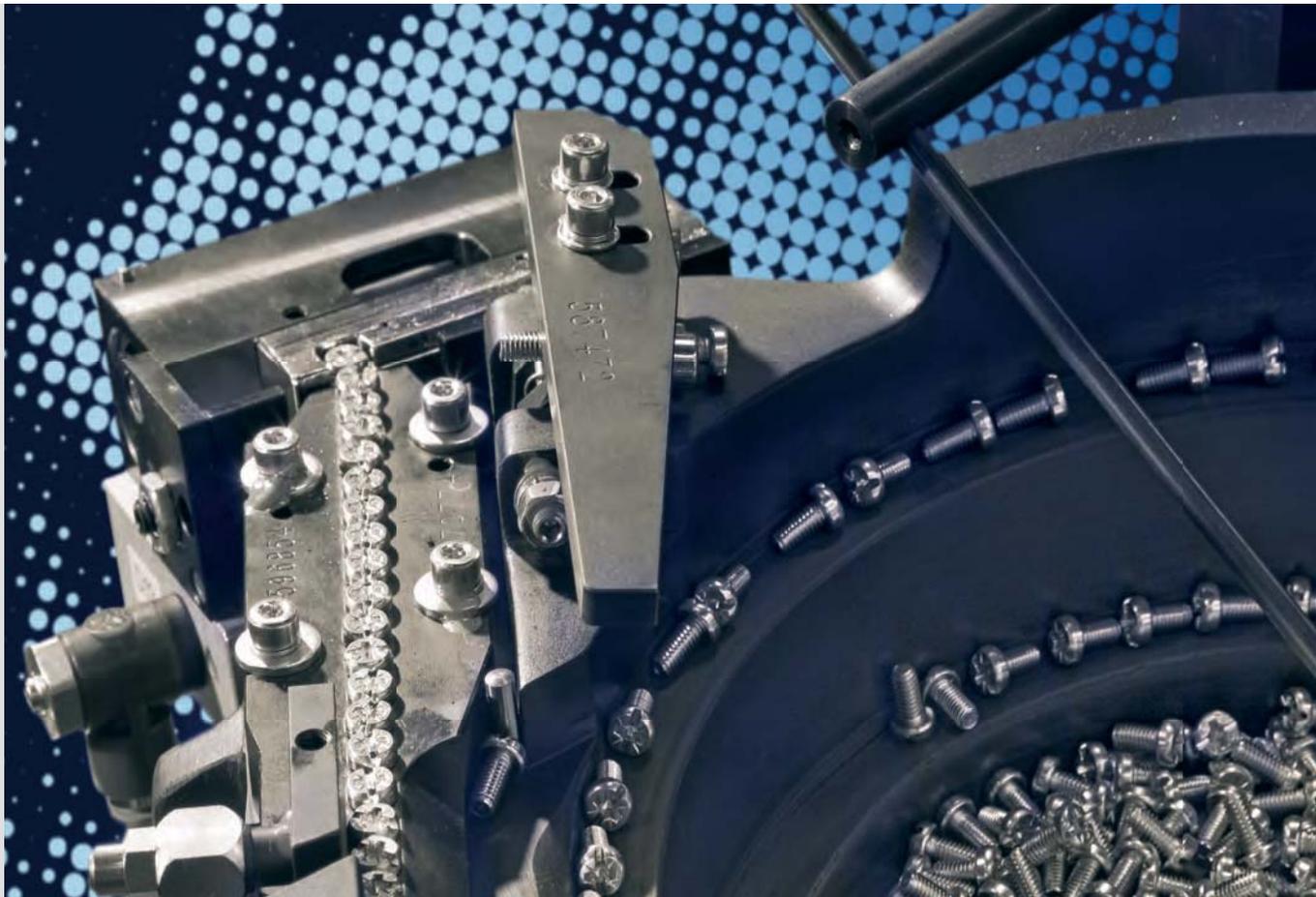




Technology that connects



Feed Technology ZEB/ZEL

Vibratory bowl feeder, step feeder, accessories

Vibratory bowl feeder



Vibratory bowl feeder

For small parts and fasteners the Weber bowl feeder represents the optimal solution in terms of adaptation, part size, flow rate, reliability and operating efficiency. Removable sound enclosure covers guarantee low noise emissions and rapid access to the unit. Select feeder bowl materials (plastic and aluminum), standard geometries and special inside coatings prevent the material being conveyed from damage, reduce noise generation and guarantee a long service life. "Intelligent" feeder vibration controls keep the conveyor in optimal working order and enable demand-oriented control.

Process:

- Fasteners are poured into the bowl as bulk material and set in upward motion by the mechanical vibration of the bowl (microthrow principle).
- Sorting and separating the material being conveyed at the bowl exit via proven Weber technology.

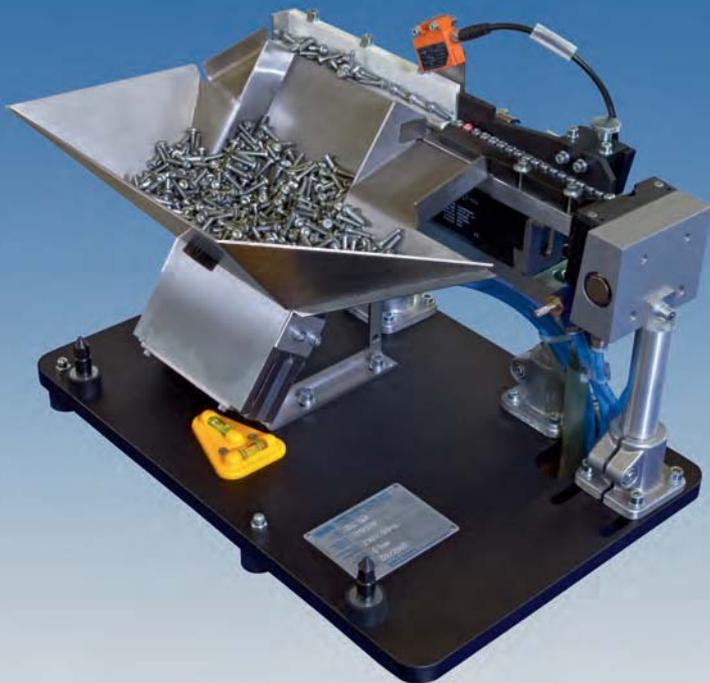
Technical data:

	Screws			Nuts			Pins		Dimensions			
	Head diameter	Thread	Overall length	Across flats	Thread	Height	Diameter	Length	Width	Depth	Height	Weight
ZEB240 (for shaft- and head-heavy screws, nuts, special components, ...)	2,5 – 12,5	M2 – M6	up to 50	up to 13	up to M8	up to 9,5	up to 13	up to 55	460	290	400 with SEC	ca. 29 kg with SEC
ZEB360 (for shaft- and head-heavy screws, nuts, special components, ...)	6 – 25	M4 – M16	up to 80	up to 17	up to M10	up to 9,5	up to 20	up to 80	597	495	550 with SEC	ca. 79 kg with SEC

SEC = sound enclosure cover; dimensions in mm; technical changes reserved or after agreement

The WEBER step feeder

The gentle, quiet solution



Process:

Fasteners are poured into the bowl as bulk material. Two lifting steps transfer the parts to the exit tracks. The parts are aligned with this linear feeder, separated via an escapement and fed into the screwdriving unit.

Features:

- _ Stainless steel bowl
- _ Hardened tool steel sliders
- _ Fasteners are not moved needlessly
- _ Minor susceptibility to dirt accumulation
- _ Ideal for parts with coating, enamel or sensitive surfaces
- _ High output
(e.g. 5000 parts/hour for an M4x30 screw)
- _ Low-vibration exit track, minor vibrations, low noise level
- _ Suitable for screws, nuts, bolts, ...

Technical data:

	Screws			Nuts			Pins		Dimensions			
	Head diameter	Thread	Overall length	Across flats	Thread	Height	Diameter	Length	Width	Depth	Height	Weight
ZEL 240 (for shaft- and head-heavy screws, nuts, special components, ...)	2,5 – 12,5	M2 – M6	up to 35	up to 13	up to M8	up to 9,5	up to 13	up to 50	460	290	400 with SEC	ca. 36 kg with SEC
ZEL 360 (for shaft- and head-heavy screws, nuts, special components, ...)	6 – 25	M4 – M16	up to 80	up to 17	up to M10	up to 9,5	up to 20	up to 70	597	495	550 with SEC	ca. 75 kg with SEC

SEC = sound enclosure cover; dimensions in mm; technical changes reserved or after agreement

Sorting



Sorting

Your hassle-free feed system is based on perfection in sortation. Our tracks are hardened and ground as a matter of course. Having delivered over 20,000 screw and assembly systems with automatic feed we know what we're talking about.



Detail: exit track with hinged cover tail for rapid fault clearance



Sorting track

For material to be conveyed having an adverse head diameter to shaft/overall length ratio



Standardization

Thanks to our sorting and separating systems' modular assembly we're able to process a variety of different fasteners with little effort: screws, nuts, rivets, washers, (headless) pins, caps, etc.



Linear feeder

As a buffer line it evens out irregularities while the parts are being conveyed and during separation.

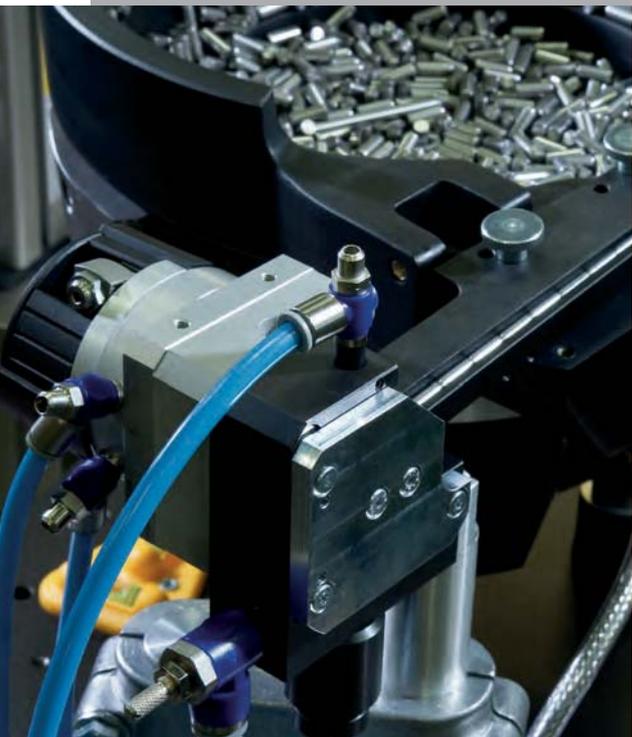
A min./max. controller prevents the material being conveyed from damage and stops noise emission. Malfunctions in the conveyor section are identified early on.

Separating



Escapement

It ensures that the previously sorted fasteners are capable of being inserted into the feed tube. Here, the feeding of the fasteners into the escapement, the position of the actuator and the presence of the fasteners in the feed tube can be detected by means of sensors.



Swivel escapement

Our swivel escapement was specially designed for parts with a square cross-section like head-heavy screws and nuts. Not only does it assure a reliable separation, but the correctly positioned transfer too. Shaft-heavy screws are conveyed accurately by head and shaft. This is the only means by which to achieve trouble-free separation.

Controlling and storing



Monitoring sensors

Only the right choice of sensors and controllers will connect the separate components to a fully automatic WEBER feed system. Deviations at the outlet or in the parts are recognized immediately, malfunctions are indicated early on and their impact is minimized as a result.

SOR3

The SOR series control units are microprocessor-controlled units for adjusting the conveying capacity of our feeders. The feeder's smooth running performance results thanks to the sinusoidal output signal. The optimal vibration frequency and amplitude are detected at system startup, adjusted at the display and secured by an access code.

C10S and C15S

The intelligent C10S and C15S control units control and monitor our feed systems and take on additional functions like the control of WEBER hand and stationary screwdrivers in the course of standardized tasks.

Means of control

- _ at the hopper (feeder level control)
- _ at the step and vibratory bowl feeder (refill time via feeder level control)
- _ at the linear feeder (min./max. monitoring)
- _ at the escapement unit (parts inlet and actuator's position indicator)
- _ at the distributor (actuator's position indicator and fastener's presence)
- _ at the feed tube (fastener's presence)
- _ at the front of the screwdriving head assembly (fastener's presence)
- _ at the pusher device (fastener's presence)

Hopper

The hopper is the storage repository in automatic assembly. Personnel-intensive checking and refilling is reduced, even unmanned shifts are possible. By using hoppers we ensure the uniformly ideal fill quantity in our feed systems. This prevents the equipment and the material being conveyed from damage. Heavy bulk material can also be conveyed via the sliding hopper without any difficulty.



Technical data:

			Dimensions			
	Vorratsvolumen	Overall length	Width	Depth	Height	Weight
SB10 (for shaft- and head-heavy screws, nuts, special components, ...)	10 Liter/15 kg	up to 30	470	180	300	10 kg
SB20 (for shaft- and head-heavy screws, nuts, special components, ...)	20 Liter/30 kg	up to 80	670	250	380	20 kg

dimensions in mm; technical changes reserved or after agreement

Accessories



Basic frames and distributors

Our basic frames guarantee the WEBER feed systems a solid footing. Control units, distributors, pneumatic components and hopper systems can be easily secured to them. The distributors serve to distribute the fasteners to a number of WEBER units (feeders to screwdriving and insertion spindles).



Special versions

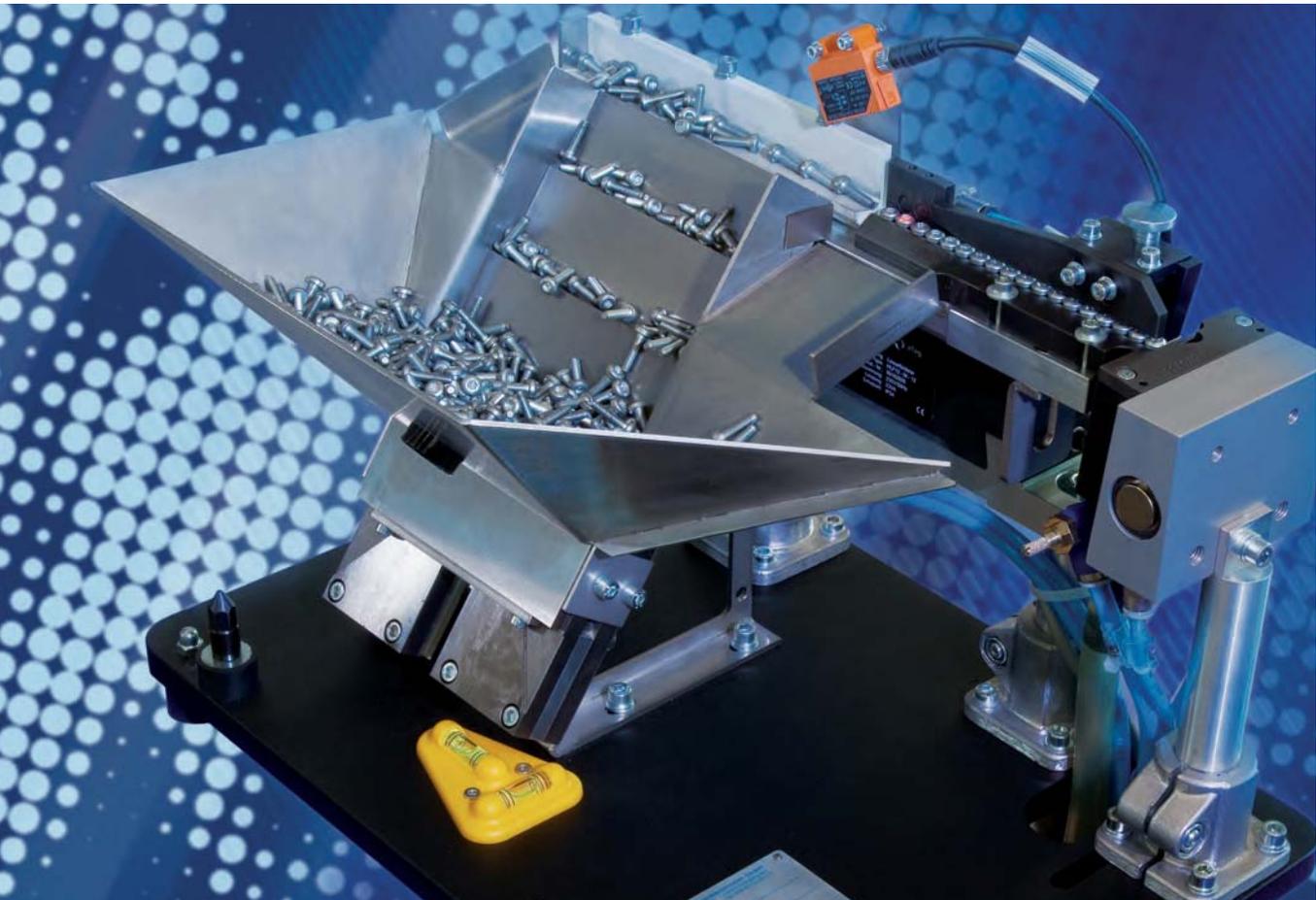
Our modules can be adapted to turnkey systems for more complex tasks.

Feed tubes

The most intricate parts often have to be conveyed over broad distances. The flexible feed tube makes this possible. There are many WEBER profiled and round feed tubes for this purpose. WEBER was the first to convey nuts in profiled feed tubes. Over 50 years of experience provide the assurance to also apply this principle to other parts.



Technology that connects



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