

Liebert HPM Extended

*New Horizons for
Data Center Efficiency*



Liebert HPM Extended

Agenda

- Market Drivers
- Liebert HPM Extended Concept
- Two ways of Operating, the Power Mode and Eco Mode
- Product Configuration
- Serviceability
- Product Performances
- Product Positioning
- Marketing tools and Availability
- Benchmarking

Liebert HPM Extended

- The Data Center environment is growing fast and energy efficiency is a critical success Factor
- Liebert HPM Extended allows maximum cooling capacity at minimized operative costs
 - Reduce energy costs as the unit is more efficient than a traditional chilled water unit
 - Reduce investment cost, as the number of units required can be lower due to an higher cooling capacity of the Liebert HPM Extended than a CW unit
- Liebert HPM Extended has been designed to suit to different installation requirements and data center room constraints

Emea Market Size – CW Floor Mount

- **EMEA Market in FY08**

- Sales Floor Mount CW: 94Mil€
- Installed Capacity : 1.050 MW
- In addition to CW Floor Mount, the chiller market in data centers is estimated in 120 Mil€

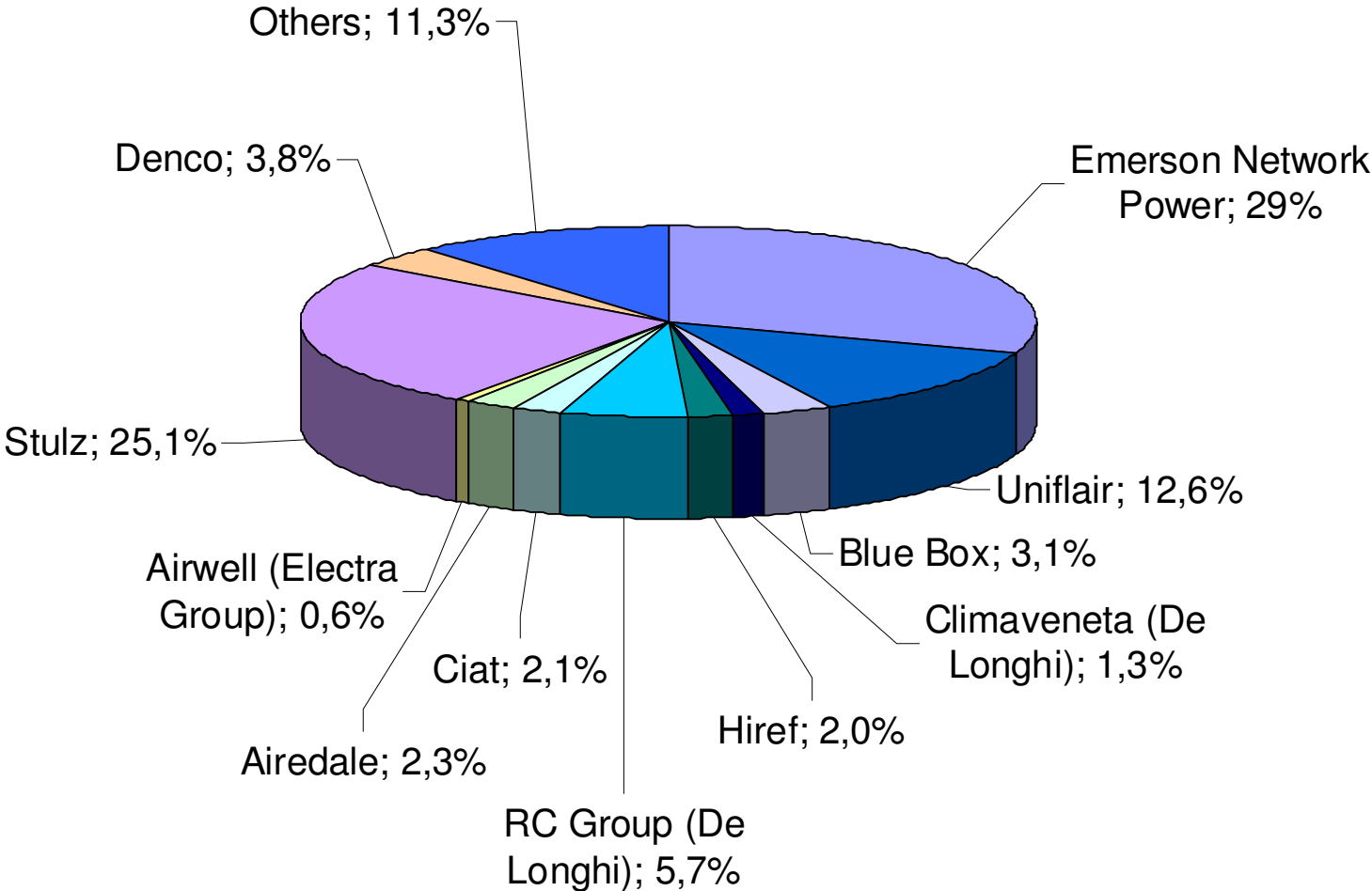
- **Market Drivers**

- Flexibility to suit to different data center layout, and building constraints
- Increasing number of data center using chilled water units
- In large data center, efficiency and cost are the main drivers
- CW Free cooling and fresh air free cooling are normally specified

- **Emerson Network Power Sales in FY08**

- Sales: 25Mil€ Sales in FY08 (23Mil€ in FY09)
- Installed Capacity: 267MW of installed capacity in FY08 (214MW in FY09)
- Qty of Units: 3.877 units

EMEA Floor Mount Market



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Liebert HPM Extended Concept

- **Market is requiring more than 30% energy reduction versus current design with EC fans**
- HPM Extended design allows:
 - Optimize air distribution
 - Use all unit height above the raised floor to increase cooling capacity
 - Optimize coil design and reduce unit air pressure drop
- Two versions available
 - **Extended DOWN** with fans in the raised floor
 - **Extended UP** with fans over the raised floor due to limited space available



Liebert Extended

**Extended DOWN
Fans in the raised floor**



**Extended UP
Fans Over the raised floor**





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Liebert HPM Extended

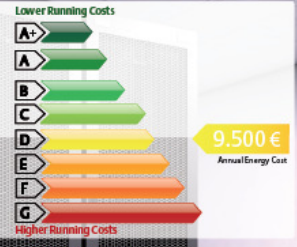
- HPM Extended is providing two huge advantage versus standard chilled water units
 - EFFICIENCY & COOLING DENSITY  Power Mode  Eco Mode
- Based on these customers values we can have two different positioning for the HPM Extended versions
 - HPM Extended DOWN
 - It is the best in term of efficiency. We position the unit in order to have the same cooling capacity of an equivalent CW standard unit. Product positioning allows to get a ROI in few months
 - HPM Extended UP
 - It is used when there are some constraints in the customer's data centers due to raised floor height or access
 - It can be used instead than a standard but bigger chilled water unit, giving advantages in term of TCO and use of data center space

Liebert HPM Extended – A Road Map to the Efficiency!



Energy Efficiency Rating

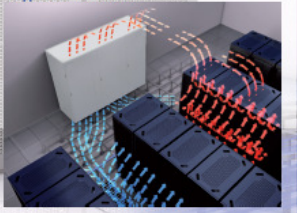
Precision Cooling Unit with AC Fan



Lower Running Costs
A+
A
B
C
D
E
F
G
Higher Running Costs

9,500 €
Annual Energy Cost

Application in a datacenter




Technical Data
Air 32° 30%
Water 14° C 20° C
Net Cooling 120 kW

EMERSON
Network Power

Energy Efficiency Rating


Liebert HPM EC Fan



Lower Running Costs
A+
A
B
C
D
E
F
G
Higher Running Costs

6,000 €
Annual Energy Cost

EC Fan

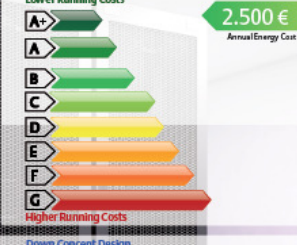


Technical Data
Air 32° 30%
Water 14° C 20° C
Net Cooling 120 kW

EMERSON
Network Power

Energy Efficiency Rating


Liebert HPM Extended



Lower Running Costs
A+
A
B
C
D
E
F
G
Higher Running Costs

2,500 €
Annual Energy Cost

Down Concept Design




Technical Data
Air 32° 30%
Water 14° C 20° C
Net Cooling 120 kW

EMERSON
Network Power

Energy Efficiency Rating


Liebert HPM Extended UP



Lower Running Costs
A+
A
B
C
D
E
F
G
Higher Running Costs

3,500 €
Annual Energy Cost

Down Concept Design



Technical Data
Air 32° 30%
Water 14° C 20° C
Net Cooling 120 kW

EMERSON
Network Power

Liebert HPM Extended – Cooling Density



At maximum speed Liebert HPM Extended can give up to 30% more capacity compared to a standard unit in the same conditions

This means More Capacity in the Same Footprint
(Higher Redundancy)

This means possibility to save Space reducing unit Footprint
(Lower Investment Costs)



TCO SAVING

Liebert HPM Extended – Application Scenarios

1st Scenario

Liebert HPM Extended DOWN

Unit installed within the data center room, with fans module installed in the raised floor.
The top level solution in terms of Energy efficiency for chilled water application.

Available as standard



2nd Scenario

Liebert HPM Extended UP

Unit installed within the data center room, with fans module installed above the raised floor.
Whenever the raised floor height is not enough to have fans in the raised floor, the best solution to maximize the efficiency.

Available as standard



3rd Scenario

Liebert HPM Extended In Service Corridor

The unit is installed within the data center service area.
The fans deliver air from the fans module rear side.
The cold air is delivered through the raised floor into the data center room. The air return from the data center is taken to the top of Liebert HPM extended unit.

Available as SFA



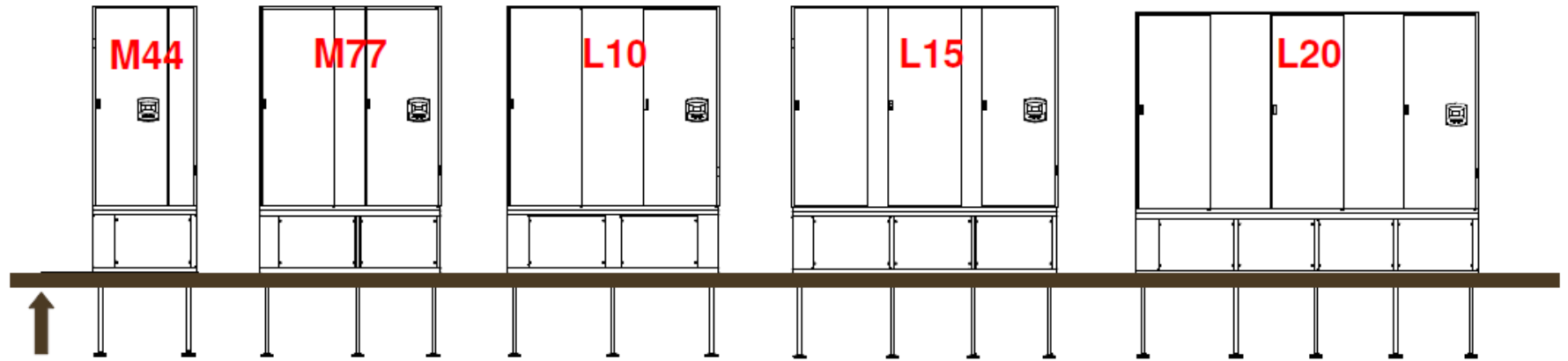
Liebert HPM Extended

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Liebert HPM Extended – Range

Version with fans **ON** raised floor with Base Module



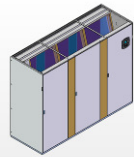
Version with fans **IN** raised floor with Base Frame



The Richest Range in the market!

Liebert HPM Extended – Configuration

2 Model Configuration



Digit Nomenclature (CW unit)

The unit is fully defined by seventeen digits.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

L 15 E C

Digit 1
Family
L Large
M Medium

Digit 2 and 3
Size: Cooling Capacity "kW"
(approx.)
Nominal Cooling Capacity

Digit 4
Air distribution
E Downflow with fans
under the unit

Digit 5
Version
C Chilled Water

Digit 6 – Fan
1 EC fan

Digit 7 – Main Power Supply
0 400V / 3Ph / 50Hz

Digit 9 – Humidification
0 None

Digit 10 – Microprocessor Control
A ICOM & Coldfire Display Small with Temperature Control
B ICOM & Coldfire Display Small with Temperature and Humidity Control
C ICOM & Coldfire Display Large with Temperature Control
D ICOM & Coldfire Display Large with Temperature and Humidity Control
2 ICOM & Inner Display with Temperature Control
3 ICOM & Inner Display with Temperature and Humidity Control

Digit 11 – Free

Digit 12 – Air Filter Efficiency
A G2
0 G4
1 F5
2 G4 with Clogged Filter
3 F5 with Clogged Filter

Digit 13 – CW Valve
All models
0 3 way valve
1 2 way valve

Digit 14 – Paint
2 BLACK Emerson 7021 Colour

Digit 15 – Configuration extended design
0 Fans IN the raised floor
1 Fans ON the raised floor

Digit 16 – Packing
C PLP and Wooden Crate
P PLP and Pallet
S Seaworthy

Digit 17 – Requirements
X Special Emerson Network Power
0 Standard Emerson Network Power

Model Configuration

Digit Nomenclature (Base unit)

The base unit is fully defined by eight digits.

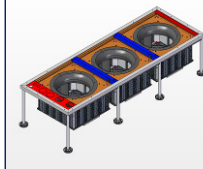
1 2 3 4 5 6 7 8

B F L 1 5

Digit 1 and 2
Version
BF Base Frame
BM Base Module

Digit 4 and 5
Size: Cooling Capacity "kW"
(approx.)
Nominal Cooling Capacity

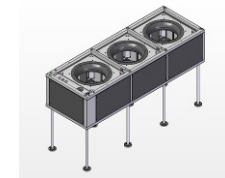
Digit 3
Family
L Large
M Medium



Digit 6 – Free

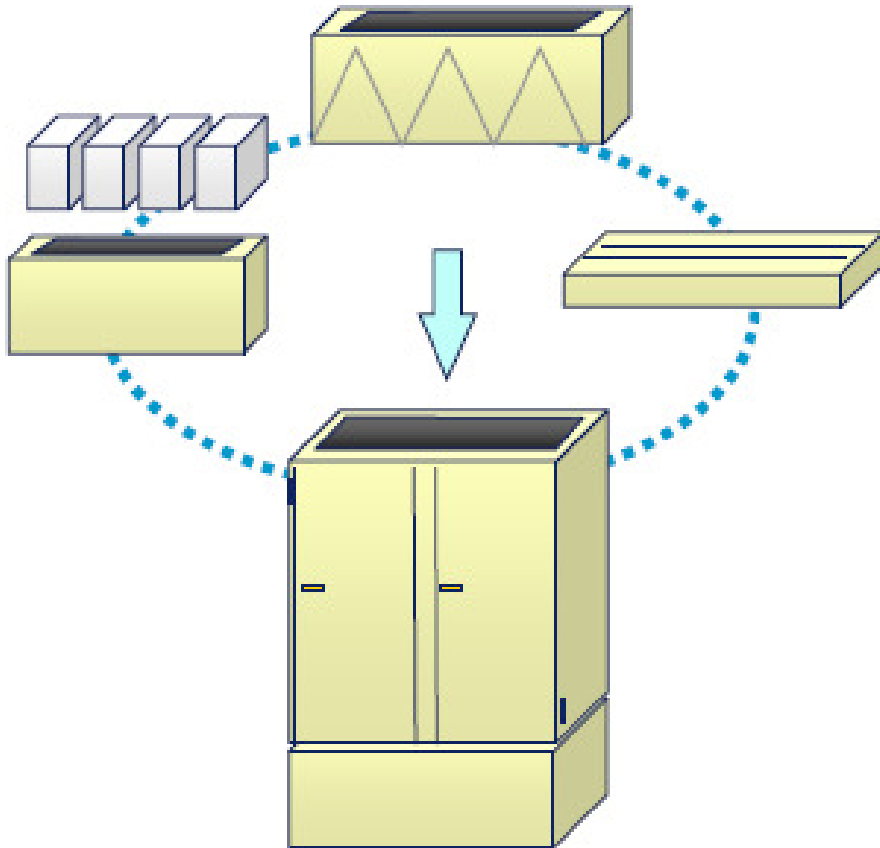
Digit 7 – Packing
C PLP and Wooden Crate
P PLP and Pallet
S Seaworthy

Digit 8 – Requirements
X Special Emerson Network Power
0 Standard Emerson Network Power

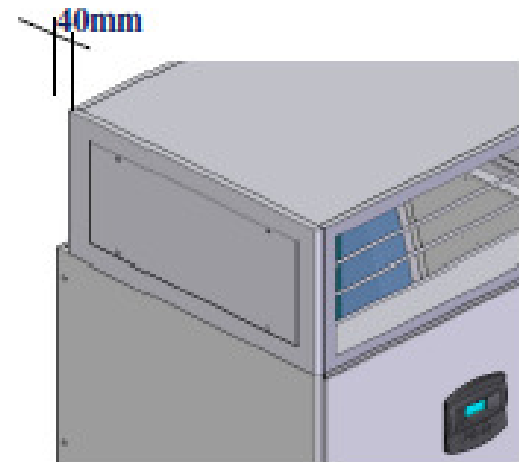


Liebert HPM Extended – Accessories

HPM standard accessories will be used.



Solution for "M77 and M44" models



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Service and maintenance issues... Consider IT Solved Liebert HPM Extended

**FULL
FLEXIBILITY in
the WATER
CONNECTIONS**

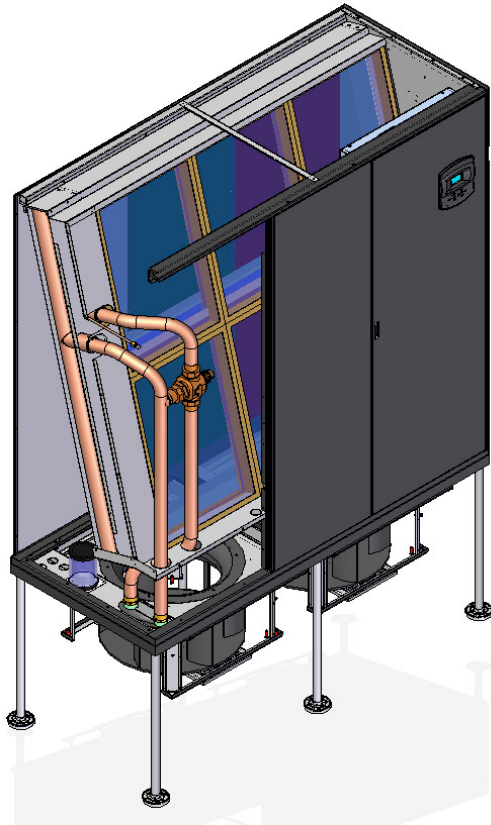
**iCOM PA
the most
advanced
control in
the market**



**EASY and
FAST to
CONNECT**

**EASY TO INSTALL
EASY for MAINTENANCE**

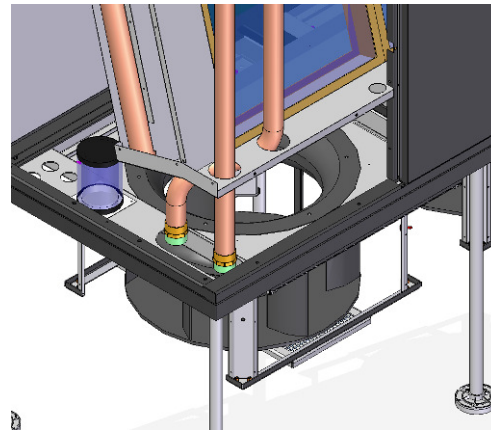
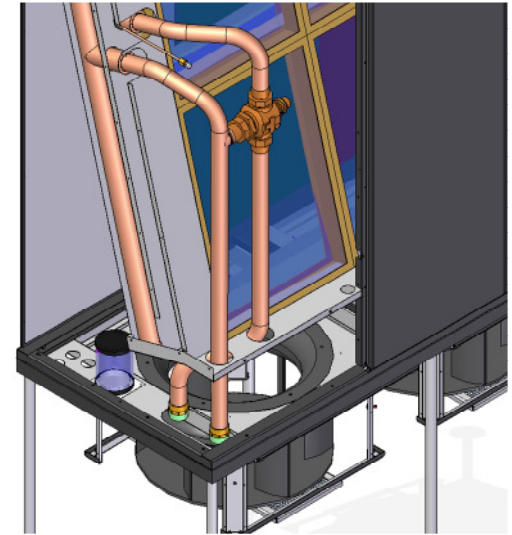
Service and maintenance issues... Consider IT Solved Liebert HPM Extended



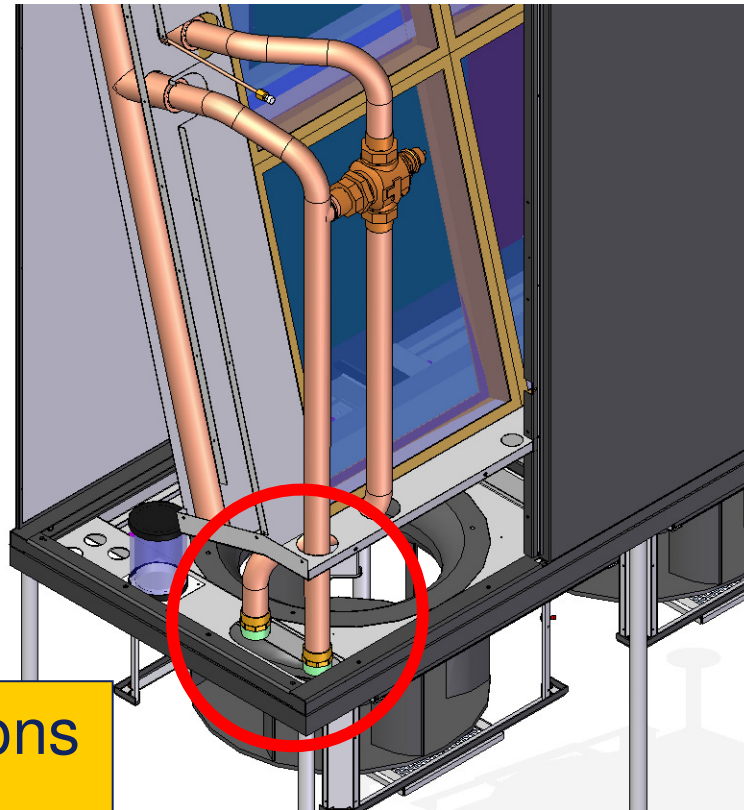
Full Component Accessibility

Full Flexibility for water connections

Design to minimize Service and Installation Costs



Service and maintenance issues... Consider IT Solved Water Connections



Water Piping connections
From the bottom
WITHOUT any obstruction
To fans replacement

Service and maintenance issues... Consider IT Solved Fans Replacement


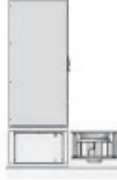
EC fan removal operation

EC fan removal operation

WARNING
There is a risk of the fan module falling down during the replacement operation and causing an injury or death.
Due to the weight of the fan module, about 10 kg, non-removable fan support is used in case of a fan replacement.

BEFORE CARRYING OUT ANY MAINTENANCE ON THE MACHINE, ALWAYS CUT ALL THE ELECTRIC SUPPLY CIRCUITS OFF.

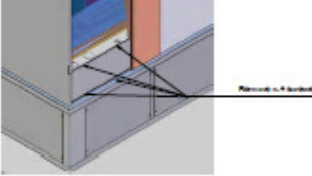
Only properly trained and qualified personnel should work on this equipment.

Legend NPM Extended (DPM) Version with fan in the raised floor	Legend NPM Extended (UP) Version with fan above the raised floor
	

Step by step procedure:

- 1) Switch the unit OFF by pressing the ON/OFF switch located in the Operational mode.
- 2) Open the front panel and turn OFF the main switch of the electrical panel.
- 3) Remove the fan safety pin of the fan cable.

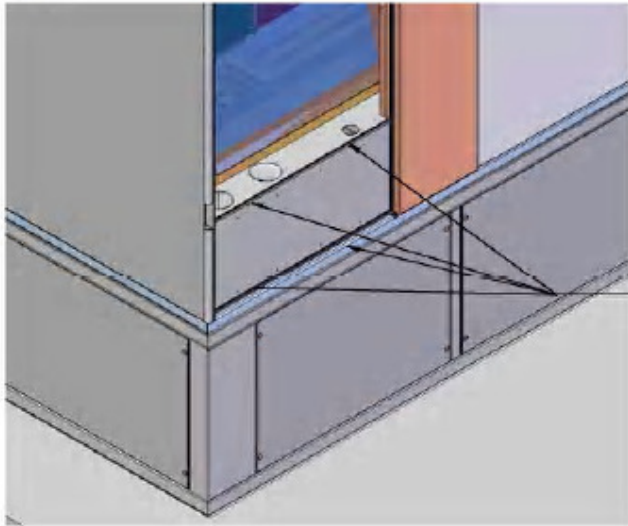
Fig. 4



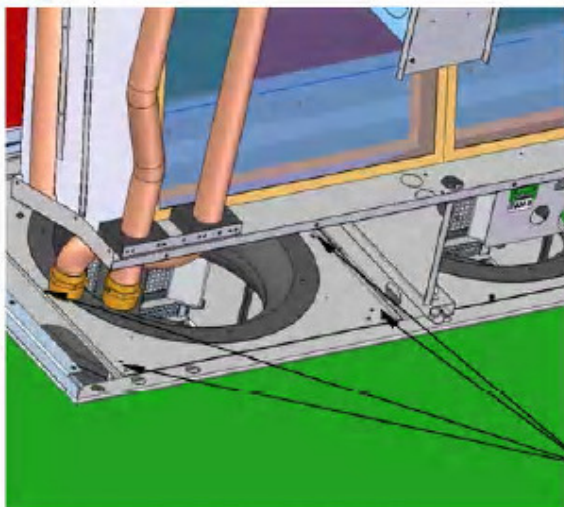
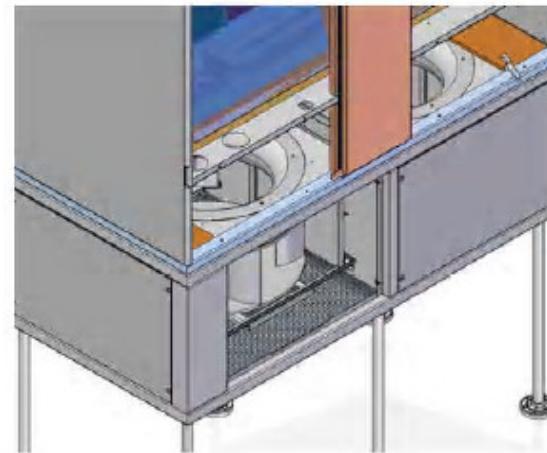
English Legend NPM Extended 2 - 1

Specific Chapter on
USER MANUAL
dedicated to FANS
REPLACEMENT

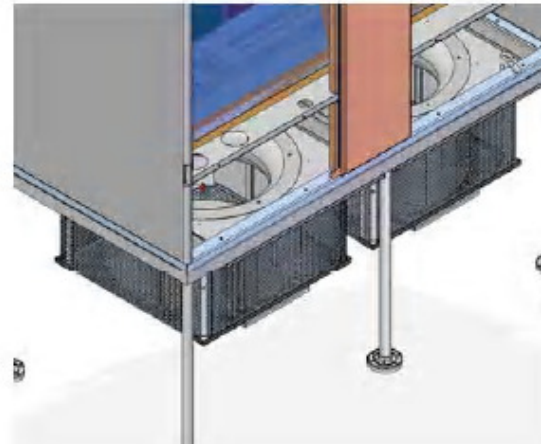
Service and maintenance issues... Consider IT Solved Fans Replacement



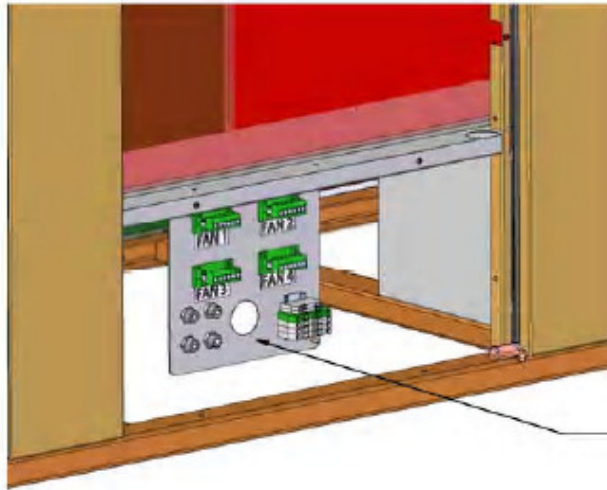
Remove n.4 screws



Remove n.4 screws

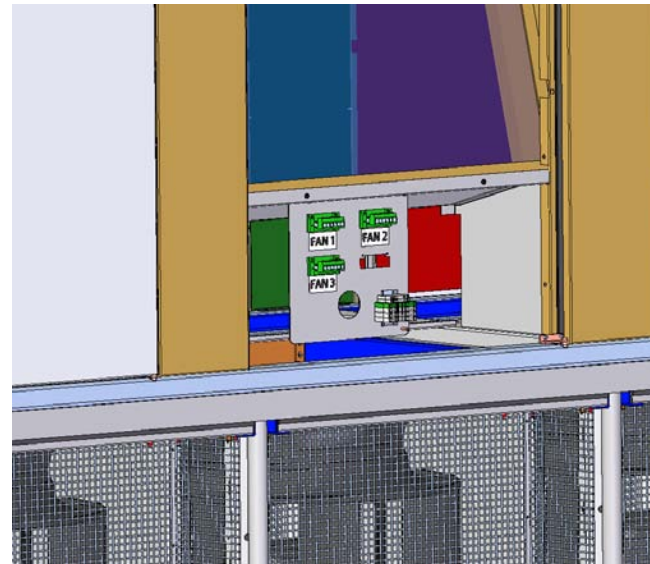


Service and maintenance issues... Consider IT Solved Fans Replacement

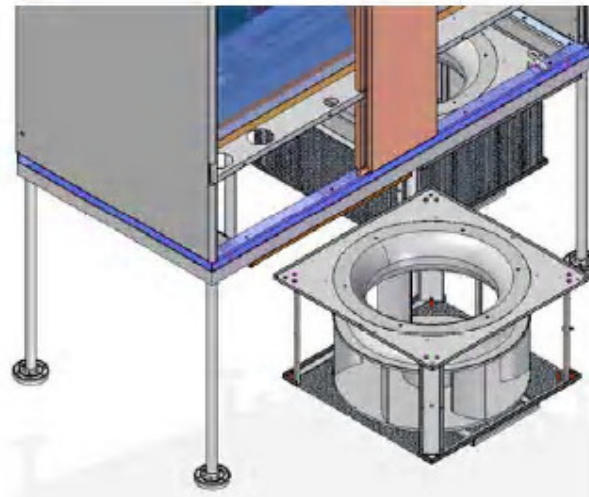
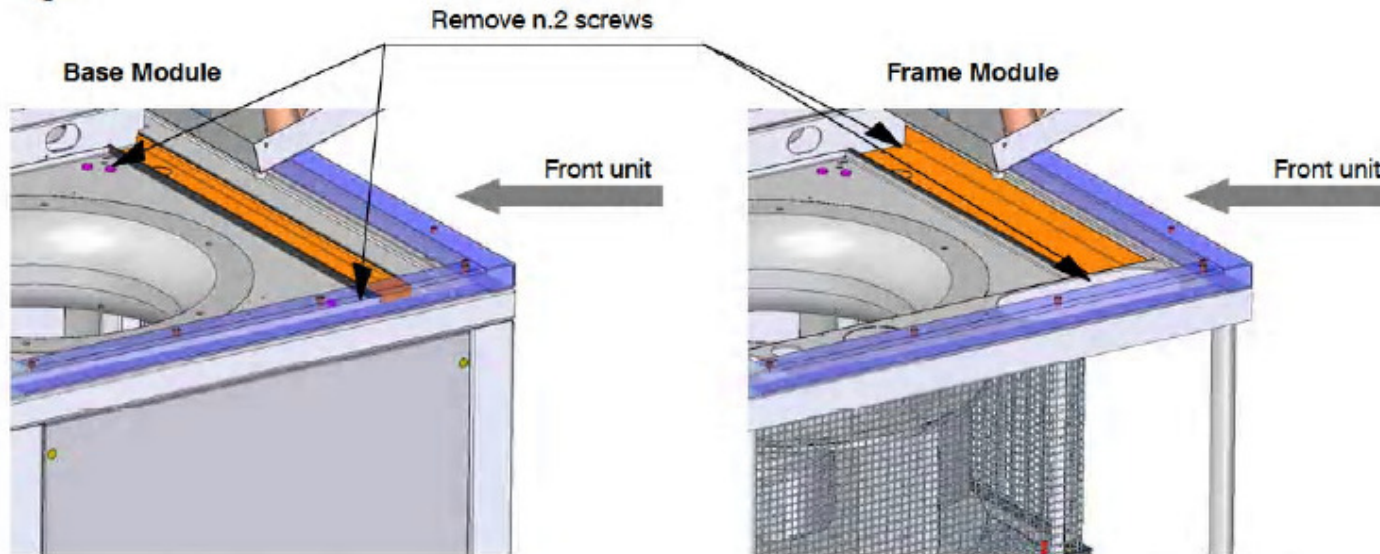


Disconnect the fast plug connector

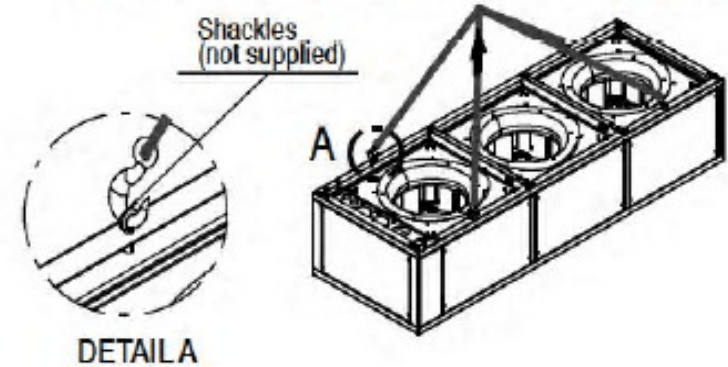
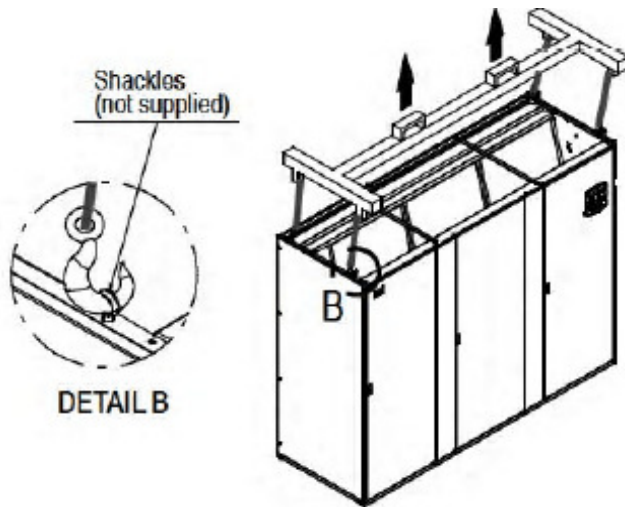
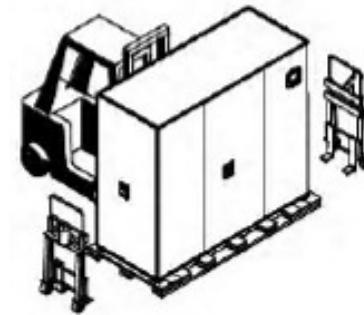
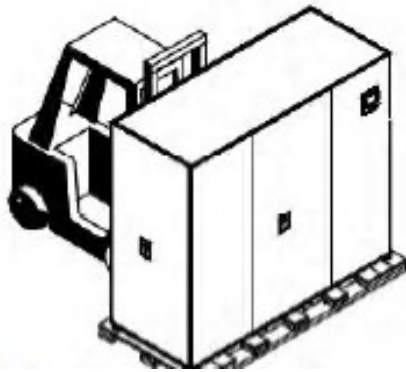
- Fans power cables with quick connections for easy installation and maintenance
- Unit predisposition with fix wiring positioning inside the unit to avoid mistakes or not correct installation



Service and maintenance issues... Consider IT Solved Fans Replacement



Service and maintenance issues... Consider IT Solved Unit handling and positioning on site

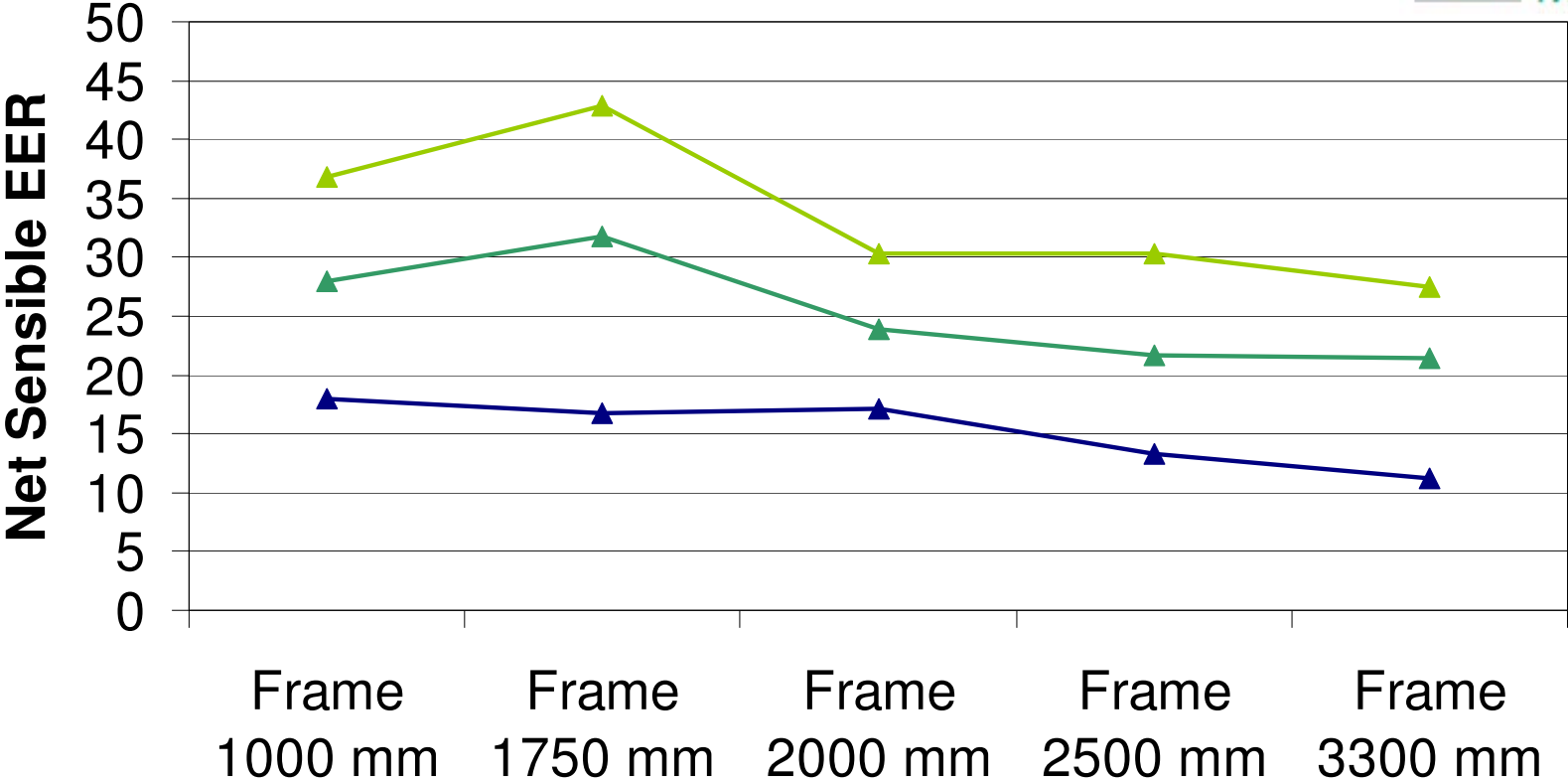


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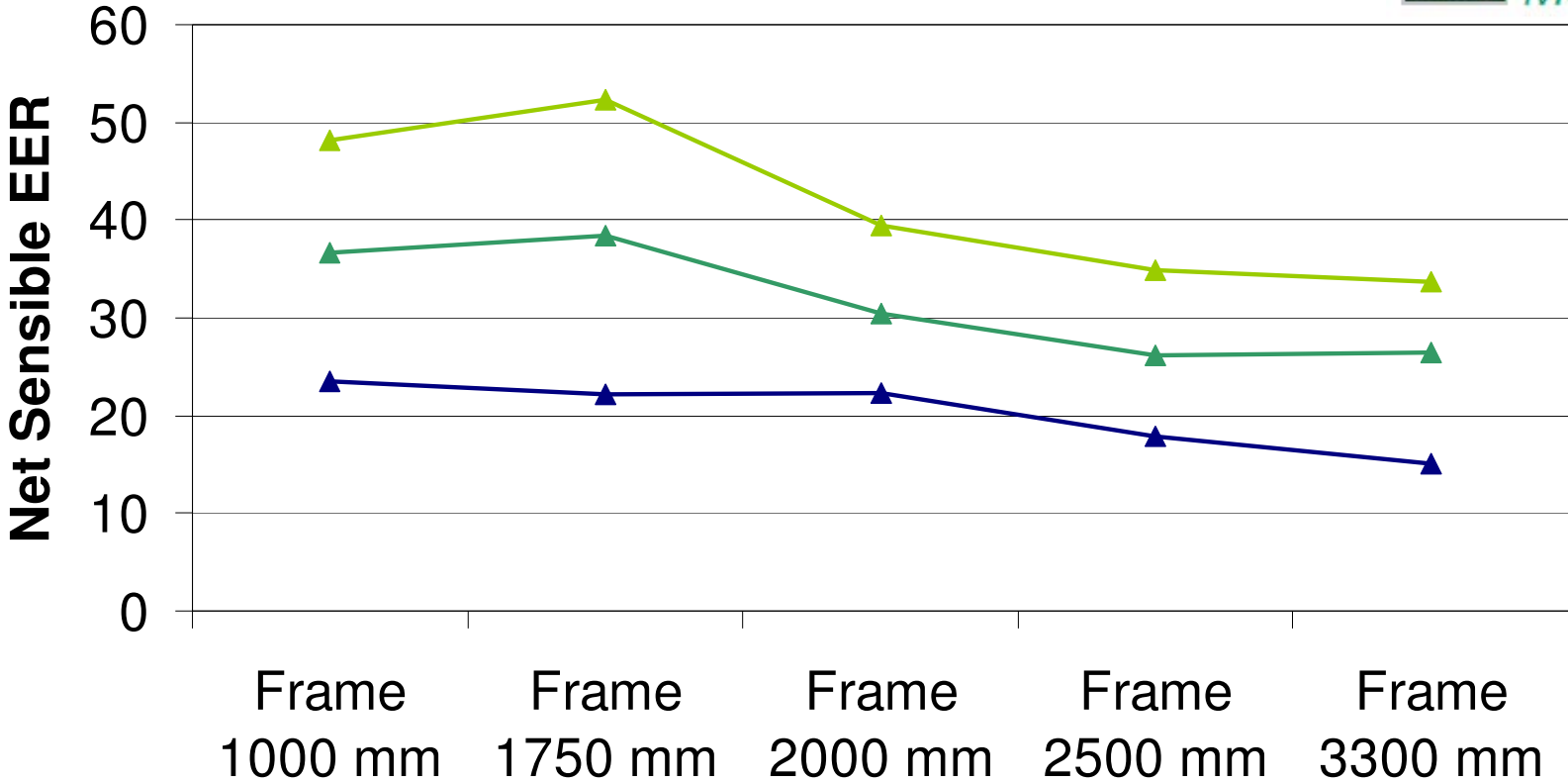
Eco Mode – 24°C 50% - Water 10°C/15°C



- ▲ Standard CRAC unit with EC FAN
- ▲ Liebert HPM Extended UP
- ▲ Liebert HPM Extended Down



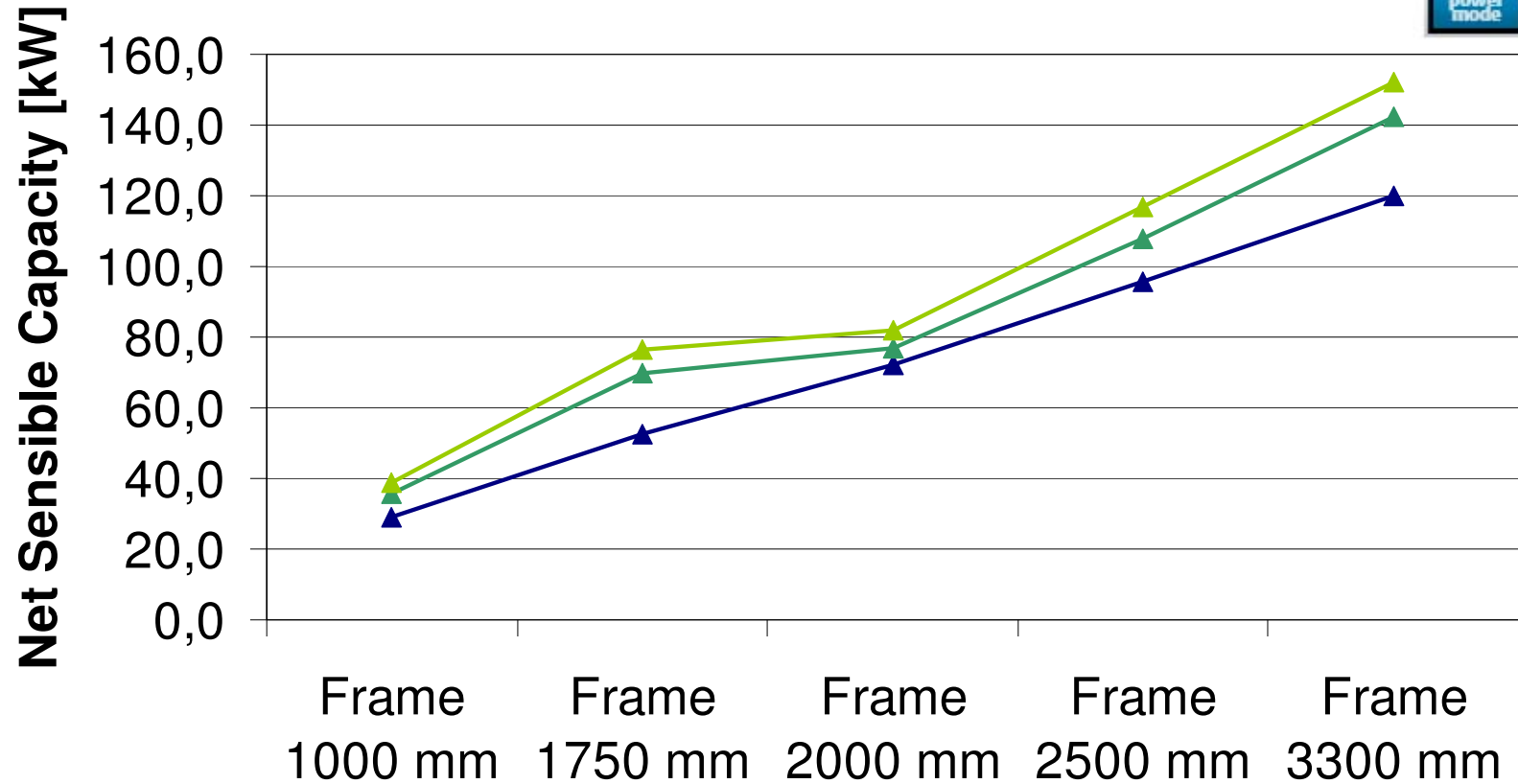
Eco Mode – 32°C 30% - Water 14°C/20°C



- ▲ Standard CRAC unit with EC FAN
- ▲ Liebert HPM Extended UP
- ▲ Liebert HPM Extended Down

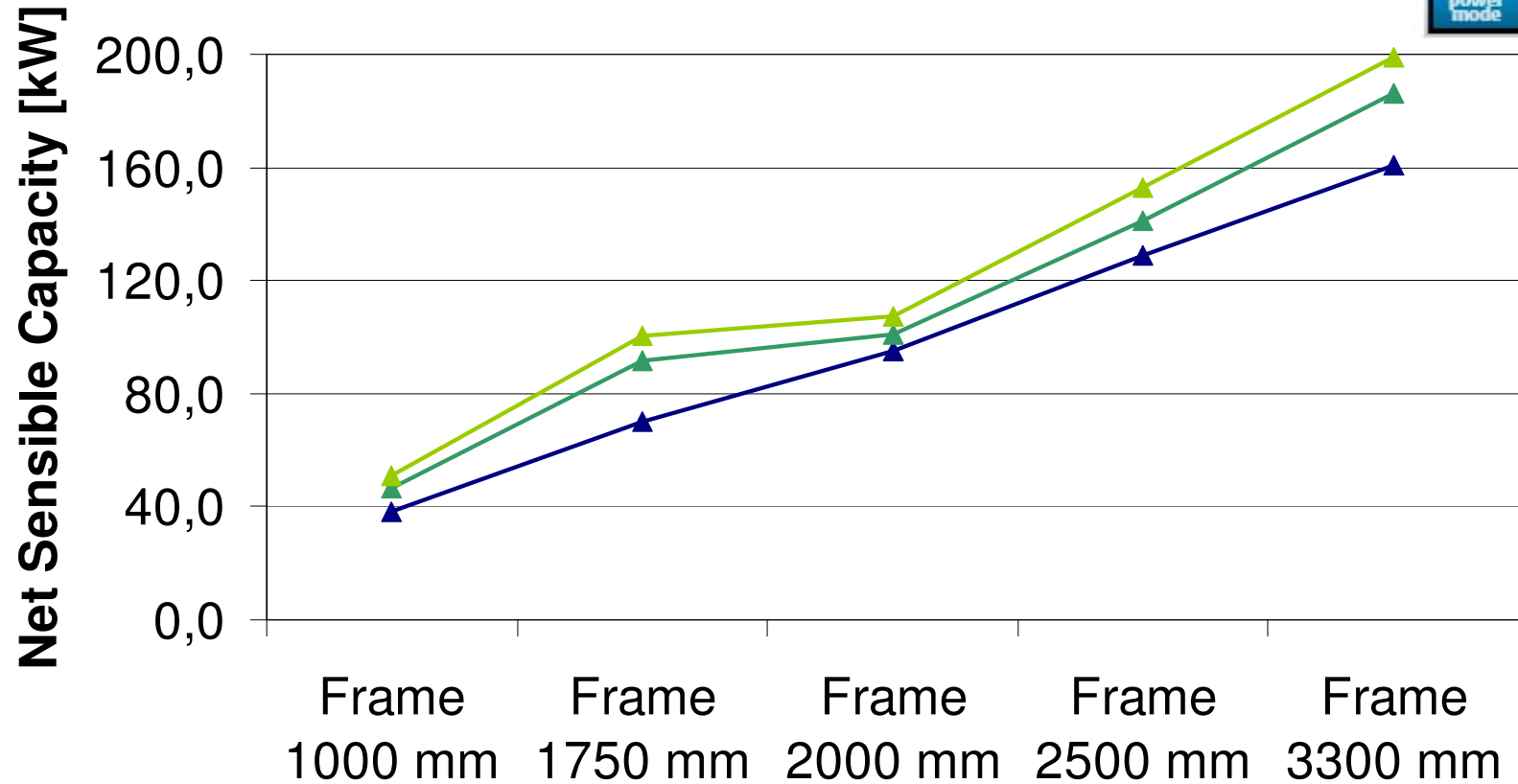


Power Mode – 24°C 50% - Water 10°C/15°C



- ▲ Standard CRAC unit with EC FAN
- ▲ Liebert HPM Extended UP
- ▲ Liebert HPM Extended Down

Power Mode – 32°C 30% - Water 14°C/20°C



- ▲ Standard CRAC unit with EC FAN
- ▲ Liebert HPM Extended UP
- ▲ Liebert HPM Extended Down

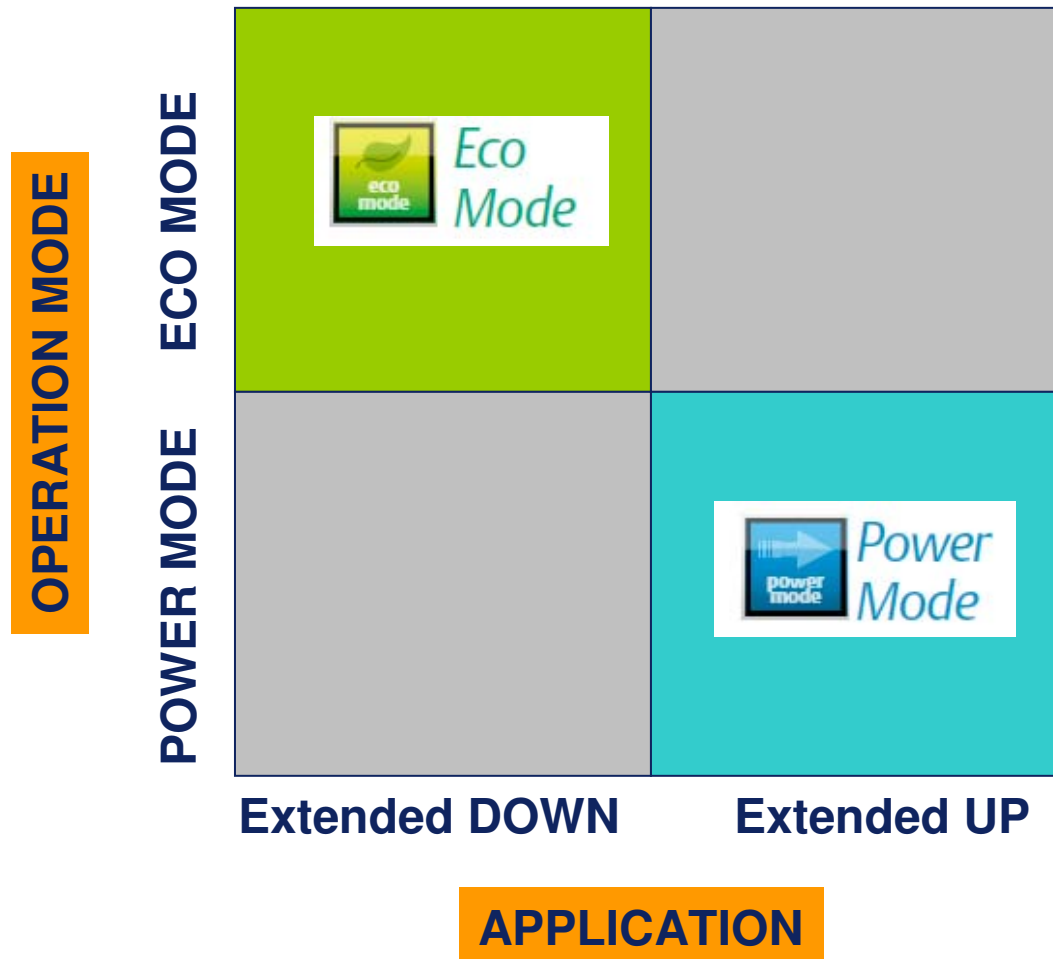
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Liebert HPM Positioning

- Extended Down: positioned as ECO Mode for best energy saving
- Extended UP: positioned as possible alternative of standard CW units, applicable also when there are data center constraints.



Liebert Extended DOWN - Positioning

Comparison at Same Cooling Capacity		
kW Net Sensible	Liebert HPM	Extended Down
33 kW	M44UC - 33,2 kW SCOP=22	M44 EC Down - 33,1 kW SCOP=45 ROI=0,77 years
60 kW	M77UC - 61,7 kW SCOP=20	M77 EC Down - 62,4 kW SCOP=50 ROI=0,51 years
80 kW	L10UC - 80,1 kW SCOP=21	L10EC Down - 81,1 kW SCOP=34 ROI=0,59 years
115 kW	L15UC - 113,9 kW SCOP=17	L15EC Down - 113,8 kW SCOP=31 ROI=0,30 years
160 kW	L20UC - 162,6 kW SCOP=15	L20EC Down - 163,1 kW SCOP=23 ROI=0,32 years

Liebert HPM Extended UP - Positioning

Comparison at Nominal Air flow @ 20Pa ESP Extended UP to match a smaller standard CW unit capacity		
kW Net Sensible	Liebert HPM	Extended UP
45 kW	M55UC 47,5 kW SCOP=22 TCO in 2-Year= 197€/kW	M44EC UP 45,2 kW SCOP=15 TCO in 2-Year= 221€/kW
80kW	L10UC 80,1 kW SCOP=21 TCO in 2-Year= 175€/kW	M77EC UP 79,7 kW SCOP=19,6 TCO in 2-Year= 179€/kW
90 kW	L12UC 92,6 kW SCOP=19,4 TCO in 2-Year= 185€/kW	L10EC UP 92,3 kW SCOP=19 TCO in 2-Year= 184€/kW
130 kW	L16UC 126,5 kW SCOP=15,6 TCO in 2-Year= 200€/kW	L15EC UP 126,4 kW SCOP=17,4 TCO in 2-Year= 193€/kW

Competitors Product

Price€/kW

110

100

90

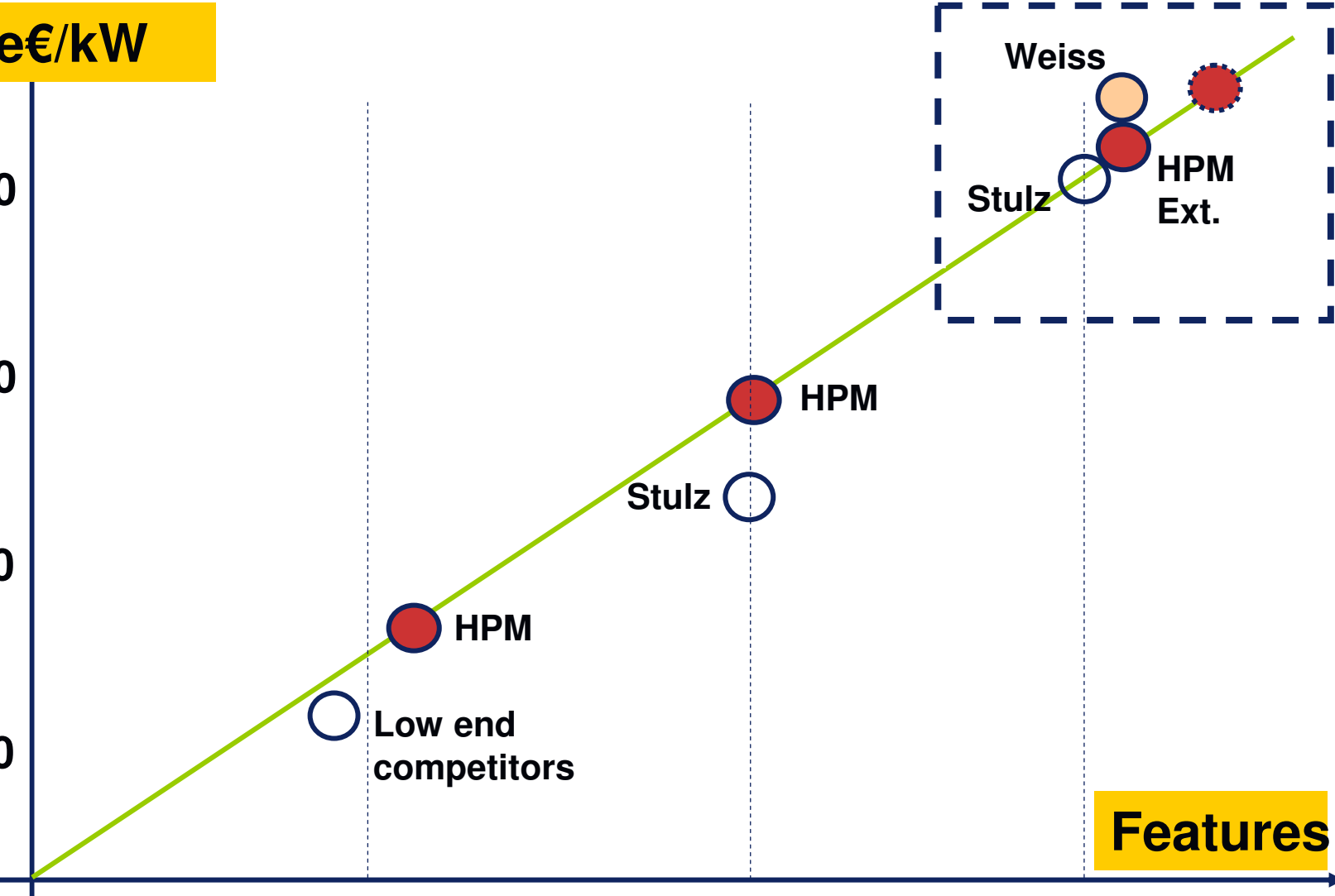
80

AC Fan

EC Fan

Extended

Features



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Selling Tools – PRICE LIST



DIGIT		M44
1-3	Basic unit Floor-mount Air Conditioning Unit including: - Frame with A1 fire class insulated panels - Plug in fan with seven speed setting - G4 air filters - Modulating 3 ports valve <i>EC Fans included in base frame/base module to be selected separately from main unit</i>	
4	Air Discharge Extended design	E
5	Version chilled water	C
6	Free Free	1

Configure the UNIT and then the fan module:
2 sections, ONE unit

BASE FRAME FOR EXTENDED DOWN VERSION		
1-5	BASE FRAME FOR EXTENDED DOWN VERSION (Fans IN the raised floor) base frame for installation on floor height between 600mm and 1000mm included EC fans	BFM44
6	Free	0
7	Packing Tognana Manufacturing PLP and wooden crate seaworthy	C S
8	Free	0
9	Special Requirements none SFA	0 X
BASE MODULE FOR EXTENDED UP		
1-5	BASE MODULE FOR EXTENDED UP (Fans OVER the raised floor) base module for installation on floor height between 300mm and 1000mm included EC fans	BMM44
6	Free	0
7	Packing Tognana Manufacturing PLP and pallet PLP and wooden crate seaworthy	P C S
8	Free	0
9	Special Requirements none SFA	0 X

Dedicated OPTIONS		Compliance
CABINET		
Mount of damper		
Automatic damper control by option		
Air in return		
M44C2	000141	Yes
M44C3	000142	Yes
M44C4	000143	Yes
M44C5	000144	Yes
M44C6	000145	Yes
ELECTRICAL		
Max. switch on the panel		
1 Module		
	000146	Yes
Mount of damper automatic control		
All the modules, for unit with valve damper		
All the modules, for the unit without damper		
	000147	Yes
	000148	Yes

Distributed next week
Valid from 19th July

Selling Tools



Precision Cooling for Business-Critical Continuity™

Liebert HPM Extended
When energy efficiency matters

New Brochure

EMERSON Network Power

Look for it on e-commerce
Available from Next Week

Precision Cooling for Business-Critical Continuity™

Liebert HPM Extended
High Efficiency
Optimal Water-Team Cooling Units

PRODUCT DOCUMENTATION

Liebert. EMERSON Network Power

Look for them on MyENP
Available from Today

Dedicated Product Document

Dedicated Service Manual

Precision Cooling for Business-Critical Continuity™

HPM Extended
High Efficiency
Optimal Water-Team Cooling Units

SERVICE MANUAL

English | Cat. 272942 | Rev. 01/2013

Liebert. EMERSON Network Power

Selling Tools



EMERSON
Network Power

Liebert HPM Extended

Precision Cooling Room Unit



EMERSON
Network Power

Power Mode



30% less in investment costs

Liebert HPM Extended



EMERSON
Network Power

Eco Mode



rise in energy savings up to 50%!

Liebert HPM Extended



EMERSON
Network Power

Liebert HPM Extended

Cut Energy bill up to € 7.000 per year



Dynamic Banner

Look on your mail box
Available within Next Week

Selling Tools – New Hirating



Rel. 6.4 (10-06-2010)

Web site www.eu.emersonnetworkpower.com

EMERSON
Network Power

Mission Critical	A - dx remote air cooled	Liebert HPM (6-29 kW)
Liquid chillers	W - dx water cooled	Liebert HPM (44-77 kW)
Telecom	D - dualfluid dx air cooled	Liebert HPM (90-200 kW)
Computer Room	H - dualfluid dx water cooled	Liebert HPM Dual CW Circuit
Utility programs	F - freecooler dx water cooled	Liebert HPM Extended
	C - chilled water	Nominal cooling capacity 44-200 kW
	Condensers	
	Dry coolers	

Info

< Go Back

**New Category:
Liebert HPM
EXTENDED**

Look for it on
MyENP
Available
from Today



Selling Tools – New Hirating



Rel. 6.4

Unit Power Supply
400 V/3 ph/50 Hz

Air Flow Configuration
Under

Coolant
WATER

Unit
M44EC Extended UP

Calculation Mode
Select Verify

Input Data

Sea level (m)	0
Room air flow (m3/h)	10633
iv (V)	8,6
ESP (Pa)	20
Unit inlet air temperature (°C)	24,0
Unit inlet air relative Humidity (%)	50,0
Inlet fluid temperature (°C)	7,0
Outlet fluid temperature (°C)	12,0

Output Data

Total cooling capacity (kW)	0,0
Sensible cooling capacity (kW)	0,0
SHR	0,00
Unit power input (kW)	0,00
Unit EER	0,0
Unit fluid flow (l/s)	0,00
Unit fluid side pressure drop (kPa)	0
Room fan input voltage (V)	0,0
Room SPL (@2m,f.f) db(A)	0,0

Dimensions

Width (mm)	1000
Depth (mm)	890
Height (mm)	2550
Weight (kg)	330

Verify Preview Options Family Table Unit Table Abort Exit

New Feature:
Starting from Extended new possibility to change fan voltage by 0,1V so showing exactly the working condition

Liebert HPM Extended

Agenda

- Market Drivers
- Liebert HPM Extended Concept
- Two ways of Operating: Power Mode and Eco Mode
- Product Configuration
- Serviceability
- Product Performances
- Product Positioning
- Marketing tools and Availability
- Benchmarking

Serviceability vs Efficiency

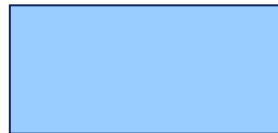
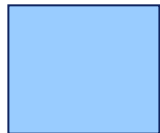
- Having the fans in the raise floor and the coil extended as much as possible 3 major service issues have to be evaluated and solved
 - Electrical Heaters
 - Fans Access
 - Water Connections
- HPM Extended has been designed as the best service friendly unit
- Competitors focus more on Efficiency sacrificing service and installation costs



Major Competitors – Weiss

- Weiss

- 4 Frames (1000 mm ; 1750 mm ; 2500 mm ; 3100 mm)



- Solution **ONLY** with fans IN the raised floor



Standard Solution	NO
CW	Standard
Dual CW	Standard
DX	Standard



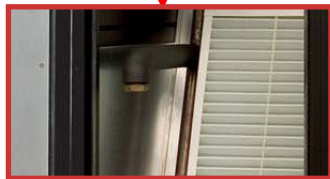
Major Competitors – Weiss

Water Connections in the unit:

- Customer has to bring its piping
- No 3 way solution
- Not clear where the modulating valve is



Heaters are Hidden from the coil



Difficult Fans Accessibility



Reduced Safety:
Fans module with small grille and only on side

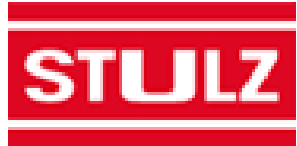


Liebert HPM Extended Vs Weiss

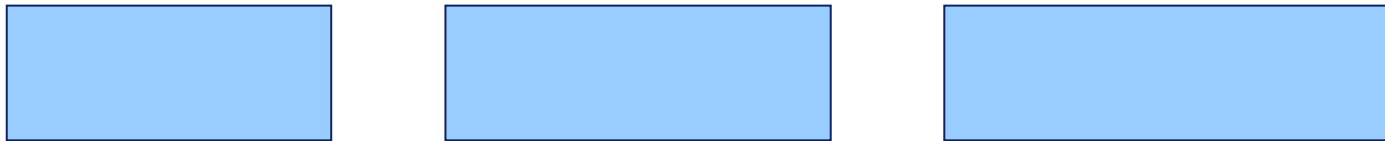
		SAME GROSS SENS CAPACITY		
Water 10-15 SHR=1		1000mm frame DOWN		
		ENP	Weiss	Delta
Gross Total		39,1	39,1	0,0%
Gross sens				
Airflow		9380	11000	-14,7%
Power Input		1,23	1,4	-12,1%
Area		0,89	0,935	-4,8%
Water 10-15 SHR=1		1750mm frame DOWN		
		ENP	Weiss	Delta
Gross Total		77,4	77,4	0,0%
Gross sens				
Airflow		18600	22000	-15,5%
Power Input		2,48	3,1	-20,0%
Area		1,5575	1,53	1,8%
Water 10-15 SHR=1		2500mm frame DOWN		
		ENP	Weiss	Delta
Gross Total		118,2	117,2	0,9%
Gross sens		117,2		0,0%
Airflow		27250	33000	-17,4%
Power Input		3,87	4,6	-15,9%
Area		2,2695	2,21	2,7%
Water 10-15 SHR=1		3000mm frame DOWN		
		ENP	Weiss	Delta
Gross Total		164,6	163,3	0,8%
Gross sens		163,3		0,0%
Airflow		38020	38000	0,1%
Power Input		6,52	5,4	20,7%
Area		2,937	2,945	-0,3%

26 °C RA – 45%RH – 10/15 °C water

Major Competitors – Stulz



- STULZ Extended
 - 3 Frames (2000 mm ; 2550 mm ; 3000 mm)



- Solution with Fans IN and ON the raised floor

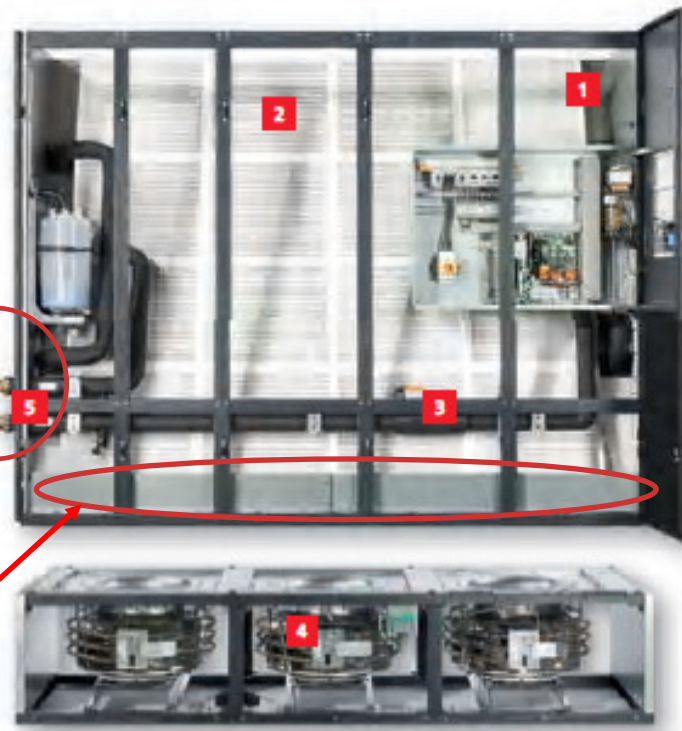


Standard Solution	Cyber Air 2
CW	Standard
Dual CW	SFA ?
DX	NO

Major Competitors – Stulz



Water Connections:
LATERAL
(Standard solution doesn't have bottom connections)
Where the drain???



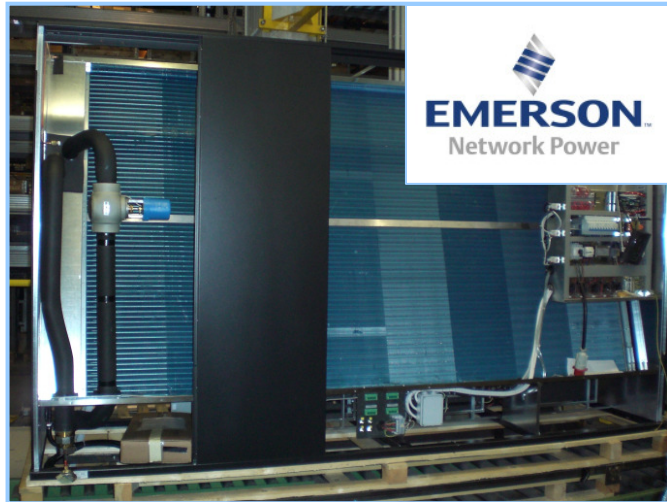
Heaters around the fans:
Service Issue
Safety Issue
No possibility to use new EC Fans Radical

Reduced Fans Accessibility
Difficult to access for maintenance on Fans & Electrical Heaters



A complete benchmark on Stulz unit will be done during July 2010

Show the Difference: Condensate Drain



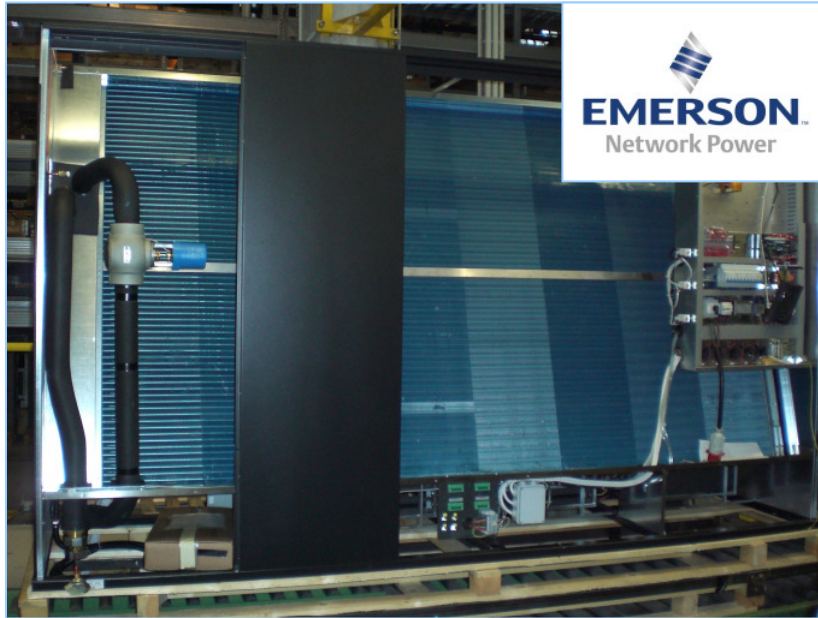
Liebert HPM Extended
As standard
additional condensate
drain in the middle of
the coil



STULZ
has not



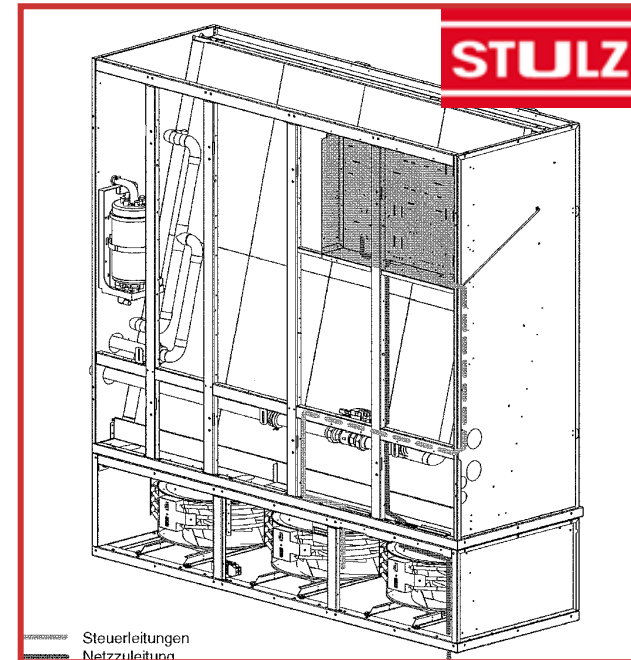
Show the Difference: Piping, Valve, Connections



Liebert HPM Extended

Connections from the bottom, minimum piping, bigger piping, bigger valve: **reduced pressure drops, reduced running costs**

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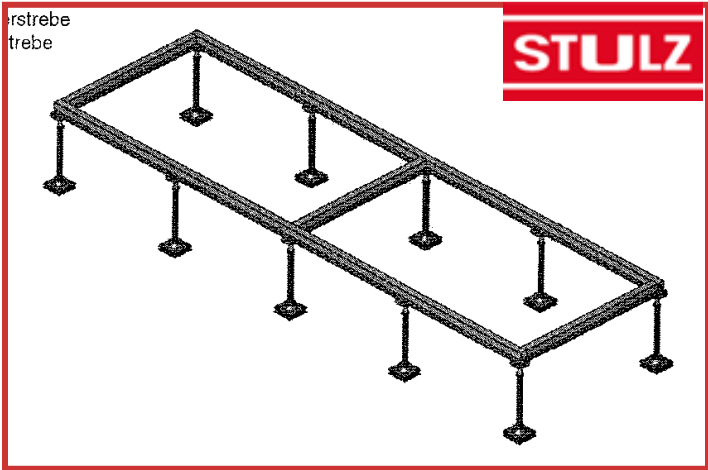
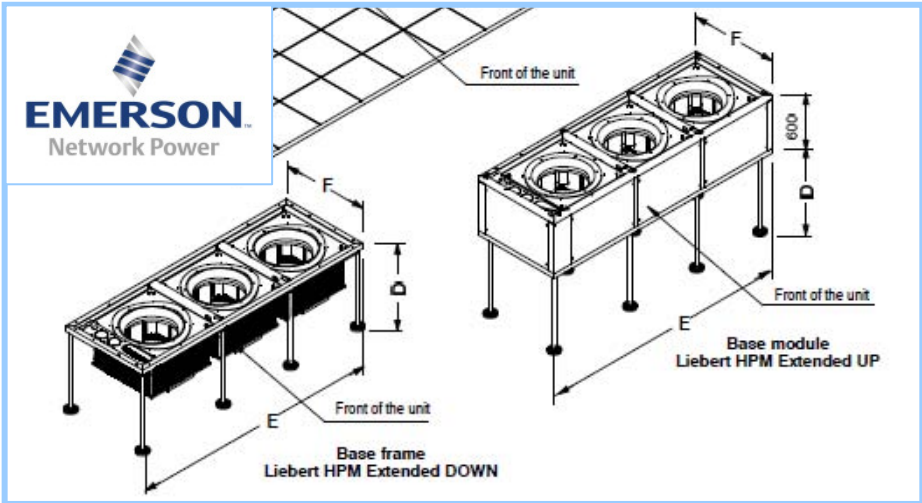


STULZ:

Lateral Connections,
Long and Small Piping and valve:
Higher pressure drops, Higher running costs

Show the Difference: Installations

Liebert HPM Extended
The unit has its own legs that allows direct installation



STULZ:
Needs additional base frame

Liebert HPM Extended Vs Stulz

HPM Extended standard design

	2550mm frame DOWN		
	ENP	STULZ	Delta
Gross Total	166,3	166,5	-0,1%
Gross Sens	133,2	133,2	0,0%
Airflow	30500	31000	-1,6%
Power Input	5,52	4,2	31,4%
Area	2,2695	2,2695	0,0%

	3000mm frame DOWN		
	ENP	STULZ	Delta
Gross Total	189,5	183,8	3,1%
Gross Sens	147,8	147,8	0,0%
Airflow	32700	35000	-6,6%
Power Input	4,48	5,6	-20,0%
Area	2,9815	2,581	15,5%

Whenever customer is looking for Efficiency WITHOUT compromises

HPM Extended SFA design

	2550mm frame DOWN		
	ENP	STULZ	Delta
Gross Total	175,4	166,5	5,3%
Gross Sens	133,2	133,2	0,0%
Airflow	28050	31000	-9,5%
Power Input	4,08	4,2	-2,9%
Area	2,2695	2,2695	0,0%

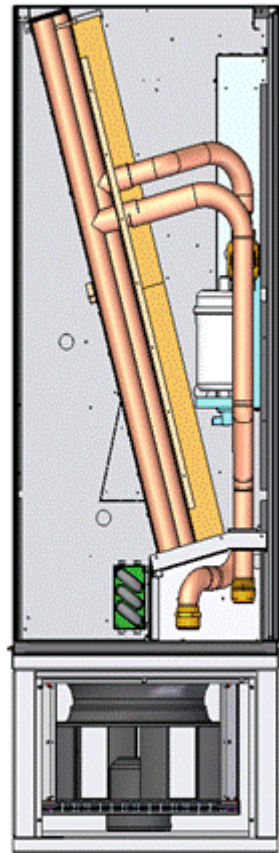
	3000mm frame DOWN		
	ENP	STULZ	Delta
Gross Total	192,7	183,8	4,8%
Gross Sens	147,8	147,8	0,0%
Airflow	31700	35000	-9,4%
Power Input	3,84	5,6	-31,4%
Area	2,9815	2,581	15,5%

Engineering Design

“Zero” energy Consumption version - available as SFA

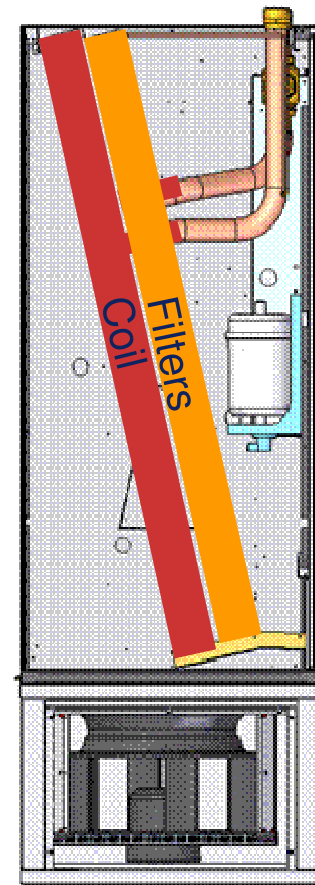
Extended Range

POWER and ECO modes



New Extended

“ZERO” Energy consumption



Take Away Messages

- Liebert HPM Extended allows maximum cooling capacity at minimized operative costs
- Liebert HPM Extended has been designed to suit to different installation requirements and data center room constraints (Extended UP and DOWN)
- Product positioning
 - select Liebert HPM Extended at same cooling capacity of a standard CW unit to save energy cost “Eco Mode”
 - Select Liebert HPM Extended to maximize cooling capacity and get more cooling density (HPM extended compared to a bigger frame standard CW unit) and save investment cost “Power Mode”
 - Explain to customer all installation and serviceability details which make a strong difference on Liebert HPM extended versus competition

Thanks

