



S U P E R C H I L L E R  
HIGH PERFORMANCE AIR CONDITIONING



TELECOMMUNICATIONS, DEALING ROOMS  
COMPUTER ROOMS PROCESS COOLING  
A P P L I C A T I O N S

Today we are one of the largest suppliers of equipment for telecommunications and computer room installations, dealing rooms, clean rooms, high security and other critical installations, with an impressive customer list which includes thousands of companies, large and small, around the world. We place a high priority on using the most advanced technology, designed and built to stringent ISO9000 standards, and we continue to invest heavily in research and development.

Available in twelve sizes, with mechanical cooling capacities ranging from 50kW to 350kW, **LiebertHIROSS Superchiller 2000** is a compact, packaged air cooled chiller with integrated 'freecooling'.

Characterised by outstanding energy-efficient performance, Superchiller 2000 is designed in particular for year-around operation, and takes advantage of lower ambient air temperatures.

The Superchiller 2000 product line is equally suitable for air conditioning and high reliability industrial applications.

Whilst maximum savings are achieved where plants run 24 hours a day, chillers with freecooling are equally cost effective over a shorter running period, when compared with other standard air-cooled chiller designs.



The different strategies adopted by Liebert HIROSS microprocessor control in managing the various components, -fans, compressors, regulation valves- and operating modes – mechanical and/or freecooling – ensure typical energy savings greater than 30%.



The system features two completely separate refrigerant circuits, where each circuit operates independently, ensuring redundancy and maximum energy efficiency.

Superchiller 2000 is equipped with two or four hermetic scroll compressors or four heavy duty semi-hermetic reciprocating compressors of the latest generation granting a COP among the highest achievable on the market.

The use of dual circuit evaporators offers optimised performance and energy efficiency both at full and partial load.

**SUPERCHILLER 2000**  
Environmental friendliness

TELECOMMUNICATIONS INDUSTRY

COMPUTER ROOMS

INTERNET SERVICE PROVIDERS

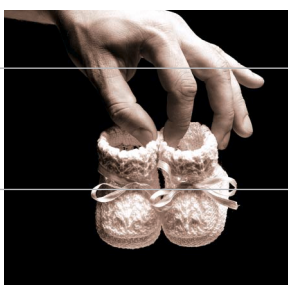
CO-LOCATION CENTRES

DEALER ROOMS

PROCESS COOLING

**Low sound emissions**

Specially designed to keep noise level to a minimum, Superchiller 2000 is available in standard and low noise versions.



Welcome  
Total Reliability

Superchiller 2000  
Newest Technology  
Maximum Reliability



**Options**

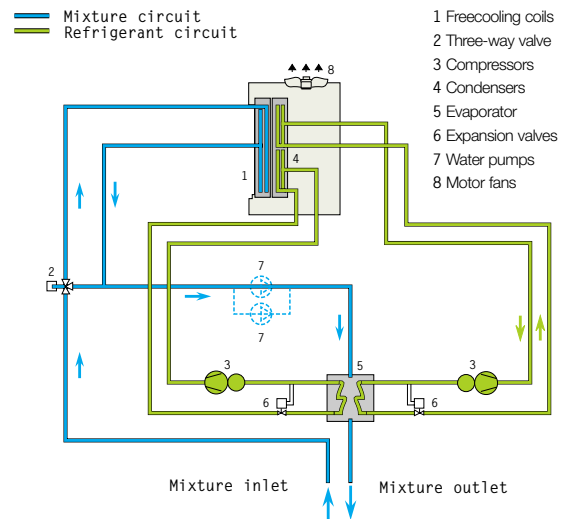
The chillers may also be supplied with integral coolant pumping/pressurisation sets, storage tanks, pressure vessels and safety equipment.

## Operating Principle

In addition to the air-cooled condenser coils (4), heat exchange coils (1) are provided to cool the chilled fluid directly – without refrigeration – when the ambient temperature is low enough.

A three-way valve (2) arrangement permits the coolant to be diverted via the heat exchanger (1) before being fed into the cooling evaporator (5).

This means that even if the outside ambient temperature is not low enough to provide the complete cooling load, a significant reduction in the running costs of the system is made at ambient temperatures as high as 18°C, depending on the operating conditions.



## Microprocessor Controls



### Microface Evolution

is the standard on-board control and its advanced features secure energy savings and system optimisation.

The Microface Display, using symbols and codes, enables the full set-up of the unit providing the programming of room temperature and humidity thresholds for local monitoring of standard alarms.

Up to 16 air conditioners can be easily linked together on a network to provide teamwork mode, stand-by operation and duty cycling without additional hardware.

Autoset-facilities: self-detection of sensors, automatic setting of the airflow threshold and an automatic Test-Cycle for a simple, quick and reliable start-up.

Sequential auto-restart timer to allow phased units after power failure.

It offers Volt-free contacts available for simple remote monitoring of alarms.

Auto – download GDR stored into microface once Hiromatic is connected.

Management of Real Time Clock in each unit.



### Hiromatic Evolution:

can locally manage up to 16 air conditioners (or up to 8 for supervision systems) with multi-language Service interface, real-clock and data record.

The Menu-Layout of the Hiromatic utilises self-explaining icons.

Online Help: each single parameter has an own multi-page explanation.

Status Report: up to 200 event messages stored for each single unit as well as for the system.

2 Individual unit GDR: available for temperature and humidity in two resolutions (last 12 hours and last 8 days).

Preventive maintenance through the management of a Wellness factor which is based on an 8 factor recalculation for each device.

Start-up assistance (step by step) for an easier configuration of the control System.

4 level password protection.



### Microface and Hiromatic:

can locally manage up to Graphic allow Connectivity with superior levels of control and supervision systems:

Hirolink SMM: can send SMS messages of Microface alarms.

Hirovisor 2000 software: allows distance monitoring and telemaintenance.

Hirolink for BMSs: represents the gateway to the most diffused Building Management Systems.

## Technical features

### SUPERCHILLER 2000

SBH series		Performance							
MODELS		SBH05	SBH06	SBH07	SBH08	SBH10	SBH11	SBH15	SBH17
Cooling capacity <sup>(1)</sup>	kW	46	53	67	82	96	107	141	164
Freecooling capacity <sup>(2)</sup>	kW	33	34	39	51	57	59	78	91
Compressor power input	kW	15	18	24	28	31	38	48	55
Unit EER		2,73	2,63	2,61	2,67	2,80	2,63	2,70	2,75
Unit EER at Z.E.T.		23,66	27,26	34,31	27,93	32,51	36,25	35,92	33,49
Airflow rate	m <sup>3</sup> /h	21.000	21.000	20.400	31.500	30.600	30.600	40.800	51.000
SPL (Sound Pressure Level) <sup>(3)</sup>	dB(A)	69	69	70	72	71	71	73	74
Capacity control steps		50/100				25/50/75/100			
Operating weight	kg	877	877	970	1.140	1.398	1.398	1.764	2.039

SLH series		Performance							
MODELS		SLH05	SLH06	SLH07	SLH08	SLH10	SLH11	SLH15	SLH17
Cooling capacity <sup>(1)</sup>	kW	45	53	68	82	97	108	142	162
Freecooling capacity <sup>(2)</sup>	kW	29	31	43	47	59	62	75	91
Compressor power input	kW	16	18	23	28	31	37	48	57
Unit EER		2,62	2,69	2,69	2,77	2,90	2,74	2,77	2,63
Unit EER at Z.E.T.		32,35	38,09	32,49	39,20	34,55	38,51	40,46	32,97
Airflow rate	m <sup>3</sup> /h	16.200	15.600	24.300	23.400	31.200	31.200	39.000	43.000
SPL (Sound Pressure Level) <sup>(3)</sup>	dB(A)	62	62	64	64	64	64	66	69
Capacity control steps		50/100				25/50/75/100			
Operating weight	kg	897	948	1.140	1.236	1.654	1.654	2.029	2.079

SBR series		Performance			
MODELS		SBR21	SBR25	SBR30	SBR34
Cooling capacity <sup>(1)</sup>	kW	195	230	291	326
Freecooling capacity <sup>(2)</sup>	kW	134	140	215	221
Compressor power input	kW	71	85	99	123
Unit EER		2,46	2,46	2,61	2,40
Unit EER at Z.E.T.		23,17	27,36	23,11	25,83
Airflow rate	m <sup>3</sup> /h	72.000	72.000	108.000	108.000
SPL (Sound Pressure Level) <sup>(3)</sup>	dB(A)	77	77	78	79
Capacity control steps		33/50/83/100		37/50/87/100	
Operating weight	kg	2.751		3.789	

SLR series		Performance			
MODELS		SLR21	SLR25	SLR30	SLR34
Cooling capacity <sup>(1)</sup>	kW	189	241	286	334
Freecooling capacity <sup>(2)</sup>	kW	121	183	193	222
Compressor power input	kW	78	82	102	121
Unit EER		2,43	2,68	2,61	2,52
Unit EER at Z.E.T.		34,91	29,70	35,30	30,89
Airflow rate	m <sup>3</sup> /h	58.800	88.200	88.200	117.600
SPL (Sound Pressure Level) <sup>(3)</sup>	dB(A)	69	70	70	71
Capacity control steps		33/50/83/100		37/50/87/100	
Operating weight	kg	2.791		4.461	

(1) At the following standard conditions: power supply 400V/3ph/50Hz; outdoor temperature 35°C; coolant inlet/outlet temperature 15/10°C; ethylene glycol 30%; 0m a.s.l.; 0.43 x 10<sup>-4</sup> m<sup>2</sup>°C evaporator fouling factor; rated in accordance with UNI9018-prEN12055

(2) At the following standard conditions: power supply 400V/3ph/50Hz; outdoor temperature 5°C; coolant inlet temperature 15°C; ethylene glycol 30%

(3) Measured with outdoor temperature 35°C; 1m from the unit; free field conditions; according to ISO3744

## Options and Accessories

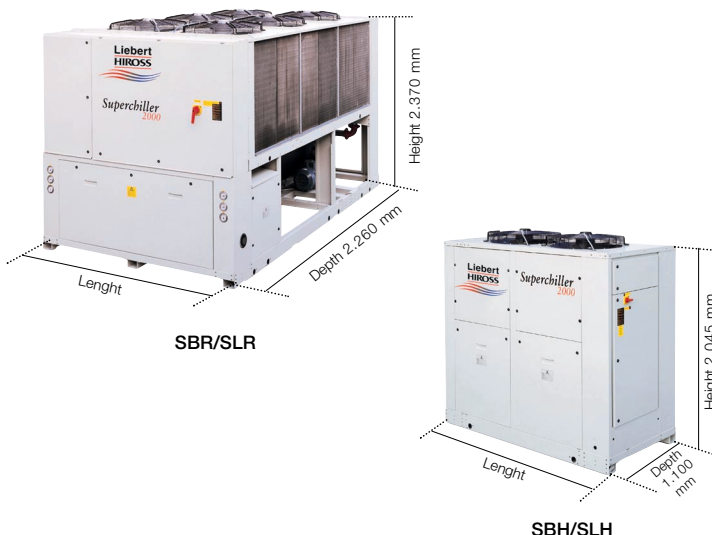
FEARTURE	SBH	SBR	SLH	SLR
4 steps capacity control	STD <sup>(1)</sup>	STD	STD <sup>(1)</sup>	STD
Condensing temperature control with fans' step	n.a.	STD	n.a.	n.a.
Condensing temperature control with fans' speed regulation	STD	STD	OPT	STD
High pressure off loading	OPT	OPT	OPT	OPT
Configuration according to TÜV, STEK standards	OPT	OPT	OPT	OPT
Buffer tank with pressure gauge	OPT	OPT <sup>(2)</sup>	OPT	OPT <sup>(2)</sup>
Hydraulic kit [expansion vessel, safety valve]	OPT	OPT	OPT	OPT
Pumps set				
- one 2-pole pump with standard head pressure	OPT	OPT	OPT	OPT
- two 2-pole pumps with standard head pressure	OPT	OPT	OPT	OPT
- one 2-pole pump with high head pressure	OPT	OPT	OPT	OPT
- two 2-pole pumps with high head pressure	OPT	OPT	OPT	OPT
- two 4-pole pumps with standard head pressure	--	OPT	OPT	OPT
Flow switch mounted on board	STD	STD	STD	STD
Mechanical filter for hydraulic protection of plate heat exchanger	STD	--	STD	--
Automatic magnetothermal switch for each compressor	STD	SPEC	STD	SPEC
Power factor correction device, cos <sub>φ</sub> =0.9	OPT	OPT	OPT	OPT
Refrigerant high/low pressure gauges	OPT	STD	OPT	STD
Pump down	--	OPT	--	OPT
Partial heat recovery [20%] with freezing-protection	OPT	OPT	OPT	OPT
Condenser coils metal filters	OPT	OPT	OPT	OPT
Cu/Cu finned coils	OPT	OPT	OPT	OPT
ALUCOAT treatment for finned coils	OPT	OPT	OPT	OPT
Evaporator electric heaters or	OPT	OPT	OPT	OPT
Buffer tank electric heaters with safety thermostat	OPT	OPT	OPT	OPT
Anti-vibration mounts (rubber/springs)	OPT	OPT	OPT	OPT
Configuration according to SAQ, TTK, MIE, UDT standards	SPEC	SPEC	SPEC	SPEC
Refrigerant R22	OPT	OPT	OPT	OPT

(1) from SBH10

(2) built-in buffer tank from 800 to 1500 liters

Contact Liebert HIROSS technical department for options or accessories not mentioned above

## Dimensions and Weights



Model	Length	Model	Length
SBR	mm.	SLR	mm.
SBR21	3.020	SLR21	3.020
SBR25	3.020	SLR25	4.120
SBR30	4.120	SLR30	4.120
SBR34	4.120	SLR34	5.220

Model	Length	Model	Length
SBH	mm.	SLH	mm.
SBH05	2.200	SLH05	2.200
SBH06	2.200	SLH06	2.200
SBH07	2.200	SLH07	2.990
SBH08	2.990	SLH08	2.990
SBH10	2.990	SLH10	2.990
SBH11	2.990	SLH11	3.780
SBH15	3.780	SLH15	4.570
SBH17	4.570	SLH17	4.570

All information given in this catalogue is intended as indicative only. The manufacturer reserves the right to change specifications without prior notice.

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The Quality Management System of the High Performance Air Conditioning Division of Liebert HIROSS SpA is certified by Lloyd's Register Quality Assurance to ISO 9001:1994.



**Liebert HIROSS Headquarters**  
Via Leonardo da Vinci, 8  
35028-Pieve di Sacco (PD)-Italy  
tel. +39 049 9719111 fax +39 049 5841257  
www.liebert-hiross.com - info@liebert-hiross.com

**High Performance Air Conditioning**  
Via Leonardo da Vinci, 8  
35028-Pieve di Sacco (PD)  
tel. +39 049 9719111 fax +39 049 5841257  
info.hpac@liebert-hiross.com

**Uninterruptible Power Supply**  
Via Gioacchino Rossini, 6  
20098-San Giuliano Milanese (MI)  
tel. +39 02 98250 1 fax +39 02 98250337  
info.ups@liebert-hiross.com

**Liebert HIROSS Services**  
Via Leonardo da Vinci, 8  
35028-Pieve di Sacco (PD)-Italy  
tel. +39 049 9719111 fax +39 049 9719045  
service@liebert-hiross.com

*Liebert HIROSS in Europe*

**Liebert HIROSS Austria**  
Handelskai 102-112-1200 Wien  
tel. +43 1 33189 fax +43 1 33189245

**Liebert HIROSS France**  
124 Avenue Gallieni-93170 Bagnolet  
tel. +33 1 43600177 fax +33 1 43607007

**Liebert HIROSS Germany**  
Liebigstrasse 9-85551 Kirchheim  
tel. +49 89 9050070 fax +49 89 90500710

**Liebert HIROSS Italy**  
Via Gioacchino Rossini, 6  
20098-San Giuliano Milanese-Milano  
tel. +39 02 982501 fax +39 02 98250273

**Liebert HIROSS Poland**  
Ul. Konstruktorska, 11A-FL-02-673 Warszawa  
tel. +48 22 5485260 fax +48. 22 5485261

**Liebert HIROSS Spain**  
Avda. de la Industria, 11-28108 Alcobendas - Madrid  
tel. +34 902 100494 fax +34 902 181955

**Liebert HIROSS Switzerland**  
Raefelstrasse 29-8045 Zürich  
tel. +41 1 456 50 60 fax +41 1 456 50 70

**Liebert HIROSS Russia**  
Malaya Trubetskaya Str. 8  
Korp. B, 11th floor - 119881 Moscow  
tel. +7 095 2329473 fax +7 095 2320358

**Liebert HIROSS United Kingdom**  
Fourth Avenue, Globe Park-Marlow  
Buckinghamshire-SL71YG  
tel. +44 1628 403200 fax +44 1628 403200

*Addresses updates and further information  
available in [www.liebert-hiross.com](http://www.liebert-hiross.com) - Contacts*