



Location Significance	Flillet	Plug or Slot	Spot or Projection	Seam	Back or Backing	Surfacing	Scarff for Brazed Joint	Flange Edge
Arrow Side								
Other Side						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

### Supplementary Symbols Used with Welding Symbols

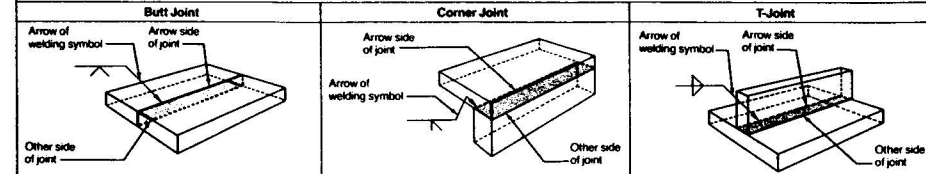
<b>Convex Contour Symbol</b> Convex contour symbol indicates face of weld to be finished to convex contour.	<b>Weld-All-Around Symbol</b> Weld-all-around symbol indicates that weld extends completely around the joint.
<b>Joint with Backing</b> With groove weld symbol. Note: Material and dimensions of backing as specified.	<b>Joint with Spacer</b> With modified groove weld symbol. Note: Material and dimensions of spacer as specified.
<b>Flush Contour Symbol</b> Flush contour symbol indicates face of weld to be made flush. When used without a finish symbol, indicates weld without subsequent finishing.	<b>Melt-Thru Symbol</b> Melt-thru symbol is not dimensioned (except height).

<b>Multiple Reference Lines</b> First operation shown on reference line nearest arrow. Second operation, or supplementary data. Third operation, or test information.	<b>Location of Elements of a Welding Symbol</b> Diagram showing the placement of various symbols: Finish symbol, Contour symbol, Groove angle, Length of weld, Pitch, Field weld symbol, Arrow connecting reference line, Weld-all-around symbol, Elements, Reference line, Tail, Number of spot or projection welds.
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<b>Field Weld Symbol</b> Field Weld symbol indicates that weld is to be made at a place other than that of initial construction.	<b>Complete Penetration</b> Indicates complete penetration regardless of type of weld or joint preparation.
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<b>Supplementary Symbols</b> Table of symbols for: Weld-All-Around, Field Weld, Melt-Thru, Backing, Spacer, Contour (Flush, Convex, Concave).	<b>Diagram of Welding Symbol Elements</b> Detailed diagram of a welding symbol with labels for: Finish symbol, Contour symbol, Groove angle, Length of weld, Pitch, Field weld symbol, Arrow connecting reference line, Weld-all-around symbol, Elements, Reference line, Tail, Number of spot or projection welds.
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### Basic Joints—Identification of Arrow Side and Other Side of Joint

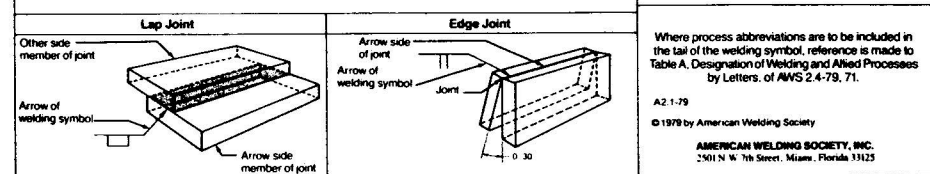


Flange	Groove	Location Significance						
Corner	Square	V	Bevel	U	J	Flare-V	Flare-Bevel	Location Significance
								Arrow Side
								Other Side
								Both Sides
								No Arrow Side or Other Side Significance

### Typical Welding Symbols

<b>Slot Welding Symbol</b> Depth of filling in inches (omission indicates filling is complete).	<b>Seam-Groove Welding Symbol</b> Omission of size indicates complete joint penetration.	<b>Flare-V and Flare-Bevel-Groove Welding Symbols</b> Root opening. Size is considered as extending only to tangent points.
<b>Plug Welding Symbol</b> Included angle of countersink. Pitch (distance between centers) of welds. Depth of filling in inches (omission indicates filling is complete). Size (diameter of hole at root).	<b>Chain Intermittent Fillet Welding Symbol</b> Size (length of leg). Pitch (distance between centers) of increments. Length of increments.	<b>Edge- and Corner- Flange Welding Symbols</b> Radius. Size of weld. Height above point of tangency.
<b>Backgouging Welding Symbol</b> Second reference line used for back gouging and welding as a second operation. Total effective throat not to exceed thickness of member.	<b>Back or Backing Welding Symbol</b> Any applicable single groove weld symbol.	<b>Surfacing Welding Symbol Indicating Built-up Surface</b> Orientation, location and all dimensions other than size are shown on the drawing.
<b>Flare or Upset Welding Symbol</b> No arrow side or other side significance. Process reference must be used to indicate process desired.	<b>Staggered Intermittent Fillet Welding Symbol</b> Pitch (distance between centers) of increments. Size (length of leg). Length of increments.	<b>Single-V Groove Welding Symbol Indicating Root Penetration</b> Size. Depth of preparation. Root opening. Groove angle.
<b>Spot Welding Symbol</b> Size (diameter of weld). Strength (in lb per weld). Pitch (distance between centers) of weld. Number of welds.	<b>Double-Bevel-Groove Welding Symbol</b> Arrow points toward member to be prepared. Omission of size dimension indicates a total depth of preparation equal to thickness of members.	<b>Projection Welding Symbol</b> Projection welding reference must be used. Diameter of weld may be used instead for circular projection welds. Pitch (distance between centers) of welds. Number of welds.
<b>Seam Welding Symbol</b> Length of welds or increments. Omission indicates that weld extends between abrupt changes in direction or as dimensioned. Size (width of weld). Strength (in lb per linear inch) may be used instead. Pitch (distance between centers) of increments. Process reference must be used to indicate process desired.	<b>Welding Symbols for Combined Welds</b> Diagrams showing combined symbols for butt, fillet, and groove welds.	<b>Double-Fillet Welding Symbol</b> Length. Omission indicates that weld extends between abrupt changes in direction or as dimensioned. Specification, process, or other reference.

### Basic Joints—Identification of Arrow Side and Other Side of Joint



Where process abbreviations are to be included in the tail of the welding symbol, reference is made to Table A. Designation of Welding and Allied Processes by Letters of AWS 2.4-79, 71.

A2.1-79  
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