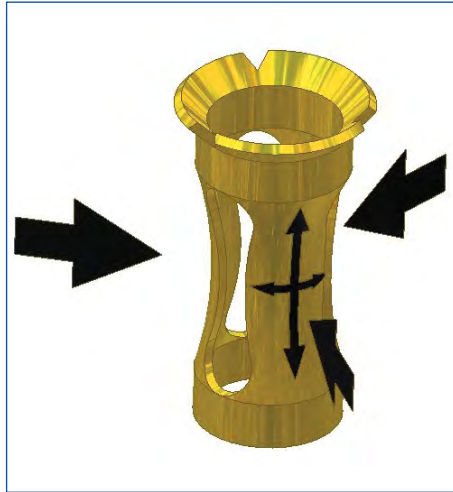


# SINGLE POLE SOCKETS PERFORMANCE DATA

Cambion miniature pins and sockets are specifically designed for quick, tight, space-saving applications on printed circuits. All connectors are electrically and mechanically tested, carefully inspected for dimensional accuracy and, when necessary, subjected to severe environmental tests. Cambion pins and sockets are available from stock in a wide range of sizes, materials and finishes to meet virtually every requirement.

Sockets are closed entry cage type. The loose piece socket consists of two pieces - a flexible spring and a housing. The spring formed from beryllium copper is hardened and then plated. Housings may be drawn copper cups or machined from brass depending on application. The spring is securely captivated in the housing by staking. Most loose piece socket connectors are offered with three plating finishes - gold spring and housing, gold spring and electro tin housing or electro-tin spring and housing. Loose piece sockets are available in many styles and sizes to accommodate miniature pins and wires in the range .014 (0,36) to .093 (2,36) diameter. For repeated usage, Cambion recommends that pins to mate with loose piece sockets should be within  $\pm .002$  (0,05) of nominal cage diameter.

## CONTACT CONFIGURATIONS



## SINGLE POLE SOCKET DESIGN FEATURES



### Compound curvature spring

- Longitudinal and circumferential contact.
- Stamped, burr-free heat-treated beryllium copper spring/conductor.



### 3-point contact

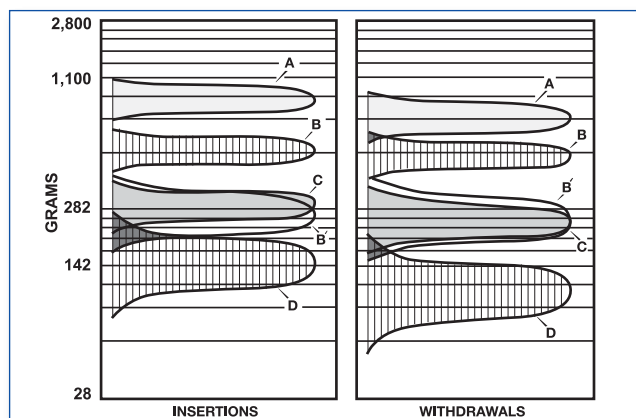
- 60% contact around mating pin.

**Pins** are precision engineered to be compatible with loose piece sockets and thereby provide positive and lasting electrical connections with low contact resistance. They are offered only gold plated, and pin diameters are held to  $\pm .002$  (0,05).

**Current carrying capacity** and contact resistance for loose piece sockets mated with various pin diameters are shown in the following table

Single Pole Socket Pin Diameter	Average Contact Resistance (mΩ)	@ rated Current For 1°C ΔT (A)	Max. Current For 30°C ΔT (A)
.020"(0,51mm)	1.5	1.4	11.0
.025"(0,64mm)	1.2	1.7	14.2
.030"(0,76mm)	1.1	2.1	17.0
.040"(1,02mm)	1.0	3.0	23.0
.050"(1,27mm)	1.0	3.0	27.0
.062"(1,57mm)	0.56	3.5	30.0
.080"(2,03mm)	0.35	4.0	32.0

## INSERTION / WITHDRAWAL FORCE DISTRIBUTION CURVES



- A : .080 (2,03) pin/.080 (2,03) socket
- B : .062 (1,57) pin/.060 (1,52) socket
- B' : .059 (1,50) pin/.060 (1,52) socket
- C : .040 (1,02) pin/.040 (1,02) socket
- D : .020 (0,51) pin/.020 (0,51) socket

**Special requirements**, for which there are no standard Cambion connectors, can be met with custom-designed pins and loose piece sockets.