

# Crimping and Stripping

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## 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 spring and locking latch for easy handling

### PA-24



### MICRO CONNECTOR PLIERS

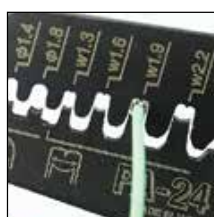
#### Specialty of 2.5mm pitch connector contacts (AWG #32 to #18), DuPont compatible

- More than 170 different terminals from the major connector manufacturers applicable
- Perfectly crimps a triangular insulation barrel (lugs) of DuPont (Servo) connector without damaging the insulations.
- 6 Crimping Dies ('M'-shaped crimp: 1.3, 1.6, 1.9 & 2.2mm & Round crimp:  $\phi 1.4$  &  $\phi 1.8$ mm) for open-barrel contacts
- Built-in screw cutter (M2, M2.6 & M3)
- Tapered and slender jaws, Light weight of 115g only
- Spring loaded (on the back side), with locking latch



**Screw Cutter** M2, M2.6, M3  
(Min. Thread Length: 3.5mm)

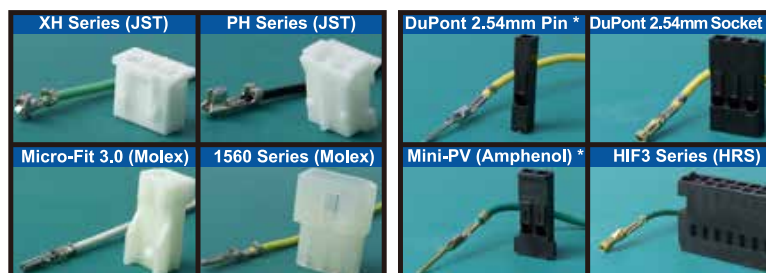
#### Typical terminals applicable



**M-shaped dies**  
Lugs curl up very tidily.

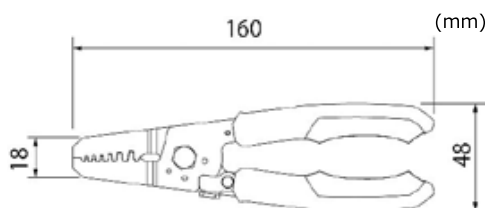


**Round dies**  
For triangular lugs  
\*DuPont connector compatible



※ Round Crimp dies for Insulation barrel only

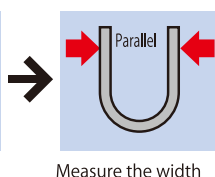
#### Specifications



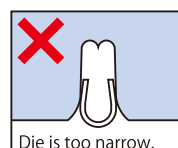
Item No.	Profile of Dies	Die Width (mm)	Die Height (mm)	Die Thickness (mm)	Wire (AWG Ref. only
PA-24	m	1.3	0.5	2.2	#32~#24
		1.6	0.7		#26~#24
		1.9	0.8		#26~#22
		2.2	0.9		#24~#18
	O	φ1.4		3.2	#30~#28
		φ1.8			#28~#24

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

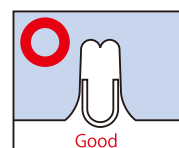
1. Measure the width of conductor barrel with a caliper while both barrel wings are in parallel.



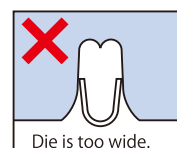
2. Select the die width which is close to the width of barrel wings measured.



For example: 1.5mm measured



Select 1.6mm dies.



SCREW REMOVAL

SCISSORS

NIPPERS

PLIERS

CRIMPING STRIPPING

TWEEZERS

SCREW DRIVERS

SPECIAL DRIVERS

WRENCHES

CUTTING PROCESSING

SETS CASES

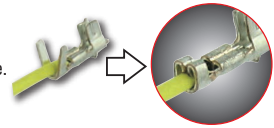
SOLDERING EQUIPMENT

ESD CHEMICALS

## CONNECTOR CRIMPING PLIERS

### Features

- Our line-up offers you very precise and perfect crimp finish of open-barrel contacts.
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- 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)	Universal Mate-N-Lok 170363-1
EH Series(JST)	NH Series(JST)	Universal Mate-N-Lok 170365-1

### Specifications

Item No.	Die Width (mm)	Die Height (mm)	Die Thickness (mm)	Wires applicable (Reference only)		
				φ mm	mm <sup>2</sup>	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)

### Specifications

Item No.	Die Width (mm)	Die Height (mm)	Die Thickness (mm)	Wires applicable (Reference only)		
				φ mm	mm <sup>2</sup>	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



Long wing type is also adaptable.



### 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	mm <sup>2</sup>	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

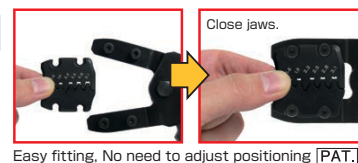
### PAD-11~13



### HANDY CRIMP TOOL

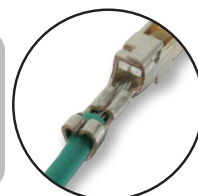
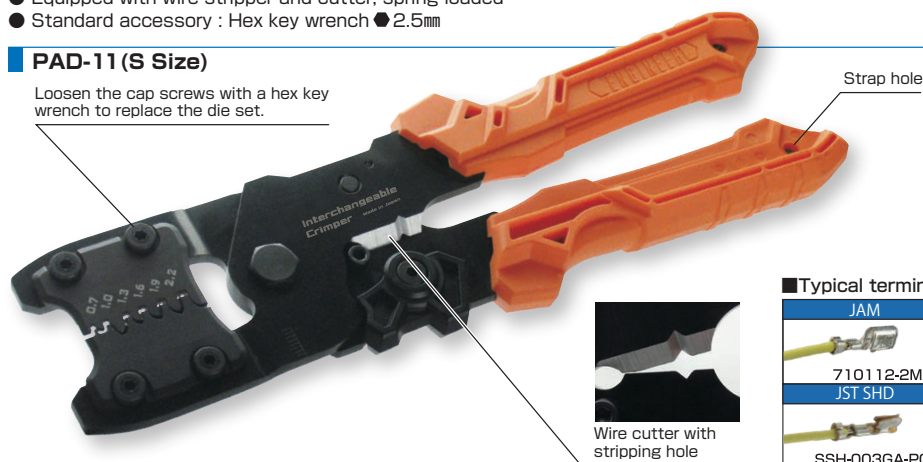
#### Ultra-precise crimper forming excellent crimping finish

- 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)

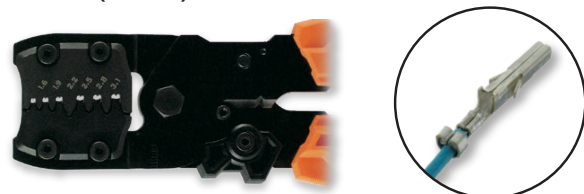
Loosen the cap screws with a hex key wrench to replace the die set.



#### Typical terminals applicable

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

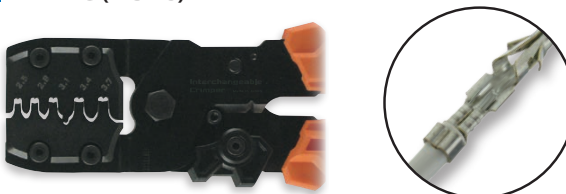
#### PAD-12 (M Size)



#### Typical terminals applicable

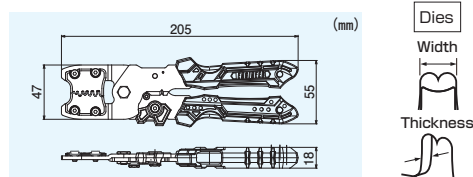
JST NH	Molex New Mini Fit	Tyco D-3000
SHF-001T-0.8BS	5556T	175217-2
JST VH	Molex New Mini Fit	Tyco D-3000
SVH-21T-P1.1	5558T	175288-2

#### 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					
	Die width						Die thickness						Die width					
	0.7	1.0	1.3	1.6	1.9	2.2	2.5	2.8	3.1	3.4	3.7		0.7	1.0	1.3	1.6	1.9	2.2
	1.0	1.5	2.0	2.5	3.0	3.5							1.0	1.5	2.0	2.5	3.0	3.5

### PAD-11S~13S



### INTERCHANGEABLE DIE SET

#### PAD-11S (S Size)

- Over 90 different terminals applicable



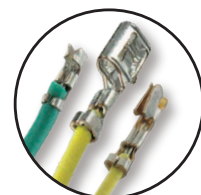
#### PAD-12S (M Size)

- 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					
	Die width						Die thickness						Die width					
	0.7	1.0	1.3	1.6	1.9	2.2	2.5	2.8	3.1	3.4	3.7		0.7	1.0	1.3	1.6	1.9	2.2
	1.0	1.5	2.0	2.5	3.0	3.5							1.0	1.5	2.0	2.5	3.0	3.5

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## PAD-02 HANDY CRIMP TOOL COMPLETE SET

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



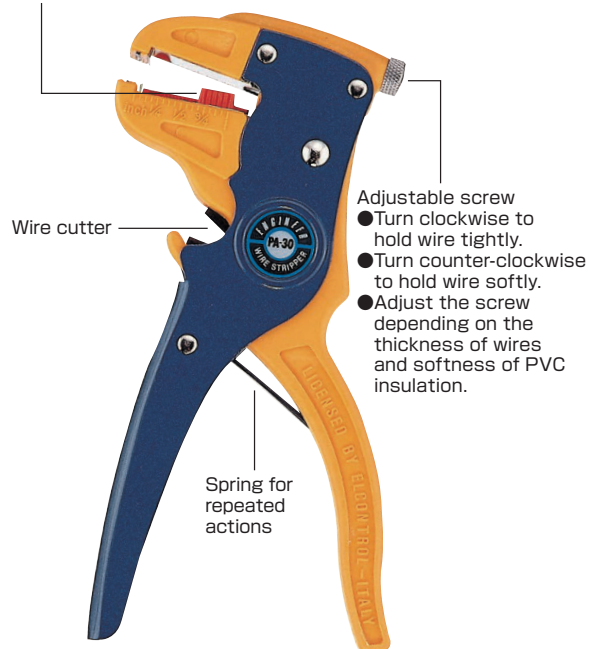
### Set Content

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-30 WIRE STRIPPER

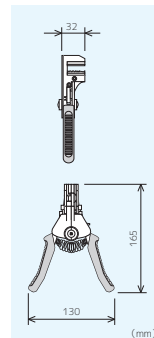
- One-Squeeze operation for easy stripping of applicable flat cables, 12mm width max.
- With stopper for adjustment of stripping length, 2~20mm.
- Applicable sectional area: AWG20~10

- Sliding stopper to adjust length of stripping.



## PAW-32 SEMI-AUTO STRIPPER

- Accurate wire stripping with a single squeeze action
- Ideal for stranded wires (AWG) to be stripped with no damage on the core
- With strip gauge: Length of wire is adjustable to max. 30mm
- Robust die-cast alloy and comfort plastic handles with a spring loaded

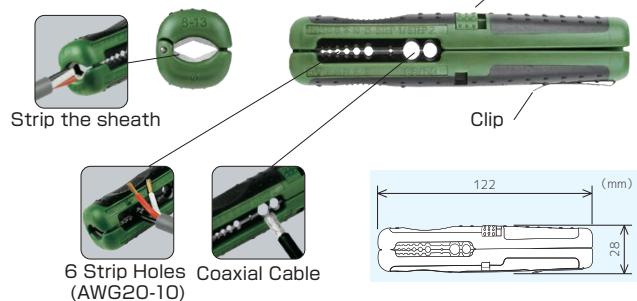


### Size applicable

Hole diameter(mm)	0.40	0.51	0.66	0.81	1.00	1.29	1.63
Stranded wire(AWG)	26	24	22	20	18	16	14
Sectional area(mm <sup>2</sup> )	0.13	0.20	0.33	0.52	0.82	1.31	2.08

## PAW-21 COMPACT STRIPPER

- Pocketable and light weight stripper for stripping AWG20~10 low voltage cables as well as coaxial cables (RG6/RG59)
- Materials : ABS & TPR - Body, Carbon Steel - Blades
- Weight : 48g



## PA-91·92 TERMINAL SET

- Popular crimping terminals and connectors in compact plastic case.



PA-91



PA-92

### PA-91 Set

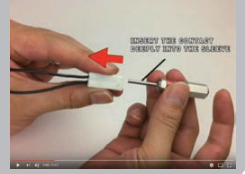
Terminal	Sectional area (mm <sup>2</sup> )	Screw diam (mm)	Contents
Bare Terminal	0.5	3	10
	1.25	3	
	1.25	4	
	2	5	5
	5.5	6	
	1.25	4	
Y	2	5	10
	5.5	6	5

### PA-92 Set

Terminal	Sectional area (mm <sup>2</sup> )	Screw diam (mm)	Contents
Insulated terminal	1.25	3	10
	1.25	4	
	2	5	
	1.25	3	5
	1.25	4	
	2	5	

**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.

**PRODUCT VIDEO**

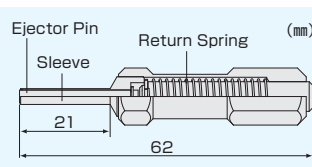
PAS-30

PAS-31

PAS-32

PAS-33

PAS-34



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.

**PRODUCT VIDEO**

SS-30

SS-31

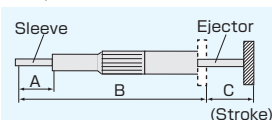
SS-32

SS-33

SS-34



(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

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**PH-01~04****LOCK HOLDER**

- Perfect for holding components and clipping oil hoses
- Ratchet handles allow smooth clipping and quick lock release.
- Serrated hemostat for assembling, soldering and precision clamping work
- With 3-position snap lock



Holding component



Clipping oil hose

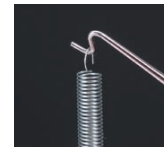


Item No.	Length	Point shape
PH-01	125	Straight
PH-02		Curved
PH-03	150	Straight
PH-04		Curved

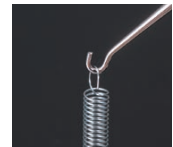
(mm)

**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



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.



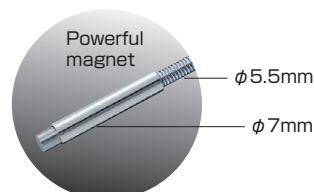
TP-33

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

(mm)

**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

(mm)



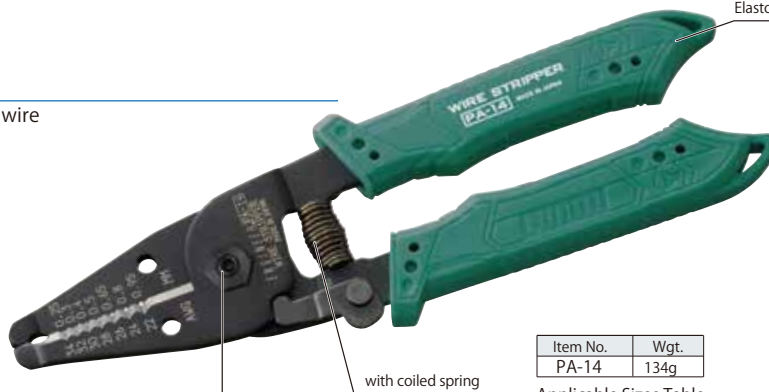
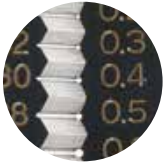
## PA-06 • 07 • 14

## 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



## PA-14 for micro-thin wire

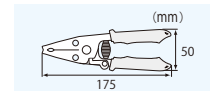


with coiled spring

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



with strap hole



Item No.	Wgt.
PA-14	134g

Applicable Sizes Table

Applicable wire	AWG conversion	Stripper's Hole Diam (mm)							
		0.25	0.3	0.4	0.5	0.65	0.8	0.95	
	Stranded	34	32	28~30	26	24	22~24	20~22	
	Solid wire	32	30	28	26	24	22	20	

( ) Reference

## PA-06 for thin wire



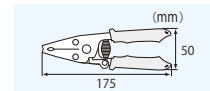
Environment-friendly Elastomer handle

Item No.	Wgt.
PA-06	134g

Applicable Sizes Table

Applicable wire	AWG conversion	Stripper's Hole Diam (mm)							
		0.4	0.5	0.65	0.8	0.95	1.15	1.45	
	Stranded	28~30	26	24	22~24	20~22	20	(18)	
	Solid wire	28	26	24	22	20	18	16	

( ) Reference



## PA-07 for thick wire



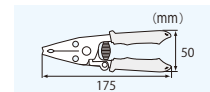
Environment-friendly Elastomer handle

Item No.	Wgt.
PA-07	134g

Applicable Sizes Table

Applicable wire	AWG conversion	Stripper's Hole Diam (mm)							
		0.8	0.95	1.15	1.45	1.8	2.1	2.5	
	Stranded	22~24	20~22	20	(18)	(16)	14	12	
	Solid wire	22	20	18	16	14	(12)	(10)	

( ) 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 (mm²)		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												
	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
- Stripping length adjustable from 1mm to 24mm



SCREW REMOVAL

SCISSORS

NIPPERS

PLIERS

CRIMPING STRIPPING

TWEEZERS

SCREW DRIVERS

SPECIAL DRIVERS

WRENCHES

CUTTING PROCESSING

SETS CASES

SOLDERING EQUIPMENT

ESD CHEMICALS