











## Optimar Standard Welding Instruction

### General Welding Rule (material thickness < 10mm)

1. All parts with contact surface in drawing shall be fully welded.
2. Each part with bend and shapes where material gap gets closer than 1 mm, the joint shall be fully welded.
3. All Cuts created for making easy bending or corner ends during sheet metal bending shall be fill welded.
4. Where welding symbols is used directly in drawing, welding symbols shall be followed.

### Details for common welding operations

Bead	Fillet	Plug or Slot	Groove or Butt						
			Square	V	Bevel	U	J	Flare V	Flare Bevel
									

#### 1. Bead

- a. Material thickness 1-5mm:
  - i. Bead profile at joint surface shall be MIN. 0mm height.
  - ii. Bead profile at joint surface shall be MAX 2mm height.
- b. Material thickness <5 - 10mm
  - i. Bead profile at joint surface shall be MIN. 0mm height.
  - ii. Bead profile at joint Surfaces shall be MAX 3mm height.

#### 2. Fillet (Values calculate of thinnest material thickness in joint)

- a. a-measure shall be 0,7 x material thickness
- b. s-measure shall be MIN. 1,0/MAX 1,5 x material thickness
- c. z- measure: For outside plate corner joint to be filled fully.

#### 3. Plug or Slot

- a. Follow rule for **Fillet**.
- b. Bead shall not exceed above slot surface.

#### 4. Groove and Butt

- a. All groove or butt joint shall be defined by how Part is shaped and assembled.
- b. If Joint got planar surface (20 deg. >), groove and but shall be combined with rules of **Bead**.
- c. If Joint got angular Surface (20 deg.<), groove and but shall be combined with rules of **Fillet**.