STÖGER AUTOMATION

Our lightweight package

AUTOMATED SCREWDRIVING AND FEEDING TECHNOLOGY


STÖGER
AUTOMATION
Masch.-Nr.: 8322
Seriennr.: SEH000459

Inhalt

Our solutions for your automated process

STÖGER Blind rivet nut setting system (BMS)

For blind rivet nuts and blind rivet studs

Process reliable, powerful and economical – the compact blind rivet nut setting system including force-displacement measurement assembles blind rivet nuts and blind rivet studs fully automatically in cycle times of 5-9 seconds. The bulk material is separated and fed to the setting unit in the correct position via the feed system with flexible feed hose.

The process can be monitored 100 %. Whether in transfer systems, turntable systems, on positioning systems or robot systems, the BMS can be used in almost unlimited ways. The tool-free changing of the tension screw in 10 seconds also guarantees minimum downtimes and maximum use.

Benefits

+ Checking of the functionality of the thread during spindling on and off, defectively detected rivets are automatically ejected and replaced
+ STÖGER positioning compensation ensures exact positioning in the workpiece, patented 6-edge finding method
+ 100 % success control thanks to force sensor
+ Commercially available standard screw as drawing tool, automatic breakage detection, tool-free changing of the drawing tool possible in 10 seconds

Technical data

	BMS 6252	BMS 6600
Dimension L x W x D	860 x 180 x 240	1180 x 215
Pulling force	25 kN	30 kN
Weight	32 kg	65 kg
Cycle time	5 - 9 seconds	8 - 12 seconds
Size blind rivet nut	M5 - M14	M8 - M14
Measurable sizes	Setting depth, force	Setting depth, force


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STÖGER Flow Drill System (FDS)

For flow drilling screws

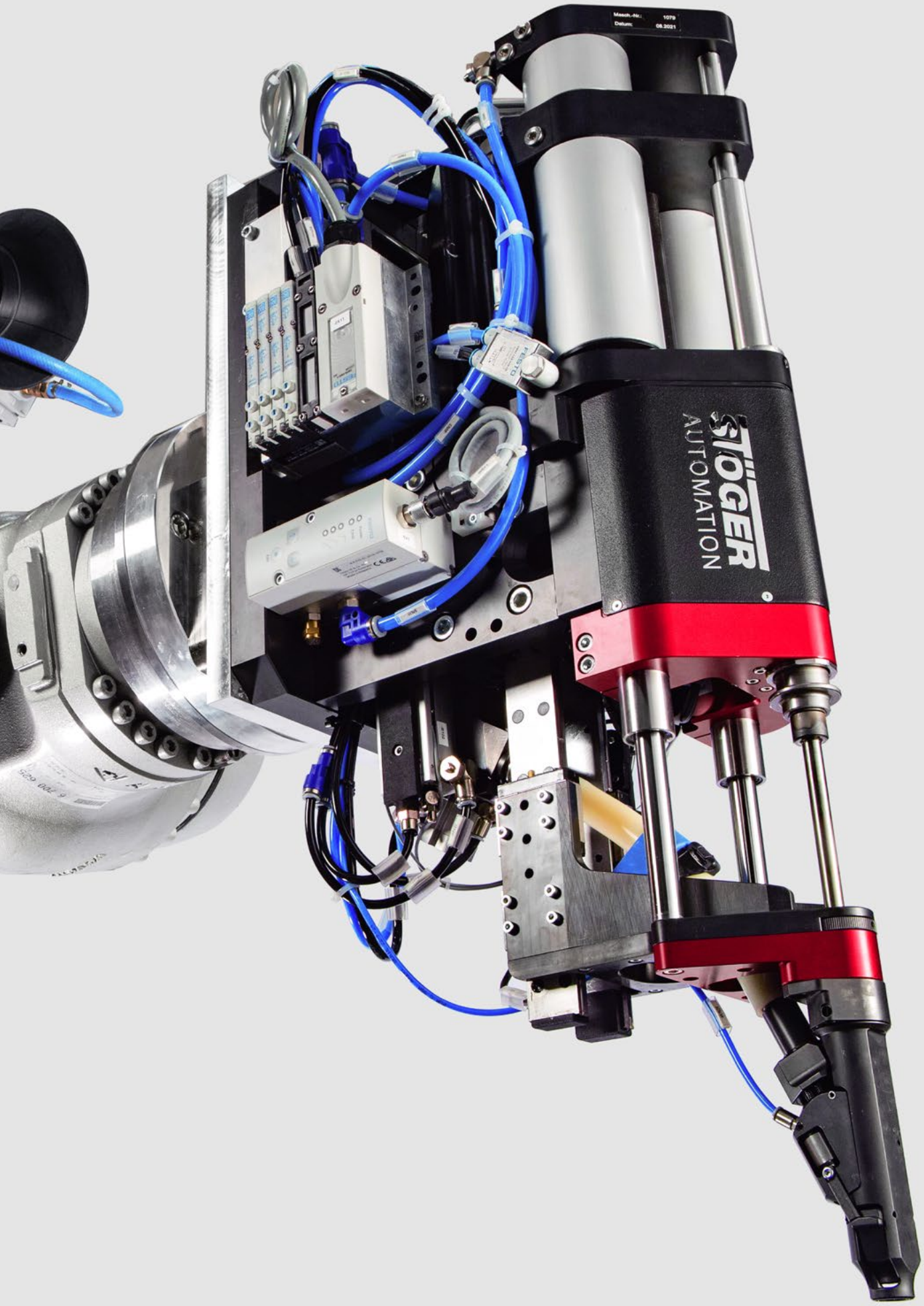
Developed for automotive production, the highly efficient FDS - stationary or on robots - connects lightweight materials with a thickness of up to 5 mm each. Thanks to the patented STÖGER Angle Offset Compensation (AOC), angular misalignment at the tool centre point is prevented and, due to the drive positioned directly above the screwdriving tool, the axial movement and thus the force is introduced centrally via the screw without lever action. High dynamics due to a low weight and the compact design allow optimal access to difficult screwdriving locations. Whether direct or magazine feed with automatic or manual filling, with both variants the screw is fed with the screw head first and only turned shortly before the feed head - for maximum material protection.

Benefits

- \+ Patented STÖGER Angle Offset Compensation (AOC): Prevents angular misalignment at the tool centre point
- \+ Developed for automated battery bolting
- \+ Compact design optimal for limited screwdriving locations
- \+ Digital monitoring and documentation of all screwdriving parameters
- \+ Universal robot solution
- \+ High dynamics due to low weight
- \+ Automatic, screw-protecting feeding system
- \+ Tool-free change of the screwdriving tool in less than 10 seconds

Technical data

Dimension L x W x H	750 x 320 x 280
Contact pressure tool	3300 N
Contact pressure downholder	1200 N
Speed	6000 min-1
Torque	15 Nm
Weight	34 kg
Size Flowdrill screw	M4 - M6
Measurable sizes	Screw-in depth, torque, angle of rotation


Mech.-Nr.: 1079
Datum: 08.2021
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STÖGER wire thread screwing system (DGS)

For 100 % correct feeding and screwing

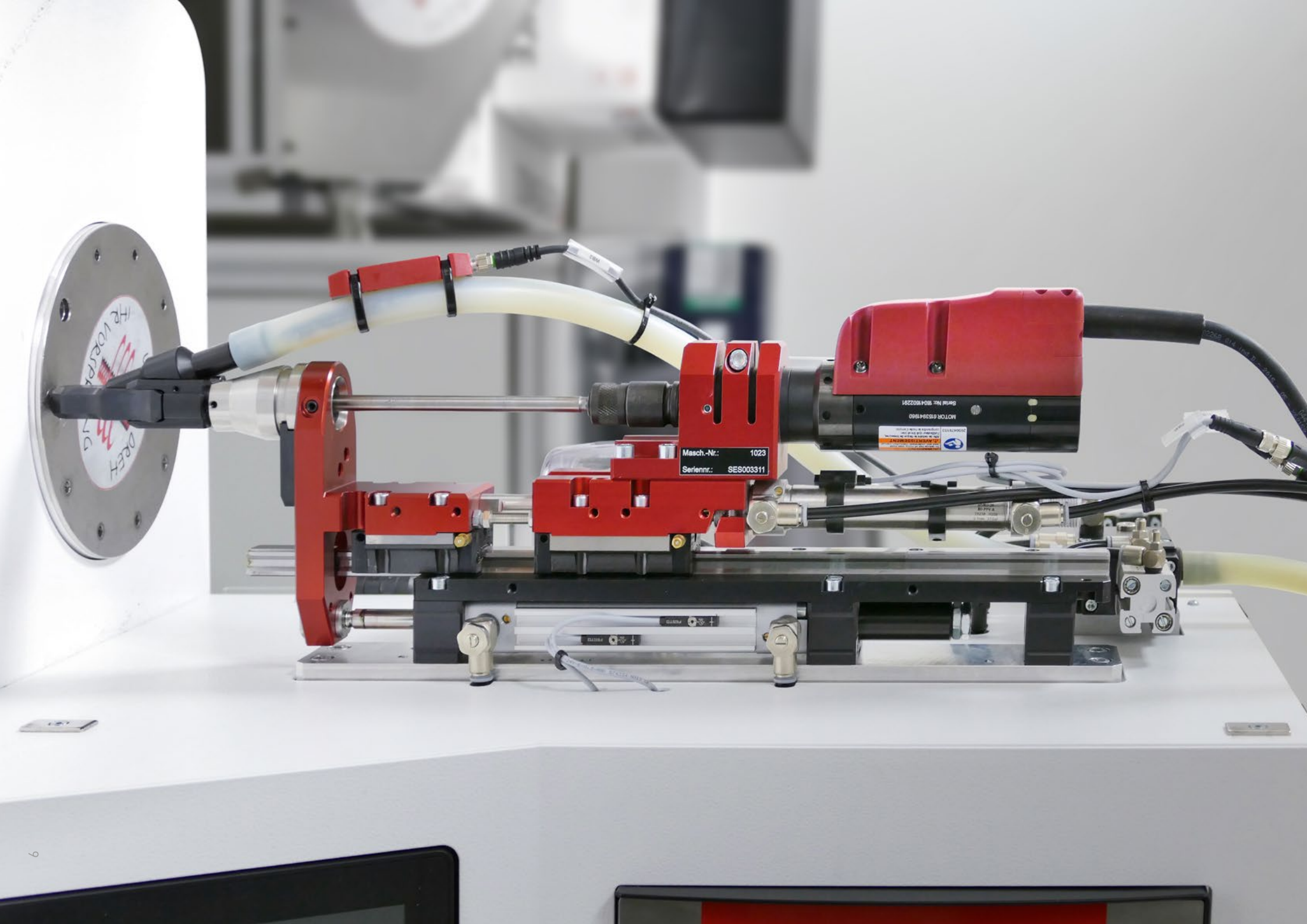
When high cycle times and process reliability are required, the STÖGER wire thread screwing system (DGS) is the right choice. The torque, angle of rotation and tightening depth control takes over the quality guarantee and each tightening process is completed in 3-5 seconds. The use of a torque sensor provides reliable data for digital process monitoring, which can be collected, fed into the STÖGER Monitoring System and evaluated. Specially designed for series production, the wire thread inserts are fed and screwed in quickly, reliably and fully automatically as bulk material. Thanks to the flexible hose on the feed and an integrated overstroke, even hard-to-reach insert locations with interfering edges can be reached without any problems.

Benefits

- \+ 100 % correct feeding thanks to STÖGER technology
- \+ High process reliability thanks to torque, angle of rotation and turning depth control
- \+ Highly accurate due to the use of a torque sensor
- \+ High cycle rates possible: each screwdriving process completed in 3-5 seconds
- \+ Designed to reach every screw location reach
- \+ For all common thread sizes and wire thread inserts
- \+ Cost-effective fully automatic feeding of bulk material
- \+ Easy to maintain due to quick release fasteners

Technical data

Dimension L x W x D	800 x 200 x 220
Weight	15 kg
Cycle time	3 - 5 seconds
Size Wire thread insert	M4 - M14
Measurable sizes	Screw-in depth, torque, angle of rotation


Masch.-Nr.: 1023
Seriennr.: SES003311

STÖGER Spatz

Pick & Place screwdriving robot with automatic tool change

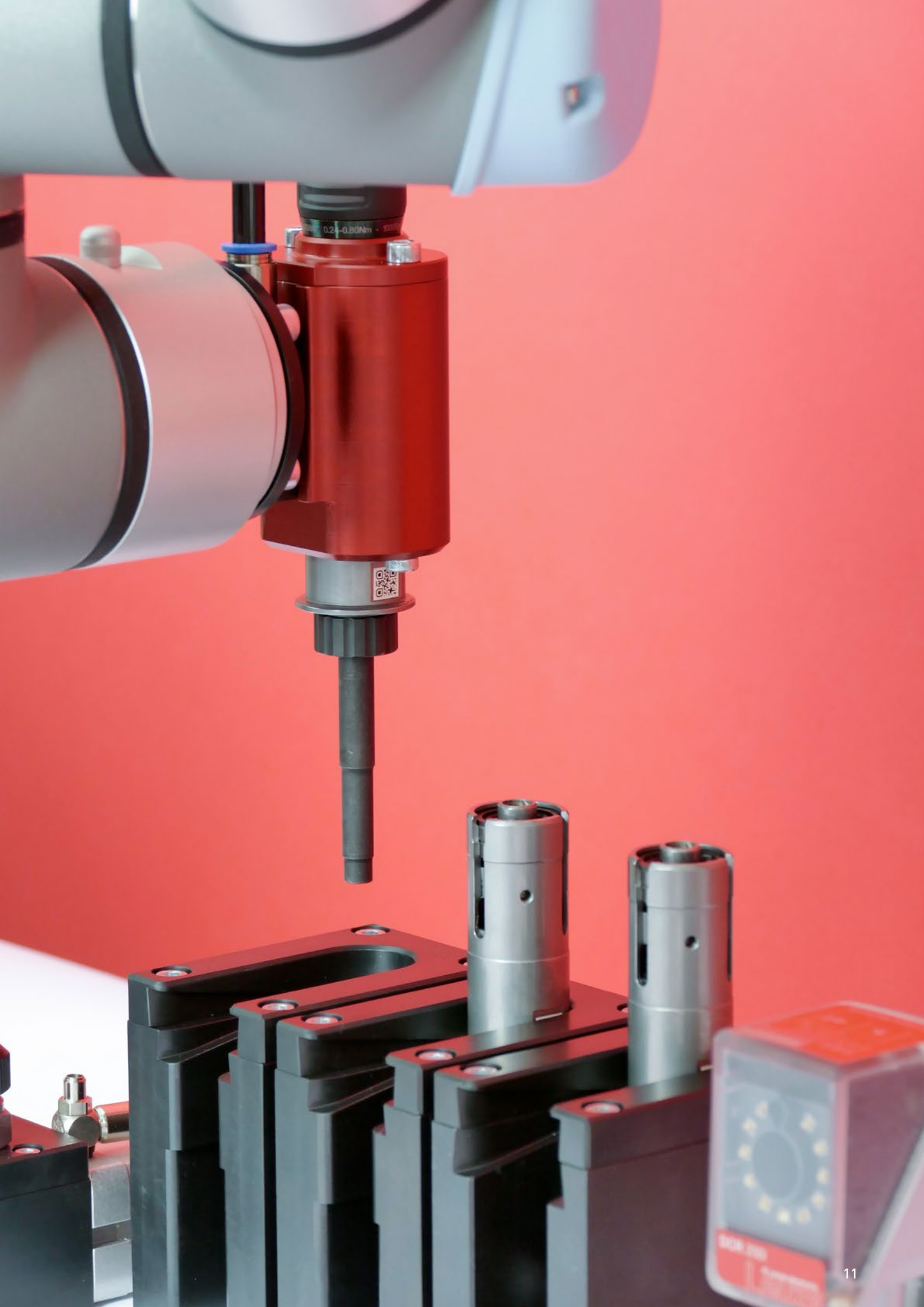
One device as a 360° solution. The Spatz combines the multitude of different screwdriving applications with just one tool. Thanks to the intelligent control, it automatically and independently changes the tool, grips and positions the parts to be processed. No matter whether it is picking up and assembling components, screwing in different screws, setting balls or pins. With 15 different screwdriving programmes in the standard version, it opens up completely new possibilities in the automation industry. The Spatz can be operated on different robots and axis systems. Extensions and changes to the system layout are conveniently adapted via an intuitive user interface.

Benefits

+ One system for several work steps
+ A wide range of tools can be adapted
+ Quality assurance through digital documentation of the screwdriving results
+ Certified UR+ product
+ Simple system expansion
+ Compatible with different robots and axis systems
+ Simple programme changes through certified UR-Cap software
+ Modular system with flexible system layout

Technical data

Type	Sparrow 04	Spatz 30
Dimension L x W x D	380 x 64 x 64	500 x 80 x 80
Torque	0.05 - 4 Nm	0.2 - 30 Nm
Measurable sizes	Screw-in depth, torque, angle of rotation, time	Screw-in depth, torque, angle of rotation, time
Weight	from 1 kg	from 2 kg
Number of different screwing tools	Any	Any
Other tools	e.g. finger gripper, vacuum gripper, punch	e.g. finger gripper, vacuum gripper, punch



Automatic feeding units

Bowl feeder

Robust and efficient. Thanks to its precise "micro-throw technology", not only screws but almost all geometries such as nuts, rivets, rings, caps or pins can be fed in the correct position and separated with our bowl feeder. The transport speed can be adjusted at any time via the integrated frequency control unit. In addition, extras such as rail type, content level control or measuring devices enable sorting and orientation individually adapted to the respective fastening element. Another plus point: the service life. Since all parts that come into contact with the connecting elements are made of hardened tool steel throughout, the bowl feeder is virtually indestructible and unsurpassed in reliability.

Benefits

- + For all sizes and geometries
- + Coated sorting bowl for high wear resistance and smooth running
- + Feed control over the entire process by means of sensors
- + Removable cover of the sorting baffle for maintenance without tools
- + High output rate
- + Operation with 100 - 240 V (50 / 60 Hz) without conversion

Technical data

Type	Bowl feeder		
Model	ZSE 1800	ZSE 2600	ZSE 4000
Screw size	M2 - M4	M3 - M6	M6 - M14
Nut size		M4 - M6	M6 - M12
Filling volume (litres)	0,4	1	3
Application rate	up to 60 pcs/min	up to 60 pcs/min	up to 60 pcs/min
Sound level reading	< 68 dB(A)	< 68 dB(A)	< 70 dB(A)
Air consumption (litres / cycle)	10 to 20	10 to 20	20 to 50
Dimensions (W x D x H)	325 x 300 x 320 mm	470 x 390 x 370 mm	750 x 550 x 430 mm
Weight (kg)	23	37	90

Automatic feeding units

Step feeder

When it comes to technical cleanliness in feeding, the step feeder from STÖGER AUTOMATION is the first choice. Here, feeding takes place on the basis of the proven conveying principle and sorting in the correct position takes place on the sorting section. However, since vibration only occurs on the sorting line and conveying is only active when the sensor signals the need for screws, the connecting elements are particularly protected and there is significantly less friction. This results in fewer particles and coated screws can also be fed without any problems. In combination with a particle sluice, the step feeder from STÖGER AUTOMATION is the optimal solution when a high degree of technical cleanliness is required in the application.

Benefits

- \+ Screw-protecting for almost all geometries
- \+ Sorting out of out-of-size or deformed screws and foreign bodies
- \+ High output rates
- \+ Removable cover of the sorting baffle for maintenance without tools
- \+ Compensation of different screw batches by adjusting the sorting device
- \+ Low noise emission
- \+ Operation with 100 - 240 V (50 / 60 Hz) without conversion
- \+ UL-approved components according to DIN VDE

Technical data

Type	Step feeder	
Model	STF 8010	STF 9020
Screw size	M3 - M6	bis M10
Nut size	M3 - M8	bis M14
Filling volume (litres)	1	10
Application rate	up to 60 pcs/min	up to 30 pcs/min
Sound level reading	< 60 dB(A)	< 60 dB(A)
Air consumption (litres / cycle)	10 to 20	20 to 50
Dimensions (W x D x H)	450 x 420 x 375 mm	900 x 560 x 1000 mm
Weight (kg)	35	155

Stöger Monitoring System (SMS)

For targeted and efficient process monitoring

With the intelligent monitoring system, you not only control all STÖGER devices within an automation process reliably and efficiently, you can also evaluate, record and save all process-related data at any time. In this way, the process history can be displayed quickly and easily and projects can be mapped completely digitally. This offers enormous optimisation potential for future planning. Furthermore, thanks to the possibility of external signal processing and the individual expandable and programmable inputs and outputs, the monitoring is versatile. In addition, the system is easy and intuitive to operate via a web browser.

Benefits

- \+ Simple and intuitive operation via web browser
- \+ Acquisition and storage of process-related data in real time
- \+ High optimisation potential through digital analysis
- \+ Possibility of external signal processing
- \+ Intelligent, easy-to-understand trouble-shooting
- \+ Graphical representation of the joining process (force-displacement measurement)
- \+ Possibility of remote maintenance

Technical data

Software	
Results archive	100,000 results
Process curves (e.g. screwing curves)	10,000 curves
Parameter change and alarm archive	14 days
Data backup	USB, SMB network drive
Recording and analysis of signals for process optimisation	16 signals per minute
Switchable between three languages	EN, DE, national language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Stöger Monitoring System
23.05.2022
15:22:20
Status
Statistik
Kurve
Protokoll
Overview
Spindel 1
Spindel 2
Spindel 3
Spindel 4
Programm 2
Tighten 4.1 s
Start
Pause
Stop
Betriebsart ok
Programm-Nummer ok
Programm ok
Programm ok für Spindel
Ladeeinrichtung Grundstellung
Ladeeinrichtung geladen
Spindel Grundstellung
Spindel Beladung ok
Startbereit
Programm gestartet
Programm beendet
Start zurückgesetzt
Gesamtergebnis
Prozess 2 Tighten to Position
Drehmoment
Position 46.6 mm
Winkel
Zeit 3.1 s
Stufe 1
Prozess 2 Tighten to Position
Drehmoment
Position 46.6 mm
Winkel
Zeit 3.1 s


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