

Air-Cooled Chiller, Scroll Compressors



Job01

Tag ECGAM-1
 Model number CGAM 90 HE SQ
 Quantity 1



General Information

Unit nominal tonnage	90 tons	Efficiency (Gross / Net)	3.12	3.03 EER (kW/kW)
Unit type	High efficiency	Gross ESEER at Eurovent conditions	4.75	
Sound attenuator package	Super quiet	Sound power level	88 dBA	
Refrigerant	R410A	Sound pressure level	56 dBA	
Cooling Capacity (Gross / Net)	246.12 kW	248.64 kW		

Evaporator Information

Evaporator application	Std cooling	Fluid type	Ethylene glycol
Entering Water temperature	12.00 C	Fluid freeze point	-8.44 C
Leaving Water temperature	6.00 C	Fluid concentration	20.00 %
Fluid flow rate	10.31 L/s	Minimum flow rate	6.10 L/s
Pressure drop	31.1 kPa	Press drop at min flow rate	8.7 kPa
Fouling factor	0.017615 m2-deg C/kW	Maximum flow rate	18.20 L/s
		Press drop at max flow rate	69.3 kPa

Evaporator pressure drop includes the water strainer.

Condenser Information

Unit application	Wide ambient	Total fan FLA	13.20 A
Ambient air temperature	35.00 C	Available static pressure	0.0 kPa
Elevation	0.0 m	Total airflow	21.76 m3/s
Number of fans	6	Fin material	Lanced aluminum
Fan motor power	3.86 kW		

Compressor Information

Number of compressors	4		<u>RLA</u>	<u>LRA</u>
Number of circuit	2	Compressor A	39.70 A	215.00 A
Capacity steps	4	Compressor B	51.20 A	260.00 A
Total compressor power	75.06 kW	Compressor D	39.70 A	215.00 A
		Compressor E	51.20 A	260.00 A

Electrical Information

Unit voltage	400 volt 3 phases	Unit current at design *	134.43 A
Unit hertz	50 hertz	Unit maximum current **	194.70 A
Unit power input	79.07 kW	Unit start-up current	403.50 A
Starter type	Across the line	Unit power factor *	0.85

Notes * At job conditions.

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 ** I MAX used to determine minimum copper cables section (the short circuit withstand of our main protection device is 15kA).
 * Electrical information excludes pump data.

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Pump Package Information

Pump type	Dual standard head	Pump size	5.50 kW
Available head pressure	156.0 kPa	Pump nominal current	
Expansion tank volume	56.00 L	Pump start-up current	85.00 A
Buffer tank	With tank	Pump flow control	Balancing valve
Buffer tank volume	592.00 L		

Physical Information

Length	3647 mm	Water connections	114.30
Width	2273 mm	Refrigerant charge circuit 1	34 kg
Height	2379 mm	Refrigerant charge circuit 2	34 kg
Operating weight	3669 kg	Oil charge circuit 1	13.40 L
Shipping weight	2965 kg		

Acoustical Performance

	<u>63 Hz</u>	<u>125 Hz</u>	<u>250 Hz</u>	<u>500 Hz</u>	<u>1 kHz</u>	<u>2 kHz</u>	<u>4 kHz</u>	<u>8 kHz</u>
Sound power	86 dB	83 dB	84 dB	89 dB	80 dB	77 dB	71 dB	62 dB
Sound pressure (10m)	54 dB	51 dB	52 dB	57 dB	48 dB	45 dB	39 dB	30 dB
Note:	Sound data is based on ISO 3744.							
Notes:	The sound power levels are in free field according to ISO 3746-1996. Reference source 1 pW.							
	The sound pressure levels are calculated from the sound power levels according to the formula: $L_p = L_w - 10\log S$.							
	The sound data per octave band are for information only.							

