



American Welding Society Welding Symbol Chart

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Second Printing

Basic Welding Symbols and Their Location Significance								
Location Significance	Fillet	Plug or Slot	Spot or Projection	Stud	Seam	Back or Backing	Surfacing	Edge
Arrow Side								
Other Side				Not Used			Not Used	
Both Sides		Not Used	Not Used	Not Used	Not Used	Not Used	Not Used	
No Arrow Side or Other Side Significance	Not Used	Not Used		Not Used		Not Used	Not Used	Not Used
Location Significance	Groove							Scarf for Brazed Joint
	Square	V	Bevel	U	J	Flare-V	Flare-Bevel	
Arrow Side								
Other Side								
Both Sides								
No Arrow Side or Other Side Significance		Not Used	Not Used	Not Used	Not Used	Not Used	Not Used	Not Used

Supplementary Symbols			
Weld-All-Around	Field Weld	Melt-Thru	Consumable Insert
Backing/Spacer (Rectangular)		Contour	
		Flush or Flat	Convex
		Concave	
Basic Joints			
Identification of Arrow Side and Other Side Joint			
Butt Joint		Corner Joint	
Arrow of Welding Symbol	Arrow Side of Joint	Arrow of Welding Symbol	Other Side of Joint
Other Side of Joint		Arrow Side of Joint	
		Other Side of Joint	
T-Joint		Lap Joint	
Arrow of Welding Symbol	Arrow Side of Joint	Other Side Member of Joint	Arrow Side Member of Joint
Other Side of Joint		Arrow of Welding Symbol	
		Other Side of Joint	

Location of Elements of a Welding Symbol			
Finishing Symbol	Contour Symbol	Groove Weld Size	Depth of Bevel; Size or Strength for Certain Welds
Groove Angle; Included Angle of Countersink for Plug Welds	Root Opening; Depth of Filling for Plug and Slot Welds	Length of Weld Segment	Pitch (Center-to-Center Spacing) of Weld Segments
Field Weld Symbol	Weld-All-Around Symbol	Arrow Connecting Reference Line to Arrow Side Member of Joint or Arrow Side of Joint	Weld Symbol
Specification, Process, or Other Reference	Number of Spot, Seam, Stud, Plug, Slot, or Projection Welds	Elements in This Area Remain As Shown When Tail and Arrow are Reversed	Weld Symbols Shall Be Contained Within the Length of the Reference Line
Tail (May Be Omitted When Reference is Not Used)	Reference Line	Arrow Side of Joint	Other Side of Joint
Both Sides	Arrow Side	Other Side	
(N)			

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Typical Welding Symbols		
Double-Fillet Welding Symbol	Chain Intermittent Fillet Welding Symbol	Staggered Intermittent Fillet Welding Symbol
Fillet Weld Size	Pitch (Distance Between Centers) of Segments	Pitch (Distance Between Centers) of Segments
Omission of Length Indicates that Weld Extends Between Abrupt Changes in Direction or as Dimensioned	Fillet Weld Size (Length of Leg)	Fillet Weld Size (Length of Leg)
Plug Welding Symbol	Back Welding Symbol	Backing Welding Symbol
Included Angle of Countersink	Back Weld	Backing Weld
Plug Weld Size (Diameter of Hole at Root)	2nd Operation	1st Operation
Depth of Filling (Omission Indicates Filling is Complete)	1st Operation	2nd Operation
Spot Welding Symbol	Stud Welding Symbol	Seam Welding Symbol
Spot Weld Size	Stud Size	Seam Weld Size
Number of Welds	Number of Studs	Increment Length
Pitch	Pitch	Pitch
Square-Groove Welding Symbol	V-Groove Welding Symbol	Double-Bevel-Groove Welding Symbol
Groove Weld Size	Depth of Bevel	Groove Weld Size
Root Opening	Groove Angle	Groove Weld Size
Symbol with Backgouging	Flare-V-Groove Welding Symbol	Flare-Bevel-Groove Welding Symbol
Depth of Bevel	Groove Weld Size	Groove Weld Size
Multiple Reference Lines	Complete Joint Penetration	Edge Welding Symbol
1st Operation On Line Nearest Arrow	Indicates Complete Joint Penetration Regardless of Type of Weld or Joint Geometry	Edge Weld Size
2nd Operation	CJP	
3rd Operation		
Flash or Upset Welding Symbol	Melt-Thru Symbol	Joint with Backing
Process Reference	Root Reinforcement	'R' Indicates Backing Removed After Welding
Joint with Spacer	Flush Contour Symbol	Convex Contour Symbol
With Modified Groove Weld Symbol	Back Weld	G
Double-Bevel Groove		

It should be understood that these charts are intended only as shop aids. The only complete and official presentation of the standard welding symbols is in AWS A2.4, *Standard Symbols for Welding, Brazing, and Nondestructive Examination*.