2. CONVENTIONAL TOOLS

SOCKETS and DRIVE TOOLS

IMPACT SOCKETS and ACCESSORIES

HEXAGONAL WRENCHES

TORX® WRENCHES

BOX END WRENCHES

OPEN END WRENCHES and COMBINATION WRENCHES

PROFIT® TOOLS

HANDLE WRENCHES

SCREWDRIVERS

PLIERS, CUTTING PLIERS, SHEARS

LOCKING PLIERS

PROSNIP®

HAMMERS, CHISELS, and PUNCHES

SCRAPERS, FILES and BRUSES

ADJUSTABLE WRENCHES, PIPE WRENCHES and GEAR PULLERS

Relentless pursuit of the mechanic standard tool



The "standard model for the 21st Century" has inherited its DNA from the world's highest standard tools "Nepros", and is polished using the latest technology.

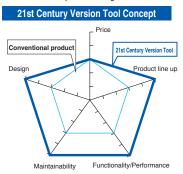
That is the "21st Century Version Tool".

A new standard model, with over 50 years of history and technology, is designed with completely new concepts. Aiming for better service, better price, and better quality, we have completely revised our source materials, designs, construction and manufacturing process in order to achieve both high specs and reasonable prices.

An all out challenge to the senses of the pro-mechanic

Tools are for use by mechanics at the site of maintenance. In order to get closer than ever to the senses of the pro-mechanic, we have repeatedly carried out uncompromising practical research and testing to achieve all of the requirements of the workplace at a higher level.

With DNA inherited from NEPROS, comes a beautiful design, improved maintainability, a richness of variation indispensable for a standard model that realize the world's highest class quality, functionality and evolution - and a reasonable price. The summation of KTC's technology, you'll understand why the "Tool that lasts 100 years" should rightly be called the mechanic standard when you use it.





Newly designed silver case

We have painstakingly sought to perfect the trinity of functionality, endurance, and design. With beautiful lines and clean catches, every part of this beautiful all compact case has a futuristic feel. (Material: Steel)

■ Metal case D.PAT.

No.	Size	
EKB-1	L270×W145×H50mm	
EKB-2	L450×W185×H60mm	
EKB-3	L270×W145×H35mm	





SOCKET

Wide variation of sizes

Sockets are designed in shapes and lengths taking into account small working spaces. The standard is shorter and more compact than conventional products. The total length of the deep socket is designed longer, to

make work in recessed areas easier. Furthermore, with the addition of the semi-deep sockets, which perform the middle role, a total of 3 lengths have been designed. (The semi-deep design is only for 3/8"sp.)

6 point and 12 point sockets for



each size from 1/4" to 1/2"sq. Furthermore the "N-Power fit shape" using NEPROS technology is used anew at both the square drive and socket ends, so that as to be more gentle on the bolt and nut, and to improve the strength of the wrench than conventional Power fit*. The size variation is also rich, and milli size varies in millimeter increments. The inch sizes are also 5 times greater in variation than conventional products. We have achieved a truly full line up.

*What is POWERFIT ?

When tightening and loosening bolts and nuts with a normal wrench the force is concentrated because the inside face of the wrench and the ridge of the bolt or nut contact in a line, giving rise to burring. With POWERFIT® the wrench changes to surface contact and concentration of force is prevented.





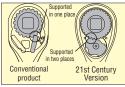


High functionality, high performance ratchet handle

Based on a slim form for the overall shape, the head in particular uses the same "unified claw" as the NEPROS to achieve a 20% reduction in thickness compared with a conventional product, and greater compactness. A 36 tooth gear is used to realize a narrow feed angle, and the gear is supported by claws in 2 places to achieve a 30% increase in strength over conventional products.

In addition, the area from the head to the grip is designed on the key concept of R, so that it is easy to apply force no matter which part of the handle is grasped. A union mechanism whereby the socket cannot accidentally separate from the ratchet unless a push button is pushed is used as standard (except for BR3A). This enables smooth release, and reduces roughness when attaching a socket.





Conventional products have an 18 tooth gear supported in one place with a claw. The 21st Century Version makes use of NEPROS technology and has a 36 tooth gear supported by claws in 2 places. In this way, even in the case of a very fine gear, there is a 30% increase in strength over a conventional product.



We have provided a repair kit to enable customers to care for and maintain their ratchet for a life time of use.

SPINNER HANDLE

Strong, long design

Uses a thick round grip that is easy to grasp and apply force to. In addition, we have achieved a 20% increase in strength over a conventional product by revising the materials and optimizing the design.

By using a resin pad for the joint part, a smooth movement can be continued without the deep socket disengaging. Furthermore, we have been able to set the head height lower by using a new joint mechanism.

This has resulted in improved workability in confined spaces.



Please use the repair kit on the head part. This will ensure life long use of the tool.

SLIDE HEAD HANDLE

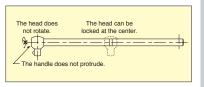
Functions designed for easier use

As the groove provided in the bar prevents the head from rotating, operation is made easier when, for example, an extension bar is attached. The head can be locked in the center position. Furthermore, stoppers are

provided at both ends of the bar, and when the head is at one end of the bar the head becomes almost flat with the bar so that the length of the bar, can be used effectively to apply force. Also, it is easier to work in confined spaces.



The head and bar become almost flat.





EXTENSION BAR

Wide variation of sizes

A newly designed form and revised materials make for maximum strength, 30 to 40% stronger than conventional products. (1/2"sq head turning type) Also, as with other accessories, the socket male side has had the form and ball position revised compared with conventional products. In addition, the socket female side also has a revised form and position for the ball groove, resulting in a design that reduces looseness.

Standard and head turning types are provided for all socket sizes, and the number of items is up 1.5 times compared with conventional product size variation.



UNIVERSAL JOINT

Smooth movement and compact design

The performance of the universal joints, at what angles it can swing and how smoothly it can move, is determined by the "pin gap" between the joints.

The new model of the universal joints has been shortened to the extreme.

The maximum swing angle to one side is set to 45°, which is very useful, and this enables smooth movement with 80 % conveyance efficiency (3/8"sq.).

The length is set to be 8 millimeters shorter than the previous models, which enables it to cope with work in tight spaces.

The "Pin Corking Method" is employed to prevent pins from falling off the joint, this improves strength and durability.





SOCKET ADAPTOR

The design that minimizes any loosening.

The socket adapter connects the sockets, which have different drive sizes, to the driving tool. A new socket adapter was produced after a thorough review of the form and material of the old mode

As in other accessories, the socket is designed to stop looseness, i.e. by placing the ball that pulls the socket toward the adapter. This gives greater stability.



IMPACT SOCKET

In pursuit of user-friendliness

The three different lengths (standard, semi-deep and deep) are available for different work places and purposes. It is made thinly so it can be used in narrow spaces (not available in standard models).

In addition to the usual engraved seal, the large, easy-to-read size indication is displayed.

Also, "AMBAC system"*, a brand new system, is employed in order to prevent pins flying out when an impact wrench is used.



Easy-to-read

* "AMBAC system"...Refer to P78





HEX. BIT SOCKET & DRIVER

Wide variation of sizes

The new bit socket is a screw-down type that is easy to replace when the bit is worn. 3 different lengths (3/8" sq. only) for different operations along with the long ballpoint type are available. Imperial sizes are also added making a greatly increased line-up. The square form is employed for the grip of the hexagon driver, as it can easily produce large torque and it is also effective for pushing. An emblem is fitted to each grip-end so that the type and the size can be easily recognized.

Left: Standard Right: Ball point







TORX® BIT SOCKET & DRIVER

Functions designed for easier use

TORX® is the standard for screws and is developed by Camcar Co. in the United States. Cam Out (a tendency to escape to the outer side) that was happening in Phillips screws occurs less as the screws torque is conveyed more efficiently. This is now internationally widespread.

The new TORX® wrench, as in other tools, has achieved wider variation, improved strength, easier maintenance and improved performance.

The driver's grip-end is more recognizable. Left: Standard



Right: Tamper Resistant



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COMBINATION WRENCH

Off-set angle 45°×6° that brings maximum power.

A new type of Box End wrench that pursues operation performance in conveying torque into hard to reach areas. In order to convey force more efficiently to the bolts & nuts, the height and the length of the Off-set areas are kept to a minimum and the rising angle of the handle is of a low design.

The head is small but devised; it can easily reach onto bolts or nuts in hollow areas and can also be used in the opposite way around. Former product





"New spear-shape" head has the width that is one of the smallest in the world

The new spanner head has employed KTC original "new spear-shaped head" that has a much smaller head-width than the previous spear-shaped head but some parts are wider where force applies. The head width is Recognized as one of the smallest in the world. The corner of the caliber is R processed

in order to prevent stress from accumulating. Satin and polished finishing brings out a beautiful form.





Simple form with real ability

New type combination wrench that exhibits real ability in extremely small spaces with simple form.

The spanner has the "new spear shaped head" which is one of the world's smallest. The handle is of a light and flexible I-shaped cross sec-

tion design. In order to spread the load over the entire length, the setting has been extended further than in previous models.





SCREWDRIVER



Wide variation of sizes

The end is shaped to fit exactly in relation to the screw, the gap between the screws is less and cam out (tendency to escape to the side) is reduced. Perfect catch with the screw through the use of magnets.

Fitted with square grips that are hard wearing with finger positions built into the design.

The outer surface is less slippery and easy to grip with bare hands, gloved hands or even oily hands with its curved design, this allows for a 30% preparation torque improvement on previous models.



Fitted with finger positioning indents, hexagon axis & a bolster

The materials of the grip are a 3 layered compound of environmentally friendly propylene and easy fit elastomer resin. In order to easily identify the + and the -, the grip ends are colored as Red (+) and Green (-) The axle is of a hexagon design. It is effective when high torque is required,

as it has a bolster attached (except in stubby versions) and an off-set wrench or spanner can also be used.



The grip is made of elastomer resin and is soft in the hand The convex surface prevents slippage and can be used even with oily hands.



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PLIERS

The "three-step form" can handle from thin to thick operations.

Combination pliers that have widely improved basic performance such as catching, gripping, rotating and cutting. The gripping area is made up of 3 separate toothed shaped areas that allow easy extraction of small to large items. The necessary cutting load required is 10% less than on previous models with a 20~30% improvement for gripping power.

The safety design to help prevent I catching hands, etc. when selecting the wider mouthed option is a function that has been inherited from NEPROS.





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NEEDLE NOSE PLIERS

The blade shape has improved the fundamental performance greatly.

On reviewing the previous blade shape, the cutting load has been reduced on the new model by 15%. 4 new variations of the previous model have been added: standard, long, slim, and bent nose. Choose the appropriate operation to suit oneself and one's working environment. The convex shape

helps prevent slippage with a soft grip that fits the hand perfectly. (Common points for scissor types)



Soft grip with a convex surface



The cutting function for both soft and hard wires has been achieved in the one pair of pliers.

Generally speaking, when talking about nippers, 2 types of pliers were required for when cutting soft and hard wires. The new design has allowed for the 2 type of pliers to be combined into 1. The blade is designed to easily cut bronze and other soft

wires at the tip end and harder wires such as piano wires and other much thicker wires at the base of the blade. This design has allowed for a reduction of around 15% in cutting load.



Standard shape has been fitted to the wide type. The blade angle on the end of the blade is 75°

2. CONVENTIONAL TOOLS

SOCKETS and **DRIVE TOOLS**





- SOCKET WRENCH SETS

 READ THE CAUTION MESSAGE
 CAREFULLY FOR EACH TOOL.

 LOCK THE STOPPER SECURELY WHEN
- CARRYING.

- DRIVE TOOLS

 DO NOT EXTEND THE HANDLE OR BAR BY USING A PIPE.

- USING A PIPE.
 INSERT THE SQUARE DRIVE TO THE END.
 DO NOT USE A DRIVE TOOL AS A
 SUBSTITUTE FOR A HAMMER.
 DO NOT APPLY IMPACT TO A DRIVE TOOL
 BY HITTING WITH A HAMMER, ETC.
 DO NOT USE A DRIVE TOOL WITH A POWER
 TOOL SUCH AS AN IMPACT WRENCH.

- SOCKETS

 USE A SOCKET APPROPRIATE TO THE SIZE OF A BOLT OR NUT.

 FIT THE BOLT HEAD OR NUT COMPLETELY

- FIT THE BOLT HEAD OR NUT COMPLETELY
 INTO THE DEEP PART OF THE SOCKET.
 FIT THE DRIVE SECTION TO COVER
 COMPLETELY THE BOLT HEAD OR NUT.
 DO NOT APPLY IMPACT BY HITTING WITH
 A HAMMER, ETC.
 DO NOT USE A SOCKET WITH A POWER
 TOOL SUCH AS AN IMPACT WRENCH.



●1/4"sq. SOCKET WRENCH SET DIGITAL RATCHET MODEL POWERFIT



SOCKET WRENCH SET	
No. TB206WG1	▼g 950 🛱 1
Digital Ratchet	GEK030-R2-L
Socket (12pt.)	B2-07W, 08W, 10W, 12W, 14W
Socket Holder (5pcs.)	EHB205

[•] It is a set of advanced digital torque tool "digital ratchet" > P.176 and 1/4"sq. socket (12pt.).

●1/4"sq. SOCKET WRENCH SET (13pcs.)



SOCKET WRENCE	H SET (13pcs	s.) mm · in
No. TB210		▼g 400 🖽 1
Socket (6pt.)		B2-05, 055, 06, 07, 08, 10, 11, 12, 13, 14
No. TB210B		▼ g 400 🖾 1
Socket (6pt.) in		B2- ³ / ₁₆ , ⁷ / ₃₂ , ¹ / ₄ , ⁹ / ₃₂ , ⁵ / ₁₆ , ¹ / ₃₂ , ³ / ₈ , ⁷ / ₁₆ , ¹ / ₂ , ⁹ / ₁₆
Common Items		
Ratchet Handle		BR2E
Extension Bar	50	BE2-050
	100	BE2-100
• with Plastic Tray (L264×W82×H	H30mm) POWERFIT® (Except 5mm and 3/16in)

■1/4"sq. SOCKET WRENCH SET (17pcs.)



SOCKET WRENC	H SET (1 <i>7</i> pc	:s.)						mm
No. TB214		▼ g 440	₩1					
Socket (6pt.)		B2-032, 04	, , ,	055, 06,	07, 08,	09,	10	
		11, 12,	13, 14					
Ratchet Handle		BR2E						
Extension Bar	50	BE2-050						
	100	BE2-100						
• with Plastic Tray (L264×W82×	H30mm)		POWERFIT (E	xcept the fo	ollowing	from	5mm)

●1/4"sq. SOCKET WRENCH SET (25pcs.)



SOCKET WRENC	H SET (25pcs	.) mm · in
No. TB2X20B		V kg 1.3 ≅ 1
Socket (6pt.)		B2-05, 055, 06, 07, 08, 10, 11, 12, 13, 14
Socket (6pt.) in		B2-3/16, 7/32, 1/4, 9/32, 5/16, 11/32, 3/8, 7/16, 1/2, 9/16
Ratchet Handle		BR2E
Spinner Handle		BS2E
Extension Bar	50	BE2-050
	100	BE2-100
Wobble Extension	Bar 30	BE2-030JW
Metal Case		EKB-3 L270×W150×H35mm
 with Plastic Tray (L264×W144×I	H30mm) POWERFIT® (Except 5mm and 3/16in)



SOCKET WRENCE	H SET (25pe	cs.)	mm
No. TB2X20		V kg 1.3 ≅ 1	
Socket (6pt.)		B2-05, 055, 06, 07, 08, 10, 11, 12, 13, 14	
Deep Socket (6pt.))	B2L-05, 055, 06, 07, 08, 10, 11, 12, 13, 14	
Ratchet Handle		BR2E	
Spinner Handle		BS2E	
Extension Bar	50	BE2-050	
	100	BE2-100	
Wobble Extension	Bar 30	BE2-030JW	
Metal Case		EKB-3 L270×W150×H35mm	

[•] with Plastic Tray (L264×W144×H30mm)

POWERFIT (Except 5mm)

●1/4"sq. SOCKET WRENCH SET (25pcs.)



●1/4"sq. DEEP SOCKET WRENCH SET (15pcs.)



DEEP SOCKET WRENCH SET (15pcs.)					
No. TB2L10		V kg1.3 ∰ 1			
Deep Socket (6pt.)		B2L-05, 055, 06, 07, 08, 10, 11, 12, 13, 14			
Ratchet Handle		BR2E			
Spinner Handle		BS2E			
Extension Bar	50	BE2-050			
	100	BE2-100			
Wobble Extension	Bar 30	BE2-030JW			
Metal Case		EKB-3 L270×W150×H35mm			
• with Plastic Tray (L	264×W144	×H30mm) POWERFIT® (Exce	ept 5mm)		

With Plastic Tray (L264×W144×H30mm)

SOCKET SET (5pcs.) · (10pc	cs.)	
No. TB205E	▼g 120 🖽	1
Socket (6pt.)	B2-06, 07, 08, 10,	, 12
Socket Holder (5pcs.)	EHB205	

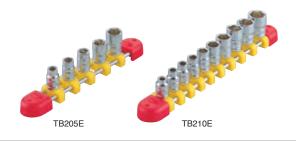
 No. TB210E
 ▼g 430
 ⊕ 1

 Socket (6pt.)
 B2-05, 055, 06, 07, 08, 10, 11, 12, 13, 14

 Socket Holder (10pcs.)
 EHB210

POWERFIT® (Except 5mm)

●1/4"sq. SOCKET	WRENCH SET	(5pcs.) •	(10pcs.)



●1/4"sq. SOCKET



POWERFIT® (Except the following from 5mm)

SOCKET											in
6pt.	12pt.		S	D ₁	D ₂	Н	L	l	▼ g	#	
B2 -1/8			3.1	6.5	12	2.5	16	8	9	10	
- 5/ ₃₂			3.9	7	12	3	16	8	9	10	
- ³ / ₁₆			4.7	8.5	12	3	16	8	9	10	
$-7/_{32}$	B2 -7/ ₃₂	W	5.5	9	12	5	18	10	9	10	
-1/4	-1/4	W	6.3	10	12	5	18	10	10	10	
- 9/ ₃₂	- 9/ ₃₂	W	7.1	11	12	5	18	10	10	10	
- ⁵ / ₁₆	- ⁵ / ₁₆	W	7.9	12	13	5.5	18.5	10.5	12	10	
- ¹¹ / ₃₂	-11/32	W	8.7	13.5	13	5.5	18.5	10.5	13	10	
- ³ / ₈	-3/8	W	9.5	14.5	13.5	5.5	18.5	10.5	13	10	
- ⁷ / ₁₆	- ⁷ / ₁₆	W	11.1	16	14.5	6	19	11	16	10	
- ¹ / ₂	-1/2	W	12.7	18.5	16.5	6.5	20.5	12.5	24	10	
- ¹⁷ / ₃₂	-17/32	W	13.4	20	17.5	7	21.5	13.5	28	10	
- ⁹ / ₁₆	- ⁹ / ₁₆	W	14.2	20	17.5	8	22.5	14.5	29	10	

POWERFIT® (Except the following from 3/16in)





■1/4"sq. DEEP SOCKET SET (5pcs.) • (10pcs.)



DEEP SOCKET SET (5pcs.)	· (10pcs.)	mm
No. TB2L05	▼g 270 🛱 1	
Deep Socket (6pt.)	B2L-07, 08, 10, 12, 14	
Socket Holder (5pcs.)	EHB205	
		DOWCDCTT.

					POWERFIT®
No. TB2L10E	▼ g 450	₩1			
Deep Socket (6pt.)	B2L-05, 055,	06, 07, 08	, 10, 11,	12, 13,	14
Socket Holder (10pcs.)	EHB210				

POWERFIT® (Except 5mm)

●1/4"sq. DEEP SOCKET



DEEP SOCK	DEEP SOCKET								mm	
6pt.	12pt.	S	D ₁	D ₂	Н	L	l	▼g	#	
B2L-032		3.2	6.5	12	5	50	42	17	5	
-04		4	7	12	5	50	42	19	5	
-045		4.5	7.5	12	5	50	42	18	5	
-05		5	8.5	12	5	50	42	20	5	
-055	B2L -055W	5.5	9	12	6	50	42	24	5	
-06	-06 W	6	10	12	6	50	42	28	5	
-07	-07 W	7	11	12	8	50	42	27	5	
-08	-08 W	8	12	13	9	50	42	33	5	
-09	-09 W	9	13.5	13	10	50	42	41	5	
-10	-10 W	10	14.5	13.5	11	50	42	36	5	
-11	-11 W	11	16	14.5	12	50	42	46	5	
-12	-12 W	12	17	15	14	50	42	52	5	
-13	-13 W	13	18.5	16.5	14	50	42	59	5	
-14	-14 W	14	20	17.5	17	50	42	67	5	

POWERFIT® (Except the following from 5mm)

DEEP SOCKET in											
6pt.	12pt.		S	D1	D2	Н	L	l	▼ g	#	
B2L -1/8			3.1	6.5	12	5	50	42	17	5	
-5/32			3.9	7	12	5	50	42	19	5	
-3/1 6			4.7	8.5	12	5	50	42	21	5	
-7/ ₃₂	B2L -7/32	W	5.5	9	12	6	50	42	24	5	
-1/4	-1/4	W	6.3	10	12	6	50	42	28	5	
-9/32	-9/32	W	7.1	11	12	8	50	42	27	5	
-5/16	- 5/16	W	7.9	12	13	9	50	42	33	5	
-11/32	-11/32	W	8.7	13.5	13	10	50	42	41	5	
-3/ ₈	-3/ ₈	W	9.5	14.5	13.5	11	50	42	39	5	
-7/16	-7/16	W	11.1	16	14.5	12	50	42	46	5	
-1/2	-1/2	W	12.7	18.5	16.5	14	50	42	66	5	
-1 7/ ₃₂	-1 7/ ₃₂	W	13.4	20	17.5	17	50	42	71	5	
- 9/16	- 9/16	W	14.2	20	17.5	17	50	42	66	5	

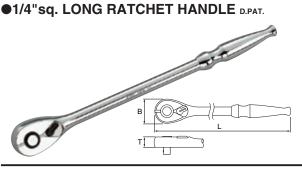
POWERFIT® (Except the following from 3/16in)

●1/4"sq. RATCHET HANDLE D.PAT.



RATCHET HANDLE								
No.	Feed	В	Т	L	▼ g	#		
BR2E	10°	22	10	125	100	5		

ON ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.



REPAIR	KIT FOR	1/4"sq. RA1	CHET HEAD

No.	Drive	Contents	
BR2E-K	1/4"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small) ×2	



No.	Feed	В	Т	L	▼g	4	
BR2L	10°	22	10	190	125	5	
CAUTIC	RE THAT TH RWISE IT M				T PROPER	LY,	

 BE CAREFUL ABOUT OVER TORQUE, AS THE WHOLE LENGTH LONG
ENOUGH TO APPLY EXCESSIVE LOAD.

■REPAIR KIT FOR 1/4"sq. RATCHET HEAI								
No.	Drive	Contents						
BR2E-K	1/4"sq.							
	-	Coil spring · Lever ·						
		Pan head screw (small) · Lid ×1,						



●1/4"sq. SHORT RATCHET HANDLE D.PAT.

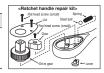


SHORT RATCHET HANDLE							
No.	Feed	В	Т	L	▼ g	#	
BR2S	10°	22	10	80	90	5	

CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY,
OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■REPAIR KIT FOR 1/4"sq. RATCHET HEAD

No.	Drive	Contents					
BR2E-K	1/4"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small) ×2					





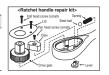
FLEX RATCHET HANDLE							
No.	Feed	В	Т	L	▼g	#	
BR2F	10°	22	10	125	140	5	

CAUTION - IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.

• ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY,
OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■REPAIR KIT FOR 1/4"sq. RATCHET HEAD

No.	Drive	Contents	
BR2E-K	1/4"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small) ×2	



●1/4"sq. FLEX RATCHET HANDLE D.PAT.



FLEX LONG RATCHET HANDLE

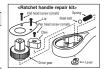
No.	Feed	В	Т	L	▼ g	#	
BR2FL	10°	22	10	190	170	5	
	 (ID) E DADE	TOO 1411011	E000E111	(=0.110) (=1.1			



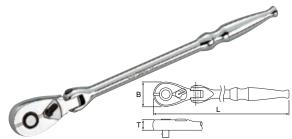
- CAUTION IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.
 ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.
 - BE CAREFUL ABOUT OVER TORQUE. AS THE WHOLE LENGTH LONG ENOUGH TO APPLY

■REPAIR KIT FOR 1/4"sq. RATCHET HEAD

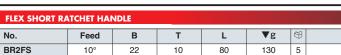
BR2E-K 1/4"sq. Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small) ×2	No.	Drive	Contents	
	BR2E-K	1/4"sq.	Coil spring · Lever · Pan head screw (small) · Lid ×1,	



●1/4"sq. FLEX LONG RATCHET HANDLE D.PAT.



NO.	Drive	Contents	
BR2E-K	1/4"sq.		
		Coil spring · Lever ·	
		Pan head screw (small) · Lid ×1,	
		Flat head screw (small) ×2	



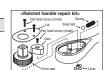


TION • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE. ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY,

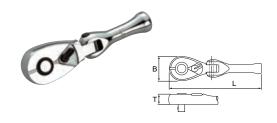
OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■REPAIR KIT FOR 1/4"sq. RATCHET HEAD

No.	Drive	Contents	
BR2E-K	1/4"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small) ×2	



●1/4"sq. FLEX SHORT RATCHET HANDLE D.PAT.



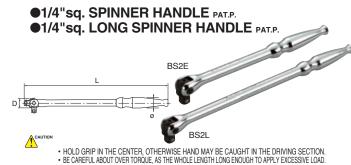
SPINNER HAND	DLE					
No.	D	Handle (ø)	L	▼ g	8	
BS2E	12	12	150	90	5	

LONG SPINNER	RHANDLE					
No.	D	Handle (ø)	L	▼ g	#	
BS2L	12	12	200	110	5	

■1/4"sq. Spinner handle head repair kit PAT.P.

No.	Insertion angle	Contents	
BS2E-K	1/4"sq.	Drive head · Pin · Pad · Spring · Stopper screw x1	
		1 0 11	



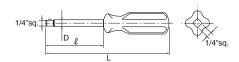


DRIVER TYPE HANDLE D BD10 90 5

Grip end has an opening. Usable as extension bar.



• DO NOT USE MULTIPLE EXTENSION.

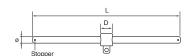


●1/4"sq. SCREWDRIVER TYPE HANDLE



SLIDE HEAD HANDLE						
No.	D	Ø	L	▼g	#	
BHM2	13	7	120	70	5	

- In the workplace (car maintenance, etc.), whether quick turning , this tool is faster than a ratchet handle. strong tightening
- A track has been fitted to the handle to prevent the head from turning.







1/4"sq. QUICK SPINNER® D.PAT.



QUICK SPINNE	R®						
No.	D	d	L	l	▼g	#	
BE2-Q	28	12	19.5	8	25	10	

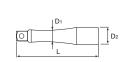
- Specially for quick turning for effective use with Ratchet handle or Extension bar.
- Grip has angle (90°) indication by groove with 30° indication on surface.
- Grip is made of resin for light weight.

• DO NOT USE MULTIPLE EXTENSION.

*Quick Spinner is a registered trademark of the Kyoto Tool Co., Ltd.

●1/4"sq. EXTENSION BAR





EXTENSION BA	R					
No.	D ₁	D ₂	L	▼g	#	
BE2 -030	9	12	30	17	5	
-050	9	12	50	27	5	
-075	8	12	75	38	5	
-100	8	12	100	48	5	
-150	8	12	150	70	5	
-200	8	12	200	90	5	
-270	8	12	270	118	5	
-600	9	12	600	300	5	

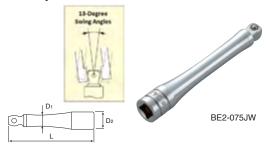


• DO NOT USE MULTIPLE EXTENSION.



POWERFIT .

●1/4"sq. WOBBLE EXTENSION BAR



WOBBLE EXTEN	WOBBLE EXTENSION BAR							
No.	D ₁	D ₂	L	▼ g	#			
BE2 -030JW	9	12	30	17	5			
-050JW	9	12	50	27	5			
-075JW	8	12	75	38	5			
-100JW	8	12	100	48	5			
-150JW	8	12	150	70	5			
-200JW	8	12	200	90	5			
-270JW	8	12	270	118	5			

- CAUTION COMPARED WITH ORDINARY EXTENSION BAR, IT ENDURES LOWER LOAD FOR ITS MECHANISM. DO NOT APPLY EXCESSIVE POWER OR IMPACT.
 - DO NOT USE MULTIPLE EXTENSION.

●1/4"sq. FLEXIBLE EXTENSION BAR



FLEXIBLE EXTEN	ISION BAR				
No.	L	N⋅m	▼g	#	
BES10 -150	150	9	50	10	

• This is a handy tool when tightening or loosening nuts & bolts when the angle is difficult or the area is confined. (e.g. bolts inside the dash).

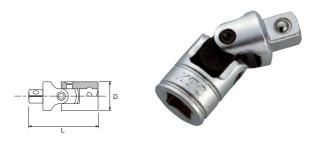


- CAUTION FOR TEMPORARY FASTENING ONLY. DO NOT APPLY EXCESSIVE POWER.
 - DO NOT USE MULTIPLE EXTENSIONS.





●1/4"sq. UNIVERSAL JOINT





UNIVERSAL JOINT 33

POWERFIT .



No.

• DO NOT APPLY EXCESSIVE POWER ON THE FLEX PART.



●1/4"sq. INTERNAL × 3/8"sq. EXTERNAL **DRIVE ADAPTOR**

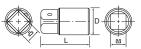




1/4"sq. INTERNAL × 3/8"sq. EXTERNAL DRIVE ADAPTOR Ħ Internal External 3/8" BA23 13 22 10 15



*CAUTION * FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.

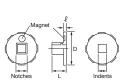


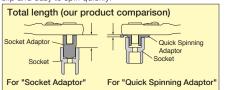


Good Design Award Winning Product

QUICK SPINNING ADAPTOR l \mathfrak{A} No. BAE23 1/4" 2.5 10 3/8' 28 20

- Quick Spinning is possible by the product itself unlike socket adaptor.
 It can be used with the total length shortened compared to socket adaptor since indents and notches are matched at the same position. (Below)
- Detachment and retention of socket is easy with the magnet.
- Grip has a shape that's hard to slip and easy to spin quickly.





●1/4"sq. QUICK SPINNING ADAPTOR D.PAT.





SOCKET HOLDER - CLIP SET (7pcs.)								
No.		Н	Α	L	▼g	#		
EHB205	5	19	25	165	55	10		
EHB210	10	19	25	215	60	10		
EHB215	15	19	25	315	80	10		

 Change of holder shape enables easier insertion/removal of socket and increased holding strength compared with previous model. (Does not fall off so easily while carrying). • Different colors for different sizes

• REVERSING HOLDER MAY MAKE SOCKETS FALLING.

No. EHB27	▼g 25	≅ 10	
CLIP	7pcs.		

- Spare clip for EHB205, 210 and 215.
- Can be used for EHB305 315 and 405 410.

ALUMINUM SOCKET HOLDER								
No.	sq.	Number of clips	Н	Α	L	▼ g	8	
EHBA210	1/4"	10	17	28.5	305	175	1	

- Clip is a ball-lock type that prevents the socket from suddenly falling out.
- Rail color differs by the square, allowing the easy identification of socket.
- Since the rail size is uniform, sockets with various squares can be stored by

*AUTION • Socket may fall off if the socket holder is turned upside down.

• It cannot be mounted on a surface that's perpendicular to the ground.

■ Supply parts

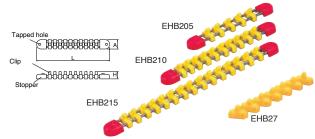
No.	Product Name	
EHBAC-2	1/4"sq. Clip Set [10pcs.]	
EHBASC	Side Cover [2pcs. Set]	

* Clip can be commonly used for EHBA210, EHBA310 and EHBA410.

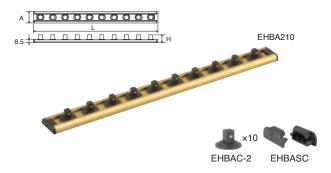
SOCKET WRENCH SET	
No. TB306WG1	▼kg 1.2 🖽 1
Digital Ratchet	GEK060-R3-L
Socket (12pt.)	B3-08W, 10W, 12W, 14W, 17W
Socket Holder (5pcs.)	EHB305

• It is a set of advanced digital torque tool "Digital Ratchet" OP.176 and 3/8"sq. socket (12pt.).

●1/4"sq. SOCKET HOLDER • CLIP SET D.PAT.



ALUMINUM SOCKET HOLDER



●3/8"sq. SOCKET WRENCH SET **DIGITAL RATCHET MODEL**



SOCKET WRENCH SET	
No. TB306WG2	▼kg 1.3 🛱 1
Digital Ratchet	GEK085-R3-L
Socket (12pt.)	B3-10W, 12W, 14W, 17W, 19W
Socket Holder (5pcs.)	EHB305

• It is a set of advanced digital torque tool "Digital Ratchet" P.176 and 3/8"sq. socket (12pt.)

●3/8"sq. SOCKET WRENCH SET **DIGITAL RATCHET MODEL**



SOCKET WRENCH SET	
No. TB306WG3	▼kg 1.1 🖽 1
Digital Ratchet	GEK030-C3-L
Socket (12pt.)	B3-07W, 08W, 10W, 12W, 14W
Socket Holder (5pcs.)	EHB305

It is a set of advanced digital torque tool "Digital Ratchet" P.176 and 3/8"sq. socket (12pt.).

●3/8"sq. SOCKET WRENCH SET **DIGITAL RATCHET MODEL**





●3/8"sq. SOCKET WRENCH SET (12pcs.)



SOCKET WRENCH SET (12pcs	:.)	mm · in
No. TB308	▼kg 1.7 🖽 1	
Socket (6pt.)	B3-07, 08, 10, 12, 13, 14, 17, 19	
No. TB308X	▼kg 1.7 🖽 1	
Socket (6pt.)	B3-07, 08, 10, 12	
Socket (12pt.)	B3-13W, 14W, 17W, 19W	
No. TB308BX	▼kg 1.7 😭 1	
Socket (6pt.) in	B3- ³ / ₈ , ⁷ / ₁₆	
Socket (12pt.) in	B3-1/2 W, 9/16 W, 19/32 W, 5/8 W, 11/16 W, 3/4 W	
Common Items		
Ratchet Handle	BR3E	
Extension Bar 50	BE3-050	
100	BE3-100	
Universal Joint	BJ3	
Socket Holders (5pcs.)	EHB305	
Metal Case	EKB-1 L270×W145×H50mm	

• with Plastic Tray (L265×W145×H38mm)

POWERFIT®

●3/8"sq. SOCKET WRENCH SET (19pcs.)



No. TB312X		▼kg 3.8 🖽 1
Socket (6pt.)		B3-055, 07, 08, 10, 12
Socket (12pt.)		B3-13W, 14W, 15W, 17W, 19W, 21W, 22W
Ratchet Handle		BR3E
Spinner Handle		BS3E
Extension Bar	75	BE3-075
	150	BE3-150
	270	BE3-270
Wobble Extension I	3ar 50	BE3-050JW
Universal Joint		BJ3
Socket Holders (10	pcs.)	EHB310
Metal Case		EKB-2 L450×W185×H60mm
 with Plastic Tray (L 	445×W185	×H52mm) p∩webert

●3/8"sq. SOCKET WRENCH SET (21pcs.)



SOCKET WRENCH SET (21pcs.	
No. TB314	▼kg 3.8 😭 1
Socket (6pt.)	B3-055, 07, 08, 09, 10, 11, 12, 13, 14, 15, 17, 19, 21, 22
Ratchet Handle	BR3E
Spinner Handle	BS3E
Extension Bar 75	BE3-075
150	BE3-150
270	BE3-270
Wobble Extension Bar 50	BE3-050JW
Universal Joint	BJ3
Socket Holders (10pcs.)	EHB310
Metal Case	EKB-2 L450×W185×H60mm
• with Plastic Tray (L445×W185×F	152mm)

●3/8"sq. SOCKET WRENCH SET (25pcs.)



SOCKET WRENCH SET (2	ipcs.) mm
No. TB317X	V kg 3.9 ≅ 1
Socket (6pt.)	B3-055, 06, 07, 08, 09, 10, 11, 12
Socket (12pt.)	B3-13W, 14W, 15W, 16W, 17W, 19W, 20W, 21W, 22W
Ratchet Handle	BR3E
Spinner Handle	BS3E
Extension Bar 30	BE3-030
75	BE3-075
150	BE3-150
270	BE3-270
Wobble Extension Bar 50	BE3-050JW
Universal Joint	BJ3
Socket Holders (10pcs.)	EHB310
Metal Case	EKB-2 L450×W185×H60mm
• with Plastic Tray (L445×W	85×H52mm) POWERFIT

●3/8"sq. SOCKET WRENCH SET (26pcs.)



SOCKET WRENC	H SET (26pcs.)							mm
No. TB318		▼ kg 4		₩1					
Socket (6pt.)		B3-055,	06, 07	, 08, 09	9, 10,	11, 12	, 13, ⁻	14,	
		15,	16, 17,	18, 19,	20, 2	1, 22			
Ratchet Handle		BR3E							
Spinner Handle		BS3E							
Extension Bar	30	BE3-030	0						
	75	BE3-075	5						
	150	BE3-150	0						
	270	BE3-270	0						
Wobble Extension	Bar 50	BE3-050	JW						
Universal Joint		BJ3							
Socket Holders (1)	Opcs.)EHB310								
Metal Case		EKB-2	L450×V	V185×H€	30mm				
 with Plastic Tray (I 445×W185×H	52mm)						DC.	WEDETT.

●3/8"sq. DEEP SOCKET WRENCH SET (17pcs.)



DEEP SOCKET WR	ENCH SET	(17pcs.)
No. TB3L11X		▼kg 4 😭 1
Deep Socket (6pt.)		B3L-06, 08, 10, 11, 12
Deep Socket (12pt.)	B3L-13W, 14W, 15W, 17W, 19W, 22W
Ratchet Handle		BR3E
Spinner Handle		BS3E
Extension Bar	30	BE3-030
	75	BE3-075
Wobble Extension B	3ar 50	BE3-050JW
Universal Joint		BJ3
Socket Holders (5p	cs.)	EHB305
Metal Case		EKB-2 L450×W185×H60mm
• with Plastic Tray (L	445×W185	×H52mm) POWERFIT



SOCKET WRENCH	SET (26p	pcs.)	mm
No. TB3X20		▼kg 4.3 😂 1	
Socket (6pt.)		B3-055, 07, 08, 10, 12	
Socket (12pt.)		B3- 13W, 14W, 15W, 17W, 19W	
Deep Socket (6pt.)		B3L-07, 08, 10, 12	
Deep Socket (12pt.)		B3L- 13W, 14W, 15W, 17W, 19W, 22W	
Ratchet Handle		BR3E	
Spinner Handle		BS3E	
Extension Bar	30	BE3-030	
	75	BE3-075	
Wobble Extension B	ar	BE3-050JW	
Universal Joint		BJ3	
Socket Holders (10p	cs.)	EHB310	
Metal Case		EKB-2 L450×W185×H60mm	
• with Plastic Tray (L4	45×W18	5×H52mm)	POWERFIT .

●3/8"sq. SOCKET WRENCH SET (26pcs.)



SOCKET SET (5pcs.) · (10p	ocs.)	mm
No. TB305E	▼ g 500 🛱 1	
Socket (6pt.)	B3-08, 10, 12, 14, 17	
Socket Holder (5pcs.)	EHB305	

POWERFIT®

No. TB310	▼kg 1	₩1			
Socket (6pt.)	B3-07, 08,	10, 11, 12,	13, 14,	17, 19,	22
Socket Holder (10pcs.)	EHB310				

●3/8"sq. SOCKET SET (5pcs.) • (10pcs.)



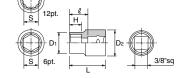
SOCKET												mm
6pt.		12pt.		S	D ₁	D ₂	Н	L	l	▼ g	#	
B3 -055	ВЗ	-055	W	5.5	9	17	5	22	10.5	19	5	
-06		-06	W	6	10	17	5	22	10.5	20	5	
-07		-07	W	7	11	17	5	22	10.5	20	5	
-08		-08	W	8	12	17	5.5	22	10.5	20	5	
-09		-09	W	9	13.5	17	5.5	22	10.5	21	5	
-10		-10	W	10	14.5	17	5.5	22	10.5	20	5	
-11		-11	W	11	16	17	6	23	11.5	23	5	
-12		-12	W	12	17	18	7.5	24	12.5	26	5	
-13		-13	W	13	18.5	18	7.5	24	12.5	28	5	
-14		-14	W	14	20	19	8.5	25	13.5	34	5	
-15		-15	W	15	21	20	8.5	26	14.5	35	5	
-16		-16	W	16	22	21	9	26	14.5	41	5	
-17		-17	W	17	24	22	10	27	15.5	51	5	
-18		-18	W	18	25	23	10	27	15.5	58	5	
-19		-19	W	19	26	24	10.5	27	15.5	62	5	
-20		-20	W	20	27.5	25	11	28	16.5	71	5	
-21		-21	W	21	28.5	26.5	11.5	28	16.5	81	5	
-22		-22	W	22	30	27.5	11.5	28	16.5	86	5	
-23		-23	W	23	31	28.5	12	29	17.5	94	5	
-24		-24	W	24	32.5	30	12	29	17.5	115	5	
												POWERFIT .

●3/8"sq. SOCKET



	/a !!	-	
6 3	/R"ea	SO	CKE

SOCKET										in
6pt.	12pt.	S	D ₁	D ₂	Н	L	l	▼ g	#	
B3 - ¹ / ₄	B3 -1/4 W	6.3	10	17	5	22	10.5	20	5	
- 9/ ₃₂	- ⁹ / ₃₂ W	7.1	11	17	5	22	10.5	20	5	
- ⁵ /16	- ⁵ / ₁₆ W	7.9	12	17	5.5	22	10.5	20	5	
- ¹¹ / ₃₂	-11/32 W	8.7	13.5	17	5.5	22	10.5	21	5	
$-\frac{3}{8}$	-3/8 W	9.5	14	17	5.5	22	10.5	21	5	
- ⁷ / ₁₆	- ⁷ / ₁₆ W	11.1	16	17	6	23	11.5	23	5	
$-\frac{1}{2}$	-1/2 W	12.7	18.5	18	7.5	24	12.5	28	5	
- ¹⁷ / ₃₂	-17/32 W	13.4	20	19	7.5	24	12.5	35	5	
- ⁹ /16	-9/16 W	14.2	20	19	8.5	25	13.5	34	5	
$\frac{19}{32}$	- ¹⁹ / ₃₂ W	15	21	20	8.5	26	14.5	35	5	
⁻⁵ /8	-5/8 W	15.8	22	21	9	26	14.5	42	5	
$\frac{21}{32}$	- ²¹ / ₃₂ W	16.6	24	22	10	27	15.5	51	5	
-11/16	-11/ ₁₆ W	17.4	24	22	10	27	15.5	51	5	
-3/4	-3/4 W	19	26	24	10.5	27	15.5	62	5	
- ²⁵ / ₃₂	- ²⁵ / ₃₂ W	19.8	27.5	25	11	28	16.5	73	5	
- ¹³ / ₁₆	- ¹³ / ₁₆ W	20.6	28.5	26.5	11.5	28	16.5	80	5	
⁻⁷ / ₈	- ⁷ / ₈ W	22.2	30	27.5	11.5	28	16.5	84	5	



POWERFIT .



●3/8"sq. SEMI-DEEP SOCKET SET (5pcs.)



SEMI-DEEP SOCKET SET (5)	ocs.)				mm
No. TB3M05	▼ g 400	₩1			
Semi-Deep Socket (6pt.)	B3M-08,	10, 12, 14,	17		
Socket Holder (5pcs.)	EHB305				

POWERFIT .

●3/8"sq. SEMI-DEEP SOCKET



SEMI-DEEP	SOCKET										mm
6pt.	12pt.		S	D ₁	D ₂	Н	L	l	▼ g	#	
B3M-055	B3M -055	W	5.5	9	17	6	40	28.5	29	5	
-06	-06	W	6	10	17	6	40	28.8	31	5	
-07	-07	W	7	11	17	8	40	28.5	30	5	
-08	-08	W	8	12	17	9	40	28.5	33	5	
-09	-09	W	9	13.5	17	10	40	28.5	37	5	
-10	-10	W	10	14.5	17	11	40	28.5	34	5	
-11	-11	W	11	16	17	12	40	28.5	39	5	
-12	-12	W	12	17	18	14	40	28.5	45	5	
-13	-13	W	13	18.5	18	14	50	38.5	61	5	
-14	-14	W	14	20	19	17	50	38.5	71	5	
-15	-15	W	15	21	20	17	50	38.5	74	5	
-16	-16	W	16	22	21	17	50	38.5	79	5	
-17	-17	W	17	24	22	17	50	38.5	95	5	
-18	-18	W	18	25	23	21	50	38.5	108	5	
-19	-19	W	19	26	24	21	50	38.5	111	5	
-20	-20	W	20	27.5	25	21	50	38.5	124	5	
-21	-21	W	21	28.5	26.5	21	50	38.5	141	5	
-22	-22	W	22	30	27.5	21	50	38.5	151	5	
-23	-23	W	23	31	28.5	21	50	38.5	155	5	
-24	-24	W	24	32.5	30	21	50	38.5	176	5	

POWERFIT .

●3/8"sq. DEEP SOCKET



DEEP SOC	DEEP SOCKET									mm
6pt.	12pt.	S	D ₁	D ₂	Н	L	l	▼ g	H	
B3L-055	B3L -055 W	5.5	9	17	6	60	48.5	40	5	
-06	-06 W	6	10	17	6	60	48.5	44	5	
-07	-07 W	7	11	17	8	60	48.5	44	5	
-08	-08 W	8	12	17	9	60	48.5	49	5	
-09	-09 W	9	13.5	17	10	60	48.5	57	5	
-10	-10 W	10	14.5	17	11	65	53.5	56	5	
-11	-11 W	11	16	17	12	65	53.5	67	5	
-12	-12 W	12	17	18	14	65	53.5	78	5	
-13	-13 W	13	18.5	18	14	70	58.5	87	5	
-14	-14 W	14	20	19	17	70	58.5	92	5	
-15	-15 W	15	21	20	17	70	58.5	95	5	
-16	-16 W	16	22	21	17	70	58.5	102	5	
-17	-17 W	17	24	22	17	70	58.5	130	5	
-18	-18 W	18	25	23	21	70	58.5	147	5	
-19	-19 W	19	26	24	21	70	58.5	150	5	
-20	-20 W	20	27.5	25	23	70	58.5	165	5	
-21	-21 W	21	28.5	26.5	23	70	58.5	188	5	
-22	-22 W	22	30	27.5	23	70	58.5	203	5	
-23	-23 W	23	31	28.5	27	70	58.5	200	5	
-24	-24 W	24	32.5	30	27	70	58.5	229	5	

DEEP SOC	KET										in
6pt.	12pt.		S	D ₁	D ₂	Н	L	l	▼ g	#	
B3L -1/4	B3L -1/4	W	6.3	10	17	6	60	48.5	42	5	
- 9/32	-9/32	W	7.1	11	17	8	60	48.5	44	5	
- 5∕ ₁₆	- 5∕ ₁₆	W	7.9	12	17	9	60	48.5	45	5	
-11/ ₃₂	-11/ ₃₂	W	8.7	13.5	17	10	60	48.5	50	5	
- 3∕8	- 3∕8	W	9.5	14	17	11	65	53.5	55	5	
- 7∕ ₁₆	- 7∕ ₁₆	W	11.1	16	17	12	65	53.5	61	5	
- 1∕2	-1/2	W	12.7	18.5	18	14	70	58.5	80	5	
■17/ ₃₂	■17/ ₃₂	W	13.4	20	19	14	70	58.5	92	5	
- 9/16	- 9∕16	W	14.2	20	19	17	70	58.5	92	5	
■19 ₃₂	■19 _{/32}	W	15	21	20	17	70	58.5	95	5	
- 5/8	- 5/8	W	15.8	22	21	17	70	58.5	102	5	
■ 21/32	-21/32	W	16.6	24	22	17	70	58.5	123	5	
-11/ ₁₆	-11 ₁₆	W	17.4	24	22	17	70	58.5	123	5	
- 3∕ ₄	-3/4	W	19	26	24	21	70	58.5	142	5	
■ 25/32	■ 25/32	W	19.8	27.5	25	23	70	58.5	165	5	
■13 ₁₆	■13 _{/16}	W	20.6	28.5	26.5	23	70	58.5	180	5	
- 7/8	- 7∕8	W	22.2	30	27.5	23	70	58.5	186	5	
											POWERFIT .



· (10pcs.)	mr
▼kg1 🖽 1	
B3L-08, 10, 12, 14, 17	
EHB305	
	B3L-08, 10, 12, 14, 17

POWERFIT .

No. TB3L10	V kg 1.2 ≅ 1
Deep Socket (6pt.)	B3L-07, 08, 10, 12, 13, 14, 15, 17, 19, 22
Socket Holder (10pcs.)	EHB310
	PÔWEŘĚŤÍ:





●3/8"sq. LONG DEEP SOCKET • SET

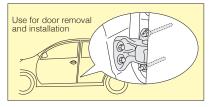
LONG DEEP SO							mm			
No.	S	D ₁	D ₂	d	Н	L	l	▼g	8	
B3LL -10	10	14.5	18	8	11	130	113	115	5	
-12	12	17.7	18	9	12	130	113	140	5	
										- /P9+

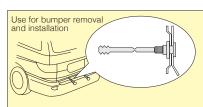
POWERFIT:

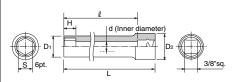
■Usage
• Tightening & loosening of bolts and nuts that are either long and jut out or are in hard to reach areas.

No. B3TLL2	▼ g 255	₩1	
Long Deep Socket (6pt.) B	3LL-10, 12		

- Rear bumper cover installation bolt, Door knob inner installation bolt, Door hinge bolt, side louver installation bolt
- Bumper reinforcement installation bolt, Air bag adjusting bolt, Tension pulley adjustment
- Installation bolts and nuts of the under carriage
 Use where Spanners, Off-set wrenches, Deep sockets, etc., are difficult to use in hard to reach areas







MAGNETIC DEEP SOCKET SET(5pcs. **▼**g 480 ₩ 1 No.TB3L05MGA Magnetic Deep Socket B3L-08MGA, 10MGA, 12MGA, 13MGA, 14MGA Socket Holder (5pcs.) EHB305

- Prevents the falling of bolt · nut with the built-in magnet in the bore.
- Since the magnet part slides, it supports the bolt with washer, thin nut and stud bolts.
- Powerful neodymium magnet is used.

●3/8"sq. MAGNETIC DEEP SOCKET SET (5pcs.)



		(ET						●3/8"sq. MAGNETIC DEEP SOCKET
lo.	S	D ₁	D ₂	L	H ₁	H ₂	▼g	
3L-08MGA	8	12.2	17	60	2.5	4	47	
3L-10MGA	10	14.7	17	65	3.1	4.5	60	
3L-12MGA	12	17.2	18	65	4.6	6	80	
3L-13MGA	13	18.7	18	70	5.2	6.5	99	
3L-14MGA	14	20.2	19	70	5.6	7	114	
Powerful neody Conventional	mium m		used.	s the bol	t with wa	<u> </u>	nin nut ar	and stud bolts.
Powerful neody Conventional	mium m	agnet is	used.	s the bol	t with wa	<u> </u>	nin nut a	and stud bolts.
Conventional product	mium m	agnet is production Spring	used.		<u> </u>	asher, th	nin nut ar	H,
Conventional product	mium m	agnet is production Spring	used.		It with wa	<u> </u>	nin nut ai	and stud bolts.
Conventional product	mium m	agnet is production Spring	used.		•		nin nut a	H,
Conventional product	This	agnet is production Spring	t		<u> </u>	<u> </u>	nin nut a	D, D
Conventional product	This	produc Spring Magne	t et		•			D ₁ Magnet D ₂ Magnet D ₃ (8"en



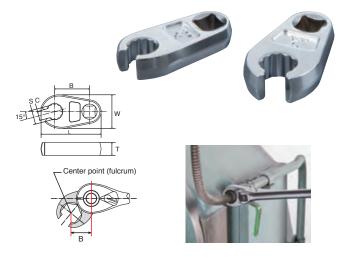
93/8"sq. CROWFOOT WRENCH SET (5pcs.)



CROWFOOT WRENCH SET(5pcs.)						
No.TBNS305W	▼g 490 🛱 1					
Crowfoot Wrench	BNS3-10W, 12W, 14W, 17W, 19W					
Socket Holder (10pcs.)	EHB310					

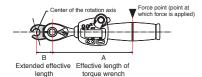
- For the loosening/tightening work of flare nut that's used in the hydraulic piping of automobiles and general industrial machinery
- Approach to nuts is easy with the double hex. bore.
- Since the distance from the bore to drive center is unified at 30mm, conversion during the use of torque wrench does not change depending on the size.

●3/8"sq. CROWFOOT WRENCH



CROWFOOT WR	ENCH							
No.	S	С	L	W	Т	В	▼ g	
BNS3-08W	8	5	49	22	9.5	30	48	
BNS3-10W	10	6	49	22	9.5	30	46	
BNS3-11W	11	7	49	22	9.5	30	44	
BNS3-12W	12	8	52	29	11	30	71	
BNS3-13W	13	9	52	29	11	30	69	
BNS3-14W	14	10	52	29	11	30	67	
BNS3-17W	17	12	55.5	35	13	30	94	
BNS3-19W	19	13	55.5	35	13	30	89	

- For the loosening/tightening work of flare nut that's used in the hydraulic piping of automobiles and general industrial machinery
- Approach to nuts is easy with the double hex. bore.
- Since the distance from the bore to drive center is unified at 30mm, conversion during the use of torque wrench does not change depending on the size.



Torque conversion formula:

- × Required torque value = Input torque value

* Numerical values of dimension B in the upper right dimension drawing (30mm) applies when there is a central axis of crowfoot wrench on the central axis extension of torque wrench (left). If there is no central axis of crowfoot wrench on the central axis extension of torque wrench as shown in the figure on the right, please measure the actual dimension B and apply to the conversion formula.

●3/8"sq. TWIST SOCKET • SET (6pcs.)



TWIST SOCKET - SET		mm
No. TB3TW06	▼g 430 🖾 1	
Twist Socket	B3TW-12, 13, 14, 15, 16, 17	
Socket Holder (10pcs.)	EHB310	
• For leasening halts which a	ve rounded off and atual holts	

- Easy to remove because of twist configuration.
- * Removed bolt and nut are nonrecyclable.
- * Using sizes differ depending on the damaged condition on bolt and nut.

Choose the size after seeing the actual stuff.



TWIST SOCKET - SET

· Do not use a socket with a power tool such as



●3/8"sq. TWIST SOCKET • SET (10pcs.)



- No. TB3TW10 **▼**g 590 B3TW-08, 09, 10, 11, 12, 13, 14, 15, 16, 17 Twist Socket Socket Holder (10pcs.) EHB310
- For loosening bolts which are rounded off and stud bolts.
- Easy to remove because of twist configuration.
- * Removed bolt and nut are nonrecyclable.
- * Using sizes differ depending on the damaged condition on bolt and nut.

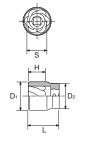
Choose the size after seeing the actual stuff.



• Do not use a socket with a power tool such as an impact wrench.



●3/8"sq. TWIST SOCKET







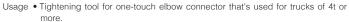
TWIST SOCKET								mm
No.	S	D ₁	D ₂	Н	L	▼ g	#	
B3TW-08	8	13	19	8	32	40	5	
-09	9	14.5	19	8	32	45	5	
-10	10	16	19	10	32	47	5	
-11	11	17.5	19	10	32	49	5	
-12	12	18.5	19	12	32	50	5	
-13	13	20	19	12	32	51	5	
-14	14	21	19	14	32	53	5	
-15	15	22.5	19	14	32	55	5	
-16	16	24	22	14	32	65	5	
-17	17	26	22	16	35	70	5	

• Do not use a socket with a power tool such as an impact wrench.

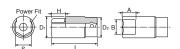


SOCKET WRENCH FOR ELBOW CONNECTOR SOCKET WRENCH FOR ELBOW CONNECTOR

No.	sq.	S	D ₁	D ₂	Н	L	Α	В	▼ g	#	
ABX6-12	9.5	12	18.5	18	14	50	14	12	60	5	1
ABX6-14	9.5	14	22	20	17	50	17	14	80	5	•
ABX6-17	9.5	17	24	22	17	50	17	17	98	5	•
ABX6-19	9.5	19	26	24	21	50	21	19	110	5	•
ABX6-22	9.5	22	30	27.5	21	50	21	22	153	5	•
ABX6-34	12.7	34	45	41	20	44	19.5	27	300	5	•



- Width across flats 34mm is for the tightening and loosening of connector for check valve that's used for Isuzu trucks.
- It can also be used to tighten and loosen elbow connectors (L-shape piping joint) used for general maintenance machinery.
- ABX6-36 is 1/2"sq. model.







Elbow Connector

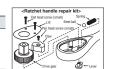
RATCHET HANG	DLE						
No.	Feed	В	Т	L	▼ g	#	
BR3E	10°	33	13.5	180	260	5	

CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■3/8"sq. Ratchet head repair kit

No.	Drive	Contents	
BR3E-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small)×2	

RATCHET HANDLE (NO UNION MECHANISM TYPE)



0	B L

●3/8"sq. RATCHET HANDLE D.PAT.

●3/8"sq. RATCHET HANDLE D.PAT.

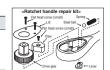
No. Feed B T L ▼g ⊕ BR3A 10° 33 13.5 180 260 5 • Slippage is prevented by using the ratchet while pressing down on the anti-slip

Slippage is prevented by using the ratchet while pressing down on the anti-slip area of the central part of the head.

CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■3/8"sq. Ratchet head repair kit

No.	Drive	Contents	
BR3A-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small)×2	



B L

LONG RATCHET HANDLE No. Feed B T L ▼g ♥ BR3L 10° 33 13.5 275 320 5

CAUTION - DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

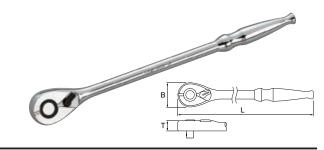
*** DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

■3/8"sq. Ratchet head repair kit

No.	Drive	Contents
BR3E-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small) ×2



●3/8"sq. LONG RATCHET HANDLE D.PAT.

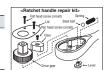


FLEX RATCHET HANDLE No. Feed B T L ▼g ⊕ BR3F 10° 33 13.5 180 280 5

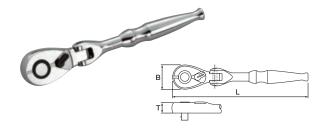
TION • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.
• ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY,
OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■3/8"sq. Ratchet head repair kit

	iutorio	t noud ropuli kit	
No.	Drive	Contents	
BR3E-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small)×2	

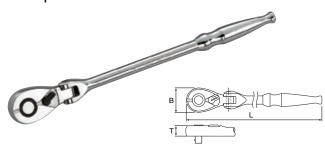


●3/8"sq. FLEX RATCHET HANDLE D.PAT.





D3/8"sq. FLEX LONG RATCHET HANDLE D.PAT.



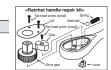
FLEX LONG RATCHET HANDLE							
No.	Feed	В	Т	L	▼ g	#	
BR3FL	10°	33	13.5	275	360	5	

CAUTION - IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.

• ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.
• DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

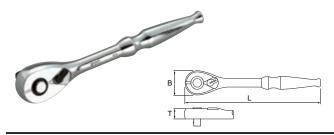
3/8"sq. Ratchet head repair kit

No. Drive		Contents	
BR3E-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small) ×2	



●3/8"sq. COMPACT SHORT RATCHET HANDLE D.PAT.

Scheduled to be on sale from July 2005



COMPACT SHORT RATCHET HANDLE								
No.	Feed	В	Т	L	▼g	#		
BRC3E	10°	22	10	125	100	5		

ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

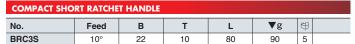
3/8"sq. Ratchet head repair kit (for the compact type)

No.	Drive	Contents	
BRC3-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small) ×2	



●3/8"sq. COMPACT SHORT RATCHET HANDLE D.PAT.

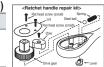




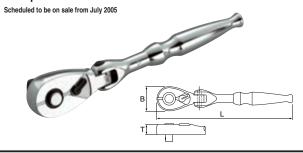
ON • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■3/8"sq. Ratchet head repair kit (for the compact type)

No.	Drive	Contents	
BRC3-K	3/8"sq.	Drive gear · Claw · Steel ball ·	
		Coil spring · Lever ·	
		Pan head screw (small) · Lid ×1,	
		Flat head screw (small)×2	



●3/8"sq. COMPACT FLEX SHORT RATCHET HANDLE D.PAT.



COMPACT FLEX SHORT RATCHET HANDLE								
No.	Feed	В	Т	L	▼g	#		
BRC3F	10°	22	10	125	140	5		
CAUTION IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE. • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY,								

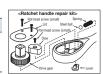
OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

COMPACT FLEX SHORT RATCHET HANDLE

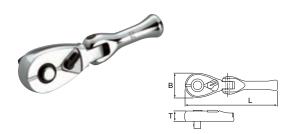
Feed

■3/8"sq. Ratchet head repair kit (for the compact type)

No. Drive		Contents	
BRC3-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Leve · Pan head screw (small) · Lid ×1, Flat head screw (small)×2	

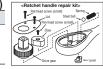


●3/8"sq. COMPACT FLEX SHORT RATCHET HANDLE D.PAT.



BRC3FS 80 ON IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.
ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY,
OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

=3/0 Sq. nai	=3/0 Sq. natchet flead repair kit (for the compa			
No.	Drive	Contents		
BRC3-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small)×2		



●3/8"sq. RATCHET HEAD REPAIR KIT

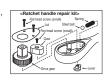


RATCHET HEAD REPAIR KIT

No.

No.	Drive	Contents	
BR3E-K	3/8"sq.	Drive gear · Claw · Steel ball · Spring · Lever Pan head screw (small) · Lid x1 Flat head screw (small) x2	

- 3/8"sq. Ratchet head repair kid (for BR3E, BR3L, BR3F, BR3FL)
- * See BR3A-K for no Union Mechanism type (BR3A)
- * See BRC3-K for the compact type type (BRC3E, BRC3S, BRC3F, BRC3FS)





RATCHET HEAD REPAIR KIT							
No.	Drive	Contents					
BR3A-K	3/8"sq.	Drive gear · Claw · Steel ball · Spring · Lever Pan head screw (small) · Lid x1 Flat head screw (small) x2					

- 3/8"sq. Ratchet head repair kid (for no Union Mechanism type) (BR3A)
- * See BR3E-K for Union Mechanism type (BR3E, BR3L, BR3F, BR3FL)
- * See BRC3-K for the compact type type (BRC3E, BRC3S, BRC3F, BRC3FS)

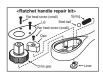


●3/8"sq. RATCHET HEAD REPAIR KIT (NO UNION MECHANISM TYPE)



Drive Contents BRC3-K Drive gear · Claw · Steel ball · Spring · Lever Pan head screw (small) · Lid x1 Flat head screw (small) x2

- \cdot 3/8"sq. Ratchet head repair kid for the compact type (BRC3E, BRC3S, BRC3F,
- * See BR3E-K for Union Mechanism type (BR3E, BR3L, BR3F, BR3FL)
- * See BR3A-K for no Union Mechanism type (BR3A)



●3/8"sq. F	RATCHET HE	AD REPAIR KIT
(COMPA	CT TYPE)	



RATCHET HANDLE No. Type Feed В L ₩g CH) BRG3 Grip Type

- 72teeth gear with small 5° increments
- *Replacement parts are available. Check with your dealer for details.

• ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

●3/8"sq. RATCHET HANDLE (GRIP TYPE)

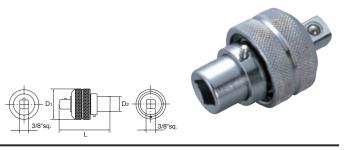


RATCHET ADAPTOR							
No.	Feed	D ₁	D ₂	L	▼ g	9	
BRA21	6°	31	17.7	51	140	10	

- 60teeth gear with small 6° increments.
- *Replacement parts are available. Check with your dealer for details.

ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

●3/8"sq. RATCHET ADAPTOR

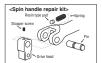


SPINNER HANDLE								
No.	D	Ø	L	▼ g	#			
BS3E	18	21	300	410	5			
LONG SPINNER HANDLE								

LONG SPINNER HANDLE						
No.	D	Ø	L	▼ g	#	
BS3L	18	21	400	510	5	

3/8"sq. Spinner handle head repair kit PAT.P.

No.	Insertion angle	Contents	
		Drive head · Pin · Pad Spring ·	
		Stopper screw x1	



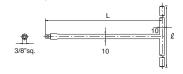
10

200 * With 3/8"sq. dr. for use on Sockets, Hexagon Wrenches, etc.

No.

TH20

CAUTION • INSERT THE DRIVE SQUARE DEEPLY TO THE END.



▼g

- ●3/8"sq. SPINNER HANDLE PAT.P.
- ●3/8"sq. LONG SPINNER HANDLE PAT.P

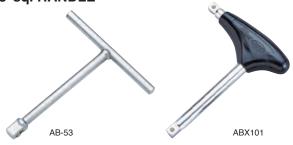


●3/8"sq. T-SHAPED WRENCH



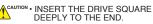


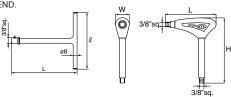
●3/8"sq. HANDLE



HANDLE							
No.	Н	W	l	L	▼ g	#	
ABX101	135	28	_	105	250	10	
AB-53	_	_	100	115	90	1	

• This can be used for sockets and hexagon wrenches due to the 3/8"sq drive.





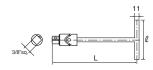
•FLEX T-SHAPED WRENCH (LONG)



FLEX T SHAPE WRENCH (LONG)						
No.	EDGE	l	L	▼ g	8	
THF20-700	3/8"sq.	180	705	700	10	

CAUTION * DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.

• INSERT THE DRIVE SQUARE DEEPLY TO THE END.

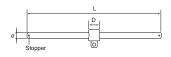


●3/8"sq. SLIDE HEAD HANDLE



SLIDE HEAD HANDLE								
No.	D	Handle (ø)	L	▼ g	#			
ВНМ3	17	9	200	120	5			
• For faster operation from quick turning to fastening to								

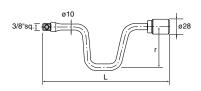
- For faster operation from quick turning
- A groove on the handle prevents head turning







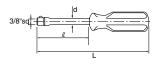
SPEEDER HANDLE							
No.	r (turning)	L	▼g	#			
BSD20	100	350	400	1			



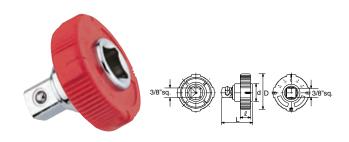
●3/8"sq. SCREWDRIVER TYPE HANDLE



DRIVER TYPE H	ANDLE					
No.	d	L	l	▼g	\oplus	
BD20	8	150	63	70	5	



●3/8"sq. QUICK SPINNER ® D.PAT.



QUICK SPINNE	R _®						
No.	D	d	L	l	▼g	8	
BE3-Q	36	17	31	10	40	10	

- Specially for quick turning for effective use with Ratchet handle or Extension bar.
- Grip has angle (90°) indication by groove with 30° indication in surface.
- Grip is made of resin for light weight.



• DO NOT USE MULTIPLE EXTENSIONS.

*Quick Spinner is the registered trademark of the Kyoto Tool Co., LTD.



FLEXIBLE EXTENSION BAR						
No.	L	N⋅m	▼g	#		
BES21-200	200	20	110	10		

Convenient for fastening & loosening bolts and nuts in narrow quarters.





*FOR TEMPORARY FASTENING ONLY. DO NOT APPLY EXCESSIVE POWER.

• DO NOT USE MULTIPLE EXTENSIONS.

●3/8"sq. FLEXIBLE EXTENSION BAR



No.	D ₁	D ₂	L	▼ g	8	
BE3-030	13	17	30	30	5	
-050	13	17	50	50	5	
-075	12	17	75	75	5	
-100	12	17	100	95	5	
-150	12	17	150	140	5	
-200	12	17	200	190	5	
-270	12	17	270	250	5	
-600	13	17	600	530	1	
-1000	13	17	990	700	1	

●3/8"sq. EXTENSION BAR



WOBBLE EXTENSION BAR								
No.	D ₁	D ₂	L	▼ g	#			
BE3-030JW	13	17	30	30	5			
-050JW	13	17	50	50	5			
-075JW	12	17	75	75	5			
-100JW	12	17	100	95	5			
-150JW	12	17	150	140	5			
-200JW	12	17	200	190	5			
-270JW	12	17	270	250	5			
-600JW	13	17	600	530	1			
-1000JW	13	17	990	700	1			
A CAUTION - DO NO	T DUT DDECC T	OO HADD ACT	TO OTDUCTUDE	LIACT ECC ME	ICH	DOW/DOT		

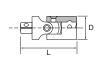
CAUTION • DO NOT PUT PRESS TOO HARD, AS ITS STRUCTURE HAS LESS WEIGH RESISTANCE THAN THE NORMAL EXTENSION BAR.
• DO NOT USE MULTIPLE EXTENSIONS.

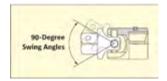
●3/8"sq. WOBBLE EXTENSION BAR



UNIVERSAL JOI	INT			
No.	D	L	▼g	8
BJ3	18	46	50	5

CAUTION DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.





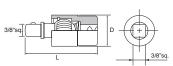
●3/8"sq. UNIVERSAL JOINT

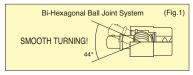


FLEX BALL JOIN	IT				
No.	D	L	▼ g	8	
BJF20	22	50	86	5	

• 12pt. ball joint system for smooth 44& turning (Fig.-1)





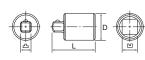


●3/8"sq. FLEX BALL JOINT



3/8"sq. INTERNAL DRIVE ADAPTOR								
NI-	S	q.			▼ g	(H)		
No.	Internal	External	D	_ L	Vg	Ð		
BA32	3/8"	1/4"	17	25	20	5		
BA34	3/8"	1/2"	17	29.5	38	5		

• FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.



●3/8"sq. INTERNAL DRIVE ADAPTOR

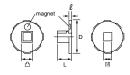




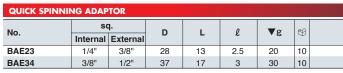


QUICK SPINNING ADAPTOR • SET D.PAT.





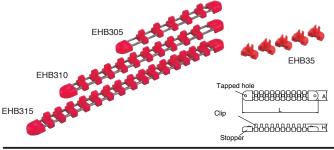




- This product is different from the socket adapter as it can be rotated quickly as it is.
 The length can be shortened and used, as the concave and the convex are set at the same place, compared with the socket adapter. (See the left figure.)
 It is easy to hold and to remove the socket because of the magnet force.
 The grip shape prevents slipping and makes it easy to rotate.

QUICK SPINNING ADAPTOR - SET						
No. BAE234	▼g 50	⊎ 1				
Quick Spinning Adaptor	BAE23, 34					

●3/8"sq. SOCKET HOLDER • CLIP SET D.PAT.



SOCKET HOLDER • CLIP SET (5pcs.)								
No.	No. of clips	Н	Α	L	▼ g	#		
EHB305	5	23	25	215	80	10		
EHB310	10	23	25	315	120	10		
EHB315	15	23	25	365	140	10		
01 (1 11			/ / /	1 1 1		1 11		

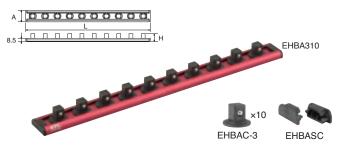
- Change of holder shape easier insertion/removal of socket and increased holding strength compared with previous model. (Does not fall off so easily while carrying)
 Different colors for different sizes.

*REVERSING HOLDER MAY ALLOW SOCKETS TO GET DISLODGED.

No. EHB35	▼ g 25	₩ 10	
Clip	5pcs.		
. O . I' (FLIDOOF	040		

- . Spare clip for EHB305, 310 and EHB315.
- Can be used for EHB205-215 and 405-410.

•ALUMINUM SOCKET HOLDER



ALUMINUM SOCKET HOLDER								
No.	sq.	No. of clips	Н	Α	L	▼g	#	
EHBA310	9.5	10	20	28.5	305	180	1	

- Clip is a ball-lock type that prevents the socket from suddenly falling out.
 Rail color differs by the square, allowing the easy identification of socket.
 Since the rail size is uniform, sockets with various squares can be stored by interchanging the clip.
- Socket may fall off if the socket holder is turned upside down.
 It cannot be mounted on a surface that's perpendicular to the ground.

No.	Product Name	
EHBAC-3	3/8"sq. Clip Set [10pcs.]	
EHBASC	Side Cover [2pcs. Set]	

* Clip can be commonly used for EHBA310, EHBA210 and EHBA410.

■1/2"sq. SOCKET WRENCH SET DIGITAL RATCHET MODEL



SOCKET WRENCH SET	
No. TB406WG1	▼kg 1.4 🖽 1
Digital Ratchet	GEK085-R4-L
Socket (12pt.)	B4-10W, 12W, 14W, 17W, 19W
Socket Holder (5pcs.)	EHB405

• It is a set of advanced digital torque tool "Digital Ratchet" P.177 and 1/2"sq. socket

●1/2"sq. SOCKET WRENCH SET (14pcs.)



TB410

No. TB410		▼ kg 3.4	₩1
Socket (6pt.)		B4-08, 10, 12	, 13, 14, 17, 19, 21, 22, 24
No. TB410X		▼ kg 3.5	⊎1
Socket (6pt.)		B4-08, 10, 12	
Socket (12pt.)		B4-13W, 14W	, 17W, 19W, 21W, 22W, 24W
Common Items			
Ratchet Handle		BR4E	
Extension Bar	75	BE4-075	
	150	BE4-150	
Universal Joint		BJ4	
Socket Holder (5pcs.)		EHB405	
Metal Case		EKB-2 L450×\	N185×H60mm

●1/2"sq. SOCKET WRENCH SET (13pcs.)



No.TB410W		▼kg 3.5 🕾	1		
Socket (12pt.)		B4-08W, 10W, 11W,	12W, 13W	. 14W, 17W,	19W, 22W, 24V
Ratchet Handle		BR4E			
Slide Head Handle		BHM4			
Extension Bar	150	BE4-150			
Metal Case		EKB-2 (W455×D19	00×H60)		

- With tray (W447xD185xH30). Foam tray has the 2-layer structure of black and pink, making it easy to confirm the presence of tools.
- Size is marked on the socket storage and tool types on the storage part of other tools, making the storage location clear in a glance.

 It is a Japan Machine Tool Standard Type 415-ISO equivalent product (set contents may somewhat differ in consideration of the frequency of use, etc.).



SOCKET WRENCH SE	T (19pcs.		mm
No. TB413		▼kg 4.9 🖽 1	
Socket (6pt.)		B4-08, 10, 11, 12, 13, 14, 17, 19, 21, 22, 24, 26,	, 27
No. TB413X		▼kg 4.9 😭 1	
Socket (6pt.)		B4-08, 10, 11, 12	
Socket (12pt.)		B4-13W, 14W, 17W, 19W, 21W, 22W, 24W, 26W,	27W
Common Items			
Ratchet Handle		BR4E	
Spinner Handle		BS4E	
Extension Bar	75	BE4-075	
	150	BE4-150	
Wobble Extension Bar		BE4-100JW	
Universal Joint		BJ4	
Socket Holder (5pcs.)		EHB405	
Metal Case		EKB-2 L450×W185×H60mm	
• with Plastic Tray (LAAF	VM/185vL	452mm)	OWEBET

●1/2"sq. SOCKET WRENCH SET (19pcs.)



TB413

with Plastic Tray (L445×W185×H52mm)

SOCKET WRENCH SET (19pcs.)							
No.TB415W	▼kg 5.1 🖽 1						
Socket (12pt.)	B4-08W, 10W, 11W, 12W, 13W, 14W, 17W, 19W, 21W, 22W, 24W, 26W, 27W, 30W, 32W						
Ratchet Handle	BR4E						
Spinner Handle	BS4E						
Slide Head Handle	BHM4						
Extension Bar 150	BE4-150						
Metal Case	EKB-2 (W455×D190×H60)						

- With tray (W447×D185×H30). Foam tray has the 2-layer structure of black and pink, making it easy to confirm the presence of tools.
- Size is marked on the socket storage and tool types on the storage part of other tools, making the storage location clear in a glance.
- It is a Japan Machine Tool Standard Type 415-ISO equivalent product (set contents may somewhat differ in consideration of the frequency of use, etc.).
- The case is listed on P.344.

●1/2"sq. SOCKET WRENCH SET (19pcs.)



●1/2"sq. SOCKET WRENCH SET (21pcs.)



TB415X

SOCKET WRENCH SE	T (21pcs.)			mm · in
No. TB415X		▼ kg 5.4	⊎1	
Socket (6pt.)		B4-08, 10, 11,	12	
Socket (12pt.)		B4-13W, 14W, 27W, 30W,	17W, 19W, 21W, 22W, 24W 32W	/, 26W,
No. TB415BX		▼kg 5.4	₩ 1	
Socket (6pt.) in		B4- ⁷ / ₁₆		
Socket (12pt.) in		B4-½W, 16W, 1	$^{19}_{32}$ W, $^{5}_{8}$ W, $^{11}_{16}$ W, $^{3}_{4}$ W, $^{25}_{32}$ W	/, ¹³ / ₁₆ W,
		$^{7}/_{8}W$, $^{15}/_{16}W$,	$1Wv1-\frac{1}{16}W$, $1-\frac{1}{8}W$, $1-\frac{1}{4}W$	
Common Items				
Ratchet Handle		BR4E		
Spinner Handle		BS4E		
Extension Bar	75	BE4-075		
	150	BE4-150		
Wobble Extension Bar		BE4-100JW		
Universal Joint		BJ4		
Socket Holder (5pcs.)		EHB405		
Metal Case		EKB-2 L450×W	185×H60mm	
• with Plastic Tray (L445	×W185×H	152mm)		POWERFIT .

SOCKET WRENCH SE	T (26pcs.		mm
No. TB420X		▼kg 5.8 😂 1	
Socket (6pt.)		B4-08, 10, 11, 12	
Socket (12pt.)		B4-13W, 14W, 15W, 16W, 17W, 18W, 19W, 21W,	
		22W, 23W, 24W, 26W, 27W, 29W, 30W, 32W	
Ratchet Handle		BR4E	
Spinner Handle		BS4E	
Extension Bar	75	BE4-075	
	150	BE4-150	
Wobble Extension Bar		BE4-100JW	
Universal Joint		BJ4	
Socket Holder (5pcs.)		EHB405	
Metal Case		EKB-2 L450×W185×H60mm	

No. TB420X		▼Kg 5.8 🖫 1
Socket (6pt.)		B4-08, 10, 11, 12
Socket (12pt.)		B4-13W, 14W, 15W, 16W, 17W, 18W, 19W, 21W,
		22W, 23W, 24W, 26W, 27W, 29W, 30W, 32W
Ratchet Handle		BR4E
Spinner Handle		BS4E
Extension Bar	75	BE4-075
	150	BE4-150
Wobble Extension Bar		BE4-100JW
Universal Joint		BJ4
Socket Holder (5pcs.)		EHB405
Metal Case		EKB-2 L450×W185×H60mm
• with Plastic Tray (L44	5×W185×	H52mm) POWERFIT

DEEP SOCKET WRENCH SET (15pcs.) mm No. TB4L10X ▼kg 5 ₩ 1 Deep Socket (6pt.) B4L-08, 10, 12 B4L-13W, 14W, 17W, 19W, 21W, 22W, 24W Deep Socket (12pt.) Ratchet Handle BR4E Extension Bar BE4-075 BE4-150 150 Wobble Extension Bar BE4-100JW

EKB-2 L450×W185×H60mm

EHB405

• with Plastic Tray (L445×W185×H52mm)

Universal Joint

Metal Case

Socket Holder (5pcs.)

●1/2"sq. SOCKET WRENCH SET (26pcs.)



●1/2"sq. DEEP SOCKET WRENCH SET (15pcs.)



POWERFIT .







POWERFIT .

SOCKET SET (5pcs.)		mm
No. TB405	▼ g 500 😂 1	
Socket (6pt.)	B4-10, 12, 14, 17, 19	
Socket Holder (5pcs.)	EHB405	



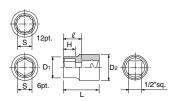


SOCKET SET (10pcs.)	mm
No. TB410E	V kg 1
Socket (6pt.)	B4-08, 10, 12, 13, 14, 17, 19, 21, 22, 24
Socket Holder (10pcs.)	EHB410
No. TB410XE	V kg 1
No. TB410XE Socket (6pt.)	▼kg 1

●1/2"sq. SOCKET





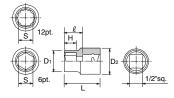


SOCKET										mm
6pt.	12pt.	S	D ₁	D ₂	Н	L	l	▼ g	#	
B4 -08	B4 -08W	8	12	22	5.5	28.5	12.5	29	5	
-09	-09W	9	13.5	22	5.5	28.5	12.5	30	5	
-10	-10W	10	14.5	22	5.5	28.5	12.5	38	5	
-11	-11W	11	16	22	6	29	13	41	5	
-12	-12W	12	17	22	7.5	30.5	14.5	44	5	
-13	-13W	13	18.5	22	7.5	30.5	14.5	45	5	
-14	-14W	14	20	22	8.5	31.5	15.5	49	5	
-15	-15W	15	21	22	8.5	31.5	15.5	50	5	
-16	-16W	16	22.5	22	9	33	17	55	5	
-17	-17W	17	24	22	10	34	18	61	5	
-18	-18W	18	25	23	10	34	18	69	5	
-19	-19W	19	26	24	10.5	34.5	18.5	75	5	
-20	-20W	20	27.5	25	11	35	19	83	5	
-21	-21W	21	28.5	26	11.5	35.5	19.5	91	5	
-22	-22W	22	30	27	11.5	35.5	19.5	104	5	
-23	-23W	23	31	27.5	12	36	20	108	5	
-24	-24W	24	32.5	28.5	12	36	20	117	5	
-25	-25W	25	34	30.5	13	37	21	140	5	
-26	-26W	26	35	31.5	14	38	22	149	5	
-27	-27W	27	36.5	33	15	39	23	171	5	
-28	-28W	28	38	34.5	16	40	24	190	5	
-29	-29W	29	39	35.5	17	41	25	206	5	
-30	-30W	30	40	36	17	42	26	214	5	
-31	-31W	31	42	37.5	18	43	27	248	5	
-32	-32W	32	43	38.5	18	43	27	256	5	
-33	-33W	33	44	40	19	44	28	278	5	
-34	-34W	34	45	41	19	44	28	286	5	
-35	-35W	35	46	41.5	19	44	28	297	5	
-36	-36W	36	47	42.5	19	44	28	305	5	

●1/2"sq. SOCKET







SOCKET										in
6pt.	12pt.	S	D ₁	D ₂	Н	L	l	▼ g	#	
B4 -3/8	B4 -3/8 W	9.5	14.5	22	5.5	28.5	12.5	38	5	
- ⁷ / ₁₆	$-\frac{7}{16}$ W	11.1	16	22	6	29	13	41	5	
$-\frac{1}{2}$	$-\frac{1}{2}$ W	12.7	18.5	22	7.5	30.5	14.5	46	5	
- ¹⁷ / ₃₂	-17/ ₃₂ W	13.4	20	22	8.5	31.5	15.5	50	5	
- 9/ ₁₆	-9/ ₁₆ W	14.2		22	8.5	31.5	15.5	49	5	
- ¹⁹ / ₃₂	- ¹⁹ / ₃₂ W	15.0	21	22	8.5	31.5	15.5	50	5	
- 5/ ₈	-5∕ ₈ W	15.8	22.5	22	9	33	17	56	5	
- ²¹ / ₃₂	$-\frac{21}{32}$ W			22	10	34	18	61	5	
- ¹¹ / ₁₆	-11/ ₁₆ W	17.4	24	22	10	34	18	62	5	
-3/4	-3/ ₄ W	19.0	26	24	10.5	34.5	18.5	75	5	
- ²⁵ / ₃₂	- ²⁵ / ₃₂ W	19.8	27.5	25	11	35	19	86	5	
- ¹³ / ₁₆	- ¹³ / ₁₆ W	20.6	28.5	26.5	11.5	35.5	19.5	94	5	
- ⁷ / ₈	- ⁷ / ₈ W	22.2	30	27.5	11.5	35.5	19.5	107	5	
- ¹⁵ / ₁₆	- ¹⁵ / ₁₆ W	23.8	32.5	30	12	36	20	131	5	
$-\frac{31}{32}$	- ³¹ / ₃₂ W	24.6	34	30.5	13	37	21	139	5	
-1	-1 W	25.4	35	31.5	14	38	22	152	5	
-1- ¹ / ₁₆			36.5	33	15	39	23	171	5	
-1- ¹ / ₈	-1- ¹ / ₈ W	28.5	39	35.5	17	41	25	204	5	
-1- ³ / ₁₆	-1- ³ / ₁₆ W		40	36	17	42	26	214	5	
-1- ¹ / ₄	-1- ¹ / ₄ W	31.7	43	38.5	18	43	27	262	5	
	-1- ⁵ / ₁₆ W			40	19	44	28	282	5	
-1- ³ / ₈	-1- ³ / ₈ W	34.9	46	41.5	19	44	28	297	5	

●1/2"sq. DEEP SOCKET SET (5pcs.) • (10pcs.)



DEEP SOCKET SET (5pcs.) - (10pcs.)										
No. TB4L05	▼g 820 🖾 1									
Deep Socket (6pt.)	B4L-10, 12, 14, 17, 19									
Socket Holder (5pcs.)	EHB405									

								POWEH-III®
No. TB4L10E	▼ g 1.8	₩ 1						
Deep Socket (6pt.)	B4L-08, 10	, 12, 13,	14, 17	19,	21,	22,	24	
Socket Holder (10pcs.)	EHB410							
								POWERFIT »

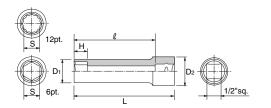


DEEP SOCKET 12pt. s D1 D_2 н **▼**g Ħ 6pt. B4L-08 B4L -08W 22 74 -09 -09W 13.5 5 5 5 107 -10 -10W 14.5 74 -11 -11W 12 22 -12W -12 17 5 18.5 -13 -13W -14W 16 22.5 22 17 90 74 -15 -15W -16 -16W 25 5 -17W -17 -18W -18 20 21 22 27.5 25 -19 -19W 5 -20 -20W 28.5 26.5 27.5 -21 -21W -22 -22W -23 -23W 28.5 25 26 27 30 -24 -24W 32.5 -25 30.5 31.5 -25W -26 -26W -27 -27W 36.5 -28 -28W 34.5 30 30 40 35.5 36 100 84 5 -29 -29W -30W -30 -31 -31W 37.5 -32W 38.5 32 34 -33 -33W 5 -34 -34W -35 41.5 -35W -36W

●1/2"sq. DEEP SOCKET



											POWERFIT®
DEEP SOCI	KET										in
6pt.	12pt.		S	D ₁	D ₂	Н	L	l	▼ g	8	
B4L- ³ / ₈	B4L-3/8	W	9.5	14.5	22	11	90	74	93	5	
- ⁷ / ₁₆	- ⁷ / ₁₆	W	11.1	16	22	12	90	74	107	5	
-1/ ₂	-1/2	W	12.7	18.5	22	14	90	74	136	5	
-17/32	-17/32	W	13.4	20	22	17	90	74	146	5	
- ⁹ / ₁₆	- ⁹ / ₁₆	W	14.2	20	22	17	90	74	138	5	
-19/32	-19/32	W	15.0	21	22	17	90	74	144	5	
- ⁵ /8	- ⁵ /8	W	15.8	22.5	22	17	90	74	170	5	
- ²¹ / ₃₂	- ²¹ / ₃₂	W	16.6	24	22	17	100	84	195	5	
-11/16	-11/16	W	17.4	24	22	17	100	84	195	5	
-3/4	-3/4	W	19.0	26	24	21	100	84	218	5	
$\frac{25}{32}$	- ²⁵ / ₃₂	W	19.8	27.5	25	22	100	84	243	5	
- ¹³ / ₁₆	- ¹³ / ₁₆	W	20.6	28.5	26.5	23	100	84	245	5	
- ⁷ / ₈	- ⁷ / ₈	W	22.2	30	27.5	23	100	84	273	5	
- ¹⁵ / ₁₆	- ¹⁵ / ₁₆	W	23.8	32.5	30	27	100	84	330	5	
- ³¹ / ₃₂	- ³¹ / ₃₂	W	24.6	34	30.5	27	100	84	344	5	
-1	-1	W	25.4	35	31.5	30	100	84	371	5	
-1- ¹ / ₁₆	-1- ¹ / ₁₆	W	26.9	36.5	33	30	100	84	409	5	
-1- ¹ /8	-1- ¹ / ₈	W	28.5	39	35.5	30	100	84	448	5	
-1- ³ / ₁₆	-1- ³ / ₁₆	w	30.1	40	36	30	100	84	460	5	
-1 - ¹ / ₄	-1- ¹ / ₄	W	31.7	43	38.5	32	100	84	556	5	
-1- ⁵ / ₁₆	-1- ⁵ / ₁₆	w	33.3	44	40	32	100	84	593	5	
-1- ³ / ₈	-1- ³ / ₈	W	34.9	46	41.5	32	100	84	669	5	



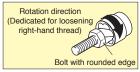
TWIST SOCKET SET (5pcs.)		
No. TB4TW05	▼g 930	₩1
Twist Socket	B4TW-17, 1	19, 21, 22, 24
Socket Holder (5ncs.)	FHB405	

- It is a tool for loosening bolts, stud bolts, etc. that are rounded from the edge loss
 Twisted teeth bite into damaged bolt·nut, allowing the easy removal.

- * Removed bolt·nut cannot be reused.
 * Size to be used may differ depending on the damage condition of the bolt·nut. Please confirm the size selection with the actual article.



CAUTION •Do not use power tools (pneumatic/ electric impact wrench, etc.).



POWERFIT:

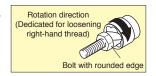
●1/2"sq. TWIST SOCKET SET (5pcs.)



TWIST SOCKET No. S D₁ D_2 **▼**g Ħ B4TW-17 25.8 B4TW-19 28.4 B4TW-21 B4TW-22 B4TW-24



•Do not use power tools (pneumatic/ electric impact wrench, etc.).



●1/2"sq. TWIST SOCKET





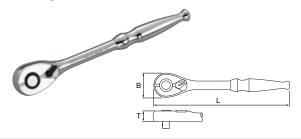
•SOCKET WRENCH FOR ELBOW CONNECTOR



SOCKET WRENCH FOR ELBOW CONNECTOR											
No.	sq.	S	D ₁	D ₂	Н	L	Α	В	▼ g	#	
ABX6-12	9.5	12	18.5	18	14	50	14	12	60	5	
ABX6-14	9.5	14	22	20	17	50	17	14	80	5	
ABX6-17	9.5	17	24	22	17	50	17	17	98	5	
ABX6-19	9.5	19	26	24	21	50	21	19	110	5	
ABX6-22	9.5	22	30	27.5	21	50	21	22	153	5	
ABX6-34	12.7	34	45	41	20	44	19.5	27	300	5	
	No. ABX6-12 ABX6-14 ABX6-17 ABX6-19 ABX6-22	No. sq. ABX6-12 9.5 ABX6-14 9.5 ABX6-17 9.5 ABX6-19 9.5 ABX6-22 9.5	No. sq. S ABX6-12 9.5 12 ABX6-14 9.5 14 ABX6-17 9.5 17 ABX6-19 9.5 19 ABX6-22 9.5 22	No. sq. S D1 ABX6-12 9.5 12 18.5 ABX6-14 9.5 14 22 ABX6-17 9.5 17 24 ABX6-19 9.5 19 26 ABX6-22 9.5 22 30	No. sq. S D1 D2 ABX6-12 9.5 12 18.5 18.5 ABX6-14 9.5 14 22 20 ABX6-17 9.5 17 24 22 ABX6-19 9.5 19 26 24 ABX6-22 9.5 22 30 27.5	No. sq. S D1 D2 H ABX6-12 9.5 12 18.5 18 14 ABX6-14 9.5 14 22 20 17 ABX6-17 9.5 17 24 22 17 ABX6-19 9.5 19 26 24 21 ABX6-22 9.5 22 30 27.5 21	No. sq. S D1 D2 H L ABX6-12 9.5 12 18.5 18 14 50 ABX6-14 9.5 14 22 20 17 50 ABX6-17 9.5 17 24 22 17 50 ABX6-19 9.5 19 26 24 21 50 ABX6-22 9.5 22 30 27.5 21 50	No. sq. S D1 D2 H L A ABX6-12 9.5 12 18.5 18 14 50 14 ABX6-14 9.5 14 22 20 17 50 17 ABX6-17 9.5 17 24 22 17 50 17 ABX6-19 9.5 19 26 24 21 50 21 ABX6-22 9.5 22 30 27.5 21 50 21	No. sq. S D1 D2 H L A B ABX6-12 9.5 12 18.5 18 14 50 14 12 ABX6-14 9.5 14 22 20 17 50 17 14 ABX6-17 9.5 17 24 22 17 50 17 17 ABX6-19 9.5 19 26 24 21 50 21 19 ABX6-22 9.5 22 30 27.5 21 50 21 22	No. sq. S D1 D2 H L A B ▼g ABX6-12 9.5 12 18.5 18 14 50 14 12 60 ABX6-14 9.5 14 22 20 17 50 17 14 80 ABX6-17 9.5 17 24 22 17 50 17 17 98 ABX6-19 9.5 19 26 24 21 50 21 19 110 ABX6-22 9.5 22 30 27.5 21 50 21 22 153	No. sq. S D₁ D₂ H L A B ▼g ♥ ABX6-12 9.5 12 18.5 18 14 50 14 12 60 5 ABX6-14 9.5 14 22 20 17 50 17 14 80 5 ABX6-17 9.5 17 24 22 17 50 17 17 98 5 ABX6-19 9.5 19 26 24 21 50 21 19 110 5 ABX6-22 9.5 22 30 27.5 21 50 21 22 153 5

- Usage Tightening tool for one-touch elbow connector that's used for trucks of 4t or more.
 - Width across flats 34mm is for the tightening and loosening of connector for check valve that's used for Isuzu trucks.
 - It can also be used to tighten and loosen elbow connectors (L-shape piping joint) used for general maintenance machinery.

●1/2"sq. RATCHET HANDLE D.PAT.



RATCHET HANDLE										
No.	Feed	В	Т	L	▼ g	#				
BR4E	10°	39.5	18	250	580	5				

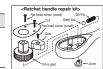
CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■1/2"sq. Ratchet head repair kit Drive Contents BR4E-K Drive gear · Claw · Steel ball 1/2"sa. Coil spring · Lever · Pan head screw (small) · Lid ×1 Flat head screw (small)×2

LONG RATCHET HANDLI

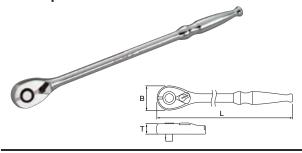
Feed

No



▼g

●1/2"sq. LONG RATCHET HANDLE D.PAT.



BR4L	10°	39.5	18	375	730	5	
A CAUTION - FAIGUE		IL CMITCH		C BEEN CE	T DDODED	ı v	

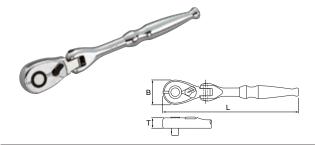
OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

■1/2"sq. Ratchet head repair kit										
No.	Drive	Contents								
BR4E-K	1/2"sq.	Drive gear · Claw · Steel ball ·								
		Coil spring · Lever ·								
		Pan head screw (small) · Lid ×1,								
		Flat head screw (small)×2								



●1/2"sq. FLEX RATCHET HANDLE D.PAT.

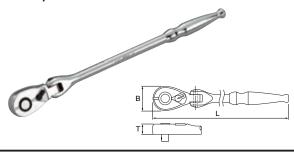


FLEX RATCHET HANDLE												
No.	Feed	В	Т	L	▼ g	#						
BR4F	10°	39.5	18	250	700	5						
• ENSUI	CAUTION - IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE. ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.											

■1/2"sq. Ratchet head repair kit									
No.	Drive	Contents							
BR4E-K	1/2"sq.	Drive gear · Claw · Steel bal · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small)×2							



●1/2"sq. FLEX LONG RATCHET HANDLE D.PAT.



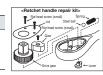
No.	Feed	В	Т	L	▼ g	#	
BR4FL	10°	39.5	18	375	870	5	

IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE. ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING. DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

■1/2"sq. Ratchet head repair kit

FLEX LONG RATCHET HANDLE

No.	Drive	Contents	
BR4E-K	1/2"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small)×2	



●1/2"sq. SPINNER HANDLE PAT.P.

●1/2"sq. LONG SPINNER HANDLE PAT.P.



	- HOLD COID IN THE CENTED, OTHERWISE HAND MAY BE CALICUT IN THE DRIVING SECTION
A (CAUTION • HOLD GRIP IN THE CENTER, OTHERWISE HAND MAY BE CAUGHT IN THE DRIVING SECTION.
	• RE CAREELII AROLIT OVER TOROLIE AS THE WHOLE LENGTH LONG ENOUGH TO ARRIVE YORKSIVE LOAD

SPINNER HANDLE							
No.	D	Grip (ø)	L	▼ g	#		
BS4E	22	21	400	700	5		

LONG SPINNER HANDLE							
No.	D	Grip (ø)	L	▼ g	#		
BS4L	22	21	600	1,100	1		

■1/2"sq. Spinner handle head repair kit . PAT.P.						
No.	Drive	Contents				
BS4E-K	1/2"sq.	Drive · head · Pin · Pad · Spring · Stopper screw x1				





●1/2"sq. EXTRA-LONG SPINNER HANDLE PAT.P.

1/2"sq. [

D ©

●1/2"sq. SPEEDER HANDLE

●1/2"sq. SLIDE HEAD HANDLE

●1/2"sq. SPEEDING CROSS WRENCH

EXTRA-LONG SPINNER HANDLE							
No.	D	L	Α	▼kg	9		
BS4-780	20	787	10	1.5	10		

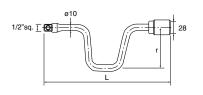
- Is optimal for crank pulley bolts, and hub centre bolt operations, etc., where heavy torque is necessary.
- The handle is hollow and light.• The unit has a knurl grip to help prevent slippage.

CAUTION - HOLD GRIP IN THE CENTER, OTHERWISE HAND MAY BE CAUGHT IN THE DRIVING SECTION. • DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

■Drive set DAT D

EDITOC SCEPALE.								
No.	Drive	Contents						
BS4-780-1	1/2"sq.	Drive head ASSY · Pin · Steel ball · Spring ·						
		Hexagon shaped stopper screw x1						

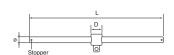
SPEEDER HANDLE							
No.	r (turning)	L	▼ g	8			
BSD30	110	350	590	1			



SLIDE HEAD HANDLE								
No.	D	Handle (ø)	L	▼g	#			
BHM4	22	12	250	275	5			
BHM4	22	12		275	5			

- From quick turning 🗃 to fastening&loosening 🖫 operation than using ratchet handle for some application.

 The head is unable to rotate as there is a groove placed into the handle.



SPEEDING CROSS WRENCH							
No.	l	L	▼kg	#			
XH30	400	285	1.5	5			

· For quick turning.

L SHAPE OFFSET HANDLE

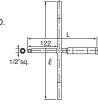
No.

BO30-280

• INSERT THE DRIVE SQUARE DEEPLY TO THE END.

D

16



2

▼g

500

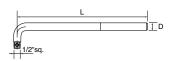
●1/2"sq. L-SHAPED HANDLE



●1/2"sq. QUICK SPINNER® D.PAT.

ON NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

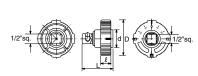
280



QUICK SPINNER®								
No.	D	d	L	l	▼g	8		
BE4-Q	46	24	34.5	11	100	10		

- Specially for quick turning for effective use with Ratchet handle or Extension bar. Grip has angle (90°) indication by groove with 30° indication in surface.
 Grip is made of resin for light weight.

CAUTION DO NOT USE MULTIPLE EXTENSIONS.





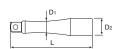






■1/2"sq. EXTENSION BAR





EXTENSION BAR							
No.	D ₁	D ₂	L	▼ g	#		
BE4- 050	17	22	50	90	5		
- 075	17	22	75	140	5		
- 100	17	22	100	170	5		
- 150	17	22	150	250	5		
- 200	17	22	200	330	5		
- 270	17	22	270	440	5		
- 600	17	22	600	1050	1		
-1000	17	22	1000	1800	1	- Part	

CAUTION DO NOT USE MULTIPLE EXTENSIONS.

POWERFIT»

●1/2"sq. WOBBLE EXTENSION BAR

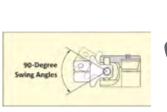


WOBBLE EXTENSION BAR						
No.	D ₁	D ₂	L	▼ g	#	
BE4-050JW	17	22	50	90	5	
-075JW	17	22	75	140	5	
-100JW	17	22	100	170	5	
-150JW	17	22	150	250	5	
-200JW	17	22	200	330	5	
-270JW	17	22	270	440	5	
A CAUTION ◆ COMPARED WITH ORDINARY EXTENSION BAR, IT ENDURES						POWERFIT .

CAUTION • COMPARED WITH ORDINARY EXTENSION BAR, IT ENDURES LOWER LOAD FOR ITS MECHANISM. DO NOT TO APPLY EXCESSIVE POWER.

• DO NOT EXTEND WITH ANOTHER

●1/2"sq. UNIVERSAL JOINT





UNIVERSAL JOINT					
No.	D	L	▼g	8	
BJ4	25	67	140	5	

• DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.





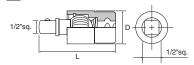
●1/2"sq. FLEX BALL JOINT



FLEX BALL JOIN	IT				
No.	D	L	▼g	#	
BJF30	29	65	170	5	

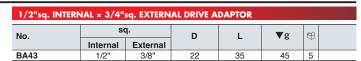
- 12pt. Ball Joint system works for 44° smooth turning.
- Short length for effective use in narrow space. (Fig.1)

CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.



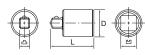
●1/2"sq. INTERNAL × 3/4"sq. EXTERNAL **DRIVE ADAPTOR**





POWERFIT .

CAUTION • FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE DO NOT APPLY EXCESSIVE POWER.



●1/2"sq. INTERNAL × 3/4"sq. EXTERNAL **DRIVE ADAPTOR**



1/2"sq. INTERNAL × 3/4"sq. EXTERNAL DRIVE ADAPTOR							
No.	s	sq.			▼ g	RA	
140.	Internal	External	D	_	7.5	9	
BA3040	1/2"	3/4"	26	40	110	10	

CAUTION • FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE DO NOT APPLY EXCESSIVE POWER.









EHB45

- 1/2"sq

]BBBBBBBB

SOCKET HOLDER CLIP SET (5pcs.)							
No.	No. of clips	Н	Α	L	▼g	#	
EHB405	5	26.5	25	215	120	10	
EHB410	10	26.5	25	365	150	10	

- Change of holder shape enables easier insertion/removal of socket and increased holing strength compared with previous model. (Does not fall off so easily while carving)
 The insertion angle has its own holder coloring setting.

CAUTION • DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

No. EHB45	▼g 30	₩ 10
Clip	5pcs.	

- Spare clip for EHB405, 410.
- Can be used for EHB205-215 and 305-315.

ALUMINU	M SOCK	ET HOLDE	R					
No.	sq.	No. of clips	Н	Α	L	▼g	#	
EHBA410	12.7	10	23	28.5	305	210	1	

- Clip is a ball-lock type that prevents the socket from suddenly falling out.
- Rail color differs by the square, allowing the easy identification of socket
- Since the rail size is uniform, sockets with various squares can be stored by interchanging the clip.

* Socket may fall off if the socket holder is turned upside down. · It cannot be mounted on a surface that's perpendicular to the ground.

■ Supply parts

No.	Product Name	
EHBAC-4	1/2"sq. Clip Set [10pcs.]	
EHBASC	Side Cover [2pcs. Set]	

* Clip can be commonly used for EHBA410, EHBA210 and EHBA310.

STUD REMOVE	₹					
No.	No. Bolt Dia			▼g	R4A	
NO.	Max.	Min.	_	' 5)	
BSR30	ø19	ø6	56	400	1	

· USE A SOCKET APPROPRIATE TO THE SIZE OF A BOLT OR NUT.

- For use on stud bolts.
- *Replacement parts are available. Check with your dealer for details

Insert the drive of atoll in the stud removerand turning. (The teeth of stud remover bitethe bolt)

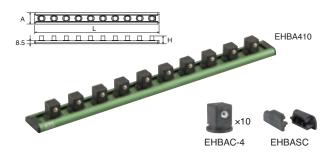


M12

220

Continue to turn the tool for fastening oloosening the stud bolt./rand the bolt

ALUMINUM SOCKET HOLDER

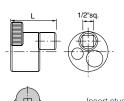


●1/2"sq. SOCKET HOLDER • CLIP SET (5pcs.)

Tapped hole

●1/2"sq. STUD REMOVER







Insert stud remover in stud bolt.

STUD BOLT REM	STUD BOLT REMOVER · SET(4pcs.)						
No. BSR354		▼kg 1.1	I 🛱	1			
Stud Bolt Remove	er	BSR35	-6, 8, 10, 12				
Metal Case		L215×V	V82×H50mm	1			
No.	D	L	S	Applicable Size	▼ g	Θ	
BSR35 - 6	24	65	21	M 6	150	1	
- 8	24	65	21	M 8	150	1	
-10	28	75	21	M10	220	1	

-12

28

TION • USE A SOCKET APPROPRIATE TO THE SIZE OF A BOLT OR NUT.

75

• CHECK THE STUD BLOT FIRMLY CONNECTED WITH THE TOOL BEFORE APPLYING ANY POWER.

21

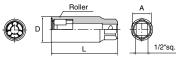
●1/2"sq. STUD BOLT REMOVER • SET (4pcs.)



Usage
• Removal & installation of stud bolts (Can be used on round ones as well).

Characteristics

For fastening/loosening stud bolts.
Usable either for fastening or loosening. Ratchet mechanism enables continuous operation. *Do not use on stud bolts that expose less than 20mm.



*The A is a wrench that is shaped like a hexagon.

SOCKET WRENCH SET(10pcs.) No.TB610A ▼kg 9 ₩ 1 Socket (12pt.) B40-22, 24, 27, 30, 32, 36, 41, 46 Ratchet Handle BR6A Extension Bar 200 BE40-200 B4110-MA (W545×D185×H85) Metal Case

The case is listed on P.344

●3/4"sq. SOCKET WRENCH SET (10pcs.)



SOCKET WRENCH SET(15pcs.) No.TB614A **▼**kg 10.8 ₩1 Socket (12pt.) $B40\text{-}22,\,24,\,27,\,30,\,32,\,35,\,36,\,38,\,41,\,46,\,50$ Head BH40 Bar BL40-500

Extension Bar 130 BE40-130 Extension Bar 200 BE40-200 Metal Case B4110-MA (W545×D185×H85)

The case is listed on P.344

●3/4"sq. SOCKET WRENCH SET (15pcs.)





●3/4"sq. SOCKET WRENCH SET (14pcs.)



▼kg 14.5 ≅ 1
B40-24, 27, 30, 32, 36, 41, 46, 50, 55
BR6A
BH40
BL40-500
BE40-200
BE40-400
B4110-MA (W545×D185×H85)

The case is listed on P.344.

●3/4"sq. SOCKET WRENCH SET (19pcs.)



SOCKET WRENCH SET(19pcs	·.)
No.TB619A	▼kg 14.1 🖽 1
Socket (12pt.)	B40-22, 23, 24, 26, 27, 29, 30, 32, 35, 36, 38, 41,46, 50, 54, 55
Ratchet Handle	BR6A
Extension Bar 130	BE40-130
Extension Bar 200	BE40-200
Metal Case	B4110-MA (W545×D185×H85)

The case is listed on P.344.

●3/4"sq. SOCKET WRENCH SET (18pcs.)

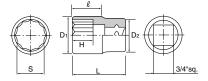


SOCKET WRENCH SET(18	Bpcs.)
No.TB618BA	▼kg 16.7 ∯ 1
Socket (12pt.)	BB40-1-1/16, 1-1/8, 1-3/16, 1-1/4, 1-5/16, 1-3/8, 1-7/16, 1-1/2, 1-5/8, 1-3/4, 1-13/16, 1-7/8, 2
Ratchet Handle	BR6A
Head	BH40
Bar	BL40-500
Extension Bar 200	BE40-200
Extension Bar 400	BE40-400
Metal Case	B4110-MA (W545×D185×H85)

The case is listed on P.344.

●3/4"sq. SOCKET





SOCKET									mm
No.	S	D ₁	D ₂	Н	L	l	▼g	#	
B40 -17	17	26	33	12	46	25	160	5	
-18	18	27	33	13	46	25	160	5	
-19	19	27.5	33	14	46	25	160	5	
-20	20	29.5	33	14	47	26	170	5	
-21	21	30	33	15	47	26	170	5	
-22	22	31	33	16	49	28	170	5	
-23	23	32.5	33	16	49	28	170	5	
-24	24	34	33	18	50	29	180	5	
-25	25	35	34	19	51	30	200	5	
-26	26	36.5	34	19	51	30	210	5	
-27	27	38	34	19	51	30	220	5	
-28	28	39	34	20	52	31	230	5	
-29	29	40	34	21	53	32	240	5	
-30	30	42	36	22	54	33	270	5	
-31	31	43	38	23	55	34	300	5	
-32	32	44	38	24	56	35	310	5	
-33	33	46	38	24	57	36	340	5	
-34	34	47	38	25	57	36	350	5	
-35	35	48	38	26	59	38	370	5	
-36	36	50	40	27	60	39	410	5	
-37	37	51	40	28	61	40	430	5	
-38	38	52	40	29	62	41	440	5	
-39	39	54	40	30	63	42	470	5	
-40	40	55	40	31	64	43	490	5	
-41	41	56	40	32	65	44	500	5	
-42	42	57.5	38	35	66	45	540	5	
-43	43	59	40	36	67	46	590	5	
-44	44	60	42	37	68	47	630	5	
-45	45	62	44	37	69	48	710	5	
-46	46	63	44	35	70	49	750	2	
-47	47	64	44	39	71	50	780	2	
-48	48	65.5	44.5	39	72	51	810	2	
-50	50	68	46	42	74	53	880	2	
-52	52	71	48	47	75	54	920	2	
-54	54	73	48	48	76	55	950	2	
-55	55	75	48	51	79	58	1,040	2	
-56	56	76	48	52	80	59	1,060	2	
-57	57	77	48	53	81	60	1,080	2	
-58	58	79	48	53	82	61	1,180	2	
-60	63	83.5	58	53	84	63	1,390	2	
-63	56	76	48	52	80	59	1,060	2	
-65	65	88	58	52	84	63	1,520	2	
-70	70	92	58	52	84	63	1,580	2	
-75	75	98.5	58	56	86	65	1,720	2	
-80	80	104.5	63	59	90	69	2,040	2	
-85	85	111	63	59	90	69	2,220	2	

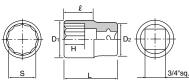
POWERFIT* (Except below B40-46)



SOCKET									in
No.	S	D ₁	D_2	Н	L	l	▼ g	#	
BB40 -1- ¹ / ₁₆	26.9	38	34	20	51	28	230	5	
-1- ¹ / ₈	28.5	40	34	21	53	30	250	5	
-1- ³ / ₁₆	30.1	42	36	22	54	31	280	5	
-1- ¹ ⁄ ₄	31.7	44	38	24	56	33	300	5	
-1- ⁵ ⁄ ₁₆	33.3	47	38	25	58	34	338	5	
-1- ³ / ₈	34.9	48	38	26	59	36	340	5	
-1- ⁷ / ₁₆	36.5	50	40	27	60	37	360	5	
-1- ½	38.1	52	40	29	62	39	480	5	
-1- ⁵ / ₈	41.2	56	37	32	65	44	500	5	
-1- ³ ⁄ ₄	44.4	61	43	34	68	47	660	5	
-1- ¹³ / ₁₆	46.0	63	44	35	70	49	740	5	
-1- ⁷ / ₈	47.6	65	44	36	71	50	780	5	
-2	50.8	69	47	38	75	54	960	5	

●3/4"sq. SOCKET

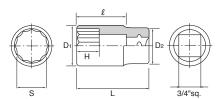




DEEP SOCKET									mm
No.	S	D ₁	D ₂	Н	L	l	▼ g	Ħ	
B45-17	17	26	33	18	90	69	280	5	
B45-18	18	27	33	19	90	69	290	5	
B45-19	19	27.5	33	20	90	69	300	5	
B45-20	20	29.5	33	21	90	69	330	5	
B45-21	21	30	33	22	90	69	330	5	
B45-22	22	31	33	23	90	69	310	5	
B45-23	23	32.5	33	24	90	69	330	5	
B45-24	24	34	33	25	90	69	360	5	
B45-25	25	35	34	26	90	69	390	5	
B45-26	26	36.5	34	27	90	69	410	5	
B45-27	27	38	34	28	90	69	410	5	
B45-28	28	39	34	29	90	69	430	5	
B45-29	29	40	34	30	90	69	440	5	
B45-30	30	42	36	31	90	69	470	5	
B45-31	31	43	38	32	90	69	510	5	
B45-32	32	44	38	33	90	69	520	5	
B45-33	33	46	38	34	90	69	550	5	
B45-34	34	47	38	35	90	69	570	5	
B45-35	35	48	38	36	90	69	580	5	
B45-36	36	50	40	37	90	69	630	5	
B45-38	38	52	40	39	90	69	650	5	
B45-40	40	55	40	41	90	69	690	5	
B45-41	41	56	40	42	90	69	700	5	
B45-42	42	57	40	43	90	69	700	5	
B45-44	44	59.5	40	45	90	69	790	5	
B45-46	46	63	44	47	90	69	910	2	
B45-48	48	64.5	44	49	90	69	960	2	
B45-50	50	68	46	51	90	69	1,010	2	
B45-52	52	69.5	46	64	100	79	1,090	2	
B45-53	53	71	48	64	100	79	1,180	2	
B45-54	54	73	48	63	100	79	1,270	2	
B45-55	55	75	48	63	100	79	1,350	2	
B45-56	56	76	48	63	100	79	1,340	2	
B45-57	57	77	48	62	100	79	1,360	2	
B45-58	58	79	48	62	100	79	1,450	2	
B45-60	60	81	48	61	100	79	1,460	2	
B45-63	63	83.5	53	60	100	79	1,540	2	

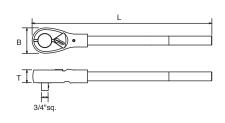
●3/4"sq. DEEP SOCKET





RATCHET HAN	RATCHET HANDLE							
No.	Туре	Feed	В	Т	L	▼kg	#	
BR6A	Oval Head	9°	71	36	505	2.5	1	

- It is a standard 3/4"sq. oval type ratchet handle.
- Gear with 40-tooth number is used. Feed angle is 9°.





●3/4"sq. RATCHET HANDLE



■ Supply Parts (3/4"sq. Ratchet Head Repair Kit)

No.	Square	Set Contents	▼g	
BR6A-K	3/4"sq.	Drive gear • Claw • Steel ball • Coil spring • Lever • Pan head screw (small) • Lid x 1, Flat head screw (small) ×2	680	



●3/4"sq. RATCHET HANDLE (ROUND HEAD)



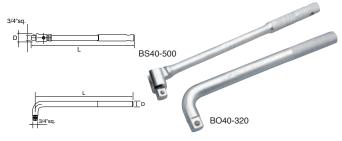
RATCHET HAND								
No.	Туре	Feed	В	Т	L	▼kg	8	
BRM40	Round Head	6°	67	36	500	2.37	1	

- · Round head with compact design
- 60 teeth gear with small 6° increments.
- *Replacement parts are available. Check with your dealer for details.



• ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

●3/4"sq. SPINNER HANDLE • L-SHAPED HANDLE



SPINNER HAND	SPINNER HANDLE							
No.	D	L	▼kg	#				
BS40-500	40	500	2	1				

CAUTION • HOLD GRIP IN THE CENTER, OTHERWISE HAND MAY BE CAUGHT IN THE DRIVING SECTION. • DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

L-SHAPED HANDLE								
No.	D	L	▼kg	#				
BO40-320	24	315	1.5	2				

• DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

●3/4"sq. HEAD • BAR



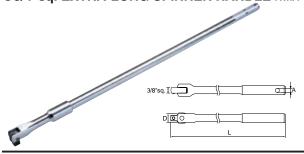
HEAD					
No.	D	L	▼ g	#	
BH40	40	71	300	1	

CAUTION • ALWAYS USE THE DESIGNATED BAR (No. BL40, BL40-500).

BAR					
No.	L	Ø	▼kg	#	
BL40-500	500	25	1.9	1	

- For use with BH40.
- \bullet The BL40 employees a succession system which makes it compact after use.

●3/4"sq. EXTRA-LONG SPINNER HANDLE PAT.P.

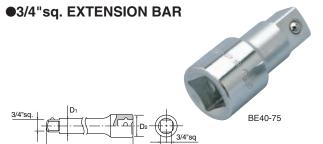


EXTRA-LONG SPINNER HANDLE								
No.	D	L	Α	▼kg	8			
BS6-1050	38	1000	10	3.7	1			

- Is suitable for construction machinery and in large sized vehicles where high torque is necessary.
- CAUTION HOLD GRIP IN THE CENTER, OTHERWISE HAND MAY BE CAUGHT IN THE DRIVING SECTION.
 DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

Drive set PAT.P.

No.	Drive	Contents	
BS6-K	3/4"sq.	Drive head ASSY · Pin · Steel ball · Spring ·	
		Hexagon shaped hole fitted stop screw · Exchangeable jig ·	
		Exchangeable 6 hexagon shaped pole wrench x1	



EXTENSION BAR											
No.	D ₁	D ₂	L	▼g	\oplus						
BE40 - 75	25	34	75	230	1						
- 130	25	34	130	500	1						
- 200	25	34	200	800	1						
- 400	25	34	400	1,600	1						

• DO NO EXTEND WITH 2 OR MORE BARS.

●3/4"sq. INTERNAL × 1/2"sq. EXTERNAL





3/4"sq. INTERNAL × 1/2"sq. EXTERNAL DRIVE ADAPTOR											
No.	sq.		D	1	▼g	eg .					
	Internal	External		_	1 5	_					
BA4030	3/4"	1/2"	34	43	154	10					

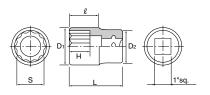
CAUTION * FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE, DO NOT APPLY EXCESSIVE PRESSURE.



SOCKET No. s B50 -27 40.5 -30 -32 46.5 65 35 -33 -35 23.5 24.5 30 32 72 74 50.5 52 43 38 54 710 47 52 34 35 56.5 77 79 82 86 -41 -42 42 59 56 50 810 -46 -50 50 56 57 1,200 74 78 55 56 56 48 92 1,270 1,430 -54 -55 84 88 91 98 1,370 1,660 -58 -60 74 74 79 60 58 1,980 2,170 2,360 -63 67 -68 -70 70 97 60 60 82 2,410 2,480 -71 2,500 3,050 3,260 3,450 3,610 -75 77 80 110.5 65 -80 75 4,170 4,370 -85 125.5 131.5 -90 85 130 101 4,800 5,200

●1"sq. SOCKET

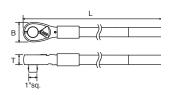




RATCHET HAN	RATCHET HANDLE												
No.	Туре	Feed	В	Т	L	▼kg	#						
BR8A	Oval Head	9°	71	36	720	4.3	1						

- It is a standard 1"sq. oval type ratchet handle.
 Gear with 40-tooth number is used. Feed angle is 9°.

^{*}Spare parts are configured. P.472



■ Supply Parts (1"sq. Ratchet Head Repair Kit)

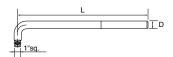
No.	Square	Set Contents	▼g	
BR8A-K	1"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x 1, Flat head screw (small) ×2	680	

●1"sq. RATCHET HANDLE



L-SHAPED HANDLE No. D ▼kg Ħ L BO50-600 28.5 3.0

ACAUTION * BE CAREFUL ABOUT OVER TORQUE, AS THE WHOLE LENGTH LONG ENOUGH TO APPLY EXCESSIVE LOAD.



EXTENSION BAR												
No.	D 1	D ₂	L	▼kg	8							
BE50 - 200	32	44	200	1.3	1							
- 400	32	44	400	2.6	1							

- You can choose from both 200mm length and 400mm in accordance with your working
- · Suitable for tightening for Hub nut of heavy trucks.



• DO NOT EXTEND WITH 2 OR MORE BARS.

●1"sq. L-SHAPED HANDLE



●1"sq. EXTENSION BAR





2. CONVENTIONAL TOOLS

IMPACT SOCKETS and ACCESSORIES





CAUTION

Socket for impact wrench and accessories

- Make sure that you read the User's manual carefully before use.
 Use the impact wrench socket and the impact wrench accessories.
- Make sure that all users are wearing safety glasses, ear plugs, hard hat, dust mask, and safety boots while working.
- Do not allow impact wrench to make contact with the nut.
- Do not connect more than one attachment.
- · Do not freely turn while sockets or attachments are attached.
- Check the turning direction before use.
- Be sure to remove the air hose before replacing the socket.
- · Check that the socket is correctly attached before commencing operation
- It is dangerous to touch the socket during operation.
- Never use a non-conforming pin or ring. If the correct pin and ring is not used, there is a danger the pin may pop out when the tool is being turned freely



The pursuit of a user friendly socket for the 21st Century Version Tool impact wrench

- 3 different lengths can be set according to use. (Standard, Semi-deep, Deep)
- The semi-deep and the deep type are of a thin wall design that can be used in
- In addition to the usual engraved stamp, the large easy-to-read size indication is displayed.



Easy-to-read size indication



Pins and rings are differentiated for use by



Standard Semi-deep



Semi-deep (BP4M)

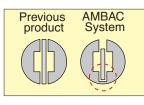


(BP4L)

- Pins and rings are differentiated by color and easily matched.
- By employing a new type ring, pins and rings are easily attached. (Refer to P.137 for attachment procedure)

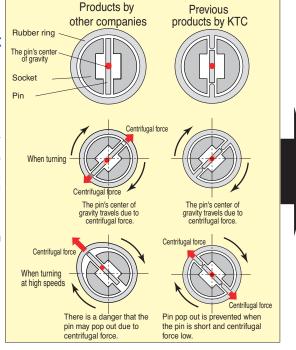
A new pin pop-out prevention mechanism [AMBAC system] *(PAT.P.) is employed by the 21st **Century Version Tool.**

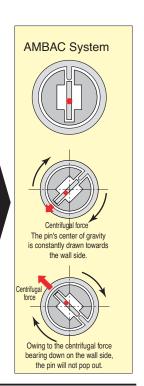
*AMBAC:Anti-disconnect Mechanism By Availing of Centrifugal force



Half of the pin hole has been used as a wall, and by shortening the length of the pin, the centrifugal force that occurs when the tool is being turned constantly bears down upon the wall side, preventing the pin from popping out. Refer to the diagram on the right.

By employing the AMBAC System, the pin is prevented from popping out when the impact wrench is being used.







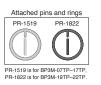
IMPACT SOCK	IMPACT SOCKET (SEMI-DEEP)									
No.	S	D ₁	D ₂	Н	L	l	▼ g	#		
BP3M-07TP	7	11.5	22	6	34	21	47	5		
BP3M-08TP	8	13	22	7	34	21	50	5		
BP3M-09TP	9	14	22	8	34	21	52	5		
BP3M-10TP	10	15.5	22	8	34	21	52	5		
BP3M-12TP	12	18	22	9	34	21	58	5		
BP3M-13TP	13	19	22	9	34	21	58	5		
3P3M-14TP	14	20.5	22	9	36	23	64	5		
BP3M-17TP	17	25	22.5	12	36	23	80	5		
BP3M-19TP	19	27.5	25	12	39	26	108	5		
BP3M-21TP	21	29	25	14	39	26	108	5		
BP3M-22TP	22	31	25	14	41	28	130	5		

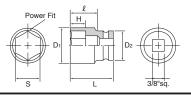


• Combine the black pin with black ring and silver pin with gray ring.

●3/8"sq. IMPACT SOCKET (SEMI-DEEP THIN WALL) WITH PIN • RING PAT.







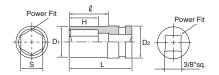
IMPACT SOCKET (SEMI-DEEP) mm No. D₁ D₂ Н l **▼**g BP3M-07T 11.5 -08T -09T -10T 15.5 -12T -13T -14T 20.5 -17T 22.5 -19T 27.5 -21T -22T

* Pins and rings are sold separately.



●3/8"sq. IMPACT SOCKET (SEMI-DEEP)





IMPACT SOCKE	ET (SEMI	-DEEP)							
No.	S	D ₁	D ₂	Н	L	l	▼ g	#	
BP3L-06TP	6	10	22	5	55	42	57	5	
BP3L-07TP	7	11.5	22	6	55	42	60	5	
BP3L-08TP	8	13	22	7	55	42	68	5	
BP3L-09TP	9	14	22	8	55	42	73	5	
BP3L-10TP	10	15.5	22	10	55	42	73	5	
BP3L-11TP	11	17	22	12	55	42	82	5	
BP3L-12TP	12	18	22	12	55	42	88	5	
BP3L-13TP	13	19	22	12	55	42	88	5	
BP3L-14TP	14	20.5	22	12	80	67	137	5	
BP3L-17TP	17	25	22.5	14	80	67	195	5	
BP3L-19TP	19	27.5	25	14	80	67	233	5	
BP3L-21TP	21	29	25	15	80	67	237	5	
BP3L-22TP	22	31	25	16	80	67	281	5	

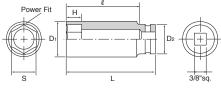


· Combine the black pin with black ring and silver pin with gray ring.

●3/8"sq. IMPACT SOCKET (DEEP THIN WALL) WITH PIN • RING PAT.



PR-1519



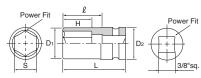
IMPACT SOCKE	T (LONG	3)							mm
No.	s	D ₁	D ₂	Н	L	l	▼ g	8	
BP3L-06T	6	10	22	5	55	42	57	5	
-07T	7	11.5	22	6	55	42	60	5	
-08T	8	13	22	7	55	42	68	5	
-09T	9	14	22	8	55	42	73	5	
-10T	10	15.5	22	10	55	42	73	5	
-11T	11	17	22	12	55	42	82	5	
-12T	12	18	22	12	55	42	88	5	
-13T	13	19	22	12	55	42	88	5	
-14T	14	20.5	22	12	80	67	137	5	
-17T	17	25	22.5	14	80	67	195	5	
-19T	19	27.5	25	14	80	67	223	5	
-21T	21	29	25	15	80	67	237	5	
-22T	22	31	25	16	80	67	281	5	
* Pins and rings a	re sold s	eparatel	y.						POWERFIT .

* Pins and rings are sold separately.

Attached pins and rings PR-1519 Pin: Silver







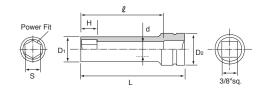


●3/8"sq. IMPACT SOCKET LONG SOCKET (THIN WALL) WITH PIN • RING PAT.



IMPACT SOCKI	IMPACT SOCKET (LONG)											
No.	S	D ₁	D ₂	d	Н	L	l	▼ g	#			
BP3LL-10TP	10	15.5	22	9	10	130	115	170	5			
BP3LL-12TP	12	18	22	9	12	130	115	220	5			
BP3LL-13TP	13	19	22	11	12	130	115	225	5			
BP3LL-14TP	14	20.5	22	12	12	130	115	250	5			
BP3LL-17TP	17	25	22.5	14	14	130	115	360	5			
BP3LL-19TP	19	27.5	25	16	14	130	115	440	5			

TION • Combine the black pin with black ring and silver pin with gray ring.



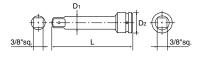
●3/8"sq. IMPACT EXTENSION BAR



IMPACT EXTENSION BAR											
No.	D ₁	D ₂	L	▼g	#						
BEP3-075	12.7	22	75	100	5						
-100	12.7	22	100	120	5						

UTION • DO NOT USE MULTIPLE EXTENSIONS.

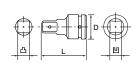
• Match the black pin with the black ring, and the silver pin with the grey ring.

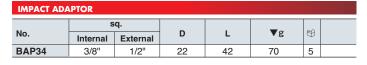


●3/8"sq. IMPACT ADAPTOR







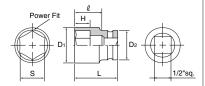


FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER. DO NOT APPLY EXCESSIVE POWER OR IMPACT.

• Match the black pin with the black ring, and the silver pin with the grey ring.

●1/2"sq. IMPACT SOCKET (STANDARD) PAT.P. **WITH PINS & RINGS**







IMPACT SOCKET mm									
No.	S	D ₁	D ₂	Н	L	l	▼g	#	
BP4-08P	8	15	25	6	33	15	65	5	
-09P	9	16	25	6.5	33.5	15.5	68	5	
-10P	10	17	25	7	34	16	68	5	
-11P	11	18.5	25	7.5	34.5	16.5	72	5	
-12P	12	20	25	8	35	17	77	5	
-13P	13	21.5	25	9	36	18	81	5	
-14P	14	22.5	25	9.5	36.5	18.5	83	5	
-15P	15	24	25	10.5	37.5	19.5	89	5	
-16P	16	26	25	11	39	21	103	5	
-17P	17	27.5	25	12	39	21	110	5	
-19P	19	30	25	13	40	22	123	5	
-21P	21	32.5	25	14	41	23	135	5	
-22P	22	34	29	15	42	24	173	5	
-23P	23	35	29	16	43	25	178	5	
-24P	24	36.5	29	16.5	43.5	25.5	186	5	
-26P	26	38	29	18	45	27	193	5	
-27P	27	40	29	18.5	45	27	212	5	
-28P	28	42	29	19	46	28	233	5	
-29P	29	43	29	19.5	46.5	28.5	243	5	
-30P	30	44	29	20	47	29	246	5	
-32P	32	46	29	21	48	30	261	5	
									POWERFIT .

CAUTION - Match the black pin with the black ring, and the silver pin with the grey ring.



IMPACT SOCKE	T								mm
No.	S	D ₁	D ₂	Н	L	l	▼g	#	
BP4-08	8	15	25	6	33	15	65	5	
-09	9	16	25	6.5	33.5	15.5	68	5	
-10	10	17	25	7	34	16	68	5	
-11	11	18.5	25	7.5	34.5	16.5	72	5	
-12	12	20	25	8	35	17	77	5	
-13	13	21.5	25	9	36	18	81	5	
-14	14	22.5	25	9.5	36.5	18.5	83	5	
-15	15	24	25	10.5	37.5	19.5	89	5	
-16	16	26	25	11	39	21	103	5	
-17	17	27.5	25	12	39	21	110	5	
-19	19	30	25	13	40	22	123	5	
-21	21	32.5	25	14	41	23	135	5	
-22	22	34	29	15	42	24	173	5	
-23	23	35	29	16	43	25	178	5	
-24	24	36.5	29	16.5	43.5	25.5	186	5	
-26	26	38	29	18	45	27	193	5	
-27	27	40	29	18.5	45	27	212	5	
-28	28	42	29	19	46	28	233	5	
-29	29	43	29	19.5	46.5	28.5	243	5	
-30	30	44	29	20	47	29	246	5	
-32	32	46	29	21	48	30	261	5	
									POWERFIT®

IMPACT SOCKET (SEMI-DEEP)

s

9

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D₁

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14.5 15.5

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▼g #

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179

307

346 349

No.

BP4M-08TP -09TP

-10TP

-12TP

-13TP -14TP

-15TP -16TP

-17TP -18TP -19TP -20TP

-21TP -22TP

-23TP -24TP -25TP -26TP -27TP

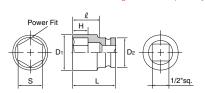
-28TP -29TP -30TP

-31TP -32TP

●1/2"sq. IMPACT SOCKET (STANDARD) PAT.P.



* Pins and rings are sold separately.



●1/2"sq. IMPACT SOCKET (SEMI-DEEP) PAT.P. **WITH PINS & RINGS**



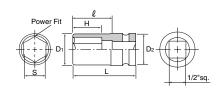
-33TP -34TP -35TP -36TP 46 47 36 29 28 75 57 433 CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

IMPACT SOCKE	T (SEMI-	DEEP)							mm
No.	S	D ₁	D ₂	Н	L	l	▼ g	#	
BP4M-08T	8	13.5	25	16	52	34	77	5	
-09T	9	14.5	25	16	52	34	81	5	
-10T	10	15.5	25	20	52	34	79	5	
-11T	11	17	25	20	52	34	86	5	
-12T	12	18	25	20	52	34	89	5	
-13T	13	19	25	20	52	34	90	5	
-14T	14	20.5	25	20	52	34	96	5	
-15T	15	22	25	20	52	34	102	5	
-16T	16	23	25	20	52	34	105	5	
-17T	17	25	25	24	52	34	116	5	
-18T	18	26	25	24	52	34	120	5	
-19T	19	27.5	25	24	52	34	127	5	
-20T	20	28	25	24	52	34	119	5	
-21T	21	29	25	24	52	34	124	5	
-22T	22	31	29	25	52	34	166	5	
-23T	23	32.5	29	25	52	34	173	5	
-24T	24	34	29	25	52	34	179	5	
-25T	25	35	29	25	52	34	184	5	
-26T	26	36.5	29	25	75	57	285	5	
-27T	27	38	29	25	75	57	307	5	
-28T	28	40	29	25	75	57	336	5	
-29T	29	41	29	25	75	57	346	5	
-30T	30	42	29	25	75	57	349	5	
-31T	31	43	29	25	75	57	359	5	
-32T	32	44	29	25	75	57	362	5	
-33T	33	45	29	28	75	57	377	5	
-34T	34	46	29	28	75	57	396	5	
-35T	35	47	29	28	75	57	414	5	
-36T	36	48	29	28	75	57	433	5	
<u> </u>									POWERFIT®

●1/2"sq. IMPACT SOCKET (SEMI-DEEP) PAT.P.



* Pins and rings are sold separately.





●1/2"sq. IMPACT SOCKET (DEEP) PAT.P. **WITH PINS & RINGS**



Attached pins and rings PR-2026 Pin: Black Pin: Silver Ring: Grey

PR-1822 for BP4L-10TP~21TP PR-2026 for BP4L-22TP~32TP

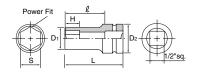
IMAPACT SOCK	ET (DEE	P)							mm
No.	S	D ₁	D ₂	Н	L	l	▼ g	#	
BP4L -10TP	10	15.5	25	20	75	57	101	5	
-12TP	12	18	25	20	75	57	124	5	
-13TP	13	19	25	20	75	57	124	5	
-14TP	14	20.5	25	20	80	62	144	5	
-17TP	17	25	24.5	24	80	62	187	5	
-19TP	19	27.5	25	24	80	62	195	5	
-21TP	21	29	25	24	80	62	193	5	
-22TP	22	31	29	25	80	62	250	5	
-23TP	23	32.5	29	25	80	62	264	5	
-24TP	24	34	29	25	80	62	280	5	
-26TP	26	36.5	29	25	100	82	391	5	
-27TP	27	38	29	25	100	82	424	5	
-30TP	30	42	29	25	100	82	487	5	
-32TP	32	44	29	25	100	82	508	5	

CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

●1/2"sq. IMPACT SOCKET (DEEP) PAT.P.



* Pins and rings are sold separately.



IMAPACT SOCK	ET (DEE	P)							mm
No.	S	D ₁	D ₂	Н	L	l	▼ g	#	
BP4L -10T	10	15.5	25	20	75	57	101	5	
-12T	12	18	25	20	75	57	124	5	
-13T	13	19	25	20	75	57	124	5	
-14T	14	20.5	25	20	80	62	144	5	
-17T	17	25	24.5	24	80	62	187	5	
-19T	19	27.5	25	24	80	62	195	5	
-21T	21	29	25	24	80	62	193	5	
-22T	22	31	29	25	80	62	250	5	
-23T	23	32.5	29	25	80	62	264	5	
-24T	24	34	29	25	80	62	280	5	
-26T	26	36.5	29	25	100	82	391	5	
-27T	27	38	29	25	100	82	424	5	
-30T	30	42	29	25	100	82	487	5	
-32T	32	44	29	25	100	82	508	5	

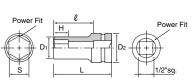
POWERFIT:

●1/2"sq. IMPACT SOCKET (LONG)



IMI ACI SOCICE	I (LOIL	υ)								mm
No.	S	D ₁	D ₂	d	Н	L	l	▼ g	#	
BP4LL-12TP	12	18	25	10	20	150	132	230	5	
-13TP	13	19	25	11.5	20	150	132	240	5	
-14TP	14	20.5	25	12	20	150	132	260	5	
-17TP	17	25	25	14	24	150	132	380	5	
-19TP	19	27.5	25	17	24	150	132	410	5	
-21TP	21	29	25	19	24	150	132	420	5	
-22TP	22	31	29	20	25	150	132	500	5	
										POWERFIT .

CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

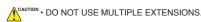


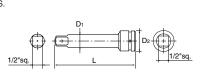


PR-1822 for BP4LL-12TP~21TP PR-2026 for BP4LL-22TP



IMPACT EXTEN	IMPACT EXTENSION BAR									
No.	D ₁	D ₂	L	▼g	#					
BEP4-075	18	29	75	180	1					
-100	18	29	100	230	1					
-150	18	29	150	300	1					





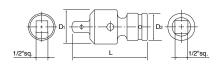
●1/2"sq. IMPACT EXTENSION BAR. PAT.P.





IMPACT UNIVERSAL JOINT									
No.	D 1	D ₂	L	▼g	8				
BJP4	38	29	82.5	340	1				

CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.



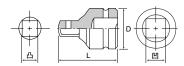
●1/2"sq. IMPACT UNIVERSAL JOINT PAT.P.





1/2"sq. INTERNAL DRIVE ADAPTOR									
	sq.		_		— ~	~			
No.	Internal	External	D	L	▼g	#			
BAP43	1/2"	3/8"	28.5	41.7	110	1			
BAP46	1/2"	3/4"	28.5	50	160	1			

• FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.



POWERFIT .

●1/2"sq. INTERNAL DRIVE ADAPTOR PAT.P.





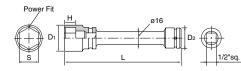
UNIVERSAL JOI	NT SOCK	ET						mm
No.	S	D ₁	D ₂	Н	L	▼g	#	
BP4L-17JUP	17	27	29	18	194	470	5	
-19JUP	19	28.5	29	18	194	470	5	
-24JUP	24	36.5	29	18	194	510	5	

*Comes with pin and ring.

*Replacement parts are specified. Check with your dealer for details.

ACAUTION • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.

Match the black pin with the black ring, and the silver pin with the grey ring.



●1/2"sq. IMPACT SOCKET FOR UNIVERSAL JOINT



WHEEL NUT SOCKET SET FOR IMPACT WRENCH									
No. TBP4903	560	₩ 1							
Wheel nut socket for impact wrench		BP49-17, 19, 21							

No.	S (Hexagonal)	D ₁	D ₂	Н	l	L	▼ g	\Box	
BP49-17	17	24.0	25	22	18	100	180	5	
BP49-19	19	26.0	25	24	18	100	190	5	
BP49-21	21	27.5	25	26	18	100	190	5	
BP49-22	22	29.5	25	27	18	100	210	5	

Usage

 Compatible with exclusive socket wrenches and impact wrenches used to tighten and loosen vehicle wheel nuts.

Characteristics

• Exclusive socket for the aluminum wheel

• A protective rubber cushion has been fitted for chrome or painted nuts.

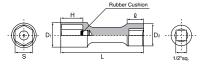
↑CAUTION • DO NOT USE EXCEPT FOR CAR WHEEL NUTS.

• SPECIALLY DESIGNED TO BE THINNER THAN ORDINARY PRODUCTS.

DUE TO THE THINNER CONSTRUCTION, THIS SOCKET SET MAY BREAK DEPENDING ON THE WAY OF USE.

●1/2"sq. WHEEL NUT SOCKET SET FOR IMPACT WRENCH (LONG, THIN TYPE) PAT.P.



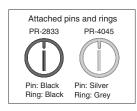


POWERFIT :

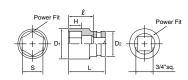


●3/4"sq. IMPACT SOCKET (STANDARD)





PR-2833 for BP6-17P~32P PR-4045 for BP6-35P~46P

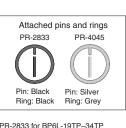


IMPACT SOCKE	T								mm
No.	S	D ₁	D ₂	Н	L	l	▼g	#	
BP6-17P	17	28.5	38	12	51	26	251	5	
-19P	19	31	38	13	51	26	259	5	
-21P	21	34	38	14	51	26	270	5	
-22P	22	35	38	15	51	26	274	5	
-23P	23	36.5	38	16	51	26	277	5	
-24P	24	38	38	16	51.5	26.5	284	5	
-26P	26	40	38	18	53	28	299	5	
-27P	27	42	38	18.5	53.5	28.5	322	5	
-28P	28	43	38	19	54	29	328	5	
-29P	29	44	38	19	54	29	336	5	
-30P	30	46	38	20	55	30	361	5	
-32P	32	48	38	21	56	31	369	5	
-35P	35	52	50	24	60.5	35.5	633	5	
-36P	36	54	50	24	61	36	672	5	
-38P	38	56	50	25	62	37	704	5	
-41P	41	60	50	26	63	38	764	2	
-46P	46	67	50	28	65	40	875	2	

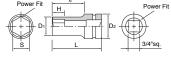
POWERFIT . CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

●3/4"sq. IMPACT SOCKET (DEEP)





PR-2833 for BP6L-19TP~34TP PR-4045 for BP6L-35TP~46TP



IMPACT SOCKE	T (DEEP)								mm
No.	S	D ₁	D ₂	Н	L	l	▼g	#	
BP6L-19TP	19	29	38	24	100	75	410	5	
-21TP	21	32	38	24	100	75	455	5	
-22TP	22	33	38	25	100	75	474	5	
-23TP	23	35	38	25	100	75	502	5	
-24TP	24	36	38	25	100	75	479	5	
-26TP	26	38	38	25	100	75	496	5	
-27TP	27	40	38	25	100	75	546	5	
-29TP	29	43	38	25	100	75	609	5	
-30TP	30	44	38	25	100	75	617	5	
-32TP	32	46	38	28	100	75	638	5	
-33TP	33	48	38	28	100	75	693	5	
-34TP	34	49	38	28	100	75	714	5	
-35TP	35	50	50	28	100	75	901	5	
-36TP	36	52	50	28	100	75	964	5	
-38TP	38	55	50	30	100	75	1,056	5	
-41TP	41	58	50	32	100	75	1,092	2	
-46TP	46	65	50	38	100	75	1,399	2	

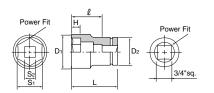
POWERFIT .

CANTION • Match the black pin with the black ring, and the silver pin with the grey ring.

●3/4"sq. IMPACT COMBINATION SOCKET **FOR WHEEL NUT**







IMPACT COMBI	NATIO	N SOC	KET FO	R WHE	EL NUT					mm
No.	S ₁ Hexagonal	S ₂ Square	D ₁	D ₂	н	L	l	▼ g	#	
ABP6-3217TP	32	17	46.5	50	12	76	51	780	2	
-3517TP	35	17	50	50	13	78	53	840	2	
-3820TP	38	20	55	50	14	75	50	850	2	
-4119TP	41	19	58	50	14	80	55	900	2	
-4120TP	41	20	58	50	14	80	55	900	2	
-4121TP	41	21	58	50	14	80	55	900	2	
										POWERFIT®

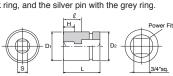
- A single, labor-saving wrench can be used to tighten or loosen both the outer and inner nuts.
 Is very effective for vehicles that have limited wheel and nut clearance due to the thin wall design.
- All the tools necessary for working on medium size (2t class) to large size (4t class) vehicles are provided.

• Match the black pin with the black ring, and the silver pin with the grey ring.



No.	S	D ₁	D ₂	н		-			
				п	L	l	√g	#	
ABP6-17SQP	17	40	38	18.5	56.5	31.5	370	5	
-19SQP	19	40	38	18.5	56.5	31.5	322	5	
-20SQP	20	40	38	20.5	58.5	33.5	346	5	
-21SQP	21	40	38	22.5	60.5	35.5	350	5	

* Match the black pin with the black ring, and the silver pin with the grey ring.



●3/4"sq. IMPACT INNER SOCKET Attached pins and rings

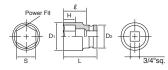




IMPACT SOCKET FOR WHEEL NUT (DEEP • THIN)										
No.	S	D ₁	D ₂	Н	L	l	▼ g	#		
BP6L-33TP	33	48	38	28	100	75	693	5		

• Deep thin wall type that supports the new ISO wheel.

• Combine the black pin with black ring and silver pin with gray ring.



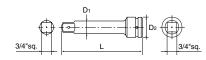
●3/4"sq. IMPACT SOCKET FOR WHEEL NUT (DEEP · THIN) PAT.





IMPACT EXTEN	SION BAR					
No.	D ₁	D ₂	L	▼g	#	
BEP6-100	25	38	100	490	1	
-150	25	38	150	680	1	
-250	25	38	250	1,070	1	

CAUTION • DO NOT USE MULTIPLE EXTENSIONS.



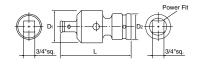
●3/4"sq. IMF	PACT	EXTENSION	BAR
--------------	------	------------------	------------





IMPACT UNIVE	RSAL JOINT					
No.	D ₁	D ₂	L	▼g	#	
BJP6	48	38	111.5	775	1	
						POWERFIT .

ONOT APPLY EXCESSIVE POWER ON THE JOINT PART.



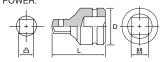
●3/4"sq. IMPACT UNIVERSAL JOINT





INTERNAL DRIV	E IMPACT	ADAPTOR					
	s	q.	_				
No.	Internal	External	D	L	▼ g	#	
BAP64	3/4"	1/2"	38	60	270	1	
BAP68	3/4"	1"	38	68	480	1	

• FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.



●3/4"sq. INTERNAL DRIVE **IMPACT ADAPTOR**

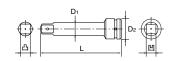






INTERNAL DRIV	INTERNAL DRIVE IMPACT LONG ADAPTOR										
No.	Internal	q. External	D 1	D ₂	L	▼ g	#				
BAP64-150	3/4"	1/2"	20	40	150	500	1				

FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.



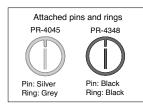




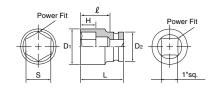


●1"sq. IMPACT SOCKET (STANDARD)





PR-4045 for BP8-21P~35P PR-4348 for BP8-36P~70P



IMPACT SOCKE	ſ								mm
No.	S	D ₁	D ₂	Н	L	l	▼g	#	
BP8-21P	21	36	50	16	58	28	483	2	
-22P	22	38	50	16	58	28	490	2	
-23P	23	38.5	50	16	58	28	496	2	
-24P	24	40	50	16.5	58	28	502	2	
-26P	26	42.5	50	18	60	30	525	2	
-27P	27	44	50	18.5	60	30	538	2	
-28P	28	45	50	19	60	30	535	2	
-29P	29	46.5	50	19	60	30	549	2	
-30P	30	48	49.5	22	70	40	633	2	
-32P	32	50	49.5	25	70	40	641	2	
-33P	33	52	50	25	70	40	686	2	
-35P	35	54	50	25	70	40	701	2	
-36P	36	56	53	25	70	40	790	2	
-38P	38	58	53	30	80	50	939	2	
-41P	41	63	53	35	80	50	1,045	2	
-46P	46	70	53	41.2	80	50	1,130	1	
-50P	50	76	53	37.4	80	50	1,273	1	
-54P	54	81	53	35.2	82	52	1,434	1	
-55P	55	82.5	53	35.2	82	52	1,481	1	
-58P	58	86	53	35.2	82	52	1,569	1	
-60P	60	88	53	35.2	82	52	1,604	1	
-65P	65	94	53	37.4	87	57	1,926	1	
-70P	70	101	53	35.4	87	57	2.235	1	

• Match the black pin with the black ring, and the silver pin with the grey ring.

●1"sq. IMPACT SOCKET (DEEP)



IMPACT SOCKE	T (DEEP)								mm
No.	S	D ₁	D ₂	Н	L	l	▼ g	#	
BP8L-22TP	22	35	50	25	100	70	696	2	
-24TP	24	38	50	25	100	70	723	2	
-27TP	27	42	50	25	100	70	794	2	
-29TP	29	44.5	49.5	25	100	70	822	2	
-30TP	30	46	49.5	25	100	70	836	2	
-32TP	32	48	49.5	25	100	70	858	2	
-33TP	33	50	49.5	25	100	70	924	2	
-35TP	35	52	50	25	100	70	924	2	
-36TP	36	54	53	30	100	70	1,034	2	
-38TP	38	56	53.5	30	100	70	1,080	2	
-41TP	41	60	53	35	100	70	1,170	2	
-46TP	46	68	53	35	100	70	1,534	1	
-50TP	50	74	53	37.2	100	70	1,636	1	
-55TP	55	79	53	51.4	110	80	1,866	1	
-60TP	60	85.5	53	51.4	110	80	2,135	1	
-65TP	65	92	53	65.4	120	90	2,630	1	
-70TP	70	99	53	65.4	120	90	3,073	1	

• Match the black pin with the black ring, and the silver pin with the grey ring.

●1"sq. IMPACT SOCKET FOR WHEEL NUT (THIN)



IMPACT SOCKET FOR WHEEL NUT										
No.	S	D ₁	D ₂	Н	L	l	▼ g	#		
ABP8-32TP	32	46.5	50	25	80	50	680	2		
-35TP	35	50	50	25	80	50	710	2		
-38TP	38	55	50	30	80	50	800	2		
-41TP	41	58	50	35	80	50	840	2		

- A tool with the thin wall design that can be used for car types with lesser clearance between the wheel hub and wheel nut.
 The outer diameter has been reduced by 94% in comparison with the previous products.

Usage

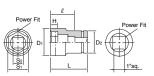
Tightening and loosening wheel nuts (outer nut) for middle size vehicles (2 t~ 4 t) and large vehicles (4 t and above, such as buses).

CAUTION* Match the black pin with the black ring, and the silver pin with the grey ring. ring

●1"sq. WHEEL NUT COMBINATION **SOCKET FOR IMPACT USE (THIN)**







WHEEL NUT CO	HEEL NUT COMBINATION SOCKET FOR IMPACT USE					mm				
No.	S ₁ Hexagonal	S ₂ Square	D ₁	D ₂	н	L	l	▼ g	#	
ABP8-3517TP	35	17	50	50	13	83	53	830	2	
-3820TP	38	20	55	50	14	80	50	840	2	
-4119TP	41	19	58	50	14	85	55	890	2	
-4120TP	41	20	58	50	14	87	57	900	2	
-4121TP	41	21	58	50	14	87	57	900	2	

POWERFIT .

- It is a labor-saving tool for the loosening/tightening work of both outer and inner nuts with just 1 wrench.
- It is a thin wall type that's also effective for vehicle models that have less clearance for wheel hubs and wheel nuts.

CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring



IMPACT LONG CO Sı S2 D₁ D_2 Н l L **▼**kg Θ Hex. ABP8ZL-4121TP 41 21 58 50 14 55 450 2.8

- It is a labor-saving tool for the loosening/tightening work of both outer and inner nuts with just 1 wrench.
- It is a thin wall type that's also effective for vehicle models that have less clearance for wheel hubs and wheel nuts.
- Looseness is eliminated by integrating the combination socket and extension bar, allowing
- the torque management with higher accuracy even when torque wrench is used.

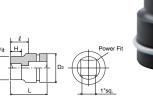
 With the long design of 450mm total length, it can be used without interference even with

ACAUTION Combine the black pin with black ring and silver pin with gray ring.



IMPACT INNER	SOCKET	ſ							mm
No.	S	D ₁	D ₂	Н	L	l	▼g	#	
ABP8-17SQP	17	40	50	18.5	61.5	31.5	600	5	
-19SQP	19	42	50	18.5	61.5	31.5	595	5	
-20SQP	20	43	50	20.5	63.5	33.5	630	5	
-21SQP	21	44	50	22.5	65.5	33.5	680	5	
									/004

CAUTION • Match the black pin with the black ring, and the silver pin with the grey



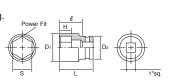


IMPACT SOCKE	T (DEEP))							
No.	S	D ₁	D2	Н	L	l	▼ g	8	
BP8L-33TP	33	48	49.5	25	100	70	832	2	

• Deep thin wall type that supports the new ISO wheel.

CAUTION. It may not be usable for some models.

· Combine the black pin with black ring and silver pin with gray ring.





●1"sq. IMPACT SOCKET (DEEP · THIN) PAT.

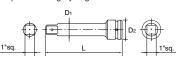


IMPACT EXTEN	IMPACT EXTENSION BAR					
No.	D ₁	D ₂	L	▼ g	#	
BEP8-150	33	50	150	1,065	1	
-200	33	50	200	1,380	1	
-250	33	50	250	1 750	1	

CAUTIO

TION • DO NOT USE MULTIPLE EXTENSIONS.

• Match the black pin with the black ring, and the silver pin with the grey ring





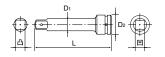
INTERNAL × EX	TERNAL DR	IVE IMPAC	ADAPTOR				
No.	s Internal	q. External	D	L	▼ g	#	
BAP86	1"	3/4"	50	75	510	1	

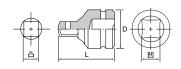
	S	q.	_	_				
No.	Internal	External	D 1	D ₂	L	▼g	#	
BAP86-150	1"	3/4"	28	50	150	900	1	

CAUTIC

on • FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.

• Match the black pin with the black ring, and the silver pin with the grey ring.





●1"sq. INTERNAL × 3/4"sq. EXTERNAL DRIVE IMPACT ADAPTOR





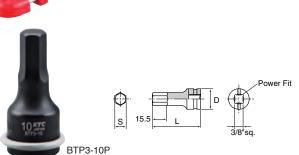




■3/8"sq. IMPACT HEX. WRENCH







IMPACT HEX. WRENCH S	ET (6pcs.)	
No. TBTP306P	▼ g 432	₩1
Impact Hex. Wrench		BTP3-04P, 05P, 06P, 08P, 10P, 12P
Socket Holder		EHB306

^{*} Pins and rings are sold separately.

IMPACT HEX. WRENCH					
No.	S	D	L	▼g	#
BTP3-04P	4	22	45	51	10
-05P	5	22	45	53	10
-06P	6	22	45	55	10
-08P	8	22	45	60	10
-10P	10	22	52	74	10
-12P	12	22	52	84	10

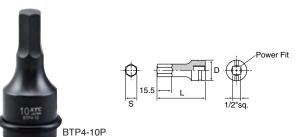
• The tool can sufficiently withstand the use of the impact wrench due to KTC unique design.

CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

●1/2"sq. IMPACT HEX. WRENCH







IMPACT HEX. WRENCH SI	T (6pcs.)	
No. TBTP406P	▼ g 768	₩1
Impact Hex. Wrench		BTP4-06P, 08P, 10P, 12P, 14P, 17P
Socket Holder		EHB4108

^{*} Pins and rings are sold separately.

IMPACT HEX. V	VRENCH				
No.	S	D	L	▼g	#
BTP4-06P	6	25	60	78	10
-08P	8	25	60	87	10
-10P	10	25	60	97	10
-12P	12	25	60	109	10
-14P	14	25	60	124	10
-17P	17	25	60	149	10

^{*} Pins and rings are sold separately.

• The tool can sufficiently withstand the use of the impact wrench due to **KTC** unique design.

• Match the black pin with the black ring, and the silver pin with the grey ring.



IMPACT TORX	WRENCH • SET (5pcs.)			
No. TBTP305T	▼ g 395	₩1			
T-Type Impact TORX ® Wrench (3/8"sq.) BTP3-T20, T25, T30, T40, T-			, T40, T45		
No.	Fastener	L	▼g	8	
BTP3-T20P	T20	75	77	1	
-T25P	T25	75	78	1	
-T30P	T30	75	79	1	
-T40P	T40	75	80	1	
-T45P	T45	75	81	1	

CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

•TORX® is a registered trademark for the Textron Fastening Systems.

•PIN & RING SET FOR IMPACT WRENCH









29







PIN & RIN	G SET FOR IMPACT WRENC	Н		
No.	Size	Color	Total	
PR-1519	Pin: φ2.5 × total length 15	Pin: Silver	Pin: 5	
	Ring: OD 26	Ring: Gray	Ring: 5	
PR-1822	Pin: φ2.5 × total length 18	Pin: Black	Pin: 5	
	Ring: OD 29	Ring: Black	Ring: 5	
PR-2026	Pin: φ2.5 × total length 20	Pin: Silver	Pin: 5	
	Ring: OD 33	Ring: Gray	Ring: 5	
PR-2833	Pin: φ4 × total length 28	Pin: Black	Pin: 5	
	Ring: OD 43	Ring: Black	Ring: 5	
PR-4045	Pin: φ4 × total length 40	Pin: Silver	Pin: 5	
	Ring: OD 54	Ring: Gray	Ring: 5	
PR-4348	Pin: φ4 × total length 43	Pin: Black	Pin: 5	
	Ring: OD 57	Ring: Black	Ring: 5	

3/8"sa





List of applied pin/ring sets for the 21st Century Version Tool impact socket (5 pins and rings included).

To be released in September 2005

Caution: there is no compatibility with tools other than the 21st Century Version Tools.

■ BP4-

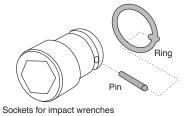
Applied product number Without pins/rings					
BP4-08 BP4-08P PR-1822 -09				Pin/ring set product number	
-09				• 1	
-10	Dr				
-11				The state of the s	
-12		-10	-10P	-1822	
-13		-11	-11P	-1822	
-14		-12	-12P	-1822	
-15 -15P -1822 -16 -16P -1822 -17 -17P -1822 -19 -19P -1822 -21 -21P -1822 -22 -22P PR-2026 -23 -23P -2026 -24 -24P -2026 -26 -26P -2026 -27 -27P -2026 -28 -28P -2026 -29 -29P -2026 -30 -30P -2026		-13	-13P	-1822	
-16		-14	-14P	-1822	
-17 -17P -1822 -19 -19P -1822 -21 -21P -1822 -22 -22P PR-2026 -23 -23P -2026 -24 -24P -2026 -26 -26P -2026 -27 -27P -2026 -28 -28P -2026 -29 -29P -2026 -30 -30P -2026		-15	-15P	-1822	
-19		-16	-16P	-1822	
-21 -21P -1822 -22 -22P PR-2026 -23 -23P -2026 -24 -24P -2026 -26 -26P -2026 -27 -27P -2026 -28 -28P -2026 -29 -29P -2026 -30 -30P -2026		-17	-17P	-1822	
-22 -22P PR-2026 -23 -23P -2026 -24 -24P -2026 -26 -26P -2026 -27 -27P -2026 -28 -28P -2026 -29 -29P -2026 -30 -30P -2026		-19	-19P	-1822	
-23		-21	-21P	-1822	
-24 -24P -2026 -26 -26P -2026 -27 -27P -2026 -28 -28P -2026 -29 -29P -2026 -30 -30P -2026		-22	-22P	PR-2026	
-26 -26P -2026 -27 -27P -2026 -28 -28P -2026 -29 -29P -2026 -30 -30P -2026		-23	-23P	-2026	
-27 -27P -2026 -28 -28P -2026 -29 -29P -2026 -30 -30P -2026		-24	-24P	-2026	
-28 -28P -2026 -29 -29P -2026 -30 -30P -2026		-26	-26P	-2026	
-29 -29P -2026 -30 -30P -2026		-27	-27P	-2026	
-30 -30P -2026		-28	-28P	-2026	
		-29	-29P	-2026	
-32 -32P -2026		-30	-30P	-2026	
		-32	-32P	-2026	

■ BP4M-

Applied product number	Applied product number	Din frien and are dead assessed as	
Without pins/rings	With pins/rings	Pin/ring set product number	
BP4M-08T	BP4M -08TP	PR -1822	
-09T	-09TP	-1822	
-10T	-10TP	-1822	
-11T	-11TP	-1822	
-12T	-12TP	-1822	
-13T	-13TP	-1822	
-14T	-14TP	-1822	
-15T	-15TP	-1822	
-16T	-16TP	-1822	
-17T	-17TP	-1822	
-18T	-18TP	-1822	
-19T	-19TP	-1822	
-20T	-20TP	-1822	
-21T	-21TP	-1822	
-22T	-22TP	PR -2026	
-23T	-23TP	-2026	
-24T	-24TP	-2026	
-25T	-25TP	-2026	
-26T	-26TP	-2026	
-27T	-27TP	-2026	
-28T	-28TP	-2026	
-29T	-29TP	-2026	
-30T	-30TP	-2026	
-31T	-31TP	-2026	
-32T	-32TP	-2026	
-33T	-33TP	-2026	
-34T	-34TP	-2026	
-35T	-35TP	-2026	
-36T	-36TP	-2026	

Attaching the pin/ring

The protruding section within the inner side of the ring must be set so that it enters the pin hole of the socket.



A protruding section is provided on the exterior of the ring in order to indicate the position of the hole while the ring is set.

■ BP4L-

Applied product number	Applied product number	.	
Without pins/rings	With pins/rings	Pin/ring set product number	
BP4L-10T	BP4L-10TP	PR-1822	
-12T	-12TP	-1822	
-13T	-13TP	-1822	
-14T	-14TP	-1822	
-17T	-17TP	-1822	
-19T	-19TP	-1822	
-21T	-21TP	-1822	
-22T	-22TP	PR-2026	
-23T	-23TP	-2026	
-24T	-24TP	-2026	
-26T	-26TP	-2026	
-27T	-27TP	-2026	
-30T	-30TP	-2026	
-32T	-32TP	-2026	

■ BEP4-

Applied product number	Pin/ring set product number	
BEP4-075	PR-2026	
-100	-2026	
-150	-2026	

■ BJP

Applied product number	Pin/ring set product number		
BJP4	PR-2026		

■ BAP

Applied product number		Pin/ring set product number	
	BAP43	PR-2026	
	43	-2026	



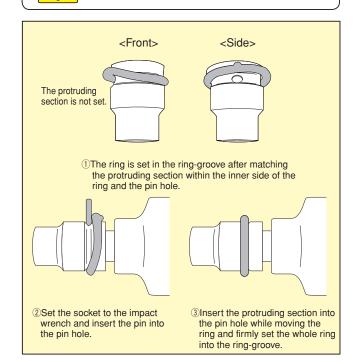
Pin: Black (length 18, diameter 2.5) Ring: Black (length 28)



Pin: Silver (length 20, diameter 2.5) Ring: Grey (length 32)



- · Never use pieces inappropriately as this is dangerous.
- · Match the black ring with the black pin, and the silver ring with the grey pin.











List of applied pin/ring sets for the impact socket (5 pins and rings included). *Caution: there is no compatibility with the 21st Century Version Tools.

■PB			
		Pin/ring set product number	
PB22		BPYPR-215	
	- 8H	-215	
	- 9H	-215	
	-10H	-215	
	-12H	-215	
	-13H	BPYPR-219	
	-14H	-219	
	-17H -19H	-219 BPYPR-222	
	-21H	-222	
	-22H	-222	
PB25	- 6H	BPYPR-215	
	- 7H	-215	
	- 8H	-215	
	- 9H	-215	
	-10H -11H	-215 -215	
	-11H	-215	
	-13H	BPYPR-219	
	-14H	-219	
	-17H	-219	
	-19H	BPYPR-222	
	-21H	-222	
	-22H	-222	
PB30		BPYPR-321	
	- 9H -10H	-321 -321	
	-11H	-321	
	-12H	-321	
	-13H	-321	
	-14H	-321	
	-15H	-321	
	-16H	BPYPR-322	
	-17H	-322	
	-19H -21H	BPYPR-324B -324B	
	-21H -22H	-324B	
	-23H	-324B	
	-24H	-324B	
	-26H	-324B	
	-27H	-324B	
	-28H	-324B	
	-29H	-324B	
	-30H -32H	-324B -324B	
PB31/		BPYPR-324A	
I DOTA	-19H	BPYPR-324C	
	-21H	-324C	
PB32	-10H	BPYPR-321	
	-12H	-321	
	-13H	-321	
	-14H	-321	
	-17H -19H	-321 BPYPR-322	
	-19H -21H	-322	
	-22H	BPYPR -324B	
	-23H	-324B	
	-24H	-324B	
	-26H	-324B	
	-27H	-324B	
	-30H	-324B	
PB35	-32H -10H	-324B BPYPR-321	
F D 3 3	-1011 -12H	-321	
	-13H	-321	
	-14H	-321	
	-17H	-321	
	-19H	BPYPR-322	
	-21H	-322	
	-22H	BPYPR-324B	
	-23H	-324B	
	-24H	-324B	
	-26H -27H	-324B -324B	
	-30H	-324B	
	-32H	-324B	

A			
		Pin/ring set product number	
PB40		BPYPR-433	
	-19H	-433	
	-21H	-433	
	-22H	-433	
	-23H	-433	
	-24H	-433	
	-26H	BPYPR-435	
	-27H	-435	
	-28H	-435	
	-29H	-435	
	-30H	-435	
	-30H	-435	
	-		
	-35H	BPYPR-442	
	-36H	-442	
	-38H	-442	
	-41H	BPYPR-444	
	-46H	-444	
PB42Z	Z-14	BPYPR-434	
	-17	-434	
	-19	-434	
	-22	-434	
PB43		BPYPR-444	
, 540	-3517	-444	
	-3820	-444	
	-4119	-444	
	-4120	-444	
	-4121	-444	
PB45	-19H	BPYPR-433	
	-21H	-433	
	-22H	-433	
	-23H	-433	
	-24H	-433	
		-433	
	-26H		
	-27H	BPYPR-435	
	-29H	-435	
	-30H	-435	
	-32H	-435	
	-34H	-435	
	-35H	BPYPR-444	
	-36H	-444	
	-38H	-444	
	-41H	-444	
	-46H	-444	
PB50		BPYPR-544	
PDSU			
	-22H	-544	
	-23H	-544	
	-24H	-544	
	-26H	-544	
	-27H	-544	
	-28H	-544	
	-29H	-544	
	-30H	-544	
	-32H	-544	
	-32H	-544	
	-зэп -35H		
		BPYPR-547	
	-36H	-547	
	-38H	-547	
	-41H	-547	
	-46H	-547	
	-50H	-547	
	-54H	BPYPR-554	
	-55H	-554	
	-58H	-554	
	-60H	-554	
	-65H	-554	
	-70H	-554	
PB53	-3517	BPYPR-544	
	-3820	-544	
	-3020		
	-4119	-544	
		-544 -544	









List of applied pin/ring sets for the impact socket (5 pins and rings included).

*Caution: there is no compatibility with the 21st Century Version Tools.

Applied product number	Pin/ring set product number	
PB54 -32H	BPYPR -544	
-35H	-544	
-38H	-544	
-41H	-544	
PB55 -22H	-544	
-24H	-544	
-27H	-544	
-29H	-544	
-30H	-544	
-32H	-544	
-35H	-544	
-36H	BPYPR -547	
-38H	-547	
-41H	BPYPR -544	
-46H	BPYPR -547	
-50H	-547	
-55H	BPYPR -554	
-60H	-554	
-65H	-554	
-70H	-554	

■ ABP

Applied product number	Pin/ring set product number	
ABP6-17Y	BPYPR -435	
-19Y	-435	
-20Y	-435	
-21Y	-435	
ABP8-17Y	BPYPR -544	
-19Y	-544	
-20Y	-544	
-21Y	-544	

■ PBA

Applied product number	Pin/ring set product number	
PBA2030	BPYPR-219	
PBA3020	BPYPR-324A	
PBA3040	-324A	
PBA4030	BPYPR-434	
PBA4030-150	BPYPR-435	
PBA4050	BPYPR-434	
PBA5040	BPYPR-544	
PBA5040-150	-544	

■ PRF		
Applied product number	Pin/ring set product number	
PBE20 -75	BPYPR -219	
-100	-219	
PBE30 -75	BPYPR -324B	
-100	-324B	
-150	-324B	
PBE40 -100	BPYPR -435	
-150	-435	
-250	-435	
PBE50 -150	BPYPR -544	
-200	-544	
-250	-544	

■ PBJ

Applied product number	Pin/ring set product number	
PBJ30	BPYPR-324B	
PBJ40	BPYPR-435	
PBJ31L-17H	BPYPR-324B	
-19H	-324B	
-24H	-324B	

■ PHB

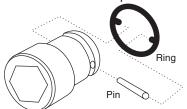
Applied product number	Pin/ring set product number	
PHB20-4	BPYPR-214	
-5	-214	
-6	-214	
-8	-214	
-10	BPYPR-219	
-12	-219	
PHB30-6	BPYPR-322	
-8	-322	
-10	-322	
-12	-322	
-14	-322	
-17	-322	

S6

Applied product number	Pin/ring set product number	
S6T20	BPYPR-214	
S6T25	-214	
S6T30	-214	
S6T40	-214	
S6T45	-214	

Attaching the pin/ring

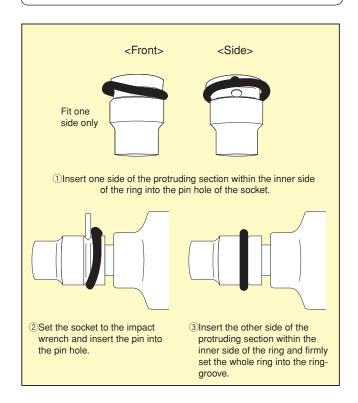
The protruding section within the inner side of the ring must be set so that it enters the pin hole of the socket.



Sockets for impact wrenches



· Never use pieces inappropriately as this is dangerous.



Impact socket pin/rubber ring size checker

BPYPR-214

BPYPR-215

BPYPR-219

BPYPR-222

BPYPR-321



Pin: ø2.5x14.6 Ring inner diameter : ø14.45



Pin: ø2.5x15 Ring inner diameter: ø15.2



Pin: ø2.5x15 Ring inner diameter: ø19.1



Pin: ø2.5x15 Ring inner diameter: ø22.05



Pin: ø3x18 Ring inner diameter: ø20.6

BPYPR-322



Ring inner diameter: ø22.05

BPYPR-324A



Pin: ø3x18 Ring inner diameter: ø24.2 **BPYPR-324B**



Pin: ø3x19 Ring inner diameter: ø24.2 **BPYPR-324C**



Pin: ø3x19.5 Ring inner diameter : ø24.2

BPYPR-444

Pin: ø4x32.5

Ring inner diameter: ø43.9

BPYPR-435

Pin: ø4x25.5 Ring inner diameter : ø35.2 **BPYPR-544**

Pin: ø5x32

Ring inner diameter: ø43.9

BPYPR-433

Pin: ø4x25.5 Ring inner diameter: ø33.2 **BPYPR-434**

Pin: ø4x25.5 Ring inner diameter: ø34.2

BPYPR-547

Pin: ø5x32

Ring inner diameter : ø47.4

BPYPR-442

Pin: ø4x25.5 Ring inner diameter: ø41.5 **BPYPR-554**

Pin: ø5x38

Ring inner diameter: ø54.2

*There is no protruding section on the ring on the BPYPR-214 and 215.

2. CONVENTIONAL TOOLS

HEXAGONAL WRENCHES



- HEXAGONAL WRENCH SETS
 READ THE CAUTION MESSAGE CAREFULLY FOR EACH TOOL.
- · LOCK THE STOPPER SECURELY WHEN CARRYING.

- HEXAGONAL WRENCHES

 USE A WRENCH APPROPRIATETE TO THE SIZE OF A BOLT.

 INSERT A WRENCH DEEPLY INTO A BOLT.

 INSERT THE SQUARE DRIVE OF A DRIVE TOOL DEEPLY TO THE END

●1/4"sq. CROSS · FLAT BIT SOCKET

- DO NOT GIVE ANY IMPACT BY HITTING WITH HAMMERS, ETC.

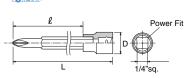
 DO NOT APPLY ANY POWER TOOL SUCH AS IMPACT
- WRENCH



CROSS - FLAT BIT SOCKET											
No. Number		D	L	l	▼g	#					
BT2-1P	No.	No.1		54.5	32	36	10				
-2P	No.2	No.2		59.5	37	38	10				
No.	а	b	D	L	l	▼g	#				
BT2-6M	1.0	6	16	59.5	37	38	10				
Bit replacement	is possible	e. (Refe	er to P.105	5)				POWERFIT:			

• Bit replacement is possible. (Refer to P.105)



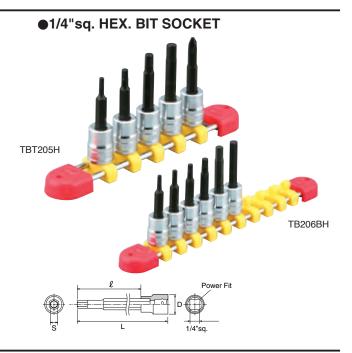




HEX. BIT SOCKET										
No.	S	D	L	l	▼ g	#				
BT2-03	3	16	54.5	32	36	10				
-04	4	16	54.5	32	36	10				
-05	5	16	59.5	37	39	10				
-06	6	16	59.5	37	39	10				

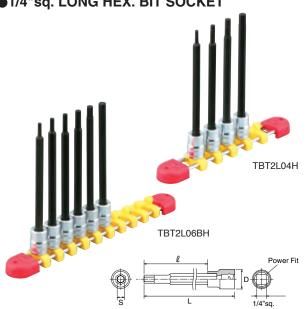
							POWERFIT .
HEX. BIT SOCK	ET						in
No.	S	D	L	l	▼ g	#	
BT2 -1/8	3.1	16	54.5	32	36	10	
-9/ ₆₄	3.5	16	54.5	32	36	10	
- ⁵ / ₃₂	3.9	16	54.5	32	36	10	
$-\frac{3}{16}$	4.7	16	54.5	32	36	10	
- ⁷ / ₃₂	5.5	16	59.5	37	39	10	
-1/4	6.3	16	59.5	37	39	10	
· Bit replacement	is possible.	(Refer to P.	105)				POWERFIT .

HEX. BIT SOCKET SET (5pcs	i.) . (ópcs.)	mm . in
No. TBT205H	▼ g 245	₩1
Hexagon bit socket (1/4"sq.)	mm	BT2-03, 04, 05,06
Cross bit socket (1/4"sq.)		BT2-2P
Socket holder		EHB205
No. TBT206BH	▼ g 280	₩1
Hexagon bit socket (1/4"sq.) Socket holder	in	BT2-1/8, 9/64, 5/32, 3/16, 7/32, 1/4 EHB210





■1/4"sq. LONG HEX. BIT SOCKET



LONG HEX. BIT	SOCKET						mm
No.	S	D	L	l	▼ g	#	
BT2-03L	3	16	121.5	99	54	10	
-04L	4	16	121.5	99	54	10	
-05L	5	16	121.5	99	55	10	
-06L	6	16	121.5	99	56	10	

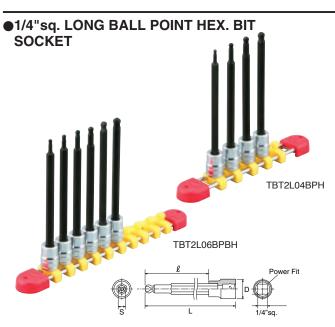
POWERFIT .

LONG HEX. BIT SOCKET									
No.	S	D	L	l	▼g	#			
BT2-1/8 L	3.1	16	121.5	99	54	10			
-9/ ₆₄ L	3.5	16	121.5	99	54	10			
- ⁵ / ₃₂ L	3.9	16	121.5	99	54	10			
- ³ / ₁₆ L	4.7	16	121.5	99	55	10			
$-\frac{7}{32}$ L	5.5	16	121.5	99	56	10			
-1/ ₄ L	6.3	16	121.5	99	56	10			

• Bit replacement is possible. (Refer to P.105)

POWERFIT .

LONG HEX. BIT SOCKET SET (4	pcs.) . (6pcs.)	mm . in				
No. TBT2L04H	▼ g 275	₩1				
Long hexagon bit socket (1/4"sq.)	mm	BT2-03L,04L,05L,06L				
Socket holder		EHB205				
No. TBT2L06BH	▼g 390	₿1				
Long hexagon bit socket (1/4"sq.)	in	BT2-1/8 L, 9/64 L, 5/32 L, 3/16 L, 7/32 L, 1/4 L				
Socket holder		EHB210				



CAUTION*	Care should	be taker	not to	force	this	piece	as the	torque	limit o	f the ba	all
4	point is low.										

LONG BALL PO	INT HEX. B	IT SOCKET					mm
No.	S	D	L	l	▼g	#	
BT2-03BPL	3	16	121.5	99	54	10	
-04BPL	4	16	121.5	99	54	10	
-05BPL	5	16	121.5	99	55	10	
-06RPI	6	16	121 5	99	56	10	

							POWERFT
LONG BALL PO	INT HEX. B	IT SOCKET					in
No.	S	D	L	l	▼ g	#	
BT2- ¹ / ₈ BPL	3.1	16	121.5	99	54	10	
-9/ ₆₄ BPL	3.5	16	121.5	99	54	10	
- ⁵ / _{3 2} BPL	3.9	16	121.5	99	54	10	
$-\frac{3}{16}$ BPL	4.7	16	121.5	99	55	10	
$-\frac{7}{32}$ BPL	5.5	16	121.5	99	56	10	
-1/ ₄ BPL	6.3	16	121.5	99	56	10	
Bit replacement i	is possible.	(Refer to P.1	105)				POWERFIT

LONG BALL POINT HEX. BIT SOCKET S	SET (4pcs.) . (6pcs.) mm . in
No. TBT2L04BPH ▼g 275	5 🕲 1
Long ball point hexagon bit socket (1/4"sq	.) mm BT2-03BPL,04BPL,05BPL,06BPL
Socket holder	EHB205
No. TBT2L06BPBH ▼ g 390)
Long ball point hexagon bit socket (1/4"sq	.) in BT2- $\frac{1}{8}$ BPL, $\frac{9}{64}$ BPL, $\frac{5}{32}$ BPL, $\frac{3}{16}$ BPL $\frac{7}{32}$ BPL, $\frac{1}{4}$ BPL
Socket holder	EHB210

●3/8"sq. CROSS · FLAT BIT SOCKET



CROSS . FLAT BIT SOCKET								
No.	Numb	er	D	L	l	▼ g	#	
BT3 -1P	No.	1	17	61	32	43	10	
-2P	No.2	2	17	66	37	45	10	
-3P	No.3	3	18.5	71	42	63	10	
No.	а	b	D	L	l	▼g	#	
BT3-6M	1.0	6	17	66	37	45	10	

• Bit replacement is possible. (Refer to P.105)







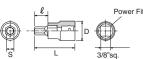
SHORT HEX. BI	T SOCKET						mm
No.	S	D	L	l	▼g	#	
BT3-03SS	3	17	34	5	36	1	
-04SS	4	17	34	5	36	1	
-05SS	5	17	34	5	37	1	
-06SS	6	17	35.5	6.5	37	1	
-07SS	7	18.5	36	7	49	1	
-08SS	8	18.5	37	8	49	1	
-09SS	9	18.5	39.5	9.5	55	1	
-10SS	10	18.5	39.5	9.5	56	1	
-12SS	12	22	42	10	87	1	

SHORT HEX. BIT SOCKET SET (9pcs.)	mm
No. TBT3SS09H ▼g 562	₩1
Stubby hexagon bitsocket (3/8"sq.) mm	BT3-03SS, 04SS, 05SS, 06SS, 07SS, 08SS, 09SS, 10SS, 12SS
Socket holder	EHB310

• Bit replacement is possible. (Refer to P.105)







SHORT HEX. BIT SOCKET						mm	
No.	S	D	L	l	▼g	#	
BT3-03S	3	17	48	19	40	10	
-04S	4	17	48	19	40	10	
-05S	5	17	50	21	41	10	
-06S	6	17	50	21	42	10	
-07S	7	18.5	50	21	56	10	
-08S	8	18.5	50	21	56	10	
-09S	9	18.5	52	22	62	10	
-10S	10	18.5	52	22	62	10	
-12S	12	22	54	22	99	10	

POWERFIT :

SHORT HEX. BI	T SOCKET						in
No.	S	D	L	l	▼g	#	
BT3-1/8 S	3.1	17	48	19	40	10	_
-9/64S	3.5	17	48	19	40	10	
- ⁵ / ₃₂ S	3.9	17	48	19	40	10	
- ³ / ₁₆ S	4.7	17	48	19	40	10	
- ⁷ / _{3 2} S	5.5	17	50	21	42	10	
-1/ ₄ S	6.3	17	50	21	42	10	
- ⁵ / ₁₆ S	7.9	18.5	50	21	56	10	
- ³ / ₈ S	9.5	18.5	52	22	62	10	
- ⁷ / ₁₆ S	11.1	22	54	22	99	10	

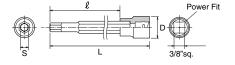
• Bit replacement is possible. (Refer to P.105)

DΩ	14	/C	-One

SHORT HEX. BIT SOCKET SET (9pcs.)	mm . in
No. TBT3S09H ▼g 620	₩1
Short hexagon bit socket (3/8"sq.) mm	BT3-03S,04S,05S,06S,07S,08S,09S,10S,12S
Socket holder	EHB310
No. TBT3S09BH ▼g 580	₩1
Short hexagon bit socket (3/8"sq.) in	BT3- $^{1}/_{8}$ S, $^{9}/_{64}$ S, $^{5}/_{32}$ S, $^{3}/_{16}$ S, $^{7}/_{32}$ S, $^{1}/_{4}$ S, $^{5}/_{16}$ S, $^{3}/_{8}$ S, $^{7}/_{16}$ S
Socket holder	EHB310

●3/8"sq. SHORT HEX. BIT SOCKET









HEX. BIT SOCK	3 1						mm
No.	S	D	L	l	▼g	#	
BT3-03	3	17	61	32	43	10	
-04	4	17	61	32	43	10	
-05	5	17	66	37	46	10	
-06	6	17	66	37	46	10	
-07	7	18.5	71	42	65	10	
-08	8	18.5	71	42	65	10	
-09	9	18.5	73	43	76	10	
-10	10	18.5	73	43	76	10	
-12	12	22	76	44	121	10	

POWERFIT:

HEX. BIT SOC	KET						in
No.	S	D	L	l	▼ g	8	
BT3- ¹ / ₈	3.1	17	61	32	43	10	
-9/64	3.5	17	61	32	43	10	
-5/32	3.9	17	61	32	43	10	
- ³ /16	4.7	17	61	32	43	10	
- ⁷ / ₃₂	5.5	17	66	37	46	10	
-1/4	6.3	17	66	37	46	10	
- ⁵ /16	7.9	18.5	71	42	65	10	
- ³ / ₈	9.5	18.5	73	43	76	10	
-7/16	11.1	22	76	44	121	10	

• Bit replacement is possible. (Refer to P.105)

	ъH

HEX. BIT SOCKET SET (6pcs.) .	(9pcs.) . (10pcs.) mm · in
No. TBT306H	▼ g 405	₩1
Hexagon bit socket (3/8"sq.) mm		BT3-04,05,06,08,10
Cross bit socket		BT3-2P
Socket holder		EHB306
No. TBT310H	▼ g 745	⊕1
Hexagon bit socket (3/8"sq.)		BT3-03,04,05,06,07,08,09,10,12
Cross bit socket		BT3-2P
Socket holder		EHB310
No. TBT309BH	▼ g 645	⊎1
Hexagon bit socket (3/8"sq.) in		BT3-1/8,9/64,5/32,3/16,7/32,1/4,5/16,3/8,7/16
Socket holder		EHB310



LONG HEX. BIT	SOCKET						mm
No.	s	D	L	l	▼ g	#	
BT3-03L	3	17	128	99	61	10	
-04L	4	17	128	99	61	10	
-05L	5	17	128	99	62	10	
-06L	6	17	128	99	63	10	
-07L	7	18.5	128	99	89	10	
-08L	8	18.5	128	99	89	10	
-09L	9	18.5	128	98	113	10	
-10L	10	18.5	128	98	113	10	
-12L	12	22	128	96	172	10	
							/D-0++

POWERFIT .

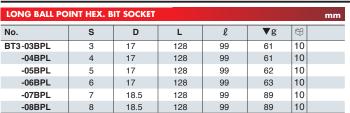
LONG HEX. BIT SOCKET							
No.	S	D	L	l	▼ g	#	
BT3-1/8 L	3.1	17	128	99	61	10	
-9/64L	3.5	17	128	99	61	10	
- ⁵ / _{3 2} L	3.9	17	128	99	61	10	
$-\frac{3}{16}$ L	4.7	17	128	99	62	10	
$-\frac{7}{32}$ L	5.5	17	128	99	63	10	
-1/ ₄ L	6.3	17	128	99	63	10	
- ⁵ / ₁₆ L	7.9	18.5	128	99	89	10	
- ³ / ₈ L	9.5	18.5	128	98	113	10	
- ⁷ / ₁₆ L	11.1	22	128	96	172	10	

• Bit replacement is possible. (Refer to P.105)



mm . in
05L,06L,07L,08L,09L,10L,12L
$_{4}$ L, $_{7}$ $_{3}$ $_{2}$ L, $_{1}$ $_{6}$ L, $_{7}$ $_{3}$ $_{2}$ L, $_{1}$ $_{4}$ L, $_{8}$ L, $_{1}$ $_{1}$ $_{6}$ L
_





POWERFIT .

LONG BALL POINT HEX. BIT SOCKET							
No.	S	D	L	l	▼ g	#	
BT3-1/8 BPL	3.1	17	128	99	61	10	
-9/ _{6 4} BPL	3.5	17	128	99	61	10	
$-\frac{5}{32}$ BPL	3.9	17	128	99	61	10	
$-\frac{3}{16}$ BPL	4.7	17	128	99	62	10	
$-\frac{7}{3}$ BPL	5.5	17	128	99	63	10	
-1/ ₄ BPL	6.3	17	128	99	63	10	
- ⁵ / ₁₆ BPL	7.9	18.5	128	99	89	10	

• Bit replacement is possible. (Refer to P.105)

IMPACT HEX. WRENCH SET (6pcs.)

Impact hex. Wrench Set (3/8"sq.)

• pins and rings are sold separately.

s

5

8

12

No. TBTP306P

Socket Holder

BTP3-04P -05P

-06P -08P

-12P

original design.

No.



mm

BTP3-04P, 05P, 06P, 08P, 10P, 12P

51

53 55

60 74

10

EHB306

45

45

45

52

LONG BALL POINT HEX. BIT SOCKET SET (6pcs.) . (7pcs.)						
No. TBT3L06BPH	▼ g 510	₩1				
Long ball point hexagon bit so	cket (3/8"sq.) mr	m BT3-03BPL, 04BPL, 05BPL, 06BPL,07BPL, 08BPL				
Socket holder		EHB306				
No. TBT3L07BPBH	▼g 580	⊜ 1				
Long ball point hexagon bit so	cket (3/8"sq.) in	BT3- ¹ / ₈ BPL, ⁹ / ₆₄ BPL, ⁵ / ₃₂ BPL, ³ / ⁷ / ₃₂ BPL, ¹ / ₄ BPL, ⁵ / ₁₆ BPL	16 BPL			
Socket holder		EHB310				

Care should be taken not to force this piece as the torque limit of the ball point is

▼g 340

22

Pins and rings are sold separately. Impact wrench can be used owing to the KTC's

SOCKET SET (6pcs.) · (7pcs.) TBT3L06BPH TBT3L07BPBH Power Fit

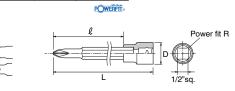
●3/8"sq. LONG BALL POINT HEX. BIT

•3/8"sq. IMPACT HEX. WRENCH SET (6pcs.)



CROSS · FLAT	BIT SOCKE	ŧΤ						
No.	Numb	per	D	L	l l	▼ g	#	
BT4-2P	No.	2	22	70	37	73	10	
-3P	No.	3	22	75	42	82	10	
No.	а	b	D	L	l	▼g	#	
BT4-6M	1.0	6	22	70	37	73	10	

Bit replacement is possible. (Refer to P.105)



●1/2"sq. CROSS · FLAT BIT SOCKET





●1/2"sq. HEX. BIT SOCKET



HEX. BIT SOCK	ŒT						mm
No.	S	D	L	l	▼ g	#	
BT4-05	5	22	70	37	74	10	
-06	6	22	70	37	74	10	
-07	7	22	75	42	84	10	
-08	8	22	75	42	84	10	
-09	9	22	77	43	98	10	
-10	10	22	77	43	98	10	
-12	12	22	79	44	121	10	
-14	14	24	85	47	164	10	
-17	17	25	90	49	216	10	

							POWERFIT
HEX. BIT SOCK	ET						in
No.	S	D	L	l	▼ g	#	
BT4- ³ / ₁₆	4.7	22	65	32	71	10	
-7/32	5.5	22	70	37	74	10	
-1/4	6.3	22	70	37	74	10	
- ⁵ /16	7.9	22	75	42	84	10	
-3/8	9.5	22	76	43	98	10	
- ⁷ /16	11.1	22	80	44	121	10	
-1/2	12.7	24	85	47	164	10	
-9/16	14.2	25	90	49	216	10	
- ⁵ / ₈	15.8	25	90	49	216	10	

 Bit replacement is 	possible.	(Refer to P.105)
--	-----------	------------------

POWERFIT .	
mm . in	

HEX. BIT SOCKET SET (7pcs.	mm . in		
No. TBT407H	▼ g 765	₩1	
Hexagon bit socket (1/2"sp.)	mm	BT4-05,06,08,10,12,14	
Cross bit socket (1/2"sp.)		BT4-2P	
Socket holder		EHB410	

No. TBT410H	▼ kg 1.3	₩ 1
Hexagon bit socket (1/2"sp.)	mm	BT4-05,06,07,08,09,10,12,14,17
Cross bit socket (1/2"sp.)		BT4-2P
Socket holder		EHB410
Socket holder		EHB410

No. TBT409BH	▼kg 1.3	₩1
Hexagon bit socket (1/2"sp.)	in	BT4-3/ ₁₆ ,7/ ₃₂ ,1/ ₄ ,5/ ₁₆ ,3/ ₈ ,7/ ₁₆ ,1/ ₂ ,9/ ₁₆ ,5/ ₈
Socket holder		EHB410

●1/2"sq. LONG HEX. BIT SOCKET



LONG HEX. BIT	SOCKET						mm
No.	s	D	L	l	▼g	#	
BT4-05L	5	22	132	99	90	10	
-06L	6	22	132	99	91	10	
-07L	7	22	132	99	108	10	
-08L	8	22	132	99	108	10	
-09L	9	22	132	98	135	10	
-10L	10	22	132	98	135	10	
-12L	12	22	132	96	172	10	
-14L	14	24	132	94	227	10	
-17L	17	25	132	91	298	10	

LONG HEX. BIT	SOCKET						in
No.	S	D	L	l	▼g	#	
BT4- ³ / ₁₆ L	4.7	22	132	99	90	10	
$-\frac{7}{32}$ L	5.5	22	132	99	91	10	
-1/ ₄ L	6.3	22	132	99	91	10	
-5/ ₁₆ L	7.9	22	132	99	108	10	
- ³ / ₈ L	9.5	22	132	98	135	10	
$-\frac{7}{16}$ L	11.1	22	132	96	172	10	
-1/2 L	12.7	24	132	94	227	10	
-9/ ₁₆ L	14.2	25	132	91	298	10	
- ⁵ / ₈ L	15.8	25	132	91	298	10	

Bit replacement is possible.	(Refer to P.105)

_	/12-2rd
	WEDETT

LONG HEX. BIT SOCKET SET (9)	pcs.)	mm . in
No. TBT4L09H	▼ kg 1.5	⊌1
Long hexagon bit socket (1/2"sp.)		BT4-05L,06L,07L,08L,09L,10L,12L,14L,17L
Socket holder		EHB410
No. TBT4L09BH	▼ kg 1.7	₩1
Long hexagon bit socket (1/2"sp.)	in	$BT4-\frac{3}{1_{6}}L,\frac{7}{3_{2}}L,\frac{1}{4}L,\frac{5}{1_{6}}L,\frac{3}{8}L,\frac{7}{1_{6}}L,\\ \frac{1}{2}L,\frac{9}{1_{6}}L,\frac{5}{8}L$
Socket holder		EHB410



LONG BALL POINT HEX. BIT SOCKET							mm
No.	S	D	L	l	▼ g	#	
BT4-05BPL	5	22	132	99	90	10	
-06BPL	6	22	132	99	91	10	
-07BPL	7	22	132	99	108	10	
-08BPL	8	22	132	99	108	10	

POWERFIT

LONG BALL POINT HEX. BIT SOCKET							
No.	S	D	L	l	▼ g	#	
BT4- ³ / ₁₆ BPL	4.7	22	132	99	90	10	
$-\frac{7}{32}$ BPL	5.5	22	132	99	91	10	
-1/ ₄ BPL	6.3	22	132	99	91	10	
- ⁵ / ₁₆ BPL	7.9	22	132	99	108	10	

• Bit replacement is possible. (Refer to P.105)

POWERFIT .

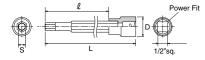
LONG BALL POINT HEX. B	IT SOCKET SET	mm . in
No. TBT4L04BPH	▼ g 520	₩1
Long ball point hexagon bit so	ocket (1/2"sp.) mr	m BT4-05BPL,06BPL,07BPL,08BPL
Socket holder		EHB405
No. TBT4L04BPBH	▼g 500	₩1
Long ball point hexagon bit s	ocket (1/2"sp.) in	BT4- ³ / ₁₆ BPL, ⁷ / ₃₂ BPL, ¹ / ₄ BPL, ⁵ / ₁₆ BPL
Socket holder		EHB405



• Care should be taken not to force this piece as the torque limit of the ball point



●1/2"sq. LONG BALL POINT HEX. BIT SOCKET



HIGH GRADE L-SHAPED STANI	DARD HEX-KEY WRENC	H SET (8pcs.) . (9pcs.) n	nm
No. HLD1009	▼g 260	₩5	
High Grade L-Shaped Stand	ard Hex-key Wrench	HLD100-1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
No. HLD1008	▼g 150	₩ 5	
High Grade L-Shaped Stand	ard Hex-key Wrench	HLD100-1.5, 2, 2.5, 3, 4, 5, 6, 8	
Common Items			

- High grade hard chrome plating for better feeling, appearance and rust-resistance
 Made of special alloy steel for better wear-resistance & torque strength.
- Can apply high torque due to balanced hardness and flexibility processed by "state of the art" heat-treatment technique.
- With original holder for carrying and tool management.
 The holder is provided as a replaceable part. Check with your dealer for details.

	●HIGH GRADE L-SHAPED STANDARD
HEX-KEY WRENCH SET (8 · 9pcs.)	HEX-KEY WRENCH SET (8 · 9pcs.)



APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

HIGH GRADE L-SHAPED STANDARD HEX-KEY WRENCH mm **▼**g No. s # HLD100- 1.5 53 13 10 1.5 10 - 2.5 2.5 62 17 10 10 - 3 3 68 23 5 10 - 4 4 76 29 10 10 - 5 5 6 96 38 30 10 - 8 8 110 44 60 10 -10 10 120 50 105 10 -12 12 135 57 170 10

HIGH GRADE L-SHAPED LONG HEX-KEY WRENCH SET (8pcs.) • (9pcs.) ₩ 5 No. HLD1509 **▼**g 450 High Grade L-Shaped Long Hex-key Wrench HLD150-1.5, 2, 2.5, 3, 4, 5, 6, 8, 10 No. HLD1508 **▼**g 245 ₩ 5 High Grade L-Shaped Long Hex-key Wrench HLD150-1.5, 2, 2.5, 3, 4, 5, 6, 8 Common Items

Holder

- High grade hard chrome plating for better feeling. appearance and rust-resistance
 Made of special alloy steel for better wear-resistance & torque strength.
 Can apply high torque due to balanced hardness and flexibility processed by "state of" the art" heat-treatment technique.
- With original holder for carrying and tool management.
- * The holder is provided as a replaceable part. Check with your dealer for details.



●HIGH GRADE L-SHAPED STANDARD HEX-KEY WRENCH



●HIGH GRADE L-SHAPED LONG HEX-KEY WRENCH SET (8 · 9pcs.)



• APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

•HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-KEY WRENCH SET (9pcs.)





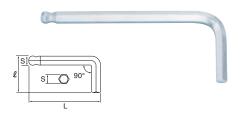
HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-KEY WRENCH SET (9pcs. No. HLD2009 **▼**g 250 CH 5

HLD100-1.5, 2, 2.5, 3, 4, 5, 6, 8, 10 High Grade L-Shaped Standard Hex-key Wrench Holder

- Made of special alloy steel for better wear-resistance & torque strength.
 With original holder for carrying and tool management.
- The hexagon ends fit into hexagon bolts more tightly for less wear & tear.
 The holder is provided as a replaceable part. Check with your dealer for details

- Care should be taken not to force this piece as the torque limit of the ball point is low.
 Oscillation angle of ball point depends on the size of bolts
 Apply force in the direction of the bolt rotation. If you raise it or push it down, it may break at the bend.

HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-KEY WRENCH





HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-RET WRENCH						
No.	S	L	l	▼g	#	
HLD200- 1.5	1.5	53.5	13.5	1	10	
- 2	2	60	14	1	10	
- 2.5	2.5	62.5	17.5	3	10	
- 3	3	68	23	5	10	
- 4	4	76	29	8	10	
- 5	5	85	33	18	10	
- 6	6	96	38	30	10	
- 8	8	108	44	60	10	
-10	10	122	50	100	10	

Caurion. Care should be taken not to force this piece as the torque limit of the ball point is low.

- · Oscillation angle of ball point depends on the size of bolts
- · Apply force in the direction of the bolt rotation. If you raise it or push it down, it

HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-KEY WRENCH SET (9pcs.)





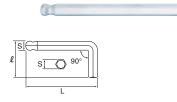
HIGH GRADE L-SHAPED STANDA	RD BALL POINT HEX-	KEY WRENCH SET (9pcs.) mm
No. HLDS2009	▼ g 220	₩5
High Grade L-Shaped Standard	Hex-key Wrench	HLDS200-1.5, 2, 2.5, 3, 4, 5, 6, 8, 10
Holder		

- Made of special alloy steel for better wear-resistance & torque strength.
 With original holder for carrying and tool management.
- The hexagon ends fit into hexagon bolts more tightly for less wear & tear.
 The holder is provided as a replaceable part. Check with your dealer for details.

Care should be taken not to force this piece as the torque limit of the ball point is low.
 Oscillation angle of ball point depends on the size of bolts

· Apply force in the direction of the bolt rotation. If you raise it or push it down, it may break at the bend.

HIGH GRADE L-SHAPED STANDARD BALL **POINT HEX-KEY WRENCH**





HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-RET WRENCH							
No.	S	L	l	▼g	#		
HLDS200- 1.5	1.5	53.5	7.5	1	10		
- 2	2	60	9	1	10		
- 2.5	2.5	62.5	10.5	2.5	10		
- 3	3	68	12	4	10		
- 4	4	76	15	7	10		
- 5	5	85	17	16	10		
- 6	6	96	20	25	10		
- 8	8	108	24	55	10		
-10	10	122	29	95	10		

CAUTION. Care should be taken not to force this piece as the torque limit of the ball point is low.

Oscillation angle of ball point depends on the size of bolts
Apply force in the direction of the bolt rotation. If you raise it or push it down, it

may break at the bend.

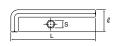
HIGH GRADE L-SHAPED LONG HEX-KEY WRENCH







• APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.



No.	S	L	l	▼ g	8	
HLD150- 1.5	1.5	81	17	1	10	
- 2	2	97	19	3	10	
- 2.5	2.5	115	20	5	10	
- 3	3	130	23	8	10	
- 4	4	145	29	18	10	
- 5	5	165	33	30	10	
- 6	6	185	38	50	10	
- 8	8	210	44	105	10	
-10	10	235	50	185	10	
-12	12	260	57	290	10	
-14	14	295	69	460	10	

●HIGH GRADE L-SHAPED LONG BALL POINT HEX-KEY WRENCH SET (8 · 9pcs.)





HIGH GRADE L-SHAPED LONG BALL POINT HEX-KEY WRENCH SET (8pcs.) - (9pcs.)						
No. HLD2509	▼ g 445	₩ 5				
Hexagon Wrench		HLD250-1.5, 2, 2.5, 3, 4, 5, 6, 8, 10				
No. HLD2508	▼ g 245	₩ 5				
Hexagon Wrench		HLD250-1.5, 2, 2.5, 3, 4, 5, 6, 8				
Common Items						
Halden						

- Made of special alloy steel for better wear-resistance & torque strength.
- With original holder for carrying and tool management.
- ON DO NOT EXTEND WITH PIPES, ETC.
 - DO NOT APPLY EXCESSIVE POWER ON THE BALL POINTS.

HIGH GRADE L-SHAPED LONG BALL POINT HEX-KEY WRENCH						
No.	S	L	l	▼ g	#	
HLD250- 1.5	1.5	81	18	1	10	
- 2	2	97	19	3	10	
- 2.5	2.5	113	21	5	10	
- 3	3	130	23	8	10	
- 4	4	145	29	17	10	
- 5	5	165	33	30	10	
- 6	6	185	38	50	10	
- 8	8	210	44	105	10	
-10	10	235	50	180	10	

• The hexagon ends fit into hexagon bolts more tightly for less wear & tear.

ACAUTION* DO NOT EXTEND WITH PIPES, ETC.

<u> </u>	DO NOT APPLY EXCESSIVE POWER ON THE BALL POINTS.						
HIGH GR	RADE L-SHAF	PED LONG BALL	POINT HEX-KEY	WRENCH . SET(9pcs.)	in		
No. HL	D2509B		▼ g 400	₩ 10			
Hexago	n Wrench	in		HLD250-1/ ₁₆ , 5/ ₆₄ , 3/ ₃₂ , 1	/8,5/32,		

Holder

No.	S	L	l	▼ g	#
HLD250 -1/1 6	1.5	81	17	1	10
- ⁵ / ₆₄	1.9	95	19	3	10
-3/32	2.3	110	20	5	10
- ⁷ / ₆₄	2.7	119	21	7	10
-1/ ₈ -9/ ₆₄	3.1	129	23	8	10
- ⁹ / ₆₄	3.5	134	27	15	10
- ⁵ / ₃₂	3.9	144	29	17	10
-3/16	4.7	163	33	30	10
- ⁷ / ₃₂	5.5	174	36	40	10
-1/4	6.3	184	38	50	10
-5/16	7.9	206	44	105	10
-3/8	9.5	232	50	180	10

- The tool allows a diagonal rotating operation up to 25 degrees, facilitating access in confined
- The tool with a new and unique design that can be employed for the tightening process.
 Anti-wear and warping characteristics have been improved through employing a special steel alloy.
- The high quality chrome galvanized finish provides a good texture while being aesthetically attractive and rust resistant.



• DO NOT APPLY EXCESSIVE POWER ON THE BALL POINTS.

HIGH GRADE L-SHAPED LONG BALL POINT HEX-KEY WRENCH SET (9pcs.)

No. HLDS2509 ₩ 5 **▼**g 400 High Grade L-Shaped HLDS250-1.5, 2, 2.5, 3, 4, 5, 6, 8, 10 Long Ball Point Hex-Key Wrench Set

Holder

- New original design that can be used in final tightening. Wear resistance and twist strength have been improved with the adoption of special steel alloy.
- Original plastic holder that's convenient in carrying and tool management.
 Abrasion and deformation are reduced with the design that enlarged the contact surface for the hex. on the tip to fit on the hex. hole of the bolt perfectly.
- With about 1/2 the under-neck length of conventional products, it is effective for work in narrow spaces.
- * Bending angle of the under-neck part is set at 95°, ensuring the space for the fingertip

 * Holder is configured as a spare part. Please contact your dealer for details.



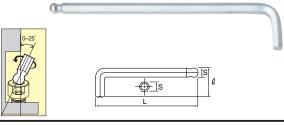
- Since the ball point has a low torque limit, please be careful not to apply too much force
 - · Swing angle of the ball point will vary depending on the variation in the size and bolt.
 - · Please apply force in the rotation direction of the bolt. There is a risk of damage from the bent part if excessively pulled up or pushed down.

HIGH GRADE L-SHAPED BALL POINT HEX-KEY WRENCH No. s $\quad \ \, \exists$ HLDS250-1.5 1.5 80.5 5.5 10 HLDS250-2 10 2 97 2.5 HLDS250-2.5 2.5 112.5 8.5 4 10 HLDS250-3 129 10 3 11 7 HLDS250-4 146 4 13 15 10 HLDS250-5 5 165 16 28 10 HLDS250-6 6 186 19 45 10 HLDS250-8 8 208 24 100 10 HLDS250-10 10 230 28 165 10



- Since the ball point has a low torque limit, please be careful not to apply too much force
- · Swing angle of the ball point will vary depending on the variation in the size
- · Please apply force in the rotation direction of the bolt. There is a risk of damage from the bent part if excessively pulled up or pushed down.

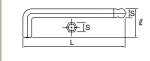
●HIGH GRADE L-SHAPED LONG BALL POINT **HEX-KEY WRENCH**



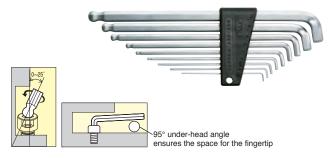
HIGH GRADE L-SHAPED LONG BALL POINT HEX-KEY WRENCH. SET (9pcs.)



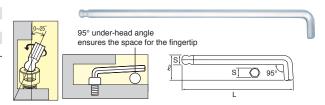




•HIGH GRADE L-SHAPED LONG BALL POINT HEX-KEY WRENCH SET (9pcs.)



•HIGH GRADE L-SHAPED BALL POINT HEX-KEY WRENCH



●HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-KEY WRENCH. SET (9pcs.)





L-Shaped Ball Poir	nt Hex-Key Wre	ench in	HLD200	0- ¹ / ₁₆ , ⁵ / ₆₄ , ³ / ₁₆ , ¹ / ₄ , ⁵ /			
Holder							
No.	s	L	l	▼ g	#		
HLD200-1/16	1.5	48	15	1	10		
- ⁵ / ₆₄	1.9	52	16	1	10		
-3/32	2.3	58	19	1	10		
_7 /	2.7	61	21	3	10		

₩ 10

HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-KEY WRENCH . SET(9pcs.)

▼g 235

No. HLD2009B

No.	S	L	l	▼ g	\oplus	
HLD200- ¹ / ₁₆	1.5	48	15	1	10	
⁻⁵ / ₆₄	1.9	52	16	1	10	
$-\frac{3}{32}$	2.3	58	19	1	10	
- ⁷ / ₆₄	2.7	61	21	3	10	
-1/8	3.1	63	23	3	10	
- ⁹ / ₆₄	3.5	69	26	5	10	
-5/32	3.9	72	28	10	10	
-3/16	4.7	80	30	15	10	
⁻⁷ / ₃₂	5.5	87	33	20	10	
-1/4	6.3	94	36	30	10	
- ⁵ /16	7.9	106	42	60	10	
- ³ / ₈	9.5	120	47	105	10	

- The tool allows a diagonal rotating operation up to 25 degrees, facilitating access in confined
- spaces.
 The tool with a new and unique design that can be employed for the tightening process.
 Anti-wear and warping characteristics have been improved through employing a special
- steel alloy.
- The high quality chrome galvanized finish provides a good texture while being aesthetically attractive and rust resistant.

CAUTION DO NOT APPLY EXCESSIVE POWER ON THE BALL POINTS.



●L-SHAPED HEX-KEY WRENCH SET (7pcs.)



L-SHAPED HEX-KEY WRENCH SET (7pcs.) mm						
No. HL107	▼g 250	₩ 10				
L-Shaped Hex-key Wrench		2.5, 3, 4, 5, 6, 8, 10				
Holder						

These products are not sold individually.

S	L	l
2.5	57	20
3	65	23
4	77	27
5	83 95	32
6	95	32 38
8	100	42 50
10	122	50

APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

•L-SHAPED LONG BALL POINT HEX-KEY WRENCH SET (9pcs.)







L-SHAPED LONG BALL POINT HEX-KEY WRENCH SET (9pcs.

No. HL259BSP	▼ g 420	₩ 10	
L-Shaped Long Ball Point Hex-Key	Wrench 1/16, 5/64,	3/32, 1/8, 5/32,3/16	, 1/4, 5/16

6, 3/8 Holder

- It is convenient in detaching bolts with hexagonal hole in deep places.
- It can be turned diagonally.* This product is not sold in the single wrench unit.

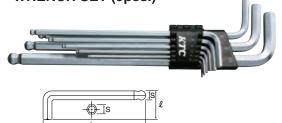
S (in)	L	l
1/16	92	16
5/64	102	18
3/32	115	21
1/8	130	24
5/32	144	29
3/16	165	33
1/4	187	39
5/16	208	44
3/8	234	50



Holder

- Since the ball point has a low torque limit, please be careful not to apply too much force
 - · Swing angle of the ball point will vary depending on the variation in the size and
 - Please apply force in the rotation direction of the bolt. There is a risk of damage from the bent part if excessively pulled up or pushed down.

L-SHAPED LONG BALL POINT HEX-KEY **WRENCH SET (9pcs.)**





L-SHAPED LONG BALL POINT HEX-KEY WREN	CH SET (9pcs.)	mm
No. HL259SP ▼g 420	₩ 10	
L-Shaped Long Ball point Hex-key Wrench Set (9pcs.)	152253456810	

s	L	
1.5	92	
2	105	
2.5	115	
0	100	

S	L	l
1.5	92	16
2	105	17
2.5	115	20
3	128	22
4	142	26
5	165	31
6	188	37
8	205	45
10	230	50

- Convenient for attaching and removing hexagon hole bolts in hard to reach
- · Diagonal rotating-operation is possible
- These products are not sold individually

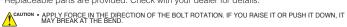


CAUTION- DO NOT APPLY EXCESSIVE POWER ON THE BALL POINTS.

- APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

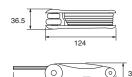
FOLDING HEX-KEY WRENCH			m	m
No. HLH8	▼ g 220	₩ 5		
Size	1.5, 2, 2.5,	3, 4, 5, 6, 8		

- For 1.5~8mm sizes.
 Plastic body which is light and helps your grasp.
 Replaceable parts are provided. Check with your dealer for details.





•FOLDING HEX-KEY WRENCH

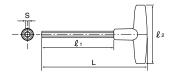


Maximum 195 (using 5mm)

T-SHAPED HEX. WRENCH mm									
No.	S	L	l 1	l 2	▼g	#			
HT10- 2.5	2.5	150	105	86	22	10			
- 3	3	150	105	86	25	10			
- 4	4	190	135	105	40	10			
- 5	5	190	135	105	50	10			
- 6	6	230	165	130	80	10			
- 8	8	230	165	130	115	10			
-10	10	230	165	130	170	10			

- For use on hexagon bolts in confined spaces.Suitable for quick turning.

APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.



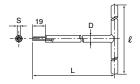
T-SHAPED HEX. WRENCH



T-SHAPED HEX. WRENCH								
No.	S	l	L	D	▼ g	#		
HTH-4	4	130	225	9	160	10		
-5	5	160	230	11	265	10		
-6	6	180	230	11	280	10		
-8	8	180	235	13	395	10		

For use on hexagon bolts in confined spaces.
Suitable for quick turning.

APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.



T-SHAPED HEX. WRENCH



•PLASTIC GRIP HEX. DRIVER SET (5pcs.) (8pcs.) (10pcs.) D PAT.



TD1H8

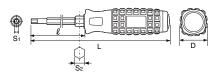
PLASTIC GRIP HEX. DRI	VER SET	mm . in		
No. TD1H5	▼g 650	₩1		
Plastic Grip Hex. Driver So	et (5pcs.)	D1H-025, 03, 04, 05, 06		
No. TD1H8	▼ kg 1.1	₩1		
Plastic Grip Hex. Driver Se	et (8pcs.)	D1H-015,02,025,03,04,05,06,08		
No. TD1H10B	▼ kg 1.3	₩1		
Plastic Grip Hex. Driver Set (10pcs.) in		D1H- ¹ / ₁₆ , ⁵ / ₆₄ , ³ / ₃₂ , ¹ / ₈ , ⁹ / ₆₄ , ⁵ / ₃₂ , ³ / ₁₆ , ⁷ / ₃₂ , ¹ / ₄ , ⁵ / ₁₆		

PLASTIC GRIP HEX. DRIVER									
No.	S ₁	S ₂	D	L	l	▼ g	#		
D1H-015	1.5	10	29.6	172	75	100	5		
-02	2	10	29.6	172	75	100	5		
-025	2.5	10	32	209	100	130	5		
-03	3	10	32	209	100	130	5		
-04	4	10	32	209	100	130	5		
-05	5	10	32	209	100	130	5		
-06	6	10	32	209	100	130	5		
-08	8	12	33.8	282	150	190	5		

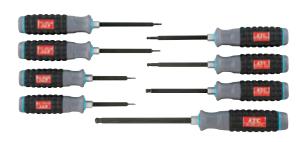
PLASTIC GRI	P HEX. DR	IVER						in
No.	S ₁	S ₂	D	L	l	▼ g	#	
D1H - 1/16	1.5	10	29.6	172	75	100	5	
-5/64	1.9	10	29.6	172	75	100	5	
-3/32	2.3	10	32	209	100	130	5	
-1/8	3.1	10	32	209	100	130	5	
- ⁹ / ₆₄	3.5	10	32	209	100	130	5	
$-\frac{5}{32}$	3.9	10	32	209	100	130	5	
$-\frac{3}{16}$	4.7	10	32	209	100	130	5	
-7/32	5.5	10	32	209	100	130	5	
-1/4	6.3	10	32	209	100	130	5	
- ⁵ ⁄ ₁₆	7.9	12	33.8	282	150	190	5	



The size is displayed on the grip end.



•PLASTIC GRIP BALL POINT HEX. DRIVER SET (5pcs.) (8pcs.) (10pcs.) D. PAT.



TD1HBP8

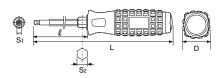
PLASTIC GRIP BALL POINT HEX.	DRIVER SET	mm · in
No. TD1HBP5	▼g 650	₩1
Plastic Grip Ball Point Hex. Driver S	Set (5pcs.)	D1H-025BP,03BP,04BP,05BP,06BP
No. TD1HBP8	V kg 1.1	⊕1
Plastic Grip Ball Point Hex. Driver S	Set (8pcs.)	D1H-015BP, 02BP, 025BP, 03BP, 04BP, 05BP, 06BP, 08BP
No. TD1HBP10B	V kg 1.3	⊕1
Plastic Grip Ball Point Hex. Driver Se	et (10pcs.) in	D1H- ¹ / ₁₆ BP, ⁵ / ₆₄ BP, ³ / ₃₂ BP, ¹ / ₈ BP, ⁹ / ₆₄ BP, ⁵ / ₃₂ BP, ³ / ₁₆ BP, ⁷ / ₃₂ BP, ¹ / ₄ BP, ⁵ / ₁₆ BP

PLASTIC GRIP I	BALL POI	NT HEX. I	DRIVER					mm
No.	S ₁	S ₂	D	L	l	▼ g	#	
D1H-015BP	1.5	10	29.6	172	75	100	5	
-02BP	2	10	29.6	172	75	100	5	
-025BP	2.5	10	32	209	100	130	5	
-03BP	3	10	32	209	100	130	5	
-04BP	4	10	32	209	100	130	5	
-05BP	5	10	32	209	100	130	5	
-06BP	6	10	32	209	100	130	5	
-08BP	8	12	33.8	282	150	190	5	

PLASTIC GRIP E	BALL POI	NT HEX. I	DRIVER					in
No.	S ₁	S ₂	D	L	l	▼ g	#	
D1H- ¹ / ₁₆ BP	1.5	10	29.6	172	75	100	5	
- ⁵ / _{6 4} BP	1.9	10	29.6	172	75	100	5	
$-\frac{3}{32}BP$	2.3	10	32	209	100	130	5	
-1/8 BP	3.1	10	32	209	100	130	5	
-9/ ₆₄ BP	3.5	10	32	209	100	130	5	
$-\frac{5}{32}BP$	3.9	10	32	209	100	130	5	
$-\frac{3}{16}$ BP	4.7	10	32	209	100	130	5	
$-\frac{7}{32}BP$	5.5	10	32	209	100	130	5	
-1/ ₄ BP	6.3	10	32	209	100	130	5	
- ⁵ / ₁₆ BP	7.9	12	33.8	282	150	190	5	



The size is displayed on the grip end.



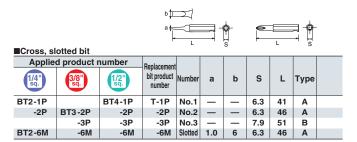


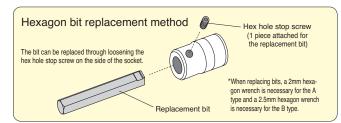




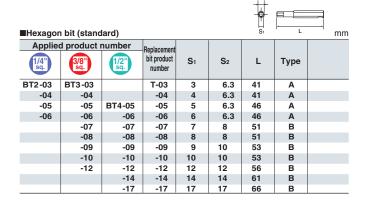
List of applications for 21st Century Version Tool-bit socket replacement bit

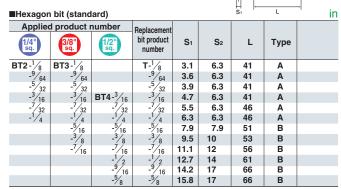
*Caution: there is no compatibility with tools other than the 21st Century Version Tools.

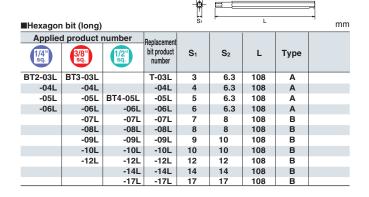




■Hexagon bit	(stubby)			S2 		mm	■Hexagon bit				S ₁		mm	■Hexagon bit				L S ₁		in
Applied product number	Replacement bit product number	S ₁	S ₂	L	Туре		Applied product number	Replacement bit product number	S ₁	S ₂	L	Туре		Applied product number	Replacement bit product number	S ₁	S ₂	L	Туре	
BT3-03SS	T-03SS	3	6.3	14	Α		BT3-03S	T-03S	3	6.3	28	Α		BT3-1/8 S	T-1/8 S	3.1	6.3	28	Α	
-04SS	-04SS	4	6.3	14	Α		-04S	-04S	4	6.3	28	Α		-9/ ₆₄ S	-9/ ₆₄ S	3.6	6.3	28	Α	
-05SS	-05SS	5	6.3	15	Α		-05S	-05S	5	6.3	30	Α		- ⁵ / ₃₂ S	-5/ ₃₂ S	3.9	6.3	28	Α	
-06SS	-06SS	6	6.3	15.5	Α		-06S	-06S	6	6.3	30	Α		-3/ ₁₆ S	-3/ ₁₆ S	4.7	6.3	28	Α	
-07SS	-07SS	7	8	16	В		-07S	-07S	7	8	30	В		-½32 S	- ¹ / ₃₂ S	5.5	6.3	30	Α	
-08SS	-08SS	8	8	17	В		-08S	-08S	8	8	30	В		-1/ ₄ S	-1/4 S	6.3	6.3	30	Α	
-09SS	-09SS	9	10	19.5	В		-09S	-09S	9	10	32	В		-5∕ ₁₆ S	-5∕ ₁₆ S	7.9	8	30	В	
-10SS	-10SS	10	10	19.5	В		-10S	-10S	10	10	32	В		-3/ ₈ S	-3/8 S	9.5	10	32	В	
-12SS	-12SS	12	12	22	В		-12S	-12S	12	12	34	В			- ¹ / ₁₆ S	11.1	12	34	В	







■Hexagon	bit (long)			Sı		L		in
1/4" sq.	product r	1/2" sq.	Replacement bit product number	S ₁	S ₂	L	Туре	
BT2-1/8 L	BT3- ¹ / ₈ L		T-1/8 L	3.1	6.3	108	Α	
-9/ ₆₄ L	-9/ ₆₄ L		-9/ ₆₄ L	3.6	6.3	108	Α	
$-\frac{5}{32}$ L	$-\frac{5}{32}$ L		$-\frac{5}{32}$ L	3.9	6.3	108	Α	
$-\frac{3}{16}$ L	- <u>3</u> / ₁₆ L	BT4-3/16L	-3/ ₁₆ L	4.7	6.3	108	Α	
-1/32L	$-\frac{7}{32}$ L	$-\frac{7}{32}$ L	- ⁷ / ₃₂ L	5.5	6.3	108	Α	
-1/4 L	-1/4 L	-1/4 L	-1/4 L	6.3	6.3	108	Α	
	-5/ ₁₆ L	-5/ ₁₆ L	-5/ ₁₆ L	7.9	7.9	108	В	
	- ³ / ₈ L	-3/8 L	- <u>3</u> /8 L	9.5	10	108	В	
	- ⁷ / ₁₆ L	- ⁷ / ₁₆ L	- ⁷ / ₁₆ L	11.1	12	108	В	
		-¹/₂ L	-½ L	12.7	14	108	В	
		-9/ ₁₆ L	-9/ ₁₆ L	14.2	17	108	В	
		-5⁄8 L	-5/8 L	15.8	17	108	В	

	ILong bal	II point he	xagon bit s	socket	[o₁		L		mm
	Applied	d product	number	Replacement					
	1/4" sq.	3/8" sq.	1/2" sq.	bit product number	S ₁	S ₂	L	Туре	
Ī	BT2-03BPL	BT3 -03BPL		T-03BPL	3	6.3	108	Α	
	-04BPL	-04BPL		-04BPL	4	6.3	108	Α	
	-05BPL	-05BPL	BT4-05BPL	-05BPL	5	6.3	108	Α	
	-06BPL	-06BPL	-06BPL	-06BPL	6	6.3	108	Α	
		-07BPL	-07BPL	-07BPL	7	8	108	В	
		-08BPL	-08BPL	-08BPL	8	8	108	В	

■Long ba	Il noint he	ragon hit s	,	31		L	٦	in
	product i		Replacement					
1/4" sq.	3/8" sq.	1/2" sq.	bit product number	S ₁	S ₂	L	Туре	
BT2-1/8 BPL	BT3-1/8 BPL		T-1/8 BPL	3.1	6.3	108	Α	
-9/ ₆₄ BPL	-9/ ₆₄ BPL		-9/ ₆₄ BPL	3.6	6.3	108	Α	
-5/32BPL	-5/ ₃₂ BPL		-5/ ₃₂ BPL	3.9	6.3	108	Α	
-3/ ₁₆ BPL	-3/ ₁₆ BPL	BT4-3/16 BPL	-3/ ₁₆ BPL	4.7	6.3	108	Α	
-7/ ₃₂ BPL	-7/32 BPL	-7/32 BPL	-7/32BPL	5.5	6.3	108	Α	
-1/ ₄ BPL	-1/4 BPL	-1/ ₄ BPL		6.3	6.3	108	Α	
	-5/ ₁₆ BPL	-5/ ₁₆ BPL	-5/ ₁₆ BPL	7.9	7.9	108	В	

2. CONVENTIONAL TOOLS

TORX® WRENCHES

TORX[®] is a registered trademark for the Textron Fastening Systems.





TORX® wrench sets

- Carefully read the individual safety warnings for the items included within the
- · When carrying the set, make sure the metal

TORX® wrenches

- Use wrenches that conform to the size of the tip standards
- Do not use by adding on pipes, etc.
- Make sure that the bolt is fully inserted
- Do not expose this tool to impact by hitting it with a hammer, etc.
- Fully insert the angle drive.
- · Do not use with power tools, such as impact wrenches, etc.
- Do not twist using the tip
- Take care to avoid over-applying force for the smaller sizes.
- Do not drop or expose to strong impact.

The TORX® Standards

The TORX® standards were developed by the American firm Camcar. The curved bolt head and tool contact surface is the main characteristic, and is mainly divided into the T type and E type, standardized for their exceptional performance. They are employed globally for automobiles and industrial machines, and in Japan, the tools are widely distributed in each field as the necessary tool for the discerning professional.

As the name TORX® is a registered trademark of Textron Fastening Systems, the tools are generally called "hex-lobe" (meaning 6 ear lobes) wrenches.

KTC receives licensing and technological training from Textron Fastening Systems, enabling the approved, formal usage of the product name TORX®



E type TORX® screw



E type TORX® wrench

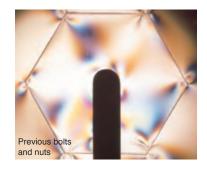
Functions

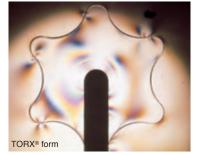
High durability and torque transmission efficiency

Torque transmission is improved through greater facial contact of the tool with bolt heads compared to previous bolt head styles. Durability is increased through a lower concentration of stress, which reduces wear and breakage.

High operational performance

When tightening Phillips screws, the screw must not only be turned but also pushed in (a force that sustains the screw in the set position). However, the TORX® design allows for stabilizing of the bolt head and the contact surface of the tool, enabling the screw to be tightened through turning only and without applying force. This reduces the physical stress of the user, increases operational efficiency, and increases tool and screw durability.

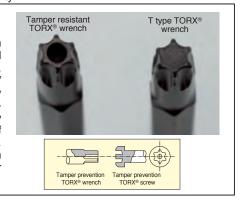


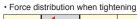


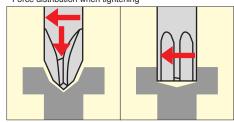
TORX Wrenches

The tamper resistant TORX®

The screw with the round protrusion of the T type TORX® screw is called the "tamper resistant TORX® screw". The "tamper resistant TORX® screw" is used in places where disassembly should be avoided by nonprofessionals. This screw is widely employed for internal components of mobile phones and computers. Recently, this screw has been used in automobile applications, such as air bags and seat belts.







Phillips screw

TORX® screw

■List of TORX® wrench sizes

*The "A" dimensions and "bolt diameter" within the table below are guidelines that indicate the size of the TORX® screw and the The A differential and dold distribute the size of the TORX® screw and the corresponding TORX® tool. Select the most appropriate (tightly matching and without space for movement) TORX® tool for the TORX® screw before use.

*The "A" dimensions are the tool standards indicated by Textron Fastening Systems which do not completely match the actual dimensions of the product. Also, the corresponding "bolt diameter" with the "designation" are examples illustrating general TORX® screws.

T type TOR	(® wrench		Designation T6	T8	Т9	T10	T15	T20	T25	T27	T30	T40	T45	T50	T55	T60	T70
			"A" dimensions 1.65	2.30	2.48	2.72	3.26	3.84	4.40	4.96	5.49	6.60	7.77	8.79	11.17	13.20	15.49
	Designation symbols	Drive	Bolt diameter M2	M2.5	_	МЗ	M3.5	M4	M5	M5	M6	M8	M8	M10	M12 · 14	M16	M18
T type TORX® bit socket	BT2-T ★	1/4" sq.	•	•	•	•	•	•	•	•	•						
T type TORX® bit socket	BT3-T ★	3/8" sq.	ı					•	•	•	•	•	•	•	•		
T type TORX® bit socket	BT4-T ★	1/2" sq.									•	•	•	•	•	•	•
T type TORX® impact wrench	S6T ★	3/8" sq.						•	•		•	•	•				
T type TORX® L handle wrench	LT *		•	•		•	•	•	•	•	•	•	•	•	•		
T type TORX® driver	D1T-T ★		•	•	•	•	•	•	•	•	•	•	•	•			

The \bigstar sign within the product number is allocated for the size (designation) number.

E type TOR	X® wrench		Designation	E4	E 5	E6	E7	E8	E10	E11	E12	E14	E16	E18	E20	E24	
71			"A" dimensions	3.83	4.72	5.69	6.17	7.47	9.37	10.03	11.12	12.85	14.71	16.64	18.41	22.10	
	Designation symbols	Drive	Bolt diameter	_	_	M5	_	M6	M8	_	M10	M12	_	M14	M16	M18	
E type TORX® wrench	B2-E ★	1/4" sq.		•	•	•	•	•	•								
E type TORX® wrench	B3-E ★	3/8" sq.			•	•	•	•	•	•	•	•	•				
E type TORX® wrench	B4-E ★	1/2" sq.						•	•	•	•	•	•	•	•	•	
E type TORX® long-straight offs wrench	et WEE ⋆ X ⋆ L					•	•	•	•		•	•					

The \bigstar sign within the product number is allocated for the size (designation) number.

T type tamper resistant TORX® wrench

T type tamper res	istant TORX® v	vrench	Designation T8	Т9	T10	T15	T20	T25	T27	T30	T40	T45	T50	T55	T60	T70
			"A" dimensions 2.30	2.48	2.72	3.26	3.84	4.40	4.96	5.49	6.60	7.77	8.79	11.17	13.20	15.49
	Designation symbols	Drive	Bolt diameter M2.5	_	МЗ	M3.5	M4	M5	M5	M6	M8	M8	M10	M12	M16	M18
T type tamper resistant TORX® bit socket	BT2-T ★ H	1/4" sq.	•	•	•	•	•	•	•	•						
T type tamper resistant TORX® bit socket	BT3-T ★ H	3/8" sq.					•	•	•	•	•	•	•	•		
T type tamper resistant TORX® bit socket	BT4-T ★ H	1/2" sq.								•	•	•	•	•	•	•
T type tamper resistant TORX® L handle wrench	LT ★ H		•		•	•	•	•	•	•	•	•	•	•		
T type tamper resistant TORX® driver	D1T-T ★ H		•	•	•	•	•	•	•	•	•	•	•			

The \bigstar sign within the product number is allocated for the size (designation) number.



1/4"sq. T-TYPETORX® BIT SOCKET

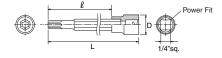


T-TYPE TORX®	BIT SOCKE	īT				
No.	Fastener	D	L	l	▼ g	9
BT2-T 6	T 6	16	54.5	32	35	10
-T 8	T 8	16	54.5	32	35	10
-T 9	T 9	16	54.5	32	35	10
-T10	T10	16	54.5	32	36	10
-T15	T15	16	59.5	37	37	10
-T20	T20	16	59.5	37	37	10
-T25	T25	16	59.5	37	37	10
-T27	T27	16	59.5	37	38	10
-T30	T30	16	59.5	37	38	10

Bit replacement is possible. (Refer to P.117)

POWERFIT .

No. TBT209T ▼g 390	₿1
T-TYPE TORX® BIT SOCKET (1/4"sq.)	BT2-T6,T8,T9,T10,T15,T20,T25,T27,T30
Socket Holder	EHB210



● 1/4"sq. T-TYPE LONG TORX® BIT SOCKET



T-TYP	T-TYPE LONG TORX® BIT SOCKET						
No.		Fastener	D	L	l	▼ g	#
BT2	-T 6L	T 6	16	121.5	99	53	10
	-T 8L	T 8	16	121.5	99	53	10
	-T 9L	T 9	16	121.5	99	53	10
	-T10L	T10	16	121.5	99	54	10
	-T15L	T15	16	121.5	99	54	10
	-T20L	T20	16	121.5	99	54	10
	-T25L	T25	16	121.5	99	54	10
	-T27L	T27	16	121.5	99	55	10
	-T30L	T30	16	121.5	99	55	10

Bit replacement is possible. (Refer to P.117)
 The long type that is useful for replacing air bags.

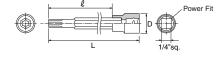
POWERFIT®

POWERFIT .

No. TBT2L09T ▼g 550 €

T-TYPE LONG TORX® BIT SOCKET (1/4"sq.) BT2-T6L,T8L,T9L,T10L,T15L,T20L,T25L, T27L,T30L

EHB210 Socket Holder



●3/8"sq. T-TYPE SHORT TORX® BIT SOCKET

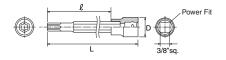


T-TYPE SHORT TORX® BIT SOCKET						
No.	Fastener	D	L	l	▼ g	8
BT3-T20S	T20	17	50	21	44	10
-T25S	T25	17	50	21	44	10
-T27S	T27	17	50	21	45	10
-T30S	T30	17	50	21	45	10
-T40S	T40	18.5	52	23	63	10
-T45S	T45	18.5	52	23	65	10
-T50S	T50	18.5	52	23	65	10
-T55S	T55	22	58	26	119	10

• Bit replacement is possible. (Refer to P.117)

Socket Holder

No. TBT3S08T	▼g 610 🖽 1
T-TYPE SHORT TORX® BIT	BT3-T20S,T25S,T27S,T30S,T40S,
SOCKET · SET (3/8"sq.)	T45S,T50S,T55S
Socket Holder	EHB310



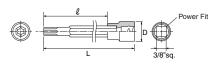


T-TYPE TORX® BIT SOCKET - SET (8pcs.)						
No.	Fastener	D	L	l	▼g	8
BT3-T20	T20	17	66	37	44	10
-T25	T25	17	66	37	44	10
-T27	T27	17	66	37	45	10
-T30	T30	17	66	37	45	10
-T40	T40	18.5	71	42	63	10
-T45	T45	18.5	71	42	65	10
-T50	T50	18.5	71	42	65	10
-T55	T55	22	76	44	119	10
Bit replacement is possible. (Refer to P.117)						POWERFIT.

No. TBT308T ▼g 610	⊌1
T-TYPE TORX® BIT SOCKET · SET (3/8"sq.)	BT3-T20,T25,T27,T30,T40,T45,T50,T55
Socket Holder	EHR310

●3/8"sq. T-TYPETORX® BIT SOCKET · SET (8pcs.)





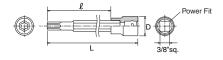
T-TYPE LONG TORX® BIT SOCKET - SET(8pcs.)							
No.	Fastener	D	L	l	▼g	#	
BT3-T20L	T20	17	128	99	61	10	
-T25L	T25	17	128	99	61	10	
-T27L	T27	17	128	99	62	10	
-T30L	T30	17	128	99	62	10	
-T40L	T40	18.5	128	99	87	10	
-T45L	T45	18.5	128	99	89	10	
-T50L	T50	18.5	128	99	89	10	
-T55L	T55	22	128	96	170	10	
Bit replacement is possible. (Refer to P.117)						POWERFIT .	

Bit replacement is possible. (Refer to P.117)
 The long type that is useful for replacing air bags.

No. TBT3L08T ▼ g 800	₩1
T-TYPE LONG TORX® BIT SOCKET · SET (3/8"sq.)	BT3-T20L,T25L,T27L,T30L,T40L, T45L,T50L,T55L
Socket Holder	EHB310

●3/8"sq. T-TYPE LONG TORX® BIT SOCKET · SET (8pcs.)





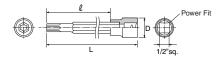
T-TYPE TORX® BIT SOCKET · SET (7pcs.)							
No.	Fastener	D	L	l	▼g	#	
BT4-T30	T30	22	70	37	73	10	
-T40	T40	22	75	42	82	10	
-T45	T45	22	75	42	84	10	
-T50	T50	22	75	42	84	10	
-T55	T55	22	80	44	119	10	
-T60	T60	24	85	47	161	10	
-T70	T70	25	90	49	211	10	
Bit replacement is possible. (Refer to P.117)						POWERFIT .	

• Bit replacement is possible. (Refer to P.117)

No. TBT407T ▼ g 965	₩1
T-TYPE TORX® BIT SOCKET (1/2"sq.)	BT4-T30, T40, T45, T50, T55, T60, T70
Socket Holder	EHB410

●1/2"sq. T-TYPETORX® BIT SOCKET · SET (7pcs.)







●1/2"sq. LONG T-TYPETORX® BIT SOCKET SET (7pcs.)

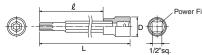


LONG T-TYPE TORX® BIT SOCKET · SET (7pcs.)						
No.	Fastener	D	L	l	▼ g	#
BT4-T30L	T30	22	132	99	90	10
-T40L	T40	22	132	99	106	10
-T45L	T45	22	132	99	108	10
-T50L	T50	22	132	99	108	10
-T55L	T55	22	132	96	170	10
-T60L	T60	24	132	94	224	10
-T70L	T70	25	132	91	293	10

- Bit replacement is possible. (Refer to P.117)
 The long type that is useful for replacing air bags.

No. TBT4L07T	▼ kg 1.3	₩1
Long T-Type TORX® Bit Soc	cket (1/2" sq)	BT4-T30L, T40L, T45L, T50L, T55L, T60L, T70L
Socket Holder		EHB410

POWERFIT .



● T-TYPE TORX® L-SHAPED WRENCH SET (12pcs.)



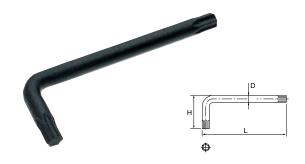
T-TYPE TORX® L-SHAPED WRENCH SET (12pcs.)

No. LTV12	▼ α 250	e0 4
No. LTX12	▼g 350	₩ 1

T-Type TORX® L Handle Wrench LT6, T8, T10, T15, T20, T25, T27, T30, T40, T45, T50, T55

• The pack can be used as a tray.

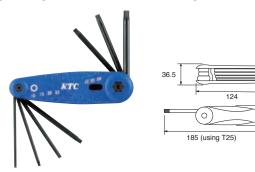
●T-TYPETORX® L-SHAPED WRENCH



T-TYPE TORX® L-SHAPED WRENCH								
No.	Fastener	D	L	Н	▼g	#		
LT 6	T 6	3	50	17	3	10		
LT 8	T 8	3	53	19	3.5	10		
LT10	T10	3	56	20	4	10		
LT15	T15	3.5	60	22	6	10		
LT20	T20	4	64	24	8	10		
LT25	T25	4.5	68	25	11	10		
LT27	T27	5	72	27	14	10		
LT30	T30	6	80	30	21	10		
LT40	T40	7	87	33	30	10		
LT45	T45	8	95	37	44	10		
LT50	T50	9	109	41	65	10		
LT55	T55	11.5	125	47	120	10		

• APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

● FOLDING T-TYPE TORX® WRENCH



FOLDING T-TYPE TORX® WRENCH						
No. HLT7	▼g 210 🛱 5					
Size	T10, T15, T20, T25, T27, T30, T40					

- It can be used for the 7 sizes of T10~T40.
- It has a light and easy-to-grip plastic body.

 * Spare parts are configured. Please contact your dealer for details.

CAUTION • Please apply force in the rotation direction of the bolt. There is a risk of damage from the bent part if excessively pulled up or pushed down.



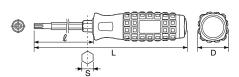
T-TYPE TOR	T-TYPE TORX® DRIVER - SET (5pcs.) - (12pcs.)									
No.	Fastener	s	D	L	l	▼g	#			
D1T-T 6	T 6	10	29.6	172	75	100	5			
-T 8	T 8	10	29.6	172	75	100	5			
-T 9	T 9	10	32	209	100	130	5			
-T10	T10	10	32	209	100	130	5			
-T15	T15	10	32	209	100	130	5			
-T20	T20	10	32	209	100	130	5			
-T25	T25	10	32	209	100	130	5			
-T27	T27	10	32	209	100	130	5			
-T30	T30	10	32	209	100	130	5			
-T40	T40	12	33.8	282	150	190	5			
-T45	T45	12	33.8	282	150	190	5			
-T50	T50	12	33.8	282	150	190	5			

No. TD1T5	▼g 650	₩1
T-Type TORX® Driver		D1T-T10, T15, T20, T25, T30
No. TD1T12	▼kg 1.7	₩1
T-Type TORX® Driver		D1T-T6, T8, T9, T10, T15, T20, T25,
		T27, T30, T40, T45, T50

●T-TYPE TORX® DRIVER · SET (5pcs.) (12pcs.)



TD1T5



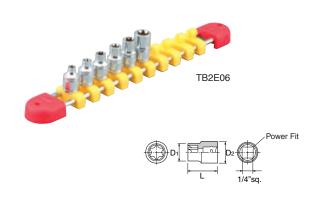


The display on the grip end enables the distinction between the TORX® driver and the tamper resistant TORX® driver.

E-TYPE TORX® WRENCH · SET (6pcs.)								
No.	Fastener	D ₁	D ₂	L	▼ g	#		
B2-E 4	E 4	5.8	12	18	8	10		
-E 5	E 5	7	12	18.5	9	10		
-E 6	E 6	8	12	19	9	10		
-E 7	E 7	9	12	20.5	10	10		
-E 8	E 8	10	12	21	11	10		
-E10	E10	13	13.5	22	17	10		

			POWERFIL
No. TB2E06	▼ g 125	₩1	
E-Type TORX® Wrench (1/4"sq.)	B2-E4, E5,	E6, E7, E8, E10	
Socket Holder	EHB210		

● 1/4"sq. E-TYPE TORX® WRENCH · SET (6pcs.)

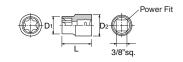


E-TYPE TORX® WRENCH · SET (9pcs.)								
No.	Fastener	D ₁	D ₂	L	▼ g	#		
B3-E 5	E 5	7	17	22.5	18	10		
-E 6	E 6	8	17	23	18	10		
-E 7	E 7	9	17	24	20	10		
-E 8	E 8	10	17	25	20	10		
-E10	E10	13	17	26	24	10		
-E11	E11	14.5	17	26.5	27	10		
-E12	E12	15.5	17	27	28	10		
-E14	E14	18	17	28	34	10		
-E16	E16	20	19	30	47	10		
							POWERFIT®	

No. TB3E09	▼ g 355	Ø	3 1			
E-Type TORX® Wrench (3/8"sq.)	B3-E5, E6,	E7, E8	E10,	E11, E12,	E14, E16	
Socket Holder	EHB310					

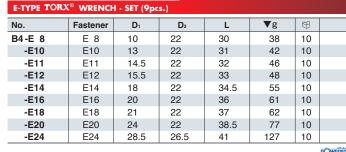
●3/8"sq. E-TYPE TORX® WRENCH · SET (9pcs.)



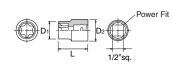




●1/2"sq. E-TYPE TORX® WRENCH · SET (9pcs.)



No. TB4E09 ▼g 705	₩ 1
E-Type TORX® Wrench (1/2"sq.)	B4-E8, E10, E11, E12, E14, E16, E18, E20, E24
Socket Holder	EHB410



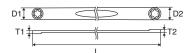
● E-TYPE TORX® LONG BOXEND WRENCH SET (3pcs.)

E-TYPE TORX® LONG BOXEND WRENCH SET (3pcs.)									
No.	Fastener	D ₁	D ₂	T ₁	T ₂	L	▼g	8	
WEE 6× 7L	E 6×E 7	9.0	9.5	5.5	6.0	240	50	10	
WEE 8×10L	E 8×E10	10.5	12.0	6.5	7.0	300	100	10	
WEE12×14L	E12×E14	15.0	16.5	8.0	8.5	330	200	10	



No. TWEE3L	▼g 350	⊌1	
F Tyme TODY® Long Boy	and Mranah	WEE6271 92401 492441	

- The substantial length and single-sided hilt-offset enable the tightening and loosening of E type TORX® pieces in hard to reach areas.
 This can be used for the tensioner pulleys of imported vehicles (American/European cars) and the stud bolt E TORX® of domestic vehicles.



TORX® WRENCHES FOR TAMPER RESISTANT FASTENERS

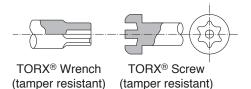
WARNING

These are restricted tools and the sale of these wrenches is limited to professional mechanics and other authorized users.

Handling Instructions

- · It is prohibited to use these tools for unauthorized use and they may not be modified in any respect.
- · "Tamper Resistant Fasteners" are used so the equipment may not be easily dissembled. These tools are designed to loosen or fasten tamper resistant fasteners and must be used in a responsible, professional manner.
- · Please refer to the equipment manufacturers manual, or seek approval from the equipment manufacturers, prior to commencing work on any piece of equipment protected by tamper resistant
- · Please ensure the security of this tool and do not allow unauthorized access to it.

POWERFIT:





T-TYPE TORX® BIT SOCKET FOR TAMPER RESISTANT FASTENERS (8pcs.)									
No.	Fastener	D	L	l	▼g	#			
BT2 -T 8H	T 8	16	54.5	32	35	10			
-T 9H	T 9	16	54.5	32	35	10			
-T10H	T10	16	54.5	32	36	10			
-T15H	T15	16	59.5	37	37	10			
-T20H	T20	16	59.5	37	37	10			
-T25H	T25	16	59.5	37	37	10			
-T27H	T27	16	59.5	37	38	10			
-T30H	T30	16	59.5	37	38	10			

Bit replacement is possible. (Refer to P.117)

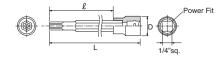
No. TBT208TH	▼g 355	₩1
T-Type TORX® Bit Socket Socket f Resistant Fastener (1/4" sq.)	or Tamper	BT2-T8H, T9H, T10H, T15H, T20H, T25H, T27H, T30H
Socket Holder		EHB210

●1/4"sq. T-TYPE TORX® BIT SOCKET FOR **TAMPER RESISTANT FASTENERS (8pcs.)**





COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.





●1/4"sq. LONG T-TYPE TORX® BIT SOCKET FOR TAMPER RESISTANT FASTENERS



LONG T-TYPE TORX® BIT SOKET FOR TAMPER RESISTANT FASTENERS (9pcs.)							
No.	Fastener	D	L	l	▼ g	#	
BT2-T 8HL	T 8	16	121.5	99	53	10	
-T 9HL	T 9	16	121.5	99	53	10	
-T10HL	T10	16	121.5	99	54	10	
-T15HL	T15	16	121.5	99	54	10	
-T20HL	T20	16	121.5	99	54	10	
-T25HL	T25	16	121.5	99	54	10	
-T27HL	T27	16	121.5	99	55	10	
-T30HL	T30	16	121.5	99	55	10	

Long T-Type TORX® Bit Socket Socket for Tamper Resistant Fastener (1/4" sq.)

Bit replacement is possible. (Refer to P.117)
The long type that is useful for replacing air bags.

₩ 1
BT2-T8HL, T9HL, T10HL, T15HL,

T20HL, T25HL, T27HL, T30HL

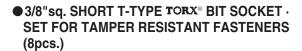
POWERFIT .

No. TBT2L08TH

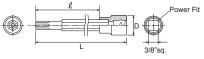
Socket Holder

CAUTION - COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.

▼g 975







SHORT T-TYPE TORX® BIT SOKET - SET FOR TAMPER RESISTANT FASTENERS (8pcs.)							
No.	Fastener	D	L	l	▼g	#	
BT3-T20HS	T20	17	50	21	44	10	
-T25HS	T25	17	50	21	44	10	
-T27HS	T27	17	50	21	45	10	
-T30HS	T30	17	50	21	45	10	
-T40HS	T40	18.5	52	23	63	10	
-T45HS	T45	18.5	52	23	65	10	
-T50HS	T50	18.5	52	23	65	10	
-T55HS	T55	22	58	26	119	10	

• Bit replacement is possible. (Refer to P.117)

POWERFIT .

No. TBT3S08TH	▼g 610	⊕ 1
Short T-Type TORX® Bit So	ocket Socket for	BT3-T20HS, T25HS, T27HS, T30HS,
Tamper Resistant Fastener	(3/8" sq.)	T40HS, T45HS, T50HS, T55HS
Socket Holder		EHB310

COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.

●3/8"sq. T-TYPE TORX® BIT SOCKET · SET FOR TAMPER RESISTANT FASTENERS (8pcs.)



e e	Power Fit 3/8"sq.
-----	-------------------

T-TYPE TORX® BIT SOKET - SET FOR TAMPER RESISTANT FASTENERS (8pcs.)								
No.	Fastener	D	L	l	▼g	#		
BT3-T20H	T20	17	66	37	44	10		
-T25H	T25	17	66	37	44	10		
-T27H	T27	17	66	37	45	10		
-T30H	T30	17	66	37	45	10		
-T40H	T40	18.5	71	42	63	10		
-T45H	T45	18.5	71	42	65	10		
-T50H	T50	18.5	71	42	65	10		
-T55H	T55	22	76	44	119	10		

• Bit replacement is possible. (Refer to P.117)

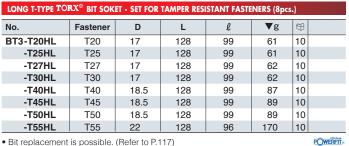
POWERFIT .

No. TBT308TH	▼ g 610	₩1		
T-Type TORX® Bit Socket Socket for		BT3-T20H, T25H, T27H, T30H,		
Tamper Resistant Fastener	(3/8" sq.)	T40H, T45H, T50H, T55H		
Socket Holder		EHB310		



COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.





Long T-Type TORX® Bit Socket Socket for

Bit replacement is possible. (Refer to P.117)
The long type that is useful for replacing air bags.

T27HL. T30HL.	

Tamper Resistant Fastener (3/8" sq) T40HL, T45HL, T50HL, T55HL Socket Holder EHB310

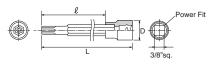
▼g 800

No. TBT3L08TH

CAUTION - COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.

91

BT3-T20HL, T25HL,



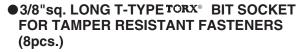
T-TYPE TORX® BIT SOCKET - SET FOR TAMPER RESISTANT FASTENERS (7pcs.)								
No.	Fastener	D	L	l	▼g	#		
BT4-T30H	T30	22	70	37	73	10		
-T40H	T40	22	75	42	82	10		
-T45H	T45	22	75	42	84	10		
-T50H	T50	22	75	42	84	10		
-T55H	T55	22	80	44	119	10		
-T60H	T60	24	85	47	161	10		
-T70H	T70	25	90	49	211	10		
Bit replacement	Bit replacement is possible. (Refer to P.117)							

• Bit replacement is possible. (Refer to P.117)

No. TBT407TH **▼**g 965 ₩ 1 T-Type TORX® Bit Socket · Set for BT4-T30H, T40H, T45H, T50H, T55H, Tamper Resistant Fastener (1/2" sq.) T60H, T70H Socket Holder EHB410



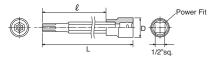
COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.





●1/2"sq. T-TYPETORX® BIT SOCKET · SET FOR TAMPER RESISTANT FASTENERS (7pcs.)





POWERFIT .

LONG T-TYPE TORX® BIT SOCKET • SET FOR TAMPER RESISTANT FASTENERS (7pcs.)							
No.	Fastener	D	L	l	▼g	8	
BT4-T30HL	T30	22	132	99	90	10	
-T40HL	T40	22	132	99	106	10	
-T45HL	T45	22	132	99	108	10	
-T50HL	T50	22	132	99	108	10	
-T55HL	T55	22	132	96	170	10	
-T60HL	T60	24	132	94	224	10	
-T70HL	T70	25	132	91	293	10	

- Bit replacement is possible. (Refer to P.117)
 The long type that is useful for replacing air bags

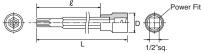
No. TBT4L07TH ▼kg 1.1	₩1			
Long T-Type TORX® Bit Socket · Set for	BT4-T30HL, T40HL, T45HL, T50HL,			
Tamper Resistant Fastener (1/2" sq.)	T55HL, T60HL, T70HL			
Socket Holder	EHB410			



COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.

● 1/2"sq. LONG T-TYPE TORX® BIT SOCKET · SET FOR TAMPER RESISTANT FASTENERS (7pcs.)





●T-TYPE TORX® L-SHAPED WRENCH SET FOR **TAMPER RESISTANT FASTENERS (11pcs.)**



T-TYPE TORX® L-SHAPED WRENCH SET FOR TAMPER RESISTANT FASTENERS (11 pcs.)							
No. LTXH11	▼ g 330	₩1					
T-Type TORX® L Handle Wi	rench	LT8H. T10H. T15H. T20H. T25H. T27H.					

T30H, T40H, T45H, T50H, T55H

T-Type TORX® L Handle Wrench

• The pack can be used as a tray.

*COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.

●T-TYPETORX® L-SHAPED WRENCH FOR **TAMPER RESISTANT FASTENERS**



T-TYPE TORX® L-SHAPED WRENCH FOR TAMPER RESISTANT FASTENERS							
No.	Fastener	D	L	Н	▼g	#	
LT 8H	T 8H	3	53	19	3.5	10	
LT10H	T10H	3	56	20	4	10	
LT15H	T15H	3.5	60	22	6	10	
LT20H	T20H	4	64	24	8	10	
LT25H	T25H	4.5	68	25	11	10	
LT27H	T27H	5	72	27	14	10	
LT30H	T30H	6	80	30	21	10	
LT40H	T40H	7	87	33	30	10	
LT45H	T45H	8	95	37	44	10	
LT50H	T50H	9	109	41	65	10	
LT55H	T55H	11.5	125	47	120	10	

COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE. APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

•T-TYPETORX® DRIVER SET FOR TAMPER RESISTANT FASTENERS (11pcs.)



T-TYPE TORX® DRIVER - SET FOR TAMPER RESISTANT FASTENERS (11pcs.)								
No.	Fastener	S	D	L	l	▼g	#	
D1T-T 8H	T 8	10	29.6	172	75	100	10	
T 9H	T 9	10	32	209	100	130	10	
T10H	T10	10	32	209	100	130	10	
T15H	T15	10	32	209	100	130	10	
T20H	T20	10	32	209	100	130	10	
T25H	T25	10	32	209	100	130	10	
T27H	T27	10	32	209	100	130	10	
T30H	T30	10	32	209	100	130	10	
T40H	T40	12	33.8	282	150	190	10	
T45H	T45	12	33.8	282	150	190	10	
T50H	T50	12	33.8	282	150	190	10	

No. TD1TH11

▼kg 1.6

T-Type TORX® Driver Set for Tamper Resistant Fastener (11pcs.)

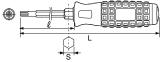
D1T-T8H, T9H, T10H, T15H, T20H, T25H, T27H, T30H, T40H, T45H, T50H



COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.



The display on the grip end enables the distinction between the TORX® driver and the tamper resistant TORX® driver.







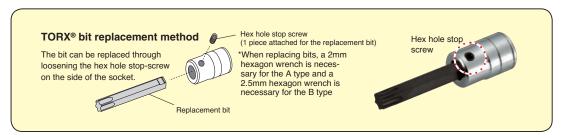




List of applications for the 21st Century Version Tool-bit socket replacement bit.

*Caution: there is no compatibility with tools other than the 21st Century Version Tools.





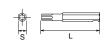


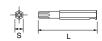


■ T type	TORX®	bit ((short)

Applie	ed product no	umber						
1/4" sq.	3/8" sq.	1/2" sq.	Replacement bit product number	Designation	S	L	type	
	BT3 -T20S		T-T20S	T20	6.3	30	Α	
	-T25S		-T25S	T25	6.3	30	Α	
	-T27S		-T27S	T27	6.3	30	Α	
	-T30S		-T30S	T30	6.3	30	Α	
	-T40S		-T40S	T40	7.9	32	В	
	-T45S		-T45S	T45	7.9	32	В	
	-T50S		-T50S	T50	7.9	32	В	
	-T55S		-T55S	T55	12	38	В	

■ T type tam	per resistant	TORX® bit (s	short)					
Applie	ed product n	umber						
1/4" sq.	3/8" sq.	1/2" sq.	Replacement bit product number	Designation	S	L	type	
	BT3 -T20HS		T-T20HS	T20	6.3	30	Α	
	-T25HS		-T25HS	T25	6.3	30	Α	
	-T27HS		-T27HS	T27	6.3	30	Α	
	-T30HS		-T30HS	T30	6.3	30	Α	
	-T40HS		-T40HS	T40	7.9	32	В	
	-T45HS		-T45HS	T45	7.9	32	В	
	-T50HS		-T50HS	T50	7.9	32	В	





-T55HS T55 12 38

■ T type TORX® bit (standard)

	ix bit (otalic							
Appli	ed product n	umber						
1/4" sq.	3/8" sq.	1/2" sq.	Replacement bit product number	Designation	S	L	type	
BT2-T 6			T-T 6	T 6	6.3	41	Α	
-T 8			-T 8	T 8	6.3	41	Α	
-T 9			-T 9	T 9	6.3	41	Α	
-T10			-T10	T10	6.3	41	Α	
-T15			-T15	T15	6.3	46	Α	
-T20	BT3 -T20		-T20	T20	6.3	46	Α	
-T25	-T25		-T25	T25	6.3	46	Α	
-T27	-T27		-T27	T27	6.3	46	Α	
-T30	-T30	BT4 -T30	-T30	T30	6.3	46	Α	
	-T40	-T40	-T40	T40	7.9	51	В	
	-T45	-T45	-T45	T45	7.9	51	В	
	-T50	-T50	-T50	T50	7.9	51	В	
	-T55	-T55	-T55	T55	12	56	В	
		-T60	-T60	T60	14	61	В	
		-T70	-T70	T70	17	66	В	

т	tvpe	tamper	resistant	TORX®	bit	(standard)

-T55HS

Appli	ed product n	umber						
1/4" sq.	3/8" sq.	1/2" sq.	Replacement bit product number	Designation	S	L	type	
BT2-T 8H			T-T 8H	T 8	6.3	41	Α	
-T 9H			-T 9H	T 9	6.3	41	Α	
-T10H			-T10H	T10	6.3	41	Α	
-T15H			-T15H	T15	6.3	46	Α	
-T20H	BT3 -T20H		-T20H	T20	6.3	46	Α	
-T25H	-T25H		-T25H	T25	6.3	46	Α	
-T27H	-T27H		-T27H	T27	6.3	46	Α	
-T30H	-T30H	BT4 -T30H	-T30H	T30	6.3	46	Α	
	-T40H	-T40H	-T40H	T40	7.9	51	В	
	-T45H	-T45H	-T45H	T45	7.9	51	В	
	-T50H	-T50H	-T50H	T50	7.9	51	В	
	-T55H	-T55H	-T55H	T55	12	56	В	
		-T60H	-T60H	T60	14	61	В	
		-T70H	-T70H	T70	17	66	В	





■ T type TORX® bit (long)

- I type I OI	TA- DIL (IDIIG)	<u>'</u>						
Applie	ed product n	umber						
1/4" sq.	3/8" sq.	1/2" sq.	Replacement bit product number	Designation	S	L	type	
BT2-T 6L			T-T 6L	T 6	6.3	108	Α	
-T 8L			-T 8L	T 8	6.3	108	Α	
-T 9L			-T 9L	T 9	6.3	108	Α	
-T10L			-T10L	T10	6.3	108	Α	
-T15L			-T15L	T15	6.3	108	Α	
-T20L	BT3 -T20L		-T20L	T20	6.3	108	Α	
-T25L	-T25L		-T25L	T25	6.3	108	Α	
-T27L	-T27L		-T27L	T27	6.3	108	Α	
-T30L	-T30L	BT4 -T30L	-T30L	T30	6.3	108	Α	
	-T40L	-T40L	-T40L	T40	7.9	108	В	
	-T45L	-T45L	-T45L	T45	7.9	108	В	
	-T50L	-T50L	-T50L	T50	7.9	108	В	
	-T55L	-T55L	-T55L	T55	12	108	В	
		-T60L	-T60L	T60	14	108	В	
		-T70L	-T70L	T70	17	108	В	

-	_	tuno	tompor	rociotont	TODV®	hit	(long)
		type	tamper	resistant	IOHX®	DIL	(long)

Appli	ed product n	umber						
1/4" sq.	3/8" sq.	1/2" sq.	Replacement bit product number	Designation	S	L	type	
BT2-T 8HL			T -T 8HL	T 8	6.3	108	Α	
-T 9HL			-T 9HL	T 9	6.3	108	Α	
-T10HL			-T10HL	T10	6.3	108	Α	
-T15HL			-T15HL	T15	6.3	108	Α	
-T20HL	BT3-T20HL		-T20HL	T20	6.3	108	Α	
-T25HL	-T25HL		-T25HL	T25	6.3	108	Α	
-T27HL	-T27HL		-T27HL	T27	6.3	108	Α	
-T30HL	-T30HL	BT4 -T30HL	-T30HL	T30	6.3	108	Α	
	-T40HL	-T40HL	-T40HL	T40	7.9	108	В	
	-T45HL	-T45HL	-T45HL	T45	7.9	108	В	
	-T50HL	-T50HL	-T50HL	T50	7.9	108	В	
	-T55HL	-T55HL	-T55HL	T55	12	108	В	
		-T60HL	-T60HL	T60	14	108	В	
		-T70HL	-T70HL	T70	17	108	В	

2. CONVENTIONAL TOOLS

BOX END WRENCHES (





Box end wrench sets

- Carefully read the individual safety warnings for the items included
- · When carrying the set, make sure the metal fasteners are locked

Box end wrenches

- · Use wrenches that conform to the size of the bolts and nuts.
- Do not use by adding on pipe, etc.
- · Insert the bolts and nuts fully.
- Do not use this tool as a hammer.
- Do not expose this tool to impact by hitting it with a hammer, etc.

List of box end wrench sizes

Diameter mm Product number Type Tilt angle	5.5 7	6 × 7	6 × 8	7 × 8	8 × 9	8 × 10	10 × 11	10 × 12	10 × 13	10 × 14	11 × 13	12 × 14	13 × 15	13 × 17	14 × 17	16 × 18	17 × 19	17 × 21	19 × 21	19 × 22	20 × 22	21 × 23	21 × 26	22 × 24	23 × 26	24 × 27	25 × 28	26 × 32	27 × 30	27 × 32	29 × 32	30 × 32	32 × 36	35 × 38	36 × 38	41 × 46
M100 Straight-short				•				•				•			•		•							•												
M150 Straight-long						•		•			•	•			•		•							•												
M160 Super long-straight						•		•				•	•		•		•							•					•							
M151 15° Long								•				•			•																					
M15 30° Short																												•	•	•	•	•		•	•	•
M5S 45° × 6° Short	•			•	•	•		•			•	•	•		•	•	•		•																	
M5 45° × 6° Long	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M25 45° Long	•	•			•	•		•	•	•	•	•		•	•		•	•	•	•		•		•	•	•										

Diameter mm Product number Type Tilt angle	8	10	12	14
$\begin{array}{l} \text{M27(hex diameter)} \\ 45^{\circ} \times 10^{\circ} \\ \text{Long} \end{array}$				
145' \10'	•	•	•	•

Diameter	1/4	5/16	3/8	13/32	7/16	1/2	9/16	19/32	5/8	5/8	11/16	3/4	3/4	25/32	13/16	15/16	1	1-1/8
Product in number Type Tilt angle	× 5/16	× 3/8	× 7/16	× 1/2	× 1/2	9/16	× 5/8	× 11/16	× 11/16	× 3/4	× 3/4	× 25/32	× 13/16	× 7/8	× 7/8	1 1	× 1-1/16	× 1-1/4
M5 45° × 6° Long √45° \ 6°	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MB25 45° Long			•			•			•			•			•	•		

BOX END WRENCH SET (6pcs.) · (8pcs.) · (10pcs.)						
No. TM506	▼ kg 1.3	₩1				
Box End Wrench	M5-0810, 101	2, 1113, 1417, 1921, 2	2224			

• Resin form tray (L444×W184×H48mm) attached.

POWERFIT:

POWERFIT

No. TM508	▼kg 1.6	⊎1							
Box End Wrench	M5-0810, 1012, 1921, 2224	, 1113, 1214, 1417, 1719, I							
Resin form tray (L444×W)	184×H48mm) attached.	Resin form tray (L444×W184×H48mm) attached.							

• Resin form tray (L444×W184×H48mm) attached.

No. TM510	▼ kg 2.3	₩1			
Box End Wrench	M5-05507,	0810, 1012,	1113, 1	214,	1417,
	1719,	1921, 2224,	2427		

• Resin form tray (L444×W184×H48mm) attached.

BOX END WRENCH SET (6pcs	.)			in
No. TM506B	▼kg 1.7	₩1		
Box End Wrench in	M5- $\frac{3}{8} \times \frac{7}{16}$,		 ³ / ₄ × ²⁵ / ₃₂ ,	

• Resin form tray (L444×W184×H48mm) attached.

● BOX END WRENCH SET (6pcs.) (8pcs.) (10pcs.)



TM506

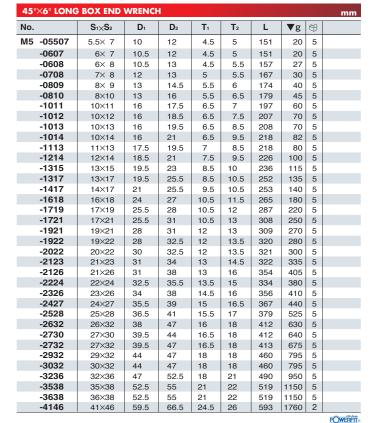


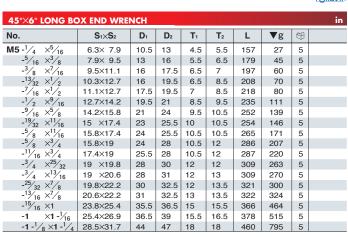
TM508



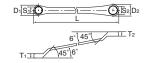
TM510

■45°×6° LONG BOX END WRENCH











●45°×6° SHORT BOX END WRENCH



45°×6° SHORT	BOX END	WRENCH	I						mm
No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼ g	#	
M5S -05507	5.5×7	9.8	11.8	4.3	4.8	96	15	10	
-0708	7×8	11.8	12.8	4.8	5.3	102	20	10	
-0809	8×9	12.8	14.3	5.3	5.8	104	25	10	
-0810	9×10	12.8	15.8	5.3	6.3	109	30	10	
-1012	10×12	15.8	18.3	6.3	7.3	127	50	10	
-1113	11×13	17.3	19.3	6.8	8.3	138	55	10	
-1214	12×14	18.3	20.8	7.3	9.3	145	70	10	
-1315	13×15	19.3	22.8	8.3	9.8	156	85	10	
-1417	14×17	20.8	25.3	9.3	10.3	168	105	10	
-1618	16×18	23.8	26.8	10.3	11.3	170	130	10	
-1719	17×19	25.3	27.8	10.3	11.8	177	160	10	
-1921	19×21	27.8	30.8	11.8	12.8	179	185	10	

			- Ondania				
45°×6° SHORT BOX END WRENCH SET (5pcs.)							
No. TM5S05	▼ g 310	₩1					
45°×6° Short Box End Wrench	M5S-0810,	1012, 1113, 1214, 1417					

● 45° LONG BOX END WRENCH SET (6pcs.)



45° LONG BOX END WRENCH SET (6pcs.)					
No. M256	V kg 2.1 ≅ 1	JIS			
45° Long Box End Wrench	M25-10×12, 12×14, 14×17, 17×19, 19×21, 23×26				
No. M2506	V kg 2.1	JIS			
45° Long Box End Wrench	M25- 8×10, 11×13, 12×14, 17×19, 22×24, 24×27				
Common Items					
Metal Case	M256-M L385×W100×H45mm				
		/D-3rd			

● 45° LONG BOX END WRENCH SET (8pcs.) (10pcs.)



45° LONG BOX END WREN	ICH SET (8pcs.	.) • (10pcs.)	mm
No. M258	▼ kg 2.5	₩ 1	JIS
45° Long Box End Wrench), 10×12, 11×13, 12× , 22×24	14, 14×17, 17×19,
No. M2510	▼kg 3	₩ 1	JIS
45° Long Box End Wrench		7, 8×10, 10×12, 11×1 1, 19×21, 22×24, 24×	
Common Items			
Metal Case	M258-M L3	370×W180×H55mm	
			POWERFIT :

●BOX END WRENCH SET (14pcs.)



BOX END WRENCH SET (14pc	:s.)	mm
No. M215P	V kg 1.9 ≅ 1	
Flat Type Short Box End Wrench	M100-7×8, 10×12, 12×14, 14×17	
Flat Type Long Box End Wrench	M150-10×12, 12×14, 14×17	
15° Long Box End Wrench	M151-10×12, 12×14, 14×17	
Box End Wrench (6pt.)	M27-8H, 10H, 12H, 14H	
Hard Plactic Case	TCD1-1 385\/W100\/H65mm	

Mixed set of Flat Type Short Box End Wrench (M100), Flat Type Long Box End Wrench (M150), 15° Long Offset Wrench and Hex Box End Wrench.
 With Hard Plastic Case for light weight and durability.

45° LONG BOX END WRENCH No. $S_1 \times S_2$ \mathbf{D}_1 D_2 $T_{1} \\$ **▼**g T_2 M25 -5.5× 7 9.5 12 12 4.5 4.5 150 150 26 26 10 10 10 10 10 10 10 10 10 10 10 10 5 5 - 5.5× 7 - 6× 7 - 8× 9 - 8×10 - 10×12 - 10×13 - 10×14 6× 7 8× 9 8×10 10×12 10×13 6 6.5 7.5 8.5 9 8.5 50 50 70 72 100 74 110 145 155 210 270 275 280 340 350 6.5 6.5 6.5 19 200 220 200 220 17 17 21 22 21 22 26 26 29 12×14 13×17 14×17 17×19 17×21 19×21 19×22 21×23 22×24 10.5 10.5 12 21 22 26 26 245 245 270 8.5 9 10.5 10.5 12 12 13 13.5 14.5 15 31 33 34 35 38 39 - 19×21 - 19×22 - 21×23 - 22×24 29 29 31 310 310 310 315 - 23×26 - 24×27 23×26 24×27 410 460 POWERFIT .

13 13.5 14.5 15 16 16.5

●45° LONG BOX END WRENCH



45° LONG BOX END WRENCH in No. $S_1 \times S_2$ T_2 **▼**g D₁ D_2 $T_{1} \\$ L 8 MB25- $\frac{3}{8} \times \frac{7}{16}$ 9.5×11.1 16 6 195 80 10 18 $-\frac{1}{2} \times \frac{9}{16}$ 8 220 115 10 12.7×14.2 20 22 8 - ⁵/₈ × ¹/₁₆ 15.8×17.4 24 26 10 10 245 105 10 $-\frac{3}{4} \times \frac{25}{32}$ 19 ×19.8 29 30 11 11 275 210 10 $.13_{16} \times \frac{7}{8}$ 20.6×22.2 31 33 12 13 310 280 5 -15/16×1 355 23.8×25.4 400 5 35 37 15 15.5

45°

JIS (M25-5.5×7, 6×7, 10×14, excludes inch size)

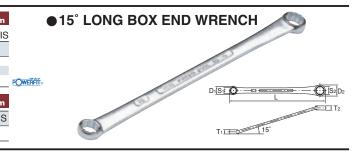
45° LONG BOX END WRENCH SET (3pcs.)

No. M253 ⊕ 1 **▼**g 345

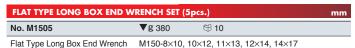
M25-10×12, 12×14, 14×17 Long Box End Wrench

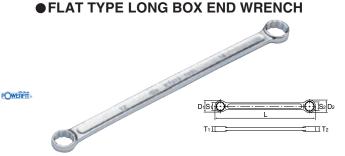
15° LONG BOX	END WRE	NCH							mm
									JIS
No.	S ₁ × S ₂	D ₁	D ₂	T 1	T ₂	L	▼ g	#	
M151-10×12	10×12	17	19	6.5	7.5	200	50	10	
-12×14	12×14	19	22	7.5	9	220	100	10	
-14×17	14×17	22	26	9	10.5	245	140	10	

15° LONG BOX END WRENCH SET (3pcs.)						
No. M1513	▼g 340 😂 10	JIS				
15° Long Box End Wrench	M151-10×12, 12×14, 14	1×17				



FLAT TYPE LONG BOX END WRENCH								mm	
No.	S1×S2	D ₁	D ₂	T ₁	T ₂	L	▼g	#	
M150- 8×10	8×10	13	16	5.5	6.5	185	44	10	
-10×12	10×12	16	18	6.5	7.5	200	56	10	
-11×13	11×13	17	19	7	8	200	60	10	
-12×14	12×14	18	21	7.5	8	220	80	10	
-14×17	14×17	21	25	8	8.5	245	125	10	
-17×19	17×19	25	28	8.5	9	285	148	10	
-22×24	22×24	32	35	9.5	10	335	240	10	





•FLAT TYPE EXTRA-LONG BOX END

FLAT TYPE EXTRA-LONG BOX END WRENCH										
No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼g	#		
M160- 8×10	8×10	14	17	7.3	7.6	235	60	10		
-10×12	10×12	17	19	8.2	8.8	295	84	10		
-12×14	12×14	19	22	9.4	10	330	120	10		
-13×15	13×15	21	24	9.9	10.5	355	197	10		
-14×17	14×17	22	26	10.6	11.5	370	240	10		
-17×19	17×19	26	29	12.3	12.9	405	365	10		
-22×24	22×24	33	35	15.2	15.8	435	540	10		
-27×30	27×30	39	44	19.8	20.7	550	1118	10		

FLAT TYPE EXTRA-LONG BOX END WRENCH SET (3pcs.)							
No. M1603	▼g 545 😂 1						
Flat Type Extra-Long Box End Wrench · Set (3pcs.)	M160-8×10, 12×14, 17×19						

POWERFIT .	
nm	

WRENCH

<u> </u>	D S D S D 2
	T ₁ 11 T ₂

FLAT TYPE SHORT BOX END WRENCH mr								mm	
No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼g	#	
M100- 7× 8	7× 8	12	13	5	5.5	95	18	10	
-10×12	10×12	16	18	6.5	7.5	115	34	10	
-12×14	12×14	18	21	7.5	8	130	50	10	
-14×17	14×17	21	25	8	8.5	145	72	10	
-17×19	17×19	25	28	8.5	9	180	95	10	
-22×24	22×24	32	35	9.5	10	230	120	10	

FLAT TYPE SHORT BOX END V	VRENCH SE	T (4pcs.)	mm
No. M1004	▼ g 170	₩ 1	
Flat Type Short Roy End Wrench - Set (Ance)	M100-7×8	10>12 12>14 14>17	

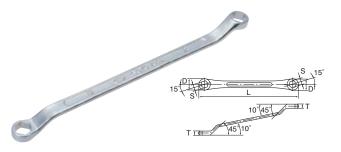
•FLAT TYPE SHORT BOX END WRENCH



mm

POWERFIT .

HEX BOX END WRENCHS



HEX BOX END WRENCH								
Hexagonal								
No.	S	D	Т	L	▼ g	#		
M27- 8H	8	13	5	175	40	10		
-10H	10	16	6	195	57	10		
-12H	12	18	7	220	86	10		
-14H	14	21	8	240	120	10		

HEX BOX END WRENCH SET (4pcs.)					
No. M274	▼ g 330	₩ 5			
Hex Box End Wrench Set (4pcs.)	M27-8H, 10I	H, 12H, 14H			

- 15* symmetric angle can enable this wrench used as Bi-hexagonal wrench.
 No chamfering on hexagonal end for bigger contact between bolts and the
- wrenches.

 Comfortable grip for applying torque easily.

• DOUBLE-FLEX RATCHET BOX END WRENCH



DOUBLE-FLEX	DOUBLE-FLEX RATCHET BOX END WRENCH											
No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	Feed	L	▼ g	\oplus			
MR1A-0810F	8×10	16.4	20	6.5	7.3	5°	151	70	5			
MR1A-1012F	10×12	20	23	7.3	8.2	5°	176	110	5			
MR1A-1113F	11×13	21.8	25.2	7.8	8.6	5°	188	120	5			
MR1A-1214F	12×14	23	27	8.2	9	5°	199	140	5			
MR1A-1315F	13×15	25	28.2	8.6	9.4	5°	226	180	5			
MR1A-1317F	13×17	25.2	31.8	8.6	10.3	5°	230	190	5			
MR1A-1417F	14×17	27	31.6	9	10.3	5°	230	190	5			
MR1A-1719F	17×19	31.6	33.7	10.3	11.2	5°	267	270	5			

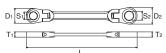
- * Feed of 8mm ratchet offset wrench section is 6°.
- · Both heads are capable of final tightening.
- 5° feed that's capable of smooth continuous work in tight spaces (excluding 8mm).
- Head tilt angle is 180°
- · Nonslip grip design is adopted.



· Since the joint is sensitive to impact and twist, please be careful not to apply too

DOUBLE-FLEX RATCHET BOX END WRENCH





DOUBLE-FLEX RATCHET BOX END WRENCH											
No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼ g	#			
MR1-0607F	6× 7	18	18	7.4	7.4	120	65	5			
MR1-0810F	8×10	18	21	7.4	8.4	150	75	5			
MR1-1012F	10×12	21	23.5	8.4	8.4	175	105	5			
MR1-1113F	11×13	22	25	8.4	8.4	185	120	5			
MR1-1214F	12×14	23.5	26.5	8.4	8.4	195	135	5			
MR1-1315F	13×15	25	28	8.4	8.4	205	155	5			
MR1-1417F	14×17	26.5	30.5	8.4	10	225	190	5			
MR1-1618F	16×18	29	32	10	11.4	250	270	5			
MR1-1719F	17×19	30.5	34	10	11.4	260	285	5			
MR1-2123F	21×23	38	45	12.5	13.5	312	555	5			
MR1-2224F	22×24	41	45	13.5	13.5	325	590	5			

DOUBLE-FLEX RATCHET BOX END WRENCH SET (5pcs.)									
No. TMR105	▼g 660	₩1							
Double-Flex Ratchet I	3ox End Wrench	MR1-0810F, 1012F, 1214F, 1315F, 1417F							

- Both heads are capable of final tightening.
- Since the span of the ratchet offset wrench and hinge sections is shortened and thickness is designed thin and flat, smooth continuous work in tight spaces is possible.
- 5° ratchet feed allows the fine feeding.
 Size is displayed on the head where it is easily visible. Working direction can also be seen at a glance with the arrow display.

 ${\boldsymbol{\cdot}}$ Since the joint is sensitive to impact and twist, please be careful not to apply too much force.

SHORT RATCHET	SHORT RATCHET BOX END WRENCH									
No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼ g	\oplus		
MR1S-0810F	8×10	18	21	7.5	8.5	107	38	5		
-1012F	10×12	21	23	8.5	8.5	129	91	5		
-1113F	11×13	22	25	8.5	8.5	135	105	5		
-1214F	12×14	23.5	26.5	8.5	8.5	149	117	5		
-1315F	13×15	25	28	8.5	8.5	155	133	5		
-1417F	14×17	26.5	30.5	8.5	10	168	162	5		
-1618F	16×18	29	32	10	11.5	170	210	5		
-1719F	17×19	30.5	34	10	11.5	180	233	5		

POWERFIT:

POWERFIT .

SHORT RATCHET BOX END W	RENCH SET (5pcs.)	mm
No. TMR1S05	▼g 580	₩1	
Flex Ratchet Box End Wrench	MR1S-0810	F, 1012F, 1214F, 1315F, 1417F	

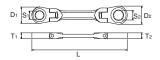
* Ratchet head is available as replacement part.



• DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.
• THE RATCHET END IS ONLY FOR TEMPORARY FASTENINGS. DO NOT USE IT FOR PERMANENT FASTENING.

SHORT RATCHET BOX END WRENCH





EXTRA-LONG I	RATCHE	г вох е	ND WR	ENCH					mm
No.	S	D ₁	D ₂	T ₁	T ₂	L	▼ g	#	
MR15L-10F	10	15.4	21	8.2	13.4	315	135	5	
MR15L-12F	12	19	23.5	9.6	14.4	350	188	5	
MR15L-13F	13	20.5	25	10.5	14.9	380	224	5	
MR15L-14F	14	22	26.5	11	15.4	395	256	5	
MR15L-15F	15	23.5	28	11.9	15.9	405	284	5	
MR15L-17F	17	26	30.5	13.4	18.5	435	370	5	
MR15L-19F	19	28.5	34	14.4	20.9	460	451	5	

- · Since the span of the ratchet offset wrench and hinge sections is shortened and thickness is designed thin and flat, smooth continuous work in tight spaces is possible.
- Tooth number of 72 and 5° ratchet feed allows the fine feeding.
- Size is displayed on the head where it is easily visible.
 Both the ratchet and offset wrench sides have single-side offset shape, allowing the use even with counterbore around the bolt · nut.
- Rotational direction can be switched with the lever on the head side, allowing the use in both tightening and loosening.



- Since the joint is sensitive to impact and twist, please be careful not to apply too much force.
 - · Since excessive load can be placed on the long total length, please beware of over-torque.

EXTRA-LONG RATCHET BOX END WRENCH (FLEX TYPE)



RATCHET BOX	END WRE	NCH						mm
No.	S ₁ ×S ₂ *	D ₁	D ₂	Т	L	▼g	#	
RM- 8× 9	8× 9	17	19	10	120	70	10	
- 8×10	8×10	17	22	10	120	70	10	
-10×12	10×12	22	24	11	150	130	10	
-12×14	12×14	24	29	14	165	230	10	
-14×17	14×17	29	33	14	195	280	10	

RATCHET BOX END WRENG	CH SET (3pcs.)		mm
No. RM03	▼ g 640	倒 10	
Ratchet Box End Wrench	RM-10×12,	12×14, 14×17	

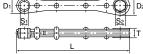
- * When the diameter is 14mm or larger, the socket has 12 points.
- Smooth ratcheting operation.
 Thin and round shaped head for use in confined spaces.
- For light-load operation.
 The feed angle is 20°.



- ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY,
 - OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.
 THIS IS ONLY FOR TEMPORARY FASTENINGS.
 - DO NOT USE IT FOR PERMANENT FASTENINGS.

• RATCHET BOX END WRENCH





●4SIZE STANDARD RATCHET BOX END **WRENCH**



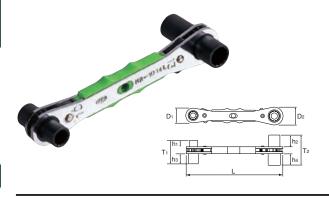
4SIZE STAN	DARD RATCHET	BOX EN	D WREN	ICH				mm
No.	S ₁ ×S ₂	D ₁	D ₂	T	L	▼g	#	
MR-0813	8×12 · 10×13	21	25	15	143	130	10	
-1014	10×13 · 12×14	25	28	15	166	160	10	

POWERFIT .

- The socket is thin enough to operate in narrow quarters.
 The grip, with its wave form, is easy to hold and apply load.
 The green color is distinguishable in the workplace. it is also lightweight because it is made of plastic

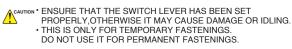
CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY,
OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.
• THIS IS ONLY FOR TEMPORARY FASTENINGS.
DO NOT USE IT FOR PERMANENT FASTENINGS.

4SIZE LONG RATCHET BOX END WRENCH



4SIZE LO	ONG	RATCHET	ВО	(END	WR	ENCH								mm
No.		Nominal Size	h₁	h ₂	h₃	h ₄	D₁	D ₂	T ₁	T ₂	L	▼ g	#	
MR-0813	3L	8×12·10×13	10	17.5	15	17.5	21	25	34.5	44.5	143	180	10	
-1014	4L	10×13 · 12×14	15	18	15	30	25	28	39.5	57.5	166	230	10	

- The socket is long enough to operate in deep quarters.
 The grip, with its wave form, is easy to hold and apply load.
 The green color is distinguishable in the workplace. It is also lightweight because it is made of plastic.



2. CONVENTIONAL TOOLS

OPEN END W and COM



Open end wrench/combination wrench sets

- · Carefully read the individual safety warnings for the items included within the set.

 • When carrying the set, make sure the metal fasteners are locked on.
- If the set includes a holder, take care to avoid jamming your hands when taking tools from the holder.

Open end wrench/combination wrenches

- Use wrenches that conform to the size of the bolts and nuts.
- Do not use by adding on pipes, etc.
 Firmly hold the bolts and nuts using the end of the tool mouth.
- The open end wrench can come loose when too much force is applied.
- · Take care not to allow the tool to slip off.
- · Do not use this tool as a hammer.
- Do not apply strong impact on this tool by hitting it with a hammer,

OPEN END WRENCH SET(8	Spcs.) • (10pcs.)			mm
No. TS208	▼kg 1.1	₩ 1		
Open End Wrench	S2-05507, 08 1921, 22		3, 1214, 1417,	

• Resin forming tray (L444×W184×H48mm) attached.

No. TS210	▼kg 1.6 😭 1
Open End Wrench	S2-05507, 0810, 1012, 1113, 1214, 1417, 1719, 1921, 2224, 2427,

• Resin forming tray (L444×W184×H48mm) attached.

● OPEN END WRENCH SET (8pcs.) · (10pcs.)







TS210

OPEN END WRENCH SET (6pe	cs.)		mm
No. TS206	▼g 550	₩1	
Open End Wrench	S2-0810, 1012	, 1113, 1214, 1417, 1719	
Holder	EHS-1		
No. TS206A	▼g 450	♥1	
Open End Wrench	S2-05507, 081	0, 1113, 1214, 1719, 2224	
Holder	EHS-1		

OPEN END WRENCH SET (6pcs.)						
No. TS206B	▼g 700 😂 1					
Open End Wrench in	\$2-5/ ₁₆ × ³ / ₈ , 13/ ₃₂ × ¹ / ₂ , 1/ ₂ × ⁹ / ₁₆ , 19/ ₃ 5/ ₈ × ³ / ₄ , 25/ ₃₂ × ⁷ / ₈	2 × ¹¹ / ₁₆ ,				
Holder	EHS-1					

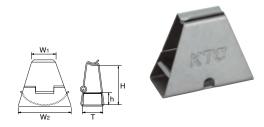
OPEN END WRENCH SET (6pcs.)





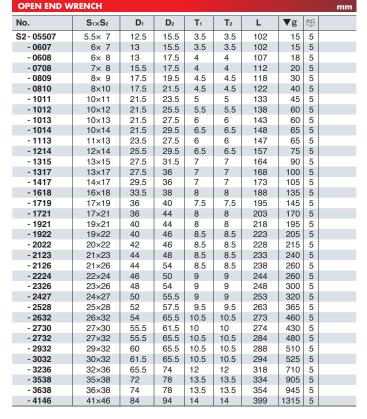
OPEN END WR	ENCH HO	LDER						
No.	Н	h	W ₁	W ₂	Т	▼g	#	
EHS-1	42	14	27	60	24	55	1	

OPEN END WRENCH HOLDER



OPEN END WRENCH

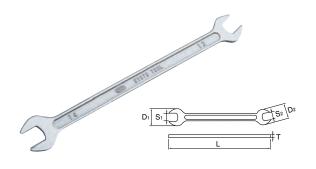






OPEN END WR	ENCH								i
No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼ g	#	
S2-1/ ₄ ×5/ ₁₆	6.3× 7.9	13	17.5	4	4	107	18	5	
$-\frac{5}{16} \times \frac{3}{8}$	7.9× 9.5	17.5	21.5	4.5	4.5	122	40	5	
$-\frac{3}{8} \times \frac{7}{16}$	9.5×11.1	21.5	23.5	5	5	133	45	5	
$-\frac{13}{32} \times \frac{1}{2}$	10.3×12.7	21.5	27.5	6	6	143	60	5	
$\frac{-7}{16} \times \frac{1}{2}$	11.1×12.7	23.5	27.5	6	6	147	65	5	
$-\frac{1}{2} \times \frac{9}{16}$	12.7×14.2	27.5	29.5	6.5	6.5	160	74	5	
$-9/16 \times \frac{5}{8}$	14.2×15.8	29.5	33.5	7	7	169	97	5	
-19/ ₃₂ ×11/ ₁₆	15 ×17.4	31.5	36	7	7	175	106	5	
$-\frac{5}{8} \times \frac{11}{16}$	15.8×17.4	33.5	36	7	7	177	110	5	
$-5/_{\circ} \times 3/_{4}$	15.8×19	33.5	40	7.5	7.5	192	133	5	
$-\frac{11}{16} \times \frac{3}{4}$	17.4×19	36	40	7.5	7.5	195	145	5	
$-\frac{3}{4} \times \frac{25}{32}$	19 ×19.8	40	42	8	8	216	177	5	
$-\frac{3}{4} \times \frac{13}{16}$	19 ×20.6	40	44	8	8	218	195	5	
$\frac{-25}{32} \times \frac{7}{8}$	19.8×22.2	42	46	8.5	8.5	228	215	5	
$-\frac{13}{16} \times \frac{7}{8}$	20.6×22.2	44	46	8.5	8.5	231	224	5	
$-\frac{15}{16} \times 1$	23.8×25.4	50	52	9	9	249	300	5	
$-1-\times 1^{-1}/_{16}$	25.4×26.9	52	55.5	9	9	256	327	5	
$-1^{-1}/_{8}\times 1^{-1}/_{4}$	28.5×31.7	60	65.5	10.5	10.5	288	510	5	

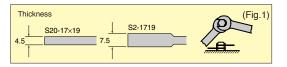
SLIM TYPE OPEN END WRENCH



SLIM TYPE OPEN END WRENCH (S20)									
No.	S ₁ ×S ₂	D ₁	D ₂	Т	L	▼g	#		
S20-10×12	10×12	21	26	4	210	64	5		
-12×10	12×10	26	21	4	210	64	5		
-12×14	12×14	26	30	4	215	75	5		
-14×12	14×12	30	26	4	215	75	5		
-17×19	17×19	36	40	4.5	235	120	5		
-19×17	19×17	40	36	4.5	235	120	5		

SLIM TYPE OPEN END WRENG	CH SET (6pcs.)	mm
No. S206	▼ g 544	₩1	
Slim Type Open End Wrench (mm)	S20-10×12,	, 12×10, 12×1	4, 14×12, 17×19, 19×17

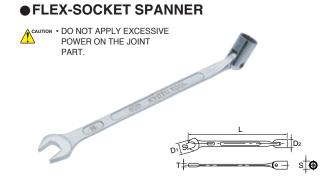
- Set of each 2 pcs. of same size combination with different angles.
- Fit to use in small spaces for tightening/loosening double nuts (Fig.1)



FLEX-SOCKET S	PANNER						mm	
No.	S	D ₁	D ₂	Т	L	▼g	#	
FBS-10	10	22	14	6	180	66	5	
-12	12	26	17	6.5	205	100	5	
-13	13	28	18	6.5	210	105	5	
-14	14	29	19	6.5	230	140	5	
-17	17	36	23	7	250	200	5	
-19	19	40	26	7.5	265	230	5	

FLEX-SOCKET SPANNER SET (6pcs.)					
No. FBS6	▼g 800	₩1			
Flex-Socket Spanner	FBS-10, 12,	13, 14, 17, 19			

• Quick turning at open end side and tight fastening at socket side.



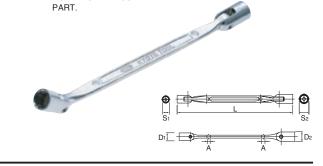
FLEX-HEAD SO	CKET							mm
No.	S ₁ ×S ₂	D ₁	D ₂	Α	L	▼ g	#	
FBH1 - 8× 9	8× 9	12	13.5	5.5	200	80	10	-
- 8×10	8×10	12	14.5	5.5	200	90	10	
-10×12	10×12	14.5	17	5.5	215	120	10	
-12×14	12×14	17	20	6.5	230	160	10	
-13×14	13×14	18.5	20	6.5	230	170	10	
-14×17	14×17	20	23.5	7.5	245	220	10	
-17×19	17×19	23.5	26	7.5	250	250	10	

FLEX-HEAD SOCKET SET	3pcs.)	mm
No. FBH103	▼g 370 🕾 1	
Flex-Head Socket	FBH1-8×9, 10×12, 13×14	

• Convenient for use in narrow space and for quick turning.



POWERFIT .



COMBINATION WRENCH SET (8pcs.) · (10pcs.) · (12pcs.) mm No. TMS208 ▼kg 1 Combination Wrench MS2-07, 08, 10, 12, 13, 14, 17, 19

• Pla. tray (L444×W184×H48mm)

100	<u> </u>	_/0	20	-
P	. m	/EH	нп	8

No. TMS210	▼kg 1.1	₩ 1					
Combination Wrench	MS2-055,	07, 08, 10	12, 13	, 14,	15,	17,	19

• Pla. tray (L444×W184×H48mm)

DOM:	/D-3/+
POW	<u>CRFII</u> 8

No. TMS212	▼kg 1.6	₩1					
Combination Wrench	MS2-055, 07	7, 08, 10, 12	, 13, 14,	15, 17	, 19,	21,	22

• Pla. tray (L444×W184×H48mm)



COMBINATION WRENCH SET (8pcs.)						
No. TMS208B	▼kg 1	₩1				
Combination Wrench in	MS2- 1/4, 3	1/8, 7/16, 1/2, 9/16	5, 5/8, 11/16, 3/4			

• Pla. tray (L444×W184×H48mm)

● COMBINATION WRENCH SET (8pcs.) (10pcs.) (12pcs.)



• FLEX-HEAD SOCKET

DO NOT APPLY EXCESSIVE POWER ON THE JOINT

TMS208

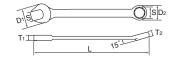


TMS210



COMBINATION WRENCH



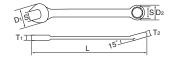


COMBINATIO	N WREN	NCH							mm
No.	s*	D ₁	D ₂	T ₁	T ₂	L	▼ g	#	
MS2- 032	3.2	8	7.5	3	3	75	6	5	
- 04	4	9	8.5	3	4	80	8	5	
- 045	4.5	10	9	3	4	85	10	5	
- 05	5	11	9.5	3	4.5	90	11	5	
- 055	5.5	12.5	10	3	4.5	96	13	5	
- 06	6	13	10.5	3	4.5	96	14	5	
- 07	7	15.5	12	3.5	5	111	20	5	
- 08	8	17.5	13	4	5.5	126	28	5	
- 09	9	19.5	14.5	4.5	6	136	36	5	
- 10	10	21.5	16	4.5	6.5	151	42	5	
- 11	11	23.5	17	5	7	161	55	5	
- 12	12	25.5	18	5.5	7.5	170	65	5	
- 13	13	27.5	19	6	8.5	188	85	5	
- 14	14	29.5	20.5	6	9.5	190	98	5	
- 15	15	31.5	22.5	7	10	200	119	5	
- 16	16	33.5	23.5	7	10.5	215	134	5	
- 17	17	36	25	7	10.5	225	153	5	
- 18	18	38	26.5	8	11.5	241	184	5	
- 19	19	40	27.5	7.5	12	256	205	5	
- 20	20	42	29.5	8	12	271	234	5	
- 21	21	44	30.5	8	13	289	267	5	
- 22	22	46	32	8.5	13.5	304	305	5	
- 23	23	48	33.5	8.5	14.5	311	331	5	
- 24	24	50	35	9	15	337	380	5	
- 25	25	52	36	9	15.5	351	423	5	
- 26 - 27	26 27	54	37.5 39	9	16 16.5	371	466	5	
- 27	28	55.5 57.5		9.5	17	381	502	5	
- 20 - 29	29	60	40.5 43.5	10	18	401 421	561 650	1	
- 30	30	61.5	43.5	10	18	446	687	1	
- 31	31	63.5	45.5	10.5	18	462	790	1	
- 32	32	65.5	46.5	10.5	18	471	836	1	
- 33	33	67.5	47.5	11	20	477	904	1	
- 34	34	69.5	52	11	21	480	1030	1	
- 35	35	72	52	12	21	481	1070	1	
- 36	36	74	52	12	21	501	1155	1	
- 38	38	78	54.5	13.5	22	521	1382	1	
- 41	41	84	59	14	24.5	542	1680	1	
- 46	46	94	66	14	26	562	2142	1	
						/D-3n+			

^{* 5}mm and below the offset side is the hexagonal diameter. POWERFIT® (Except the following from 5mm)

• COMBINATION WRENCH





COMBINATIO	N WREN	ICH							in
No.	s*	D ₁	D ₂	T ₁	T ₂	L	▼ g	#	
MS2-1/8	3.1	8	7.5	3	3	75	6	5	
$\frac{-5}{32}$	3.9	9	8.5	3	4	80	8	5	
$-\frac{3}{16}$	4.7	10	9	3	4	85	10	5	
- ¹³ / ₆₄	5.1	11	9.5	3	4.5	90	11	5	
$-\frac{7}{32}$	5.5	12.5	10	3	4.5	96	13	5	
- ¹⁵ / ₆₄	5.9	13	10.5	3	4.5	96	14	5	
-1/4	6.3	13	10.5	3	4.5	96	14	5	
- ⁹ / ₃₂	7.1	15.5	12	3.5	5	111	20	5	
- ⁵ / ₁₆	7.9	17.5	13	4	5.5	126	28	5	
- ¹¹ / ₃₂	8.7	19.5	14.5	4.5	6	136	36	5	
-3/8	9.5	21.5	16	4.5	6.5	151	42	5	
- ⁷ / ₁₆	11.1	23.5	17	5	7	161	55	5	
-1/2	12.7	27.5	19	6	8.5	188	85	5	
- ⁹ / ₁₆	14.2	29.5	20.5	6	9.5	190	98	5	
- ¹⁹ / ₃₂	15	31.5	22.5	7	10	200	119	5	
-5/8	15.8	33.5	23.5	7	10.5	215	134	5	
- ¹¹ / ₁₆	17.4	36	25	7	10.5	225	153	5	
$-\frac{3}{4}$	19	40	27.5	7.5	12	256	205	5	
$\frac{-25}{32}$	19.8	42	29.5	8	12	271	234	5	
- ¹³ / ₁₆	20.6	44	30.5	8	13	289	267	5	
-1/8	22.2	46	32	8.5	13.5	304	305	5	
- ¹⁵ / ₁₆	23.8	50	35	9	15	337	380	5	
-1	25.4	52	36	9	15.5	351	423	5	
-1- ¹ / ₁₆	26.9	55.5	39	9	16.5	381	502	5	
-1- ¹ / ₈	28.5	60	43.5	10	18	421	650	5	
$-1-\frac{3}{16}$	30.1	61.5	43.5	10	18	446	687	5	
-1-1/4	31.7	65.5	46.5	10.5	18	471	836	5	
$-1^{-5}/_{16}$	33.3	67.5	47.5	11	20	477	904	5	_
$-1-\frac{3}{8}$	34.9	72	52	12	21	481	1070	1	
$-1^{-7}/_{16}$	36.5	74	52	12	21	501	1155	1	_
$-1-\frac{1}{2}$	38.1	78	54.5	13.5	22	521	1382	1	

 $^{^{\}star}$ 13/64in and below the offset side is the hexagonal diameter.

RATCHET COMBI	NATIO	N WR	NCH S	TRAIG	HT TY	PE				
No.	S	D ₁	D ₂	T ₁	T 2	Feed	L	▼ g	#	
MSR1A-08	8	16.2	16.4	4	6.5	6°	140	40	5	
MSR1A-09	9	18.2	18.3	4.4	6.9	6°	150	50	5	
MSR1A-10	10	20.5	20	4.8	7.3	5°	159	50	5	
MSR1A-11	11	22.6	21.4	5.2	7.7	5°	165	70	5	
MSR1A-12	12	24.6	22.6	5.5	8.2	5°	172	70	5	
MSR1A-13	13	26.7	24.5	5.8	8.6	5°	178	80	5	
MSR1A-14	14	28.8	27	6.2	9	5°	191	110	5	
MSR1A-15	15	30.8	28.2	6.5	9.4	5°	200	120	5	
MSR1A-16	16	33.2	30.3	6.8	9.9	5°	208	140	5	
MSR1A-17	17	35.1	31.6	7.2	10.3	5°	225	170	5	
MSR1A-18	18	37.2	32.3	7.7	10.7	5°	236	190	5	
MSR1A-19	19	39.3	33.7	8.2	11.2	5°	248	230	5	
MSR1A-21	21	46.2	40.1	9	13	4°	290	340	5	
MSR1A-22	22	46.2	40.1	9	13	4°	290	340	5	
MSR1A-24	24	51.5	46.5	10	14.5	4°	323	500	5	

- · Ratchet is capable of final tightening.
- $\, \cdot \, 5^{\circ}$ feed that's capable of smooth continuous work in tight spaces (excluding below 9 mm and above 21mm).
- · Working direction can be seen at a glance with the arrow display.
- · Nonslip grip design is adopted.

RATCHET COMBINATION WRENCH (STRAIGHT TYPE)



RATCHET COMBI	RATCHET COMBINATION WRENCH OFFSET TYPE										
No.	S	D ₁	D ₂	T ₁	T ₂	Feed	L	▼ g	#		
MSR2A-08	8	16.2	16.4	4.6	6.5	6°	140	40	5		
MSR2A-10	10	20.5	20	5.3	7.3	5°	159	50	5		
MSR2A-12	12	24.6	22.6	6	8.2	5°	172	80	5		
MSR2A-13	13	26.7	24.5	6.4	8.6	5°	178	90	5		
MSR2A-14	14	28.8	27	6.8	9	5°	191	110	5		
MSR2A-17	17	35.1	31.6	7.7	10.3	5°	226	170	5		
MSR2A-19	19	39.3	33.7	8.6	11.2	5°	248	220	5		

- · Ratchet is capable of final tightening.
- 5° feed that's capable of smooth continuous work in tight spaces (excluding 8mm).
- · Rotation direction can be switched by lever.
- · Nonslip grip design is adopted.

ON Please switch the lever securely from left to right since it may be the cause of damage or idling.





SEMI-SHORT RAT	SEMI-SHORT RATCHET COMBINATION WRENCH										
No.	S	D 1	D ₂	T ₁	T ₂	Feed	L	▼ g	#		
MSR1A-08F	8	16.2	16.4	4.3	6.5	6°	127	40	5		
MSR1A-10F	10	20.5	20	5	7.3	5°	136	60	5		
MSR1A-12F	12	24.6	23	5.8	8.2	5°	148	80	5		
MSR1A-13F	13	26.7	25	6.1	8.6	5°	155	100	5		
MSR1A-14F	14	28.8	27	6.4	9	5°	162	110	5		
MSR1A-17F	17	35.1	31.6	7.6	10.3	5°	191	170	5		
MSR1A-19F	19	39.3	33.7	8.6	11.2	5°	216	230	5		

- · Intermediate size of standard and short that considered the operability in tight spaces.
- Ratchet is capable of final tightening.
 5° feed that's capable of smooth continuous work in tight spaces (excluding 8mm).
- · Working direction can be seen at a glance with the arrow display.
- · Head tilt angle is 180°
- · Nonslip grip design is adopted.

TION • Since the joint is sensitive to impact and twist, please be careful not to apply too much force.

SEMI-SHORT RATCHET COMBINATION WRENCH (FLEX TYPE)



SHORT RATCHET COMBINATION WRENCH OFFSET TYPE										
No.	S	D ₁	D ₂	T ₁	T ₂	Feed	L	▼g	\oplus	
MSR2SA-08	8	16.2	16.4	3.8	6.4	6°	90	30	5	
MSR2SA-10	10	20.5	20	4.8	7.3	5°	95	40	5	
MSR2SA-12	12	24.6	22.6	5.5	8.2	5°	106	50	5	
MSR2SA-13	13	26.7	24.5	5.8	8.6	5°	108	60	5	
MSR2SA-14	14	28.8	27	6.2	9	5°	115	70	5	
MSR2SA-17	17	35.1	31.6	7	10.3	5°	127	110	5	

- Ratchet is capable of final tightening.
 5° feed that's capable of smooth continuous work in tight spaces (excluding 8mm).
- Rotation direction can be switched by lever.
- Nonslip grip design is adopted.

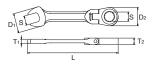
• Please operate the switching lever on left and right securely since it may be the cause of damage or idling.

SHORT RATCHET COMBINATION WRENCH (OFFSET TYPE)



SHORT RATCHET COMBINATION **WRENCH (FLEX TYPE)**





SHORT RATCH	ET COMBI	NATIO	N WREI	NCH					
No.	S	D ₁	D ₂	T ₁	T ₂	L	▼ g	#	
MSR2S-08F	8	17.3	18	4	7.4	90	39	5	
MSR2S-10F	10	21.5	21	4.5	8.4	110	58	5	
MSR2S-11F	11	23.5	22	5	8.4	115	67	5	
MSR2S-12F	12	25.5	23.5	5.5	8.4	125	79	5	
MSR2S-13F	13	27.5	25	6	8.4	135	94	5	
MSR2S-14F	14	29.5	26.5	6	8.4	140	104	5	
MSR2S-15F	15	31.4	28	7	8.4	145	119	5	
MSR2S-16F	16	33.4	29	7	10	155	144	5	
MSR2S-17F	17	36	30.5	7	10	165	163	5	
MSR2S-18F	18	38	32	8	11.4	175	201	5	
MSR2S-19F	19	40	34	8	11.4	185	221	5	

SHORT RATCHET COMBINATION WR	ENCH SET (6pcs.)
No. TMSR2S06 ▼g 54	0 🖭 1
Short Ratchet Combination Wrench (Flex Type)	MSR2S-08F, 10F, 12F, 13F, 14F 17F

- Ratchet is capable of final tightening.
- · Since the span of the ratchet offset wrench and hinge sections is shortened and thickness is designed thin and flat, smooth continuous work in tight spaces is possible.
- Tooth number of 72 and 5° ratchet feed allows the fine feeding.
- Size is displayed on the head where it is easily visible. Working direction can also be seen at a glance with the arrow display.

 ${f \cdot}$ Since the joint is sensitive to impact and twist, please be careful not to apply too much force.

PRATCHET COMBINATION WRENCH & SOCKET SET (WITH 3/8"sq. DRIVE ADAPTER)



RATCHET COMBINATION WRENCH & SOCKET SET No.TBZ1407 ▼g 205 🖽 1 (1 Carton) Drive adapter for Ratchet Combination Wrench BZ14-BA3 BZ14-08W, 10W, 12W, 13W, 14W Socket for 14mm Ratchet (12pt.) Ratchet Combination Wrench MSR2S-14F

• With a plastic case and storage tray that are convenient for storage.





Combination example (MSR2S-14F + BZ14-BA3)

Comparison with ratchet handle (BR3E)

• RATCHET COMBINATION WRENCH &



RATCHET COMBINATION WRENCH & SOCKET SET								
No. TBZ1406	▼g 185 🕾 1 (1 Carton)							
Socket for 14mm Ratchet (12pt.)	BZ14-08W, 10W, 12W, 13W, 14W							
Ratchet Combination Wrench	MSR2S-14F							

· With a plastic case and storage tray that are convenient for storage.



Combination example (MSR2S-14F + BZ14-12W)

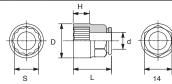
SOCKET FOR 14mm RATCHET





SOCKET FOR 1	SOCKET FOR 14mm RATCHET										
No.	S	D	L	Н	d	▼g	#				
BZ14-08W	8	12.2	19	5.5	6	17	5				
BZ14-10W	10	14.7	19	5.5	9	17	5				
BZ14-12W	12	17	19	7.5	9	17	5				
BZ14-13W	13	18.5	20	7.5	9	20	5				
BZ14-14W	14	20	20.5	8	10.5	20	5				

- · By combining with a 14mm ratchet combination wrench or ratchet offset wrench, both the outer diameter and height become compact, making it effective in small spaces.
- It can be used for long and protruded bolts since the socket has a through hole



▼g

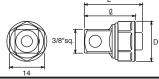
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PRATCHET BOX END WRENCH 3/8"sq. **DRIVE ADAPTER**

BZ14-BA3	16.1	23.4	20.
By combining w combination wre			١,
various 3/8"sq. s	sockets and bi	t sockets can	be _

- used
- · With the adoption of union mechanism, socket can be held securely.



No.

I



PROFIT® TOOLS





- PROFIT[®] tools

 The durability is lower than that of the standard type due to the thin wall type design.
- Take care to not over-apply force.
- Use wrenches that conform to the size of the bolts and nuts
- Do not use by adding on pipes, etc. Make sure that bolts and nuts are inserted correctly and fully into the tool. (Open end wrenches)
- · Insert the bolts and nuts fully. (Box end wrenches)
- The open end wrench can come loose when too much force is applied.
- Take care not to allow the tool to slip off.

Open end wrench

Do not use this tool as a hammer.
Do not apply strong impact on this tool by hitting it with a hammer,

Box End wrench

PROFIT® tool

The professional mechanic is expected to conduct high quality work in a confined space operating environment. Previous tools make working in a confined space difficult. Mechanics prefer to be able to work from various angles without changing the tool. Precision tools prioritizing usability have been developed in order to make this possible. Weight and excessive mass has been shed from the extremely slim tool body and open end wrenches and offsets have identical diameters with differing angles. The tool for the discerning professional who can feel the torque with experience.



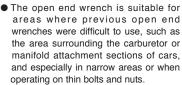
Box End wrench set



Open end wrench set







Box End wrench

Combination wrench

Open end wrench

- Removal and attachment of bolts and nuts in narrow areas, such as the flange joints or tight spaces in industrial machines
- Suitable for the differential propeller shaft joint section of cars, drive shaft and clutch overhaul for front drive vehicles, carburetor and manifold related attachment and removal operations during engine overhaul.
- Operations that require deep reach in narrow areas, such as bumpers and inside panels during vehicle maintenance.



Combination wrench set



PROFIT® TOOL BOX END WRENCH & OPEN END WRENCH SET (6pcs.)							
No. SM306	▼g 320	₩ 5					
Open End Wrenches		S 30-10, 12, 14					
Box-End Wrenches		M30-10, 12, 14					

[·] Each set includes Box-End and Open-End wrenches.

*PROFIT® is a registered trademark of KYOTO TOOL CO., LTD.

●PROFIT® TOOL OPEN END WRENCH





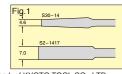
PROFIT® TOOL OPEN END WRENCH										
No.	S	D	Т	L	▼g	#				
S30- 8	8	19	3	120	30	10				
-10	10	22	3.5	130	35	10				
-12	12	27	4.3	140	53	10				
-13	13	29	4.5	150	60	10				
-14	14	30	4.6	160	68	10				
-15	15	33	4.7	170	80	10				
-17	17	36	4.8	185	105	10				
-19	19	40	5	200	125	10				

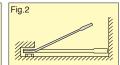
PROFIT® TOOL OPEN E	ND WRENCH SET (5)	ocs.)	mm
No. TS305	▼ g 380	₩1	

Profit ToolTM Open End Wrench S30-8, 10, 12, 13, 14

- Plastic Case L215×W120×H45mm
- Placed in the tray and housed in a transparent plastic case. • Extra thin type open end wrench with one bent end and one tapered edge end. (Fig.1)
- The diameter is limited to one size and set with a 25 degree tilt angle on one end only.
 Convenient for use on double nuts on various machineries.
- Effective in places where it's difficult to use conventional wrenches, such as near surroundings of automobile carburetors and manifolds. Particularly effective in tight spaces or with thin bolts and nuts. (Fig.2)

COMPARISON OF TAPERED SHAPE ON THE TIP (to the KTC's conventional shape)





*PROFIT is a registered trademark of KYOTO TOOL CO., LTD.

●PROFIT® TOOL BOX END WRENCH

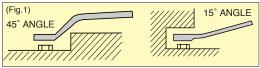


PROFIT® TOOL BOX END WRENCH							mm
No.	S	D	Т	L	▼g	8	
M30 - 8	8	12	4.5	155	30	10	
-10	10	15	5.5	175	40	10	
-12	12	18	6.5	200	60	10	
-13	13	19	7	210	70	10	
-14	14	21	7.5	225	80	10	
-15	15	22	8	231	90	10	
-17	17	25	9	244	100	10	
-19	19	27	10	270	120	10	

POWERFIT .

PROFIT® TOOL BOX END WRENCH SET (5pcs.)					
No. TM305 ▼g 460 😭 1					
PROFIT® Tool Box End Wrench M30-8, 10, 12, 13, 14					
Plastic Case L187×W190×H44mm					

- Placed in the tray and housed in a transparent plastic case.
 Smaller diameter of box-ends and thinner body angled 45°x15°.
 Convenient for use on bolts and nuts used in flange joints of industrial machineries or between narrow gaps. (Fig.1) Effective for automobile parts including differentials, propeller shafts, joints and drive shafts of front-drive vehicles, as well
 as for clutch overhauling. Also convenient for attaching or removing carburetors and manifolds during engine overhauls.
- Suitable for automobile servicing operations in tight and deep spaces, such as behind bumpers or inside panels.



*PROFIT is a registered trademark of KYOTO TOOL CO., LTD.

●PROFIT® TOOL COMBINATION WRENCH



PROFIT® TOOL COMBINATION WRENCH m							mm			
No.	S	D ₁	D ₂	T ₁	T ₂	L		▼ g	#	
MS30- 8	8	18	11.5	2.5	4.5	125	18°	20	10	
-10	10	21.5	14.5	3	5.5	150	15°	30	10	
-12	12	26	17.5	3.8	6.5	170	13°	50	10	
-13	13	28.5	18.5	4	7	185	12°	60	10	
-14	14	29.5	20	4.1	7.5	200	11°	80	10	
-15	15	32	21	4.2	8	215	10°	90	10	
-17	17	36	24	4.3	9	240	9°	125	10	
-19	19	40	26.5	4.5	10	260	9°	155	10	

POWERFIT .

POWERFIT .

PROFIT® TOOL COMBINA	TION WRENCH SET (5pcs.)	mm
No. TMS305	▼g 440 😂 1	
Open-End Wrenches	MS30-8, 10, 12, 13, 14	
Plastic Case L187×W190:	×H44mm	

- Placed in the tray and housed in a transparent plastic case.
 The closed end is designed to have Power Fite.
 Slim in form: designed in pursuit of thin lightweight wrenches.

- Shaft designed to be tapered for good torque transmission and ductility.
 Shaft length designed to be optimal for sufficient fastening torque.

The jaw holds the bolt/nut firmly.

Closed End:	
 The offset angle of the shaft is determined for each size, allowing effective transmission of torque and easy operation. 	
The height is to 35mm allowing a hand to get in.	
35mm Offset of the shaft	

*PROFIT® is a registered trademark of KYOTO TOOL CO., LTD.

2. CONVENTIONAL TOOLS

HANDLE WRENCHES

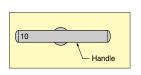


HANDLE WRENCHES

- DO NOT EXTEND A WRENCH BY CONNECTING A PIPE, ETC.
- FIT THE BOLT OR NUT COMPLETELY INTO THE DEEP PART OF THE SOCKET.
- \bullet DO NOT USE A WRENCH AS A SUBSTITUTE FOR A HAMMER.
- DO NOT APPLY IMPACT BY HITTING WITH A HAMMER, ETC.

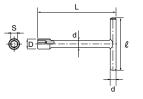
T-SHAPED WRENCH								
No.	S (Hexagonal)	D	d	l	L	▼ g	#	
TH- 8	8	12	8	200	255	300	10	
-10	10	14	9	200	255	300	10	
-12	12	17	10	250	255	430	10	
-13	13	19	10	250	255	440	10	
-14	14	20	11	250	255	440	10	
-17	17	24	12	300	305	540	10	
-19	19	29	14	300	305	680	10	
-21	21	31	14	300	305	780	10	

· Size marked on the top of the handle for easy recognition.



T-SHAPED WRENCH



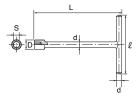


T-SHAPED WRENCH WITH SHORT HANDLE								
No.	S (Hexagonal)	D	d	l	L	▼ g	#	
TH- 8N	8	12	8	130	250	300	1	
-10N	10	14	9	130	250	300	1	
-12N	12	17	10	130	250	430	1	

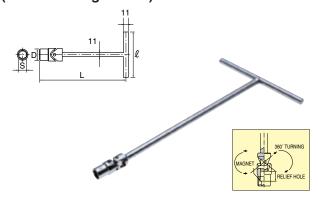
· Short handle for quick turning.

T-SHAPED WRENCH WITH SHORT HANDLE





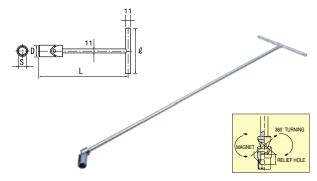
•FLEX T-SHAPED WRENCH (Socket is magnetised)



FLEX T-SHAPED WRENCH						
No.	S (Hexagonal)	D	l	L	▼g	#
THF2-10	10	15	180	330	400	10
-12	12	17	180	330	405	10
-13	13	19	180	330	410	10
-14	14	20	180	335	410	10
-17	17	24	180	335	430	10

CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.

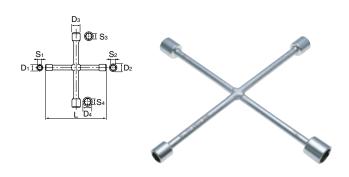
•FLEX T-SHAPED WRENCH (LONG) (Socket is magnetised)



FLEX T-SHAPED WRENCH (LONG)							
No.	S (Hexagonal)	D	l	L	▼ g	#	
THF2-10L	10	15	180	700	680	10	
-12L	12	17	180	700	680	10	
-13L	13	19	180	700	690	10	
-14L	14	20	180	705	690	10	
-17L	17	24	180	705	700	10	

CAUTION DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.

●CROSS RIM WRENCH



CROSS RIM WRENCH								
No.	S ₁ ×S ₂ ×S ₃ ×S ₄ (Hexagonal)	$D_1 \times D_2 \times D_3 \times D_4$	L	▼kg	#			
XH-14-21	14×17×19×21	20×25×29×31	400	1.3	10			
-17-23	17×19×21×23	25×29×31×33	400	1.5	10			
-19-26	19×21×23×26	29×31×33×37	400	1.5	10			
-19-27	19×22×24×27	29×32×35×39	400	1.6	10			

Note: Please refer below pages for Drive Tools.







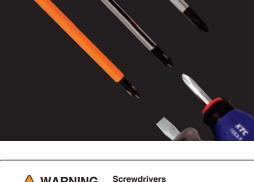


▶P.71



2. CONVENTIONAL TOOLS

SCREWDRIVERS





• Do not use if there is a live electric current. The plastic on the grip does not provide insulation against electrical current.





- Use screwdrivers that conform to the size of the screws.

 Do not use the screwdriver as a lever, scraper, punch, or chisel.
- Do not use this tool as a hammer.
- Do not apply strong impact on this tool by hitting it with a hammer, etc.
 The use of protective goggles is recommended.
- Do not use screwdrivers with chipped, worn, or cracked heads
- Do not hold materials in one hand and the screwdriver in the other as it is unsafe. Carry out maintenance in a safe, stable position.





■Standard screwdriver (21st Century Version Tools) ▶ P.137

The square shaft allows for easy delivery of high torque while being effective in the direction it is being pushed in. A double format consisting of environmentally friendly polypropylene and elastomer, which provides a soft, comfortable grip. A hexagonal bolster is attached when extra power is needed. (Excluding stubby screwdrivers)



■Palm screwdriver P.138

A soft grip that reduces fatigue.

A hexagonal bolster is attached when high torque for larger sizes is needed.



■Plastic grip screwdriver ▶P.138

Acetyloid plastic grip with high durability. A powerful piercing type screwdriver with a black finish using special steel in the shaft.



■Soft grip screwdriver ▶P.143

The screwdriver employs a handle that is easy to grip and turn while applying force in pursuit of user-friendliness. Careful consideration has been provided in selecting grip material by using environmentally-friendly wood and plastic.

■Wooden grip screwdriver ▶P.145

Conventional screwdriver using natural timber for a soft, gentle grip. Wide grooves have been designed in 4 sections for the purpose of improved grip, concentrating the application of strength by the thumb and little finger, facilitating gripping and greater power for use.







Chart of KTC screwdrivers *Except special screwdrivers = with magnetic type Non-through type Through type Shaft Rounded shaft Square shaft Rounded shaft Thin shaft (Rounded shaft) Grip Bolster Bolster Bolster Material Shape Yes Yes No Yes No No No PDDZ / MDDZ D10SP / D10SM Square D10P2 / D10M2 D10P / D10M **Plastic** Hexagon DPD / DMD Rounded ●PDD1 / MDD1 Round D8P2 / D8M2 D8P / D8M Square D7P2 / D7M2 D1P2 / D1M2 ND2P / ND2M D7P / D7M D7SP / D7SM Soft Hexagon Rounded PDEA / MDEA* ●D6P / D6M MDEA1 Hexagon ND3P / ND3M

*Only PDEA-2, 3, MDEA-100, 150

Selecting screwdrivers

As there is a great variety of screwdriver makes available, how do you select the appropriate type? Here, we will show you ways of selecting screwdrivers more suited to your purpose while showing you screwdriver types and functions.



Wooden

Select the grip

Rounded

Firstly, the grip is a very important factor when selecting a screwdriver. Select the material that it is best suited to your project. Every effort has been carried out to improve the grip but as users all have differently shaped hands, it is important that you try gripping the tool before purchase.

Try this in the store in front of the sales staff.



Mainly made from hard durable materials that do not get dirty easily, such as Acetyloid.



The elasticity of the surface provides a soft grip.



familiar screwdriver that uses wooden materials. The screwdriver provides good grip even for greasy hands.

2Shape a.Round type

OD12P2 / D12M2

PD / MD

The round grip that allows for the hand to firmly grasp the tool is shaped for easier use when pushing and turning action is required.

The ratio of pushing and turning for a basic screwdriver is said to be 7:3. This shape is often used for wooden screws that especially require the pushing and turning action. It is also suitable for women and when the application of strength by the user





A standard shape held using the basic side-grip method allows for easy use when turning rapidly or hitting the washer.

Select the shaft

The shaft is an important component as well as the grip. Select the correct shaft from the 5 points provided below.



used for leverage by attaching a hex to the root of the shaft when high torque is needed.



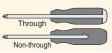
1 Go Through and non-through

The through type shaft can also be used as a shock screwdriver for hitting washers. (However, the tool will quickly deteriorate.) The piercing type shaft is identified in the catalog by this



Go Through type





4 Material

a.Cr-V (Chrome vanadium copper)

A special steel that has anti-wear properties that are desired in screwdrivers. The steel is often used in high-grade models.

b.SWRH62A (Hard drawn steel wired material)

A common steel material used for screwdrivers regulated by JIS standards

c.S55C, S45C (Carbon steel)

A common steel material used for screwdrivers regulated by JIS standards.

2 Shape

a.Rounded shaf



A common shape that is easy to use when turning while supporting the shaft with the hand.

b.Square shaft

Open end wrenchs can be used for leverage when high turning torque is needed.

5 Magnetic tip

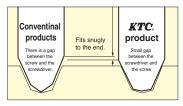
These tools have magnetized tips. The magnetic type is identified in the catalog by this symbol.



SCREWDRIVERS

New plastic grip screwdriver A new design that embodies a new concept.

- The design of the edges of the screwdriver has been modified in order to produce a new type of screwdriver.
- The square form (shape) allows for easy delivery of high torque while being effective in the direction it is being pushed in.
- A triple format consisting of environmentally friendly polypropylene and elastomer which provides a soft, comfortable grip.
- ullet The grip end is color coded with red \oplus (Cross head) and green \ominus (Flat head) for easy distinction.
- Improved ease of use due to the tip shape that snugly fits the screw.
- The axle is of a hexagon design. The attached bolster is effective when high torque is needed. (Excluding stubby screwdrivers)
- The cross screwdriver reduces the gap with the screw and prevents cam out (the applied force from being forced outwards)



*Cam out

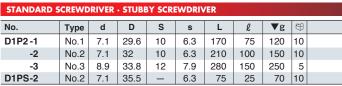
This refers to the force of the screwdriver that escapes when turning the screw.

STANDARD SCREWDRIVER SET (8pcs.)							
No. TPMD18 ▼kg 1	.2 ♥1						
Plastic grip screwdriver piercing type (cross)	D1P2-1, 2, 3						
Plastic grip screwdriver piercing type (flat)	D1M2-5, 6, 8						
Plastic grip stubby screwdriver (cross)	D1PS-2						
Plastic grip stubby screwdriver (flat)	D1MS-6						
• With hovagonal holetor (Evoluding etub	by ecrowdrivere)						

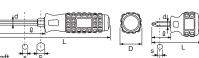
- The tip is magnetized.Cr-V is used for shaft material.

*The stubby screwdriver is a non-through type shaft.





- The tip is magnetized.
- · Cr-V is used for shaft material.



*The stubby screwdriver is a non-through type shaft.



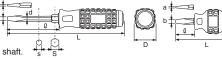
DSTANDARD SCREWDRIVER · STUBBY

SCREWDRIVER D.PAT.

SCREWDRIVER D.PAT.

STANDARD S	STANDARD SCREWDRIVER - STUBBY SCREWDRIVER												
No.	а	b	d	D	S	s	L	l	▼ g	#			
D1M2 -5	0.8	5.5	7.1	29.6	10	6.3	170	75	120	10			
-6	1.0	6.3	7.1	32	10	6.3	210	100	150	10			
-8	1.2	8	8.9	33.8	12	7.9	280	150	250	5			
D1MS -6	1.0	6.3	7.1	35.5	_	_	75	25	70	10			

- The tip is magnetized.Cr-V is used for shaft material.



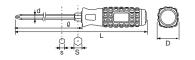
*The stubby screwdriver is a non-through type shaft.

-	D1M2-6	
	D1MS-6	

STANDARD LONG SCREWDRIVER D.PAT.

STANDARD L	STANDARD LONG SCREWDRIVER											
No.	Туре	d	D	S	s	L	l	▼g	#			
D1P2-130	No.1	7.1	29.6	10	6.3	400	300	180	5			
-230	No.2	7.1	32	10	6.3	410	300	200	5			
-330	No.3	8.9	33.8	12	7.9	430	300	310	5			

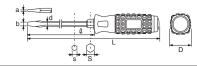
- With a long neck (length 300mm), the six sided type is useful in hard to reach areas around engines
- With hexagonal bolster.
- Cr-V is used for shaft material.
- The tip is magnetized.





STANDARD L	STANDARD LONG SCREWDRIVER											
No.	а	b	d	D	S	s	L	l	▼ g	#		
D1M2-530	0.8	5.5	7.1	29.6	10	6.3	400	300	180	5		
-630	1.0	6.3	7.1	32	10	6.3	410	300	200	5		
-830	1.2	8.0	8.9	33.8	12	7.9	430	300	310	5		

- With a long neck (length 300mm), the six sided type is useful in hard to reach areas around engines
- With hexagonal bolster.
- · Cr-V is used for shaft material. • The tip is magnetized.



●STANDARD LONG SCREWDRIVER D.PAT.



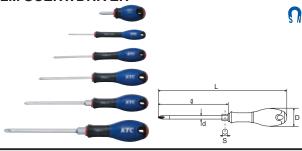


●PALM SCREWDRIVER SET (8pcs.)



	PALM SCREWDRIVER SET (8pcs.)	
	No. PMDEA8	▼ g 740	9 1
U N	Palm screwdriver cross	No.1	PDEA-1
		No.2	PDEA-2
		No.3	PDEA-3
	Palm screwdriver flat	5.5×100	MDEA-75
		6.5×125	MDEA-100
		8 ×150	MDEA-150
	Stubby screwdriver cross	No.2	PDEA-P
	Stubby screwdriver flat	6 × 30	MDEA-M

PALM SCERWDRIVER



PALM SCERV	PALM SCERWDRIVER										
No.	Туре	d	D	S	L	l	▼ g	#			
PDEA-00	No.00	3	20	_	148	50	20	5			
-0	No. 0	4	27	_	177	75	40	5			
-1	No. 1	5	32	_	205	100	70	5			
-2	No. 2	6	32	10	230	125	95	5			
-3	No. 3	8	40	12	266	150	165	5			
-P	No. 2	6	32	_	89	30	40	5			

- The large size comes attached with a hexagonal bolster. (Only PDEA-2, 3)
 The tip is magnetized.

PALM SCERWDRIVER



PALM SCERW	/DRIVE	?								
No.	а	b	d	D	S	L	l	▼ g	#	
MDEA-75	0.8	5.5	5	32	_	205	100	70	5	
-100	0.9	6.5	6	32	10	230	125	95	5	
-150	1.1	8	8	40	12	266	150	165	5	
MDEA-M	0.9	6	6	32	_	89	30	40	5	

- The large size comes attached with a hexagonal bolster.(Only MDEA-100, 150)

●PALM THIN BLADE SCERWDRIVER



PALM THIN B	PALM THIN BLADE SCERWDRIVER											
No.	а	b	d	D	L	l	▼ g	#				
MDE1A-50	0.4	3	3	20	148	50	20	5				
-75	0.45	4	4	27	177	75	40	5				
-150	0.9	5	5	32	255	150	75	5				
-200	0.9	6	6	32	305	200	100	5				

• This screwdriver is especially useful for operating on meters/gauges and electrical systems.

● PLASTIC GRIP SCREWDRIVER SET (8pcs.)





	PLASTIC GRIP SCI	REWDRIVER S	EI (Spcs.)	
	No. PMD18		▼g 910	₩1
	Flat Screwdriver	75	MDD1-75	
•		100	MDD1-100	
		150	MDD1-150	
	Cross Screwdriver	No.1	PDD1-1	
		No.2	PDD1-2	
		No.3	PDD1-3	
	Stubby Screwdriver	Flat	SD1-M	
		Cross	SD1-P	

- The tip is magnetized. (Except SD1-M, P)
- · Cr-V is used for shaft material.

*The stubby screwdriver is a non-through type shaft.

PLASTIC GRIP SCREWDRIVER



	n	
•	-	

PLASTIC GRIP SCREWDRIVER										
No.	Туре	D	d	L	l	▼g	#			
PDD1 -1	No.1	27	5	160	75	75	10			
-2	No.2	30	6.3	205	100	130	10			
-3	No.3	33	8	265	150	210	5			

- The tip is magnetized.
- Cr-V is used for shaft material.

SCREWDRIVERS

PLASTIC GRIP SCREWDRIVER											
No.	а	b	d	D	L	l	▼ g	8			
MDD1 - 75	0.7	5.5	5.5	27	160	75	75	10			
-100	0.8	6	6	30	205	100	130	10			
-150	1.0	8	8	33	265	150	210	5			

- The tip is magnetized.
- · Cr-V is used for shaft material.

100 150	130 210	10		St.
	1			
b Description	ld 1		D -	

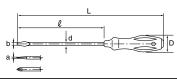
● PLASTIC GRIP SCREWDRIVER

● PLASTIC GRIP LONG SCREWDRIVER

PDDZ-2

PLASTIC GRIP L	PLASTIC GRIP LONG SCREWDRIVER									
No	Туре	а	b	d	D	L	l	▼ g	#	
PDDZ -2	Cross No.2	_	_	5.5	27	383	288	100	5	
MDDZ-400	Flat	0.7	5.5	5.5	27	383	288	90	5	

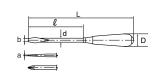
- Convenient for adjusting carburetors, etc.
- S55C is used for shaft material.



MDDZ-400

HEAVY DUTY S	HEAVY DUTY SCREWDREIVER										
No. Type a b d D L ℓ ▼g 🕾											
FPD-250	Cross	_	_	9	32	275	150	210	5		
FD -250	Flat	1.2	10	9	32	275	150	210	5		
The screwdriver has increased durability through widening and lengthening the shaft.											

- The shaft and the handle are strongly fixed.
- · SWRH62A is used for shaft material.

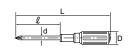




WOODEN GRI	WOODEN GRIP SCREWDRIVER										
No.	Туре	D	L	l	▼g	#					
PD -1	No.1	5	24	170	75	60	10				
-2	No.2	6	28	220	100	110	10				
-3	No.3	8	33	285	150	190	5				
-1	No 4	a	3/	350	200	260	5				

- Traditional wooden grip.

 S55C (PD-1, 2, 3), S45C (PD-4) is used for shaft material.



● WOODEN GRIP SCREWDRIVER
are man

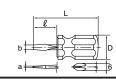
WOODEN GRIP SCREWDRIVER										
No.	а	b	d	D	L	l	▼g	#		
MD - 50	0.6	4.5	5	24	145	50	55	10		
- 75	0.7	5.5	5	24	170	75	55	10		
-100	0.9	6	6	28	220	100	110	10		
-125	0.9	7	7	33	260	125	160	10		
-150	1.0	8	8	33	285	150	190	5		
-200	1.1	9	9	34	350	200	250	5		
-250	1.2	10	9	34	400	250	280	5		
-300	1.2	10	9	34	450	300	310	5		

- Traditional wooden grip.
 \$55C (MD-50~150), \$45C(MD-200~300) is used for shaft material.

WOODEN GRIP SCR	REWDRIVER
	100
	L L

STUBBY SCREW	STUBBY SCREWDRIVER									
No.	Туре	а	b	D	L	l	▼ g	8		
SD1- P	Cross No.2	_	_	32	72	26	40	10		
- M	Flat	0.8	6	32	72	26	40	10		

- Convenient for attaching / detaching screws in narrow spaces.
 SWRH62A is used for shaft material.



STUBBY SCREWDRIVER



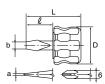
MINI STUBBY SCREWDRIVER





MINI STUBBY S	CREWDRIVER	!							
No	Туре	а	b	D	L	l	▼g	#	
SD3-P	Cross No.2	_	_	29	40	20	25	10	
-M Flat 0.7 6				29	40	20	25	10	

- With improved function of Stubby Screwdriver.
 SWRH62A is used for shaft material.



SHORT STUBBY SCREWDRIVER





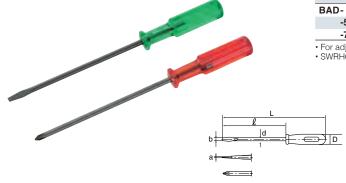
SHORT STUBBY	SHORT STUBBY SCREWDRIVER										
No	Туре	D	L	l	▼g	#					
SD4-P	Cross No.2	40	30	15	20	10					

- Total length: 30mm for use in narrow space.
- (Ex. attaching/detaching mud guards, console boxes, installment panels)

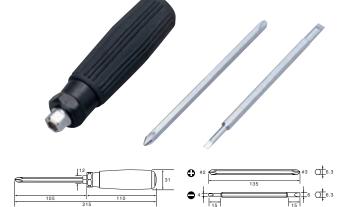
 •ø40 grip for applying higher torque.

 •SWRH62A is used for shaft material.

BABY SCREWDRIVER



●INTERCHANGEABLE SCREWDRIVER SET



No	Туре	а	b	d	D	L	l	▼g	4	
BAD- 0	Cross	_	_	3	11	120	75	10	50	
-50	Flat	0.4	3	3	11	95	50	10	50	
-75	Flat	0.4	2.5	3	11	120	75	10	50	
For adjusting meters and other precision equipments.SWRH62A is used for shaft material.										

BABY SCREWDRIVER

INTERCHANGEABLE	SCREWDRIVER SET						
No. DB4	No. DB4 ▼g 180						
Cross-bit for the interc	Cross-bit for the interchangeable screwdriver (No.2×No.3)						
FI	at bit (tip width 4 × tip width 6)	-M					
H	andle	-H					

• Cr-V is used for shaft material.

- 1 bit fits 2 sizes. One-touch operated through inserting and removing.
 A soft grip that prevents slipping.
 The shaft is hexagonal (each side of the hexagonal shaft is 6.3 mm). The attached bolster

- (hexagonal width-across flat 12 mm) allows the use of an open end wrench for tightening.

 Screwdriver bits that are readily available can also be used. (Where each side of the shaft is 6.3 mm and full length is 65 mm and over)

Replacement parts For the interchangeable screwdriver

No.	Product name	
DB4-P	Cross bit (No.2×No.3)	
-M	Flat bit (tip width 4 × tip width 6)	
-H	Handle	

RATCHET SCRE	WDRIVER			
No. DBR14	▼g 340			
Body	1pcs.			
Axis	Hex hole width across flats 6.3mm×8mm 1pcs.			
Bit	Cross No.1 × Flat 5.5mm,			
	Cross No.3 × Flat 8mm,			
	Torx T15 × T20, Torx T25 × T30,			
	Hex. 2.5mm×3mm, Hex. 4mm×5mm 1pcs. each			
	Cross No.2 × Flat 6mm 2pcs.			

- Ratchet mechanism that's capable of quick turning in both tightening and loosening

- It can also be used as a regular screwdriver by fixing the ratchet.
 2 on the axis, 6 on the grip end, the total of 8 bits can be stored.
 14 types of cross, flat, T-type Torx and hex. bits are attached. Only the frequently used cross No.2 × flat 6mm are 2 pcs.

Supply Parts

No.		Product Name		
DBR14-01	End Cap (Gray)		
DBR14-02	Axis	Hex hole width across flats Width 6.3mm×8mm		
DBR14-03	Bit	Cross No.1 × Flat 5.5mm		
DBR14-04	Bit	Cross No.2 × Flat 6mm		
DBR14-05	Bit	Hex. 2.5mm × Hex. 3mm		
DBR14-06	Bit	Hex. 4mm × Hex. 5mm		
DBR14-07	Bit	Torx T15 × Torx T20		
DBR14-08	Bit	Torx T25 × Torx T30		
DBR14-09	Bit	Cross No.3 × Flat 8mm		
DBR14-10	Bit	Torx T27 × Torx T40		

Usage State Bit Storage Part 37.5

RATCHET SCREWDRIVER			
No. DBR16	▼g 340	₩ 6	
Body	1pcs.		
Axis	Hex hole width across flats	s 6.3mm×8mm 1pcs.	
Bit	Cross No.2 × Flat 6mm		
	Hex. 1.5mm×2mm, 2.5mm	n×3mm, 4mm×5mm, 6mm×8mm	
	Anti-Tinker Torx T15HxT2	0H, T25H×T30H, T27H×T40H	

- Ratchet mechanism that's capable of quick turning in both tightening and loosening
- directions.

 It can also be used as a regular screwdriver by fixing the ratchet.
- 2 on the axis, 6 on the grip end, the total of 8 bits can be stored.

Supply Parts

No.		Product Name	
DBR16-01	End Cap (Blue)		
DBR14-02	Axis	Hex hole width across flats Width 6.3mm×8mm	
DBR14-04	Bit	Cross No.2 × Flat 6mm	
DBR14-14	Bit	Hex. 1.5mm×2mm	
DBR14-05	Bit	Hex. 2.5mm × Hex. 3mm	
DBR14-06	Bit	Hex. 4mm × Hex. 5mm	
DBR14-15	Bit	Hex. 6mm×8mm	
DBR14-11	Bit	Anti-Tinker Torx T15H×T20H	
DBR14-12	Bit	Anti-Tinker Torx T25H×T30H	
DBR14-13	Bit	Anti-Tinker Torx T27H×T40H	

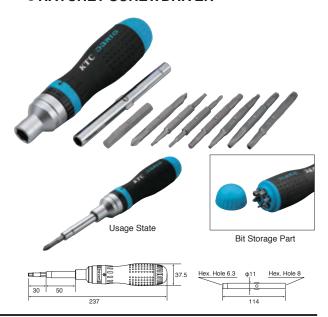
RATCHET SCREWDRIVER No. DBR03 **▼**g 280 ₩ 6 Body 1pcs. Hex hole width across flats 6.3mm×8mm 1pcs. Axis Bit 1/4"sq. Screwdriver 1/4"sq. Socket 7mm, 8mm, 10mm Socket

- Ratchet mechanism that's capable of quick turning in both tightening and loosening
- It can also be used as a regular screwdriver by fixing the ratchet.
- Socket can be stored in the grip.
 * 1/4"sq. screwdriver cannot be stored in the grip.

Supply Parts				
No.		Product Name		
DBR03-01	End Cap (Y	'ellow)		
DBR14-02	Axis	Hex hole width across flats Width 6.3mm×8mm		
DBR14-BD2	Bit	1/4"sq. Screwdriver		
B2-07	Socket	1/4"sq. Socket 7mm		
B2-08	Socket	1/4"sq. Socket 8mm		
B2-10	Socket	1/4"sq. Socket 10mm		

RATCHET SCREWDRIVER

• RATCHET SCREWDRIVER



• RATCHET SCREWDRIVER





INSERT CHANGEABLE FLAT RATCHET SCREWDRIVER SET				
No. TMDB8	▼ g 105 🕲1			
Body				
Cross Bit	No.2 22mm, No.2 30mm, No.3 25mm			
Hexagon Bit	4 · 5 · 6mm			
Bit Holder for 6units	EHDB06			

- SWRH62A is used for shaft material.
- *The screwdriver is not sold individually.

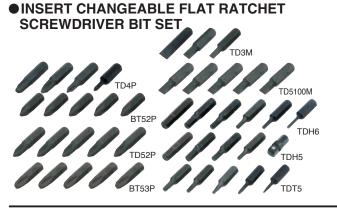
●INSERT CHANGEABLE F	LAT RATCHET
SCREWDRIVER	
CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.	
	27 Bit - Cross No. 2

INSERT CHANG	EABLE FLAT RATCHET SCREW	DRIVER.BI	T SET	
No. RM22		▼ g 60	♥ 10	
Body RM2-110 E	Bit (BT52P)			
Bit Set				
No. BT52P	Cross Bit (No.2 Length22)5pcs.	▼ g 40	₩ 10	
No. TD52P	Cross Bit (No.2 Length30)5pcs.	▼ g 40	₩ 10	
No. BT53P	Cross Bit (No.3 Length25)5pcs.	▼ g 40	₩ 10	
No. TD5100M	Flat Bit (☐ 100 Length30) 5pcs.	▼ g 40	₩ 10	
No. TDH5	Hexagon Bit (3, 4, 5, 6 Length20) adapter (4 1/4"sq. Length30)each 1 unit		₩ 10	
No. EHDB06	Bit Holder 1 unit	▼ g 10	₩ 10	
Cr-V is used for	bit material.			



- INSERT CHANGEABLE FLAT RATCHET SCREWDRIVER OFFSET TYPE No. RM32 **▼**g 60 ₩ 10 Body * Bit Cross No.2 Total Length 22mm 1pcs.
- 15° offset type that helps avoiding obstacles and secures the finger space.
- Ratchet can be operated in both left and right directions with the switching lever.
 Quick spinning is possible by turning the gear with a fingertip.
- Bit of 6.3mm axis subtense can be used.
- * The body alone is not available.

CAUTION - Please operate the switching lever on left and right securely since it may be the cause of damage or idling.



INSERT CHANGEABLE FLAT RATCHET SCREWDRIVER BIT SET			
No.	Set Contents	#	
TD4P	Cross Bit No.0, No.1, No.2, No.3	10	
BT52P	Cross Bit No.2 (Total Length 22mm) × 5pcs.	10	
TD52P	Cross Bit No.2 (Total Length 30mm) × 5pcs.	10	
BT53P	Cross Bit No.3 (Total Length 25mm) × 5pcs.	10	
TD3M	Flat Bit 4, 5.5, 7	10	
TD5100M	Flat Bit 5.5 (Total Length 30mm) × 5pcs.	10	
TDH6	Hex. Bit 2, 2.5, 3, 4, 5, 6 (Total Length 30mm)	10	
TDH5	Hex. Bit 3, 4, 5, 6 (Total Length 30mm) Adaptor (Notch 1/4"sq. Total Length 30mm)	10	
TDT5	T-Type Torx Bit T6, T8, T10, T15, T20 (Total Length 20mm)	10	

- It is a bit set of 6.3mm axis opposing side that can be used for the insert changeable flat ratchet screwdriver (TMDB8, RM22, RM32).
 It can also be used for Digital Ratchet screwdriver type (GLK060~500) P.180 and Torque screwdriver (GDP-080~GDP-450) P.190.

IMPACT SCREWDRIVER SET

AUTION • GRIP THE CENTER SECURELY. • HIT THE CENTER SECURELY.

• USE EXCLUSIVE BITS. • USE APPROVED EYE PROTECTION.



IMPACT SCR	EWDRIVER SET			
No. SD6		▼ kg 1.1	₩6	
Body		SD30-B		
Bit Holder (Op	oposite side8mm)	SD30-8H		
Cross Bit	No.1	SDP-1		
	No.2	SDP-2		
	No.3	SDP-3		
Flat Bit	(Tip Thickness1)	SDM-1.0		
	(Tip Thickness1.6)	SDM-1.6		
	(Tip Thickness1.8)	SDM-1.8		
Metal Case L	170×W50×H33	SD6-M		

- Light & easy to use and especially effective for loosening tightly fastened bolts or rusted bolts.
- · Cr-V is used for shaft material.

Rody	,
Doug	

-1.6

-1.8

Body									
No.	sq.	D	L	▼kg	#				
SD30-B	12.7	30	142.5	1	1				
Bit Holder									
No.	sq.	D	L	▼g	#				
SD30-8H	12.7	22	36	10	1				
Cross Bit		Cross Bit							
No.	Туре	d	L	▼g	8				
No. SDP-1	Type No.1	d 8	L 80	▼g 10	10				
		-	_		-				
SDP-1	No.1	8	80	10	10				
SDP-1 -2	No.1 No.2	8	80 80	10	10				
SDP-1 -2 -3	No.1 No.2	8	80 80	10	10				

80

80

10

10

10

10

1.6

1.8

SOFT GRIP SCREWDRIVER SET (8pcs.) No. TD798 ▼kg 1 ₩ 10 Cross Soft Grip Screwdriver D7P-1 No.1 D7P-2 No.2 D7P-3 No.3 Flat Soft Grip Screwdriver D7M-5 100 D7M-6 D7M-8 150 Cross Soft Stubby Screwdriver D9P-225 No.2 Flat Soft Stubby Screwdriver D9M-625 25

- Elastomer used as grip materials; lightweight, environment friendly, not sticky.

 The orange grip color indicates "cross".

 The green color of the grip indicates "flat".

 The shaft is through type and the tip is magnetized.

 The package can be used as a tray.

 Cr-V is used for shaft material.

No. TD2798	▼kg 1	₩ 10	
Cross Soft Grip Screwdriver Through type	No.1	D7P2-1	
	No.2	D7P2-2	
	No.3	D7P2-3	•
Flat Soft Grip Screwdriver Through type	75	D7M2-5	
	100	D7M2-6	
	150	D7M2-8	
Cross Soft Stubby Screwdriver	No.2	D9P-225	
Flat Soft Stubby Screwdriver	25	D9M-625	

- Elastomer used as grip materials; lightweight, environment friendly, not sticky.
 The orange grip color indicates "cross".

- The green color of the grip indicates "flat".
 The shaft is through-type and the tip is magnetized.
 The package can be used as a tray.
- · Cr-V is used for shaft material.

*The stubby screwdriver is a non-through type shaft.

● SOFT GRIP SCREWDRIVER SET (8pcs.)



SOFT GRIP SCREWDRIVER GIFT SET (2pcs.)							
SOFT GRIP SCREWDRIVER GIFT SET (2pcs.)							
No. TD902 Soft Stubby Screwd	Iriver Set						
Cross Soft Stubby Screwdriver	No.2	D9P-225					
Flat Soft Stubby Screwdriver	25	D9M-625					
No. TD702 Soft Grip Screwdriv	er Set						
Cross Soft Grip Screwdriver	No.2	D7P-2					
Flat Soft Grip Screwdriver	100	D7M-6					

- Cr-V is used for shaft material.
- ■Best for gift-giving
- Pleasing as a gift, Convenient set of two pieces.
 Operable in narrow spaces; good appearance.
 Necessities, popular at home and office.

● SOFT GRIP SCREWDRIVER GIFT SET (2pcs.)



SOFT GRIP SCR	SOFT GRIP SCREWDRIVER										
No. Type d D L ℓ ▼g 🕾											
D7P2 -1	No.1	5.5	29	195	75	90	10				
-110	No.1	5.5	29	220	100	95	10				
-2	No.2	6.3	31	225	100	110	10				
-215	No.2	6.3	31	275	150	120	10				
-3	No.3	8	33	280	150	170	10				

- Elastomer used as grip materials; lightweight, environment friendly, not sticky.
 The orange grip color indicates "cross".
 The shaft is through type and the tip is magnetized.
 Cr-V is used for shaft material.

SOFT GRIP SCREWDRIVER



SOFT GRIP SCREWDRIVER



SOFT GRIP SC	REWDRI	/ER							
No.	а	b	d	D	L	l	▼ g	#	
D7M2-5	0.75	5.5	5.5	29	195	75	90	10	
-510	0.75	5.5	5.5	29	220	100	95	10	
-6	0.95	6	6.3	31	225	100	110	10	
-615	0.95	6	6.3	31	275	150	120	10	
-8	1.1	8	8	33	280	150	170	10	

- The green color of the grip indicates "flat".
 The shaft is through type and the tip is magnetized.
 Cr-V is used for shaft material.

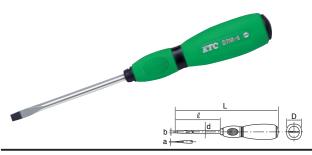
SOFT GRIP SCREWDRIVER



	SOFT GRIP SCR	EWDRIVE	R						
n	No.	Туре	d	D	L	l	▼g	#	
2 N	D7P-1	No.1	5.5	29	200	75	80	10	
	-110	No.1	5.5	29	225	100	85	10	
	-115	No.1	5.5	29	275	150	95	10	
	-120	No.1	5.5	29	325	150	105	10	
	-2	No.2	6.3	31	230	100	105	10	
	-215	No.2	6.3	31	280	150	110	10	
	-220	No.2	6.3	31	330	200	130	10	
	-230	No.2	6.3	31	430	300	155	10	
	3	No.3	8	33	285	150	160	10	

The shaft is non-through type and the tip is magnetized.
Cr-V is used for shaft material.

SOFT GRIP SCREWDRIVER



	SOFT GRIP SCR	EWDRI	/ER							
N	No.	а	b	d	D	L	l	▼ g	#	
IV	D7M-5	0.75	5.5	5.5	29	200	75	80	10	
	-510	0.75	5.5	5.5	29	225	100	85	10	
	-515	0.75	5.5	5.5	29	275	150	95	10	
	-520	0.75	5.5	5.5	29	325	200	105	10	
	-6	0.95	6	6.3	31	230	100	105	10	
	-615	0.95	6	6.3	31	280	150	115	10	
	-620	0.95	6	6.3	31	330	200	130	10	
	-630	0.95	6	6.3	31	430	300	155	10	
	-8	1.1	8	8	33	285	150	160	10	

- The shaft is non-through type and the tip is magnetized.
 Cr-V is used for shaft material.

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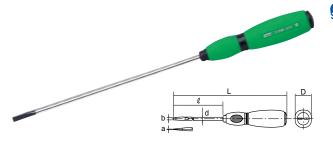
SOFT GRIP SCREWDRIVER



	SOFT GRIP SCR	EWDRIVE	R						
	No.	Туре	d	D	L	l	▼g	#	
N.	D7SP-0075	No.00	4	20	165	75	35	10	
	-0010	No.00	4	20	190	100	35	10	
	-075	No.0	4	20	165	75	35	10	
	-010	No.0	4	20	190	100	35	10	
	-175	No.1	4	20	165	75	35	10	
	-110	No.1	4	20	190	100	35	10	
	-115	No.1	4	20	240	150	40	10	

The shaft is thin and non-through type.Cr-V is used for shaft material.

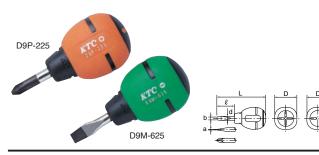
SOFT GRIP SCREWDRIVER



	SOFT GRIP SCREWDRIVER										
N	No.	а	b	d	D	L	l	▼g	8		
N	D7SM-450	0.5	4	4	20	140	50	30	10		
	-475	0.5	4	4	20	165	75	35	10		
	-410	0.5	4	4	20	190	100	35	10		
	-412	0.5	4	4	20	215	125	40	10		
	-415	0.5	4	4	20	240	150	40	10		
	-420	0.5	4	4	20	290	200	45	10		

The shaft is thin and non-through type.Cr-V is used for shaft material.

SOFT STUBBY SCREWDRIVER



Cross **▼**g \mathfrak{A} Type d D D9P-125 35 25 40 No.1 6 75 10 -225 25 40 10 No.2 6 35 75

	Flat									
	No.	а	b	d	D	L	l	▼g	8	
in.	D9M-625	0.8	6	6	35	75	25	40	10	

The shaft is non-through type and the tip is magnetized. Cr-V is used for shaft material.

SOFT ROUND S	CREWDR	IVER										
No.	No. Type d D L ℓ ▼g 🕾											
D8P2-1	No.1	5.5	32	170	75	65	10					
-2	No.2	6.3	40	215	100	120	10					
-215	No.2	6.3	40	265	150	130	10					

- Round grip end, good for "push and turn" without palm pain.
 Elastomer used as grip materials; lightweight, environment friendly, not sticky.
 The shaft is through type and the tip is magnetized.
 Cr-V is used for shaft material.



SOFT ROUND SCREWDRIVER												
No.	а	b	d	D	L	l	▼g	#				
D8M2-5	0.75	5.5	5.5	32	170	75	65	10				
-6	0.95	6	6.3	40	215	100	120	10				
-615 0.95 6 6.3 40 265 150 130 10												
	6.11		. ""									

- The green color of the grip indicates "flat".
 The shaft is through type and the tip is magnetized.
 Cr-V is used for shaft material.



SOFT ROUND SCREWDRIVER											
No.	Туре	d	D	L	l	▼g	#				
D8P-1	No.1	5.5	32	170	75	55	10				
-110	No.1	5.5	32	195	100	60	10				
-115	No.1	5.5	32	245	150	70	10				
-2	No.2	6.3	40	215	100	100	10				
-215	No.2	6.3	40	265	150	110	10				
-220	No.2	6.3	40	315	200	125	10				

- The shaft is non-through type and the tip is magnetized.
- · Cr-V is used for shaft material.



SOFT ROUND SCREWDRIVER											
No.	а	b	d	D	L	l	▼g	8			
D8M-5	0.75	5.5	5.5	32	170	75	55	10			
-510	0.75	5.5	5.5	32	195	100	60	10			
-515	0.75	5.5	5.5	32	245	150	70	10			
-6	0.95	6	6.3	40	215	100	100	10			
-615	0.95	6	6.3	40	265	150	110	10			
-620	0.95	6	6.3	40	315	200	125	10			

- The shaft is non-through type and the tip is magnetized.
 Cr-V is used for shaft material.

●SOFT ROUND SCRE	WDRIVER
	M
4	KIC SEEL C
	L D
b	d

WOODEN GRIP SCREWDRIVER										
No.	Туре	d	D	L	l	▼g	#			
D12P2-1	No.1	5.5	30	195	75	60	10			
-2	No.2	6.3	32	230	100	120	10			
-215	No.2	6.3	32	280	150	130	10			
-3	No.3	8	35	290	150	200	10			

- Palm-friendly native wood is used for grip.
- The shaft is through type and the tip is magnetized.
 Cr-V is used for shaft material.

THE STATE OF THE S
e d

WOODEN GRIP SCREWDRIVER

WOODEN GRIP SCREWDRIVER											
No.	а	b	d	D	L	l	▼g	8			
D12M2-5	0.75	5.5	5.5	30	195	75	60	10			
-6	0.95	6	6.3	32	230	100	120	10			
-7	0.95	7	7	35	265	125	180	10			
-8	1.1	8	8	35	290	150	200	10			

- Palm-friendly native wood is used for grip.
 The shaft is through type and the tip is magnetized.
 Cr-V is used for shaft material.



● WOODEN GRIP SCREWDRIVER D.PAT

SCREWDRIVERS

2. CONVENTIONAL TOOLS

PLIERS, CUTTING **PLIERS, SHEARS**





Pliers, cutting pliers, shears

Do not use if there is a live electric current.

The plastic on the grip does not provide insulation against electrical current



- Do not use this tool as a hammer
- Do not apply strong impact on this tool by hitting it with a hammer, etc.
- Take care not to get hands or fingers caught
- between the grips.

 Take care when adjusting the width of the mouth.

- Water pump pliers
 Do not use this tool as a hammer.
 Do not apply strong impact on this tool by hitting it with a hammer, etc.
- Firmly hold the pliers perpendicular to the pipe and hold firmly at the center.
 Do not twist or apply force sideways.
 Take care when adjusting the width of the mouth.

Snap rings

- Do not use except for snap rings.
 Use pliers that conform to the size of the snap rings.
 The pliers can loosen when too much force is applied.
- The snap ring may pop out if the tool looses its grasp.
 Wipe off any grease from the hole of the snap ring and tip of the pliers before use.
- · Use protective goggles when working

Pliers and nippers

- r*ners and nippers

 Check the direction the cut piece is likely to travel before cutting

 Use protective goggles when working.

 Do not use this tool as a hammer.

 Do not apply strong impact on this tool by hitting it with a hammer, etc.

 Close the blade and store when the tool is not going to be used.

Shears and bolt clippers Check the direction the cut piece is likely to

- Check the direction the cult piece is likely to travel before cutting.

 Use protective goggles when working.

 Close the blade and store when the tool is not going to be used.

 Do not twist or hit using the blade tip.

 Take care not to cut the hand holding the tool.

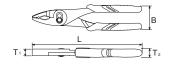
● COMBINATION PLIERS (SOFT GRIP) PAT.P.



COMBINAT	COMBINATION PLIERS (SOFT GRIP)										
No.	Is able to cut through I arge diameter wires (Steel wire)	L	В	T ₁	T ₂	▼ g	8				
PJ-150	ø2	163	47	11	15	200	5				
-200	ø2.6	200	52	11	16	300	5				
-250	ø3.5	250	58	11	16	380	5				

A safe design that prevents the hand from getting jammed when changing to the wide-sized width.
Each blade of the "three stage form" allows the tool to grasp thin and thick objects.





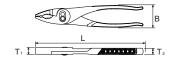
COMBINATION PLIERS



COMBINAT	COMBINATION PLIERS									
No.	Is able to cut through I arge diameter wires (Steel wire)	L	В	T 1	T ₂	▼ g	#			
PJ-150A	ø2	158	40	11	10	190	5			
-200A	ø2.6	195	45.5	11	11	270	5			
-250A	ø3.5	245	50	11	11	350	5			

- A safe design that prevents the hand from getting jammed when changing to the wide-sized width.
- Each blade of the "three stage form" allows the tool to grasp thin and thick objects.





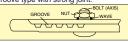
OHEAVY DUTY WATERPUMP PLIERS

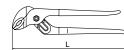


- **HEAVY DUTY WATERPUMP PLIERS** Applicable Dia No. Nominal WPD1-250 ø6~32 265 360 10 -300 300 ø6~50 295 500
- The left and right teeth feature special design which become engaged in a unique way when the pliers turn in the direction of engagement.
- The grooves are worked with a high-precision dedicated machine to eliminate virtually all rattle, and reduce slippage and deformation.
- The joint replacement section is fixed firmly in order to prevent accidental changes in

Groove type with strong joint.

The three stage form of the plie





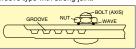
DWATERPUMP PLIERS WITH SLOTTED



Applicable Dia ø6~32 260 380

- The shape of the teeth facilitates the grasp when the pliers are turned towards the lower jaw.
- The grooves are worked with a high-precision dedicated machine to eliminate virtually all rattle, and reduce slippage and deformation.
- Screwdriver-shaped grip end is handy for turning screws and prying.

Groove type with strong joint.



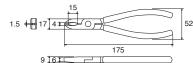
SCREW PLIERS				
No.	Applicable screw size	▼g	#	
PSN-175	M2~M6	160	6	

- Unlike conventional pliers, teeth for holding small screws are given on the tips.
- It is capable of vertical use that's been difficult with ordinary pliers. It is very convenient for loosening crushed, rusted or specially shaped small screws.

 Using the nonslip tips, small screws can be turned at 4 times or more torque compared to
- conventional pliers



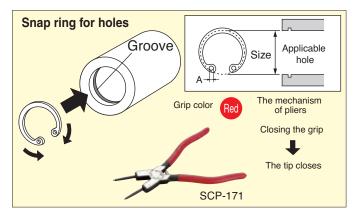


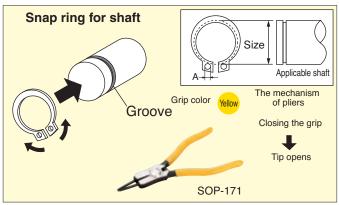




Types and applicable diameters of the snap ring pliers

- ●KTC sets the claw diameter of the snap ring pliers according to the dimensions of the hole as shown in diagram "A" below. The "A" dimensions determine the nominal diameter of the snap ring according to the JIS standards. Therefore, the application of the snap ring pliers (nominal diameter) is dependent on the claw diameter.
- ●The grip color of KTC snap ring pliers is differentiated by using red for the "hole type" and yellow for the "shaft type", setting the tip shape according to use by dividing the types into the "straight type" where the tip is straight and the "curved type" where the tip is curved.





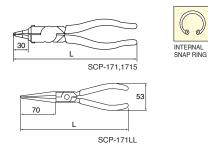
INTERNAL SNAP RING PLIEF INTERNAL SNAP RING PLIERS No. Claw Dia. Applicable Dia. **▼**g SCP- 171 ø2.0 19~30 185 200 10 -1715 12~13 185 200 10 ø1.5

- The claws are interchangeable. The caulked part of the grips has little looseness. The spring helps open the mouth. (The set of claws shown on page 149 can be used.)
- * The number marked on the pliers is the product number (SCP-170), which indicates only the pliers themselves (without claws). (The pliers are not sold alone.)

INTERNAL LONG SNAP RING PLIERS

No.	Claw Dia.	Applicable Dia.	L	▼ g	#	
SCP-171LL	ø 1.2	10~11	220	160	10	

• Long clows for use in narrow spaces.



•INTERNAL SNAP RING PLIERS



*Replaceable parts are available for the opening/closing spring and screw. Check with your dealer for details.

OBENT INTERNAL SNAP RING PLIERS



BENT INTERNAL SNAP RING PLIERS BENT INTERNAL SNAP RING PLIERS Claw Dia. Applicable Dia SCP-172L 10 ø1.2 10~11 165 200

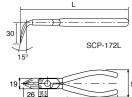
- Claws are interchangeable. (7 kinds of spare claw tip sets are available.)
- Convenient for removing/installing snap rings on master cylinders of brakes.

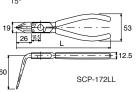
BENT INTERNAL LONG SNAP RING PLIERS

No.	Claw Dia.	Applicable Dia.	L	▼ g	Θ	
SCP-172LL	ø1.2	10~11	175	200	10	

· Long claws (60a) for use in narrow deep spaces.







*Replaceable parts are available for the opening/closing spring and screw. Check with your dealer for details.

•EXTERNAL SNAP RING PLIERS



EXTERNAL SNAP RING PLIERS

EXTERNAL SNAP RING PLIERS

No.	Claw Dia.	Applicable Dia.	L	▼g	#	
SOP- 171	ø2.0	19~30	180	200	10	
-1715	ø1.5	12	180	200	10	

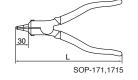
• The claws are interchangeable. The caulked part of the grips has little looseness. The spring helps open the mouth. (The set of claws shown on page 149 can be used.)

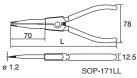
EXTERNAL LONG SNAP RING PLIERS

No.	Claw Dia.	Applicable Dia.	L	▼g	#	
SOP-171LL	ø1.2	10~11	215	200	10	



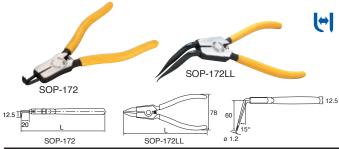
EXTERNAL SNAP RING





* The number marked on the pliers is the product number (SOP-170), which indicates only the pliers themselves (without claws). (The pliers are not sold alone.)

•BENT EXTERNAL SNAP RING PLIERS



BENT EXTERNAL SNAP RING PLIERS

RENT EVTEDNIAL SNIAD DING DI IEDS

DEINI EVIEDIN	AL SINAF HING	3 FLIENS				
No.	Claw Dia.	Applicable Dia.	L	▼ g	#	
SOP-172	ø2.0	19~30	170	195	10	



The claws are interchangeable. The caulked part of the grips has little looseness. The spring helps open the mouth. (The set of claws shown on page 149 can be used.)
The number marked on the pliers is the product number (SOP-170), which indicates only the pliers themselves (without claws). (The pliers are not sold alone.)

12.5 BENT EXTERNAL LONG SNAP RING PLIERS

No.	Claw Dia.	Applicable Dia.	L	▼ g	#				
SOP-172LL	ø1.2	10~11	170	200	10				
*Desired by the second of the facility of the second of th									

'Replaceable parts are available for the opening/closing spring and screw. Check with your dealer for details.

•FLAT TYPE EXTERNAL SNAP RING PLIERS



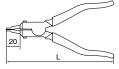


FLAT TYPE EXTERNAL SNAP RING PLIERS No. SOP-173 Flat type 170 10



The claws are interchangeable. The caulked part of the grips has little looseness. The spring helps open the mouth. (The set of claws shown on page 149 can be used.)

The number marked on the pliers is the product number (SOP-170), which indicates only the pliers themselves (without claws). (The pliers are not sold alone.)



^{*}Replaceable parts are available for the opening/closing spring and screw. Check with your dealer for details.

Bent type

Straight type

ø2.0

INTERNAL-EXTERNAL CONVERTIBLE SNAP RING PLIERS									
No.	Diameter of sharp end claw	Applicable Dia.	L	▼ g	#				
SOCP-130	ø1.2	For Internal & External	145	120	6				
		10~40							

Good work efficiency for the hole provided on the shaft.

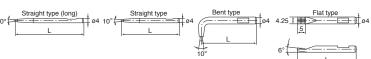




SPARE TIPS FO	R SNAP RING PLIERS (10pcs	5.)				
No.	Contents		L	▼g	#	
SPC 110 Straight type ø2.0 10pcs			36	40	10	
SPC 110L	Straight type ø2.0 (Long)	10pcs.	46	40	10	
SPC0110	Straight type ø1.5	10pcs.	36	40	10	
SPC0110L	Straight type ø1.5 (Long)	10pcs.	46	40	10	
SPC 210	Bent type ø2.0	10pcs.	34	40	10	
SPC0210	Bent type ø1.5	10pcs.	34	40	10	
SPC 310	Flat type	10pcs.	36	40	10	
SPC5	Straight ø1.5 (Long), ø2.0	1pa.ea.	_	40	10	
	Flat	1pa.				
	Bent ø1.5, ø2.0	1pa.ea.				

*Replaceable parts are available for the opening/closing spring. Check with your dealer for details.

- 7 kinds of Interchangeable claws are available for installation/removal of various kinds of snap rings. Economical as the claws are replaceable.
- Claws are made of special alloy steel and specially heat-treated for extra strength. Also upside-down tapered tip to prevent snap rings from clipping off the claws.
- * Suitable for work in narrow spaces.
- * Snap ring pliers with a tell mark as shown on P.147~148 are applicable to the pliers themselves. (Cannot be used for SCP-171LL, SCP-172LL, SCP-172LL, SOP-171LL, SOP-172LL, and SOCP-130.)



CONNECTOR HOUSING PLIERS ● CONNECTOR HOUSING PLIERS D.PAT.P.

No. **Attached Claw** В **▼**g 8 L l Т Claw A 208 53 25 12 177 AD101 Claw B 209 54 25 5 12 177 12 Claw C 194 39 34 176

UsageUnlocking and extraction of connector housing.

Features

- Smoothly unlocks small, thin or recessed lock that's difficult to work with.
- Supports various shapes with 3 types of claw with different bending angles and tip
- Long claw that can avoid bundled wirings and reach deep places is adopted.
- * Spare parts are configured. Please contact your dealer for details.



CAUTION • Please do not use it for usages other than the application.

Supply Parts

No. Product Name		Set Contents	▼ g	#	
AD101-123	Claw Set	Housing Claw A, B, C, 1 each	20	5	

Hex. socket screws are not included.

• If you already own the KTC straight snap ring pliers for hole (No.SCP-171, 1715), it can be used by replacing the claw. (Either screw can be used for the set screw.) P.147















•INTERNAL-EXTERNAL CONVERTIBLE

OSPARE TIPS FOR SNAP RING PLIERS (10pcs.) Flat type

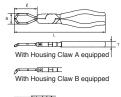
SNAP RING PLIERS

Bent type

Straight type

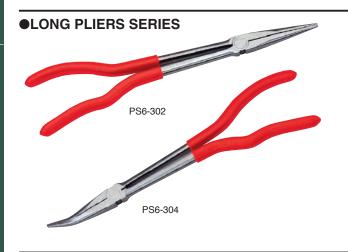
ø1.5





With Housing Claw C equipped

* AD101 is a set of the body and 3 types of housing claw (A, B, C).

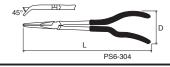


LONG PLIERS S	ERIES						
STRAIGHT LON	IG NOSE CUT	TING PLIERS,	LONG				
No. L ℓ D ▼g 🕾							
DS6-302	295	72	73	300	5		

ANGLED LONG	NOSE CUTTI	NG PLIERS, L	ONG TYPE			
No.	L	Angle	D	▼g	#	
PS6-304	290	45°	73	300	5	





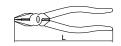


•SIDE CUTTING PLIERS (COATED HANDLE)



SIDE CUTTING I	PLIERS (COATE	D HANDLE)				JIS
No. Nominal		Max. Cutting Dia.	L	▼ g	8	
SPD-150C	150	wireø2.15	165	215	10	
-175C	175	wireø2.75	190	275	10	
-200C	200	wireø3.4	215	375	10	

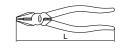
- For cutting copper & steel wire and gripping & bending wires, thin plates, small parts, etc.
- Suitable for steel wire & sheet metal working.
- With vinyl coated handle. (No insulation)



•SIDE CUTTING PLIERS	

SIDE CUTTING I	PLIERS					JIS
No.	Nominal	Max. Cutting Dia.	L	▼ g	#	
SPD-175	175	wireø2.75	185	265	10	

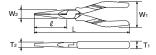
- For cutting copper & steel wire and gripping & bending wires, thin plates, small parts, etc.
- Suitable for steel wire & sheet metal working.



●NEEDLE NOSE PLIERS (STANDARD TYPE) PAT.P.



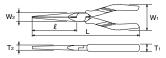
NEEDLE NOSE PLIERS (STANDARD TTPE)											
No.	Max Cut	ting Dia.	L	0.	W ₁	W ₂	T ₁	T ₂	▼g	e41	
	soft	hard									
PSL-150	ø2.0	ø1.6	165	54	54	16	14	9	110	5	
-200	ø2.3	ø1.8	205	70	55	18	15.5	10	190	5	



●NEEDLE NOSE PLIERS (LONG TYPE) PAT.P.



NEEDLE NOSE PLIERS (LONG TYPE)											
No. Max Cutting Dia. L ℓ W₁ W₂ T₁ T₂ ▼g 😭											
PSL-200L		ø1.6	200	89	54	16	14	10	130	5	

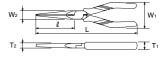


●NEEDLE NOSE PLIERS (SLIM TYPE) PAT.P.



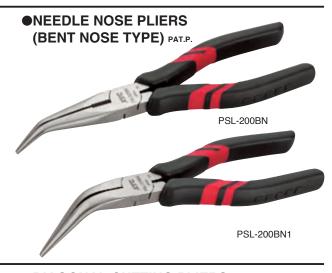
NEEDLE NOS	NEEDLE NOSE PLIERS (SLIM TYPE)										
No.	L	l	W 1	W ₂	T ₁	T ₂	▼ g	#			
PSL-175N	175	54	55	13.5	14.5	9	130	5			

No blade.



NEEDLE NOSE PLIERS (BENT NOSE TYPE)												
No.	Max Cut	ting Dia.	L	l	Anale	W ₁	W ₂	T ₁	T ₂	▼g	æ	
	soft	hard		~				-"	• • •		_	
PSL-150BN	ø2.0	ø1.6	161	15	45°	54	16	14	9	110	5	
-200BN	ø2.3	ø1.8	199	25	45°	55	18	15.5	10	190	5	
-200BN1	_	_	181	50	60°	55	18	15.5	10	190	5	

- A cross groove has been designed on the tip section in order to prevent the grasped object from slipping.
- *The PSL-200BN1 is not supplied with a cutting edge.



DIAGONAL CUTTING PLIERS												
No.	Max (Cuttin	g Dia.		l	W ₁	W ₂	т.	T 2	▼ g	ea .	
	soft	hard	piano wire	_			***2				_	
PN1-125	ø2.3	ø1.6	ø1.2	135	16	49	17	14	10	95	5	
-150	ø2.6	ø2.0	ø1.8	160	18	52	22	15	10.5	172	5	
-175	ø2.6	ø2.0	ø1.8	180	20	51	25	16	11.5	220	5	
-200	ø2.9	ø2.3	ø2.0	205	22	52	28	15	11.5	265	5	

- A multi-functional type that can cut thin soft wires (such as copper) with its tip and hard wires (such as piano strings) with the base.
- Skin peeler attached.





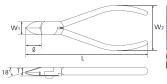
•DIAGONAL C	EUTTING	PLIERS PAT.P.
	PN1-150	W ₂
		T ₂

BAND HOLD	BAND HOLD CUTTING PLIERS										
No.	L	l	W ₁	W ₂	Т	▼g	#				
PNC-125	130	16.5	14	48	8.5	90	6				

- \bullet It is a cutting tool for plastic binding band (2.2~4.8mm width, 1.0~1.5mm thickness,
- 300mm or less length).

 Holding part prevents the cut-end of binding band from flying, allowing the safe work.

 Plastic dedicated blade that prevents protrusion on the cut surface of binding band
- compared to ordinary diagonal cutting pliers for iron wire, preventing work injury.





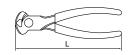


Flush cut surface



END CUTTING PLIERS											
No.	Nominal	Cutting Dia.	L	▼ g	#						
EP-160	160	Hardø2	160	220	10						
		Softø2.6									

- Special tool for cutting wires.
- Can be used for cutting nails.

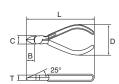


• END CUTTING PLIERS



ANGLE CUTTER	ANGLE CUTTER (TRUE FLUSH CUT)										
No.	Nominal	L	В	С	D	Т	Capacity(ø)	▼ g	#		
EN-21S	125	130	14	12.5	51	6.5	Copper2.0	75	5		

- Special tool for cutting wires on printed circuits.Sharp edge of the blade for smooth cutting.



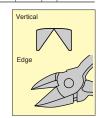


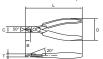


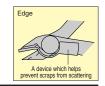




PLATE TYPE CU	PLATE TYPE CUTTER										
No.	Nominal	L	В	С	D	Т	Capacity(ø)	▼g	#		
EN-30S	130	130	11	13	48	7	Copper0.9	50	5		

- For cutting leads in printed circuits.
 Flush cut blade for sharp cutting with stainless body for durability.
- Stopper for easy handling.
- · Built in device for preventing chips from scattering.

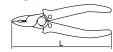






MULTIPLICATIVE SIDE CUTTING PLIERS											
No. Nominal Max. Cutting Dia. L ▼g 🕄											
SPP -175	175	Hard ø1.8	175	200	10						
		Soft ø2.3									

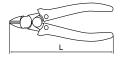
- Compound leverage action offers easy cutting.
- Soft comfortable grip.
 The grip end comes with a ball chain that prevents it from opening.

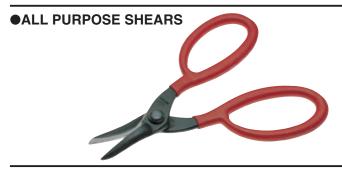




MULTIPLICATIVE CUTTING PLIERS										
No.	Nominal	Cutting Dia.	L	▼g	#					
DPP-165	165	Hard ø1.8 Soft ø2.3	165	180	10					

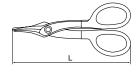
- Compound leverage action offers easy cutting.
- Soft comfortable grip.
- Blade is induction heat-treated.
 The grip end comes with a ball chain that prevents it from opening.





ALL PURPOSE SHEARS									
No.	Nominal	L	▼ g	8					
AP-175	175	180	200	10					

- Induction heat-treated special alloy steel for sharpness and durability.
- Specially shaped back of the blade for avoiding deformation or bent.
- Built-in special nut in the axle bolt for tight and sharp cutting.







BOOT BAND CUTTER									
No.	B ₁	B ₂	Т	L	▼ g	#			
AS402	24	41	11	193	260	10			

UsageCutting the boot or boot band of the drive shaft

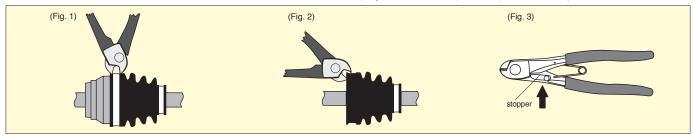
Application
• The stainless boot band of the drive shaft on light weight vehicles to standard vehicles.



Characteristics

- Cutting can be conducted while the boot band is attached.

- Cutting can be conducted while the boot band is attached.
 The boot band can also be cut, increasing overall operation speed. (Fig. 1)
 The same tool can be used to cut the boot after cutting the band. (Fig. 2)
 The attached spring allows easy opening while the stopper allows storage in a compact form. Pushing the stopper while holding the handle will fix the tool in a position where the handle is closed, reducing the total storage space occupied by the tool. (Fig. 3)
 Springs are available as replacement parts. Check with your dealer for details.



BOLT CLIPPER											
No.	Nominal	Cutting Dia.	L	В	▼kg	#					
BP7-300	300(12")	ø5	320	54	0.8	1					
-350	350(14")	ø6	370	60	1	1					
-450	450(18")	ø7	465	69	1.5	1					
-600	600(24")	ø9	620	84	2.6	1					
-750	750(30")	ø12	770	96	3.9	1					
-900	900(36")	ø15	920	108	5.9	1					

- Blade is made of chrome-vanadium steel and forged & heat-treated to increase toughness. Blade tip is additionally processed with secondary quenching by induction heating to provide an improved cut.
- The product cannot be used for previous replacement blades (BP2K-).



SPARE BLADE F	OR BOLT CLIPPER			
No.	Nominal	▼kg	#	
BP7 -300-K	For 300(12")	0.3	1	
-350-K	For 350(14")	0.4	1	
-450-K	For 450(18")	0.6	1	
-600-K	For 600(24")	1.0	1	
-750-K	For 750(30")	1.4	1	
-900-K	For 900(36")	2.1	1	
	For 900(36")	2.1	1	

- \bullet Blade is made of chrome-vanadium steel and forged & heat-treated to increase toughness. Blade tip is additionally processed with secondary quenching by induction heating to provide an improved cut.
- The product cannot be used for previous tools (BP2-).

MINI CLIPPER									
No.	Nominal	Cutting Dia.	L	▼ g	#				
BPZ2-215C	215	Hardø2.9	215	355	6				

OSPARE BLADE FOR BOLT CLIPPER





MULTI-PURPOSE CRIMPING PLIERS									
No.	L	В	T	▼ g	Θ				
AD102A	187	56	22	160	10				

Usage• For the wire harness repair of automobiles.

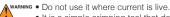
Application

• Applicable wires: JASO AVS AVSS 0.3, 0.5, 0.85, 1.25.

Features

- Supports automotive low-voltage wires 0.3 · 0.5 · 0.85 · 1.25.
- \bullet Supports 3 usages of wire cutting \cdot wire stripping \cdot terminal crimping.
- With the lock function that's convenient in storage.





It is a simple crimping tool that does not have a molding confirmation mechanism. It cannot be used in work that needs to guarantee the reliability

●MULTI-PURPOSE CRIMPING PLIERS (FOR AUTOMOTIVE THREAD) D.PAT.P.



MULTI-PURPOSE CRIMPING PLIERS									
No.	L	В	Т	▼ g	#				
AD102B	220	62.5	22.5	200	10				

Usage• wire cutting ⋅ wire stripping ⋅ terminal crimping.

- \bullet Supports 3 usages of wire cutting \cdot wire stripping \cdot terminal crimping.
- With the lock function that's convenient in storage

Application

Wire Stripping · Cutting

mm	0.25	0.3	0.4	0.5	0.65	0.8	1.0
AWG	30	28	26	24	22	20	18

• Crimping part (open barrel terminal)

0.3sq. 0.5sq. 1.25sq.							
Crimping part (sleeve terminal)							
0.5sq.	1.25sq.	2.0sq.					

- . Do not use it where current is live.
- It is a simple crimping tool that does not have a molding confirmation mechanism. It cannot be used in work that needs to guarantee the reliability

•MULTI-PURPOSE CRIMPING PLIERS



LOCKING PLIERS

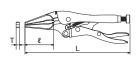


●LOCKING PLIERS LONG NOSE (WIRE CUTTER)



LOCKING	LOCKING PLIERS LONG NOSE (WIRE CUTTER)										
No.	Cutting capacity Soft wire	Open width	L	l	T (Tip width)	▼ g	#		Old model		
100LN	ф1.2	0~45	135	38	5	108	5		4LN		
150LN	ф1.2	0~51	165	46	5	192	5		6LN		
225LN	ф2.3	0~71	220	56	5	375	5		9LN		

- Long nose type that's useful in tight workspace.
 It can hold and turn small screws, bolt · nut.
- · It can be used as a wire cutter.



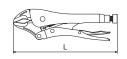


•LOCKING PLIERS-CURVED JAW (WIRE CUTTER)



LOCKING	LOCKING PLIERS-CURVED JAW (WIRE CUTTER)										
No.	Cutting capacity	Open	Open ,		8		Old				
	Soft wire	width	_	▼ g	T T		model				
100WR	φ1.2	0~26	110	90	5		4WR				
130WR	ф1.2	0~32	140	155	5		5WR				
175WR	ф2.3	0~41	180	325	5		7WR				
250WR	ф2.3	0~57	220	500	5		10WR				

- It can fix pipes and the like with the curved jaw with teeth.
- · It can be used as a wire cutter.



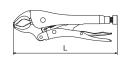


•LOCKING PLIERS-CURVED JAW



LOCKING PLIERS-CURVED JAW									
No.	Open width	L	▼ g	#		Old model			
175CR	0~40	180	330	5		7CR			
250CR	0~51	225	538	5		10CR			

- It can fix pipes and the like with the curved jaw with teeth.
- It can securely hold even small objects when grinding.



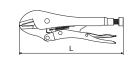


LOCKING PLIERS-STRAIGHT JAW



LOCKING PLIERS-STRAIGHT JAW									
No.	Open width	L	▼ g	#		Old model			
175R	0~37	180	383	5		7R			
250R	0~45	215	553	5		10R			

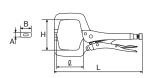
- It can fix square materials and the like with the straight jaw with teeth.
- It can securely hold even small objects when grinding.
- It can be used as a temporary handle for saw blades, files, etc





LOCKING PLIERS C-CLAMP										
No.	Open width	L	l	Н	Α	В	▼ g	#		Old model
150R	0~ 47	165	38	47	10	10	235	5		6R
280R	0~ 97	270	76	95	10	14	775	5		11R
460R	0~188	450	250	100	10	14	1,216	5		18R
610R	0~330	610	400	90	10	14	1,586	5		24R

• It is convenient for fixing and welding of square iron materials and panels.





●LOCKING PLIERS C-CLAMP



•LOCKING PLIERS SWIVEL PAD CLAMP

LOCKING	LOCKING PLIERS SWIVEL PAD CLAMP										
No.	Open width	L	l	н	Α	В	▼ g	#		Old model	
100SP	0~ 37	135	25	47	17	18	145	5		4SP	
150SP	0~ 45	165	37	58	22	22	275	5		6SP	
280SP	0~ 96	270	70	90	29	29	815	5		11SP	
460SP	0~205	460	240	100	29	29	1,272	5		18SP	
610SP	0~320	615	400	85	29	29	1,546	5		24SP	
					e						



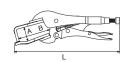
- It can fix tilted objects since the swivel pads at the tips move according to the objects. It is convenient for fixing and welding of panels.

A A	H

LOCKING	LOCKING PLIERS PANEL CLAMP										
No.	Open width	L	Α	В	▼ g	#		Old model			
225R	0~41	230	25	76	666	5		9R			

• It is convenient for fixing, welding and riveting of square iron materials and panels.





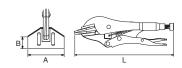
•LOCKING PLIERS PANEL CLAMP



LOCKING PLIERS SHEET METAL TOOL Old No. L В **▼**g Ħ Α 200R 200 79 25 509 5 8R

It is convenient for bending and temporary locking.





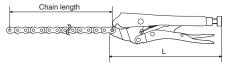
OCKING	PI IFRS	SHEET	METAI	TOOL
DVIINO.	FLIENS	SHEEL	IVILIAL	IOUL



LOCKING	LOCKING PLIERS CHAIN CLAMP									
No.	L	Chain length	▼ g	#		Old model				
510R	210	450	757	5		20R				

• It is convenient for turning and gripping of circular and polygonal parts.





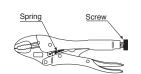
•LOCKING PLIERS CHAIN CLAMP



•LOCKING PLIERS SUPPLY PARTS

No.	Product name	Applicable part No.	Total	
91A	Screw	100LN, 100SP, 100WR	1	
51A	Screw	130WR, 150LN, 150R, 150SP	1	
21A	Screw	175CR, 175R, 175WR, 200R, 225LN, 225R	1	
07A	Screw	250WR, 250CR, 250R, 280R, 280SP, 460R, 460SP, 510R, 610R, 610SP	1	





No.	Product name	Applicable part No.	Total	
92A	Spring	100LN, 100SP, 100WR	1	
52A	Spring	130WR, 150LN, 150R, 150SP	1	
22A	Spring	175CR, 175R, 175WR, 200R, 225LN, 225R	1	
08A	Spring	250WR, 250CR, 250R, 280R, 280SP, 460R, 460SP, 510R, 610R, 610SP	1	

* 1pcs. per pack.



*Please use the KTC genuine parts for spare parts.



Original locking pliers by VISE-GRIP

* 1pcs. per pack

Blacksmith William Petersen from Denmark was the first to achieve a patent for the locking pliers.

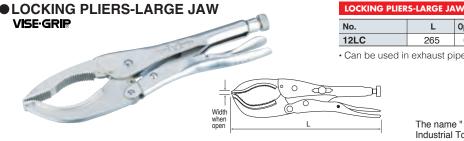
Mr. Petersen founded a small factory in De Witt, Nebraska in 1924. Today, the factory has grown, employing several hundred people. His invention is treasured and used around the world both domestically and professionally.

To this day, all tools manufactured by VISE-GRIP adhere to Mr. Petersen's strict policies towards craftsmanship and quality.



- Do not use this tool as a hammer
- Do not apply strong impact on this tool by hitting it with a hammer, etc.
- Take care to avoid jamming your hands with the grip.

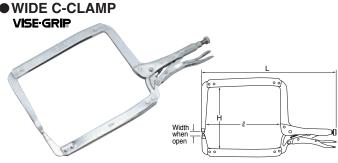
 Make sure that the held object is firmly locked in place before use.



Open width Screw Spring **▼**g 265 0~79 No.07 No.08 5

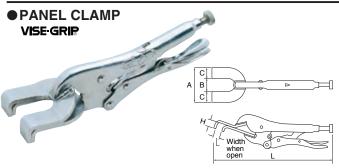
· Can be used in exhaust pipe and radiator hose replacement, etc

The name " **VISE-GRIP** _®" is a registered trade mark of Irwin Industrial Tools Company.



WIDE C-CLAMP	WIDE C-CLAMP								
No.	L	Open width	l	Н	Screw	Spring	▼kg	#	
18DR	455	0~190	240	190	No.07	No.34	1.5	1	

· Is effective when using fender clamps, lower panels, upper panel clamps, and back panel clamps.



	Industrial Tools Company.										
P											
	L	Open width	Α	В	С	Н	Screw	Spring	▼g	#	
	230	0~9.5	69	25	22	13	No.21	No.22	300	1	

The name " VISE-GRIP " is a registered trade mark of Irwin

• The lower jaw of the tool can be adjusted by sliding forward and backward to suit, (a width of 0~9.5 mm) and can be clamped to a panel at 90°



PANEL CLAN

No.

Can be adjusted to suit the gap of closed doors



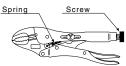
Start the welding process after adjusting the tool to suit the gap of the closed door.

The name " $\mbox{VISE-GRIP}_{\mbox{\tiny o}}$ " is a registered trade mark of Irwin Industrial Tools Company.

REPLACEMENT FOR VISE GRIPS

No.	Product name	Applicable product number	Number	
91	Screw	4BN, 4WR, 4LN, 4SP	5	
51	Screw	5WR, 6BN, 6LN, 6R, 6SP	5	
21	Screw	7WR, 7CR, 7R, 8R, 9R, 9BN, 9LN, 9AC	5	
07	Screw	10WR, 10CR, 10R, 20R, 11P, 11R, 11SP,	5	
		18R, 18SP, 18DR, 24R, 24SP, 24DR, 12LC		

*5 units to one bag



No.	Product name	Applicable product number	Number	
92	Spring	4BN, 4WR, 4LN, 4SP	5	
52	Spring	5WR, 6BN, 6LN, 6R, 6SP	5	
22	Spring	7WR, 7CR, 7R, 8R, 9R, 9BN, 9LN, 11P, 11R, 11SP, 9AC	5	
80	Spring	10WR, 10CR, 10R, 20R, 12LC	5	
34	Spring	18R, 18SP, 18DR	5	
137	Spring	24R, 24SP, 24DR	5	

^{*5} units to one bag.



PROSNIP®

The name " Prosnip" is a registered trade mark of Irwin Industrial Tools Company.



PROSNIP® type

· Do not use if there is a live electric current.

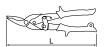


PROSNIP® type

- Check the direction the cut piece is likely to travel before cutting.
- Use protective goggles when working.
 Close the blade and store when the tool is not going to be used.
- Do not use the blade tip for gouging or hitting.Take care not to cut the hand holding the tool.

SNIP (STRAIGHT LEFT CUTTING)									
No.	L	Cutting power mm	▼g	#					
101	250	1.25	420	5					

• Will cut stainless steel to 0.8 mm in thickness.





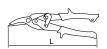
· Is beneficial for cutting in a straight line and from left to right.

SNIP (STRAIGHT LEFT CUTTING) Prosnip[®]



SNIP (STRAIGH	T RIGHT CUTTING)				
No.	L	Cutting power mm	▼ g	8	
102	250	1.25	410	5	

· Will cut stainless steel to 0.8 mm in thickness.





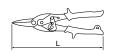
 Is beneficial for cutting in a straight line and from left to right.

SNIP (STRAIGHT RIGHT CUTTING) Prosnip®



SNIP (STRAIG	HT WIDE CURVES CUTTI	NG)			
No.	L	Cutting power mm	▼g	#	
103	250	1 25	420	5	

• Will cut stainless steel to 0.8 mm in thickness.





 Is beneficial for cutting in a straight line and from left to right.

● SNIP (STRAIGHT WIDE CURVES CUTTING) Prosnip®



HAMMERS, CHISELS, and PUNCHES





Hammer types

- Use the face of the hammer to tap in a perpendicular fashion.
 Do not use if the connection between the head and the grip is loose.
- Do not use if the blade becomes blunt as this will cause ripping and burring from long-term use.
 Do not use in the presence of fire hazards.
- Use protective goggles when working

COMBINATION HAMMER



COMBINATION HAMMER									
No.	Size	L	W ₁	W ₂	Н	▼ g	#		
UD7-10	1 LB	315	32	30	114	730	1		

- This tool is a combined hammer made from steel and plastic that allows two different uses
- · Specially heat treated head for preventing recess or chipping.
- The head is pressed into the shank and a pin tang thru.Chrome plated shank is made of high class pipe steel so light and durable.
- The grip is made of oil-resistant rubber and offer secure and comfortable gripping.
- The head can be replaced.

Replacement head (1 attached)

No.	Application	Material	Θ	
UD7-10-1	For UD7-10	Plastic	1	

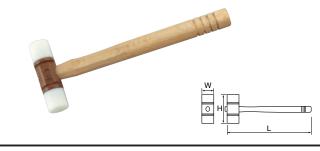
BALL-PEEN HAMMER



BALL-PEEN HAMMER										
No.	Size	L	W ₁	W ₂	Н	▼ g	#			
PH45-323	1 LB	310	26	30	105	720	5			
PH68-344	1.5 LB	335	28	35	117	950	5			

- · Specially heat treated head for preventing recess or chipping.
- The head is pressed into the shank and a pin tang thru.
 Chrome plated shank is made of high class pipe steel so light and durable.
- The grip is made of oil-resistant rubber and offer secure and comfortable gripping.

PLASTIC HAMMER



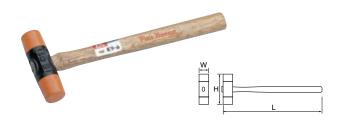
PLASTIC HA	AMMER							
No.	Size	Material	L	W	Н	▼ g	8	
UD8-10	1 LB	Plastic (reinforced nylon)	310	32	112	450	1	

- · The head is constructed from reinforced nylon which prevents cracking and chipping, also reducing the possibility of chipped materials entering the
- A slit is added to the wooden grip for prevention of slipping.
 The head can be replaced.

Replacement head (1 attached)

No.	Application	Material	#	
UD8-10-1	For UD8-10	Plastic (reinforced nylon)	1	

PLASTIC HAMMER



PLASTIC HAMMER									
No.	Size	L	W	Н	▼g	8			
K0-6	1 I B	310	32	110	450	5			

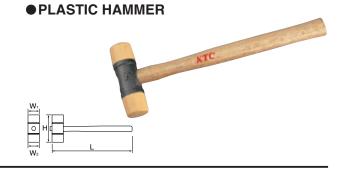
Head is made of plastic (Note) The head is not replaceable.

PLASTIC HAMMER										
No.	Size	Material	L	w	Н	▼g	8			
UD3-10	1 LB	Plastic	330	35	116	500	1			

- A tapered grip form that raises efficiency and allows for easy familiarization.
- The head can be replaced.

Replacement head (1 attached)

No.	Application	Material	#	
UD3-10-1	For UD3-10, UD6-10	Plastic 1		



SHOCK-LESS H	SHOCK-LESS HAMMER									
No.	Size	Material	L	W	Н	▼g	#			
UD1-10B	1 LB	Steel, Plastic	366	36	119	450	1			

- The head can be replaced. Replacement can be carried out in one single motion without a roll pin. (UD1-10A)
- This tool is a combined hammer made from steel and plastic that allows two different uses. The head on the plastic side can be replaced (roll pin type). (UD1-10B) $\,$
- The flat hitting side allows for the nailing in of decorative pins or for hitting in center punches. (UD1-10B)

Replacement head (1 attached)

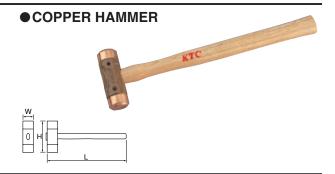


COPPER HAMMER									
No.	Size	Material	L	W	Н	▼g	#		
UD2-10	1 LB	Copper	330	30	88	450	1		

- The head can be replaced (roll pin type).The main structure is made from cast iron.

Replacement head (1 attached)

No.	Application	Material	#	
UD2-10-1	For UD2-10	Copper	1	



COMBINATION HAMMER									
No.	Size	Material	L	W ₁	W ₂	Н	▼ g	#	
UD6-10	1 LB	Steel, Plastic	300	33	32	100	610	1	

- A tapered grip form that raises efficiency and allows for easy familiarization.
 This tool is a combined hammer made from steel and plastic that allows two different operations.
 The head on the plastic side can be replaced.

Replacement head (1 attached)

No.	Application	Material	\oplus	
UD3-10-1	For UD3-10, UD6-10	Plastic	1	

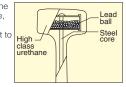


COMPONENT F								
No.	Size	Material	L	W	Н	▼g	H	
UD1-10	1 LB	Plastic	310	46	98	610	1	

- A singular structure with high standards of safety (urethane plastic). The tool is highly durable and produces no noise,
- allowing for quiet operation.

 The "shock-less" structure does not feed back the impact to your hands.

 • The tool does not damage the item being worked on.



T.W.	410
H	

COMPONENT HAMMER

RUBBER HAMMER

RUBBER HAMM	ER						
No.	Size	L	W	Н	▼ g	#	
UD4-10	1 LB	330	60	100	450	1	

• Excellent quality rubber with high durability is used.

● MINI HAMMER-SET



MINI HAMMER-SET			
No. TUD6	▼g 190	₩ 1	
MINI HAMMER · SET	TUD3S, 3L		

No.	L	Н	▼g	#	
TUD3S	180	56	70	1	
3L	245	65	120	1	

- Interchangeable head (iron, plastic, brass) enables use for different applications.
 The head is a twist-in type.
 Most suitable for press fitting of oil-seals and small bearings, and installation/removal of split pins.
 Complete with each 1 piece of plastic head and brass head.

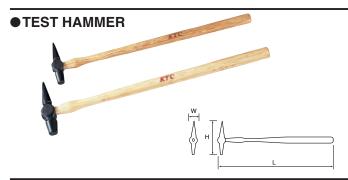
Head set (2 each attached)

For TUD3S

No.	W	Material	
UD1802C	12	Brass	
F	12	Iron	
P	12	Plastic	

For TUD3L

No.	W	Material	
UD2502C	4	Brass	
F	4	Iron	
Р	4	Plastic	



TEST HAMMER							
No.	Size	L	W	Н	▼g	#	
UDHT - 2	1/ ₄ LB	380	16	95	160	1	
-26	1/ ₄ LB	600	16	95	250	1	
- 4	1/2 LB	420	20	113	290	1	
-46	1/2 LB	600	20	113	350	1	
-49	1/2 LB	900	20	113	420	1	

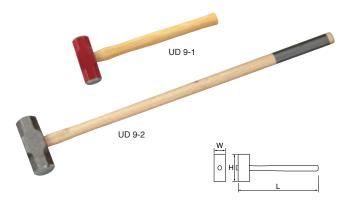
^{*}The grip is available as a replacement part. Check with your dealer for details.

SHEET METAL PROCESSING HAMMER



SHEET METAL PROCESSING HAMMER									
No.	Usage	L	W	Н	▼ g	#			
UD5-1	Rough	250	38	190	1600	1			
-2	Cone shaping	300	30	143	290	1			
-3	Horizontal	300	30	100	300	1			
-4	Vertical	300	50	100	390	1			

DOUBLE-HEAD HAMMER



DOUBLE-HEAD HAMMER									
No.	Size	Head weight (kg)	Material	L	W	Н	▼kg	#	
UD9 -1	3 pounds	1.3	Iron	360	44	118	1.5	1	
-2	8 pounds	3.6	Iron	900	58	163	4.0	1	

[•] The grip of the UD9-2 has a slip prevention structure.

^{*}The grip is available as a replacement part. Check with your dealer for detail.

CHISEL				
No.	Size	▼ g	#	
UDC-10	10×140	70	10	
-13	13×160	150	10	
-16	16×180	260	10	
-19	19×190	290	10	
-25	25×215	600	5	

- Special alloy steel is friction-welded on the edge for more strength and durability.
 Chrome plated surface for rust resistance.
- - DO NOT USE THE TOOL AS A SUBSTITUTE FOR A HAMMER.

 - WEAR SAFETY GLASSES WHEN USING THE TOOL.
 DO NOT USE THE TOOL WITH CHIPPED OR ROUNDED EDGE.
 - DO NOT TWIST THE TOOL.



OTHER TOOLS

DO NOT USE THE TOOL IF ANYTHING WRONG SUCH AS CHIP, CRACK, WEAR OR DEFORMATION IS/ARE NOTICED.

· DO NOT ALTER.

CENTER PUNCH							
No.	Size	▼g	8				
UDP-10	10×125	65	10				
-13	13×150	130	10				

Characteristics

- Made with special steel alloy for durability and strength.
- Galvanized surface to prevent rust.
- The handle is knurled to prevent slippage

- Use protective goggles when working.Do not use a punch with a chipped or rounded tip.
- · Do not use with force as the blade may beak or shatter.

CENTER PUNCH



KNOCK PIN PUNCH-SET (3pcs.) • (8pcs.)								
No. PK3	▼ g 300	₩ 10						
Knock Pin Punch Set (3pcs.)	PK-4185, 45185	, 5190						
No. PK8	▼g 960	₩5						
Knock Pin Punch Set (8pcs.)	PK-2125, 3135,	4185, 45185, 5190, 6207, 212, 8217						

KNOCK PIN PUNCH								
No.	No.	S	L	l	Α	▼ g	8	
PK-2125	2	1.8	125	25	12	46	10	
-3135	3	2.8	135	35	12	46	10	
-4185	4	3.8	185	45	18	98	10	
-45185	4.5	4.3	185	45	18	100	10	
-5190	5	4.8	191	51	18	100	10	
-6207	6	5.8	207	67	22	150	10	
-7212	7	6.8	212	72	22	160	10	
-8217	8	7.8	217	77	22	170	10	

Spare Parts

No.	Product	Number	
PK-2125-4	Chucking rubber	1	
-3135-4	Chucking rubber	1	
-4185-4	Chucking rubber	1	
-45185-4	Chucking rubber	1	
-5190-4	Chucking rubber	1	
-6207-4	Chucking rubber	1	
-7212-4	Chucking rubber	1	
-8217-4	Chucking rubber	1	

● KNOCK PIN PUNCH SET (3 or 8pcs.)



- · Set of most frequently used sizes.
- Vinyl coated handle is hexagonal from, which prevents from rolling off.
- · With chucking rubber at the point.



- WHEN USING THE TOOL, WEAR SAFETY EYE GLASSES.
- USE A TOOL APPROPRIATE TO THE SIZE OF AN OBJECT. SET THE CHUCKING RUBBER SECURELY.

AUTO PUNCH							
No.	L	ℓ 1	ℓ2	D1	D2	▼ g	
UDP-4	160	90	70	28	34	160	

Punches for Replacement

No. UDP-4-1

Application

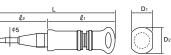
- For making when attaching optional parts. To eliminating distortion during sheet metal

- Punch tip is made of highly durable hard steel
 Continuous operations enhance operability.
- Quick marking with one hand without a hammer.Strength of punching adjustable by turning the handle.
- Harder punch: turn clockwise. Softer punch: turn counter-clockwise. The punch is made of abrasion-resistant SK steel.



•AUTO PUNCH





SCRAPERS, FILES and BRUSES





Scraper is a tool with a spatula-shaped blade. It can be used in various usages such as scraping off of residue of sealant, gasket and packing of engines in automobile or industrial machinery, removing of rust and deburring of cutting trace.

File is a rod-shaped tool for the scraping and polishing of metal or wood. It is divided into different types such as woodworking and ironworking depending on the fineness and blade shape. Cloth-type is called emery paper or sandpaper.

Brush is used in various fields, but the representative industrial brush is the metal wire brush with hard bristles. It is used for removing of dirt and rust, polishing and the like.

■ Scraper Chart

Handle length Blade material	Short	Standard	Long
Ceramic	KZ4S-18 Slade width	KZ4-12 KZ4-18 Stade width 11.5mm	KZ4L-18
Carbide Blade	KZ2S-18 Slade width 18mm	KZ2-18A Blade width 18mm	KZ2L-18 Blads width 18mm
Hard Steel Edge	KZ3S-18	KZ3-18A	KZ3L-18
Stainless Steel	KZ1S-15	KZ1-10 KZ1-15 KZ1-22 KZ1-30 Blode width Storm Blode width Storm Blode width Storm	KZ1L-15 Width
Hard Steel Edge (for Sticker)		KZSS-25 KZS-40 Blade width 25mm Blade width	

Proper Tool Use



CAUTION Scrapers

- Please do not use it as a chisel, lever or knife.
- Please do not use it as a hammer.
- Please do not apply an impact by tapping with a hammer, etc.
- Please do not use it if crack, chip, wear or deformation is detected.

Scrapers (Spare Blade)

- Please do not use the spare blade as a substitute for razor blade.
- Please beware of the cutting edge when replacing the blade.

● CERAMIC & STAINLESS SCRAPER SET A · B CERAMIC AND STAINLESS SCRAPER SET A

No. KZ142A	▼ g 80	₩ 10	
Ceramic Scraper	Blade Width 12mm	KZ4-12	
Stainless Scraper	Blade Width 10mm	KZ1-10	

CERAMIC AND STAINLESS SCRAPER SET B

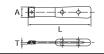
No. KZ142B	▼g 130 🖽 10
Ceramic Scraper	Blade Width 18mm KZ4-18
Stainless Scraper	Blade Width 15mm KZ1-15

· Stainless Scraper for grinding and Ceramic Scraper for finishing.

• DO NOT USE AS A SUBSTITUTE OF A CHISEL, LEVER, CUTTER ETC.

CERAMIC SCRAPER SHORT							
No.	Α	Т	L	▼ g	9		
1/2 40 40				=-			

- It is excellent in wear resistance. * It uses a ceramic chip that causes less rust and deformation.
- The blade does not bite in, allowing the smooth cutting.
- Scrapes, glue and the like do not adhere to the blade.
- Both sides of blade can be used.
- * Impact (hitting, prying) and drop may damage the tip, so please be careful in handling.
- * Ceramic chip is not sold by itself.



CERAMIC SCRAPER SHORT



KZ1-10

CERAMIC SCRAPER								
No.	Α	Т	L	▼g	#			
KZ4-12	11	3	145	30	5			
-18	18	3	175	52	5			

Purpose

Scraping and finishing the surface of automotive engines and gaskets of industrial machineries, etc.

Special feature

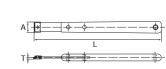
- Superb wear resistance. and smooth cutting.
- Ceramic tip for preventing rust and deformation.
 Tip does not adhere to sticky gasket, seal, gum, etc.
 Both sides of the blade can be used.

CERAMIC	SCRAPER D. PAT.
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CERAMIC SCRAPER LONG							
No.	Α	Т	L	▼ g	#		
KZ4L-18	18	3	262	80	20		

- It is excellent in wear resistance. * It uses a ceramic chip that causes less rust and deformation.
- The blade does not bite in, allowing the smooth cutting.
- Scrapes, glue and the like do not adhere to the blade.
- Both sides of blade can be used.
- * Impact (hitting, prying) and drop may damage the tip, so please be careful in handling.
- * Ceramic chip is not sold by itself.



CERAMIC SCRAPER LONG



STAINLESS SCRAPER SET		
No. KZ12A	▼ g 130 🖽 10	
Stainless Scraper	Blade Width 10mm KZ1-10	
	Blade Width 22mm -22	
No. KZ12B	▼g 130 🛱 10	
Stainless Scraper	Blade Width 15mm KZ1-15	
	Blade Width 30mm -30	
No. KZ12S	▼g 160 🛱 10	
Stainless Scraper	KZ1-22 (Blade Width 22mm)	KZ1-30 (Blade Width 30mm)

Blade width is small, to avoid scraping with blade at vertical position.

STAINLESS SCRAPER SET		
No. TKZ1153	▼g 182	⊎ 10
Stainless Scraper Short	KZ1S-15	Blade width 15mm
Stainless Scraper	KZ1-15	Blade width 15mm
Stainless Scraper Long	KZ1L-15	Blade width 15mm

• It is a stainless scraper set with various handle lengths.

on • Please do not use it as a chisel, lever or knife.

• STAINLESS SCRAPER SET



STAINLESS SCRAPER SET



• STAINLESS SCRAPER SHORT



A
T⊨

STAINLESS SCRAPER SHORT							
No.	Α	Т	L	▼g	8		
KZ1S-15	15	1.4	110	50	20		

- It can be used in tight spaces with the shorter handle than the conventional.
- * Since the tip width is narrow, be careful not to stand the edge too much.

Please do not use it as a chisel, lever or knife.

STAINLESS SCRAPER



STAINLESS SCRAPER							
No.	Α	Т	L	▼g	8		
KZ1-10	10	1.4	165	50	5		
-15	15	1.4	170	52	5		
-22	22	1.4	180	80	5		
-30	30	1.4	180	80	5		

Special feature

• Set of stainless scrapers of different blade width for multi purposes.



 $igwedge^{ ext{CAUTION}}$ • DO NOT USE AS A SUBSTITUTE OF A CHISEL, LEVER, CUTTER ETC.



STAINLESS SCRAPER LONG						
No.	Α	Т	L	▼g	#	
KZ1L-15	15	1.4	260	80	20	

• It can be used in deep spaces with the longer handle than the conventional. * Since the tip width is narrow, be careful not to stand the edge too much.



Please do not use it as a chisel, lever or knife.

● HIGH CLASS SCRAPER SET (2pcs.)



HIGH CLASS SCRAPER SET (2pcs.)					
No. TKZ232A	▼ g 110	₩ 10			
H.S.S.	KZ2-18A	Blade Width 18mm			
Hard Steel	KZ3-18A	Blade Width 18mm			

Purpose

- Scraping gaskets on engines.Cleaning.
- For scraping heat-hardened gaskets easily and finishing for clean surface.
 Superb wear resistance.
- Specially heat-treated for superb durability so can be used for long time after grinding the edge at one time. (KZ3-18)

CAUTION • DO NOT USE AS A SUBSTITUTE OF A CHISEL, LEVER, CUTTER ETC

HARD METAL SCRAPER SHORT





HARD METAL S	CRAPER SHO					
No.	Α	T	L	▼g	\Box	
KZ2S-18	18	1	118	50	5	

- Carbide tip is used on the cutting edge.
- It can be used in tight spaces with the shorter handle than the conventional.

CAUTION • Please do not use it as a chisel, lever or knife.



HARD METAL SCRAPER						
No.	Α	T	L	▼g	Θ	
KZ2-18A	18	1	180	55	5	

Hard steel tip is used on the cutting edge.

CAUTION • Please do not use it as a chisel, lever or knife.

OHARD METAL SCRAPER LONG



HARD METAL SCRAPER LONG								
No.	Α	Т	L	▼ g	8			
KZ2L-18	18	1	265	80	5			

- Carbide tip is used on the cutting edge.
- \bullet It can be used in deep spaces with the longer handle than the conventional.

CAUTION • Please do not use it as a chisel, lever or knife.

HARD STEEL SCRAPER SET No. TKZ3183 **▼**g 185 Blade width 18mm Hard Steel Scraper Short KZ3S-18 Hard Steel Scraper KZ3-18A Blade width 18mm Hard Steel Scraper Long KZ3L-18 Blade width 18mm

• It is a hard steel scraper set with various handle lengths

HARD STEEL SO	RAPER SHOR	eT .				
No.	Α	Т	L	▼g	#	
KZ3S-18	18	1.4	118	50	5	

- It uses a hard steel edge with less wear.
- It can be used in tight spaces with the shorter handle than the conventional.

HARD STEEL SO	RAPER					
No.	Α	Т	L	▼ g	#	
KZ3-18A	18	1.4	180	55	5	
KZ3-10A	10	1.4	100	33		

It uses a hard steel edge with less wear.

HARD STEEL SCRAPER LONG							
No.	Α	Т	L	▼ g	8		
KZ3L-18	18	1.4	265	80	5		

- It uses a hard steel edge with less wear.
- It can be used in deep spaces with the longer handle than the conventional.

• Please do not use it as a chisel, lever or knife.

KZ3-18A KZ3S-18 KZ3L-18

● HARD STEEL SCRAPER SET

STICKER SCRAPER - SPARE BLADE

STICKER SCRAPER

No.	Blade Width	L	▼g	\oplus	
KZS-40	40	155	110	10	

Special feature

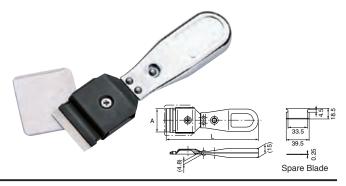
- For speedy, neatly, and safety sticker scraping.
- Sharp edge for clean finish.Fixed blade for preventing the position from changing.
- Comfortable grip for easy operation.

SPARE BLADE

No.	Contents	▼g	\oplus	
KZS-4010	10pcs. set	15	10	

CAUTION - DO NOT USE THE SPARE BLADE AS A SUBSTITUTE OF A SHAVING BLADE. · BE CAREFUL OF THE EDGE WHEN CHANGING THE BLADE.

• STICKER SCRAPER & SPARE BLADE



HIGH CLASS STICKER SCRAPER · SPARE BLADE

STICKER SCRAPER

No.	L	W	Н	▼g	#	
KZSS-25	150	40	19	120	10	

Special feature

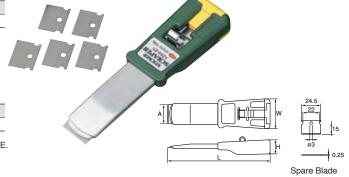
- Easier job with unique 25mm blade width and round-shaped supporter for the blade.
 Built in space in the grip for storing optional spare blades set of 10pcs.
- 5pcs. spare blades as the standard accessory.

SPARE BLADE

No.	Contents	▼g	#	
KZS-2510	10pcs.set	20	10	

CAUTION • DO NOT USE THE SPARE BLADE AS A SUBSTITUTE OF A SHAVING BLADE. • BE CAREFUL OF THE EDGE WHEN CHANGING THE BLADE.

STICKER SCRAPER DX & SPARE BLADE D. PAT.



SET OF SMALL FILES

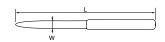
Set of small Files (5pcs.)

No. TZKF105	▼g 250	₩ 10
small File Flat	ZKF1-2H	
Half Round	-2HR	
Round	-2R	
Squire	-2S	
Triad	-2T	

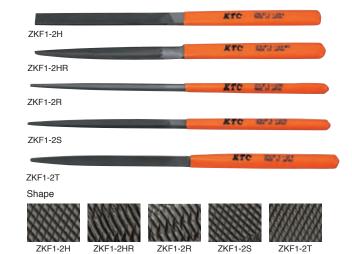
SMALL FILE

No.	Shape	L	W	Туре	▼ g	#	
ZKF1-2H	Flat	220	11	Mid	60	25	
-2HR	Half Round	220	11	Mid	60	25	
-2R	Round	220	5.5	Mid	40	25	
-2S	Squire	220	5.5	Mid	50	25	
-2T	Triad	220	9	Mid	40	25	

CAUTION • DO NOT TWIST THE TOOL.



SMALL FILE

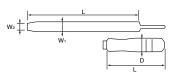


● ENGINEER'S FILE (WOODEN HANDLE)



ENGINEER'S FILE (WOODEN HANDLE)									
No.	Shape	Туре	L	W 1	W ₂	D	▼ g	#	
ZKF2-2H	Flat	Mid	250	25	22	_	260	5	
-2HR	Half Round	Mid	250	25	15	_	240	5	
-2R	Round	Mid	250	ø10	ø5.2	_	150	5	
-HR	Wood Handle	Mid	115	_	_	ø23	30	10	

• DO NOT TWIST THE TOOL.



Shape







ABRASIVE PAPER WATERPROOF ABRASIVE PAPER

Supply will be in packing unit shown in the table.



ABRASIVE PAPER · WATERPROOF ABRASIVE PAPER

ABRASIVE PAPER

No.	Size	#	
YWP- 400	228×280	100	
- 600	228×280	100	
- 800	228×280	100	
-1000	228×280	100	
-1200	228×280	100	
*Dort Noo india	oto the cizes o	f tha	abrasiva

grains on the papers.

NAIL AND HAND BRUSH

WATERPROOF ABRASIVE PAPER

No.	Size	Θ	
YGJ- 40	228×280	50	
- 60	228×280	50	
- 80	228×280	50	
-120	228×280	50	

CAUTION • WEAR SAFETY GLASSES WHEN USING THE TOOL.

NAIL AND HAND BRUSH





- Brushes for nail, fingertip and palm are made into one.
- Upper brush for nail/fingertip is made of white hog bristle placed in arch shape.
- Lower brush for palm is made of Tampico.
- Base is made of mold resistant PP (polypropylene) that allows cleanliness to be maintained.
- * Please avoid the use of kerosene or detergent.





No.	Name	Material (brush)	Length	Dia	Width (brush)	Shape (head)	Material (handle)	Shape (handle)	#	
YTBR-112	Thee Line Wire Brush	Steel	270	0.3	85×15	Straight	Wood	Straight	10	
-132	Sword Type Wire Brush	Steel	230	0.3	90×30	Straight	Wood	Straight	10	
-142	Oval Type Wire Brush	Steel	130	0.3	110×50	_	Wood	_	10	
-122	Metal Handle Wire Brush	Steel	260	0.25	67	Straight	Steel	Bent	10	
-1221	A Type Channel Brush	Steel	215	0.25	65	Straight	Steel	Bent	10	
-1222	J Type Channel Brush	Steel	235	0.25	85	Bent	Steel	Bent	10	
-212	Brass Brush	Brass	240	0.14	75×17	Straight	Wood	Straight	10	
-311	Engine Brush (Small)	Pig Hair	200	_	38× 9	Straight	Bamboo	Straight	10	
-312	Engine Brush (Big)	Pig Hair	295	_	62×10	Straight	Bamboo	Straight	10	
-323	Angled Brush	Pig Hair	315	_	62×15	Straight	Bamboo	Straight	10	
-422	Palm Brush	Palm	260	_	65	Straight	Steel	Straight	10	

Features

- Brass plated wire brush for more durability. (YTBR-112, 132, 142, 122, 1221 & 1222)
- The wood section of the shank is made of timber from thinning, that is used in consideration for preservation of natural environments.

CAUTION • WEAR SAFETY GLASSES WHEN USING THE TOOL.





ADJUSTABLE WRENCHES, PIPE WRENCHES and GEAR **PULLERS**



Adjustable wrenches

- · Firmly adjust the mouth to the width of the bolts and nuts.
- Turn towards the lower jaw.

- Do not use by adding on pipes, etc.
 Do not use this tool as a hammer.
 Do not apply strong impact on this tool by hitting it with a hammer,

PIPE WRENCH

- Use this tool within the range of the outer diameter of the pipe being held. • Firmly hold the wrench perpendicular to the pipe and hold firmly at the center.

- the center.

 Do not apply force sideways.

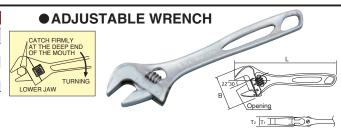
 Do not use by adding on pipes, etc.

 Do not use this tool as a hammer.

 Do not apply strong impact on this tool by hitting it with a hammer, etc.

 Do not use when the teeth are chipped or worn, or when blocking has occurred

ADJUSTABLE WRENCH										
No.	Nominal	Opening	T ₁	T ₂	В	L	▼g	Θ		
WM-150	150	25	5.5	11	51.7	164.5	140	10		
-200	200	30	6.5	13	63.5	213	240	10		
-250	250	35	8.5	14.5	75	263	380	10		
-300	300	43	10	18.5	91.5	316	670	5		



ADJUSTABLE WRENCH											
No.	Nominal	Opening	T 1	T ₂	L	▼ g	#				
MWA-150	150	20	6.7	11	158	120	6				
-200	200	24	7.5	12.9	208	235	6				
-250	250	29	8.7	15.32	258	380	6				
-300	300	34	10.2	18.24	308	590	6				
-375	375	44	13.4	23.5	375	1,300	1				
-450	450	55	14	25.6	450	2,200	1				



PIPE WRENCH										
No.	Nominal	Max. Dia. of Pipe	L	▼ g	#					
PWA-150	150(6")	³ / ₄ "(19)	150	185	6					
-200	200(8")	3/4"(20)	185	350	5					
-250	250(10")	1" (26)	245	750	5					
-300	300(12")	11/4"(32)	300	1,100	5					
-350	350(14")	11/2"(38)	325	1,300	5					
-450	450(18")	2" (52)	410	2,100	5					
-600	600(24")	$2^{1}/_{2}$ "(65)	540	3,800	1					
-900	900(36")	3 ³ / ₄ "(95)	780	7,300	1					

- Upper jaw screws have trapezoidal shape and are processed using a non-oxidizing heat-treatment to enhance strength and endurance.

 Upper and lower jaws have well-engaging teeth and are processed with induction heat-treatment for superior strength.

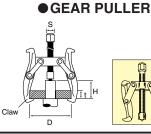
ALUMINUM PIPE WRENCH										
No.	Nominal	Max. Dia. of Pipe	L	▼ g	#					
APWA-350	350(14")	11/2"(38)	325	1,000	5					
-450	430(18")	2" (52)	400	1,600	5					
-600	600(24")	$2^{1/2}$ (65)	550	2,500	1					
Extra light bo	Extra light body made of specially selected aluminum alloy									

- Highly accurate and rugged enough to pass U.S. Federal standards.



GEAR PULLER											
No.	D · Diameter of Subject		t · widiii oi	н	B Screw	Breaking	▼ g	eg .			
NO.	Min	Max	Subject (when D is max.)	Claw Span	Hexagon	Load ton	Vg	Ψ.			
GU- 75	40	75	30	55	14	2	385	1			
-100	50	100	45	70	17	4	800	1			
-150	60	150	60	100	19	6	1,862	1			

· Can be used both outer and inner diameter by reversing the claws *Replacement parts are available. Check with your dealer for details.







Basic courses on hand tools part2.

SCREWDRIVER

A screwdriver is a common tool that can be found in family homes. The screwdriver is used for tightening and loosening screws. Along with the more common cross and flat screwdrivers, there are hex bolt/nut screwdrivers, hex hole bolt screwdrivers, TORX® screwdrivers, etc. according to the purpose.



Types of screwdrivers

There are cross (+), and sometimes referred to as Philips) screwdrivers and flat (-) screwdrivers. In many cases KTC color codes the handles red or orange (+ or cross) and green (- or flat).

The size of the cross screwdriver is determined by the size of the

The KTC lineup of cross screwdrivers covers the following screw sizes: No. 00, No. 0, No.1, No. 2, No. 3, No. 4 but No.1~No. 3 are most commonly used. The flat screwdriver size is determined by the length from the tip to the base of the shaft or by the width of the tip. Flat screwdrivers with a shaft length between 75 mm and 150 mm or a tip width between 5.5 mm and 8 mm are used most frequently.



Hexagon screwdrivers

This screwdriver is used to turn bolts with hex



Flat ratchet screwdriver

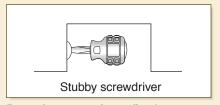
The ratchet structure allows for the forward and reverse movement alone to tighten and loosen screws.



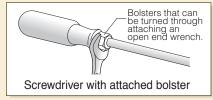
Impact screwdriver

By holding the grip and hitting the base of the tool with a hammer, the strength of the impact turns the screw. This method is effective for turning tightly screwed screws or rusty screws.

Selecting screwdrivers



Removing screws in confined spaces.



that require large torque.

Removing and attaching screws



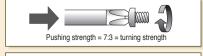
Apply impact to a hard tightened screw in order to loosen.

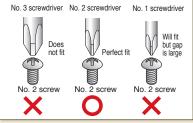
Refer to "Selecting screwdrivers" (P.189) listed in the section on conventional tools - screwdrivers for information on basic selection methods.

How to use the screwdriver

The basic movement in using a screwdriver is "push and turn" - pushing the screw and turning at the same time. Generally, the ratio between pushing and turning is 7:3, however, with hard-tightened screws, the pushing force must be increased in order to prevent the tip from slipping off the screw or damaging the screw. The center of the screwdriver shaft and the center of the screw must match for flat screwdrivers. Not only is turning difficult but the screw and/or screwdriver tip may become damaged if the center does not match.

It is also important to select the screwdriver size that matches the number allocated to the screw. The key to selecting the right size is to initially select a screwdriver that is slightly larger than the size of the screw. By selecting screwdrivers one size below the first screwdriver, the right match will be found. Once the perfect fitting screwdriver has been found, the operation can commence. If the size of the screwdriver is smaller than the size of the screw cross, the gap will increase, resulting in damaging the cross-hole of the screw.





Proper use of the tools

Do not hold materials in one hand and the screwdriver in the other as it is unsafe. Carry out maintenance in a safe, stable position.



- The plastic on the grip does not provide insulation against electrical current. Do not use if there is a live electric current.
- Do not use this tool as a lever or chisel.
- Do not use this tool as a hammer.
- Do not apply strong impact on this tool by hitting it
- Ouse screwdrivers that conform to the size of the screws.

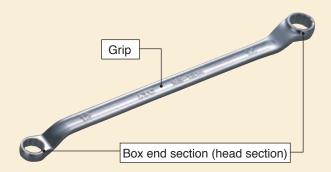


BOX END WRENCH · OPEN END WRENCH

Bolts and nuts are used not only in engines, machines, and automobiles but also in building structures, furniture, and various places. The box end wrenches, open end wrenches, and combination wrenches are used for the attachment and removal of bolts and nuts

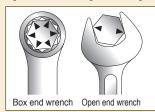
Box end wrench

Basic structure of the box end wrench



Like the open end wrench, the box end wrench is a tool that is used to tighten and loosen bolts and nuts. Where the open end wrench holds the bolt/nut in two points, the box end wrench holds the bolt/nut in 6 points. The ring-form of the box end wrench prevents the head from slipping off the bolt/nut allowing even distribution of load, resulting in the application of more force than the open end wrench. The box end wrench is composed of the head used to grasp bolts/nuts and the grip. The nickname "eyeglass wrench" in Japan comes from the ring-form grip head on both sides of the grip. The head section is normally dodecagonal (12 sided/double hex) with a deflection angle of 30°, allowing the turning of

bolts/nuts. The size of the box end wrench is expressed from the width-across flat of the diameter as in open end wrenches. For example, the box end wrench that can turn bolts and nuts with a width-across flat of 12 mm and 14 mm is called 12 × 14. KTC offers box end wrenches between 5.5 mm and 46 mm.



Box end wrench types



Box end wrench for brake pipes

This box end wrench is mainly used for the flare nuts on the brake pipes of automobiles. The tip of the head is open, making this type suitable for working on nuts in piping connections.



Combination wrench

One side has a ring-form head and the other has an open end wrench head. The open end wrench is suitable for quick turning and the ringform head is suitable for applying force as an offset wrench.



Ratchet box end wrench

This type has a ratchet function included in the head. The wrench can continuously turn the bolt/nut without taking the head off the bolt/nut.

Classification of box end wrenches

Classification through total length — short type or long type

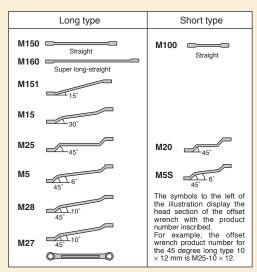
The long type is more commonly used. The longer wrench provides more force when turning, but is difficult to use in confined spaces. KTC also provides a super-long type straight offset wrench (M160) together with the previous long type.

Classification according to the angle of the handle — straight type \cdot 15 degree type \cdot 30 degree type \cdot 45 degree type

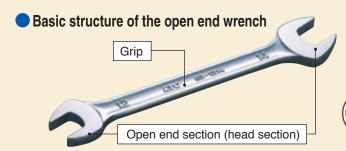
A variety of types are available according to the working environment but the 45° type is the most common wrench. KTC offers the $45^{\circ} \times 6^{\circ}$ and the $45^{\circ} \times 10^{\circ}$ types (NEPROS_®, M5, M27, M28) that allow for easy operation and increased application of force.

Using the box end wrench

Select the correct diameter according to the width-across-flat of the bolt/nut and cover the bolt/nut with the ring-form head from above. The hex edge of the bolt/nut can slip or jar dangerously if the gap between the offset wrench diameter and the bolt/nut is too big. Select the right size offset wrench for the bolt/nut and firmly place the ring form to the end.



Open end wrench



The open end wrench is a basic tool used to tighten or loosen nuts. The open end wrench holds the bolt/nut across the flat side in two places. Open end wrench size is determined through the width-across-flat of the diameter.

For example, the open end wrench that can turn bolts and nuts with a width-across flat of 12 mm and 14 mm is called 12×14 .

KTC offers open end wrenches between 5.5 mm and 46 mm.



The open end wrench is included in vehicle maintenance tools and is commonly known. However, professional mechanics rely on offset wrenches that offer firmer control.

Types of open end wrenches



Slim type open end wrench (Tappet open end wrench)

This open end wrench is thin with a long grip, making it suitable for adjusting the tappets.



Flex socket spanner

The other end is an offset socket wrench, allowing for quick turning using the spanner and final adjustments using the socket.



PROFIT_® open end wrench

This open end wrench is an original thin slim design by KTC allowing work to be completed effectively in hard to reach areas, difficult with previous open end wrenches.

Classification of open end wrenches

Classification through total length - - - standard type or long type

The longer open end wrench provides more force when turning, but is difficult to use in confined spaces.

Classification through head shape - - - round \cdot spear \cdot new spear types

The spear type is small compared to the round type, making work in narrow areas easy. It is also often used in automobiles as the head weight is reduced. All KTC open end wrenches are spear types. NEPROS $_{\!\!0}$ and $21^{\rm st}$ Century Version Tools offers advanced, new original spear heads by KTC with minimal outer diameters and large volume in areas where strength is applied compared to previous spear types.

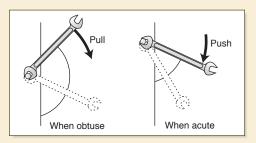




How to use the open end wrench

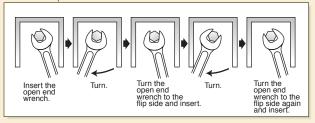
The open end wrench is effective on the return as well.

For safety, pull towards you if the turning angle against the bolt/nut is obtuse. Push away from you if the turning angle is acute.



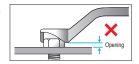
Using the open end wrench in confined spaces

Common open end wrenches have an angle of 15° against the grip. By using the front and flip sides of the open end wrench, a leverage of 30° and half the angle allows the bolt/nut to turn, making it convenient to use in confined spaces.



Proper use of the tools

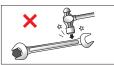
- The offset wrench must completely cover the bolt/nut before turning.
- ●Do not use this tool as a hammer.
- Do not attach the open end wrench diagonally towards the bolt/nut.
- Do not link two open end wrenches together.



- Use tools that conform to the size of the bolts and nuts.
- $\bullet \mbox{Do}$ not use by adding on pipes, etc.



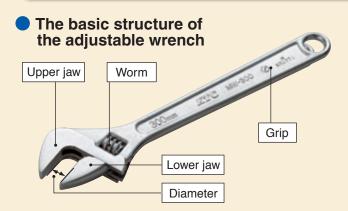
- Do not apply strong impact on this tool by hitting it with a hammer, etc.
- Firmly hold the bolts and nuts using the end of the tool mouth.



Basic courses on hand tools part2

ADJUSTABLE WRENCH

The adjustable wrench is able to turn several kinds of bolts and nuts, by adjusting the worm on the head section. Monkey wrench is the slang term in English. The nick name "monkey wrench" is said to have come from the inventor Charles Moncky or from the theory that the head section is shaped like a monkey. The correct term is Adjustable Wrench.



Adjustable wrenches are divided into 15 $^{\circ}$ and the 23 $^{\circ}$ types according to the angle of the head.

KTC offers both 15° and 23° adjustable wrenches. SSize dimensions of the adjustable wrench all display the total length. SSize dimensions are displayed on the grip section. The maximum opening (maximum size of the bolt/nut that can be turned) as opposed to the size dimension is determined.

Size dimension (mm)	150	200	250	300	375	450
Maximum opening (mm)	20	24	29	34	44	53

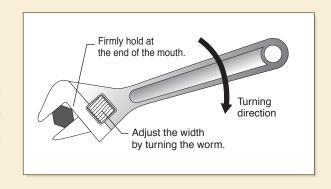
How to use the adjustable wrench

The adjustable wrench is basically used like an open end wrench with an adjustable opening. Widen the opening by turning the worm with the thumb. Match the upper jaw to the bolt/nut and bring in the lower jaw by twisting the worm until the bolt/nut is firmly grasped. Move the adjustable wrench up and down in order to check for looseness. Turn the bolt and nut after re-gripping the grip.

The direction of the turn is important. Always turn adjustable wrenches towards the lower jaw side.

Turning towards the upper jaw will stress the lower jaw, causing the tool to break.

Any movementAny play in the lower jaw of the adjustable wrench causes loosening. Do not apply excessive torque. Take care when using an adjustable wrench for turning small bolts/nuts as the play can becomes larger. Like the open end wrench, the adjustable wrench only holds the bolt/nut in two places. When high torque is needed, use the socket wrench/offset wrench as these tools hold the nut in 6 points.

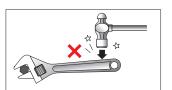


Proper use of the tools

 Firmly adjust the mouth width to the bolts and nuts using the end of the mouth.

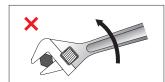


 Do not apply strong impact on this tool by hitting it with a hammer, etc.



 Always turn towards the lower jaw.

The lower jaw can be exposed to excessive force, causing damage.



- Do not use this tool as a hammer.
- Do not use by adding on pipes, etc.