



CHANNEL PARTNER EVENT, PALERMO

Writing the future of HVACR

Smart motion solutions for comfort control and higher HVACR system efficiency



Leading the way in HVAC drives

ACH480 and ACH580 series

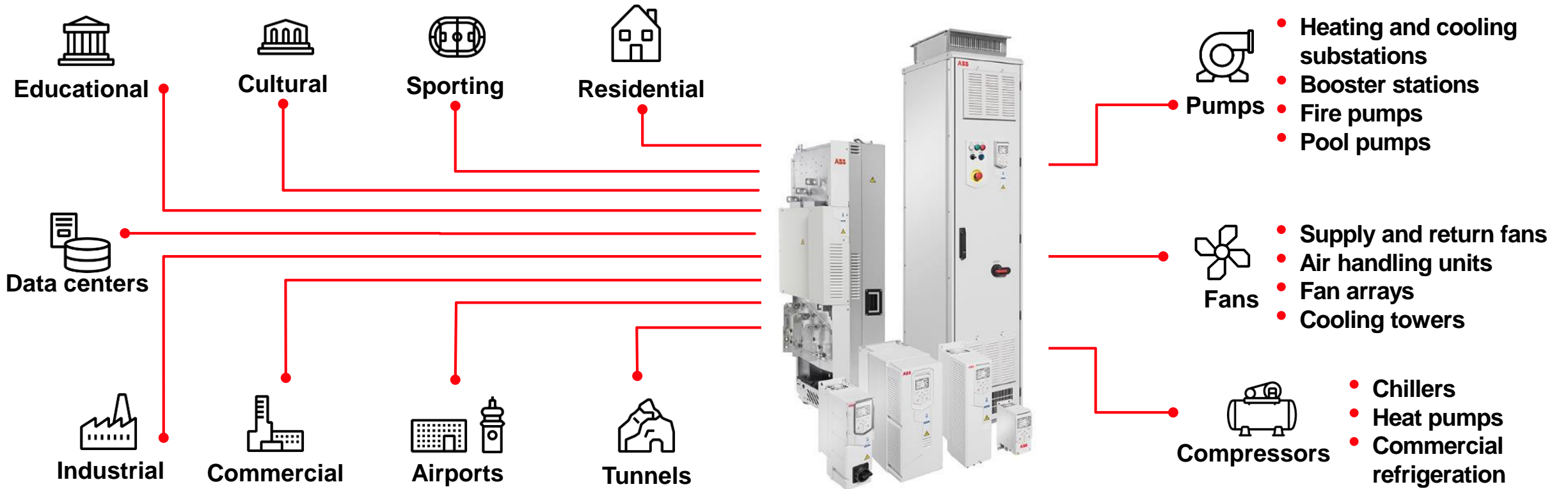
Comfort. It's something we take for granted in the buildings we live and work in. But it requires dedicated control of heating, ventilation, and air conditioning (HVAC) systems to ensure the air we breathe is pure and the temperature is comfortable. We also need to ensure that the systems are controlled in the safest and most energy-efficient way in both normal and mission-critical situations.

For half a century, ABB has been leading the way in optimizing HVAC systems using drive control to ensure that your customers can take comfort, safety and cost-efficiency for granted. The new series of HVAC dedicated variable frequency drives (VFDs) provide the quality, reliability, and energy savings your customers expect, while being easy to use, and safe to operate and maintain.

Free your customers time to focus on what counts, while ABB ensures their comfort.

Scope of applications

HVACR is in every business we work in



HVACR drives

Key customer values

Comfortable and safe building environment



Increased energy savings for a building



Minimized disruption to a building HVAC system



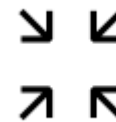
ULH ACH580-31: improved performance of a building electrical network



ACH480-04 and ACH580-01/04/07: dedicated drives with complete HVAC functionality



ACH480-04: compactness and optimized cost for cabinet installations



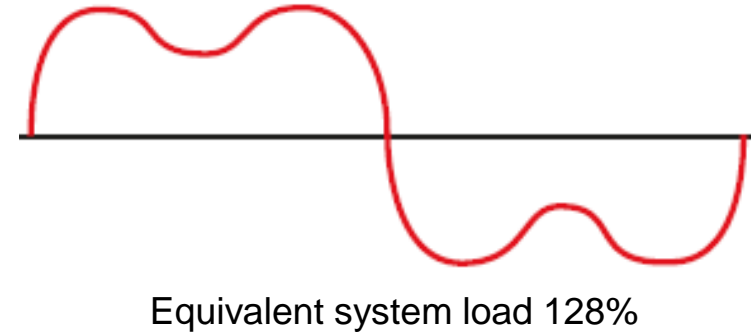
Increased stability with ultra-low harmonic drives

Improving power quality and avoiding power factor penalties

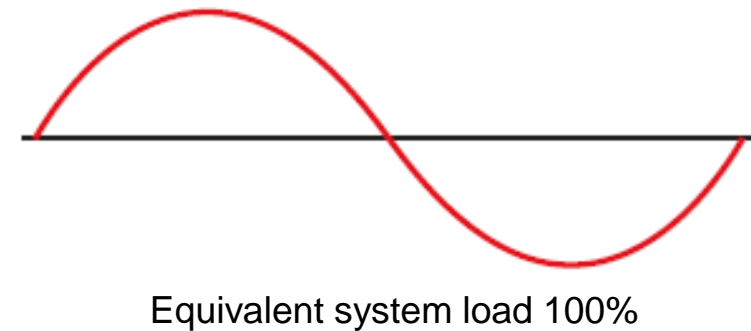
Benefits

- Reliability for your facility
- Avoid non-wattage usage penalties from power utility
- Clean supply (THDi < 3 %)
- Reduced risk of overload on electrical installation
- Complete HVAC functionality
- Savings on investments and during the lifetime
- Simple to install and commission – no external hardware required

Diode supply



Active supply

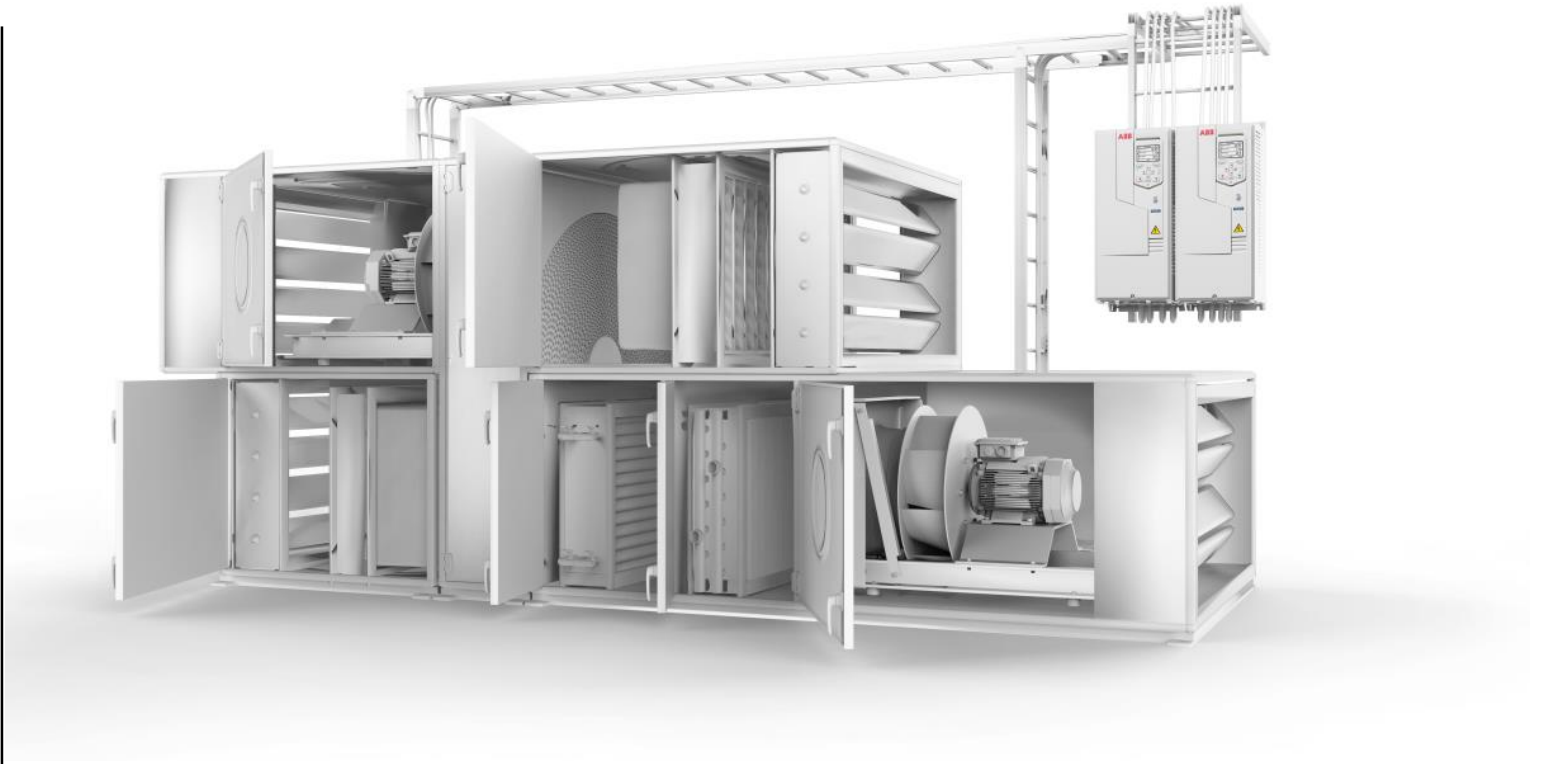


Safer machines and processes

Compliance with latest Machinery Directive guideline made easy

Benefits

- Certified, integrated safety system simplifying safety evaluation
- Easy compliance with machinery directive
- Safe mechanical maintenance without power disconnect
- Reduced costs due to elimination of auxiliary safety equipment
- Simplified wiring and servicing



BACnet-enabled drives for easy system integration

Benefits of HVACR drives



Common benefits

- BTL certified BACnet MS/TP embedded and BACnet/IP option
- Modbus RTU embedded, Modbus TCP option
- Complete HVAC functionality
- Common user interfaces
- Integrated Bluetooth connection

ACH480 and ACH580-07/34

- Cabinet-optimized design

ACH580

- Wall and floor mount optimized design
- All hardware in one package

A drive for every need

ACH480 and ACH580 series

Two product series, one HVACR family

ACH480 benefits

- Optimized for cabinet installations
- Uniform enclosure height and depth in all power sizes
- DIN-rail and screw mounting

ACH580 benefits

- Wall-mounted, factory cabinet or modules
- All hardware in one package
- Wide power range

Common benefits

Both drive series offer complete HVAC functionality and the same intuitive interface, standard I/O configuration, fieldbus options, operation logic and PC tools.



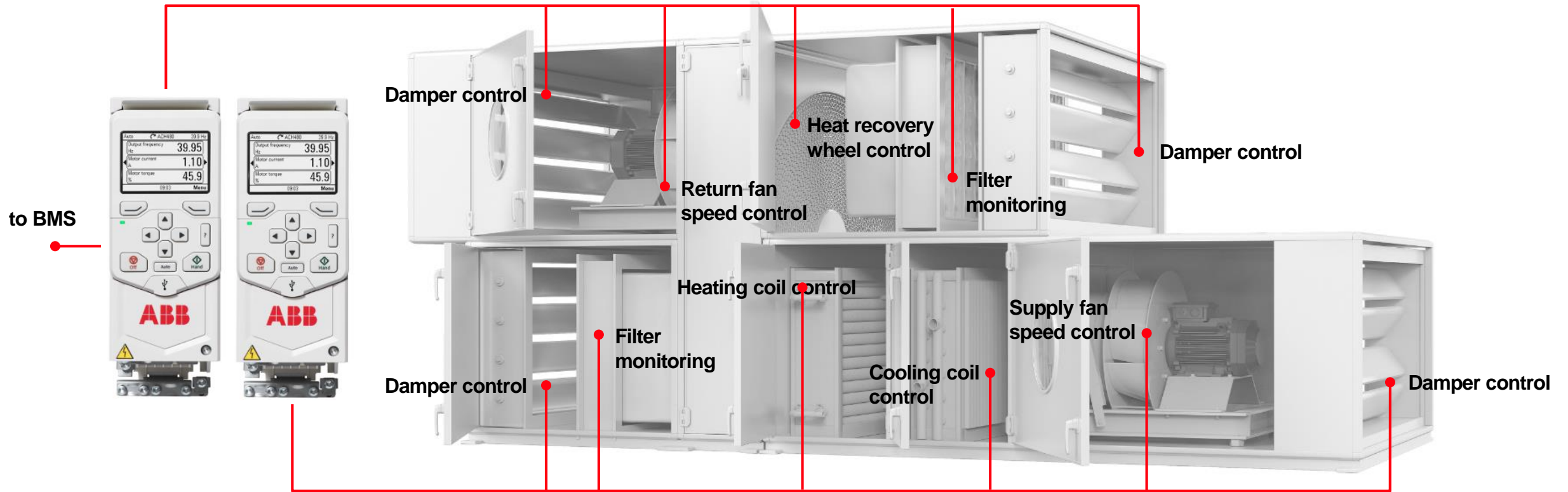
ACH480 R1
0.75 – 4 kW



ACH580-01 R3
15 – 22 kW

Air Handling Unit

Replace your controller with built-in drive functionality



Any motor – any HVACR application

ACH480 and ACH580 series

Motor control highlights

- Take advantage of the highest in efficiency offerings, SynRM IE4 motor control delivered as standard
- Compatible with a broad range of motors on the market.
- Flying Start feature restarts the fan without tripping, even if it is wind milling
- Thermal model of the motor enables the drive to protect the motor from overheating
- For critical applications, PTC can be connected directly to the drive for thermal monitoring
- Motor AC pre-heating prevents corrosion in condensing environments
- Reduced motor noise with adjustable switching frequency range



ABB technology cuts energy usage of InterContinental Hotel Madrid

by 40 percent

Challenge

Energy survey conducted by **Exel Industrial**, ABB's official Value Provider for sales, support, service and engineering in Madrid, revealed that the hotel's energy use was high, particularly in the eight pump groups that serve its HVAC systems and hot water supply for guest rooms, kitchens and other facilities.



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Solution

the pumping systems were equipped with

- 13 ABB ACH550 variable speed drives
- 16 IE3 electric motors
- and integrated into building management systems

Upgrade provides the overall system with greater stability and higher energy efficiency, as the motor speeds are now adjusted to match the precise demand at any given time.



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by 40 percent

40%

Energy bill savings

\$37000

annually

Payback time

<2 years

