

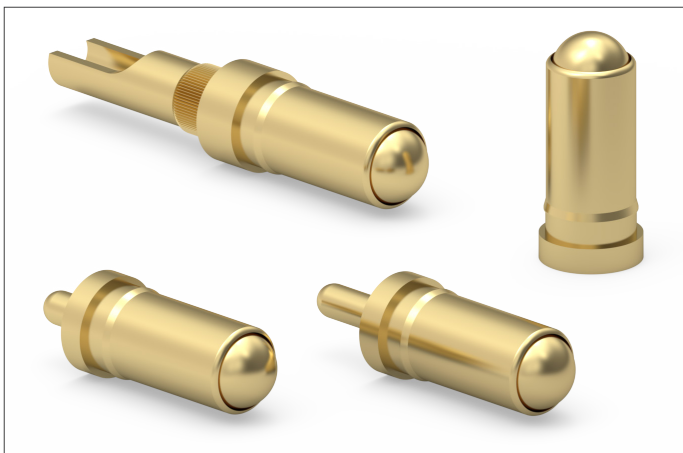
# MAXIMUM SOLUTIONS

## Mill-Max Adds New Omniball™ Spring-Loaded Contact Options

*Through-hole and solder-cup styles now offered in spring-loaded pins with rolling ball interface*

Mill-Max announces new additions to its Omniball™ spring-loaded contact product line with solder tail and solder-cup versions, offering options for different termination requirements. The unique Omniball™ spring-loaded contact (patent pending) features a rolling ball interface, enabling mating components to engage in lateral, rotational and angular alignments while providing optimal electrical, mechanical, and structural reliability.

Joining the original surface mount style Omniball™ contacts are through-hole mount and solder-cup termination styles. There are two new through-hole mount contacts featuring different tail lengths, making them suitable for use on PCB's of various thickness. P/N: 7945-1-15-20-09-14-11-0 has a tail length of .079" (2 mm) while 7945-2-15-20-09-14-11-0 has a .118" (3 mm) long tail.



The solder-cup version, P/N: 7949-0-15-20-09-14-11-0, is designed to accept wire sizes up to 20 AWG. It has two press-fit features, a barb, and a knurl, allowing the pin to be pressed in from either direction. The knurl, an anti-rotation press-fit feature, is preferred when maintaining solder-cup alignment is critical.

Omniball™ contacts are spring-loaded pins in which the traditional plunger has been replaced by a gold plated, brass ball. They are designed to simplify and improve the connections made between components which are mated together in a sliding or rotational motion rather than in an axial or vertical orientation. When engaged, the ball

compresses and rolls, allowing the mating surfaces to make contact and then easily slide parallel to each other while spring force acts to ensure consistent electrical contact is maintained. This rolling action alleviates the concerns of connector damage such as binding, premature wearing and structural failure that may occur when using traditional plunger style spring pins in these types of applications.

Features of Omniball™ contacts include: .030" (.762 mm) maximum stroke; gold plating on all components and a .091" diameter ball interface. These spring-loaded pins are durable, they have been tested to 1,000,000 compression cycles and rolled over 67 miles (108 km) at half stroke while still meeting specifications for contact resistance of 20m-ohms max., current rating of 5.5 amps @ 30°C temperature rise and spring force of 55 grams at mid stroke (.015", .381 mm).

Omniball™ contacts are an excellent choice for any application that involves sliding or rotating connections, such as: "twist & lock" cable connectors; smart lens camera connectors; rugged and IP rated connectors including quarter turn and threaded; as well as docking stations, quick connects and blind mating applications.

Contact our technical services staff to discuss your application and how we may be able to address your needs.

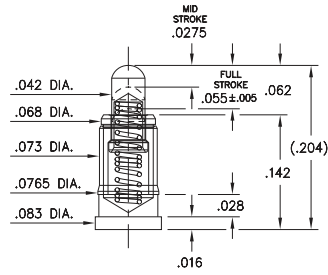
For more information, please visit [www.mill-max.com/PR700](http://www.mill-max.com/PR700).

# SPRING-LOADED PINS

## DISCRETE SPRING-LOADED CONTACTS

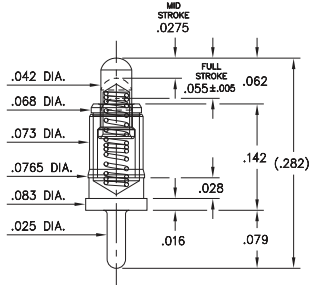
### 0981

**0981-0-15-20-75-14-11-0**  
Standard stroke, Surface mount



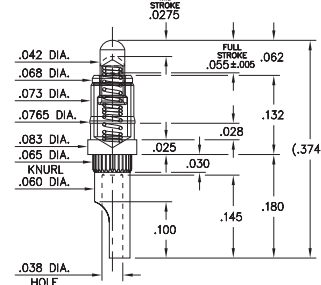
### 7982

**7982-1-15-20-75-14-11-0**  
Standard stroke  
Solder mount in .029 min. mounting hole



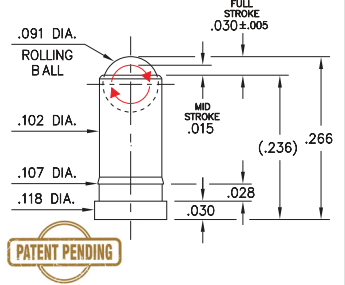
### 7983

**7983-1-15-20-75-14-11-0**  
Standard stroke, Knurl Press-fit in .062 mounting hole. Accepts wire sizes up to 22 AWG



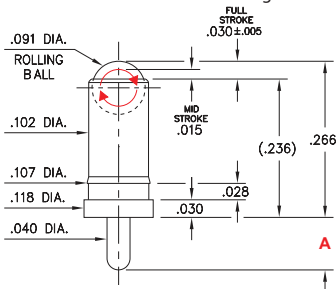
### 0945

**0945-0-15-20-09-14-11-0**  
Omniball™, Surface mount  
For lateral, sliding & rolling contact applications



### 7945

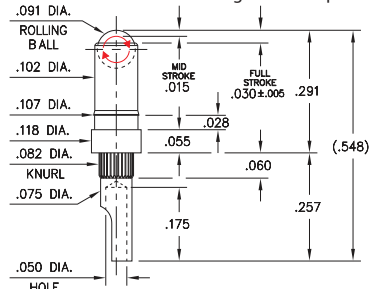
**7945-X-15-20-09-14-11-0**  
Omniball™, For lateral, sliding & rolling contact applications  
Solder mount in .044 min. mounting hole



Basic Part Number	Length A
7945-1	.0787
7945-2	.1181

### 7949

**7949-0-15-20-09-14-11-0**  
Omniball™, For lateral, sliding & rolling contact applications  
Knurl Press-fit in .079 mounting hole. Accepts wire sizes up to 20 AWG



#### Material Specifications:

**Sleeve & Plunger Material:** Copper Alloy  
**Spring Material:** Beryllium Copper  
**Sleeve & Plunger Finish:** 20 μ" Gold over Nickel  
**Spring Finish:** 10 μ" Gold over Nickel  
**Dimensions: Inches**  
**Tolerances On:** Lengths: ± .006  
Diameters: ± .002  
Angles: ± 2°



#### Mechanical & Electrical Specifications:

**Durability:** Up to 1,000,000 cycles  
**Current Rating:** 2A continuous, 3A peak,  
**(09 spring):** 3.5A continuous, 5A peak  
**Contact Resistance:** 20 mΩ max.

#### Environmental Specifications:

**Operating temperature range:**  
-55/+125° C (discontinuous)

**09, 75 Springs are not interchangeable**

Order Code: XXXX - 0 - 15 - 20 - **XX** - 14 - 11 - 0

Spring Number

Spring Number	Mid. Stroke	Max. Stroke	Force @ Mid. Stroke	Initial Force (Pre-Load)
* 09	.015	.030	55 g	30 g
75	.0275	.055	60 g	25 g

