
HIROSS

Advanced Cooling Technologies

Hiflex

High Performance Air Conditioning

Hiflex: maximum flexibility

The Hiflex series of air conditioners has been designed for maximum flexibility of application in technological environments. The names 4M, Freecooler, Dualfluid, Constant and Hiflex T identify specific versions with standard features which are perfectly able to fulfill the strictest and most varied user requirements.





Hiflex is used for conditioning metrological rooms, industrial applications, fixed telephone systems, museums, control rooms, computer rooms and technological environments in general.



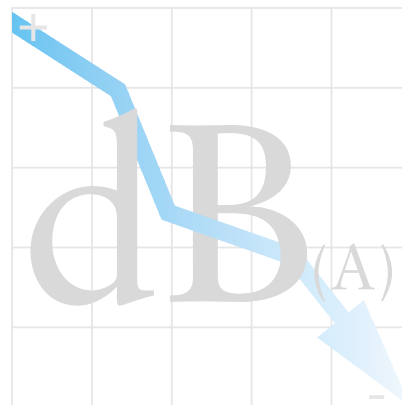
Flexible

The Hiflex range is certainly the largest and most flexible of all Hiross products. The customization of its mechanical and control components has made it possible to create the “Constant” version, the most precise tool for climate management in technological rooms.

Silent

All Hiross products are characterized by low noise levels, but in the Hiflex Under version this is particularly low.

In this version, the presence of the plenum built into the air delivery, reduces the turbulence of the air flow in the underfloor void and helps to ensure particularly quiet operation.



Ease of maintenance

In the Hiflex series, as much as in the whole range of Hiross air conditioners, the layout of the components in compartments separate from the air flow, and with access only from the front, allows the units to be checked while running and any maintenance to be carried out quickly.

Intelligent controls

MICROFACE is the evolution of the family of Hiromatic controls; it makes use of all the regulation and management functions that have always been characteristic features of Hiross electronics. Interconnection in a local network and remote supervision, the latter as an option with Hiromatic Graphic and Hirolink, are available on the whole range.



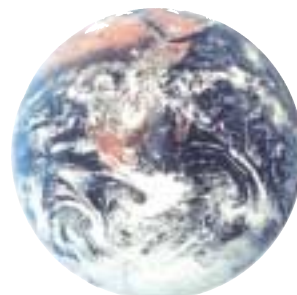
The absolute certainty of Hiflex Constant

When it is necessary to guarantee precise control of temperature and humidity, Hiflex Constant is the answer. In small environments with negligible heat loads such as test laboratories for the textile, tobacco, or precision mechanical industry, when using a delivery duct that guarantees optimum air distribution, the Constant version guarantees temperature and humidity conditions with a tolerance of $\pm 0.3^{\circ}\text{C}$ and $\pm 2\%$ HR for respectively.

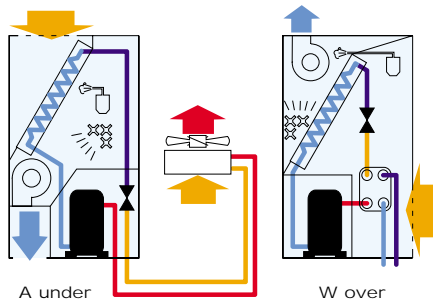
$\pm 0.3^{\circ}\text{C}$
 $\pm 2\% \text{HR}$

Ecology

Like all Hiross products, Hiflex air conditioners have been designed to respect environmental problems. The direct expansion versions are equipped with cooling circuit in conformity with the standards preventing leakage of refrigerant gases. The Hiflex range is also available with R407C.

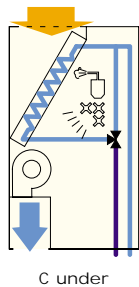


Functional drawings and technical features



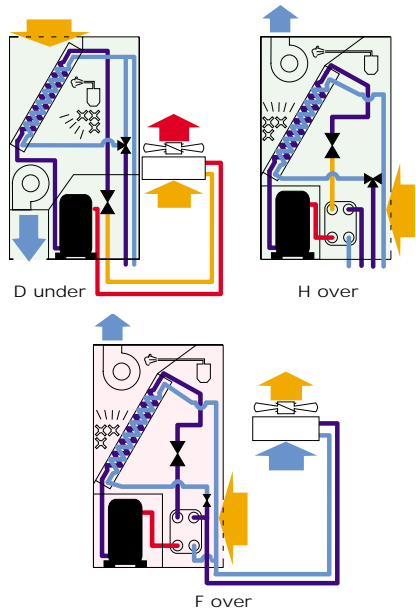
HIFLEX DIRECT EXPANSION VERSION " A/W " (1) (3)

OVER (O) / UNDER (U) MODELS		4MOA(**)	4SO	4LO	6SO	6LO
Air flow	m ³ /s	0.33	0.400	0.59	0.68	0.73
Maximum available static pressure	Pa	0	50	50	50	50
Ambient 24°C - 50% R.H.						
Total capacity	kW	4.8	5.2	7.8	9.9	11.5
SHR*		0.88	0.89	0.87	0.91	0.88
Sound pressure level (2)	dB(A)	45.0	47.0	52.3	53.0	54.2



HIFLEX CHILLED WATER VERSION " C " (4)

OVER (O) / UNDER (U) MODELS		4LOC	6LOC
Air flow	m ³ /s	0.59	0.73
Maximum available static pressure	Pa	50	50
Ambient 24°C - 50% R.H.			
Total capacity	kW	6.9	10.8
Sensible capacity	kW	6.4	9.6
Water flow	l/s	0.33	0.51
Sound pressure level (2)	dB(A)	52.2	54.1



HIFLEX DUALFLUID " D/H "

OVER (O) / UNDER (U) MODELS		8LO	8LU
Air flow	m ³ /s	1.05	1.22
Maximum available static pressure	Pa	50	20

CHILLED WATER OPERATION (4)

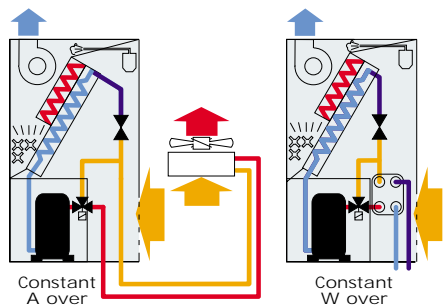
Ambient 24°C - 50% R.H.			
Sensible capacity	kW	11.8	16.5
Water flow/l/s		0.63	0.85

MECHANICAL OPERATION (1) (3)

Ambient 24°C - 50% R.H.			
Total capacity	kW	13.7	14.4
SHR*		0.85	0.90
Water flow (only H)	l/s	0.32	0.34

SOUND PRESSURE LEVEL (2)

"Chilled water"	dB(A)	54.5	51.6
"Mechanical"	dB(A)	54.8	52.1



HIFLEX CONSTANT DIRECT EXPANSION VERSION " A/W " (1) (3)

OVER (O) MODELS		4SCA	4LCA	6SCA
Air flow	m ³ /s	0.36	0.53	0.61
Maximum available static pressure	Pa	50	50	50
Ambient 24°C - 50% R.H.				
Total capacity	kW	5.1	7.8	9.9
SHR*		0.87	0.84	0.87
Sound pressure level (2)	dB(A)	47.0	52.3	53.0

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

A complete accessories range

8SO	8LO	4MUA(**)	4SU	4LU	6SU	6LU	8SU	8LU
1.08 50	1.13 50	0.43 20	0.46 20	0.64 20	0.74 20	0.80 20	1.21 20	1.31 20
13.0 0.98 53.8	15.8 0.89 55.3	5.1 0.96 44.9	5.5 0.91 46.9	8.1 0.88 50.1	10.2 0.89 50.0	11.7 0.91 51.3	13.3 1.00 50.3	16.2 0.94 52.6

8LOC	4LUC	6LUC	8LUC
1.13 50	0.64 20	0.80 20	1.31 20
15.4 14.2 0.74 55.1	7.6 7.0 0.36 49.8	11.9 10.6 0.57 51.4	17.9 16.4 0.85 51.7

HIFLEX FREECOOLER " F "

OVER (O) / UNDER (U) MODELS	8LOF	8LUF	
Air flow	m ³ /s	1.05	1.22
Maximum available static pressure	Pa	50	20
MECHANICAL/FREECOOLING (1)(3)			
Ambient 24°C - 50% R.H.			
Total cooling capacity (Mechanical)	kW	12.9	13.5
SHR*		0.87	0.92
Sensible cooling capacity (Freecooling)	kW	12.2	16.1
Inlet water	°C	7.0	7.0
Water/glycol mixture flow	l/s	1.19	1.21
ZERO ENERGY TEMPERATURE Z.E.T. FREECOOLING			
Ambient 24°C - 50% R.H.			
Z.E.T.	°C	4	6
Mixture inlet temperature	°C	7.6	10
Total pressure drop (5)	kPa	62	62
SOUND PRESSURE LEVEL (2)			
"Freecooling"	dB(A)	54.5	51.6

8SCA	4SCW	4LCW	6SCW	8SCW
0.97 50	0.36 50	0.53 50	0.61 50	0.97 50
12.8 0.94 53.8	5.1 0.87 47.0	7.8 0.84 52.3	9.9 0.87 53.0	12.8 0.94 53.8

Scroll compressors	■
G3 efficiency filters	■
Electric panel to IEC norms	■
Microprocessor control	■
Supervision interface systems (Connectivity)	■
Electric heating	□
Post-heating with hot water	□
Post-heating with hot gas	□ •
Humidifier	□ •
Hiromatic Graphic	□
High efficiency filters (up to F8)	□ •
Refrigerant non return valve	□
Smoke / Fire alarm	□
Water detection alarm	□
Additional Temperature-Humidity sensor	□
Modulating water valve (W/H)	□
Fresh air inlet	□
Inlet & discharge extension hoods	□
Silencer hoods	□
Plenum with front discharge grille	□
Base frame	□
Base module	□
Serial communication	□
Bottom air inlet (up flow units)	□
Back draught damper	□
R407C refrigerant	□

- Standard □ Option
• Standard on the Constant version

The series includes units with a rated cooling capacities from 4 to 16 kW, in versions with chilled water, air or water cooled direct expansion, Freecooling, Dualfluid or Constant, with air delivery from the bottom, under-flow, or from the top, ductable.

DIMENSIONS

Model	Height mm	Width mm	Depth mm
4	1950	750	450
6	1950	750	600
8	1950	750	750

Notes:

- 45°C condensing temperature.
 - Sound pressure level measured in free field conditions, measured at 1m above the ground and 2m in front of the unit.
Over units with ducted discharge.
 - Inlet water temperature to the condenser (W-H-F): 30°C.
 - Chilled water temperature in/out 7/12°C; glycol 0%.
 - Sum of the pressure drops for the coil and valve
- Technical data are referred to units with refrigerant R22 and electrical supply 400V/3phase/50Hz.
* Sensible and total cooling capacity ratio (SHR).
Cooling capacities are gross. To obtain net cooling capacities the fan heat load must be subtracted.
(**) Hiflex 4 M is available only in the air cooled version; electric power supply 230 V/1phase/50Hz.
The codes "S" and "L" become respectively "P" and "G" for the versions with coolant R407C.



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



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