

Basic Specification	
Model	YM43E3S-100 (Including Extended Model)
Type	Low Side Shell Design Scroll Compressor
Application	Medium Temp. Refrigeration
Refrigerant	R-404A
Power	2.5 HP
Capacity (BTU/Hr)	14576
Displacement(cc/rev)	42
Cooling Capacity(W) ^(a)	5100
Input Power(W) ^(a)	2833
RLA(A) ^(a)	13.4
Cooling COP(W/W) ^(a)	1.76
Power Supply	208-230V/1~/60Hz
Min. Operating Voltage(V)	187
Max. Operating Voltage(V)	253
LRA(A)	76
Max. Operating Current(A) ^(b)	20.7
Rated Speed(r/min) ^(a)	3500
Compressor Weight (With Oil)(kg)	31
Oil Type	POE
Oil Kinematic Viscosity(cSt, 40°C)	32
Oil Density(kg/L, 20°C)	0.977
Primary Charge(L)	1.4
Recharge(L)	1.25
Oil Circulation Rate ^(a)	≤1%
Rated Sound(Sound Power)(dBA) ^(c)	73
Max. Operating Sound in Running Envelope (Sound Power)(dBA)	78
Vibration Displacement Peak-Peak(mm) ^(d)	≤0.09
Moisture(mg)	≤500
Impurity(mg)	≤100
LVS(V) ^(e)	177
MOV (V) ^(f)	187
Start Capacitor(μF/V)	160
Start Relay	HLR3800-4AI3D
Run Capacitor(μF/V)	60/450
IP Class of Terminal Box	IP21
Compressor Color	Black

Motor Parameters	
Motor Type	Single-phase asynchronous motor
Motor Pole	2
Motor Insulation Class(°C)	130(B Class)
Line to Line Resistance UV(CS)(Ω, 25°C)	1.519(± 10%)
Line to Line Resistance UW(CR)(Ω, 25°C)	0.67(± 10%)
Line to Line Resistance VW(SR)(Ω, 25°C)	2.189(± 10%)
Dielectric Strength	2000VAC / 1s / 50Hz, Leakage Current≤5mA
Insulation Resistance(MΩ)	≥20
Ground Resistance(Ω)	≤0.1

Safety Operating Limit	
Tightness Test Pressure (MPa)	3.8-4.0
Max. Operating Pressure	
High Side(MPa) Low Side(MPa)	H3.2/L2.0
Compressor FreeSpace(Without Oil)	
High Side(L) Low Side(L)	H1.0/L3.6
Max. Refrigerant Charge(kg)	See Notes
Discharge Temperature Limit(°C)	≤125 (120mm to compressor discharge connection and well insulated)
Start-Stop Interval	See Notes

Performance Condition:

Condition	Condition Description
a	Rated Condition
b	Max. Load Condition, 90% Rated Voltage
c	Rated Condition, A Weighted Sound Power
d	Rated Condition, Max Operating Normal Displacement of Compressor Housing
e	Discharge Pressure and Suction Pressure: Saturated Refrigerant Pressure at 40°C
f	Max. Load Condition

2. Rated Condition, 48 Hours Break-in-Running before implementing Performance and Sound Testing

Item	Rated Condition	Max. Load Condition
E.T.(°C)/C.T.(°C)/S.H.(K)/ S.C.(K)/ A.T.(°C)	-6.7/48.9/11.1/0/35	10/65/11.9/0/46.1
Cooling Capacity Deviation	≥92.5%	-
Power Deviation	≤107.5%	-
COP Deviation	≥92.5%	-

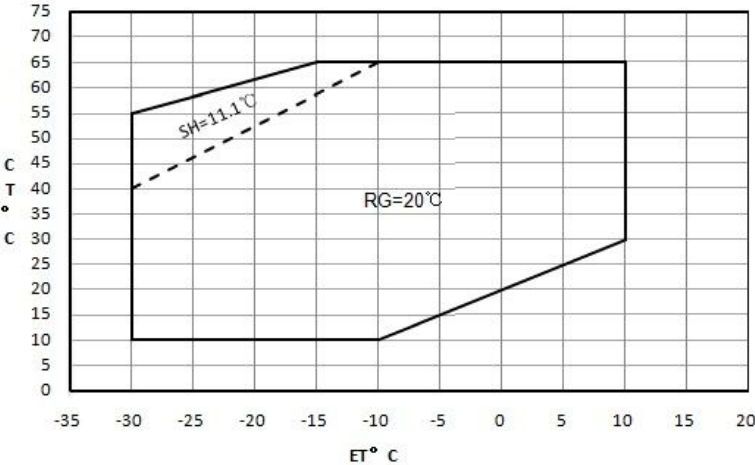
3. Internal Protector

Protection Method	Config	Parameter		
Internal Overload Protector	With	Vendor	Vendor 1	Vendor 2
		Model	15HM2495-XX	
		Open Temp.(°C)	105±5	
		Close Temp. (°C)	61±9	
		Short Time Trip	65A 2-10s	A S
Internal Pressure Relieve Valve	With	-MPa		

4. Accessory

Item	Name	P.N.	PCS
1	Grommet	070-0003-00	4
2	Sleeve	010-0014-00	4
3	StartBox	110-0076-02	1

5. Compressor Operating Envelope



EVI control logic(only for EVI module)

- » Recommend system subcooling 5K
- » DLT≤95°C,control superheat of injection line=5K
- » DLT>95°C,control DLT=95°C
- » Max injection pressure≤2.0MPa

Compressor Performance Sheet

- » Performance Based on Superheat is within the Operating Envelope, Subcooling after Condenser is OK;
- » Performance Calculated by Coefficients of Polynomial is Only Suitable for the Condition within Operating Envelope
- » Capacity, Power can be Calculated by Coefficients of Polynomial

