

STEPS TO INSTALL A REMOTE MODULAR SPIKA

REMOTE CONDENSERS

The units with a remote condenser have a head unit (ice producer), a remote condenser, and the refrigerant pipes between them. These units dissipate the heat from the condenser out of the room where the ice generator is located.

SPIKA MS 220 220V/I/50HZ REMOTE + REMOTE CONDENSER RC5

SPIKA MS 410 380V/III/50HZ REMOTE + REMOTE CONDENSER RC10

STEP 1: PLACING BOTH UNITS (REMOTE CONDENSER AND SPLIT MACHINE) IN ITS LOCATION

CHECKING THE PROPER CONNECTIONS FOR EACH UNIT:

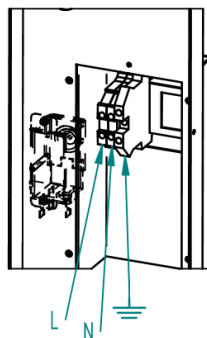
REMOTE CONDENSER:

- It needs an electrical supply (check label with power supply specifications). It comes without an electrical cable. Connect to the power supply directly (it does not need communication with the split unit).
- To connect, remove the rear cover, using a Torx screwdriver. The electrical cable must go through the hole next to the piping hole. Use a 3x1.5 mm² electrical cable.



Terminal connector

Cable passing hole



- *Terminal connector to supply electrical power to the remote condenser, located behind the metallic cover.*

- Level the unit correctly.
- Locate the remote condenser unit under a shadow. We advise to place it under a roof, whenever possible.
- The remote condenser unit works between 0°C (32°F) and 43°C (109.4°F) air temperature.
- Check the air direction through the remote condenser, always install the unit with the air direction out to the ambient when installed in a wall, to avoid condensed air returning to the condenser.
- If more than one unit is going to be installed, please located them to avoid the condensed air going from one unit to the other.

- Pipes diameter:

MS 220/500: liquid 1/4", suction 3/8"

MS 410/1000: liquid 5/16", suction 1/2"

- Pipe connections:

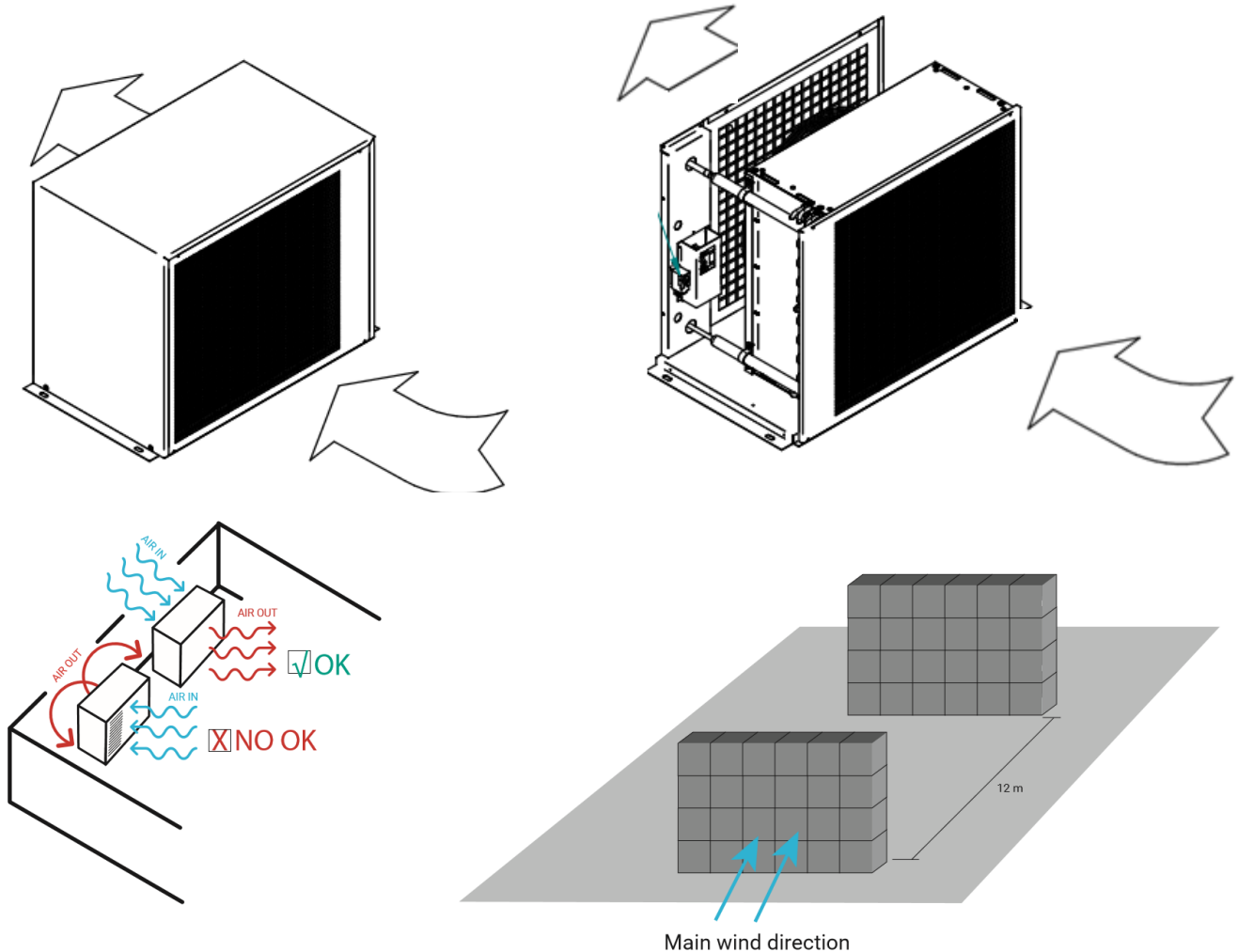
MS 220/500: 3/8" – 3/8" SAE

Condenser 1/4" – 3/8" ODS

MS 410/1000: 3/8" – 1/2" SAE

Condenser 5/16" – 1/2" ODS

- The piping length must be up to 5 meters (16 ft). If longer, please check the next step.



MODULAR SPIKA:

- It needs an electrical supply (check label with power supply specifications). The unit comes with an electric cable, and no plug.
- Water supply: it needs a water tap nearby. The unit comes with a water hose, ¾" GAS connection, and two net filters.
- Drain pipe: The unit has one drain pipe. A drainage is need it. The drain pipes must be straight, no siphons allowed, to let the water drain directly.
- Level the unit correctly.
- Always check the ice exit, to allow the ice cubes fall free.
- In case of stacking two units, please follow the stacking manual.

STEP 2: REFRIGERATION CONNECTION BETWEEN BOTH UNITS

REMOTE CONDENSER: Remove the rear cover if need it.

REMOTE CONDENSER PIPING CONNECTION

Gas pipe, upper inlet: MS410 ½" welded, MS220 3/8" welded

Liquid pipe, lower inlet: MS410 5/16" welded, MS220 ¼" welded

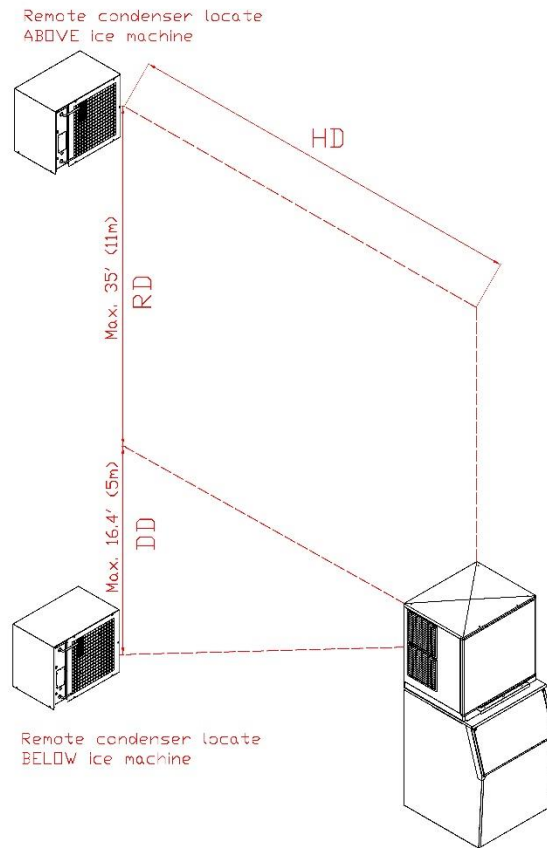
- The remote condenser is sent from factory pressurized. To ensure there is no damage from the transport, please check that is still pressurized, before cutting the pipes to start the connection.
- Always connect the remote condenser to the refrigeration pipes by welding. The remote condenser comes with the inlet gas pipe closed, and the outlet liquid pipe with a gas intake. Cut both pipes to weld.
- Do the refrigeration installation between the remote condenser and the split unit. Check always that each tube is in the correct position, and the pipes are not together (to avoid heat exchange between pipes. We advise to insulate the liquid line.
- Try to do a clean installation, as straight forward as possible.
- The liquid line must always go from the outlet remote condenser (liquid, lower pipe) to the split unit liquid inlet, and the gas inlet from the remote condenser (upper pipe) to the gas outlet in the split unit.
- Maximum drop between ice generator (head) to the remote condenser: 5 meters (16 ft).
- Maximum rise between the head and the remote condenser: 11 meters (35 ft).
- Maximum pipelines length: 30 meters (100 ft).
- Maximum calculated pipelines length: 45 meters (150 ft).

Calculated pipeline length: Drop + Rise + Horizontal distance ≤ 45 meters (150 ft)

Drop = $DD \times 2.012$ (DD = distance in meters)

Rise = $RD \times 0.52$ (RD = distance in meters)

Horizontal distance = HD (HD = distance in meters)



Remote condenser located ABOVE ice machine

HD

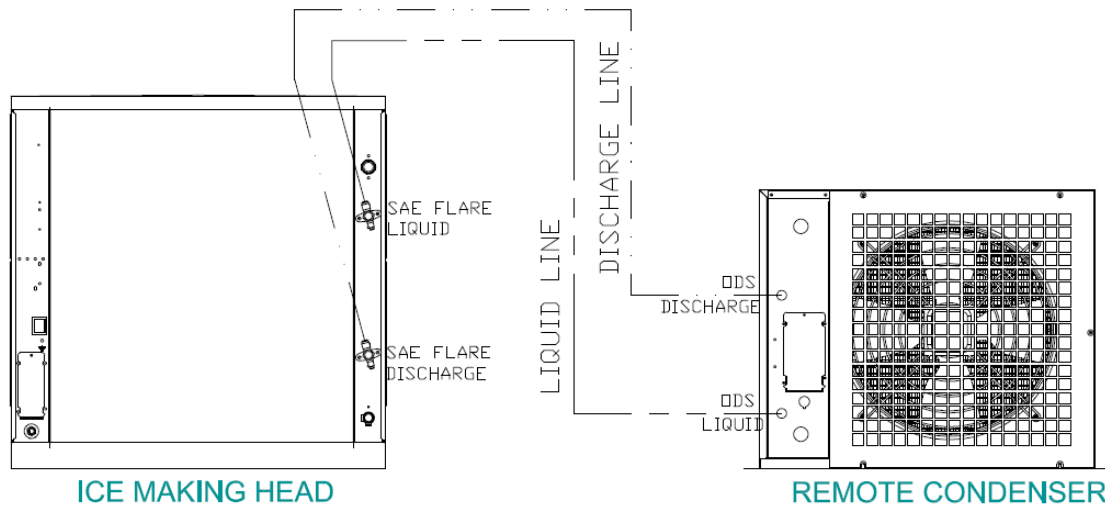
RD 11 m máx. (35')

DD 5 m máx. (16,4')

Remote condenser located BELOW ice machine

Figura 1. Remote condenser location.

MODULAR SPIKA: It is connected with copper pipe, 3/8" liquid, 1/2" gas (3/8" in the MS220).



PIPE SIZE AND FITTINGS

		MS 1000R	MS 500R
LIQUID	LIQUID LINE	5/16" COPPER PIPE	1/4" COPPER PIPE
	HEAD FITTING	3/8" SAE FLARE	3/8" SAE FLARE
	CONDENSER FITTING	5/16" ODS	1/4" ODS
DISCHARGE	DISCHARGE LINE	1/2" COPPER PIPE	3/8" COPPER PIPE
	HEAD FITTING	1/2" SAE FLARE	3/8" SAE FLARE
	CONDENSER FITTING	1/2" ODS	3/8" ODS

STEP 3: INSTALLATION LEAKING TEST AND VACUUM

- Once the refrigeration pipes are weld and connected, a leaking test must be done to check that the line has no leakage in the nuts or the welding.
- After checking for leakages, a correct vacuum must be done. We advise to keep vacuum for around 4 hours.

ATTENTION: Do not open the gas taps from the split before doing the vacuum, as the unit comes with refrigerant.

STEP 4: OPEN GAS AND LIQUID TAPS

- Once that everything is correctly installed and there are no leakages, and the vacuum has been done properly, open the split unit, that comes with a refrigerant charge for 5 meters of distance between the remote condenser and the split unit. Open slowly the liquid gas tap (3/8") and then the gas tap (1/2").



STEP 5: ONLY FOR GREATER DISTANCES THAN 5 METERS BETWEEN UNITS

- If the distance between the remote condenser and the head is longer than 5 meters, it is necessary to add some refrigerant.
- SPIKA MS 220/500 is filled with the necessary quantity of R452A for no more than 5 meters (16.4 ft) pipeline length. To increase this length, add 80 grams (2.82 oz) R452A per 5 meters (16. ft). The maximum pipeline length increase will be 25 meters (82 ft).
- SPIKA MS 410/1000 is filled with the necessary quantity of R452A for no more than 5 meters (16.4 ft) pipeline length. To increase this length, add 240 grams (8.5 oz) R452A per 5 meters (16. ft). The maximum pipeline length increase will be 25 meters (82 ft).

STEP 6: START UP

- Now the split unit can be turn on to try it, and modified the control parameters if need it (electronic board). Instructions in the user manual.