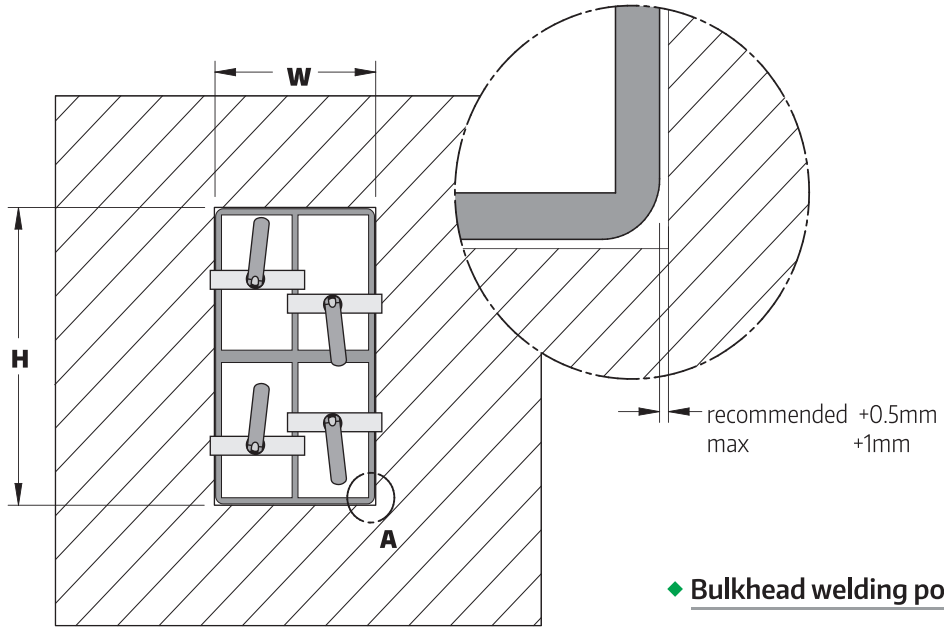
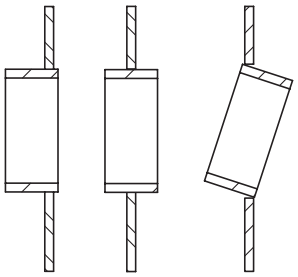
HAWKE® | Transit System

STANDARD WELDING INSTRUCTIONS

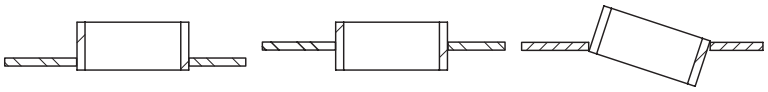
1. Check the measures of the precut hole and external dimensions of the frame. Recommended gap around the frame is in between 1mm and 2mm (0.5-1mm on every side of the frame).
See frames dimension chart page...19



Bulkhead welding positions



Deck welding positions

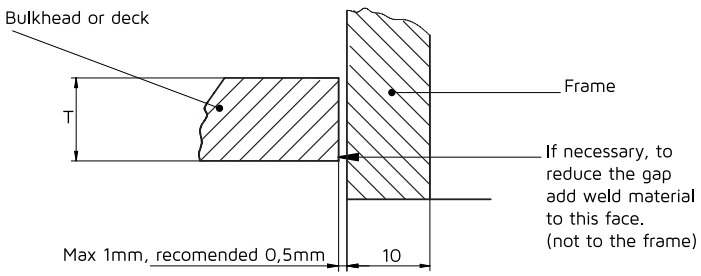


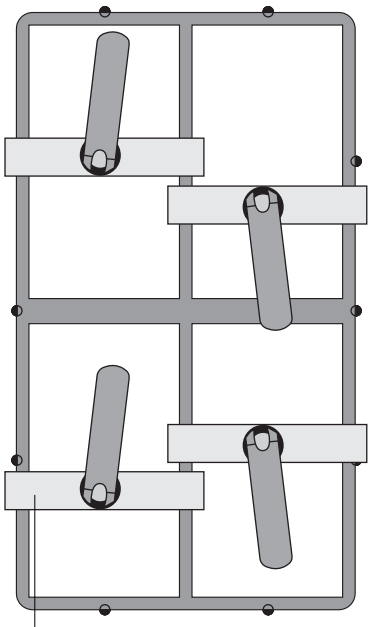
2. Tack weld on the front side, centring the frame onto the cut-out hole:

- 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.

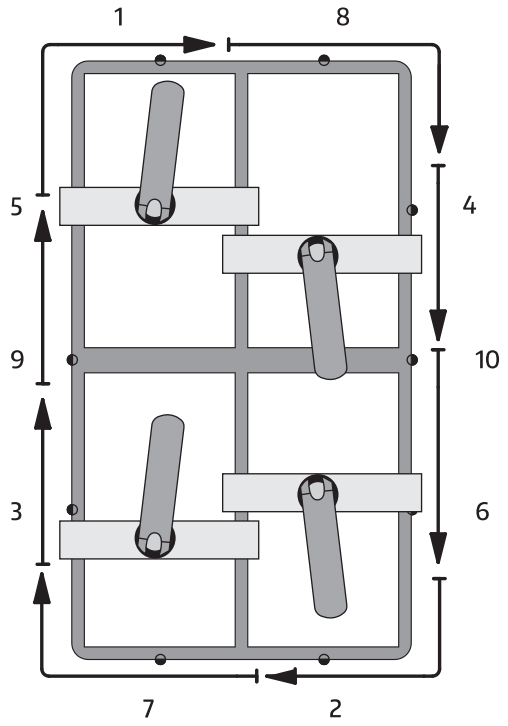




- Welding tool (See page..77) can be used to prevent deformation during the welding.

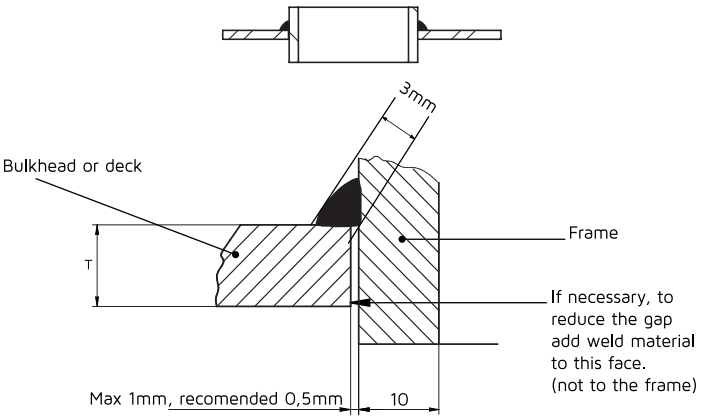
3. Start welding the frame with a sealing fillet weld on the backside. Follow appropriate welding sequence.
This welding throat should not excess of 3mm.

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



- Máx run lenght:

Mild Steel	200 mm
Stainless Steel	150 mm
Aluminium	200 mm



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

η = { 1 SMAW; 0,8 GMAW / FCAW; 0,6 GTAW }

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

	Máx. Heat Input (KJ/mm)		
	Mild Steel	Stainless Steel	Aluminium
a = 3 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.

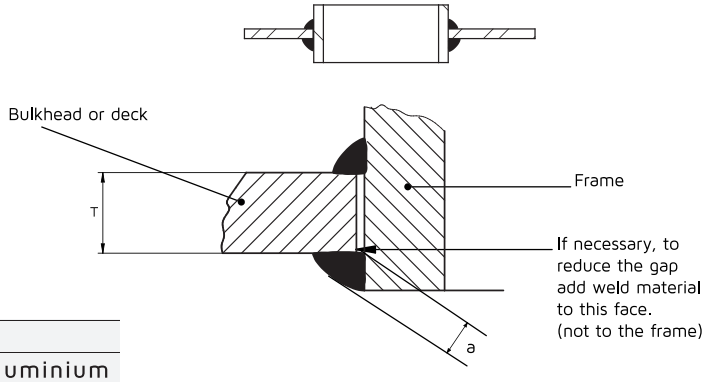
Follow same welding sequence for correct procedure.
The interpass temperature should not exceed 200ºC for mild steel and aluminium and 150ºC for stainless steel.

This welding throat should not excess following values:

T > 7mm a=5mm
T ≤ 7mm a=4mm

- Máx run lenght:

Mild Steel	200 mm
Stainless Steel	150 mm
Aluminium	200 mm



	Máx. Heat Input (KJ/mm)		
	Mild Steel	Stainless Steel	Aluminium
a = 4 mm	1,2	1,1	2
a = 5 mm	1,4	1,1	2