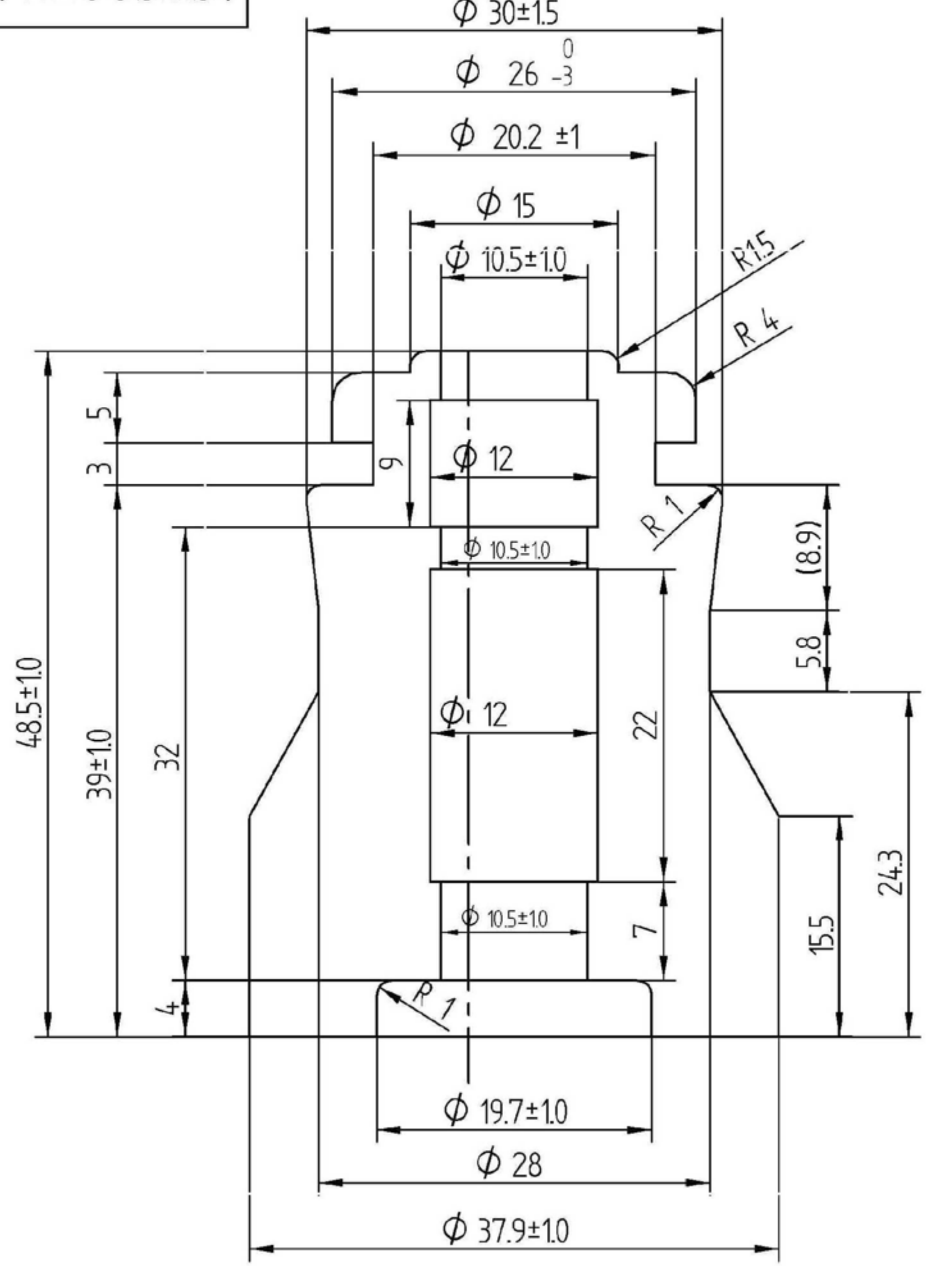
The Safety Performance in accordance with GB4706.1 Safety of household and similar electrical appliances General requirements and GB 4706.17 Safety of household and similar electrical appliances Particular requirements for motor-compressor.

2. Rule for Checking upon Delivery

If come across any quality problem, please notify the company in written form within 30 days after the arrival of the cargo, the company shall exchange exactly the number of the products, otherwise they shall be regarded as being up to standard.


4CYCL0171
A
120
90°
120°
120°
Φ176
3-Φ21
THE COLUMN WHICH LESS THAN DIAMETER 9.6 mm CAN PASS THE PIPE, BUT THE COLUMN WHICH MORE THAN DIAMETER 9.2 mm CAN'T PASS THE PROTRUSIVE POSITION.
(9.7 ID)
10
15
DISCHARGE PIPE (NTS)
THE COLUMN WHICH LESS THAN DIAMETER 16.15 mm CAN PASS THE PIPE, BUT THE COLUMN WHICH MORE THAN DIAMETER 15.2 mm CAN'T PASS THE PROTRUSIVE POSITION.
(16.2 ID)
7
22
SUCTION PIPE (NTS)
BOLT
COMP. FOOT
0.5-3
RUBBER GROMMET
UNIT BASE
RUBBER GROMMET STRUCTURE
THE CONCRETE APPEARANCE IS SUBJECT TO MATERIAL OBJECT
VIEW FROM A (NTS)
THE ACCUMULATOR APPEARANCE IS SUBJECT TO MATERIAL OBJECT
SUCTION
DISCHARGE
NUT
295
26
52.3
Ø 90
Ø 129.1
30.7
290.5
33.4
34.5
46.8
NOTE:
1. THE TORQUE ENFORCED ON THE NUT IS 1.5±0.3N.m
2. PUTTING OUT RUBBER PLUG WHEN FIXING EARTH PARTS.
DIMENSION: mm
WHP08750VCDNC9AU
REMARKS
REGD
DWN.
CHKD.
CHKD.
APPD.
TITLE
DIMENSIONED
SKETCH
PROJECTION
SCALE NTS
SHEC
DWG NO.
4CYCL0171

4CYC00754 | D



Technical requirements
Material:Natural Rubber
Hardness is HA 40±4°

DIMENSION:mm

	RE. MARKS			PROJECTION	SCALE NTS	
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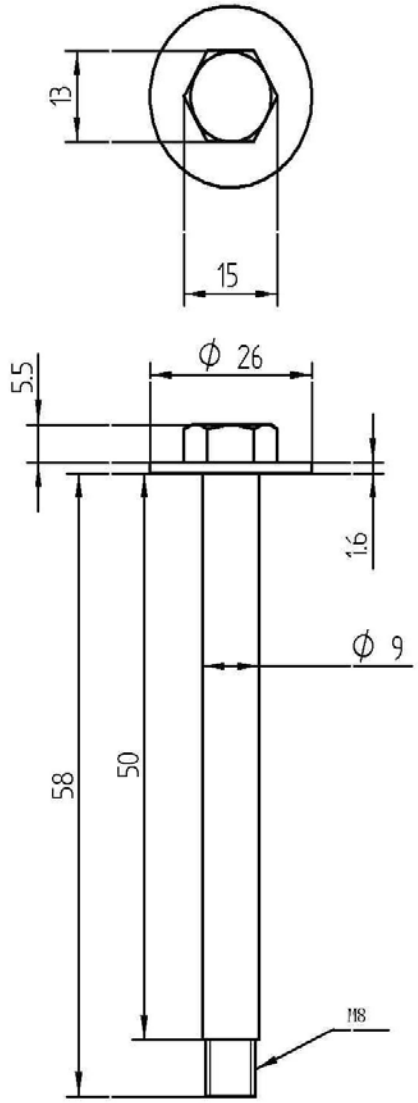
	CHKD.					
	CHKD.		18. 06. 13			
	APPD.		18. 06. 13			

4CYC00791



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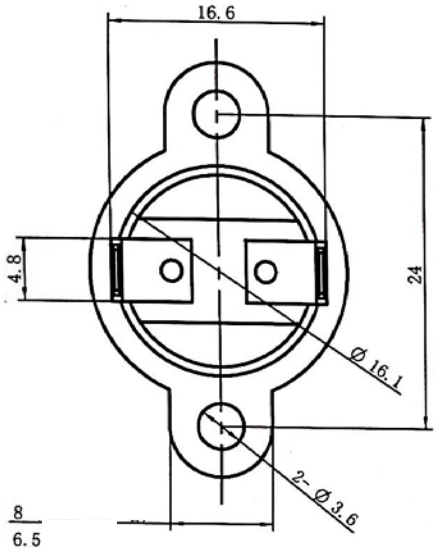
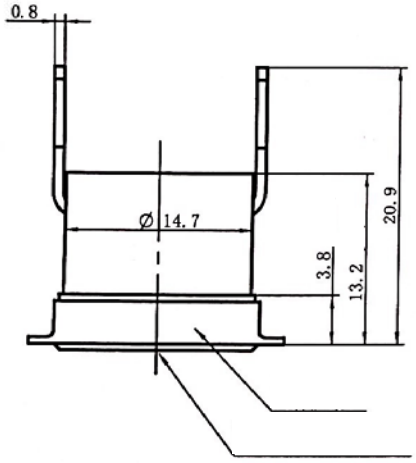
	CHKD.					
	APPD.		2018.06.13			

4CYC01036 C

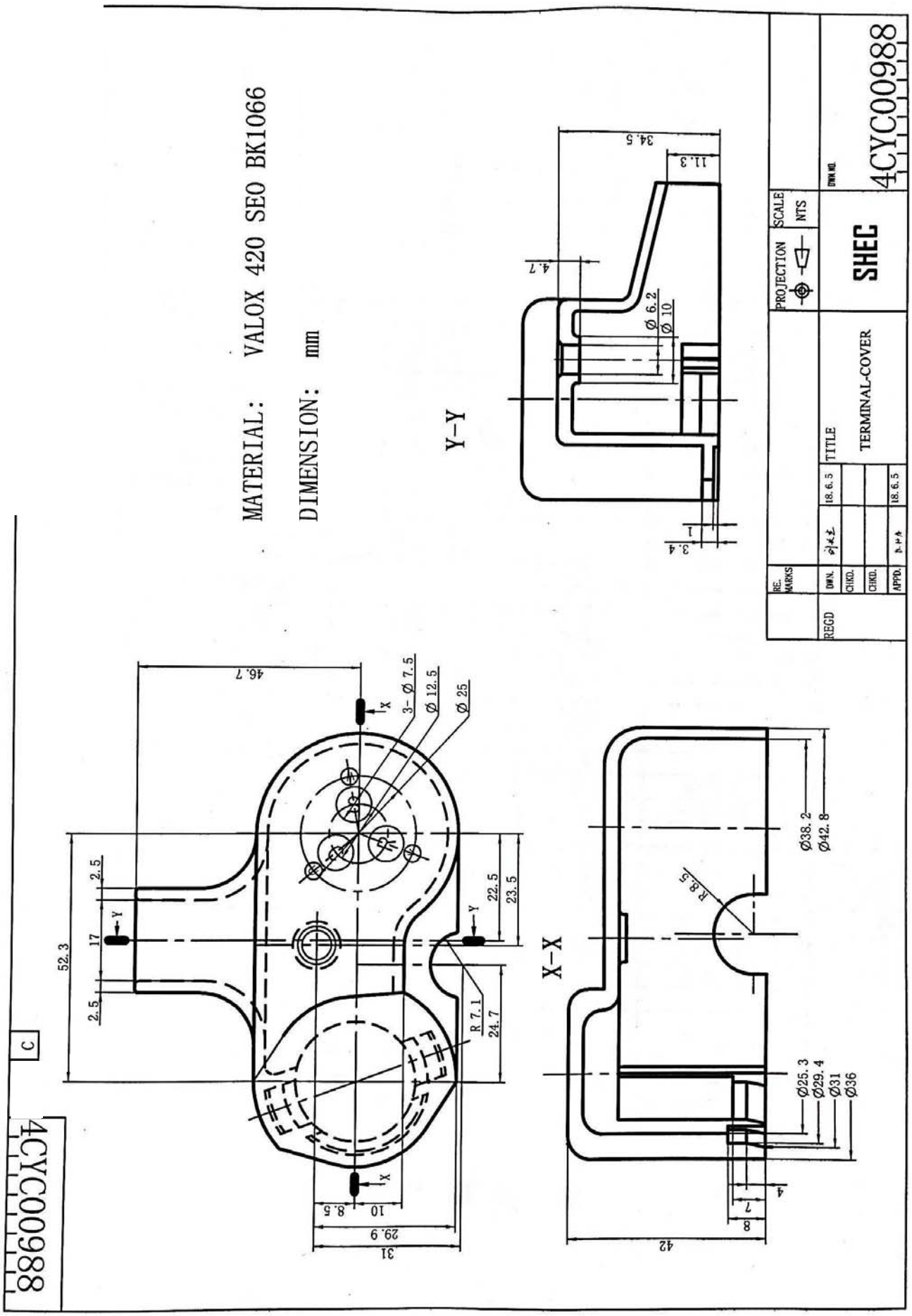




SPECIFIED LIMITS

		(OFF)	(ON)		
	KSD301-11.5 /10BC22S20-S2	115±3℃	95±5℃	AC250V	10A
	1NT01L-6785	115±3℃	95±5℃	AC125V	15A
	HPC-115/95-U1	115±3℃	95±5℃	AC250V	10A

	RE. MARKS			PROJECTION	SCALE NTS	
REGD	DWN.	이수호	18.6.5	TITLE THERMOSTAT	SHEC	DWG NO. 4CYC01036
	CHKD.					
	CHKD.					
	APPD.	노태수	18.6.5			


MATERIAL: VALOX 420 SEO BK1066
DIMENSION: mm
Y-Y
X-X
TERMINAL-COVER
SHEC
4CYC00988
4CYC00988
SCALE NTS
PROJECTION
TITLE
REGD
RE. MARKS
DWN.
CHKD.
CHKD.
APPD.
18.6.5
18.6.5
46.7
52.3
2.5
17
2.5
3- Ø 7.5
Ø 12.5
Ø 25
22.5
23.5
R 7.1
24.7
31
29.9
10
8.5
34.5
11.3
4.7
Ø 6.2
Ø 10
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25.3
29.4
31
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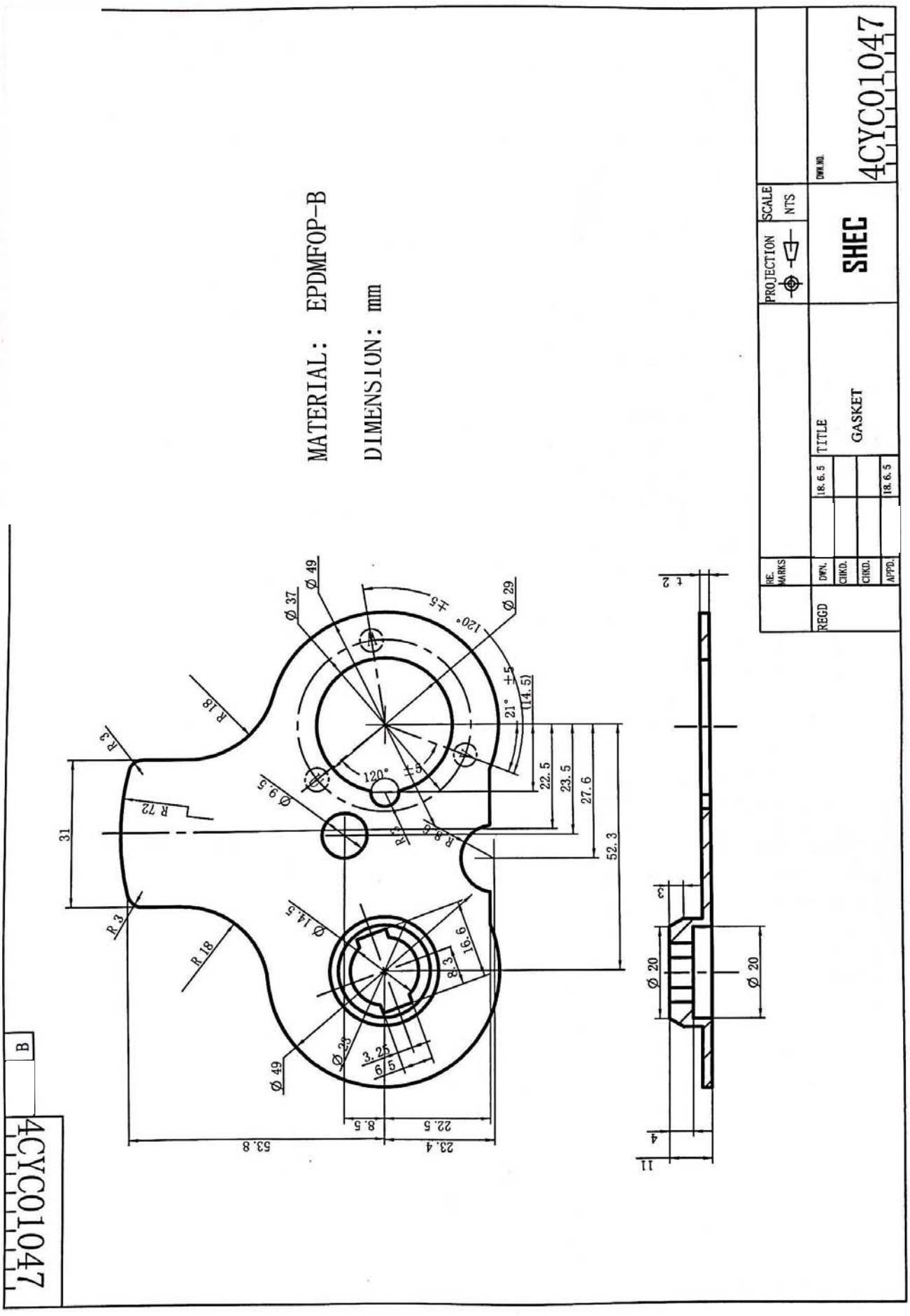
8
7
4


4CYC01047
B
MATERIAL: EPDMFOP-B
DIMENSION: mm
Ø 49
Ø 37
Ø 29
120° ±5
21° ±5
(14.5)
R 18
R 3
R 12
Ø 9.5
120° ±3
22.5
23.5
27.6
52.3
31
R 3
R 18
Ø 14.5
16.6
8.3
Ø 49
Ø 28
3.25
6.5
8.5
22.5
23.4
53.8
t 2
Ø 20
Ø 20
4
11
REGD
DWN.
CHKD.
CHKD.
APPD.
18. 6. 5
18. 6. 5
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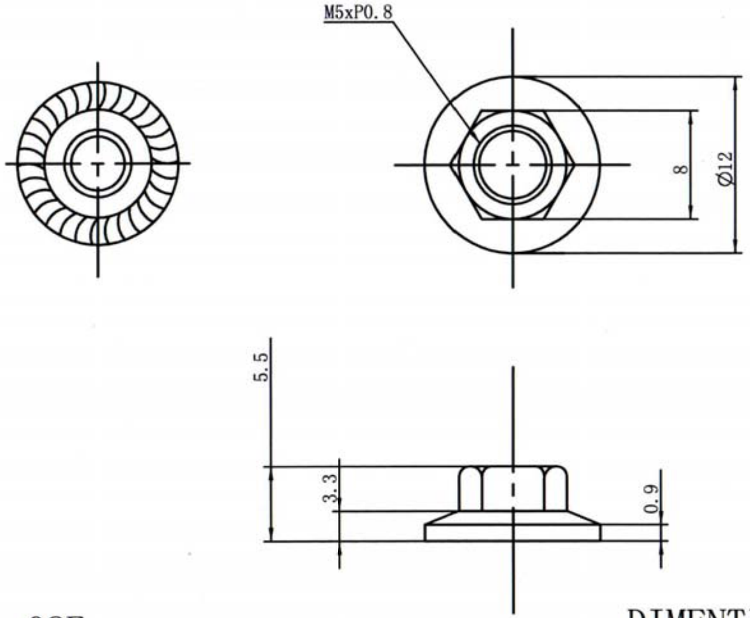
TITLE
GASKET
PROJECTION
SCALE
NTS
SHEC
DWG NO.
4CYC01047

3CYC00004 | E



MATERIAL：08F

DIMENTION：mm

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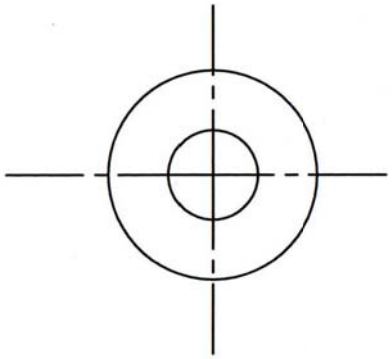
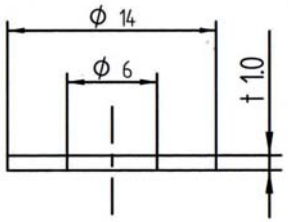
	CHKD.					
	APPD.	[illegible]	18.5.21			

4CYC00174 B

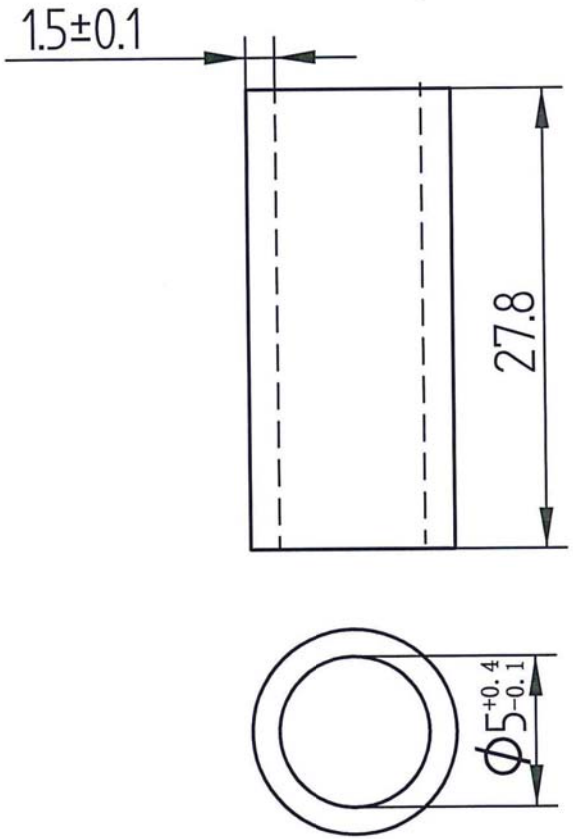




MATERIAL:EPDM

	RE. MARKS			PROJECTION	SCALE	
					NTS	
REGD	DWN.		18.5.24	TITLE	DWN.NO.	
	CHKD.		18.5.24	RUBBER WASHER	SHEC	4CYC00174
	CHKD.					
	APPD.		18.5.24			

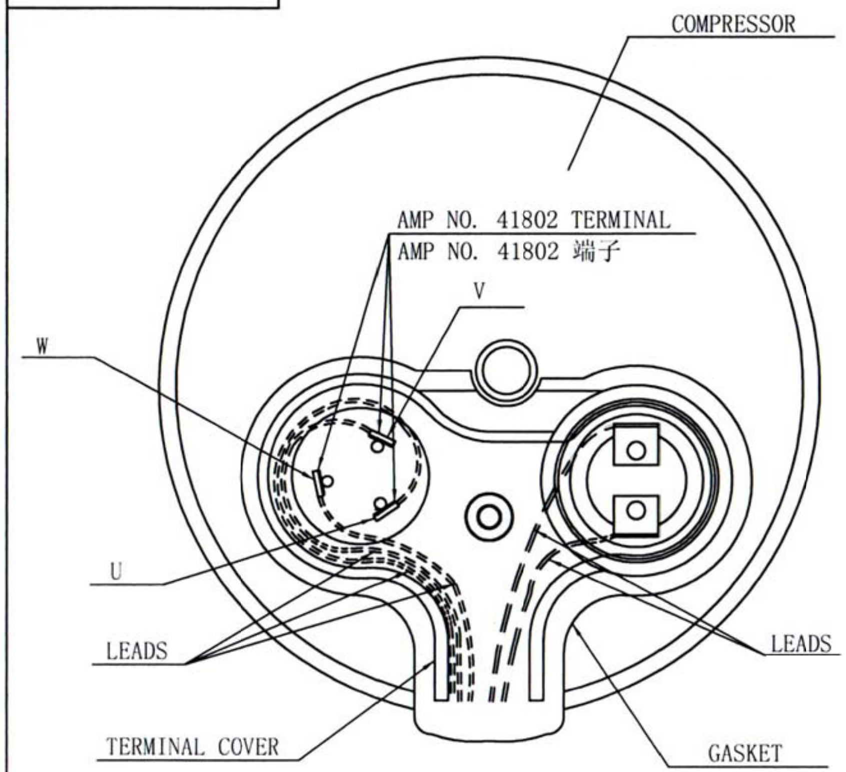
4CYC01042 C

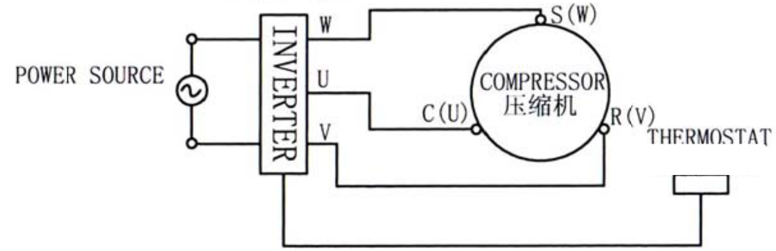


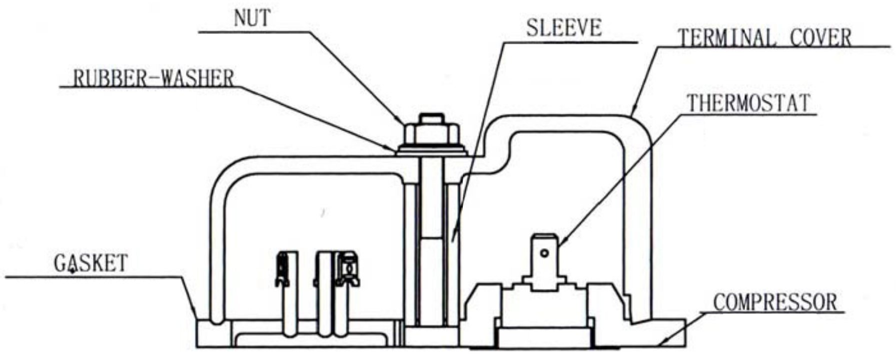
NOTE:
1、COLOR:WHITE
2、MATERIAL:SILICONE RUBBER

	RE. MARKS			PROJECTION	SCALE	
					NTS	
REGD	DWN. 黄五安	18.5.18	TITLE		DWN.NO.	
	CHKD. 王腾	18.5.18	SLEEVE	SHEC	4CYC01042	
	CHKD.					
	APPD. 马利强	18.5.18				

4CYC01039 C





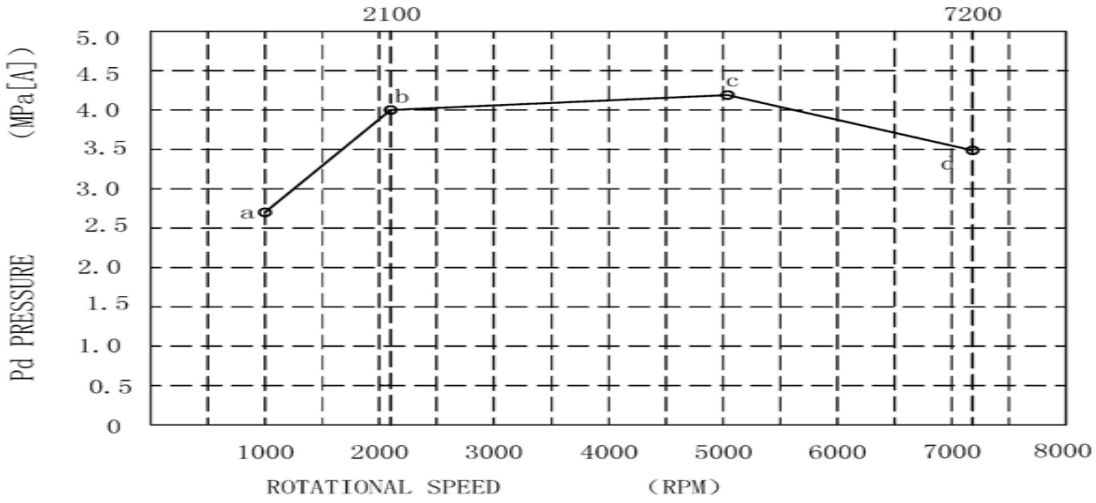


NOTES:
1. PLEASE PREPARE LEADS BY YOURSELF.
2. THE LETTER U, V OR W STANDS FOR EACH TERMINAL.
3. TABS FOR HERMETIC TERMINAL ARE AMP #250.
4. THERMOSTAT TO BE SET ON THE TOP OF COMPRESSOR AS SHOWN.

	RE. MARKS				PROJECTION	SCALE NTS	
REGD	DWN.		18.6.5	TITLE LEAD ROUTING WIRING DIAGRAM	SHEC		DWNNO 4CYC01039
	CHKD.						
	CHKD.						
	APPD.		18.6.5				

1.1

WHP0875OVCDNC9AU INVERTER COMPRESSOR CUARANTER PRESSURE RANGE（R410A）

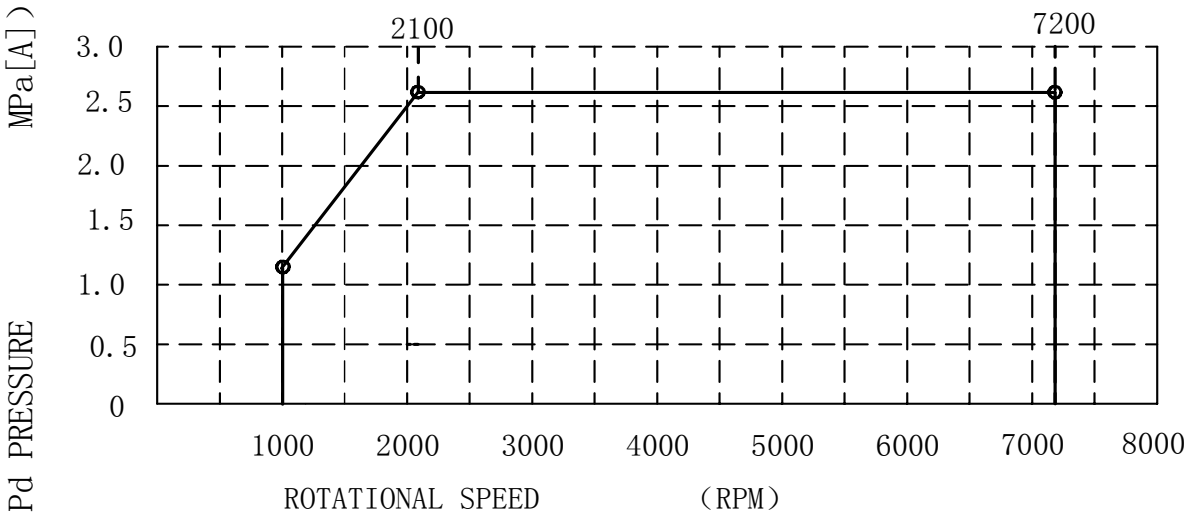


Compressor running speed range： Min 1000min^{-1}～Max 7200min^{-1}

Rotational speed	Pd limit
1000	2.7 MPa
2100	4.0 MPa
5000	4.2 MPa
7200	3.5 MPa

1.2

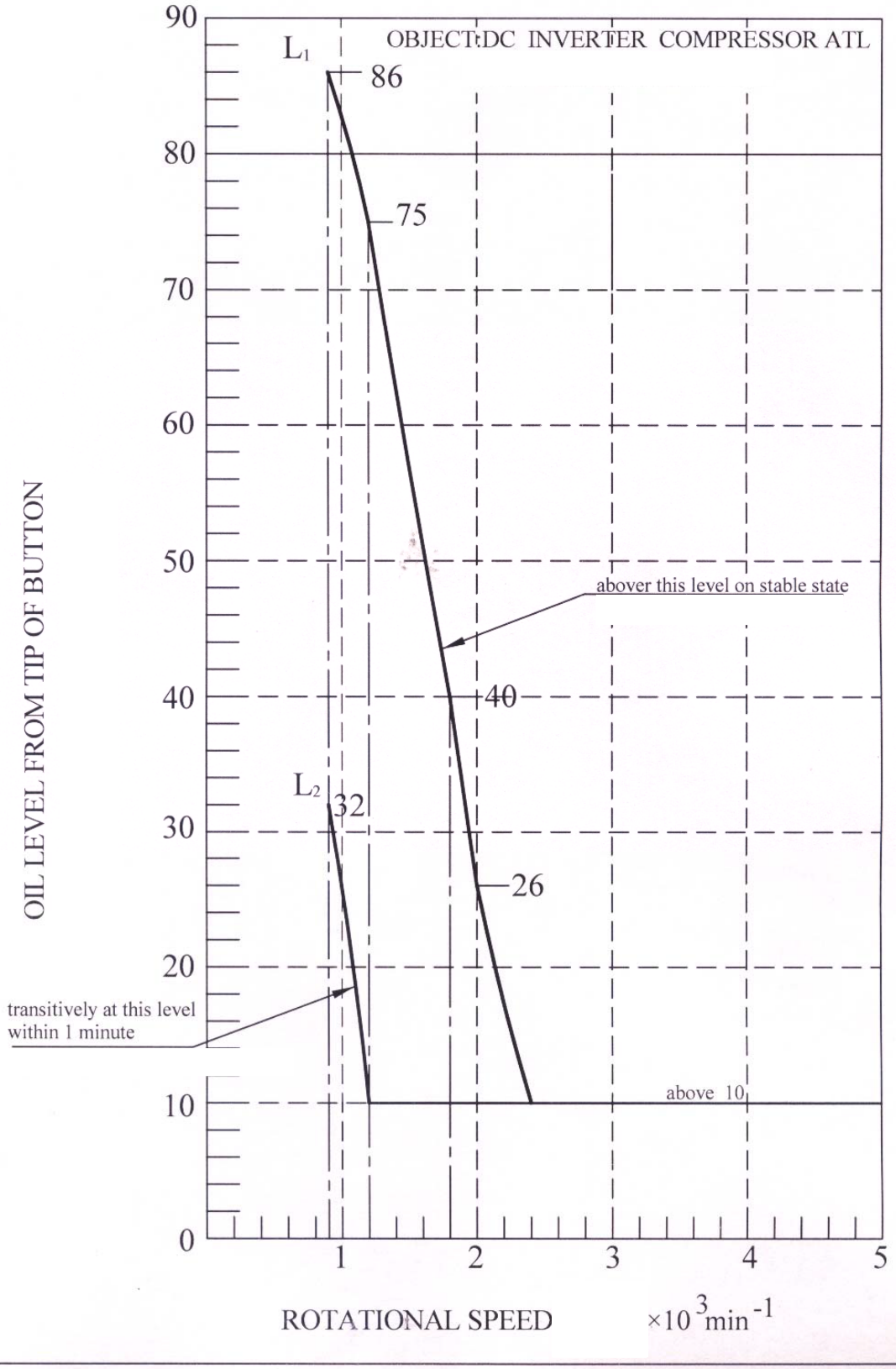
WHP08750VCDNC9AU INVERTER COMPRESSOR CUARANTER
PRESSURE RANGE（R134a）



Compressor running speed range： Min 1000min^{-1}～Max 7200min^{-1}

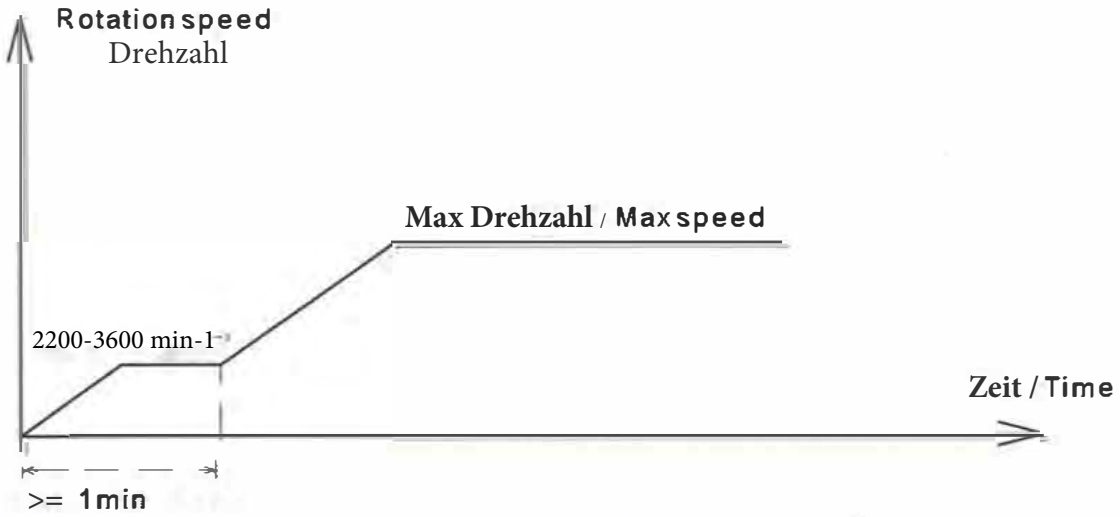
Rotational speed	Pd limit
1000	1.148 MPa
2100	2.633 MPa
7200	2.633 MPa

CHART2 ATL DC INVERTER COMPRESSOR OIL LEVEL DATUM

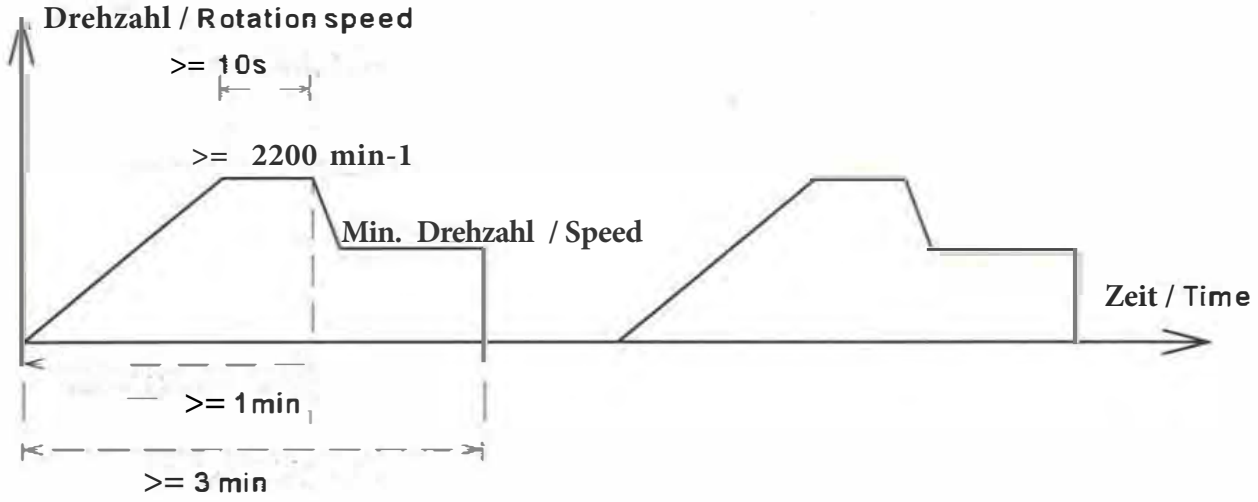


Drehzahländerung /Speed change rate: <= 133min-1/s
Max und Min Drehzahl in den einzelnen Spezifikationen
Max and min speed is showed in the specification

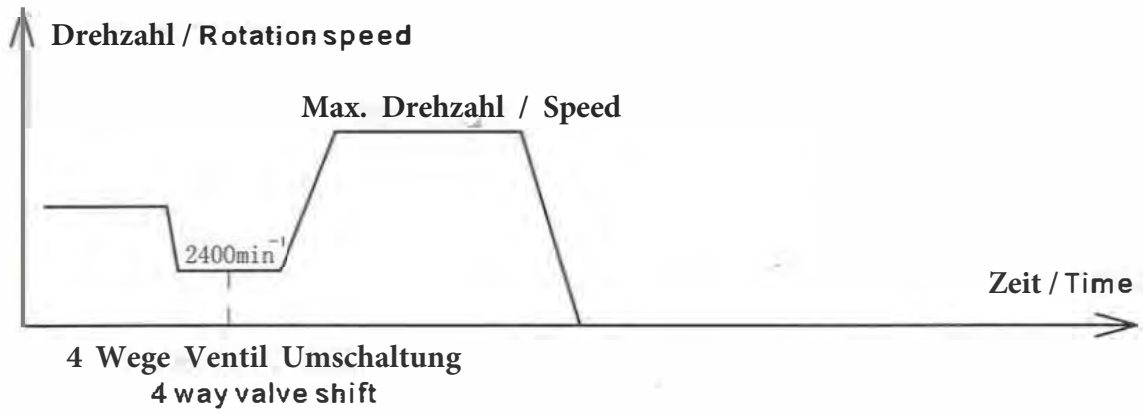
(1) **Vom Start zur gewünschten Drehzahl** / From starting to normal running



(2) **Niedrige Drehzahl und unregelmäßiger Betrieb** / Low speed un-continuosly running



(3) **Abtauung** / Defrost mode (**unter Verwendung eines 4 Wege Ventiles** / by using 4 way valve)

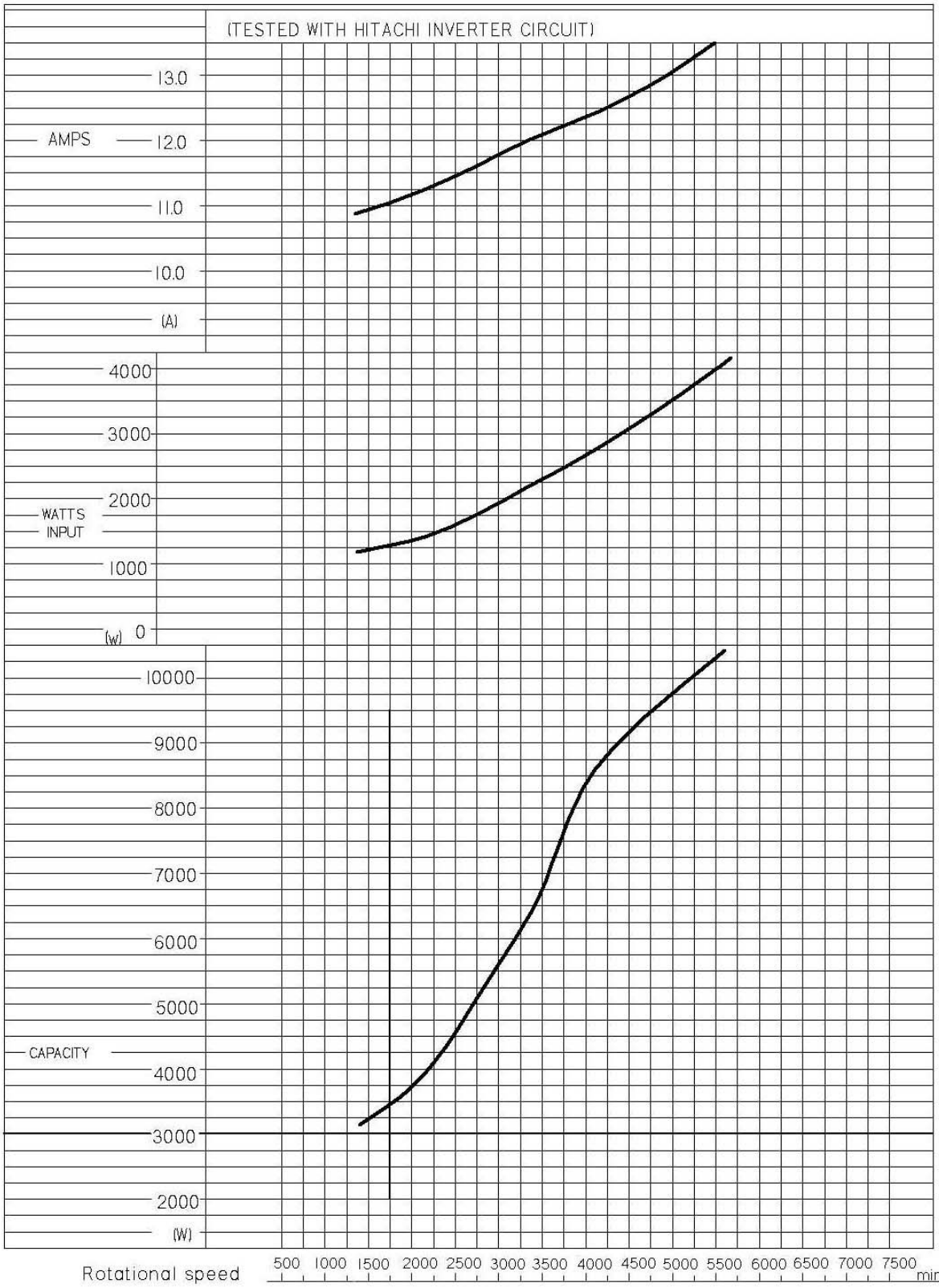


SHANGHAI HIGHLY ELECTRICAL APPLIANCES CO.,LTD

WHP08750VCD* COMPRESSOR PREFORMANCE CURVE

R410A

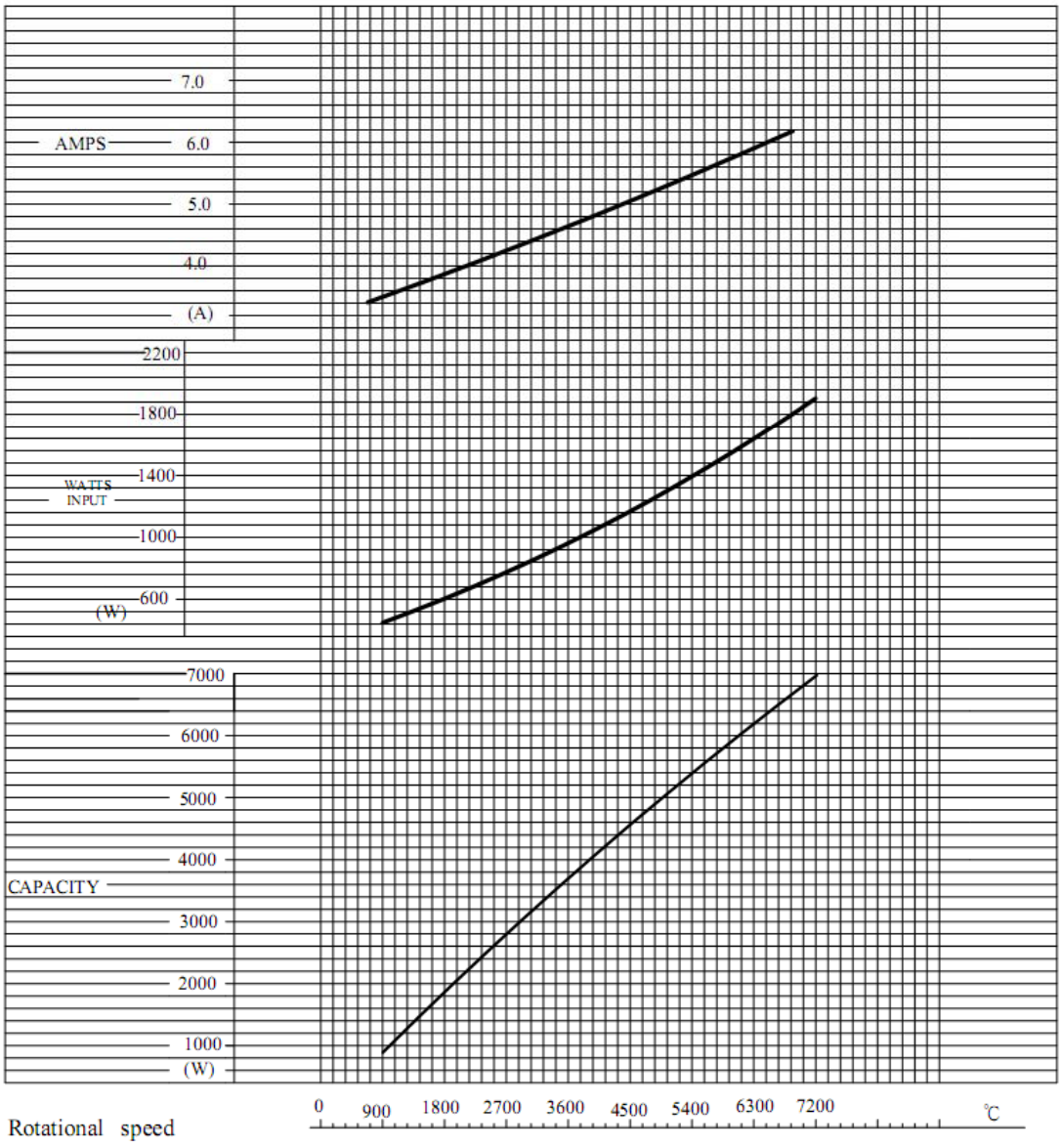
to= 7.2℃ 35℃
tc= 54.4℃ 35℃
8.3℃ 2m/s Wind speed



SHANGHAI HIGHLY ELECTRICAL APPLIANCES CO.,LTD
WHP08750VCD* COMPRESSOR PREFORMANCE CURVE

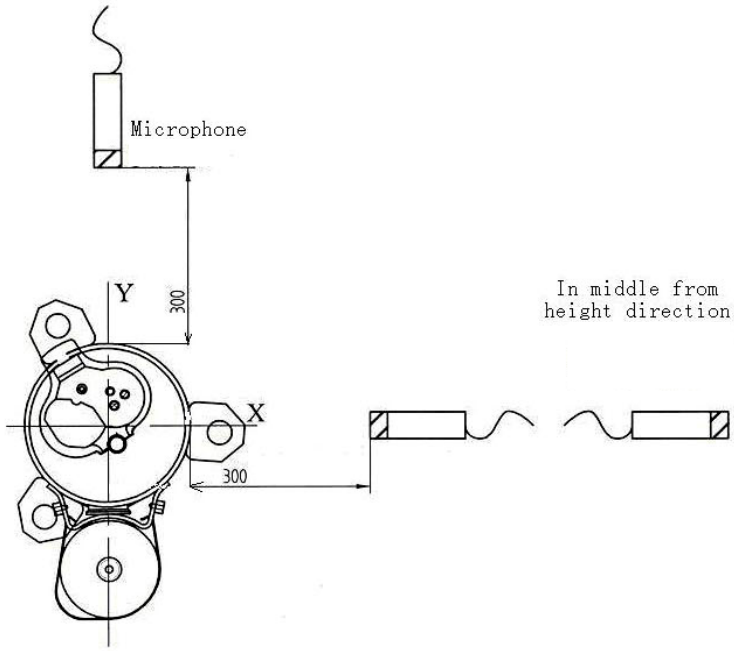
to= 7.2℃；　　tc=: 54.4℃；
8.3℃；　　: 35℃；
35℃；　　: 2m/s

: R134a



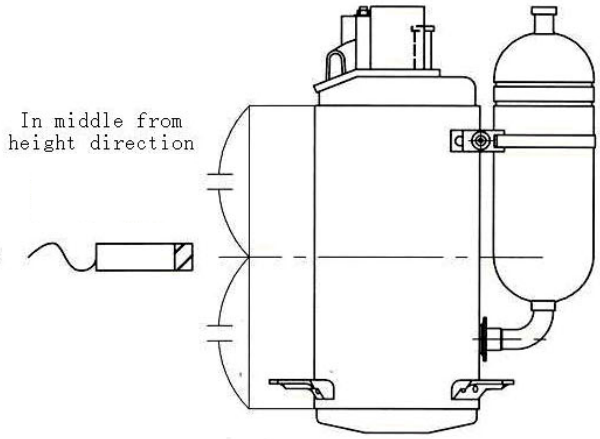
APPENDIX

1. Noise measuring method: Measure from X and Y' s direction and take the bigger value of noise.



(图1)

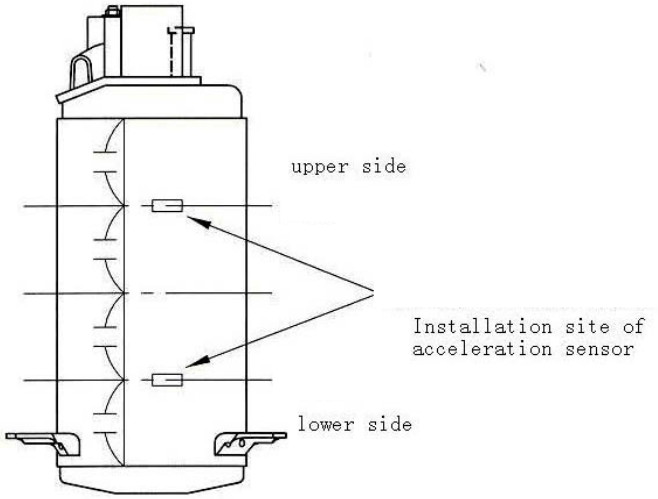
(Picture 1)



(图2)

(picture 2)

2. Vibration measuring method: Measure vibration in the upper and lower side, and take the bigger value.



View from the Y direction of picture 1

Specification Revision Record				
No.	Date	Page in Spec	Revision Reason	Conclusion Date
A				
B				
C				
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