

Refrigeration: Commissioning – Condensing unit

Installer		Performed by	
Company name		Company	
Contact person		Technician	
End customer		Certificate	
Name		Date	
Street – N°			
Zip code – City			
Country			

Installation			
Model name		Refrigerant type	
Serial number		Standard weight	kg
Construction year		Additional weight	kg
Reference installation		Total weight	kg
Number of refrigerant appliances		Number of air handling units	

Safety / last minute risk analysis						
Safe access to the installation	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Other safety hazards	
Enclosed workplace	<input type="checkbox"/>	No	<input type="checkbox"/>	Yes	Emergency exits	
Working at heights	<input type="checkbox"/>	No	<input type="checkbox"/>	Yes	Presence of necessary personal protection equipment	
Electrical hazards	<input type="checkbox"/>	No	<input type="checkbox"/>	Yes	<input type="checkbox"/>	Yes
					<input type="checkbox"/>	Not OK
					<input type="checkbox"/>	Not OK

Precommissioning					
N2 Test data available	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Vacuum test data available
N2 start pressure		bar			Vacuum test start pressure
N2 test time		hours			Vacuum test time
N2 end pressure		bar			Vacuum test end pressure
Power ON 6 hours before commissioning	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	

Visual inspection						
Piping limits within limits	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Logbook available and complete?	
Piping insulation state	<input type="checkbox"/>	OK	<input type="checkbox"/>	Not OK	Airco energy audit requested?	
Air side outdoor unit correct	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Vibrations/frictions	
Presence of installation mistakes	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Noise	
Sales selection data available	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Yes
					<input type="checkbox"/>	Not OK

Settings							
Setting	Description	Default value	New value	Setting	Description	Default value	New value

Electrical system					
Main voltage 400 V AC	L1	L2	L3	Control voltage	230 V AC
	V	V	V		V
Isolating switch		Fuse outdoor unit		Cable section	
<input type="checkbox"/> OK	<input type="checkbox"/> Not OK	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK

Operation check											
Evaporating °t target	°C										
Installation capacity	%										
	OnOff/Inv	Freq.	L1 (A)	L2 (A)	L3 (A)	DC °C(*)	DC SH(*)	Abnormal noise		Crankcase heater	
Compressor 1						°C	K	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK
Compressor 2						°C	K	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK

(*) DC °t=discharge temperature / DC SH=discharge super heat

Number of running compressors				Discharge pressure	bar	
Suction pressure	bar			Condensation pressure	°C	
Evaporating temperature	°C			Liquid temperature	°C	
Suction temperature	°C			Subcooling	K	
Suction superheat	K					
Refrigeration appliances magnetic valve state	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK				

Outdoor unit			
Inlet temperature	°C	Fan state	<input type="checkbox"/> OK <input type="checkbox"/> Not OK
Outlet temperature	°C		
Approach temperature	K		

Electrical checks							
Electrical connections	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK		Electrical insulation		Winding resistance	
Contactor contacts	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK	Compressor 1	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK
			Compressor 2	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK

Regulation checks					
Low pressure switch	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK	High pressure switch	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK



Overall result

The installation is working:

- Good
- Safe

- Not good
- Not safe

Follow-up site visit needed?

- Yes
- No

Shortcomings and measures to be taken

General remarks:

Shortcomings that were not fixed during the commissioning:

Measures to be taken in order to resolve the remaining shortcomings:

Signature certified technician