

KISTLER

measure. analyze. innovate.



Smart Single Stations for joining operations

Single Stations for assembly and testing with integrated cutting-edge technologies from Kistler

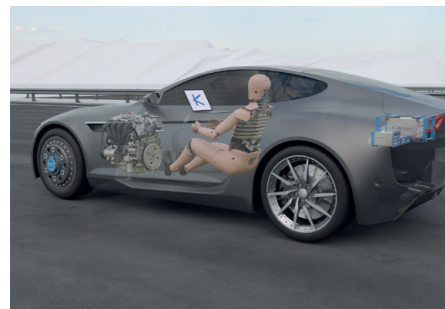
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Absolute Attention for tomorrow's world

Kistler develops solutions for challenges in measurement technology with a portfolio that comprises sensors, electronics, systems and services. We push the frontiers of physics in fields such as emission reduction, quality control, mobility and vehicle safety: our products deliver top performance to meet the standards of tomorrow's world, providing the ideal basis for Industry 4.0. This is how we pave the way for innovation and growth – for our customers, and with our customers.

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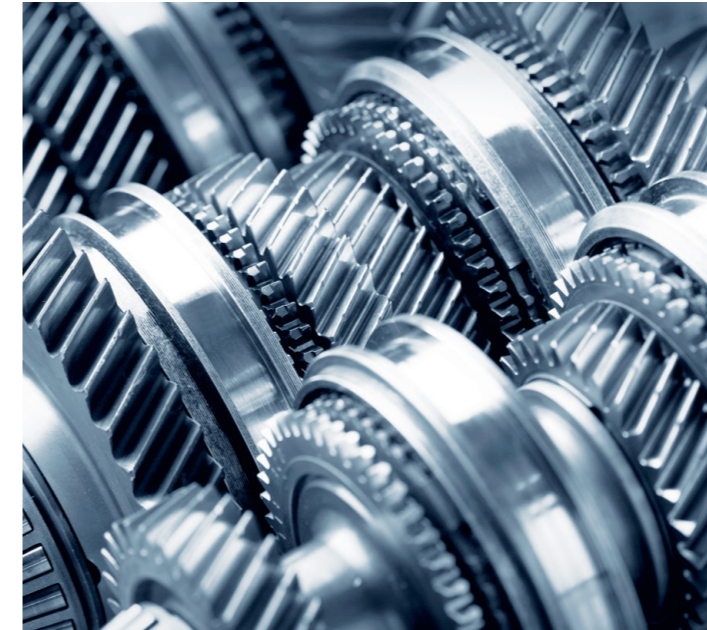
Kistler: the byword for advances in engine monitoring, vehicle safety and vehicle dynamics. Our products deliver data that plays a key part in developing efficient vehicles for tomorrow's world.



Measurement technology from Kistler ensures top performance in sport diagnostics, traffic data acquisition, cutting force analysis and many other applications where absolutely reliable measurements are required despite extreme conditions.



By supporting all the stages in networked, digitalized production, Kistler's systems maximize process efficiency and cost-effectiveness in the smart factories of the next generation.



Higher flexibility and resource optimization with Smart Single Stations for joining operations

In pressing and assembly processes, joining systems from Kistler have proven to be superior to other conventional systems. Compared with pneumatic or hydraulic solutions, electromechanical systems from Kistler offer dramatically higher efficiency, highly accurate press-fit forces, and exceptional repeatability.

All press-related applications, such as pressing, riveting, clinching, and compression, require stable systems and components to meet high-precision requirements.

Kistler Smart Single Stations for joining operations is the perfect solution for these applications. With our highly integrated and modular design, we can provide standard workstations based on joining systems, whether manual, automated C-frame, or 2- or 4-column. Our solutions are flexible, simple, and economical for all customer applications, complemented by the most professional design, consultancy, and services.

The modular design also enables our customers to select the most optimal configuration for their needs.

In addition to standalone workstations, our integrated solutions can also be easily combined with other automated, integrated applications.

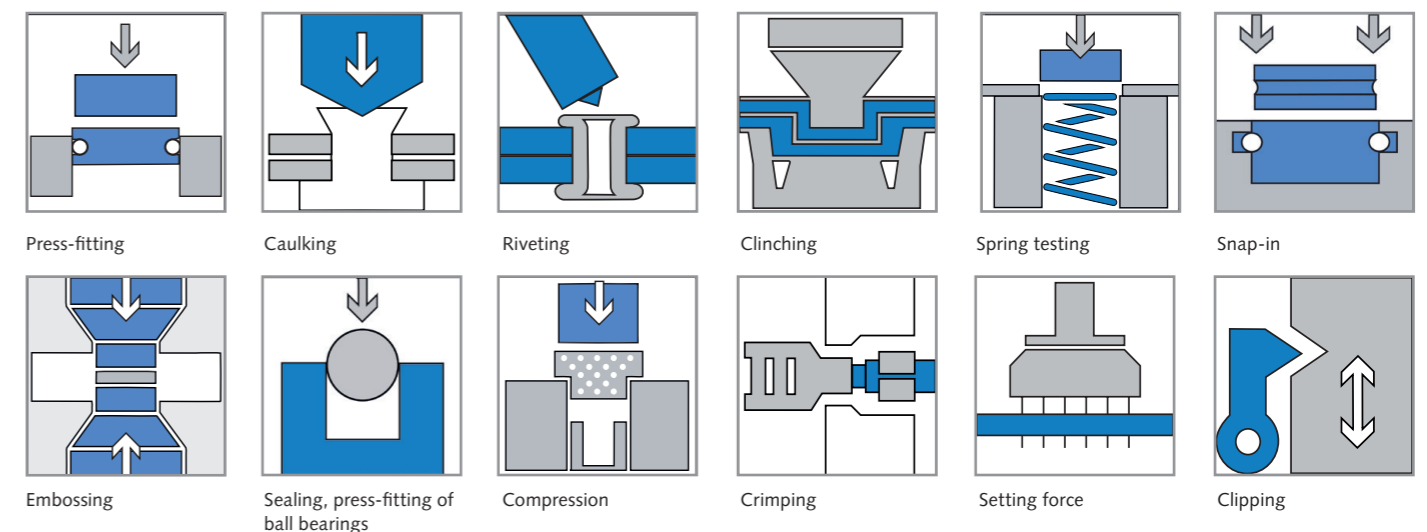
Advantages

- Maximum precision and reliability thanks to Kistler component technology
- Wide range of manufacturing and testing process
- Stations with different degrees of automation (manual, semi-automatic, full-automatic)
- Self-optimizing assembly processes
- Tailored to customer needs from application to components
- Built-in Kistler application know-how
- Feasibility studies in Kistler application centers
- Integrated quality control based on process value measurements
- 100% traceable process and quality data management
- Unified control system for all assembly and testing processes
- Minimized carbon footprint
- Global services for both systems and components

Greater economic efficiency from improved system utilization
Offering a comprehensive range of cutting-edge joining systems with a press force of up to 300 kN – from standardized compact single modules to fully customized designs – Kistler is setting new standards in the global market.

NC joining systems from Kistler allow for high-precision control of all traversing motions during assembly and product inspection. Better still, they can easily switch between different measuring ranges and measuring tasks, making it possible to use one system for a wide variety of components. This higher system utilization means lower costs in the long run.

Typical applications

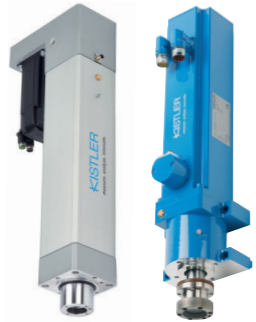


Overview of Smart Single Stations for joining operations

1 Kistler NC Joining Module

- NCFT series
- NCFH series
- NCFS series
- NCFN series
- NCFE series
- NCFR series

Note: Details in NC joining modules data sheets at www.kistler.com



2 Servo amplifier IndraDrive C

- Coordinated complete package with all components
- Control unit CSB02 NC joining module specifically parameterized
- SERCOS III connection to maXYmos NC
- Safe motion on-board (SMES, SMST2¹, SMM1¹)
- Applications up to Performance Level e (PL e) possible
- Diagnostics via Ethernet

Note: Not for NCFR
Data sheet www.kistler.com: 2180A (003-125)



4 Press module and tool

- C-frames
- 2-column
- 4-column
- Press/stamping tools
- Punching tools
- Clinching tools
- etc.



3 XY monitor for monitoring and controlling NC Joining Modules



- 128 independent programs, each with up to 10 evaluation objects using a variety of types with online and offline objects
- Integrated process control (sequencer) for maximum flexibility
- Real-time behavior through SERCOS III actuation of the servo amplifier
- On-board fieldbus interfaces for system control (PROFIBUS, PROFINET, EtherCAT, EtherNet/IP)
- Integrated curve memory for up to 5 000 curves
- Statistics and protocolling of the measurement results (Q-DAS, CSV, PDF, XML, IPM 5.0, QDA9, QWX)
- Self-monitoring and diagnosis, as well as visualization and remote control (VNC)

Data sheet www.kistler.com: 5847B (003-272)



5 Electrical control cabinet

- Control units (e.g. PLC)
- Power units
- Safety protection units
- Wire and cables

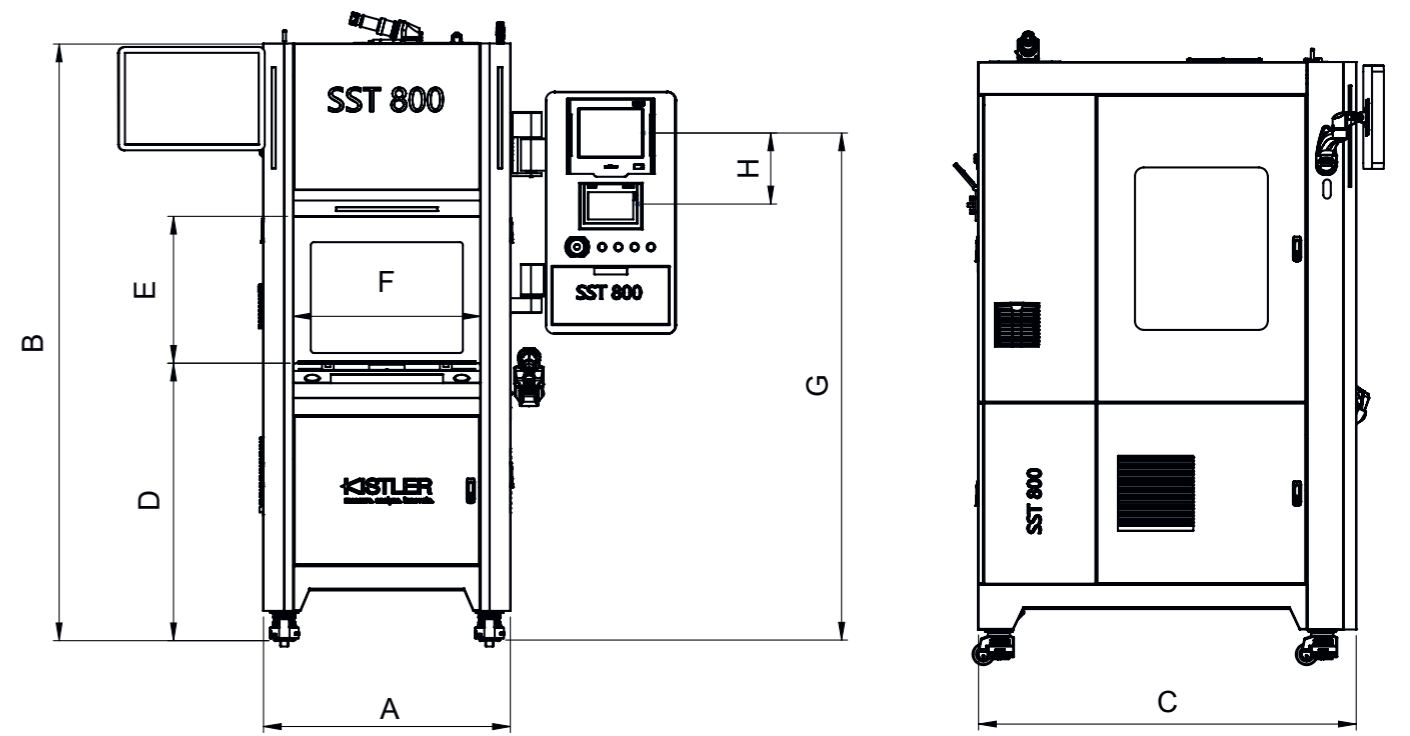
6 Flexible IPC operating workstation

- Configurable IPC
- Kistler integration software

7 Mechanical parts and accessories

- Base frames
- 2-hand safety control
- Safety light curtain or safety door
- Code scanner
- Additional sensors for
 - Stroke
 - Force
 - Pressure





Technical data

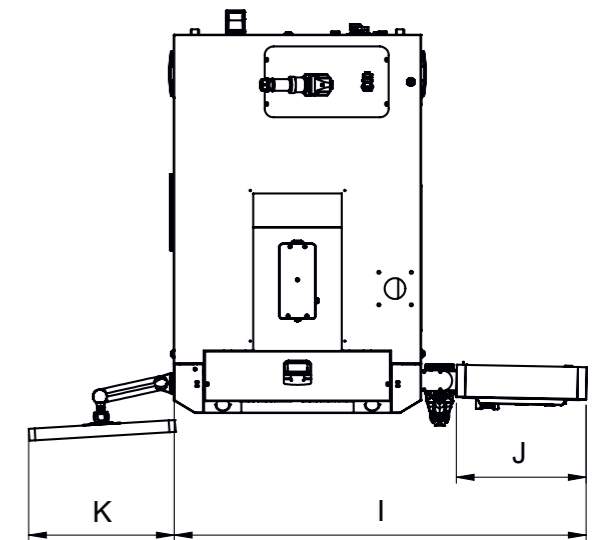
Technical data	Type	JSB-AY010-8-S	JSB-AY020-8-S	JSB-AY040-8-S	JSB-AY080-10-S
Station		SST-800-1	SST-800-1	SST-800-2	SST-1000
Dimensions	mm	1 300 x 820 x 2 000	1 300 x 820 x 2 000	1 300 x 820 x 2 000	1 500 x 1 020 x 2 000
Total height	mm	2 011	2 011	2 181	2 309
Table height	mm	870	870	870	870
Operation area	mm	640 x 530	640 x 530	640 x 530	840 x 530
Weight	kg	650	650	650	750

Joining system	Type	2162A NCFE 10	2162A NCFE 20	2162A NCFE 40	2162A NCFE 80
Nominal joining force	kN	10	20	40	80
Length of stroke nominal joining force 10 ... 80 kN	mm	350	350	350	350
Practical repeatability ²⁾	mm	0.01	0.01	0.01	0.01
Max. tool weight w/o holding brake ¹⁾	kg	10	10	15	15
Max. tool weight with holding brake ¹⁾	kg	50	50	100	100
Max. movement speed	mm/s	250	250	250	200
Temperature range	°C	10-40	10-40	10-40	10-40
Protection class		IP54	IP54	IP54	IP54
Evaluation unit ³⁾		maXYmos NC Type 5847B...	maXYmos NC Type 5847B...	maXYmos NC Type 5847B...	maXYmos NC Type 5847B...

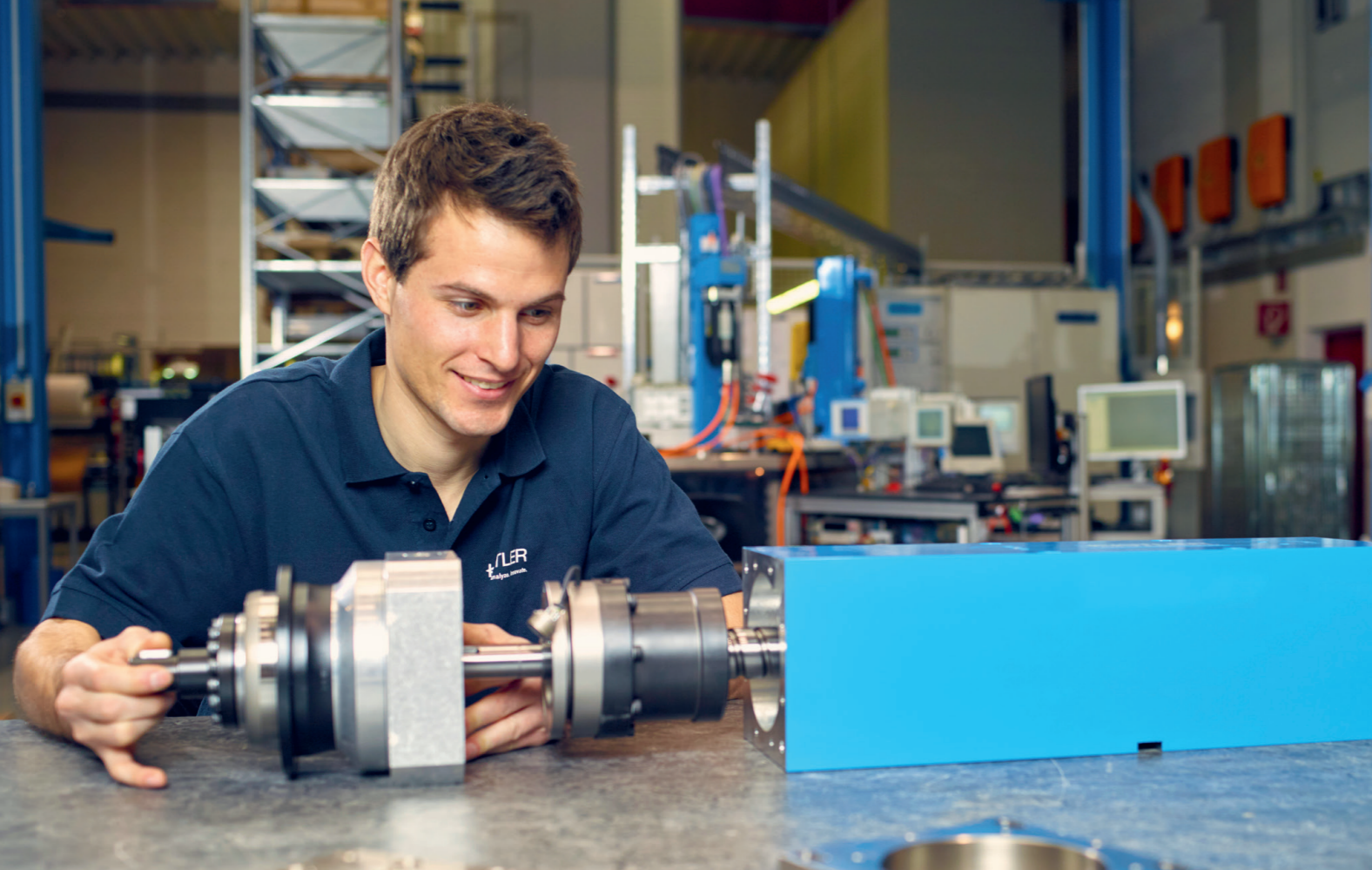
¹⁾ Possible radial forces must be considered independent of the mounting. Permissible tool weight may have to be reduced for manual feed.

²⁾ At thermal steady-state

³⁾ Evaluation unit maXYmos NC Type 5847B... see data sheet 003-272



Dimensions [mm]	A	B	C	D	E	F	G	H	I	J	K
Optional A	840	2 050	1 300	950	520	640	1 600	240	1 380	440	450
Optional B	1 040	2 050	1 300	950	520	840	1 600	240	1 380	440	450



From the competent consultation through the installation to the fast supply of spare parts: Kistler is present worldwide with comprehensive service and training offerings

Kistler service: customized solutions from A–Z

Kistler offers sales and service wherever automated production processes are applied.

In addition to sensors and systems, Kistler offers a variety of services – from the competent consultation to the installation to the fast, worldwide supply of spare parts. An overview of our service offering can be found under www.kistler.com. Please contact our local distribution partners for detailed information about our training offerings (see p. 11).

Kistler service at a glance

- Consultation
- Support during the commissioning of systems
- Process optimization
- Periodic onsite calibration of sensors
- Education and training events
- Development services

At our customers' service across the globe

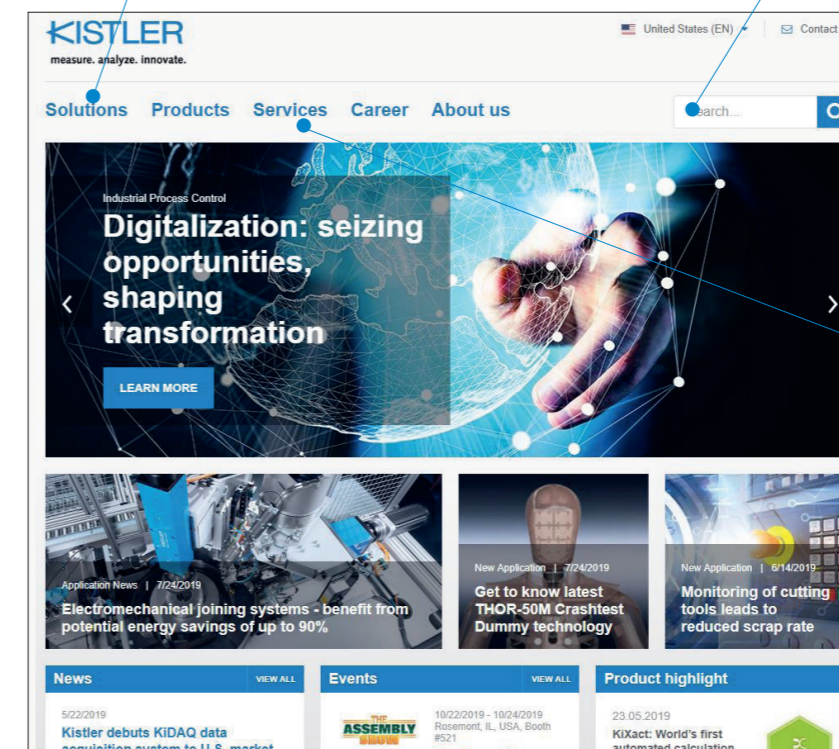
Thanks to Kistler's global sales and service network, we are always close to our customers. Approximately 2 200 employees at more than 60 locations are dedicated to the development of new measurement solutions and offer customized on-site support of individual applications.



Our representatives are here to help
Whether you would like a consultation or require support during installation – our website provides the contact information for your local representative.



Data sheets and documents
Use our Online Search to download data sheets, brochures or CAD data.



Education and training events
Education and training courses, during which our sensors and measuring systems are explained by Kistler experts, are the most efficient way for you to obtain the required user knowledge.

KISTLER
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Force Sensors
Support Manufacturing Processes
From Quality and Motion Cuts

Process Monitoring Systems
enables 4T Machines for 100% Quality
in Production, Assembly and Product Testing

NC Joining Systems
Solutions for Strong Efficient and Highly Flexible Press Fit
and Spring Processes

Find out more about our applications:
www.kistler.com/solutions

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