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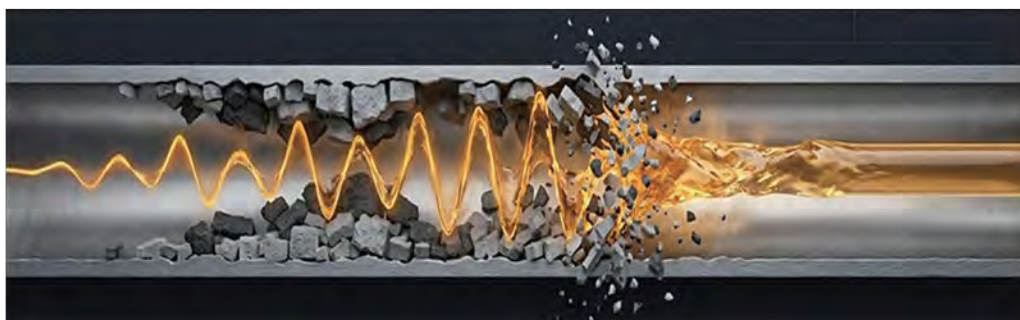
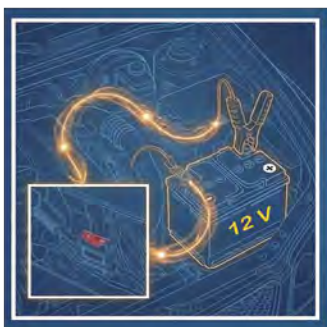
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ST-25119

12 VOLT POWER PULSATING BRAKE EXCHANGE

- pulsating effect removes debris from the brake system using a rhythmic pulsating pressure.
- force drain function to allow the machine to work with different types of brake fluids.
- automatic shut-off design when brake fluid level goes below 100 mL. by a built-in electric level indicator.
- gauge reading from 0~7 bar (0~100 psi); recommended working pressure is 1~2 bar (14.5~29 psi); max. pressure is 3.5 bar (50.7 psi).
- self-purge function is included to prevent air bubbles from being introduced into the brake system.
- unique 100% transparent & brake fluid resistant 2-liter tank allows users to see the remaining brake fluid volume.
- use car battery as the power source, increasing working flexibility.
- total weight of empty machine is 6.4 kg, easy to carry around.

INNOVATION



ST-34008

WIPER ANGLE ADJUSTMENT TOOL - TESLA

- checks and adjusts the angle between the windshield wiper arm and windshield
- secures the adjustment tool to the front of the wiper arm; adjust the angle using a 24mm open-ended wrench.
- adjustment range: $\pm 20^\circ$.
- suitable arm specifications:
LHD & RHD vehicles, driver's side: $1.5^\circ \pm 3^\circ$.
LHD & RHD vehicles, passenger's side: $1.7^\circ \pm 3^\circ$.
- applications: Tesla model X and S.



ST-34009

WIPER ANGLE ADJUSTMENT TOOL - TESLA

- checks and adjusts the angle between the windshield wiper arm and windshield
- secures the adjustment tool to the front of the wiper arm; adjust the angle using a 24mm open-ended wrench.
- adjustment range: $\pm 20^\circ$.
- suitable arm specifications:
LHD & RHD vehicles, driver's side: $1.5^\circ \pm 3^\circ$.
LHD & RHD vehicles, passenger's side: $1.7^\circ \pm 3^\circ$.
- applications: Tesla model 3.



ST-22097

SPRING STEEL TRIM CLIP REMOVAL TOOL

- this pry bar style trim removal tool has been designed to enable the quick and easy removal of spring steel type trim clips of various.
- for the fast removal spring steel type trim clips without causing damage to the fastener of the surrounding components.
- overall length: 191mm, width: 20mm.
- applications:
Audi (from 2013) / Mercedes (2008~2020) / Porsche / Tesla model X, Y / VW.



ST-34010

HOSE CLAMP PLIER

- plier for fitting and removing clipless. Spring-loaded clamps, including pre-opened SBC clamps.
- ideal for securing and releasing coolant hose clamps.
- sand-dipped handles for better grip.
- dual function: release and secure self-locking clamps.
- applications: Tesla and various EVs.



ST-34011

6 - 12 - 24 - 48 VOLT DIGITAL DISPLAY AUTO CIRCUIT TESTER

- digital display to read the accurate voltage value.
- supports 6, 12, 24 and 48 VDC system.
- LED indicator for power (red) and ground (green).
- voltage measurement from 3 ~ 60 VDC.
- small testing current < 10 mA.
- 4 level over-voltage warning:
70~100 volt / 100~200 volt / 200~300 volt and over 300 volt.
- 3 meter spring cable.



ST-34012

6 ~ 1000 VOLT AC/DC MULTI-FUNCTION VOLTAGE TESTER

- the multi-function voltage tester is a professional 2-pole tester.
- designed for electricians, supporting DC 6~1000V and AC 24~1000V.
- including CAT IV 1000V. for high-voltage systems like electric / hybrid vehicles.
- voltage range: 6~1000VDC / 24~1000VAC.
- probe cap and dual switch for safety.



ST-34005

1/2" DR. BATTERY COVER STUD SCREW REMOVAL SOCKET - TESLA

- designed for Tesla's five-flower battery box screws; ensures secure removal and re-installation.
- easily removes battery compartment cover screws without damaging surrounding components.
- applications: Tesla model 3, model Y, and more.



ST-34018

4PCS - JACK LIFT PAD SET - TESLA

- pad pucks for creating a safe jack lifting point for Tesla models.
- magnets to help the pad to stick to the metallic frame when fitting the pad to the jack point for servicing the battery.
- pads to protect the battery at the bottom of Tesla.
- special colored line attached as an identifier so the pads are not forgotten after servicing Tesla.
- applications: Tesla model S, 3, X and Y.



ST-34001

RADIATOR CONNECTOR - TESLA

- cooling system leak detection connector for accurate pressure testing.
- designed to test radiator & water tank pressure for quick identification of leaks.
- ensures secure connection for accurate diagnostics during maintenance.
- applications: Tesla model 3 and model Y.



ST-34002

RADIATOR CONNECTOR - TESLA

- cooling system leak detection connector for accurate pressure testing.
- designed to test radiator & water tank pressure for quick identification of leaks.
- ensures secure connection for accurate diagnostics during maintenance.
- applications: Tesla model S and model X.



ST-23119

3PCS - VACUUM TYPE COOLANT REFILL KIT - TESLA

- vacuum-type coolant refill tool has large internal passages to allow coolant to be refilled fast.
- provided with adaptors for all Tesla models.
- with only two valves - easy to use, intuitive design. tool with a hook can hang under the hood.
- tool needs to work with an air compressor to create a vacuum in the cooling system.
- applications: Tesla model S and Model X (all years) - blue color adaptor.
Tesla model 3 and model Y (all years) - red color adaptor.



ST-23117

31PCS - PRESSURE AND VACUUM TYPE COOLING TESTER KIT

- remove the original radiator cap while the engine is cold.
- choose a proper radiator cap and install it on to radiator opening.
- work the hand pump till the pressure up to 10~15 psi.
- check the gauge reading, if the reading drops automatically, the leakage might occur in radiator.
- raise the vehicle bonnet and hand the hook in available position.
- connect the universal radiator rubber adaptor provided or suitable radiator cap on radiator.
- connect air line, press button "ON" to allow the air gone. turn switch 50~60cmHG, then press button "OFF".
- applications:
Audi e-Tron / BMW i3, i8 / Chevrolet Bolt EV / Hyundai Kona Electric / Hyundai Ioniq Electric / Kia Niro EV / Mitsubishi Outlander PHEV / Nissan V200, Leaf/ Renault Zoe / Toyota Prius PHEV / Volvo XC40, XC60 Hybrid / VW e-Golf.



ST-23145

35PCS - PRESSURE AND VACUUM TYPE COOLING TESTER KIT

- set for testing leaks in automotive cooling system and refill new coolant by creating a vacuum in cooling system.
- applications:
 - adaptor 24 for Hyundai and Kia new models, including EVs.
 - adaptor 25 (X) for Volvo 2.0L twin engines.
 - adaptor 3Y for Tesla model 3 and model Y.
 - adaptor SX for Tesla model S and model X.
 - adaptor F with a 90° turn for Ford with limited access.
 - adaptor J for GM 3.6L hybrid and Fiat 500e.
 - adaptor MG for MG models, including EVs.
 - adaptor P for Porsche Boxster and Cayman.
 - adaptor Y for BYD models, including EVs.



ST-34013

ADAPTOR Y TESTER CAP

- nylon test cap to be connected on recovery tank filler necks.
- size: M33.6 x 3.0.
- suitable for BYD models, including petrol, hybrid and fully electric vehicles.
- applications:
 - Atto 3 / Yuan Plus, Dolphin, e1, e2, e3, e5, e6 and Seal.



ST-34004

6PCS - EVs MOTOR SHAFT ASSEMBLY AND DISASSEMBLY TOOL KIT

- designed for EV energy vehicles.
- removes worn motor shafts or installs new ones using a press, ensuring precise alignment.
- secures the magnetic steel sheet from both ends; lock screws and press out the shaft with ease.
- strange noises, skidding, or motor idling after 200,000 km may indicate shaft wear and require repair.
- includes: 2pcs mounting tools and 4pcs bolt.
- suitable: EVs and hybrid models.
- applications:
 - Tesla / Jeep / Honda / Hyundai / Chevrolet and GM.



ST-24647

6PCS - BRAKE BLEEDING ADAPTOR SET

- designed for applications on master cylinder reservoirs from 2001 to 2020. covers at least 90% of all the common vehicles on the market.
- adaptors with standard European air plug type. suitable for pressure bleeding tools or machines.
- most adaptors have a swivel 90° fitting to tackle limited space problems.
- applications:
 - Audi e-Tron / BMW i3, i8 / Chevrolet Bolt EV / Hyundai Kona Electric, Ioniq Electric / Kia Niro EV / Mitsubishi Outlander PHEV / Nissan-NV200, Leaf / Renault Zoe / Toyota Prius PHEV / Volvo XC40, XC60 Hybrid / VW e-Golf.



ST-34016

2PCS - BRAKE BLEEDING ADAPTOR SET - TESLA

- compatible with most brake pressure bleeder machines or tank pumps.
- kit specially designed for performing power brake bleeding on Tesla vehicles.
- suitable for working pressure up to 2.0 bar / 30 psi.
- applications:
 - Tesla model S, Tesla model 3 and Tesla model Y.



ST-24033

4PCS - BRAKE CALIPER PISTON WIND BACK TOOL KIT - TESLA

- this tool kit designed for Tesla rear brake caliper piston wind.
- supplied with both left and right-handle.
- winders enabling the return of the brake piston into the caliper delivering clearance for the new brake pads.
- application: Tesla model 3 - 2017~2025 Tesla model S - 2012~2025
Tesla model X - 2015~2025 Tesla model Y - 2019~2025



ST-34021

AIR POWER BRAKE CALIPER PISTON WIND BACK TOOL - TESLA

- compact design with a 950g. nylon body for easy handling.
- compatible with both regular and reverse-threaded pistons.
- retractable design ensures secure and precise caliper placement. pneumatic-powered operation simplifies disc brake servicing.
- application: Tesla model 3 - 2017~2025 Tesla model S - 2012~2025
Tesla model X - 2015~2025 Tesla model Y - 2019~2025



ST-32037

10PCS - LOCKING WHEEL NUT KEY SET - TESLA

- this socket enables you to permit serving of customer vehicle, even lost the key.
- material: Cr-Mo steel and chrome finish.
- 10pcs-wheel lock adaptor:
#76, #77, #78, #79, #80, #81, #82, #83, #84, #85.
- applications:
installing and removing lock of "Tesla" series.



ST-34017

BUSHING TOOL FOR FRONT DRIVE UNIT TOOL - TESLA

- designed for removing and replacing the front drive unit bushing.
- black receiving sleeve features a specially shaped cutout tailored.
- compatible only with the front electric motor.
- applications: Tesla model 3.



ST-34003

BUSHING TOOL FOR REAR DRIVE UNIT TOOL - TESLA

- designed for removing and installing rear lower control arm and drive unit bushings.
- specially engineered for efficient bushing removal and installation without damaging components.
- matches part numbers: 1931711-00-A, 1931710-00-A, 137792-00-B.
- applications: Tesla model Y.



ST-34006

1/2" DR. STRUT NUT REMOVAL SOCKET - TESLA

- designed for quick, damage-free removal of Tesla shock absorber strut nuts.
- distributes force evenly to reduce thread wear and ease installation / removal.
- reaches confined areas with ease for smooth maneuverability.
- ideal for model 3 suspension strut nut bolts.
- socket: 1/2" dr. x 13mm x 6 point.
- applications:
Tesla model 3 / OEM ref: 1467109-00-A.



ST-34007

1/2" DR. SOLENOID VALVE SOCKET - TESLA

- designed for easy solenoid valve service on model 3/Y without damage.
- works with heat pump, pressure relief, and solenoid valve cores.
- swap valves in minutes with precision-matched sockets.
- applications:
Tesla model 3 and model Y.



ST-34014

TRANSMISSIONS OIL FILTER WRENCH - TESLA

- designed for Tesla transmissions: 2-wheel drive models use one rear filter; all-wheel drive models use two filters, front and rear.
- precision size: $\varnothing 63.8\text{mm} \times 14\text{ flutes} \times 43\text{mmH}$.
- compatible with 27mm spanner.
- maximum torque capacity: 200 Nm.
- applications: Tesla model 3, Y, S, and X.



ST-34015

TRANSMISSIONS OIL FILTER WRENCH - TESLA

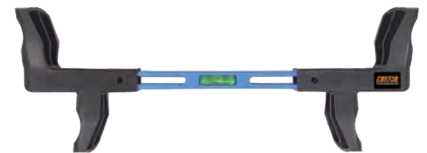
- designed for Tesla transmissions: 2-wheel drive models use one rear filter; all-wheel drive models use two filters, front and rear.
- precision size: $\varnothing 63.8\text{mm} \times 14\text{ flutes} \times 42\text{mmH}$.
- compatible with 21mm spanner or 1/2" dr. ratchet handle for easy operation.
- maximum torque capacity: 580 Nm.
- applications: Tesla model 3, Y, S, and X.



ST-34019

STEERING WHEEL LEVEL

- the steering wheel level is a sturdy and simple tool used to assure a level steering wheel during a front-end alignment procedure.
- the tool easily attached to the steering wheel at the beginning of the alignment procedure.
- it is spring-loaded for automatic centering and self-retaining.
- capacity: 160~270mmL. / 260~350mmL.
- suitable for kinds of vehicles and Tesla series.



ST-34020

3PCS - UNIVERSAL ATF REFILL TANK SET - TESLA

- 3 liter tank with a manual pump for easy refilling gearbox oil.
- provided with 2 adaptors (a soft tube type and a hook type) for fitting most automatic transmission / gear box fill plug holes.
- hose with internal wire spring does not get kinked.
- cap on the tank side for pouring new ATF / gearbox oil into the tank.
- pressure release button for enhanced safety.
- capacity: 3.0 litre.
- applications:

Tesla: model 3 - 2017~2025

Tesla: model S - 2012~2025

Tesla: model X - 2015~2025

Tesla: model Y - 2019~2025



ST-24656

3PCS - INTERNAL COIL SPRING COMPRESSOR KIT

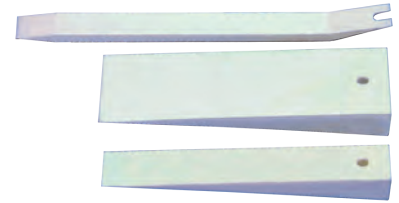
- suitable for coil springs with internal diameter $> 75\text{mm}$ & external diameter $< 155\text{mm}$.
- special pins on tool body to mesh with grooves on discs to create a secure connection.
- can be operated with an air impact wrench.
- applications:
Audi: A4, A6 / BMW: 3 series E46, X3 E83, X6 E71, E72, Z3 E36 / Citroën: berlingo, C8, dispatch / Fiat: bravo, croma, punto, scudo, ulysse / Ford: galaxy, maverick, mondeo / Hyundai: getz, santa fe / Mercedes: A-class W169, W176, B-class W245 / Nissan: cube, leaf, micra, murano, versa / Opel: astra G/H/J, corsa B/C, insignia, zafira A/B / Peugeot: 207, 807, 5008 / Renault: clio, espace, laguna, thalia / Tesla model 3 / Volvo: C70, S80, V60, V70, XC60, XC70.



ST-22001

3PCS - UTILITY WEDGE REMOVAL TOOL SET

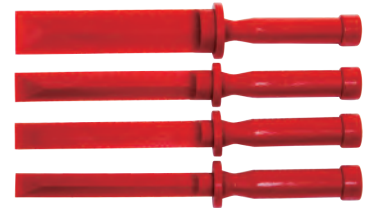
- utility wedge set suitable for removal of wide range of exterior body and interior trim.
- composite material reduces marking or scratching paintwork body/ trim.
- contents: 1pc-width 60mm x 196mmL.
1pc-width 30mm x 190mmL.
1pc-width 22mm x "U" notch blade x 265mmL.



ST-22046

4PCS - SUPER SCRAPER REMOVAL TOOL SET

- working like chisel.
- tough plastic handle can be hit with a hammer.
- sharpen when needed with a file.
- utility wedge set suitable for removal of wide range of exterior body and interior trim.
- contents:
1pc-width 19mm x 273mmL. 1pc-width 25mm x 273mmL.
1pc-width 22mm x 273mmL. 1pc-width 38mm x 273mmL



ST-22070

2PCS - SUPER SCRAPER REMOVAL TOOL SET

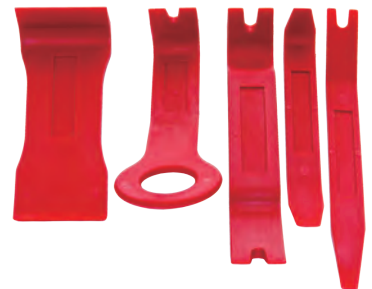
- working like chisel.
- tough plastic handle can be hit with a hammer.
- sharpen when needed with a file.
- utility wedge set suitable for removal of wide range of exterior body and interior trim.
- contents:
1pc - with handle: width 82mm x 290mmL.
1pc - without handle: width 82mm x 165mmL.



ST-22002

5PCS - HANDY REMOVAL TOOL SET

- designed to simplify trim and trim stud removal.
- made for resilient plastic to minimize panel damage and marking.
- upholstery clip: 10 x 20 mm "U" notch blade x 210 mmL.
- contents:
1pc-pull remover: 31mm "U" notch blade x 180mmL.
1pc-handy remover: 31mm double "U" notch blade x 200mmL.
1pc-narrow remover: 13 x 13 x 175mmL.
1pc-wide remover: 61 x 61 x 160mmL.



ST-22071

2PCS - HANDY REMOVAL TOOL SET

- use this pry-style tool to create enough space to easily insert the air wedge without damaging the vehicle.
- contents:
1pc - wedge-shaped handle, width 37mm x 226mmL.
1pc - round-shaped handle, width 37mm x 252mmL.



ST-22065

2PCS - HOOK / WEDGE REMOVAL TOOL SET

- a high quality set of non-marring plastic trim removal tools.
- the universal hook tool features multiple profile for those tight spots which is difficult to fit in.
- the combination wedge tool is excellent for lifting bezel edges, and for the removal of molded body trim pieces without damaging.
- contents:
1pc-width 23mm x 185mmL.
1pc-width 26mm x 209mmL.



ST-22089

METAL SKIN WEDGE REMOVAL TOOL

- unique design fits in tight gaps for removing exterior and interior trims, moldings, panels, fasteners, clips, gaskets, dashboards, and more without damage.
- slim radius taper end for optimum blend of strength and access.
- high strength thin tip (0.48mm) with very little deflection.
- curved tip x 178mmL.



ST-22090

METAL SKIN WEDGE REMOVAL TOOL

- unique design fits in tight gaps for removing exterior and interior trims, moldings, panels, fasteners, clips, gaskets, dashboards, and more without damage.
- slim radius taper end for optimum blend of strength and access.
- high strength thin tip (0.48mm) with very little deflection.
- curved and straight tips x 208mmL.



ST-22094

2PCS - TRIM AND CLIP REMOVAL TOOL SET

- for removing exterior and interior trim, molding, dashboards, door panels, and clips.
- each tool is two-sided to increase its applicability and versatility.
- metallic material is not easily damaged or broken, more durable than plastic panel removal tools.
- contents: 1pc-double-sided trim removal pry bar: W 55mm x L 224mmL.
1pc-double-sided clip lifter tool with "U" shape: W 7.4mm x 174mmL.



ST-22094A

TRIM AND CLIP REMOVAL TOOL

- for removing exterior and interior trim, molding, dashboards, door panels, and clips.
- the tool is two-sided to increase its applicability and versatility.
- metallic material is not easily damaged or broken, more durable than plastic panel removal tools.
- double-sided trim removal pry bar: W 55mm x L 224mmL.



ST-22094B

TRIM AND CLIP REMOVAL TOOL

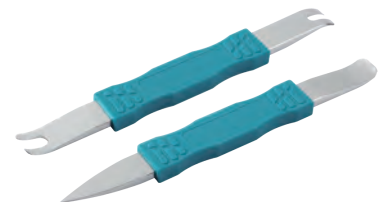
- for removing exterior and interior trim, molding, dashboards, door panels, and clips.
- the tool is two-sided to increase its applicability and versatility.
- metallic material is not easily damaged or broken, more durable than plastic panel removal tools.
- double-sided clip lifter tool with "U" shape: W 7.4mm x 174mmL.



ST-22107

2PCS - TRIM AND CLIP REMOVAL TOOL SET

- unique design fits in tight gaps for removing exterior and interior trims, molding, panels, fasteners, clip, gaskets, dashboards and more without damage.
- contents:
1pc-double-sided clip: "U" shape W 5mm and "U" shape W 7mm x 170mmL.
1pc-double-sided trim: radius and sharp x 170mmL.



ST-22107A

TRIM AND CLIP REMOVAL TOOL

- unique design fits in tight gaps for removing exterior and interior trims, molding, panels, fasteners, clip, gaskets, dashboards and more without damage.
- 1pc-double-sided clip: "U" shape W 5mm and "U" shape W 7mm x 170mmL.



ST-22107B

TRIM AND CLIP REMOVAL TOOL

- unique design fits in tight gaps for removing exterior and interior trims, molding, panels, fasteners, clip, gaskets, dashboards and more without damage.
- 1pc-double-sided trim: radius and sharp x 170mmL.



ST-22108

TRIM AND CLIP REMOVAL TOOL

- unique design fits in tight gaps for removing exterior and interior trims, molding, panels, fasteners, clip, gaskets, dashboards and more without damage.
- contents:
1pc-double-sided clip: "U" shape W 5mm and "U" shape W 7mm x 210mmL.
1pc-double-sided radius trim x 210mmL.



ST-22108A

TRIM AND CLIP REMOVAL TOOL

- unique design fits in tight gaps for removing exterior and interior trims, molding, panels, fasteners, clip, gaskets, dashboards and more without damage.
- 1pc-double-sided clip: "U" shape W 5mm and "U" shape W 7mm x 210mmL.



ST-22108B

TRIM AND CLIP REMOVAL TOOL

- unique design fits in tight gaps for removing exterior and interior trims, molding, panels, fasteners, clip, gaskets, dashboards and more without damage.
- 1pc-double-sided radius trim x 210mmL.



ST-22048

TRIM CLIP REMOVAL TOOL

- for plastic fastener, place the tool under the edge of the door upholstery panel and insert it into the fastener as far as possible than simply pry up.
- with comfortable handle.



ST-22043

TRIM CLIP REMOVAL PLIER

- allow easy access and removal of those hard to reach clips on bumper cover, fender liner etc.
- features positive lift action without damage the clip or the surrounding area.
- simply insert the jaws under the clip & squeeze the plier on or remove the clip.



ST-22055

TRIM CLIP REMOVAL PLIER

- this drop forged tapered "V" opening tool removes upholstery clip from car door, panel and bumper.
- the double tapered tips slide under the clip and grip to prevent damaging.
- the tips is 45°, providing more leverage for easier clip removal in tight spots.



ST-22101

11PCS - TRIM CLIP REMOVAL TOOL SET

- remove plastic fasteners that secure the door panel / trim piece w/out damage.
- place the tool under the edge of the door panel / trim piece, and insert into fastener as far as possible than simply pry up.
- distinct pivot point is designed for appropriate leverage and to discourage twisting that may damage panel or trim piece.
- contents:
1pc: movable support x 490mmL.
2pc: angle long 10, 13 x 500mmL. 3pc: angle short 6, 10, 13 x 235mmL.
2pc: straight long 10, 13x 500mmL. 3pc: straight short 6, 10, 13 x 260mmL.



ST-22059

3PCS - STRAIGHT TYPE LIGHT-DUTY SCRAPER TOOL SET

- multiple using for delicate surface finish and close tolerance components.
- unique tips ensure the economic, consistent and aesthetic removal.
- control and precision during delicate assembly, repair or restoration work.
- flexible, durable and easy to use. ● non-marring material non-scratch.



ST-22060

3PCS - ANGLE TYPE LIGHT-DUTY SCRAPER TOOL SET

- multiple using for delicate surface finish and close tolerance components.
- unique tips ensure the economic, consistent and aesthetic removal.
- control and precision during delicate assembly, repair or restoration work.
- flexible, durable and easy to use. ● non-marring material non-scratch.



ST-22061

3PCS - LIGHT-DUTY PRYING / SMOOTHING TOOL SET

- prying apart electronic key fobs (battery replacement).
- prying / smoothing epoxy, adhesives and silicone uniform.
- paint stripping in confined space.
- removing / installing O-ring and gasket.
- prying dashboard parts and air vent. ● flexible, durable and easy to use.
- cleaning small parts. ● non-marring material non-scratch.



ST-22062

3PCS - LIGHT DUTY O-RING REMOVAL TOOL SET

- removing / manipulating O-ring, small seal / gasket, clip.
- handling delicate wiring, composite electrical connectors.
- cleaning tight gaps in interior components.
- cleaning air vent assembly. ● flexible, durable and easy to use.
- to reach access panels. ● non-marring material non-scratch.



ST-22016

12PCS - AIR BAG REMOVAL TOOL KIT

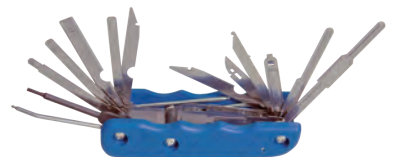
- set includes updated special tools for a variety of applications.
- suitable for the fast and safe removal of steering wheel airbag.
- applications:
Mercedes / Ford / Opel / U.S.W. / BMW / VW: Passat, AB, B5, Polo, Lupo, Golf 4, New Beetle, Bora, Jetta / Audi A4 / Seat / Sköda: Fabia, Superb, Octavia AB.



ST-25004

36PCS - FOLDING-TYPE RADIO REMOVAL TOOL SET

- the ultimate vehicle radio removal tool set for stereo installer and DIY to remove a wide variety of vehicle's radios and stereos.
- applications:
Mercedes / Becker / VW / Audi / Porsche / Sköda-New / Becker-New / PK-Clarion / Pioneer / RK-Kenwood 01 / Sony / RK-Kenwood / Fiat Brava / JVC / Panasonic 2006 / Panasonic/Sony II ab 2002/Opel / Grundig / Ford / Blaupunkt.



ST-25001

52PCS - RADIO REMOVAL TOOL KIT

- the ultimate vehicle radio removal tool set for stereo installer and DIY to remove a wide variety of vehicle's radios and stereos.
- applications:
Ford / VW / Audi / Grundig / Blaupunkt / BMW / Mercedes / Porsche / Opel / New Beckers / New Blaupunkt / New Sköda / Fiat Brava / Doppel kuge linbus / Kenwood 2002 / Kenwood II / Sony II ab 2002 / Kenwood III ab 2002/ab 2002 / Pioneer / JVC / Sony Ibis 2001 / Kenwood Ibis 1998 / Panasonic / Kenwood New / Clarion- New / Clarion-Alt / Panasonic 2006 / Sony IDIC 2005.



ST-25092

STEERING WHEEL LEVEL

- the steering wheel level is a sturdy and simple tool used to assure a level steering wheel during a front-end alignment procedure.
- the tool easily attached to the steering wheel at the beginning of the alignment procedure.
- it is spring-loaded for automatic centering and self-retaining.
- suitable for inside diameter of steering wheel from 154~355mmL.



ST-22035

SINGLE SUCTION CUP

- this pliable rubber suction cup creates enough suction to move an 40 kgs object, pull a dent out of your fender or pick up a large piece of plate glass.
- features include a durable high-impact nylon body and a squeeze release on the handle for added convenience.
- this durable suction cup is perfect for the home garage and auto shop alike.
- cup dia.: ø115mm.
 - loading capacity: 40 kgs.



ST-22036

3PCS - DOUBLE SUCTION CUP SET

- each suction cup set contents two suction cups and one ratchet tie down.
- the most helpful tool in moving, use suction cup to move or install object / materials so easy that can operate one person.
- unique design of adjustable suction cup to increase the adhesive function.
- application for mobile, stone, glass industry, flat window, windshield, glass, marble, granite, plastic, metal, tiles, decorative surfaces...
- ratchet tie-down: 1" x 360 cmL.
- cup dia.: ø115mm.
 - loading capacity: 160 kgs.



ST-22014

14PCS - WINDSCREEN REMOVING TOOL KIT

- this is a master kit for cutting the vinyl adhesive compound and urethane around the windshield and auto glass.
- contents:

3pc-pinch weld scraper: 3/4" / 5/8" & 1/2" wide.	2pc-wire gripping handle.
1pc-24" weather strip cutting knife.	1pc-72 feet triangle wire.
1pc-windshield molding release tool.	1pc-wire feeder tool.
1pc-12" weather strip cutting knife.	1pc-trim pad remover.
1pc-wide pinch weld scraper.	1pc-hex. head wrench.
1pc-windshield removal wrench.	



ST-22078

9PCS - WINDSCREEN REMOVING TOOL KIT

- this is a master kit for cutting the vinyl adhesive compound and urethane around the windshield and auto glass.
- contents:

1pc-windscreen removal tool cuts the adhesive around the screen.	
1pc-wire feeder tool designed for easy and flexible insertion of wire through polyurethane, allowing speedy removal of bonded windscreen.	
1pc-double direction moulding release tool.	
1pc-braided wire (3 strand).	1pc-trim pad remover.
2pc-wire gripping handles.	2pc-cold knife blade.



ST-22039

4PCS - WINDSCREEN REMOVING TOOL SET

- useful for removing the windshield of most vehicles.
- complete tool kit for the removal of bonded and rubberized screen.
- reinforced composite handle with heat treated carbon shaft.
- contents:

1pc-stainless steel wire roll 0.6 x 0.6mm x 50mL. (ST-22039A)		
1pc-wire T-handle.	1pc-wire needle.	1pc-wire guide.



ST-22041

4PCS - WINDSCREEN REMOVING TOOL SET

- useful for removing the windshield of most cars.
- complete tool kit for the removal of bonded and rubberized screen.
- reinforced composite handle with heat treated carbon shaft.
- contents:

1pc-hi-carbon steel wire roll ø0.7mm x 50mL. (ST-22041A)		
1pc-wire T-handle.	1pc-wire needle.	1pc-wire guide.



ST-22039A

STAINLESS STEEL WIRE ROLL

- wire material: stainless steel.
- square wire: 0.6mm x 0.6mm.
- wire length: 50mL.



ST-22041A

HI-CARBON STEEL WIRE ROLL

- wire material: hi-carbon steel.
- braided wire: \varnothing 0.7mm.
- wire length: 50mL.



ST-22039B

WINDSCREEN WIRE GUIDE

- the wire guide can prevent damaging the dashboard, interior trims or the painted body of the vehicle.
- knurled head screw for secure fastening of the wire without use of tools.
- tool with reinforced composite handle.
- total length: 330mmL.



ST-22039C

WINDSCREEN WIRE T-HANDLE

- handle material: aluminum.
- guide material: steel.
- handle: 100mmL.
- guide length: 48mmL.



ST-22039D

WINDSCREEN WIRE NEEDLE

- handle material: aluminum.
- needle material: steel.
- handle : 50mmL.
- needle length: 100mmL.



ST-22026

WINDSCREEN REMOVING TOOL

- useful for removing the windshield of most vehicle.
- steel cable aluminum pull handle for ease work.
- cut the buttress adhesive caulking compound around windows with special design tempered steel blade.
- replaceable tempered steel cutting blades can be re-sharpened.



ST-22079

INSTALL CHANNEL - TYPE MOULDINGS TOOL

- universal mouldings are not difficult to install on the glass, but with the proper tool, you can save a few minutes that can add up at the end of the day.
- the tool has a nylon roller that is pulled against the moulding.
- this action seats the butyl against the glass so the moulding will stay in place.
- It has a clear acrylic roller attachment that lets you see through the tool and make sure you are seating the rubber properly.



ST-22099

WINDSCREEN BELT MOLDING REMOVER

- slide the tool downward between the window exterior and the door.
- when the tool channel is below the belt molding, push or pull the tool upward.
- the tool quickly removes the belt molding without damage to the window or the molding.
- quickly removes all window belt moldings.



ST-22063

WINDSCREEN BELT MOLDING REMOVER

- quickly and easily remove window belt moldings w/out damaging the glass, connection point or molding.
- slim design for tight space.
- angled design for easy access.
- trim tool open end: 6mm (large side).
- trim tool open end: 3.5mm (small side).



ST-22103

WINDSCREEN WIPER-ARM REMOVER TOOL

- easily removes wiper arms without damage to car finish.
- makes wiper arm removal and replacement an easy work.



ST-24673

SHORT-HANDLE RAZOR SCRAPER

- short handle razor scraper, suitable for scraping gaskets and also for removing labels, stickers and overspray from car windows.
- single edge blade.
- razor blade material: K5.
- overall length: 110mmL.



ST-24674

SHORT-HANDLE RAZOR SCRAPER

- short handle razor scraper, suitable for scraping gaskets and also for removing labels, stickers and overspray from car windows.
- single edge blade.
- tool come with razor blade safety cover.
- razor blade material: K5.
- overall length: 165mmL.



ST-24675

LONGER-HANDLE RAZOR SCRAPER

- long-handle razor scraper, suitable for scraping gaskets and also for removing labels, stickers and overspray from car windows.
- safe storage of spare blades in handle.
- supplied with total 3pc-razor blades.
- single edge blade.
- razor blade material: K5.
- overall length: 280mmL.



ST-24676

10PCS - RAZOR SCRAPER BLADE SET

- 10pcs blades storage in the safety cartridge.
- single edge blade.
- razor blade material: K5.



ST-22093

4PCS - PROFESSIONAL DASHBOARD PROTECTIVE PANEL SET

- ideal for protecting the dashboard, interior trim and roof lining from damage when removing windscreen.
- each with two protective panels with straight and slightly angled front edges.
- contents: 1pc - 205 x 270mm straighter front edge.
- 1pc - 205 x 270mm bent front edge.
- 1pc - 305 x 450mm straighter from edge.
- 1pc - 305 x 450mm bent front edge.



ST-22047

WINDSCREEN WIPER-ARM REMOVER TOOL

- this wiper arm remover tool is the idea tool to remove stuck on windscreen wiper arms.
- avoid to damage the vehicle bodywork or wiper assembly.
- the design allows the tool to be fastened securely to the wiper arm before commencing the pull.
- the "U" shape ensures a perfect hold, pulling the wiper arm squarely off every time.



ST-22051

16PCS - UNIVERSAL WINDSCREEN WIPER-ARM PULLER KIT

- this set designed to remove bolted windscreen wiper arm, especially for those which have become rusted or corroded onto the drive-shaft.
- contents:

1pc-drive.	1pc-hollow-cap.	2pc-special-legs.
1pc-puller.	1pc- spindle-cap.	8pc-grippers.
1pc-spindle-exten.	1pc-sliding hammer.	
- applications:
Audi / Alfa Romeo / BMW / Chrysler-Jeep / Citroën / Chevrolet- Daewoo / Daihatsu / Fiat / Ford / Honda / Saab / Hyundai / Jaguar / Land Rover / Opel Mazda / Kia / MG / Mercedes / Mitsubishi / Rover / Nissan / Peugeot / VW / Porsche / Renault / Seat / Sköda / Smart / Toyota / Volvo / Suzuki.



ST-22069

5PCS - WINDSCREEN WIPER-ARM REMOVER TOOL SET

- remove wiper arms in an energy-saving manner.
- universal application for both front and rear wiper arms.
- extractor puller is specially designed for confined areas as the legs can be inserted from different angles.
- contents:
4pc-cup pullers
1pc-extractor.
- applications:
VW Polo, Lupo / Ford Galaxy, Alhambra / Mercedes A-class, B-class / BMW 5er model, E 39 bis Baujahr 05, 7sr model, E 38 bis baujahr 05 / Honda Jazz, CRV, FRV, accord, Turnier / Audi A3, A4, A5, A6, Q7 and other SUVs / Opel Astra G / Zaphira B / Corsa C / Vectra C.



ST-22091

3PCS - RAIN AND LIGHT SENSOR REMOVAL TOOL SET

- simply remove the sensor by warming the outside of the windscreen.
- removal tools for rain and light sensors for 90% of vehicles on the market.
- remove the adhesive with the selected tool using sideways pressure.
- three assorted sizes.
- applications:
Chrysler / Jeep / Mazda / Mercedes / BMW.....



ST-22092

2 IN 1 WINDSHIELD WASHER NOZZLE AND JET CLEANING TOOL

- this windshield washer nozzle clean tool features 2 ends, can be used to clean the washer jet and adjust position of jet.
- the windshield washer jet tool is comfortable to use. there are caps to protect the needles, and the surface is designed with grooves to make it non-slip.
- mainly made of copper, the washer nozzle tool is strong and tough, not easy to be worn out.



ST-22015

6PCS - HAND PUMP WITH INFLATABLE PAD SET

- this set allows the easy, problem-free and precise positioning, fixing and dismantling of body parts, interior trim, etc...
- the different shape of the 5 inflatable pad allows their application in the most different places and operating range.
- contents:
1pc-inflatable hand pump: \varnothing 40mm x 460mmL.
5pc-inflatable pad: 160x160, 190x55, 19x35, 325x120, 420x140mm.



ST-22037

2PCS - MINI SUCTION LIFTER SET

- ideal for small dent under 60mm in diameter.
- operate by closing the two handles together.
- require surface area to grip to.
- durable hi-impact nylon body.
- quick release handle.
- lift sheet metal with a smooth surface.
- cup size: ø60mm / each.
- loading capacity: 12 kgs. / each.



ST-22084

2PCS - MINI SUCTION LIFTER SET

- rubber gripper prevents to damage the surface.
- designed for handling glass, tile, plastic, metal sheet and other non-porous materials.
- cup size ø85mm can be much-easier to pick-up the vehicles' head and tail light cover.
- loading capacity: 5.0 kgs. / each.



ST-22042

MINI PISTOL SUCTION LIFTER

- despite it's small dimension, it has an optimal seal, safety to support up to 15 kgs.
- created for the disassembly of lamps, tail lights, rearview mirror, lateral glass.
- cup size: ø70mm.
- loading capacity: 15 kgs.



ST-22064

MINI BULB REMOVER / INSTALLER PLIER

- bulb plier suitable for bayonet, screw and wedge designs.
- for removing miniature style bulb fitted to vehicle, boat, plane, arcade game, vending machine and a multitude of electronic device.
- cup type ends grip bulb and electronic component securely.
- great tool for those hard to reach bulb location.



ST-22066

2PCS - LIGHT COVER REMOVAL TOOL SET

- easily remove front and tail light covers without creating crack.
- universal application for light covers with clip, but not for those fixed with screws and nuts.
- slip-resistant handle provides secure gripping.
- plastic probes avoid creating scrape on light cover surface.



ST-22105

CAR HEADLIGHT REPAIR PLIER TOOL

- this tool designed for trim clip removal pliers, door panel fascia sash upholstery remover and other essential tools for car headlight repair.
- not just for headlight repair, this tool can also be used for other car repair and maintenance tasks.
- easy to use: designed for both professionals and DIY enthusiasts, this tool is user-friendly and makes headlight repair a breeze.



ST-22086

6/12/24V. CAR LIGHT TESTER CHECK

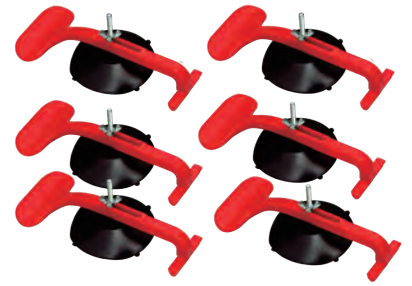
- for use on automotive fuse blocks, marine fuse blocks, light socket and trailer wiring.
- bright indicator bulb.
- durable construction.
- pointed probe for piercing wires.



ST-22038

6PCS - MINI SUCTION CLAMP SET

- secure the panel during preparation stage or while waiting for adhesive to set.
- non-marking, composite construction with adjustable reach and clamp.
- do not need to fix with hand for a long time and have the effect of stable fixation and adherence.
- cup size: $\varnothing 85\text{mm}$ / each.
- loading capacity: 10 kgs. / each.



ST-22081

3PCS - GAP GAUGE TOOL SET

- for correct body / interior alignment.
- original dimension can be determined in advance.
- gap to be set from 1mm ~ 10mm.
- measuring capacity from 0.5mm ~ 11.5mm.



ST-22067

CONTOUR GAUGE

- it helps to make sure the left and right sides match when repairing wheel arch profiles, bodywork contours, or forming your own panels.
- many nylon blades assure faithful reproduction of even the finest details.
- there are two magnets attached to the gauge, and it makes the working more easily on a magnetic reference plane.
- overall length: 125mmL.



ST-22068

CONTOUR GAUGE

- it helps to make sure the left and right sides match when repairing wheel arch profiles, bodywork contours, or forming your own panels.
- many nylon blades assure faithful reproduction of even the finest details.
- there are two magnets attached to the gauge, and it makes the working more easily on a magnetic reference plane.
- overall length: 250mmL.



ST-22085A

CAR PAINT MASKING TAPE SOFT EDGE DISPENSER

- this tape dispenser automatically folds a soft edge when you pull the tape.
- this is so useful when you want to paint your car nicely.
- base has grooves for fixing on a wall or working table.
- replacement blades is included inside the holder.
- holder suitable for 19mm.
- masking tapes with an inner core $\varnothing 76\text{mm}$.



ST-22085B

CAR PAINT MASKING TAPE SOFT EDGE DISPENSER

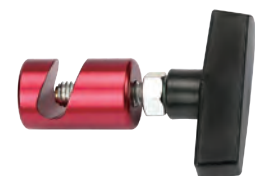
- this tape dispenser automatically folds a soft edge when you pull the tape.
- this is so useful when you want to paint your car nicely.
- base has grooves for fixing on a wall or working table.
- replacement blades is included inside the holder.
- holder suitable for 24 ~ 25mm.
- masking tapes with an inner core $\varnothing 76\text{mm}$.



ST-22030

UNIVERSAL LIFT SUPPORT CLAMP

- hold gas charged lift supports found on hood, tailgate, hatchback and trunk.
- securely holds weak lift supports in the extended position to allow access to the engine compartment or luggage area.
- aluminum body prevents damaging to the lift support.
- jaw capacity: 10.20mm.



ST-22080

STEPPED LEVER WEDGE

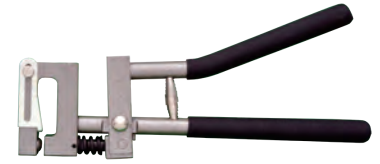
- designed to assist alignment of panels and glass.
- steps in the tip to help gauge consistent spacing when resetting panels or glass.
- manufactured from POM material which is rigid and non-marking.
- won't damage painted or glass surfaces.



ST-28014

HAND PUNCH TOOL

- this hand punch tool can crimp panel edges for excellent weld repair.
- with this tool in place, you and your crew will be able to achieve the best looking and perfectly fitting replacement panels, even if they are big and flat, without any warping.
- capacity: ø5mm x deep throat 40mm for plug welds.



ST-28015

HAND FLANGE TOOL

- this flange tool can crimp panel at seam for superior weld repair.
- with this tool in place, you and your crew will be able to achieve the best looking and perfectly fitting replacement panels, even if they are big and flat, without any warping.
- capacity: 1.20mm (t.)



ST-28016

3-EDGE DURABLE PAINT SCRAPER

- with this paint scraper can remove paint, varnish, rust and even glue.
- it is suitable for all surfaces, like wood, metal and concrete.
- the scraper comes with 3-edge carbide blade, which is very durable, if it is dull, it can be reversed.
- the carbide blades hold 50 times longer than conventional steel blades and does not have to be sharpened.



ST-22098

4PCS - DOOR HINGE ADJUSTER SET

- for easy and clean realignment of doors on passenger cars and commercial vehicles (height adjustment) as well as tailgates.
- hatchback vehicles (adjustment of door gap-width).
- overall length: 700mm.
- contents:
 - 1pc-aligning rod x 710mmL.
 - 1pc-pin x ø9.3mm.
 - 1pc-pin x ø12mm.
 - 1pc-pin x ø19mm.



ST-22076

5PCS - ALUMINUM BODY HAMMER AND DOLLY REPAIR SET

- aluminum hammers help to prevent crossing contamination / provide more forgiving strike on aluminum bodied vehicles.
- rubber dollies provide a lighter option when accessing a tight, confined location behind an aluminum panel.
- contents:
 - 1pc-aluminum pein / finishing hammer (vertical-large).
 - 1pc-aluminum bumping hammer.
 - 1pc-rubber toe dolly.
 - 1pc-rubber general purpose dolly.
 - 1pc-rubber heel dolly.



ST-22077

9PCS - ALUMINUM BODY HAMMER REPAIR SET

- aluminum hammers prevent crossing contamination on aluminum bodies vehicles.
- aluminum hammers provide more forgiving strike than other hammers, avoiding further damage on aluminum panels.
- contents:
 - 1pc-aluminum round large head hammer.
 - 1pc-aluminum pein / finishing hammer (horizontal large).
 - 1pc-aluminum pein / finishing hammer (vertical large).
 - 1pc-aluminum pein / finishing hammer (horizontal medium).
 - 1pc-aluminum pein / finishing hammer (vertical medium).
 - 1pc-aluminum pein / finishing hammer (horizontal small rubber cap).
 - 1pc-aluminum pein / finishing hammer (vertical small cap).
 - 1pc-aluminum bumping hammer.
 - 1pc-aluminum pick / finishing hammer.



ST-22010

12PCS - DENT PULLER KIT

- quick assembly for applying hook-up on fender, bumper end, rocker panel, aligning door and door edge, hood and hood hinge, trunk and trunk hinges, headlights and more applications.
- contents: 2pc-pipe dia. 22.5 x 590mmL. / 22.5 x 200mmL.
 - 1pc-two hole pipe dia. 29 x 40mm.
 - 1pc-hammer 4.5kg cast iron.
 - 1pc-chain and hook.
 - 5pc-plates 6 x 170mm / 6 x 120mm / 3 x 100mm / 6 x 200mm / 6 x 200mm.
 - 1pc-hex nut 29mm.
 - 1pc-dent puller.



ST-22082

5PCS - PNEUMATIC DENT PULLER SET

- sliding hammer to ease dent without damaging to the paint surface.
- get the power and versatility of a slide hammer without marring the finish by welding or drilling body panels.
- pneumatic control creates a super-strong vacuum making it easy to pull most dents out of panels.
- instantly removes most dents without damaging paint.
- requires air compressor - no drilling, welding or sanding required.
- contents: 3pc-suction pad \varnothing 75 / 100 and 125mm.
 - 1pc-pneumatic vacuum sliding hammer
 - 1pc-hook puller \varnothing 16mm.



ST-22106

18PCS - PNEUMATIC AUTO BODY FRAME PUSH AND PULL TOOL SET

- set for pushing and pulling auto body frames back to the original place with a pneumatic tool.
- pneumatic tool features 5.25 tons of force, no hydraulic fluid is required and no unsafe and unpleasant leaks will occur.
- provided with a remote control with a 2 meter extension hose for extra safety.
- included attachments for various auto body repair tasks, such as pushing / spreading and pulling / pressing.



ST-22102

9PCS - BODY PRY BAR AND WEDGE TOOL SET

- designed to remove and install tyre, and used for automotive body repair.
- these pry bars are manufactured from special steel and are particularly suitable for dismantling stubborn component, holding component in required position, positioning component and spreading clamp-fixture.
- contents:
 - 5pc-pry bar: 300/450/570/730/890mmL.
 - 2pc-S type pry bar: 405/470mmL.
 - 1pc-L type body wedge: 130 x 263mmL.
 - 1pc-body wedge: 140 x 263mmL.



ST-22005

13PCS - BODY PRY BAR AND WEDGE TOOL SET

- designed to remove and install tyre, and used for automotive body repair.
- these pry bars are manufactured from special steel and are particularly suitable for dismantling stubborn component, holding component in required position, positioning component and spreading clamp-fixture.
- contents: 1pc-L type body wedge: 130 x 263mmL.
5pc-pry bar: 300/450/570/740/900mmL. 2pc-S type pry bar: 410/490mmL.
5pc-body wedge: 85x113mmL/45x111mmL/52x112mmL/140x263mmL/71x111mmL.



ST-22049

6PCS - VELCRO SANDING BLOCK STARTER SET

- this sanding block starter set is supplied with a very convenient grip block and five interchangeable contour blocks fitted with velcro attachment and therefore ideal for use with velcro sanding discs.
- the kit is suitable for the final sanding finish.
- a car has many edges where to get tricky when it is normal sanding blocks. this 6pcs sanding block set has been developed in order to facilitate sanding, for example, profile edges.
- contents:
2pc-curve block: 85x150mmL. 1pc-flat block: 80x150mmL.
1pc-gap block: 190x130mmL. 1pc-half-moon block:120x150mmL.
1pc-half-moon block: 105x150mmL.



ST-22013A

W-TYPE AXIAL LOCKING GRIP PLIER

- W-type provides four spot welds continued and aligned without tool removal.
- for use on door openings, side panels, lap joints and folded sheet metals.
- nickel plated finish and electro deposited-coating.
- auto-body, welding, garage repair work.
- jaw-adjustment: 0 ~ 10mm.
- tool length: 200mm.



ST-22013B

JJ-TYPE AXIAL LOCKING GRIP PLIER

- JJ-type clamps two flanged laps, "Z-shapped" profiles or adjacent point.
- plug welding between the jaws.
- for use on center rear-end parts, side panels and folded sheet metals.
- nickel plated finish and electro deposited-coating.
- auto-body, welding, garage repair work.
- jaw-adjustment: 0 ~ 6.5mm. ● tool length: 230mm.



ST-22013C

LL-TYPE AXIAL LOCKING GRIP PLIER

- LL-type "U-shapped" profiles or adjacent points.
- enables to work in tight spots even through holes.
- plug welding between the jaws.
- for use on door sills, wheel arches, side panels and folded sheet metals.
- nickel plated finish and electro deposited-coating.
- auto-body, welding, garage repair work.
- jaw-adjustment: 0 ~ 7.0mm. ● tool length: 213mm.



ST-22013D

J-TYPE AXIAL LOCKING GRIP PLIER

- J-type clamps "U-shapped" profiles or adjacent points.
- enables to work in tight spots even through holes.
- for use on center rear-end parts, rear side panels and folded sheet metals.
- nickel plated finish and electro deposited-coating.
- auto-body, welding, garage repair work.
- jaw-adjustment: 0 ~ 10mm. ● tool length: 210mm.



ST-22013E

L-TYPE AXIAL LOCKING GRIP PLIER

- L-type clamps two lap joints.
- especially suitable for work in narrow areas.
- for use on door openings, lower center rear-end parts, wheel arches and problem areas.
- nickel plated finish and electro deposited-coating.
- auto-body, welding, garage repair work.
- jaw-adjustment: 0 ~ 14.5mm.
- tool length: 195mm.



ST-22013F

T-TYPE AXIAL LOCKING GRIP PLIER

- T-type clamps two sheet metal pieces of equal thickness at 90 degree.
- enable easily work by one operator efficiently.
- nickel plated finish and electro deposited-coating.
- auto-body, welding, garage repair work.
- jaw-adjustment: 0 ~ 8.0mm.
- tool length: 194mm.



CURVE JAW LOCKING PLIER

ST-28001A	overall length: 149mm.	jaw adjustment: 0 ~ 25mm.
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ST-28001B	overall length: 185mm.	jaw adjustment: 0 ~ 38mm.
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ST-28001C	overall length: 225mm.	jaw adjustment: 0 ~ 48mm.
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- these locking pliers have nickel-plated finish that resists rust and corrosion.
- they have versatile curved jaw with angled tooth pattern for better grip also features integral wire cutter.



LONG-NOSE LOCKING PLIER

ST-28004A	overall length: 170mm.	jaw adjustment: 0 ~ 42mm.
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ST-28004B	overall length: 215mm.	jaw adjustment: 0 ~ 43mm.
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- these locking pliers have nickel-plated finish that resists rust and corrosion.
- they have versatile curved jaw with angled tooth pattern for better grip also features integral wire cutter.



ST-28006

PINCH-OFF LOCKING PLIER

- the hose pinch plier feature rounded off jaw edges to prevent internal damage.
- suitable for brake, coolant, fuel and vacuum hoses.
- overall length: 285mm.
- jaw adjustment: 0 ~ 100mm.



C-CLAMP LOCKING PLIER

ST-28007A	overall length: 170mm.	jaw adjustment: 0 ~ 40mm.
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ST-28007B	overall length: 280mm.	jaw adjustment: 0 ~ 90mm.
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ST-28007C	overall length: 445mm.	jaw adjustment: 0 ~ 160mm.
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ST-28007D	overall length: 605mm.	jaw adjustment: 0 ~ 230mm.
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- forward release lever allows for smooth and ease unlocking.



SHEET METAL LOCKING PLIER

ST-28009A	overall length: 200mm.	jaw adjustment: 0 ~ 30mm.
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ST-28009B	overall length: 250mm.	jaw adjustment: 0 ~ 50mm.
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- use to crimp, bend, form, or stretch work pieces, quick release trigger rapidly unlocks tool.



WELDING CLAMP LOCKING PLIER

ST-28010A	overall length: 225mm.	jaw adjustment: 0 ~ 60mm.
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ST-28010B	overall length: 265mm.	jaw adjustment: 0 ~ 85mm.
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- U-shaped jaws provide enhanced visibility and more working space.
- for use in welding applications or for holding awkward shapes in place.



ST-22058

SPECIAL BUMPING Mallet

- mallet with special rubber filler that is elastic in nature, but hard when in use.
- for pushing in and fixing vehicle door weatherstrip, fender flare, and bumper.
- avoid scratching and damaging bumper, panel, and car body in general.
- rubber body size: hexagon 75mm x 60mmH.



ST-22052

12PCS - BUMPER DRILL SET

- easy and professional punching of holes, according to the requirement for most of automobile manufacture.
- with the right cutter, a custom-fit hole is punched into the bumper.
- contents and applications:
 - ø18.2mm punch and mandrel: for usual models from BMW / VW.
 - ø24.0mm punch and mandrel: for usual models from Opel.
 - ø26.0mm punch and mandrel: for usual models from VW.
 - ø32.0mm punch and mandrel: for usual models from BMW.



ST-22095

8PCS - PDC BUMPER CUTTING TOOL SET

- cuts sensor holes cleanly without any distortion or warping.
- only on wrench needed to cut sensor holes.
- sharp-edge cutter won't dimple the bumper cover.
- contents:

1pc-ø17mm punch.	1pc-ø21mm punch.
1pc-ø18mm punch.	1pc-ø22mm punch.
1pc-ø19mm punch.	1pc-ø32mm punch.
1pc-ø20mm punch.	1pc-drill bit 5/16" x 117mmL.



ST-22053

A/C HOT STAPLER PLASTIC REPAIR SYSTEM SET

- new design hot plastic stapler lightweight.
- lugs on lighting housing and splits in plastic parts can be stapled together.
- handheld machine enables metal staple to be pressed into plastic quickly and simple process.
- power input: 100 ~ 240 Volt - 50 / 60 Hz.
- power output: max. to 20 watt.
- contents: 100pc-"V" nails ø0.6mm.
- vibration frequency: 8MHz.
- 100pc-"U" nails ø0.8mm.
- 100pc-"U" nails ø0.6mm.



ST-22083

GAS-POWERED SOLDERING IRON PLASTIC REPAIR KIT

- great for welding and repairing plastic parts or components, vehicle bumpers, broken headlight fixings, cracks, fractures and deep scratches.
- contents: 3pc-stainless steel mesh for reinforcement 100 x 60mm.
- 1pc-butane-powered soldering iron (plastic welding tip 9mm) with housing.
- 1pc-plastic welding tip 12mm.
- 1pc-iron rod.
- 1pc-copper brush.
- 1pc-screwdriver SL3.0 x 50mmL.
- 6pc-welding materials (PP).
- 6pc-welding materials (PE).
- 6pc-welding materials (PC).
- 6pc-welding materials (ABS).



ST-22088

RECHARGEABLE HOT STAPLER PLASTIC REPAIR SYSTEM SET

- new design hot plastic stapler lightweight.
- handheld machine enables metal staple to be pressed into plastic quickly and simple process.
- lugs on lighting housing and splits in plastic parts can be stapled together.
- power input: USB charging cord.
- power output: max. to 30 watt.
- contents: 2pc-stainless steel mesh for reinforcement 50 x 100mm.
- 50pc-"W" nails ø0.6mm.
- 10pc-welding materials (PP).
- 50pc-"W" nails ø0.8mm.
- 5pc-welding materials (PS).
- 5pc-welding materials (PE).
- 5pc-welding materials (ABS).



ST-21001

12 VOLT BATTERY SURGE PROTECTOR

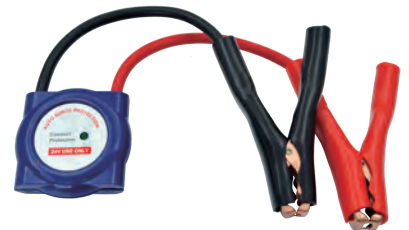
- this unit is designed to prevent damaging voltage spikes and surges reaching delicate vehicle's electronic system.
- clips across the battery terminals and permits working such as body welding without effecting or damaging electronic device system.
- time of answering: 10~12 sec.
- input voltage: DC 12 volt.
- reverse stand-off voltage: 15.30 Vrwm (V).
- breakdown voltage: 17.10 Vbr Min (V).
- breakdown voltage: 18.90 Vbr Max (V).
- maximum clamping voltage: 25.2 Vc (V).



ST-21002

24 VOLT BATTERY SURGE PROTECTOR

- this unit is designed to prevent damaging voltage spikes and surges reaching delicate vehicle's electronic system.
- clips across the battery terminals and permits working such as body welding without effecting or damaging electronic device system.
- time of answering: 10~12 sec.
- input voltage: DC 24 volt.
- reverse stand-off voltage: 30.80 Vrwm (V).
- breakdown voltage: 34.20 Vbr Min (V).
- breakdown voltage: 37.80 Vbr Max (V).
- maximum clamping voltage: 49.9 Vc (V).



ST-21003

12 / 24 VOLT BATTERY SURGE PROTECTOR

- this unit is designed to prevent damaging voltage spikes and surges reaching delicate vehicle's electronic system.
- clips across the battery terminals and permits working such as body welding without effecting or damaging electronic device system.
- time of answering: 10~12 sec.
- input voltage: DC 12/24 volt.
- reverse stand-off voltage: 36.80 Vrwm (V).
- breakdown voltage: 40.90 Vbr Min (V).
- breakdown voltage: 45.20 Vbr Max (V).
- maximum clamping voltage: 59.30 Vc (V).



ST-25073

UNIVERSAL BATTERY CARRIER

- designed to lift large size of battery.
- the steel handle and adjustable arm, have rubber pad, that are riveted and glued to each end to provide an exceptional grip.
- the carrier is built with a non-slip vinyl hand grip for superior support.
- capacity from 133 to 190mmL.



ST-25068

BATTERY TERMINAL AND WIPER PICK UP TOOL

- to work for battery terminal and windshield wiper etc
- the tights at terminal will be lifted off without damage the battery case or posts, because the sharp jaws are able to engage either below or on the side of terminal.
- travel: 100mmL.



ST-25072

12 VOLT BATTERY CHARGER

- this charger use microprocessor to monitor the charger process.
- therefore it is a smart charger with protection of reverse connection, over-voltage, over-current, short circuit, and over-charging.
- it has wide working temperature, and it has IP54 protection.
- input voltage: 100 ~ 240V.
- output voltage: 12 volt.
- charging voltage: 12 volt.
- charging current: 3.8A.
- battery capacity: 6 ~ 120Ah.



ST-25087

12V. VEHICLE BATTERY TESTER

- available range of cold cranking ampere: DIN 105~600
- 3-functions: battery test, engine starting voltage test and charging voltage test.
- available with sealed maintenance free battery, maintenance free battery, standard type battery, enhanced flooded cell battery and absorbent glass mat battery.
- resolution: 0.01V. / 1CCA.
- accuracy: +/- 005V.
- reverse polarity protection: < 20V. DC



ST-25094

12V. AND 24V. VEHICLE BATTERY TESTER

- this is a helpful tester for 12 volt and 24 volt vehicle battery.
- user is able to check the battery power level and the charging condition with various circumstances.
- it is also able to monitor alternator condition by very easy procedure.
- designed with reverse polarity protection.
- measurement voltage range: 6 ~ 30 volt DC.
- over voltage protection: maximum DC voltage 36 volt.



ST-25009

12V. BATTERY ALTERNATOR CHECKER

- easy to operate with LED light to show.
- battery charge situation.
- high or low output of alternator.



ST-25061

12V. DIGITAL BATTERY ANALYZER

- the analyzer can be hung on the wall or place standing on the table with back and side special hook design.
- covered with removable and washable grey soft case.
- stable quality, shaking-resistant and portable can be installed on different kinds of vehicle battery for testing.
- max. opening of clinchers: 360° of angle.
- based on sonar reflection principle, all the indexes of battery are analyzed by special alternating current signals which lead to very accurate testing result.



ST-25020

ANALOGUE MULTIMETER

- a reliable 20,000V DC multimeter with diode and fuse protection, mirror scale, dB reading and transistor checker.
- DCV: 0 - 0.1 - 0.5 - 2.5 - 10 - 50 - 250 - 1000 V.
- ACV: 0 - 10 - 50 - 250 - 1000 V.
- DCA: 0 - 50 uA - 2.5 mA - 0.25 A.



ST-25088

20A. CAR CURRENT TESTER

- this is a stable, low power consumption, and high accuracy 3 1/2 digits (2000 counts) leaking current meter for automobile.
- leaking current for automobile is generally as small as milliamps, which is hard to measure by clamp meter.
- by plug this meter with the fuse box, user is able to measure leaking current as small as 1 mA.
- refresh rate: 3-times per seconds.
- power: 1.5V. AAA battery x 2pcs.
- measure range: 0 ~ 20A.

auto range	accuracy	resolution
1999 mA.	2digits +/-0.5%	1 mA.
20 A.	2digits +/-0.5%	10 mA.



ST-25063

20A. AUTO CURRENT TESTER

- range: 0 ~ 20 A. / 0 ~ 48 Vdc.
- max. load: 20 A / 48 Vdc for max. 10 sec.
- accuracy: +2% reading + 2 digits.
- relative humidity: <70% operating, <80% storage.
- operating altitude: 2000 meters (maximum).
- operating temp.: 0°C ~ 50°C.
- storage temp.: -20°C ~ 60°C.



ST-25111

THE OPTIMAL AUTO CIRCUIT TESTER

- this is an equipment used to test the automotive electrical system within 12 ~ 24 volt.
- in order to save the testing time for the automotive electrical system, it is designed to test the system w/out re-connection between the vehicle battery and the testing component, and it contains the above function.
- testing the voltage of the circuit and the voltage reading will be indicated on the LCD display within 1/10th of a volt.
- 4-function:
 - measuring voltage range: 0~60 volt.
 - measuring rotational speed.
 - peak detection.
 - locate missing cylinder.



ST-25089

12V. / 24V. RELAY TESTER

- figure out the condition of the relay.
- speculating the problem in the vehicle.
- power supplied: 12V. / 24V. Vehicle battery.
- vehicle relay testing for 3 most popular kind of relays.
- suitable for 12V. / 24V. vehicle relay.
- health test for 4 and 5-pin electro-mechanical relays commonly found on modern vehicles.
- testing the resistance, contacts and consistency within each cycle.



ST-25022B

MEMORY BACK-UP

- this power backup offer backup power to the vehicle via OBD II connector while changing the battery.
- power backup work on all vehicle types, it also can protect the MIS polarity.



ST-25071

12V. AUTO BATTERY AND CHARGING SYSTEM ANALYZER

- auto battery analyzer checks battery, regulator and alternator.
- for all 12 volt system vehicle, with LED indicator that helps pinpoint problem for fast trouble shooting.



ST-25070A

AUTO CIRCUIT TESTER

- circuit tester with test lead for either passenger vehicle or truck.
- automotive voltage tester with range 3 ~ 48 VDC.
- tail with banana connector, additional crocodile clip and testing probe for testing connection.
- pierce through clip for cable < 4 mm.
- cable length 100 cm.



ST-25070B

AUTO CIRCUIT TESTER

- circuit tester with test lead for either passenger vehicle or truck.
- automotive voltage tester with range 3 ~ 48 VDC.
- tail with crocodile clip and testing probe for testing connection.
- pierce through clip for cable < 4mm.
- cable length 100cm.



ST-25049

6 - 12 - 24 VOLT AUTO CIRCUIT TESTER

- the most essential tool for troubleshooting automotive electrical system.
- make it easy to find out where current is present.
- super-sharp probe punctures wire insulation easily.
- long lead for convenience.
- cable length 120cm.



ST-25055

6 - 12 - 24 VOLT AUTO CIRCUIT TESTER

- use this tester to check all 6~24 volt circuit and accessories including light, starter, alternator, cooling and heating component, radio and relay.
- not recommend to use on computer, sensor or computer wiring.
- consult the service manual for circuit diagram and specific test procedure.
- spring cable length 365cm.



ST-25066

6 - 12 - 24 VOLT DIGITAL DISPLAY AUTO CIRCUIT TESTER

- digital display to read the accurate voltage value.
- available for 6 / 12 / 24 VDC system.
- LED indicator for power (red) and ground (green).
- stainless steel testing probe.
- voltage measurement from 5 ~ 28 VDC.
- small testing current < 10 mA.
- spring cable length 365mm.



ST-25074

6 - 12 - 24 - 48 VOLT DIGITAL DISPLAY AUTO CIRCUIT TESTER

- digital display to read the accurate voltage value.
- available for 6 / 12 / 24 and 48 VDC system.
- LED indicator for power (red) and ground (green).
- stainless steel testing probe.
- voltage measurement from 4 ~ 60 VDC.
- small testing current < 10 mA.
- spring cable length 365mm.



ST-25065

VEHICLE ACTUATOR TESTER

- this device is designed to test electronic component actuate by magnetic field or electronic magnetic field.
- devices like actuator, ignition coil, AC generator, indoor air blower, valve controller EGR (exhaust gas control), injector, spark plug, relay, and all effect sensor are such which can be tested.



ST-25048

BATTERY TESTER

- insert tester into cell of the battery.
- hold the tester vertically, squeeze fluid into tester.
- the number of balls floating indicates battery condition.
- return liquid to the same battery cell from which it was drawn.



ST-25056

BATTERY TESTER

- avoid dead batteries and helps to extend battery life.
- tests battery life hot or cold detects overcharge.
- tests all 6 / 12 / 24 volt system.



ST-25047

BATTERY HYDROMETER

- squeeze bulb and draw up enough liquid until float moves freely but do not touch rubber stopper at top barrel.
- the mark on the battery tester which is in line with the surface of liquid indicates insert rubber tip in cell of battery.
- hold instrument in vertical position.
- condition of battery thus:
RED - 1.100~1.205 battery cell is in discharged.
WHITE - 1.205~1.260 battery cell needs attention.
GREEN - 1.260~1.300 battery cell is OK.



ST-25093

BATTERY ACID TESTER

- for the quick and accurate testing of acidity in the battery fluid and the antifreeze content.
- can also be used for coolant and windscreen wiper fluid.
- adjustable eye piece with rubber viewing rest.
- with automatic temperature compensation (ATC).
- also suitable in ambient temperatures of less than 10 °C.
- high quality design made from aluminium.



ST-25076

MULTI-FUNCTION CRIMPING TOOL

- designed with wire stripping and wire cutting function.
- capacity of stripped insulating layer: $\varnothing 0.2 \sim 6.0\text{mm}$.
- capacity of wire cutting: $\varnothing 0.2 \sim 6.0\text{mm}$.



ST-25007

WIRE STRIPPER AND CUTTER

- designed with wire stripping and wire cutting function.
- capacity of stripped insulating layer: $\varnothing 9.5\text{mm}$.
- capacity of wire cutting:
 $\varnothing 0.2 / 0.3 / 0.4 / 0.5 / 0.6 / 0.8\text{mm}$.



ST-25008

WIRE STRIPPER AND CUTTER

- designed with wire stripping and wire cutting function.
- capacity of stripped insulating layer: $\varnothing 9.5 \text{ mm}$.
- capacity of wire cutting:
 $\varnothing 0.8 / 1.0 / 1.3 / 1.6 / 2.0 / 2.6\text{mm}$.



ST-25062

FAST CHECK WIRE-CLIP

- applicative wire diameter: 1.5mm ~ 4.5mm.
- voltage range: 0 V ~ 330 V.
- current load: max. 5 A.



ST-25067

13PCS - PROBE AND TEST ADAPTOR SET

- high quality testing and test accessories.
- for use in conjunction with test probe.
- bi color test leads for polarity indication.
- contents:
 - 2pc-male/female to female/male extension wire.
 - 1pc-insulator pierce through clip.
 - 2pc-polarity tester / stroboscope.
 - extra thin test probe.
 - flexible silicone cable.
 - 2pc-testing probe.
 - 2pc-alligator clip.
 - 4pc-testing needle.



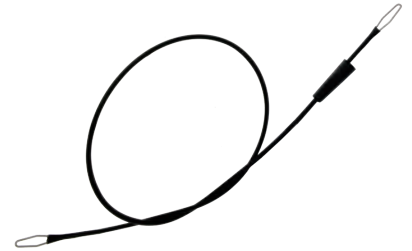
WIRE INSTALLATION TOOL

ST-25081A overall length: 730mm.

ST-25081B overall length: 1,000mm.

ST-25081C overall length: 1,500mm.

- designed for quick installation of wires for stereo systems, alarm system cellular phones, vacuum hoses and air shock supply lines.
- conical shaped collet provides secure wire retention when threading wires.
- will push or pull wires through openings.



ST-25118

ELECTRICAL CONNECTOR DISCONNECT PLIER

- quickly disconnects electrical connectors w/wo CPA (connector position assurance) found on mass air flow sensors, fuel injectors, ignition coils and other applications.
- to hard-to-reach electrical connectors without damage:
 - sharp tips - for better grip.
 - angled handle - for difficult access.
 - thin claw - for small tabs.
 - spring action - for easy to use.



ST-25079

12PCS - UNIVERSAL TERMINAL RELEASE TOOL SET

- easily to remove terminal from electrical connector.
- sturdy stainless steel tips.
- contents:
 - ejection tools for contact size \varnothing 1.5 or \varnothing 3.5mm.
 - ejection tools for contact size \varnothing 2.3mm.
 - cable extractor tool for plugs with one release channel \varnothing 2.8 and \varnothing 5.8mm.
 - cable extractor tool for micro-timer II, III contacts \varnothing 1.6mm.
 - cable extractor tool for maxi-power timer contact \varnothing 9.5mm.
 - cable extractor tool for pit-pod contacts
 - cable extractor tool for micro-timer I contact & ABS plug-in housing \varnothing 1.6mm.
 - cable extractor tool for plugs with two release channels \varnothing 2.8 and \varnothing 5.8mm.
- applications: BMW / Daimler Chrysler / Fiat / Ford / Man / Opel / Renault / Psa / Saab / VW / Audi / Porsche / Seat / Psa / Mazda / Sköda,



ST-25080

14PCS - TRUCK TERMINAL RELEASE TOOL SET

- easily to remove terminal from electrical connector.
- sturdy stainless steel tips.
- contents:
 - ejection tools for contact size \varnothing 1.5 or \varnothing 3.5mm.
 - Cable extractor tool for plugs with two release channels \varnothing 2.8 and \varnothing 5.8mm.
 - cable extractor tool for plugs with one release channels \varnothing 2.8 and \varnothing 5.8mm.
 - ejection tools for contact size \varnothing 4.0mm.
 - assembly sleeve (ABS)
 - for flat plug-in sockets with single latch (flat plug without box)
 - for flat plug-in sockets, VKR box contacts
 - for flat plug-in sockets, MKR/MKS contacts.
- applications: BMW / Daimler Chrysler / Fiat / Ford / Opel / Psa / Renault / Saab / VW / Audi / Porsche / Sköda / Scania / Volvo / Iveco.



ST-25082

3PCS - CONNECTOR AND TERMINAL REMOVAL TOOL KIT

- these tools are designed specifically for removing connectors and releasing terminals of the VAG vehicles.
- removing most of VW/Audi/Porsche push and pull style connectors/MAF
- removing MAF sensor, coil pack, headlight, fog light, level sensor/MAP sensor..
- releasing terminals of VW/Audi/Porsche junior and micro connectors.



ST-25078

5PCS - TERMINAL RELEASE TOOL SET

- easily to remove terminal from electrical connector.
- large, high polished chrome handle with knurled finish.
- sturdy stainless steel tips.
- to fit the most vehicles Asian.
- contents: 1pc-single face blade tool: 1.0mm (w.) x 1.0mm (t.) tip.
1pc-dual face blade tool: 1.5mm (w.) x 1.0mm (t.) tip.
1pc-single face blade tool: 1.8mm (w.) x 1.0mm (t.) tip.
1pc-ladder blade tool: 1.5mm (w.) x 0.3mm (t.) tip.
1pc-knife blade tool: 2.0mm (w.) x 0.8mm (t.) tip.
- applications: Acura / Honda / Toyota / Mitsubishi / Lexus / Nissan / Infiniti.



ST-25095

3PCS - ELECTRICAL CONNECTOR CLEANING SET

- designed to remove corrosion from electrical connectors, terminals, and contacts with diamond coating for effective cleaning.
- blade length: 30mm.
- total length 142mm.
- contents: 1pc-round blade \varnothing 1mm.
2pc-flat blade 2mm / 4mm.



ST-25096

3PCS - ELECTRICAL FUSE TERMINAL CLEANING SET

- designed to remove corrosion from fuse terminals with diamond coating for effective cleaning and ensuring a good connection.
- blade thickness: 0.5 mm.
- blade length: 30mm.
- total length 142mm.
- blade width: 8.0mm / 10.4mm / 14.0mm.



ST-25083

50 WATT CORDLESS HEATING TOOL

- powerful soldering iron for general industrial / automotive applications.
- cordless soldering, without the need for butane refills.
- fast 10 second start up / 600°C max temperature with 60 seconds.
- one charge provides 40 minutes continuous runtime.
- supplied with cone / chisel tips. optional tips available separately.
- simple USB recharging (charging time 3 hours).
- 2,000 mAh lithium-ion battery.



ST-25116

10PCS - GAS INDEX SOLDERING IRON KIT

- professional 3-in-1 soldering iron / torch / hot blower with 7 accessories (chisel tip, anvil tip, flat tip, deflector, lead free soldering wire, cleansing sponge, hot knife blade and base).
- index head for 3-different angles and can be operated in each angle while work, for different applications.
- 90 ~ 150 watt equivalent electrical power.
- fuel type: butane (normal lighter gas).
- burning time: 45 ~ 60 min.
- gas volume: 30mL.
- flame temperature: 1,300 °C.
- soldering temperature: 450 °C.
- hot air temperature: 600 °C.



ST-23060

HOSE CLAMP PLIER

- swivel jaw are slotted for positive holding of large or small clamp at any angle.
- ratchet action holds jaw closed in 5 different positions.
- suitable for all automotive and appliance spring wire hose clamp.



ST-23063

LONG REACH FLEXIBLE HOSE CLAMP PLIER

- convenient for working hidden area and long distance.
- no damage to the clutches and hoses due to proper operation of quick-release fasteners.
- bowden cable locking element facilitates precise adjustment of the range.
- suitable for removal of hose clamp on fuel, oil and water hose.
- hose clamp with flexible cable 600mmL.



ST-23028

9PCS - HOSE CLAMP PLIER KIT

- including different types of hose clamp plier.
- comprehensive set features h. d. construction w/ratchet lock mechanism on most pliers.
- soft-grip handle for comfortable.
- suitable for removal of hose clamp on fuel, oil and water hose.
- contents:

1pc-swivel jaw hose clamp plier.	1pc-hose remove plier.
1pc-swivel jaw (-) hose clamp plier.	1pc-2 way screw-driver.
1pc-swivel jaw (+) hose clamp plier.	1pc-hose clamp plier.
1pc-spare part for flexible hose clamp.	1pc-flat band hose clamp plier.
1pc-angled flat band hose clamp plier.	



ST-23038

4PCS - COOLANT FILLING TOOL SET

- quick and easy way to refill coolant during cooling system bleeding process.
- quick, efficient and no mess.
- applications:
 - black- Japanese vehicles / American vehicles.
 - red - Mitsubishi / Ford / Nissan / Mazda.
 - blue - Honda / Toyota / Suzuki.



ST-23076

13PCS - COOLANT REFILLING FUNNEL WITH EXTENSION PIPES SET

- for anti-spill coolant refilling and air bleeding.
- includes 4 extension pipes for confined space or tricky angles.
- transparent lower chamber displays the amount of air bubble remaining in the radiator.
- includes adaptors with nylon covers to reduce heat transfer resulted from air bleeding.
- special design of connector to adaptors provides anti-spill feature.
- funnel capacity:
 - 1,500 ml. large capacity suitable for working on truck and h. d. vehicles.



ST-23092

8PCS - COOLANT REFILLING FUNNEL SET

- for anti-spill coolant refilling and air bleeding.
- transparent lower chamber displays the amount of air bubble remaining in the radiator.
- included 3 steel connector caps mainly for american and japanese vehicles, and one universal adaptors with 3 rubber rings for european cars.
- with enlarged capacity is suitable for SUV, light trucks and h. d. vehicles.
- special connector design to adaptors provides an anti-spill feature.
- funnel capacity:
 - 1,500 ml. large capacity suitable for working on truck and h. d. vehicles.



ST-23101

5PCS - UNIVERSAL RADIATOR PRESSURE TESTER KIT

- the adaptor's expandable rubber body allow user to connect to most automotive cooling systems without the need for additional costly adaptors.
- user can perform pressure testing and cooling system diagnostics.
- 0~35 psi, colour-coded gauge, and pressure release valve.
- adaptor size:
16.5 ~ 37mm. 38 ~ 50mm. 28 ~ 42mm. 46 ~ 60mm.



ST-23046

7PCS - RADIATOR PRESSURE TESTER KIT

- remove the original radiator cap while the engine is cold.
- choose a proper radiator cap and install it on to radiator opening.
- connect the pump to the test cap through the coupling at the hose end.
- manual pump with quick joint and release valve.
- connector R123 / R124 (black color), R123 / R125 (blue color).
- applications:
R123 - suitable for Mercedes/GM (Buick)/Jeep.
R124 - suitable for Peugeot / Subaru / Chrysler / Acura / GM Nova, Spectrum. Sprint / Mitsubishi / Nissan / Mazda / Toyota / Infiniti / Geo / Suzuki / Isuzu / Ford.
R125 - suitable for Honda/Toyota/Suzuki/Mitsubishi/Chrysler/Honda Acura.



ST-23102

10PCS - UNIVERSAL RADIATOR CAP PRESSURE TESTER KIT

- pressure tester to check the gasket of radiator cap.
- instantly detect leakage of cooling system.
- multi adaptor included which apply for most vehicles in the market.
- hand pump with colour-coded gauge.
- 0~35 psi, colour-coded gauge, and pressure release valve.
- applications:
no. 1 (blue): Toyota/Honda. no. 3 (black): Nippon Hino.
no. 2 (orange): Mitsubishi/Ford/Nissan/Mazda. no. 7 (green): Volvo / Renault.
no. 4 (orange) Renault / Audi / VW. no. 8 (black): BMW.
no. 5 (red): Volvo/Citroen/Renault/Fiat/Peugeot. no. 9 (black): Mercedes.
no. 6 (yellow): Opel / VW / Ford.



ST-23015

14PCS - UNIVERSAL RADIATOR PRESSURE TESTER KIT

- easy-to-read pressure gauge with rubber protective sleeve.
- pressure range: 0~35 psi / 0~2.5 bar with pressure release valve and quick coupler.
- applications:
Nissan / Mitsubishi / Mazda / Subaru / Toyota / Honda / Ford / GM / Chrysler / VW / Audi / Volvo / Saab / Mercedes / BMW / Renault / Fiat / Alfa Romeo / Geo / Suzuki / Isuzu / Lexus / Opel / Peugeot / Rover / Citroen.



ST-23140

18PCS - UNIVERSAL RADIATOR PRESSURE TESTER KIT

- set for testing leaks in automotive cooling system.
- adaptors and pump are made of light nylon 66.
- provided with blue and black connectors are testing pressure caps.
- includes a thermometer for safety reason.
- applications:
Buick / Chrysler / Chevrolet / Dodge / Jeep / Mercedes / Oldsmobile / Pontiac / BMW / Eagle / Acura / Geo / Honda / Hyundai / Infiniti / Isuzu / Plymouth / GM / Lexus / Lincoln / Mazda / Subaru / Suzuki / Toyota / Scion / VW / Cadillac / Daewoo / Jaguar / Land Rover / Porsche / Saab / Fiat / Kia / Saturn / Alfa Romeo / Mini Cooper / Lancia / Peugeot / Audi / Skoda / Renault / Sterling / Volvo / Seat / Caterham / Opel / Ssangyong / Vauxhall / Ford.



ST-23050

27PCS - PRESSURE AND VACUUM TYPE COOLING TESTER KIT

- remove the original radiator cap while the engine is cold.
- choose a proper radiator cap and install it on to radiator opening.
- work the hand pump till the pressure up to 10~15 psi.
- check the gauge reading, if the reading drops automatically, the leakage might occur in radiator.
- raise the vehicle bonnet and hand the hook in available position.
- connect the universal radiator rubber adaptor provided or suitable radiator cap on radiator.
- connect air line, press button "ON" to allow the air gone. turn switch 50~60cmHG, then press button "OFF".
- applications:
Alfa Romeo 146, 156, 166, GTV, Spider / Audi A2, A4, A5.



ST-23118

26PCS - COOLING SYSTEM

VACUUM PURGE AND REFILL COOLANT PRESSURE TESTER KIT

- pressure pump to test leaks in cooling system.
- provided with 3 twist-on type and 16 threaded type adaptors, covering almost all types of car makes and models on the market.
- vacuum-type coolant refill tool has large internal passages to allow coolant to be refilled fast.
- radiator cap test tubes (black and blue) to test if the radiator cap from the car has leaks.
- coolant hose and drain hose are made of cold-resistant material.
- applications:
Chrysler / GM / Honda / Hyundai / Mazda / Subaru / Toyota / Mitsubishi / Opel / Kia / Subaru / Mercedes / Dodge / Lincoln / Mitsubishi / Land Rover / Saab / Audi / Skoda / VW early models, late models) / Tesla model X / Buick / Cadillac / Seat / Chevrolet / Opel / Citroen / Nissan / Peugeot / Renault / Ford.



ST-23093

6PCS - COOLING SYSTEM VACUUM PURGE AND REFILL KIT

- quick coupler attachments, no more bleeding and saves clean up time.
- easy to connect with air pump and creates a vacuum to the filler hose.
- opening the valve and letting the pre-mixed coolant flow into the system.
- uses shop air to evacuate and leak test an auto cooling system.
- use to refill coolant in minutes, reduces the refill time of cooling system and prevents the air flow into the system.
- contents:
1pc-gauge / 1pc-coolant hose /
1pc-vacuum gauge / 3pc-adaptor.



ST-23094

4PCS - VACUUM-TYPE COOLING SYSTEM FILLER KIT

- this is a special tool kit for cars, it's used for car antifreeze replacement and filling.
- significantly reduces coolant replacement time without entering the air.
- copper-plated connectors, rust-proof & beautiful, durable and wear-resistant.
- the pressure measurement is accurate, and the water tank leakage can be found in time.
- can be used in 4S shops, auto repair shops, and personal DIY.
- contents:
1pc-vacuum purge refill tool.
1pc-universal radiator adaptor.
1pc-coolant hose.
1pc-transparent hose.



ST-23081

9PCS - HGV COOLING SYSTEM PRESSURE TESTER KIT

- set for testing leak in heavy duty vehicles (HGV) cooling system.
- include 7 adaptors for major HGV brand.
- applications:
MB sprinter-2006, vito-2006, actros-1997, atego-1998, axor-2001, eco-8401 / Deutz engine 1015 / Volvo: fh12-1993, fl-2000, fm-1998 / Man l-2000 2000, tga-2000, e2000-2000, f2000 1995-2003, f90 1987-1996, tgal, m/s 2005 / Daf: lf55 2001, xf95 2002-2006, xf105 2005 / Iveco eurocargo 1991 / eurostar 1993-2001, euro tech 1993-2001, euro trakker 1993- 2001, euro trakker cursor 2002, euro trakker cursor 13 2001, euro truck stralis cursor 2002 / Renault Kerax 1999, magnum 1990-2003, midlum 2000, premium 1997 / Scania 4 series 1995-2004, 93, 94, 1996-2004, 113, 114 1996-2004, 124 1996-2004, 144 1996-2002, 164 1999-2004.



ST-23149

12PCS - HGV COOLING SYSTEM PRESSURE TESTER KIT

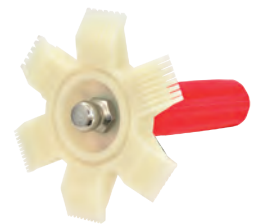
- leak test kit for cooling systems.
- pressurized operation prevents engine overheating.
- air pressure device for quick pressurization.
- include 9 adaptors for major HGV brand.
- suitable for large-capacity cooling systems.
- applications:
DAF / Ford / Freightliner / Internation / Kenworth / Mack / MAN / Mercedes / Peterbilt / Renault / Scania / Volvo ... Trucks.



ST-22096

FIN COMB STRAIGHTENER TOOL

- HVAC condenser evaporator 6 in 1 fin comb straightener.
- this fin comb clean and straightens bent fins in seconds to help keep air flowing so your system works fine.
- this handy fin straightener can also be used on oil coolers and air conditioner condensers.
- straighten damaged fins and remove debris without danger of puncture.
- fin with spacing of 8 / 9 / 10 / 12 / 14 and 15 fins per inch.



ST-23007

10PCS - FAN CLUTCH SERVICE KIT

- removal of lock nuts on viscous fan on MB, BMW, Ford and any other vehicles.
- special open-end spanner to remove and replace the radiator fan hub.
- the technician can hold the water pump pulley in place while loosening radiator fan then remove the viscous-coupling on the cooling fan.
- 3 in 1 design allows serving of three repair, which is required a special tool due to their separate areas of confined locations.

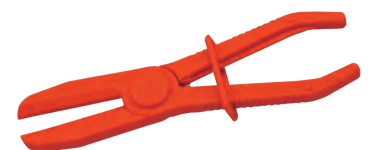
**STRAIGHT PINCH-OFF PLIER**

ST-23030A for up to ø10mm line.

ST-23030B for up to ø15mm line.

ST-23030C for up to ø24mm line.

- unique designed jaws prevent internal hose lining from destruction.



ST-23030

3PCS - STRAIGHT PINCH-OFF PLIER SET

- unique designed jaws prevent internal hose lining from destruction.
- lightweight for handle and non-conductive safety.
- contents:
"A" for up to ø10mm line.
"B" for up to ø15mm line.
"C" for up to ø24mm line.



ANGLE PINCH-OFF PLIER

- ST-23061A for up to ø10mm line.
- ST-23061B for up to ø15mm line.
- ST-23061C for up to ø24mm line.

- unique designed jaws prevent internal hose lining from destruction.
- lightweight for handle and non-conductive safety.



ST-23061

3PCS - ANGLE PINCH-OFF PLIER SET

- unique designed jaws prevent internal hose lining from destruction.
- lightweight for handle and non-conductive safety.
- contents:
 - "A" for up to ø10mm line.
 - "B" for up to ø15mm line.
 - "C" for up to ø24mm line.



ST-24568

7PCS - A/C FUEL LINE DISCONNECT TOOL SET

- this seven pieces fuel line and air conditioning disconnect set help to disconnect the fitting of fuel line and air conditioning quickly and easily, even if they are in hard-to-reach parts of your car.
- size include: 6.4 / 7.9 / 9.5 / 12.7 / 15.9 / 19 and 22.2mm.
- applications: Chrysler / Ford / GM / Daihatsu / Honda / Mercedes / Mitsubishi / Saab / Nissan / VW / Vauxhall / Scania / Volvo etc.



ST-25050

9PCS - FUEL LINE DISCONNECT TOOL SET

- designed for A/C line, fuel line, and transmission cooler line.
- contains 3/8" / 1/2" / 5/8" and 3/4" spring lock disconnect tool for A/C line on 1981 thru 2003 Ford vehicle and truck.
- 1994 thru 2003 Chrysler and Jeep vehicle. contains the 3/8" and 1/2" fuel line disconnect tool for Ford vehicle.
- contains the 5/16" and 3/8" fuel line disconnect tools for GM and Chrysler vehicle.
- contains the transmission oil cooler line disconnect tool used on many GM and Ford vehicle.



ST-23010

8PCS - FUEL / TRANSMISSION AND A/C LINE DISCONNECT KIT

- designed for A/C line, fuel line and transmission cooler line.
- all the disconnect tool need to work with spring locking coupling, fuel line, and transmission cooler line.
- two ends disconnect tool: 5/16" ~ 3/8".
- long disconnect tool: 1/2".
- round disconnect tool: 1/2".
- two point disconnect tool and rubber cap x 4:
 - 1/4" (black).
 - 3/8" (yellow).
 - 5/16" (red).
 - 1/2" (blue).



ST-23054

22PCS - FUEL AND A/C LINE DISCONNECT KIT

- designed for A/C line, fuel line and transmission cooler line.
- all the disconnect tool need to work with spring locking coupling, fuel line, and transmission cooler line.
- contents:
 - 6pc-fuel & air conditioning line disconnect: 5/16" / 3/8" / 1/2" / 5/8" / 3/4" / 7/8".
 - 4pc-Ford A/C spring lock coupling: 3/8"(red) / 1/2"(blue) / 5/8"(black) / 3/4"(green).
 - 1pc-Ford oil cooler line disconnect tool.
 - 7pc-A/C, fuel line disconnect set.
 - 1pc-rubber band.
 - 1pc-fuel line disconnect tool.
 - 1pc-Ford/GM quick disconnect tool.
 - 1pc-Ford fuel line coupling tool.



ST-23057

HEAVY DUTY SPARK PLUG BOOT PLIER

- thin and long body is suitable for removing hard-to-reach spark plug boot.
- double insulated tip offer complete protection against shock.
- jaw is double dipped to assure complete coverage of all contact area.
- angled nose for easier access to boot.



ST-23064

HEAVY DUTY SPARK PLUG BOOT PLIER

- use to remove the "BERU" type wire and tough to reach spark plug wire on most of automobile.
- wide grip section and special angle make it easy to remove plug wire w/out separating or damaging connector, wires or shield.
- application: Mercedes Benz and Ferrari.



ST-24665

IGNITION COIL PULLER

- suitable for removal of spark plug boot on deep-seated engine application.
- used for removing pencil-type ignition coil on 1.0L, 1.0L TSI, TFSI-1.2L TSI-1.4L TSI, TFSI-2.0L GTI engines.
- applications: VW Up 2011~, Polo 2012~, Golf 2013~, Beetle 2014~, Caddy 2015~, Passat 2014~, Tiguan 2015~, Touran 2015~, Sharan 2015~/Audi A1 2012~, A3 2013~/Sköda Citigo 2011~, Fabia 2014~, Octavia 2013~/Seat Mii 2011~, Ibiza 2013~, Leon 2013~.



ST-24523

4PCS - IGNITION COIL PULLER KIT

- suitable for removal of spark plug boot on deep-seated engine application.
- applications:
 - VW: Bora, Golf, New Beetle, Passat, Polo, Touran 1.4, 1.6, 6L, Lupo4-Zyl, FSI, Phaeton and T4.
 - VW: Bora, Golf, Passat, Sharan, Touareg, Phaeton, T5.
 - VW: Golf, Touran, Eos, Passat.
Audi: A3 2.0, A6 3.2.
 - VW: 8 and 12 cylinder engines.



ST-23098

18PCS - GLOW PLUG SOCKET SET

- for disassembly and assembly of common type glow plugs and special PSG glow plugs with pressure sensor.
- contents:
 - 3pc-3/8" dr. glow plug socket with universal joint: 8 / 9 / 10mm x 72mmL.
 - 3pc-1/4" dr. glow plug socket with universal joint: 8 / 9 / 10mm x 60mmL.
 - 3pc-slotted glow plug socket: 8, 9, 10mm.
 - 5pc-plastic protective caps for PSG glow plugs.
 - 1pc-socket, fitting depth 8mm x 50mmL.
 - 1pc-glow plug socket with snap ring for PSG, 12mm x 50mmL.
 - 1pc-1/4" dr. extension bar x 100mmL. 1pc-1/4" dr. universal.
- applications: OEM number: GM: 55564163 / 55577419 . Opel: 1826354 / 1214061. VAG: 03L905061D.



ST-23088

5PCS - 1/4" DR. GLOW PLUG JOINT SOCKET SET

- 1/4" dr. and 12 point socket easy to fasten and unfasten glow plug.
- socket can turn 360°, suitable for working in limited space.
- size include 8 / 9 / 10 / 12 / 14mm x 70 mmL.
- applications:
 - 8mm-Ford / Iveco / Mercedes / Psa / Renault / Volvo.
 - 9mm-Alfa Romeo / Fiat / Opel / Seat / VW.
 - 10mm-Audi / Ford / Mercedes / Peugeot / Seat / VW.
 - 12mm-BMW / Hyundai / Opel / Psa / Toyota Hilux, Land Cruiser.
 - 14mm-universal.



ST-23023

6PCS - 3/8" DR. GLOW PLUG JOINT SOCKET SET

- 3/8" dr. and 12 point socket easy to fasten and unfasten glow plug.
- socket can turn 360°, suitable for working in limited space.
- size include 8 / 9 / 10 / 12 / 14 / 16mm x 70 ~ 78 mmL.
- applications:
 - 8mm-Ford / Iveco / Mercedes / Psa / Renault / Volvo.
 - 9mm-Alfa Romeo / Fiat / Opel / Seat / VW.
 - 10mm-Audi / Ford / Mercedes / Peugeot / Seat / VW.
 - 12mm-BMW / Hyundai / Opel / Psa / Toyota Hilux, Land Cruiser.
 - 14mm-universal.
 - 16mm-universal.



ST-23107

6PCS - SWIVEL SPARK AND GLOW PLUG SOCKET SET

- for professional damage-free removal and installation of spark plug and glow plugs as well as "PSG" glow plugs (pressure sensor glow plugs.).
- the socket are provided on the inside with a retaining rubber to prevent the spark / glow plug from falling out unintentionally.
- the special ball joint and the long and slim design of the socket allow even deep- seated glow plug / spark plugs that are difficult to reach to be removed quickly and with easy.
- contents:
 - 2pc-1/4" dr. 8 / 9mm x 92mmL.
 - 4pc-3/8" dr. 10 / 12 / 14 / 16mm x 94.5mmL.



ST-23099

16PCS - GLOW PLUG REMOVAL TOOL KIT

- designed for removal of damaged or broken glow plug from cylinder head.
- removes 8mm and 10mm glow plugs.
- set includes all required adaptors for drilling, centering and pulling for the safe removal of glow plug.
- applications: Audi / VW / Mercedes Benz.



ST-23087

27PCS - GLOW PLUG REMOVAL TOOL KIT

- designed for removal of damaged or broken glow plug from cylinder head.
- set includes all required adaptors, centering and cleaning tool to safely remove glow plug without damaging engine.
- suitable for glow plug size:
 - M8 / M9 / M10 thread.
- cleaning brush: \varnothing 5.3mm x 100mmL. x 300mmL. (overall length)
- cleaning brush: \varnothing 9.0mm x 100mmL. x 300mmL. (overall length)
- cleaning brush: \varnothing 10mm x 100mmL. x 300mmL. (overall length)
- 1/2" dr. adaptor (10 mm hex.).



ST-23105

33PCS - GLOW PLUG THREAD REPAIR TOOL SET

- for repairing the glow plug threads in cylinder head.
- suitable for glow plug sizes:
 - M8 x 1.0mm / M10 x 1.0mm / M10 x 1.25mm / M12 x 1.25mm.
- contents:
 - 6pc-thread sleeves: M8 x 1.0mm / M10 x 1.0mm / M10 x 1.25mm / M12 x 1.0mm / M12 x 1.25mm / M14 x 1.25mm.
 - 20pc-thread repair coils, each 5pcs: M8 x 1.0mm / M10 x 1.0mm, M10 x 1.25mm / M12 x 1.25mm.
 - 2pc-coil drives.
 - 3pc-centering pieces.
 - 1pc-guide pin.
 - 1pc-guide.



SPARK PLUG HOLE THREAD CHASER

ST-23034A M18 x 1.5 P. x hex. 21mm

ST-23034B M14 x 1.25 P. x hex. 22mm

ST-23034C M18 x 1.5 P. x hex. 22mm

ST-23034D M12 x 1.25 P. x 22mm

- those threads designed to start and remove carbon and dirt or straighten damaged threads in spark plug hole.
- use with ratchet handle and deep socket or suitable wrench.

**ST-23134****18PCS - TOP PART GLOW PLUG REMOVAL SET**

- design to extract the glow plug when the head of glow plug broken.
- inside hole for M3 and M4 taps and drill.
- contents:

3pc-M8 x 1.0P x ø6mm x 37mmL / 48mmL / 75mmL.	
3pc-M10 x 1.0P x ø8mm x 48mmL / 58mmL / 100mmL.	
3pc-M10 x 1.25P. x ø8mm x 48mmL / 58mmL / 100mmL.	
1pc-M3 x 0.5P. x 180mmL.	
1pc-M10 x 1.0P. x ø4.5mm x 7mmL.	2pc-M4 x 0.7P. x 180mmL.
2pc-M10 x 0.7P. x ø4.5mm x 19mmL.	1pc-M8 x 1.0P. x 7mmL.
1pc-M10 x 1.25P. x ø4.5mm x 7mmL.	1pc-M8 x 1.0P. x 19mmL.

**ST-23106****9PCS - GLOW PLUG BASE CLEANING REAMER SET**

- special tools for cleaning / re-cutting the glow-plug aperture and for cleaning / re-cutting the glow-plug seat within the cylinder head.
- guide holder size: M8 x 1.0 / M10 x 1.0 / M10 x 1.25 / M12 x 1.25.
- reamer size: M8 / M10 / M12.
- contents:

M8 x 1.0 thread.	M10 x 1.25 thread.
M10 x 1.0 thread.	M12 x 1.0 thread.

**ST-23071****MULTI VOLTAGE GLOW PLUG TESTER**

- this glow plug tester is designed to test the condition of diesel engine glow plug status quickly.
- voltage supply by 9V battery.
- auto switch off.
- rubber coating for tester protection.
- tester probe / clip are easy to replace.
- initialization for different testing probe / clip.

**ST-25025****SPARK PLUG AND BATTERY BRUSH**

- battery terminal and post cleaner.
- use bottom brush for cleaning battery post.
- unscrew top and use inside brush for cleaning battery.
- come with metal case.



ST-25037

3PCS - GAS CYLINDER COMPRESSION TESTER SET

- compact tools can solve the trouble of cylinder pressure testing.
- equipped most of the vehicles with fuel injection test cylinder pressure.
- stop engine then disconnect the spark plug and the connecting wire.
- choose a proper adaptor and hose, attach them into cylinder.
- "WARNING" this tester in only suitable for gas cylinder.



ST-23014

8PCS - GAS CYLINDER COMPRESSION TESTER SET

- compact tools can solve the trouble of cylinder pressure testing.
- equipped most of the vehicles with fuel injection test cylinder pressure.
- stop engine then disconnect the spark plug and the connecting wire.
- choose a proper adaptor and hose, attach them into cylinder.
- "WARNING" this tester in only suitable for gas cylinder.



ST-23069

13PCS - DIESEL AND GAS INJECTION REMOVER TOOL SET

- special two jaws design to fix the injector and pull out with slide hammer.
- special design to remove seized diesel injector from VAG TDI engines.
- always allow to cool down the engine before using the tool.
- applications:
VW / Audi FSI, TDII engine code ALH, AHU, 1Z.



ST-23097

14PCS - OIL PRESSURE TEST KIT

- set for testing engine oil pressure and transmission pressure.
- applicable to both gasoline and diesel engines, also suitable for passenger cars and light trucks.
- gauge reading range from 0~10 bar (0~150 psi).
- provided with an oil filter clamp for piercing through oil filter canister when oil pressure switch is hard to access.
- H-shape oil canister piercer can be offered individually.
- contents:
black adaptor: 1/2" x 20UNF / 3/8" x 20UNF / 1/4" x 18UNF / 1/8" x 27UNF, R1/8" DIN
silver adaptor: M10 x P1.0 / M12 x P1.5 / M14 x P1.5 / M16 x P1.5 / M18 x P1.5.



ST-23095

37PCS - DIESEL COMPRESSION TESTER SET

- high quality hydraulic gauge provides accurate reading and prevents damaging on gauge due to high pressure.
- includes 4 injector adaptors and a universal kit.
- provided with 22 glow plug adaptors for nearly all vehicle type on the market.
- glow plug adaptors are helpful when diesel injectors are hard to remove due to carbon deposits.
- includes a 90° adaptor fo fitting gauge to injector (or glow plug) adaptor in limited spaces.



ST-23096

13PCS - DIESEL ENGINE LOW PRESSURE DIAGNOSTIC KIT

- this diagnostic kit is to inspect low pressure or return fuel side of diesel engines.
- two manometers with different scales (-1 - 5 bar and -1 - 15 bar) offer more accurate test results.
- ten fuel line adaptors cover a wide range of diesel engines and car makes.
- translucent tube on adaptors help observing impurities and bubbles in the fuel.
- 2m. long hoses help connections in confined areas in engine compartment.



ST-23068

6PCS - DIESEL INJECTOR SEAT CUTTER SET

- re-face the diesel injector seat in order for the new or reconditioned injector to be fitted correctly.
- clean and re-cutting of injector seat for universal application.
- unique "double lock" design provides highly accurate clean work without damaging engine.
- applications:
 - 1pc-15 x 19mm flat reamer for universal injector.
 - 1pc-17 x 17mm flat reamer for Delphi / Bosch injectors BMW / Psa / Renault / Ford.
 - 1pc-17 x 19mm flat reamer for Bosch injectors Mercedes CDI.
 - 1pc-17 x 21mm angle reamer for Fiat/Iveco.
 - 1pc-pilot post x 175mmL.
 - 1pc-hex. key wrench x 2.5mm.



ST-23130

7PCS - DIESEL INJECTOR SEAT CUTTER SET

- re-face the diesel injector seat in order for the new or reconditioned injector to be fitted correctly.
- clean and re-cutting of injector seat for universal application.
- unique "double lock" design provides highly accurate clean work without damaging engine.
- applications:
 - 1pc-17 x 17mm angled reamer for Fiat / Iveco / Ford.
 - 1pc-17 x 17mm flat reamer for Delphi / Bosch injectors BMW / Psa / Renault / Ford.
 - 1pc-17 x 19mm flat reamer for Bosch injectors Mercedes CDI.
 - 1pc-15 x 19mm flat reamer for universal injector.
 - 1pc-17 x 21mm angled reamer for Fiat / Iveco.
 - 1pc-pilot post x 175mmL.
 - 1pc-hex. key wrench x 2.5mm.



ST-23131

8PCS - DIESEL INJECTOR SEAT CUTTER SET

- re-face the diesel injector seat in order for the new or reconditioned injector to be fitted correctly.
- clean and re-cutting of injector seat for universal application.
- unique "double lock" design provides highly accurate clean work without damaging engine.
- applications:
 - 1pc-15 x 19mm flat reamer for universal injector.
 - 1pc-17 x 17mm angled reamer for Fiat / Iveco / Ford.
 - 1pc-17 x 17mm flat reamer for Delphi / Bosch injectors BMW / Psa / Renault / Ford.
 - 1pc-17 x 19mm flat reamer for Bosch injectors Mercedes CDI.
 - 1pc-17 x 21mm angled reamer for Fiat / Iveco.
 - 1pc-1/4" dr. T-handle x 150mmL.
 - 1pc-hex. key wrench x 2.5mm.
 - 1pc-pilot post x 175mmL.



ST-23132

9PCS - DIESEL INJECTOR SEAT CUTTER SET

- re-face the diesel injector seat in order for the new or reconditioned injector to be fitted correctly.
- clean and re-cutting of injector seat for universal application.
- unique "double lock" design provides highly accurate clean work without damaging engine.
- applications:
 - 1pc-15 x 19mm flat reamer for universal injector.
 - 1pc-17 x 17mm angled reamer for Fiat / Iveco / Ford.
 - 1pc-17 x 17mm flat reamer for Delphi / Bosch injectors / BMW / Psa / Renault / Ford.
 - 1pc-17 x 19mm flat reamer for Bosch injectors Mercedes CDI.
 - 1pc-17 x 21mm angled reamer for Fiat / Iveco.
 - 1pc-19 x 50mm injector cleaner reamer. 1pc-hex. key wrench x 2.5mm.
 - 1pc-1/4" dr. T-handle x 150mmL. 1pc-pilot post x 175mmL.



ST-23133

9PCS - DIESEL INJECTOR SEAT CUTTER SET

- re-face the diesel injector seat in order for the new or reconditioned injector to be fitted correctly.
- clean and re-cutting of injector seat for universal application.
- unique "double lock" design provides highly accurate clean work without damaging engine.
- applications:
 - 1pc-15 x 19mm flat reamer for universal injector.
 - 1pc-15 x 17mm reamer for Fiat multi-jet injector.
 - 1pc-17 x 17mm angled reamer for Fiat / Iveco / Ford.
 - 1pc-17 x 17mm flat reamer for Delphi / Bosch injectors BMW / Psa / Renault / Ford.
 - 1pc-17 x 19mm flat reamer for Bosch injectors Mercedes CDI.
 - 1pc-17 x 21mm angled reamer for Fiat/Iveco. 1pc-hex. key wrench x 2.5mm.
 - 1pc-19 x 50mm injector cleaner reamer. 1pc-pilot post x 175mmL.

ST-23108

8PCS - VW AND AUDI INJECTOR REMOVER KIT

- this tool kit assists the removal and installation of the high pressure petrol injectors used on direction VAG engines.
- tools are also included for the installation of the injector seals-important to ensure a good seal.
- applications:
 - VW / Audi with direct injection FSI system.

ST-23109

5PCS - VW AND AUDI DIESEL INJECTOR REMOVER KIT

- special design to remove the seized injector from VAG TDI engines.
- always allow to cool down the engine before using the tool.
- with slide hammer these injectors are removed easily without damage.
- applications:
 - VW / Audi TDI engine code: ALH, AHU, 1Z.

ST-23110

15PCS - INJECTORS PUMP EXTRACTOR REMOVER KIT

- special two jaws design to fix the injector and pull out with slide hammer. designed to remover seized diesel injector from VAG TDI engine. always allow to cool down the engine before using the tool.
- applications:
 - VAG 1.4, 1.6, 1.8, 2.0, 2.7 V6 3.0, V6 3.2, V6 3.6, V6 4.2 V8 FSI system.

ST-23090

5PCS - VERTICAL-TYPE COMBUSTION GAS LEAK TESTER KIT

- set for testing leaks in head gasket without removing engine cylinder head by testing presence of CO_2 in cooling system.
- includes US-made CO_2 tester fluid.
- tester fluid changes from blue to green or yellow if CO_2 is present in coolant.
- rubber bulb helps draw vapor from radiator into test chambers.
- tester fluid with MSDS and SVHC compliance.

ST-23017

45PCS - GASOLINE ENGINE INJECTING PRESSURE TESTER KIT

- serve the most vehicles with fuel injection system.
- allows to diagnose and clean fuel injection system on a wide variety of vehicles.
- all the necessary fittings, hoses, adaptors, disconnect tools, and gauges included.
- disconnect the new-type fuel line with quick connectors can be a touchy operation unless you have the right equipment.
- including the newest fuel line disconnect tools.

ST-23077

13PCS - TURBO SYSTEM PRESSURE LEAK TESTER KIT

- pressure test kit for testing turbo system pressure and identifying leaks.
- charges the turbo system by connecting a low pressure compressed air system through a suitable pressure regulator (not included).
- 6 pairs of stepped adaptor to fit most common sizes of hose.
- adaptors are lipped to allow for better grip within the turbo hose end.
- contents:

ø31mm.	ø38mm.	ø46mm.
ø51mm.	ø55mm.	ø60mm.
ø65mm.	ø70mm.	ø75mm.
ø80mm.	ø85mm.	ø90mm.

ST-23103

9PCS - TURBO SYSTEM PRESSURE LEAK TESTER KIT

- designed to detect leaks within the turbo system and cooling system hoses.
- features a pressure gauge with shut off valve, pressure regulator, and pressure release valve.
- comes with four pairs of adaptor to fit most sizes of hose.
- adaptor size: ø35 ~ 45mm. ø50 ~ 60mm.
ø65 ~ 75mm. ø80 ~ 90mm.

ST-23113

2PCS - VALVE LAPPER SET

- hand grind small and large flat-head unslotted valves.
- to use place grinding compound on valve face and put in seat.
- 1pc-small cup ø16mm and ø21mm.
- 1pc-large cup ø29mm and ø35mm.

ST-23114

OVERHEAD VALVE SPRING COMPRESSOR

- it is ideal for removing valve springs, spring retainers by compressing the valve spring retainer and exposing the valve keeper, remove keepers, uncompress the tool then remove spring.
- this tool allows valve spring and valve stem oil seals to be replaced with the cylinder head.
- there are reversible jaw adaptor and automatic cam action locking to a pre-determining setting.
- with adjustable depth can fit for most large and small spring applications.
- suitable for most of OHV / OHC / CVH engines,



ST-23115

VALVE SPRING COMPRESSOR

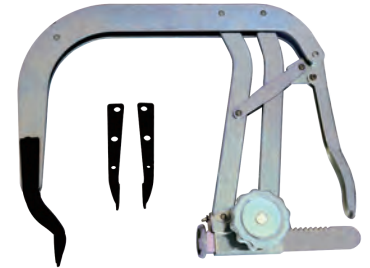
- designed with plastic coated locking handle, when locked on keeps valve springs positively compressed during maintenance work.
- opening capacity: 72~ 40mm.
- adjustable collet release adaptor: $\varnothing 25\sim 40\text{mm}$.
- suitable for most small and medium sized OHV engines.
- fully adjustable jaw with 72~240mm capacity.



ST-23116

OVERHEAD AND L-HEAD VALVE SPRING COMPRESSOR

- compresses valve springs on overhead valve and L-head engines on cars, trucks and tractors.
- jaws and plunger bar are easily adjusted.
- plunger bar seats on both flat and cup shaped valve heads.
- includes offset and straight jaws.
- throat depth 245mm and jaw opening 70~195mm fit larger engine size.



ST-23027

7PCS - VALVE SPRING COMPRESSOR KIT

- ideal to use on vehicles, motorcycles and small bore engines.
- this tool kit is designed to compress and release valve spring after removing the collets.
- arched-type steel tube lever ensures a consistent coaxial contact with the valve.
- including 5 interchangeable driving adaptors to fit valve spring, 16mm / 19mm / 23mm / 25mm / 30mm.
- 2 length pressure screw: 50mm and 90mm.



ST-23025

23PCS - CYLINDER HEAD SERVICE KIT

- remove and replace of worn valve spring and bushing.
- universal valve spring compressor.
- valve collet replacement tool.
- valve stem seal plier long / straight.
- valve stem seal plier long / angle.
- rigid and flexible air / cylinder hoses.
- valve stem seal replacement kit: 5 / 6 / 7 / 8 / 10 / 11 / 15mm.



PISTON RING COMPRESSOR

ST-23033A $\varnothing 53\sim 125\text{mm} \times 75\text{mmL}$.

ST-23033E $\varnothing 90\sim 175\text{mm} \times 100\text{mmL}$.

ST-23033B $\varnothing 53\sim 125\text{mm} \times 85\text{mmL}$.

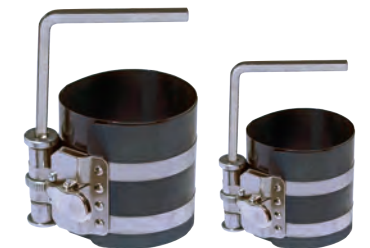
ST-23033F $\varnothing 90\sim 175\text{mm} \times 150\text{mmL}$.

ST-23033C $\varnothing 90\sim 175\text{mm} \times 75\text{mmL}$.

ST-23033G $\varnothing 90\sim 175\text{mm} \times 162\text{mmL}$.

ST-23033D $\varnothing 90\sim 175\text{mm} \times 85\text{mmL}$.

- two spring steel bands provide evenly distributed pressure across all piston rings.
- handles most pistons are durable and easy thumb release.
- for use on all passenger vehicles.



ST-25101

7PCS - CUP ROCKET SET

- this tool enable cups to be installed smoothly without scratching or damaging O-ring cylinders.
- contents:

$\varnothing 14.4\sim 16.0\text{mm}$.	$\varnothing 15.9\sim 17.5\text{mm}$.	$\varnothing 17.5\sim 19.1\text{mm}$.
$\varnothing 20.7\sim 22.4\text{mm}$.	$\varnothing 24.0\sim 26.0\text{mm}$.	$\varnothing 25.5\sim 27.5\text{mm}$.
$\varnothing 30.3\sim 32.3\text{mm}$.		



ST-29030

4PCS - MINI HOOK AND PICK SET

- ideal for installing and removing O-rings, seals and washers.
- stainless steel blades have knurled area for better finger control.
- contents: 1pc-combination pick x 125mmL. 1pc-straight pick x 125mmL.
1pc-90° pick x 125mmL. 1pc-hook pick x 125mmL.



ST-24522

3PCS - SEAL PULLER SET

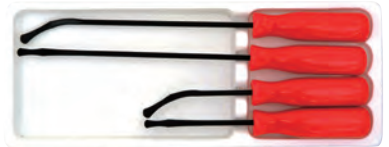
- quickly and easily remove O-ring, grease and oil seal.
- special angle on the tool head provides a better work than traditional seal pullers.
- 3 different lengths and tips fit nearly all seal application.
- simple insert the tool tips, press and pull.
- contents: 117mmL. / 150mmL. / 165mmL.



ST-24573

4PCS - SEAL REMOVAL TOOL SET

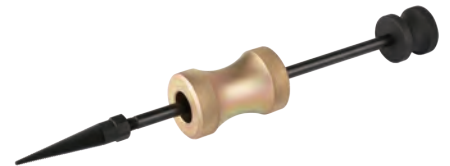
- round tip with blended radius edge allows to removal seals or O-ring while reducing chance of damaging to seal or finished surface.
- 2 tip configurations and 2 blade lengths handle most seal removal situations transmissions, heater and vacuum hoses, oil pump drive shaft seals, injectors and fuel rail O-ring, inner tie rod rack boot and CV boot removal, fork seals and caliper dust boot assemblies on motorcycles and steering racks on pumps.



ST-24680

DIESEL INJECTOR SEAL PULLER

- for the professional removal of diesel injector sealing rings with an internal $\varnothing 4\sim 16\text{mm}$.
- screw the tapered tip of the tool into the copper washer, then pull it out with the aid of slide hammer.
- applications: BMW / Mercedes / PSA, etc.



ST-24555

REPLACEABLE OIL PAN SEPARATOR

- breaks gasket seals on engine sumps, transmissions or any difficult to separate gasket joints.
- install the rod with tool body, then work w/a hammer to separate the gasket or joint.



ST-24685

19PCS - REPLACEABLE OIL PAN SEPARATOR AND CLEAN KIT

- breaks gasket seals on engine sumps, transmissions or any difficult to separate gasket joints.
- the copper blade could avoid damage on gasket or oil pan connection joint surface.
- clean cup wheel tool helps use to clean all small spaces on cylinder head.
- contents:
15pc-additional cup wheels x $\varnothing 20\text{mm}$.
1pc-replaceable separator. 1pc-2.5mm hex. Key wrench.
1pc-replace cooper blade. 1pc-clean cup wheel tool.



ST-23121

22MM - FLEXIBLE OXYGEN SENSOR SOCKET WRENCH

- special socket (6 and 12 point) x 22mm. for assembling and dismantling of stuck oxygen sensors that are difficult to access.
- 180° freely-revolving joint.
- time-saving to work with, even for hard-to-reach oxygen sensors.
- prevents disassembly and assembly of protective shield.
- flat and half-opened design.
- applications: for almost all vehicles.



ST-23127

22MM - IMPACT FLEXIBLE OXYGEN SENSOR SOCKET WRENCH

- special socket 6- point x 22mm. for assembling and dismantling of stuck oxygen sensors that are difficult to access.
- time-saving to work with, even for hard-to-reach oxygen sensors.
- prevents disassembly and assembly of protective shield.
- total length 210mmL. x 9.0mm shank outside diameter.
- operation with air hammer (10.2mm. holder)
- the vibration increases the release torque and increases the effectiveness of rust-remover products.
- applications: for almost all vehicles.



ST-25038

OXYGEN SENSOR SOCKET

- this offset oxygen sensor socket enables you to remove and install sensor on computerized engine controlled vehicles.
- the offset design helps to reach oxygen sensor in tough-to-reach spots compared to standard wrench.
- 3/8" dr. x 22mm. universal vacuum PVS, TVS, valve and oxygen sensor socket.
- use with 3/8" dr. ratchet handle or breaker bar.



ST-25039

OXYGEN SENSOR SOCKET

- special 22mm socket with cutaway slot to provide.
- provides adequate depth to fit over sensor.
- heat-treated alloy steel.
- clearance for wire harness.
- use with 3/8" sq. ratchet handle or 24mm spanner.



ST-25040

3/8" DR. OXYGEN SENSOR RE-THREAD TOOL

- oxygen sensor re-thread tool.
- (F) 3/8" dr. x (M) M18 x 1.5P.
- use with 3/8" dr. ratchet handle or suitable wrench.



ST-23020

7PCS - OXYGEN SENSOR SWITCH SOCKET SET

- remove oxygen sensor, injector, oil pressure sending unit and vacuum switch.
- accepts either 3/8" or 1/2" dr. ratchet depending on the size of the socket.
- contents:
 - 1pc-22mm heated oxygen sensor socket.
 - 1pc-22mm low profile offset socket.
 - 1pc-22mm oxygen sensor socket.
 - 1pc-22mm universal vacuum PVS, TVS Valve and oxygen sensor socket.
 - 1pc-27mm GM thermal sensor switch socket.
 - 1pc-27mm oil pressure sending unit socket.
 - 1pc-30mm oil pressure sending unit socket.



ST-23080

10PCS - OXYGEN SENSOR SWITCH SOCKET SET

- remove oxygen sensor, injector, oil pressure sending unit and vacuum switch.
- accepts either 3/8" or 1/2" dr. ratchet depending on the size of the socket.
- contents:

1pc-29mm oil pressure sending unit socket.	1pc-22mm injector socket.
1pc-26mm oil pressure sending unit socket.	1pc-28mm injector socket.
1pc-27mm GM thermal sensor switch socket.	1pc-22mm oxygen sensor socket.
1pc-22mm long-reach vacuum switch socket.	
1pc-22mm oxygen sensor socket.	
1pc-22mm low profile offset oxygen sensor socket.	
1pc-22mm universal vacuum PVS, TVS valve and oxygen sensor socket.	



ST-23111

TWIN CAM ADJUSTABLE TIMING LOCKING TOOL

- this tool is designed to "lock" twin camshafts during timing belt removal.
- the unique design is full adjustable and will even fit sprockets which are positioned closely together e.g. Vauxhall / Opel EcoTec engines.
- it also incorporates a variable pitch feature to cover a range of sprocket diameters and tooth pitch.
- suitable: twin cam and quad cam V engines diesel engines - camshaft to injection pump sprocket "lock".



ST-23008

8PCS - TWIN CAMSHAFT LOCKING AND SETTING TOOL KIT

- anodised aluminum chocks suitable for locking camshaft pulley on twin cam engine.
- set includes flywheel locking tools for selected PSA and pulley on twin GM petrol and diesel engine.
- applications: Citroën/Fiat/Isuzu/Lotus/MG/Peugeot/Land Rover/Saab/Vauxhall/VW.



ST-23072

19PCS - TWIN CAMSHAFT LOCKING AND SETTING TOOL KIT

- this kit supply with adequate tools to lock the camshaft on twin cam (multi-valve) engine in order to stop them rotating out of timed position when the timing belt is replaced and removed.
- it also provides different camshaft locking pin that can cover specific crankshaft and flywheel locking application.
- applications: Ford / Honda / Land Rover / Vauxhall / Opel.



ST-23066

11PCS - STRETCH BELT TOOL SET

- for mounting and dismounting stretch belt fitted to modern auxiliary belt drive system such as alternator, power steering pump, air conditioning pump and also separate water pump.
- also fits most crankshaft pulley.
- prevents damaging to the pulley and prolongs the life of the belt during installation.
- applications: BMW/Cadillac/Chevrolet/Chrysler/Citroën/Fiat/Ford/Isuzu/Iveco/Lancia/Lincoln/Mercedes/Mazda/Peugeot/Volvo/GMC



ST-23135

2PCS - BELT INSTALL AND REMOVER TOOL SET

- this tool is required for quick and easy removal and replacement of the new flexible V-ribbed belts.
- a professional removal and replacement is almost impossible without this tool as the belt guide has no tensioning element and therefore, a relief of the belt is not possible.
- applications: BMW / Chevrolet / Citroën / Fiat / Ford / Peugeot / Skoda



ST-23074

5PCS - BELT INSTALL AND REMOVER TOOL SET

- this tool is required for quick and easy removal and replacement of the new flexible V-ribbed belts.
- a professional removal and replacement is almost impossible w/out this tool as the belt guide has no tensioning element and therefore, a relief of the belt is not possible.
- applications: Alfa Romeo / BMW / Chrysler / Fiat / Ford / Mercedes / PSA / Seat / Smart / Volvo / VW / Audi / Mazda / Lancia / Citroën.....



ST-25041

CAM BELT TENSION GAUGE

- the schwaben micrometer-style belt tension gauge provides an exact tension measurement on any timing or accessory belt, on any vehicle.
- durable all metal construction with knurled handle and easy-to read number of measure belt tension in newton meter.



ST-23112

SERPENTINE BELT REPLACE TOOL - Mercedes Benz

- designed to turn the idler and replace the serpentine belt easily.
- fit for Mercedes Benz M133 and M270 engine..
- applications:
mercedes: W176 (A class) / W246 (B class) / C/X117 / (CLA class),
X156 (GLA class).



ST-23124

SERPENTINE BELT REPLACE TOOL - VAG

- simple assembly and disassembly of the crank shaft disc and the crank shaft toothed-belt wheel.
- versatile usage.
- with plastic-coated handle.
- applications Audi: A2, A4, A6 / Seat / Sköda / VW: Lupo, Polo, Golf 4, Bora, Passat, Beetle, Sharan etc.....



ST-23125

V BELT AND TIMING BELT WRENCH - VAG

- for loosening the automatic clamping device.
- problem free changing of the belt and hard reaching the place.
- total length: 380mmL.
- jaw opening in: 16mm.
- applications: Audi / Seat / Sköda / VW 2.0TDi, 1.4TSi engines.



ST-23126

CRANKSHAFT PULLEY HOLDING TOOL - VAG

- designed to be used to hold the crankshaft pulley stationary while loosening or tightening the crankshaft pulley fixing bolts.
- designed with an angled shaft to assist access on transverse mounted engines.
- total length: 740mmL.
- applications:
1.0, 1.2, 1.4 & 1.6L TFSI & TSI petrol engines / Audi / Seat.



ST-23138

16PCS - SERPENTINE BELT RATCHET WRENCH KIT

- service approximately 90% of all vehicles equipped with spring-loaded serpentine belt tensioners.
- ratcheting action allows quick and easy positioning of wrench driving end serpentine belt for tensioner access from any angle.
- for use when servicing serpentine drive belts or any belt-driven accessories.
- specifically, designed to fit into tight areas.
- socket size: 8 / 12 / 13 / 14 / 17 / 18 / 19mm and 3/8" dr. / 1/2" dr. / 5/8" dr.



ST-23004

11PCS - UNIVERSAL PULLEY HOLDER AND FAN CLUTCH KIT

- this set is designed to remove and install fan clutch and hold the camshaft pulley.
- available for most of cars with different tap size and adjustable pin width.
- adjustable different width from 40mm~220mm.
- available size: \varnothing 6~10mm / \varnothing 8~11mm / \varnothing 10~12mm / \varnothing 11~16mm.



ST-23006

11PCS - UNIVERSAL CAMSHAFT PULLEY HOLDING TOOL KIT

- this set is designed to remove and install fan clutch and hold the camshaft pulley.
- available for most of cars with different tap size and adjustable pin width.
- adjustable different width from 20mm~1000mm.
- available size: \varnothing 5mm / \varnothing 6mm / \varnothing 8mm / \varnothing 10mm.



ST-23053A

10PCS - CHANGEABLE PULLEY PULLER HOLDER WRENCH SET

- for biasing the auxiliary belt tensioner off and on during installation of the belt in the vehicle.
- the slim and curved handle is ideal for working in tight space.
- changeable offset-ring type.
- contents: 4pc-12pt. offset-ring 12 x 14mm/13 x 15mm/16 x 17mm/18 x 19mm
5pc-E-type offset-ring E10, E12, E14, E16, E18.
1pc-bent handle.



ST-24525

27PCS - BALANCE PULLER AND INSTALLER KIT

- built-in bearing makes balancer replacing job easy and damage-free.
- 4-slot puller plate plus 9 threaded adaptors fit to balancer or most of engine.
- for easy removal of most harmonic balancer and drive pulley which are press-fitted onto the crank-shaft.
- they easily remove the harmonic balancer and include an assortment of bolt.
- this universal kit will take care of most balancer w/threaded removal hole.
- not only remove balancer but also installs them, using the included threaded crank shaft adaptors.
- prevents damaging to the pulley and shaft.



ST-24005

6PCS - HARMONIC DAMPER PULLEY PULLER KIT

- this kit for harmonic balancer removal on Chrysler, GM, Mitsubishi vehicle when you need to remove the harmonic balancer on your vehicle.
- enhanced design with spring-loaded legs for optimal position retention; all steel construction for extra strength and longevity; black oxide finish for corrosion resistance.
- use with 3/8" dr. or 3/4" dr. wrench or socket.
- applications: Chrysler / GM / Mitsubishi / Cadillac / Oldsmobile vehicle; Car, SUV, van and pickup truck.



ST-23022

13PCS - COMPLETELY ALTERNATOR REPAIR KIT

- permits easy removal of freewheel alternator pulley, either on or off the vehicle.
- allows alternator shaft to be held while the pulley retainer is removed.
- work with hand tools or air impact wrench.
- applications:
VW golf, Vento, Passat/Audi A3/Volvo/Mercedes A series/BMW/Audi/Skoda ...



ST-23031

22PCS - COMPLETELY ALTERNATOR REPAIR KIT

- permits easy removal of freewheel alternator pulley, either on or off the vehicle.
- allows alternator shaft to be held while the pulley retainer is removed.
- work with hand tools or air impact wrench.
- applications:
VW/Audi/Seat/Mercedes/Renault/BMW/Ford/Fiat/Skoda/Mercedes A series ...



ST-24643

11PCS - BLIND HOLE BEARING PULLER & SLIDE HAMMER KIT

- set for pulling blind hole bearings off in an energy saving way.
- includes a slide hammer and a claw puller.
- provided with collets for major blind hole inner diameter sizes.
- adaptor expand when being tightened.
- claw puller: M10 x 1.5 / 8~11mm collet.
- slide hammer: M10 x 1.5 / M6 x 1.0 / 12~17mm collet.
- extended adaptor: M10 x 1.5 / M8 x 1.25 / 18~23 / 24~29 / 30~34mm collet.



ST-24644

16PCS - BLIND HOLE BEARING PULLER & SLIDE HAMMER KIT

- set for pulling blind hole bearings off in an energy saving way.
- includes a slide hammer and a claw puller.
- provided with collets for major blind hole inner diameter sizes.
- adaptor expand when being tightened.
- claw puller: M10 x 1.5 / 8~11mm collet.
- slide hammer: M10 x 1.5 / M6 x 1.0 / 12~17mm collet.
- extended adaptor: M10 x 1.5 / M8 x 1.25.
- collet: 18~23 / 24~29 / 30~34 / 34~38 / 39~43 / 44~48 / 49~53 / 54~58mm.



ST-23073

14PCS - VW / AUDI TIMING SETTING TOOL KIT

- this engine timing tool set is designed for VAG 2.7/3.0 TDi and TDi CR chain driven engine.
- it can be used on diesel engine fitted with four chains and tensioners linking the oil pump, crankshaft, camshaft and balance shaft.
- applications: VAG 2.7, 3.0 Tdi V6, 4.0, 4.2 Tdi V8 chain drive/Audi A4, A5, A6, A8, Q5, Q7 diesel engine / VW phaeton, touareg diesel engine.



ST-23065

45PCS - TIMING SETTING TOOL KIT

- this comprehensive set of tools enables the correct engine timing to be made when replacing the timing belt.
- suitable for use on the most recent cars with either HPI (petrol) or HDI (diesel) engines.
- applications: Citroën Xsara, Picasso C4, C5, Evasion, Synergie, C8, Dispatch, Jumpy. Peugeot 206, 307, 406, coupe. 408, 607, 806, 807, Expert.



ST-23141

15PCS - TIMING SETTING TOOL KIT

- raising the front of the vehicle and removing the front wheel and inner wheel arches as required.
- to remove the engine under shield, top cover, air intake, auxiliary drive belts.
- applications:
 - Audi: A4 (208~2009), A5 (2008~2011), Q3 (2011), Q5 (2008~2009), TT (2008~2010).
 - Seat: Alhambra (2010), Altea (2009), Exeo (2010), Leon (2009~2011), Toledo (2009).
 - Sköda: Octavia (2008~2009), Superb (2008~2009), Yeti (2009).
 - VW: Eos (2009), Golf (2009), Passat (2008~2012), Sharan (2011), Beetle (2011), CC (2012), Scirocco (2009), Tiguan (2009~2011).



ST-23142

16PCS - TIMING SETTING TOOL KIT

- to remove and install belt for 1.2, 1.4L. Engines.
- including camshaft and tensioner adjuster, and sprocket locking tool.
- applications:
 - Fiat: 500 (07~12), Doblo/cargo (05~10), Grand Punto (07~12), Idea (04~12), Linea (07~11), Panda EVO2 (05~11), Punto EVO (09~12).
 - Ford: Ka (09~12).
 - Lancia: Ypsilon (06~11), Musa (05~12).



ST-23143

10PCS - TIMING SETTING TOOL KIT

- replaces the inlet camshaft with an electro / hydraulic system operating the inlet valves.
- including camshaft setting plates, crankshaft locking tool, tensioner adjuster.
- applications: Alfa Romeo: giulietta (2010~2019), Mito (2009~2018).
 - Fiat: Bravo (2010~2015), Punto (2012~2014), Punto EVO (2009~2012).
 - Lancia: Delta (2010~2013).
 - Chrysler: Delta (2011~2013).



ST-23147

17PCS - TIMING SETTING TOOL KIT

- flywheel-crankshaft alignment.
- fuel injection pump shaft adjustment.
- tensioning the timing belt.
- removing crankshaft pulley.
- adjusting camshaft and pump shaft.
- applications:
 - Renault fuel engines: 1.2, 1.4, 1.6, 1.7, 1.8, 2.0, 2.2
 - Renault diesel engine: 1.9, 2.5, 2.8 2.5L. 20V with double camshaft.
- also suitable for Opel Arena / Movano / Volvo V/S 40.



ST-23148

36PCS - TIMING SETTING TOOL KIT

- for adjusting engine timing during timing belt replacement.
- applications:
 - Citroen / Peugeot 16V petrol engines: 1.8, 2.0 16V engine code EW (UX + TU). included HPI engine Model: C5 / 206 / 306 / 406.
 - Citröen / Fiat / Peugeot / Toyota diesel engines: 1.9D, 2.0D, 2.2D engine code DW8, DW10, DW12 HDI (XUD + TUD).
- also suitable for similar engine types in Toyota / Fiat.



ST-25085

9PCS - STEERING WHEEL AND FLYWHEEL PULLER SET

- specialized puller set for steering wheel, pulley and flywheel puller.
- can also be used as a two or three way puller to remove pulleys and flywheel from small engines and snowmobiles.
- works on most vehicle.
- contents:
 - 1pc-forcing screw: \varnothing 10.9mm x 12T. x 125mmL.
 - 2pc-screw: 5/16" - 24NF x 75mmL.
 - 2pc-screw: 3/8" - 16NC x 75mmL. 1pc-adaptor.
 - 2pc-screw: 5/16" - 18NC x 90mmL. 1pc-yoke.



ST-24524

18PCS - STEERING WHEEL AND HARMONIC BALANCE PULLER SET

- specialized puller set for steering wheel, pulley and flywheel puller.
- can also be used as a two or three way puller to remove pulleys and flywheel from small engines and snowmobiles.
- designed to ease the operation of pulling the balancer pulley.
- the most complete harmonic balancer puller.
- reduces damage to both pulley and shaft.
- works on most vehicle.
- contents:
 - 1pc-forcing screw: 10.9 mm (dia.) - 12T x 125mmL.
 - 1pc-forcing screw: 15.5 mm (dia.) - 11T x 140mmL.
 - 2pc-screw: 5/16" - 24NF x 75mmL. 3pc-screw: 3/8" - 24NF x 75mmL.
 - 2pc-screw: 3/8" - 16NC x 75mmL. 3pc-screw: 3/8" - 16NC x 75mmL.
 - 2pc-screw: 5/16" - 18NC x 90mmL. 2pc-adaptor. 2pc-yoke.



ST-29051

TRANSMISSION OIL DIPSTICK - Mercedes Benz

- overall length: 920mmL.
- this oil gauge and dipstick is designed for measuring the oil level of transmission for different vehicle of Mercedes Benz.
- applications: Mercedes W210 W211 available all of E class.
Mercedes W202 W203 W204 available all of C class.
Mercedes W168 W169 available all of A class.
Mercedes W245 available all of B class.
Mercedes W140 W220 available all of S class.



ST-29050

TRANSMISSION OIL DIPSTICK - Mercedes Benz

- overall length: 1,220mmL.
- this oil gauge and dipstick is designed for measuring the oil level on different vehicle of Mercedes Benz.
- applications: Mercedes 722.6 models.



ST-29052

TRANSMISSION OIL DIPSTICK - Mercedes Benz

- overall length: 930mmL.
- this oil gauge and dipstick is designed for measuring the oil level of transmission for different vehicle of Mercedes Benz.
- applications Mercedes: C240, C320, C320 AMG, CLK320, E320, SLK320, SLK320 AMG, C55 AMG, CLK500, CLK55 AMG, E500, E55K AMG, CLS500, CLS55K AMG, S430, S500, S55 AMG, S55K AMG, CL500, CL55 AMG, CL55K AMG, SLK55 AMG, SL500, S600 (2000~2002), E320cdi, ML500, R500 (2006~2007).



ST-29053

TRANSMISSION OIL DIPSTICK - Mercedes Benz

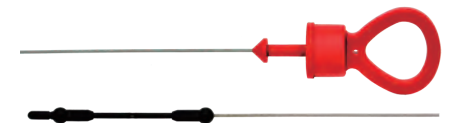
- overall length: 930mmL.
- this oil gauge and dipstick is designed for measuring the oil level of transmission for different vehicle of Mercedes Benz.
- applications Mercedes: 103, 104, 111, 119, 120, 137, 603, 604, 605, 606, 611, 612, 613, 626, 913, 943, 963, 984, 985, 997 engines.



ST-29054

TRANSMISSION OIL DIPSTICK - Audi and VW

- overall length: 695mmL.
- this oil gauge and dipstick is designed for measuring the oil level of transmission for different vehicle of Audi and VW.
- applications Audi: 053115611C 80 (81, 85, B2, 89, 89Q, 8A, B3, 8C, B4) A4 (8D2, B5, 8D5, B5) A6 (4A, C4) / VW: passat (32B, 3B2, 3B5).



ST-29055

TRANSMISSION OIL DIPSTICK - Audi

- overall length: 695mmL.
- this oil gauge and dipstick is designed for measuring the oil level of transmission for different vehicle of Audi.
- applications Audi: 2.0 tfsi, 3.2 fsi, 3.0 supercharged, 4.3 fsi and 2.0 tdi cr, A4, A5, 6 cyl petrol direct injection 3.2 4V engine.



ST-25502

ENGINE LOAD LEVELER

- more available space w/extended fix base for engine rubber damper and metal bush replacement.
- two hooks and chains for securely hoisting all kind of engine and transmission.
- stand on the inner wall and acting as a bridge to support engine.
- adjustable in height and width to bridge all vehicles' fender wall and securely hold engine in place.
- including slider bolt that can be positioned to anywhere on the bar weight balance.



ST-25526

UNIVERSAL ENGINE SUPPORT BAR SET

- highest flexibility thanks to adjustable and flexibly positionable construction.
- easy lifting by special design ACME screw lift.
- hook rotatable and adjustable in longitudinal direction.
- supporting plates height adjustable with non-slip feet.
- secure supporting of engine or transmission.
- assembly and access unhindered below possible, through it to the engine compartment.
- also suitable for light commercial vehicles.
- suitable for timing belt changing, clutch changing etc...



ST-26005

FLEXIBLE FUNNEL PAD

- drain hard-reach oil filter without a mess.
- reshape and reuse thousands of time.
- easy to clean and simple to store.
- nitrile rubber w/aluminum net.
- size: 170 x 370mm x 3.5mm (t.).

ST-29066

4PCS - OIL FUNNEL SET - Audi and VW

- funnel can be directly connected to oil filler necks, eliminating unsafe oil spills.
- engine oil bottles can be put up side down on funnel-hands-free & one person operation.
- large oil passage allows oil to flow down more rapidly.
- lower transparent chamber shows oil flows down to engine.
- applications: Audi: A1, A2, A3, A4, A5, A6, 7, A8, Q2, Q3, Q5, Q6, Q7, Q8, TT. Seat: Alhambra, Arona, Ateca, Ibiza,,Leon, Tarraco, Toledo. Sköda: Fabia, Kamiq, Karoq, Kodiaq, Octavia, Rapid, Scala, Superb, Yeti. VW: Amarok, Arteon, Atlas, Beetle, Caddy CC, Crafter, Golf, Jetta, Scirocco, Polo, Sharan, T-Cross, Tiguan, Touareg, Touran, Transporter, T-Roc.



ST-29067

3PCS - OIL FUNNEL SET - Mercedes Benz and BMW

- funnel can be directly connected to oil filler necks, eliminating unsafe oil spills.
- engine oil bottles can be put up side down on funnel-hands-free & one person operation.
- large oil passage allows oil to flow down more rapidly.
- lower transparent chamber shows oil flows down to engine.
- applications: BMW: 1 series, 2 series, 3 series, 4 series, 5 series, 6 series, 7 series, 8 series, X1, X2, X3, X4, X5, X6, X7, Z3, Z4.

Mercedes: C-class,CLA-class,CL-class,CLK-class,CLS-class,E-class,G-class, GLA-class,GLC-class,GL-class,M-class,GLE-class,GLK-class,GT-4-door, R-class,S-class,SL-class,SLK-class,SLS AMG,Vaneo,Vito, Sprinter.



ST-29068

2PCS - OIL FUNNEL SET - Toyota, Audi, BMW, Mercedes, Volvo and VW

- funnel can be directly connected to oil filler necks, eliminating unsafe oil spills.
- engine oil bottles can be put up side down on funnel-hands-free & one person operation.
- large oil passage allows oil to flow down more rapidly.
- lower transparent chamber shows oil flows down to engine.
- without adaptor for Toyota: 4Runner, Auris, Avalon, Avensis, Carmy, Celica, C-HR, Corolla, Corolla iM, Echo, FJ Cruiser, Hiace, Highlander, IQ, Land Cruiser, Matrix, MR2 Spyder, Prius, RAV4, Sequoia, Sienna, Tacoma, Tundra, Venza, Verso, Yaris.
- with adaptor for: Audi A1, A3, A4, A6, A8, Q7, TT/BMW 1, 3, 5, 6, 7, 8 Series, X3, X5, X6, Z3, Z4, Z8/Mercedes: A-class, B-class, C-class, CLK C208, CLS C219, E-class, G-class, M-class, R-class, S-class/Volvo: 850, S70, S80, V70/VW: Beetle, Bora, Caddy, EOS, CC, Golf, Jetta, LT, Lupo, Multivan, Passat, Phaeton, Polo, Sharan Touareg, Touran.



ST-25117

7PCS - TOPPING UP ENGINE OIL FILLER SET

- topping-up funnel is made of strong plastic with bayonet fitting.
- the funnel with the matching connector adaptor is mounted in place of the sealing cap on the oil filter cap on the valve.
- to prevent unintended dripping oil on the cylinder head, cylinder block, intake manifold / exhaust manifold etc.
- applications: VW-group MQB platform Audi A3/VW Golf 7/Seat Leon 5/Sköda Octavia 3/Dodge: Cummins turbo diesel truck and Neon/Ford: turbo-diesel 6.0. 6.4, 6.9, 7.3/Honda: Accord, Civic, Element, Fit, NSX and S2000 all Acura model/Nissan: model/some Jaguar models/ Mazda/Lexus/Toyota/Scion/ Pontiac Vibe models/Volvo/MB.



ST-26012

SYRINGE FOR VEHICLE FLUID CHANGE

- transparent design to see fluid visually.
- suitable for fluid suction and supply in vehicle service.
- application such as gear oil and differential fluid.
- composite plastic resists to fluid and antifreeze except brake oil.
- capacity: 0.2 litre.



ST-26013

SYRINGE FOR VEHICLE FLUID CHANGE

- transparent design to see fluid visually.
- suitable for fluid suction and supply in vehicle service.
- application such as gear oil and differential fluid.
- composite plastic resists to fluid and antifreeze except brake oil.
- capacity: 1.5 litre.



ST-26018

SYRINGE FOR VEHICLE DIESEL FLUID CHANGE

- for retrieving excess fuels from the fuel lines.
- suitable for engine oil, gear oil, antifreeze and water.
- suitable to add or remove diesel fuel from filters, etc.
- composite plastic resists to fluid and antifreeze except brake oil.
- 5pc-adaptor: $\varnothing 8\text{mm} \sim 8\text{mm}$ (o.d.), $\varnothing 10\text{mm} \sim 8\text{mm}$ (o.d.),
hose connector $\sim \varnothing 8\text{mm}$ (o.d.), 2pc- $\varnothing 10\text{mm}$ (o.d.) $\sim 5/16"$ (i.d.).
- connecting hose $\varnothing 10\text{mm}$ (o.d.) x 395mmL.
- capacity: 1.5 litre.



ST-26017

3PCS - UNIVERSAL ATF REFILL TANK SET

- 3 liter tank with a manual pump for easy refilling gearbox oil.
- provided with 2 adaptors (a soft tube type and a hook type) for fitting most automatic transmission / gear box fill plug holes.
- hose with internal wire spring does not get kinked.
- cap on the tank side for pouring new ATF / gearbox oil into the tank.
- pressure release button for enhanced safety.
- capacity: 3.0 litre.



ST-26014

MANUAL OPERATION FLUID EXTRACTOR

- three air outlet with check valve design on handle for easy and quick to release air pressure from the extractor.
- easy to operate suitable for engine oil, gear oil, brake fluid, coolant, water ...
- provide w/new decompression valve for easy to release the negative pressure.
- fixing valve and safety cup for automatic cut-off extracting.
- non-spark, non-power fluid extractor.
- include 3pcs nylon tubes can be extracting and non-corrosive fluid.
- include 1.5 meter silicone hose with one touch controller and universal rubber adapter, can fits to most type brake fitting.
- capacity: 9.5 litre.



ST-26015

MANUAL OPERATION FLUID EXTRACTOR

- easy to operate suitable for engine oil, gear oil, brake fluid, coolant, water ...
- provide w/new decompression valve for easy to release the negative pressure.
- fixing valve and safety cup for automatic cut-off extracting.
- non-spark, non-power fluid extractor.
- include 3pcs nylon tubes can be extracting and non-corrosive fluid.
- include 1.5 meter silicone hose with one touch controller and universal rubber adapter, can fit to most type brake fitting.
- capacity: 7.5 litre.

ST-26016

MANUAL AND PNEUMATIC FLUID EXTRACTOR

- this machine is designed for the extraction of all type of engine, transmission & lubricating oils from car, motorcycle, marine engine and industrial machinery.
- available with manual or pneumatic operation.
- venturi system design to provide excellent performance.
- suitable also for low viscosity fluid such as water.
- include 2pcs tubes (1pc nylon and 1pc PVC) can be extracting and non-corrosive fluid.
 - capacity: 7.5 litre.

ST-25105

MANUAL AND PNEUMATIC FLUID EXTRACTOR

- this machine is designed for the extraction of all type of engine, transmission & lubricating oils from car, motorcycle, marine engine & industrial machinery.
- available with manual or pneumatic operation.
- venturi system design to provide excellent performance.
- suitable also for low viscosity fluid such as water.
- include 4pcs nylon tubes can be extracting and non-corrosive fluid.
- capacity: 9.5 litre.

ST-25525

6PCS - 12 VOLT ELECTRIC OIL EXTRACTOR SET

- electric oil suction tool set powered by 12V. Battery (not included), easy to use, and no need for air compressor.
- special level detection mechanism that shuts off the pump automatically when fluid level reaches to 4.3 L. to prevent the tank from being overfilled.
- tank made by special materials that can be made transparent, heat resistant and suitable for extracting engine oil, coolant and ATF.
- extension tubes with outer diameters in 4, 6 and 8mm, suitable for oil dipstick tubes on different car makes.
- total tube length 2,700mm can reach oil dipsticks on tall engine bays on SUV, pickups and light trucks.
- extension tube storage system & tank lid can be detached easily for cleaning purposes.
- sturdy round base that holds the tank in place and avoid wobbling.
- 12V. Alligator battery clips total length: 150cmL.
- tank capacity: 5.5 Liter.

ST-25521

MANUAL OPERATION TRANSMISSION FILLING SYSTEM

- manual operated pump to fill seal transmission system.
- standard and optional adaptors cover all CVT and DSG design.
- pump stroke to minimize leakage when reaching overflow point.
- fluid control valve to shut off dispensing immediately.
- large transparent tank to see through fluid level.
- capacity: 7.5 liter.
- applications:
Ford / BMW / Honda / Nissan / VW / Audi / Porsche / Mini Cooper / Audi CVT / Mercedes 722. 9, DSG.

ST-25522

MANUAL OPERATION TRANSMISSION FILLING SYSTEM

- manual operated pump to fill seal transmission system.
- standard and optional adaptors cover all CVT and DSG design.
- pump stroke to minimize leakage when reaching overflow point.
- fluid control valve to shut off dispensing immediately.
- large transparent tank to see through fluid level.
- capacity: 9.5 liter.
- applications: Ford / BMW / Honda / Nissan / VW / Audi / Porsche / Mini Cooper / Audi CVT / Mercedes 722.9, DSG.



ST-25523

MANUAL OPERATION TRANSMISSION FILLING SYSTEM

- manual operated pump to fill seal transmission system.
- standard and optional adaptors cover all CVT and DSG design.
- pump stroke to minimize leakage when reaching overflow point.
- fluid control valve to shut off dispensing immediately.
- large transparent tank to see through fluid level.
- capacity: 4 liter.
- applications: Ford / BMW / Honda / Nissan / VW / Audi / Porsche / Mini Cooper / Audi CVT / Mercedes 722.9, DSG.



ST-25524

MANUAL OPERATION TRANSMISSION FILLING SYSTEM

- manual operated pump to fill seal transmission system.
- standard and optional adaptors cover all CVT and DSG design.
- pump stroke to minimize leakage when reaching overflow point.
- fluid control valve to shut off dispensing immediately.
- large transparent tank to see through fluid level.
- capacity: 5 liter.
- applications: BMW / Honda / Nissan / Audi / Porsche / Mini Cooper / Audi / Ford CVT / Mercedes 722.9, DSG / Volvo / Toyota Lexus / Sköda / VW Passat, Tiguan (after 2007).



ST-24565

FLUID ROTARY HAND PUMP

- the most worldwide popular pump.
- comes with three suction tube and discharge spout.
- tube size $\varnothing 1$ ".
- non-leak fitting.
- use with: machine oil, lubricant, diesel, kerosene, heating oil, motor oil.



ST-29072

5PCS - PLASTIC OIL DRAIN PLUGS KIT

- required for proper removing and installing of the special plastic oil drain plug at plastic oil pan.
- contents: 1pc - assembly T-handle. 4pc - plastic oil drain plug.
- applications: Ford C-max (2015~), Focus (2014~), Galaxy (2015~), Kuga (2014~), Mondeo (2014~), S-max (2015~), Edge (2015~), Escape (2014~)/Peugeot 308 (2013~), 508 (2014~), 3008 (2009~), 5008 (2009~), Traveller (2016~), Expert (2013~)/Opel /Vauxhall Grandland X (2017~)/Citroën C4 (2013~), C5 (2009~), DS4 (2014~2015), DS5 (2013~2015), Jumpy(2016~), Space Tourer (2016~)/Toyota Proace Verso (2016~)/Mercedes M176, M177, M178 (2015~2018), M276 (2014~2018) OM642 (2013~), OM651 (2013~2018), OM654 (2016~2017)/BMW F07, F10, F11, F18, F20, F21, F22, F23, F30, F31, F32, F33, F34, F35, F36, F80, F82, F83, F87, E84, E89/VAG Beetle, Caddy, CC, Golf, Jetta, Passat, Polo, Scirocco, sharan, Tiguan, Touran/Audi A1, A3, A4, A5, A6, A7, Q3, Q5, Q7, TT, TTS/Sköda Ibiza Octavia, Rapid, Superb, Yeti/Seat Alhambra, Leon, Toledo 4/Carrera 4S 3.0L. (2017~),/Porsche 911 Carrera, Carrera S 3.0L (2017~), 911 Carrera Rapid, 911 Targa 4, Targa 4S 3.0L. (2017~), Macan 2.0L. (2017~).



ST-29048

5PCS - PLASTIC OIL DRAIN PLUGS KIT

- required for proper removing and installing of the special plastic oil drain plug at plastic oil pan.
- contents: 1pc - assembly T-handle. 4pc - plastic oil drain plug.
- applications: VW golf VII (2013~), jetta hybrid / Seat: leon (2013~) / Sköda: octavia 3, superb 3, yeti, rapid / Audi: A1, A3, A4, A5, Q5 ..



ST-24646

UNIVERSAL RADIATOR DRAIN PLUG SOCKET

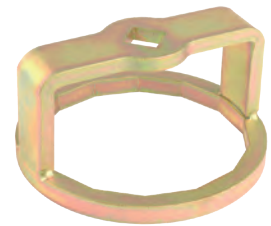
- double slotted end (3mm x 5mm) will fit most radiator drain plug that have thumb wings.
- cooling: remove / install radiator drain plugs that have thumb wings.
- reach into confined areas.
- operation with 17mm spanner or 3/8" dr. ratchet handle.



ST-29073

FUEL TANK LOCKING RING REMOVAL TOOL - Mercedes Benz

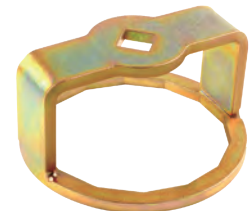
- used for the diesel / oil filter housing cap with 84mm / 14 flats Mercedes Benz.
- this tool is operated with 1/2" dr. ratchet wrench.
- applications: diesel filter A-class (W177), B-class (W247), C-class (W205, A205, C205, S205) C-class (W206), CLA (C118, W118, X118), CLS (C257), E-class (W/S213, A/C238), G-class (W463), GLA (h247), GLB (X247), GLC-coupe (X253, C253), GLE Sprinter III (907-coupe, GLS(w167), S-class (W, C, V223), S-class, coupe, cabrio (W222, A, C217, C4313910, V-class II (447), Vito III (447).
- applications:
oil filter C-class (W203, C203, S203), /C-class (W204, /C204, / S204), CLK (A/C209), CLS shooting brake (C/X218), CLS (C219), E-class (W/ S211) / E-class (W / S212), E-class couple, cabriolet (A / C207), E-class, cabrio (W/S213,A/C2380) G-class (W461, 463), GL (X164), GL, GLS (X166), GLC coupe (X253, C2530, GLE (W166), GLE-coupe (C292), GLK (X204), M-class (W164), M-class (W166), R-class (W251), S-class(W221), S-class coupe/cabrio (W222, A/C217)/Sprinter II (906), Sprinter III (907, 910), Viano (639), Vito II (639) X-class (W470).



ST-29074

FUEL TANK LOCKING RING REMOVAL TOOL - Hyundai and Kia

- used for the oil filter housing cap with 80mm / 14 flats Hyundai and Kia.
- this tool is operated with 1/2" dr. ratchet wrench.
- suitable for Hyundai / Kia 1.6L. U3 CRDi (D4FE) diesel engine from 2018.
- applications:
Hyundai: Tucson, Kona, i40, i30.
Kia: Sportage, Stonic, Soul, Ceed, ProCeed, Optima.



ST-29057

13PCS - FUEL TANK LOCKING RING REMOVAL TOOL SET

- suitable for Toyota, Lexus, Scion and Honda vehicles.
- this tool is operation with 1/2" dr. ratchet wrench.
- achieving exactly the right pressure and placement.
- applications: Toyota: 4runner, Auris, Avensis, Camry, Celica, Corolla, Crown, FJ, Etios, Cruiser, Hiace, Highlander, Land Cruiser, Lfa, Mark x, Mr2, Porte, Previa, Prius, Prius C/Ractis, Rav4, Sai, Tacoma, Vios, Yaris/Lexus CT200h, GS300, GS350, GS430, GS460, HS250h, IS200, IS250, IS350, IS430, IX570, RX200t, RX270, RX330, RX350, RX400h, RH450h/Scion IM, TC, XA, XB, XD, Honda: Accord, City, Civic, CRV, Fit, Legend, Odyssey, type R.



ST-29044

17PCS - 3/8" DR. OIL DRAIN PLUG KEY SET

- remove and tighten sump plugs including those on VW / Audi vehicles with security nut. comprehensive set of chrome vanadium steel keys.
- ideal for removing and tightening different type of sump plugs on engine, gearbox and back axle.
- suitable for use with a 3/8" dr. tool.
- square (S): 8, 9.5, 10, 10.5, 11, 12 and 13.1mm.
- hex (H): 8, 9, 10, 12, 13, 14 and 17mm.
- square hole (XS): 10mm.
- triangle (XT): 10mm.
- star (M): 16mm.



ST-29076

15PCS - 3/8" DR. OIL DRAIN SOCKET SET

- set for removing transmission, gear oil and differential drain nuts.
- includes a T-bar handle.
- contents and applications:

hex. 8mm: BMW/Ford/GM.	hex. 9mm: GM.
hex. 9.5mm: Morris/Lancia Beta.	hex. 10mm: Ford/Toyota.
hex. 12mm: Fiat/Lancia/Peugeot.	hex. 14mm: Lancia/Mercedes.
hex. 17mm: Audi/BMW/Lancia/VW.	triangle 3/8": Renault.
square 8mm: Citroën/Peugeot/Renault/Volvo.	square 11mm: Ford.
square 12mm: Toyota.	square 13mm: Nissan/Subaru.
square 9.5mm: Honda/Mazda/Peugeot/Saab/Volvo.	
internal square 10mm: BMW/Ford/Renault/Toyota.	



ST-24046A

225 C.C. METAL OILER

- color of container: red.
- material of spout: aluminum.
- double-action brass pump with steel ball valve.
- container capacity: 225 ml.



ST-24046B

225 C.C. METAL OILER

- color of container: red.
- material of spout: pvc.
- double-action brass pump with steel ball valve.
- container capacity: 225 ml.



ST-24047A

350 C.C. METAL OILER

- color of container: red.
- material of spout: aluminum.
- double-action brass pump with steel ball valve.
- container capacity: 350 ml.



ST-24047B

225 C.C. METAL OILER

- color of container: red.
- material of spout: pvc.
- double-action brass pump with steel ball valve.
- container capacity: 350 ml.



ST-24048A

500 C.C. PLASTIC OILER

- color of container: red.
- material of spout: aluminum.
- double-action brass pump with steel ball valve.
- container capacity: 500 ml.



ST-24048B

500 C.C. PLASTIC OILER

- color of container: red.
- material of spout: pvc.
- double-action brass pump with steel ball valve.
- container capacity: 500 ml.



ST-26001

6.6 L. OIL DRAIN PAN

- features anti-splash lip that contains fluid when carrying or pouring.
- large handle and enclosed pouring spout makes easy work of returning oil / fluid to recycling container.
- dimension: L 435mm. / W 395mm. / H 110mm.
- capacity: 6.6 litre.



ST-26002

8.0 L. OIL DRAIN PAN

- features anti-splash lip that contains fluid when carrying or pouring.
- large handle and enclosed pouring spout makes easy work of returning oil / fluid to recycling container.
- dimension: L 502mm. / W 400mm. / H 132mm.
- capacity: 8.0 litre.



ST-26003

16 L. OIL DRAIN PAN

- features anti-splash lip that contains fluid when carrying or pouring.
- large handle and enclosed pouring spout makes easy work of returning oil / fluid to recycling container.
- dimension: L 582mm. / W 472mm. / H 156mm.
- capacity: 16 litre.



ST-26004

24 L. OIL DRAIN PAN

- features anti-splash lip that contains fluid when carrying or pouring.
- large handle and enclosed pouring spout makes easy work of returning oil / fluid to recycling container.
- dimension: L 820mm. / W 540mm. / H 190mm.
- capacity: 24 litre.



ST-26006

6 L. OIL DRAIN PAN AND RECYCLING STORAGER

- purpose-made for the recovery of oil and antifreeze.
- this pan helps to keep the workshop floor free from oily residue and aid return of oil to recycling containers with min. risk of spill or splash.
- large handle position to aid carrying and pouring.
- resistant to most chemical and solvent.
- dimension: L 427mm. / W 292mm. / H 126mm.
- capacity: 6 litre.



ST-26007

10 L. OIL DRAIN PAN AND RECYCLING STORAGER

- purpose-made for the recovery of oil and antifreeze.
- this pan helps to keep the workshop floor free from oily residue and aid return of oil to recycling containers with min. risk of spill or splash.
- large handle position to aid carrying and pouring.
- resistant to most chemical and solvent.
- dimension: L 567mm. / W 321mm. / H 126mm.
- capacity: 10 litre.



ST-26008

17 L. OIL DRAIN PAN AND RECYCLING STORAGER

- purpose-made for the recovery of oil and antifreeze.
- this pan helps to keep the workshop floor free from oily residue and aid return of oil to recycling containers with min. risk of spill or splash.
- large handle position to aid carrying and pouring.
- resistant to most chemical and solvent.
- dimension: L 671mm. / W 380mm. / H 138mm.
- capacity: 17 litre.



OIL FILTER WRENCH

ST-24548A capacity: ø60~90mm.

ST-24548B capacity: ø85~115mm.

- three-position slip joint design quickly adjusts to size.
- right-angle teeth grip while turning in either direction.
- long handle reach into tight space.
- fits most of oil filter.



3-STEP OIL FILTER WRENCH

ST-24550A capacity: ø60~75mm.

ST-24550B capacity: ø75~95mm.

ST-24550C capacity: ø95~115mm.

- jaw have multiple teeth designed.
- drop forged steel construction.
- the automatic action clamping ring has a serrated inner surface for a secure grip.
- fits most of oil filter.



METAL BAND OIL FILTER WRENCH

ST-24600A capacity: ø60~73mm.

ST-24600B capacity: ø73~85mm.

ST-24600C capacity: ø85~95mm.

ST-24600D capacity: ø95~111mm.

- get into tight engine bay spot and grip on the dirtiest of filter.
- extra-thick yoke for added strength, can be applied at 180° to the filter.
- wide dimpled band securely grips filter without crushing.
- fits most of oil filter.



METAL BAND OIL FILTER WRENCH

ST-24693A capacity: ø64~110mm.

ST-24693B capacity: ø110~150mm.

- the oil filter wrench designed to remove filters without damage.
- soft grip handle with twist adjuster.
- wide dimpled band securely grips filter without crushing.
- fits most of oil filter.



METAL BAND OIL FILTER WRENCH

ST-24694A capacity: ø65~105mm.

ST-24694B capacity: ø110~155mm.

- the oil filter wrench designed to remove filters without damage.
- soft grip handle with twist adjuster.
- wide dimpled band securely grips filter without crushing.
- fits most of oil filter.



HEAVY-DUTY CHAIN OIL FILTER WRENCH

ST-24655A capacity: ø60~115mm.

ST-24655B capacity: ø60~170mm.

- this wrench is made of steel and is a universal one of most of the metal oil filter.
- it is used to unscrew the oil filter where there is limited access.
- fits most of oil filter.



ST-24006

3/8" DR. SPIDER OIL FILTER WRENCH

- gear-driven and heat-treated leg will handle high torque application.
- removes filter from ø63~102mm.
- (m) 3/8" dr. x (f) 1/2" dr. adaptor included.
- use with 3/8" or 1/2" dr. ratchet handle or 21mm spanner.



ST-24563

3/8" DR. SPIDER OIL FILTER WRENCH

- gear-driven and heat-treated leg will handle high torque application.
- removes filter from $\varnothing 45\sim 111\text{mm}$.
- (m) 3/8" dr. x (f) 1/2" dr. adaptor included.
- use with 3/8" or 1/2" dr. ratchet handle or 21mm spanner.

**1/2" DR. UNIVERSAL OIL FILTER WRENCH**ST-24691A capacity: $\varnothing 60\sim 80\text{mm}$.ST-24691B capacity: $\varnothing 80\sim 115\text{mm}$.

- special designed to remove and tighten most of oil filter.
- quick and easy to change the direction.
- steel jaw grip filter without slipping.
- use with 1/2" dr. ratchet wrench or (A) 21mm (B) 22mm spanner.



ST-24564

3/8" DR. UNIVERSAL OIL FILTER WRENCH

- special designed to remove and tighten most of oil filter.
- quick and easy to change the direction.
- steel jaw grip filter without slipping.
- removes filter from $\varnothing 61\sim 97\text{mm}$.
- use with 3/8" dr. ratchet wrench.



ST-24585

3/8" DR. ALUMINUM OIL FILTER WRENCH - Mercedes Benz and Dodge

- 14 flutes x 84.4mm x 3/8" dr. x 46mm (h.).
- max. torque: 25 Nm.
- use with 3/8" dr. ratchet handle or 27mm spanner.
- applications Dodge: Sprinter 2007~2018.
Jeep: Cherokee with 3.0L V6 diesel engines 2007.
Mercedes: OM642 V6 diesel 2007~2018.



ST-24586

3/8" DR. ALUMINUM OIL FILTER WRENCH - Land Rover

- 15 flutes x 90.2mm x 3/8" dr. x 66mm (h.).
- max. torque: 25 Nm.
- use with 3/8" dr. ratchet handle or 27mm spanner.
- applications Land Rover: LR4 2014~2019.
Range Rover: 2014~2019, Sport 2015~2019.



ST-24587

3/8" DR. ALUMINUM OIL FILTER WRENCH - Toyota and Lexus

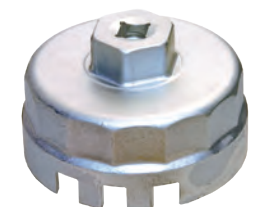
- 14 flutes x 64.5mm x 3/8" dr. x 47mm (h.).
- max. torque: 25 Nm.
- use with 3/8" dr. ratchet handle or 27mm spanner.
- applications Toyota: 4 Runner 2010~2016, Avalon 2006~2018, Camry 2006~2018, RAV 4, Highlander 2008~2018, Land Cruiser 2008~2017, 2010~2018, Sequoia 2008~2017, Sienna 2007~2019
Lexus: IS460 2007~2017, LX570 2008~2017, RX350 2007~2018.



ST-24588

3/8" DR. ALUMINUM OIL FILTER WRENCH - Toyota

- 14 flutes x 64.5mm x 3/8" dr. x 47mm (h.).
- max. torque: 25 Nm.
- use with 3/8" dr. ratchet handle or 27mm spanner.
- applications Toyota: Camry 4 cyl 1990~2015, Corolla 2009~2015, Matrix 2009~2015, Prius 2007~2018, Tundra 2007~2008...



ST-24589

3/8" DR. ALUMINUM OIL FILTER WRENCH - Hyundai and Kia

- 15 flutes x 88.8mm x 3/8" dr. x 51mm (h.).
- max. torque: 25 Nm.
- use with 3/8" dr. ratchet handle or 27mm spanner.
- applications: Hyundai Azera 2005~2010, Entourage 2006~2008, Genesis 2008~2014, Santa Fe 2006~2009/Kia: Amanti 2007~2009, Sedona 2007~2008, Sorento 2007~2009.



ST-24590

3/8" DR. ALUMINUM OIL FILTER WRENCH - Volvo

- 16 flutes x 86.6mm x 3/8" dr. x 74.5mm (h.).
- max. torque: 25 Nm.
- use with 3/8" dr. ratchet handle or 27mm spanner.
- applications: Volvo S60 2006~2009, S80 2006~2010, V70 2006~2007, XC70 2006~2007, XC90 2006~2014...



ST-24591

3/8" DR. ALUMINUM OIL FILTER WRENCH - BMW

- 16 flutes x 86.6mm x 3/8" dr. x 54mm (h.).
- max. torque: 25 Nm.
- use with 3/8" dr. ratchet handle or 27mm spanner.
- applications: BMW 320i x Dr. 2013~2016, 328i GT x Dr. 2014~2016, 335i x Dr. 2007~2015, 428i x Dr. 2014~2016, 535i x Dr. 2008~2016, 640i x Dr. 2012~2018, Active Hybrid 52012~2016, M2 2016~2019, M3, M4 2015~2018, X5, X6 2007~2018.



ST-24592

3/8" DR. ALUMINUM OIL FILTER WRENCH - Ford and Mazda

- 14 flutes x 74.2mm x 3/8" dr. x 46mm (h.).
- max. torque: 25 Nm.
- use with 3/8" dr. ratchet handle or 27mm spanner.
- applications: Ford Galaxy 2006~2015, Mondeo V Turnier 2015~2019, Ranger 2011~2019, S-Max 2006~2014 / Mazda: 6 Break 2013~2019.



ST-24593

3/8" DR. HEXAGON OIL FILTER WRENCH - BMW Chevrolet GMC and Ford

- Hex 27mm x 3/8" dr. x 30mm (h.).
- oil filter wrenches made of sturdy forged steel.
- work with a 3/8" dr. ratchet wrench.
- suitable for cartridge oil filter housings with a hex on top.
- applications: BMW 328d (F30) 2014~2017, 535d (F10) 2014, 2017/Chevrolet: Colorado Diesel 2016~2019/GM: Canyon Diesel 2016~2019/ Ford: Focus TDCi 2004~2011.



ST-24594

3/8" DR. HEXAGON OIL FILTER WRENCH - Audi Porsche and VW

- Hex 32mm x 3/8" dr. x 31mm (h.).
- oil filter wrenches made of sturdy forged steel.
- work with a 3/8" dr. ratchet wrench.
- suitable for cartridge oil filter housings with a hex on top.
- applications: Audi A3 2015~2016, A8 2014~2015, Q5 2014~2015. Porsche Cayenne Diesel 2013~2015 VW Beetle, Golf, Jetta, Passat 2015~2016, Touareg 2013~2016.



ST-24595

3/8" DR. HEXAGON OIL FILTER WRENCH - BMW Ford and VW

- Hex 36mm x 3/8" dr. x 32mm (h.).
- oil filter wrenches made of sturdy forged steel.
- work with a 3/8" dr. ratchet wrench.
- suitable for cartridge oil filter housings with a hex on top.
- applications: BMW 710iL 1993~2001, 540i 1997~2003, X5 2000~2003. Ford F250 2003~2007, F350 2003~2007. VW Beetle 2006~2013, Golf 2010~2013, Jetta 2005~2013, Passat 2007~2013.



ST-24668

3PCS - 3/8" DR. HEXAGON OIL FILTER CAP WRENCH SET

- a comprehensive set oil filter wrench for removing both cartridge oil filter cover and oil filter canister.
- work with a 3/8" dr. ratchet wrench.
- suitable for cartridge oil filter housings with a hex on top.
- contents and applications:
27mm: BMW / Mini / Citroën / Peugeot / Fiat / Ford / Mercedes / Renault.
32mm: BMW 3 series E90, 5 series E60 / VAG.
36mm: BMW / Ford F series / VAG / Volvo.



ST-24669

5PCS - 3/8" DR. HEXAGON OIL FILTER CAP WRENCH SET

- a comprehensive set oil filter wrench for removing both cartridge oil filter cover and oil filter canister.
- work with a 3/8" dr. ratchet wrench.
- suitable for cartridge oil filter housings with a hex on top.
- contents and applications:
24mm: BMW / Mini / Chevrolet / Chrysler / Opel.
27mm: BMW/Mini/Citroën/Peugeot/Fiat/Ford Europe/Mercedes/Renault.
32mm: Audi / VW / BMW 3-series E90, E91, 5-series E60, E61.
36mm: Audi / VW / BMW / Ford F-series / Volvo.
38mm: Opel / Vauxhall Vectra 2.0 CDTI.



ST-24670

7PCS - 3/8" DR. HEXAGON OIL FILTER CAP WRENCH SET

- a comprehensive set oil filter wrench for removing both cartridge oil filter cover and oil filter canister.
- work with a 3/8" dr. ratchet wrench.
- suitable for cartridge oil filter housings with a hex on top.
- contents and applications:
24mm: BMW / Mini / Chevrolet / Chrysler / Opel.
27mm: BMW / Mini / Citroën / Peugeot / Fiat / Ford / Mercedes / Renault.
29mm: Dodge Cummins fuel filter housing.
30mm: VW: Polo, Golf / Seat: Ibiza / Skoda: Fabia 1.4 16V. petrol engines.
32mm: BMW 3 series E90, 5 series E60 / VAG.
36mm: BMW / Ford F series / VAG / Volvo.
38mm: Opel / Vauxhall Vectra 2.0 CDTI.



ST-24596

9PCS - 3/8" DR. ALUMINUM OIL FILTER CAP WRENCH SET

- a comprehensive set oil filter wrench for removing both cartridge oil filter cover and oil filter canister.
- work with a 3/8" dr. ratchet wrench or 27mm spanner.
- contents and applications:
27mm: BMW / Chevrolet / GM / Ford. 32mm: Audi / Porsche / VW.
36mm: BMW / Ford / VW. 65.4mm: Toyota.
65.4mm: Toyota / Lexus. 74.2mm: most European.
86.6mm: most European. 88.8mm: Hyundai / Kia.
2 way oil filter wrench 63~83 mm.



ST-24688

9PCS - 3/8" DR. OIL FILTER CAP WRENCH SET

- a comprehensive set oil filter wrench for removing both cartridge oil filter cover and oil filter canister.
- work with a 3/8" dr. ratchet wrench or 21mm spanner.
- contents:
27mm-6 flutes: 1 step. 32mm-6 flutes: 1 step. 36mm-6 flutes: 1 step.
75.6mm-14 flutes: 1 step. 76mm-12 flutes: 1 step. 76mm-14 flutes: 1 step.
86mm-16 flutes: 1 step. 93mm-15 flutes: 1 step. 1pc - 21mm spanner.



ST-24689

9PCS - 1/2" DR. OIL FILTER CAP WRENCH SET

- a comprehensive set oil filter wrench for removing both cartridge oil filter cover and oil filter canister.
- work with a 1/2" dr. ratchet wrench or 21mm spanner.
- contents:

36mm-6 flutes: 1 step.	76mm-14 flutes: 1 step.	106mm-15 flutes: 1 step.
107mm-15 flutes: 1 step.	108mm-15 flutes: 1 step.	108mm-18 flutes: 1 step.
135mm-18 flutes: 1 step.	1pc - 21mm spanner.	1pc - filter strap wrench.



ST-24003

14PCS - 3/8" DR. OIL FILTER CAP WRENCH SET

- a comprehensive set oil filter wrench for removing both cartridge oil filter cover and oil filter canister.
- work with a 3/8" dr. ratchet wrench.
- contents:

65mm-14 flutes: 1 step.	68mm-14 flutes: 1 step.	73mm-14 flutes: 1 step.
76mm-14 flutes: 1 step.	76mm-30 flutes: 1 step.	80mm-15 flutes: 1 step.
90mm-15 flutes: 1 step.	93mm-15 flutes: 1 step.	93mm-36 flutes: 1 step.
100mm-15 flutes: 1 step.	65~67mm-14 flutes: 2 step.	
75~77mm-15 flutes: 2 step.	80~82mm-15 flutes: 2 step.	



ST-24007

24PCS - 3/8" & 1/2" DR. OIL FILTER CAP WRENCH SET

- a comprehensive set oil filter wrench for removing both cartridge oil filter cover and oil filter canister.
- work with a 3/8" or 1/2" dr. ratchet wrench.
- contents: 3/8" dr.

27mm-6 flutes: 1 step.	32mm- 6 flutes: 1 step.	36mm-6 flutes: 1 step.
38mm-6 flutes: 1 step.	86mm-6 flutes: 1 step.	86mm-18 flutes: 1 step.
90mm-15 flutes: 1 step.	92mm-10 flutes: 1 step.	
- contents: 1/2" dr.

66mm-6 flutes: 1 step.	68mm-14 flutes: 1 step.	73mm-14 flutes: 1 step.
76mm-8 flutes: 1 step.	76mm-12 flutes: 1 step.	76mm-14 flutes: 1 step.
76mm-30 flutes: 1 step.	80mm-15 flutes: 1 step.	93mm-15 flutes: 1 step.
93mm-45 flutes: 1 step.	95mm-15 flutes: 1 step.	96mm-18 flutes: 1 step.
100mm-15 flutes: 1 step.	106mm-15 flutes: 1 step.	108mm-15 flutes: 1 step.



ST-24661

23PCS - 1/2" DR. ALUMINUM OIL FILTER CAP WRENCH SET

- a comprehensive set oil filter wrench for removing both cartridge oil filter cover and oil filter canister.
- work with a 1/2" dr. ratchet wrench.
- contents and applications:

64mm x P-14: Toyota/Nissan/Fiat/Daihatsu.	
67mm x P-14: Ford/Mitsubishi/Mazda/Proton/Honda/Subaru.	
73mm x P-15: GM/Chrysler/Mitsubishi.	
74mm x P-14: VW/Mercedes/BMW/Opel/Audi/Austin.	
74mm x P-8: VW/Audi/Seat/BMW/Renault.	
75mm x P-15: GM AC, Wix/Ford/Isuzu.	73mm x P-14: Toyota/Lexus/Nissan.
78.5mm x P-15: Nissan/Ford/Daihatsu.	73mm x P-30: GM/Ford.
78.5mm x P-15: Toyota/Honda/Nissan.	74mm x P-15: Audi/Rover/Chrysler.
84mm x P-18: Peugeot/Citröen/Renault.	86mm x P-14: Mitsubishi/Mazda.
89mm x P-15: Mitsubishi/Toyota/Honda.	91mm x P-15: Nissan/Toyota.
91mm x P-12: Citröen/Peugeot/Renault.	92mm x P-15: Honda/Toyota.
95mm x P-15: Toyota/Alfa Romeo/Ford/Chrysler.	
76mm x P-12: Ford/Mazda/Mitsubishi/Daihatsu.	
91mm x P-15: GM/Ford/Chrysler/Lancia/Fiat.	
101mm x P-15: Mazda/Toyota/Daihatsu/Mitsubishi.	



ST-24004

30PCS - 3/8" DR. OIL FILTER CAP WRENCH SET

- a comprehensive set oil filter wrench for removing both cartridge oil filter cover and oil filter canister.
- work with 3/8" dr. or 1/2" dr. ratchet wrench.
- contents:

65mm-14 flutes: 1 step.	66mm-6 flutes: 1 step.	68mm-14 flutes: 1 step.
73mm-14 flutes: 1 step.	74mm-15 flutes: 1 step.	76mm-8 flutes: 1 step.
76mm-12 flutes: 1 step.	76mm-14 flutes: 1 step.	76mm-30 flutes: 1 step.
78mm-15 flutes: 1 step.	80mm-15 flutes: 1 step.	86mm-16 flutes: 1 step.
86mm-18 flutes: 1 step.	90mm-15 flutes: 1 step.	92mm-10 flutes: 1 step.
93mm-15 flutes: 1 step.	93mm-36 flutes: 1 step.	93mm-45 flutes: 1 step.
95mm-15 flutes: 1 step.	96mm-18 flutes: 1 step.	100mm-15 flutes: 1 step.
106mm-15 flutes: 1 step.	108mm-15 flutes: 1 step.	108mm-18 flutes: 1 step.
65~67mm-14 flutes: 2 step.	74~76mm-15 flutes: 2 step.	
75~77mm-15 flutes: 2 step.	80~82mm-15 flutes: 2 step.	
adaptor:1/2"(F)x3/8"(M).	2 way oil filter wrench 65~120 mm.	



application table

size	applications
27mm - 6 flutes: 1 step.	Mercedes-Smart-Mercedes C230 (4 cylinder) 2003.
32mm - 6 flutes: 1 step.	GM-Opel-vauxhall-GM-ecotec engine-Mercedes hgv engines-Saab-93 2003-Saturn Ion 4c.
36mm - 6 flutes: 1 step.	Mercedes engines om604 om605 om606-BMW engines m52 m60 m62 m70 m73-Ford-Volvo.
38mm - 6 flutes: 1 step.	Opel-Vauxhall Vectra 2 liter diesel engines.
65mm - 14 flutes: 1 step.	Fiat-Champ-Hastings-Wix-Napa-Purolator-Daihatsu-Toyota-Nissan.
66mm - 6 flutes: 1 step.	Fiat-punto 12-Renault-clio 1.2express, Kangoo, Rapid, Twingo.
68mm - 14 flutes: 1 step.	Hastings-Mazda-Ford Escort-Capri-Subaru-Fram ph6607-Motorcraft fl816.
73mm - 14 flutes: 1 step.	Toyota-Lexus.
74mm - 15 flutes: 1 step.	MF-Audi-GM-Rover-Chrysler.
76mm - 8 flutes: 1 step.	Fiat (z.b marea)-Lancia (z.b delta).
76mm - 12 flutes: 1 step.	Fiat (z.b ducato, scudo, ulyse)-Renault (megane, laguna, espace III)-Mercedes.
76mm - 14 flutes: 1 step.	Champion-Champ Lee-Purolator-Mopar-VW-Porsche-Mercedes-BMW-Audi-Opel.
76mm - 30 flutes: 1 step.	Motorcraft only-fl400a-Ford.
78mm - 15 flutes: 1 step.	Nissan #15205h8991-Ford-Toyota-Honda-Accord.
80mm - 15 flutes: 1 step.	Hastings-Fram-Purolator-Nissan-Honda-Motorcraft-Mazda-Isuzu-Subaru-Opel-Toyota.
86mm - 16 flutes: 1 step.	Volvo S40, S60, S70, S80.
86mm - 18 flutes: 1 step.	VW Golf (mk III, tdi, passat tdi)-Audi a6 tdi-Renault (clio, rapid 1.9d laguna,) Citroën-Peugeot
90mm - 15 flutes: 1 step.	Honda Accord-Mitsubishi-Mopar-Isuzu.
92mm - 10 flutes: 1 step.	Cinquecento-Coupe-Croma-Fiat-Panda-Regata-Ritmo Fiat-Seicento-Tempra-Tipo-Lancia.
93mm - 15 flutes: 1 step.	Casite-Champ-Champion-GM-Fram-Hastings-Opel-Mazda-Volvo-Mitsubishi-Purolator-Wix-Nissan-VW-Porsche-Renault-Ford-Honda-Audi.
93mm - 36 flutes: 1 step.	Motorcraft only-fla1a, Fla1b, fl300, fl820/Ford.
93mm - 45 flutes: 1 step.	VW-Audi (tdi 2.4, 2.6, 2.8l.).
95mm - 15 flutes: 1 step.	Toyota #15600-41010-Alfa-GM-Ford-Chrysler.
96mm - 18 flutes: 1 step.	Audi (ar, a6, tdi)-VW (passat 97 tdi)-Renault (laguna 2.2d, safrane 2.2d, espace 2.2d, r19, rapid megane, 1.9/2.1d tdi).
100mm - 15 flutes: 1 step.	Fram-Motorcraft-Wix-Isuzu-Mitsubishi.
106mm - 15 flutes: 1 step.	Fiat (ducato 2.5d. Tdi).
108mm - 15 flutes: 1 step.	Volvo (c70, s70, v70, tdi td) (turbo diesel, 850 tdi diesel).
108mm - 18 flutes: 1 step.	Renault (espace, laguna, master, safrane, trafic 2.4, 2.5, 2.8d, tdi).
65~67mm - 14 flutes: 2 step.	Canada made ph4386, ph4967, ph6017, ph6018-Daihatsu-Toyota.
74~76mm - 15 flutes: 2 step.	Opel-Ford-VW-Mercedes-Fram-AC-Saturn .
75~77mm - 15 flutes: 2 step.	VW-Audi-Casite-GM-AC-Hastings-Wix-Napa-Ford-Isuzu-Mercedes-Opel.
80~82mm - 15 flutes: 2 step.	Wix filters brand for Mazda-Subaru-Toyota-Honda-Acura-Nissan-Napa.

ST-29008

BRAKE CYLINDER HONE

- collar prevents stone breakage.
- sleeve makes insertion in cylinder ease and protects stones when not in use.
- flexible shaft with an adjustable honing tension.
- capacity: \varnothing 19~63mm.



ST-24618

DRUM BRAKE SPRING SERVICE PLIER

- designed to aid installation and removal of brake shoes retaining spring washer found in brake assembly.
- spring loaded; offset jaws enable easy access to the spring washer located behind wheel hub.
- suitable for cars and light commercial vehicle.
- max. angle: 50°.
- total length: 180.5mm.



ST-24581

REAR PARKING BRAKE SPRING TOOL

- this application requires a smaller brake spring tool with more reach.
- special tip is designed to engage the shoe hold down spring cup on Toyota vehicle.
- applications:
2000~current Toyota Camry / Tacoma / FJ Cruiser / Tundra / Land Cruiser.



ST-24597

BRAKE SPRING WASHER TOOL

- the little spring & cup washer that keep your brake shoes flat against the back plate regularly fly across the garage when being installed or removed with plier.
- designed with double-end tool makes it a simple matter of push and turn to either remove or fit them and keeps everything in place.
- fit size: 16 ~ 17mm and 17 ~ 22mm (dia.).



ST-24598

BRAKE RETAINER SPRING TOOL

- the brake spring washer tool removes and installs both large and small brake spring washer.
- fit size: 16 ~ 22mm(dia.).



ST-24599

BRAKE SHOE HOLD-DOWN CLIP TOOL

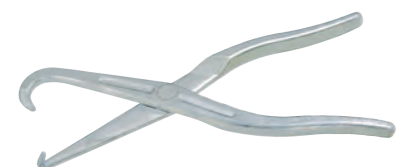
- remove and install the brake clip and nail on brake shoes in seconds.
- set tool head in the brake clip groove.
- push tool to depress brake clip, turn hand 1/4 turn to disengage clip from nail then reverse to install.



ST-24684

DRUM BRAKE SPRING PLIER

- versatile - works on drum brakes for most of cars.
- removal and installation - used to remove and install brake shoe return springs on most drum brakes.
- won't damage springs - installing springs with either the hooked or notched end won't introduce weak points like normal pliers.
- maximum jaw opening 130mm.
- overall length 215mm.



ST-24678

DRUM BRAKE SPRING PLIER

- designed with soft-grip drum brake spring plier used for re-fitting or installing the brake shoe springs.
- for use on light and heavy goods vehicles.
- one end hooks onto the spring, the other grips onto the lining fastened to the brake shoe.
- used on two brake return spring system.
- maximum jaw opening 100mm. ● overall length 320mm.



ST-24679

DRUM BRAKE SPRING PLIER

- versatile - works on drum brakes for most of cars.
- removal and installation - used to remove and install brake shoe return springs on most drum brakes.
- ease of use-socket end removes springs from anchor stud while notched end installs.
- won't damage springs - installing springs with either the hooked or notched end won't introduce weak points like normal pliers.
- maximum jaw opening 130mm. ● overall length 320mm.

**BRAKE LINE BENDING PLIER**

ST-24037A capacity: 3/16" (outside diameter.).

ST-24037B capacity: 3/16" and 1/4" (outside diameter).

- 180° bender - fibre-reinforced construction with full length steel handle inserts, no damage to tubing that can happen with other tools.
- use to make accurate radius and bend in 3/16", 1/4" tubing up to 180°.
- a must-have tool when making your own brake, fuel or transmission lines.
- suitable for steel, aluminium and copper .



ST-24039

BRAKE PIPE BENDING PLIER

- sizes from $\varnothing 4.75\sim 10\text{mm}$ up to 90°.
- with 2 reversible bending from $\varnothing 3/16'' \sim 1/4''$ (o.d.) and $\varnothing 5/16'' \sim 3/8''$ (o.d.) for soft copper pipes.
- all non-ferrous metal pipes as well as thin-walled precision steel pipes and brake lines.
- total length: 260mm.

**INTERNAL AND EXTERNAL BRAKE PIPE DEBURRER**ST-24040A capacity: $\varnothing 1/8''\sim 1-5/8''$ (o.d.).ST-24040B capacity: $\varnothing 3/16''\sim 1-1/2''$ (o.d.).

- used to remove burrs from metal pipes and plastic pipes.
- handy for quick, clean and easy I.D. reaming and O.D. beveling of $\varnothing 3\sim 38\text{mm}$ tube.
- metal body construction with long-wearing alloy steel blade.
- gives fast, professional reaming on copper, aluminium, brass and other types of tubing.



ST-24038

BRAKE PEDAL UNLOCKING PLIER - VAG

- for unlocking the pressure rod of the brake booster from the brake pedal.
- required when replacing the master brake cylinder.
- simple handling.
- use with star bit T-45. ● for use on VAG vehicles.



ST-24667

UNIVERSAL PEDAL DEPRESSOR

- depressor and holds all kind of car and truck's brake and clutch pedal.
- the stepless, extendable design allow the mechanic to adjust the tool in any preferred position.
- the coated U-shaped steel plate can be placed on the steering wheel or the seat firmly.
- this depresses can be extended from 630 to 950mmL.



ST-24628

BRAKE LINING THICKNESS GAUGE

- to offer the accurate measurement of how much brake lining is left without guess work.
- contents: red - 2 / 3mm. yellow - 4 / 5 / 6mm. green - 8 / 10 / 12mm.



BRAKE DISC VERNIER CALIPER

ST-24672A	measuring range: 0~60mm.	jaw length: 55mm.
ST-24672B	measuring range: 0~60mm.	jaw length: 80mm.

- metric graduations only.
- hardened raised measuring tips to allow you to measure over the brake disc lip
- vernier scale lock to allow you to open jaws and retain measurement.
- made of hardened stainless steel. ● resolution - 0.1mm.



ST-24045

2PCS - SUPER SCRAPER SET

- to scrape off old silicone on oil pans, carbon buildup on exhaust manifolds, or rusts on brake calipers.
- finely ground carbide double edges scrape residues off without leaving a damage on the surface.
- premium tungsten carbide tip remains sharp for an extended period of time.
- 17mm (w.) x 4.3mm (t.) blade to clean up more efficiently.
- 32.5mm (w.) x 4.3mm (t.) blade to clean up more efficiently.
- total length: 210mmL.



ST-24035

6PCS - BRAKE DISC RUST REMOVAL TOOL SET

- to remove the rust, corrosion, and lip buildup around the edge of brake disc and hubs.
- the scraper is able to remove the old silicone on oil pans, carbon on exhaust manifolds etc...
- simply fix the handle on the brake disc with the original wheel bolt, hold the scraper on the disc edge, & rotate the handle to remove the rust & corrosion.
- contents:
4pc-washer \varnothing 28mm (o.d.) x \varnothing 15mm (i.d.) x 3mm (t.).
1pc-rotary handle.
1pc-scraper 32.5mm (w.) x 4.3mm (t.).



ST-24625

5PCS - 2-WAY BRAKE DISC MEASURING TOOL KIT

- gauge stand with 3-point connection for the assembly of the bumper.
- gauge stand with magnetic base.
- ideal for identifying of vertical and lateral wobble on the brake disk.
- transverse arm with joint and fine adjustment.
- includes dial gauge and micrometer for identifying wear limit.
- universal usage.
- simple handling.



ST-24622

10PCS - BRAKE CALIPER BLEED VALVE REPAIR TOOL KIT

- no need to replace expensive caliper just because the bleed nipple is broken due to corrosion or damage.
- simply drill out the broken bleed nipple with one of the HSS special drill bit in the kit, then tap a new thread with the matching special tungsten tap and with one of the 4 inserts and bleed nipples.
- contents:
1pc-hand tap HSSG NPT 1/4" x 18 Gg. 2pc-1/4" NPT bleed valve repair set.
1pc-hand tap HSSG NPT 1/8" x 27 Gg. 2pc-1/8" NPT bleed valve repair set.
1pc-HSS countersink triple cutting 90°. 1pc-special drill 8.5mm (dia.).
1pc-HSS-Co twist drill 6.0mm (dia.). 1pc-reamer 11.0mm (dia.).



ST-24620

8PCS - BRAKE MAINTENANCE AND REPAIR TOOL KIT

- this tool set includes the most popular brake tool for servicing, installing, repairing and removing drum brake. Including three different style brake spoons for adjusting drum brake, five different brake spring tools for servicing drum brake shoes.
- contents:

1pc-mini adjustment spoon.	1pc-brake spring installer.
1pc-spring compressor.	1pc-spring removal tool.
1pc-brake retaining spring tool.	1pc-brake spring plier.
	2pc-brake adjustment spoons.



ST-25112

15PCS - BRAKE MAINTENANCE AND REPAIR TOOL KIT

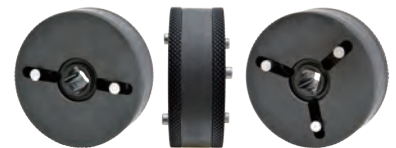
- brake spring pliers for removing and replacing the return spring, forged version.
- brake spring mounting tool, for installation and removal.
- brake cable wrench, double-side cranked version, with reinforced hexagonal opening, 10 x 11mm.
- mounting hook for installing and removing the tension spring, e.g. at the same time.
- applications: Mercedes / VW LT from year of construction 1997.



ST-24022

1/4" DR. BRAKE CALIPER REWIND ADAPTOR

- designed with both side for adjustable 2 and 3 pin piston wind-back adaptor.
- can replace the kits containing up to 20 parts.
- rotate brake piston back into the caliper on vehicle with self adjusting parking brake.
- work with a 1/4" dr. ratchet wrench or breaker bar.
- all range is 20~35mm.
 - fits most of vehicle.



ST-24023

2PCS - 3/8" DR. BRAKE CALIPER REWIND ADAPTOR SET

- designed with 2pcs adjustable 2 and 3 pin piston wind-back adaptor set.
- can replace the kits containing up to 20 parts.
- rotate brake piston back into the caliper on vehicle with self adjusting parking brake.
- work with a 3/8" dr. ratchet wrench or breaker bar.
- all range is 20~35mm.
- fits most of vehicle.



ST-25102

1/2" DR. BRAKE CALIPER PISTON WIND BACK TOOL

- this tool separates piston in the caliper quickly and simply.
- to help pushing the brake caliper piston back squarely with no damage to the piston face.
- spread jaw size: 115 x 50 x 6mm (t.)
- sliding bolt 100mmL.
- T-type sliding bolt with 21mm hex head and insert 1/2" dr.



ST-24503

18PCS - BRAKE CALIPER PISTON WIND BACK TOOL KIT

- master set of adaptors for a wide range of vehicle application.
- suitable for push back and wind-back brake piston.
- includes left and right handed thrust bolt assembly.
- precision made adaptor plate with thrust bolt assembly and reaction plate.
- to prevent the damage on piston and seal.
- applications:
 - Alfa Romeo / Audi / BMW / Citroën / Ford / Honda / Jaguar / Mazda / Renault / Nissan / Mitsubishi / Peugeot / Fiat / Rover / Saab / Mercedes / Seat / Sköda / Subaru / Toyota / Opel / Vauxhall / VW.



ST-24583

21PCS - BRAKE CALIPER PISTON WIND BACK TOOL KIT

- master set of adaptors for a wide range of vehicle application.
- suitable for push back and wind-back brake piston.
- includes left and right handed thrust bolt assembly.
- precision made adaptor plate with thrust bolt assembly and reaction plate.
- to prevent the damage on piston and seal.
- applications:
Alfa Romeo / Audi / BMW / Citroën / Fiat / Mazda / Ford / Jaguar/ Mitsubishi / Honda / Mercedes / Nissan / Rover / Peugeot / Renault / Saab / Seat / Sköda / Subaru / Toyota / Vauxhall / Opel / VW / Audi A8, S9.



ST-24569

37PCS - BRAKE CALIPER PISTON WIND BACK TOOL KIT

- master set of adaptors for a wide range of vehicle application.
- suitable for push back and wind-back brake piston.
- includes left and right handed thrust bolt assembly.
- precision made adaptor plate with thrust bolt assembly and reaction plate.
- to prevent the damage on piston and seal.
- applications:
Audi / Alfa Romeo / Suzuki / Honda / Jaguar / Mitsubishi / Fiat / Mercedes / Nissan / BMW / Rover / Ford / Toyota / Volvo / Mazda / Saab / Subaru / GM / Peugeot / Citroën / Renault / Seat / Lancia / VW / proton / Laguna / Mazda / Mini Cooper.



ST-24621

44PCS - BRAKE CALIPER PISTON WIND BACK TOOL KIT

- master set of adaptors for a wide range of vehicle application.
- suitable for push back and wind-back brake piston.
- includes left and right handed thrust bolt assembly.
- precision made adaptor plate with thrust bolt assembly and reaction plate.
- to prevent the damage on piston and seal.
- applications: Jaguar S type / BMW mini / Citroën / Citroën XM / Alfa Romeo / Audi / Ford / Austin / BMW / GM / Jaguar / Mercedes / Mitsubishi / Nissan / Rover / Opel / Toyota / Subaru / Honda / Saab 9000 / VW golf, passat / Renault / Peugeot / Lancia / Proton / Lincoln.



ST-24504

16PCS - AIR POWERED BRAKE CALIPER PISTON WIND BACK TOOL KIT

- air operated wind-back tool is suitable for left or right hand wind-back operation.
- master set of adaptors suit a wide range of vehicle application.
- suitable for push-back and wind-back brake piston.
- interchangeable adaptor plate with thrust bolt assembly and reaction plate.
- left or right wind-back operation.
- applications: Alfa Romeo / Audi / BMW / Citroën / Fiat / Ford / VW / Honda / Mitsubishi / Jaguar / VW / Mercedes / Mazda / Nissan / Peugeot / Rover / Saab / Seat / Opel / Subaru / Toyota / Volvo.



ST-24582

22PCS - AIR POWERED BRAKE CALIPER PISTON WIND BACK TOOL KIT

- air operated wind-back tool is suitable for left or right hand wind-back operation.
- master set of adaptors suit a wide range of vehicle applications.
- suitable for push-back and wind-back brake pistons.
- interchangeable adaptor plate with thrust bolt assembly and reaction plate.
- left or right wind-back operation.
- applications: Alfa Romeo / Audi / Citroën / Fiat / Ford / Honda / Mitsubishi / Jaguar / BMW / Mazda / Mercedes / Nissan / VW / Peugeot / Rover / Saab / Seat / Opel / GM / Subaru / Toyota / Volvo / Isuzu / Renault / Lancia / Iveco Daily / Mini.



ST-24640

4PCS - BRAKE BLEEDING ADAPTOR SET

- adaptor kit for fitting brake master cylinder caps to introduce brake fluid connected from brake service machines.
- includes 3 specific adaptor and 1 universal adaptor with a fastening chain.
- E20 adaptor with a 90° extension hose and free rotation feature provides unrestricted access to limited spaces.
- E20 extension hose made of brake fluid resistant materials.
- contents and applications:
 - 78.1mm (dia.): universal application with chain fastener.
 - 33mm (dia.): Chrysler/Ford explorer/Hyundai/Mazda 6/Subaru.
 - 79.5mm (dia.) x P3.0: Mitsubishi/Nissan/Subaru/Suzuki/Volvo S40, V40.
 - 46.5mm (dia.) x P3.5: European vehicles/Ford Fiesta, Focus, Galaxy s-max.



ST-24657

13PCS - BRAKE BLEEDING ADAPTOR SET

- this new kit contains master cylinder adaptor which cover domestic vehicles.
- it contains many universal adaptors and manufacturer specific caps. an adaptor is also available to use with traditional pressure bleeders.
- adaptors fit 90% of current master cylinder reservoirs.
- suitable for use with most pressure brake bleeders. includes european cap adaptor, multi vehicle caps, american adaptor.
- applications: GM/BMW/Audi/Mazda/Honda.



ST-23040

NON-POWER BRAKE OIL RECEIVER

- simple way to release the remained brake oil.
- silicone hose with hydraulic brake oil check valve.
- universal rubber adaptor can fit most vehicle brake oil bleeder fitting.
- capacity: 1 liter.



ST-23041

BRAKE OIL BLEEDER

- easy carry and operation with light weight.
- topping up the brake reservoir and bleeding brakes at the same time.
- offset fluid bottle with adjustable neck for easy engine access.
- maintaining fluid level while operation can reduce risk of accidental spillage during topping up.
- airtight fixtures ensures fluid can be stored safely without risk of contamination display packed.
- capacity: 1 liter.



ST-25103

PNEUMATIC BASIC BRAKE OIL EXTRACTOR

- economical - fast and easy, reduce working time.
- versatile - handle most of standard and ABS brake system.
- clean - collects old brake fluid without spillage.
- quiet - integrated silencer for a quieter working environment.
- silicone suction assembly with universal rubber fitting.
- capacity: 2 liter.



ST-25104

PNEUMATIC VACUUM BRAKE FLUID BLEEDER

- air vacuum brake bleeder.
- use standard workshop air supply.
- removing fluid via bleeder is suitable for most of fluid replacement.
- capacity: 1 liter.



ST-23016

VACUUM PUMP AND BRAKE BLEEDING KIT

- this kit includes the vacuum complete fitting accessories for vacuum testing and brake bleeding.
- the vacuum pump is field repairable, replace wrong O-ring, seal and valve with the vacuum pump repair kit.
- attach many kinds of joint to fit most kind of vehicles.
- has the switch to control two kinds of pressure condition.
- pressure range: positive pressure 0~60 psi.



ST-24642

VACUUM PUMP AND BRAKE BLEEDING KIT

- a multi-function kit that provides a vacuum pump for vacuum-related tests and brake bleeding.
- the vacuum-operated system includes intake manifold, auto. transmission, fuel control, exhaust gas recirculation (EGR), air conditioning and heating systems.
- bleeding air in the brake system with this kit can be operated individually, without needing another person depressing the brake pedal while bleeding the air.
- it is suitable for ABS, conventional brake system and power brake system.
- provided with a pack of adaptors for different brake bleeder valves.



ST-25108

BRAKE FLUID TESTER

- suitable for DOT4 brake fluid.
- the brake fluid tester is suitable for determining brake fluid quality.
- recommended testing fluid temperature: 25~32°C.
- working ambient temperature: 0~50°C.
- height above sea level: 2000M.
- humidity: 0~85%.



ST-25109

BRAKE FLUID TESTER

- suitable for DOT3, DOT4 and DOT5 brake fluid.
- the brake fluid tester is suitable for determining brake fluid quality.
- recommended testing fluid temperature: 25~32°C.
- working ambient temperature: 0~50°C.
- height above sea level: 2000M.
- humidity: 0~85%.



ST-25110

BRAKE FLUID TESTER

- suitable for DOT4 brake fluid.
 - press switch to turn on - green LED illuminates to indicate battery OK.
 - immerse probe of the tester into brake fluid.
- | | | |
|--|---|------------------------------|
| green LED = brake fluid H ² O < 1.5% | → | brake fluid OK / battery OK. |
| yellow LED = brake fluid H ² O < 1.5~3% | → | low percentage of water. |
| red LED = brake fluid H ² O > 3% | → | change brake fluid. |



ST-24626

13PCS - WHEEL HUB CLEANER SET

- this tool attacks the rust on lug stud and rotor on the hub.
- assembly faster and easier .
- usable on most of vehicle with either front or rear disc brake.
- shank: hex. 8mm x 30mmL.
- nylon stripping wheel size: 15mm (id) x 39mm (od) x 17mm (t.).
- including 10pcs of stripping wheel.



ST-24606

8PCS - WHEEL STUD CLEANING TOOL KIT

- faster and easier to clean studs.
- only need one tool to fit different sizes of brush.
- quick change brush in 5 seconds.
- this kit is designed to be used with a cordless drill or wrench.
- come with a 1/2" drive adaptor and six brushes.
- brush size: $\varnothing 12 / 13 / 14 / 16 / 22 / 28$ mm.



ST-24627

4PCS - WHEEL HUB CLEANER SET

- designed working with 1/2" dr. cordless or air impact wrench.
- for cleaning the wheel centering device as well as the attachment area between the wheel and hub.
- corrosion between the rim and the wheel hub is removed and torque values can no longer be distorted.
- maximum 1,500 rpm.
- nylon stripping wheel size: $\varnothing 90$ mm (id) x $\varnothing 150$ mm (od) x 13mm (t.).
- including 3pcs of stripping wheel.



ST-24559

6PCS - UNIVERSAL HUB PULLER SET

- removes wheel hubs mounted on tapered axles and press-fit rear drum brakes.
- constructed of heat-treated forged alloy steel and fine-threaded 28mm hex. drive center bolt.
- maximum reach is 200mm bolt circle.
- has readily adjustable sliding arms to pull wheel hubs quickly and easily.
- provides a straight pull - will not distort wheel lugs.
- striking wrench and puller screw included.



ST-24636

10PCS - TWO WAY UNIVERSAL HUB PULLER SET

- this is a 5 leg puller with slide through center bolt forcing screw for impact action plus a 10 ton hydraulic ram with extension pieces.
- removes wheel hubs mounted on tapered axles and press-fit rear drum brakes.
- constructed of heat-treated forged alloy steel and fine-threaded 28mm hex. drive center bolt.
- maximum reach is 200mm bolt circle.
- has readily adjustable sliding arms to pull wheel hubs quickly and easily.
- provides a straight pull - will not distort wheel lugs.
- striking wrench and puller screw included.



ST-24607

10PCS - HYDRAULIC CYLINDER OPERATION REPAIR TOOL KIT

- two specially designed adaptor, accurate and safe guidance of hydraulic cylinder and the clamping nut fixed on the wheel hub bearing tool set center.
- the kit is designed to press out of the universal joint drive shaft and drive shaft.



ST-24682

16PCS - WHEEL HUB / BEARING REPAIR TOOL KIT

- for removing and installing the wheel hub or wheel bearing of built-in parts on car.
- the design prevent damage to the new wheel bearing because it provides safe and accurate centering and alignment when changing wheel bearing.
- for wheel bearing $\varnothing 62\text{mm}$.
- applications: VW Lupo / Audi A2 1.2L.

ST-24683

16PCS - WHEEL HUB / BEARING REPAIR TOOL KIT

- for removing and installing the wheel hub or wheel bearing of built-in parts on car.
- the design prevent damage to the new wheel bearing because it provides safe and accurate centering and alignment when changing wheel bearing.
- for wheel bearing $\varnothing 72\text{mm}$.
- applications:

Audi A1 A2 2000 > .	VW Polo (front) 2002 > .
Seat Cordoba, Ibiza 2002 > .	Sköda Fabia, Roomster 2000 > .

ST-24624

13PCS - WHEEL HUB / BEARING REPAIR TOOL KIT

- for removing and installing the wheel hub or wheel bearing of built-in parts on car.
- the design prevent damage to the new wheel bearing because it provides safe and accurate centering and alignment when changing wheel bearing.
- for wheel bearing $\varnothing 90\text{mm}$.
- applications: Audi A4, S4, A6, S6, A8, S8, R8.

ST-24608

18PCS - WHEEL HUB PULLER KIT

- this kit with the slide hammer can remove wheel hub, half share, brake drum, drive shaft directly in the car.
- a mechanical spindle can press out drive shaft.
- bolt size: M12 x 1.5 t. / M14 x 1.5 t.
- spindle standard: 2-1/4" x 14uns / range: $\varnothing 90\text{--}130\text{mm}$. / $\varnothing 160\text{mm}$ (o.d.)
- applications: VW / Audi / Alfa Romeo / Ford / Citroën / BMW / Mazda / Fiat / Seat / Mercedes / Opel / Peugeot / Renault / Sköda / Porsche.

ST-24609

25PCS - WHEEL BEARING PULLER KIT

- for removing and installing the wheel hub or wheel bearing of built-in parts on car.
- the design prevent damage to the new wheel bearing because it provides safe and accurate centering and alignment when changing wheel bearing.
- for wheel bearing $\varnothing 60\text{--}85\text{mm}$.
- applications: VW / Audi / Seat / Opel / BMW etc.

ST-24610

18PCS - WHEEL HUB / BEARING REPAIR TOOL KIT

- for removing and installing the wheel hub or wheel bearing of built-in parts on car.
- the design prevent damage to the new wheel bearing because it provides safe and accurate centering and alignment when changing wheel bearing.
- for wheel bearing $\varnothing 78\text{mm}$.
- applications: Ford Focus 2 (2004-2007), 2.5RS (2007), 2.5RS 500 (2007), Mondeo 4 (2007), C-max (2003) / Volvo C30 (2006), C70 2 Cabriolet (2006), S40 (2004), V50 (2004) / Mazda M3 (bk) 1.4, 1.6, 1.6D turbo (2003).



ST-24611

18PCS - WHEEL HUB / BEARING REPAIR TOOL KIT

- for removing and installing the wheel hub or wheel bearing of built-in parts on car.
- the design prevent damage to the new wheel bearing because it provides safe and accurate centering and alignment when changing wheel bearing.
- for wheel bearing $\varnothing 85\text{mm}$.
- applications: VW T5, transporter, multivan touareg.



ST-24612

41PCS - WHEEL HUB / BEARING REPAIR TOOL KIT

- for removing and installing the wheel hub or wheel bearing of built-in parts on car.
- the design prevent damage to the new wheel bearing because it provides safe and accurate centering and alignment when changing wheel bearing.
- for wheel bearing diameter: $\varnothing 62\text{mm}$. / $\varnothing 72\text{mm}$. / $\varnothing 85\text{mm}$.
- applications: Audi A2 (1995-05) / VW lupo (1995-05), Polo (2000-02), Fox-2005 T5, transporter, Multivan, Touareg / Seat arosa (1995-05), Cordoba (1995-05), Ibiza (1995-05) / Sköda Fabia, roomster.



ST-32007

WHEEL NUT CAP REMOVER PLIER

- removes chrome-plated lug nut caps found on many heavy-duty truck.
- most ruggedly built remover available can with stand the extra force applied.
- during cap removal won't bend or break under pressure.



ST-32008

WHEEL NUT CAP REMOVER PLIER

- solid, hard to reach cap of wheel bolts / nut pull off without damage and fast.
- enables the damage-free removal of wheel nut cap on aluminum rim.
- applications: Audi / VW / Opel etc.



ST-32045

WHEEL NUT CAP REMOVER TOOL

- storage for 6 caps in the tool keeps them safe ready for replacing after repair.
- this is an ideal tool for busy tyre bays, garage workshops and roadside repair and recovery mechanics etc.
- applications: VW / Audi / Seat / Sköda / vauxhall / opel vehicles.



ST-32003

1/2" DR. LOCKING WHEEL SOCKET - Mercedes Benz

- this socket enables you to permit servicing of customer vehicle, even lost the key.
- material: Cr-Mo steel and black oxide finish.
- size: 17mm x 85mmL.
- applications: installing and removing locks of "Mercedes" only.



ST-32030

3PCS - 1/2" DR. LOCKING WHEEL SOCKET SET

- this socket enables you to permit servicing of customer vehicle, even lost the key.
- material: Cr-Mo steel and black oxide finish.
- thin wall for aluminum wheel use.
- size: 17, 19, 21mm x 85mmL.
- applications: Mercedes/Kia/Hyundai.



ST-32031

3PCS - 1/2" DR. SPLINE LOCKING WHEEL SOCKET SET

- this socket enables you to permit servicing of customer vehicle, even lost the key.
- material: Cr-Mo steel and black oxide finish.
- thin wall for aluminum wheel use.
- size: 17, 19, 21mm x 85mmL.
- applications: VW/Audi/Sköda.



ST-32002

23PCS - LOCKING WHEEL NUT KEY SET - VAG

- this socket enables you to permit servicing of customer vehicle, even lost the key.
- material: Cr-Mo steel and chrome finish.
- 1pc-1/2" dr. deep socket x 17mm.
- 22pc-wheel lock adaptor:

51/6PT	52/7PT	53/8PT	54/9PT
55/10PT	56/11PT	57/12PT	58/13PT
59/14PT	60/15PT	61/16PT	
62/17PT	0/10PT.	1/11PT	2/13PT
3/14PT	4/15PT	5/16PT	
6/17PT	7/19PT	8/20PT	9/21PT
- applications: installing and removing locks of "VAG" only.

ST-32009

20PCS - LOCKING WHEEL NUT KEY SET - BMW

- this socket enables you to permit servicing of customer vehicle, even lost the key.
- material: Cr-Mo steel and chrome finish.
- 20pc-wheel lock adaptor:

#41	#42	#43	#44	#45	#46	#47	#48	#49	#50
#51	#52	#53	#54	#55	#56	#57	#58	#59	#60
- applications: installing and removing lock of "BMW" only.

ST-32011

20PCS - LOCKING WHEEL NUT KEY SET - VW

- this socket enables you to permit servicing of customer vehicle, even lost the key.
- material: Cr-Mo steel and chrome finish.
- 20pc-wheel lock adaptor:

#521	#522	#523	#524	#525	#526	#527	#528	#529	#530
#531	#532	#533	#534	#535	#536	#537	#538	#539	#540
- applications VW: Beetle, EOS, Jetta, Passat, Tiguan, Golf, GTI's in the production years 2006~2012.

ST-32012

21PCS - LOCKING WHEEL NUT KEY SET - BMW

- this socket enables you to permit servicing of customer vehicle, even lost the key.
- material: Cr-Mo steel and chrome finish.
- 1pc-1/2" dr. wheel lock socket 17 mm x 85 mmL.
- 20pc-wheel lock adaptor:

11/15PT	12/14PT	13/16PT	14/12PT
15/11PT	16/10PT	17/7PT	18/13PT
19/8PT	20/9PT		
30/13PT	31/15PT	32/16PT	33/17PT
34/18PT	35/19PT		
36/20PT	37/21PT	38/22PT	40/23PT
- applications: installing and removing locks of "BMW" only.

ST-32013

20PCS - LOCKING WHEEL NUT KEY SET - PORSCHE

- this socket enables you to permit servicing of customer vehicle, even lost the key.
- material: Cr-Mo steel and chrome finish.
- 20pc-wheel lock adaptor:

				ABC50	ABC51
ABC52	ABC53	ABC54	ABC55	ABC56	ABC57
ABC58	ABC59	ABC60	ABC61	ABC62	ABC63
ABC64	ABC65	ABC66	ABC67	ABC68	ABC69
- applications: installing and removing locks of "Porsche" only.

ST-32014

20PCS - LOCKING WHEEL NUT KEY SET - AUDI

- this socket enables you to permit servicing of customer vehicle, even lost the key.
- material: Cr-Mo steel and chrome finish.
- 20pc-wheel lock adaptor:

#801	#802	#803	#804	#805	#806	#807	#808	#809	#810
#811	#812	#813	#814	#815	#816	#817	#818	#819	#820
- applications: installing and removing locks of "Audi" only.



ST-32015

30PCS - LOCKING WHEEL NUT KEY SET - MERCEDES BENZ

- this socket enables you to permit servicing of customer vehicle, even lost the key.
- material: Cr-Mo steel and chrome finish.
- 30pc-wheel lock adaptor:

#301	#302	#303	#304	#305	#306	#307	#308	#309	#310
#311	#312	#313	#314	#315	#316	#317	#318	#319	#320
#321	#322	#323	#324	#325	#326	#327	#328	#329	#330
- applications: installing and removing lock of "Mercedes" only.



ST-32027

35PCS - LOCKING WHEEL NUT KEY SET - MERCEDES BENZ

- this socket enables you to permit servicing of customer vehicle, even lost the key.
- material: Cr-Mo steel and chrome finish.
- 32pc-wheel nut socket:

#301	#302	#303	#304	#305	#306	#307	#308	#309	#310
#311	#312	#313	#314	#315	#316	#317	#318	#319	#320
#321	#322	#323	#324	#325	#326	#327	#328	#329	#330
#331	#332								
- applications Mercedes: A, B, C, GLK, CLC, CLS, CLK, E, SL, SLK, M class, C300, C250, C350, E320, 204, 211, 212/R class.



ST-32022

22PCS - LOCKING WHEEL NUT KEY SET - VW

- this socket enables you to permit servicing of customer vehicle, even lost the key.
- material: Cr-Mo steel and black oxide finish.
- 20pc-wheel nut socket:

#521	#522	#523	#524	#525	#526	#527
#528	#529	#530	#531	#532	#533	#534
#535	#536	#537	#538	#539	#540	
- applications VW: Beetle, EOS, Jetta, Passat, Tiguan, Golf, GTI's in the production years 2006~2012.



ST-32023

22PCS - LOCKING WHEEL NUT KEY SET - BMW

- this socket enables you to permit servicing of customer vehicle, even lost the key.
- material: Cr-Mo steel and black oxide finish.
- 20pc-wheel nut socket:

#41	#42	#43	#44	#45	#46	#47
#48	#49	#50	#51	#52	#53	#54
#55	#56	#57	#58	#59	#60	
- applications BMW: 1 series F20, F21/3 series F30,F31/4 series F32, F34, F36, 5 series F10, F11, 6 series F12, F13, 7series F01,F02, F04.



ST-32024

22PCS - LOCKING WHEEL NUT KEY SET - AUDI

- this socket enables you to permit servicing of customer vehicle, even lost the key.
- material: Cr-Mo steel and black oxide finish.
- 20pc-wheel nut socket:

#A	#B	#C	#E	#F	#G	#H	#I	#J	#L
#M	#N	#P	#Q	#R	#S	#T	#V	#W	#X
- applications: Audi A6 2005 >.



ST-32025

12PCS - LOCKING WHEEL NUT KEY SET - MERCEDES BENZ

- this socket enables you to permit servicing of customer vehicle, even lost the key.
- material: Cr-Mo steel and chrome finish.
- 10pc-wheel nut socket:

#301 (5A)	#303 (5C)	#304 (5D)	#306 (5F)	#307 (5G)
#312 (5N)	#313 (5P)	#319 (5X)	#331 (5E)	#332 (5L)
- applications Mercedes: A, B, GLK, CLC, CLS, CLK, E, SL, SLK, M class, C300, C250, C350, E320, 204, 211, 212/R class.



ST-32034

11PCS - UNIVERSAL LOCKING WHEEL NUT REMOVAL KIT

- the tool kit includes shroud which protects the wheel against any damage.
- simple to use master tool kit has the capability of removing practically any locking wheel nuts.
- contents:

1pc-impact driver.	1pc-outer shroud
3pc-blade C pack.	1pc-center punch.
1pc-blade A.	1pc-blade B.
1pc-hand protection ring.	1pc-main body and outer shroud.
1pc-1/2" dr. x 24mm impact socket.	



ST-32043

13PCS - UNIVERSAL LOCKING WHEEL NUT REMOVAL KIT

- the tool kit includes shroud which protects the wheel against any damage.
- simple to use master tool kit has the capability of removing practically any locking wheel nuts.
- contents:

1pc-impact driver.	1pc-blade A.
1pc-center punch.	1pc-blade B.
1pc-hand protection ring.	3pc-blade C pack.
1pc-main body and outer shroud.	
1pc-1/2" dr. x 24mm drive impact socket.	
3pc-locking wheel nut remover for Jaguar / Ford / Range Rover.	
- applications: Ford / Jaguar and Range Rover.



ST-32036

9PCS - CENTER SLEEVE PIN SET

- design to protect the wheel threads when taking off the wheel.
- center sleeves kit with inner thread.
- contents and applications:

each kit includes 3 sleeves:
M18 x 1.5 - DAF / Unimog / MAN / Renault / Volvo.
M20 x 1.5 - Mercedes.
M22 x 1.5 - DAF / MAN / Mercedes / Ford / Renault / Scania / Volvo.



ST-32044

2PCS - CLUTCH-CENTERING MANDREL SET

- the use of the clutch-centering mandrel helps ensure that the clutch
- adapter plate inserted between the clutch disc and the pressure plate is centered exactly.
- with two precision-made tapered spikes.
- contents: $\varnothing 20\text{mm} \sim 26\text{mm}$. / $\varnothing 15\text{mm} \sim 19\text{mm}$.



ST-32001

13PCS - TPMS TOOL ASSORTMENT KIT

- comprehensive tyre pressure monitoring system (TPMS) set that contains tools required to correctly mount the TPMS sensor to the wheel rim.
- contents:

1pc-valve insert tool torque: 0.25Nm.	1pc-pin punch: 2mm x 150mmL.
1pc-valve insert tool torque: 0.45Nm.	1pc-bit holder 150mmL.
2pc-1/4" dr. socket: 11,12mm x 50mmL.	1pc-torque wrench 2 ~ 14Nm.
1pc-grommet removal tool 80mmL.	1pc - tyre valve removal tool.
3pc-1/4" dr. socket bit: T10 - T15 - T20.	
1pc-torque tool for valve and sensor assembly 0.5 ~ 3.5 Nm.	



ST-32029

10PCS - TPMS TOOL ASSORTMENT KIT

- comprehensive tyre pressure monitoring system (TPMS) set that contains tools required to correctly mount the TPMS sensor to the wheel rim.
- fixed torque 0.45Nm for tire valve core.
- adjustable torque: 1.4 / 3.3 / 4 Nm for assembling TPMS.
- TX-bits T10, T15, T20.
- holder thorn: 2mm.



ST-32004

DIGITAL ELECTRONIC TYRE PRESSURE GAUGE

- to measure tyre pressure, measuring range: 5~150 PSI.
- with LCD backlight, LED light (only use for searching gas vent).
- 4 unit set conversion: PSI / Bar / Kpa / Kg/cm².
- dual powered solar panel and lithium battery.



ST-32033

2 IN 1 TYRE THREAD DEPTH AND BRAKE PAD THICKNESS GAUGE

- 2 in 1 function, easy to carry, used for checking thickness of brake pad and depth of tyre tread.
- durable, accurate measurement, delicate appearance.
- made of high quality material.
- total length: 180 x 15mm.



ST-32006

TYRE LEVER W/PLASTIC PROTECTOR - FLAT TYPE

- with the changeable plastic covering the rim is not damaged if used properly.
- please use necessary in painted or powder-coated wheel!
- flat pattern with hook / taper end.
- tool size: length: 380mm. / width: 24mm.



ST-32042

TYRE LEVER W/PLASTIC PROTECTOR - FLAT TYPE

- with the changeable plastic covering the rim is not damaged if used properly.
- please use necessary in painted or powder-coated wheel!
- flat pattern with hook / taper end.
- tool size: length: 500mm. / width: 27mm.



ST-32017A

TYRE LEVER - FLAT TYPE

- chrome plated hardened and tempered.
- flat pattern with hook / taper end.
- tool size: length: 380mm. / width: 23mm.



ST-32017B

TYRE LEVER - BENT TYPE

- chrome plated hardened and tempered.
- bent pattern with hook / taper end.
- tool size: length: 380mm. / width: 23mm.



ST-32018A

TYRE LEVER - FLAT TYPE

- chrome plated hardened and tempered.
- flat pattern with hook / taper end.
- tool size: length: 530mm. / width: 28mm.



ST-32018B

TYRE LEVER - BENT TYPE

- chrome plated hardened and tempered.
- bent pattern with hook / taper end.
- tool size: length: 530mm. / width: 28mm.



ST-32019A

TYRE LEVER - FLAT TYPE

- chrome plated hardened and tempered.
- flat pattern with hook / taper end.
- tool size: length: 650mm. / width: 28mm.



ST-32019B

TYRE LEVER - BENT TYPE

- chrome plated hardened and tempered.
- bent pattern with hook / taper end.
- tool size: length: 650mm. / width: 28mm.



ST-32020A

TYRE LEVER - FLAT TYPE

- chrome plated hardened and tempered.
- flat pattern with hook / taper end.
- tool size: length: 400mm. / width: 23mm.



ST-32021A

TYRE LEVER - FLAT TYPE

- chrome plated hardened and tempered.
- flat pattern with hook / taper end.
- tool size: length: 600mm. / width: 28mm.



ST-24561

2PCS - RIM PROTECTOR SET

- a set of 2 pieces of tyre rim protectors.
- designed to reduce damage the wheel rims when fitting or removing tyre.
- helps to protect your rims from scuffs and scratches when changing tyre.
- premium plastic construction of the tyre rim protectors makes it durable in use.
- great for many motorcycles and cars tyre repair in the garage or travel use.



ST-32016

WHEEL BALANCER PLIER HAMMER

- wheel weight plier is used to install, remove, or tighten wheel weights on your tyre rims.
- this wheel weight tool features a hammer, pliers, and crimping tool all in one to allow you to strike, pry, and pinch weights into and out of place.
- fits various T type of wheel balancer weights.



ST-32026

STICK-ON WHEEL BALANCE PLIER HAMMER

- to remove stick-on wheel balancing weight.
- plastic cover on the jaw and hammer can protect the alloy rims from damaging or scratching.
- adjustable jaw for different type of wheel weight.



ST-24551

EXHAUST DONUT STRETCHER

- remove and install rubber mounting ring-style hanger just place the hook of the tool through the rubber mounting ring.
- then pull or push to stretch until you can remove ring from the hook on muffler, pipe or frame.
- reverse the procedure to install ring.



ST-24036

2PCS - EXHAUST RUBBER RING HOOK TOOL SET

- T-handle with plastic cover.
- for the dismantling and assembly of exhaust rubber stop ring.
- for vehicle with rubber ring mountings.
- 1pc-hook has a 90° angle.
- 1pc-hook has a 100° angle.



ST-24562

EXHAUST GROMMET PLIER

- for removal of exhaust component from rubber-style hanger.
- self-location forcing pin.
- 25° offset for easy access.
- "cushioned" slip-resistant handle.



ST-24570

ADJUSTABLE EXHAUST PIPE CUTTER

- suitable for use on exhaust and tailpipe, and thin-wall copper and steel-tubing.
- simply hook in pin to desired diameter, tighten chain by turning adjustable "T" handle during cutting process.
- capacity: up to 2.5mm (thickness) and ø8~90mm (o.d.).



ST-24571

3PCS - EXHAUST TAIL-PIPE EXPANDER SET

- handy set designed to quickly and easily straighten out dents in tailpipe and exhaust pipe.
- simply insert the tool inside the tailpipe and turn the hex bar to expand the tool inside the pipe.
- fitted with extra long hex bar for easier turning.
- capacity: ø29~44mm / ø38~62mm / ø54~87mm.



ST-24660

7PCS - EXHAUST PIPE STRETCHER KIT

- handy set designed to quickly and easily straighten out dents in tailpipe and exhaust pipe.
- especially for exhaust and tailpipe, suited to use on exhaust and tailpipe, and thin-wall copper and steel tubing.
- expands all types of exhaust pipe, including stainless steel.
- inexpensive alternative to hydraulic pipe expanders.
- capacity: ø40~105mm.



ST-24552

5PCS - EXHAUST REPAIR KIT

- handy set designed to quickly and easily straighten out dents in tailpipe and exhaust pipe.
- especially for exhaust and tailpipe, suited to use on exhaust and tailpipe, and thin-wall copper and steel tubing.
- with this tool kit can easily cut pipes without exerting gripping pressure.
- simply hook in pin to desired diameter, tighten chain by turning adjustment T bar handle during cutting process.
- adjustable pipe cutter capacity: 2.5mm thickness and ø60mm.
- tailpipe expander capacity: ø38~87mm.



ST-23059

C.V. JOINT BOOT CLAMP PLIER

- designed for installing clamp on fuel filter, water pump, CV joint boot and other cooling system hose.
- thickness 3.6mm and 235mmL.
- suitable for ear type clamp.



ST-24547

C.V. JOINT BOOT CLAMP PLIER

- using with "torque wrench" or "breaker bar" will be more powerful.
- suitable for easy installation of ear-type clamp on fuel filter, water pump and others.



ST-24560

C.V. JOINT BAND TOOL W/CUTTER

- easy removal by sliding side-way after winding has been completed.
- using a 1/2" socket wrench or by hand wind the band until sufficient tension is applied.
- designed with cutting function.
- suitable for placing band around boot, through nose of tool and through slot in winding body.



ST-24663

CV JOINT PULLER

- for removing the CV joints on front wheel drive cars.
- no need to remove the entire drive axle from the vehicle.
- no need to use a hammer - avoid damaging the drive axle.
- adjusting range length: 135mm.
- mount the nut of the drive shaft maximum $\varnothing 31.5\text{mm}$.



ST-24613

TWO WAY - CV BOOT CLAMP PLIER

- for fitting the high strength stainless steel clamps on modern vehicles where a torque setting is required.
- the two way jaws are designed to work in hard to reach areas.
- using a 3/8" ratchet handle or torque wrench is ideal to provide the drive.
- the plier can adjust the width max. to 42mm.
- torque requirement 23~30 Nm.
- application: VW / Audi / Seat / Skoda / Opel / Vauxhall / Ford etc.



ST-24662

AIR BOOT INSTALLATION TOOL

- put the CV boots on the front jaws and ensure the jaws hold CV boots firmly.
- press the pressure button, then the front jaws will open to max. $\varnothing 110\text{mm}$.
- put the CV boots into the CV joint, then press the release button to release the CV boots onto the CV joint.
- CV joint diameter: $\varnothing 25\sim 110\text{mm}$.
- working pressure: 5~8 kg/cm².
- maximum air pressure: 9 kg/cm².
- air inlet size: 1/4" BSP.



ST-24681

6PCS - ALIGNMENT TOOL SET

- the pair of pressure fixtures allows a single technician working alone to adjust and set camber angles.
- not only quick and easy, but eliminates the need for additional labor.
- the tool is placed between the strut or body work and the wheel-rim and camber may be adjusted by rotating the hexagonal drive.

hex. nut length	spin width (min.)	spin width (max.)
75mmL	135mm.	175mm.
85mmL.	155mm.	180mm.
115mmL.	175mm.	210mm.

- applications: VW Golf, Polo from 1995, Jetta/Seat Toledo, Cordoa/Chrysler Voyager.



ST-25517

37PCS - SELF-ADJUSTING CLUTCH MASTER TOOL KIT

- 37pc specialist service tool kit for the professional disassembling and assembling of all self-adjusting clutches (SAC).
- necessary for the safe and accurate pre-tightening of SAC pressure plate before their removal and installation.
- prevents plate distortion which may prevent the clutch from disengaging or cause dragging.
- the single piece six arm plate has been designed for SAC clutch with 6/8 locking hole.
- six arm clamping plate with compression strut and handle.
- clutch resetting tool to reset the adjuster ring, if the existing clutch cover is being reused.
- specialist 6 pcs clutch mandrel set for BMW model, to be used if fitted transit ring prevents conventional alignment.
- face spanner for releasing the locking element on various VAG group model.
- clutch centring tool set ensures the disk is central, relative to the release bearing and pressure plate.
- various size threaded bolts with knurled nuts.



ST-25518

5PCS - CLUTCH ALIGNMENT TOOL SET

- align the clutch disc either relative to the clutch pressure plate or via the pilot bearing relative to the flywheel.
- the self-centering mechanism ensures the tool is being exactly positioned in the clutch disc hub.
- available for clutch hub 15 ~ 28mm (dia.).



ST-25519

13PCS - UNIVERSAL CLUTCH ALIGNMENT TOOL SET

- align the clutch disc either relative to the clutch pressure plate or via the pilot bearing relative to the flywheel.
- the self-centering mechanism ensures the tool is being exactly positioned in the clutch disc hub.
- available for clutch hub 15~28mm (dia.).
- available for pilot bearing $\varnothing 12 / 14 / 15 / 16 / 17 / 18 / 19$ mm.



ST-25520

19PCS - UNIVERSAL CLUTCH ALIGNMENT TOOL SET

- align the clutch disc either relative to the clutch pressure plate or via the pilot bearing relative to the flywheel.
- contents:
 - 1pc-mandrel: $\varnothing 15\sim 19$ mm.
 - 1pc-pilot bearing extension adaptor: 20mmL.
 - 1pc-clutch disc aligning adaptor: $\varnothing 19\sim 30$ mm.
 - 1pc-mandrel: $\varnothing 20\sim 26$ mm.
 - 1pc-spindle: 100mmL.
 - 1pc-clutch disc aligning adaptor: $\varnothing 26\sim 35$ mm.
 - 1pc-clutch plate aligning adaptor: $\varnothing 29\sim 69$ mm.
 - 10pc-pilot bearing adaptor: $\varnothing 10 / 12 / 14 / 15 / 16 / 17 / 19 / 25 / 27 / 30$ mm.
 - 1pc-spindle: 55mmL.
 - 1pc-spindle: 150mmL.



ST-24521

3PCS - REAR AXLE BEARING PULLER SET

- this bearing puller makes it easy to remove semi-floating rear axle bearing.
- choose from three different sizes to fit the main bearing tube (id).
- this bearing puller set works on most of vehicle.
- contents:
 - 1pc-1-5/16" ~ 2-3/8".
 - 1pc-1-3/8" ~ 2-7/8".
 - 1pc-1" ~ 1-7/8".



ST-25086

9PCS - HARMONIC BALANCER PULLER SET

- the most complete harmonic balancer puller.
- designed to ease the operation of pulling the balancer pulley.
- reduces damage to both pulley and shaft.
- works on most vehicle.
- contents: 1pc-forcing screw $\varnothing 15.5\text{mm} \times 11\text{T} \times 140\text{mmL}$.
- 3pc-screw $3/8" - 24\text{NF} \times 75\text{mmL}$. 1pc-adaptor.
- 3pc-screw $3/8" - 16\text{NC} \times 75\text{mmL}$. 1pc-yoke.



ST-24615

26PCS - UNIVERSAL SLEEVE REMOVAL AND INSTALLATION KIT

- for removing and installing bushings and bearings.
- easy work to remove and install bearing bushing, silent bushing, hydraulic bearing, and rubber bearing.
- equipped with socket sizes from $\varnothing 34\text{--}66\text{mm}$ (id) and $\varnothing 44\text{--}82\text{mm}$ (od) with 2mm increments.
- each socket has a window for observing the process of bushing or bearing removal/installation, preventing bushing or bearing overworks.
- includes 4 spindles with two 27mm hex. Nuts: M10 x P1.5 / M12 x P2.0, M14 x P2.0 / M16 x P2.5.



ST-24630

27PCS - UNIVERSAL PRESS AND PULL SET

- universal tool set for extracting and drawing in silent bearing, hydraulic bearing, bearing bush, ball bearing, shaft seal, rubber bearing etc.
- fully universal application. ideal for different vehicle, car + HGVs.
- depending on requirement, the particular sleeves can be also be individually reworked (e.g. recess, etc.)
- application also with workshop press + press frame.
- 22pc-press-on sleeves. (i. d.): $\varnothing 34 / 36 / 38 / 40 / 42 / 44 / 46 / 48 / 50 / 52 / 54 / 56 / 58 / 60 / 62 / 64 / 66 / 68 / 70 / 72 / 75 / 80\text{mm} \times 5\text{mm}$ (t.).
- 5pc-pulling spindle + nuts: M10 / M12 / M14 / M16 / M18.



ST-24651

8PCS - VW BUSH REMOVER / INSTALLER TOOL KIT

- special design for removal and replacement of the silent bloc placed in dirt bracket is easily and safely carried out directly on the vehicle by using the extractor.
- suitable for VW Polo (9N) front-axle bracket wishbone silent blocs.
- applications: VW: Polo (9N) / Seat: Ibiza IV, Cordoba (ab bj. 02) Altea / Sköda: Fabia, Roomster / Audi: A2.



ST-24652

4PCS - VW AND AUDI BUSH REMOVER / INSTALLER TOOL KIT

- special design for removal and replacement of the silent bloc placed in dirt bracket is easily and safely carried out directly on the vehicle by using the extractor.
- applicable: most of VAG series.



ST-24645

20PCS - BUSH REMOVER / INSTALLER TOOL SET

- this set is designed for removing and installing bushings and bearings.
- suitable for SUV, light trucks and heavy duty vehicles.
- sleeve length: 40mm / 110mm.
- contents: $\varnothing 62\text{mm} \times 70\text{mm}$ (od) $\varnothing 64\text{mm} \times 72\text{mm}$ (od)
- $\varnothing 66\text{mm} \times 74\text{mm}$ (od) $\varnothing 68\text{mm} \times 76\text{mm}$ (od) $\varnothing 70\text{mm} \times 78\text{mm}$ (od)
- $\varnothing 72\text{mm} \times 80\text{mm}$ (od) $\varnothing 74\text{mm} \times 82\text{mm}$ (od) $\varnothing 76\text{mm} \times 84\text{mm}$ (od)
- $\varnothing 78\text{mm} \times 86\text{mm}$ (od) $\varnothing 80\text{mm} \times 88\text{mm}$ (od)



ST-24638

7PCS - STEERING KNUCKLE SPREADER TOOL KIT

- this products is used to spread the steering knuckle to enable the removal and fitting of shock absorbers without the risk of damaging the aluminum or cast iron knuckle.
- the tools is adjustable and suitable for steering knuckles with either a centralized slot or a non centralized slot.
- applications: Audi / BMW / Citroën / VW Golf, Passat / Ford / Sköda / Seat / Renault / Peugeot and many Asian vehicles.



ST-29045

64PCS - OIL PAN THREAD REPAIR KIT

- a comprehensive thread repair kit ideal for repairing sump, gearbox and different drain plug thread.
- use tap to slightly enlarge the thread size, to fit a new drain plug and washer.
- contents:

1 x M13 x 1.5mm tap.	1 x M17 x 1.5mm tap.
5 x M13 x 1.5mm 17mm sump bolt.	5 x M17 x 1.5mm / 8mm sump bolt.
10 x washers for M13 bolt.	10 x washers for M17 bolt.
1 x M15x1.5mm tap.	1 x M20 x 1.5mm tap.
5 x M15 x 1.5mm 19mm sump bolt.	5 x M20 x 1.5mm / 10mm sump bolt.
	10 x washers for M20 bolt.
	10 x washers for M15 bolt.



ST-25075

ALTERNATOR BEARING / GEAR PULLER

- the tightest terminal will be lifted off without damage to battery case or posts, because the sharp jaws are able to engage either below or on the sides of terminals.
- the center screw swivel also makes this puller very effective on alternator bearing.
- working depth: 47mm.
 - applicable bearing: \varnothing 10~30mm.
 - jaw thickness: 1.5mm.



ST-25042

THIN-TYPE 2-JAW SLIDING LEG BEARING / GEAR PULLER

- thin-type design is suitable for removing bearing in small and narrow space.
- applies even pressure preventing damage to bearing.
- removing bearing or gear from diameter up to 90mm.
- working depth: 93mm.
- jaw thickness: 1.5mm.
 - spread: 30~90mm.

**2-JAW SLIDING LEG BEARING / GEAR PULLER**

ST-24634A spread: 30~80mm.

ST-24634B spread: 30~120mm.

ST-24634C spread: 40~160mm.

ST-24634D spread: 40~200mm.

- the claw legs are reversible for internal and external pulling.
- fully adjustable design allows it to fit a variety of application.
- arm and jaw are made forged and machined from quality alloy steel, precision heat treated for max. durability and strength.
- applies even pressure to remove bearing, gear, pulley and flywheel from shaft w/o damage.

**3-JAW REVERSIBLE BEARING / GEAR PULLER**

ST-24602A spread: 100mm. reach: 60mm. capacity: 2 ton.

ST-24602B spread: 150mm. reach: 85mm. capacity: 5 ton.

ST-24602C spread: 200mm. reach: 85mm. capacity: 5 ton.

ST-24602D spread: 240mm. reach: 140mm. capacity: 5 ton.

- reversible two-jaw design for internal and external pulling.
- arm and jaw are made forged and machined from quality alloy steel, precision heat treated for max. durability and strength.
- applies even pressure to remove bearing, gear, pulley and flywheel from shaft w/o damage.



ST-24603A

2-JAW HYDRAULIC BEARING / GEAR PULLER

- reversible two-jaw design for internal and external pulling.
- arm and jaw are made forged and machined from quality alloy steel, precision heat treated for max. durability and strength.
- applies even pressure to remove bearing, gear, pulley and flywheel from shaft w/o damage.
- jaw grip tighter as more pressure 8 tons is applied.
- reach both: 100~150mm.
- maximum reach: 125mm.
- maximum spread: 180mm.



ST-24604A

3-JAW HYDRAULIC BEARING / GEAR PULLER

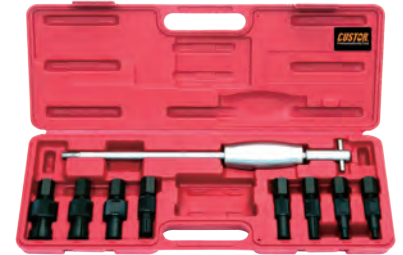
- reversible three-jaw design for internal and external pulling.
- arm and jaw are made forged and machined from quality alloy steel, precision heat treated for max. durability and strength.
- applies even pressure to remove bearing, gear, pulley and flywheel from shaft w/o damage.
- jaw grip tighter as more pressure 8 tons is applied.
- reach both: 100~150mm.
- maximum reach: 125mm.
- maximum spread: 180mm.



ST-24506

9PCS - SLIDING INTERNAL BEARING PULLER KIT

- sliding hammer designed with T-handle, perfect for pulling job requiring an internal pull, such as inner bearing.
- fitting a wide range of application, select the proper clamp by comparing...
- use the sliding hammer to pull out the bearing.
- contents:
 ø8~10mm / ø10~12mm / ø12~14mm / ø15~17mm / ø17~20mm / ø20~24mm / ø25~29mm / ø30~32mm.



ST-24513

5PCS - SLIDING INTERNAL & EXTERNAL BEARING PULLER KIT

- reversible three-jaw design for inside or outside pull.
- arm and jaw are made forged and machined from quality alloy steel, precision heat treated for max. durability and strength.
- applies even pressure to remove bearing, gear, pulley and flywheel from shaft without damage.
- contents: use the sliding hammer to pull out the bearing.
 internal puller: ø15~30mm / ø30~80mm.
 external puller: ø15~80mm.



ST-24514

26PCS - SLIDING HAMMER GEAR/BEARING PULLER KIT

- it can also be used for removing dent.
- practical in use! Convert into a 2 or 3 jaw internal / external puller.
- gear puller arms can be mounted for inside or outside pulling.
- extracts flange-type rear axles, semi-floating rear axle bearing, balance and other press-on parts also.
- contents:

1pc-nut	3pc-screw and nut	1pc-2 way yoke
1pc-tapping screw	1pc-5 lbs hammer	1pc-pivot pin
1pc-inside hook jaw	3pc-adjustable jaw	1pc-3 way yoke
1pc-low axle puller	3pc-adjustable rev. jaw	1pc-handle rod
1pc-high axle puller	1pc-adjustable rev. nut	1pc-attachment
1pc-hex Screw	3pc-adjustable rev. jaw	1pc-forcing screw



ST-24041

17PCS - SLIDING HAMMER GEAR/BEARING PULLER KIT

- it can also be used for removing dent.
- practical in use! Convert into a 2 or 3 jaw internal / external puller.
- gear puller arms can be mounted for inside or outside pulling.
- extracts flange-type rear axles, semi-floating rear axle bearing, balance and other press-on parts also.
- contents:

1pc-attachment	1pc-3 way yoke
3pc-adjustable rev. jaw	3pc-screw and nut
1pc-nut	1pc-low axle puller
1pc-adjustable rev. nut	1pc-5 lbs hammer
1pc-inside hook jaw	1pc-high axle puller



ST-24511

12PCS - TWO SET BEARING SEPARATOR ASSEMBLY KIT

- pull out the bearing with the H-type beam and bolt.
- bearing separator tools are used with bar puller and leg for a wide variety of pulling job.
- contents:

4pc-main rod and extension rod.	1pc-forcing screw.
1pc-bearing separator and bolt capacity: $\varnothing 30 \sim 50\text{mm}$.	4pc-extension rod.
1pc-bearing separator and bolt capacity: $\varnothing 50 \sim 75\text{mm}$.	1pc-beam.



ST-24512

8PCS - BEARING SEPARATOR PULLER KIT

- pull out the bearing with the H-type beam and bolt.
- bearing separator tools are used with bar puller and leg for a wide variety of pulling job.
- contents:

1pc-bearing separator and bolt capacity: 75~105mm.	1pc-beam carbon steel.
2pc-main rod (hex bar 19mm x 10" L. x 1/2"-16T.)	
2pc-extension rod (hex bar 19 mm x 10" L. x 1/2"-16T.)	
1pc-central bolt.	
1pc-forcing screw.	



ST-24515

21PCS - HYDRAULIC GEAR / BEARING PULLER KIT

- direct thrust of hydraulic power to release tight bearing, gear, flange, etc.
- for agriculture machine / garage / industry use.
- contents:

1pc-bearing separator and bolt capacity: 75~105mm.	3pc-100 mm jaw.
1pc-hydraulic ram (10 ton).	4pc-main rod.
3pc-200mm jaw.	1pc-beam.
1pc-3 way yoke.	3pc-150mm jaw.
1pc-2 way yoke.	2pc-extension rod.
1pc-central rod.	



ST-24516

17PCS - HYDRAULIC GEAR PULLER KIT

- direct thrust of hydraulic power to release tight bearing, gear, flange, etc.
- for agriculture machine / garage / industry use.
- contents:

1pc-hydraulic ram (10 ton).	1pc-combination leg.
1pc-ram ext. rod (1.0mm x 50mmL.).	6pc-steel plate.
1pc-sent pop (1.0mm x 30mmL.).	6pc-screw nut and washer.
1pc-combination cross head.	



ST-24518

39PCS - TURNBUCKLE FOR SHOCK ABSORBER'S TOP LID KIT

- for servicing the shock absorber of spring/strut assembly.
- suitable for a wide variety of vehicle and an essential tool for use with most strut and spring compressor.
- suitable for all kind of vehicle.
- 5pc-yoke: 10.5 / 12.5 / 14.5 / 14.5 / 14mm.
- 9pc-deep socket: 14 / 16 / 17 / 18 / 19 / 21 / 22 / 24 / 27mm.
- 9pc-slotted bit: 4 / 5.2 / 6 / 6.3 / 7 / 8 / 9 / 10 / 12mm.
- 2pc-D type bit: D5 / D10.
- 3pc-slotted bit: 3 / 3.5 / 4.0mm.
- 4pc-hex nut bit: 8 / 9 / 10 / 11mm.
- 1pc-12 point bit: M12.
- 4pc-hex bit: 5 / 6 / 7 / 8mm.
- 2pc-star bit: T50 / T60.



ST-24631

8PCS - STRUT NUT SET

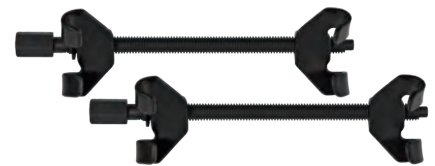
- contains essential for upper piston rod nut on the shock absorber and for spreading the strut clamp in the pivot bearing.
- 1pc-spreading socket: 1/2" dr. x 5.0mm x 60mmL.
- 1pc-spreading socket: 1/2" dr. x 5.5mm x 48mmL.
- 1pc-internal 10.5mm x 22mm hex. drive 3.5mm pin.
- 1pc-internal 12.5mm x 22mm hex. drive 3.5mm pin.
- 1pc-internal 14.5mm x 22mm hex. drive 5.0mm pin.
- 1pc-internal 14.0mm x 22mm hex. drive 3.0mm pin.
- 1pc-internal 15.0mm x external 22mm x 5mm pin.
- 1pc-internal 15.0mm x external 15.5mm x 3mm pin.



ST-24543

2PCS - COIL SPRING COMPRESSOR SET

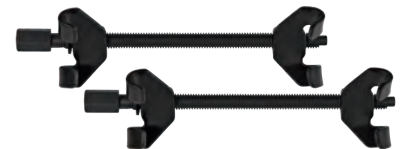
- this coil spring clamp tool set is designed to remove coil spring safely in limited space under the wheel arch.
- the jaw design is suitable to wrap coil claw for safety.
- used 1/2" square ratchet handle or 21mm spanner.
- clamp: 300mmL.



ST-24544

2PCS - COIL SPRING COMPRESSOR SET

- this coil spring clamp tool set is designed to remove coil spring safely in limited space under the wheel arch.
- the jaw design is suitable to wrap coil claw for safety.
- used 1/2" square ratchet handle or 21mm spanner.
- clamp: 370mmL.



ST-24546

2PCS - COIL SPRING COMPRESSOR SET

- no need extra complicated jaw installation / removal.
- features adjustable safeguard that prevents accidental release of spring under load and also enables the parts of tool used for removing to always operate in parallel.
- hook engage spring can be compressed by turning hex nut.
- use 19mm hex socket or spanner.
- jaws capacity: 23mm~280mm. ● max. capacity: 1,200 kgs. per pair.



ST-24632

3PCS - COIL SPRING COMPRESSOR WITH SAFETY GUARD SET

- no need extra complicated jaw installation / removal.
- features adjustable safeguard that prevents accidental release of spring under load and also enables the parts of tool used for removing to always operate in parallel.
- hook engage spring can be compressed by turning hex nut.
- use 19mm hex socket or spanner.
- jaws capacity: 23mm~280mm. ● max. capacity: 1,200 kgs. per pair.



ST-24650

10PCS - MASTER COIL SPRING COMPRESSOR SET

- the 10pcs master coil spring compressor quickly and easily compresses most sizes of macpherson strut springs.
- setup is fast and simple.
- compression is achieved by alternating from one assembly to another.
- every device has heat-treated alloy thrust screws (11 x 300mmL.) with forged hooks.
- can be operated with an air impact wrench.



ST-24507

5PCS - COIL SPRING COMPRESSOR KIT

- advantage: developed automatic 3-point safety.
- supply w/two pairs of interchangeable caps provided with a three-hook safety system.
- it offers a quick and easy removal and installation of spring at wishbone and multi-link independent suspension, without dismantling the axle.
- interlock and automatic freewheel at the end of stroke.
- equipped with safety lock for higher security.
- type 116 / 123 / 124 / 126 / 129 / 201 / 202 / 140 and 4-matic.
- can be operated with an air impact wrench.
- contents:
 - 2pc-plate: $\varnothing 70$ / $\varnothing 130$ mm.
 - 2pc-plate: $\varnothing 90$ / $\varnothing 150$ mm.
- maximum load: 5,959 kgs/f.
- break point: 14,900 kgs/f.
- applications: Mercedes / Ford / Saab and more...



ST-24508

7PCS - COIL SPRING COMPRESSOR KIT

- suitable for MacPherson strut coil spring.
- features a yoke extension bracket that also allows using on conical springs.
- equipped with safety lock for higher security.
- can be operated with an air impact wrench.
- contents:
 - 2pc-black yoke: $\varnothing 105$ / $\varnothing 140$ mm.
 - 2pc-silver yoke: $\varnothing 145$ / $\varnothing 190$ mm.
 - 2pc-gold yoke: $\varnothing 80$ / $\varnothing 105$ mm.
- break point: 4,275 kg/f.
- maximum load: 1,710 kg/f.
- applications:
 - Mercedes / BMW / Toyota / Ford / Mitsubishi / Audi / Saab /
 - VW / Nissan / Honda / Subaru / Volvo / Opel / Porsche.



ST-24584

MACPHERSON DAMPER SPRING EXTRACTOR SET

- set for compressing MacPherson shock absorber coil spring.
- jaw width is adjustable (100 ~ 250mm).
- set designed to be used with an air impact wrench.
- equipped with safety lock for higher security.
- break point: 5,800 kgs/f.
- maximum load: 2,318 kgs/f.



ST-24528

SMALL MOUTH PULL CLAMP

- small mouth pull clamp for car paint spraying equipment and used in automobile maintenance equipment.
- featuring a 360° self-tightening pull ring and specially designed non-slip teeth.
- operation: single-way pull.
- bolt size: \varnothing 16mm x 70mmL.
- capacity: 5 ton.



ST-24529

2-WAY SMALL MOUTH PULL CLAMP

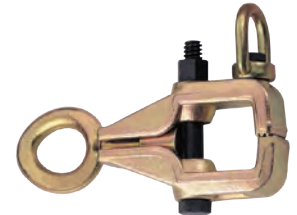
- small mouth pull clamp for car paint spraying equipment and used in automobile maintenance equipment.
- featuring a 360° self-tightening pull ring and specially designed non-slip teeth.
- operation: two-way pull.
- bolt size: \varnothing 16mm x 70mmL.
- capacity (straight way): 5 ton.
- capacity (cross way): 2 ton.



ST-24531

2-WAY BOX CLAMP

- deep throat fits over or around most vehicle flange.
- featuring a 360° self-tightening pull ring and specially designed non-slip teeth.
- operation: two-way pull.
- capacity (straight way): 3 ton.
- capacity (cross way): 2 ton.
- bolt size: \varnothing 14mm x 110mmL.



ST-24532

HEAVY-DUTY BOX CLAMP

- deep throat fits over or around most vehicle flange.
- featuring a 360° self-tightening pull ring and specially designed non-slip teeth.
- operation: single-way pull.
- bolt size: \varnothing 20mm x 130mmL.
- capacity: 5 ton.



ST-24533

2-WAY MINI CLAMP

- screw clamp with a pulling ring for pulling in two directions.
- due to small size, the clamp can be used in narrow space.
- capacity (straight way): 3 ton.
- capacity (cross way): 2 ton.
- operation: two-way pull.
- bolt size: \varnothing 14mm x 45mmL.



ST-24534

LONG-NOSE CLAMP

- screw clamp with a locking pulling ring for use in narrow and deep place.
- operation: single-way pull.
- capacity: 2 ton.
- bolt size: \varnothing 14mm x 72mmL.



ST-24536

CHAIN JOINT

- for use as chain shorter or chain connector.
- contact for two chain is always on a same level, meaning no twisting of chain happens accordingly.
- use with \varnothing 8mm or 10mm chain.
- capacity: 6 ton.



ST-24537

CHAIN JOINT

- for use as chain shorter or chain connector.
- contact for two chain is always on a same level, meaning no twisting of chain happens accordingly.
- use with \varnothing 8mm or 10mm chain.
- capacity: 6 ton.



ST-24538

CHAIN JOINT

- for use as chain shorter or chain connector.
- contact for two chain is always on a same level, meaning no twisting of chain happens accordingly.
- use with $\varnothing 8\text{mm}$ or 10mm chain.
- capacity: 6 ton.



ST-24539

WIDE SERRATE CLAMP

- wide plate makes the clamp to be harder.
- the special puller design used with plate make it hard to be broken.
- serrate width: 120mm.
- operation: single-way pull.
- bolt size: $\varnothing 14\text{mm}$ x 73mmL.
- capacity: 5 ton.



ST-24579

90° CORNER CLAMP

- will be able to get into narrow, confined area.
- cross-hatched teeth is offset to provide a firm grip for straight ahead pulls on right angle corner.
- eliminates the need to use two separate clamps.
- to be used with slide hammer. ● capacity: 2 ton.



ST-24580

90° CORNER CLAMP

- will be able to get into narrow, confined areas.
- cross-hatched teeth is offset to provide a firm grip for straight ahead pulls on right angle corner.
- eliminates the need to use two separate clamps.
- to be used with slide hammer. ● capacity: 2 ton.



ST-22011

C-TYPE CLAMP

- C-type clamp with screw fixing for pulling in various direction.
- drop forged steel construction.
- capacity: 5 ton.
- jaw opening: 150mm.
- operation: multi-way pull.



ST-22012

C-TYPE CLAMP

- C-type clamp with screw fixing for pulling in various direction.
- drop forged steel construction.
- capacity: 5 ton.
- operation: multi-way pull.
- jaw opening: 75mm.



ST-24540

BALL JOINT SEPARATOR

- impact free ball joint separation and removal with this effective forged steel device.
- suitable for use on car and light commercial vehicle.
- mini operation space: 6~7mm.
- jaw opening: 19mm.



ST-24542

BALL JOINT SEPARATOR

- impact free ball joint separation and removal with this effective forged steel device.
- thin arm designed.
- mini operation space: 6~7mm.
- jaw opening: 19mm.



ST-24557

BALL JOINT SEPARATOR

- special design 2-stage operation suits most of car and light truck ball joint insteering and suspension.
- impact free ball joint separation and removal with this effective forged steel device.
- offset lever permits max. jaw opening in 30mm and 56mm.
- jaw opening: 22mm.



ST-24578

BALL JOINT SEPARATOR

- impact free ball joint separation and removal with this effective forged steel device.
- for splitting track rod end, anti-roll bar mountings, ball joint, etc..
- jaw opening 58mm.



ST-24556

BALL JOINT SEPARATOR

- the ball joint separator makes it easy to separate pitman arm, ball joint, tie rod and shock link on a variety of car and truck.
- this tool separates ball joint from steering knuckle.
- tempered drop forged steel, one piece construction for longevity usage.
- strike end of separator with hammer.
- size: 24mm (fork) x 300mmL.



ST-24526

5PCS - BALL JOINT SEPARATOR SET

- the ball joint separator makes it easy to separate pitman arm, ball joint, tie rod and shock link on a variety of car and truck.
- this tool separates ball joint from steering knuckle.
- tempered drop forged steel, one piece construction for longevity usage.
- strike end of separator with hammer or attach air hammer and apply air pressure to separate.
- contents:

1pc-17mmW. tie rod attachment.	1pc-75mmL. air hammer adaptor.
1pc-24mmW. ball joint attachment.	1pc-200mmL. striking handle.
1pc-28mmW. pitman arm attachment.	



ST-24614

5PCS - CHANGEABLE BALL JOINT SEPARATOR SET

- innovative quick-change and simple action for suitable fork.
- enable operator to select correct jaw size without taking entire extractor to the vehicle.
- thrust screw length: 100mm.
- pivot rod length: 125mm.
- contents:
 - 5pc - jaw opening 20, 22, 24, 27, 30mm.



ST-24637

7 TON - HYDRAULIC BALL JOINT PULLER

- unique design and function for dismounting the conic bolt on passenger cars and light commercial vehicles with ease.
- this hydraulic puller is developed for the new front suspensions w/longer conic bolts often fitted in aluminum cones.
- these fittings sit harder and are also more fragile than the older steel versions.
- jaw opening: 25 and 32 mm and fit range: 60 ~ 72mm.
- capacity force: 7 tons.



ST-29015

4PCS - PRY BAR SET

- each bar in this set is built to withstand tough lifting, prying and moving object.
- each bar has a carbon steel square steel shank and a comfortable, ergonomic polypropylene grip to give you the leverage you need for the task at hand.
- contents:

1pc-6mm x 200mmL.	1pc-11mm x 455mmL.
1pc-9mm x 300mmL.	1pc-11mm x 600mmL.



ST-22003

3PCS - ANGLE ADJUSTABLE PRY BAR SET

- these pry bars are ideal for prying seal, axle and drive shaft...
- push design for quick release pry head and easy lock to fix angle.
- when pressure is applied the head will be fixed in place since as push button on the side only allows the head to move when fully pressed in.
- maximum capacity: 20 kgs/m.
- contents: 3pc-angle pry bar 250mmL. / 300mmL. / 380mmL.



ST-22004

4PCS - JUMBO AND HEAVY DUTY PRY BAR SET

- four different tip angles to adapt to different working situation, and protect the offering anti-slip performance.
- great length for achieving a bigger torque and for having accessibility to deep area inside the vehicle.
- durable component (PP+TPR) handle for a better grip and protect the end user.
- metal cap to allow the pry bar be hit by a hammer.
- contents:

1pc-W15 x 620mmL. bent type 70°.	1pc-W28 x 920mmL. bent type 30°.
1pc-W35 x 640mmL. bent type 90°.	1pc-W28 x 920mmL. straight type.



ST-22057

4PCS - HEAVY DUTY PRY BAR SET

- 30° tip angles to adapt to different working situation, offering anti-slip performance.
- great length for achieving a bigger torque and for having accessibility to deep area inside the vehicle.
- durable component (PP+TPR) handle for a better grip and protect the end user.
- metal cap to allow the pry bar be hit by a hammer.
- contents: 2pc-W6.0 x 200mmL. and W9.5 x 300mmL. / bent type 30°.
2pc-W11 x 455mmL. and W11 x 600mmL. / bent type 30°.



ST-22104

LOW PROFILE COMPOSITE CREEPER

- low profile clearance.
- steel wheel bushing molded into creeper to provide maximum strength.
- composite plastic resist to grease solvent and fuel.
- dimension size: 1000 x 470 x 130 mmH.
- wheel: \varnothing 75 mm x 6pcs.
- body material: HDPE.
- capacity: 150 kgs.



ST-29026B

16PCS - IMPACT DRIVER SET

- the original use of the term applied to a sturdy, hand held, metal barrel shaped device, that was designed to loose (or tight) stubborn screws.
- it achieves by being clobbered with a hammer - each blow turning the holder, a small fraction of a rotation.
- contents:
 5pc-star bit: T25 / T30 / T40 / T45 / T50. 3pc-hex bit: 6 / 8 / 10mm.
 1pc-impact driver. 2pc-phillips bit: PH2 / PH3.
 2pc-slotted bit: 8 / 10mm. 1pc-1/4" dr. adaptor.
 2pc-pozidrive bit: PZ2 / PZ3.



ST-29047

25PCS - DAMAGED BOLT EXTRACTOR KIT

- suitable for the removal of broken stud and bolt.
- supplied with centering pilot for 4.75 ~ 9.75mm (dia.) stud, drill, extractor shafts and nut.
- ideal for engine manifold stud.
- minimum stud size: 4.75mm.
- maximum stud size: 15mm.
- drill size: 3.2 / 4.8 / 6.4 / 8 / 8.7mm.



ST-29002

21PCS - TAP AND DIE KIT

- this tap and die set contains everything you need to repair and cut internal and external thread and is machined to exacting standard.
- 18pc-tap and die: M3 x 0.5 / M4 x 0.7 / M5 x 0.8 / M6 x 1.0 / M7 x 1.0 / M8 x 1.25 / M10 x 1.5 / M12 x 1.75 / 1/8" x NPT27.
- 1pc-die handle.
- 1pc-adjustable tap wrench.
- 1pc-screw-driver.



ST-29046

42PCS - UNF, UNC AND METRIC RE-THREAD KIT

- tap and dies suitable for chasing out damaged thread and removal of nick and burr without undercutting good thread.
- right or left handed thread file restores damaged external thread on any diameter, just select the correct pitch.
- contents:
 rethreader die size: 1/4", 5/16" 3/8", 7/16", 1/2", 9/16" and 5/8", UNC 1/4", 5/16", 3/8", 7/16", 1/2", 9/16" and 5/8", UNF 6 x 1.00, 8 x 1.25, 10 x 1.25, 10 x 1.50, 12 x 1.25, 12 x 1.50, 12 x 1.75mm.
 rethreader tap size: 1/4", 5/16" 3/8", 7/16", 1/2"and 9/16", UNC 1/4", 5/16", 3/8", 7/16", 1/2"and 9/16", UNF 6 x 1.00, 8 x 1.25, 10 x 1.25, 10 x 1.50, 12 x 1.25, 12 x 1.50, 12 x 1.75mm.
 description pitch size: SAE file 11, 12, 13, 14, 16, 18, 20 and 24.
 SAE file 9, 10, 12, 16, 20, 27, 28 and 32.



ST-29012

39PCS - TAP AND DIE KIT

- this tap and die set contains everything you need to repair and cut internal and external thread and is machined to exacting standard.
- contents:
 34pc-tap and die: M3 x 0.5 / M3 x 0.6 / M4 x 0.7 / M4 x 0.75 / M5 x 0.8 / M5 x 0.9 / M6 x 0.75 / M6 x 1.0 / M7 x 1.0 / M8 x 1.0 / M8 x 1.25 / M10 x 1.25 / M10 x 1.5 / M12 x 1.5 / M12 x 1.75 / 1/8" x NPT27.
 1pc-tap wrench. 1pc-screw pitch gauge.
 1pc-"T" - tap wrench. 1pc-screw-driver.
 1pc-die stock 25mm.



ST-29043

51PCS - TAP AND DIE KIT

- this tap and die set contains everything you need to repair and cut internal and external thread and is machined to exacting standard.
- contents: 20pc-tap: M6 x 1.0 / M6 x 0.75 / M8 x 1.25 / M8 x 1.0 / M10 x 1.5 / M10 x 1.25 / M12 x 1.75 / M12 x 1.5 / M14 x 2.0 / M14 x 1.5 / M16 x 2.0 / M16 x 1.5 / M18 x 2.5 / M18 x 1.5 / M20 x 2.5 / M20 x 1.5 / M22 x 2.5 / M22 x 1.5 / M24 x 3.0 / M24 x 1.5.
- 14pc- \varnothing 1-1/2" (od): M6 x 1.0 / M6 x 0.75 / M8 x 1.25 / M8 x 1.0 / M10 x 1.5 / M12 x 1.75 / M12x1.5/M14x2.0/M14x1.5/M16x2.0/M16x1.5/M18x2.5/M18x1.5.
- 6pc- \varnothing 2" die: M20x2.5 / M20x1.5 / M22x2.5 / M22x1.5 / M24x3.0 / M24x1.5.
- 5pc-screw extractors: #1, #2, #3, #4, #5.
- 2pc- \varnothing 2" die stock with 1-1/2" adaptor.
- 1pc-T type tap wrench.
- 1pc-automatic punch.
- 1pc-tap wrench.



ST-29039

75PCS - TAP AND DIE KIT

- this tap and die set contains everything you need to repair and cut internal and external thread and is machined to exacting standard.
- contents: 68pcs - tap and die: M3 x 0.5 / M3 x 0.6 / M4 x 0.7 / M4 x 0.75 / M5 x 0.8 / M5 x 0.9 / M6 x 1.0 / M7 x 1.0 / M8 x 1.25 / M9 x 1.0 / M9 x 1.25 / M10 x 1.25 / M10 x 1.5 / M11 x 1.5 / M12 x 1.5 / M12 x 1.75 / 1/8 BSP 28 / 4NC 40 / 6NC 32 / 8NC 32 / 10NC 24 / 10NF 32 / 12NC 24 / 1 / 4NC 20 / 1/4NF 28 / 5 / 16NC 18 / 5 / 16NF 24 / 3 / 8NC 16 / 3 / 8NF 24 / 7 / 16NC 14/7 / 16NF 20 / 1 / 2NC 13 / 1 / 2NF 20 / 1 / 8NPT 27.
- 1pc-gear wrench.
- 1pc-die stock.
- 2pc-tap holder (M3~M6) (M6~M12).
- 2pc-screw pitch gauge.
- 1pc-screw-driver.



ST-29077

115PCS - THREADED COIL-INSERT REPAIR KIT

- common traditional type installation tool, less repair skill to learn for user.
- coil installation of the depth as under control.
- customize coil size and packing method for client.
- contents:
 - 5pc-tap: M6x1.0 / M8x1.25 / M10x1.25 / M12x1.25 / M14x1.25.
 - 5pc-tang puncher: M6x1.0 / M8x1.25 / M10x1.25 / M12x1.25 / M14x1.25.
 - 5pc-drill: \varnothing 6.3mm / 8.3mm / 10.4mm / 12.4mm / 14.5mm.
 - 5pc-main tool: M6x1.0 / M8x1.25 / M10x1.25 / M12x1.25 / M14x1.25.
 - 25pc-screw-coil: M6 x 1.0 x 1.5D x 9mmL.
 - 25pc-screw-coil: M8 x 1.25 x 1.5D x 12mmL.
 - 25pc-screw-coil: M10 x 1.25 x 1.5D x 15mmL.
 - 10pc-screw-coil: M12 x 1.25 x 1.5D x 18mmL.
 - 10pc-screw-coil: M14 x 1.25 x 1.5D x 20mmL.



ST-29078

130PCS - THREADED COIL-INSERT REPAIR KIT

- common traditional type installation tool, less repair skill to learn for user.
- coil installation of the depth as under control.
- customize coil size and packing method for client.
- contents:
 - 5pc-tap: M5x0.8 / M6x1.0 / M8x1.25 / M10x1.5 / M12x1.75.
 - 5pc-tang puncher: M5x0.8 / M6x1.0 / M8x1.25 / M10x1.5 / M12x1.75.
 - 5pc-drill: \varnothing 5.2mm / 6.3mm / 8.3mm / 10.4mm / 12.4mm.
 - 5pc-main tool: M5x0.8 / M6x1.0 / M8x1.25 / M10x1.5 / M12x1.75.
 - 25pc-screw-coil: M5 x 0.8 x 1.5D x 7.5mmL.
 - 25pc-screw-coil: M6 x 1.0 x 1.5D x 9mmL.
 - 25pc-screw-coil: M8 x 1.25 x 1.5D x 12mmL.
 - 25pc-screw-coil: M10 x 1.5 x 1.5D x 15mmL.
 - 10pc-screw-coil: M12 x 1.75 1.5D x 18mmL.



ST-29027

20PCS - FEELER THICKNESS GAUGE SET

- the gauge contains 20 blades, which are made of high quality carbon steel.
- blade thickness:
0.05 / 0.10 / 0.15 / 0.20 / 0.25 / 0.30 / 0.35 / 0.40 / 0.45 / 0.50 / 0.55 / 0.60 / 0.65 / 0.70 / 0.75 / 0.80 / 0.85 / 0.90 / 0.95 / 1.00mm.



ST-29040

12PCS - THREAD GAUGE SET - METRIC

- a simple device for checking the pitch of screw thread, particularly useful when trying to identify threaded item like bolt and screw.
- one end has a range of imperial pitch and the other has metric.
- thread size:
0.5 / 0.6 / 0.7 / 0.75 / 0.8 / 0.9 / 1.0 / 1.25 / 1.5 / 1.75 / 27 / 28 t.



ST-29041

12PCS - THREAD GAUGE SET - SAE

- a simple device for checking the pitch of screw thread, particularly useful when trying to identify threaded item like bolt and screw.
- one end has a range of imperial pitches and the other has metric.
- suitable for thread size: 12 / 13 / 14 / 16 / 18 / 20 / 24 / 27 / 28 / 32 / 36 / 40 t.



ST-24015

6PCS - 3/8" DR. BOLT EXTRACTOR SET

- set designed for removing worn or rusty inner hex bolt by drilling a hole.
- suitable for using with 3/8" dr. ratchet handle.
- contents: 2 / 3 / 4 / 6 / 8 / 10mm x 60mmL.
product not designed for air impact wrench operation.



ST-24016

5PCS - 1/2" DR. BOLT EXTRACTOR SET

- set designed for removing worn or rusty inner hex bolt by drilling a hole.
- suitable for using with 1/2" dr. ratchet handle.
- contents: 8 / 10 / 12 / 14 / 16mm x 78mmL.
product not designed for air impact wrench operation.



ST-24017

9PCS - 3/8" DR. TWIST SOCKET SET

- set designed for removing damaged nut and bolt.
- reverse spiral flutes are designed for maximum grip.
- suitable for using with 3/8" dr. ratchet handle.
- contents: 10 / 11 / 12 / 13 / 14 / 15 / 16 / 17 / 19mm x 32mmL.
product not designed for air impact wrench operation.



ST-24018

4PCS - 1/2" DR. TWIST SOCKET SET

- set designed for removing damaged nut and bolt.
- reverse spiral flutes are designed for maximum grip.
- suitable for using with 1/2" dr. ratchet handle.
- contents: 17 / 19 / 21 / 22mm x 50mmL.
product not designed for air impact wrench operation.



ST-24020

13PCS - 1/4" & 1/2" DR. TWIST SOCKET SET

- set designed for removing damaged nut and bolt.
- reverse spiral flutes are designed for maximum grip.
- suitable for using with 1/4" and 1/2" dr. ratchet handle.
- contents: 1/4" dr.: 6 / 8 / 10 / 11 / 12 / 13mm x 32mmL.
1/2" dr.: 14 / 16 / 17 / 19 / 21 / 24 / 27mm x 50mmL.
product not designed for air impact wrench operation.



ST-24032

7PCS - 3/8" AND 1/2" DR. STUD PULLER SOCKET SET

- function: screw without head; screw up; pull up.
- advantage: quick function and no damage to stud.
- ways in use: put stud puller socket on screw, then handle on it; turn it up or down.
- suitable for using 3/8" dr. & 1/2" ratchet handle or 19 & 21mm spanner.
- contents: 3/8" dr.: 5mm. 1/2" dr.: 6 / 7 / 8 / 10 / 12 / 14mm.
product not designed for air impact wrench operation.



ST-24009

4PCS - NUT SPLITTER SET

- for the safe removal of corroded or damaged nuts without damaging bolt threads.
- threaded splitting pin manufactured from chrome vanadium steel with black phosphate finish.
- a few turns with a spanner & the hardened steel chisel soon slices through.
- capacity: 3~12mm. 12~17mm. 17~25mm. 25~32mm.



ST-24510

9PCS - HYDRAULIC NUT SPLITTER KIT

- utilizes a 10 tonne hydraulic power system to drive the five nut splitting blades supplied.
- hardened, durable cutting blades of 3/8", 1/2", 5/8", 3/4" and 1".
- capable of splitting hexagon mild steel nuts to a maximum of 38mm across the flat, without causing damage to the stud or bolt.
- not suitable for splitting high tensile or deep wall nuts.
- contents:

1pc-3/4" nut splitter body.	1pc-3/8" nut splitter body.	1pc-splitter adaptor.
1pc-1/2" nut splitter body.	1pc-1" nut splitter body.	1pc-hydraulic ram.
1pc-5/8" nut splitter body.	1pc-machine oil pot.	1pc-ram adaptor.



ST-25064

INFRARED THERMOMETER

- non contact thermometer detects the infrared ray that an object emits.
- displays the measurement temperature on the LCD.
- digital readout.
- battery low indicator.
- emissivity point indicator.
- laser indicator.
- distance ratio: 10:1.
- °F and °C selectable.
- measuring range: -20°C~500°C.



ST-25077

INFRARED THERMOMETER

- non contact thermometer detects the infrared ray that an object emits.
- displays the measurement temperature on the LCD.
- digital readout.
- battery low indicator.
- emissivity point indicator.
- laser indicator.
- distance ratio: 30:1.
- °F and °C selectable.
- measuring range: -50°C~800°C.



ST-27002A

TELESCOPING MAGNETIC PICK-UP TOOL

- perfect for picking up dropped bolt & screw down engine bay & hard to reach place.
- telescoping with 5 sections from 160~640mmL.
- powerful magnet: retrieve item in confined area.
- maximum pick-up capacity: 1.5 kgs.



ST-27002B

TELESCOPING MAGNETIC PICK-UP TOOL

- perfect for picking up dropped bolt & screw down engine bay & hard to reach place.
- telescoping with 5 sections from 160~640mmL.
- powerful magnet: retrieve item in confined area.
- maximum pick-up capacity: 3.5 kgs.



ST-27003B

TELESCOPING INSPECTION MIRROR

- this inspection mirror is perfect for inspection of the invisible, hard to reach behind view spots and ideal for a visual inspection.
- the mirror is made of clear glass that can be positioned by setting the double all angle ball joints for 360° view.
- telescoping with 5 sections from 160~640mmL.
- mirror diameter: ø83mm.



ST-27004

TELESCOPING INSPECTION MIRROR

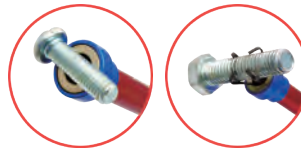
- this inspection mirror is perfect for inspection of the invisible, hard to reach behind view spots and ideal for a visual inspection.
- the mirror is made of clear glass that can be positioned by setting the double all angle ball joints for 360° view.
- telescoping with 5 sections from 160~640mmL.
- mirror size: 50mm x 90mm.



ST-27007

2 IN 1 - 4-CLAW AND MAGNETIC PICK-UP TOOL

- perfect for picking up dropped bolt and screw down engine bay and hard to reach place.
- flexible shaft for easy positioning in awkward place.
- maximum pick-up capacity: 0.8 kgs.
- strong and powerful 4-claw.
- overall length: 640mmL



ST-29037

MAGNETIC PARTS TRAY

- tray size: ø150mm.
- material: stainless steel.
- use for small parts, such as nut, bolt, screw and small tool.
- can be used horizontally, vertically, upside down.



ST-29017

UNIVERSAL MAGNETIC PARTS TRAY

- tray size: ø150mm.
- material: stainless steel.
- designed with nonconductor and adjustment parts holder.
- use for small parts, such as nut, bolt, screw and small tool.
- can be used horizontally, vertically, upside down or hang on hook.



ST-29038

MAGNETIC PARTS TRAY

- tray size: 140mm x 240mm.
- material: stainless steel.
- use for small parts, such as nut, bolt, screw and small tool.
- can be used horizontally, vertically, upside down.



ST-29018

UNIVERSAL MAGNETIC PARTS TRAY

- tray size: 140mm x 240mm.
- material: stainless steel.
- designed with nonconductor and adjustment parts holder.
- use for small parts, such as nut, bolt, screw and small tool.
- can be used horizontally, vertically, upside down or hang on hook.



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ST-22038	15	ST-22101	8	ST-23065	46	ST-23148	47	ST-24537	86
ST-22039	10	ST-22102	17	ST-23066	43	ST-23149	31	ST-24538	87
ST-22039A	11	ST-22103	12	ST-23068	37	ST-24003	60	ST-24539	87
ST-22039B	11	ST-22104	89	ST-23069	36	ST-24004	61	ST-24540	87
ST-22039C	11	ST-22105	14	ST-23071	35	ST-24005	45	ST-24542	88
ST-22039D	11	ST-22106	17	ST-23072	43	ST-24006	56	ST-24543	84
ST-22041	10	ST-22107	7	ST-23073	46	ST-24007	60	ST-24544	84
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ST-22046	6	ST-22108A	8	ST-23080	42	ST-24017	92	ST-24548B	56
ST-22047	12	ST-22108B	8	ST-23081	31	ST-24018	92	ST-24550A	56
ST-22048	8	ST-23004	44	ST-23087	34	ST-24020	92	ST-24550B	56
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ST-22052	20	ST-23008	43	ST-23092	28	ST-24032	93	ST-24552	77
ST-22053	20	ST-23010	32	ST-23093	30	ST-24033	4	ST-24555	41
ST-22055	8	ST-23014	36	ST-23094	30	ST-24035	64	ST-24556	88
ST-22057	89	ST-23015	29	ST-23095	36	ST-24036	77	ST-24557	88
ST-22058	20	ST-23016	68	ST-23096	37	ST-24037A	63	ST-24559	69
ST-22059	9	ST-23017	39	ST-23097	36	ST-24037B	63	ST-24560	78
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ST-22062	9	ST-23023	34	ST-23101	29	ST-24040A	63	ST-24563	57
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