

STANDARD TOLERANCES FOR KOVAR PACKAGES

THESE ARE STANDARD TOLERANCES. CONSULT FACTORY FOR TIGHTER TOLERANCE OPTIONS

Dimensions are in inches

DIMENSION	MACHINED HOUSING	FLATPACK	PLUG IN	PRICE ADDER IF TIGHTER	COMMENTS
BOTTOM THICKNESS	±.002	±.002	±.005	YES	TIGHTER TOLERANCE WILL REQUIRE SPECIAL PROCESSING NO REWORK, AND/ OR SPECIAL MATERIAL
BOTTOM FLATNESS	.002 IN/IN	.004 IN/IN	.004 IN/IN	YES	.002 IN/IN IS STANDARD ON BOTTOMS GREATER THAN OR EQUAL TO .020 IF LESS THAN .020, EXTRA ANNEALING/ FLATTENING IS REQUIRED MACHINED HOUSINGS - CAN GENERALLY ACHIEVE FLATNESS WITHIN .001 IN/IN
GLASS MENISCUS	.010 MAX.	.010 MAX	.010 MAX	YES	ANYTHING TIGHTER THAN .010 MAX REQUIRES SOUP AND REFIRE, 0 MENISCUS CAN BE ACHIEVED
HOLE DIAMETER	±.002	+/- .002	+/- .002 SEE COMMENTS	YES	+/- .002 ON PLUG-INS CAN BE HELD IF WE ARE TOOLED ACCORDINGLY. IF CUSTOMER WANTS .056+/- .002, AEGIS WOULD HAVE TO USE .054 PUNCH (NOT STANDARD). PLUG-INS, IF CUSTOMER WANTS .042+/- .005, SHOULD QUOTE .047 OR BIGGER TO IMPROVE AEGIS YIELDS, AS WELL AS OUR CUSTOMERS
EDGE OF GLASS SEAL TO SEAL SURFACE	0.045	.045	.045	NO	IF CUSTOMER REQUIRES SMALLER WEB THEN WE CANNOT GUARANTEE HERMETICITY AFTER SEAM SEALING.
LENGTH AND WIDTH	±.005 SEE COMMENTS	+/- .005	+/- .005	YES	±.003 CAN BE ACHIEVED BUT USUALLY REQUIRES NEW TOOLING, SPECIAL PROCESSING, AND NO REWORK MACHINED HOUSINGS - TIGHTER TOLERANCES CAN BE HELD IF NECESSARY
LEAD THICKNESS / DIAMETER	±.002	±.002	±.002	YES	WE CAN MEET ±.001, BUT CANNOT REWORK
LEAD WIDTH	±.003	±.003	-----	NO	±.002 CAN BE ACHIEVED BY RUNNING FOR YIELD AND 100% INSPECTING
LEAD CONCENTRICITY	TRUE POSITION W/IN Ø.020	TRUE POSITION W/IN Ø.020 SEE COMMENTS	TRUE POSITION W/IN Ø.020	YES	TIGHTER IS DIFFICULT TO ACHIEVE ON MOST PRODUCTS AND SIGNIFICANTLY AFFECTS YIELDS OR MOLD COSTS .005" MIN. GLASS PIN TO CASE FOR .040 DIA. HOLE
OVERALL HEIGHT / INTERNAL HEIGHT	±.005 SEE COMMENTS	±.005	±.005	YES	TIGHTER REQUIRES 100% GAUGING, HAND SANDING AND CANNOT BE REWORKED MACHINED HOUSINGS - TIGHTER TOLERANCES CAN BE HELD IF NECESSARY OVERALL HEIGHT/INTERNAL HEIGHT HELD NON-CUMULATIVE
INTERNAL PIN EXTENSION	±.005	+ .010/- .005 OR ±.007	±.005	YES	TIGHTER REQUIRES SPECIAL PROCESSES AND/ OR FIXTURE ESPECIALLY FOR LARGE PACKAGES MACHINED HOUSINGS - TIGHTER TOLERANCES CAN BE HELD DEPENDING ON DESIGN
SEAL RING FLATNESS	.002 IN/IN	.003 IN/IN	.003 IN/IN	YES	ON SMALL PARTS .002 TIR SHOULD NOT BE A PROBLEM LARGE PARTS WOULD REQUIRE SPECIAL HANDLING
WALL THICKNESS	±.005 SEE COMMENTS	±.005	±.005	YES	TIGHTER USUALLY REQUIRES SPECIAL PROCESSING, NON-STANDARD MATERIAL AND NO REWORK MACHINED HOUSINGS - TIGHTER TOLERANCES CAN BE HELD IF NECESSARY

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EXTERNAL PIN LENGTH (CHOP LENGTH)	±.010	±.010	±.010	YES	SPECIAL FILTERING IS USUALLY REQUIRED TO HOLD BETTER THAN ±.010
INSIDE RADIUS	MAX. DIMENSION	MAX. DIMENSION	MAX. DIMENSION	YES SEE COMMENTS	+/- .005 CAN BE HELD ONLY IF WE ARE TOOLED FOR WHAT THE CUSTOMER WANTS (EX. THE CUSTOMER WANTS .020 MAX AND WE ARE TOOLED AT .020 +/- .005: THIS WILL REQUIRE RETOOLING OR DEVIATIONS FOR MACHINED HOUSINGS - 3 TIMES DIAMETER OF THE FLUTE LENGTH IS THE MAX. DEPTH ACHIEVABLE
OUTSIDE RADIUS	±.005	±.005	±.005	YES	
PLATING THICKNESS	SEE COMMENTS	SEE COMMENTS	SEE COMMENTS	YES	STANDARD PLATING PRICES ARE BASED ON: ELECTROLYTIC Ni - MAX. MUST BE EQUAL TO OR GREATER THAN 3 TIMES THE MIN. ELECTROLESS Ni - MAX. MUST BE EQUAL TO OR GREATER THAN 2 TIMES THE MIN. GOLD - PREFER A MINIMUM (OR THE MAX. MUST BE EQUAL TO OR GREATER THAN 3 TIMES THE MIN). CAN BE AS TIGHT AS 2:1 IF MEASUREMENT LOCATIONS ARE DEFINED TIGHTER SPECS USUALLY ADDS COST
THREADED HOLES	THRU HOLE PREFERRED SEE COMMENTS	-----	-----	YES	IF BLIND HOLE IS REQUIRED, THE FIRST 3 THREADS WILL BE PLATED. TAP DEPTH = TAP DRILL DEPTH - (1.5 X PITCH) ** IF YOU WANT ALL OR NO THREADS PLATED-CONSULT FACTORY EVACUATION HOLES AT BOTTOM OF BLIND HOLES ARE STRONGLY RECOMMENDED.