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CLAW 300

Mobile
Hostile Vehicle Barrier

MANUAL

Revision 0 / 22.07.2020

VOLKMANN & ROSSBACH GmbH & Co. KG
experience · competence · flexibility · innovation

Content

Appendices:

1 General Information

1.1 Preliminary Remarks

The mobile work zone protection barrier CLAW 300 is primarily consists of the following elements:

- Base Plate
- Frame
- Guide Bolts
- Locking Clip
- Screwing Material

In order to achieve the utmost safety and the intended performance while using the product, the assembly and installation requirements of this manual have to be followed closely. Any deviation from these requirements must be authorized by the manufacturer.

All information, specifications and illustrations in this manual are based on available information at the time of publication. Specifications and other information may be subject to change at any time.

1.2 Manufacturer

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Hohe Strasse 9-17
56410 Montabaur/Germany
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Fax: +49 2602 135-270

1.3 Intended Use

The system is a mobile hostile vehicle barrier designed to stop vehicles from entering protected perimeters and vulnerable areas.

1.4 Storage and Transport

The system is to be stored and handled in an appropriately careful manner and to be protected from dirt, corrosion and damage.

When shipping, the cargo must be securely fastened so that it does not shift.

All personnel must be equipped with appropriate personal protection gear when loading and unloading.

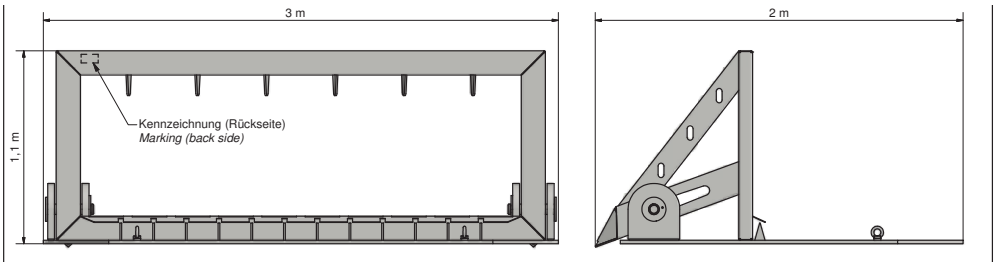
For easy and secure handling, the pre-mounted elements should be moved by competent personnel using a crane or other suitable lifting devices. All auxiliaries (chains, belts) and tools must be capable to bear the occurring loads without damaging the components.

The assembled system must not be stored upside-down or tilted in order to avoid damages.

All relevant national security regulations must be obeyed.

Technical Data

Length	2.1 m
Width	3.0 m
Height	1.1 m
Total Weight	1.3 tons
Material	Steel, hot-dip galvanized



2 Crash Tests

The product has been crash tested acc. to ISO IWA 14-1:2013 in the following configurations:

Test No.	*Date*	*Vehicle Class*	*Impact Speed*	*Impact Angel*	*Impact Energy*	*Vehicle Penetration*
IWA 14-1:029/19	28/03/2019	M1 (Car - 1,500 kg)	64 km/h	90°	237 kJ	4.7 m
IWA 14-1:046/20	28/05/2020	M1 (Car - 1,500 kg)	80 km/h	90°	370 kJ	7.8 m
IWA 14-1:030/19	28/03/2019	N1 (Truck - 3,500 kg)	64 km/h	90°	553 kJ	8.2 m
IWA 14-1:035/19*	09/09/2019	N3C (18t-truck - 7,200 kg)	32 km/h	90°	284 kJ	1.2 m

* tested with two elements = 6,0 m width

3 Assembly

The assembly of the system is to be carried out in general according to the drawings in Appendix 2. *The assembly instructions can be referred to in relation to the installation process.*

When setting and aligning the elements, any damage to the galvanized surfaces must be avoided. The used of hammers etc. is not permitted.

Small defects on the galvanized surface are to be *touched up aft*er careful preparation through the application of a suitable zinc dust coating according to EN ISO 1461.

3.1 Tools Required

- Crane or Forklift truck (lifting capacity >2 to)
- Ratchet with nut 24
- 4 pcs. Eyebolts (included)
- 4 pcs. Lifting belts (length 4 m) Measuring tools (tape, level, plumb line etc.

3.2 Fittings

For a perfect connection, all screws must sit perpendicular to the relevant components and must be tightened according to regulations. The screwing tools need to be adjusted sufficiently. As pre-mounted screwing may get loose during transport, all screwing torques must be checked after installation.

3.3 Assembly Steps

The assembly steps below are also pictured in the appendix.

- Put the Base Plate flat to the ground and screw the four Lifting Eyebolts into the threaded holes.
- Position the Catching Frame into the Hinge Brackets.
- Insert the two Hinge Bolts and secure them both loosely with a Clip.
- Lift the construction using Lifting Belts attached to the Eyebolts, so that the Hinge Clips can be fastened from the underside (Torque 70-140 Nm)

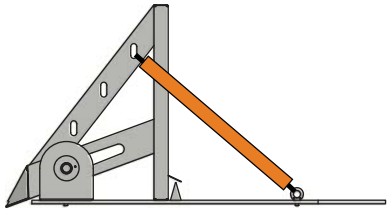
3.4 Controls

After assembly, it must made sure that the Frame is not blocked or jammed and that it can move smoothly in its hinge.

Surplus part or screws must not remain at the work site.

4 Handling

The device can be lifted and rolled around. Before lifting or otherwise moving the device, the frame must be completely pushed onto the base plate and firmly secured in this position with two tensioning belts. The lashing can be fixed at eye bolts screwed into the base plate and in the long holes at the sides of the frame.



Hoisting gear may be fixed at top bar of the frame or passed into the eye bolts.

5 Installation

5.1 General Remarks

The user must have the adequate training, the necessary knowledge and the sufficient equipment to identify and successfully avert the risks arising while using the product.

5.1.1 Traffic Safety

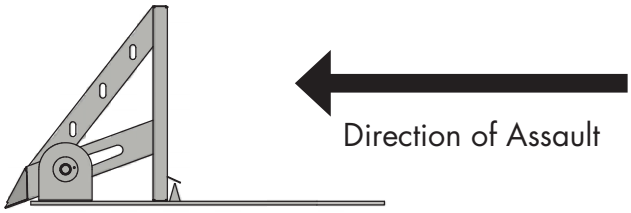
For the installation of the product, national road work site safety requirements must be followed.

5.2 Place of Installation

The system can only be installed on paved and even ground such as asphalt. The base plate must have full contract to the surface. The space before and behind the system must also be paved and even. Before beginning the installation, the work site must swept clean.

5.3 Positioning

The product is to be positioned square to the expected direction of assault and with its hinges away from oncoming vehicles:



Depending on the situation on site, more than one element can be placed.

5.4 Additional Attachments

Additional attachments may affect the performance of the system and therefore should not be installed.

6 Repair, Inspection and Maintenance

It is recommended to regularly carry out general visual inspections of the system with particular attention to the following:

It must be ensured that both hinges are free to move.

All threads must be in good condition and function properly.

Components, that show any obvious permanent (plastic) deformation whatsoever, must be replaced.

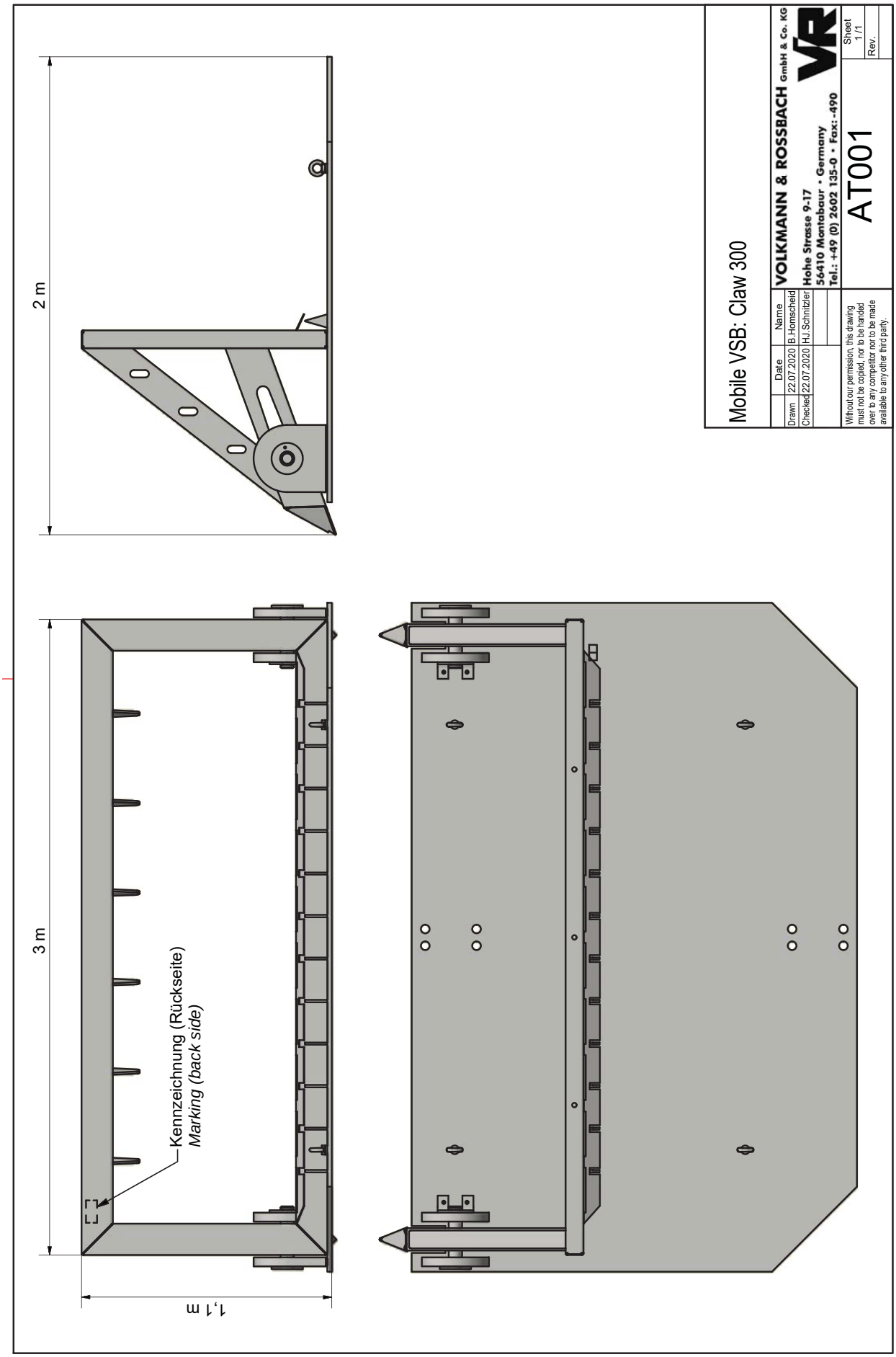
Damage to the zinc surface must be checked and, if necessary, can be treated with suitable zinc dust paint.

7 Toxic Substances / Recycling

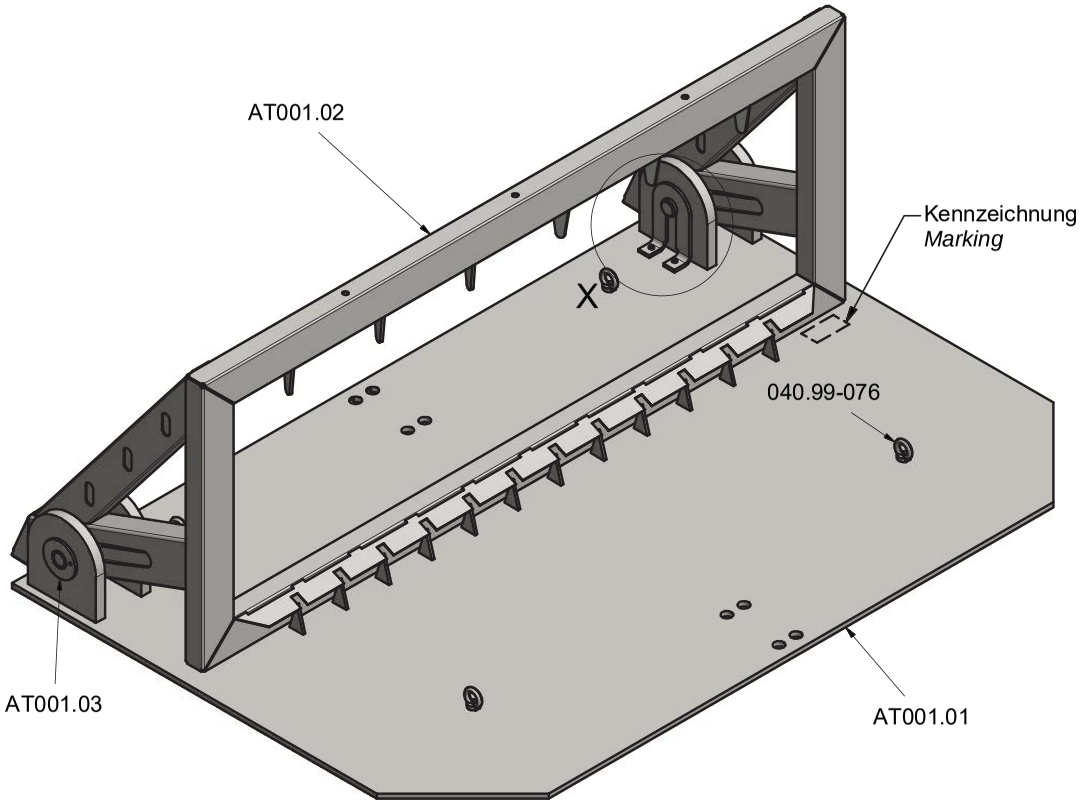
The product mainly consist of steel and zinc (hot dip galvanizing). Both materials are not toxic and are not in need of any special treatment or operation.

Steel components can be recycled.

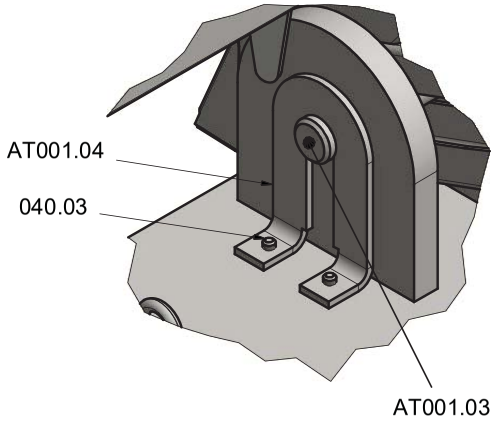
Appendix 1 - Drawings - Page 1



Montage mit Einzelteilen
Assembly of single parts



Detail X



Stk.	Art.-Nr.	Benennung	Description
4	040.03	HRK-Schraube m. 6-kt. M 16 x 30 Mu, 8.8	Buttonhead bolt with hexhead M 16 x 30 with nut, 8.8
4	040.99-076	Ringschraube M20, DIN 580, feuerverzinkt	Lifting eye bolt M20, DIN 580, hot dip galvanized
1	AT001.01	Grundplatte für Claw 300	Base plate for Claw 300
1	AT001.02	Rahmen für Claw 300	Frame for Claw 300
2	AT001.03	Führungsbolzen für Rahmen Claw 300	Guide bolt for frame Claw 300
2	AT001.04	Sicherungsblech für Claw 300	Locking bracket for Claw 300

Ringschrauben nach dem Aufstellen entfernen
Remove lifting eye bolts after set up

Mobile VSB: Claw 300

	Date	Name
Drawn	16.04.2019	Y.Aller
Checked	22.06.2020	HJ.Schnitzler

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AT001

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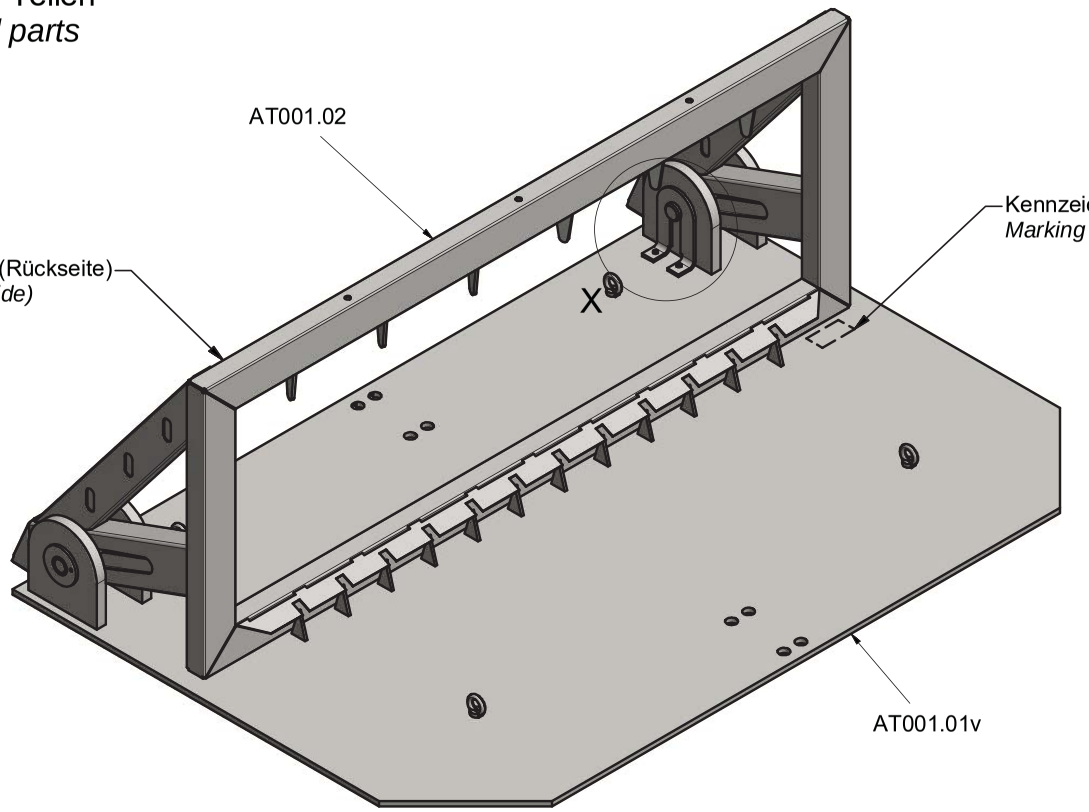
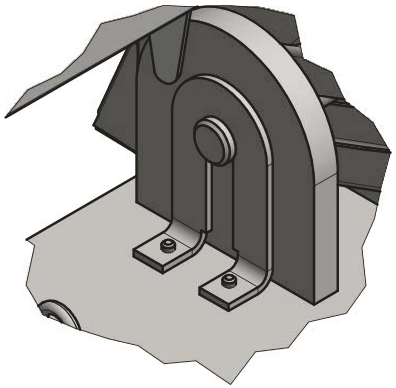
Montage mit vormontierten Teilen
Assembly of pre-mounted parts



Detail X



Ringschrauben nach dem Aufstellen entfernen
Remove lifting eye bolts after set up

Stk.	Art.-Nr.	Benennung	Description
1	AT001.01v	Grundplatte für Claw 300, vormontiert	Base plate for Claw 300, pre-mounted
1	AT001.02	Rahmen für Claw 300	Frame for Claw 300

Mobile VSB: Claw 300

	Date	Name
Drawn	16.04.2019	Y.Aller
Checked	22.06.2020	HJ.Schnitzler

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A. Assembly

1. Tools/devices

The following tools are recommended for the assembly works:

a. Crane (load capacity >2 to)
b. Forklift truck (lifting capacity >2 to)
c. Ratchet with nut 24
d. 4 pcs. Eyebolts (included)
e. 4 pcs. Lifting belts (length 4 m)

2. Parts

a. Catching Frame
b. Base Plate
c. Hinge Bolts
d. Screws
e. Securing Clips

3. Assembly Steps

a. Unload the base plate (if necessary by means of the four eyebolts and lifting straps fastened there, see point 2) and lower it to the ground.

b. Insert the bolts into the brackets.

c. Push on the securing clip and screw it from below after carefully lifting the unit. Do not tilt it (risk of injury).

B. Lifting

Use eyebolts and appropriate lifting gear to load, unload and position the assembled unit.

Before lifting the assembled device, the frame must be completely pushed onto the base plate and firmly secured in this position with tensioning belts.