

[illegible]

Technical drawing of the MSH 1000/2500 air handling unit, showing front, top, and side views with dimensions and airflow labels.

**Front View Dimensions:**

- Overall width: 649
- Internal width: 563
- Overall height: 1047
- Internal height: 365
- Bottom flange height: 385.5

**Top View Dimensions:**

- Overall length: 1442
- Internal length: 1442
- Left side air outlet width: 329
- Right side air outlet width: 317
- Condensate drain outlet width: 750
- Bottom flange width: 186.5
- Bottom flange depth: 90

**Side View Dimensions:**

- Overall width: 424
- Internal width: 274
- Bottom flange width: 462
- Bottom flange depth:  $\varnothing 1$

**Airflow Labels:**

- Extract air (top left)
- Intake air (top right)
- Supply air (bottom left)
- Exhaust air (bottom right)

**Connection:** WW element G 1/2" Internal thread

**Condensate drain:** G 1 1/2"

Dimensions in mm



Independently certified hygiene properties and energy efficiency according to VDI 6022 and the passive house standard. Unit construction and unit components fulfil the general hygiene requirements according to VDI 6022. Optionally available with integrated warm water heating element.

Double-walled, made of galvanised steel sheet, with 30 mm heat and sound insulation on all sides.

Inspection openings for filter replacement fastened to both side panels with screws.

Both side walls can be completely dismantled for free access to all components.

The unit is suitable for floor installation (standing) indoors.

Vibration dampers can be underlaid (on-site) to prevent the direct transmission of vibrations and structure-borne noise to building parts.

Large cross counterflow heat exchanger made of aluminium with heat recovery efficiency of up to 90 %. Dismantling possible in just a few simple steps.

Two low-noise high-performance EC fans with backward-curved impellers guarantee maximum energy efficiency. The special control technology enables constant volume control or constant pressure control.

Installation-friendly connection of intake, exhaust, extract and supply air through pipe or duct system NW 250 mm. The floor-standing unit can be rotated 180° for installation so that intake air and exhaust air as well as extract air and supply air connections can be on the left or right sides.

The unit contains a stainless steel condensate tray with a condensate drain below. Ball siphon included in delivery. On-site connection to drain pipe.

Standard equipment:  
Clean intake air supply via  
ISO ePM<sub>1</sub> 55% filter (F7).  
The heat exchanger requires  
a ISO ePM<sub>10</sub> 50% filter (M5) on  
the extract air side.  
All filters are pressure-controlled  
and exchangeable in just a few  
simple steps.

Standard equipment with automatic bypass function for maximum comfort.

An electric preheating element heats the intake air at very low outdoor temperatures. Thus, it prevents the heat exchanger from icing up and guarantees its safe functioning and optimal heat recovery during the entire heating period.

The comfort control element with graphic display and user-friendly menu navigation, which is included in the delivery, enables the following functions:

- ☐ Control directly via touchscreen.
- ☐ Freely definable operating points within the entire range of the performance curve.
- ☐ Selection between constant volume control or constant pressure control.
- ☐ Demand-oriented ventilation using CO<sub>2</sub>, VOC (mixed gas) or humidity sensor.
- ☐ Building control system via ModBus (RS 485, TCP/IP).
- ☐ Initial commissioning (automatic determination of the system performance curve).
- ☐ Control of external shutters.
- ☐ Connection of a fire alarm contact.
- ☐ Weekly or daily programme.
- ☐ Pressure monitoring of filter contamination.
- ☐ Indication of necessary filter replacement, operating status, error messages.
- ☐ Different access levels.


Easily accessible terminal box on top of the casing.  
The isolator/main switch can be controlled from below the unit for maintenance work and it can be locked with a padlock to prevent unauthorised access.

The integrated warm water heating element guarantees the convenient and energy-efficient post-heating of supply air. The setpoint temperature is simply set in the control element. The hydraulic unit (Type WSHS HE 24 V (0-10V), accessories) is recommended for controlling the warm water heat exchanger.

The ventilation unit design according to VDI 6022 requires the use of VDI 6022-compliant air filters.

The use of original replacement air filters is therefore mandatory.

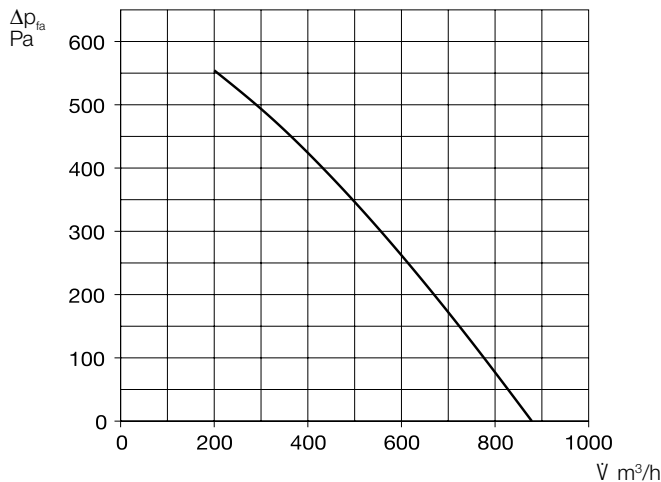
- 1 pc. ISO ePM<sub>10</sub> 50% filter  
ELF-KWL 800 S/5 VDI No. 08256
- 1 pc. ISO ePM<sub>1</sub> 55% filter  
ELF-KWL 800 S/7 VDI No. 08257

 Other accessories	Page
KWL peripherals	150 ff.
– Air distribution systems	166 ff.
– Further overview, control lines	170 f.

Ventilation grilles, ducts, fittings	
roof outlets	561 ff.
extract air elements	574 ff.

### Performance curve KWL EC 800 S

Frequency	Hz	Tot.	125	250	500	1k	2k	4k	8k
$L_{WA}$	Extract air	dB(A)	70	65	68	54	49	43	35
$L_{WA}$	Supply air	dB(A)	78	76	73	67	63	55	55
$L_{PA}$ at 1 m	Radiation	dB(A)	54	50	50	42	42	41	31



### Included in delivery:

#### Surface comfort control element

User-friendly control via self-explanatory graphic elements with clear text directly on the touchscreen. Control line (10 metres) included in delivery, other lengths available (ALB EC-SK, accessories).  
Dim. mm (WxHxD) 115x80x25



Control element with connection cable (10 m) included in the scope of delivery.  
Dim. mm (WxHxD) 115 x 80 x 25

### Accessories for Type Pro WW

#### Hydraulic unit

#### WHSH HE 24 V (0-10 V) No. 08318

Controls the water temperature of the PWW heating element using a three-way valve actuator 24 V (0-10 V) and thus the heat output transferred to the air. Delivered as a complete unit, incl. VL-/RL temperature display, circulating pump and flexible connection hoses.



### Accessories for all types

#### Room sensor – Air quality

AIR1/KWL-VOC 0-10V No. 20250

AIR1/KWL-CO2 0-10V No. 20251

AIR1/KWL-FTF 0-10V No. 20252

For measuring the CO<sub>2</sub>, mixed gas (VOC) concentration or relative room air humidity. A maximum of one sensor can be connected.  
Dim. mm (W x H x D) 85 x 85 x 27



#### Room sensor – Temperature

TFR-ALB/KWL No. 07277

For measuring the room temperature and controlling the ventilation unit according to the set value. Incl. 20 m control line. Maximum total of one sensor can be connected.  
Dim. mm (W x H x D) 80 x 80 x 25



#### Transition piece – Symmetrical

KWL-ÜS 800 S No. 08339

From unit flange to round duct systems.

#### Flexible connecting sleeve

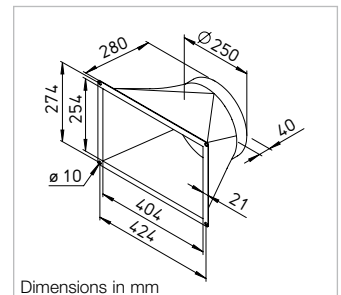
FM 250 No. 01672

For acoustic decoupling, incl. 2 pcs. hose clamps.

#### Duct shutter, motorised

RVM 250 No. 02576

Prevents cold draughts when the unit is at a standstill. Automatic function through fan operation, with mounted spring return motor (outside of air flow). Installation in any position.



Dimensions in mm

#### Angle flange ring

FR 250 No. 01203

Made of galvanised steel sheet, for duct connection.

#### Base cover

KWL-SB 800 S No. 09315

Made of galvanised steel sheet.



Technical data	KWL EC 800 S			KWL EC 800 S, with warm water post-heater		
	Type		Ref. no.	Type		Ref. no.
For floor-standing installation	KWL EC 800 S Pro		08327	KWL EC 800 S Pro WW		08328
Flow rate at level <sup>1)</sup>	③	②	①	③	②	①
Supply air/extract V m³/h approx.	600	490	325	600	490	325
Noise dB(A) at 620 m³/h and 195 Pa						
Supply air $L_{WA}$ (sound power)	78	n/a	n/a	78	n/a	n/a
Extract air $L_{WA}$ (sound power)	70	n/a	n/a	70	n/a	n/a
Radiation $L_{PA}$ at 1 m	54	n/a	n/a	54	n/a	n/a
Power consumption fans 2xW	140	94	65	140	94	65
Standby power consumption	< 1 W			< 1 W		
Voltage/Frequency	1~, 230 V, 50 Hz			1~, 230 V, 50 Hz		
Rated current A – Ventilation	3.0			3.0		
– Preheating	11.0			11.0		
– max. total	14.0			14.0		
Electric preheater kW	2.4			2.4		
Heat output/post-heating element kW	–			2.8 (at 60/40 °C) / 2.6 (at 50/40 °C) / 1.6 (at 40/30 °C)		
Summer bypass	automatic (adjustable), with heat exchanger cover			automatic (adjustable), with heat exchanger cover		
Wiring diagram no.	1370			1370		
Temperature operating range	–20 °C to +40 °C			–20 °C to +40 °C		
Installation temperature	+5 °C to +40 °C			+5 °C to +40 °C		
Connection PWW heating element	–			IG 1/2"		
Weight approx. kg	172			175		

<sup>1)</sup> Values based on operating ranges defined according to PHI (Passive House Institute).