



# Welding Instruction and Bult-in Instruction



Welding sequence of a two-pass fillet shall be performed in the following steps with minimize heat input.

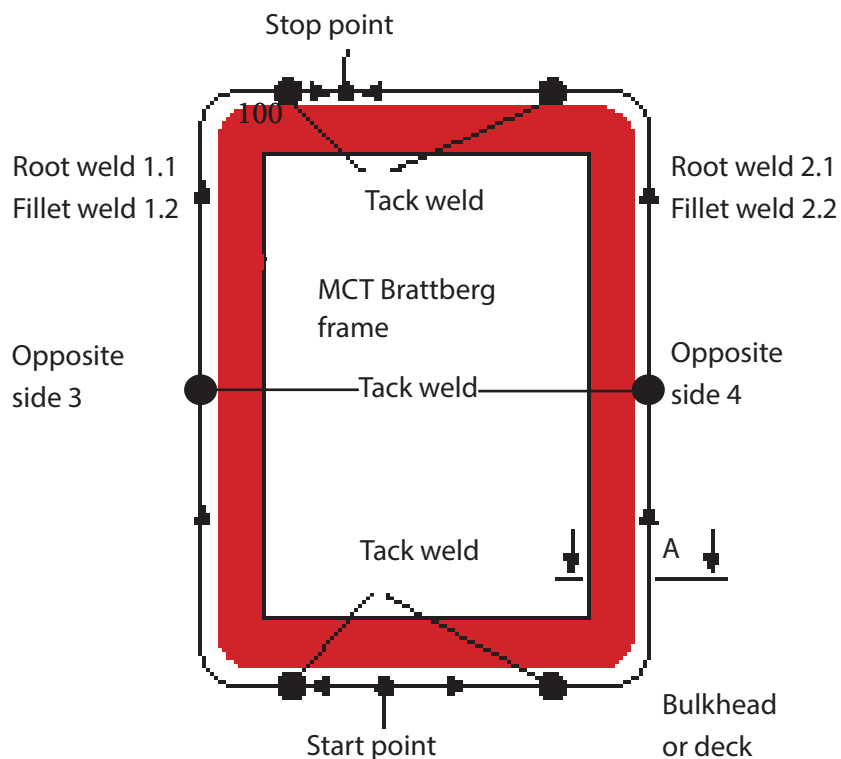
1 – Fix with tack weld points, maximum 150 mm (5.90") between.

2 – Root weld 1.1 and 2.1

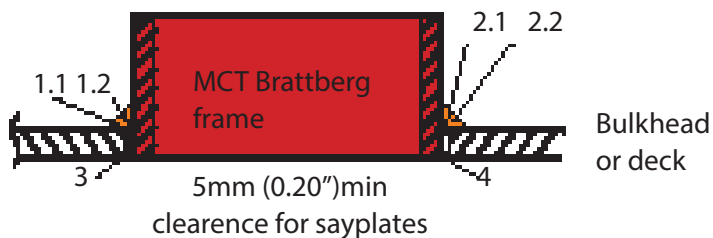
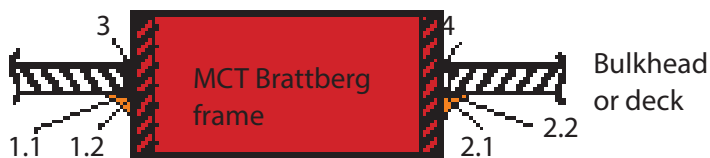
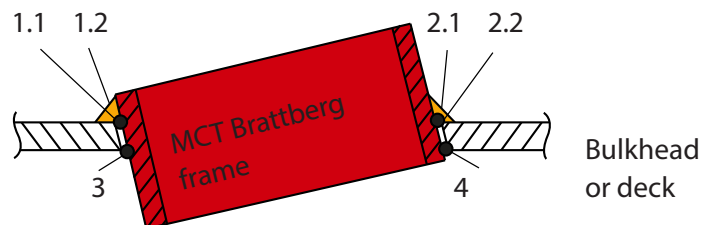
3 – Fillet weld 1.2 and 2.2

4 – Seal weld 3 and 4

Weld pass 4 is not to be started until weld 2 and 3 are completed!



Three different welding sequences

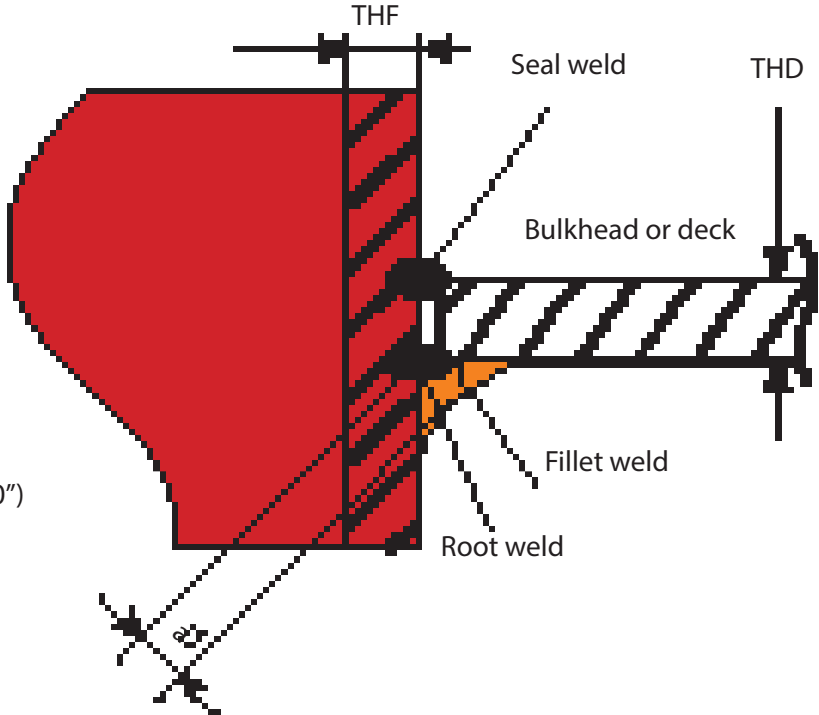


1.1 Root weld	1.2 Fillet weld	3 Seal weld
2.1 Root weld	2.2 Fillet weld	4 Seal weld

Fillet weld size for a centre-placed frame

Fillet weld size (throat thickness) is to be 0.5 x plate thickness of the bulkhead or deck plate (THD). However fillet weld size is not to be greater than 0.7 x frame plate thickness (THF).

a = Fillet size (throat thickness) Note!  
 THD = Thickness deck plate  
 THF = Thickness frame plate  
 Multi-pass welding is required if  $a \geq 5 \text{ mm (0.20")}$



Maximum allowable root gap for fillet joint

If root gap is too wide the deck plate or bulkhead may be built up with weld to achieve a proper gap (see Figure 2).

Figure 1

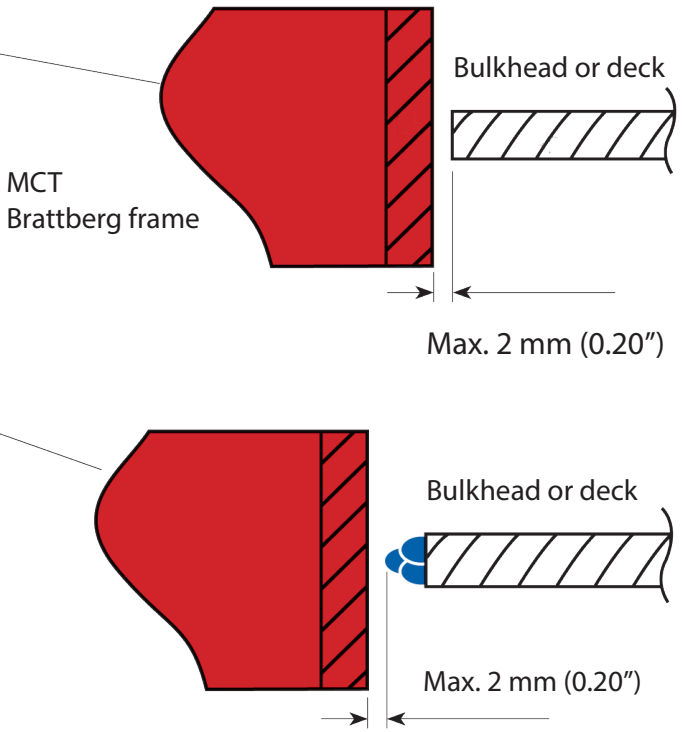


Build-up of fillet joint

Figure 2



Note! Weld build up on the frame is not recommended as it may cause deformation of the frame.



# Built-in

RGB frames can be cast directly into concrete walls or floors (figures 1 and 2). Alternatively the frames can be cast into a loose section that is built in later. When the demands for fire safety are extremely high, frames can be mounted back-to-back (fig. 3). Such an installation can also be pressure tested.

For there to be sufficient space for the stay plate and compression plate there must be 5 mm (0.2") of clearance between the frame's inside and the cast hole (fig. 4). MCT Brattberg's expanded polystyrene casting forms simplifies fixing when casting and provides the necessary clearance (fig. 5).

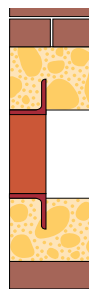


Fig. 1

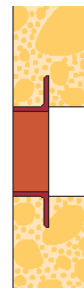


Fig. 2

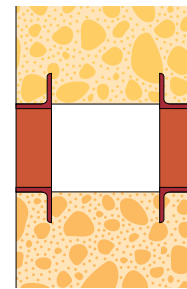


Fig. 3

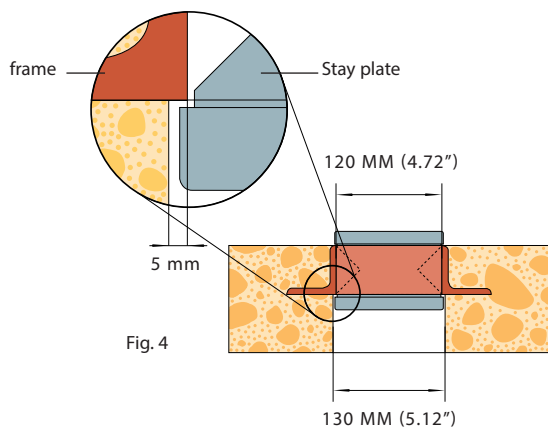
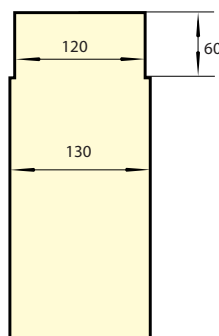


Fig. 4

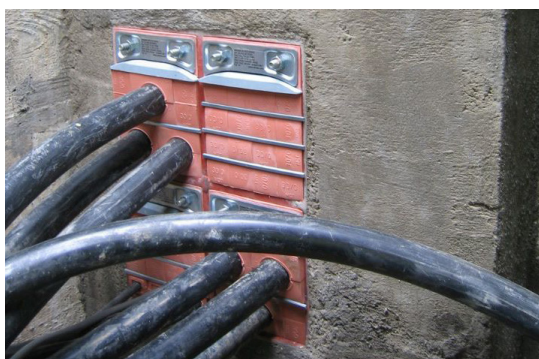


Polystyrene casting form

Fig. 5

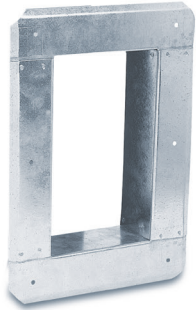


MCT Brattberg's expanded polystyrene casting form.





RGG frames and the flanges of the Counter frame are screwed into the wall (fig. 6). A Lycron sealing strip should be used between the wall and the flange to provide a gas tight seal. The galvanised counter frame is available with three different standard depths, which are suitable for the most common wall thicknesses, see below.



Counter frame

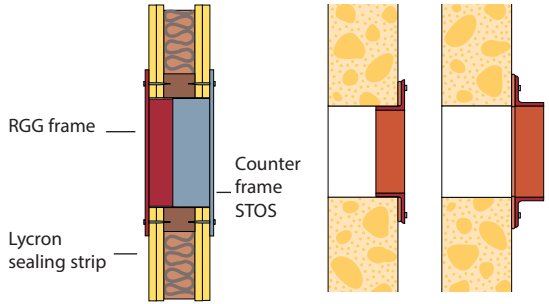


Fig.6

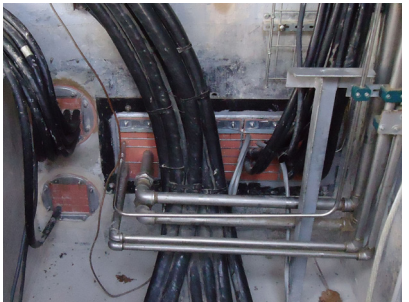
Fig. 7

Fig. 8

RGG and RGGO frames can also be bolted in place with the aid of, for example, expansion bolts. A Lycron sealing strip or sealant is used between the frame and the wall to provide a gas tight seal. There are two ways of bolting the frames in position, (figs. 7 and 8).

Where practically possible, fig. 7 should always be employed.

Wall thickness mm(inches)		
Counter frame/type	Min	Max
1	80 (3,15")	110 (4.33")
2	110 (4.33")	150 (5,91")
3	150 (5.91")	190 (7.48")



RGP and RGPO frames are installed on one side of the wall when normal demands are made for fire safety, (see fig. 9.) When the safety demands are particularly high two RGP frames are installed back-to-back (fig.10). RGP can be installed in drilled or cast holes, or in a pipe that is cast in or bolted. Casting is made easier if MCT Brattberg casting forms are used, see picture.

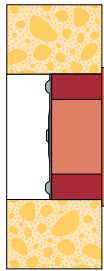


Fig. 9

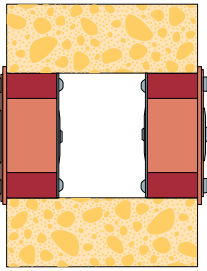


Fig. 10



MCT Brattberg's casting form.

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