

NA GOLDRX/PX/SD



EN - Installation Instructions

CONTENTS

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0.	Caution.....	3
1.	Key to Symbols.....	3
2.	Safety Instructions.....	4
3.	A2L Safety Instructions.....	5
4.	Operation and Maintenance.....	18
5.	Decommissioning.....	22
6.	Packing.....	24
7.	Serial Numbers.....	24
8.	Assembly.....	25
9.	Clearances.....	26
10.	Connecting to the Ductwork.....	28
11.	Electrical Connections.....	29
12.	12.....	30
13.	13.....	31
14.	Connections for the Hand-held/Micro Sensors.....	32
15.	Installations of Sensors.....	33
16.	Verification of the Direction of Rotation.....	34
17.	EN - List of terminals.....	35

WARNING

THIS UNIT IS A PARTIAL UNIT AIR CONDITIONER. THIS UNIT COMPLIES WITH PARTIAL UNIT REQUIREMENTS OF THE APPLICABLE INTERNATIONAL STANDARD AND MUST ONLY BE CONNECTED TO OTHER UNITS THAT HAVE BEEN CONFIRMED AS COMPLYING WITH CORRESPONDING PARTIAL UNIT REQUIREMENTS OF THE SAME INTERNATIONAL STANDARD. ENSURE THAT THIS PARTIAL UNIT IS ONLY CONNECTED TO AN APPLIANCE SUITABLE FOR THE SAME REFRIGERANT. IMPROPER CONNECTION MAY RESULT IN EQUIPMENT DAMAGE, PERSONAL INJURY, OR SYSTEM FAILURE.

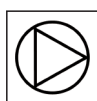
0. Caution

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

- That the appliance shall be installed in accordance with national wiring regulations;
- For the dimensions of the space necessary for correct installation of the appliance including the minimum permissible distances to adjacent structures, please check section 8.

1. Key to Symbol

EN



Fan



Filter



Warning



Must be connected by a qualified Electrician. Warning! Hazardous voltage.



Outdoor air



Supply air

EN



Extract air



Exhaust air



Protect from moisture



Rotary heat exchanger

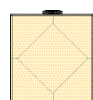
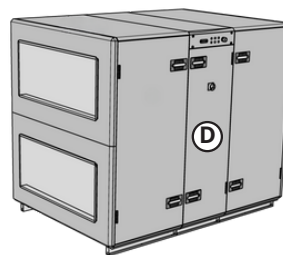
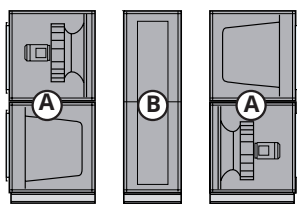


Plate heat exchanger

2.



NA GOLD RX A (kg)					NA GOLD RX A (lb)				
	B (kg)	C (kg)	D (kg)			B (lb)	C (lb)	D (lb)	
005	-	-	20	243	005	-	-	44	534.6
007	-	-	21	301	007	-	-	46.2	662.2
008	-	-	21	309	008	-	-	46.2	679.8
011	167	162	28	496	011	367.4	356.4	61.6	1091.2
012	178	162	39	518	012	391.6	356.4	85.8	1139.6
014	209	171	40	589	014	459.8	376.2	88	1295.8
020	227	171	65	625	020	499.4	376.2	143	1375
025	265	216	65	746	025	583	475.2	143	1641.2
030	285	216	78	786	030	627	475.2	171.6	1729.2
035	379	312	78	1070	035	833.8	686.4	171.6	2354
040	404	312	103	1120	040	888.8	686.4	226.6	2464
050	502	414	65	1418	050	1104.4	910.8	143	3119.6
060	542	414	78	1498	060	1192.4	910.8	171.6	3295.6
070	816	579	78	2211	070	1795.2	1273.8	171.6	4864.2
080	928	579	134	2435	080	2041.6	1273.8	294.8	5357

NA GOLD PX A (kg)					NA GOLD PX A (lb)				
	B (kg)	C (kg)	D (kg)			B (lb)	C (lb)	D (lb)	
005	-	(kg) -	20	337	005	-	-	44	741.4
007	-	-	21	419	007	-	-	46.2	921.8
008	-	-	21	428	008	-	-	46.2	941.6
011	167	312	28	646	011	367.4	686.4	61.6	1421.2
012	178	312	39	668	012	391.6	686.4	85.8	1469.6
014	209	355	40	773	014	459.8	781	88	1700.6
020	227	355	65	809	020	499.4	781	143	1779.8
025	265	528	65	1058	025	583	1161.6	143	2327.6
030	285	528	78	1058	030	627	1161.6	171.6	2327.6
035	379	1034	78	1792	035	833.8	2283.1	171.6	3950.7
040	404	1034	103	1842	040	888.8	2283.1	226.6	4060.7

NA GOLD SD	A (kg)	B (kg)	C (kg)	D(kg)	A(lb)	B(lb)	C(lb)	D(lb)
007	138	-	-	232	304	-	-	511
008	145	-	-	285	320	-	-	628
011	184	-	-	368	406	-	-	811
012	195	-	-	379	430	-	-	836
014	250	-	-	506	551	-	-	1116
020	260	-	-	516	573	-	-	1138
025	308	-	-	616	679	-	-	1358
030	351	-	-	659	774	-	-	1453
035	413	-	-	853	911	-	-	1881
040	438	-	-	878	966	-	-	1936
050	516	-	-	1058	1138	-	-	2332
060	589	-	-	1131	1299	-	-	2493
070	791	-	-	1494	1744	-	-	3294
080	818	-	-	1521	1803	-	-	3353

3. A2L Safety Instructions

3.1 General Requirements for A2L Refrigerants

Units equipped with A2L refrigerants contain a low-burning-velocity, mildly flammable refrigerant. The following precautions shall always be observed:
The appliance must be installed and serviced only by trained and qualified personnel familiar with A2L refrigerants.

The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).

Do not pierce or burn.

Be aware that refrigerants may not contain an odor.

3.2 Safety Labels and Identification

All A2L configured NA GOLD units are marked with dedicated A2L/flammable refrigerant safety labels. It is the responsibility of the installer and owner to comply with safety requirements listed in this document.

The following symbols must remain clearly visible and must not be removed or obscured.

	warning; flammable materials
	warning; flammable materials
	service indicator; read technical manual
	A2L warning; low burning velocity material
	pressure
	ultraviolet radiation, instructional safeguard
	operator's manual; operating instructions





⚠ WARNING RISK OF FIRE OR EXPLOSION. STORE IN A WELL-VENTILATED ROOM WITHOUT CONTINUOUSLY OPERATING FLAMES OR OTHER POTENTIAL IGNITION.	⚠ AVERTISSEMENT RISQUE D'INCENDIE OU D'EXPLOSION. ENTREPOSER DANS UNE PIÈCE BIEN VENTILÉE SANS FLAMMES CONTINUES OU AUTRE RISQUE D'ALLUMAGE.
⚠ WARNING RISK OF FIRE. FLAMMABLE REFRIGERANT USED. TO BE REPAIRED ONLY BY TRAINED SERVICE PERSONNEL. DO NOT PUNCTURE REFRIGERANT TUBING.	⚠ AVERTISSEMENT RISQUE D'INCENDIE. CONTIENT UN FRIGORIGÈNE INFLAMMABLE. CONFIER LA RÉPARATION À UNE PERSONNE QUALIFIÉE. NE PAS PERFORER LA TUBULURE CONTENANT LE FRIGORIGÈNE.
⚠ WARNING RISK OF FIRE. DISPOSE OF PROPERLY IN ACCORDANCE WITH FEDERAL OR LOCAL REGULATIONS. FLAMMABLE REFRIGERANT USED.	⚠ AVERTISSEMENT RISQUE D'INCENDIE. METTRE AU REBUT CONFORMÉMENT AUX RÈGLEMENTS FÉDÉRAUX OU LOCAUX. CONTIENT UN FRIGORIGÈNE INFLAMMABLE.
⚠ WARNING RISK OF FIRE. AUXILIARY DEVICES WHICH MAY BE IGNITION SOURCES SHALL NOT BE INSTALLED IN THE DUCTWORK, OTHER THAN AUXILIARY DEVICES LISTED FOR USE WITH THE SPECIFIC APPLIANCE. SEE INSTRUCTIONS.	⚠ AVERTISSEMENT RISQUE D'INCENDIE. LES DISPOSITIFS AUXILIAIRES POUVANT ÊTRE DES SOURCES D'INFLAMMATION NE DOIVENT PAS ÊTRE INSTALLÉS DANS LA CONDUITE, À L'EXCEPTION DES DISPOSITIFS AUXILIAIRES HOMOLOGUÉS POUR ÊTRE UTILISÉS AVEC L'APPAREIL SPÉCIFIQUE. VOIR LES INSTRUCTIONS.
⚠ NOTICE LEAK DETECTION SYSTEM INSTALLED. UNIT MUST BE POWERED EXCEPT FOR SERVICE.	⚠ AVIS SYSTÈME DE DÉTECTION DE FUITES INSTALLÉ. L'UNITÉ DOIT ÊTRE SOUS TENSION, SAUF EN CAS D'ENTRETIEN.



WARNING

Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer. The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater. Do not pierce or burn. Be aware that refrigerants may not contain an odour.

The manufacturer may provide other suitable examples or may provide additional information about the refrigerant odour.”

NOTE: Ensure safety labels or markings are not covered prior to installation.

3.3 Minimum Room Requirements & Ventilation



WARNING

Keep any required ventilation openings clear of obstruction.



WARNING

This appliance contains a flammable refrigerant. Minimum floor area on nameplate is based on factory charge at a ceiling/release height of 2.2 m (7.2 ft) in accordance with UL 60335 2 40. Refer to Table 1 for different allowable room areas based on other charges and ceiling/release heights.

NOTE: The appliance shall be stored so as to prevent mechanical damage from occurring.

Table 1 includes the maximum releasable charge based on floor area serviced by NA GOLD unit and the ceiling height. The releasable charge is either the full charge of the circuit or the maximum releasable charge defined by the VRF manufacturer.

NA GOLD RX, PX, SD	Floor area		Release Height	
			7.2 ft/2.2m	
			Maximum R-32 Releasable Charge	
Model	ft2	m2	lbs	kg
05	54	5	3.70	1.68
05	108	10	7.40	3.36
05	161	15	11.10	5.04
08	215	20	14.80	6.72
08	269	25	18.50	8.39
12	323	30	22.20	10.07
12	377	35	25.90	11.75
12	431	40	29.61	13.43
12	484	45	33.31	15.11
12	538	50	37.01	16.79
20	646	60	44.41	20.15
20	753	70	51.81	23.50
30	861	80	59.21	26.86
30	969	90	66.61	30.22
30	1076	100	74.01	33.58
40	1345	125	92.52	41.97
40	1615	150	111.02	50.37
40	1884	175	129.52	58.76
60	2153	200	148.03	67.15
60	2422	225	166.53	75.55
80	2691	250	185.03	79.00
80	3229	300	222.04	79.00
80	3767	350	259.04	79.00
80	4306	400	296.05	79.00

Table 2 shows Minimum Mitigation Airflow values for partial units based on total system charge values for split systems.

					Minimum Room Area	
NA GOLD RX, PX, SD	System Charge		Min. Mitigation Airflow		7.2 ft/2.2m release height	
Model	Lbs	kg	cfm	m3/h	ft2	m2
05	12	5.45	314	533	175	16.24
07	21	9.58	551	936	307	28.54
08	21	9.58	551	936	307	28.54
11	38	17.05	981	1,667	545	50.77
12	38	17.05	981	1,667	545	50.77
14	56	25.45	1,464	2,487	814	75.81
20	56	25.45	1,464	2,487	814	75.81
25	81	36.93	2,124	3,609	1,182	109.99
30	81	36.93	2,124	3,609	1,182	109.99
35	132	59.92	3,446	5,855	1,917	178.47
40	132	59.92	3,446	5,855	1,917	178.47
50	170	77.27	4,444	7,550	2,472	230.14
60	170	77.27	4,444	7,550	2,472	230.14
70	233	79.00	4,544	7,720	3,393	235.28
80	233	79.00	4,544	7,720	3,393	235.28



WARNING

If this appliance is installed to serve a conditioned area less than the minimum area as indicated in Table 2, the served space must be free of continuously operating open flames or other sources of ignition. Additional ventilation is required in accordance with ASHRAE 15.

Mitigation requirements for A2L refrigerants are based at sea level. For applications at greater elevation, multiply the floor area by the altitude correction factor in Table 3 to determine the required floor area at the specified altitude.

Altitude Adjustment Factor		
ft	m	Minimum room Area Multiplier
-	-	1.00
656	200	1.00
1,312	400	1.00
1,969	600	1.00
2,625	800	1.00
3,281	1,000	1.05
3,937	1,200	1.07
4,593	1,400	1.10
5,249	1,600	1.12
5,906	1,800	1.15
6,562	2,000	1.18

3.4 Refrigerant Leak Detection System (RDS)



WARNING

The RDS sensor is not intended for service or repair, only replacement when required. Replacement sensors for RDS shall be specified by the Swegon.

The RDS sensor is secured to a factory bracket located behind the drain pan on the floor and centered in the downstream air. The bracket ensures that the sensor is mounted at the correct height from the floor of the unit. Do not change the location of the sensor from factory position.

NOTE: Ensure external zoning or shutoff dampers are functioning correctly prior to charging the unit to ensure mechanical ventilation as part of the response sequence.

NOTE: The refrigerant detection sensor is a limited-life component with a service life of fifteen years and shall be replaced at the end of this period or sooner if a fault is detected. The service should be done by a certified Swegon technician.

Replacement: Disconnect power, replace the sensor with the manufacturer-specified part, restore power, and verify proper system operation.

User guide for NA GOLD A2L Detection System

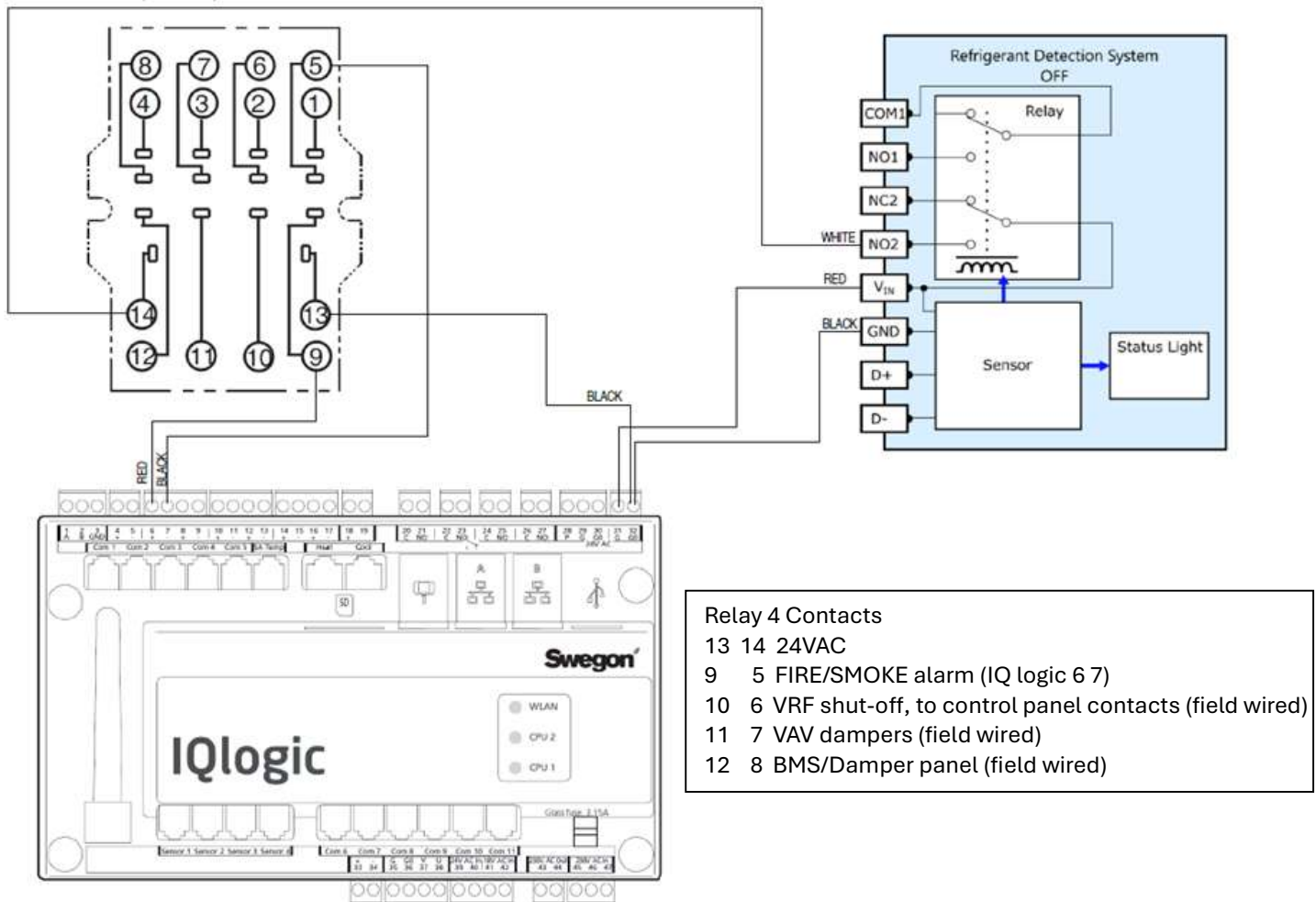
The NA GOLD unit is designed to operate with A2L-based VRF split systems that are UL-approved for A2L Refrigerants. The NA GOLD unit includes factory-mounted and wired UL 60335-2-40/CSA C22.2 listed refrigerant monitor for A2L refrigerants. The refrigerant sensors are factory mounted. For units shipped in sections, the refrigerant sensors are mounted in the appropriate section with enough cable to allow field wiring connections.

Leakage mitigation control sequence:

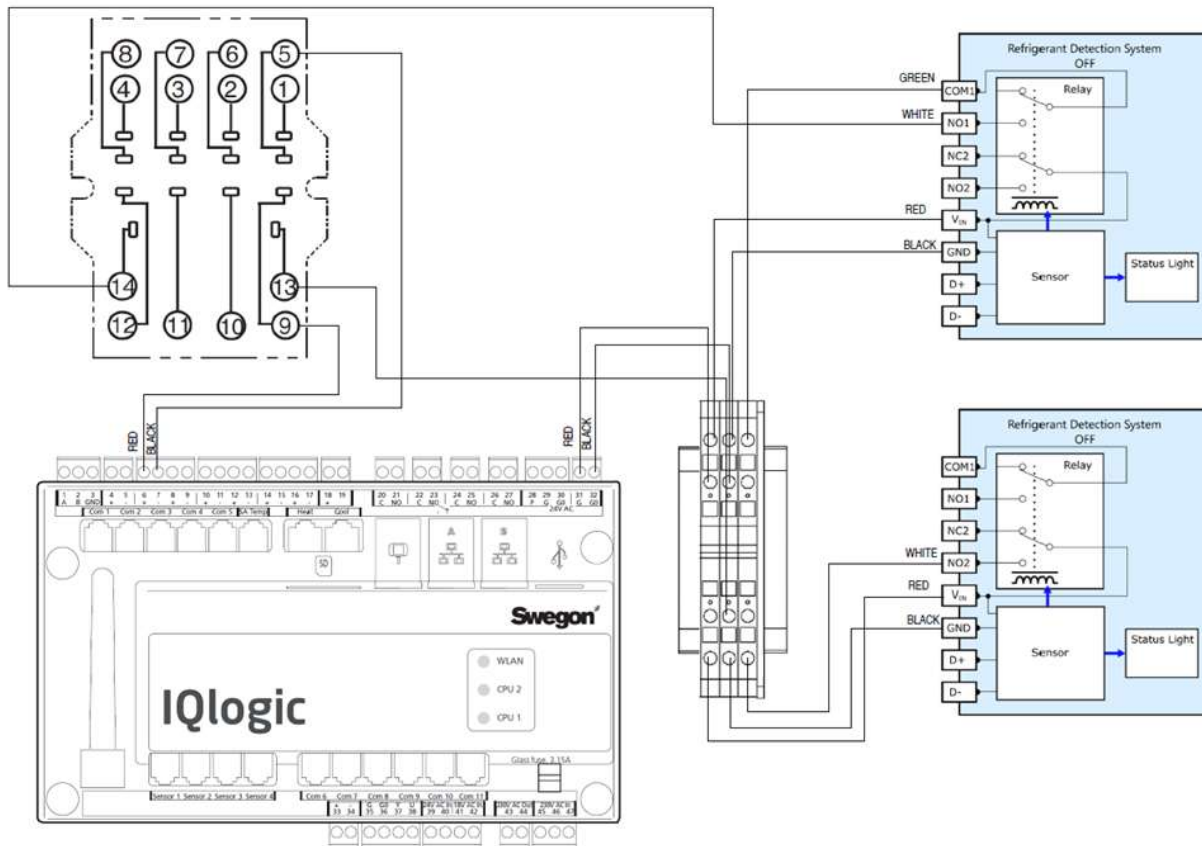
The IQLogic controller includes the necessary programming for leak detection as required in UL 60335-2-40 and ASHRAE Std 15. On a detection of a refrigerant leak,

- The unit will operate the supply and return fans at 100% rpm.
- Dampers within the Swegon unit will open.
- Swegon provides output signal to the contact (field wired) on the VRF unit, indicating a refrigerant leak (close=normal, open=leak). Upon open circuit of the output signal, the VRF unit is responsible for stopping operation (turning off the compressor) and/or closing the refrigerant safety valves, if exist.
- Contact (field wired) for VAV dampers.
- Contact (field wired) indicating a refrigerant leak to the Building Automation System (Optional).

Control wiring diagram from IQLogic to the detector (SENSIRION SGD43S-M3-S5) in a DX section:



Control wiring diagram from IQLogic to the detector (SENSIRION SGD43S-M3-S5) in a DX and HGRH section:



Relay 4 Contacts

13 14 24VAC

9 5 FIRE/SMOKE alarm (IQ logic 6 7)

10 6 VRF shut-off, to control panel contacts (field wired)

11 7 VAV dampers (field wired)

12 8 BMS/Damper panel (field wired)

SENSIRION SGD43S-M3-S5:

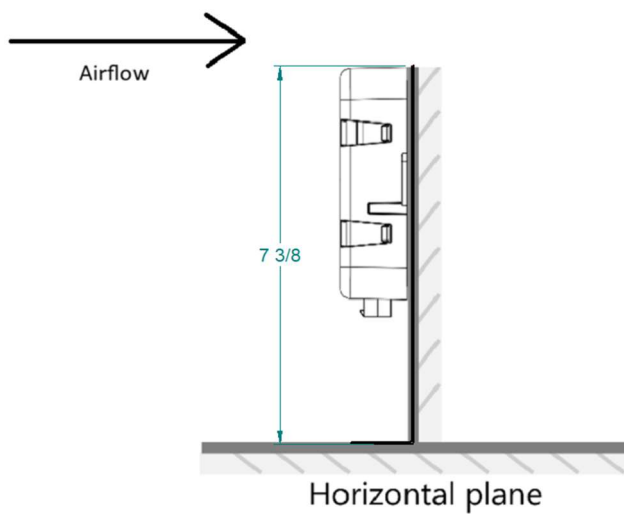


Mount location:

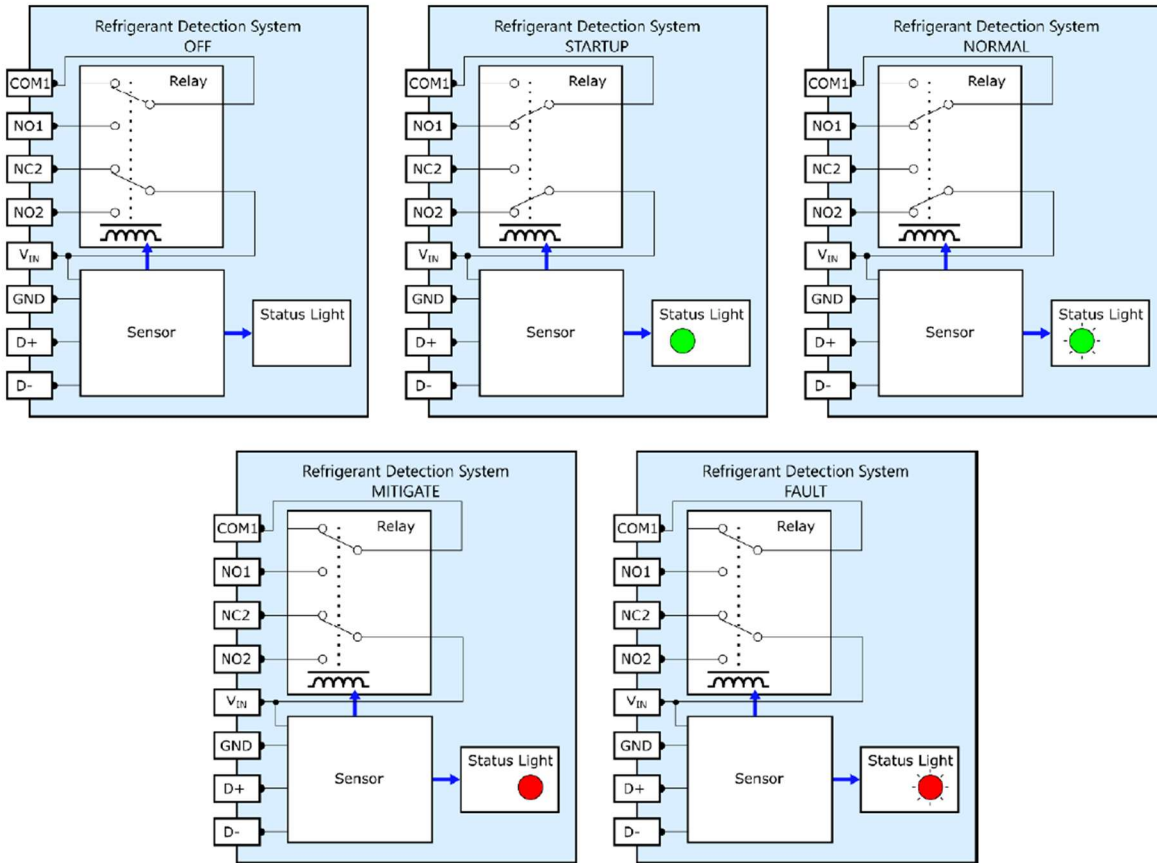


Secured to a factory bracket located near the edge of the cabinet and centered in the downstream air. The bracket ensures that the sensor is mounted at the correct height from the floor of the unit. One sensor downstream of the DX coil and a second sensor downstream of the HGRH coil if applicable. **Do not change the location of the sensor from factory position.**

View as seen from the inspection side:



Relay and Status Light Operation:



The sensor's relay contacts remain not energized (normally-open open, normally-closed closed) if any of the following conditions are met:

- Sensor is unpowered
- Sensor is in FAULT state
- Sensor is out of calibration as determined by the self-monitoring algorithm
- Sensor has reached its end-of-life as determined by the self-monitoring algorithm
- Sensor is in MITIGATE state

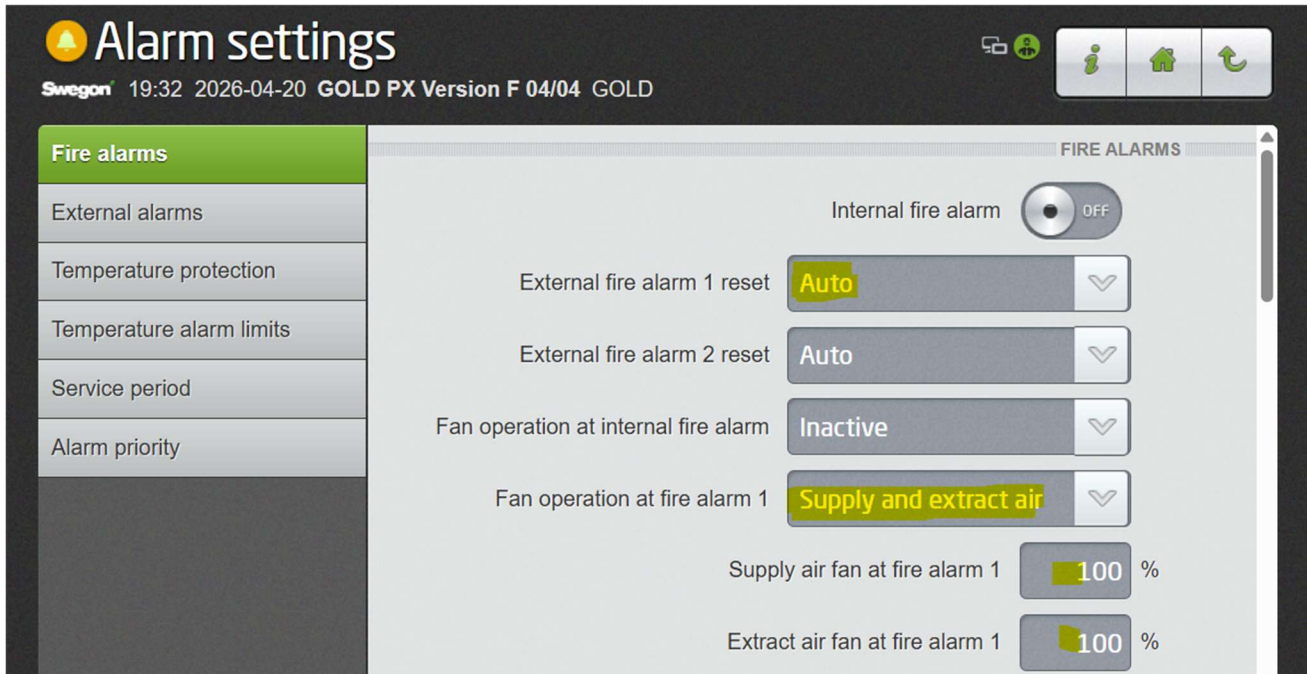
The sensor's relay contacts remain energized (normally open=closed, normally closed=open) if all of the following conditions are met:

- Sensor is powered
- Sensor is in STARTUP state, or sensor is in NORMAL state (the sensor is operating normally)
- The measured refrigerant concentration is below the detection limit threshold value (DTLV)

When a refrigerant leak has been detected, the sensor goes into the MITIGATE state. After the refrigerant concentration is again below the detection threshold limit value (DTLV), the sensor remains in the MITIGATE state for the leak sustain period. The relay remains not energized during the leak sustain period. The leak sustain period is set to 5 min (300 s).

IQ logic settings:

Using the 6 and 7 terminals will assign the RDS under “fire” alarm 1, as far as the IQ logic is concerned. Therefore, all settings in the user configuration for fire alarm #1 will be strictly for RDS. Set up the fan to 100% rpm for supply and extract air.



To check that the RDS system is functioning remove the wire from #14 terminal of the 4-contact relay. “Fire alarm 1” will activate and a red light on the handheld tablet should start flashing. The fans will ramp towards the 100% set for the supply and return. VRF, VAV dampers (if wired), BMS (if wired) contacts will change state.

VRF – Compressor off and valves closed

VAV dampers – Typically open. Check specific strategy for building.

BMS – Custom setup can trigger building specific strategies.

After checks are complete, reattach wire back to #14 terminal. Sensor downstream of coil should have a blinking green light.

3.5 Refrigerant Piping & Component Requirements



WARNING

Ducts connect to an appliance shall not contain a potential ignition source.

The installation of pipe-work shall:

- be kept to a minimum
- ensure compliance with national gas regulations is observed

NOTE: In areas where refrigerant pipes are permitted, pipe-work including piping material, pipe routing, and installation shall include protection from physical damage in operation and service, and be in compliance with national and local codes and standards, such as ANSI/ASHRAE 15, ANSI/ASHRAE 15.2, IAPMO Uniform Mechanical Code, ICC International Mechanical Code, or CSA B52. All field joints shall be accessible for inspection prior to being covered or enclosed.



WARNING

For coils using A2L FLAMMABLE REFRIGERANTS, when installed in a room with an area less than that outlined in in Table 1 for a given releasable charge of the A2L refrigerant, that room shall be without continuously operating open flames (for example, an operating gas appliance) or other potential ignition sources (for example, an operating electric heater, hot surfaces). A flame providing device may be installed in the same space if the device is provided with an effective flame arrest.



WARNING

Auxiliary devices which may be a POTENTIAL IGNITION SOURCE shall not be installed in the duct work. Examples of such POTENTIAL IGNITION SOURCES are hot surfaces with a temperature exceeding 700°C and electric switching devices.

NOTE: 700°C is the maximum allowable surface temperature as defined in 22.117.

NOTE: After completion of field piping for split systems, the field pipework shall be pressure tested with an inert gas and then vacuum tested prior to refrigerant charging, according to the following requirements:

- Minimum test pressure for the low side of the system shall be the low side MAXIMUM ALLOWABLE PRESSURE, and the minimum test pressure for the high side of the system shall be the high side MAXIMUM ALLOWABLE PRESSURE, unless the high side of the system cannot be isolated from the low side of the system in which case the entire system shall be pressure tested to the low side MAXIMUM ALLOWABLE PRESSURE.
- o Field made refrigerant joints indoors shall be tightness tested. The test method shall have a sensitivity of 5 grams per year of refrigerant or better under a pressure of at least 0.25 times the MAXIMUM ALLOWABLE PRESSURE. No leak shall be detected.
- o Where addition of charge is required to complete installation, instructions on how to determine the additional REFRIGERANT CHARGE and how to complete the REFRIGERANT CHARGE on the label provided by Swegon considering the requirements in 4.9. Interconnecting refrigerant piping length and diameter shall be taken into consideration.

3.6 Safety Shut-off Valves

For Swegon units connected to R32 REFRIGERANT systems that utilize safety shut off valves in the field piping to minimize the releasable charge m_”REL” inside the Swegon appliance, each Swegon unit shall have a nominal heating or cooling capacity not exceeding 5 tons (17.5 kW) in accordance with the latest ASHRAE Standard 15, or 10 tons (35 kW) in accordance with UL 60335 2 40 limitations. Please refer to Table 1 for minimum room area and ventilation airflow.

Consult the Heating and Cooling Manufacturer’s technical guide to determine the resulting system charge when safety shut off valves are present. Safety shut off valves are sized and supplied by others.

3.7 Installer & Technician Qualification Requirements

NOTICE: Servicing shall be performed only as recommended by Swegon.



WARNING

For appliances using A2L refrigerants connected via an air duct system to one or more rooms, a warning that only auxiliary devices approved by the Swegon or declared suitable with the refrigerant shall be installed in connecting ductwork

3.8 Qualification of Workers

Installation and servicing shall be performed only by qualified personnel trained in handling A2L refrigerants and familiar with applicable codes and safety practices.

Only personnel with appropriate training or certification shall install or service this appliance.

Examples for such working procedures are:

- breaking into the refrigerating circuit;
- opening of sealed components;
- opening of ventilated enclosures.

4. Operation and Maintenance

4.1 Checks to the area

Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimized.

4.2 Work procedure

Work shall be undertaken under a controlled procedure so as to minimize the risk of a flammable gas or vapor being present while the work is being performed.

4.3 General work area

All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided.

4.4 Checking for presence of refrigerant

The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially toxic or flammable atmospheres. Ensure the leak detection equipment used is suitable for use with all applicable refrigerants (non sparking, adequately sealed, or intrinsically safe).

4.5 Presence of fire extinguisher

If any hot work is to be conducted on the refrigerating equipment or associated parts, appropriate fire extinguishing equipment shall be available. A dry powder or CO₂ extinguisher shall be adjacent to the charging area.

4.6 No ignition sources

No person carrying out work on a refrigerating system that exposes any pipework shall use any sources of ignition that may lead to fire or explosion. All possible ignition sources, including cigarette smoking, shall be kept sufficiently far from the site. Prior to work, the area shall be surveyed to ensure there are no flammable hazards or ignition risks. "No Smoking" signs shall be displayed.

4.7 Ventilated area

Ensure that the area is in the open or is adequately ventilated before breaking into the system or conducting hot work. Ventilation shall continue during the work to safely disperse released refrigerant and preferably expel it externally.

4.8 Checks to the refrigerating equipment

Where electrical components are being changed, they shall be fit for purpose and meet manufacturer specifications. Maintenance and service guidelines must be followed. If in doubt, consult the manufacturer.

The following checks shall be applied to installations using flammable refrigerants:

- The actual refrigerant charge is in accordance with the room size within which the refrigerant containing parts are installed.
- The ventilation machinery and outlets are operating adequately and are not obstructed.
- If an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant.
- Marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected.
- Refrigerating pipe or components are installed in a position where they are unlikely to be exposed to any substance that may corrode refrigerant containing components, unless the components are constructed of materials inherently resistant to corrosion or are suitably protected against being corroded.

4.9 Checks to electrical devices

Repair and maintenance of electrical components shall include initial safety checks and inspection procedures. If a fault exists that could compromise safety, no electrical supply shall be connected until it is corrected. If temporary operation is necessary, a safe temporary solution may be used and must be reported to the equipment owner.

Initial safety checks include:

- Capacitors are discharged safely to avoid sparking.
- No live electrical components or wiring are exposed during charging, recovery, or purging.
- Continuity of earth bonding is confirmed.

4.10 Repairs to sealed components

- During repairs to sealed components, all electrical supplies shall be disconnected before removing sealed covers. If an electrical supply must remain for servicing, leak detection must be located at the most critical point to warn of a hazardous situation.

4.11 Repair to intrinsically safe components

Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use.

Intrinsically safe components are the only types that can be worked on while live in the presence of a flammable atmosphere. The test apparatus shall be at the correct rating.

Replace components only with parts specified by the manufacturer. Other parts may result in the ignition of refrigerant in the atmosphere from a leak.

NOTE: The use of silicon sealant can inhibit the effectiveness of some types of leak detection equipment. Intrinsically safe components do not have to be isolated prior to working on them.

4.12 Cabling

Cabling must not be subject to wear, corrosion, excessive pressure, vibration, sharp edges, or other adverse effects. Checks must consider ageing or continual vibration from compressors or fans.

4.13 Detection of flammable refrigerants

Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used. The following leak detection methods are deemed acceptable for all refrigerant systems.

Electronic leak detectors may be used to detect refrigerant leaks but, in the case of FLAMMABLE REFRIGERANTS, the sensitivity may not be adequate, or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area.) Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed, and the appropriate percentage of gas (25 % maximum) is confirmed.

Leak detection fluids are also suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work. Examples of leak detection fluids are:

- Bubble method
- Fluorescent method agents

If a leak is suspected, all naked flames shall be removed/extinguished.

If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak. Removal of refrigerant shall be carefully carried out according to the following guidance.

4.14 Removal and evacuation

When breaking into the refrigerant circuit to make repairs – or for any other purpose – conventional procedures shall be used. However, for flammable refrigerants, it is important that best practice is followed, since flammability is a consideration. The following procedure shall be adhered to:

- safely remove refrigerant following local and national regulations;
- evacuate;
- purge the circuit with inert gas (optional for A2L);
- evacuate (optional for A2L);
- continuously flush or purge with inert gas when using flame to open the circuit; and
- open the circuit.

The refrigerant charge shall be recovered into the correct recovery cylinders if venting is not allowed by local and national codes. For appliances containing flammable refrigerants, the system shall be purged with oxygen free nitrogen to render the appliance safe for flammable refrigerants.

This process might need to be repeated several times. Compressed air or oxygen shall not be used for purging refrigerant systems.

For appliances containing flammable refrigerants, refrigerant purging shall be achieved by breaking the vacuum in the system with oxygen free nitrogen and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum (optional for A2L). This process shall be repeated until no refrigerant is left in the system (optional for A2L). When the final oxygen free nitrogen charge is used, the system shall be vented down to atmospheric pressure to enable work to take place.

The outlet for the vacuum pump shall not be close to any potential ignition sources, and ventilation shall be available.

5. Decommissioning

5.1 Decommissioning

Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re use of recovered refrigerant. It is essential that electrical power is available before the task is commenced.

a) Become familiar with the equipment and its operation.

b) Isolate system electrically.

c) Before attempting the procedure, ensure that:

- mechanical handling equipment is available, if required, for handling refrigerant cylinders;
- all personal protective equipment is available and being used correctly;
- the recovery process is supervised at all times by a competent person;
- recovery equipment and cylinders conform to the appropriate standards.

d) Pump down refrigerant system, if possible.

e) If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.

f) Make sure that the cylinder is situated on the scales before recovery takes place.

g) Start the recovery machine and operate in accordance with instructions.

h) Do not overfill cylinders (no more than 80% volume liquid charge).

i) Do not exceed the maximum working pressure of the cylinder, even temporarily.

j) When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.

k) Recovered refrigerant shall not be charged into another REFRIGERATING SYSTEM unless it has been cleaned and checked.

5.2 Labelling

Equipment shall be labelled stating that it has been de-commissioned and emptied of refrigerant. The label shall be dated and signed. For appliances containing FLAMMABLE REFRIGERANTS, ensure that there are labels on the equipment stating the equipment contains FLAMMABLE REFRIGERANT.

5.3 Recovery

When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.

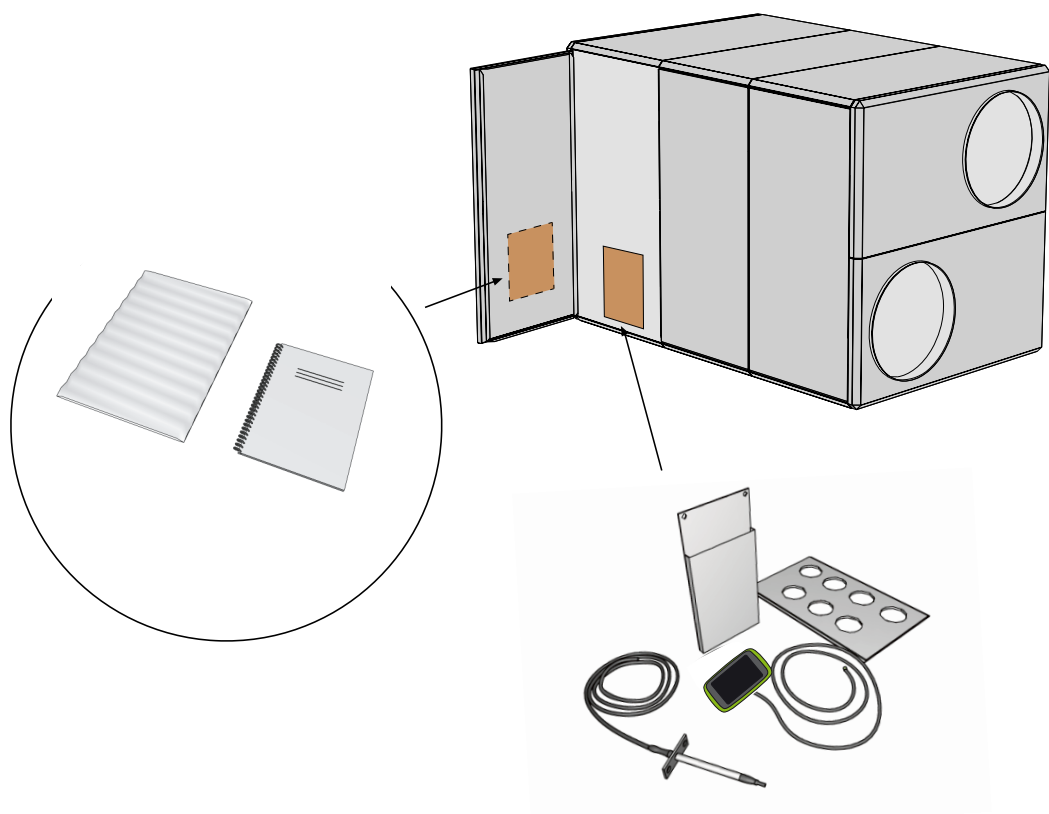
When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct number of cylinders for holding the total system charge is available. All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i.e. special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure-relief valve and associated shut-off valves in good working order. Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.

The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of all appropriate refrigerants including, when applicable, FLAMMABLE REFRIGERANTS. In addition, a set of calibrated weighing scales shall be available and in good working order. Hoses shall be complete with leak-free disconnect couplings and in good condition. Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer if in doubt.

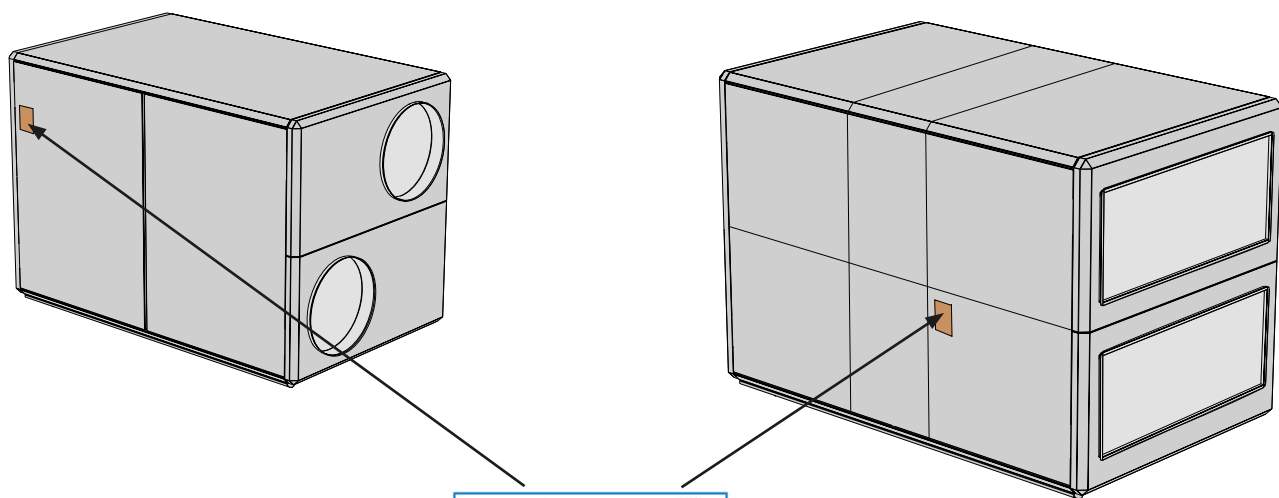
The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant waste transfer note arranged. Do not mix refrigerants in recovery units and especially not in cylinders.

If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that FLAMMABLE REFRIGERANT does not remain within the lubricant. The evacuation process shall be carried out prior to returning the compressor to the suppliers. Only electric heating to the compressor body shall be employed to accelerate this process. When oil is drained from the system, it shall be carried out safely.

6. Unpacking



7. Serial Numbers



Family Name

GOLD NA

Model #

GOLD08RX111111

Serial #

G00809778

Location of Construction

Swegon AB, Box 300, SE-535 23, Kivik, Sweden

Power Supply	VAC	Frequency	Phase	MCA	MICPD		
	600	60	3	7	11		
Motor Loads	kW	HP	VAC	Frequency	Phase	FLA	
	Qty	(EA)	(EA)			(EA)	
Supply/Return Fan	2	2.4	3.22	600	60	3	2.8
Transformer	1			600	60	3	2.8
Transformer	2			600	60	3	2.8

Suitable for outdoor applications when supplied with roof (TBTB-3), exhaust air hood (TETA-2), and intake air hood (TETA-3, TBT-2) accessories.

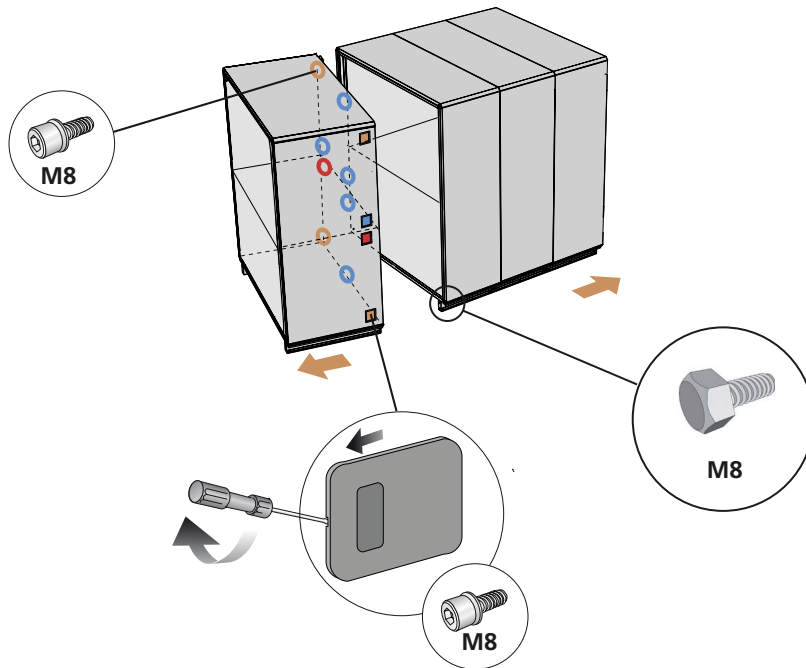
Approprié pour les applications extérieures quand avec les accessoires: un toit (TBTB-3), l'échappement d'air capuche (TETA-2), et l'alimentation d'air capuche (TETA-3, TBT-2).

8. Assembly

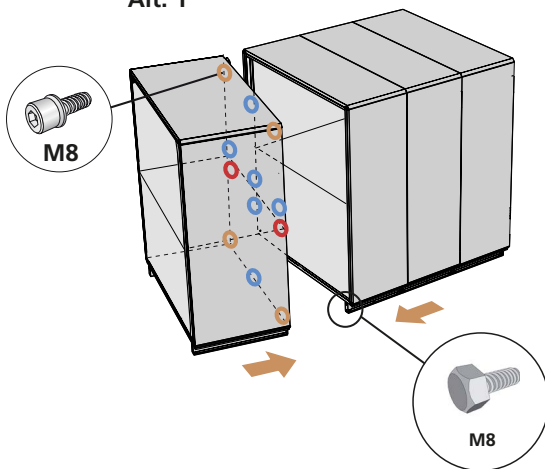
NA GOLD 005, 007/008, 011/012, 014/020, 025/030

NA GOLD 035/040, 050/060

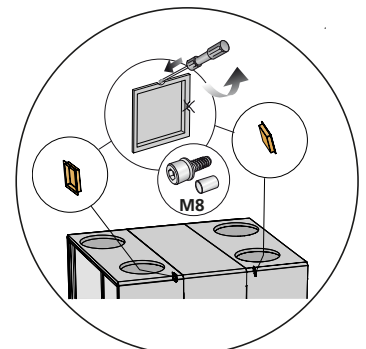
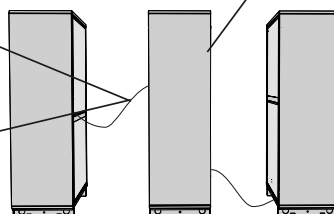
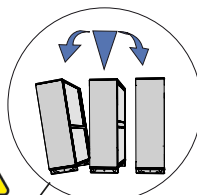
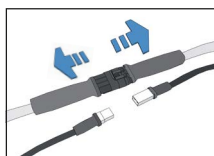
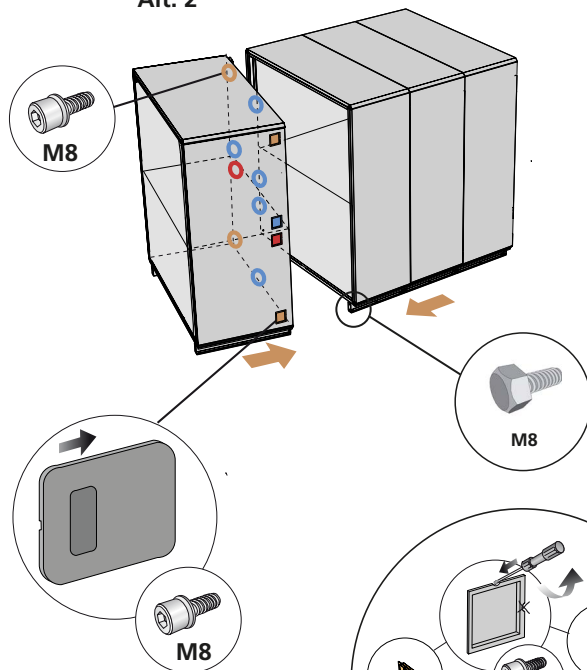
NA GOLD 070/080



Alt. 1



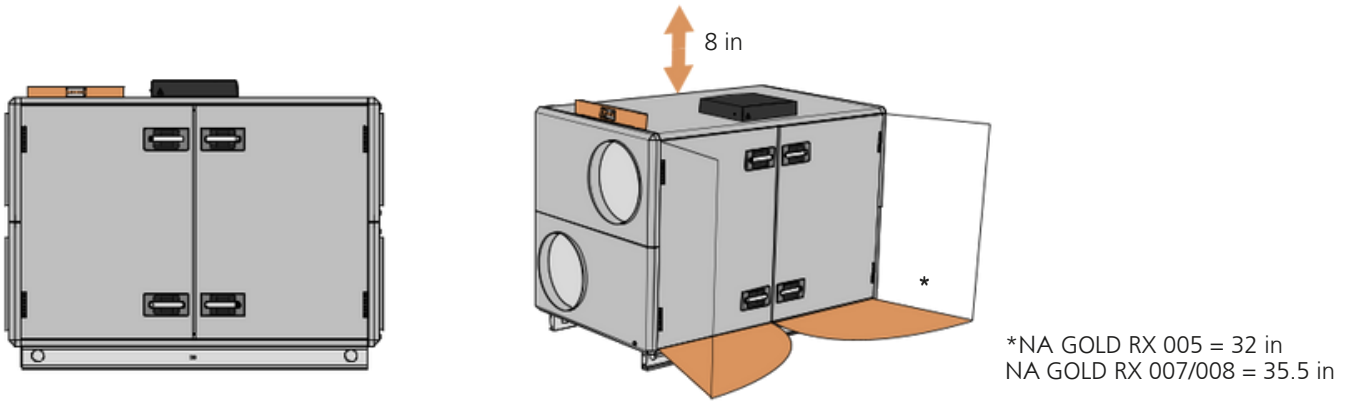
Alt. 2



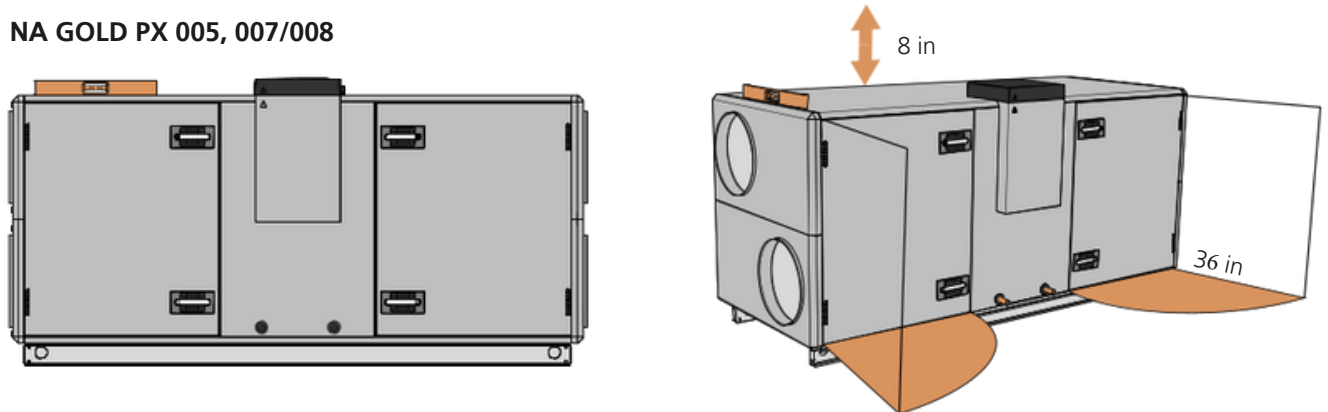
NA GOLD RX Top 012

9.Clearances

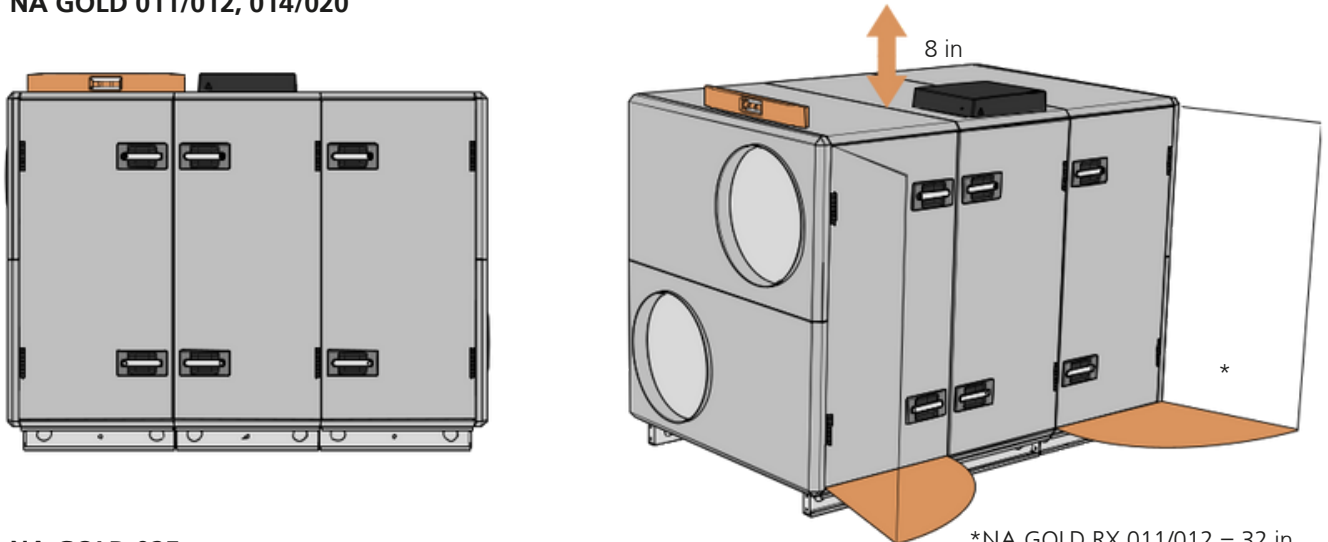
NA GOLD RX 005, 007/008



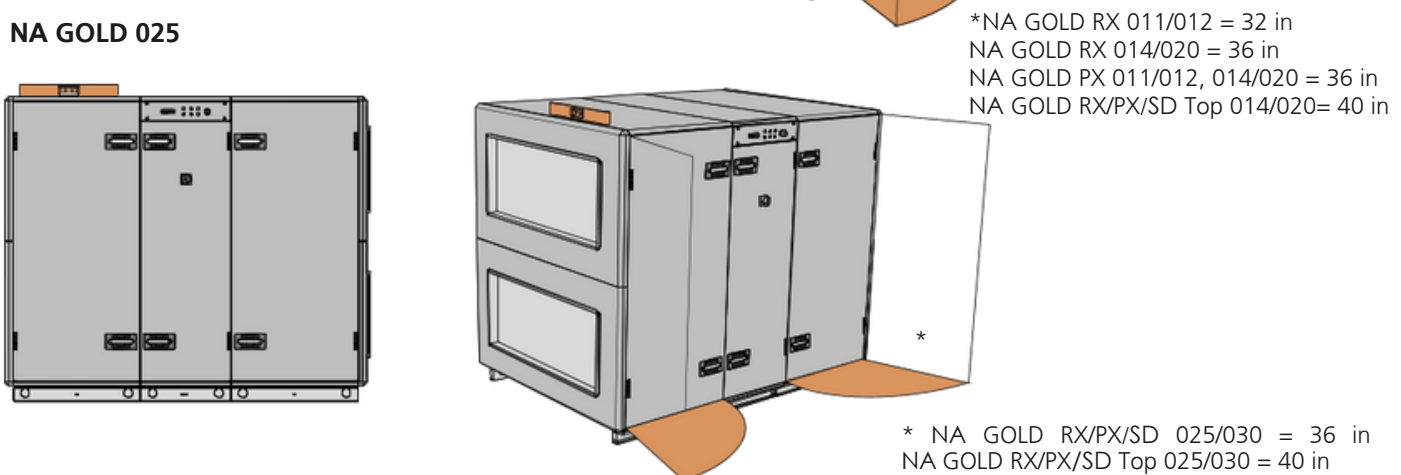
NA GOLD PX 005, 007/008



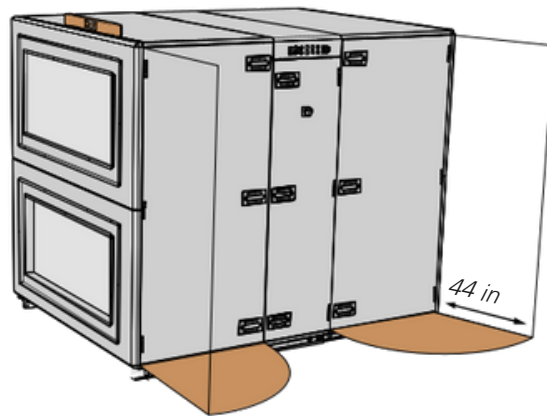
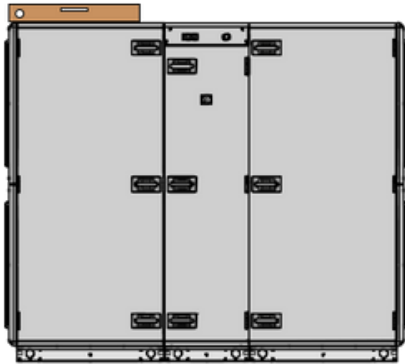
NA GOLD 011/012, 014/020



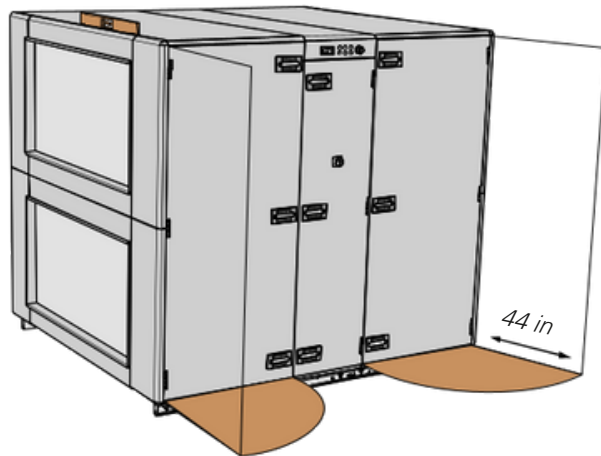
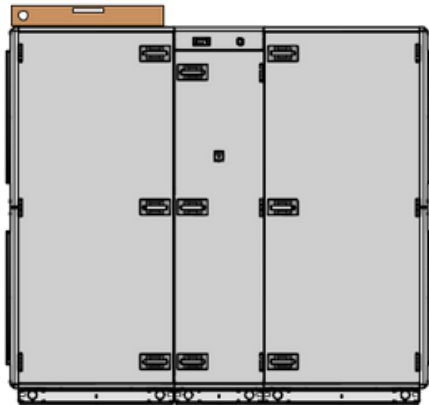
NA GOLD 025



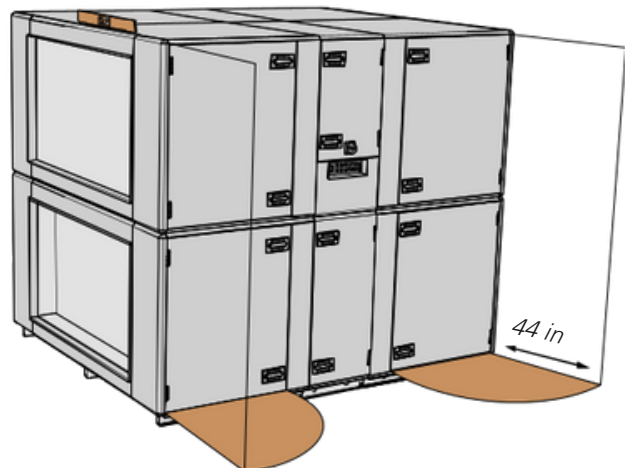
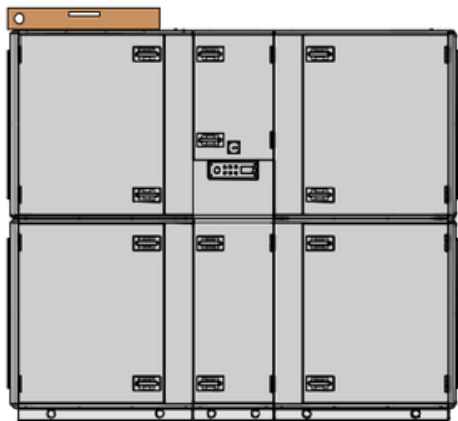
NA GOLD 035/040



NA GOLD 050/060

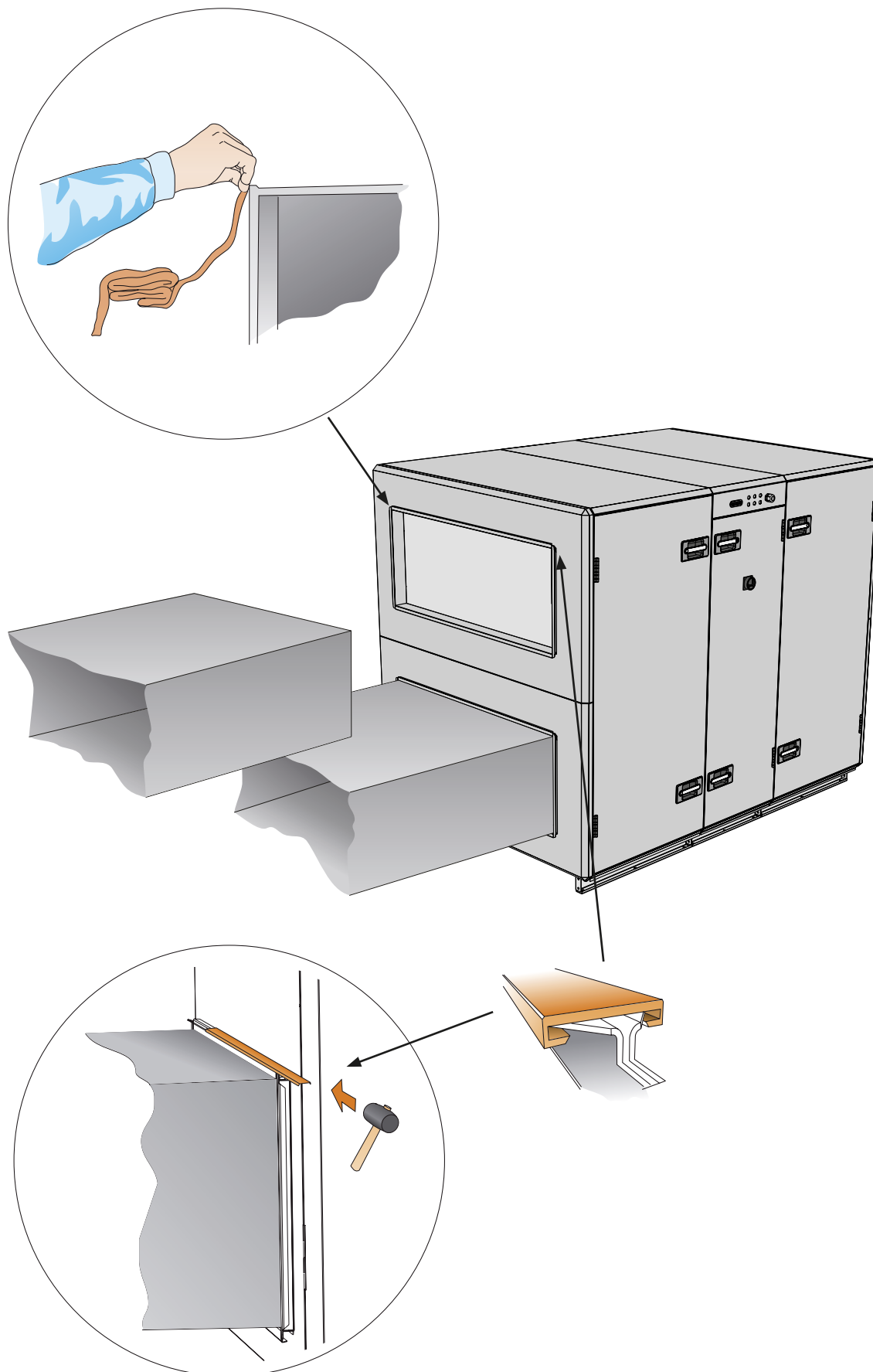


NA GOLD 070/080

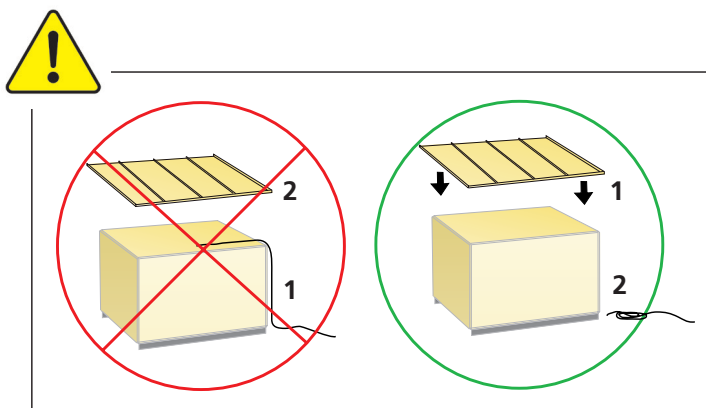


10. Connecting to the Ductwork

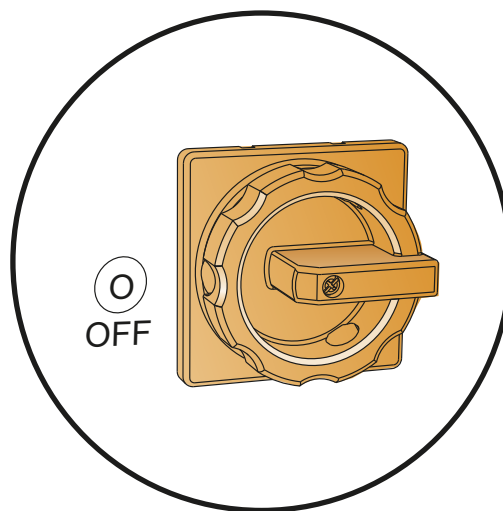
NA GOLD 005, 007/008, 011/012, 014/020,
025/030, 035/040 NA GOLD 050/060, 070/080



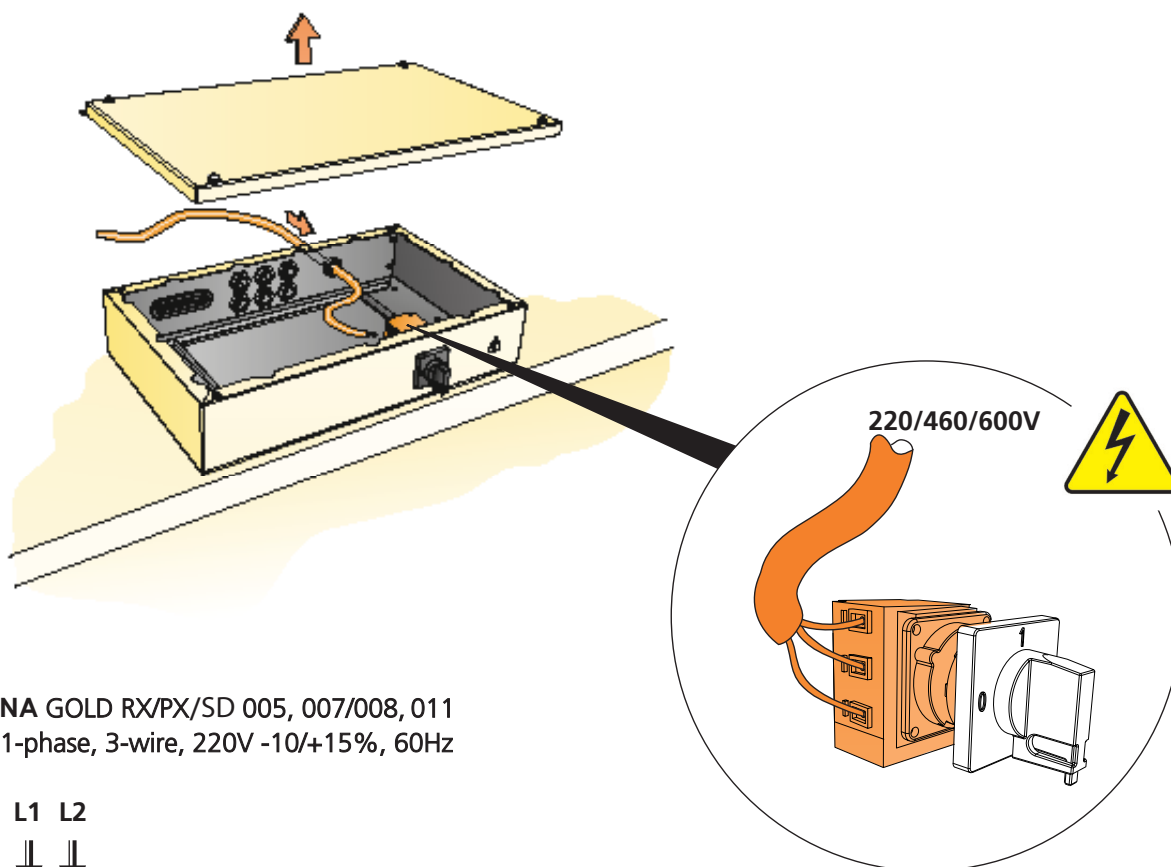
11. Electrical Connections



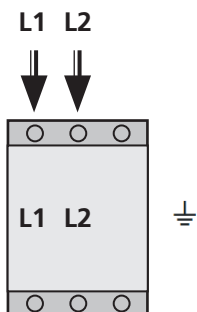
NA GOLD RX 025/030, 035/040, 050/060



NA GOLD RX/PX/SD 005, 007/008, 011/012, 014/020, 025/030, 035/040, 050/060 070/080



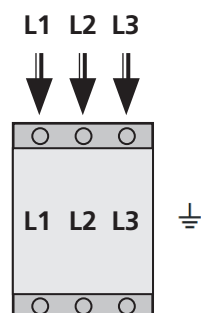
NA GOLD RX/PX/SD 005, 007/008, 011
1-phase, 3-wire, 220V -10/+15%, 60Hz



230 V

NA GOLD 005	15A
NA GOLD 007	15A
NA GOLD 008	15A
NA GOLD 011	15A

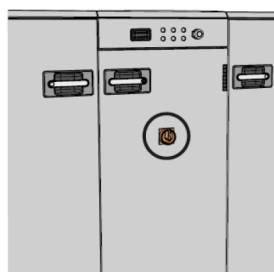
NA GOLD RX/PX/SD 012, 014/020
3-phase, 4-wire, 460/600V -10/+15%, 60Hz



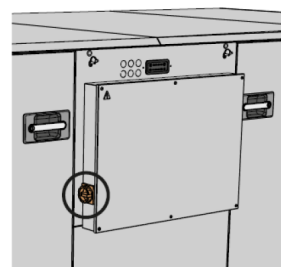
460 V 600 V

NA GOLD 012	15A	15A
NA GOLD 014	15A	15A
NA GOLD 020	15A	15A
NA GOLD 025	15A	15A
NA GOLD 030	20A	15A
NA GOLD 035 PX	20A	15A
NA GOLD 040 PX	30A	20A

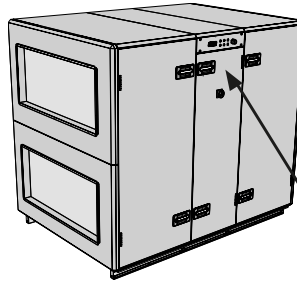
NA GOLD RX 025/030



NA GOLD PX 025/030, 35/40



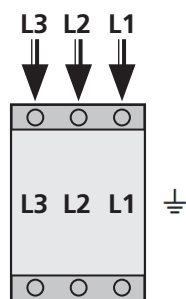
NA GOLD RX 025/030, 035/040, 050/060



460/600V

NA GOLD RX 035/040, 050/060

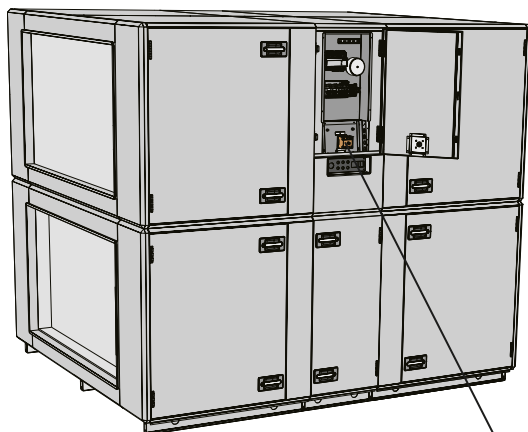
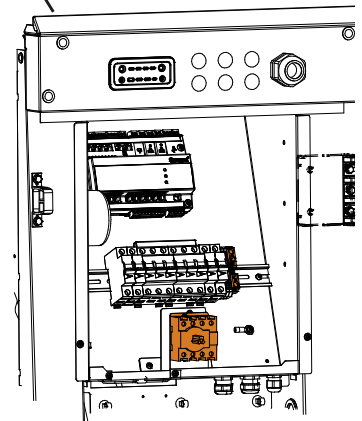
3-phase, 4-wire, 460/600V -10/+15%, 60Hz



NA GOLD RX 035
NA GOLD RX 040
NA GOLD RX 050
NA GOLD RX 060

460 V
20A
30A
30A
45A

600 V
15A
20A
20A
35A

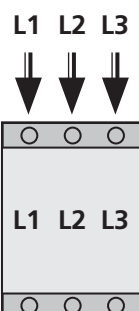


460/600V



NA GOLD RX 070/080

3-phase, 4-wire, 460/600V -10/+15%, 60Hz



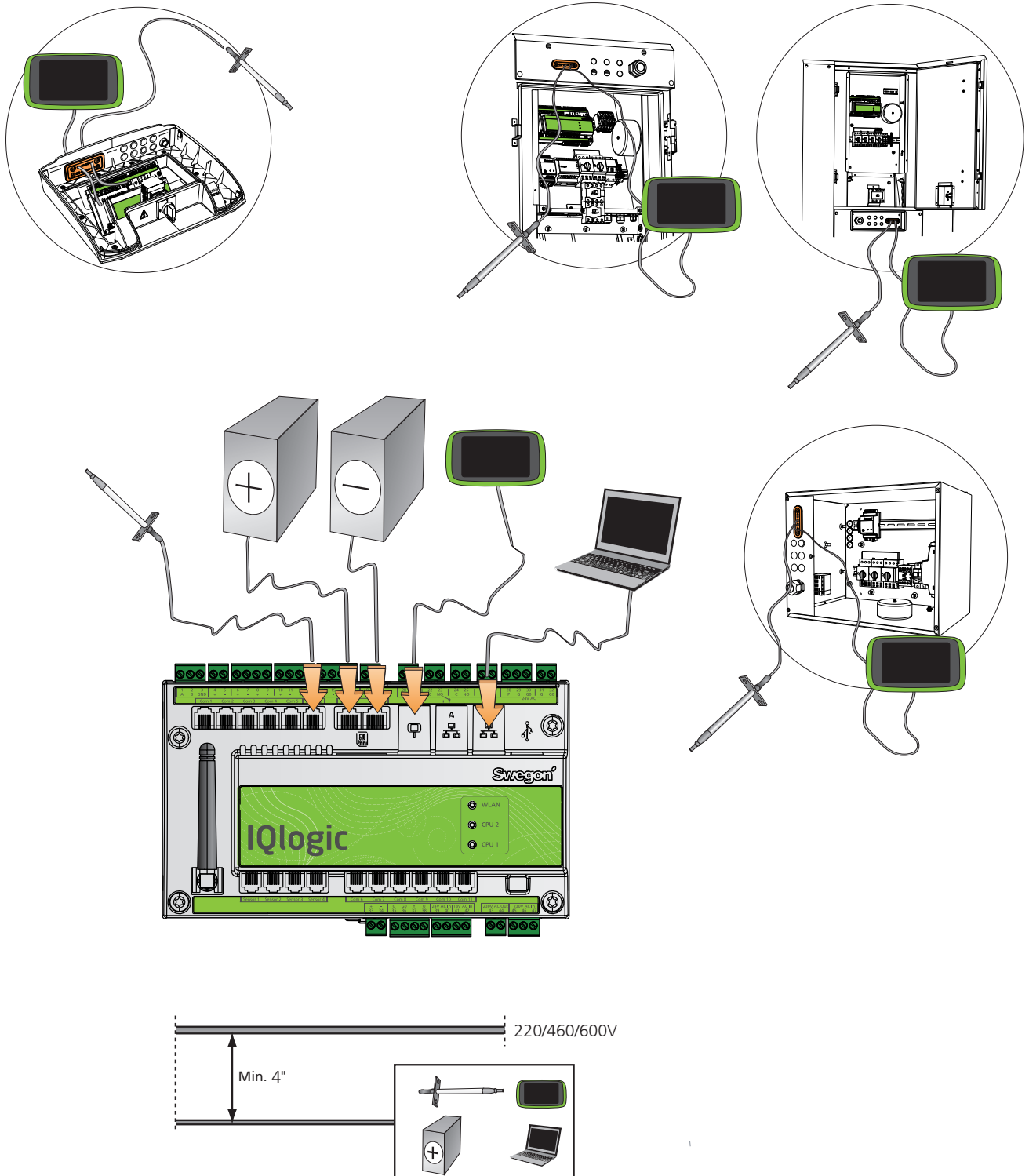
NA GOLD RX 070, 080

3-phase, 4-wire, 460/600V -10/+15%, 60Hz

	460V	600V
NA GOLD RX 070	45A	35A
NA GOLD RX 080	45A	35A

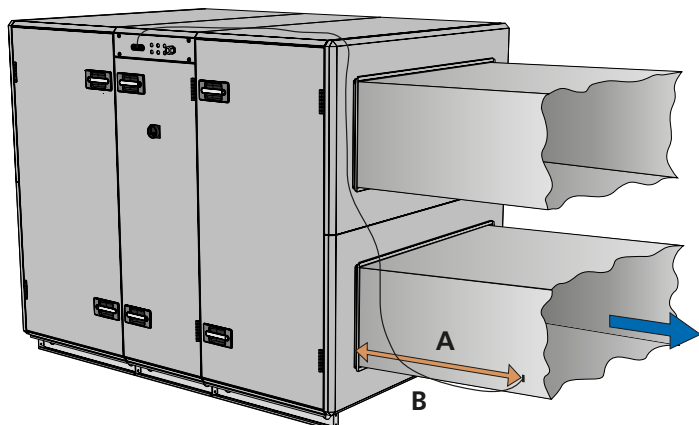
14. Connections for the Hand-held/Micro-Sensor

NA GOLD RX/PX/SD 005, 007/008, 011/012, 014/020 NA GOLD RX 025/300, 035/040, 050/060 NA GOLD RX 070/080

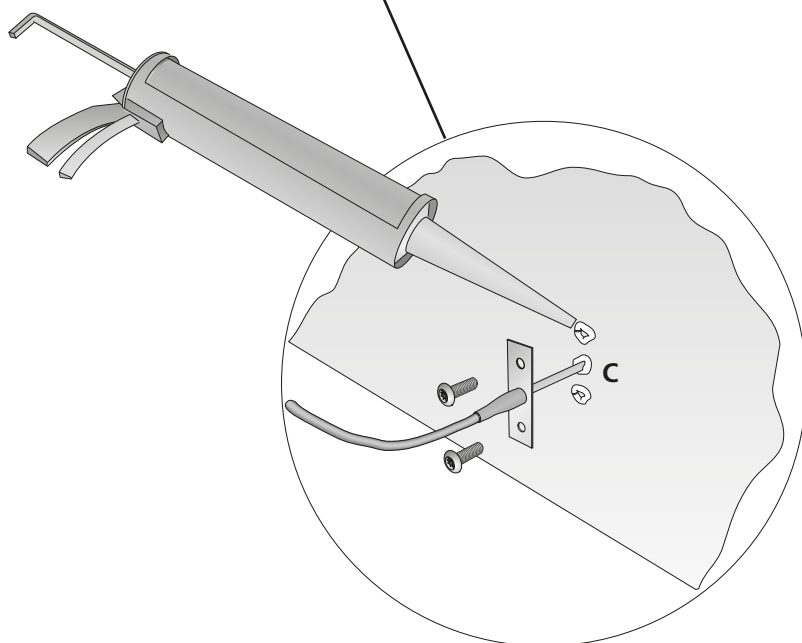
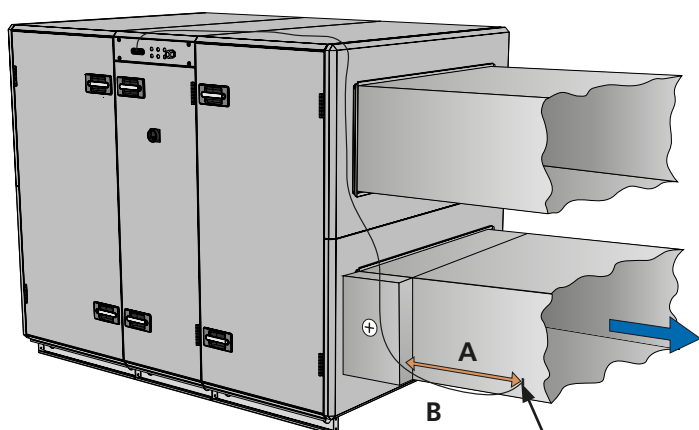


15. Installations of Sensors

NA GOLD 005, 007/008, 011/012, 014/020,
025/030 NA GOLD 035/040, 050/060, 070/080

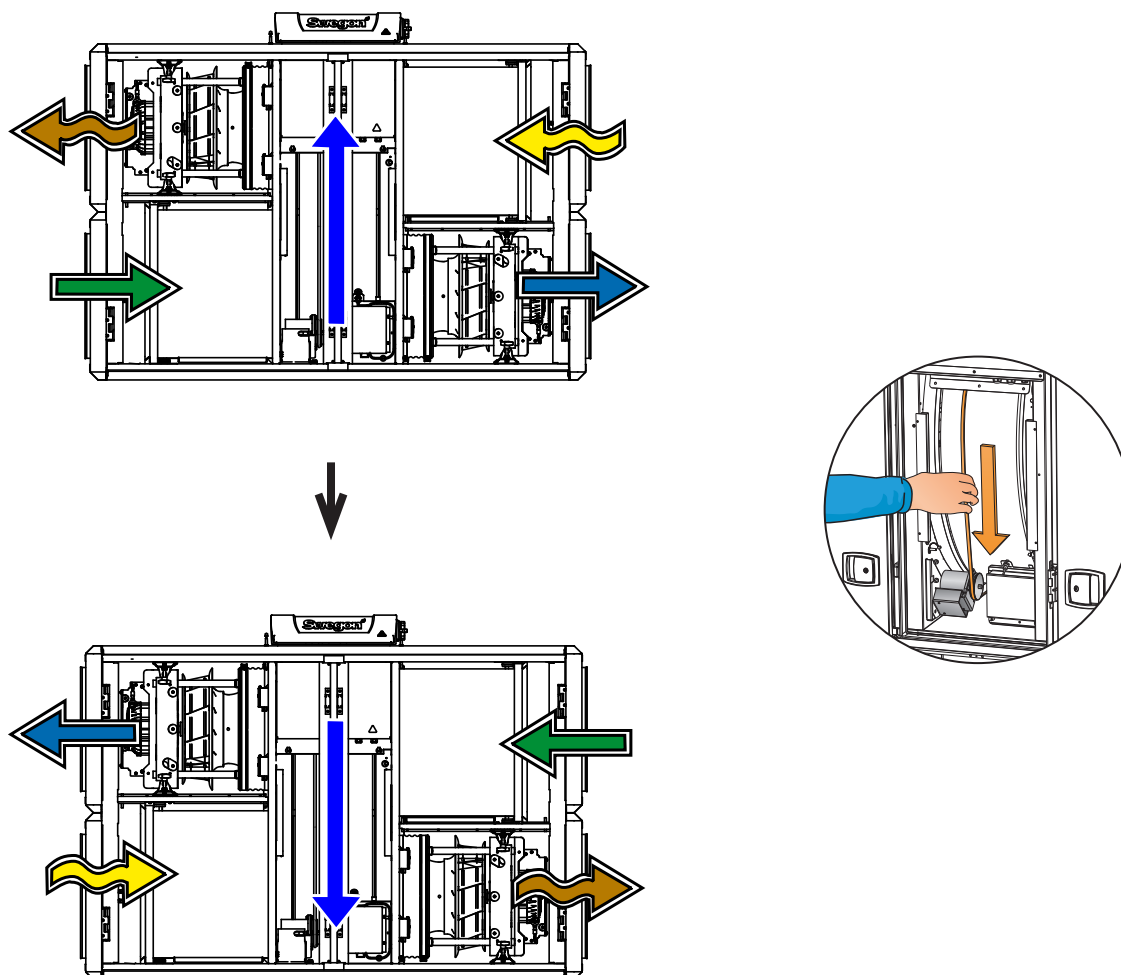


A $\geq$ 5'
B = 25' (NA GOLD 005, 007/008, 011/012, 014/020, 025/030)
= 35' (NA GOLD 035/040, 050/060, 070/080)
C = $\varnothing$ 7/16"



16. Verification of the Direction of Rotation

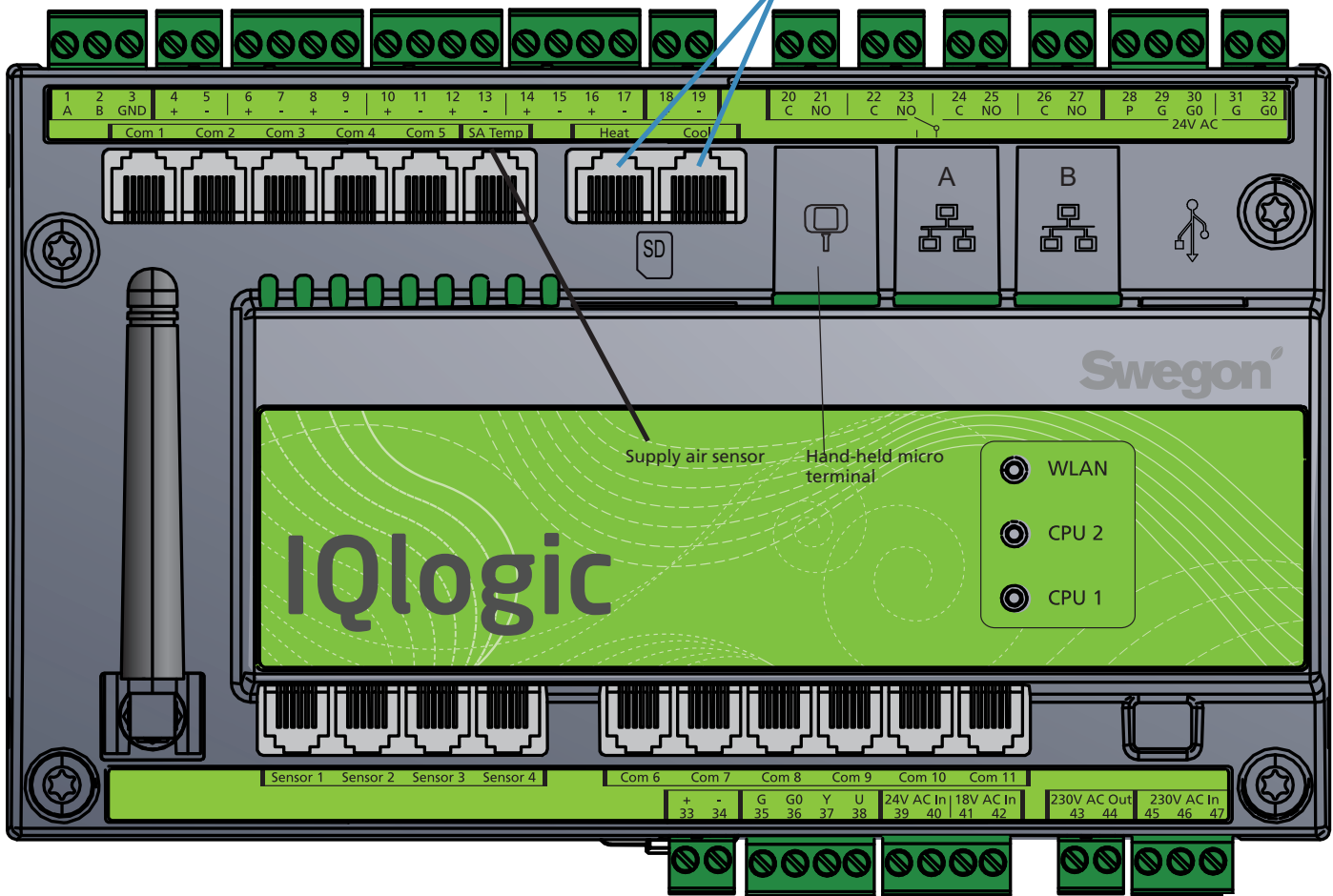
NA GOLD RX 005, 007/008, 011/012, 014/020, 025/030, 035/040, 050/060, 070/080



EN - See section 6.4.10 in the Operation and Maintenance Instructions for NA GOLD.

17. EN - List of terminals

The max. permissible load on the corresponding connection is 16 VA.



Digital inputs, terminals 4-17, are of extra-low voltage type.
Analogue inputs, terminals 18-19 have an input impedance of 66 kΩ.



Wiring terminal	Function	Remarks
1,2,3	Connections for EIA -485	1= Communication connection A/RT+, 2= Communication connection B/RT-, 3= GND/COM.
4,5	External stop	Stops the air handling unit by opening the circuit. On delivery, this function is fitted with a jumper. If the connection is interrupted, the air handling unit will stop.
6,7	External fire/smoke function 1	External fire and smoke function. On delivery, this function is fitted with a jumper. If the connection is interrupted, the function will trip and initiate an alarm.
8,9	External fire/smoke function 2	External fire and smoke function. On delivery, this function is fitted with a jumper. If the connection is interrupted, the function will trip and initiate an alarm.
10,11	External alarm 1	External contact function. Optional: Normally open/normally closed.
12,13	External alarm 2	External contact function. Optional: Normally open/normally closed.
14,15	External low speed	External contact function. Overrides the time switch from stop to low speed operation.
16,17	External high speed	External contact function. Overrides the time switch from stop or low speed to high speed operation.
18,19	Demand control	Input for 0-10 VDC. The input signal influences the supply air/extract airflow setpoint if the unit is operating in the demand control mode. For connection of a sensor, for example CO ₂ , CO and VOC
20,21	Circulation pump, heating circuit	Independent contact, max. 5 A/AC1, 2 A/AC3, 250 VAC. Closes on a heating load.
22,23	Circulation pump, cooling circuit or cooling on/off, 1-step operation	Independent contact, max. 5 A/AC1, 2 A/AC3, 250 VAC. Closes on a cooling load.
24,25	Cooling, on/off, 2-step operation	Independent contact, max. 5 A/AC1, 2 A/AC3, 250 VAC. Closes on a cooling load.
26,27	In-service indication	Independent contact, max. 5 A/AC1, 2 A/AC3, 250 VAC. Closes when the unit is operating.
28,29,30	Damper control	24 VAC. 28= Controlled 24 VAC (G), 29= 24 VAC (G), 30= 24 VAC (G0).
31,32	Control voltage	24 VAC control voltage. Terminals 31-32 are loaded with a total of 16 VA. Opened by means of the safety isolating switch.
33,34	Reference voltage	Output for constant 10 VDC. Max. permissible load: 8 mA.
35,36,37,38	Control, recirculation damper	The recirculation damper can be loaded with max. 2 mA at 10 VDC. 35= 24 V AC (G), 36= 24 V AC (G0), 37= 0-10 V DC control signal, 38= 0-10 VDC feedback signal.

The max permissible common load on terminals 31-32, outputs for Heat/Cool and damper output (terminals 28-30) is 50 VA.

Specifications are subject to alteration without notice.