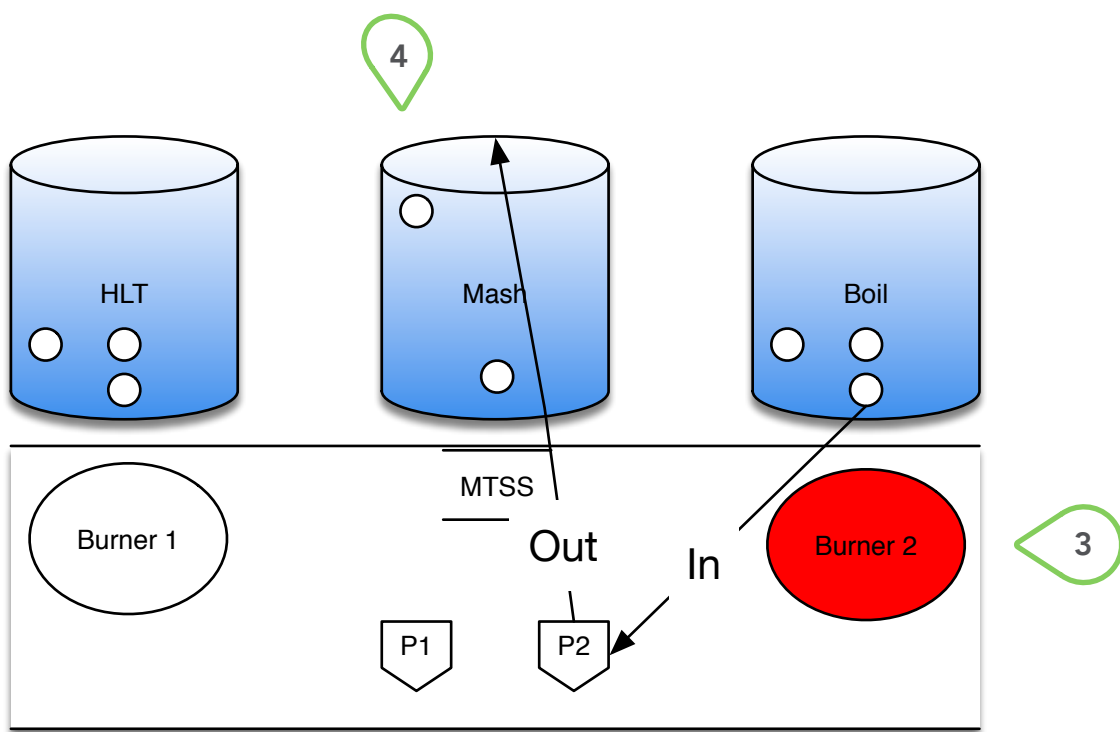


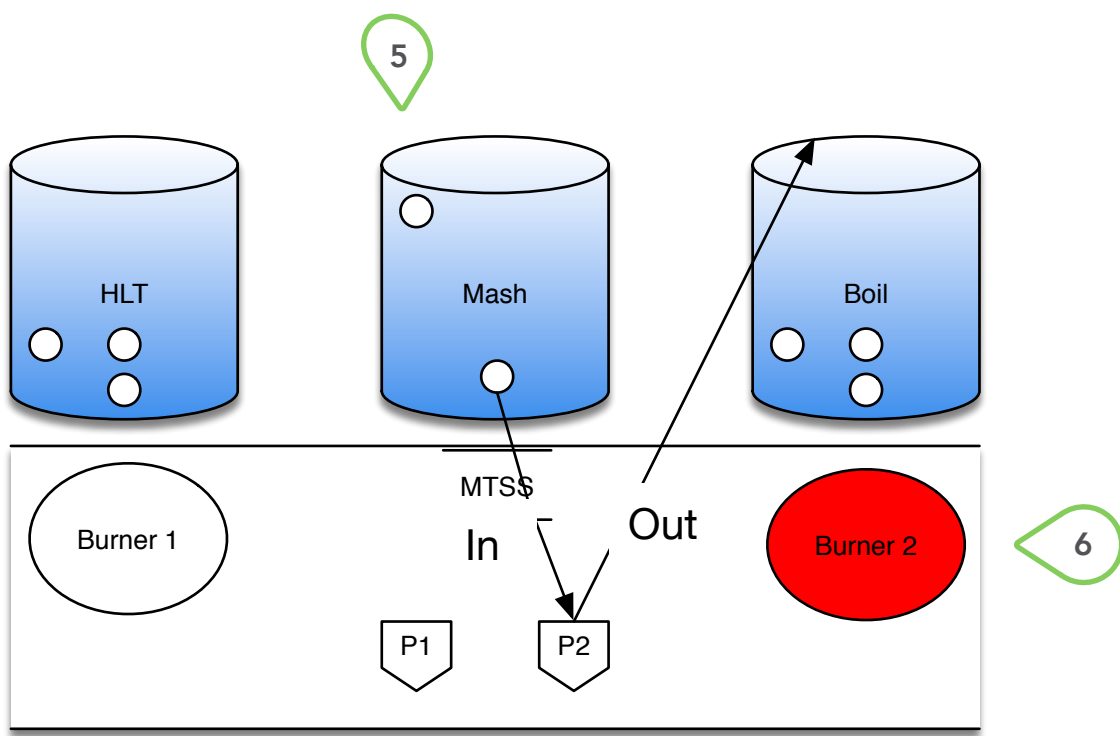
Water Volume

1. Fill boil kettle with Strike water volume.
2. Fill hot liquor tank with Sparge water volume.



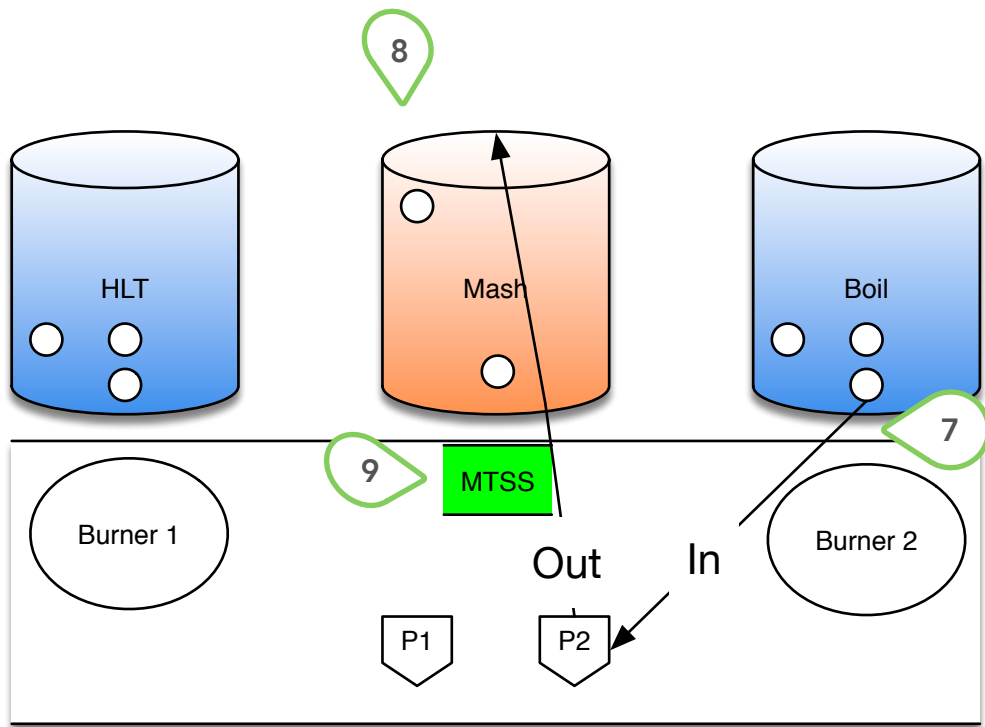
Pre-Heat Step A

3. Light burner 2 - get boil kettle up to target strike temperature.
4. Once target strike temp is reached, use pump 2 to transfer water to mash tun for pre-heat step (full volume for 10 minutes).



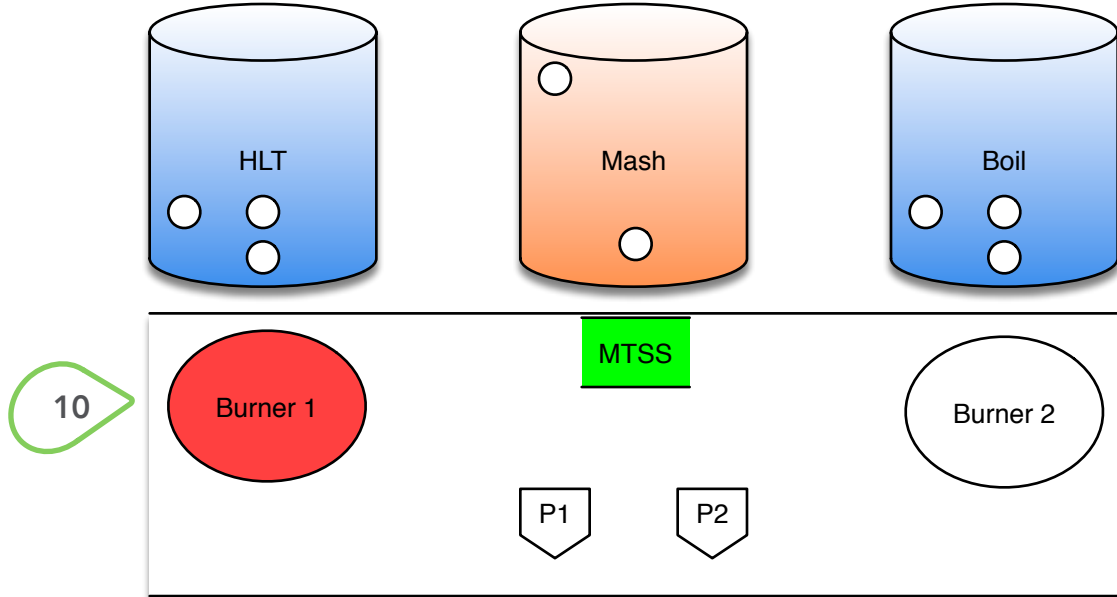
Pre-Heat Step B

5. Transfer water from pre-heated mash tun back to boil kettle.
6. Heat strike water back up to target temperature.



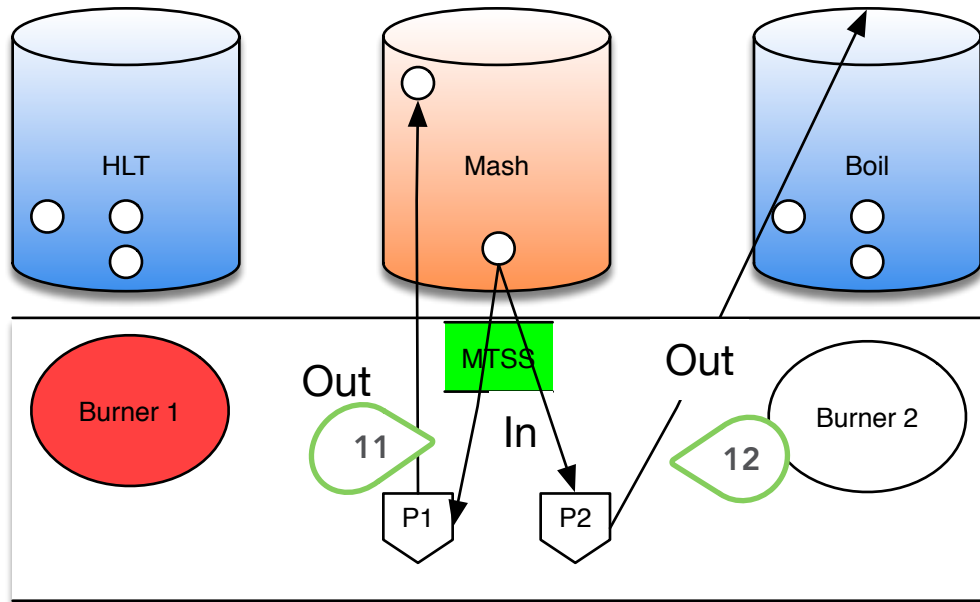
Mash In

- 7. Once target strike temp is reached, use pump 2 to transfer water to mash tun. Turn burner off.
- 8. Dough in (add grain), mix well and cover for duration of mash.
- 9. Turn on MTSS and set to target temperature for duration of mash.



Heat Sparge

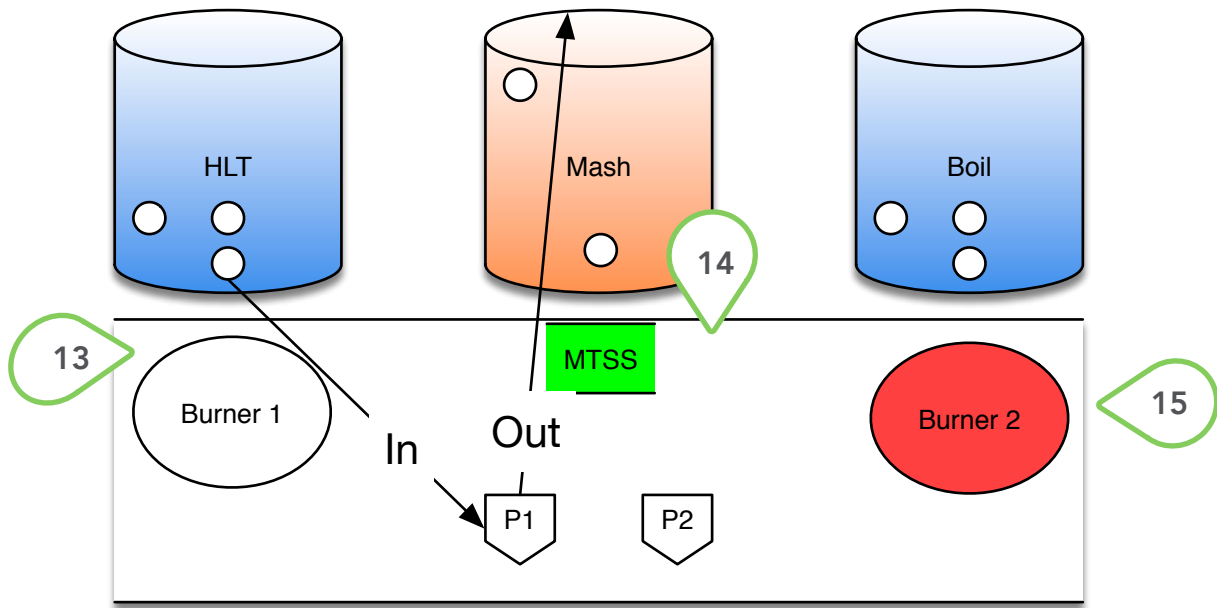
10. Once 15 - 20 minutes are left in the duration of the mash rest, light burner 1 and get to 175 - 180 degrees for sparge temp. Lower heat as needed to maintain at 180 degrees.



Vorlauf (recirculate) + first runnings

11.. Once duration of mash is over, recirculate wort for 5 minutes using pump 1.

12.. Once wort is clear, change quick disconnect configuration to transfer first runnings to boil kettle via pump 2.

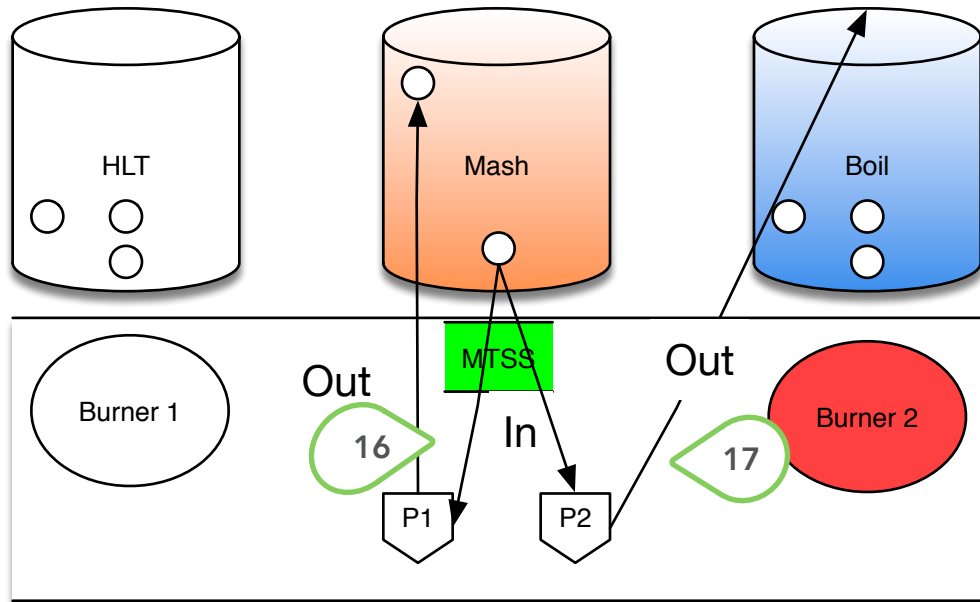


Sparge

13. Shut burner 1 off. Transfer sparge water from hot liquor tank to mash tun via pump 1. Mix, cover, and rest 15 minutes.

14. Raise temperature of MTSS to 170.

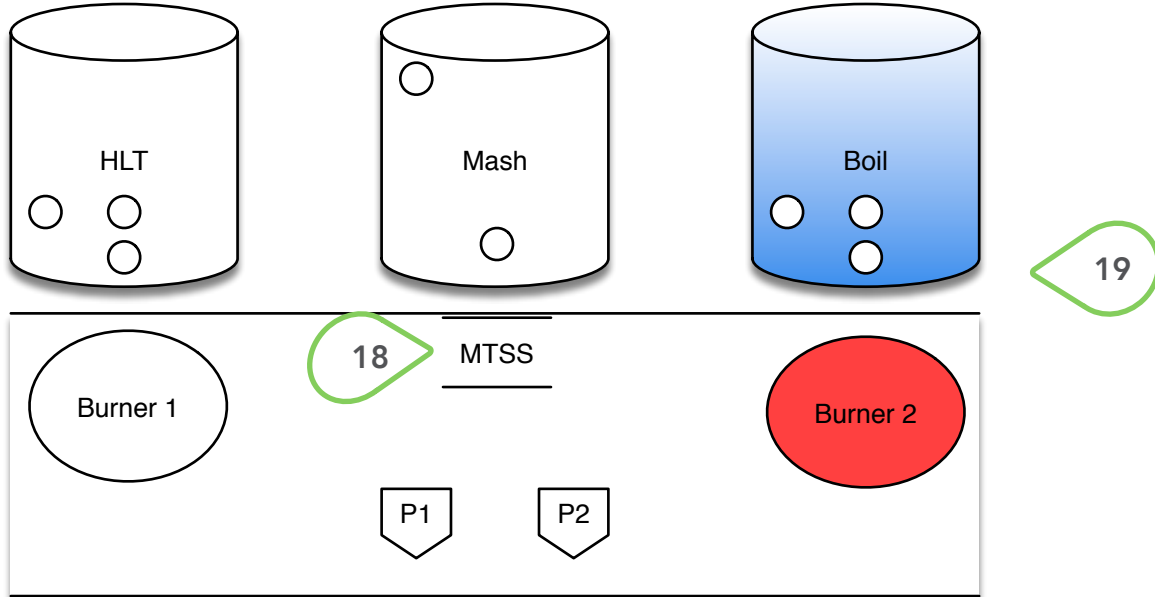
15. Ignite burner 2 to start getting wort up to a boil.



Recirculate) + second runnings

16. Once duration of sparge is over, recirculate wort for 5 minutes using pump 1.

17. Once wort is clear, change quick disconnect configuration to transfer first runnings to boil kettle via pump 2.

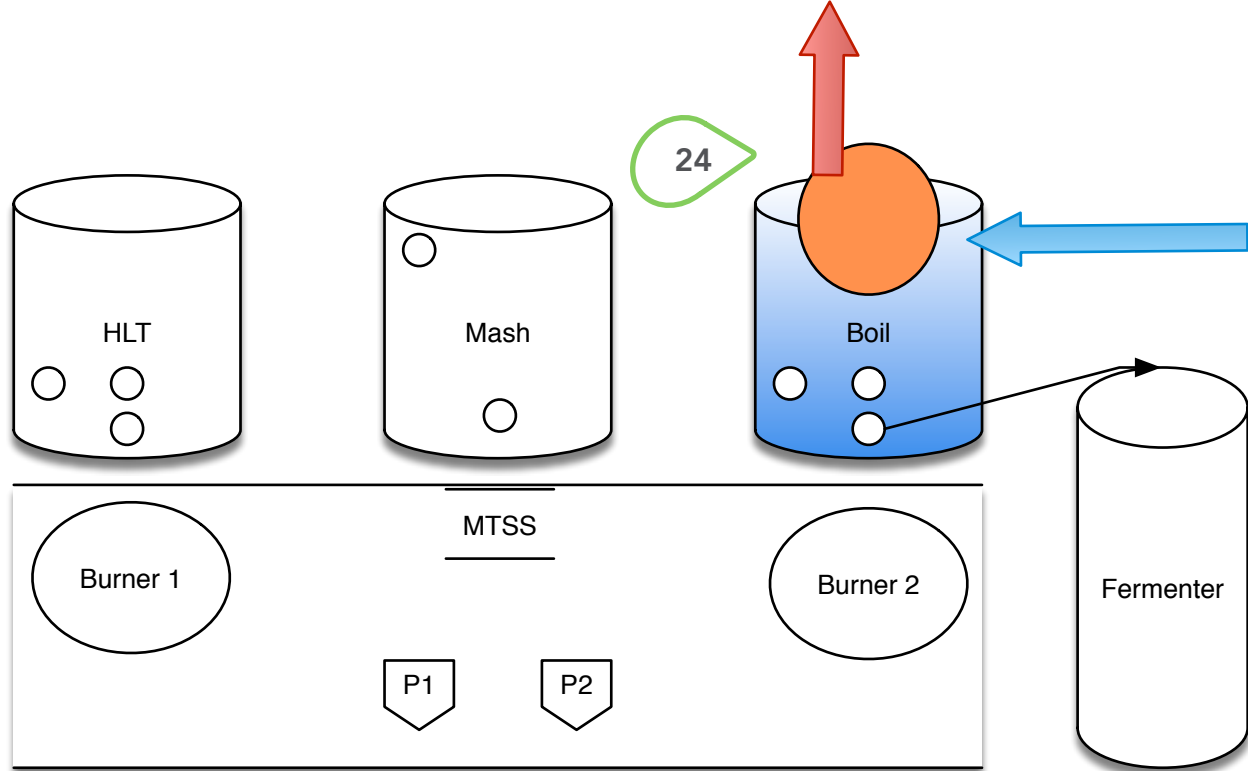


Boil

- 18. Shut off MTSS.
- 19. Bring wort to a boil for duration of brew.



20. Insert hydra cooler during last 10 minutes of boil.
21. Once boil is completed shut off burner 2.
22. Setup whirlpool using pump 2. Run for 3 - 5 minutes to establish a good whirlpool.
23. Hookup hydra to ground water and out source.



Cooling & transfer

24. Continue running hydra until the wort is within 5+ degrees of pitching temperature.
25. Use standard ball valve on boil kettle to transfer wort to fermenter.