

MANDÍK®

Product
catalogue

2024



Quality Craftsmanship at MANDÍK

At MANDÍK, we take pride in our dedicated approach to developing and manufacturing products that stand the test of time. We are committed to innovation, continuously investing in research and the professional growth of our team to enhance our technologies and offerings.

Our philosophy focuses on consistently providing quality products and services at competitive prices. We strive to meet our customers' expectations. Moreover, we ensure robust after-sales support and maintenance for all our products, guaranteeing reliability and peace of mind for every customer. This commitment fosters lasting relationships and builds trust in our capabilities and services.

Who we are

MANDÍK, a.s. is a Czech family-owned company founded in 1990. Currently, it is one of the major European manufacturers of fire protection and air handling components, central air-handling units and industrial heating systems.

The company has established itself on the European market through its emphasis on quality, affordability, a wide product portfolio and flexibility in processing customer requests for changes to existing products or the development of new products.

Emphasis is also placed on supporting customers and our deliveries with service and technical support. Customers can thus rely on the successful completion of any business case.

The current technical and commercial maturity of the company is documented by deliveries for buildings of the world's largest technology companies, banks, office complexes, high-rise buildings and deliveries of technically demanding custom products for nuclear power plants, etc. across the entire European continent, including deliveries outside Europe.

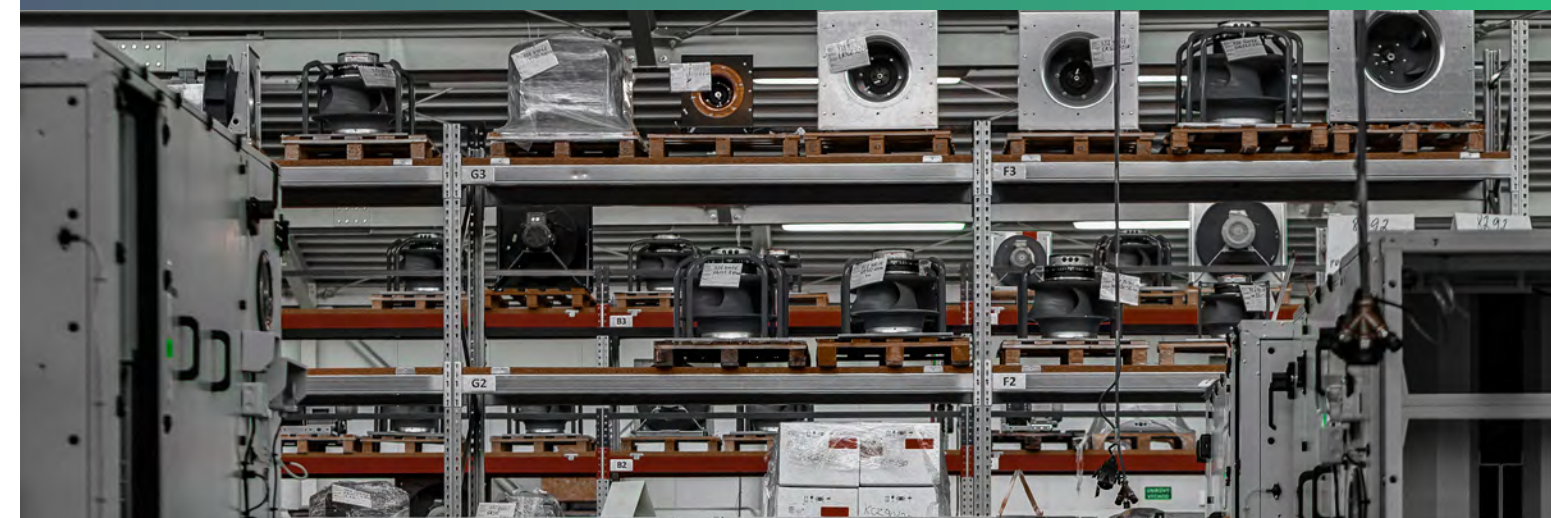
Compliance with EN ISO 9001, EN ISO 14001, EN ISO 3834-2, ISO 45001, EN ISO 19443 is a matter of course.

Furthermore, the company extends its quality with European certifications with worldwide scope such as Eurovent, RLT certification according to the German air-handling unit manufacturers association and German hygiene certification according to German VDI and DIN standards.

Territorially, the business of MANDÍK, a.s. covers, in addition to the domestic market, almost all European countries where products are supplied in cooperation with our branches or foreign partners.

The company emphasizes environmental protection and occupational safety in its daily operations. Compliance with strict European standards in these areas are a common standard for our company, which is uncompromisingly demanded by the company management. Our company also contributes to the protection of the environment by operating its own renewable energy sources and making the widest possible use of energy-saving appliances.

Our goal is to maximize customer satisfaction, the continuous development of the company across all departments and, finally, to create a quality working environment for our employees.



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FIRE DAMPERS

Square



FDMQ

CE 1391
TPM 103/14



Fire damper

- > Dimensions from 150 × 150 to 1 500 × 800 mm
- > Fire resistance up to EI 90 S
- > Leakage acc. to EN 1751: casing class C / blade class 2
- > Damper actuating: mechanical or electrical
- > For a maximum speed of 12 m/s and a pressure difference on the damper of 1 200 Pa
- > Corrosion resistance acc. to EN 15650
- > Cycling test C_{10000} / C_{mod} (depending on the type of drive) acc. to EN 15650
- > CE certification acc. to EN 15650
- > Tested acc. to EN 1366-2
- > Classified acc. to EN 13501-3+A1
- > Offered also in design for potentially explosive atmospheres



FDMQ 120

CE 1391
TPM 162/22



Fire damper

- > Dimensions from 150 × 150 to 1 500 × 800 mm
- > Fire resistance EI 120 S
- > Leakage acc. to EN 1751: casing class C / blade class 2
- > Damper actuating: mechanical or electrical
- > For a maximum speed of 12 m/s and a pressure difference on the damper of 1 200 Pa
- > Corrosion resistance acc. to EN 15650
- > Cycling test C_{10000} acc. to EN 15650
- > CE certification acc. to EN 15650
- > Tested acc. to EN 1366-2
- > Classified acc. to EN 13501-3+A1



FDMB

CE 1391
TPM 075/09



Fire damper

- > Dimensions from 100 × 100 to 1 000 × 500 mm
- > Fire resistance up to EI 120 S
- > Leakage acc. to EN 1751: casing A<160 or B<160 class B – A≥160 and B≥160 class C / blade class 2
- > Damper actuating: mechanical or electrical
- > For a maximum speed of 12 m/s and a pressure difference on the damper of 1 200 Pa
- > Corrosion resistance acc. to EN 15650
- > Cycling test C_{10000} / C_{mod} (depending on the type of actuator) acc. to EN 15650
- > CE certification acc. to EN 15650
- > Tested acc. to EN 1366-2
- > Classified acc. to EN 13501-3+A1
- > Offered also in design for potentially explosive atmospheres



FDMA

CE 1391
TPM 018/01



Fire damper

- > Dimensions from 180 × 180 up to 1 600 × 1 000 mm
- > Fire resistance up to EI 120 S
- > Leakage acc. to EN 1751: casing class C / blade class 2
- > Damper actuating: mechanical or electrical
- > For a maximum speed of 12 m/s and a pressure difference on the damper of 1 200 Pa
- > Corrosion resistance acc. to EN 15650
- > Cycling test C_{10000} acc. to EN 15650
- > CE certification acc. to EN 15650
- > Tested acc. to EN 1366-2
- > Classified acc. to EN 13501-3+A1
- > Offered also in design for potentially explosive atmospheres



FDMQ 180

CE 1391
TPM 149/21



Fire damper

- > Dimensions from 200 × 200 to 1 500 × 800 mm
- > Fire resistance up to EI 180 S
- > Leakage acc. to EN 1751: casing class C / blade class 3
- > Damper actuating: mechanical or electrical
- > For a maximum speed of 12 m/s and a pressure difference on the damper of 1 200 Pa
- > Corrosion resistance acc. to EN 15650
- > Cycling test C_{10000} acc. to EN 15650
- > CE certification acc. to EN 15650
- > Tested acc. to EN 1366-2
- > Classified acc. to EN 13501-3+A1



FDML

CE 1391
TPM 130/17



Slatted fire damper

- > Dimensions from 200 × 300 up to 1000 × 1000 mm
- > Fire resistance up to EI 90 S, E 120 S
- > Leakage acc. to EN 1751: casing class B / blades class 3
- > Damper actuating: electrical
- > For a maximum speed of 12 m/s and a pressure difference on the damper of 1 500 Pa
- > Corrosion resistance acc. to EN 15650
- > Cycling test C_{10000} acc. to EN 15650
- > CE certification acc. to EN 15650
- > Tested acc. to EN 1366-2
- > Classified acc. to EN 13501-3+A1



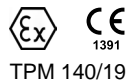
MANDÍK's FDMS and FDMB fire dampers, tested with Cross-Laminated Timber (CLT) walls and ceilings, provide top-notch fire resistance. The FDMS achieves **EI 60 S** in 90 mm CLT walls, while the FDMB reaches **EI 90 S** in both 100 mm CLT walls and 140 mm CLT ceilings, making them excellent for sustainable construction.



Round



FDMR



TPM 140/19

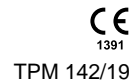


Fire damper

- › Dimensions from DN 100 to DN 800 mm
- › Fire resistance up to EI 120 S - 500 Pa
- › Leakage acc. to EN 1751: casing class C / blade class 3
- › Damper actuating: mechanical or electrical
- › For a maximum speed of 12 m/s and a pressure difference on the damper of 1 200 Pa
- › Corrosion resistance acc. to EN 15650
- › Cycling test C₁₀₀₀₀ acc. to EN 15650
- › CE certification acc. to EN 15650
- › Tested acc. to EN 1366-2
- › Classified acc. to EN 13501-3+A1
- › Offered also in design for potentially explosive atmospheres



FDMR 60



TPM 142/19

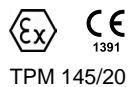


Fire damper

- › Dimensions from DN 100 to DN 400 mm
- › Fire resistance EI 60 S
- › Leakage acc. to EN 1751: casing class C / blade class 3
- › Damper actuating: mechanical or electrical
- › For a maximum speed of 12 m/s and a pressure difference on the damper of 1 200 Pa
- › Corrosion resistance acc. to EN 15650
- › Cycling test C₁₀₀₀₀ acc. to EN 15650
- › CE certification acc. to EN 15650
- › Tested acc. to EN 1366-2
- › Classified acc. to EN 13501-3+A1



FDMA-PM



TPM 145/20



Fire damper

- › Dimensions DN 900 and DN 1 000 mm
- › Fire resistance up to EI 120 S
- › Leakage acc. to EN 1751: casing class C / blade class 2
- › Damper actuating: mechanical or electrical
- › For a maximum speed of 12 m/s and a pressure difference on the damper of 1 200 Pa
- › Corrosion resistance acc. to EN 15650
- › Cycling test C₁₀₀₀₀ acc. to EN 15650
- › CE certification acc. to EN 15650
- › Tested acc. to EN 1366-2
- › Classified acc. to EN 13501-3+A1
- › Offered also in design for potentially explosive atmospheres



FDMS



TPM 125/17



Fire damper

- › Dimensions from DN 100 to DN 630 mm
- › Fire resistance up to EI 90 S
- › Leakage acc. to EN 1751: casing class C / blade class 2
- › Damper actuating: FDMS - mechanical or electrical
- › Damper actuating: FDMS-VAV - only electrical
- › For a maximum speed of 12 m/s and a pressure difference on the damper of 2 500 Pa
- › Corrosion resistance acc. to EN 15650
- › Cycling test in case of FDMS: C₁₀₀₀₀ acc. to EN 15650
- › Cycling test in case of FDMS-VAV: C₂₀₀₀₀ acc. to EN 15650
- › Certification P mark from RISE Institute in Sweden no. SC1433-17
- › CE certification acc. to EN 15650
- › Tested acc. to EN 1366-2
- › Classified acc. to EN 13501-3+A1

Round



CFDM /-V



TPM 118/16



Fire damper

- › Dimensions: DN 100, DN 125, DN 160 and DN 200 mm
- › Fire resistance: EI 60 S, EI 90 S, EI 120 S
- › Leakage acc. to EN 1751: through blade class 2
- › Damper actuating: mechanical
- › For a maximum speed of 12 m/s and a pressure difference on the damper of 1 200 Pa
- › CFDM-V – includes inlet / outlet dish valve
- › Corrosion resistance acc. to EN 15650
- › CE certification acc. to EN 15650
- › Tested acc. to EN 1366-2
- › Classified acc. to EN 13501-3+A1



CFDM 250



TPM 152/21



Fire damper

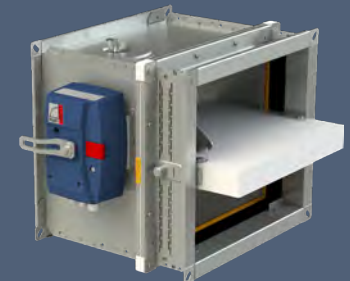
- › Dimension DN 250 mm
- › Fire resistance: EI 90 S
- › Leakage acc. to EN 1751: through blade class 2
- › Damper actuating: mechanical
- › For a maximum speed of 12 m/s and a pressure difference on the damper of 1 200 Pa
- › Corrosion resistance acc. to EN 15650
- › CE certification acc. to EN 15650
- › Tested acc. to EN 1366-2
- › Classified acc. to EN 13501-3+A1



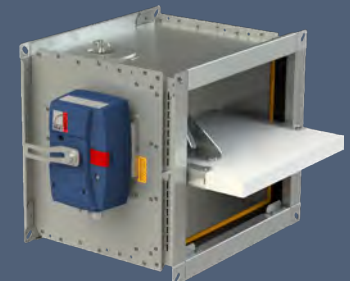
Selected models of our fire dampers are now enhanced with the innovative MODULAR-Control feature, tailored to meet the specific needs of the French market.

Fire Dampers that are Now Available with MODULAR-Control for the French Market:

FDMQ Series (FDMQ, FDMQ 120, FDMQ 180):
[150 x 150 mm - 1500 x 800 mm]



FDMB Series:
[100 x 100 mm - 1000 x 500 mm]



FDMR Series (FDMR, FDMR 60, FDMR 180):
[DN 100 - DN 800]

FDMA-PM Series:
[DN 900 - DN 1000]



SMOKE CONTROL DAMPERS

MULTI



SEDM-D

CE 1391
TPM 155/22



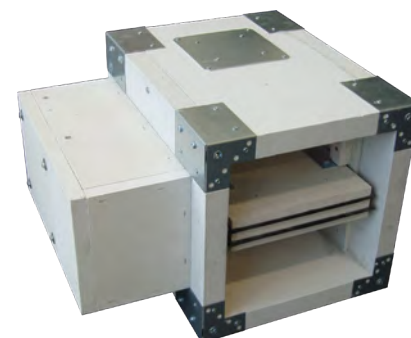
Smoke control damper/shutter
- Multi

- › Dimensions width B x height H by 5 mm:
 - from 300 x 300 up to 700 x 1 100 mm hand operated design
 - from 350 x 385 up to 700 x 1 100 mm rearming motor design
- › Total depth of 90 mm (built-in depth 80 mm) without grille
- › Damper actuating: mechanical or electrical
- › Pressure class 3 (underpressure 1500 Pa / overpressure 500 Pa)
- › Grilles of 77% to 95% effective cross section available
- › Opening and securing within 5 seconds; closing in less than 30 seconds
- › Leakage acc. to EN 1751: blade class 3
- › CE certification acc. to EN 12101-8
- › Tested acc. to EN 1366-10
- › Classified acc. to 13501-4
- › In accordance with NF 61.937-1 and NF 61.937-10

FOUR ALTERNATIVE DESIGN OPTIONS



MULTI



SEDM

CE 1391
TPM 087/12



Smoke control damper - Multi

- › Dimensions from 180 x 180 to 1 600 x 1 000 mm
- › Fire resistance up to EI 120 S, activation AA/MA, HOT 400/30
- › Damper actuating: electrical
- › Max. air speed in the system 15 m/s, underpressure up to -1 500 Pa, or pressure up to 500 Pa
- › Cycling test C_{mod} acc. to EN 12101-8
- › Leakage acc. to EN 1751: casing class C / blade class 2
- › CE certification acc. to EN 12101-8
- › Tested acc. to EN 1366-10
- › Classified acc. to EN 13501-4+A1



SEDM-L

CE 1391
TPM 146/20



Multileaf smoke control damper - Multi

- › Dimensions from 200 x 430 to 1 200 x 2 030 mm
- › Fire resistance up to EI 120 S, activation AA/MA, HOT 400/30
- › Damper actuating: electrical
- › Max. air speed in the system 12 m/s, underpressure up to -1 000 Pa, pressure up to 500 Pa
- › Cycling test C_{mod} acc. to EN 12101-8
- › Leakage acc. to EN 1751: casing class C / blade class 3
- › Corrosion resistance acc. to EN 15650
- › CE certification acc. to EN 12101-8
- › Tested acc. to EN 1366-10
- › Classified acc. to EN 13501-4+A1



MSD

CE 1391
TPM 109/15



Smoke control damper - Multi

- › Dimensions from 160 x 180 to 1 500 x 800 mm
- › Fire resistance up to EI 120 S, activation AA, HOT 400/30
- › Damper actuating: electrical
- › Max. air speed in the system 15 m/s, underpressure up to -1 500 Pa, or pressure up to 500 Pa
- › Cycling test acc. to EN 12101-8:
 - MSD square dampers - C_{mod}
 - MSD-W square dampers - C_{10000} (tested without ballast)
- › Leakage acc. to EN 1751: casing class C / blade class 2
- › CE certification acc. to EN 12101-8
- › Tested acc. to EN 1366-10
- › Classified acc. to EN 13501-4+A1



MSD-R

CE 1391
TPM 120/16



Smoke control damper - Multi

- › Dimensions from DN 180 to DN 630 mm
- › Fire resistance up to EI 120 S, activation AA, HOT 400/30
- › Damper actuating: electrical
- › Max. air speed in the system 15 m/s, underpressure up to -1 500 Pa, or pressure up to 500 Pa
- › Cycling test acc. to EN 12101-8:
 - MSD, MSD-W round dampers - C_{10000}
- › Leakage acc. to EN 1751: casing class C / blade class 2
- › CE certification acc. to EN 12101-8
- › Tested acc. to EN 1366-10
- › Classified acc. to EN 13501-4

SINGLE



SEDS

Smoke control damper - Single

- › Dimensions from 180 x 180 to 1 600 x 1 000 mm
- › ES 90/600, activation AA
- › Damper actuating: electrical
- › Max. air speed in the system 15 m/s, underpressure up to -1 000 Pa, or pressure up to 500 Pa
- › Cycling test C₃₀₀ acc. to EN 12101-8
- › Leakage acc. to EN 1751: casing class C / blade class 2
- › CE certification acc. to EN 12101-8
- › Tested acc. to EN 1366-10
- › Classified acc. to EN 13501-4

CE
1391
TPM 086/12



SEDS-L

Smoke control damper - Single

- › Dimensions from 200 x 200 to 1 200 x 1 200 mm
- › ES 120/600, activation AA/MA
- › Damper actuating: electrical
- › Max. air speed in the system 15 m/s, underpressure up to -1500 Pa, or pressure up to 500 Pa
- › Cycling test C_{mod} acc. to EN 12101-8
- › Leakage acc. to EN 1751: casing class B / blade class 3
- › CE certification acc. to EN 12101-8
- › Tested acc. to EN 1366-10
- › Classified acc. to EN 13501-4

CE
1391
TPM 121/16



SEDS-R

Smoke control damper - Single

- › Dimensions from DN 100 up to DN 630 mm
- › ES 120/600, activation AA/MA
- › Damper actuating: electrical
- › Max. air speed in the system 15 m/s, underpressure up to -1 500 Pa, or pressure up to 500 Pa
- › Cycling test C_{mod} acc. to EN 12101-8
- › Leakage acc. to EN 1751: casing class B / blade class min. 4, for DN 100 mm class 3
- › CE certification acc. to EN 12101-8
- › Tested acc. to EN 1366-10
- › Classified acc. to EN 13501-4

CE
1391
TPM 120/16



AIR REGULATION TECHNOLOGIES

Airflow regulators



RPMC-V

TPM 106/14

Variable airflow regulator - square

- › For regulation of variable or constant airflow volume in HVAC systems
- › Dimensions from 200 x 200 up to 1 000 x 1 000 mm
- › Airflow volume from 70 up to 26 000 m³/h
- › For air velocities from 1 m/s
- › Material: galvanized steel
- › Each VAV controller is equipped with an airflow pressure probe and electrical actuating (e.g. Belimo LMV-D3 MP, NMV-D3-MP or SMV-D3-MP, power supply 24 V, control power 0 -10 V, or 2 - 10 V)
- › Control based on flow, duct pressure, or room pressure
- › With a compact VAV controller (LMV/NMV/SMV...), or a separate VAV controller (VRU) and drive
- › Communication options: MP-BUS, NFC wireless, MODBUS RTU, BACnet MS/TP



RPMC-K

TPM 105/14

Constant airflow regulator - square

- › For keeping and regulation of constant airflow volume in HVAC systems
- › Dimensions from 200 x 100 up to 600 x 600 mm
- › Airflow volume from 250 up to 12 000 m³/h
- › Set the desired flow rate manually or by actuator
- › Material: casing and actuating mechanism made of galvanized steel, leaf made of aluminium, leaf axle, bearings and spring made of austenitic steel



RPM-V

TPM 085/12

Variable airflow regulator - round

- › For regulation of variable or constant airflow volume in HVAC systems
- › Dimensions from DN 80 up to DN 630 mm
- › Airflow volume from 18 up to 7 900 m³/h
- › For air velocities from 1 m/s
- › Material: galvanized steel
- › Each VAV controller is equipped with an airflow pressure probe and electrical actuating (e.g. Belimo LMV-D3 MP, NMV-D3-MP or SMV-D3-MP, power supply 24 V, control power 0 -10 V, or 2 - 10 V)
- › Control based on flow, duct pressure, or room pressure
- › With a compact VAV controller (LMV/NMV/SMV...), or a separate VAV controller (VRU) and drive
- › Communication options: MP-BUS, NFC wireless, MODBUS RTU, BACnet MS/TP



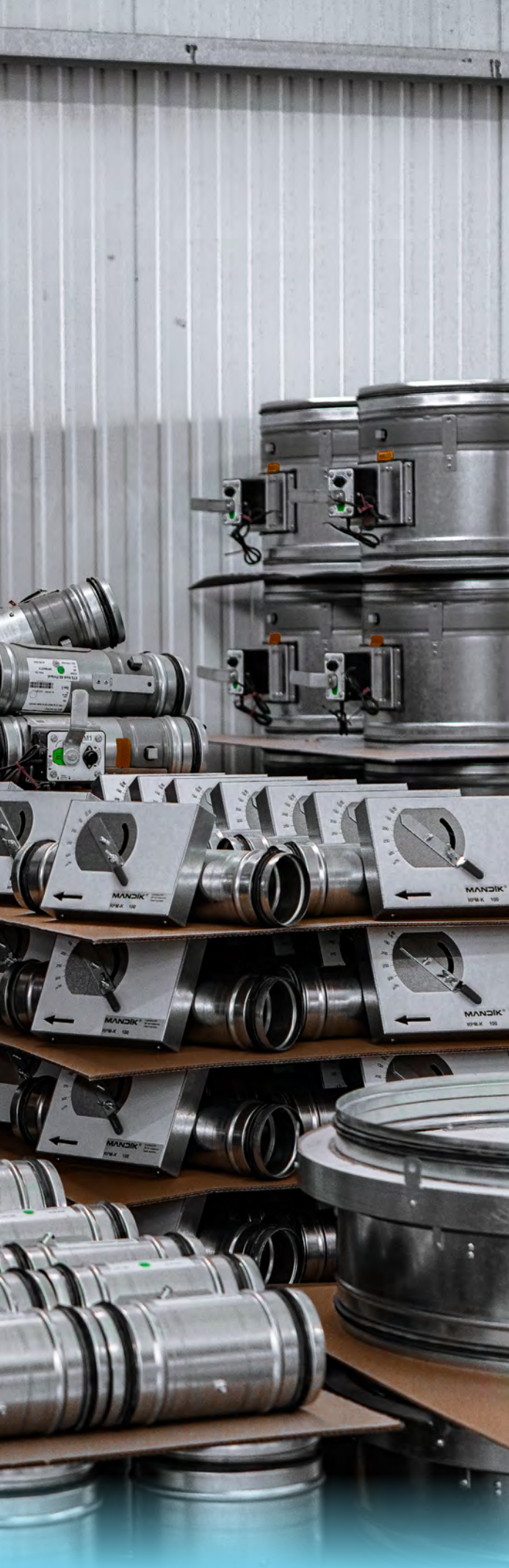
RPM-K

TPM 094/13

Constant airflow regulator - round

- › For keeping and regulation of constant airflow volume in HVAC systems
- › Dimensions from DN 80 up to DN 400 mm
- › Airflow volume from 50 up to 4 500 m³/h
- › Set the desired flow rate manually or by actuator
- › Material: casing and actuating mechanism made of galvanized steel, leaf made of aluminium, leaf axle, bearings and spring made of austenitic steel





Airflow regulators



RPM-LV

TPM 144/19



Variable airflow regulator - round
for low air velocities with high precision

- › To control variable or constant airflow in ventilation systems
- › Dimensions from DN 80 up to DN 315 mm
- › Airflow volume from 9 up to 2 244 m³/h (i.e. from 2,5 up to 623 l/s)
- › For air velocities from 0,5 m/s
- › System is working since control pressure loss is above 2 Pa
- › Material: galvanized steel
- › Each VAV controller is equipped with an airflow pressure probe and electrical actuating (e.g. Belimo LMV-D3 MP, NMV-D3-MP or SMV-D3-MP, power supply 24 V, control power 0 – 10 V, or 2 – 10 V)
- › Communication options: MP-BUS, NFC wireless, MODBUS RTU
- › Compact construction - no sharp and obsolete devices inside the damper



FDMS-VAV

CE 1391
TPM 125/17



Fire damper with added function
of variable airflow regulator

- › Dimensions from DN 100 up to DN 630 mm
- › Fire resistance up to EI 90 S
- › Leakage acc. to EN 1751: casing class C / blade class 2
- › Damper actuating: electrical
- › For a maximum speed of 12 m/s and a pressure difference on the damper of 2500 Pa
- › Corrosion resistance acc. to EN 15650
- › Cycling test C₂₀₀₀₀ acc. to EN 15650
- › Certification P₂₀₀₀₀ mark from RISE Institute in Sweden no. SC1433-17
- › Tested acc. to EN 1366-2
- › Classified acc. to EN 13501-3+A1

Square regulation/adjustment dampers



RDM

Ex
TPM 150/21



Multi blade regulation/adjustment damper - square

- › For regulation/adjustment of the airflow
- › Dimensions from 200 × 200 up to 2 000 × 2 000 mm
- › Leakage acc. to EN 1751: casing class C
- › Damper actuating: manual or electrical
- › Torque needed: very small
- › Minimised pressure drop and noise
- › Material: galvanised or stainless steel
- › UV stabilisation and flammability suppression: class V-0; casing, blades and mechanics reaction to fire class A1
- › Includes a flange for connection to the duct; silicone free, halogen free, lead free
- › Offered also in design for potentially explosive atmospheres



RDTM

Ex
TPM 151/21



Multi blade regulation/adjustment damper - tight - square

- › For regulation/adjustment of the airflow or to close the duct tightly
- › Dimensions from 200 × 200 up to 2 000 × 2 000 mm
- › Leakage acc. to EN 1751: casing class C / blades class 3
- › Damper actuating: manual or electrical
- › Torque needed: very small
- › Minimised pressure drop and noise
- › Material galvanised or stainless steel
- › UV stabilisation and flammability suppression: class V-0; casing, blades and mechanics reaction to fire class A1
- › Includes a flange for connection to the duct; silicone free, halogen free, lead free
- › Offered also in design for potentially explosive atmospheres



RKALM

TPM 119/16



Regulation/adjustment damper - aluminium - square

- › For regulation of airflow inside the duct
- › Dimensions from 200 × 100 up to 2 000 × 2 000 mm
- › Leakage acc. to EN 1751: blade class 2, 3
- › Damper actuating: manual or electrical
- › Coefficient of thermal transmission per blade up to 2,99 W/m².K
- › Material: aluminium, protected by transparent varnish
- › Includes a flange for connection to the duct

Round regulation/adjustment dampers



RKKM

Ex
TPM 030/03



Regulation/adjustment damper - round

- › For regulation of airflow inside the duct
- › Dimensions from DN 80 up to DN 630 mm
- › Damper actuating: manual or electrical
- › Material: galvanized steel
- › Includes a flange for connection to the duct; SPIRO design also available
- › Offered also in design for potentially explosive atmospheres



RKKTM

Ex
TPM 031/03



Regulation/adjustment damper - tight - round

- › For regulation and airflow cut off inside the duct
- › Dimensions from DN 80 up to DN 630 mm
- › Leakage acc. to EN 1751: casing class C / blade class 4
- › Damper actuating: manual or electrical
- › Material: galvanized steel
- › Includes a flange for connection to the duct; SPIRO design also available
- › Offered also in design for potentially explosive atmospheres



RKKTM-DK

Ex
TPM 132/18



Regulation/adjustment damper - tight - round

- › For regulation and airflow cut off inside the duct
- › Dimensions from DN 80 to DN 630 mm
- › Damper actuating: manual or electrical
- › Material: galvanized steel
- › Includes a flange for connection to the duct; SPIRO design also available
- › Offered also in design for potentially explosive atmospheres

DISTRIBUTION ELEMENTS

Components for clean rooms



HEPAbox

TPM 154/22



Plenum box for cleanrooms



- › Square front plate sizes 400, 500, 600 and 625 mm
- › Filtration class H14
- › Volume flow with HEPA filter as a standard, up to 1 440 m³/h (400 l/s)
- › Chamber pressure (final pressure drop) max. 500 Pa
- › Air-diffusers / air-grilles: 6 types
- › Material: all-welded stainless steel, the surface is protected by a special powder paint
- › Shut-off damper of tightness class sheet 4 according to EN 1751

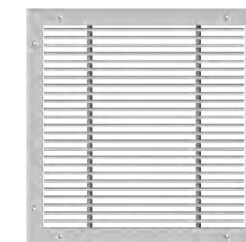
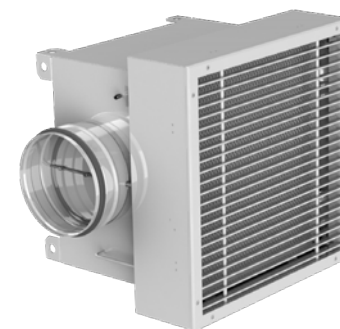
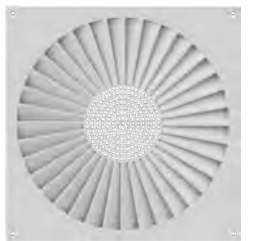
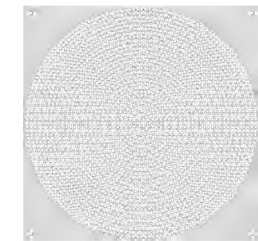
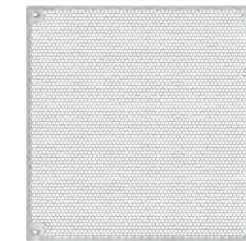
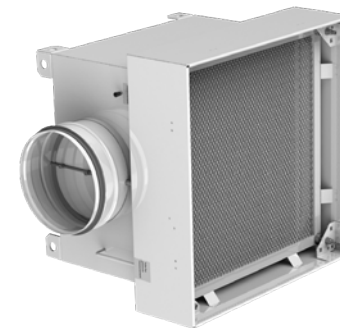
It meets the following requirements:

Design in accordance with the following general and hygienic standards:

Design in accordance with the following standards for hospitals, medical laboratories, etc.:

- › VDI 3804
- › VDI 6022
- › SWK VA 105-01
- › ÖNORM H 6020

- › DIN 1946, Teil 4
- › SWK VA 104-01
- › ÖNORM H 6021



Anemostats



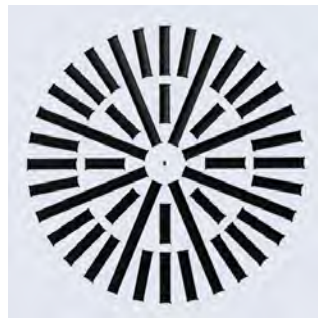
VVM

TPM 001/96



Whirling air outlet

- › Dimensions 125, 160, 200, 250, 315 and 400 mm
- › Airflow volume from 30 to 900 m³/h
- › For cooling
- › Design with or without diffuser
- › Front plate coated RAL 9010 or RAL shade based on customer requirements
- › Optional plenum box in galvanised finish



VVDM

TPM 089/12



Whirling air outlet

- › Dimensions 300, 400, 500, 600, 625 and 825 mm
- › Airflow volume from 150 to 1 500 m³/h
- › For heating and cooling
- › Adjustable plastic blades for airflow direction
- › Front plate coated RAL 9010 or RAL shade based on customer requirements
- › Optional plenum box in galvanised finish



VVPM

TPM 007/99



Whirling air outlet with fixed blades

- › Dimensions 300, 400, 500, 600 and 625 mm
- › Airflow volume from 120 to 600 m³/h
- › For cooling
- › Front plate coated RAL 9010 or RAL shade based on customer requirement
- › Optional plenum box in galvanised finish



ALCM

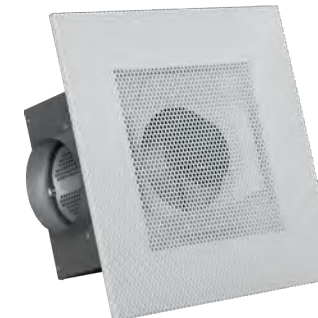
TPM 003/97



Anemostat diffuser

- › Dimensions 250, 300, 400, 500, 600 and 625 mm
- › Airflow volume 110 to 1 800 m³/h
- › For cooling
- › Front plate coated RAL 9010 or RAL shade based on customer requirement
- › Optional plenum box in galvanised finish

Anemostats



DVCM

TPM 131/17



Perforated air diffuser

- › Front plate dimensions 300, 400, 500, 600 and 625 mm
- › Airflow volume from 40 to 950 m³/h
- › For cooling
- › Front plate coated RAL 9010 or RAL shade based on customer requirement
- › Optional plenum box in galvanised finish



VAPM

TPM 010/00



Whirling anemostat with fixed blades

- › Dimensions 125, 160, 200, 250, 315 and 400 mm
- › Airflow volume from 30 to 900 m³/h
- › For cooling
- › Design with or without diffuser
- › Front plate coated RAL 9010 or RAL shade based on customer requirements
- › Optional plenum box in galvanised finish



VASM

TPM 017/01



Whirling anemostat with adjustable blades

- › Dimensions 315, 400 and 630 mm
- › Airflow volume from 350 to 2 400 m³/h
- › For heating and cooling
- › Adjustable blades by hand or with self-drive
- › Front plate coating RAL 9010 or RAL shade based on customer requirements
- › Optional plenum box in galvanised finish



ALKM

TPM 005/99



Anemostat diffuser - round

- › Dimensions 300, 400, 500, 600 and 625 mm
- › Airflow volume from 40 to 950 m³/h
- › For cooling
- › Front plate coating RAL 9010 or RAL shade based on customer requirements
- › Optional plenum box in galvanised finish



VAPM-L

TPM 082/11



Whirling anemostat with fixed blades - linear

- › Dimensions according to number of blades 1-6
- › Airflow volume from 6 to 100 m³/h
- › For cooling
- › Front plate coating RAL 9010 or RAL shade based on customer requirements
- › Optional plenum box in galvanised finish

Grilles and vents



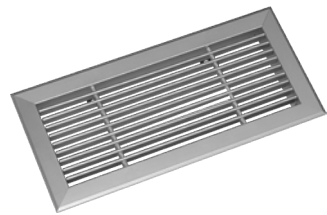
VNKM

TPM 034/04



Adjustable vent for round duct

- › Dimensions from 225 × 75 to 1 225 × 325 mm
- › Airflow volume from 100 to 5 000 m³/h
- › Adjustable blades
- › Can be coated according to RAL



SMM

TPM 014/01



Wall mounted grilles

- › Dimensions from 200 × 75 to 1 250 × 550 mm
- › Airflow volume from 100 to 5 000 m³/h
- › Fixed blades
- › Aluminium, galvanised or RAL coated



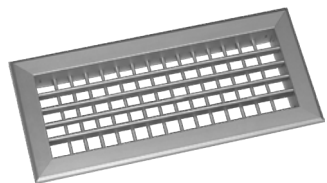
SMPM

TPM 035/04



Wall mounted grilles

- › Dimensions: length variable, width from 215 × 75 to 1 225 × 325 mm
- › Airflow volume from 100 to 5 000 m³/h
- › Fixed blades
- › Aluminium or RAL coated



VNM

TPM 015/01



Adjustable vent

- › Dimensions from 150 × 65 to 1 250 × 550 mm
- › Airflow volume from 100 to 5 000 m³/h
- › Adjustable blades
- › Aluminium, galvanised or RAL coated



RAG45

TPM 107/15

Outlet with fixed blades at an angle of 45°

- › Dimensions from 200 × 75 to 1 250 × 550 mm
- › Airflow volume from 100 to 5 000 m³/h
- › Fixed blades 45°
- › Aluminium or RAL coated

Grilles and vents



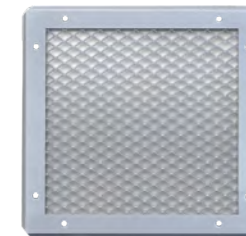
SDL

TPM 110/15



Slot diffuser linear

- › Variable length, up to 6 slots
- › Airflow volume up to 780 m³/h
- › Long flow range and high air induction
- › Uniform and stable air flow along the entire length
- › Adjustable blades to suit the slot
- › With plenum box or separately



KMM

TPM 002/96



Covering/protection grille

- › Dimensions from 100 × 100 to 2 000 × 2 000 mm
- › Active surface area approx. 78%
- › Wall or duct mounting
- › RAL coated finish

Nozzles and valves



DDM II

TPM 072/08



Long-reach nozzle

- › Long distance air distribution
- › Designed for wall or ceiling mounting
- › Dimensions 100, 125, 160, 200, 250, 315 and 400 mm
- › Airflow volume from 40 to 2 400 m³/h
- › Intended for heating and cooling
- › Readjustment of airflow direction: manual or electrically actuated (± 25°)
- › High output speed for airflow
- › Painted surface RAL 9010



TVOM/TVPM

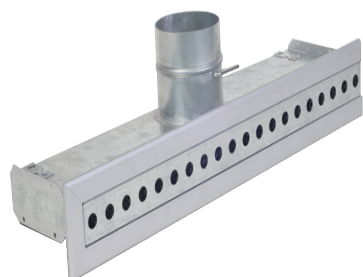
TPM 028/03



Dish valve

- › For supply and extraction of air
- › Dimensions DN 80, DN 100, DN 125, DN 150, DN 160, DN 200 mm
- › Airflow volume from 20 to 250 m³/h
- › Plenum box in galvanised finish and outlets can be coated according to RAL

Other elements



VSV

TPM 065/06



Slot airflow vent

- › For supply and extraction of air in comfortable places
- › Dimensions 600 and 1 200 mm
- › Steady and stable air stream - across the entire length of the vent
- › Placement height from 2,6 to 4 m
- › Airflow volume from 20 to 250 m³/h
- › Material: aluminum profile vent frame, remaining parts made of galvanized steel – front parts: galvanized or coated with variable RAL color



VPVM

TPM 013/01



Large-area vent

- › Extraction and supply of air to work areas in offices, industrial buildings, laboratories with high temperature demand or dangerous air pollution – small speeds of air flow in work areas
- › Airflow volume from 500 to 8 100 m³/h
- › For supply of air colder by 1 to 3 °C than surrounding temperature
- › Design options: round, wall mounted or corner
- › Supply of air in space widens out from the floor utilizing convection streams
- › Material: stainless steel, or RAL 9010 coated surface



PDZM

TPM 079/10



Rain protection louver

- › For air supply and extraction
- › Dimensions from 200 × 200 to 2 000 × 2 000 mm
- › Standard depth: 40 and 70 mm
- › Fixing, or openings for fixing screws: hidden
- › Frame: fixing or for walling
- › Bird and insect protection net
- › Possible fitting with G2 filter
- › Material options: zinc, aluminium, stainless steel, copper and titanium zinc
- › Coating by RAL available

SUPPLEMENTARY HVAC ELEMENTS

Plenum boxes



UNIBOX

TPM 139/19



Universal plenum box

- › Dimensions for rectangular and round air diffusers: 250, 300, 400, 500, 600, 625 and 825 mm, are adapted so that they can be inserted into cassette suspended ceilings
- › Control of the regulating blade is possible from the inside or from the outside of the box
- › Horizontal and vertical connection with regulation damper blade
- › Intended for front plates VVM, VVPM, ALCM, ALKM
- › Material: galvanized steel



EKOBOX

TPM 037/04



Plenum box for front panels

- › Dimensions for rectangular and round air diffusers: 250, 300, 400, 500, 600, 625 and 825 mm
- › Design options: standard, or optionally with possibility of airflow setting in case of installed front panel
- › Economic design for air supply
- › Horizontal installation with adjustable blade
- › Intended for front plates VVM, VVPM, VVDM, ALCM, ALKM a VAPM
- › Material: galvanized steel

Damping pads



FFDM

TPM 137/19



Damping pad

- › The damping pad is used to restrict the transfer of dynamic forces created by fan vibrations from units
- › Dimensions of round design from DN 80 to DN 800 mm
- › Dimensions of square design from 125 × 125 to 2 000 × 2 000 mm
- › Connection to flange or connection to SPIRO
- › Pads intended for duct group I
- › Tightness class "D"
- › Width of pad flange 20 or 30 mm
- › Material: galvanized or stainless steel (AISI 304)

AIR-HANDLING UNITS

Assembled standard design

KJM

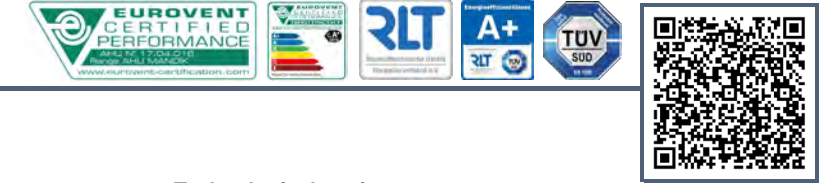


- › **Air performance**
 - In the range from 500 to 120 000 m³/h
- › **Design option**
 - From 89 standard sizes in square M, rectangular P and transport T cross-sections
 - Possibility to design in dynamic cross-section or custom dimensions in 1 mm increments for the entire range of air outputs
- › **Coating and its thermal properties**
 - Unique frameless construction with a smooth inner surface of 50 or 100 mm thickness with internal mineral wool insulation
 - The coating has the best mechanical stability class D1 and the highest tightness class L1
 - Choice of three types of unit coating certified by the Munich TÜV-SÜD laboratory according to EN 1886 according to the thermal transmittance and thermal bridge classes T2 TB3 / T2 TB1 / T1 TB1, for all KJM series, including the dynamic dimension and for the entire range of air outputs
 - For T1 TB1 / T2 TB1 coating, coating thermal transmittance and thermal bridges are eliminated in accordance with EN 1886
- › **Certification and standards**
 - Design according to Ecodesign requirement according to EU Regulation 1253/2014, ErP 2018
 - EUROVENT certification and the possibility of designing in energy classes up to A+ and issuing an energy label
 - Certification according to the requirements of the German RLT air handling equipment manufacturers' association and the possibility of designing in energy classes up to A+ and issuing an energy label certified by the German company TÜV SÜD Industrie Service GmbH
- › **Configuration and arrangement of units**
 - Possibility to design the unit in a vertical arrangement (inlet and outlet parts of the unit above each other), horizontal arrangement (side by side) or in underfloor design
 - Possibility of atypical "L", "U" or "three-storey" layouts
 - Indoor, outdoor or hygienic design
- › **Materials and finishes**
 - Choice of surfaces (external/internal coating parts, built-in parts, end elements, base frame) in combination with materials - zinc, aluzinc, stainless steel, powder coating (RAL on customer's request)
- › **Technological equipment**
 - Wide choice of recuperation types: plate, counterflow, rotary or glycol (liquid)
 - Choice of a wide range of fans with AC motor with frequency converter or EC motor
 - Choice of water, electric, direct or gas heating
 - Gas heaters of our own production: the Monzum with heating outputs of 15-60 kW and the GHM condensing gas heaters with outputs of 90-600 kW
 - Choice of water or direct cooling
 - A wide variety of filter types: metal, frame, pocket, compact, activated carbon, etc.
- › **Measurement and control system**
 - Own MaR system on the Siemens Climatix platform
 - Choice of a large number of room controllers, actuators, sensors (temperature, humidity, CO2, etc.)
 - Remote management via Mandik Cloud
 - Possibility of atypical customized requirements
 - Possibility of free-cooling
 - Possibility of cabling the units already in the Mandik factory: complete plug & play, loose cables or cables with plug & play connectors
 - Certification according to Directive 2004/108/EC and 2006/95/EC



Assembly design with heat pump

KJM - TC



- › **Air performance**
 - In the range from 500 to 40 000 m³/h
- › **Design options**
 - From 89 standard sizes in square M, rectangular P and transport T cross-sections
 - The possibility of designing in dynamic cross-section or custom dimensions in 1 mm increments for the entire range of air outputs
- › **Coating and its thermal properties**
 - Choice of three types of certified unit coating according to thermal transmittance and thermal bridge classes T2 TB3 / T2 TB1 / T1 TB1
- › **Certification and standards**
 - Design according to the Ecodesign requirement of EU Regulation 1253/2014, ErP 2018
 - RLT certification and the possibility of designing in energy classes up to A+ and issuing an energy label
- › **Configuration and arrangement of units**
 - Possibility to design the unit in a vertical layout (supply and extract parts of the unit above each other) or horizontal layout (side by side)
 - Possibility of atypical "L", "U" shaped arrangements
 - Indoor and outdoor design
- › **Materials and finishes**
 - Choice of surfaces (external/internal coating parts, built-in parts, end elements, base frame) in combination with materials - zinc, aluzinc, stainless steel, powder coating (RAL on customer's request)
- › **Technological equipment**
 - Wide choice of recovery types: plate, counterflow, rotary or glycol (liquid)
 - Choice of a wide range of AC motor fans with frequency converter or EC motor
 - Fully integrated cooling circuit with or without reversible operation
 - Cooling circuit can be sized for R410A or R407C refrigerants
 - Choice of ON/OFF or digital screw compressors with a large range of outputs from 5 to 150 kW
 - Choice of bivalent source: water, electric, direct or gas
 - A multitude of filter types: metal, frame, pocket, compact, activated carbon, etc.
- › **Measurement and control system**
 - Own MaR system on the Siemens Climatix platform
 - Choice of a large number of room controllers, actuators, sensors (temperature, humidity, CO2, etc.)
 - Remote management via Mandik Cloud
 - Possibility of atypical customized requirements
 - Option to use free-cooling
 - Possibility of cabling the units already in the Mandik factory: complete plug & play, loose cables or cables with plug & play connectors
 - Certification according to Directive 2004/108/EC and 2006/95/EC



Assembled hygienic design

KJM - HYG



- › **Air performance**
 - In the range from 500 to 100 000 m³/h
- › **Design options**
 - Design option only in dynamic cross-section or custom dimension in 1 mm increments for the entire range of air outputs
- › **Coating and its thermal properties**
 - Unique frameless construction with smooth inner surface 50 mm thick with internal mineral wool insulation
 - The casing has the best mechanical stability class D1 and the highest tightness class L1
 - Unit coating certified by the Munich TÜV-SÜD laboratory in accordance with EN 1886 according to thermal transmittance and thermal bridge classes T2 TB2
 - In the case of coating T1 TB2, thermal transmittance of the coating and thermal bridges are eliminated in accordance with the standard EN 1886
- › **Certification and standards**
 - Design according to Ecodesign requirement as per EU Regulation 1253/2014, ErP 2018
 - EUROVENT certification and the possibility of designing in energy classes up to A+ and issuing an energy label
 - Certification in accordance with the requirements of the German RLT air handling equipment manufacturers' association and the possibility of designing in energy classes up to A+ and issuing an energy label certified by the German company TÜV SÜD Industrie Service GmbH
 - Certified by the German Hygiene Institute (Hygiene Institut des Ruhrgebiets) and compliant with VDI 6022, ÖNORM H 6021, ÖNORM H 6020, DIN 1946-4, SWKI VA 104-01 and SWKI 99-3
- › **Configuration and arrangement of units**
 - Possibility to design the unit in a vertical arrangement (inlet and outlet parts of the unit above each other) or horizontal arrangement (side by side)
 - Indoor and outdoor design
- › **Materials and finishes**
 - Choice of surfaces (external/internal coating parts, built-in parts, end elements, base frame) in combination with materials - zinc, aluzinc, stainless steel and powder coating
 - Special powder paint in antimicrobial finish tested according to ISO 846
 - Condensate baths in a special hygienic 3D gradient design
 - Door seals without adhesive and removable for disinfection
 - Rubbers, sealants, gaskets, inspection windows, interior lighting tested according to ISO 846 for bacterial and fungal inertness
- › **Technological equipment**
 - Choice of plate, counterflow and glycol (liquid) recovery
 - Choice of a wide range of AC motor driven fans with frequency converter or EC motor
 - Choice of water, electric or direct heating
 - Choice of water or direct cooling
 - Wide variety of filter types: metal, frame, pocket, compact, activated carbon, etc.
- › **Measurement and control system**
 - Own MaR system on the Siemens Climatix platform
 - Choice of a large number of room controllers, actuators, sensors (temperature, humidity, CO2, etc.)
 - Remote management via Mandik Cloud
 - Possibility of atypical customized requirements
 - Possibility of free-cooling
 - Possibility of cabling the units already in the Mandik factory: complete plug & play, loose cables or cables with plug & play connectors
 - Certification according to Directive 2004/108/EC and 2006/95/EC

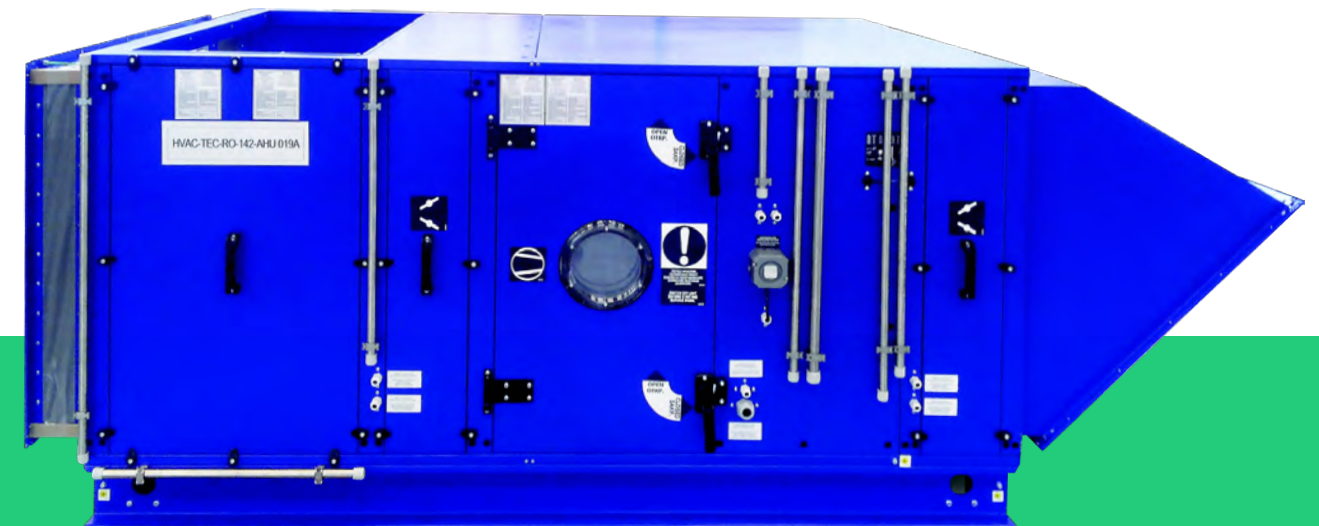


Assembled ATEX design - for an explosive environment

KJM - ATEX

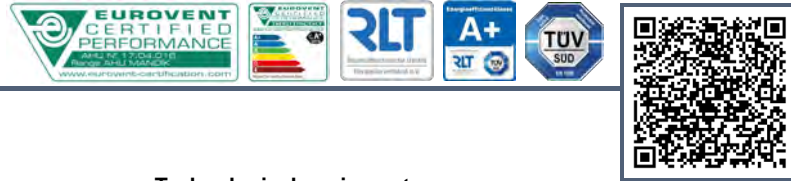


- › **Air performance**
 - In the range from 500 to 120 000 m³/h
- › **Design option**
 - From 89 standard sizes in square M, rectangular P and transport T cross-sections
 - Possibility to design in dynamic cross-section or custom dimensions in 1 mm increments for the entire range of air outputs
- › **Coating and its thermal properties**
 - Choice of only one type of certified unit coating according to thermal transmittance and thermal bridge classes T2 TB3
- › **Certification and standards**
 - RLT certification and the possibility of designing in energy classes up to A+ and issuing an energy label
 - Units are designed according to EN 13463, EN 1127, EN 60079-20
 - The units are provided with a declaration of conformity in accordance with Directive 2014/34/EU or they can be provided with a chargeable certification by an authorized person of the state enterprise FTZU on the basis of which the unit will then carry the EX mark.
- › **Use for explosive atmospheres**
 - EX-zone: 1 and 2
 - Equipment group: II
 - Equipment category: 2; 3
 - Explosive atmosphere: G
 - Gas group: IIA and IIB
 - Temperature class: T1 - T4
- › **Configuration and arrangement of units**
 - Possibility of designing the unit in a vertical arrangement (supply and discharge parts of the unit above each other), horizontal arrangement (side by side) or in a floor-standing design
 - Possibility of atypical "L", "U" shaped arrangements
 - Indoor or outdoor design
- › **Materials and finishes**
 - Choice of surfaces (external/internal coating parts, built-in parts, end elements, base frame) in combination with materials - zinc, aluzinc, stainless steel, powder coating
- › **Technological equipment**
 - Choice of plate, counterflow and glycol (liquid) recuperation
 - Choice of a wide range of AC motor fans with frequency converter or EC motor
 - Choice of water or direct heating
 - Choice of water or direct cooling
 - Selected filter types: pocket, activated carbon, etc.
 - All non-conductive connections are conductively bridged (e.g. chamber connections to each other and to the base frame, damping inserts to the unit shell, etc.)
 - All metal parts of the unit conductively bonded with a Cu conductor
 - All electrical components are earthed and the whole unit is earthed with central earth points
 - If condensation occurs in the units, a special damper eliminator in aluminium is used



Compact vertical design

CPV



- › **Air performance**
 - In the range from 500 to 10 000 m³/h
- › **Design options**
 - Compact units are calculated directly to the working point, including their dimensions
 - Possibility to design only in dynamic cross-section or custom dimension in 1 mm increments for the entire range of air outputs
- › **Coating and its thermal properties**
 - Choice of two types of certified unit coating according to thermal transmittance and thermal bridge classes T2 TB3 / T2 TB1
 - Thermally separated fresh and exhaust air ducts
- › **Certification and standards**
 - Design according to Ecodesign requirement according to EU Regulation 1253/2014, ErP 2018
 - EUROVENT certification and the possibility of designing in energy classes up to A+ and issuing an energy label
 - RLT certification and the possibility of designing in energy classes up to A+ and issuing an energy label
- › **Configuration and arrangement of units**
 - Possibility to design the unit in a vertical arrangement (all outlets facing upwards)
 - Indoor design only
 - Choice of square or circular air outlets
- › **Materials and finishes**
 - Choice of finishes (external/internal coating parts, built-in parts, end elements, base frame) in combination with materials - zinc, aluzinc, stainless steel, painting
 - Painting is possible in a wide selection of RAL shades according to customer or building requirements
- › **Technological equipment**
 - Wide range of efficiency classes of counter-current recuperation
 - Choice of a wide range of AC motor fans with frequency converter or EC motor
 - Choice of water, electric or direct heating
 - Choice of water or direct cooling
 - Large variety of filter types: frame, pocket or compact
 - Dampers inside or outside the unit
- › **Measurement and control system**
 - Proprietary MaR system on the Siemens Climatix platform
 - Units completely internally wired plug & play from the factory Mandik
 - Choice of different enclosure locations: inside the enclosure frontally, inside the enclosure laterally or external location
 - Choice of a large number of room controllers, actuators, sensors (temperature, humidity, CO₂, etc.)
 - Possibility of free-cooling
 - Remote management via Mandik Cloud
 - Certification according to Directive 2004/108/EC and 2006/95/EC

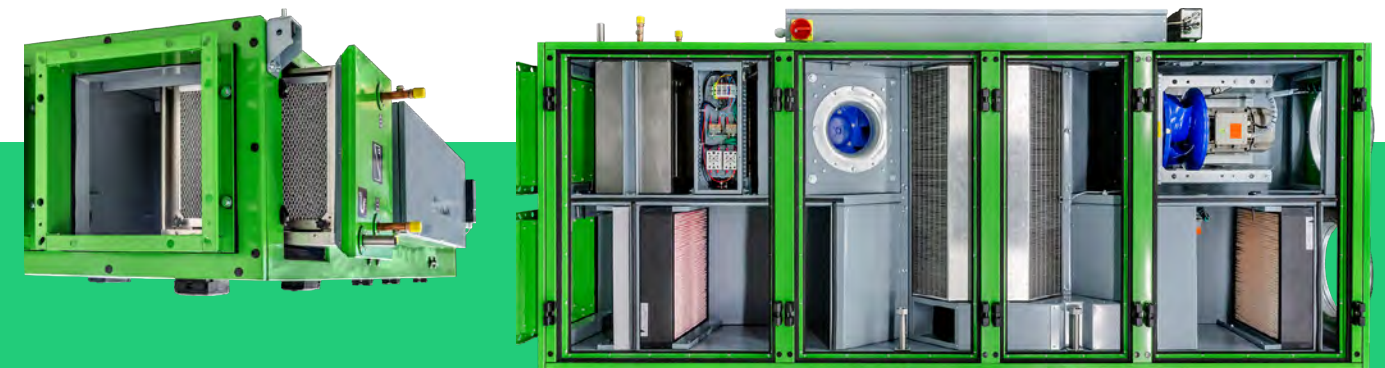


Compact under-ceiling design

CPX



- › **Air performance**
 - In the range from 500 to 4 500 m³/h
- › **Design options**
 - Compact units are calculated directly to the working point, including their dimensions
 - Possibility to design only in dynamic cross-section or custom dimension in 1 mm increments for the entire range of air outputs
- › **Coating and its thermal properties**
 - Choice of two types of certified unit coating according to thermal transmittance and thermal bridge classes T2 TB3 / T2 TB1
 - Thermally separated fresh and exhaust air ducts
- › **Certification and standards**
 - Design according to Ecodesign requirement according to EU Regulation 1253/2014, ErP 2018
 - EUROVENT certification and the possibility of designing in energy classes up to A+ and issuing an energy label
 - RLT certification and the possibility of designing in energy classes up to A+ and issuing an energy label
- › **Configuration and arrangement of units**
 - Underfloor unit configuration with all outlets to the sides
 - Indoor only
 - Choice of square or circular air outlets
 - Positions of the media connections of the heat exchangers on the side of the unit
- › **Materials and finishes**
 - Choice of surfaces (external/internal coating parts, built-in parts, end elements, base frame) in combination with materials - zinc, aluzinc, stainless steel, powder coating (RAL on customer's request)
- › **Technological equipment**
 - Wide range of efficiency classes of counter-current recuperation
 - Choice of a wide range of AC motor fans with frequency converter or EC motor
 - Choice of water, electric or direct heating
 - Choice of water or direct cooling
 - Large variety of filter types: frame, pocket or compact
 - Possibility of two-stage filtration
 - Dampers outside the unit
 - Optional sliding door system
- › **Measurement and control system**
 - Own MaR system on the Siemens Climatix platform
 - Units completely internally wired plug & play from the factory Mandik
 - Choice of different cabinet locations: on the unit casing from the side or external location
 - Choice of a large number of room controllers, actuators, sensors (temperature, humidity, CO₂, etc.)
 - Possibility of free-cooling
 - remote management via Mandik Cloud
 - Certification according to Directive 2004/108/EC and 2006/95/EC



INDUSTRIAL HEATING AND COOLING

Heating



HELIOS

TPM 143/19

[H₂]
READY

[EKO]
DESIGN
2021



Dark tube gas infrared heater

- › Heating output from 10,5 to 45 kW
- › Fuel: natural gas (G20, G25), propane (G31)
- › Seasonal efficiency: up to 93 %
- › Several design versions: difference in performance, design of the burner housing, reflector construction and shape of the heating tube
- › Reflective reflector: insulated, which directs radiant heat
- › Own single-zone control - MHS: analogue via 0-10 V signal, or bus via Modbus
- › Tested for combustion of a mixture of hydrogen and natural gas, up to a proportion of H₂ up to 20%



Coating options with optional RAL shade for industrial heating products available on request from our sales department.



MONZUN-HP



Industrial heat pump air-to-air

- › Heating and cooling modes
- › Heating output from 20 or 33 kW
- › High seasonal heating factor SCOP = 4,04
- › Refrigerant R410a
- › Air flow from 4 100 and 6 100 m³/h
- › Continuous power control



MONZUN

TPM 143/17

[H₂]
READY

[EKO]
DESIGN
2021



Gas hot-air unit

- › Intended for heating of manufacturing and storage halls/areas
- › Heating output from 12 to 54,8 kW
- › Fuel: natural gas (G20), propane (G31), propane-butane (G30 / G31)
- › Air flow from 2 500 to 8 000 m³/h
- › Installation design: wall or ceiling mounted
- › Modulated power already in the basic version (continuous power modulation 60 - 100%)
- › Tested for burning a mixture of hydrogen and natural gas, up to 20% H₂
- › With mixing chamber: can also be used for fresh air supply



MONZUN-CP

TPM 156/20

[H₂]
READY

[EKO]
DESIGN
2021



Gas condensing hot-air heater

- › Intended for heating of manufacturing and storage halls/areas
- › Heating output from 15,2 to 55 kW
- › Fuel: natural gas (G20), propane (G31), propane-butane (G30 / G31)
- › Air flow from 2 400 to 6 000 m³/h
- › Installation design: wall mounted
- › Performance modulation: from 28% continuous
- › Tested for burning a mixture of hydrogen and natural gas, up to 20% H₂
- › With mixing chamber: can also be used for fresh air supply



MONZUN-TE

TPM 063/07



Hot water heater unit

- › Intended for ecological heating and ventilation of halls and rooms
- › Heating output from 9,6 kW to 88,7 kW
- › Air flow from 1 450 to 7 500 m³/h
- › Installation design: wall or ceiling mounted
- › Water heated: water - t_{max} = 100°C, p_{max} = 1,4 MPa
- › With mixing chamber: can also be used for fresh air supply

MONZUN-HP also provides a cooling option

Gate curtain and ceiling fan



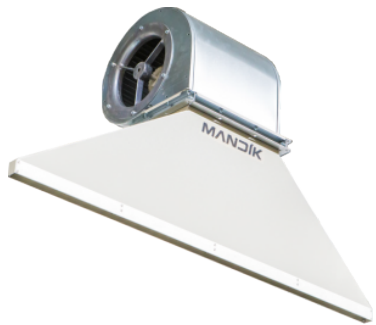
STRATIFIER

TPM 048/05



Ceiling fan

- › To increase the efficiency of heating in industrial halls, especially with hot air heating
- › The underfloor fans ensure forced flow of heated air downwards (into the work zone) and thus reduce the temperature gradient between the upper and lower part of the hall
- › Three power ranges according to the air output of the fan:
 - D1 at 20 °C = 4 300 m³/h
 - D2 at 20 °C = 5 700 m³/h
 - D3 at 20 °C = 9 100 m³/h



AIRSTREAM

TPM 102/14



Gate curtain

- › Separates indoor and outdoor environments in industrial buildings, e.g. when doors are opened
- › Two power series AS 43 and AS 47
- › Air output 3 800 and 4 700 m³/h

Additional components



EKONOMIZER

Heat recovery from dark infrared radiators



Regulation



ZEUS

Multi-zone regulation

- › Allows control of both MONZUN and HELIOS units
- › Control of independent temperature zones, support for multiple schedules
- › Support for various temperature sensors (PT1000, NTC100k, NTC10k, NI1000) or ModBus temperature sensor
- › Cloud connectivity, building management system (BMS) integration
- › Allows control of aggregates controlled by both ModBus and analog control (0-10V)



VULCAN MMS



- › VULCAN controller
- › Compatible with MONZUN aggregates
- › Siemens thermostat for modulation (0-10V output signal)
- › Manual or weekly program control
- › Support for external temperature sensor
- › 1-6 aggregates can be controlled in one temperature zone
- › IP20 protection, exclusively for indoor use



VULCAN MHP

- › VULCAN controller
- › Compatible with MONZUN-HP heat pump
- › Siemens thermostat for modulation (0-10V output signal)
- › Manual or weekly program control
- › Controls heating and cooling
- › Support for external temperature sensor
- › 1-6 aggregates can be controlled in one temperature zone
- › IP20 protection, exclusively for indoor use

VULCAN DHS



- › VULCAN controller
- › Compatible with HELIOS-J/D aggregates
- › Siemens thermostat for on/off control or power stage switching
- › Manual or weekly program control
- › Support for external temperature sensor
- › 1-6 aggregates can be controlled in one temperature zone
- › IP20 protection, exclusively for indoor use



VULCAN MHS

- › VULCAN controller
- › Compatible with HELIOS-M aggregates
- › Siemens thermostat for modulation (0-10V output signal)
- › Manual or weekly program control
- › Support for external temperature sensor
- › 1-6 aggregates can be controlled in one temperature zone
- › IP20 protection, exclusively for indoor use



CONTROL ELEMENTS

Fire dampers

MCS-B TPM 134/18



Electronic control system

- › Central control module with high-resolution touch screen
- › Connection of up to 120 UFC communication modules in two zones
- › Support for all standard 24 V AC/DC and 230 V AC drives
- › System allows bus topology connected in two zones, max. distance between central control module and communication module 1 200 m (without repeater)
- › Automatic detection of UFC communication modules due to uniquely set address



MCS-P TPM 135/18



Electronic control system

- › Connection of up to 64 BKN230-24-PL communication modules
- › Support for all standard 24 V AC/DC drives
- › Communication via 230 V AC power cable, Powerline technology
- › The central control module has an integrated filter
- › The system allows any wiring topology, max. distance between central control module and communication module 1 200 m
- › Automatic detection of BKN230-24-PL communication modules due to unique MAC address

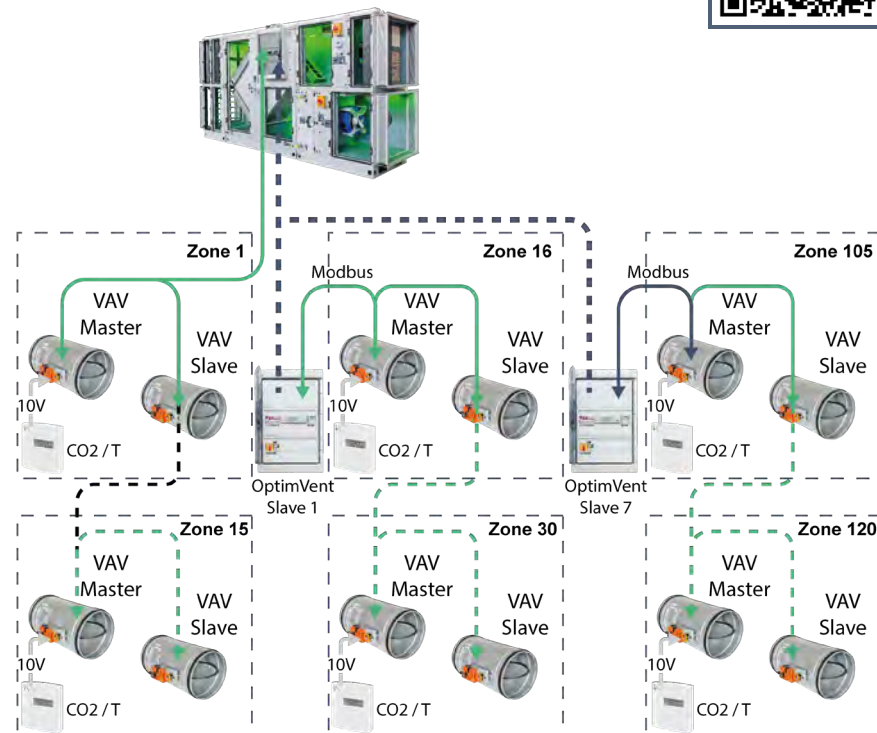


Air regulation technologies Air-handling units

OPTIMVENT

Fan performance optimization

- › **Fan performance optimization:** Real-time collaboration between fans and flow controllers keeps the control dampers open as much as possible and saves fan energy. The flow controllers ventilate the zones - according to temperature, CO2 or other similar signal (e.g. stay button)
- › **Reduction of electricity consumption:** Only the air that is needed is transported. This reduces flow and pressure losses, which dramatically reduces the energy consumption of the HVAC unit.
- › **Overall energy savings in HVAC operation:** The lower flow rate also carries with it a lower need for heat and cold to achieve the desired temperature in the space or supply duct. Particularly in the summer months when the effect of heat recovery is lower but the cooling demand is high, significant savings are achieved.
- › **Financial savings for service work:** By reducing the air flow rate, the filters become less clogged and their replacement is delayed.
- › **Online monitoring:** The Optimvent function can also be connected to remote management using Mandik Cloud, where, in addition to collecting data over time, it is possible to create a visualisation of the current operation of the entire system.



Air-handling units

CS

Control system

- › Smart control for each variant of the MANDÍK air handling unit assembly
- › Comfortable operation control with Siemens Climatix controller
- › Wide communication possibilities - cooperation with most of the higher-level systems
- › Easy operation and full service settings via display and buttons on the controller
- › Power cabinets in metal or plastic depending on configuration
- › Excellent price/performance ratio
- › Easy installation
- › Simple operation in several variants
- › Local and remote control
- › Annual and weekly time program
- › Text display with clear display of all data
- › Choice of display in any European language (standard English)
- › Selection of multiple operating modes
- › Temperature and humidity control in the supply or room



+ Service Mandik Cloud

- › Online monitoring of data points such as power, temperature, wattage, etc. 24 hours a day
- › Collected data can be easily exported from the cloud to an MS Excel file
- › Online alarm alerts including viewing alarm history
- › Set up alerts for regular maintenance and filter changes
- › Online support for commissioning of units
- › Easy setup of weekly unit scheduling
- › Option of visualisation extension

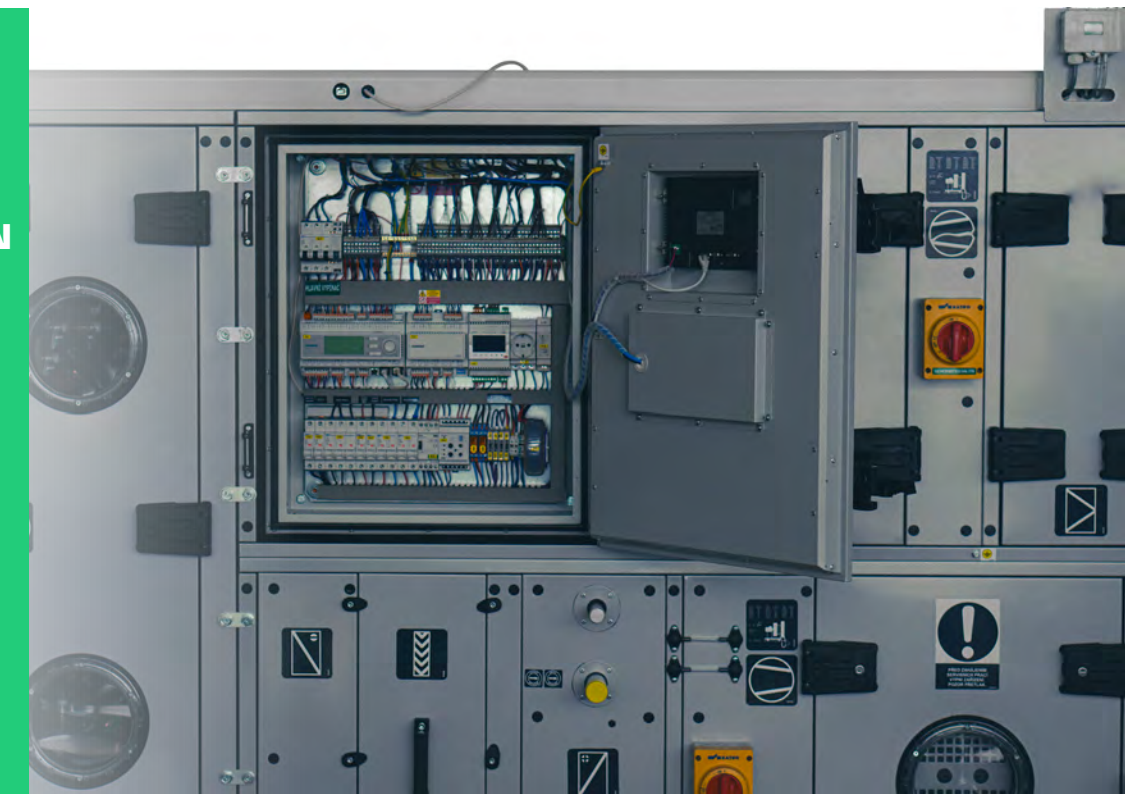
+ WIDE COMMUNICATION POSSIBILITIES

+ SIMPLE OPERATION

+ LOCAL AND REMOTE CONTROL

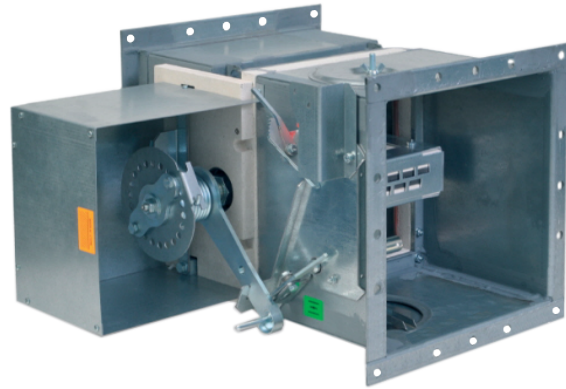
+ EASY INSTALLATION

+ EXCELLENT PRICE/ PERFORMANCE RATIO



SPECIAL APPLICATIONS

Fire dampers



PKTMB-120



Fire damper resistant against seismic events, effects of high pressure and higher airflow velocity

- › Square version only (circular adapter available)
- dimensions from 200 × 200 × 450 to 1 500 × 1 000 × 450 mm
- › Fire resistance EI 120 S
- › Leakage acc. to EN 1751: casing class C / blade class 2
- › Damper actuating: mechanical, electrical, pneumatic or combined
- › The damper can be operated (opened, closed) at flow velocities up to 20 m/s, pressure up to 6 600 Pa even in case of seismic event (DBE, APC), turbulent flow inside the duct is permissible
- › Damper body material: galvanized steel, carbon steel with coating or stainless steel
- › Max. air velocity inside the duct 20 m/s
- › Max. pressure difference 6 600 Pa
- › Seismic resistance defined according to RRS (DBE, APC) for the site of construction - tested for accelerations above 10 g
- › Corrosion resistance acc. to EN 15650
- › Cycling test C₁₀₀₀₀ acc. to EN 15650
- › CE certification acc. to EN 15650
- › Tested acc. to EN 1366-2
- › Classified acc. to EN 13501-3+A1
- › Minimum service life 40 years (maintenance-free design)



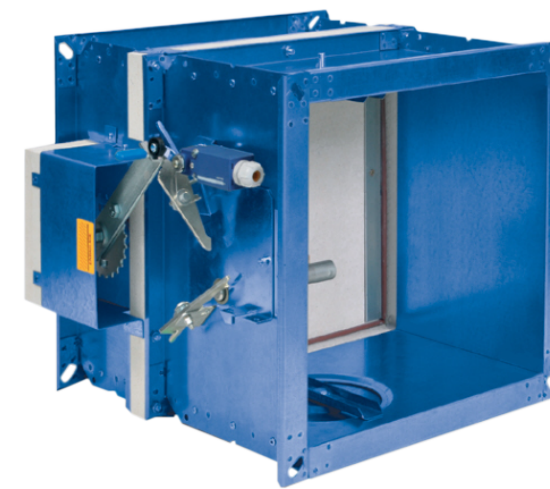
PKTMT-120



Fire damper resistant against seismic events, effects of high pressure and higher airflow velocity

- Basic technical features identical to the PKTMB-120, with the addition of:
- › Square design only
 - dimensions from 200 × 200 × 450 to 1 000 × 1 000 × 450 mm
 - › Electromagnetic actuation device
 - › Vertical/horizontal installation outside fire separating structures
 - EI 120 S, seismic resistant
 - › Suitable for potentially explosive atmospheres (Ex II 3G Ex h IIC T4 Gc)

Fire dampers

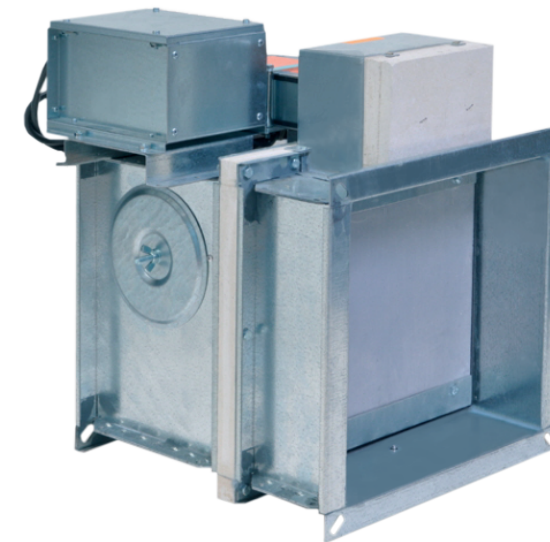


PKTMJ-90/120



Fire damper resistant against seismic events, effects of high pressure and higher airflow velocity

- › Square cross-section: dimensions from 180 × 180 × 375 to 1 600 × 1 000 × 375 mm
- › Round cross-section: from DN 180 to DN 1 000 mm
- › Fire resistance EI 120 S
- › Leakage acc. to EN 1751: casing class C / blade class 2
- › Damper actuating: mechanical, electrical, electromagnetic
- › Seismic resistance defined according to RRS (DBE, APC) for the building site
- tested for accelerations above 5 g
- › Damper body material: galvanized steel, carbon steel with coating or stainless steel
- › Max. air velocity inside the duct 15 m/s
- › Max. pressure difference 2 000 Pa
- › Corrosion resistance acc. to EN 15650
- › Cycling test C₁₀₀₀₀ acc. to EN 15650
- › CE certification acc. to EN 15650
- › Tested acc. to EN 1366-2
- › Classified acc. to EN 13501-3+A1
- › Minimum service life 40 years (maintenance-free design)
- › Suitable for potentially explosive atmospheres (Ex II 3G Ex h IIC T4 Gc)



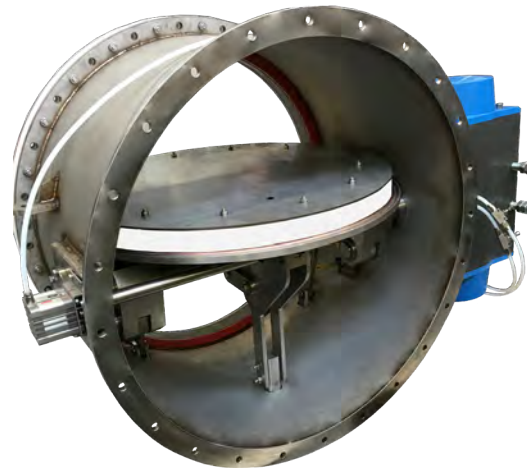
PKTMF-120



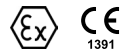
Fire damper resistant against seismic events

- › Square design only (round adapter available) - dimensions from 180 × 180 × 375 to 1 400 × 600 × 375 mm
- › Fire resistance EI 120 S
- › Leakage acc. to EN 1751: casing class C / blade class 2
- › Damper actuating: mechanical, electrical
- › Damper body material: galvanised steel, carbon steel with coating or stainless steel
- › Max. air velocity inside the duct 12 m/s
- › Max. pressure difference 1 250 Pa
- › Seismic resistance defined according to RRS (DBE, APC) for the site of construction - tested for accelerations above 12 g
- › Corrosion resistance acc. to EN 15650
- › Cycling test C₁₀₀₀₀ acc. to EN 15650
- › CE certification acc. to EN 15650
- › Tested acc. to EN 1366-2
- › Classified acc. to EN 13501-3+A1
- › Minimum service life 40 years (maintenance-free design)

Fire dampers



PKTMC-180



Pressure-resistant fire damper with insulation function

- › Round cross-section only (extension fitting to square duct possible): dimensions from DN 200 to DN 800 mm
- › Fire resistance EI 180 S
- › Damper actuating: pneumatical (STASTO-VALBIA), electrical (AUMA, ROTORK, SIPOS, BERNARD) or combination
- › Damper body material: stainless steel passivated
- › Possible use as a fire damper, a pressure valve with fire resistance, a tight pressure resistance valve, a control damper, a heat and smoke extraction damper
- › Max. air velocity inside the duct 35 m/s
- › Max. pressure difference 23 000 Pa (inner pressure/external pressure – dynamic pressure)
- › Usable in a magnetic field of up to 126 mT
- › Radiation resistance up to 3,35 MGy
- › Seismic resistance defined as per RRS (EDB, APC) applicable to the site – tested to peak acceleration above 30 G
- › The damper can be operated (opened, closed) under pressure up to 23 000 Pa and concurrent seismic event (EDB, APC), turbulent flow inside the duct permissible
- › Operable at temperatures up to 220°C
- › Low voltage and electromagnetic compatibility available
- › IP65 protection of actuators and limit switches
- › Pressure tightness class “D” according to EN 12266-1 (Tightness max. 6l/min at 1,1 bar)
- › Corrosion resistance acc. to EN 15650
- › CE certification acc. to EN 15650
- › Tested acc. to EN 1366-2
- › Classified acc. to EN 13501-3
- › Suitable for explosion-risk environment (Ex II class 3 / 3G.c IIB + H2 TX)
- › Minimum service life 40 years

NOMINATION FOR THE BEST PRODUCT IN THE CATEGORY "SAFETY AND INNOVATION" AT WNE 2023



PKTMA-120



IN DEVELOPMENT

Fire damper resistant to seismic events, universal use without interference in fire separating structures when replacing dampers

- › Square cross-section only (round adapter available): dimensions from 200 × 200 × 600 to 1 000 × 1 000 × 600 mm
- › Fire resistance EI 120 S
- › Leakage acc. to EN 1751: casing class C / blade class 2
- › Damper actuating: mechanical, electrical or electro-mechanical
- › Damper body material: galvanized steel or carbon steel painted, stainless steel
- › Universal use without the need to break the fire dividing structure
- › Max. air velocity inside the duct 16 m/s
- › Max. pressure difference 1 500 Pa (inner pressure/external pressure – dynamic pressure)
- › Seismic resistance defined as per RRS (EDB, APC) applicable to the site
- › The damper can be operated (opened, closed) at pressures up to 1 500 Pa
- › CE certification acc. to EN 15650
- › Tested in accordance with EN 1366-2 (under-pressure 1500 Pa)
- › Classified acc. to EN 13501-3+A1
- › Minimum service life 30 years (maintenance-free plain bearings)

Air regulation and check (pressure relief) dampers



RKTMJ



Multi-leaf regulation damper resistant against seismic events, effects of high pressure and higher airflow velocity

- › Square cross-section only (round adapter available): dimensions from 250 × 250 × 210 to 2 000 × 2 000 × 210 mm
- › Damper actuating: mechanical, electrical, pneumatical or combination
- › Leakage acc. to EN 1751: casing class C / blade class 3,4
- › Damper body material: galvanized steel, carbon steel painted, stainless steel
- › Usable as insulating damper, tight insulating damper, low overpressure damper
- › Max. air velocity inside the duct 25 m/s
- › Max. pressure difference 7 500 Pa (inner pressure/external pressure – dynamic pressure)
- › Seismic resistance (HIGH) defined as per RRS (EDB, APC) applicable to the site – tested to peak acceleration above 10 G
- › Radioactive aerosol impact allowed – de-contaminable
- › Minimum service life 40 years (maintenance-free plain bearings)



RKTMA

IN DEVELOPMENT

Multi-leaf regulation damper resistant against seismic events, effects of high pressure and higher airflow velocity

- Optimization of the RKTMJ damper design while maintaining the original properties:
- › Extension of the size range to a maximum size of 4 000 × 2 000 × 210 mm
 - › Damper details design improvements, lower weight



NKTMJ



Non-return damper resistant against seismic events, effects of high pressure and higher airflow velocity

- › Square cross-section only (round adapter available): dimensions from 200 × 200 × 210 to 2 000 × 2 000 × 210 mm
- › Damper actuating: mechanical only
- › Leakage acc. to EN 1751: casing class C / blade class 3
- › Damper body material: galvanized steel, carbon steel painted, stainless steel
- › Max. air velocity inside the duct 25 m/s
- › Max. pressure difference 7 500 Pa (inner pressure/external pressure – dynamic pressure)
- › Seismic resistance (HIGH) defined as per RRS (EDB, APC) applicable to the site – tested to peak acceleration above 10 G
- › Radioactive aerosol impact allowed – de-contaminable
- › Minimum service life 40 years (maintenance-free plain bearings)



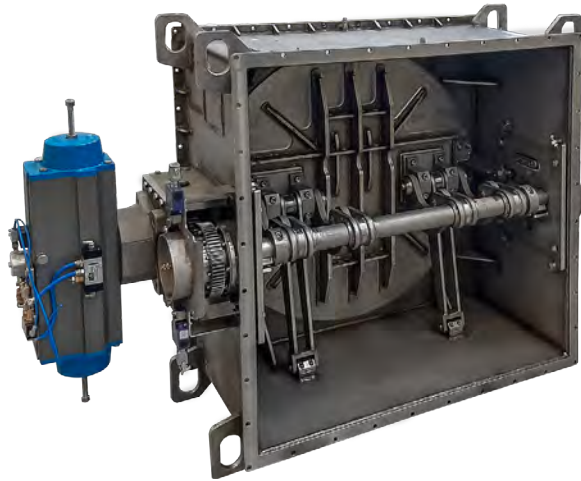
NKTMA

IN DEVELOPMENT

Non-Return damper resistant against seismic events, effects of high pressure and higher airflow velocity

- Optimization of the design of the NKTMJ damper while maintaining the original properties
- › Increased leak tightness across the blades
 - › Damper design improvements

Pressure-tight dampers/valves



RNTD

Pressure-tight damper



- Durable pressure-tight damper for quick hermetic separation of HVAC sections. Resistant to seismic events and radiation, high pressure and high flow velocities.
- › Square design only - dimensions from 400 × 270 × 400 to 1 000 × 1 000 × 535 mm
 - › Radiation resistance min. 10 kGy
 - › Seismic resistant
 - › Damper actuating: mechanical, electrical or pneumatic
 - › Damper body material: stainless steel (8 mm thick)
 - › Can be used as a sealing and isolation damper or as a stand-alone hermetic closure
 - › Air velocity inside the duct above 25 m/s
 - › Tested to a required pressure difference of 10 000 Pa
 - › Max. operating temperature 125 °C
 - › Decontaminable
 - › High operational resistance and reliability
 - › Body tightness and leak tightness across the sheet (bidirectional) 10 l/(h.m²)
 - › Minimum service life 40 years



CNTD

Pressure-tight valve



- Manual pressure-tight end for hermetic separation of circular sections. Resistant to seismic events and radiation, high pressure and high speeds.
- › Round design only - min. dimensions DN 300 mm
 - › Radiation resistance min. 10 kGy
 - › Valve actuating: manual only
 - › Material: carbon steel with coating or stainless steel
 - › Can be used as a manual hermetic closure for liquids and fluids.
 - › Screw sliding, maintenance-free design
 - › Air velocity inside the duct above 25 m/s
 - › Tested for a required pressure difference of 10 000 Pa
 - › Decontaminable
 - › Body tightness and leak tightness across blade (bidirectional) 10 l/(h.m²)
 - › Minimum service life 40 years

Flexible connection, compensator



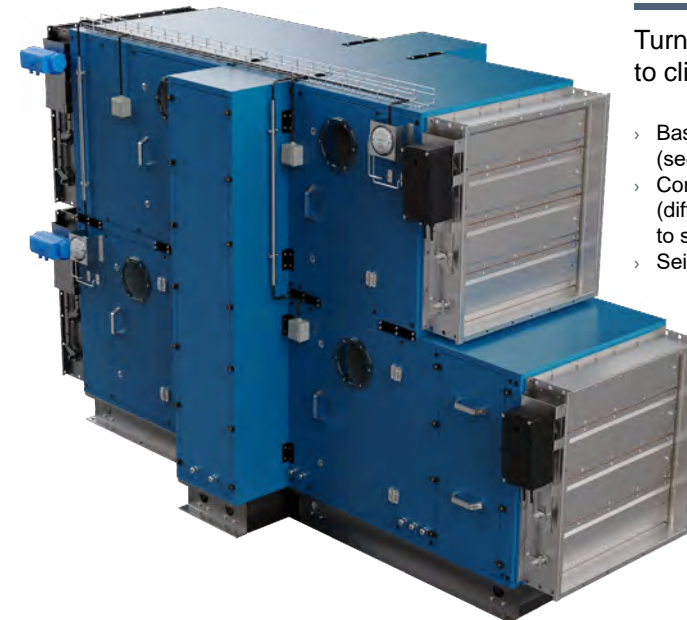
TVMJ

Damping pad



- A component that prevents the transmission of noise and vibration into the piping system, compensating for length or other changes caused by temperature fluctuations or environmental influences. Useful for compensating for thermal expansion, when unexpected loads are applied to component flanges that are rigidly connected to the subdivision structures. Applicable in high pressure and temperature environments.
- › Seismic resistant design
 - › Dimensions from 100 × 100 to 2 500 × 2 500 mm
 - › Installation length 60-600 mm, with longer lengths available on request
 - › Fabrics with fire resistance up to 500 °C
 - › Leakage acc. to EN 1751: external class C/D
 - › Applicable for overpressure/underpressure up to 7 kPa
 - › Flat or profiled flanges with variable drilling (pattern on request)
 - › Variable flange height
 - › Flanges made from stainless steel, coated carbon steel or galvanised
 - › Common PTFE-based fabrics, silicone, fiberglass-silicone, PVC or a combination of layers
 - › Meets the requirements of VDI 6022 and DIN 4102 B1/B2
 - › Decontaminable

Air-handling unit

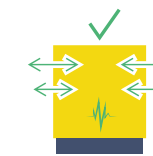


KJM-SA

Turnkey air handling units according to client requirements



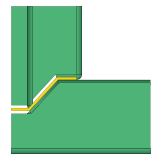
- › Based on the KJM model series (see page 22 of this catalogue)
- › Complete realization according to customer requirements (different dimensions, configurations, modified for resistance to seismic events, higher tightness rates, etc.)
- › Seismic resistance (incl. design of insulation, if applicable)



Seismic resistance



Reinforced construction/assembly



Robust construction without additional frame

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Czech Republic

Contacts:

tel.: +420 311 706 706
e-mail: mandik@mandik.cz

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