

By Order of GM OPEL German we offer for Sale:

Complete Line for the tube bending, hydroforming, machining and cleaning of complex tube-type vehicle frame and chassis parts up to a dimension of ca. 1.500 x 1.500 x 100 mm

Year of Manufacture: 1996 / was in Production until July 2011



Including:

- 3 off SCHULER HYDROFORMING Presses
- 2 off SCHWARZE WIRTZ Tube Benders
- 4 off FANUC Handling Robots
- HEISS Punching + Machining Unit
- TECHNO-COMMERZ Washing, Coating and Drying Unit

Main Features and Processes:

- Tubes supplied by fork lift (200 tubes of ca. dia 50 x 2.500 mm length in each storage magazine)
- Central master control system for status analysis of the complete process
- All production line components communicate via bus systems
- 2 operators required to run the line
- Fully automated transfer of parts
- Tooling provided with sensors to inspect the dimensional accuracy
- Automatic scrap removal via robot after bending or forming
- After hydroforming process 22 holes were punched into the part and slugs are folded back
- Tube end machining with gages to verify the accuracy of holes
- Final washing, coating and drying unit
- Automatic handling and loading of frame parts to cradles running on a rotation system



2 off SCHWARZE WIRTZ Tube Benders with FANUC handling robot



SCHULER HYDROFORMING Pre-Form-Press



2 off SCHULER HYDROFORMING Presses with FANUC handling robot each



HEISS tube end machining unit loaded by FANUC robot
TECHNO-COMMERZ washing/coating/drying unit

Process of Production and Handling System consisting of:

- 1) 2 off SCHWARZE-WIRTZ tube benders, capacity each: max dia 60 x 3.000 mm, power requirement ca. 52 kW
- 2) SCHULER HYDROFORMING Pre-Form-Press, capacity 200 tons vertical, 6 tons horizontal
- 3) 2 off SCHULER HYDROFORMING Presses:
 - a. closing force: 3.500 tons
 - b. internal pressure for hydroforming: 1.600 bar
- 4) 4 off FANUC S 420 iF / iL handling robots with RJ 2 control + teach panels
- 5) HEISS tube end machining unit for punching and trimming, max 20 tons
- 6) TECHNO-COMMERZ KHBWss/5-1 in-process washing unit for final cleaning/degreasing, coating and drying of finished frame parts with:
 - a. 2 cleaning zones
 - b. coating zone
 - c. 2 drying zones
- 7) Conveyor system for loading of finished frame parts to cradles

General Information:

- Inspections by appointment only! Location: OPEL Bochum / Germany (next Airport: Duesseldorf)
 - All Equipment becomes offered "AS IS, WHERE IS" and subject to prior Sale!
 - Although Information has been given from sources deemed reliable, MAYNARDS make no warranty or guarantee, expressed or implied, as to the accuracy of the information contained herein.
 - All offers are subject to approval by the Seller and subject to acceptance of Sellers OFFER TO PURCHASE.
 - This Sale is based on the Terms & Conditions of GM OPEL and MAYNARDS
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**For further Information and Photos
or an Inspection Appointment please contact:**

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