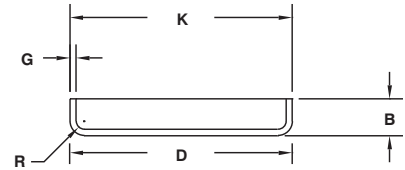
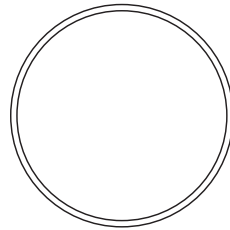


CARBON STEEL EXPANSION PLUGS Cup Type – Flat Bottom, Tapered Walls

MATERIAL: HRP&O or CR Steel, CQ

FINISH: None (Plain), Zinc Plated

PF



Part Number	Nominal Diameter	D Diameter Closed End	K Diameter Open End	B Height ±.020	G Gage	R Inside Radius
PF-0375	3/8	.375 - .381	.383 - .386	.218	.032	.03
PF-0500	1/2	.500 - .502	.508 - .511	.250	.032	.03
PF-0750	3/4	.753 - .756	.760 - .763	.375	.060	.03
PF-0875	7/8	.875 - .877	.877 - .880	.406	.032	.03
PF-1001	1	1.003 - 1.005	1.009 - 1.011	.312	.060	.03
PF-1250	1-1/4	1.255 - 1.257	1.261 - 1.263	.343	.060	.03
PF-2000	2	1.992 - 1.997	2.010 - 2.017	.437	.083	.06
PF-2125	2-1/8	2.127 - 2.129	2.133 - 2.138	.437	.083	.06
PF-2375	2-3/8	2.382 - 2.386	2.382 - 2.386	.281	.032	.03
PF-2501	2-1/2	2.506 - 2.512	2.510 - 2.520	.656	.060	.06
PF-2750	2-3/4	2.752 - 2.754	2.762 - 2.767	.500	.083	.06
PF-3001	3	2.997 - 3.000	3.010 - 3.015	.500	.074	.06

These parts can be furnished from brass, aluminum and galvanized steel. Tolerances will vary slightly from those shown for carbon steel.

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

KMC produces a full line of concave-bottom ("PC") plugs, and flat-bottom tapered-wall ("PF") 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. The "PF" seals by compression of the tapered walls against the core hole. Although hole preparation is the same for both, each requires a different method of insertion.

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.

Flat bottom, tapered walls (PF) plugs should be driven from the rim and not on the bottom. The end of the driving tool should be .015/.025" smaller than the inside diameter of the plug, and should not touch the bottom of the plug. The depth in the hole can be controlled from the face of the casting by a shoulder on the driver.

