

Basic Specification	
Model	YS34U7G-100
Type	Low Side Scroll Compressor
Application	Medium Temp. Refrigeration
Power	5 HP
Capacity (BTU/Hr)	32909
Refrigerant	R454C
Displacement (in³/Rev)	5.08
Compressor Weight With Oil (lbs)	68.3
Oil Type	POE
Oil Kinematic Viscosity (cSt,104°F)	32
Oil Primary Charge (oz)	54.1
Oil Recharge (oz)	49.0
Rated Speed (r/min)	3500
IP Class Of Terminal Box	IP54
Compressor Colour	Black

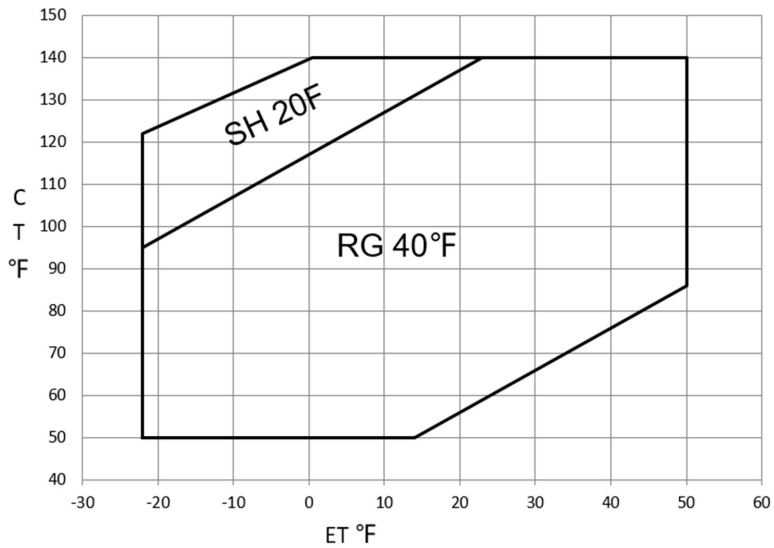
Performance Specifications	
Cooling Capacity (BTU/hr)	32909±7.5%
Input Power (W)	4265±7.5%
EER (BTU/Wh)	7.72±7.5%
Rated Operating Current (A)	13.7
Oil Circulation Rate(%)	≤1%
Rated Sound Power (dBA)	74
Max. Sound Power (dBA)	79
Max. Vibration Displacement (mil)	≤3.9

Test Condition	Rated Cooling	Oil Cirulation	Sound & Vibration
Evaporating Temp. (°F)	20	20	20
Condensing Temp. (°F)	120	120	120
Return Gas Temp. (°F)	40	40	40
Liquid Temp. (°F)	120	120	120
Ambient Temp. (°F)	95	95	95

Electric Parameters	
Motor Type	Three Phase Induction Motor
Motor Poles	2
Power Supply	208-230V/3~/60Hz
Locked Rotor Current (A)	136.0
Max. Operating Current (A)	19.9
Motor Insulation Class	B
Line to Line Resistance (Ω,77°F)	0.675±10%
Lowest Starting Voltage (V)	177
Dielectric Strength	2000VAC / 1s / 60Hz ≤5mA
Insulation Resistance (MΩ)	≥20
Ground Resistance(Ω)	≤0.1

Safety Operating Limitation	
Tightness Test Pressure (psig)	551-580
High Side Max Running Pressure(psig)	328.8
Low Side Max Running Pressure(psig)	76.3
Discharge Temp. Limit (°F)	≤257 4.72in to Compressor Discharge Connection And Well Insulated

Operating Envelope



Performance Table										
Item	ET, °F CT, °F	-20	-10	0	10	20	30	40	50	
Cooling Cap. (BTU/hr)	140			14730	20566	26884	34026	42328	52125	
	130		12973	18419	24177	30569	37935	46612	56936	
	120	10568	15771	21082	26857	33415	41099	50244	61186	
	110	12700	17711	22981	28866	35684	43780	53487	65142	
	100	14126	19038	24360	30448	37620	46220	56582	69042	
	90	15101	20008	25476	31861	39481	48679	59791	73152	
	80	15873	20869	26576	33351	41511	51400	63354	77707	
	70	16698	21876	27916	35176	43970	54645	67535	82975	
	60	17822	23276	29742	37579	47100	58653	72571	89190	
	50	19503	25327	32312	40820	51164	63689	78731	96625	
Power (W)	140			4740	4960	5159	5342	5510	5669	
	130		4104	4315	4507	4681	4843	4994	5139	
	120	3562	3764	3947	4114	4268	4412	4550	4684	
	110	3292	3467	3625	3771	3908	4039	4167	4295	
	100	3054	3204	3342	3471	3594	3715	3836	3961	
	90	2836	2965	3086	3201	3315	3429	3548	3674	
	80	2630	2742	2849	2955	3062	3174	3294	3425	
	70	2426	2524	2622	2721	2826	2939	3063	3202	
	60	2214	2303	2394	2491	2597	2714	2847	2998	
	50	1985	2068	2157	2255	2365	2491	2636	2802	

- » Performance Data Sheet Is Based On Limited Compressor Tests and Data Treatment, It Is Only a Reference for Compressor Selection.
- » Return gas temperature within Envelope is 40°F, and Liquid Subcooling is 0F;

Compressor Protection
Motor Protector

Internal Protector For Motor Protection	
Open Temp.(°F)	257±9
Close Temp.(°F)	158±18
Short Time Trip	103A 3-10s

High Pressure Relieve

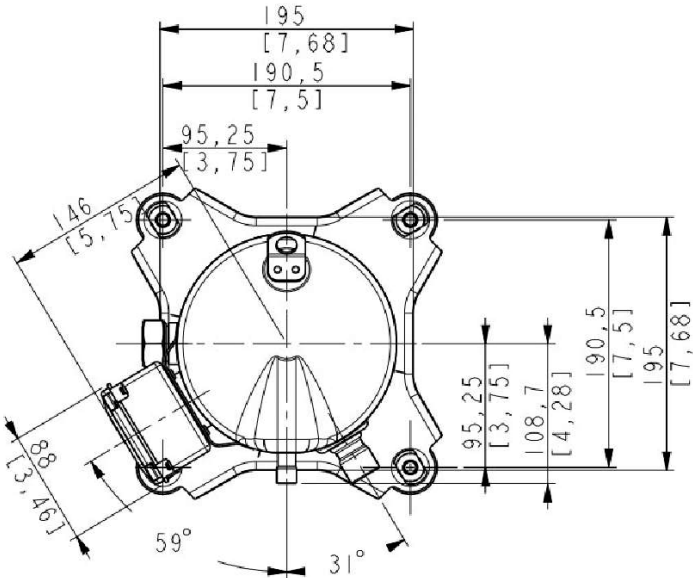
Internal Pressure Protection	
Internal Pressure Relieve Valve Opening Pressure Difference (psi)	575.7-625.0

Accessory

Item	Drawing/Standard No.	Quantity
Grommet	070-0003-00	4
Sleeve	010-0014-00	4

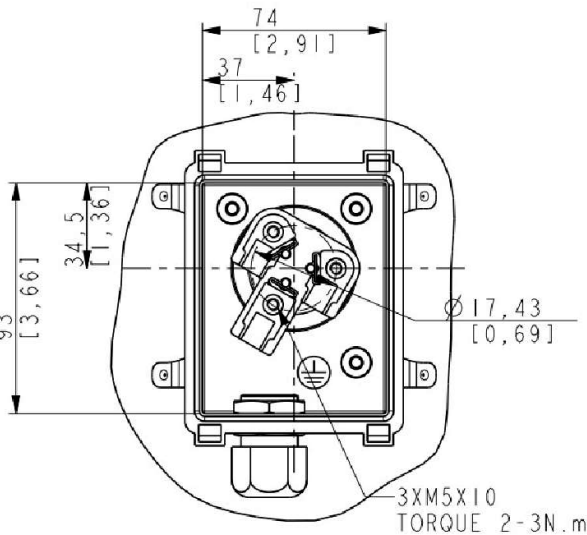
Attentions

- » It is not allowed to perform vacuum in the system by using the refrigeration compressor. The compressor can start only after the refrigerant is charged;
- » It is not allowed to charge the refrigerant from the suction o discharge line closes to the compressor. The charge port should be arranged on the connection pipe of suction line accumulator or receiver, which is far away from the compressor, to avoid the liquid refrigerant flooding back;
- » The refrigerant charge amount complies with local regulations;
- » It is not allowed to run compressor in vacuum, not allowed to run compressor without refrigerant, and not allowed to run compressor in the reversed direction for long duration;
- » The compressor can only work with approved refrigerants;
- » The compressor is not allowed to work outside its envelope. System design should guarantee the suction line superheat and avoid the liquid refrigerant flooding back;
- » When the suction and discharge plugs are removed, the assembly and brazing should be done in 15 minutes;
- » The frequently start/stop compressor should be avoided. The suggested minimum continuous running time is 10 minutes to guarantee the safe oil level ($\geq 50\%$ initial charge volume), the suggested minimum interval between start and stop is 3 minutes.
- » A 70W crankcase heater is recommended to avoid the refrigerant migration during the off circle and flooded start. The crankcase heater should be powered on 12 hours earlier before the first start or restart after long duration off;
- » The system should be equipped with necessary protection devices for pressure, temperature, oil return, overcurrent and phase fault, etc.
- » The compressor is not allowed to lay down or place upside down during transportation, stock and installation. The maximum inclination is 15° when the compressor is running.

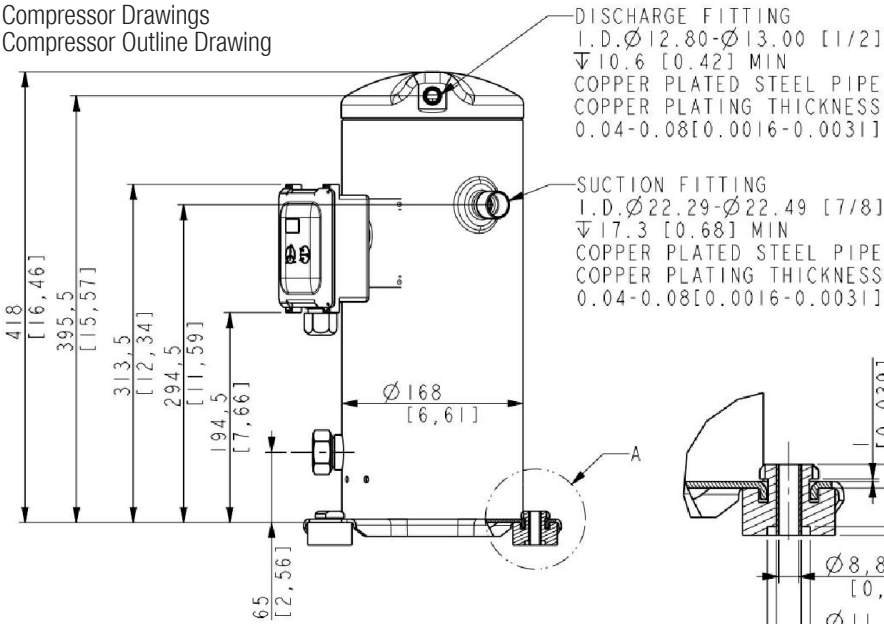


Wring Diagram

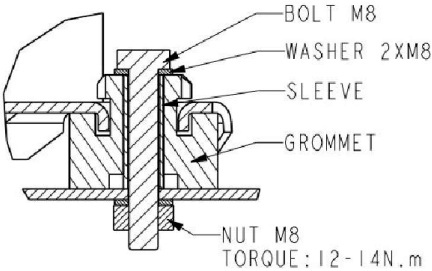
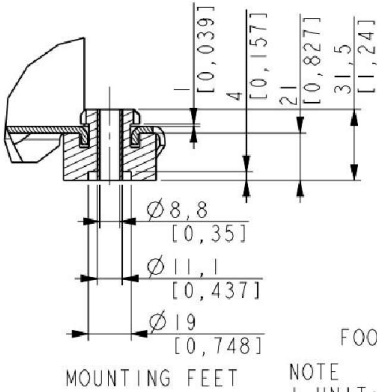
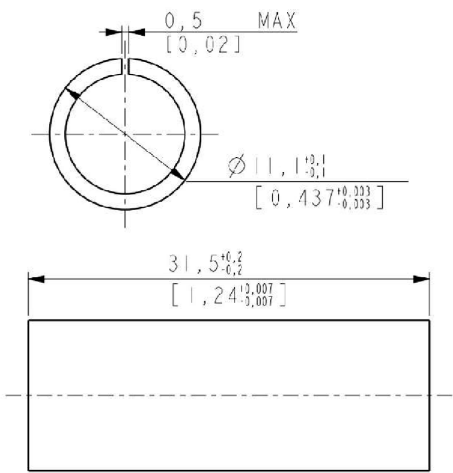
WRING DIAGRAM



Compressor Drawings
Compressor Outline Drawing



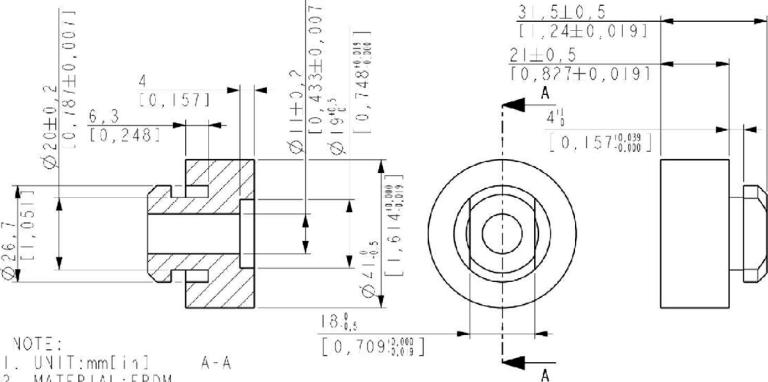
Mounting Sleeve Drawing



FOOT INSTALLATION RECOMMENDATION

NOTE
1. UNIT:mm[in]
1. ALL TOLERANCES UNLESS OTHERWISE SPECIFIED: $\pm 3 [0.12]$, $\pm 3^\circ [0.12^\circ]$

Grommet Drawing



Application Guideline

- » See Details in the Application Guidelines for Invotech YS****U***_R454C.