

## Horizontal mechanical unit

Type 5413-4504/...

### Base frame

The base frame to accommodate the test items, sensors and drive unit(s) has a major impact on the results achieved. The Analyse system is used for quality monitoring of releasable fasteners, in conjunction with a measurement and control unit, a control unit with servo regulator and the testXpert software.

- Standard torque range up to 1000 N·m
- Coefficient of friction tests in the standard range up to thread sizes of approx. M24
- Test of the prevailing torque of nuts with clamping element
- Horizontal structure ensures easy, barrier-free access to the test item

### Description

The base frame of the horizontal mechanical fixture is constructed as a ladder-type frame with aluminum profiles, which supports a steel base plate with high torsional stiffness.

A slide for the exchangeable clamping force/thread torque sensor runs on two flat guides on the steel base plate, enabling a variable distance between the drive with the torque/angle of rotation sensor and the clamping force/thread torque sensor.

The slide is moved manually by means of a handle and can be manually locked after the test item has been inserted.

### Application

With the Kistler horizontal Analyse system, fast and precise tests and analyses of fasteners are possible in conformity with international or customer-specific standards – especially in regards determining coefficients of friction.

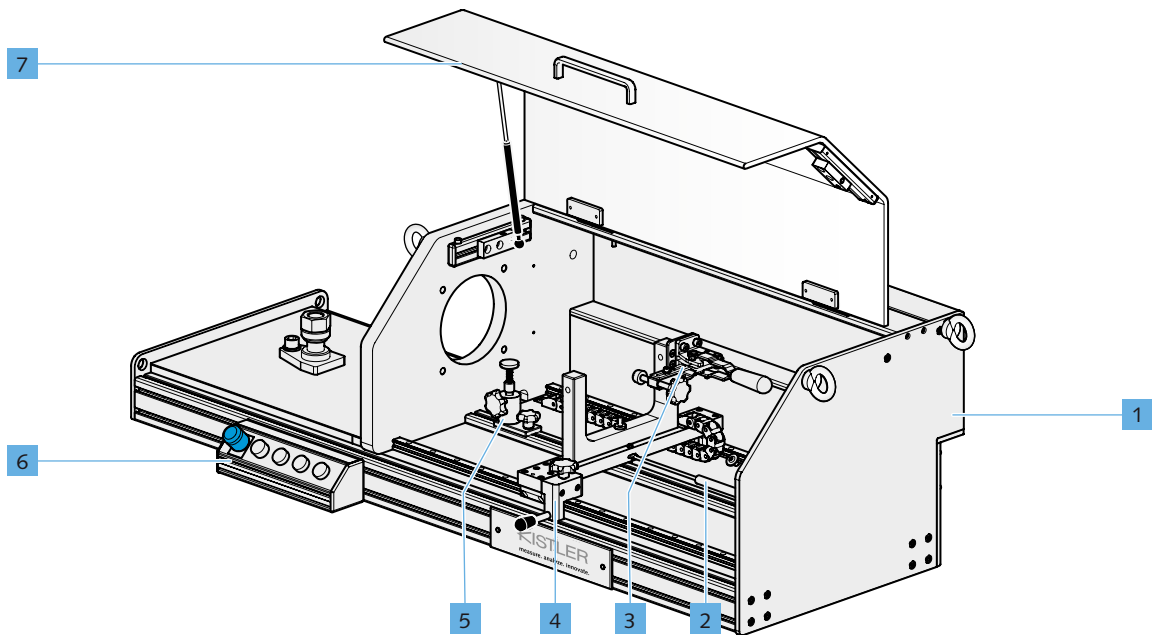
One or two drive units are mounted on the horizontal mechanical unit; with the help of a torque/angle of rotation sensor, they introduce the tightening torque into the test item via a suitable tool. The clamping force/thread torque sensor is mounted on a slide that can be moved and fixed; it captures the mechanical adaptations of the test item for the item's bearing surface and the counterthread in the thread dimension required for the test, without any risk of torsion.

The horizontal configuration of the test system components ensures easy, barrier-free access to the test item. The system can be equipped with a gas spring to test nuts with a clamping



Horizontal mechanical unit with optional drive spindle and sensor system

element. In this case, the slide moves with the sensor during the test, and contact between the tool and the test item is guaranteed during tightening and loosening.



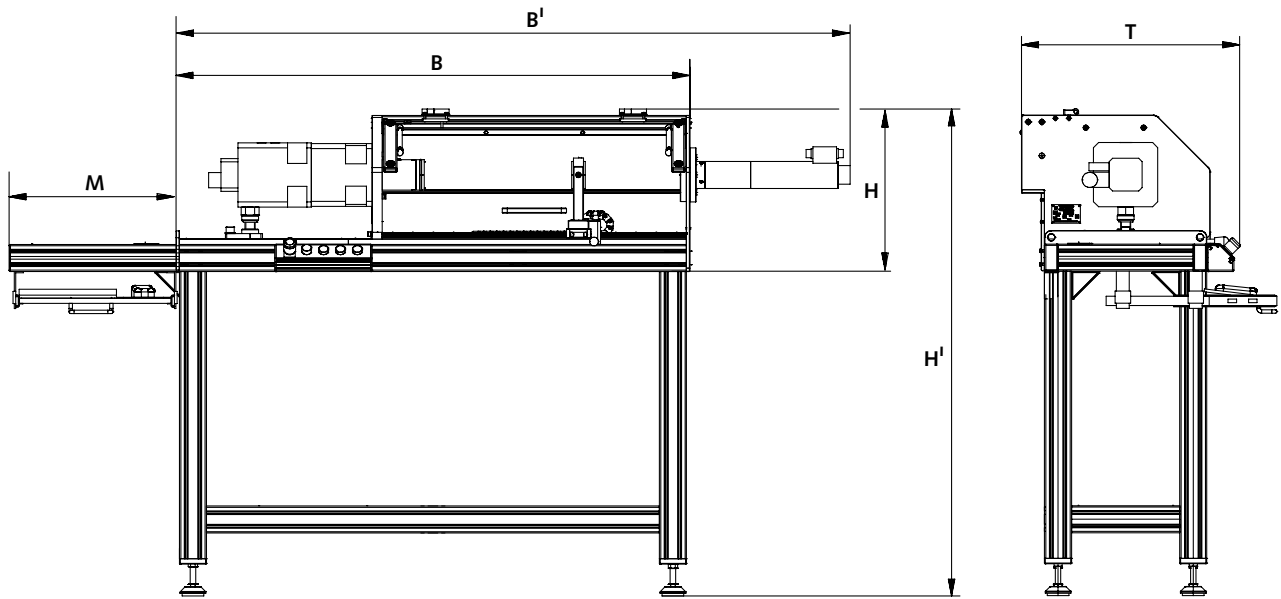
Horizontal mechanical unit

- 1 Horizontal mechanical unit
- 2 Gas spring with clamping lever
- 3 Fixing unit for insertion piece or test item
- 4 Slide with holding fixture for clamping force/thread torque sensor and clamping lever
- 5 Support and fixture device for torque/angle of rotation sensor
- 6 Control box
- 7 Protective cover with safety switch

### Technical data

<b>Type</b>	<b>5413-4504/...</b>
	up to 1000
Horizontal mechanical unit	N·m
Maximum tightening torque	1 000 N·m
Maximum thread torque	500 N·m
Drive unit, left side (depending on design, maximum)	1 000 N·m
Drive unit, right side (depending on design, maximum)	500 N·m
Dimensions, approx.	
Width (B) (drive unit, left only)	1 520 mm (+ 500 mm for optional monitor shelf (M))
Width (B') (drive unit, left and right)	2 000 mm (+ 500 mm for optional monitor shelf (M))
Depth (D)	645 mm
Height (H) (without underframe)	480 mm
Height (H') (with optional underframe)	1 440 mm
Weight	
Without drive unit(s), sensors and underframe	approx. 135 kg
Center distance without accessories and adapter	approx. 85 mm - 500 mm
Center height	approx. 190 mm
Operating temperature range (nominal temperature range)	10 ... 40 °C
Service temperature range	0 ... 50 °C
Storage temperature range	-20 ... 70 °C
Air humidity	max. 70 %, non-condensing

**Dimensions of horizontal mechanical unit**



**Options**

- Holders for different drive units on the left and right side of the base frame
- Underframe for stand-alone operation
- Monitor shelf for underframe

**Ordering key**

Typ 5413-4504/

**Drive unit, left side**

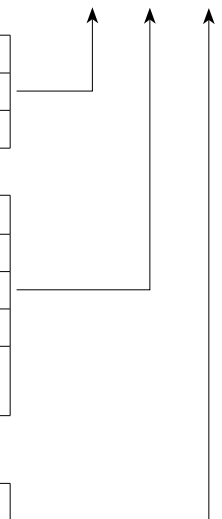
Motor	LM
Spindle	LS
Spindle (Bosch)	LB

**Drive unit, right side**

None	00
Spindle	RS
Spindle (Bosch)	RB
None – vibration adaptation	RV
None – prepared for spindle/vibration	RP

**Underframe as stand-alone**

No underframe	0
Underframe	D



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