



SIAM COMPRESSOR INDUSTRY

Classification : Specification for Compressor	Written By		Jiradet Arthan	
	Approved By		Dumrongsak Sompradit	
Subject : TNB220FLHMT	Issued Date		2014-09-24	Revised C
	Document No.		SPC06O580.02	
1.Compressor data				
Type		Twin Rotary		
Displacement	cm ³ /rev.	22.0		
	in ³ /rev.	1.3		
2.Motor data				
Motor type		BLDCM		
Motor protection		External		
Nominal output	W	1300		
Number of pole		4		
Nominal revolution	rpm	3600 (at 60rps)		
Insulation class		E		
Motor resistance (20 °C)	Ohm	0.88		
3.Refrigerant				
Type		R-410A		
4.Oil				
Type		FV50S		
Charge amount	L (in ³)	0.87 (53.1)		
5.Mass (include.oil)	kg (lbs)	14.0 (30.9)		
6.Compressor power source				
Running frequency	Hz	30-240 (15-120rps)		
7.Performance				
Refrigerating capacity (±7.5%)	W	7130	5510	
	BTU/hr	24328	18800	
Motor input (±7.5%)	W	2200	1990	
COP	W/W	3.24	2.77	
EER	BTU/hr.W	11.06	9.45	
Current	A	9.7	8.5	
Note: Conditions	°C (°F)	ASRE-T	Heat Pump	
Evaporating temp.	°C (°F)	7.2 (45.0)	-7 (19.4)	
Condensing temp.	°C (°F)	54.4 (129.9)	50 (122.0)	
Return gas temp.	°C (°F)	35.0 (95.0)	-2 (28.4)	
Ambient temp.	°C (°F)	35.0 (95.0)	0 (32.0)	
Liquid temp.	°C (°F)	46.0 (114.8)	46 (114.8)	
Power source	rps/Hz	60/120	60/120	
Cooling performance curve		PCS383A		
Heating performance curve		SCI-HPDT001		
-Performance data are base on SCI's calorie meter.				
Please follow to the general specification for TNB (TDRD11D006)				



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Subject : TNB220FLHMT	Document No.	SPC06O580.02
Compressor data	SC01F169	
Wiring diagram	CS01F071	
Terminal parts accessories		
Terminal parts assy	CS01F132	
Terminal cover	SC25C050H01	1 pce.
Holder	SC03D385H01	1 pce.
Packing	SC34D048H01	1 pce.
Rubber washer	CR34D115H01	1 pce.
Flange nut	SC12D378H01	1 pce.
Mounting accessories		
Mounting parts	SC01D023	
Rubber mount	CR31D137H01	3 pce.
Motor specification	TDRD14K014	
Limitation curve of discharge pressure and temperature	VM-CZB40	

REFERENCE

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Pressure		
Condensing		0.20 ~ 4.15 MPaG [29.0 ~ 602 psiG]
Evaporating		0.20 ~ 1.60 MPaG [29.0 ~ 232.1 psiG]
Compression ratio		9.0 or less
Abnormal rise in pressure		5.88 MPaG [852.8 psiG] or less
Temperature		
Condensing temperature		-27 ~ 65 °C
Evaporating temperature		-27 ~ 26 °C
Discharge gas (max)		120 °C (In case of Heat pump or De-humidifier, this limit is 115 °C)
Suction gas superheat		Must be more than 0 °C - No liquid-back
Discharge gas superheat		20 °C or more
Outdoor ambient temp.		Air Con.: 20 ~ 43 °C -Heat pump.: -10 ~ 43 °C
Electrical		
Reverse phase (rotation)		Not possible
ON / OFF		
ON/OFF frequency		Less than 170,000 cycles
ON/OFF cycle		-The ON/OFF cycle shall be a maximum of 10 times/hour. -OFF time shall be the time until the high side and low side pressure reach to balance pressure (more than 3 minutes)
Piping 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		Amount of refrigerant [g] < or = Amount of oil [g] x 4 (the relative density of oil : 1[g/cm ³]). Regarding operation which exceeds the above limit, consult with us.
Piping vibration		Maximum 0.8 mm.
Inclination of compressor		Within 5°