



HiNews



SPECIAL NUMBER

Periodical information of the company, health and safety at work.

JANUARY 2010

BRANDNEW – THE HIREF R&D LABORATORY

In this issue:

P.1 THE HIREF R&D LABORATORY

P.2 TECHNICAL DATA

P.2 POSSIBLE AIRFLOW DIRECTIONS

P.3 TESTING TLC UNIT

P.3 TESTING CCAC UNIT

For a company like HiRef continuous innovation and custom made solutions based on the latest state of the art is a fundamental aspect for the entry in new markets and growing in the existing ones. The search for new customers/markets is quite often accompanied by several homologation processes of our products and this means testing procedures which are most similar to real operating conditions: the availability of this new laboratory facility is fundamental to follow this strategy and at the same time it is a reason of prouddness for the comprehensive efforts which has been put into building up this kind of advanced infrastructure. Each of the 2 testing chambers offers testing conditions which start from -20°C and ends up just with +65°C, offers a fully controlled humidity range and offers the measurement of all thermal flows, (cooling capacity, heating capacity, heat recovery etc.) with a contemporary data logging of all functional parameters of the test unit. In a historical counter direction in which the worldwide crisis is by far not yet terminated, the general opinion within the Galletti Group companies is that the last thing to slow down are the efforts in Research and Development. It is even more important today -with all the new upcoming technologies such as BLDC for electrical motors, renewable energy technologies, high efficient heat pumps, High Density air conditioners, modulating compressor speeds, high efficient evaporator technology [Hiref patent], new ecologic refrigerants, new compressor- free technologies, etc. – to continue these activities in order to build up a broad fundament for the establishment of Hiref's future.

Our Galletti Group's testing facilities today are composed of:

- Climatic chamber A - 20°C / + 65°C with max. available testing capacity 200 kW
- Climatic chamber B - 20°C / + 65°C with max. available testing capacity 200 kW
- Climatic chamber C 0°C / + 55°C with max. available testing capacity 40 kW
- Climatic chamber D - 5°C / + 50°C with max. available testing capacity 150 kW
- Ventilation tunnel for fan's characteristics and other air measurements
- Reverberating chamber 500 m3 for direct measurement of sound pressure level of units and components
- Testing table for compressor performances in terms of fixed and variable speeds

There are still missing some finishes such as floor paintings, wall coverings etc. but the laboratory is already functional and has been utilized and visited by several end customers already. In future we will even more demonstrate the structure, explain functionality and performances and we will talk about the efforts to realize this laboratory: Hiref is small but tough.

M. Mantovan

HiRef S.p.A.

Viale Spagna, 31/33

35020 Tribano (PD)

Tel +39 049.9588511

Fax +39 049.9588522

e-mail : info@hiref.it

web : www.hiref.it



Printed for internal use



False ceiling with air outlets



Closed airwall section



Hydraulic pipeworks in raised floor

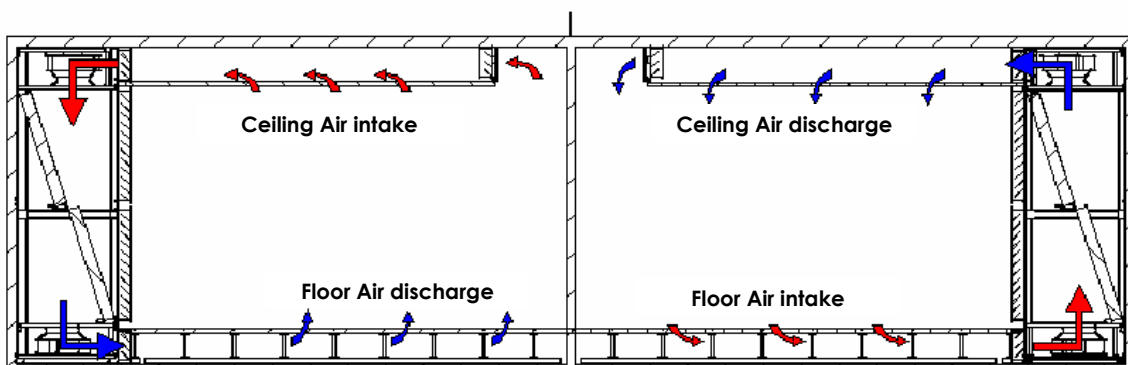
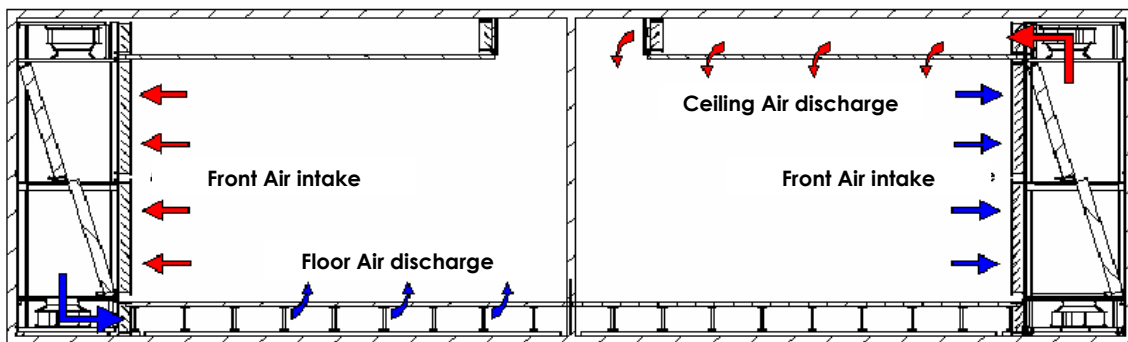
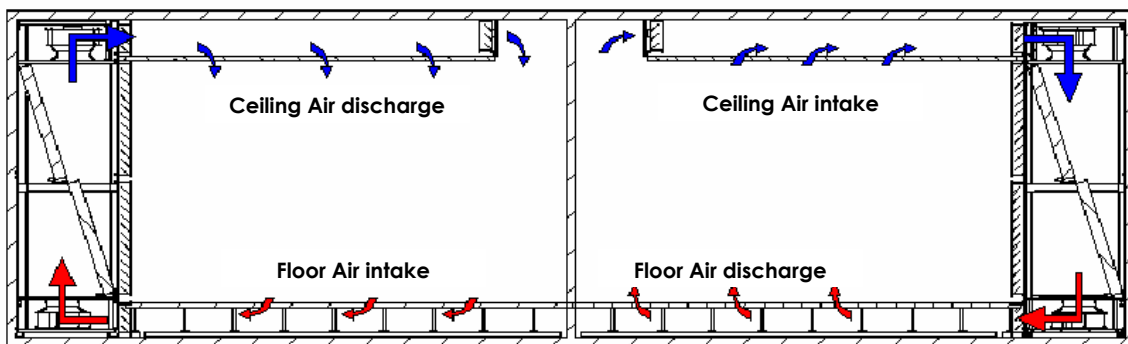


Partially open airwall section

TECHNICAL DATA

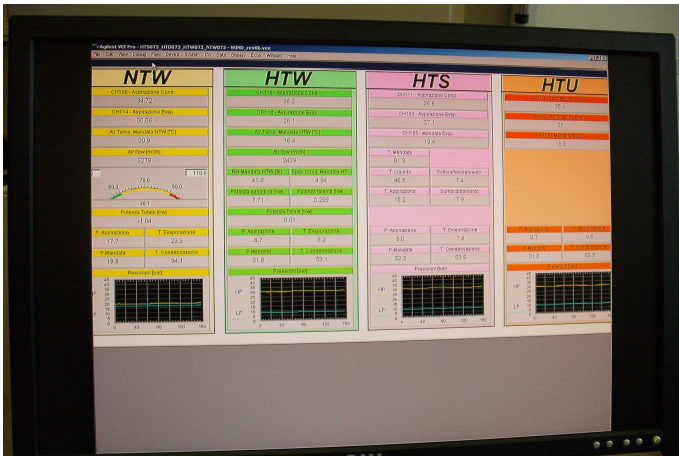
N° of independent test rooms:	2
Net area of each test room:	28,5 m ²
Removable central wall	yes with quick modification possibilities
Net volume for each test room:	83 m ³
Net max. height:	2,9 m
Raised floor load:	400 daN / m ²
Max cooling capacity each room:	c.a. 200 kW
Available el. current:	250 A [EL power provider]
Available el. current:	400 A [ext. Diesel Genset]
Max available airflow each room:	57.000 m ³ /h
Min. testing temperature condition:	-20°C
<ul style="list-style-type: none"> • temporarily to simulate low temp. start up • DX facility from 10kW @ -20°C 	
Min. testing temperature condition:	+ 65° C
Humidifier capacity for each room:	40 kg/h
No. of independent hydraulic circuit per room:	3 pure water + 1 water/glycol 30%
<ul style="list-style-type: none"> • each of it with thermal waterflow measurement 	
No. of data logging lines per each room:	60

POSSIBLE AIRFLOW DIRECTIONS



TESTING TLC unit

unit R410A 7kW ON-OFF and BLDC inverter compressor. Max ambient T tested @ full capacity T = 52°C :



TESTING CCAC unit

176 KW @ water 12/20°C and air 31°C:

