

PRODUCT CATALOG

VEHICLESCANNER 3.0

VERSION SMALL / CAR / VAN

APRIL 2020



Productdescription

The vehicle scanner developed by us is used in the reception and handover process of vehicles such as in the garage dialogue intake / car rental / car fleet etc. Through a patented concept, vehicles can be audited and documented by „driving through the scanner“ within smallest space and minimal capital expenditure. The system has a modular structure and can „scan“ all sides of a vehicle including the underside in high resolution. For all other acquisition needs we offer additional solutions such as mobile smart cameras, thermal cameras,

Endoscope cameras, process cameras, info tablets, cloud services and much more. Through the uniform structure and the same process landscape of all scanner types, the images are compared and evaluated independently of used scanner site.

Variants:

The vehicle scanner is offered in three variants for vehicles of different sizes: Small for up to 1.6m scan height without roof camera, Car for up to 2m scan height incl. roof and Van with 3,5m vehicle height incl. roof. You will find the exact space requirements at the end of the document.

The Basic and Pro version differ mainly in the sensor type of the cameras.

Only the Pro version freezes the vehicle movement completely and offers the best possible picture quality. On the other hand, the Basic - Version allows the construction of very cost-effective systems with high quality images, which depend on the drive-through speed of the vehicle. With up to 5km/h vehicle speed there are hardly any losses of quality.

Function:

The vehicle scanner has a state-of-the-art laser position detection system. This is freely programmable according to the individual installation requirements and can detect vehicles from a distance of 25m in front or end of the scan system. Due to the movable cameras, in connection with the high-precision position detection, it generates a wide range of image perspectives. The system controls can also be adapted to almost any target location of the scanner system. The intelligent lighting system provides the optimal light conditions for the image acquisition of each vehicle individually, so that a high-quality image acquisition process is dynamically supported. The recording process runs completely automatically when a vehicle passes through the scanner. The integrated status LED displays support the entrance procedure and provide information about the current status of the system.

Configuration:

You can configure your digital scanner system individually.

We are always available for consultation.

You should know the following points in advance:

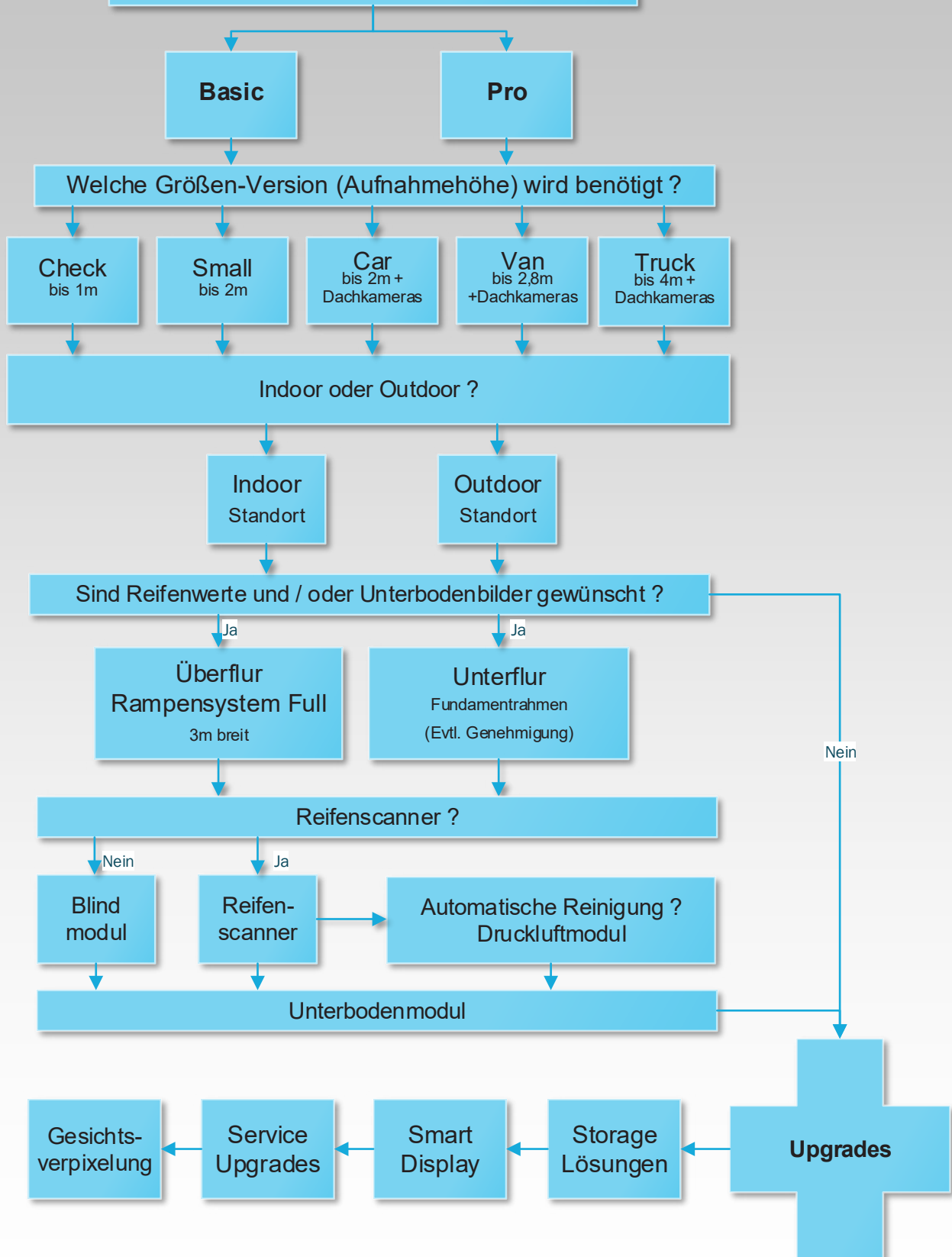
1. which maximum size of vehicles should be covered?
2. should the system be installed indoor or outdoor?
3. do you prefer an installation frame within the ground for a tire scanner and / or underbody module or a ramp system?
4. how many vehicles will pass through the system on average each day?
5. the size of the storage solution (how long shall the pictures stay available)?
6. do you prefer a local storage or cloud-based storage solution?
7. which additional add-ons do you need?

If you are planning an outdoor system, you can order the small version as an outdoor version.

For the car- or van-version you will need the outdoor upgrade for static protection and weather protection.

All storage solutions are in 19“-rack design for a professional installation in the server room or an industrial 19“-cabinet. If you wish a desktop version, we can also offer you this. We also recommend a UPS solution for storage which can be requested separately from us.

Fahrzeugscanner 3.0



The Vehiclescanner 3.0

Since 2013, TwoTronic GmbH has been working on the digitalization of vehicles. Already today many car dealerships and leasing companies work with our systems and they can hardly imagine life without them. Our systems offer you and your employees not only more comfort and safety, but also many other aspects, that offer an unparalleled added value.

Your advantage - the added value:

- Time savings for employees and customers
- Risk minimization through documented transfer of risk
- Transparency and sustainability of vehicle condition
- Unique selling proposition, competitive advantages
- Standardized images supplement the digital vehicle file
- Completely new customer experience
- Ideal for fleet managers
- Regular checklists for integration into leasing, service and insurance contracts

System properties:

- Automatic License Plate Recognition
- Minimum space requirements
- Seamless integration (e.g. gate entrance, passage area, etc.)
- Multiple use of the cameras for different viewing angles
- High-performance LED illumination for maximum image quality
- Special coating of the surfaces to avoid mirroring & reflections
- Outstanding camera and lens quality
- optional person face anonymization for data protection compliant operation
- optional tire scanner for the detection of tire condition and chassis problems
- freely programmable image positions and angles

Our systems are modular so that we can offer you the perfect solution for your processes. You can also benefit from our extensions, such as the underbody scanner, info display or the fully integrated tire scanner from Beissbarth. Further new and innovative enhancements await you in the future.

Start with us into a new service of the future!

	Basic	Pro
Sensor type	Sony CMOS rolling shutter	Sony CMOS global shutter
Images Aspect ratio	2 : 3 upright	4 : 3 panorama
Image sensor readout method	Rolling shutter - sequential (line by line)	Global - simultaneous (whole sensor surface simultaneously)
Direction of travel	1 way (one pre-defined direction)	2 way (Bi-directional)
Automatic license plate recognition	1 way	2 way
Post-processing time / vehicle (Car version)	12 seconds	7 seconds
Images without geometric distortions (see technical info)	No	yes
Maximum passage vehicle speed	Up to 5 km/h	Up to 8 km/h

Scanner-Panels

Small Basic

FS3-SKS-Basic

Digital indoor documentation system for passenger cars up to 1.6m height as a basic system. The image acquisition panels with their re-positionable, high-resolution cameras and system lighting form the basic building block of the system. It optically records the exterior condition of the car, without underbody and roof, in one direction of travel in an automated process incl. license plate recognition & position determination in the scanner.

Included in the system:

- Integrated Industrial Server
- High-resolution rolling shutter cameras¹
- Sensor technology for vehicle detection
- LED signaling on both sides
- Only one direction of travel possible
- Documentation of vehicles up to a height of 1.6m
- System LED lighting

Scope of delivery:

- 1x FS3-Small-Basic scanner panel-Master
- 1x FS3-Small-Basic scanner panel Slave
- 1x installation kit standard

¹ Images can have a geometric deviation in the X-axis depending on the speed.

Small Pro

FS3-SKS-Pro

Digital indoor documentation system for passenger cars up to 1.6m height as a basic system. The image acquisition panels with their re-positionable, high-resolution cameras and system lighting form the basic building block of the system. It optically records the exterior condition of the car, without underbody and roof, in both directions of travel in an automated process incl. license plate recognition & position determination in the scanner.

Included in the system:

- Integrated Industrial Server
- High-resolution rolling shutter cameras²
- Sensor technology for vehicle detection
- LED signaling on both sides
- Bi-directional travel of vehicle through the scanner possible
- Documentation of vehicles up to a height of 1.6m
- System LED lighting

Scope of delivery:

- 1x FS3-Small-Basic scanner panel-Master
- 1x FS3-Small-Basic scanner panel-Slave
- 1x installation kit standard

² Images are geometrically correct regardless of vehicle scan speed.



Scanner-Panels

Car Basic

FS3-CKS-Basic

Digital indoor documentation system for passenger cars up to 2.0m height as a basic system. The image acquisition panels with their re-positionable, high-resolution cameras and system lighting form the basic building block of the system. It optically records the exterior condition of the car, without underbody and roof, in one direction of travel in an automated process incl. license plate recognition & position determination in the scanner.

Included in the system:

- Integrated Industrial Server
- High-resolution rolling shutter cameras¹
- Sensor technology for vehicle detection
- LED signaling on both sides
- Only one direction of travel possible
- Documentation of vehicles up to a height of 1.6m
- System LED lighting

Scope of delivery:

- 1x FS3-Car-Basic scanner panel-Master
- 1x FS3-Car-Basic scanner panel-Slave
- 1x Installation kit standard

¹ Images can have a geometric deviation in the X-axis depending on the speed.

Car Pro

FS3-CKS-Pro

Digital indoor documentation system for passenger cars up to 2.0m height as a basic system. The image acquisition panels with their re-positionable, high-resolution cameras and system lighting form the basic building block of the system. It optically records the exterior condition of the car, without underbody and roof, in both directions of travel in an automated process incl. license plate recognition & position determination in the scanner.

Included in the system:

- Integrated Industrial Server
- High-resolution global shutter cameras²
- Sensor technology for vehicle detection
- LED signaling on both sides
- Bi-directional travel of vehicle through the scanner possible
- Documentation of vehicles up to a height of 1.6m
- System LED lighting

Scope of delivery:

- 1x FS3-Car-Basic scanner panel-Master
- 1x FS3-Car-Basic scanner panel-Slave
- 1x Installation kit standard

¹ Images are geometrically correct regardless of vehicle scan speed.



FS3-Ins-GM

Installation flat rate for scanner panels 2.500 € plus travel expenses

The technical requirements of our installation document are assumed

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Scanner-Panels



Van Basic Outdoor

FS3-VOKS-Basic

Digital indoor documentation system for Vehicles up to 2.8m height as a basic system. The image acquisition panels with their re-positionable, high-resolution cameras and system lighting form the basic building block of the system. It optically records the exterior condition of the car, without underbody and roof, in one direction of travel in an automated process incl. license plate recognition & position determination in the scanner.

Included in the system:

- Integrated Industrial Server
- High-resolution rolling shutter cameras¹
- Sensor technology for vehicle detection
- LED signaling on both sides
- Only one direction of travel possible
- Documentation of vehicles up to a height of 1.6m
- System LED lighting

Scope of delivery:

- 1x FS3-Van-Basic scanner panel-Master
- 1x FS3-Van-Basic scanner panel-Slave
- 1x installation kit standard

¹ Images can have a geometric deviation in the X-axis depending on the speed.



Van Pro Outdoor

FS3-VOKS-Pro

Digital indoor documentation system for Vehicles up to 2.8m height as a basic system. The image acquisition panels with their re-positionable, high-resolution cameras and system lighting form the basic building block of the system. It optically records the exterior condition of the car, without underbody and roof, in both directions of travel in an automated process incl. license plate recognition & position determination in the scanner.

Included in the system:

- Integrated Industrial Server
- High-resolution global shutter cameras²
- Sensor technology for vehicle detection
- LED signaling on both sides
- Bi-directional travel of vehicle through the scanner possible
- Documentation of vehicles up to a height of 1.6m
- System LED lighting

Scope of delivery:

- 1x FS3-Car-Basic scanner panel-Master
- 1x FS3-Car-Basic scanner panel-Slave
- 1x Installation kit standard

² Images are geometrically correct regardless of vehicle scan speed.



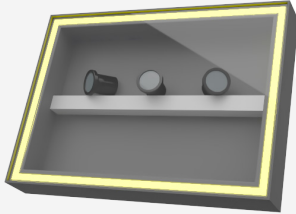
FS3-Ins-GM

Installation flat rate for scanner panels 2.500 € plus travel expenses

The technical requirements of our installation document are assumed

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Extensions



Underbody Pro

FS3-UM-Pro

The underbody module is the ideal extension for all versions of the vehicle scanner. With the underbody scanner you can scan without additional time and effort high-resolution pictures of the vehicle underside create. The system has Global Shutter cameras² and an adaptive high-performance LED lighting system.

To complement Basic and Pro systems

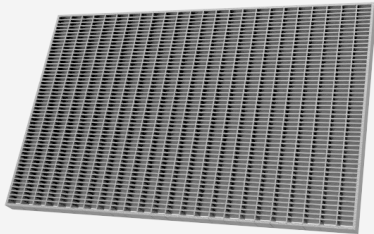
Scope of delivery:

1x Underbody module-Pro

1x cable set

1x mounting material

² Images are geometrically correct regardless of the speed.



Dummy module tire scanner

FS3-BM

The dummy module is designed for the case that the foundation frame or a Ramp system is ordered without tire scanner.

An axle load of 4t must not be exceeded.

Blind modules are available on request for higher loads.

Scope of delivery:

2x dummy module up to withstand a load of up to 4t



Foundation Frame

FS3-FR

Frame for embedding in concrete with filling pieces

It is advisable that the frame is installed by the customer.

However, we can also provide an offer for the installation.

DRUCKLUFT
MODUL

Compressed Air Module

FS3-DLM

The compressed air module is used for independent cleaning of the underbody module and the tire scanner module.

Special nozzles remove leaves, snow, water and other

impurities. To supplement the tire scanner and underbody module.

Scope of delivery:

- Whisper Compressor
- Switch cabinet in scanner module
- Compressed air kit

The upgrade removes coarse dirt, but it is still recommended that at least once per week, clean the windscreen of the underbody module and the scanner surfaces of the tire scanner.



Erweiterungen

Tire Scanner Easy Tread UF

by Beissbarth

FS3-RS-UF

Tire tread measurement with robust HD camera technology.

Scope of delivery:

- 2 measuring units
- Glass pane puller / cleaning cloth
- Installation material

Maximum axle load of 4t must not be exceeded !

Only vehicles with 4 tyres / no double tyres



Ramp system Small

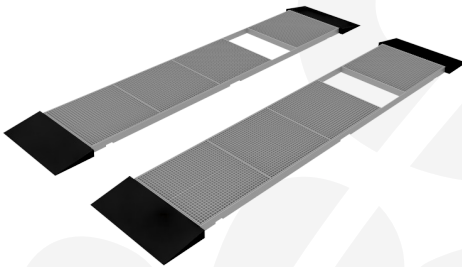
FS3-RAS

Upgrade module for all versions of the vehicle scanner for Above-ground installation

- Aluminum lightweight construction ramp system
- installation height 9cm
- drivable grids with max. 5t load capacity
- lane width of 80 cm each

Scope of delivery:

1x ramp system Small



Ramp system Full

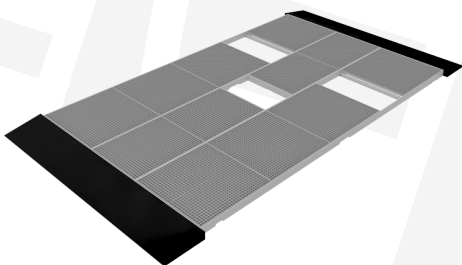
FS3-RAF

Upgrade module for all versions of the vehicle scanner for Above-ground installation

- Aluminium lightweight construction Ramp system
- installation height 9cm
- trafficable light grids with max. 5t load capacity
- Ramp width of 300 cm

Scope of delivery:

1x ramp system Full



Upgrades

OUTDOOR UPGRADE SMALL

Outdoor Upgrade Small

Upgrade for Small Systems

FS3-SOU

Weather protection and static upgrade for car and van systems as upgrade

Scope of delivery:

- Outdoor Upgrade Kit
- Installation material

OUTDOOR UPGRADE CAR

Outdoor Upgrade Car

Upgrade for Car Systems

FS3-COU

Weather protection and static upgrade for car and van systems as upgrade

Scope of delivery:

- Outdoor Upgrade Kit
- Traverse system with cable duct
- Installation material



Erweiterungen

SMART DISPLAY

Smartdisplay Indoor

for the display of the tire values and other info's
FS3-SDI

Scope of delivery:

- 49" industrial display
- Dust and humidity protected
- Wall bracket / pedestal
- Signal connection to the scanner
- Installation material



PERSONS FACE ANONY- MIZATION

Persons Face anonymization Upgrade

FS3-GV-Upgrade

Upgrade module for all versions of the vehicle scanner

- AI-based, pixel-wise mosaicing / anonymization of person faces
- 98% detection
- additional high-performance GPU for the additional computational needs
- with one year of software updates ¹

Scope of delivery:
1x FS3-GV-Kit

¹ after the first year no more updates will be made available

PERSONS FACE ANONY- MIZATION SERVICE

Persons Face anonymization yearly service

FS3-GV-Updateservice

Update service for FS3-GV-upgrade Kit persons face anonymization,
annual fee

- 1-year update service for face anonymization
- incl. update installation

Scope of delivery:
1x FS3-GV-US

System Storage



Storage Version Premium 1

FS3-Storage-PV1

The Storage Version Pro 1 is for small and medium-sized businesses, the expansion of the memory is only possible within a limited scope.

- 19" memory solution
- 8 x 3.5" bay for hard disks
- redundant electricity supply
- 4 x 6TB 24/7 HDD
- 1 Hot Spare HDD (configured)
- Usable memory approx. 12TB
- Extension by 4 additional HDD's possible
- 10G Lan Uplink
- Virtualization option

Scope of delivery:

- 1x Storage Version 1
- 1x pre-installation and implementation
- 1x mounting material



Storage Version Premium 2

FS3-Storage-PV2

The Storage Version Pro 2 is designed for large car dealerships / leasing companies and customers with a high volume of scans.

- 19" storage solution
- 12 x 3.5" bay for hard disks
- redundant electricity supply
- 6 x 6TB 24/7 HDD
- 1 Hot Spare HDD (configured)
- Usable memory approx. 24TB
- Extension by 6 additional HDD's possible
- 10G Lan Uplink
- Virtualization option

Scope of delivery:

- 1x Storage Version 2
- 1x pre-installation and implementation
- 1x mounting material



Storage Version Premium 3

FS3-Storage-PV3

The Storage Version Pro 3 is for customers who want a maximum storage solution.

- 19" storage solution
- 16 x 3.5" bay for hard disks
- redundant electricity supply
- 12 x 6TB 24/7 HDD
- 2 Hot Spare HDD (configured)
- Usable memory approx. 54TB
- Extension by 4 additional HDD's possible
- 10G Lan Uplink
- Virtualization option

Scope of delivery:

- 1x Storage Version 2
- 1x pre-installation and implementation
- 1x mounting material

If a redundant storage solution is required, a separate system can be ordered to create backups automatically.

System Storage

Storage Version Light 1

FS3-Storage-LV1

The Storage Version Light 1 is the smallest storage solution.

- 19" storage solution
- 4 x 3.5" bay for hard disks
- 3 x 4TB 24/7 HDD
- Usable memory approx. 8TB
- Extension by 1 additional HDD possible
- 10G Lan Uplink

Scope of delivery:

- 1x Storage Version Light 1
- 1x pre-installation and implementation
- 1x mounting material



Storage Version Light 2

FS3-Storage-LV2

The Storage Version Light 2 still has reserves for SMEs to Extension.

- 19" storage solution
- 8 x 3.5" bay for hard disks
- 4 x 6TB 24/7 HDD
- Usable memory approx. 18TB
- Extension by 4 additional HDD's possible
- 10G Lan Uplink

Scope of delivery:

- 1x Storage Version Light 2
- 1x pre-installation and implementation
- 1x mounting material



Storage Version Light 3

FS3-Storage-LV3

The Storage Version 3 has the option of virtualization

- 19" storage solution
- 8 x 3.5" bay for hard disks
- 4 x 6TB 24/7 HDD
- Usable memory approx. 18TB
- Extension by 4 additional HDD's possible
- 10G Lan Uplink
- Virtualization option

Scope of delivery:

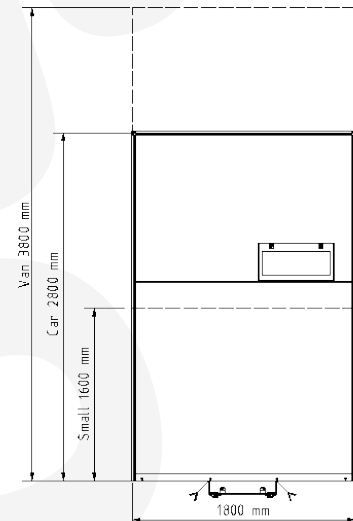
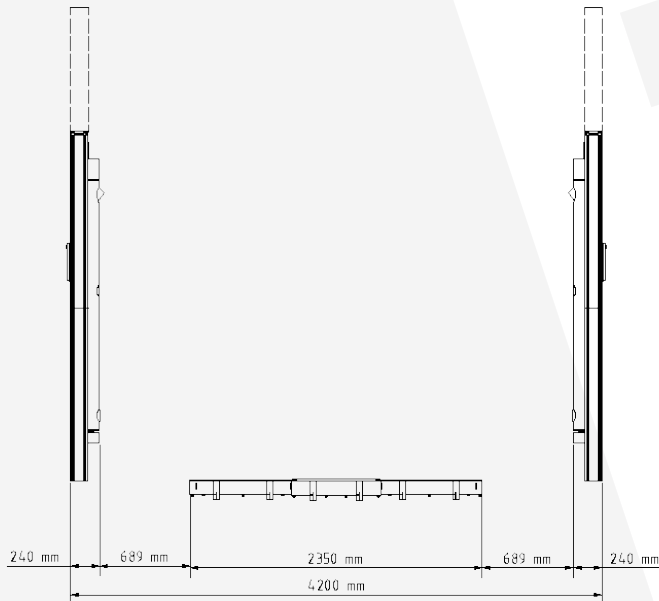
- 1x Storage Version Light 3
- 1x pre-installation and implementation
- 1x mounting material



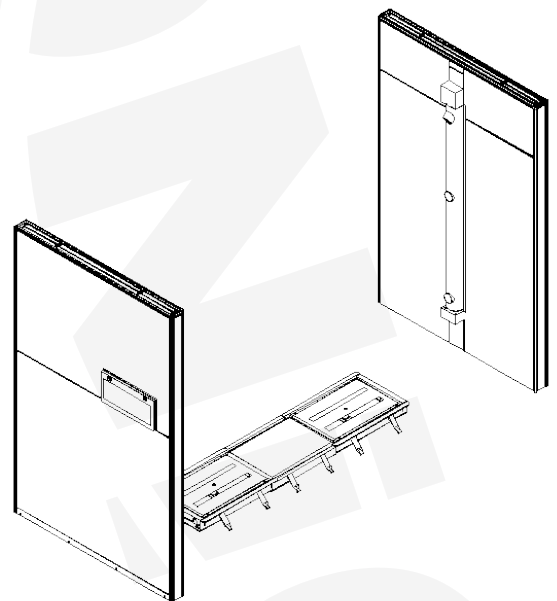
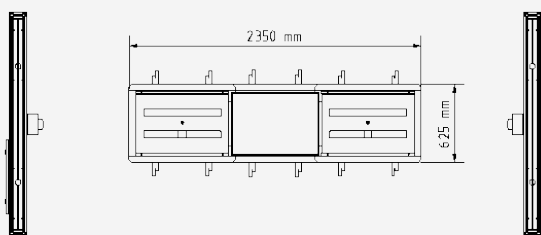
If a redundant storage solution is required, a separate system can be ordered to create backups automatically.

Space Requirements

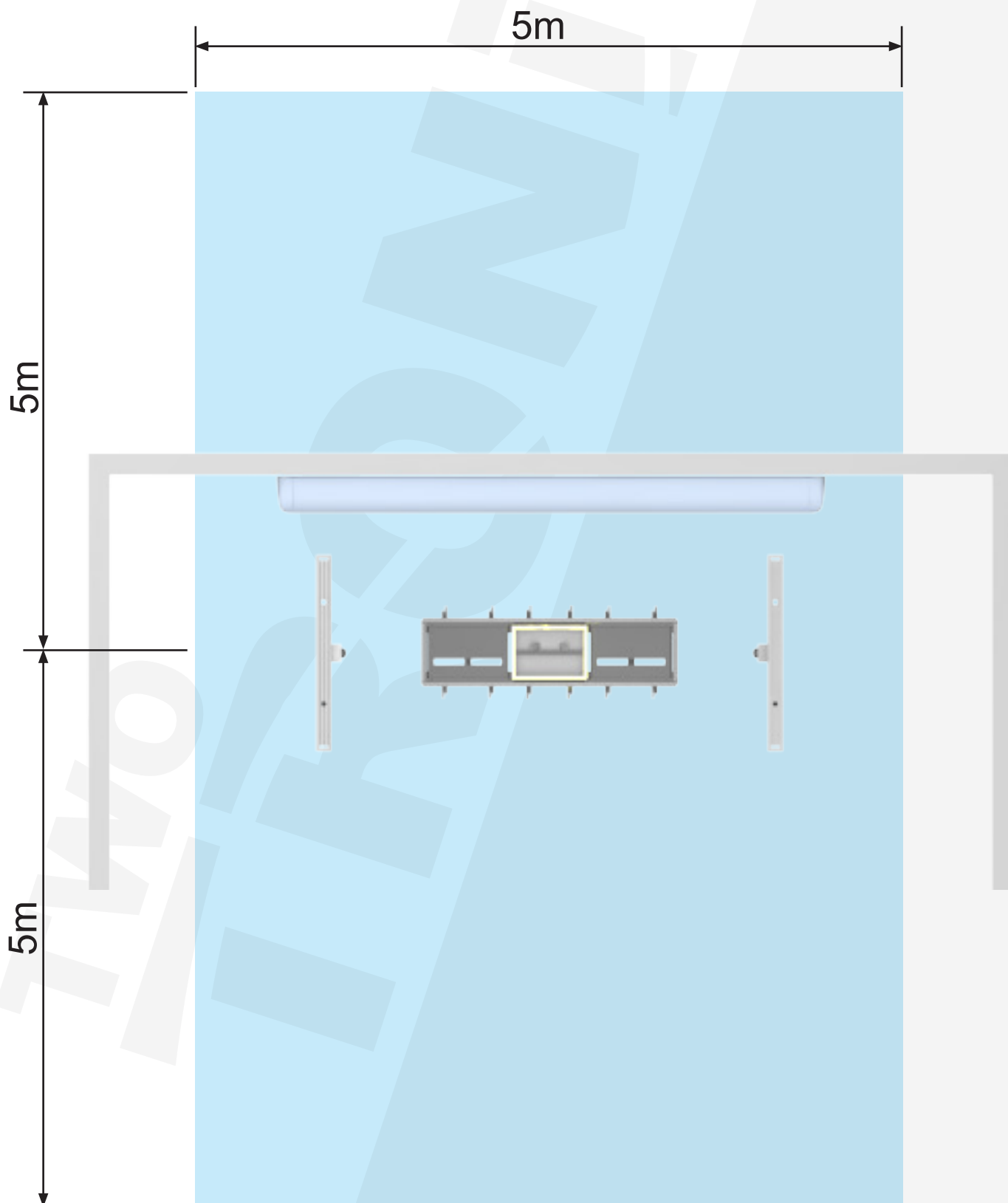
Frontansicht



Draufsicht

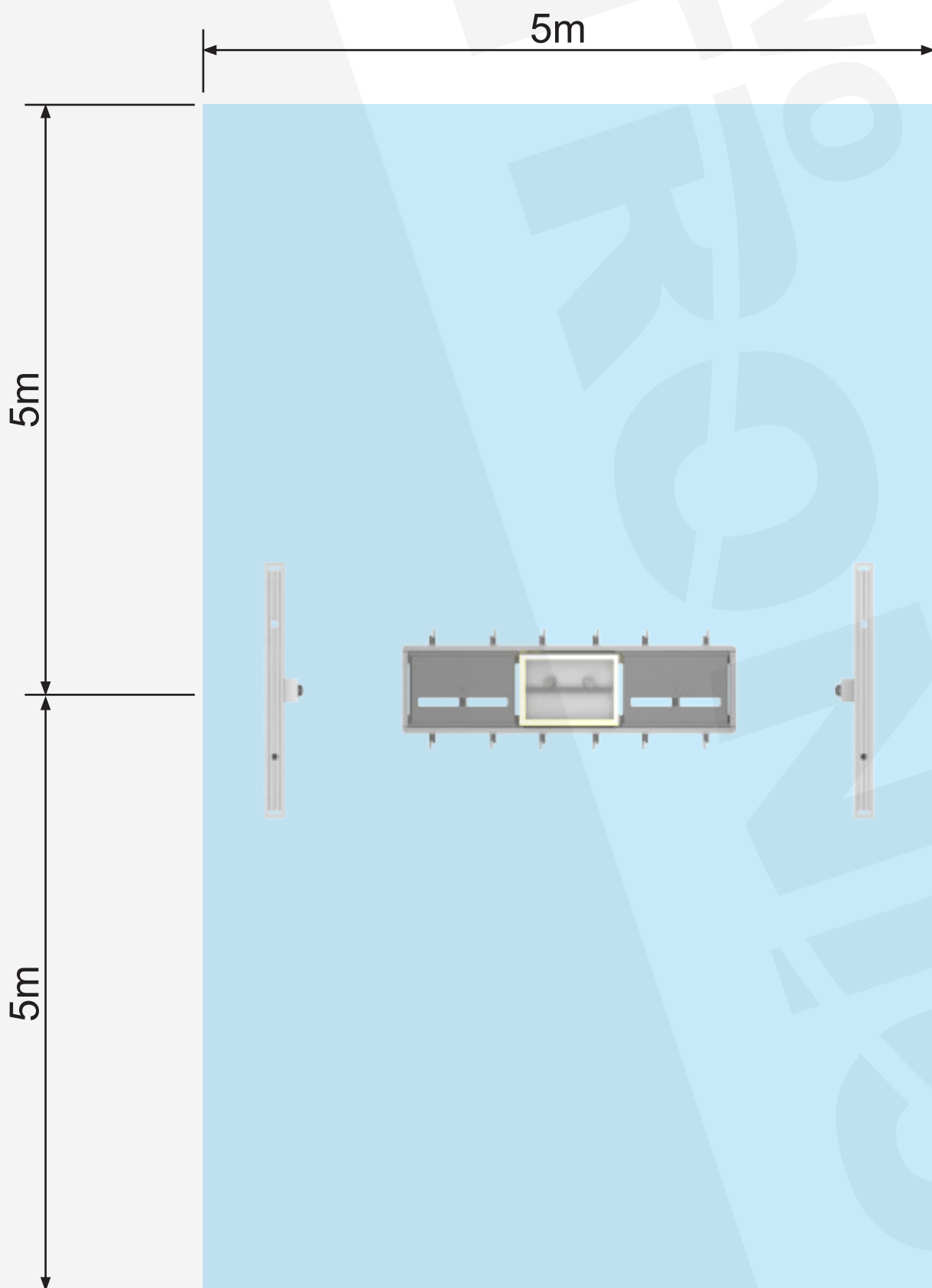


Space requirement roller door



All solutions can be placed directly in front of or behind a roller door. The space required is only necessary for vehicle registration and behind the panel for maintenance purposes.

Space required area



All solutions can be placed directly in front of or behind a roller door. The space required is only necessary for vehicle registration and behind the panel for maintenance purposes.

Notes

A solid blue horizontal line that starts at the left edge of the page and tapers off to the right, ending under the word 'Notes'.A large, light gray triangular shape that originates from the top right corner and extends diagonally towards the bottom left, covering the right half of the page.