TECHN**®V**



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O T COMPANY PROFILE

About company

he company TECHNOV s.r.o was established in 2007 after transformation of the company LAMES and it follows a long tradition of producing air conditioning components.

The newly established company TECHNOV started its manufacturing production in the original halls of the former company Lames in the Rumanová municipality and through innovation and the purchase of new modern equipmentin 2007-2008 the company proceeded to modernize and develop it. The TECHNOV production area is bigger than 10 000 m² and all production facilities are currently located in production halls which are designed according to the latest modern technologies with the aim of achieving the optimal production standard with focus on product quality The company TECHNOV s.r.o. successfully provides complex services in the area of production of components for air conditioning and ventilation, whereby monthly production capacity consists of more than 42 000 m² or 210 tons of steel processing. The TECHNOV production area

will significantly grow form September 2018 on and will be enlarged of more than 20 000 m² by a newly built production complex located in the village of Rumanová. More information about the production plant can be found on page 24.

Our products are suitable for the following areas:

- production spaces
- medical spaces
- cultural and sporting facilities
- administrative spaces
- shopping centres
- shops and business spaces
- hotels and catering facilities
- technological containers, aspirators
- households and others



We place emphasis on technological requirements that are absolutely necessary for ensuring the functionality and high standard of current architectural complexes.

he priority for TECHNOV is the quality and reliability of our products. We place emphasis on a flexible approach towards our business partners and the prompt resolution of their requests. Modern technological procedures and knowledge are the cornerstone of our uniqueness in this field:

- Highly qualified employees with many years of experience in the area of development and manufacture of shaped air conditioning components and piping; their design and technical advice are key to our success.
- TECHNOV currently employs approximately 150 employees, most of whom are technical workers directly in production, and also administrative workers and drivers.
- The implementation of information technologies into the processes of production and product bar code labelling leads to clarity and the easy identification of components. The combination of bar codes with 3D output from CAD software leads to the efficiency of the component assembly process.



We offer our customers short delivery times, attractive competitive prices and product delivery with our own vehicles to the place of destination.



Since 2009 the company TECHNOV has had a developed certified management system.



Quality is our top priority and therefore transmitted to the all processes - starting from the design, through production, ending at products' delivery to the place of destination.



Quality management system according to ISO 9001



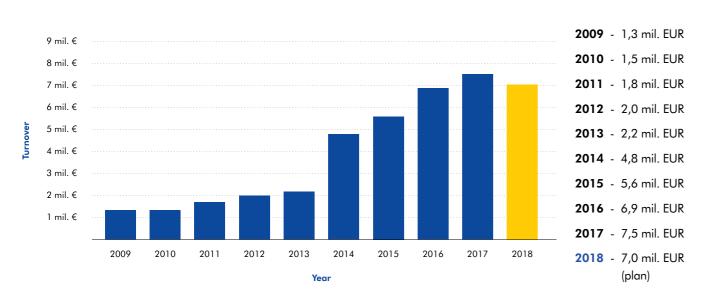
Environmental management system according to STN EN ISO 14001



OHS management system according to STN EN OHSAS 18001

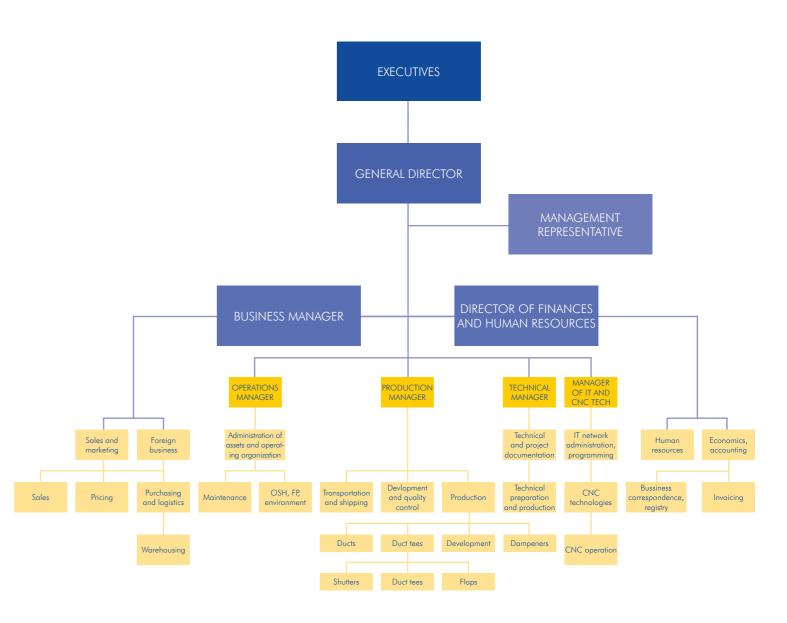
O T COMPANY PROFILE

Turnovers



TruPunch 1000

Organizational structure



02 PRODUCTS

Production program

ECHNOV is responsible for the manufacture of its products, which are manufactured to the highest quality according to standards STN EN 1505, STN EN 1506, STN EN 1507, STN EN 12237 and DIN 24191, DIN 24145 and DIN 24147.

All components are normally made of galvanized sheet DX51D Z275 MAC. Based on the customer's requirements it is possible to make components from other materials (stainless steel, aluminium, copper, and others). We supply air conditioning products not only for customers on the domestic market but also to other European countries such as Austria, France, Germany, Czech Republic and many others.



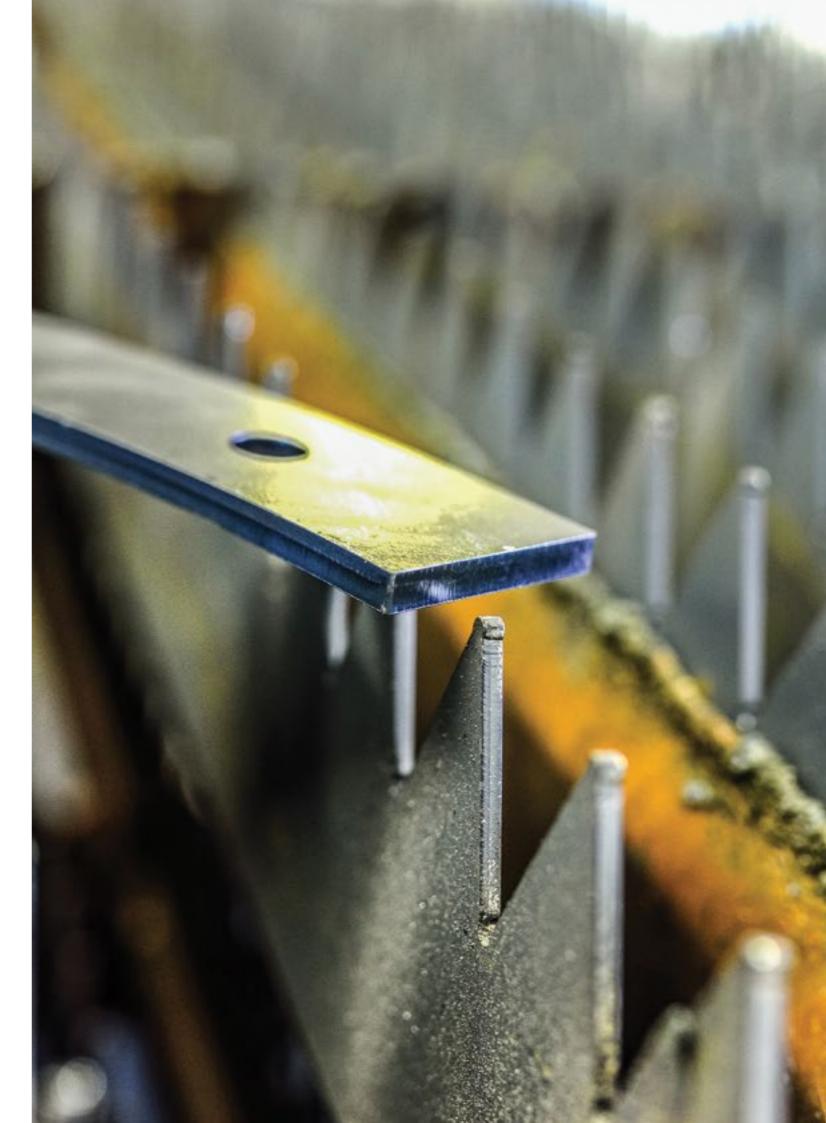
Our vision is to expand the export of Slovak products of TECHNOV to countries of the European Union.

The production program consists of the following components:

- rectangular ducts and duct tees
- coiled ducts and round tees
- connectors for round pipes and tees
- round caps
- round regulating flaps, also in tight variant
- collars for rectangular and round pipes
- round and rectangular exhaust pipes with screen
- round and rectangular direct exhaust pieces
- round and rectangular inlets/outlets
- vapour extractors
- anti-rain shutters, also a profiled Al variant
- anti-noise shutters
- anti-sand shutters
- rectangular and round flexible connections
- noise dampeners round and rectangular
- sanitary rectangular noise damping inserts
- sanitary cellular noise dampeners

- rectangular regulating flaps
- protective grilles rectangular and round
- rectangular automatic flaps
- diffuser boxes for rectangular and round plates
- fireplace air distribution ducts
- front plates
- and many other air conditioning components





03 TECHNOLOGIES

Modern technologies

n addition to proven technologies TECHNOV utilizes development trends of awide range of new, modern technologies for the production of air conditioning components and constantly follows the manufactured products.

development trends of equipment and work procedures used in our activities, which leads to the high standard of our manufactured products

The production line includes the following technologies:

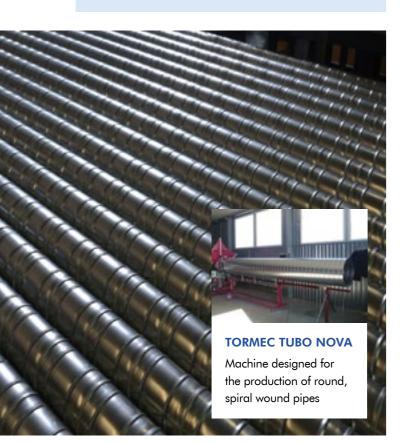


RAS DUCT ZIPPER

Device for folded closing of extremely narrow rectangular pipes

ATTEXOR - Rivclinch

Pneumatic manual device for producing a pressure pressed connection without breaking the surface of the material



SWAH LINK

Automatic line for producing rectangular pipes



TORMEC ARC – DUAL

Device designed for the production and closing of folds on round components

PLASMA CUTTING

Flame cutting parts of any shape with a plasma cutting machine

PRESSING MACHINE - VS 5

Machine designed for producing air conditioning flanges of sizes 20 and 30 mm

PRESS BRAKE SAFAN 6020

Technology for sheet bending with maximum accuracy and speed

SPOTCLINCH

Pneumatic standing device for producing pressure pressed connections without breaking the surface of the material

STITCH WELDER STITCHWELDER 1000 MM

Connecting of sheets using stitch welding



Responsible employees constantly follow the development trends of equipment and work procedures used in our activity, which leads to the high standard of our manufactured products.

WELDING OF KÖCO ELEMENTS



LASER TRUMATIC L 3030

Sheet metal processing and the production of parts for components by precision laser cutting, to a thickness of 20 mm (depending on the cut material)



PUNCHING MACHINES TRUMPF TRUMATIC 200, TRUPUNCH 1000 Processing of sheets and manufacturing of parts for components by precision cutting

TIG WELDING

Precise welding of thin stainless steel and aluminium sheets using TIG technology under a protective atmosphere

NOISE DAMPENER PRODUCTION LINE

A line constructed specifically for the company's requirements, designed for manufacturing casings and reinforcements of the noise dampener bodies.

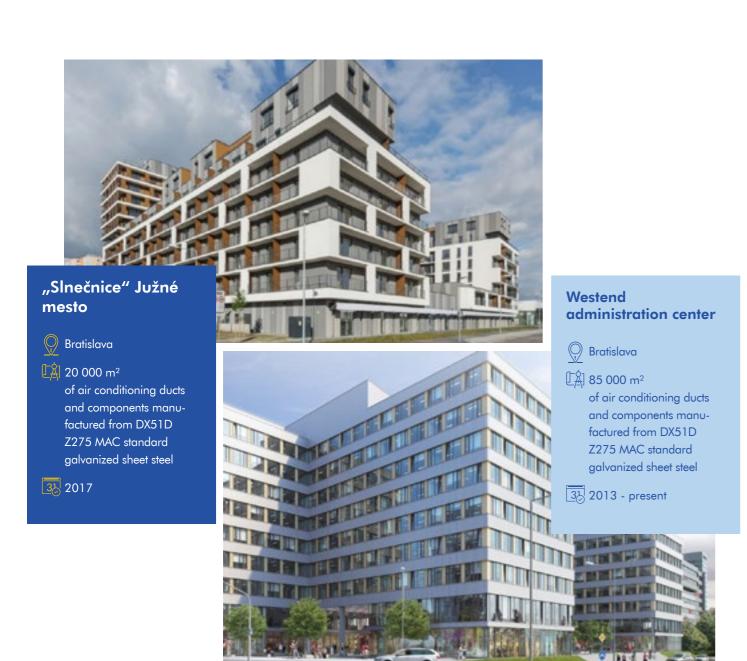
PRESS BRAKE TRUMPF TRUBEND 3120

MIG/ MAG WELDING, RESISTANCE WELDING



Administrative and residential facilities

Air conditioning elements and piping made by our company were installed into large and significant projects and buildings both in Slovakia and also abroad.





Malé Krasňany residential complex

Bratislava

of air conditioning ducts and components manufactured from DX51D Z275 MAC standard galvanized sheet steel

3 2017

www.technov.sk 13

19 000 m²

35 2017

of air conditioning ducts and components manu-

factured from DX51D

Z275 MAC standard

galvanized sheet steel

Production and logistics halls





120 000 m² of air conditioning ducts and components manufactured from DX51D Z275 MAC standard galvanized sheet steel and special output heads with a reinforced load-bearing structure

> construction is still in progress since 2016

ZF Slovakia



25 000 m² of air conditioning ducts and components manufactured from DX51D Z275 MAC standard galvanized sheet steel

32 2017

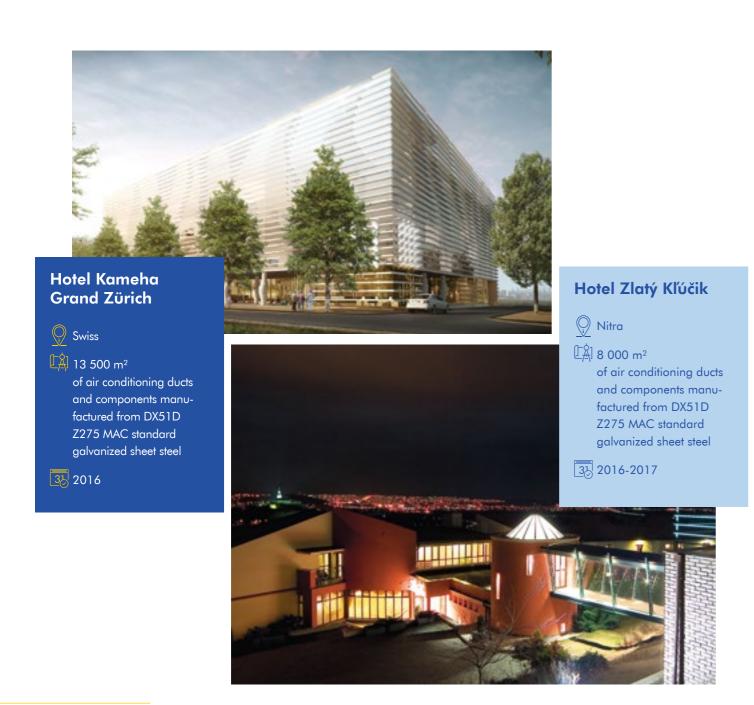


CTP Park Voderady

3 2017

14 www.technov.sk www.technov.sk 15

Hotel complexes, restaurants





Bratislava

of air conditioning ducts and components manufactured from DX51D Z275 MAC standard galvanized sheet steel

32 2010

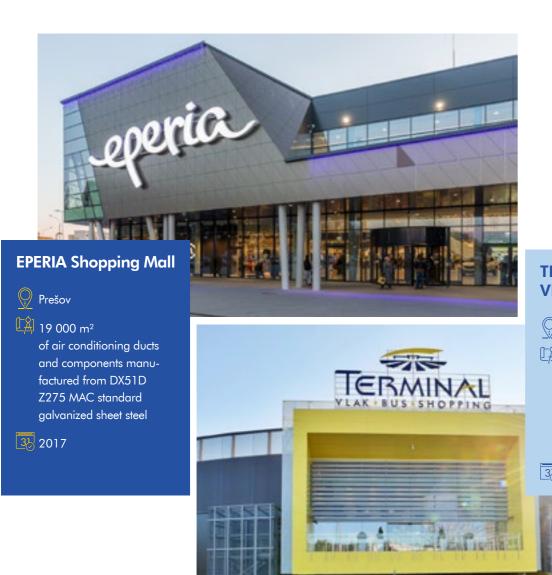


of air conditioning ducts

of air conditioning ducts and components manufactured from DX51D Z275 MAC standard galvanized sheet steel

3 2015

Shopping and entertainment centres



TERMINAL Vlak-Bus-Shopping

- Banská Bystrica
- 8 000 m² of air conditioning ducts and components manufactured from DX51D Z275 MAC standard galvanized sheet steel
- 3 2017





9 000 m² of air conditioning ducts

and components manufactured from DX51D Z275 MAC standard galvanized sheet steel

35 2017

18 www.technov.sk www.technov.sk 19

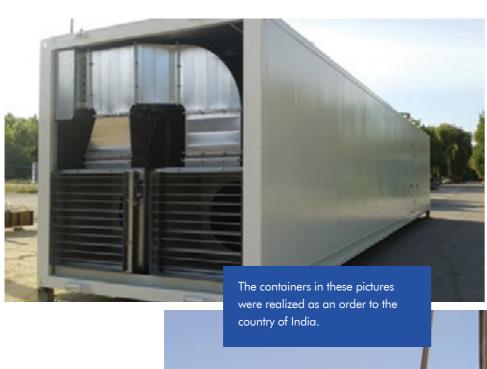
5 ATYPICAL PRODUCTION PROGRAM

Air conditioning for container systems

Air conditioning component production for technological containers installed in various countries where they must meet difficult climatic conditions such as low or high temperatures, or high dustiness.

Distribution to: hospitals, oil platforms, army and locations with extreme weather conditions

Countries: India, Russia, Nigeria



Air conditioning components for sanitary environment

TECHNOV in its product portfolio also offers air conditioning ducts, which are used in environments with high sanitary requirements. These include, for example, hospitals, or the pharmaceutical industry. The tightness class of these ducts is: **D.**

The duct is cleaned with a disinfectant and packaged in anti-static film.

Instead of a regular cashmere cloth the noise dampeners use special electro fabric ensuring quality under MIT Decree 460/2005 Coll. TECHNOV already uses this fabric as a standard for all its dampener versions.

Annual production: 42 000 pieces



Air conditioning for nuclear power plants

TECHNOV also manufactures air conditioning components for nuclear power plants (TPE N 107/85), when the components are placed in a controlled area. These components ensure the highest seismic resistance, Category 1a – functionality and integrity.

seismic certification for flap regulation follows the standards STN IEC 60980 and STN IEC 60780

06 IT SYSTEM

n order to efficiently utilize information, our specialized technical workers use systems which are designed to produce high quality and relevant information required for the management and production processes.

TECHNOV s.r.o. currently uses a complex enterprise information system developed for its own needs. It's an open, fully customizable according to immediate requirements, modular ERP system utilizing Client / Server technology.

Import of drawing documentation is in standard formats .dwg, or .pdf. The system offers output in the form of price offer, documentation for the entire production process, and, last but not least, output in 3D for duct assembly, which will be appreciated particularly by installation and execution groups.

- assembly documentation in 3D visualisations
- outputs according to individual sectors (branches, facilities, floors, etc.)
- positional numbers for individual components

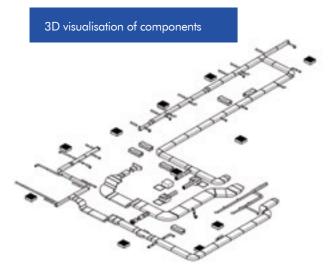
As a supplement to the primary production software, we utilize in the production process also our own system of Intranet applications.



The IT system grows along with the development of our company

2D vs. 3D

3D component visualisation export is used as a model and helpful assistance especially when installing ducts, which will be appreciated particularly by installation and execution groups. The export can be overall or by individual sectors, e.g. branches, facilities, floors, etc.





2D drawing of project components

Autodesk Revit

Technov is currently cooperating with the Autodesk company for creating and finalizing of the air ducts components library. The library will ensure better connection with a current software used in TECHNOV and will make the work of project engineers and designers much more easier. The process should provide simplicity for its users as well as fast and precise processing that is necessery for smooth run of the Sales Department.

verzia 1.2.4



TLMIČE HLUKU

Technov, s.r.o. | 951 37 Rumanová 144, SK | www.technov.sk | tel.: +421 376 588 391

Zadanie kulisový @ bunkový O kruhový O Typ tlmiča: Kulisový tímič **Acoustic software** It is a software that provides prevedenie: s plechom calculation of the attenuation 100 mm šírka tímiča: A šírka kulisy: parameters of the noise silenvýška tímiča: počet kulis: n 3 cers. The software gives fast dĺžka tímiča: 1000 mm prietočná medzera: s 66.67 mm and easy schema as well as nábehová hrana: výbehová hrana: guaranteed data according to the calculated values. dopočítať vlastný hluk a tlakovú stratu útlm pre frekvenciu: Okrajové podmienky pred tímičom hustota vzduchu: p 1.2 kg/m³ prietok vzduchu: Q 7 100 m3/h

prietok vzduchu: Q 7 100 m³/h hustota vzduchu: p 1.2 kg/m³
hladina akustického výkonu vrátene započítaného váhového filtra A:

f 16 32 63 125 250 500 1000 2000 4000 8000 16000 Hz
L_u(A) 48 50 52 57 74 75 76 69 62 53 49 d8

O7 VISION FOR THE FUTURE

New production complex

Investment of 22 mil. €

- Total area 20,000 m²
- Production spaces 6,300 m²
- Technologies for approx. 12 million €
- Creation of 350 jobs
- Significant increase in production capacity
- Development and expansion of the portfolio of offered products and services
- Increasing exports





Validity of the construction permit05/2016Start of construction10/2016Commissioning of the production hall and paint shop03/2018Commissioning of the office building03/2018Start of construction of the development centre2022 - 2023





Research and development

Experimental research of the parameters and functional properties of the equipment in the area of measured variables:

Heat-technical - extreme temperatures of -150°C to 120°C, heat losses

Product durability in various climatic conditions

Hydrodynamic - pressure, flow, gas leak

Improvement to the ecological and economic level of air conditioning ducts

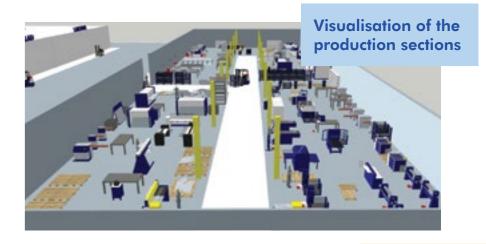
Mechanical - forces, mechanical stress and deformations

Resistance against coarse impurities

Acoustic - noise, noise dampening, vibrations

Improvement to the acoustic properties of air conditioning ducts

Ecological and sanitary properties



PRODUCT PORTFOLIO

As standard, air conditioning ducts are manufactured from tested materials, which are made of DX51D Z275 MAC galvanized steel sheets.

TECHNOV offers its customers a wide range of materials such as stainless steel, aluminium, copper, etc. Therefore, the selected product material only depends on the customer's requirement.

The standard version of the ducts corresponds to tightness class A (sealed

If the duct has all folded joints caulked, it corresponds to tightness class B. In tightness class C the profile flanges are caulked as well.

Tightness classes are regulated by the STN EN 1507 standard.

SQUARE DUCT

Pressure grade 1

Ducts intended for ventilation, air conditioning and air extraction without mechanical and abrasive particles and without corrosive gases and vapours that promote excessive wear or corrosion of steel or zinc.

Pressure grades 2 and 3

HCZ rectangular ducts groups II and III intended for the extraction of hot gases (up to 200-350 °C), for dust removal from technological machines containing abrasive materials (at low speeds of movement), chimneys, dryers and low pressure pneumatic transport.

ROUND DUCT

A wound spiral round duct is used mainly for the needs of assembly and construction of air conditioning, ventilation and exhaust systems with the

- maximum temperature of transported air 80°C,
- maximum relative humidity 80%,
- maximum allowed air speed 20m/s,



ROUND STRAIGHT DUCTS





ROUND ELBOWS







ROUND TEE PIECES AND BANCHES







round cross piece



round cross piece



ROUND REDUCTIONS





REGULATING AND CHCECK FLAPS





round regulating flap







ROUND EXHAUST HEADS AND ROOFTOPS













EXHAUST PIECES AND DUCT





exhaust piece straight





ROUND END CAPS AND COUPLINGS





round end cap



COLLAR



ROUND GRIDS





round grids

ATTENUATORS, FLANGES, CLAMPS





TVS1P round attenuator with one flange











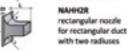
round clamps

round half-clamps with rubber

NOZZLES



rectangular nozzle for rectangular duct with one radius



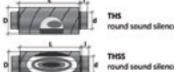
NAKH round nozzle for rectangular duct



round nozzle for round duct

NAHK rectangular nozzle for round duct

SOUND SILENCER AND SILENCER INSERTS



When silencer type THS or THSS the diameter d ≥ 900 mm normally available as an optional mounting console.

POOL SLOT DIFFUSER



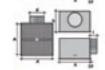
pool slot diffuser with 1,2 or 3 slots 1.3xA



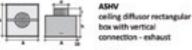
ceiling diffusor box ADQ exhaust



celling diffusor rectangular box with horizontal connection - exhaust



ASHB2 ceiling diffusor rectangular box with horizontal connection - supply



box with vertical connection - exhaust ceiling diffusor rectangular

box with vertical connection - supply



ceiling diffusor rectangular box for round board with horizontal connection - exhaust



ceiling diffusor rectangular box for round board with horizontal connection - supply



ceiling diffusor rectangular box for round board with vertical connection - exhaust



ASHKV2 ceiling diffusor rectangular box for round board with vertical connection - supply



round ceiling diffusor box with vertical connection - exhaust



ASK2 round ceiling diffusor box with vertical connection - supply

PLENUM BOXES



plenum box



plennum box with rectangular connection

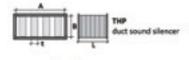


STRAIGHT RECTANGULAR DUCTS

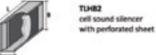


straight rectangular duct without flanges

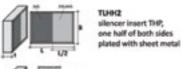
SOUND SILENCER AND SILENCER INSERTS

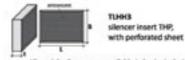










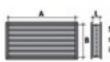


All models silencers are available in hygienic design in accordance with the standards for hospitals and general as with rounded edges including

PRESSURE RELIEF DAMPERS (SELF-MOVED)



self-moved rectangular damper into the duct (pressure relief)



Side self-m self-moved rectangular damper in the duct (pressure relief)

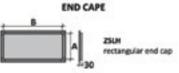


self-moved rectangular damper for the fasade (pressure relief)

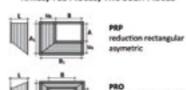
RECTANGULAR ATTENUATOR



Rectangular attenuator



RECTANGULAR REDUCTIONS, ELBOWS, KNIES, TEE PIECES, TROUSER PIECES





PRSKS reduction rectangular to round

reduction rectangular to round

reduction rectangular



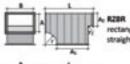




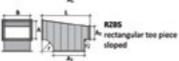
rectangular knee

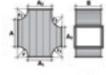


rectangular knee-reduced



rectangular tee piece





RZBX



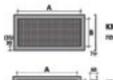
rectangular trouser-piece symetric



NOHHZ rectangular trouser-piece



RECTANGULAR GRIDS

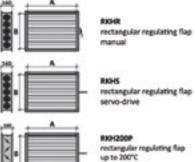


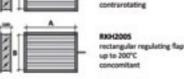
KMH rectangular grid



KMHN rectangular grid

RECTANGULAR REGULATING FLAPS





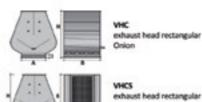
up to 200°C

rectangular blade flap



RIGHLR rectangular blade flap

RECTANGULAR EXHAUST HEADS





exhaust head rectangular

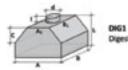


exhaust head rectangular lower with grid



Exhaust head rectangular hexagonal d > 1000 mm

DIGESTORS

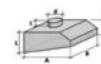


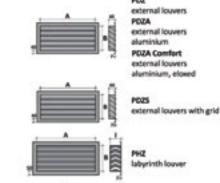
Digestor type 1











RECTANGULAR LOUVERS

FILTER CHAMBER

frame for external louvers



CONTACTS

Contact address

Technov, s.r.o.

Rumanová 144 951 37 Rumanová Slovak Republic

Invoicing information

Company ID: 36 801 640 Tax ID: 2022 409 125 VAT ID: SK7120000030 CR: DC Nitra, Section: Sro, File number 20237/N



Banking information

VÚB, a.s. 2626227759/0200

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ČSOB, a.s.

4005195044/7500

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Departments



Production department

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Pricing

E-mail: cenotvorba@technov.sk



Economics department

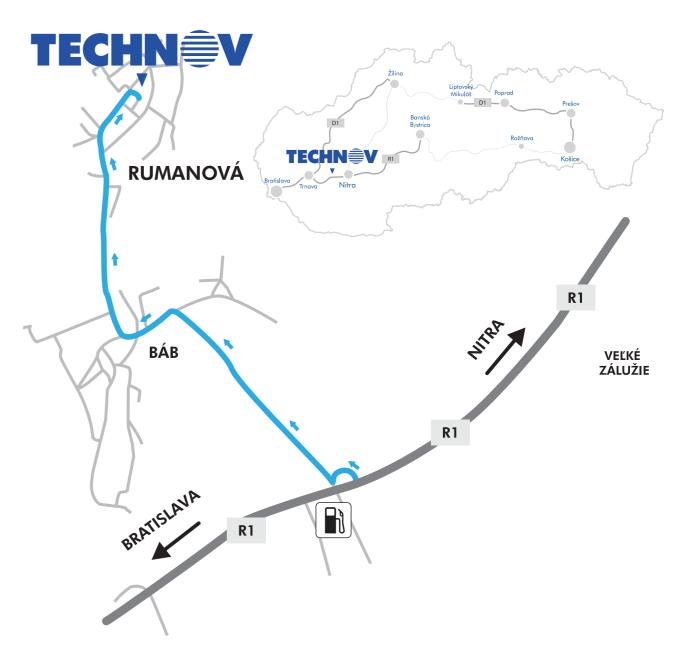
E-mail: ekonomicke@technov.sk

We are looking forward to your visit and requests via phone or e-mail to our company.



Map of the company

Rumanová 144 951 37 Rumanová



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