

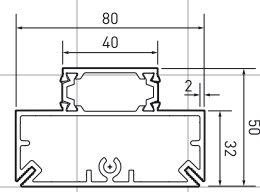
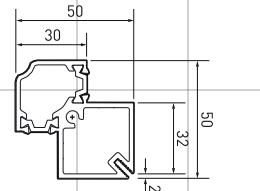
# Anatomy of a DEHUMIDIFIER

Pg. 1 2 3 4

Please note:  
Dimensions are in "mm", millimetre - metric system. Some dimensions and gridlines on the blueprint may deviate from the original plan and to be used for guidance purposes only.

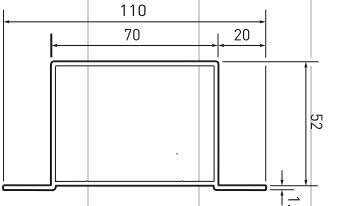
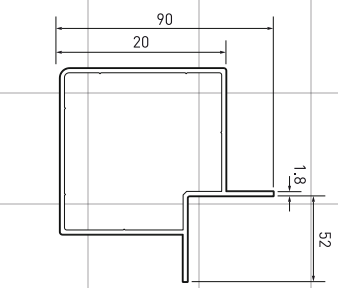
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Thermal break aluminium profile

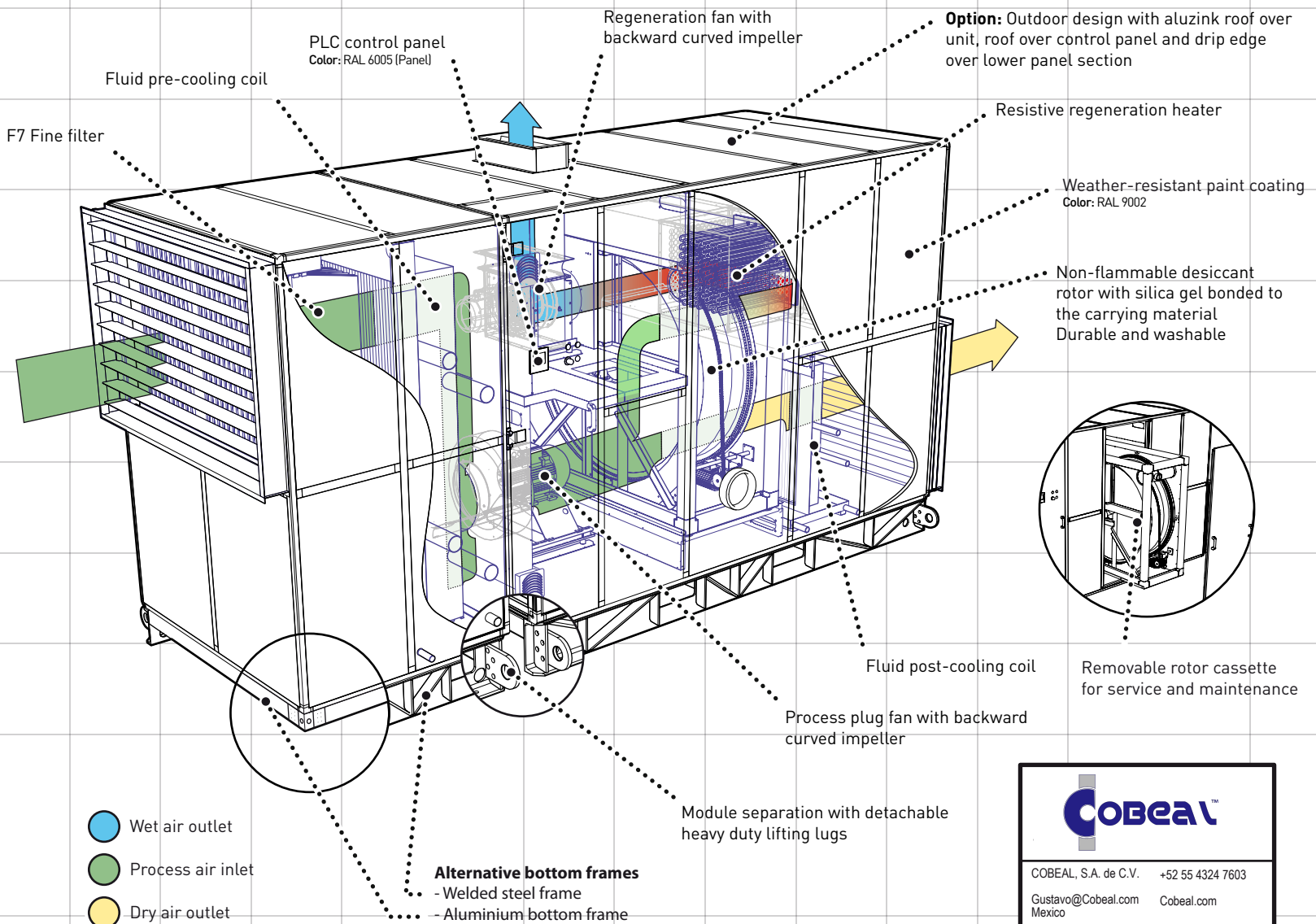


Material: EN AW 6060

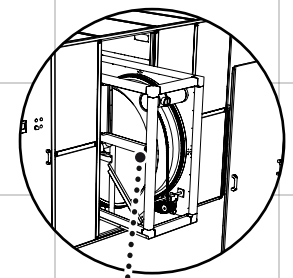
Standard aluminium profile



Material: EN AW 6060



**Option:** Outdoor design with aluzink roof over unit, roof over control panel and drip edge over lower panel section





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Gustavo@Cobecal.com Cobecal.com  
Mexico

Revision no: RevF Version no: 2.1 Filename: Overview

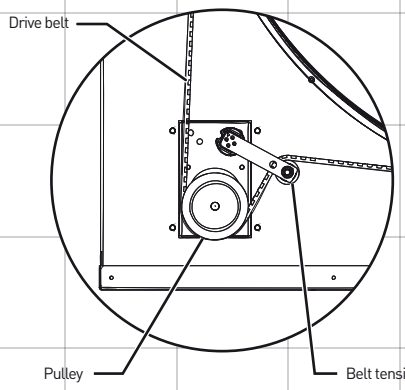
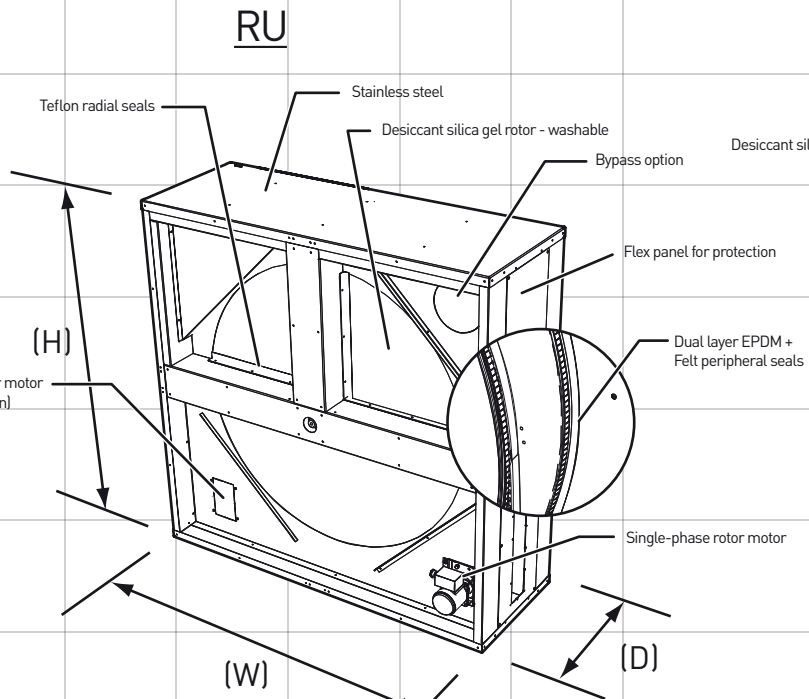
# Rotor cassette DEHUMIDIFIER



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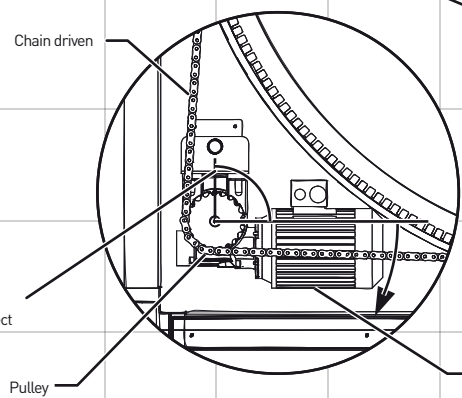
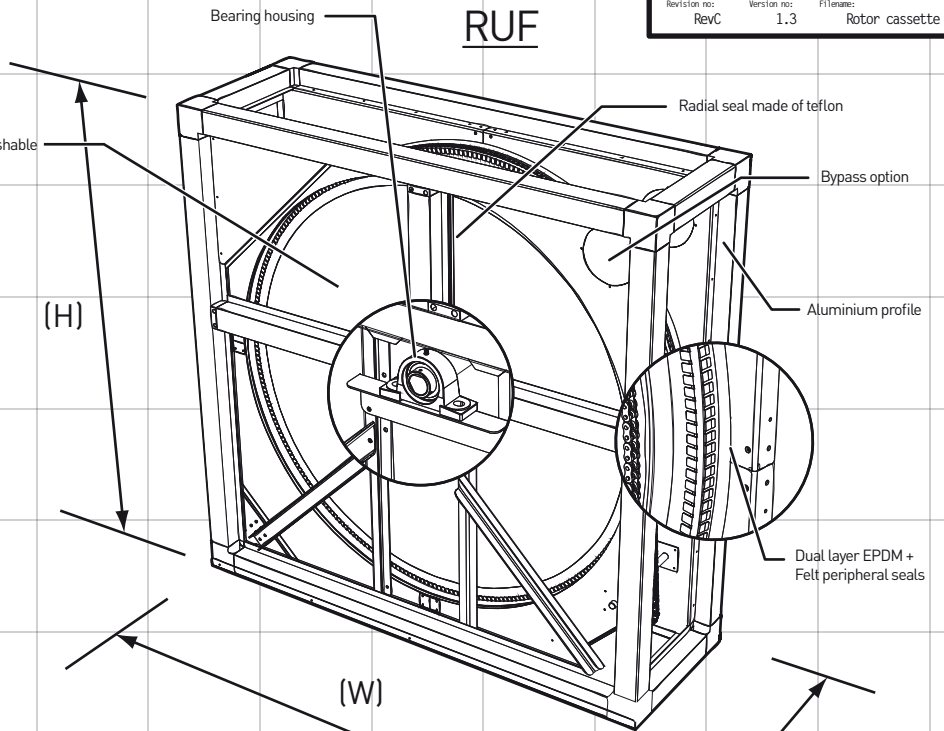
Mexico

Revision no: RevC Version no: 1.3 File name: Rotor cassette



| Model  | Height [mm] | Width [mm] | Depth [mm] | Weight [kg] |
|--------|-------------|------------|------------|-------------|
| RU-060 | 700         | 700        | 290        | 40          |
| RU-061 | 700         | 700        | 340        | 45          |
| RU-062 | 700         | 700        | 440        | 57          |
| RU-082 | 920         | 920        | 440        | 85          |
| RU-102 | 1220        | 1200       | 440        | 120         |

Self-adjusting mechanism uses the rotor motor weight to maintain correct chain tension

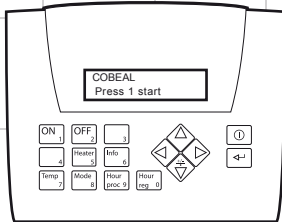


| Model   | Height [mm] | Width [mm] | Depth [mm] | Weight [kg] |
|---------|-------------|------------|------------|-------------|
| RUF-122 | 1 500       | 1 500      | 500        | 250         |
| RUF-152 | 1 805       | 1 805      | 500        | 320         |
| RUF-172 | 2 010       | 2 010      | 500        | 360         |
| RUF-192 | 2 220       | 2 220      | 500        | 450         |
| RUF-222 | 2 470       | 2 470      | 500        | 650         |
| RUF-242 | 2 700       | 2 700      | 500        | 760         |

# Components DEHUMIDIFIER

Pg. 1 2 3 4

## Programmable Logic Control



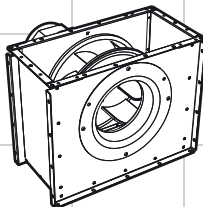
Type: C2, JZ10-11-UA24  
The C2 offers a two 16-character text lines, LCD illuminated screen, with alphanumeric 16-key customisable keypad. A flexible 24K ladder code programming, on-board I/O configurations. The HMI application enables you to design up to 60 text screens, using up to 64 HMI variables for the display of time, date, and real-time system data.



Optional

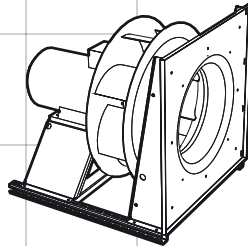
Type: C4, V570  
The touchscreen HMI enables the display of 'touchable' images and text according to real-time conditions—for on-line operation and diagnostics.  
  
The C4 offers a rich range of embedded features such as multiple auto-tuned PID loops, internal 120K structured data table and loadcell support, Ethernet, GSM/SMS, MODBUS, networking, remote access and much more.

## Regeneration fan



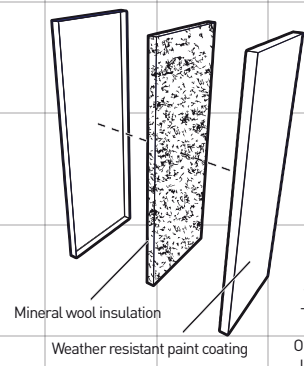
Material  
ER-plug fan made as rugged bolted construction built with galvanised sheet steel. Inlet ring for optimum impeller inflow with measurement device for determining flow rate.

## Process fan



Blades: 7 backward curved blades made of steel sheet or hard resistant plastic  
Max/Min permissible media temperature: 40°C / -20°C  
Conforms to energy efficiency ErP 2009/640/EC directive  
Motor class: IE2  
IP class: IP55  
VSD controlled using Vacon  
Motor protection: PTC thermistor (PTC)  
Manufacturer: Ziel-Abegg

## Heat insulated panel

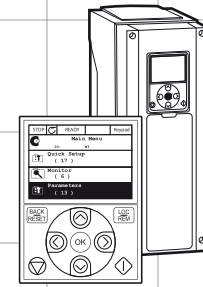


MINERAL WOOL SPECIFICATION  
- 50 mm  
- Rockwool  
- 100kg/m³  
- 0.045 W/m²K  
- Flameproof class O (ISO1182)

PANEL SPECIFICATION  
- Hot-zinc (UNI EN10142)  
- 150 gr/mq  
- Inside panel 1mm galvanized steel  
- Outside panel 0.8mm galvanized steel

COATING SPECIFICATION  
- Dual dry film layer  
- 1st layer 5 µm  
- 2st layer 25 µm  
- RAL9002

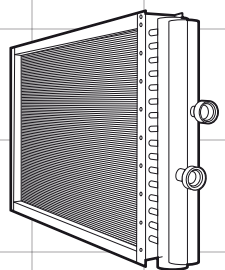
OPTION  
- INOX 304 or 316



## VSD

Type: AC drive  
Input voltage 208...240, 380...500  
Input frequency: 50...60 Hz -5...+10%  
Standards: Compliance with global standards and approvals  
E.g. EMC compliance, Safety: EN 61800-5-1 (2007)...  
IP class: IP21 or IP54  
Remote access: Built-in Modbus TCP and Modbus RTU  
Feature: Real time clock with calendar based functions  
Energy counter  
Flying start  
Motor Switch  
3 Prohibit Frequency Ranges  
Digital control panel  
Safe torque off, Safe Stop  
Manufacturer: Vacon

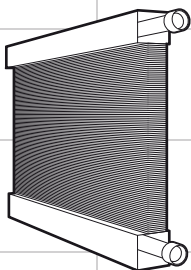
## Fluid coils



Material  
The heat exchanger is designed using copper tubes and aluminium fins with a casing of hot-dip galvanised steel sheet and steel headers.  
Conforms to SS-EN ISO 228-1, AMA-code QFC and Pressure Equipment Directive PED 97/23/EC.

Fluid  
Max. Fluid velocity: 1.5 m/s in tubes.  
Max. Air velocity: 5.0 m/s.

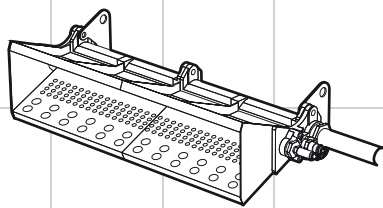
## Steam coil



Steam  
Max. Operating pressure: 10 bar(g)  
Max. Operating temperature: 185°C

| Header material | Max/Min temp | Max operating pressure |
|-----------------|--------------|------------------------|
| Fe              | 100/-20°C    | 1.6 Mpa                |
| Cu (DN 80)      | 110/0°C      | 1.0 Mpa                |
| Cu (DN 15-50)   | 110/0°C      | 1.6 Mpa                |

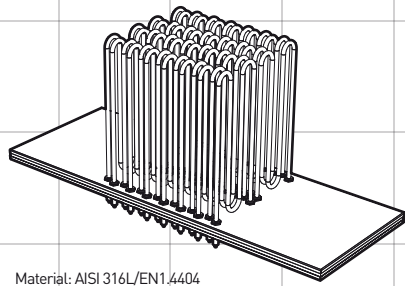
## Gas heater



Material:  
The burners consist of rust resistant cast iron bodies (which serve as the gas manifold) drilled to discharge the fuel between diverging stainless steel mixing plates. The main heater assembly houses the circulating air fan, the gas burner, the fuel gas line and all necessary safety and burner management system controls.

Burner type: Maxon LV-NP Direct fire heater  
Material: Rust resistant cast iron bodies  
Maximum effect: 300kW  
Siemens electronic control box  
Honeywell safety components

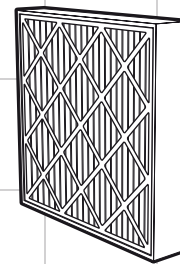
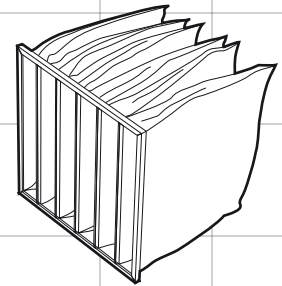
## Electric heater



Material: AISI 316L/EN1.4404  
Tube diameter: 8.5mm  
Current: Max. 600V  
Conforms to: EN60335-1 safety  
Corrosion: Minimal due to low carbon  
Max 700°C for use in corrosive environment  
Connection: 2 nipples on each end secured using heat resistant bushing and nut  
Bending radius: R12.5

## Main filter

Type: Compact multi-pocket bag filter  
Frame: Galvanised steel  
Media: Glass fibre  
EN779:2012 efficiency: F7  
Recommended final pressure drop: 450 Pa  
Temperature: 70°C



## Pre-filter

Type: Disposable pleated panel filter  
Frame: Moisture resistant cardboard  
Media: Mixture of cotton & synthetic fibres  
Gravimetric efficiency: 90%  
EN779:2012 efficiency: G4  
Recommended final pressure drop: 200 Pa

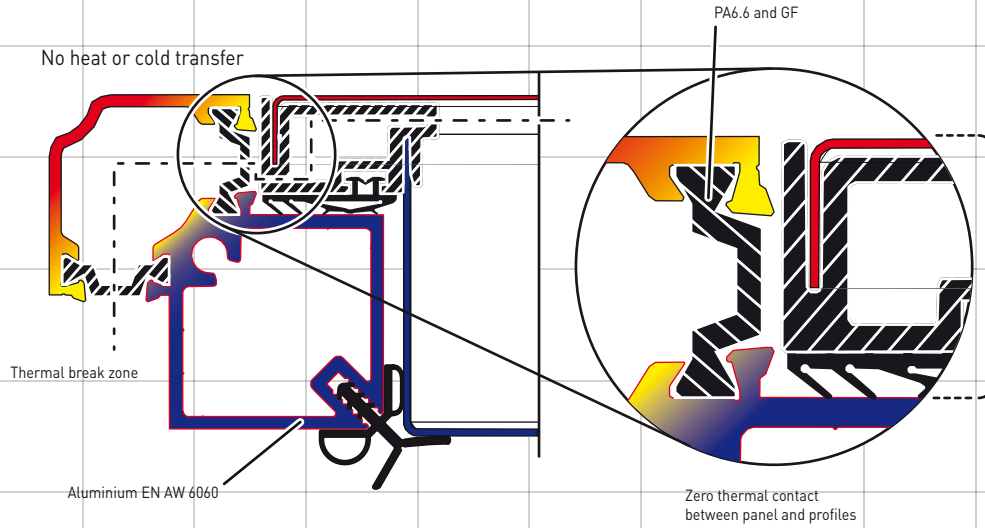
# Thermal break DEHUMIDIFIER



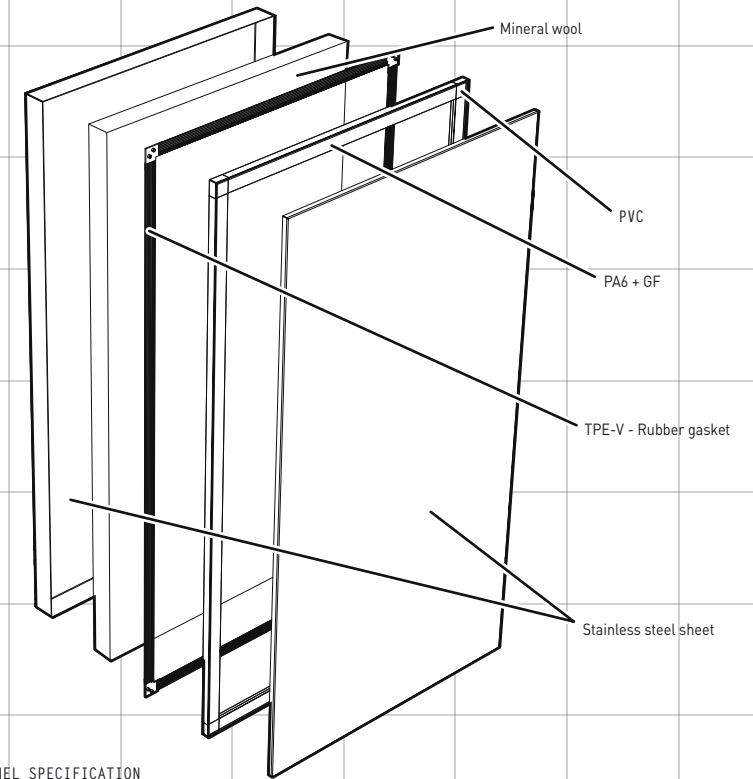
Please note:  
The thermal break system is optional

Thermal Break System **T2 & B2 EN 1886**

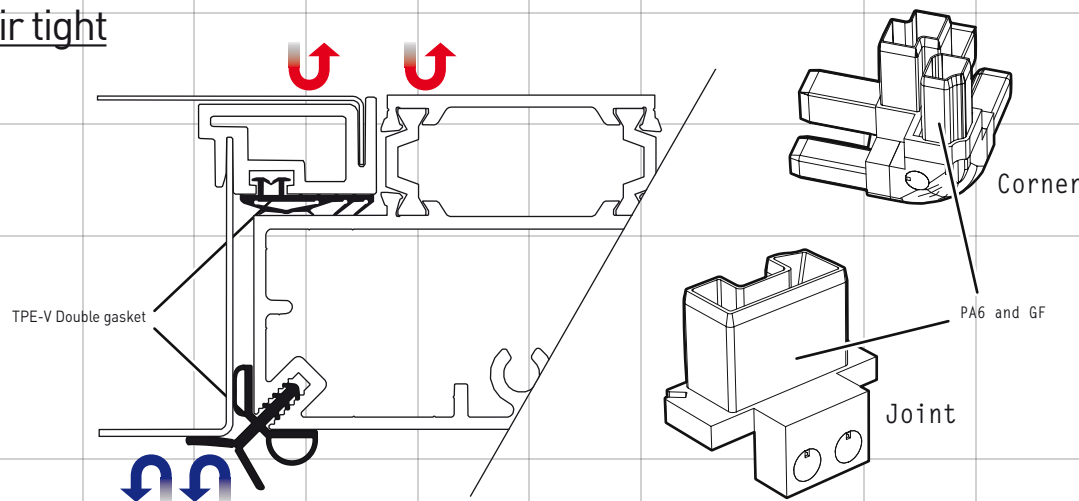
## Thermal bridging



## Panel design



## Air tight



- PANEL SPECIFICATION**
- Hot-zinc (UNI EN10142)
  - 150 gr/mq
  - Inside panel 1mm galvanised steel
  - Outside panel 0.6mm galvanised steel

- COATING SPECIFICATION**
- Dual dry film layer
  - 1st layer 5 µm
  - 2st layer 25 µm

- MINERAL WOOL SPECIFICATION**
- 50 mm
  - Rockwool
  - 100kg/m³
  - 0.045 W/m\*K
  - Flameproof class 0 (ISO1182)



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Revision no: RevD Version no: 1.0 Filename: Profiles