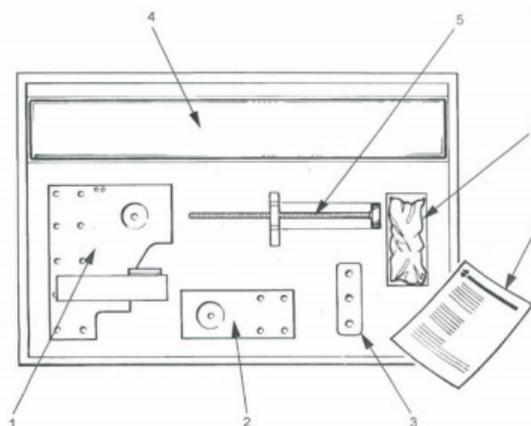


# Tube Sheet Facing Kit SX2872

## Technical documentation

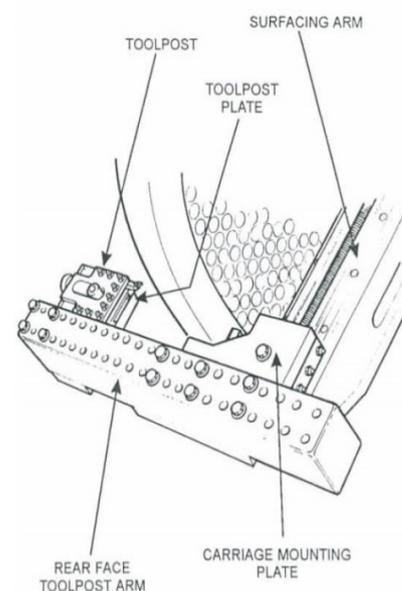
### Packing List

1. Carriage mounting plate and liner bearing.
2. Rear face toolpost plate
3. Linear support spacer
4. Rear face toolpost arm
5. Extended toolpost knob assembly
6. Pack of screws
  - M12 x 50 caphead screw (1 off)
  - M12 x 5 5 caphead screw (1 off)
  - M12 x 35 hexagon headed bolt (1 off)
  - M12 x 145 caphead screw (14 off)
  - M12 washers (15 off)
  - M10 x 110 caphead screw (3 off)
  - M10 washers (3 off)
7. Instruction sheet



### Instructions Machining the Flange Rear Face

1. Unscrew the toolpost centre screw and remove the toolpost from the carriage mounting plate. Remove the top plate and extended knob assembly and replace with the standard knob assembly.
2. Place the rear face toolpost arm against the carriage mounting plate in a position that allows the toolpost to access the flange and keeps arm protrusion above the carriage plate to a minimum. Secure in position with six M12 screws.
3. Attach the rear face toolpost plate at 90° to the rear face arm on the flange side. Secure with four M12 screws. Fit the toolpost to the rear face plate and secure.
4. Insert a turning tool into the toolpost, move the feed selector on the facing machine gearbox to the 'N' (neutral) position, select the feed direction and turn the feed direction knob to check the tool will full transverse the tool to the mid point of the area to be machined.
5. Adjust the counter balance weights by moving or adding additional weight(s) until the machine is rebalanced.
6. The assembly is now ready to perform the machining operation on the rear face of the tube sheet flange.



**Warning:** beware dangerous rotating machinery keep well clear during operation

Integrated Solutions to Piping Problems | [www.patriot-int.com](http://www.patriot-int.com)

The Netherlands

Dordrecht

T: +31 (0) 78 652 41 11

E: [info@patriot-int.com](mailto:info@patriot-int.com)

United Kingdom

Aberdeen

T: +44 (0) 1224 724726

E: [info@patriot-int.com](mailto:info@patriot-int.com)

Belgium

Antwerp

T: +32 (0)36 00 17 07

E: [info@patriot-int.com](mailto:info@patriot-int.com)



## Instructions Machining The Flange Front Face

1. Measure and note the outside diameter of the tube sheet puter flange. Slacken the surfacing arm clamping screws and move the arm outwards until the distance from the centre line of the machine to the end of the arm equals half the noted diameter plus 160/170mm. retighten the clamping screws to secure the arm in position.
2. Fit the vertical lifting bracket supplied with the facing machine to ensure the surfacing arm is underside of the centre line of the machine when lifted. Using a mechanical lifting device carefully lift the machine into the vertical position. Rotate the machine base by hand until a mounting hole is in line with the lifting cable (12 o'clock position) to match the mounting plate hole. Fit the location spigot to the rear of the machine base (refer to manual).
3. Carefully offer up the facing machining to the tube sheet mounting plate, ensure the location spigot is seated correctly in the mounting plate and secure with four M12 machine mounting bolts. When the lifting sling is removed the surfacing arm will rotate downwards due to its weight. To aid the operator it is recommended that the arm is supported to stop it rotating while the operator fits the counter balance and machining kit.

**Warning:** as the lifting cable is lowered and removed the operator must inspect and check the security of the machine. If in doubt, do not continue. Remove the machine and fully secure the mounting plate and refit the machine

4. Removing the lifting bracket and fit the counter balance bracket and stud bar. Attach the two large counter balance weight to the spud plus additional weights as necessary to roughly balance the surfacing arm (refer to manual).
5. Remove the toolpost from the surfacing arm. Locate the carriage mounting plate onto the surfacing are carriage and loosely fit the M12 hexagon headed bolt to lightly secure in position. Position the linear support bearing and support spacer (clearance step uppermost) such that the linear bearing protrudes one screw hole past the end of the surfacing arm and the remaining screw holes align with the holes in the support spacer and the three holes in the underside of the surfacing arm. Fit three M10 screws and lightly secure. Check and tighten the four linear bearing securing screws, the carriage mounting plate M12 hexagon headed bolt and the three support bearing and spacer screws.
6. Remove the two screws from the toolpost top plate, remove the plate and unscrew the knob and leadscrew assembly. Fit the extended knob assembly and refit the end plate. Locate the toolpost on the raised boss on the carriage mounting plate and secure in position with the centre screw. Check and adjust gib strips to allow movement with nil play.
7. Insert a turning tool into the toolpost, move the feed selector on the facing machine gearbox to the 'N' (neutral) position and turn the feed direction know to check the tool will fully traverse the width of the flange. After checking, traverse the tool to the mid point of the area to be machined.

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### The Netherlands

Dordrecht

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### United Kingdom

Aberdeen

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E: [info@patriot-int.com](mailto:info@patriot-int.com)

### Belgium

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E: [info@patriot-int.com](mailto:info@patriot-int.com)

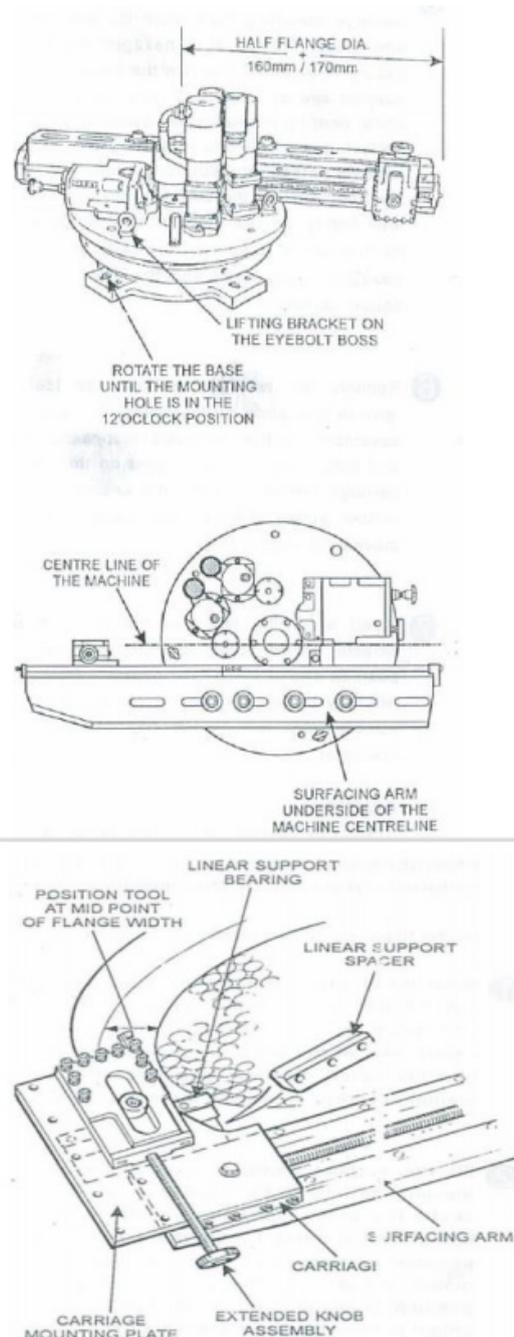


**Caution:** visually check that the machine will not foul obstruction during a complete revolution before operating the machine.

- Remove the surfacing arm support and adjust the counter balance weights, adding additional weight(s) if necessary until the machine is balanced (refer to machine manual).

**Warning:** before operating this machine a safe no-go area must be cautioned of around the machine to eliminate accidental intrusion by unauthorised personnel.

- The assembly is now ready to perform the machining operation on the front face of the tube sheet flange.



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**The Netherlands**

Dordrecht

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Aberdeen

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E: [info@patriot-int.com](mailto:info@patriot-int.com)

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