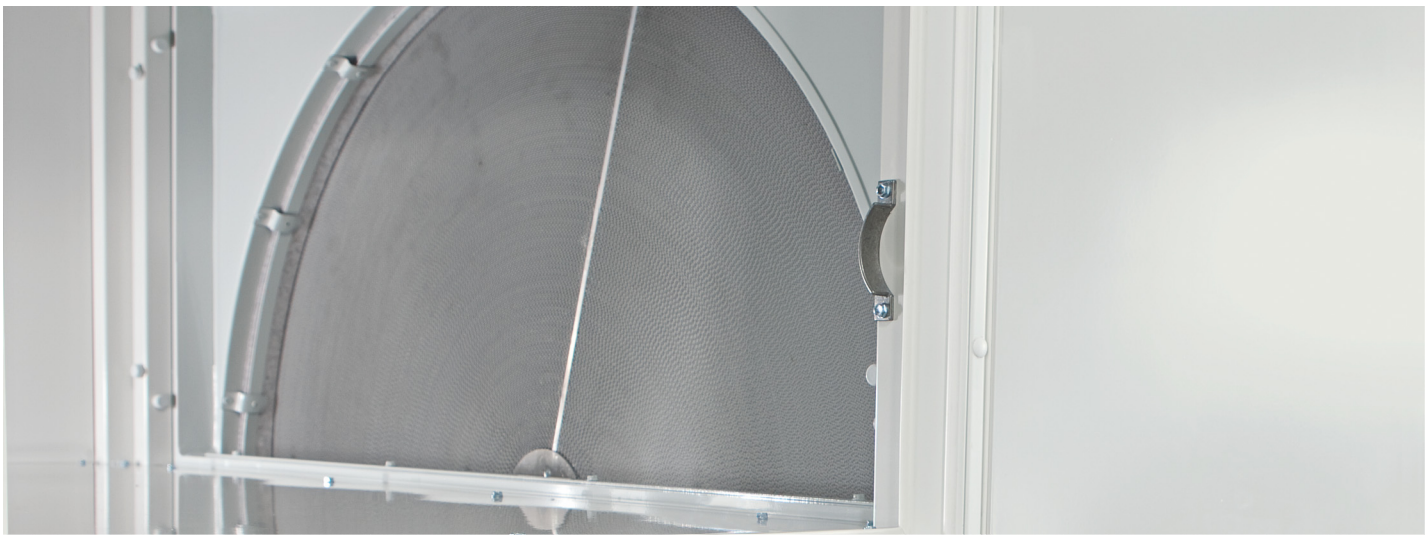


TrueCompact|rotor – Compact and efficient.

TrueCompact|rotor is robatherm's new unit series with rotary heat exchangers, combining the highest level of energy efficiency with compact exterior dimensions with each other.

ErP READY APPLIES TO EUROPEAN DIRECTIVE VENTILATION UNITS (AHU)

robatherm
the air handling company

TrueCompact | rotor

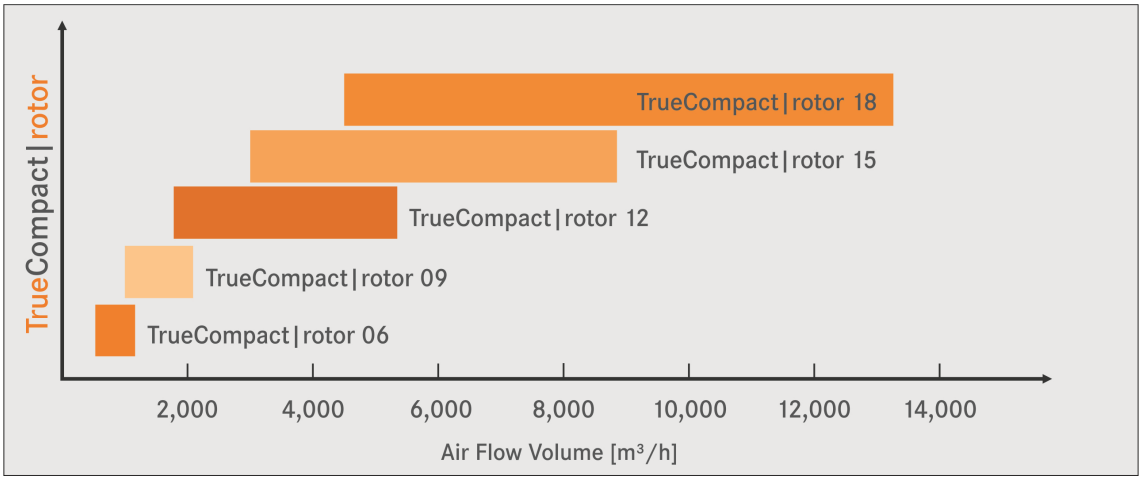
Conceptually designed for everyday use – robatherm **True**Compact's plug and play saves time and effort and is predestined for projects with short design and construction phases. In addition, central air-handling units of the **True**Compact series have been developed for highest efficiency, while providing compact exterior dimensions.

TrueIndividual AHUs offer customized solutions of up to 320,000 m³/h.
In contrast, the **True**Compact series presents assembled solution concepts up to an air flow of 13,250 m³/h. By the way; both series are based on the same housing construction. One can debate the required degree of individuality, however never the quality.

TrueCompact | rotor – five times uncompromisingly efficient

Compared to the unlimited flexibility of the series **True**Individual, **True**Compact focuses on five elaborated unit concepts. Equipment attributes and unit cross-sections have already been defined. Two highly efficient systems are available for heat recovery.

- **True**Compact | **rotor** with rotary heat exchanger
- **True**Compact | **plate** with counter flow plate heat exchanger



In the event that your requirements should exceed the configured concepts, our **True**Individual series offers a suitable response. We are more than happy to exclusively design your customized solution.

TrueCompact|rotor – At a glance

- Broad range of air flows up to 13,250 m³/h
- Highly efficient heat recovery system with rotary heat exchanger
- Fully assembled as 1 delivery unit (rotor 06, 09 and 12) - for easy mounting, quickly and smoothly demountable into 3 individual cubes
- Delivered ready for connection “Plug and Play” (rotor 06, 09 and 12)
- Housing construction including inspection doors in T2/TB1-quality (TÜV certified)
- Excellent interior and exterior corrosion protection through galvanization with additional powder-coating. The base framework is also powder-coated.
- High hygienic standards (TÜV certified according to DIN EN 13053 and VDI 6022)
- Minor electricity costs through efficiency optimized, direct-driven EC-fans
- Integrated control technology with all required sensors and actuators
- Comprehensive communication options with Modbus RTU, Modbus TCP/IP and BACnet IP
- Convenient web/remote control via the Web Server
- Complies with the efficiency requirements of the ErP-Stage 2016 and 2018 (1253/2014/EU)
- With EUROVENT-Energy Efficiency Label A+ (2016)

For applications with higher hygienic requirements, we recommend the unit series **True**Compact**|plate** with counter flow plate heat exchanger.

Quality that is compactly packaged


1


2

1 | Unit Housing

- Premium housing construction in T2/TB1-quality
- High airtightness: L1 (EN 1886)
- Interior and exterior galvanization with additional powder-coating (ca. RAL 7035 - light-grey); this includes the base framework
- Sturdy base framework for easy site handling
- Lifting eyes on the unit's roof for easy transportation

2 | Rotary Heat Exchanger

- Transmission of sensitive and latent heat
- Low leakage of 3% by optimized fan positioning
- Short installation length
- Power control by rotor speed
- Icing protection by inbuilt extract temperature sensor (optional)
- Matrix made of corrosion-resistant aluminum
- Integrated rotor speed control with running control
- Energy efficiency class H1 in accordance with DIN EN 13053


3


5


7


4


6

3 | Inspection Doors
- Quick and easy to open inspection doors facilitate good accessibility to all components
- The width of a doorway is limited to one airflow and does not span any component. This avoids both, cross contamination between the air flows and component leakage

4 | EC-Fans
- Efficiency optimized, direct-driven fans
- State-of-the-art motor technology with permanent magnet-charged synchronous exterior rotor motors (EC-motor) in the highest energy efficiency class “Super Premium Efficiency” (IE4 in accordance with IEC 60034-30)
- Performance rating P1 in accordance with DIN EN 13053
- Integrated motor controls with fully variable speed regulation
- Steady control [%], air flow control or duct pressure control

5 | Dampers
- Sturdy galvanized steel design
- Aerodynamic hollow-body-blades
- Aluminum gear wheel-driven
- Tightness Class 2 in accordance with DIN EN 1751
- Including actuators
- Monitoring position “OPEN”
- In the case of malfunction, fresh air-shut off via on-site potential-free enabling contact (option)

6 | Filter
- Removable for inspection
- Effective fine dust filters in catch-all design Outdoor air filters class F7, exhaust air filters class M5 (corresponding to VDI 6022 in accordance with DIN EN 779)
- Supply air filter module, optional

7 | Sound-Insulated Connection (option)
- Sturdy galvanized frame with additional powder-coating
- Hygienic due to lack of creases or indentations
- High degree of insulation
- Alternatively flexible connections EVS-80 or EVS-160 (Fire Class M0)

Air heater module (option)
Individually designed air heater module installed in a separate housing (upon request)
- Return temperature sensor for hot water (loose)
- Frost protection thermostat
- Including control technology

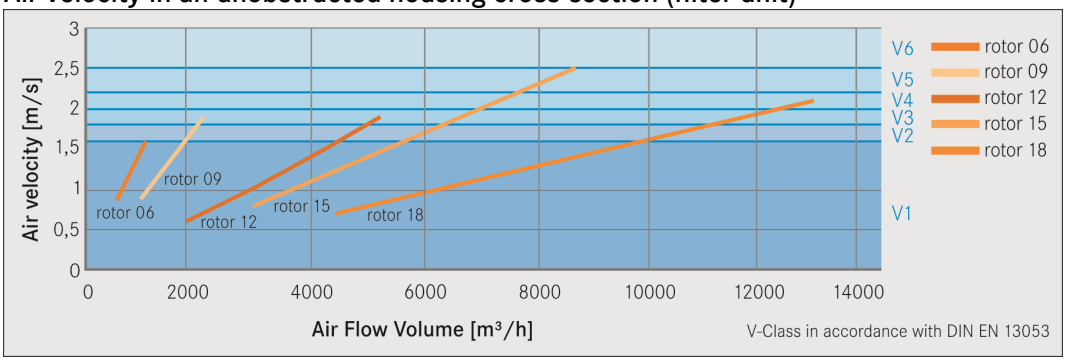
Air cooler module (option)
Individually designed air cooler module with various design executions:
- Assembled into its own housing incl. inspection door and a laser welded drip tray made from stainless steel 1,4301, declined to all sides
- Sliding drop eliminator (on demand)
- Including control technology

Communication (option)
- Convenient operation of all robatherm-AHUs via intranet or Internet via web server
- Connection to a building control system is possible
- Comprehensive communication options with Modbus, RTU, Modbus TCP/IP and BACnet IP

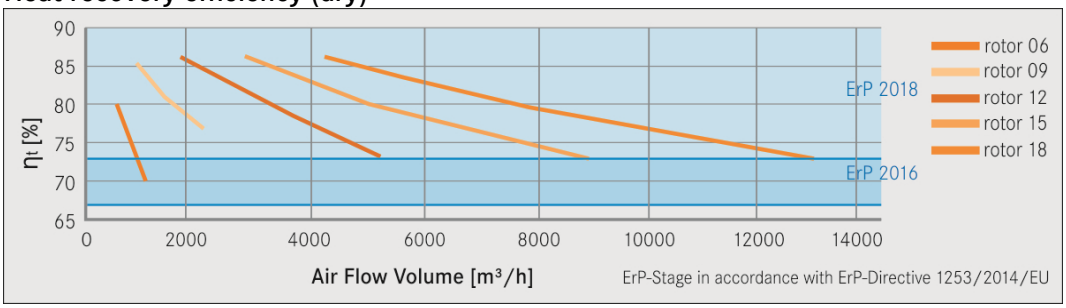
TrueCompact | rotor – Efficiency meets Performance

Based on the following diagrams, you will quickly and clearly find the ideal device suitable for your individual application.

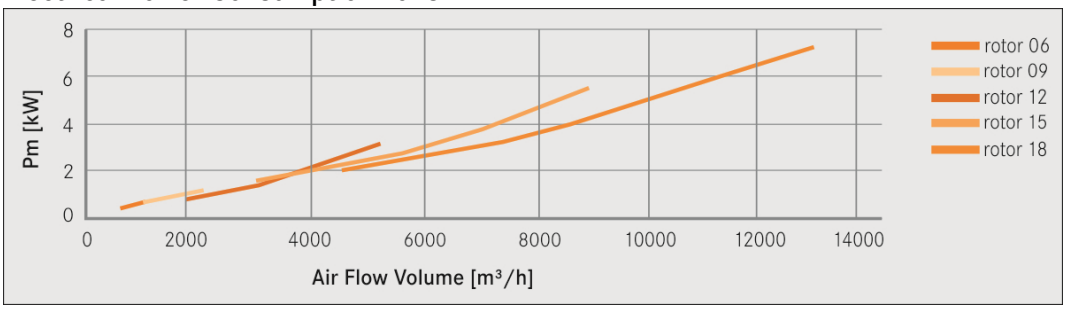
Air velocity in an unobstructed housing cross-section (filter unit)



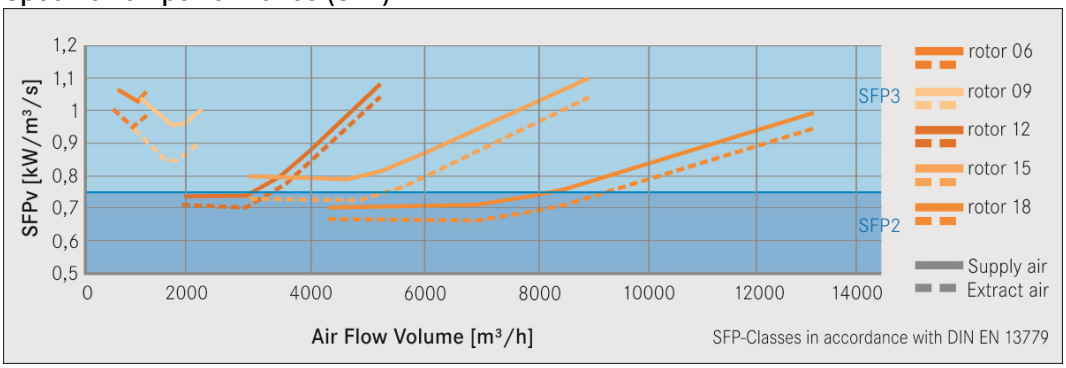
Heat recovery efficiency (dry)



Electrical Power Consumption Fans

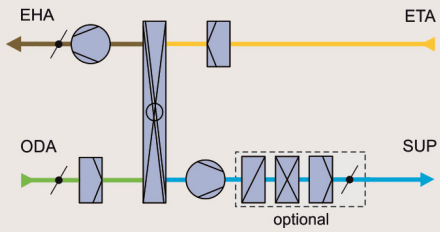


Specific Fan performance (SFP)

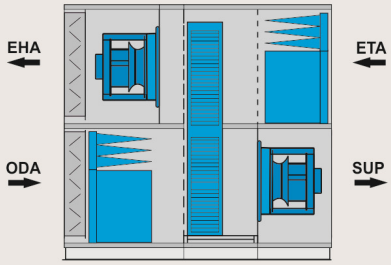


Navigator	Equipment features	Optimization features

Plant flow diagram



AHU schematic



Technical Data

Type	Height approx.	Depth approx [1]	Length approx.	Weight approx.	Layout	Air Flow Volume	V-Classes (DIN EN 13053)	Heat recovery efficiency dry (DIN EN 308)
[-]	[mm]	[mm]	[mm]	[kg]	[-]	[m³/h]	[-]	[%]
rotor 06	892	692	1836	527	min. nenn max.	600 960 1150	V1 V1 V1	80 73 70
rotor 09	1198	998	1836	688	min. nenn max.	1000 1650 2125	V1 V1 V3	85 80 77
rotor 12	1504	1304	1989	939	min. nenn max.	1800 3250 5300	V1 V1 V3	86 80 73
rotor 15	1810	1610	2244	1318	min. nenn max.	3000 5400 8850	V1 V1 V5	86 80 73
rotor 18	2116	1916	2397	1717	min. nenn max.	4500 8100 13250	V1 V1 V4	86 80 73

[1] Depth without control cabinet

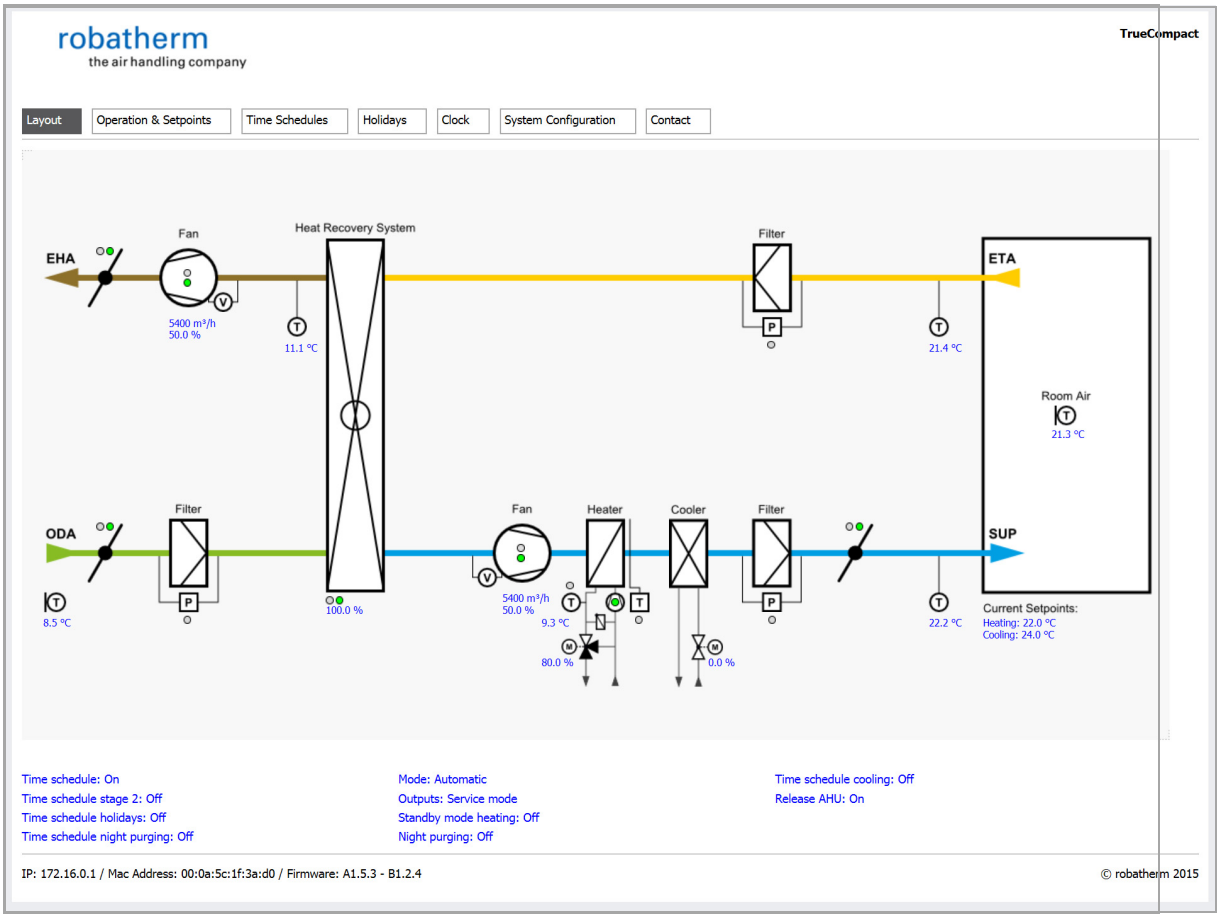
Type	Sound power SUP/ETA	Electrical Power Consumption Fans SUP/ETA	SFPv SUP/ETA (DIN EN 13779)	Power input compact device	ErP-Stage (1253/2014/EU)	EUROVENT-Class (2016)
[-]	[dB(A)]	[kW]	[kW/m³/s]	[kW]	[-]	[-]
rotor 06	79/70 79/75 79/71	0,24/0,23 0,34/0,33 0,40/0,39	1,14/1,10 1,09/1,03 1,12/1,04	1,7 (230 V)	2018 2018 2016	A+ A B
rotor 09	77/60 77/58 79/60	0,34/0,33 0,49/0,46 0,63/0,60	1,03/0,95 0,96/0,86 1,01/0,90	2,9 (230 V)	2018 2018 2018	A+ A+ A+
rotor 12	74/57 77/59 87/70	0,43/0,43 0,78/0,76 1,66/1,63	0,71/0,69 0,75/0,71 1,06/1,01	5,2 (230/400 V)	2018 2018 2018	A+ A+ B
rotor 15	76/60 81/63 91/74	0,77/0,75 1,34/1,29 2,81/2,70	0,75/0,72 0,79/0,73 1,09/1,01	7,4 (230/400 V)	2018 2018 2016	A+ A+ B
rotor 18	76/61 79/64 90/74	1,06/1,03 1,86/1,80 3,85/3,73	0,68/0,66 0,72/0,67 0,98/0,92	10,1 (230/400 V)	2018 2018 2016	A+ A+ B

Abbreviations for types of air (according to DIN EN 13779) ODA = Outdoor air, SUP = Supply air,
ETA = Exhaust air, EHA = Exhaust air
Layout conditions HRS (DIN EN 308): ODA = +5 °C/0% relative humidity ETA = +25 °C/0% relative humidity
External pressure increase (SUP/ETA): 300 Pa/300 Pa

Integrated ICA-Technology – Powerful, Smart and Compact

For our **True**Compact units, the same powerful control software SmartControl is used as for the units **True**Individual.
Adapted to the special requirements of compact air handling units, an unique performance is available, which is second to none in this segment.
Thus, we provide a high level of control accuracy as well as efficient energy use in all operating conditions.

System Diagram of the TrueCompact|rotor



User Interface Web Server (This instance includes additional options)

Control-Technology at a Glance

- Integrated control technology with all required sensors and actuators
- Wiring on terminal blocks in accordance with DIN EN 60204
- Cable routing and field devices inside the AHU
- Complete power supply integrated into the control cabinet
- User-friendly interface with all available setting options
- Comprehensive communication options with Modbus, RTU, Modbus TCP/IP and BACnet IP (optional)
- Convenient web/remote control via the Web Server (optional)
- On-site commissioning with fine tuning of the pre-set regulations (optional)

Versatile control options from one source - The Scope of Regulation of TrueCompact|rotor

Filters (Outdoor Air, Exhaust Air) (Supply Air[1] optional)	Monitoring with a pressure switch	■
	Filter test (manually or time-controlled)	□
Fan (Supply Air, Exhaust Air)	Constant controlling [%] or	■
	volume flow control in accordance with static setpoint [m³/h] (optional) or	□
	duct pressure control in accordance with static setpoint [Pa] (optional)	□
Heat Recovery System	Rotary heat exchanger	■
	Frost protection with power limitation by exhaust air temperature sensor (optional)	■
Temperature Control	Supply air or	□
	Room air (1 sensor) with minimum or maximum limitation of incoming air or	□
	Exhaust air with minimum or maximum limitation of supply air or	■
	Cascade, room air (1 sensor) and supply air or	□
	Cascade, exhaust air and supply air	□
Setpoint correction and reference setting	Heating (winter compensation)	□
	Cooling (summer compensation)	□
	Supply Air Temperature-minimum limitation	□
Short time ventilation	Via display handling	■
Standby Modes	Heating (room temperature sensor)	□
	Night Ventilation (room temperature sensor)	□
Summer - Winter	Automatic summer/winter time changeover	■
Messages	Maintenance notifications of all components (display and data point)	■
	Error messages of all components (display and data point)	■
	Collective error notifications as potential-free contact max. 2A)	■
Communication interface (Option) for connection to the BMS	Modbus RTU[2]	■
	Modbus TCP/IP[2] oder BACnet IP[2] (max. 250 COV)	■
Web Server (optional)	Modbus TCP/IP[2] oder BACnet IP[2] (max. 250 COV)	■
Air heater[1] (optional)	Hot water heater	■
	Return flow temperature and frost protection regulation	■
	Pump kick	■
	Continuous heater pump operation	■
	Startup mode (e.g. with long feeds)	■
Air cooler[1] (optional)	Cold water cooler	■
Dampers	Shut-off damper for fresh air and escaping air with monitoring of the open position	■
	Shut-off damper for incoming air via onsite potential-free enabling contact (optional)	■
External enabling (optional)	Shut down by on-site contacts of smoke detectors, fire dampers or other devices	■

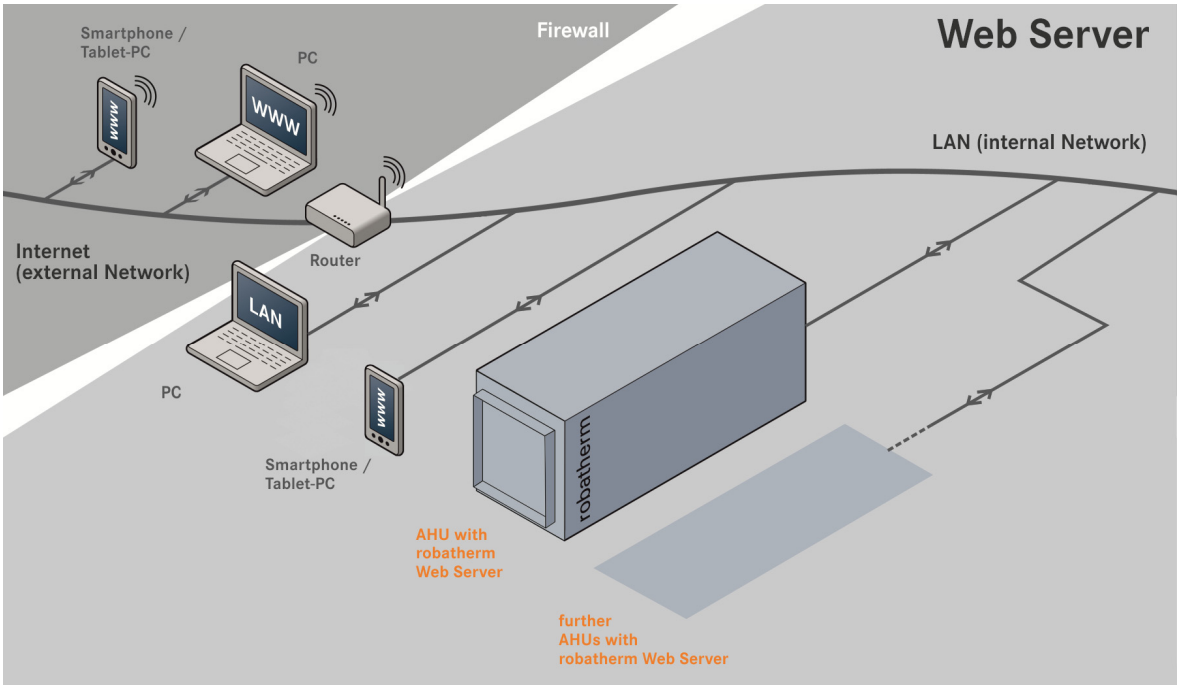
To use this function, additional accessories and/or hardware might be required.

■ Function is pre-set ex works
□ Function can be activated by the user

[1] Option includes extended DDC-Controller
[2] Scope of Function is located in the data point list

Everything under control from afar

With **True**Compact, the comfortable and future-oriented operation of your AHUs is possible via intranet or Internet.



Web Server at a glance

- Static system diagram with dynamic data points
- Display of Error and Maintenance notifications
- Password protected handling
- Operating switch cabinets and setpoints
- Setting of time, timer and vacation programs
- Data logging incl. daily e-Mail delivery as a vector graphic or CSV-file
- The option of automatic e-Mail delivery in the case of individually definable events for monitoring analog or binary values (e.g. alarms)

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