VOLTVENT®
VENTILATION SYSTEMS



Air Handling Units
General
Catalogue

Four complementary unit ranges

EN / 2026

AIR HANDLING UNITS

One coordinated air path.

Compact, modular, hygienic and pool air treatment for the spaces people use.

Define the room and duty.

Set the required airflow, external static pressure, operating schedule and entering/leaving air conditions. Coordinate the ventilation and thermal loads with the project.

Configure the complete unit.

Select filtration, recovery, heating, cooling, moisture treatment, air movement and controls as appropriate to the selected range. Allow service access and coordinate the building interfaces.

Confirm through selection.

Use the AHU selection software and obtain the project-specific report, dimensional drawing and electrical schedule for the offered configuration. Current installation and service documentation is available through Voltvent product pages.

VOLTVENT®
VENTILATION SYSTEMS

EXPLORE THE RANGE

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VLT-CAH

Compact Air Handling Unit

Technical section: 005-010

004



VLT-AHU-ST

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Hygienic Air Handling Unit

Technical section: 029-040

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Pool Dehumidification Unit

Technical section: 042-053

041

VOLTVENT®
VENTILATION SYSTEMS



01 / AIR HANDLING UNITS

VLT-CAH

Compact Air Handling Unit

Air treatment within the available footprint.

005-010

01 / RANGE OVERVIEW

VLT-CAH

Compact Air Handling Unit

APPLICATION

For comfort ventilation in commercial interiors, including offices, retail and shared spaces. Select the arrangement for the required air conditions, duct route and service access.



CONFIGURATION

The existing range specification describes double-skin insulated construction, EPDM seals and 40-60 mm panel options. Material finish and final build-up are confirmed for the selected project.

1 Air treatment

Filter and coil options are selected around the application.

2 Drive options

AC or EC fan arrangements require model-specific selection.

IN THIS CATALOGUE

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Air path & components 007

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Installation & service 009

Controls & project selection 010

02 / MODEL SCHEDULE

Seven sizes. One range.

Recorded Voltvent project schedule. Airflow is shown in m^3/h for every model.

Model	Scheduled airflow m^3/h	Recorded power* W	Supply V / Hz	Speed rpm
VLT-CAH 1010	1,000	170	380 / 50	1,400
VLT-CAH 1018	1,850	172	380 / 50	1,400
VLT-CAH 1027	2,750	350	380 / 50	1,400
VLT-CAH 1036	3,750	565	380 / 50	1,400
VLT-CAH 1045	4,600	760	380 / 50	1,400
VLT-CAH 1055	5,500	1,200	380 / 50	1,400
VLT-CAH 1060	6,250	1,500	380 / 50	1,400

*Power is the existing motor-power entry. Its fan quantity and input/shaft basis require confirmation; it is not a total unit or heater electrical load.

HOW TO READ THE AIRFLOW

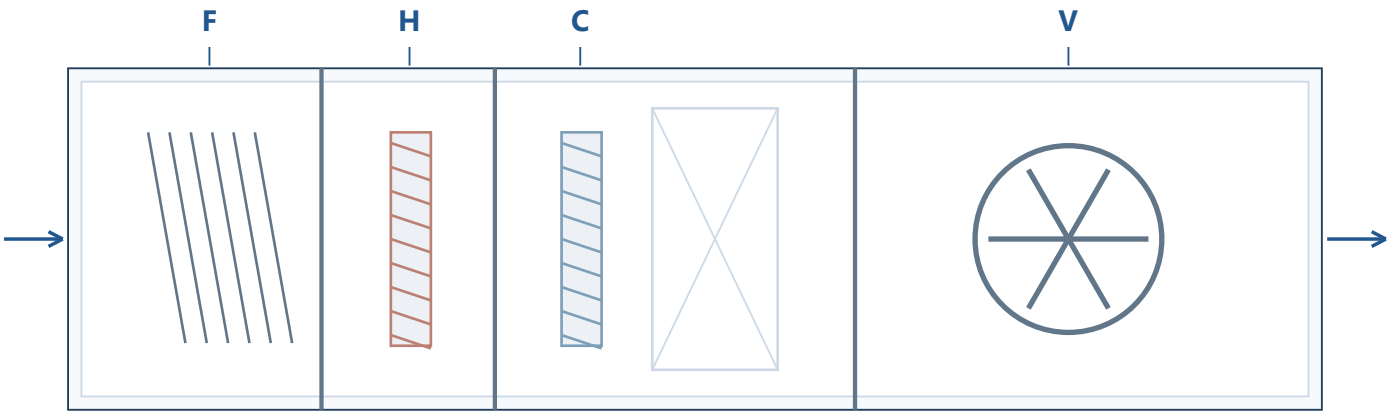
The available schedule does not state a common external static pressure or the filter-loading condition. These numbers are range-selection references, not guaranteed duty points. Confirm airflow and pressure together before final selection.

Fan pressure curves, sound data, filter classes, coil duties, full-load current and unit weight must be supplied for the final selected configuration.

03 / AIR PATH & COMPONENTS

A coordinated air path.

The existing single-level section places the filter, heating/cooling options and fan along one air stream.



Illustrative single-level arrangement. Final component order, airflow direction and coil selection follow the selected configuration.

F Filtration

Specify the filter class, face area, access side and clean/loaded pressure allowance.

H Heating

Water-side or electric heating is a selected option. Confirm duty and protection.

C Cooling

Water or DX treatment requires selected conditions, drainage and service access.

V Fan & drive

Confirm motor type and fan selection against all internal and duct-system losses.

The diagram is illustrative and not to scale. Heat recovery, bypass sections and additional treatment are project options; they are not included by default in this single-level arrangement.

04 / DIMENSIONAL PROPOSAL

Reference casing envelopes.

Proposed dimensions in mm. The seven-model performance schedule is retained independently.



Outline views are not to scale. L = casing length, W = casing width, H = casing height. The duct size is a proposed clear opening; flange details and connection positions require the final drawing.

VLT-CAH model	L mm	W mm	H mm	Duct clear opening mm
VLT-CAH 1010	1150	500	341	300 x 150
VLT-CAH 1018	1250	600	392	400 x 200
VLT-CAH 1027	1350	700	432	500 x 250
VLT-CAH 1036	1250	800	502	600 x 300
VLT-CAH 1045	1250	1000	552	800 x 350
VLT-CAH 1055	1250	1000	552	800 x 350
VLT-CAH 1060	1250	1000	552	800 x 350

DIMENSIONAL DESIGN PROPOSAL - The 1045, 1055 and 1060 models share the largest proposed casing envelope. These dimensions are adopted for review; they are not verified manufacturing dimensions or evidence of achievable airflow. Final envelope, coils, fan fit, connection positions, support layout and component access require a unit-specific drawing.

05 / INSTALLATION & SERVICE

Plan access before placement.

Coordinate the real unit, its support strategy and maintenance route with the building design.



Installation coordination view using the approved product visual. Support hardware, service clearances and connection sizes must follow the final project drawing.

1 Support the unit

Confirm mass and designated structural support points. Select isolation for the actual duty.

2 Keep access clear

Provide a route for filters, coils and fan removal; keep valves and wiring accessible.

3 Connect & commission

Coordinate ducts and flexible interfaces, then verify airflow, drains and controls.

Water-coil connections, drain traps, electrical isolation and protection are determined by the final equipment schedule and installation documents. No anchor, load, torque or clearance value is assumed.

06 / CONTROLS & PROJECT SELECTION

Define the duty. Then select.

A complete selection brings air-side duty, thermal duty, controls and installation constraints together.

Selection input	Project definition
Air-side duty	Design m^3/h, external static pressure and filter allowance
Air conditions	Outdoor / entering / leaving dry-bulb and humidity
Thermal treatment	Water / DX / electric; selected heating and cooling duty
Electrical supply	Confirm actual supply, current, protections and heater load
Control sequence	Enable, speed, temperature, alarms and safe shutdown
BMS interface	Required protocol and points; confirm supplied capability
Installation	Envelope, duct sizes, access, drainage and support layout

FINAL SELECTION DELIVERABLES

Request the unit-specific fan curve, component pressure losses, thermal selection, acoustic data, dimensional drawing and electrical/control schematic. Confirm which sensors, actuators and interfaces are included in the order.

Proposed casing and duct dimensions are proposals for this review. The original airflow and electrical schedule is retained; final fan/coil selection and manufacturing drawings remain required.



VOLTVENT®
VENTILATION SYSTEMS

02 / AIR HANDLING UNITS

VLT-AHU-ST

Standard Air Handling Unit

Build the air path around the project.

012-027

01 / THE RANGE

VLT-AHU-ST

Standard Air Handling Unit

Choose the section size for the air volume and component face velocity. Develop filtration, recovery, thermal treatment and air movement into a serviceable project arrangement.



26 SIZES / 750-3,700 MM SECTION WIDTH

In-line, stacked and side-by-side air paths can be developed with the project team. Equipment illustrated in this catalogue is a configuration example; options are selected for the application.

CONTENTS

The modular range	012	Configuration choices	019
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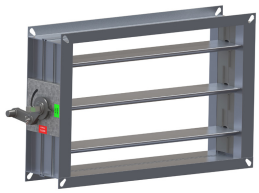
02 / COMPONENT GALLERY

The components behind the air path.

Original component images introduce the equipment types used to build a modular air handling configuration.



Dampers
Regulation and shut-off.



Panel filters
First-stage filtration.



Bag filters
Application-specific filtration.



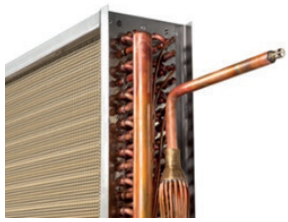
Compact filters
Selected final filtration stage.



Fan & motor
Air movement and drive.



Water coil
Heating or cooling selection.



Coil construction
Fins, tubes and connections.



Valve & actuator
Circuit regulation.



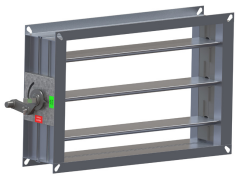
Control panel
Project-specific control scope.

Component images are illustrative examples. The supplied configuration, component make, filtration grade and duty follow the project-specific selection report.

03 / CASING & AIR QUALITY

Start at the air inlet.

Access, filtration and air regulation are coordinated with the selected component sequence.



01 / AIR DAMPERS

Regulate and isolate.

Linked blades control fresh, return or shut-off air. Manual or motorised operation follows the operating sequence; actuator access remains clear.

Selection software: check opening area, air velocity and pressure loss.



02 / FILTRATION

Select each filtration stage.

Panel, bag or compact stages protect the air path. Any higher-efficiency or application-specific stage needs its own grade, sealed seating and withdrawal route.

Selection software: allow for clean and loaded filter resistance.

03 / FRAME & DOUBLE-SKIN PANELS

Steel or aluminium frame options, insulated double-skin panels and gasketed access doors form the section enclosure. Specify surface finish, insulation build-up, access side and environmental exposure for the project.

Component images illustrate equipment types. No casing leakage, thermal, mechanical or filtration certification class is inferred. Request verified construction information for the selected unit.

04 / AIR MOVEMENT & ACOUSTICS

Select the complete duty.

Fan choice follows both the internal component resistance and the connected duct system.

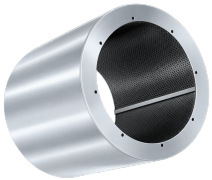


01 / FAN SECTION

Move air at the required pressure.

Plug, housed, direct-drive, belt-drive or EC configurations are project options. Confirm the selected fan curve, operating region, efficiency, sound and service access.

Selection software: enter design m^3/h and external static pressure together.



02 / ACOUSTIC TREATMENT

Control sound along the air path.

Select circular or splitter attenuators for the arrangement and acoustic target. Check pressure loss, insertion loss and regenerated sound. The photo shows a circular attenuator example.

Selection software: include attenuator resistance in the fan calculation.

03 / MOTOR & SPEED CONTROL

Match the motor, supply and control method to the fan duty and operating sequence. Separate fan/motor input from heater, pump, rotor and other auxiliary loads. Confirm isolation and protection for the actual assembly.

Section airflow references are not fan performance curves or guaranteed duty points. Motor rating, absorbed power and sound values require the unit-specific selection report.

05 / THERMAL TREATMENT

Control temperature and moisture.

Select the treatment process from the entering air, required leaving air and available building services.

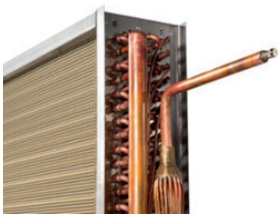


01 / HEATING

Water-side or electric heating.

Confirm available water temperatures, flow, pressure drop and freeze protection. Electric heating needs a selected duty, airflow proving, over-temperature protection and safe shutdown.

Selection software: verify duty and leaving-air conditions at the design airflow.

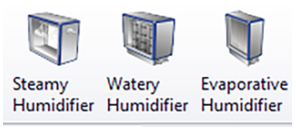


02 / COOLING

Water or DX cooling.

Define entering dry-bulb and humidity, leaving conditions and the fluid/refrigerant circuit. Coordinate the drain pan, condensate trap and droplet control.

Selection software: review sensible/total duty, face velocity and pressure losses.



PROGRAM MODULES

03 / HUMIDIFICATION

Add moisture when required.

Steam, spray, wetted-media or atomising processes require application-specific water quality, absorption distance, drainage, hygiene and service provision. The image shows actual program module options.

Selection software: confirm moisture output, absorption space and controls.

06 / HEAT RECOVERY

Choose the recovery principle.

Illustrative component views show plate, rotary and run-around arrangements; final duties follow selection.

01

Plate exchanger

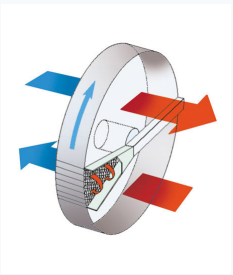


Separate passages exchange heat through fixed plates. Coordinate bypass and frost strategy.

Check both air-side pressure losses.

02

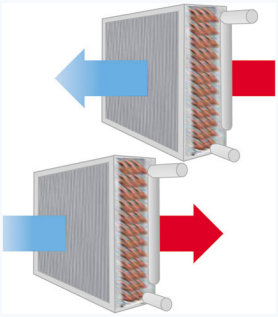
Rotary exchanger



A rotating matrix transfers energy. Check material, speed control and carry-over strategy.

Check pressure balance and rotor input.

03 / RUN-AROUND COILS



A closed liquid circuit connects separate air streams. Confirm the coil pair, pump duty, fluid and frost protection.

04 / HEAT PIPE

A sealed refrigerant circuit transfers heat between the air-side sections. Orientation, seasonal duty and the available temperature difference determine the useful operating range.

Confirm the arrangement-specific heat-pipe selection and dimensional drawing.

Use the AHU selection software to compare recovered duty, pressure losses, frost/bypass operation and auxiliary input at the actual design conditions. No fixed recovery efficiency is assumed.

07 / CONTROLS & ACCESSORIES

Coordinate sensing and operation.

Specify the operating sequence and the accessories actually included with the selected configuration.



CONTROL PANEL



PRESSURE SENSING



VALVE & ACTUATOR



INSPECTION WINDOW

Interface / accessory	What to specify
Temperature / humidity	Sensor position, range and control purpose
Differential pressure	Filter-loading or fan-proving function and setpoints
Inspection & service	Windows, lighting, switches and accessible isolation
Thermal safeguards	Frost, airflow proving and heater over-temperature logic
Building interface	Required BMS protocol, points and supplied capability

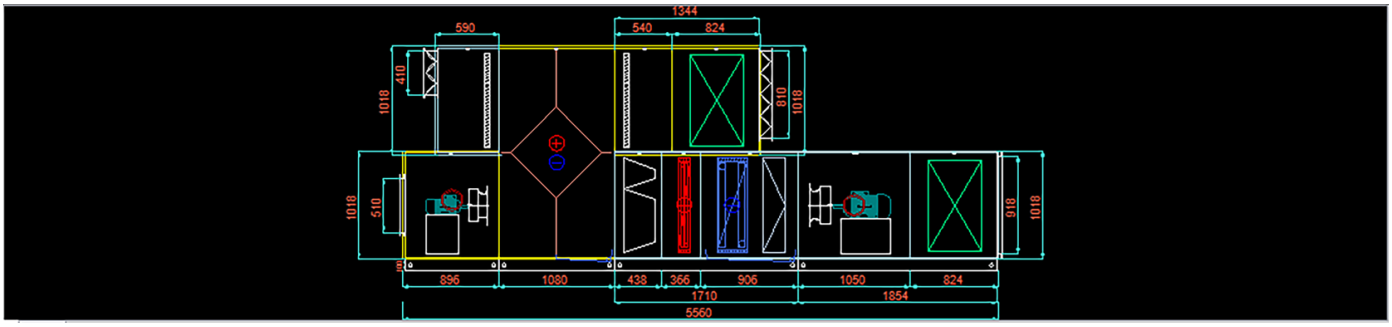
Selection software references: include controls and accessory options in the configuration and export their scope with the report. Images illustrate component types; actual supply requires confirmation.

08 / CONFIGURATION VIEWS

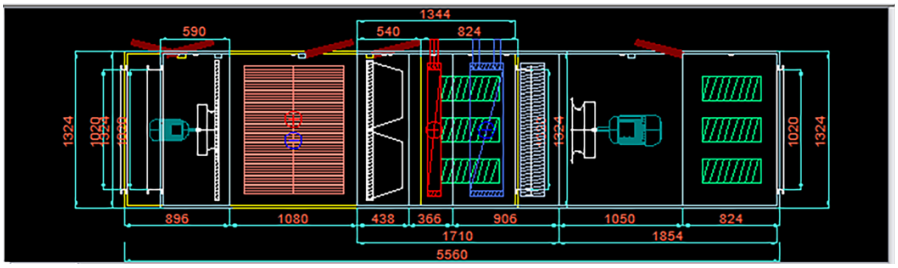
View the configured unit.

Selection software screen views show how the section arrangement can be reviewed from different directions.

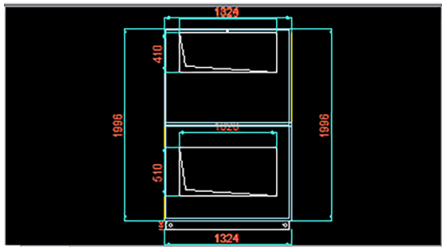
SIDE / SECTION VIEW



PLAN VIEW



END VIEW



Screen details are cropped from the illustrative image. Visible dimensions belong to the example project and are not VLT-AHU-ST manufacturing or selection data.

1 Review the arrangement

Coordinate module order, airflow direction and access side.

2 Confirm the envelope

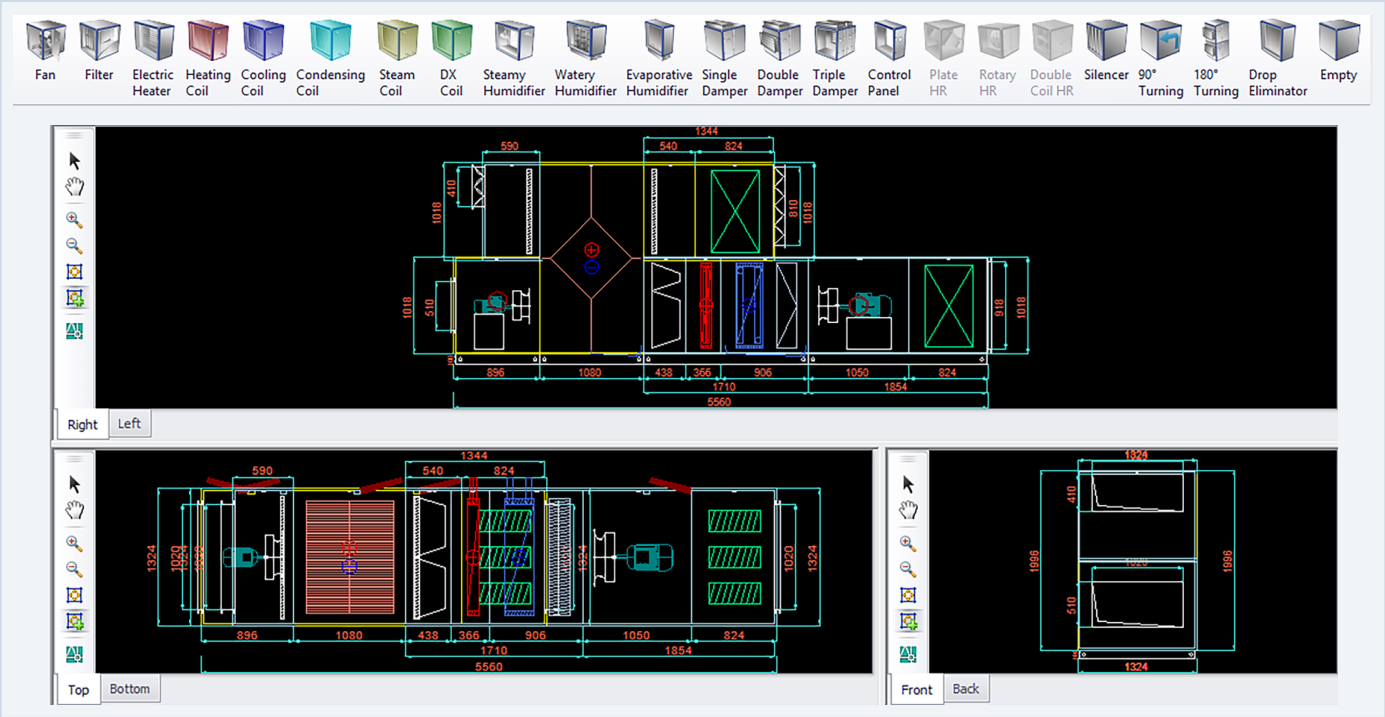
Export the actual selected unit drawing and service clearances.

In-line, stacked and side-by-side air paths are project layout choices. Use the selection program and the final dimensional drawing to define the actual supplied arrangement.

09 / AHU SELECTION SOFTWARE

From brief to selection report.

Use the AHU selection program to define the duty, configure modules and review the unit-specific result.



Selection software screen details for illustration. Example project values are illustrative; no VLT-AHU-ST software selection has been executed.

1 Define the duty

Enter airflow, external pressure, climate and required supply-air conditions.

2 Build the air path

Select section, components, recovery, access side and available installation space.

3 Review the result

Check fan curves, coil duties, pressure losses, dimensions, sound and control scope.

Request the project-specific report and coordinated dimensional drawing before release for manufacture.

10 / DIMENSIONAL PRINCIPLES

Section size is a starting point.

The following schedules give section dimensions in mm and recorded coil face area in m^2.

SINGLE SECTION / END VIEW



CONFIGURED UNIT / EXAMPLE



L / overall envelope by selection

H and W describe one section. A stacked unit needs its own overall height, base frame and interface dimensions. Do not derive a complete-unit envelope from the section table.

READ THE SCHEDULE CORRECTLY

W / H: one section external width and height.
Wi / Hi: clear internal opening width and height.
Coil face area: recorded selection area, distinct from the internal opening.
L, total height, service clearances, connections and mass: project-specific.

Selection program: confirm the complete configured envelope and export its dimensional drawing. These section dimensions do not define the final unit length or a stacked unit overall height.

11 / SECTION SCHEDULE 1/2

26 section sizes.

Airflow below is the existing table reference at a 2.5 m/s face-velocity column, in m^3/h.

Model	W mm	H mm	Wi mm	Hi mm	Coil face m^2	Airflow @ 2.5 m/s m^3/h
VLT-AHU-ST 1010	750	750	670	670	0.29	2,596
VLT-AHU-ST 1015	1050	750	970	670	0.46	4,108
VLT-AHU-ST 1020	1350	750	1270	670	0.62	5,620
VLT-AHU-ST 1515	1050	1050	970	970	0.70	6,269
VLT-AHU-ST 1520	1350	1050	1270	970	0.95	8,591
VLT-AHU-ST 1525	1650	1050	1570	970	1.21	10,913
VLT-AHU-ST 2020	1350	1350	1270	1270	1.28	11,484
VLT-AHU-ST 2025	1650	1350	1570	1270	1.60	14,407
VLT-AHU-ST 2030	1950	1350	1870	1270	1.95	17,539
VLT-AHU-ST 2525	1650	1650	1570	1570	1.97	17,690
VLT-AHU-ST 2530	1950	1650	1870	1570	2.40	21,578
VLT-AHU-ST 2535	2250	1650	2170	1570	2.83	25,466
VLT-AHU-ST 3030	1950	1950	1870	1870	2.87	25,839

W/H are single-section external dimensions; Wi/Hi are the clear internal opening. Coil face area is retained from the existing range schedule. No complete-unit length, weight or duty pressure is implied.

11 / SECTION SCHEDULE 2/2

26 section sizes.

Airflow below is the existing table reference at a 2.5 m/s face-velocity column, in m^3/h.

Model	W mm	H mm	Wi mm	Hi mm	Coil face m^2	Airflow @ 2.5 m/s m^3/h
VLT-AHU-ST 2540	2500	1650	2420	1570	3.17	28,512
VLT-AHU-ST 3035	2250	1950	2170	1870	3.39	30,537
VLT-AHU-ST 3040	2500	1950	2420	1870	3.80	34,217
VLT-AHU-ST 3535	2250	2250	2170	2170	3.95	35,527
VLT-AHU-ST 3045	2800	1950	2720	1870	4.32	38,915
VLT-AHU-ST 3540	2500	2250	2420	2170	4.46	40,117
VLT-AHU-ST 3545	2800	2250	2720	2170	5.04	45,349
VLT-AHU-ST 4040	2500	2500	2420	2420	4.97	44,724
VLT-AHU-ST 3550	3100	2250	3020	2170	5.65	50,857
VLT-AHU-ST 4045	2800	2500	2720	2420	5.63	50,701
VLT-AHU-ST 4050	3100	2500	3020	2420	6.32	56,884
VLT-AHU-ST 4055	3400	2500	3320	2420	7.01	63,067
VLT-AHU-ST 4060	3700	2500	3620	2420	7.69	69,250

W/H are single-section external dimensions; Wi/Hi are the clear internal opening. Coil face area is retained from the existing range schedule. No complete-unit length, weight or duty pressure is implied.

12 / AIRFLOW MATRIX 1/2

Compare face-velocity references.

All airflow values are in m^3/h. Columns identify the original table face velocity in m/s.

VLT-AHU-ST size	3.5 m/s	3.25 m/s	3 m/s	2.75 m/s	2.5 m/s	2.25 m/s	2 m/s
1010	3,634	3,374	3,115	2,855	2,596	2,336	2,076
1015	5,751	—	4,929	4,518	4,108	3,697	3,286
1020	7,867	7,305	6,744	6,182	5,620	5,058	4,496
1515	8,777	8,150	7,523	6,896	6,269	5,642	5,016
1520	12,028	11,169	10,310	9,451	8,591	7,732	6,873
1525	15,279	14,187	13,096	12,005	10,913	9,822	8,731
2020	16,078	14,929	13,781	12,632	11,484	10,336	9,187
2025	20,170	18,729	17,289	15,848	14,407	12,966	11,526
2030	24,555	22,801	21,047	19,293	17,539	15,785	14,031
2525	24,767	22,998	21,228	19,459	17,690	15,921	14,152
2530	30,210	28,052	25,894	23,736	21,578	19,421	17,263
2535	35,653	33,106	30,560	28,013	25,466	22,920	20,373
3030	36,175	33,591	31,007	28,423	25,839	23,255	20,671

— = no value in the listed data; the 1015 / 3.25 m/s entry is intentionally blank.

Selection software: verify the intended airflow and component face velocities together with the actual fan and thermal selection. This matrix is not a pressure curve.

12 / AIRFLOW MATRIX 2/2

Compare face-velocity references.

All airflow values are in m^3/h. Columns identify the original table face velocity in m/s.

VLT-AHU-ST size	3.5 m/s	3.25 m/s	3 m/s	2.75 m/s	2.5 m/s	2.25 m/s	2 m/s
2540	39,917	37,066	34,214	31,363	28,512	25,661	22,810
3035	42,752	39,698	36,644	33,591	30,537	27,483	24,430
3040	47,904	44,482	41,061	37,639	34,217	30,795	27,374
3535	49,737	46,185	42,632	39,079	35,527	31,974	28,421
3045	54,481	50,590	46,698	42,807	38,915	35,024	31,132
3540	56,165	52,152	48,140	44,128	40,117	36,105	32,093
3545	63,489	58,954	54,419	49,884	45,349	40,814	36,279
4040	62,613	58,141	53,668	49,196	44,724	40,251	35,779
3550	71,200	66,114	61,029	55,943	50,857	45,771	40,686
4045	70,981	65,911	60,841	55,771	50,701	45,631	40,560
4050	79,637	73,949	—	62,572	56,884	51,195	45,507
4055	88,293	81,987	75,860	69,373	63,067	56,760	50,453
4060	96,948	90,024	83,100	76,175	69,250	62,325	55,400

— = no value in the listed data; the 4050 / 3.0 m/s entry is intentionally blank. The recorded 4055 / 3.0 m/s value of 75,860 is retained and requires confirmation.

Selection software: verify the intended airflow and component face velocities together with the actual fan and thermal selection. This matrix is not a pressure curve.

13 / INSTALLATION & MAINTENANCE

Make every section accessible.

Coordinate delivery, support, ducts, building services and the maintenance route before equipment placement.



Coordination view using the approved product visual. The final support, lifting and access arrangements follow the unit-specific project drawing.

1 Delivery & support

Confirm splits, lifting points, mass, base frame and the structural support/isolation design.

2 Service envelope

Maintain access to doors, filters, coils, fans, dampers and control components.

3 Building connections

Coordinate duct interfaces, coil circuits, drainage and electrical isolation.

Selection program: export the configured drawing, then resolve support details and service clearances in the project installation documents.

14 / PROJECT SELECTION REPORT

Turn the configuration into a record.

Request a dated, unit-specific output from the AHU selection software for the exact offered equipment.

Report content	Required project information
Air-side duty	Supply/extract m^3/h, external static pressure, internal losses and filter loading
Fan & electrical	Actual fan curve and duty, fan/motor input, speed range, supply and auxiliary loads
Thermal treatment	Entering/leaving air conditions, heating/cooling duty, fluid circuit and pressure drops
Recovery & sound	Selected recovery performance, frost/bypass strategy and acoustic data
Dimensional drawing	Overall L/W/H, section splits, connections, service access and mass
Controls & accessories	Operating sequence, included sensors/actuators, protection and BMS scope

CURRENT RANGE DATA

The section and airflow tables provide a documented starting point. Final fan pressure curves, thermal capacities, electrical details and complete-unit drawings remain tied to the selected project configuration.

Review issue. Catalogue preparation does not establish product certification or engineering validation of a configured unit.

VOLTVENT®
VENTILATION SYSTEMS



03 / AIR HANDLING UNITS

VLT-AHU-HYG

Hygienic Air Handling Unit

Coordinate cleanability, filtration and service.

01 / THE HYGIENIC RANGE

VLT-AHU-HYG

Hygienic Air Handling Unit

The recorded range covers ten model sizes, from 2,400 to 15,000 m³/h. Plan the filtration, temperature and humidity treatment around the room brief and the available building services.



DESIGNED AROUND SERVICE ACCESS

Smooth stainless-steel inner surfaces, accessible filter and coil runners, inspection windows and a drainage-focused layout support the cleaning and service strategy. Specify the actual materials and equipment for the project.

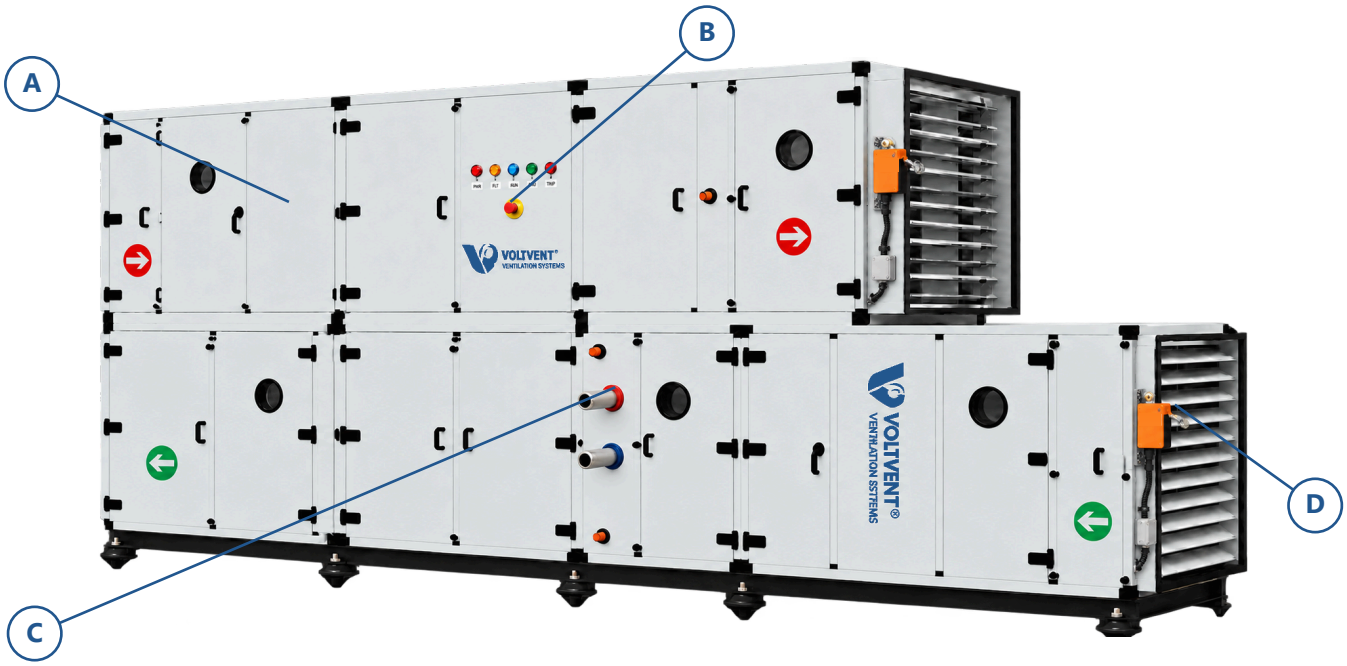
CONTENTS

The hygienic range	029	Thermal & moisture schedule	035
Access & cleanability	030	Dimensions & interfaces	036
Filtration & internal surfaces	031	Ten-model dimensional table	037
Thermal treatment & humidity	032	Selection software	038
Fans, controls & accessories	033	Installation & maintenance	039
Airflow & electrical schedule	034	Project selection report	040

02 / ACCESS & CLEANABILITY

Make the air path serviceable.

Cleanability depends on access to the selected components, surfaces, drainage and service interfaces.



Configuration example. Final component scope, service access and connection details follow the selected unit.

A Access & inspection

Gasketed doors and viewing points support inspection. Keep the complete removal route clear.

B Controls & operation

Place isolation, monitoring and service controls where they remain accessible.

C Coil interfaces

Coordinate water-side connections, drainage and access to the selected treatment section.

D Motorised dampers

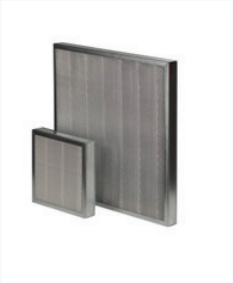
Coordinate actuator access and the damper operating sequence with the control package.

03 / FILTRATION & SURFACES

Select the stage. Keep it accessible.

The filtration strategy follows the application, air quality brief and the room-specific system design.

01



Panel filtration

A first stage protects downstream sections. Specify grade, seating and access.

02



Bag / compact stage

Select the required efficiency and sealed seating; confirm the removal envelope.

STAINLESS-STEEL INTERNAL CONSTRUCTION

The existing range description specifies smooth AISI 304 stainless-steel inner surfaces and accessible stainless filter/coil runners. Confirm the ordered build-up, joints, surface finish and cleaning compatibility for the installation.

1 **Account for filter loading**

Include clean and final filter resistance in fan selection and monitoring.

2 **Protect service access**

Plan filter withdrawal, safe handling and inspection access before installation.

Component images illustrate filter types; they do not establish the supplied filter class or material. A HEPA stage, room cleanliness class or hygienic certification is not implied by the model name.

04 / THERMAL & MOISTURE TREATMENT

Coordinate temperature and humidity.

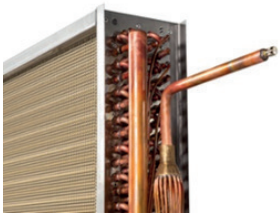
The recorded schedule lists heating, cooling and humidification quantities separately for each model.



01 / HEATING

Match the available circuit.

Select the coil or other offered heating arrangement from entering/leaving air conditions, available services, fluid temperatures and pressure loss. Confirm freeze protection and service withdrawal.



02 / COOLING

Plan the wet section.

Cooling treatment needs selected air conditions, coil duty, condensate collection and a coordinated drain connection. Confirm coating, droplet control and access for cleaning.

03 / HUMIDIFICATION

The model schedule states moisture output in kg/h. Select the process, water quality, absorption space, control sensors and drainage for the application; the schedule alone does not define the supplied humidifier.

Use the AHU selection program to verify air-side and fluid-side duties. Published schedule values do not include complete rating conditions; confirm capacities at the actual project conditions.

05 / FANS, CONTROLS & ACCESSORIES

Coordinate the complete operating unit.

Air movement, monitoring and accessible controls form one project-specific equipment package.

01



Direct-drive fan

The existing range description uses direct-drive plug fans. Confirm the actual duty and drive.

02



Control panel

Agree the operating sequence, isolators, alarms, sensors and building interface.



Pressure monitoring

Coordinate filter differential pressure and fan-proving points.



Inspection access

Viewing windows and service lighting follow the ordered configuration.

SELECT THE ACTUAL FAN DUTY

Enter airflow, external static pressure and internal component losses in the selection program. Motor ratings, absorbed power, sound and the selected speed range are distinct quantities.

A direct drive does not automatically identify an EC motor. Confirm electrical supply, protection, control method and BMS capability for the offered assembly.

06 / AIRFLOW & ELECTRICAL SCHEDULE

Ten models. Recorded ratings.

Nominal airflow and recorded power entries. Electrical reference for all ten models: 380 V / 50 Hz.

Model	Airflow m^3/h	Supply motor kW	Extract motor kW	Compressor entry* kW	Comp. qty
VLT-AHU-HYG1	2,400	2.2	2.2	6	2
VLT-AHU-HYG2	3,500	3	3	9	2
VLT-AHU-HYG3	4,500	4	4	9	2
VLT-AHU-HYG4	5,500	5.5	5.5	13.4	2
VLT-AHU-HYG5	6,500	7.5	7.5	16.4	2
VLT-AHU-HYG6	7,500	7.5	7.5	16.4	2
VLT-AHU-HYG7	8,500	7.5	7.5	18.6	2
VLT-AHU-HYG8	10,000	11	11	24	2
VLT-AHU-HYG9	12,000	11	11	24	2
VLT-AHU-HYG10	15,000	15	15	24	2

*The compressor power entry is retained with the listed quantity of two. Its per-compressor or aggregate basis requires confirmation. Do not infer total installed or absorbed input by summing the entries.

Motor values are recorded in kW. Airflow duty pressure, fan curves, full-load current and auxiliary electrical loads require the unit-specific selection report.

07 / THERMAL & MOISTURE SCHEDULE

Read each duty separately.

Heating and cooling entries are in kW; humidification is the recorded moisture output in kg/h.

Model	Airflow m^3/h	Heating kW	Cooling kW	Humidification kg/h
VLT-AHU-HYG1	2,400	40	24	18
VLT-AHU-HYG2	3,500	55	36	30
VLT-AHU-HYG3	4,500	70	44	45
VLT-AHU-HYG4	5,500	85	54	45
VLT-AHU-HYG5	6,500	100	64	55
VLT-AHU-HYG6	7,500	115	74	60
VLT-AHU-HYG7	8,500	130	83	70
VLT-AHU-HYG8	10,000	155	92	90
VLT-AHU-HYG9	12,000	185	120	110
VLT-AHU-HYG10	15,000	230	140	130

RATING CONDITIONS TO CONFIRM

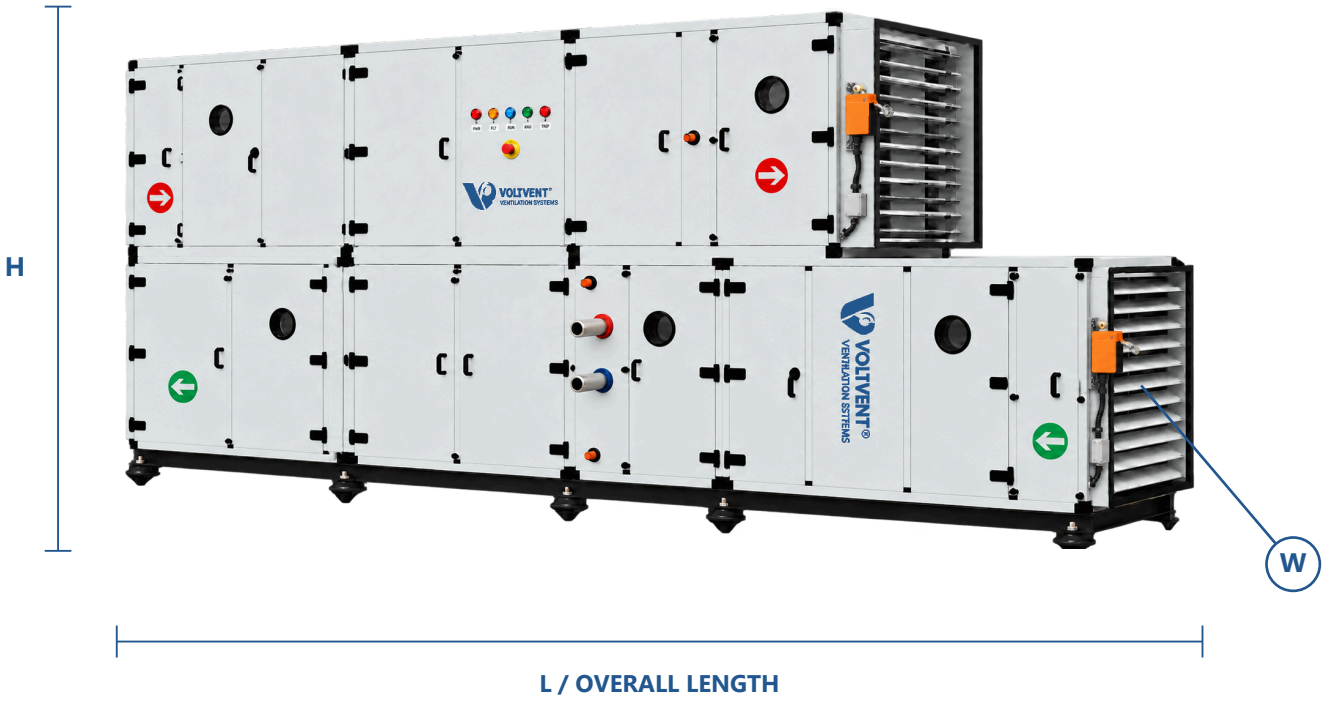
Outdoor and entering air, leaving-air temperature/humidity, circuit conditions, coil pressure losses and humidifier operating conditions belong in the project selection. No COP, efficiency or room humidity result is derived from this table.

Nominal range data. Confirm the selected duties before manufacture or project specification.

08 / DIMENSIONS & INTERFACES

Plan the unit and its surroundings.

The dimensional schedule gives overall L / W / H in mm for the ten recorded models.



L = overall length; W = overall width; H = overall height. Perspective illustration is not to scale. Module splits, duct openings, base detail and service clearances need the final project drawing.

1 Separate equipment and access

Add the required door opening, filter/coil withdrawal and service routes outside the scheduled envelope.

2 Coordinate the connections

Confirm duct faces, coil circuits, drain positions and electrical access with the final drawing.

Support points, section weights, lifting splits and base details are project-specific. The product image is not a scaled manufacturing drawing.

09 / DIMENSIONAL SCHEDULE

Overall dimensions by model.

Recorded overall dimensions in mm. Airflow remains visible alongside each model.

Model	Airflow m^3/h	L mm	W mm	H mm
VLT-AHU-HYG1	2,400	2,650	900	2,100
VLT-AHU-HYG2	3,500	2,750	950	2,150
VLT-AHU-HYG3	4,500	2,750	1,000	2,200
VLT-AHU-HYG4	5,500	2,800	1,100	2,300
VLT-AHU-HYG5	6,500	2,950	1,300	2,400
VLT-AHU-HYG6	7,500	3,400	1,300	2,500
VLT-AHU-HYG7	8,500	3,400	1,300	2,500
VLT-AHU-HYG8	10,000	3,500	1,300	2,900
VLT-AHU-HYG9	12,000	3,500	1,450	2,900
VLT-AHU-HYG10	15,000	3,650	1,550	3,200

PROJECT DRAWING

Confirm module lengths, delivery splits, base arrangement, mass, duct openings, coil connections, drainage and full service clearances for the selected configuration. These items are not supplied by the range envelope table.

VLT-AHU-HYG3 overall width: 1,000 mm.

10 / PROJECT SELECTION

Define. Configure. Review.

Use the AHU selection program to coordinate the exact duty, component arrangement and installation envelope.

Selection stage	Project information to verify
01 / Define the duty	Supply/extract airflow, external pressure, entering-air conditions, operating hours and room requirements.
02 / Select the components	Fan and coil duties, filtration, humidity treatment, materials and cleaning access.
03 / Coordinate the unit	Module arrangement, service withdrawal, connections, dimensions, controls and electrical supply.
04 / Review the report	Selected fan curves, thermal/moisture calculations, actual unit drawing and control documentation.

Selection workflow. A project-specific software result or manufacturing drawing has not been issued for the range described in this document.

1 Keep the listed conditions

Record air/fluid conditions, filter loading and the agreed operating modes.

2 Review the offered assembly

Use the report and drawing for the actual supplied configuration.

Request a dated selection report for the exact offered unit. Document design review does not establish fan, thermal or hygiene validation.

11 / INSTALLATION & MAINTENANCE

Build service into the installation.

Delivery, accessible plant space, drainage and a documented operating sequence support maintainable equipment.



Coordination item	Project action
Delivery & support	Confirm section splits, lifting points, mass and structural support.
Accessible servicing	Keep doors, filter runners, coils, fans and control points reachable.
Wet-section drainage	Coordinate drain connections, traps and the installation level.
Commissioning	Verify airflow, pressures, drain function, sensors and the agreed sequence.
Maintenance plan	Document isolation, cleaning compatibility, filter replacement and inspection.

No anchor, load, torque, trap dimension or maintenance interval is assumed. Follow the final unit documentation and project requirements.

12 / PROJECT SELECTION REPORT

Specify the exact configuration.

The range catalogue is a starting point. The offered unit needs its own coordinated technical package.

Selection topic	Information to confirm
Application	Room/system brief, filtration strategy, cleaning access and operating hours.
Air-side duty	Supply/extract airflow, external pressure and internal pressure losses.
Thermal & humidity	Entering/leaving air, circuit conditions and selected treatment duties.
Materials & filtration	Inner surfaces, coatings, filter grades, seals and cleaning compatibility.
Electrical & controls	Actual motor/auxiliary loads, protections, included sensors and BMS scope.
Dimensions & service	Overall envelope, module splits, mass, connections and withdrawal routes.
Supporting documents	Selected fan curves, coil reports, drawings, wiring and maintenance information.

Any project-required hygiene assessment, room classification or certification must be supported by the relevant documentation for the exact offered assembly. Catalogue preparation does not establish such approval.

English review issue. Technical and engineering validation remain separate from catalogue design approval.



VOLTVENT®
VENTILATION SYSTEMS

04 / AIR HANDLING UNITS

VLT-AHU-PD

Pool Dehumidification Unit

Plan ventilation, moisture removal and heat management.

042-053

01 / THE POOL RANGE

VLT-AHU-PD

Pool Dehumidification Unit

VLT-AHU-PD covers nine recorded sizes. Select the moisture-removal duty and air volume together, using pool surface area, water temperature, room conditions, occupancy and the operating schedule.



A PROJECT-SPECIFIC SELECTION

The range schedule is the starting point. The offered unit needs confirmed rating conditions, fan duty, air-path arrangement, electrical supply and installation details.

CONTENTS

Pool air treatment	043	Recovery & COP	049
Product interfaces	044	Dimensional interfaces	050
Access & controls	045	Dimensional schedule	051
Airflow & moisture removal	046	Controls & selection report	052
Power schedule	047	Installation & commissioning	053
Current schedule	048		

02 / MOISTURE & AIR

Treat the moisture load and the air.

A pool produces a changing latent load. Airflow alone does not establish dehumidification performance.

FUNCTIONAL PRINCIPLE

01

Moist air

Pool-hall return air contains water vapour.

→

02

Moisture removal

The selected refrigeration circuit condenses moisture.

→

03

Heat management

Recovered heat follows the selected operating arrangement.

Functional sequence only. It is not a duct, refrigeration, wiring or manufacturing schematic. Fresh-air and exhaust-air quantities require project selection.

1 **Define the pool hall**

Record pool areas, water temperatures, room temperature and relative humidity.

2 **Define how it operates**

Record activity, occupancy, covers, opening hours and the out-of-hours strategy.

Select at the actual design conditions.

Confirm moisture duty, fresh/exhaust air balance and the selected supply-air condition in one project report.

03 / PRODUCT INTERFACES

Coordinate the visible interfaces.

Use the approved product arrangement to plan air connections, operation and accessible servicing.



Approved product illustration. Confirm the offered connection faces, controls and access arrangement in the project drawing.

A Inspect & access

Keep service doors and viewing points reachable.

B Operate & monitor

Confirm local controls, isolation and required sensors.

C Connect the air paths

Confirm duct faces and motorised damper interfaces.

D Provide service space

Keep connection and component removal routes clear.

04 / ACCESS & CONTROLS

Details that need service space.

Service doors, operating controls and air-path connections need accessible installation space.



A / Access & inspection

Service doors and viewing points. Keep door swing and internal access clear.



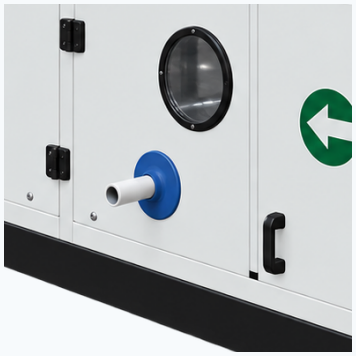
B / Local operation

Visible operating interfaces. Specify isolation, sensors, alarms and the control sequence.



C / Air-path interfaces

Coordinate duct faces, damper operation and the fresh/return/exhaust arrangement.



D / Service connections

Coordinate the connection schedule and maintenance route for the offered unit.

Illustrated arrangement only. Connection sizes, component makes, materials and included control functions must follow the offered configuration.

05 / AIRFLOW & MOISTURE SCHEDULE

Nine models. Two separate duties.

Recorded airflow and dehumidification capacity. The listed schedule does not state complete rating conditions.

Model	Airflow m^3/h	Dehumidification kg/h
VLT-AHU-PD-20	2,527	20
VLT-AHU-PD-35	4,095	35
VLT-AHU-PD-45	5,046	45
VLT-AHU-PD-57	6,356	57
VLT-AHU-PD-67	7,498	67
VLT-AHU-PD-85	9,426	85
VLT-AHU-PD-100	11,093	100
VLT-AHU-PD-130	14,473	130
VLT-AHU-PD-160	18,115	160

CONFIRM THE RATING BASIS

Moisture-removal capacity depends on entering-air temperature and humidity and the selected operating conditions. Airflow values do not establish external static pressure or a fan duty point.

Do not size a pool from the model number alone. Use a project moisture-load assessment and an equipment-specific selection report.

06 / ELECTRICAL POWER SCHEDULE

Separate component and total entries.

Recorded kW entries for supply fan, extract fan, compressor and total. Preserve the stated ratings as separate values.

Model	Supply fan kW	Extract fan kW	Compressor kW	Recorded total kW
VLT-AHU-PD-20	1.29	1.25	2.33	4.87
VLT-AHU-PD-35	1.24	1.24	3.82	6.30
VLT-AHU-PD-45	1.73	1.68	5.18	8.59
VLT-AHU-PD-57	2.36	2.36	6.35	11.07
VLT-AHU-PD-67	2.43	2.43	7.29	12.15
VLT-AHU-PD-85	3.35	3.35	9.49	16.19
VLT-AHU-PD-100	4.25	4.25	11.15	19.65
VLT-AHU-PD-130	5.91	5.91	14.45	26.27
VLT-AHU-PD-160	7.84	7.84	18.20	33.88

ELECTRICAL COORDINATION

Confirm voltage, phase, frequency, motor starting/control method, protective devices and the installed auxiliary loads. These kW entries do not define the supply circuit or the absorbed power at every duty.

The recorded total is reproduced from the existing schedule; it has not been replaced by a new calculation or independently tested.

07 / ELECTRICAL CURRENT SCHEDULE

Read current independently of power.

Recorded A entries for the same nine models. The equipment-specific electrical documentation governs final design.

Model	Supply fan A	Extract fan A	Compressor A	Recorded total A
VLT-AHU-PD-20	2.50	2.42	4.56	9.48
VLT-AHU-PD-35	2.42	2.42	6.92	11.76
VLT-AHU-PD-45	3.31	3.21	10.07	16.59
VLT-AHU-PD-57	4.47	4.47	11.93	20.87
VLT-AHU-PD-67	4.59	4.59	13.28	22.46
VLT-AHU-PD-85	6.33	6.33	16.78	29.44
VLT-AHU-PD-100	8.25	8.25	21.77	38.27
VLT-AHU-PD-130	10.81	10.81	25.76	47.38
VLT-AHU-PD-160	14.43	14.43	32.41	61.27

REQUEST THE ACTUAL ELECTRICAL PACKAGE

Use the offered-unit wiring diagram and component data to confirm running/starting currents, isolation, circuit protection and cable selection. No supply voltage or electrical protection size is inferred here.

The current entries and recorded totals are distinct values; their operating and aggregation basis needs confirmation.

08 / HEAT RECOVERY & COP

Keep the rating conditions visible.

Existing recovery-power and COP entries are range references; the data do not state the COP definition or test conditions.

Model	Airflow m^3/h	Heat-recovery transfer power / kW	Recorded COP
VLT-AHU-PD-20	2,527	11	4.12
VLT-AHU-PD-35	4,095	16	4.13
VLT-AHU-PD-45	5,046	22	4.10
VLT-AHU-PD-57	6,356	28	4.21
VLT-AHU-PD-67	7,498	33	4.32
VLT-AHU-PD-85	9,426	41	4.18
VLT-AHU-PD-100	11,093	48	4.18
VLT-AHU-PD-130	14,473	59	4.21
VLT-AHU-PD-160	18,115	73	4.18

A PROJECT DUTY NEEDS ITS OWN RATING

Confirm entering/leaving air, moisture-removal duty, recovered-heat destination, operating mode and which electrical inputs are included in COP. No seasonal efficiency, recovery percentage or certified performance claim is made.

Do not derive pool-heating or water-heating duty from these entries without the selected circuit and supporting calculation.

09 / DIMENSIONAL INTERFACES

Plan the equipment and its access.

The dimensional schedule identifies the recorded equipment envelope. Add service space around the selected arrangement.



L = length; W = width; H = casing height; Hmax = overall height including the base in the recorded schedule. Perspective identification only; not a scaled fabrication drawing.

1 Separate envelope and access

Keep door swing, component withdrawal and service circulation outside the unit envelope.

2 Coordinate the interfaces

Confirm duct, pipe, drain and electrical entry positions with the final drawing.

10 / DIMENSIONAL SCHEDULE

Seven envelopes. Two to confirm.

Recorded dimensions in mm. PD-130 and PD-160 dimensions are not available in the existing project schedule.

Model	L mm	W mm	H mm	Hmax mm
VLT-AHU-PD-20	2,770	1,050	1,460	1,610
VLT-AHU-PD-35	3,150	1,050	1,850	2,000
VLT-AHU-PD-45	3,400	1,350	1,850	2,000
VLT-AHU-PD-57	3,500	1,350	2,500	2,650
VLT-AHU-PD-67	3,500	1,650	2,500	2,650
VLT-AHU-PD-85	3,765	1,650	2,140	2,290
VLT-AHU-PD-100	3,965	1,950	2,140	2,290
VLT-AHU-PD-130	To confirm	To confirm	To confirm	To confirm
VLT-AHU-PD-160	To confirm	To confirm	To confirm	To confirm

FINAL PROJECT DRAWING

Confirm section splits, unit mass, support points, base arrangement, duct openings, service connections and withdrawal routes. PD-130 and PD-160 require their own dimensional drawings; no scaled or extrapolated dimensions are supplied.

Hmax includes the base in the recorded reference arrangement. These dimensions do not establish delivery splits or lifting requirements.

11 / CONTROLS & SELECTION REPORT

Define the sequence before release.

Use the AHU selection program and a coordinated controls brief for the actual pool project.

Selection input	Define with the project team
Pool & occupancy	Pool surface areas, water temperatures, activity, occupancy and opening hours.
Room & ambient	Room temperature/RH, outdoor design conditions and building condensation risks.
Air-side duty	Supply, return, fresh/exhaust balance; external pressure and duct distribution.
Moisture & heat	Moisture load, selected operating modes and recovered-heat arrangement.
Controls	Day/night modes, setpoints, sensors, protections, alarms and BMS scope.
Release package	Selected fan curves, capacity report, dimensional drawing and wiring diagram.

Keep a dated selection report.

Confirm the offered unit at the project conditions. No PD software selection has been executed for this catalogue; no interface screenshot is used as performance evidence.

Control functions and operating modes follow the final ordered package; the model code alone does not define the included hardware.

12 / INSTALLATION & COMMISSIONING

Coordinate drainage, access and air.

Indoor-pool installations need coordinated moisture management across the equipment and the building.

Coordination item	Project action
Delivery & support	Confirm lifting splits, unit mass, access route, support and any isolation.
Corrosion exposure	Confirm coating/material compatibility with the pool atmosphere and maintenance regime.
Drainage	Confirm condensate connection, trap design, installation level and discharge route.
Air distribution	Coordinate supply/return locations and fresh/exhaust balance with the room design.
Service access	Keep doors, heat exchangers, filters, fans and control interfaces accessible.
Commissioning	Verify airflow, pressures, condensate drainage, sensors, alarms and agreed modes.

DOCUMENT THE OPERATING HANDOVER

Provide the final selection report, drawings, wiring, settings and maintenance instructions. Unit selection does not replace building-physics assessment or the pool-hall ventilation design.

English review issue. Document design approval and engineering validation remain separate.



VOLTVENT®
VENTILATION SYSTEMS

Air Handling Units
General Catalogue

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