

# Quality levels specification

## Decision support on the quality level identification

Quality level	Recommended for	Summary of the most important material difference
<b>1</b>	Non-corrosive conveyed medium	<ul style="list-style-type: none"> <li>- Casing sendzimir-galvanised inside</li> <li>- Casing sendzimir-galvanised and approx. 50–70 µm powder-coated outside</li> <li>- Aluminium frame profiles</li> <li>- Sendzimir-galvanised or powder-coated installation constructions</li> <li>- Chromium-plated screw and connection material</li> </ul>
<b>2</b>	Slightly corrosive conveyed medium	<ul style="list-style-type: none"> <li>- Casing sendzimir-galvanised and approx. 50–70 µm powder-coated inside</li> <li>- Casing sendzimir-galvanised and approx. 50–70 µm powder-coated outside</li> <li>- Aluminium frame profiles</li> <li>- Installation constructions approx. 50–70 µm powder-coated</li> <li>- Chromium-plated screw and connection material</li> </ul>
<b>3</b>	Corrosive conveyed medium	<ul style="list-style-type: none"> <li>- Casing sendzimir-galvanised and approx. 80–100 µm powder-coated inside</li> <li>- Casing sendzimir-galvanised and approx. 50–70 µm powder-coated outside</li> <li>- V2A base plates</li> <li>- Aluminium frame profiles</li> <li>- V2A with installation constructions with a higher load; otherwise approx. 80–100 µm powder-coated</li> <li>- V2A screw and connection material</li> </ul>
<b>4</b>	Heavily corrosive conveyed medium	<ul style="list-style-type: none"> <li>- Casing with V4A inside</li> <li>- Casing sendzimir-galvanised and approx. 50–70 µm powder-coated outside</li> <li>- Aluminium frame profile with two-component wet paint, 80–100 µm</li> <li>- V2A / V4A installation constructions</li> <li>- V2A / V4A screw and connection material</li> </ul>
Special version	Special maximum requirements	Determination of the material quality and the corrosion protection according to the respective conveyed medium and requirements in coordination with our sales team consultants or the technical department

The quality levels listed are to be regarded as recommendations. They are the result of our long-term experience in the construction of air-conditioning units. Thanks to the appropriately selected materials, the entire spectrum - from simple up to the highest-level corrosion protection - is covered.

When determining the quality level, our well trained sales team will be happy to advise you.

The detailed material description can be obtained on our overall table. Non-listed types and/or materials available on request.

There is an option to select different quality levels within the monobloc combination.

Example: Monobloc unit, quality level 1, but with quality level 3 according to vaporisation humidifier.

Powder-coating:

Standard: Seven Air green Epoxy EPX020  
 Seven-Air grey Epoxy EPX0202, RAL7043  
 All RAL colours are available on request.

For external applications:

Standard: Seven-Air grey Polyester PES5803 RAL 7043  
 All RAL colours are available on request.

Sendzimir galvanisation:

Steel sheet with hot-dip galvanising

Stainless steel

V2A: Chrome nickel steel

W no. 1.4301

V4A: Chrome nickel molybdenum steel W no. 1.4404

# Material description

Device parts		Quality levels				Special designs	
		1	2	3	4		
<b>Frame profiles:</b>		Aluminium Al Mg Si05				Alu, 2-component wet paint	
<b>Frame profile seals:</b>		Rubber profile temperature resistant up to 110°C				up to 150 °C temp.-resist.	
<b>Casing walls:</b> Double-shell versions with insulation in between	Outside	Sendzimir galvanised + powder coated 50-70 µm				sg + pc 100-120 µm V2A / V4A	
	Inside	Walls and ceiling	Sendzimir galvanised	sg + pc 50-70 µm	sg + pc 80-100 µm	V4A	V2A
		Floors	Sendzimir galvanised	sg + pc 50-70 µm	V2A	V4A	
		Condensate trays	V2A			V4A	
Insulation		Rigid foam, SKG:33mm/SKG-Z and SZG:43mm, CFC/HCFC-free up to 110°C temp. resistant., λ=0.021 W/mK				Mineral wool	
<b>Partition walls in the unit:</b>		Sendzimir galvanised	sg + pc 50-70 µm	sg + pc 80-100 µm	V4A	V2A	
<b>Closures, handles:</b>		Promat galvanised / plastic		V2A / plastic			
<b>External door hinges:</b>		Promat galvanised / alu			V2A / alu		
<b>Connecting and fastening material:</b> Screws, nuts, washers, rivets etc.		Promat galvanised		V2A	V2A / V4A		
<b>Air dampers:</b>	Frames	Alu			alu + 2-c wet paint		
	Slats	Alu			alu + 2-c wet paint		
	Axles	Promat galvanised		V2A			
	Gears	Plastic					
<b>Filter:</b>	Mounting frame GF, FF	sg + pc 50-70 µm	sg + pc 80-100 µm	V2A	V4A		
	Installation frame AKF	Sendzimir galvanised	sg + pc 50-70 µm	V2A			
	Installation kit SF filter	V2A			V4A		
<b>Air heater:</b>	Installation rails	Hot-dip galvanised		V2A	V4A		
	Frame	Sendzimir galvanised		V2A		V4A	
	Collectors	Steel + reaction paint		Cu		Steel + KO 42/V2A/V4A	
	Slats	Aalu			alu + dip coated	alu + KO 42/Cu/ V2A/V4A	
	Tubes	Cu			Cu + dip coated	galv. Steel+KO 42/V2A/V4A	
<b>Frost protection grille</b>		Hot-dip galvanised			V2A		
<b>Air cooler:</b>	Installation rails	Hot-dip galvanised	V2A		V4A		
	Frame	Sendzimir galvanised		V2A	V4A		
	Collectors	Steel + base/deck contact	Cu			Steel + KO 42/V2A/V4A	
	Slats	Alu		alu + epoxy coating.	alu + dip coated	Alu + KO 42/Cu, V2A/V4A	
	Tubes	Cu			Cu + dip coated	galv. Steel + KO 42/V2A/V4A	
<b>Droplet separator:</b>	Slats	PP				Alu, V2A, V4A	
	Installation rails	Alu		V2A	V4A		
<b>Free running centrifugal fans</b>	Running wheel	Steel+pc or alu or pl	Steel+pc ≥ 60 µm or alu or pl	Steel+pc ≥ 80 µm or pl	on request		
	Support structure + Inlet nozzle	Steel sg or Steel+pc	Steel+pc ≥ 60 µm or Steel sg	Steel+pc ≥ 80 µm	on request		
<b>Case fans</b>	Case	sg, folded	sg, folded + pc ≥ 60 µm	sg, folded + pc ≥ 90 µm	steel both sides welded through + mlp ≥ 120 µm		
	Running wheel	Steel step-welded + pc ≥ 60 µm		Steel welded through + pc ≥ 90 µm	Steel welded through + mlp ≥ 120 µm		
	Shaft	Steel tectylated				V2A, V4A	
<b>Fan console:</b>		Steel + pc 50-70 µm		Steel + pc 80-100 µm	V2A		
<b>Motors:</b> IEC-standard, B3, IP 44	Case	Synthetic resin coating			Increased corr. coating		
	Shaft end	Steel tectylated				V2A, V4A	
<b>Silencer:</b>	Casing, perforated sheets	Sendzimir galvanised	sg + pc 50-70 µm	sg + pc 80-100 µm	V4A	V2A	
	Installation rails	Hot dip galvanised		V2A	V4A		
<b>Contact humidifier:</b>	Sheet metal parts + tub	V2A			V4A		
	Packing	Glasdek (glass fibre, impregnated)					
	Piping	PVC					
	Pump	Pump body and impeller made of plastic, shaft made of stainless steel					
<b>Hybrid humidifier/ Cold steam humidifier</b>	Cladding sheets inside or inner casing	V2A			V4A		
	Turbolators, droplet sep., installation frames	Alu or pl or V2A			pl or V4A		
	Pipes, nozzles, hoses, pump, fittings	Stainless					
<b>Aluminium plate-heat exchanger:</b>	heat exchanger	Alu		alu + Epoxid coated	on request	V4A/Kunststoff oder Glasrohr	
	Exchanger housing /bypass	Sendzimir galvanised	alu or galvanised + pc	galvanised + pc or V2A	on request	V4A	
<b>Rotary heat exchanger:</b>	Rotor	Alu			on request	alu + Epoxid coated	
	Rotor case	Sendzimir galvanised	sg or galvanised+pc or alu	galvanised + pc or alu	on request	V2A or V4A	
	Installation rails	Hot dip galvanised		V2A	V4A		
<b>Flex. Cuffs:</b>		Glass fibre fabric with PU coating, fire class according to VKF = 6q.3 (according to EN 13501 = RF1), temperature resistant up to 150 °C					
<b>Duct connection frame:</b> System METU-M3		Sendzimir galvanised			V2A	angle frame: Steel + pc/hot-dip galv./V2A	
<b>Plinth frame:</b>	Frame profiles	Alu				alu + 2-c-wet./ hot-dip galv.	
	Screw material	Promat galvanised				V2A	
	Insulating elements	Die-cast aluminium / rubber					
<b>Mounting brackets, ceiling brackets:</b>		Hot-dip galvanised				Steel + pc / V2A	

pc = powder-coated  
sg = sendzimir galvanised  
2-c = 2-component coating

mlp= multilayer powde  
pl=plastic