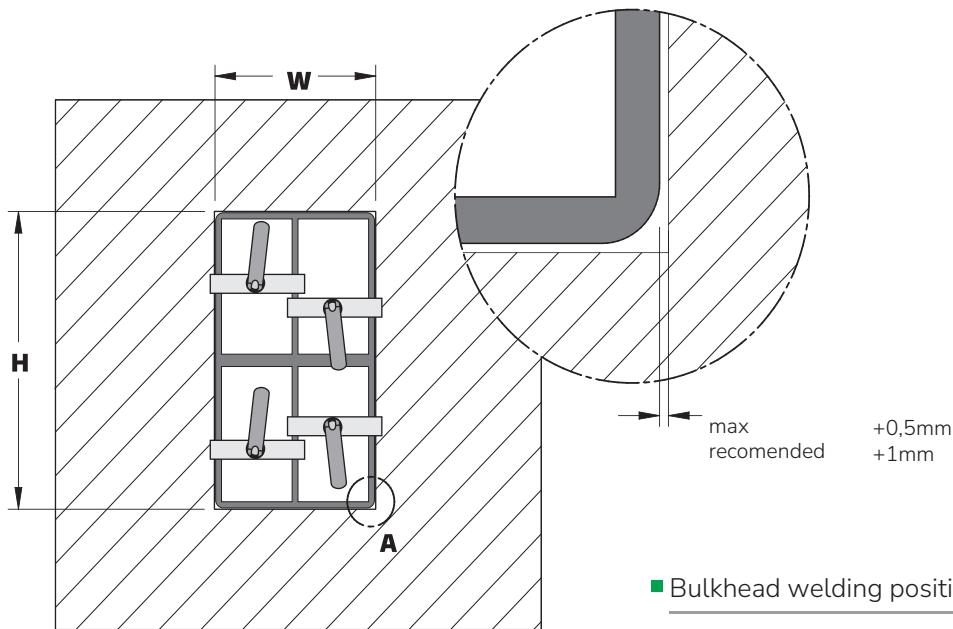


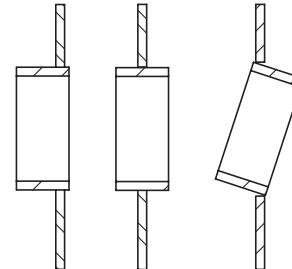
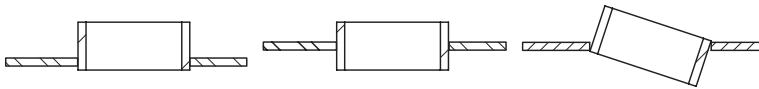
## STANDARD WELDING INSTRUCTIONS

1. Check the measures of the precut hole and external dimensions of the frame. Recommended gap around the frame is in between 1mm and 2mm (0.5-1mm on every side of the frame).



■ Bulkhead welding positions

■ Deck welding positions

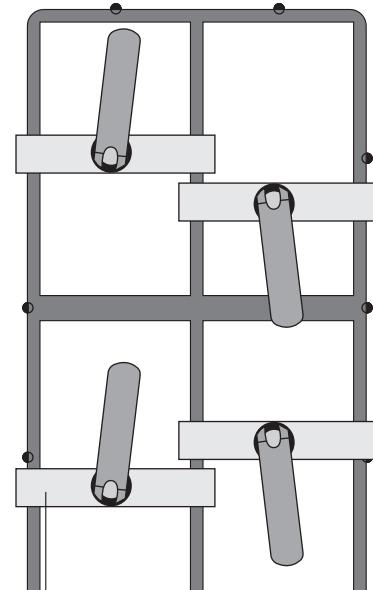
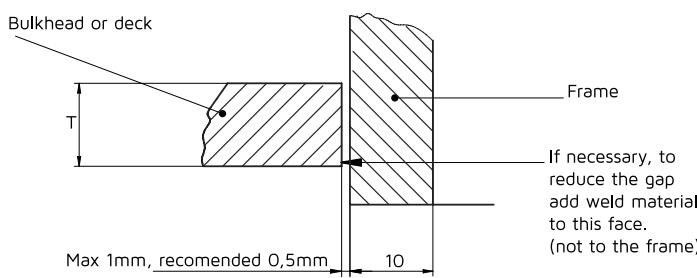


2. Tack weld on the front side, centring the frame onto the cut-out hole:

■ Horizontally, one tack on every aperture.

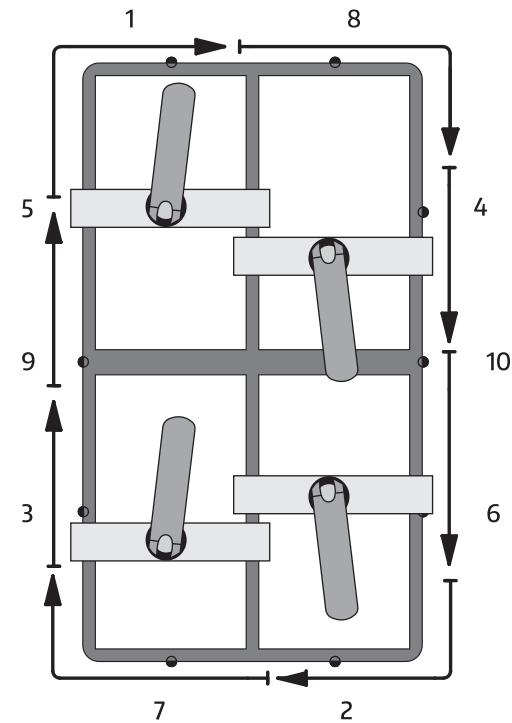
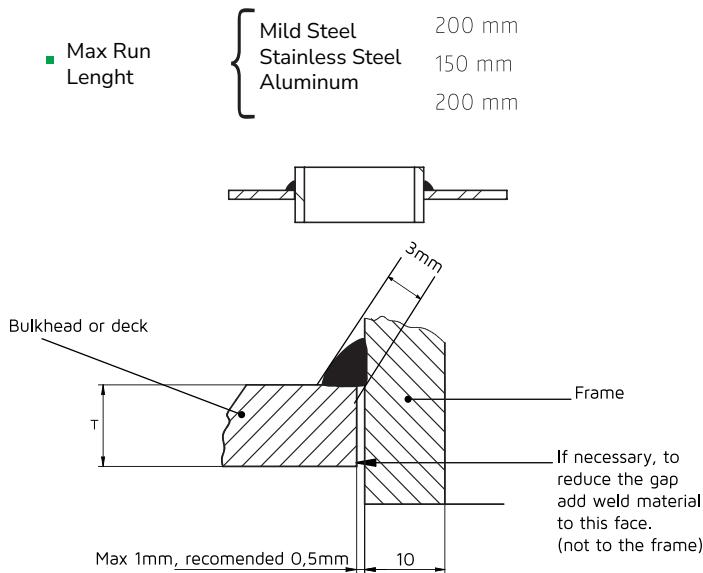
■ Vertically, one tack on every aperture and on every vertical division.

Check the gap measures all around the frame are maintained. If necessary, add weld material to the bulkhead/deck to reduce the gap (not to the frame). Use HTS welding tool to prevent frame deformations during welding process.



3. Start welding the frame with a sealing fillet weld on the backside. Follow appropriate welding sequence. This welding throat should not exceed of 3mm.

The interpass temperature should not exceed 200°C for mild steel and aluminium and 150°C for stainless steel.



$$\text{Heat Input (kJ/mm)} = \frac{V \cdot I \cdot \eta}{\text{vel} \cdot 1000}$$

$$\eta = \begin{cases} 1 & \text{SMAW} \\ 0,8 & \text{GMAW / FCAW} \\ 0,6 & \text{GTAW} \end{cases}$$

V = volts / I = amperes / vel = mm/s

	Máx. Heat Input (kJ/mm)		
	Mild Steel	Stainless Steel	Aluminium
$a = 3 \text{ mm}$	1,2	1,1	2

4. Grind off weld tacks before start filled weld. Weld runs should not start or stop at a tack weld but should run over a tack.

Follow same welding sequence for correct procedure. The interpass temperature should not exceed 200°C for mild steel and aluminium and 150°C for stainless steel.

This welding throat should not exceed following values:

$$\begin{array}{ll} T > 7 \text{ mm} & a=5 \text{ mm} \\ T \leq 7 \text{ mm} & a=4 \text{ mm} \end{array}$$

Max Run Length

Mild Steel	200 mm
	150 mm
	200 mm
Stainless Steel	150 mm
	200 mm
	200 mm
Aluminum	200 mm
	200 mm
	200 mm

	Máx. Heat Input (kJ/mm)		
	Mild Steel	Stainless Steel	Aluminium
$a = 4 \text{ mm}$	1,2	1,1	2
$a = 5 \text{ mm}$	1,4	1,1	2