# Flake ice machines for direct carbon dioxide operation CO<sub>2</sub> (R744) **RVH CO2-D**



## The advantages of the MAJA RVH CO<sub>2</sub>:

- •Eco-friendly ice production by the use of natural refrigerant R744 (carbon dioxide / CO2).
- •Compared to other usual refrigerants, the direct carbon dioxide operation brings more power density, thus increase of ice capacity up to 30 % compared with the same machine scale.
- Excellent sanitary conditions thanks to the HY-GEN sanitation principle by MAJA with removable hygiene evaporator tank and evaporator self-cleaning system MAJA-SCS (option).
- Reduced ice production costs, reduced TCO.



# RVH CO2-D

#### Technical details

Туре	lce output*) kg/24h	Water consumption m³/24h	Refrigeration capacity required	Electrical connection kW 3AC/50Hz/400V/PE	Width mm	Depth mm	Height mm	Weight kg
RVH 400 CO2-D	ca. 500	ca. 0,5	t <sub>o</sub> -25,0°C, 2,8 kW	0,28	1185	512	525	85
RVH 800 CO2-D	ca. 1000	ca. 1,00	t <sub>o</sub> -25,0°C, 5,5 kW	0,28	1345	512	525	125
RVH 1000 CO2-D	ca. 1300	ca. 1,30	t <sub>o</sub> -25,0°C, 7,3 kW	0,28	1545	512	525	145
RVH 1500 CO2-D	ca. 1900	ca. 1,90	t <sub>o</sub> -25,0°C, 10,7 kW	0,28	1695	512	525	160
RVH 2000 CO2-D	ca. 2500	ca. 2,50	t <sub>o</sub> -25,0°C, 14.4 kW	0,28	1695	512	525	160
RVH 2500 CO2-D	ca. 3000	ca. 3,00	t <sub>o</sub> -25,0°C, 16.2 kW	0,28	1695	512	525	160
RVH 3000 CO2-D	ca. 3800	ca. 3,80	t <sub>o</sub> -25,0°C, 20,5 kW	0,34	1735	675	525	220

water supply temperature: +20°C
\*) Higher temperatures may lead to reduced ice output.
Water supply: 3/4" external thread Drain water: 1" hose clip
Max. pressure: liquid side 42 bar, suction side 28 bar.

### **Equipment & features:**

The HY-GEN Flake Ice Machines type RVH CO2-D are suitable for the production of flake ice under excellent sanitary conditions. They are designed for direct carbon dioxide operation with a R744 multicompressor refrigeration unit and can be integrated into refrigeration projects targeting sustainability and environmental safety.

The MAJA Flake Ice Machines type RVH CO2-D allow quick and easy cleaning, either by hand or by the self-cleaning system MAJA-SCS (option). The core piece of the HY-GEN sanitation principle is the evaporator tank in plastic material, which can easily be removed for cleaning.



# Sun A



Operation by Control Panel Touch (standard control unit)

# **TECHNOLOGY FOR THE FUTURE**

#### Optimum energy efficiency - increased power density:

- Compared to other usual refrigerants (e. g. R404A), the direct carbon dioxide operation brings more power density, thus increase of ice capacity up to 30 % compared with the same machine scale.
- Electronic expansion valve for optimum evaporation efficiency.

#### Eco-friendly flake ice production:

- $\bullet$  Excellent ecological impact by the use of the natural refrigerant R744 (carbon dioxide /  $\rm CO_2$ ) for flake ice production.
- R744 consists of the elements carbon and oxygen, gases which are natural parts of the earth atmosphere.
- Almost no influence on the destruction of the ozone layer and the greenhouse effect:

Ozone depletion potential ODP = 0, global warming potential GWP = 1

#### High safety standard:

• Refrigerant pump-down when the machine stops.

#### Easy operation by Control Panel Touch:

• Timer function for free programmable production and cleaning cycles: For having the right quantity of fresh MAJA flake ice at your disposal exactly in time.

#### Conditions for installation of MAJA RVH CO2-D for operation with R744:

- Subcritical CO2 circuit.
- Evaporation pressure regulator to adapt the evaporation temperature of the RVH to to = approx. -25°C.
- Stop valve liquid line and suction line.
- Pressure relief valve with interchangeable valve for maintenance.
- If necessary, CO<sub>2</sub> gas detector (depending on the local situation at the installation place)

RVH CO2-D 5 / 2013 EN Alterations reserved.

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