

Refrigeration: Commissioning – Convenipack

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

Installation			
Model name		Refrigerant type	
Construction year		Standard weight	kg
Reference installation		Additional weight	kg
Software version		Total weight	kg
Serial number			

Number of VRV units		Number of biddle units	
Number of refrigeration appliances		Number of air handling units	
Presence of booster units	☐ Yes ☐ No	Number of booster units	

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

Precommissioning					
N2 Test data available	☐ Yes ☐ No	Vacuum test data available	☐ Yes ☐ No		
N2 start pressure	bar	Vacuum test start pressure	mbar		
N2 test time	hours	Vacuum test time	hours		
N2 end pressure	bar	Vacuum test end pressure	mbar		
Power ON 6 hours before commissioning	☐ Yes ☐ No				

Visual inspection					
Refrigeration: Outdoor installation connection rate		Airconditioning: Outdoor installation connection rate			
Refrigeration: Indoor installation connection rate		Airconditioning: Indoor installation connection rate			
Refrigeration: System index	%	Airconditioning: System index	%		
General state	☐ OK ☐ Not OK	Presence of sight glass at farthest branch	☐ OK ☐ Not OK		
Corrosion/oxidation	☐ OK ☐ Not OK	Air side outdoor unit correct	☐ OK ☐ Not OK		
Vibrations/frictions	☐ OK ☐ Not OK	Air side indoor units correct	☐ OK ☐ Not OK		
Noise	☐ OK ☐ Not OK	Unit height (≥15 cm)	☐ OK ☐ Not OK		
Unit correctly supported	☐ OK ☐ Not OK	Communication bus (F1/F2)	☐ OK ☐ Not OK		
Piping length within limits	☐ OK ☐ Not OK	Expansion valve rain caps present	☐ OK ☐ Not OK		
Piping insulation liquid	☐ OK ☐ Not OK	Release contact (P1/P2) connected	☐ OK ☐ Not OK		
Piping insulation suction	☐ OK ☐ Not OK	Alarm contacts (C/C1/W1) connected	☐ OK ☐ Not OK		
Refnets position/angle correct	☐ OK ☐ Not OK	Sales selection data available?	☐ Yes ☐ No		
Presence of oil traps	☐ Yes ☐ No	Logbook available and complete?	☐ Yes ☐ No		
Oil traps installed correctly	☐ Yes ☐ No	Outdoor unit heat exchanger state	☐ OK ☐ Not OK		
Liquid line filter present	☐ Yes ☐ No	Presence of installation mistakes	☐ Clean ☐ Dirty		
Suction line filter present (45°)	☐ Yes ☐ No	Airco energy audit requested?	☐ Yes ☐ No		

Settings							
Setting	Description	Default value	New value	Setting	Description	Default value	New value
Lpm	Target evaporation temperature equivalent pressure			20-08	Deactivation sensor correction		
Tst	Target evaporation temperature			23-02	Ceiling height		
Tsd	Evaporation temperature (DIP switch)						
2-06	Airnet address						
3-07	Activation caution output						
2-15	Heat pump off						
2-38	Heat pump release						

Electrical system						
	L1	L2	L3		230 V AC	560 V DC
Main voltage 400 V AC	V	V	V	Control voltage	V	V
	Isolating switch				Fuse outdoor unit	
	☐ OK	☐ Not OK			☐ OK	☐ Not OK
	Fuse indoor unit				Cable sections	
	☐ OK	☐ Not OK			☐ OK	☐ Not OK

Operation check											
Evaporating P target			bar								
Installation capacity			%								
	OnOff/Inv	Freq.	L1 (A)	L2 (A)	L3 (A)	Td °t(*)	Td SH(*)	Abnormal noise			
Inverter 1						°C	K	☐ No	☐ Yes		
Standard 1						°C	K	☐ No	☐ Yes		
Standard 2						°C	K	☐ No	☐ Yes		

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

Running mode				Operation refrigeration output magnetic valves		
Opening electronic expansion valve condenser (EV1)	pulse			☐ OK	☐ Not OK	
Opening electronic expansion valve subcooler (EV2)	pulse					
Suction pressure refrigeration (LP1)	bar			P1/P2 pump down test		
Suction pressure airconditioning (LP2)	bar			☐ OK	☐ Not OK	
Evaporating temperature refrigeration	°C					
Evaporating temperature airconditioning	°C					
Suction temperature refrigeration (Ti1)	°C					
Suction temperature airconditioning (Ti1)	°C					
Suction superheat refrigeration (SH1)	K					
Suction superheat airconditioning (SH2)	K					
Discharge pressure refrigeration (HP1)	bar					
Discharge pressure airconditioning (HP2)	bar					
Condensation temperature	°C					
Liquid temperature (Tce)	°C					
Subcooling temperature (SC)	K					
Subcooler outlet temperature (Tg1)	°C					
Subcooler inlet temperature (TL)	°C					
Pressure drop suction filter	bar					
Pressure drop liquid filter	bar					

		First indoor unit	Middle indoor unit	Farthest indoor unit
Operation mode				
Indoor unit setpoint	°C			
Electronic expansion valve opening	pulse			
Liquid temperature	°C			
Gas temperature	°C			

Outdoor unit				
Inlet air temperature (Ta)	°C		Fan 1	☐ OK ☐ Not OK
Outlet air temperature	°C		Fan 2	☐ OK ☐ Not OK
Approach temperature	K			

Electrical checks				
Electrical connections	☐ OK ☐ Not OK	Electrical insulation		Winding resistance
Alarm contacts (C/C1/W1)	☐ OK ☐ Not OK	Inverter 1	☐ OK ☐ Not OK	☐ OK ☐ Not OK
		Standard 1	☐ OK ☐ Not OK	☐ OK ☐ Not OK
		Standard 2	☐ OK ☐ Not OK	☐ OK ☐ Not OK

Overall inspection result				
The installation is working:	☐ Good ☐ Not good	Follow-up site visit needed?	☐ Yes ☐ No	
	☐ Safe ☐ Not safe			

General remarks:

Shortcomings that were not fixed during the commissioning:

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

Signature certified technician