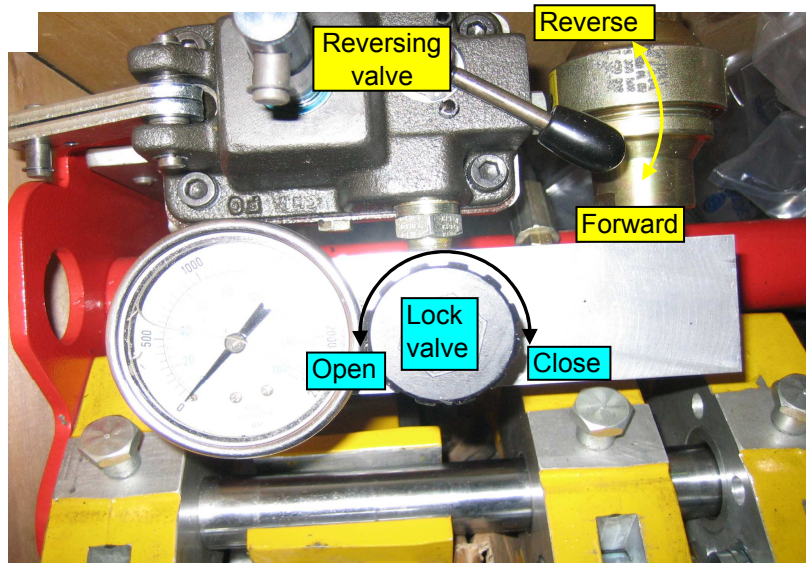




## Manual Hydraulic operation for 160,250 & 315mm butt welders



1. Before starting weld ensure that Lock valve in in "open" position
2. To move clamps (pipe ends) apart switch Reversing valve to "reverse" position & pump lever.
3. To move clamps (pipe ends) together switch Reversing valve to "forward" position & pump lever.

### Welding procedure

1. Complete welding parameters sheet.
2. Move carriage apart as far as possible.
3. Load pipe into clamps, allowing enough space between ends for easy placement of facer, close & tighten upper clamps.
4. Bring pipe ends together until you achieve welding pressure "P1" ensure that pipe does not move at this pressure load.
5. Bring pipe ends apart until you have enough space to fit the facer in.
6. Fit & lock facer into place, start facer.
7. Bring pipe ends together until pipe makes contact with facer, slowly increase pressure until the facer starts to shave the pipe ends, continue to keep pressure against facer until swarf is parting off as a continuous length. **DO NOT EXCEED 10 BAR DURING THIS OPERATION AS THIS MAY DAMAGE FACER!**
8. Decrease pressure slowly (using reversing valve) then move pipe ends apart.
9. Switch off facer and remove, replace facer into stand.
10. Bring pipe ends together to check alignment.
11. Clean pipe ends and heater plate.
12. Confirm heater plate temperature.
13. Move pipe ends apart until there is enough space to fit the heating plate in.
14. Bring pipe ends against heater plate until you achieve welding pressure "P1"; maintain this pressure until there is bead of approximately "T1" around the circumference of the pipe.
15. Slowly move reversing valve toward reverse position until pressure drops to soak pressure "P2" then move reverse lever back to forward position.
16. Maintain this pressure for time "T2" and change reversing valve to reverse position.
17. Move pipe ends apart until there is enough space to remove the heating plate. (N.B. see heater plate removal device)
18. Bring pipe ends together within "T3" until you achieve welding pressure "P1", turn lock valve fully to closed position maintain this pressure for "T5"
19. Open lock valve and reversing lever to relieve pressure before loosening clamps.

(Ram dimension 250 & 315mm = 510mm<sup>2</sup>, 160mm = 353mm<sup>2</sup>)