Exhaust pipe systems

Off-road vehicles
Special vehicles
Agricultural vehicles
Buses & coaches
Construction machinery
Power generators

Military vehicles
Mobile air units
Trains
Industrial applications
Sea transport
On-road vehicles
<table>
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<th>Pipe diameter OD (mm)</th>
<th>Bending radius CLR (mm)</th>
<th>Wall thickness T (mm)</th>
<th>CLR / OD</th>
<th>Acid resistance pipe</th>
<th>Bending angle</th>
<th>min. distance between bends</th>
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We are among the production leaders of exhaust systems for all on- and off-road vehicles, power generators and tractors.

We have been in this industry for over 30 years and we are constantly increasing our competency. Our experience with the latest technological achievements allows us to develop ourselves and offer our Customers perfect solutions.

ATEX has been on the European market since 1980. Since 2005, we have had the Quality Management System Certificate ISO 9001 issued by TUV RHEILAND in the scope of designing and producing exhaust systems. In 2007, we implemented the system of warehouse management, logistics, production, sales and accounting. As a result of this we have improved Customer Service and we are able to offer even more competitive prices.

We can definitely say that we are the leader in the production of exhaust systems. The experience of our excellent staff with the latest technological achievements allows us to develop ourselves and offer our Customers perfect products and solutions.

Our greatest strength are our people. Their knowledge and commitment make sure that ATEX products are always of the highest quality and every subsequent day gives us new ideas and solutions in contributing to our leadership position on the market.

ATEX is a family company which focuses on developing, producing and distributing exhaust systems for all types of vehicles equipped with combustion engines. ATEX has been on the market since 1980 and has 98 employees.

So far our products have been exported to: Germany, France, Italy, Spain, Belgium, the Netherlands, the United Kingdom, the Republic of Ireland, the Czech Republic, Norway, the Republic of Iceland, Sweden, Finland, Denmark, Ukraine, Lithuania, Hungary and the USA.

ATEX operates on the following markets:
- OEM - Original Equipment Manufactured
- OES - Original Equipment Spare Parts Supply

ATEX has the proper development, production and logistic processes to meet specific Customer requirements. Our products are always customized according to the Customer’s needs and requirements.

ATEX is the producer of exhaust systems for all on- and off-road vehicles, power generators and tractors.
This is the number of our employees in 2013, 23 white-collar workers and 75 blue-collar workers. Within one year we have created 10 new job positions.

Such was the value in Euro of our export in 2012. Compared to 2009, our export has almost tripled in size.

...of our general sales goes to the German market; 12% to the Belgian; 8% to the French; 5% to the Finnish, and almost half of our production finds its end-users in Poland.

Exhaust systems are our main specialization. 21% of our production are tanks.
Due to the latest technology such as the function BOOSTER we have become the leader in bending pipes in dia 1-D on the acid-resistant pipes (1.4301).

All the bending processes are done using the CNC machines that achieve a very high level of repeatability and quality of the subsequent elements.

Bending technology
ATEX can bend pipes from 38 mm in dia to 152,4 mm.

ATEX does ideal bending using an adjustable leading remote control with a new technology of accelerating the pipe (boosting) that enables ideal pipe diameter at the lowest possible radius while free flow of fumes in order to achieve the optimal effectiveness of noise reduction.

We are also ready to use the technology of PUSH BENDING which enables us to use a large bending radius – which is the current trend in constructing the newest tractors.
ATEX does the bending of mild steel, aluminised steel, stainless steel and acid-resistant steel.

**Mild steel - DC04**
Very popular raw material which is used for pipes. Unfortunately, it requires an anti-corrosion layer such as powder painting or thermo resistant paint.

**Aluminised steel - DX54+120AS**
The most often used steel for the exhaust pipes. The surface of the aluminium sheets consists of aluminium with a 10% silicon addition which enables us to use this type of steel in very high temperatures (up to 650°C) without the risk of exfoliation. After contact with oxygen on the surface there occurs a layer of aluminium which rebuilds itself after any damage to the surface.

**Stainless steel (1.4512);**

**Acid-resistant steel (1.4301)**
ATEX uses the basic types of stainless steel for the exhaust system industry, so 1.4512 (AISI 409) and acid-resistant steel 1.4301 (AISI 304).
Characteristics:
- Integral insulation is a required adaptation for DPF and SCR exhaust systems.
- The following application provides correct burning of exhaust gases in the filter.
- This feature allows to increase borderline temperature of exhaust gases maintaining required level of working and full functionality.
- Integral insulation is keeping heat inside, while it is 800°C inside, outside it is only 250°C.
- High resistance to vibration.

Options of insulation:
- Glassneedlemat 10 mm - 20 mm (up to 550°C)
- Silicanneedlemats 10 mm - 20 mm (up to 1000°C)
- Covered with stainless steel foil 1.4828 (AISI 309)
- Application: 550°C or 1000°C

Exhaust decoupling elements from stainless steel strip wound hoses

Characteristics:
- High tensile and bending strength
- Excellent durability
- Resistant to pressure, impact and mechanical stress.

Type ASS: Double interlocked profile (range size 25.4 mm to 280 mm)
Leakage Rate: 9,0 l min-1dm-2 at 0,15 bar; Axial Extension: > = 20 %; Maximum Torsion: 0° (polygonal cross section).

Type SSS: Double interlocked profile additional inner scale (range size 63,5 mm to 152,4 mm).
Leakage Rate: 2,0 l min-1dm-2 at 0,2 bar; Axial Extension: > = 30 %; Maximum Torsion: 5° (per 300 mm of Length)

Type DSS: Double interlocked profile additional inner and outer scale (range size 76,1 mm to 139,7 mm).
Leakage Rate: 1,0 l min-1dm-2 at 0,2 bar; Axial Extension: > = 30 %; Maximum Torsion: 5° (per 300 mm of Length)
I am a constructor in ATEX. This job, in some sense, has fulfilled my childhood dreams. My job involves constructing, making calculations and making documentation. What I do is the beginning of the way which is the same for all our products.

We have a large range of pipe endings including all the possible standard connections in the exhaust systems as well as in case of air and water charge pipes.

**Accessories for pipes:**
- Exhaust decouplings: GTH, LINKEO, FLEXIBLE METAL HOSE, BELLOWS
- Connections: ID/OD, Joints with reduced diameter, Collar end Deutz type
- Clamps
- Mounting brackets
- NOx sensor carriers
- Flanges
- Insulations

Pipe beading according to DIN 71550 to rubber hose joints and mounting stopping for rubber hose for air and water charge pipes.

Surface treatments: black/silver wet paint heat resistance up to 900°C coated, electro-polishing (only material 1.4301), powder coating, blue/yellow/black chromate.

Notice: All pipes are internally cleaned. They are then plugged to ensure protection against contamination during transport to the Customer.

**Examples**
- Collar end type V-Deutz (bent)
- Collar end type V-Deutz (short)
- Big pipe adapter
- ID-ID Connector
- OD-OD Connector
- Collar end type MB (short)
- Cone with flare
- Collar end type SC
- Cone without flare
- Collar end SC (long)
- Quadrat - diameter adapter
- Collar end SC (long)
- Pipe adapter aluminised pipe
- Pipe beading end type DIN 71560 (long, air & water charge pipe)
- Pipe beading end type DIN 71550 (short, air & water charge pipe)
- Pipe beading end type DIN 71550 (long, air & water charge pipe)
- Cone with flare
- Collar end type SC
- Cone without flare
- Collar end SC (long)
- Quadrat - diameter adapter
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- Pipe beading end type DIN 71550 (long, air & water charge pipe)
Exhaust pipe for DPF system:
- Designed for agricultural vehicles
- Collar end type Deutz
- Exhaust decoupling: Bellows with inside linear and outer braid
- Material: Acid resistant steel pipe 1.4301 (AISI 304)
- Diameter: 76,1 mm x 2,00 mm
- CLR: 99,1
- Insulation: glassneedlemat 10 mm (up to 550 °C)
- Covered with stainless steel foil 1.4828 (AISI 309)
- Test: Assuming that ambient temperature is 20°C and medium is about 550°C with air flow 1 m/s temperature of the outer surface is 130°C

Exhaust pipe for SCR system:
- Designed for off-road machines
- Collar end type Deutz
- Exhaust decoupling: LINKEO (Axial Displacement: +/- 14,3mm Radial Displacement: +/- 26,mm)
- Material: Acid resistant steel pipe 1.4301 (AISI 304)
- Diameter: 70,0 mm x 2,00 mm
- CLR: 100,0
- Insulation: glassneedlemat 10 mm (up to 550 °C)
- Covered with stainless steel foil 1.4828 (AISI 309)
- Test: Assuming that ambient temperature is 20°C and medium is about 550°C with air flow 1 m/s temperature of the outer surface is 130°C

Insulation exhaust pipe:
- Designed for off-road machines
- Flange – 10 mm
- Exhaust decoupling: Bellows with inside linear and outer braid
- Material: Aluminised pipe: DX54 + 120AS
- Diameter: 50,0 mm x 2,00 mm
- CLR: 75
- Insulation: glassneedlemat 10 mm (up to 550°C)
- Covered with stainless steel foil 1.4828 (AISI 309)
- Test: Assuming that ambient temperature is 20°C and medium is about 550°C with air flow 1 m/s temperature of the outer surface is 130°C
QUALITY CONTROL
In order to provide the highest quality of the delivered products we have our own measurement room equipped with the measuring arm of the American company FARO-Platinum model. The laboratory is also equipped with other kinds of measurement and control devices essential while producing exhaust systems and not only.

Our company is consistently committed to achieving a zero defect performance. Our customers demand products with faultless quality, and we make sure that any improvements to our manufacturing processes are always to the advantage of product quality.

TRACEABILITY
Using the implemented ERP system our company can track the entire process from the purchase till the end product. Every end product has its own unique order number and the order number is stamped on the end product.

Continuous improvement is the essence of our Quality Management System. The whole company structure is involved in this process, our customers appreciate our commitment and trust our actions.

Having the advanced software technology for spacious comparison we are able to control with extreme precision the achieved products’ parameters with the model assumptions.
### Pipe Bending Design

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<th>Pipe diameter</th>
<th>Bending radius</th>
<th>Wall thickness</th>
<th>CLR / OD</th>
<th>CLR (MM)</th>
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We are exactly in the centre of Europe!