



# RAILWAY SECTOR

Presentation & Projects



# ABOUT US

**360 Zolutions** is a company specialized in customized surface treatment solutions at competitive prices, granting high quality and a first-class service.

With more than 15 years of experience dedicated to the analysis, design, manufacturing and implementation of installations worldwide, we are able to develop tailor-made solutions covering a wide range of products from the most simple spray booth up to the most challenging and complex surface treatment project.





# RAILWAY PROJECTS

We install complete painting lines and custom designed installations for railway industry and rolling stocks manufacturers.

Large dimensions spraybooths with robotisation systems that ensure the correct temperature and humidity levels and the traceability of the painting process. Our coating and blasting equipment meet the security specific requirements for treating rolling stock components (such as the experience of potentially explosive dust) as well as a safe working environment with ATEX environments.

We develop automated coating installations for full-scale repairs adapted to railroad wagons and locomotive dimensions. Equipment for manufacturers of rolling stock in surface-treatment (wagons, locomotives and “bogie”), as well as engineering and repair-shops (“depot”) for the maintenance of long-haul and metropolitan lines in full-scale repairs.





# RAILWAY SECTOR IN NUMBERS

10+

Years of experience

40+

Projects in collaboration with our  
partners

7+

Countries



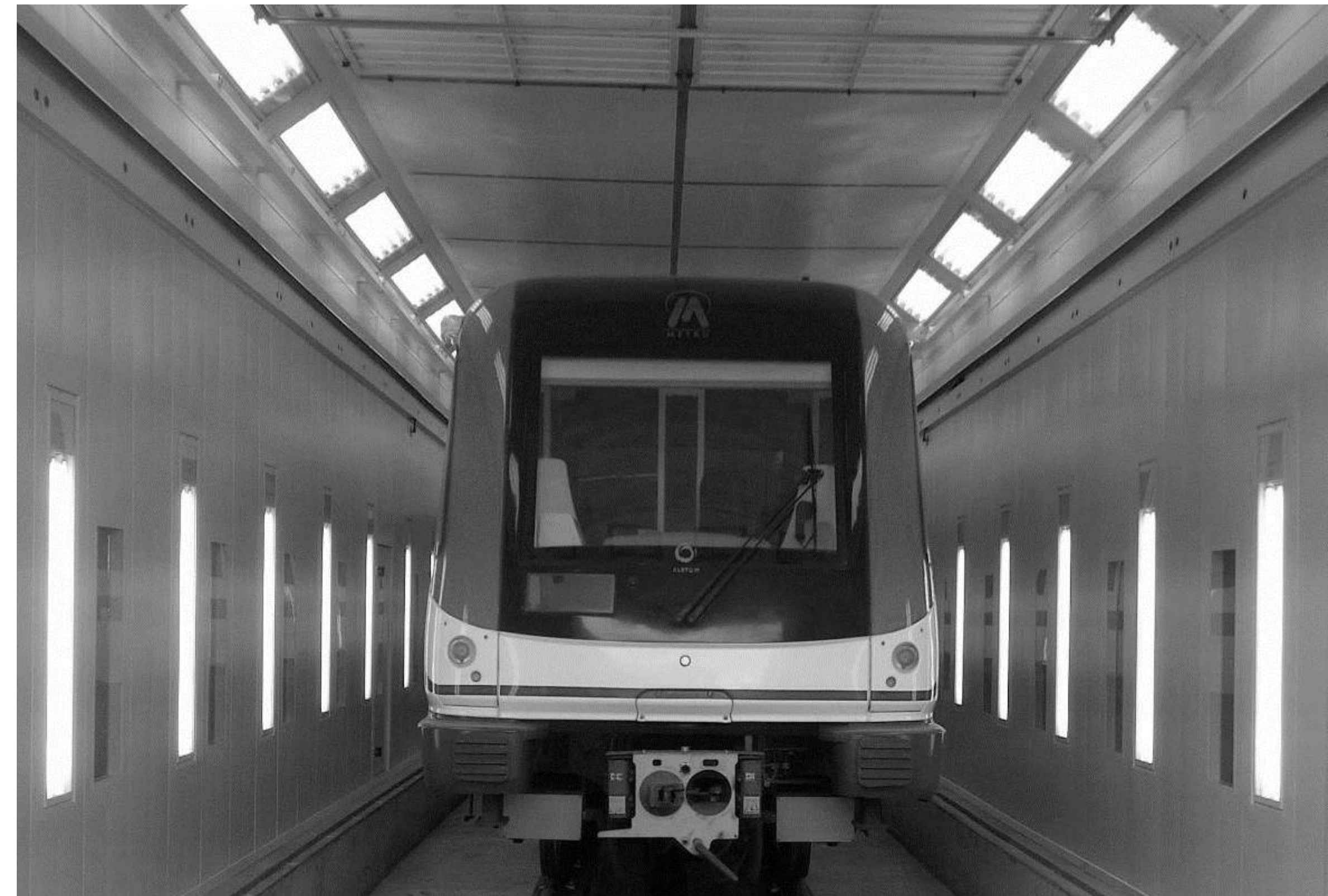


# **PAINTING SYSTEMS FOR THE RAILWAY INDUSTRY**



We install complete painting lines and customised equipment for the rail vehicle industry.

We develop automated coating systems for major repairs that are adapted to the dimensions of railway wagons, locomotives and chassis.





Customised painting and blasting equipment,  
ideal for large rail vehicles



360<sup>o</sup>  
Zolutions

Side and top ATEX LED lighting



Special ATEX lifts for chassis treatment



XYZ lifts to reach any area of the train





# CUSTOMISED BLASTING INSTALLATIONS



We offer manual and automated blasting installations, adapted to railway industry. Customised blasting systems and equipment designed to optimise surface treatment processes for rail vehicles and large components.





# DRYING SOLUTIONS ADAPTED TO RAILWAY INDUSTRY



We develop infrared drying solution, adapted to railway industry needs, such as chassis painting.





# MOBILE PAINTING SOLUTIONS

## skyTROTTER



The perfect equipment to perform quick repair jobs on large vehicles, thanks to the skyTROTTER mobile booth. Ideal for Spot repair jobs in the railway sector. Suitable for small damages on locomotives and heavy vehicles.

The skyTROTTER EVO version is a very flexible equipment which has been updated and adapted to our customers' suggestions and needs.

*Painting solution that makes easy industrial refinishing*





## OPTIMISED SOLUTIONS

The skyTROTTER is ideal for repairing damages in the lower and middle sections of trains, trams, light railways, cable cars, locomotives and heavy vehicles.

- Maximum flexibility with 3-axis movement
- Battery powered horizontal movement with rubber wheels and fully functional direction
- It reaches 3,8 meters in height when fully elevated and can move up to 40 meters away from the power socket
- Built in 4 Stages filtration system with activated carbon
- Fully operated from inside the booth with a user-friendly control panel



**360**  
Zolutions



## AUTONOMOUS VEHICLE

It is a 100% electric vehicle, battery-powered that is controlled from the booth and ensures full autonomy.

## QUICK REPAIR

It will improve the painting process of your repairs by reducing operating times and costs.

## XYZ-MOVEMENT

The skyTROTTER can reach any point on the vehicle thanks to its cabin with three-axis movement and approach system.

## SUSTAINABLE & CLEAN

Equipped with filters located inside the booth cleaning the environment from VOCs generated during the painting process.





# TECHNICAL DETAILS\*



Dimension	2.400 x 1.210 x 2.400 mm
Weight	2,300 Kg
Airflow	6.000 m3 /h
Air Speed	0,3 - 0,6 m/s avg.
Displacement Speed	2,5 km/h (2 speeds)
Battery for Displacement	48v with automatic Smart Charger
Lighting	950 lux
Electric Traction	220 Nm par
Voltage	380 V / 50 Hz
Noise Levels	74 +/- 3dB(A)
Power cable	40m of automatic triphasic retractable cable
Max Elevation	2.400mm on the booth floor 3.800mm on the working area
Elevation Systems	Double-Cylinder Electro Hydraulic scissor Lift
Elevation Average time	30 s.
Max load	200 kg.
Max operators	1
Filtration system	4 stages with activated carbon
Safety systems	Rear view camera and screen Anti-entrapment device platform Yellow Strobe Light Rear bumper Control panel inside Booth Proximity sensor for the approaching phase

\*Indicative, non binding information



## REFERENCES IN THE SECTOR

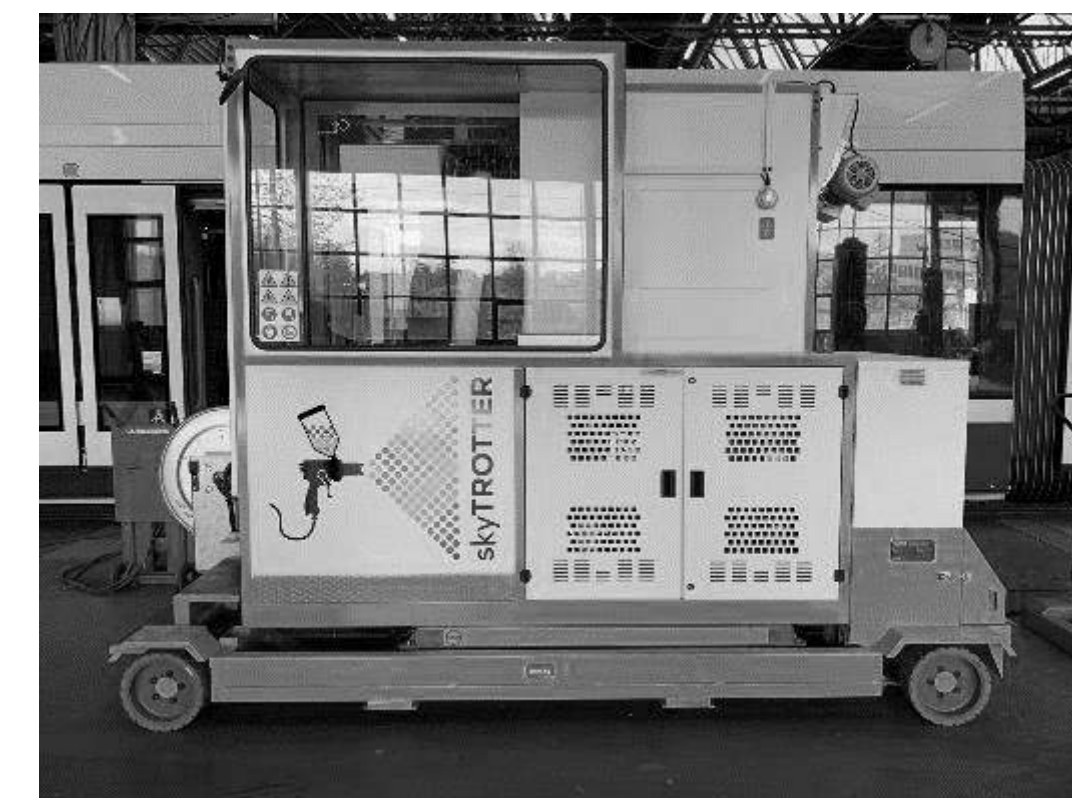
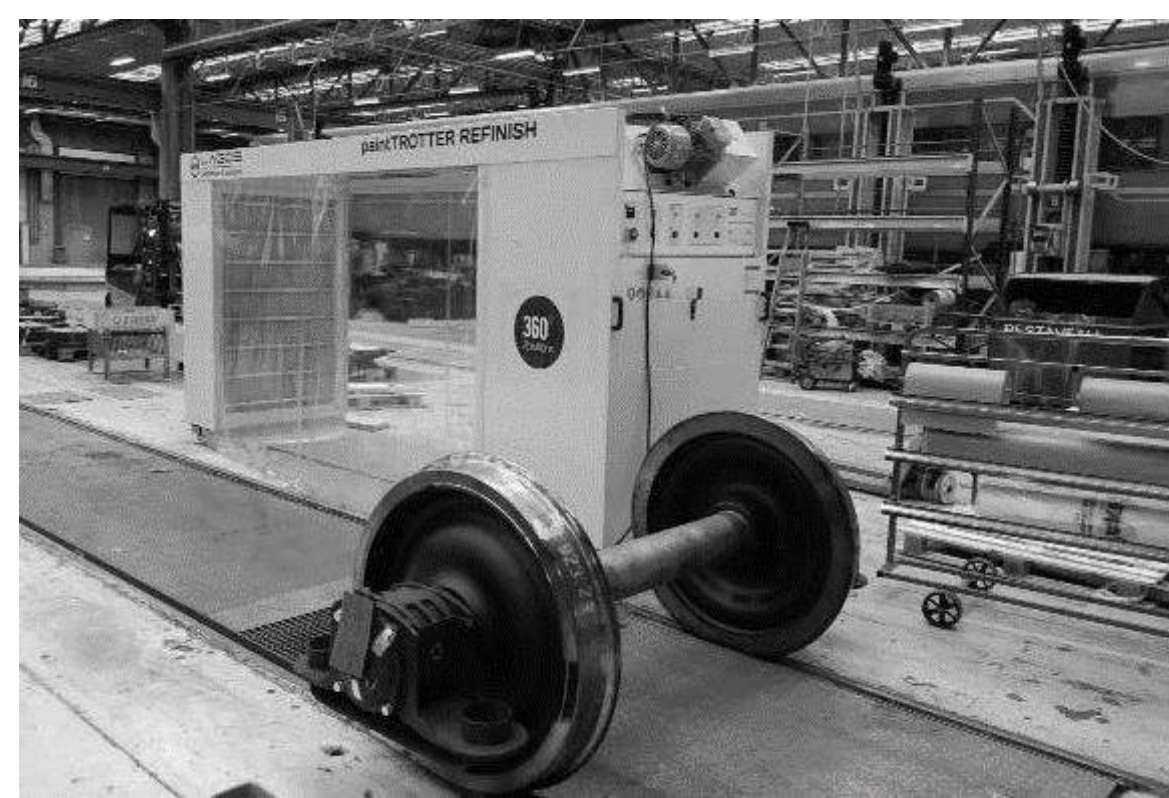
Our team has a lot of experience with large public and private companies of railway industries. Here some of our references, a wide range of projects in collaboration with our partners.

TALGO  
SBB

SNCF  
NORWAY RAILWAY

RENFE  
C.A.F.

ALSTOM  
TPG





# QUALITY GUARANTEED



Our plants are equipped in compliance with ISO 9001 for design, manufacture and installation: In addition, our installations generally comply with the following regulations:

- Directive 2014/35/UE: Low Voltage Directive.
- Directive 2014/30/UE: Electromagnetic Compatibility .
- Directive 2006/42/CE: Machinery Directive.
- Directive 2011/65/EU RoHS II (Restriction of the use of certain hazardous substances in electrical and electronic equipment).



Through the implementation of the following harmonised technical standards:

- EN 13355: Coating equipment. Combined paint booths. Safety requirements.
- EN 12100: Safety of machinery. General principles for design.
- EN 61000-6-4: Electromagnetic compatibility (CEM). Part 6: Generic standards. Emission requirements for industrial environments.
- EN 61000-6-1: Electromagnetic compatibility (CEM). Part 6: Generic standards. Immunity for residential, commercial and small business environments.
- EN 60204-11: Safety of machinery. Electrical equipment of machines.



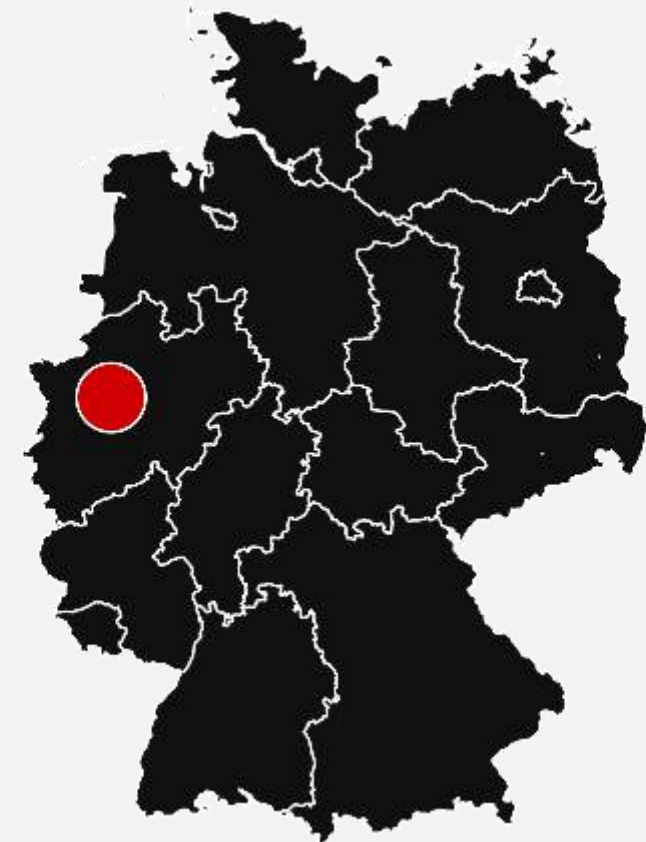




### 360 Zolutions Scandinavia AB

Svetsvägen 3, 28342  
Osby, Sweden

+46 739881142  
info@360zolutions.com



### 360 Zolutions GmbH

Fritz-Vomfelde-Str. 34  
40547 Düsseldorf, Germany

+49 211 5469068  
info@360zolutions.com



### 360 Zolutions Europe S.L

Parque Empresarial de Alvedro, Calle H, Nave  
24  
15180 A Coruña, Spain

+34 881 128 980  
info@360zolutions.com



**WEBSITE**

[360zolutions.com](https://360zolutions.com)

