

DIE CLEARANCE CHART

The information in this chart is a fine tuned version of more general clearance charts that are published in our various catalogs and in other industry publications. The chart is based on experiences from our customers who achieve superior piece part quality and the longest possible tool life. Blanking tools are generally assigned with less clearance than piercing tools so that the burnished area of the piece part (slug) is greater. This leads to a higher quality piece part; however, due to the smaller clearances, blanking tools become dull more quickly.

Dimensions in inches(millimeters)		Piercing	Blanking
Material Type (Typical Shear Strength)	Material Thickness (T)	Total Die Clearance (% of T)	Total Die Clearance (% of T)
Aluminum 25K psi (.1724kN/mm ²)	Less than .098(2.5)	15%	15%
	.098(2.5) through .197(5.0)	20%	15%
	Greater than .197(5.0)	25%	20%
Mild Steel 50K psi (.3447kN/mm ²)	Less than .118(3.0)	20%	15%
	.118(3.0) through .236(6.0)	25%	20%
	Greater than .236(6.0)	30%	20%
Stainless Steel 75K psi (.5171kN/mm ²)	Less than .059(1.5)	20%	15%
	.059(1.5) through .109(2.8)	25%	20%
	.110(2.8) through .158(4.0)	30%	20%
	Greater than .158(4.0)	35%	25%

Dimensions in inches(millimeters)



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METAL GAGES

	Aluminum and Brass	Mild Steel	Stainless Steel
8	.129(3.3)	.164(4.2)	.172(4.4)
9	.114(2.9)	.150(3.8)	.156(4.0)
10	.102(2.6)	.135(3.4)	.141(3.6)
11	.091(2.3)	.120(3.0)	.125(3.2)
12	.081(2.1)	.105(2.7)	.109(2.8)
13	.072(1.8)	.090(2.3)	.094(2.4)
14	.064(1.6)	.075(1.9)	.078(2.0)
16	.051(1.3)	.060(1.5)	.063(1.6)
18	.040(1.0)	.048(1.2)	.050(1.3)
20	.032(0.8)	.036(0.9)	.038(1.0)
22	.025(0.7)	.030(0.8)	.031(0.8)
24	.020(0.5)	.024(0.6)	.025(0.6)
26	.016(0.4)	.018(0.5)	.019(0.5)
28	.013(0.3)	.015(0.4)	.016(0.4)

Dimensions in inches(millimeters)



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