SAFECONTROL

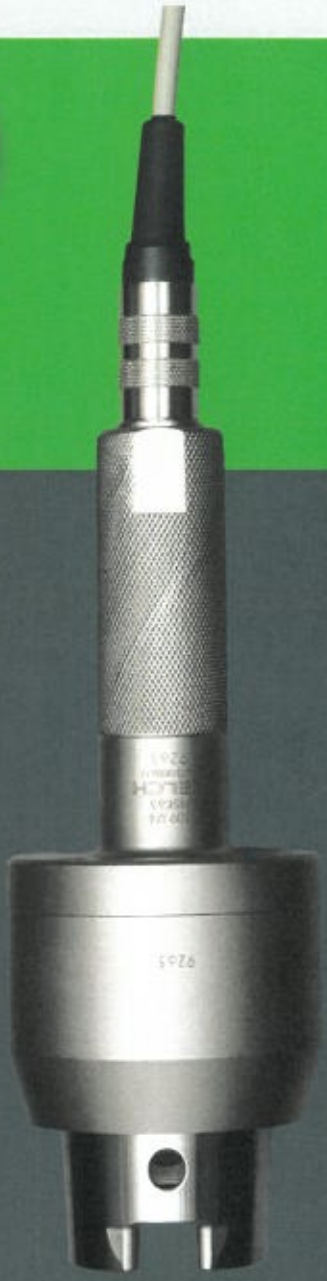
KELCH

For the measurement of pull back forces in the machine spindle, as well as force measurement for various extensions and reducers.

QUALITY MADE BY KELCH

SAFECONTROL

- Easy to operate
- Quick and accurate (<± 1% of upper range value)
- Direct reading from the eletronic display
- Large measuring range (0-100 KN) with one readout unit
- Readout unit for measurement of higher pull back forces (0-130 KN) available on request
- Wide range of taper sizes
- Special sizes available on request
- Calibration service

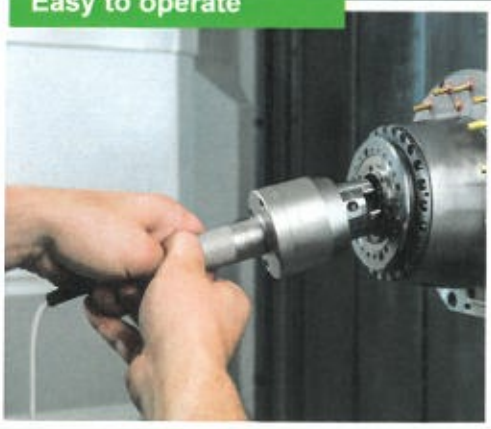


Trust is good - **SAFECONTROL** is better:

- Increases the service life of components and the machine spindle
- Guarantees the processing quality and accuracy
- Reduces reject rates and down time
- Improves work safety and process reliability

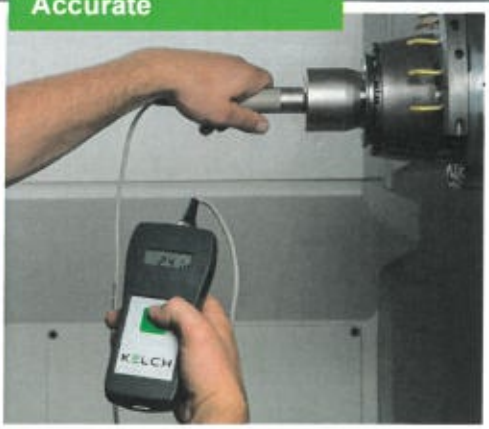
SAFECONTROL is QUALITY control

Easy to operate



Quick reading

Accurate



SAFECONTROL

Control is good –
measuring with Kelch is better!

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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)

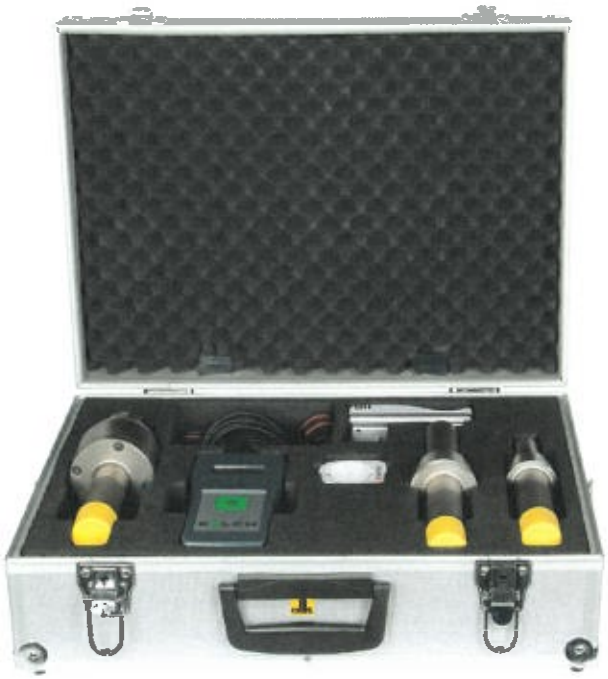
Item No. for Case set	Item No. for single items	SK	F/kN
309.014	309.004	30	0 - 22
309.011*	309.001*	40	0 - 37
309.012	309.002	45	0 - 45
309.013	309.003	50	0 - 75
On request!	309.052	60	0 - 100

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

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SAFECONTROL - Force Sensing Bars for Machine Spindles with Polygonal Shank

The power-check for the clamping system. An important component of quality control.

- Increases the service life of the machine spindle
- Guarantees the processing quality
- Reduces reject rates
- Easy to operate and direct reading at the digital display
- European patent

Force sensing bars individual

Force sensing bar for PSK	Ref.no.	Size	Measuring range
32	309.040	Capto C3	0 - 18 KN
40	309.041	Capto C4	0 - 40 KN
50	309.042	Capto C5	0 - 52 KN
63	309.043	Capto C6	0 - 63 KN
80	309.044	Capto C8	0 - 86 KN

Accessories

	Ref.no	Description
Case with indicating device, connection cable and charging device, without force sensing bar	309.108	can be equipped with 3 force sensing bars PSK 32, PSK 40 and PSK 50
	309.109	can be equipped with 2 force sensing bars PSK 63 and PSK 80

	Ref.no.	Description
Case empty, without electronics, without force sensing bar	309.110	can be equipped with 3 force sensing bars PSK 32, PSK 40 and PSK 50
	309.111	can be equipped with 2 force sensing bars PSK 63 and PSK 80

Use
Electonic measuring system for the control of the pull-back power of machine tool's clamping systems.

Function
A precision force sensing bar with wire strain gauges does the measuring. It is inserted into the machine spindle and pulled back by the machine's clamping system. The actual pull-back power can be read directly at the indicating device.

Note
Indicating device, connection cable and charging device are needed only once - independent of the number of force sensing bars. Other force sensing bars (ISO, HSK...) can also be used.

SAFECONTROL -
A relatively small investment compared to the benefits provided.

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STANDARD SPECIFICATION

- 1 Force sensing bar in case
- Separate readout unit
- 4 rechargeable batteries (Micro AAA)
- Recharger unit
- Connection cable
- Certificate

Case holds up to three sensing bars, further accessories available on request.

Type according to	Taper	Measuring range F/kN	SAFECONTROL-Set (Case with electronic readout unit and 1 force sensing bar) Item-Nr. complete	SAFECONTROL Individual force sensing bars Item-Nr. individual
DIN 69871-1 / MAS BT	SK 30	0 - 22	309.014	309.004
	SK 40	0 - 37	309.011	309.001
	SK 50	0 - 75	309.013	309.003
DIN 69893	HSK 63	0 - 75	309.024	309.124
	HSK 80			
	HSK 100	0 - 100	309.026	309.126
ISO 26623-1	PSK 63	0 - 100	309.083	309.043
	PSK 80 / 80X	0 - 100	309.084	309.044

See catalogue for further taper sizes, specials available on request.

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**Control is good –
measuring with Kelch is better!**

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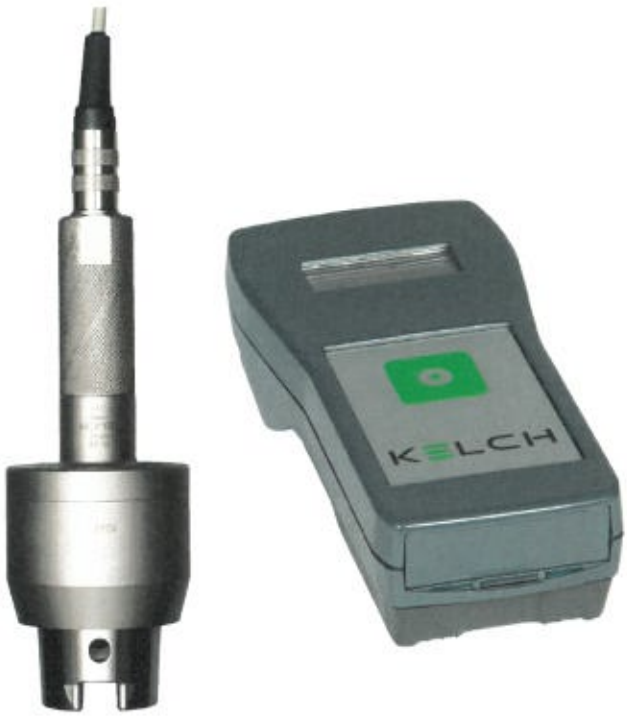
Electronic measuring system for measuring the pull forces of clamping systems in machine tool spindles and, with an appropriate adapter, also for the force measurement of extensions, reducers and zero point clamping systems.

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 (< ±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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