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## Commissioning

**WARNING**

Only qualified persons should conduct commissioning.

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**CAUTION**

Preliminary electrical system checks such as earth continuity, polarity, resistance to earth and short circuit must be carried out by using a suitable test meter by a competent person.

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**NOTICE**

**Installation manual / Installer reference guide.** This general commissioning checklist can be used as a guideline and reporting template during the commissioning and hand-over to the user.

For more detailed commissioning instructions, see the installation manual or the installer reference guide.

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**Installation by**

Company

Contact person

Telephone N°

Email address

Date

**Commissioning by**

Company

Name

Telephone N°

Email address

Date

**Client**

Name

Street – N°

Zip code – City

Country

Telephone N°

Email address

**Installation**

**Outdoor unit:**

Model name  Refrigerant type

Serial N°  Standard weight  kg

Manufacturing date  Additional weight  kg

Software version  Total weight  kg

(if it differs from the factory setting) Total piping length  m

Refrigerant piping highest difference outdoor-indoor  m

	Indoor unit 1	Indoor unit 2	Indoor unit 3	Indoor unit 4	Indoor unit 5
Model name	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Serial N°	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Manufacturing date	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Options (controllers, ...)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Software version	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
(if it differs from the factory setting)					

Reference installation  Other options:

Location of logbook

**Changed setting (field setting)**

**Note:** Add all changed settings.

Changed on unit:	Changed setting:
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
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<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

Safety / last minute risk analysis

**Note:** Before continuing, make sure all required safety measures are taken. If not, do NOT start commissioning. Perform a last minute risk analysis on the following items.

- |  |  |
|--|--|
| <input type="checkbox"/> Safe access to the installation         | <input type="checkbox"/> General check on possible safety hazards            |
| <input type="checkbox"/> Enclosed workplace                      | <input type="checkbox"/> Emergency exits                                     |
| <input type="checkbox"/> Precaution taken for working at heights | <input type="checkbox"/> Presence of necessary personal protection equipment |
| <input type="checkbox"/> Precaution taken for electrical hazards | <input type="checkbox"/> No refrigerant leakage                              |

Electrical system

Main voltage (power supply) \_\_\_\_\_ V

**Cable section (type and size):**

Outdoor unit \_\_\_\_\_ mm<sup>2</sup>

Indoor unit \_\_\_\_\_ mm<sup>2</sup>

**Operation check done on:**

- |   |               |
|---|---------------|
| <input type="checkbox"/> All electrical connections make good contact |               |
| <input type="checkbox"/> Residual current device                      | type: _____   |
| <input type="checkbox"/> Fuse   | rating: _____ |
| <input type="checkbox"/> Circuit breaker                              | type: _____   |

**Compressor components check:**

- |  |
|--|
| <input type="checkbox"/> Electrical insulation |
| <input type="checkbox"/> Winding resistance    |

Pre-Commissioning

**Note:** Full installation has to be done in line with the installer reference guide. If NOT, do NOT commission and solve all open issues first.

- |  |                              |                             |   |
|--|------------------------------|-----------------------------|---|
| Outdoor unit and indoor unit are properly mounted?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |   |
| Outdoor unit is protected against snowfall and freezing conditions (in cold climates, if applicable)?          | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Not applicable |
| Outdoor unit is protected against strong winds (if applicable)?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Not applicable |
| Outdoor unit is protected against from direct sea winds (if applicable)?                                       | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Not applicable |
| Sufficient space around the outdoor/indoor unit for servicing and air circulation?                             | <input type="checkbox"/> Yes | <input type="checkbox"/> No |   |
| No corrosion/oxidation present?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |   |
| All labels are present and matching with the unit?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |   |
|  |                              |                             |   |
| No damaged components or squeezed pipes on the inside of indoor and outdoor unit?                              | <input type="checkbox"/> Yes | <input type="checkbox"/> No |   |
| Indoor and outdoor unit fan can rotate freely?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |   |
| Air inlet or air outlet is NOT blocked?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |   |
| Drainage of the outdoor unit and indoor units flows smoothly?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |   |
|  |                              |                             |   |
| Both stop valves are open before operation?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |   |
| Piping is correctly insulated?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |   |
| Refrigerant piping is installed according to the installation manual?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |   |
| Fluorinated greenhouse gases label is filled correctly?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |   |
|  |                              |                             |   |
| Electrical system installed according to the installation manual?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |   |
| System is properly earthed?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |   |
| Power supply wiring is according to the specifications?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |   |
| The fuses, circuit breakers are installed according the installation manual?                                   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |   |
| All control wiring connections between indoor and outdoor are finished?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |   |
| All electronic components are OK?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |   |
| Position of sensors and thermistors is correct?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |   |
| The suspend connector on the outdoor unit PCB removed for connection with Sky Air indoor unit? (if applicable) | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Not applicable |

## Test run

**Note:** Perform the Test run according to the instructions in the installation manuals of the connected units and then check below items

	Indoor unit 1	Indoor unit 2	Indoor unit 3	Indoor unit 4	Indoor unit 5
Indoor unit fan rotates freely	<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	<input type="checkbox"/> OK <input type="checkbox"/> Not OK	<input type="checkbox"/> OK <input type="checkbox"/> Not OK
Airflow direction louvers and flaps operate normally (if applicable)	<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	<input type="checkbox"/> OK <input type="checkbox"/> Not OK	<input type="checkbox"/> OK <input type="checkbox"/> Not OK
WLAN adaptor connection (if applicable)	<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	<input type="checkbox"/> OK <input type="checkbox"/> Not OK	<input type="checkbox"/> OK <input type="checkbox"/> Not OK
<b>Outdoor unit</b>					
Outdoor unit fan rotates freely	<input type="checkbox"/> OK <input type="checkbox"/> Not OK				
<b>System</b>					
Abnormal noise	<input type="checkbox"/> Yes <input type="checkbox"/> No				
Are there any error codes?	<input type="checkbox"/> Yes <input type="checkbox"/> No		If yes, write down the error codes <input style="width: 150px;" type="text"/>		

## Operation check

**Note:** Optional (only for certified service engineers)

Outdoor air temperature  °C

	Indoor unit 1	Indoor unit 2	Indoor unit 3	Indoor unit 4	Indoor unit 5
Operation mode	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Set temperature	°C <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Inlet air temperature	°C <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Outlet air temperature	°C <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Room thermistor	°C <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Indoor heat exchanger thermistor	°C <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Gas pipe thermistor	°C <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Liquid pipe thermistor	°C <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>Outdoor unit</b>					
Inlet air temperature	°C <input type="text"/>	Outdoor heat exchanger thermistor	°C <input type="text"/>		
Outlet air temperature	°C <input type="text"/>	Discharge pipe thermistor	°C <input type="text"/>		
Gas pipe pressure	bar <input type="text"/>		Liquid pipe pressure	bar <input type="text"/>	
Compressor data	L1 (A) <input type="text"/>	L2 (A) <input type="text"/>	L3 (A) <input type="text"/>		

Overall result

Is the unit ready for operation?

- Yes
- No (specify below why not)

Shortcomings that were not fixed during the commissioning:

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

Name and signature client

Name and signature of person who performed commissioning





