

Direct expansion: Commissioning – ERQ

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	
Serial number		Standard weight	
Construction year		Additional weight	
Reference installation		Total weight	
End unit type <input type="checkbox"/> Air handling unit <input type="checkbox"/> Biddle air curtain <input type="checkbox"/> Non-Daikin air curtain			
Controller type Type of EKEXV-box Regulation type			

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

Precommissioning					
N2 Test data available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Vacuum test data available	<input type="checkbox"/> Yes	<input type="checkbox"/> 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 <input type="checkbox"/> Yes <input type="checkbox"/> No					

Visual inspection					
Outdoor installation connection ratio			Air side outdoor unit correct	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK
Indoor installation connection ratio			Air side indoor unit correct	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK
System index		%	Vibrations/frictions	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK
Piping distance		m	Noise	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK
Piping length within limits	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK	Height of unit	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK
			Communication bus	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK
				<input type="checkbox"/> Not applicable	
Position/angles of refnets correct?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Presence of installation mistakes	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	<input type="checkbox"/> Not applicable		Sales selection data available?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Type of system charging	<input type="checkbox"/> Automatic charge		Logbook available and completed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	<input type="checkbox"/> Manual charge		Airco energy audit has been requested?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Which test run was executed?	<input type="checkbox"/> Short			<input type="checkbox"/> Not applicable	
	<input type="checkbox"/> Long				

Settings

Outdoor unit				Indoor unit			
Setting	Description	Default value	New value	Setting	Description	Default value	New value

Air handling unit

Airflow pulsion		m³/h	Fresh air intake	<input type="checkbox"/> Yes	<input type="checkbox"/> No		%
Airflow extraction		m³/h	Heat recuperation	<input type="checkbox"/> Yes	<input type="checkbox"/> No		%
Internal volume heat exchanger coil		dm³	Protection present to prevent the ERQ from operating when the air handling unit is stopped?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
Presence of distributor	<input type="checkbox"/> Yes	<input type="checkbox"/> No					
Thermistors installed correctly?	<input type="checkbox"/> Yes	<input type="checkbox"/> No					
Thermistor used for temperature regulation				<input type="checkbox"/> Yes	<input type="checkbox"/> No		

Electrical system

Single phase unit							
Main voltage 230 V AC		V					
Three phase unit							
	L1	L2	L3	230 V AC			
Main voltage 400 V AC		V		V		V	Control voltage
Isolating switch	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK	Fuse outdoor unit	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK		
Cable section	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK	Fuse EKEQ-box	<input type="checkbox"/> OK	<input type="checkbox"/> Not OK		

Operation check

Operation mode								
Indoor unit set point		°C						
Installation capacity		%						
	Frequency	L1 (A)	L2 (A)	L3 (A)	DC °t*	Abnormal noise		
Inverter compressor						<input type="checkbox"/> No	<input type="checkbox"/> Yes	
Standard 1 compressor						<input type="checkbox"/> No	<input type="checkbox"/> Yes	
* DC °t=discharge temperature / DC SH*=discharge super heat								
Number of running compressors		Suction superheat				K		
Opening electronic expansion valve condenser	pulse		Discharge pressure				bar	
Opening electronic expansion valve subcooler	pulse		Condensation temperature				°C	
Suction pressure	bar		Liquid temperature				°C	
Evaporating temperature	°C		Subcooling				K	
Suction temperature	°C		Compressor capacity building up				<input type="checkbox"/> OK	<input type="checkbox"/> Not OK
	EKE XV-box							
Electronic expansion valve opening	pulse							
Liquid temperature	°C							
Gas temperature	°C							

Outdoor unit

Inlet temperature	°C	<input type="text"/>	Fan state 1	<input type="checkbox"/>	OK	<input type="checkbox"/>	Not OK
Outlet temperature	°C	<input type="text"/>	Fan state 2	<input type="checkbox"/>	OK	<input type="checkbox"/>	Not OK
Approach temperature	K	<input type="text"/>					

Electrical checks

Electrical connections	<input type="checkbox"/>	OK	<input type="checkbox"/>	Not OK	Inverter compressor	<input type="checkbox"/>	OK	<input type="checkbox"/>	Not OK	Winding resistance	<input type="checkbox"/>	OK	<input type="checkbox"/>	Not OK
Contactors contacts	<input type="checkbox"/>	OK	<input type="checkbox"/>	Not OK	Standard 1 compressor	<input type="checkbox"/>	OK	<input type="checkbox"/>	Not OK		<input type="checkbox"/>	OK	<input type="checkbox"/>	Not OK

Regulation checks

Low pressure sensor calculation	<input type="checkbox"/>	OK	<input type="checkbox"/>	Not OK	High pressure sensor calculation	<input type="checkbox"/>	OK	<input type="checkbox"/>	Not OK
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Overall result

The installation is working	<input type="checkbox"/>	Good	<input type="checkbox"/>	Not good	Follow-up site visit needed?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
	<input type="checkbox"/>	Safe	<input type="checkbox"/>	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