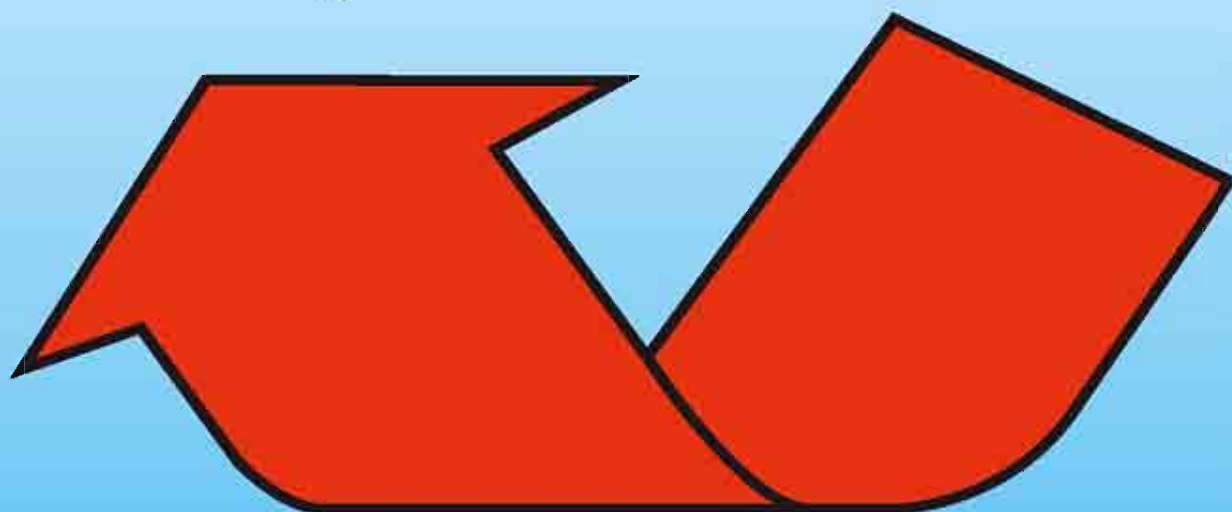
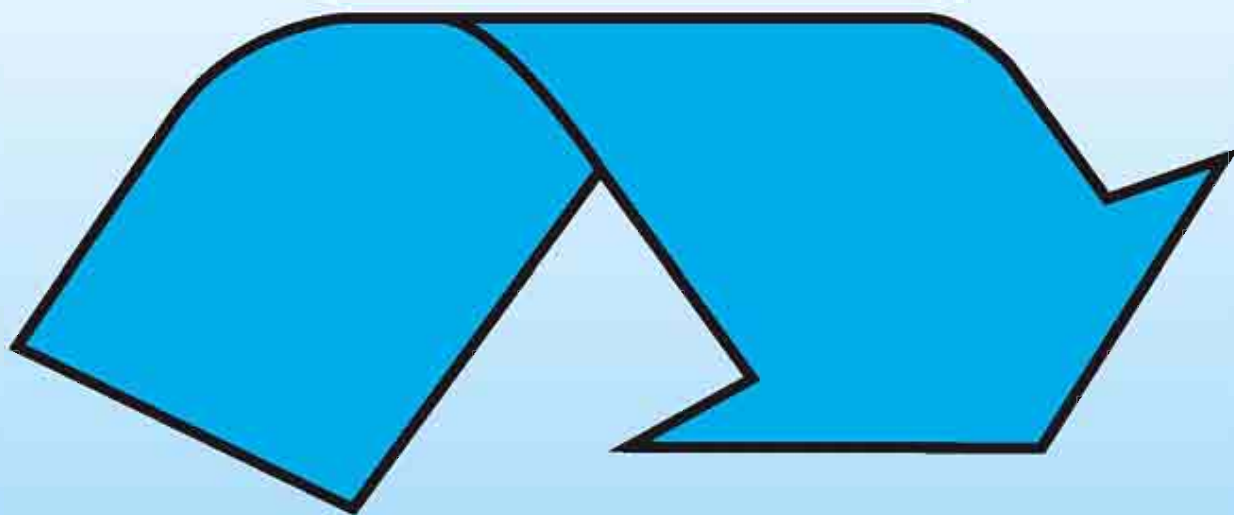


*componenti per condizionamento e refrigerazione  
refrigeration and A/C components*

**OCTOBER 2018**



**N A M A**  
**G R O U P**

**R290 HORIZONTAL COMPRESSORS**

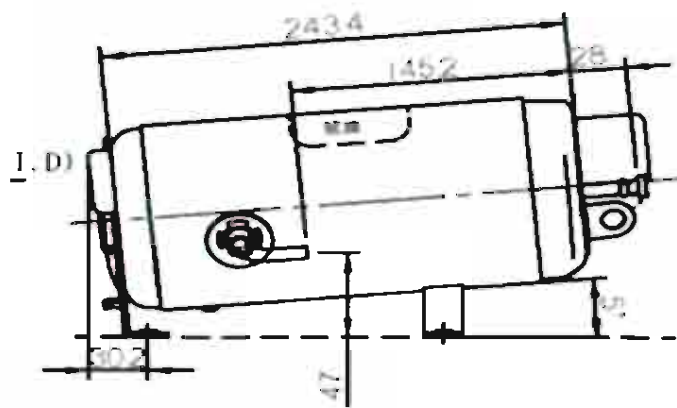
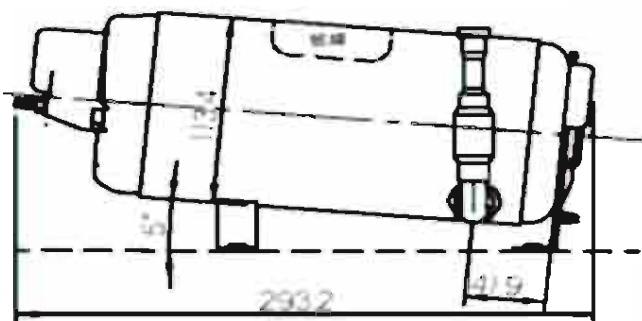
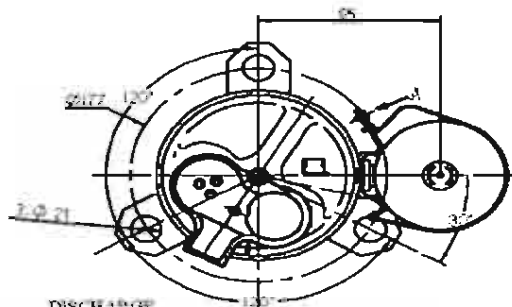
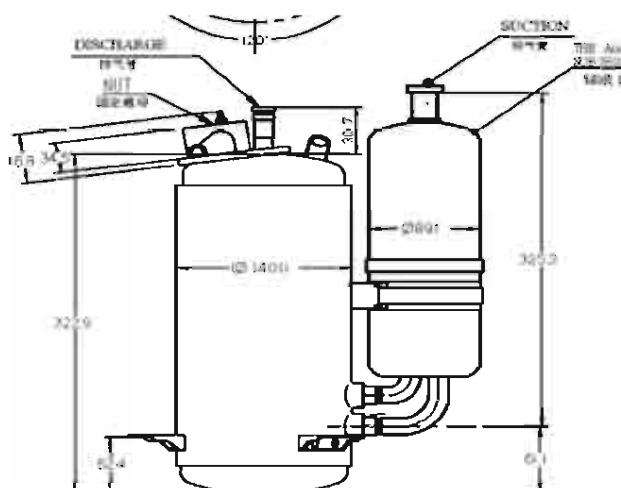
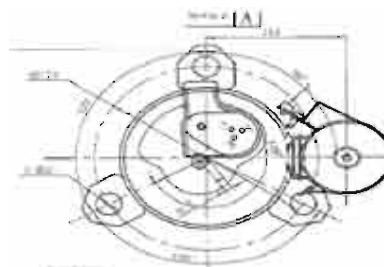
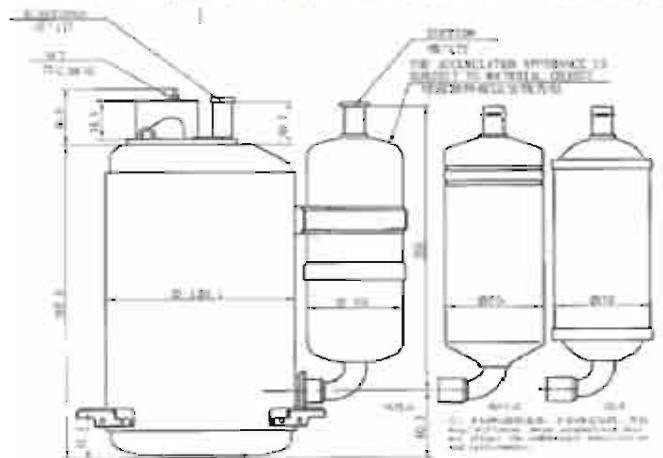
**HITACHI/HIGHLY FOR SUPERMARKET**

[www.namasrl.eu](http://www.namasrl.eu)

[sales@namasrl.eu](mailto:sales@namasrl.eu)

# R290 HITACHI / HIGHLY

## ORIZZONTALI PER SUPERMARKET HORIZONTAL COMPRESSORS FOR SUPERMARKET



Cod.	Modello	Capacità	Cilin.	COP	Condensatore di marcia	Peso
	Model	Capacity [W]	Displ. cc.			Weight [kg]
<b>HMBP 220~240V/1Ph/50Hz Evap. Temp. -25 ~ +10 °C, Max Temp. Cond. 60 °C</b>						
1A.550	PDD084SV-A2AA	770	8,40	2,07	15µF/400V	9,80
1A.551	PDD102SV-A2AA	935	10,20	2,08	15µF/400V	9,80
<b>LBP 220~240V/1Ph/50Hz Evap. Temp. - 40 ~ +10 °C, Max Temp. Cond. 60 °C</b>						
1A.552	PDD122LV-A2AA	1120	12,20	2,07	25µF/400V	9,95
1A.553	PDD145LV-A2AA	1330	14,50	2,10	25µF/400V	9,95
1A.554	PDD160LV-A2AA	1470	16,00	2,04	25µF/450V	9,95

Capacità [W] Tc = +54,4 °C Te = - 6,7 °C  
Temperature range [°C] - 40 ÷ +15

Capacity [W] Tc = +54,4 °C Te = - 6,7 °C

Nota 1: I compressori sono forniti senza condensatore di marcia/Compressors are supplied w/o run capacitor

# Model PDD084SV-A2AA

## 1. SCOPE

This specification is applied to SHANGHAI HIGHLY horizontal rotary compressor.

## 2. SPECIFICATION OF COMPRESSOR

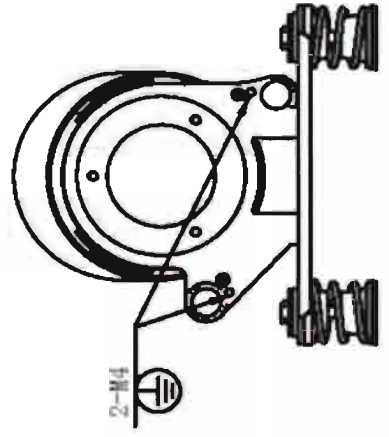
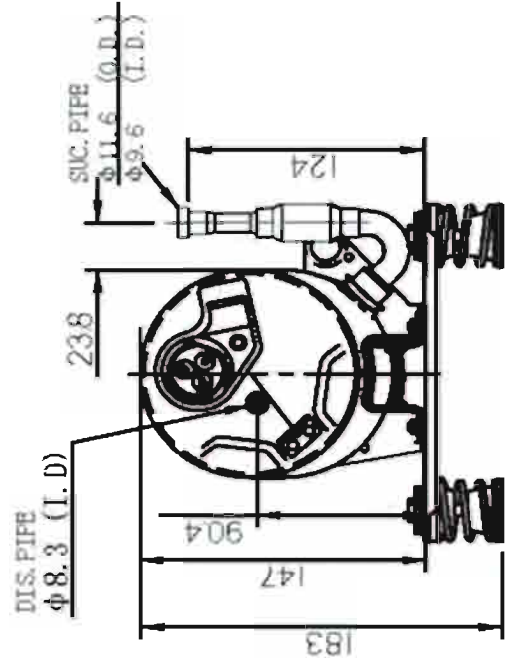
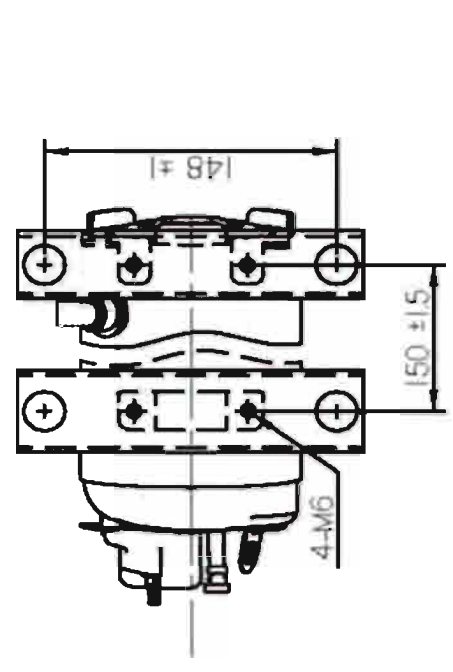
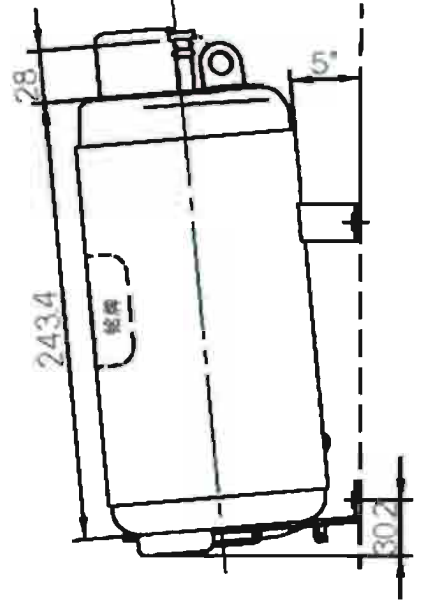
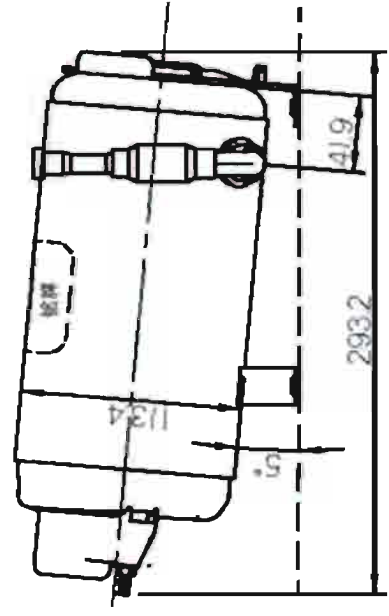
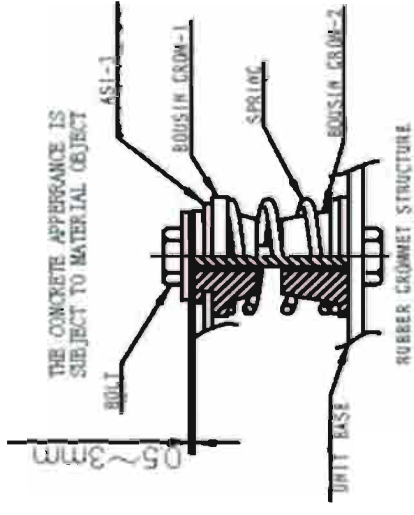
2.1 Model	PDD084SV-A2AA
2.2 Rated Voltage-Frequency-Phase	220~240V/50Hz
2.3 Application	Refregeration
2.4 Refrigerant	R-290
2.5 Compressor Cooling	Forced air
2.6 Displacement	8.4ml/rev
2.7 Allowable amount of refrigerant charge	150 g
2.8 Amount of oil charge	270±20 ml(Initial) 270±20 ml
2.9 Oil	HAF68DIC or equivalent
2.10 Space volume of inner case	1020ml
2.11 Net weight	9.8 kg incl.oil 9.8 kg
2.12 Hermetic Terminal	1/4"quick connect type 1/4"
2.13 Motor	
Type	Permanent Split Capacitor
Capacitor	15 μ F/400V
Locked rotor amps	12A (at 240V)
Approved voltage range	Rated voltage ±10%
Winding resistance(M/S)	7.401/6.483 Ω (at 20°C)
	PSC
	15 μ F/400V
	12A (at 240V)
	±10%
	7.401/6.483 Ω (at 20°C)

Performance (Voltage 220V)		
Item	ASHRAE Condition	Refrigeration Condition
Nominal Cooling Capacity	1230	770
Motor input	410	360
Current	2.0	1.7
COP	3.0	2.14
Test Conditions		
Evaporating temp.	7.2	-6.7
Condensing temp.	54.4	54.4
Liquid temp. entering expansion valve.	46.1	46.1
Return gas temp.	35	35
Ambient temp.	35	35

# Model PDD084SV-A2AA - Outline Drawing

種別記号 A

PDD102SV-A2AA	PDD084SV-A2AA
---------------	---------------

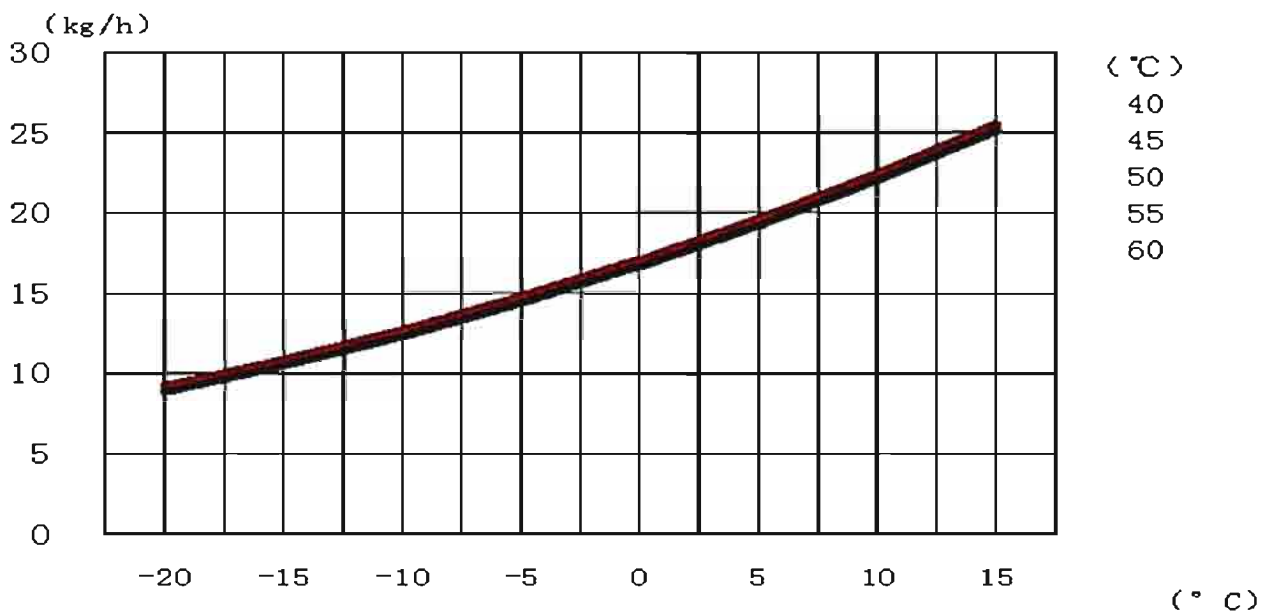
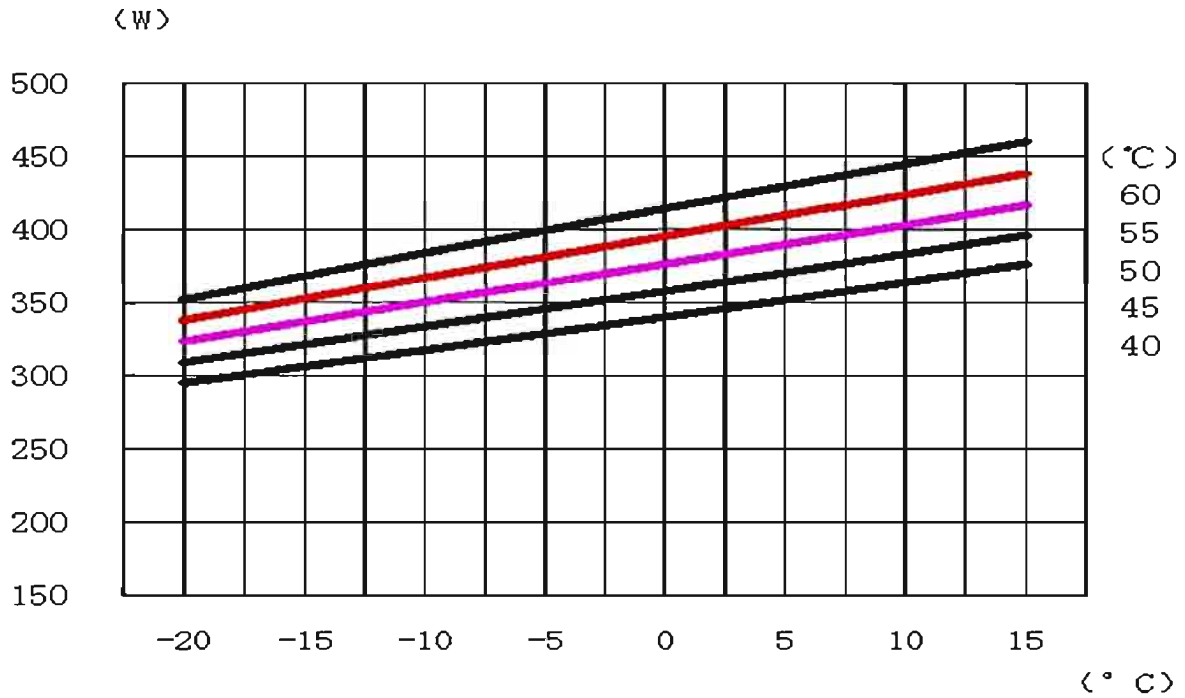
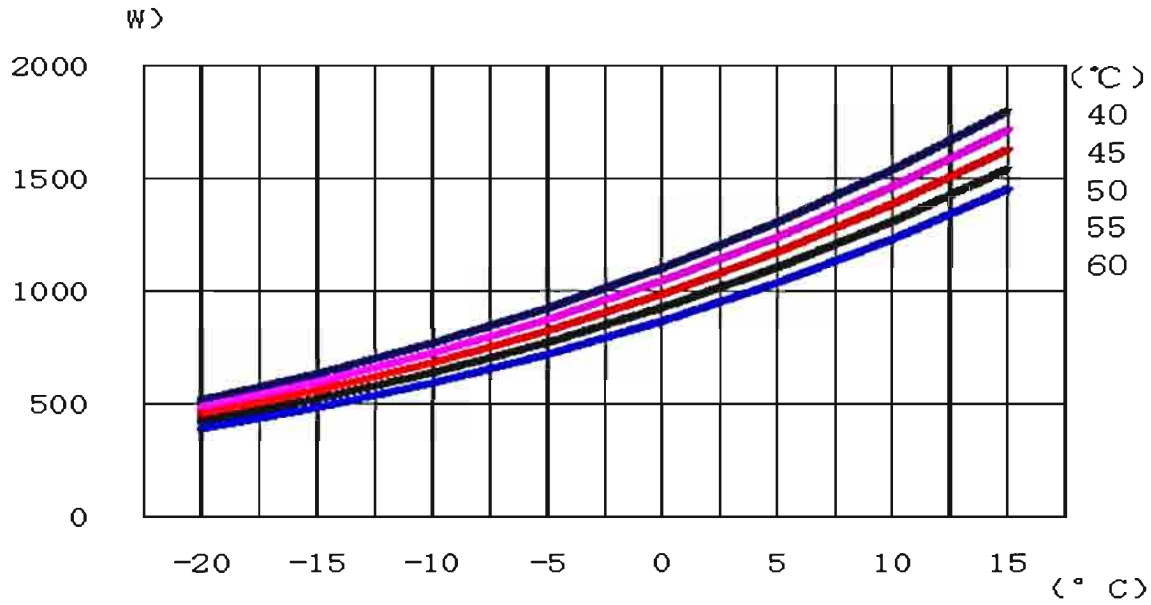


NOTE:  
 1. PUTTING OUT RUBBER PLUG WHEN FIXING EARTH PARTS.

DIMENSION : mm

NO.	NAME	SCALE	PROJECTION	NTS		UNIT
				Height	Medium	
RECD.	DATE	TITLE	DIMENSIONED	SHEET		
	CHKD.					
	ENG.					
	APP.					

# Model PDD084SV-A2AA - Performance curve



# Model PDD102SV-A2AA

## SCOPE

This specification is applied to SHANGHAI HIGHLY horizontal rotary compressor.

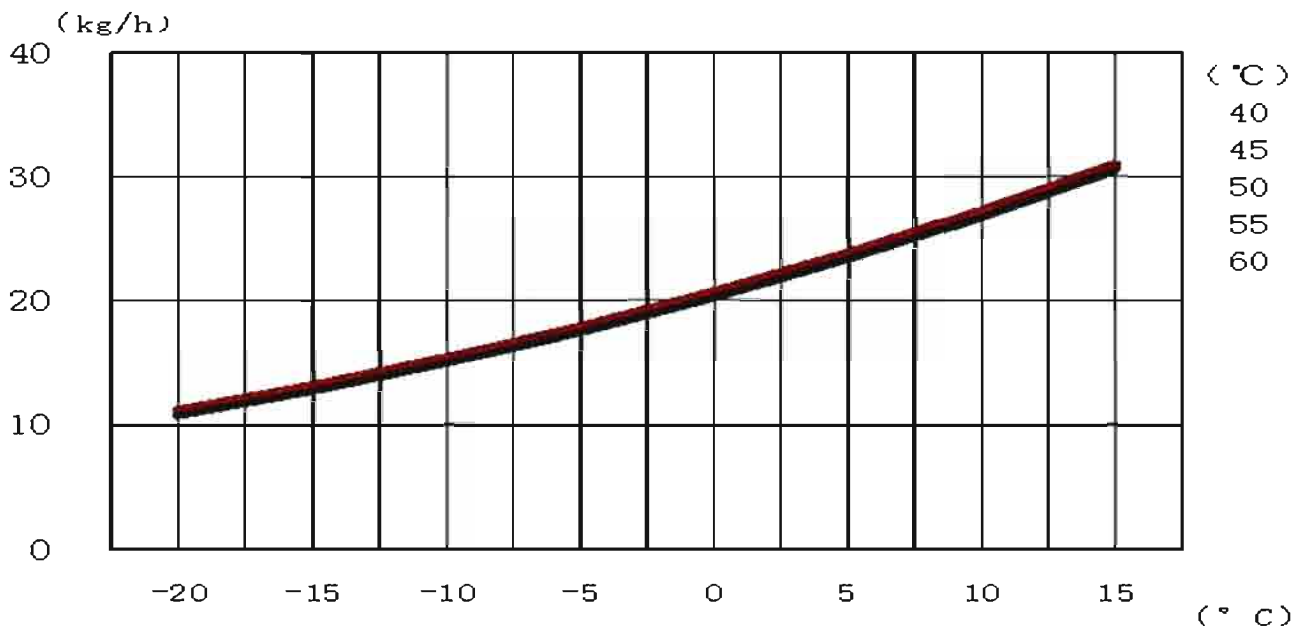
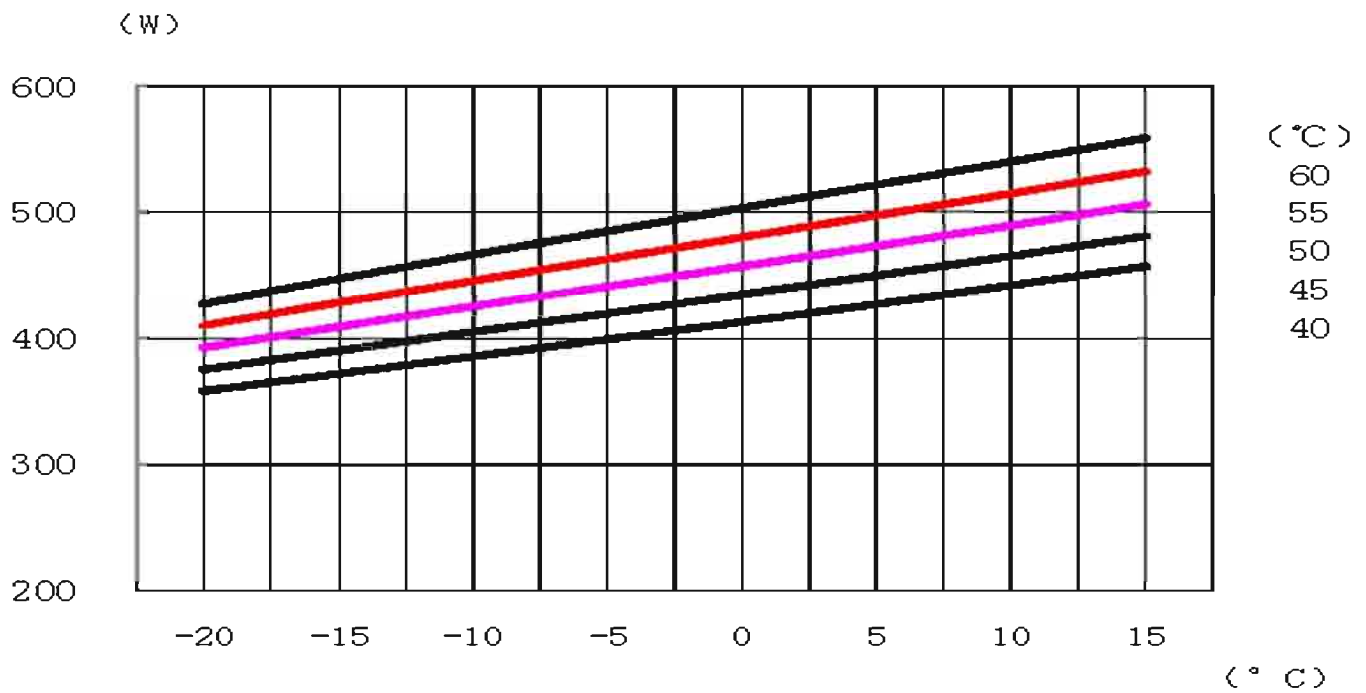
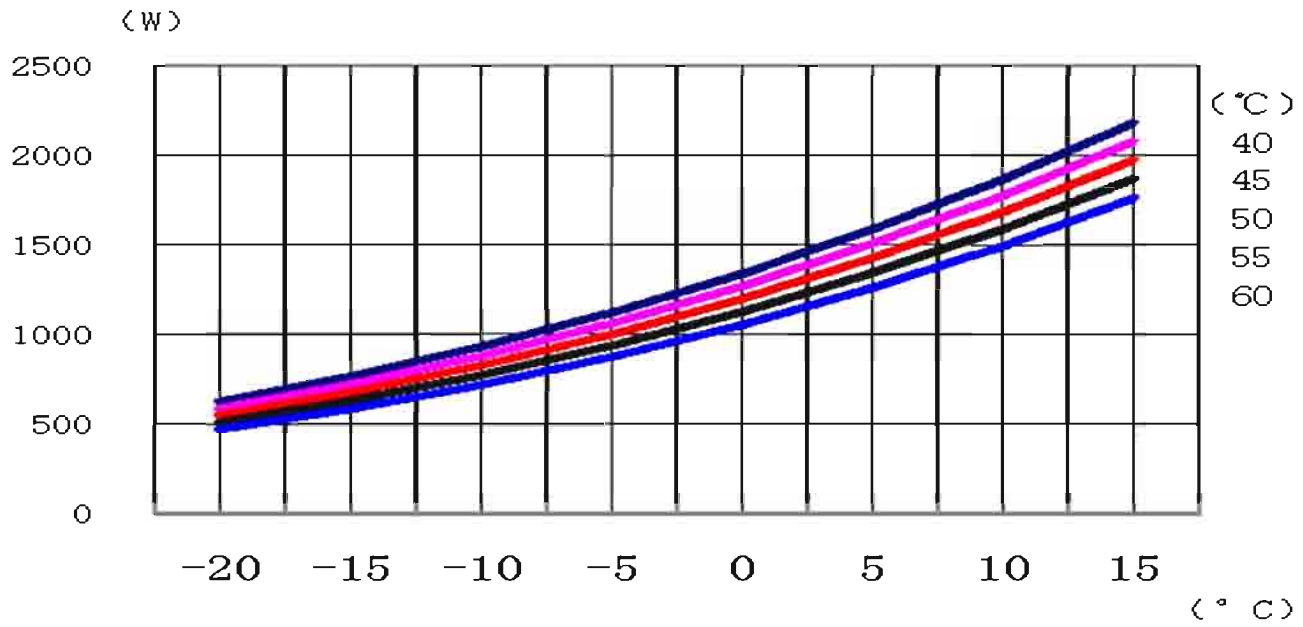
## SPECIFICATION OF COMPRESSOR

2.1 Model	PDD102SV-A2AA
2.2 Rated Voltage-Frequency-Phase	220~240V/50Hz
2.3 Application	Refrigeration
2.4 Refrigerant	R-290
2.5 Compressor Cooling	Forced air
2.6 Displacement	10.2ml/rev
2.7 Allowable amount of refrigerant charge	150 g
2.8 Amount of oil charge	270±20 ml(Initial) 270±20 ml
2.9 Oil	HAF68DIC or equivalent
2.10 Space volume of inner case	1020ml
2.11 Net weight	9.8 kg incl.oil 9.8 kg
2.12 Hermetic Terminal	1/4"quick connect type 1/4"
2.13 Motor	
Type	Permanent Split Capacitor
Capacitor	15 μ F/400V
Locked rotor amps	12A (at 240V)
Approved voltage range	Rated voltage ± 10%
Winding resistance(M/S)	7.401/6.483 Ω (at 20°C)
	PSC
	15 μ F/400V
	12A (at 240V)
	7.401/6.483 Ω (at 20°C)

Performance (Voltage 220V)		
Item	ASHRAE Condition A/T	Refrigeration Condition
Nominal Cooling Capacity	1490	935
Motor input	500	450
Current	2.4	2.1
COP	2.98	2.08
Test Conditions		
Evaporating temp.	7.2	-6.7
Condensing temp.	54.4	54.4
Liquid temp. entering expansion valve.	46.1	46.1
Return gas temp.	35	35
Ambient temp.	35	35



# Model PDD102SV-A2AA - Performance curve





# Model PDD122LV-A2AA

## 1. SCOPE

This specification is applied to SHANGHAI HIGHLY horizontal rotary compressor.

## 2. SPECIFICATION OF COMPRESSOR

### 2.1 Model

PDD122LV-A2AA

### 2.2 Rated Voltage-Frequency-Phase

220~240V/50Hz

### 2.3 Application

Refrigeration & freezing

### 2.4 Refrigerant

R-290

### 2.5 Compressor Cooling

Forced air

### 2.6 Displacement

12.2ml/rev

### 2.7 Allowable amount of refrigerant charge

150 g

### 2.8 Amount of oil charge

270±20 ml(Initial)

270±20 ml

### 2.9 Oil

HAF68DIC or equivalent

### 2.10 Space volume of inner case

1020ml

### 2.11 Net weight

9.95 kg incl.oil

9.95 kg

### 2.12 Hermetic Terminal

1/4"quick connect type

1/4"

### 2.13 Motor

#### Type

Permanent Split Capacitor

#### Capacitor

25 μ F/400V

#### Locked rotor amps

16A (at 240V)

#### Approved voltage range

Rated voltage ± 10%

#### Winding resistance(M/S)

4.79/4.23 Ω (at 20°C)

PSC

25 μ F/400V

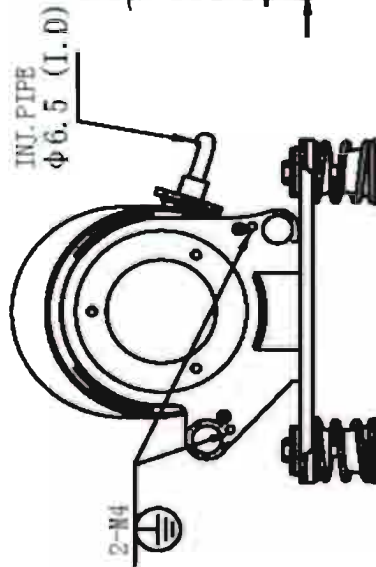
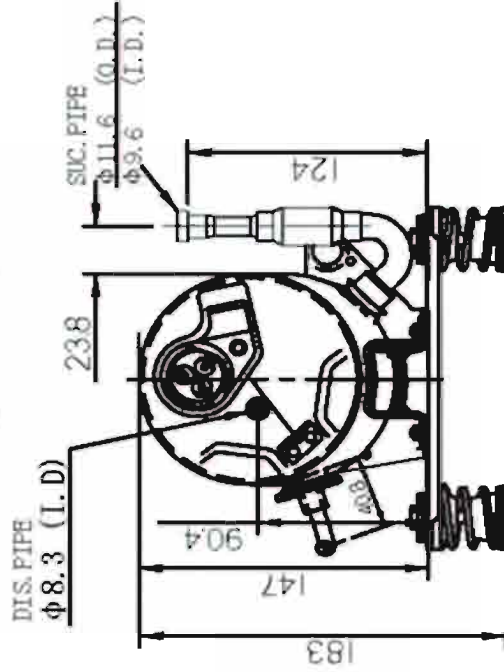
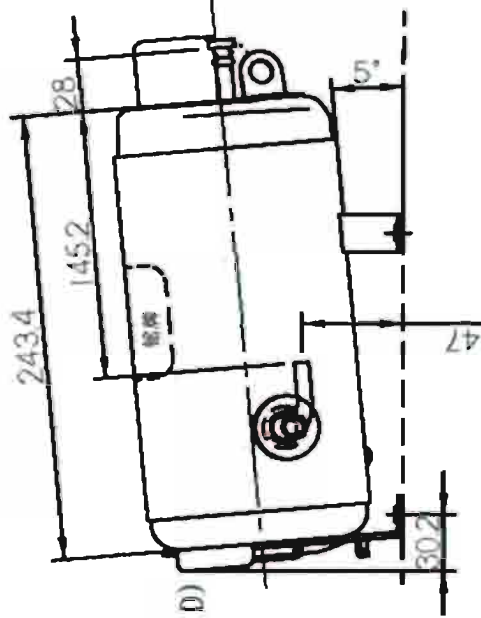
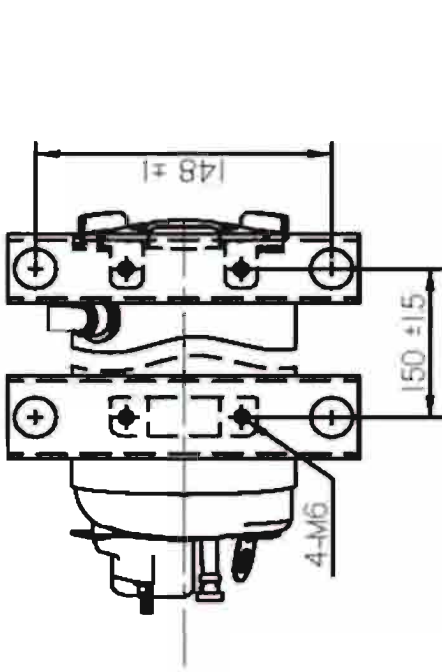
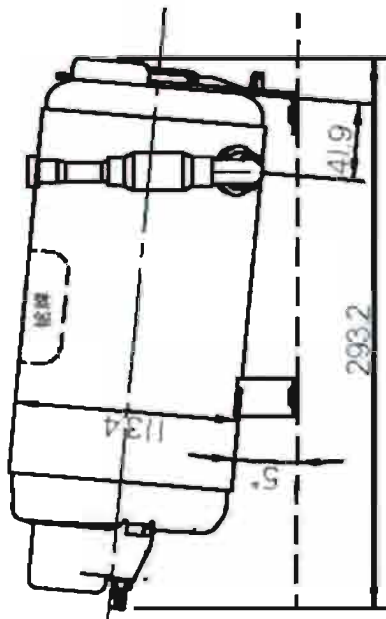
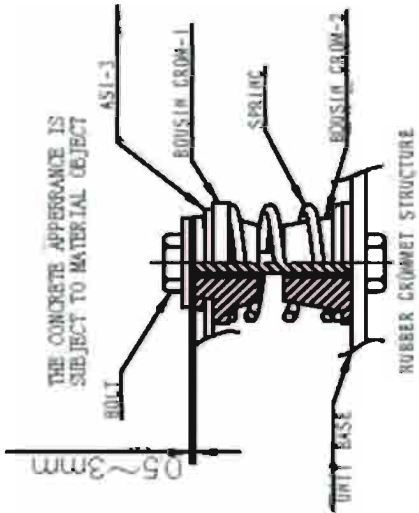
16A (at 240V)

4.79/4.23 Ω (at 20°C)

Performance (Voltage 220V)			
Item	ASHRAE Condition	Refrigeration Condition	Freezing Condition
Nominal Cooling Capacity	1790	1120	650
Motor input	600	540	470
Current	2.75	2.5	2.1
COP	2.98	2.07	1.38
Test Conditions			
Evaporating temp.	7.2	-6.7	-23.3
Condensing temp.	54.4	54.4	54.4
Liquid temp. entering expansion valve.	46.1	46.1	32.2
Return gas temp.	35	35	18.3
Ambient temp.	35	35	32.2
Discharge temp.	—	—	95.0

Model PDD122LV-A2AA - Outline Drawing


PDD122LV-A2AA	PDD145LV-A2AA
PDD160LV-A2AA	

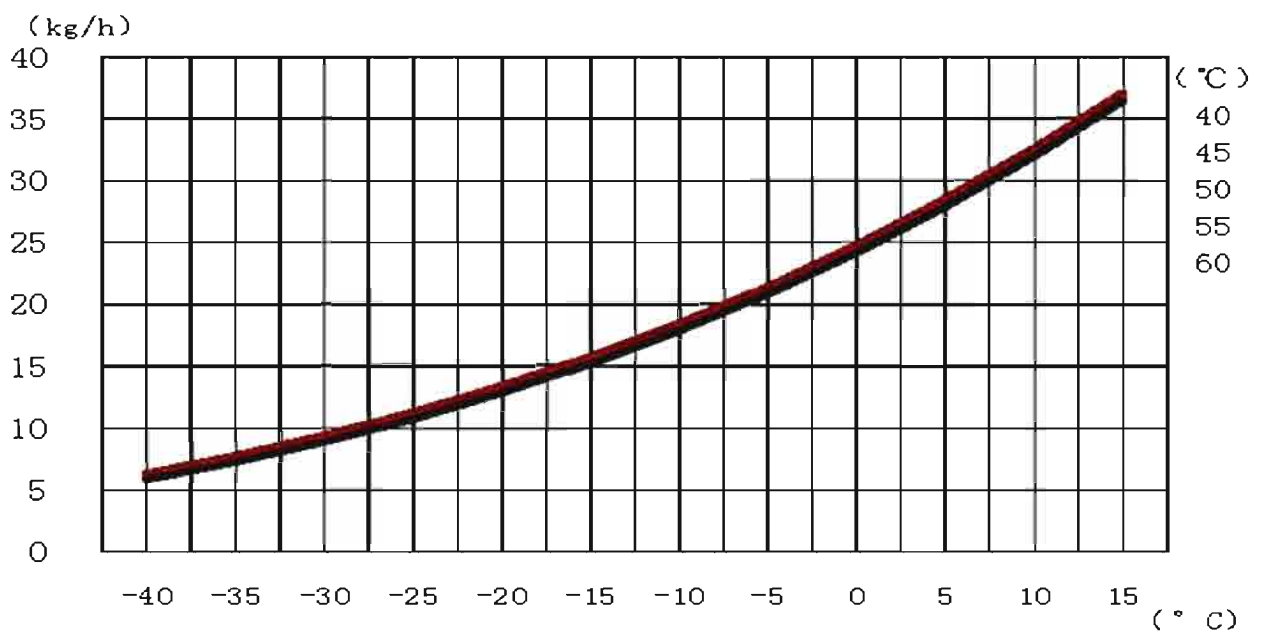
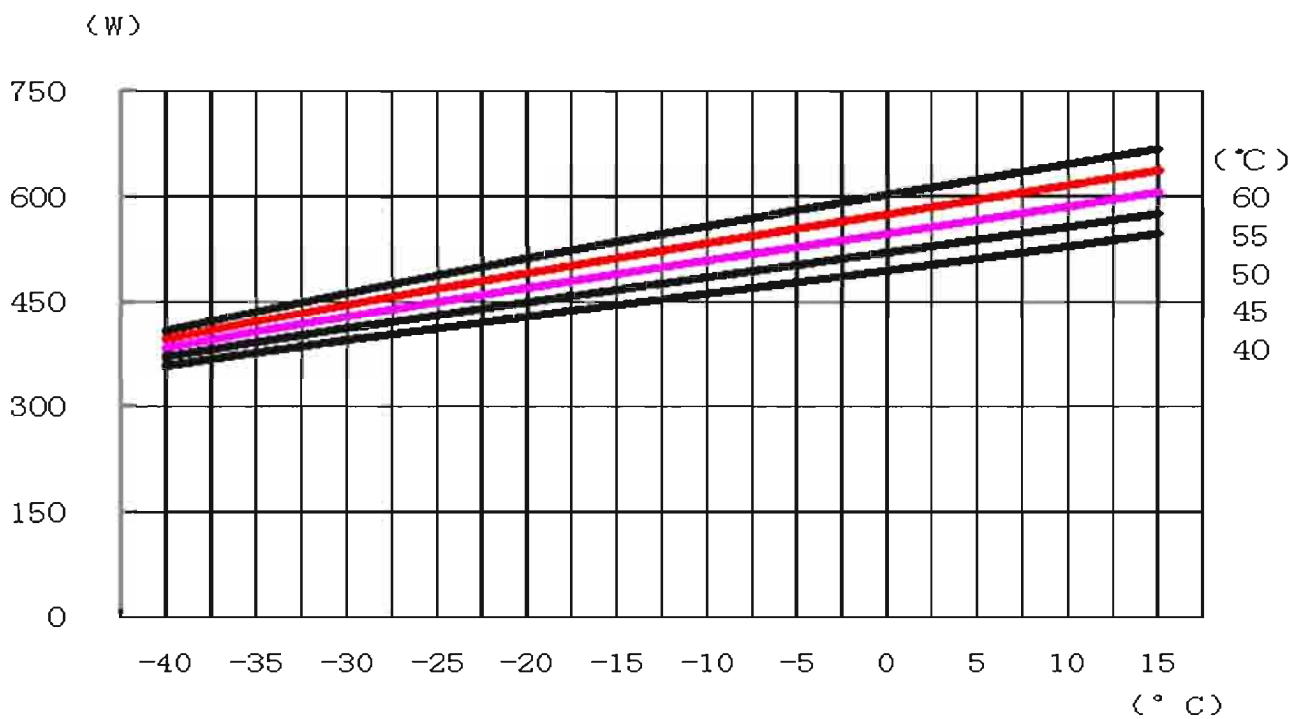
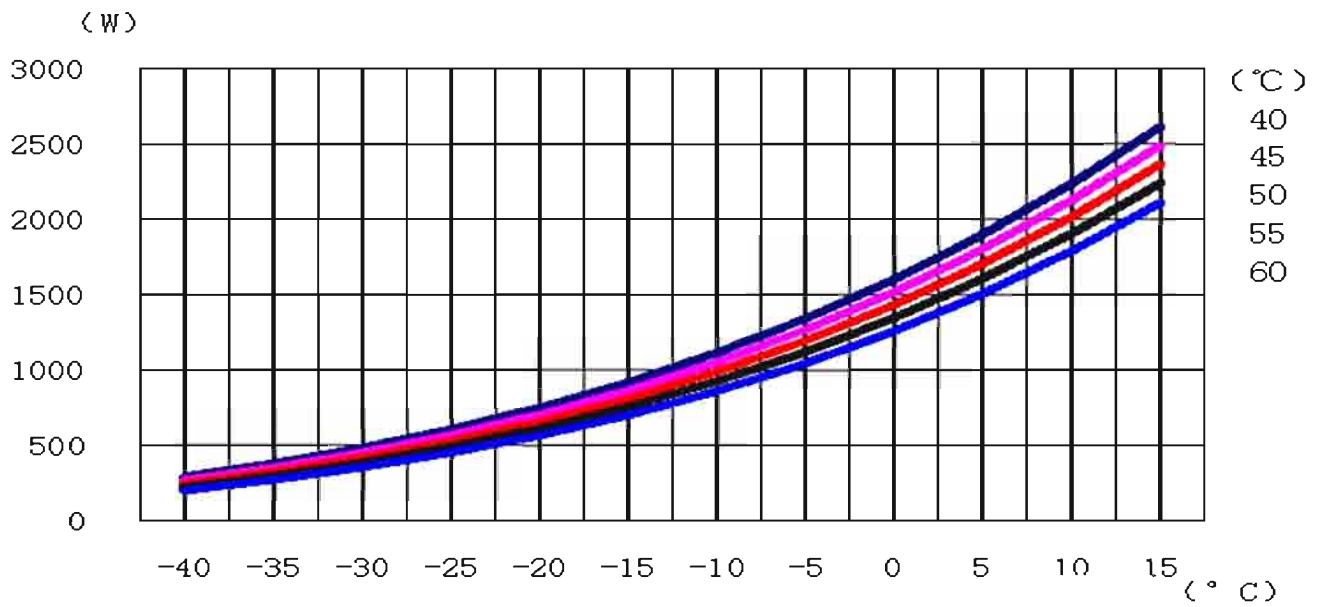


NOTE:  
1. PUTTING OUT RUBBER PLUG WHEN FIXING EARTH PARTS.

DIMENSION: mm

NO. PART	QTY	CODE	TITLE	SCALE	PROJECTION	NTS
FRONT			DRAWING			

# Model PDD122LV-A2AA - Performance curve



# Model PDD145LV-A2AA

## 1. SCOPE

This specification is applied to SHANGHAI HIGHLY horizontal rotary compressor.

## 2. SPECIFICATION OF COMPRESSOR

### 2.1 Model

PDD145LV-A2AA

### 2.2 Rated Voltage-Frequency-Phase

220~240V/50Hz

### 2.3 Application

Refrigeration & freezing

### 2.4 Refrigerant

R-290

### 2.5 Compressor Cooling

Forced air

### 2.6 Displacement

14.5ml/rev

### 2.7 Allowable amount of refrigerant charge

150 g

### 2.8 Amount of oil charge

270 ± 20 ml(Initial)

270 ± 20 ml

### 2.9 Oil

HAF68DIC or equivalent

### 2.10 Space volume of inner case

1020ml

### 2.11 Net weight

9.95 kg incl.oil

9.95 kg

### 2.12 Hermetic Terminal

1/4" quick connect type

1/4"

### 2.13 Motor

#### Type

Permanent Split Capacitor

#### Capacitor

25 μ F/400V

#### Locked rotor amps

16A (at 240V)

#### Approved voltage range

Rated voltage ± 10%

#### Winding resistance(M/S)

4.79/4.23 Ω (at 20°C)

PSC

25 μ F/400V

16A (at 240V)

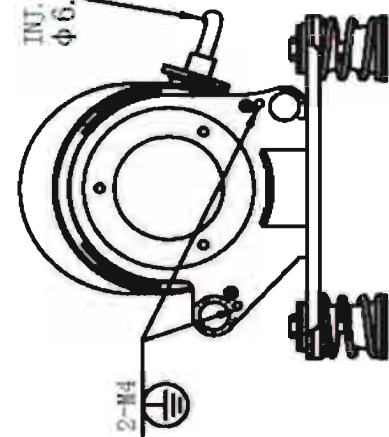
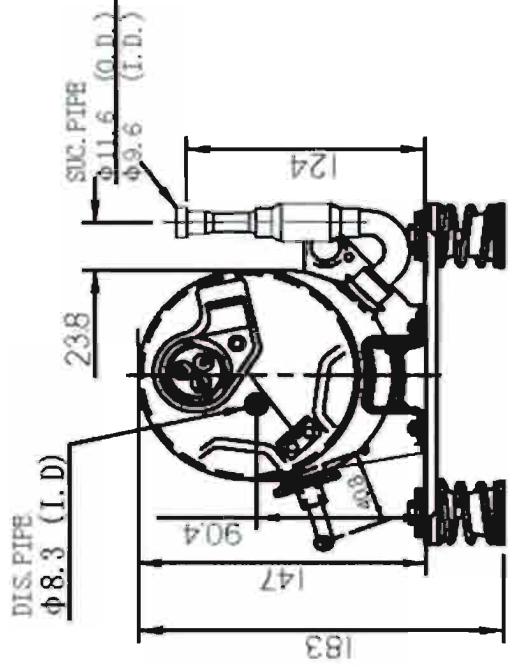
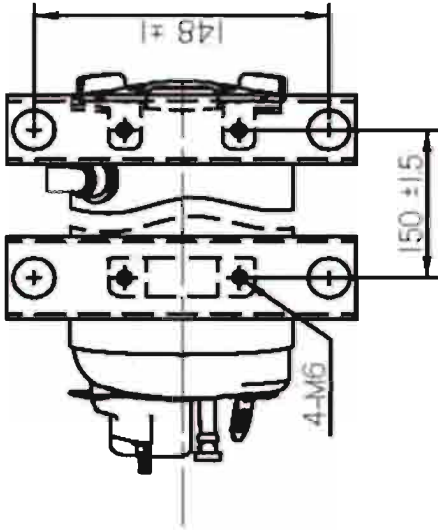
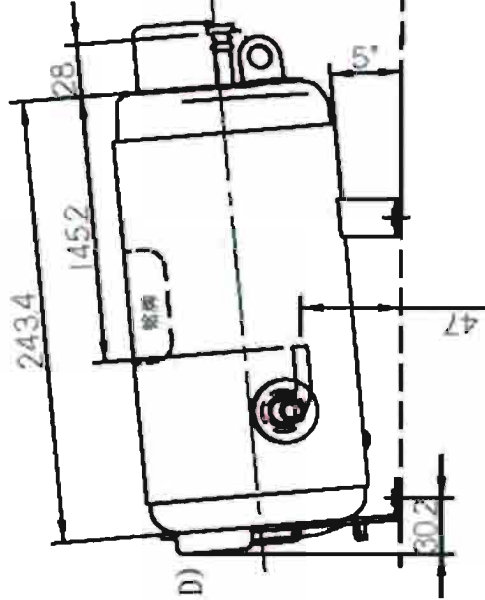
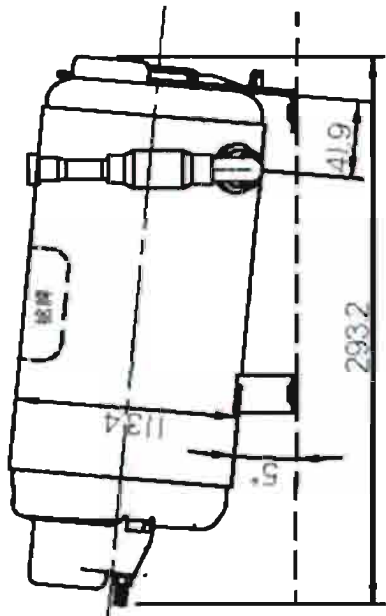
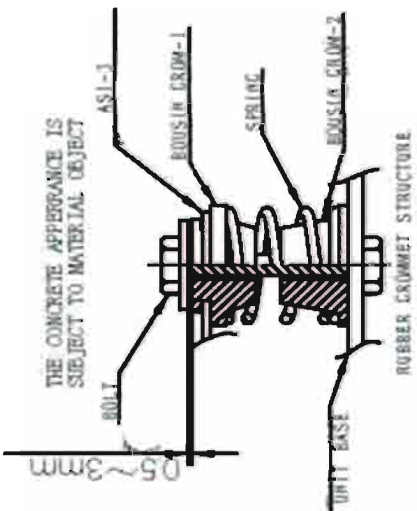
± 10%

4.79/4.23 Ω (at 20°C)

Performance (Voltage 220V)			
Item	ASHRAE Condition	Refrigeration Condition	Freezing Condition
Nominal Cooling Capacity	2130	1330	770
Motor input	735	630	520
Current	3.3	2.9	2.5
COP	2.90	2.10	1.43
Test Conditions			
Evaporating temp.	7.2	-6.7	-23.3
Condensing temp.	54.4	54.4	54.4
Liquid temp. entering expansion valve.	46.1	46.1	32.2
Return gas temp.	35	35	18.3
Ambient temp.	35	35	32.2
Discharge temp.	—	—	95.0

Model PDD145LV-A2AA - Outline Drawing


PDD122LV-A2AA	PDD145LV-A2AA
PDD160LV-A2AA	

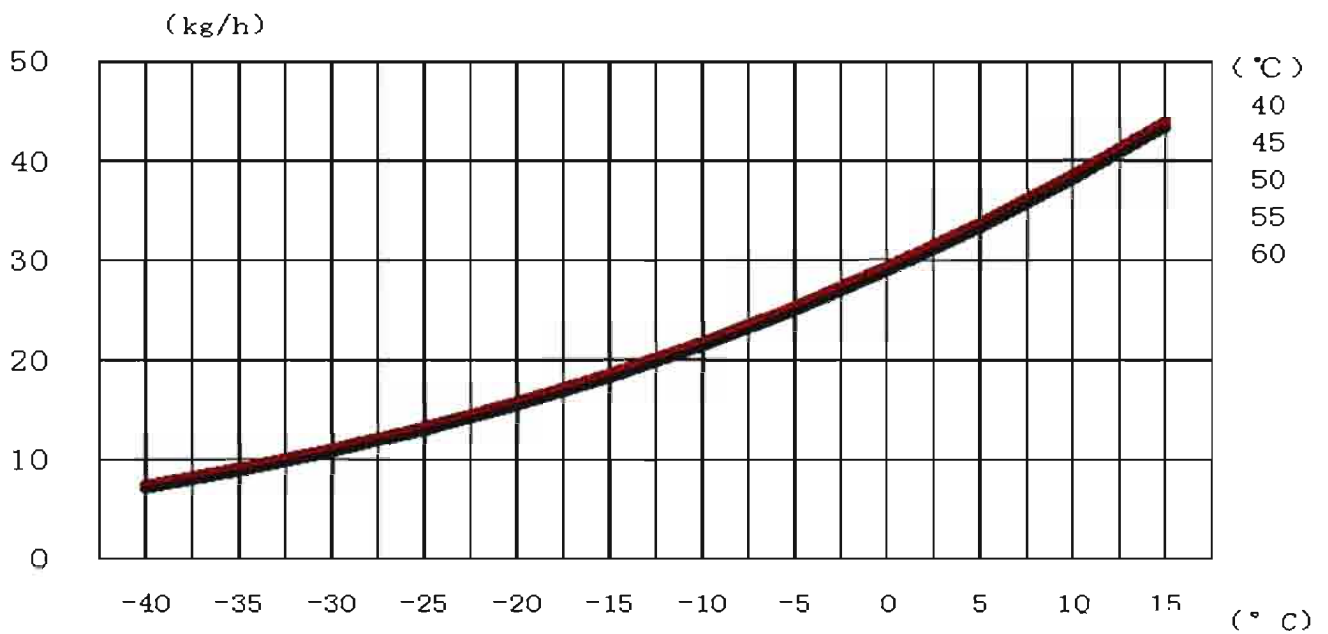
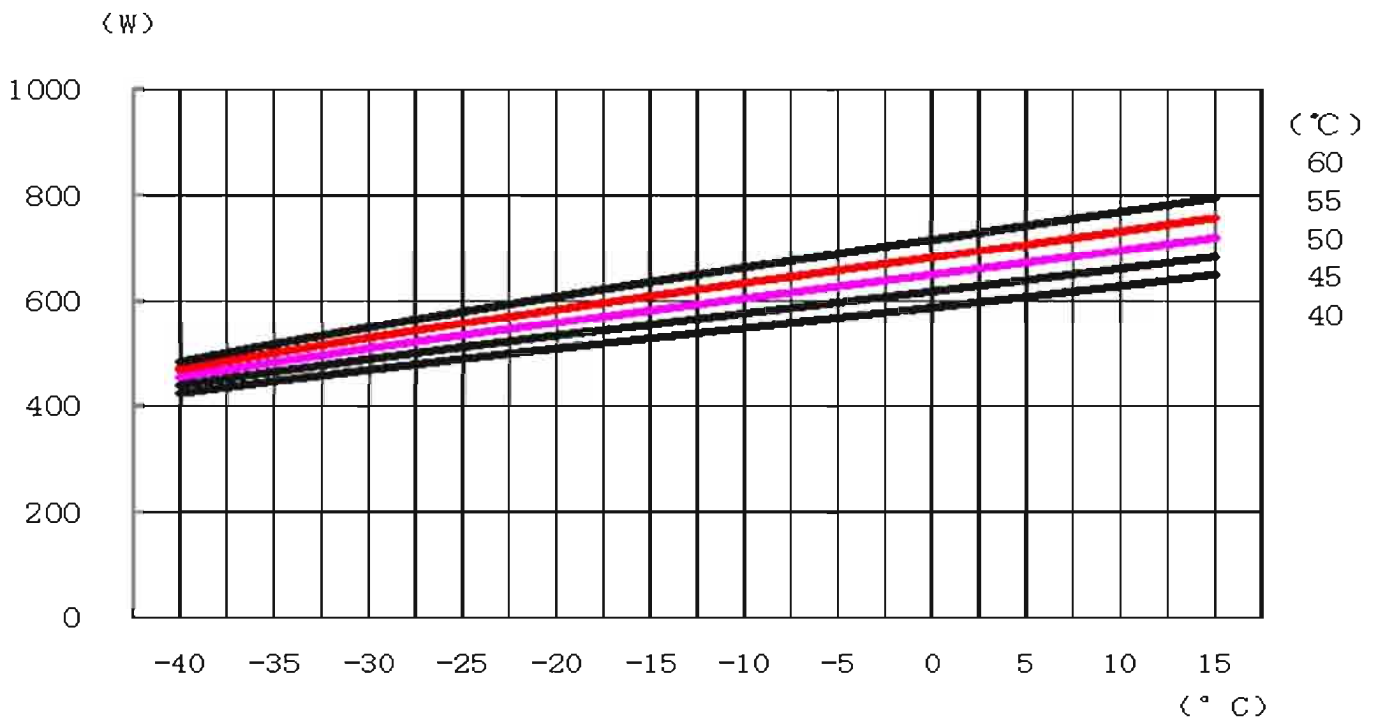
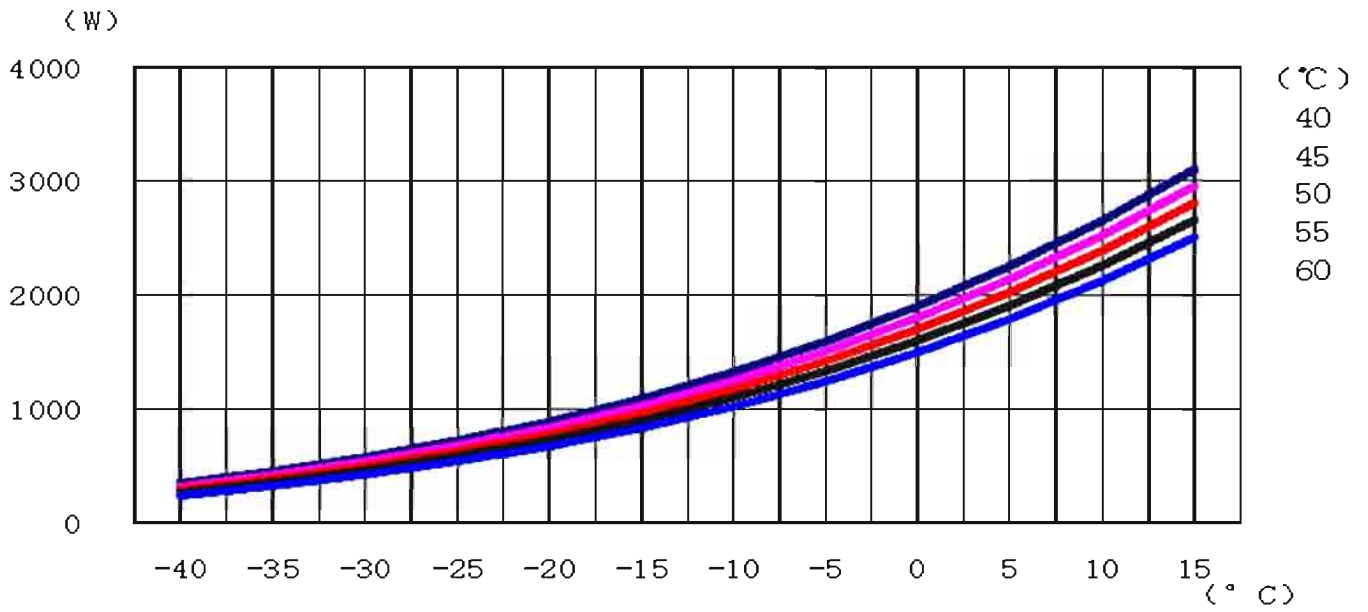


NOTE: 1. PUTTING OUT RUBBER PLUG WHEN FIXING EARTH PARTS.

DIMENSION: mm

NO.	DATE	REVISION	TITLE	SCALE	PROJECTION	DATE
		REV		NTS		2016/11/10 2016/11/10 2016/11/10 2016/11/10 2016/11/10
REV		CHK	DIMENSIONED			
		ENG	SECRET		Hack/UM	

# Model PDD145LV-A2AA - Performance curve



# Model PDD160LV-A2AA

## 1. SCOPE

This specification is applied to SHANGHAI HIGHLY horizontal rotary compressor.

## 2. SPECIFICATION OF COMPRESSOR

### 2.1 Model

PDD160LV-A2AA

### 2.2 Rated Voltage-Frequency-Phase

220~240V/50Hz

### 2.3 Application

Refrigeration & freezing

### 2.4 Refrigerant

R-290

### 2.5 Compressor Cooling

Forced air

### 2.6 Displacement

16.0ml/rev

### 2.7 Allowable amount of refrigerant charge

150 g

### 2.8 Amount of oil charge

270±20 ml(Initial)

270±20 ml

### 2.9 Oil

HAF68DIC or equivalent

### 2.10 Space volume of inner case

1020ml

### 2.11 Net weight

9.95 kg incl.oil

9.95 kg

### 2.12 Hermetic Terminal

1/4"quick connect type

1/4"

### 2.13 Motor

#### Type

Permanent Split Capacitor

#### Capacitor

25 μ F/400V

#### Locked rotor amps

20A (at 240V)

#### Approved voltage range

Rated voltage ±10%

#### Winding resistance(M/S)

3.9/5.0 Ω (at 20°C)

PSC:

25 μ F/400V

20A (at 240V)

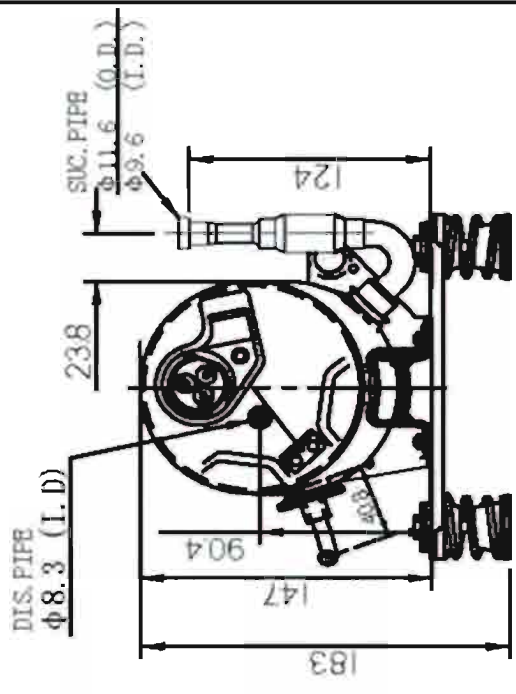
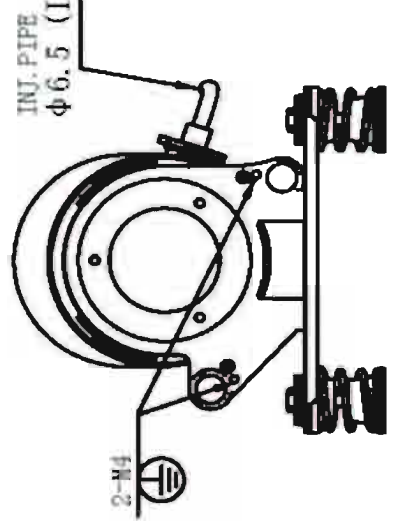
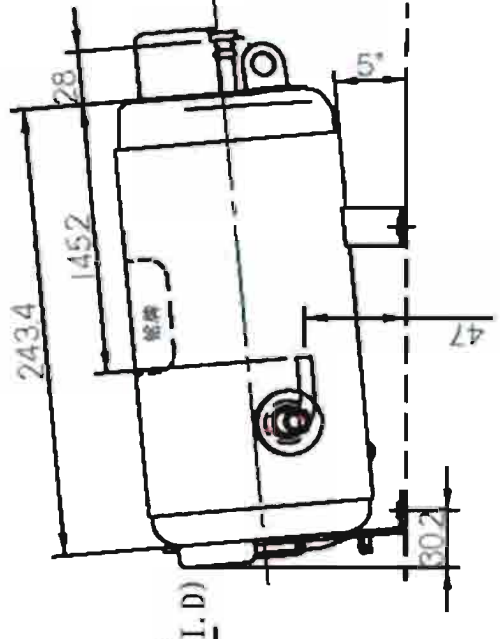
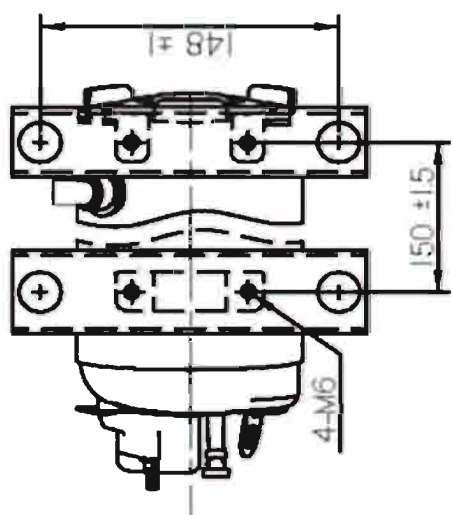
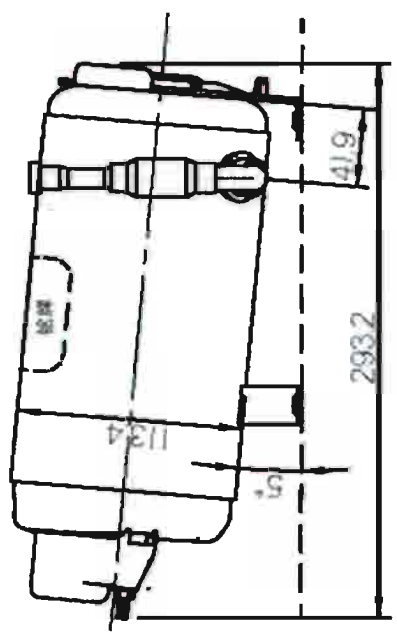
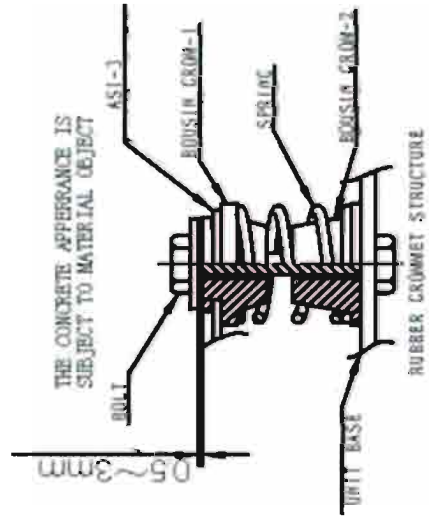
±10%

3.9/5.0 Ω (at 20°C)

Performance (Voltage 220V)			
Item	ASHRAE Condition A/T	Refrigeration Condition	Freezing Condition
Nominal Cooling Capacity	2350	1470	860
Motor input	810	720	650
Current	3.8	3.4	3.0
COP	2.90	2.04	1.32
Test Conditions			
Evaporating temp.	7.2	-6.7	-23.3
Condensing temp.	54.4	54.4	54.4
Liquid temp. entering expansion valve.	46.1	46.1	32.2
Return gas temp.	35	35	18.3
Ambient temp.	35	35	32.2
Discharge temp.	—	—	95.0

# Model PDD160LV-A2AA - Outline Drawing


PDD122LV-A2AA	PDD145LV-A2AA
PDD160LV-A2AA	



NOTE:  
1. PUTTING OUT RUBBER PLUG WHEN FIXING EARTH PARTS.

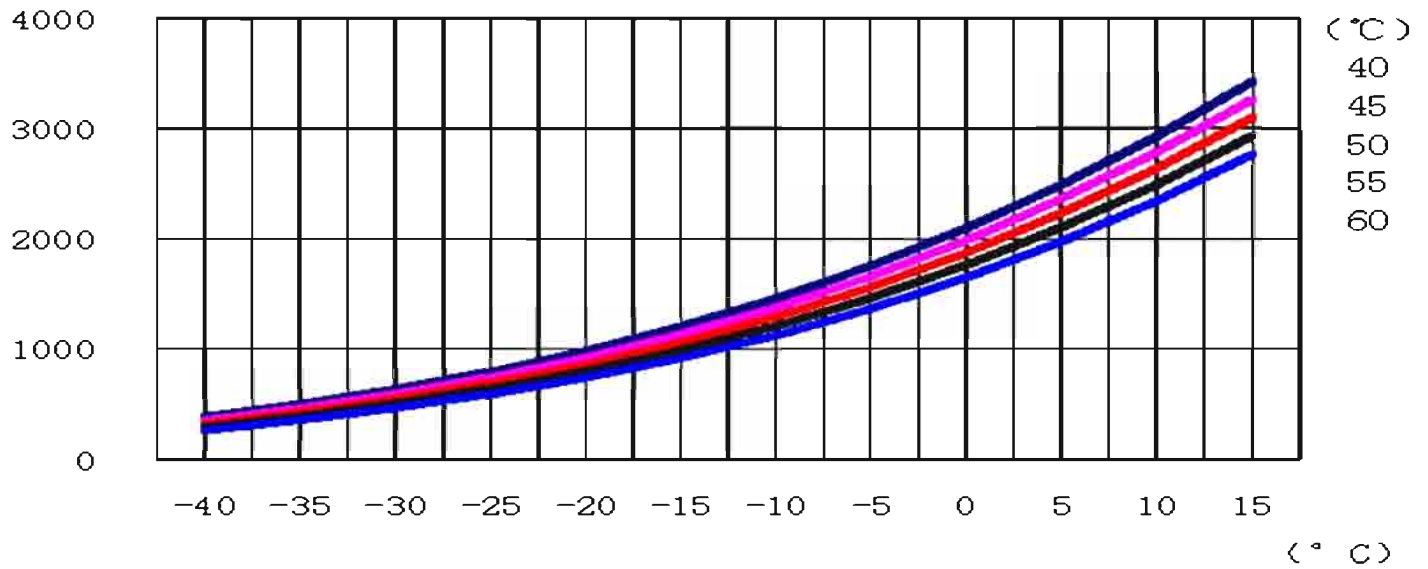
DIMENSION: mm

PROJECTION	SCALE	TITLE		DRAWING SHEET	
NTS	NTS	DIMENSIONED		SHEET	

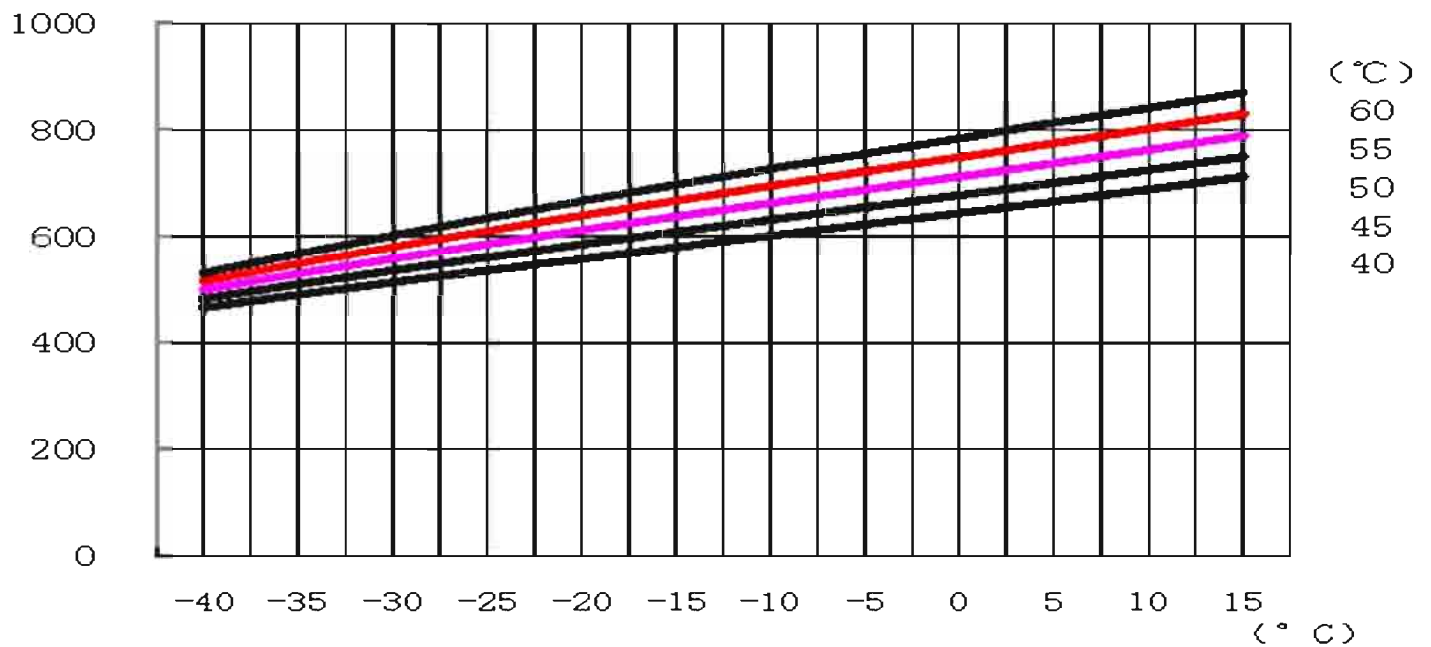


# Model PDD160LV-A2AA - Performance curve

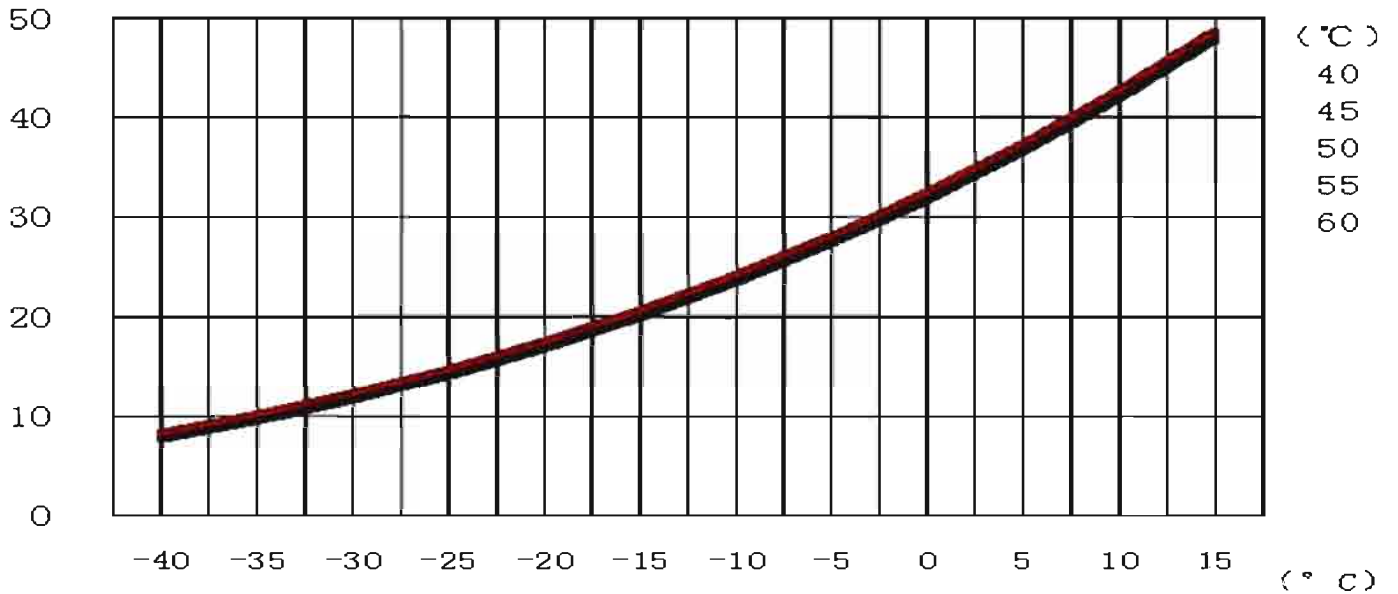
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(W)

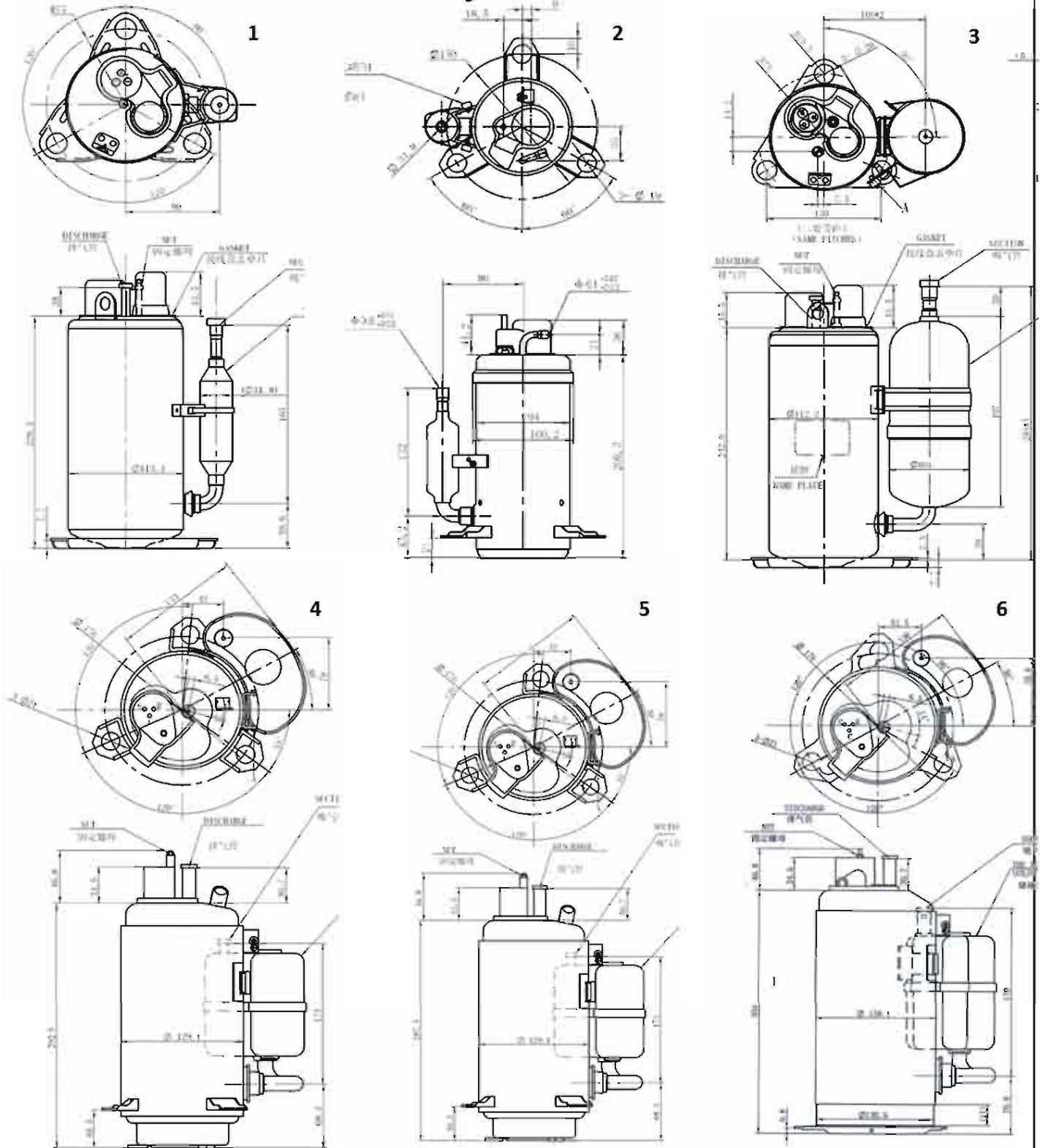


(kg/h)



# HITACHI / HIGHLY

R513A/R450A/R134A/R1234yf



Rif. Ref.	Modello Model	Alimentazione Power type	Cilin. Displ. [cc]	Capacità Capacity [W]	COP	Condensatore di marcia Run Capacitor [µF/V]	Altezza Height [mm]
	WHP00535VCV	220 ~240 V 1Φ, 50Hz	3,57	556	3,16	6,5/450	152,1
1	WHP00930VUV-H3CU		6,30	951	4,00	10/450	217,4
2	WHP00990VUV-A3EGN		6,45	975	3,55	7/450	185,1
3	WHP01900VUV-H8JU		12,20	1895	4,20	15/420	237,9
4	WHP02830VUV-C4AT		18,00	2805	4,22	25/420	292,5
5	WHP03970VUV-C4AT		25,30	3860	4,24	35/420	287,5
6	WHP05100VUV-G4AQ	33,80	5230	4,39	45/450	304,0	

Nota : Le capacità riportate sono date a 7,2°C evaporazione 54,4°C condensazione. ( condizioni ASCHRAE )  
Capacity referred at +7,2°C evaporating and + 54,4°C condensing temperature ( ASCHRAE )

**BALL VALVES**



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**ALL VALVES  
ARE AVAILABLE  
FOR CO2**

**ROTOLOCK VALVES**



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TÜV**

**ALSO AVAILABLE FOR CO2**

**VIBRATION ELIMINATOR**



**CE RoHS  
TPED TÜV**

**ALSO AVAILABLE FOR CO2**



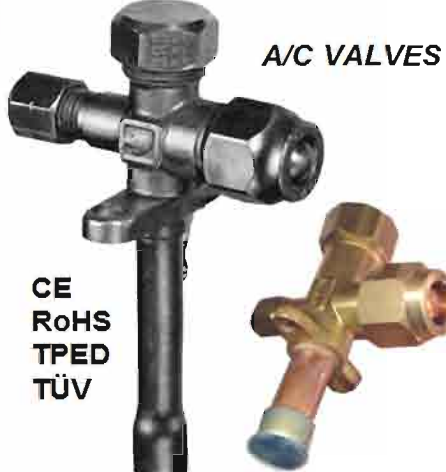
**CE  
RoHS**

**AXIAL FANS, FANS & MOTOR - EC MOTOR**

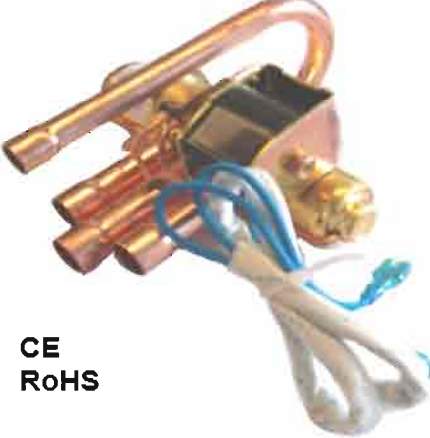


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**A/C VALVES**



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**RANCO REVERSING VALVES**



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ANAL RESET 420N**

**PRESSURE SWITCHES**



**SUCTION LINE**

**BI-FLOW**

**SERVICE VALVES**



**VACUUM PUMPS**



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