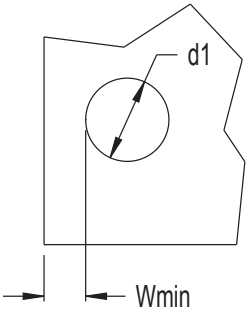
Design Guidelines

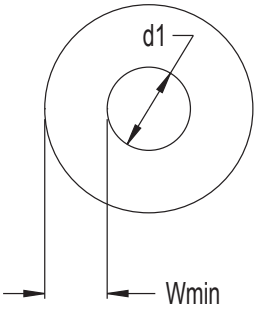
Wall thickness/distance from an edge

As the radial expansion of the EIS Sealing Plug occurs, the base metal in which it will be installed plastically deforms. The hydraulic pressure, temperature service conditions, plug type and characteristics of the base metal must be considered when calculating a minimum wall thickness, or distance from an edge to optimize the strength of the mechanical connection.

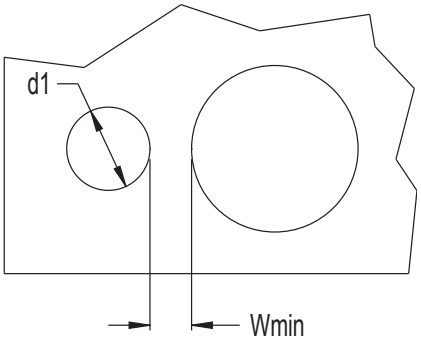
Distance to an external wall



Distance to an exterior wall



Wall thickness between bores



The guidelines for a minimum wall thickness or distance from an edge (Wmin) are expressed below. At these minimum values, only slight deformation on the exterior profile of less than 20µm is likely. This does not affect the function of the EIS Sealing Plug. Using Wmin distances below the recommended values can cause overloading of the base material. This can adversely influence the function of the EIS Sealing Plug. Please contact EIS for additional information.

Wmin Guideline Values

EIS Sealing Plug Diameters: **d1 ≥ 4mm: Wmin = fmin * d1**
d1 < 4mm: Wmin = fmin * d1 + 0.5mm

	Base Metal						
	SAE 1144	SAE 10L15	ASTM A48 Cast iron	ASTM A356 Ductile iron	2024-T4	6061-T6	356-T6 Cast alum
EIS Series	**Factor fmin**						
EIS-11	.5	.6	1.0	.6	.6	1.0	1.0
EIS-31	.6	.8	1.0	.8	.8	1.0	1.0

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