

Crimping and Stripping



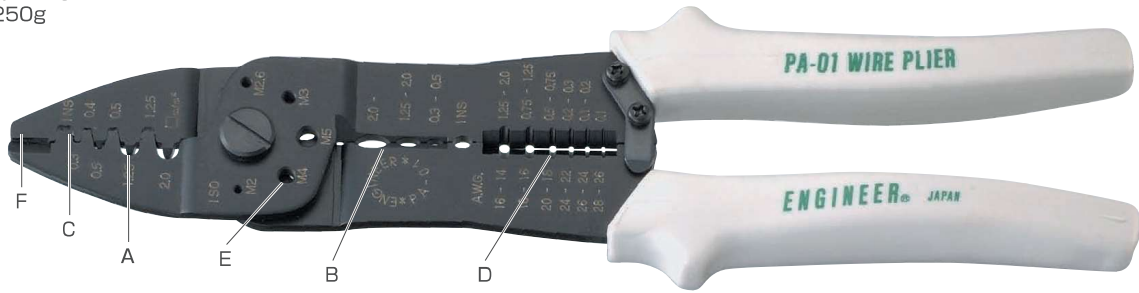
WIRE PLIERS SERIES

Features ● General purpose & compact wire pliers used for crimping, stripping & cutting for precision wiring work.

PA-01

RoHS WIRE PLIERS

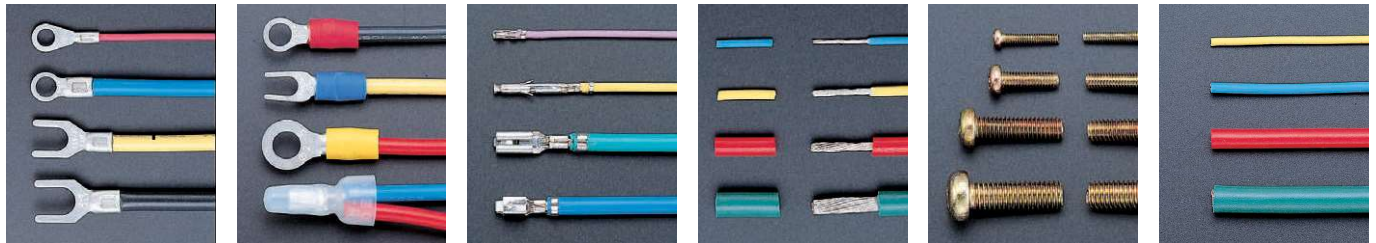
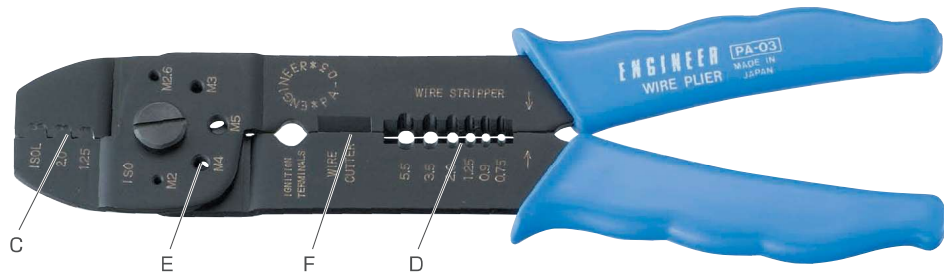
- Six-in-one multipurpose type.
- For bare, insulated terminals & splices (open barrels).
- O.A. length: 245mm.
- Weight: 250g



PA-03

RoHS WIRE PLIERS

- For splices (open barrel terminals) with wire stripper & bolt cutter.
- O.A. Length: 210mm.
- Weight: 205g



A. For crimping BARE terminals. B. For crimping INSULATED terminals. C. For crimping OPEN BARREL(SPLICES) D. For stripping insulated WIRES. E. For cutting SCREWS. F. For cutting WIRES.

Item No.	(mm ²)					
	A	B	C	D	E	F
PA-01	Bare terminals' crimping 0.5 ~2.0	Insulated terminals' crimping 0.3 ~2.0	Splices' crimping 0.3 ~1.25	Wires' stripping 0.1 ~2.0	Small screw's cutter(ISO) M2, M2.6, M3, M4, M5	Wires' cutting ○
PA-03	-	-	1.25~2.0	0.75~5.5	M2, M2.6, M3, M4, M5	○

■ Conversion A.W.G. table

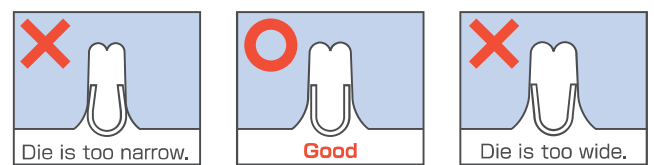
AWG	8	10	12	14	16	18	20	22	24	26	28	30
Sectional area mm ²	8.37	5.26	3.31	2.08	1.31	0.82	0.52	0.33	0.20	0.13	0.08	0.05
Wire diam mm	3.26	2.59	2.05	1.63	1.29	1.02	0.81	0.64	0.51	0.40	0.32	0.25

■ How to select the proper dies for crimping an open-barrel contact

1. Measure the width of conductor barrel with a caliper while both barrel wings are in parallel.



2. Select the die width which is close to the width of barrel wings measured.



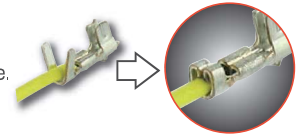
For example: 1.5mm measured → Select 1.6mm dies.

Turn to page 26 for Crimping Pliers →

CONNECTOR CRIMPING PLIERS

Features

- Our line-up offers you very precise and perfect crimp finish of open-barrel contacts.
- ENGINEER original joint-screw prevents the joint from being loose and realizes easy maintenance.
- Pliers made of S55C high carbon steel for durability
- With locking latch and coiled spring, Light weight for fatigue-free work



PA-09



MICRO CONNECTOR PLIERS

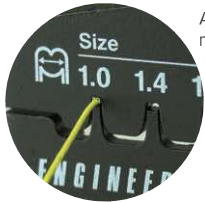
Crimp AWG #32 to #20 wires in micro connectors of different makers!!

- 4 different crimping dies, 1.0, 1.4, 1.6 & 1.9mm(W)
- Makes it possible to crimp 1,25 to 2,5mm pitch connector pin (Narrow pitch)
- D-sub connector contacts also adaptable
- Weight: 145 g

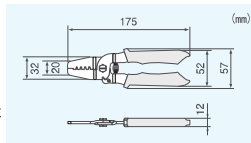


■ Typical terminals applicable

PH Series(JST)	ZH Series(JST)	Molex 170363(Molex)
EH Series(JST)	NH Series(JST)	Molex 170365(Molex)



AWG32 wire in microscopic die



■ Specifications

Item No.	Die Width (mm)	Die Height (mm)	Die Thickness (mm)	Wires applicable (Reference only)		
				φ mm	mmf	AWG (conductor)
PA-09	1.0	0.50	1.7	0.20~0.32	0.031~0.08	#32~#28
	1.4	0.55		0.32~0.51	0.08~0.21	#28~#24
	1.6	0.8	2.0	0.51~0.64	0.21~0.33	#24~#22
	1.9	0.9		0.51~0.81	0.21~0.52	#24~#20

PA-20



UNIVERSAL CRIMPING PLIERS

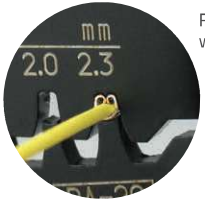
Crimp AWG #28 to #18 wires in micro connectors of different makers!!

- 4 different crimping dies, 1.6, 1.9, 2.0 & 2.3mm(W)
- Makes it possible to crimp 2.5 to 5mm pitch connector pin (Universal type)
- Weight: 145 g

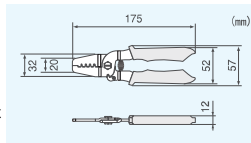


■ Typical terminals applicable

VH Series(JST)	NH Series(JST)	PH Series(JST)
EL Series(JST)	3191 Series(Molex)	MATE-N-LOK(Tyco)



Precise crimping of wire or insulation



■ Specifications

Item No.	Die Width (mm)	Die Height (mm)	Die Thickness (mm)	Wires applicable (Reference only)		
				φ mm	mmf	AWG (conductor)
PA-20	1.6	0.7	2.5	0.32~0.64	0.08~0.33	#28~#22
	1.9	0.8		0.51~0.81	0.21~0.52	#24~#20
	2.0	0.9		0.64~1.02	0.33~0.82	#22~#18
	2.3	1.0		0.81~1.02	0.52~0.82	#20~#18

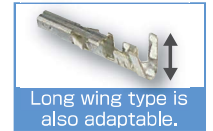
PA-21



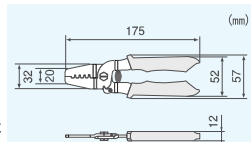
UNIVERSAL CRIMPING PLIERS

Precise crimpers for wide range of open-barrel contacts including long barrel wing type

- 4 different crimping dies, 1.6, 1.9, 2.2 & 2.5mm(W)
- Crimping AWG #26~18 contacts of different connector makers
- Weight: 145 g



Excellent curling of wire and insulation barrels individually



■ Typical terminals applicable

XH Series(JST)	NH Series(JST)	VH Series(JST)
PA Series(JST)	Mini Fit(Molex)	Universal MATE-N-LOK(Tyco)

■ Specifications

Item No.	Die Width (mm)	Die Height (mm)	Die Thickness (mm)	Wires applicable (Reference only)		
				φ mm	mmf	AWG (conductor)
PA-21	1.6	0.8	1.8	0.41~0.51	0.13~0.21	#26~#24
	1.9	1.0		0.41~0.64	0.13~0.33	#26~#22
	2.2	1.2		0.51~0.81	0.21~0.52	#24~#20
	2.5	1.4		0.64~1.02	0.33~0.82	#22~#18

PRECISE CRIMPING SERIES - Tool Frame and Die Set

PAD-11~13

IRoHS HANDY CRIMP TOOL

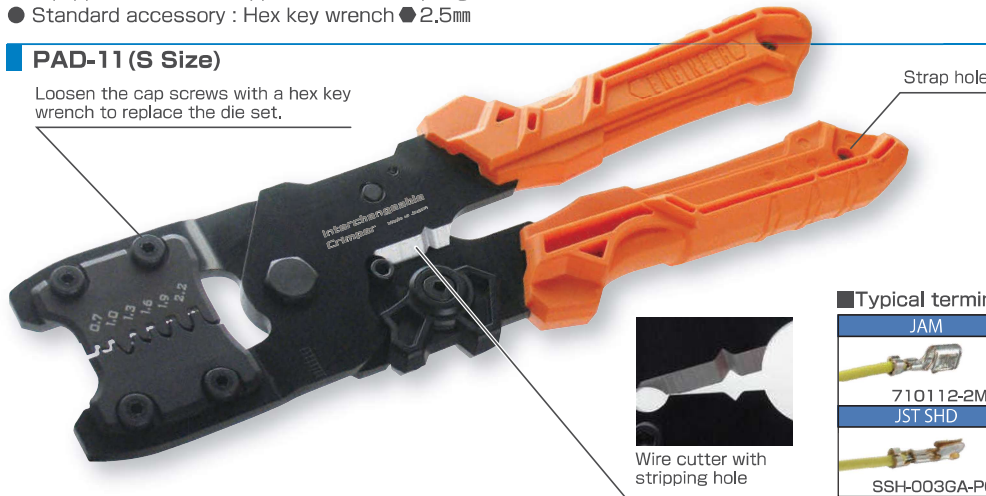
Ultra-precise crimper forming excellent crimping finish

- Interchangeable die set for open-barrel contacts. Easy replacement and perfect fitting to the frame
- Ergonomically-designed handles with strap hole
- Equipped with wire stripper and cutter, spring loaded
- Standard accessory : Hex key wrench ● 2.5mm
- Material :
Frame & Die set – Special alloy steel
Handles – Elastomer (TPR)



PAD-11 (S Size)

Loosen the cap screws with a hex key wrench to replace the die set.



Typical terminals applicable

JAM	Molex CLIK-Mate	Tyco D-1000
710112-2MAC	502381	1827586-2
JST SHD	Molex PicoBlade	Tyco D-1000
SSH-003GA-P0,2	50079	1827587-2

PAD-12 (M Size)



Typical terminals applicable

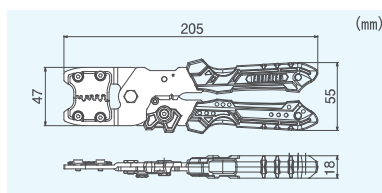
JST NH	Molex New Mini Fit	Tyco D-3000
SHF-001T-0,8BS	5556T	175217-2
JST VH	Molex New Mini Fit	Tyco D-3000
SVH-21T-P1,1	5558T	175288-2

PAD-13 (L Size)



Typical terminals applicable

JST VL	Molex 3191	Tyco D-3000
BVF-42T-P2,0	1189T	175218-2
JST VL	Molex 3191	Tyco D-3000
BVF-61T-P2,0	1190T	175289-2



Crimper size

Item No.	PAD-11											PAD-12					PAD-13				
	PAD-11						PAD-12					PAD-13									
	0.7	1.0	1.3	1.6	1.9	2.2	2.5	2.8	3.1	3.4	3.7	2.5	2.8	3.0	3.5						
Die width	0.7	1.0	1.3	1.6	1.9	2.2	2.5	2.8	3.1	3.4	3.7	2.5	2.8	3.0	3.5						
Die thickness	1.0		1.5		2.0		2.5		3.0		3.5										

PAD-11S~13S

IRoHS INTERCHANGEABLE DIE SET

PAD-11S (S Size)

- Over 90 different terminals applicable



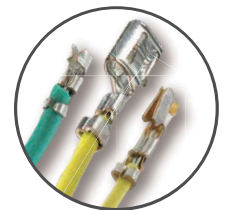
PAD-12S (M Size)

- Over 110 different terminals applicable



PAD-13S (L Size)

- Over 100 different terminals applicable



Frame & Dies Combination

Item No.	Frame	Die set
PAD-11	PAD-10	+ PAD-11S
PAD-12	PAD-10	+ PAD-12S
PAD-13	PAD-10	+ PAD-13S

Crimper size

Item No.	PAD-11S						PAD-12S					PAD-13S				
	PAD-11S						PAD-12S					PAD-13S				
	0.7	1.0	1.3	1.6	1.9	2.2	2.5	2.8	3.1	3.4	3.7	2.5	2.8	3.0	3.5	
Die width	0.7	1.0	1.3	1.6	1.9	2.2	2.5	2.8	3.1	3.4	3.7	2.5	2.8	3.0	3.5	
Die thickness	1.0		1.5		2.0		2.5		3.0		3.5					

PAD-02  **HANDY CRIMP TOOL COMPLETE SET**

- Comes with 3 different interchangeable Die Sets
- Tool Frame & Parts Boxes in a stylish carrying case



■ Set Content

Item No.	Description	
PAD-11	Handy Crimp Tool	
PAD-12S	Interchangeable Die Set (M Size)	
PAD-13S	Interchangeable Die Set (L Size)	
	2.5mm Hex. key wrench	
	Connectable parts box (6 pcs.) Ext. size:20×29×16mm	
	Carrying case (HDPE)	
(mm)		
Item No.	Case Size	Wgt.(g)
PAD-02	300×200×63mm	910g approx.

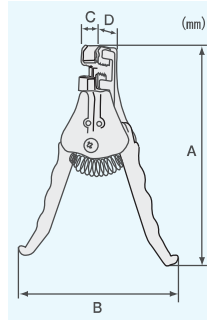
PA-11

 **WIRE STRIPPER**

- Super-Light weight wire stripper
- Accurate wire stripping with single squeeze action.
- Fatigue-free owing to spring action
- Made of durable plastic



■ With strip gauge
Length of wire is adjustable using strip gauge.



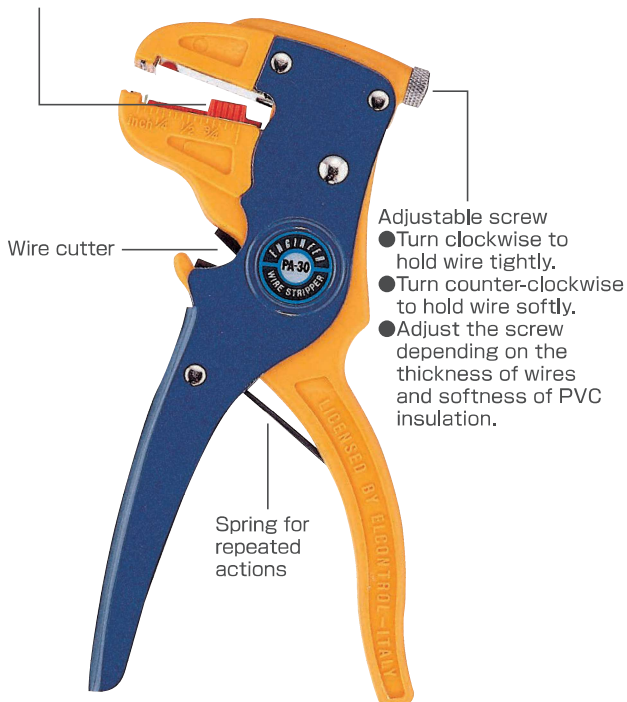
■ Size applicable


Hole diameter mm	0.5	1.2	1.6	2.0	
Stranded wire(AWG)	26	18	16	14	
Solid wire AWG	24	16	14	12	
(mm)					
Item No.	A	B	C	D	Wgt.(g)
PA-11	165	128	20	30	140

PA-30  **WIRE STRIPPER**

- One-Squeeze operation for easy stripping of applicable flat cables, 12mm width max.
- With stopper for adjustment of stripping length, 2~20mm.
- Applicable sectional area: AWG20~10

- Sliding stopper to adjust length of stripping.





PA-91~93  **TERMINAL SET**

- Popular crimping terminals and connectors in compact plastic case.





■ PA-91 Set

Terminal	Sectional area (mm ²)	Screw diam (mm)	Contents
Bare Terminal	R 	0,5	3
		1,25	3
		1,25	4
	Y 	2	5
		5,5	6
		5,5	6







■ PA-92 Set

Terminal	Sectional area (mm ²)	Screw diam (mm)	Contents
Insulated terminal	RV 	1,25	3
		1,25	4
		2	5
	YV 	1,25	3
		1,25	4
		2	5



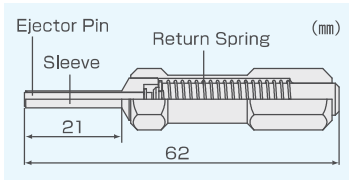
■ PA-93 Set

Terminal	Sectional area (mm ²)	Screw diam (mm)	Contents
Insulated terminal	RV 	5,5	6
	YV 	5,5	6
Splice terminal	BC 	1,25	8
		2	8
Twist connector	TC 	1,25~2	10
		1,5~4	8

PAS-30~34

CONNECTOR EXTRACTOR (Spring Loaded Type)

- Perfect and simple work for extracting pin & socket contacts
- Newly designed construction with built-in return spring
- Owing to built-in spring, ejector pin retracts in the sleeve after work. It prevents the ejector pin from being damaged while carrying or not in use.



Item No.	Inner Diam of Sleeve	Outer Diam of Sleeve	Material
PAS-30	1.9	2.5	SUS303 Stainless Steel
PAS-31	2.1	2.7	
PAS-32	2.4	2.9	
PAS-33	3.1	3.6	
PAS-34	2.7	3.2	

■ Reference for extracting typical connectors

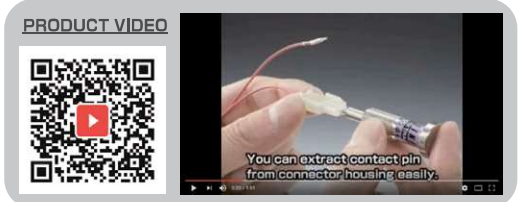
Brand/Connector	Pin Housing	Socket Housing
"TE" Mini Universal Mate-N-Lok	PAS-30	SS-30
"TE" Universal Mate-N-Lok	PAS-34	PAS-34
"TE" Commercial Mate-N-Lok	PAS-32	PAS-34
"JST" ML & EL Series	PAS-31	PAS-31
"JST" L & LL Series	PAS-33	PAS-33
"MOLEX" 1545 Series	PAS-33	PAS-34
"MOLEX" 1625 Series	PAS-30	PAS-31
"MOLEX" 3191 Series	PAS-33	PAS-33

SS-30~34

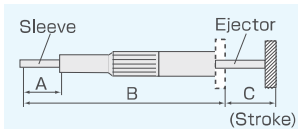
PIN EXTRACTOR

Perfect for extracting both pin and socket terminals.

- The ejector rod inside the sleeve enables you to knock out both male & female pin easily from socket terminal.



(Shape sizes)



Item No.	Outer Diam of Sleeve	Inner Diam of Sleeve	A	B	C
SS-30	2.5	1.9	12	64	21
SS-31	2.7	2.1			
SS-32	2.9	2.4			
SS-33	3.6	3.1			
SS-34	3.2	2.7			

■ Reference for extracting typical connectors

Brand/Connector	Pin Housing	Socket Housing
"TYCO" Mini Universal Mate-N-Lok	SS-30	SS-30
"TYCO" Universal Mate-N-Lok	SS-34	SS-34
"TYCO" Commercial Mate-N-Lok	SS-32	SS-34
"JST" ML & EL Series	SS-31	SS-31
"JST" L & LL Series	SS-33	SS-33
"MOLEX" 1545 Series	SS-33	SS-34
"MOLEX" 1625 Series	SS-30	SS-31
"MOLEX" 3191 Series	SS-33	SS-33
"MOLEX" 8980 Series(4-pin connector in PC)	SS-32	SS-34

SCREW REMOVAL

SCISSORS

NIPPERS

PLIERS

CRIMPING STRIPPING

TWEEZERS

SCREW DRIVERS

SPECIAL DRIVERS

WRENCHES

CUTTING PROCESSING

SETS CASES

SOLDERING EQUIPMENT

ESD CHEMICALS

PH-01~04

LOCK HOLDER

- Serrated ratchet allows quick disconnect & reconnect for temporary connection.
- Ideal for assembling, soldering & precision clamping work.
- Material: Stainless Steel



Holding component

Clipping oil hose



Item No.	Length	Point shape
PH-01	125	Straight
PH-02		Curved
PH-03	150	Straight
PH-04		Curved

SS-21·22

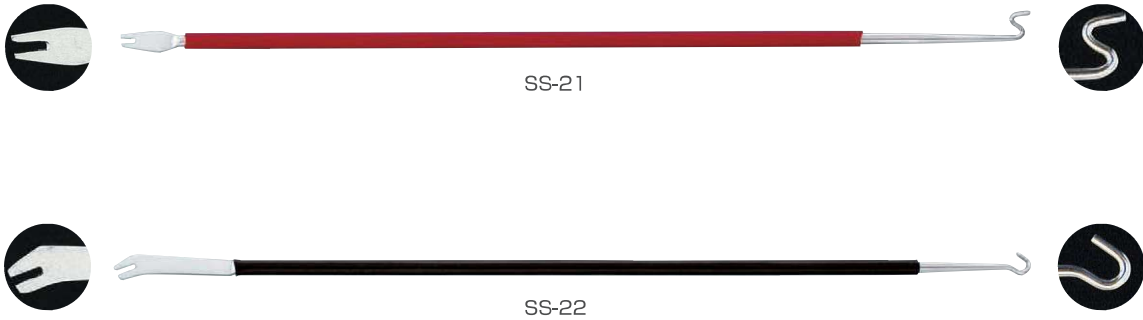
SPRING HOOK

- Ideal for inserting, removing and adjusting coil springs of electronic components or precision instruments
- Suitable for removing connector leads, aligning leads of resistor or condenser and testing arrangements of wires
- 3mm diam.X215 O.A. length



SS-21

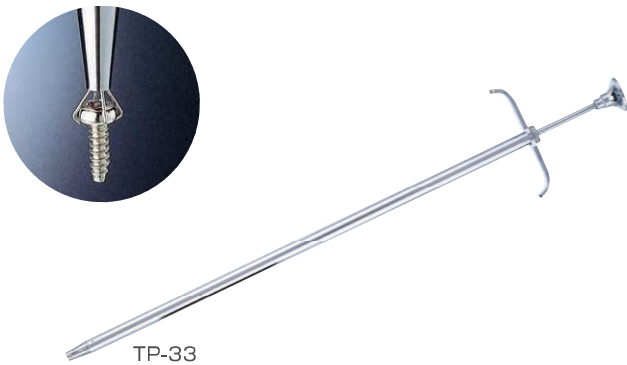
SS-22



TP-33·34

PICK-UP TOOL

- 4 spring jaws pick up small and ball bearing type parts easily and firmly.
- Suitable for assembly work of precision instruments.
- Ideal for pick-up work even in hard to reach areas.



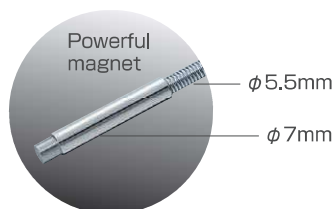
TP-33

Item No.	Housing	O.A. Length
TP-33	φ6.2	250
TP-34	φ6.2	350

TP-35·36

MAGNETIC PICK-UP TOOL

- Ideal for part retrieval in hard to reach areas
- Flexible shaft conforms to any shape
- Alnico magnet tip



Item No.	O.A. Length
TP-35	410
TP-36	525

PA-05·06·07·14

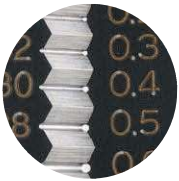
WIRE STRIPPER

- Giving a very round finish of wires after stripping by sharp and precise edge
- Made of carbon steel alloy withstanding abrasions
- Oil-resistant Elastomer (TPR) handle

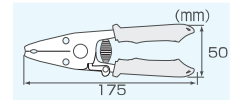


Environment-friendly Elastomer handle

PA-14 for micro-thin wire



with strap hole



Item No.	Wgt.
PA-14	134g

Applicable Sizes Table

Stripper's Hole Diam(mm)		0,25	0,3	0,4	0,5	0,65	0,8	0,95	
Applicable wire	A WG conversion	Stranded	34	32	28~30	26	24	22~24	20~22
		Solid wire	32	30	28	26	24	22	20

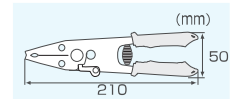
() Reference

"ENGINEER" original Joint-Screw prevents the joint from being loose and offer you easy maintenance.

PA-05 for thin wire



Item No.	Wgt.
PA-05	166g



Applicable Sizes Table

Stripper's Hole Diam(mm)		0,4	0,5	0,65	0,8	0,95	1,15	1,45
Applicable wire	A WG conversion	Stranded	28~30	26~28	24	22~24	20~22	20 (18)
		Solid wire	28	26	24	22	20	18

() Reference

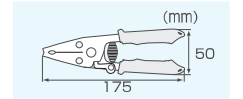
■ Crimping Function (mm²)

Bare Terminal	Connector Terminal
0,5~2,0	0,3~1,25

PA-06 for thin wire



Item No.	Wgt.
PA-06	134g



Applicable Sizes Table

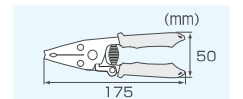
Stripper's Hole Diam(mm)		0,4	0,5	0,65	0,8	0,95	1,15	1,45
Applicable wire	A WG conversion	Stranded	28~30	26	24	22~24	20~22	20 (18)
		Solid wire	28	26	24	22	20	18

() Reference

PA-07 for thick wire



Item No.	Wgt.
PA-07	134g



Applicable Sizes Table

Stripper's Hole Diam(mm)		0,8	0,95	1,15	1,45	1,8	2,1	2,5
Applicable wire	A WG conversion	Stranded	22~24	20~22	20 (18)	(16)	14	12
		Solid wire	22	20	18	16	14	(12)

() Reference

■ Wire Stripper AWG Conversion (Reference only)

AWG	34	32	30	28	26	24	22	20	18	16	14	12
Stranded wire diameter(mm)	0.19	0.23	0.29	0.37	0.47	0.59	0.74	0.94	1.18	1.49	1.88	2.37
Conductor diameter(mm)	0.16	0.2	0.25	0.32	0.40	0.51	0.64	0.81	1.02	1.29	1.63	2.05
Sectional area(ml)	0.025	0.032	0.05	0.08	0.13	0.2	0.33	0.52	0.82	1.31	2.08	3.31
Stripping hole φ (mm)	PA-05		0,4	0,5	0,65	0,8	0,95	1,15	1,45			
	PA-06		0,4	0,5	0,65	0,8	0,95	1,15	1,45			
	PA-07					0,8	0,95	1,15	1,45	1,8	2,1	2,5
	PA-14	0,25	0,3	0,4	0,5	0,65	0,8	0,95				

PA-90 STRIP GAUGE

Min. stripping length 1mm!

- Saving time and giving you perfect stripping length every time
- Adjustable stripping length let you work more efficiently and reduces faults.



SCREW REMOVAL

SCISSORS

NIPPERS

PLIERS

CRIMPING STRIPPING

TWEEZERS

SCREW DRIVERS

SPECIAL DRIVERS

WRENCHES

CUTTING PROCESSING

SETS CASES

SOLDERING EQUIPMENT

ESD CHEMICALS