

# High Current Probes



When we talk about High Currents, we normally don't think of the electrical testing sector, where most of the job is done working around 3 Amperes. Our standard Spring Contact Probes can work at 5 Amperes.

Tecon's High Current Spring Contact Probes can work with currents of up to 100 Amperes, during electrical tests lasting a few seconds at the most.

Sometimes, there are situations in which the Spring Contact Probe needs to be more performing, such as in testing equipment for a longer period of time. In this case, it is necessary to carry out specific manufacturing processes, according to the project requirements, to optimize performance in such testing conditions.

## Recommended minimum centers (grid-pitch)

The standard installation pitch for our High Current Spring Contact Probe ranges from 2.54 mm to 10.00 mm.

## Current rating

By using different techniques during the manufacturing process and performing the silver plating of the barrel and the spring, our standard High Current Probes can withstand currents ranging from 10A to 30A. With our special High Current Probes, the tolerated current load is up to 100A.

## Typical contact resistance

The choice of materials, the design specifications, the silver plating of components and the precision in assembly, allow our High Current Spring Contact Probes to have a low-contact resistance, not exceeding 10mΩ.

## Types of High Current Probes

High Current Probes can be of two types:

- Standard: The main difference between High Current Probes and standard Probes is the type of material and the type of galvanic treatment they undergo. This will allow the High Current Probe to have a very low electrical resistance and consequently a higher rated current. In addition, the spring force is increased to ensure better contact.
- Continuous plunger: in this case the plunger comes out of the barrel from both sides. The wiring is directly connected at the end of plunger. This allows the current to flow only through the plunger and the barrel, not the spring. This solution enables our High Current Probes to withstand a greater current flow for a longer period of time. In alternative, the wiring can be soldered on the barrel.

## Materials and plating

The materials used in making High Current Probes are very important in order to guarantee the lowest possible electrical resistance: The barrel can be made of:

- Bronze, material with good hardness and good malleability
- Brass, material with excellent electrical conductivity and malleability, but not as hard as bronze

The barrel is silver or gold plated.

The spring is made of:

- music wire (Harmonic steel) with a spring force ranging from 100 to 1300 gr

The spring is plated with silver to improve electrical conductivity.

The plunger is made of:

- Beryllium-Copper (Be-Cu)

The plunger can be plated in gold.

Silver Plating significantly improves electrical conductivity of the components and ensures the lowest possible electrical resistance.

## Receptacle

For our standard High Current Probes series (HCP3/HCP4/HCP5) the receptacles are the same as those used for standard Spring Contact Probes for ICT (In-Circuit Test):

- Solder, to solder the wire directly on the receptacle
- Crimp, for crimping the wire inside the receptacle
- Wire-Wrap, to wrap the wire around the square end of the receptacle
- Round Post, to insert the end of the receptacle directly into the assembly hole

For High Current Probes with continuous plunger

- the receptacle for this type of probe is open on both ends to allow for the passage of the plunger and to solder directly the wire on the probe.

## Head Shape

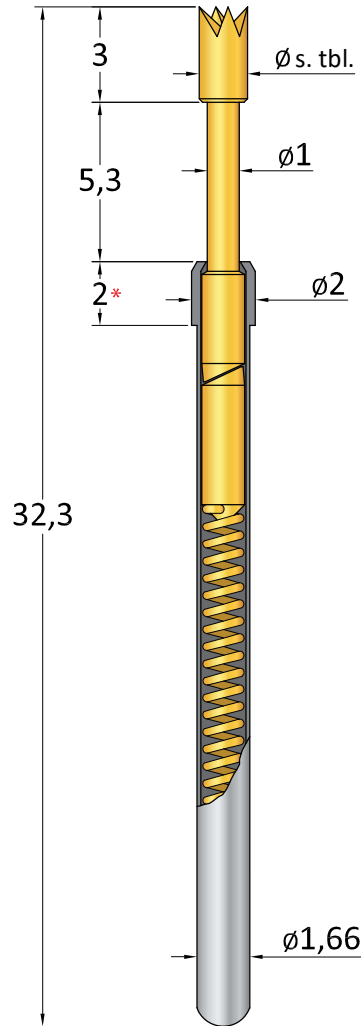
The greater the contact surface, the lower is the risk of electric arc and wear of the High Current Spring Contact Probes. For this reason, the head Styles most frequently used for High Current are nr. 01, 03, 04, 08, 10, 11, 21. These geometries guarantee excellent contact surface.

## Summary of High Current Probes

Test probes version	Series	Pitch size (≥mm)	Working stroke (mm)	Max. stroke (mm)	Current rating (A)	Spring force (g)		Installation heights (mm) v = variable			Page
						min	max	min	max	v	
High current probes (press-in/screw-in)	HCP 912	2,54	4,00	5,30	20	150	300	10,30	31,30	v	69
	HCP912M	2,54	4,00	5,30	20	150	300	10,30	10,50	-	70
	HCP 3	3,18	4,30	6,30	10 - 15	200	300	8,30	15,92	v	73
	HCP 113	4,00	4,00	5,30	15 - 30	150	500	10,30	18,70	-	75
	HCP 114	4,00	4,00	5,50	15 - 30	150	500	10,50	15,70	-	76
	HCP 33M	4,00	4,00	5,30	30	150	500	-	10,50	-	77
	HCP 4	4,75	4,30	6,35	10 - 20	200	300	8,89	16,51	v	80
	HCP 5	4,75	4,30	6,35	15 - 30	400	1300	8,89	16,51	v	81
	HCP 150	5,08	4,40	5,50	50	300	500	10,50	10,80	-	82
	HCP 150M	5,08	4,40	5,50	50	300	500	10,50	10,80	-	83
	HCP 15	6,35	4,40	5,50	75	500	1000	-	10,80	-	84
	HCP 18	7,60	4,40	5,50	100	500	1500	-	10,80	-	85
	HCP 220	7,60	6,00	9,00	40	-	1000	-	38,00	-	86
HCP 250	10,00	6,00	9,00	50	-	1000	-	37,50	-	87	
High current probes with continuous plunger	HCP 420	2,54	3,20	4,00	10	-	100	-	13,60	-	71
	HCP 430	3,18	5,60	7,00	14	200	400	-	18,80	-	72
	HCP 502	3,18	5,60	7,00	12 - 15	80	500	12,00	12,20	-	74
	HCP 503	4,00	5,60	7,00	10 - 15	200	300	13,00	18,25	-	78
	HCP 440	4,00	6,40	8,00	16	200	400	-	22,50	-	79
	HCP 450M	10,00	8,00	9,00	50	-	500	-	23,50	-	88
HCP 451	10,00	8,00	9,00	100	-	1000	-	23,50	-	89	

## Available Tip Styles

Material	Tip Style	$\phi$ mm
B	01	1,00
		1,80
		2,00
B	03	1,00
		1,80
		2,00
B	04	1,00
		1,80
		2,00
B	05	1,80
		2,00
B	08	1,00
		1,80
		2,00
B	10	2,00
B	11	2,00
B	13	1,00
		1,80
		2,00
B	21	1,00
		1,80
		2,00



## Technical Data

Recommended minimum centers:	2,54 mm
Recommended working stroke:	4,00 mm
Maximum stroke:	5,30 mm
Current rating:	20,0 A
Typical contact resistance:	<10 m $\Omega$
Operating temperature range:	-50° up to +100°

## Materials

Plunger:	BeCu or Steel, gold plated
Barrel:	Brass, silver plated
Spring:	Music wire, gold plated
Receptacle:	Brass, gold plated

## Spring Force ( g $\pm 20\%$ )

Spring force:	200 g
Alternative:	150 g
	250 g
	300 g

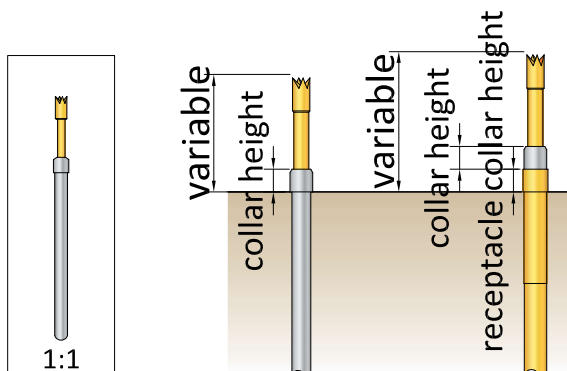
## Hole size without receptacle

Drills:  $\phi 1,66 - \phi 1,67$

## Hole size with receptacle

Drills:  $\phi 1,99 - \phi 2,00$  (see page 47)

* Collar Height	Total Length	
2	32,3	Different collar heights and spacers (DR) are available to vary the total installation height of the probe.
3	33,3	
5	35,3	
7	37,3	
10	40,3	



## Ordering example:

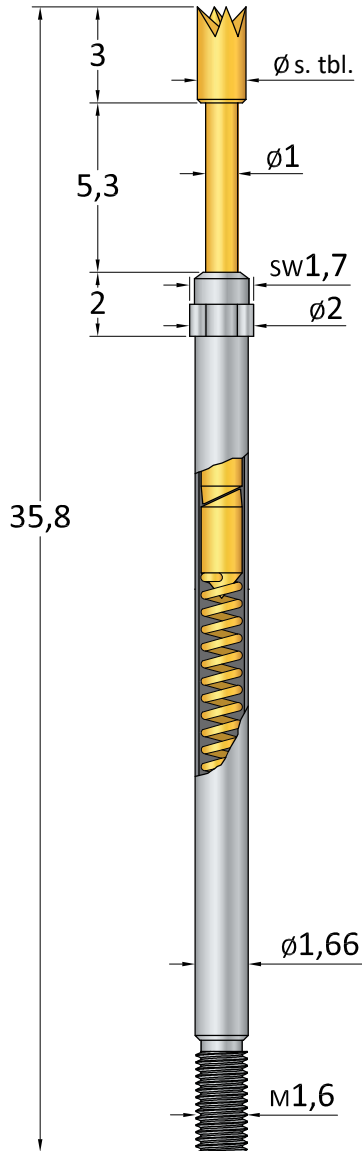
Series	Collar Height	Material B=BeCu S=Steel	Tip Style	Tip $\phi$ mm	Spring Force	Plating G=Gold
HCP 912	-2	B	21	152	200	G

# HCP 912M

High Current Probes  $\geq 2,54$  mm /  $\geq 100$  mil

## Available Tip Styles

Material	Tip Style	$\phi$ mm
B	01	1,00
		1,80
		2,00
B	03	1,00
		1,80
		2,00
B	04	1,00
		1,80
		2,00
B	05	1,80
		2,00
B	08	1,00
		1,80
		2,00
B	10	2,00
B	11	2,00
B	13	1,00
		1,80
		2,00
B	21	1,00
		1,80
		2,00



## Technical Data

Recommended minimum centers:	2,54 mm
Recommended working stroke:	4,00 mm
Maximum stroke:	5,30 mm
Current rating:	20,0 A
Typical contact resistance:	<10 m $\Omega$
Operating temperature range:	-50° up to +100°

## Materials

Plunger:	BeCu or Steel, gold plated
Barrel:	Brass, silver plated
Spring:	Music wire, gold plated
Receptacle:	Brass, gold plated

## Spring Force ( g $\pm 20\%$ )

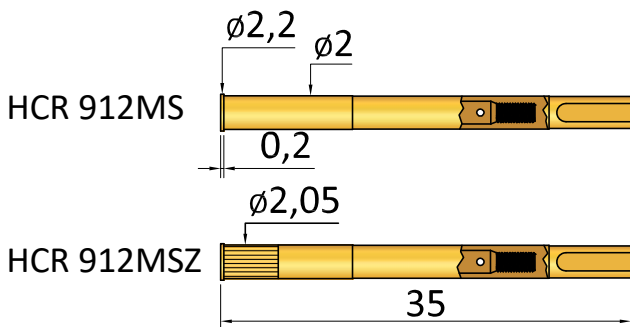
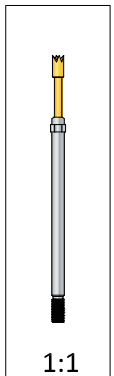
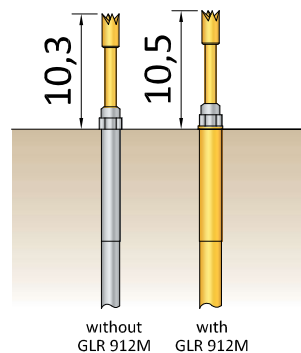
Spring force:	200 g
Alternative:	150 g
	250 g
	300 g

## Hole size without receptacle

Drills:  $\phi 1,66 - \phi 1,67$

## Hole size with receptacle









Drills:  $\phi 1,99 - \phi 2,02$

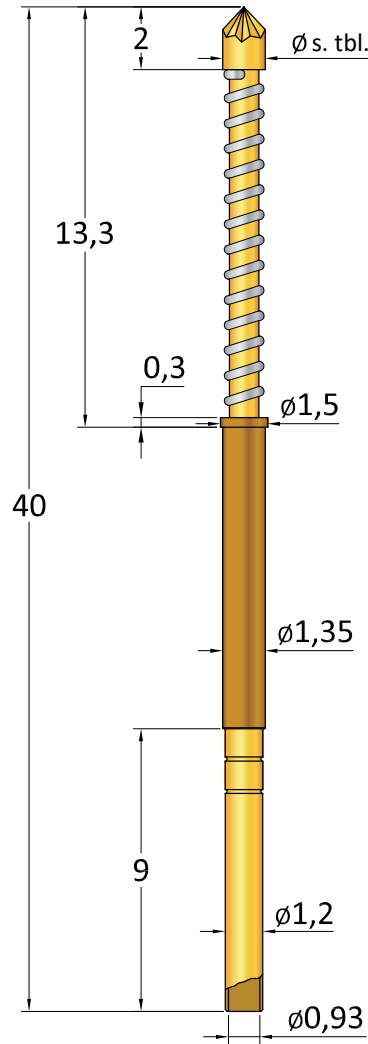


## Ordering example:

Series	Tip Style	Spring Force			
HCP 912M	B	10	396	200	G
	Material	Tip $\phi$ mm			Plating
	B=BeCu				G=Gold
	S=Steel				

## Available Tip Styles

Material	Tip Style	$\phi$ mm
S	01 	1,35
S	03 	1,35
S	04 	1,35
S	08 	1,35
S	13 	1,35
S	17 	1,35
S	20 	1,35
S	21 	1,35



## Technical Data

Recommended minimum centers:	2,54 mm
Recommended working stroke:	3,20 mm
Maximum stroke:	4,00 mm
Current rating:	10,0 A
Typical contact resistance:	<math><20\text{ m}\Omega</math>
Operating temperature range:	-50° up to +100°

## Materials

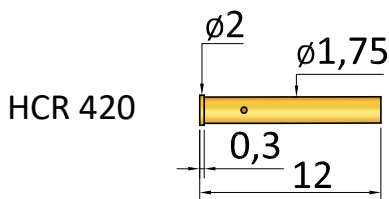
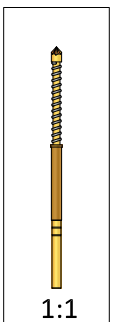
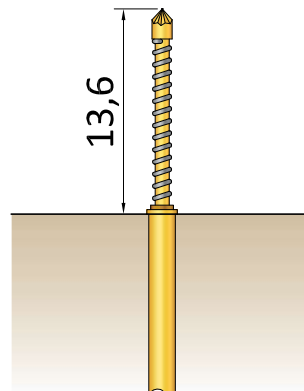
Plunger:	Steel, nickel or gold plated
Barrel:	Bronze, unplated
Spring:	Stainless steel
Receptacle:	Brass, gold plated

## Spring Force ( g $\pm 20\%$ )

Spring force: 100 g

## Hole size for receptacle

Drills:  $\phi 1,74 - \phi 1,75$











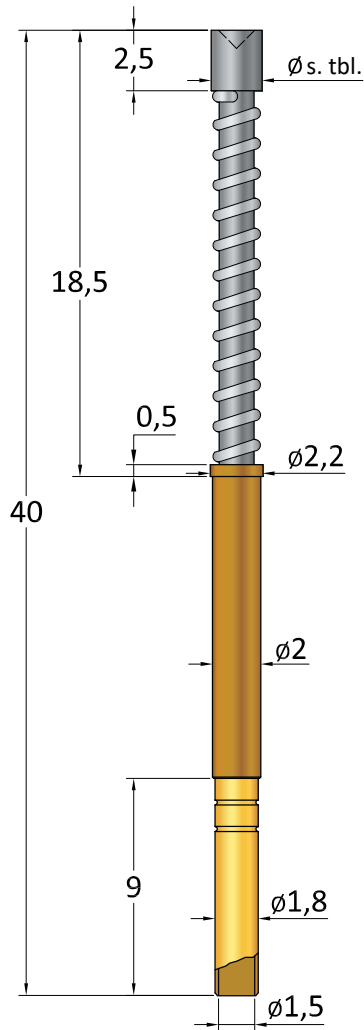
Series	Tip Style	Spring Force			
HCP 420	S	13	135	100	G
	Material	Tip $\phi$ mm			Plating
	S=Steel				G=Gold N=Nickel

# HCP 430

High Current Probes  $\geq 3,18$  mm /  $\geq 125$  mil

## Available Tip Styles

Material	Tip Style	$\phi$ mm
S	01 	2,10
S	03 	2,10
S	04 	2,10
S	08 	2,10
S	13 	2,10
S	17 	2,10
S	20 	2,10
S	21 	2,10



## Technical Data

Recommended minimum centers:	3,18 mm
Recommended working stroke:	5,60 mm
Maximum stroke:	7,00 mm
Current rating:	14,0 A
Typical contact resistance:	<15 m $\Omega$
Operating temperature range:	-50° up to +100°

## Materials

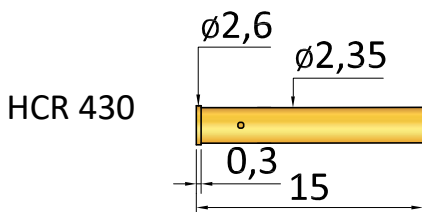
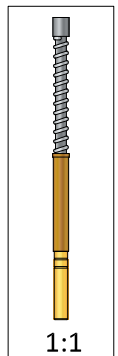
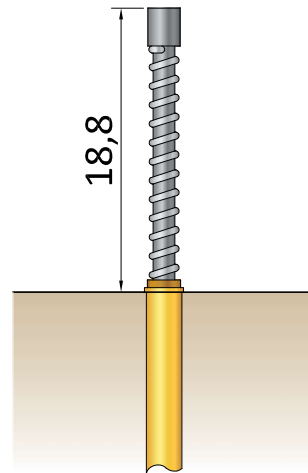
Plunger:	Steel, nickel or gold plated
Barrel:	Bronze, unplated
Spring:	Stainless steel
Receptacle:	Brass, gold plated

## Spring Force ( g $\pm 20\%$ )

Spring force:	200 g
Alternative:	400 g

## Hole size for receptacle

Drills:  $\phi 2,34 - \phi 2,35$

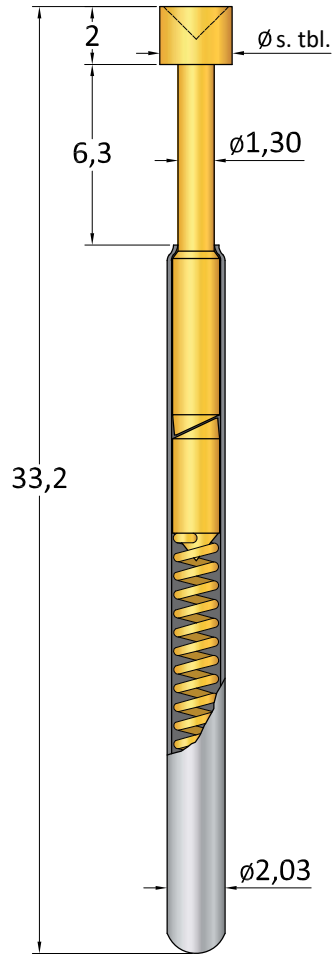


## Ordering example:

Series	Material	Tip Style	Tip $\phi$ mm	Spring Force	Plating
HCP 430	S	01	210	200	N
	S=Steel				G=Gold N=Nickel

## Available Tip Styles

Material	Tip Style	$\phi$ mm
B	01	2,54
B	03	2,54
B	04	2,03 2,54
B	05	2,54
B	08	2,54
B	10	2,54 4,00
B	11	2,54
B	17	2,54
B	20	2,54
B	21	2,54



## Technical Data

Recommended minimum centers:	3,18 mm
Recommended working stroke:	4,30 mm
Maximum stroke:	6,30 mm
Current rating:	10,0 - 15,0 A
Typical contact resistance:	<10 m $\Omega$
Operating temperature range:	-50° up to +100°

## Materials

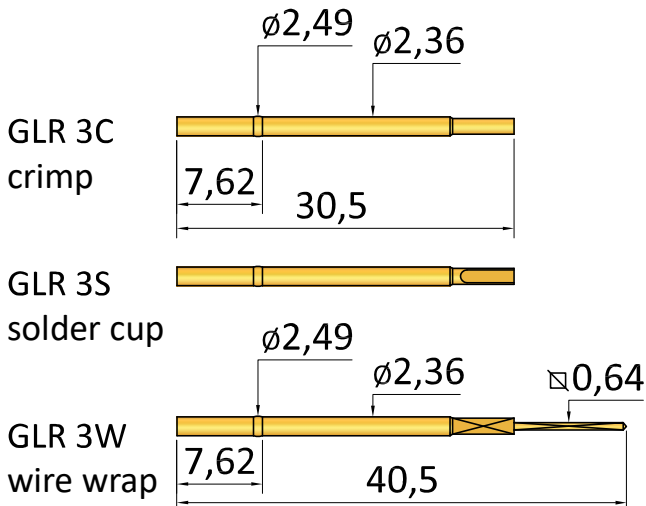
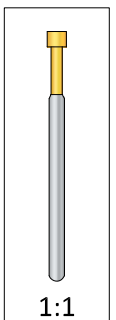
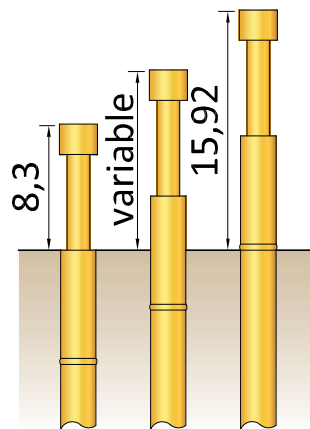
Plunger:	BeCu, gold plated
Barrel:	Nickel-silver or Brass, silver plated
Spring:	Music wire, gold plated
Receptacle:	Nickel-silver or Brass, gold plated

## Spring Force ( g $\pm 20\%$ )

Spring force:	200 g
Alternative:	300 g

## Hole size for receptacle

Drills for press ring as a stop:	$\phi 2,36$ - $\phi 2,37$
Drills for press ring insert:	$\phi 2,40$ - $\phi 2,45$








Series	Tip Style	Spring Force
HCP 3	B 01 254	200
	Material B=BeCu	Tip $\phi$ mm
		Plating G=Gold

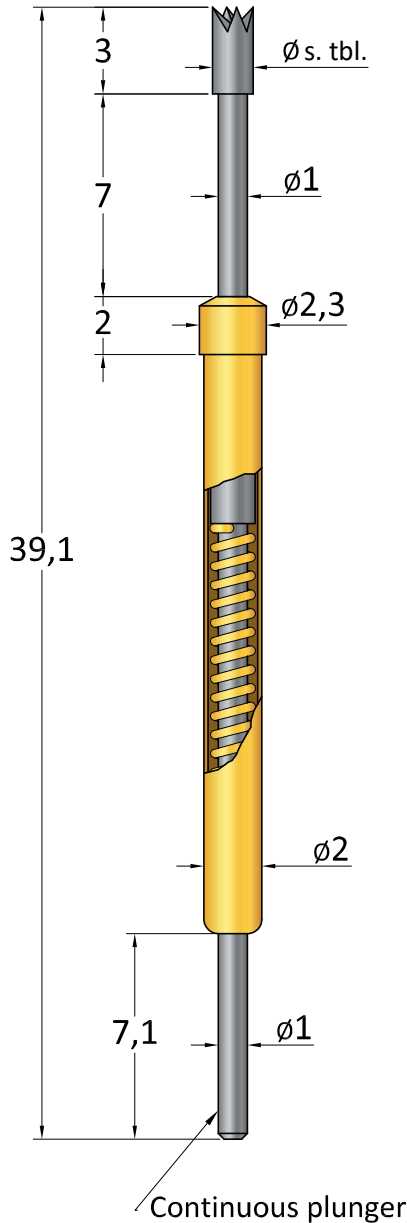
# HCP 502

High Current Probes  $\geq 3,18$  mm /  $\geq 125$  mil

## Available Tip Styles

Material	Tip Style	$\phi$ mm
B*	01 	1,80 2,30 2,50
B	03 	1,40 2,30
B	04 	1,40 2,30
B*	08 	1,40 2,30 2,50
B	21 	1,40 2,30

\*Tip length 4 mm.  
Total length 40,1 mm



## Technical Data

Recommended minimum centers:	3,18 mm
Recommended working stroke:	5,60 mm
Maximum stroke:	7,00 mm
Current rating:	12,0 - 15,0 A
Typical contact resistance:	<10 m $\Omega$
Operating temperature range:	-50° up to +100°

## Materials

Plunger:	BeCu or Steel, nickel or gold plated
Barrel:	Brass, gold plated
Spring:	Music wire, gold plated
Receptacle:	Brass, gold plated

## Spring Force ( g $\pm 20\%$ )

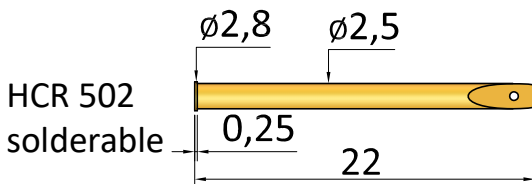
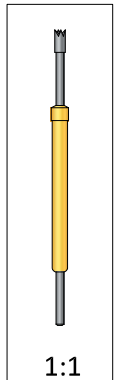
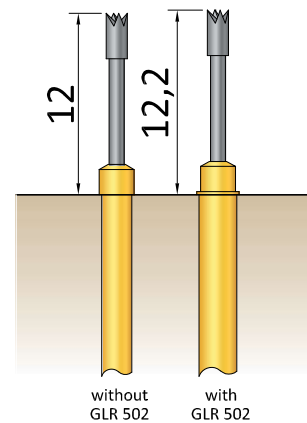
Spring force:	150 g
Alternative:	80 g 300 g 500 g

## Hole size without receptacle

Drills:  $\phi 1,99 - \phi 2,00$

## Hole size with receptacle

Drills:  $\phi 2,49 - \phi 2,50$



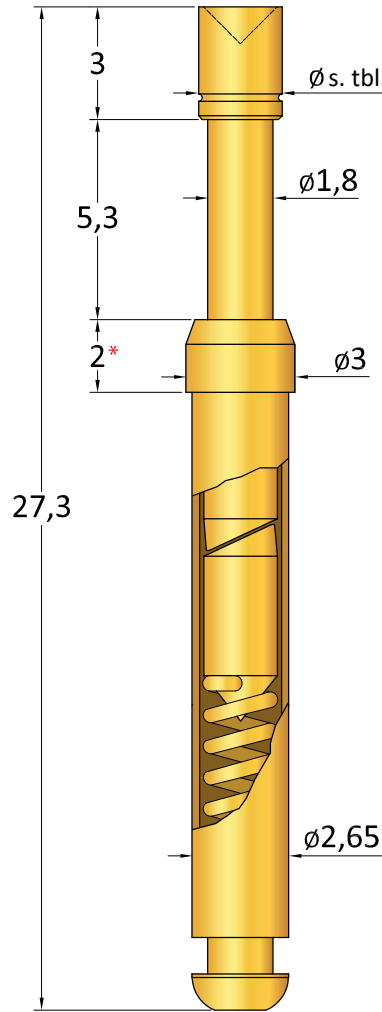
## Ordering example:

Series	Tip Style	Spring Force
HCP 502	B 21	140 150
	Material	Tip $\phi$ mm
	B=BeCu S=Steel	
		Plating
		G=Gold N=Nickel



## Available Tip Styles

Material	Tip Style	∅ mm
B	01	2,30
		3,00
		4,00
B	03	2,30
		3,00
		4,00
B	04	1,80
		2,50
		4,00
B	08	1,80
		2,50
		4,00
B	10	4,00
		6,00
B	11	2,30
		3,00
		4,00
B	21	1,80
		2,50
		4,00
B	31	1,80



## Technical Data

Recommended minimum centers:	4,00 mm
Recommended working stroke:	4,00 mm
Maximum stroke:	5,30 mm
Current rating:	15,0 - 30,0 A
Typical contact resistance:	<10 mΩ
Operating temperature range:	-50° up to +100°

## Materials

Plunger:	BeCu, nickel or gold plated
Barrel:	Brass, gold plated
Spring:	Music wire, gold plated
Receptacle:	Brass, gold plated

## Spring Force ( g ±20%)

Spring force:	150 g
Alternative:	200 g
	300 g
	500 g

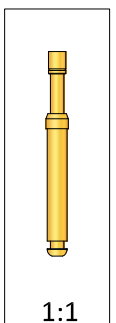
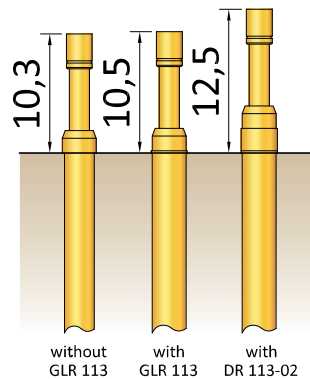
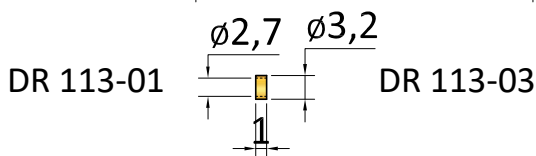
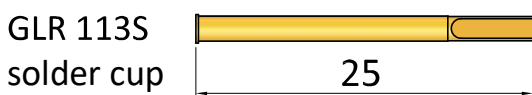
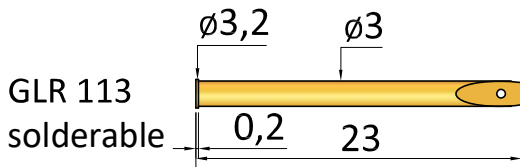
## Hole size without receptacle

Drills: ∅2,64 - ∅2,65

## Hole size with receptacle

Drills: ∅2,99 - ∅3,00

* Collar Height	Total Length
2	27,3
5	30,3
10	35,3



## Ordering example:

Series	Material	Tip ∅ mm	Plating
	B=BeCu S=Steel		G=Gold N=Nickel
HCP 113	B	230	G
-2		150	
	01		

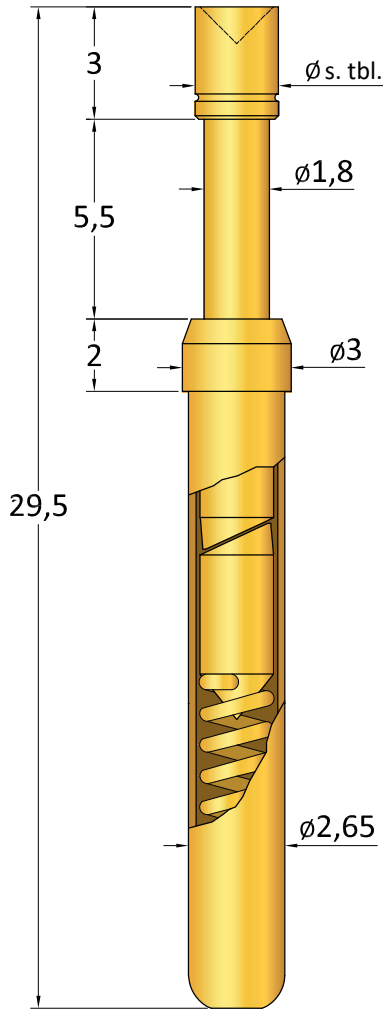
Collar Height      Tip Style      Spring Force

# HCP 114

High Current Probes ≥ 4,00 mm / ≥ 160 mil

## Available Tip Styles

Material	Tip Style	∅ mm
B	01	2,30
		3,00
		4,00
B	03	2,30
		3,00
		4,00
B	04	1,80
		2,50
		4,00
B	08	1,80
		2,50
		4,00
B	10	4,00
		6,00
B	21	1,80
		2,50
		4,00
B	31	1,80



## Technical Data

Recommended minimum centers:	4,00 mm
Recommended working stroke:	4,00 mm
Maximum stroke:	5,50 mm
Current rating:	15,0 - 30,0 A
Typical contact resistance:	<10 mΩ
Operating temperature range:	-50° up to +100°

## Materials

Plunger:	BeCu, nickel or gold plated
Barrel:	Brass, gold plated
Spring:	Music wire, gold plated
Receptacle:	Brass, gold plated

## Spring Force ( g ±20%)

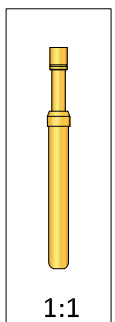
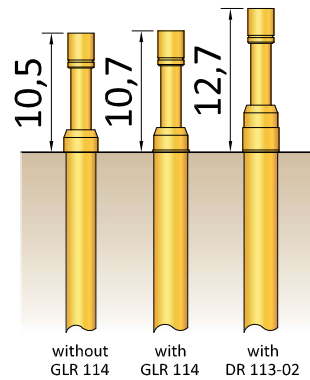
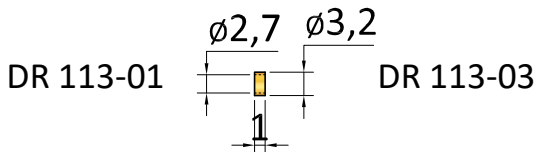
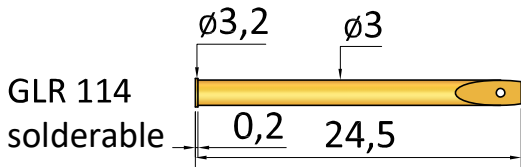
Spring force:	150 g
Alternative:	200 g
	300 g
	500 g

## Hole size without receptacle

Drills: ∅2,64 - ∅2,65

## Hole size with receptacle







Drills: ∅2,99 - ∅3,00

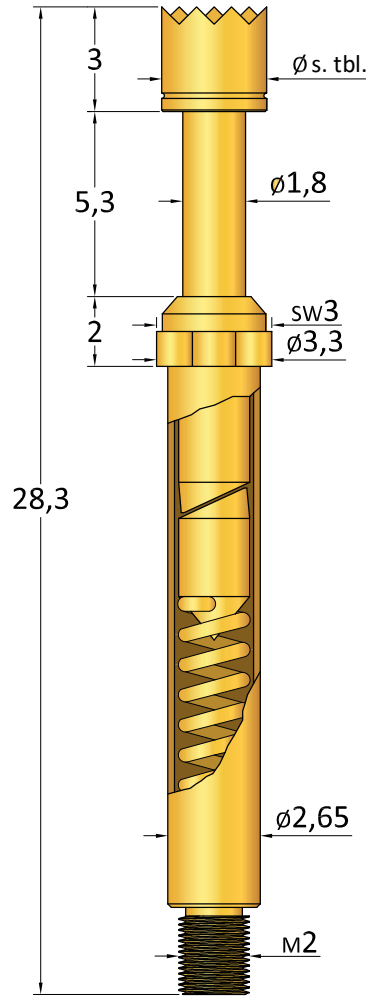


## Ordering example:

Series	Tip Style	Spring Force	Material	Tip ∅ mm	Plating
GLP 114	B	230	B=BeCu	150	G
			S=Steel		N=Nickel

## Available Tip Styles

Material	Tip Style	$\phi$ mm
B	01 	2,30 3,00
B	03 	2,30 4,00
B	04 	2,30 3,00
B	08 	2,30 3,00
B	10 	4,00
B	13 	3,00



## Technical Data

Recommended minimum centers:	4,00 mm
Recommended working stroke:	4,00 mm
Maximum stroke:	5,30 mm
Current rating:	30,0 A
Typical contact resistance:	<10 m $\Omega$
Operating temperature range:	-50° up to +100°

## Materials

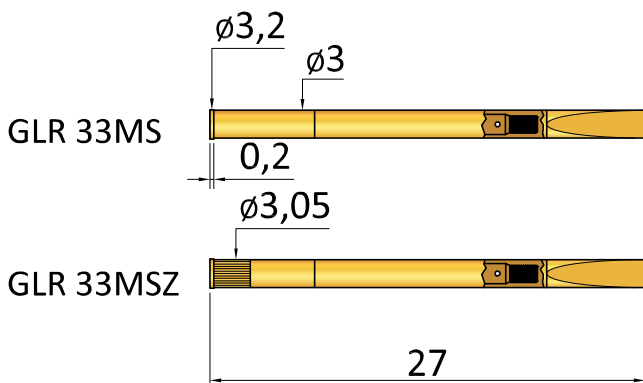
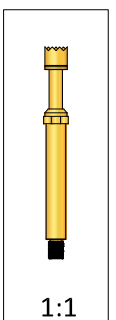
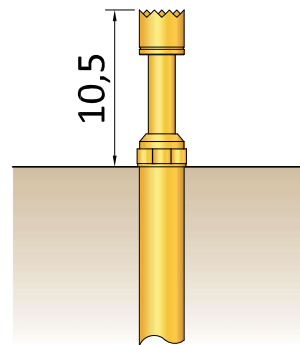
Plunger:	BeCu, gold plated
Barrel:	Brass, gold plated
Spring:	Music wire, gold plated
Receptacle:	Brass, gold plated

## Spring Force ( g $\pm 20\%$ )

Spring force:	150 g
Alternative:	200 g
	300 g
	500 g

## Hole size for receptacle

Drills:  $\phi 3,00 - \phi 3,02$










## Ordering example:

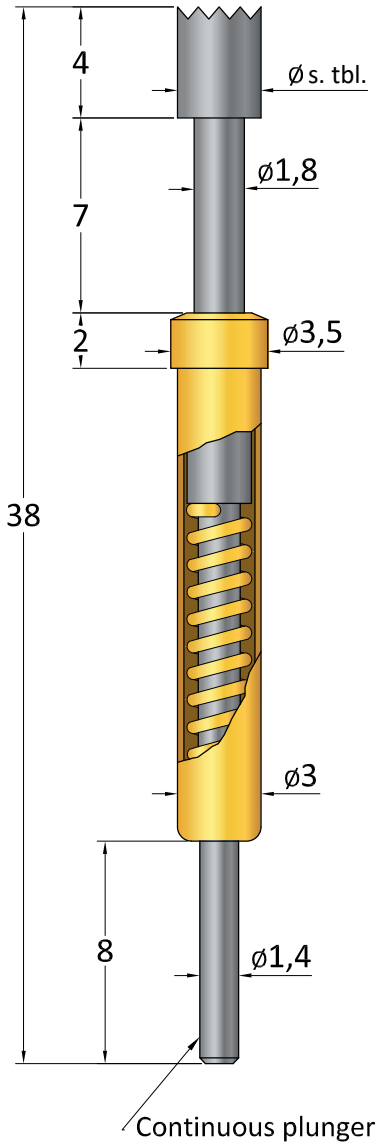
Series	Material	Tip Style	Tip $\phi$ mm	Spring Force	Plating
HCP 4	B	10	396	200	G
	B=BeCu S=Steel				G=Gold

# HCP 503

High Current Probes ≥ 4,00 mm / ≥ 160 mil

## Available Tip Styles

Material	Tip Style	ø mm
B	01 	4,00
B	02 	1,80
B	03 	2,30 4,00 6,50
B	04 	1,80 4,00
B	08 	1,80 3,00 4,00
B	10 	2,30 4,00 6,50
B	21 	4,00



## Technical Data

Recommended minimum centers:	4,00 mm
Recommended working stroke:	5,60 mm
Maximum stroke:	7,00 mm
Current rating:	10,0 - 15,0 A
Typical contact resistance:	<10 mΩ
Operating temperature range:	-50° up to +100°

## Materials

Plunger:	BeCu, nickel or gold plated
Barrel:	Brass, silver plated
Spring:	Music wire, gold plated
Receptacle:	Brass, gold plated

## Spring Force ( g ±20%)

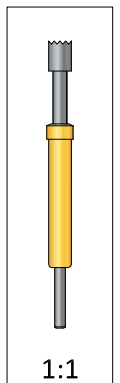
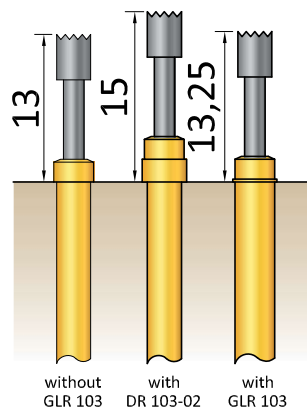
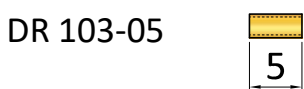
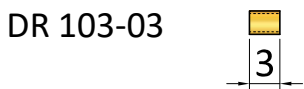
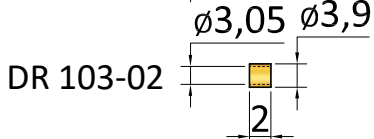
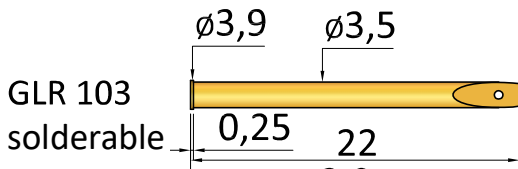
Spring force:	500 g
Alternative:	200 g 300 g

## Hole size without receptacle

Drills: ø2,99 - ø3,00









## Hole size with receptacle

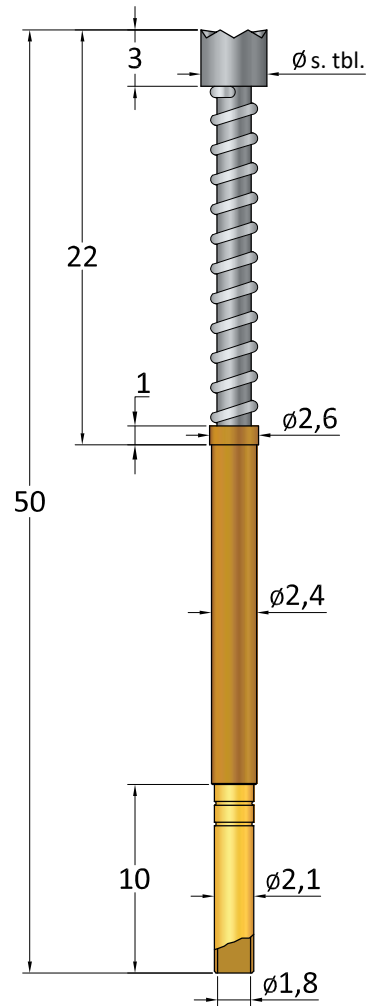
Drills: ø3,49 - ø3,50



Series	Tip Style	Spring Force
HCP 503	B	08
	400	150
	N	
	Material	Tip ø mm
	B=BeCu	
	S=Steel	
	Plating	
	G=Gold	
	N=Nickel	

## Available Tip Styles

Material	Tip Style	$\phi$ mm
S	01 	3,50
S	03 	3,50
S	04 	3,50
S	08 	3,50
S	13 	3,50
S	17 	3,50
S	20 	3,50
S	21 	3,50



## Technical Data

Recommended minimum centers:	4,00 mm
Recommended working stroke:	6,40 mm
Maximum stroke:	8,00 mm
Current rating:	16,0 A
Typical contact resistance:	<10 m $\Omega$
Operating temperature range:	-50° up to +100°

## Materials

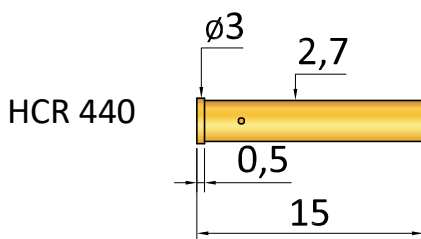
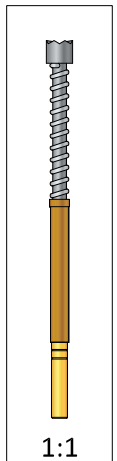
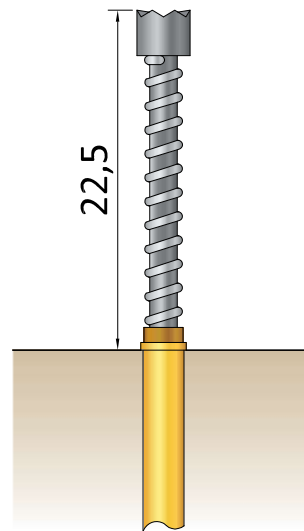
Plunger:	Steel, nickel or gold plated
Barrel:	Bronze, unplated
Spring:	Stainless steel
Receptacle:	Brass, gold plated

## Spring Force ( g $\pm 20\%$ )

Spring force:	200 g
Alternative:	400 g

## Hole size for receptacle

Drills:  $\phi 2,69 - \phi 2,70$











## Ordering example:

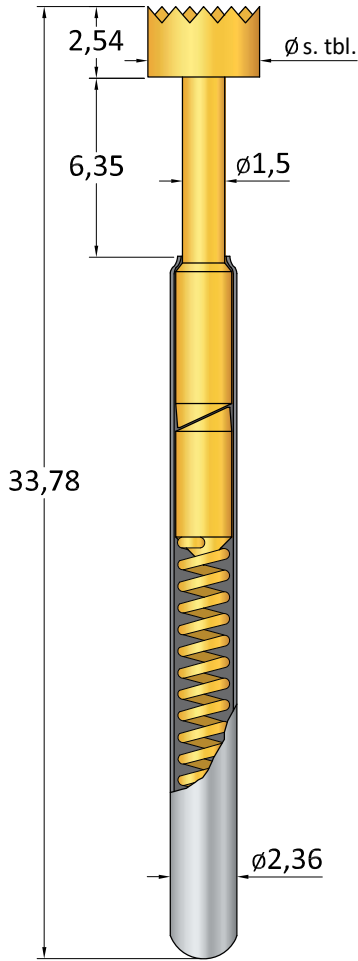
Series	Material	Tip Style	Tip $\phi$ mm	Spring Force	Plating
HCP 440	S	20	350	200	N
	S=Steel				G=Gold N=Nickel

# HCP 4

High Current Probes  $\geq 4,75$  mm /  $\geq 187$  mil

## Available Tip Styles

Material	Tip Style	$\phi$ mm
B	01 	2,54 3,96
B	03 	2,54 3,96
B	04 	2,54 3,96
B	05 	2,54 3,96
B	08 	2,54 3,96
B	10 	3,96
B	11 	2,54
B	21 	2,54 3,96



## Technical Data

Recommended minimum centers:	4,75 mm
Recommended working stroke:	4,30 mm
Maximum stroke:	6,35 mm
Current rating:	10,0 - 20,0 A
Typical contact resistance:	<10 m $\Omega$
Operating temperature range:	-50° up to +100°

## Materials

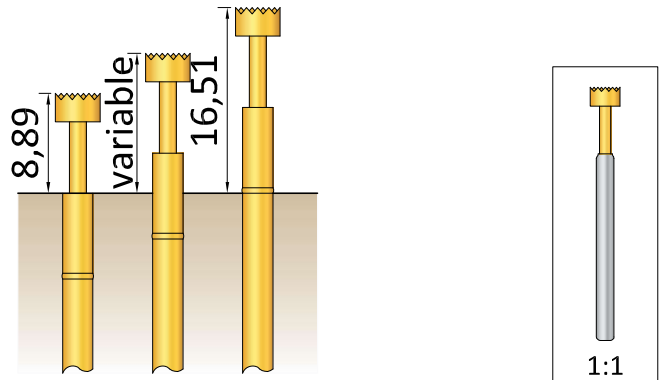
Plunger:	BeCu or Steel, gold plated
Barrel:	Nickel-silver or Brass, silver plated
Spring:	Music wire, gold plated
Receptacle:	Nickel-silver or Brass, gold plated

## Spring Force ( g $\pm 20\%$ )

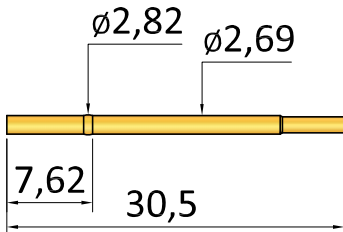
Spring force:	200 g
Alternative:	300 g

## Hole size for receptacle

Drills for press ring as a stop:	$\phi 2,69 - \phi 2,70$
Drills for press ring insert:	$\phi 2,75 - \phi 2,78$



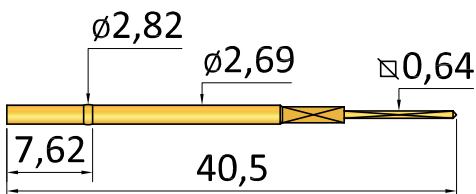
GLR 4C  
crimp



GLR 4S  
solder cup












GLR 4W  
wire wrap

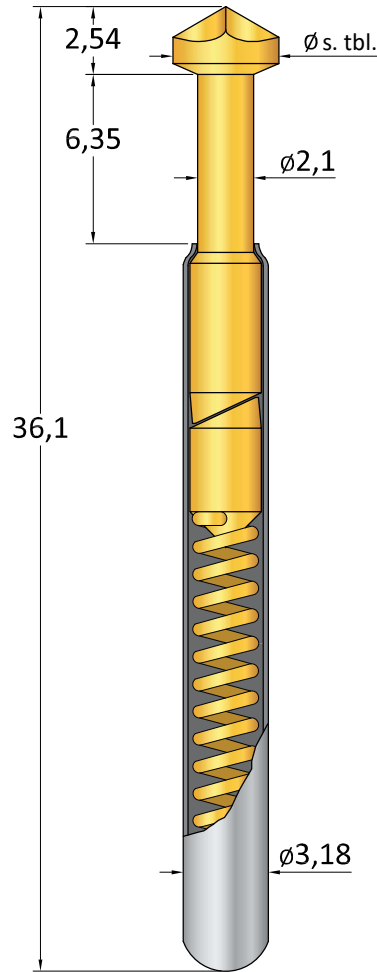


## Ordering example:

Series	Tip Style	Spring Force
HCP 4	B	10
	396	200
	G	
	Material	Tip $\phi$ mm
	B=BeCu	
	S=Steel	
	Plating	
	G=Gold	

## Available Tip Styles

Material	Tip Style	Ø mm
B	01 	3,96
B	03 	3,96
B	04 	2,10 3,96
B	05 	3,96
B	08 	2,10 3,96
B	10 	3,96
B	11 	3,96
B	13 	3,96
B	21 	2,10 3,96



## Technical Data

Recommended minimum centers:	4,75 mm
Recommended working stroke:	4,30 mm
Maximum stroke:	6,35 mm
Current rating:	15,0 - 30,0 A
Typical contact resistance:	<10 mΩ
Operating temperature range:	-50° up to +100°

## Materials

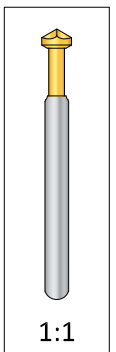
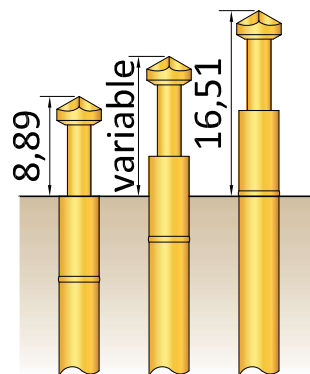
Plunger:	BeCu, gold plated
Barrel:	Nickel-silver or Brass, silver plated
Spring:	Music wire, gold plated
Receptacle:	Nickel-silver or Brass, gold plated

## Spring Force ( g ±20%)

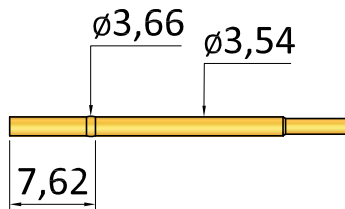
Spring force:	400 g
Alternative:	500 g
	600 g
	1300 g

## Hole size for receptacle

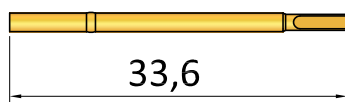
Drills for press ring as a stop:	Ø3,54 - Ø3,55
Drills for press ring insert:	Ø3,58 - Ø3,63



GLR 5C  
crimp



GLR 5S  
solder cup







## Ordering example:

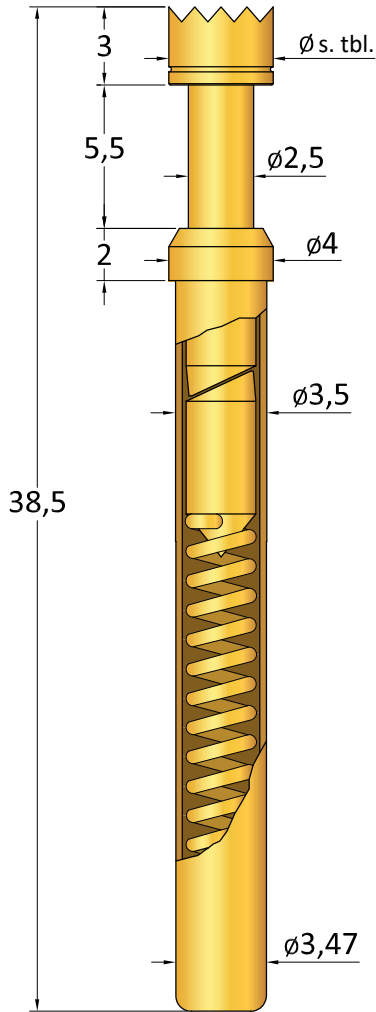
Series	Material	Tip Style	Tip Ø mm	Spring Force	Plating
HCP 5	B	11	396	200	G
	B=BeCu				G=Gold
	S=Steel				

# HCP 150

High Current Probes  $\geq 5,08$  mm /  $\geq 200$  mil

## Available Tip Styles

Material	Tip Style	$\phi$ mm
B	03 	2,50
		4,00
		6,50
B	04 	3,00
		4,00
B	08 	3,00
		4,00
B	10 	4,00



## Technical Data

Recommended minimum centers:	5,08 mm
Recommended working stroke:	4,40 mm
Maximum stroke:	5,50 mm
Current rating:	50,0 A
Typical contact resistance:	<math><10\text{ m}\Omega</math>
Operating temperature range:	-50° up to +100°

## Materials

Plunger:	BeCu, gold plated
Barrel:	Brass, gold plated
Spring:	Music wire, gold plated
Receptacle:	Brass, gold plated

## Spring Force ( g $\pm 20\%$ )

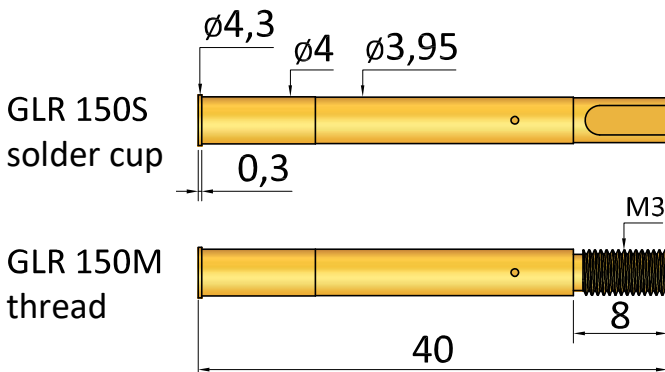
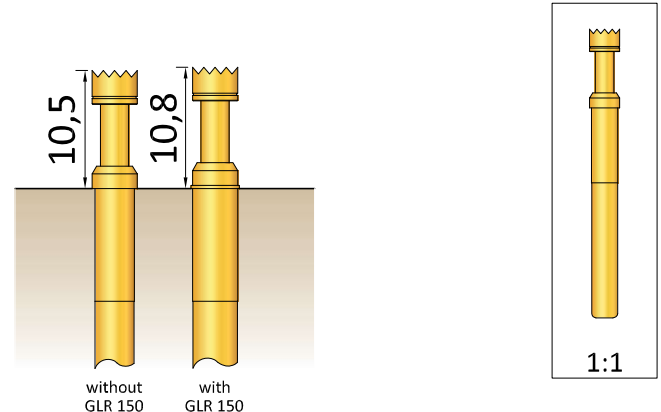
Spring force:	300 g
Alternative:	500 g

## Hole size without receptacle

Drills:  $\phi 3,49 - \phi 3,50$

## Hole size with receptacle

Drills:  $\phi 3,99 - \phi 4,00$



## Ordering example:

Series	Tip Style	Spring Force
HCP 150	B	400
	08	300
		G





Material: B=BeCu      Tip  $\phi$  mm: 400      Plating: G=Gold, N=Nickel

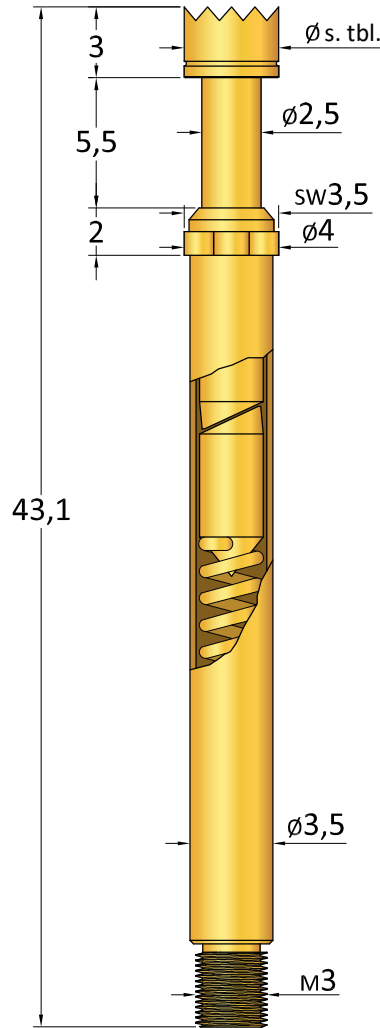


# HCP 150M

High Current Probes  $\geq 5,08$  mm /  $\geq 200$  mil

## Available Tip Styles

Material	Tip Style	$\phi$ mm
B	03 	2,50
		4,00
		6,50
B	04 	3,00
		4,00
B	08 	3,00
		4,00
B	10 	4,00



## Technical Data

Recommended minimum centers:	5,08 mm
Recommended working stroke:	4,40 mm
Maximum stroke:	5,50 mm
Current rating:	50,0 A
Typical contact resistance:	<10 m $\Omega$
Operating temperature range:	-50° up to +100°

## Materials

Plunger:	BeCu, gold plated
Barrel:	Brass, gold plated
Spring:	Music wire, gold plated
Receptacle:	Brass, gold plated

## Spring Force ( g $\pm 20\%$ )

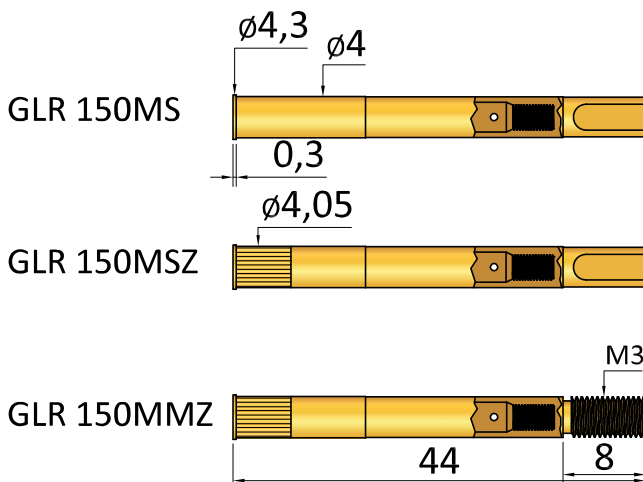
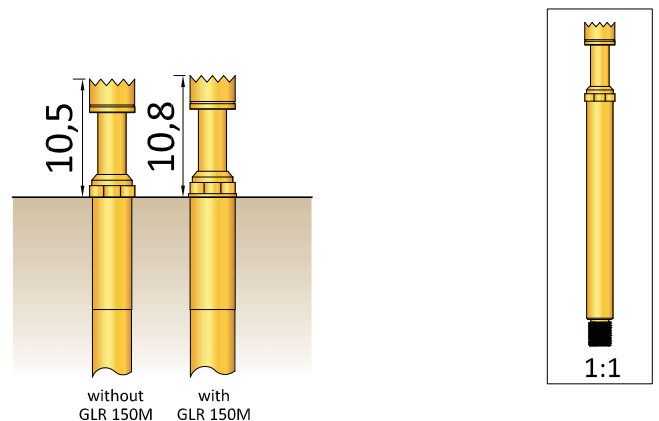
Spring force:	300 g
Alternative:	500 g

## Hole size without receptacle

Drills:	$\phi 3,49$ - $\phi 3,50$
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## Hole size with receptacle

Drills:	$\phi 3,99$ - $\phi 4,00$
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

Series	Tip Style	Spring Force
HCP 150M	B	254
	01	200
	G	

Material: B=BeCu  
Tip  $\phi$  mm: 254  
Plating: G=Gold

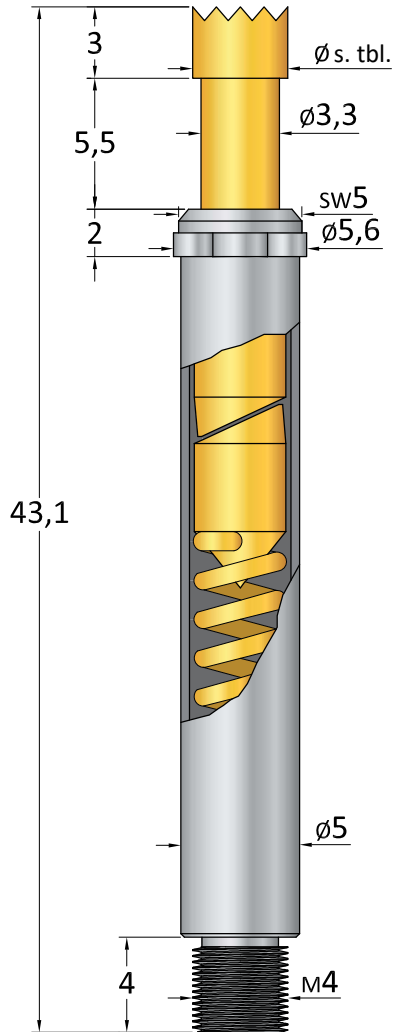
# HCP 15

High Current Probes  $\geq 6,35$  mm /  $\geq 250$  mil

## Available Tip Styles

Material	Tip Style	$\phi$ mm
B	03 	4,00 5,00
B	04 	4,00
B	08 	4,00 5,00
B	10 	5,00 6,50
B	44* 	4,00

\*pressed-in silver stud



## Technical Data

Recommended minimum centers:	6,35 mm
Recommended working stroke:	4,40 mm
Maximum stroke:	5,50 mm
Current rating:	75,0 A
Typical contact resistance:	<math><10\text{ m}\Omega</math>
Operating temperature range:	-50° up to +100°

## Materials

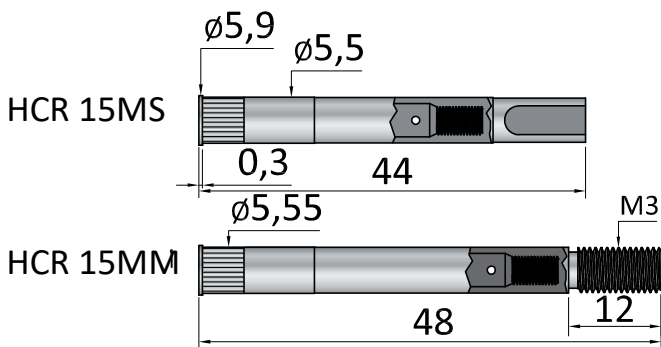
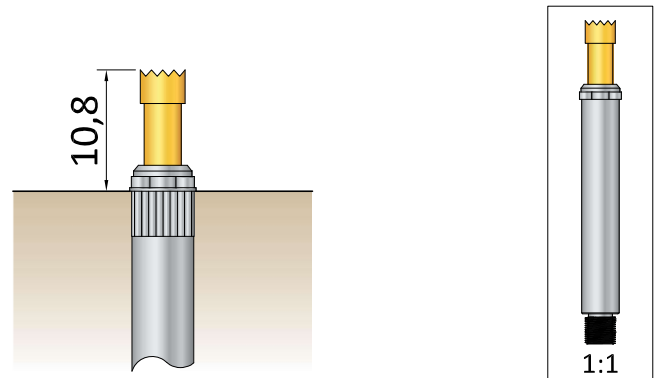
Plunger:	BeCu, gold plated
Barrel:	Brass, silver plated
Spring:	Music wire, gold plated
Receptacle:	Brass, silver plated

## Spring Force ( g $\pm 20\%$ )

Spring force:	500 g
Alternative:	1000 g

## Hole size for receptacle

Drills:  $\phi 5,52 - \phi 5,54$



## Ordering example:





Series	Tip Style	Spring Force			
HCP 15	B	400	500	G	
	Material	Tip $\phi$ mm		Plating	
	B=BeCu			G=Gold	

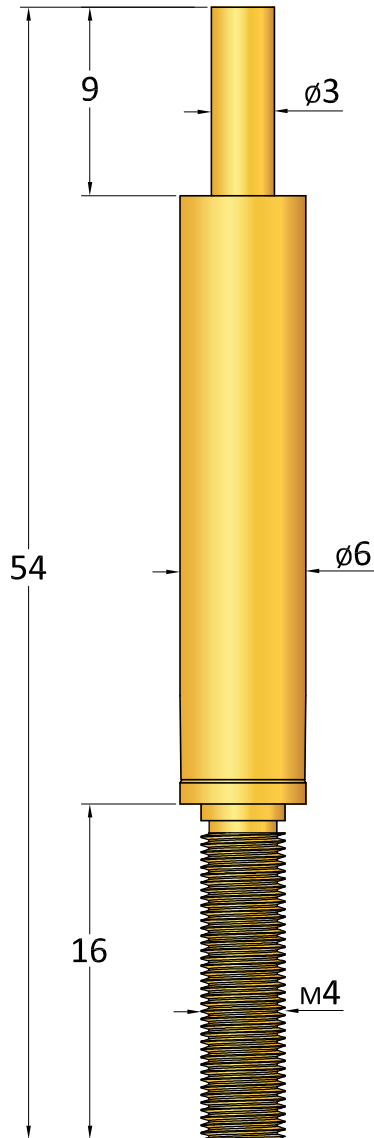


# HCP 220

High Current Probes  $\geq 7,60$  mm /  $\geq 300$  mil

## Available Tip Styles

Material	Tip Style	$\phi$ mm
B	03 	3,00
		6,00
		8,50
B	04 	3,00
B	08 	3,00
		5,00
B	10 	6,00
		8,00



## Technical Data

Recommended minimum centers:	7,60 mm
Recommended working stroke:	6,00 mm
Maximum stroke:	9,00 mm
Current rating:	40,0 A
Typical contact resistance:	<10 m $\Omega$
Operating temperature range:	-50° up to +100°

## Materials

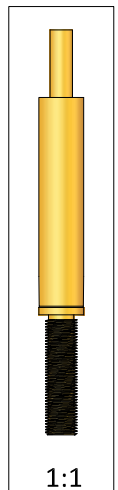
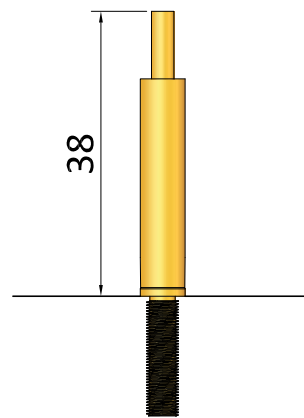
Plunger:	Brass or BeCu, gold plated
Barrel:	Brass, gold plated
Spring:	Music wire, gold plated

## Spring Force ( g $\pm 20\%$ )

Spring force: 1000 g

## Hole size




Drills:  $\phi 6,02 - \phi 6,04$

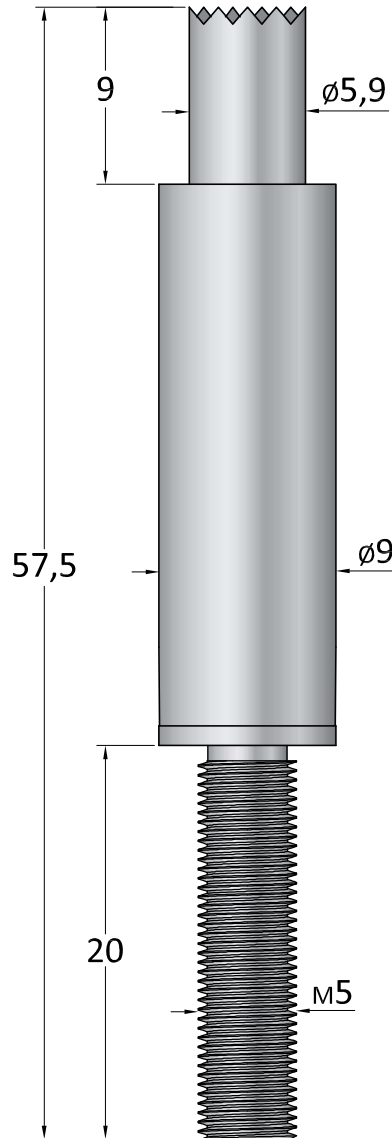


## Ordering example:

Series	Material	Tip Style	Tip $\phi$ mm	Spring Force	Plating
HCP 220	B	03	300	1000	G
	B=BeCu Br=Brass				G=Gold

## Available Tip Styles

Material	Tip Style	$\phi$ mm
B	03 	5,90
B	04 	5,90
B	10 	5,90



## Technical Data

Recommended minimum centers:	10,00 mm
Recommended working stroke:	6,00 mm
Maximum stroke:	9,00 mm
Current rating:	50,0 A
Typical contact resistance:	<10 m $\Omega$
Operating temperature range:	-50° up to +100°

## Materials

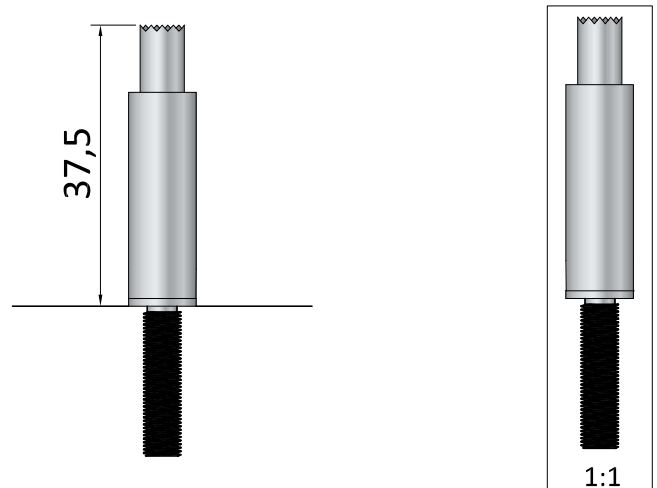
Plunger:	Brass or BeCu, silver plated
Barrel:	Brass, silver plated
Spring:	Music wire, gold plated

## Spring Force ( g $\pm 20\%$ )

Spring force:	1000 g
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## Hole size

Drills:	$\phi 9,02$ - $\phi 9,04$
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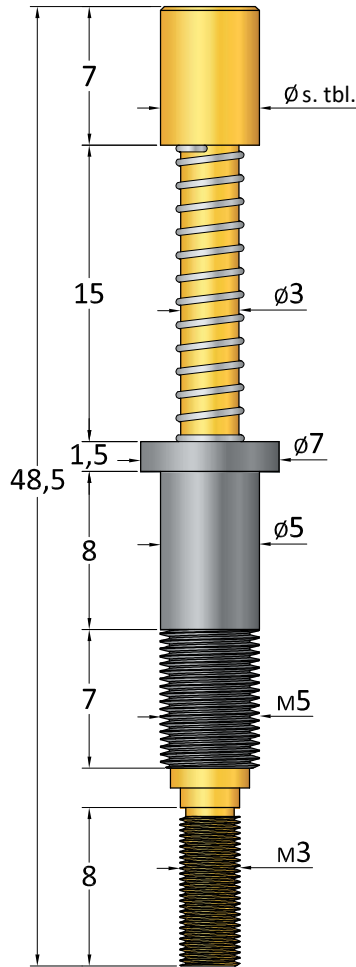
Series	Material	Tip Style	Tip $\phi$ mm	Spring Force	Plating
HCP 250	B	10	590	1000	S
	B=BeCu Br=Brass				S=Silver

# HCP 450M

High Current Probes  $\geq 10,00$  mm /  $\geq 400$  mil

## Available Tip Styles

Material	Tip Style	$\phi$ mm
B	03 	5,00 10,00
B	10 	5,00 10,00



## Technical Data

Recommended minimum centers:	10,00 mm
Recommended working stroke:	8,00 mm
Maximum stroke:	9,00 mm
Current rating:	50,0 A
Typical contact resistance:	<10 m $\Omega$
Operating temperature range:	-50° up to +100°

## Materials

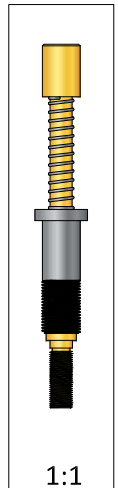
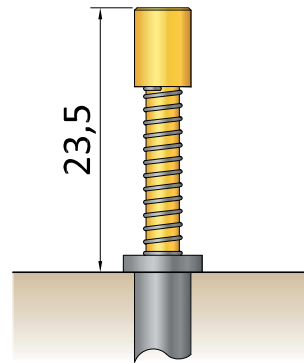
Plunger:	BeCu, gold plated
Barrel:	Brass, nickel or gold plated
Spring:	Stainless steel

## Spring Force ( g $\pm 20\%$ )

Spring force:	500 g
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## Hole size



Drills:	$\phi 4,99$ - $\phi 5,00$
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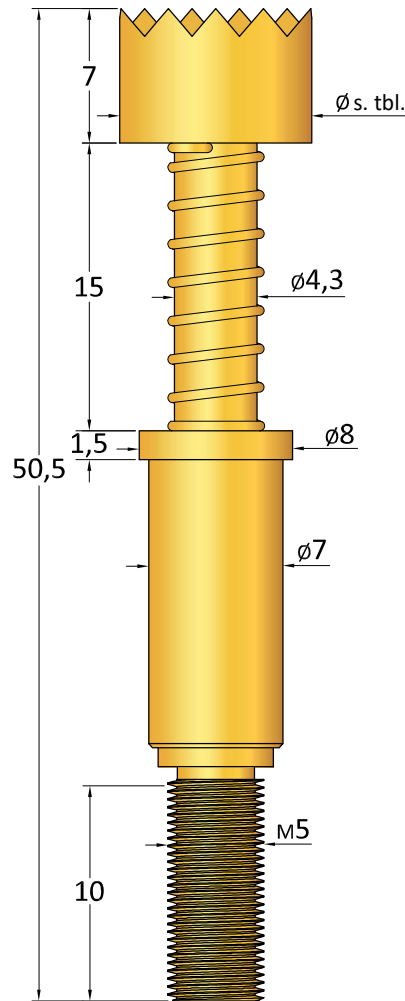


## Ordering example:

Series	Material	Tip Style	Tip $\phi$ mm	Spring Force	Plating
HCP 450M	B B=BeCu	10	500	500	G G=Gold

## Available Tip Styles

Material	Tip Style	$\phi$ mm
B	03 	10,00
B	10 	10,00



## Technical Data

Recommended minimum centers:	10,00 mm
Recommended working stroke:	8,00 mm
Maximum stroke:	9,00 mm
Current rating:	100,0 A
Typical contact resistance:	<10 m $\Omega$
Operating temperature range:	-50° up to +100°

## Materials

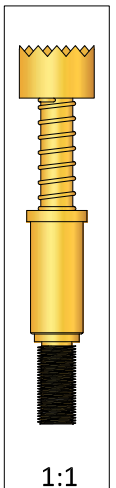
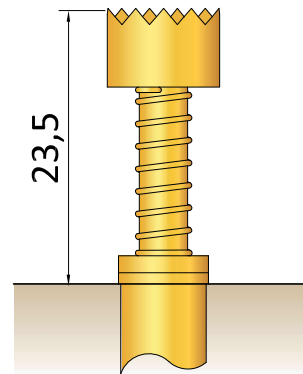
Plunger:	BeCu, gold plated
Barrel:	Brass, gold plated
Spring:	Music wire, gold plated
Receptacle:	Brass, gold plated

## Spring Force ( g $\pm 20\%$ )

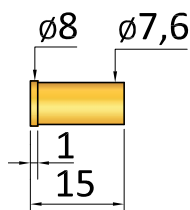
Spring force: 1000 g

## Hole size for receptacle

Drills:  $\phi 7,58 - \phi 7,59$



HCR 451



Series	Tip Style	Spring Force		
HCP 451	B	10	1000	1000
	Material	Tip $\phi$ mm		Plating
	B=BeCu			G=Gold