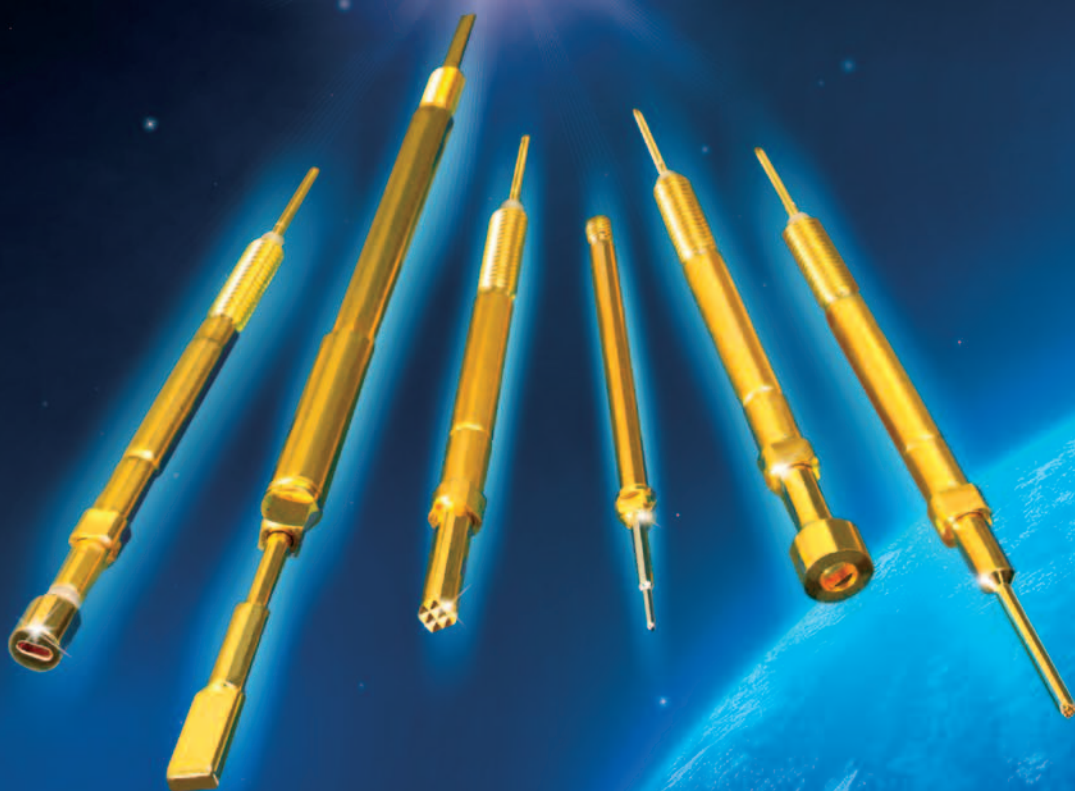
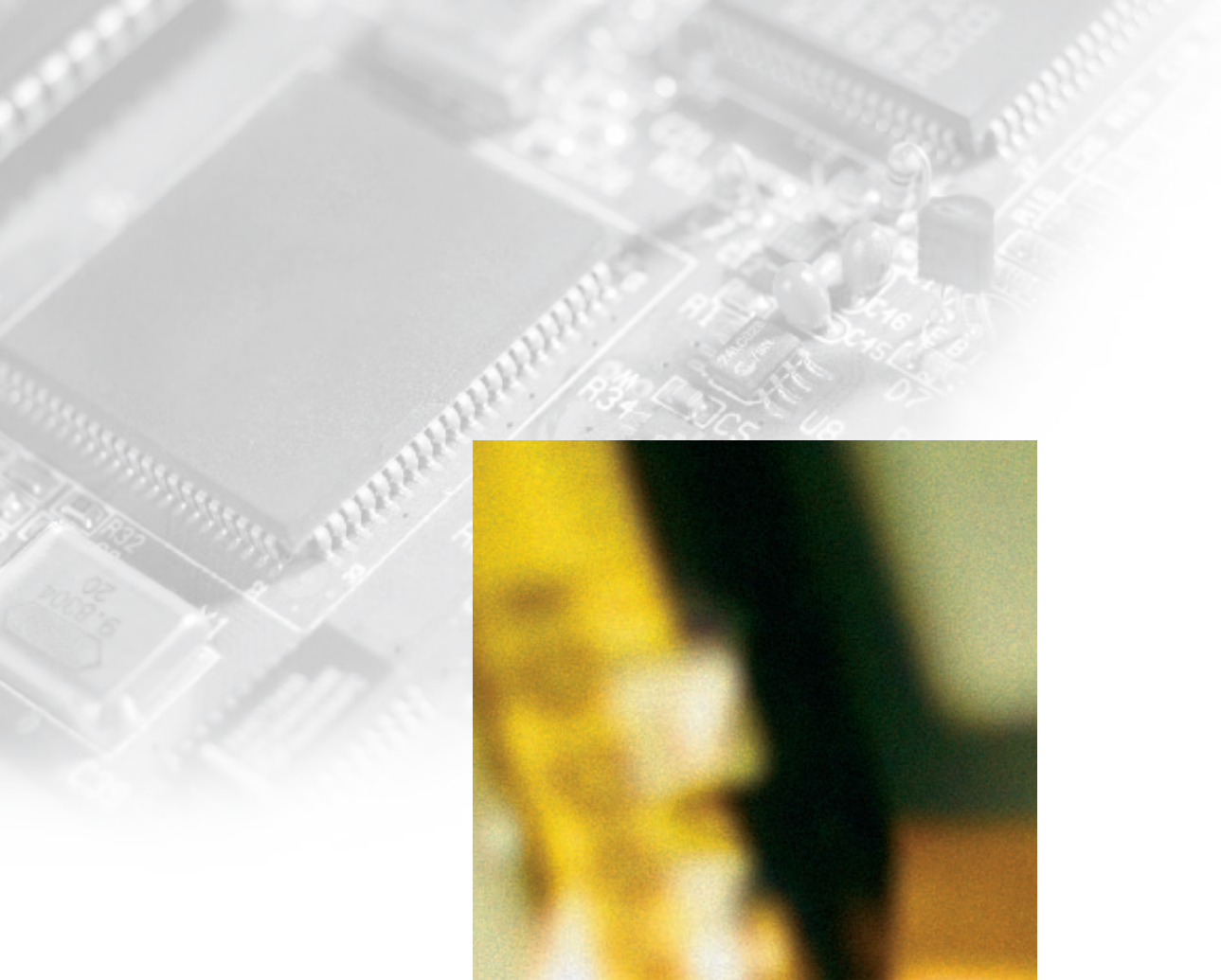




Precision & Quality in manufacturing
of PROBES and ACCESSORIES for ELECTRONIC TEST

Precisione e Qualità nella produzione di
PUNTALINI e ACCESSORI per IL TEST ELETTRICO



SPRING CONTACT PROBES

QUALITY AND RELIABILITY IN PROBE PRODUCTION

At C.Z. our only business is designing and manufacturing high quality spring contact probes. All our people is devoted to improve and guarantee the best quality. Our continued growth is totally depending upon customer satisfaction and our cost effective high quality products are a reference for the ATE market.

Customer support is our aim in order to find the best product for any specific need with years of experience in designing custom or standard probes. In house engineering manufacturing and controls capabilities is the insurance to meet the quality targets and costs. Our engineering people are designing most of our special tooling to offer "in time" customized competitive solutions.

C.Z. offers a variety of standard spring probes with a wide choice of different tip materials and finishes. A wide range of options are available on request. Most of mils or metric standard pins presents on the market are mechanically interchangeable with our correspondent codes. A cross reference table is available.

QUALITÀ E AFFIDABILITÀ NELLA PRODUZIONE DI CONTATTI PER IL TEST ELETTRICO

La C.Z. è sinonimo di accessori per il test elettrico.

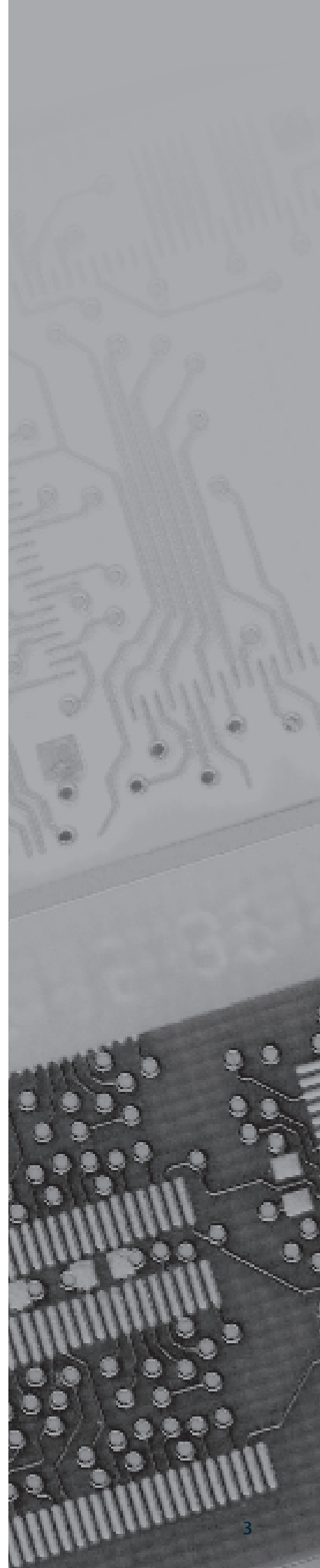
Specializzata nella produzione di contatti a molla di alta qualità, l'offerta si è estesa ad accessori quali Test fixture, adapters, sensori etc. La nostra clientela è sicura di trovare presso C.Z. la risposta alle esigenze di test più impegnative, inclusa la contattazione di flessibili, microconnettori, BGA ecc.

La continua crescita della società è il frutto dell'impegno dimostrato nel migliorare e garantire la qualità del nostro prodotto.

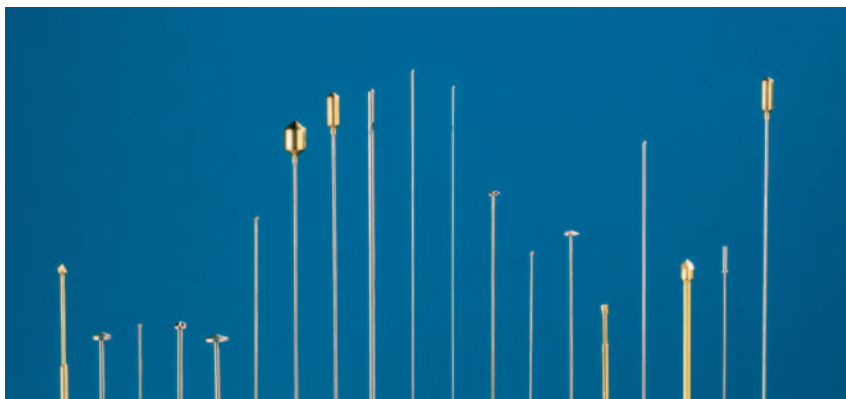
La C.Z. ha completa autonomia nella realizzazione di un nuovo prodotto, dalla progettazione alla produzione, con capacità di intervento sui cicli e sui metodi di fabbricazione in tempo reale.

L'offerta di prodotti per la contrattazione spazia dai contatti a molla tipici del test elettrico per banchi di prova IN-CIRCUIT a prodotti dedicati per applicazioni speciali quali test di BGA, test di apparati HF, test BBT per tutti i tester universali per il circuito stampato.

Nuove linee di prodotti per il test "wire less" sono disponibili per il test di componenti integrati.



PROBES per CIRCUITO STAMPATO - BARE BOARD PROBES



Ampia offerta di puntalini rigidi ed a molla per macchine di test universali: Mania, Atg, TTI, Circuit Line, Tecnost e Luther & Maelzer.

Wide offer of rigid probes for universal grid tester as: Mania, Atg, TTI, Circuit Line, Tecnost e Luther & Maelzer.

PROBES per IN-CIRCUIT - IN-CIRCUIT PROBES



Puntalini a molla standard per le più ampie applicazioni su banchi di test ICT e funzionali. Ampia scelta di diametri, tipi di teste e corsa per la miglior contattazione delle UUT.

A superior selection of probes for any size and tip style to offer the best contact and fixture assembling solutions.

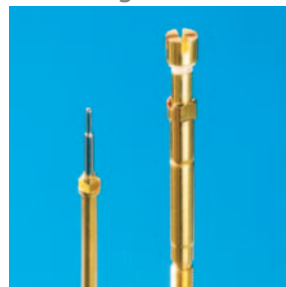
PROBES SPECIALI - HIGH-TECH SPRING PROBES



Contatti a molla per applicazioni speciali: test funzionali, test di cablaggi, interfaccia UUT. Per applicazioni professionali tipo: FFS, militari ed aeronautiche.

Professional applications for functional test of equipment; wiring and interface. Threaded probes for wire harness and connector, high frequency, high current, switching systems, etc.

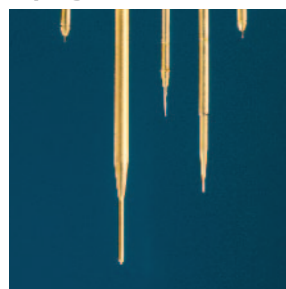
Switching Test Probes



Contatti regolabili per controllo presenza e continuità

Adjustable switching probes

Flying Probe



La nuova esigenza di test di piccola serie sia su BBT che su piastre assemblate. Contatti speciali rigidi e "soft touch".

The new solutions for testing small batches of bare and assembled board. Rigid spring probes for most flying probe machines as: ATG, Okano, Seica, Takaia.

MICROCONTATTI - MICROCONTACTS

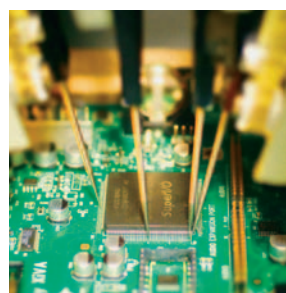
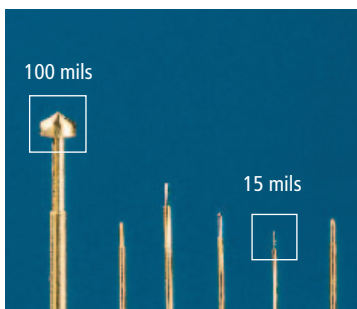
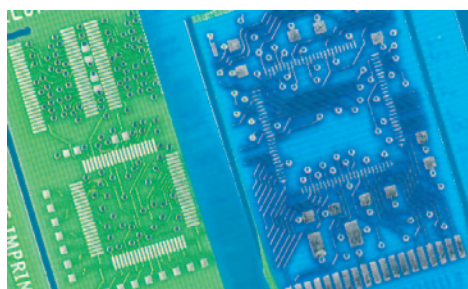


TABELLA COMPARATIVA PUNTALINI STANDARD - STANDARD PROBES CONVERSION TABLE

Passo minimum centers		Corsa	Serie	Compatibilità con altre case - Compatibility					Pagina - Page
mm	mils	mm							
2,54	100	6,35	SP-25	HPA 25 SPA 25 EPA 25	GKS 925	F 585	100-25	S-25	8
2,54	100	8,00-11,80	SP-25L	LPT25		F 588			9
1,91	75	6,35	SP-1L	LPT1		F 703	075-25	SL-1	10
1,27	50	6,35	SP-20	HPA60			050R-25	SL05 SS40 S5-0/S-0	11
1,27	50	2,54	SP-0	HPA 0 SPA 0		F 111		S5-0	12
1,91	75	2,54	SP-1	SPA 1					13
2,54	100	4,06	SP-2	SPA 2	GKS 900	F 562	100PL16	S2A	14
3,18	125	6,35	SP-3	SPA 3		F 140			15
3,18	125	6,35	SP-4	SPA 4					16
4,50	150	6,35	SP-5 SP-5L	SPA 5					17
2,54	100	8,00-10,00	SP-212		GKS 212				24
2,54	100	8,00-10,00	SP-422		GKS 422				24
2,54	100	5,00	SP-912		GKS 912				25
2,54	100	1,52	SP-100	SPA 100				SS100	28

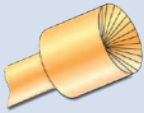
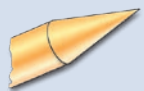
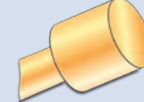
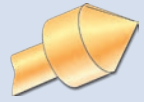
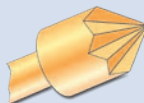
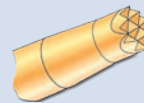
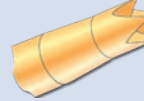
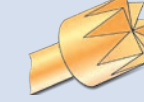


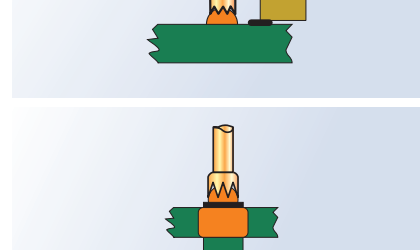
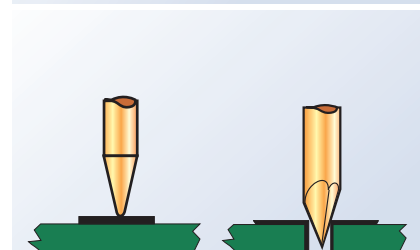
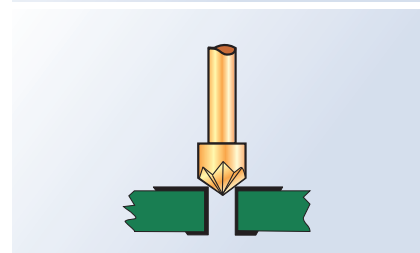
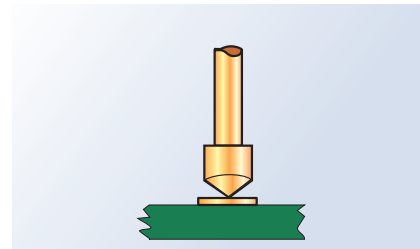
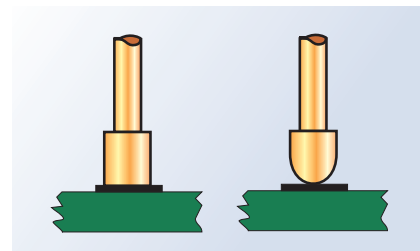
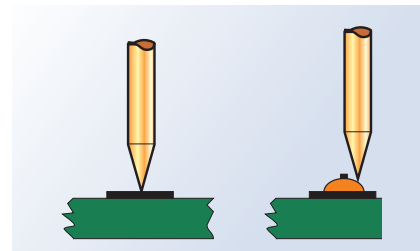
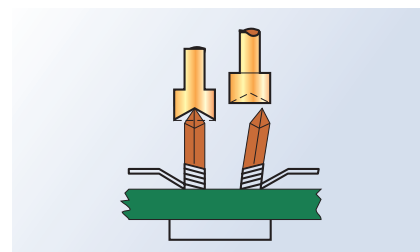
INDICE - INDEX

Pag.

Standard probe	6
High Current Probe	18
Screw-in Probe	19
Switch Probe	22
Metric Standard Probe	24
Special Probe & Battery Charger	27
Bare Board Probe	28
Micropins	29
Insertion Tools	30
Interface pins	31
Fixture & Accessories	32
Tools	34

LE APPLICAZIONI - APPLICATIONS

1		1 - CONCAVA - CONCAVE Per lunghi terminali e terminali a WW Long leads, terminal and Wire Wrap pads
2		2 - Punta conica 30° - Conic head 30° Per piastre ossidate o contaminate Cuts oxidation and contamination
12		12 - Punta HSS - HSS spear Per piastre ossidate o contaminate Cuts oxidation and contamination
3		3 - Testa piatta - Flat Head Per terminali dorati, non incide Gold edge fingers, leaves no marks
4		4 - Testa tonda - Dome head Per terminali, fori passanti, non incide Gold edge fingers, plated through holes leaves no marks
5		5 - Conica - Conical Per fori passanti Plated through holes
11		11 - Piramidale 3 lati - 3 sided pyramid Per fori passanti, incide l'ossidazione Plated through holes, cuts through contamination
13		13 - A stella - 6 fluted star Per fori passanti, incide l'ossidazione Plated through holes, pads, lands
17		17 - 4 lati - 4 sided chisel Per fori passanti, incide l'ossidazione Plated through holes, cuts through contamination
6		6 - Punta conica arrotondata - Conic rounded head Per circuiti SMD e piazzole di test, non incide Circuitry and Teaspads, leaves no marks
14		14 - Punta lancia HSS - Dagger HSS Generica molto aggressiva, in acciaio temprato, nichelato, dorato Very aggressive, general purpose steel hardened nickel/gold plated
15		15 - Piramidale - Pyramid Generica molto aggressiva, in acciaio temprato, nichelato, dorato Very aggressive, general purpose steel hardened nickel/gold plated
7		7 - SMD 9 punte - SMD serrated 4 points Superfici di contatto ristrette, evita corti per adiacenza (0,6 mm) Small pads and lands, no bridge risks (0,6 mm)
27		27 - SMD 4 punte - SMD tulip 4 points Autopulente, per contatti di piccole dimensioni (0,6 mm) Self cleaning, small lands and pads (0,6 mm)
22		22 - Corona a 8 punte - 8-point crown Applicazioni simili alla punta 21 Similar application like Tip 21



8 - A 9 punte - 9-point serrated
 Generico per piazzole e reofori
 Universal Tip-style for lands, pads, leads, terminals

10 - A 16 punte - 16-point serrated
 Generico per piazzole e reofori
 Universal Tip-style for lands, pads, leads, terminals

20 - A caleidoscopio - Kaleidoscope
 Adatto a terminali lunghi o Wire Wrap
 Wire Wrap and pads

9 - Punta HSS - HSS spear
 Acciaio temperato per CS ossidati o non lavati
 For contaminated and unwashed PC boards

28 - Punta HSS - HSS spear
 Acciaio temperato per CS ossidati o non lavati
 For contaminated and unwashed PC boards

18 - Conica 30° - Spear
 Speciale per connettori
 Designed for connectors

32 - Din Connector
 Speciale per connettori
 Designed for connectors

21 - Corona a 4 punte - 4-point crown
 Per piazzole, terminali e punti di saldatura
 Testpads, leads solder point

23 - Corona con anello - 4-point with ring
 Come 21 con anello per facilitare l'estrazione
 Like 21, with ring for easy probe extraction

25 - Tulipano - Tulip
 Generico, per tutte le applicazioni
 For almost all applications

26 - Corona a 5 punte - 5-point crown
 Simile al tipo 25
 Similar applications like Tip 25

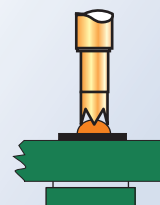
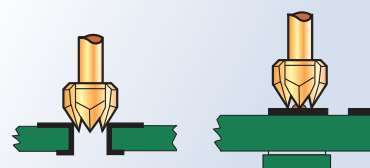
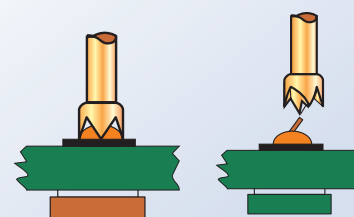
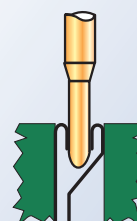
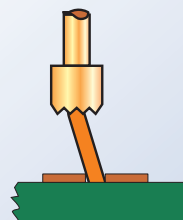
24 - SMD 4 punte strette - 4-point tapered crown
 Bivalente per piazzole e fori SMD
 For pads, leads, lands and holes

30 - Corona a 3 punte - 3-point crown
 Adatta al test di SMD
 Suitable for SMD testing due to small head diameter

38 - Con anello stop - Stop-ring
 Per test connettori
 For connector probe

39 - Con taglio cacciavite - Screw probe
 Per test connettori e presenza componenti
 For connector test and component presence

40 - Contrasto - Push-back
 Contrasto per espulsione connettori
 Connector push-back



Dati Tecnici

Distanza minima raccomandata : 2,54 mm
 Intensità nominale : 2,0 - 3,0 A
 Resistenza tipica : 14 m Ω
 Corsa di lavoro raccomandata: 4,32

Technical Data

Recommended Minimum Centers: 2,54 mm
 Current Rating: 2,0 - 3,0 A
 Typical Contact Resistance: 14 m Ω
 Recommended Working Travel : 4,32

Materiali

Corpo : Ottone dorato
 Molla : Acciaio argentato / dorata
 Pistone : Rame-Berillio, nichel-oro / oro duro
 Acciaio temprato dorato

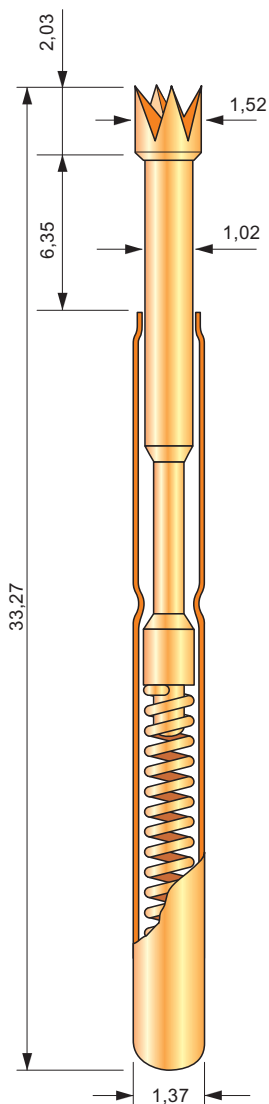
Materials

Barrel : Gold plated
 Spring : Music Wire, silver / gold plated
 Plunger : Becu, hardened 24 Kt gold plated
 HSS Hardened steel gold plated over nickel

Informazioni per l'ordine - Order Info:

Serie	Materiale Material	Testa Head	Ø	Forza Molla Spring Force	Galvanica Galvanic
	B=Becu S=Steel SS=Stainless St.				

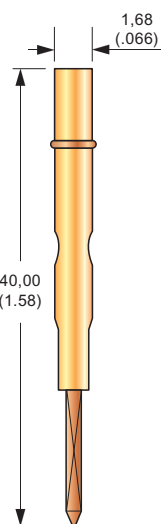
SP-25					
-------	--	--	--	--	--



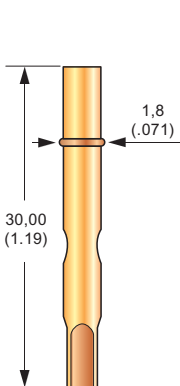
R-25

Ricettacolo - Receptacle

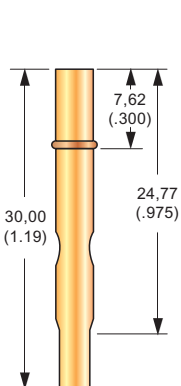
Wire Wrap



Saldare



Crimp



Corsa Max : 6,35 mm.
 Max Travel :

Forza Molla : 200 gr.
 Spring Force :

Precarico : 57 gr.
 Preload :

Opzioni - Options :

100 g.
 150 g.
 300 g.

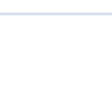
Punta di foratura: Drills:

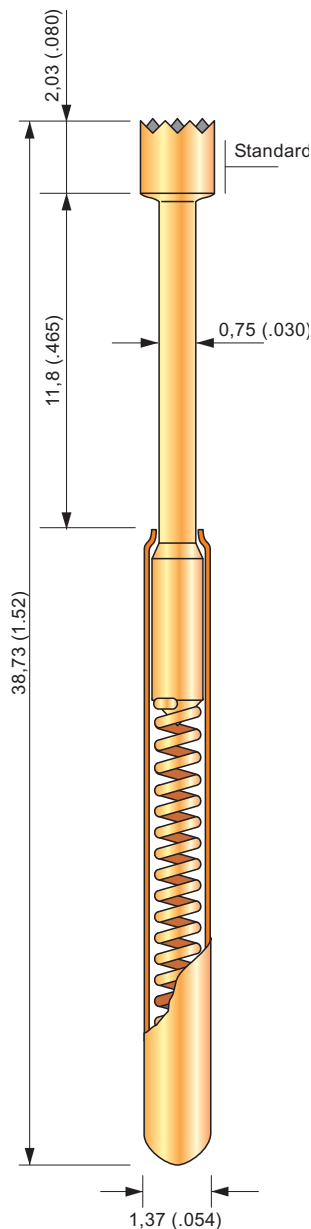
Ø 1,72



R-25

C = Crimp
 S = Saldare
 W = Wire wrap
 WW = With wire

MATERIAL	TESTA HEAD	Ø mm
B	1 	1,02 1,52
B S	2 	0,75
B	3 	1,02 1,52
B	4 	1,02 1,27 1,52
B S	5 	1,02 1,52
B S	7 	0,60
B S	8 	1,02 1,52
S	9 	0,60 0,75 1,02
B	10 	1,52
B S	11 	1,52
B S	13 	1,52
S	14 	0,74 1,02 1,52
B S	21 	1,02 1,27 1,52
B S	23 	1,02
B S	25 	1,40



Dati Tecnici

Distanza minima raccomandata : 2,54 mm
 Intensità nominale : 2,0 - 3,0 A
 Resistenza tipica : 14 m Ω
 Corsa di lavoro raccomandata: 8,00

Technical Data

Recommended Minimum Centers: 2,54 mm
 Current Rating: 2,0 - 3,0 A
 Typical Contact Resistance: 14 m Ω
 Recommended Working Travel : 8,00

Materiali

Corpo : Ottone dorato
 Molla : Acciaio argentata / dorata
 Pistone : Rame-Berillio, nichel-oro / oro duro

Materials

Barrel : Gold plated
 Spring : Music Wire, silver / gold plated
 Plunger : Becu, hardened 24 Kt gold plated

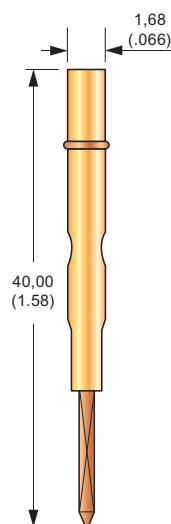
Informazioni per l'ordine - Order Info:

Serie	Materiale Material	Testa Head	Ø	Forza Molla Spring Force	Galvanica Galvanic
	B=Becu S=Steel SS=Stainless St.				
SP-25-L					

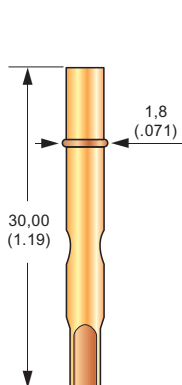
R-25

Ricettacolo - Receptacle

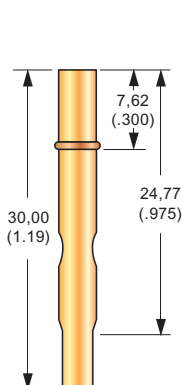
Wire Wrap



Saldare



Crimp



Corsa Max : 11,80 mm.
 Max Travel :

Forza Molla : 200 gr.
 Spring Force :

Precarico : 57 gr.
 Preload :

Opzioni - Options :

100 g.
 150 g.
 250 g.
 300 g.

Punta di foratura: Drills:

Ø 1,72



R-25-L

C = Crimp
 S = Saldare
 W = Wire wrap
 WW = With wire

Dati Tecnici

Distanza minima raccomandata : 1,91 mm
 Intensità nominale : 3,0 A
 Resistenza tipica : 20 m Ω
 Corsa di lavoro raccomandata: 4,25

Technical Data

Recommended Minimum Centers: 1,91 mm
 Current Rating: 3,0 A
 Typical Contact Resistance: 20 m Ω
 Recommended Working Travel : 4,25

Materiali

Corpo : Ottone dorato
 Molla : Acciaio argentato / dorata
 Pistone : Rame-Berillio, nichel-oro / oro duro

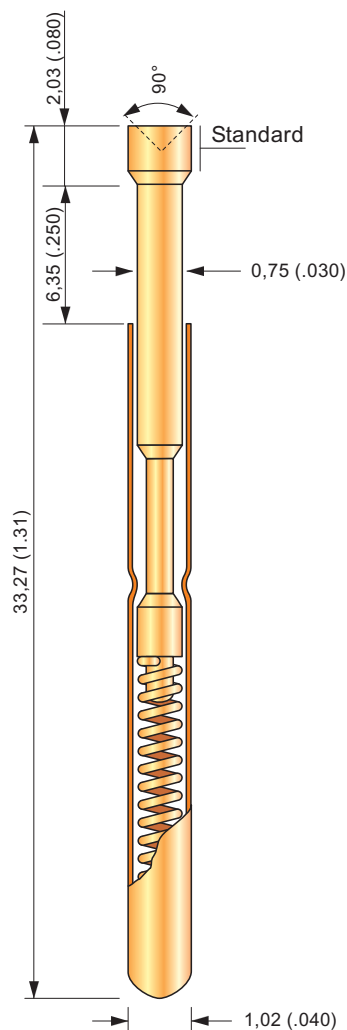
Materials

Barrel : Gold plated
 Spring : Music Wire, silver / gold plated
 Plunger : Becu, hardened 24 Kt gold plated

Informazioni per l'ordine - Order Info:

Serie	Materiale Material	Testa Head	Ø	Forza Molla Spring Force	Galvanica Galvanic
	B=Becu S=Steel SS=Stainless St.				

SP-1-L



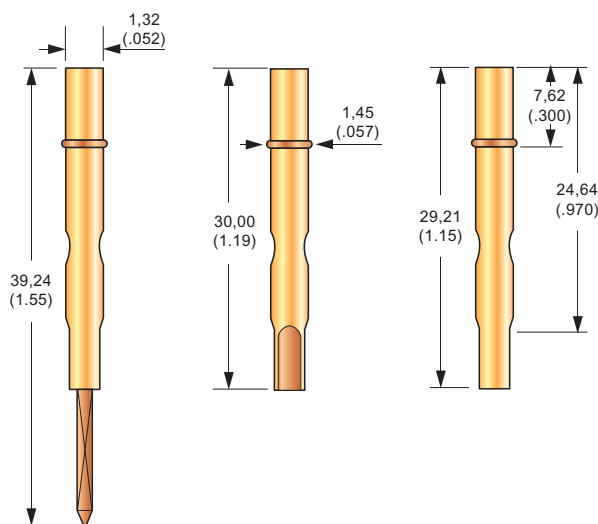
R-1-L

Ricettacolo - Receptacle

Wire Wrap

Saldare

Crimp



Corsa Max : 6,35 mm.
 Max Travel :

Forza Molla : 108 gr.
 Spring Force :

Precarico : 14 gr.
 Preload :

Opzioni - Options :
 150 g.
 200 g.

Punta di foratura: Drills:

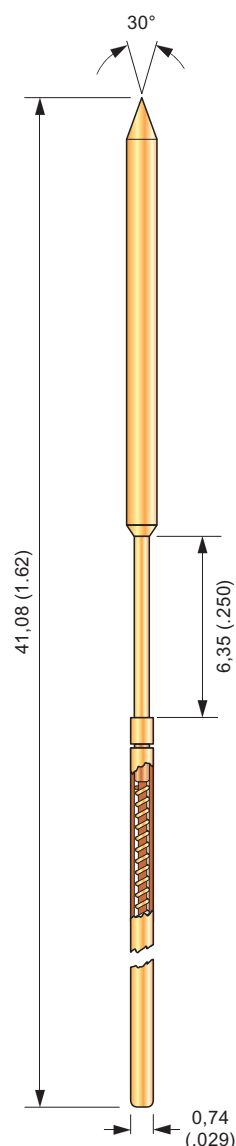
Ø 1,38



R-1-L

C = Crimp
 S = Saldare
 W = Wire wrap
 WW = With wire

MATERIAL	TESTA HEAD	Ø mm
B S	2 	0,74
B	3 	0,89
B	4 	0,74
S	12 	0,74
B S	13 	0,89
S	14 	0,74
S	15 	0,74
B S	21 	0,74 0,89
B S	27 	0,40
B	30 	0,74

**Dati Tecnici**

Distanza minima raccomandata : 1,27 mm
 Intensità nominale : 3,0 A
 Resistenza tipica : 20 m Ω
 Corsa di lavoro raccomandata: 4,25

Technical Data

Recommended Minimum Centers: 1,27 mm
 Current Rating: 3,0 A
 Typical Contact Resistance: 20 m Ω
 Recommended Working Travel : 4,25

Materiali

Corpo : Ottone dorato
 Molla : Acciaio argentata / dorata
 Pistone : Rame-Berillio, nichel-oro / oro duro

Materials

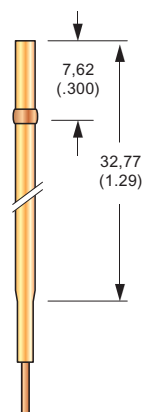
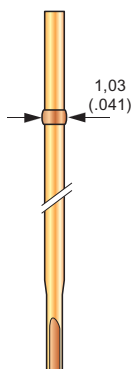
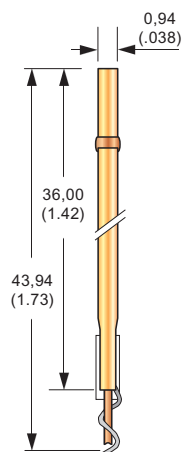
Barrel : Gold plated
 Spring : Music Wire, silver / gold plated
 Plunger : Becu, hardened 24 Kt gold plated

Informazioni per l'ordine - Order Info:

Serie	Materiale Material	Testa Head	Ø	Forza Molla Spring Force	Galvanica Galvanic
	B=Becu S=Steel SS=Stainless St.				
SP-20					

R-20**Ricettacolo - Receptacle**

With Wire 1 m. AWG 28/30
 (con filo) 1 m. AWG 28/30

Saldare**Crimp**

Corsa Max : 6,35 mm.
 Max Travel :

Forza Molla : 100 gr.
 Spring Force :

Precarico : 28 gr.
 Preload :

Opzioni - Options : 200 g.

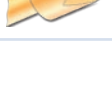
Punta di foratura: Drills:

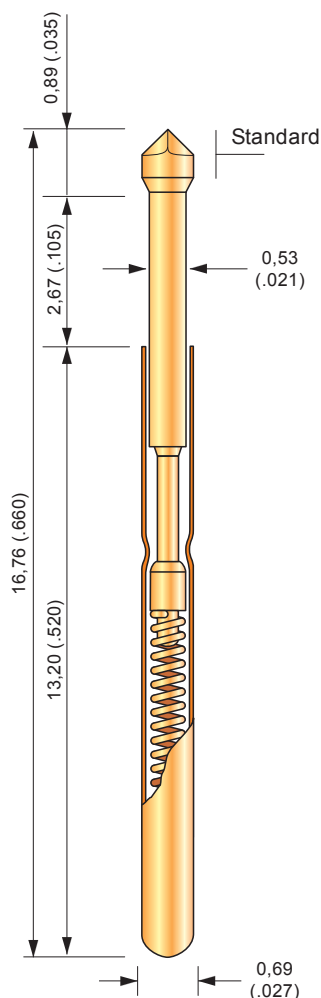
Ø 0,98



R-20

C = Crimp
 S = Saldare
 W = Wire wrap
 WW = With wire

MATERIAL	TESTA HEAD	Ø mm
B	1 	0,53 0,89
B	2 	0,53
B	3 	0,89
B	4 	0,53 0,89
B	5 	0,89
B	6 	0,53
B	8 	0,89
S	9 	0,53
B	11 	0,89
S	15 	0,53
B	21 	0,53 0,89



Dati Tecnici

Distanza minima raccomandata :	1,27 mm
Intensità nominale :	3,0 A
Resistenza tipica :	30 m Ω
Corsa di lavoro raccomandata:	1,78

Technical Data

Recommended Minimum Centers:	1,27 mm
Current Rating:	3,0 A
Typical Contact Resistance:	30 m Ω
Recommended Working Travel :	1,78

Materiali

Corpo :	Ottone dorato
Molla :	Acciaio argentato / dorata
Pistone :	Rame-Berillio, nichel-oro / oro duro

Materials

Barrel :	Gold plated
Spring :	Music Wire, silver / gold plated
Plunger :	Becu, hardened 24 Kt gold plated

Informazioni per l'ordine - Order Info:

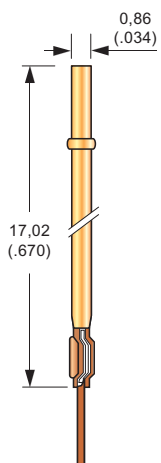
Serie	Materiale Material	Testa Head	Ø	Forza Molla Spring Force	Galvanica Galvanic
	B=Becu S=Steel SS=Stainless St.				G = gold N = nickel R = rodium

SP-0					
------	--	--	--	--	--

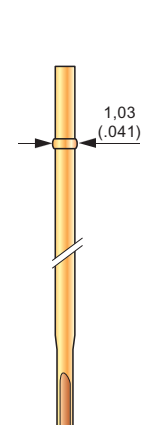
R-0

Ricettacolo - Receptacle

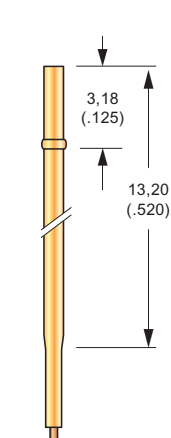
Wire Wrap



Saldare



Crimp



Corsa Max : 2,54 mm.
Max Travel :

Forza Molla : 100 gr.
Spring Force :

Precarico : 32 gr.
Preload :

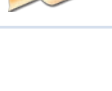
Punta di foratura: Drills:

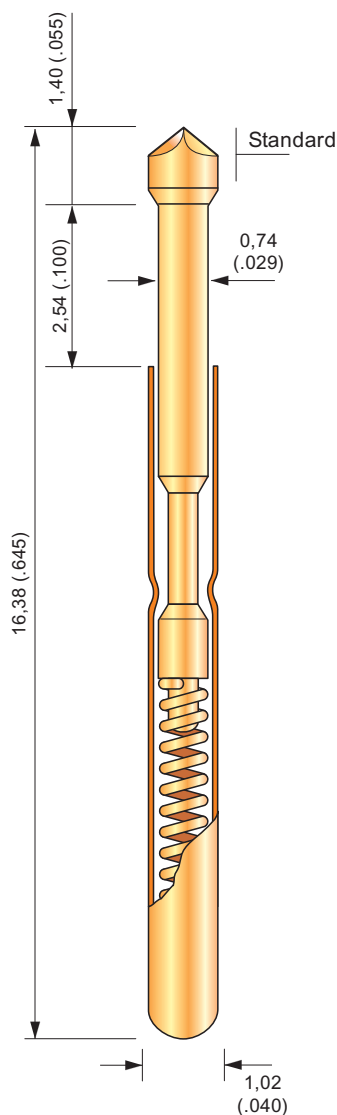
Ø 0,90



R-0	
-----	--

C = Crimp
S = Saldare
W = Wire wrap
WW = With wire

MATERIAL	TESTA HEAD	Ø mm
B	1 	0,74 1,40
B S	2 	0,74
B	3 	0,74 1,22
B	4 	0,74 1,02
B	5 	1,22
B	6 	0,74
B	7 	0,53
B	8 	1,22
S	9 	0,74
B	10 	2,00
B	11 	1,22
S	15 	0,74
B S	21 	0,74 1,02 1,22



Dati Tecnici

Distanza minima raccomandata : 1,91 mm
 Intensità nominale : 3,0 A
 Resistenza tipica : 30 m Ω
 Corsa di lavoro raccomandata: 1,78

Technical Data

Recommended Minimum Centers: 1,91 mm
 Current Rating: 3,0 A
 Typical Contact Resistance: 30 m Ω
 Recommended Working Travel : 1,78

Materiali

Corpo : Ottone dorato
 Molla : Acciaio argentata / dorata
 Pistone : Rame-Berillio, nichel-oro / oro duro

Materials

Barrel : Gold plated
 Spring : Music Wire, silver / gold plated
 Plunger : Becu, hardened 24 Kt gold plated

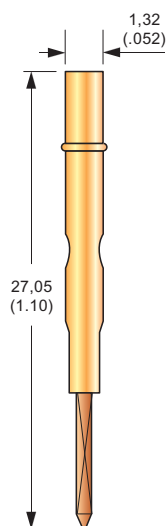
Informazioni per l'ordine - Order Info:

Serie	Materiale Material	Testa Head	Ø	Forza Molla Spring Force	Galvanica Galvanic
	B=Becu S=Steel SS=Stainless St.				G = gold N = nickel R = rodim
SP-1					

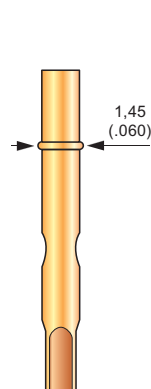
R-1

Ricettacolo - Receptacle

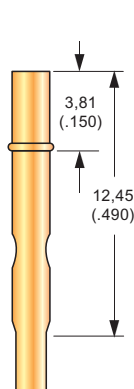
Wire Wrap



Saldare



Crimp



Corsa Max : 1,78 mm.
 Max Travel :

Forza Molla : 108 gr.
 Spring Force :

Precarico : 32 gr.
 Preload :

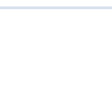
Punta di foratura: Drills:

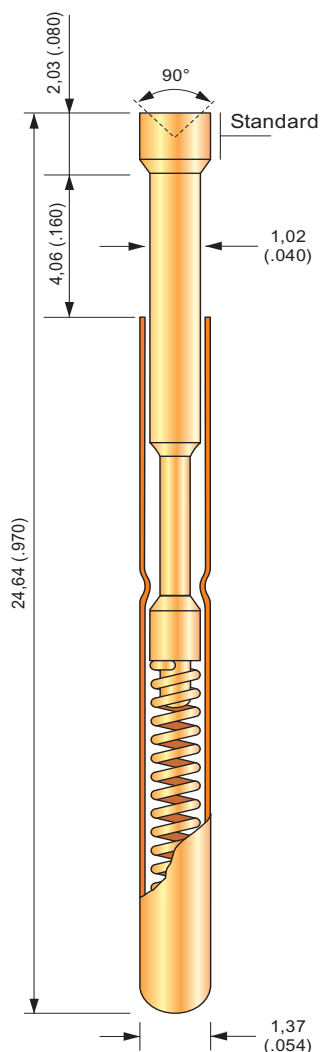
Ø 1,35



R-1

C = Crimp
 S = Saldare
 W = Wire wrap
 WW = With wire

MATERIAL	TESTA HEAD	Ø mm
B	1 	1,02 1,52
B S	2 	1,02
B	3 	1,02 1,52
B	4 	1,02 1,27 1,52
B S	5 	1,02 1,52
B S	7 	0,60
B S	8 	1,02 1,52
S	9 	0,60 0,75 1,02
B	10 	1,91
B S	11 	1,52
B S	13 	1,52
S	14 	0,75 1,02
B S	21 	1,02 1,27 1,52
B S	23 	1,02
B S	24 	1,02
B S	25 	1,02



Dati Tecnici

Distanza minima raccomandata : 2,54 mm
 Intensità nominale : 2,0 - 3,0 A
 Resistenza tipica : 14 m Ω
 Corsa di lavoro raccomandata: 2,54

Technical Data

Recommended Minimum Centers: 2,54 mm
 Current Rating: 2,0 - 3,0 A
 Typical Contact Resistance: 14 m Ω
 Recommended Working Travel : 2,54

Materiali

Corpo : Ottone dorato
 Molla : Acciaio argentato / dorata
 Pistone : Rame-Berillio, nichel-oro / oro duro

Materials

Barrel : Gold plated
 Spring : Music Wire, silver / gold plated
 Plunger : Becu, hardened 24 Kt gold plated

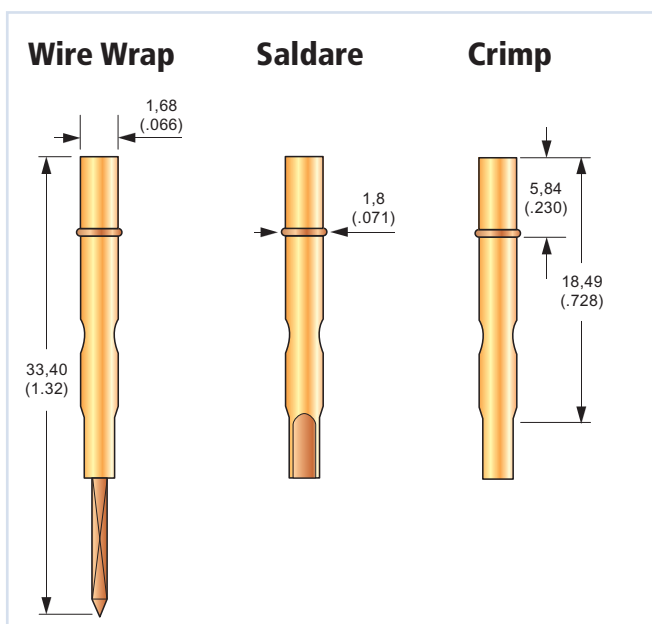
Informazioni per l'ordine - Order Info:

Serie	Materiale Material	Testa Head	Ø	Forza Molla Spring Force	Galvanica Galvanic
	B=Becu S=Steel SS=Stainless St.				G=gold N=nickel R=rodium

SP-2					
------	--	--	--	--	--

R-2

Ricettacolo - Receptacle



Corsa Max : 4,06 mm.
 Max Travel :

Forza Molla : 200 gr.
 Spring Force :

Precarico : 93 gr.
 Preload :

Opzioni - Options :
 100 g.
 250 g.

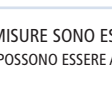
Punta di foratura: Drills:

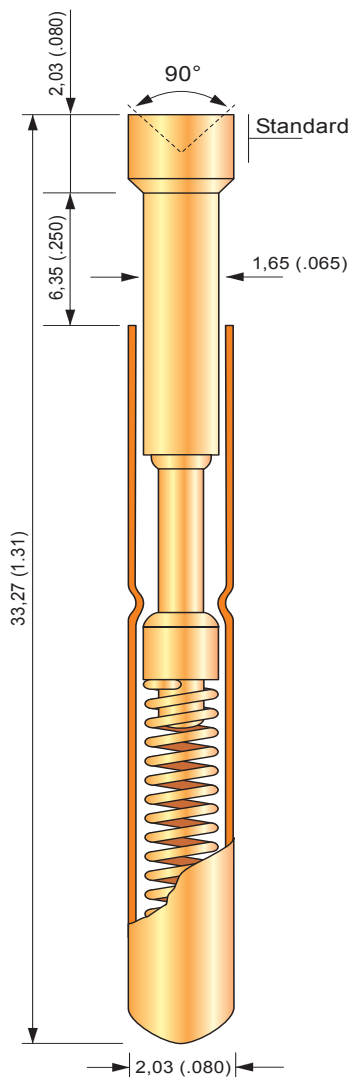
Ø 1,72



R-2	
-----	--

C = Crimp
 S = Saldare
 W = Wire wrap
 WW = With wire

MATERIAL	TESTA HEAD	Ø mm
B	1 	1,65 2,54
B S	2 	1,65
B	3 	1,65 2,54
B	4 	2,03 2,54
B S	5 	2,54
B	7 	1,00
B S	8 	2,54
B	10 	2,54 4,00
B S	11 	2,54
S	12 	1,65
S	14 	1,65
S	17 	2,54
B S	20 	2,54
B S	21 	2,54
B S	26 	2,54
B	30 	1,00



Dati Tecnici

Distanza minima raccomandata : 3,18 mm
 Intensità nominale : 5,0 A
 Resistenza tipica : 50 m Ω
 Corsa di lavoro raccomandata: 4,32

Technical Data

Recommended Minimum Centers: 3,18 mm
 Current Rating: 5,0 A
 Typical Contact Resistance: 50 m Ω
 Recommended Working Travel : 4,32

Materiali

Corpo : Ottone dorato
 Molla : Acciaio argentata / dorata
 Pistone : Rame-Berillio, nichel-oro / oro duro

Materials

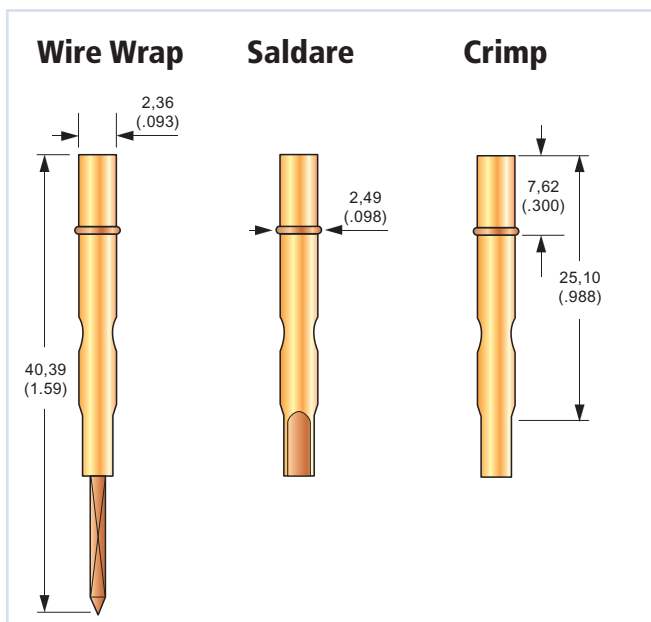
Barrel : Gold plated
 Spring : Music Wire, silver / gold plated
 Plunger : Becu, hardened 24 Kt gold plated

Informazioni per l'ordine - Order Info:

Serie	Materiale Material	Testa Head	Ø	Forza Molla Spring Force	Galvanica Galvanic
	B=Becu S=Steel SS=Stainless St.				G=gold N=nickel R=rodium
SP-3					

R-3

Ricettacolo - Receptacle



Corsa Max : 6,35 mm.
 Max Travel :

Forza Molla : 114 gr.
 Spring Force :

Precarico : 60 gr.
 Preload :

Opzioni - Options :
 200 G.
 300 g.

Punta di foratura: Drills:

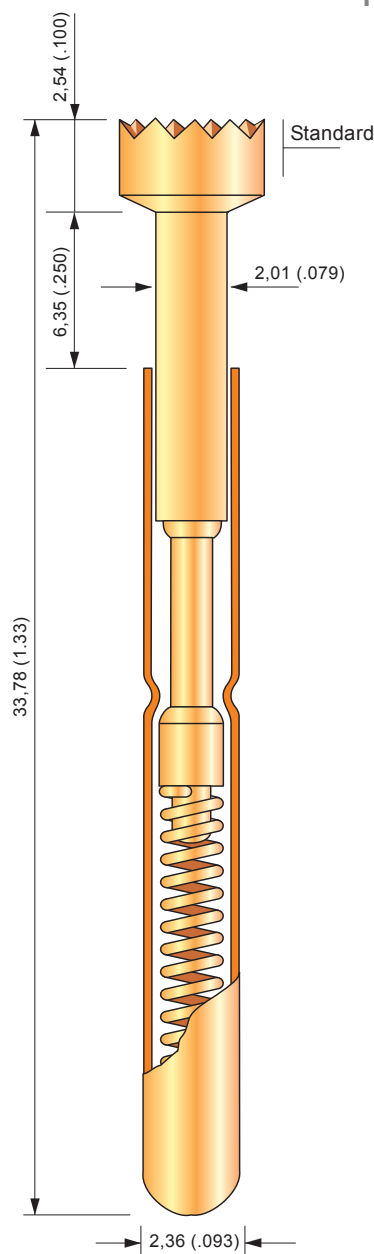
Ø 2,40



R-3	
-----	--

C = Crimp
 S = Saldare
 W = Wire wrap
 WW = With wire

MATERIAL	TESTA HEAD	Ø mm
B	1	2,00 3,96
B S	2	2,01
B	3	2,01 3,96
B	4	2,01 3,96
B S	5	2,01 3,96
B S	8	2,01 3,96
B	10	3,96
B S	11	2,54
B S	21	2,01 2,54 3,96



Dati Tecnici

Distanza minima raccomandata : 4,75 mm
 Intensità nominale : 7,0 - 8,0 A
 Resistenza tipica : 50 m Ω
 Corsa di lavoro raccomandata: 4,32

Technical Data

Recommended Minimum Centers: 4,75 mm
 Current Rating: 7,0 - 8,0 A
 Typical Contact Resistance: 50 m Ω
 Recommended Working Travel : 4,32

Materiali

Corpo : Ottone dorato
 Molla : Acciaio argentato / dorata
 Pistone : Rame-Berillio, nichel-oro / oro duro

Materials

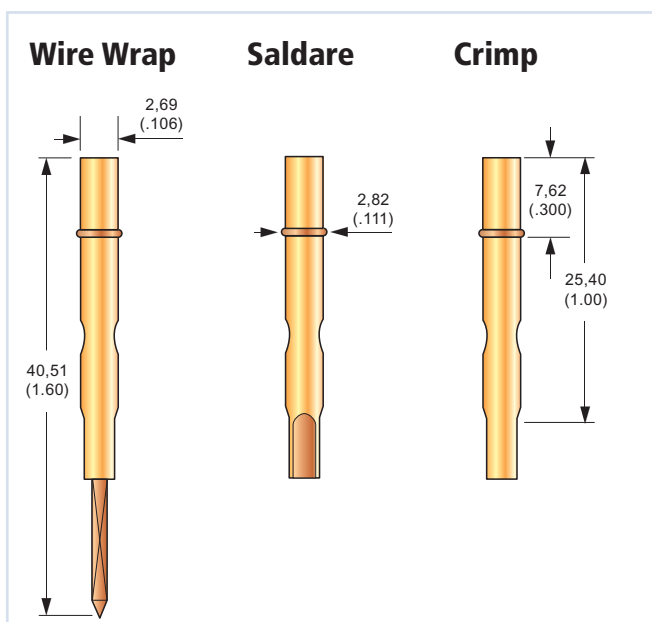
Barrel : Gold plated
 Spring : Music Wire, silver / gold plated
 Plunger : Becu, hardened 24 Kt gold plated

Informazioni per l'ordine - Order Info:

Serie	Materiale Material	Testa Head	Ø	Forza Molla Spring Force	Galvanica Galvanic
	B=Becu S=Steel SS=Stainless St.				G = gold N = nickel R = rodium
SP-4					

R-4

Ricettacolo - Receptacle



Corsa Max : 6,35 mm.
 Max Travel :

Forza Molla : 200 gr.
 Spring Force :

Precarico : 130 gr.
 Preload :

Opzioni - Options :
 100 g.
 300 g.

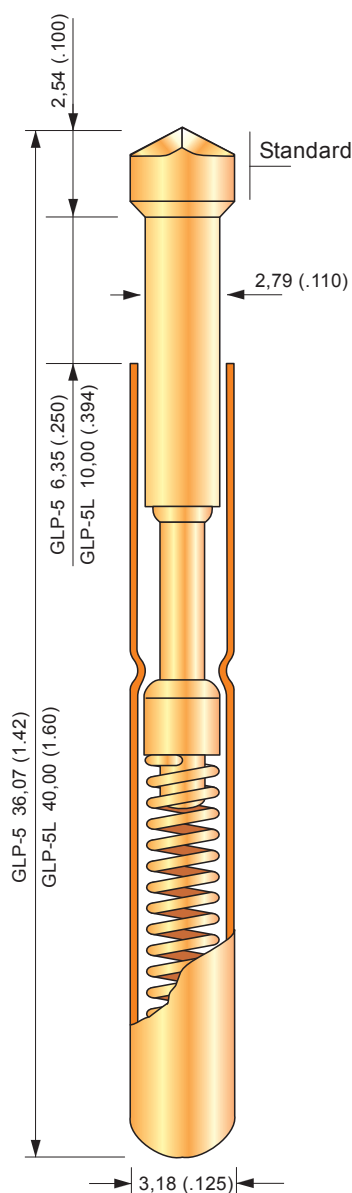
Punta di foratura: Drills:

Ø 2,75



R-4	
C = Crimp S = Saldare W = Wire wrap WW = With wire	

MATERIAL	TESTA HEAD	Ø mm
B	1	3,96
B S	2	2,79
B	3	2,79 3,96
B	4	2,79 3,96
B S	5	2,79 3,96
B	6	2,79
B S	8	3,96
S	9	2,79
B	10	2,79 3,96
B S	11	3,96
B	13	2,00 2,79
S	14	2,00 2,79
S	15	2,00 2,79
B S	17	2,79
B S	21	2,79 3,96



Dati Tecnici

Distanza minima raccomandata : 4,75 mm
Intensità nominale : 10,0 A
Resistenza tipica : 50 m Ω
Corsa di lavoro raccomandata : 4,32 (SP-5)
8 (SP-5L)

Technical Data

Recommended Minimum Centers: 4,75 mm
Current Rating: 10,0 A
Typical Contact Resistance: 50 m Ω
Recommended Working Travel : 4,32 (SP-5)
8 (SP-5L)

Materiali

Corpo : Ottone dorato
Molla : Acciaio argentata / dorata
Pistone : Rame-Berillio, nichel-oro / oro duro

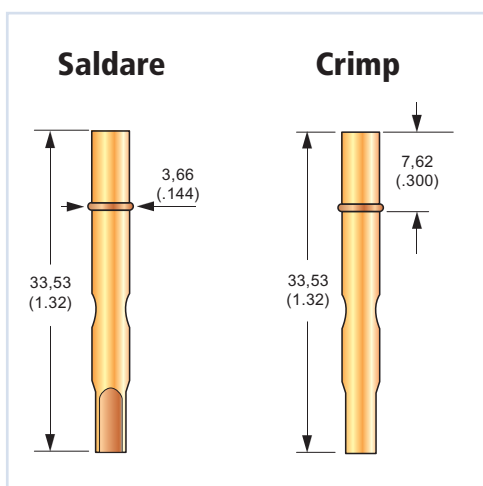
Materials

Barrel : Gold plated
Spring : Music Wire, silver / gold plated
Plunger : Becu, hardened 24 Kt gold plated

Informazioni per l'ordine - Order Info:

Serie	Materiale Material	Testa Head	Ø	Forza Molla Spring Force	Galvanica Galvanic
	B=Becu S=Steel SS=Stainless St.				G = gold N = nickel R = rodium
SP-5					

R-5 Ricettacolo - Receptacle



	SP-5	SP-5L
Corsa Max : Max Travel :	6,35 mm.	10 mm.
Forza Molla : Spring Force :	400 gr. 400 mm.	
Precarico : Preload :	79 gr.	79 mm.

Punta di foratura: Drills:

Ø 3,60



R-5	
C = Crimp S = Saldare	

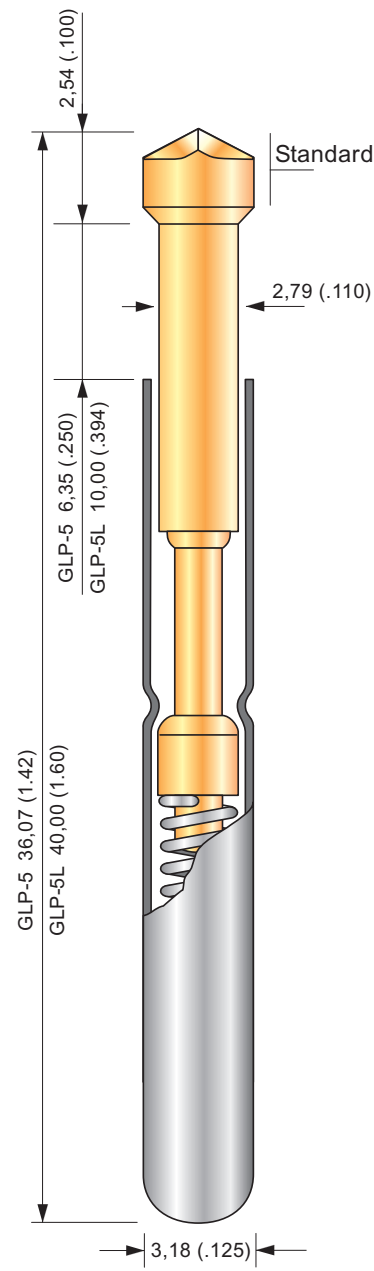
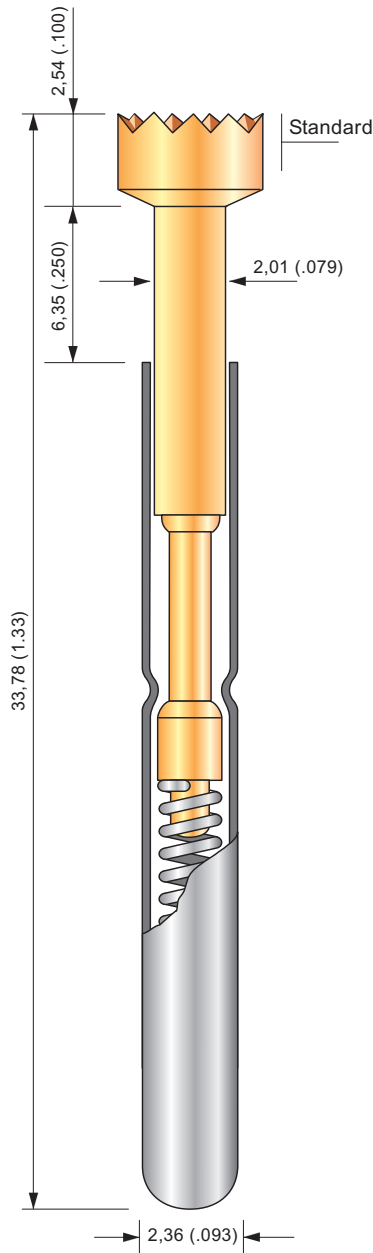
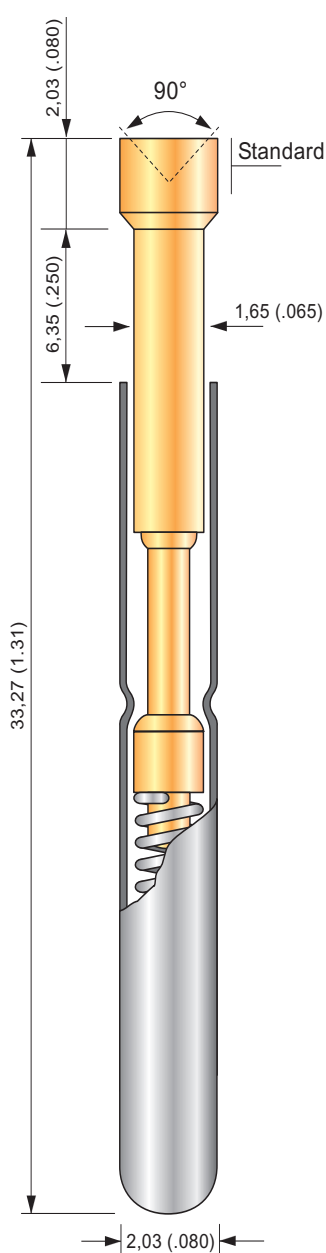
SP-3HC/SP-4HC/SP-5HC

100 Mils
HIGH CURRENT PROBE

SP-3HC
5-15* AMP

SP-4HC
10-15* AMP

SP-5HC
15-30* AMP



Dati Tecnici

Distanza minima raccomandata : 2,54 mm
Intensità nominale : 2,0 - 3,0 A
Resistenza tipica : 14 m Ω
Corsa di lavoro raccomandata: 8,00

Technical Data

Recommended Minimum Centers: 2,54 mm
Current Rating: 2,0 - 3,0 A
Typical Contact Resistance: 14 m Ω
Recommended Working Travel : 8,00

Materiali

Corpo e molla: Acciaio argentato
Pistone : Rame-Berillio, nichel-oro / oro duro

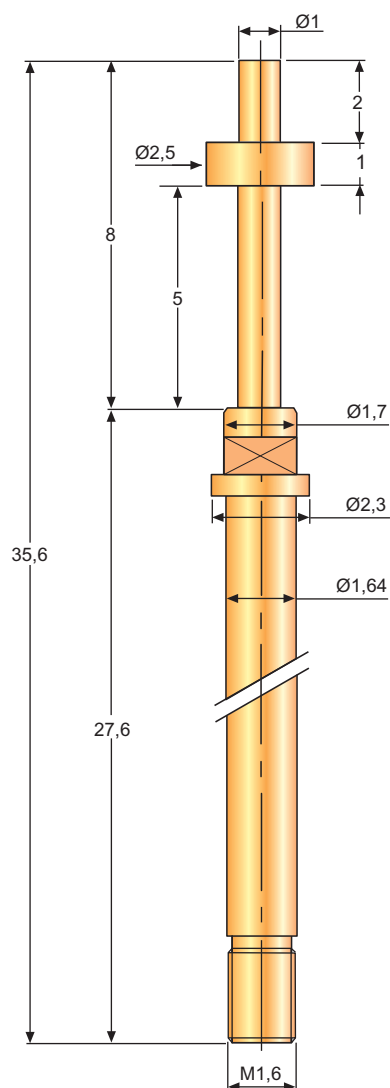
Materials

Barrel & spring : Deep silver plated
Plunger : Becu, hardened 24 Kt gold plated

Per teste e ricettacoli vedere: SP-3, SP-4, SP-5
For head and receptacles see: SP-3, SP-4, SP-5

* HC probes are special **deep silver plated** for highest conductivity performance. Max Current is NOT continue

MATERIAL	TESTA HEAD	Ø mm
B	38	0,65 0,80 1,00 2,50



Dati Tecnici

Distanza minima raccomandata : 2,54 mm
Intensità nominale : 5,0 - 8,0 A
Resistenza tipica : 20 m Ω
Corsa di lavoro raccomandata: 4,00

Technical Data

Recommended Minimum Centers: 2,54 mm
Current Rating: 5,0 - 8,0 A
Typical Contact Resistance: 20 m Ω
Recommended Working Travel : 4,00

Materiali

Corpo : Ottone dorato
Molla : Acciaio argentata / dorata
Pistone : Rame-Berillio, nichel-oro / oro duro

Materials

Barrel : Gold plated
Spring : Music Wire, silver / gold plated
Plunger : Becu, hardened 24 Kt gold plated

Informazioni per l'ordine - Order Info:

Serie	Materiale Material	Testa Head	Ø	Forza Molla Spring Force	Galvanica Galvanic
	B=Becu S=Steel SS=Stainless St.				
SP-32M					

Corsa Max : 5,0 mm.
Max Travel :

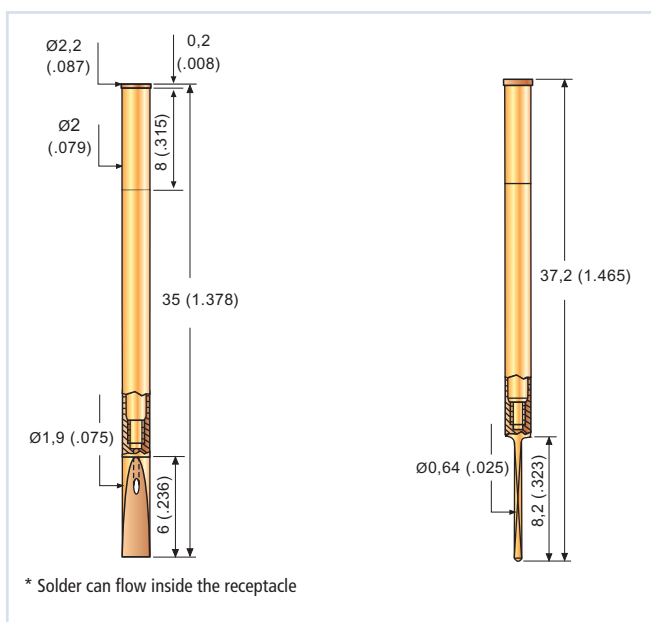
Forza Molla : 200 gr.
Spring Force :

Precarico : 75 gr.
Preload :

Opzioni - Options :

R-32M

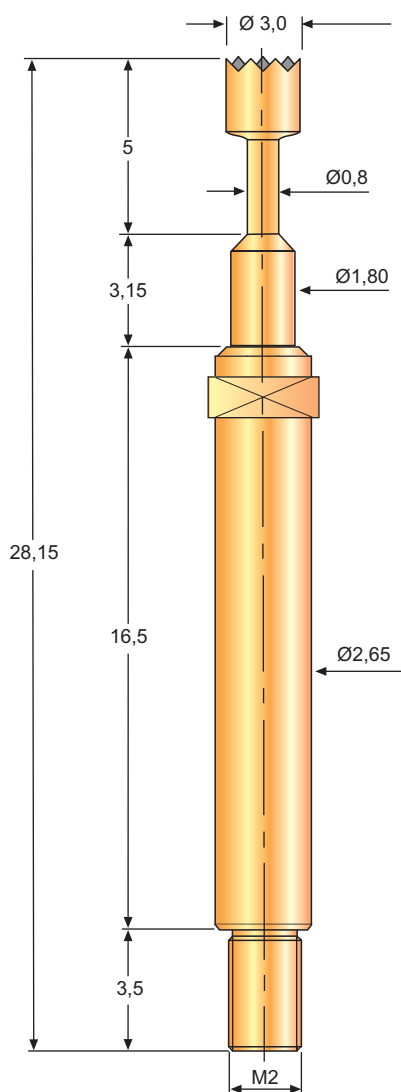
Ricettacolo - Receptacle



Punta di foratura: Drills:

Ø	
R-32M	
	C = Crimp S = Saldare W = Wire wrap WW = With wire

MATERIAL	TESTA HEAD	Ø mm
B	1	2,30
B S	2	1,80
B	3	0,80 1,00 2,50
B	4	3,00
B S	8	3,00



Dati Tecnici

Distanza minima raccomandata : 4,75 mm
 Intensità nominale : 5,0 - 8,0 A
 Resistenza tipica : 30 m Ω
 Corsa di lavoro raccomandata: 4,0

Technical Data

Recommended Minimum Centers: 2,54 mm
 Current Rating: 5,0 - 8,0 A
 Typical Contact Resistance: 30 m Ω
 Recommended Working Travel : 4,0

Materiali

Corpo : Ottone dorato
 Molla : Acciaio argentato / dorata
 Pistone : Rame-Berillio, nichel-oro / oro duro

Materials

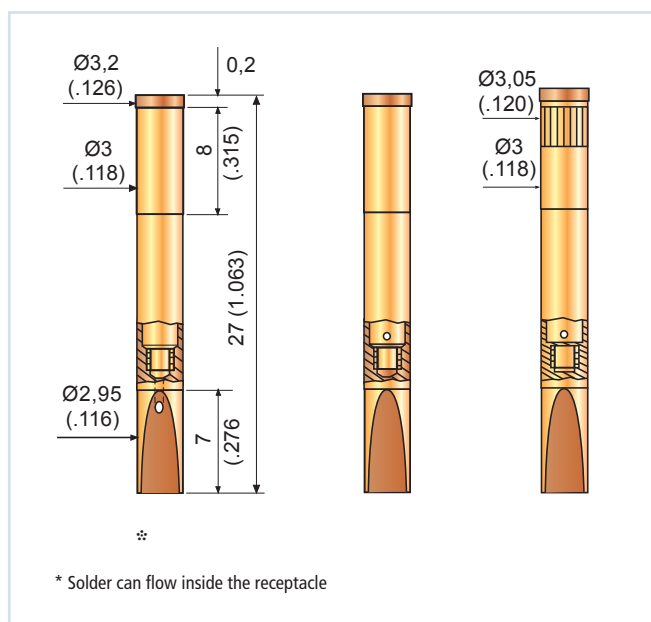
Barrel : Gold plated
 Spring : Music Wire, silver / gold plated
 Plunger : Becu, hardened 24 Kt gold plated

Informazioni per l'ordine - Order Info:

Serie	Materiale Material	Testa Head	Ø	Forza Molla Spring Force	Galvanica Galvanic
	B=Becu S=Steel SS=Stainless St.				G = gold N = nickel R = roodium
SP-33M					

R-33M

Ricettacolo - Receptacle



Corsa Max : 5,3 mm.
 Max Travel :

Forza Molla : 300 gr.
 Spring Force :

Precarico : ?? gr.
 Preload :

Opzioni - Options :
 1??? g.

Punta di foratura: Drills:

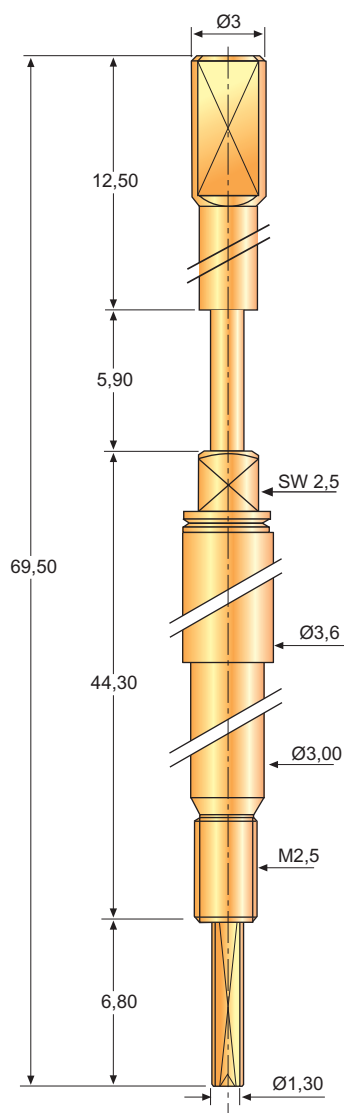
Ø



R-33M

C = Crimp
 S = Saldare
 W = Wire wrap
 WW = With wire

MATERIAL	TESTA HEAD	Ø mm
B	8	2,4 3,0 4,0 4,8
B	40	



Dati Tecnici

Distanza minima raccomandata :
 Intensità nominale : 8,0 A
 Resistenza tipica : 30 m Ω
 Corsa di lavoro raccomandata:

Technical Data

Recommended Minimum Centers:
 Current Rating: 8,0 A
 Typical Contact Resistance: 30 m Ω
 Recommended Working Travel :

Materiali

Corpo : Ottone dorato
 Molla : Acciaio argentata / dorata
 Pistone : Rame-Berillio, nichel-oro / oro duro

Materials

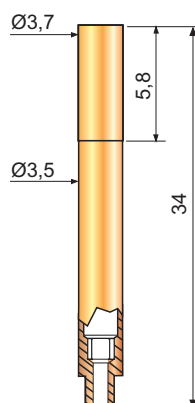
Barrel : Gold plated
 Spring : Music Wire, silver / gold plated
 Plunger : Becu, hardened 24 Kt gold plated

Informazioni per l'ordine - Order Info:

Serie	Materiale Material	Testa Head	Ø	Forza Molla Spring Force	Galvanica Galvanic
	B=Becu S=Steel SS=Stainless St.				G = gold N = nickel R = rodium
SP-34					

R-34

Ricettacolo - Receptacle



Corsa Max : 5,5 mm.
 Max Travel :

Forza Molla : 300 gr.
 Spring Force :

Precarico : 50 gr.
 Preload :

Opzioni - Options :

Punta di foratura: Drills:

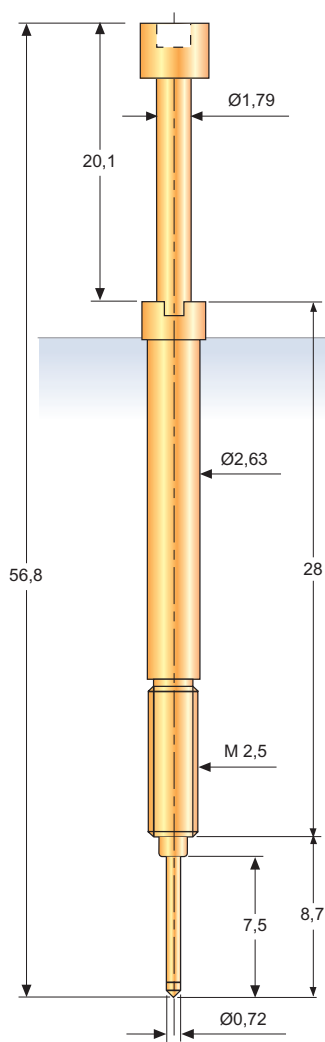
Ø ...



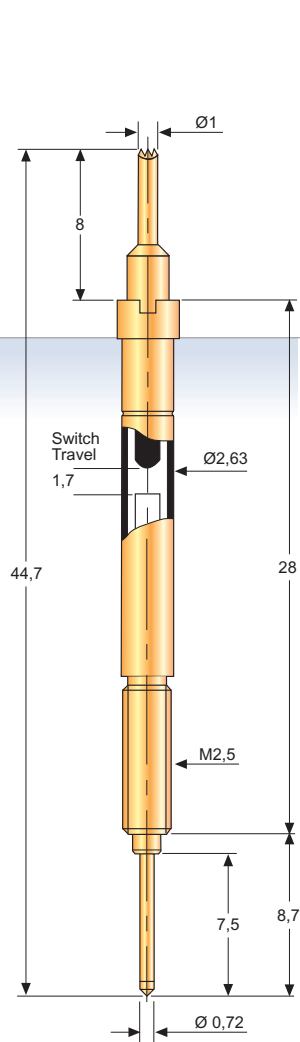
R-34	
------	--

C = Crimp
 S = Saldare
 W = Wire wrap
 WW = With wire

LONG VERSION



SHORT VERSION



Dati Tecnici

Distanza minima raccomandata : 2,54 mm
 Intensità nominale : 1,0 A
 Resistenza tipica : 50 m Ω
 Corsa di lavoro raccomandata: 4,00

Technical Data

Recommended Minimum Centers: 2,54 mm
 Current Rating: 1,0 A
 Typical Contact Resistance: 50 m Ω
 Recommended Working Travel : 4,00

Materiali

Corpo : Ottone dorato
 Molla : Acciaio argentata / dorata
 Pistone : Rame-Berillio, nichel-oro / oro duro
 Acciaio temprato dorato

Materials

Barrel : Gold plated
 Spring : Music Wire, silver / gold plated
 Plunger : Becu, hardened 24 Kt gold plated
 HSS Hardened steel gold plated over nichel

Informazioni per l'ordine - Order Info:

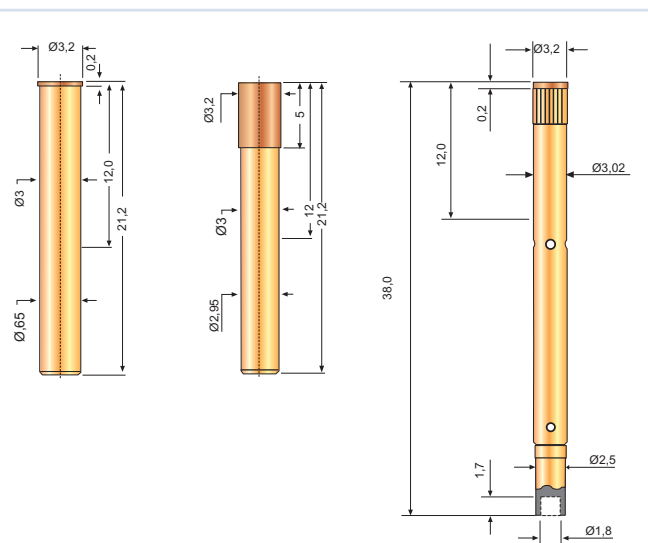
Serie	Materiale Material	Testa Head	Ø	Forza Molla Spring Force	Galvanica Galvanic
	B=Becu S=Steel SS=Stainless St.				

SP-36					
-------	--	--	--	--	--

MATERIAL	TESTA HEAD	Ø mm
B	8	1,00 3,00 4,00
B S	39	3,0 3,5 4,0 4,5 5,0 5,5 5,9

R-36

Ricettacolo - Receptacle



Corsa Max : 4,2 mm.
 Max Travel :

Forza Molla : 350 gr.
 Spring Force :

Precarico : 70 gr.
 Preload :

Opzioni - Options :
 200 g.
 300 g.

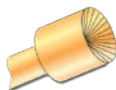
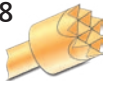
Punta di foratura: Drills:

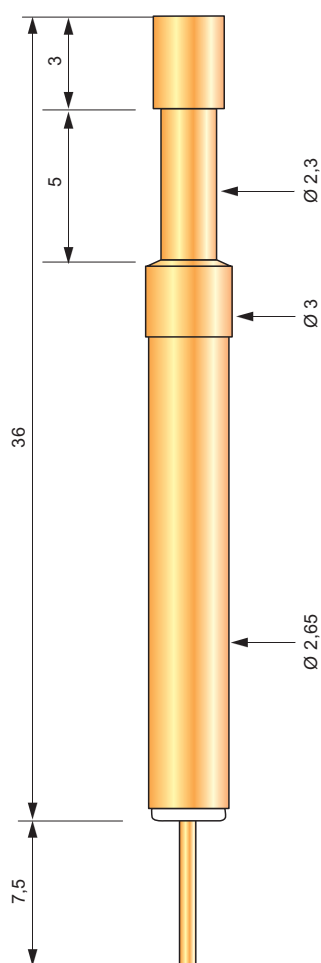
Ø



R-36

C = Crimp
 S = Saldare
 W = Wire wrap
 WW = With wire

MATERIAL	TESTA HEAD	Ø mm
B	1 	2,30
B	3 	2,30 3,00
P	3P 	3,00
B	08 	2,30 3,00

**Dati Tecnici**

Distanza minima raccomandata : 3,58 mm
 Intensità nominale : 3,0 A
 Resistenza tipica : 50 m Ω
 Corsa di lavoro raccomandata: 4,00 mm

Technical Data

Recommended Minimum Centers: 3,58 mm
 Current Rating: 3,0 A
 Typical Contact Resistance: 50 m Ω
 Recommended Working Travel : 4,00 mm

Materiali

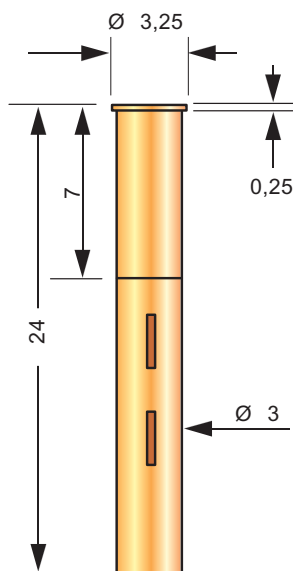
Corpo : Ottone dorato
 Molla : Acciaio argentata / dorata
 Pistone : Rame-Berillio, nichel-oro / oro duro

Materials

Barrel : Gold plated
 Spring : Music Wire, silver / gold plated
 Plunger : Becu, hardened 24 Kt gold plated

Informazioni per l'ordine - Order Info:

Serie	Materiale Material	Testa Head	Ø	Forza Molla Spring Force	Galvanica Galvanic
	B=Becu S=Steel SS=Stainless St.				G=gold N=nickel R=rodium
SP-SW3					

R-SW3**Ricettacolo - Receptacle**

Corsa Max : 5,00 mm.
 Max Travel :
 Forza Molla : 200-300 gr.
 Spring Force :
 Precarico : 65 gr.
 Preload :

**Punta di foratura:
Drills:**

Ø



R-SW3

C = Crimp
 S = Saldare
 W = Wire wrap
 WW = With wire

Dati Tecnici

Distanza minima raccomandata :	2,54 mm
Intensità nominale :	2,0 - 3,0 A
Resistenza tipica :	20 m Ω
Corsa di lavoro raccomandata:	6,40 (SP-422) 8 (SP-212)

Technical Data

Recommended Minimum Centers:	2,54 mm
Current Rating:	2,0 - 3,0 A
Typical Contact Resistance:	20 m Ω
Recommended Working Travel :	6,40 (SP-422) 8 (SP-212)

Materiali

Corpo :	Ottone dorato
Molla :	Acciaio argentata / dorata
Pistone :	Rame-Berillio, nichel-oro / oro duro Acciaio temprato dorato

Materials

Barrel :	Gold plated
Spring :	Music Wire, silver / gold plated
Plunger :	Becu, hardened 24 Kt gold plated HSS Hardened steel gold plated over nichel

Informazioni per l'ordine - Order Info:

Serie	Materiale Material	Testa Head	Ø	Forza Molla Spring Force	Galvanica Galvanic
	B=Becu S=Steel SS=Stainless St.				G=gold N=nichel R=rodium

SP-422					
SP-212					

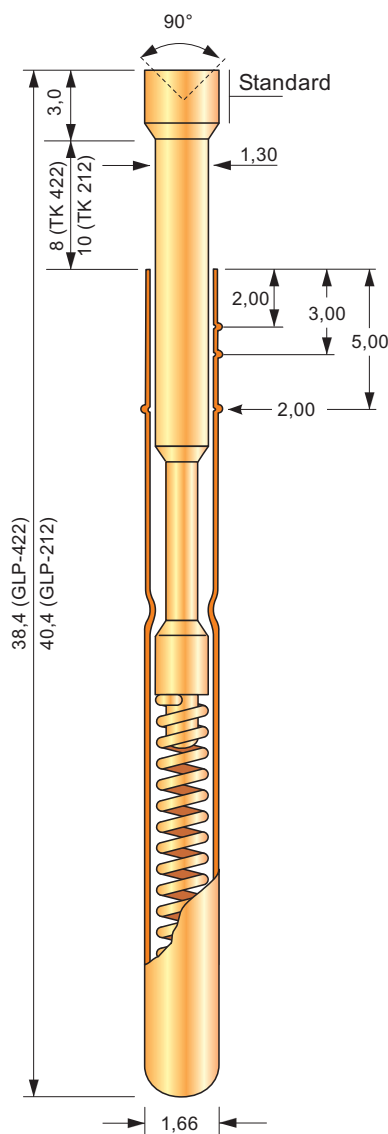
SP-422 SP-212

Corsa Max :	8,00 mm.	10,00 mm
Max Travel :		
Forza Molla :	200 gr.	200 gr.
Spring Force :		
Precarico :	57 gr.	57 gr.
Preload :		

Opzioni - Options :

100 g.
150 g.
250 g.
300 g.

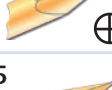
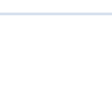
MATERIAL	TESTA HEAD	Ø mm
B	1	2,00
B	4	1,30 2,00
B	5	2,00
B	8	1,40 2,00
B	10	2,00
B	11	2,00
S	12	0,75 1,02 1,30
B	13	1,30 1,80 2,00
S	14	0,75 1,02 1,30
S	15	1,02 1,30
B S	21	1,30 1,80
B	25	1,30 2,00
B S	27	0,60
B S	28	0,45
B S	30	1,02

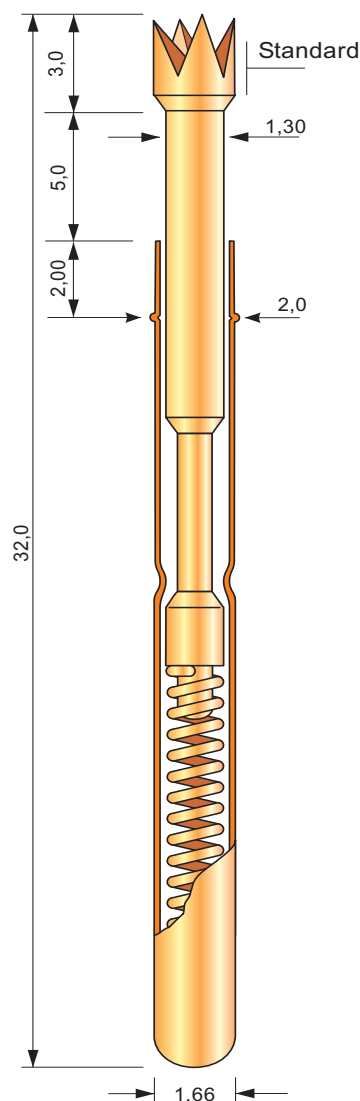


R-422 / R-212

Ricettacolo - Receptacle

Vedi a pag. 26 - See page 26

MATERIAL	TESTA HEAD	Ø mm
B	1 	2,00
B	4 	1,30 2,00
B S	5 	2,00
B S	8 	1,30 2,00
B	10 	2,00
B S	11 	2,00
S	12 	1,02 1,30
B S	13 	1,30 1,80 2,00
B	14 	1,30
S	15 	1,30
B S	21 	1,02 1,30 1,52
B S	25 	1,30 1,50 2,00
B S	27 	0,60
S	28 	0,45
B S	30 	1,02



Dati Tecnici

Distanza minima raccomandata : 2,54 mm
 Intensità nominale : 2,0 - 3,0 A
 Resistenza tipica : 20 m Ω
 Corsa di lavoro raccomandata: 4,00

Technical Data

Recommended Minimum Centers: 2,54 mm
 Current Rating: 2,0 - 3,0 A
 Typical Contact Resistance: 20 m Ω
 Recommended Working Travel : 4,00

Materiali

Corpo : Ottone dorato
 Molla : Acciaio argentata / dorata
 Pistone : Rame-Berillio, nichel-oro / oro duro

Materials

Barrel : Gold plated
 Spring : Music Wire, silver / gold plated
 Plunger : Becu, hardened 24 Kt gold plated

Informazioni per l'ordine - Order Info:

Serie	Materiale Material	Testa Head	Ø	Forza Molla Spring Force	Galvanica Galvanic
	B=Becu S=Steel SS=Stainless St.				
SP-912					

Corsa Max : 5,0 mm.
 Max Travel :

Forza Molla : 200 gr.
 Spring Force :

Precarico : 57 gr.
 Preload :

Opzioni - Options :

100 g.
 150 g.
 250 g.
 300 g.

R-912

Ricettacolo - Receptacle

Vedi a pag. 26 - See page 26

Punta di foratura:
Drills:

Ø 2,02



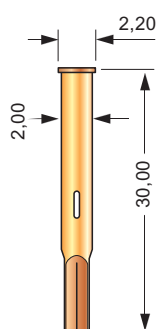
E 0,20

S

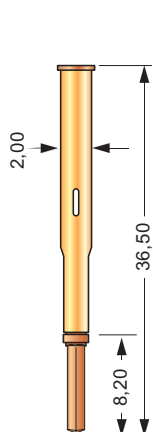
C = Crimp
S = Saldare / Sold
W = Wire wrap
SO = Sold outside

RICETTACOLI - RECEPTACLES

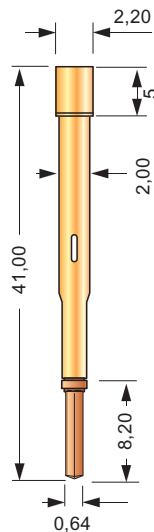
E 0,20 S



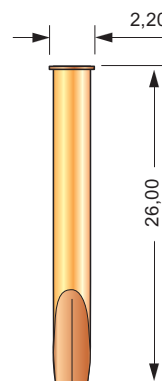
E 0,20 W



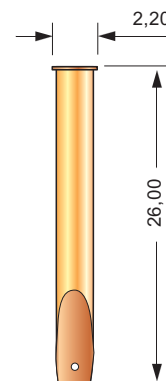
E 5,00 W



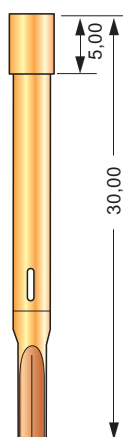
E 0,20 SO



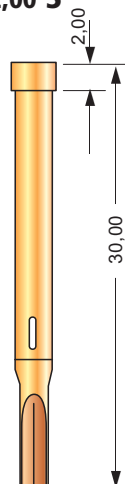
E 0,20 SO/23



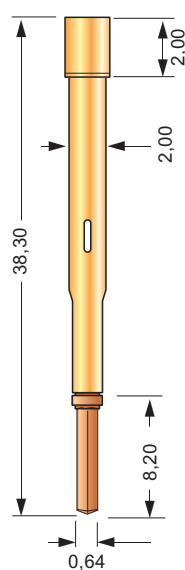
E 5,00 S



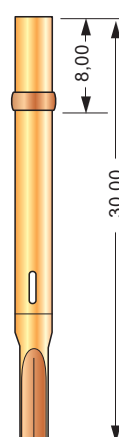
E 2,00 S



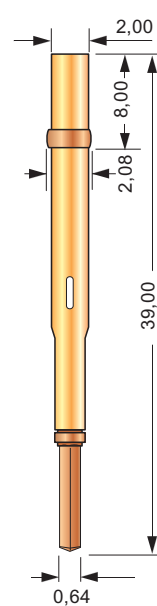
E 2,00 W



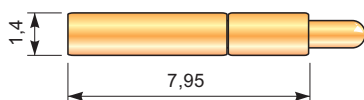
E 8,00 S



E 8,00 W



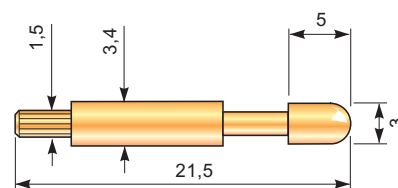
PW0



SPECIFICHE TECNICHE - TECHNICAL SPECIFICATION

Numero cicli vita - Mechanical Life	1 M
Corrente tipica - Current Rating	3 Amp
Materiale pistone - Plunger Material	Becu - Gold Silver
Materiale corpo - Barrel Material	Ottone - Brass
Carico molla - Spring Force	RQ*
Utenza - Destination	+ ricettacolo + receptacles

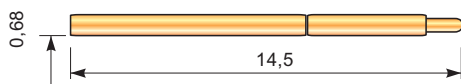
PW3



SPECIFICHE TECNICHE - TECHNICAL SPECIFICATION

Numero cicli vita - Mechanical Life	400/800 K
Corrente tipica - Current Rating	3 Amp
Materiale pistone - Plunger Material	Ottone - Brass
Materiale corpo - Barrel Material	Ottone - Brass
Carico molla - Spring Force	RQ*
Utenza - Destination	saldato su PCB soldered on PCB

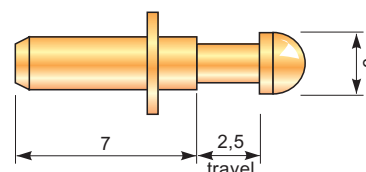
PW1



SPECIFICHE TECNICHE - TECHNICAL SPECIFICATION

Numero cicli vita - Mechanical Life	200 K
Corrente tipica - Current Rating	3 Amp
Materiale pistone - Plunger Material	Ottone - Brass
Materiale corpo - Barrel Material	Ottone - Brass
Carico molla - Spring Force	RQ*
Utenza - Destination	+ ricettacolo + receptacles

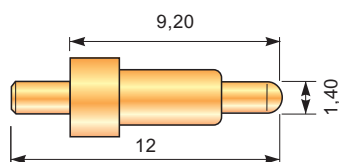
PW4



SPECIFICHE TECNICHE - TECHNICAL SPECIFICATION

Numero cicli vita - Mechanical Life	500 K
Corrente tipica - Current Rating	3 Amp
Materiale pistone - Plunger Material	Ottone - Brass
Materiale corpo - Barrel Material	Ottone - Brass
Carico molla - Spring Force	RQ*
Utenza - Destination	saldato su PCB soldered on PCB

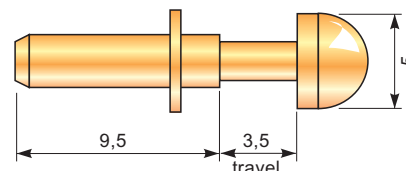
PW2



SPECIFICHE TECNICHE - TECHNICAL SPECIFICATION

Numero cicli vita - Mechanical Life	200 K
Corrente tipica - Current Rating	5 Amp
Materiale pistone - Plunger Material	Becu - Gold Plated
Materiale corpo - Barrel Material	Becu - Gold Plated
Carico molla - Spring Force	RQ*
Utenza - Destination	saldato su PCB soldered on PCB

PW5

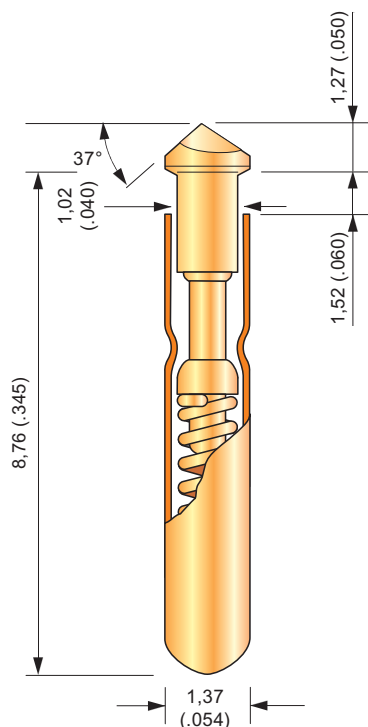


SPECIFICHE TECNICHE - TECHNICAL SPECIFICATION

Numero cicli vita - Mechanical Life	500 K
Corrente tipica - Current Rating	3 Amp
Materiale pistone - Plunger Material	Ottone - Brass
Materiale corpo - Barrel Material	Ottone - Brass
Carico molla - Spring Force	RQ*
Utenza - Destination	saldato su PCB soldered on PCB

RQ* : Su richiesta - On Request

MATERIAL	TESTA HEAD	Ø mm
B	4	1,02 1,96
B	5	2,00
B	11	1,57 1,96 2,49
B	11	3,30 3,96
B	33	1,96



Dati Tecnici

Distanza minima raccomandata : 2,54 mm
Intensità nominale : 3,0 A
Resistenza tipica : 50 m Ω
Corsa di lavoro raccomandata: 1,27 mm

Technical Data

Recommended Minimum Centers: 2,54 mm
Current Rating: 3,0 A
Typical Contact Resistance: 50 m Ω
Recommended Working Travel : 1,27

Materiali

Corpo : Ottone dorato
Molla : Acciaio argentata / dorata
Pistone : Rame-Berillio, nichel-oro / oro duro

Materials

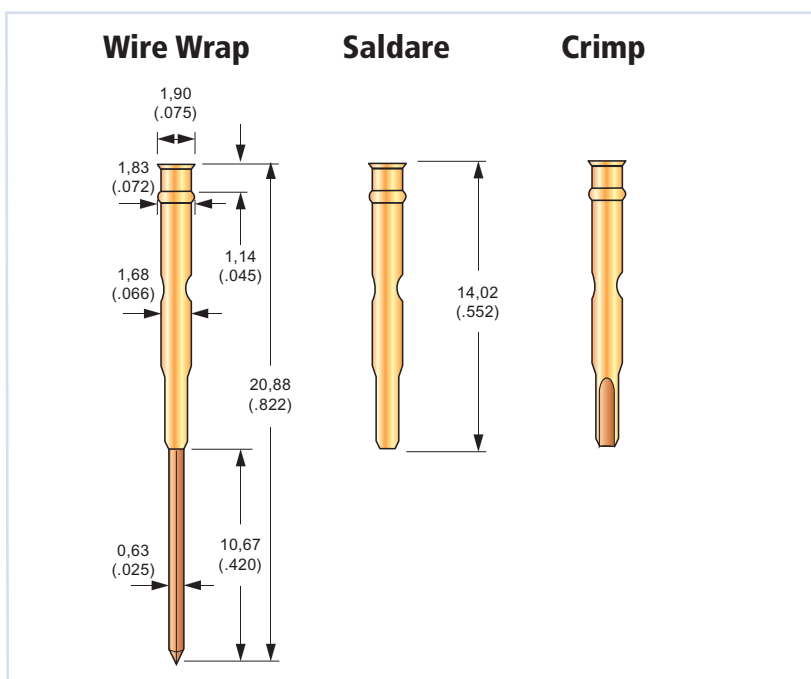
Barrel : Gold plated
Spring : Music Wire, silver / gold plated
Plunger : Becu, hardened 24 Kt gold plated

Informazioni per l'ordine - Order Info:

Serie	Materiale Material	Testa Head	Ø	Forza Molla Spring Force	Galvanica Galvanic
	B=Becu S=Steel SS=Stainless St.				G=gold N=nickel R=rodium
SP-100					

R-100

Ricettacolo - Receptacle



Corsa Max : 1,52 mm.
Max Travel :

Forza Molla : 100 gr.
Spring Force :

Precarico : 37 gr.
Preload :

Punta di foratura: Drills:

Ø 1,75

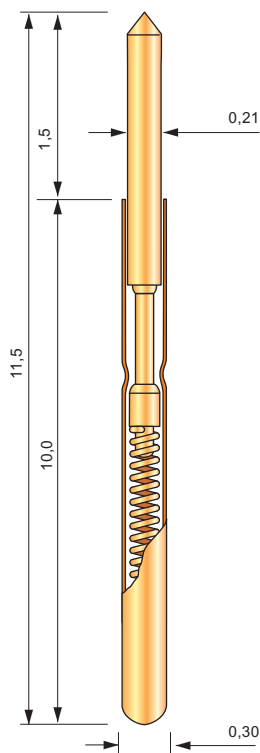


R-100	
-------	--

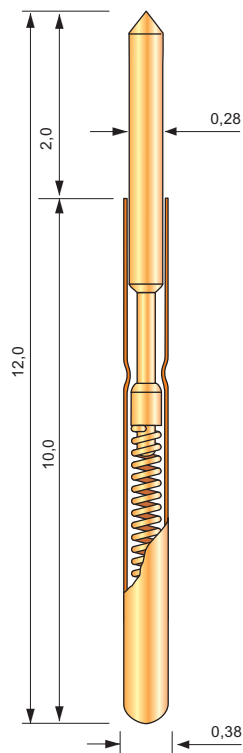
C = Crimp
S = Saldare
W = Wire wrap
WW = With wire

MATERIAL	TESTA HEAD	Ø mm
B	2	0,21 0,28 0,35 0,40
B	5R	0,21 0,28 0,35 0,40
B	5	0,60 0,80
B	21	0,21 0,28 0,35 0,40

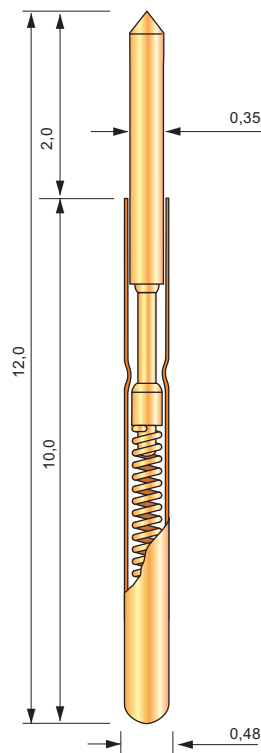
SP-00030



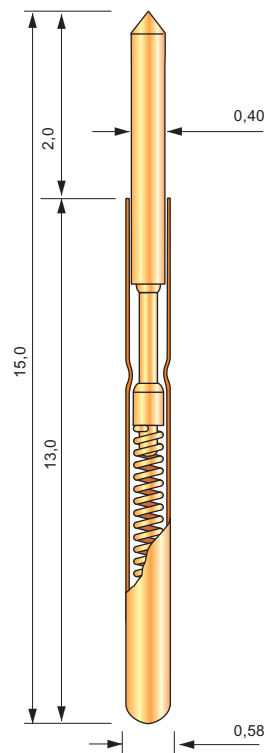
SP-00038



SP-00048



SP-00058



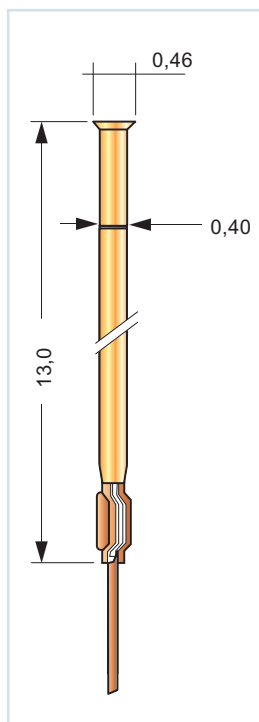
Corsa Max : 1,5 mm.
Max Travel :
Forza Molla : 40 gr.
Spring Force :

Corsa Max : 2,0 mm.
Max Travel :
Forza Molla : 40 gr.
Spring Force :

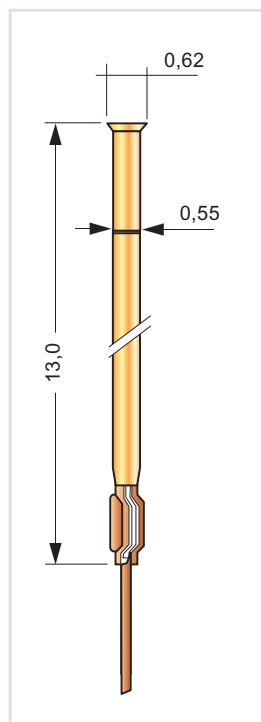
Corsa Max : 2,0 mm.
Max Travel :
Forza Molla : 55 gr.
Spring Force :

Corsa Max : 2,0 mm.
Max Travel :
Forza Molla : 55 gr.
Spring Force :

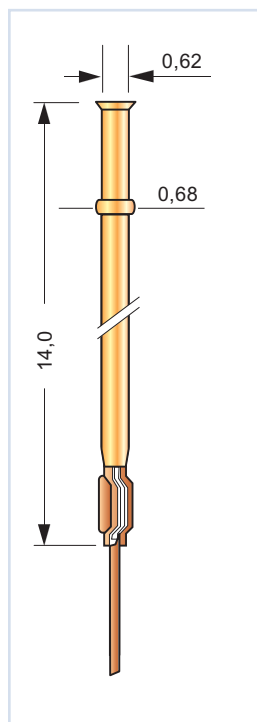
R-00030ww



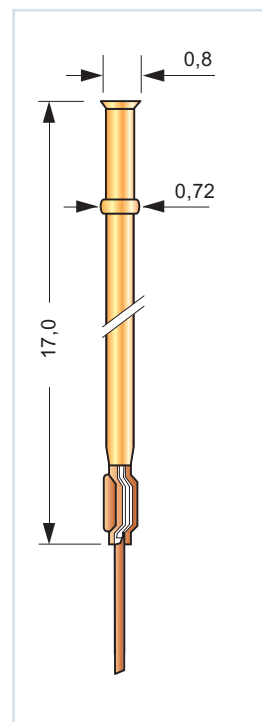
R-00038ww



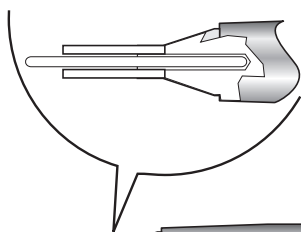
R-00048ww



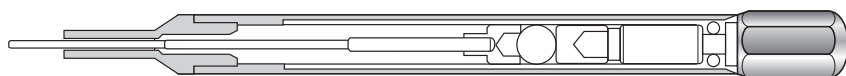
R-00058ww



ww: with wire

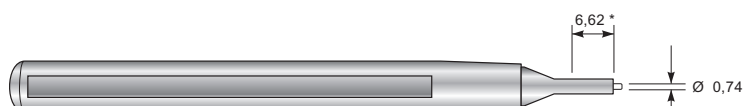


PUNZONE FISSO

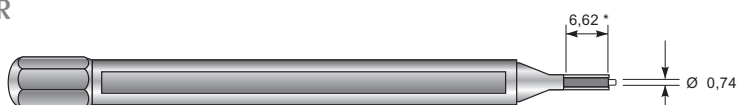


PUNZONE REGOLABILE

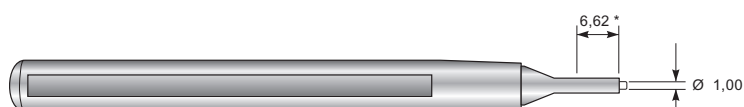
PU50



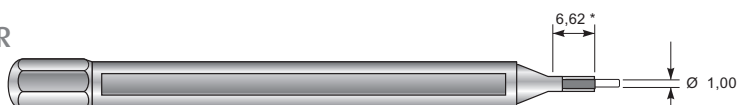
PU50R



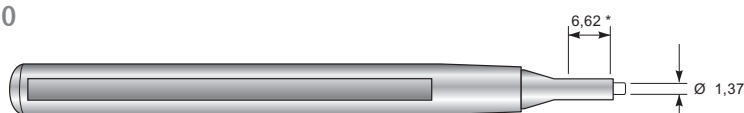
PU75



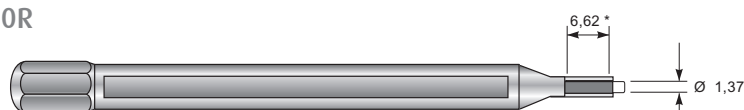
PU75R



PU100

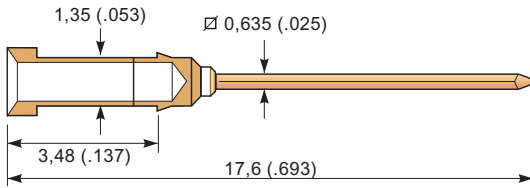


PU100R

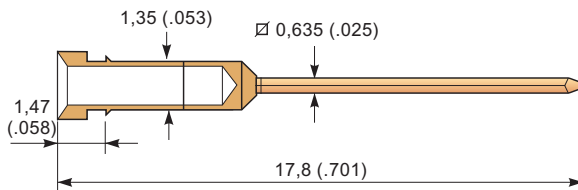


* Dimensioni speciali su richiesta - Special dimensions on request

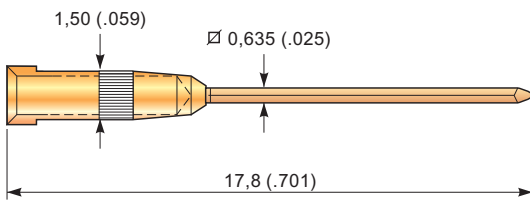
300300



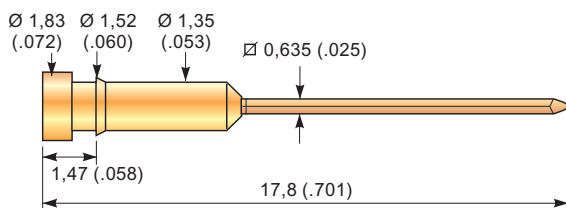
300301



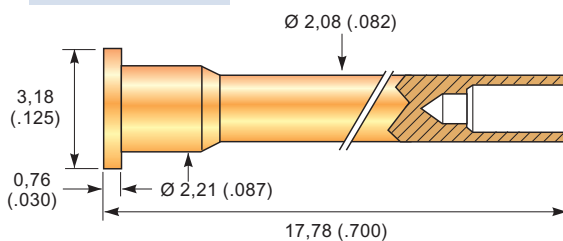
300396



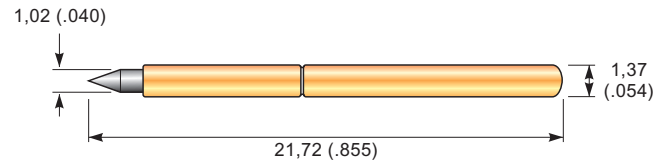
300410



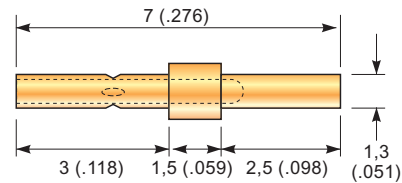
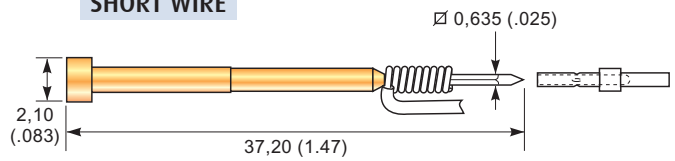
GPP 95 - 1



SP 2GR

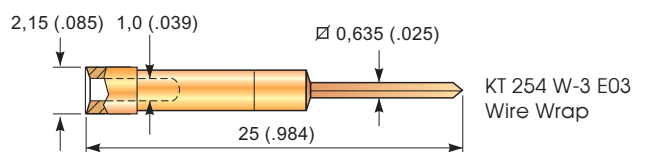
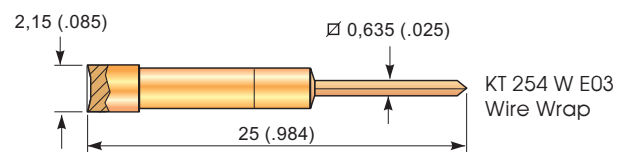
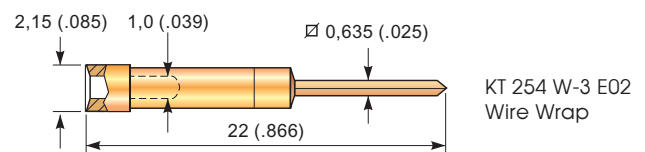
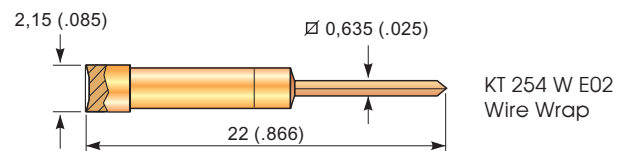


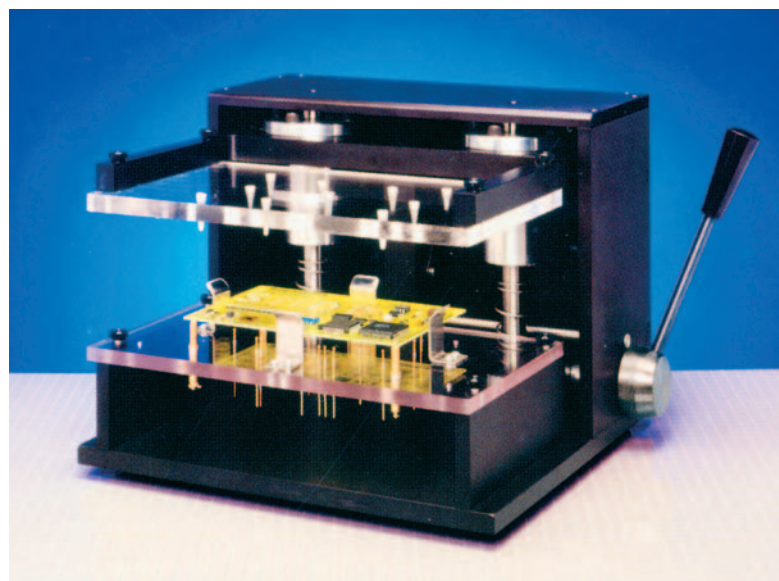
KT 675 SHORT WIRE



KT 676 FOR GR 228...

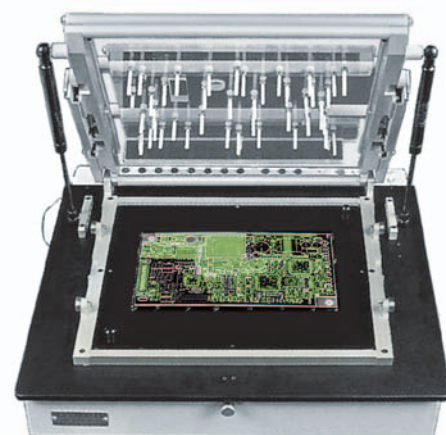
KT 254





La miglior qualità di banchi di collaudo meccanici, tutti con movimentazione su cuscinetti a sfera per la massima precisione e flessibilità di applicazione "Low Cost Solutions".
Test fixture standard: TTI TESTRON e banchi di prova professionali a rack, serie V.G. 512 "Mil. spec."

The best quality mechanical fixture, fully ball bearing movement, for smooth operating and precise targeting.



ACCESSORI - ACCESSORIES



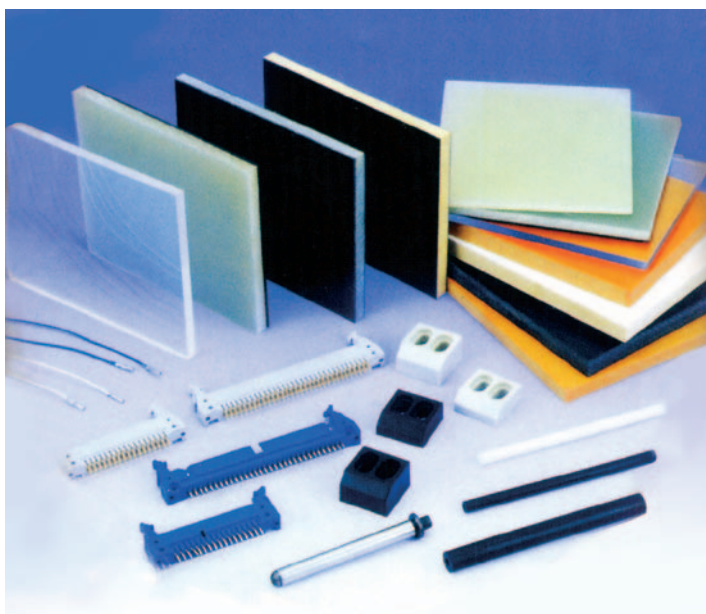
Accessori per montaggio fixture.

Test fixture spares.
Reference pins: spacers, springs etc.

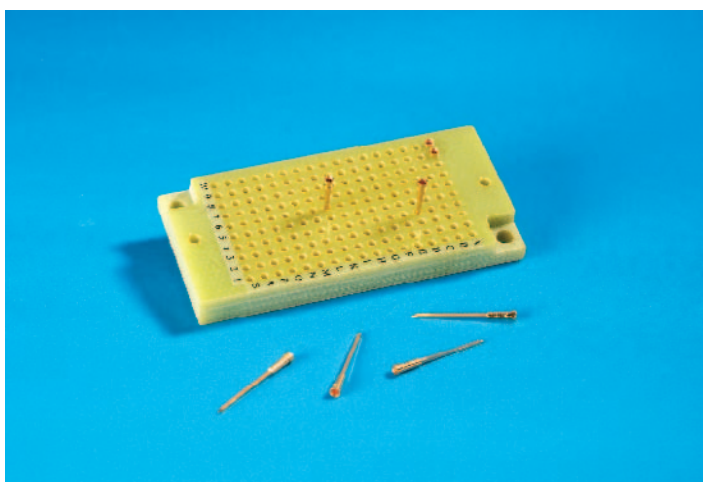
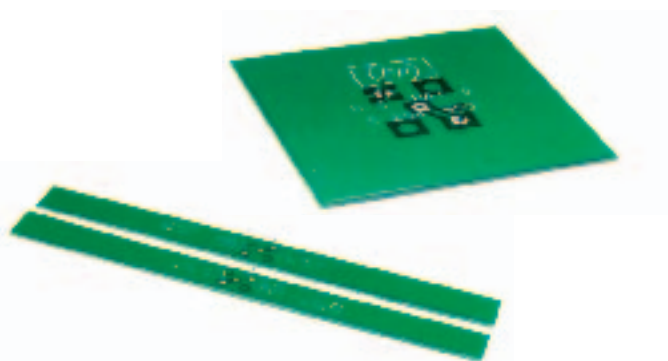
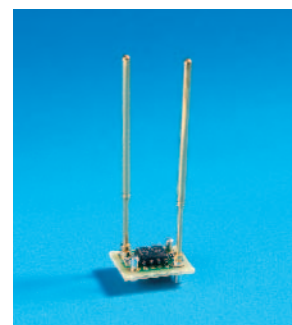


Discriminatori colore per diodi LED
Sensori di luminosità LUM.
Output ± 2 volt regolabili.

Led color discriminator



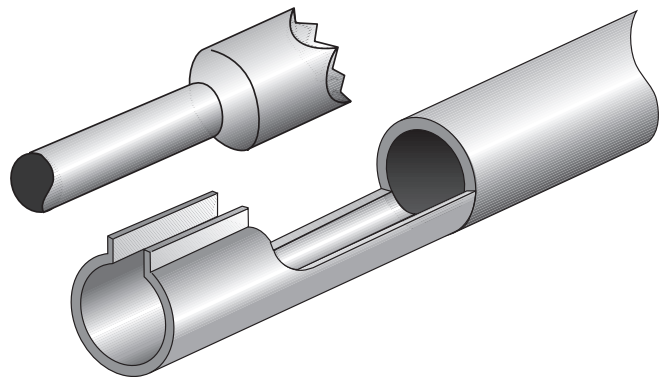
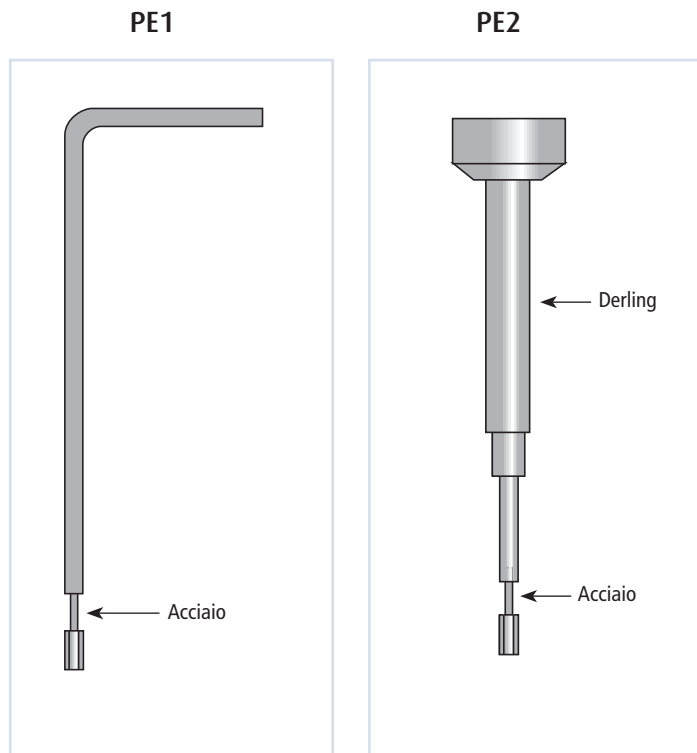
Laminati in FR-4 (ESD) CEM1,
Laminati calibrati, ricambi
fixture con serigrafia ecc.
Fixture plates: FR-4 (ESD), CEM1.



Interface blocks



Contatti per caricabatterie - Battery charger probes

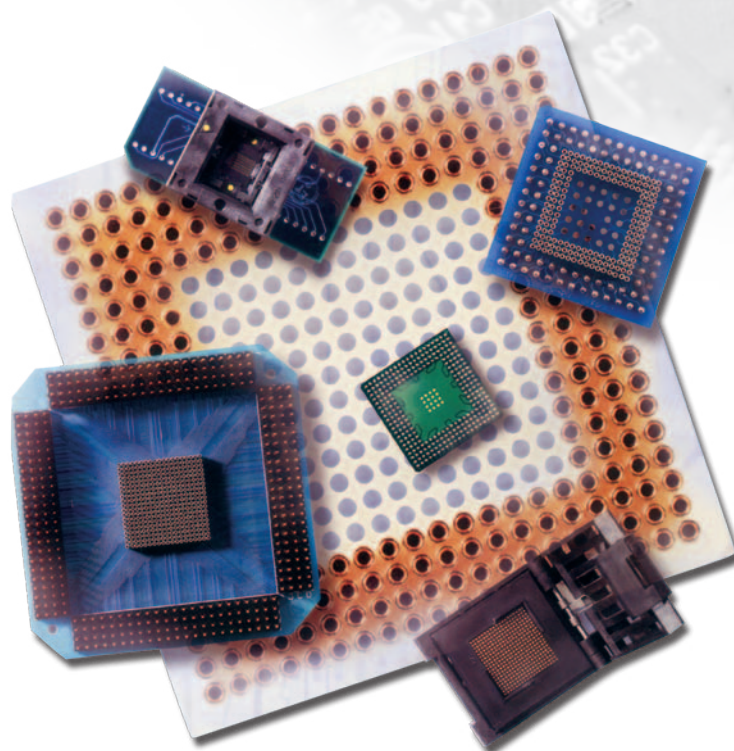


TORNERIA

PRODOTTI PER ELETTRONICA - TURNED PARTS



Ampia gamma di prodotti tipicamente per l'elettronica in piccole e grandi serie.
Turned parts mainly for electronic applications in small and large production series.



SPRING CONTACT PROBES

