



# Samurai L

Water-to-water chiller with screw compressor



### More compact

With its small footprint, the Samurai L is an ideal unit for both new buildings and the replacement market. Just 1 m2 of space for the 250-kW unit, the most compact one on the market.

### New Hitachi twin-screw compressor

The HITACHI Samurai L range is equipped with a new semi-hermetic twin-screw compressor, with continuous capacity control from 25% to 100%, optimized for R134a refrigerant. Thanks to this feature and the Hitachi electronic control, the energy supplied by the unit corresponds precisely to the hydronic circuit's demand. This standard option in the Samurai L range avoids additional accessories in the system.

- The twin-screw compressor is fitted with an EXCLUSIVE HITACHI cyclonic oil separator, which, in addition to being maintenance free, ensures that the compressor will have no lubrication issues or impurities in the suction circuit.  
- Hitachi mechanical efficiency to ensure 40,000 hours of work before mechanical component inspection. (Fig. 1)

### Precise emperature control

The combination of continuous adjustment of the compressor capacity and exclusive HITACHI electronic controls means the chiller is able to precisely control the water outlet temperature, independently of the load. This control is an advantage in both comfort applications and industrial process applications (Fig. 2)

### Modular design

The possibility of installing up to eight modules in cascade with no additional controls (Master-Slave mod.) offers a wide range of powers and flexibility of installation, as it means the power and the overall size of the chiller unit can be adapted to the design requirements.

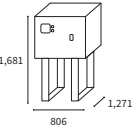
### Two operating modes

Two operating modes available as standard, to adapt the functionality in both comfort and process applications:  
- Standard mode > Constant water outlet temperature > all compressors work with the same load.  
- High-efficiency mode > Intelligent control of compressors' on/off function to optimize the system's energy performance.

### Cooling-only unit with heating option

The Samurai L can optionally work as a heat pump. Through an optional accessory the water outlet temperature can be regulated on the condenser side instead of on the evaporator side. (Fig. 3)

Cooling only models



RCME-40WH1 RCME-50WH1  
RCME-60WH1 RCME-70WH1

## Samurai L - RCME-WH1 - Cooling only

		RCME-40WH1		RCME-50WH1	RCME-60WH1	RCME-70WH1
Capacity	Cooling (nominal)	140		180	220	250
	Heating (nominal)	159.9		205.9	252.9	287.1
EER		5.00		4.96	4.85	4.87
COP		4.79		4.76	4.67	4.69
SEER		5.14		5.46	5.51	5.52
SEPR <sub>HT</sub>		4.88		4.85	4.89	4.90
SEPR <sub>HT</sub>		7.58		7.51	7.57	7.59
SCOP <sub>LT</sub>		5.90		5.86	5.75	5.78
SCOP <sub>HT</sub>		4.42		4.39	4.32	4.33
Sound power		88		89	90	91
Sound pressure at 10 m		60		61	62	63
IP Rating		IP2X		IP2X	IP2X	IP2X
No. and type of compressor/ no. of circuits		1 - Semi-hermetic twin-screw/ 1		1 - Semi-hermetic twin-screw/ 1	1 - Semi-hermetic twin-screw/ 1	1 - Semi-hermetic twin-screw/ 1
Refrigerant		R134A		R134A	R134A	R134A
Refrigerant charge		19		20	24	29
Capacity control		25-100		25-100	25-100	25-100
Water flow	Cooling (Min/Nom/Max)	15.1-24.1-52.3		19.4-31.0-67.3	23.7-37.8-82.3	26.9-43.0-83.8
Condensation water flow	(nom-max)	28.9-62.8		37.2-80.9	45.6-83.8	51.8-83.8
Water pipe connection	Size and type	2.1/2" Victaulic				
	Quantity	1 x Inlet, 1 x Outlet				
Minimum system water volume		0.51		0.65	0.80	0.90
Water temperatures of the condenser	Cooling	22 to 50		22 to 50	22 to 50	22 to 50
	Heating (optional)	35 to 60		35 to 60	35 to 60	35 to 60
Water production temperatures	Cooling - Standard	5 to 15		5 to 15	5 to 15	5 to 15
	Cooling - Low option	-10 to 5		-10 to 5	-10 to 5	-10 to 5
	Cooling - High option	15 to 25		15 to 25	15 to 25	15 to 25
	Heating	35 to 60		35 to 60	35 to 60	35 to 60
Power supply		3N~400V 50Hz		3N~400V 50Hz	3N~400V 50Hz	3N~400V 50Hz
Consumption	Cooling (nominal)	28.0		36.3	45.4	51.3
	Heating (nominal)	33.4		43.3	54.1	61.2
Current (maximum cooling / startup)		66.2 / 179		84.6 / 240	105 / 240	118 / 240
Current (optional maximum heating / startup)		76.4 / 179		96.2 / 240	119 / 240	135 / 240
Dimensions (H x W x D)		1,681x806x1,271		1,681x806x1,271	1,681x806x1,271	1,681x806x1,271
Weight		860.0		950.0	1,040.0	1,075.0

Options and accessories:

See pages 328-329