

# preci-dip

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# CONTACT TECHNOLOGY

MIL CONTACTS

## INTRODUCTION

PRECI-DIP has tapped its unique expertise and tested know-how to develop new MIL socket contacts based on the clip technology.

Two socket contact technologies are available: hooded contacts using the reversed clip and hoodless contacts using the Eagle Grip clip.

These contacts have successfully passed all the qualification tests according to AS39029 and are listed on the QPL.

We are also manufacturing the corresponding precision-machined pin contacts.



## HOODED CONTACTS USING THE REVERSED CLIP PATENTED TECHNOLOGY

### CONTACT DESIGN

The contact consists of three parts, separately manufactured and made of different base materials. This design allows to optimise the performance and to select the most appropriate production process individually:

- Contact body made of machined brass
- Reversed clip made of stamped and formed beryllium-copper
- Protection hood made of deep-drawn stainless steel

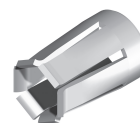
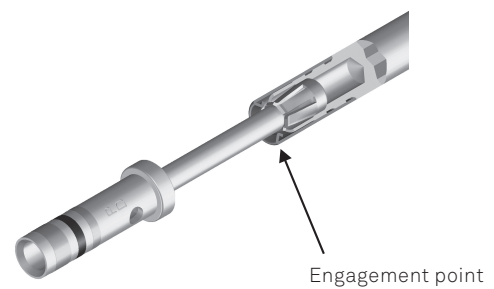
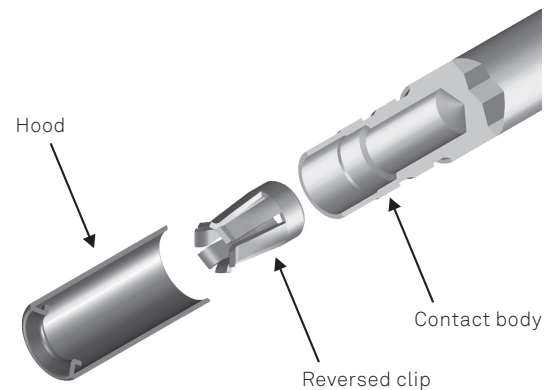
Separate electroplating processes of body and clip allow the best cost-performance ratio. The assembly of the three parts is then carried out on dedicated, fully automatic assembly lines.

Reversed clip contacts are presently available in size 12, 16, 20 and 22. This proprietary technology, entirely developed by PRECI-DIP, is protected by international patents.

### ADVANTAGES AND CHARACTERISTICS

In comparison with the traditional slotted contact body, the reversed clip design has several advantages:

- Smaller difference between insertion and extraction force
- Reduced dispersion of the force values
- Better redundancy at the level of the contact point, thanks to 6 or 8 contact fingers



Reversed clip available in sizes 12, 16, 20, 22



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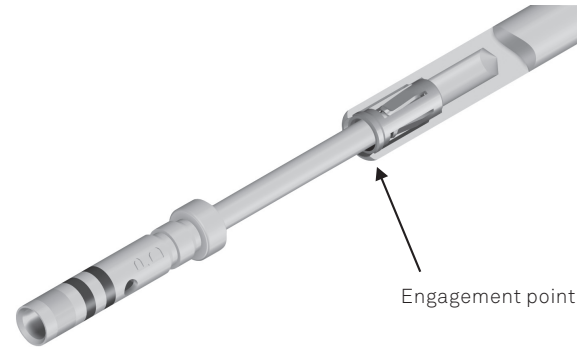
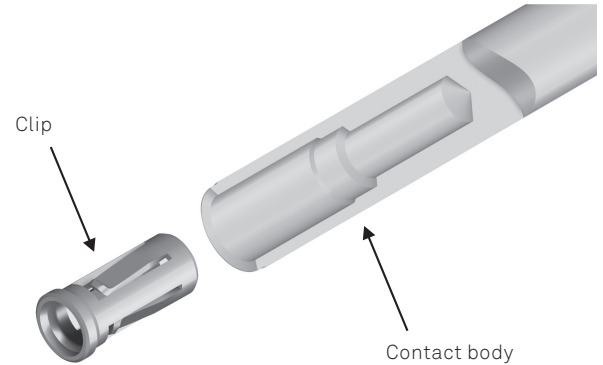
# CONTACT TECHNOLOGY

MIL CONTACTS

## HOODLESS CONTACTS USING THE EAGLE GRIP CLIP PATENTED TECHNOLOGY

### CONTACT DESIGN

- The hoodless contact consists of two parts: the contact body and the clip (separate pressure member) are made from different base materials.
- The high-speed screw machined contact body is made of brass.
- The use of quality crimping brass renders the annealing operation unnecessary.
- The precision stamped and formed Eagle Grip clip is made of beryllium-copper.
- Separate electroplating processes of the body and clip offer the best cost-performance ratio.
- Automatic assembly lines are designed by our engineers to conduct the body and clip assembly.
- The clip is precisely positioned in the outer shell and firmly held in place between a shoulder and the crimp lip.
- In-line mechanical check is carried out on the assembly machine.
- Eagle Grip clip hoodless contacts are presently available in sizes 16, 20 and 22.
- This PRECI-DIP proprietary technology is protected by international patents.



### ADVANTAGES AND CHARACTERISTICS

- 2-piece contact without hood
- Fully automatic assembly process with in-line mechanical check
- Localized finish: body and clip are plated separately
- High surface quality with a stamped and formed clip
- Precision rolling surface finish in the contact area
- Better contact redundancy thanks to 3 or 4 contact fingers
- Repeatability in the manufacturing process of the clip (tooling and stamping)
- Limited difference between insertion and extraction mating forces
- Narrow range of the force values
- Fully integrated manufacturing process on one single production site
- Swiss precision technology

### TECHNICAL SPECIFICATIONS

#### CONTACT BODY

**MATERIAL** Machined brass C34500  
**OVERALL FINISH** Gold plate acc. to ASTM B488, Type II, C, over 2.5 µm Ni

#### CLIP

**MATERIAL** BeCu C17200  
**OVERALL FINISH** Gold plate acc. to ASTM B488, Type II, C, min. 1.27 µm Au over 2.5 µm Ni



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## LIST OF PART NUMBERS QUALIFIED PRODUCT LISTED

### SOCKET CONTACTS

CONNECTOR TYPE ACC. TO	MIL P/N	REVERSED / EAGLE GRIP CLIP	PRECI-DIP P/N	SIZE
MIL-DTL-38999 Series I, III, IV	AS/M39029/56-348	Reversed Eagle Grip	83011-1P4-7010-B1 83051-7Q4-6010-01	#22D
	AS/M39029/56-351	Reversed Eagle Grip	83021-1P4-7110-B1 83061-7Q4-6110-01	#20
	AS/M39029/56-352	Reversed Eagle Grip	83031-1P4-7210-B1 83071-7Q4-6210-01	#16
	AS/M39029/56-353	Reversed	83041-1P4-7310-B1	#12
MIL-DTL-38999 Series II	AS/M39029/57-354	Reversed	83101-7Q4-7010-B1	#22D
MIL-DTL-24308		Eagle Grip	83091-7Q4-6010-01	
MIL-DTL-55302				
MIL-DTL-83733				
MIL-DTL-24308	AS/M39029/63-368	Eagle Grip	83121-7Q4-6110-01	#20
MIL-DTL-26482 Series 2	AS/M39029/5-115	Reversed	83181-7Q4-7110-B1	#20
AS 81703 Series 3		Eagle Grip	83131-7Q4-6110-01	
MIL-DTL-83723 Series 3	AS/M39029/5-116	Reversed	83191-7Q4-7210-B1	#16
MIL-DTL-83733		Eagle Grip	83141-7Q4-6210-01	
	AS/M39029/5-118	Reversed	83151-7Q4-7310-B1	#12
MIL-DTL-26482 Series 1	AS/M39029/32-259	Reversed	83161-7Q4-7110-B1	#20
		Eagle Grip	83111-7Q4-6110-01	
MIL-DTL-26482 Series 1	AS/M39029/32-248	Reversed	83171-7Q4-7210-B1	#16
MIL-DTL-26500		Eagle Grip	83081-7Q4-6210-01	

### PIN CONTACTS

CONNECTOR TYPE ACC. TO	MIL P/N	OVERALL / LOCALIZED FINISH	PRECI-DIP P/N	SIZE
MIL-DTL-38999 Series I, II, III, IV	AS/M39029/58-360	Overall	82011-40-01	#22D
		Localized	82011-7Q4-01	
MIL-DTL-24308	AS/M39029/58-363	Overall	82021-40-01	#20
MIL-DTL-55302		Localized	82021-7Q4-01	
MIL-DTL-83733	AS/M39029/58-364	Overall	82031-40-01	#16
		Localized	82031-7Q4-01	
	AS/M39029/58-365	Overall	82041-40-01	#12
		Localized	82041-7Q4-01	
MIL-DTL-24308	AS/M39029/64-369	Overall	82061-40-01	#20
		Localized	82061-7Q4-01	
MIL-DTL-26482 Series 2	AS/M39029/4-110	Overall	82071-40-01	#20
AS 81703 Series 3		Localized	82071-7Q4-01	
MIL-DTL-83723 Series 3	AS/M39029/4-111	Overall	82081-40-01	#16
MIL-DTL-83733	AS/M39029/4-113	Localized	82081-7Q4-01	
		Overall	82091-40-01	#12
		Localized	82091-7Q4-01	
MIL-DTL-26482 Series 1	AS/M39029/31-240	Overall	82051-40-01	#20
		Localized	82051-7Q4-01	
MIL-DTL-26482 Series 1	AS/M39029/31-229	Overall	82101-40-01	#16
MIL-DTL-26500		Localized	82101-7Q4-01	