

# PRODUCT OVERVIEW





## THE ART OF HANDLING AIR *for indoor life quality*

TROX is a global leader in the development, production and sales of components, units and systems for the ventilation and air conditioning of rooms. With 33 subsidiary companies in 28 countries on five continents, 20 production facilities, and importers and representatives, TROX is present in over 70 countries. Currently, the TROX GROUP has around 4,770 employees worldwide and generates revenues of about EUR 670 million.

### **Technology for people.**

The human being is the yardstick and his well-being is our goal. Since the company was founded in 1951, this has been the motto for company decisions.

### **Systems from a single source.**

The interaction between all technical building services can make or break the whole system. This has been TROX's greatest motivation and the team always strive to be a one-stop solution for HVAC needs. This results in maximum energy efficiency while the coordination effort during the design and installation stages for a project is reduced to a minimum.

### **The perfect system for each building.**

Working closely with the customers, TROX develops a specific system that takes the relevant criteria for each building into account and simultaneously meeting the requirements of its occupants. This close cooperation leads to sustainable solutions that help to increase the people's well-being, protect life and environment.

## TROX MALAYSIA

TROX Malaysia is a subsidiary of TROX GmbH in Germany, situated in Senawang, Seremban. Since January 1995, we have been manufacturing and supplying a complete product range, including Tunnel Ventilation and Marine Dampers, to existing and new customers around the world. Today TROX Malaysia is the centre of excellence within the TROX Group for the design and manufacture of Ventilation Dampers for the Global Tunnel Market.

Our production facility is built on a 7-acre site with an administrative office area of 1,596 square meters and a factory area of 13,400 square meters. We are proud to be the first air conditioning product manufacturer in Malaysia to be certified to ISO 9002 by RWTUV and our quality management system has achieved ISO 9001: 2015 certification since 2000 .

TROX Malaysia has grown from a company that was created to supply products to the KLCC Twin Towers, has experienced strong growth in its business and remained resilient through difficult economic times. Through the years, we have expended twice and we continue investing in sustainable development and strive to be high green rating corporate. The first expansion created a research and development laboratory for new product development and full mock-up capabilities. At the same time the training room and conference room have been upgraded with an Air Water system to demonstrate a state of the art energy efficient solution.

The second expansion was built up a new factory for manufacturing industrial damper. The new plant represents a MYR 7.0 million investment by TROX and provided a further 3,100m<sup>2</sup> of manufacturing space together with an additional loading bay. TROX Malaysia also invested in a new state-of-the-art Fibre Laser Cutting CNC machine to support the higher demand for project specific customisation, reducing lead times and increasing capacity to suit the growing tunnel business. This new facility hosts the manufacturing of all industrial products for the Tunnel and Marine/Oil & Gas markets and provides additional space for customer Factory Acceptance Testing and Witness & Inspection Testing in order to meet the demanding expectations of our customers.

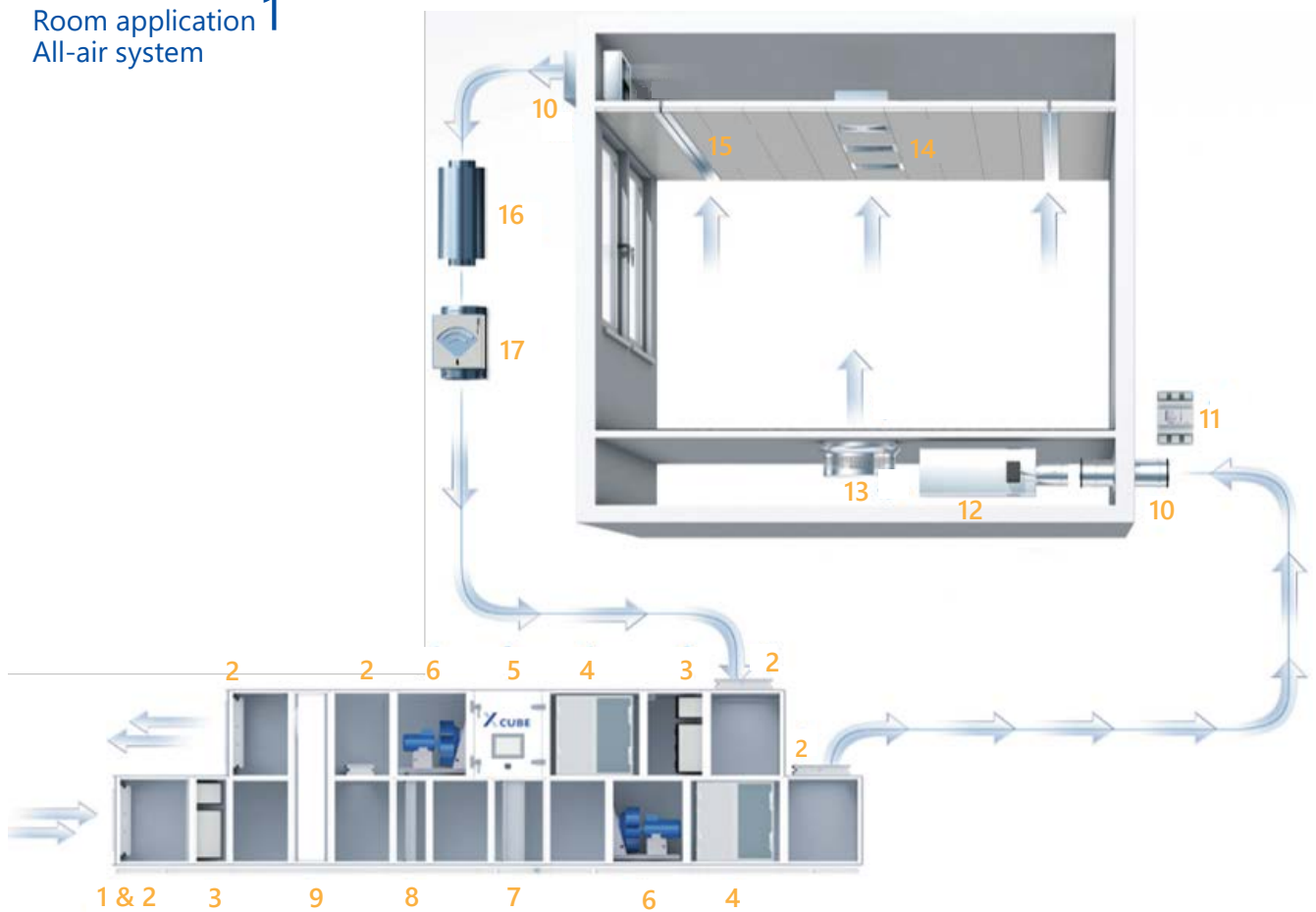
In year 2022, TROX Malaysia upgraded our facilities with rooftop solar panels, which allowed for a significant reduction of CO2 emission supporting sustainability as a part of everyday operation.

For over 25 years, TROX Malaysia has maintained our pledge to provide our customers with the highest quality products offered in the market, superior manufacturing operational excellence and technical expertise unsurpassed in HVAC industry. Our commitment to excellence is the cultural foundation at TROX Malaysia and through our dedicated and talented staff we are looking forward to serving our customers for many more years to come.



## A COMPLETE ONE STOP SOLUTION

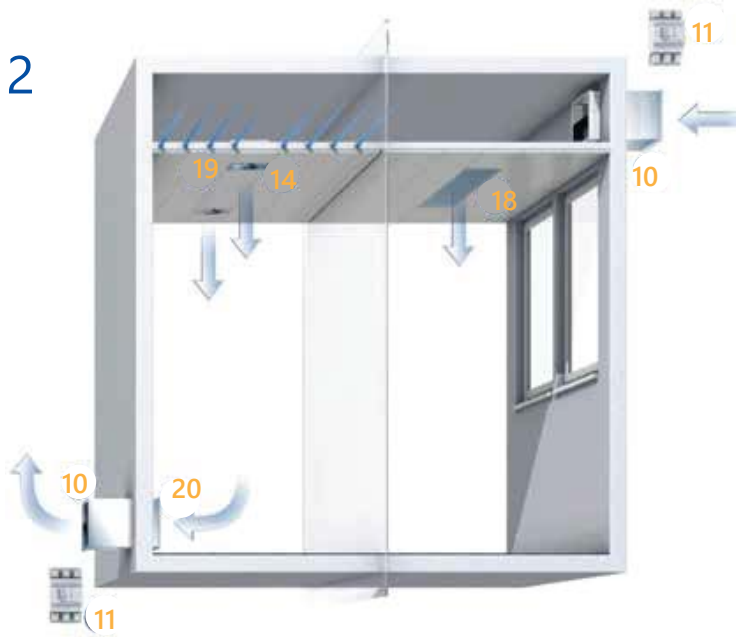
Room application **1**  
All-air system



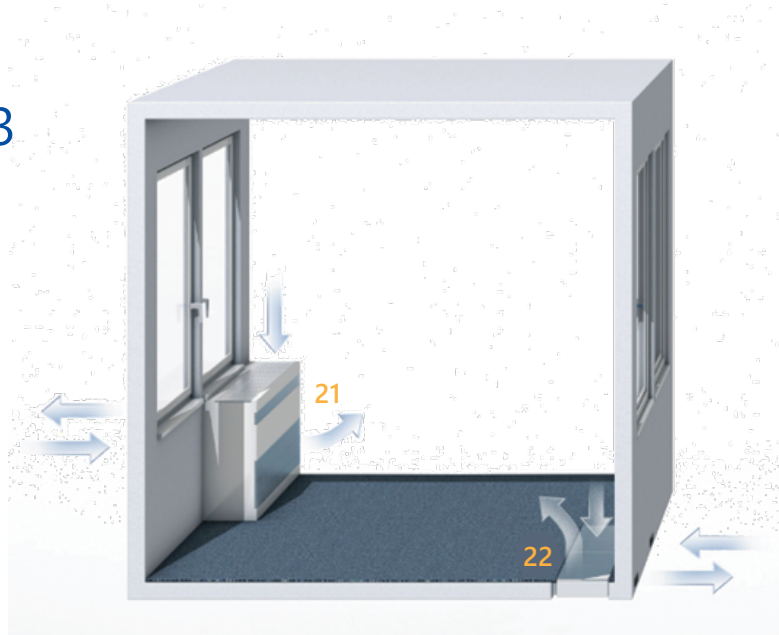
- |   |                                      |    |   |
|---|--------------------------------------|----|---|
| 1 | External weather louvre              | 10 | Fire damper   |
| 2 | Multileaf damper                     | 11 | Controller  |
| 3 | Filter inserts                       | 12 | Air terminal unit                                   |
| 4 | Splitter attenuators                 | 13 | Floor diffuser                                      |
| 5 | Control for X-CUBE air handling unit | 14 | Ceiling diffuser                                    |
| 6 | Fan                                  | 15 | Slot diffuser                                       |
| 7 | Cooling coil                         | 16 | Sound attenuator                                    |
| 8 | Heating coil                         | 17 | System powered constant volume flow rate controller |
| 9 | Heat exchanger                       |    |   |

# Product Cycle

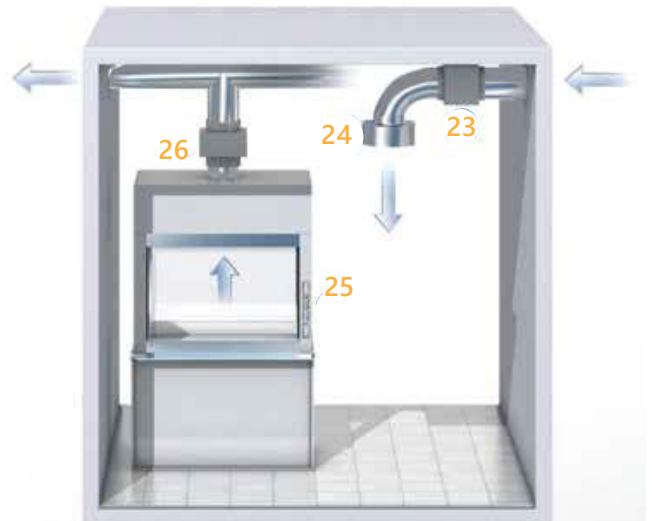
Room application 2  
Air-water system



Decentralised ventilation 3

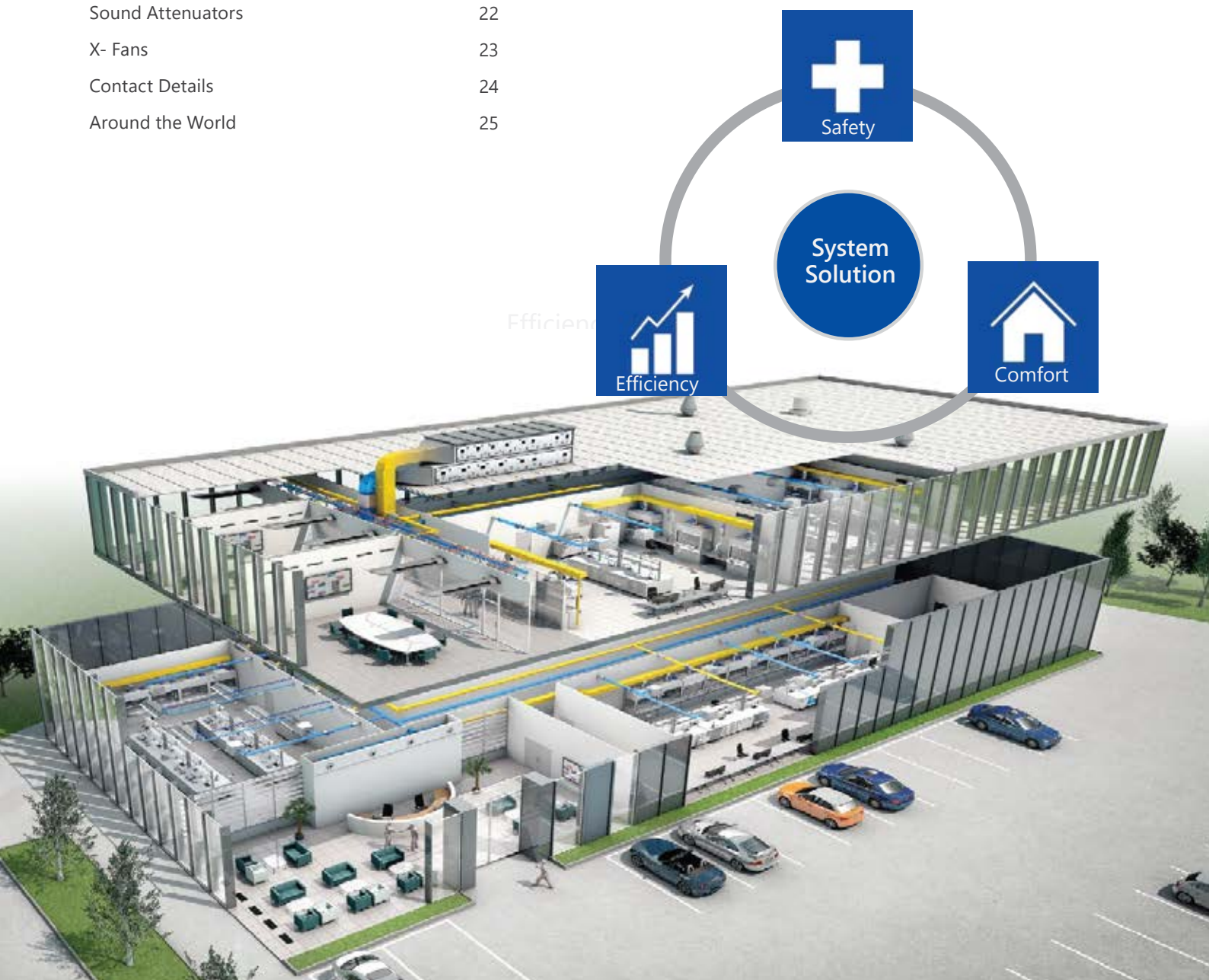


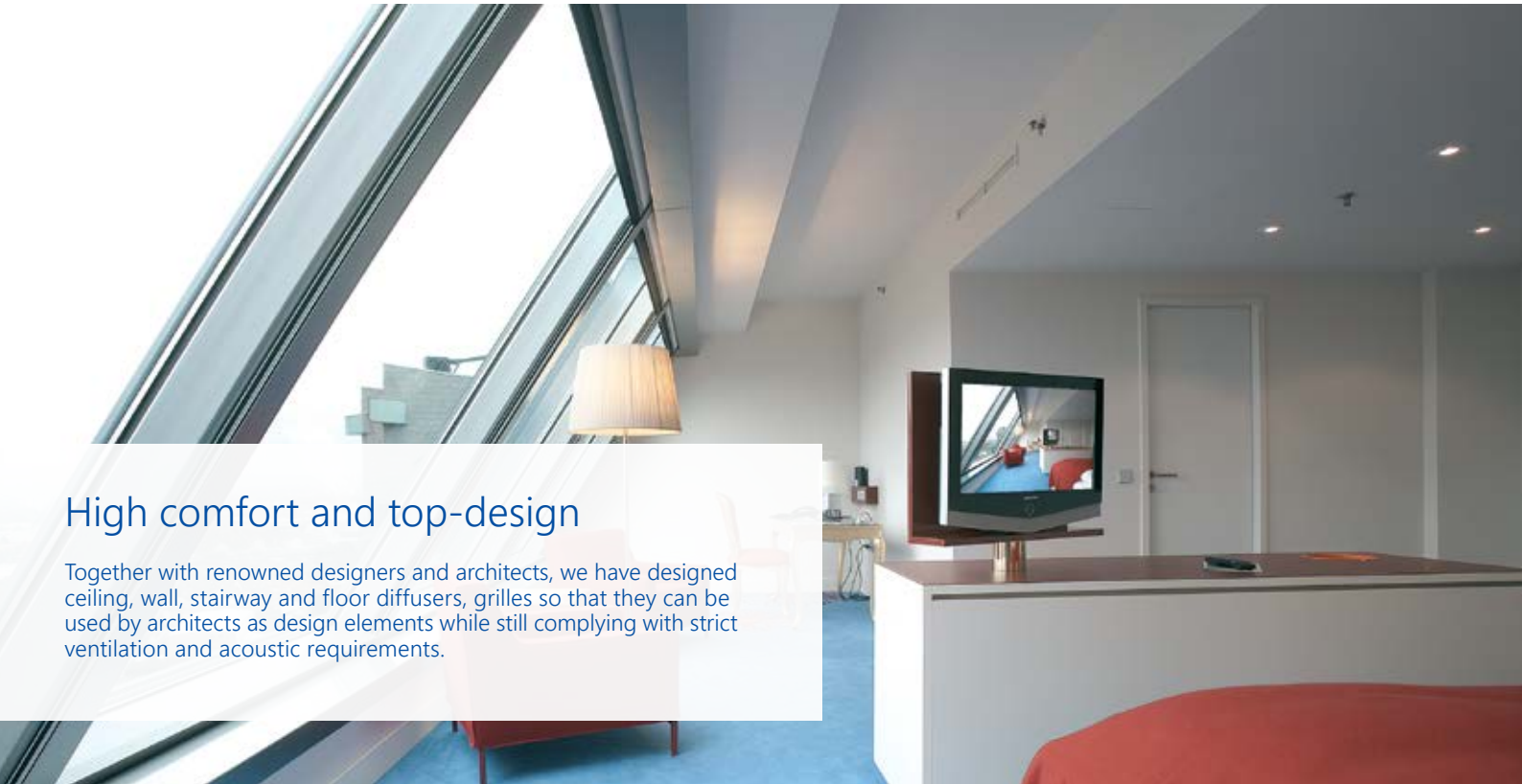
Laboratory 4  
ventilation



- 18 Active chilled beam
- 19 Chilled ceiling
- 20 Grille
- 21 Decentralised air handling unit
- 22 Under floor unit
- 23 Room controller
- 24 Laboratory air diffuser
- 25 Fume cupboard control panel
- 26 Fume cupboard controller

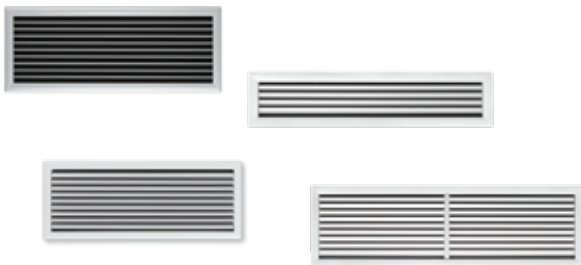
	Page
Grilles and Diffusers	6
Displacement Flow Diffusers	8
Swirl Diffusers	9
Diffusers	11
Jet Nozzle and Drum Louvre	12
Weather Resistant Louvre	13
Passive Chilled Beams & Chilled Ceilings	14
Active Chilled Beams	15
Control Units and Systems	16
Filter Technology	19
Fire and Smoke Protection System	20
Shut-off Devices	21
Sound Attenuators	22
X- Fans	23
Contact Details	24
Around the World	25








## High comfort and top-design

Together with renowned designers and architects, we have designed ceiling, wall, stairway and floor diffusers, grilles so that they can be used by architects as design elements while still complying with strict ventilation and acoustic requirements.



### Type X-GRILLE Modular Malaysia

The system offers the modular configuration of frame, grille core and attachment in individual color and sizes- all according to your requirements. It can be individually tailored, this enables more than 3,000 different variants. Regardless of whether it is a workshop or reception area – the X-GRILLE modular Malaysia is the right solution.

- |   |   |   |                      |  |
|---|---|---|----------------------|--|
|  | Rectangular   |  | Standard             | Min : 100 x 75 mm                          |
| <b>M</b>  | Aluminum<br>(border, blades<br>& pattern core)<br>Sheet steel (only<br>for rear assemblies) |   | (B x H)<br>Standard+ | Max : 1250 x 300 mm<br>Max : 1250 x 600 mm |
|  | 11 - 4,370 l/s<br>40 - 15,732 m <sup>3</sup> /h   |   |                      |  |



## Type AGS (non-vision grille/door grille)

Non-vision grilles type AGS are suitable for air transfer and exhaust air. They consist of a surrounding front border with horizontal, fixed inverted vee blades and are suitable for visible screw fixing (border counter punched). The grille can be supplied on request with matching rear frame for door installation (type AGS-T).

- Rectangular
 
 L : 100 - 1,250 mm  
 H : 100 - 600 mm
- M** Aluminum (face)  
 Sheet steel (only for rear assemblies)
- 4 - 1,110 l/s  
 15 - 3,996 m<sup>3</sup>/h  
 9 - 2,352 cfm



## Type AF

Special linear grilles, AF Type is designed for either supply or return application with fixed horizontal blades, suitable for mounting on the wall or floor with recessed aluminum Z frame. The grille face can be removed from the frame by releasing the W clips. It can be supplied with either 0° or 15° deflection blade profile.

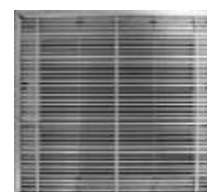
- Rectangular
 
 L : 300 - 2,000 mm  
 H : 75 - 300 mm
- M** Aluminum (face)  
 Sheet steel (only for rear assemblies)
- 12 - 1,546 l/s  
 43 - 5,566 m<sup>3</sup>/h  
 26 - 3,276 cfm



## Type AH

Special linear grilles, AH Type is designed for either supply or return application with fixed horizontal blades, suitable for mounting on the wall or ceiling with either 28 mm or 20 mm aluminum frame. It can be supplied with either 0° or 15° deflection blade profile.

- Rectangular
 
 L : 300 - 2,000 mm  
 H : 75 - 300 mm
- M** Aluminum (face)  
 Sheet steel (only for rear assemblies)
- 12 - 1,546 l/s  
 43 - 5,566 m<sup>3</sup>/h  
 26 - 3,276 cfm



## Type AFG

Floor grille is developed to be mounted on raised floor systems to match typical 600 mm by 600 mm floor tiles. To supply cool air to computer rooms or data processing centres where cooling load demand is high.

- Square
 
 L : 600 mm  
 H : 600 mm
- M** Aluminum
- 111 - 750 l/s  
 400 - 2,700 m<sup>3</sup>/h  
 240 - 1,620 cfm






# Displacement Flow Diffusers



## Type QL

It is suitable for corner, wall or free-standing application, corresponding to shapes 90, 180 or 360 for discharge velocities and low-turbulence supply of air, consisting of a casing with top or bottom air entry spigot, suitable either for low or high pressure drop with internal air distribution elements. Customization possible to fit to the building.

 Circular, Rectangular, Square, Half-circular, Quarter-circular	 H : 750 - 2,000 mm
<b>M</b> Steel	 30 - 750 l/s 108 - 2,700 m <sup>3</sup> /h 65 - 1,620 cfm

## Type QLE / QLF




These two types are notable for their flat, space-saving construction and feature an elegant face construction. Depending on the degree of activity of the persons in the occupied zone, the supply air can enter the space with a temperature difference of -1K to -6K in relation to the room air.

 Rectangular	 L : 300 - 1,500 mm H : 150 - 2,000 mm
<b>M</b> Steel	 10 - 1,025 l/s 40 - 3,700 m <sup>3</sup> /h 24 - 2,177 cfm



## Type QSH/ISH

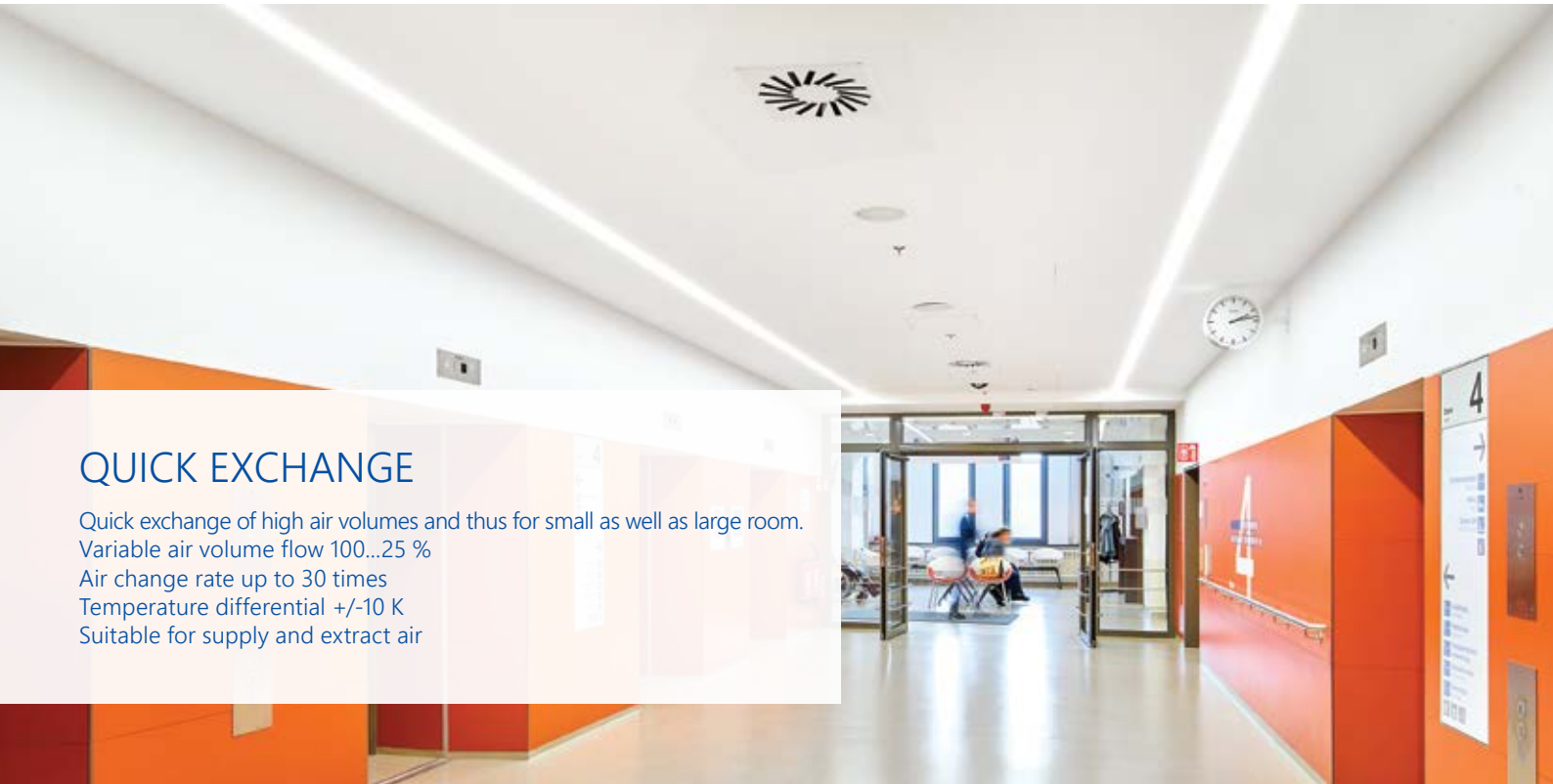
TROX displacement flow diffusers type QSH/ISH are primarily used in industrial manufacturing and installed as free hanging units. They could be adjusted individually for any supply temperature range; the  $\Delta T$  of -8K to +12K.

 Circular/Cylindrical	 Ø 250 - 560 mm
<b>M</b> Steel	 195 - 2,220 l/s 700 - 8,000 m <sup>3</sup> /h 415 - 4,706 cfm



## FOR LARGE ROOMS

TROX Displacement Diffusers are used in large rooms that require high performance ventilation and is capable of fulfilling the changing requirements of heating and cooling. These diffusers can control the air discharge direction of the air jet either manually or with an electric actuator whilst discharging warm air downwards or distributing cold air horizontally throughout the room.






## QUICK EXCHANGE

Quick exchange of high air volumes and thus for small as well as large room.  
 Variable air volume flow 100...25 %  
 Air change rate up to 30 times  
 Temperature differential +/-10 K  
 Suitable for supply and extract air



### Type VDL




Swirl diffuser for very large and high rooms or halls.  
 For department stores, airports, railway stations etc.  
 For heating and cooling.  
 Air discharge can be changed manually or with an actuator.  
 With protective grid also suitable for sport arenas.  
 Suitable for installation with ceiling height more than 4 m.

 Circular	 Ø 315 - 800 mm
<b>M</b> Aluminum & Steel	 65 - 1,080 l/s 234 - 3,888 m <sup>3</sup> /h 138 - 2,288 cfm



### Type VDW

Swirl diffuser with adjustable air control blades.  
 For comfort conditioning and flexible room design.  
 Top or side entry air connection.  
 Suitable for installation height up to 4 m.

 Circular, Square	 Circular 300 - 625 mm Square 300 - 825 mm
<b>M</b> Steel & highly temperature resistant special plastic	 7 - 470 l/s 25 - 1,692 m <sup>3</sup> /h 15 - 996 cfm

# Swirl Diffusers





## Type AIRNAMIC

Excellent comfort level with low air velocities and low temperature differences in the occupied zone.

Air distribution element to ensure a uniform air flow through the diffuser.

Acoustically optimized damper blade for flow rate balancing.

Suitable for installation height up to 4 m.

	Square, Circular		R, L : 400 - 400 mm Ø 160 - 600 mm
	Flame retardant ABS plastic Steel (plenum & crossbar)		Q, L : 300 - 300 mm 300 - 625 mm
			5 - 385 l/s 16 - 1,386 m <sup>3</sup> /h 11 - 832 cfm



## Type XARTO



Face plates come in classic, modern and flamboyant styles and can be creatively integrated with all types of ceilings.

Various face plate designs offer a multitude of possibilities.

Low air velocities and low temperature differences in the occupied zone.

Air distribution element to ensure a uniform air flow through the supply air diffuser.

Suitable for installation height up to 4 m.

	Square, Circular		Ø 600 mm, 625 mm
	Flame retardant ABS plastic Steel (plenum & crossbar)		31 - 265 l/s 110 - 954 m <sup>3</sup> /h 66 - 562 cfm





## Type TCS

It has a radial air flow discharge pattern with high induction flow rate suitable for both constant and variable air flow application.

Diffuser face is manufactured from galvanized sheet steel powder coated to RAL 9010 as standard finish.

Blanking plate if fitted to the back of the diffuser face will be painted black to RAL 9005.

Suitable for installation height up to 4 m.

	Square, Circular		Square 400 x 400 mm 600 x 600 mm
	Steel		Circular Ø 400 or 600 mm
			125 - 360 l/s 450 - 1,296 m <sup>3</sup> /h 270 - 778 cfm



## Type FD



Designed to fit into a standard 600 mm square ceiling tile with 24 fixed blades.

Provided with either a square or round face.

Only one size is manufactured but it can be supplied with blanking plate fitted to the rear of the diffuser face to reduce the air flow if needed.

Designed to provide a radial air flow discharge pattern with high induction flow rate.

Suitable for installation height up to 4 m.

	Square, Circular		Rectangular 300, 400, 500, 600 mm
	Steel		Circular Ø 400
			72 - 275 l/s 260 - 990 m <sup>3</sup> /h 156 - 594 cfm



## Floor Diffuser Type FBA

These floor diffusers have been designed to withstand very heavy usage.

Can be used with and without a border unit.

Control of discharge characteristics and unit flow rate are available as accessories which fit into the dirt trap.

<p>☒ Circular</p> <p><b>M</b> Aluminum, Plastic Steel</p>	<p>◀▶ Ø 150 mm Ø 200 mm Ø 250 mm</p> <p>↻ 10 - 96 l/s 36 - 345 m<sup>3</sup>/h 21 - 203 cfm</p>
---	---



## Staircase Swirl Diffusers Type SD

TROX staircase swirl diffusers type SD can be used for horizontal or angled air flow depending on the requirements of the location.

Depending on the architectural requirements, the staircase swirl diffuser can be made circular or square.

<p>☒ Circular, Square</p> <p><b>M</b> Steel</p>	<p>◀▶ Ø 180 mm 180 mm</p> <p>↻ 10 - 25 l/s 36 - 90 m<sup>3</sup>/h 21 - 53 cfm</p>
---	--



## Slot Diffusers Type VSD 35

It is available with 1 - 4 slots.

Diffuser element is 35 mm wide.

It is suitable for suspended ceiling.

Slot diffusers installation height up to 4m.

<p>☒ Rectangular</p> <p><b>M</b> Aluminum</p>	<p>◀▶ L 600 - 1,950 mm Ø 98 - 198 mm</p> <p>↻ 15 - 135 (l/s)/m 54 - 486 (m<sup>3</sup>/h)/m</p>
---	---



## Slot Diffusers Type VSD 50

It is available with 1 - 2 slots.

Diffuser element is 50 mm wide.

It is suitable for suspended ceiling.

Slot diffusers installation height up to 4m.

<p>☒ Rectangular</p> <p><b>M</b> Aluminum</p>	<p>◀▶ Ø 123 - 198 mm</p> <p>↻ 20 - 120 (l/s)/m 72 - 432 (m<sup>3</sup>/h)/m</p>
---	---



## Slot Diffusers Type ESD

It can be supplied with 1 up to 8 slots with adjustable air deflection blades in black.

Diffuser face is made from extruded aluminum.

Slot diffusers installation height up to 4m.

<p>☒ Rectangular</p> <p><b>M</b> Aluminum</p>	<p>◀▶ L 600 - 2,000 mm</p> <p>↻ 15 - 400 l/s /m 54 - 1,440 m<sup>3</sup>/h /m 32 - 864 cfm /m</p>
---	---

# Jet Nozzle & Drum Louvre



## Jet Nozzle Type DUK

The compact TROX jet nozzles type DUK are inconspicuous and discharge air long distances to the occupied zone.

They can be adjusted electrically or manually and work in heating or cooling modes.

- ☒ Circular
- ☒ Ø 100 - 400 mm
- M** Aluminum (face)  
Plastic & steel (saddle)
- ☒ 19 - 1,292 l/s  
70 - 4,650 m<sup>3</sup>/h  
42 - 2,790 cfm



## Jet Nozzle Type TJN

Up to 6 dB less noise than with DUK jet nozzles due to optimised nozzle contours.

Jet angle can be adjusted, limited and fixed.

Two-step reduction of the discharge range for smaller spaces.

High-grade polymer in RAL white aluminum or pure white.

Simple installation due to bayonet fixing at the discharge ring.

Self-adjusting variant with short response time due to actuator made of shape memory alloy.

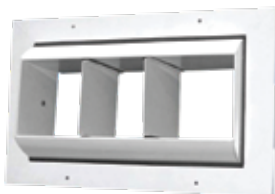
Flat external motor ensures compact installation and increased energy efficiency.

Integration with measurement and control system is possible.

Five sizes, each available for duct (rectangular or circular) or direct connection.

All variants are also available with outer casing for visible areas.

- ☒ Circular
- ☒ Ø 160 mm, 200 mm  
250 mm, 315 mm,  
400 mm
- M** Plastic (outer casing)  
Steel (nozzle casing)
- ☒ 20 - 1,000 l/s  
72 - 3,600 m<sup>3</sup>/h  
42 - 2,160 cfm



## Drum Louvre Type AIL

Designed to deliver a high volume of supply air to a space that requires long throw such as assembly halls, auditoriums and convention halls. Can be installed onto walls or, mounted directly to metal ductwork.

- ☒ Rectangular
- ☒ Size 1 : 250 x 150 mm  
Size 8 : 900 x 250 mm
- M** Aluminum
- ☒ 120 - 1,470 l/s  
432 - 5,292 m<sup>3</sup>/h  
259 - 3,175 cfm



## Sand Trap Louvre Type WSL / AWSL

The sand trap louvre is used as pre-filter for the protection of air conditioning plants in area exposed to extreme levels of industrial pollution. It has a high degree of separation of sand and large dust particles, even in cases of high dust concentrations.

The vertically arranged sections and holes for sand drainage ensure the sand trap louvre is self-cleaning and maintenance-free.

- Square, Rectangular
- Maximum velocity 2 m/s based on B x H
- M** Aluminum  
Steel



## Weather Louvre Type AWG / AWK

Weather resistant louvre is available in single or multi-section units and suitable for facade installation.

- Square, Rectangular
- M** Aluminum  
Steel  
Stainless Steel 430
- W : 297 - 1,985 mm  
H : 197 - 1,980 mm
- 50 - 18,611 l/s  
180 - 67,000 m<sup>3</sup>/h  
108 - 40,200 cfm



## Acoustic Louvre Type NL

Sound-attenuating external louvre.

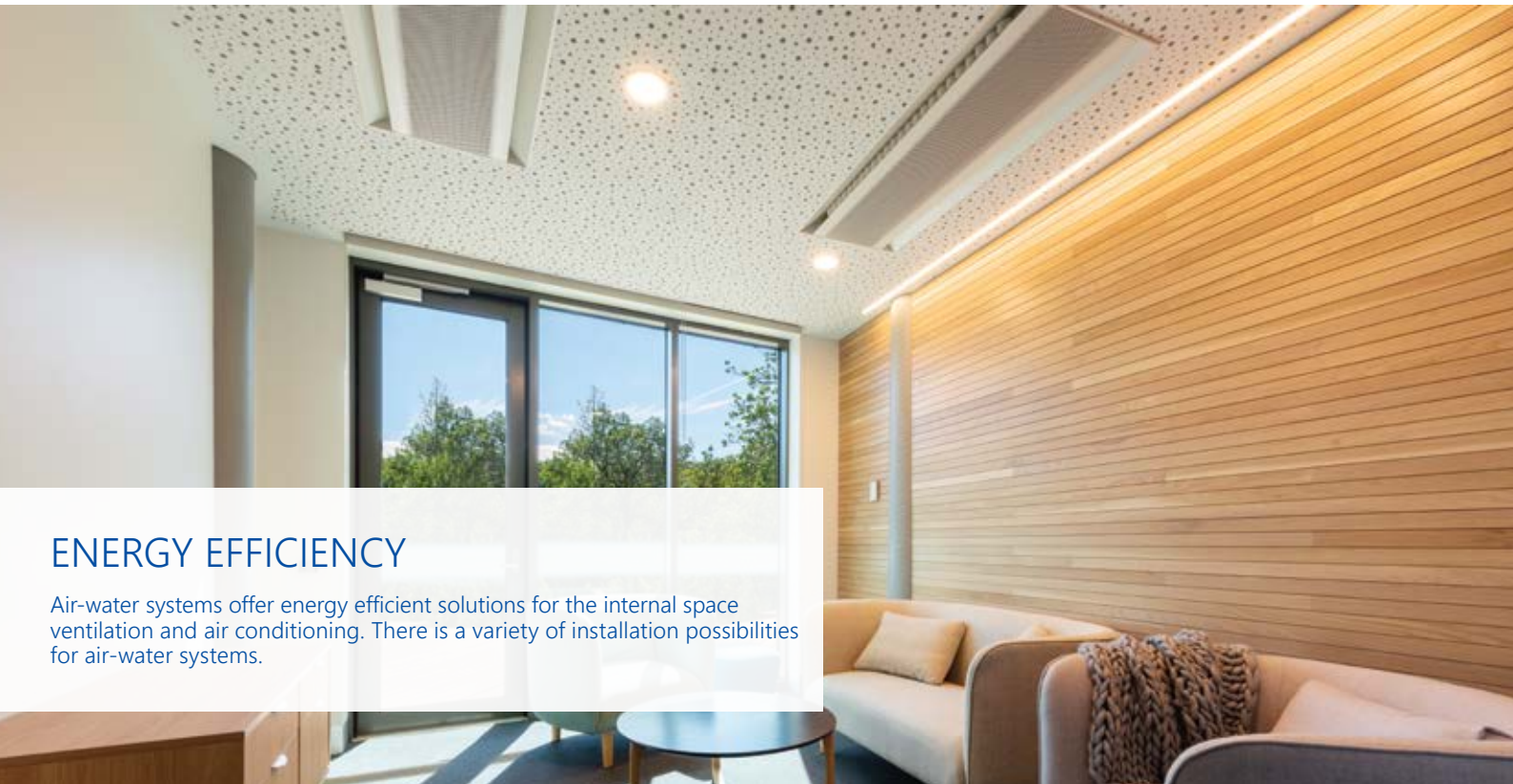
Weather and noise protection at reduced depth.

For more stringent acoustic requirements there are twin louvre available.

For visual integration can also be supplied as blind louvre.

- Square, Rectangular
- M** Aluminum  
Steel
- W : 300 - 1,800 mm  
H : 450 - 2,250 mm
- 67 - 19,444 l/s  
240 - 70,000 m<sup>3</sup>/h  
144 - 42,000 cfm





## ENERGY EFFICIENCY

Air-water systems offer energy efficient solutions for the internal space ventilation and air conditioning. There is a variety of installation possibilities for air-water systems.

*Other models and special models available*



### Type PKV

Passive chilled beam with 2-pipe heat exchanger for ceiling installation, either freely suspended or above an open cell ceiling.

☒ Rectangular

Cooling capacity  
Up to 1,000 W

◀▶ L : 1,000 - 3,000 mm  
W : 295 - 575 mm  
H : 110 - 300 mm

### Type WK-D-UL (Chilled Ceiling Panel)

Radiant chilled ceiling components.  
Can fit in all commercial ceiling tiles.  
Can be incorporated into a plaster ceiling.  
Easy assembly.

☒ Rectangular

Cooling capacity  
acc to EN 14240 (8K)  
50 - 80 W/m<sup>2</sup>

◀▶ L : 800 - 2,400 mm  
W : 300 - 750 mm



## Type DID604

Flush ceiling active chilled beam.  
Nominal width size 600 mm.  
High cooling capacity with low conditioned fresh air flow rates, low air velocities in the occupied zone and low sound power levels.  
Adjustable control blades to control the air discharge direction.  
Air discharge four way.  
Vertically mounted heat exchangers with condensate drip trays for low chilled water flow temperatures.  
Heat exchangers for two or four pipe systems.  
Heating and / or cooling is possible.

<p>☒ Square, Rectangular</p> <p>Cooling capacity Up to 1,200 W</p> <p>Heating capacity Up to 1,100 W</p>	<p>◀▶ L : 600 - 1,200 mm W : 600 mm H : 225 mm</p> <p>↻ Primary air 6 - 50 l/s 22 - 180 m<sup>3</sup>/h</p>
--	---



## Type DID642

Flush ceiling active chilled beam.  
Nominal width size 600 mm.  
Large cooling capacity.  
Four options of induced air grille design.  
Adjustable control blades to control the air discharge direction.  
Adjustable induction nozzle configuration.  
Side entry spigot for fresh air.  
Supply-extract-air combination available.

<p>☒ Rectangular</p> <p>Cooling capacity Up to 3,100 W</p> <p>Heating capacity Up to 2,330 W</p>	<p>◀▶ L : 900 - 3,000 mm W : 593, 598, 618, 623 mm H : 170, 205 mm</p> <p>↻ Primary air 10 - 125 l/s 36 - 450 m<sup>3</sup>/h</p>
--	---



Other Active Chilled Beams model as DID-EV, BID, DID-E, DID-E2 are upon request



## Type DID-EW

Type DID-EW is a unit with one way air discharge that is predestined for hotel applications.  
For installation in a suspended ceiling and thus not visible.  
Blending in with the architecture.  
Highly efficient, thereby saving operation cost.  
Standby mode to be centrally controlled and adapted to different loads; with minimum volume flow rate to remove odorous substances.

<p>☒ Rectangular, Square</p> <p>Cooling capacity Up to 1,730 W</p> <p>Heating capacity Up to 1,480 W</p>	<p>◀▶ L : 900 - 3,000 mm W : 550, 614 mm H : 200 mm (+induced air grille)</p> <p>↻ Primary air 10 - 78 l/s 36 - 281 m<sup>3</sup>/h</p>
--	---





## Type VFL

Mechanical system-powered volume flow limiter.  
 High control accuracy of  $\pm 10\%$ , relative to nominal.  
 Easy installation into round air ducting.  
 Can be installed in any orientation.

- Circular
  - 80 mm, 100 mm,  
 125 mm, 160 mm,  
 200 mm, 250 mm
  - 4 - 212 l/s  
 14 - 763 m<sup>3</sup>/h  
 30 - 300 Pa



## Type EN - CAV

Rectangular mechanical automatic controller.  
 Factory functional testing of each unit.  
 No on-site calibration required.  
 Units are essentially ready for commissioning after installation.  
 Mechanically system powered, without external power supply.  
 Low friction control bellows functional also as a damper element.  
 The flow rate can be set with an external scale.  
 High accuracy of flow rate.  
 Orientation-independent and maintenance-free.

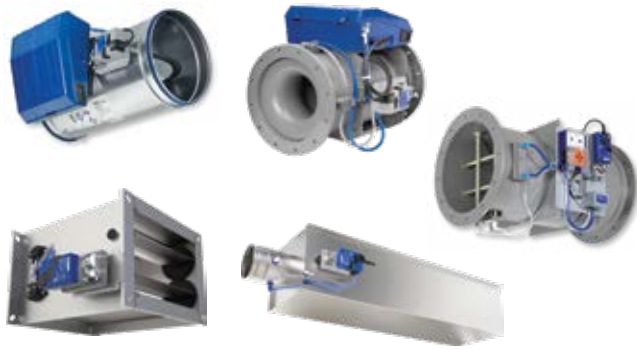
- Square, Rectangular
  - W : 200 - 600 mm  
 H : 100 - 600 mm
  - 39 - 3,500 l/s  
 140 - 12,600 m<sup>3</sup>/h  
 83 - 7,416 cfm  
 50 - 1,000 Pa



## Type RN - CAV

Circular mechanical automatic controller.  
 Factory functional testing of each unit.  
 No on-site calibration required.  
 Units are essentially ready for commissioning after installation.  
 Mechanically system powered, without external power supply.  
 Low friction control bellows functional also as a damper element.  
 The flow rate can be set with an external scale.  
 High accuracy of flow rate.  
 Orientation-independent and maintenance-free.

- Circular
  - 80 - 400 mm
  - 11 - 1,400 l/s  
 40 - 5,040 m<sup>3</sup>/h  
 23 - 2,966 cfm  
 50 - 1,000 Pa



## LabControl - EasyLab / LabControl - LON EasyLab Controller

- Response time less than 3 sec.
- Fast and precise volume flow control for supply air, extract air, pressure and fume cupboard control.
- Integrated monitoring function.
- Modular controller hardware individually expandable.
- Modern control panel with various display and operation options.
- Plug and Play communication system.
- Analogue and digital interface to building management systems; LonWorks optionally.
- Room-Management-Function (RMF).
- Simple and user guided configuration via PC Software EasyConnect.



### VARYCONTROL - VAV Type TVB

Type TVB, AHRI certified terminal unit designed as a pressure independent control unit and is suitable for either VAV or CAV application.

It comes with a circular inlet spigot and a rectangular discharge connection complete with transformer, volume control damper and multi-point sensor grid for better air flow measurement accuracy reliability.

- Circular inlet  
 Rectangular outlet
- Ø 99 - 399 mm
- 10 - 1,890 l/s  
 36 - 6,804 m<sup>3</sup>/h  
 22 - 4,005 cfm



### VARYCONTROL - VAV Type TFP

TROX Terminal Boxes Type TFP takes primary together with induced air and mix the two thoroughly to provide a constant air supply to the occupied zone of the building.

It is eminently suitable for low temperature air applications and the primary air damper can also be fully shut, with 100% recirculated or induced air.

It is available with 5 fan sizes to handle airflow rates between 150 and 2,100 l/s, most fan sizes are available with three primary air valve sizes to optimize the unit fan and primary air valve combinations required by current industry needs.

- Circular inlet  
 Rectangular outlet
- L : 885 - 1,182 mm  
 W : 762 - 1,300 mm  
 H : 386 - 446 mm
- Primary air  
 15 - 1,800 l/s  
 54 - 6,480 m<sup>3</sup>/h  
 32 - 3,814 cfm
- Secondary air  
 150 - 2,100 l/s  
 540 - 7,560 m<sup>3</sup>/h  
 318 - 4,450 cfm



## VARYCONTROL - VAV Type TVJ

Rectangular air terminal units for standard applications in supply air or extract air systems with variable volume flow rates. Suitable for volume flow rate ranges up to approx. 62,000 m<sup>3</sup>/h or 17,000 l/s.

Suitable for the control of volume flow rate, room pressure or duct pressure.

Electronic control components for different applications (Easy, Compact, Universal, and LABCONTROL).

High control accuracy.

☒ Rectangular  
 ↻ 45 – 10,100 l/s  
 162 – 36,360 m<sup>3</sup>/h

◀▶ Minimum size  
 W : 200 mm  
 H : 100 mm  
 Maximum size  
 W : 1,000 mm  
 H : 1,000 mm

## Air Flow Measurement Station Type VME / VMR

Circular measuring unit.

Manual detection of the air flow.

Continuous air flow measurement.

Conversion of the differential pressure measurement of a transducer into a voltage signal and then display or integration into the building management system.

Measured value detection for tracking controller.

Measures the total air flow of a duct section, which might be pressure-controlled, for example, and enables tracking control of, for example, the extract air, with the same percentage.

☒ Circular  
 100 / 400  
 Rectangula  
 200 - 1,000  
 100 - 1,000

◀▶ Ø 100 - 400 mm  
 ↻ 10 - 1,744 l/s  
 36 - 6,278 m<sup>3</sup>/h  
 21 - 3,695 cfm  
 P<sub>eff</sub>: Approx. 2 - 260 Pa





## Type KSFS Ducted HEPA filter units for critical requirements

Duct casing for installation into ductwork, with or without prefilter.  
Double-groove service board for contamination-free filter change.  
The basic unit can be combined to a filter unit system with entry spigot.  
Duct casing for installation into ductwork.  
Fitting of filter elements for the separation of suspended particles such as aerosols, toxic dusts, viruses and bacteria from the supply or extract air.



## Type TFM HEPA filter modules

For ceiling installation in clean room technology.  
Casing with clamping mechanism for the HEPA filter.  
Individual casing can be combined into ceiling sections.

- ◀▶ 600 x 600 mm
- 600 x 900 mm
- 600 x 1,200 mm



## Type TFC, TFP HEPA terminal filter units

For critical air purity and hygiene requirements.  
Used in medicine, biology, pharmaceuticals and sensitive technical areas.  
Constructions with shut-off damper or volume flow controller.  
Different faces available: ADLQ, DLQ, FD, FDF, DLQLF, DLQL, VDW, PCD.



## Type MFP Minipleat filter panels used as HEPA filters

High efficiency filters for very critical requirements of air purity.  
Used for industrial, research, medical, pharmaceutical and nuclear engineering applications.  
Various dimensions and constructions.  
Filter classes: M5, M6, F7, F9, E11, H13, H14.  
Filter frames made of aluminum, galvanized steel frames, stainless steel frames or fibre board.



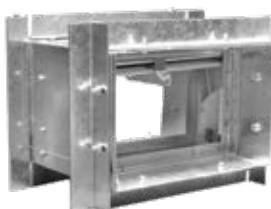
### Tunnel Dampers Type JFM

4 hours fire integrity rating in accordance with BS 476 Part 20.  
Smoke control operation at 400°C for 2 hours.  
Smoke leakage rate complies with UL 555S Class 1 requirement at 3 kPa. Tested to withstand a cyclic pressure of +/- 6 kPa for 8 million cycles.  
Available with range of actuators.  
Offered with 316, 316L, 304 stainless steel or galvanised steel construction.



### Marine Fire and Gas Dampers Type JFD

Suitable for A60 rated divisions.  
Certificated by Llyods Register of Shipping, ABS and MED.  
ATEX certified for hazardous area use.  
Available with either pneumatic or electric actuators and other accessories.  
Offered with 316, 316L, 304 stainless steel or galvanised steel construction.



### Fire Shutter Damper Type FSD / FSP / FSE

Fire dampers provide an automatic means of localizing areas of fire in ventilation system.  
The FSD range of curtain bladed fire dampers are suitable for installation in walls and floor slabs made from concrete, brickwork or in timber construction, to stop the spread of fire through ductwork.  
4 hours fire integrity to BS476 Part 20 & AS 1530.4 1997. Approved by BOMBA & HKFSD.

☐ Rectangular      ◀▶ W : 150 - 1,000 mm  
H : 150 - 1,000 mm



### Fire and Smoke Dampers Type SFD / MSD

4 hours fire integrity rating in accordance with BS 476 part 20.  
Smoke control operation at 250°C for 2 hours.  
Smoke leakage rate complies with UL 555S class 2 requirement at 1,125 Pa.  
Available with range of electric actuators.  
Offered with 316, 316L, 304 stainless steel or galvanised steel construction.

☐ Rectangular      ◀▶ W : 100 - 1,200 mm  
H : 100 - 1,800 mm



## Type AK

Circular shut-off damper.  
Airtight shut-off.  
Manual action, electronic or pneumatic.  
Casing air leakage flow rate complies with EN 1751, class C Control.

☒+ Circular      ☞  $\Delta_p$  : Up to 1,500 Pa  
Ø 100 - 400 mm



## Back Draught Dampers Type BDD

The BDD damper is a non-return damper intended to be used in mechanical ventilation systems and buildings to prevent back-flow. It is designed to only allow single airflow direction. It will close automatically when the supply fan upstream of the damper is switched off or when there is a sudden buildup of pressure downstream of the damper.

It could also serve as an adjustable pressure relief damper by manually adjusting the weight or the position of weights on each counter weight arm. Plus, this damper has been tested for its pressure drop and closed blade leakage in accordance to AMCA 500-D and BS 6821.

☒+ Rectangular      ☞ W : 110 - 1,200 mm  
H : 210 - 1,860 mm



## Volume Control Damper Type VCD

TROX type VCD is a multi-leaf volume control damper designed for the purpose of controlling air flow and pressure in low/medium pressure HVAC systems.

This volume control damper is suitable for air flow regulation, pressure control or isolating a section of a ductwork from the rest of the HVAC system.

In addition, option C2; with side and tip seals provide a closed blade leakage to Class II of UL555S.

☒+ Rectangular      ☞ W : 200 - 2,000 mm  
H : 100 - 1,995 mm



## Volume Control Devices Type SLC

SLC multi-leaf volume control dampers have been specifically designed for use in ventilation systems for volume, flow and pressure control. In addition, the type C2 with side and tip seals provides low closed blade leakage performance.

The casing is a rigid and robust assembly formed from channel frame with reinforcing corner brackets incorporating corner holes to suit most flange system ductwork. The blades are extruded double skin aerofoil section. Damper has opposed blade action. The dampers can be fitted with hand locking quadrant or can be operated by electric or pneumatic actuators.

☒+ Rectangular      ☞ Minimum size  
B : 100 mm  
H : 100 mm  
Maximum size  
B : 1,000 mm  
H : 1,000 mm

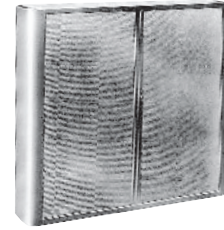
# Sound Attenuators



## Type CA

Circular silencer in rigid construction.  
 Casing and perforated inner duct galvanized sheet steel.  
 Lining is mineral wool conforming to DIN 4102, fire rating class A2, with RAL quality mark RAL-GZ 388.  
 Mineral wool faced with fibreglass as protection against erosion suitable for air velocities up to 20 m/s.  
 Insertion loss tested according to DIN EN ISO 7235.

- ☒+ Circular
- ☒+ Ø 100 - 450 mm
- M Galvanized steel
- L : 500 - 1,500 mm
- Insulation Thickness: 50 or 100 mm



## Type DK

Aerodynamically shaped splitter.  
 Exposed infill has a glass tissue lining.  
 Infill protected by an expanded metal sheet.  
 High temperature tested at 250 °C for 120 minutes.

- ☒+ Rectangular
- Size : 100, 200 mm
- M Galvanized steel
- ☒+ L : 600 - 2,100 mm
- H : 300 - 1,800 mm
- W : 200 mm

*Other industrial silencers are available, please contact us for more details.*



## Type DS

In-line rectangular cased attenuators fitted with Type DK splitters.  
 As standard supply, the attenuators will be fitted with 40 mm Doby slide on flange.

- ☒+ Rectangular
- M Galvanized steel
- Stainless steel 304
- Stainless steel 316
- ☒+ B : 275 - 2,100 mm
- H : 300 - 1,800 mm
- L : 600 - 2,100 mm





**GreenLine Duct Fan**

**Smoke Extraction fan - because safety counts**

- Roof smoke extraction fans
- Axial flow smoke extraction fans
- Wall smoke extraction fans
- Centrifugal smoke extraction fans
- Jet smoke extraction fans



**Axial Fans (car park ventilation)**

**Ventilation Fans - a broad spectrum**

- Roof ventilation fans
- Axial flow ventilation fans
- Centrifugal ventilation fans
- Duct ventilation fans
- Plug ventilation fans
- Jet ventilation fans



**Smoke Exhaust Fan**

**GreenLine fans - question of energy**

- GreenLine RoofFan
- GreenLine FuFan
- GreenLine DuctFan
- GreenLine FanBox



# Contact Details

---

## Visit Us



### TROX Malaysia Sdn Bhd

20 Persiaran Bunga Tanjung 1, Senawang Land Industrial Park  
70400 Seremban, Negeri Sembilan  
Malaysia

## Contact Us



+60 6 6788 188



Enquiry-MY@troxgroup.com



www.troxapo.com



TROX Malaysia

### Malaysia

Ms Lim Lay Peng  
Sales Manager  
Phone : +60 12 303 3252  
Email : laypeng.lim@troxgroup.com

### Singapore

Mr Melvin Thong  
Sales Representative  
Phone : +65 9362 2057  
Email : melvin.thong@troxgroup.com

### Taiwan, South Korea, Philippines, Cambodia, Brunei, Japan, Myanmar, Laos

Mr Jerry Lee  
Export Sales Manager  
Phone : +60 12 273 8757  
Email : jerry.lee@troxgroup.com

### Thailand Representative

Mr Pumai Pongsakornsathien  
Sales Representative  
Phone : +66 61 614 5261  
Email : pumai.pongsakornsathien@troxgroup.com

### Indonesia

Mr Holmes Nababan  
Sales Representative  
Phone : +62 811-9847-888  
Email : holmes.nababan@troxgroup.com

### Vietnam

Mr Luat Tran  
Sales Representative  
Phone : +84 96 86 70034  
Email : luat.tran@troxgroup.com

## TROX Australia Pte Ltd

Mr Sivaruban Sivasamy (Ruban)  
 Phone : +61 478706267  
 Email : sivaruban.sivasamy@troxgroup.com

## TROX Hong Kong Limited

Dr Peiran Chen  
 Phone : +85 2 9037 3084  
 Email : peiran.chen@troxgroup.com

## TROX Worldwide

### Argentina

TROX Argentina S.A.

### Australia

TROX Australia Pty Ltd

### Austria

TROX Austria GmbH

### Belgium

S.A. TROX Belgium N.V.

### Brazil

TROX do Brasil Ltda.

### Bulgaria

TROX Austria GmbH

### China

TROX Air Conditioning  
 Components (Suzhou) Co., Ltd

### Croatia

TROX Austria GmbH

### Czech Republic

TROX KS Filter a.s.

### Denmark

TROX Danmark A/S

### France

TROX France Sarl

### Germany

TROX TLT GmbH

### Hong Kong

TROX Hong Kong Ltd.

### Hungary

TROX Austria GmbH

### India

TROX India Private Limited

### Italy

TROX Italia S.p.A.

### Malaysia

TROX Malaysia Sdn. Bhd.

### Mexico

TROX Mexico S.A. de C. V.

### Netherlands

TROX Netherland B.V.

### Norway

TROX Auranor Norge AS

### Poland

TROX Austria GmbH

### Qatar

TROX Arabia LLC

### Romania

TROX Austria GmbH

### Russia

OOO TROX RUS

### Serbia

TROX Austria GmbH

### Spain

TROX Expana, S.A.

### South Africa

TROX South Africa (Pty) Ltd

### Switzerland

TROX Hesco (Schweiz)AG

### Turkey

TROX TURKEY TEKNIK KLIMA  
 SAN. Ve. TIC. LTD. STI

### United Arabia Emirates

TROX Middle East (LLC)

### United Kingdom

TROX UK Ltd.

## TROX Easy Product Finder



The TROX Easy Product Finder which is available on our website, helps our customers to find and design the best products for each application situation in no time.

Download from :  
<https://www.troxapo.com/planning/easy-product-finder-selection-programme>

