

## Manufacturing Standards 7.2-S001

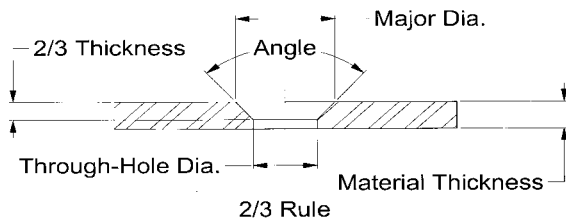
The following information describes EVS Metal's manufacturing standards. In the event that details regarding tolerancing are not provided (for example: when we receive only a solid model or a physical sample, an undimensioned or underdimensioned print) these tolerances will be applied. EVS may also specify a quotation is based on these standards at the time of quote when tolerance on a print cannot be met with stand manufacturing methods. While this does not indicate the tightest tolerances that EVS can hold, it represents referenced industry standards achievable with our normal manufacturing processes. While the addition of secondary processes such as reaming, machining, hard tooling, etc. may improve the tolerances which can be held, they will impact cost. Any critical tolerances must be indicated as such by the customer upon placement of an order and will be evaluated by our Engineering Department for manufacturability.

Unless we at EVS receive specific instructions to the contrary, all dimensions/tolerances are to be applied before finish.

Description	Tolerance in inches
Hardware Hole Diameter	+ .003 / - .000
Hole Diameter	+/- .005
Countersink Major Diameter	+/- .005
Countersink Minor Diameter	+/- .010

Standard Dimensions	
Description	Tolerance
Angular	+/- 1 degree
Fractional	+/- 1/64

**Standard For Turret Formed Countersinks to avoid distortion caused by material displacement**



Solid Model format by order of preference: SolidWorks (.SLDPRT, .SLDASM), Pro-E (.PRT, .ASM), Parasolid, STEP, IGES

Locational Dimensions	
Description	Tolerance (in)
Edge to Bend across 1 or 2 bends	+/- .010
Edge to Bend across 3 bends	+/- .015
Edge to Edge across no bends	+/- .005
Edge to Edge across 1 or 2 bends	+/- .010
Edge to Edge across 3 bends	+/- .015
Bend to Bend across 1 or 2 bends	+/- .010
Bend to Bend across 3 bends	+/- .015
Feature to feature across 4 bends	+/- .020
Feature to feature across more than 4 bends	+/- .020 +.005 each additional bend
Edge to Hole across no bends	+/- .005
Hole to bend formed off of the same plane	+/- .010
Hole to Hole on same plane	+/- .005
Part to Part in welded sheet metal assembly	(see note)

Note: due to the inherent differences in welded assemblies, EVS will review customer requirements and establish acceptable standards prior to starting production.

### EVS DEFAULT PLATING SPECIFICATIONS

Process	Material or other pertinent factors	Specification nomenclature
Clear Zinc	N/A	ASTM B633-98, Class FE/ZN 8, Type III
Yellow Zinc	N/A	ASTM B633-98, Class FE/ZN 8, Type II, Yellow Chromate
Black Zinc	N/A	ASTM B633-98, Class FE/ZN 8, Type II, Black Chromate
Clear Iridite	N/A	MIL-C-5541E, Class 1A, Clear
Yellow Iridite	N/A	MIL-C-5541E, Class 1A
Electrodeposited Nickel	<b>COPPER</b>	QQ-N-290A, Class 1, Grade D
Electrodeposited Nickel	<b>STEEL</b>	QQ-N-290A, Class 1, Grade C
Electroless Nickel	<b>ALUMINUM</b>	MIL-C-26074E, Class 1, Grade A
Electroless Nickel	<b>COPPER</b>	MIL-C-26074E, Class 1, Grade B
Electroless Nickel	<b>STEEL</b>	MIL-C-26074E, Class 1, Grade C
Anodize - Clear	N/A	MIL-A-8625F, Type 2, Class 1
Anodize - Black	N/A	MIL-A-8625F, Type II, Class 2, Black
Anodize - Gold	N/A	MIL-A-8625F, Type II, Class 2, Gold
Anodize - Grey	N/A	MIL-A-8625F, Type II, Class 2, Grey
Tin Plate	<b>BRIGHT DIP</b> must be specified if required.	ASTM-B545-97, Class A