

# TECHNICAL SHEET

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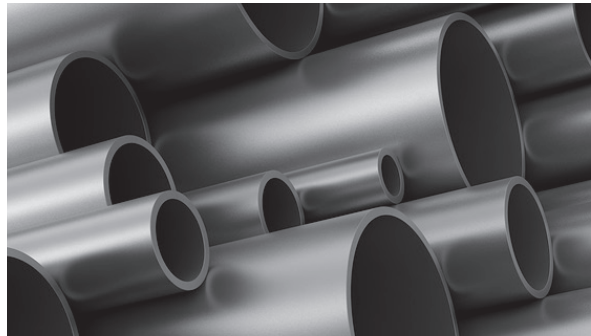


# Materials

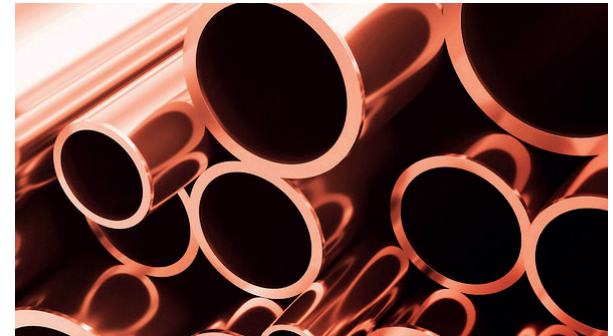
Joongwon Etching Point has expertise in various metal types in addition to stainless steel.



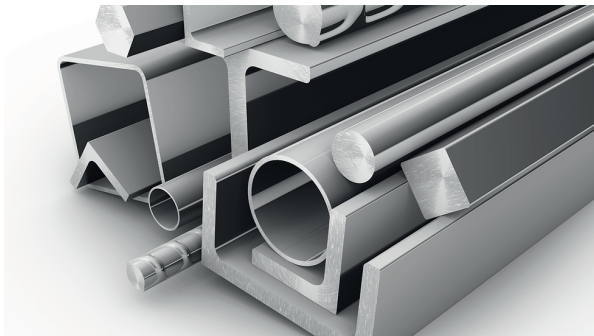
**Stainless steels**



**Carbon Steels**



**Copper Alloy**



**Aluminum**



**Nickel Alloy**

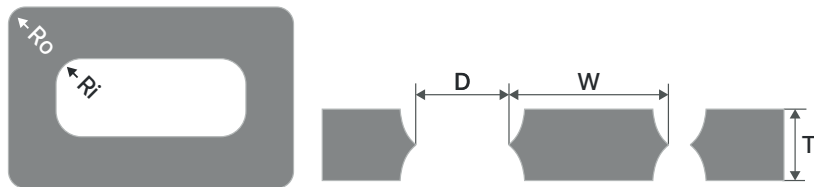


**Kovar**

# Tolerance

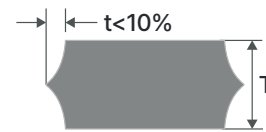
The general tolerance for chemical etching is taken into account about +/- 10% of the thickness of the product.

Thickness(T)	Minimum D Size	Actual Minimum D Size	Actual Minimum W Size	D, W Tolerance
10μm 20μm	Subject to Testing	Subject to Testing	≅ 0.5	Subject to Testing
50μm				Abt. ±0.25t
125μm	≅ 0.7t	≅ 0.8t		Abt. ±0.16t
175μm				
300μm 2000μm				

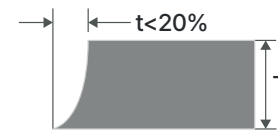


External angle( $R_o$ )  $\geq t \times 40\%$   
 Internal angle( $R_i$ )  $\geq t \times 80\%$

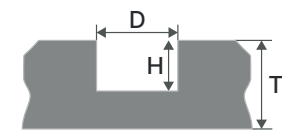
t = Thickness



Double Side Etching



Single Side Etching



Half Etching

## Bridge

In chemical etching, a bridge is a kind of dynamics that connects a product to a frame.  
The shape of the bridge can be customized in various ways according to the customer's needs.

