

# PICO Pneumatic Crimping Tools

QUALITY • PRECISION • SPEED



These versatile, lightweight pneumatic powered crimping tools cover a broad range of requirements for:

## COMMERCIAL \* SPACE \* MILITARY APPLICATIONS

- 24 AWG up to 250 MCM
- Up to 130 tons Crimping Force
- Rapid Crimp Cycle Time
- Variety of Crimp Styles
- Precision  $\pm .001'' / - .001$
- Operates on Shop Air (80 psi)
- Model 400 - 16-21 lbs
- Pins & Sockets
- Solderless Terminals
- Rt Angle, Flag Terminals
- Non-Contact Applications
- Variety of Crimp Styles
- Long life\*
- Model 500 - 31-39 lbs



### Double Crimp Spring Locators



### EC Models Increased Power Shorter Cycle time



\*Critical parts are manufactured with high strength S-7 tool

MADE IN USA

# 400 SERIES PNEUMATIC CRIMPING TOOL

MULTI INDENT • CYCLE CONTROLLED • MEETS PERFORMANCE REQUIREMENTS OF MIL-C -22520

## Patent No. 3,173,341

This versatile, lightweight, pneumatic powered crimping tool handles a broad range of requirements for commercial, space and military applications.

The full cycle design insures the user a perfect crimp on every contact that meets tolerance requirements.

This multifaceted tool has been designed to work with a variety of applications, including pin and socket contacts, solderless terminals, and a variety of custom non-connector specific applications. Consult the tooling guide for your requirements, or contact Pico for custom applications.

Several models available: 400, 400-BHD, 400-B-1. Depending on model, this versatile crimp tool accommodates a large range of contact sizes; from No. 28 wire through 4/0 gage. Refer to application charts for model specifications.

Non-adjustable die heads, ensuring quick setup, are interchangeable between all models within the same series.

Critical parts are manufactured with high-strength S-7 tool steel, ensuring light weight and durability.

Human engineered to prevent accidents.

For more information contact Pico or visit web: [www.picotools.com](http://www.picotools.com)

## Features

- Pneumatic - Full Cycle
- Pin & Sockets, Solderless Terminals and many Custom Applications
- Crimps No. 28 thru 4/0
- Variety of Crimp Styles
- Interchangeable, Nonadjustable Die Heads
- No Operator Adjustments required
- Precision  $\pm .001$  /  $- .001$ "
- Operates on Shop Air 80-125 PSI (5-8.6 BAR)
- Series 400: 16-21 lbs (7-9.5 kg)



**Models** are categorized by the addition of one or more booster units, enabling larger sized applications with standard shop air pressure.

**Mil-C-22520/23** was written to cover model 400-B-1 in this series.

Consult Pico or tooling guide for specific details.

**EC kit** available as optional accessory for any 400/500 series model ( Std for model 500-EC ).

EC kit replaces internal valve system, decreasing cycle time on average from 3 sec/cycle to 1.5 sec/cycle for model 400; from 7-8 sec/cycle to 2.5 sec/cycle for series 500.

**Custom Tool Kits** available for both 400 & 500 series; kits can be configured in a variety of combinations to service several connector groups. Contact PICO for details.

**Lightweight/Portable:** Tools are lightweight, portable, and function equally well in both shop and field environments.

**Interchangeable Dies:** Pico's dies are interchangeable between models within the same series.

No adjustment of the dies are required, ensuring quick set-ups between applications.



# 500 SERIES PNEUMATIC CRIMPING TOOL

**Patent No. 3,173,341 & 3,201,969**

The most versatile crimping tool available today.

Models 500-EC, 500-D, 500-DEC and 500-D-1 are available from stock to handle No. 22 through 250 MCM.

Standard factory air pressure 80-125 psi (5-8.6 BAR) is now sufficient for all sizes.

Model 500 has the same safety cycling feature that is built into all of the Pico line of quality tools.

Optional **EC kit** available for models 500-D & 500-D-1. EC kit replaces internal valve system, decreasing cycle time from 8 sec/cycle to 2.5 sec/cycle.

Human engineered to prevent accidents.

For more information contact Pico or visit web: [www.picotools.com](http://www.picotools.com)

**Features**

- Pneumatic - Full Cycle
- Pin & Sockets, Solderless Terminals
- Crimps No. 22 thru 250 MCM
- Variety of Crimp Styles
- Interchangeable, Nonadjustable Die Heads
- No Operator Adjustments required
- Precision +.001/-0.001"
- Operates on Shop Air 80-125 PSI (5-8.6 BAR)
- Series 500: 31-39 lbs (14-17.7 kg)



**Std Shop Pressure:** Both 400 & 500 series tools operate on standard shop air pressure 80-125 PSI (5-8.6 BAR) through the push of a button, or with an optional foot control.



**Bench Mount**

Standard equipment on both 400 and 500 models.

**TYPICAL CONTACT-TERMINAL APPLICATIONS**



Both model 400 & 500 series accommodate insulated and non insulated Ring, Spade and Forked Terminals from 26-24 gage thru 250 MCM, wire range 28 gage thru 250 MCM. Refer to specification charts for individual models.



These series also accept Flag, Right Angle, Quick connects, In-line Splice, End caps and Battery Terminals.



Models within this series accept #23 thru 4/0 Pin and Socket Contacts, and #28 thru 4/0 wire.

Coaxial applications and wire ferrules are also accommodated.



Refer to specification charts for model applications.

Many dies are available for special electrical and non-electrical applications. Contact Pico for your application needs.

**CRIMPING CONFIGURATIONS**

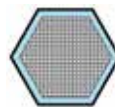
There are many different types of crimps employed today. Both Series 400 & 500 tools are capable of producing a number of crimp configurations, ranging from 4-indent, 8-indent, Hex, Circular, Square and a variety of others.

The indentor crimp principle has been used to produce a variety of impressions, the most common being the "bathtub" and "octadent" (Eight Indentor Crimp).

The 8-indent configuration has been chosen by the Military for use in the M22520/23 tools.



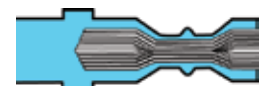
**4 Indent**



**Hex**



**Two Indent**



**8 Indent - Cross Section**



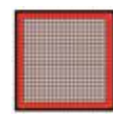
**Circular**



**B Crimp**



**Nest & Indent Crimp**



**Square**



# ACCESSORIES 400 & 500 SERIES

MULTI INDENT • CYCLE CONTROLLED • MEETS PERFORMANCE REQUIREMENTS OF MIL-C -22520

## EC KIT

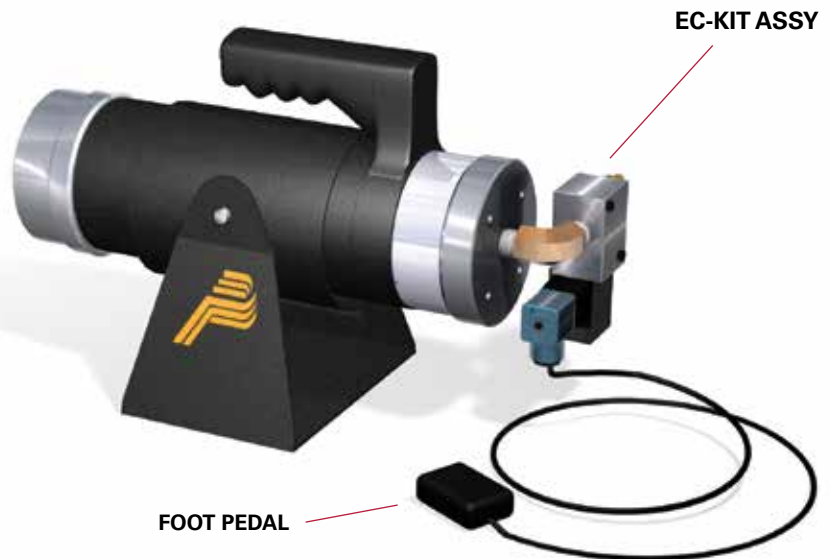
EC kit replaces the internal valve system, decreasing cycle time over stock configuration, resulting in increased production rates.

Available as optional accessory for series 400, 400-BHD, 400-B-1, and series 500, 500-D & 500-D-1.

Includes foot pedal.

**Note:** EC standard on 500-EC model

SERIES MODEL	400	500
<b>CYCLE TIME</b>		
WITHOUT EC	3 sec	7 - 8 sec
WITH EC	1.5 sec	2.5 sec



## ACCESSORIES

Several optional accessories are available, including:

**Foot Pedal** provides operator comfort and increased production speed with foot pedal cycle trigger. (Included with all EC kits)

**Gaging tools**, including Go No-Go gages for die calibration.

**Portable Field Kit** provides mobile power unit for field and in-plant applications. Kit includes CO<sub>2</sub> air tank, up to 400 crimps on a charge.



GO NO-GO GAGES



FOOT PEDAL



PORTABLE FIELD KIT

## SPECIFICATIONS

APPLICATIONS	400	400-BHD	400-B-1
	400	400-BHD-EC	400-B-1-EC
<b>CONTACTS</b>			
PINS	23 thru 8	28 thru 2/0	28 thru 4/0
SOCKETS	23 thru 8	28 thru 2/0	28 thru 4/0
<b>SOLDERLESS TERMINALS</b>			
INSULATED	26-24 thru 6	26-24 thru 1/0	26-24 thru 2/0
UNINSULATED	26-24 thru 6	26-24 thru 2/0	26-24 thru 3/0
<b>COAXIAL APPLICATIONS</b>	<b>MAX. DIA.</b>	<b>MAX. DIA.</b>	<b>MAX. DIA.</b>
CONTACTS	1.00 (2.54 cm)	1.00 (2.54 cm)	1.00 (2.54 cm)
CONNECTORS			
<b>WEIGHT</b>	14 lb (6.3 kg)	17 lb (7.7 kg)	21 lb (9.5 kg)
<b>LENGTH (no bench mt)</b>	10.5 in length 267 mm	13.0 in length 330 mm	15 in length 381 mm

APPLICATIONS	500-D	500-D-1
	500-EC	500-D-1-EC
<b>CONTACTS</b>		
PINS	20 thru 4/0	20 thru 4/0
SOCKETS	20 thru 4/0	20 thru 4/0
<b>SOLDERLESS TERMINALS</b>		
INSULATED	22 thru 1/0	22 thru 3/0
UNINSULATED	26-24 thru 2/0	26-24 thru 4/0
<b>COAXIAL APPLICATIONS</b>	<b>MAX. DIA.</b>	<b>MAX. DIA.</b>
CONTACTS	1.5 (3.8 cm)	1.5 (3.8 cm)
CONNECTORS		
<b>WEIGHT</b>	31 lb (14 kg)	39 lb (17.7 kg)
<b>LENGTH (no bench mt)</b>	15 in length 381 mm	21 in length 533 mm

# 400 SERIES DIE APPLICATIONS GUIDE

MULTI INDENT • CYCLE CONTROLLED • MEETS PERFORMANCE REQUIREMENTS OF MIL-C -22520

STANDARD DIES*		400 400-EC	400-BHD 400-BHD-EC	400-B-1 400-B-1-EC
414DA-22N	Pins & Sockets	Yes	Yes	Yes
414DA-20N	Pins & Sockets	Yes	Yes	Yes
414DA-16N	Pins & Sockets	Yes	Yes	Yes
414DA-12N	Pins & Sockets	Yes	Yes	Yes
414DA-8N	Pins & Sockets	Yes	Yes	Yes
414DA-6N	Pins & Sockets	No	Yes	Yes
414DA-4N	Pins & Sockets	No	Yes	Yes
414DA-2N	Pins & Sockets	No	Yes	Yes
414DA-0N	Pins & Sockets	No	Yes	Yes
414DA-2/ON	Pins & Sockets	No	Yes	Yes
414DA-4/ON-1	Pins & Sockets	No	No	Yes
414DA-26-24-IT	Insulated Terminals	Yes	Yes	Yes
414DA-22-18-IT	Insulated Terminals	Yes	Yes	Yes
414DA-16-14-IT	Insulated Terminals	Yes	Yes	Yes
414DA-12-10-IT	Insulated Terminals	Yes	Yes	Yes
414DA-8IT	Insulated Terminals	Yes	Yes	Yes
414DA-6IT	Insulated Terminals	No	Yes	Yes
414DA-4T	Insulated Terminals	No	Yes	Yes
414DA-2IT	Insulated Terminals	No	Yes	Yes
414DA-1/O-IT	Insulated Terminals	No	Yes	Yes
414DA-26-24-NIT	Non-Insulated Terminals	Yes	Yes	Yes
414DA-22-18-NIT	Non-Insulated Terminals	Yes	Yes	Yes
414DA-16-14-NIT	Non-Insulated Terminals	Yes	Yes	Yes
414DA-12-10-NIT	Non-Insulated Terminals	Yes	Yes	Yes
414DA-8NIT	Non-Insulated Terminals	Yes	Yes	Yes
414DA-6NIT	Non-Insulated Terminals	No	Yes	Yes
414DA-4NIT	Non-Insulated Terminals	No	Yes	Yes
414DA-2NIT	Non-Insulated Terminals	No	Yes	Yes
414DA-1/O-NIT	Non-Insulated Terminals	No	Yes	Yes
414DA-2/O-NIT	Non-Insulated Terminals	No	Yes	Yes

\*NOTE: Consult locator catalog or contact factory for complete application listing.

## INTERCHANGEABLE DIES

Pico's dies are interchangeable between all models within a particular series.

No adjustment of the dies are required, ensuring quick setups between applications.

Pico manufactures dies for most common applications, custom designs are available.

Consult Crimp Die Application Guide for more information on a specific requirement.



# 500 SERIES DIE APPLICATIONS GUIDE

MULTI INDENT • CYCLE CONTROLLED • MEETS PERFORMANCE REQUIREMENTS OF MIL-C -22520

STANDARD DIES*		500-D	500-D-1	
		500-EC	500-D-EC	500-D-1-EC
514DA-20N	Pins & Sockets	Yes	Yes	Yes
514DA-16N	Pins & Sockets	Yes	Yes	Yes
514DA-12N	Pins & Sockets	Yes	Yes	Yes
514DA-8N	Pins & Sockets	Yes	Yes	Yes
514DA-6N	Pins & Sockets	Yes	Yes	Yes
514DA-4N	Pins & Sockets	Yes	Yes	Yes
514DA-2N	Pins & Sockets	Yes	Yes	Yes
514DA-1/0N	Pins & Sockets	Yes	Yes	Yes
514DA-2/0N	Pins & Sockets	Yes	Yes	Yes
514DA-4/0N-1	Pins & Sockets	Yes	Yes	Yes
514DA-16-14-IT	Insulated Terminals	Yes	Yes	Yes
514DA-12-10-IT	Insulated Terminals	Yes	Yes	Yes
514DA-8IT	Insulated Terminals	Yes	Yes	Yes
514DA-6IT	Insulated Terminals	Yes	Yes	Yes
514DA-4IT	Insulated Terminals	Yes	Yes	Yes
514DA-2IT	Insulated Terminals	Yes	Yes	Yes
514DA-1/0-IT	Insulated Terminals	Yes	Yes	Yes
514DA-2/0-IT	Insulated Terminals	Yes	Yes	Yes
514DA-3/0-IT	Insulated Terminals	Yes	Yes	Yes
514DA-4/0-IT	Insulated Terminals	No	Yes	Yes
514DA-250 MCM IT	Insulated Terminals	No	Yes	Yes
514DA-16-14-NIT	Non-Insulated Terminals	Yes	Yes	Yes
514DA-12-10-NIT	Non-Insulated Terminals	Yes	Yes	Yes
514DA-8NIT	Non-Insulated Terminals	Yes	Yes	Yes
514DA-6NIT	Non-Insulated Terminals	Yes	Yes	Yes
514DA-4NIT	Non-Insulated Terminals	Yes	Yes	Yes
514DA-2NIT	Non-Insulated Terminals	Yes	Yes	Yes
514DA-1/0-NIT	Non-Insulated Terminals	Yes	Yes	Yes
514DA-2/0-NIT	Non-Insulated Terminals	Yes	Yes	Yes
514DA-3/0-NIT	Non-Insulated Terminals	Yes	Yes	Yes
514DA-4/0-NIT	Non-Insulated Terminals	No	Yes	Yes
514DA-250 MCM NIT	Non-Insulated Terminals	No	No	Yes

## MIL - C - 22520/23 SPECIFICATION

M22520/23 - #	PICO- EQUIV	DESCRIPTION
M22520/23-01	400-B-1	POWER UNIT
M22520/23-02	414DA-8N	#8 Die Assembly
M22520/23-03	414DA-6N	#6 Die Assembly
M22520/23-04	414DA-4N	#4 Die Assembly
M22520/23-05	414DA-0N	#0N Die Assembly
M22520/23-06	414DA-2/0N	#2/0 Die Assembly
M22520/23-07	414DA-4/0N-1	#4/0 Die Assembly
M22520/23-09	4046A	#8 Locator

M22520/23 - #	PICO- EQUIV	DESCRIPTION
M22520/23-10	4297-6	#6 Locator (Class L)
M22520/23-11	4112	#4 Locator
M22520/23-12	4297-5	#4 Locator (Class L)
M22520/23-13	4066	#1/0 Locator
M22520/23-14	4297-3	#1/0 Locator (Class L)
M22520/23-15	4297-2	#2/0 Locator (Class L)
M22520/23-16	4297-1	#2/0 Locator (Class L)