

*Laser Drivers, TEC Controllers,
OEM Laser Modules*

*Electronics, Mechanics,
Electro-Mechanical Modules*

*Everything you need from one competent source. With a high level of
vertical integration, flexibility, excellent quality and high reliability.*





"Our core competences along with our qualified and experienced team allow us to take up with confidence every challenge from the market and from our customers."

Kersten Stoebe, CEO
MESSTEC Power Converter GmbH

Competent and Powerful

Are you looking for an enterprise for your laser technologies which has its focus on laser drivers, TEC controllers and OEM laser modules? Your portfolio needs mature electronic circuit developments, special electronic boards, mechanical components or electro-mechanical modules? Then you will find the right partner with us.

For more than 45 years we have been working dynamically with a high degree of vertical integration, flexibility, excellent quality, high reliability and a level of commitment to our customers that is second to none.

Whether you require a complete order handling service for your project or if you require our dynamic support for parts of your production – we are reliable, powerful and motivated from the enquiry to completion of your order.

MESSTEC's technical and logistical flexibility is to your benefit which is characterized by

- high vertical integration
- short lead time
- absolute reliability in deliveries
- highest quality for the production of single units through to series production
- fast technical service.

MESSTEC can provide both Electronics and Mechanics from one competent source. Our know-how comprises all processes of the electronic development and mechanical construction, the electronic and mechanical production of components as well as the complete assembly and testing. This applies to our own developed products and your contract orders.

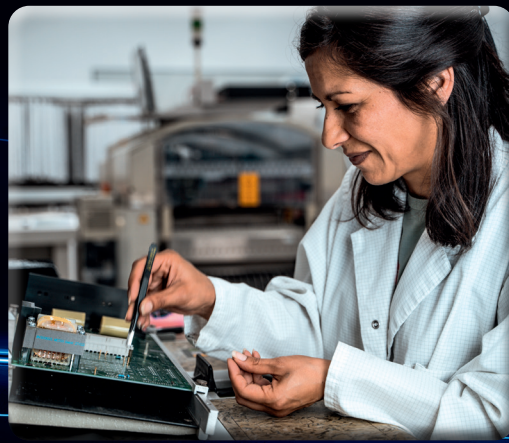


Core competences of MESSTEC Power Converter GmbH

Range of Services	Laser Driver TEC Controller	Electronics and Mechanics, Modules	Engineering Services
Development	✓		✓
Part Production	✓	✓	
Assembly	✓	✓	
Testing	✓	✓	

Flexibility is the basis for a state-of-the-art developing and manufacturing enterprise. This is also expressed in the range of goods and services which can be individually customised to your requirements. Whether you need complete products or only components for your production – you are in capable hands. We adapt our service to your requirements

without any compromises. Starting from development through assembly and testing we cover all relevant steps for the production of modules for laser power supplies as well as for the electronic and mechanical production. Of course this also includes all engineering service requirements on request.



Power Supplies and Components for Laser

MESSTEC is an important German leader of technologies for laser drivers and has more than 35 years experience in development, production and application of power supplies, TEC controllers, components for lasers and OEM laser modules. MESSTEC is a globally sought-after partner for standard products as well as for individual customised solutions.

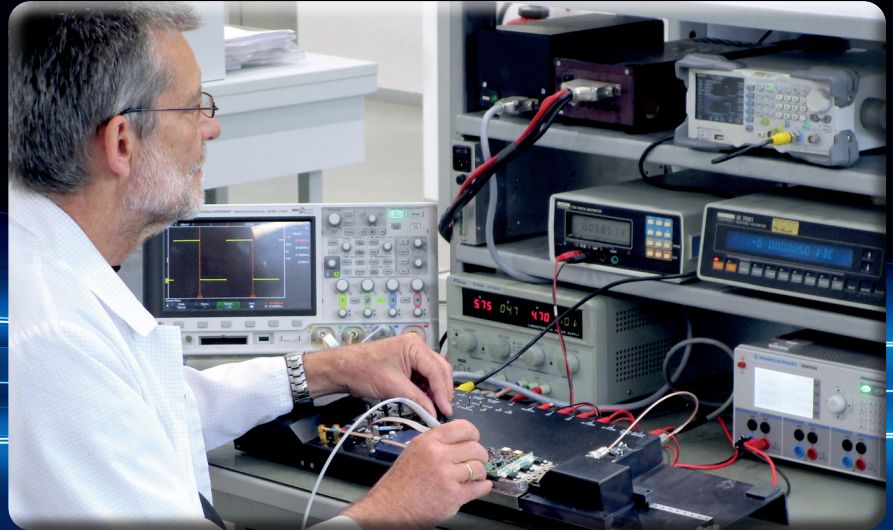
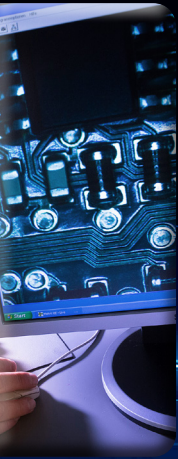


We have more than 100 different devices with technical solutions for diode pumped lasers, diode lasers and TEC controllers in our portfolio. Our comprehensive range of accessories, such as external control panels or serial interfaces, enable our customers to realise multifunctional applications.

Some general key features of our products

- ideal dynamic power supply behaviour without overshoot and with steep rising and falling edge at low current ripple
- constant output current independent from diode voltage
- high accuracy and temperature stability
- overlayable setpoint curves / pulses
- analog, parallel and / or serial interfaces, such as USB or RS 232
- no additional power line filters necessary
- integrated power factor correction
- configuration via PC or touch display

MESSTEC can offer drivers for diode currents from 100mA to 320A at diode voltages up to 150V and TEC controllers in the range from 3A to 24A at voltages up to 45V.



Laser Drivers and TEC Controllers

Many devices are based on the MESSTEC power supply topologies.



Product features Diode and TEC Driver D / DT / DTP

- CW and pulsed operation up to 200kHz (burst mode 1 MHz)
- Diode current up to 80A, diode voltage up to 49V
- integrated TEC controller with temperature control for cooling and heating



Product features High Power Driver DPD / DPDP

- CW, pulsed and burst operation up to 20kHz; rise time 1 μ s
- Diode current up to 320A, diode voltage up to 55V
- Modular configuration with air or water cooling



Product features Low Power Driver LPD

- CW, pulsed and modulated operation up to 50kHz
- Diode current up to 5A, diode voltage up to 46V



Product features Very Fast Modulators FM / VFM / MSM

- CW, pulsed and modulated operation up to 20MHz; rise time 10ns
- Diode current up to 240A, diode voltage up to 49V
- Very short rise and fall time for arbitrary current curves



Product features TEC Controller

- Precise driver for heating and cooling with very low ripple
- Output current up to 24A, output voltage up to 45V
- Temperature sensors and digital PID controller configurable



Electronic and Mechanical Production

MESSTEC produces, assembles and tests circuit boards, modules and complete devices. We utilise fully automated SMD technology with vapor phase soldering and semi-automated THT placement with wave soldering for prototypes, special circuit boards and series. Our business activities also comprise the non-cutting and cutting machining of single parts and modules.

Engineering Services

Our developments are focused on laser technologies. Our core competences are the conceptual and project design of

- laser drivers, TEC controllers, OEM laser modules
- electronic circuits, single line diagrams
- design of circuit boards
- mechanical engineering and construction

In addition to that we design layouts according to customers' requests and related mechanical components. Our service also includes the co-operation with our customers during all development stages – from the product idea through to series production.

From a single unit to mass production

Our customers for electronic and mechanical components come from various industrial areas.

Order volumes from a single unit up to mass production are our day to day business. Subsequent solder joint checks and semiautomatic visual controls with microscope work stations as well as high precision mechanical controls guarantee continued high quality in our production.

Electronic production

Within the electronic production we wind reactance coils and transformers and cast them in a vacuum process. We manufacture and adapt necessary cables and connectors according to your requirements and technical conditions.

Electro-mechanical modules and devices are assembled, mounted and wired in-house. The intermediate and final controls can be carried out according to customers' requests as tests of single components or as functional tests of complete electro-mechanical modules.



Mechanical Machining

Further strengths of MESSTEC are based in the various possibilities of the non-cutting and cutting machining of aluminum, copper, brass, steel, stainless steel, POM materials and plastics.

This includes:

Non-cutting CNC machining

- cutting
- punching, nibbling
- bending

Cutting CNC machining

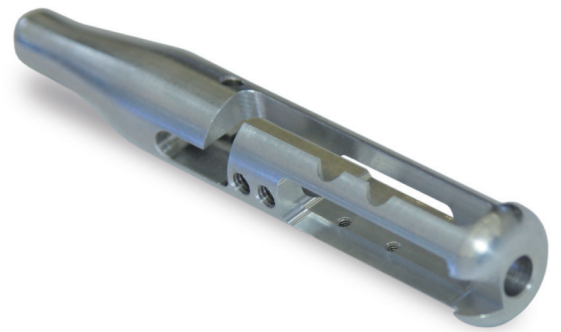
- milling
- turning
- drilling, threading

Joining technologies

- soft-soldering
- hard-soldering
- welding

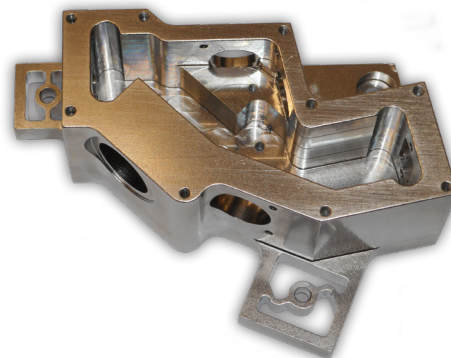
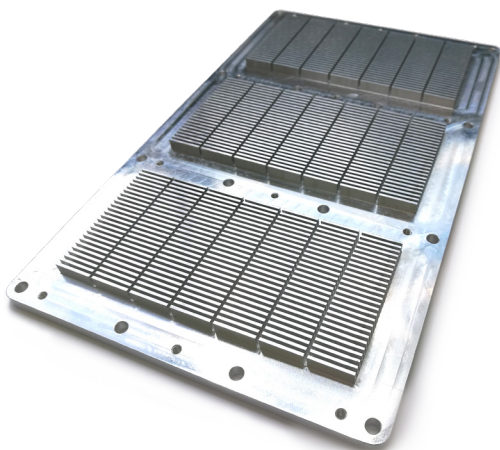
Surface finishing

- grinding
- lapping
- vibratory fine grinding



Our demand: quality

MESSTEC's in-house quality management system secures for the core process of the complete order process as well as management processes and supporting processes a permanent continuous quality.





History

For more than 45 years MESSTEC have been your experienced partner for products and services for laser technologies, for electronic and mechanical components as well as for electro-mechanical modules. The story of our success is not only by our innovative technological developments and our qualified team but also by our customers. Here are some of our milestones:

- 1976** Establishment of the engineering company Peter Moosbauer
- 1982** Start-up of the electronic and mechanical production
- 1985** Construction of new Company building
- 1986** Development of the first laser driver
- 2000** Registration of the first patent
- 2006** Reconstruction and expansion of the electronic production area
- 2012** Acquisition of MESSTEC Power Converter GmbH by Kersten Stoebe
- 2017** Acquisition and integration of Ernst Rieger Apparatebau GmbH
- 2019** Development of stand-alone TEC controller product line
- 2021** 45th Anniversary