

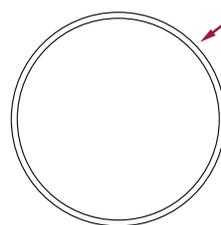
# CARBON STEEL EXPANSION PLUGS Cup Type – Concave Bottom

**MATERIAL:** CRS, Per ASTM A 1008 CS Type B

**FINISH:** Z2 - .0002 Min Zinc Clear

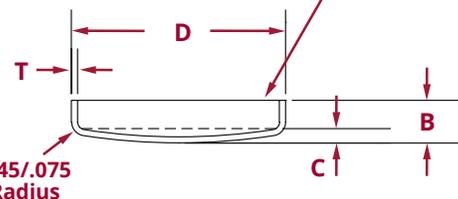


PC



Round within  
.003 Total

This surface to be  
square and flat  
within .020 total



Part Number	Nominal Diameter	D Outside Diameter	B Overall Height	C Crown Height	T Steel Thickness	Recommended Hole Diameter
PC-0500	1/2	.510 - .512	.230 - .270	.049 - .075	.042	.504 - .506
PC-0562	9/16	.572 - .574	.230 - .270	.049 - .075	.042	.566 - .568
PC-0625	5/8	.635 - .637	.230 - .270	.049 - .075	.042	.629 - .631
PC-0687	11/16	.697 - .699	.230 - .270	.049 - .075	.042	.691 - .693
PC-0750	3/4	.760 - .762	.230 - .270	.057 - .083	.048	.754 - .756
PC-0812	13/16	.823 - .825	.230 - .270	.057 - .083	.048	.817 - .819
PC-0875	7/8	.885 - .887	.230 - .270	.057 - .083	.048	.879 - .881
PC-1000	1	1.010 - 1.012	.290 - .330	.067 - .103	.048	1.002 - 1.005
PC-1125	1-1/8	1.135 - 1.137	.290 - .330	.067 - .103	.048	1.127 - 1.130
PC-1250	1-1/4	1.260 - 1.262	.290 - .330	.067 - .103	.048	1.252 - 1.255
PC-1500	1-1/2	1.506 - 1.508	.290 - .330	.077 - .113	.060	1.497 - 1.500
PC-1750	1-3/4	1.760 - 1.762	.340 - .380	.077 - .113	.060	1.751 - 1.754
PC-1875	1-7/8	1.885 - 1.887	.340 - .380	.077 - .113	.060	1.876 - 1.879
PC-2000	2	2.010 - 2.012	.340 - .380	.097 - .153	.060	2.001 - 2.004
PC-2500	2-1/2	2.513 - 2.518	.380 - .440	.111 - .167	.060	2.500 - 2.504
PC-3000	3	3.010 - 3.013	.480 - .540	.111 - .167	.074	3.000 - 3.004

Dimensions apply before plating.

## Core Hole Preparation and Insertion of Cup-type Core Hole Plugs

KMC produces a full line of concave-bottom ("PC") plugs. The "PC" seals by pressure exerted by the concave bottom against the walls of the plug, much in the same manner as a Belleville washer.

**HOLE PREPARATION.** Inside core hole finish should not exceed 100 micro inches. Eccentricity of the hole should not be greater than .002" for plugs under 1", nor more than .003" for plugs over 1" diameter. With properly prepared holes, plugs can be installed without a sealant. A small amount of lubricant, such as light machine oil with 5% white lead, is desirable to prevent galling.

A 30° x .03" minimum chamfer should be machined on the core hole entry to facilitate plug entry. A .25" minimum radius is preferable to a chamfer, but is seldom used because of tooling cost.

Plugs should be driven square to the hole with the open end approximately .03" below the tangent point of the entry relief. The shoulder on the driver should be bottomed on the casting to control squareness and proper depth. If the surface of the casting is rough or irregular, it should be faced. Plugs should not touch bottom in a counterbored hole.

**DRIVING THE PLUG.** Concave bottom (PC) plugs should be driven on the **inside bottom radius** and **NOT** from the top rim of the cup. The driving arbor should be .015/.025" smaller than the inside diameter of the plug, and have a contact radius of .062", with a flat bottom to prevent contact with the concave bottom to avoid deforming this surface.