

**Manufacturer: SCHORCH Elektrische Maschinen, Antriebssysteme und Anlagen
Breite Str. 131
D-41238 Mönchengladbach**

- **Test equipment – general**
 - **Final inspection – electrical**
 - + test laboratories for electrical/thermal final tests and type tests of electrical machines with a load capacity up to 3600 kW; special tests are possible with higher loads.
 - + Test equipment for noise and vibration measurements
 - + Facilities for testing Ex machines
 - Δ Flameproof enclosure EEx d
 - Δ Pressurised apparatus EEx p
 - Δ Increased safety EEx e
 - Δ Non-sparking Ex n
 - + Facilities for the testing of converter-fed machines
 - + Facilities for the testing of high-speed motors
 - + Calibration of electrical test equipment
 - **Final inspection – mechanical**
 - + System for measuring form and position tolerances (Cylindrical form and straightness) to DIN ISO 1101 for diameters up to 1200 mm
 - + Calibration of mechanical test equipment
- **Manufacture of large machines (Model Series 5 and larger, trans-standard machines larger than Frame Size 355)**

Machine/equipment	Manufacturer	Workpiece	Technical data
Oxy-acetylene cutting machine	ESAB	Heavy plate	Plate size 6000 x 4000 mm
Submerged arc-welding	SAF	Spiderweb shafts	max. length theoretically no limit max. dia theoretically no limit
Slot punching press for core segments	Schuler	Core segments	Rated power 320 kN Max. sheet thickness 2.5 mm Length of cord of rotor and stator segments, measured on the punching radius between first and last slot. max. 1400 mm Smallest mean slot circle dia. (punching dia.) 300 mm Largest mean slot circle dia. (punching dia.) 99000 mm
Punching press	Schuler	Blanks	Rated power 2500 kN Max. width of strip 1250 mm
Autom. slot punching press	Müller-Weingarten	Stator laminations	Rated power 80 kN Max. blank diameter 720 mm
Autom. slot punching press	Müller-Weingarten	Rotor laminations	Rated power 80 kN Max. blank diameter 720 mm
Slot punching machine	Müller-Weingarten	Stator and rotor laminations	Rated power 200 kN Max. blank diameter 1300 mm
Annealing furnace in welding shop	---	Fabricated parts	Max. dimensions 1800x1300x4000 mm

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Machine/equipment	Manufacturer	Workpiece	Technical data
NC wire eroding machine	AGIE	Punching tools	Erosion generator AGIEPLUS Multimode Numer. contour control AGIEMATIC C Machine control CH Electrolyte plant Type DA 15
Vertical turret boring machine	FRORIEP	Frames	Max. load on table 50 t Max. height, ext. machining 2480 mm Max. height, int. Machining 2480 mm Max. machining diameter 5100 mm Max. boring stroke 1300 mm
Vertical boring mill	Dörries	Frames Endshields	Largest swing diameter 2800 mm Boring depth in one go 1350 mm Faceplate diameter 2500 mm
Single-column turret lathe	Schiess	Endshields	Largest swing diameter 2000 mm Faceplate diameter 2500 mm Max. load on table 12 t
Single-column turret lathe	Schiess	Endshields	Largest swing diameter 2000 mm Largest height 1300 mm Max. load on table 10 t
Turret lathe	Toshulin	Frames Endshields	Largest swing diameter 1640 mm Faceplate diameter 2500 mm Max. load on table 12 t
Centre lathe	Ravensburg	Shafts Rotors	Max. dia over bed 1650 mm Max. dia over cross slide 1280 mm Distance between centres 5000 mm Max. mass of workpiece 25 t
Centre lathe	Boehringer	Shafts Rotors	Max. swing dia above bed 1100 mm Max. machining length 5000 mm Faceplate dia 820 mm Max. load between centres 5.0 t Max. load with steady rest 6.3 t
Centre lathe	Wohlenberg	Shafts	Machining length 3810 mm Clamping length 4025 mm Max. swing dia above bed 1070 mm Max. load 13 t
Cylindrical grinding machine	Naxos	Shafts	Max. grinding dia 630 mm Max. grinding length 4000 mm Max. load 2.5 t
Boring and milling centre	Norte	diverse	Travels: X axis 2000 mm Y axis 650 mm Z axis 600 mm Table dimensions 2870x710 mm
Fixed-bed boring and milling centre	Drop & Rein	Milling: - Frames - Spiderweb shafts	Max. boring depth 1200 mm Max. boring dia depending on tool Max. longitudinal travel 10000 mm Min. height to centre of spindle 200 mm Max. height to centre of spindle 3400 mm Spindle diameter 130 mm

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Fixed-bed boring and milling centre	Köllmann	Milling: - Frames - Spiderweb shafts	Max. boring depth 900 mm Max. boring dia depending on tool Max. longitudinal travel 6000 mm Min. height to centre of spindle 20 mm Max. height to centre of spindle 3420 mm Spindle diameter 380 mm
Boring and milling centre	DIAG	Frames Endshields	Travels: X axis 1200 mm Y axis 1400 mm Z axis 800 mm Table dimensions 800x800 mm
Drill press	MAS V080	Frames Endshields	Max. length 2565 mm Max. height 2200 mm Max. load on table 80 t
Hydraulic press	Siempelkamp	Rotors	Stroke: 1800 – 3800 mm Table dimensions 4000 x 4000 mm Max. pressure 350 t
Balancing machine (under-floor type)	Schenck	Rotors	Max. speed 4300 rpm Min. speed 600 rpm Max. distance between bearings 4700 mm Min. distance between bearings 800 mm Total length 5100 mm Max. rotor radius 1250 mm
Balancing machine (above floor-type)	Schenck	Rotors	Max. speed 1250 rpm Min. speed 20 rpm Max. distance between driven rotor end and middle of opposing bearing 4640 mm Min. distance between bearings 200 mm max. radius of balancing body 1200 mm Max. weight of rotor 18 t
Vacuum pressure Impregnating plant (VPI)	Meier Vakuum-technik	Stators	Tank dimensions Width 2100 mm Length 2630 mm Depth 2600 mm max. rotating load 15 t
Laser-based labelling system	Haas	Rating plates	Labelling field dimensions Without moving the table 100 x 100 mm With moving the table 540 x 380 mm Distance between lens and table 190 mm Laser power 60 W
Test laboratory equipment	Diverse	Complete electrical machines	Equipment for electrical/thermal final tests and type tests, with load facilities up to 3600 kW (above that, load simulation)
Coil shaping machine SPIRAFORM 4000	SELVA	Coils	---
Coil bandaging machine MI 171	MICA-MATION	Coils	---

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Machine/equipment	Manufacturer	Workpiece	Technical data
Lathe	Heidenreich & Harbeck	Shafts Rotors	Max. swing dia above bed 1025 mm Max. machining length 4000 mm Max. swing dia above saddle 715 mm Max. length between centres 4100 mm Faceplate diameter 800 mm Max. load between centres 3.50 t Max. load with steady rest 3.75 t

• **Manufacture of standard motors ≤ shaft centre height 315**

Machine/equipment	Manufacturer	Workpiece	Technical data
Endshield machining	Index	Endshields	For motors shaft centre height 160-315 mm
Flexible manufacturing system	Ex-Cell-O	Frames	For motors shaft centre height 160-315 mm
Balancing machine	Schenck	Rotors	For motors shaft centre height 160-315 mm
Shaft machining centre	Heid	Shafts	For motors shaft centre height 160-315 mm
Roll impregnating plant	Eisenmann	Stators	For motors shaft centre height 160-315 mm
Diverse high-speed and universal lathes	diverse	diverse	---

• **Miscellaneous**

Machine/equipment	Manufacturer	Workpiece	Technical data
Calibration of inspection Measuring and test equipment (electrical)	Fluke	Inspection/ measuring and test equipment for electrical values	D.C. voltage 0 - ± 1,020 V D.C. current 0 - ± 11 A A.C. voltage 1 mV - 1,020 V (10 Hz-500 kHz) A.C. current 0,01 µA - 11 A (10 Hz-10 kHz) Electrical resistance 0 Ω - 330 MΩ Electrical capacitance 330pF - 1100 µF
Calibration of inspection measuring and test equipment (mechanical)	Trimos	Inspection/ meas.and test equ. for mech. values	Length measuring External 0 - 999.9 mm Internal 10 - 999.9 mm
Shape measuring system	FAG	Shape/ position	max. diameter measured 1200 mm
Cranes and lifting tackle	Diverse	---	max. load 80 t

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