# PRODUCT CATALOGUE

EUROVENT CERTIFIED PERFORMANCE
AHU N° 17.04.016
Range AHU MANDIK
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TÜV SÜD EN 1886

RLT Raumlufttechnische Geräte Herstellerverband e.V.

APPROVED QUALITY

MANDÍK®

# Contents

# Fire-protection technology

## FDMA (TPM 018/01)

Fire damper
EI120, EI90 ($v_e$, $h_o$ i ↔ o)S

- Rectangular dampers from 180 × 180 mm to 1600 × 1,000 mm
- CE certified according to EN 15650
- Tested according to EN 1366-2
- Classified according to EN 13501-3+A1
- Fire resistance up to EIS 120
- Leakage according to EN 1751 past the class C body and damper leaf class 2
- Corrosion resistant according to EN 15650
- Cycling test in class C 10,000 according to EN 15650
- Damper actuation: mechanical or with an actuator
- For air velocities up to 12 m/s and pressure differences at the damper up to 1200 Pa

## FDMB (TPM 075/09)

Fire damper
EI120, EI90 ($v_e$, $h_o$ i ↔ o)S

- Rectangular, from 100 × 100 mm to 0,5 $m^2$ (maximum size 1,000 × 500 mm)
- CE certified according to EN 15650
- Tested according to EN 1366-2
- Classified according to EN 13501-3+A1
- Fire resistance up to EIS 120–500 Pa
- Tightness according to EN 1751 past the class C body and damper blade class 2
- Corrosion resistant according to EN 15650
- Cycling test in class C 10,000 according to EN 15650
- Damper actuation: mechanical or with an actuator
- For air velocities up to 12 m/s and pressure differences at the damper up to 1,200 Pa

## FDMR (TPM 140/19)

Fire damper

- Dampers ø 100 mm to 800 mm
- CE certified according to EN 15650
- Tested according to EN 1366-2
- Classified according to EN 13501-3+A1
- Leakage according to EN 1751 past the class C body and damper leaf class 3
- Fire resistance up to EIS 120–500 Pa
- Corrosion resistant according to EN 15650
- Cycling test in class C 10,000 according to EN 15650
- Damper actuation: mechanical or with an actuator
- For air velocities up to 12 m/s and pressure differences at the damper up to 1,200 Pa

## FDMR-60 (TPM 142/19 )

Fire damper

CE

- Dampers ø 100 mm to 400 mm
- CE certified according to EN 15650
- Tested according to EN 1366-2
- Classified according to EN 13501-3+A1
- Fire resistance up to EIS 60
- Leakage according to EN 1751 past the class C body and damper leaf class 3
- Corrosion resistant according to EN 15650
- Cycling C 10,000 according to EN 15650
- Damper actuation: mechanical or with an actuator
- For air velocities up to 12 m/s and pressure differences at the damper up to 1,200 Pa

## FDMQ (TPM 0103/14)

Fire damper

CE Ex

- Rectangular dampers from 150 × 150 mm to 1,500 × 800 mm
- CE certified according to EN 15650
- Tested according to EN 1366-2
- Classified according to EN 13501-3+A1
- Fire resistance up to EIS 120
- Leakage according to EN 1751 past the class C body and damper leaf class 2
- Corrosion resistant according to EN 15650
- Cycling C 10,000 according to EN 15650
- Damper control: mechanical or with an actuator
- For air velocities up to 12 m/s and pressure differences at the damper up to 1,200 Pa

## FDMA-PM (TPM 145/20)

Fire damper

CE Ex

- Round dampers 900 and 1,000 mm in diameter
- CE certified according to EN 15650
- Tested according to EN 1366-2
- Classified according to EN 13501-3+A1
- Fire resistance up to EIS 120
- Leakage according to EN 1751 past the class C body and damper leaf class 2
- Corrosion resistant according to EN 15650
- Cycling C 10,000 according to EN 15650
- Damper control: mechanical or with an actuator
- For air velocities up to 12 m/s and pressure differences at the damper up to 1m200 Pa

## FDMS (TPM 092/13)

CE

Fire damper

EI60 ($v_e$, $h_o$ i ↔ o)S

- Dampers 100 mm to 630 mm in diameter
- CE certified according to EN 15650
- Tested according to EN 1366-2
- Classified according to EN 13501-3+A1
- Fire resistance up to EIS 60
- Leakage according to EN 1751 past the class C body and damper leaf class 2
- Corrosion resistant according to EN 15650
- Cycling C 10,000 according to EN 15650
- Damper control: mechanical or with an actuator
- For air velocities up to 12 m/s and pressure differences at the damper up to 2,500 Pa

## CFDM / CFDM-V (TPM 118/16)

CE

Fire damper

EI120, EI90, EI60 ($v_e$ i ↔ o)S, EI120 ($v_e$, $h_o$ i ↔ o)S

- Dampers ø 100, 125, 150, 160, 200 mm
- Mechanical damper control
- CFDM-V – an inlet/outlet dish valve included
- CE certified according to EN 15650
- Tested according to EN 1366-2
- Classified according to EN 13501-3+A1
- Fire resistance up to EIS 60, 90, 120
- Leakage according to EN 1751 past a blade class 2
- Corrosion resistant according to EN 15650
- For air velocities up to 12 m/s and pressure differences at the damper up to 1,200 Pa

## CFDM 250 (TPM 152/21)

CE

Fire damper

- Damper ø 250 mm
- Mechanical damper control
- CE certified according to EN 15650
- Tested according to EN 1366-2
- Classified according to EN 13501-3+A1
- Fire resistance up to EIS 90
- Tightness according to EN 1751 past a blade class 2
- Corrosion resistant according to EN 15650
- For air velocities up to 12 m/s and pressure differences at the damper up to 1,200 Pa

## FDML (TPM 130/17)

### Multiblade fire damper
### EI90 ($v_e$ i ↔ o)S, E120 ($v_e$ i ↔ o)S

- Sizes from 200 × 300 to 1,000 × 1,000 mm
- Damper control with an actuator
- CE certified according to EN 15650
- Tested according to EN 1366-2
- Classified according to EN 13501-3+A1
- Leakage class past the damper B body, past the damper leaf class 3 according to EN 17501
- Cycling test C10,000 according to EN 15650
- Air flow velocities up to 12 m/s
- Pressure differences up to 1,500 Pa

## DM-S (TPM 095/13)

### Fire dampers without thermal insulation
### E30 ($v_e$, $h_o$ i ↔ o)S

- Round dampers ø from 100 to 630 mm
- Material: galvanized steel
- Damper actuation with an actuator
- Certified according to ČSN EN 15650
- Tested according to EN 1366-2
- Classified according to ČSN EN 13501-3+A1
- Fire resistance up to 30 ES
- For air velocities through the open damper up to 12 m/s and pressure differences up to 1,200 Pa

## SMRF (TPM 091/13)

### Silencer

- Attachment sizes from 80 to 500 mm
- Blade sealing
- Tested according to EN 1366-1, EN 12237 and EN ISO 11691
- SMR is a SMRF version without fire resistance
- Pressure differences up to 1,500 Pa
- Air velocities up to 12 m/s
- Fire resistance according to EN 13501-3 + A1 EI 30 with no protective distance
- Insulation thickness 50 mm

# Smoke/heat extraction dampers

## SEDS (TPM 086/12)

CE

Smoke extraction damper for one fire compartment

$E_{600}90(v_e - i \leftrightarrow o)S1000C_{300}AAsingle$

- Rectangular dampers from 180 × 180 mm to 1,600 × 1,000 mm
- CE certified according to EN 12101-8
- Tested according to EN 1366-10
- Classified according to EN 13501-4+A1 ES 90/600, AA control for one fire compartment
- Cycling C 300 according to EN 15650
- Leakage according to EN 1751 past the class C body and damper leaf class 2
- Damper actuation with an actuator
- For systems with air velocities up to 15 m/s, negative pressure up to -1,000 Pa or positive pressure up to 500 Pa

## SEDS-R (TPM 120/16)

CE

Smoke extraction damper for one fire compartment

$E_{600}\ 120(v_e - i \leftrightarrow o)S1500C_{mod}MAsingle$

- Dampers 100 mm to 630 mm in diameter
- CE certified according to EN 12101-8
- Tested according to EN 1366-10
- Classified according to EN 13501-4+A1 ES 120/600, actuation: MA or AA for one fire compartment
- Cmod cycling according to EN 15650
- Leakage according to EN 1751 past the class B body and damper leaf class 4 for ø 100 mm class 3
- Damper actuation with an actuator
- For systems with air velocities up to 15 m/s, negative pressure up to -1,500 Pa or positive pressure up to 500 Pa

## SEDS-L (TPM 121/16)

CE

Smoke extraction damper for one fire compartment

$E_{600}\ 120(v_e - i \leftrightarrow o)S1500C_{mod}MAsingle$

- Rectangular dampers from 200 × 200 mm to 1,200 × 1,200 mm
- CE certified according to EN 12101-8
- Tested according to EN 1366-10
- Classified according to EN 13501-4+A1 ES 120/600, MA or AA control for one fire compartment
- Cmod cycling according to EN 12101-8
- Leakage according to EN 1751 past the class B body and damper leaf class 3
- Damper control with an actuator
- For systems with air velocities up to 12 m/s, negative pressure up to -1,500 Pa or positive pressure up to 500 Pa

## SEDM (TPM 087/12)

CE

Smoke extraction damper for multiple fire compartments
EI120($v_{ew}$, $v_{ed}$, $h_{ow}$, $h_{od}$ - i↔o)S1500$C_{mod}$ MA multi

- Rectangular dampers from 180 × 180 mm to 1,600 × 1,000 mm
- CE certified according to EN 12101-8
- Tested according to EN 1366-10
- Classified according to EN 13501-4+A1 EIS 120, HOT 400/30, actuation: AA/MA for multiple fire compartments
- Cmod cycling according to EN 15650
- Leakage according to EN 1751 past the class C body and damper leaf class 2
- Damper control with an actuator
- For systems with air velocities up to 15 m/s, negative pressure up to -1,500 Pa or positive pressure up to 500 Pa

## SEDM-L (TPM 146/20)

CE

Smoke extraction damper for multiple fire compartments, multiblade
EI120 ($v_{ew}$, $v_{ed}$, $h_{ow}$ $h_{od}$ - i ↔ o)S1500$C_{mod}$ MA multi

- Rectangular multiblade dampers from 200 × 430 mm to 1,200 × 2,030 mm
- CE certified according to EN 12101-8
- Building length only 250 mm
- Tested according to EN 1366-10
- Classified according to EN 13501-4+A1 EIS 120: AA (automatic activation), MA (manual activation) for multiple fire compartments
- Corrosion resistant according to EN 15650
- Cmod cycling according to EN 12101-8
- Leakage according to EN 1751 past the class C body and damper leaf class 3
- Damper control with an actuator
- For systems with air velocities up to 12 m/s, negative pressures up to -1,000 Pa or positive pressures up to 500 Pa

## MSD (TPM 109/15)

CE

Smoke extraction damper for multiple fire compartments
EI120($v_{ew}$, $h_{ow}$ - i↔o)S1500$C_{mod}$ AA multi

- Rectangular dampers from 160 × 180 mm to 1,500 × 800 mm
- Round dampers from ø 180 to 630 mm
- CE certified according to EN 12101-8
- Tested according to EN 1366-10
- Classified according to EN 13501-4+A1 EIS 120, actuation: AA for multiple fire compartments
- Cycling according to EN 12101-8 MSD rectangular dampers – Cmod MSD, MSD-W round dampers – C10,000 SD-W rectangular dampers – C10,000 (no-load testing according to EN 1366-10)
- Leakage according to EN 1751 past the class C body and damper blade class 2
- Damper activation with an actuator
- For systems with air velocities up to 15 m/s, negative pressures up to -1,500 Pa or positive pressures up to 500 Pa

# Control equipment

## RDM (TPM TPM 150/21)

### Multiblade regulating damper

- For air flow regulation
- Very low torques required
- Manual control of servo motor
- Standard series sizes from 200 × 200 mm to 2,000 × 2,000 mm
- Leakage according to EN 1751:
  – past the class C body
- Material: galvanized steel or corrosion-resistant steel
- Measures to minimize pressure loss and noise:
  – two blade sizes
  – aerodynamic blade profile – leading body edge under an angle
- With a flange for installation on piping
- Silicone free, halogen free, lead free
- UV stabilization and suppressed flammability class V-0
- Body, blades and mechanical part: reaction to fire class A1

## RDTM (TPM 151/21)

### Rectangular regulating damper, leaktight

- For air flow regulation
- Very low torques required
- Manual control of servo motor
- Standard series sizes from 200 × 200 mm to 2,000 × 2,000 mm
- Leakage according to EN 1751:
  – leakage past the class C body
  – leakage past the closed blades class 3
- Material: galvanized steel or corrosion-resistant steel
- Measures to minimize pressure loss and noise:
  – two blade sizes
  – aerodynamic blade profile
  – leading body edge under an angle
- With a flange for installation on piping
- Silicone free, halogen free, lead free
- UV stabilization and suppressed flammability class V-0
- Body, blades and mechanical part: reaction to fire class A1

## RKALM (TPM 119/16)

### Rectangular aluminium regulating damper

- Air flow regulation and closing
- Activation: manual or with an actuator
- Damper sizes from 200 × 100 mm to 2,000 × 2,000 mm
- Blade width 100 mm
- Material: aluminium sheet
- Leakage past the blades class 2, 3 according to EN 1751
- Heat transfer coefficient across the blade up to 2.99 W/m$^2$.K
- With a flange for installation on piping

## RKKM (TPM 030/03)

### Round regulating damper

- For air flow regulation
- Activation: manual or with an actuator
- Also for environments with the explosion hazard
- Diameters from 80 mm to 630 mm
- Material: galvanized steel
- With a flange for installation on piping/SPIRO piping

## RKKTM (TPM 031/03)

### Round tight regulating damper

- Air flow regulation and closing
- Activation: manual or with an actuator
- Also for environments with the explosion hazard
- Diameters from 80 mm to 630 mm
- Material: aluminium sheet
- With a flange for installation on piping/SPIRO piping

## RPM-V (TPM 085/12)

### Round variable airflow regulator

- To regulate a variable or constant air flow in ventilation systems
- Diameters from 80 mm to 400 mm
- Air flow rates from 35 to 5,800 $m^3/h$
- Material: galvanized steel
- Each VAV regulator is equipped with an airflow pressure probe and electrical actuation (e. g. Belimo LMV-D3 MP, NMV-D3-MP or SMV-D3-MP, power supply 24 V, actuation voltage 0–10 V or 2–10 V)

## RPM-K (TPM 094/13)
### Round constant airflow regulator

- To maintain airflow in ventilation systems constant
- Diameters from 100 mm to 400 mm
- Air flow rates from 100 to 4,000 $m^3/h$
- The regulator body and actuating mechanism are made of galvanized steel, the damper leaf is made of aluminium, the blade axis, bearings and spring are made of stainless steel

## RPMC-V (TPM 106/14)
### Square-shaped variable-airflow regulator

- To regulate a variable or constant airflow in ventilation systems
- Sizes from 200 × 200 to 1,000 × 1,000 mm
- Air flow rates from 90 to 43,000 $m^3/h$
- Material: galvanized sheet
- Each VAV regulator is equipped with an airflow pressure probe and electrical actuator (e.g. Belimo LMV-D3 MP, NMV-D3-MP or SMV-D3-MP, power supply 24 V, actuation voltage 0–10 V or 2–10 V)

## RPM-LV (TPM144/19)
### Variable air flow regulator for low air velocities

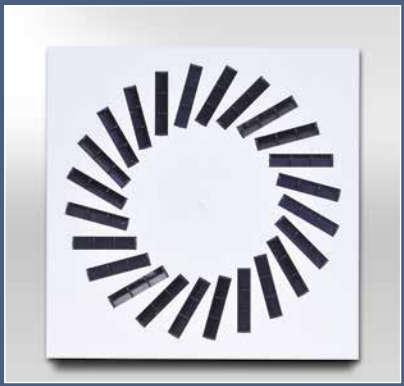
- To regulate a variable or constant air flow in ventilation systems
- Diameters from 80 mm to 315 mm
- Air flow rates from 9 to 2,244 $m^3/h$ (i. e. from 2.5 to 623 L/s)
- For air velocities ≥0.5 m/s
- Works starting from a 2 Pa regulating pressure loss
- Each unit is equipped with pressure sensors in the air flow and an actuator (Belimo LMV-D3W-MP.1 MDK, supply voltage 24 V, actuation voltage 0–10 V or 2–10 V)
- Compact design
- Material: galvanized sheet

# RPMC-K (TPM 105/14)

## Rectangular constant airflow regulator

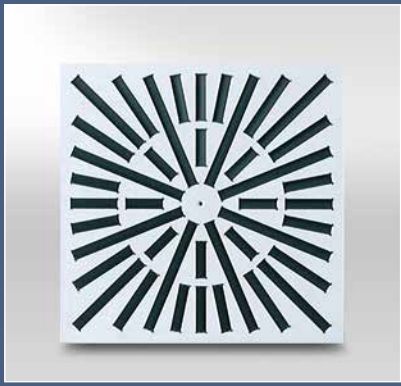
- To maintain the airflow in ventilation systems constant
- Sizes from 200 × 100 to 600 × 600 mm
- Air flow rates from 250 to 12,000 $m^3/h$
- The regulator body and actuating mechanism are made of galvanized steel, the damper leaf is made of aluminium, the leaf axis, casings and spring are made of stainless steel

# Air distribution elements



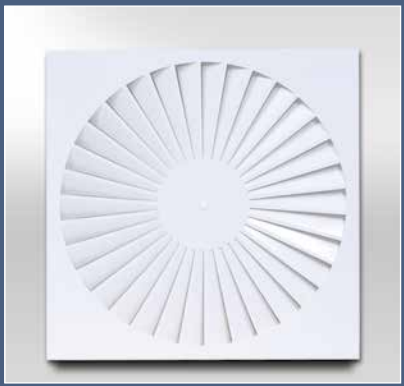
## VVM (TPM 001/96)
### Whiling air flow outlet

- For installation into a false ceiling or suspended under the ceiling
- For offices, cinemas, shopping centres, etc.
- Air flow rates from 55 to 1,200 $m^3/h$
- Sizes (mm): 300, 400, 500, 600, 625, 825
- Installation height: from 2.6 to 4.0 m
- For heating and cooling at $\Delta tp \leq -14$ K
- Adjustable plastic blades for air flow direction adjustment
- Galvanized steel plenum box
- Painted (RAL 9010) front panel



## VVDM (TPM 089/12)
### Whiling air flow outlet

- For installation into a false ceiling or suspended under the ceiling
- For offices, cinemas, shopping centres, etc.
- Air flow rates from 150 to 1,600 $m^3/h$
- Sizes (mm): 300, 400, 500, 600, 625, 825
- Installation height: from 2.5 to 4.0 m
- For heating and cooling at $\Delta tp \leq 12$ K
- Adjustable plastic blades for air flow direction adjustment
- Galvanized steel connection box
- Painted (RAL 9010) front panel



## VVPM (TPM 007/99)
### Whiling air flow outlet with fixed blades

- For installation into a false ceiling or suspended under the ceiling
- For offices, cinemas, shopping centres, etc.
- Air flow rates from 120 to 600 $m^3/h$
- Sizes (mm): 300, 400, 500, 600, 625
- Installation height: from 2.6 to 4.0 m
- For cooling at $\Delta tp \leq -14$ K
- Galvanized steel plenum box
- Painted (RAL 9010) front panel

## ALCM (TPM 003/97)
### Finned anemostat

- For installation into a false ceiling or suspended under the ceiling
- For offices, cinemas, shopping centres, etc.
- Air flow rates from 110 to 1,800 $m^3/h$
- Sizes (mm): 250, 300, 400, 500, 600, 625
- Installation height: from 2.6 to 4.0 m
- For heating and cooling at $\Delta tp \leq -8$ K
- Inlet air is distributed into 4 mutually perpendicular sides
- Galvanized steel plenum box
- Painted (RAL 9010) front panel

## ALKM (TPM 005/99)
### Finned anemostat

- For installation into a false ceiling or suspended under the ceiling
- For offices, cinemas, shopping centres, etc.
- Air flow rates from 110 to 1,800 $m^3/h$
- Sizes (mm): 250, 300, 400, 500, 600, 625
- Installation height: from 2.6 to 4.0 m
- For heating and cooling at $\Delta tp \leq -8$ K
- Inlet air is uniformly distributed to all sides
- Galvanized steel plenum box
- Painted (RAL 9010) front panel

## DVCM (TPM 131/17)
### Perforated air diffuser

- For installation into a false ceiling or suspended under the ceiling
- For offices, cinemas, shopping centres, etc.
- Air flow rates from 40 to 950 $m^3/h$
- Sizes (mm): 250, 300, 400, 500, 550
- Front plate size invariably 595 × 595 mm
- Installation height: from 2.6 to 4.0 m
- For heating and cooling at $\Delta tp \leq -15$ K
- Galvanized steel plenum box
- Painted (RAL 9010) front panel

## VASM (TPM 017/01)
### Whirling anemostat with adjustable blades

- For installation into a false ceiling or suspended under the ceiling
- For production floors, warehouses, shopping centres, etc.
- Air flow rates from 350 to 2,400 $m^3/h$
- Sizes (mm): 315, 400, 630
- Installation height >3.8 m
- For heating at Δtp ≤ -1 % K and cooling at Δtp ≤ -10 K
- Adjustable outlet air direction (vertical, inclined, horizontal)
- Outlet air flow direction control: with a BELIMO actuator or manual
- High inlet air induction in the ventilated space
- Galvanized steel plenum box
- Painted (RAL 9010) front panel

## VAPM (TPM 010/00)
### Whirling anemostat with fixed blades

- Heating/cooling option selection by means of the sliding central part
- For installation into a false ceiling or suspended under the ceiling
- For offices, cinemas, shopping centres, etc.
- Sizes (mm): 125, 160, 200, 250, 315, 400
- Air flow rates from 30 to 1,800 $m^3/h$
- Installation height: from 2.6 to 4.0 m
- For heating and cooling at Δtp ≤ -10 K
- High inlet air induction in the ventilated space
- Galvanized steel plenum box
- Painted (RAL 9010) front panel

## VAPM-L (TPM 082/11)
### Whirling anemostat with fixed blades – linear

- For installation into aprons, ledges, steps, or stairs
- For cinemas, theatres, concert halls, etc.
- Size depending on the number of outlets (1–6)
- Air flow rates from 6 to 100 $m^3/h$
- Installation height: 15–300 mm above the floor
- Temperature difference Δtp ≤ 5 K
- Painted (RAL 9010) front panel
- Galvanized steel plenum box
- An air distributing component can be added

## UNIBOX
### Universal plenum box

- Sizes for square and round front panels (mm): 250, 300, 400, 500, 600, 625, 825, adapted for installation through a suspended cassette ceiling
- The regulating leaf can be controlled from the inside and outside of the box
- Both horizontal and vertical connection with the regulating leaf
- Designed for VVM, VVPM, ALCM and ALKM front panels
- Material: galvanized steel

## TVOM, TVPM (TPM 028/03)
### Dish valve

- For air extraction from (TVOM) or supply to (TVPM) toilets, bathrooms and other small spaces, installed into a false ceiling
- Air flow rates from 20 to 250 $m^3/h$
- Sizes (mm): 100, 125, 160, 200
- Material: painted (RAL 9010) steel

## VSV (TPM 065/06)
### Slot diffuser

- For air supply to / extraction from comfort areas
- Stable linear air flow along the diffuser length
- Installation height from 2.6 to 4 m if installed into the ceiling
- Flow rates from 20 to 250 $m^3/h$
- Sizes: 600 and 1,200 mm
- Materials: diffuser frame: aluminium, other parts: galvanized steel. The front parts are either galvanized or painted (any RAL colour)

## SDL (TPM 110/15)
### Slot diffuser

- For high-induction air supply/extraction
- Stable uniform air flow along the slot length
- Number of slots: 1–6
- Variable length
- Material: anodized aluminium, alternatively powder coated

## VPVM (TPM 013/01)
### Large-area vent

- To supply air to offices, working areas of industrial buildings and laboratories under high point-temperature stress or with dangerous air pollution – low air flow in the working area
- Air flow rates from 500 to 8,100 $m^3/h$
- For inlet air temperatures 1 °C to 3 °C lower than that in the area
- Available in the round, wall-mounted and corner design
- The inlet air flows from the floor upwards by convection flow
- Material: painted (RAL 9010) steel

## KMM (TPM 002/96)
### Covering grille

- To cover openings and duct outlets and prevent foreign objects from penetrating into ducts
- Effective area ~78 %
- Material: painted (RAL 9010, 9006) steel

## SMM, SMPM (TPM 014/01, TPM 035/04)

### Wall-mounted grille

- Material: anodized aluminium or galvanized steel
- Independent wall grilles (SMM) and horizontal wall grille systems (SMPM) for installation into rectangular ducts or walls
- For air supply/extraction in cinemas, shopping centres, halls, garages, etc.
- Air flow rates from 100 to ~5,000 $m^3/h$

## VNM (TPM 015/01)

### Adjustable vent

- Material: anodized aluminium or galvanized steel
- For wall-mounting or installation into a rectangular duct or wall
- Adjustable airflow direction
- For air supply/exhaust in cinemas, shopping centres, halls, garages, etc.
- Air flow rates from 100 to ~5,000 $m^3/h$
- Optional regulation device for airflow and pressure loss setting

## SVM (TPM 016/01)

### Wall-mounted vent

- Material: anodized aluminium or galvanized steel
- For wall-mounting or installation into a rectangular duct or wall
- Adjustable airflow direction
- For air supply/extraction in cinemas, shopping centres, halls, garages, etc.
- Air flow rates from 100 to ~5,000 $m^3/h$
- Optional regulation device for airflow and pressure loss setting

## RAG45 (TPM 107/15)
### Grille with blades fixed at 45°

- Material: anodized aluminium or galvanized steel
- For wall-mounting or installation into a rectangular duct or wall
- Air stream leaving/entering the grille under a 45° angle
- For air supply/exhaust in cinemas, shopping centres, halls, garages, etc.
- Air flow rates from 100 to ~5,000 $m^3/h$
- Optional regulation device for airflow and pressure loss setting

## VNKM (TPM 034/04)
### Vent for round ducts

- For installation into a round duct
- For air supply/exhaust in cinemas, shopping centres, halls, garages, etc.
- Air flow rates from 100 to ~5,000 $m^3/h$
- Adjustable airflow direction
- Optionally: regulation device for airflow and pressure loss setting
- Material: frame: galvanized steel, blades: aluminium

## DDM II (TPM 072/08)
### Long-reach nozzle

- Long-distance air distribution
- For installation into walls or ceilings
- For large halls, theatres, concert halls
- Air flow rates from 40 to 2,400 $m^3/h$
- Sizes (mm): 100, 125, 160, 200, 250, 315, 400
- For heating at $\Delta tp \leq 25$ K and cooling at $\Delta tp \leq -14$ K
- Outlet air direction adjustment: manual or by means of an actuator (± 25 °)
- High outlet air velocity
- Painted (RAL 9010)

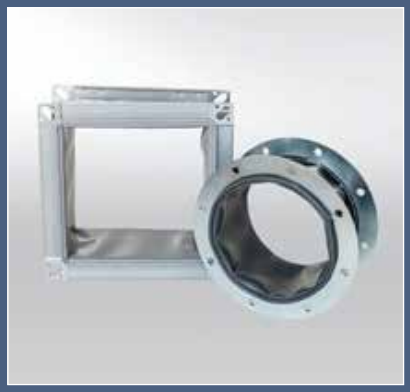
## PDZM (TPM 079/10)
### Rain protection louvre

- For air supply/exhaust
- Hidden fixing or openings for screws
- Fixing frame or frame for building-in
- Sizes: from 200 × 200 mm to 2,000 × 2,000 mm
- Anti bird/insect net
- Optional filter fabric G2
- Material: galvanized steel (basic design)
- Painted (RAL colour)
- Louvre depths 70 mm and 40 mm

## SMR (TPM 112/15)
### Silencer

- Attachment sizes from 80 to 900 mm
- SPIRO design with blade sealing
- Insulation thickness 50 mm or 100 mm
- Air velocities up to 12 m/s, pressure differences up to 1,500 Pa

# Other VAC components



## FFDM (TPM 003/96)
### Damping pad

- To prevent the transfer of dynamic forces created by the vibration of the fans and units to the attached duct
- Designed for group 1 ducts
- Leakage class D
- Flange width 20 mm or 30 mm
- Round or square-shaped
- Material: galvanized steel or stainless steel (AISI 304)

## NKTM (TPM 090/13)
### Pressure-relief damper

- Sizes: from 200 × 200 mm to 1,400 × 1,400 mm
- Pressure differences up to 1,500 Pa
- Air velocities up to 12 m/s
- Mechanical non-return design
- Material: galvanized steel

## DM-E (TPM 084/12)
### Evacuation (decompression) damper

CE

- Sizes: from 100 × 100 mm to 1,200 × 600 mm, round ø 100–630 mm
- Pressure differences up to 1,500 Pa
- Flow velocities up to 12 m/s
- Designed for smoke extraction and pressure relief
- Material: galvanized steel
- Activation by means of an actuator
- Fire classification E30 ve, ho (i→o) S according to ČSN EN 13501-3

# Air handling units

## MANDÍK compact air handling unit

- Ait throughput from 500 to 10,000 m³/h
- Dynamic design available, with the dimensions in 1 mm steps covering the whole air throughput range
- Two casing types available depending on the heat transfer class and heat bridge (T3 TB2 / T2 TB1), according to EN1886, covering the whole air throughput range
- In the T2 TB1 casing variant, casing heat transfer and heat bridging are eliminated in accordance with EN 1886
- Thermally separated air streams inside the unit
- Design meeting the EKODESIGN requirement according to Commission Regulation (EU) 1253/2014, ErP 2018
- Counter-current recuperative plate heat exchanger optionally available depending on the requirements for minimum efficiency and pressure loss
- Continuous recuperation power control
- Continuous recuperative heat exchanger antifreeze protection
- Free-cooling possible
- Fresh air can be mixed with outlet air for heat power optimization
- EC fans with a high margin for the required external pressure into the duct

## MANDÍK air handling unit



- Ait throughput from 500 to 120,000 m³/h
- Range of 89 type sizes, square/rectangular/transport cross sections
- Newly the option of design in a dynamic (customer-selected) size in 1 mm steps covering the entire air throughput range
- Design meeting the EKODESIGN requirement according to Commission Regulation (EU) 1253/2014, ErP 2018
- Newly a range of casings for all KJM series including a dynamic size and covering the entire air throughput range depending on the heat transfer class and heat bridging class T3 TB2 / T2 TB1 / T1 TB1, according to EN1886
- Casings (all variants) certified by the TÜV-SÜD laboratory in Munich, Germany
- EUROVENT certification and, optionally, design in energy classes up to A+ and issue of an energy label
- Certification meeting the requirements of the German RLT association of air handling product manufacturers and the option of design in energy classes up to A+ and the issue of the energy label by the certified German TÜV-SÜD Industrie Service GmbH
- Indoor, outdoor and hygienic designs available
- Standard configuration design – inlet and outlet sections vertically or horizontally arranged or in the under-ceiling design
- ATEX design for explosion hazard environments (only for the variant with the T3 TB2 casing)
- Optional surface finishing by powder coating (outer/inner parts of the casing panels and steel parts of the unit internals)
- Smooth internal surface in the standard design requiring no additional installation changes
- Wide range of recuperative (plate/rotary) heat exchange efficiencies in each type size or dynamic series
- Company's own GHM gas heaters 15 to 610 kW power
- I&C system on the Siemens Climatix platform
- Emphasis put on high-quality technical workmanship and a favourable price-performance ratio
- Emphasis put on a high quality of the proven and certified purchased components
- Emphasis put on easy access for service and maintenance
- Possibility of warranty period extension to ≤60 months


# MANDÍK air handling unit with a heat pump

- Air throughputs from 500 to 25,000 $m^3/h$
- Square or round cross section
- Newly the option of design in a dynamic (customer's own) size in 1mm steps covering the entire air throughput range
- Design meeting the EKODESIGN requirement according to Commission Regulation (EU) 1253/2014, ErP 2018
- Newly a range of casings for all KJM series including a dynamic size and covering the entire air throughput range depending on the heat transfer class and heat bridging class T3 TB2 / T2 TB1 / T1 TB1, according to EN1886
- Casings (all variants) certified by the TÜV-SÜD laboratory in Munich, Germany
- EUROVENT certification and, optionally, design in energy classes up to A+ and issue of an energy label
- Certification meeting the requirements of the German RLT association of air handling product manufacturers and the option of design in energy classes up to A+ and the issue of the energy label by the certified German TÜV-SÜD Industrie Service GmbH
- Standard configuration design – inlet and outlet sections vertically or horizontally arranged
- Indoor, outdoor and hygienic designs available
- Optionally surface finishing by powder coating (outer/inner parts of the casing panels and steel parts of the unit internals)
- With or without a recuperative (plate/rotary) heat exchanger (only active recuperation of the cooling circuit)
- An integrated cooling circuit with or without reversible operation completely connected and made operable
- Smooth internal surface in the standard design with no additional installation changes
- Option of inclusion of a bivalent source in extreme design conditions – water, electric or gas heating, Company's own GHM gas heaters
- The cooling circuit can be dimensioned for the R410A or R407C environmentally friendly coolants
- I&C system on the Siemens Climatix platform
- Emphasis put on high-quality technical workmanship
- Emphasis put on a high quality of the proven and certified purchased components
- Emphasis put on easy access for service and maintenance

# MANDÍK air handling unit in the hygienic design

This is an extension of the standard air handling unit series and their operating conditions. The units in the hygienic version are designed to be usable in hygienic and clean areas, e. g. in the medical sector, laboratories and various industries.

The units have been certified by the German 'Hygiene-Institut des Ruhrgebiets' and meet the following German, Austrian and Swiss standards.

**Standard hygienic design:**

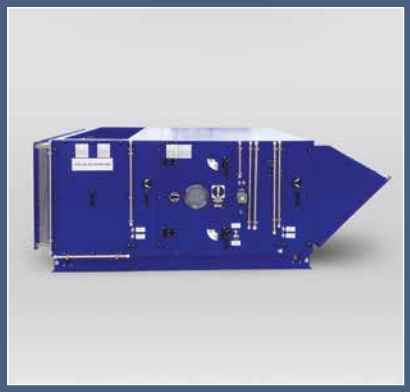
- VDI 6022 Blatt 1
- SWKI VA104-01
- ÖNORM H 6021

**Extended hygienic design for hospitals and clean areas:**

- DIN 1946-4
- SWKI 99-3
- ÖNORM H 6020
- The unit is designed to minimize impurity deposits and eliminate the growth of bacteria and moulds
- The unit is designed to enable easy access for cleaning and sanitation of all components (internal service areas, removables, …)
- The internal surface is smooth, with no grooves, folds or sharp edges, to enable safe cleaning and sanitation
- The internal area is designed to meet all requirements of applicable hygiene standards (e. g., the inlet filter is equipped with a condensate drain tray, all the condensate trays are a special 3D design, door sealing is free from any adhesives and is removable for sanitation, etc.)
- The design of the internals meets the requirements of applicable standards (filters, fans, heat exchanges, silencers silencing frames, dampers, chamber connections, etc.)
- Internal materials and their surface finishing meet the requirements of applicable standards: the metallic parts are stainless steel or are coated with a powder paint, the non-metallic parts (powder paint, rubber, sealants, sealing, etc.) have been tested for bacterial and fungal inertness according to ISO 846
- Special antimicrobial powder paint used on all coated internals
- Design in the M/P/T series
- In a dynamic size
- Eurovent, RLT certified
- Certified T1 TB1/T2 TB1/T3 TB1 casing

**The following components have been eliminated from the hygienic series:**

- integrated cooling
- gas/electric heating





# MANDÍK air handling unit in the design for explosion hazard environments

- Air throughputs from 500 to 99,250 m³/h
- Range of 89 type sizes, square/rectangular/transport cross sections
- The units for ATEX are among products that are exempt from EKODESIGN according to Commission Regulation (EU) 1253/2014
- Casing certified by the TÜV-SÜD laboratory in Munich, Germany
- EUROVENT certification and, optionally, design in energy classes up to A+ and issue of an energy label
- Certification meeting the requirements of the German RLT association of air handling product manufacturers and the option of design in energy classes up to A+ and the issue of the energy label by the certified German TÜV-SÜD Industrie Service GmbH
- Units in the outdoor or indoor designs
- Units in the galvanized version
- Smooth internal surface in the standard design requiring no additional installation changes
- Standard configuration design – inlet and outlet sections vertically or horizontally arranged or in the under-ceiling design
- All the electrically non-conducting connections are conductively bridged (e. g. the chambers are interconnected and conductively connected to the structure frame, damping frames with the unit casing, etc.)
- All metallic parts are bonded by means of a Cu wire
- Certified drives (fan + motor) fitted with thermistor protection are used in units intended for use in explosion hazard areas
- All electrical parts are grounded and the whole unit is grounded by means of a central grounding point located in the fan chamber
- Inspection and servicing openings are equipped with a protective grating
- A wide range of recuperative plate heat exchanger sizes and efficiencies
- Where condensate forms in the unit, a specific aluminium drop eliminator is used
- Emphasis is put on a high quality of the proven and certified purchased components
- Emphasis put on easy access for service and maintenance
- The possibility of warranty period extension to ≤60 months exists

## MaR

### Instrumentation and control

- An I&C system is designed for each Mandík air handling unit variant
- Comfort unit run control by means of the programmable Siemens Climatix controller
- Wide communication capability – cooperation with the majority of the superior systems
- Easy control and full service setting by means of the display and buttons
- Power distribution boards in the metallic or plastic design depending on the air handling unit configuration


## KAY

CE

### MANDÍK room air conditioning unit

- Room heating, cooling and dehuminification
- Room air treatment with a filter
- Low running costs owing to the technology involved
- Energy class A+++ for cooling and A++ for heating
- The heating system can work at outdoor temperatures as low as -15 °C
- Environmentally friendly – the unit emits no harmful substances and has no adverse environmental effects


## KAY-D

CE

### MANDÍK room air conditioning unit

- Room heating, cooling and dehuminification
- Room air treatment with a filter
- Low running costs owing to the technology involved
- Energy class A+++ for cooling and A++ for heating
- The heating system can work at outdoor temperatures as low as -15 °C
- Environmentally friendly – the unit emits no harmful substances and has no adverse environmental effects

# Industrial heating equipment


## HELIOS / HELIOS-S

### Dark gas-heated infrared heater

- Fuel: gas (G20), propane (G31), propane-butane (G30/G31)
- Heating power from 6.2 to 90 kW
- A range of designs
- The versions differ in power, burner box design, reflector design and heating tube shape
- Selection between the one-stage or two-stage burner designs
- Company's own OI, OID control boxes + UC 301 regulator or the possibility of connection to a SIEMENS regulation system


## HELIOS-M

### Dark gas-heated infrared heater

- Fuel: gas (G20, G25), propane (G31)
- Heating power from 6 to 45 kW
- Burner adjustable to a 60 % to 100 % power
- High seasonal efficiency up to 93 %
- Company's own MHS one-zone regulation
- Control: analogous by using a signal 0–10 V or via Modbus


## MONZUN

### Gas warm air heater

- Axial fans in the standard design
- For heating production and warehouse area
- Open or closed appliances with forced flue gas exhaust
- Fuel: gas (G20), propane (G31), propane-butane (G30/G31)
- Heating power from 12 to 54.8 kW
- Air flow rates from 2,500 to 950 $m^3/h$
- Wall-mounted or ceiling-mounted design
- Modulated power also in the basic design (smooth power regulation)


## MONZUN-CP

### Gas condensing hot-air heater

- For heating production and ware-house area
- Open or closed appliances with forced flue gas exhaust
- Fuel: gas (G20), propane (G31), propane-butane (G30/G31)
- Heating power from 4.2 to 55 kW
- Air flow rates from 2,200 to 950 $m^3/h$
- Wall-mounted
- Modulated power also in the basic design (smooth power regulation)

## MONZUN – TE

### Hot water heater unit

- Available in 3 sizes, single-row to four-row heat exchanger
- Wall-mounted or ceiling-mounted design
- Connection of a mixing chamber or other accessories possible
- Power series from 8.7 to 80 kW with air flow rates from 1,500 to 7,800 $m^3/h$
- Heating medium: water, – $t_{max}$ = 100 °C, $p_{max}$ = 1,4 MPa

## FLUE GAS DUCTS

### Certified components for air supply and flue gas exhaust

- Certified modular flue gas exhaust / combustion air supply system
- Horizontal or vertical installation,
- Stainless steel variant: DN 80 to DN 150
- Aluminium variant: DN 80 to DN 125

## DESTRATIFIER
### Ceiling fan

- Three power series depending on the air throughput
- Combined with warm air heating, this product makes heating of the building more economical


## AIRSTREAM
### Gate curtain

- This is a HVAC system to separate indoor and outdoor areas in industrial buildings
- The air stream from the gate curtain serves to reduce the unwanted penetration of outdoor air into the heated space when the gate is opened, thereby reducing the building heating costs

# Special applications

## PKTMB – 120

CE

Fire damper resistant to seismic events and high pressures and usable at high air flow rates

- Sizes from 200 × 200 × 450 mm to 1,400 × 1,000 × 450 mm (rectangular design only, transition to the round design is possible)
- Certified according to EN 15650
- Tested according to EN 1366-2
- Classified according to EN 13501-3+A1
- Fire resistance up to EIS 120
- Leakage past the body: class C, past the closed leaf: class 2 according to EN 1751
- Corrosion resistant according to EN 15650
- Cycling C 10,000 according to EN 15650
- Electrical, pneumatic or mechanical actuation
- For air velocities up to 20 m/s and pressure differences up to 6,600 Pa (inner duct space with respect to the environment – dynamic pressure)
- The pneumatic control variant enables connection to the SWAGELOK system
- Plain bearings – maintenance-free design resistant to high seismic stresses
- Turbulent flow inside the duct is permitted, the damper can be opened/closed at air mass velocities up to 20 m/s and pressures up to 6,600 Pa
- Earthquake-resistant (high seismic resistance)

## PKTMT – 120

CE

Fire damper resistant to seismic events and high pressures and usable at high air flow rates

- Sizes from 200 × 200 × 450 mm to 1,400 × 1,000 ×450 mm (rectangular design only, transition to the round design is possible)
- Certified according to EN 15650
- Tested according to EN 1366-2
- Classified according to EN 13501-3+A1
- Fire resistance up to EIS 120
- Leakage past the body: class C, past the closed leaf 2 class 2 according to EN 1751
- Corrosion resistant according to EN 15650
- Cycling C 10,000 according to EN 15650
- Electrical, pneumatic, mechanical or electromechanical actuation
- For velocities up to 20 m/s and pressure differences up to 6,600 Pa (inner duct space with respect to the environment – dynamic pressure)
- The pneumatic control variant enables connection to the SWAGELOK system
- Plain bearings – maintenance-free design resistant to high seismic stresses
- Turbulent flow inside the duct is permitted, the damper can be opened/closed at air mass velocities up to 20 m/s and pressures up to 6,600 Pa
- High seismic resistance

## PKTMF – 120

CE

### Fire damper resistant to seismic events and high pressures and usable at high air flow rates

- Sizes from 200 × 200 × 375 mm to 1,600 × 800 × 375 mm (rectangular design only, transition to the round design is possible)
- Certified according to EN 15650
- Tested according to EN 1366-2
- Classified according to EN 13501-3+A1
- Fire resistance up to EIS 120
- Leakage past the body: class C, past the closed leaf: class 2 according to EN 1751
- Corrosion resistant according to EN 15650
- Cycling C 10,000 according to EN 15650
- Electrical, pneumatic, mechanical or electromechanical actuation
- For air velocities up to 12 m/s and pressure differences up to 7,500 Pa (static pressure exerted on the closed damper leaf)
- The pneumatic control variant enables connection to the SWAGELOK system
- Plain bearings – maintenance-free design resistant to high seismic stresses
- Earthquake-resistant (high seismic resistance)

## PKTMJ – 90/120

CE Ex

### Fire damper resistant to seismic events and high pressures and usable at high air flow rates

- Rectangular dampers from 200 × 200 × 375 mm to 1,600 × 1,000 × 375 mm
- Round dampers ø 180–1,000 mm
- CE certified according to EN 15650
- Tested according to EN 1366-2
- Classified according to EN 13501-3+A1
- Fire resistance up to EIS 120
- Leakage past the body: class C, past the closed leaf: class 2 according to EN 1751
- Corrosion resistant according to EN 15650
- Cycling C 10,000 according to EN 15650
- Electrical, pneumatic, mechanical or electromechanical control
- For air velocities up to 15 m/s and pressure differences up to 2,000 Pa (internal vs external pressure – dynamic pressure)
- The pneumatic control variant enables connection to the SWAGELOK system
- Plain bearings – maintenance-free design resistant to high seismic stresses
- Also usable in environments with the explosion hazard
- Earthquake-resistant

## NKTMJ

Pressure damper serving to automatically close the duct if a fan is turned off. If one of the fans in the parallel arrangement is deactivated, the damper prevent air back-flow.

- Smallest size: 200 × 200 × 210 mm, largest size: 2,000 × 2,000 × 210 mm (rectangular variant only, transition to the round-design variant is possible)
- Mechanical design only
- Plain bearings, maintenance-free design
- Maximum tolerable leakage past the closed damper leaves is 2 % of the nominal flow rate, damper casing leakage class C according to EN 1751
- Airflow velocities up to 25 m/s
- Variants with or without a counterweight available
- Control mechanism installed externally to the damper axis and airflow direction
- Pressure differences up to 7,500 Pa (internal vs external pressure)
- Carbon steel painted, galvanized, or stainless steel – casings made of 3 mm sheets, welded structure
- Contact with radioactive aerosols is permissible, the product is decontaminable
- Earthquake-resistant (high seismic resistance)
- 40 years lifetime, maintenance interval 10,000 h

## RKTMJ

CE Ex

Regulating damper resistant to seismic events and high pressures and usable at high air flow rates. Usable as a tight damper, pressure damper, regulating damper and isolating damper.

- Smallest size: 250 × 250 × 210 mm, largest size: 2,000 × 2,000 × 210 mm (rectangular variant only, transition to the round-design variant is possible)
- Electrical, pneumatic, mechanical or electromechanical actuation – installation of limit switches is feasible
- Plain bearings, maintenance-free design
- Leakage past the closed damper leaves: – class 3,4 according to EN 1751
- Leakage past the damper casing: class C according to EN 1751
- Airflow velocities up to 25 m/s
- Contra-rotating aerodynamic blades
- Actuation mechanism installed externally to the airflow direction
- Operating pressure difference up to 7,500 Pa (internal vs. external pressure)
- Carbon steel painted, galvanized, or stainless steel – casings made of 3 mm sheets, welded structure
- Contact with radioactive aerosols is permissible, the product is decontaminable
- Earthquake-resistant (high seismic resistance)
- 40 years lifetime

# TVMJ

## Damping frame

A component designed to prevent the transfer of noise and vibrations to the duct, compensate length differences or other changes caused by temperature fluctuations or other changes in the surrounding environment

It can be used to accommodate thermal expansion of the material and unexpected loads acting onto the flanges that are fixed to the dividing structures.

It is usable in high-pressure/high-temperature environments.

Earthquake-resistant, – tested at accelerations >30 G.

- Sizes: from 100 × 100 mm to 2,500 × 2,500 mm
- Installation lengths: 60–600 mm, longer on order
- External leakage class C or D according to EN 1751
- Usable at positive/negative pressures up to 7 kPa
- Flat or profiled flanges with variable drilling patterns
- Variable flange height
- Flange material: stainless steel, painted carbon steel or galvanized steel
- Basic fabric materials: PTFE, silicone, silicone-glass fibre, PVC, or combinations in layers
- Conforming according to VDI 6022 and DIN 4102 B1/B2
- Fire resistant fabric (up to 500 °C)
- Decontaminable surface

# PKTMC

## Pressure-resistant fire damper

CE

- Diameters from 200 mm to 800 mm (only round design, transition to a rectangular duct is feasible)
- Material: stainless steel, damper body 3–6 mm thick, welded structure, pickled and passivated surface
- Usable as a highly pressure-tight fire damper, pressure-tight valve, fire shut-off valve
- Actuation: electrical (e. g. AUMA, Bernard Controls, SIPOS) or pneumatic (Stasto-Valbia), use of limit switches feasible (e. g. Petercem, Telemechanique, Honeywell)
- Air mass flow velocities up to 35 m/s
- Pressure difference at the damper tested up to 23 kPa (internal/external – dynamic pressure at which the damper opens/ closes safely), the maximum pressure difference is not defined
- Turbulent flow inside the duct upstream/downstream of the damper is possible
- Earthquake-resistant (high seismic resistance)
- Fire resistance tested according to EN 1366-2, classified according to EN 13501-3 and CE certified according to EN 15650 Attained fire classification EI 180 ve, ho (i ↔ o) S
- For installation into/onto/off the rigid wall/ceiling structures, vertical/horizontal leaf rotation
- Pressure-tight: leaf leakage ≤14 L/m²/min at a 1.1 bar load (from both sides of the closed leaf)
- Damper leaf operable at temperatures up to 200 °C
- Usable in magnetic induction fields up to 126 mT
- Ionising radiation-resistant up to 100 kGy (pneumatic drive included)
- Usable in explosion-hazard areas class II 3 / 3G.c IIB + H2 TX
- Decontaminable
- 40 years lifetime
- Certified for LV and EMC
- Enclosure: IP 65

# NTD

Pressure-tight damper for rapid hermetic separation of HVAC sections. Resistant to seismic events, ionising radiation and high pressures, usable at high airflow rates. Usable as a leak-tight isolating damper/independent hermetic seal.

- Current sizes from 400 × 270 mm to 1,000 × 1,000 mm (extension available on request – only the rectangular design with a round leaf section, transition to a round duct is possible)
- Material: stainless steel, damper body 8 mm thick
- Welded structure with pickling and passivation
- Rolling bearings, long servicing interval
- Non-metallic materials are virtually halogen-free
- Actuation: electric (SIPOS), pneumatic (STASTO), manual
- Tested at an airflow rate of 8.42 $m^3/s$, usable up to 25 m/s
- Earthquake-resistant damper
- Body/closed leaf leakage (in both directions) 10 $L/h.m^2$ (leaf leakage depends on pressure)
- Damper leaf and shaft tightness can be verified without dismounting the damper from the duct
- Pressure difference 10 kPa (internal/external)
- Operable at temperatures up to 125 °C
- Highly operationally resistant system (qualified by a cycling test)
- System resistant to ionising radiation doses up to 10 kGy or higher
- Decontaminable
- Limit sensors in the end positions (open/closed)
- 40 years lifetime (provided that manufacturer's conditions are adhered to)

## NTDC

Pressure-tight manual valve for hermetic separation of round sections. Resistant to seismic events, ionising radiation and high pressures, usable at high airflow rates. Usable as a manual hermetic valve for liquids and gases.

- Sizes according to customer's specification depending on the availability of flanges according to EN 1092-1 (only round design with a round leaf section)
- Material: stainless steel, painted carbon steel or combination
- Welded structure with axial leaf motion
- Screw-shifted, maintenance free design
- Non-metallic materials are virtually halogen-free
- Mechanical (manual) design
- Usable at air velocities up to 25 m/s
- Earthquake-resistant valve
- Body/closed leaf leakage (in both directions) 10 L/h.m$^2$ (leaf leakage depends on pressure)
- Pressure difference 10 kPa (internal/external)
- System resistant to ionising radiation doses up to 10 kGy or higher
- Decontaminable
- 40 years lifetime (provided that manufacturer's conditions are adhered to)

## MANDÍK air handling unit M and P series

Air handling unit resistant to seismic events
Usable in hygienic areas

- Airflow rates from 800 to 100,000 m$^3$/h
- I&C on Siemens and Carel platforms
- Casing meeting the requirements of EN 1886
- Indoor design
- Outdoor design
- Earthquake-resistant design incl. a reinforcing system
- Hygienic design meeting the requirements of VDI 6022 and EN 13053+A1

# References

## Nuclear Power Plant
CHERNOBYL, UKR

30 atypical assembly units with a total air throughput about 365,000 m³/h were supplied to the NPP in 2016–2017 for the sarcophagus construction project.

## Dreiländergalerie
Weil am Rein, DE

12 Mandík assembly units with a total air throughput about 315,500 m³/h were supplied for the construction of this shopping centre in 2021.

## SK Innovations Battery
HU

We supplied 11 air handling units with a total air throughput over 300,000 m³/h to this car battery plant in 2020.

## Bořislavka centrum
Prague, CZ

Mandík company supplied 24 air handling units with a total air throughput about 450,000 m³/h to this new shopping centre in 2019–2020.


## Job air TECHNIC
Ostrava-Mošnov airport, CZ

Ten air handling units with a total air throughput about 60,000 m³/h were installed at the Airbus a Boeing aircraft repair shop in 2019.

## CT Park
Bor u Tachova, CZ

We supplied 14 air handling units with a total air throughput about 170,000 m³/h to the industrial/warehouse area in 2021.

## King´s Casino
Rozvadov, CZ

Eight air handling units with a total air throughput about 100,000 m³/h were supplied for the casino building in 2015–2017.

## Crystal Prague
Prague-Vinohrady, CZ

We have been owning an exceptional reference from this modern office building since 2014. A total of 6 units with a total air throughput about 108,000 m³/h have been installed in it.

## Czech Ministry of the Interior
Prague, CZ

We supplied 3 large air handling units with a total air throughput about 100,000 m³/h to this governmental building in 2020.

## PORSCHE Development Centre
Horná Streda, SK

We supplied 8 air handling units with a total air throughput of 91,250 m³/h to the development centre of this famous car factory in 2021.

## Tesco Petržalka Gallery
Bratislava, SK

We supplied 14 air handling units with a total air throughput about 200,000 m³/h to this shopping centre in 2019.

## KLINGERKA
Bratislava, SK

We supplied 15 air handling units with a total air throughput about 127,000 m³/h to this polyfunctional and residential building in 2020.

## Strahov stadium

Prague, CZ

We supplied 3 compact CPV air handling units with a total air throughput about 9,600 m³/h for ventilation of this rebuilt stadium.

## Thermal Power Plant

Martin, SK

We supplied air handling units with a total air throughput of 553,350 m³/h during 2019.

## Winter stadium

Kuřim, CZ

We supplied air handling units with a total air throughput of 23,300 m³/h for the winter stadium in 2019.

## Winter stadium

Spišská Nová Ves, SK

We supplied a new compact CPV air handling unit with an air throughput of 2,000 m³/h to this winter stadium in 2021.

## MÖBELIX

Jihlava, CZ

We supplied air handling units with a total air throughput about 20,000 m³/h for the construction of the department store in 2019.

## Vysočany Policlinic

Prague, CZ

We supplied air handling units with a total air throughput about 38,000 m³/h to this medical centre in Prague-Vysočany in 2019.

## Motol University Hospital

Building H, Prague, CZ

We have been regularly supplying air handling units to this largest Czech hospital since 2017.

## Central Military Hospital

Forensic Medicine Centre, Prague, CZ

We supplied 6 air handling units with a total air throughput about 20,500 m³/h in 2015.

## Regional Hospital

Cancer Department, Mladá Boleslav, CZ

Seven air handling units with a total air throughput about 20,000 m³/h were supplied in 2015.


## AGEL Hospital with a Policlinic

Levice, SK

Mandík a. s. supplied 5 air handling units with a total air throughput of 31,750 m³/h for ventilation and sanitation of the outpatient department and X-ray examination rooms in 2020.

## ISCARE Clinic

Martin, SK

We supplied 2 air handling units with a total air throughput about 7,000 m³/h in an excellent hygiene condition for the ventilation of this reproductive clinic in 2021.

## BIA Separations

Ajdovščina, SI

We supplied 10 air handling units with a total air throughput about 40,200 m³/h during 2020–2021.

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Date of issue: February 2022