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HVAC
SYSTEMS

AIR HANDLING UNIT

TKS MODULAR AIR HANDLING UNIT



CE TSEK

TEKNOGEN®

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Teknogen

As one of the leading manufacturers of Heating, Ventilation and Air Conditioning market, **TEKNOGEN HVAC** stands for innovation, top quality, leading technology and reliable service. That's why our motto is **"SIMPLY THE BEST SOLUTIONS"**.

One of the core issues for production is quality and high-end components for reaching top quality units. All internal processes are being regulated by **ISO9001** quality management system.

We combine the demands from the market with the new trends for energy savings and environmental needs. This combination leads us to create new designs with innovated ideas. This approach makes us have loyal customers worldwide.

TEKNOGEN has a large range for Air handling Units, Fancoils, Heat Recovery Ventilators, Swimming Pool Air Handling Units, Chillers, Rooftop Units, Floor Convectors, Unit Heaters. Our headquarters located in Istanbul and the factory is in Izmir.

If you are looking for high quality production and a solution partner, we Teknogen ready.

Air Handling Unit

TEKNOGEN TKS Modular Air Handling Units are designed by TEKNOGEN R&D team for hygienic, comfort and industrial needs. The core point of design process is energy efficiency. The panel and body design of units can meet low levels of thermal bridging. The easy mounting and demounting of the units can be done easily thanks to modular design of the units.

TKS units are designed in 62 different dimensions in accordance with standard filter sizes which offers alternative solutions for users. In TKS modular units, there could be 19 different cells which are Fan Cell, Panel Filter Cell, Bag Filter Cell, Active Carbon Filter Cell, Heating /Cooling or DX Coil Cell, Plate Type Heat Recovery Cell, Rotary Type Heat Recovery Cell, Heat Pipe Heat Recovery Cell, Run Around Heat Recovery Cell, Electrical Heater Cell, Steam Humidifier Cell, Pad Humidifier Cell, Silencer, Double Damper Mixing Cell, Triple Damper Mixing Cell and Empty Cell. These cells can be selected in 62 different dimensions according to technical needs.

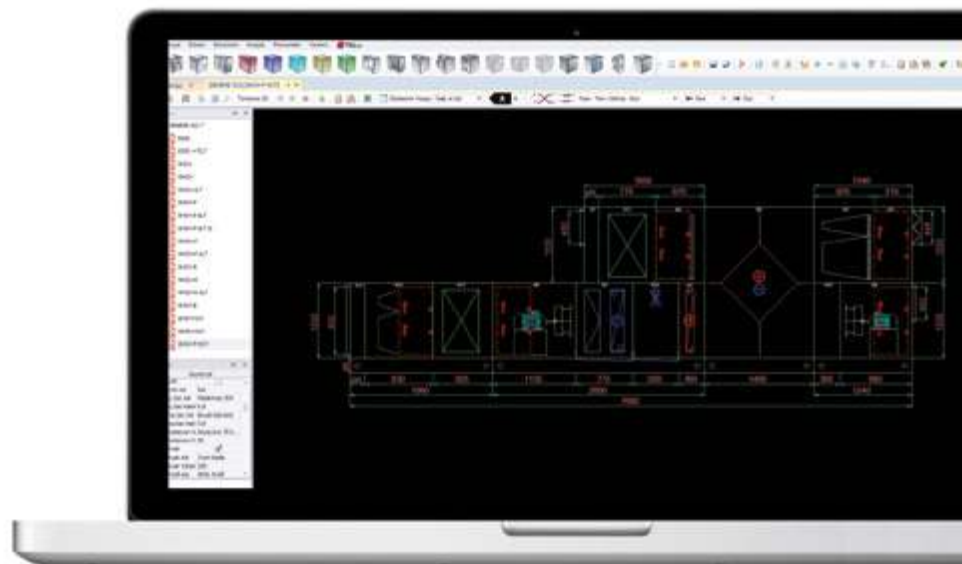
The energy efficient TKS units, thanks their unique design, heat recovery sections can be easily selected through a user friendly selection software in a very short time. In accordance with the increasing cost of the energy and the demand to the energy efficiency, heat recovery options are turning to a standard application. Plate Type / Rotary Type/ Heat Pipe or Run Around Heat Recovery options could be applied in TKS units according to working conditions. By using these heat recovery options makes cooling and the heating capacities less and offers chance to have energy efficient units.

The carcass structure of the units consist of specially designed aluminium profiles. 50 mm panel design blocks thermal bridging with advanced gasketing system. The click-fit design of the panel creates smooth surface inside of the unit. The standard panels are 50 mm in thickness and 70 kg/m³ in density. In addition to this panel configuration 50 mm-52 kg/m³ and 50 mm-110 kg/m³ are optional which satisfies different heat and sound proof necessities.

Inner pressure loss values could be minimum thanks to carcass and the panel structure of TKS Modular Air Handling Units which creates a smooth surface inside the units. To reach these values, IE2 type motors are used as standard where as IE3 motors are optional which let the units consume less electrical power. For fans belt driven and direct driven types are available. In belt driven systems, the fan model options are forward curved, back curved and hollow aerofil. In direct driven fans the options are AC plug and EC plug fans. These fan options enable to create an efficient system at the optimum working conditions.

TKS MODULAR AIR HANDLING UNIT SELECTION AND DESIGN SOFTWARE

With TEKNOGEN selection software hundreds of different units could be designed and selected according to required conditions. After the selection, the technical data sheets and drawing of the units in .dxf format is ready to be used. This a web-based software which makes it possible to be used in everywhere internet connection available.



Housing/Carcass Of The Unit



Feet

The feet that are used in TKS Air Handling Units has advantages for transportation and during operation of the unit. Each cell of the Air Handling unit has its own foot. This design enables to reach downside of every cell. There are horizontal and vertical connection points letting units be transported easily.

Panel

TKS Air handling Units have panels which has 50 mm thickness and 70kg/m³ rockwool isolation . The design of these panels creates a smooth surface in and out of the unit. Specially designed gaskets are used to prevent thermal bridging and also to btain low thermal loss values. Inner sheet metals of the panels are 0,9 mm (275 gr/m²) galvanised, and the outer sheet metals are 1mm and painted in RAL 9002. Panels are attached to the skeleton with a special screw to prevent corrosion. The screws are sealed inside of the units and covered with plastic stoppers at outside of the unit.

Housing

TKS Modular Air Handling are produced with eloxal aluminium frame structure which has D2,L1,T3,TB3 values according to EN 1886. TKS units are designed in modular type in accordance with standard filter sizes which offers alternative solutions for users. There is no contact between inner and outer metal surface of the units thanks to special gasketing system.

At connections points, instead of using a interconnection between panels, the panels are connected panel to panel. This makes units have homogenic isolation all through the surface and let the unit have minimum thermal loss values.

Body Specifications

Housing and the body of TKS Modular Air Handling Units are tested according to EN-1886 and below mechanical results are obtained.

| TKS MODULAR AIR HANDLING UNITS TECHNICAL DATA ACCORDING TO EN-1886 | | | | | |
|---|------------------|------------------|--------------|--------------|---------|
| Mechanical strength (mm x m ⁻¹) | D1 | D2 | | D3 | |
| | 4 | 10 | | >10 | |
| Air Leakage on the Body (l x s ⁻¹ x m ⁻²) | L1 (f400) | L2 (f400) | | L3 (f400) | |
| | 0,15 | 0,44 | | 1,32 | |
| | L1 (f700) | L2 (f700) | | L3 (f700) | |
| | 0,22 | 0,63 | | 1,90 | |
| Bypass leakage on the Filter (%k) | F9 | F8 | F7 | M6 | G1-M5 |
| | 0,5 | 1 | 2 | 4 | 6 |
| Thermal permeability (w x m ⁻² x K ⁻¹) | T1 | T2 | T3 | T4 | T5 |
| | U<0,5 | 0,5<U≤1,0 | 1,0<U≤1,4 | 1,4<U≤2,0 | 2,0<U |
| Thermal Bridging | TB1 | TB2 | TB3 | TB4 | TB5 |
| | 0,75<kb<1,00 | 0,60<kb<0,75 | 0,45<kb<0,60 | 0,30<kb<0,45 | kb<0,30 |



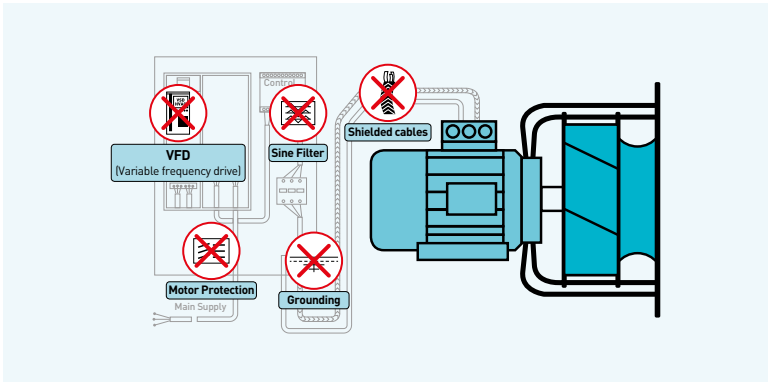
Fan/Motor Section

Fan/Motor

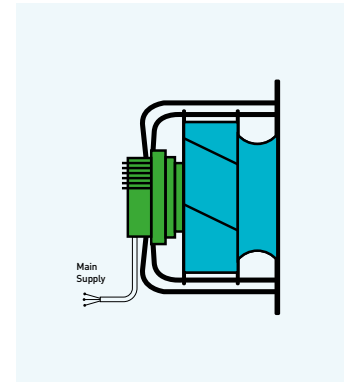
According to design conditions, forward curved, back curved and aerofil plug fans could be used in TKS Modular Air Handling Units. Selection software enables to choose between fans and optimization is also possible. The inlet direction could be head or down and unit can be produced with flanges. The flanges could be square or rectangular in shape.



Conventional Fans



GreenTech EC Fans



Fan/Motor sections are produced over spring isolators to prevent vibration. There is service cover for replacing of the motor, for cleaning of the fan and for adjusting or changing the belt.

Observation glass, lighting of the cell, belt fault signal or constant flow kits (only for plug fans) are optional. In some applications, motor could be taken out of the cell.



Damper Section

Damper

Dampers which are in aerofil structure and with opposite winged are used in TKS Modular Air Handling Units. Body and wing of the dampers are made up of from painted aluminium. The gaskets that are used in dampers minimize the leakage. Manually controlled dampers are used as standard in production, but as an option it can be produced to work with damper motors . Damper motors can be supplied as on/off and also proportionally controlled.

There are three different types of damper sections; suction cell with single damper, mixing cell with double damper and mixing cell with triple damper. These dampers can be selected according to technical needs. The dampers in mixing cell, are calculated according to air speed, when the full air volume pass through them. As an option, filtre can be added to damper sections.



Filter Sections

Filter

Four types of filters are used in TKs Modular Air Handling Units. Due to filter classifications , the dust keeping capacities are listed below;

| | DIN EN 779 ⁽¹⁾ | | EUROVENT 4/9 ⁽²⁾ | |
|--------------------|------------------------------|--------------|------------------------------|--------------|
| | Particle Keeping Average [%] | | Particle Keeping Average [%] | |
| Panel Filter | G 1 | 0m < 65 | EU 1 | 0m < 65 |
| | G 2 | 65 ≤ 0m < 80 | EU 2 | 65 ≤ 0m < 80 |
| | G 3 | 80 ≤ 0m < 90 | EU 3 | 80 ≤ 0m < 90 |
| | G 4 | 90 ≤ 0m | EU 4 | 90 ≤ 0m |
| Bag/Compact Filter | Particle Keeping Average [%] | | Particle Keeping Average [%] | |
| | F 5 | 40 ≤ Em < 60 | EU 5 | 40 ≤ Em < 60 |
| | F 6 | 60 ≤ Em < 80 | EU 6 | 60 ≤ Em < 80 |
| | F 7 | 80 ≤ Em < 90 | EU 7 | 80 ≤ Em < 90 |
| | F 8 | 90 ≤ Em < 95 | EU 8 | 90 ≤ Em < 95 |
| | F 9 | 95 ≤ Em | EU 9 | 95 ≤ Em |

Panel Filter

Panel filters are used for pre-filtering in comfort applications. To increase air passage surface, panel filters are produced in zigzag shape. Due to their dust-keeping capacities, panel filters can be classified as G2, G3, and G4 class. They can be cleaned with air, and as an option, washable types are available. They can be produced specially to keep grease and those kinds of elements. The dimensions are standard. Maintenance and also replacing of the filters are easy.



Compact Filter

These filters are classified as M5, M6, M7, M8, and M9 due to their dust-keeping performance according to EN-779 regulations. They are used for re-filtering of pre-filtered air and have a high capacity of dust-keeping. If there is a need for a compact design, compact filters can be used as an alternative to the bag filters, since their length is 292 mm. These filters are not cleanable; they had to be replaced when they became dirty.

Bag Filter

These filters are classified as M5, M6, M7, M8, and M9 due to their dust-keeping performance according to EN-779 regulations. They are used for re-filtering of pre-filtered air and have a high capacity of dust-keeping. To decrease pressure loss, they can be produced with 300 mm of pockets. Pockets of 600 mm length are optional.



Active Carbon Filter

These filters are used for keeping bad smell and steam molecules in the air, and they are suitable for industrial usage such as big kitchens, air-plane hangars, chemical factories, and refineries. They are cylindrical in shape and have active carbon granules inside. After using a certain period of time, these granules lose their particle-keeping features and had to be replaced.

Heating /Cooling Coil Section

Heating/Cooling Coils

Different types of heating and cooling coils are used in TKS Modular Air Handling Units according to required capacities in the project. While the cooling coils could be with water or refrigerant, the heating coils could also be with steam. The coils can be selected through the selection software due to required capacity, pressure loss and geometrical design. Coils are made up of copper tube aluminium winged as standard but also copper tube copper winged is optional. The coils made up of from steel are also available as an option. The coils with water has air purges as standard application. By-pass sheet metals are covered all around the coils for preventing air leakage. If air speed on the cooling coil is more than 2,5m/s, then the cooling coil will be produced with drop eliminator.



Electrical Heater Section

Electrical Heater

Electrical heaters are used when there is no thermal source for heating or to minimize the risk of freezing. The heaters have thermostates for safe operation and also shutting down the unit in case of high temperatures. These can be controlled by automation and uncontrolled high temperatures will not be allowed. Electrical heaters can be produced with automation panels which let the heater work with some accessories.

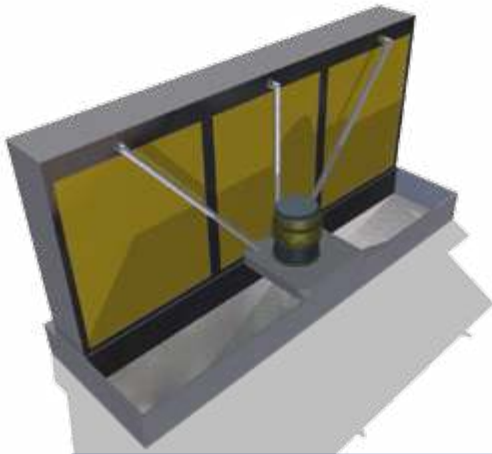


Dehumidifier Section

Two types of humidifiers can be used TKS Modular air Handling Units.

Steam Humidifiers

It consists of a microprocessor controlled steam producer and pipes. The steam coming from humidifier goes through air handling unit with pipes. They produce steam by using electricity. They have types which work controlled as on/off and also proportional, and capacity between 5kg/h -180kg/h and electrical current between 230-400V.



Humidifiers with Pad

These type humidifiers has a pad which transfers humidity. This pad is selulosic based and while air passing through this pad the humidity level increases thanks to humidity transfer feature of the pads. They are used with drop eliminators to prevent water drops go through to air, if the air speed is more than 2,5m/s.

Silencer Section

Silencer

The noise levels are very low in TKS Modular Air Handling Units thanks to noise reduction feature of the body. Silencers are used to minimize the noise caused by the air movement or where the very low noise levels are required. There are three types of silencers used as standard according to their lengths. Below table shows noise reduction levels of silencer in different frequencies.

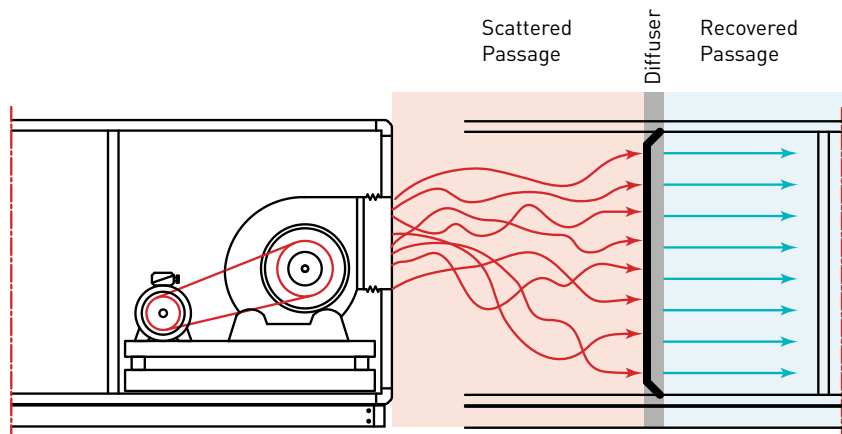


| Cell length | 63 Hz | 125 Hz | 250 Hz | 500 Hz | 1000 Hz | 2000 Hz | 4000 Hz | 8000 Hz |
|-------------|-------|--------|--------|--------|---------|---------|---------|---------|
| mm | dB | | | | | | | |
| 600 | 4 | 8 | 15 | 15 | 17 | 12 | 9 | 6 |
| 900 | 6 | 12 | 22 | 22 | 24 | 23 | 13 | 9 |
| 1200 | 7 | 15 | 27 | 28 | 29 | 29 | 19 | 12 |

Diffuser Sections

Diffusers

They are used for the units with radial fan to adjust airflow. It is highly recommended to use silencers when the fan is used at the same direction with air flow to have homogenic air flow.



Heat Recovery Section

Heat Recovery

In accordance with increasing demand for energy efficiency, heat recovery sections are designed to recover the energy on the exhaust air. There are two types heat recovery applications selected from the TKS selection software.

Heat Recovery with Cross-flow Aluminium Plate Exchangers

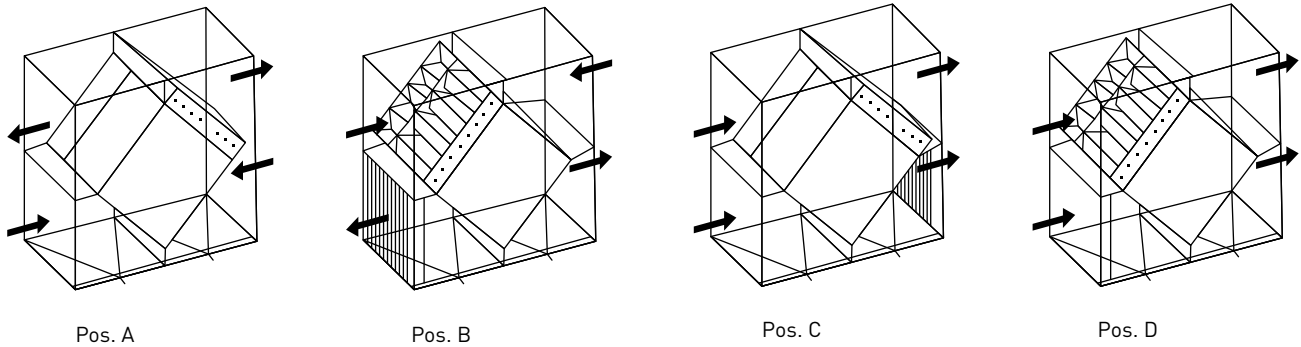
It is the most common way of heat recovery. Inlet and exhaust air can transfer thermal load up to %70 due to air temperature and relative humidity. High efficiencies and low pressure losses can be obtained with these kind of exchangers. Air flows of fresh and exhaust air go through in different ways which prevents transferring of odor any other particles.

The TKS units using these kind of exchangers can have free-cooling feature. In these applications, the air flow goes through inside without passing through the exchanger with by-pass damper located on the exchanger. It is an optional feature which can be supplied with damper motor and automation. ve otomasyonu ile birlikte sağlanabilmektedir.



Heat Recovery Section

A drain pan is used for collecting the drain where exhaust air leaves exchanger in case of possible condensation. Additional drain pan can be used in the other air flow way in ambients where the relative humidity is very high. Cross-flow heat recovery sections are designed as follows for standard applications;



Rotary Type Heat Recovery

High efficiency levels ,humidity transfer and compact structure are the features that makes Rotary type heat recovery used in air handling units. Rotary consist of aluminium sheets that is rounded one on another in sinuzoidal shape. The distance between aluminium sheets is the area where heat transfer takes place .This difference also shows the efficiency level and pressure loss of the rotary.

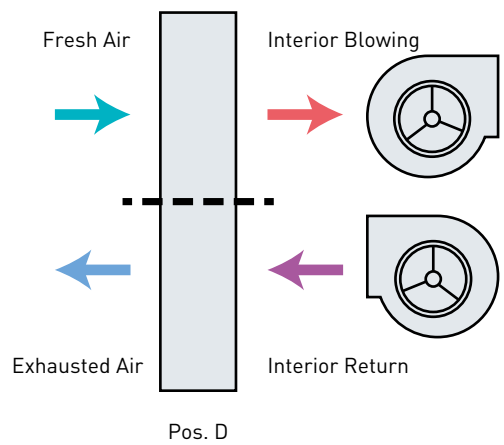
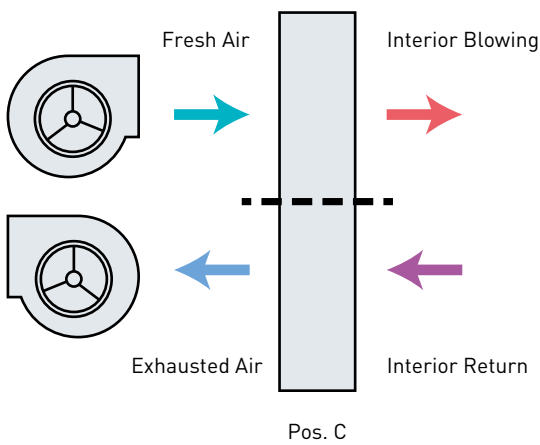
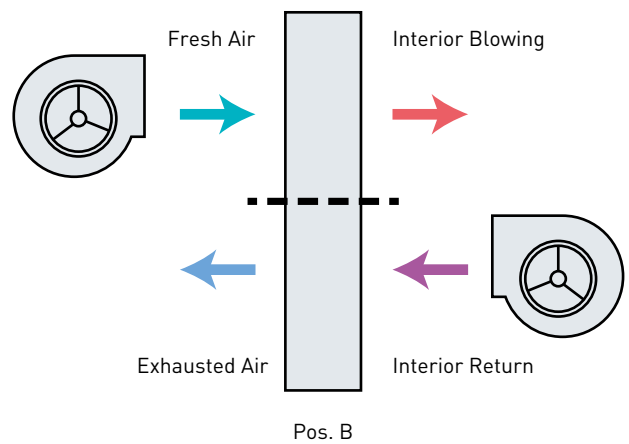
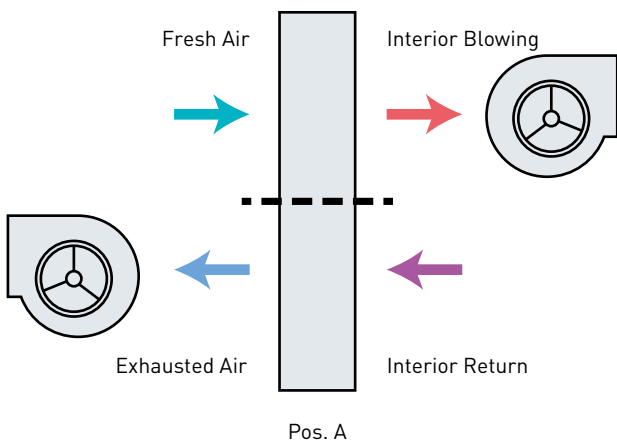
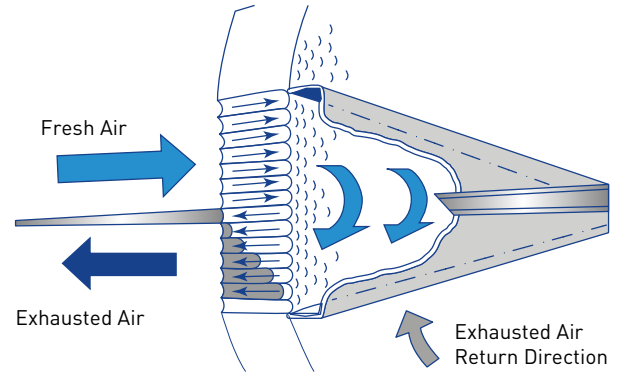
Aluminium sheets can be covered with special materials according to humidity transfer required. The efficiencies could reach up to %80 due to material covered on the aluminium sheets while the humidty transfer levels are changing.

The humidity transfer efficiency with condensation rotaries could be around %40 .Silica gel coated rotaries could reach up to %60 humidity transfer efficiency. Humidity transfer efficiency level can reach up to%80 with zeolite coated rotaries thanks to nano-technology used in .



Heat Recovery Section

There is a possibility of mixing of air between fresh and exhaust air in rotary type heat recovery systems. TKS Modular Air handling Units come with sweeping cells to reduce mixing of air. The sweeping cell change the direction of the return air before it mixed with fresh air to return air direction. This application keeps the surface of the rotary clean while decreasing the maintenance needs.



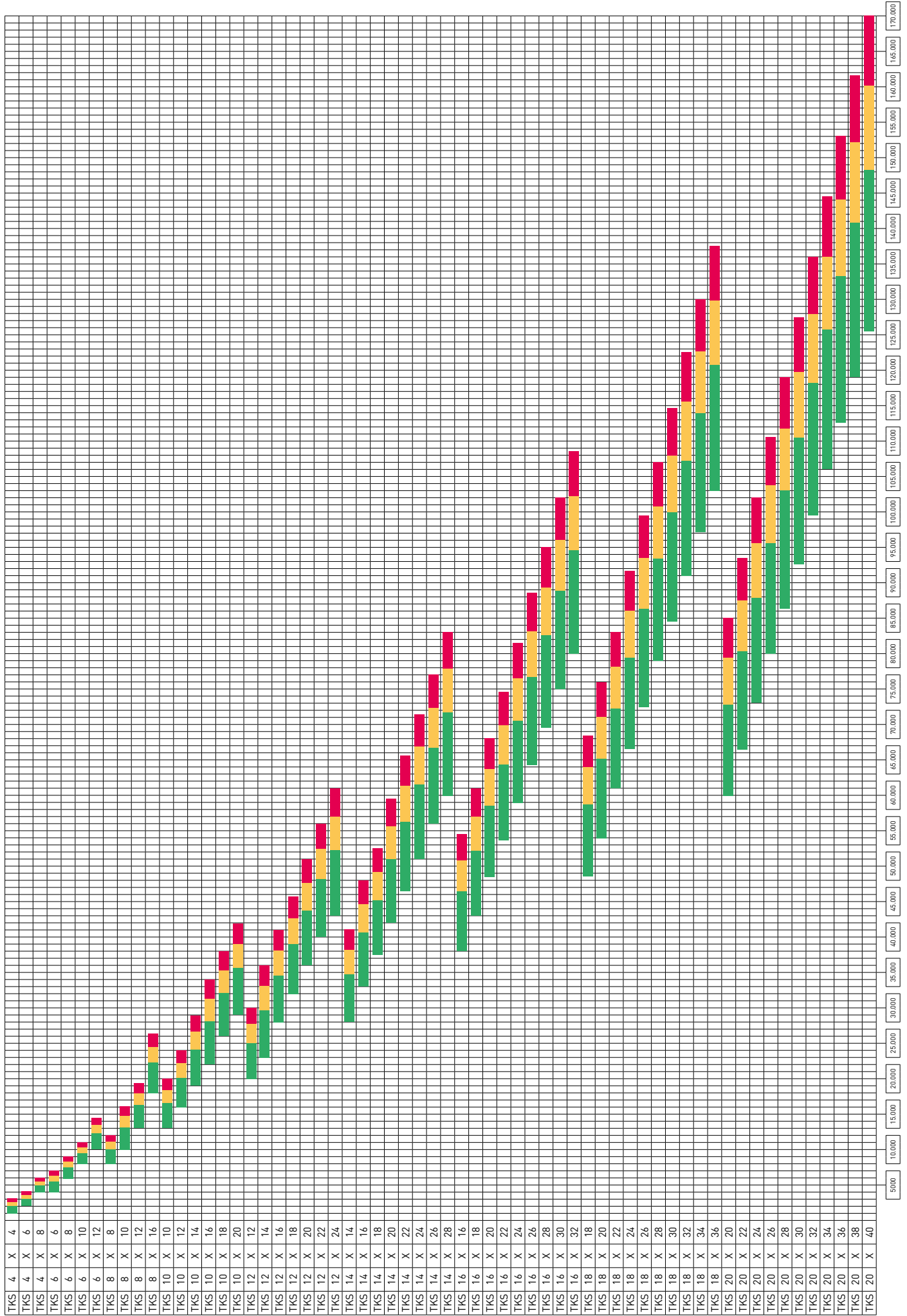
Dimensions

| Model | Panel Thickness | | Bag Filter | Panel Filter | Heating Coil | Cooling Coil | DX Coil | Humidifier | Electrical Heater | Silencer | Plate Heat Recovery | Mixing Cell with Damper | Air Inlet-Outlet (Front/with damper) | | | | |
|--------|-----------------|---|------------|--------------|--------------|--------------|---------|------------|-------------------|----------|---------------------|-------------------------|--------------------------------------|-----|------|------|------|
| | 50 mm | | | | | | | | | | | | | | | | |
| | H | W | 600 | 300 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | | | |
| mm | | | | | | | | | | | | | | | | | |
| TKS 4 | 4 | X | 4 | 912 | 712 | 865 | 559 | 253 | 406 | 559 | 559 | 712 | 559 | 865 | 1018 | 1171 | 559 |
| TKS 4 | 4 | X | 6 | 912 | 1018 | 865 | 559 | 253 | 406 | 559 | 559 | 712 | 559 | 865 | 1018 | 1171 | 559 |
| TKS 4 | 4 | X | 8 | 912 | 1324 | 865 | 559 | 253 | 406 | 559 | 559 | 712 | 559 | 865 | 1018 | 1171 | 559 |
| TKS 6 | 6 | X | 6 | 1218 | 1018 | 865 | 559 | 253 | 406 | 559 | 559 | 712 | 559 | 865 | 1018 | 1171 | 559 |
| TKS 6 | 6 | X | 8 | 1218 | 1324 | 865 | 559 | 253 | 406 | 559 | 559 | 712 | 559 | 865 | 1018 | 1171 | 559 |
| TKS 6 | 6 | X | 10 | 1218 | 1630 | 865 | 559 | 253 | 406 | 559 | 559 | 712 | 559 | 865 | 1018 | 1171 | 559 |
| TKS 6 | 6 | X | 12 | 1218 | 1936 | 865 | 559 | 253 | 406 | 559 | 559 | 712 | 559 | 865 | 1018 | 1171 | 559 |
| TKS 8 | 8 | X | 8 | 1524 | 1324 | 865 | 559 | 253 | 406 | 559 | 712 | 712 | 559 | 865 | 1171 | 1171 | 559 |
| TKS 8 | 8 | X | 10 | 1524 | 1630 | 865 | 559 | 253 | 406 | 559 | 712 | 712 | 559 | 865 | 1018 | 1171 | 559 |
| TKS 8 | 8 | X | 12 | 1524 | 1936 | 865 | 559 | 253 | 406 | 559 | 712 | 712 | 559 | 865 | 1171 | 1171 | 559 |
| TKS 8 | 8 | X | 16 | 1524 | 2548 | 865 | 559 | 253 | 406 | 559 | 712 | 712 | 559 | 865 | 1477 | 1171 | 559 |
| TKS 10 | 10 | X | 10 | 1830 | 1630 | 865 | 559 | 253 | 406 | 559 | 712 | 712 | 559 | 865 | 1477 | 1630 | 712 |
| TKS 10 | 10 | X | 12 | 1830 | 1936 | 865 | 559 | 253 | 406 | 559 | 712 | 712 | 559 | 865 | 1477 | 1324 | 712 |
| TKS 10 | 10 | X | 14 | 1830 | 2242 | 865 | 559 | 253 | 406 | 559 | 712 | 712 | 559 | 865 | 1171 | 1324 | 712 |
| TKS 10 | 10 | X | 16 | 1830 | 2548 | 865 | 559 | 253 | 406 | 559 | 712 | 712 | 559 | 865 | 1171 | 1324 | 712 |
| TKS 10 | 10 | X | 18 | 1830 | 2854 | 865 | 559 | 253 | 406 | 559 | 712 | 712 | 559 | 865 | 1171 | 1324 | 712 |
| TKS 10 | 10 | X | 20 | 1830 | 3160 | 865 | 559 | 253 | 406 | 559 | 712 | 712 | 559 | 865 | 1477 | 1630 | 712 |
| TKS 12 | 12 | X | 12 | 2136 | 1936 | 865 | 559 | 253 | 406 | 559 | 712 | 712 | 559 | 865 | 1783 | 1936 | 1018 |
| TKS 12 | 12 | X | 14 | 2136 | 2242 | 865 | 559 | 253 | 406 | 559 | 712 | 712 | 559 | 865 | 1477 | 1783 | 1018 |
| TKS 12 | 12 | X | 16 | 2136 | 2548 | 865 | 559 | 253 | 406 | 559 | 712 | 712 | 559 | 865 | 1477 | 1630 | 1018 |
| TKS 12 | 12 | X | 18 | 2136 | 2854 | 865 | 559 | 253 | 406 | 559 | 712 | 712 | 559 | 865 | 1477 | 1630 | 1018 |
| TKS 12 | 12 | X | 20 | 2136 | 3160 | 865 | 559 | 253 | 406 | 559 | 712 | 712 | 559 | 865 | 1783 | 2242 | 1018 |
| TKS 12 | 12 | X | 22 | 2136 | 3466 | 865 | 559 | 253 | 406 | 559 | 712 | 712 | 559 | 865 | 1783 | 1936 | 1018 |
| TKS 12 | 12 | X | 24 | 2136 | 3772 | 865 | 559 | 253 | 406 | 559 | 712 | 712 | 559 | 865 | 1171 | 1936 | 1018 |
| TKS 14 | 14 | X | 14 | 2442 | 2242 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1783 | 2395 | 1171 |
| TKS 14 | 14 | X | 16 | 2442 | 2548 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1783 | 2395 | 1171 |
| TKS 14 | 14 | X | 18 | 2442 | 2854 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1783 | 2242 | 1018 |
| TKS 14 | 14 | X | 20 | 2442 | 3160 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1783 | 1936 | 1018 |
| TKS 14 | 14 | X | 22 | 2442 | 3466 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1783 | 1936 | 1018 |
| TKS 14 | 14 | X | 24 | 2442 | 3772 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1783 | 1936 | 1018 |
| TKS 14 | 14 | X | 26 | 2442 | 4078 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1783 | 1936 | 1018 |
| TKS 14 | 14 | X | 28 | 2442 | 4384 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1783 | 1936 | 1018 |
| TKS 16 | 16 | X | 16 | 2748 | 2548 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 2548 | 2548 | 1324 |
| TKS 16 | 16 | X | 18 | 2748 | 2854 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1783 | 2395 | 1171 |
| TKS 16 | 16 | X | 20 | 2748 | 3160 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1477 | 2242 | 1018 |
| TKS 16 | 16 | X | 22 | 2748 | 3466 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1783 | 2242 | 1018 |
| TKS 16 | 16 | X | 24 | 2748 | 3772 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1783 | 1936 | 1018 |
| TKS 16 | 16 | X | 26 | 2748 | 4078 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1783 | 2242 | 1018 |
| TKS 16 | 16 | X | 28 | 2748 | 4384 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1783 | 2242 | 1018 |
| TKS 16 | 16 | X | 30 | 2748 | 4690 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1783 | 2242 | 1018 |
| TKS 16 | 16 | X | 32 | 2748 | 4996 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1783 | 2242 | 1018 |
| TKS 18 | 18 | X | 18 | 3054 | 2854 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 4690 | 3619 | 1783 |
| TKS 18 | 18 | X | 20 | 3054 | 3160 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 3160 | 3160 | 1630 |
| TKS 18 | 18 | X | 22 | 3054 | 3466 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 3160 | 3007 | 1477 |
| TKS 18 | 18 | X | 24 | 3054 | 3772 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 2548 | 2854 | 1324 |
| TKS 18 | 18 | X | 26 | 3054 | 4078 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 2089 | 2548 | 1324 |
| TKS 18 | 18 | X | 28 | 3054 | 4384 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1783 | 2395 | 1171 |
| TKS 18 | 18 | X | 30 | 3054 | 4690 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 2089 | 2395 | 1171 |
| TKS 18 | 18 | X | 32 | 3054 | 4996 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1783 | 2395 | 1171 |
| TKS 18 | 18 | X | 34 | 3054 | 5302 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1783 | 2395 | 1171 |
| TKS 18 | 18 | X | 36 | 3054 | 5608 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 1783 | 2395 | 1171 |
| TKS 20 | 20 | X | 20 | 3360 | 3160 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 4690 | 3772 | 1936 |
| TKS 20 | 20 | X | 22 | 3360 | 3466 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 4690 | 3619 | 1783 |
| TKS 20 | 20 | X | 24 | 3360 | 3772 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 4690 | 3160 | 1630 |
| TKS 20 | 20 | X | 26 | 3360 | 4078 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 3160 | 3007 | 1477 |
| TKS 20 | 20 | X | 28 | 3360 | 4384 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 3160 | 2854 | 1324 |
| TKS 20 | 20 | X | 30 | 3360 | 4690 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 2548 | 2548 | 1324 |
| TKS 20 | 20 | X | 32 | 3360 | 4996 | 865 | 559 | 253 | 406 | 712 | 712 | 712 | 559 | 865 | 2548 | 2548 | 1324 |

These data are for quick selection: for different parameters, selection programme should be used.

Quick Selection

AIR SPEED ON THE COIL
 ■ V < 2,5 m/sn ■ V < 2,8 m/sn ■ V < 3 m/sn



Control Systems(Automation)

TKS Modular Air handling Units ,in accordance with increasing demand for low energy consumption and integrated control systems on the buildings, can be produced with built-in automation systems on demand. System consist of electrical panels and controller of all the equipment used in air handling unit. It controls the unit and provide safe and efficient operation during lifetime of the unit. Air quality sensor, humidity sensor, pressure sensor, temperature sensor, frequency inverters for adjusting the airflow, filter check and EC motor automation can be included in the total autotomation systems. It provides to control the system through a hand terminal or building management system or through internet connection.



Automation control panels are designed by our technical team in accordance with required parameters. Below controls can be maintained by choosing appropriate components;

- Constant air flow
- Constant duck pressure
- Ventilaton on Demand
- Variable Air Flow Control
- Electrical Heater Check
- Heating Capacity Check
- Cooling Capacity Check
- Heat Recovery Exchanger Check
- Freezing Check
- Fire alarm
- Checking of the Filters
- Recording and checking of the failures
- Weekly proگرامing of the unit
- Control of the Damper

SIMPLY THE BEST
SOLUTIONS

HVAC
SYSTEMS

APRIL 2016
BY HVAC SYSTEMS INC.
RESERVES THE RIGHT TO MAKE ALTERATIONS
DUE TO TECHNICAL DEVELOPMENTS WITHOUT PRIOR NOTICE.



TEKNOGEN®

HEADQUARTERS

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