

SAFECONTROL

Control is good –
measuring with Kelch is better!

KELCH

Electronic measuring system for measuring the pull forces of clamping systems in machine tool spindles and, with an appropriate adapter, also for the force measurement of extensions, reducers and zero point clamping systems.

The benefits for you:

- Easy-to-operate and robust readout unit with automatic zeroing function
- Direct and ergonomic readout of measuring results from the digital readout unit
- Fast, smooth and reliable measurement directly after clamping into the machine spindle
- Excellent measuring accuracy ($< \pm 1\%$ of the upper range value)
- Large measuring range with one readout unit (0-100 kN or 0-130 kN)
- All popular taper sizes available in HSK, PSK and SK
- Calibration and repair service



SAFECONTROL – an important component for quality assurance, as well as for process reliability and operating safety in production!

SAFECONTROL helps to safeguard the service life of components and machine tools. It also protects the electronic measuring system from greater tool and machine wear. Other features include guaranteed machining quality and accuracy, reduced reject rates and down time and improved operating safety and process reliability.

You now have quality under control with SAFECONTROL!



Easy to operate

The force sensing bar is inserted into the tool machine spindle and tightened.



Fast reading

A precision force sensing bar with expansion measuring strips performs the measurement.



Accurate readout

The pull force is transmitted by an electrical measuring signal to the readout unit and can be read off there.

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HSK (DIN 69893 / ISO 12164-1)

Item No. for Case set	Item No. for single items	HSK	F/kN
309.028	309.128	25	0 - 22
309.021	309.121	32	0 - 22
309.022	309.122	40	0 - 22
309.023	309.123	50	0 - 37
309.024	309.124	63	0 - 75
309.025	309.125	80	0 - 75
309.026	309.126	100	0 - 100

SK (DIN 69871-1 / MAS BT)

Item No. for Case set	Item No. for single items	SK	F/kN
309.014	309.004	30	0 - 22
309.011*	309.001*	40	0 - 37
309.012	309.002	45	0 - 45
309.013	309.003	50	0 - 75
On request!	309.052	60	0 - 100

SK (DIN 2080)

Item No. for Case set	Item No. for single items	SK	F/kN
309.075	309.005	30	0 - 22
309.076	309.006	40	0 - 37
309.077	309.007	45	0 - 45
309.078	309.008	50	0 - 75

PSK (ISO 26623-1)

Item No. for Case set	Item No. for single items	PSK	F/kN
309.080	309.040	32	0 - 20
309.081	309.041	40	0 - 50
309.082	309.042	50	0 - 50
309.083	309.043	63	0 - 100
309.084	309.044	80/80X	0 - 100



Non-standard sizes available on request. Accessories are listed in the main catalogue.

* In order to also be able to use this force sensing bar for the MAS-BT SK 40 taper length (l1=65.4), a pull stud shortened by 3 mm is required.

Technical Data (Display unit):

Dimensions (WxHxD):	85 × 200 × 60 mm
Weight:	~0.2 kg
Power supply:	12 V / 24 V DC, 1 A
Operating time:	34 hours continuous operation
Nominal temperature range:	15 °C to 35 °C, maintenance-free, IP40
Readout unit:	LCD display, 10.2 mm high figures
Accuracy:	≤ ± 1% of the upper range value
Measuring range:	0-100 kN (standard version) or 0-130 kN (enhanced version)*1

*1 available on request.

Standard specification (Case set):

- 1 Force sensing bar in the case
- Separate readout unit
- 4 rechargeable batteries (Micro AAA)
- Charger
- Connecting cable
- Functional description and test certificate

Some cases are also available with several force sensing bars on request. Other accessories are available on request.

Standard specification (Single bar):

- 1 Force sensing bar
- Functional description and test certificate