

# ECGAM - Air-Cooled Chiller, Scroll Compressors



VRA rörinstallationer  
TIG

Tag ECGAM-1  
Model number CGAM 90 SE Cpct  
Quantity 1



## General Information

Unit nominal tonnage	<b>90 tons</b>	Efficiency (Gross / Net)	<b>4,13 3,91 EER (kW/kW)</b>
Unit type	<b>Standard efficiency</b>	Sound power level	<b>94 dBA</b>
Sound attenuator package	<b>Compact</b>		
Refrigerant	<b>R410A</b>		
Cooling Capacity (Gross / Net)	<b>310,98 kW 311,92 kW</b>		
TOPSS version number	<b>249</b>		

## EcoDesign Compliance

SEER	<b>4</b>	SEER compliance 2021	<b>Compliant</b>
ETA <sub>sc</sub> (%)	<b>176 %</b>	SEPR MT compliance 2018	<b>Compliant</b>
SEPRMT	<b>3,52</b>	SEPR HT compliance 2021	<b>Compliant</b>
SEPRHT	<b>5,01</b>		

## Evaporator Information

Evaporator application	<b>Std cooling</b>	Fluid type	<b>Ethylene glycol</b>
Entering Water temperature	<b>17,0 C</b>	Fluid freeze point	<b>-15,0 C</b>
Leaving Water temperature	<b>11,0 C</b>	Fluid concentration	<b>30,00 %</b>
Fluid flow rate	<b>13,51 L/s</b>	Minimum flow rate	<b>5,80 L/s</b>
Pressure drop	<b>87,6 kPa</b>	Press drop at min flow rate	
Fouling factor	<b>0,000000 m2-deg C/kW</b>	Maximum flow rate	<b>17,50 L/s</b>
		Press drop at max flow rate	

Evaporator pressure drop includes the water strainer.

## Condenser Information

Unit application	<b>Low ambient</b>	Total fan FLA	<b>20,40 A</b>
Ambient air temperature	<b>28,0 C</b>	Available static pressure	<b>0,0 kPa</b>
Elevation	<b>0,0 m</b>	Total airflow	<b>27,12 m3/s</b>
Number of fans	<b>6</b>	Fin material	<b>Lanced aluminum</b>
Fan motor power	<b>8,49 kW</b>		

## Compressor Information

Number of compressors	<b>4</b>		<u>RLA</u>	<u>LRA</u>
Number of circuit	<b>2</b>	Compressor A	<b>39,70 A</b>	<b>215,00 A</b>
Capacity steps	<b>4</b>	Compressor B	<b>51,20 A</b>	<b>260,00 A</b>
Total compressor power	<b>66,43 kW</b>	Compressor D	<b>39,70 A</b>	<b>215,00 A</b>
		Compressor E	<b>51,20 A</b>	<b>260,00 A</b>

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## Electrical Information

Unit voltage	<b>400 volt 50 Hz 3 phases</b>	Unit current at design *	
Unit hertz	<b>50 hertz</b>	Unit maximum current **	<b>203,40 A</b>
Unit power input	<b>75,32 kW</b>	Unit start-up current	<b>412,20 A</b>
Starter type	<b>Across the line</b>	Unit power factor *	<b>0,85</b>

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.

## Pump Package Information

Pump type	<b>Single standard head</b>	Pump size	<b>5,50 kW</b>
Available head pressure	<b>37,4 kPa</b>	Pump nominal current	<b>10,60 A</b>
Expansion tank volume	<b>25,00 L</b>	Pump start-up current	<b>85,00 A</b>
Buffer tank	<b>With tank</b>	Pump flow control	<b>Var speed drive</b>
Buffer tank volume	<b>515,00 L</b>		

## Physical Information

Length	<b>4330 mm</b>	Water connections	<b>88,00</b>
Width	<b>2266 mm</b>	Refrigerant charge circuit 1	<b>22 kg</b>
Height	<b>2185 mm</b>	Refrigerant charge circuit 2	<b>22 kg</b>
Operating weight	<b>3195 kg</b>	Oil charge circuit 1	<b>13,40 L</b>
Shipping weight	<b>2623 kg</b>		

## 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	<b>86 dB</b>	<b>89 dB</b>	<b>90 dB</b>	<b>92 dB</b>	<b>90 dB</b>	<b>87 dB</b>	<b>83 dB</b>	<b>76 dB</b>
Sound pressure (10m)	<b>54 dB</b>	<b>57 dB</b>	<b>57 dB</b>	<b>60 dB</b>	<b>58 dB</b>	<b>55 dB</b>	<b>51 dB</b>	<b>44 dB</b>

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.

