

Battery Tester 210

- Easy to use with quick results already after 15 seconds
- Suitable for all standard batteries and batteries with GEL technology
- The test does not harm the battery because when tested in the low current occurrence of sparks or reconciliations be prevented, thus no damage to the electronics
- Reverse polarity protection

Application Area

- Testing of 12 V batteries and generators

Characteristics

- Digital display with lighting and 12 line x 16 characters, rugged housing with protective rubber, the testing of the batteries is performed in accordance with the standards EN, DIN, IEC, SAE and JS, including reverse polarity
- Optional 6 languages in the display with operating instructions

Scope Of Delivery

- battery Tester
- Nylon bag



Title	PU Piece	Article No.
Battery Tester 210	1	030976

AGR: 08.300

Battery Tester with Printer

- Tests lead acid (liquid), AGM (felt) and GEL batteries
- Possible to test discharged batteries
- 5 button operation -> simple button selection of the temperature parameters and the menu functions
- Tester and printer in one -> fast test results and test result document for the customer
- Workshop address can be entered and is also visible on the print out



- Servo-Technology recognizes bad connections. A good connection is guaranteed through the movement of the connection clamps and thus correct testing
- The actual cold start performance and the charging status of the battery, the starter and charging systems are diagnosed and printed
- Surface voltage procedure-> the device recognizes a surface voltage, which may distort the test result. By switching on the consumer (light, fan...), the surface voltage can be eliminated
- Temperature-compensation
- Recognition of defect cells
- Reverse polarity protection
- 19 languages can be set



Application Area

- 12 V Starter batteries, lead acid, AGM and GEL
- 12 V Starter and charging systems

Title	PU Piece	Article No.
Battery Tester with Printer 35P	1	043285
AGR: 08.003		
Spare Parts	PU Piece	Article No.
ROLL PAPER BATTERYTEST. 35P	1	051909

Battery tester HU50888

- Suitable for 12 volt batteries (lead-acid, gel, wet cell, MF, VRLA, calcium, AGM and low cycle batteries)
- The battery is tested under real load by a built-in resistor

Application Area

- Checking the battery, starter motor and charging circuit

Characteristics

- LCD display
- Application range: 12 V
- Load 12 V: 100 A
- Cold start current range: 200 - 1,000 CCA

Hints

- For starter batteries from 30 Ah (12 V suitable)



Title	PU Piece	Article No.
Battery tester HU50888	1	338221
AGR: 08.300		

Battery Charging Device BHFB 05 12 V

- Trickle charge - ideal for seasonal vehicles and vehicles on show

Application Area

- Microprocessor-controlled battery charger for lead / acid, gel, AGM and calcium (fleece) batteries

Title	PU Piece	Article No.
Battery Charging Device BHFB 05 12V	1	120780
AGR: 08.003		



INTERNAL/Approved (2019-03-22 21:50:18)

Battery Charger and Service Device BHFL 8A/12+24V

- Application: batteries 4 Ah to 180 Ah
- Automatic voltage detection 12V / 24V
- Autostart (device loads immediately when connected to the battery)
- 100% full charge of all lead / acid, gel, AGM, fleece and maintenance-free batteries
- Perfect protection for the on-board electronics, control unit, airbag, etc.
- Short circuit and reverse polarity protection
- Extensive self-protection and protection features for eg. defective batteries
- Trickle charging and trickle charge (perfect for showroom vehicles)
- Reliable sparking suppression
- Built-in handle and fixed mounting tabs
- Robust aluminum housing
- Convection cooling and housing (no fans, no noise)
- Suitable for start - stop systems

Application Area

- Microprocessor-controlled battery charging / service unit for lead / acid, gel, calcium, AGM (fleece) - and maintenance-free batteries

Scope Of Delivery

- Battery charger / service unit BHFL 8 A / 12 + 24 volts
- 2 m battery cable with high quality, fully insulated metal pole clamp
- 2 m power cord



Title	PU Piece	Article No.
BATTERY SERVICE BHFL8A 12/24V	1	201166

AGR: 08.003

INTERNAL/Approved (2019-03-22 21:50:24)

Battery Charging / Servicing Device BHFL 16A / 6 + 12 Volt

- Monitoring free 100 % full charging of vehicle batteries
- Field of application of batteries from 4 Ah to 300 Ah
- Service charge program-> supports CAN BUS systems with diagnosis, service, and customer service ("flashing") so that the battery still remains fully charged when switched on or being used.
- Support operation up to max. 16 A -> voltage maintenance during the changing of the battery prevents data loss
- Reliable protection of the board electronics, control devices, airbag etc.
- Short circuit and reverse polarity protection
- Reactivating program for the charging of fully discharged batteries
- Ability to charge continuously/leave charging
- Self protection function
- Suitable for start - stop systems
- Recommended by Daimler AG

Hints

- Warning: Real 16 amperes arithmetically at 14.4 volts
- Manual selectable charging levels: 6 V - 2 A / 12 V - 2 A / 12 V - 8 A / 12 V - 16 A



Title	PU Piece	Article No.
Battery Charging / Servicing Device BHFL 16A	1	059522

AGR: 08.003

Battery Service Device BHFL 60A

- Protect on-board electronics, airbag control units etc.
- easy operation via menu-driven 2.4 "touch display
- 5 easy programmms are available
- 1. Easy charging (Battery charging, without having to enter further parameters)
- 2. Boost charging (Battery is charging quickly)
- 3. Charging (Battery is charging for individual adjustment)
- 4. Service mode (Buffering during service- / diagnostics at the car)
- 5. Reactivation (Refreshing of sulphated or rather deeply discharged batteries)



Application Area

- Digital controlled switch mode charger

Scope Of Delivery

- 2 m main cable
- 3 m battery cable

Title	PU Piece	Article No.
Battery Service Device BHFL 60A	1	329144

AGR: 08.003

Battery Service Device BHFL 75 A 6+12+24 V

- The battery result incl. vehicle data can be stored on the SD Card
- Ideal for detection with guarantee and warranty cases
- 100% full charge of all lead / acid, GEL, - and AMG (web) batteries and new LiFePO4 batteries with battery management system
- Protect on-board electronics, controller, etc. aribag
- Operation via menu-driven 2.4 "touch display
- Very high capacity selectable from 2 A to 75 A
- The following programs can be selected directly:
 - 1. EASY LOAD everything works fully automatically
 - 2. LOAD + TEST with protocol on SD Card
 - 3. SERVICE / OBD diagnostic and batterie change
 - 4. REACTIVATE for batteries
 - 5. BOOST quick charge



Application Area

- Tip device for all classes of vehicles with integrated battery test function

Scope Of Delivery

- Main cable 2 m
- Battery cable 3 m
- SD Card

Title	PU Piece	Article No.
BATTERY SERVICE DEVICE BHFL75A	1	329145

AGR: 08.003

INTERNAL/Approved (2019-03-22 21:50:39)

Headlight tester with laser

- Review of low beam, high beam and fog lights
- Suitable for halogen xenon and LED headlights
- Photodiode for low and high beam intensity
- With laser pointer for centering the main LED in LED Headlamp
- With new My Control Panel for easy adjustment of LED lights
- Analog lux meter for measuring the light intensity
- Easy alignment of the device with the aid of a mirror visor
- By spring a smooth height adjustment of the housing is rated benefits
- Optical polycarbonate lens
- TÜV tested with certificate under normal road traffic § 50
- With protective film

Application Area

- For testing of halogen, xenon and LED headlights
Checking and adjusting headlights any kind of motorcycles, automobiles, and trucks
Precise and fast adjustment of vehicle headlights (low beam, high beam and fog lights)

Characteristics

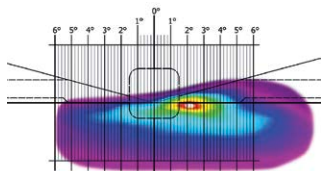
- Mechanical headlight tester with mirror visor and analog light meter

Technical Data

Height adjustment	240 - 1250 mm
Dimension	670 x 600 x 1740 mm
Weight	30 kg

Title	PU Piece	Article No.
Headlight tester with laser	1	239839

AGR: 08.309



Headlight Tester SEG05CT

- TÜV approved.
- LASER alignment visor.
- LASER pointer to easily positioning in front of the vehicle.
- new HORIZONTAL and VERTICAL internal scale.
- Rotating mast allows a 360° turning of the body of the headlight tester. With blocking pedal.
- For light and heavy vehicles.
- Suitable to verify and adjust any kind of headlamp (high, low and fog lights), including headlights with XENON and LED lamps.
- Height adjustment system with locking system (single handed).
- integrated 8" Windows 8.1 tablet
- High quality CMOS camera.
- the software is designed to be very easy to use (with guided menus)
- PC Computer connection trough USB, Bluetooth and WiFi.
- Allows connection to any commercial USB, Bluetooth or WiFi printer.
- intergrated (optional with entry code) ASA live stream
- including dust cover.



Application Area

- For testing halogen, xenon and LED headlights
- Checking and adjusting headlights of all types of motorcycles, motor vehicles and trucks
- Accurate and fast adjustment of vehicle headlights (low beam, high beam and fog lamps)

Scope Of Delivery

- Inclusive protective cover

Technical Data

Height adjustment	250 - 1450 mm
Depth	550 mm
Weight	22 kg

Title	PU Piece	Article No.
Headlight Tester SEG05CT	1	335938

AGR: 08.309

INTERNAL/Approved (2019-03-22 21:50:54)

Antifreeze & Battery Refractometer

- Easily read scalec
- Adjustable
- Delivered with pipette

Application Area

- Control of all types of coolant and battery fluids
- Mixture numbers for the fluids are quickly and easily found

Characteristics

- The measurement results can be read on four scales:
Propyl scale; for mixtures of antifreeze based on propyl glycol.
Ethyl Scale; for mixtures of antifreeze based on ethyl glycol.
Washing fluid scale; to determine to what degree the liquid is frost resistant
Battery Scale; to determine the battery's acid content

Processing Information

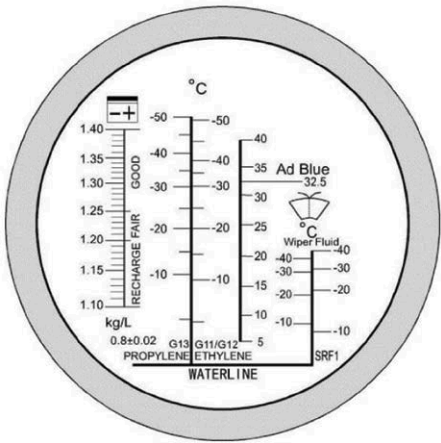
- A few drops of fluid or battery acid is placed on the prism under the cover plate, which is then closed. Neither air or liquid temperature influences the outcome, which is east to read as a clear color separation on the scale

Hints

- After use clean the refractometer with a soft cloth



Title	PU Piece	Article No.
Battery Refractometer	1	141796
AGR: 08.302		
Accessories Available	PU Piece	Article No.
ET 188 PIPETTE F.FROST PROT.PR	1	141922
SPAREGLASCAP F.REFRACT.MT767	1	008254



Frost Protection Tester for Coolant

- Rotary valve prevents dripping
- Reading the value scale guarantees easy, fast and accurate measurement
- No vertical position of the apparatus required by pendulum Gazette
- Sturdy plastic housing

Application Area

- Testing the percentage of frost protection (Ethandiol, Ethylenglykol) in the coolant

Technical Data

Temperature range	15 - 70 °C
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Title	PU Piece	Article No.
Frost protection tester for coolant	1	140089

AGR: 08.302



Cooler tester with coupling TVU 138/5

Application Area

- Leak and pressure loss control of the whole cooling system

Characteristics

- Cooling system tester with drain valve and quick coupling in glass fiber reinforced plastic,
- Precision manometer Ø 52 mm with robust protective rubber cap, dual scale 0 - 2,5 bar/0 - 36 psi

Hints

- Useable in conjunction with FZ 100 K for cooler openings which are difficult to access

Title	PU Piece	Article No.
TVU 138/5 RADIATOR TESTER	1	853567
AGR: 08.300		
Accessories Available	PU Amount	Article No.
FZ 100 K HOSE	1	823706



Hose FZ 100 K

Application Area

- Flexible hose, 0,50 m long, suitable for docking, for difficult to access cooler openings in order to connect the cooling system tester with the vehicle-specific single adapter K. or the universal adapter

Characteristics

- Quick coupling, the other side has a nipple for quick coupling (only useable for cooling system testers with quick coupling)

Title	PU Piece	Article No.
FZ 100 K HOSE	1	823706
AGR: 08.300		



Universal adapter with hand wheel UA..

Application Area

- For cooler openings or compensation tanks, with coupling nipple for the connection to the quick coupling

Title	PU Piece	Article No.
UA 1 UNI-ADAPTS W. HAND WHL	1	823652
UA 2 UNI-ADAPTS W. HAND WHL	1	823645
UA 3 UNI-ADAPTS W. HAND WHL	1	823669*

* = The delivery time is 21 days
AGR: 08.300



Cooler adapter K..

Application Area

- Vehicle specific single adapter for cooler opening or expansion tank
- With coupling nipple for the connection to the quick coupling of the cooler tester or vehicle hose

Title	PU Piece	Article No.
K 33 RAD.ADAPT. JAPAN FZG	1	884974*
K 60 RAD.ADAPT. STD.	1	846873
KS65ADAPTER F.RADIATOR VW/AUDI	1	061722

* = The delivery time is 21 days
AGR: 08.300



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Radiator Press-Test Device

- Damaged hose clamps and cylinder head gaskets, oxidised or damaged seals, possible leaks of the comps, damaged heating cycle can be detected immediately

Application Area

- Device for testing the cooling water system at cars and trucks

Title	PU Piece	Article No.
415 RADIATOR PRESS-TEST DEV	1	103146
AGR: 08.302		
Scope Of Supply	Amount	Article No.
(96415_11_1_AT01_41605VolvoCitrenRenaultF)	1	-
(96415_12_1_AT01_41610OpelVWPassatAudiSko)	1	-
(96415_13_1_AT01_41614Volkswagen)	1	-
(96415_14_1_AT01_41625VWSeatSkoda)	1	-
(96415_15_1_AT01_41635VAG)	1	-
(96415_16_1_AT01_41645MercedesSerieCEundA)	1	-
(96415_17_1_AT01_41654BMW)	1	-
(96415_18_1_AT01_41673AsiatFahrzeuge)	1	-
(96415_19_1_AT01_41676AsiatFahrzeuge)	1	-
(96415_20_1_AT01_41664AdapterfrLKW)	1	-
(96415_21_1_AT01_41666AdapterfrPKW)	1	-
(96415_22_1_AT01_41668BajonettsttzefrAdap)	1	-



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Universal Radiator Pressure Kit

- Fast and efficient checking
- Complete set with adapters
- 4 various adapters enable use in almost all common vehicles
- No additional expensive special adapters required
- Simple pressurized testing of cooling system
- Pressure pump and quick-release valve in one piece
- For diameter from 17 to 48,5 mm
- Simple handling

Application Area

- Pressurized test of the cooling system

Scope Of Delivery

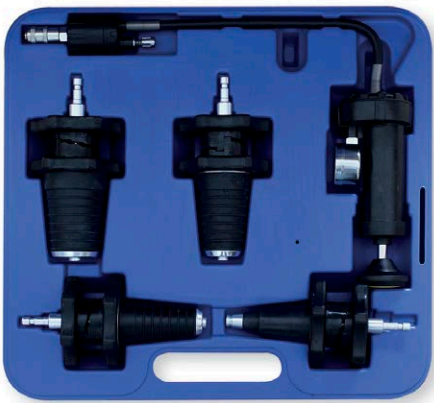
- Pump with manometer
- Adapter 1: 17 – 24 mm, smooth
- Adapter 2: 28 – 31,5 mm, stepped
- Adapter 3: 37 – 39,5 mm, stepped
- Adapter 4: 47 – 48,5 mm, stepped

Technical Data

Working pressure 0 - 2.4 bar

Title	PU Piece	Article No.
Universal Radiator Pressure Kit	1	219151

AGR: 08.302



Airvac Coolant Refiller

- Fast and clean filling of cooling systems with vacuum
- An automatic leak testing of the cooling system is performed during the vacuum generation
- Avoidance of air cushion in the cooling system
- Fitting to the most vehicles due to universal adapter
- Very quiet due to powerful absorbing duct
- Strainer on suction hose
- Extension Hose for adapter cones and therefore even more versatile

Application Area

- Filling of cooling systems with vacuum



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Scope Of Delivery

- 1 x vacuum unit with manometer
- 1 x cone straight (17-45mm)
- 1 x cone 90° offset (17-45mm)
- 2 x cone adapter (24-51mm / 29-53mm)
- 1 x suction hose
- 1 x filling hose

Technical Data

Suction Hose Lenght	1.4 m
Length, Filling Hose	0.68 m
Working pressure	6 - 12 bar
Air-Connection, Nominal-Ø, Inch	1/4 "

Title	PU Piece	Article No.
Airvac Coolant Refiller	1	219148

AGR: 08.302

Taring pump 470/400 N

Application Area

- For the testing of injection nozzles of diesel engines after reconstruction

Characteristics

- After the connection of the nozzle to be tested to the pump, the pulverisation pressure of the injection nozzle is controlled which means every pressure that causes the lifting of the needle or the leakage of fuel, after that the vaporisation can be controlled, by ensuring that no nozzle openings are blocked, wheather every jet is as strong as the others and whether there is no dripping, furthermore the leak tightness of the pressure performace between injection pump and injection dozzle can be controlled with the pump, the pump can be used in the diesel sector as well as in other sectors, like for lines, containers and castings etc., the gas oil container is made from shock-proofed plastic
- At the bottom of the container is an exchangeable filter that removes impurities which hinder the flawless operation of the pump and the injection dozzles

Scope Of Delivery

- 1 connecting piece 14x14, 1 connecting piece 14x12, 2 tables with the calibration value of the nozzles , 1 manometer with a scale of 0/400 bar



Title	PU Piece	Article No.
470/400 N EQUALISG PUMP	1	921661

AGR: 08.302

Pressure loss tester DRV 05

Application Area

- Indicates percentage pressure loss of the cylinder

Characteristics

- Engine pressure loss tester in compact design

Scope Of Delivery

- Precision manometer with protective rubber cap Ø 80 mm, standard test hose 1 m long, can be docked, with spark plug thread dock M 14 x 1,25 und M 18 x 1,5

Title	PU Piece	Article No.
DRV 05 PRESSURE DROP-TESTER	1	116332
AGR: 08.300		



Compression Pressure Recorder – Set for Otto and Diesel Engines

Hints

- The compression pressor is factory-made supplied without a calibration. The tools can be fee-based be caibrated upon demand

Scope Of Delivery

- 1 Compression Pressure Recorder Otto Engine 3.5 – 17.5 bar
- 1 Compression Pressure Recorder Diesel Engine 10 – 40 bar or 10 – 60 bar
- 1 Pressure Hose
- 3 Extensions 70 mm and 140 mm, angle 70 °
- 1 adapter for re-use of existing port adapter
- 2 rubber cones with socket
- 2 packets chart sheets gasoline / diesel
- 1 User's Guide

Title	PU Set	Article No.
Compression Pressure Recorder	1	104746

AGR: 08.300

Accessories Available	PU Piece	Article No.
Chart sheet VK12	100	021385
Chart sheet VK 17,5	100	021393
Chart sheet DM 40	100	021415



Compressed ait vacuum pump HV 90

Application Area

- Useable in many areas concerning the motor vehicle industry

Characteristics

- Switchable from vacuum to pressure, metal version can be handled with one hand

Scope Of Delivery

- Precision manometer with protective rubber cap Ø 63 mm, with double-belt precision scale, minus range from -1 to 0 bar, positive range from 0 to +3 bar/42 psi, scale division 0,05 bar brass cone, 4 plastic connection pieces, trunk

Title	PU Piece	Article No.
HV 90 PRESSURE-PART VAC PUMP	1	141899
AGR: 08.300		



OP85 Pressure Gauge

- Precision manometer with rugged rubber boot
- Double belt scale 0 to 10 bar / 0 to 140 psi
- Manometer tube 1 m with quick coupling
- Supplied with 10 adapters can be coupled
- In addition, 1 angle adapter for hard to reach places Installation
- Made in Germany

Application Area

- Tester to check the oil pressure. The connection via adapter in place of the oil pressure switch.



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Scope Of Delivery

- Precision gauge with 1 m hose and quick coupling
- Adapter 4 (M 10 x 1) for VW, Audi, BMW, Alfa Romeo, Mercedes Benz, Porsche, Skoda, MAN
- Adapter 18 (M 12 x 1.5) for Autobianchi, BMW, Citroen, Fiat
- Adapter 19 (M 14 x 1.5) for Alfa Romeo, DAF, Fiat, Lada, Lancia, Mercedes Benz, Opel, Renault, Vauxhal
- 20 adapter (1/8 "x 27) Austin, British Leyland, Chrysler, Daihatsu, Ford, General Motors, Mazda
- 39 adapter (1/4 "x 27) for Volvo, Saab, Ford, Alfa Romeo, British Leyland
- Adapter 40 (M 18 x 1.5) for Citroën, Peugeot, Renault, Volvo
- 47 adapter (1/8 "x 28) for Honda, Mazda, Nissan, Opel, Toyota
- Adapter 53 (M 16 x 1.5) for Citroën, Peugeot, Renault
- 62 adapter (3/8 "x 24) for Ford, Rover, Jaguar
- 63 adapter (1/2 "x 20) for American vehicles
- 1 angle adapter with coupling nipple and quick coupling
- Plastic case with foam insert



Title	PU Piece	Article No.
OP 85 OIL PRESSURE GAUGE	1	119893

AGR: 08.302

charge air testing system

- Charched-air system, which can be sealed up with hose clamps
- The testing tool KL-0124-51 K enables a secure, professional and quick leak test of the charched-air system
- Due to the mounting of the plug and the adapter plug the charched-air system can be squeezed off with a tyre pump.
- The leak test can be executed through a check on noise generation, leakage spray or a pressure drop. Leakages at hose connection, hooses, intercooler or turbocharcher are therefore fast and easy detactable and localizable.
- The special form of the plugs ensures that they stick in tighly

Application Area

- Leak test of charged-air systems

Scope Of Delivery

- 6 plug-pairs(2 stes with a security bead) Ø 35 - 40, Ø 45 - 50, Ø 55 - 60, Ø 65 - 70, Ø 75 - 80, Ø 85 - 90
- Overpressure valve
- Extension hose (for slim constructions)
- Hose clip twister with a flexible shaft (SW6/7)
- Plastic case



Title	PU Piece	Article No.
charge air testing system	1	244110

AGR: 03.413

INTERNAL/Approved (2019-03-22 21:52:50)

Engine Stethoscope

Application Area

- Fast localization of knocking, dragging and bearing sounds due to ultra sensitive sound detector

Characteristics

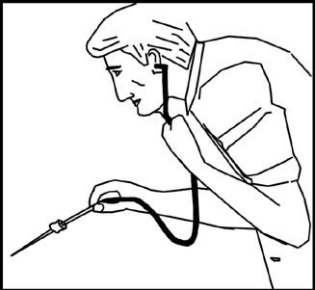
- analyzable

Hints

- Attention must be paid whilst the engine is running

Scope Of Delivery

- Incl. sensor extension for hard to reach areas



Title	PU Piece	Article No.
Engine Stethoscope	1	823454

AGR: 08.303

Brake Fluid Tester Easy DOT 3, 4, 5.1

- Simple and rapid measurement of fluid quality
- Result easy to read
- Small and portable
- long life, as acid and alkali resistant
- Robust, with protective cap for professional use
- Measurement spotlight
- tested in accordance with IEC / EN 61010-1 (DIN VDE 0411)

Application Area

- Handy tester for determination of brake fluid performance DOT 3, 4 and 5.1

Characteristics

- The brake fluid tester checks quickly and accurately the water content in brake fluids DOT 3, DOT 4 and DOT 5.1. Thanks to various measuring ranges, user-friendly operation and compact design, it is suitable for use in automotive, truck and motorcycle workshops.

Scope Of Delivery

- Battery is also included

Technical Data

Fluid type	DOT5.1 DOT4 DOT3
------------	------------------------

Title	PU Piece	Article No.
Brake Fluid Tester Easy	1	215220

AGR: 08.302

Accessories Available	PU Amount	Article No.
Battery Micro LR03 1,5 V X-tra	1/10	332673



INTERNAL/Approved (2019-03-22 21:53:07)

Brake Fluid Tester EBT 03

- Brake fluids of type DOT 3, DOT 4, DOT 4 Plus and DOT 5.1
- Selection of brake fluid Manufacturers possible
- Interpretation of the measurement result
- Display by two-line alphanumeric display
- Measuring range: 130-260 ° C in 2 ° C increments (boiling point)
- from 0 to 10% in 0.1% increments (water content)
- Checking the sensor readiness
- Automatic start of measurement after immersion of the sensor
- Processor-controlled measuring process
- Made in Germany



Application Area

- To measure the boiling temperature and percent water content of brake fluids

Characteristics

- Switchable display lighting
- easy to use
- automatic shut-off
- "Low Batt" display
- Power supply by 9 V battery

Technical Data

Fluid type	DOT5.1 DOT4 Plus DOT4 DOT3
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Title	PU Piece	Article No.
Brake Fluid Tester EBT 03	1	056211

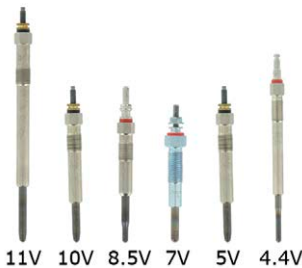
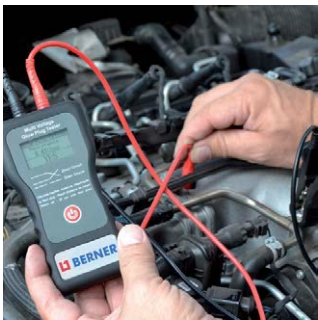
AGR: 08.302

Multivoltage Glow Plug Tester

- Displays, if there is an open circuit or a short circuit and the condition of the glow plug
- The device displays the current resistance of the glow plug, therefore it can be determined if the glow plug still corresponds to the given values
- Universal: Works with all common types of glow plugs
- Easy handling
- The results can be quickly read
- Insulated, flexible quality cable
- Easy handling, because no pre-settings are needed.
- The device is equipped with an "auto switch of" mode (automatic shutdown)
- Easy readable LCD-display

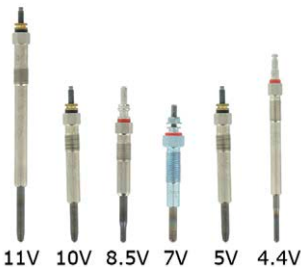
Application Area

- The glow plug tester is the ultimate tool for testing glow plugs with several voltages



Title	PU Piece	Article No.
Multivoltage Glow Plug Tester	1	198593

AGR: 08.300



INTERNAL/Approved (2019-03-22 21:53:27)

Torque-Reversible Square

Title	Driver	Length	PU Piece	Article No.
Torque Wrench Repositioning square	3/4 "	57.2 mm	1	115076

AGR: 03.015

Spare parts for dynamometric key with armswitch

Title	Driver	PU Piece	Article No.
Scale Cover (40-210 Nm)	1/2 "	1	129499

AGR: 03.015

Torque Wrench with Reversible Square

- With a large range of measurement, and legible graduation scale (Nm - lbf - ft)
- Clearly micrometer Nm framework guaranteeing the required values are accurate and quick adjustment
- Ergonomic handle for safe working conditions and precise workmanship
- Square drive pin with ball security provides direct power supply socket
- Drive pins corrugated plastic ratchet head provides precise shifting
- Quick Setup and torque thanks to fixture simple and convenient operations
- Grooved handle for fast timing
- For the achievement of value for set notify the sounds and the mechanical vibration
- High-quality powder-coating protects against corrosion and oxidation

Application Area

- For the controlled application of complying with the approvals torque



1/4"



3/8"



3/4"

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Processing Information

- After completion of the work and release the tension spring set the key to the lowest measurement scale section!

Hints

- To determine the required torque, observe the approval regulations, installation instructions or performance data
- After use, relieve the spring and set to the lowest value
- 3/4 "quadrant with pin holder for manually actuated plug-in inserts according to DIN 3120 with insertion chamfer and unlocking button

Scope Of Delivery

- It is supplied with a test certificate (original language)

Technical Data

Norms	DIN EN ISO 6789
Accuracy +/-	3 %

Title	Measuring range	Length	Driver	PU Piece	Article No.
Torque Wrench with Reversible Square	5 - 25 Nm	285 mm	1/4 "	1	120362
Torque Wrench with Reversible Square	10 - 50 Nm	335 mm	3/8 "	1	120318
Torque Wrench with Reversible Square	40 - 200 Nm	485 mm	1/2 "	1	120332
Torque Wrench with Reversible Square	60 - 300 Nm	577 mm	1/2 "	1	120340
Torque Wrench with Reversible Square	80 - 400 Nm	625 mm	3/4 "	1	120350
Torque Wrench with Reversible Square	150 - 750 Nm	1236 mm	3/4 "	1	120351

AGR: 03.015

Spare Parts

	PU Piece	Article No.
Torque Wrench Repositioning square 1/4"	1	139858
Torque Wrench Repositioning square 3/8"	1	139870
Torque Wrench Repositioning square 1/2"	1	139874
Torque Wrench Repositioning square 3/4"	1	115076



1/2"



Square connect



Square connect 3/4"

Torque spanner

Torque Scale Cover

Title	PU Piece	Article No.
Scale cover f. torque spanner	1	045341

AGR: 03.015



Torque wrench 3/4" 520-1000 Nm

- ISO 6789:2003 type II class A, with a factory certificate
- Tripping accuracy +/-3% from the set scale value.
 - The specification of the norm (+/-4%) is exceeded
- Automatic shortcut release with a noticable and audible signal
- Light and robust(because the housing is made of alluminium alloy), very workshop friendly
- No shift in value and no impact of accuracy through two-handed operation or actuation done away from the hand grip (as for stand-ard torque wrenches)
- As both square drive and pivt are on a single axis, therefore high level of operating safety, , extendable for reducing the workload oft he user
- Extremely low wear through force reduction through a unique lever mechanism
- Lubricated lever chain from quality blacksmith
- High precision even if used permanently
- Long life-time and high endurance
- Easy operation, fast and safe torque-tension
- Pleasent setting through an elegant, undetachable adjusting knob at the end oft he handle
- Easy double square for controlled clockwise tightning



Application Area

- Controlled screw tightening in a range of 520-1000 Nm

Hints

- With a certificate according to DIN EN ISO 6789:2003, traceable through DKD-laboratory of the company to a national standard

Technical Data

Norms	DIN EN ISO 6789
Accuracy +/-	3 %

Title	Measuring range	Mounting height	Length	Driver	PU Piece	Article No.
Torque Wrench	520 - 1000 Nm	35 mm	1413 mm	3/4 "	1	243314

AGR: 03.015

Torque wrench K300-1000 Nm

- Adjustable torque wrench - with a scale
- 3/4" square drive with an integrated ratchet function or 22 mm or push-on attachment pun
- Suitable for clockwise and counter-clockwise tightening, because of a push-through square
- Bending mechanism (bending of the tube shaft) trigger signal is noticeable and visible and covering gets unlikely
- Double scale in Nm and lbf·ft

Application Area

- Controlled screw tightening

Scope Of Delivery

- Torque wrench skinflint
- Operating instructions are located in sticker form on the torque wrench
- Test certificate according to DIN EN ISO 6789
- Supplied in a stable carton

Technical Data

Norms	DIN EN ISO 6789
Accuracy +/-	4 %

Title	Measuring range	Length	Driver	PU Piece	Article No.
Torque wrench	300 - 1000 Nm	1470 mm	3/4 "	1	243313*

* = The delivery time is 14 days

AGR: 03.015



INTERNAL/Approved (2019-03-22 21:54:06)

Digital Detector-1 Multi Finder

- Maximum reliability: most objects are found and application errors are avoided due to the automatic calibration
- Reliable detection even of deep-lying objects – up to a depth of 120 mm
- High precision display of the object’s center with the “Center Finder” -scale and display of material properties
- Better overview of the results due to illuminated display
- Marked opening with LED light ring
- Three detection modes for different applications: Element Construction, Metal, Voltage carrying cables
- Even more reliable detection of objects due to three-coloured LED luminous ring

Application Area

- Simple and optimal detection of metals, cables and wooden sub-structures such as concealed in. In concrete.

Characteristics

- Precise detection of objects with the centering on the display. In this case, the center or the edge of an object can be determined in the substrate. This is represented mainly by the LED hole marking. Viewing the material properties and a perfect view Thanks to the illuminated display. Setting in drywall mode, metal mode or cable mode.

Scope Of Delivery

- Digital Detector 1 Multi Finder
- Battery E-Block
- pocket
- hand Strap
- shipping carton

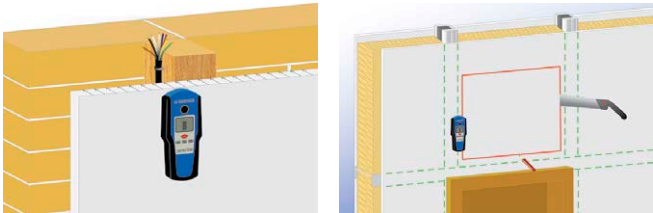
Technical Data

Device Type	Continuity tester
Detection depth, steel	120 mm
Detection depth, copper	80 mm



Electronic measuring equipment

Detection depth, wooden construction	38 mm
Detection depth of live wires	50 mm
Temperature range	-10 - 50 °C
Automatic shut off	300 s
Power Supply	1 x 9 V Block Battery
Operating Time, Approx. (Alkaline Batteries)	5 h
Protection Class	IP54
Length x width x height	200 x 85 x 32 mm
Weight	0.27 kg



Title	PU Piece	Article No.
Detector-1 Multi Finder	1	183842
AGR: 08.319		
Accessories Available	PU Amount	Article No.
Battery E-Block LR 61 9V X-tra	1/10	332677

Moisture Meter

- Ball probe prevents damage to building materials
- Pinless measuring of humidity in walls
- Easy and fast results
- Hold function for storing the current measurement value
- Minimum and maximum value measurements
- Low battery indicator
- automatic shut-off
- Backlight

Application Area

- The nondestructive spraying of building moisture and humidity distribution

Characteristics

- By the capacitive measuring method, the moisture in concrete, wood, plaster and many other materials without damaging or destruction in a penetration depth of about 20 leaves - 40 mm measure.

Technical Data

Weight	180 g
--------	-------

Title	PU Piece	Article No.
Moisture Meter	1	213981

AGR: 08.319

Mould Detector

- Dew point indicator
- relative humidity measurement
- Laser ring display
- adjustable emissivity
- Determination of average value
- Display lightning
- Data-hold function



Application Area

- For determining the dew point for locating thermal bridges and for displaying mold endangered places



Characteristics

- Identification of prone to mold areas within seconds due to the dew point indicator on the mold detector as well as hidden and invisible thermal bridges. It is excellently suitable for mobile use, due to its extensive range of services and easy handling
- Fracture-resistant ABS plastic
- Accuracy Infrared: object 10-30 ° C: ± 1 ° C, object -20 - 10 ° C and 30-200 ° C: applies ± 3 ° C or ± 2%, whichever is greater

Scope Of Delivery

- Mold detector
- Ever-ready case
- 9V battery

Technical Data

Device Type	Thermopile detector
Humidity	10 % - 90 % RH
Temperature range Infrared	-20 °C - 350 °C
Temperature range Sensor	-10 °C - 40 °C
Response Time, max.	0.5 s
Automatic shut off	25 s
Distance to spot size	12:1
Emission Value	0.75
	0.85
	0.95
Laser Class	2
Laser Diode	650 Nm
Range selection	°C; °F
Resolution (Display)	0.1°C
Display	LCD
Operating Time, Approx. (Battery)	100 h
Storage temperature	-20 - 60 °C
Operating temperature	-10 - 40 °C
Length x width x height	162 x 56 x 194 mm
Weight	222 g

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Electronic measuring equipment

Title	PU Piece	Article No.
Mould Detector	1	219048

AGR: 08.319

Digital Vernier Caliper

Characteristics

- With data output, stainless, hardened, LCD display, "0" position at every position possible, With a resolution of 0,01mm

Hints

- The measuring accuracy for lengths over 100 mm is +/- 0.03 mm.

Scope Of Delivery

- Digital Caliper in plastic box

Technical Data

Measuring Accuracy, typ.	0.02 mm
Norms	DIN 862
Digital	Yes
Operating temperature	5 - 40 °C



Title	Measuring range	Jaw Length	PU Piece	Article No.
Digital Vernier Caliper	0 - 150 mm	40 mm	1	169091

AGR: 08.313

Digital-multimeter

- When setting the measurement range, only the competent jacks are released
- Data Hold “H” button
- Backlight
- Large display
- temperature sensor
- Housing protected by rubber
- Voltage between the bushes and ground 600 V DC or 600 effectively (sine) V AC
- Surge is indicated by “1” (overload)
- Polarity display “-” is displayed automatically
- Low battery indication is indicated by the battery symbol
- 200 mA automatic backup for the Strommmessbereich. After the overload case, this will automatically lock back
- In accordance with the new IEC / EN 61010-1 and IEC / EN 61010-2-033

Application Area

- Handy digital multimeter to measure and troubleshooting of all important electrical parameters

Scope Of Delivery

- Test cable red and black
- 9 V battery
- temperature sensor
- Stand
- pocket

Technical Data

Amperage, Alternating Currency	1 μA - 10 A
Amperage, Direct Currency	1 μA - 10 A
Voltage, Alternating Currency	0.0001 V - 600 V
Voltage, Direct Currency	0.0001 V - 600 V
CAT	III
CAT, Volt	600 V
Frequency	20 kHz
Resistance	200 Ω - 20 MΩ
Diode test	1 mV
Capacity	1 - 20 nF



Electronic measuring equipment

Temperature range	-20 - 1000 °C
Operating temperature	0 - 40 °C
Display	LED 1.999
Weight	380 g
Length x width x height	200 x 89 x 38 mm
Power Supply	1 x 9 V Block Battery

Title	PU Piece	Article No.
Digital-multimeter 313	1	185139
AGR: 08.321		
Spare Parts	PU Piece	Article No.
185339 FUSE 10A 690V	1	241987
Measuring wires, 2 parts	1	144333

Multimeter Pocket

- DC voltage measurement
- AC voltage measurement
- Resistance measurement
- Frequency measurement
- Holder function
- Led light integreted
- Compact

Scope Of Delivery

- Batteries 2 x 1.5V AAA, LR03
- Storage bag

Technical Data

Voltage, Alternating Currency	1.6 V - 300 V
Voltage, Direct Currency	0.3 V - 300 V
Frequency Range	40 - 70 Hz
Input impedance	3 MΩ
Operating temperature	0 - 40 °C
Weight	170 g
Length x width x height	170 x 90 x 38 mm



INTERNAL/Approved (2019-03-22 21:55:01)

Electronic measuring equipment

Title	PU Piece	Article No.
Multimeter Pocket	1	219045

AGR: 08.320

Points set for multimeter

Application Area

- This set of high quality test probes was designed for the automotive engineer.

Scope Of Delivery

- Son of a pair of double insulated silicone test, completed on one side by a straight connector wrapped and the other by a right angle connector, both compatible with all standard 4 mm sockets.
- A cable pair piercers for intrusive measures, ideal when the inverted test is not an option.
- A pair of fine inverted test probes which comprise a spring steel rod for greater flexibility and less damage when attempting to pass through the rubber seal on some connectors.

Technical Data

Device Type	Multimeter	
-------------	------------	--

Title	PU Set	Article No.
Points set	1	245072

AGR: 08.320

Scope Of Supply	Amount	Article No.
Cable set for multimeter	1	245055
Set 2 right angle needles	1	245056
Set 2 straight needles	1	245057



Measuring Set Standard

- For the use with all commercial multimeters
- Perfectly tidied up in the case with all common measuring lines
- Checking of all circuits and consumers under consideration of given measured values

Characteristics

- Measuring line set profi, 20 pieces, for professional applications in a garage and all common cables are ideally packed in the Smart Box size 2

Scope Of Delivery

- 2 x 5KΩ potentiometer (250V 10A)
- 2 x LED stroboscope (24V 10A)
- 2 x SRS connectors (250V 0.25A)
- 2 x 1 to 2 connector (600V 10A)
- 2 x crocodile clips (600V 10A)
- 2 x Probe (600V 10A)
- 4 x needle probe (600V 10A)
- 4 x Test lead connector (600V 10A)
- in foam padding in Smart Box Gr. 2

Title	PU Piece	Article No.
Measuring Set Standard	1	215727
AGR: 08.320		
Scope Of Supply	Piece	Article No.
5 KΩ Stroboscope & LED Potentiometer	2	215726
1 to 2 Connector + SRS connector	1	215725
Alligator clip black/red	1	215711
Probe black/red	1	215733
Acicular probe black/red	1	215729
1 to 1 Connector black/red	1	215728
Open-Jawed and Ring Ratchet Wrench	1	043572
Related Products	PU Amount	Article No.
Digital-multimeter 313 600v	1	185139



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Test Lamp Metal

Application Area

- Testing / troubleshooting of electronic components such as ignition, lighting system, etc.

Characteristics

- Voltage tester DC with piercing tip for insulated cable and alligator clip

Scope Of Delivery

- Includes protective cap for lancing tip

Title	Voltage Area	PU Piece	Article No.
Test Lamp	6 - 24 V	1	013560
AGR: 08.301			
Spare Parts		PU Piece	Article No.
Alligator Crimp 5A		10	668338



Car tester

- Polarity test without polarity
- With piercing tip for insulated cable and alligator clip
- Cable Tester with LED display (4 optical LED lights)
- Piercing probe facilitates Check the cables in inaccessible
- By Polarity indicator no longer necessary to change the test leads

Application Area

- Ideal for troubleshooting of electronic components in Cars & LCV



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Characteristics

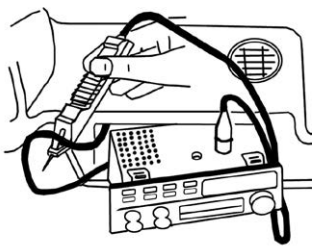
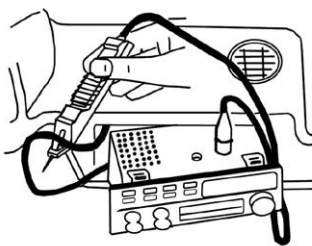
- DC Voltage Tester
- According to Safety Standard IEC / EN 61010-1
- Power supply via DUT

Technical Data

Protection Class	IP40
Length x width x height	145 x 25 x 16 mm
Weight	120 g

Title	Voltage Area	PU Piece	Article No.
Car tester	6 - 48 V	1	185244

AGR: 08.301



Continuity and line tester

- LED flashlight function
- Insulated connectors and break-proof housing
- Tested and approved by TÜV / GS IEC / EN 61010-1 (VDE DIN 0411)



INTERNAL/Approved (2019-03-22 21:55:41)

Electronic measuring equipment

- Optical and acoustical display (optical 0-20 ohms/10mA, acoustically 0 - 250 Ohm/2mA)

Application Area

- For testing continuity of cables, fuses, light bulbs, etc.
- Optical continuity test to 20 ohms, audible continuity test to 250 ohms
- Non-contact voltage tester
- Single-pole phase search

Characteristics

- Resistant against ingress of foreign objects and water jets (IP 44), tested and approved acc. to TÜV/GS IEC/EN 61010, 3 year manufacturer warranty

Scope Of Delivery

- 3 x mignon batteries (prod. no. 010524)
- Test leads

Technical Data

Device Type	Continuity tester	
CAT	II	
CAT, Volt	300 V	
Voltage	400 V	
Resistance From	0 Ω	
Resistance To	250 Ω	
Protection Class	IP20	
Battery	1,5V Mignon Battery	
Weight	90 g	

Title	PU Piece	Article No.
Continuity and line tester	1	169217

AGR: 08.321

Voltage testers Vibration

- In contrast to inductive measuring method, the capacitive method



- requires no current flow
- Interruptions are displayed quickly and centimeter accuracy
- White LED flashlight function
- Housing made of impact-resistant ABS plastic and consumption
- Tested and approved according to TÜV / GS IEC / EN 61010-1 (VDE DIN 0411)

Application Area

- Non-contact, optical and vibrant detection of AC voltage from 12 V
- Distinction between phase and neutral conductor for single-phase and three-phase networks
- Detection of live cables in junction boxes
- Quickly locate cable breaks and blown fuse
- Check live conductors as in low-voltage systems, defective switches, cable connectors or sockets

Characteristics

- Non-contact voltage tester with vibration

Scope Of Delivery

- incl. 2 batteries AAA 1.5 V

Technical Data

CAT	III
CAT, Volt	1000 V
Protection Class	IP40
Weight	45 g

Title	Voltage Area	PU Piece	Article No.
Voltage testers Vibration	12 - 1000 V	1	141016

AGR: 08.321

Accessories Available	PU Piece	Article No.
Battery Micro LR03 1,5 V X-tra	1/10	332673



INTERNAL/Approved (2019-03-22 21:55:48)

Magnetic Field Tester

- Direct contact with the probe is often not necessary (cover panels usually do not have to be removed). Tip lights up when a magnetic field is present.
- With integrated high performance LED, which provides bright and white light

Application Area

- Testing of solenoid valve in hydraulic and pneumatic control systems, relays, solenoids and solenoid valve by machine tools

Characteristics

- Portable - fits in any pocket, TÜV / GS approved

Title	PU Piece	Article No.
Magnetic Field Tester	1	043344

AGR: 08.323



Power circuit tester easy AC/DC

- The voltage tester EASY convinces with an user-friendly construction
- The robust housing guarantees a long service life

Application Area

- The double-pole voltage tester reliably indicates DC voltage and alternating voltage

Characteristics

- The two-pole voltage tester Easy convinces by a user-friendly design and a rugged housing ensures a long operational readiness. The two-pole voltage tester shows DC and AC voltages in the range of 6 to 400 V at reliable. In addition, the electronics provide the phase search against the protective conductor.
- The display contains 8 optical LED's
- Power supply via DUT

Technical Data

CAT	III
CAT, Volt	400 V
Protection Class	IP65
Length x width x height	120 x 60 x 30 mm



Electronic measuring equipment

Weight100 g

Title	Voltage Area	PU Piece	Article No.
Power circuit tester easy AC/DC	6 - 400 V	1	215208

AGR: 08.321

Multifunctional test instrument 6 / 12 / 24 V

- Polarity test without polarity reversal
- Optical and acoustic display function
- Security through self-test function and short circuit protection
- Finding of bad ground connections
- Illuminated by LED Testing
- Red / green LED for indication of polarity
- Changing visual and audible signal indicator, depending on the polarity
- Made in Germany

Application Area

- Localization of short circuits and bad ground contacts, continuity of electrical components such as Trailers electronics, relay, radiator fan, fuel pump, lamps, windows, fuses, wiring harnesses, etc.

Characteristics

- Multifunction Device 6/12/24 V with rocker switch for the electric car with a thermal fuse that can be reactivated as often.

Scope Of Delivery

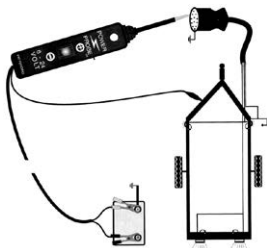
- Multifunctional test instrument including 6 m test leads with alligator clips and auxiliary terminal 0.5 cable in a plastic case

Technical Data

Device Type	Voltage tester
Cable Length	6 m

Title	PU Piece	Article No.
MULTI TESTER 6/12/24 V	1	186415

AGR: 08.300



INTERNAL/Approved (2019-03-22 21:56:08)

Multi tester LED Plus III

- Display of DC and AC voltages from 6 volts to 1000 volts
- Single-pole phase testing
- Bipolar phase sequence test
- Continuity test to 50 k ohms (optical / aktu table)
- diode test
- Data hold function
- display Lighting
- FI / RCD-scan test (30 mA) with two buttons
- LED Flashlight (White)
- Detachable 4mm test tips
- Click system for one-handed operation
- Auto Power Off
- According to EN 61243-3: 2010
- Switchable load: Is ~ 30mA ED (AT) = 30 sec.

Application Area

- "Display of AC and DC voltage (AC / DC) 6-1000 V
- Single-pole phase search: bellow 100 V AC
- Two-pole phase sequence test
- Continuity test to 500 kOhm
- FI / RCD-scan test (30mA) by means of two buttons
- Optical signals with life-threatening voltage from 35 V"

Characteristics

- The Multi Tester LED Plus II impresses with its user-friendly handling, robust, safe design and meets all requirements set by an expert on modern voltage tester. Thanks to the security level CAT IV 1000 V it is also suitable for measurements on hybrid and electric vehicles and photovoltaic systems.

Scope Of Delivery

- Multitester LED
- 2 Batterien AAA Micro 1,5 V (Art-Nr. 10524)

Technical Data

Voltage, Alternating Currency	6 V - 1000 V
Voltage, Direct Currency	6 V - 1000 V
CAT	IV
CAT, Volt	1000 V
Frequency Range	0 - 400 Hz
Continuity testing	0 – 500 Ω with acoustic signal



Electronic measuring equipment

Protection Class	IP 65
Display	12 LED
Weight	200 g
Length x width x height	238 x 70 x 30 mm

Title	PU Piece	Article No.
Multi tester LED Plus III	1	214018

AGR: 08.321

Multitester Profi LCD Plus II

- The Multitester ProfiLCD Plus II is the new top model of our proven Profi series. The innovative two-pole voltage tester convinces with a wide performance range and practical one-hand operation. It enables tests without finger contact and, due to the highest safety level, CAT IV 1000 V, is also immediately suitable for measurements on hybrid and
- electric vehicles, as well as photovoltaic installations
- Highest safety level CAT IV 1000 V
- Large, illuminated LCD
- Voltage indication up to 1000 V AC and 1400 V DC
- Resistance measurement 0,1 up to 199,9 kΩ
- Frequency indication up to 500 Hz
- T-RMS measurement procedure for non-sinus voltage, e.g. in industry
- FI/RCD check test: 30 mA at 230 V AC using two buttons
- Single-pole phase testing: Yes
- PELV indication: Optical acoustic and vibrating
- 4-mm test tip adapter: Removable

Scope Of Delivery

- Inclusive Batteries

Technical Data

Voltage, Alternating Currency	3 V - 1000 V
Voltage, Direct Currency	4 V - 1400 V
CAT	IV
CAT, Volt	1000 V
Frequency Range	0 - 500 Hz
Resistance	0.1 Ω - 199.9 Ω
Continuity testing	0 – 200 Ω with acoustic signal



INTERNAL/Approved (2019-03-22 21:56:23)

Electronic measuring equipment

Protection Class	IP65
Display	LCD
Weight	270 g
Length x width x height	300 x 75 x 20 mm
Power Supply	2 x 1,5 V Micro, IEC LR03

Title	PU Piece	Article No.
Multitester Profi LCD Plus II	1	248622

AGR: 08.321

Digital Clamp-on Ammeter

- Compact, handy device for versatile use with direct digital LCD display

Application Area

- Change and equal voltage measurement (AC and DC voltage)
- Change and dc measurement (e.g. charging current dynamo, leakage currents, cable disruptions)
- Resistance measurement
- Continuity and diode test

Characteristics

- Low battery indicator, TÜV / GS approved

Scope Of Delivery

- Current clamp, 2 test leads, case, 2 micro batteries (prod. no. 010525)

Technical Data

Voltage, Alternating Current, From	0.1 V
Voltage, Alternating Current, To	600 V
Voltage, Direct Current, from	0.1 V
Voltage, Direct Current, To	600 V
Amperage, Alternating Current, From	10 mA
Amperage, Alternating Current, To	400 A
Amperage, Direct Current From	10 mA
Amperage, Direct Current To	400 A
Resistance To	400 Ω
Cable Length	1.30 m
Protection Class	IP30
Length x width x height	194 x 72 x 35 mm



Función	Rango	Resolución	Precisión
Corriente AC	0-400 A	0.01 A	< 10 A ±(2%+10)
Corriente DC	0-400 A	0.1 A	≥ 10 A ±(2%+5)
Tensión AC	0-400 V	0.1 V	±(1.5%+5)
	0-600 V	1 V	±(1.5%+5)
Tensión DC	0-400 V	0.1 V	±(1%+5)
	0-600 V	1 V	±(1%+5)
Resistencia	0-400 Ω	0.1 Ω	±(1%+5)
Continuidad acústica	0-40 Ω		



Electronic measuring equipment

Weight 210 g

Title	PU Piece	Article No.
Digital clamp-on ammeter	1	043345

AGR: 08.323

Accessories Available	PU Amount	Article No.
Battery Micro LR03 1,5 V X-tra	1/10	332673

Wire finder

- Modulation of a carrier signal with the sender
- Easy and contactless locating of the cable with the receiver
- Easy and percise
- Continuous setting of the sensitivity
- No stripping needed
- Also suitable for passenger cars, trucks or trailers

Application Area

- Simplified locating of in-wall wiring and cable ducts

Characteristics

- The Cable Locator Set makes locating cables in walls and cable ducts. Given a signal to the transmitter via the crocodile clips or an optional adapter modulated onto a cable end. The other end of the cable can be found quickly and accurately with the receiver, even without contacting or stripping. Likewise pairs in the telecommuni-cations and network technology can be accurately identified.
- With LED light
- Display: continuous or alternating sound

Hints

- Please do not attach the alligator clip on to the body, only attach on zero potential cables, otherwise a wrong signal can occure.

Scope Of Delivery

- Sender and receiver
- Adapter with coax, F and RJ11 adapter
- Carrying case
- batteries

Technical Data



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Electronic measuring equipment

Power Supply	2 x 9 V Block Battery
Dimension receiver	230 x 55 x 23 mm
Dimension sender	55 x 57 x 23 mm
Weight	244 g

Title	PU Piece	Article No.
Wire finder	1	219030

AGR: 08.306

Thermo Control with K-Type Sensor

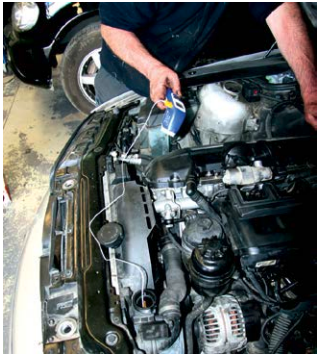
- Touch-free measuring (via infrared/laser) and contact measurement (via K-Type sensor) is possible -> multiple uses
- High measuring ranges
- Fast response time -> measuring result rapidly available
- °C/°F switching -> measuring in celsius and fahrenheit possible
- Engageable laser point with LED torch
- Engageable LCD display lighting
- Value memory for min. and max. values
- Difference value determination (DIF) between highest and lowest measurement value
- Possible to set continuous measuring
- Possible to set alarm values (HAL and LOW)
- Average determination (AVG) of the temperature measurement
- Possible to set the emission degree (= energy radiation characteristics of the material to be measured)
- Automatic switch off after approx. 60 seconds
- Revolver form -> handy
- Compact, stable construction
- TÜV/GS tested (German Association for Technical Inspection (Safety Tested))

Characteristics

- Infrared laser thermometer with connection of a K-type thermocouple

Hints

- Complies with the requirements of the valid European and national guidelines EN 60825-1, EN 61001
- 6-3:2001, EN 631000
- 6-1:2001



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Technical Data

Temperature range Infrared	-60 °C - 500 °C
Temperature range Sensor	-64 °C - 1400 °C
Accuracy +/- Infrared	2 °C
Accuracy +/- ThermoSensor	1 °C
Emission Value	0.95
Response Time, max.	1 s
Distance to spot size	12:1
Resolution (Display)	0.1°C
Automatic shut off	60 s
Storage temperature	0 - 50 °C
Height x length x width	146 x 132.7 x 48.8 mm
Weight	221.8 g

Title	PU Piece	Article No.
Thermo Control with K-Type Sensor	1	059055

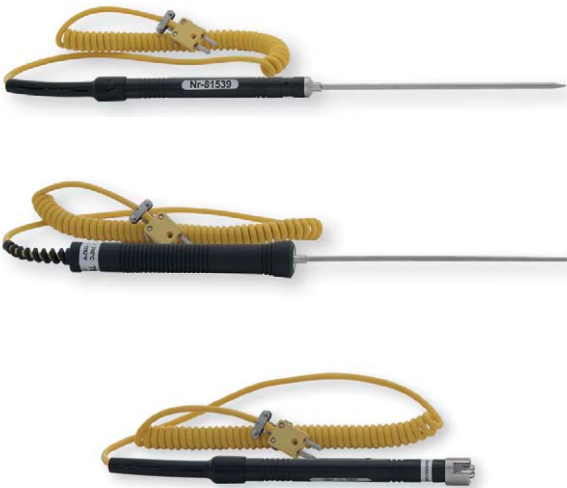
AGR: 08.309

Scope Of Supply	Amount	Article No.
Battery Micro LR 03	2	-
(616278_12_1_AT01_KTypeFhlerMessbereich50)	1	-
(616278_13_1_AT01_AufbewahrungstascheausN)	1	-

Thermo Sensor

Characteristics

- Penetration probe:
- -50°C up to +600C. Enables a quick and exact measuring of temperature. Pricking through soft plastic material is possible through the concentric tip.
- Surface probe:
- -50°C up to +400°C.For measuring temperatures on surfaces.
- Immersion sensor:
- -50°C up to +700°C. Can be used as a penetration probe, as a surface probe and as a room sensor for measuring temperature in gaseous media.



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Electronic measuring equipment

Title	PU Piece	Article No.
Thermo Sensor	1	198669
Thermo Sensor	1	198660
Thermo Sensor	1	198659

AGR: 08.320

Thermo Control III

- Split second measurement of temperatures
- Ideal for use in garages (engines, transmissions, catalysts, brakes, air conditioning, etc.), heating, refrigeration, air conditioning and electrical trades (cabinets, transformers, cables, etc.)
- Built-in laser pointer for precise temperature measurement
- Data Hold and Auto Power Off function
- ° C / ° F switch
- Switchable laser point
- Switchable display lighting
- Carrying case for safe transport
- Housing made of impact resistant and unbreakable ABS plastic
- Tested: IEC / EN 61010-1 (DIN VDE 0411)
- 3-digit display

Characteristics

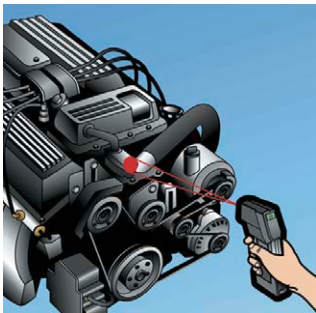
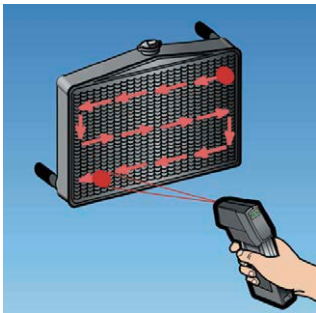
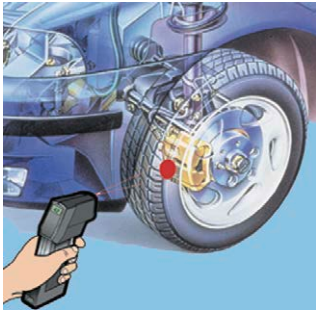
- Non-contact infrared temperature measurement

Hints

- On shiny materials must for measurement due to the reflection of the measuring range, for example. Be taped with electrical tape over critical.

Technical Data

Device Type	Thermopile detector
Humidity	10 % - 80 % RH
Temperature range Infrared	-50 °C - 550 °C
Operating temperature	0 - 50 °C
Accuracy +/-	2 °C
Emission Value	0.95
Overflow indication	1" (> 550 ° C; < -50 ° C)
Response Time, max.	1 s
Distance to spot size	12:1
Automatic shut off	10 s



INTERNAL/Approved (2019-03-22 21:56:41)

Electronic measuring equipment

Power Supply	2 x 1,5V Micro Battery
Height x length x width	152 x 94 x 38 mm
Weight	127 g

Title	PU Piece	Article No.
Thermo Control III	1	215517

AGR: 08.309

Digital Thermometer

- Has a memory function to compare figures

Application Area

- Air temperature control at the air outlet of the air-conditioning system
- First diagnosis whether the air-conditioning system is working or not

Characteristics

- The display has a range from 50 to 150°C, a memory function enables the comparision of figures

Title	PU Piece	Article No.
DIGITALTHERMOMETER / RA 43240	1	011920

AGR: 08.309



Lamination Strength Measuring Easy

- The lamination strength tester EASY ensures fast and easy testing of all non-magnetic layers like lacquers, enamel, chromium, copper, zinc etc. on steel or iron due to his clear LED-display
- Especially suitable for a quick check on vehicles for previous accidental damages in garages

Application Area

- Fast determination of the layer thickness and quick checks on vehicles for previous accidental damages



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Characteristics

- The coating thickness tester allows EASY with its clear LED display quick and easy control of all non-magnetic coatings such as lacquer, enamel, chrome, copper, zinc, etc. on steel or iron. It is particularly well suited for quick checks of vehicles on prior accident damage in automotive holdings.

Technical Data

Measuring Range	0 - 400 µm
Surface thickness, min.	7 mm
Accuracy +/-	15 %
Operating temperature	0 - 40 °C
Weight	80 g

Title	PU Piece	Article No.
Lamination Strength Measuring	1	215221

AGR: 08.309

Lamination Strength Measuring PREMIUM

- The lamination strength tester reliably measures all insulating layers on magnetic and non-magnetic metallic surfaces, with the help of a combination probe. Switching occurs automatically
- The integrated data logger saves the last 10 measurements
- The switchable screen orientations ensures measurements under most difficult conditions
- Combination probe for magnetic and non-magnetic metallic grounds
- Data logger
- Switchable display orientation
- Practical case
- Calibration disk included

Application Area

- Fast determination of the layer thickness on magnetic and non-magnetic metallic surfaces
- Quick checks on vehicles for previous accidental damages



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Characteristics

- The lamination strength tester PREMIUM reliably measures all insulating layers on magnetic and non-magnetic metallic surfaces, with the help of a combination probe. Switching occurs automatically
- The integrated data logger saves the last 10 measurements
- The switchable screen orientations ensures measurements under most difficult conditions.
- In accordance with IEC / EN 61010-1 (DIN VDE 0411)

Technical Data

Measuring Range	0 - 2000 µm
Surface thickness, min.	7 mm
Accuracy +/-	3 %
Operating temperature	0 - 40 °C
Length x width x height	94 x 48 x 24.2 mm
Weight	72 g

Title	PU Piece	Article No.
Lamination Strength Measuring	1	215222

AGR: 08.309

Digital Angle Gauge

- Easy handling
- By 3 adapter plates suitable for almost all ratchets, torque wrenches, extensions, toggles etc.
- Setting range from ± 0,0 - 999,0
- Angle summation function in tight spaces
- Fine resolution (0,1°)
- 99 memory seats
- Measurements in- and counter-clockwise
- Angle measurements independent of the length of torque wrench or toggle
- Audible and visual alarm signal when reaching the set value
- Battery charge display
- Automatic shutdown

Application Area

- Accuracy angle tightening of screws with torque, toggle or ratchet

Scope Of Delivery

- Digital protractor
- 2 adapter plates for round absorption
- 1 adapter plate with magnet for straight absorption
- In smart box with foam inlet
- 2 batteries AAA



Title	PU Piece	Article No.
Digital Angle Gauge	1	219164

AGR: 08.312

Test Equipment Set Construction SB XL

Title	PU Piece	Article No.
Test Equipment Set Construction SB XL	1	332567

AGR: 03.701



INTERNAL/Approved (2019-03-22 21:57:25)

Electronic measuring equipment

Scope Of Supply	Amount	Article No.
Power circuit tester easy AC/DC	1	215208
Wire finder	1	219030
Digital clamp-on ammeter	1	043345
Lid Foam Inlay SB XL	1	210493
Mould Detector	1	219048
Digital-multimeter 313 600v	1	185139
Multi tester LED Plus III	1	214018
SMART-BOX XL	1	188017
Foam Inlay Test Equipment empty, Construction	1	329150
Thermo Control III	1	215517
Voltage testers Vibration 12-1000V	1	141016

Test Equipment Set Car SB XL

Title	PU Piece	Article No.
Test Equipment Set Car SB XL	1	332569

AGR: 03.701

Scope Of Supply	Amount	Article No.
Power circuit tester easy AC/DC	1	215208
Brake Fluid Tester Easy DOT 3, 4, 5.1	1	215220
Car tester	1	185244
Digital clamp-on ammeter	1	043345
Lamination Strength Measuring Easy	1	215221
Lid Foam Inlay SB XL	1	210493
Magnetic Field Tester	1	043344
Digital-multimeter 313 600v	1	185139
Multimeter Pocket	1	219045
Multi tester LED Plus III	1	214018
SMART-BOX XL	1	188017
Foam Inlay Test Equipment empty KFZ	1	329151
Thermo Control III	1	215517
Voltage testers Vibration 12-1000V	1	141016



INTERNAL/Approved (2019-03-22 21:57:30)

Electronical Leak Detector

- The electronic leak detector TIF XP-1A detects the smallest amounts of refrigerant concentrations in the surrounding air
- It identifies the refrigerants by recognizing the specific features with the sensor tip and then indicates it visual with an LED-display and acoustically through an alarm sound. The frequency of the alarm sound increases the nearer it is to the leakage. The device can be adapted to local circumstances through a volume control for the acoustic signal and a regulation of sensitivity
- With this leak detector an easy leak detection is provided

Application Area

- Activations

Characteristics

- -For all kind of halogen based refrigerants
- Licensing according to SAE J 1627 for R134a, R22 and R12
- Probe on a gooseneck for hard-to-reach areas
- Leak display via LED-lamps or arlarm signals
- Spare probe included in delivery
- Can be reseted

Technical Data

Device Type	Continuity tester
Sensitivity	3 g / year
Sensitivity level	7
Mechanical pump	Yes
Alarm tone switch off	Yes
Length probe	355 mm
Lifetime LED	20 h
Power Supply	2 x 3V C-Cell (R14)
Weight	560 g

Title	PU Piece	Article No.
Electronical Leak Detector	1	004792

AGR: 08.329



Gas Test Case

- The assesment must be carried out during overpresser, because underpressure does not supply a practice-oriented statement. Therefore the forming gas test kit has been developed
- For detecting the smallest leakages the most appropriate solution is to use a test gas with quite small molecules
- To ensure safety which is needed for the handling in a garage, the gas is mixed in a proportion with nitrogen of 5/95
- The gas micture (forming gas 5/95) is filled into the air conditioning under pressure and afterwards the leaking hydrogen is detected with an electronic leak detector
- The advantage of this procedure are quite moderate test pressures up to a maximum of 10 bar, because for example no expansion valve gets demaged.
- For a reliable diagnosis a selective leak detector with high sensi-tivity hast to be used, for determining even the smallest amount of H2
- this procedure is also suitable for air conditionings with other refrigerants



Application Area

- Due to legal requirements the air condition sytsem must be tested for leaks before the refrigerant is filled in, if there is a suspicion that it could be leaking. There is a suspicion if an abnormal amount of refrigerant has leaked or if it is totally empty

Scope Of Delivery

- Electronic leak detector for hydrogen, accuracy 5 g/year
- Pressure reducer variable up to 10 bar with 3 manometers
- Bottle of forming gas 1 kg, up to 20 applications
- Tube HD and ND
- Quick coupling HD and ND
- Transport case

Title	PU Piece	Article No.
Inert Gas Finder Prof.	1	129501

AGR: 08.329

Accessories Available	PU Amount	Article No.
ACT100YF UPDATE SET FLG800-YF	1	206919

INTERNAL/Approved (2019-03-22 21:57:47)

Electronic measuring equipment

Spare Parts	PU Piece	Article No.
ONE WAY TRACER GAS 2KG	1	132324

Videoscope Pro 3.9

- Compact and handy device
- Capturing images or videos with just one touch of a button
- Rapid detection of damage or problems without disassembling components
- With the very flexible, slim 3.9 mm in diameter and 1 m long probe almost all areas are accessible
- 3.5 "color monitor
- Brightness of the LED's at the top adjustable
- Data, images or movies can be stored on the SD card or via USB connection and thus processed on a PC next
- Through A / V output images or movies can be printed directly on a monitor or projector
- Screen shot possible while filming
- Zoom-in / zoom-out function
- Image rotation possible
- It is possible to have 2 images side by side on the monitor in order to obtain a direct comparison
- 3 magnetic stripes on the back
- Special tips oil- and water-protected to IP 57



Application Area

- For outdoor and indoor use. Whether you work at midday inspecting leaking pipes, or are checking car engines in the sun - Videoscopes Pro™ is essential
- Designed for industrial use as: Automotive and aerospace and maritime industries, locksmiths, electricians, engineers, carpenters, heating, ventilation and air conditioning engineering, plumbing fixtures, welding and pipe inspection

Electronic measuring equipment

Characteristics

- Better picture quality
ME-Series is designed professionally for inspection in the sun.
This unique sun visor design is able to block 50% of sunlight, and thus you get clear pictures of the system. In addition the screen is protected from bumps and scratches.

Picture during video recording (SWR)
Zoom In / Zoom out 2x digital
Image rotation 90/180/270/360 degrees
Photographic Comparison of two images
Large 3.5 "TFT LCD screen
Possibility for alternatives and additional camera probes and mirror glass (ask customer service)
Built-in tripod mounting & magnetic stripes (not included as standard ask customer service)
- Video Format: MPEG4 / AVI 30 f / s
Image format max .: JPEG, 640x480 resolution

Hints

- Probe fits on previous model (art.No. 91625)

Scope Of Delivery

- Videoscope with 3.5 "color monitor
- Probe with a diameter of 3.9 mm and 1 m length
- 3 levels with 35 °, 45 °, 55 ° and 1 magnet
- SD card with 2 GB
- USB and AV cables
- Charging plug 230 V
- Cleaning cloth and chopsticks
- User manual
- Plastic case

Technical Data

Length probe	1000 mm
Display	3,5" TFT-LCD
Resolution (Display)	320 x 240 pixel
Storage capacity	2 GB (Gigabyte)
Voltage	3.7 V
Battery Typ	Li-polymer
Operating Time, Approx. (Battery)	5 h
Length x width x height	215 x 115 x 35 mm

Weight	430 g
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Title	Ø	PU Piece	Article No.
Videoscope Pro	3.9 mm	1	144162

AGR: 08.304

Accessories Available	PU Piece	Article No.
BOROSCOPE CABLE 10MT	1	116580
BOROSCOPE CABLE 1MT	1	116534
PROBE BOROSCOPE 1MT Ø3,9 MM	1	138949

VIDEOSCOPE DUALCAM 4,9MM

- Digitaler zoom
- Brightness adjustment
- Probe camera adjustment - front and side view

Application Area

- It allows you to analyze easily and quickly hard-to-reach places without having to disassemble (examples: spars, engine, transmission, axes, cavities, cable or air ducts, plumbing and other applications).

Characteristics

- DUAL CAM technology: optimization of inspection work
- Lights: 2 LED in front and 2 LED at the side
- Horizontal Viewing Angle: 45 °
- Vertical Viewing Angle: 34 °
- Diagonal viewing angle: 56 °

Technical Data

Length probe	1000 mm
Display	TFT LCD 2.4"
Resolution (Display)	320 x 240 pixel
Depth of field	1 - 6 cm
Operating temperature	-20 - 60 °C
Operating Time, Approx. (Battery)	8 h
Protection Class	IP67
Length x width x height	209.5 x 93.5 x 57.5 mm



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Electronic measuring equipment

Title	Ø	PU Piece	Article No.
Videoscope Dual Cam	4.9 mm	1	336327

AGR: 08.304

Videoscope 4.9mm Switch Probe

Title	Ø	PU Piece	Article No.
Videoscope 4.9mm Switch Probe	4.9 mm	1	198445

AGR: 08.304



Videoscope Flex probe

- Compact and lightweight

Application Area

- Inspection of vehicle engine, engine compartment, door interior, etc.
- Inspection of leaks and rust damage in hard-to-reach areas
- Inspection of welding nets on pipes or inside walls

Characteristics

- Probe diameter: 4.5 mm
- Field of view: 90° image rotations
- Light source: 4 LED's
- Probe length: 1 m
- Protection class: IP67
- Display: TFT LCD 3,5"
- Display resolution: 320 x 240
- Operating temperature: 0 °C - 60 °C
- Dimensions: 140 mm x 116 mm x 42 mm
- Power supply: 4 pcs. AA Batteries
- Estimated battery life: 4 hours



Title	Ø	PU Piece	Article No.
VIDEOSCOPE 4,5 FLEX PROBE	4.5 mm	1	370471

AGR: 08.304

videoscope 22 meters on reel (on order)

Application Area

- For viewing, shooting films in less accessible places, pipes, water pipes, drains, etc

Title	PU Piece	Article No.
vidéoscope 22 meters on reel (on order)	1	216067

AGR: 08.304



INTERNAL/Approved (2019-03-22 21:58:21)

Laser Range Detector

- First laser range finder with a touchscreen handling
- For the measurements different reference levels can be used(corners, edges, walls, alu tripod)
- Large LCD-display with a white backgroudlightning

Application Area

- Length measurements
- Surface measurement
- Volume measurement
- Continious measurement
- indirect length measurement

Characteristics

- Easy and precise measuring

Scope Of Delivery

- Laser distance meter BLMT 50
- Belt bag
- 4 x 1.5 V batteries (Article number 010525)

Technical Data

Measuring Range	0.1 - 50 m
Measuring Accuracy, typ.	1.5 mm
Laser Class	2
Protection Type	IP54
Battery lifetime, approx. (Measurements)	5.000
Automatic shut off	300 s
Operating temperature	0 - 40 °C
Weight	0.18 kg

Title	PU Piece	Article No.
LASER RANGE FINDER BLMT 50	1	094180
AGR: 08.331		
Accessories Available	PU Piece	Article No.
Laser Glasses	1	111936



INTERNAL/Approved (2019-03-22 21:58:33)

Laser Distance Meter BLM 80

- High functionality due to integrated 360° incline sensor
- Combined with the BLM 80 guide rail (accessory) to use as a digital inclinometer
- Precise and easy to operate due to illuminated display which flips automatically
- Equipt with in-built Li-ION battery rechargeable via standard micro-usb port. Up to 25,000 measurements per charge thanks to lithium-ion technology
- Automatic storage of the last 20 measured values
- Possibility for activating timer function - for precise measurement from difficult positions
- Small and handy
- A reliable help at any construction site due to robust design

Characteristics

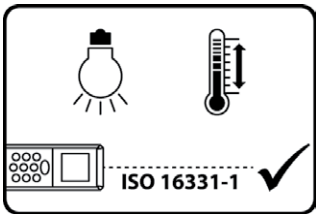
- automatic storage of the last 20 measured values and one constant, timer function can be switched on/off – for precise measurement from difficult positions, small and handy, reliable aid on any construction site due to robust design, fold-out measuring pin for measuring out of tight spaces, reference point code for determining whether it is to be measured from front or rear edge of housing, tripod bracket or measuring pin.

Scope Of Delivery

- Laser rangefinder BLM 80 incl. Battery (installed)
- pocket
- charger
- shipping carton

Technical Data

Measuring Range	0.05 - 80 m
Measuring range, Angle	0 - 360 °
Measuring Accuracy, typ.	1.5mm; 0.2°
Measuring Time, Leveling, To	4 s
Minimum Display Unit	1 mm
Laser Class	2
Laser Diode	635 Nm
Protection Type	IP54
Stativ-Connection	1/4 "
Unit Measurement Range, Minimum Or Single Value	mm



Laser technology

Unit Measurement Range, Maximum	m
Battery Typ	Li-Ion
Voltage	3.7 V
Charging Time (Standard)	180 min
Automatic shut off	300 s
Operating temperature	-10 - +50 °C
Dimensions	111 x 51 x 30 mm
Weight	0.14 kg

Title	PU Piece	Article No.
BLM 80 Range Finder	1	183844
AGR: 08.331		
Accessories Available	PU Piece	Article No.
BLM 80 Guide	1	184931
Laser Glasses	1	111936

BLM 80 Guide Rail

- Measuring guide rail BLM 80 for use as a digital inclinometer (4x90°)
- Immediately ready for operation due to automatic detection of the measuring rail
- Fits perfect to BLM 80 distance measuring tool

Hints

- Rangefinder must be ordered separately

Scope Of Delivery

- Measuring Rail
- Pouch (Protective case)
- Carton

Technical Data

Measuring range, Angle	0 - 360 °
Measuring Accuracy, typ.	0.2°
Material	Aluminium
Dimension	610 mm
Weight	0.6 kg

Title	PU Piece	Article No.
BLM 80 Guide	1	184931

AGR: 08.332

Necessary Accessories	PU Amount	Article No.
BLM 80 Range Finder	1	183844



BCLL Cross Line Laser BASIC

- Surface angle with automatic display when leaving the leveling range
- Shows a leveling line to within a few seconds
- 2 button operation with battery indicator for easy handling
- Compatible with the handheld receiver for a range up to 50 meters
- Easily positioned magnetic angle for easy attachment to metal surfaces
- Robust, damp proof and fully rubberized housing for use even under severe conditions
- Automatic safety function: Leaving the self-leveling range is indicated by flashing laser level

Application Area

- For the alignment of pipe hangers, railings or profiles
- For a quick highlight of attachment points, holes etc. on the floor, wall and ceiling
- Vertical laying of tiles on floor and walls

Characteristics

- Built in magnetic pivot bracket mounts easily on metal surfaces, overmolded housing and thick glass protects the tool and helps maintain calibration under jobsite conditions

Hints

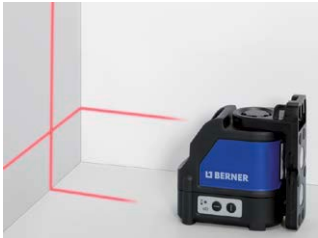
- Automatic safety function: leaving of the levelling area is displayed by a flashing laser level

Scope Of Delivery

- Cross Line Laser Bcll BASIC
- Wall Mount
- 3 x 1.5 V batteries (AA)
- Plastic carrying case

Technical Data

Measuring range, max.	15 m
Range Max, With Receiver (Radius)	50 m
Measuring Time, Leveling, To	2 s
Leveling Accuracy	0.3 mm/m
Leveling Area +/-	4 °
Laser Class	2



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Laser Diode	637 nm
Protection Type	IP54
Stativ-Connection	1/4 "
Battery	1,5V Mignon Battery
Number of lines	2
Operating Time, 1 line	36 h
Operating Time, 2 lines	16 h
Operating temperature	-10 - 45 °C
Weight	0.75 kg
Length x width x height	112 x 61 x 113 mm

Title	PU Piece	Article No.
BCLL Berner Cross Line Laser Basic	1	183845
AGR: 08.332		
Accessories Available	PU Piece	Article No.
BCLLD Berner Cross Line Laser Detector	1	183847
Laser Glasses	1	111936
Telescopic Laser Pole CrossMax2	1	034973
Related Products	PU Piece	Article No.
Battery Mignon LR6 1,5 V X-tra	1/10	332674

Multi Line Laser Matrix-2 360°

- 360° all round horizontal and vertical
- 360°-pitch circle for angle transmission
- Visible horizontal and vertical lines are projecting 4 crosses in a 90° angle on the wall
- Additionally visible 90°-cross on the ceiling with a vanishing/perpendicular point to the ground (intersection point is a cross)
- Quick levelling through an electric actuator
- Large workig area up to 10 m distance from a wall and 360° horizontal line



- Side-fine adjustment facilitates the exact positioning and angle adjustment
- Illuminated level at the head of the unit - assists the alignment of the unit with its adjustable feet

Application Area

- Vertical and rectangular orientation of partition walls and constructions, linear orientation of stud wall partitions
- Height transfer of meter-tear and of installation-, door- and window-openings
- Transfer of joint cuts of wall tiles, right angle at floor tiles
- Positioning of the ceiling light, procedure of ceiling suspensions and so on

Characteristics

- Transport lock of the swing system
- 5/8" tripod connection

Hints

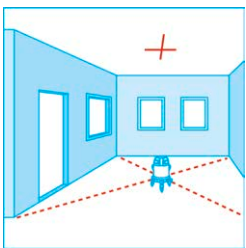
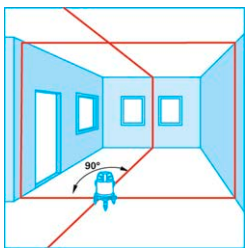
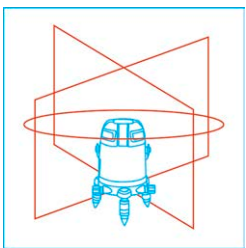
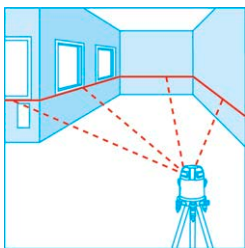
- Automatic safety function: leaving of the levelling area is displayed by a flashing laser level

Scope Of Delivery

- Multi-line laser matrix 360
- 4 batteries Mignon rechargeable (Article number 165917)
- Transport case
- Laser glasses
- Charger for direkt charching
- Target plate

Technical Data

Measuring range, max.	30 m
Range Max, With Receiver (Radius)	50 m
Measuring Time, Leveling, To	4 s
Accuracy On 10 M, +/-	1.5 mm
Leveling Accuracy	0.15 mm/m
Leveling Area +/-	4 °
Laser Class	2
Laser Diode	670 Nm
Protection Type	IP54
Stativ-Connection	5/8 "
Battery Typ	NiMh
Operating temperature	-10 - 40 °C



INTERNAL/Approved (2019-03-22 21:59:17)

Weight1.3 kg

Title	PU Piece	Article No.
Multi Line Laser Matrix-2 360°	1	240006

AGR: 08.332

Accessories Available	PU Piece	Article No.
CHARGING CABLE FOR MATRIX 360	1	336158
Rech. battery Mignon 1,2 V	4	165917

Related Products	PU Piece	Article No.
Aluminum Elevator Tripod 0.8-2.65	1	135903
Chalk Line Reel Stop 30m	1	116449

BCLLD Cross Line Laser Detector

- Suitable for laser line
- Handheld Receiver with clamp and magnetic
- Compatible with cross line laser BcII BASIC & TOP
- Coarse and fine adjustment possible
- Very easy to use
- Automatic shut-off after five minutes
- Background LCD
- Max. 2 m drop

Characteristics

- Very easy to use, specially about the possibility of coarse and fine adjustment. With sturdy clamp to attach the measuring rod and LCD display with backlight. By the magnets of the receiver can best be attached to metal braces. The automatic shutdown of the receiver provides perfect protection when the unit has not been used for 5 minutes.

Scope Of Delivery

- BCLLD Detector
- clamp
- carton

Technical Data

Range, Max50 m



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Battery	9 V Block Battery
Length x width x height	67 x 38 x 121 mm
Weight	0.56 kg

Title	PU Piece	Article No.
BCLLD Detector	1	183847
AGR: 08.332		

Telescopic Laser Pole

- Especially suitable for smaller laser devices such as cross-line or 5-point lasers

Scope Of Delivery

- Telescope-tripod, quick-tension-adaptor, clamp, transport bag

Technical Data

Height	1.1 - 2.75 m
--------	--------------

Title	PU Piece	Article No.
Telescopic Laser Pole	1	034973
AGR: 08.333		



Multiline Laser Set

Technical Data

Measuring range, max.	30 m
Range Max, With Receiver (Radius)	30 m
Measuring Time, Leveling, To	4 s
Accuracy On 10 M, +/-	1.5 mm
Leveling Accuracy	0.15 mm/m
Leveling Area +/-	4 °



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Laser technology

Laser Class	2
Laser Diode	670 Nm
Protection Type	IP54
Stativ-Connection	5/8 "
Battery Typ	NiMh
Operating temperature	-10 - 40 °C
Weight	1.3 kg

Title	PU Assortment	Article No.
MULTILINELASER SET	1	209167

AGR: 08.332

Scope Of Supply	Amount	Article No.
Aluminum Elevator Tripod 0.8-2.65	1	135903
BCLLD Berner Cross Line Laser Detector	1	183847
Multi Line Laser Matrix-2 360°	1	240006

Cross Line Laser Green BCLL-G Basic

- Green laser light
 - Better visible in light working conditions
- Leaving the self-leveling range is indicated by flashing laser level
- 2 button operation and battery indicator
 - Easy handling
- Easily positioned magnetic angle
 - Product can be easily attached to metal surface
- Robust, fully rubberized housing
 - Can be used even in severe conditions
- Overmolded housing and thick glass
 - Tool and laser diode are well protected from damages
- Compatible with the green handheld receiver (BCLLD-G) for a range
 - up to 50m

Application Area

- For the alignment of pipe hangers, railings or profiles
- For vertical laying of tiles on the floor
- For kitchen cabinet and counter-top installation
- For electrical outlet and fixture placement



Scope Of Delivery

- Cross Line Laser BCLL-G Basic
- Wall mount
- 3x 1,5 V Type AA Batteries
- Plastic carrying case

Technical Data

Measuring range, max.	20 m
Range Max, With Receiver (Radius)	50 m
Accuracy On 10 M, +/-	3 mm
Leveling Area +/-	4 °
Laser Class	2
Laser Diode	515 Nm
Protection Type	IP54
Stativ-Connection	1/4 "
Battery	1,5V Mignon Battery
Number of lines	2
Operating Time, 1 line	16 h
Operating Time, 2 lines	8 h
Operating temperature	-10 - 45 °C
Weight	0.75 kg
Length x width x height	112 x 61 x 113 mm

Title	PU Piece	Article No.
Cross Line Laser Green	1	351719

AGR: 08.332

INTERNAL/Approved (2019-03-22 21:59:30)

Laser Detector Green BCLLD-G

- Handheld Receiver with clamp and magnet at the bottom
- Coarse and fine adjustment possible
- Very easy to use
- LCD display with backlight
- Automatic shut-off after five minutes

Application Area

- Suitable for green crossline and multiline laser (BCLL-G Basic/Top)

Scope Of Delivery

- BCLLD-G Detector
- Clamp
- In carton

Technical Data

Range, Max	50 m
Battery	9V E-Block, alkaline
Length x width x height	67 x 38 x 121 mm
Weight	0.56 kg

Title	PU Piece	Article No.
Laser Detector Green BCLLD-G	1	351717

AGR: 08.332



Rotation Laser Topline Easy VL One Touch BC+

- Very easy to use.
- Equipped with self-levelling function.
- Equipped with infrared remote control.
- Usable for internal and external works.
- Equipped wit laser receiver with dual LCD screen.

Application Area

- Suitable for horizontal and vertical linear (in manual mode) projections.
- For align and leveling.
- Installation of doors, windows.
- Vertical alignment of columns.
- Control of slops.
- Controlo of planarity of the gorund.

Characteristics

- Fully automatic self-leveller (from +/- 5 ° "obliquity") for horizontal and vertical work,
A-axis automatic mode or manual mode also allows tilt work, highly visible laser beam, automatic shutdown when misalignment, inclusive firmly integrated beam splitter prism, simple handling through singlebutton function and clear display, robust plastic housing

Hints

- The manuell and uniaxial inclination mode, as well ad the standby function can only be controlled with the optional remote-control

Scope Of Delivery

- Rotating Laser Topline Easy VL One Touch
- Hand receiver with bracket Outdoor
- 2 x alkaline batteries mono (Laser)
- 2 x alkaline batteries AA LR06 (receiver)
- BERA CLIC + 4 incl. Ticking

Technical Data

Range Max, With Receiver (Radius)	350 m
Measuring Time, Leveling, To	30 s
Leveling Area +/-	5 °
Laser Class	2



INTERNAL/Approved (2019-03-22 22:00:00)

Laser technology

Laserdiode	630/680 Nm
Laser beam Ø	5 mm
Rotational Speed	600 r/min
Protection Type	IP55
Stativ-Connection	5/8 "
Battery	1,5 V Mono Battery
Operating Time, Approx. (Alkaline Batteries)	80 h
Operating Time, Approx. (Battery)	35 h
Operating temperature	-5 - 45 °C
Weight	1.5 kg

Title	PU Piece	Article No.
Topline Easy VL One Touch	1	215374

AGR: 08.330

Accessories Available	PU Amount	Article No.
Topline 3 Remote Control Unit	1	000687

Spare Parts	PU Amount	Article No.
BC+ system case sz. 4	1	102547
Topline 3 Receiver with wall bracket Outdoor	1	000685

Topline Hand Receiver "Outdoor" with Bracket

- Simultaneous optical reading on dual LCD & LED display
- Signal facilitates reading of deviations
- With bubble level for accurate horizontal mode
- With integrated magnet for wall and ceiling fixing
- Two sensitivity settings of trapping laser beam

Characteristics

- Provides quick reception of the laser plane in all lighting conditions, especially if the laser is no longer visible, Simultaneous optical reading on dual LCD & LED display for displaying the laser plane, marked on both sides, acoustic indication of connected and disconnected tone, 2 sensitivity levels for the laser receiver, tolerance of measurement accuracy of 1.5 mm and 3.0 mm, automatic shut-off after 30 minutes if no reception or operated, support for consumption of the receiver and attachment to benchmarks

Hints

- Art. 000688 Bracket for handheld receiver outdoor old version: light gray color
- Art. 059701 Bracket for handheld receiver outdoor new version: black
- Suitable for rotary laser Topline 3 Premium and Easy Topline Universal

Scope Of Delivery

- Hand receiver incl. bracket
- 2 x Mignon batteries

Technical Data

Range, Max	150 m
Operating Time, Approx. (Alkaline Batteries)	140 h
Protection Type	IP54

Title	PU Piece	Article No.
Topline 3 Receiver Outdoor	1	000685

AGR: 08.330

Accessories Available	PU Amount	Article No.
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INTERNAL/Approved (2019-03-22 22:00:21)

Topline Infrared Remote Control Unit

Characteristics

- Enables usage of the rotating laser with the most important functions up to a distance of 50m, operating functions: rotational speed, navigation dot modus and line modus, one-axe automatic modus

Hints

- Suitable for the rotating laser Topline 3 Premium and Topline Easy Universal

Scope Of Delivery

- 9 V monobloc battery (Art.-No. 010521)



Title	PU Piece	Article No.
Topline 3 Remote Control Unit	1	000687
AGR: 08.330		
Spare Parts	PU Piece	Article No.
Battery E-Block LR 61 9V X-tra	1/10	332677

Slope Adapter

- Quick setting over 100% and 90 ° scale
- Weatherproof scale with crank
- Economic, as cost-effective solution compared to tilt rotation lasers
- No complicated gradient calculations longer necessary

Application Area

- Projecting driveways, paving, pipe connections, parking and ramp drainage, leveling interior panels in the roof, landscaping

Characteristics

- Locking clamping fixtures to secure the set inclination,
- Flight mode "iron sights" offset parallel, with integrated circular bubble

Processing Information

- By using the A-axis automatic mode by rotating laser Topline enable the user to only one axis to tilt, while the second axis leveled height and surveillance remains horizontal
- However, the slope of the laser must be exactly in the y-axis (front panel) done

Hints

- Suitable for Rotating Laser Topline 3 Premium and Topline Easy Universal



Title	PU Piece	Article No.
Slope Adapter	1	000691

AGR: 08.330

INTERNAL/Approved (2019-03-22 22:00:37)

Ground Bracket

- Protects the laser from ground contact at 0,20 m to 3,05 m work area in conjunction with Berner aluminium elevator tripod
- Precise adjustment within a millimetre via the crank drive of the tripod

Application Area

- Laser applications below the cutting check in interior construction, level transfers for screed installers (floor unevenness), to install plug sockets and cable ducts (electrical trade), to install radiators and pipes (heating and sanitary sector)

Title	PU Piece	Article No.
GROUND-CLEVIS AGR: 08.330	1	000693



Batteries and Battery Charger for Topline 2

Hints

- Art.No. 133718 battery charger and 165915 battery cells for rotating laser Berner Topline 2 before November 2003
- 4 battery cells Art.No. 165915 are required for operating the laser (packaging unit = 1)



Baby



Title	PU Piece	Article No.
Battery Charger 230 V for Topline 2	1	133718*
* = The delivery time is 30 days AGR: 08.330		
Accessories Available	PU Piece	Article No.
Rech. battery Baby 1,2 V	1	165915

INTERNAL/Approved (2019-03-22 22:00:56)

Battery Pack and Charger

Characteristics

- Battery pack in cage prevents unintentional loading of standard batteries, after 10 hours the batteries with battery charger are completely loaded

Hints

- Battery pack fits only Berner's Topline 3 Premium rotating laser, not for Easy Topline Universal rotary laser

Title	PU Piece	Article No.
Charger Plug 220V Topline 3	1	003069

AGR: 08.330



Rotating Laser-Set Multi HV-R

- Very simple operation with clear functional program
- A thick-walled, solid aluminum housing protects the laser from the hard use on construction side
- Automatic self-leveling by pressing a button
- Laser leveling technology and laser stop function via touch of a button
- Universally suitable for indoor and outdoor use, for tripod, wall and floor use
- Choose between three different working modes: rotation (four speeds), scan line (for confining workspaces), point mode
- The Multi HV-R can be tilted 5 ° in two axes manually
- Automatic drift - off (no self-leveling)

Application Area

- Horizontal, vertical and inclined leveling indoor and outdoor area

Characteristics

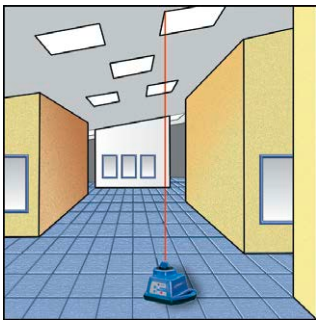
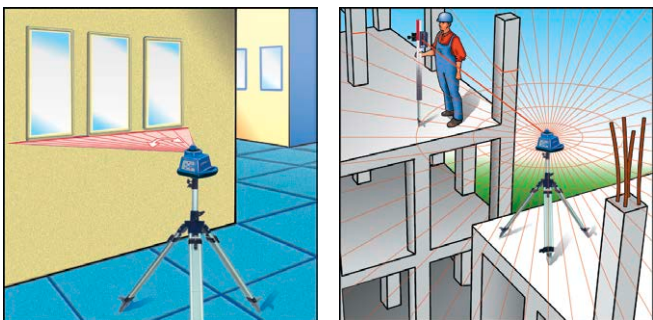
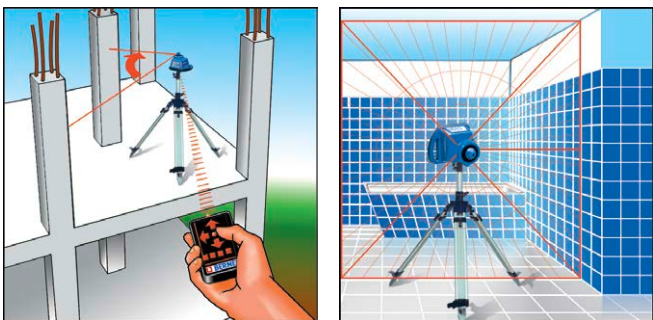
- 24 Months Warranty
- 5 level of rotational speed: 0, 60, 120, 300 and 600 r/min
- Power supply possible with battery pack and charger or just battery

Technical Data

Range Max, With Receiver (Radius)	250 m
Leveling Area +/-	5 °
Accuracy On 10 M, +/-	1 mm
Laser Class	2
Laser Diode	635 Nm
Rotational Speed	600 r/min
Protection Type	IP56
Stativ-Connection	5/8 "
Operating Time, Approx. (Battery)	20 h
Operating temperature	-20 - 50 °C
Dimensions	202 x 202 x 194 mm
Weight	3.8 kg

Title	PU Piece	Article No.
Rotating Laser-Set Multi HV-R	1	245070

AGR: 08.330



INTERNAL/Approved (2019-03-22 22:01:12)

Scope Of Supply	Piece	Article No.
Rotating Laser Multi HV-R	1	245071
Remote Laser Multi HV-R	1	245067
Receiver for Laser Multi HV-R	1	245069
Holder Receiver Laser Multi HV-R	1	245068
Akkupack Laser Multi HV-R	1	245066
Recharger Laser Multi HV-R	1	245065
Wall Holder Laser Multi HV-R	1	245063
Target Board Laser Multi HV-R	1	245062
Laser Glasses	1	111936
BC+ system case sz. 4	1	102547
Accessories Available	PU Amount	Article No.
Battery Compartment Laser Multi HV-R	1	245064

Rotating Laser Multi HV-R

- Very simple operation with clear functional program
- A thick-walled, solid aluminum housing protects the laser from the hard use on construction side
- Automatic self-leveling by pressing a button
- Laser leveling technology and laser stop function via touch of a button
- Universally suitable for indoor and outdoor use, for tripod, wall and floor use
- Choose between three different working modes: rotation (four speeds), scan line (for confining workspaces), point mode
- The Multi HV-R can be tilted 5 ° in two axes manually
- Automatic drift - off (no self-leveling)

Application Area

- Horizontal, vertical and inclined leveling indoor and outdoor area

Characteristics

- 24 Months Warranty
- 5 level of rotational speed: 0, 60, 120, 300 and 600 r/min
- Power supply possible with battery pack and charger or just battery

Hints

- Charger (245065) for the battery pack is not included



INTERNAL/Approved (2019-03-22 22:01:24)

Technical Data

Range Max, With Receiver (Radius)	250 m
Leveling Area +/-	5 °
Accuracy On 10 M, +/-	1 mm
Laser Class	2
Laser Diode	635 Nm
Rotational Speed	600 r/min
Protection Type	IP56
Stativ-Connection	5/8 "
Operating Time, Approx. (Battery)	20 h
Operating temperature	-20 - 50 °C
Dimensions	202 x 202 x 194 mm
Weight	3.8 kg

Title	PU Piece	Article No.
Rotating Laser Multi HV-R	1	245071

AGR: 08.330

Scope Of Supply	Amount	Article No.
Akkupack Laser Multi HV-R	1	245066
Rotating Laser Multi HV-R	1	245071

Battery Pack Laser Multi HV-R

- Accu pack for rotating laser multi HV-R

Characteristics

- 4 x Typ C Battery, each 5000mAh

Technical Data

Capacity	5 Ah
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Title	PU Piece	Article No.
Akkupack Laser Multi HV-R	1	245066

AGR: 08.330



INTERNAL/Approved (2019-03-22 22:01:27)

Recharger Laser Multi HV-R

- Charger for accu packs ro rotating laser multi HV-R

Title	PU Piece	Article No.
Recharger Laser Multi HV-R	1	245065
AGR: 08.330		



Battery Box Laser Multi HV-R

- Battery compartement incl. 2 pcs. Battery Baby for rotating laser milti HV-R

Title	PU Piece	Article No.
Battery Compartment Laser Multi HV-R	1	245064
AGR: 08.330		



Remote Laser Multi HV-R

- Enables the use of the rotating laser milti HV-R with the most important functions in a radius of 20 m

Scope Of Delivery

- 2 piece allkaline batteries micro AAA (Article number 010525)

Title	PU Piece	Article No.
Remote Laser Multi HV-R	1	245067

AGR: 08.330

Spare Parts	PU Amount	Article No.
Battery Micro LR03 1,5 V X-tra	1/10	332673



Receiver for Laser Multi HV-R

- Hand-held receiver for all rotating lasers with a visible laser
- Integrated horizontal and vertical level, for a quick and precise alignment of the receiver
- Laser beam display readably on the front as well as the back
- Accoustic signal and LED-display indicate towards which direction the laser beam should be moved
- Acoustic signal can be switched of
- Tolerance of the measurement 1 mm or 2 mm
- Work area up to 250 m (radius)

Scope Of Delivery

- Hand-held receiver is supplied with a mounting bracket for the receiver (Article number 245068) and 1 pc. 9 V monobloc battery (Art. No. 010521)

Technical Data

Range, Max	500 m
Protection Type	IP54
Weight	460 g

Title	PU Piece	Article No.
Receiver for Laser Multi HV-R	1	245069

AGR: 08.330



INTERNAL/Approved (2019-03-22 22:01:49)

Laser technology

Spare Parts	PU Amount	Article No.
Battery E-Block LR 61 9V X-tra	1/10	332677

Holder Receiver Laser Multi HV-R

- Mounting bracket for receiver rotating laser multi HV-R

Title	PU Piece	Article No.
Holder Receiver Laser Multi HV-R	1	245068
AGR: 08.330		



Wall Holder Laser Multi HV-R

- Wall holder for rotating laser milti HV-R

Title	PU Piece	Article No.
Wall Holder Laser Multi HV-R	1	245063
AGR: 08.330		



Target Board Laser Multi HV-R

Application Area

- Targate plate for interior work

Title	PU Piece	Article No.
Target Board Laser Multi HV-R	1	245062
AGR: 08.330		



Laser visibility goggle

- Special coated glasses
 - 5-times better identification of the laser beam
- Extremely large field of view
 - Large panoramic lens
 - Modern single lens glasses
- Optimal fit and pleasant wearing comfort
 - Ergonomically shaped and length-adjustable temples
 - Extremely lightweight
- High-quality coating
 - Fog-free
 - Scratch-resistant
- High side protection, nevertheless extremely good side perception

Characteristics

- Fully adjustable arms
- scratch resistant polycarbonate lens

Technical Data

Material	Polyethylene (PE)
Risk category	Category 1
Mechanical strength	Protection class F = low energy impact (45m/s)

Title	Norms	Color_Protective Screen	PU Piece	Article No.
Laser Glasses	EN 166	Red	1	111936

AGR: 09.030



Aluminum Elevator Tripod

- Stepless adjustment of aluminum tripod legs that can be easily extended and shortened
- Removable rubber protection on tripod feet

Application Area

- Rotating laser, levels and level heads

Characteristics

- Integrated crank assembly for accurate, to-the-milimeter installation, incl. water level

Technical Data

Height	0.8 - 2.65 m
Connection Thread	5/8 "
Material	Aluminium

Title	PU Piece	Article No.
Aluminum Elevator Tripod	1	135903

AGR: 08.333

Accessories Available	PU Piece	Article No.
Extension for Tripod Aluminium 280	1	148000



Aluminum Telescope Tripod

Application Area

- Point/lines laser, laser distance meters, easy rotating laser

Characteristics

- Steplessly adjustable telescope feets made of anodized aluminum, integrated, adjustable telescope pipe (45 cm) for accurate height adjustment, incl. water level

Technical Data

Height	0.8 - 2 m
Connection Thread	5/8 "
Material	Aluminium

Title	PU Piece	Article No.
Aluminum Telescope Tripod	1	028887

AGR: 08.333



Adapter 5/8"- 1/4"

Application Area

- Cross-/Line-laser Cross Max2
- Laser range finder BLTM 50 and BLM 80

Characteristics

- Transition adapter with 5/8" internal thread and 1/4" external thread for the connection of components with different connections

Technical Data

Connection Thread	5/8-1/4 "
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Title	PU Piece	Article No.
Adapter 5/8"- 1/4"	1	049303

AGR: 08.330



INTERNAL/Approved (2019-03-22 22:02:28)

Tripod plate with clamping screw

Application Area

- Tripod with a flat head for aluminium elevator tripod

Technical Data

Connection Thread	5/8 "
Ø	63 mm

Title	PU Piece	Article No.
Tripod plate with clamping screw	1	243642

AGR: 08.333



Level Rod

Characteristics

- Made of anodized aluminum tubing facilitates reference height measurement, optimal use with laser handheld receiver, rapid fixation by locking screw with dragonfly

Technical Data

Height	1.3 - 2.4 m
Material	Aluminium

Title	PU Piece	Article No.
Level Rod	1	152631

AGR: 08.333



Telescopic Plate Aluminium

Characteristics

- Telescope plat out of anextruded aluminium tube
- Facilitates the reference height measurement
- Laminated in special foil for a better reclection

Technical Data

Height	1.22 - 5 m
Material	Aluminium

Title	PU Piece	Article No.
Telescopic Plate Aluminium	1	168358

AGR: 08.333



Laser visibility goggle

- Special coated glasses
 - 5-times better identification of the laser beam
- Extremely large field of view
 - Large panoramic lens
 - Modern single lens glasses
- Optimal fit and pleasant wearing comfort
 - Ergonomically shaped and length-adjustable temples
 - Extremely lightweight
- High-quality coating
 - Fog-free
 - Scratch-resistant
- High side protection, nevertheless extremely good side perception

Characteristics

- Fully adjustable arms
- scratch resistant polycarbonate lens

Technical Data

Material	Polyethylene (PE)
Risk category	Category 1
Mechanical strength	Protection class F = low energy impact (45m/s)



Title	Norms	Color_Protective Screen	PU Piece	Article No.
Laser Glasses	EN 166	Red	1	111936

AGR: 09.030

Feeler Gauge Fan

Characteristics

- With hinged Bitholders

Scope Of Delivery

- Art No. 69 868 (13 sheets): 0.05 - 0.1 - 0.15 to 0.2 - 0.25 - 0.3 - 0.4 to 0.5 - 0.6 - 0.7 to 0.8 - 0.9 - 1.0 mm
- Art No. 69 850 (5 sheets): 0.1 - 0.2 - 0.25 - 0.3 - 0.4 mm



Title	Measuring Range	Measuring Range, Max.	Length (m)	PU Piece	Article No.
Feeler Gauge	0.05 mm	1 mm	0.1 m	1	069868

AGR: 08.303

Feeler Gauges

Characteristics

- Every size has a different colored plastic handle and a undelibly marked measurement
- Gauge pivotable at the hadle
- 13-parts on the chain with the standard measures 0.05 - 0.60 mm

Title	Measuring Range	Measuring Range, Max.	PU Piece	Article No.
Feeler Gauges 13-Parts	0.05 mm	0.6 mm	1	852607

AGR: 08.303

Scope Of Supply

	Piece	Article No.
Feeler gauge 0.05 mm	1	873510
Feeler Gauge 0,25 mm with bracket	1	264229
Feeler Gauge 0,5 mm with bracket	1	264261
Feeler gauge 0.08 mm	1	873527
Feeler Gauge 0,1 mm with bracket	1	264199
Feeler Gauge 0,15 mm with bracket	1	264202
Feeler Gauge 0,2 mm with bracket	1	264210
Feeler Gauge 0,3 mm with bracket	1	264237
Feeler Gauge 0,35 mm with bracket	1	264245
Feeler Gauge 0,4 mm with bracket	1	264253
Feeler Gauge 0,45 mm with bracket	1	283053
Feeler Gauge 0,6 mm with bracket	1	283061



Exterior Micrometer

Characteristics

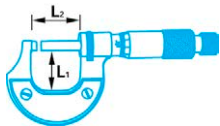
- Measuring drum and hull dull chromium-plated, measuring surfaces, fitted with hard metal , in accordance with DIN 86

Scope Of Delivery

- Wooden box

Title	Measuring range	PU Piece	Article No.
Exterior Micrometer	0 - 25 mm	1	126896
Exterior Micrometer	25 - 50 mm	1	133374

AGR: 08.309



Straight-Edge

Characteristics

- Out of special steel, completely hardened
- Straight edge finely lapped
- Rustprotected
- Glare-free chamfers

Scope Of Delivery

- Straightedge in durable leather bag

Title	Limb Length	PU Piece	Article No.
Straight Edge	500 mm	1	897691

AGR: 08.312



INTERNAL/Approved (2019-03-22 22:03:19)

Tape Measure EG II NC with Magnet

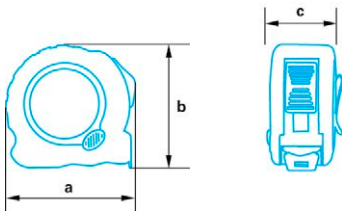
- Protection against abrasion and corrosion
 - Nylon wrapped blade
- Tipping length of the tape measure about 2 m (bending)
- Robust
 - Fully rubber covered plastic housing
- Always at hand
 - With belt clip
- Precise inner measuring
 - With tape break

Characteristics

- With belt clip, wrist strap and locking brake

Technical Data

Accuracy Class	II
Thickness	0.14 mm
Magnetic	Yes
Blade coating	Nylon wrapped



Title	Length	Width	PU Piece	Article No.
Tape Measure "BERNER"	3 m	16 mm	1/5	049306
Tape Measure "BERNER"	5 m	19 mm	1/5	049305
Tape Measure "BERNER"	8 m	25 mm	1/5	049304

AGR: 08.311

INTERNAL/Approved (2019-03-22 22:03:36)

Mechanical measuring equipment

Measuring Tape Without Magnet

- Nylon coated steel strip (NC = nylon coated), abrasion resistant, kink resistant
- Tape only kinks at 2 m
- Robust plastic housing

Characteristics

- With a belt-clip, hand strap and locking brake

Technical Data

Accuracy Class	II
----------------	----



Title	Length	Width	PU Piece	Article No.
Measuring tape without magnet	3 m	16 mm	1/5	097784
Measuring tape without magnet	5 m	19 mm	1/5	097785
Measuring tape without magnet	8 m	25 mm	1/5	097786

AGR: 08.311

Tape measure EG II TOP

- Accuracy class: EG II
- Steel strapping yellow lacquered
- Anti-reflective coating
- Continuous mm graduation
- Automatical tape insert and non-return device
- Return/Shock absorbers
- Grey plastic housing with a belt clip

Technical Data

Accuracy Class	II
----------------	----



Title	Length	Width	PU Piece	Article No.
Tape measure TOP	3 m	13 mm	1/5	242716
Tape measure TOP	5 m	19 mm	1/5	242717
Tape measure TOP	8 m	25 mm	1/5	242718
Tape measure TOP	10 m	25 mm	1/5	242719

AGR: 08.311

INTERNAL/Approved (2019-03-22 22:03:39)

Tape measure EG I Premium

- Accuracy class: EG I
- Steel strapping yellow lacquered
- Anti-reflective coating
- Continuous mm graduation
- Two-parted belt stop
- Chromed plastic housing with a belt clip
- Sliding end hook multiple times riveted and strengthened
- Shock absorber system for strap return



Technical Data

Accuracy Class |

Title	Length	Width	PU Piece	Article No.
Tape measure PREMIUM	3 m	13 mm	1	242713
Tape measure PREMIUM	5 m	19 mm	1	242714
Tape measure PREMIUM	8 m	25 mm	1	242715

AGR: 08.311

Capsular measuring tape

- Reliable measuring tool
 - Precise tape guide, kink resistant
- Resistant to oils, chemicals and corrosion
- Robust and longlasting
 - Combination of plastic and steel
- Compact design
 - Small sized tool with fold-out crank, lightweight
- Easy rolling in and out
 - Crank handle with metal axle
- Continuous mm-graduation



Characteristics

- Glass fibre tape with mm-scale, lightweight, flexible and shatter-proof, measure starts after about 10 cm, volume tape reinforced in the beginning, resistant to almost all fluids and chemicals, capsule made of steel / plastic, fold-out handle

Hints

- Measuring starts 10cm after fitting (type A)

Technical Data

Accuracy Class	II
Material	Fibre-reinforced and reinforced plastics

Title	Length	Width	Type	PU Piece	Article No.
Measuring Tape	20 m	16 mm	A	1	113458
Measuring Tape	30 m	16 mm	A	1	113459

AGR: 08.311

INTERNAL/Approved (2019-03-22 22:04:02)

Capsular steel measuring tape

- Reliable measuring tool
 - Precise tape guide, kink resistant
- Resistant to oils, chemicals and corrosion
- Robust and longlasting
 - Combination of plastic and steel
- Compact design
 - Small sized tool with fold-out crank
- Easy rolling in and out
 - Crank handle with metal axle
- Continuous mm-graduation

Characteristics

- White lacquered steel tape with mm-graduation, very unbreakable and resistant to kinking, measurement starts after about 10 cm, resistant to oils, chemicals and corrosion, capsule made of steel / plastic fold-out crank

Hints

- Measuring starts 10cm after fitting (type A)

Technical Data

Accuracy Class	II
Color	White
Material	Steel

Title	Length	Width	Type	PU Piece	Article No.
Measuring tape	20 m	13 mm	A	1	113461
Measuring tape	30 m	13 mm	A	1	113462

AGR: 08.311



INTERNAL/Approved (2019-03-22 22:04:11)

Mechanical measuring equipment

Frame steel measuring tape

- Convertible for left-handers
- Shatterproof and kink resistant
- Resistant to oils, chemicals and corrosion

Characteristics

- Frames made of anodized light metal, with continuous mm-scale, white lacquered steel measuring tape

Hints

- Form A: Begins 10 cm after the fitting
Form B: Begins immediately after the fitting

Technical Data

Accuracy Class	II
Color	Yellow
Material	Steel



Title	Length	Width	Type	PU Piece	Article No.
Measuring Tape - Form B	30 m	13 mm	B	1	113541
Measuring Tape - Form A	30 m	13 mm	A	1	040583
Measuring Tape - Form B	50 m	13 mm	B	1	113542
Measuring Tape - Form A	50 m	13 mm	A	1	040585

AGR: 08.311

INTERNAL/Approved (2019-03-22 22:04:16)

Glass Fibre Measuring Tapes Frame-Type

- Longlasting professional tool
 - Shatterproof and kink resistant
- Resistant to oils, chemicals and corrosion
- Measuring tape protected from deformation
 - Tangential tape outlet
- Easy rolling in and out
 - Crank handle with metal axle
- Protecting of the finger tips against injuries
 - Special design of the crank handle head
- Continuous cm-graduation
- Compact measuring tool
 - Anodized triangular light metal frame

Characteristics

- Frames made of anodized light metal, measure starts immediately after fitting (B), with continuous mm-scale, white lacquered steel measuring tape, extremely break- and bend-resistant, resistant to oils, chemicals and corrosion

Hints

- Scale begins immediately after the fitting

Technical Data

Accuracy Class	II
Color	White
Material	Fibre-reinforced and reinforced plastics

Title	Length	Width	Type	PU Piece	Article No.
Measuring Tape Frame-Type	30 m	13 mm	B	1	048252
Measuring Tape Frame-Type	50 m	13 mm	B	1	048251

AGR: 08.311



INTERNAL/Approved (2019-03-22 22:04:25)

Mechanical measuring equipment

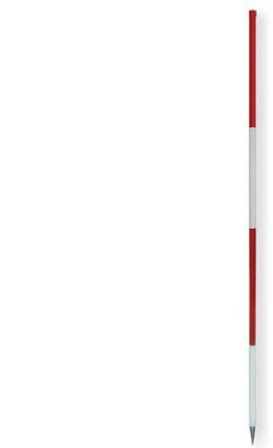
Ranging Pole

Application Area

- To signal the entire points, border points, segments, cross-roads in the area, as well as for identifying pits

Scope Of Delivery

- Supplied in a set = 12 pieces ranging poles



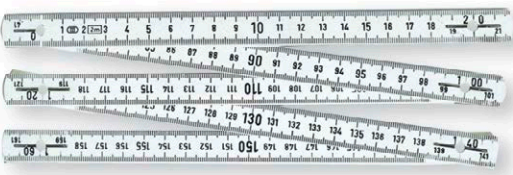
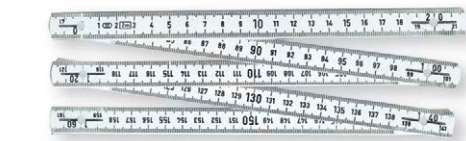
Title	PU Pack	Article No.
Ranging Pole AGR: 08.319	1	188127

Plastic Spirit Level

- resistant against wet conditions and other influences of moisture
- Dimensional accuracy also remains during moisture

Characteristics

- Plastic version



Title	Length	Material	PU Piece	Article No.
Folding Meter Rule "BE" AGR: 08.311	2000 mm	Plastic	1	173434

INTERNAL/Approved (2019-03-22 22:04:29)

Folding Meter Rule

- Wear-free and longlasting spring system
 - Precision spring made of hardened steel
- Straight marking lines
 - No indentation sideward
- High quality wood folding rule
 - Made of white beech wood
- Resistant to moisture, grease and various chemicals
 - Painted surface



Technical Data

Accuracy Class III

Title	Length	Width	Material	PU Piece	Article No.
Folding Rule	2 m	16.5 mm	White beech wood	1	217565

AGR: 08.311

Folding Ruler, Wood

Application Area

- Metric gradation on both sides

Characteristics

- made of beech wood, painted, resistant to moisture, various fats and chemicals



Title	Length	Material	PU Piece	Article No.
Folding Rule, 12 segments, PROF	2 m	Wood	1	279366

AGR: 08.311

INTERNAL/Approved (2019-03-22 22:04:44)

Mechanical measuring equipment

Fiberglass folding rule

- Longlife
 - Fiberglass folding rule of high elasticity
- Universal tool for construction site
 - Resistant to cold and humidity



Technical Data

Accuracy Class III

Title	Length	Material	PU Piece	Article No.
Fiberglass Folding Rule	1 m	Fibre-reinforced and reinforced plastics	1	370307
Fiberglass Folding Rule	2 m	Fibre-reinforced and reinforced plastics	1	370306

AGR: 08.311

Measuring Fix

- Analog reading of the extension length in the viewing window

Application Area

- Height, depth and distance measurements

Characteristics

- Rods made of anodized aluminum
- Abrasion-resistant, dust-resistant plastic guide
- Integrated vertical and horizontal vial
- Inboard, robust measuring tape with mm scale



Title	Length	Measuring Range	Measure Reading	PU Piece	Article No.
Measuring Fix	3000 mm	0.7 - 3 m	Below	1	113536
Measuring Fix	5000 mm	1.07 - 5 m	Overhead	1	113534
Measuring Fix	8000 mm	1.53 - 8 m	Overhead	1	113533

AGR: 08.311

Accessories Available

	PU Amount	Article No.
Bag for Telescope Scale 3m	1	113532
Bag for Telescope Scale 5m	1	113529
Bag for Telescope Scale 8m	1	370191

Bag for Telescopic Scale

Application Area

- Bag for protection of telescopic scale



Title	Length	PU Piece	Article No.
Bag for Telescope Scale	3 m	1	113532
Bag for Telescope Scale	5 m	1	113529
Bag for Telescope Scale	8 m	1	370191

AGR: 08.311

INTERNAL/Approved (2019-03-22 22:04:57)

Angle Fix

- Can be over an analog display determine quickly and accurately degrees
- Precise operation through vertical and horizontal vial
- Integrated locking screw allows easy comparison or transferring angles

Characteristics

- 0.5° Possibility to read, accurate to 0.25°

Technical Data

Measuring range, Angle 0 - 180 °



Title	Limb Length	PU Piece	Article No.
Angle Fix Plus	750 mm	1	113527

AGR: 08.312

Angle Level



Title	Limb Length	Width	PU Piece	Article No.
Angle Level	1500 mm	1000 mm	1	336324

AGR: 08.312

INTERNAL/Approved (2019-03-22 22:05:05)

Winkeltronic Easy II

- Can be a large digital display determine quickly and accurately degrees
- Precise operation through vertical and horizontal vial
- Interlocking measuring jaws allow right- and linksanliegendes Fairs
- In every position of the device starts after switching at 0°

Characteristics

- 0.05° readability
- Accuracy of + / - 0.1°
- With switch-off and hold button
- With backlight

Technical Data

Measuring range, Angle	0 - 355 °
Accuracy	0.1 Degree



Title	Limb Length	PU Piece	Article No.
Winkeltronic Easy II	750 mm	1	363052

AGR: 08.312

Digital Inclinometer

- Digital display of angle in degrees or inclination in percent at the push of a button
- In hardly visible places, a tone indicates the 0° and 90° position
- Storage of the measured value through hold button
- For overhead measurement, the digital display rotates automatically
- Easy calibration via push of a button

Characteristics

- With horizontal and vertical water level, measuring range 360° (4 x 90°)

Scope Of Delivery

- 1 block battery 9V (article-no. 010 521)

Technical Data

Magnetic	No
Inclination Measurement Accuracy_01	0.05 at 0° and 90°
Inclination Measurement Accuracy_02	0.2 at 1° to 89°

Title	Length	Measuring Range, Max. Angle	PU Piece	Article No.
Digital Inclinometer	60 cm	360 °	1	113773

AGR: 08.312

Accessories Available	PU Piece	Article No.
Battery E-Block LR 61 9V X-tra	1/10	332677



Digital Angle Meter

- Can be a digital display determine quickly and accurately degrees
- Precise operation through vertical and horizontal vial
- Interlocking measuring jaws allow right- and linksanliegendes Fairs
- Hold function
- R key to put the protractor in any position to “zero”
- Display illumination can be activated
- Automatic shut-off after 5 min.

Characteristics

- Possibility to read 0,05°

Scope Of Delivery

- Bag

Technical Data

Measuring range, Angle 0 - 180 °



Title	Limb Length	PU Piece	Article No.
Digital Angle Meter	350 mm	1	188244
Digital Angle Meter	500 mm	1	358540

AGR: 08.312

INTERNAL/Approved (2019-03-22 22:05:38)

High-Precision Measuring Wheel Roll Tachometer

- Measure in one-man operation for long distances with high precision and simple operation

Application Area

- Can be used for quick measurement of distances, squares, circles, ellipses and bumps

Characteristics

- Running wheel ground exactly to 1 m in circumference and is provided with test certificate, robust and durable design, large counter with reset lever, forward and reverse measurements possible, measurement range 9,999.99 m, tolerance less than 0.02%,spoked wheel of aluminum, type approved design PTB 5.45-4016905, calibratable

Scope Of Delivery

- High-Precision Measuring Wheel Roll Tachometer BRT002



Title	Measuring Range	PU Piece	Article No.
Berner Measuring Wheel BRT 002	0 - 9999.99 m	1	040212

AGR: 08.319

Spirit Level **TOPline**

- Passes the daily challenges on the construction site
 - High stiffness
- Protects the tool against wear and dropping
 - Thick-walled (1,8mm) profile
- No slipping while marking
 - Milled measuring surface for all models up to 120cm
- With 1 vertical and 1 horizontal vial
- Professional reliable measuring tool
 - Vial is permanently fixed and immutably connected to the profile
- High measuring accuraccy guaranteed
 - Design of corpus allows a reduction of soiling and optimal cleaning of the product
- High corrosion and abrasion resistance
 - Powder-coated in signal colour
- 30 year warranty on dragonflies durability, with appropriate use

Application Area

- For horizontal and vertical measurements

Technical Data

Measuring Tolerance Standard Position	0.5 mm/m
Measuring Tolerance Inverted Position	0.75 mm/m
Magnetic	No
Material	Aluminium

Title	Length	Profile weight	PU Piece	Article No.
Water Level Topline	40 cm	691 g/m	1	113472
Water Level Topline	60 cm	691 g/m	1	113471
Water Level Topline	80 cm	691 g/m	1	113470
Water Level Topline	100 cm	691 g/m	1	113469
Spirit Level Topline	120 cm	691 g/m	1	092795
Spirit Level Topline	150 cm	691 g/m	1	092796
Spirit Level Topline	180 cm	691 g/m	1	092798

AGR: 08.310



INTERNAL/Approved (2019-03-22 22:05:54)

Mechanical measuring equipment

Aluminium Spirit Level Magnetic

- Easily handling
 - Light aluminium profile
- Passes the daily challenges on the construction site
 - High stiffness
- With 1 vertical and 1 horizontal vial
- Professional reliable measuring tool
 - Vial is permanently fixed and immutably connected to the profile
- High measuring accuraccy guaranteed
 - Design of corpus allows a reduction of soiling and optimal cleaning of the product
- Silver anodized profile
- 5 year warranty on dragonflies durability, with appropriate use

Application Area

- For horizontal and vertical measurements

Characteristics

- Shockproof, silver anodized light alloy spirit level with vertical and horizontal vial, which are permanently fixed and immutable connected to the water level profile with 2 strong adhesive magnets, 5 year warranty on dragonflies durability, with appropriate use
- Measurement accuracy Normal position: 1 mm / m

Technical Data

Measuring Tolerance Standard	0.5 mm/m
Position	
Magnetic	Yes
Material	Aluminium

Title	Length	Profile weight	PU Piece	Article No.
Water Level	40 cm	543 g/m	1	113467
Water Level	60 cm	543 g/m	1	113466
Water Level	100 cm	-	1	890081
Spirit Level Magnetic	100 cm	543 g/m	1	369852

AGR: 08.310



Spirit Level-Measuring Tape Set

Characteristics

- SPIRIT LEVEL:
Shockproof, silver anodized light alloy spirit level with vertical and horizontal vial, which are permanently fixed and immutable connected to the water balance profile
5 year warranty on dragonflies durability, with appropriate use
- Accuracy Normal Location: 1.0 mm / m

Scope Of Delivery

- 6 units: 1 each of the dimensions 20 cm, 60 cm, 80 cm, 100 cm, 180 cm and 1 Measuring Tape of 3 m



Title	PU Assortment	Article No.
Water Level Set 6 Units	1	032314
AGR: 08.310		
Scope Of Supply	Amount	Article No.
Tape Measure EG II NC "BERNER" 3m	1	049306
Water Level Topline 100 cm	1	113469
Spirit Level Topline 180 cm	1	092798
Water Level Topline 60 cm	1	113471
Water Level Topline 80 cm	1	113470
Spirit Level 20 cm	1	038847

INTERNAL/Approved (2019-03-22 22:06:11)

Mechanical measuring equipment

Alu-Water Level Premium

- Break-proof acrylic glass block vial
- 30-years guarantee on the density of the level
- Horizontal level with a magnifying lense and a lightning surface
- Shock-absorbing end caps

Technical Data

Material		Aluminium	
Title	Length	PU Piece	Article No.
Water Level PREMIUM	40 cm	1	251242
Water Level PREMIUM	60 cm	1	242720
Water Level PREMIUM	80 cm	1	242721
Water Level PREMIUM	100 cm	1	242722
Water Level PREMIUM	120 cm	1	242723
Water Level PREMIUM	150 cm	1	242724
Water Level PREMIUM	180 cm	1	242725

AGR: 08.310



Alu-Water Level BIG X

- Thermal resistant level installation
- Ergonomically formed profile
- Horizontal level with a magnifying lense and a lightning surface
- Light/Charge reistant level
- 30 years guarantee on the density of the level
- Shock-absorbing end caps

Characteristics

- BIG X: 1 horizontal spirit level and 1 vertical spirit level
- BIG X3: 1 horizontal spirit level and 2 vertical spirit level

Technical Data

Material		Aluminium		
Title	Length	PU Piece	Article No.	
Alu-Water Level BIG X	30 cm	1	244667	
Alu-Water Level BIG X	40 cm	1	244668	
Alu-Water Level BIG X	50 cm	1	244669	
Alu-Water Level BIG X	60 cm	1	244670	
Alu-Water Level BIG X	80 cm	1	244671	
Alu-Water Level BIG X3	100 cm	1	244672	
Alu-Water Level BIG X3	120 cm	1	244673	
Alu-Water Level BIG X3	150 cm	1	244674	
Alu-Water Level BIG X3	180 cm	1	244675	
Alu-Water Level BIG X3	200 cm	1	244676	

AGR: 08.310



INTERNAL/Approved (2019-03-22 22:06:29)

Mechanical measuring equipment

Torpedo Spirit Level

- With a magnet
- Horizontal and vertical leveling

Technical Data

Magnetic	Yes
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Title	Length	PU Piece	Article No.
Spirit Level	200 mm	1	038847

AGR: 08.310



Spirit Level AZ Gold

Title	Length	PU Piece	Article No.
Water Level AZ Gold	400 mm	1	363097
WATER LEVEL AZ GOLD 600 MM	600 mm	1	372000
Water Level AZ Gold	1000 mm	1	363095
Water Level AZ Gold	1500 mm	1	363096

AGR: 08.310



Orientation Level 60 cm

Title	Length	PU Piece	Article No.
Orientation Level 60 cm	60 cm	1	336323

AGR: 08.310



Straightedges / Timber Screed TOPline



- Light metal profile (dim. 100 x 18 mm) with center bar
- Absorption of shocks e.g. when dropping
 - Plastic caps at both ends
- With 1 vertical and 1 horizontal vial

Application Area

- To detect, check and measure slight differences in height on even surfaces

Characteristics

- Light metal profile (dim. 100 x 18 mm) with center bar; with barrel-shaped horizontal and vertical vials bubbles of unbreakable acrylic glass, ends sealed with plastic caps

Technical Data

Measuring / Leveling Accuracy	0.057
Material	Aluminium

Title	Length	PU Piece	Article No.
Straightedge	2.0 m	1	104015
Straightedge	2.0 m	1	369865
Straightedge	2.5 m	1	104016
Straightedge	2.5 m	1	369866
Straightedge	3.0 m	1	104017
Straightedge	3.0 m	1	369868
Straightedge	4.0 m	1	214912
Alu Straightedge 4,0 m TOPline	4.0 m	1	336460

AGR: 08.310

INTERNAL/Approved (2019-03-22 22:06:53)

Mechanical measuring equipment

Straightedges / Timber Screed PREMIUMline



Characteristics

- With 2 handles

Technical Data

Measuring / Leveling Accuracy	0.057
Material	Aluminium

Title	Length	PU Piece	Article No.
Straightedge	2 m	1	104020
Straightedge	2.5 m	1	214911
Straightedge	3 m	1	872087
Straightedge	3.5 m	1	214910
Straightedge	4 m	1	214909

AGR: 08.310

Straightedge



Characteristics

- Dimensions 100 x 18 mm
- Contorsion free light metal profile with a middle bar

Processing Information

- Both ends sealed with a plastic cap

Scope Of Delivery

- Without level and without handles

Title	Length	PU Piece	Article No.
Straightedge	2.0 m	1	218047
Straightedge	3.0 m	1	218049

AGR: 08.310

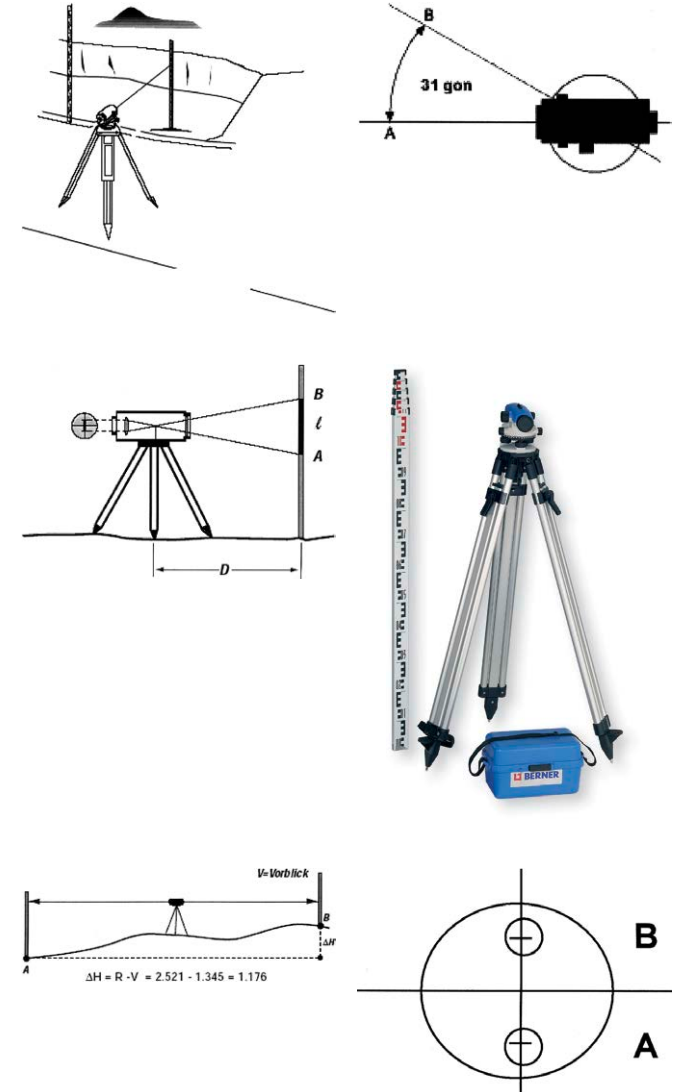
Construction - Level - Set

Application Area

- Easy and exact transfer of levels
- Determination of height differences
- Setting-out of angles
- Optical distance measurement

Characteristics

- Robust, automatic level with 24-fold extension, Tenimeter telescope level rod with a minimum measurement of 1.24 m and a maximum measurement of 5.0 m, bilateral scaling, front with cm-division (for levelling), rear with mm-division (measuring of height and length), bullseye level (control via readings prism), optical targeting at a box, splash-proof



Mechanical measuring equipment

Title	PU Piece	Article No.
Construction Level Set	1	001669
AGR: 08.315		
Scope Of Supply	Piece	Article No.
BBN-24 Level	1	001668
Flat Head Tripod Light For BBN24	1	001673
BBN Tenimeter 5.0 m	1	001672

Tenimeter for BBN 24



Title	PU Piece	Article No.
BBN Tenimeter 5.0 m	1	001672

AGR: 08.315

Tripod for BBN24



Title	PU Piece	Article No.
Flat Head Tripod Light For BBN24	1	001673

AGR: 08.333

INTERNAL/Approved (2019-03-22 22:07:22)

Mechanical measuring equipment

Ranging Pole

Application Area

- To signal the entire points, border points, segments, cross-roads in the area, as well as for identifying pits

Scope Of Delivery

- Supplied in a set = 12 pieces ranging poles



Title	PU Pack	Article No.
Ranging Pole	1	188127
AGR: 08.319		

High-Precision Pocket Vernier Caliper

Application Area

- Interior, exterior, depth and height measurements

Characteristics

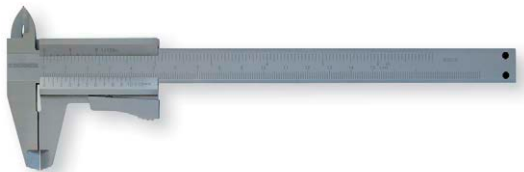
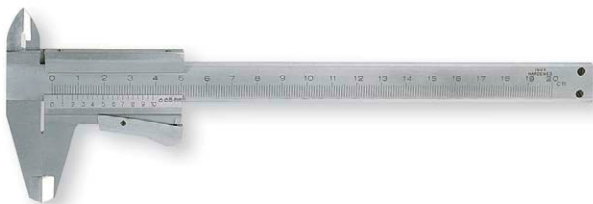
- Stainless steel and hardened, vernier and main part chrome matt

Scope Of Delivery

- Calipers in leatherette case

Technical Data

Norms	DIN 862
Scale Graduation Value / Nonius	0.05 mm
Digital	No



Title	Measuring range	Jaw Length	PU Piece	Article No.
Pocket Vernier Caliper, Locking Screw	0 - 150 mm	40 mm	1	133376
Pocket Vernier Caliper, Momentum	0 - 150 mm	40 mm	1	161691

AGR: 08.313

Workshop Venier Calipers

Characteristics

- Stainless hardened steel, with locking screw, chromed scale and vernier

Scope Of Delivery

- Workshop caliper
- Wooden box

Technical Data

Norms	DIN 862
Scale Graduation Value / Nonius	0.05 mm



Title	Measuring range	PU Piece	Article No.
Workshop Venier Calipers	0 - 300 mm	1	133373

AGR: 08.313

INTERNAL/Approved (2019-03-22 22:07:33)

Mechanical measuring equipment

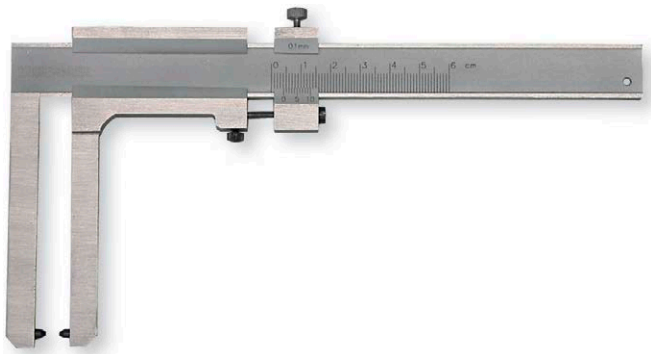
Vernier Calipers for Brake Disks

Application Area

- Used for measuring the thickness of brake disks while being installed

Technical Data

Scale Graduation Value / Nonius0.1 mm



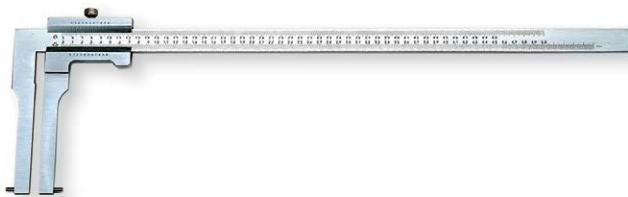
Title	Measuring range	Jaw Length	Length	PU Piece	Article No.
Vernier Caliper for Brake Disk	0 - 60 mm	74 mm	215 mm	1	119410
Vernier Caliper for Brake Disk	0 - 60 mm	80 mm	215 mm	1	006656

AGR: 08.313

Calipers for Brake Drums

Technical Data

DigitalNo



Title	Measuring range	Jaw Length	PU Piece	Article No.
Calipers for Brake Drums	0 - 300 mm	93 mm	1	174021
Calipers for Brake Drums	0 - 500 mm	153 mm	1	141685

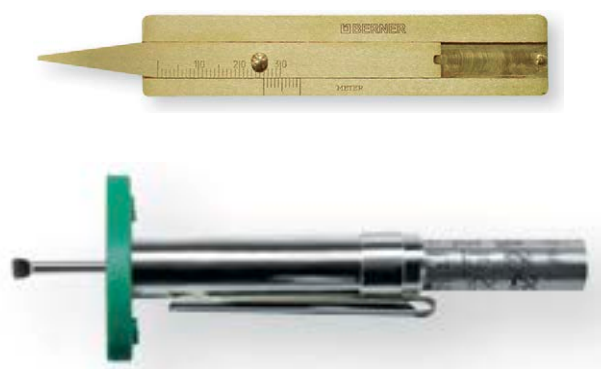
AGR: 08.313

INTERNAL/Approved (2019-03-22 22:07:39)

Tyre Tread Depth Gauge

Characteristics

- Made of carbide metal, surface highly polished with vernier scale



Title	Measuring range	PU Piece	Article No.
Tyre Tread Depth Gauge	0 - 26 mm	1	168425
Brass Tyre Tread Depth Gauge	0 - 30 mm	1	174044

AGR: 03.413 / 08.309

Telescopic Vernier Gauge

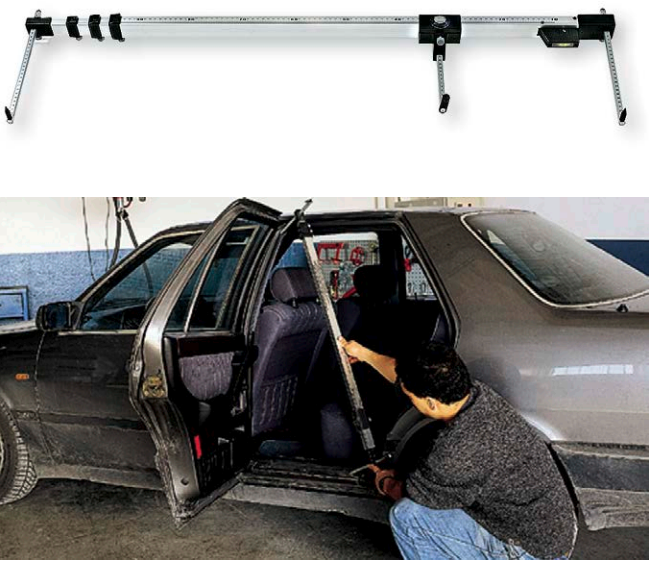
- Angled measuring tips allow measurements in deep areas

Application Area

- Used for millimetric measurements and measurement comparisons in the bodywork area (e.g. door frames, engine compartments, trunks heelbase)

Characteristics

- Anodised aluminum



Title	Length	Measuring Range	Material	PU Piece	Article No.
Telescopic Vernier Gauge 400	2995 mm	1.05 - 2.995 m	Aluminium	1	107081

AGR: 08.309

INTERNAL/Approved (2019-03-22 22:07:53)

Mechanical measuring equipment

High-Precision Depth Vernier Caliper

Characteristics

- Caliper with locking screw, stainless steel, hardened and precision-ground

Scope Of Delivery

- Caliper in leatherette case

Technical Data

Norms	DIN 862
Scale Graduation Value / Nonius	0.05 mm



Title	Measuring range	Length	PU Piece	Article No.
High-Precision Depth Vernier Caliper	0 - 200 mm	100 mm	1	133375

AGR: 08.313

Digital Pocket Slide Gauge for Brake Discs

- Mechanical system is a non-corrosive, hardened version
- LCD-display
- Conical, hardened measuring tips
- Zero position for each position, switchable measuring unit mm/ inch
- with locking screw

Application Area

- For an easy and fast measuring of brake disk thickness

Scope Of Delivery

- incl. 2 x 1.5V battery (type LR44 article number 175965)

Technical Data

Digital	Yes
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Title	Measuring range	PU Piece	Article No.
Pocket Slide Gauge 206020	0 - 60 mm	1	177903

AGR: 08.313

INTERNAL/Approved (2019-03-22 22:07:58)

Vernier Caliper for Tire Thread Depth

- big LCD-display
- Switchable measuring unit mm/inch
- Measuring tip with autom. spring feed

Scope Of Delivery

- incl. 1x 3V battery (type CR2032 article number 165673)

Technical Data

Digital Yes



Title	Measuring range	PU Piece	Article No.
Tire Thickness Controller	0 - 25 mm	1	184463

AGR: 08.300

Brake pad and tyre profil measuring pen

- A measuring pin for two measurements
- Easily determine the tire profile
- Fast measurement of brake pad thickness
- Measurement of the brake pad thickness possible without dismantling the wheel
- Slim design, with chest pocket clip

Application Area

- Measure the brake lining thickness or profile depth of the tire



Title	Measuring range	Length	PU Piece	Article No.
Brake pad and tyre profil measuring pen	0 - 20 mm	175 mm	1	336033

AGR: 08.309

INTERNAL/Approved (2019-03-22 22:08:09)

Pocket Air Pressure Gauge Car

Title	Measuring Range, pressure	PU Piece	Article No.
Pocket Air Pressure Gauge Car	0.5 - 3.4 bar	1	168426

AGR: 08.309



Joiner's Square / Miter

Characteristics

- Carpenter's bracket:
- with rosewood stock and a scale at the spring-hardened blue steel tongue, brass fitting double grooved-in, handy recessed grip in the wood



Title	Limb Length	PU Piece	Article No.
Miter 403 300	300 mm	1	113836

AGR: 08.312

Miter Tool

Characteristics

- End stop positioning leg out of aluminium, measuring bar out of steel



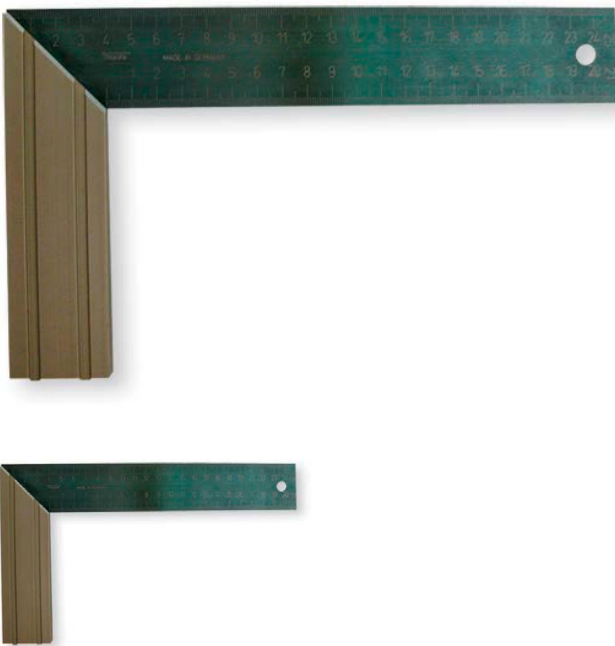
Title	Limb Length	PU Piece	Article No.
Miter Square	300 mm	1	169087

AGR: 08.312

Carpenters' Angle

Characteristics

- Made of hardened steel blades, blued spring steel, anodized aluminum handle with profiled grooves, measuring scale on front and back



Title	Limb Length	Width	PU Piece	Article No.
Carpenters Angle	300 mm	145 mm	1	158359

AGR: 08.312

Bevel

Characteristics

- Aluminum stop arm, steel measuring bar, easy adjustment of arm by locking the wing nut



Title	Limb Length	Width	PU Piece	Article No.
Bevel	300 mm	150 mm	1	158358

AGR: 08.312

Further measurement and testing technology

Bevel 300 mm

Characteristics

- With rosewood stock, blue spring hardened steel blade, strong brass fitting



Title	Limb Length	PU Piece	Article No.
Bevel	300 mm	1	824826

AGR: 08.312

Marking Gauge

- Inserted clearly readable mm-scaling
- Two individually adjustable measuring bar

Characteristics

- Hornbeam, Scribing needle out of hardened steel

Title	Length	PU Piece	Article No.
Marking Gauge	0.15 m	1	108091

AGR: 08.319

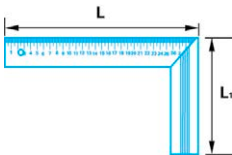


INTERNAL/Approved (2019-03-22 22:08:37)

Carpenter's Measuring Square

Characteristics

- Leg width at the shorter leg 5 cm
- Galvanizes, produced from one piece



Title	Limb Length	Width	PU Piece	Article No.
Joiner's Set Square Dela.1223.03	300 mm	170 mm	1	804064
Joiner's Set Square Z074000	700 mm	300 mm	1	138977

AGR: 08.312

Carpenter's Square

Characteristics

- Stainless steel A2, flexible with bilateral perforations and length scale



Title	Limb Length	Width	PU Piece	Article No.
Carpenter's Square	800 mm	320 mm	1	108089

AGR: 08.312

INTERNAL/Approved (2019-03-22 22:08:49)

Further measurement and testing technology

Alpha-Scribing Device

- Very fast form of marking, as other tools like bevel gauges or similar are not necessary

Application Area

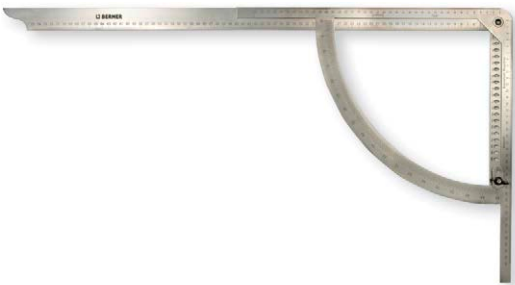
- For all kinds of joinery, marking of hip rafters and offsets (simple and double) as well as straight stairs

Characteristics

- Stainless steel A2, produced in one piece

Title	PU Piece	Article No.
ALPHA SCRIBER M900000	1	138979

AGR: 08.312



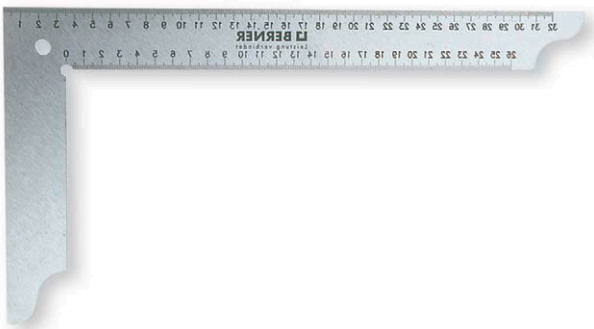
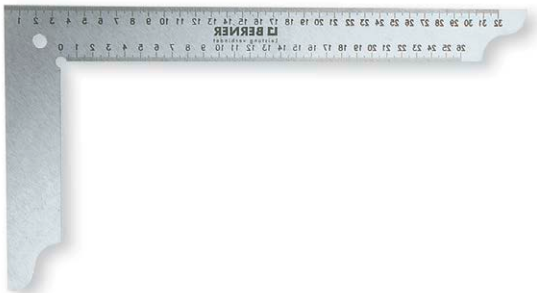
Scribing Square

Characteristics

- Stainless steel A2, produced from one piece

Title	PU Piece	Article No.
TRY SQUARE Z032000	1	138978

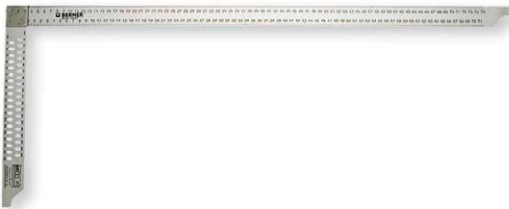
AGR: 08.312



Scriber Set

Scope Of Delivery

- 1 Alpha marking device
- 1 carpenter's square
- 1 scribe's square



Title	PU Piece	Article No.
SCRIBERS SET M900974	1	138980

AGR: 08.312

Parallel Scriber

- Indispensable tool for every joiner, carpenter or other wood processor

Application Area

- Can be used for common scribing

Title	PU Piece	Article No.
PARALLEL SCRIBER"BERNER"	1	173505

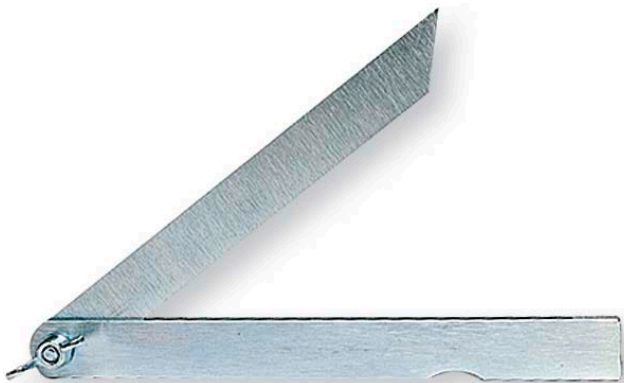
AGR: 08.319



Sliding Steel Bevel

Characteristics

- 3 part, with winged nut, zinc coated, plant surfaces and polished sides, special steel, chrome finish



Title	Limb Length	PU Piece	Article No.
Sliding Steel Bevel	200 mm	1	133394
Sliding Steel Bevel	300 mm	1	133395

AGR: 08.319

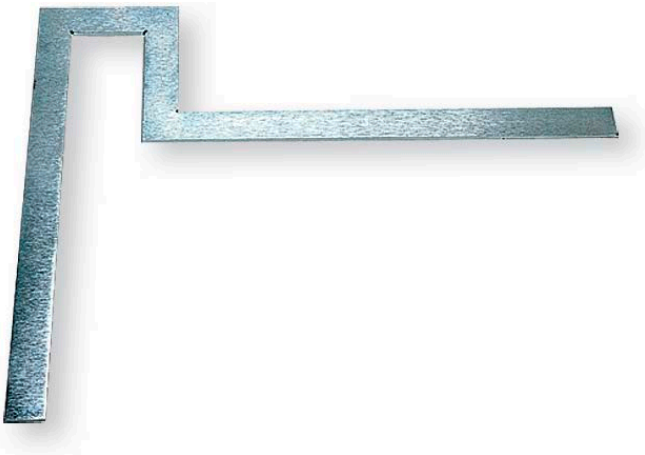
Flange Angle

Application Area

- Alignment of the flanges

Characteristics

- Galvanized design, testing surfaces and fine sharpened faces



Title	Limb Length	Width	PU Piece	Article No.
Flange Angle	400 mm	400 mm	1	133390

AGR: 08.319

Steel square

Characteristics

- Special steel, galvanized version

Hints

- Without a stop



Title	Limb Length	Width	Height	PU Piece	Article No.
Flat Square Without Stop	150 mm	100 mm	-	1	133357
Flat Square Without Stop	200 mm	130 mm	-	1	133358
Flat Square Without Stop	300 mm	175 mm	25 mm	1	108956
Flat Square Without Stop	300 mm	180 mm	-	1	133360

AGR: 08.312

Further measurement and testing technology

Try Square

Characteristics

- Zinc coated design
- Square with Stop

Hints

- With a stop



Title	Limb Length	Width	Height	PU Piece	Article No.
Try Square	150 mm	100 mm	-	1	133368
Try Square	200 mm	130 mm	-	1	133369
Steel Square	300 mm	175 mm	25 mm	1	147146
Try Square	300 mm	180 mm	-	1	133371
Try Square	300 mm	200 mm	-	1	135343

AGR: 08.312

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Precision Workshop Angle

Characteristics

- Fine sharpened testing surfaces, special steel with stop square, according to DIN 875/II



Title	Limb Length	Width	PU Piece	Article No.
Precision Workshop Angle	100 mm	70 mm	1	133365
Precision Workshop Angle	150 mm	100 mm	1	133363
Precision Workshop Angle	200 mm	130 mm	1	133362
Precision Workshop Angle	300 mm	175 mm	1	133359

AGR: 08.312

Precision-Bevelled Steel Square

Application Area

- Tests are according to the splitting methods of the light

Characteristics

- Low profile, stainless steel, hardened and finely polished, according to DIN 875/00



Title	Limb Length	Width	PU Piece	Article No.
Precision Protractor Square	100 mm	70 mm	1	133372

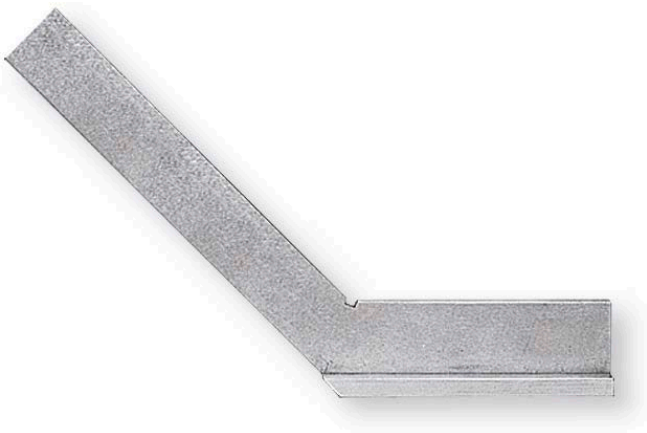
AGR: 08.312

INTERNAL/Approved (2019-03-22 22:09:33)

Miter Square

Characteristics

- With 135° angle, testing surfaces and fine shaped side surfaces, with stop, according to DIN 875/II



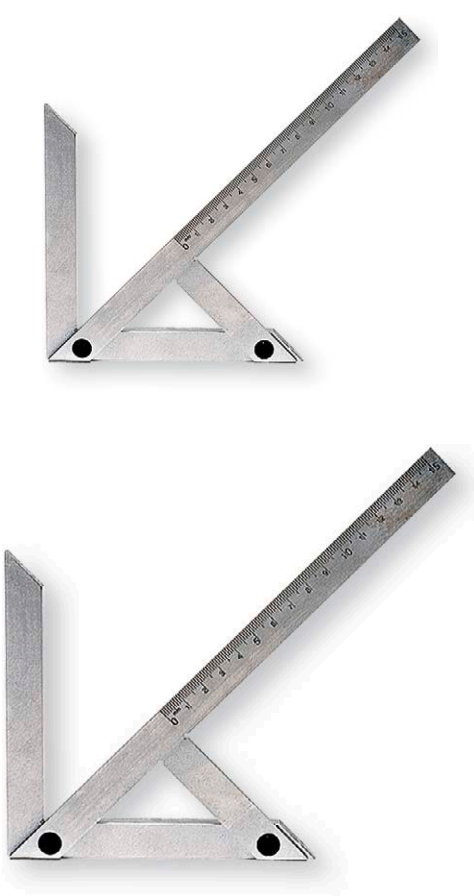
Title	Limb Length	Width	PU Piece	Article No.
Miter Square 135°	150 mm	100 mm	1	133389

AGR: 08.319

Centering Square

Application Area

- For cutting the centre of round disks and round shafts



Title	Limb Length	Width	For Shafts To Ø	PU Piece	Article No.
Centering Square	100 mm	70 mm	90 mm	1	133391
Centering Square	150 mm	130 mm	190 mm	1	133392
Centering Square	200 mm	150 mm	220 mm	1	133393

AGR: 08.319

Plumber Scriber

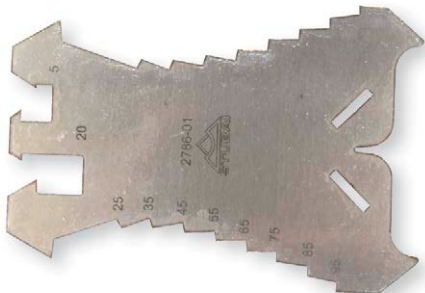
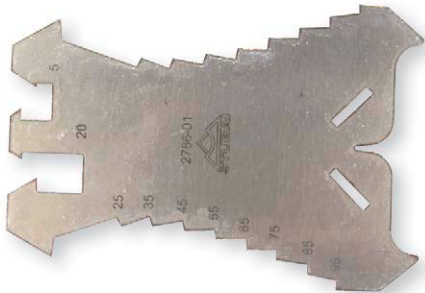
- No deformation
- Significantly greater lifetime of the edges

Characteristics

- Stainless, hardened, high-grade steel, brightly polished
- Exact scale etched
- From 50-100 mm, seperated all 5 mm
- Material strength 1.3 mm
- Hardened on 48 HRC

Title	PU Piece	Article No.
Scriber For Plumber	1	021073

AGR: 08.312



Further measurement and testing technology

Flexible scale

- Flexible version
- Longlasting and resistant to corrosion
 - Made of stainless spring steel
- Clear reading
 - Non glare, matt surface and etched graduation
- Compliant with DIN 2004/22/ECII

Hints

- Scale: top 1/2 mm; bottom 1/1 mm graduation

Technical Data

Accuracy Class	II
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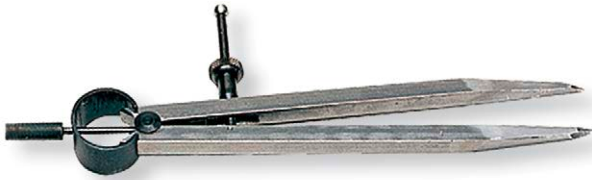
Title	Length	Width	Material	PU Piece	Article No.
Measuring Rules	30 cm	13 mm	Stainless Steel	1	133379
Measuring Rules	50 cm	18 mm	Stainless Steel	1	133380
Measuring Rules	100 cm	18 mm	Stainless Steel	1	133381

AGR: 08.311

High-Precision Spring Divider

Characteristics

- With square axle stub, chromed with a quick release nut and hardened tips.



Title	Length	PU Piece	Article No.
High-Precision Spring Divider	200 mm	1	133355
High-Precision Spring Divider	300 mm	1	133356

AGR: 08.312

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Precision Protractor

- White scale on a black surface for a better legibility

Characteristics

- 1° graduation
- With locking screw

Technical Data

Measuring range, Angle	0 - 180 °
Material	Duraluminum



Title	Limb Length	Miner'S Level	PU Piece	Article No.
Precision Protractor	150 mm	120 mm	1	133385
Precision Protractor	200 mm	150 mm	1	133386

AGR: 08.319

Scribers

Characteristics

- With hard metal marking-out tops, scribe case mechanics with aluminium case

Technical Data

Material tip	carbide
--------------	---------

Title	Length	PU Piece	Article No.
Scribe Mechanics Case	150 mm	1	169083
Scriber with Carbide Clip	150 mm	1	169085
DRAWING PIN STEEL CURVED 250MM	250 mm	1	133398

AGR: 03.970

Accessories Available	PU Piece	Article No.
Spars Scribe Mechanics Case (new Eddition)	1	169084



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Precision Marking Gauges

Characteristics

- Flat design, tempered with mm-graduation, hardened marking-out edge, matt chrome
- stainless steel rail, with vernier reading of 0.10 mm



Title	Length	PU Piece	Article No.
Precision Marking Gauge	200 mm	1	133397

AGR: 08.319

Chalk Line Reel Aluminum

- Can also be used as a plumb bob

Characteristics

- Duty aluminum construction with hook
- sliding filling opening

Title	Color	Chalk capacity	Ø	Length	PU Piece	Article No.
Chalk line reel alu	Silver	100 g	1 mm	30 m	1	117501
AGR: 08.341						
Spare Parts					PU Piece	Article No.
Refill Line Chalk Line					1	117528



Chalk Line Reel Speed

- Special coil ratio 1: 3 for fast penetration of the cord

Characteristics

- Ergonomic shape
- Sliding fill opening

Title	Color	Ø	Length	PU Piece	Article No.
Chalk Line Reel Speed blue grey		1 mm	30 m	1	117498
AGR: 08.341					
Spare Parts				PU Amount	Article No.
Refill Line Chalk Line Speed				1	216454



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Chalk Line Reel Cosmos

- Special coil ratio 1:3 for quick entering of the cord

Characteristics

- Braided cord for increased tensile strength
- Robust aluminum design



Title	Color	Length	PU Piece	Article No.
CHALK LINE REEL COSMOS 30M	Blue	30 m	1	216455
AGR: 08.341				
Spare Parts			PU Amount	Article No.
Refill Line Chalk Line Cosmos			1	216449

Chalk Line Reel Magnum

- rubberized grip
- Robust, braided cotton cord

Title	Color	Ø	Length	PU Piece	Article No.
CHALK LINE REEL MAGNUM 50M	Blue	2.5 mm	50 m	1	116450
AGR: 08.341					
Spare Parts				PU Amount	Article No.
Refill Line Chalk Line Magnum				1	216451



Chalk Line Reel Stop

- STOP function to hold the line
- Rubber-coated handle
- Durable cord for a perfect line
- Large steel crank allows easy rewind

Characteristics

- sliding filling opening



Title	Color	Ø	Length	PU Piece	Article No.
Chalk Line Reel Stop	blue grey	1.5 mm	30 m	1	116449
AGR: 08.341					
Spare Parts				PU Amount	Article No.
Refill Line Chalk Line Stop				1	216452

Chalk line reel Premium

- Extremely light and break-proof magnesium housing
- 5-times faster cord entering by crank gear
- Comfortable cord extraction: freewheel function by pressing the crank axle
- Large color powder capacity
- Hardened end hook
- High tensile strength



Title	Ø	Length	PU Piece	Article No.
Chalk line reel Premium 30 m 1 mm		30 m	1	242712
AGR: 08.341				
Spare Parts			PU Amount	Article No.
Refill Line Chalk Line Premium			1	242764

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Further measurement and testing technology

Double Chalk Line Reel

- Long, comfortable handle on both sides
- Robust braided cotton cord

Title	Color	Ø	Length	PU Piece	Article No.
Double Chalk Line Reel	Blue	1.5 mm	30 m	1	116447
AGR: 08.341					
Spare Parts				PU Amount	Article No.
Refill Line Chalk Line Double				1	216450



Chalk Line Refill

- Intesive color
- High intensity labeling
- U.V. resistant
- Special granule enables high adhesion when marking

Characteristics

- Easy to use

Hints

- 1 carton = 6 pieces

Title	Color	Content (Weight)	Material	PU Piece	Article No.
Chalk Line Refill	black	250 g	Chalk	1	117507
Chalk Line Refill	Blue	250 g	Chalk	1	871936
Chalk Line Refill	Neon green	250 g	Chalk	1	117508
Chalk Line Refill	Neon orange	250 g	Chalk	1	116444
Chalk Line Refill	Red	250 g	Chalk	1	103333
Chalk Line Refill	White	250 g	Chalk	1	116446
Chalk Line Refill	Blue	1000 g	Chalk	1	103369
Chalk Line Refill	Red	1000 g	Chalk	1	103368
Chalk Line Refill	Blue	4000 g	Chalk	1	117522
Chalk Line Refill	Red	4000 g	Chalk	1	116445

AGR: 08.340



Masonry cord

Characteristics

- Fluorescent neon colors, woven

Technical Data

Material	Polypropylene (PP)
Norms	DIN EN 83307
Resistant to	Water

Title	Color	Length	Ø	PU Piece	Article No.
Masonry cord	Green	100 m	1.0 mm	1	169408
Masonry cord	Red	100 m	1.7 mm	1	149097
Masonry cord	Neon yellow	100 m	2.0 mm	1	011041
Masonry cord	Green	100 m	2.0 mm	1	169409

AGR: 08.669

Guideline Nylon

Technical Data

Material	Nylon
----------	-------

Title	Color	Length	PU Piece	Article No.
MEAS.CORD PERLON M	50 White	50 m	1	894638

AGR: 08.660

Curb String Line

Technical Data

Material	Polypropylene (PP)
Norms	DIN EN 83307
Resistant to	Moisture

Title	Color	Length	Ø	PU Piece	Article No.
Curb String Line	Red	500 m	3.0 mm	1	050667

AGR: 08.669



Further measurement and testing technology

Plumb bob

Technical Data

Weight 300 g

Title	PU Piece	Article No.
Plumb bob	1	917842

AGR: 08.661



Plumb bob

- Made from durable steel

Application Area

- Suitable for determining vertically superimposed points

Characteristics

- Pear-shaped plumb bob

Technical Data

Weight 500 g

Title	PU Piece	Article No.
Plumb bob	1	032775

AGR: 08.669



Marking Chalk

- Universal marking crayon for construction area
 - Wiping proof and weather resistant

Application Area

- For marking on metal, stone, concrete, dry and wet wood and cardboard

Characteristics

- Available in 4 colors, heat resistant, practical case holder with mechanics



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Further measurement and testing technology

Hints

- Can be washed out of textiles with water

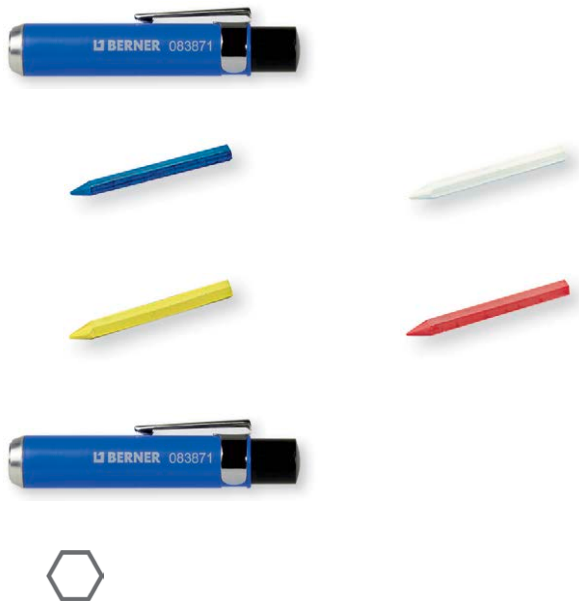
Technical Data

Material	Wax chalk
Ø	12 mm

Title	Color	Length	PU Piece	Article No.
Marking Chalk	Blue	120 mm	12	082644
Marking Chalk	Red	120 mm	12	082735
Marking Chalk	White	120 mm	12	082495
Marking Chalk	Yellow	120 mm	12	082599

AGR: 08.340

Accessories Available	PU Piece	Article No.
Holder for Marking Chalk	1	083871



Tyre Chalk

- Ideal for marking tyres before storage
 - Wiping-proof and weather resistant

Application Area

- For tyres, rubber, iron, steel, glass, ceramics, plastic, leather and a lot of more

Technical Data

Material	Wax chalk
Shape	Hexagonal with 6KT
Ø	12 mm

Title	Color	Length	PU Piece	Article No.
Tyre Chalk	White	120 mm	12	081614
Tyre Chalk	Yellow	120 mm	12	081615

AGR: 08.345

Accessories Available	PU Piece	Article No.
Holder for Marking Chalk	1	083871



Further measurement and testing technology

Signal Chalk Soft

Application Area

- For tyres, rubber, iron, steel, glass, ceramic, plastic, leather

Characteristics

- Practical holder with a falling mechanism

Title	Color	PU Piece	Article No.
Signal Chalk Soft	White	12	052452
Signal Chalk Soft	Yellow	12	052453

AGR: 08.340

Accessories Available

	PU Amount	Article No.
Holder for Tyre Crayon Black	1	052454



Art No. 52454

Tire Chalk

- Paraffin oil base and high quality pigments, therefore environmentally friendly

Application Area

- Identification of tire/wheels, barrels, metals

Characteristics

- Wipe and break-resistant, temperature-stable

Technical Data

Material	Paraffin oil
----------	--------------



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Further measurement and testing technology



Title	Color	PU Piece	Article No.
Tire Chalk	White	12	159283
Tire Chalk	Yellow	12	159282

AGR: 08.340

Marking Chalk Premium

- Waterproof

Application Area

- For the marking of metal sheets and so on
- For covering markings even on dark areas

Technical Data

Material	Chalk
----------	-------

Title	Color	Length	PU Piece	Article No.
Marking Chalk	White	175 mm	1	094160

AGR: 08.345

Marking Chalk "Berner"

- Waterproof
- Particularly soft and colorful mine
- Ergonomic triangular shape

Application Area

- To mark sheets, etc.
- For covering markings even on dark surfaces

Technical Data

Material	Chalk
Shape	Triangular



Further measurement and testing technology

Title	Color	Length	PU Piece	Article No.
Marking Chalk	White	175 mm	1	031063

AGR: 08.340

Masonry Pencil

- For professional use
 - Very durable model
- Easy to sharpen and offers a good combination between flexibility and durability
 - Linden tree is a soft wood with few transverse fibers
- Optimal performance on hard surfaces, like concrete, tile, brick, stone
 - Lead 6H
- Wiping proof and weather resistant

Application Area

- Marking on hard and rough surfaces: concrete block, tile, brick, stone, concrete etc.

Hints

- Delivered unpointed

Technical Data

Material	Linden wood
Shape	Oval- squared

Title	Length	PU Piece	Article No.
Stonecarver Pencil	240 mm	1	032724

AGR: 08.345

Carpenter Pencil

- For professional use
 - Very durable pencil
- Easy to sharpen and offers a good combination between flexibility and durability
 - Linden tree is a soft wood with few transverse fibers
- Optimal performance on wood, plaster, paper and concrete
 - Lead HB
- Wiping proof and weather resistant



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Further measurement and testing technology

Application Area

- For marking on wood, carton, paper and concrete

Hints

- A box contains 144 pieces
- Delivered unpointed

Technical Data

Material	Linden wood		
Shape	Oval		

Title	Length	PU Piece	Article No.
Carpenters' Pencil	240 mm	1	000178

AGR: 08.345

Joiner Pencil

- For professional use
 - Very durable model
- Easy to sharpen and offers a good combination between flexibility and durability
 - Linden tree is a soft wood with few transverse fibers
- Optimal performance on wood, carton and paper
 - Lead 2H
- Wiping proof and weather resistant

Application Area

- For marking on wood, carton, paper

Hints

- Delivered pointed

Technical Data

Material	Linden wood		
Shape	Round		

Title	Length	PU Piece	Article No.
Joiner Pencil	175 mm	1	369021

AGR: 08.345



Further measurement and testing technology

Rubber

- Comfort-quality for an excellent erasing result
- Small crumb formation

Application Area

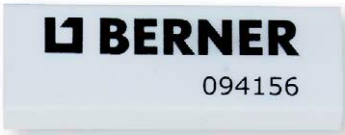
- For cleaning work after assembly work, e.g. for removing pencil lines
- For an almost spotless erasing result - exact and clean

Characteristics

- Plasticizers- (phtalate-) and latex-free

Title	PU Piece	Article No.
Rubber	1	094156

AGR: 08.345



Pencil Touch

- Ergonomical triangular shaft for fatigue-free writing
- The pencil is extremely fracture-resistant due to a special lead formula and a super-bonded lead
- There is a rubber cap at the end of the pencil for controlling a touchscreen
- With a measurement scale on the pencil

Application Area

- Ideal for writing, drawing and sketching as well as the handling of a touchscreen

Title	PU Piece	Article No.
Pencil Touch	1	218836

AGR: 90.100



Profi Marker Set

- Fits in every trousers and shirt pocket
 - Compact size
- Dropping resistant
 - Extremely robust 5.6 mm lead
- No smeared hands



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Further measurement and testing technology

- ▶ Lead is optimally positioned and can be adjusted
- Easily removable
 - ▶ Wax leads practically insoluble in water but markings can be removed through wiping

Application Area

- For marking on practically any material, dry or wet
- Graphite lead: wood, paper, cardboard
- Wax lead: metal, plastic, glass, brick, tile, rubber, ceramics, concrete

Scope Of Delivery

- 2 marking pens
- 5 graphite leads
- 5 yellow wax leads
- 5 red wax leads

Technical Data

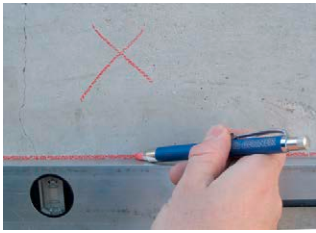
Shape	Round
Ø	5.6 mm

Title	Color	PU Piece	Article No.
Marking and Labeling Set Professional Marker	Anthracite Red Yellow	1	017343

AGR: 08.345

Scope Of Supply	Package	Article No.
(442838_11_2_AT01_MarkierungsstiftemitFal)	2	-
Graphite Lead Set (5 pieces)	1	023296
Wax Lead Set (5 pieces), yellow	1	023295
Wax Lead Set (5 pieces), red	1	023294

Accessories Available	PU Amount	Article No.
Graphite Lead Set (5 pieces)	1	023296
PROFI MARKER SOAPSTONE LEAD	1	091643
Wax Lead Set (5 pieces), yellow	1	023295
Wax Lead Set (5 pieces), red	1	023294
Profi Marker Pencil	1	028911



Permanent marker for deep holes

- The tip cannot slip into the steel barrel
 - Special shaped tip
- Waterproof on nearly all surfaces
- Telescopic support for hard to reach areas
 - 25 mm long and fine stainless steel point
- No wiping
 - Quick drying ink
- Low odour

Application Area

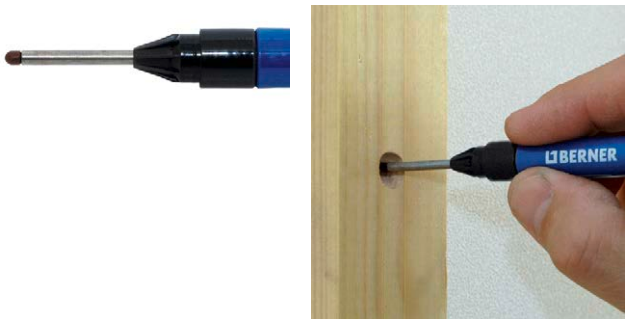
- For marking in hard to reach places
- Perfect for installation and assembly work
- Highlight on virtually any dry material like wood, paper, cardboard, stone, metal, plastic, glass, bricks, tile, rubber, ceramics, concrete

Technical Data

Ø 1 mm

Title	Color	Length	PU Piece	Article No.
Permanent marker for deep holes	black	25 mm	1/10	200741

AGR: 08.345



Deep hole marker dry Set

- 45 mm long stainless steel tip with automatic lead support - perfect for drilling and installation works
- Tip, body and Clip made of metal - therefore very solid and durable
- (perfect for professional use)
- well-integrated sharpener inside the push button - always ready-to-use, also for fine markings
- very exact marking based on small lead diameter (2.8 mm)
- marks on nearly every surface
- graphite universal lead: for rough and smooth surfaces
- allwriter leads: water proof lead in yellow and red for smooth and dark surfaces

Application Area

- For marking in hard-to-reach areas
- For installation and assembly work
- For marking on nearly all surfaces



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Further measurement and testing technology

- Graphite universal lead: for rough and smooth surfaces
- Allwriter leads: water proof lead in yellow and red for smooth and dark surfaces

Scope Of Delivery

- 1 pc. Deep hole marker dry with 1 graphite universal lead
- 1 dispenser with 2 graphite universal lead, 2 allwriter leads red and 2 allwriter leads yellow

Technical Data

Shape	Round
Ø	2.8 mm

Title	Color	Length	PU Piece	Article No.
Deep hole marker dry set	Anthracite Yellow Red	155 mm	1	335071

AGR: 08.345

Accessories Available	PU Amount	Article No.
Leads for Deep Hole Marker Grey 6 pcs.	1	335069
Leads for Deep Hole Marker Red 6 pcs	1	335068
Leads for Deep Hole Marker Yellow 6 pcs	1	335067

Duo Marker

- Highly visible mark in inaccessible places possible, as perforated plates, drill holes, edges, base, hardware, ...
- Excellent smudge-proof and waterproof
- Color intensive, low odor
- Peaks form and a fine (0.6 mm) and medium tip (1.5 mm)
- Set consists of the colors black, red, blue and green

Application Area

- Felt-tip pen with two tips one for writing and one for marking
- Can write on almost any dry material such as wood, paper, stone, metal, plastic, glass, porcelain, brick, tile, rubber, ceramics, concrete, styrofoam

Hints

- Difficult to remove from textiles



Further measurement and testing technology

- The color black is UV resistant and waterproof
- 1 case = 100
- Set: 4 pencils, one of each colour

Title	Color	PU Piece	Article No.
Duo Marker	black	1/10	094159
Duo Marker	Blue	1/10	094157
Duo Marker	Green	1/10	198667
Duo Marker	Red	1/10	094158
Duo Marker Set	black Red Blue Green	1	198668

AGR: 08.345

Permanent marker

- Paint marker for permanent marking

Application Area

- For intense covering marking of nearly all materials, even dark ones such as plastic, metal, glass, rubber, wood, ceramics, cardboard
-
- Highly covering, non-fading and extremely durable pigmented varnish.

Hints

- When tip worn-down: pull out tip, turn around and stick back

Technical Data

Shape	Round
Point width, from - to	2 - 4 mm

Title	Color	PU Piece	Article No.
Permanent marker	Blue	1/10	369028
Permanent marker	Yellow	1/10	369027
Permanent marker	black	1/10	200744
Permanent marker	White	1/10	200743

AGR: 08.345



INTERNAL/Approved (2019-03-22 22:12:44)