

# High-Precision Tools for Medical Device Manufacturing



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## Side cutters and tip cutters

## FOR CRITICAL APPLICATIONS

https://www.weller-tools.com/professional/USA/us/Home/Erem

### **Built-in Weller-Erem Magic Spring**

The Magic Spring system used in Weller-Erem precision tools is unique. It is integral to the cutting head and provides a constant closing and re-opening force.

to use and reduces operator fatigue.



This self locking screw joint system gives a smooth cutting and opening action and ensures that there is no blade overlap or play.

- Smooth jaw action with no play
- Smooth cutting operation with no jaw overlapping

Induction-hardened

The cutting blades of Weller-Erem

by an induction-heating process.

High durability, thanks to special

cutters are hardened to Rockwell 63-65 HRc

cutting edges

material selection

is made using a unique Swiss processing technique.

strength and toughness to the tools to promote a long service life.

The interchangeable foam-cushion handles are ESD-safe and are fitted as standard on all Weller-Erem cutters and pliers.



Weller-Erem electronics tools are made





## **Special tool steel**

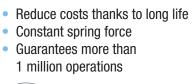
## from bright steel. The special tool steel

## The bright tool steel gives additional

### **ESD-safe**

It is highly reliable, makes the tools easy

1 million operations



## For further information please see:

Weller-Erem cutting-edge

protection for tip cutters

stop system which prevents the

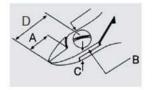
cutting edges from overlapping.

All tip cutters are fitted with a special

## **CUTTERS**

		04	Description	1/ A 11 11		Dimer			Dental/	Cardio-	Typical	Tungsten-
	Model	Cut	Description	Key Applications	А	В	С	D	Ortho		Medical	Carbide Steel
503ETST	The state of the s		Tip cutter - angled wide head	Guide Wires, Stents, Catheters, Single/	0.354 in	0.433 in	0.236 in	0.748 in				
	6	Flush	The dates and the season of th	Multiple Fillers, Lateral/ Internal Cuts	9 mm	11 mm	6 mm	19 mm		٧		<b>Y</b>
576TX			Tip cutter -pointed relieved head The underside is relieved and facilitates optimm access even to extremely	Guide Wires, Stents, Catheters, Single/	0.433 in	0.433 in	0.236 in	0.748 in				
		Flush	hard-to-reach areas.  • The narrowest head shape.  Multiple Fillers, Lateral/ Internal Cuts  11 mn	11 mm	11 mm	6 mm	19 mm		٧		<b>Y</b>	
576TX-1	167		Side cutter - tapered head     Jaws have straight edges and taper to a point	Guide Wires, Stents, Catheters, Single/	0.433 in	0.433 in	0.236 in	0.011 in				
		Flush	capacity in comparison to the same size oval head cutter	Multiple Fillers, Lateral/ Internal Cuts	11 mm	11 mm	6 mm	19 mm		٧		<b>Y</b>
595T	W. J.		Side cutter - tapered head The jaws of the cutter have straight edges and taper to a point This head shape allows access to difficult to reach areas but reduces the	Hard Wire - Stainless Steel 303-316, MP35N,	0.472 in	0.433 in	0.236 in	0.748 in				
		Semi-Flush	cutting capacity in comparison to the same size aval head cutter	Stents	12 mm	11 mm	6 mm	19 mm		*		<b>Y</b>
599TF	0		Side cutter - oval head     Fits all cutting applications where easy access is given		0.472 in	0.433 in	0.236 in	0.748 in				
		Flush	Pris all cutting applications where easy access is given		12 mm	11 mm	6 mm	19 mm		<b>Y</b>		<b>Y</b>
599TFO	19/		Side cutter High precision for optical fibres High precision for optical fibres High precision for optical fibres High for Knote® fills Northern® cheented wires entired fibres and small	Stainless Steel Coil Wires, Kevlar®, Vectran™ Braided	0.472 in	0.43 in	0.24 in	0.748 in				
		Ideal for Kevlar® silks, Vectran™ sheated wires, optical fibres and small stainless wires.  Vectran™ Braided Wires, Fiber Optics  Vectran™ Sheated wires, optical fibres and small wires, Fiber Optics  Vectran™ Braided Wires, Fiber Optics		12 mm	11 mm	6 mm	19 mm		<b>Y</b>		<b>Y</b>	
E147A			Side cutter with compound action     For cutting hard wires with minimal effort	Guide Wires, Stents, Catheters, Single/ Multiple Fillers, Lateral/	0.472 in	0.413 in	0.284 in	-				
		Semi-Flush	- 101 Cutung naru Wites With Infillinate Bibit	Internal Cuts	12 mm	10.5 mm	7.2 mm	-	٧	<b>Y</b>	٧	
T622N			Side cutter – oval head     Fits all cutting applications where easy access is given	Guide Wires, Stents, Catheters, Single/ Multiple Fillers, Lateral/	0.354 in	0.354 in	0.236 in	0.590 in				
		Flush	- тъв ан одину аррисация мнего сазу авсезо во учен	Internal Cuts	9 mm	9 mm	6 mm	15 mm		*	٧	¥

<sup>\*</sup> Includes production of catheters, stents, pace makers, etc.



A = length of cutting edges

B = head widh

 $C = head\ thickness$ 

D = head length

For further information please see:

https://www.weller-tools.com/professional/USA/us/Weller+Erem/Cutters



## **CUTTERS**

	Model		Description	Key Applications		Dimensions			Dental/	Cardio-	Typical	Tungsten- Carbide
	Model	Cut Description		Rey Applications	А	В	C	D	Ortho	vascular*	Medical	Steel
622NB 2622NB			Side cutter - pointed relived head     Facilitates optimum access to extremely hard-to-reach areas		0.354 in	0.39 in	0.236 in	0.65 in				
		Flush	Facilitates optimum access to extremely naro-to-reach areas		9 mm	9.8 mm	6 mm	16 mm				<b>,</b>
632NCF			Tip cutter - straight short relieved head High precision for optical fibres Suitable for precision cuts of soft materials (e.g. small silicone tubes precision	Soft materials only. Perfect for trimming silicone material,	0.354 in	0.354 in	0.236 in	0.590 in			<b>✓</b>	
0321101		Super Full Flush	connector seals, miniature ruber seals, soft synthetic parts)  High-precision working on SMD and micro-package contacts	miniature rubber seals or soft synthetic parts	9 mm	9 mm	6 mm	15 mm		V	<b>V</b>	
2476TX1			Side cutter - tapered relieved head     Series 2400 MagicSense model     The jaws of the cutter have straight edges and taper to a point	Stainless Steel or Nickel Titanium Wires.	0.433 in	0.433 in	0.236 in	0.011 in		✓	<b>√</b>	
	You.	Semi-Flush	This head shape allows access to difficult to reach areas but reduces the cutting capacity in comparison to the same size oval head cutter	Catheters, Coiled Wires	11 mm	11 mm	6 mm	19 mm				<b>V</b>
792E			Side cutter - pointed relieved head     The underside is relieved and facilitates optimum access even in extremely	Micro electronics	0.472 in	0.433 in	0.236 in	0.748 in				
/92E		Super Full Flush	hard-to-reach areas  This is the narrowest head shape	WILLIO ELECTIONICS	12 mm	11 mm	6 mm	19 mm				
2422E			Side cutter - oval head     Polyected of size of the bished cutting agreety.	Missa electronica	0.472 in	0.433 in	0.236 in	0.748 in				
		Flush	Robust and size for size offers the highest cutting capacity     This is the most widely used head shape	Micro electronics	12 mm	11 mm	6 mm	19 mm			<b>\</b>	

<sup>\*</sup> Includes production of catheters, stents, pace makers, etc.

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#### **PLIERS** DIMENSION DIAGRAM 552S . Suitable for all types of insulation, Teflon®, Tefzel A = Jaw length and optical fibres. B = Width of tips · Unique precision for damage-free stripping of 0.82 in 0.24 in 0.24 in 0.43 in 0.354 in = Depth of fine wires. interchangeable blade All Types of Insulation, · Interchangeable blades Wire = Total height of both tips · Unlimited stripping length thanks to side stripping Teflon, Tefzel and Stripper G = Length of cutting blade . The required diameter is set by means of screws optical fibers. Non-reflecting surface G 21 mm · Screwdriver and key are included 11 mm 6 mm 6 mm 9 mm · Robust, high-precision tools for use in electronics and aeronautical engineering 2411PD 1.32 in 0.43 in 0.24 in 0.039 in 0.047 in A = Jaw length · Needle nose pliers with very precise and For miniature and B = Head width standard electronics. C = head thickness Non-reflecting surface, ESD-safe E = Width of tips 33.5 mm 11 mm 6 mm 1.2 mm 1 mm = Total height of both 531E Tapered Forming and handling 0.91 in 0.43 in 0.24 in 0.2 in 0.12 in · Flat nose pliers with replaceable nylon jaws components while · Non-reflecting surface, ESD-safe, high grade preventing scratching tool steel and nicking for · Nylon jaws prevent nicking and scratching miniature and 23 mm 6 mm 5 mm 3 mm 11 mm standard electronics.

For further information please see:

https://www.weller-tools.com/professional/USA/us/Weller+Erem/Pliers

#### **Internal patented Weller-Erem Magic Spring**

The Magic Spring system used in Weller-Erem precision tools is unique. It is integral to the cutting head and provides a constant closing and re-opening force. It is highly reliable, makes the tools easy to use and reduces operator fatigue.

- · Reduce costs thanks to long life
- Constant spring force
- · Guarantees more than 1 million operations

# 0

#### **High-precision screw joint**

This self-locking screw joint system gives a smooth cutting and opening action and ensures that there is no blade overlap or play.

#### **Precision-ground jaws**

The very precisely worked tips get a firm and sure grip on even the thinnest of parts.

The choice of high-quality materials and meticulous tempering are especially important during the manufacturing of these tweezers.

· Ground with the greatest precision

- · Smooth jaw action with no play
- · No damaging of sensitive components



#### Special tool steel

Weller-Erem electronics tools are made from bright steel. They are not drop forged.

The special tool steel is made using a unique Swiss processing technique.

. The bright tool steel gives additional strength and toughness to the tools to promote a long service life.

#### **ESD-safe**

The interchangeable foam-cushion handles are ESD-safe and are fitted as standard on all Weller-Erem cutters and pliers.

**WIDE VARIETY OF** 

**HEAD SHAPES** 



opening more than 5 mm/.197 Inch. The limited extent to which the handles can open prevents user hand fatique.





**Ergonomically shaped handles** 

better grip and added safety

For high comfort.

## **TWEEZERS**

	WLLLLING										
Model		Shape	Description	Key Applications	Length	Weight	Dental/ Ortho	Various Medical	Material	Head Size	
2ASARU	ON MAS	Straight/ Round	Precision tweezers with flat rounded tips for gripping components Coated tips for non-stick holding of self-adhesive parts	For handling sticky adhesive labels and	4.724 in	0.53 oz			SS w/ Teflon	N/A	
ZAGANO		Titanium stainless steel, nonmagnetic, non-rusting, acid-proof, heat-resistant ribbons.	120 mm	16 g		<b>V</b>	Coated Tips	11/2			
5FSA,	FF.SA	Staight Pointed	Precision tweezers with extremely pointed tips for use in dissection procedures and working under a microscope  For use on soft		4.528 in	0.42 oz			Stainless Steel		
5MBS		Otalgit i olitoa	Relieved shape facilitates excellent access to the most confined spaces     Stainless steel, robust tips, non-rusting, non-reflecting surface	materials.	115 mm	12 g		V			
15AGS		Narrow Oblique	Cutting tweezers with narrow oblique head     Hardened cutting edges for long service life	Designed for cutting fine soft wires up to dia. 0.25	4.528 in	0.74 oz			Carbon Steel	.216 narrowed	
		Head		Suitable for cutting fine soft wires and small components	mm/.010 in. and small components.	115 mm	21 g		<b>Y</b>		to a pt
29Y			Non-reflecting surface	Suitable for stripping fine wires with PVC or	4.724 in	0.78 oz			Stainless &		
Series				Teflon® insulation.	120 mm	22 g		٧	Carbon		
940AS		Ring-Shaped	Gripping tweezers with locking mechanism The ring-shaped tip provides for secure handling up to a tensile force of 5 kg Suitable as a ligature clamp in dentistry Can be disinfected and sterilized		4.724 in	0.60 oz			Stainless Steel		
		Gripping tweezers enable the user to hold and manipulate particularly fine wires with a diameter from 0.3 mm/.011 Inch or insulated optical fibres with a diameter of between 1.5 mm/.059 Inch and 5 mm/.197 Inch		120 mm	17 g	٧	٧				
7SA		Curved	Precision tweezers, curved, relieved, with pointed tips     Bent shape facilitates access to confined spaces  bi	For applications in biology, medicine,	4.724 in	0.53 oz			Stainless	Very Fine	
			Special stainless steel, nonmagnetic, non-rusting, acid-proof, heat-resistant	laboratory technology and microelectronics	120 mm	15 g		٧		.,	
5SA	5-5A	Straight	Precision tweezers with very pointed tips, suitable for very fine wires Relieved shape facilitates excellent access to the most confined spaces Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant	Micro electronics	4.528 in	0.42 oz			Stainless	Very Fine	
		Saugh	For precision work e.g. under a microscope		115 mm	12 g		٧	Antiacid		
258SA		Straight	Precision tweezers with pointed synthetic tips (PPS) and serrated finger grips for secure handling Relieved shape facilitates excellent access to the most confined spaces	Secure handling of components up to 480F and resistant to acid and	4.724 in	0.53 oz			Stainless Anti- acid w/ pointed	Fine Point	
2365A		Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant     For precision work e.g. under a microscope  The standard and a more a microscope  The standard a	120 mm	15 g		<b>Y</b>	synthetic tips	i mo i unit			

For Tweezers information, please see

https://www.weller-tools.com/professional/USA/us/Top-Menu/Know+How+and+FAQ/Know-How+Erem/Tweezers:+Erem+impresses

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## **TWEEZERS**

Model		Shape	Description	Key Applications	Length	Weight	Dental/ Ortho	Various Medical	Material	Head Size
249SA		Straight	Precision tweezers with pointed synthetic tips (PPS) and serrated finger grips for secure handling     Non-reflecting surface	Microelectronics, medicine and laboratory technology. Secure han-	5.118 in	0.71 oz			Anti Magnetie	Blunt
2495A		Straight	Suitable for delicate standard applications and precision work on small components or wires     Special stainless steel non-mannetic non-rusting acid-proof heat-resistant	dling of components up to 480F and resistant to acid and molten solder - water resistant.	130 mm	20 g		<b>V</b>	Anti-Magnetic	
M5S	M5-S	Straight	Micro-tweezers, very pointed tips, e.g. for precision work under a microscope     Suitable for delicate standard applications and precision work on small	Microelectronics, medicine and labora- tory technology. For	3.150 in	0.21 oz			Stainless Steel	Very Fine
		ou augus	components or wires  Stainless steel, robust tips, non-rusting, non-reflecting surface applica	precision electronic application work under a microscope	80 mm	6 g		V	Stanness Steel	10., 1
3CSA	3054	Straight	Suitable for delicate standard applications and precision work on small micro	General purpose use in microelectronics,	4.331 in	0.39 oz			Anti-Magnetic	
			components or wires • Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant	medical and laboratories	110 mm	11 g		<b>Y</b>		
1SA	1-SF 4	Straight	Suitable for delicate standard applications and precision work on small components or wires	General purpose use in microelectronics,	4.724 in	0.49 oz			Stainless Steel	Fine Point
		Special st	Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant	medical and laboratories	120 mm	14 g		<u> </u>		
2ASA	2051-	Straight	traight • Special stainless steel, nonmagnetic, non-rusting, acid-proof, neat-resistant	General purpose use in microelectronics, medical and laboratories	4.724 in	0.53 oz			Stainless	Flat Round
					120 mm	15 g		Į v	Steel	
3CSA	3054	Straight  Straight  Suitable for delicate standard applications and precision work on small components or wires Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant  General purpose use in microelectronics, medical and laborate and delicate work.	components or wires		4.331 in	0.39 oz		Stainless	Fine Point	
				110 mm	11 g		Steel	Steel		
3SA	3054	Straight	Suitable for delicate standard applications and precision work on small components or wires	General purpose use in microelectronics,	4.724 in	0.49 oz			Stainless	Fine Point
		ognt		medical and laboratories	120 mm	14 g		<b>Y</b>	Steel	
5SA	5-SA	Straight	Precision tweezers with very pointed tips, suitable for very fine wires. Relieved shape facilitates excellent access to the most confined spaces Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant	For precision application work under a	4.528 in	0.42 oz			Stainless	Fine Point
			Special stallness steel, non-inagnetic, non-rusting, acid-proof, near-resistant     For precision work e.g. under a microscope	microscope	115 mm	12 g		<b>Y</b>	Steel	

For Tweezers information, please see

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## **TWEEZERS**

	WELLING									
Model		Shape	Description	Key Applications	Length	Weight	Dental/ Ortho	Various Medical	Material	Head Size
5ASA	21-ST (400)	Bent	Precision tweezers, lightly curved 15°, relieved. Very pointed tips, e.g. for installing small components	For applications in biology, medicine,	4.528 in	0.42 oz			Stainless	Fine Point
SASA		Delli	Bent shape facilitates access to confined spaces     Special stainless steel, nonmagnetic, non-rusting, acid-proof, heat-resistant	laboratory technology and microelectronics	115 mm	12 g			Steel	rine roint
7SA		Bent	Precision tweezers, curved, relieved, with pointed tips. Excellent handling in confined spaces	For applications in biology, medicine,	4.724 in	0.53 oz			Stainless	Fine Point
75A		Delli	Bent shape facilitates access to confined spaces	laboratory technology and microelectronics	120 mm	15 g		<b>\</b>	Steel	rille rollit
AASA	AAS	Straight	t components or wires m	General purpose use in microelectronics, medical and laboratories	4.921 in	0.56 oz			Stainless Steel	Fine Point
AAGA					125 mm	16 g		<b>Y</b>		T IIIO T OIIII
OOSA	OCE	oce Straight	Precision tweezers with pointed tips. Very robust. Suitable for standard applications, e.g., for assembly in electronics	General purpose use in microelectronics, medical and laboratories Suitable for delicate	4.724 in	0.71 oz			Stainless	Fine Point
003A		Suaigiit	Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant	standard applications and precision work on small components or wires	120 mm	0 mm 20 g	Y	Steel	Tille Foliit	
	0008:	Chroimha	Model same as OOSA, but with serrated finger grips and inside-serrated tips	General purpose use in microelectronics, medical and laboratories Suitable for delicate	4.724 in	0.71 oz			Stainless	<i>-</i>
OODSA		Straignt	for secure handling standard applications and precision work on	120 mm	20 g			Steel	Fine Point	
15AGW		Cutting	Cutting tweezers with narrow oblique head. For soft wires up to dia. 0.25 mm/.010 Inch.	Suitable for cutting fine, soft wires and small			Carbon	Narrow Oblique		
ISAGW	333	Outuily	Delivers high-precision cuts     Hardened cutting edges for long service life	components	115 mm	26 g		<b>Y</b>	Steel	Narrow oblique
4ASA		Straight	Relieved shape facilitates excellent access to the most confined spaces	For precision application work under a	4.331 in	0.45 oz			Stainless	Very Fine
4454		oudignt	Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant	microscope	110 mm	13 g		Steel	15.7	

For Tweezers information, please see

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