

B3.10.1 Weld-All-Around Symbol. A continuous weld is one which has no breaks in its length and does not change in size, geometry, or weld type. Such a weld, which extends around a series of connected joints and ends at the point of origin, may be specified by adding the weld-all-around symbol. The joint may require welding in different directions and positions and the welds may lie in more than one plane. The most common applications involve either fillet welds or square groove welds and are often intended to provide a gas or liquid seal in addition to or in lieu of carrying the loads imposed on the joints. The weld-all-around symbol should not be used in place of double-fillet or symmetrical double-groove weld symbols for specifying welds on both sides of the same thickness of base metal.

B3.11.3 Welding Symbols Designated "Typical".

The "TYPICAL" designation is intended as an alternative to repeating identical welding symbols many times on the same drawing, but only when the joints represented are identical in all details. The "TYPICAL" notation is added to the tail of the welding symbol, usually abbreviated "TYP", and all applicable joints must be completely identified, i.e., "TYP at four stiffeners".

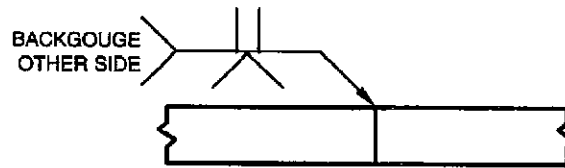
Misuse of the "TYPICAL" designation has caused many instances of confusion and fabrication errors by failing to completely identify all applicable joints or by identifying joints that might be similar but not identical. If more extensive information is required it may be stated in a separate drawing note with a reference in the tail of the welding symbol.

B3.19 Changes in Joint Geometry During Welding.

Joint geometry of groove welds is sometimes changed as a result of specified welding operations. These changes in joint geometry are not to be included in the welding symbol. For example; a welding symbol could specify a V-groove weld on the arrow side of a joint and a square-groove weld on the other side of the joint with backgouging to sound metal, from the other side of the joint, using air carbon arc cutting. With the V-groove weld completed, the backgouging operation would be expected to produce a weld groove that could be described as a U-groove. This change in geometry, from a square-groove to a U-groove, is not to be specified in the welding symbol (see following illustration).

B4.2.2 Complete Joint Penetration. Complete joint penetration is defined as, "Penetration of weld metal through the thickness of a joint with a groove weld". The simplest way of specifying such a groove weld is to show no dimensions to the left of the groove weld symbol. This is the intent of 4.2.2. There are other ways by which complete joint penetration can be specified including:

WELDING SYMBOL:



BEFORE WELDING:



V-GROOVE WELD COMPLETE:



BACKGOUGING COMPLETE:



WELD COMPLETE:



4.2.4—Nonsymmetrical double-groove welds

4.2.8—"CJP" in the tail of the welding symbol

4.7 —Back or backing welds

4.8 —Joint with backing

The provision in 4.2.8 is included for use on design drawings where there is insufficient information available as to what equipment might be used or, in some cases, what company or organization might do the work. For example, the design drawings might be completed prior to the job being submitted for bids. In these situations, it is considered good practice to require the successful bidder to submit construction drawings complete with detailed welding symbols for review. The other methods identified above require knowledge of the specific welding situation and also the requirements of any codes or specifications that might apply.

B4.2.10 Flare-Groove Welds. Although flare-groove welds are included in the section on groove welds, they must be treated as special cases since they do not conform to all of the accepted conventions associated with other types of groove welds. The dimensions corresponding to "depth of bevel" and "groove angle" in a normal groove weld are functions of the curvature of the