preci-dip
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SPRING-LOADED CONTACT TECHNOLOGY

DESCRIPTION AND TECHNICAL SPECIFICATIONS

Functional principle
PRECI-DIP spring-loaded contacts are made of a contact body or barrel, a piston and an helical compression spring. The electrical contact is established by the pressure against a fixed, flat area called the pad connector.

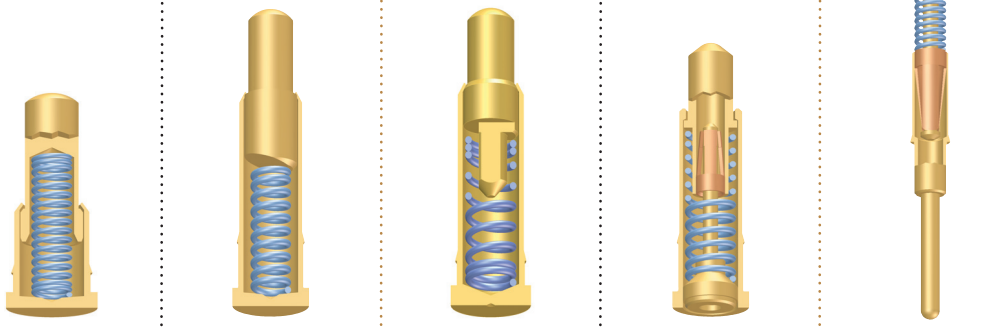
An evolving line
Based on this initial model, we have developed additional designs featuring particular advantages:

- contacts with a slant or polygonal piston. These designs lead to a radial force on the piston, resulting in a lower ohmic resistance.
- patented coaxial or in-line designs with integrated multifinger sliding contact (clip) establishing electrical continuity between body and piston.

The electrical multipoint connection between the mobile piston and the clip guarantees low, stable electrical resistance values without micro-discontinuities, even when the piston is moving or in case of vibrations, thus assuring maximum reliability.

We produce since 1995 a wide range of dimensions with varying technical specifications (see table).

CHARACTERISTICS



	STANDARD CONTACTS	IMPROVED-DESIGN CONTACTS		«HIGH RELIABILITY» CONTACTS	
	HOLLOW PISTON DESIGN	SLANT PISTON DESIGN	POLYGONAL PISTON DESIGN	CLIP COAXIAL DESIGN	CLIP IN-LINE DESIGN
ENVIRONMENTAL					
Operating temp. range	- 55°C to + 85°C (music wire) / + 125°C (stainless steel)				
MATERIALS (RoHS-compliant)					
Piston	Gold plated machined brass				
Barrel	Gold plated machined brass				
Spring	Gold plated music wire / Stainless steel				
Clip	–	–		Gold plated BeCu C17200	
MECHANICAL					
Min. diameter	1.5 mm	1.5 mm		1.8 mm	1.0 mm
Min. initial height	3 mm	6 mm		5 mm	10 mm
Travel / height ratio	Max. 0.3	Max. 0.2		Max. 0.2	Max. 0.15
Max. travel (stroke)	2 mm	2 mm		1.5 mm	
Min. initial spring force	0.2 N	0.2 N		0.2 N	
Mechanical life*	100'000 cycles	50'000 cycles		40'000 cycles	
ELECTRICAL					
Contact resistance**	Max. 15 mΩ	Max. 10 mΩ		Max. 20 mΩ	
Max. operating current***	1 A cont. / 2 A peak	3.5 A cont. / 7 A peak		2 A cont. / 4 A peak	

* Tested at nominal stroke with perpendicular pad connector area
** Static measurement in halfway position of piston travel
*** Above max. current values are for single contacts in free air and for 10°C temperature rise. Values are indicative and may be affected by contact force, static or dynamic applications, shocks or vibrations