

UNIVERSAL TESTING MACHINES

Universal Testing Machines series „smarTens 2.5 IS“

Single ball screw drive with solid state servo and motor controls for loads upto 2.5 kN

High-precision single-column testing machine for strength tests in the lower load range. Developed for the most varied testing application in the laboratory, in production or in research and development. Due to the large number of available test programmes, almost all conceivable tests, such as tensile, compression or bending tests as well as pull-off, peel or shear strength tests are possible. The large application range of this machine allows tests in the load range up to 2.5 kN on plastics, elastomers, paper, wires, cords, foams, but also tests on finished parts. In combination with our powerful Windows® software, simple standard tests as well as user-specific tests can be carried out in a user-friendly and reliable manner.

Features / Equipment:

- Load range max. 2.5 kN
- Available in 3 different test area heights
- Innovative brushless motor without gear drive for long life
- Minimised noise emissions due to low motor speed and optimised frequency range
- Highly accurate force measurement: Class 1 from 0.1 % to 100 % nominal force according to DIN EN ISO 7500-1 or ASTM E4 (optional class 0.5)
- Testing speed from 0.0015 to 1200 mm/min
- Designed for standing or sitting work at the UTM
- Large machine base plate for mounting accessories and storing tools or samples
- User-friendly software



Technical data:

	smarTens 2.5 IS-S	smarTens 2.5 IS-M	smarTens 2.5 IS-L
Article Number	4300-008-201	4300-008-211	4300-008-221
Load range [kN]	2.5	2.5	2.5
Stiffness [kN/mm]	2.7	2.7	2.7
Dimension			
Width [mm]	630	630	630
Height [mm]	700	1300	1600
Depth [mm]	630	630	630
Weight [kg] approx.	48	55	60
Technical characteristics			
Working area depth [mm]	105	105	105
Working area height [mm]	475	1075	1375
max. test stroke (without tools, grips, adapter, load cell) [mm]	350	950	1250
Cross head speed range [mm/min]	0,0015 - 1200	0,0015 - 1200	0,0015 - 1200
Electrical data			
Rated Voltage [V]	230	230	230
Power frequency [Hz]	50	50	50
Nominal power [kW]	0,5	0,5	0,5
Phase (Nominal voltage) [ph]	1~	1~	1~

Universal Testing Machines series „smarTens 5/10 ID“

Two-spindle universal testing machine for a load range up to 5 or 10 kN

The two-spindle universal testing machine series smarTens ID has two backlash-free ball screws in H-frame design with spindle protection and innovative brushless drive motor. The newly developed testing machine is available in two different test testing area heights and can thus be optimally adapted to individual requirements. These models (table machines) are equipped with modern microprocessor technology and a universal testing software which allows strength tests on metals, non-ferrous materials, plastics, elastomers, wires, cords or foams. This testing machine series is mainly designed for standardised testing tasks according to national or international standards as well as for use in quality control.

Features / Equipment:

- Load range 5kN and 10 kN
- Available in 2 different test area heights
- innovative brushless drive without gear
- reduced noise pollution due to low motor speed and optimised frequency range
- freely selectable control of crosshead travel, force or elongation
- highly accurate force measurement by means of DMS load cell
- compact workplace design
- designed for standing as well as sitting activities due to very flat lower crossbar and lateral arrangement of the electronics
- Large machine base plate for the adaptation of accessories and the storage of tools or samples
- Variable speed upto 1200 mm/min.



Technical data:

	smarTens 5-ID M	smarTens 5-ID L	smarTens 10-ID M	smarTens 10-ID L
Article Number	4300-030-511	430-030-521	4300-030-611	4300-030-621
Load range [kN]	5	5	10	10
Stiffness [kN/mm]	11	11	11	11
Dimension				
Width [mm]	804	804	804	804
Height [mm]	1305	1605	1305	1605
Depth [mm]	631	631	631	631
Weight [kg] approx.	83	88	83	88
Technical characteristics				
Working area width [mm]	420	420	420	420
max. test stroke (w/o tools, adapter and load cell) [mm]	970	1270	970	1270
max. test height (w/o tools, adapters and load cell) [mm]	1025	1325	1025	1325
Cross head speed range [mm/min]	0,0015 - 1200	0,0015 - 1200	0,0008 - 600	0,0008 - 600
Electrical data				
Rated Voltage [V]	230	230	230	230
Power frequency [Hz]	50	50	50	50
Nominal power [kW]	0,5	0,5	0,5	0,5
Phase (Nominal voltage) [ph]	1~	1~	1~	1~

Universal Testing Machines series „smarTens 20/30“

Twin ball screw drive universal testing machine for loads up to 20 or 30 kN

The smarTens 20 / 30 kN materials testing machines were designed for standard and routine tests. These universal testing machines are used in quality assurance and are characterised by a particularly attractive price/performance ratio. The smarTens 20/30 is suitable for tensile, compression, peel and bending tests on different materials. In combination with the ergonomic design and the new brushless drive concept, a safe and fast measurement with easiest operation is guaranteed both in rough production environments and in sterile laboratories.

Features / Equipment:

- Load range max. 30 kN
- Innovative brushless drive without gears
- reduced noise due to low motor speed and optimised frequency range
- freely selectable control of crosshead travel, force or elongation
- high-precision force measurement by strain gauge force transducer
- designed for standing (with optional substructure table) and seated work
- ersatile adaptation of accessories and additional force transducers
- Variable speed up to 400 mm/min.



Technical data:

	smarTens 020	smarTens 030
Article Number	4300-030-209	4300-030-309
Load range [kN]	20	30
Stiffness [kN/mm]	35	40
Dimension		
Width [mm]	790	790
Height [mm]	1420	1420
Depth [mm]	520	520
Weight [kg] approx.	140	140
Technical characteristics		
Working area depth [mm]	420	420
Working area height [mm]	1005	1005
max. test stroke (without tools, grips, adapter and load cell) [mm]	1100	1100
Cross head speed range [mm/min]	0,0003 - 400	0,0002 - 240
Electrical data		
Rated Voltage [V]	115/230	115/230
Power frequency [Hz]	50/60	50/60
Nominal power [kW]	0,5	0,5
Phase (Nominal voltage) [ph]	1~	1~

Universal testing machines series „proTens“

Twin ball screw drive with solid state servo and motor controls for loads up to 250 kN

These universal tensile tester series “proTens” (table standing) incorporate an advanced microprocessor technology. In combination with our user friendly software we provide an extremely efficient, reliable approach to any materials testing need. Well-known for their versatile performance and rugged mechanical design, these machines are designed to accommodate a wide range of applications (e. g. quality and production control, R & D and test labs) to be able to meet the most demanding test requirements. It is designed to perform a variety of test procedures, including compression, tension, shear, peel and flex. The large application range permits testing of metals, plastics, elastomers, foam materials, wood, ropes, cords, wires as well as strength tests (tensile and compression tests) at finished parts.

Features / Equipment:

- Force range up to 250 kN
- Two different type of motor (300 W or 900 W)
- User-friendly software
- Cross head guidance system
- Quick-disconnect load cell and fixture system
- Adjustable overload stop
- Load measurement accuracy: Class 1 from 0,1 % to 100% of rated capacity acc. DIN EN ISO 7500-1 and ASTM E4 (optionally Class 0,5)
- Variable speed up to 2000 mm/min.
- Different test space widths (+ 190 / +330 / +620 mm) or test space heights (+250 / +500) are available for each machine type and can thus be adapted to almost all testing tasks or component geometries
- Expandable with temperature test chambers



Technical data:

	proTens T3-005	proTens T3-010	proTens T3-020	proTens T3-050	proTens T9-010	proTens T9-020	proTens T9-050	proTens T9-100	proTens T9-250
Article Number	4300-030-001	4300-030-101	4300-030-201	4300-030-501	4300-030-104	4300-030-204	4300-031-004	4300-031-104	4300-031-254
Load range [kN]	5	10	20	50	10	20	50	100	250
Dimension									
Width [mm]	685						880		
Height [mm]	1420						1585		2250*)
Depth [mm]	550						695		
Weight [kg] approx.	100	100	130	150	100	130	320	400	570
Technical characteristics									
Working area width [mm]	420						510		
max. test stroke (without tools, grips, adapter and load cell) [mm]	1025	1025	1005	995	1025	1005	1095	1065	1030
max. test height (without tools, grips, adapters and load cell) [mm]	1080	1080	1080	1070	1080	1080	1170	1145	1110
Cross head speed [mm/min]	0.001-1200		0.001-600	0.0005-250	0.005-2000		0.001-800	0.0005-400	0.0005-175
Electrical data									
Rated Voltage [V] / [Hz]					230				
Power frequency [Hz]					50/60				
Nominal power [kW]	0.7				1.5				
Phase (Nominal voltage) [ph]					1~				

*) incl. table

RMCi - Handpanel

Manual operation for all machines of the *smarTens* and *proTens* series with PC.

RMCi 6:

- Crosshead movement
- Stop, Return
- Display of current force and displacement values
- Mounting bracket for mounting on column profile Load frame 1+2, right side of machine
- Remote unit with 15 keys, DigiPoti and display and M12 interface
- OLED monochrom display with 128p x 64p and status LEDs
- Internal EDCi interface and protocol – supply voltag +24 VDC, RS485 communication
- Magnetic foil for easy fixation to testing machine chassis for comfortable use



RMCi 7: with EMERGENCY STOP, Function - necessary in safety door operation

- Crosshead movement
- Test start, stop, return
- Emergency stop button
- Opening and closing of extensometer arms and fixtures
- Display of current force and displacement values, storage and output of test results
- Parameterization of simple tensile compression and bending tests
- Mounting bracket for mounting on column profile, Load frame 1+2, right machine side
- OLED-Monochrom-Display with 128p x 64p und status-LEDs
- Internal EDCi interface und protocol – voltage supply +24 VDC, RS485 communication
- Magnet foil for easy fixation at the testing system for comfortable use

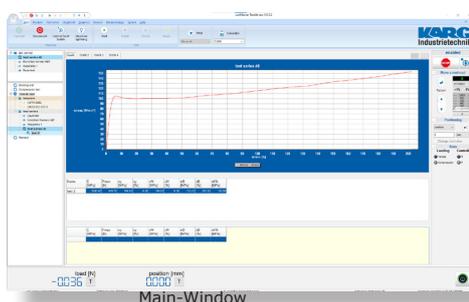


Software

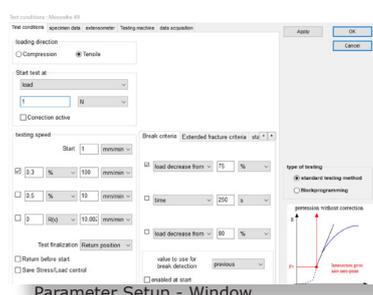
Our material testing software has been developed in a modular design and consists of a comprehensive basic software. This allows simple but also complex testing tasks to be configured in a standard-compliant or customer-specific manner. A large number of templates or pre-configured test parameter sets are available for standardised and standard-compliant test tasks. In addition and for the individual creation of test cycles, a freely programmable software (block program creation) with the following features is available:

- Free programming of a sequence control for static or dynamic tests
- Individual definition of test parameters including calculation / display of test results (force, displacement, strain or any other measured values such as temperature, weight, etc.)
- All test results can be converted with arithmetic formulas.

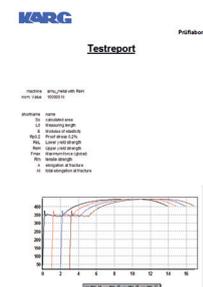
The integrated test wizard can be used to configure the test sequence individually, so that the user only has to operate the necessary input windows, receives supporting information and can work through his tasks purposefully. Our software works under Microsoft Windows® and guarantees „Microsoft Office® compatibility“, i.e. all results can be exported to other applications such as Access®, Excel®, ASCII-file or other SQL applications. The integrated report generator allows individual report generation including graphical display in single or series mode. The software is available in different languages.



Main-Window



Parameter Setup - Window



Report-Editor / Print out