

# Eaton 93PS UPS

## 8–40 kW

*The most advanced UPS for small data centres  
and mission critical applications*



Rabbe Johansson, Product Manager, Power Quality & Electronics, EMEA

# Eaton's Premium Range of UPSs

Power Xpert 9395P



250–1200 kW

Eaton 93PM



30–200 kW

New Eaton 93PS



8–40 kW

# The Eaton 93PS Concept



## Efficiency

- Cost pressure
- Environmental oversight



## Scalability

- Need to optimize capital expenditure
- Need to react fast to customer needs



## Resiliency, Virtualization & Cloud readiness

- It's all about availability
- Service Level Agreements / Selectivity
- Bridge IT and electrical infrastructure
- Hardware & software...convergence

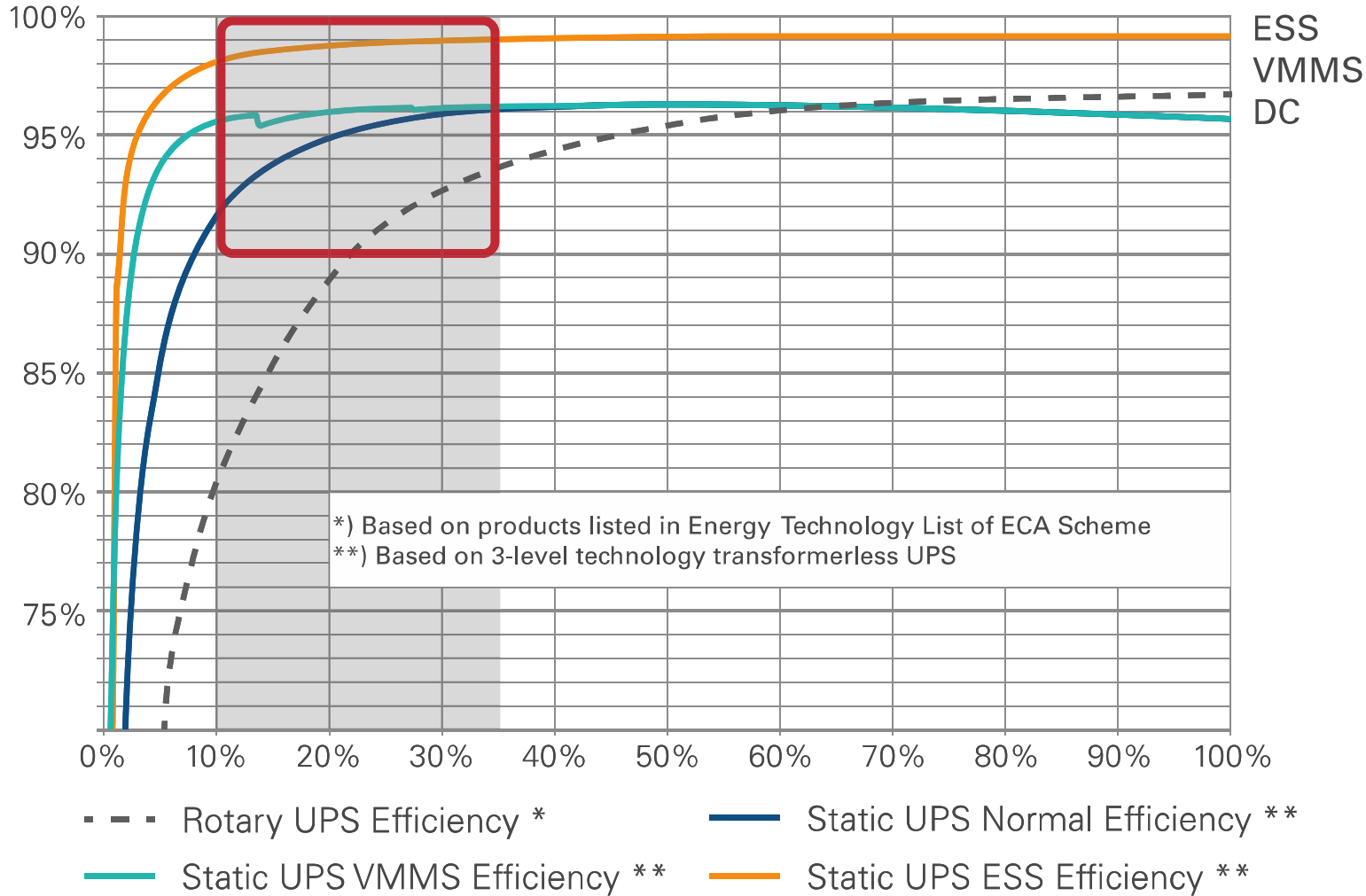


## Safety

- Regulatory compliance
- Personnel ALWAYS safe



# Efficiency Modes Compared



# Energy Saver System (ESS) – 99%

The year  
ESS became  
available

**2009**



Amount of UPS  
capacity in kVA  
using ESS mode

**879,000 kVA**



Energy  
saved  
every day

**>348,000 kWh**



Number of UPS  
units operating  
in ESS mode

**>1,500**



Resulting overall  
availability of UPS  
units in ESS mode

**>99.999%**



Overall  
reduced CO<sub>2</sub>  
emissions

**95,000,000 kg**



Number of sites  
using ESS

**>150**



Total time  
of ESS  
operation

**>23 million hours**



Overall energy  
saved by units

**214 GWh**



**EATON**

Powering Business Worldwide

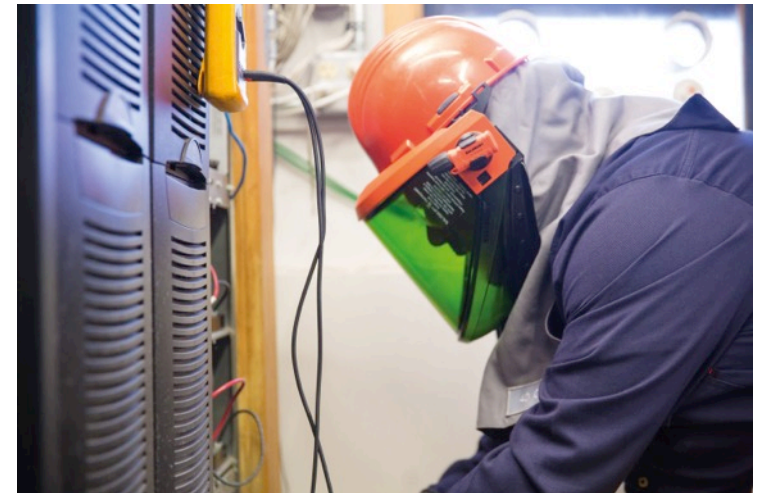
# Maximum Availability

## Hot swappable

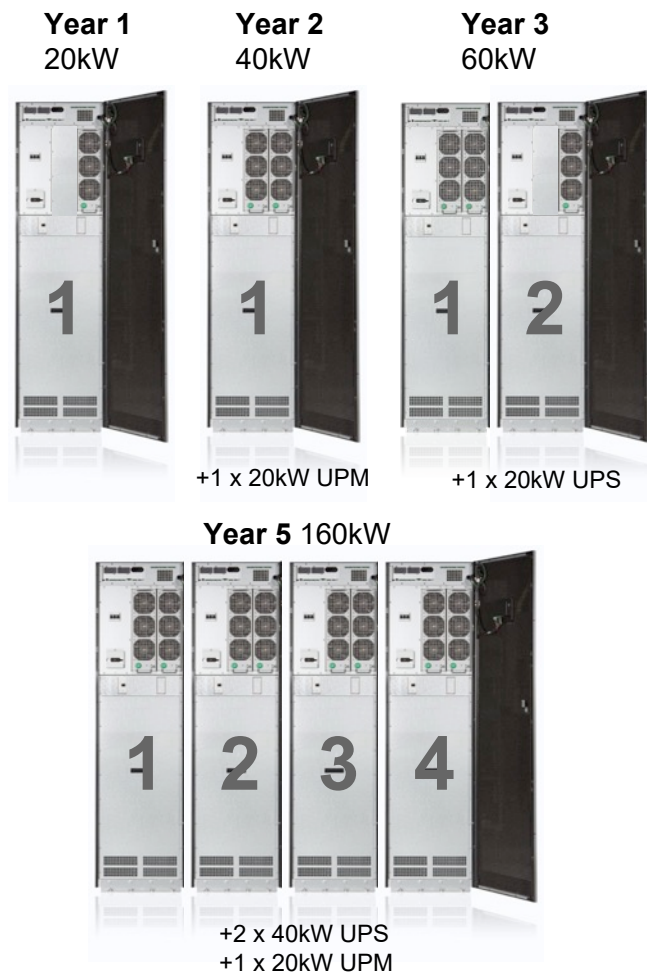
- A module can be replaced while the other continues protecting the load

## Hot scalable

- A module can be added while the other continues protecting the load
- No need to go to bypass for replacement/upgrade (MTTR =0)
- Replacement/upgrade operations can be typically performed in less than 10 minutes



# Maximum Scalability



## Scalability and flexibility

- Reducing the amount of time required to scale up in response to increased demand from days to hours
- Scaling up without affecting the footprint to save floorspace

## Internal redundancy for high availability

- HotSync technology for reliable and resilient load sharing
- Each Power Module in the system operates independently

## External redundancy for improved scalability

- Parallel up to 4x frames (later up to 8)
- **Total system size up to 160kW (320kW)**

# Inherent Redundancy

- Due to its modular design the 93PS can provide redundancy at UPS level generating significant savings in footprint, cooling and electrical installation
- 8, 10, 15 and 20 N+1 models with both common and separate battery configurations

## Eaton 93PS components

Communication ports

Power Module (UPM)

Input Switch

Battery Breaker

Maintenance Bypass Switch (MBS)

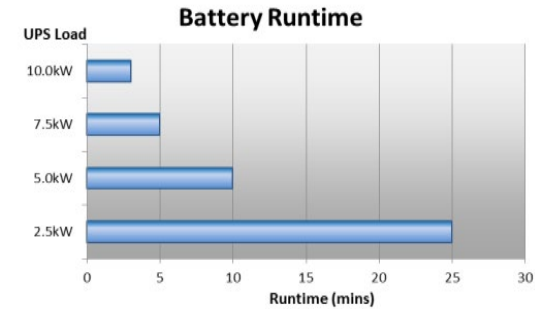
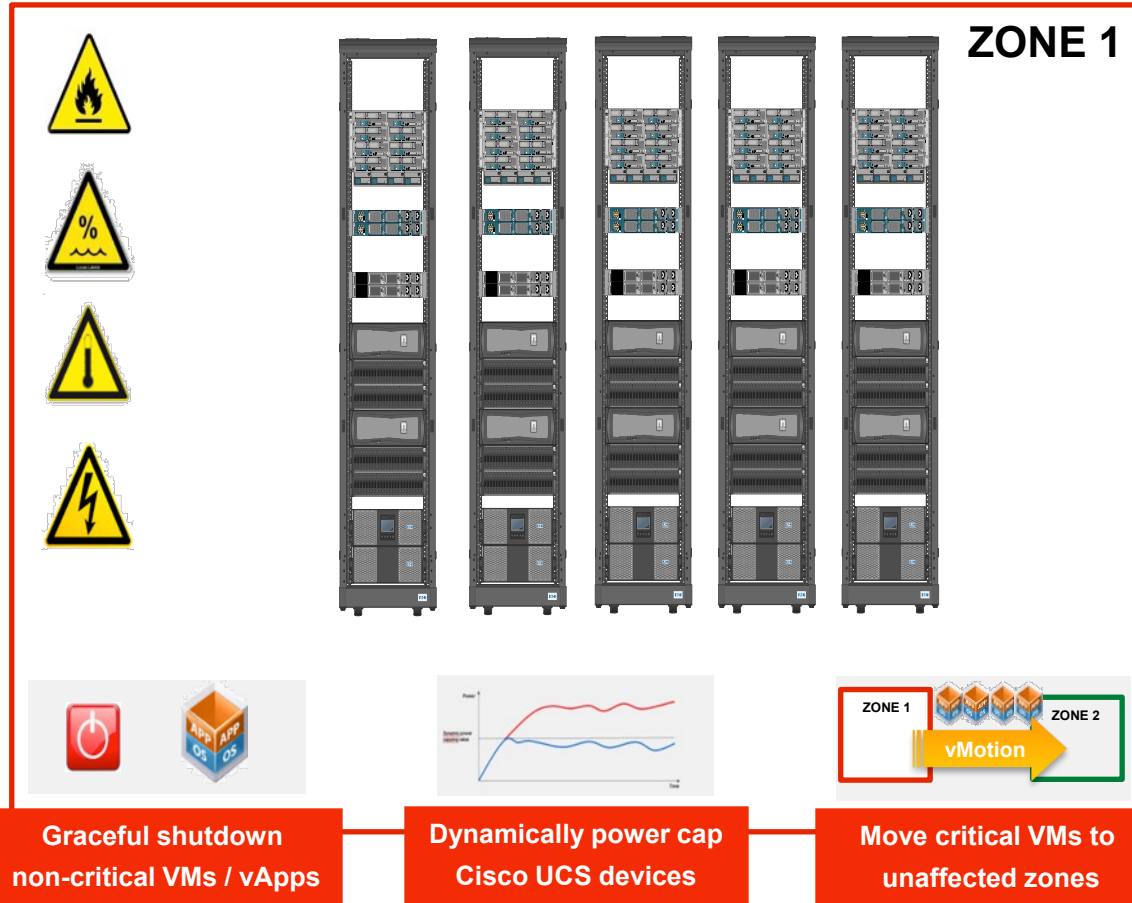
Internal Battery





# Virtualization / Load Shedding

50% drop in load equates to 150% more runtime!



- Suspend non-critical virtual machines
- Consolidate critical virtual machines
- Power cap Cisco UCS devices
- Works with VMware Distributed Power Manager

# Two Frame Sizes

Available now in two frame sizes:

- Small frame: 8-20 kW
  - one module
  - 20 kW static switch
  - internal batteries
  - optional internal MBS
  - 5" touch screen display
- Large frame: 8-40 kW
  - two module slots
  - 40kW static switch
  - internal redundancy possibility
  - internal batteries
  - optional internal MBS
  - 5" touch screen display



## Line up and match cabinets



- Small battery cabinet
  - 2x32 or 3x32 9Ah standard batteries
  - 2x32 or 3x32 7Ah long life batteries
  - 2x32 or 3x32 9Ah long life batteries

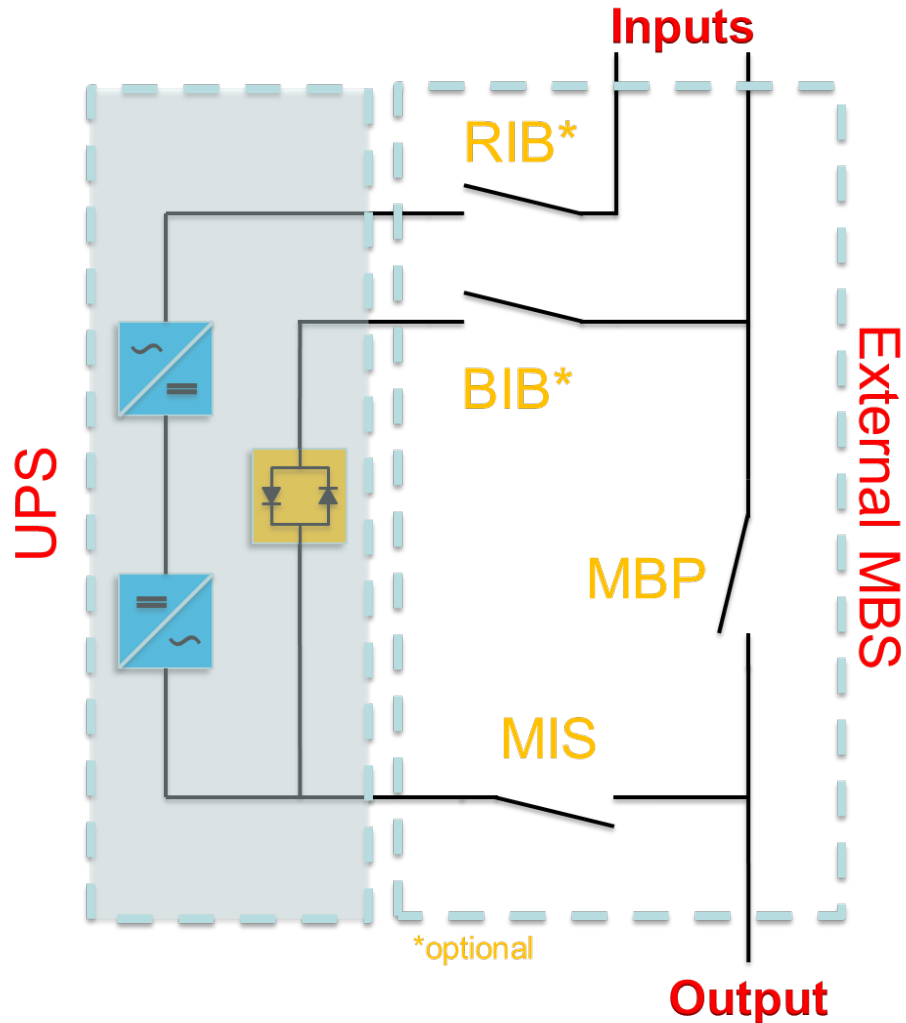
- Large Battery cabinet
  - 1x32 200W batteries



# Accessories – External Maintenance Bypass Switches



2, 3 and 4 switch models available



# Summary

