

EQUIPMENT OVERVIEW

TURN / MILL MACHINING CENTERS CNC	MAX. Ø	MAX. BAR CAPACITY Ø	MAX. LENGTH	CONFIGURATION	CONTROL	AUTOMATION
DMG MORI NTX2000/1500SZM	660	80	1540	B-axis, Y-axis, sub spindle, lower turret, simultaneous 5-axes milling	Fanuc 31i-B5	automated bar feeder and BMO Platinum 50 Frontloader robot cell
DMG MORI NTX1000 (2nd Generation)	430	65	800	B-axis, Y-axis, sub spindle, lower turret, simultaneous 5-axes milling	Fanuc 10TF-D	BMO Platinum 50 Frontloader robot cell

LATHES / TURNING MACHINING CENTERS CNC	MAX. Ø	MAX. BAR CAPACITY Ø	MAX. LENGTH	CONFIGURATION	CONTROL	AUTOMATION
Benzinger GOFuture B3	160	24	260	driven tools, sub spindle	Fanuc 31i-B	automated bar feeder
Benzinger GOFuture B4	160	24	200	driven tools, tailstock	Fanuc 31i-B	automated bar feeder
Benzinger TCM B4	160	24	180	driven tools, 16-fold turret	Siemens 840D	
Schaublin 110	115	32	235	driven tools, programmable center	Fanuc 0-T	automated bar feeder
Mori Seiki CL-200A	205	52	350		MSC-803 L	automated bar feeder
DMG MORI NLX2500Y/1250	275	80	1255	Y-axis, driven tools and programmable center	Mitsubishi 730UM CELOS	
DMG MORI NLX2500Y/700	275	80	728	Y-axis, driven tools and programmable center	Mitsubishi 730UM CELOS	
Mori Seiki NL2000-500	356	65	590	programmable center	MSX-850 BM	
Mori Seiki NL2000SY/500	356	65	590	Y-axis, sub spindle, driven tools	MSX-850 BM	automated bar feeder
Victor A26-1300YCM	420 or 600	resp. 75 of 70	1300	Y-axis, driven tools and programmable center	Fanuc 0i-TD	

MILLING MACHINING CENTERS CNC	MAX. X	MAX. Y	MAX. Z	CONFIGURATION	CONTROL	AUTOMATION
Mikron MILL S 600 U	800	600	500	5-axis, high speed milling, spindle speed: 36.000 rpm	TNC 640 (Heidenhain)	automatic pallet loader (Fanuc), 20 pallets 280x280
DMG MORI NMV3000 DCG 34APC I	500	350	510	5-axis, spindle speed 12.000 rpm	MSX-711 IV	automatic pallet loader, 34 pallets Ø350
DMG MORI NMV3000 DCG 34APC II	500	350	510	5-axis, spindle speed 20.000 rpm	Fanuc 31i-A5	automatic pallet loader, 34 pallets Ø350
DMG MORI NMV3000 DCG 34APC III	500	350	510	5-axis, spindle speed 20.000 rpm	Fanuc 31i-B5	automatic pallet loader, 34 pallets Ø350
DMG MORI NMV5000 DCG 20APC	730	510	510	5-axis, spindle speed 12.000 rpm	Fanuc 31i-A5	automatic pallet loader, 20 pallets 400x400
DMG MORI NVX5100/40	1050	530	510	4th axis	MSX-853 IV	
DMG MORI Ecomill 1100 V	1100	560	510		Fanuc 0i-MD	
DMG MORI M1	550	550	510		Siemens SINUMERIK 828 D	
Fehlmann Picomax 54	500	260	480	4th axis		

CAD/ CAM-SOFTWARE	COMMENTS
ESPRIT 2000, ESPRIT TNG and ESPRIT Edge	CAM-software incl. SolidMill Production, SolidMill Freeform 5-axes, SolidTurn, Multi Spindle, SolidMillTurn C-Y(-B) Axis, Multi Turret, Technology Library and ESPRIT Probing
Hexagon DESIGNER	CAD software
Autodesk Fusion	CAM software
Autodesk Inventor	CAD software
Zeiss Calypso	CAM software for CMM, suitable for MBD with PMI

MEASURING ROOM	MAX. X	MAX. Y	MAX. Z	COMMENTS
Zeiss Contura measuring machine 9/12/6	900	1200	600	CNC CMM (coordinate measuring machine) with automated probe changing system and with active probe head, accuracy (length measuring uncertainty): 1,6 + L/350 µm
Zeiss DuraMax measuring machine 5/5/5	500	500	500	CNC CMM with probe changing system, accuracy (length measuring uncertainty): 2,4 + L/300 µm
Wenzel LH65 measuring machine	650	750	500	CNC CMM with probe changing system, accuracy (length measuring uncertainty): 3,5 + L/300 µm
Hauser H601-DR				profile projector
Mitutoyo S-210				surface roughness tester
Digital microscope Dino-Lite AM5216ZTL				10 to 140x magnification
Keyence LM-X100TL measuring microscope	325	175	75	optical measurement system with laser and touch probe, incl. 4 th axis, accuracy: ±0,7 µm

CLEANING AND CLEANROOM	COMMENTS
Cleanroom for cleaning and assembly	500 m ² , ISO 6/7, incl. dark room for inspections - including brightlight (particles), UVA light (organic contamination), visual inspection (light microscope 40x with camera) - and flow cabinets (ISO 5)
LPW PowerJet 530T4Twin Ultra cleaning system	automated wet cleaning system with ultrasound and CNp technology (Cyclic Nucleation process) suitable for complex geometries, 2 rotating chambers, incl. ultra pure water (<0.1 µS), drying process, max. dimensions: 530x320x200
Bandelin CNp-tool UP 28-2	2-bath (28L) stand-alone wet cleaning system with ultrasound and CNp technology, basket dimensions: 455x245x50
4-Bath Ultrasonic Cleaning 24L	manual cleaning line incl. oven
Simco Top Gun	ionization gun
Unicorn Magido manual pressure washer HP25 (100L)	cleaning machine for manual cleaning with high pressure, hot water and detergent, working space: 750x550x500
Thermo High vacuum bake out oven 128L	with internal turbo pump / measuring equipment and dry Scroll pump
Heraeus VT 6130 M Vacuum bake out oven	with turbomolecular pump and dry scroll pump
Pfeiffer ASM340 dry version	helium leak tester

CONVENTIONAL LATHES	MAX. Ø	MAX. BAR CAPACITY Ø	MAX. LENGTH
Cazeneuve	575	50	1000
Weiler Ergodor	230	32	430
Schaublin 125	270	26	500

CONVENTIONAL MILLING	MAX. X	MAX. Y	MAX. Z:
Deckel FP4M	500	400	400

ENGRAVING MACHINES	COMMENTS
Gravograph IS400	CNC controlled
Euromark ME92	electrolytic etching
Ideal ES100	electric (hand) engraving

CASTING	COMMENTS
2x Casting furnace 350 kg	bottom outlet
Casting furnace 400 kg	64L, bottom outlet
Various annealing furnaces	for molds, tempering/ hardening

SAWING MACHINES	MAX. Ø	COMMENTS
Cosen C3	360	CNC band saw, fully automatic
Bewo CPO315	100	circular sawing machine

OTHER EQUIPMENT			COMMENTS
Jung HF50 flat grinding and profile grinding	Max. X: 500	Max. Y: 200	grinding machine
Sunnen MBC1803	Max. Ø: 160	Max. Y: 250	horizontal honing machine
Microtab Jobtab G5			thread cutting machine
Double polishing machine (Aceti)			
Mantis PIXO optical stereo microscope			illuminated base, magnification up to 60x

ENESKAmicro	de-burring tool
Rosler Mini Bowl 60 Vibro Automatic	polishing and de-burring machine
Tool presetter Haimer UNO 20/40	
Shrink fit machine Power Clamp Air i4.0 Eco	
Bambu A1 AMS Lite combo	3D FDM printer 300°C

Dimensions in mm