



STANDARD MACHINING TOLERANCES

PCS Company machining is performed to the tolerances stated below.

Should tighter tolerances be necessary submit requests for review.

Note: Unless otherwise noted on customer supplied final CAD drawings, and in writing on quote request, stated tolerances will apply. All Dimensions are in Inches

FINISHED INSERT POCKETS (MILLED):

Length and Width = (+.002/-0.000)

Parallel to bottom of plate = .001 per 8 inches

Position to Leader Pins and or Guide Bushings = (+/- .002)

Taper (\pm .0005) on plates or assemblies with thicknesses \leq 4.000

Taper (\pm .001) on plates or assemblies with thicknesses $>$ 4.000

Depth = (+0.000/-0.002) measured from parting line

.375 Corner radius standard \leq 4.000 Deep

.500 Corner radius standard $>$ 4.000 Deep

Pocket floors will have a .020 to .030 radius

* unless requested in writing and in CAD file

parting line pockets and machined features left sharp unless otherwise requested.

This is to prevent a potential flash condition if a runner crosses over the edge of the pocket.*



STANDARD MACHINING TOLERANCES

FINISHED INSERT POCKETS (WIRED):

Length and Width = (+.001/-0.000)

Position to Leader Pins and or Guide Bushings = (+/- .001)

Taper (\pm .0005) on plates or assemblies with thicknesses \leq 6.000

Taper (\pm .001) on plates or assemblies with thicknesses $>$ 6.000

FINISHED INSERT POCKETS (BORED):

Diameter = (+.0008/-0.000)

Position to Leader Pins and or Guide Bushings = (+/- .002)

Taper (\pm .0004) on plates or assemblies with thicknesses \leq 4.000

OTHER POCKETS (MILLED): Clearence, Slide Pockets, Ect.

Length and Width = (+.002/-0.000)

Parallel = .001 to bottom of plate

Position to Leader Pins and or Guide Bushings = (+/- .002)

Taper (\pm .0005) on plates or assemblies with thicknesses \leq 4.000

Taper (\pm .001) on plates or assemblies with thicknesses $>$ 4.000

Depth = (+0.000/-0.002)

*Parting line pockets and machined features left sharp unless otherwise requested.

This is to prevent a potential flash condition if a runner crosses over the edge of the pocket.*



STANDARD MACHINING TOLERANCES

ASSEMBLY SCREWS (S.H.C.S.):

Clearance Hole Diameter = (+.015 / +.030)

Clearance Head Diameter = (+.030 / +.060)

Clearance Head Depth = (+.015 / +.030)

DOWEL HOLES:

Location = (\pm .002) in relationship to Leader Pins and/or Guide Bushings

PERIMETER PLATE EDGE ALIGNMENT

Within .003 of each other when mold base is closed

EJECTOR PIN CLEARANCE (B, BX, SP, ER):

Diameter = (+.015/+0.030) over pin diameter

EJECTOR PIN COUNTER BORES:

Depth = (+.002/-0.000)

Head Diameter = (+.010 min)

RETURN PIN CLEARANCE (SP, ER):

Diameter = (+.015/+0.030) over pin diameter

RETURN PIN CLEARANCE (B, BX, XP, 5 & 6 Plate Stripper Series):

Diameter = (+.003/+0.005) over pin diameter



STANDARD MACHINING TOLERANCES

RETURN PIN COUNTER BORES:

Depth = (+.001) minimum, (+.015) maximum

Head Diameter = (+.015/+0.030)

EYEBOLT HOLE INFORMATION:

1/2-13: 1.22 drill depth / 1.050 thread depth

5/8-11: 1.375 drill depth / 1.2 thread depth

3/4-10: 1.585 drill depth / 1.350 thread depth

TAPPED HOLES DEPTH:

Blind = 2.5 times diameter 3/8 and smaller

Blind = 2 times diameter 1/2 and larger

Taps used are 2-3 thread lead

Thru = necessary distance for good thread

EDGE CHAMFERING

Outside edges of mold plates chamfered 45° by .050"

Internal features chamfered 45° by .015 minimum

Slide Retainer Pockets

We do not chamfer these

Rail Preload

Preload requested is milled



PRECISION MACHINING TOLERANCES

PCS PRECISION TOLERANCES

By request additional charges apply

Requests must be reviewed and approved

FINISHED INSERT POCKETS (MILLED):

Length and Width = (+.001/-0.000)

Parallel to bottom of plate = .001 per 8 inches

Position to Leader Pins and or Guide Bushings = (+/- .001)

Taper (± 0.0005) on plates or assemblies with thicknesses ≤ 4.000

Taper (± 0.001) on plates or assemblies with thicknesses > 4.000

Depth = (+0.000/-0.001) measured from parting line

.375 Corner radius standard ≤ 4.000 Deep

.500 Corner radius standard > 4.000 Deep

Pocket floors will have a .020 to .030 radius

Pocket floors machined sharp

Rail Preload

Preload requested is Ground

Mold Base Milled Square

Leader pins indicated to 0.0005

.001 per 8 inches parallel and square

.001 per 8 inches taper from top to bottom of mold base side



STANDARD MACHINING PRACTICES

PCS STANDARD PRACTICES

- 1) Clamp slots that interfere with leader pin or bushing holes could be modified
- 2) C'bore size and depth for Guided Ejection pins & bushings, Return pins, Leader pins & bushings might be changed to PCS standards
- 3) PCS locks will be installed and tested for function
- 4) Sprue c'bore changed to 2.030"
- 5) Sprue c'bore to sprue hole chamfer will be change to .20 x 45°
- 6) Ejector pin hole clearance is assumed added by customer unless otherwise noted or pins are in cad data
- 7) Standard vents and clamp slots in rails will remain regardless of cad unless otherwise noted
- 8) Clearance will be added to core pins in the top clamp plate in x series mold bases
- 9) PCS will machine SHCS c'bores .015" deeper minimum than actual screw shoulder length
- 10) Ejector pin holes in B-Plate will be drilled for clearance unless otherwise noted.