

# HY-GEN Flake Ice Machines daily output from 400 kg



MAJA FLAKE ICE



SAH

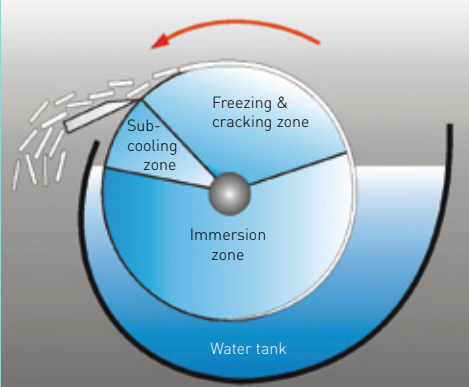


RVH-L & RVH-LT



RVH

A deep-frozen metal cylinder, rotating in a water reservoir, guarantees constant ice quality. With each rotation, water freezes on the evaporation drum and then flakes off, leaving the machine as dry-frozen ice. This system of ice production was developed by MAJA and has proven its reliability for more than five decades. It is efficient, cost-saving and does not require special maintenance.



# Flake Ice Technology by MAJA:

## Simple, but ingenious - since more than 50 years!



### MAJA Flake Ice for versatile applications:

- Mincer process for boiled sausage production
- Production of baking and pastry products
- Refrigeration of fish and seafood
- Filling of fresh food displays in supermarkets
- Decorative refrigeration of buffets (hotels, restaurants, event catering...)
- Cryotherapy in human and veterinary medicine
- Health spas & leisure swimming baths
- Artificial snow tracks for sports and leisure

### Efficient refrigeration - ice temperature approx. -7°C

- Quick heat dissipation
- Slow melting process - products stay fresh longer

### Dry-frozen flake ice

- Dry surface, virtually no water from melting
- Easy storage, easy handling
- Attractive appearance

### Light weight (density 0,42 kg / dm<sup>3</sup>)

- Up to 30 % lighter than other types of ice, thus less ice requirements for display filling and reduced costs for transportation

### Thin ice flakes (1 - 2 mm)

- Very good product covering
- Big surface, thus good heat exchange
- Little mechanical resistance, thus good mixing behaviour, no damage to the product and to tools, such as mincer blades, dough hooks...

### Reduced production costs

- High efficiency
- 100 % of water becomes ice, thus no waste of water

### High reliability - low maintenance

- Reduced operation and maintenance costs
- No additional efforts for water treatment, such as softening, filtration...

HY-GEN Flake Ice Machines from MAJA are designed to allow the production of flake ice under excellent sanitary conditions. The core piece is the evaporator tank in plastic material, which can easily be removed for cleaning.



## The HY-GEN sanitation principle by MAJA: Ideal conditions for efficient cleaning, by hand and also fully automatically!

**All flake ice machines types SAH from 800 kg on and RVH / L / LT from 400 kg on are labelled „HY-GEN Protected“.**

**That means for these machines:**

- Evaporator can be opened without the use of tools for cleaning purposes and is accessible from all sides
- Easily removable hygiene evaporator tank in plastic material (insulation and no corrosion!)
- Round-shaped, cleaning-friendly evaporator tank; if necessary it is even replaceable.
- Evaporator tank free of built-in parts without angles and edges, for easy and efficient cleaning
- Automatic water pipe rinsing when the machine was out of operation for more than 24 hours; automatic residual water outlet after approx. one hour
- Special hygiene advantages in conformity with the current German drinking water regulations issued by the DVGW (German association for water & gaz), for example: water supply with back-flow protection, special drinking water hoses for protection from biofilm

### Option MAJA-SCS:

MAJA Flake Ice Machines can also be cleaned fully automatically. Thanks to the patent-pending evaporator self-cleaning system MAJA-SCS, the ice producing unit can be regularly cleaned without investing additional working time or labour.

The cleaning cycle is started manually by ON/OFF push-buttons or fully automatically by programmable Control Panel Timer (option). A mixture from water and a special cleaning agent flows around all machine parts that contact water, thus cleaning, deliming and reduction of germs in one and the same operation.



**MAJA®**



Flake ice machines ready for operation, including condensing unit; compact machine structure



SAH 800

## Flake ice machines with integrated condensing unit

# SAH

- Frame and housing in stainless steel
- Condensing unit in air, water or brine cooled execution
- Control Panel Standard or Control Panel Timer (option) provide easy operation
- Reliable SPS control unit
- Cleaning-friendly machine design according to the principle of HY-GEN sanitation



Control Panel Standard



Control Panel Timer (option)

## Technical details

Type	Ice output *) kg / 24 h	Water consumption m <sup>3</sup> /24 h	Electrical connection 3AC/50Hz/400V/PE kW	Width mm	Depth mm	Height mm	Weight kg approx.
SAH 800 L	800	0,8	2,72	1170	760	1150	280
SAH 800 W	800	0,8	2,64	1170	760	1150	265
SAH 1500 L	1500	1,5	4,79	1430	780	1230	355
SAH 1500 W	1500	1,5	4,36	1430	780	1230	330
SAH 3000 L	3000	3,0	9,20	1700	980	1420	600
SAH 3000 W	3000	3,0	8,34	1700	980	1420	560

Refrigerant R404A, others on demand.

Water temperature: +16°C, ambient temperature: +20°C.

\*) Higher temperatures may lead to reduced ice output.

Water supply: 3/4" external thread, drain water: 1" hose clip

Flake ice producing unit (rotating evaporator), compact, space-saving structure, without condensing unit. For connection to an external refrigeration system.



## Flake ice machines without condensing unit

# RVH

- Frame and housing in stainless steel
- For connection to (separate) external refrigeration unit or multicompressor refrigeration system
- Control Panel Standard or Control Panel Timer (option) provide easy operation
- Reliable SPS control unit
- The types RVH 9000 & RVH 12000 consist of two separately operated rotating evaporator units.  
Advantages: high operation safety and individual control of ice output according to varying needs.

## Technical details

Type	Ice output *) kg / 24 h	Water consumption m <sup>3</sup> /24 h	Refrigeration capacity required **) kW	Electrical connection 3AC/50Hz/400V/PE kW	Width mm	Depth mm	Height mm	Weight kg approx.
RVH 400	400	0,40	t <sub>0</sub> -20,5°C, 2,2	0,28	1185	512	525	85
RVH 800	800	0,80	t <sub>0</sub> -21,5°C, 4,0	0,28	1345	512	525	125
RVH 1000	1000	1,00	t <sub>0</sub> -18,5°C, 5,6	0,28	1545	512	525	145
RVH 1500	1500	1,50	t <sub>0</sub> -18,5°C, 8,4	0,28	1695	512	525	160
RVH 2000	2000	2,00	t <sub>0</sub> -21,5°C, 11,5	0,28	1695	512	525	160
RVH 2500	2500	2,50	t <sub>0</sub> -21,5°C, 13,5	0,28	1695	512	525	160
RVH 3000	3000	3,00	t <sub>0</sub> -21,0°C, 16,2	0,34	1730	675	525	220
RVH 6000	6000	6,00	t <sub>0</sub> -22,0°C, 33,0	0,52	1860	1450	586	320
RVH 9000	9000	9,00	t <sub>0</sub> -22,0°C, 33,0 t <sub>0</sub> -21,0°C, 16,2	0,52 0,34	1863	1456	1572	600
RVH 12000	12000	12,00	t <sub>0</sub> -22,0°C, 33,0 t <sub>0</sub> -22,0°C, 33,0	0,52 0,52	1863	1456	1572	700

Refrigerant R404A, others on demand.

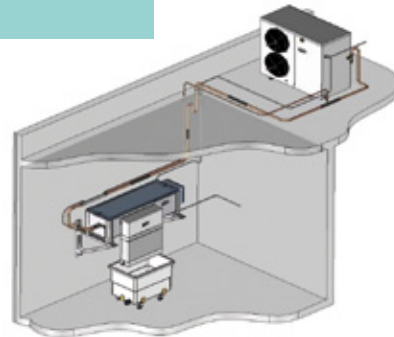
Water temperature: +16°C, ambient temperature: +20°C. \*) Higher temperatures may lead to reduced ice output.

Water supply: 3/4" external thread, drain water: 1" hose clip

For optimized working conditions concerning ice capacity and ice quality a suction line heat exchanger is necessary.

Flake ice machines with separate condensing unit for standard ambient temperatures up to approx. +32°C; version LT for higher temperatures up to +45°C.

Designed to provide individual solutions for separate installation of ice producing unit and condensing unit.



## Flake ice machines with separate condensing unit

- Machine frame and housing in stainless steel
- Separate condensing unit in weather protection housing in galvanized steel, plastic coating
- Execution RVH-L for standard ambient temperatures up to approx. +32°C  
Execution RVH-LT for higher temperatures up to approx. + 45°C
- The types RVH 9000 L/LT & RVH 12000 L/LT consist of two separately operated rotating evaporator units.  
Advantages: high operation safety and individual control of ice output according to varying needs.
- Electronic condenser fan speed regulator for automatic adaptation to variable ambient temperatures
- Control Panel Standard or Control Panel Timer (option) provide easy operation
- Reliable SPS control unit
- Suction line heat exchanger for optimized working conditions concerning ice capacity and ice quality
- **Option:** Winter mode for ambient temperatures < -15°C



Control Panel Standard



Control Panel Timer (Option)

Examples condensing units:



L1000



L1500 - L3000



LT2500 - LT3000



L6000 / LT6000

# Flake ice machines with separate condensing unit (up to approx. +32°C)

# RVH-L

## Technical details

Type	Ice output *) kg / 24 h	Water consumption m³/24 h	Electr. connection 3AC/50Hz/400V/PE kW	Width mm	Depth mm	Height mm	Weight kg approx.	Condensing unit Dimensions WxDxH mm   Electr. connection kW   Weight kg
RVH 400 L	400	0,40	0,28	1185	512	525	85	1032x462x751   1,91   90
RVH 800 L	800	0,80	0,28	1345	512	525	125	1352x732x891   2,54   167
RVH 1000 L	1000	1,00	0,28	1545	512	525	145	1352x732x891   3,25   168
RVH 1500 L	1500	1,50	0,28	1695	512	525	160	1352x732x1201   4,58   262
RVH 2000 L	2000	2,00	0,28	1695	512	525	160	1700x946x1536   7,68   330
RVH 2500 L	2500	2,50	0,28	1695	512	525	160	1700x946x1536   8,84   344
RVH 3000 L	3000	3,00	0,34	1730	675	525	220	1700x946x1536   8,84   344
RVH 6000 L	6000	6,00	0,52	1860	1450	586	320	2200x1300x1810   17,74   1000
RVH 9000 L	9000	9,00	0,52 0,34	1863	1456	1572	600	2200x1300x1810   17,74   1000 1700x946x1536   8,84   344
RVH 12000 L	12000	12,00	0,52 0,52	1863	1456	1572	700	2200x1300x1810   17,74   1000 2200x1300x1810   17,74   1000

# Flake ice machines with separate condensing unit (up to approx. +45°C)

# RVH-LT

## Technical details

Type	Ice output *) kg / 24 h	Water consumption m³/24 h	Electr. connection 3AC/50Hz/400V/PE kW	Width mm	Depth mm	Height mm	Weight kg approx.	Condensing unit Dimensions WxDxH mm   Electr. connection kW   Weight kg
RVH 400 LT	400	0,40	0,28	1185	512	525	85	1032x462x751   2,39   90
RVH 800 LT	800	0,80	0,28	1345	512	525	125	1352x732x891   3,06   170
RVH 1000 LT	1000	1,00	0,28	1545	512	525	145	1352x732x1201   4,58   262
RVH 1500 LT	1500	1,50	0,28	1695	512	525	160	1352x732x1201   6,56   262
RVH 2000 LT	2000	2,00	0,28	1695	512	525	160	1700x946x1536   8,84   344
RVH 2500 LT	2500	2,50	0,28	1695	512	525	160	1900x882x1561   10,40   480
RVH 3000 LT	3000	3,00	0,34	1730	675	525	220	1900x882x1561   10,40   480
RVH 6000 LT	6000	6,00	0,52	1860	1450	586	320	2800x1300x2275   24,96   1200
RVH 9000 LT	9000	9,00	0,52 0,34	1863	1456	1572	600	2800x1300x2275   24,96   1200 1900x882x1561   10,40   480
RVH 12000 LT	12000	12,00	0,52 0,52	1863	1456	1360	520	2800x1300x2275   24,96   1200 2800x1300x2275   24,96   1200

For refrigerant R404A, others on demand; supplied without refrigerant filling.

Water temperature: +16°C; ambient temperature: +20°C. \*) Higher temperatures may lead to reduced ice output.

Water supply: 3/4" external thread; drain water: 1" hose clip. Suction line heat exchanger enclosed separately.

[www.hy-gen.de](http://www.hy-gen.de)

# TECHNOLOGY FOR THE FUTURE

## Accessories & options

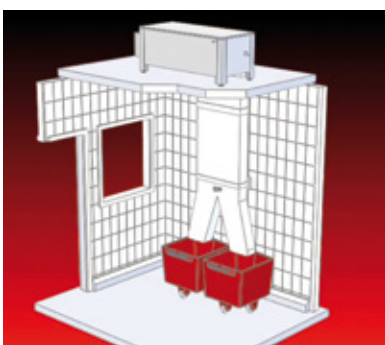
- **Control Panel Timer with timer function:**  
Free programmable production and cleaning cycles, visualization of the hygiene status
- **Patent-pending evaporator self-cleaning system MAJA-SCS:**  
For sanitation safety at the push of a button: fully automatic cleaning, deliming and reduction of germs
- **External UV-disinfection system in the water supply:**  
For making sure that only hygienically perfect water is used for flake ice production
- **Special voltage** (on demand)
- **External water pre-heater:**  
For water / ambient temperatures between +2°C and +5°C
- **Different types of chutes:**  
For individualized installation of the ice producing unit
- **Ice storage systems:**  
For example, with fully automatic ice extraction, weighing module, dosage system
- **Alternative refrigerants:**  
MAJA Flake Ice Machines of the HY-GEN line type RVH are also available for direct operation with the environment-friendly refrigerants NH<sub>3</sub> R717 (capacities 7.000 + 14.000 kg) and CO<sub>2</sub> R744 (capacities 500 - 3.800 kg).



Control Panel Timer



Ice storage silo type AS with automatic ice extraction and weighing module



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