



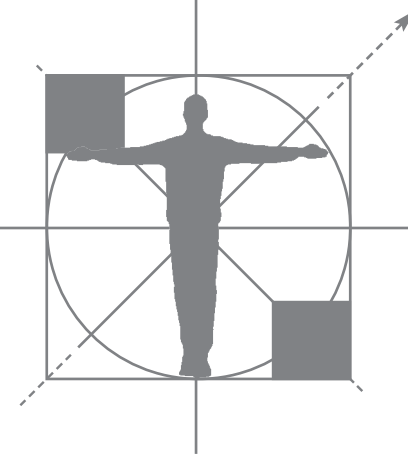
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TROX[®] TECHNİK
The art of handling air



ARCHITECTURE NEEDS TO BREATHE.





The person is the focus. At TROX, the person is at the forefront of all considerations. Our aim is to create an environment in which the individual has a sense of well-being. Almost as important as air to breathe is the aesthetic feeling created. For this reason, in addition to air quality, we place the highest value on design and visual impact in the development of our air conditioning systems. The range of solutions developed by TROX is as versatile as the world of architecture. This range includes air conditioning systems for the widest variety of building sectors through to special solutions for fire protection, noise control and the clean air sector, e.g. laboratories, clinics and electronic manufacturing. TROX subsidiaries all over the world ensure that these solutions are also at all times universally available.

Systems and components from TROX combine state-of-the-art technology with the best architectural standards. They impress with their high-class design and also offer superb bespoke developments. Or even better: like our decentralised façade ventilation units, they stay completely hidden.

TROX is the corporate partner of the **UIA** (International Union of Architects) and has received numerous awards for the high design standards of its products.

Innovation Prize for Architecture and Technology, ISH 2009, Frankfurt/Main:

1. Prize in the category "Building, Energy, Air Conditioning, Cooling and Ventilation Technology" together with Collignon Architektur

Innovation Prize for Architecture and Technology, ISH 2009, Frankfurt/Main:

Special Award in the category "Building, Energy, Air Conditioning, Cooling and Ventilation Technology" together with Ingenhoven Architects

World Architecture Festival Barcelona:

Three nominations for TROX products

Innovation Prize for Architecture and Technology, ISH 2005, Frankfurt/Main:

1. Prize in the heating and air distribution category together with Gatermann + Schossig Architects

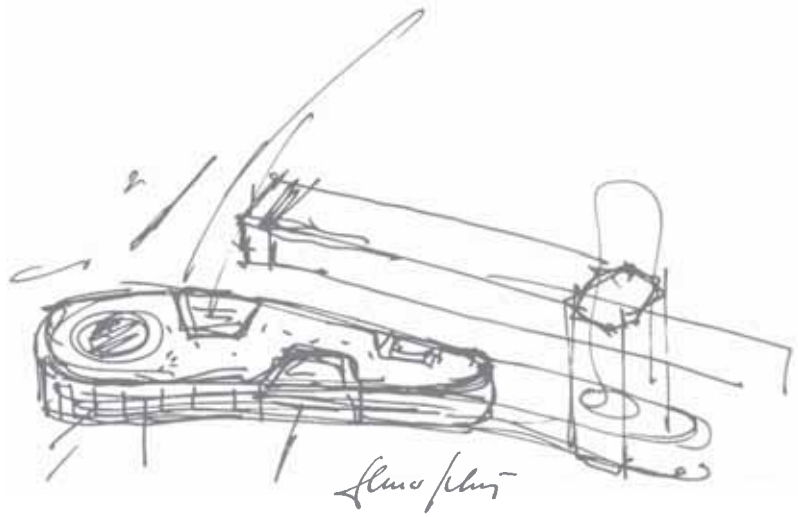
Mostra Convegno 2002, Milan:

Winner in the comfort and design category for the ceiling diffuser PASSCLEAN

Les Trophées du Design, Interclima 1999, Paris:

Silver medal for the ceiling diffuser WAVESTREAM





DEVELOPMENTS FROM A FREE HAND SKETCH.

TROX applications in office and administration buildings. Modern office and administration buildings shape the image of our major cities. As the statements of influential companies and institutions, these buildings are the source of inspiration, incorporating glass façade architecture which is continually pushing the boundaries and setting ever higher standards in creativity. This is possible not least thanks to the air conditioning systems available from TROX. In the case of the decentralised ventilation systems from TROX, for example, the entire technology is located out of sight under the sill or under the floor. For visionary concepts in glass - in unadulterated elegance.

Capricorn, Düsseldorf



Architect: Gatermann + Schossig Architects, general consultant, Bauplanungsgesellschaft mbH & Co. KG, Cologne
Specialist consultant: HIT Huber Ingenieur-Technik – Winter Engineers
Construction company: caverion GmbH

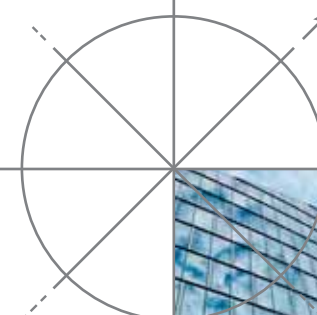


FOR A CLIMATE OF EFFICIENCY.

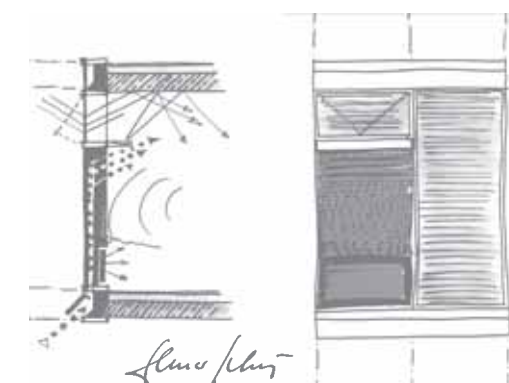


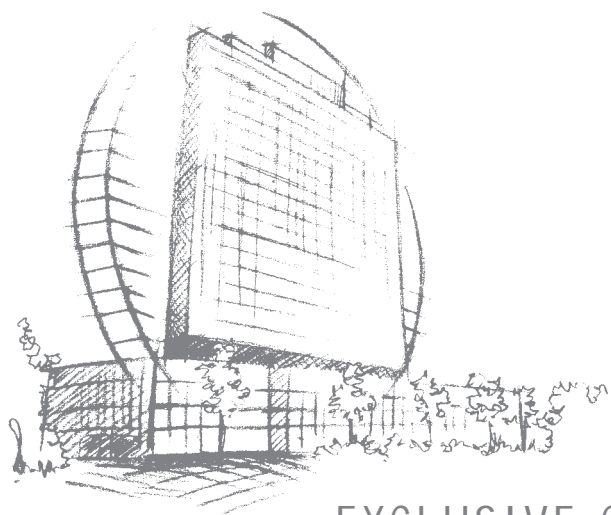
Optimum working environment. The indoor climate has a great influence on an individual's sense of well-being and thus on the performance of employees. In this context, air conditioning systems from TROX play a significant role in office and administration buildings around the world, e.g.

Main-Triangel, Frankfurt/Main – Business Centre Glacis, Luxembourg – Tai Pai Financial Centre, Taipeh – Westfälische Immobilien-Anlagengesellschaft, Düsseldorf – Feldbergstraße, Frankfurt/Main – Chambre de Commerce, Luxembourg



Façade-integrated, decentralised ventilation systems from Trox simply provide a plug and play installation and operation. Units can be controlled separately and according to individual needs: this provides an ideal local environment for each and every office whilst achieving the most effective levels of energy efficiency.





EXCLUSIVE COMFORT.

TROX applications in hotels. Hotels are first and foremost measured by their level of comfort. The primary aim of management is thus to make the guest's visit to the hotel as comfortable as possible. The reason for this is that satisfied guests are the best recommendation and have a major influence on the success of the business.

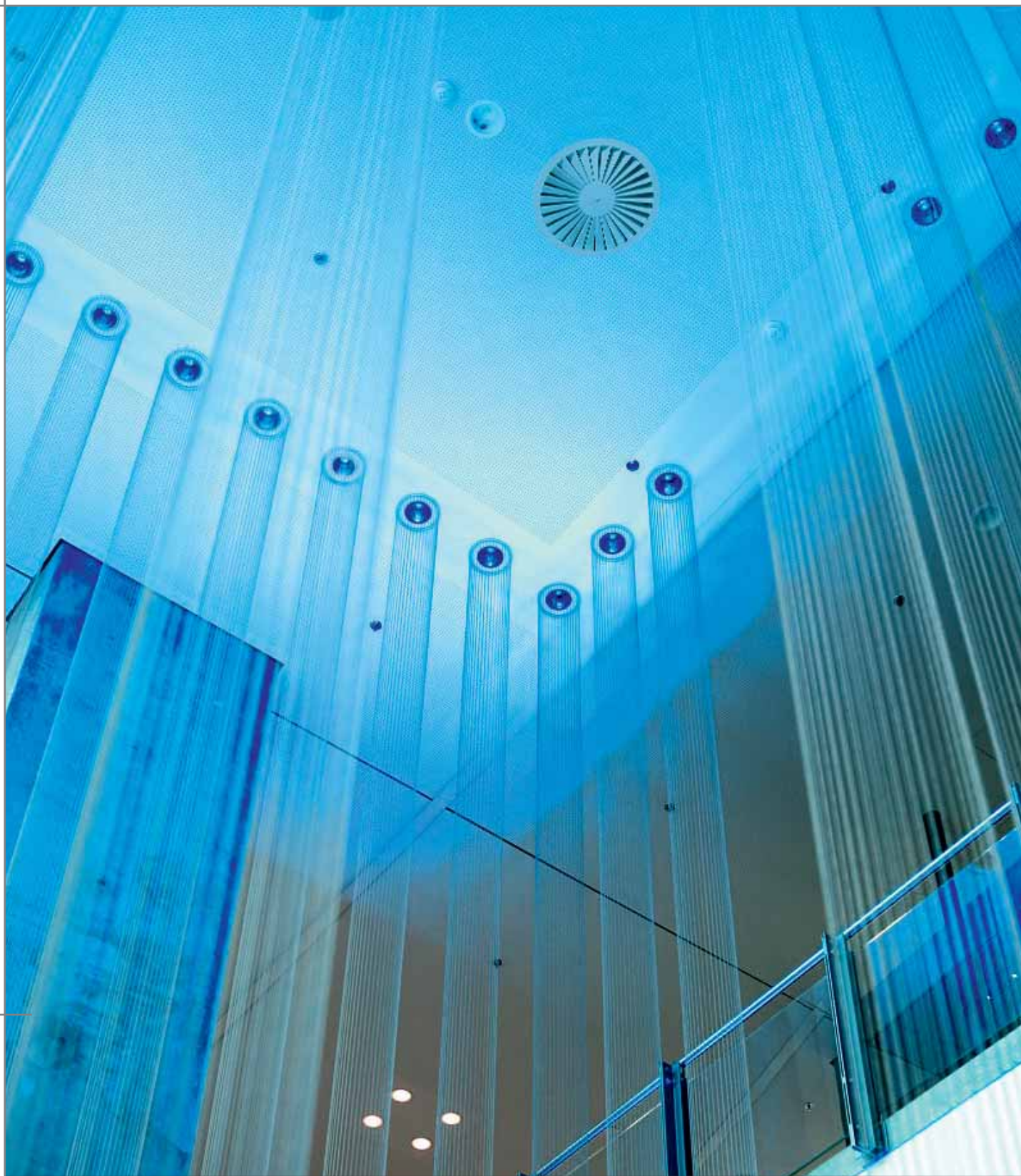
Air conditioning systems from TROX play a huge role in ensuring this comfort. The provision of the required supply and extract air provides the best indoor air quality in the public spaces as well as in the suites and bedrooms. Pleasantly quiet with comfortable temperatures.

Radisson „Blue Heaven“, Frankfurt/Main



Architect: John Seifert Architects, London
Specialist consultant: IB Walter Maier
Construction company: YIT Germany GmbH

TO GIVE THE INDIVIDUAL A SENSE OF WELL-BEING.

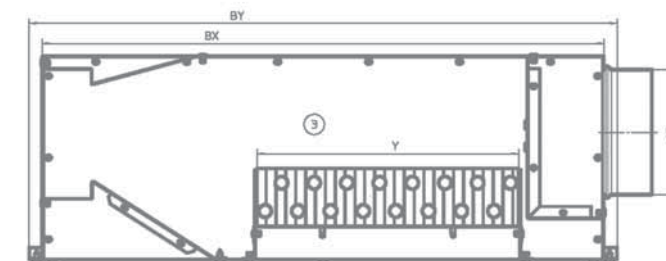


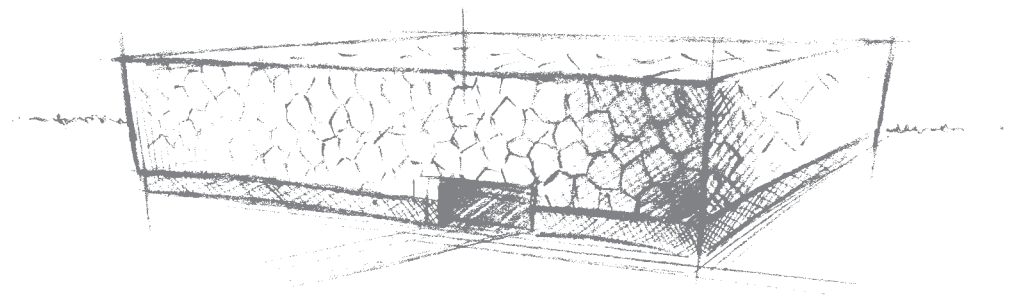
Greatest level of comfort. Every hotel guest has the right to a sense of well-being. TROX makes this possible: with innovative air-water systems and active chilled beams. The various systems from TROX can be seen in the world's finest hotels, e.g.

Burj al Arab, Dubai – Maritim Hotel, Düsseldorf Airport – Yachthafenresidenz
Hohe Düne, Rostock-Warnemünde – Marqués de Riscal, Rioja



Aesthetics also play a role in creating an atmosphere of well-being. TROX diffusers can be individually adapted in both configuration and colour to complement the features of the room.



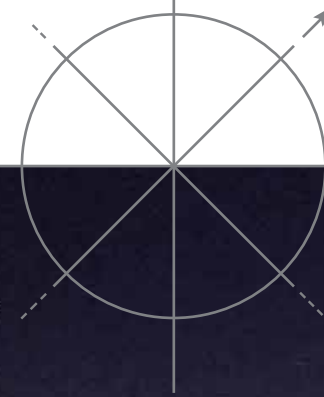


PERFORMANCE AT WORLD LEVEL.

TROX applications in sporting and cultural locations. In an age of entertainment culture and mass media, sporting and cultural events are continually growing in scale. Masses of enthusiastic fans flock to huge stadiums and arenas to see their favourite international stars. This means that thousands and thousands of people then need to share the air in these venues in the breathing process.

To meet this enormous demand for fresh air, air conditioning systems need to perform at their highest capacity. Here, TROX systems ensure a reliable and efficient air supply at all times.

The Water Cube, Beijing

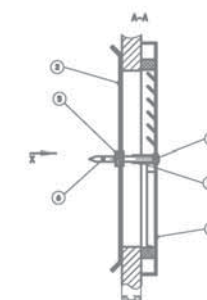
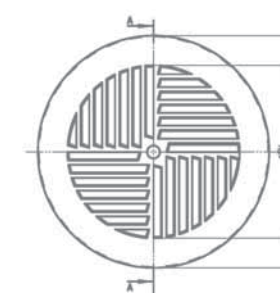
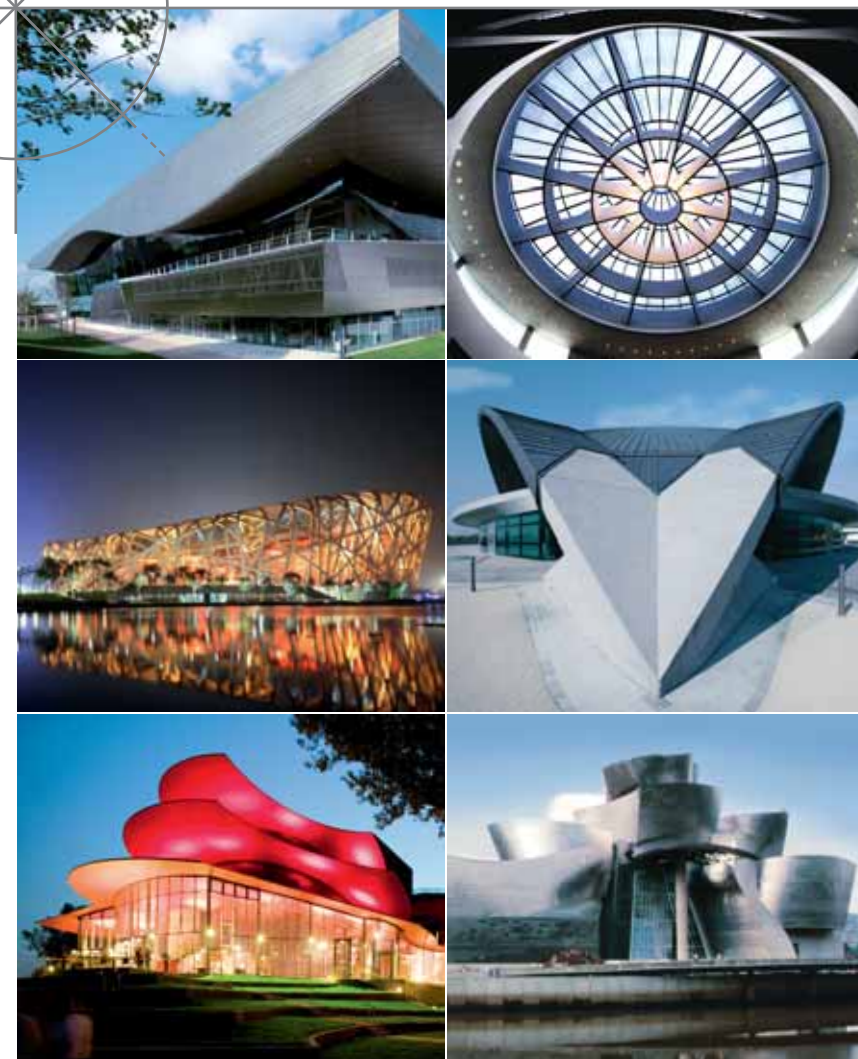
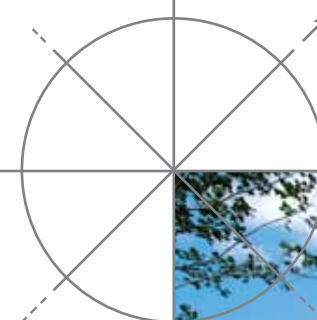


FOR AN ATMOSPHERE BRIMMING WITH ENTHUSIASM.

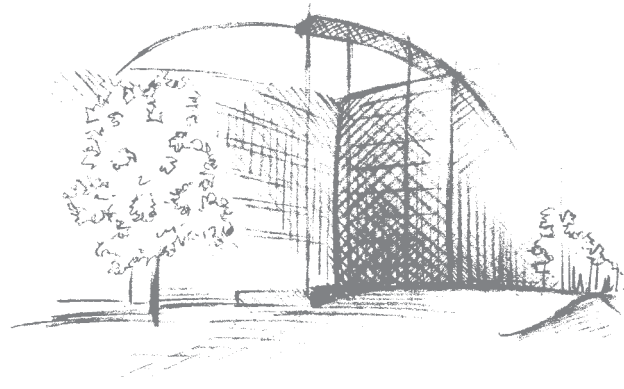


Breathing fresh air. To prevent people from swooning in all the excitement, jet nozzles from TROX distribute fresh air in all directions. The use of TROX displacement flow diffusers and sound attenuators meet the most demanding requirements to ensure that live classical music is the audio experience it should be. In this way, TROX enables millions of sports and culture fans to enjoy their chosen events, e.g. in

BMW Museum, Munich – Pinakothek der Moderne, Munich – National Stadium, Beijing – Centre National Sportif, Luxembourg – Hans-Otto-Theater, Potsdam – Guggenheim-Museum, Bilbao



Engineering creativity of the highest standard is the reason that TROX jet nozzles are developed for applications where it is paramount that conditioned air reaches people in all locations in a well directed and efficient way.



TREND-SETTING SAFETY.

TROX applications in train stations and airports. The world is a village. Mobility and speed shape our daily lives – and we then get away from this by travelling on holiday. Every day, millions of people around the world pass through airports and train stations. In very few other places will you see such strict safety measures as those that are in place in airports and train stations. In addition to, at all times, providing a reliable supply of large quantities of fresh air, one of TROX's most impressive solutions here has been its fire protection systems: for some years now, these have been setting the standard when it comes to ensuring the highest level of safety.

Terminal 2, Frankfurt/Main Airport

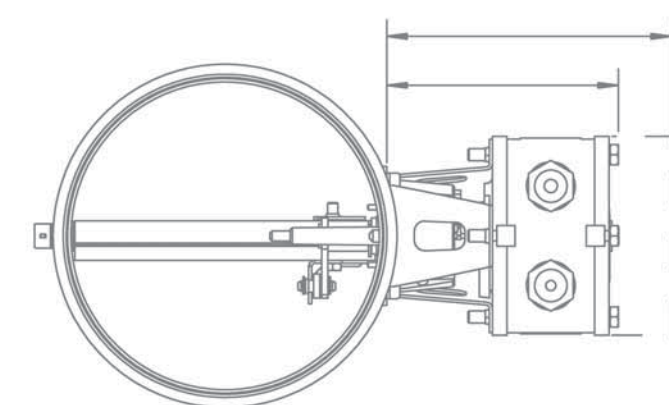


FOR PERFECT FIRE PROTECTION.

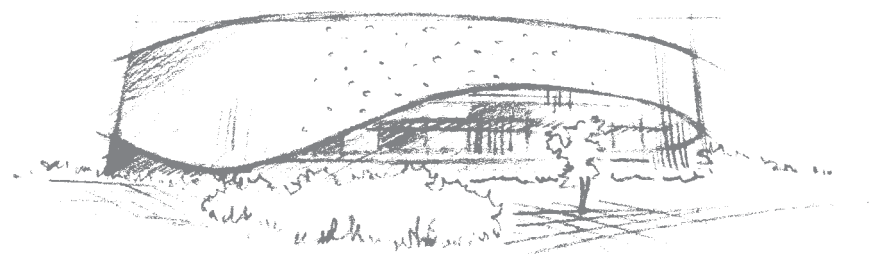


Where there's fire, there's smoke! And this needs to be kept away from the air conditioning system – and thus the air people breath. The building must be cleared of smoke with a suitable system. As a pioneer in fire protection, in 1973 TROX launched the first fire damper to be officially approved and given a certification mark. Today it can be seen at many international transport hubs, e.g.

Main Train Station, Berlin – Terminal 5, London Heathrow Airport – Metro Station Sarrika, Spain – Main Train Station, Dresden – ICE Main Train Station, Frankfurt/Main Airport – Terminal 4, Madrid Barajas Airport

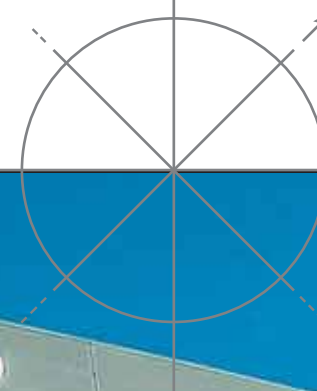


Trend-setting: TROX has decades of experience in fire protection. It now offers a fire damper certified to European standards, which makes it suitable for use across Europe.



A NEW OPERATING EFFICIENCY.

TROX applications in shopping centres. Our consumer behaviour is significantly shaped by our shopping environment. The more pleasant the atmosphere, the longer we spend shopping and the more we are willing to buy. Marketing professionals have been putting this principle to use for quite some time with targeted applications, e.g. music or perfume marketing. Just as important in this context is air marketing. By providing a continuous supply of fresh air, TROX ensures that customers and those interested in buying are kept active and alert for as long as possible.



Limbecker Platz, Essen

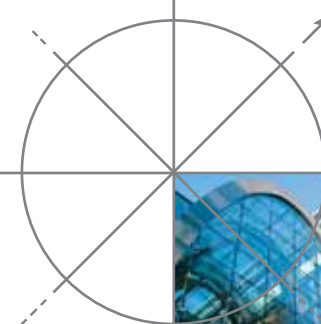


FOR A SUCCESSFUL SHOPPING ENVIRONMENT.

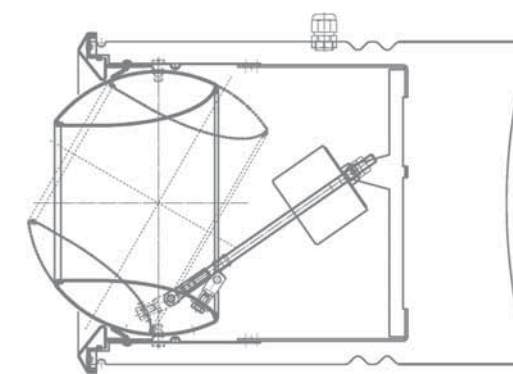


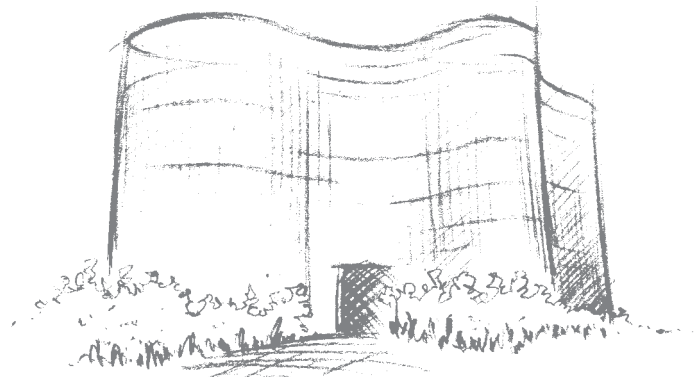
Most welcome! Modern shopping malls invite people to shop. Here TROX ensures undiluted shopping pleasure: in the arcades with jet nozzles and displacement flow units, and in the shops with air diffusers – with the entire system designed to the clients requirements. Also, in terms of energy consumption, TROX systems play a huge role in boosting economic efficiency in malls around the world, e.g.

Europa Passage, Hamburg – The MALL Complex , Athens – Limbecker Platz, Essen

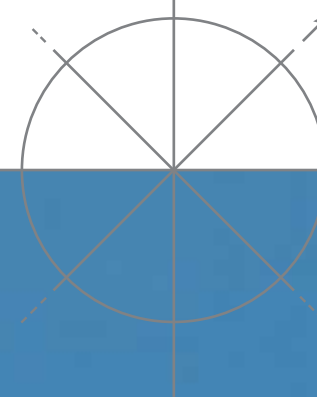


TROX does not just guarantee a pleasant shopping atmosphere by providing good air quality. The extraordinarily low noise emissions also contribute to an all-round comfortable ambience.



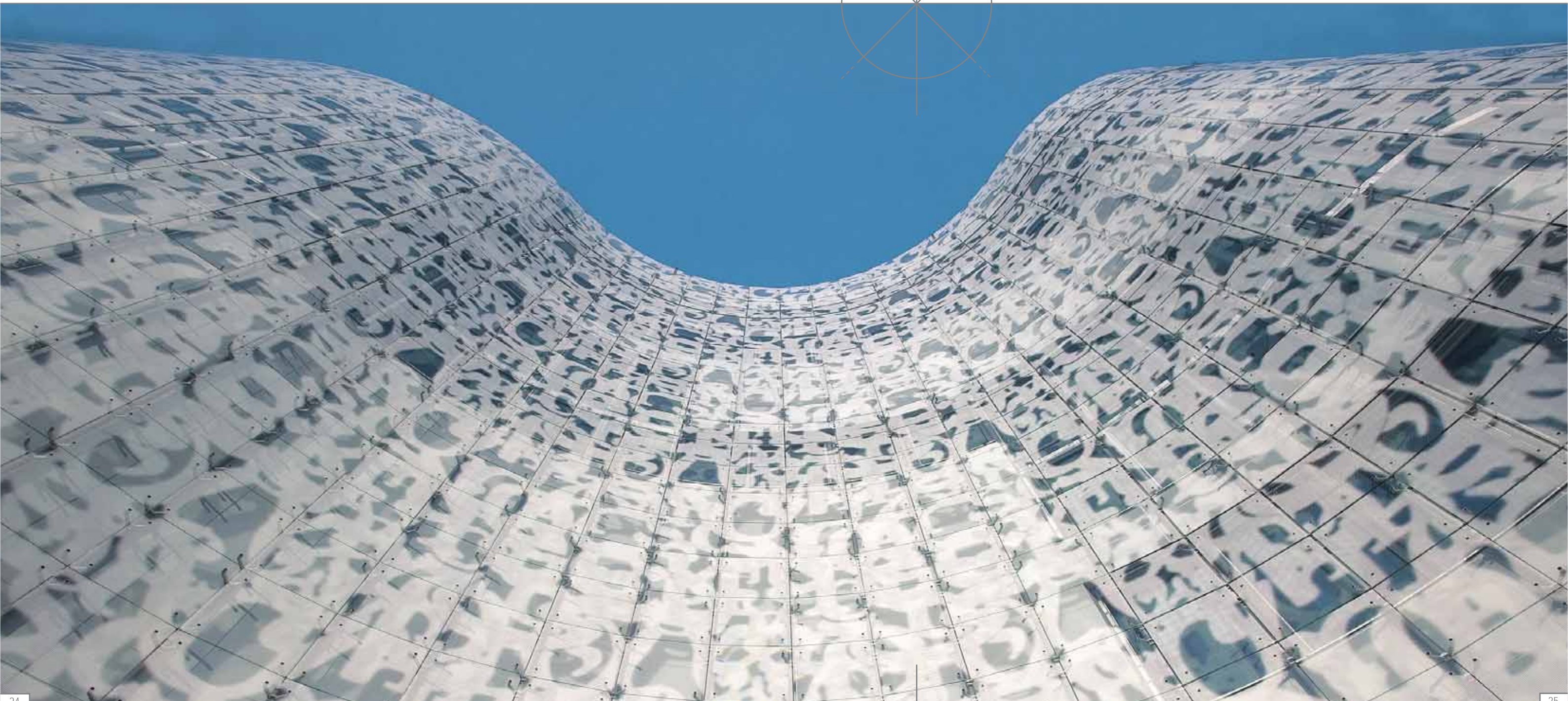


FULFILLING THE MOST DEMANDING REQUIREMENTS.



TROX applications in specialist areas. TROX applications in specialist areas. Of course there are always specialist areas where there is a need for close environmental control to be achieved. For example, laboratories, operating theatres in clinics or manufacturing sites in the IT sector which require the most demanding hygiene standards. A climate of pure clean air is crucial here: and this is delivered by TROX with special air conditioning systems based on state-of-the-art filtration technology. But TROX also has the solution for many other specialist areas.

Information, Communication and Mediacenter
of Brandenburg Technical University Cottbus

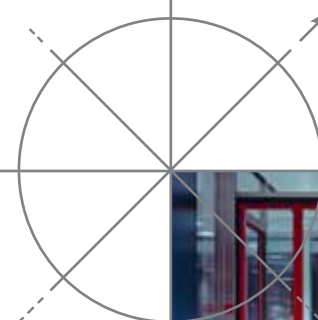


FOR FRESH AIR AT EVERY LOCATION.

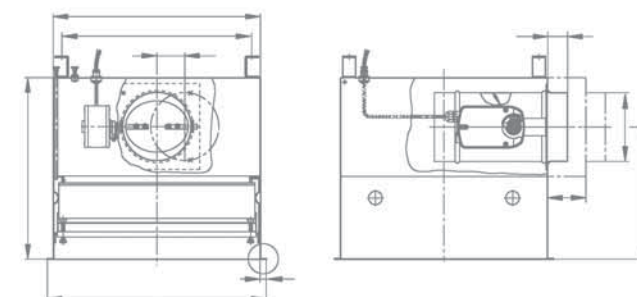


Ideal environment. Along with clean air solutions, TROX has also developed very special air conditioning solutions in close consultation with its customers and it supports specialist consultants and architects, e.g. in the development of project specific solutions for universities, tunnels, ships, data centres and off shore venues such as

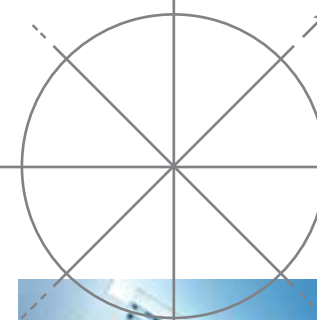
IDT Biologica GmbH, Dessau – Byk Chemie, Wesel – Centre Hospitalies, Lausanne – Norway GEM



Colourful variety – not just in buildings. TROX has also developed components and systems for the shipping industry. These provide passengers across the climatic zones of the world with a constant and consistently pleasant internal environment. Tested, certified and completely resistant to seawater.



COMFORTABLE IN ALL SECTORS.



Office and administration buildings



Main-Triangel, Frankfurt/Main
Architect: Architect Group N+M GmbH, Offenbach
Specialist consultant: Pettersson + Ahrens
Construction company: Kretz + Wahl Gebäudetechnik GmbH & Co. KG



Business Center Glacis, Luxembourg
Architect: Jean Petit, Luxembourg – Atelier d'Art Urbain, Brussels
Specialist consultant: Masterplan
Construction company: A+P Kieffer Omnitec Sarl



Tai Pai Financial Centre, Taipei
Architect: Chang Yong Lee & Partners, Taipei
Specialist consultant: Continental Consulting Engineers
Construction company: Shynrio



Westfälische Immobilien-Anlagengesellschaft, Düsseldorf
Architect: Nattler Architekten, Essen



Feldbergstraße, Frankfurt/Main
Architect: Collignon Gesellschaft von Architekten mbH, Berlin
Specialist consultant: Integ Prof. Mayer & Partner



Chambre de Commerce, Luxembourg
Architect: Claude Vasconi & Partners, Paris
Specialist consultant: RMC Consulting
Construction company: ELCO S.A. – ABB Luxembourg – Climalux S.A.

Hotels



Burj al Arab, Dubai
Architect: Tom Wright, Atkins Middle East – W.S. Atkins & Partners, Epsom, UK
Specialist consultant: W.S. Atkins & Partners
Construction company: B.K. Gulf



Maritim Hotel, Düsseldorf Airport
Architect: Reinhardt und Sander GmbH Planung und Baubetreuung, Bad Salzfluren
Specialist consultant: B.A.C. Barleben GmbH
Construction company: YIT Germany GmbH

Sporting and cultural sites



Yachthafenresidenz Hohe Düne, Rostock-Warnemünde
Architect: Ralph Flum Flum Design, Hamburg
Construction company: Dr. Distel GmbH



Marqués de Riscal, Rioja
Architect: Frank O. Gehry, Gehry Partners, LLP, Los Angeles
Specialist consultant: IDOM (Ingeniería, Arquitectura y Consultoría)
Construction company: AXIMA Sistemas e Instalaciones, S.A.



BMW Museum, Munich
Architect: Atelier Brückner GmbH, Stuttgart
Specialist consultant: Ingenieur Consult
Construction company: caverion GmbH



Pinakothek der Moderne, Munich
Architect: Stephan Braunfels Architects, Munich
Construction company: REHE Versorgungstechnik GmbH



National Stadium, Beijing
Architect: Herzog & De Meuron Architekten, Basel



Centre National Sportif, Luxembourg
Architect: Agence Roger Tallibert, Paris
Specialist consultant: Felgen et associés engineering
Construction company: A+P Kieffer Omnitec Sarl

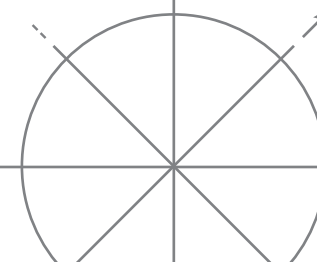


Hans-Otto-Theater, Potsdam
Architect: Architecture office Paul Böhm, Cologne
Specialist consultant: Ingenieurgesellschaft Ridder & Meyn



Guggenheim-Museum, Bilbao
Architect: Frank O. Gehry, Gehry Partners, LLP, Los Angeles
Specialist consultant: Frank O. Gehry and IDOM (Ingeniería, Arquitectura y Consultoría)
Construction company: Thyssen Krupp





Train stations and airports



Main Train Station, Berlin
Architect: gmp von Gerkan, Marg and Partners, Hamburg
Construction company: Eichelberger GmbH & Co. KG – Airteam Lufttechnische Anlagen GmbH



Terminal 5, London Heathrow Airport
Architect: Richard Rogers, Rogers Stirk Harbour + Partners, London
Specialist consultant: WSP Consulting Engineers
Construction company: Amec Building & Facility Services – MACE



Metrostation Sarrika, Spain
Architect: Sir Norman Foster, Foster + Partners, London
Specialist consultant: IMEBISA
Construction company: Etxea Instalaciones



Main Train Station, Dresden
Architect: Sir Norman Foster, Foster + Partners, London



ICE Main Train Station, Frankfurt/Main Airport
Architect: BRT Architects, Bothe, Richter, Teherani, Hamburg



Terminal 4, Madrid-Barajas Airport
Architect: Richard Rogers, Rogers Stirk Harbour + Partners, London – Estudio Lamela, Spain
Specialist consultant: GHESA
Construction company: ATIL-GSI-TECAIR

Shopping centres



Europa Passage, Hamburg
Architect: BRT Architects, Bothe, Richter, Teherani, Hamburg
Specialist consultant: THS Consulting GmbH
Construction company: Siegle+Epple GmbH & Co. KG



The MALL Complex, Athens
Architect: AS.PA SA – Ergotex Ltd. – AVP Architects, Athens
Specialist consultant: T.E.K.E.M. Ltd. – Team M-H
Construction company: J & P Avax SA

Special areas of application



IDT Biologica GmbH, Dessau
Architect: Heene + Pröbst GmbH, Ludwigshafen
Specialist consultant: IB Mayer AG
Construction company: Daldrop + Dr.-Ing. Huber



Byk Chemie, Wesel
Architect: Architecture office M. Kleinböhrer & Partner, Hamminkeln
Specialist consultant: Ingenieurgesellschaft Meinhardt Fulst GmbH
Construction company: J. Christoffers GmbH & Co. KG



Centre Hospitalier, Lausanne
Architect Reconstruction: Iten+Brechtbühl, Bern und Lausanne



Norwegian GEM
Architect: Meyer Werft GmbH, Papenburg
Specialist consultant: Imtech Deutschland GmbH & Co. KG Schiffbau Dockbautechnik
Construction company: Imtech Deutschland GmbH & Co. KG Schiffbau Dockbautechnik

TROX is Corporate Partner of

