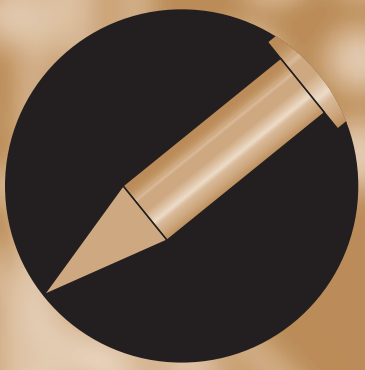
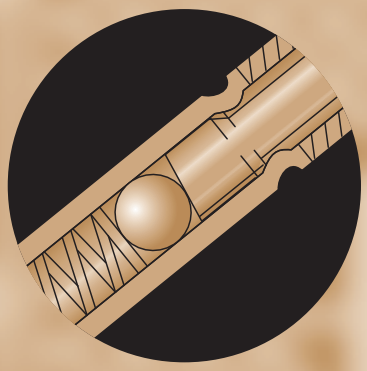
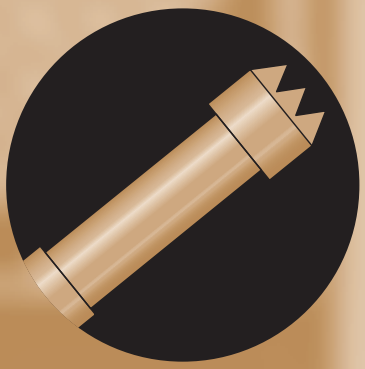
PYLON POGO® CONTACTS





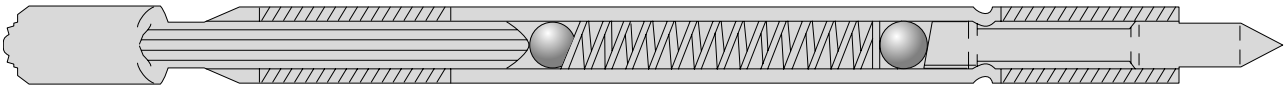


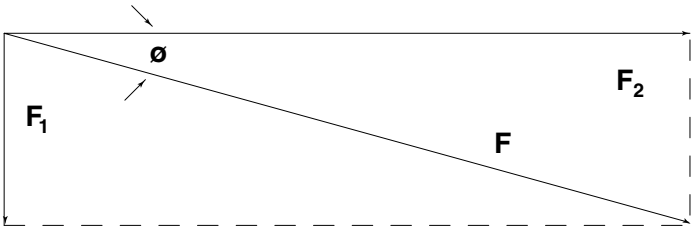
Pogo Contacts for Board Test, Battery Interconnects, Medical Devices and other Momentary Electrical Contacts

The Pylon® Advantage

The Pylon Pogo® Contact advantage comes in two unique design features that enable our Pogo Contacts to achieve the lowest, most consistent contact resistance available in the marketplace.

These features are:
- The biasing ball construction of the Pogo Plunger
- Gold lined nickel silver tubing material for the Pogo body on selected series





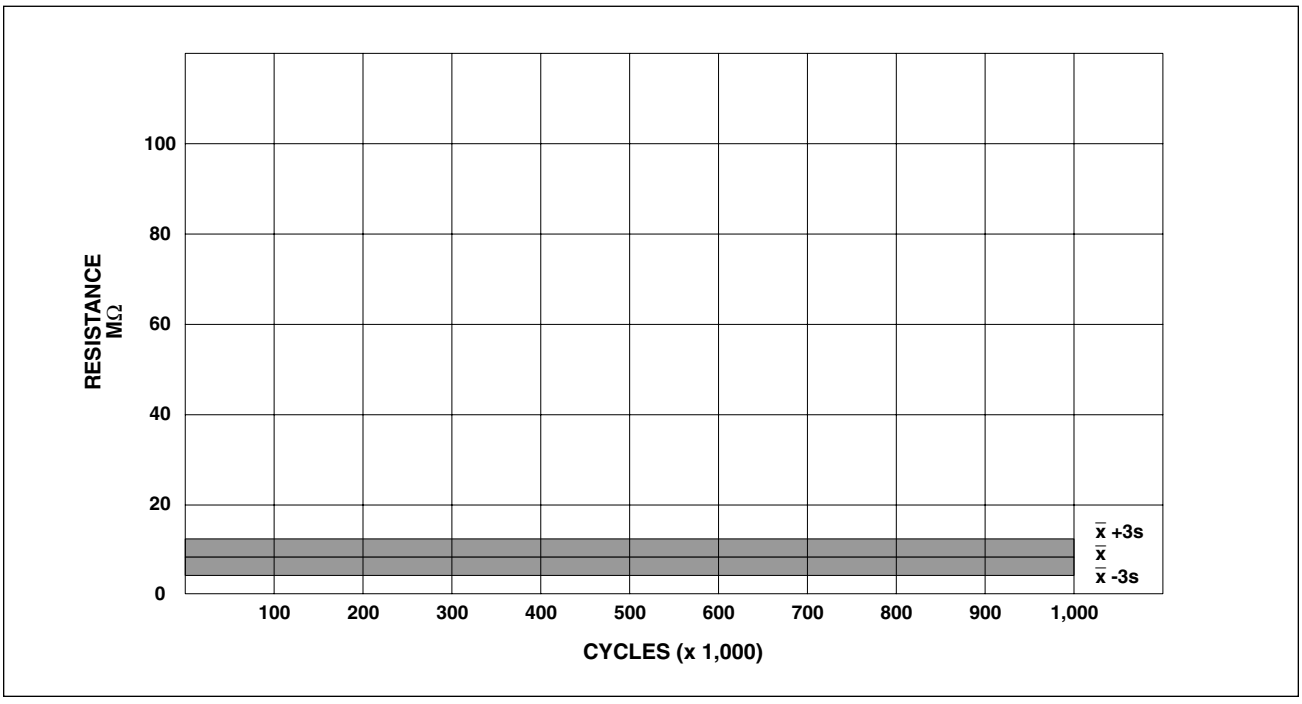
The figure above depicts the biasing angle (ø), spring force (F), radial or side force (F_1) and plunger force (F_2) of Biasing-Ball Pogo Contacts.

Pylon's Biasing Ball Plungers

Biasing-Ball Construction* creates a radial component force insuring a positive and uniform electrical junction between the contact plunger and gold-alloy lining of the contact body.

Contact Resistance

In evaluating contact resistance, low levels of resistance are important. However, the more critical performance measurement is the consistency of the low contact resistance. Resistance measured as 8 milliohms at 1000 cycles must also measure 8 milliohms at 200K, 500K and 1,000,000 cycles. The Biasing Ball design ensures that our Pogo Contacts achieve consistent, low contact resistance. The graph below plots the resistance of our P2663 Pogo series. Note the consistency even to 3 sigma.



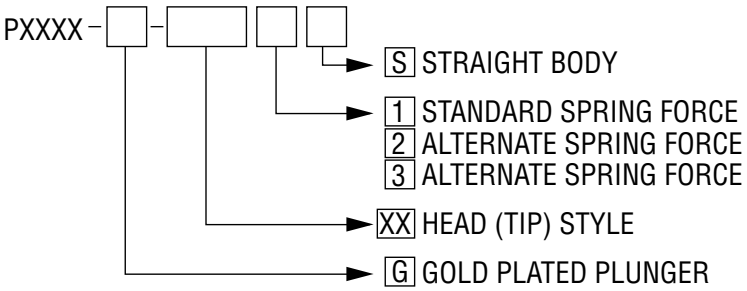
Considerations When Specifying Pogo Contacts

The following list details common mechanical, electrical and economic considerations when specifying Pogo Contacts and Receptacles:

- Centerline spacing
- Plunger shape
- Plunger travel
- Plunger force
- Cleanliness of surface to be contacted
- What the Pogo will contact
- Resistance
- Current to be carried
- Materials and plating
- Replaceable or nonreplaceable
- Temperature
- Termination method
- Life required
- Quantity
- Cost
- Other ambient conditions

Part Numbering Scheme

As a means to allow our customers to easily specify Pogo Contacts that meet specific application requirements, a new part number scheme has been adopted. The scheme is easy to follow and utilizes the long-standing Pylon numerical Pogo family design.



Example: P2663G-1P1S

This would be a P2663 Series probe, gold-plated plunger, with a chisel tip, having a standard spring, and a straight body configuration.

Table of Contents

P2662A Series - .050 (1.27) centers 2
P2662B Series - .050 (1.27) centers 3
P2663 Series - .075 (1.91) centers 4
P2664 Series - .100 (2.54) centers 5
P3158 Series - .100 (2.54) centers 6
P5160 Series - .100 (2.54) centers 7
P2665 Series - .125 (3.18) centers 8
P2757 Series - .187 (4.75) centers 9
Nonreplaceable Pogo Contacts 10
Pogo Contact A-A-S/A-S Series 11
Pogo Contact C-S/E-S Series 12
Pogo Contact F/G Series 13
Pogo Contact P2550/P2532 Series 14
Pogo Contact Low Ω/P2447/HC125A-TT 15
Pogo Contact P3325 Series/P4301-1F 16
Tools 17

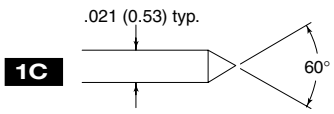
Custom-designed Pogo Contacts and Sockets

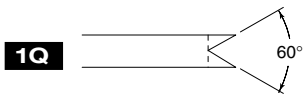
Pylon has been designing custom Pogo contacts for more than 25 years. Pogo contacts have been designed to withstand harsh environmental conditions.

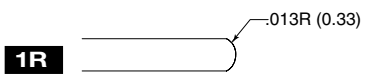
Put our dedicated engineering team to work on your custom requirements.

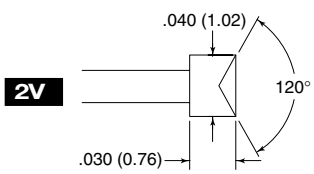
Specifications subject to change without notice.
Drawings may not be to scale.
Dimensions in inches (millimeters).

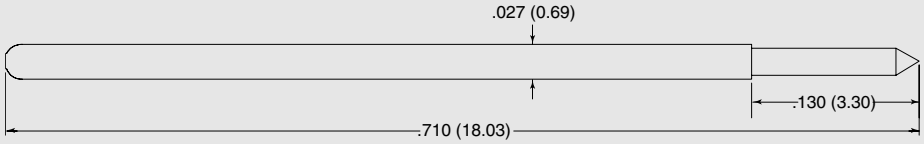
P2662A Series











Specifications

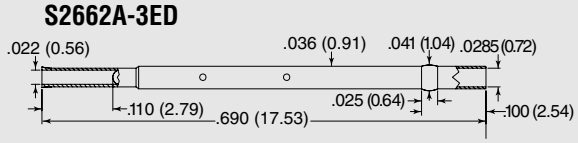
Plunger	Hardened BeCu
Body	Gold-plated phosphorous bronze
Spring	Silver-plated BeCu
Ball	Stainless steel
Electrical Resistance	<30mΩ
Maximum Current	3 amps
Working Travel	.067” (1.7)

Spring Force in oz. (grams)	Initial	Working
Standard:	0.7 (20)	1.7 (48)
Alternate:	0.6 (17)	2.5 (72)

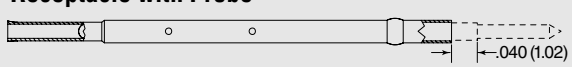
Pogo® Receptacle

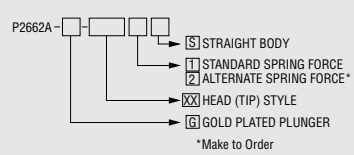
The P2662A Series is designed to be used with the S2662A Series receptacle below. The recommended mounting hole is .0395/.0380.

S2662A-3ED



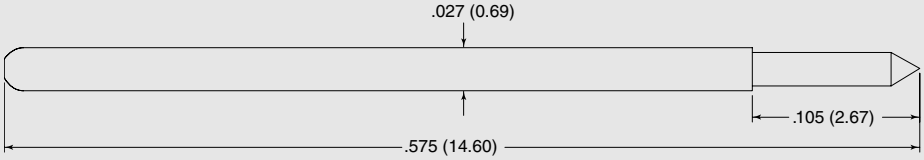
Receptacle with Probe





 Dimensions in inches (millimeters).

P2662B Series



Specifications

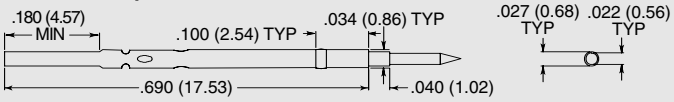
Plunger	Hardened BeCu
Body	Gold-plated phosphorous bronze
Spring	Silver-plated BeCu
Ball	Stainless steel
Electrical Resistance	<30mΩ
Maximum Current	3 amps
Working Travel	.050” (1.27)

Spring Force in oz. (grams)	Initial	Working
Standard:	1.0 (28)	1.8 (51)
Alternate:	0.5 (14)	2.5 (71)

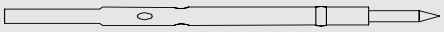
Pogo® Receptacle

The P2662B Series is designed to be used with the PR261 Series receptacles below. The recommended mounting hole is .035/.0365 (0.89/0.93mm). The recommended drill is a #64 or 0.92mm. Use tool T261-0 for installation.

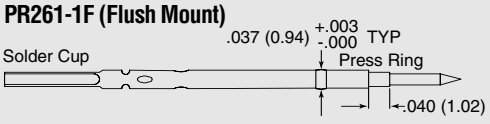
PR261-O Crimp



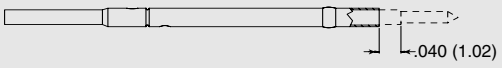
PR261-OF (Flush Mount)

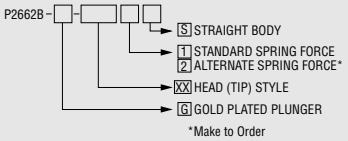


PR261-1 Solder
PR261-1F (Flush Mount)

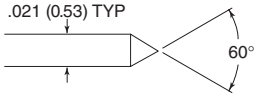


Receptacle with Probe





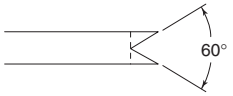
1C



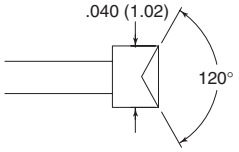
1R



1Q

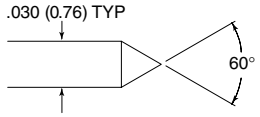


2V

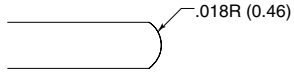


P2663 Series

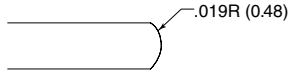
1C



1R

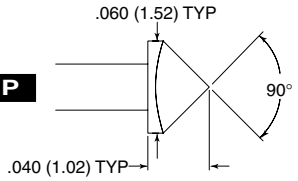


3R

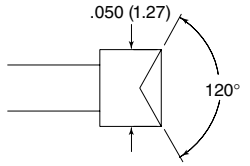


O.A.L. - .770 (19.56)

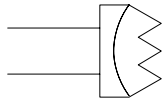
1P

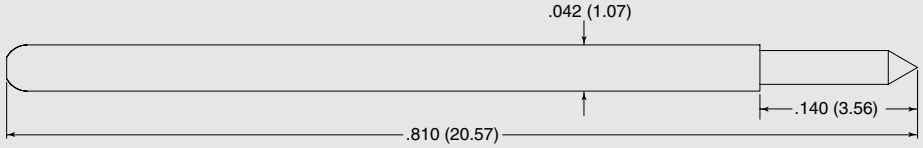


1V



1W





Specifications

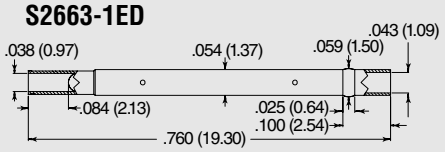
Plunger	Hardened BeCu
Body	Gold-plated phosphorous bronze
Spring	Stainless steel
Ball	Stainless steel
Electrical Resistance	<10mΩ
Maximum Current	3 amps
Working Travel	.067" (1.70)

Spring Force in oz. (grams)	Initial	Working
Standard:	1.5 (42)	3.3 (94)
Alternate:	1.0 (28)	2.0 (57)

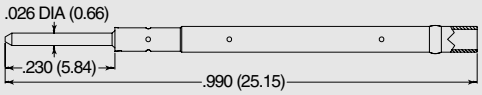
Pogo® Receptacle

The P2663 Series is designed to be used with the S2663 Series receptacles below. The recommended mounting hole is .0576/.0561.

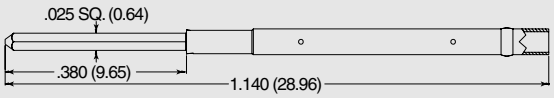
S2663-1ED



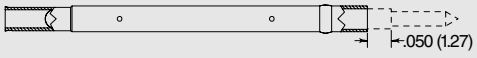
S2663-1ETD

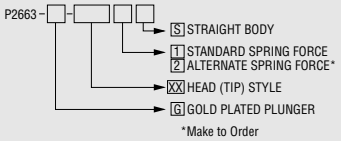


S2663-1EWWD



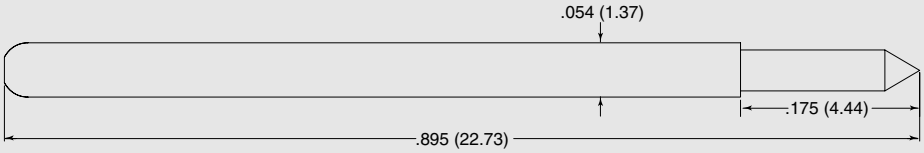
Receptacle with Probe





Dimensions in inches (millimeters).

P2664 Series



Specifications

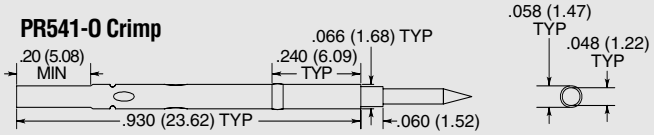
Plunger	Hardened BeCu
Body	Gold-plated phosphorous bronze
Spring	Stainless steel
Ball	Stainless steel
Electrical Resistance	<10mΩ
Maximum Current	5 amps
Working Travel	.084" (2.13)

Spring Force in oz. (grams)	Initial	Working
Standard:	2.0 (57)	3.6 (102)
Alternate:	3.0 (85)	5.7 (162)

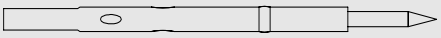
Pogo® Receptacle

The P2664 Series is designed to be used with the PR541 Series receptacles below. The recommended mounting hole is .069 (1.75mm). The recommended drill is 1.75mm. Use ARIT54 tool for installation.

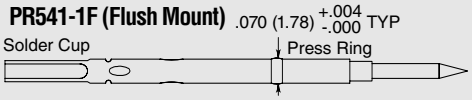
PR541-0 Crimp



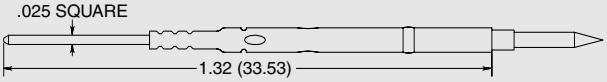
PR541-0F (Flush Mount)



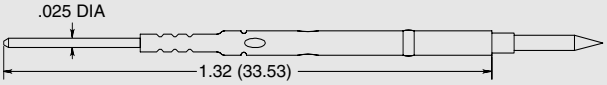
PR541-1 Solder
PR541-1F (Flush Mount)

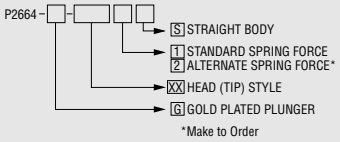


PR541-2 Wire Wrap
PR541-2F (Flush Mount)

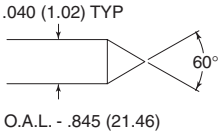


PR541-3 Round Post
PR541-3F (Flush Mount)





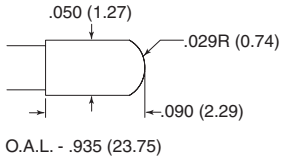
1C



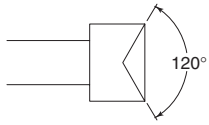
1R



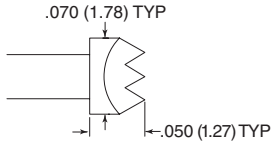
2R



4V

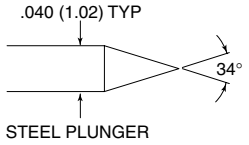


1W

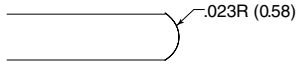


P3158 Series

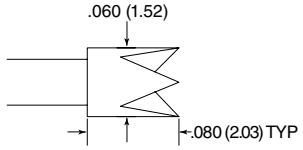
3C



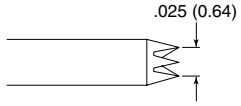
1R



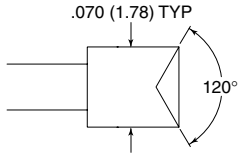
1Q



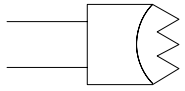
2Q

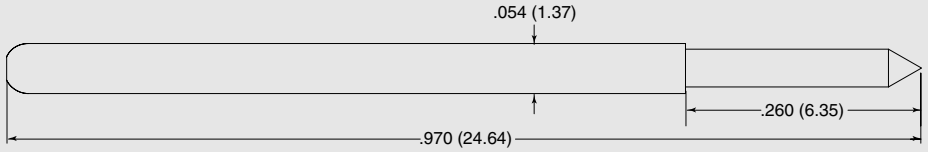


1V



1W





Specifications

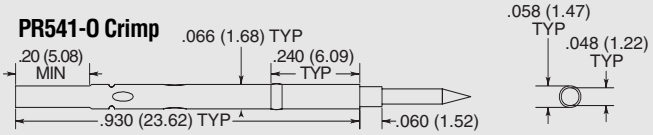
Plunger	Hardened BeCu (except as noted)
Body	Gold-plated phosphorous bronze
Spring	Music wire
Ball	Stainless steel
Electrical Resistance	<10mΩ
Maximum Current	8 amps
Working Travel	.114” (2.90)

Spring Force in oz. (grams)	Initial	Working
Standard:	2.7 (77)	6.9 (196)
Alternate:	1.3 (37)	2.8 (79)

Pogo® Receptacle

The P3158 Series is designed to be used with the PR541 Series receptacles below. The recommended mounting hole is .069 (1.75mm). The recommended drill is 1.75mm. Use ARIT54 tool for installation.

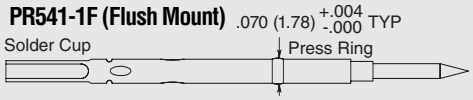
PR541-0 Crimp



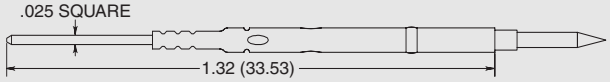
PR541-0F (Flush Mount)



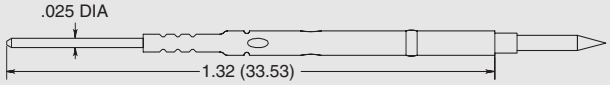
PR541-1 Solder
PR541-1F (Flush Mount)

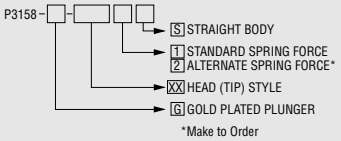


PR541-2 Wire Wrap
PR541-2F (Flush Mount)



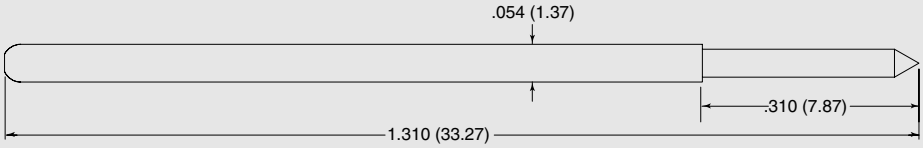
PR541-3 Round Post
PR541-3F (Flush Mount)





Dimensions in inches (millimeters).

P5160 Series



Specifications

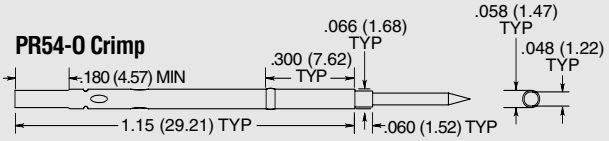
Plunger	Hardened BeCu
Body	Gold-plated phosphorous bronze
Spring	Music wire
Ball	Stainless steel
Electrical Resistance	<10mΩ
Maximum Current	8 amps
Working Travel	.167" (4.24)

Spring Force in oz. (grams)	Initial	Working
Standard (-1):	2.5 (71)	6.5 (184)
Alternate (-2):	1.7 (48)	3.5 (99)
Alternate (-3):	2.5 (71)	8.2 (232)

Pogo® Receptacle

The P5160 Series is designed to be used with the PR54 Series receptacles below. The recommended mounting hole is .069 (1.75mm). The recommended drill is 1.75mm. Use ARIT54 tool for installation.

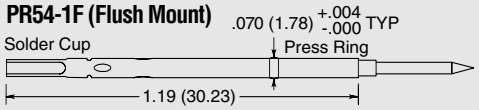
PR54-O Crimp



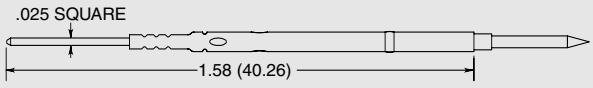
PR54-OF (Flush Mount)



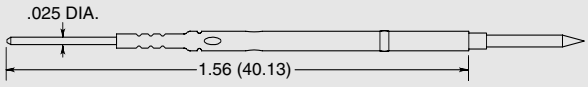
PR54-1 Solder
PR54-1F (Flush Mount)

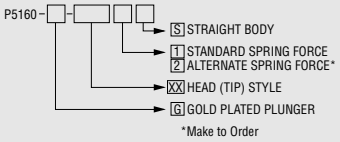


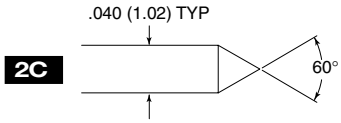
PR54-2 Wire Wrap
PR54-2F (Flush Mount)

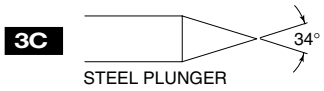


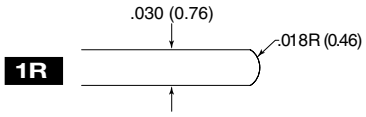
PR54-3 Round Post
PR54-3F (Flush Mount)

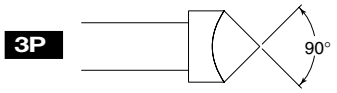


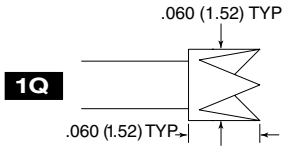


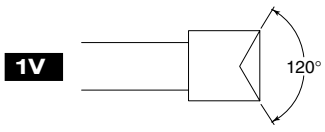


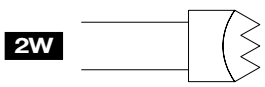








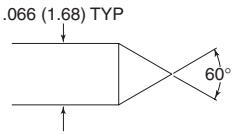




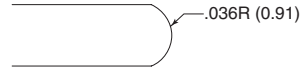
Dimensions in inches (millimeters).

P2665 Series

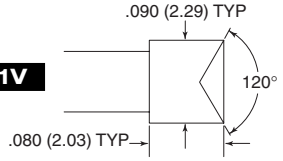
1C



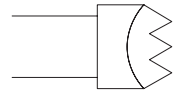
1R



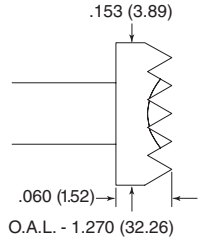
1V

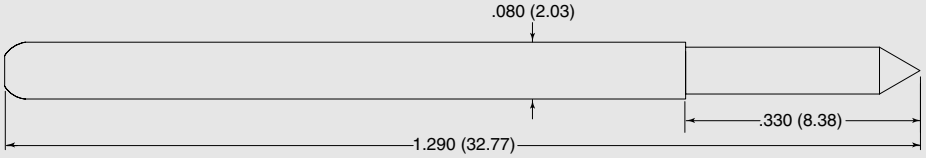


1W



2W





Specifications

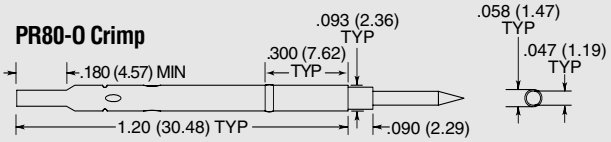
Plunger	Hardened BeCu
Body	Gold-plated phosphorous bronze
Spring	Stainless steel
Ball	Stainless steel
Electrical Resistance	<10mΩ
Maximum Current	15 amps
Working Travel	.167" (4.24)

Spring Force in oz. (grams)	Initial	Working
Standard:	1.5 (43)	3.0 (85)
Alternate:	2.5 (71)	5.8 (164)

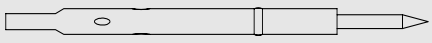
Pogo® Receptacle

The P2665 Series is designed to be used with the PR80 Series receptacles below. The recommended mounting hole is .094/.096 (2.39/2.44mm). The recommended drill is a #41 or 2.4mm. Use tool T80-0 for installation.

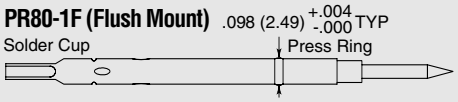
PR80-0 Crimp



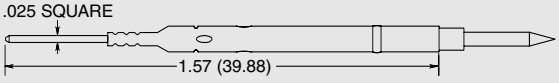
PR80-0F (Flush Mount)



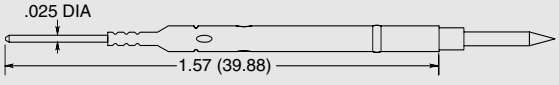
PR80-1 Solder
PR80-1F (Flush Mount)

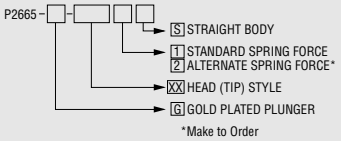


PR80-2 Wire Wrap
PR80-2F (Flush Mount)



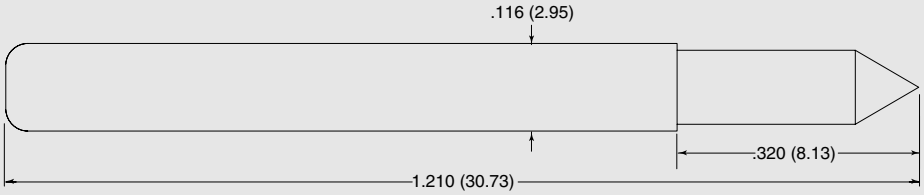
PR80-3 Round Post
PR80-3F (Flush Mount)





Dimensions in inches (millimeters).

P2757 Series



Specifications

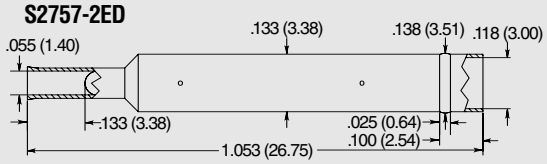
Plunger	Hardened BeCu
Body	Gold-plated phosphorous bronze
Spring	Stainless steel
Ball	Stainless steel
Electrical Resistance	<10mΩ
Maximum Current	20 amps
Working Travel	.167" (4.24)

Spring Force in oz. (grams)	Initial	Working
Standard:	2 (57)	4.0 (113)
Alternate (Stainless steel):	3.5 (99)	6.85 (194)

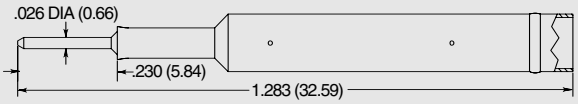
Pogo® Receptacle

The P2757 Series is designed to be used with the S2757 Series receptacles below. The recommended mounting hole is .1365/.1350.

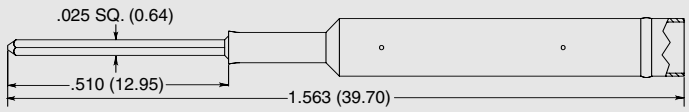
S2757-2ED



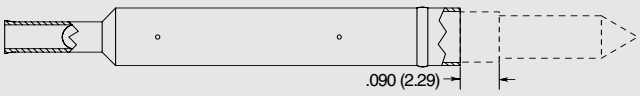
S2757-2ETD

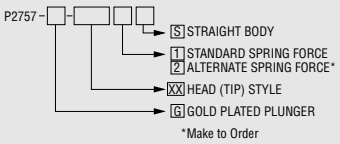


S2757-2EWWD

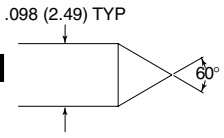


Receptacle with Probe

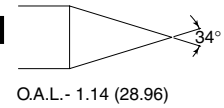




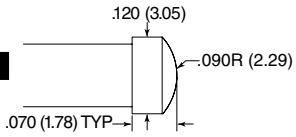
1C



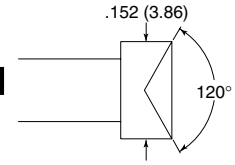
2C



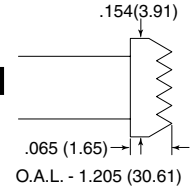
1R



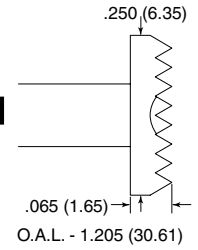
1V



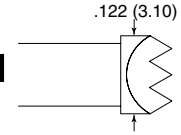
1W



2W

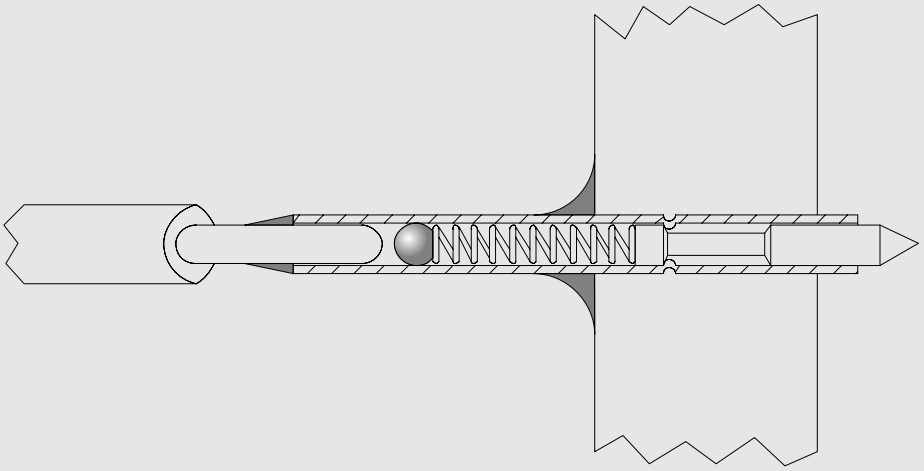


3W



Dimensions in inches (millimeters).

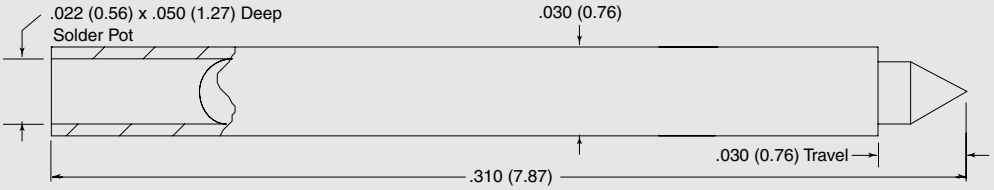
Nonreplaceable Pogo® Contacts



The Pylon line of standard products include nonreplaceable Pogo Contacts. They differ from the replaceable contacts in that they do not require a socket. The nonreplaceable line is designed to be permanently mounted. Solder pots are incorporated for a reliable electrical connection.

The construction is typically gold-plated brass bodies, combined with gold-plated springs and plungers. This ensures the user of excellent electrical contact.

Available in body diameters from .030" to .187", nonreplaceable Pogo Contacts are another example of Pylon's quality and innovation and how it can work for you.

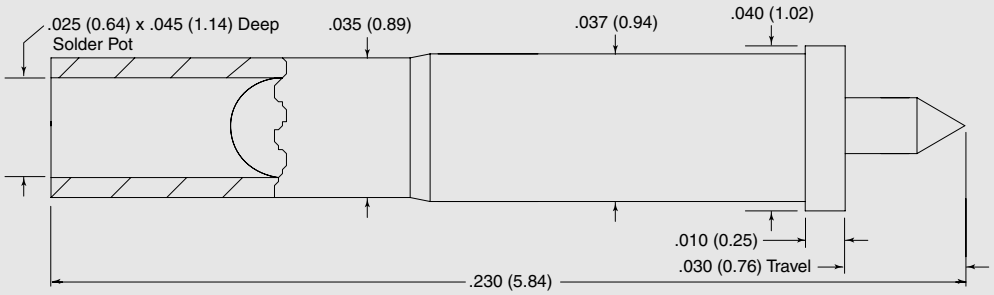


A-A-S Series Specifications

Plunger	Gold-plated hardened BeCu
Body	Gold-plated phosphorous bronze
Spring	Gold-plated stainless steel
Ball	Gold-plated stainless steel
Electrical Resistance	<30mΩ
Maximum Current	2 amps
Working Travel	.020 (0.51)

Spring Force in oz. (grams)	Initial	Working
Standard:	0.5 (14)	2.0 (57)

The recommended hole is .0315 (#68 drill) for epoxy mounting.



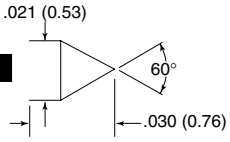
A-S Series Specifications

Plunger	Gold-plated hardened BeCu
Body	Gold-plated brass
Spring	Gold-plated stainless steel
Ball	Gold-plated stainless steel
Electrical Resistance	<30mΩ
Maximum Current	2 amps
Working Travel	.020 (0.51)

Spring Force in oz. (grams)	Initial	Working
Standard:	0.7 (20)	1.3 (37)

The recommended hole is .0380 (#62 drill) for epoxy mounting.

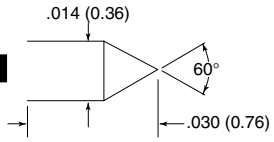
A-A-S-C



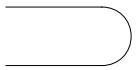
A-A-S-R



A-S-C

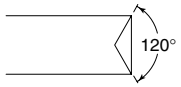


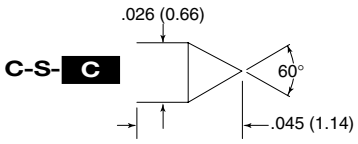
A-S-R



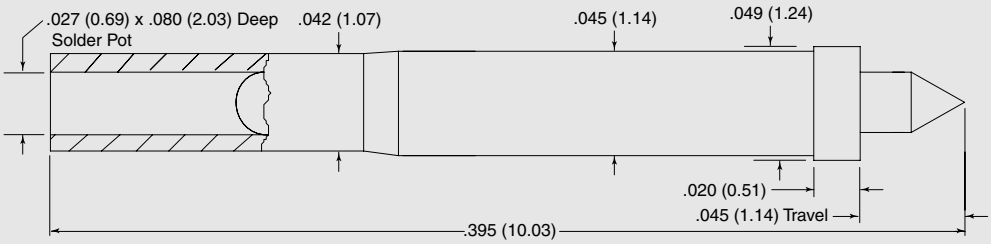
Gold Plated
Brass Plunger

A-S-V







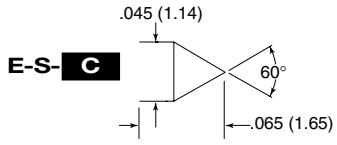


C-S Series Specifications

Plunger	Gold-plated hardened BeCu
Body	Gold-plated brass
Spring	Gold-plated stainless steel
Ball	Gold-plated stainless steel
Electrical Resistance	<30mΩ
Maximum Current	5 amps
Working Travel	.030 (0.76)

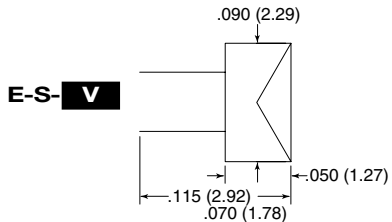
Spring Force in oz. (grams)	Initial	Working
Standard:	.5 (14)	3.4 (96)

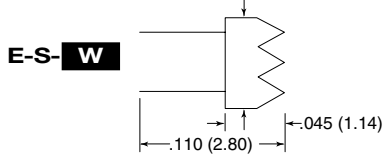
The recommended hole is .0465 (#56 drill) for epoxy mounting.

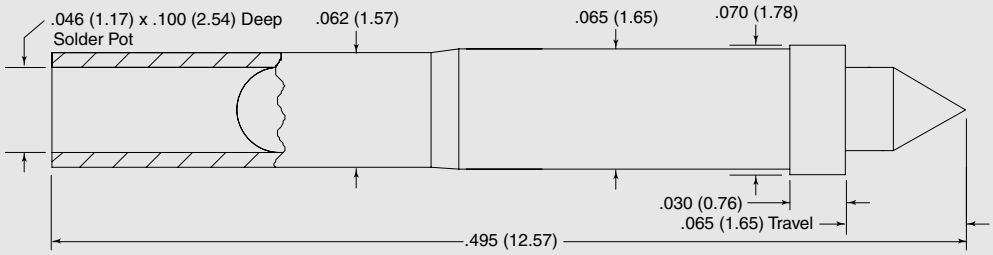












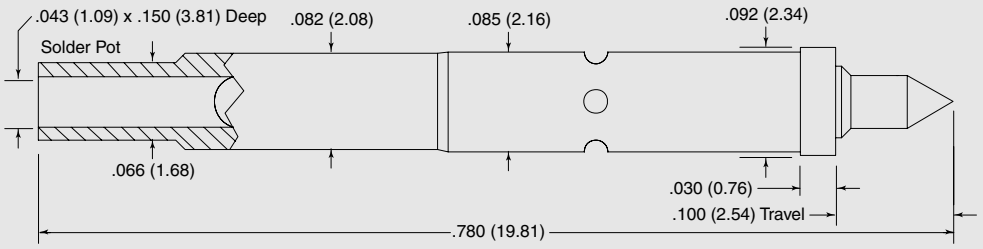
E-S Series Specifications

Plunger	Gold-plated hardened BeCu
Body	Gold-plated brass
Spring	Gold-plated stainless steel
Ball	Gold-plated stainless steel
Electrical Resistance	<30mΩ
Maximum Current	5 amps
Working Travel	.043 (1.09)

Spring Force in oz. (grams)	Initial	Working
Standard:	1.0 (29)	2.75 (78)

The recommended hole is .0670 (#51 drill) for epoxy mounting.

Dimensions in inches (millimeters).

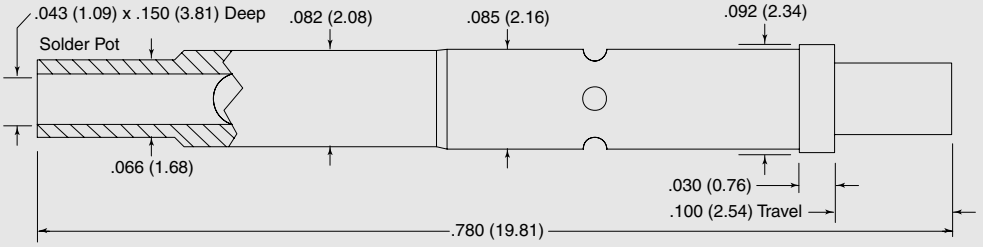


F-S Series Specifications

Plunger	Gold-plated hardened BeCu
Body	Gold-plated brass
Spring	Gold-plated stainless steel
Ball	Gold-plated stainless steel
Electrical Resistance	<30mΩ
Maximum Current	5 amps
Working Travel	.066 (1.68)

Spring Force in oz. (grams)	Initial	Working
Standard:	2.0 (57)	6.0 (170)

The recommended hole is .0860 (#44 drill) for epoxy mounting.



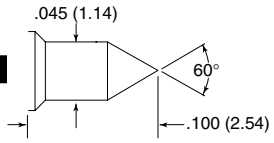
G-S Series Specifications

Plunger	Gold-plated hardened BeCu
Body	Gold-plated brass
Spring	Gold-plated stainless steel
Ball	Gold-plated stainless steel
Electrical Resistance	<30mΩ
Maximum Current	5 amps
Working Travel	.067 (1.68)

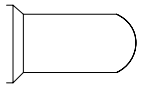
Spring Force in oz. (grams)	Initial	Working
Standard:	3.0 (85)	6.0 (170)

The recommended hole is .0860 (#44 drill) for epoxy mounting.

F-S-C

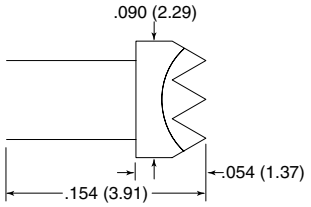


F-S-R

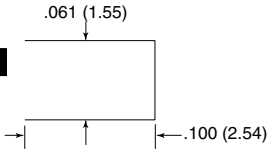


Rhodium-plated brass plunger

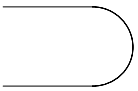
F-S-W



G-S-F

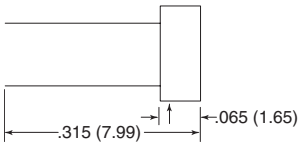


G-S-R

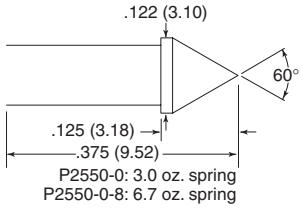


P2550/2532 Series*

P2550-8

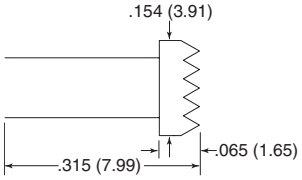


P2550-0-8

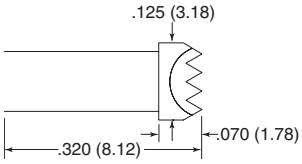


P2550-0: 3.0 oz. spring
P2550-0-8: 6.7 oz. spring

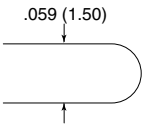
P2550-6-8



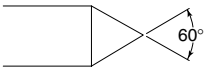
P2550-9

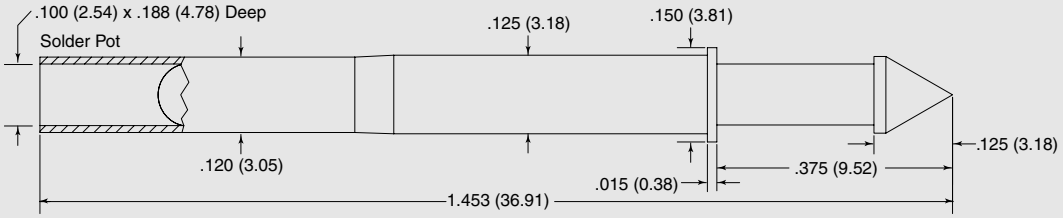


P2532-1



P2532-2





P2550 Series Specifications

Plunger	Gold-plated hardened BeCu
Body	Gold-plated brass
Spring	Stainless steel
Ball	Gold-plated stainless steel
Electrical Resistance	<30mΩ
Maximum Current	5 amps
Working Travel	.167 (4.24)

Spring Force in oz. (grams)	Initial	Working
Standard:	1.20 (34)	3.10 (88)

The recommended hole is .1260 (3.2mm) for epoxy mounting.



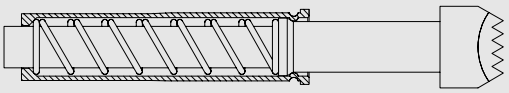
P2532 Series Specifications

Plunger	Gold-plated hardened BeCu
Body	Gold-plated brass
Spring	Stainless steel
Ball	Gold-plated stainless steel
Electrical Resistance	<30mΩ
Maximum Current	5 amps
Working Travel	.093 (2.36)

Spring Force in oz. (grams)	Initial	Working
Standard:	1.0 (28)	2.3 (65)

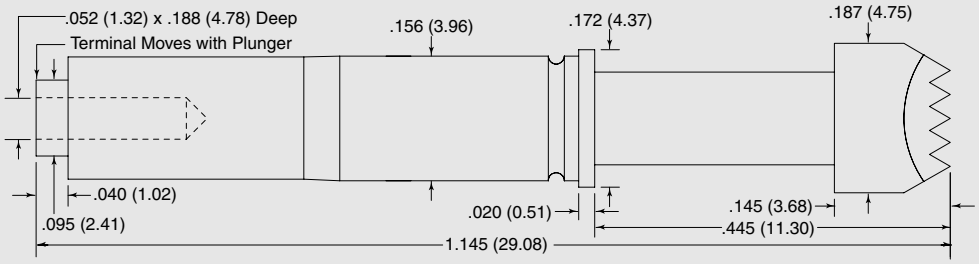
The recommended hole is .0945 (2.4mm) for epoxy mounting.

*Consult factory for minimum order quantity



Low resistance Pogo Contacts are designed for applications requiring minimum internal resistance and/or high current-carrying capacity.

These objectives are achieved by making the Pogo plunger and terminal as a single unit. This construction method eliminates the resistance of the spring and body.

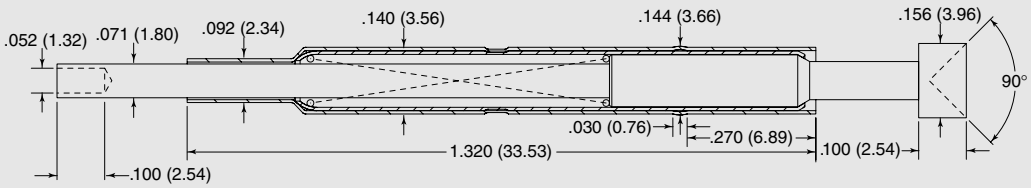


P2447 Specifications

Plunger	Nickel-plated hardened BeCu
Body	Brass
Spring	Stainless steel
Terminal	Nickel-plated brass
Electrical Resistance	<10mΩ
Maximum Current	10 amps
Working Travel	.200 (5.08)

Spring Force in oz. (grams)	Initial	Working
Standard:	6.0 (170)	14.0 (397)

The recommended hole is .1570 (#22 drill) for epoxy mounting.



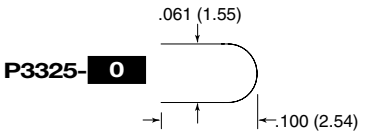
HC125A-TT (replaceable probe) Specifications

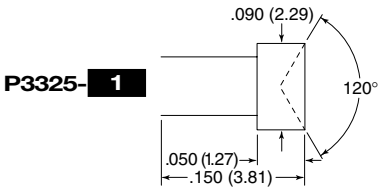
Plunger	Gold-plated hardened BeCu
Body	Gold-plated nickel silver
Spring	Silver-plated stainless steel
Electrical Resistance	<20mΩ
Maximum Current	45 amps
Plunger Travel (Full)	.250 (6.35)

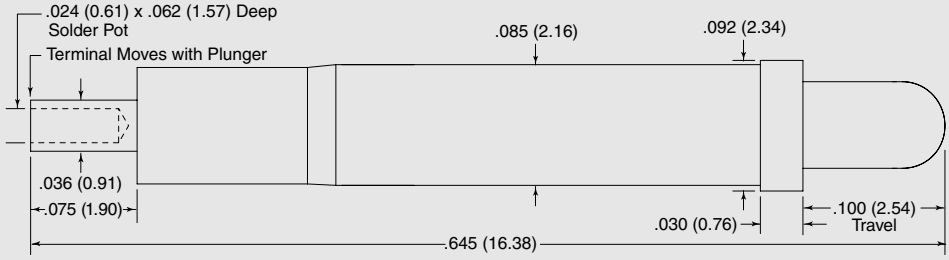
The HC125A-TT is designed to be used with the SR125 receptacle. The recommended mounting hole is .141/.143 (3.58/3.63mm). The recommended drill is a 3.6mm. Use tool T125-0 for installation.

Spring Force in oz. (grams)	Initial	Working
Standard:	6.0 (170)	16.0 (454)

Dimensions in inches (millimeters).





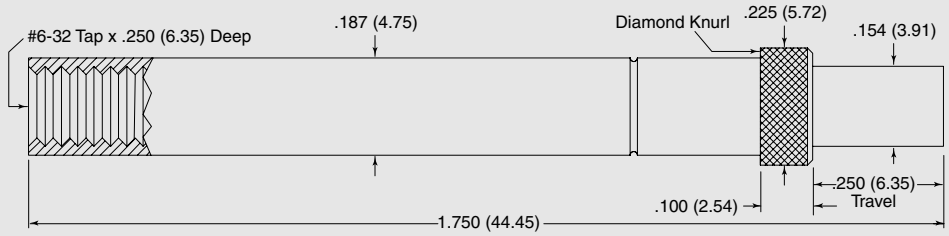


P3325 Series Specifications

Plunger	Gold-plated hardened BeCu
Body	Brass
Spring	Music wire
Electrical Resistance	<10mΩ
Maximum Current	10 amps
Working Travel	.066 (1.68)

Spring Force in oz. (grams)	Initial	Working
Standard:	5.0 (142)	8.3 (235)

The recommended hole is .0680 (#44 drill) for epoxy mounting.



P4301-1F "The Brute" Specifications

Plunger	Gold-plated tellurium copper
Body	Gold-plated tellurium copper
Spring	Stainless steel
Ball	Stainless steel
Electrical Resistance	<5mΩ
Maximum Current	45 amps
Working Travel	.167 (4.24)

Spring Force in oz. (grams)	Initial	Working
Standard:	16.0 (454)	25.7 (729)

The recommended hole is .1890 (#12 drill) for epoxy mounting.



Receptacle Insertion Tools

Model #	Mounting Height	Receptacle Series
ARIT54	Flush–.125"	SR541
ARIT54	Flush–.220"	SR54
T80-0	Flush	SR80
T125-0	Flush	SR125

Adjustable Tool (ARIT) Instructions

1. Loosen set screws.
2. Rotate thimble to desired receptacle mounting height.
3. Lock both set screws.

Maintenance Brushes

Model #	Description
MB-1	Brass bristle brush (4-1/4" x 2-1/2")
MB-2	4 row brass brush (3-1/4" x 1-1/8")
MB-3	Nylon brush (6-1/4")

Receptacle Installation

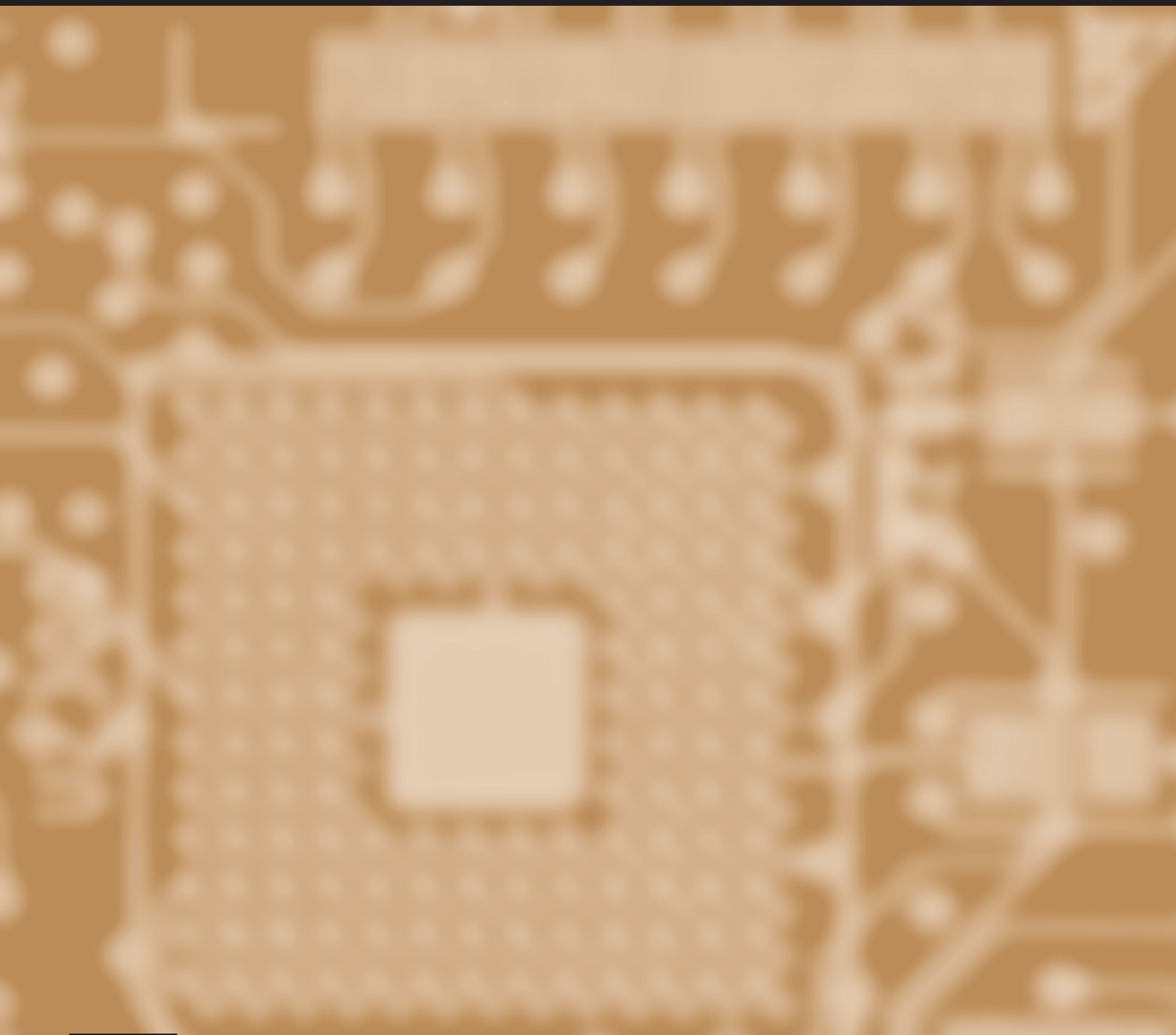
(Press fit type only)

The receptacle is inserted into the drilled hole and tapped into place using a plastic mallet and a receptacle insertion tool. Several “taps” (3-5) with the mallet is recommended to provide maximum receptacle retention. Epoxy is not required. The receptacle is held in place by the press ring, which collapses into the hole during insertion, forming a tight fit.

While some insertion tools are designed to mount the receptacles flush with the probe plate, the ARIT series (Adjustable Tool) allows various mounting heights as required by the test fixture manufacturer. The press ring should be positioned for maximum retention in probe plates that are 3/8 inch thick or more. If the probe plate is too thin, the receptacle may fall through during insertion. In this case you can drill a smaller hole and use the press ring as a stop. However, you will need to secure receptacle with epoxy.

Once the receptacle is installed, insert the probe until the top of the probe barrel is flush with the top of the receptacle. The probe is held in place with 4 retention detents.

Specifications subject to change without notice.
Drawings not to scale.
Optional tip styles, spring pressures, and materials available, contact factory for more information.



Ostby Barton
A Division of Everett
Charles Technologies
487 Jefferson Boulevard
Warwick, RI 02886
Tel: (401) 739-7310
Fax: (401) 732-4937
www.ectinfo.com

©2006 Everett Charles Technologies. Pogo is a registered trademark of ECT.1331-4-06.