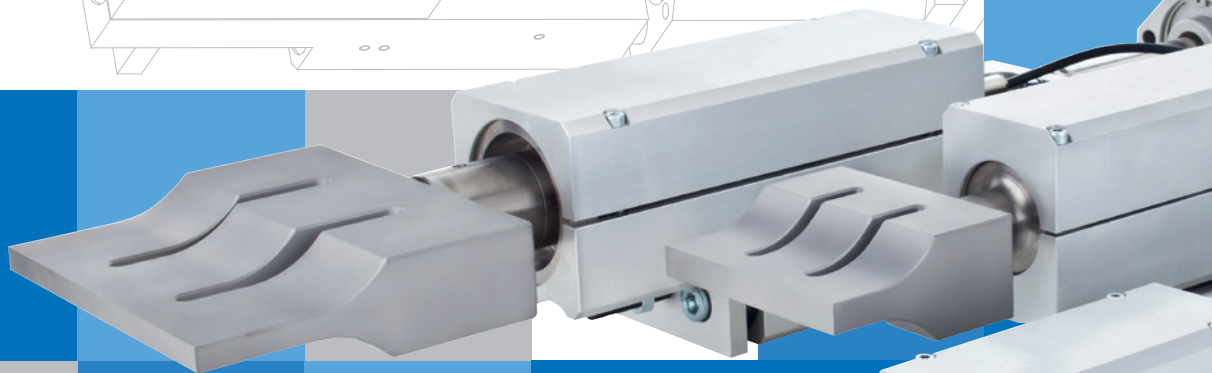
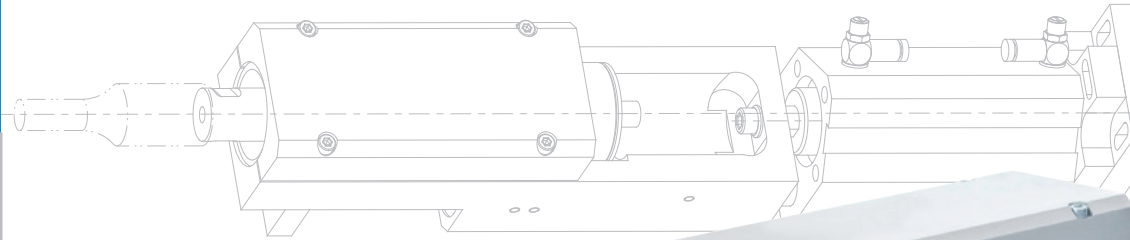


Feed units

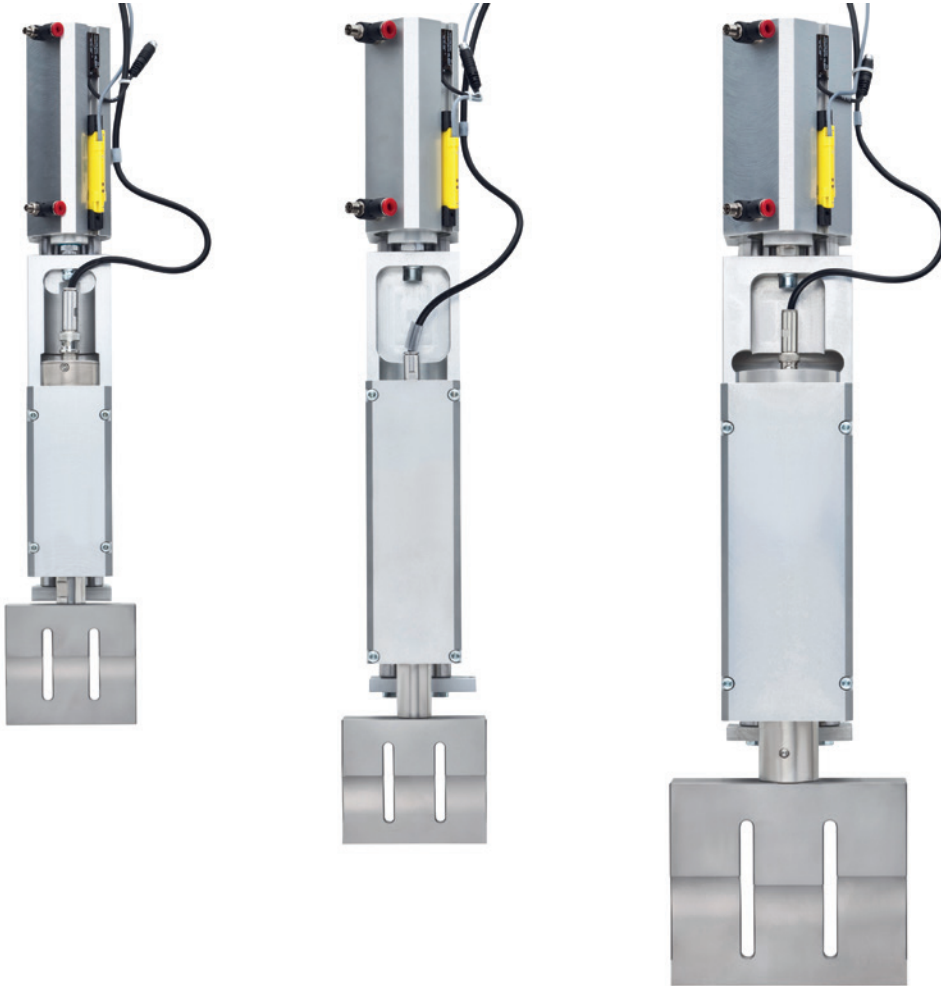
Type VE 35, VE 30 and VE 20

Special designs for building special machines



Feed units type VE 35, VE 30 and VE 20

The universal standard for building special machines



Feed units with built-in ultrasonic welding stack (from left to right: VE 35, VE 30 and VE 20)

The VE 35, VE 30 and VE 20 feed units are used to fix an ultrasonic welding stack.

Feed units are used mainly in the building of special machines in sectors such as the car industry or other plastics processing industries, the textile industry, as well as in the building of packaging machinery and in the food industry. They can be simply incorporated in existing or new machine concepts for various different applications.

“Maximum quality in three frequencies.”

As ultrasound specialists we ourselves use our feed units when building special machines and have perfected them from our own experience.

Our feed units achieve their durability as a result of outstanding workmanship and high-quality precision guides. SONOTRONIC offers feed units for welding stacks having ultrasonic frequencies of 35, 30 and 20 kHz. The maximum welding forces are achieved at 20 kHz

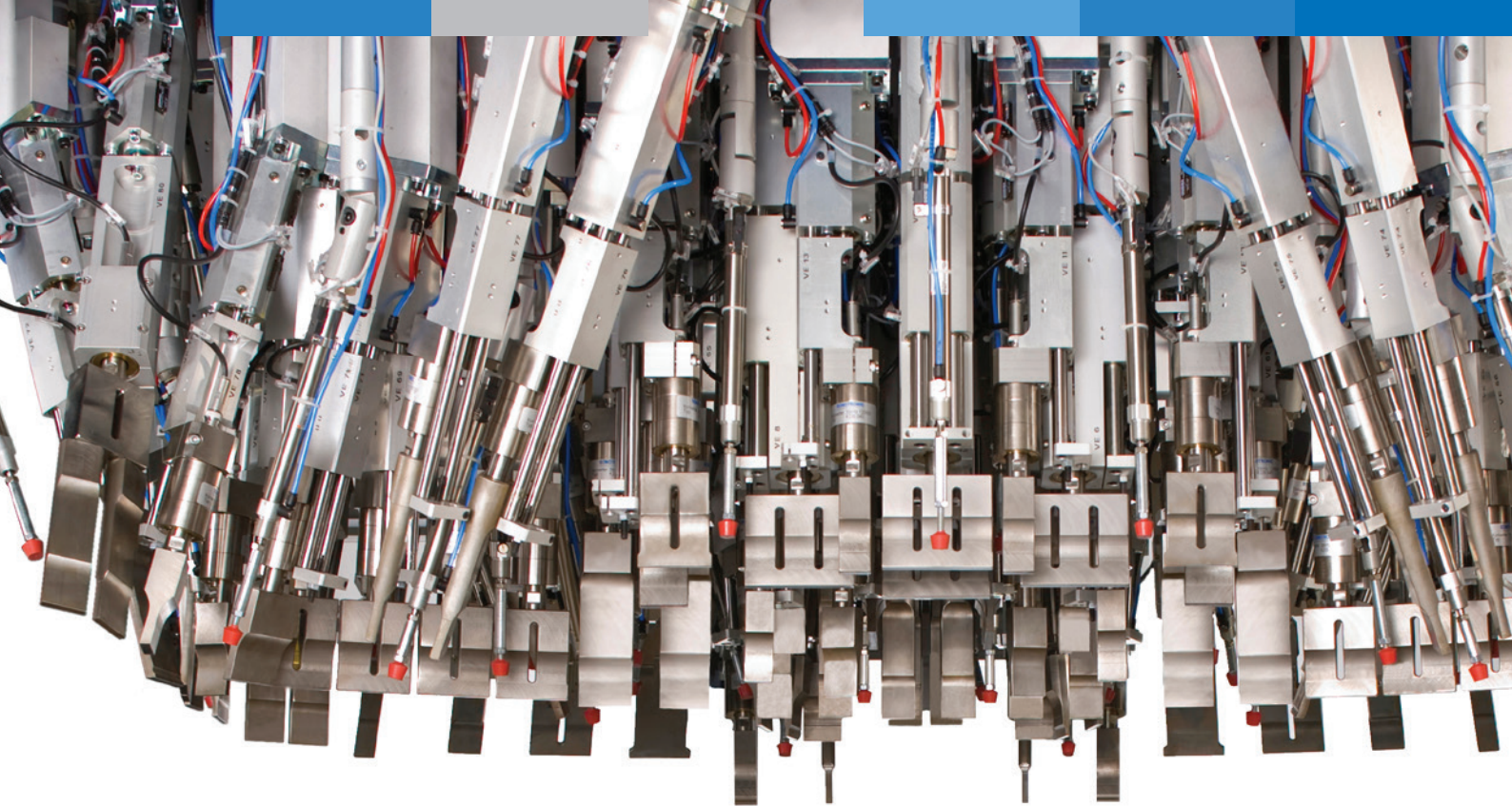
frequency and the largest dimensions can be handled. The available diameters and stroke lengths of the feed units are governed in each case, by the sound frequency.

Applications

- Ultrasonic welding, cutting, cut & seal, punching, riveting and embossing
- Special machine building
- Sectors
 - Car industry
 - Plastics processing industries
 - Textile industry
 - Packaging industry
 - Food industry

Properties and advantages

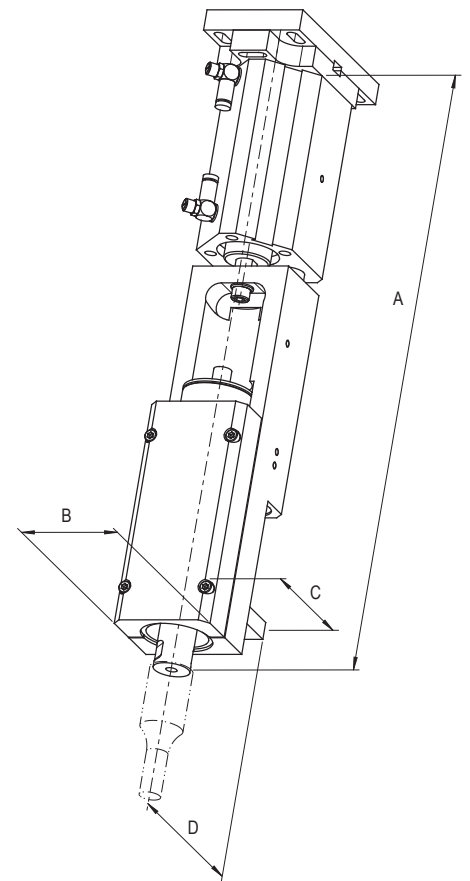
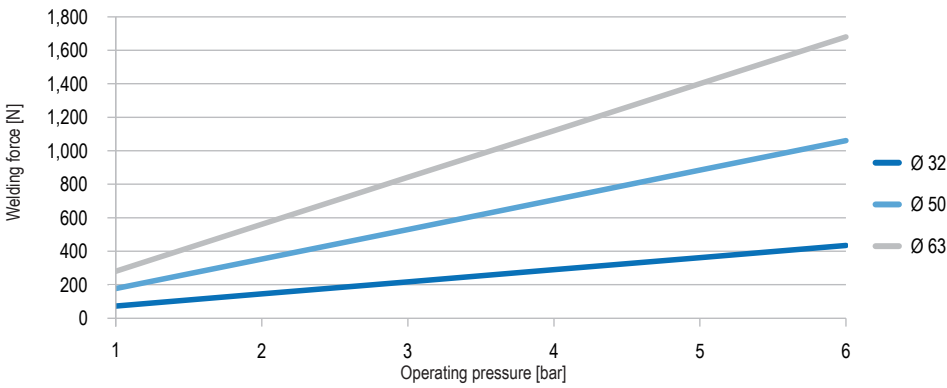
- Precise monitoring of the welding path:
 - Analogue displacement measuring system using a Hall-effect sensor (accuracy 0.05 mm)
 - Depth adjustments by control panel
- Precise feed into the welding position:
 - X-Y adjustment +/- 5 mm
 - Basic position sensing via a Reed switch with LED
 - Hardened guide shafts
 - Ball sockets
- Precision build-up of welding force:
 - Max. operating pressure: 10 bar
 - Magnet ring piston
- Anodized housing (natural aluminium)
- Simple integration into existing or new machine concepts



Technical data

Shown below are the welding forces, as well as the dimensions of our standard feed units in relation to ultrasonic frequency (35, 30 and 20 kHz) and cylinder diameter. We will be pleased to send you detailed information on request.

Pressure [bar]	Cyl.-Ø [mm]	Welding forces [N]		
		Ø 32	Ø 50	Ø 63
1		72	177	281
2		145	353	561
3		217	530	842
4		290	707	1,120
5		362	884	1,400
6		434	1,060	1,680



Cyl.-Ø	VE 35 (35 kHz)					VE 30 (30 kHz)			VE20 (20 kHz)			
	Ø 32					Ø 50			Ø 50		Ø 63	
Stroke	60	80	100	125	150	30	100	125	80	100	125	100
A	355.5	375.5	395.5	420.5	445.5	403.5	473.5	498.5	488.5	508.5	533.5	523
B	58	58	58	58	58	64	64	64	88	88	88	88
C	75.5	75.5	75.5	75.5	75.5	117	117	117	117	117	117	118,5
D	49.5	49.5	49.5	49.5	49.5	76	76	76	76	76	76	76

Special design feed units

Development specific to requirements for optimum ultrasonic results

Particularly when building special machines, special solutions regarding the design of the feed units are required in certain cases. If, for example, welding areas are difficult to access, space is limited or if extreme height differences have to be overcome between welding points, then standard feed units cannot be used.

For such situations, SONOTRONIC develops appropriate feed units to meet the requirements of customer and application. With our many years of experience in building special ultrasonic machines, we will find a solution to every problem and the perfect feed unit for every task.

Examples of special solutions achieved to date:

- Where space is limited
 - Compact feed unit
 - Short-stroke feed unit
 - Feed unit 35 in narrow design (converter width)
- For welding points that are difficult to access
 - Return stroke feed unit
 - Angle feed unit
- For extreme height differences
 - Tandem feed unit with two separate welding stacks



Special feed units (from left to right): angle feed unit, return stroke feed unit and tandem feed unit

SONOTRONIC Linked with success.

SONOTRONIC Nagel GmbH develops and produces high-tech ultrasonic systems and components for the packaging and food industries, as well as for medical engineering and textiles. We are the market leader in building special ultrasonic machines for

the car industry and in ultrasonic systems for environmental applications. We are a traditional company and employ 240 members at our headquarters in Karlsbad (Germany) and at our branches in Spain and the USA.



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