

## construction

<b>own</b>	12 CAD-work stations Solidworks 3D
<b>design department</b>	product development, preparation of suitable data for machine programming

## blanking

<b>TRUMPF</b>	punching and combined processing working range 3000x1500mm laser cutting working range 4000x2000mm max. thickness: Steel up to 25mm, Stainless steel up to 15mm, Aluminium up to 15mm 3-D-laser cutting working range 4000x1500x750mm
<b>mechanical bar processing</b>	Elumatec SBZ 122, bar length up to 4 m

## bending and folding

<b>folding</b>	press brakes for high-precision bending 4420 mm with complicated bendings with pressure up to 3200KN, Multibend centre for automated bending of laminary parts
<b>plate rolling</b>	4-roll bending roll for diameters $\geq 220$ mm thickness up to 3 mm and maximum length of 2,5 m

## welding and soldering

<b>certifications</b>	Quality standard ISO 3834-2(2006) CL1 / CL2 DIN15085-2 rail vehicle comonets Q1 / Q2 / Q3 DIN2303 defence products
<b>MIG / MAG/ TIG methods</b>	13 welding work station for steel, stainless steel and aluminium QIROX welding robot Cloos (TIG und MAG) Universal Robot (6 axis)
<b>3-D-laser welding</b>	Trumpf working range 4000x1500x750mm
<b>spot welding</b>	Stationary machine for thin sheets, up to 90kVA
<b>gas-shielded soldering</b>	

## blasting

Klefler blasting cabin 8000x4000x3285 (steel granulate)

## joining and straightening

<b>Haeger 824 Window Touch</b>	advanced technolgy for setting bolts and nuts
<b>OMCN straightening press</b>	100 t press

## messuring

<b>German Mechatronics VQC 12/20</b>	2D messuring machine Visual Quality Control working range 1250 x 2000mm accuracy + 0,05 mm
<b>3D-messuring arm FaroArm Fusion</b>	working range: $\leq 2,4$ m accuracy: 0.043 mm [single point acuracy] $\pm 0,061$ mm [volumetric]

## colouring

<b>powder coating</b>	application of tricationzincphosphating excellent corrosion protction in steel chromium-free passivation excellent corrosion protction in aluminium 6000 x 2000 x 1000 mm
<b>wet lacquering</b>	6000 x 3000 x 3000 mm