



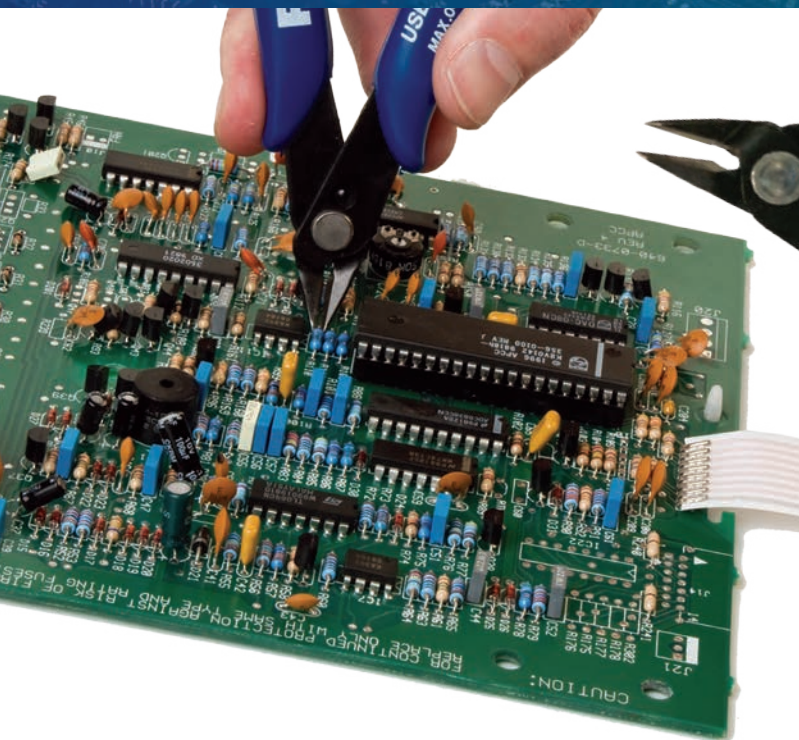
PRODUCT CATALOG

LEAD CUTTERS | SOLDERING TIPS | SOLDERING ACCESSORIES | SPONGES

V1.0

www.platoproducts.com

LEAD CUTTERS



Our best-selling cutter!

170 • 175

PLATOSHEAR

GENERAL PURPOSE LEAD CUTTER

Precise, reliable cutting action at an economical price. Thin profile handle and light weight design is ideal for smaller hands.

- Cut up to 18 AWG copper wire (.04"/1mm)
- Economical, disposable cutter
- Thin blade profile for trimming in tight areas
- Ergonomic handle design
- Spring-back action

170 1 cutter, 10/case

175 1 cutter w/safety guard, 10/case



LEAD CUTTERS

Plato cutters give you the precision of a high-end tool, but at a disposable cutter price. Assemblers love the effortless shearing action, comfort, and safety. Plato cutters use the shear cutting method, which requires 50% less operator effort and extends cutting life.

The thin profile design is perfect for hard-to-reach areas in electronic assembly. Handles are cushioned for comfort all day, and automatically spring back to their original position after each use.

OPTIONAL SAFETY GUARD

175 cutter comes with a lead catcher, which holds onto a trimmed lead until the shear is opened. This prevents leads from flying off, which can cause eye injury or contaminate the assembly.

Safety Guard



170S

PLATOSHEAR S

HEAVY GAUGE LEAD CUTTER

Blades designed for higher gauge leads and wire, and for greater durability.

- Cut up to 15 AWG copper wire (.06"/1.5mm)
- Long-life blade design
- Ergonomic handle design
- Spring-back action

170S 1 cutter,
10/case



Cuts 50% thicker leads!

170SD

PLATO SHEAR

STATIC DISSIPATIVE LEAD CUTTER 

Permanently static dissipative grips meet DODSTD-1686 and MIL-B-81705, type 2.

- Cut up to 18 AWG copper wire (.04"/1mm)
- Thin blade profile for trimming in tight areas
- ESD safe handle
- Spring-back action

170SD 1 cutter, 10/case



170LX — ADVANCED DESIGN FOR DAY-LONG COMFORT



- Comfortable, Ergonomic design
- ESD safe to protect sensitive components
- Responsive spring-back action for quick, comfortable cutting of multiple leads
- Thin profile design to reach tight areas in electronics assembly

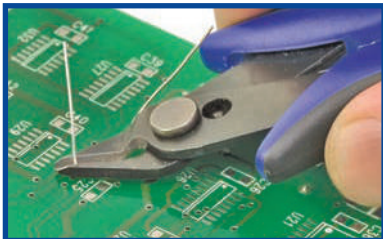


170LX

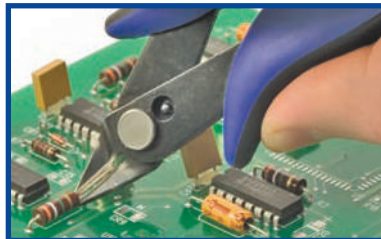
LEAD CUTTER

ERGONOMIC, ESD SAFE LEAD CUTTER

The 170LX is a remarkable advancement in cutter design. Carefully crafted precision cutting blades combine seamlessly with curved, palm shaped handles to deliver effortless lead cutting and user comfort.



Shearing action of blades produces a clean precise cut with less effort.



170LX is ESD safe to protect components from static discharge.



Comfortable grip reduces operator fatigue and increases productivity.

1755

PLATO BIG SHEAR

HEAVY DUTY CUTTER

Cuts round and flat cable, co-ax, nickel, Kovar and other wire with a clean shearing cut that reduces cable cut-end distortion. Lightweight design significantly reduces operator fatigue.

- For heavy gauge wire
- Cushioned rubber handles
- Spring-back action

1755 1 cutter, 10/case



BOTTLES & SOLDERING ACCESSORIES

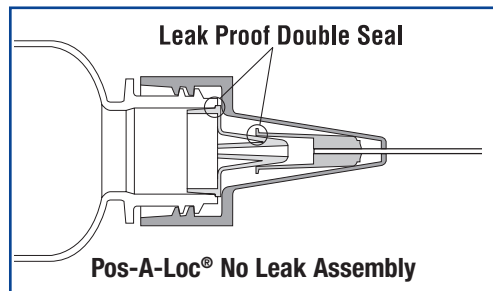


FD-2 • FD-21 • SD-01 • SD-02 NEEDLE FLUX DISPENSERS

Needle bottles are ideal for precisely controlled flux applications. Two different needle sizes are available: 0.25mm for low viscosity no-clean and aqueous fluxes, and 0.50mm for higher viscosity rosin-based fluxes.

Each bottle is available in standard plastic or with optional ESD-safe cover. Plato ESD-safe bottles are surrounded by permanently static dissipative sleeves that stay out of contact with flux and other liquids. This prevents conductive "hot spots" on the surface of the bottle.

- Dispense precise amount of flux without dripping, spilling, or waste
- Unique, no leak design



ESD-Safe Bottles:

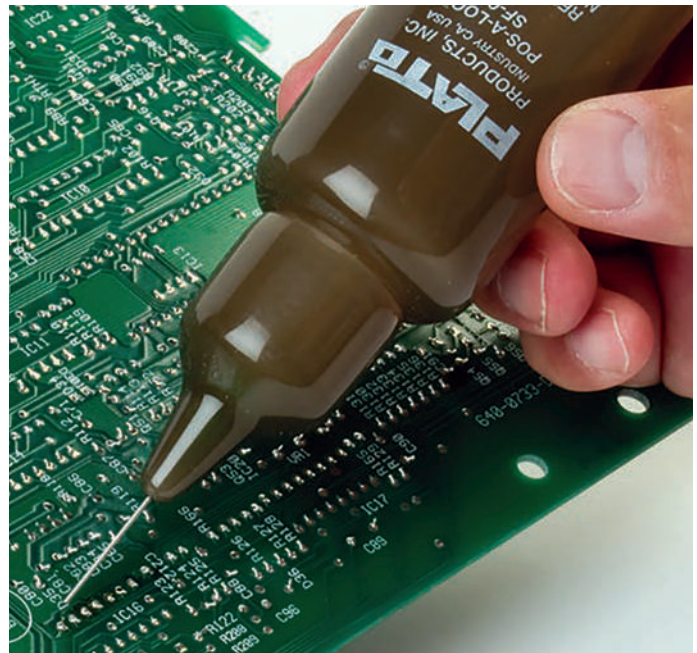
- Protects voltage sensitive devices from static discharge
- Meets ANSI J-STD-001B
- Meets the requirements of DOD-STD-1686 for containers
- Physical characteristics comply with MIL-B-81705, Type 2

0.25mm needle for No-Clean & Aqueous Fluxes

FD-21 1 bottle
SF-01 1 bottle, ESD-safe

0.50mm needle for Rosin-based Fluxes

FD-2 1 bottle
SF-02 1 bottle, ESD-safe



CS-50 BRASS WATERLESS TIP CLEANER



- Works with all popular soldering stations
- Cleans quickly without water
- Eliminates thermal shock of wet sponge

CS-50 1 Brass Tip Cleaner pad (25g), 6 pads/bag

Holder not included.

TT-95 TIP TINNER/TIP CLEANER

Plato's Tip Cleaner provides fast, efficient cleaning and re-tinning of highly oxidized soldering iron tips. This thermally-stable compound is lead-free, environmentally safe, and in an ESD-safe container. Tip Cleaner brings oxidized tips back to life, which improves soldering speed. Roll a hot soldering tip in the Tip Cleaner for a few seconds until the bright tinning surrounds the end of the tip.

- Extends tip life
- Lead-free
- Easy to use

TT-95 1 – 20g container, 10 per case





REPLACEMENT SPONGES

Manufactured with pure cellulose (a wood derivative) which has the ability to absorb many times its weight in water. Also resistant to abrasion and tearing when wiping tips. Meets ANSI J-STD-001B for low sulphur content and fine porosity.

Special design features:

- Hole - Increases wiping surface.
- Slitted - Prevents throwing excess solder.

CS-17 • CS-17/625

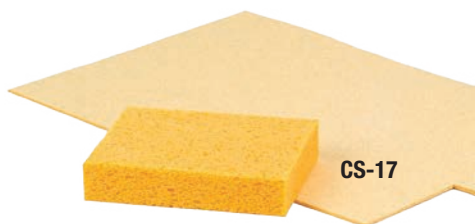
PLATO CUT-TO-FIT SHEET

For difficult to find sponge sizes or special applications, Plato offers full sheets of sponge material that can be trimmed to exact size.

CS-17— 1 sheet,
8" x 17" x 1" thick
(203mm x 432mm x 25mm thick)

CS-17/625

Thinner Economy
Sponge, 1 sheet,
8" x 17" x 0.625" thick
(203mm x 432mm x 16mm thick)



CS-44 • CS-888H

HAKKO COMPATIBLE REPLACEMENT SPONGES

CS-44

10 sponges/pack, 2.7" x 2.7" x 1" thick
(69mm x 69mm x 25mm thick)
Comparable to Hakko 609-0229, A1042



CS-888H

10 sponges/bag,
2.36" dia x 2" x 0.625" thick
(60mm dia x 51mm x 17mm thick)
Fits Hakko FX-888, FX-888D
Comparable to Hakko A1559



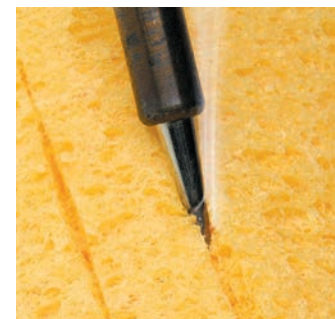
CS-47

METCAL & UNGAR COMPATIBLE REPLACEMENT SPONGES

CS-47— 10 sponges/pack,
2.1" x 3.2" x 1" thick
(53mm x 81mm x 25mm thick)
Comparable to Metcal STSS-YS3,
AC-YS3, ACY10, Ungar 455, UTC234



Hole design



Slitted design

C-1 • CS-14/14M • CS-33 • CS-44

WELLER & PACE COMPATIBLE REPLACEMENT SPONGES

CS-1

10 sponges/pack,
1.5" x 2.12" x 1" thick
(38mm x 54mm x 25mm thick)
Comparable to Weller SP-60,
Pace 4021-005



CS-14

10 sponges/pack,
2.15" x 2.75" x 1" thick
(55mm x 70mm x 25mm thick)
Comparable to Weller T52241999



CS-14M

10 sponges/pack,
2.15" x 2.75" x 1" thick
(55mm x 70mm x 25mm thick)
Comparable to Weller T52241999



CS-44

10 sponges/pack,
2.7" x 2.7" x 1" thick
(69mm x 69mm x 25mm thick)
Comparable to Weller TC205



CS-9/625 • CS-36

HEXACON COMPATIBLE REPLACEMENT SPONGES

CS-9/625

10 sponges/pack,
3.5" x 4.5" x 0.625" thick
(89mm x 114mm x 16mm thick)
Comparable to Hexacon 8101,
8101C, 8121, 8121C



CS-36

10 sponges/pack,
2.24" x 3.5" x 1" thick
(57mm x 89mm x 25mm thick)
Comparable to Hexacon
8141, 8141C





YOUR ONE SOURCE FOR SOLDERING TIPS

Plato is one of the largest manufacturers of soldering tips in the world, producing tips to fit all of the most popular soldering stations.

LONG LIFE

Using a high quality Plato soldering tip increases soldering speed and decreases the total cost of manufacture. Higher temperatures and high tin content solders, common in lead-free soldering processes, place additional strain on soldering iron tips. The long life of a Plato soldering iron tip reduces tip changes, decreasing the total number of tips used and decreasing down time.

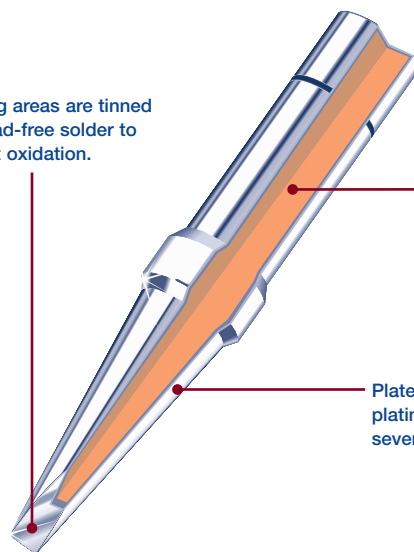
RAPID HEAT RECOVERY

Plato soldering tips are constructed from highly conductive premium grade copper to transmit heat to the work more quickly than other brands of soldering tips. Quick heat recovery enables more joints to be soldered per minute, reducing manufacturing time and costs.

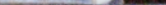
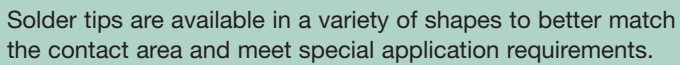
Working areas are tinned with lead-free solder to prevent oxidation.

Constructed with high-grade copper for maximum heat conductivity.

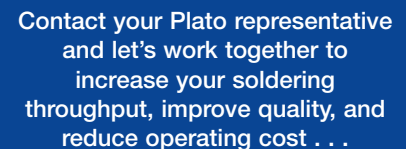
Plated with proprietary iron plating for long life even in severe soldering conditions.



Solder tip shapes should be chosen to allow the maximum wetted contact of the tip point with the leads and contacts to be soldered. Solder tip should be similar to the size of the contact area.



- Assess customer requirements / specifications
- Initial design & PDF drawing approval
- Prototype approval
- Full production run





Soldering Stations: FX-888, FX-888D, FX889, FR-701, FR-702, 926, 928, 936, 937, 951, 952, 958, 959, 701, 702

Soldering Handpieces: FX-8801, FX-8802, FX-8803, FX-600, 900M, 900M-ESD, 907, 907-ESD, 913

Tip drawings are actual size

Hakko® **Plato®** () = mm

POINT / CONICAL TIPS

T18-SB
900M-T-SB

HS-4988

.008" (0.2)



T18-BL
900M-T-LB

HS-4786

1/64" (0.4)



T18-I
900M-T-I

HS-4787

.016" (0.41)



T18-B
900M-T-B

HS-4785

.040" (1.0)
.250" TIN LENGTH



T18-BR02
900M-T-0.2RB

HS-4791

0.016" (0.4)



T18-S5
900M-T-S5

HS-8157

1/64" (0.4)



SCREWDRIVER / CHISEL TIPS

T18-D08
900M-T-0.8D

HS-2863

1/32" (0.8)



T18-D12
900M-T-1.2D

HS-2796

3/64" (1.2)



T18-D16
900M-T-1.6D

HS-2751

1/16" (1.6)



T18-D24
900M-T-2.4D

HS-2752

3/32" (2.4)



T18-D32
900M-T-3.2D

HS-2753

1/8" (3.2)



Hakko® **Plato®** () = mm

T18-S3
900M-T-S3

HS-1665

13/64" (5.2)
.040" (1.0)

900M-T-H

HS-0925

30° 1/16" (1.6)
9/64" (3.5)

BLADE / KNIFE TIPS

T18-K
900M-T-K

HS-0927

.2" (5.08)
1/4" (6.3)
(0.1)

BEVEL TIPS

T18-C1
900M-T-1C

HS-5701

3/64" (1.2)

T18-C2
900M-T-2C

HS-5702

5/64" (2.0)

T18-C3
900M-T-3C

HS-5703

1/8" (3.0)

T18-C4
900M-T-4C

HS-5875

5/32" (4.0)

FLOW TIPS

HS-0530

.128" (3.3)
.118" (3.0)

HS-0531

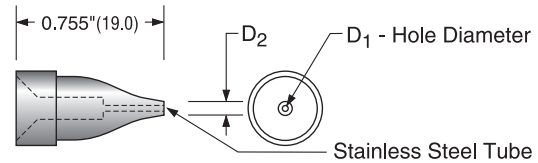
.195" (5.0)
.135" (3.4)

Desoldering Irons: 474, 475, 701, 702B — Handpieces: 808

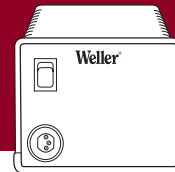
Hakko®	Plato®	(mm) D1	(mm) D2
A-1002	HK-0878	.030" (0.8)	.070" (1.8)
A-1003	HK-0879	.040" (1.0)	.080" (2.0)
A-1005	HK-0881	.040" (1.0)	.100" (2.5)
A-1006	HK-0882	.050" (1.3)	.120" (3.0)
A-1007	HK-0883	.060" (1.5)	.120" (3.0)

Tip drawings are actual size

- Premium quality for long life
- Iron plated outside and stainless steel tube insert prevents solder path erosion
- All dimensions are shown before tinning and are subject to manufacturing tolerances



Soldering Stations: WTCPT, WTCPTD, WTCPTFE, WTCPN, WTCPS Soldering Handpieces: TC201T, TC201FE



WELLER

COMPATIBLE

Tip drawings are actual size

Weller®	Plato®	() = mm
POINT / CONICAL TIPS		
PTS8	C-494-8	800°F / 425°C
		1/64" (0.4)
PTP8	C-462-8	800°F / 425°C
		1/32" (0.8)

Weller®	Plato®	() = mm
SCREWDRIVER / CHISEL TIPS		
PTC8 PTC9	C-3036-8 C-3036-9	800°F / 425°C 900°F / 480°C
		1/8" (3.2)

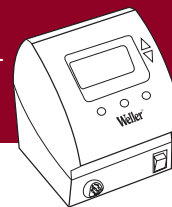


Soldering Stations: WES50, WES51, WD1, WD2
Soldering Handpieces: • EC1201A, EC1204A, PES50, PES51, WCC101, EW303, EW305, EW307, EW103, EW105, EW0574

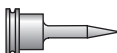
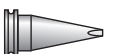
Tip drawings are actual size

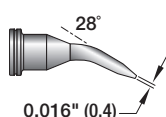
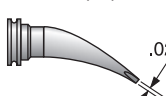
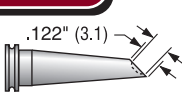
Weller®	Plato®	() = mm
POINT / CONICAL TIPS		
	EW-4796	
ETS	EW-402	
ETT	EW-401	
ETP	EW-403	
ETO	EW-404	
SCREWDRIVER / CHISEL TIPS		
ETH	EW-301	
ETK	EW-304	
ETR	EW-101	
ETA	EW-303	
ETL	EW-306	

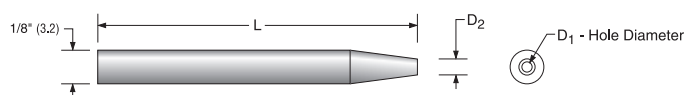
Weller®	Plato®	() = mm
ETB	EW-305	
ETC	EW-307	
ETD	EW-103	
ETE	EW-105	
BEVEL TIPS		
ETV	EW-511	
ETAA	EW-513	
ETBB	EW-515	
ETCC	EW-517	
FLOW TIPS		
ETGW	EW-0574	SMD Flow Tip



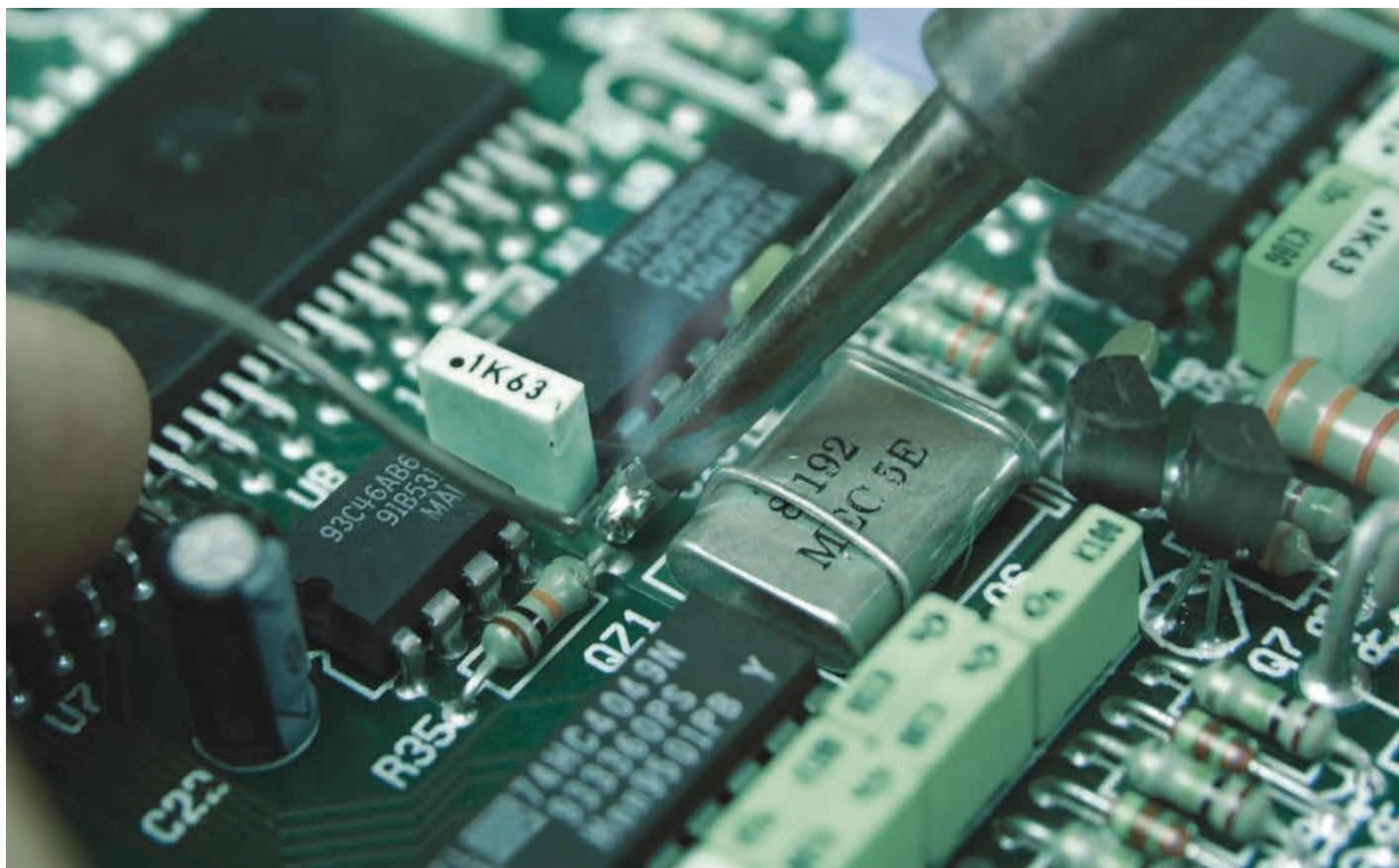
Tip drawings are actual size

Weller®	Plato®	() = mm	
POINT / CONICAL TIPS			
LT1S	MS-4100		
LT1	MS-4120		
LT1L	MS-4110		
—	MS-4140		
SCREWDRIVER / CHISEL TIPS			
LTH	MS-3110		
LTK	MS-3150		
LTA	MS-3200		
LTL	MS-3250		

Weller®	Plato®	() = mm	
LTB	MS-3300	 Length: .094" (2.4) Diameter: .031" (0.8)	
LTC	MS-3400	 Length: .125" (3.2) Diameter: .031" (0.8)	
LTM	MS-3450	 Length: .125" (3.2) Diameter: .047" (1.2)	
LTD	MS-3600	 Length: .181" (4.6) Diameter: .031" (0.8)	
LT4X	MS-3125	 Angle: 28° Length: 0.016" (0.4)	 Diameter: 0.085 (2.1) Diameter: 0.047 (1.2)
LTHX	MS-3101	 Length: .024" (0.6)	 Diameter: .016" (0.4)
BEVEL TIPS			
LT4W	MS-5160	 Length: .047" (1.2)	
FLOW TIPS			
LTGW	MS-0100	 Length: .122" (3.1) Diameter: .084" (2.1)	 Diameter: (0.8)



Pace®	Plato®	L (mm)	D1 (mm)	D2 (mm)	Pace®	Plato®	L (mm)	D1 (mm)	D2 (mm)
Plato® Tips to fit Pace® SX-20, SX-25, SX-25V SODR-X-TRACTORS®					Plato® Tips to fit Pace® SX-40A, SX-55A, SX-65A, SX-70 SODR-X-TRACTORS® with Plato Adapter 33-0001				
1121-0480	20-0114	1.125" (28.6)	.030" (0.8)	.060" (1.5)					
---	20-0815	1.125" (28.6)	.036" (0.9)	.065" (1.7)	1121-0485	20-025	1.875" (47.6)	.030" (0.8)	.080" (2.0)
1121-0479	20-0110	1.125" (28.6)	.040" (1.0)	.080" (2.0)	1121-0486	20-040	1.875" (47.6)	.040" (1.0)	.080" (2.0)
1121-0216	20-0113	1.125" (28.6)	.050" (1.3)	.090" (2.3)	1121-0255	20-060	1.875" (47.6)	.060" (1.5)	.100" (2.5)
1121-0217	20-0111	1.125" (28.6)	.060" (1.5)	.100" (2.5)					



3/16" Shank Diameter for Soldering Irons: PS-90, PS-80, SP-2, IR-70

PACE®

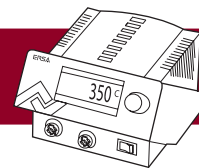
COMPATIBLE

Tip drawings are actual size

Pace®	Plato® Tip	
POINT / CONICAL TIPS		
1121-0336	33-8142	1/32" (0.8)
1121-0357	33-8141	1/64" (0.4)
1121-0526	33-3982	.015" (0.4)
SCREWDRIVER / CHISEL TIPS		
1121-0359	33-1144	1/32" (0.8)
1121-0360	33-6057	3/32" (2.4)
1121-0414	33-6056	1/16" (1.5)

Pace®	Plato® T	
1121-0337	33-6058	1/8" (3.2)
1121-0358	33-1658	3/16" (4.8)
BLADE / KNIFE TIPS		
1121-0402	SMP-2004	3/16" (4.7) .250" (6.3) .020" (0.5)
SMD Blade Tip to Solder SOIC & PLCC's		
BEVEL TIPS		
1121-0406	33-5894	1/8" (3.2)
FLOW TIPS		
1121-0490	33-5895	.195" (5.0) .135" (3.4)
Plato® SMD Flow Tip		

**Soldering Stations: SMT 60, Digital 2000 with Micro Tool,
Twin 80 A with Micro Tool**



ERSA®

COMPATIBLE

Tip drawings are actual size

Ersa®	Plato®	() = mm
212BD	ER-4007	0.004" (0.1)

1/4"
TIPS

**1/4" (6.4mm) Plato® Tips to fit Soldering Irons For
Hexacon® • American Beauty® • Esico®**

PLATO®

Hexacon®	American Beauty®	Esico®	Plato®	Plato® Tip	Tip drawings are actual size.
HT359	716	422-108 422-132	42-355	 1/16" (1.6)	
HT358	714	422-347 422-144	42-347	 3/32" (2.4)	
HT417	721	420-106 420-119	44-390	 1/8" (3.2)	
HT426	---	420-114	44-715	 1/8" (3.2)	
HT397	720	420-143 420-164	44-386	 5/32" (4.0)	
HT313	715	---	44-352	 3/16" (4.8)	
HT552	---	426-161 426-173	46-626	 3/16" (4.8)	
HT553* *similar	704	410-140 410-126	44-152	 1/4" (6.4)	

5/16"
TIPS

**5/16" (8.0mm) Plato® Tips to fit
Hexacon® Soldering Irons**

Hexicon®	Plato®	Plato® Tip	Tip drawings are actual size.
HT556	55-336	 1/8" (3.2)	
HT5550	55-321	 3/16" (4.8)	
HT547	55-118	 5/16" (8.0)	
	55-133	 5/16" (8.0)	

Hexacon®	American Beauty®	Plato® Tip	Tip drawings are actual size.	
HT108		66-409	1/16" (1.6)	
HT566	43D	66-201	1/16" (1.6)	
HT129	43S	66-367	3/16" (4.8)	
		66-627	3/16" (4.8)	
HT449	823	66-300	1/4" (6.4)	
HT470		66-349	5/16" (8.0)	
HT151		66-145	3/8" (9.5)	
	43C	66-704	3/8" (9.5)	

**5/8" (15.9mm) Plato® Tips to fit Soldering Irons For
Hexacon® • American Beauty® • Esico® • Weller® Marksman SP175**
**5/8"
TIPS**

Hexacon®	American Beauty®	Weller®	Plato® Tip	Tip drawings are actual size.	
HT256	44D		1010-286	1/16" (1.6)	
HT178	44S		1010-397	5/16" (8.0)	
HT499	44C		1010-184	5/8" (15.9)	
HT891		MTG40	1010-104	5/8" (15.9)	



TIPS CROSS REFERENCE

American Beauty	PLATO®	Pg #
43C	66-704	15
43D	66-201	15
44C	1010-184	15
44D	1010-286	15
704	44-152	14
714	42-347	14
715	44-352	14
716	42-355	14
720	44-386	14
721	44-390	14
823	66-300	15
8-I	A-417	13

Ersa	PLATO®	Pg #
212BD	ER-4007	12

Esico	PLATO®	Pg #
410-126	44-152	14
410-140	44-152	14
420-106	44-390	14
420-114	44-715	14
420-119	44-390	14
420-143	44-386	14
420-164	44-386	14
422-108	42-355	14
422-132	42-355	14
422-144	42-347	14
422-347	42-347	14
426-161	46-626	14
426-173	46-626	14

Hakko	PLATO®	Pg #
	HS-0530	8
	HS-0531	8
900M-T-0.2RB	HS-4791	8
900M-T-0.8 D	HS-2863	8
900M-T-1.2D	HS-2796	8
900M-T-1.6D	HS-2751	8
900M-T-1C	HS-5701	8
900M-T-2.4D	HS-2752	8
900M-T-2C	HS-5702	8
900M-T-3.2D	HS-2753	8

900M-T-3C	HS-5703	8
900M-T-4C	HS-5875	8
900M-T-B	HS-4785	8
900M-T-H	HS-0925	8
900M-T-I	HS-4787	8
900M-T-K	HS-0927	8
900M-T-LB	HS-4786	8
900M-T-S3	HS-1665	8
900M-T-S5	HS-8157	8
900M-T-SB	HS-4988	8
A1002	HK-0878	9
A1003	HK-0879	9
A1005	HK-0881	9
A1006	HK-0882	9
A1007	HK-0883	9
T18-B	HS-4785	8
T18-BL	HS-4786	8
T18-BR02	HS-4791	8
T18-C1	HS-5701	8
T18-C2	HS-5702	8
T18-C3	HS-5703	8
T18-C4	HS-5875	8
T18-D08	HS-2863	8
T18-D12	HS-2796	8
T18-D16	HS-2751	8
T18-D24	HS-2752	8
T18-D32	HS-2753	8
T18-I	HS-4787	8
T18-K	HS-0927	8
T18-S3	HS-1665	8
T18-S5	HS-8157	8
T18-SB	HS-4988	8

Hexacon	PLATO®	Pg #
	55-133	14
	66-627	15
HT108	66-409	15
HT129	66-367	15
HT151	66-145	15
HT178	1010-397	15
HT256	1010-286	15
HT313	44-352	14
HT358	42-347	14

HT359	42-355	14
HT397	44-386	14
HT417	44-390	14
HT426	44-715	14
HT449	66-300	15
HT470	66-349	15
HT499	1010-184	15
HT547	55-118	14
HT552	46-626	14
HT553	44-152	14
HT5550	55-321	14
HT556	55-336	14
HT566	66-201	15
HT891	1010-104	15

Japan Unix	PLATO®	Pg #
P1V12-28	00-0112	7
P3PC-S	00-0118	7
C25D-S	00-0120	7
P2PC-S	00-0121	7
P3D-R	00-0181	7

Pace	PLATO®	Pg #
	20-0815	12
1121-0216	20-0113	12
1121-0217	20-0111	12
1121-0255	20-060	12
1121-0336	33-8142	13
1121-0337	33-6058	13
1121-0357	33-8141	13
1121-0358	33-1658	13
1121-0359	33-1144	13
1121-0360	33-6057	13
1121-0402	SMP-2004	13
1121-0406	33-5894	13
1121-0414	33-6056	13
1121-0479	20-0110	12
1121-0480	20-0114	12
1121-0485	20-025	12
1121-0486	20-040	12
1121-0490	33-5895	13
1121-0526	33-3982	13

Weller	PLATO®	Pg #
	EW-4796	10
ETA	EW-303	10
ETAA	EW-513	10
ETB	EW-305	10
ETBB	EW-515	10
ETC	EW-307	10
ETCC	EW-517	10
ETD	EW-103	10
ETE	EW-105	10
ETGW	EW-0574	10
ETH	EW-301	10
ETK	EW-304	10
ETL	EW-306	10
ETO	EW-404	10
ETP	EW-403	10
ETR	EW-101	10
ETS	EW-402	10
ETT	EW-401	10
ETV	EW-511	10
	MS-4140	11
LT1	MS-4120	11
LT1L	MS-4110	11
LT1S	MS-4100	11
LT4W	MS-5160	11
LT4X	MS-3125	11
LTA	MS-3200	11
LTB	MS-3300	11
LTC	MS-3400	11
LTD	MS-3600	11
LTGW	MS-0100	11
LTH	MS-3110	11
LTHX	MS-3101	11
LTK	MS-3150	11
LTL	MS-3250	11
LTM	MS-3450	11
MTG40	1010-104	15
PTC8	C-3036-8	9
PTC9	C-3036-9	9
PTP8	C-462-8	9
PTS8	C-494-8	9

