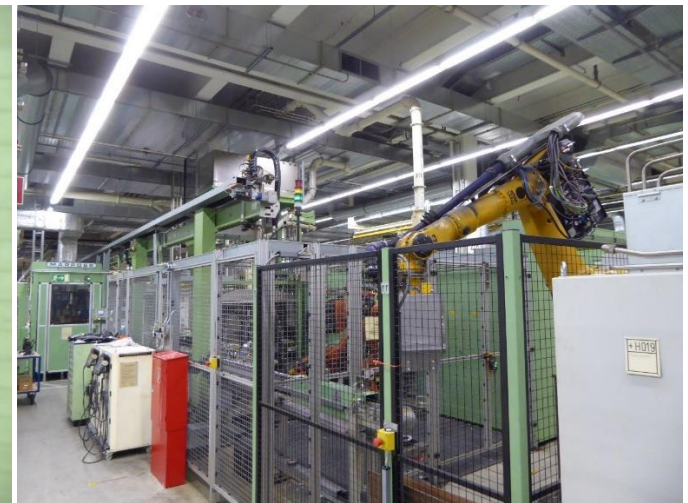
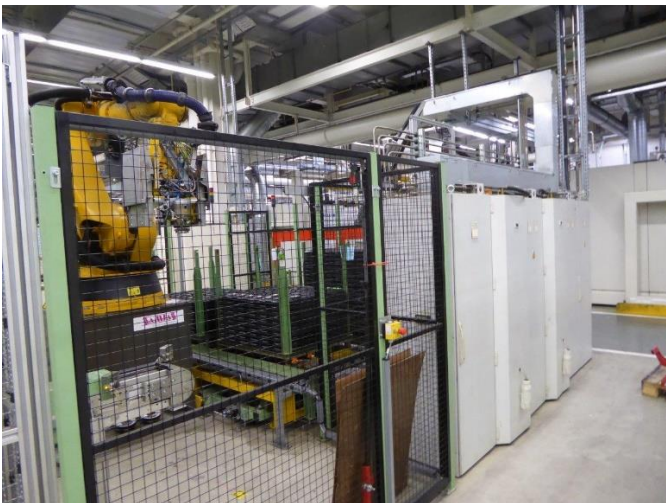
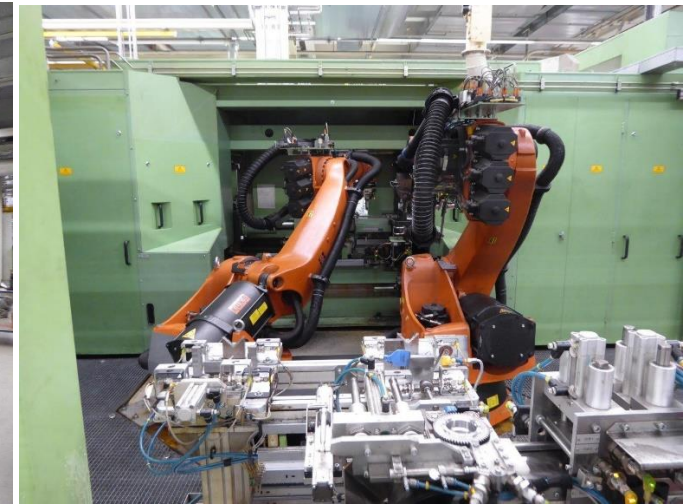


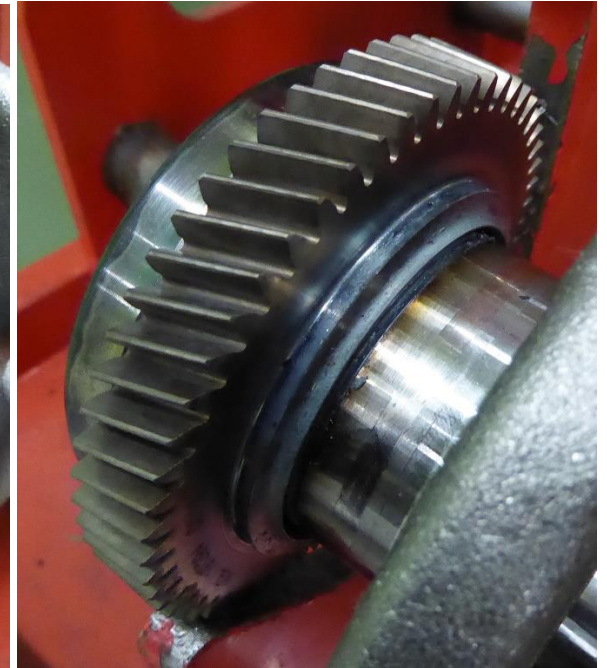
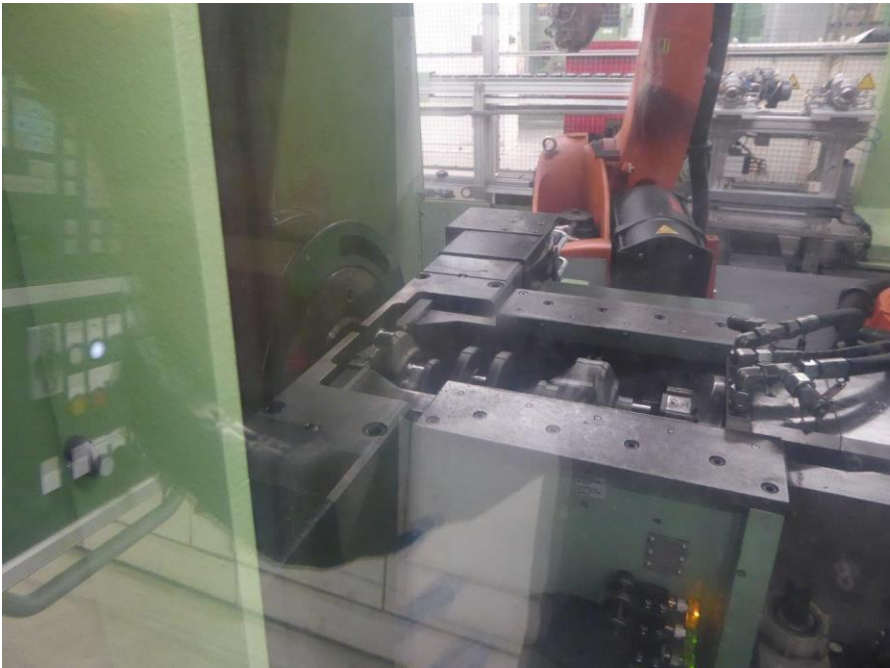
For Sale by Private Treaty, ex Location/Foundation Germany:

KUKA RS 45 Friction-Welding Unit, YoM 2007

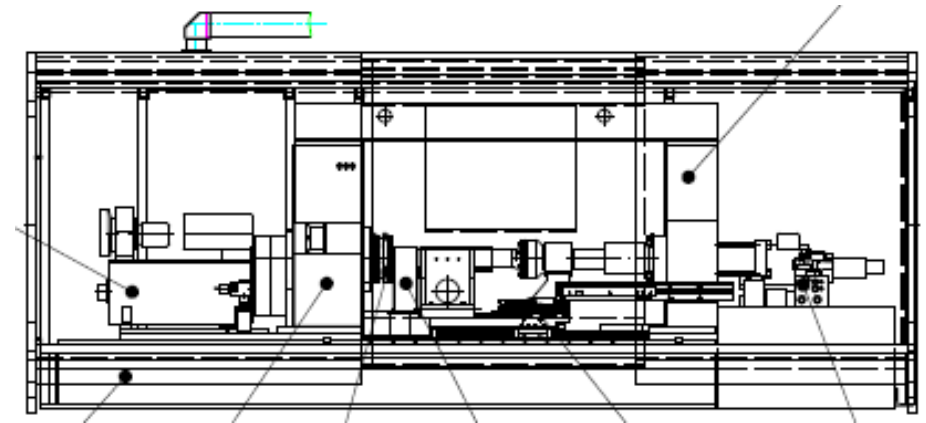
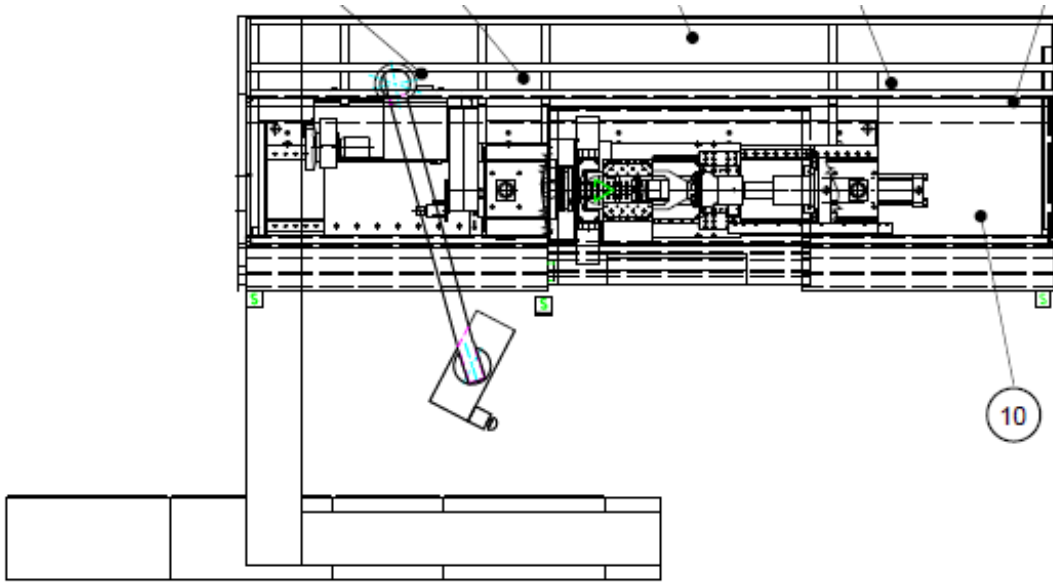
as Production Cell with two KUKA Robots for Workpiece Handling and PCD 304 Parameter-Control



Operation: Friction Welding of Gear on Crankshaft



Top- and Side-View of Machine:



Operation-Panel Sinumerik 840D



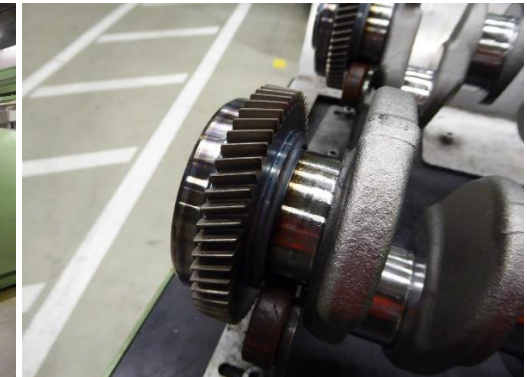
Electric Cabinet



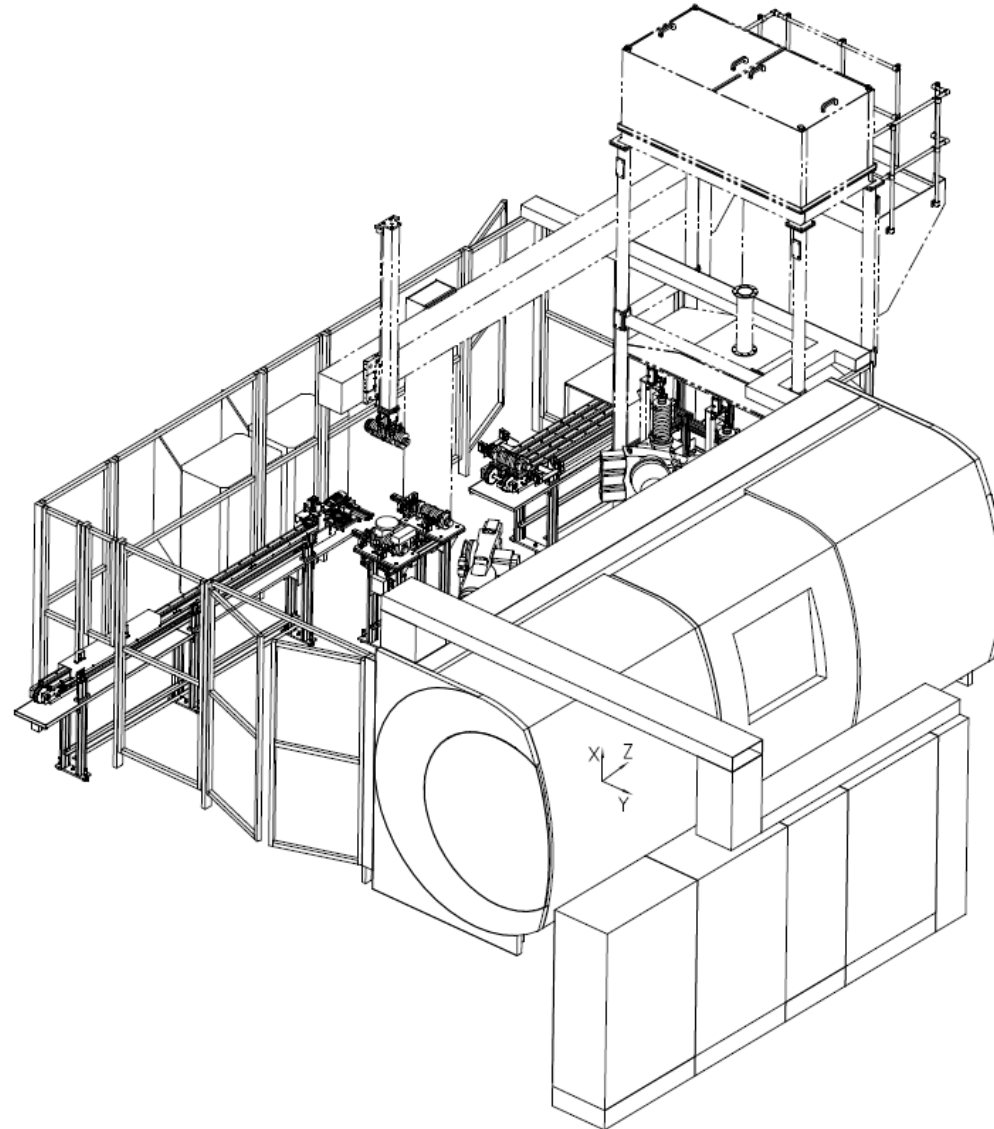
Back-View with KUKA Robot

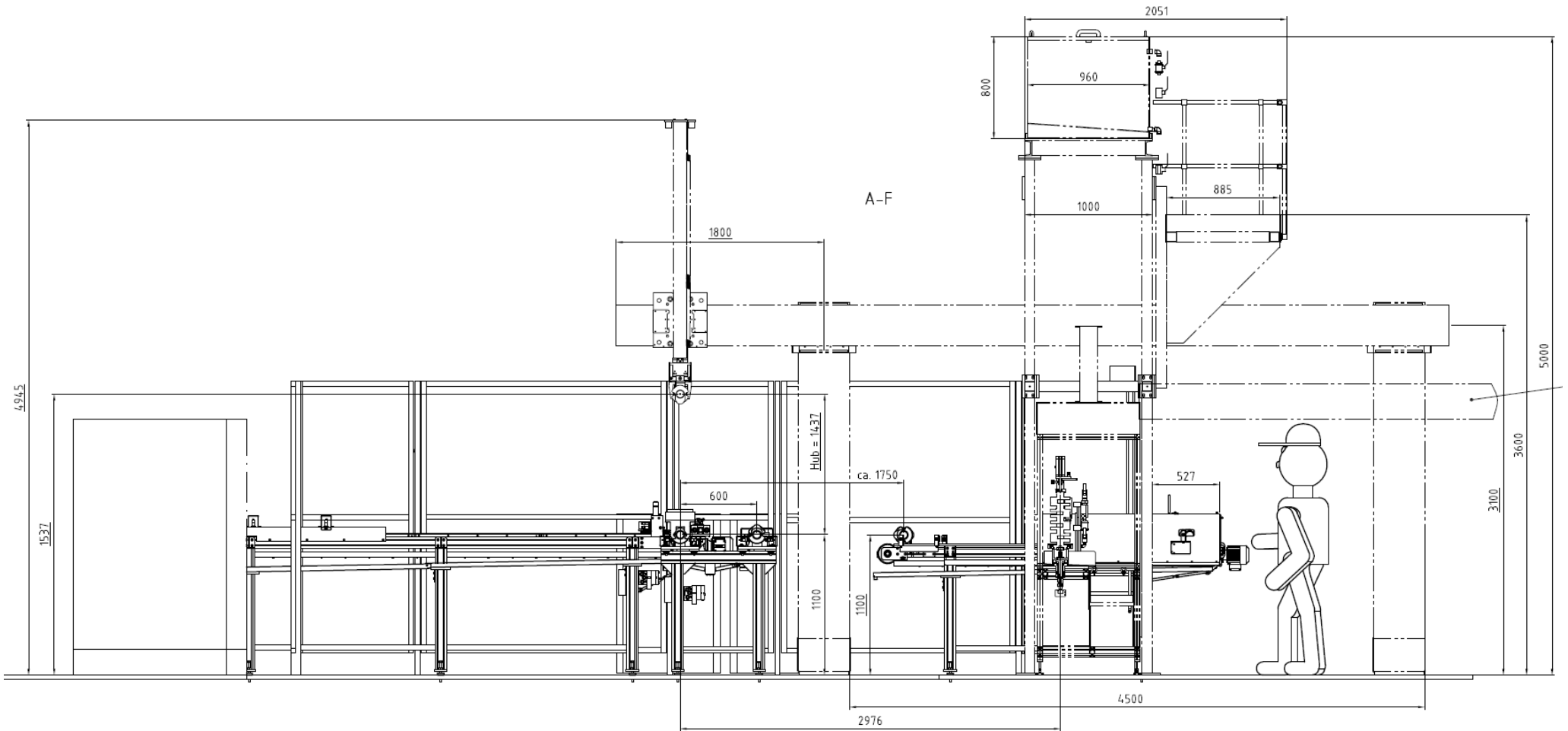


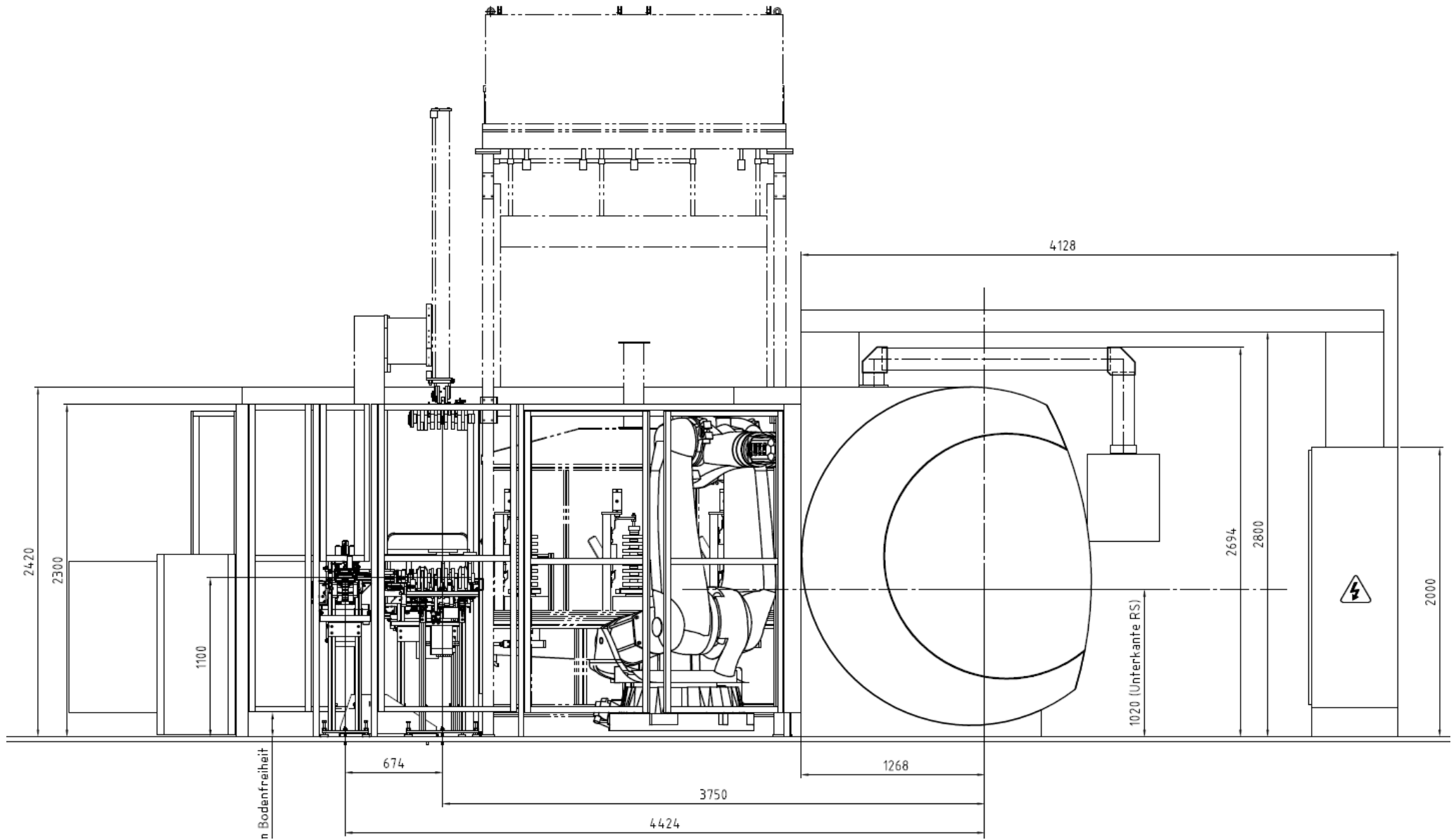
Friction-Welded Gear on Crankshaft

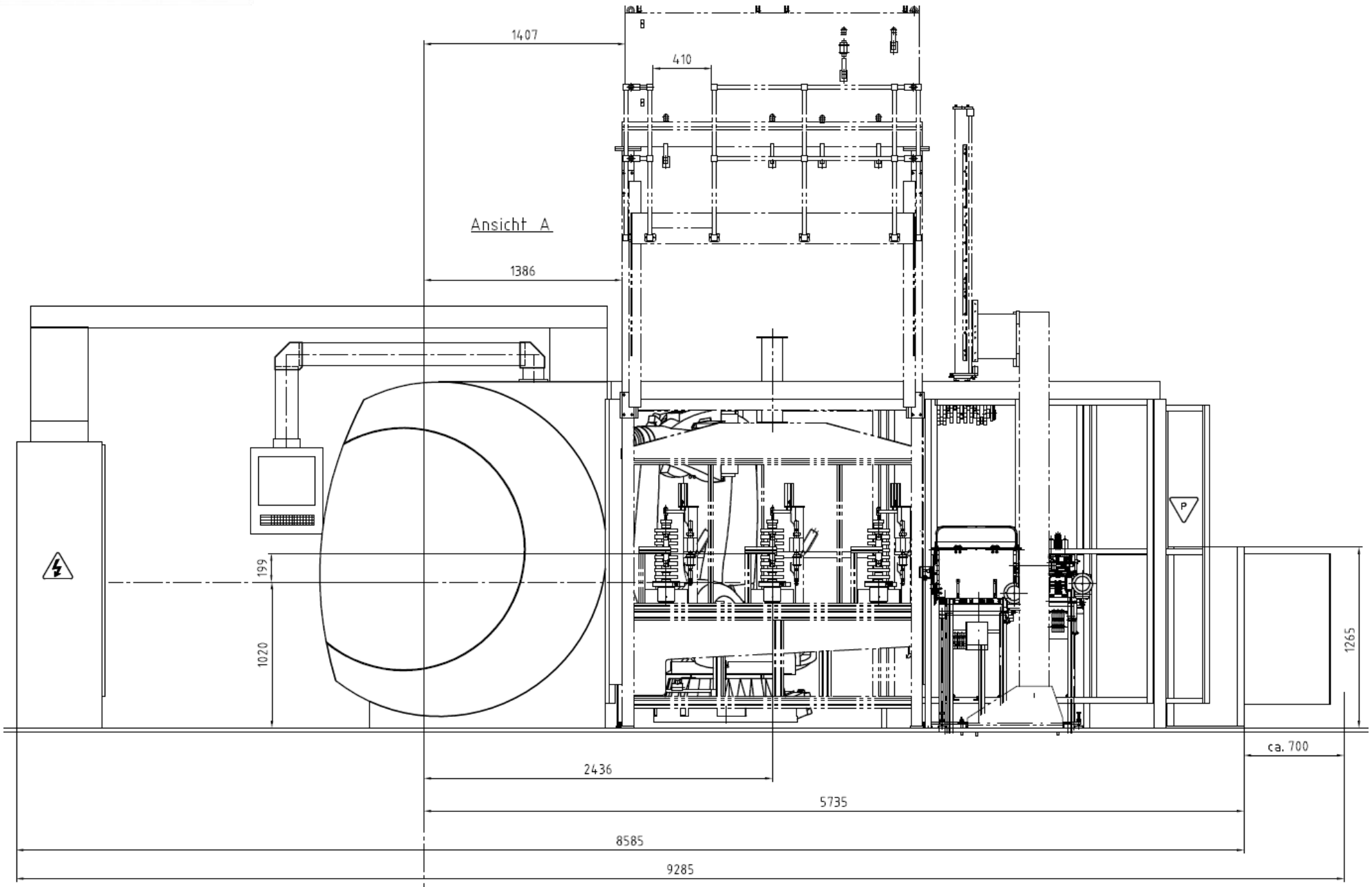


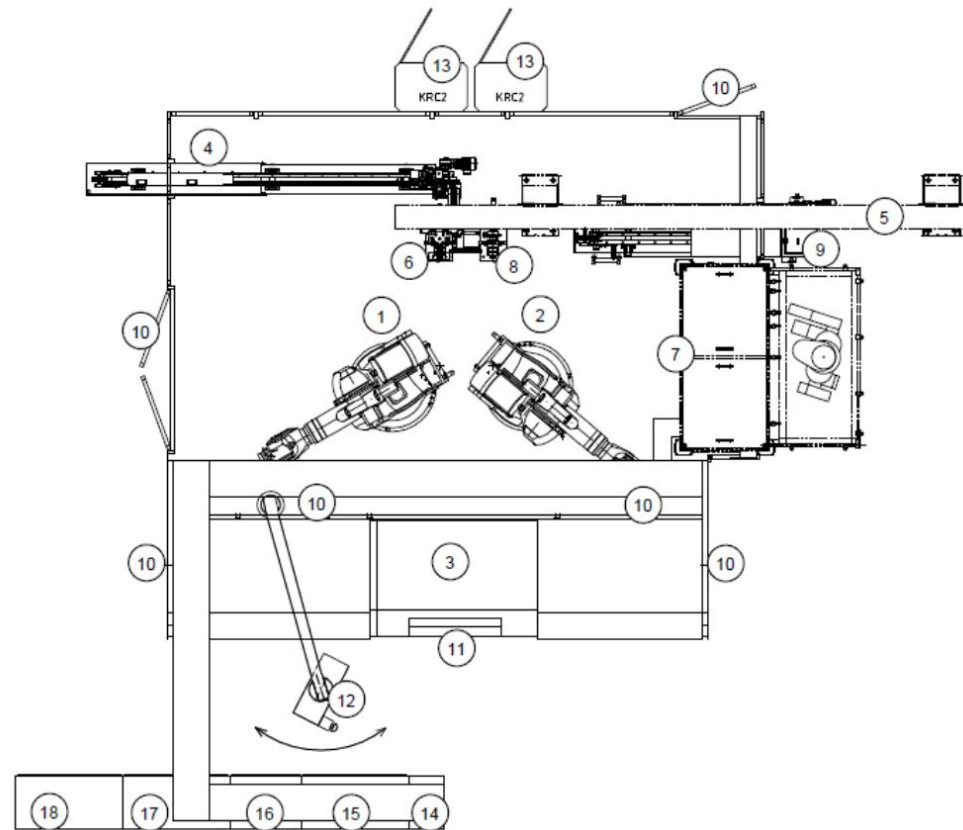
Layout-Drawings and Dimensions of Production Cell:





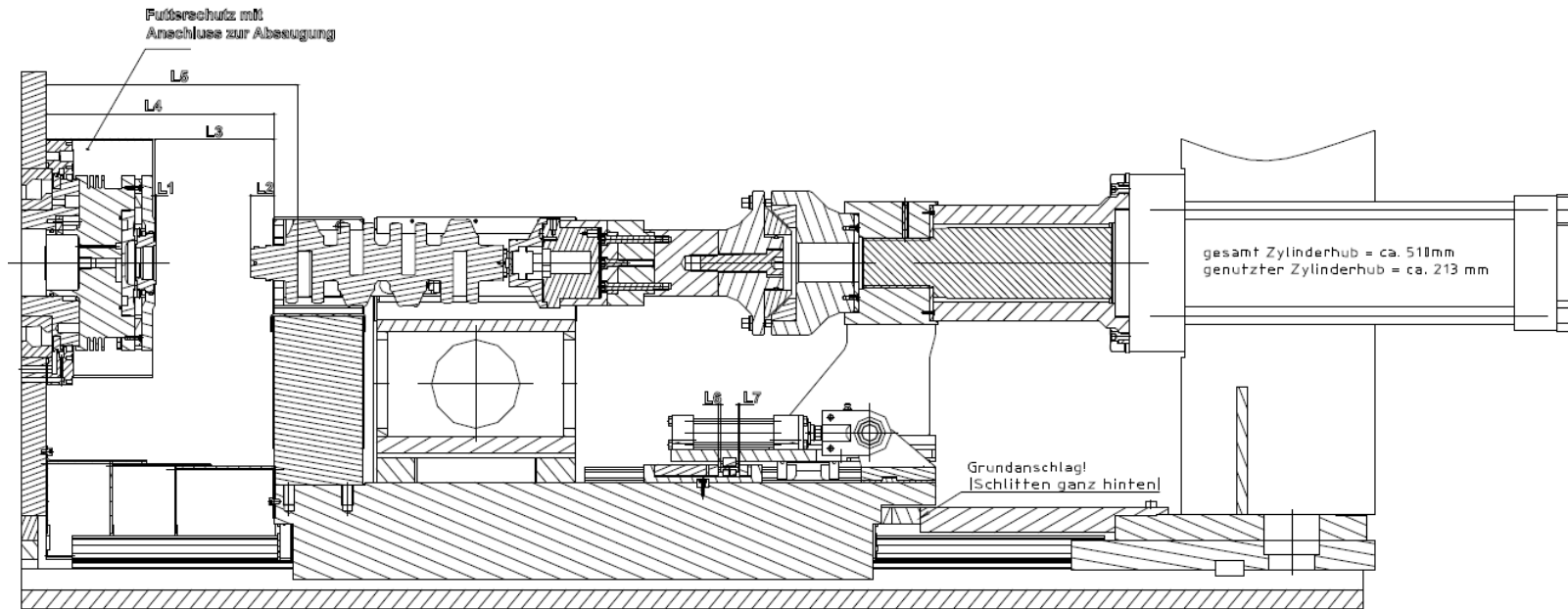






- | | | | |
|-----|---|-----|---------------------------------------|
| 1) | KUKA KRC 150-2 Loading Robot 1 with Gripper | 11) | Access Doors RS 45 |
| 2) | KUKA KRC 150-2 Unloading Robot 2 with Gripper | 12) | Operation Panel |
| 3) | KUKA RS 45 Friction Welding Machine | 13) | Robot Controller |
| 4) | Conveyor for Part to be welded (Gear) | 14) | Connection Cabinet |
| 5) | Gantry for Shaft-Part (Crankshaft) | 15) | Control Cabinet 2 + Controller PCD304 |
| 6) | Table for Shaft-Part | 16) | Control Cabinet 1 |
| 7) | Cooling-Station | 17) | Power-Supply Cabinet |
| 8) | Table OK-Parts | 18) | Drive-Cabinet |
| 9) | Table NOK-Parts | 19) | Pneumatic-Connection |
| 10) | Access Doors | 20) | Coolant Water Connection |

Workarea:



Dimensions of Production-Cell and Machine

Length x Width of Production-Cell, ca.:	9.500 x 9.300 mm
Length x Width x Height of KUKA RS 45, ca.:	6.050 x 2.000 x 2.500 mm
Center Height of Spindle over Floor, ca.:	1.020 mm
L x W x H of Control-Cabinet, ca.:	4.800 x 600 x 2.000 mm
Weight of KUKA RS 45, ca.:	20.000 kg
L x W x H of Robot Controller Cabinet KRC-2, ca.:	810 x 570 x 2.000
Weight of Robot Controller Cabinet KRC-2, ca.:	136 kg