

Industrial Bits

BITS & SOCKETS

BITS

Made in Japan



VESSEL



BITS & SOCKETS ดอกไขควง

Industrial Bits Type A	C4
Industrial Bits Type B	C8
Precision Bits	C12



Industrial bits Technical

BITS & SOCKETS

TECHNICAL

RoHS

Environmental measures

Pb (lead) / Cd (cadmium) / Hg (mercury) / Hexavalent chromium / PBB (polybrominated biphenyl) / PBDE (polybrominated diphenyl ether) / DEHP, BBP, DBP, DIBP (phthalate esters)

The products with this mark in this catalogue are compliant with the RoHS directives (EU) (usage limit of the above 10 substances),

Note: For the updated information on RoHS compliant products, visit our homepage, because some products or sizes are under investigation or are not compliant at the time of publication of this catalogue.

BITS

Made in Japan

VESEL



For cross recessed screws

Most commonly used in the market
JIS B4633.
Devised by PHILLIPS SCREW COMPANY.



For slotted head screws

Especially used for small screws for watches, glasses and precision equipment.
Also used for cross recessed slotted screws
JIS B4609.



For square screws

Mainly used for quake-resistant hardware.
Also good for sash doors and log houses.



For hexagonal socket screws

Used for metal products assembly, mold tools, machines, precision equipment and motorcycles, etc.



For TORX screws

Used for hard disk, automobiles and cutting tools.
VESSEL manufactures tools for TORX and TORX PLUS under the licensing agreement with Acument Intellectual Properties, LLC.



For POZIDRIV screws

Favored in Europe and used for OA devices, computers, housing materials, automobiles and airplanes.
VESSEL manufactures POZIDRIV tools under the licensing agreement with European Ind. Serv. Ltd. in UK.



For SUPADRIV screws

Favored in UK, Where this shape was devised, and used for OA devices, computers, housing materials, automobiles and airplanes. VESSEL manufactures SUPADRIV tools under the licensing agreement with European Ind. Serv. Ltd. in UK.



For hexagonal bolts and nuts

Sockets widely used for metal product assembly, automobiles, machines, houses and construction related fields



Magnetized bits

These bits can capture screws with a strong magnetic force enhancing work efficiency.



Torsion part



Torsion part absorbs the impact caused when the screw head is fully seated by an impact driver, preventing tip breakage.



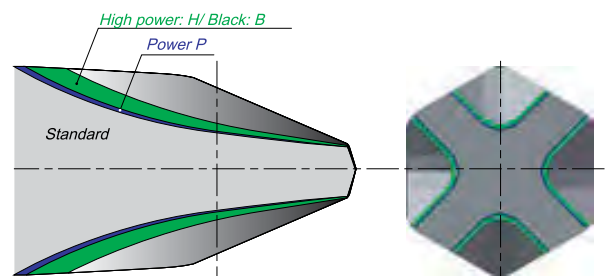
φ3.5×20mm

For soft joint such as wood screws fastening.
Suitable when fastened material is soft.



φ3.7×14mm

For hard joint such as drill fastening.
Suitable when fastened material is hard.



Name	Mark	Cross-section area of the tip	Purpose	Fitting to screws
Standard	—	Small	Wide range of works	Strongly Recommended
Power	P	Medium	For high impact	Very Good
High Power	H	Large	For widely cross recessed screws (pan head screws.)	Good
Black	B			

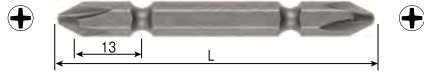
INDUSTRIAL BIT TYPE A

ดอกไขควง TYPE A

 H 6.35 MM

A14 DOUBLE END BIT

- if one end breaks, the other end can be used.
- A wide variety of bits according to different heat treatment.



Size Tip x Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.
⊕ 1 x 45	H	10	100
65	H	10	100
65	G	10	100
110	H	10	100
110	G	10	100
⊕ 2 x 45	X	10	100
45	H	10	100
45	G	10	100
65	X	10	100
65	H	10	100
65	G	10	100
65	E	10	100
110	X	10	100
110	H	10	100
110	G	10	100
110	E	10	100
150	X	10	100
150	H	10	100
150	G	10	100
150	E	10	150
200	X	10	150
200	H	10	150
200	G	10	150
200	E	10	100
300	G	10	100
⊕ 3 x 45	H	10	100
45	E	10	100
65	X	10	100
65	H	10	100
65	E	10	100
110	H	10	100
110	E	10	100

M-A14 DOUBLE END BIT (Magnetized)

- if one end breaks, the other end can be used.
- Strongly magnetized.



Size Tip x Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.
⊕ 1 x 45	H	10	100
65	H	10	100
110	H	10	100
⊕ 2 x 45	H	10	100
45	G	10	100
65	H	10	100
65	G	10	100
110	H	10	100
110	G	10	100
150	H	10	100

 H 8 MM

A15 DOUBLE END BIT

- if one end breaks, the other end can be used.
- High strength with 8mm hexagonal shank.

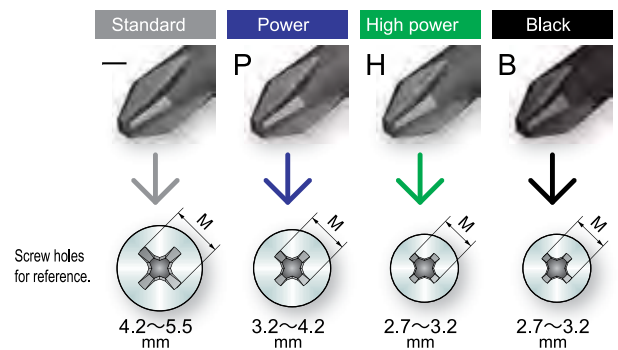
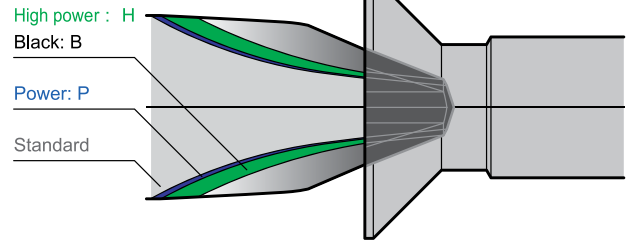


Size Tip x Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.
⊕ 2 x 65	G	10	250
110	G	10	150
⊕ 3 x 65	E	10	250
110	E	10	150

One point

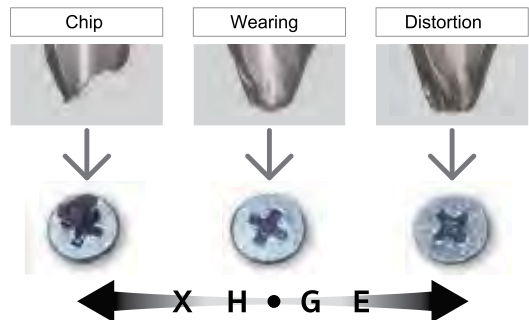
Bit selection I

- Selecting Phillips tip suitable for screw head hole



* M dimension : the size of a cross recess on a screw head viewed from directly above

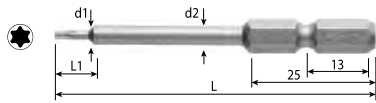
- Selecting Phillips tip according to hardness classification



V TORX BIT H 6.35 MM

V TORX BIT

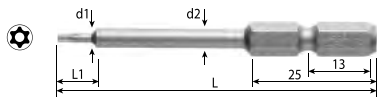
- For TORX screws used in the automotive industry.



Size Tip x Overall Length (mm)	mm	d1	L1	d2	Inner Ctn.
		mm			
T6 x 65	1.65	1.95	6.5	4.0	10
110	1.65	1.95	6.5	4.0	10
T8 x 65	2.3	2.60	7.0	4.5	10
110	2.3	2.60	7.0	4.5	10
T10 x 65	2.72	3.02	7.5	4.5	10
110	2.72	3.02	7.5	4.5	10
T15 x 65	3.26	3.56	7.5	4.5	10
110	3.26	3.56	7.5	4.5	10
T20 x 65	3.84	4.14	7.5	5.0	10
110	3.84	4.14	7.5	5.0	10
T25 x 65	4.4	4.70	8.0	5.0	10
110	4.4	4.70	8.0	5.0	10
T27 x 65	4.96	5.26	8.0	5.5	10
110	4.96	5.26	8.0	5.5	10
T30 x 65	5.49	5.79	8.5	6.0	10
110	5.49	5.79	8.5	6.0	10
T40 x 65	6.6	H6.35	-	H6.35	10
110	6.6	H6.35	-	H6.35	10

V TORX BIT (TAMPER-PROOF)

- For TORX screws used in the automotive industry.
- With around hole for tamper-proof.



Size Tip x Overall Length (mm)	mm	d1	L1	d2	Inner Ctn.
		mm			
T8H x 65	2.3	2.60	7.0	4.5	10
110	2.3	2.60	7.0	4.5	10
T10H x 65	2.72	3.02	7.5	4.5	10
110	2.72	3.02	7.5	4.5	10
T15H x 65	3.26	3.56	7.5	4.5	10
110	3.26	3.56	7.5	4.5	10
T20H x 65	3.84	4.14	7.5	5.0	10
110	3.84	4.14	7.5	5.0	10
T25H x 65	4.4	4.70	8.0	5.0	10
110	4.4	4.70	8.0	5.0	10
T27H x 65	4.96	5.26	8.0	5.5	10
110	4.96	5.26	8.0	5.5	10
T30H x 65	5.49	5.79	8.5	6.0	10
110	5.49	5.79	8.5	6.0	10
T40H x 65	6.6	H6.35	-	H6.35	10
110	6.6	H6.35	-	H6.35	10

A16 HEX BIT

- For assembly work focusing on workability.

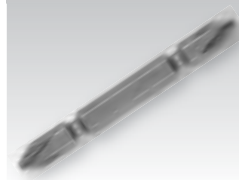


Size Tip x Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.
H 2 x 65	H	10	100
110	H	10	100
2.5 x 65	H	10	100
110	H	10	100
3 x 65	H	10	100
110	H	10	100
4 x 65	H	10	100
110	H	10	100
5 x 65	G	10	100
110	G	10	100
6 x 65	G	10	100
110	G	10	100

One point

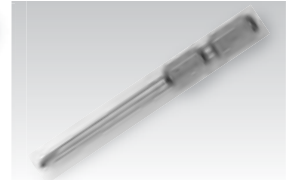
Bit selection II

- Selection according to bit shapes



Double End Bit

If one end breaks, the other end can be used.



Recessed Bit / Bit

Thin shank improves workability in narrow spaces.

- Selection according to torsion effect

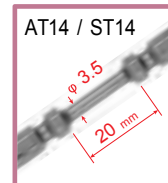


Impact is absorbed by the torsion effect at the slot part which receives tempering treatment.

Hard Joint



Soft Joint



Impact is absorbed by the torsion part (ø3.5×20mm).

Soft Joint

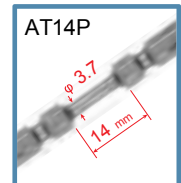


Hard Joint

When an instantaneous impact is given when the head of drill screw and tapping screw is fully seated

Soft Joint

When load is gradually increased such as in fastening wood screws



Impact is absorbed by the torsion part (ø3.7×14mm).

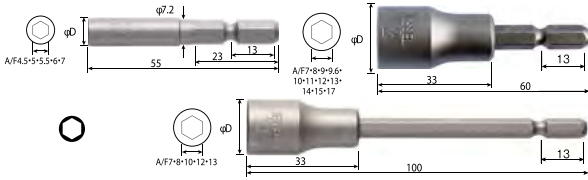
Hard Joint



H 6.35 MM

A20 SOCKET BIT

- Socket bit for assembly.
- Strong resistance to shank breakage with press-fit method (Marked with a star symbol in the table below)



Size Tip x Overall Length (mm)	Ø D	Holes Depth		Inner Ctn.	Outer Ctn.
		mm			
A/F 4.5 x 65	7.5	20	10	250	
5 x 55	8.5	20	10	250	
5.5 x 55	9	20	10	250	
100	9	25	10	250	
6 x 55	10	20	10	200	
100	10	25	10	200	
7 x 11 x 55	11	20	10	200	
100	11	25	10	150	
7 x 60	☆ 13.5	22	10	200	
100	☆ 13.5	25	10	150	
8 x 60	☆ 13.5	22	10	200	
100	☆ 13.5	22	10	150	
9 x 60	☆ 15	22	10	150	
9.6 x 60	☆ 15	22	10	150	
10 x 60	☆ 16	22	10	150	
100	☆ 16	22	10	100	
11 x 60	☆ 17	22	10	150	
12 x 60	☆ 18	22	10	100	
100	☆ 18	22	10	100	
13 x 60	☆ 19	22	10	100	
100	☆ 19	22	10	50	
14 x 60	☆ 20	22	10	100	
15 x 60	☆ 21	22	10	50	
17 x 60	☆ 23	22	10	50	

H 8 MM

A19 HEX BIT

- For assembly work focusing on workability.
- High strength with 8mm hexagonal shank.

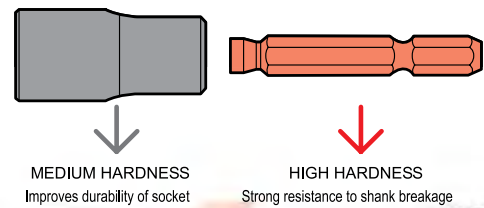


Size Tip x Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.
H 5 x 65	G	10	250
6 x 65	G	10	250
130	G	10	100
8 x 65	G	10	250
130	G	10	100
10 x 65	S	10	200
130	S	10	100

One point

Features of press-fit type sockets

(Press-fit type: marked with a star symbol in the table of each model)



The shank and socket have been heat-treated to the best hardness and press-fit together. The socket part is strong against wear and shank against twisting, resulting in higher durability.

Prevents shank breakage
Torsion moment with a static torque



No. B35

Bit Type B



The Type B insertion entry is designed to work with the dimensions most commonly used by air tool manufacturers. There are some models that will not accept insertion of the double-head types, depending on the shape of the insertion chuck. Please make your selections while referring to the specifications table

BITS



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VESSEL



No. B35

Bit

Bits manufactured to meet specifications based on ISO.
Width across flats 6.35 mm, hexagonal.

9.5mm

9mm

⊠This is for illustrative purpose.

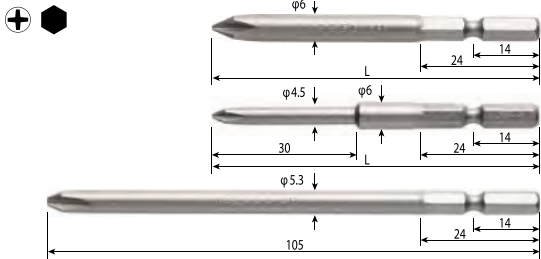
INDUSTRIAL BIT TYPE B

ดอกไขควง TYPE B



B34 BIT

- For assembly work focusing on workability.
- Hexagonal shape with the width across flats of 5mm is also suited for electric drivers.



Size	Heat treatment classification	Inner Ctn.	Outer Ctn.
⊕ 1 x 70	H	10	100
100	H	10	100
150	H	10	100
⊕ 1 x 4 x 70	H	10	100
⊕ 1 x 4 x 30 x 70	H	10	100
⊕ 1 x 5.3 x 105	H	10	100
120	X	10	100
120	H	10	100
⊕ 2 x 70	H	10	100
100	H	10	100
120	H	10	100
150	H	10	100
200	H	10	100
⊕ 2 x 3 x 30 x 75	H	10	100
⊕ 2 x 4.5 x 70	H	10	100
⊕ 2 x 5.3 x 105	H	10	100
120	H	10	100
H 2 x 70	H	10	100
H 2.5 x 70	H	10	100
H 3 x 70	H	10	100
H 4 x 70	H	10	100
H 5 x 70	H	10	100



B36 DOUBLE END BIT

- If one end breaks, the other end can be used.
- For assembly work focusing on workability.

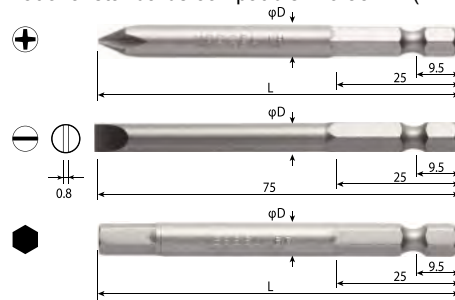


Size	Heat treatment classification	Inner Ctn.	Outer Ctn.
⊕ 1 x 70	H	10	100
100	H	10	100
⊕ 2 x 70	H	10	100
100	H	10	100
150	H	10	100
200	H	10	100



B35 BIT

- For assembly work focusing on workability.
- International standards compatible H 6.35mm (1/4")



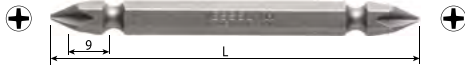
Size	Heat treatment classification	øD	Inner Ctn.	Outer Ctn.
⊕ 1 x 50	H	7.0	10	100
75	X	7.0	10	100
75	H	7.0	10	100
⊕ 1 x 4.5 x 100	H	4.5	10	100
⊕ 2 x 50	X	7.0	10	100
50	G	7.0	10	100
75	X	7.0	10	100
75	H	7.0	10	100
75	G	7.0	10	100
75	E	7.0	10	100
100	H	7.0	10	100
100	G	7.0	10	100
100	E	7.0	10	100
150	H	7.0	10	100
150	G	7.0	10	100
150	E	7.0	10	100
⊕ 2 x 4.5 x 100	H	4.5	10	100
⊕ 3 x 75	H	7.0	10	100
75	E	7.0	10	100
100	H	7.0	10	100
100	E	7.0	10	100
150	G	7.0	10	100
⊕ 6 x 75	E	6.0	10	100
⊕ 6.35 x 0.97 x 49(1524)	H	6.35	10	100
⊕ 7.9 x 1.17t x 49(1526)	H	7.92	10	100
* ⊕ 6.99 x 1.07t x 76(1565)	H	6.99	10	100
H 2 x 75	H	7.0	10	100
100	H	7.0	10	100
H 2.5 x 75	H	7.0	10	100
100	H	7.0	10	100
150	H	7.0	10	100
H 3 x 75	H	7.0	10	100
100	H	7.0	10	100
150	H	7.0	10	100
H 4 x 49(21204)	H	4.6	10	100
75	H	7.0	10	100
100	H	7.0	10	100
150	H	7.0	10	100
H 5 x 49(21205)	H	5.8	10	100
75	G	7.0	10	100
100	G	7.0	10	100
150	G	7.0	10	100
H 6 x 49(21206)	H	-	10	100
75	G	7.0	10	100
100	G	7.0	10	100
150	G	7.0	10	100
* H 7 x 70(1336/70)	G	7.0	10	100
* H 8 x 70(1337/70)	G	7.0	10	100
H 9 x 70(1339/70)	G	7.0	10	100



H 6.35 MM

B43 DOUBLE END BIT

- If one end breaks, the other end can be used.
- For assembly work focusing on workability.



Size Tip x Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.
⊕ 1 x 75	H	10	100
⊕ 2 x 50	X	10	100
50	H	10	100
50	E	10	100
75	X	10	100
75	H	10	100
75	G	10	100
75	E	10	100
100	X	10	100
100	H	10	100
100	G	10	100
100	E	10	100
150	X	10	100
150	H	10	100
150	G	10	100
200	G	10	100
300	H	10	100
⊕ 3 x 75	H	10	100
75	E	10	100
100	H	10	100
100	E	10	100
150	H	10	100

M-B43 DOUBLE END BIT (MAGNETIZED)

- If one end breaks, the other end can be used.
- For assembly work focusing on workability.

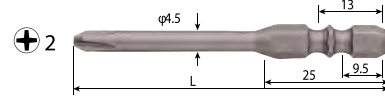


Size Tip x Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.
⊕ 2 x 75	H	10	100
100	H	10	100
150	H	10	100

H 6.35 MM

M-AB16 RECESSED BIT (MAGNETIZED)

- Compatible with both A and B type chucks.
- Useful when using multiple fastening tools with different drive types in an assembly line.

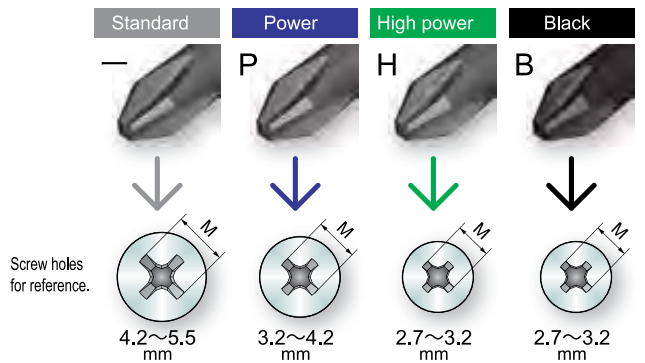
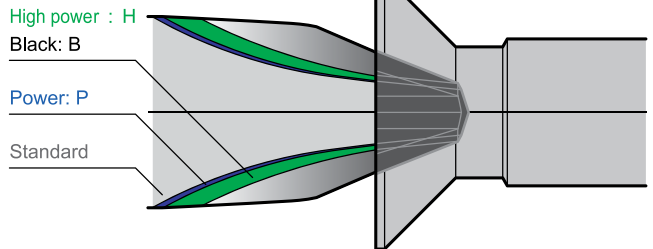


Size Tip x Overall Length (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.
⊕ 2 x 4.5 x 65	H	10	100
100	H	10	100
150	H	10	100

One point

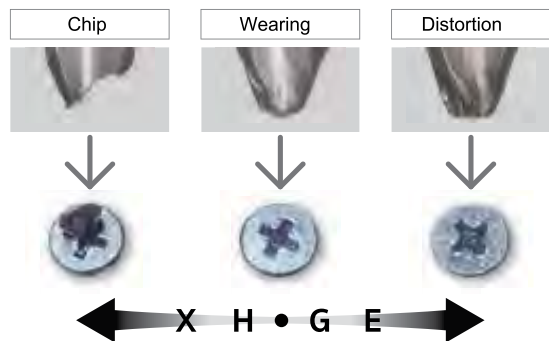
Bit selection I

- Selecting Phillips tip suitable for screw head hole



* M dimension : the size of a cross recess on a screw head viewed from directly above

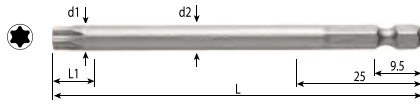
- Selecting Phillips tip according to hardness classification



J TORX BIT H 6.35 MM

J TORX BIT

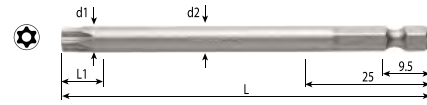
- For TORX screws used in the automotive industry.



Model No. (mm)	mm	d1	L1	d2	Inner Ctn.
T5 x 49 (T10605)	1.37	1.67	6.5	3.18	10
70 (T10705)	1.37	1.67	6.5	3.18	10
89 (T10805)	1.37	1.67	6.5	3.18	10
T6 x 75	1.65	1.95	6.5	4.0	10
100	1.65	1.95	6.5	4.0	10
152 (T10906)	1.65	1.95	6.5	3.18	10
T7 x 70 (T10707)	1.97	2.27	6.5	3.18	10
75	1.97	2.27	6.5	4.0	10
90 (T10807)	1.97	2.27	6.5	3.18	10
152 (T10907)	1.97	2.27	6.5	3.18	10
T8 x 49 (T10608)	2.3	2.6	7.0	3.18	10
70 (T10708)	2.3	2.6	7.0	3.18	10
75	2.3	2.6	7.0	4.5	10
90 (T10808)	2.3	2.6	7.0	3.18	10
100	2.3	2.6	7.0	4.5	10
152	2.3	2.6	7.0	3.18	10
T9 x 70 (T10709)	2.5	2.78	7.0	3.18	10
90 (T10809)	2.5	2.78	7.0	3.18	10
152 (T10909)	2.5	2.78	7.0	3.18	10
T10 x 49 (T10610)	2.72	3.02	7.5	3.96	10
70 (T10710)	2.72	3.02	7.5	3.96	10
75	2.72	3.02	7.5	4.5	10
100	2.72	3.02	7.5	4.5	10
152 (T10910)	2.72	3.02	7.5	3.96	10
T15 x 49 (T10615)	3.26	3.56	7.5	3.96	10
70 (T10715)	3.26	3.56	7.5	3.96	10
75	3.26	3.56	7.5	4.5	10
90 (T10815)	3.26	3.56	7.5	3.96	10
100	3.26	3.56	7.5	4.5	10
152 (T10915)	3.26	3.56	7.5	3.96	10
T20 x 49 (T10620)	3.84	4.14	4.75	4.37	10
70 (T10720)	3.84	4.14	7.5	4.37	10
75	3.84	4.14	7.5	5.0	10
100	3.84	4.14	7.5	5.0	10
152 (T10920)	3.84	4.14	7.5	4.37	10
T25 x 70 (T10725)	4.4	4.7	8.0	5.0	10
75	4.4	4.7	8.0	5.0	10
100	4.4	4.7	8.0	5.0	10
152 (T10925)	4.4	4.7	8.0	4.75	10
T27 x 75	4.96	5.26	8.0	5.5	10
100	4.96	5.26	8.0	5.5	10
152 (T10927)	4.96	5.26	8.0	6.35	10
T30 x 70 (T10730)	5.49	5.79	8.5	6.35	10
75	5.49	5.79	8.5	6.0	10
90 (T10830)	5.49	5.79	8.5	6.35	10
100	5.49	5.79	8.5	6.0	10
152 (T10930)	5.49	5.79	8.5	6.35	10
T40 x 49 (T10640)	6.6	-	-	7.0	10
70 (T10740)	6.6	-	-	7.0	10
75	6.6	-	-	7.0	10
90 (T10840)	6.6	-	-	7.0	10
100	6.6	-	-	7.0	10
152 (T10940)	6.6	-	-	7.0	10
T45 x 75	7.77	-	-	8.0	10
100	7.77	-	-	8.0	10

J TORX BIT (TAMPER-PROOF)

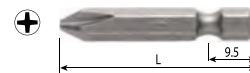
- For TORX screws used in the automotive industry.
- With a round hole for tamper-proof.



Model No. (mm)	mm	d1	L1	d2	Inner Ctn.
T6H x 75	1.65	1.95	6.5	4.0	10
100	1.65	1.95	6.5	4.0	10
T8H x 75	2.3	2.60	7.0	4.5	10
100	2.3	2.60	7.0	4.5	10
T10H x 49 (T10610H)	2.72	3.02	7.5	3.96	10
70 (T10710H)	2.72	3.02	7.5	3.96	10
75	2.72	3.02	7.5	4.5	10
100	2.72	3.02	7.5	4.5	10
T15H x 75	3.26	3.56	7.5	4.5	10
100	3.26	3.56	7.5	4.5	10
T20H x 49 (T10620H)	3.84	4.14	7.5	4.37	10
70 (T10720H)	3.84	4.14	7.5	4.37	10
75	3.84	4.14	7.5	5.0	10
100	3.84	4.14	7.5	5.0	10
T25H x 75	4.4	4.70	8.0	5.0	10
100	4.4	4.70	8.0	5.0	10
T27H x 75	4.96	5.26	8.0	5.5	10
100	4.96	5.26	8.0	5.5	10
T30H x 75	5.49	5.79	8.5	6.0	10
100	5.49	5.79	8.5	6.0	10
T40H x 75	6.6	-	-	7.0	10
100	6.6	-	-	7.0	10

B39 BIT

- For assembly work focusing on workability.



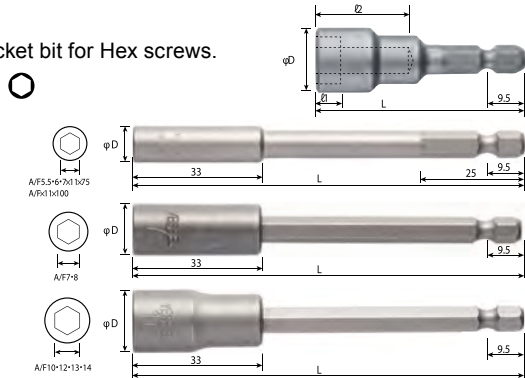
Model No. (mm)	Heat treatment classification	Inner Ctn.	Outer Ctn.
⊕ 1 x 23	H	10	100
⊕ 2 x 23	H	10	100
40	H	10	100
100	H	10	100
⊕ 2 x 4.8 x 25 x 150 (1092-2)	H	10	-
⊕ 3 x 6.3 x 25 x 50 (1063-2)	H	10	-



 H 6.35 MM

B45/13**SOCKET BIT

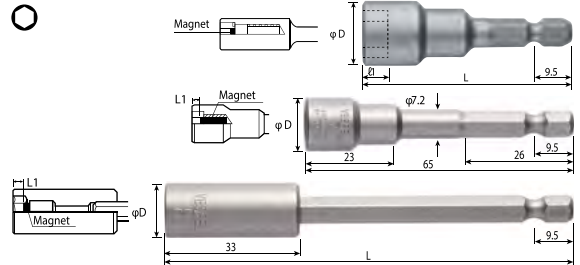
- Socket bit for Hex screws.



Model No.	A/F	øD	L1	L2	OAL	Inner Ctn.
1304/50	4	8	3	15	50	10
1304/75	4	8	3	25	75	10
1304/100	4	8	3	25	100	10
1345/50	4.5	8	3	15	50	10
1345/75	4.5	8	3	25	75	10
1345/100	4.5	8	3	25	100	10
1305/50	5	8.5	3.5	15	50	10
1305/75	5	8.5	3.5	25	75	10
1305/100	5	8.5	3.5	25	100	10
1305/150	5	8.5	3.5	25	150	10
1355/50	5.5	9	3.5	15	50	10
1355/75	5.5	9	3.5	25	75	10
1355/100	5.5	9	3.5	25	100	10
1355/150	☆ 5.5	9	3.5	25	150	10
1306/50	6	10	4	15	50	10
1306/75	☆ 6	10	4	25	75	10
1306/100	6	10	4	25	100	10
1306/150	☆ 6	10	4	25	150	10
1307/50	7	13	5	15	50	10
1307/75	☆ 7	13.5	5.5	22	75	10
1307/100	☆ 7	13.5	5.5	22	100	10
1307/150	☆ 7	13.5	5.5	22	150	10
1308/50	8	13	5	15	50	10
1308/75	☆ 8	13.5	6.5	22	75	10
1308/100	☆ 8	13.5	6.5	22	100	10
1308/150	☆ 8	13.5	6.5	22	150	10
1309/50	9	14	5.5	15	50	10
1309/75	☆ 9	15	6.5	22	75	10
1309/100	☆ 9	15	6.5	22	100	10
1310/50	10	16	6.5	15	50	10
1310/75	☆ 10	16	6.5	22	75	10
1310/100	☆ 10	16	6.5	22	100	10
1310/150	☆ 10	16	6.5	22	150	10
1311/50	11	17	7	15	50	10
1311/75	☆ 11	17	7	22	75	10
1311/100	☆ 11	17	7	22	100	10
1312/50	12	19	7.5	15	50	10
1312/75	☆ 12	18	8	22	75	10
1312/100	☆ 12	18	8	22	100	10
1312/150	☆ 12	18	8	22	150	10
1313/50	13	19	8	15	50	10
1313/75	☆ 13	19	8	22	75	10
1313/100	☆ 13	19	8	22	100	10
1313/150	☆ 13	19	8	22	150	10
1314/50	14	20	8	15	50	10
1314/75	☆ 14	20	8	22	75	10
1314/100	☆ 14	20	8	22	75	10

MB45/13**M SOCKET BIT (PRESS-FIT MAGNET)

- Socket bit for Hex screws.
- Holds the screw with a strong magnet, to prevent the screws from dropping



Model No.	A/F	øD	L1	OAL	Inner Ctn.
1305/50M	5	8.5	3.5	50	10
1305/75M	5	8.5	3.5	75	10
1305/100M	5	8.5	3.5	100	10
1305/150M	5	8.5	3.5	150	10
1355/50M	5.5	9	3.5	50	10
1355/75M	5.5	9	3.5	75	10
1355/100M	5.5	9	3.5	100	10
1355/150M	5.5	9	3.5	150	10
1306/50M	6	10	4	50	10
1306/75M	6	10	4	75	10
1306/100M	6	10	4	100	10
1306/150M	6	10	4	150	10
1307/50M	7	13	4.5	50	10
1307/75M	7	13	4.5	75	10
1307/100M	7	13	4.5	100	10
1307/150M	7	13	5	150	10
1308/50M	8	13	5	50	10
1309/50M	9	14	5.5	50	10
1309/75M	9	14	5.5	75	10
1309/100M	9	14	5.5	100	10
1310/50M	10	16	6.5	50	10
1311/50M	11	17	7	50	10
1311/75M	11	17	7	75	10
1311/100M	11	17	7	100	10
1312/50M	12	19	7.5	50	10
1313/50M	13	19	8	50	10
1313/75M	13	19	8	75	10
1313/100M	13	19	8	100	10
1313/150M	13	19	8	150	10
1314/50M	14	20	8	50	10
1314/75M	14	20	8	75	10
1314/100M	14	20	8	100	10

**Adopts a patented axial press-fit shank technique

BITS

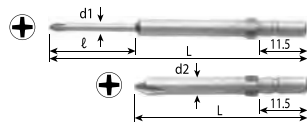
Made in Japan

VESSEL

⊕ ⌀ 4 MM

D73 BIT

- For fastening Precision small screws.
- Bit tip high-precision-machined to thread standards.

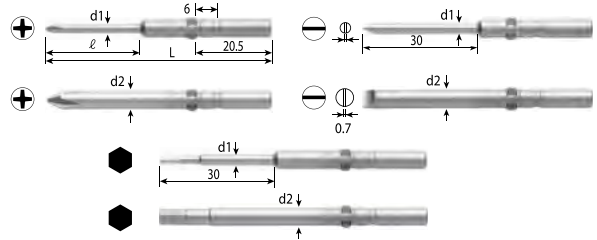


Model No.	Tip	L	d1		d2	L	Inner Ctn.	Outer Ctn.
			(mm)					
⊕ 00 x 1.2 x 20 x 40	00	20	1.2	-	40	10	100	
⊕ 00 x 1.5 x 40	00	20	1.5	-	40	10	100	
⊕ 00 x 1.5 x 60	00	20	1.5	-	60	10	100	
⊕ 00 x 1.5 x 80	00	20	1.5	-	80	10	100	
⊕ 00 x 1.7 x 20 x 40	00	20	1.7	-	40	10	100	
⊕ 00 x 2 x 40	00	20	2	-	40	10	100	
⊕ 00 x 2 x 60	00	20	2	-	60	10	100	
⊕ 0 x 1.2 x 20 x 40	0	20	1.2	-	40	10	100	
⊕ 0 x 1.4 x 20 x 40	0	20	1.4	-	40	10	100	
⊕ 0 x 1.4 x 20 x 60	0	20	1.4	-	60	10	100	
⊕ 0 x 1.4 x 20 x 80	0	20	1.4	-	80	10	100	
⊕ 0 x 1.5 x 20 x 40	0	20	1.5	-	40	10	100	
⊕ 0 x 1.5 x 20 x 60	0	20	1.5	-	60	10	100	
⊕ 0 x 1.7 x 40	0	20	1.7	-	40	10	100	
⊕ 0 x 1.7 x 60	0	20	1.7	-	60	10	100	
⊕ 0 x 1.7 x 80	0	20	1.7	-	80	10	100	
⊕ 0 x 1.8 x 60	0	20	1.8	-	60	10	100	
⊕ 0 x 2 x 20 x 40	0	20	2	-	40	10	100	
⊕ 0 x 2 x 20 x 60	0	20	2	-	60	10	100	
⊕ 0 x 2 x 20 x 80	0	20	2	-	80	10	100	
⊕ 0 x 2 x 20 x 100	0	20	2	-	100	10	100	
⊕ 0 x 2 x 120	0	20	2	-	120	10	100	
⊕ 0 x 2.5 x 40	0	20	2.5	-	40	10	100	
⊕ 0 x 2.5 x 60	0	20	2.5	-	60	10	100	
⊕ 0 x 2.5 x 20 x 80	0	20	2.5	-	80	10	100	
⊕ 0 x 2.5 x 20 x 100	0	20	2.5	-	100	10	100	
⊕ 0 x 2.5 x 120	0	20	2.5	-	120	10	100	
⊕ 1 x 2.5 x 20 x 40	1	20	2.5	-	40	10	100	
⊕ 1 x 3 x 40	1	20	3	-	40	10	100	
⊕ 1 x 3 x 20 x 60	1	20	3	-	60	10	100	
⊕ 1 x 3 x 20 x 80	1	20	3	-	80	10	100	
⊕ 1 x 3 x 20 x 100	1	20	3	-	100	10	100	
⊕ 1 x 3 x 20 x 120	1	20	3	-	120	10	100	
⊕ 1 x 4 x 40	1	-	-	4	40	10	100	
⊕ 1 x 4 x 60	1	-	-	4	60	10	100	
⊕ 1 x 4 x 80	1	-	-	4	80	10	100	
⊕ 1 x 4 x 100	1	-	-	4	100	10	100	
⊕ 1 x 4 x 120	1	-	-	4	120	10	100	
⊕ 1 x 4 x 150	1	-	-	4	150	10	100	
⊕ 1 x 4 x 180	1	-	-	4	180	10	100	
⊕ 1 x 4 x 200	1	-	-	4	200	10	100	
⊕ 2 x 4 x 40	2	-	-	4	40	10	100	
⊕ 2 x 4 x 60	2	-	-	4	60	10	100	
⊕ 2 x 4 x 80	2	-	-	4	80	10	100	
⊕ 2 x 4 x 100	2	-	-	4	100	10	100	
⊕ 2 x 4 x 120	2	-	-	4	120	10	100	
⊕ 2 x 4 x 150	2	-	-	4	150	10	100	

⊕ ⌀ 5 MM

D76 BIT

- For fastening various small screws and tapping screws for sheet metals.
- Bit tip high-precision-machined to thread standards.

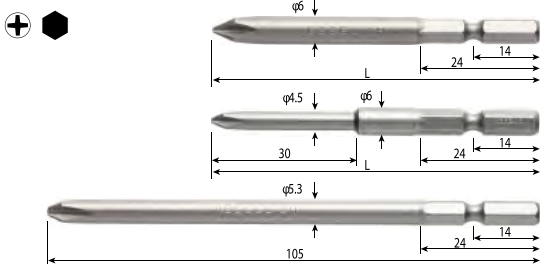


Model No.	Tip	L	d1		d2	L	Inner Ctn.	Outer Ctn.
			(mm)					
⊕ 00 x 2 x 60	00	20	2	-	60	10	100	
⊕ 0 x 2 x 60	0	25	2	-	60	10	100	
⊕ 0 x 2.5 x 60	0	25	2.5	-	60	10	100	
⊕ 0 x 2.5 x 80	0	25	2.5	-	80	10	100	
⊕ 0 x 2.5 x 100	0	25	2.5	-	100	10	100	
⊕ 0 x 2.5 x 150	0	25	2.5	-	150	10	100	
⊕ 1 x 3 x 15 x 40	1	15	3	-	40	10	100	
⊕ 1 x 3 x 60	1	30	3	-	60	10	100	
⊕ 1 x 3 x 30 x 80	1	30	3	-	80	10	100	
⊕ 1 x 3 x 30 x 100	1	30	3	-	100	10	100	
⊕ 1 x 3 x 30 x 120	1	30	3	-	120	10	100	
⊕ 1 x 5 x 40	1	-	-	5	40	10	100	
⊕ 1 x 5 x 60	1	-	-	5	60	10	100	
⊕ 1 x 5 x 80	1	-	-	5	80	10	100	
⊕ 1 x 5 x 100	1	-	-	5	100	10	100	
⊕ 1 x 5 x 120	1	-	-	5	120	10	100	
⊕ 1 x 5 x 150	1	-	-	5	150	10	100	
⊕ 1 x 5 x 180	1	-	-	5	180	10	100	
⊕ 1 x 5 x 200	1	-	-	5	200	10	100	
⊕ 1 x 5 x 250	1	-	-	5	250	10	100	
⊕ 1 x 5 x 300	1	-	-	5	300	10	100	
⊕ 2 x 5 x 40	2	-	-	5	40	10	100	
⊕ 2 x 5 x 60	2	-	-	5	60	10	100	
⊕ 2 x 5 x 80	2	-	-	5	80	10	100	
⊕ 2 x 5 x 100	2	-	-	5	100	10	100	
⊕ 2 x 5 x 120	2	-	-	5	120	10	100	
⊕ 2 x 5 x 150	2	-	-	5	150	10	100	
⊕ 2 x 5 x 180	2	-	-	5	180	10	100	
⊕ 2 x 5 x 200	2	-	-	5	200	10	100	
⊕ 2 x 5 x 250	2	-	-	5	250	10	100	
⊕ 2 x 5 x 300	2	-	-	5	300	10	100	
⊕ 2 x 5 x 400	2	-	-	5	400	10	100	
⊖ 3 x 0.4 x 60	⊖ 3 x 0.4t	30	3	-	60	10	100	
⊖ 4 x 0.6 x 60	⊖ 4 x 0.6t	30	4	-	60	10	100	
⊖ 5 x 0.7 x 60	⊖ 5 x 0.7t	-	-	5	60	10	100	
H2 x 3 x 70	H2	30	3	-	70	10	100	
H2.5 x 3 x 70	H2.5	30	3	-	70	10	100	
H3 x 4 x 70	H3	30	4	-	70	10	100	
H4 x 5 x 70	H4	-	-	5	70	10	100	

⊕ H 5 MM

B34 BIT

- For fastening various small screws and tapping screws for sheet metals.
- Bit tip high-precision-machined to thread standards.



Size	Heat treatment classification	Inner Ctn.	Outer Ctn.
⊕ 1 x 70	H	10	100
100	H	10	10
150	H	10	100
⊕ 1 x 4 x 70	H	10	100
⊕ 1 x 4 x 30 x 70	H	10	100
⊕ 1 x 5.3 x 105	H	10	100
120	X	10	100
120	H	10	100
⊕ 2 x 70	H	10	100
100	H	10	100
120	H	10	100
150	H	10	100
200	H	10	100
⊕ 2 x 3 x 30 x 75	H	10	100
⊕ 2 x 4.5 x 70	H	10	100
⊕ 2 x 5.3 x 105	H	10	100
120	H	10	100
H 2 x 70	H	10	100
H 2.5 x 70	H	10	100
H 3 x 70	H	10	100
H 4 x 70	H	10	100
H 5 x 70	H	10	100



AIR TOOLS เครื่องมือลม

Air Dusters ปืนฉีดลม	C15
Air Screwdrivers ไช้ควงลม	C17
Air Impact Wrenches บล็อกลม	C20
Air Micro Grinders เครื่องเจียลม	C26



AIR DUSTER AD-2 SERIES

ปืนฉีดลม



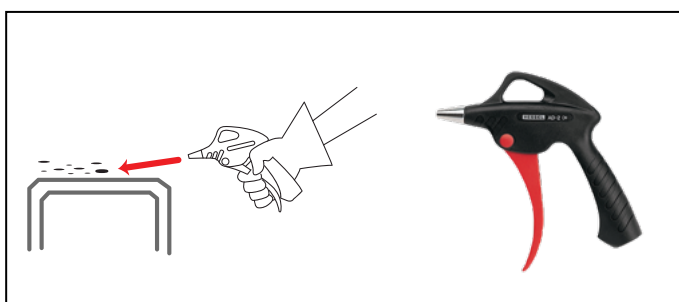
- ผลิตจากพลาสติกชนิดพิเศษ (Engineering Plastic <POM>) จึงมีความเหนียว และทนทานกว่าพลาสติกทั่วไป ทนต่อแรงกระแทกและคราบน้ำมัน
- โทปืนฉีดลมมีความยาวพิเศษ ใช้แรงกดน้อย สามารถใช้งานต่อเนื่อง โดยไม่เมื่อยมือ

AIR TOOLS

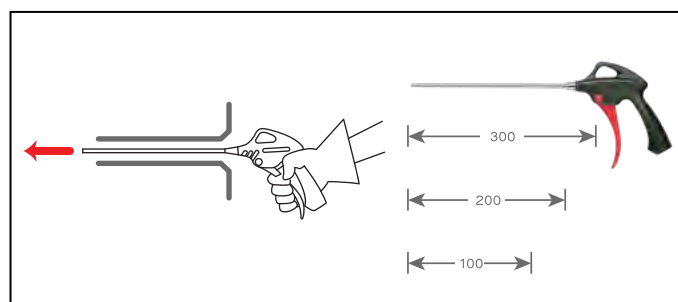
Made in Japan

VESSEL

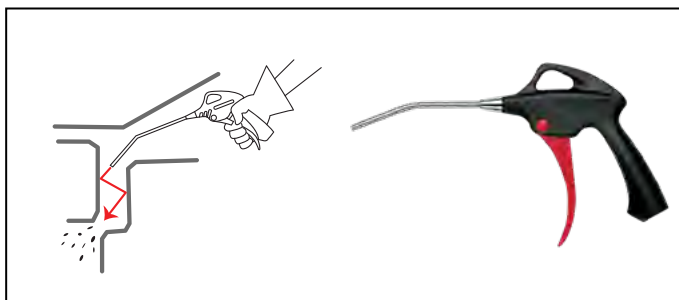
AD-2 0N



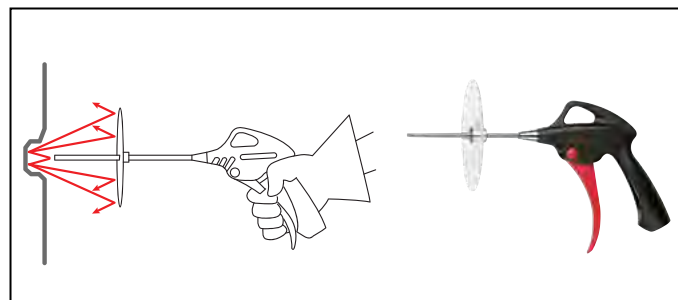
AD-2 100N / AD-2 200N / AD-2 300N



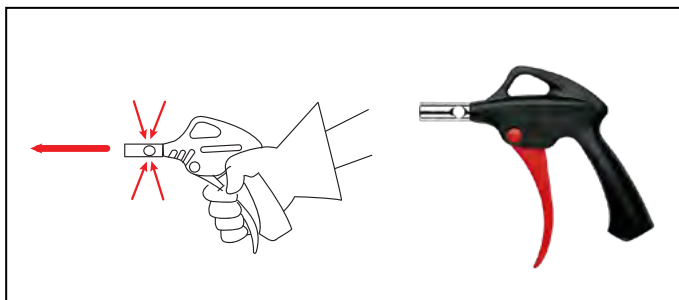
AD-2 100A



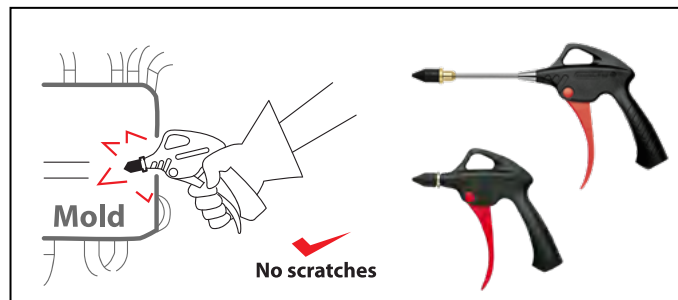
AD-2 100P



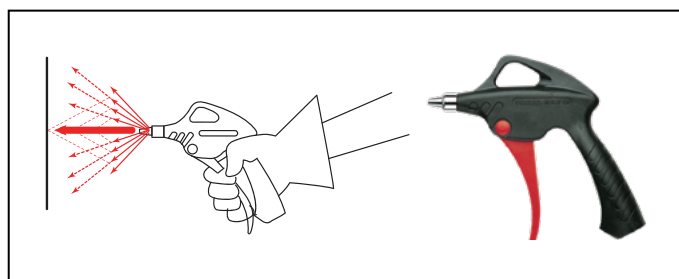
AD-2 0M



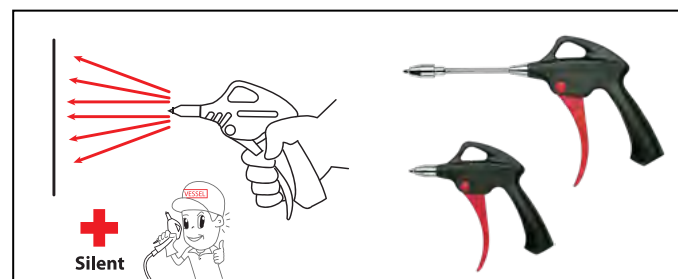
AD-2 0R / AD-2 100R



AD-2 0C



AD-2 0S / AD-2 100S



Model No.	Nozzle Type	Nozzle		Air Consumption (m ³ /min)	Overall Length (mm)	Weight (g)
		Length	Inner Dia. (mm)			
AD-2 0N	Standard Nozzle	-	2.1	0.135	145	122
AD-2 100N	Long Nozzle	100	2.1	0.135	242	131
AD-2 200N	Long Nozzle	200	2.1	0.135	342	141
AD-2 300N	Long Nozzle	300	2.1	0.135	442	150
AD-2 100A	25° Long Nozzle	100	2.1	0.135	242	131
AD-2 0S	Safety Bypass Nozzle	-	2.1	0.105	155.5	131
AD-2 100S	Safety Bypass Long Nozzle	100	2.1	0.105	239.5	151
AD-2 0R	Rubber Nozzle	-	2.1	0.115	155.5	123
AD-2 100R	Rubber Long Nozzle	100	2.1	0.115	227	147
AD-2 0M	High Volume Nozzle	-	10	0.185	160	126
AD-2 100P	Chip Shield Long Nozzle	100	2.1	0.135	242	157
AD-2 0C	Air Screen Nozzle	-	2.8	0.260	145	127



AIR DUSTER AD-4 SERIES

ปืนฉีดลม



- ตัวปืนผลิตจากวัสดุอลูมิเนียม Die-cast ทนทานต่อแรงกระแทกและรองรับการใช้งานหนัก
- สามารถเลือกจุดต่อลมเข้าได้ 2 ทาง (บนและล่าง)


Model No.	Nozzle Type	Nozzle Inner Dia. (mm)	Air Consumption (m ³ /min)	Overall Length (mm)	Weight (g)	Air Hose Connection
AD-4N	Standard Nozzle	2	0.18	125	235	Coupling

AIR SCREWDRIVER


OILXtra SERIES

ไขควงลม

Vessel พัฒนาสินค้าที่เป็นเอกลักษณ์เฉพาะด้วยระบบหล่อลื่นพิเศษ ที่ช่วยลดเสียงรบกวน และลดแรงกระแทก จึงสามารถใช้งานต่อเนื่อง ได้นาน เป็นมิตรกับผู้ใช้และช่วยชะลอความเสื่อมของเครื่องมือ



 Standard screw 4~5mm Compact, lightweight and high revolution motor. For recycle plant, small sash frame, etc

GT-S4.5XD

-  Bit sleeve retainer
- Noise reducer
- 15.4~23.5 N•m




GT-PLXD


-  Bit sleeve retainer
-  Adjust dial
- Noise reducer
- 9.1~19.5 N•m





GT-P4.5XD

-  Bit sleeve retainer
- Noise reducer /Rear exhaust
- 15.4~23.5 N•m




 Standard screw 5~6 mm Stable tightening performance with high power. For sash frame for building, exterior, home building, etc.

GT-S6LXD


-  Bit sleeve retainer
-  Adjust dial
- Noise reducer
- 24.5~48 N•m





GT-P6LXD

-  Bit sleeve retainer
- Noise reducer /Rear exhaust
- 29~48 N•m





 Standard screw 6~8 mm Powerful torque force. For installing parts, fastening concrete screw, etc.

GT-P60XD

-  Bit sleeve retainer
-  Adjust dial
- Noise reducer /Rear exhaust
- 21~51.8 N•m



GT-P80XD

-  Bit sleeve retainer
-  Adjust dial
- Noise reducer / Rear exhaust
- Standard screw 8-10mm
- 61.7~131.1 N•m



Model No.	Capacity (mm)				No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Overall Length (mm)	Weight (g)
	Standard Screw	Tapping Screw	Wood Screw	Bolt					
GT-S4.5XD	4.0~5.0	3.5~4.0	2.7~3.5	4.0~5.0	14,500	0.2	G 1/4	188	585
GT-P4.5XD	4.0~5.0	3.5~4.0	2.7~3.5	4.0~5.0	14,000	0.2	Rc 1/4	170	735
GT-PLXD	4.0~5.0	3.8~4.2	3.3~3.8	4.0~5.0	11,000	0.35	G 1/4	198.5	670
GT-S6LXD	5.0~6.0	4.0~4.5	3.6~4.1	5.0~6.0	12,000	0.4	G 1/4	212	815
GT-P6LXD	5.0~6.0	4.0~4.5	3.6~4.1	5.0~6.0	12,500	0.45	Rc 1/4	184	876
GT-P60XD	6.0~8.0	4.0~5.0	3.8~4.5	6.0~8.0	7,500	0.38	Rc 1/4	176	1,130
GT-P80XD	8.0~10.0	5.0~6.0	4.5~6.2	8.0~10.0	7,000	0.4	Rc 1/4	172	1,520

AIR SCREWDRIVER IMPACT TYPE

ไขควงลม

- ไขควงลมระบบค้อนเดี่ยว (Single Hammer) ความเร็วรอบ และค่าแรงบิดที่มีประสิทธิภาพสูง
- เหมาะสำหรับงานชิ้นประกอบที่ต้องการความเร็วรอบ และค่าความแน่นสูง

Standard screw 4~5 mm
Compact and lightweight. Basic models for assembly plant.

GT-S4.5DR

- Bit sleeve retainer
- Noise reducer
- 15.2~24.5 N•m



GT-PLR

- Ball spring retainer
- Adjust dial
- 5.91~16.8 N•m



GT-PLP

- Ball spring retainer
- Push starting / Noise reducer
- 5.91~15.8 N•m



GT-PLZ

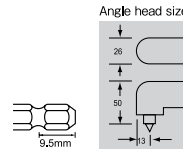
- Bit sleeve retainer
- Adjust dial
- Noise reducer
- 5.91~16.8 N•m



Standard screw 4~5 mm
Angle impact screwdriver.

GT-PLRC

- Ball spring retainer
- Adjust dial
- 3.01~10.3 N•m



Standard screw 5~6 mm Compact and lightweight. Basic models for assembly plant.

GT-PLHII

- Bit sleeve retainer (Pull type)
- Adjust dial
- Anvil (Bit sleeve retainer, push type)
- 17.96~40.5 N•m



GT-S6MLR

- Bit sleeve retainer (Pull type)
- Adjust dial
- 13.41~31 N•m



Standard screw 6~8 mm Powerful torque force. Excellent durability.

GT-S6.5D

- Bit sleeve retainer
- Adjust dial
- 32~57.2 N•m



GT-P6.5D

- Bit sleeve retainer
- Adjust dial
- 32~57.2 N•m



GT-P8D

- Bit sleeve retainer
- Adjust dial
- 75~137 N•m



Model No.	Capacity (mm)				No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Overall Length (mm)	Weight (g)
	Standard Screw	Tapping Screw	Wood Screw	Bolt					
GT-S4.5DR	4.0~5.0	3.5~4.0	2.7~3.5	4.0~5.0	14,000	0.2	G 1/4	180	585
GT-PLR	4.0~5.0	3.5~4.0	2.7~3.5	4.0~5.0	9,000	0.2	G 1/4	187	830
GT-PLP	4.0~5.0	3.5~4.0	2.7~3.5	4.0~5.0	9,000	0.2	G 1/4	197	750
GT-PLZ	4.0~5.0	3.5~4.0	2.7~3.5	4.0~5.0	9,000	0.2	G 1/4	205	950
GT-PLHII	5.0~6.0	4.0~4.5	3.6~4.1	5.0~6.0	8,500	0.3	Rc 1/4	213	925
GT-S6MLR	5.0~6.0	4.0~4.5	3.6~4.1	5.0~6.0	8,500	0.25	G 1/4	215	1,120
GT-PLRC	4.0~5.0	-	-	4.0~5.0	9,000	0.2	G 1/4	228	1,100
GT-S6.5D	6.0~8.0	4.0~4.5	3.8~4.5	6.0~8.0	7,500	0.35	Rc 1/4	217	1,300
GT-P6.5D	6.0~8.0	4.0~5.0	3.8~4.5	6.0~8.0	8,500	0.38	Rc 1/4	152	1,450
GT-P8D	8.0~10.0	5.0~6.0	4.5~6.2	8.0~10.0	7,500	0.4	Rc 1/4	172	1,930



AIR SCREWDRIVER CLUTCH TYPE

ไขควงลม

Standard screw 3~4 mm

GT-H4R

- Ball spring retainer
- Lever push starting
- Noise reducer
- 2.49~3 N·m



- ทำงานด้วยระบบ Clutch Spring ให้ความเร็วรอบ และค่าแรงบิดที่มีความแม่นยำสูง
- เหมาะสำหรับงานขันสกรูขนาดเล็ก หรืองานขันสกรูที่ต้องการค่าแรงบิดต่ำ เพื่อลดความเสียหายของสกรู และชิ้นงาน

Model No.	Capacity (mm)				No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Overall Length (mm)	Weight (g)
	Standard Screw	Tapping Screw	Wood Screw	Bolt					
GT-H4R	3~4	-	1.8~2.4	3~4	1,500	0.2	G 1/4	190	590

AIR SCREWDRIVER TORQUE CONTROL

ไขควงลม

- ทำงานด้วยระบบ Clutch Spring ความเร็วรอบและค่าแรงบิดมีความแม่นยำสูง
- เหมาะสำหรับงานขันสกรูขนาดเล็ก หรืองานขันสกรูที่ต้องการค่าแรงบิดต่ำ เพื่อลดความเสียหายของสกรูและชิ้นงาน

Standard screw 3~4 mm

GT-S4TR

- Ball spring retainer
- Adjust dial type
- Push startup type
- Noise reducer
- Rear exhaust

OP Torque Spring
Hose Coupling (1/8")



Standard screw 4~5 mm

GT-S5TR

- Ball spring retainer
- Adjust dial type
- Push startup type
- Noise reducer
- Rear exhaust

OP Torque Spring



Standard screw 4.5~6 mm

GT-S5TS

- Bit sleeve retainer (Pull type)
- Adjust dial type



Model No.	Capacity Standard Screw (mm)	Torque Range (N·m)	No Load Speed (rpm)	Air consumption (m³/min)	Hose Coupling	Overall Length (mm)	Weight (g)
GT-S4TR	3.0~4.0	0.7~2.1	1,100	0.28	Rc 1/4	215	650
GT-S5TR	4.0~5.0	1.8~4.0	700	0.35	Rc 1/4	260	930
GT-S5TS	4.5~6.0	3.9~9.8	6,500	0.25	Rc 1/4	292	1,310

AIR IMPACT WRENCHES DOUBLE HAMMER

บล็อกลม

Machine Bolt Dia. 6~8 mm
For powerful constant fastening.
Excellent durability.



GT-P65W

- 9.5 Pin-lock
- ④ Adjust dial

Machine Bolt Dia. 8~10 mm
For powerful constant fastening.



GT-P80W

- 12.7 Pin-lock
- ③ Adjust dial

- บล็อกลมหน้าสั้น ลูกตีแบบค้อนคู่ รองรับงานหนัก งานพื้นที่แคบ
- เหมาะกับงานซ่อมบำรุงยานพาหนะ อยู่ซ่อมรถ ศูนย์บริการรถยนต์ และงานถอดประกอบเครื่องยนต์ ทุกรูปแบบ

Machine Bolt Dia. 20 mm For powerful constant fastening.



GT-S20RW

- 19 Pin-lock
- ④ Adjust dial

Machine Bolt Dia. 33 mm For powerful constant fastening.



GT-S32RW

- 25.4 Pin-lock
- ④ Adjust dial

Model No.	Capacity Ordinary Bolt Dia (mm)	Torque Range (N·m)	Max. Torque (N·m)	No Load Speed (rpm)	Air consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (kg)
GT-P65W	6~8	49~121.6	140.5	8,500	0.38	Rc 1/4	6.35	146	1.43
GT-P80W	8~10	49~259.8	295.3	7,500	0.4	Rc 1/4	6.35	164	1.89
GT-S20RW	20	75~610	928	4,800	0.9	Rc 3/8	9.5	300	5.4
GT-S32RW	33	343~1,569	1801.2	3,600	1.0	Rc 1/2	12.7	380	12.2

AIR IMPACT WRENCHES DOUBLE HAMMER

บล็อกลม

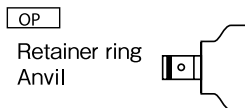


Machine Bolt Dia. 6~8 mm
Low noise and low vibration. High power and high durability.



GT-P60XW

- 9.5 Pin-lock
- ③ Adjust dial
- Noise reducer/Rear exhaust



- บล็อกลมค้อนคู่ (Double Hammer) เหมาะสำหรับ งานหนักและงานที่ต้องการความต่อเนื่อง
- มีระบบ Oil Extra เอกสิทธิ์เฉพาะของ Vessel ที่มีน้ำมันหล่อลื่นช่วยขับแรงกระแทก และเก็บเสียง ได้ดีกว่ารุ่นทั่วไป

Model No.	Capacity Ordinary Bolt Dia (mm)	Torque Range (N·m)	Max. Torque (N·m)	No Load Speed (rpm)	Air consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (g)
GT-P60XW	6~8	49~116.8	135.0	7,500	0.38	Rc 1/4	6.35	169.4	1.1



AIR IMPACT WRENCHES SINGLE HAMMER

บลึคคลม

- บลึคคลมค้อนเดี่ยว (Single Hammer) ใช้สำหรับงานประกอบหรือถอดแยกชิ้นส่วนต่างๆ
- ใช้งานได้หลากหลาย ทั้งงานถอดล้อรถจักรยานยนต์ รถยนต์ รถกระบะ รวมไปถึงงานก่อสร้างอาคาร สะพาน เรือ และเครื่องจักรต่างๆ

AIR TOOLS

Made in Japan

VESSEL

Machine Bolt Dia. 6-8 mm For strong tightening work. Excellent durability.

GT-S650

- 9.5 Retainer ring
- ④ Adjust dial



GT-P6II

- 9.5 Retainer ring
- ③ Adjust dial



Machine Bolt Dia. 8-10 mm For strong tightening work. Excellent durability.

GT-P8II

- 12.7 Retainer ring
- ③ Adjust dial



Machine Bolt Dia. 10 mm Corner type impact wrench

GT-C900 PAT.P.

- 9.5 Retainer ring
- ④ Adjust dial



Machine Bolt Dia. 14 mm Corner type impact wrench

GT-C1400 PAT.P.

- 12.7 Retainer ring
- ④ Adjust dial



Machine Bolt Dia. 14 mm For strong tightening work. Excellent durability.

GT-P12

- 12.7 Retainer ring
- ④ Adjust dial



GT-1400P

- 12.7 Retainer ring
- ④ Adjust dial



Machine Bolt Dia. 16mm For strong tightening work. Excellent durability. Long anvil model also available.

GT-P14J

- 12.7 Retainer ring
- ④ Adjust dial



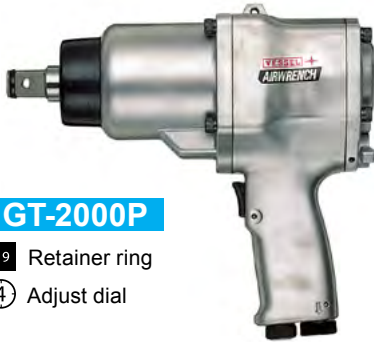
GT-1600P

- 12.7 Retainer ring
- ④ Adjust dial



Machine Bolt Dia. 20 mm

For strong tightening work. Excellent durability. Long anvil model also available.

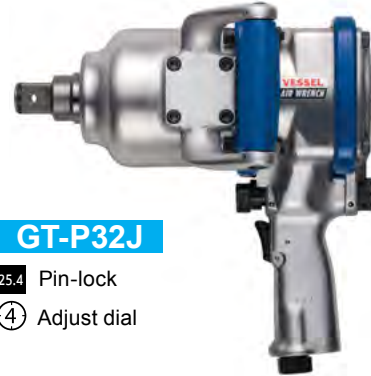


GT-2000P

- 19 Retainer ring
- ④ Adjust dial

Machine Bolt Dia. 33mm

For strong tightening work.



GT-P32J

- 25.4 Pin-lock
- ④ Adjust dial

Model No.	Capacity Ordinary Bolt Dia (mm)	Torque Range (N·m)	Max. Torque (N·m)	No Load Speed (rpm)	Air consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (g)
GT-S650	6~8	49~121.6	140.5	7,500	0.35	Rc 1/4	6.35	210	1.3
GT-P6II	6~8	49~121.6	140.5	8,500	0.38	Rc 1/4	6.35	146	1.43
GT-P8II	8~10	49~259.8	295.3	7,500	0.4	Rc 1/4	6.35	166	1.89
GT-C900	10	49~100	131.7	7,000	0.25	Rc 1/4	6.35	257	1.9
GT-C1400	14	49~220	241.8	4,500	0.3	Rc 1/4	6.35	277	2.8
GT-1400P	12~14	49~294.1	344.9	7,000	0.35	Rc 1/4	6.35	182	2.25
GT-P12	12~14	49~294.1	344.9	7,500	0.4	Rc 1/4	6.35	185	2.3
GT-1600P	14~16	75~308.9	362.3	6,700	0.36	Rc 1/4	6.35	196	2.7
GT-2000P	16~20	98~470.7	556.5	5,000	0.45	Rc 1/4	9.5	241	4.3
GT-P14J	14~16	75~323.6	409.6	6,500	0.42	Rc 1/4	6.35	197	2.95
GT-P32J	33	343~1569	1906.9	3,700	0.8	Rc 3/8	12.7	264	11.2



AIR IMPACT WRENCHES TWIN HAMMER

บลึคคณ

Machine Bolt Dia. 16 mm

Well balanced. less shock from the impact

GT-1600JP

- 12.7 Retainer ring
- ③ Adjust dial
- Rear exhaust



- บลึคคณระบบค้อนคู่ (Twin Hammer) ให้ความเร็วรอบและค่าแรงบิดที่มีประสิทธิภาพสูง แรงสั่นสะเทือนต่ำ
- เครื่องขนาดกระทัดรัด น้ำหนักเบาเมื่อเทียบกับรุ่นที่มีขนาดเดียวกัน
- ด้ามจับหุ้มด้วยยาง จึงจับกระชับมือ
- เหมาะสำหรับงานขันประกอบที่ต้องการความเร็วรอบและค่าความแน่นสูง

Model No.	Capacity Ordinary Bolt Dia (mm)	Torque Range (N·m)	Max. Torque (N·m)	No Load Speed (rpm)	Air consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (kg)
GT-1600JP	16	50~220	280	10,000	0.6	Rc 1/4	6.35	109	1.4

AIR IMPACT WRENCHES SUPER LIGHT V-HAMMER

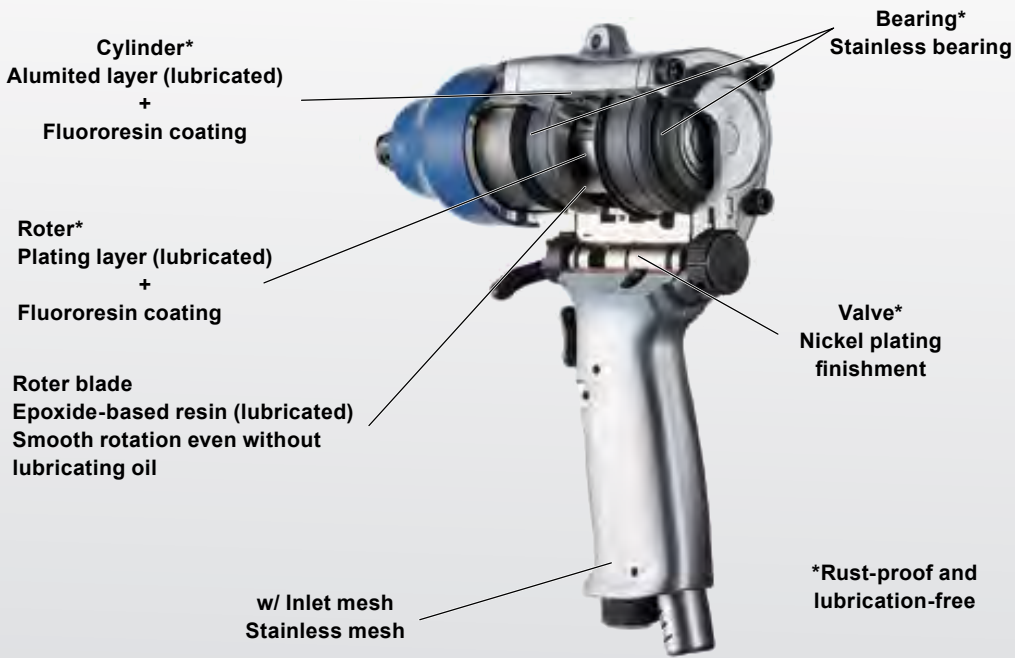
บล็อกคลม

- บล็อกคลมค้อนเดี่ยว (Single Hammer) ที่มีขนาดกระทัดรัด น้ำหนักเบา และพลังสูงด้วยระบบค้อนรูปตัว V
- เหมาะสำหรับงานขันประกอบสกรู น็อตที่ต้องการค่าแรงบิดสูง

Oilless mechanism

GT-1600VPH/GT-1600VPHL

Completely oil-less model with rust-proofing and lubrication treatment on the air passage. Maintenance-free and environmental-friendly impact wrench, not causing oil mist.



Machine Bolt Dia. 16 mm Compact, lightweight and high power with V shape hammer system.

GT-1600VPX

- 12.7 Retainer ring
- ④ Adjust dial
- Rear exhaust



GT-1600VP

- 12.7 Retainer ring
- ④ Adjust dial
- Rear exhaust



GT-1600VPL

- 12.7 Retainer ring
- ④ Adjust dial
- Rear exhaust



GT-1600VPH

- 12.7 Retainer ring
- ④ Adjust dial
- Rear exhaust
- Oil-less type



GT-1600VPHL

- 12.7 Retainer ring
- ④ Adjust dial
- Rear exhaust
- Oil-less type



Machine Bolt Dia. 39 mm Compact, lightweight and high power with V shape hammer system.

GT-3900VP

- 25.4 Retainer ring
- Ⓔ Adjust dial
- Rear exhaust



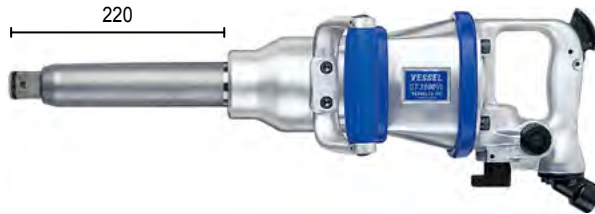
GT-3900V

- 25.4 Retainer ring
- Ⓔ Adjust dial



GT-3900VL

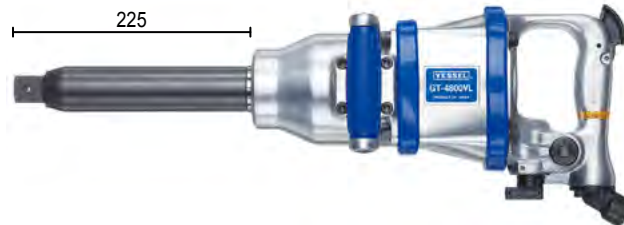
- 25.4 Retainer ring
- Ⓔ Adjust dial



Machine Bolt Dia. 48 mm Compact, lightweight and high power with V shape hammer system.

GT-4800VL

- 25.4 Pin-Lock
- Ⓔ Adjust dial



Model No.	Capacity Ordinary Bolt Dia (mm)	Torque Range (N·m)	Max. Torque (N·m)	No Load Speed (rpm)	Air consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (g)
GT-1600VPX	16	49~294.2	360.0	8,200	0.4	Rc 1/4	6.35	169	1.48
GT-1600VP	16	49~304.0	366.7	8,500	0.4	Rc 1/4	6.35	171	1.91
GT-1600VPL	16	49~304.0	366.7	8,500	0.4	Rc 1/4	6.35	199	1.95
GT-1600VPH	16	49~284.3	352.0	8,200	0.4	Rc 1/4	6.35	174.5	1.75
GT-1600VPHL	16	49~284.3	352.0	8,200	0.4	Rc 1/4	6.35	202.5	1.8
GT-3900VP	39	490~1716	2013.4	4,200	0.7	Rc 3/8	12.7	268	7.95
GT-3900VL	39	490~1716	2094.9	4,200	0.7	Rc 1/2	12.7	524	8.95
GT-3900V	39	490~1716	2094.9	4,200	0.7	Rc 1/2	12.7	358.6	8.2
GT-4800VL	48	343~2010	2542.1	3,200	1.0	Rc 1/2	12.7	559	12.8



AIR IMPACT WRENCHES LIGHTWEIGHT F-HAMMER

บล็อกคลม

- บล็อกคลมค้อนเดี่ยว (Single Hammer) ใช้สำหรับงานประกอบหรือถอดแยกชิ้นส่วนต่างๆ
- ใช้งานได้หลากหลาย ทั้งงานถอดล้อรถจักรยานยนต์ รถยนต์ รถกระบะ รวมไปถึงงานก่อสร้างอาคาร สะพาน เรือ และเครื่องจักรต่างๆ

Machine Bolt Dia. 20 mm Models with the best balance between strength and lightness.

GT-2000PF

- 19 Retainer ring
- ④ Adjust dial
- Rear exhaust/Noise reducer



Machine Bolt Dia. 25 mm Models with the best balance between strength and lightness.

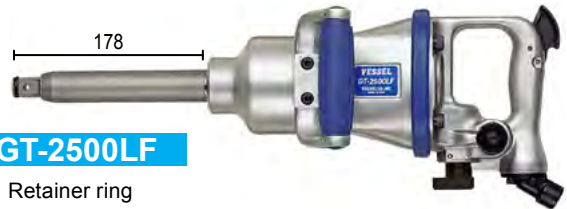
GT-2500PF

- 19 Retainer ring
- ④ Adjust dial
- Rear exhaust/Noise reducer



GT-2500LF

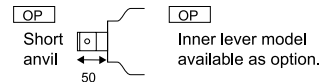
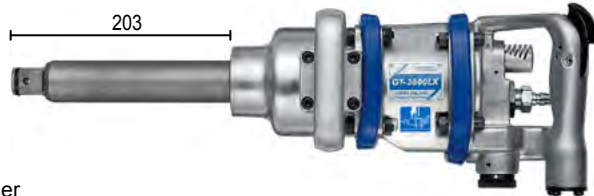
- 19 Retainer ring
- ④ Adjust dial



Machine Bolt Dia. 39 mm Models with the best balance between strength and lightness.

GT-3800LX PAT.

- 25.4 Retainer ring
- ③ Adjust dial
- Rear exhaust/Noise reducer



Machine Bolt Dia. 42 mm Models with the best balance between strength and lightness.

GT-4200PF

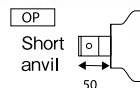
- 25.4 Pin-Lock
- ④ Adjust dial



Machine Bolt Dia. 52 mm Models with the best balance between strength and lightness.

GT-S55R

- 25.4 Pin-Lock
- ④ Adjust dial
- Noise reducer



Model No.	Capacity Ordinary Bolt Dia (mm)	Torque Range (N·m)	Max. Torque (N·m)	No Load Speed (rpm)	Air consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Weight (kg)
GT-2000PF	20	98~460.9	542.7	5,500	0.43	Rc 1/4	9.5	210	3.5
GT-2500PF	25	147~961	1187.7	3,200	0.6	Rc 3/8	9.5	242	6.2
GT-2500LF	25	245~961	1315.2	4,400	0.7	Rc 3/8	9.5	478	7.3
GT-3800LX	39	490~1607	2082.3	4,100	0.7	Rc 1/2	12.7	520	9.8
GT-4200PF	42	343~1863	2250	2,500	1.0	Rc 3/8	12.7	297	11.5
GT-S55R	52	343~2450	3000	2,800	1.2	Rc 1/2	12.7	610	17.0

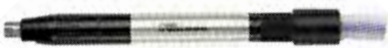
AIR MICRO GRINDERS

เครื่องเจียรลม

- เครื่องเจียรลมสำหรับงานเจียรและสลักต่างผิวไม้ ชัดงานฝีมือขนาดเล็ก เช่น งานจิ๋วเวิร์ก งานหัตถกรรม และเครื่องประดับต่างๆ
- สามารถเจียรกับรายละเอียดเล็กๆได้แม่นยำ
- มีขนาดให้เลือกตั้งแต่ 3 มม. 6 มม. และแบบจวนลูกถ้วยขนาด M7
- ทำงานด้วยความเร็วรอบที่ 25,000 - 75,000 รอบ / นาที

Collet chuck Dia. 3 mm. High rotation speed and minimum core deviation, realizing an effortless and smooth grinding performance

GT-MG75S 75,000 rpm



GT-MG75SAR 75,000 rpm



OP Collet chuck (Ø 2.35mm, Ø1/8")

GT-MG55SR 55,000 rpm



GT-MG55S 55,000 rpm



GT-MG55SAR 55,000 rpm



OP Collet chuck (Ø 2.35mm, Ø1/8")

GT-MG35-12CC 35,000 rpm



OP Collet chuck (Ø 2.35mm, Ø1/8")
 OP Corner attachment
 No.GT-MG25-12CF
 (Smooth grinding / polishing at 25,000 rpm)
 No.GT-MG25-12CC
 (Precision grinding at 25,000 rpm)

GT-MG25S 25,000 rpm



GT-MG35SAR 35,000 rpm



OP Collet chuck (Ø 3mm, Ø1/4, Ø 1/8") OP Collet chuck (Ø 3mm, Ø1/4, Ø 1/8")

Model No.	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Frame Dia (mm)	Weight (g)	Collet Chuck (Ømm)
GT-MG75S	75,000	0.16	Rc 1/4	6.35	170	18.5	190	3
GT-MG75SAR	75,000	0.16	Rc 1/4	6.35	156	20.9	180	3
GT-MG55SR	55,000	0.16	Rc 1/4	6.35	180	20.5	220	3
GT-MG55SAR	55,000	0.245	Rc 1/4	6.35	178	24.4	260	3
GT-MG55S	55,000	0.16	Rc 1/4	6.35	165	17.5	180	3
GT-MG35-12CC	35,000	0.20	Rc 1/4	6.35	183	24.5	305	3
GT-MG25S	25,000	0.175	Rc 1/4	6.35	198	30.0	600	6
GT-MG35SAR	35,000	0.285	Rc 1/4	6.35	182	29.4	435	6

GT-MG25-12CF 25,000 rpm

Soft Grip



OP Corner attachment
 No.GT-MG35-12CC (Precision grinding at 35,000 rpm)
 No.GT-MG25-12CC (Precision grinding at 25,000 rpm)

GT-MG25-9CF 25,000 rpm

Soft Grip



OP Corner attachment
 No.GT-MG25-9CC (Precision grinding at 25,000 rpm)
 No.GT-MG35-9CC (Precision grinding at 35,000 rpm)

Model No.	No Load Speed (rpm)	Air Consumption (m³/min)	Hose Coupling	Air Hose Inner Dia. (mm)	Overall Length (mm)	Frame Dia (mm)	Weight (g)	Tip tool attachment size
GT-MG25-12CF	25,000	0.25	Rc 1/4	6.35	181	24.5	315	M7
GT-MG25-9CF	25,000	0.25	Rc 1/4	6.35	173	24.5	310	M7



AIR NIPPER

VESSEL

Made in Japan



AIR NIPPERS



AIR NIPPER nsツnsau

Selection Method for Air Nippers	C29
Air Nippers for Cutting and Crimping	C30
Blade Type	C41

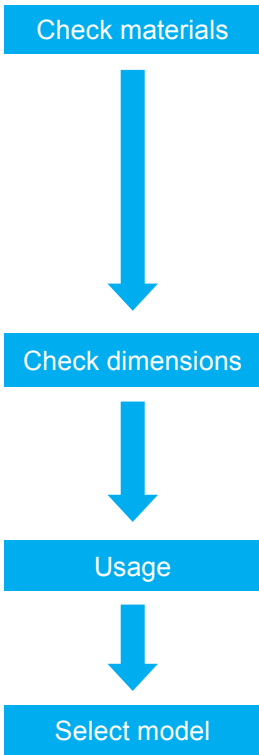


SELECTION METHOD FOR AIR NIPPER

AIR NIPPERS

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What is the "cutting target (workpiece)"?

- Metal wire
 - Steel wire
 - Copper wire
 - Piano wire(not heat processed/HV320 or below), precious metals etc.
- Molded plastic
 - Soft plastic(polyvinyl chloride, polyethylene)
 - Hard plastic(acrylic, polycarbonate, ABS, etc.)
- Other applications ———— Check materials, applications and work.
(Bending, caulking, punching, robotic hand, and scissors.)

How big is the "size of the cut portion"?

- Metal
 - Angle (mm×mm) [select model by cross-section area]
 - Round(Φ mm)
- Plastic ———— Angle (mm×mm) [select model by cross-section area]
- Other applications ———— Check materials, applications and work.

What is the "state/environment of the work"?

- Used mounted on automated machinery and robots.
- Used for manual work.
- Used mounted on a jig. And so forth

Choose a model suitable for the purpose.

Choose based on "usage and cut dimensions" for the main unit, and "material and dimensions/shape" for the blades.
 Refer to "product specifications" for the main unit/blade characteristics/usage, respectively. Also when selecting the machine, refer to "capability selection chart".
 The shape/material of the workpiece may not be compatible with standard products.

Guidance for capability selection

Note: Reference value when a standard blade is mounted.
 Values vary depending on the blade shapes and types of cut objects.

Types	Cutting material								
	Copper wire	Steel wire (Non-heat thread)	Piano Wire (HV320 or below)	Soft Plastic		Hard Plastic	Solderless terminals	Applicable model	Air pressure (MPa)
				Dia.	Cross-section				
N • NS • NR	1.0 mm	0.5 mm	0.2 mm	2.0 mm	3.1 mm ²			NS2,N3,NS3,NR3	0.4~0.5
	1.0	0.5	0.3	2.0	3.1			N5,NS5,NR5	0.4~0.5
	1.6	1.0	0.5	3.0	7.0	2.0 mm		N7,NS7,NR7	0.4~0.5
	1.8	1.2	0.5	4.0	12.5	2.6		N10,NS10L,NR10L	0.5~0.6
	2.3	1.7	0.6	4.5	15.8	4.0		N12	0.5~0.6
	2.6	2.0	1.0	7.0	38.4	5.0		N20,NS20,NR20	0.5~0.6
	3.3	2.8	1.2	10.0	78.5	6.5	1.25/2.0	N30,NS30,NR30	0.5~0.6
With pressure booster	5.5	4.5	2.0	12.0	113.0	6.5		N50,NR50	0.5~0.6
	2.6	1.6		5.0	19.6	4.0	1.25/2.0	P-10L	
	3.0	2.2		8.0	50.2	6.0	2.0/5.5	P-20	
	4.8	4.0		13.0	132.6	7.0	~0.8	P-30	
NY								P-50	
				2.0	3.1	1.3		NY03	0.4~0.5
	1.6	1.0		3.0	7.0	2.0		NF05,NY05	0.4~0.5
				3.5	9.6	2.3		NF10,NY10	0.4~0.5
				4.0	12.5	2.6		NF15,NY15	0.4~0.5
NT				5.0	19.6	3.4		NY25	0.5~0.6
				1.5	1.7	1.0		NT03	0.4~0.5
				2.5	4.9	1.5		NT05	0.4~0.5
				3.5	9.6	2.3		NT10	0.4~0.5
			5.0	19.6	3.4		NT20	0.4~0.5	
	AS, HS, BJ type		BBB	AP, PF, AJ type			ACD type		

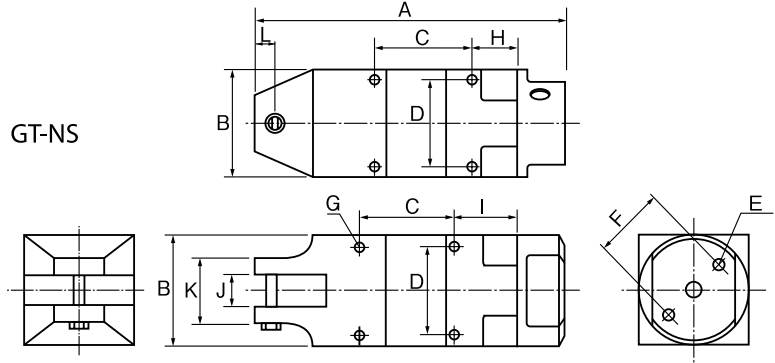
SQUARE AIR NIPPERS

กรรไกรลมทรงเหลี่ยม (แบบอัตโนมัติ)



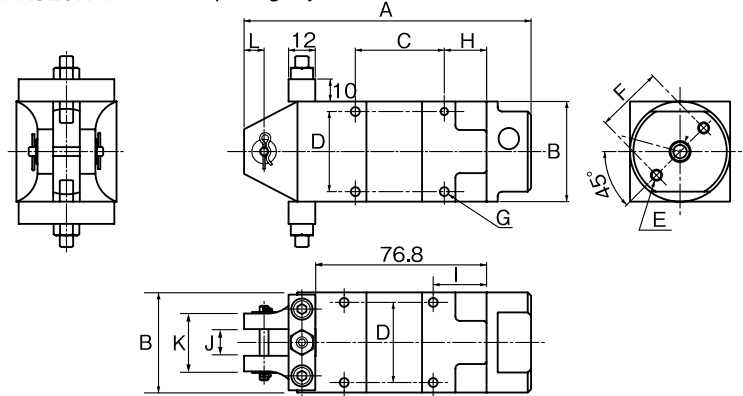
GT-NS3/5/7/10L/20/30

- เหมาะสำหรับตัด Gate พลาสติกในงานแม่พิมพ์ และงานตัดลวดต่างๆ



Made-to-order

GT-NS20H-1 (Blade opening adjustable)



Capacity Ø (mm)			
Soft Plastic	Hard Plastic	Copper	Steel
2.0		1.0	0.5
2.0		1.0	0.5
3.0	2.0	1.6	1.0
4.0	2.6	1.8	1.2
7.0	5.0	2.6	2.0
10.0	6.5	3.3	2.8
7.0	5.0	2.6	2.0

Model No.	Size (mm)													Air Consumption (cm³/str.)	Air Pressure (MPa)	Weight (g)	Hose Coupling
	A	B	C	D	E	F	G	H	I	J	K	L					
GT-NS3	110	23	40	19	M3 Depth8	17	M3 Depth3.5	19	24	7	23	7	45	0.4~0.5	95	Rc 1/8	
GT-NS5	94	30	30	24	M4 Depth10	20	M3 Depth5	14	19	7	23	7	64	0.4~0.5	135		
GT-NS7	113	36	30	28	M4 Depth10	24	M4 Depth5.5	18	23	9	23	7	116	0.4~0.5	215		
GT-NS10L	113	36	30	28	M4 Depth10	24	M4 Depth5.5	18	23	12	26	7	116	0.5~0.6	215		
GT-NS20	129	45	40	36	M5 Depth12	30	M4 Depth7	19	24	12	26	9	230	0.5~0.6	370		
GT-NS30	170	56	60	46	M6 Depth12	40	M5 Depth10	20	30	17	36	15	584	0.5~0.6	685		
GT-NS20H-1	129	45	40	36	M5 Depth12	30	M4 Depth12	19	24	12	26	9	230	0.5~0.6	455		



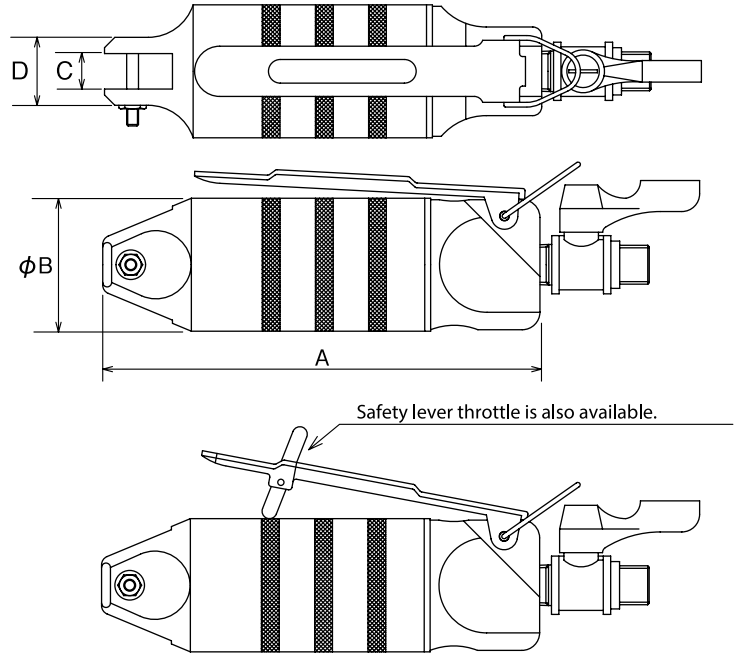
HAND HELD AIR NIPPERS

กรรไกรลมทรงกลมแบบด้ามกด

AIR NIPPERS

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GT-NV 3/5/7/10/12/20/30/50

Capacity Ø (mm)			
Soft Plastic	Hard Plastic	Copper	Steel
2.0		1.0	0.5
2.0		1.0	0.5
3.0	2.0	1.6	1.0
4.0	2.6	1.8	1.2
4.5	4.0	2.3	1.7
7.0	5.0	2.6	2.0
10.0	6.5	3.3	2.8
		5.5	4.5

Model No.	Size (mm)				Air Consumption (cm ³ /str.)	Air Pressure (MPa)	Weight (g)	Body	Hose Coupling
	A	B	C	D					
GT-N3	112	23	7	14	45	0.4~0.5	95	Rc 1/8	Rc 1/4
GT-N5	103	30	7	17	64	0.4~0.5	135	Rc 1/8	
GT-N7	123	34	9	17	116	0.4~0.5	180	Rc 1/4	
GT-N10	132	34	9	17	116	0.4~0.5	185	Rc 1/4	
GT-N12	142	36	12	20	116	0.5~0.6	210	Rc 1/4	
GT-N20	148	45	12	23	230	0.5~0.6	375	Rc 1/4	
GT-N30	185	56	17	30	584	0.5~0.6	625	Rc 1/4	
GT-N50	237	75	25.2	43	1,170	0.5~0.6	1,220	Rc 1/4	

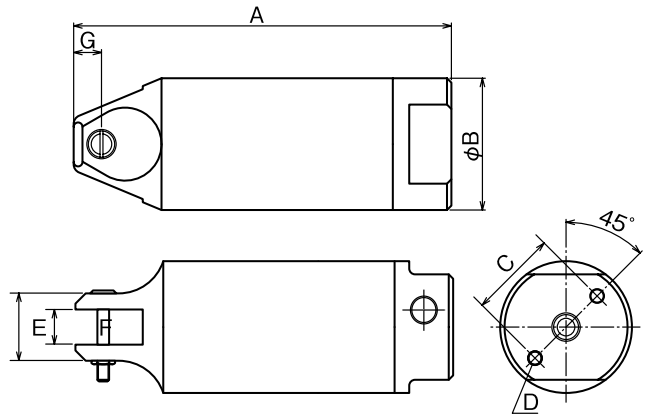
AIR NIPPER ROUND-TYPE WITHOUT LEVER

กรรไกรลมทรงกลม (แบบอัตโนมัติ)



GT-NR 3/5/7/10L/20/30/50

- เลือกจุดเชื่อมต่อระบบลมได้ 2 ช่องทาง ทำให้สามารถใช้งานได้หลากหลายรูปแบบตามการติดตั้ง
- สามารถปรับทิศทางการทำงานหมุนของตัวเครื่องได้ 180 องศา



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Capacity Ø (mm)				Model No.	Size (mm)							Air Consumption (cm ³ /str.)	Air Pressure (MPa)	Weight (g)	Hose Coupling
Soft Plastic	Hard Plastic	Copper	Steel		A	B	C	D	E	F	G				
2.0		1.0	0.5	GT-NR3	110	23	17	M3 Depth8	7	14	7	45	0.4~0.5	70	Rc 1/8
2.0		1.0	0.5	GT-NR5	94	30	20	M4 Depth10	7	17	7	64	0.4~0.5	110	
3.0	2.0	1.6	1.0	GT-NR7	113	34	22	M4 Depth10	9	17	7	116	0.4~0.5	150	
4.0	2.6	1.8	1.2	GT-NR10L	113	36	24	M4 Depth10	12	20	7	116	0.5~0.6	215	
7.0	5.0	2.6	2.0	GT-NR20	129	45	30	M5 Depth12	12	23	9.5	230	0.5~0.6	280	
10.0	6.5	3.3	2.8	GT-NR30	165	56	40	M6 Depth12	17	30	10.5	584	0.5~0.6	505	
12.0	6.5	5.5	4.5	GT-NR50	222	75	50	M8 Depth12	25.2	43	15	1,170	0.5~0.6	1,190	

STAND FOR GT-NR

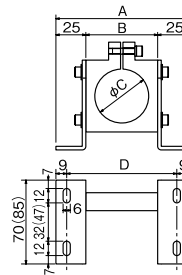
แท่นยึดกรรไกรลมรุ่น GT-NR



NR10LST/20ST/30ST/50ST

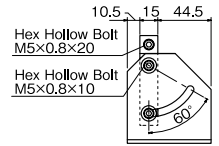
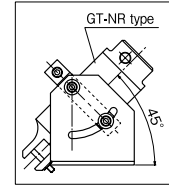
Model No.	Size (mm)				Weight (g)
	A	B	C	D	
NR10LST	102	52	36	84	335
NR20ST	110	60	45	92	385
NR30ST	130	80	56	112	535
NR50ST	150	100	75	132	835

- แท่นยึดสำหรับติดตั้งร่วมกับกรรไกรลมรุ่น GT-NR ซึ่งเหมาะสำหรับงานตัด Gate พลาสติก และเครื่องจักรระบบอัตโนมัติ
- สามารถปรับมุมการตัดได้ตั้งแต่ 0-60 องศา



Figures in () are for the NR50ST

Mounting example



AIR NIPPERS



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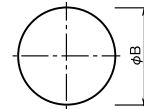
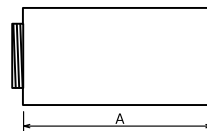
EXTRA PRESSURE BOOSTERS

อุปกรณ์เพิ่มแรงดัน



P-10L/20/30/50

- สามารถต่อเข้ากับกรรไกรลมรุ่นพื้นฐาน เพื่อเพิ่มแรงดันลมในการตัด ช่วยให้สามารถตัด Gate ย่างยิ่งขึ้น



Capacity Ø (mm)			
Soft Plastic	Hard Plastic	Copper	Steel
5.0	4.0	2.6	1.6
8.0	6.0	3.0	2.2
13.0	7.0	4.8	4.0
		6.5	5.5

Application Models	Model No.	Size(mm)		Air Consumption (cm ³ /str.)	Air Pressure (MPa)	Weight (g)
		A	B			
NS10L, NR10L, N12	P-10L	71	36	223	Up to 0.5MPa	115
N20, NS20, NR20	P-20	87	45	508	Up to 0.5MPa	215
N30, NS30, NR30	P-30	92	56	956	Up to 0.5MPa	330
N50, NR50	P-50	133	75	2,670	Up to 0.5MPa	840

DOUBLE ACTION AIR NIPPERS

กรรไกรลมระบบ 2 จังหวะ

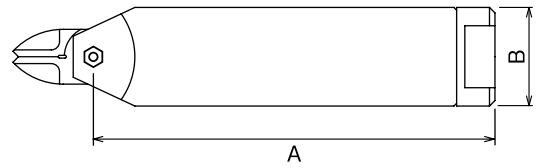


GT-NWR10/20/30

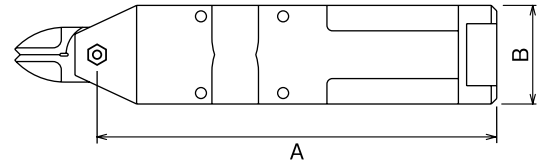
GT-NWS1/10/20/30

- ปากกรรไกรขับเคลื่อนด้วยระบบลูกสูบในการเปิด-ปิดใบมีด จึงดูแลรักษาง่าย และใช้งานได้ยาวนานกว่าแบบใช้สปริง

GT-NWR



GT-NWS



AIR NIPPERS

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Model No.	Capacity Φ (mm)			Air Consumption (cm ³ /str.)	Applied Pressure (N)	Air Pressure (MPa)	Size (mm)		Weight (g)
	Copper	Steel	ABS Plastic				A	B	
Double Action Air Scissors (Round type without Lever)									
GT-NWR10	1.8	1.2	4.0	116	588	0.4~0.5	146	Φ 36	280
GT-NWR20	2.6	2.0	6.5	230	1,372	0.5~0.6	165	Φ 45	523
GT-NWR30	3.3	2.8	9.5	584	2,744	0.5~0.6	216	Φ 56	980
Double Action Air Scissors (Square Type)									
GT-NWS1	1.0	0.5	2.0	45	294	0.4~0.5	95	23x20	116
GT-NWS10	1.8	1.2	4.0	116	588	0.4~0.5	146	36x36	356
GT-NWS20	2.6	2.0	6.5	230	1,372	0.5~0.6	165	45x45	610
GT-NWS30	3.3	2.8	9.5	584	2,744	0.5~0.6	230.5	56x56	1115

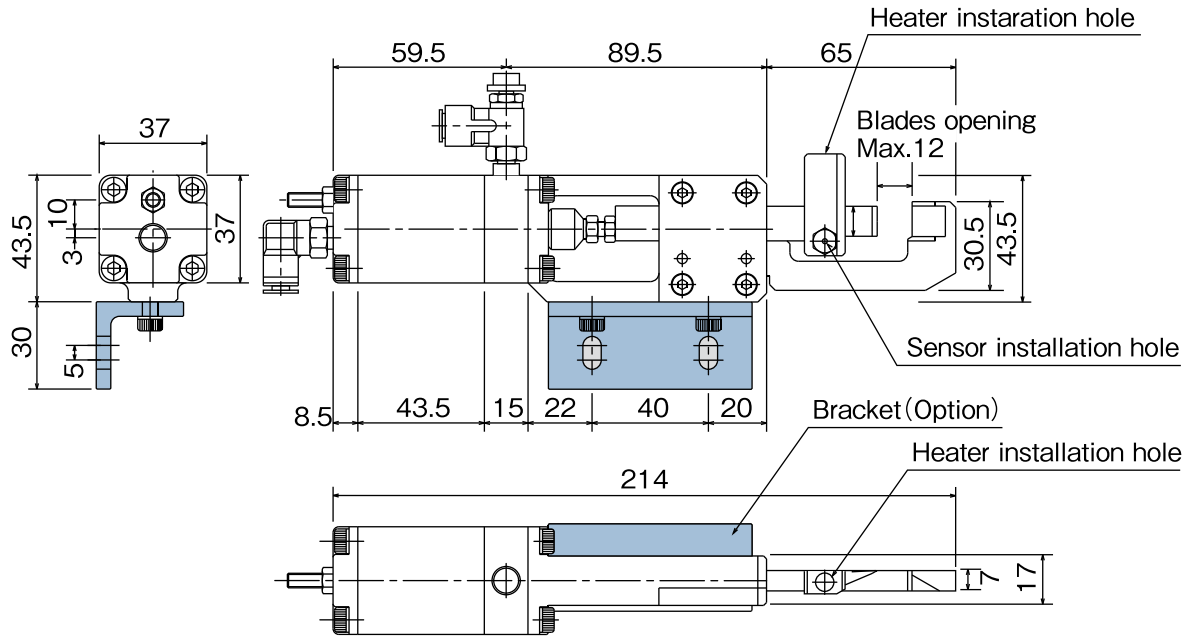
HEAT AIR NIPPERS

กรรไกรลม แบบใช้ความร้อนในการตัด



GT-NKH10

- ออกแบบมาให้สามารถควบคุมอุณหภูมิ และความเร็วในการตัด การตัดจึงมีความแม่นยำสูง และชิ้นงานไม่เสียหาย



Model No.	Cutting Capacity width x thickness (mm) Acril	Blade Edge Temp. (MAX °C)	Cutting Cycle (sec./cut)	Air Consumption (cm³/str.)	Piston Stroke (mm)	Weight (g)
GT-NKH10	7x1.5	200	4~5	73	12	715

Blades Specifications					
Model No.	Material	Blade Shape	Blade Opening (mm)	Cutting blade effective (mm)	Weight (g)
NKH10AJ	Special alloy steel	Knife type (resin)	12	10	137
NKH10RAJ					

AIR NIPPERS

VESSEL

Made in Japan



HEAT AIR NIPPER BLADE

ปากกรรไกรแบบใช้ความร้อน

AIR NIPPERS

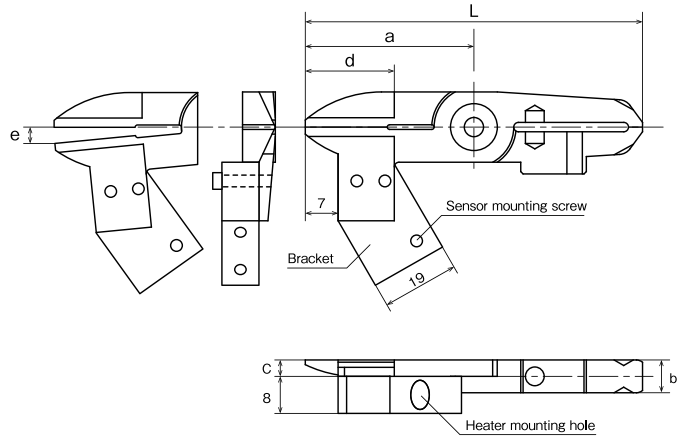
Made in Japan

VESSEL



NTH05AJ/10AJ

- ปากกรรไกรด้านหนึ่งจะอยู่กับที่ ส่วนอีกด้านจะสไลด์เพื่อตัด การตัดจึงมีความแม่นยำสูง และชิ้นงานไม่เสียหาย



Model No.	Size (mm)							Weight (g)	Cutting Capacity Ø (mm) Acrylic	Set temperature (MAX °C)	Material	Applicable model
	a	b	c	d	Effective Length	e	Blade Opening					
NTH05AJ	36	7	3.5		15	3.5	72	40	2.5	200	Special alloy steel	GT-NT05(-4)/GT-NT05R(-4)
NTH10AJ	47	9	4.7		17	4.5	94	88	3.5	200	Special alloy steel	GT-NT10(-6)/GT-NT10R(-6)

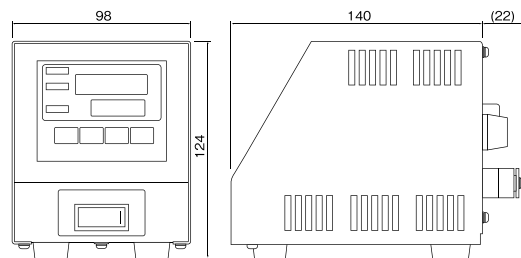
BENCHTOP TEMPERATURE CONTROLLER

เครื่องควบคุมอุณหภูมิ



DTC-001

- เครื่องควบคุมอุณหภูมิปากกรรไกร สำหรับใช้งานร่วมกับกรรไกรสามรุ่น Heat Air Nipper



Model No.	Temperature range Thermocouple K (°C)	Power supply (VAC)	Power consumption (with 100 VAC input)	Operating ambient temperature/humidity (°C) / (%)	Protection fuse	Weight (g)
DTC-001	0~200	100~240	Approx. 3W (Approx. 5VA) (with no load)	0-40 RH35~85% (No condensing)	One 15A fuse is incorporated.	900

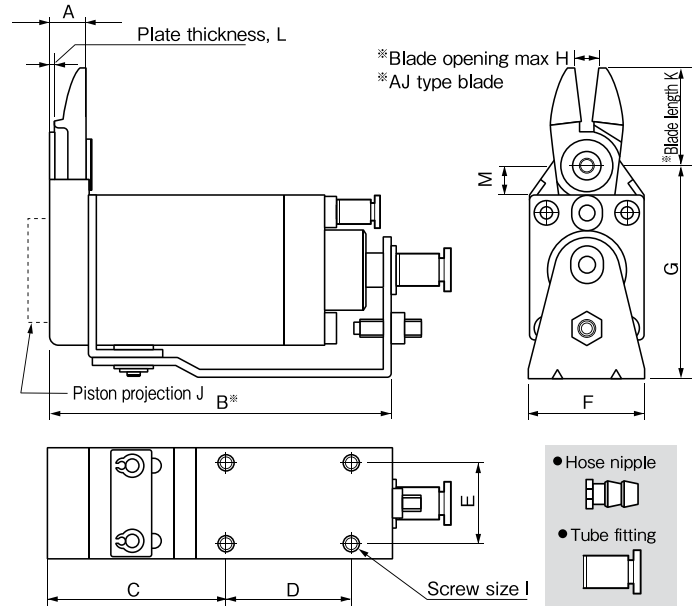
SLIDING AIR NIPPER HORIZONTAL-TYPE

กรรไกรลมแบบสไลด์ทรงแนวนอน



GT-NY05/10/15/25

- ปากกรรไกรแบบแนวนอน ช่วยประหยัดพื้นที่ ไม่กีดขวางชิ้นงาน และตัดได้อย่างแม่นยำ



AIR NIPPERS

VESSEL

Made in Japan



Capacity Ø (mm)				Size (mm)													Air Consumption (cm³/str.)	Weight (g)	Slide Distance (mm)	Hose Port	
Soft Plastic	Hard Plastic	Copper	Steel	Model No.	A	B	C	D	E	F	G	H	I	J	K	L					M
3.0	2.0	1.6	1.0	GT-NY05	8.6	75.9	40.9	25	15	23	47.6	4	M4	3	22	1.6	8.5	48	155	Pull 0~3	W / hose nipple Hose I.D. Ø 2.5 mm
3.0	2.0	1.6	1.0	GT-NY05R														48	155	Push 0~3	
3.0	2.0	1.6	1.0	GT-NY05R-4														48	155	Pull 0~3	W / tube fitting Hose I.D. Ø2.5 x O.D Ø4 mm
3.0	2.0	1.6	1.0	GT-NY05R-4														48	155	Push 0~3	
3.5	2.3			GT-NY10	8.8	82.1	42.1	30	20	28	51.6	6	M4	5	24	1.6	7.5	68	210	Pull 0~3	W / hose nipple Hose I.D. Ø 2.5 mm
3.5	2.3			GT-NY10R														68	210	Push 0~3	
3.5	2.3			GT-NY10-4														68	210	Pull 0~3	W / tube fitting Hose I.D. Ø2.5 x O.D Ø4 mm
3.5	2.3			GT-NY10R-4														68	210	Push 0~3	
4.0	2.6			GT-NY15	10.2	93	48	35	25	33	58	8	M4	5	27	2	7.5	136	319	Pull 0~3	W / hose nipple Hose I.D. Ø2.5 mm
4.0	2.6			GT-NY15R														136	319	Push 0~3	
4.0	2.6			GT-NY15-4														136	319	Pull 0~3	W / tube fitting Hose I.D. Ø2.5 x O.D Ø4 mm
4.0	2.6			GT-NY15R-4														136	319	Push 0~3	
5.0	3.4			GT-NY25	12.5	108.5	54.5	40	30	42	69	9	M5	2	31	2.5	10.5	184	580	Pull 0~5	W / hose nipple Hose I.D. Ø 4 mm
5.0	3.4			GT-NY25R														184	580	Push 0~5	
5.0	3.4			GT-NY25-6														184	580	Pull 0~5	W / tube fitting Hose I.D. Ø4 x O.D Ø6 mm
5.0	3.4			GT-NY25R-6														184	580	Push 0~5	

SLIDING AIR NIPPER VERTICAL-TYPE

กรรไกรลมแบบสไลด์ทรงแนวตั้ง

AIR NIPPERS

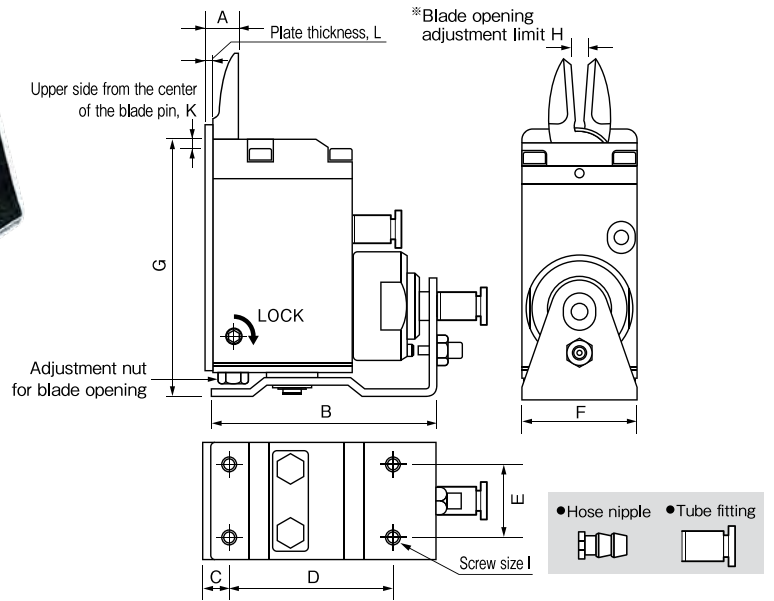
Made in Japan

VESSEL



GT-NT03/05/10/20

- ช่วยต่อการถอดเปลี่ยนปากกรรไกร
- สามารถติดตั้งปากกรรไกร รูปแบบหันเข้า หรือออกตามการใช้งาน



Capacity Ø (mm)		Model No.	Size (mm)										Air Consumption (cm³/str.)	Weight (g)	Slide Distance (mm)	Hose Port		
Soft Plastic	Hard Plastic		A	B	C	D	E	F	G	H	I	J					K	
1.5	1.0	GT-NT03													27	178	Pull 0~3	W / hose nipple Hose I.D. Ø2.5 mm
1.5	1.0	GT-NT03R	9	62	7	43	14	19	68.1	1.5~3	M3	2	5	27	178	Push 0~3		
1.5	1.0	GT-NT03-4													27	178	Pull 0~3	W / tube fitting Hose I.D. Ø2.5 x O.D Ø4 mm
1.5	1.0	GT-NT03R-4													27	178	Push 0~3	
2.5	1.5	GT-NT05													47	325	Pull 0~3	W / hose nipple Hose I.D. Ø2.5 mm
2.5	1.5	GT-NT05R	9	64	7	45	20	32	71.1	3~6	M4	2	5	47	325	Push 0~3		
2.5	1.5	GT-NT05-4													47	325	Pull 0~3	W / tube fitting Hose I.D. Ø2.5 x O.D Ø4 mm
2.5	1.5	GT-NT05R-4													47	325	Push 0~3	
3.5	2.3	GT-NT10													82	515	Pull 0~3	W / hose nipple Hose I.D. Ø2.5 mm
3.5	2.3	GT-NT10R	11	73	8	53	24	38	88.1	4~7	M4	2	5	82	515	Push 0~3		
3.5	2.3	GT-NT10-6													82	515	Pull 0~3	W / tube fitting Hose I.D. Ø4 x O.D Ø6 mm
3.5	2.3	GT-NT10R-6													82	515	Push 0~3	
5.0	3.4	GT-NT20													203	930	Pull 0~8	W / hose nipple Hose I.D. Ø4 mm
5.0	3.4	GT-NT20R	14	103	10	80	28	44	102.1	4.5~9	M5	2	6	203	930	Push 0~8		
5.0	3.4	GT-NT20-6													203	930	Pull 0~8	W / tube fitting Hose I.D. Ø4 x O.D Ø6 mm
5.0	3.4	GT-NT20R-6													203	930	Push 0~8	

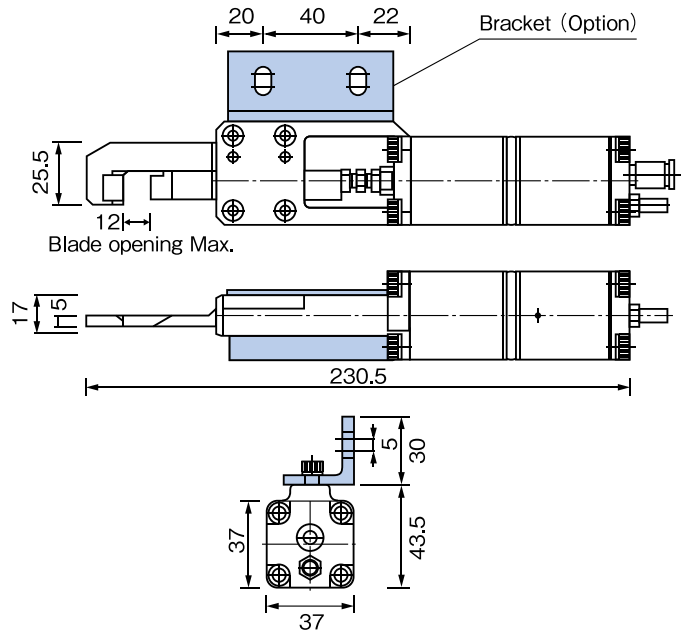
THRUST-CUT AIR NIPPER

เครื่องกรรไกรลมแบบแรงผลัก



GT-NK10

- สำหรับตัดชิ้นงานพลาสติกขนาดเล็กและบาง สามารถเชื่อมต่อชุดควบคุมการตัดด้วยการใช้เท้าเหยียบ เพื่อเพิ่มความแม่นยำในการตัด
- สามารถตัดมุมที่มีความบอบบาง เพื่อป้องกันรอยยับบริเวณที่ตัด



AIR NIPPERS

VESSEL

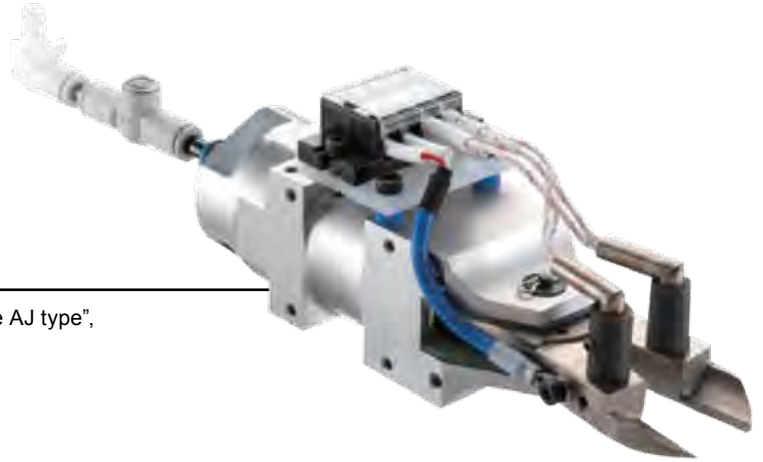
Made in Japan



Capacity Φ (mm) ABS Plastic	Model No.	Air Consumption (cm ³ /str.)	Air Pressure (MPa)	Weight (g)	Applied Pressure (N)	Spec. & Size of the Hose Port
5	GT-NK10	110	0.4~0.5	800	735	Hose I.D. Φ 2.5 x O.D. Φ 4 mm

WE DESIGN YOUR CUSTOM-MADE BLADES, EVEN FROM 1 PIECE!

Vessel provides solutions of customized blades for a wide variety of applications. Custom-made blades are designed flexibly according to a wide range of demands and offered at the minimum cost and lead-time. See the example below. We accept orders for small quantity as well.



An example of a custom-made nipper

A combination of "Square Air Nipper NS type" + "Blade AJ type", modified to a "Heat Nipper type"

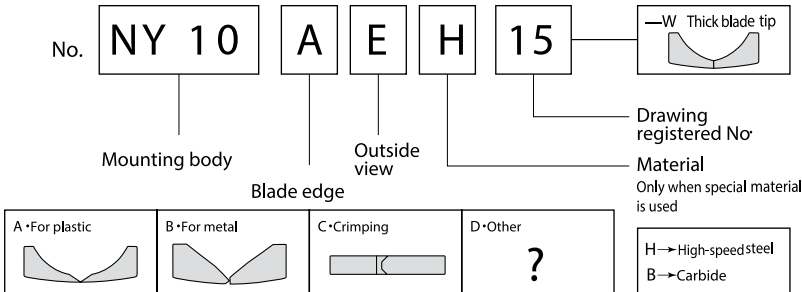
AIR NIPPERS



Made in Japan

VESSEL

Ref: What the model code stands for



Type for blades

A Angled	B Angled	C Crimping		
D Mounted gate	E Disposable gate treatment	F Power cutting	G Punching	H Crankshaft
I Pilers type	J(JL) Long blade for plastic Straight Long blade <small>For product which are vertically long and to which a nipper does not reach with an ordinary blade.</small>	K L-shaped (disposable gate treatment)	L L-shaped	M/XL/XR Side opening blades
TN Tube cutting	VO Nail pulling	DI Bending	VHA Scissors	Cutting of stranded wire Film gate
Direct gate <small>Sprue is equal to a gate.</small>	AHE Pin gate treatment <small>...Treatment of small gates which should be automatically cut at de-gating.</small>	AHW Double blades	NH Double heating blades	

Slide-off air nipper blade						
Model No.	Capacity Ø					
	Body No.	Shape	Soft Plastic	Hard Plastic	Copper	Steel
NY03	AJ		2.0	1.3		
NY03	AJL		1.6	1.1		
NY03	AJT		2.0	1.3		
NY03	RAJ		2.0	1.3		
NY05	BJ			2.0	1.6	1.0
NY05	AJ		3.0	2.0		
NY05	AJL		2.8	1.6		
NY05	AJB		3.0	2.0		
NY05	AJT		3.0	2.0		
NY05	AH		3.0	2.0		
NY05	RBJ			2.0	1.6	1.0
NY05	RAJ		3.0	2.0		
NY05	RAH		3.0	2.0		
NY10	AJ		3.5	2.3		
NY10	AJL		3.2	2.1		
NY10	AD		2.3	1.6		
NY10	AJB		3.5	2.3		
NY10	AJT		3.5	2.3		
NY10	AH		3.5	2.3		
NY10	RAJ		3.5	2.3		
NY10	RAH		3.5	2.3		
NY15	AJ		4.0	2.6		
NY15	AJL		3.7	2.3		
NY15	AD		2.6	2.2		
NY15	AJB		4.0	2.6		
NY15	AJT		4.0	2.6		
NY15	AH		4.0	2.6		
NY15	RAJ		4.0	2.6		
NY15	RAH		4.0	2.6		
NY25	AJ		5.0	3.4		
NY25	AJL		4.7	3.0		
NY25	AD		3.3	2.0		
NY25	AJB		5.0	3.4		
NY25	AH		5.0	3.4		
NY25	RAJ		5.0	3.4		
NY25	RAH		5.0	3.4		

Slide-off air nipper blade						
Model No.	Capacity Ø					
	Body No.	Shape	Soft Plastic	Hard Plastic	Copper	Steel
NY03	AJ		1.5	1.0		
NY03	AJT		1.5	1.0		
NY03	AJY		1.5	1.0		
NE5	AJ		2.5	1.5		
NT05	AJ		2.5	1.5		
NT05	AJL		2.0	1.3		
NT05	AJB		2.5	1.5		
NT05	AJT		2.5	1.5		
NT05	AJY		2.5	1.5		
NT05	AD		2.5	1.2		
NT05	AJH		2.5	1.5		
NT05	AJV		2.5	1.5		
NT05	AE		2.5	1.3		
NE10	AJ		3.5	2.3		
NT10	AJ		3.5	2.3		
NT10	AJL		3.0	2.0		
NT10	AJB		3.5	2.3		
NT10	AJT		3.5	2.3		
NT10	AJY		3.5	2.3		
NT10	AD		3.5	2.1		
NT10	AJH		3.5	2.3		
NT10	AJV		3.5	2.3		
NT10	AE		3.5	2.1		
NT20	AJ		5.0	3.4		
NT20	AJL		4.5	3.2		
NT20	AD		5.0	2.0		
NT20	AJB		5.0	3.4		
NT20	AJH		5.0	3.4		

Air nipper blade							
Model No.	Capacity Ø						
	Body No.	Shape	Soft Plastic	Hard Plastic	Copper	Steel	Piano Wire
N3	AS				1.0	0.5	
N3	HS				1.0	0.5	
N3	AP		2.0				
N3	AE		2.0				
N3	BJ				1.0	0.5	
N5	AS				1.0	0.5	
N5	HS				1.0	0.5	
N5	AP		2.0				
N5	AE		2.0				
N5	BJ				1.0	0.5	
N7	AS				1.6	1.0	
N7	HS				1.6	1.0	
N7	AP		3.0	2.0			
N7	PF		3.0	2.0			
N7	AE		3.0	2.0			
N7	BJ				1.6	1.0	
N10	AS				1.8	1.2	
N10	HS				1.8	1.2	
N10	AP		4.0	2.6			
N10L	AS				1.8	1.2	
N10L	AP		4.0	2.6			
N10L	PF		4.0	2.6			
N12	AS				2.3	1.7	
N12	HS				2.3	1.7	
N12	AP		4.5	4.0			
N20	AS				2.6	2.0	
N20	HS				2.6	2.0	
N20	AG				2.6	2.0	
N20	AP		7.0	5.0			
N20	AJ		7.0	5.0			
N20	AJL		6.0	4.0			
N20	AJB			5.0			
N20	PF		7.0	5.0			
N20	AE		7.0	5.0			
N20	BFB				2.6	2.0	1.2
N30	AS				3.3	2.8	
N30	BBB				3.3	2.8	1.2
N30	AP		10.0	6.5			
N30	AJ		10.0	6.5			
N30	AJL		8.0	5.0			
N30	PF		10.0	6.5			
N30	AE		10.0	6.5			
N30	ACD	(Bare terminal 1.25sq)					
N50	AS				5.5	4.5	
N50	BBB				5.5	4.5	2.0

NM blade						
NM20	AJ		7.0	5.0		
NM20	AP		7.0	5.0		
NM20	AE		7.0	5.0		
NM30	AJ		10.0	6.5		
NM30	AP		10.0	6.5		
NM30	AE		10.0	6.5		

For Double Action Air Nipper						
NW1	BJ				1.0	0.5
NW10	AJ			4.0		
NW10	BJ				1.8	1.2
NW20	AJ			6.5		
NW20	BJ				2.6	2.0
NW30	AJ			9.5		
NW30	BJ				3.3	2.8

Quasi-standard products				
Model No.	Capacity Ø			
	Body No.	Shape	Soft Plastic	Hard Plastic
N10	LAB152		3.5	2
N10	LAJ141		3.5	2
N20	AH		6	
N20	AML1498	10x1.5	8x1	
N20	AMR1499	10x1.5	8x1	
N20	AB360		6.5	4.5
N20	AA239		6.5	4.5
N20	AB39		6.5	4.5
N20	AE19		6	4
N20	AA227		6.5	4.5
N20	AK249		5.5	3.5
N20	AE1205		5.5	3.5
N30	AA114		8	5
N30	AE53		7	4.5
N30	AL525		7	4.5
N30	AJ163		8	5
N30	AML1435	15x2	10x1.5	
N30	AMR1395	15x2	10x1.5	



STATIC SOLUTIONS

Reliable performance even in a severe environment.

STATIC SOLUTIONS

Made in Japan



VESSEL



STATIC SOLUTIONS เครื่องทำลายไฟฟ้าสถิต

Fan Type	C45
Nozzle Type	C49
Gun Type	C53
Bar Type	C57
Ion Parts Cleaner	C61
EPA Working Mat	C63
Clean Walker	C66



IONIZING MINI FAN WITH CLIP OR STAND

พัดลมทำลายไฟฟ้าสถิต

STATIC SOLUTIONS

Made in Japan

VESSEL



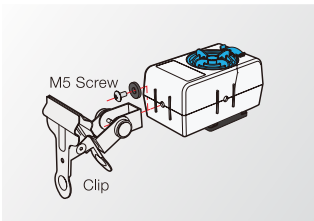
F6RCL-E



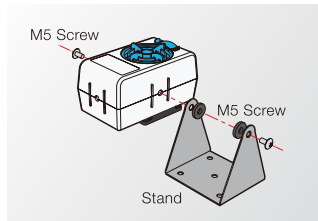
F6RST-E

- มีให้เลือกแบบตั้งโต๊ะ และแบบตัวหนีบ ขึ้นอยู่กับความเหมาะสมของพื้นที่ใช้งาน
- มีโหมดไฟส่องสว่าง ช่วยให้สามารถมองเห็นการทำงาน และสิ่งปนเปื้อนภายใน

Model No.	F6RCL-E	F6RST-E
Ionizing method/Applied voltage	Piezoelectric high-frequency AC corona discharge/ AC 3.5kV	
Power supply and current consumption	DC24V ± 5% / 210mA(typ.)	
Ion balance	within ± 10V (150mm at front)	
Decay time	3 sec or less (150mm at front)	
Operating distance	150 mm to 600 mm	
HxWxDmm	H254xW77xD108mm (clip included)	
Weight	514g	
Airflow	0.78m ³ /min (Maximum flow rate)	
Noise level	HI 53 dBA / LO 42 dBA	
Ozone production	0.05 ppm or less (measured 50 mm)	
Operating environment temperature and humidity	5~40°C/35~65% RH (with no dew condensation or freezing)	
Accessories	AC adapter AD24-ITF6E, AC cable (1.8m)	



Can remove the clip when not needed



Can remove the stand when not needed

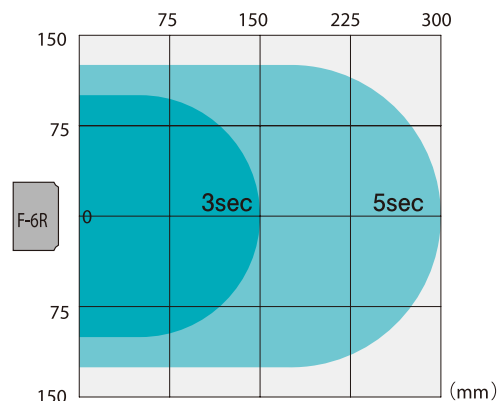


Easy removal



Built-in light

High Voltage Transformer Piezoelectric high-frequency AC corona discharge	Ion balance within ± 10V	Decay time 3.0 sec or less	Directive CE
Power supply DC 24V	Fan Speed HI / LOW	LED illumination	AC adapter 100~240V included
Needle electrode unit replacement	ALARM FAN LOCKUP	ALARM H.V.	

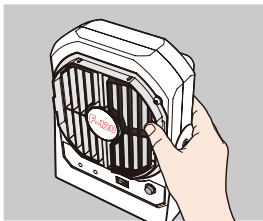


BUTTERFLY LOUVER IONIZING FAN

พัดลมทำลายไฟฟ้าสถิต



F120R



Butterfly Louver



RUN lamp LED



Front cover with needle electrode

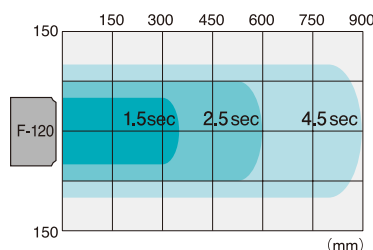
- หน้ากากทรงผีเสื้อสามารถปรับทิศทางการทำงานได้หลายทิศทาง (ซ้าย-ขวา-ตรงกลาง)
- มีระบบสัญญาณไฟ LED แสดงสถานะการทำงาน
- ง่ายต่อการถอดทำความสะอาด และเปลี่ยนหัวเข็ม

Model No.	F120R
Ionizing method/Applied voltage	Piezoelectric high-frequency AC corona discharge / AC 10kV (p-p)
Power supply and current consumption	DC24V ± 5% / 700mA (max.)
Ion balance	within ± 10V
Decay time	1.5 sec or less
Operating range	150 mm to 900 mm
HxWxDmm	H198xW162xD70mm
Weight	0.9kg
Air Flow	3.66m³/min (Maximum flow rate)
Noise level	HI : 55dBA / LO : 49 dBA
Ozone production	0.05 ppm or less (measured 50 mm)
Operating environment temperature and humidity	5~40°C/35~65% RH (with no dew condensation or freezing)
Accessories	AC adapter AD24-ITE AC cable (1.8m)

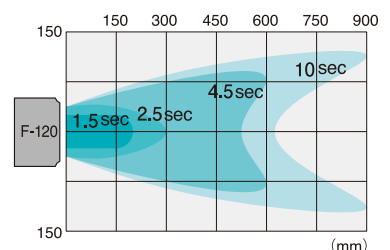
High Voltage Transformer Piezoelectric high-frequency AC corona discharge	Ion balance within ± 10V	Decay time 1.5 sec or less	Directive CE
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Power supply DC 24V	Fan Speed HI / MD / LO	AC adapter 100~240V included	Needle electrode unit replacement	ALARM FAN LOCKUP	ALARM H.V.	External grounding terminal
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Straight (F120R)



Wide (F120R)



IONIZING CROSS-FLOW FAN

พัดลมทำลายไฟฟ้าสถิต

STATIC SOLUTIONS



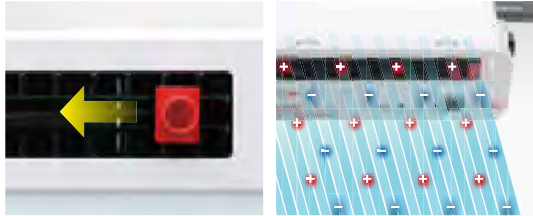
CF300-E

- ทำลายไฟฟ้าสถิตแบบ CROSS-FLOW ครอบคลุมพื้นที่กว้าง ระยะไกล และให้แรงลมต่อเนื่อง
- ทำความสะอาดหัวเข็มได้ง่ายด้วยการใช้ปลายนิ้วเลื่อนตัวแปรงทำความสะอาด



Made in Japan

VESSEL



Cleaning Brush

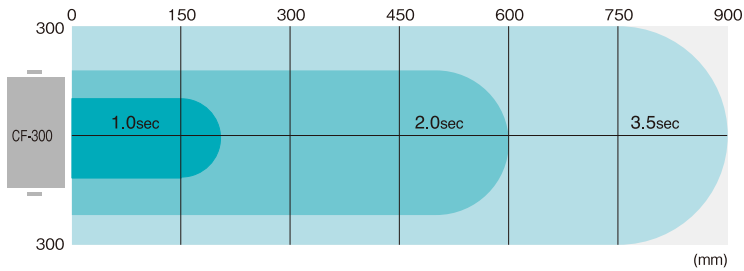
Cross-Flow Fan



Stepless adjustment of fan speed

High Voltage Transformer Coiled transformer AC corona discharge	Ion balance within $\pm 10V$	Decay time 1.5 sec or less
Power supply DC 24V	No-step airflow volume changeover	AC adapter 100-240V included
ALARM FAN LOCKUP	ALARM H.V.	External grounding terminal

Model No.	CF300-E
Ionizing method/ Applied voltage	High voltage AC(20KHz) corona discharge / AC 9.2kV(p-p)
Power supply and current consumption	DC24V $\pm 10\%$ / 500 mA(max.)
Ion balance	within $\pm 10V$
Decay time	1.5 sec or less
Operating range	150 mm to 900 mm
HxWxDmm	H157xW348xD165 mm
Weight	2.9kg
Air Flow	2.5m ³ /min (Maximum flow rate)
Noise level	48dBA (at 1m, Maximum flow rate)
Ozone production	0.05 ppm or less (measured 50 mm)
Operating environment temperature and humidity	5~40°C/35~65% RH (with no dew condensation or freezing)
Accessories	AC adapter AD24-ITE AC cable (1.8m) Cleaning brush

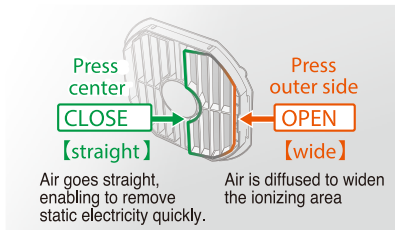


OVERBENCH IONIZING FAN

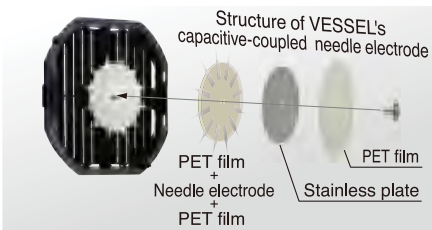
พัดลมทำลายไฟฟ้าสถิต



L-90-E



Butterfly lever



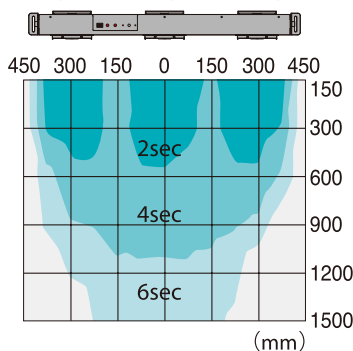
Capacitive-coupled needle electrode

- หน้ากากทรงพีเสื้อสามารถปรับการทำงานได้หลายทิศทาง (ซ้าย-ขวา-ตรงกลาง)
- ระบบการทำงานแบบ Capacitive-coupled needle electrode ช่วยต่อการทำความสะอาดและเปลี่ยนหัวเข็ม

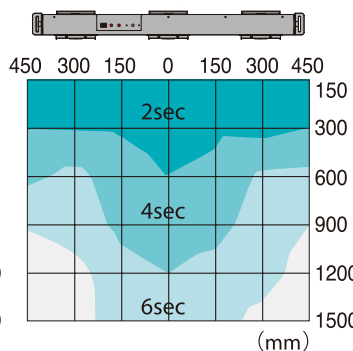
Model No.	L-90-E
Ionizing method/Applied voltage	Piezoelectric high-frequency AC corona discharge / AC 9.5kV(p-p)
Power supply and current consumption	DC24V ± 5% / 3.0A(max.)
Ion balance	within ± 10V
Decay time	1.5 sec or less
Operating range	150 mm to 900 mm
HxWxDmm	H182xW814xD91mm (with stand : H201xW880xD91 mm)
Weight	4.7kg
Air Flow	7.1m ³ / min (a total of fan) Maximum flow rate
Noise level	75.4 dBA (at 1m, Maximum flow rate)
Ozone production	0.05 ppm or less (measured 50 mm)
Operating environment temperature and humidity	5~40°C/35~65% RH (with no dew condensation or freezing)
Accessories	AC adapter AD24-IT37E AC cable (1.8m)

High Voltage Transformer Piezoelectric high-frequency AC corona discharge	Ion balance within ± 10V	Decay time 1.5 sec or less
Power supply DC 24V	No-step airflow volume changeover	AC adapter 100~240V included
Needle electrode unit replacement	ALARM FAN LOCKUP	ALARM H.V.
External grounding terminal		

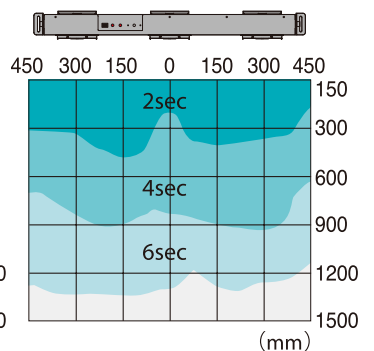
straight straight straight



wide straight wide



wide wide wide



SUPER SLIM IONIZING NOZZLE

เครื่องทำลายไฟฟ้าสถิตแบบหัวฉีด

STATIC SOLUTIONS



Made in Japan

VESSEL



N-1

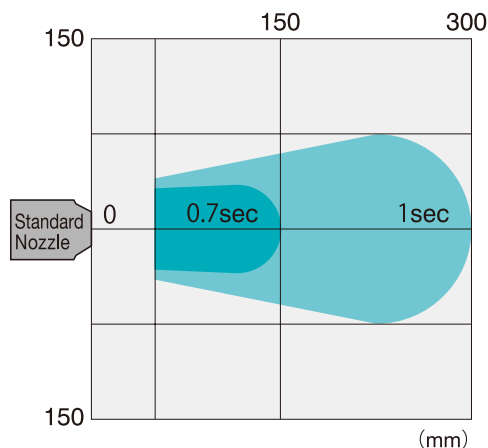


- เครื่องมีขนาดเล็ก และน้ำหนักเบา เหมาะสำหรับติดตั้งในพื้นที่แคบหรือในพื้นที่จำกัด
- เครื่องสามารถทำงานพร้อมกันได้สูงสุด 6 เครื่อง ด้วยการเชื่อมต่อแบบ Daisy-chain

Model No.	N-1
Ionizing method/Applied voltage	Piezo high-frequency AC Corona discharge method/AC5kV (p-p)
Power supply and current consumption	DC24V ±5% / 100mA (max.)
Ion balance	within ± 10V
Decay time	1.0 sec or less (standard nozzle • 0.3 MPa. 150mm) (measured values)
Operating range	50 mm to 600 mm
HxWxDmm	L109.6xW27.5xH28mm (with standard nozzle mounted)
Weight	80 g (with standard nozzle mounted)
Air supply hose diameter	tube fitting Ø6mm
Operating fluid	Clean dry air (0.1MPa to 0.6MPa). Nitrogen N ² (0.1MPa to 0.6MPa)
Air Consumption	219ℓ/min (with standard nozzle mounted. at 0.3 MPa)
Noise	96dBA (With standard nozzle mounted, at 0.3MPa)
Ozone production	0.05ppm or less (measured 50 mm)
Operating environment temperature and humidity	5~40°C/35~65% RH (with no dew condensation or freezing)
Accessories	Standard Nozzle (included with device)

High Voltage Transformer Piezoelectric high-frequency AC corona discharge	Ion balance within ± 10V	Decay time 1.0 sec or less
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Power supply DC 24V	Power supply: AIR / N ₂ max 0.6Mpa	AC adapter (Option)	Screw-type needle electrode	"ON" lamp
ALARM H.V.	External grounding terminal			



PINPOINT IONIZING NOZZLE

เครื่องทำลายไฟฟ้าสถิตแบบหัวฉีด



N-3



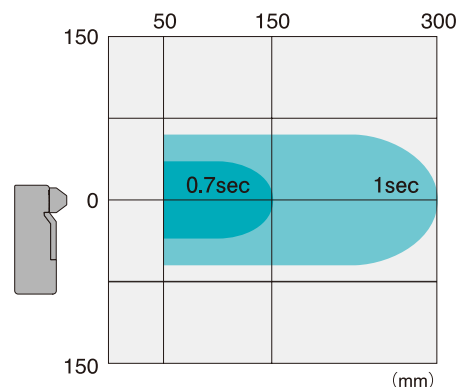
- ขนาดเล็ก กะทัดรัด เหมาะสำหรับพื้นที่แคบ
- ง่ายต่อการเชื่อมต่อเข้ากับระบบ
- สามารถเปลี่ยนรูปแบบหัวฉีดได้ เพื่อรองรับงานที่หลากหลาย

Model No.	N-3
Ionizing method/Applied voltage	Piezo high-frequency AC Corona discharge method/AC5.6kV (p-p)
Power supply and current consumption	DC24V ±5% / 90mA (max.)
Ion balance	within ± 10V
Decay time	1.0 sec or less (standard nozzle • 0.3 MPa. 150mm) [measured value]
Operating range	50 mm to 600 mm
HxWxDmm	L95xW50xH47mm
Weight	104 g (with standard nozzle mounted)
Air supply hose diameter	tube fitting Ø6mm
Operating fluid	Clean dry air (0.1MPa to 0.6Mpa). nitrogen N ² (0.1MPa to 0.6Mpa)
Air Consumption	210 ℓ/min (with standard nozzle mounted. at 0.3 Mpa)
Noise level	99.4 dBA (With standard nozzle mounted, at 0.3MPa)
Ozone production	0.05ppm or less (measured 50 mm)
Operating environment temperature and humidity	5~40°C/35~65% RH (with no dew condensation or freezing)
Accessories	Standard Nozzle (included with device), Power supply harness

High Voltage Transformer High voltage AC corona discharge	Ion balance within ± 10V	Decay time 1.0 sec or less	Directive CE
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Power supply DC 24V	Power supply: AIR / N ₂ max 0.6Mpa	AC adapter (Option)	Screw-type needle electrode	"ON" lamp
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ALARM H.V.	External grounding terminal
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HIGH POWER IONIZING NOZZLE

เครื่องทำลายไฟฟ้าสถิตแบบหัวฉีด

STATIC SOLUTIONS

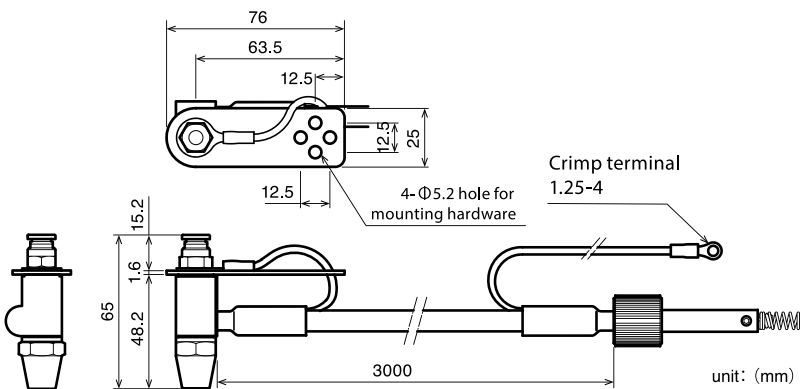
Made in Japan

VESSEL

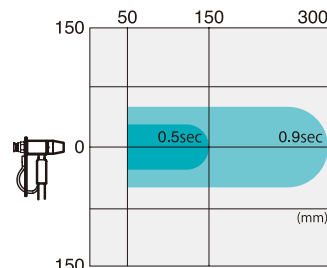
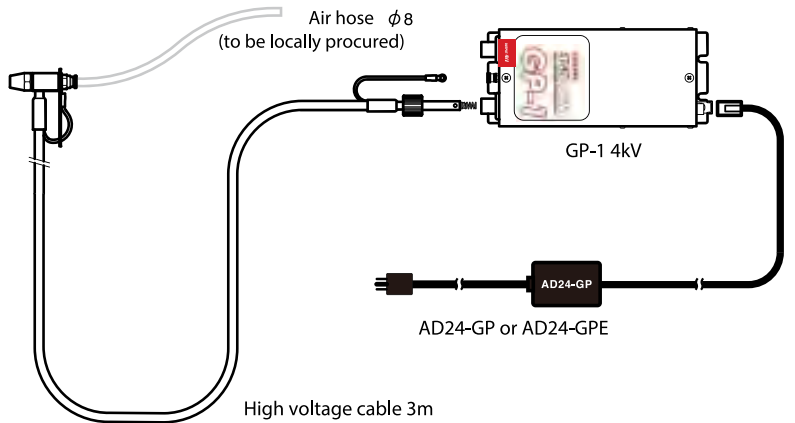


HPN-1

- เหมาะสำหรับงานกลุ่ม Automation และงานที่มีไฟฟ้าสถิตสูง
- หัวเข็มวัสดุไทเทเนียม (อีเล็กโทรด) ปลอ่ยประจุไอออนและทำลายไฟฟ้าสถิตได้อย่างรวดเร็ว และแม่นยำ
- สายไฟฟ้าแรงดันสูง ช่วยป้องกันสัญญาณรบกวนจากภายนอก และเพิ่มประสิทธิภาพการทำลายไฟฟ้าสถิตด้วยระบบแรงลมความเร็วสูง
- ตัวเครื่องมีน้ำหนักเบา และขนาดกะทัดรัด ช่วยต่อการติดตั้ง



Example of connection



High Voltage Transformer Piezoelectric high-frequency AC corona discharge (Option)	Ion balance Adjustable on the GP-1	Decay time 0.5 sec or less
Power supply AC 3.5kV	Air Pressure max 0.7Mpa	GP-1 Option
		AC adapter (Option)

Model No.	HPN-1
Applied High Voltage	High Voltage Power Supply Unit GP-1 4kV
Ionizing Method	AC corona discharge (Structure: Direct-coupled *1)
Applied Voltage / Frequency	3.5kV AC / 50/60Hz *2
Operating Fluid / Input Pressure	Clean air/max. input pressure of 0.7MPa *3
Operating Temp. / Humidity	0~45°C/10~90% RH (without freezing or dew condensation)
Storage Temp. / Humidity	-30~50°C/10~90% RH (without freezing or dew condensation)
Installation Distance	Approx. 50~300mm (between a charged product and a discharged tip of the ionizer)
Decay Time	Approx. 0.5 sec. (input air pressure: 0.3 Mpa. Distance: 150mm)
Ion Balance	Adjustable on GP-1 4kV *4
Installation Place	Indoor
Protective Circuit	High Voltage Power Supply GP-1 4kV has high voltage anomaly detection function and automatic stop circuit.
High Voltage Cable	3m (standard), silicon shielded cable *5 (high voltage connector CON-4)
Air Connection	One touch joint, outer dia.6mm tube applied
Weight	Approx. 350g. Including high pressure cable (3m), standard mounting hardware, and high pressure connector.
Noise	Approx. 95dBA (Air pressure: 0.3Mpa, Distance: 1m)
Air flow	Approx. 100L/min (Air pressure: 0.3Mpa)
Accessories	High voltage warning sticker, Instruction manual

HIGH POWER IONIZING FLEXIBLE NOZZLE

เครื่องทำลายไฟฟ้าสถิตแบบหัวฉีด

STATIC SOLUTIONS

VESSEL

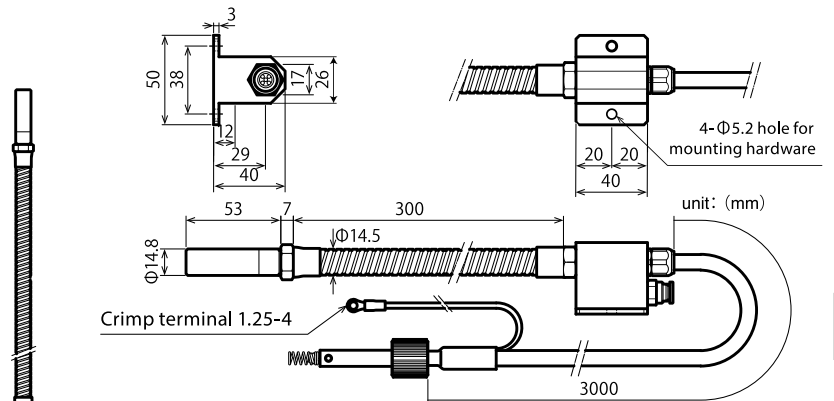
Made in Japan



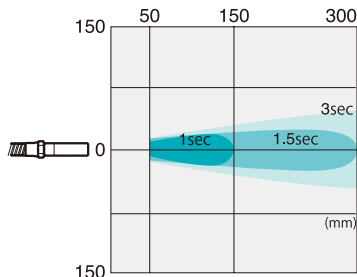
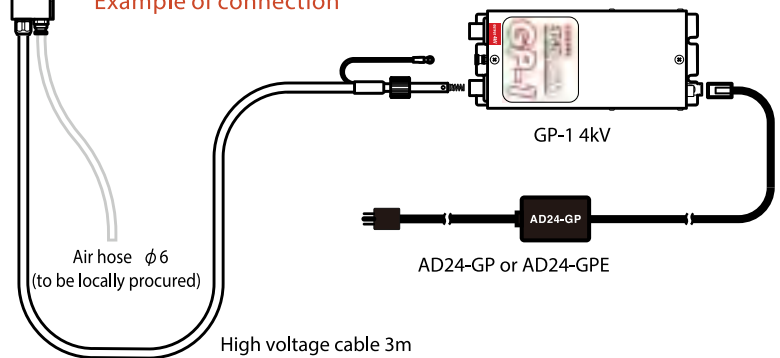
HPF-1



- เหมาะสำหรับงานที่มีไฟฟ้าสถิตสูง
- หัวเข็มวัสดุไทเทเนียม (อีเล็กโทรด) ปล่อยประจุไอออน ทำลายไฟฟ้าสถิตได้อย่างรวดเร็ว และแม่นยำ
- สายไฟฟ้าแรงดันสูง ช่วยป้องกันสัญญาณรบกวนจากภายนอก และเพิ่มประสิทธิภาพการทำลายไฟฟ้าสถิตด้วยระบบแรงลมความเร็วสูง
- สามารถปรับทิศทางการทำลายไฟฟ้าสถิตได้อย่างอิสระแบบในพื้นที่แคบและจำกัด
- ตัวเครื่องมีน้ำหนักเบา และขนาดกะทัดรัด ช่วยต่อการติดตั้ง



Example of connection



High Voltage Transformer Piezoelectric high-frequency AC corona discharge (Option)	Ion balance Adjustable on the GP-1	Decay time 0.5 sec or less
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Power supply AC 3.5kV	Air Pressure max 0.4Mpa	GP-1 Option	AC adapter (Option)
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Model No.	HPF-1
Applied High Voltage	High Voltage Power Supply Unit GP-1 4kV
Ionizing Method	AC corona discharge (Structure : Direct-coupled *1)
Applied Voltage / Frequency	3.5kV AC / 50/60Hz *2
Operating Fluid / Input Pressure	Clean air/max. input pressure of 0.4MPa *3
Operating Temp. / Humidity	0~45°C/10~90% RH (without freezing or dew condensation)
Installation Distance	Approx. 50-300mm (between a charged product and a discharge tip of the ionizer)
Decay Time	Approx. 1 sec. (input air pressure: 0.3 Mpa. Distance: 150mm)
Ion Balance	Adjustable on GP-1 4kV *4
Installation Place	Indoor
Protective Circuit	High Voltage Power Supply GP-1 4kV has high voltage anomaly detection function and automatic stop circuit.
High Voltage Cable	3m (standard), silicon shielded cable *5 (High voltage connector CON-4)
Air Connection	One touch joint, outer dia.6mm tube applied
Weight	Approx, 690g. Including high pressure cable (3m), standard mounting hardware, and high pressure connector.
Noise	Approx. 86 dBA (Air pressure: 0.3MPa, Distance: 1m)
Air flow	Approx. 100L/min (Air pressure:0.3 MPa)
Accessories	High voltage warning sticker, instruction manual

IONIZING GUN

ปืนทำลายไฟฟ้าสถิต

STATIC SOLUTIONS

Made in Japan

VESSEL



G-7R-E

High Voltage Transformer
Piezoelectric high-frequency AC corona discharge

Ion balance
within $\pm 10V$

Decay time
1.0 sec or less

Directive
CE

Power supply
DC 24V

Air Pressure
max 0.6Mpa

LED illumination

AC adapter
100~240V included

Screw-type needle electrode

"ON" lamp

ALARM H.V.

- มีโหมดไฟ LED สีขาว ช่วยให้มองเห็นฝุ่นบนชิ้นงาน
- ปลอดภัยจากไฟรั่ว หรือไฟฟ้าช็อต เนื่องจากสายไฟแรงสูงจะถูกซ่อนอยู่ภายใน

Model No.	G-7R-E
Ionizing method /Applied voltage	Piezoelectric high-frequency AC corona discharge/AC2kV
Power supply and current consumption	DC24V $\pm 5\%$ / 85mA (typ.)
Ion balance	within $\pm 10V$
Decay time	1.0 sec or less (standard nozzle *measured 150mm from device at 0.3 Mpa)
Operating distance	50 mm to 600 mm
HxWxDmm	L105xH150xD36mm
Weight	200g
Air supply hose diameter	tube fitting $\varnothing 6mm$
Operating fluid	Clean dry air (0.1MPa to 0.6MPa)
Air Consumption	200 ℓ /min (0.3MPa)
Noise level	92dBA (0.3Mpa)
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	5~40°C/35~65% RH (with no dew condensation or freezing)
Accessories	AC adapter AD24-ITC-E AC cable (1.8m) / Standard Nozzle (included with device)



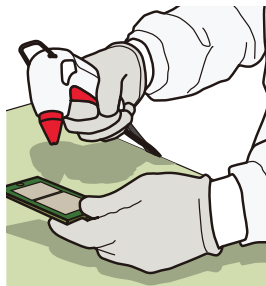
Attach a brush to blow out dust



Operating and malfunction alarm LEDs are provided on both sides of the grip



Dust removal from plastic trays



Dust removal from substrates



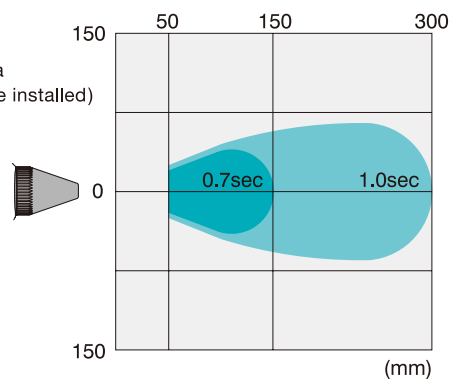
Dust and static-electricity removal from mobile phone parts



Dust and static-electricity removal from bumpers

Decay area

Air Pressure : 0.3MPa
(with Standard Nozzle installed)



IONIZING GUN

ปืนทำลายไฟฟ้าสถิต



G2-E

High Voltage Transformer Piezoelectric high-frequency AC corona discharge	Ion balance within ± 10V	Decay time 0.8 sec or less	Directive CE
Power supply DC 24V	Air Pressure max 0.6Mpa	AC adapter 100~240V included	Screw-type needle electrode
	"ON" lamp	ALARM H.V.	

Use the G2-E with cables upward (e.g. hanging from a tool balancer)



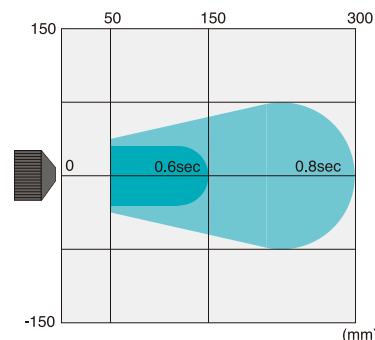
Use the G2-E with cables downward



※ Possible to fix the direction of the air hose and the power cable.

- ด้ามจับขนาดกะทัดรัด น้ำหนักเบา สามารถใช้งานได้อย่างต่อเนื่องโดยไม่เมื่อยล้า
- มีระบบสัญญาณไฟ LED แจ้งเตือนหากเครื่องทำงานผิดปกติ
- สามารถปรับเปลี่ยนรูปแบบหัวฉีดได้ เพื่อรองรับงานที่หลากหลาย
- สามารถเลือกปรับสายไฟไว้ด้านล่าง หรือด้านบนของตัวปืน ขึ้นอยู่กับการใช้งาน และสามารถใช้งานร่วมกับบาลานเซอร์

Model No.	G2-E
Ionizing method/Applied voltage	Piezoelectric high-frequency AC corona discharge / AC 4.5kV
Power supply and current consumption	DC24V ±5% / 100mA (typ.)
Ion balance	within ±10V (at 0.3 Mpa measured at 150mm)
Decay time	0.8 sec (measured at 150mm)
Operating distance	50 mm ~ 300 mm (Installation: Indoor, non-hazardous area)
HxWxDmm	L148mm x H57mm x W44mm
Weight	260g
Air supply hose diameter	ODØ6 mm x IDØ4 mm
Operating fluid	Clean dry air (0.1 MPa to 0.6MPa)
Air Consumption	153 ℓ/min (0.3MPa)
Noise level	94dBA (0.3MPa)
Ozone production	0.05ppm or less (measured 50 mm)
Operating environment temperature and humidity	5~40°C/35~65% RH (with no dew condensation or freezing)
Accessories	AC adapter AD24-ITCS-E, AC cable (1.8m), Standard nozzle (included with device)



PNEU-POWER ION GUN

ปืนทำลายไฟฟ้าสถิต โดยไม่ใช้ระบบไฟฟ้า

STATIC SOLUTIONS



Made in Japan

VESSEL



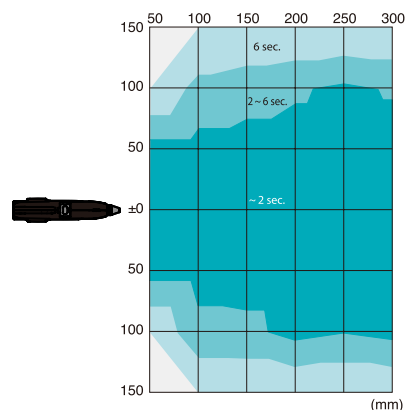
G-9

RoHS

High Voltage Transformer Coiled Transformer AC corona discharge	Ion balance within +/-30V	Decay time 1 sec. or less	Directive CE
Air Pressure max 0.6Mpa	Screw-type needle electrode	Adjustment lamp	Regulator

- นวัตกรรมอีกขั้นของปืนทำลายไฟฟ้าสถิต ที่ไม่มีสายไฟ ไม่ใช้ไฟฟ้าแต่ใช้เป็นระบบมอเตอร์ใบพัดหมุนเพื่อสร้างพลังงานไฟฟ้า
- เหมาะกับการทำลายไฟฟ้าสถิตในพื้นที่ขนาดใหญ่ เนื่องจากสามารถใช้แรงลมได้สูงถึง 6 bars

Model No.	G-9
Ionizing method/Applied voltage	AC corona discharge / AC8kV p-p
Ion balance	Within +/- 30 V
Decay time	1 second or less
Operating distance	50mm~300mm
Air speed	12.3m/s (0.5MPa, 200L/min, 150mm)
Air connection	Ø8mm with one-touch joint
Operating fluid	Clean dry air
Air consumption	200ℓ/min (0.5MPa)
HxWxD	191 x 233 x 51 mm (without protrusions)
Weight	470g
Noise	88dBA (0.5MPa)
Operating temperature and humidity	0~45°C/10~90% RH (no condensation or freezing)
Accessories	Instruction manual



HIGH POWER IONIZING GUN

ปืนทำลายไฟฟ้าสถิต



HPG-1



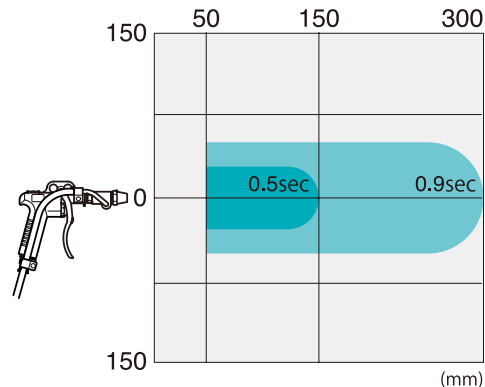
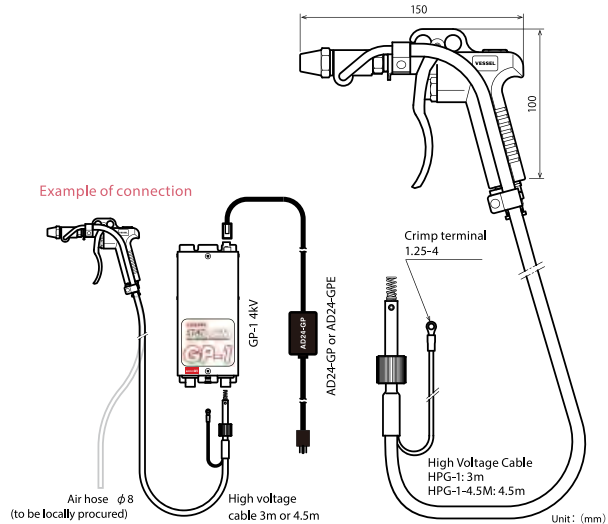
High Power Series

- High Voltage Transformer**
Piezoelectric high-frequency AC corona discharge (Option)
- Ion balance**
Adjustable on the GP-1
- Decay time**
0.5 sec or less
- Power supply**
AC 3.5kV
- Air Pressure**
max 0.7MPa
- GP-1 Option**
(Except HPG-1S)
- AC adapter Option**
(Except HPG-1S)



- สำหรับทำลายไฟฟ้าสถิตปริมาณสูง หรือกำจัดฝุ่นก่อนขั้นตอนเพนท์สี
- หัวเข็มเป็นวัสดุไทเทเนียม (อีเล็กโทรด) ปลดปล่อยประจุไอออนและทำลายไฟฟ้าสถิตได้อย่างรวดเร็วแม่นยำ
- โทปืนออกแบบมาให้มีความยาวพิเศษ สะดวกต่อการใช้งาน

Model No.	HPG-1
Applied High Voltage	High Voltage Power Supply Unit GP-1 4kV
Ionizing method	AC corona discharge (Structure : Direct-coupled *1)
Applied Voltage / Frequency	3.5kV AC / 50/60Hz *2
Operating Fluid / Input Pressure	Clean air/max, Input pressure of 0.7MPa *3
Operating Temp. / Humidity	0~45°C / 10~90% RH (without freezing or dew condensation)
Storage Temp. / Humidity	-30~50°C / 10~90% RH (without freezing or dew condensation)
Installation Distance	Approx. 50~300mm (between a charged product and a discharge tip of the ionizer)
Decay Time	Approx. 0.5 sec, (Input air pressure: 0.3Mpa, Distance: 150mm)
Ion Balance	Adjustable on GP-1 4kV *4
Installation Place	Indoor
Protective Circuit	High Voltage Power Supply GP-1 4kV has high voltage anomaly detection function and automatic stop circuit.
High Voltage Cable	3m (standard), silicon shielded cable *5 (high voltage connector CON-4)
Air Connection	One touch joint, outer dia.6mm tube applied
Weight	Approx. 550g including high voltage cable (3m) and high voltage connector
Noise	Approx. 95dBA (Air pressure: 0.3MPa, Distance: 1m)
Air flow	Approx. 100L / min (Air pressure :0.3MPa)
Accessories	High voltage warning sticker, Air consent, Instruction manual



AC PULSE IONIZING CLEAN BAR

บาร์ทำลายไฟฟ้าสถิต

STATIC SOLUTIONS

Made in Japan

VESSEL



C-SERIES

High Voltage Transformer
Pulse AC corona discharge

Ion balance
within ± 30 V (measured 1000mm)

Power supply
24VDC
 $\pm 5\%$

Air Pressure
max 0.3Mpa

LED Display

Electrode
needle unit
replacement

Adjustable
Ion
Balance

Needle
Cleaning Timer
(1 to 60 days)**

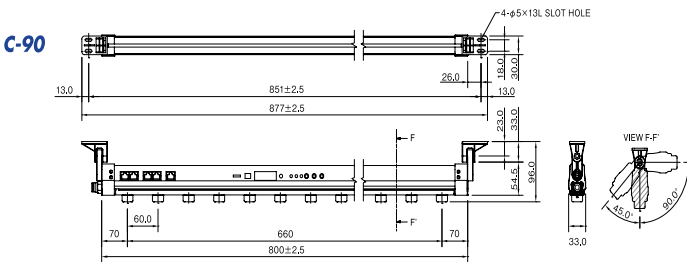
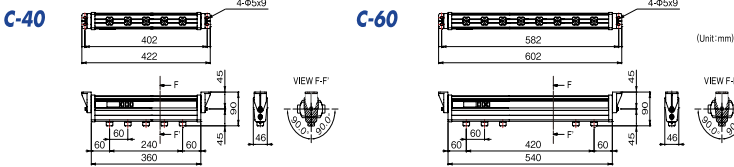
** Except C-40, C-60

ALARM
H.V.

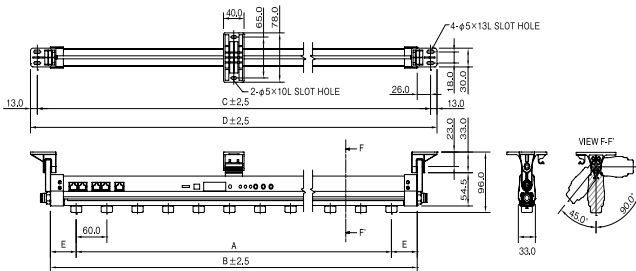
External
output
LAN Terminal

- มีโหมดปรับสมดุลไอออนอัตโนมัติ (ระยะทางเป้าหมาย: 50 - 100 มม.)
ช่วยเพิ่มประสิทธิภาพในการทำลายไฟฟ้าสถิต

Model No.	C-40~C-300
Ionizing method / Applied voltage	Pulse AC Corona discharge / AC8~12.5kV (p-p)
Frequency	0.1 to 50Hz (Select form ten steps)
Pulse ratio	Positive ion 40 to 70%, negative ion 60 to 30%
Power Supply and current consumption	DC24V $\pm 5\%$ /600mA (max.)
Ion balance	within ± 30 V (Distance 1000mm)
Decay time	See below
Operating distance	50 to 2000mm
HxWxDmm	Refer to the table on the left
Weight	Refer to the table on the left
Air supply hose diameter	PT1/8
Operating fluid	Clean dry air or nitrogen (N ²) (0.3MPa or less)
Ozone production	0.05ppm or less (measured 50 mm)
Operating environment temperature and humidity	0~50°C / 35~85% RH (with no dew condensation or freezing)
Accessories	Remote controller (except C-40/60) / Interface cable (C-40/60 only) / Power cable (5m) / End bracket (included with device) / Middle bracket (included with device) (except C-40/60/90)

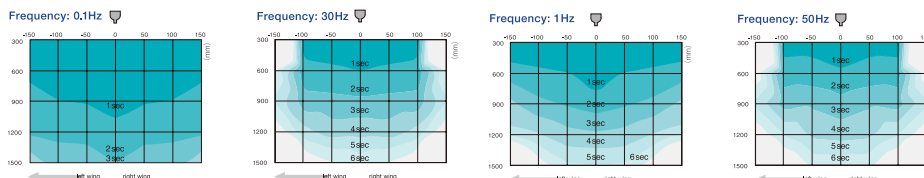
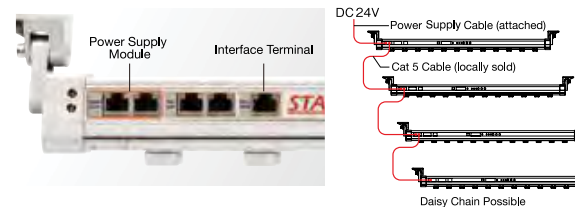


C-100, 120, 150, 170, 200, 220, 250, 270, 300



Voltage Level	1	2	3	4	5	6	7	8	9	10
Positive Voltage (kV)	4	4.25	4.5	4.75	5	5.25	5.5	5.75	6	6.25
Negative Voltage (kV)	4	4.25	4.5	4.75	5	5.25	5.5	5.75	6	6.25
kV p-p	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5

Dimension / Needle Electrode / Middle Bracket								
Model No.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Needle Electrode	Middle Bracket	Weight (kg)
C-40	240	360	402	422	60	5 pcs	-	0.78
C-60	420	540	582	602	60	8 pcs	-	1.08
C-90	660	800	851	877	70	12 pcs	-	0.9
C-100	900	1001	1052	1078	50.5	16 pcs	1 pc	1.0
C-120	1140	1241	1292	1318	50.5	20 pcs	1 pc	1.2
C-150	1380	1481	1532	1558	50.5	24 pcs	1 pc	1.4
C-170	1620	1721	1772	1798	50.5	28 pcs	2 pcs	1.6
C-200	1860	1961	2012	2038	50.5	32 pcs	2 pcs	1.8
C-220	2100	2201	2252	2278	50.5	36 pcs	2 pcs	2.3
C-250	2340	2441	2492	2518	50.5	40 pcs	3 pcs	2.6
C-270	2580	2681	2732	2758	50.5	44 pcs	3 pcs	2.8
C-300	2820	2921	2972	2998	50.5	48 pcs	3 pcs	3.1



ION PARTS CLEANER IPC CLEAN

บาร์ทำลายไฟฟ้าสถิต



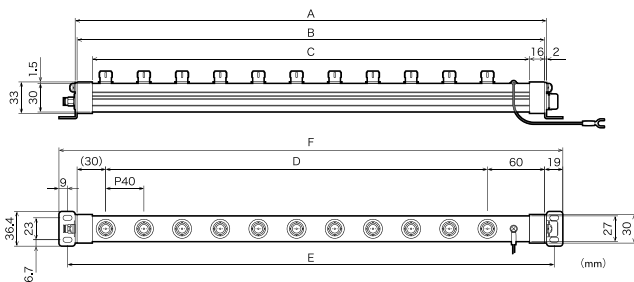
SL- SERIES

High Voltage Transformer AC corona discharge	Ion balance within +/-50V (measured 1000mm)	Decay time 1 sec or less (measured 1000mm)
Power supply No.GP-1 4kV	Air Pressure max. 0.36Mpa	



- ตัวเครื่องออกแบบมาให้มีขนาดกะทัดรัด เพื่อให้ง่ายต่อการติดตั้ง
- สะดวกในการทำความสะดวก และเปลี่ยนหัวเข็ม
- สายไฟฟ้าแรงดันสูงสามารถถอดเปลี่ยนได้
- อุปกรณ์ยึดจับสามารถหมุนปรับทิศทางได้อย่างอิสระ ช่วยรองรับการใช้งานที่หลากหลาย
- ควบคุมการทำงานผ่านเครื่อง GP-1

model	SL-30 / SL-50 / SL-120 / SL-150 / SL-180
Ionizing method Applied Volage	AC corona discharge / 4kV
Power Supply	High Voltage Power Supply No.GP-1 4kV (Option)
Ion Balance	Within ±50V (measured at 1,000mm, at air pressure 0.3 MPa)
Decay Time	1 second or less (measured at 300mm, at air pressure 0.3MPa)
Operating Distance	50~2000mm
Ozone production	0.05ppm or less (measured at 50mm from the discharge needle)
Air Connection	PT1/8, with one-touch joint
Air hose	SL-80 or smaller: Hose O.D. 6mm x I.D.4 mm SL-120 or larger: Hose O.D. 8mm x I.D. 6mm
Operating Fluid	Clean dry air or Nitrogen gas (0.3Mpa or less)
Operating Environment	5~50°C / 35~85% RH (without freezing or dew condensation)
Accessories	Ground wire, Instruction manual



Dimension / Needle Electrodes								
Model No.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Needle Electrode	Weight (kg)
SL-20	174	170	138	80	190	208	3 pcs	0.2
SL-30	334	330	298	240	350	368	7 pcs	0.3
SL-50	494	490	458	400	510	528	11 pcs	0.7
SL-80	814	810	778	720	830	848	19 pcs	0.9
SL-120	1,134	1,130	1,098	1,040	1,150	1,168	27 pcs	1.1
SL-150	1,454	1,450	1,418	1,360	1,470	1,488	35 pcs	2.0
SL-180	1,774	1,770	1,738	1,680	1,790	1,808	43 pcs	2.2



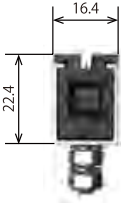
HIGH POWER IONIZING BAR

บาร์ทำลายไฟฟ้าสถิต

STATIC SOLUTIONS

Made in Japan

VESSEL



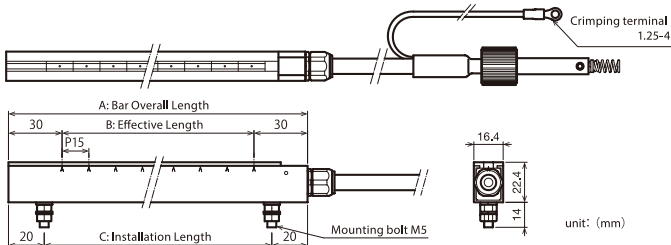
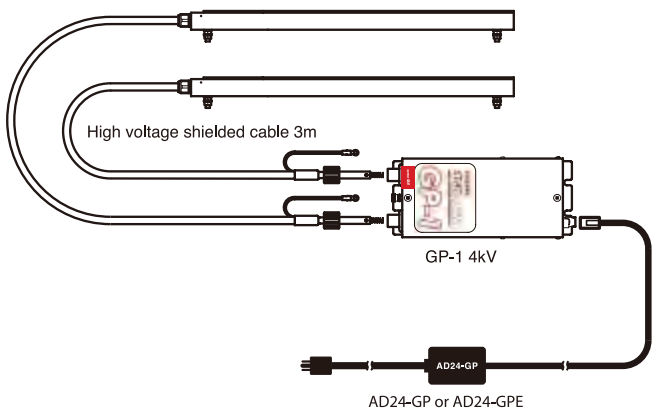
- หัวเข็มวัสดุไทเทเนียม (อิเล็กทรอนิกส์) ปล่อยประจุไอออนและทำลายไฟฟ้าสถิตได้อย่างรวดเร็ว แม่นยำ
- หัวเข็มติดตั้งในระยะทุก ๆ 15 มม. จึงทำให้สามารถปล่อยประจุไอออนได้อย่างมีประสิทธิภาพ เหมาะสำหรับงานที่ต้องการทำลายไฟฟ้าสถิตอย่างรวดเร็ว เช่น ผู้ผลิตถุงพลาสติก ผู้ผลิตม้วนฟิล์มพลาสติก เป็นต้น
- สายไฟฟ้าแรงดันสูง ช่วยป้องกันสัญญาณรบกวนจากภายนอก และเพิ่มประสิทธิภาพการทำลายไฟฟ้าสถิตด้วยระบบแรงลมความเร็วสูง
- ตัวเครื่องบางเพียง: 16.4x22.4 มม. เหมาะสำหรับพื้นที่แคบ หรือพื้นที่จำกัด

HPB SERIES

High Voltage Transformer Piezoelectric high-frequency AC corona discharge (Option)	Ion balance Adjustable on the GP-1	Decay time 2 sec or less
Power supply AC 3.5kV	GP-1 Option	AC adapter Option



Example of connection



HPB-series	
Model No.	HPB-300/600/810/1005/1200/1500/1800
Applied High Voltage	High Voltage Power Supply Unit GP-1 4kV
Ionizing Method	AC corona discharge (Structure: Direct-coupled *1)
Applied Voltage / Frequency	AC 3.5kV /50/60Hz *2
Operating Temp. / Humidity	0~45°C/10~85% RH (without freezing or dew condensation)
Storage Temp. / Humidity	0~50°C/10~85% RH (without freezing or dew condensation)
Installation Distance	Approx. 50~100mm (between a charged product and a discharge tip of the ionizer)
Decay Time	Approx. 2 secs. (No compressed air, distance: 100mm)
Ion Balance	Adjustable on GP-1 4kV *4
Installation Place	Indoor
Protective Circuit	High Voltage Power Supply GP-1 4kV has high voltage anomaly detection function and automatic stop circuit.
High Voltage Cable	3m (standard), Silicon shielded cable *5 (High voltage connector CON-4)
Weight	Approx. 540g/m, not including high voltage cable
Accessories	Instruction manual, high voltage cable (already mounted), Mounting bolt M5 (already mounted)

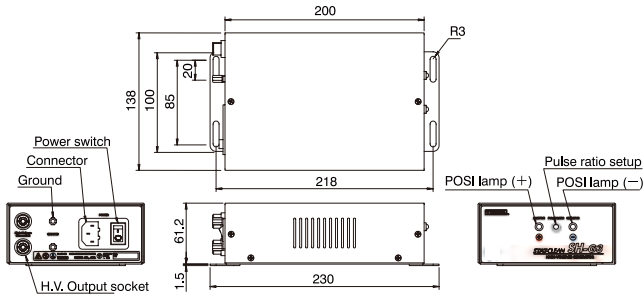
Dimensions / No. of Needle Electrode					
Model No.	A (mm)	B (mm)	C (mm)	Discharge Needle	Weight (kg)
HPB-300	300	240	260	17	0.16
HPB-600	390	540	560	37	0.32
HPB-810	810	750	770	51	0.44
HPB-1005	1005	945	965	64	0.54
HPB-1200	1200	1140	1160	77	0.65
HPB-1500	1500	1440	1460	97	0.81
HPB-1800	1800	1740	1760	117	0.97

POWER SUPPLY UNITS SUPPORTING 100 TO 240 VAC



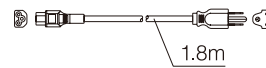
SH-G3

Model No.	SH-G3
Ionizing method/Applied voltage	AC corona discharge / AC 5kV
Power supply	100~240V AC $\pm 5\%$
H x W x D	61 x 138 x 200 mm (without protrusions)
Weight	1.5 kg

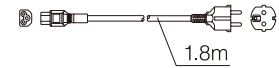


AC power cable

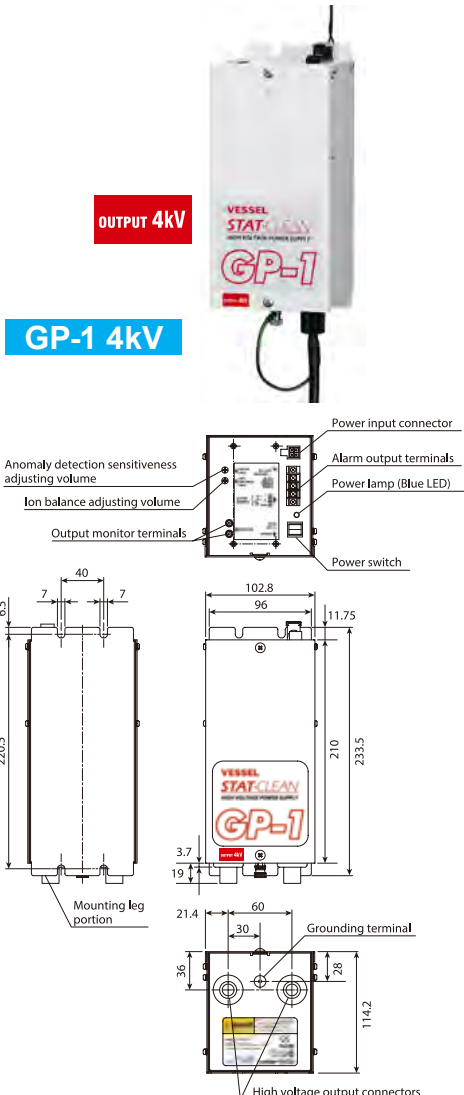
For 100VAC



For 200VAC



HIGH VOLTAGE POWER SUPPLY UNIT



Model	GP-1 4kV
Operating Temp. / Humidity	0~50°C/10~90% RH (without freezing or dew condensation)
Storage Temp. / Humidity	-30~70°C/10~95% RH (without freezing or dew condensation)
Installation Place	Indoors
Rated Input Voltage	24V DC $\pm 10\%$
Variable Output Range Without Load (rms)	AC output 4kV DC output -150 to +550V
Secondary Short Circuit Current	5 mA or lower
Output Monitor	1/1000V $\pm 5\%$ of the output voltage is emit to the monitor terminals.
Low-voltage Detection	Anomaly detection function will operate when each output drops to about 85% or less of the set voltage due to high voltage short circuit or abnormal sparks.
Overcurrent Detection	Anomaly detection function will operate when the output current is about 4mA or more
Anomaly Detection	The anomaly detection response speed can be adjusted (using external adjustment knob)
Sensitivity Adjustment	
Power Supply Input	Molex 5569-04A1-210
High Voltage Output Connector	Ceramic high voltage output terminal x2
Alarm Output Terminal	C Contact relay output
Switches And Displays	On-off rocker switches. Blue LED power indicator lamp (goes off when anomaly is detected)
Material	Housing SPCC, painted white
Size	W102.8xD233.5xH114.2mm
Weight	Approx. 4.5 kg



ION PARTS CLEANER

ตู้ทำลายไฟฟ้าสถิต

STATIC SOLUTIONS

Made in Japan

VESSEL



IPC-A4

Sensor Diffused reflection type	Air blow Continuous/pulse blow selection	Decay time 1 to 30 seconds (5 steps)
Power supply DC 24V	Air Pressure max 0.6Mpa	Ionizer N-3x1 pc
AC adapter 100~240V included	Regulator Built-in	Self-adhesive polyurethane gel sheets and non-woven fabric filter
Integrated hood/dust collector		



Self Adhesive GEL collects Dust

- ประหยัดพลังงาน โดยการดับจันฝุ่นด้วยแผ่นเจลแทนการใช้ไฟฟ้า
- สามารถเลือกการทำงานของหัวฉีดพ่นลมแบบต่อเนื่อง หรือเป็นจังหวะได้

Model No.	IPC-A4
Ionizing method/Applied voltage	Piezoelectric high frequency AC corona discharge / 5.6kVAC (p-p)
Power supply	DC24V±5%
Current consumption	700mA or less
Dust collection airflow	3.5m³/min (Built-in fan)
Static pressure	105Pa (Built-in fan)
Dust collection filter	Self-adhesive polyurethane gel sheets and non-woven fabric filter
HxWxDmm	H361xW314xD253mm
Weight	6kg
Air supply hose diameter	Tube fitting 8mm
Operating fluid	Clean dry air (0.1 to 0.6MPa)
Air Consumption	147ℓ/min (0.3MPa, Continuous mode)
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	5~40°C/35~65% RH (with no dew condensation or freezing)
Accessories	AC adapter, Adhesive gel sheet plate (included with device) x 2pcs

ION PARTS CLEANER

ตู้ทำลายไฟฟ้าสถิต



IPC-A3

Sensor Diffused reflection type	Air blow Continuous/pulse blow selection	Decay time 1 to 30 seconds (5 steps)
Power supply DC 24V	Air Pressure max 0.5Mpa	Ionizer N-3x1 pc
AC adapter 100~240V included	Regulator Built-in	Self-adhesive polyurethane gel sheets and paper pack filter
Integrated hood/dust collector		



Regulator Built-in

Filter to Duct Relaceable

- ประหยัดพลังงานโดยการดับจันฝุ่นด้วยแผ่นเจลแทนการใช้ไฟฟ้า
- สามารถติดตั้งชุดแผ่นกรองเข้ากับท่อบริเวณท้ายเครื่องเพื่อช่วยดับจันฝุ่น

Model No.	IPC-A3
Ionizing method/Applied voltage	Piezoelectric high frequency AC corona discharge / 5.6kVAC (p-p)
Power supply	DC24V ±5%
Current consumption	900mA or less
Dust collection airflow	1.13m³/min (Built-in fan)
Static pressure	460Pa (Built-in fan)
Dust collection filter	Self-adhesive polyurethane gel sheets and paper pack filter
HxWxDmm	H411xW420xD300mm
Weight	9.5kg
Air supply hose diameter	Tube fitting 10mm
Operating fluid	Clean dry air (0.1 to 0.6MPa)
Air Consumption	315ℓ/min (0.3MPa, Continuous mode)
Ozone production	0.05ppm or less (measured 50mm)
Operating environment temperature and humidity	5~40°C/35~65% RH (with no dew condensation or freezing)
Accessories	AC adapter, Adhesive gel sheet plate (included with device) x 2pcs, Duct flange (for Ø75mm) Paper pack filter (6pcs)

ION PARTS CLEANER IPC CLEAN

ตู้ทำลายไฟฟ้าสถิต



IPC-250CR



Air blow
Continuous

- Power supply 24V DC
- DC type Ionizer
- AC adapter 100-240V (Option)
- Airblow port
- Air volume regulator built-in
- HEPA filter

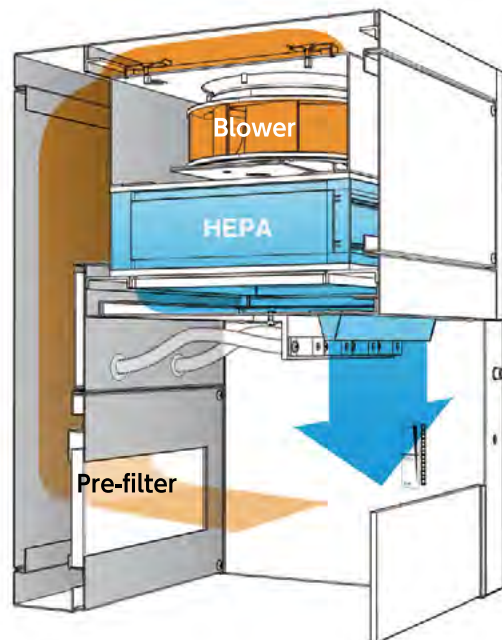
The generated ions are blown off downward with the air through the wide air discharge port.



- มีระบบกรองอากาศ HEPA Filter เพื่ออากาศที่สะอาด ปราศจากฝุ่นละออง
- สามารถปรับระดับแรงลมตามการใช้งาน
- มีระบบหมุนเวียนอากาศภายใน

Model No.	IPC-250CR
Ionizing method/Applied voltage	DC corona discharge / +6kV, -3 to -7kV
Power supply	24V DC ± 5%
Current consumption	4.5 A max. (excluding inrush)
Air flow	Max. 14m ³ /min No internal filter clogging, output value of the blower
Wind speed	Max. 25m/sec. (No clogging of built-in filter, output value of the blower)
Dust collection method	Built-in pre-filter and HEPA filter (two-stage)
HxWxD	515 x 350 x 345 mm (without protrusions)
Weight	22 kg
Noise	74 dBA (Maximum air flow, no clogging of built-in filter of deterioration of blower)
Operating temperature and humidity	+5 to +40°C 35 to 65% RH (no condensation or freezing)
Accessories	Caution label sticker / Instruction manual

Air circulation type, with no exhausted air.



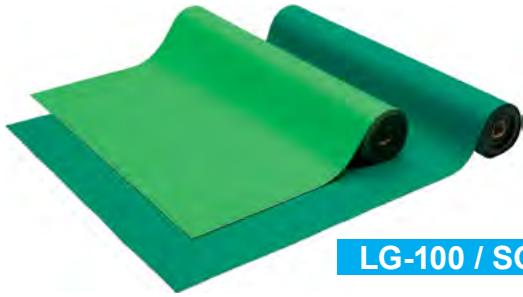
EPA WORKING MAT

แผ่นรองกันไฟฟ้าสถิต

STATIC SOLUTIONS

Made in Japan

VESSEL



LG-100 / SG-100

RoHS



SG-100 EDP No. 621461

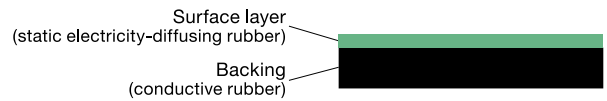


Applications Work benches	Conductivity $10^6 \leq R \leq 10^7 \Omega$	Material NBR+SBR	Material EPA RoHS
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- ช่วยถ่ายเทไฟฟ้าสถิตได้อย่างมีประสิทธิภาพ
- สามารถทนความร้อนที่เกิดจากงานเชื่อมแพ่งวงจรได้ดี
- พื้นผิวด้าน ช่วยลดแสงสะท้อนเข้าดวงตา

Common Specifications	
Model No.	SG-100
Color	Green
Size	W1.0m x L10m x t2.0mm
Conductivity	$10^6 \leq R \leq 10^7 \Omega$
Weight	29kg/roll
Material	NBR+SBR

Structure



WRIST STRAP

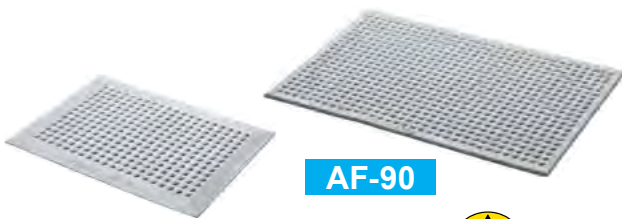
EPS-05



Model No.	EPS-05
Weight (g)	38 per piece, including alligator clip
Band length (mm)	Approx. 190
Cord length (m)	Max. 2.5 (0.72 when shrunken)
Resistance(Ω)	Approx. 1M between the body and the ground cord
Contents	Wrist strap, Ground cord Alligator clip, Instruction manual

CONDUCTIVE ANTI-FATIGUE MAT

แผ่นยางกันเมื่อยป้องกันไฟฟ้าสถิต



AF-45

AF-90



RoHS

Applications Cell production, line work assembly process	Conductivity $R \leq 1.0 \times 10^9 \Omega$	Material NBR	Directive EPA RoHS
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- ช่วยลดความเมื่อยล้าจากการยืนเป็นเวลานาน
- ผู้ใช้งานจึงสามารถยืนทำงานได้ต่อเนื่องโดยไม่เมื่อยล้า
- เสื่อสีเทาอ่อน ช่วยต่อการตรวจจับสิ่งสกปรกที่ติดอยู่บนเสื่อ
- ขอบเสื่อลาดเอียงป้องกันการเดินสะดุด

Model No.	AF-90	AF-45
Size	W900mm x L600mm x t15mm	W600mm x L447mm x t15mm
Color	Gray	Gray
Conductivity	$R \leq 1.0 \times 10^9 \Omega$	$R \leq 1.0 \times 10^9 \Omega$
Weight	4.2kg	2.0kg
Material	NBR	NBR



Comfortable and which make you feel like jumping up



Air pocket on the reverse side spread the body weight to alleviate fatigue.



SURFACE RESISTANCE CHECKER

เครื่องวัดความต้านทานไฟฟ้าบนพื้นผิว หรือแผ่นรองกันไฟฟ้าสถิต

- ใช้สำหรับวัดความต้านทานไฟฟ้าบนพื้นผิว เสื้อ ใต้อ หรือเก้าอี้
- สามารถวัดอุณหภูมิ และความชื้นไปพร้อมกัน



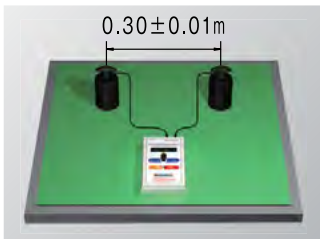
SRC-01

Measurement

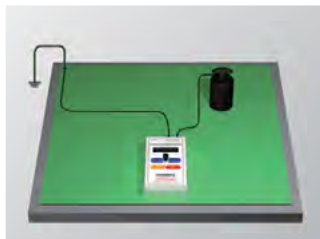
4 types

- One 9V battery
- With probes
- With a carrying case
- Auto-off

4 types of measurement



Resistance between 2 points on a surface



Resistance between a ground and a connecting point by a probe on a surface



Surface resistivity



Volume resistance

With a carrying case

Useful to carry all necessary items for measurement



SRC-01	
Conformity standards	IEC61340-4-1, JIS-C2170
Measurement range	10 ³ ~ 10 ¹² Ω (Ω / sq)
Applied voltage	10V (R < 1.0 x 10 ⁶ Ω or Ω / sq), 100V (R ≥ 1.0 x 10 ⁶ Ω or Ω / sq)
Display	Triple-digit LCD (□□□e□□) ex.: 3.14 e10 → 3.14 x 10 ¹⁰
Power source	9 V battery x 1 (Type: 006P, recommended alkaline battery)
L x W x Dmm	L190 x W101.5 x D54.7mm
Weight	Body: around 340 g (including a battery); gross weight: around 6.2 kg (including the carrying case)
Operating temperature and humidity	0°C~37°C 10%~90% RH
Material	Body case: ABS resin
Accessories	Probe (outer diameter: about Ø66 mm, about 2.3 kg) : 2 Curled cord for a body earth (banana plugs at both ends) : 1 Curled cord for measurement for the point-to-point resistance and resistance to ground (banana plug/mono plug) : 2 Crocodile clip : 1, Large crocodile clip : 1, Stainless plate (142mm x 67mm) : 1 Carrying case : 1, 9 V battery (006P type: manganese dry battery) : 1 Manuals



ELECTROSTATIC FIELD METER

เครื่องวัดค่าไฟฟ้าสถิต

STATIC SOLUTIONS

Made in Japan

VESSEL



EYE-02

- กำหนดระยะการวัดได้ง่ายด้วยเครื่องหมาย (+) LED
- หน้าจอ LCD ที่มีความสว่างในตัว จึงง่ายต่อการอ่านค่าไฟฟ้าสถิตแม้อยู่ในที่มืด
- สามารถติดตั้งบนขาตั้งเข้ากับเครื่องวัดได้

Measurement Charge potential	Measurement Ion balance	LCD display Bar graph+3digits	Directive CE RoHS
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One 9V battery	ion balance measurement plate	Measuring distance 25 mm	Auto power off	Out of measuring range alarm	Peak hold function
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Battery level display	Anti-Drop strap
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Model No.	EYE-02
Charge potential measurement	±0 to ±1.50 kV (LO range) / ±1.0 to ±20.0 kV (HI range)
Ion balance measurement	0 to ± 200V
Response time	within 1 sec
Accuracy	± 10%
Power	One 9V battery (006P)
Charge potential Measurement distance	25mm±0.5mm
LxWxDmm	L123xW70xD25mm
Weight	170g / ion balance measurement plate 30g
Operating environment temperature and humidity	10°C to 50°C / 80% RH or less
Accessories	Ion balance measurement plate, Grounding cord, alligator clip, Soft case



Charged Potential Measurement
Check anywhere with this handy tester.

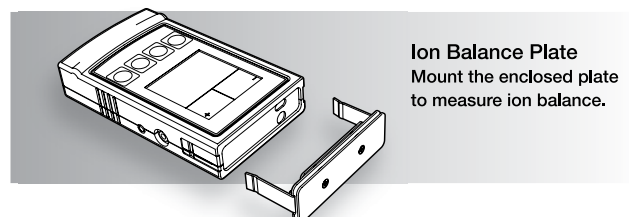
Wide Display
The measured potential is displayed with a bar graph and values for quick confirmation

Red Cross-mark
Guide for 25mm measurement distance.

NG (Too Far) GOOD NG (Too Close)



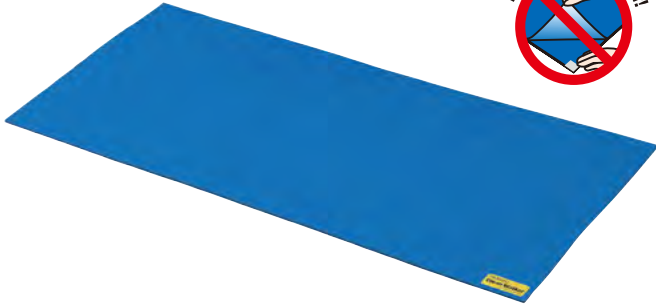
Ion Balance Measurement
Can check the performance of the ionizer in a cell production table or the one installed in an in-line equipment.



Ion Balance Plate
Mount the enclosed plate to measure ion balance.

CLEAN WALKER

แผ่นยางปูพื้นดักฝุ่น



CW-900B

Applications
For indoor use
(especially in front of clean rooms)

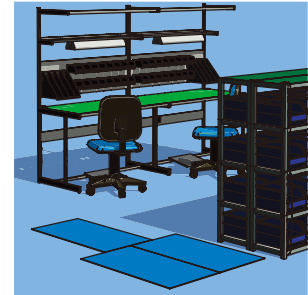
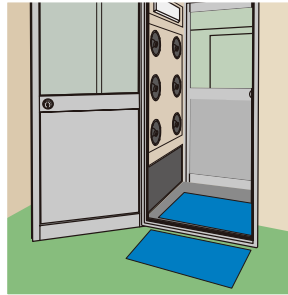
Material
Polyurethane

Washable
✓

Directive
EPA RoHS

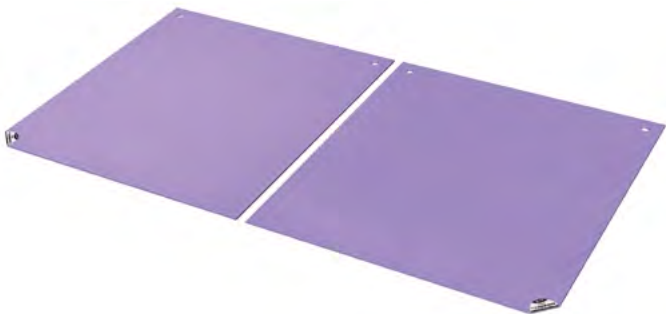
- แผ่นยางดักจับฝุ่นมีความหนา 5 มม.
- ทำหน้าที่ดักจับฝุ่น และสิ่งสกปรกบนพื้นผิวรองเท้าก่อนเข้าพื้นที่ควบคุม
- สามารถเช็ดล้างทำความสะอาดได้ง่าย

Model No.	CW-900B
Color	Blue
Size	W900mm x L500mm x t5mm
Conductivity	Insulator
Weight	2.4 kg
Material	Polyurethane



CLEAN WALKER EASY

แผ่นยางปูพื้นดักฝุ่น



CW-900EZ

Applications
For indoor use
(especially in front of clean rooms)

Material
Polyurethane,
non-woven textiles

Washable
✓

Directive
EPA RoHS

- แผ่นยางผลิตจากโพลียูรีเทน เรียงซ้อนประกบกันหนา 3 มม. เพื่อความแข็งแรง
- ทนทานต่อการใช้งานไม่ฉีกขาดง่ายแม้เจอแรงกดทับจากรถเข็นสินค้า
- ล้างทำความสะอาดได้ด้วยน้ำ และตากให้แห้ง

Model No.	CW-900EZ
Color	Light purple
Size	W450mm x L500mm x t3mm
Conductivity	Insulator
Weight	1.6 kg (2 pieces)
Material	Polyurethane, non-woven textiles

