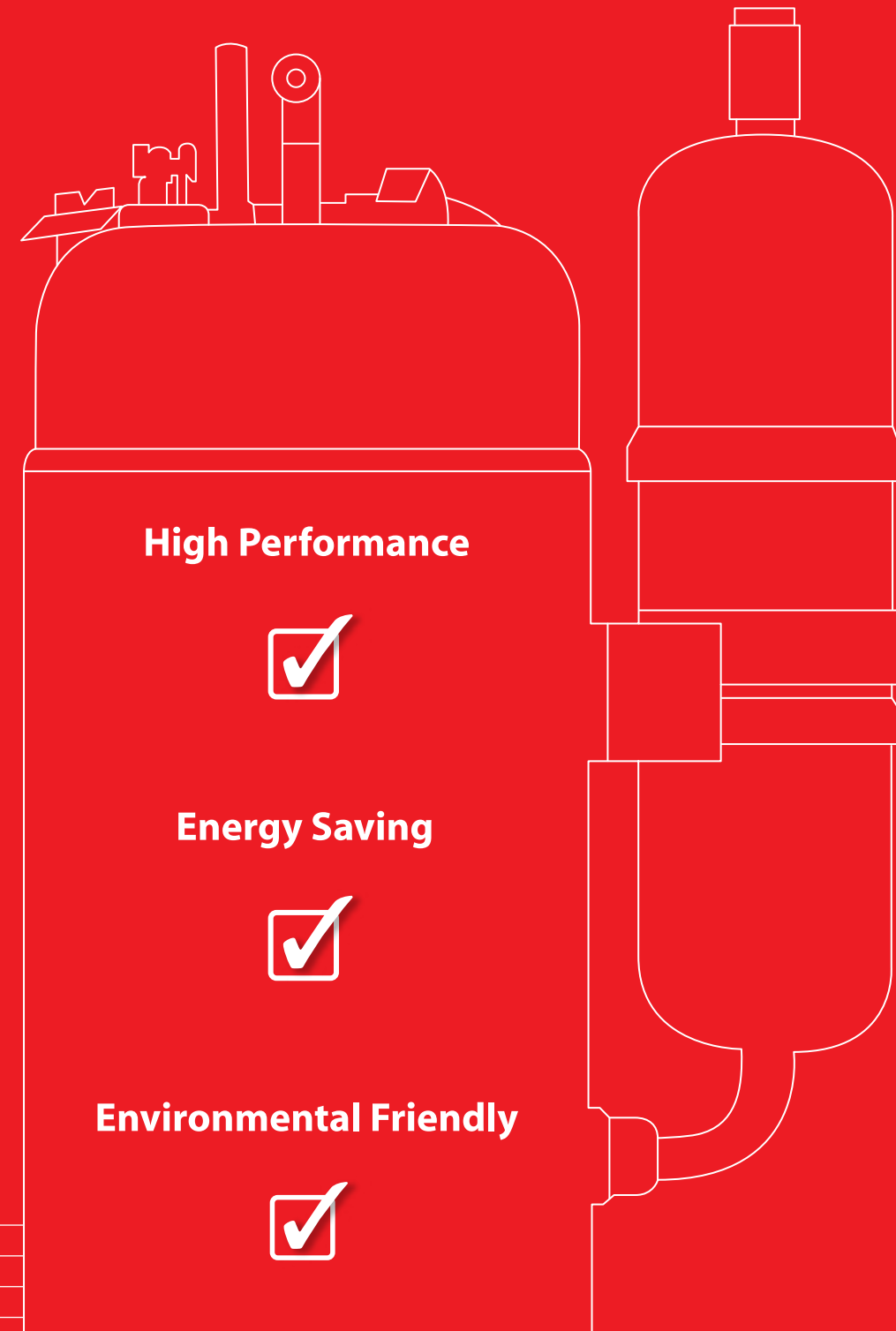




SIAM COMPRESSOR INDUSTRY

MITSUBISHI ELECTRIC GROUP

ROTARY
compressor



High Performance



Energy Saving



Environmental Friendly



SIAM COMPRESSOR INDUSTRY

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Siam Compressor Industry Co., Ltd.

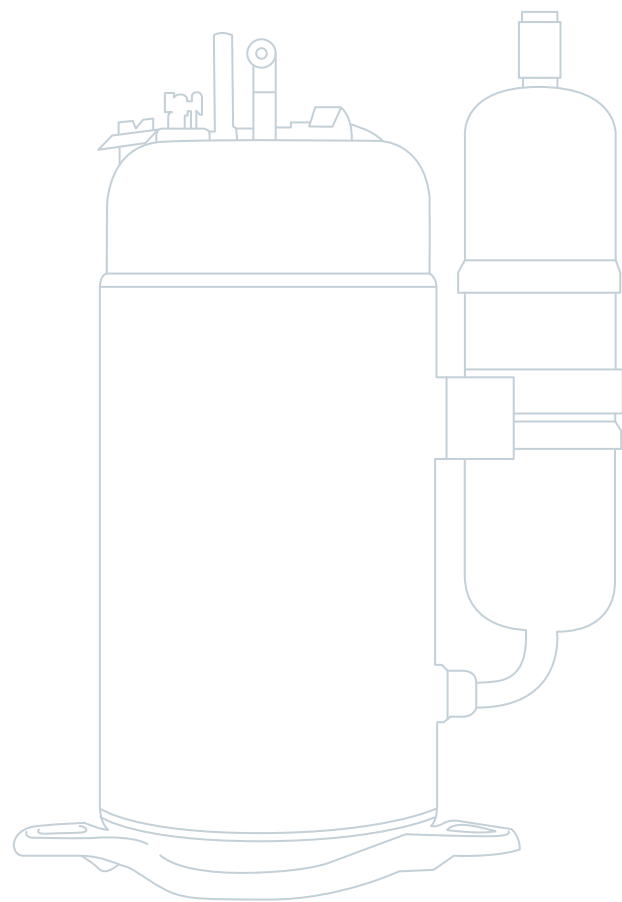
Head Office & Factory : Laem Chabang Industrial Estate 87/10 Moo 2, Sukhumvit Road, Sriracha, Chonburi 20230, Thailand
Tel. +66 (0) 38 490 900 to 912 Fax. +66 (0) 38 490 917

Marketing Office : 979/108 - 110, 32nd Floor S.M. Tower Phaholyothin Road, Samsennai, Phayathai, Bangkok 10400, Thailand
Tel. +66 (0) 2298 0371 to 377 Fax. +66 (0) 2298 0411 to 412

Website : www.siamcompressor.com

Ambient Solution,
Advanced Technology

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Models	SNB	TNB
Compressor		
Type	Rotary DC inverter	
Displacement (cc/rev.)	13.0 - 17.2	22.0 - 30.6
Refrigerant type	R-410A	
Pressure		
Maximum Condensing	42.3 kg/cm ² G (65°C)	
Evaporating	2.04~16.32 kg/cm ² G (-27°C ~ +26°C)	
Compression Ratio	9 or less (See Note 1)	
Abnormal Rise in pressure	69.9 kg/cm ² G or less	60 kg/cm ² G or less
Temperature		
Condensing	-27°C ~ +65°C	
Evaporating	-27°C ~ 26°C	
Discharged Gas (max)	120°C(248°F) , In case of Heat pump or De-humidifier, this limit is 115°C(239°F) (See Note 2)	
Suction gas's superheat	must be over 0°C (No liquid back) (See Note 2)	
Discharged gas's superheat	20°C or more	
Outdoor Ambient Temp.	Under 43°C	
Electrical		
Supply voltage during operation	The compressor must be operated on the proper voltage in accordance with the frequency (or the revolution) as shown the performance curve. The applied voltage's phase of the compressor must be neatly accoded with the phase of rotor in the compressor. The operating voltage shall be the terminal voltage of the compressor during operation.	
Starting voltage	Minimum 80% of rated voltage balancing pressure(at 43°C) (Asynchronous drive at start-up) The compressor motor must be operated by suitable power supply voltage and revolution for unit condition without reverse rotation. The unit condition at start-up must be balanced the high/low pressure at 2.49 Mpa (43°C)	
Reverse phase (rotation)	Not possible	
Frequency range	See in compressor specification	
ON/OFF		
ON/OFF Frequency	Less than 170,000 cycles	
Pipe Stress	3.5 Kg/mm ² or less at start and stop condition (1.8kg/mm ² during operation)	
Refrigerant Circuit		
Evacuation level	Degree of vacuum equivalent to about 133 Pa (abs) (1.0 mmHg)	
Piping length between indoor and outdoor units	Max. 20 m.	
Elevation between indoor and outdoor units	Max. 15 m.	
Piping vibration	Maximum 0.8 mm.	
Inclination of compressor	Within 5°	

Note : 1. High compression ratio test ; C.T./E.T. = 62/-20°C ; has been performed already.
 2. The temperature must be lower than this critical value even the unit has been using for many years.
 3. These Piping Length and Elevation for all series are based on pipe size following this ; Liquid : Ø 9.52 mm. (3/8")
 Gas : Ø 15.88 mm. (5/8")

Condition Application :

Application Range

- Evaporating Temperature Range -27°C to 26°C (-16.6°F to 78.8°F)
- Condensing Temperature Range -27°C to 65°C (-16.6°F to 149°F)
- Refrigerant R-410A
- Discharge Gas Temperature 120°C (248°F) max. for Air Cond
115°C (239°F) max. for Heat Pump

ASRE - T Rating Condition

- Evaporating Temperature 7.2°C (45°F)
- Return Gas Temperature 35.0°C (95°F)
- Condensing Temperature 54.4°C (130°F)
- Liquid Temperature 46.1°C (115°F)
- Ambient Temperature 35.0°C (95°F)





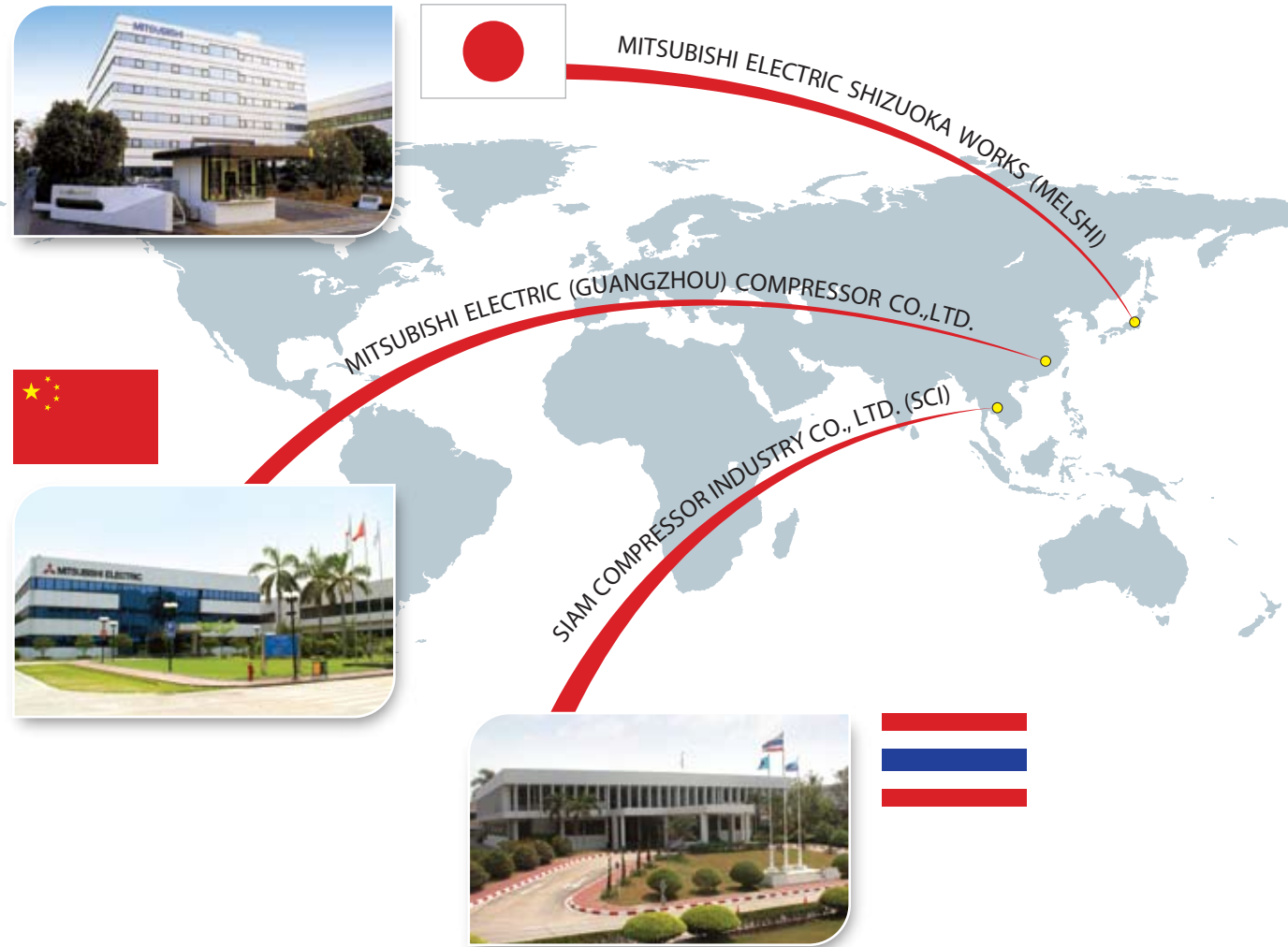
Company Profile

Siam Compressor Industry Co., Ltd. (SCI) is Thailand's first manufacturer of rotary compressor for room air conditioner. SCI was founded on May 25, 1990 as a subsidiary of Mitsubishi Electric Corporation of Japan, a world leader in compressor technology with over 70 years of experience. So successful was SCI in the first year of production that we were able to open a second plant only five years later, on December 16, 1995. Further milestones since then have been the inauguration of our research and development centre in 1998, the launching of a new ozone-friendly compressor that does not use HCFC coolant in 1999 and the opening of a third plant on October 16, 2002.

Since 2003, SCI has been producing Advanced Scroll Compressor utilizing Frame-Complaint Mechanism technology, thus saving energy and minimizing energy loss due to friction. SCI remains at the forefront of the global compressor industry in terms of technical progress, efficiency of production, the competence of our trained staff and our ongoing expansion.

Important Milestones

- 1988 : Registered the company (December 7th)
- 1990 : Produced the 1st Rotary Compressor of Thailand
- 1994 : Acquired ISO 9002
- 1995 : Established Factory No.2
- 1997 : Acquired ISO 14001
- 1998 : Established R & D Center
- 1999 : Received Prime Minister Award for Excellent Exporter and Industrial Management.
First Production of R-407C spec.
- 2000 : Received Millennium Business Award for Environmental Achievement from UNEP and ICC
- 2001 : Mitsubishi Electric took over all share. Acquired TIS 18001 & ISO 9001
- 2002 : Reached the 10 million set - production. First Production of R-410A spec.
- 2002 : Established Factory No.3 and launched scroll compressor production.
- 2004 : Received Prime Minister Award for Excellent Productivity Management
- 2006 : Received TPM Award from JIPM (Japanese Institute of Plant Maintenance)
- 2006 : Reached the 20 million set - production.
- 2008 : Reached the 1 million set - scroll compressor production.



Global Mitsubishi Compressor Line-Up

	Nominal Output (kW)	Nominal Output (kW)											
		0.1	0.5	1.0	1.5	3.0	6.0	8.0	10.0				
Mitsubishi Electric Corp., Shizuoka Works (Japan)	Single Rotary & Reciprocating	1HP		2HP		4HP		8HP		10HP		13HP	
	Twin Rotary	1HP		2HP		4HP		8HP		10HP		13HP	
	Inverter Single Rotary	1HP		2HP		4HP		8HP		10HP		13HP	
	Inverter Twin Rotary	1HP		2HP		4HP		8HP		10HP		13HP	
Mitsubishi Electric (Guangzhou) Compressor Co.,Ltd (China)	Single Rotary	1HP		2HP		4HP		8HP		10HP		13HP	
	Inverter Single Rotary	1HP		2HP		4HP		8HP		10HP		13HP	
	Inverter Twin Rotary	1HP		2HP		4HP		8HP		10HP		13HP	
	Twin Rotary	1HP		2HP		4HP		8HP		10HP		13HP	
Siam Compressor Industry Co.,Ltd. (Thailand)	Single Rotary	1HP		2HP		4HP		8HP		10HP		13HP	
	Inverter Twin Rotary	1HP		2HP		4HP		8HP		10HP		13HP	
	Scroll	1HP		2HP		4HP		8HP		10HP		13HP	
	Inverter Scroll	1HP		2HP		4HP		8HP		10HP		13HP	

Compressor Line-Up

Compressor Series	kW Capacity	2	3	4	5	6	7	8	9	10	11	12	13
	Btu/hrs	7,500	12,000	16,000	24,000	26,000	28,000	32,000	36,000	40,000	44,000		
R Series		50Hz		60Hz									
P Series				50Hz		60Hz							
N Series				50Hz		60Hz							
T Series				60Hz									
S Series						60Hz							
Ultra Tropical				50Hz		60Hz							

Our rotary compressor

Powerful rotary compressors, under MITSUBISHI ELECTRIC technology, which are suitable designed for various applications especially air-conditioner for residential and commercial use, are smoothly operated with better performance and durability even in harsh environment resulting from our special design with selective raw material and meticulous process.

Efficiency : To cope with Global warming concern, which can affect our world climate circumstances, people tend to rely on more energy efficient appliances. Many standards have been continuously developed to serve this energy-saving issue notably for HVAC which is a major energy consumption scene in daily lifestyle. To facilitate current and future HVAC standard requirements, SCI provides supreme performance product with full line-up range and specialized design to serve in every different application using alternative refrigerant enabling a sustainable environmental development.

Our high performance rotary compressor comes from design and production technology advancement including compressor energy usage analysis with computerized base by Computer-Aided Engineering (CAE) software to simulate compression mechanism and scrutinize a refrigerant flow. Superior motor design is implemented with high-graded selective material composed with high density technology to insert winding on production process.

Reliability : Our state-of-the-art facilities, with automatic line control and customized production technique, leads to low defective rate and reliable product with less deviation of performance. Every rotary compressor delivered to our customer has passed a quality assurance in every production process controlled by robot and our experienced staff. These made MITSUBISHI name stands for high quality for more than 70 years.

Durability : Our rotary compressor has special design for longer life-time, verified by life testing on every product which can proof that our rotary can maintain good efficiency over 10 years of operation.

Product variety : In order to attain the best efficiency and product differentiation, compressor variety is essential in each application and condition. Our rotary compressor can serve in any various products of application, refrigerants, operating temperature, sizing, electrical power supply and other special requirements.

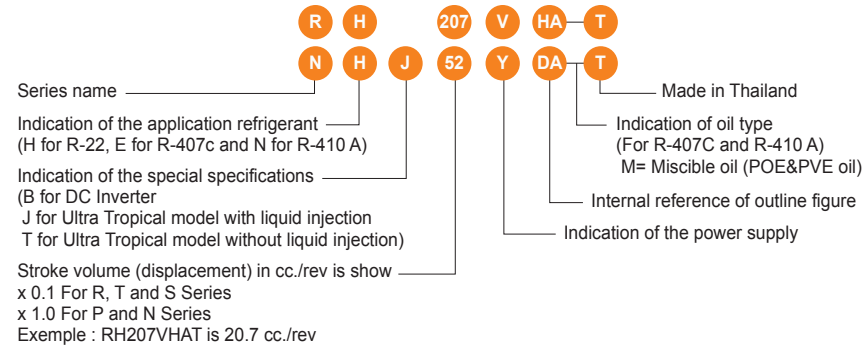
From all of these reasons, our rotary compressors are acquired a trustworthiness from our customers for many years therefore making our rotary renowned in global market.



Rotary Compressor

General Information SCI R-22, Ultra Tropical, R-407C, R-410A

Model Code Diagram

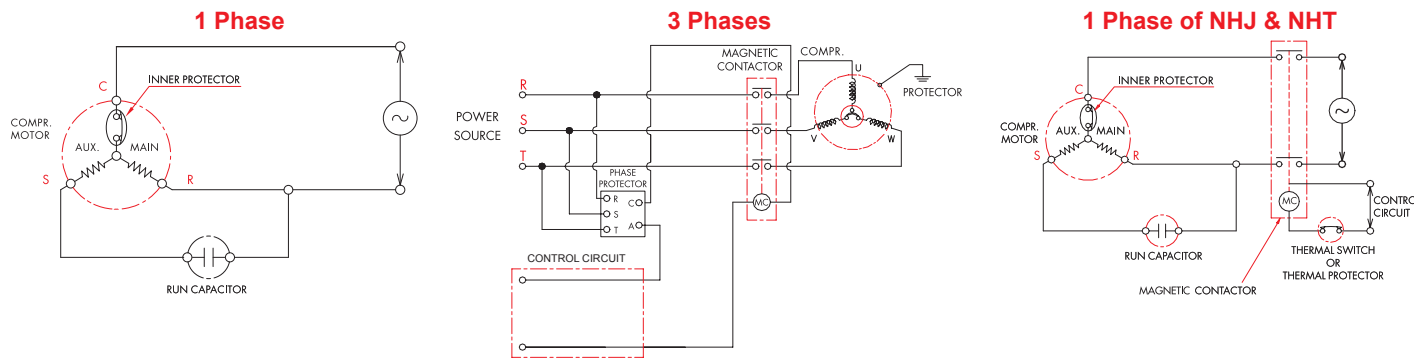


Power Supply Symbol

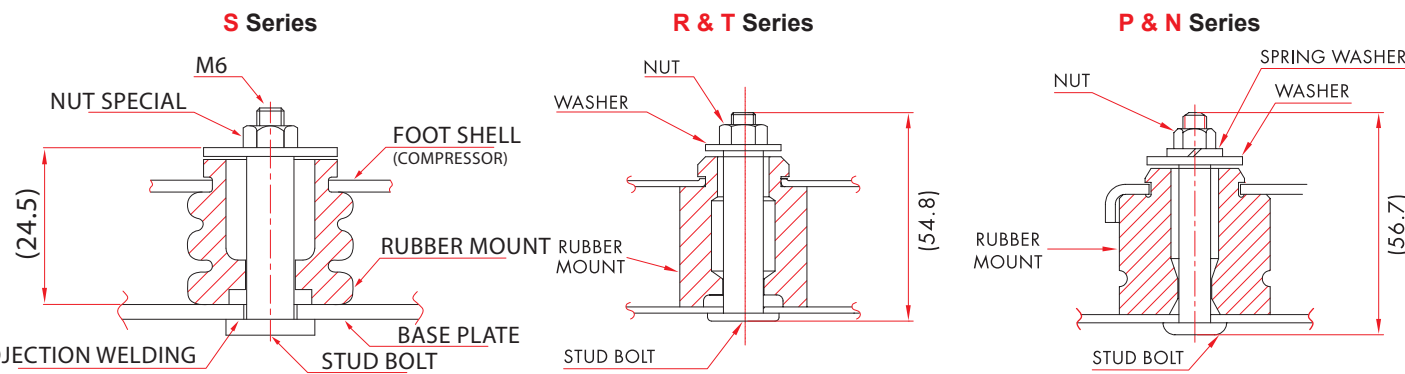
Symbol	Phase	Rated Voltage(V)	Rated Frequency(Hz)	Note
N	1	208-230	60	-
V	1	220-240	50	-
W	1	115-120	60	A
C	1	200-220	50	A
H	1	265-277	60	A
T	3	200/200-230	50/60	B
Y	3	380-415/400(460)	50/60	B

Note : A = Available in some model of R series
B = Available in some model of N series

Wiring Diagram



Mounting Assembly



Compressor Accessories

R & T series & PHT & PH Compact & NH Compact



- 1 Terminal Cover
- 2 Packing
- 3 Flange Nut
- 4 Rubber Washer
- 5 Rubber Mount

PH & PE & NH & NE & NN



- 1 Terminal Cover
- 2 Clip
- 3 Gasket
- 4 Rubber Mount

Models	Capacity			Input		Nominal Output		COP. (W/W)	EER. (Btu/hr*w)	Run Cap. (µF/VAC)	Weight (kgs.)	Oil Q'ty (CC.)
	W	Kcal/hr	Btu/hr	Watt	Amps	Hp	kW					

High EER Models

a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase

RH130VHST	2,255	1,939	7,698	700	3.22	0.87	0.65	3.22	11.00	25/370	13.3	300
RH140VHST	2,395	2,059	8,174	740	3.41	0.94	0.70	3.23	11.04	25/370	13.3	300
RH145VHST	2,488	2,139	8,492	770	3.56	0.94	0.70	3.23	11.03	25/370	13.3	300
RH154VHST	2,662	2,289	9,087	820	3.79	1.01	0.75	3.24	11.08	25/370	13.3	300
RH165VHST	2,872	2,469	9,801	890	4.12	1.07	0.80	3.23	11.01	25/370	13.3	300
RH174VHST	2,998	2,578	10,239	930	4.30	1.14	0.85	3.22	11.00	25/370	13.3	300
RH189VHST	3,325	2,859	11,348	1,040	4.85	1.21	0.90	3.19	10.91	30/370	15.4	520
RH197VHST	3,468	2,982	11,833	1,058	4.92	1.34	1.00	3.28	11.18	30/370	15.4	520
RH207VHST	3,670	3,156	12,522	1,140	5.30	1.34	1.00	3.22	11.00	30/370	15.4	520
RH220VHST	3,906	3,359	13,332	1,210	5.65	1.41	1.05	3.23	11.02	30/370	15.4	520
RH231VHST	4,093	3,519	13,967	1,270	5.92	1.48	1.10	3.22	11.00	35/370	15.4	520
RH247VHST	4,372	3,759	14,920	1,360	6.32	1.61	1.20	3.21	10.97	35/370	15.4	520
RH277VHST	4,848	4,169	16,541	1,530	7.10	1.74	1.30	3.16	10.81	40/370	15.4	520
RH313VAGT	5,640	4,850	19,244	1,746	8.43	1.74	1.30	3.23	11.02	45/370	15.7	520
RH313VAJT	5,640	4,850	19,244	1,746	8.43	1.74	1.30	3.23	11.02	45/370	15.7	520

b) Electrical 60 Hz : 115 - 120 Volt : 1 Phase

RH130WHHT	2,697	2,319	9,206	850	7.50	0.87	0.65	3.17	10.83	75/220	13.3	300
RH135WHHT	2,825	2,429	9,642	890	7.85	0.87	0.65	3.17	10.83	75/220	13.3	300
RH140WHHT	2,918	2,509	9,960	920	8.15	0.94	0.70	3.17	10.82	80/220	13.3	300
RH145WHHT	3,046	2,619	10,396	960	8.50	0.94	0.70	3.17	10.83	80/220	13.3	300
RH165WHHT	3,453	2,969	11,785	1,090	9.65	1.07	0.80	3.17	10.81	85/220	13.3	300
RH189WRAT	4,011	3,449	13,690	1,270	11.25	1.21	0.90	3.16	10.78	100/220	15.4	520
RH197WRAT	4,081	3,509	13,928	1,300	11.50	1.21	0.90	3.14	10.72	100/220	15.4	520

Premium High EER Models

c) Electrical 60 Hz : 208 - 230 Volt : 1 Phase

RH130NHHT	2,697	2,319	9,206	840	3.85	0.87	0.65	3.21	10.96	25/370	13.3	300
RH135NHHT	2,825	2,429	9,642	885	4.10	0.87	0.65	3.20	10.89	25/370	13.3	300
RH140NHHT	3,000	2,580	10,236	935	4.30	0.94	0.70	3.21	10.95	25/370	13.3	300
RH145NHHT	3,070	2,640	10,476	950	4.40	0.94	0.70	3.23	11.03	25/370	13.3	300
RH154NHHT	3,220	2,769	10,991	995	4.58	1.01	0.75	3.23	11.05	30/370	13.3	300
RH167NRAT	3,558	3,059	12,142	1,100	5.06	1.07	0.80	3.23	11.04	30/370	15.4	520
RH174NHHT	3,745	3,220	12,777	1,160	5.35	1.07	0.80	3.23	11.02	25/370	13.3	300
RH189NRAT	4,047	3,480	13,807	1,250	5.76	1.21	0.90	3.23	11.03	30/370	15.4	520
RH197NRAT	4,209	3,619	14,364	1,305	6.00	1.21	0.90	3.22	11.01	30/370	15.4	520
RH207NRAT	4,418	3,799	15,078	1,370	6.35	1.34	1.00	3.22	11.00	30/370	15.4	520
RH220NRAT	4,674	4,019	15,950	1,450	6.70	1.48	1.10	3.22	11.00	35/370	15.4	520
RH231NRAT	4,941	4,248	16,864	1,540	7.16	1.48	1.10	3.21	10.95	35/370	15.4	520
RH247NRAT	5,267	4,529	17,975	1,650	7.65	1.61	1.20	3.19	10.89	35/370	15.4	520
RH277NRAT	5,884	5,059	20,078	1,840	8.55	1.74	1.30	3.20	10.91	40/370	15.4	520
RH313NRAT	6,700	5,761	22,860	2,140	9.91	2.41	1.80	3.13	10.68	45/400	15.7	520

Compact Models

a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase

RH197VHRT	3,610	3,104	12,317	1,060	5.12	1.34	1.00	3.38	11.55	30/370	15.4	520
RH207VHRT	3,712	3,192	12,670	1,097	5.21	1.34	1.00	3.38	11.53	30/370	14.9	520
RH207VRJT	3,740	3,216	12,761	1,090	5.14	1.30	1.00	3.43	11.71	30/370	15.1	520
RH277VAMT	4,780	4,110	16,309	1,480	6.85	1.07	1.03	3.23	11.02	40/370	15.3	440
RH277VHRT	4,930	4,239	16,821	1,507	7.16	1.74	1.30	3.27	11.16	40/370	15.4	520
RH313VAMT	5,650	4,858	19,278	1,700	7.95	1.07	1.03	3.32	11.34	50/370	16.1	520

b) Electrical 60 Hz : 208 - 230 Volt : 1 Phase

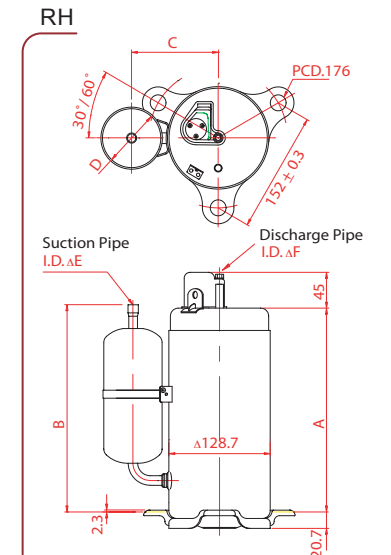
RH207NRHT	4,580	3,938	15,626	1,355	6.28	1.34	1.00	3.38	11.53	35/370	15.4	520
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Note : 1. Testing condition ASRE-T,
for V code at 1Phase 220Volt 50Hz,
for N code at 1Phase 220Volt 60Hz,
for W code at 1Phase 115Volt 60Hz

2. All figures indicated are nominal value,
for detailed specification,
please contact sales representative

3. Oil type is NM56P

Models	Dimension (mm.)					
	A	B	C	D	E	F
RH130-174 VHST						
RH130-165 WHHT	211.3	240.8	101.0	60.5	9.6	8.0
RH130-174 NHHT						
RH207-220VRFT	211.3	240.8	101.0	60.5	12.7	8.0
RH189-277NRAT	246.2	258.5	101.0	60.5	9.6	8.0
RH277NRHT						
RH189-277VHST						
RH189-197 WRAT	256.2	260.5	110.5	74.0	12.7	8.0
RH197-207VHRT						
RH207VRJT						
RH277VHRT	256.2	265.5	110.5	74.0	12.7	8.0
RH313VAGT	261.2	282.5	110.5	74.0	12.7	9.7
RH313VAJT						
RH313NRAT	261.2	284.5	110.5	74.0	16.0	9.7
RH313VAMT	268.2	287.5	110.5	74.0	12.7	9.6



Models	Capacity			Input		Nominal Output		COP. (W/W)	EER. (Btu/hr*w)	Run Cap. (µF/VAC)	Weight (kgs.)	Oil Q'ty (CC.)
	W	Kcal/hr	Btu/hr	Watt	Amps	Hp	kW					

High EER Models

4Legs

a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase

PH33VPET	5,978	5,140	20,395	1,850	8.60	2.01	1.50	3.23	11.02	50/370	22.3	900
PH36VPET	6,466	5,560	22,062	2,015	9.30	2.15	1.60	3.21	10.95	55/400	22.3	900
PH39VPET	6,885	5,920	23,490	2,150	10.00	2.28	1.70	3.20	10.93	60/400	22.3	900
PH41VPJT	7,519	6,465	25,678	2,355	11.00	2.55	1.90	3.19	10.90	60/400	22.3	900

b) Electrical 60 Hz : 208 - 230 Volt : 1 Phase

PH33NPBT	7,117	6,120	24,284	2,200	10.80	2.01	1.50	3.23	11.04	35/370	21.8	900
PH36NPBT	7,733	6,650	26,387	2,390	11.60	2.15	1.60	3.23	11.04	35/370	22.1	900
PH39NPBT	8,257	7,100	28,173	2,560	12.60	2.28	1.70	3.22	11.00	35/370	22.1	900
PH41NPBT	8,930	7,678	30,469	2,850	13.40	2.55	1.90	3.13	10.69	45/420	22.1	900

3Legs

a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase

PH33VTET	5,978	5,140	20,395	1,850	8.60	2.01	1.50	3.23	11.02	50/370	22.3	900
PH36VTET	6,466	5,560	22,062	2,015	9.30	2.15	1.60	3.21	10.95	55/400	22.3	900
PH39VTET	6,884	5,920	23,490	2,150	10.00	2.28	1.70	3.20	10.93	60/400	22.3	900
PH41VTJT	7,519	6,465	25,678	2,355	11.00	2.55	1.90	3.19	10.90	60/400	22.3	900

b) Electrical 60 Hz : 208 - 230 Volt : 1 Phase

PH33NTBT	7,117	6,120	24,284	2,200	10.80	2.01	1.50	3.23	11.04	35/370	21.8	900
PH36NTBT	7,733	6,650	26,387	2,390	11.60	2.15	1.60	3.23	11.04	35/370	22.1	900
PH39NTBT	8,257	7,100	28,173	2,560	12.60	2.28	1.70	3.22	11.00	35/370	22.1	900
PH41NTJT	8,930	7,678	30,469	2,850	13.40	2.55	1.90	3.13	10.69	45/420	22.1	900

Premium High EER Models

4Legs

a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase

PH36VPXT	6,685	5,748	22,809	2,000	9.30	2.15	1.60	3.34	11.40	55/400	22.4	900
PH39VPXT	6,685	5,748	22,809	1,970	9.00	2.15	1.06	3.39	11.58	60/420	22.5	670
PH39VPXT	7,170	6,165	24,464	2,145	10.00	2.30	1.70	3.34	11.41	60/400	22.8	900

Compact Models

4Legs

a) Electrical 60 Hz : 208 - 230 Volt : 1 Phase

PH33NXBT	7,117	6,120	24,284	2,200	10.80	2.01	1.50	3.23	11.04	50/400	20.9	670
PH36NXBT	7,733	6,650	26,387	2,390	11.60	2.15	1.60	3.23	11.04	60/380	21.4	670

3Legs

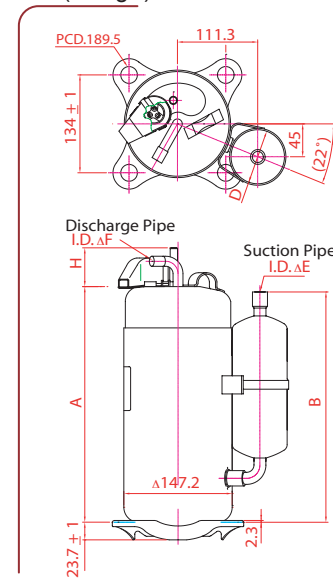
a) Electrical 60 Hz : 208 - 230 Volt : 1 Phase

PH33NWBT	7,117	6,120	24,284	2,200	10.80	2.01	1.50	3.23	11.04	50/400	20.9	670
PH36NWBT	7,733	6,650	26,387	2,390	11.60	2.15	1.60	3.23	11.04	60/380	20.9	670

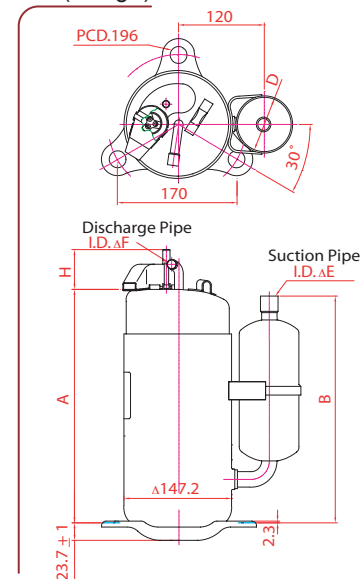
- Note :**
1. Testing condition ASRE-T, for V code at 1Phase 220Volt 50Hz, for N code 1Phase 220Volt 60Hz
 2. All figures indicated are nominal value, for detailed specification, please contact sales representative
 3. Oil type is NM56EP

PH (4 legs)	Models	Dimension (mm.)					
		A	B	D	E	F	H
PH (4 legs)	PH33-39VPET	316.3	308.9	74.0	16.0	9.6	52.0
	PH33-41NPBT						
	PH33-39VPXT						
	PH36 VPTT						
PH (3 legs)	PH41 VPJT	316.3	308.9	74.0	16.0	9.6	None
	PH33-39VTET						
	PH33-39NTBT						
	PH41 VTJT						
PH (4 legs) Compact	PH33-36NXBT	282.2	295.8	74.0	16.0	9.6	45.0
	PH41 NTJT						
PH (3 legs) Compact	PH33-36NXBT	281.3	293.9	74.0	16.0	9.6	45.0
	PH33-36NWBT						

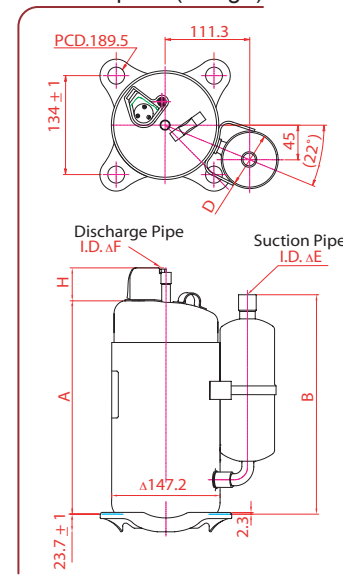
PH (4Legs)



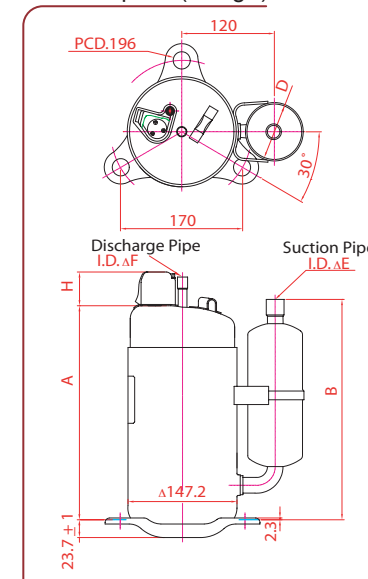
PH (3Legs)



PH Compact (4Legs)



PH Compact (3Legs)



Models	Capacity			Input		Nominal Output		COP. (W/W)	EER. (Btu/hr*w)	Run Cap. (µF/VAC)	Weight (kgs.)	Oil Q'ty (CC.)
	W	Kcal/hr	Btu/hr	Watt	Amps	Hp	kW					

High EER Models

a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase

NH41VNHT	7,570	6,510	25,829	2,410	10.90	2.55	1.90	3.14	10.72	45/420	31.3	1300
NH44VNHT	7,800	6,708	26,614	2,440	11.00	2.68	2.00	3.20	10.91	50/420	30.3	1300
NH47VNHT	8,500	7,310	29,002	2,700	12.60	2.95	2.20	3.15	10.74	50/420	31.2	1300
NH52VNHT	9,674	8,320	33,008	3,100	14.20	3.35	2.50	3.12	10.65	60/420	31.2	1300
NH56VNHT	10,572	9,092	36,072	3,450	15.80	3.62	2.70	3.06	10.46	60/420	32.2	1300

b) Electrical 60 Hz : 208 - 230 Volt : 1 Phase

NH41NAHT	9,405	8,088	32,090	2,894	12.90	2.55	1.90	3.25	11.09	50/400	32.2	1300
NH44NAHT	9,884	8,500	33,724	3,095	14.10	2.68	2.00	3.19	10.90	55/380	31.8	1300
NH47NAHT	10,570	9,090	36,065	3,340	15.10	2.95	2.20	3.16	10.80	60/380	31.8	1300
NH52NAHT	11,692	10,055	39,893	3,710	16.81	3.35	2.50	3.15	10.75	65/400	31.8	1300
NH56NAHT	12,860	11,060	43,878	4,100	18.68	3.62	2.70	3.14	10.70	65/400	32.2	1300

c) Electrical 50/60 Hz : 380 - 415 Volt : 3 Phases

NH41YDTT	7,450	6,407	25,419	2,310	3.95	2.55	1.90	3.23	11.00	-	30.3	1300
NH44YDTT	8,100	6,966	27,637	2,510	4.30	2.68	2.00	3.23	11.01	-	29.3	1300
NH47YDTT	8,650	7,439	29,514	2,680	4.60	2.95	2.20	3.23	11.01	-	29.3	1300
NH52YDTT	9,710	8,351	33,131	3,010	5.30	3.35	2.50	3.23	11.01	-	30.3	1300
NH56YDTT	10,650	9,159	36,338	3,300	5.85	3.62	2.70	3.23	11.01	-	32.2	1300

d) Electrical 50/60 Hz : 200-230 Volt : 3 Phases

NH38TKAT	6,745	5,801	23,014	2,210	7.50	2.28	1.70	3.05	10.41	-	29.2	1300
NH41TKAT	7,267	6,250	24,795	2,420	8.00	2.55	1.90	3.00	10.25	-	29.2	1300
NH44TKAT	7,919	6,810	27,020	2,550	8.80	2.68	2.00	3.11	10.60	-	28.5	1600
NH47TKAT	8,372	7,200	28,565	2,790	10.00	2.95	2.20	3.00	10.24	-	28.2	1300
NH52TKAT	9,442	8,120	32,216	3,160	10.90	3.35	2.50	2.99	10.19	-	29.3	1300
NH56TKAT	10,291	8,850	35,113	3,420	11.60	3.62	2.70	3.01	10.27	-	31.0	1300

Premium High EER Models

a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase

NH41VNWT	7,529	6,465	25,689	2,216	10.20	2.55	1.90	3.40	11.60	45/420	30.2	1300
NH47VNWT	8,800	7,633	30,026	2,634	12.20	2.95	2.20	3.34	11.40	55/400	30.7	1300
NH52VNWT	9,850	8,453	33,608	3,000	13.90	3.35	2.50	3.28	11.20	55/400	30.7	1300

Ultra Tough Models

a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase

NH41VXBT	7,570	6,510	25,829	2,410	10.90	2.55	1.90	3.14	10.72	45/420	31.3	1300
NH44VXBT	8,100	6,966	27,637	2,510	11.80	2.68	2.00	3.18	10.84	50/420	30.3	1300
NH47VXBT	8,650	7,439	29,514	2,750	12.60	2.95	2.20	3.15	10.73	50/420	31.2	1300
NH52VXBT	9,676	8,321	33,015	3,100	14.20	3.35	2.50	3.12	10.65	60/420	31.2	1300
NH56VXBT	10,574	9,094	36,078	3,450	15.80	3.62	2.70	3.06	11.47	60/420	31.2	1300

b) Electrical 60 Hz : 208 - 230 Volt : 1 Phase

NH44NXBT	9,984	8,586	34,065	3,095	14.10	2.68	2.00	3.23	11.01	55/380	31.8	1300
NH47NXBT	10,570	9,090	36,065	3,340	15.10	2.95	2.20	3.16	10.80	60/380	31.8	1300
NH52NXBT	11,692	10,055	39,893	3,710	16.81	3.35	2.50	3.15	10.75	65/400	31.8	1300
NH56NXBT	13,050	11,223	44,527	4,200	18.68	3.62	2.70	3.11	10.60	65/400	32.2	1300

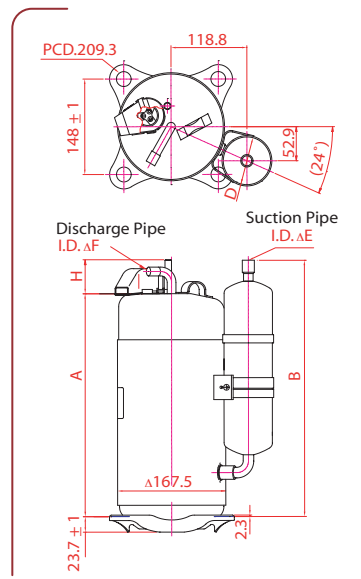
c) Electrical 50 Hz : 380 - 415 Volt : 3 Phases

NH41YXCT	7,450	6,463	25,419	2,310	3.95	2.55	1.90	3.23	11.00	-	30.3	1300
NH47YXCT	8,650	7,439	29,514	2,680	4.60	2.95	2.20	3.23	11.01	-	29.3	1300
NH52YXCT	9,710	8,351	33,131	3,010	5.30	3.35	2.50	3.23	11.01	-	30.6	1300
NH56YXCT	10,650	9,159	36,338	3,300	5.85	3.62	2.70	3.23	11.01	-	31.3	1300

- Note :**
1. Testing condition ASRE-T, for V code at 1Phase 220Volt 50Hz, for N code 1Phase 220Volt 60Hz, for Y code at 3Phases 400Volt 50Hz.
 2. All figures indicated are nominal value, for detailed specification, please contact sales representative
 3. Oil type is NM56EP

Models	Dimension (mm.)					
	A	B	D	E	F	H
NH41-47VNHT	341.3	392.3	74.0	16.0	9.6	52.0
NH41-47VXBT						
NH44-47NXBT						
NH38-47TKAT						
NH41-47YDTT						
NH41-47YXCT						
NH52-56VNHT	341.3	392.3	74.0	19.1	9.6	52.0
NH52-56VXBT						
NH52-56NAHT						
NH52-56NXBT						
NH52-56TKAT						
NH52-56YDTT						
NH52-56YXCT	341.3	392.3	74.0	19.1	9.6	None
NH41VNWT						

NH



Models	RH	PH	NH
Compressor			
Type	Rolling Piston Type Rotary		
Displacement (cc/rev.)	13.0~31.3	28.1~44.1	28.1~38.8, 41.8~56.9
Refrigerant type	R-22		
Pressure			
Maximum Condensing	26.5 kg/cm ² G /65°C (377 psiG/149°F)		
Evaporating	2.61~7.05 kg/cm ² G (37 ~ 100 psiG)		
Compression Ratio	6 or less	8 or less (See Note1)	
Abnormal Rise in pressure	40 kg/cm ² G (569 psiG) or less (According to JIS BB620 Critical Pressure limit is 42 kg/cm ² G for fan block)		
Temperature			
Condensing	28°C ~ 65°C (82.4°F~149°F)		
Evaporating	-10°C ~ 15°C (14°F ~ 59°F)		
Discharged Gas (max)	120°C(248°F), In case of Heat pump or De-humidifier, this limit is 115°C(239°F) (See Note 2)		
Suction Gas (max)	must be over 0°C (No liquid back) (See Note 2)		
Discharged gas's superheat	20°C or more		
Outdoor Ambient Temp.	Air cond :20°C ~ 43 °C (68°F ~ 109.4°F) Heat Pump :-10°C ~ 43 °C(14°F ~ 109.4°F)		
Electrical			
Supply voltage during operation	Rated voltage ±10%		
Starting voltage	Minimum 80% of rated voltage (at 10.3 kg/cm ² G balancing pressure) In case of 208-230 V Rated Voltage (N-code compressor), the starting voltage shall be 85% or more. This shall be measured at compressor termin.		
Reverse Phase (Rotation)	Not possible		
Frequency range	Rated Frequency ±2%		
ON/OFF			
ON/OFF Frequency	Less than 170,000 cycles		
ON/OFF Cycle	The ON/OFF cycle shall be a maximum of 10 time/hour. OFF time shall be the time until the high side pressure reach to balance pressure (more than 3 min)		
Pipe Stress	3.5 kg/mm ² or less at start and stop condition (1.8 kg/mm ² during operation)		
Refrigerant Circuit			
Maximum Refrigerant Charge	See in General Spec		
Evacuation level	Degree of vacuum equivalent to about 133 Pa (abs) (1.0 mmHg)		
Piping length between indoor and outdoor units	Max. 15 m. for RH130 - RH165 Max. 20 m. for RH167 - RH 313	Max. 30 m. (for Ultra Tough Model, Max. 50 m.) (See also Note 3)	
Elevation between indoor and outdoor units	Max. 7 m. for RH130 - RH165 Max. 15 m. for RH167 - RH 313	Max. 30 m. (See also Note 3)	
Piping Vibration	Maximum 0.8 mm.		
Inclination of compressor	Within 5°		

Note : 1. High compression ratio test ; C.T./E.T. = 62/-12°C ; has been performed already.
2. The temperature must be lower than this critical value even the unit has been using for many years.
3. These Piping Length and Elevation for all series are based on pipe size following this ;
Liquid : Ø 9.52 mm. (3/8") Gas : Ø 15.88 mm. (5/8")

Condition Application :

Application Range

- Evaporating Temperature Range -10°C to 15 °C (14°F to 59 °F)
- Condensing Temperature Range 28°C to 65 °C (82.4°F to 149 °F)
- Refrigerant R-22
- Discharge Gas Temperature 120 °C (248°F) max. for Air Cond
115 °C (239°F) max. for Heat Pump

ASRE - T Rating Condition

- Evaporating Temperature 7.2°C (45°F)
- Return Gas Temperature 35.0°C (95°F)
- Condensing Temperature 54.4°C (130°F)
- Liquid Temperature 46.1°C (115°F)
- Ambient Temperature 35.0°C (95°F)

What are the Ultra Tough compressors?

'Ultra Tough' are rotary compressors which are suitably invented for using in serve conditions. Its extremely high durable and reliable mechanism can benefit to enhance product life-time, powerful motor with compact size and lightweight (~20% lower weight when compare with reciprocating compressor at the same cooling capacity)

Ultra Tough is the latest technology of rotary compressor which has a specialty designed by adding new Oil circulation reduction mechanism that will result in the avoidance of oil out problem and the using of new alloy bearing to increase durability and help to protect liquid back and short starting problem.

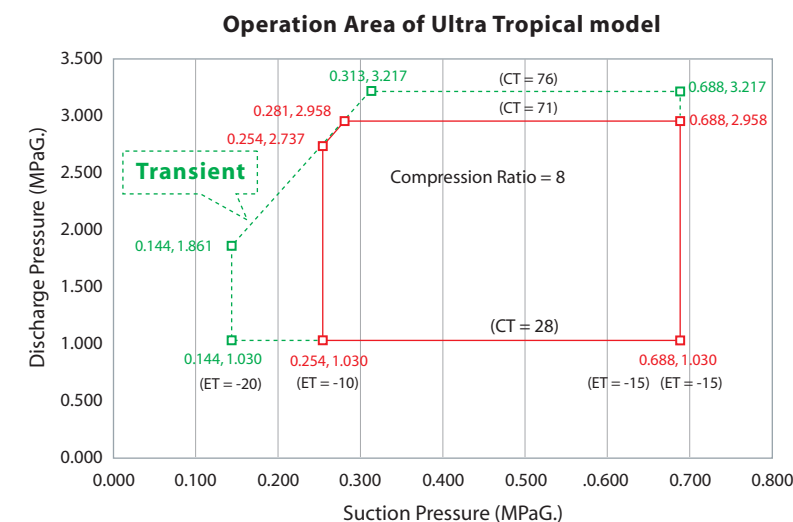
These ultra tropical rotary compressors which are suitably invented for high ambient zone, are prized for their extremely high reliable mechanism bringing to longer product life-time, powerful motor with compact size and light weight. All of these ultra tropical advanced features are resulting from our tropical market insight and our expert technology owned by MITSUBISHI ELECTRIC.

• **Higher operating ambient temperature**

up to 54°C (CT~71°C & CT~76°C for transient)

• **Higher operating pressure**

(up to 3.22 MPaG or 468.5 psiG). These ultra tropical compressors can superbly perform even in the very high temperature such as desert area. The well designed compressors are an ideal solution for every air-conditioning system in the world toughest tropical zone.



• **Mechanical part strenghtening**

During high ambient temperature operation, parts of compressor contacting together are corrosion easily. With Mitsubishi technology, all critical parts are treated with specialized material and specific hardening process causing compressor to be more durable.

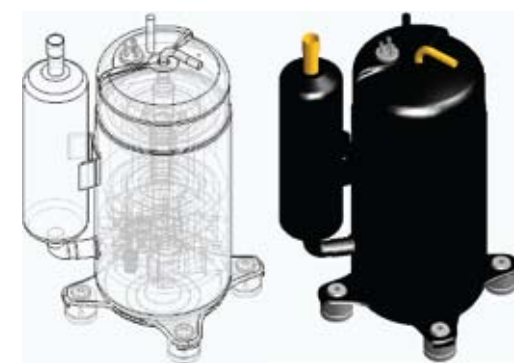
• **High torque motor**

Get greatest efficiency from the high performance motor with our ultra tropical compressor, which torque optimized for higher high temperature condition.

Our ultra topical model comprises of Non-Liquid Injection model and Liquid Injection model.

The non-liquid injection model is designed for smaller capacity, with special motor that is able to withstand high temperature operation without extra cooling down feature.

The Liquid injection model is specially designed for higher motor capacity that liquid refrigerant injecting is needed to reduce an extremely high temperature in limited area of operation.



Non-Liquid Injection model



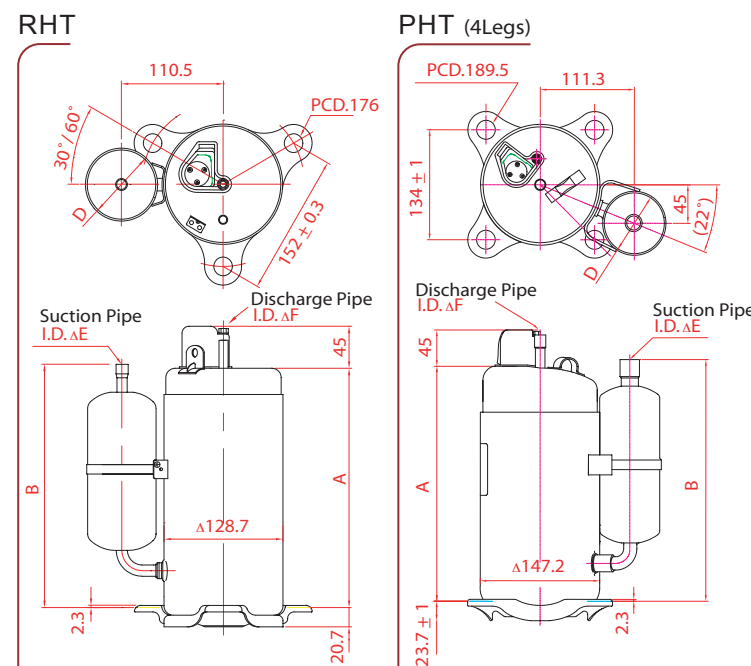
Liquid Injection model

From our compressor expertise and our experience in tropical design with full array of modern production line bring our ultra tropical compressor to be the genuine tropical compressor in the market.

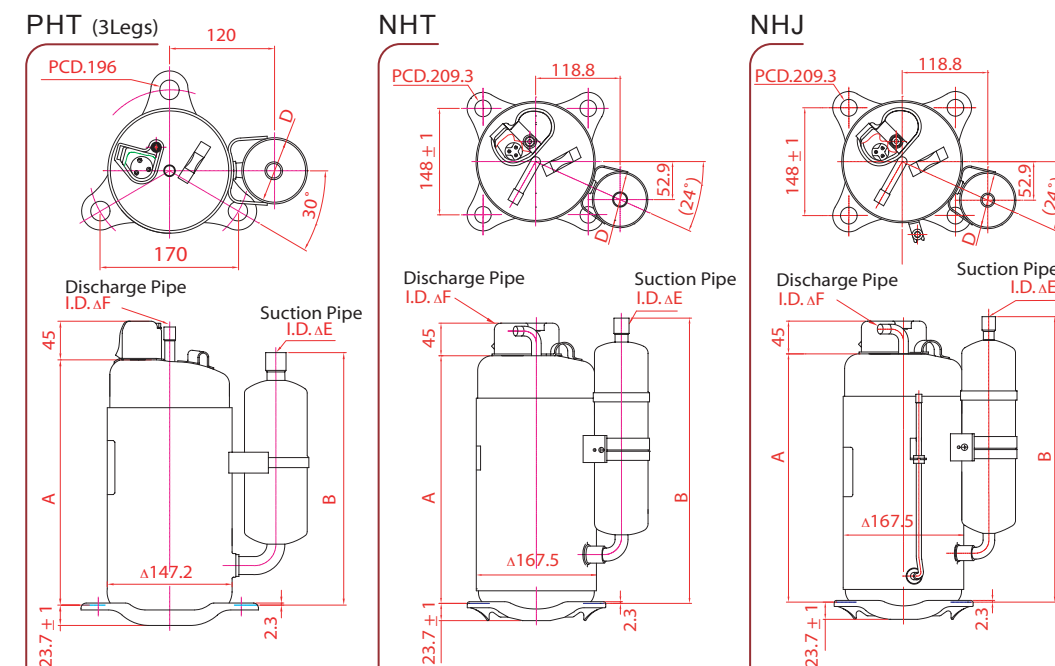
Models	Capacity			Input		Nominal Output		COP. (W/W)	EER. (Btu/hr*W)	Run Cap. (µF/VAC)	Weight (kgs.)	Oil Q'ty (CC.)
	W	Kcal/hr	Btu/hr	Watt	Amps	Hp	kW					
Ultra Tropical												
RHT												
a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase												
RHT313VADT	5,580	4,798	19,039	1,835	8.50	1.74	1.30	3.04	10.37	50 / 400	15.7	520
RHT277NAAT	5,880	5,056	20,080	1,840	8.55	1.74	1.30	3.20	10.90	40 / 370	15.4	520
b) Electrical 60 Hz : 208 - 230 Volt : 1 Phase												
RHT277NAAT	5,880	5,056	20,080	1,840	8.55	1.74	1.30	3.20	10.90	40 / 370	15.4	520
PHT												
a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase												
4Legs												
PHT33VXET	6,000	5,159	20,470	1,880	8.80	2.01	1.50	3.19	10.89	60 / 400	20.9	670
PHT41VBAT	7,519	6,465	25,678	2,355	11.00	2.55	1.90	3.19	10.90	60 / 420	22.7	900
3Legs												
PHT33VWET	6,000	5,159	20,470	1,880	8.80	2.01	1.50	3.19	10.89	60 / 400	20.9	670
PHT41VDAT	7,519	6,465	25,678	2,355	11.00	2.55	1.90	3.19	10.90	60 / 420	22.7	900
b) Electrical 60 Hz : 208 - 230 Volt : 1 Phase												
4Legs												
PHT33NXBT	7,118	6,120	24,284	2,200	10.80	2.01	1.50	3.23	11.04	50 / 400	20.9	670
PHT36NXBT	7,733	6,650	26,387	2,390	11.60	2.15	1.60	3.23	11.04	60 / 380	20.9	670
3Legs												
PHT33NWBT	7,118	6,120	24,284	2,200	10.80	2.01	1.50	3.23	11.04	50 / 400	20.9	670
PHT36NWBT	7,734	6,650	26,387	2,390	11.60	2.15	1.60	3.23	11.04	60 / 380	20.9	670
NHT												
a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase												
NHT41VBAT	7,640	6,570	26,068	2,380	11.20	2.55	1.90	3.21	10.95	55 / 420	32.2	1,300
NHT44VBAT	7,850	6,751	26,784	2,490	11.60	2.68	2.00	3.15	10.76	55 / 420	31.2	1,300
NHT47VBAT	8,400	7,224	28,661	2,700	13.00	2.95	2.20	3.11	10.62	60 / 420	31.2	1,300
NHT52VBAT	9,320	8,015	31,800	2,970	14.10	3.35	2.50	3.14	10.71	60 / 420	31.2	1,300
b) Electrical 60 Hz : 208 - 230 Volt : 1 Phase												
NHT44NBBT	9,800	8,428	33,438	3,060	14.10	2.68	2.00	3.20	10.93	55 / 420	31.2	1,300
Ultra Tropical liquid Injection												
a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase												
NHJ56VNHT	10,572	9,092	36,072	3,450	15.80	3.62	2.70	3.06	10.46	60 / 420	32.2	1,300
b) Electrical 60 Hz : 208 - 230 Volt : 1 Phase												
NHJ47NAHT	10,570	9,090	36,065	3,340	15.10	2.95	2.20	3.16	10.80	60 / 380	32.2	1,300
NHJ52NAHT	11,692	10,055	39,893	3,710	16.81	3.35	2.50	3.15	10.75	65 / 400	32.2	1,300
NHJ56NAHT	12,860	11,060	43,878	4,100	18.68	3.62	2.70	3.13	10.70	65 / 400	32.2	1,300

Note : 1. Testing condition ASRE-T, for V code at 1Phase 220Volt 50Hz, for N code 1Phase 220Volt 60Hz, for Y code 3Phases 400Volt 50Hz
 2. All figures indicated are nominal value, for detailed specification, please contact sales representative
 3. Oil type is NM56EP

RHT	Models	Dimension (mm.)					
		A	B	D	E	F	
RHT	RHT313VADT	261.2	282.5	74.0	12.7	9.7	
	RHT277NAAT	256.2	260.5	74.0	12.7	8.0	
PHT (4Legs)	PHT33VXET	305.9	295.8	74.0	16.0	9.6	
	PHT33-36NXBT	340.0	308.9	74.0	16.0	9.5	
PHT (3Legs)	PHT33VWET	303.0	293.9	74.0	16.0	9.6	
	PHT33-36NWBT	340.0	308.9	74.0	16.0	9.6	
NHT	NHT41-47VBAT	341.3	392.3	74.0	16.0	9.6	
	NHT44NBBT	341.3	392.3	74.0	19.1	9.6	
NHJ	NHT52-56YBAT	341.3	392.3	74.0	16.0	9.6	
	NHJ52-56NAHT	341.3	392.3	74.0	19.1	9.6	



Models	RHT	PHT	NHT	NHJ
Compressor				
Type	Rolling Piston Type Rotary			
Displacement (cc/rev.)	22.0, 22.7, 29.5, 31.3	38.8, 36.5, 41.7, 44.1	41.8 ~ 52.4	47.4 ~ 56.9
Refrigerant type	R-22			
Pressure				
Condensing	Normal Range 1.03 ~ 2.60 MpaG/ 10.5 ~ 26.5 kg/ cm ² G/ 65°C/ 149.4 ~ 377.1 psiG Tropical Range 1.03 ~ 2.95 MpaG/ 10.5 ~ 30.1 kg/ cm ² G/ 65°C/ 149.4 ~ 427.9 psiG Maximum Limit (transient) 3.23 MPaG/ 33 kg/ cm ² G/ 468.5 psiG			
Evaporating	0.26 ~ 0.69 MPaG/ 2.61 ~ 7.05 kg/ cm ² G/ 37.7 ~ 100.1 psiG			
Compression Ratio	6 or less	8 or less (See Note1)		
Abnormal Rise in pressure	3.29 MPaG/ 40 kg/ cm ² G/ 568.5 psiG or less (According to JIS BB620 Critical Pressure limit is 42 kg/ cm ² G for fan block)			
Temperature				
Condensing	Normal Range 28°C ~ 65°C (82.4°F ~ 149°F) Tropical Range 28°C ~ 71°C (82.4°F ~ 160°F) Maximum limit (transient) 76°C (169°F)			
Evaporating	-10°C ~ 15°C (14°F ~ 59°F)			
Discharged Gas (max)	115°C (239°F) (See note 2)			
Suction gas's superheat	must be over 0°C (No liquid back) (See Note 2)			
Discharged gas's superheat	20°C or more			
Outdoor Ambient Temp.	Air cond : 20°C ~ 55 °C (68°F ~ 131°F) Heat Pump : -10°C ~ 55 °C (14°F ~ 131°F)			
Electrical				
Supply voltage during operation	Normal range Rated Voltage -15%, +10% in 220-240V (V-code) and Rated Voltage ±10% in 208-230V (N-code) Tropical Range Rated Voltage ±10% in 220-240V (V-code) and Rated Voltage -5% ±10% in 208-230V (N-code)			
Starting voltage	Minimum 70% of rated Voltage (at 10.3 kg/cm ² G balancing pressure) In case of 208-230 V Rated Voltage (N-code compressor), the starting voltage shall be 75% or more. This shall be measured at compressor terminal at instance of start.			
Reverse phase (rotation)	Not possible			
Frequency range	Rated Frequency ±2%			
ON/OFF				
ON/OFF Frequency	Less than 170,000 cycles			
ON/OFF Cycle	The ON/OFF cycle shall be a maximum of 10 time/hour. OFF time shall be the time until the high side pressure reach to balance pressure (more than 3 min)			
Refrigerant Circuit				
Maximum Refrigerant Charge	See in General Spec			
Evacuation level	Degree of vacuum equivalent to about 133 Pa (abs) (1.0 mmHg)			
Piping length between indoor and outdoor units	Max. 20 m.	Max. 30 m. (See also Note 3)		
Elevation between indoor and outdoor units	Max. 15 m.	Max. 20 m. (See also Note 3)		
Piping vibration	Maximum 0.8 mm.			
Inclination of compressor	Within 5°			



Note : 1. High compression ratio test ; C.T./E.T. = 62/-12°C ; has been performed already.
 2. The temperature must be lower than this critical value even the unit has been using for many years.
 3. These Piping Length and Elevation for all series are based on pipe size following this ; Liquid : Ø 9.52 mm. (3/8")
 Gas : Ø 15.88 mm. (5/8")

ASRE - T Rating Condition

- Evaporating Temperature 7.2°C (45°F)
- Return Gas Temperature 35.0°C (95°F)
- Condensing Temperature 54.4°C (130°F)
- Liquid Temperature 46.1°C (115°F)
- Ambient Temperature 35.0°C (95°F)

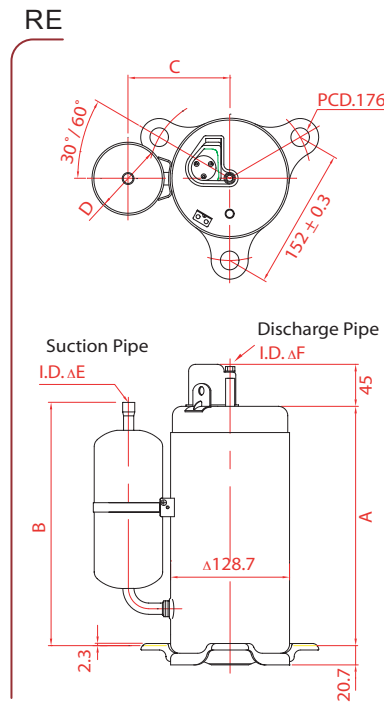
Models	Capacity			Input		Nominal Output		COP. (W/W)	EER. (Btu/hr*w)	Run Cap. (μF/VAC)	Weight (kgs.)	Oil Q'ty (CC.)
	W	Kcal/hr	Btu/hr	Watt	Amps	Hp	kW					
High EER Models												
a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase												
RE135VHSMT	2,240	1,926	7,642	730	3.30	0.87	0.65	3.07	10.47	25 / 370	13.2	300
RE145VHSMT	2,420	2,081	8,257	790	3.60	0.94	0.70	3.06	10.43	25 / 370	13.2	300
RE154VHSMT	2,580	2,219	8,805	840	3.80	1.01	0.75	3.07	10.47	25 / 370	13.2	300
RE165VHSMT	2,770	2,382	9,452	890	4.10	1.07	0.80	3.11	10.63	25 / 370	13.2	300
RE174VHSMT	2,920	2,511	9,964	940	4.30	1.07	0.80	3.10	10.60	25 / 370	13.2	300
RE189VHSMT	3,211	2,761	10,956	1,010	4.80	1.14	0.85	3.17	10.83	30 / 370	15.1	520
RE197VHSMT	3,331	2,864	11,364	1,050	5.00	1.21	0.90	3.17	10.83	30 / 370	15.1	520
RE207VHSMT	3,520	3,027	12,011	1,110	5.20	1.34	1.00	3.17	10.83	30 / 370	15.1	520
RE231VHSMT	3,940	3,388	13,444	1,250	5.90	1.48	1.10	3.15	10.75	30 / 400	15.1	520
RE247VHSMT	4,220	3,629	14,400	1,340	6.40	1.61	1.20	3.15	10.75	35 / 400	15.1	520
RE277VHSMT	4,701	4,042	16,039	1,520	7.20	1.74	1.30	3.09	10.55	40 / 370	15.1	520
RE313VADMT	5,380	4,626	18,353	1,770	8.34	1.74	1.30	3.04	10.36	45 / 370	15.7	520
b) Electrical 60 Hz : 115 - 120 Volt : 1 Phase												
RE135WHHMT	2,850	2,451	9,724	890	7.89	0.87	0.65	3.20	10.90	75 / 220	13.3	300
RE174WHHMT	3,640	3,130	12,419	1,130	9.93	1.14	0.85	3.22	11.00	85 / 220	13.2	300
c) Electrical 60 Hz : 208 - 230 Volt : 1 Phase												
RE135NHHT	2,719	2,338	9,279	868	4.12	0.87	0.65	3.13	10.69	25 / 370	13.3	300
RE174NHHT	3,610	3,104	12,317	1,138	4.19	1.07	0.80	3.17	10.82	25 / 370	13.2	300
RE207NRAMT	4,250	3,654	14,509	1,350	6.34	1.34	1.00	3.15	10.74	30 / 370	15.1	520
RE220NRAMT	4,500	3,869	15,354	1,422	6.64	1.34	1.00	3.16	10.80	30 / 370	15.1	520
RE231NRAMT	4,760	4,093	16,241	1,511	6.96	1.48	1.10	3.15	10.74	30 / 370	15.1	520
RE277NRAMT	5,660	4,867	19,311	1,805	8.55	1.74	1.30	3.15	10.70	40 / 370	15.4	520

Note : 1. Testing condition ASRE-T, for V code at 1Phase 220Volt 50Hz, for N code at 1Phase 220Volt 60Hz, for W code at 1Phase 115Volt 60Hz

2. All figures indicated are nominal value, for detailed specification, please contact sales representative

3. Oil type is FV50S

	Dimension (mm.)					
	A	B	C	D	E	F
RE135-174VHSMT	211.3	240.8	101.0	60.5	9.6	8.0
RE135-174WHHMT						
RE135-174NHHT						
RE189-277VHSMT	256.2	260.5	110.5	74.0	12.7	8.0
RE207-277NRAMT						
RE313VADMT	261.2	282.5	110.5	74.0	12.7	9.7



Models	Capacity			Input		Nominal Output		COP. (W/W)	EER. (Btu/hr*w)	Run Cap. (μF/VAC)	Weight (kgs.)	Oil Q'ty (CC.)
	W	Kcal/hr	Btu/hr	Watt	Amps	Hp	kW					
High EER Models												
PE												
4Legs												
a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase												
PE33VPENT	5,777	4,967	19,725	1,850	8.60	2.01	1.50	3.13	10.66	50 / 370	22.7	900
PE36VPENT	6,227	5,354	21,261	2,010	9.40	2.15	1.60	3.11	10.58	55 / 400	22.7	900
PE39VPENT	6,664	5,730	22,738	2,150	10.10	2.28	1.70	3.09	10.55	60 / 400	22.7	900
PE41VPJMT	7,360	6,328	25,114	2,305	10.80	2.55	1.90	3.19	10.90	60 / 400	22.3	900
b) Electrical 60 Hz : 208 - 230 Volt : 1 Phase												
PE33NPBMT	6,877	5,917	23,479	2,210	10.40	2.01	1.50	3.11	10.61	35 / 370	22.7	900
PE36NPBMT	7,427	6,386	25,355	2,400	11.30	2.15	1.60	3.09	10.54	35 / 370	22.7	900
PE39NPBMT	8,113	6,976	27,232	2,580	12.10	2.28	1.70	3.09	10.54	35 / 370	22.7	900
3Legs												
a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase												
PE33VTEMT	5,777	4,967	19,725	1,850	8.60	2.01	1.50	3.13	10.66	50 / 370	22.7	900
PE36VTEMT	6,227	5,354	21,261	2,010	9.40	2.15	1.60	3.11	10.58	55 / 400	22.7	900
PE39VTEMT	6,664	5,730	22,738	2,150	10.10	2.28	1.70	3.09	10.55	60 / 400	22.7	900
PE41VTJMT	7,360	6,328	25,114	2,305	10.80	2.55	1.90	3.19	10.90	60 / 400	22.3	900
b) Electrical 60 Hz : 208 - 230 Volt : 1 Phase												
PE33NTBMT	6,877	5,913	23,479	2,210	10.40	2.01	1.50	3.11	10.61	35 / 370	22.7	900
PE36NTBMT	7,427	6,386	25,355	2,400	11.30	2.15	1.60	3.09	10.54	35 / 370	22.7	900
PE39NTBMT	7,981	6,862	27,232	2,580	12.10	2.28	1.70	3.09	10.54	35 / 370	22.7	900

Models	Capacity			Input		Nominal Output		COP. (W/W)	EER. (Btu/hr*w)	Run Cap. (μF/VAC)	Weight (kgs.)	Oil Q'ty (CC.)
	W	Kcal/hr	Btu/hr	Watt	Amps	Hp	kW					
High EER Models												
NE												
a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase												
NE41VNHMT	7,270	6,252	24,805	2,330	10.60	2.55	1.90	3.12	10.65	45 / 420	31.3	1300
NE44VNHMT	7,850	6,751	26,784	2,500	11.70	2.68	2.00	3.14	10.71	50 / 420	31.3	1300
NE47VNHMT	8,380	7,207	28,593	2,670	12.40	2.95	2.20	3.14	10.71	50 / 420	32.2	1300
NE52VNHMT	9,380	8,067	32,005	3,020	14.10	3.35	2.50	3.11	10.60	60 / 420	32.2	1300
NE56VNHMT	10,260	8,824	35,007	3,360	15.90	3.62	2.70	3.05	10.42	60 / 420	32.2	1300
b) Electrical 50/60 Hz : 380 - 415/460 Volt : 3 Phases												
NE41YDNMT	7,150	6,149	24,396	2,210	3.80	2.55	1.90	3.24	11.04	-	30.3	1300
NE44YDNMT	7,790	6,699	26,579	2,420	4.10	2.68	2.00	3.22	10.98	-	30.3	1300
NE47YDNMT	8,350	7,181	28,490	2,580	4.50	2.95	2.20	3.24	11.04	-	30.3	1300
NE52YDNMT	9,480	8,153	32,346	2,950	5.20	3.35	2.50	3.21	10.96	-	31.3	1300
NE56YDNMT	10,200	8,772	34,802	3,240	5.60	3.62	2.70	3.15	10.74	-	32.2	1300

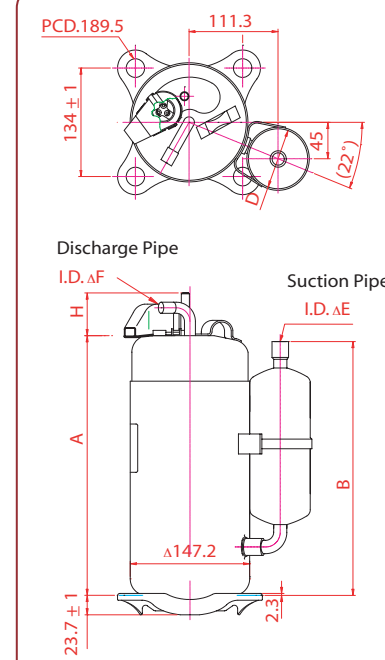
Note : 1. Testing condition ASRE-T, for V code at 1Phase 220Volt 50Hz, for N code at 1Phase 220Volt 60Hz.

2. All figures indicated are nominal value, for detailed specification, please contact sales representative.

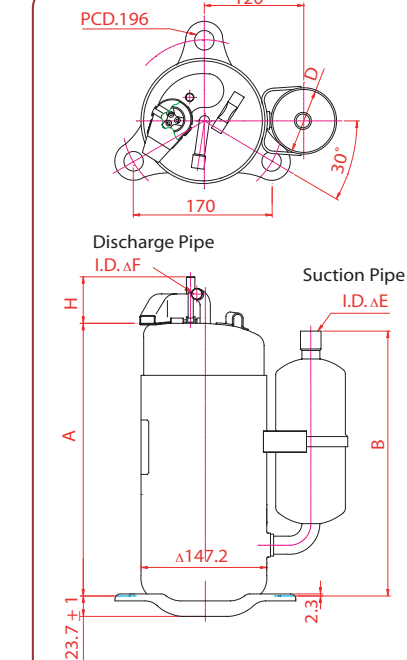
3. Oil type is FV50S.

	Model	Dimension (mm.)					
		A	B	D	E	F	H
PE (4 legs)	PE33-39VPENT	316.3	308.9	74.0	16.0	9.6	52.0
	PE33-39NPBMT						
	PE41VPJMT	316.3	308.9	74.0	16.0	9.6	None
PE (3 legs)	PE33-39VTEMT	316.3	308.9	74.0	16.0	9.6	52.0
	PE33-39NTBMT						
	PE41VTJMT	316.3	308.9	74.0	16.0	9.6	None
NE	NE41-56VNHMT	341.3	392.3	74.0	16.0	9.6	52.0
	NE41-56YDNMT	341.3	392.3	74.0	16.0	9.6	None

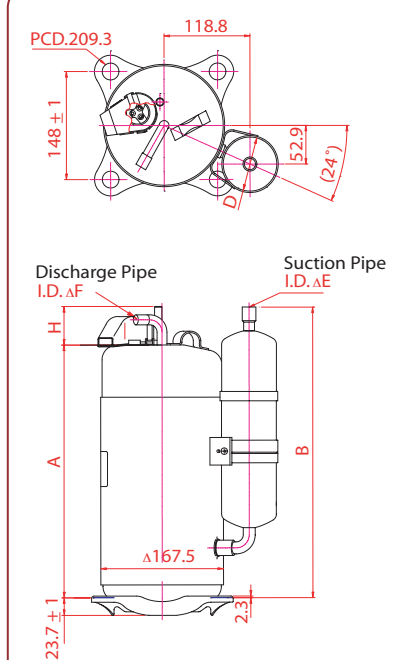
PE (4Legs)



PE (3Legs)



NE



Models	RE	PE	NE
Compressor			
Type	Rolling Piston Type Rotary		
Displacement (cc/rev.)	13.5~31.3	28.1~41.7	28.0~38.8, 41.8~56.9
Refrigerant type	R-407C		
Pressure			
Maximum Condensing	27.7 kg/cm ² G (65°C)		
Evaporating	2.55~7.16 kg/cm ² G (-10 ~ +15°C)		
Compression Ratio	6 or less	8 or less (See Note1)	
Abnormal Rise in pressure	48 kg/cm ² G or less		
Temperature			
Condensing	28°C ~ + 65°C		
Evaporating	-10°C ~ 15°C		
Discharged Gas (max)	120°C(248°F), In case of Heat pump or De-humidifier, this limit is 115°C(239°F) (See Note 2)		
Suction gas's superheat	must be over 0°C (No liquid back) (See Note 2)		
Discharged gas's superheat	20°C or more		
Outdoor Ambient Temp.	Air cond : 20°C ~ 43°C(68°F ~ 109.4°F) Heat Pump : -10°C ~ 43°C(14°F ~ 109.4°F)		
Electrical			
Supply voltage during operation	Rated voltage ±10%		
Starting voltage	Minimum 80% of rated voltage (at 10.3 kg/cm ² G balancing pressure) In case of 208-230 V Rated Voltage (N-code compressor), the starting voltage shall be 85% or more. This shall be measured at compressor terminal at instance of start		
Reverse phase (rotation)	Not possible		
Frequency range	Rated Frequency ±2%		
ON/OFF			
ON/OFF Frequency	Less than 170,000 cycles		
ON/OFF Cycle	The ON/OFF cycle shall be a maximum of 10 time/hour. OFF time shall be the time until the high side pressure reach to balance pressure (more than 3 min)		
Pipe Stress	3.5 kg/mm ² or less at start and stop condition (1.8 kg/mm ² during operation)		
Refrigerant Circuit			
Maximum Refrigerant Charge	See in General Spec		
Evacuation level	Degree of vacuum equivalent to about 133 Pa (abs) (1.0 mmHg)		
Piping length between indoor and outdoor units	Max. 15 m. for RE130 - RE165 Max. 20 m. for RE167 - RE 313	Max. 30 m. (See also Note 3)	
Elevation between indoor and outdoor units	Max. 7 m. for RE130 - RE165 Max. 15 m. for RE167 - RE 313	Max. 20 m. (See also Note 3)	
Piping vibration	Maximum 0.8 mm.		
Inclination of compressor	Within 5°		

Note : 1. High compression ratio test ; C.T./E.T. = 62/-12°C ; has been performed already.
2. The temperature must be lower than this critical value even the unit has been using for many years.
3. These Piping Length and Elevation for all series are based on pipe size following this ;
Liquid : Ø 9.52 mm. (3/8") Gas : Ø 15.88 mm. (5/8")

Condition Application :

Application Range

- Evaporating Temperature Range -10°C to 15°C (14°F to 59°F)
- Condensing Temperature Range 28°C to 65°C (82.4°F to 149°F)
- Refrigerant R-407C
- Discharge Gas Temperature 120°C (248°F) max. for Air Cond
115°C (239°F) max. for Heat Pump

ASRE - T Rating Condition

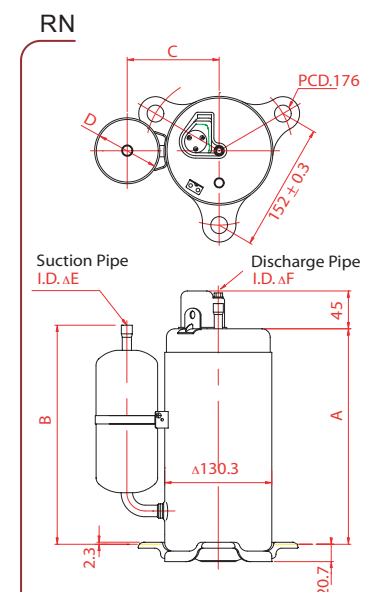
- Evaporating Temperature 7.2°C (45°F)
- Return Gas Temperature 35.0°C (95°F)
- Condensing Temperature 54.4°C (130°F)
- Liquid Temperature 41.44°C (107°F)
- Ambient Temperature 35.0°C (95°F)



Models	Capacity			Input		Nominal Output		COP. (W/W)	EER. (Btu/hr*w)	Run Cap. (µF/VAC)	Weight (kgs.)	Oil Q'ty (CC.)
	W	Kcal/hr	Btu/hr	Watt	Amps	Hp	kW					
High EER Models												
a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase												
RN092VHSMT	2,240	1,926	7,643	770	3.60	0.80	0.60	2.91	9.93	20 / 370	13.8	300
RN096VHSMT	2,340	2,012	7,984	805	3.70	0.87	0.65	2.91	9.92	20 / 370	13.8	300
RN099VHSMT	2,390	2,055	8,155	820	3.80	0.87	0.65	2.91	9.95	25 / 370	13.8	300
RN104VHSMT	2,510	2,158	8,564	865	4.00	0.94	0.70	2.90	9.90	25 / 370	13.8	300
RN110VHSMT	2,680	2,304	9,144	920	4.20	1.01	0.75	2.91	9.94	25 / 370	13.8	300
RN117VHSMT	2,850	2,450	9,724	975	4.40	1.07	0.80	2.92	9.97	25 / 370	13.8	300
RN125VHSMT	3,050	2,623	10,407	1,050	4.90	1.07	0.80	2.90	9.91	25 / 370	13.8	300
RN130VHSMT	3,160	2,717	10,782	1,080	5.00	1.14	0.85	2.93	9.98	30 / 370	15.9	520
RN135VHSMT	3,290	2,829	11,225	1,120	5.20	1.21	0.90	2.94	10.02	30 / 370	15.8	520
RN140VHSMT	3,430	2,949	11,703	1,170	5.40	1.21	0.90	2.93	10.00	30 / 370	15.8	520
RN145VHSMT	3,570	3,070	12,181	1,220	5.80	1.34	1.00	2.93	9.98	30 / 370	15.8	520
RN154VHSMT	3,820	3,285	13,034	1,320	6.20	1.48	1.10	2.89	9.87	30 / 400	15.8	520
RN165VHSMT	4,070	3,499	13,887	1,410	6.60	1.48	1.10	2.89	9.85	30 / 400	15.8	520
RN174VHSMT	4,230	3,637	14,433	1,460	6.80	1.61	1.20	2.90	9.89	35 / 400	15.8	520
RN196VHSMT	4,800	4,127	16,378	1,680	7.90	1.74	1.30	2.86	9.75	40 / 370	15.8	520
RN220VHSMT	5,480	4,712	18,700	1,920	8.80	2.15	1.60	2.85	9.72	45 / 370	16.5	520
b) Electrical 60 Hz : 115 - 120 Volt : 1 Phase												
RN092WHDMT	2,856	2,456	9,745	959	8.45	0.87	0.65	2.98	10.16	70 / 220	13.8	300
RN104WHDMT	3,119	2,682	10,642	1,065	9.40	0.94	0.70	2.92	10.00	75 / 220	13.8	300
RN110WHDMT	3,280	2,820	11,190	1,113	9.84	0.94	0.70	2.95	10.06	75 / 220	13.7	300
RN140WHDMT	4,258	3,661	14,530	1,461	12.90	1.21	0.90	2.92	9.95	85 / 220	15.8	520
c) Electrical 60 Hz : 208 - 230 Volt : 1 Phase												
RN092NHDMT	2,750	2,365	9,383	950	4.30	0.87	0.65	2.90	9.89	25 / 370	13.8	300
RN096NHDMT	2,870	2,468	9,792	960	4.44	0.87	0.65	2.99	10.19	25 / 370	13.8	300
RN099NHDMT	3,010	2,588	10,270	1,010	4.64	0.87	0.65	2.98	10.17	25 / 370	13.7	300
RN104NHDMT	3,080	2,648	10,508	1,045	4.82	0.94	0.70	2.95	10.06	25 / 370	13.7	300
RN110NHDMT	3,360	2,889	11,460	1,130	5.22	1.01	0.75	2.97	10.15	25 / 370	13.7	300
RN117NHDMT	3,510	3,018	11,976	1,190	5.53	1.01	0.75	2.95	10.06	25 / 370	13.8	300
RN125NHDMT	3,750	3,224	12,795	1,280	5.97	1.07	0.80	2.93	10.00	25 / 370	13.8	300
RN130NHDMT	4,050	3,482	13,819	1,320	6.15	1.34	1.00	3.07	10.47	30 / 370	15.8	520
RN135NHDMT	4,230	3,637	14,433	1,370	6.38	1.34	1.00	3.09	10.53	30 / 370	15.8	520
RN140NHDMT	4,280	3,680	14,603	1,410	6.55	1.34	1.00	3.03	10.36	30 / 370	15.8	520
RN145NHDMT	4,360	3,749	14,876	1,490	6.85	1.34	1.00	2.93	9.98	30 / 370	15.8	520
RN165NHDMT	5,070	4,359	17,299	1,670	7.79	1.48	1.10	3.04	10.36	35 / 370	15.8	520
RN174NHDMT	5,300	4,557	18,083	1,750	8.14	1.48	1.10	3.03	10.33	35 / 370	15.8	520
RN196NHDMT	5,820	5,004	19,858	2,070	9.60	1.74	1.30	2.81	9.58	40 / 370	15.8	520
Premium High EER Models												
a) Electrical 60 Hz : 208 - 230 Volt : 1 Phase												
RN092NHTMT	2,870	2,468	9,792	910	4.35	1.07	0.80	3.15	10.76	20 / 370	15.9	440
RN096NHTMT	3,010	2,588	10,270	960	4.64	1.14	0.85	3.14	10.70	20 / 370	15.9	440
RN099NHTMT	3,120	2,683	10,645	980	4.73	1.18	0.88	3.18	10.86	20 / 370	15.9	440
RN110NHTMT	3,400	2,924	11,600	1,090	5.07	1.29	0.96	3.12	10.65	30 / 370	15.9	440
RN117NHTMT	3,680	3,165	12,556	1,160	5.40	1.37	1.02	3.17	10.82	30 / 370	15.9	440
RN125NHTMT	3,890	3,345	13,272	1,230	5.70	1.43	1.07	3.16	10.79	30 / 370	15.9	440
RN135NHTMT	4,270	3,672	14,569	1,320	6.13	1.57	1.17	3.23	11.04	35 / 400	16.0	520
RN140NHTMT	4,440	3,818	15,149	1,370	6.41	1.62	1.21	3.24	11.06	35 / 400	16.0	520
RN145NHTMT	4,590	3,947	15,661	1,410	6.55	1.68	1.25	3.26	11.11	35 / 400	16.0	520
RN154NHTMT	4,900	4,214	16,718	1,520	7.25	1.81	1.35	3.22	11.00	35 / 400	16.0	520
RN165NHTMT	5,220	4,489	17,810	1,640	7.88	1.90	1.42	3.18	10.86	35 / 400	16.0	520
RN174NHTMT	5,480	4,712	18,697	1,750	8.22	2.00	1.49	3.21	10.94	35 / 400	16.0	520
RN196NHTMT	6,170	5,306	21,052	1,940	9.17	2.23	1.66	3.18	10.85	45 / 400	16.0	520

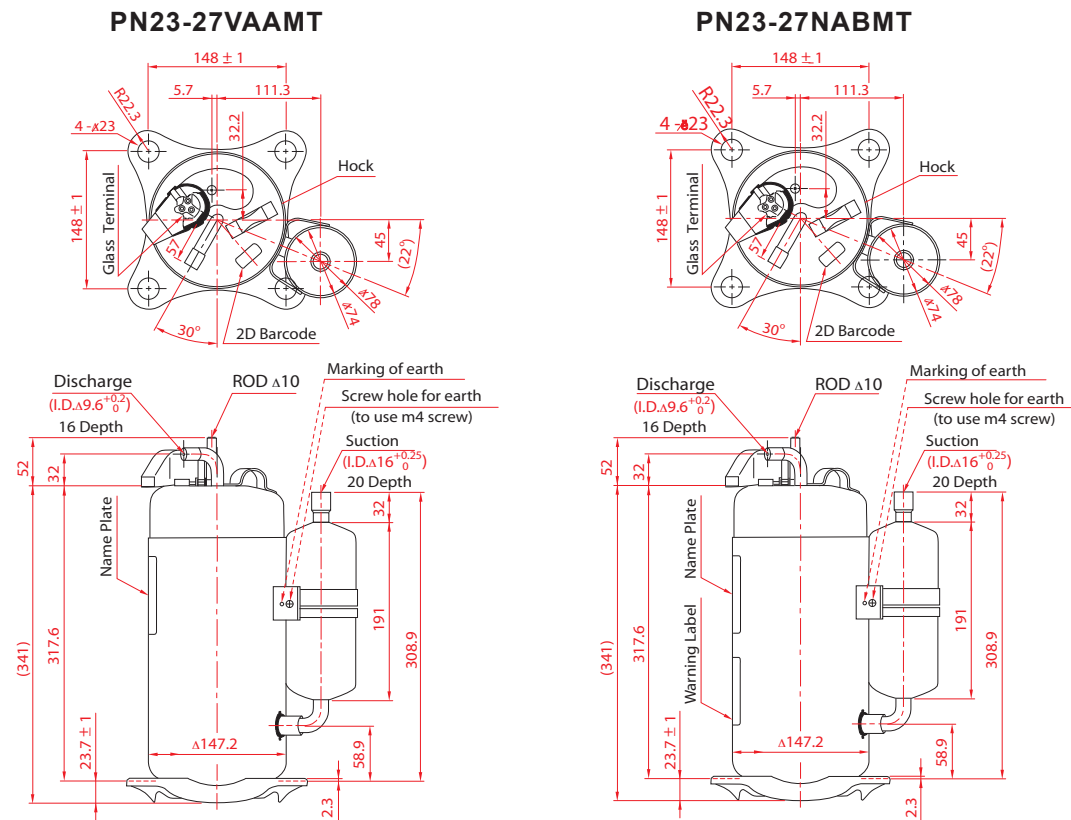
Note : 1. Testing condition ASRE-T, for V code at 1Phase 220Volt 50Hz, for N code at 1Phase 220Volt 60Hz, for W code at 1Phase 115Volt 60Hz
2. All figures indicated are nominal value, for detailed specification, please contact sales representative
3. Oil type is FV50S

	Dimension (mm.)					
	A	B	C	D	E	F
RN092-125VHSMT	213.1	243.8	101.0	60.5	9.6	9.6
RN092-110WHDMT						
RN092-125NHDMT						
RN130-220VHSMT	257.5	260.5	110.5	74.0	12.7	9.6
RN140WHDMT						
RN130-196NHDMT						
RN092-196NHTMT						



Models	Capacity			Input		Nominal Output		COP. (W/W)	EER. (Btu/hr*w)	Run Cap. (μF/VAC)	Weight (kgs.)	Oil Q'ty (CC.)
	W	Kcal/hr	Btu/hr	Watt	Amps	Hp	kW					
High EER Models												
a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase												
PN23V--MT	5,860	5,038	19,994	1,990	9.40	2.28	1.70	2.94	10.46	55 / 400	23.7	900
PN25V--MT	6,360	5,468	21,700	2,165	10.00	2.41	1.80	2.94	10.46	60 / 420	23.7	900
PN27V--MT	6,800	5,846	23,202	2,290	10.70	2.55	1.90	2.97	10.48	65 / 420	23.7	900
b) Electrical 60 Hz : 208 - 230 Volt : 1 Phase												
PN23N--MT	7,165	6,160	24,447	2,440	11.30	2.01	1.50	2.94	10.41	40 / 400	23.7	900
PN25N--MT	7,660	6,586	26,136	2,645	12.30	2.15	1.60	2.90	10.37	40 / 400	23.7	900
PN27N--MT	8,320	7,153	28,388	2,810	13.00	2.28	1.70	2.96	10.55	45 / 420	23.7	900

Note : 1. Testing condition ASRE-T, for V code at 1Phase 220Volt 50Hz, for N code at 1Phase 220Volt 60Hz, 2. All figures indicated are nominal value, for detailed specification, please contact sales representative 3. Oil type is FV50S



Models	Capacity			Input		Nominal Output		COP. (W/W)	EER. (Btu/hr*w)	Run Cap. (μF/VAC)	Weight (kgs.)	Oil Q'ty (CC.)
	W	Kcal/hr	Btu/hr	Watt	Amps	Hp	kW					
High EER Models												
a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase												
NN21VBAMT	5,400	4,644	18,424	1,820	8.30	1.74	1.30	2.97	10.12	50 / 400	29.2	1200
NN23VBAMT	5,800	4,988	19,789	1,950	9.20	2.01	1.50	2.97	10.15	50 / 400	29.2	1200
NN25VBAMT	6,300	5,418	21,495	2,120	9.80	2.15	1.60	2.97	10.14	50 / 420	29.8	1200
NN27VBAMT	6,720	5,779	22,928	2,260	10.40	2.28	1.70	2.97	10.15	55 / 400	30.4	1200
NN29VAAMT	7,400	6,364	25,248	2,440	11.20	2.55	1.90	3.03	10.35	55 / 400	31.3	1300
NN31VAAMT	7,960	6,845	27,159	2,620	12.20	2.68	2.00	3.04	10.37	55 / 400	31.3	1300
NN33VAAMT	8,490	7,301	28,967	2,800	13.10	2.95	2.20	3.03	10.35	55 / 420	31.9	1300
NN37VAAMT	9,400	8,084	32,072	3,130	14.70	3.35	2.50	3.00	10.25	60 / 420	31.9	1300
NN40VAAMT	10,200	8,772	34,802	3,430	16.10	3.62	2.70	2.97	10.15	60 / 420	31.9	1300

b) Electrical 60 Hz : 208 - 230 Volt : 1 Phase												
NN21NBMT	6,500	5,590	22,177	2,150	9.90	1.74	1.30	3.02	10.32	45 / 400	29.8	1200
NN23NBMT	7,200	6,192	24,565	2,380	11.00	2.01	1.50	3.03	10.32	50 / 400	29.5	1200
NN25NBMT	7,810	6,716	26,647	2,580	11.70	2.15	1.60	3.03	10.33	55 / 400	30.7	1200
NN27NBMT	8,480	7,293	28,933	2,760	12.70	2.28	1.70	3.07	10.48	55 / 400	30.2	1200
NN29NBMT	9,100	7,826	31,048	2,950	13.50	2.55	1.90	3.08	10.53	55 / 400	31.3	1200
NN31NAAMT	10,130	8,712	34,563	3,280	15.10	2.68	2.00	3.09	10.54	60 / 400	32.0	1300
NN33NAAMT	10,900	9,374	37,189	3,500	16.10	2.95	2.20	3.11	10.63	60 / 380	32.0	1300
NN37NAAMT	12,190	10,483	41,592	3,920	18.00	3.35	2.50	3.11	10.61	65 / 400	32.0	1300
NN40NAAMT	13,220	11,369	45,105	4,270	19.60	3.62	2.70	3.10	10.56	65 / 400	32.0	1300

c) Electrical 50/60 Hz : 380 - 415/460 Volt : 3 Phases												
NN21YDAMT	5,500	4,730	18,766	1,780	3.00	1.74	1.30	3.09	10.55	-	29.9	1200
NN25YDAMT	6,580	5,659	22,450	2,120	3.70	2.15	1.60	3.10	10.59	-	29.8	1200
NN27YDAMT	6,980	6,003	23,816	2,210	3.70	2.28	1.70	3.16	10.78	-	29.9	1200
NN29YCMT	7,500	6,450	25,590	2,360	4.00	2.55	1.90	3.18	10.85	-	31.0	1300
NN31YCMT	8,060	6,932	27,501	2,550	4.30	2.68	2.00	3.16	10.78	-	30.1	1300
NN33YCMT	8,600	7,396	29,342	2,730	4.70	2.95	2.20	3.15	10.74	-	30.1	1300
NN37YCMT	9,600	8,256	32,754	3,050	5.40	3.35	2.50	3.15	10.74	-	31.3	1300
NN40YCMT	10,400	8,944	35,485	3,300	5.70	3.62	2.70	3.15	10.75	-	31.9	1300
NN44YCMT	11,400	9,804	38,897	3,770	6.20	3.62	2.70	3.02	10.32	-	31.9	1300

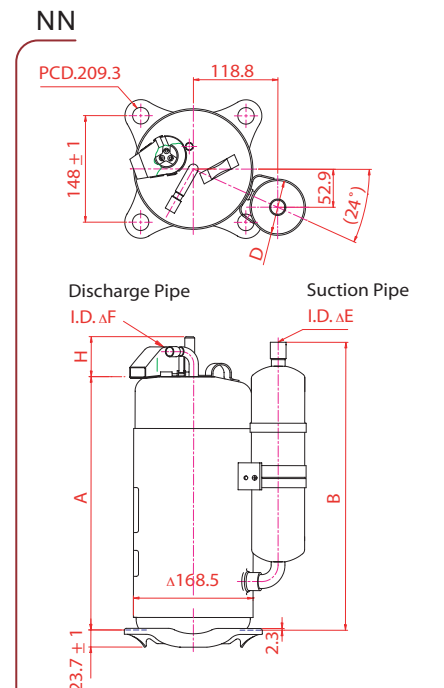
d) Electrical 50/60 Hz : 200/200 - 230 Volt : 3 Phases												
NN25TDBMT	6,600	5,676	22,519	2,092	7.20	2.28	1.70	3.15	10.76	-	29.7	1200
NN27TDBMT	6,990	6,011	23,850	2,218	7.70	2.28	1.70	3.15	10.75	-	29.8	1200
NN31TDBMT	7,960	6,846	27,160	2,650	8.80	2.68	2.00	3.00	10.25	-	30.4	1300

Premium High EER												
a) Electrical 50 Hz : 220 - 240 Volt : 1 Phase												
NN31V--MT	8,000	6,878	27,296	2,580	12.20	2.90	2.20	3.10	10.58	60 / 400	31.8	1300
NN33V--MT	8,490	7,300	28,968	2,720	12.60	3.20	2.40	3.12	10.65	60 / 420	32.0	1300
NN35V--MT	9,000	7,738	30,708	2,930	13.50	3.40	2.50	3.07	10.48	65 / 420	31.9	1300
NN37V--MT	9,400	8,082	32,073	3,080	14.20	3.50	2.60	3.05	10.41	65 / 420	32.0	1300

b) Electrical 50/60 Hz : 380 - 415 Volt : 3 Phases												
NN31Y--MT	8,150	7,007	27,808	2,530	4.50	2.90	2.20	3.22	10.99	-	32.0	1300
NN33Y--MT	8,600	7,394	29,343	2,670	4.70	3.20	2.40	3.22	10.99	-	32.1	1300
NN37Y--MT	9,600	8,254	32,755	2,980	5.10	3.50	2.60	3.22	10.99	-	32.2	1300

Note : 1. Testing condition ASRE-T, for V code at 1Phase 220Volt 50Hz, for N code at 1Phase 220Volt 60Hz, for Y code at 3Phases 400Volt 50Hz and 460Volt 60Hz, 2. All figures indicated are nominal value, for detailed specification, please contact sales representative 3. Oil type is FV50S

	Dimension (mm.)					
	A	B	D	E	F	H
NN21-27VBAMT	327.8	318.6	74.0	16.0	9.6	52.0
NN21-29NBMT						
NN29-33VAAMT						
NN31-35V--MT	342.8	393.6	74.0	16.0	9.6	52.0
NN31-33NAAMT						
NN29YCMT						
NN37-40VAAMT	342.8	393.6	74.0	19.1	9.6	52.0
NN37-40NAAMT						
NN21-27YDAMT	327.8	318.6	74.0	16.0	9.6	None
NN25-27TDBMT						
NN31-33YCMT	342.8	393.6	74.0	16.0	9.6	None
NN31TDBMT						
NN37-40YCMT	342.8	393.6	74.0	19.1	9.6	None



Models	RN	PN	NN
Compressor			
Type	Rolling Piston Type Rotary		
Displacement (cc/rev.)	9.2~22.0	23.0~27.0	21.9~44.4
Refrigerant type	R-410A		
Pressure			
Maximum Condensing	42.3 kg/cm ² G (65°C)		
Evaporating	2.04~16.32 kg/cm ² G (-27 ~ +26°C)		
Compression Ratio	6 or less	9 or less (See Note1)	8 or less (See Note1)
Abnormal Rise in pressure	60 kg/cm ² G or less		
Temperature			
Condensing	-27°C ~ +65°C		
Evaporating	-27°C ~ 26°C		
Discharged Gas (max)	120°C(248°F), In case of Heat pump or De-humidifier, this limit is 115°C(239°F) (See Note 2)		
Suction gas's superheat	must be over 0°C (No liquid back) (See Note 2)		
Discharged gas's superheat	20°C or more		
Outdoor Ambient Temp.	Air cond : 20°C ~ 43°C (68°F ~ 109.4°F) Heat Pump : -10°C ~ 43°C (14°F ~ 109.4°F)		
Electrical			
Supply voltage during operation	Rated voltage ±10%		
Starting voltage	Minimum 80% of rated voltage (at 16.7 kg/cm ² G balancing pressure) In case of 208-230 V Rated (N-code compressor), the starting voltage shall be 85% or more. This shall be measured at compressor terminal at instance of start.		
Reverse Phase (rotation)	Not possible		
Frequency Range	Rated Frequency ±2%		
ON/OFF			
ON/OFF Frequency	Less than 170,000 cycles		
ON/OFF Cycle	The ON/OFF cycle shall be a maximum of 10 time / hour. OFF time shall be the time until the high side pressure reach to balance pressure (more than 3 min)		
Pipe Stress	3.5 Kg / mm ² or less at start and stop condition (1.8kg/mm ² during operation)		
Refrigerant Circuit			
Maximum Refrigerant Charge	See in General Spec		
Evacuation Level	Degree of vacuum equivalent to about 133 Pa (abs) (1.0mmHg)		
Piping length between indoor and outdoor units	Max. 15 m. for RN092 - RN125 Max. 20 m. for RN130 - RN220	Max. 30 m. (See also Note 3)	Max. 30 m. (See also Note 3)
Elevation between indoor and outdoor units	Max. 7 m. for RN092 - RE125 Max. 15 m. for RN130 - RN 220	Max. 20 m. (See also Note 3)	Max. 20 m. (See also Note 3)
Piping Vibration	Maximum 0.8 mm.		
Inclination of Compressor	Within 5°		

Note : 1. High compression ratio test ; C.T./E.T. = 62/-20°C ; has been performed already.
2. The temperature must be lower than this critical value even the unit has been using for many years.
3. These Piping Length and Elevation for all series are based on pipe size following this ;
Liquid : Ø 9.52 mm. (3/8") Gas : Ø 15.88 mm. (5/8")

Condition Application :

Application Range

- Evaporating Temperature Range -27°C to 26°C (-16.6°F to 78.8°F)
- Condensing Temperature Range -27°C to 65°C (-16.6°F to 149 °F)
- Refrigerant R-410A
- Discharge Gas Temperature 120°C (248°F) max. for Air Cond
115°C (239°F) max. for Heat Pump

ASRE - T Rating Condition

- Evaporating Temperature 7.2°C (45°F)
- Return Gas Temperature 35.0°C (95°F)
- Condensing Temperature 54.4°C (130°F)
- Liquid Temperature 46.0°C (115°F)
- Ambient Temperature 35.0°C (95°F)

Inverter Technology

Inverter-driven systems can promote maximum compressor efficiency in term of smooth operation. The system can detect subtle temperatures and adjust its capacity output automatically which lead to stable temperature while minimizing power consumption and optimizing humidity control.



Inverter system can control over room temperature to deliver appropriate capacity which is a smart technology that can suitably match cooling and heating performance with operating requirements at specific location so the system can ensure that a room will stay with steady temperature and comfort.

Conventional compressor operates at a fixed speed with on and off repetitively, on the other hand, inverter compressor has controller which can control power output to fit with variable operating environment as well as optimize system therefore amazingly performance in any variant load is ensured throughout the system by means of unit customization and design.

With a proper design concept, the system can reach as higher SEER as 64% comparing with other VRF technology.

Inverter Benefits

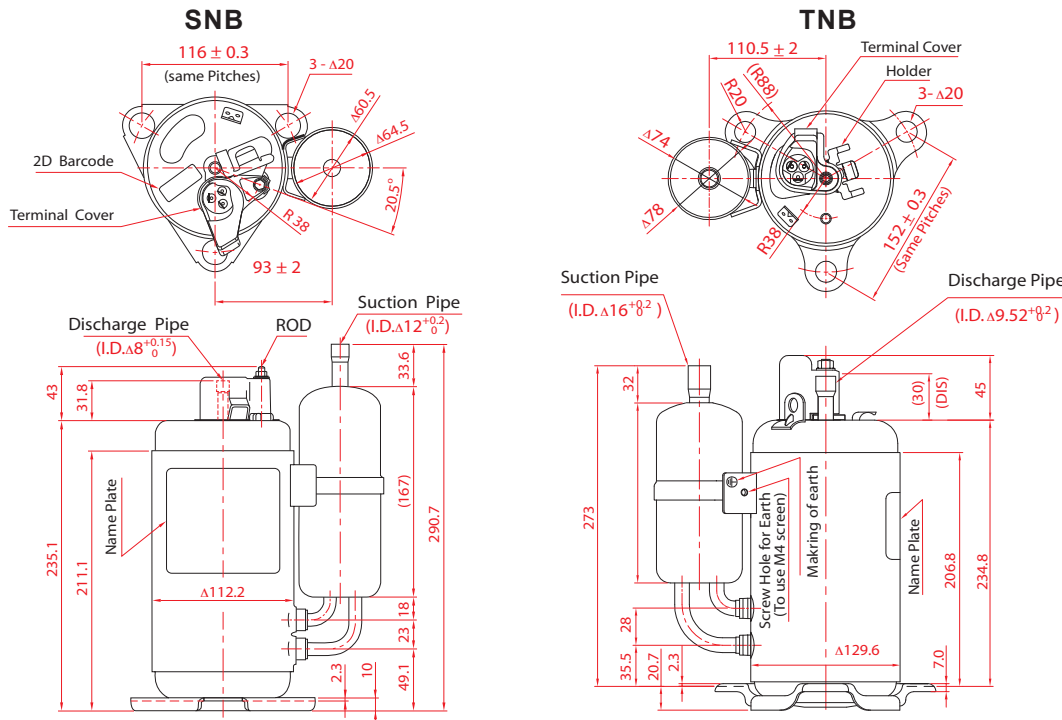
- 1) Precision Temperature Control : unnoticeable swing in temperature because of its adaptation of capacity to match with any variable conditions automatically.
- 2) High Efficiency : deliver only the energy needed to satisfy the cooling or heating condition, thereby saving both energy and cash.
- 3) Humidity Control : enjoy greater comfortable climate with desired level of humidity at a glance.
- 4) Compact size and light weight : Owing to the inverter, motor speed changing technology, inverter compressor is more compact size and light weight comparing to other Variable Refrigerant Flow (VRF) technology by more than 30%.

Inverter › Technology for the Future

Inverter technology is becoming the new trend in HVAC&R industry in many recently years. The system enhances smoothing performance for every cooling or heating applications. This technology, not only decrease energy usage, but also support those future HVAC requirements such as Multi-system AC, more compact unit, Buliding integration, indoor air quality (IAQ) etc.

Models	Capacity Range (min~max)			Performance at 60 rps				Weight (kgs.)	Oil Q'ty (CC.)		
	Watt	Kcal/hr	Btu/hr	Capacity		Input				COP. (W/W)	EER. (Btu/hr*w)
				W	BTU/hr	Watt	Amps				
a) DC Inverter											
SNB130FGBMT	510-9,670	440-8,310	1,740-33,000	3,630	12,386	1,140	5.4	3.18	10.86	7.9	350
SNB172FEKMT	970-13,760	830-11,830	3,310-46,950	4,830	16,480	1,560	6.7	3.10	10.56	8.6	400
TNB220FLHMT	990-16,100	850-13,840	3,370-54,930	7,130	24,328	2,200	9.7	3.24	11.06	14.0	870
TNB306FPGMT	1,500-22,100	1,290-19,000	5,110-75,400	9,880	33,711	3,010	13.5	3.28	11.2	16	870

Note : Oil type is FV50S



Twin Rotary Inverter

Twin rotary inverter synergize two significant advantages as a combination between highly powerful and smooth performance through the latest innovative solution of 'Twin Mechanism'. This mechanism are done by balancing torque of two compression chambers in a revolution which can operate at the highest efficiency with extremely low vibration and low noise. Moreover, they are compact sizes, lightweight, and wider range of operating area than other rotary compressor. With our inverter design technic, we use selective raw material and meticulous process to ensure superior performance and reliability.

Our DC Inverter Twin Rotary, advanced technology is the combination of double technology solution which are 'Twin Mechanism' and 'Inverter Technology'. This unique solution can ensure specifically for the highest smooth performance with quiet compressor operation and high energy saving when compare with other compressor. Its compact sizes and lightweight are also comfortable for unit with space limitation but need for high capacity.

The Special Features of Twin Rotary Inverter Compressor

1. High efficiency (E.E.R. 11.06 with R-410A) High efficiency resulting from twin mechanism, DC inverter technology and selective motor component is embedded into every single Twin Rotary Inverter Compressor to ensure the best performance.

2. High reliability As a result of using high-grade raw materials such as specialized permanent magnet, Rare Earth Magnet, which is more durable to demagnetize thereby our twin rotary is very reliable to operate in high frequency inverter supply. Higher operating frequency ability brings about a more wider capacity range.

3. Extremely Low Noise & Vibration Twin Rotary Inverter Compressor uses the special crankshaft. Its balanced geometry create smooth operation and silent as you never feel.

4. Compact size & Light weight With the advanced technology, the weight is obviously reduced by 50%. So the size of overall system will be more compact.

