

# LFMS [OVERHEAD M20/HM]

CNC system according to high gantry design  
with servo motor drive CNC-System mit Servomotorantrieb

- Combined solution with milling and laser systems available (Laser solutions for cutting, drilling, welding, ablation, structuring, marking and special laser processing)
- System expandable up to 5 axes
- Loading and unloading system according to customer requirements



Fig. LFMS OverHead M20/HM T3  
with control panel

Maximum function with minimum space requirement is the motto of the OverHead-M20/HM. A wide range of variable equipment features and additional options allow the system to be optimally configured for many industries and work areas. Applications for the OverHead-M20/HM include machining, measuring, testing, dispensing, laser processing and induction applications. The Overhead M20/HM is especially designed for the carbide production of HM-Green. The already designed function and the integration of a laser system makes this machine unique and very flexible for the production of HM tools. For a process-safe production, an integrated extraction system, especially for the HM-Green production, is already included.

### Features

- CAN bus system with EC servo motors in all axes
- backlash-free steel ball screws with steel linear guides
- T-slot table for easy clamping of the workpiece and accessories
- variable passage from 340 mm to 590 mm
- Speed: 15 m/min.
- swivelling control panel iOP-19 touch screen
- Control PC iPC 25 with WIN 10 / 64 bit
- Network connection

### For processing of:

- Aluminium / light and non-ferrous metals (brass, bronze, etc.)
- Foam and milled plastics
- Ceramics
- Plexiglas
- HM-Green (in various grain sizes)

Due to the power of the milling motor of up to 5.0 kW and 40,000 rpm as well as a process speed of up to 250 mm/sec, the system is suitable for the processing of wood / plastic as well as for light and non-ferrous metals and HM-Green productions. The free large processing area and the excellent price/performance ratio offer decisive advantages over comparable products. A round tool changer is also provided for the basic equipment of the system. To ensure reliable machining of various materials, the linear axes and the spindle are equipped with sealing air from the ground up, so that no smoke or dust particles can be deposited.

### Options

- Cooling-spraying device
- Swarf tray
- Tool length measuring probe
- Various spindle motors
- Rotary changing system SK 20
- Handwheel
- 4th axis with tailstock unit
- 4th and 5th axis as rotary-swivel axis
- 4th axis for the laser processing head
- Engine room lighting LED
- Beckhoff/ISEL solution with CAD/CAM system for both milling as well as for laser processing



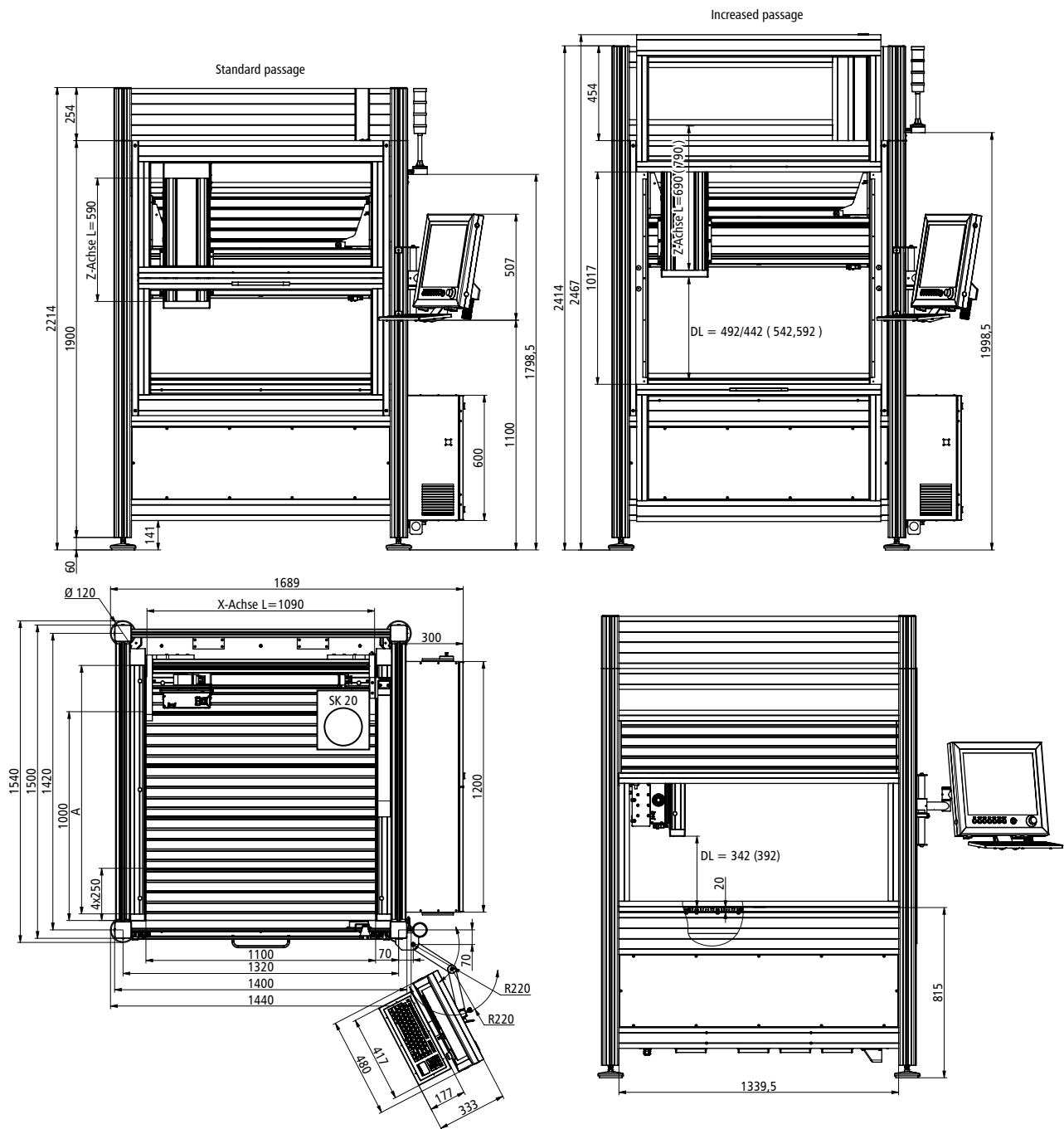
### Areas of application:

- Mould's industries
- Prototyping / R&D department
- Electroindustrie
- Ceramic Industries
- Gas, oil and chemical industry
- Aerospace
- Tooling
- Automotive

OverHead	M20/HM T1	M20/HM T2	M20/HM T3	M20/HM T4	M20/HM T5
processing areas X/Y/Z [mm]*	710 / 610 / 310	710 / 910 / 310	1210 / 910 / 310	1210 / 1410 / 310	1510 / 1710 / 310
Table clamping surface W x D [mm]	1100 x 1000	1100 x 1300	1600 x 1300	1600 x 1800	1750 x 2000
Passage [mm]	340 (590)				
Dimensions WxDxH [mm]	1400 x 1200 x 1960	1400 x 1500 x 1960	1900 x 1500 x 1960	1900 x 2000 x 1960	2245 x 2400 x 1970
Travel speed X/Y/Z	15 m/min.				
Drive motors	EC-Servomotors				
Drive elements X/Y/Z	Ball screws 16x10 / 16x10 / 16x5 mm, backlash-free adjustable				
Control	CAN controller iMD with 4 drive controllers, expandable to 12 axes (max. 6 interpolated and 6 handling axes), PC, I/O module, safety circuit with standstill monitoring, power supply unit 48 V / 1000 W				
Operation	Control panel iOP-19 Touch screen with keyboard and touchpad				
Weight [kg]	ca. 690	ca. 710	ca. 750	ca. 910	ca. 1150
Software	WinRemote (optional: ProNC, isy-CAM)				
Connected loads	400 V / 16 A				

\*without mounted components on the axes.

### Dimensions



OverHead	A	B	C	D	E	F
M20/HM T1	1000	1100	1240	1400	1040	1200
M20/HM T2	1190	1100	1240	1400	1340	1500
M20/HM T3	1250	1600	1740	1900	1340	1500
M20/HM T4	1750	1600	1740	1900	1840	2000
M20/HM T5	2000	1750	2150	2400	1995	2245

## Applications

Thanks to the great flexibility of the M20/HM, various applications can be produced. With the loading/unloading system, which was also developed for this purpose, an automated solution is also available for production. Our competent specialist will be happy to advise you on your requirements in a personal meeting. Thanks to the cooperation with one of the worldwide operating professional laser producers (the Bright Solutions Group from Pavia-Italy with the division Bright System Srl) we can also realize a wide range of laser applications with the system. Be it as a pure laser solution or as a multiprocessing system; we are able to cover a wide range of customer requirements. Thanks to the flexible machine solution and the modular laser processing heads (of our laser partner) we can offer a variety of production solutions for tube processing. Be it a round tube or any other geometry, we have the right automation for your process.



Thanks to the specially designed linear guides as well as the E-spindle and the necessary process safety devices (because of the powder particles when milling HM Green), the system can also be used for such or similar products without damaging the E-spindle or linear guides. Important is the suction device, only with the correctly designed unit we can guarantee the reliability of the equipment. A system which can be fully adapted to your requirements for every application.



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Components for the aviation industry. Thanks to the simple equipment options of the plant, very different components can be manufactured. Be it flat (with rotary tables) or upright by means of a 4th axis or a 4/5 axis solution as a rotary swivel axis system. We would be pleased to take on your requirements.



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A machine concept for a wide variety of products. This system can also be used in the tool industry. With the correctly selected laser and the corresponding processing head, we can also produce saw blades very economically.

Various automation solutions round off the entire production concept.

We will be happy to advise you and also show you many other sample parts which have been realized with this system. Challenge us, we will gladly answer your production questions



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Subject to technical changes. 20201112-01\_teltec-systems\_CNC-Machines