



oceania
SOLUTIONS GROUP

ZHK INOVA

Customised Air Handling Units

Environmentally friendly and clean
concept solutions for comfort, hospital
and industrial applications.



euroclima[®]



Your projects, challenges and requirements are our focus. We have a dedicated team that can engineer tailored solutions for your commercial HVAC application.

Oceania Solutions Group is an Australian owned business that focuses on providing engineered HVAC solutions. We value the importance of relationships with our clients and partners. Our team enjoy collaborating and solving complex 'design and construct' projects for your business with our product solutions.

Oceania Solutions Group are proud of our extensive portfolio and experience within HVAC industry. From industrial applications through to commercial air conditioning installations for tropical and high humidity environments.

Operating throughout Australia, New Zealand and the South Pacific Islands, we provide engineered technical data and commercial support for a wide range of HVAC solutions.

Our experienced team of HVAC professionals work hand-in-hand with market leading suppliers of HVAC solutions and equipment.

With international accreditation from Eurovent, CTI, AHRI, TÜV and AMCA, our products are rigorously tested and certified, meeting Australian and New Zealand standards and regulations.

Partnering with trusted international suppliers, we are available to provide an engineered solution for your next project.



Your best partner for air handling units

Since 1963, Euroclima has been a leader in customised air conditioning and ventilation systems. Our partners develop, manufacture and commercialise high quality air handling products for all applications, from basic comfort to healthcare, process air and installations with highly efficient heat recovery systems.

Euroclima is a company with extensive international operations and five manufacturing facilities in Italy, Austria, India and UAE, with more than 36,000m² of production and offices. They are specialists in the manufacturing and worldwide distribution of air handling units and fan coil units.

Approximately 400 employees are presently employed with a well distributed network of sales and service all over Europe, Asia, Middle East and Northern Africa.

A fully certified system

Euroclima are a part of a number of international certification programs, related to quality, performance, hygiene or energy consumption.



Euroclima participates in the ECP programme for Air Handling Units (AHU) and Fan Coil Units (FCU); Check ongoing validity of certificate: eurovent-certification.com



ISO 9001:2015	No. 03578/0
ISO 14001:2204	No. 02301/0
BS OHSAS 18001:2007	No. 00559/0



It certifies that every unit leaving our production lines is built in accordance with the standards required by the European Union.



CERTIFIED PRESSURE EQUIPMENT MANUFACTURER

TÜV AUSTRIA SERVICES GMBH



Ventilation and Air-Conditioning technology

- ✓ VDI 6022 (07/2011)
- ✓ DIN 1946-4 (12/2008)
- ✓ SWKI VA104-01 (04/2006)
- ✓ ONORM H 6021 (09/2003)
- ✓ ONORM H 6020 (02/2007)

Validity Period: 2012 - 2017



Customised Solutions

Customised Units Designer

AirCalc++, the Euroclima selection program is the result of years of experience in designing and optimising customised air handling units. The performances provided by this software are Eurovent certified.

It allows selection of all possible configurations, components or options to reach exact project requirements. Detailed data sheets, in ducts and radiated sound levels, Autocad format drawings, product specifications, psychometric charts, fan curves, SFPs and energy classes can be viewed and printed from the AirCalc++ software.



Eurovent certified software



Unmatched flexibility



Precise data sheets



DWG/DXF drawings edition



Fan curves, mollier chart and acoustic data

Casing Constructions

The innovative casing construction of the ZHK makes the units extremely flexible to cover a wide range of applications from comfort to process applications.

The standard range offers the highest flexibility available in the marketplace:

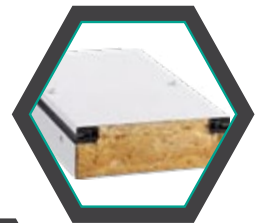
- Any possible unit configuration
- Any type of components available on the market
- Anti-corrosion protections, including galvanised steel, 130 µm PVC coating, epoxy painting, peraluman, stainless steel 304 or 316L
- Large choice of options and accessories
- 100% hygiene and attenuation material
- Factory mounted controls and refrigeration

Casing Characteristics

- 50mm thick double skin panels
- Standard casing: metal sheet 0,7/1,0 mm
- Industrial casing: metal sheet 1,0/1,5 mm
- Incombustible insulation, glass fibre or rock wool, from 20 to 150kg/m³
- Fire class: A1/A2 as per EN 13-501-1 A1 as per DIN 4102
- Upper profiles in epoxy painted aluminium
- Integrated base frame from 80 to 200mm
- Certified data of AHU casing as per EN 1886:
 - D1/L1/F9/T2/TB2 (INOVA Standard)
 - D1/L1/F9/T2/TB1 (INOVA Optional)
 - D1/L1/F9/T2/TB1 (INOVA Industrial)
 - D1/L1/F9/T1/TB1 (INOVA 100mm panel)
 - D1/L1/F9/T2/TB2 (ZHK2000 Standard)



Thermal break in doors and panels



Unlimited flexibility



High built quality and reliability



Hygienic design



High efficiency



Certified performances



Indoor air treatment

Increasingly high demands are constantly being made for cost efficient, high air quality.

Energy saving air handling optimised for particular requirements is one of the most important planning functions in building technology. The running costs of the building are largely determined by this factor. At the same time, the user's sensitivity to air quality is increasing and importance is placed on avoiding the harmful effects of buildings on people (key word: sick building syndrome).

With more time being spent indoors, the quality of modern room climates has become essential for living comfort. Indoor climates must provide healthy, germ-free air to promote wellbeing and efficiency.

Since the eighties, Sick Building Syndrome (SBS) has been analysed, with frequent evidence of physical imbalance negatively affecting health.

Fundamentally the main hygienic risks include:

- toxic parts in the air
- allergic symptoms
- noise, light, smell, humidity, temperature
- infections

Euroclima units set new standards of ventilation technology and air-conditioning. Features of the units include innovative technological design, reduced operating costs and compact dimensions. The units meet all hygiene requirements.

Sections of the ZHK INOVA



Control unit

- Connections for mains supply / external inputs
- Main switch for cutting the power supply
- Fuses / over current protect
- Programmable RAM controls with alphanumeric display and one-button navigation
- PGU interface
- Menu levels: manual/emergency
- Modem modules: advanced telecommunication (diagnosis, parameter download)



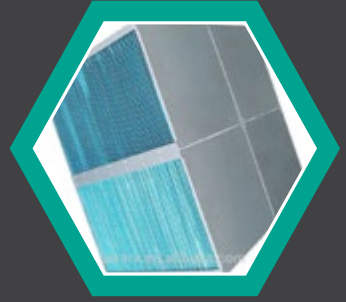
Fan sections

- Radial fan with belt drive
- Plug fan
- Plug fan with external runner engine
- EFC three phase motor, conform to IEC standard, single speed or two speed
- Measuring device for air volume (analogue or digital)
- Repair switch
- Belt guard protection or grid for inspection door



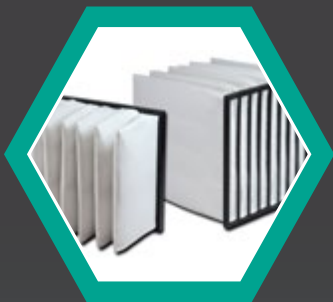
Humidifier section

- Steam humidifier
- Electrode steam generator
- Resistance steam generator
- Gas fired steam generator
- Steam distribution systems for available on site steam
- Adiabatic humidifier systems
- High pressure atomisation
- Hybrid air humidifier
- Air washer
- Contact pad evaporation humidifiers
- Ultrasonic humidifiers



Energy recovery section

- Diagonal plate heat exchanger PTD: single or double with efficiency up to 90%
- Heat wheel RT: condensation wheel, sorption wheel
- Run around coil system KV
- Heat pipe
- Energy recovery for special applications with glass tube or stainless steel tube exchanger
- SPC-System



Filter sections

- Panel filter G2-G4, F5
- V-bank filter G2-G4, F5
- Auto roll filter G3
- Bag filter G4-F9
- Compact filter F5-F9
- Absolute filter H10-H14
- Activated carbon filter
- Filter Safe®



Heater / Cooling section

- Heating coil water / glycol
- Condenser coil
- Steam coil
- Electric heater
- Cooling coil water / glycol
- Direct expansion coil



Silencer sections

- Attenuation at 250 Hz from 14 to 40 dB depending on splitter length
- Sound attenuation of silencers, Data referring to
 - ISO 7235 / DIN 45646
 - Splitter- type 105 R+F
 - Splitter with 200mm
 - Distance 105 mm
 - Relative section 1m³
- Nominal length in mm: 610, 915, 1220, 1525, 1830, 2135



Panels & doors

- New casing and doors manufactured by Euroclima incorporating thermal break
- TB2/T2 standard
- TB1/T2 optional

Certificates



Eurovent



Hygienic institute



ISO 9001



ATEX



GOST



Austrian hygienic standard



ISO 14001:2004



BS OHSAS / 18001

Technical specification ZHK INOVA

Housing assembled with self supporting modular panels with base frame integrated into the unit and aluminium profiles along the upper sides of the unit. The inside and outside walls are completely smooth.

The 50 mm thick double skin panel contains a glass fibre insulation, complying with fire protection class 0 of ISO 1182.2 a class A1 of DIN 4102. The fibre glass guarantees an optimal thermal and acoustic insulation. On the front sides of the inner panels there are centred holes at a distance of 152,5 mm each. Through these holes the panels are fixed to each other. In order to obtain a high stability of the structure, the inner panel has two bending on the outer side, allowing an easy assembly of the outer panel skin. Additionally, the overlapping sheets on the angles are micro welded on each other. A quick assembly and disassembly of the outer panel skin is possible through the international patented snap-in-assembly construction with a special profile on the inner side of the outer panel skin.

The air handling units are equipped with large dimensioned access doors in same thickness and execution as panel, door frame made of aluminium, special rubber seal with welded corners, adjustable hinges, safety locks. The doors are foreseen for fan- filter- and humidifier section.

Removable inspection panels with patented service locks are foreseen for prefilters and anti-frost frame sections and on request also for other sections. The execution is the same as the panel, door frame made of aluminium, rubber seal. With screws removable panels are foreseen for electric heater section and on request for other sections. The execution is the same as the panel, door frame made of aluminium.

Certified data of AHU casing conform to EN 1886:

- Casing strength: class D1
- Casing air leakage at -400 Pa: class L1
- Casing air leakage at +700 Pa: class L1
- Filter bypass leakage: class F9
- Incombustible fibre glass insulation thickness 50 mm
- Performance data certified in compliance with DIN EN 13052
- Heat exchangers certified in compliance with EUROVENT Rating Standard 6/C/005/2009
- Base frame made of galvanized sheet metal, hot dip galvanised or painted steel profiles for great units



Technical specification continued

Panel executions standard

- Inner skin: 1,00 mm galvanized sheet
- Outer skin: 0,7 mm galvanized sheet with additional surface coating in white plastic type A47SME, thickness 150 µm
- Thermal transmittance: class T2
- Thermal bridging factor: class TB2
- T2 / TB1 (optional)
- Sound attenuation R_w (DIN 52210-03): 36dB
- Sound attenuation of the panel certified in compliance with EN 1886 and EN ISO 3744:
- Calculated heat transfer coefficient $k = 0,59 \text{ W/m}^2\text{K}$

Frq. Hz	125	250	500	1000	INOVA	4000	8000
Okt. dB	17	21	27	30	31	38	42

Housing assembled with self supporting modular panels with base frame integrated into the unit and aluminium profiles along the upper sides of the unit. Inside and outside walls completely smooth.

The 50 mm thick double skin panel contains a glass fibre insulation, complying with fire protection class 0 of ISO 1182.2 and class A1 of DIN 4102. The fibre glass guarantees an optimal thermal and acoustic insulation. On the front sides of the inner panels there are centred holes at a distance of 152,5 mm each. Through these holes the panels are fixed to each other. In order to obtain a high stability of the structure, the inner panel has two bending on the outer side, allowing consequently an easy assembly of the outer panel skin. Additionally, the overlapping sheets on the angles are micro welded on each other. A quick assembly and disassembly of the outer panel skin is possible through the international patented snap-in-assembly construction with a special profile on the inner side of the outer panel skin.

Frq. Hz	125	250	500	1000	INOVA	4000	8000
Okt. dB	25	25	29	30	31	37	38

The air handling units are equipped with large dimensioned access doors in the same thickness and execution as panel, door frame made of aluminium, special rubber seal with welded corners, adjustable hinges, safety locks. The doors are foreseen for fan, filters and humidifier section. Removable inspection panels with patented service locks are foreseen for prefilters and anti-frost frame sections and on request also for other sections. The execution is the same as the panel, door frame made of aluminium, rubber seal. With screws removable panels are foreseen for electric heater section and on request for other sections. The execution is the same as the panel, door frame made of aluminium.

Certified data of AHU casing conform to EN 1886

- Casing strength: class D1
- Casing air leakage at -400 Pa: class L1
- Casing air leakage at +700 Pa: class L1
- Filter bypass leakage: class F9
- Incombustible fibre glass insulation thickness 50 mm
- Performance data certified in compliance with DIN EN 13052
- Heat exchangers certified in compliance with EUROVENT Rating Standard 6/C/005/2009
- Base frame made of galvanized sheet metal, hot dip galvanised or painted steel profiles for great units

Panel executions standard

- Inner skin: 1,00 mm galvanized sheet
- Outer skin: 0,7 mm galvanized sheet with additional surface coating in white plastic type A47SME, thickness 150 µm
- Thermal transmittance: class T2
- Thermal bridging factor: class TB2
- T2 / TB1 (optional)
- Sound attenuation Rw(DIN 52210-03): 36dB
- Sound attenuation of the panel certified in compliance with EN 1886 and EN ISO 3744
- Calculated heat transfer coefficient $k = 0,59 \text{ W/m}^2\text{K}$

Panel execution industrial

- Inner skin: 1,50 mm galvanized sheet
- Outer skin: 1,0 mm galvanized sheet with additional surface coating in white plastic type A47SME, thickness 130 µm
- Thermal transmittance: class 3
- Thermal bridging factor: class TB2
- Sound attenuation Rw(DIN 52210-03): 41dB
- Sound attenuation of the panel certified in compliance with EN 1886 and EN ISO:

Special materials

- Stainless steel
- Aluminium
- Epoxy coating
- Powder coating

Weatherproof execution (in addition to standard)

- Weatherproof canopy
- Additional sealing of the panels and watertight service doors

Hygienic execution (in addition to standard)

- All components are removable
- Floor panel made as inclined drain pan
- Inner panel connections sealed with special sealant, steam tight, resistant to all known disinfectants and cleaning agents
- Manufactured in accordance with DIN 1946-4

ATEX

- In compliance with 94/9EG / ATEX 100a



Technical data

We reserve the right of technical modifications relating to product improvement without notice.

ZHK Type	Width	Height	Coil face velocity					
			M / S					
			2	2,5	2,75	3	3,5	4
6/3	610	305	950	1.188	1.307	1.426	1.663	1.901
6/4,5	610	457,5	1.331	1.663	1.830	1.996	2.328	2.661
6/6	610	610	1.711	2.138	2.352	2.566	2.994	3.421
9/4,5	915	457,5	2.208	2.759	3.035	3.311	3.863	4.415
9/6	915	610	2.838	3.548	3.903	4.257	4.967	5.676
12/6	1220	610	3.966	4.957	5.453	5.949	6.940	7.932
9/9	915	915	4.324	5.405	5.946	6.486	7.568	8.649
12/9	1220	915	6.169	7.711	8.482	9.253	10.796	12.338
15/6	1525	610	6.698	8.372	9.209	10.047	11.721	13.396
15/9	1525	915	7.923	9.904	10.894	11.884	13.865	15.846
12/12	1220	1220	8.249	10.311	11.342	12.374	14.436	16.498
18/9	1830	915	9.495	11.869	13.056	14.243	16.617	18.991
15/12	1525	1220	10.752	13.441	14.785	16.129	18.817	21.505
18/12	1830	1220	12.887	16.108	17.719	19.330	22.551	25.773
15/15	1525	1525	13.375	16.718	18.390	20.062	23.406	26.749
21/12	2135	1220	15.390	19.238	21.161	23.085	26.933	30.780
18/15	1830	1525	16.537	20.671	22.738	24.805	28.940	33.074
24/12	2440	1220	17.893	22.367	24.603	26.840	31.314	35.787
21/15	2135	1525	19.440	24.300	26.730	29.160	34.020	38.880
18/18	1830	1830	19.669	24.586	27.045	29.503	34.421	39.338
24/15	2440	1525	22.602	28.253	31.078	33.903	39.554	45.204
21/18	2135	1830	23.490	29.363	32.299	35.235	41.108	46.980
24/18	2440	1830	27.311	34.139	37.553	40.967	47.794	54.622
21/21	2135	2135	27.540	34.425	37.868	41.310	48.195	55.080
27/18	2745	1830	31.132	38.915	42.807	46.698	54.481	62.264
24/21	2440	2135	32.020	40.025	44.027	48.030	56.035	64.040
30/18	3050	1830	34.953	43.691	48.061	52.430	61.168	69.906
27/21	2745	2135	36.500	45.625	50.187	54.750	63.874	72.999
24/24	2440	2440	36.197	45.247	49.771	54.296	63.345	72.395
33/18	3355	1830	38.712	48.389	53.228	58.067	67.745	77.423
30/21	3050	2135	40.980	51.224	56.347	61.469	71.714	81.959
27/24	2745	2440	40.794	50.992	56.091	61.191	71.389	81.588
36/18	3660	1830	42.595	53.244	58.568	63.893	74.542	85.190
33/21	3355	2135	45.386	56.732	62.406	68.079	79.425	90.772
30/24	3050	2440	45.801	57.251	62.976	68.701	80.151	91.601
36/21	3660	2135	49.939	62.424	68.666	74.909	87.394	99.878
33/24	3355	2440	50.725	63.407	69.747	76.088	88.770	101.451
39/21	3965	2135	54.346	67.932	74.725	81.518	95.105	108.691
36/24	3660	2440	55.814	69.768	76.745	83.722	97.675	111.629
42/21	4270	2135	55.296	69.120	76.032	82.944	96.768	110.592
39/24	3965	2440	60.739	75.924	83.516	91.109	106.294	121.478
45/21	4575	2135	59.443	74.304	81.734	89.165	104.026	118.886
42/24	4270	2440	65.664	82.080	90.288	98.496	114.912	131.328
45/24	4575	2440	70.589	88.236	97.060	105.883	123.530	141.178
42/27	4270	2745	72.576	90.720	99.792	108.864	127.008	145.152
48/24	4880	2440	75.514	94.392	103.831	113.270	132.149	151.027
45/27	4575	2745	78.019	97.524	107.276	117.029	136.534	156.038
48/27	4880	2745	83.462	104.328	114.761	125.194	146.059	166.925

Notes

A series of horizontal dotted lines for taking notes.



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