









# AVEN



#### **Products:** for Optical Inspection, Assembly and Field Services

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## About AVEN

With a product line that features more than 750 tools for optical inspection and precision assembly, Aven, Inc. has made a name for itself as a leading precision technology provider.

When Aven was founded in 1983, our objective focused on the importing and wholesaling of specialty tools. As the business evolved, we expanded our product portfolio to include more high technology tools, thus allowing us to engage in new market segments. In 1997, Aven underwent its first progression, shifting from traditional workbench tools to industrial electronics supplies. We then turned our focus to precision tools for optical inspection and precision assembly.

Today, Aven's product line includes stationary and portable microscopes, video inspection systems, specialty high-resolution digital and video cameras, lenses, illuminated magnifiers, software for image analysis and tools for precision assembly.

## The **AVEN** Advantage

While we offer a broad product line of optical inspection equipment components, Aven's true value to customers is realized in our positioning as a full-service technology provider.

As a result of years of comprehensive research and development, Aven has expanded its expertise in the realm of design and customized configuration of advanced video inspection systems. Our solutionbased experts possess the ability to recommend and create complete optical systems according to customer's needs and budgets. We also develop new products based on the specifications of our customers.

To form a clearer understanding of our customers and their needs, Aven's specialists make on-site visits to evaluate client's testing and/or quality control stations. Based on the findings, we are able to recommend application improvements and demonstrate the latest advances in testing equipment technology.

A highly experienced sales staff and our diverse and extensive product mix allow us to meet the needs of the optical measurement and electronic equipment markets. Aven also provides a variety of ancillary services such as product assembly, custom parts and tooling, and distribution, all of which are coordinated from our Michigan headquarters.

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From the world's first compact portable microscope to tools that are as simple as "plug and play," Aven's iSeries line of digital microscope technology offers a variety of functions and capabilities that are applicable to a number of industries.

The iSeries product line includes:

#### **iLo**upe

The world's first compact portable field microscope/camera combination with zoom capability of up to 150x.

#### i360

A 3-D microscope featuring enhanced viewing capabilities, including a 360-degree rotational view and oblique viewing angles up to 55 degrees.

#### **iG**auge

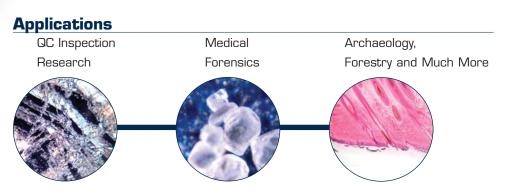
Video imaging and measurement software that enables the user to measure, annotate and analyze images with just a few clicks.



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World's first compact portable field microscope, available anytime and anywhere
2 in 1 device. Standard Digital Camera & a High Power Microscope
Built in Adjustable LED Lighting
High Resolution 7 mega-pixel Canon Camera
10x, 20x and 30x objective lenses available giving a magnification range of 10x to 150x
Cost Effective Offering with Powerful Functions



Visit www.aveninc.com to see more images taken with the iLoupe.

The first compact portable field microscope utilizes a digital camera with a patented module and specially designed lenses with built in high intensity adjustable LED Lights. The iLoupe can clearly capture objects from 6mm to 10 microns. This 2 in 1 device allows you to quickly interchange between a standard digital camera and a microscope. You can now carry a portable field microscope and a digital camera in your pocket with ease. Three objective lenses are available to meet a variety of different applications. Using the optical and digital zoom range of the camera the following magnification ranges are produced:

#### With the 10x objective lens: 10x to 60x With the 20x objective lens: 20x to 100x With the 30x objective lens: 30x to 150x

The iLoupe is available in Starter Pack and Pro Pack Versions. The iLoupe Starter Pack includes the Canon Camera with the Adapter Ring, Module and a 10x-60x Objective Lens. The iLoupe ProPack includes the Canon Camera with the Adapter Ring, Module and three objective lenses (10x-60x), (20x-100x) and (30x-150x). Both the Starter Pack and Pro Pack are supplied in a Plastic Carrying Case.

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#### **LOUNE** Accessories



iLoupe Carrying Case 26700-506



iLoupe Stand 26700-505



#### Specifications

	iLoupe Starter Pack	iLoupe Pro Pack		
Objective Lenses included	10x	10x, 20x, and 30x		
Magnification Range	10x -60x	10x-150x		
Field of View	10x: 16x12mm, 20x: 9x6.5mm, 30x: 5.7x4.5mm			
Lens Design	Schott No-Lead Optical Grade Glass			
Coating	Multi-Layer Anti-Reflective Coating			
Built in Dimmable Illumination	4 White LED Lights			
Batteries	Two Li-ion Rechargeable Batteries Included			

Order #	Description		
26700-5015	iLoupe Starter Pack w/ Plastic Carrying Case		
26700-501P	iLoupe Pro Pack w/ Plastic Carrying Case		
26700-505	iLoupe Stand		
26700-506	iLoupe Carrying Case		
26700-501-10	Replacement Lens 10x-60x		
26700-501-20	Replacement Lens 20x-100x		
26700-501-30	Replacement Lens 30x-150x		

Aven Inc. | 4595 Platt Road | Ann Arbor, MI 48108 Tel: 734-973-0099 | Fax: 734-973-0097 | www.aveninc.com



**3D 360** degree rotational view with a 45 degree oblique viewing angle.

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Zoom 50x-300x with great depth of field

Built in LED lighting with intensity control

Rotate clockwise or counter clockwise

Ideal for SMT, Semiconductor IC, Medical Devices, Research and Failure Analysis i360 3D Microscope is designed to give you a 3D perspective with rotation to your inspection process. The user can now view the specimen from all angles without having to move it. This helps reduce evaluation times and improves the QC process.

i360 also comes with our optional PC Link software that allows for image capture and measurement. It can also be connected directly to a PC with our optional USB Camera. Our USB Camera comes with our Infinity Analyze Imaging Software. Infinity analyze allows you to quickly and easily process images which can be entered into an archive application or saved in a variety of formats. Measurements and annotations are easy to perform, highly reproducible and can be customized to your needs.

i360 standard version comes with a 50x-300x lens with a 45 degree oblique viewer, high resolution analog color CCD Camera with BNC and S-Video Outputs, Control Box for controlling the LED light intensity, rotation (i.e. counter clockwise or clockwise), and rotational speed, 15" color flat panel monitor, and stand with focusing control. All cables and adapters are also included.

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#### **i360** Optional Accessories

USB Cameras with 1.4 and 2.0 megapixel resolution

USB Video Link with Software for image capture, processing and archiving

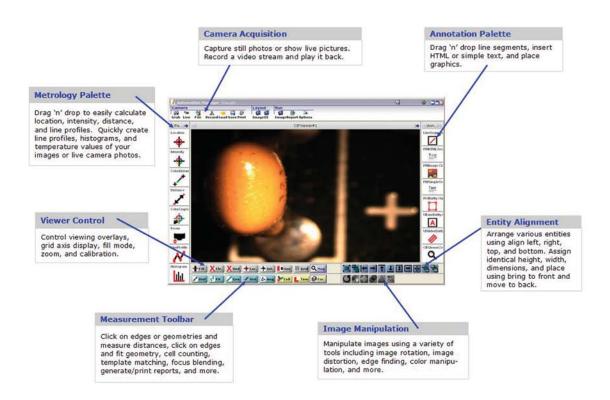


i360 Dimensions: Base - 13"x13" Height - 16 1/4"

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Magnification Range		50x-300x		
Lighting		LED with Intensity Control		
Camera		1/3" CCD Color Camera		
Working Disto	ince	55.5mm		
Depth of Fie	ld	8mm to 1.2mm		
Field of View		9.2mm to 1.3mm		
Order #	Deacr	iption		
26700-106-10	<b>i360 3D Micro</b> Controller, Stand v	<b>scope</b> with 45 degree Viewer, 1/3" CCD Color Camero vith Focus Control, and 15" Flat Panel Color Monitor.		
26700-106-14	Pixel Camera wi	<b>i360 3D Microscope</b> with 45 Degree Viewer, USB 1.4 Mega Pixel Camera with Infinity Analyze Imaging Software, Controller, Stand with Focus Control		
26700-106-20		Same as 26700-106-14 USB 1.4 Megapixel Camera replaced with our USB 2.0 Megapixel Camera		
26100-403	Processing and A	<b>USB Video Link with Software</b> for Image Capture, Processing and Archiving for use with our Analog CCD Camera. Basic measurement functions are included.		

## iGauge Video Imaging and Measurement Software



iGauge allows you to measure, annotate and analyze your images with just a few clicks. iGauge will dramatically increase the capability of any video camera based system. Test Drive iGauge by downloading a 30 day trial version from our website www.aveninc.com

#### SIMPLE AND EASY TO USE

Features:

- Image Capture, Record & Playback
- Viewing Tools
- Toolbar Geometry/Metrology
- Geometry Tools
- Annotation Tools
- Metrology Tools
- Image Processing Tools
- Reporting Tools
- Image Manipulation Tools
- Intuitive Interface

#### Order # Description

26100-405

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**i**Series

iGauge Video Software

## **Video Inspection Systems**

Aven's Video Inspection Systems can be used for several applications, including inspection, defect analysis and quality assurance. Our products feature a wide range of lenses, cameras, lighting options, video capture cards and stands to enable us in creating a custom solution for you.

This product line includes:

#### Aven Micro Zoom Systems Designed for high magnification and high resolution applications.

#### Aven Macro Zoom Video Inspection Systems Designed for large field of view applications.

Aven Micro and Macro Systems now feature our NEW **miniVue** high resolution color camera with instant image capture and a built-in 2" high resolution LCD Screen.

Create Your Own Custom System @ www.aveninc.com

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#### Aven Micro Zoom Video Inspection System VIS-6000

Create Your Own Custom System @ **www.aveninc.com** 



#### Designed for high magnification and high resolution applications

Modular design allows you to vary magnification, field of view, and working distance

Easily upgradeable

Magnification Range: 10x–67x (with 0.5x adapter and auxilary lens) (20x–134x with the 0.5x lens removed)

Working Distance: 143mm (5.6") to 187mm (7.36") (81-93mm with the 0.5x lens removed)

Field of View: 34.32mm (1.35") to 5.32mm (0.2") (17.16–2.67mm with the 0.5x lens removed)

 miniVue 3.1 megapixel camera with instant image capture on built-in SD card and 2" high resolution LCD screen.
 Connect to a PC via USB, as well as to a larger LCD Monitor for detailed viewing

Order # 26700-102-00 Description

**VIS 6000** with Zoom 6000 lens, 0.5x adapter tube and auxilary lens, miniVue Camera and 150 watt FOI with Ring Light. Mounted on the Ergo Stand with 11"x18" base. With our miniVue camera, images can be saved directly onto a SD Card.

#### **Applications**

Inspection of a wide range of objects such as integrated circuits, solder joints, surface analysis, quality control and laboratory inspection.

#### Customization

A variety of adapters & auxiliary lens, cameras, lighting options, video capture cards, and stands are available to provide a custom solution.

#### **Magnification Range**

2x to 2735x possible. Call for more information.

#### **High Accuracy Measurement**

Detented Lenses are available for high accuracy measurements.

#### 12x Zoom Lenses

For customers requiring the highest combination of zoom range and resolution. Visit www.aveninc.com for more information.

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Micro Zoom Video Inspection System on Articulating Arm 26700-102-15

#### Specifications



Micro Zoom Video Inspection System on Boom Stand 2700-102-10

Lens Attachment	Mag/Field of View (mm)			2x /	2x Adapter		5x Adapter		
		Low	High	Low	High	Low	High	Low	High
0.25x	Magnification	5x	33x	10x	67x	21x	134x	52x	329x
	Field of View	68.64	10.64	34.32	5.32	17.16	2.66	6.88	1.08
0.5x	Magnification	10x	67x	21x	133x	41x	267x	104x	671x
	Field of View	34.32	5.32	17.16	2.67	8.58	1.33	3.43	0.53
0.75x	Magnification	16x	100x	31x	200x	62x	400x	155x	1016
	Field of View	17.16	2.67	8.58	1.33	4.29	0.67	1.72	0.27
None	Magnification	21x	133x	41x	267x	83x	531x	207x	<b>1317</b> :
	Field of View	17.16	2.67	8.58	1.33	4.29	0.67	1.72	0.27
1.5x	Magnification	31x	200x	62x	400x	124x	808x	312x	<b>1976</b> :
	Field of View	11.43	1.78	5.72	0.89	2.86	0.44	1.14	0.18
2x	Magnification	41x	267x	83x	531x	165x	1078x	413x	2735
	Field of View	8.58	1.33	4.29	0.67	2.15	0.33	0.86	0.13

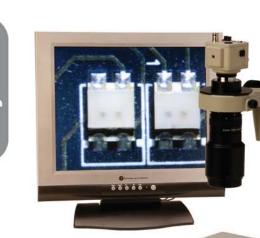
\* Note magnification data calculated based on 1/3" CCD camera and a 15" LCD Monitor.

	Ordar #	Description
	26700-102-10	<b>VIS 6000</b> – Same system as 2700-102-00 but mounted on a Dual Arm Ball Bearing Stand with a 1.3 Megapixel USB Camera with Image Capture and Measurement Software. <i>Monitor not Included</i> .
* Systems 26700-102-10 and 26700-102-15 can also be ordered with our new miniVue Camera. Go to www.aveninc.com to configure a system.	26700-102-15	<b>VIS 6000</b> – Same system as 2700-102-10 but mounted on an Articulating Arm with Mounting Clamp. <i>Monitor not Included</i> .

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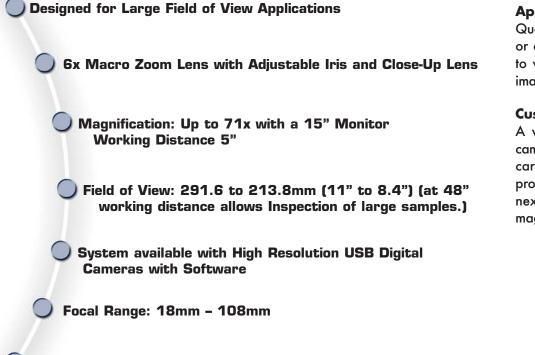


VI Svstems



### Aven Macro Zoom Video Inspection System

Create Your Own Custom System @ **www.aveninc.com** 



Working Distance: 5" – 12" with Close Up Lens, 24" to Infinity without close-up lens

#### Applications

Quality Assurance, biomedical imaging or assembly applications where an easy to view, sharp and true-to-life magnified image is required.

#### **Customization**

A variety of adapters & auxiliary lens, cameras, lighting options, video capture cards, and stands are available to provide a custom solution. See chart on next page for more information on magnification and FOV ranges possible.

#### AVEN

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**VI Systems** 



Macro Zoom Video Inspection System on Boom Stand 2700-103-00

#### Specifications

w/Close-Up Lans	Working Distance	FOV(mm) @ Low Mag.	FOV(mm) @ High Mag.	Magification Range
	5″	25.9x19.4	4.3x3.2	12x - 71x
	7″	38.9x29.2	6.5x4.9	8x - 47x
	8″	45.5x34	7.6x5.7	7x - 40x
	10″	58.3x43.7	9.7x7.3	5x - 31x

w/o Close-Up Lens	Working Distance	FOV(mm) @ Low Mag.	FOV(mm) @ High Mag.	Magification Range
	24″	136.1x97.2	22.7x21.1	2x - 13x
	36″	213.8×155.5	35.6x25.9	1.5x - 9x
	48″	291.6x213.8	48.6x35.6	1x - 6x

Order #	Description
26700-103-00	<b>6x Macro Lens</b> mounted on a SS Dual Arm Ball Bearing Boom Stand, 1/3" CCD Camera, 15" LCD Monitor, PC Link Device and Software for Image Capture.

\* Please note, in most applications additional illumination is not required for this lens system.



Our stereo zoom and stereo microscopes are manufactured exclusively for Aven by Carton Optical of Japan. Carton Optical has been manufacturing microscopes for over 40 years. Their microscopes have gained a reputation for providing the very best in optical performance, durability, and versatility. With a diverse selection of bodies, stands, and lighting techniques a system can be configured to fit any application.

#### To configure your system select:

- The microscope body that meets your magnification, field of view and working distance requirements. Note with a combination of eyepieces and auxiliary lens you can tailor a system to meet your requirements.
- 2. Focusing Mount.
- Stand (please take into account the working distance and the height of the stand).
- Illumination Fiber Optic, Fluorescent or LED.
- 5. Camera and or adapter if you are using a trinocular body.
- 6. Monitor if necessary.

#### All stereo zoom bodies feature:

- Crisp high resolution precision optics that provide an erect, non-reversed stereoscopic image.
- Binocular eyepieces inclined at 45 degrees for fatigue free viewing.
- Diopter adjustments on both eyepieces.
- Interpupilary distance adjustment 52mm to 75mm.
- Body can be rotated a full 360 degrees and locked in any position.
- Trinocular zoom bodies feature a beamsplitter. When engaged 100% of the light from the left optical path is directed to the phototube. The image can still be viewed through the right eye tube.

Configure Your Own Custom Microscope System @ www.aveninc.com

Stereo Zoom Microscopes

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## Z-50 Series

Outstandingly large zoom ratio 7.46:1-best zoom ration in this class

Magnification range: 6.7x to 50x

Field of View 34.3mm to 3.6mm (1.35" to 0.14")

Working distance 108mm (4.25") - the best in this class

Magnification range of 2.25x to 200x with optional lenses

17mm (0.67") high eye point wide field 10x eyepieces (field number 23) for comfortable viewing even for operators with eyeglasses.

Trinocular version has diopter adjustment on vertical tube for fine focusing of image

\* Note specifications mentioned above are with Wide Field 10x eyepieces.



## Stereo Zoom Microscopes

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SPZ-50

Binocular stereo zoom body with 10x eyepieces, rubber eye guards and dust cover

#### **Optical Data**

Eyepiece	DHW10X (F.N. 23)					
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x	w/2x	
Magnifications	6.7x-50x	3.35x-25x	5x-37.5x	10.72x-80x	13.4x-100x	
Working Dist.	108mm	240mm	132mm	50mm	41mm	
Field of View	34.3-4.6mm	68.9-9.2mm	45.7-6.1mm	21.4-2.8mm	17.1-2.3mm	
Eyepiece	DHW15X (F.N.15)					
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x	w/2x	
Magnifications	10.05x-75x	5.02x-37.5x	7.53x-56.25x	16.08x-120x	20.1x-150x	
Working Dist.	108mm	240mm	132mm	50mm	41mm	
Field of View	22.3-3mm	44.7-6mm	29.8-4mm	16-1.8mm	11.1-1.5mm	
Eyepiece	DHW20X (F.N. 11.4)					
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x	w/2x	
Magnifications	13.4x-100x	6.7x-50x	10.05x-75x	21.44x-160x	26.8x-200x	
Working Dist.	108mm	240mm	132mm	50mm	41mm	
Field of View	17-2.2mm	34-4.5mm	22.6-3mm	10.6-1.4mm	8.5-1.1mm	



Trinocular stereo zoom body with 10x eyepieces, rubber eye guards and dust cover

	DH	W20X (F.N. 11.4)		
	w/0.5x	w/0.75x	w/1.6x	w/2x
)x	6.7x-50x	10.05x-75x	21.44x-160x	26.8x-200x
	240mm	132mm	50mm	41mm
1	34-4.5mm	22.6-3mm	10.6-1.4mm	8.5-1.1mm

Order #	Description
SPZ-50	SPZ-50 Binocular
SPZT-50	SPZT-50 Trinocular



## DSZ-44 Series

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#### DSZ-44

Binocular stereo zoom body with 10x wide field eyepieces, Rubber eye guards and dust cover

#### Zoom Ratio of 4.4:1

Magnification range: 10x to 44x

Field of View of 23mm to 5.3mm (0.90" to 0.20")

Working distance 90mm (3.54")

Magnification range of 2.5x to140.8x with optional lenses

#### Wide Field 10x Eyepieces (field number 23)

\* Note specifications mentioned above are with Wide Field 10x eyepieces.



Trinocular stereo zoom body with 10x wide field eyepieces, Rubber eye guards and dust cover

#### **Optical Data**

Eyepiece	DSW5X (F.N. 22.5)				
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x	
Magnifications	5x-22x	2.5x-11x	3.75x-16.5x	8x-35.2x	
Working Dist.	90mm	150mm	105mm	45mm	
Field of View	22.5-5.1mm	45-10.2mm	30-6.8mm	14-3.1mm	
Eyepiece		DSW1	0X (F.N. 23)		
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x	
Magnifications	10x-44x	5x-22x	7.5x-33x	16x-70.4x	
Working Dist.	90mm	150mm	105mm	45mm	
Field of View	23-5.2mm	46-10.4mm	30.6-6.9mm	14.3-3.2mm	
Eyepiece		DSW1	5X (F.N. 15)		
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x	
Magnifications	15x-66x	7.5X-33X	11.25X-49.5X	24X-105.6X	
Working Dist.	90mm	150mm	105mm	45mm	
Field of View	15-3.4mm	30-6.8mm	20-49.5mm	9.3-2.1mm	
Eyepiece		DSW20	X (F.N. 11.4)		
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x	
Magnifications	20x-88x	10x-44x	15x-66x	32x-140.8x	
Working Dist.	90mm	150mm	105mm	45mm	
Field of View	11.4-2.5mm	22.8-5.1mm	15.2-3.45mm	7.1-1.6mm	

Order #	Description
DSZ-44	DSZ-44 Binocular
DSZT-44	DSZT-44 Trinocular

## DSZ-70 Series

For high magnification applications

Zoom Ratio of 3.5: 1

Magnification range: 20x to 70x

Field of View of 10mm to 2.8mm (0.39" to 0.11")

Working distance 80mm (3.15")

Magnification range of 5x to 224x with optional lenses

#### Wide Field 10x Eyepieces (field number 20)

\* Note specifications mentioned above are with Wide Field 10x eyepieces.

#### **Optical Data**

Field of View 7.5-2.1mm

Eyepiece	DSW5XZ (F.N. 20)			
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x
Magnifications	10x-35x	5x-17.5x	7.5x-26.25x	16x-56x
Working Dist.	80mm	120mm	85mm	41mm
Field of View	10-2.9mm	20-5.7mm	13.3-3.8mm	6.2-1.7mm
Eyepiece	DSW10XZ (F.N. 20)			
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x
Magnifications	20x-70x	10x-35x	15x-52.5x	32x-112x
Working Dist.	80mm	120mm	85mm	41mm
Field of View	10-2.8mm	20-5.7mm	13.3-3.8mm	6.2-1.7mm
Eyepiece	DSW15X (F.N. 15)			
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x
Magnifications	30x-105x	15x-52.5x	22.5x-78.75x	48x-168x
Working Dist.	80mm	120mm	85mm	41mm
				1

Eyepiece	DSW20X (F.N. 11.4)			
Auxiliary Lens	Nil	w/0.5x	w/0.75x	w/1.6x
Magnifications	40x-140x	20x-70x	30x-105x	64x-224x
Working Dist.	80mm	120mm	85mm	41mm
Field of View	5.7-1.6mm	11.4-3.2mm	7.6-2.1mm	3.5-1mm

15-4.2mm

10-2.8mm

4.6-1.3mm

Order #	Description
DSZ-70	DSZ-70 Binocular
DSZT-70	DSZT-70 Trinocular



#### DSZ-70

Binocular stereo zoom body with 10x wide field eyepieces, Rubber eye guards and dust cover 17



Trinocular stereo zoom body with 10x wide field eyepieces, Rubber eye guards and dust cover



#### NSW Series Stereo Microscopes

Configure Your Own Custom Microscope System @ www.aveninc.com



Dual Magnification of 6x & 20x, 10x & 20x, 10x & 30x and 20x & 40x bodies available

Single Magnification of 10x or 20x bodies available

10x Wide Field Eyepieces standard (field number 23)

Field of View: 38.3mm (1.50") at 6x, 23mm (0.91") at 10x, 11.5mm (0.45") at 20x, 7.6mm (0.30") at 30x and 5.7mm (0.22") at 40x

Order #	Description				
NSW-1	Single 10x Stereo Body				
NSW-2	Single 20x Stereo Body				
NSW-20	Dual Magnification 10x & 20x Stereo Body				
NSW-30	Dual Magnification 10x & 30x Stereo Body				
NSW-40	Dual Magnification 20x & 40x Stereo Body				
NSW-620	Dual Magnification 6x & 20x Stereo Body**				

 \* Each Body comes with Wide Field 10x eyepieces Rubber Eye Guards and dust cover

\*\* NSW-620 will not work with stand T



Large stage to accommodate large parts (220mmx284mm). A long life and low temperature 9W fluorescent lamp is used for the built-in incident light. **Magnification: 10x & 30x** 

Order #	Description
26800B-361	NSW-30PF Microscope



Features a large stage to accommodate large parts (220mmx284mm). For illumination, we recommend our fluorescent ring lights or our fiber optic illuminator with our annular ring light. If an auxiliary lens is not used a ring light adapter will be required to install the fluorescent ring light or the annular ring light. **Magnification: 10x & 30x** 

Order # Description 26800B-362 NSW-30P Microscope

#### AVEN

## **Preconfigured Systems**

Shown below are some of our popular systems or you can configure a system to match your application. **Configure a system online at www.aveninc.com** 

Stand Systems



Order #

26800B-305

#### Model DSZ-44P

DSZ-44 Stereo Zoom Binocular Microscope 10x to 44x, with 10x eyepieces. Mounted on Stand P. For illumination we recommend fluorescent or LED Ring Lights or our fiber optic illuminators.

Stand base is 220mm x 284mm



#### Order #

26800B-371

#### Model SPZ-50PFM

SPZ-50 Stereo Zoom Binocular Microscope 6.7x to 50x, with 10x eyepieces. Mounted on Stand PFM. Has built in 9W Fluorescent ring light.

Stand base is 220mm x 284mm





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Order # 26800B-370

SPZ-50 Stereo Zoom Binocular Microscope

6.7x to 50x, 10x eyepieces, 0.5x lens, Ring Light Adapter, and LED Ring Light with Intensity Control. Mounted on our Double Arm Stainless Steel Ball Bearing Boom Stand.



Order # 26

26800B-369

#### SPZT-50 Stereo Zoom Trinocular Microscope

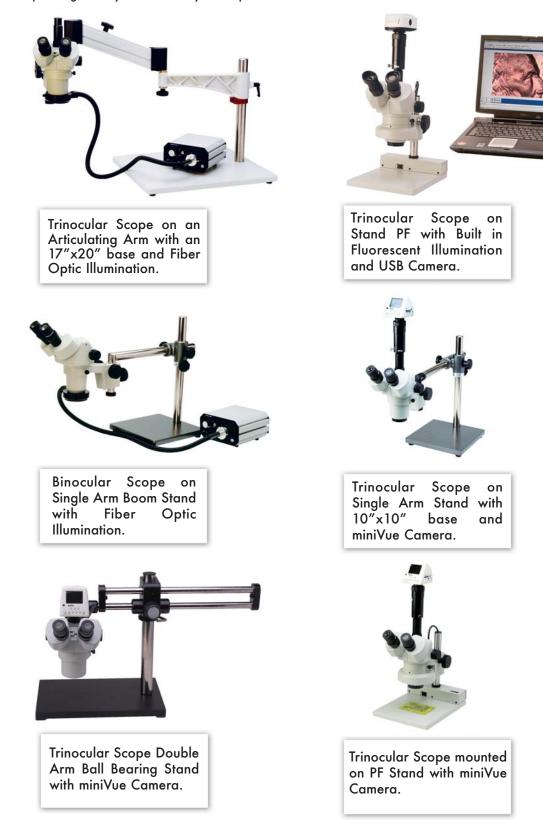
6.7x to 50x 10x eyepieces, 0.5x lens, Ring Light Adapter, Fiber Optic Illuminator with Annular Ring Light, USB Infinity 1, 1.3 Megapixel Camera with Infinity Image Analysis Software. Mounted on our Double Arm Stainless Steel Ball Bearing Stand. Computer not included. **Preconfigured Systems** 

Shown below are some of our popular systems or you can configure a system to match your application. **Configure a system online at www.aveninc.com** 

#### Examples of other Popular Systems

Systems shown below can be ordered using individual part #s. Call us, we can help configure a system to meet your requirements





## **Optional Accessories**

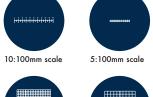
Eyepiece Lenses and Rubber Eye Guards

	Order #	Description
awax awax	26800B-444	<b>DSW-5X eyepieces</b> for DSZ-44, DSZT-44 and NSW series bodies. F.N. 22.5
have have	26800B-446	<b>DSW-5XZ eyepieces</b> for DSZ-70 and DSZT-70 series bodies, F.N. 20.
	Order #	Description
	26800B-441	<b>DSW-10X eyepieces</b> for DSZ-44, DSZT-44 and NSW series bodies. F.N. 23.
	26800B-448	<b>DHW-10X eyepieces</b> for SPZ-50 and SPZT-50 series bodies. F.N. 23.
	26800B-445	<b>DSW-10XZ eyepieces</b> for DSZ-70 and DSZT-70 series bodies. F.N. 20.
	Order #	Description
	26800B-442	<b>DSW-15X eyepieces</b> for DSZ-44, DSZT-44, DSZT-70, DSZT-70 and NSW series bodies. F.N. 15
	26800B-449	DHW-15X eyepieces for SPZ-50 and SPZT-50 series bodies. F.N. 15.
	Order #	Description
	26800B-443	<b>DSW-20X eyepieces</b> for DSZ-44, DSZT-44, DSZ-70, DSZT-70 and NSW series bodies. F.N. 11.4
	26800B-450	<b>DHW-20X eyepieces</b> for SPZ-50 and SPZT-50 series bodies. F.N. 11.4.
	Rubber Ev	/e Guards
apieces listed above	Rubber Ey Order #	
repieces listed above re sold in pairs only.		Rubber Eye Guards for DSW eyepieces

#### Focusing Eyepiece 1 Ox with Reticle

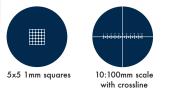


Order #	Description
26800B-455	10x with 5:100mm scale
26800B-456	10x with 10:100mm scale
26800B-457	10x with 20 x 20 0.5mm squares
26800B-458	10x with 10 x 10 1mm squares
26800B-459	10x with 10:100mm scale with cross line





20x20 0.5mm squares 10x10 1mm squares



\*Above eyepieces are for the DSZ/NSW series bodies.

To order focusing eyepieces for the SPZ Series bodies, please **add -10** to the end of the above mentioned part numbers.

**Optional Accessories** 

#### Auxilary Objective Lenses

		Order # 26800B-461	Description Auxiliary lens 0.5x		
22	0.5×	26800B-462	Auxiliary lens 0.75x		
₹Ŷ		Order #	Description		
ere		26800B-463	Auxiliary lens 1.6x		
0 S C N	1.6×	26800B-464	Auxiliary lens 2x	*	Please note 0.5x lens
Stereo Zoom Microscopes		Ordar #	Description		cannot be used with SPZ series bodies with stand P and PF. 0.5x lens cannot
S E	$\bigcirc$	26800B-465	Lens Cover for protection of objectives		be used for stands T and
		Order #	Description	**	TL and with NSW series with stand P 2x lens cannot be used
		26800B-460	Adapter to mount Fluorescent Ring Light or Fiber Optic Annular Ring Light		with the DSZ and NSW series bodies.

#### Camera Adapters



\* Various Adapters are available for mounting Digital Cameras. Please call with the type of camera you want to use with our trinocular microscopes.

#### Gliding Stages

	Order #	26800B-475		Order #	26800B-476
	Stage size 350mm x 250mm x 103mm. Base Size: 520mm x 480mm. Range of movement 360mm x 418mm.			Stage size: 300mm x 210mm 40mm. Base Size 250mm x 250mm. range of movement 250mm x 250mm.	
	Order #	26800B-471		Order #	26800B-474
	micrometers. Mi (MHN1-25). Siz	ith attachments for tutoyo No. 150-192 e 114mm x 114mm. nent 25mm x 25mm.			e 135mm. Range 25mm x 25mm.
	Order i	Descrip	ition		
	26800B-472	Size 140mm x 114	mm. Range of movement 94mm x 66mm.		

## Illumination

#### Standard Frequency Fluorescent Ring Lights



26200B-207 to 208

Aven fluorescent ring lights are designed for applications requiring a high quality illuminator. Provides 360° shadow free illumination. Our reflector housing is cast from high quality aluminum alloy (except for model 26200B-201) for durable and cool operation. Operates at 115V AC.

Order #	Description
26200B-201	Fluorescent Ring Light Economy, 8 watt Lamp
26200B-202	Fluorescent Ring Light Standard, 17 watt Lamp
26200B-203	Fluorescent Ring Light with UV Lamp
26200B-206	Fluorescent Ring Light ESD Safe, 17 watt Lamp
26200B-207	Fluorescent Ring Light with Focus mount for DSZ & NSW Series
26200B-208	Fluorescent Ring Light with Focus mount for SPZ Series

#### White LED Ring Light w/Brightness Control



Designed to be used with standard microscopes and video lenses. Provides a stable bright	
light with 54 LEDs. These long life LEDs operate at very low temperature, are flicker free	
and do not change color over time. 110V	

26200B-210	White LED Ring Light with Brightness Control	
Order #	Description	

#### White LED Ring Light w/Brightness & Sector Control

Designed to be used with standard microscopes and video lenses. Has a 7 step brightness control feature and four lighting modes, 1/4, 2/4, 3/4, and Full. Excellent for applications requiring a high degree of lighting control. Incorporates 60 Long Life LEDs that are flicker free and operate at low temperature and do not change color over time. 110V.



26200B-211	White LED Ring Light with Brightness & Sector Control	
Order #	Description	

#### Model L Fiber Optic Illuminators



#### Features

- High output 150 Watt Lamp
- Variable Intensity Control
- Approximately 200-2000 Hours Lamp Life (not guaranteed)
- Supplied with Ring Light (39") or Double Pipe Light (19.5")
- Illuminator with double pipe light has a focusing lens included, providing an illumination distance of 20-200mm and an illumination area of 10-40mm

#### Input Voltage 110VAC

Dimensions: 1	1″x6.5″x5″	Weight: 9.6lbs.
Ordar #	Descri	ption
26200A-205	Model L Fib	er Optic Illuminator w/Ring Light
26200A-207	Model L Fibe Light & Focusin	<b>r Optic Illuminator</b> w/Double Pipe g Lens

26200A-207

#### Aven Inc. | 4595 Platt Road | Ann Arbor, MI 48108

Tel: 734-973-0099 | Fax: 734-973-0097 | www.aveninc.com

	Illuminat	ion		
	odel 150 Fib	er Optic Illun	ninator	
A Nicroscopes		Features High quality High output Variable inter Easy lamp of	5 ball bearing fan fo 150 watt bulb ensity control change ight Filters availab	or low noise and vibration le
0,0	Specifications	3	Order #	Description
<sup>o</sup> N			26200A-200	Model 150 Fiber Optic Illuminator
om	Lamp life		26200A-212	Adapter for 1.125" ID Ring Light
		7.5 lbs. (3.4 kgs.) 7.0" x 7.5" x 6.5"		
Fil	oer Optic Rir			
1 12		Features		
		Uniform Lighting		Accepts polarizer and darkfield adapters
		Streamlined Design		Black anodized aluminum housing
○ 360° shadow free illumination ○ Crimped Stainless Steel terminations				Crimped Stainless Steel terminations
		3 thumb screw for ea	isy mounting	36" cable length
			Order #	Description
			26200A-402	Ringlight 2.31" ID Can be mounted on all SPZ, DSZ and NSW Series Microscopes
	V		26200A-403	Ringlight 1.125"ID Can be mounted on Video Lenses

#### Fiber Optic Goosenecks



These light guides are constructed with high quality glass fiber optics and provide the highest degree of adjustable and interference free uniform illumination of focused white light. Focusable lenses allow for variable spot light adjustments making these ideal for situations where intense illumination is required. Our light guides are offered in a standard stainless steel obedient sheathing which offers "stay-put" positioning.



Description

#### Fiber Optic Area Backlights

These high-output, uniform backlights are made of the highest quality components and offer a sleek, slim design, which makes them highly versatile for mounting in tight spaces. The housing consists of black, electrocoated steel and the sheathing is PVC covered metal hose. Backlights have a ±10% uniformity. 36" long cable length.

Order #	Description
26200A-532	FOA Backlight 4" x 4" (101.6 x 101.6mm)

## **Digital Color Camera**

miniVue Camera



World's first digital color camera for microscopy and video inspection applications with a built in 2" LCD Screen and instant image capture feature with the built in SD Card. A PC is not required for image capture or image viewing, saving bench space and money. A 2.0 USB outlet is provided to connect to a PC.

Can be used with **any microscope** or video lens with a C-Mount

#### Features

- 3.1Megapixel Camera
- Built in High Resolution 2" Screen
- Full Digital Signal Processing
- Capture Images and Video on the built in SD Card. Transfer to a PC at your convenience
- Connect via USB to a PC or Printer
- 🔵 Friendly User Interface
- Crosshair feature for location and measurement
- TV Out allows the connection of an external LCD monitor for detailed viewing
- Wireless and wired USB Shutter control
- Many stand alone features on camera (see www.aveninc.com for more details)

#### Specifications

Sensor Resolution Maximum Resolution Sensor Type	8 megapixels
Frame Rate	28 fps at TV/PC Out
LCD Screen Size	2"
Memory Card	SD/MMC Card
TV Output	
USB Interface	
Controller	Remote and USB
Picture Format	jpeg
Video Format	mpeg4
Printer Support	Pictbridge and DPOF
Mount	C-Mount
Power Supply	DC 12V, 1.5A

Order #

26100-230

Description miniVue Camera

imera

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Aven Inc. | 4595 Platt Road | Ann Arbor, MI 48108 Tel: 734-973-0099 | Fax: 734-973-0097 | www.aveninc.com

CCD &CMOS	Camera	S
High Resolution D	SP CCD C	Color Cameras
26 Nicroscopes	Our color cameras processing system to These cameras are in Highlights CCD Total Pixels: 8	use single integration type CCD complemented by a digital signal provide both high quality images and a host of compensation functions. deal for machine vision, video inspection and microscopy applications. R81(h) x 508 (v) /L / 580 TVL Enhanced 26100-102 has Y/C and Composite Outputs /L / 580 TVL Enhanced C & CS Mount Detail Specs at www.aveninc.com
	Order #	Description
0 O IT	26100-100	1/3" CCD Camera with power supply
	26100-102	1/2" CCD Camera with power supply

#### Infinity 1 CMOS Color Camaras



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The Infinity CMOS USB 2.0 cameras are designed to be a cost effective, versatile solution for a variety of microscopy imaging applications. Features include auto white balance, full exposure control, programmable gain, sub-windowing and region of interest. It is excellent for documentation and archiving applications.

Highlights

- 1 and 3 Meagpixel. 6 also available upon request
- Perfect for documentation and archiving applications

C-mount

Infinity Analyze Software Included. For more details of this software please visit our website at www.aveninc.com

Fast frame rate

Order #	Description	Specifications			
26100-215	Infintiy 1 CMOS 1.3 Megapixel Camera	Megapixel	Resolution	FPS	Sensor
		1.3	1280 x 1024	15	1/2" CMOS
26100-216	Infintiy 1 CMOS 3.1 Megapixel Camera	3.1	2040 x 1536	6	1/2" CMOS

#### Infinity 2 CCD Color Cameras



Declar # Description

Equipped with a high quality Sony CCD Sensor, these USB 2.0 cameras offer excellent sensitivity, high dynamic range and a 12-bit digital output. Features include binning, auto white balance, full exposure control, programmable gain, sub-windowing and region of interest. It is ideal for higher-end scientific, medical, ophthalmic and life science applications. Highlights

- 1, 2 and 3 megapixel resolution
- 🔵 Higher dynamic range for quantitative analysis 🔵 Infinity Analyze Software Included. For more
- 🔵 Fast frame rate
- Low noise electronics

#### C-Mount

Infinity Analyze Software Included. For more details of this software please visit our website at www.aveninc.com

#### Soecifications

	23331231211				
26100-220	1.4 Megapixel CCD Camera	Megapixel	Resolution	FPS	Sensor
26100-221	2.0 Megapixel CCD Camera	1.4	1390 x 1040	15	1/2″ CCD
20100-221		2.0	1616 x 1216	12	1/1.8" CCD
26100-222	3.3 Megapixel CCD Camera	3.0	2080 x 1536	5	1/1.8" CCSD

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Stereo Zoom Microscopes

## **CCD & CMOS Cameras**

#### Infinity Lite Camera



INFINITY lite is a compact, affordable microscopy camera that delivers outstanding image quality and excellent value. Highlights include live video preview and real-time focus for the efficient capture of optimal images, an intuitive user application for camera control, full integration to popular third-party imaging applications through our TWAIN drivers, USB 2.0 interface, standard C-mount and compact design for trouble-free installation, and one standard cable for power and data to minimize clutter. As with all INFINITY cameras, no costly framegrabber is required.

#### Highlights

- 1.5 megapixel camera
- High-speed USB 2.0 interface eliminates a framegrabber and facilitates ease of installationon both laptop and desktop computers
- INFINITY CAPTURE software application included
- Mac compatible

On-board image processing of the INFINITY lite's progressive scan 1.5 megapixel image sensor results in accurate color fidelity

Full color sub-windowing allows for rapid, focus and scanning of samples: 15 fps at full 1440x1080 resolution and 60 fps at 640x480 resolution

🔵 8-bit pixel data

Rugged dependability and versatility

Description

Dr	der	#	
261	00-212		

Infinity Lite Color Camera 1.5 Megapixel

## **LCD Monitors**



Produces only the sharpest and most brilliant color images. Featuring easy to use OSD controls and built in speakers. You will find this monitor both easy to use and a pleasure to look at. This monitor offers a maximum resolution of 1280 x 1024 pixels and a refresh rate up to 75KH translating into a flicker free monitor that is easy on your eyes.

Comes with

- 12V DC adapter /power chord
- D-Sub 15 pin VGA connector cable
- Audio Cables

#### Inputs

Video Input: 15-pin D sub/ AV/ S-Video

Order #	Description	
26700-402	17" LCD Monitor	
26700-404	15" LCD Monitor	

#### Focus Mount





Focus mount to hold our SPZ, DSZ and NSW Series bodies. Rack & Pinion mechanism allows for precise focusing over a 55mm travel. Coarse focus mechanism incorporates a slip clutch and tension adjustment. Fits a 25mm mounting post and has an opening to accept bodies of diameter 74mm (2.9")

Order #	Description
SCW-PA	Focus Mount

#### Stand Type PF with Focus Mount and Built in Fluorescent Light



#### Features:

- Large stage 220mm(8.66") x 284mm (11.18") to accommodate a variety of parts
- Built in 9 watt low temperature fluorescent light in focus mount Length of Post 250mm (9.84")

Order #	Description
Stand PF	For DSZ-44, DSZT-44, and NSW Series Bodies
Stand PFM	For SPZ-50 and SPZT-50 Series Bodies
Stand PFL	For DSZ-70 and DSZT-70 Series Bodies

#### Pole Type Stand with Focus Mount

	Features: Large stage 220 variety of parts	mm (8.66") x 284mm (11.18") to accommodate a 50mm (9.84")
-	Order # Stand P	Description For SPZ, DSZ, and NSW Series Bodies

#### Stand Type T and L with Focus Mount



#### Features:

- Transmitted and Incident Lights are built in the Type T stand as shown
- Type T stand has Fluorescent 9 watt incident light and Tungsten Transmitted light
- Base 160mm x 219mm (6.30" x 8.62")
- Stage Plate: Frosted glass plate (diameter 80mm (3.15")) and Frosted blue filter (diameter 37mm ( 1.46"))
- Stand Type L same as stand T but Incident Light is Tungsten (not shown)

Rack and Pinion Focus Mount, tension control pin included

Order #	Description
Stand T	For DSZ-44, DSZT-44, and NSW Series Bodies
Stand L	For DSZ-44, DSZT-44, and NSW Series Bodies

#### Standard Boom Stand with Mounting Post



#### Features:

- Perfect for stationary video and microscopy applications
- 🔵 Heavy Duty Steel Base 10" x 10" x 0.75" (254mm x 254mm x 19mm ), 21lbs
- 16" (406mm) Vertical Post with 16" (406mm) Horizontal Post. Diameter of Post and Bar 1-3/16" (30.16mm). Nickel plated
- Safety Clamp Included
- Mounting Post with tilt feature for Focus Mount SCW-PA
- Sturdy and stable
- Requires focusing mount to mount microscope bodies

Order #

26800B-520

Description

Standard Boom Stand with Mounting Post

#### Deluxe Boom Stand with Mounting Post



#### Features:

- Perfect for stationary video and microscopy applications especially where vibrations can disrupt your work
- Heavy Duty Steel Base 10" x 10" x 0.75" (254mm x 254mm x 19mm), 21lbs or 17" x 20" Heavy Duty Base , 27lbs to accommodate large parts on base
- 🔵 16" (406mm) x 1-1/2" OD (38mm ) stainless steel vertical post
  - 18" (457mm) x 1-1/2" OD(38mm) aluminum horizontal post
  - Post with tilt feature for Focus Mount SCW-PA included
  - Quick release red anodized aluminum safety clamp
- Optional 25" Vertical Post and 25" Horizontal Bars available
- Optional table mount and C-clamp mounts available

#### Order # Description **Deluxe Boom Stand** with Tilt Mounting Post and $10^{\prime\prime} \times 10^{\prime\prime}$ base 26800B-525 Deluxe Boom Stand with Tilt Mounting Post and 26800B-530 17" x 20" base

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icroscopes ereo Zoom

#### Standard Dual Arm Ball Bearing Boom Stand with Mounting Post

M	Features:
30	Stability of the standard boom stand but with ultra smooth movement of a ball bearing slide
	Great for inspection applications where magnification adjustment and the ability to move across a specimen are important
	—— 💭 🛑 Heavy duty base 11" x 10" x 1.25" (285mm x 260mm x 32mm), 21lbs
	Main Vertical post 15" (380mm) long, extension post 9" (225mm) long. OD 1-1/2' (37mm) for a total post length of 24"
ဗိုဂ္ဂ	Horizontal Post 22.5" (570mm) long from end to end.
es m	Safety Clamp included
	Post with Tilt Feature for Focus Mount SCW-PA included
	Order # Description
	26800B-535 Double Arm Ball Bearing Boom Stand

#### Deluxe Dual Arm Ball Bearing Boom Standing with Mounting Post





- Ultra smooth movement of a ball bearing slide
- Two types of bases available 10" x 10'(254mm x 254mm) and 17" x 20" (432mm x 508mm) Weights 21 lbs and 27 lbs respectively
- 16" (406mm) Stainless Steel Vertical Post (OD 1-1/2"). Other sizes available on request
- Thomson linear ball bearing and dual hardened stainless steel shafting for the horizontal axis. Total horizontal motion 12-1/2" (317.5mm)
- Safety Clamp included
- Optional table mount clamps and C-Clamps available
- Post with tilt feature for focus mount SCW-PA included

Order #	Description
26800B-540	<b>Deluxe Dual Arm Ball Bearing Boom Stand</b> with Mounting Post and 10" x 10" base
26800B-545	<b>Deluxe Dual Arm Ball Bearing Boom Stand</b> with Mounting Post and 17" x 20" base



#### Lift Articulating Arm Boom Stand

#### Features:

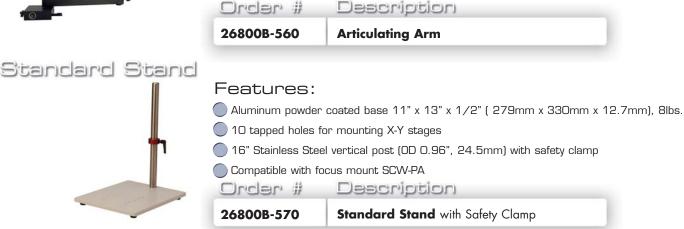
- Designed to allow maximum freedom of movement
- Perfect for video and lighting applications that require a lot of movement
- 🔵 Flexible arm can easily be adjusted into hard to reach locations and out of the way again
- Various mounts and bases available to suit your application
- Vertical Post 16" (406mm). OD 1-1/2"
- Lift Articulating boom arm approximately 30"(762mm) horizontal reach, and approximately 15"(381mm) vertical travel ± 40° movement from horizontal
- Adjustable gas spring counter balance allows "free floating" of O-20 lbs. Ambidextrous vertical position lock. Gas spring provides controlled "safe" lift and decent
- Mount post with tilt feature included for focus mount SCW-PA
- Safety Clamp included

Order #	Description
26800B-550	Lift Articulating Arm Boom Stand with Table Clamp
26800B-555	Lift Articulating Arm Boom Stand with 17" x 20" base

#### Articulating Arm

#### Features:

- Adjustable, counter-balanced articulating arm moves easily up or down through 14.5".
- Heavy-Duty construction allows for maximum of 20 lbs of weight.
- Wide range of horizontal and vertical movements. Scanning area can reach 3"
- Adjustable counter-balanced arm which allows easy, hand guided up and down movement, works in spaces where a conventional boom stand will not fit.



Ergo Stand

#### Features:

- Aluminum powder coated base 13" x 13" x 1/2", 8lbs.
- (330mm x 330mm x 12.7mm) with Black & White glass plate
- 16" Stainless Steel vertical post (OD 0.96", 24.5mm) with safety clamp
- Compatible with focus mount SCW-PA

26800B-575	Ergo Stand with Safety Clamp
Order #	Description







## hop Microscopes

#### Shop Microscope 40x and 100x

32 0 A 0 9.

croscop

Designed for quick and precise measurements in laboratories, workshops and assembly lines. Comes with a dual scale reticle graduated in both inches and millimeters. A turn of the eyepiece brings the reticle in sharp focus. No calibration is needed. Reticle can be rotated for measurement in any direction. Dual knobs with rack and pinion focusing lets you quickly refine the image. Includes a fully adjustable battery operated penlight illuminator. Scope has a cutaway opening at base for subject manipulation.

Shop Microscope 40x	Shop Microscope 100x
40X (4.5 mm)	100 (1.8 mm)
4x	10x
10x with Scale	10x with Scale
3.0 mm/0.1"	1.0 mm/0.05"
<b>n</b> 0.02 mm/0.001"	0.01 mm/0.001"
15 mm	5.5 mm
200 mm	200 mm
65 mm	65 mm
570 g	580 g
Penlight	Penlight
Description	
Shop Microscope 40x with 3.0mm/0.1" Scale	
-532 Shop Microscope 100x with 1.0mm/0.05" Scale	
	40X (4.5 mm) 4x 10x with Scale 3.0 mm/0.1" 0.02 mm/0.001" 15 mm 200 mm 65 mm 570 g Penlight Description Shop Microscope 402

#### Specifications

#### Pocket Microscopes 25x



"Pen Size" powerful direct measuring pocket scope for quick, close examination. Excellent for detecting flaws or imperfections, surface measurements, examination of fibers, print, etc.

Comes with a measuring metric glass reticle. Has beveled opening for gathering and focusing light. Scope has an aluminum case with a satin finish and pocket clip. Furnished in a vinyl sleeve.

Order #

Description

26800C-533

Pocket Microscopes 25x

#### Specifications

Magnification	Field of View	Scale Calibration	Measurement Range	Length	Diameter
25x	3.24mm	0.05mm	0-3mm	127mm (5")	11.10mm (7/16")

**Shop Microscopes** 

#### Illuminated Pocket Microscopes



Perfect carry-with microscope. Ideal for on site detailed examination of small areas and objects. Useful for engineers, tool makers, quality control inspectors, field researchers etc.

Has a built in light source. In addition a clear acrylic stand allows ambient light to the object under examination.

Operates on two AA batteries not included. Case Included.

Order #	Description
26800C-534	Illuminated Pocket Microscope 40x w/Scale: Measuring Range 4mm, Graduation: 0.1mm
26800C-536	Illuminated Pocket Microscope 20x
26800C-538	Illuminated Pocket Microscope 30x w/Scale: Measuring Range 4mm, Graduation 0.1mm
26800C-540	Illuminated Pocket Microscope 50x w/Scale: Measuring Range 4mm, Graduation 0.1mm

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26800C-536 to 540

## **Loupes & Magnifiers**

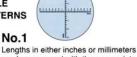
#### Loupes with Scales

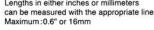


Loupes with reticles for measurement and inspection. Comes with ReticleScale No.1 and Vinyl Case. Optional reticle scales are available.

Ordar #	Description	
26001	Loupe with Scale 7x	
26002	Loupe with Scale 10x	
26003	No. 1 Reticle Scale	
26004	No. 2 Reticle Scale	
26005	No. 3 Reticle Scale	
26006	No. 4 Reticle Scale	

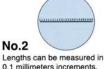
SCALE PATTERNS







No.3 Angles, redius, diameters, widths, etc. can be measured mainly in inches.



0.1 millimeters increments. Maximum:16mm



Angles, redius, diameters, widths, etc. can be measured mainly in millimeters.

## Loupes & Magnifiers

#### Inspection Eye Loupes

34 Stereo No 26041-43 Great for close inspection. Rests comfortably in the eye socket. Lightweight yet sturdy. Plastic mount. Our 8x, 6x and 4x loupes come with rubber cushion for additional comfort.

Drder # 26034		
20034	10x Eyeloupe 1" WD	
26041	<ul><li>8x EyeLoupe with Cushion 1" WD</li><li>6x EyeLoupe with Cushion 2" WD</li></ul>	
26042		
26043	4x EyeLoupe with Cushion 2.5" WD	

#### Inspection Eye Loupes

26051

Fixed focus magnifiers with clear acrylic bases that permit ambient light to illuminate subject for clear bright viewing.

Order #	Description		
26051	10x Inspection Magnifier with 1" Diameter Lens		
26052	<b>3x Inspection Magnifier</b> with 3" Diameter Lens		

26052

#### Swing Out Inspection Loupes



Order #	Description		
26010	10x Hex Loupe 18mm Diameter Triplet Lens		
26011	<b>10x Loupe</b> 16mm Diameter Triplet Lens		
26012	<b>20x Loupe</b> 12mm Diameter Triplet Lens		

#### Giant Folding Loupe



Double glass lens provides a large viewing area. Lens diameter is 1-3/4" and has a magnification of 6x.

197		10.0		 1
cl=	100	188		1:

26013	Giant Folding Loupe, 6x
Order #	Description

#### Magnifier with Clamp



Has an adjustable 2 1/2" diameter magnifying glass. Allows for close observation of work during soldering operation.

Order #	Description	_	
26000	Magnifier with Clamp		

## **Loupes & Magnifiers**

### Magnifier with Tweezers



Magnifying glass mounted onto stainless steel, anti acid, anti magnetic tweezers. Lens diamter is 1.25" and the power is 3x. Available with pointed or curved tweezer tips. Excellent for working on small parts that require magnification.

Order #	Description
26030	<b>3x Magnifier</b> with Curved Tips
26031	<b>3x Magnifier</b> with Straight Tips

## Headband Magnifier with LED Illumination



Comes with 1.5x, 2x, 2.5x and 3.5x clip-on lenses. LED light provides 50,000 hours of illumination. Light operates with 3 AAA batteries (not included).

26221	Headband Magnifier with LED Illumination
Order #	Description

## Headband Magnifier with Light



Optivisor



Comes with 1.2x, 1.8x, 2x and 3.5x clip on lenses. Features a 2.2v bulb and operates with 4 AAA batteries (not included).

26222	Headband Magnifier with Light
Order #	Description

Soft pliable wide headband for ultimate comfort. Easily adjusts to any head size. Self locking, remains in place. Glass lens.

Order #	Description		
26101	Magnification: 1-1/2x Working Distance: 20" (#2)		
26102	Magnification: 1-3/4x Working Distance: 14" (#3)		
26103	Magnification: 2x Working Distance: 10" (#4)		
26104	Magnification: 2-1/2x Working Distance: 8" (#5)		
26105	Magnification: 2-3/4x Working Distance: 6" (#7)		
26106	Magnification: 3-1/2x Working Distance: 4" (#10)		
Accessorie Ordar #	s Description		
26107	Replacement Lens #2 (1-1/2x)		
26108	Replacement Lens #3 (1-3/4x)		
26109	Replacement Lens #4 (2x)		
26110	Replacement Lens #5 (2-1/2x)		
26111	Replacement Lens #7 (2-3/4x)		
26112	Replacement Lens #10 (3-1/2x)		
26113	Auxiliary Lens 2-1/2x		

D Stereo Zoom Microscopes

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## **Magnification & Task Lighting**

Aven's Magnification & Task Lighting products are for the demanding professionals who need the flexibility to view objects from a variety of angles.

#### **Magnifying Lamps**

Our magnifying lamps enable users to magnify objects up to four times. Some of the features among products within this line also include lighting that is positioned so that shadows will not hinder your ability to inspect and analyze.

#### **Task Lighting**

All of our task lighting products come equipped with a flexible, adjustable arm that allows users to direct light where they need it most for assignments in such areas as manufacturing, assembly and inspection.

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AVEN

## **Magnification Lighting**

## ProVue Magnifying Lamps

Our most popular magnifying lamp is designed for professionals. It is equipped with an ultra-bright 22-watt circular fluorescent bulb and a Crystal Clear 5", 3-diopter (1.75x) glass lens to provide 360° distortion free viewing. Metal housing is mounted on a 45" spring balanced arm that stays set in any position. Lamp operates at 115V-AC and comes complete with mounting clamp and a 5-foot power cord. 1 year warranty (excludes bulb).

- **Optional Accessories**
- Weighted Base
- Swing-Away Lens 5 diopter (2.25x)
- Auxiliary Lens 3 diopter (1.75x)



Swing-Away Lens

iliary Lens

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#### Order # Description

26501-SIV	ProVue Magnifying Lamp-Ivory-3 Diopter
26501-WB	Weighted Base
26501-B22	22-watt Replacement Bulb
26501-SLA	Swing-Away Lens – 5 Diopter (2.25x)
26501-AL3	Auxiliary Lens – 3 Diopter (1.75x)

## ProVue Deluxe Magnifying Lamp 'Features a Heavy Duty Spring Balanced Arm'



Designed for demanding professionals. It is equipped with an ultra-bright 22-watt circular fluorescent bulb, a Crystal Clear 5", 3-diopter (1.75x) lens, mounted on a silvergrey metal housing. The fluorescent bulb is protected with a clear plastic diffuser/splash guard. The heavy-duty adjustable arm with tempered steel springs allows for easy positioning. When fully extended the arm has a reach of 35". Comes with a mounting clamp. Can also be mounted directly on the working surface. Operates at 115V-AC and comes with a 5-foot power cord. 1 year warranty (excludes bulb).

- **Optional Accessories**
- Swing-Away Lens 5 diopter (2.25x) for total magnification of 8 diopter (4x)
- Auxiliary Lens 3 diopter (1.75x) for total magnification of 6 diopter (3.5x)





Swing-Away Lens

Ordar	#	Description

26501-DSG	ProVue Deluxe Magnifying Lamp-Silver
26501-B22	22-watt Replacement Bulb
26501-SLA	Swing-Away Lens – 5 Diopter (2.25x)
26501-AL3	Auxiliary Lens – 3 Diopter (1.75x)

# **Magnification Lighting**

## Maxi-Mag Magnifying Lamp



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Super large 7", 3-diopter lens gives you unrivaled field of view and work space. Comes with a powerful 32-watt circular fluorescent bulb. This lamp can show you things that you have never seen before! The lvory mar-resistant engineered plastic housing is mounted on a 45" spring balanced arm for easy positioning. Lamp operates at 115V-AC and comes complete with a mounting clamp and a 5-foot power cord. 1 year warranty (excludes bulb).

**Optional Accessories** 

Weighted Base

Swing-Away Lens – 5 diopter (2.25x) for total magnification of 8 diopter (4x)



Order #	Description

26503-SIV	Maxi-Mag Magnifying Lamp – Ivory
26503-B32	Replacement Fluorescent Bulb
25501-WTB	Weighted Base
25501-SLA	Swing-Away Lens – 5 Diopter (2.25x)

## Mighty Mag Magnifying Lamps



The Mighty Mag features a large  $7'' \ge 5.2''$ , 3-diopter (1.75 $\ge$ ), distortion free Crystal Clear lens mounted in a high tech style mar-resistant engineered plastic housing with dual light sources. The large, rectangular viewing area of the glass enables comfortable viewing with both eyes and provides shadow-free magnification with light coming from both sides. The housing is mounted to an internal spring balanced arm with a 30'' reach that will set in any position. Unit operates at 115V-AC and comes complete with mounting camp and a 5-foot power cord. 1 year warranty (excludes bulb). Available in Ivory and Black (ESD safe).

### Optional Accessories

Swing-Away Lens – 5 diopter (2.25x) for additional magnification



Swing-Away Lens

Order #	Description
26505-SIV	Mighty Mag Magnifying Lamp – Ivory
26505-ESD	Mighty Mag Magnifying Lamp – Black
26505-B09	Replacement Bulb
26501-SLA	Swing-Away Lens – 5 Diopter (2.25x)
26506-BT4	Black Light Bulb

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## **Magnification Lighting**

MaxiVue Magnifying Lamp



The MaxiVue offers a fully adjustable magnifier lens (can be rotated) for full range inspection capabilities. Unnecessary slouching is eliminated. Three 9-watt compact fluorescent lamps provide two light levels: 27-watts from top and both sides of the magnifier or 18-watts of side-to-side lighting. Features a large 6.9"x4.2", 3-diopter (1.75x) Crystal Clear lens, mounted on a mar-resistant engineered plastic housing. The spring balanced arm has a 40" reach and stays in any position. Operates at 115V-AC and comes complete with a mounting clamp and a 5 foot power cord. 1 year warranty (excludes bulbs).

### **Optional Accessories**

Weighted Base

Order #	Description
25506-SIV	MaxiVue Magnifying Lamp – Ivory
26501-WB	Weighted Base
26505-B09	Replacement Bulb
26506-BT4	Black Light Bulb

## VuePlus Magnifying Lamp



VuePlus features a 4", 3-diopter Crystal Clear lens. Comes with a 60-watt incandescent bulb which provides "incident lighting" for viewing irregular work surfaces. Comes with a 30" spring balanced arm with a tension control knob at the arm joint and a table mounting clamp. Operates at 115V-AC.

Order #	Description	
26504-SBK	VuePlus Magnifying Lamp - Black	

## Task Lighting

## OptiVue Magnifying Lamp

OptiVue combines function and form in one small package. With a powerful 13-watt fluorescent bulb, an all capable 3-diopter lens and a highly flexible gooseneck, this small "goes anywhere" dynamo provides illumination and magnification wherever you need.

Order #	Description
26507-SBK	OptiVue Magnifying Lamp - Black-3 Diopter

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Magnification &Task Lighting



## Titan Halogen 150 Watt Taak Light

Provides clean and crisp light. Features a powerful 150-watt bulb mounted in a black metal housing. Comes complete with a 35" spring balanced arm with tension control and mounting clamp. Operates at 115V-AC.

Order #	Description	
26512-SBK	Titan 150-watt Task Light	

## Elumina 50 Watt Task Light

With a contemporary design, the Elumina task light allows you to direct light where you need it. Adjustable arm extends 23 inches from the weighted base. Lamp includes a 50-watt halogen bulb. Silver Satin Finish. Comes with a 5-foot power cord. Operates at 115V-AC.

Order #	Description	_
26511-SSL	Elumina 50-watt Task Light	

## Task Lighting

### Aurora Combo Lamp



Features a 9 1/2" shade with a 22-watt fluorescent and a 60-watt incandescent bulb. A 3-way switch permits selection of fluorescent or incandescent or both. A 42" adjustable spring balanced arm with tension control allows you to position the lamp exactly where you require. Ivory color. Comes with a mounting clamp and a 5-foot power cord. Operates at 115V-AC.

Order #	Description
26515-SIV	Aurora Combo Lamp

### Magna Fluorescent Lamp



Features a flexible 42" spring balanced arm supplied with two 15-watt fluorescent tubes that provide uniform light. 19" rectangular head features a handle that permits easy positioning. Comes with a mounting clamp and a 5-foot power cord. Operates at 115V-AC.

Ordar #	Description
26516-SIV	Magna Fluorescent Lamp

### Magna Deluxe Fluorescent Lamp



A whole new class of elegant looking fluorescent light from Aven designed to give you crisp, flicker-free lighting, and a maximum uniformity together with a larger lighting area. The 20" lighting head is totally enclosed and features a 55 watt fluorescent bulb. Features a built-in electronic ballast for increased lumen.

The heavy duty industrial grade adjustable arm with tempered steel springs and tension control knobs allows you to easily position the lamp where you want it. The head swivels 310° and tilts 210° for maximum adjustment. Comes with a mounting clamp and a 5 ft power chord. Operates 115V-AC. 1 year warranty (excludes bulb).

26516-D155	Magna Deluxe 20″ Fluorescent Lamp
Order #	Description



### Sirus Quartz Halogen Task Lights



Excellent for all types of applications requiring high intensity illumination, such as manufacturing, assembly, and inspection. Round tube arms are vibration resistant but can be adjusted to provide the lighting angle you require (Also available with a flex arm). Lamp Head can be moved in up and down direction. 20 Watt Halogen bulb included. Can accept up to 50 watt bulb. C-Clamp is included. Optional Magnetic Base also available. Industrial Grade Quality. 1 year warranty (excludes bulb).

Order #	Description	
26521	Short Arm Task Light	
26522	220mm (8.66") Arm Task Light	
26523	440mm (17.32″) Arm Task Light	
26524	800mm (31.5″) Arm Task Light	
26525	520mm (20.5") Flex Arm Task Light	
26520-MB	Magnetic Base	

## **Precision Tools**

To provide years of worry-free service, we have selected only the best tools for our kits and provide them with a lifetime guarantee.

Our tool kits range from 22 to 163 pieces and can be used in such fields as electronics, engineering and any other task that requires precision assembly.

Tools can also be purchased individually from the following available categories:

#### Ergo Pliers & Cutters

Featuring scientifically designed handles to provide exceptional comfort, this product is made from stainless steel with a nonreflective black finish. Dual-leaf springs, a box joint construction for exceptional durability and induction-hardened cutting edges are among the other attributes.

#### **Precision Tweezers**

Designed to meet applications in areas such as electronics, aircraft and aerospace, miniature assembly, precision engineering, optics and microscopy, these tools come in a variety of materials and can be custom made.

#### Alignment Tools, Knives & Blades, Scissors, Desoldering/Soldering Tools

Featuring a range of speciality "hard to find" tools for assembly and field service applications.

#### **Precision Screwdrivers**

Specifically designed for electronics, our precision screwdrivers include such features as a black tip, nylon engineered plastic, duplex component handle designed for rapid rotation, greater comfort and control, fast turning swivel caps and imprinted sizes on the handle for easy selection.

#### Crimping Tools & Wire Strippers

Featuring a broad selection to meet all your data com requirements. Special dies and crimpers are also available on request.

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# Tool Kits



#### Ergonomically designed screwdrivers

Included in all Aven Kits for fatigue free work and high torque. The fine textured grip has excellent anti-slip properties, and the blades are made from chrome vanadium steel hardened throughout for long life.

#### Lifetime Warranty on Tools

We have selected only the best tools for our kits to give you years of worry free service. Should any hand tool from your kit fail under normal use, we will replace it free of charge.



#### Rugged Hard Cases

High density polyethylene for outstanding toughness and attractive styling. The thick walls of our cases are reinforced with a full length piano hinge and a continuous tongue-and-groove aluminium valance. Cases come in a rich pebble grain finish that absorbs scratches without chipping or fading. (1 Year Warranty)



Our soft and Durable Soft Cases Our soft cases are manufactured from tough ballistic nylon. They are lightweight, yet strong, featuring oversized self healing zippers, large pockets for all your extras, nylon web handles and shoulder straps.

## **Tool Kits**

163-paice Master Field Service Kit



This kit has all the essential tools required by field service professionals and in-house technical support groups for onsite support of electronic equipment. Built-in cart for easy transportation.

Dimensions (LxWxH) 14.5"x18"x10.5"

Weight 28lbs. (with tools)

#### TOOLS:

- Alignment Tool, 2-piece
- Brush
- Bit Set, 33-piece Security
- Crimping Tool, w/wire stripper, bolt cutter
- Cutters, 4" & 5" Diagonal
- Desoldering Pump
- Dispenser, 2 oz. Leak Proof
- Driver Blade Extension 4"
- Driver Blade Handle
- Duplex Outlet Tester
- Feeler Gauge
- File Set, Square, Round & Flat
- Hammer, 4 oz. Ball Pein
- Hemostat, 6" Straight
- Hex Driver Blades, 9-piece .050-3/16"
- Hex Key Set, 7-piece
- IC Extractor, 8-24 Pin
- Inspection Mirror
- Knife, w/pack of 5 precision utility blades

- Nut Driver Blades, 9-piece, 3/16"-1/2"
- Measuring Tape, 1" x 25 ft
- Parts Box, 8 Compartments
- Penlight with Batteries
- Pick Up Tool 8 1/2" Magnetic
- Punches, Drive Pin 1/16" and 1/8"
- Ruler, 6" Stainless Steel
- Scissors, Electrician
- Scribe
- Soldering Aid, 3-piece
- Soldering Iron, 25-Watt
- Socket Set, 13-piece
- Solder Pack
- Solder Wick
- Spring Tool Push & Pull
- Torx Blade Set, 6-piece T6-T25
- Utility Knife
- Wire Stripper, Adjustable Stop

#### PLIERS:

- 4" Chain Nose
- 10" Groove Joint

- Retaining Ring, Internal/External
- 5" Vise Grip
- 6" Long Nose with cutter

#### SCREWDRIVERS:

- Slotted: 3/32" x 2", 1/8" x 4", 1/8" x 8", 3/16" x 4", 1/4" x 4", 5/16" x 6", 1/4" x 4", 5/16" x 6", 1/4" Stubby
- Phillips: #0 x 2", #0 x 8", #1 x 3", #2 x 4", #2 Stubby
- Ratchet Offset
- Jeweler's Set, 6-piece
- Pocket: 3/32" & #0 Phillips

#### TWEEZERS:

- 6 1/2" Angle Point
- Reverse Action

#### WRENCHES:

- 4" Adjustable
- 6" Adjustable
- Wrench Set: 10-piece
- Combination 5/32" 7/16"

#### Description

**163-piece Master Field Service Kit** 

45

15201

Order #



140-piece Information Systems Service Kit



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## Precision Tools

Alignment Tools, 3-piece setCrimping Tool, Wire/Bolt

TOOLS:

- Bit Sets: 11-piece & 33-piece Security
- Cutters, 4" Diagonal & 5" Diagonal
- Drive Blade Handle 4"
- Drive Blade Extension 4"
- Feeler Gauge
- File Set, 3-piece: Square, Round, Flat
- Hemostat 6"
- Hex Driver Blades Ball End, 7-piece .050 - 3/32"
- IC Inserter/Extractor
- Interface Card Int/Ext Tool
- Key Cap Puller
- Knife #1 with 5 Precision Utility Blades
- Magnifier with Light
- Mirror/Magnetic Pick Up Tool 6"-18" Telescopic
- Nut dirver Blades, 8-piece 3/16" - 1/2"

- Penlight with Batteries
- Pick Up Tool, 4 1/2" 3-Prong
- Scissor
- Socket Set, 13-piece 1/4" Driver (9) Sockets 3/16" - 1/2"
  - (2) Extensions 3" and 6"
  - (1) Reversible Ratchet
  - (1) Spinner Handle
- Solder Pack
- Soldering Iron with Tip
- Solder Pump Anti-static
- Spring Hook Tool Set 2-piece
- Spudger
- Storage Box
- Tester, Duplex Outlet
- Tester, Telephone Line
- Tweezers Reverse Action
- Wire Stripper: 16-26 AWG
- Wrench 6" Adjustable

#### PLIERS:

- 4" Chain Nose
- 8" Groove Joint
- 5" Locking

Order #

15210

Description

#### 140-piece Information System Kit

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Service PCs, workstations, file servers, LANs, Telco and RS232 line sharing devices, printers, plotters, and monitors. This kit contains the key tools to service equipment that processes, transmits, and displays information. Included are specialty tools for extracting DIPs, PLCC and RS232 pins, tamperproof drivers needed for accessing computers and monitors and two function testers for power and telephone lines.

Dimensions (LxWxH) 14.5"x18"x10.5" Weight 24lbs. (with tools)

- 6" Long Nose with Cutter
- RS232 Contact Insert/Removal Tool
- Retaining Ring

#### SCREWDRIVERS:

- Slotted: 3/32" x 2" Pocket, 1/8" x 8", 3/16" x 4", 1/4" X 6", 5/16 x 6"
- Phillips: #0 x 2" Pocket, #1 x 8", #2 x 4"
- Stubby 2-piece PH/ST
- Ratchet Offset
- Jeweler's Set, 6-piece

#### EXTRACTORS:

- 8-24 pin IC
- PLCC

#### RULERS:

- 6" Stainless Steel
- 1" x 25' Tape

## Tool Kits

## 35-piece Master Electronic Tool Kit



One of our most popular kits offering the best value. We have included in this kit a multimeter, a high-speed drill set with accessories, a vice for holding small objects, battery-powered vacuum cleaner, 30 watt soldering iron, and much more, all supplied in a sturdy aluminum case for years of service.

Dimensions (LxWxH) 13"x18"x6"

Weight 18lbs. (with tools)

#### 93-piece Premier Field Service Kit TOOLS:



A full complement of tools for maintaining, upgrading and repairing electronic equipment. Supplied in double-sided, durable nylon case with large external pockets.

Dimensions (LxWxH) 17"x12"x5.5"

Weight 13lbs. (with tools)

- TOOLS:
- Brush
- Plastic Box for Components
- Cleaning Solution (20 ml)
- Desoldering Pump
- Drill Set 15-piece
- File Set 5-piece
- Crimping Tool 9" 5-way
- Cutter 4.5"
- Flashlight
- Head Cleaning Fluid
- Hex Key Wrench 7-piece
- Holder 3-prong
- Knife Utility (Snap-Off Blade)
- IC Inserter/Extractor
- Multimeter Diaital
- Nut Drivers: 5 and 6 mm •
- Scissor 6"
- Solder
- Solder Aid Kit, 3-piece Soldering Iron, 30-Watt Ceramic
- Soldering Iron Stand

Cutters: 4 1/4" & 6" Diagonal

Jeweler's Screwdrivers, 6-piece

Nutdriver Blades, 9-piece: 3/4"

9/32", 3/8", 7/32", 5/16", 7/16", 1/4", 11/32", 1/2" • Punch Pins 1/16", 1/8"

Mirror/Magnetic Retriever

Needle Files, 3-piece

Ruler, 6" Stainless Steel

Solder Aid Kit, 3-piece

Soldering Iron

Order #

15006

Scissors, Technik Electricians

Socket Set, 13-piece 1/4" Drive

Driver Handle 4"

Desoldering Pump

Flashlight, with batteries Hammer, 4 oz. Ball Pein Hex Key Set BP, 9-piece

**DIP IC Extractor** 

DIP IC Inserter

Feeler Gauge

Hemostat, 5"

Phillips/Slotted

Metal Scribe

Microwick

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- Tape, Electrical
- Tweezers 6.5" Cross Lock Wrench 6" Adjustable
- Wrench Set Ignition 10-piece

- Wrist Strap Anti-Static Vacuum Cleaner, 5-piece
- Vice

#### PLIERS:

- 5" Flat Nose Serrated
- 5" Bent Nose Serrated
- 5" Long Nose Serrated
- 8" Linesman

#### SCREWDRIVERS:

- Electrical Test
- Slotted: 3 x 75 mm; 5 x 75 mm, 6 x 38 mm, 6 x 100 mm
- Phillips: #0 x 75 mm, #1 x 75 mm, #1 x 150 mm, #2 x 100 mm,
- #2 x 200 mm, #2 x 38 mm
- Safety Torx: T10 & T15

#### PRECISION SCREWDRIVERS:

- Slotted: 2.4 x 75 mm;
- 3.0 x 100 mm, 3.8 x 150 mm Phillips: #0 x 75 mm,
- #1 x 100 mm; #2 x 150 mm

Description Order #

15018 **85-piece Master Electronic Tool Kit** 

> Spring Tool Combination, 2-piece Tape Measure

- Wire Stripper 16-26 AWG
- Wrench 6<sup>"</sup> Adjustable
- Wrench Set, Mini Ignition, 8-piece 7/32", 7/16"

#### PLIERS:

Solder

- 41/2" Chain Nose Serrated
- 6" Long Nose with Side Cutter
- 5 3/4" Needle Nose
- 6" Slip Joint

#### SCREWDRIVERS:

- Slotted: 3/32" x 2", 3/8" x 4",
- 3/16" x 4", 1/4" x 4" Phillips: #0 x 2", #1 x 4", #2 x 4"
- Safety Torx: T10, T15, T20 ٠ Stubby Slotted: 1/4"
- Stubby Phillips: #1
- Handle

#### TWEEZERS:

- 5" Sharp Point
- 41/2" Cross Lock
- Description

#### 93-piece Field Servcice Kit

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## 65-piece Premier Service Engineer's Kit



For those that repair computers, copiers, and any other electronic equipment on-site. Double sided, durable nylon case with large external pockets.

Dimensions (LxWxH) 17"x12"x5.5"

Weight 11lbs. (with tools)

#### TOOLS:

- Alignment Tool
- Cutters: 4 1/2" Diagonal
- Desoldering Pump
- Flashlight, with batteries
- Hemostat, Technik 5"
- Hex Key Set Fold Up, 9-piece
- .050 to 3/16"
- Knife, Precision
- Metal Scribe
- Microwick
- Needle Files, 2-pieces
- Nutdriver Blades: 3/16", 9/32"
   3/8", 7/32", 5/16", 7/16", 1/4", 11/32", 1/2"
- Prong Holder
- Ruler, 6" Stainless Steel Ruler
- Solder Aid Kit, 3-piece
- Soldering Iron
- Soldering
  Solder

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    Jeweler's 6-piece Set
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Ordar #

Description

15002 65-piece

## 65-piece Service Engineer's Kit

## Precisio Tools

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## 67-piece Premier General Electronic Tool Kit



Contains all the essential tools needed to access, troubleshoot and repair electronic equipment.

Dimensions (LxWxH) 15.5"x10.5"x5.5" Weight 8lbs. (with tools) TOOLS:

- Brush
- Cutter, 4 1/2" Diagonal
- Flashlight, with batteries
- Hex Keys Fold Up, 9-piece .050 to 3/16"
- Knife Snap Blade, 10-pieces
- Microwick
- Plastic Parts Box
- Rachet
- Ruler, 6" Stainless Steel
- Scissors, Electrician
- Socket Set, 9-piece
- Extension Bars: 4" and 6"
- Solder
- Soldering Iron

Tape Measure 12'/3M

Scissors, Electricians

• Tweezers, 6" Cross lock

Wrench 6" Adjustable

T6 to T20

• Wire Stripper

• 5" Needle Nose

• Phillips: #0 x 2"

• Slotted: 3/32" x 2"

• 6" Slip Joint

PLIERS:

Torx Key Set Fold Up, 7-piece

• 6" Long Nose with Wire Cutter

• 4 1/2" Chain Nose-Serrated

• Blades: Phillips - #0, #1, #2

• Blades: Slotted - 1/8", 3/16", 1/4"

SCREWDRIVERS:

- Torx Fold Up, 7-piece T6 to T20
- Wire Stripper/Cutter
- Wire Stripper/Cutter
  Wrench Adjustable 6"

#### PLIERS:

- 6" Slip Joint
- 6" Long Nose with Wire Cutter
- 4 1/2" Long Nose Pliers with Cutter

#### SCREWDRIVERS:

- Phillips: #0 x 4", #1 x 4", #2 x 4"
- Slotted: 1/8" x 4", 3/16" x 4", 1/4" x 4"
- Jeweler's 6-piece Phillips & Slotted

 Order #
 Description

 15001
 67-piece Premier General Electronic Kit

## **Tool Kits**

## 98-piece Premier Networking Tool Kit



Designed to address the specific requirements of maintaining and troubleshooting data links, LANs and WANS. Kit contains a complete selection of tools to access and troubleshoot a variety of equipment common to all networks.

Dimensions (LxWxH) 17"x12"x5.5" Weight

11lbs. (with tools)

#### TOOLS:

- Alignment Tool
- Cable Cutter
- Cable Stripper, Coax
- Cable Tester, Multi Network
- RS232 to w12/45 Converter Crimp Tool, with (RG58 & RG59)
- die set
- Cutters 4 1/2" Diagonal
- Flashlight, with batteries
- Gender Changer: M/M & F/F
- Hex Key Set, 9-piece
- 5/64" to 1/4"
- Knife, Precision
- Mirror/Magnetic Retriever
- Modular Plugs (24): 4 & 8 Pos Nutdriver Blades, Interchangeable:
- 3/16", 1/4", 5/16"
- Plastic Parts Box (3) • Pliers: 4 3/4" Long Nose -Serrated Jaws
- Punch Down Tool

Order #

Solder Soldering Iron

- Wire Stripper 16 to 26 AWG • Wrench 6" Adjustable
- SCREWDRIVERS:

• Receptacle Analyzer • RJ45 Adapter Cable 14'

Scissors, Electrician

- Blades: Slotted 1/8", 3/16", 1/4"
- Blades: Phillips #0, #1, #2
- Blades: Torx T10, T15, T20

#### PRECISION

#### SCREWDRIVERS:

- Slotted: 2.4 mm
- Phillips: #0

#### POCKET

- SCREWDRIVERS:
- Phillips #0
- Slotted 3/32"

#### Description

98-piece Premier Networking Tool Kit

49

48-piece Premier Compact Technician's Kit



A compact version of our popular Technician's Kit, with 47 of the most requested tools in a durable nylon case.

Dimensions (LxWxH) 15.5"x10.5"x5.5" Weight

8lbs. (with tools)

- TOOLS:
- Alignment Tools (3)
- Cutter, 4 1/2" Diagonal
- **Desoldering Pump**
- Driver Handle 4"
- Flashlight, with batteries
- Hex Key Set, 9-piece
- Knife Precision Blade
- Microwick
- Needle File Flat
- Nutdriver Blades:
- 1/4", 5/16", 3/8"
- Ruler, 6" Stainless Steel
- Solder
- Solder Aid Kit, 6-piece

- Soldering Iron
- Wire Stripper/Cutter
- Wrench 4" Adjustable

#### SCREWDRIVERS:

- Blades: Slotted- 3/16", 1/4", 5/16"
- Blades: Phillips #1, #2
- Jeweler's, 6-piece **Phillips and Slotted**

#### PLIERS

- 6" Slip Joint
- 4 1/2" Chain Nose Smooth Jaws
- 5 1/2" Needle Nose
- 6" Long Nose with Wire Cutter

#### Order # Description

15004	48-piece Premier Compact Tech. Tool Kit

ool Kits

## 70-piece Premier Technician's Kit



Ideal for general electronic service, this kit contains tools commonly needed to get at the 'electronics,' including a socket set, an adjustable wrench, and locking pliers an much more.

15.5"x10.5"x5.5" Weight 8lbs. (with tools)

Dimensions (LxWxH)

#### TOOLS:

- Alignment Tools (3)
- Cutter, 4 1/2" Diagonal
- Desoldering Pump
- Flashlight, with batteries • Hex Key Set, 9-piece
- Hemostat, 5"
- IC Inserter/Extractor
- Knife Precision Blade
- Microwick
- Mirror, Inspection
- Needle File Flat • Nutdriver Blades: 1/4",
- 5/16", 3/8" • Ruler, 6" Stainless Steel
- Scissors, Electrician
- Socket Set, 13-piece 1/4"
- Solder
- Spring Hook Tool (2) • Solder Aid Kit, 6-piece

- Soldering Iron
- Wire Stripper/Cutter
- Wrench 6" Adjustable

#### PLIERS:

- 5 3/4" Needle Nose-Serrated Jaws
- 4 1/2" Chain Nose-Serrated Jaws
- 6" Vise Grip
- 6" Long Nose with Wire Cutter

#### SCREWDRIVERS:

- Phillips: #0 x 21/2"
- Slotted: 3/32" x 2"
- Jeweler's, 6-piece Phillips and Slotted
- Blades: Slotted 3/16", 1/4", 5/16"
- Blades: Phillips #1, #2
- Screwdriver Handle Drive

	15003	70-piece Premier Techni
nd	Order #	Description

ician's Kit

55-piece Premier PC Technician's Tool Kit



TOOLS: Alignment Tool

- Cable Ties
- Cutter, 4 1/2" Diagonal
- Driver handle 4"
- Flashlight, with batteries
- Gender Changers RS232
- M/M, F/F
- IC Inserter/Extractor
- Nutdriver Blades: 3/16", 1/4",
- 5/16", 3/8"
- Needle Files (3)
- Parts Holder 3-Prong
- PLCC Removal Tool
- Pliers: 4 1/2" Chain Nose, Serrated

- Wrench, Adjustable 4"
- Wipes (6)
- Wire Stripper
- Wrist Strap

#### HEX KEYS

- BP(8) .050 to 5/32"
- BP metric (6) 1.5 to 5 mm

#### SCREWDRIVERS:

- Phillips #00, #0, #1
- Slotted: 3/32", 1/8"
- Torx T8, T10, T15
- Blades: Slotted 1/8", 3/16", 1/4"
- Blades: Phillips #0, #1, #2

This kit contains an assortment of tools for the "Pros" servicing computer systems, PC terminals, and peripherals.

#### Dimensions (LxWxH) 15.5"x10.5"x5.5" Weight 6lbs. (with tools)

Description 55-piece Premier PC Technician's Kit

Ordar # 15005

## **Tool Kits**

## 22-piece Personal Computer Tool Kit



15019

Dimensions (LxWxH) 14"x9"x2.5" Weight 6lbs. (with tools) 22-piece Basic Electronic Tool Kit

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ľ.



## Aven Tronex Series High Precision Pliers and Cutters

made in the USA

## Cutting Edge Technology provides you with superior levels of cutting performance, quality, value and comfort.

- Highest quality American made 1% carbon alloy steel is used for exceptional hardness and toughness. Tools are engineered for precision cutting yet long lasting ruggedness. These tools have the heft and feel that of a luxury car.
- Special Handles both standard and long are ergonomically designed to fit most hands with no points of pressure. They are enhanced by soft cushion grips for maximum comfort to reduce cutting fatigue dramatically.
- Exceptional Cutting Edges. They are made with by using a proprietary dual sharpening process and then raised to optimum hardness and toughness through a induction heating and tempering process. The result: Sharp, hard and tough cutting edges outcut and outlast all others.
- Superior Joint System: Two halves of the tool are joined by a fine thread interlocking screw and nut which mount on precision machined bearing rings. This ensures a tight, perfect alignment with smooth consistent cutting.

- Cutters are available in Semi-Flush, Flush and Razor Flush cutting edges.
- Attractive satin coating protects against corrosion and reduces glare.
- Stainless steel double leaf springs
- ESD Safe cushion grips for exceptional comfort
- Available in Standard and Ergonomic handle lengths. Length of tool with standard handle: 115mm (4-1/2") and with ergonomic handle: 140mm (5-1/2")
- 100% Quality assurance:- Each cutter is checked individually at the factory and are warranted for be free of defects in materials and workmanship for the life of the tool





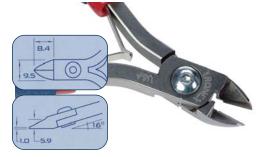
Ergonomic Handle



Precision Tools

## **Tronex Series - High Precision Cutters**

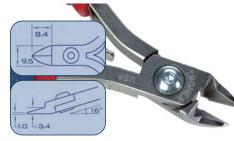
### Tronex Oval Head Cutter



Strong versatile and long lasting, this popular shape can be used for many applications. Designed to be durable through hundreds of thousands of cuts.

Standard Handle	Ergonomic Handle	Cutting Edge	Cutting Capacity*
5111	7111	Semi-Flush	.20 to 1.20mm
5112	7112	Flush	.15 to 1.50mm
5113	7113	Razor Flush™	.10 to 1.00mm

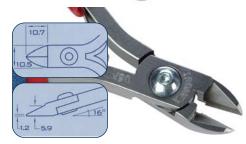
### Tronex Oval Head Cutter with Relief



Same features as the oval head cutter but the relief provides extra accessibility.

Standard Handle	Ergonomic Handle	Cutting Edge	Cutting Capacity*
5121	7121	Semi-Flush	.20 to 1.20mm
5122	7122	Flush	.15 to 1.10mm
5123	7123	Razor Flush™	.10 to 0.90mm

### Tronex Large Oval Head Cutter



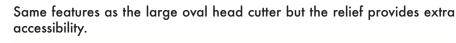
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Popular for wire and cable, extra rugged, 25% larger head than standard oval cutters.

Standard Handle	Ergonomic Handle	Cutting Edge	Cutting Capacity*
5511	7511	Semi-Flush	.20 to 1.50mm
5512	7512	Flush	.15 to 1.50mm
5513	7513	Razor Flush™	.10 to 1.20mm

## Tronex Large Oval Head Cutter with Relief



Standard Handle	Ergonomic Handle	Cutting Edge	Cutting Capacity*
5521	7521	Semi-Flush	.20 to 1.40mm
5522	7522	Flush	.15 to 1.40mm
5523	7523	Razor Flush™	.10 to 1.20mm

#### Tronex Tapered Head Cutter



A more compact design pointed head for increased operator access, yet covers a wide cutting range and long tool life.

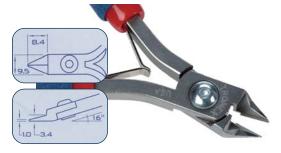
Standard Handle	Ergonomic Handle	Cutting Edge	Cutting Capacity*
5211	7211	Semi-Flush	.20 to 1.10mm
5212	7212	Flush	.15 to 1.10mm
5213	7213	Razor Flush™	.10 to 1.00mm

\*Diameter of Soft Copper wire

AVEN

**Tronex Series - High Precision Cutters** 

### Tronex Tapered Head Cutter with Relief



Same features as the tapered head cutter but with a lower profile for better access and extra visibility.

Standard Handle	<b>Ergonomic Handle</b>	Cutting Edge	Cutting Capacity*
5221	7221	Semi-Flush	.20 to 1.10mm
5222	7222	Flush	.15 to 1.00mm
5223	7223	Razor Flush™	.10 to 0.90mm

### Tronex Miniature Oval Head Cutter



Standard Handle	Ergonomic Handle	Cutting Edge	Cutting Capacity*
5311	7311	Semi-Flush	.20 to 1.10mm
5312	7312	Flush	.10 to 1.00mm
5313	7313	Razor Flush™	.10 to 0.80mm

### Tronex Minature Tapered Head Cutter



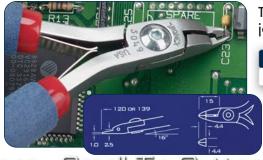
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Miniature Taper Relief cutters are used only for exceptionally fine cutting work. Usually access to the cutting area is difficult, requiring the very low profile of this cutter with full relief.

Standard Handle	<b>Ergonomic Handle</b>	Cutting Edge	Cutting Capacity*
5421	7421	Semi-Flush	.20 to 1.10mm
5422	7422	Flush	.10 to 1.00mm
5423	7423	Razor Flush™	.10 to 0.80mm

## Tronex Tip Cutter High Relief



Tronex Small Tip Cutter



Tip cutter with a deep relief for an exceptionally low profile. Short sturdy jaw. Razor Flush<sup>™</sup> cutting Edges.

Standard Handle	Ergonomic Handle	Cutting Edge	<b>Cutting Capacity</b>
5049	7049	Razor Flush™	.10 to 0.65mm

Most popular tip cutter. Jaw is twice as long as standard cutters. Jaw is slim with a low relieved profile. Razor Flush<sup>™</sup> cutting edges.

Standard Handle	Ergonomic Handle	Cutting Edge	Cutting Capacity
5070	7070	Razor Flush™	.10 to 0.65mm

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## **Fronex Series - High Precision Cutters**

## Tronex Subminiature Tip Cutter



SMT Cutter. Extraordinarily small. Fine cutting edges and fine tip. Often used under a microscope. Removes individual leads from fine pitch components. Razor Flush<sup>™</sup> Cutting Edges.

Standard Handle	Ergonomic Handle	Cutting Edge	<b>Cutting Capacity</b>
5071	7071	Razor Flush™	.05 to 0.40mm

### Tronex Angulated Miniature 50° Cutter



An SMT cutter with a very small cutting head. Used for exceptionally fine cutting. Relieved for maximum accessibility. Flush cutting edges.

Standard Handle	Ergonomic Handle	Cutting Edge	Cutting Capacity
5075	7075	Flush	.10 to 0.65mm

#### Small 50° Cutter Tronex Angulated



Most popular angulated cutter. Small cutting head with relief for excellent visibility. Durability combined with fine cutting. Flush cutting edges.

Standard Handle	Ergonomic Handle	Cutting Edge	Cutting Capacity
5082	7082	Flush	.10 to 0.65mm

#### arge 50° Cutter. Tronex Anculated



Largest cutting head. Robust. Excellent in cutting several leads in a single cut. Relieved for enhanced visibility. Razor Flush™ cutting edges.

Standard Handle	Ergonomic Handle	Cutting Edge	Cutting Capacity
5072	7072	Razor Flush™	.10 to 0.65mm

#### Tronax Haavy Juty Cutter



This cutter, forged of carbon steel, has strength in the head and joint areas needed to cut heavier gauge wire or cable. Cushion grips provide operator comfort. A jaw restraining device is attached to insure spring retention. Overall length 6" (152mm). Length of cutting blade 3/4" (19mm)

Standard Handle	Ergonomic Handle	Cutting Edge	<b>Cutting Capacity</b>
-	7812	Flush	.10 to 1.60mm

\*Diameter of Soft Copper wire

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## **Tronex Series - High Precision Pliers**

### Tronex Chain Nose Pliers: Standard and Short Jaw



Features very fine tips, "eased" edges of the inner jaw to reduce the risk of damage to the workpiece during forming, and a long jaw for extended gripping power. Available with smooth or serrated jaws. Standard & Short Chain nose pliers have tips dimension of 1.2mm W x 1.4mm H (.050" x .060").

Standard Handle	<b>Ergonomic Handle</b>	Jaw Type	Jaw Length
511	711	Standard Smooth	33mm (1.30")
512	712	Standard Serrated	33mm (1.30")
513	713	Short Smooth	19mm (0.75″)

### Tronex Needle Nose Pliers



These pliers have exceptionally fine tips. The outer surface of the jaw is rounded to the shape of smooth half cones. This design increases tool access and allows forming of round loops. All edges of the inner jaws are eased. Tip dimensions: 1.0mm W x 1.2mm H. (.040" x .050").

Standard Handle	Ergonomic Handle	Jaw Type	Jaw Length
521	721	Smooth	31.7mm (1.25")

56

## Precision Tools

## Fronex Round Nose Pliers: Standard and Short Jaw

Available in long and short jaws. The long jaws makes it possible to form a wide range of loop diameters. The short jaw adds more stiffness and strength to allow forming of heavier gauge wire with added control. Long jaw pliers have a tip diameter of 0.7mm(.030") and the short jaw pliers have a tip diameter of 0.9mm (.035").

Standard Handle	Ergonomic Handle	Jaw Type	Jaw Length
531	731	Smooth	31.7mm (1.25")
532	732	Smooth	18.1mm (.715")

## Tronex Flat Nose Pliers: Standard and Wide Tips



These flat nose pliers have a long jaw and very thin tips. The tip gripping area has a smooth finish. All inner edges are "eased" to reduce risk of workpiece damage. Standard flat nose pliers have tips that are 3.5mm (.140") wide and the Wide Tip Flat Nose Pliers have tips that are 6.3mm (.250") wide.

Standard Handle	Ergonomic Handle	Jaw Type	Jaw Length
541	741	Standard Smooth	31.7mm (1.25")
542	742	Wide Smooth	31.7mm (1.25")

**Ergo Pliers & Cutters** 

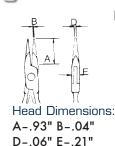
- Scientifically designed handles to provide exceptional comfort
- Manufactured from Stainless Steel, will not rust
- Non Reflective Black Finish
- Dual Leaf Springs
- Induction Hardened Cutting Edges

57

**AVEN** 

**Ergo Pliers & Cutters** 

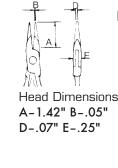
Chain Nose Pliers



	Order #	Description
	10301-ER	4.5" Chain Nose, Smooth Jaws: 0.93" Jaw Length
	10307-ER	4.5" Chain Nose, Serrated Jaws: 0.93" Jaw Length
:	10302-ER	5" Chain Nose, Smooth Jaws: 1.05" Jaw Length
	10308-ER	5" Chain Nose, Serrated Jaws: 1.05" Jaw Length

Ideal for forming, bending and precision assembly work.

Extra Long Chain Nose Pliers

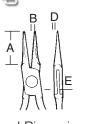


Excellent for hard to reach areas.

Ordar #	Description
10311-ER	<b>5" Extra Long Chain Nose</b> Smooth Jaws: 1.42" Jaw Length
103115-ER	<b>5" Extra Long Chain Nose</b> Serrated Jaws: 1.42" Jaw Length

Naadla Nosa Pliars

58



Ideal for work in tight places where space and accessibility are limited.

Order #	Description
---------	-------------

5-3/4" Needle Nose Serrated Jaws: 1.93" Jaw Length

Head Dimensions: A-1.93" B-.04" D-.06" E-.22"

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## **Ergo Pliers & Cutters**

Oval Head Cutters



A A E	

Head Dimensions: A-.55" B-13° E-.28"

Order #	Description
10321-ER	4-1/2" Oval Head Cutter, Semi-Flush Cutting Capacity: 22 AWG, CBL: 0.55"
10323-ER	4-1/2" Oval Head Cutter, Flush Cutting Capacity: 24 AWG, CBL: 0.55"
10332-ER	4-3/8" Mini Oval Head Cutter, Flush Cutting Capacity: 24 AWG, CBL: 0.45"

## Tapered Head Cutters



Head Dimensions:
A55" B05"
D-14° E28"

Order #	Description	
10325-ER	<b>4-1/2" Tapered Head Cutter, Semi-Flush</b> Cutting Capacity: 22 AWG, CBL: 0.55"	
10326-ER	4-1/2" Tapered Head Cutter, Flush Cutting Capacity: 24 AWG, CBL: 0.55"	
10331-ER         4-3/8" Mini Tapered Head Cutter, Flush Cutting Capacity: 24 AWG, CBL: 0.45"		

Tapered Head Cutter w/Relieved Head



Head Dimensions:	
A55" B05"	
D-13° E28"	

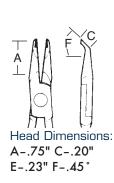
10329-ER

Order # Description 4-1/2" Tapered Head Cutter, RH, Flush Cutting Capacity: 24 AWG, CBL: 0.55"

59

Tip Cutter





Order #	Description	
10330-ER	4-1/2" Tip Cutter, Flush Cutting Capacity: 24 AWG	

\* Cutting Capacity stated aboove is for soft copper wire



## **Stainless Steel Pliers & Cutters**

- Mirror Polished Stainless Steel
- ESD Safe Grips
- Box Joint Construction
- Dual Leaf Springs For Comfortable Action
- Induction Hardened Cutting Edges
- Large Selection



## Stainless Steel Pliers & Cutters

precision assembly work.

10301

10307

Order #

D

### Stainless Steel Pliers



Head Dimensions: A- .93" B-.04" D-.06" E-.21"



D

Technik 5" Chain Nose - Popular pliers for forming, bending and precision assembly work.

Technik 4-1/2" Chain Nose - Ideal for forming, bending and

Description

Technik 4-1/2" Chain Nose, Smooth

Technik 4-1/2" Chain Nose, Serrated

10302	Technik 5" Chain Nose, Smooth
10308	Technik 5" Chain Nose, Serrated



A-1.53" B-.06" D-.08" E-.38"

A-1.05" B-.04" D-.06" E-.39"

Head Dimensions:

R M

Head Dimensions:



Head Dimensions: A-1.42" B-.05" D-.07" E-.25"



_	Technik 6" Chain handling.	Nose – For forming, bending and component
	•	Description
Ξ	10333	Technik 6" Chain Nose, Serrated
-		

Technik 5" Extra Long Chain Nose - For forming, bending and precision assembly work. Excellent for difficult to reach areas. Declar # Description

103115	Technik 5" Extra Long Chain Nose, Serrated			
10311	Technik 5" Extra Long Chain Nose, Smooth			
01001- 11	2830123011			



Head Dimensions: A-.94" B-.02" D-.15" E-.24"





Head Dimensions: A-.94" B-.02" D-.15" E-.24"

Tech	nik 5" Flat Nose – For bending and component handling. Order # Description					
Ē	10304	Technik 5" Flat Nose, Smooth				

## tainless Steel Pliers & Cutters

Stainless Steel Pliers



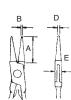
Head Dimensions: A-1.66" B-.02" D-.21" E-.33"



Technik 6" Flat Nose - For bending and component handling. Order # Description 10335 Technik 6" Flat Nose, Smooth



Head Dimensions: A-.84" B-.05" D-.04" E-.25"



Order # Description 10305 Technik 4-1/2" Round Nose, Smooth

Technik 4-1/2" Round Nose - For forming or coiling fine wire.



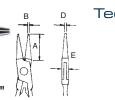
A-.93" B-.05" D-.04" E-.31"



10306	Technik 5" Round Nose, Smooth

	В
12	$\mathbb{N}$
Head Dimensions:	0

A-1.53" B-.05" D-.04" E-.30"



echnik 6" Round	Nose – For forming or coiling fine wire.
Order #	Description
10334	Technik 6" Round Nose, Smooth



Head Dimensions: A-.90" B-.04" D-.06" E-.24" F-42° G-.31"



Technik 4-1/2"	Bent Nose – For working in confined areas.
Ordar #	Description

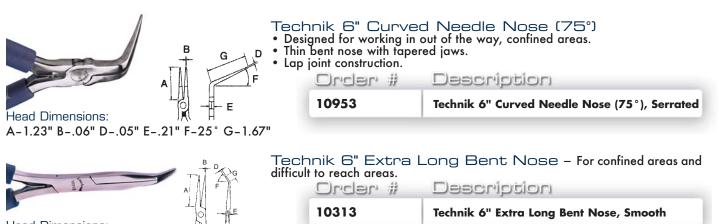
	Technik 4-1/2" Bent Nose, Smooth				
10310 Technik 4-1/2" Ben	t Nose, Serrated				

i	Technik 5	' Extra	Long	Bent	Nose	_	For working in	
<sup>7</sup> confined, difficult to reach areas.								

Order #	Description
10312	Technik 5" Extra Long Bent Nose, Smooth

## **Stainless Steel Pliers & Cutters**

Stainless Steel Pliers



Head Dimensions: /// // A-1.6" B-.05" D-.08" E-.25" F-50° G-.44"



Technik	4-3/4"	Long	Nose	with	Cutter	_	General
purpose plie	r with built ir	cutting b	olades.				

10315	Technik 4-3/4" Long Nose with Cutter, Serrated
Order #	Description

Technik 5-3/4" Needle Nose – Designed for light work where space and accessibility are limited.

	0314	Technik 5-3/4" Needle Nose, Serrated
--	------	--------------------------------------

63



A-1.93" B-.04" D-.06" E-.22"



Head Dimensions: A-.55" B-13° E-.28"



Head Dimensions: A-.62" B-15° E-.36"



## Technik 4-1/2" Standard Oval Head Cutter

10321	Technik 4-1/2" Standard Oval Head Cutter, Semi-Flush, Cutting Capacity: 22 AWG Soft Wire
10323	Technik 4-1/2" Standard Oval Head Cutter, Flush, Cutting Capacity: 24 AWG Soft Wire

Technik 5" Standard Oval Head Cutter

Order #	Description
10322	Technik 5" Standard Oval Head Cutter, Semi-Flush, Cutting Capacity: 20 AWG Soft Wire
10324	Technik 5" Standard Oval Head Cutter, Flush, Cutting Capacity: 22 AWG Soft Wire

## inless Steel Pliers & Cutters

D

Stainless Steel Cutters



Head Dimensions: A-.55" B-.05" D-14° E-.28"



Head Dimensions: A-.55" B-.05" D-13° E-.28



#### Technik 4-1/2" Standard Tapered Head Cutter Deden # Description

21.291. 11	00001100011
10325	Technik 4-1/2" Standard Tapered Head Cutter Semi-Flush, Cutting Capacity: 22 AWG Soft Wire
10326	Technik 4-1/2" Standard Tapered Head Cutter Flush, Cutting Capacity: 24 AWG Soft Wire

в • Т ДД в"		Technik 4-1/2" St Tapered Relieved Order # 10329	Technik 4-1/2" Standard Tapered Relieved Head Cutter Flush, Cutting Capacity: 24 AWG Soft Wire
		Technik 4-3/8" Mi Order # 10332	ini Oval Head Cutter Description Technik 4-3/8" Mini Oval Head Cutter Flush, Cutting Capacity: 24 AWG Soft Wire
		Technik 4-3/8" Mi Order # 10331	ini Tapered Head Cutter Description Technik 4-3/8" Mini Tapered Head Cutter Flush, Cutting Capacity: 24 AWG Soft Wire
В	D	Technik 4-1/2" Tip	o Cutter



#### Technik 4-1/2" End Cutter

Order #	Description
10327	Technik 4-1/2" End Cutter Semi-Flush, Cutting Capacity: 22 AWG Soft Wire

Head Dimensions: A-.69" B-.39"



#### Head Dimensions: A-.71" B-.38" D-8°

#### Technik 4-1/2" Oblique Cutter

Order # Description Technik 4-1/2" Oblique Cutter Semi-Flush, Cutting Capacity: 22 AWG Soft Wire 10328

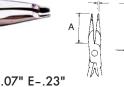
64

### Head Dimensions: A-.45" B-.04" D-17° E-.23

Head Dimensions: A-.45" B-13° D-.25"



Head Dimensions: A-.87" B-.05" D-.07" E-.23"

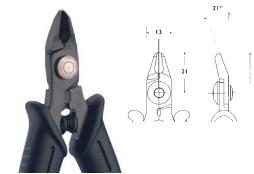


## **Niptec Cutters**

- Manufactured from a special carbon alloy steel, heat treated in a controlled environment for optimum hardness. Has an anti-glare finish to improve work accuracy.
- Niptec Cutters can be distinguished from their competitors by their smooth cutting action with less force, due to the specially designed return spring.
- Our 5000 Series Cutters manufactured with 5mm thick cutting blades are recommended for applications requiring highly durable and long lasting cutters.

liptec Cutters

Niptec 5000 Series



TR 5000 / TR 5000R – Long lasting cutting blades, 5mm thick. TR 5000 produces a semi flush cut and TR 5000 R a clean flush cut. Both have ESD safe handles.

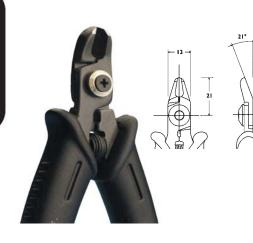
10502	TR 5000 R Flush, Cutting Capacity: 14 AWG Steel Wire
10501	TR 5000 Semi-Flush, Cutting Capacity: 12 AWG Steel Wire
Order #	Description

TR 5000 PG – Pointed long lasting cutting blades, allowing access into tight places. Cutting edges are rounded and well finished. 5mm thick, flush cutting blades. Has ESD safe handles.

Ordar #	Description
10503	TR 5000 PG Flush, Cutting Capacity: 16 AWG Steel Wire

Precision Tools

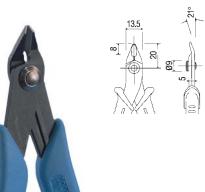
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TRR 5000 – Specially designed blades to cut steel wire up to a diameter of 0.5mm / 24 AWG, 10 AWG copper wire 5mm, flush cutting blades. Has ESD safe handles.

Order #	Description
10504	TRR 5000 Flush, Cutting Capacity: 24 AWG Steel Wire

Niptec 1000 Series



TR 25 E – Our most popular and economical cutter. Has a narrow cutting head for greater access into dense areas. Produces a clean flush cut. Tool handles have regular blue non-slip grips.

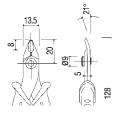
Ordar #	Description
10521EC	<b>TR 25 E</b> Flush, Cutting Capacity: 16 AWG Steel Wire

Aven Inc. | 4595 Platt Road | Ann Arbor, MI 48108 Tel: 734-973-0099 | Fax: 734-973-0097 | www.aveninc.com

## **Niptec Cutters**

Niptec 1000 Series

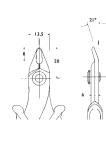




TR 25 – A very popular tool. Light weight and easy to handle with narrow cutting head for access into dense areas. Produces a clean flush cut. ESD safe handles.

Ordar #	Description
10521	TR 25 Flush, Cutting Capacity: 18 AWG Steel Wire





TR 30 15 – Specially designed tool for cutting wires a certain length from the surface. TR 30 15 cuts 1.5mm from the surface. Produces a clean flush cut and has ESD safe handles.

Order #	Description
10523H	<b>TR 30 15</b> Flush, Cutting Capacity: 16 AWG Steel Wire

Niptec 1000 Micro Series

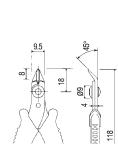


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TR 20 M - Small head design	allows access	into tight places.	Produces
a clean flush cut. ESD safe handles.		•	

Order #	Description
10527B	TR 20 M Flush, Cutting Capacity: 20 AWG Steel Wire

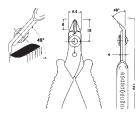




TR-20-50 M – Has the same features as our TR 20 M but the cutting angle is 48° instead of 21°. Ideal for reaching into difficult places. Has ESD safe handles.

Order #	Description
10525	TR-20-50 M Flush, Cutting Capacity: 22 AWG Steel Wire





TR 20 TM – Specially designed for cutting integrated circuit pins. The very small size of the cutting blades angled at 45° enables closely placed pins to be cut. Produces a flush cut. Has ESD safe handles.

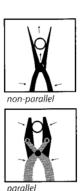
Order #	Description
10526	TR 20 TM Flush, Cutting Capacity: 22 AWG Steel Wire

# **Parallel Action Pliers**

The unique compound joint design allows the jaws to open and close parallel to one another. This makes them ideal for holding and gripping components and manipulating wire. Comes with anti-rust finish with bright nickel sealed handles and smooth fully heat-treated black jaws for durability.

#### When to Choose Parallel Action Pliers

Parallel Action Pliers are the right choice when you need to hold an object still while applying pressure on it. Non-parallel pliers let an object slip forward when pressure is applied. The configuration of Parallel Action Pliers holds the object firmly even when the job calls for firm pressure.



### Flat Nose with Wire Cutter



Flat nose pliers with a wire cutter. Has serrated jaws with a v-slot. Model 10761 has a maximum jaw opening of 0.4" (10mm) and a soft wire cutting capacity of 0.1"/2.5mm. Model 10764 has a jaw opening of 0.7"/17mm and a soft wire cutting capacity of 0.24" (6.0mm).

Order #	Description
10761	<b>5" Flat Nose with Wire Cutter</b> Jaw Length: 1 6/16"/35mm Jaw Width: 1/4"/6.4mm
10764	8" Flat Nose with Wire Cutter Jaw Length:1 10/16"/41mm Jaw Width: 1 1/2"/12.5mm

68

### Flat Nose



The 8" Flat Nose plier has serrated jaws with a v-slot that allows you to feed wire down the throat of the plier and hold it firmly in place. The plier has a maximum jaw opening of 0.7" (17mm).

Order #	Description
10756	<b>8" Flat Nose</b> Jaw Length: 1 10/16"/41mm Jaw Width: 1 10/16"/41mm

## Compound Action 8-1/2" Diagonal Cutter



The essential feature of these diagonal cutters is the accuracy of the cutting edges and the quality of the steel and heat treatment. The compound lever design gives good mechanical advantages allowing the pliers to cut piano wire with handle loads significantly less than conventional forged pliers of equivalent size.

Ordar # 10754 Description

Compound Action 6-1/2" Diagonal Cutter Jaw Type: Semi-Flush Cutting Capacity: 2mm Piano Wire

## **Precision Tweezers**

Precision tweezers to meet applications in electronics, aircraft and aerospace, miniature assembly, precision engineering, optics, microscopy, etc.

35ASP

69

**AVEN** 

Precision Tools

- Large selection in a variety of materials
- Special coatings for custom applications

The

Custom designs

## **Precision Tweezers**

We Offer a Wide Variety of Tweezers To Meet a Broad Range Of Applications and 2 Different Quality Grades.

#### In order to choose the best tool for your application:

- 1. Determine the type of points best suited for your application.
- 2. Refer to the material guide below and select the correct material for your application.
- 3. Determine the quality level required for your application if applicable. (Table 1)
- 4. Remember there is a trade-off between hardness, magnetism and corrosion resistance. (Table 2)

#### Quality Grades (Table 1)

Brand	Recommend For:
Accutek ★★★★	Made from the finest steels. Perfectly balanced for a superior feel. Light weight with soft tension with accurately finished points. Recommended for work under high power magnification aerospace and micro electronics and in applications where high precision is required. All Accutek precision tweezers are made from anti-acid, anti-magnetic stainless steel.

Technik Finely crafted tweezers. Anti-glare finish to reduce eye strain. Hand finished points for accuracy. Recommended for micro electronics and precision assembly.

Material Selection Guide (Table 2)

Material	Tip Hardness	Magnetism	<b>Corrosion Resistance</b>	
Carbon Steel	Excellent	Yes	Low	
Stainless Steel	Very Good	Some	Good	
Stainless Steel, Anti-magnetic, Anti-acid	Good	None to very little	Excellent, Resists Acids	
Carbon Composite	Soft	None	Non Corrosive	

**Ceramic** ESD Safe, non magnetic. Resists all chemicals except hydrofluoric acids. Withstands temperatures up to 900°F. Heat sink fighter. For more details on the features of our ceramic tweezers please refer to page 80.

**Plastic** We offer static dissipative plastic tweezers. Plastic tweezers are non magnetic, resist virtually all commercial solvents. Non absorbent and easy to clean. Tips are non marring.

Carpenter 20, Nickel, Titanium, Beryllium, Copper & Brass: Available on special order.

Special Coatings (Available on non magnetic steel only)

TE - Teflon Superior anti-scratch	non-stick material. Acid	resistant. 400°F/200°C
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- EP Epoxy Good electrical insulation and resistance to chemicals. Antiglare. 300°F/150°C
- RY Ryton Very smooth. Excellent resistance to chemicals and temperature.
- PY Pyron Water and solder repellent. Non conductive 950°F/500°C
- GP Gold Plating Very high corrosion resistance. Smooth anti-scratch, anti-glare, no tarnish finish.

\* To order tweezers with above mentioned coatings, please add the symbol to the order #.

\* Call AVEN for price and delivery time.



## Straight: Thick, Flat, Strong Tipa

Pattern OO Flat edges, heavy-duty strong blades tapering to regular strong points. Length: 4 3/4" 120mm

Order #	Description	
18032 ACU	Accutek Pattern OO Stainless Steel, Anti-Magnetic, Anti-Acid	****
18032 USA	Technik Pattern OO Stainless Steel, Anti-Magnetic, Anti-Acid	***

Pattern OOD Same as OO with serrated tips and grips. Length: 4 3/4" 120mm

Order #	Description	
18037 ACU	Accutek Pattern OOD Stainless Steel, Anti-Magnetic, Anti-Acid	****
18037 USA	Technik Pattern OOD Stainless Steel, Anti-Magnetic, Anti-Acid	***
18036	Aven Pattern OOD Carbon Steel, Nickel/Chrome Plated	***

Pattern OOC Same as OO except shorter. Length: 4 1/2" 115mm

Order #	Description	
18034	Aven Pattern OOC Stainless Steel, Anti-Magnetic, Anti-Acid	***

Pattern AC Sturdy tips for bending and handling very fine wire and components. Has finger serrations. Length: 4 3/4" 120mm

Order #	Description	
18014	Aven Pattern AC Carbon Steel, Nickel/Chrome Plated	***
18016	Aven Pattern AC Stainless Steel, Anti-Magnetic, Anti-Acid	***

## Straight: Strong Precise Tips

Pattern AA For general assembly, very strong and precise tips with fine finish. Length: 5" 130mm

10012 1164	Technik Pattern AA
Order	# Description

18013 USA	Stainless Steel, Anti-Magnetic, Anti-Acid	000
18011	Aven Pattern AA Carbon Steel, Nickel/Chrome Plated	***

Pattern MM Economical general-purpose tweezers slightly larger than AA. Length: 5" 130mm

Order #	Description	
18023 USA	Technik Pattern MM Stainless Steel, Anti-Magnetic, Anti-Acid	***
18021	Aven Pattern MM Carbon Steel, Nickel/Chrome Plated	***

\*USA – Ultra Satin Anti-glare Finish

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## Straight: Fina Tipa

Pattern O Fine straight point tweezers for general handling and positioning of miniature parts or fine wire. Length: 4-3/4" 120mm

Order #	Description	
18026 ACU	Accutek Pattern O Stainless Steel, Anti-Magnetic, Anti-Acid	****
18026	Aven Pattern O Stainless Steel, Anti-Magnetic, Anti-Acid	***

Pattern OC Flat edges, fine tips and short. Length: 3-1/2" 90mm

18029	Aven Pattern OC Stainless Steel, Anti-Magnetic, Anti-Acid	***
18029 ACU	Accutek Pattern OC Stainless Steel, Anti-Magnetic, Anti-Acid	****
Order #	Description	

Pattern OA Straight point tweezers with radius edges. Designed for dense areas. Length: 4-3/4" 120mm

Order #	Description	
18027	Aven Pattern OA Stainless Steel, Anti-Magnetic, Anti-Acid	***

Pattern SS Extra long and narrow straight point tweezers. Provides extended reach and access to confined areas. Length: 5-1/2" 140mm

Order #	Description	
18040 ACU	Accutek Pattern SS Stainless Steel, Anti-Magnetic, Anti-Acid	****
18040 USA	Technik Pattern SS Stainless Steel, Anti-Magnetic, Anti-Acid	***

Pattern 1 General use, strong blades with fine points. Length: 4-3/4" 120mm

Order #	Description	
18043 ACU	Accutek Pattern 1 Stainless Steel, Anti-Magnetic, Anti-Acid	****
18043 USA	Technik Pattern 1 Stainless Steel, Anti-Magnetic, Anti-Acid	***

## Straight: Ultra Fine Tips

Pattern 3 Extra long and narrow straight point tweezers. Provides extended reach and access to confined areas. Length: 4-3/4" 120mm

Order #	Description	
18053 ACU	Accutek Pattern 3 Stainless Steel, Anti-Magnetic, Anti-Acid	****
18053 USA	Technik Pattern 3 Stainless Steel, Anti-Magnetic, Anti-Acid	***

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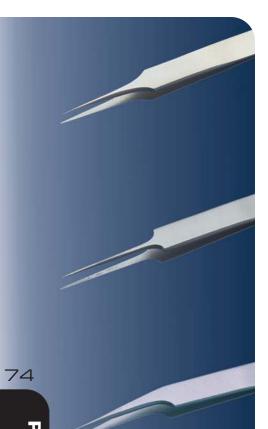
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## **Precision Tweezers**



\*USA – Ultra Satin Anti-glare Finish



## Tapered: Ultra Fine Tips

Pattern 4 For extra fine work, blades taper sharply from body to very fine long rounded points. Length: 4-1/4" 110mm

Order #	Description	
18059 ACU	Accutek Pattern 4 Stainless Steel, Anti-Magnetic, Anti-Acid	****
18059 USA	Technik Pattern 4 Stainless Steel, Anti-Magnetic, Anti-Acid	***
18057	Aven Pattern 4 Carbon Steel, Nickel/Chrome Plated	***

Pattern 5 For extra fine work, long blades break sharply from body and taper to super fine points. Length: 4-1/4" 110mm

Order #	Description	
18062 ACU	Accutek Pattern 5 Stainless Steel, Anti-Magnetic, Anti-Acid	****
18062 USA	Technik Pattern 5 Stainless Steel, Anti-Magnetic, Anti-Acid	***

### Angled: Fine Tips

Pattern 5A Oblique fine points for greater visibility. Length: 4-1/2" 115mm

Order #	Description	
18065 ACU	Accutek Pattern 5A Stainless Steel, Anti-Magnetic, Anti-Acid	****
18065 USA	Technik Pattern 5A Stainless Steel, Anti-Magnetic, Anti-Acid	***

#### Pattern 6 Same as 3 but shorter. Length: 4-3/4" 120mm

Order #	Description	
18069 ACU	Accutek Pattern 6 Stainless Steel, Anti-Magnetic, Anti-Acid	****
18069 USA	Technik Pattern 6 Stainless Steel, Anti-Magnetic, Anti-Acid	***
18067	Aven Pattern 6 Carbon Steel, Nickel/Chrome Plated	***

### Angled: Ultra Fine Tips

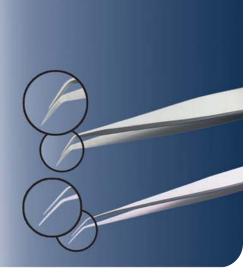
Pattern 3CB Same as 3C except tips are bent. Length: 4-1/4" 110mm

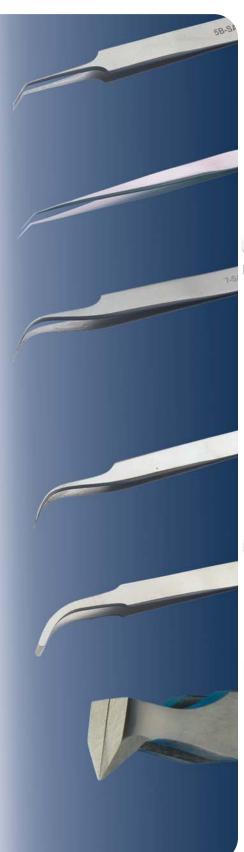
Order #	Description	
18078 ACU	Accutek Pattern 3CB Stainless Steel, Anti-Magnetic, Anti-Acid	****

Pattern 65A Long fine curved tips. Length: 5-1/2" 140mm

Order #	Accutek Pattern 65A	****
	Stainless Steel, Anti-Magnetic, Anti-Acid	

\*USA – Ultra Satin Anti-glare Finish





## Angled: Ultra Fine Tips

Pattern 5B Super micro, high precision bent tips provide maximum visibility. Length: 4-1/4" 110mm

Order #	Description	
18066 ACU	Accutek Pattern 5B Stainless Steel, Anti-Magnetic, Anti-Acid	****
18066 USA	Technik Pattern 5B Stainless Steel, Anti-Magnetic, Anti-Acid	***

#### Pattern 66 Long double bent tips. Length: 5-1/2" 140mm

18077 ACU	Accutek Pattern 66 Stainless Steel, Anti-Magnetic, Anti-Acid	****
Order #	Description	

### Curved: Fine Tips

Pattern 7 For assembly work, hand can rest on bench, curved super fine points. Length: 4-1/2" 115mm

	(m)
er #	Description

18072 ACU	Accutek Pattern 7 Stainless Steel, Anti-Magnetic, Anti-Acid	****
18072 USA	Technik Pattern 7 Stainless Steel, Anti-Magnetic, Anti-Acid	***
18070	Aven Pattern 7 Carbon Steel, Nickel/Chrome Plated	***

Pattern 7B Curved precision point tweezers. Similar to 7 but tips are serrated. Length: 4-1/2" 115mm

Order #	Description	
18074 USA	Technik Pattern 7B Stainless Steel, Anti-Magnetic, Anti-Acid	**

## Curved: Flat Tips

Pattern 2AB Curved round tip tweezers. Handles delicate or small parts. Tip angle facilitates wafer tray loading. Length: 4-3/4" 120mm

Order #	Description	
18050 USA	Technik Pattern 2AB Stainless Steel, Anti-Magnetic, Anti-Acid	***

### Cutting Tweezers

Pattern 15AGW & 15AP For cutting hairsprings and electronic component wires. Blades induction hardened to C58 (C Scale). 15AP same as 15A with parallel cut. Length: 4-1/2" 115mm

Order #	Description	
18114 ACU	Accutek Pattern 15AGW Carbon Steel, Nickel/Chrome Plated	****
18115 ACU	Accutek Pattern 15AP Carbon Steel, Nickel/Chrome Plated	****

\*USA – Ultra Satin Anti-glare Finish

### Comfort Grip Twaezers

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Aven comfort grip tweezers are designed to provide you the ultimate in comfort and control, to help you increase productivity and combat fatigue. The foam grips are ESD Safe and the tweezers feature high precision points for exact control. Tweezers are manufactured from Anti-Magnetic, Anti-Acid Stainless Steel.

TEU	Pattern 00-9	SA Flat edges, heavy duty strong blades, tapering to regular strong points. Length: 4-3/4"
18032-ER	Order #	Description
005A 18032-ER AVET	18032-ER	Aven Pattern OO-SA
	Pattern 2A-9	3A Straight, flat tips. Provides large flat gripping
2ASA 18049-ER AVEN	<b>C</b> )	surface. Length: 4-3/4"
2ASA 1804	Order #	Description
	18049-ER	Aven Pattern 2A-SA
3CSA 18056-ER EVEN	Pattern 3C-9 Order # 18056-ER	BA Very Sharp, ultra fine tips. Length: 4-1/4" Description Aven Pattern 3C-SA
55A 18062-ER AVEN	Pattern 5-S4 Order # 18062-ER	<ul> <li>For extra fine work, blades taper sharply from the body to super fine points. Length: 4-1/2"</li> <li>Description</li> <li>Aven Pattern 5-SA</li> </ul>
	10002-LK	Aven Fulletti 5-5A
75A 18072-ER AVEN	Pattern 7-SA Order # 18072-ER	A Curved, super fine tips. Length: 4-1/2" Description Aven Pattern 7-SA

## **Precision Tweezers**

### Titanium Tweezers

These titanium tweezers have been found to be excellent for use in the silicon chip industry because titanium tweezers do not shed particles like the stainless steel tweezers. Anytime an abrasive substance is handled and microscopic particles are a detriment, it may be best to choose titanium. Since titanium is non-magnetic, these tweezers are extremely useful when handling magnetic materials or when working in a magnetic field. Titanium is a light weight, high strength material.

#### Features:

- · Lightweight ( high strength to weight ratio )
- Zero Magnetic Retaintivity
- Temperature Resistant to 800° F
- Chemical and Corrosion Resistant
- Non Solder Adhesive
- Bio compatible ( maintain cell integrity, no inflammatory response )
- Typical application: handling of sensitive components in cleaning/chemical processes at high temperatures, histology, biology, forensics, electron microscopy etc.

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TANIU	Titanium AA	Ordar #	Description	
AA		18013TT	Titanium AA Length: 5" (130mm)	
	Titanium #2	Order #	Description	
2 TITANIUM		18046TT	<b>Titanium #2</b> Length:4-3/4" (120mm)	
NIUM	Titanium #2A		Description	
2A TITANIUM		18049TT	<b>Titanium #2A</b> Length:4-3/4" (120mm)	
			-	77
TITANIUM	Titanium OO	Order #	Description	
00		18032TT	Titanium OO Length:4-3/4" (120mm)	Pr
				<sup>o</sup> recision Tools
3 TITANTUM	Titanium #3	Order #	Description	sio Is
31.		18053TT	<b>Titanium #3</b> Length:4-3/4" (120mm)	
OC TITAL	.Titanium #3C	Order #	Description	
30		18056TT	Titanium #3C Length:4-1/4" (110mm)	
	Titanium #6	Order #	Description	
6 TITANIUM		18069TT	<b>Titanium #6</b> Length:4-3/4" (120mm)	
6 11.				
	Titanium #5			
5 TITANIUM	ncanium #3	Order # 18062TT	Description Titanium #5 Length:4-1/4" (110mm)	
		1808211		
	Titanium #7	Order #	Description	
7 TITANIUM		18072TT	<b>Titanium #7</b> Length:4-1/2" (115mm)	

## E-Z Pik Twaazars

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E-Z Pik tweezers features a highly durable special coating for high visibility and easy identification. Helps operators quickly identify the tweezers they need for their particular operation and engineers can easily specify tweezers to be used for a particular process by identifying the color only rather than type and style of tweezers. E-Z Pik tweezers will help improve productivity and process control. Available in six popular styles: AA (Yellow); OO (Red): #2A (Black); #3c (Light Blue); #5 (Green); #7 (Orange). Tweezers are manufactured from Anti-Acid, Anti-Magnetic Stainless Steel.

	Style AA	10 10 10 10 10 10 10 10 10 10 10 10 10 1
AA-SA AVEN	Order #	Description
	18013EZ	Style AA (Yellow) Length: 5" (130mm)
	Style OO	
00.SA AVEN	Order #	Description
Ue	18032EZ	Style OO (Red) Length: 4-3/4" (120mm)
12.	Style 2A	
2A.SA NET	Order #	Description
	18049EZ	Style 2A (Black) Length: 4-3/4" (120mm)
IEFA	Style 3C	
3C.SA AND	Order #	Description
	18056EZ	Style 3C (Light Blue) Length: 4-1/4" (110mm)
	Style 5	
5.SA AVEN	Order #	Description
	18062EZ	Style 5 (Green) Length: 4-1/4" (110mm)
	Style 7	
7.5A AVEN	Order #	Description
	18072EZ	Style 7 (Orange) Length: 4-1/2" (115mm)
	6 E-Z Pik Twe	ezers w/Protective Pouch
	Order #	Description
	18480EZ	6 E-Z Pik Tweezers w/Protective Pouch
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## **Carbofib Tweezers**

Anti-Magnetic, Anti-Acid Stainless Steel Grips, with "Carbofib Tips." Fully ESD Safe (10<sup>2</sup> ohm) but at the same time, soft and non scratching. These conductive synthetic fiber tips are ideally suited to handle delicate and fragile components when extreme care and ESD safety are an absolute necessity. Every tweezers is manually finished and tested for maximum precision. Chemical resistant and heat resistant upto 256°C.



## **Ceramic Tweezers**

#### Zirconica Ceramic Tweezers meet the requirements for a high grade tweezer for use in:

- Clean rooms
- Analytical Chemistry
- Chemical Laboratories
   Semiconductor manufacturing
- Bio Technology
- Circuit Board, Disk Drive and Magnetic Head Manufacturing

- Features:
- Extremely smooth surface and very low coefficient of friction.
- Low thermal conductivity and high thermal shock resistance.
- Excellent electric loss at very high frequency range (VHF, UHF, and SHF).
- Will not cause electromagnetic induction or eddy current loss in high frequency.
- 100% non magnetic, non rusting and non static.

- Highly resistant to all strong acids except hydrofluoric. Free from all metallic contamination.
- Solder will not adhere to surface.
- Six times harder than stainless steel.
- Two times harder than carbon steel.
- Will hold tip geometry better than metal.
- Can be subject to microwaves for sterilization.
- Thermal insulators well suited for soldering.
- Resistant to 1500°C



## AVEN Full Caramic Tweazars

For working with acids (except HF). For SMD solder pot, high temperature exposure. Clean room approved. Can be sterilized, solder repellent.

Order #	Description
18801	Aven Full Ceramic Tweezers Straight 1mm serrated tips Length: 5"/130mm
18802	Aven Full Ceramic Tweezers Straight 1mm smooth tips Length: 5"/130mm
18803	Aven Full Ceramic Tweezers Straight very fine smooth tips Length: 5"/130mm
18804	Aven Full Ceramic Tweezers Curved shape, fine tips Length: 5"/130mm

## Accu-Tek Ceramic Tweezers

Lightweight, Zirconia replaceable ceramic tips attached to aluminum body. \*Replacement tips available.

Order #	Description
18810	Accu-Tek Pattern 71 Flat fine tips Length: 5-1/4" Tip Length: 1-1/4"
18811	Accu-Tek Pattern 72 Fine tips Length: 5-1/4" Tip Length: 1-1/4"
18812	Accu-Tek Pattern 73 Extra fine tips Length: 5-1/4" Tip Length: 1-1/4"
18813	Accu-Tek Pattern 74 Fine broad tips Length: 5-3/8" Tip Length: 1-5/8"

## AVEN Ceramic Tweezers

w/EDS Safe Plastic Body

Lightweight and economical ceramic tipped tweezer. Length: 4-3/4: Fine Points

18820	Aven EDS Safe Ceramic Tipped Tweezers
Order #	Description

## **Plastic Tweezers**

Features & Specifications:

- Tips do not spread under pressure
- No contamination
- Static Dissipative (106 109 OHM/SQ)
- Overall length 4-1/2" 115mm
- Non magnetic

Recommended Uses:

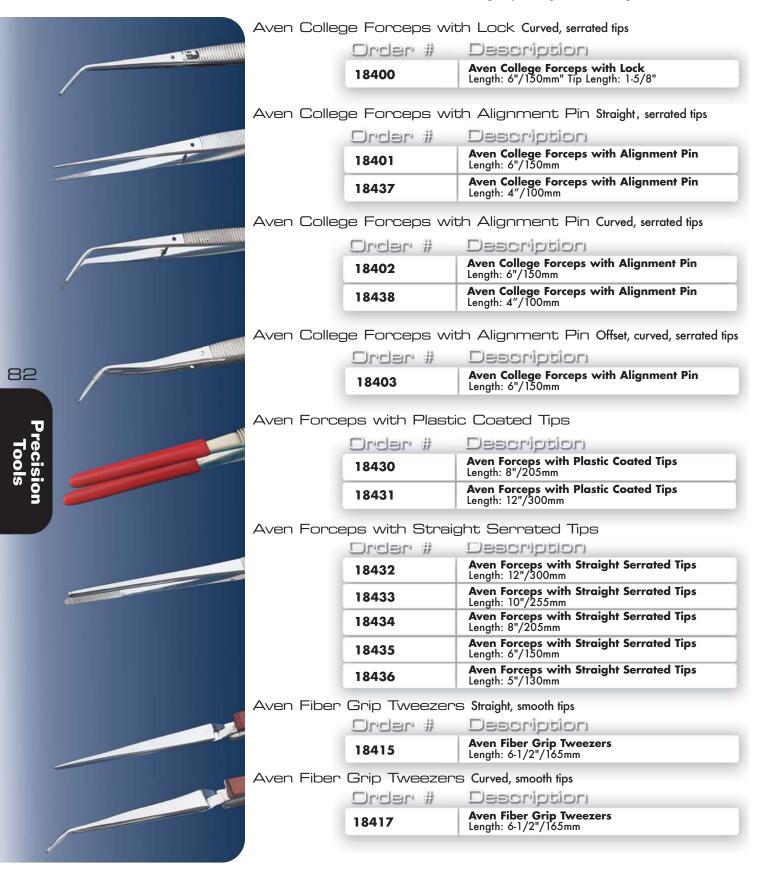
Ideal for handling semi-conductors, silicone chips and delicate wafers. Static dissipative tweezers are ideal for use with sensitive components where ESD damage is a concern.

### Aven Plastic Tweezers

	itraight, flat, rounded	tine	
AVEIT EAU	Order #	Description	
	18511	<b>Aven 2A</b> Type: P2A	
Pattern 2	AB Curved, rounde	ed tips	
	Order #	Description	_
	18514	Aven 2AB Type: P2AB	
Pattern 3	C Very fine, straight	t tips	81
	Order #	Description	
	18517	Aven 3C Type: P3C	P
Pattern 6	A Very fine, angula	ted tips	Tools
	Order #	Description	ols i
	18520	<b>Aven 6A</b> Type: P6A	, Š
Pattern 7	Very fine, curved tip	05	
	Order #	Description	_
	18523	<b>Aven 7</b> Type: P7	
Pattern 3	5 Straight, flat tips		
	Order #	Description	
	18526	Aven 35 Type: P35	
Pattern 3	5A Straight, broad	, flat tips	
	Order #	Description	
	18529	Aven 35A Type: P35A	
		1	

**General Purpose Tweezers** 

Recommended Uses: For bending, separating and removing small items.



## **General Purpose Tweezers**



General Purpose Tweezers Aven General Purpose Tweezers Slant end Order # Description Aven General Purpose Tweezers Length: 3-1/2"/90mm 18484 Aven General Purpose Tweezers Square end, smooth tips Order # Description Aven General Purpose Tweezers Length: 3-1/2" 90mm 18485 Aven General Purpose Tweezers Blunt, smooth tips Order # Description Aven General Purpose Tweezers 18486 Length: 3"/80mm Aven General Purpose Tweezers Spade tips, smooth Order # Description **Aven General Purpose Tweezers** 18487 Length: 4-1/2"/110mm Aven General Purpose Tweezers Offset spade tips, smooth Order # Description Aven General Purpose Tweezers Length: 4-1/8"/108mm 84 18488 Aven General Purpose Tweezers Square end, smooth tips Order # Description Aven General Purpose Tweezers Length: 4-1/8"/108mm 18489 Aven General Purpose Tweezers Blunt, serrated tips Order # Description Aven General Purpose Tweezers Length: 5-11/16"/145mm 18490 Aven General Purpose Tweezers Offset blunt, serrated tips Order # Description Aven General Purpose Tweezers Length: 4-1/2"/115mm 18491 Aven General Purpose Tweezers Bent, blunt serrated tips Order # Description **Aven General Purpose Tweezers** 18492 Length: 10" 255mm Aven Toothed Tissue Forceps Order # Description **Aven General Purpose Tweezers** 18494 Length: 5-1/2"/140mm

## weezer Sets

5-Piece Precision Tweezers Set



Supplied in an elegant padded wooden case. Contains the most popular tweezers: OO-SA, OOD-SA, 3C-SA, 5-SA and 7-SA

Order #	Description	
18476 ACU	Accutek Stainless Steel, Anti-Magnetic, Anti-Acid	****
18476 USA	Technik Stainless Steel, Anti-Magnetic, Anti-Acid	***

### 8-Piece Precision Tweezers Set



6 of our most popular tweezers OOD-SA, 3C-SA, 5-SA and 7-SA		ontains AA-SA, OO-SA,
Order #	Description	

18475 ACU	Accutek Stainless Steel, Anti-Magnetic, Anti-Acid	****
18475 USA	Technik Stainless Steel, Anti-Magnetic, Anti-Acid	***

### 5-Piece Carbofib Tweezers Set



Five of our most popular carbofib tweezers in an elegant padded wooden case. Contains: 2-CF,OO-CF, 2A-CF, 3C-CF and 5CF

Order # Description

18478

ESD-Safe	Tweezers	Set





Aven 6-Pc. Tweezers Set

Contains one each of the following in a plastic pouch: 7" Curved Solder Utility Tweezers, 6" Blunt Tip Tweezers Serrated Points, 4-1/2" Solder Utility Tweezers Sharp Points, 7" Wide Point Tweezers with Lock, 7" Wide Point Cross Locking Tweezers, 7" Solder Utility Tweezers Straight

10470		
18472	Aven 6-Pc. Tweezers Set	

## Aven 5-Pc. Tweezers Set

Contains one each of the following in a plastic pouch:4-1/4" Curved Tweezers Serrated Tips, 4-1/4" Spade Tip Tweezers Smooth, 4-1/4" Wide Point Tweezers Serrated Tips, 4-1/4" Indented Shank Tweezers Smooth Tips, 4-1/2" Solder Utility Tweezers Sharp Points

	Description	
18473	Aven 5-Pc. Tweezers Set	

## Screwdrivers

Features:

- Ergonomically designed handle made from a molded thermoplastic rubber which prevents hands from slipping and allows for maximum torque application.
- Chrome-Vanadium steel blade with tip hardened to 56-60 HRC.



Slotted Order #	Blade Length	Tip Size
13801	3″ / 75mm	1/8″ / 3mm
13802	6″ / 150mm	1/8″ / 3mm
13803	3″ / 75mm	3/16" / 5mm
13804	6″ / 150mm	3/16″ / 5mm
13805	8″ / 200mm	3/16" / 5mm
13806	4" / 100mm	1/4″ / 6mm
13807	6" / 150mm	1/4" / 6mm
13808	6" / 150mm	5/16″ / 8mm

## Stubby Style Screwdrivers



Stubby Style				
Order #	Blade Length	Tip Size		
13809 (Slotted)	1-1/4"/31mm	1/4"/6mm		
13817 (Phillips)	1-1/4"/31mm	#2		





Nut Drivers					
Order #	Blade Length	Tip Size			
13841	4"/100mm	3/16″			
13842	4"/100mm	7/32″			
13843	4"/100mm	1/4″			
13844	4"/100mm	9/32″			
13845	4"/100mm	5/16″			
13846	4"/100mm	11/32″			
13847	4″/100mm	7/16″			
13848	4"/100mm	1/2″			

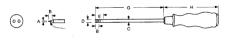


Phillips Order #	Blade Length	Tip Size
13811	3″/ 75mm	#0
13812	6" / 150mm	#0
13813	3″ / 75mm	#1
13814	6" / 150mm	#1
13815	6" / 150mm	#2
13816	10"/250mm	#2



Tamper-Proof Torx					
Order #	Blade Length	Tip Size			
13821	2"/50mm	T5			
13822	2"/50mm	Τ6			
13823	2"/50mm	T7			
13824	3-1/4"/80mm	T8			
13825	3-1/4"/80mm	T9			
13826	3-1/4"/80mm	T10			
13827	3-1/4"/80mm	T15			





Security									
Order #	Туре	Α	В	С	D	E	F	G	Н
13831	M1.7	0.5	0.8	4	2.0	10	Ø10	80	50
13832	M2.0	1.0	1.0	4.5	2.0	10	Ø10	80	50
	M2.3								
13834	M2.6	1.2	1.2	5.5	2.8	10	Ø10	80	50

## Screwdrivers

### Pocket Screwdriver



#### Pocket Clip Style - Slotted

Ordar #	Description	
13850	Pocket Screwdriver - Slotted Blade Length: 1/32" x 2"	

### Pocket Screwdriver



#### Pocket Clip Style - Phillips

Order # 13851

Description

**Pocket Screwdriver - Phillips** Blade Length: #0 x 2"

## **Precision Screwdrivers**

Precision Screwdrivers



#### Specifically designed for electronics.

Features:

- Black Tip.
- Nylon engineered plastic.
  AISI 8660 Chrome-molybdenum vanadium steel with satin finish.
- Duplex component handle designed for rapid rotation greater comfort and control. •
- Fast turning swivel caps.
- Imprinted sizes on the handle for easy selection.

Slotted		Unit: m/m	Torx and	Temper-Pro	of Unit: m/m
Order #	Shaft Diameter	Working Length	Order #	Tip Size	Working Length
13900	1.0	50mm	13920	T5 (only in star)	50mm
13901	1.6	50mm	13921	T6 (only in star)	50mm
13902	2.0	50mm	13922	T7	50mm
13903	2.4	50mm	13923	T8	50mm
13904	3.0	50mm	13924	T9	50mm
13905	2.4	75mm	13925	T10	50mm
13906	3.0	100mm	13926	T15	50mm
13907	4.0	150mm	13927	T20	50mm
Phillips		Unit: m/m	Nutdrive	er	Unit: m/m
Order #	Tip Size	Working Length	Order #	Socket Size	Working Length
13910	No. 000	50mm	13930	M3.0	50mm
13911	No. 00	50mm	13931	M3.5	50mm
13912	No. 0	50mm	13932	M4.0	50mm
13913	No. 1	50mm	13933	M4.5	50mm
13914	No. 0	75mm	13934	M5.0	50mm
13915	No. 1	100mm	13935	M5.5	50mm
13916	No. 1	150mm	13936	M6.0	50mm

## **Precision Screwdriver Sets**

## 7-Piece Precision Screwdriver Set



88

Contents: **Slotted:** 1.6 x 50mm, 2.0 x 50mm, 2.4 x 50mm, 3.0 x 50mm **Phillips:** No.00 x 50, No.0 x 50, No.1 x 50 **Carrying case** 

13940	

Order #

7-pc. Precision Screwdriver Set

Description

## 14 in 1 Reversible Precision Screwdriver Set



20 Piace Precision Screwdriver Set

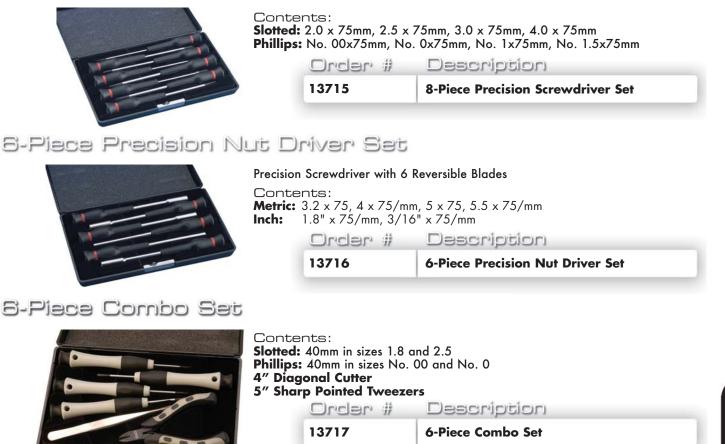
This useful set contains 19 assorted Slotted/Philip/Star/Hex/Ball point/Blades.<br/>Special quick release design makes blade changes quick and easy.Contents:<br/>Slotted: 2.0mm, 2.5mm, 3.0mm, 4.0mm<br/>Star: T6, T7, T8, T9, T10<br/>Nutdriver: 1.5, 2.0, 2.5 mm<br/>Handle: 75mm (3")Phillips: No.00, No.0 PZ#00 & #0<br/>Hex: 1.5, 2.0, 2.5 mm<br/>Handle: 75mm (3")Order #Description1371420pc. Precision Screwdriver Set

**AVEN** 

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## **Precision Screwdriver Sets**

## 8-Piece Precision Screwdriver Set



### 7-Piaca Combo Sat



11-Piaca Combo Sat



Contents: Slotted: 40mm in sizes 1.8 and 2.5 Phillips: 40mm in sizes 00 and 0 4" Diagonal Cutter 4" Long Nose Pliers 5" Sharp Pointed Tweezers Order # Description

1

	200011201011
3718	7-Piece Combo Set

Contents: Slotted: 40mm in sizes 1.2, 1.5, 1.8, 2.0, and 2.5 Phillips: 40mm in sizes 000, 00 and 0 4" Diagonal Cutter, 4" Long Nose Pliers, 5" Sharp Pointed Tweezers Order # Description 13719 11-Piece Combo Set

# recision Screwdrivers

15-Piece Combo Set



Contents: **Slotted:** 40mm in sizes 1.0, 1.2, 1.5, 2.0 and 2.5 Phillips: 40mm in sizes 000 and 00 Hex: 40mm in sizes 0.9, 1.3 and 1.5 4" Diagonal Cutter, 4" Long Nose Pliers, 5" Sharp Pointed Tweezers, 4-1/2" Scissors, Precision Knife Handle with 6 blades

Urder #	Description
13720	15-Piece Combo Set

### 28-Piece Bit and Socket Set



Contents: 19 Bits, 4m	
<b>Slotted:</b> 2.0, 2.5, 3.0, and 4.0	
<b>PZ:</b> 00 and 0	<b>Torx:</b> 6, 7, 8, 9, and 10
Hex: 1.5, 2.0 and 2.5	Ball Point: 1.5, 2.0 and 2.5
Adapters: 4mm Hex, 1/4" SQ,	
Sockets: 1/4" Drive: 3.2, 4.0, 5	
Neo Microtip Screwdriver Ho	Indle
Ordar #	Description

13723

**26-Piece Bit and Socket Set** 

90

11-Piece MicroTip Screwdriver Set w/ Interchangeable Blades

Contents: **Slotted:** 40mm in sizes 0.8, 1.0, 1.2, 1.5, 1.8, 2.0 and 2.5 Phillips: 40mm in sizes 00, 0 and 1 Screwdriver Handle Description Ordar #

13721

**11-Piece Microtip Screwdriver Set** 

## 8-Piece Precision Reversible Screwdriver Set

Contents: Slotted Reversible: 120mm in sizes 0.25 x 1.5 and 0.5 x 3.0, 0.4 x 2..0 and 0.6 x 3.5, 0.4 x 2.5 and 0.8 x 4.0 Phillips Reversible: 120mm in sizes No. 000 and No. 00, No. 0 and No. 1 Neo Microtip Screwdriver Handle, Roll Up Pouch

Order # Description

13722

**6pc.** Precision Reversible Screwdriver Set

## **Alignment Tools**

## 25-Piece Master Alignment Tool Kit



This comprehensive selection of the most commonly used alignment tools and adjusters is invaluable to anyone's tool kit. The 25-piece set includes all the trimmer/potentiometer and RF coil adjusting tools available.

13500	25-Piece Master Alignment Tool Kit
Order #	Description

## 9-Piece Anti-Static Alignment Tool Kit



This Pocket Kit contains nine alignment tools constructed from a special nylon type material that cannot retain a static charge. Wide range of tip styles and sizing assures the user will have a tool for adjusting most conventional components. Pocket Size ESD Safe

13016		9-Piece Anti-Static Alignment Tool Kit	
Order	#	Description	

Ceramic Alignment Screwdrivers/Adjusters

Special ceramic blades for zero electromagnetic induction. Outlasts metal and plastic tools.



#### Slotted Blade ,Ceramic Adjusters

Order #	Description
13224	Slotted Blade, Ceramic Adjusters Tip Size:0.9mm Blade Length: 15mm
13221	Slotted Blade, Ceramic Adjusters Tip Size:1.3mm Blade Length:15mm
13225	Slotted Blade, Ceramic Adjusters Tip Size:1.8mm Blade Length:15mm
13222	Slotted Blade, Ceramic Adjusters Tip Size:2.6mm Blade Length:15mm

Phillips, Ceramic Adjusters

Order #	Description
13218	Phillips, Ceramic Adjusters Tip Size:PHOO Blade Length:15mm
13219	Phillips, Ceramic Adjusters Tip Size:PHO Blade Length:15mm
13220	Phillips, Ceramic Adjusters Tip Size:PH1.7 Blade Length:15mm

#### 4 in 1, Ceramic Adjusters

A handy tool consisting of two double end ceramic bits. Phillips: 0 and 1.8mm Slotted: 1.7mm and 0.9mm Supplied with two protective plastic caps.

Order	#	Description

13230	4 in 1, Ceramic Adjusters
-------	---------------------------

#### 6-Piece Ceramic Adjuster Set

A handy set consisting of the most popular ceramic adjusters. Blade length is 15mm and the following sizes are included:

Phillips: PHO and PH1.7 Slotted: 0.9mm, 1.3mm, 1.8, and 2.6mm

Order # Description

13231	6-pc Ceramic Adjuster Set





## es & Blades

Technik Knives



#### Technik K-18 Grip-On Non-Roll Soft Handle Knife

5" Comfortable soft grip handle with 4 jaw machined aluminum chuck for secure blade positioning. Includes a super sharp #11 blade, convenient rear blade release and a clear plastic safety cap. Used for cutting or trimming plastic, wood, paper, cloth and film. See page 94 for replacement blades.

Order	#
44011	

Description

**K-18 Precision Knife** 

#### Technik K-40 Pocket-Clip Light Duty Utility Knife

This unique multi-purpose precision knife is outstanding for cutting and trimming of paper, plastic, cloth, film and rubber and includes the following features:

- Unique twist lock pocket-clip safety cap.
- Machined aluminum 4 jaw chuck for tight secure blade housing.
- Comfortable ridged tapered plastic handle.
- Super sharp #11 blade.

See page 94 for replacement blades.

44018	K-40 Knife with Pocket Clip Cap
Order #	Description

#### Technik Precision K-1 Light Duty Knife

4-3/4" aluminum handles with 4-slot point chuck for easy blade release. Includes a super sharp #11 blade and a high impact safety cap. Used for precision cutting, forming and stripping of paper, plastic, wood, cloth and film. See page 94 for replacement blades.

44012	K-1 Precision Knife	
Drder #	Description	

#### Technik K-2 Medium Duty Knife

4-3/4" aluminum handle with 4-slot point chuck for easy blade release. Includes a super sharp #22 blade and a high impact safety cap. Used for precision cutting, trimming and stripping paper, plastic, wood, cloth and film. See page 94 for replacement blades.

Order #	Description	
44013	K-2 Medium Duty Knife	

#### Technik K-5 Heavy Duty Knife

7/16" aluminum adapter, 4 jaw machined aluminum chuck for secure blade positioning and a snug fitting plastic safety cap. Included is a sharp edge angled blade. Used for precision cutting, trimming, stripping paper, plastic and wood. See page 94 for replacement blades.











## **Knives & Blades**

## Technik Knives



#### Technik K-8 Flat Handle Light Duty Knife

You can adjust the length of the blade by releasing the nut. Both ends of the blade can be used for cutting boxes, wood, leather and foam.

Order #	Description	-
44015	K-8 Light Duty Knife	
44257	K-8 Replacement Blade (5/pk)	

#### Technik K-10 Plastic Snap Blade Knife

Comes with 13-point blade. For home, office, industrial use cutting paper, plastic, wood and other items.

44256	K-10 Replacement Blade (100/pk)
44016	K-10 Heavy Duty Snap Blade Knife
Order #	Description

Technik K-13 Heavy Duty Plastic Snap Blade Knife

Comes with 7 point snap blade used for cutting and trimming.

Order #	Description
44017	K-13 Heavy Duty Snap Blade Knife
44254	K-13 Replacement Blade (100/pk)

#### Technik Scalpel Handles and Blades

These high precision knives are designed for intricate detailed work. Made from non-sterile .015" thick stainless steel, these blades are ideal for precision cutting in micro circuitry, photography, art, etc.

We offer a variety of handles and blades to suit many applications. Blades are made from surgical quality stainless steel and are supplied 2pc per tube.

Use the #30 plastic or #31 stainless steel metal handles for blades #10, 11, 12 and 15, use the #32 plastic handle or the #33 stainless steel metal handle for blade #23.

Ordar #	Description	
44030	#30 Plastic Handle	
44031	#31 S.S Metal Handle	
44032	#32 Plastic Handle	
44033	#33 S.S. Metal Handle	
Order #	Description	
44041	#10 Scalpel Blade	2pc/tube
44042	#11 Scalpel Blade	2pc/tube
44043	#12 Scalpel Blade	2pc/tube
44044	#15 Scalpel Blade	2pc/tube
44045	#23 Scalpel Blade	2pc/tube





Tools

## **Knives & Blades**

### Technik Knife Set



Contains K1, K2, K5 knife handles with 13 assorted blades in a plastic tray that includes a Teflon covered magnetic strip to help in holding the blades securely.

44101	Knife Set
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## Technik Deluxe Knife Set



## Contains the same items as our Knife Set #44101 however, is supplied in a wooden box.



## Technik Replacement Blades

#### Features:

- Blades precision-crafted of the highest quality carbon and stainless steel with hard, sharp points and honed cutting edges.
- Designed to handle a variety of tasks where accuracy and cutting ease are essential.

	Description	Order #
0	<b>No. 2 Blade</b> Sharp angle for precision cutting of medium to heavyweight materials	44201 / 5 Pack Tube 44202 / 100 Pack
	No. 10 Blade For general cutting, light carving and slicing	44203 / 5 Pack Tube 44204 / 100 Pack
	<b>No. 11 Blade</b> Sharp angle for delicate, precision cutting, trimming and stripping	44205 / 5 Pack Tube 44206 / 100 Pack
	No. 11 Stainless Steel Blade Resists corrosion; will not rust	442055 / 5 Pack Tube 442065 / 100 Pack
	<b>No. 16 Blade</b> For stencilling, etching and scoring; also used on printed circuit boards	44211 / 5 Pack Tube 44212 / 100 Pack
	<b>No. 17 Blade</b> For precision wood chiseling with 1/4" cutting surface	44213 / 5 Pack Tube 44214 / 100 Pack
	<b>No. 18 Blade</b> For deep cross and smooth chiseling of wood with 1/2" cutting surface	44215 / 5 Pack Tube 44216 / 100 Pack
	<b>No. 19 Blade</b> For light chiseling, rough shaping, deburring and trimming	44217 / 5 Pack Tube 44218 / 100 Pack
	<b>No. 22 Blade</b> For long, heavy pressure cuts and general initial shaping in wood working, whittling, carving, trimming and slicing	44221 / 5 Pack Tube 44222 / 100 Pack
	<b>No. 23 Blade</b> For corner cuts, stripping and trimming in confined areas	44223 / 5 Pack Tube 44224 / 100 Pack
	<b>No. 24 Blade</b> For close corner cuts on templates and mates for deburring, stripping and gasket cutting	44225 / 5 Pack Tube 44226 / 100 Pack
	<b>No. 25 Blade</b> For general purpose heavy-pressure cutting, whittling, carving and trimming	44227 / 5 Pack Tube 44228 / 100 Pack
	<b>No. 26 Blade</b> For general purpose whittling and trimming with 2-15/16" cutting edge	44229 / 5 Pack Tube
	<b>No. 27 Blade</b> For general purpose cutting of lightweight & medium woods; 3" length for deeper cut	44230 / 5 Pack Tube
	<b>No. 28 Blade</b> For whittling, leather and linoleum work	44231 / 5 Pack Tube

## Scissors













\*Ceramic blades never need sharpening. No metal to rust or corrode. Trims Kevlar quickly and neatly.

### 5" Electrician Scissor

Heavy-duty general-purpose scissor with two notches for 19 AWG and 23 AWG wire. Scraper and file on back edge of blade. Blade Length: 2"

11012	5" Electrician Scissor	
Order #	Description	

#### 4-1/2" Slim Blade Scissor

Most popular precision scissor for cutting fine wire and for general use. Blade Length: 1-1/4"

Order #	Description
11014	4-1/2" Slim Blade Scissor - Straight
11072	4-1/2" Slim Blade Scissor - Curved

#### All Purpose Standard Scissor

The most common scissor for a variety of applications. Available in 3 most popular sizes.

Ordar #	Description	
11022	<b>7" All Purpose Standard Scissor</b> Blade Length: 3-1/4"	
11023	<b>8" All Purpose Standard Scissor</b> Blade Length: 3-3/4"	

### 4-1/2" Precision Scissor

Excellent for routine and specialty applications. Blade Length: 1-3/8"

11016	4-1/2" Precision Scissor	
Order #	Description	

### 5" Ceramic Scissor

The durable zirconia blade insert even works with magnetic materials. Plastic handles are carbon fiber reinforced.

Order #	Description	-
11802	5" Ceramic Scissor	

### 5-1/2" Ceramic Scissor

Ultra-sharp solid blades never dull. Aluminum die cast handles.

11801	5-1/2" Ceramic Scissor	
Order #	Description	



Copper wire: 1.5mm

11080	2 IN 1 Combination Scissors	
Order #	Description	

**AVEN** 

## **Crimping Tools/Wire Strippers**

• A full line of crimping tools and wire strippers to meet all your data com requirements

Special die available on request

T T

97

### Aven Professional Crimping System

All Steel Construction.
Fully Ratcheting Cycle.
Interchangeable dies constructed from heat treated hardened tool steel for long life.
Quick Release Safety Latch.
Sure-Grip Handles.
More die selections available, contact Aven for details.
Can provide custom designed die, contact Aven for details.
Can provide custom designed die, contact Aven for details.

### Dies for Coax Connectors

Die for Coax Connectors	Description	Order #
	For RG-58, RG-174 and RG-8218 for both 50 and 75-ohm cables. (Hex 0.213, 0.190, 0.178, 0.068, 0.042)	10162D
	For N-Series and RG-8/11 Connectors (Hex 0.429, 0.100, 0.080)	10166D
	For Cambridge CP-88, CP-89, BNC/TNC coax connectors with RG-58, RG-59/62 AU cables. (Hex 0.305, 0.068, 0.228)	10169D
	For RG-58, RG-59/62, BNC/TNC Coax connectors (Hex 0.255, 0.213, 0.068)	10172D
	For Plenum and Teflon cables RG-58 and 59. (Hex 0.213, 0.190, 0.068, 0.042)	10163D
	For RG-59, RG-6, F-Type CATV Connectors (Hex 0.350, 0.320, 0.255)	10167D
	For RG-174, Mini 59, BNC/TNC Connectors (Hex 0.178, 0.128, 0.068)	10170D
	For RG-6, RG-174, Belden-Type RG 8281 Cables (Hex 0.324, 0.178, 0.068)	10174D

Die for Modular Connectors	Description	Order #
	For RJ-11 DEC MMJ six-position modular plugs with an offset release tab	10164D
	For Amp RJ-45 eight-position modular plugs. Primary strain relief crimp bar is located further back on the die/modular plugs	10168D
	For RJ-45, eight-position keyed or non-keyed modular plugs (excluding AMP)	10171D
	For RJ-11 two, four and six-position modular plugs	10175D
	For RJ-22 two and four-position handset modular plugs	10176D
Die for Barrel Type	Connectors	
Image: Constraint of the second se	22-10 AWG insulated terminals. Color-coded nests	10161D
	For 22-12 AWG non-insulated, open barrel connectors, Commercial type	10165D
Die for Wire Ferrul	es	
	For wire ferrules 12-22 AWG (0.5mm sq to 4mm sq)	10178D
	For wire ferrules 6-10 AWG (6mm sq to 16mm sq)	10179D
Die for Fiber Optic	Connecters	
	AMP Optimate Fiber-Optic SMA or SFR type connectors (Round 0.195)	10173D

Tools

Universal Crimp Tool for Coax Connectors



For crimping RG type connectors. Will crimp the following RG connectors: 55, 58, 59, 5, 6, 21, 141, 142, 143, 210, 212, 222, 223, 303, 304 and 400. Will crimp the following Belden type connectors: 8279, 8281, 9231 and 9141.



### All In One Telephone Tool



This versatile tool combines all the necessary tools to cut, strip and crimp modular telephone wires and plugs. Will cut and strip flat line cord cable up to 8 conductors wide. Crimps 8P8C/RJ45, 6P6C/RJ12, 6P2C/RJ11, 6P2C, 4P4C/Handset and 4P2C.

10181	All In One Telephone Tool
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### All In One Telephone Tool





Cuts and strips telephone cable. Features: RJ11, 2, 4 and 6 position and RJ45 8 position, a fully ratcheting cycle and a built in safety release.

10183	Universal Crimp Tool
Order #	Description

## Modular Crimper



An extremely practical tool that is used for RJ11 and RJ45 applications. Both
die are built into the tool. Also has a built in cutter and stripper to make it
easier to prepare wire before crimping. Ratcheted Action

	Description	Order #
	RJ11/RJ45 Modular Crimp Tool	10185
I	RJ11/RJ45 Modular Crimp Too	10185

## 4-Way Indent Crimp Tool



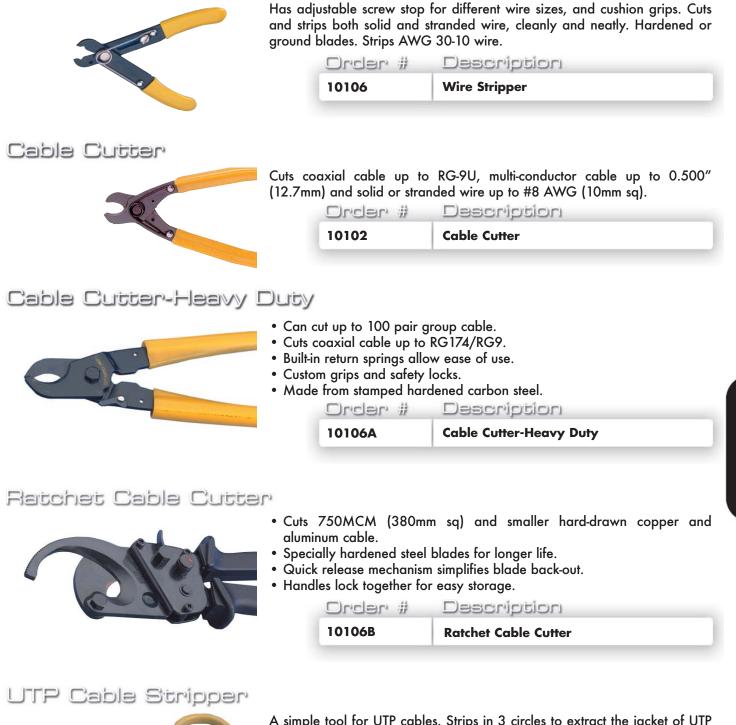
Designed to crimp closed barrel, screw machine pin and socket style contacts. Performs a simultaneous 4 indent crimp for superior contact retention.

Order #	Description	
10186	4-Way Indent Crimp Tool	

101

## **Crimping Tools/ Wire Strippers**

## Wire Stripper

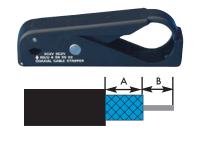




A simple tool for UTP cables. Strips in 3 circles to extract the jacket of UTP cables. Can also function as a 110 punch down tool.

Order #	Description	
10110	UTP Cable Stripper	

Rotary Coaxial Cable Stripper



### Round Cable Stripper



For RG/58, 59 and 62. Strips without adjustments.

Order # Description

10111	Rotary Coaxial Cable Stripper A: 8mm B: 4mm
10112	Rotary Coaxial Cable Stripper
10111D	Replacement Blades for 10.111
10112D	Replacement Blades for 10.112

Slits cable both longitudinally and circumferentially. It can be used on single or multiple conductor cable to 1.75" (44.5mm) 0.D. The blade can be adjusted to jacket thickness up to 0.125" (3.2mm).



## Multi-Function Wire Stripper



AVEN

## **Crimping Tools/ Wire Strippers**

Crimping Tool for Micro Connectors Precision Engineered

- Capable of crimping 1.25 to 2.5mm (AWG 32-20) pitch connector pins.
- D-Sub connector contact can be also crimped.
- Original Set-pin prevents the joint from being loose and offers you easy maintenance.
- With locking latch and coiled spring.
- Pliers made of S55C with Teflon coating.
- 135g compact body for fatigue-free work.
- Length 6.8"

A 10 14 16

	Die Width	Die Height	Wire Size Range	
Die 1	1.0mm	0.50mm	Ø 0.20-0.32mm	AWG 32-28
Die 2	1.4mm	0.55mm	Ø0.32-0.51mm	AWG 28-24
Die 3	1.6mm	0.8mm	Ø 0.51-0.64mm	AWG 24-22
Die 4	1.9mm	0.9mm	Ø 0.51-0.81mm	AWG 24-20

Order #	Description
10140	Crimping Tool for Micro Connectors
10141	Crimping Tool for Large Connectors Sizes: 1.6, 1.9, 2.0 and 2.3 mm

## g Tools/ Wire Strippers

Order #

Order #

10136A

10136B

10105

## Wire Stripper



One light squeeze strips wire clean up to a full 7/8". Automatic feature holds jaws open to remove wire without crushing ends. Practically eliminates all nicking, cutting or fraying. Strips Teflon, Silicone and PVC wire. Made of aluminum with plastic molded handles. Will strip 22, 16, 14, 12, 10 and 8 AWG sizes. Description

BNC/INC	Connector	Removal	1001

Punch Down Tool with 110/66 Blades

For easy access to high-density locations of connectors. Available in two popular lengths.

Description

12" BNC/TNC Removal Tool

8" BNC/TNC Removal Tool

Wire Stripper



Precision
-----------

Insert and cut cable terminations effortlessly with this punch down tool. Impact absorbing, cushioned grip reduces operator stress for high volume installers. Adjustable high/low actuation setting accommodates termination requirements or operator preference. Storage compartment with unique locking device provides convenient storage for spare blades and helps prevent blade loss.

Order #	Description
10135	Punch Down Tool with 110/66 Blades
10135A	Spare Blade 110
10135B	Spare Blade 66

### Connector-Crimping Pliers

Designed to seat UG, UR and UY connectors. A special stop behind cutout prevents damage to connectors.

10137	Connector-Crimping Pliers
Order #	Description

Double Socket Can Wrench



Use to place fuses in cable terminals and connect wires to fuses and binding posts. 3/8" and 7/16" hex double end. Plastic handle.

> Order # Description

10138 De
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ouble Socket Can Wrench

### Desoldering Iron



Combines the ease and portability of a hand-held, manual desolder pump, with the performance of an electric desolder station. Vacuum chamber is easily removed for cleaning.

Order #	Description	
17522	Desoldering Iron	
17522-220	Desoldering Iron 220V	

6-Piece Solder Aid Kit



5-Piece Solder Aid Kit



Soldering Stands



### Desoldering Pumps



Six of the most popular soldering aids. Use the hook to remove components, the reamer to clean holes choked with solder, the knife for cutting away unnecessary circuits on PCB's, the scraper to remove the shielding from wires, rust and contamination to improve adhesion of solder, the brush to clean and the fork to bend and hold leads.

17524	6-Piece Solder Aid Kit	
Order #	Description	

This kit consists of a tweezer, a heat sink and 3 popular solder aids.

		10
17523	5-Piece Solder Aid Kit	

- Holds up to 1-1/8" diameter iron. Heavy duty metal base.
  - Sponge receptacle.
    - 2 position iron holder stand.

AVEN

- Built in sponge tray.
- - Two per pack.

Order #	Description
17531	Soldering Iron Stand
17533	Soldering Stands-Two per pack.

Rugged, manual loading tool for volume desoldering. High vacuum heavy-duty plastic, fully enclosed shaft for safety. Plunger locks for compact storage.

17535	Desoldering Pump-13" High Impact Plastic	
Order #	Description	

Sturdy tool for routine desoldering. Slim profile with a smooth action.

Order # Descrip:	rion	
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17536	Desoldering Pump-8.5" EDS Safe Plastic
	 and the second second

Rugged, metal construction with an anti-static tip.

Order # Description

Aven Inc. | 4595 Platt Road | Ann Arbor, MI 48108

Tel: 734-973-0099 | Fax: 734-973-0097 | www.aveninc.com

#### No Clean Microwick



#### Desoldering Wick

# SLDER ME HIE

106 Solder Reel Stand





Solder



Third Hand With Tweezers

Features:

- No Contamination.
- No Burns.
- Handy dispenser allows precision positioning of the wick.
- Eliminates contamination and burns.
- Pure copper braid (3/32" wide) coated with a "no clean", non-corrosive, halide-free rosin based flux. Length 8".
- Cleaning not needed, leaves no visible residue.

Order #	Description	
17549	No Clean Microwick	

- High quality desoldering braid with unique no clean flux.
- Pure oxygen free copper wire.
  - Order # Description

17540	Desoldering Wick Width: .06"/1.5mm Length:5"/1.5mm	Weight: 0.4oz/11g
17541	Desoldering Wick Width: .08"/2mm Length:5"/1.5mm	Weight: 0.5oz/13g
17542	Desoldering Wick Width: .10"/2.5mm Length:5"/1.5mm	Weight: 0.6oz/16g

Features:

- Keep benches neat and draw out solder wire smoothly.
- Holds up to 1kg (approximately 2lbs.)roll of solder wire.
- Dimensions: 86mm (W) x 14mm (H) x 78mm (D) (3.4"x0.55"x3.1")
- Shaft diameter: 1.5mm (0.6")

Order #	Solder Reel Stand

Formulated for high quality hand soldering of circuit boards and electronic assemblies.

Ordar #	Description
17551	Solder Tin-Lead Alloy: 60 – 40 Diameter: 0.03"/0.8mm Weight: 11b/500g
17552	<b>Solder</b> Tin-Lead Alloy: 60 – 40 Diameter: 0.04"/1mm Weight: 1lb/500g
17553	<b>Solder</b> Tin-Lead Alloy: 60 – 40 Diameter: 0.05"/1.2mm Weight: 1lb/500g
17554	Solder Tin-Lead Alloy: 60 – 40 Diameter: 0.03"/0.8mm Weight: 0.55lb/250g
17555	Solder Tin-Lead Alloy: 60 - 40 Diameter: 0.04"/1mm Weight: 0.55lb/250g

Allows both hands free for soldering. Heavy base prevents movement and multi position swivel clamps permit holding of piece at any angle.

Order # Description

17012

Third Hand With Tweezers



#### Hemostats Straight with Plastic Coated Handles

The most versatile tool, can be used as clamps, heat sinks, third hands, etc., while soldering. Has a three position locking device. Serrated jaws. Stainless steel construction.

Order #	Description
12011	Hemostat Straight with Plastic Coated Handles
12013	Hemostat Straight with Plastic Coated Handles

#### Hemostats Curved with Plastic Coated Handles

Order #	Description
12012	Hemostat Curved with Plastic Coated Handles Length: 5"
12014	Hemostat Curved with Plastic Coated Handles Length: 6"

### Hemostats Straight

Ordar #	Description	
12001	Hemostat Straight Length: 3-1/2"	
12015	Hemostat Straight Length: 5"	
12017	Hemostat Straight Length: 6"	
12019	Hemostat Straight Length: 8"	

### Hemostats Curved

Ordar #	Description	
12002	Hemostat Curved Length: 3-1/2"	
12016	Hemostat Curved Length: 5"	
12018	Hemostat Curved Length: 6"	
12020	Hemostat Curved Length: 8"	

#### Alligator Clamps

A unique tool for retrieving and holding small parts. Allows you to reach into long narrow spaces. Stainless steel.

Order #	Description	
12201	Alligator Clamp Length: 3-1/2"	
12202	Alligator Clamp Length: 5-1/2"	

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108

## 4-Pc. Single Probe Set

These probes are made from stainless steel. They are scalpel-shaped for fine probing. Useful for cold solder probing, hand inspection, micro positioning lead adjusting, etc.

Order #	Description	
20210	4-Pc. Single Probe Set	

#### Stainless Steel Probes

Useful for cold solder probing, hand inspection, micro positioning and lead adjusting.

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Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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