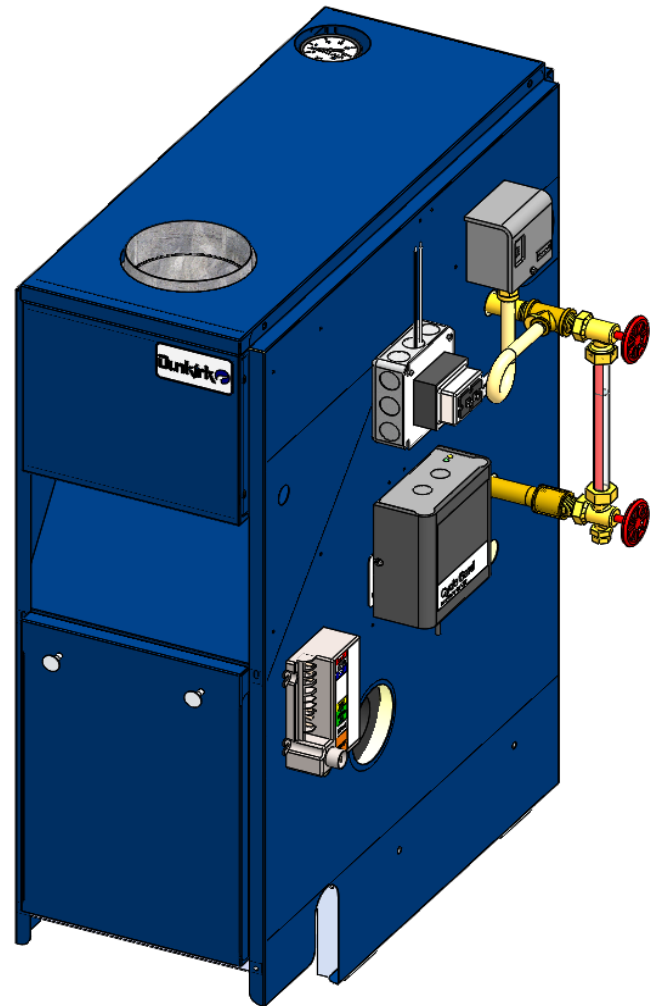




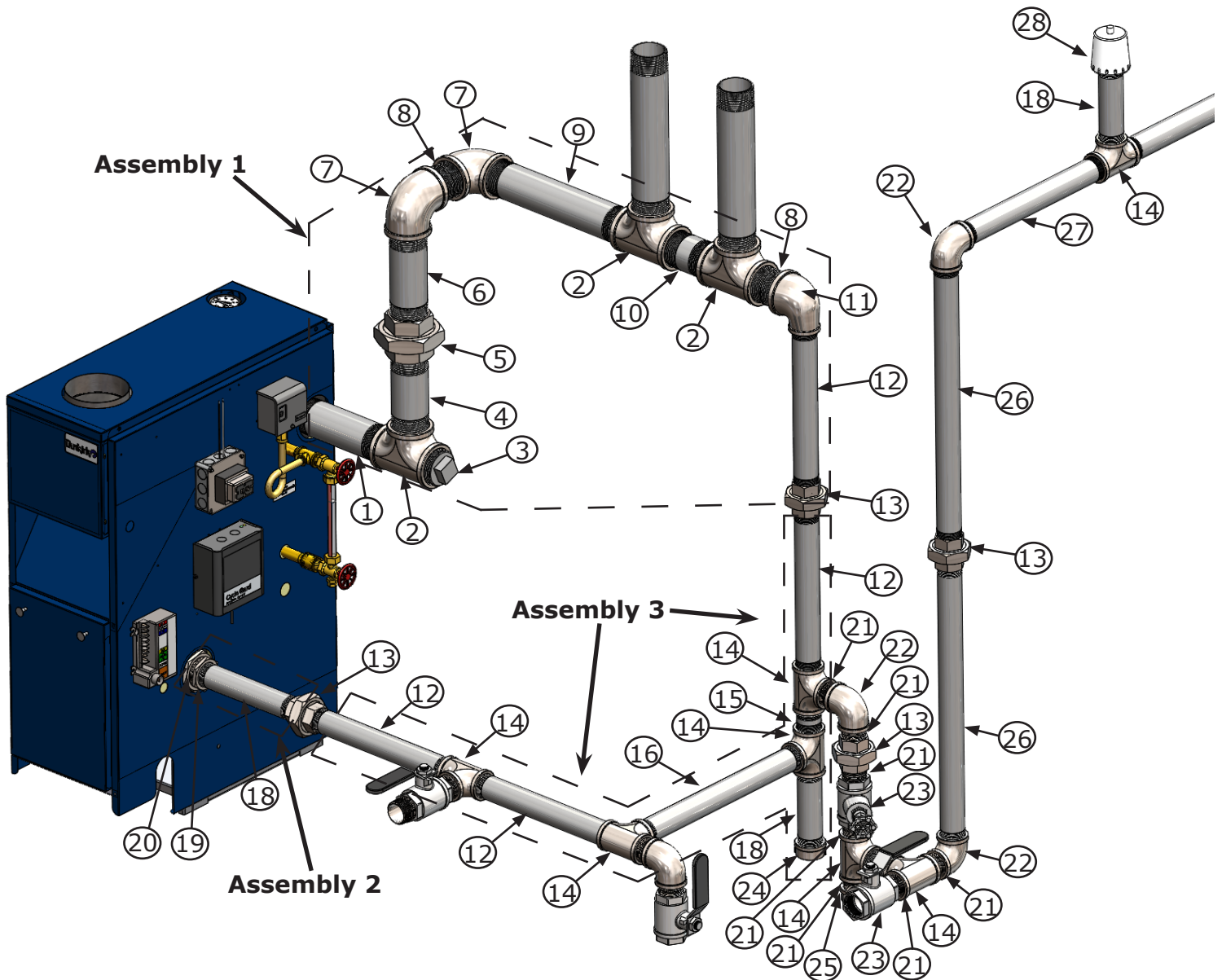
**PLYMOUTH STEAM
BOILER SERIES 2
GAS-FIRED
STEAM BOILERS**

NEAR BOILER PIPING



Manufactured by:
ECR International Inc.
2201 Dwyer Avenue, Utica, NY 13501
Tel. 800 253 7900
www.ecrinternational.com
PN 615000243 REV. A [06/30/2018]

**ONE SUPPLY TAPPING
FOR 3 AND 4 - SECTION BOILERS ONLY**



- All installations shall follow National/Local codes and requirements mentioned in boiler installation manual.
- It is recommended to apply Teflon tape or quality pipe dope on all threaded connections.
- Engagement depth for all piping is normally around $1\frac{9}{32}$ " per threaded connection.
- Engagement depth of threaded connection depends on quality and supplier of parts. Installer is responsible for making sure each connection is fully engaged, secure, and leak free.
- General guide only. Check dimensions of specific install location and adjust piping as needed to meet requirements in IOM.
- This guide is not intended to require replacement of existing piping. Existing piping may meet the requirements outlined in the IOM.

ONE SUPPLY TAPPING - LIST OF PARTS

| Piping | | | |
|---------------|--------------------------------|--------|-------------------|
| Item # | Description | Length | Quantity Required |
| 1 | 2 ½" NPT,Nipple | 9" | 1 |
| 2 | 2 ½" NPT,Tee Connector | n/a | 3 |
| 3 | 2 ½" NPT,Plug | n/a | 1 |
| 4 | 2 ½" NPT,Nipple | 7" | 1 |
| 5 | 2 ½" NPT,Union | n/a | 1 |
| 6 | 2 ½" NPT,Nipple | 8" | 1 |
| 7 | 2 ½" NPT,Elbow Connector | n/a | 2 |
| 8 | 2 ½" NPT,Nipple | 3" | 2 |
| 9 | 2 ½" NPT,Nipple | 14" | 1 |
| 10 | 2 ½" NPT,Nipple | 4 ½" | 1 |
| 11 | 2 ½" to 1 ½" NPT,Elbow Reducer | n/a | 1 |
| 12 | 1 ½" NPT,Nipple | 14" | 4 |
| 13 | 1 ½" NPT,Union | n/a | 4 |
| 14 | 1 ½" NPT,Tee Connector | n/a | 7 |
| 15 | 1 ½" NPT,Nipple | 2 ½" | 1 |
| 16 | 1 ½" NPT,Nipple | 18" | 1 |
| 18 | 1 ½" NPT,Nipple | 7" | 3 |
| 19 | 2"-1 ½" Bushing Reducer | n/a | 1 |
| 20 | 2 ½"-2" Bushing Reducer | n/a | 1 |
| 21 | 1 ½" NPT,Nipple | 1 ¾" | 7 |
| 22 | 1 ½" NPT,Elbow Connector | n/a | 3 |
| 23 | 1 ½" NPT,Gate/Ball Valve | n/a | 2 |
| 24 | 1 ½" NPT,Cap | n/a | 2 |
| 25 | 1 ½" NPT,Nipple | 3" | 1 |
| 26 | 1 ½" NPT,Nipple | 24" | 2 |
| 27 | 1 ½" NPT,Nipple | 16" | 1 |
| 28 | Air Vent | n/a | 1 |

- Assembly 1

1. Secure Pipe 1 to boiler
2. Tee 2 to pipe 1
3. Plug 3 to tee 2
4. Pipe 4 to tee 2
5. Union 5 to pipe 4
6. Pipe 6 onto other side of union 5
7. Elbow 7 to pipe 6
8. Pipe 8 to elbow 7
9. Elbow 7 to pipe 8
10. Pipe 9 to elbow 7
11. Tee 2 to pipe 9
12. Pipe 10 to tee 2
13. Tee 2 to pipe 10
14. Pipe 8 to reducer 11
15. Pipe 12 to elbow reducer 11
16. Half union 13 to pipe 12

- Assembly 2

1. Secure pipe 10 to boiler
2. Elbow 7 to pipe 10
3. Pipe 4 to elbow 7
4. Union 5 to pipe 4

- Assembly 3

1. Half of union 13 to pipe 12
2. Tee 14 to pipe 12
3. Pipe 15 to tee 14
4. Tee 14 to pipe 15
5. Pipe 18 to tee 14
6. Cap 24 to pipe 18
7. Pug 24 to tee 14
8. Tee 14 to pipe 16
9. Pipe 12 to tee 14
10. Tee 14 to pipe 12
11. Pipe 12 to tee 14
12. Half of union 13 to pipe 12

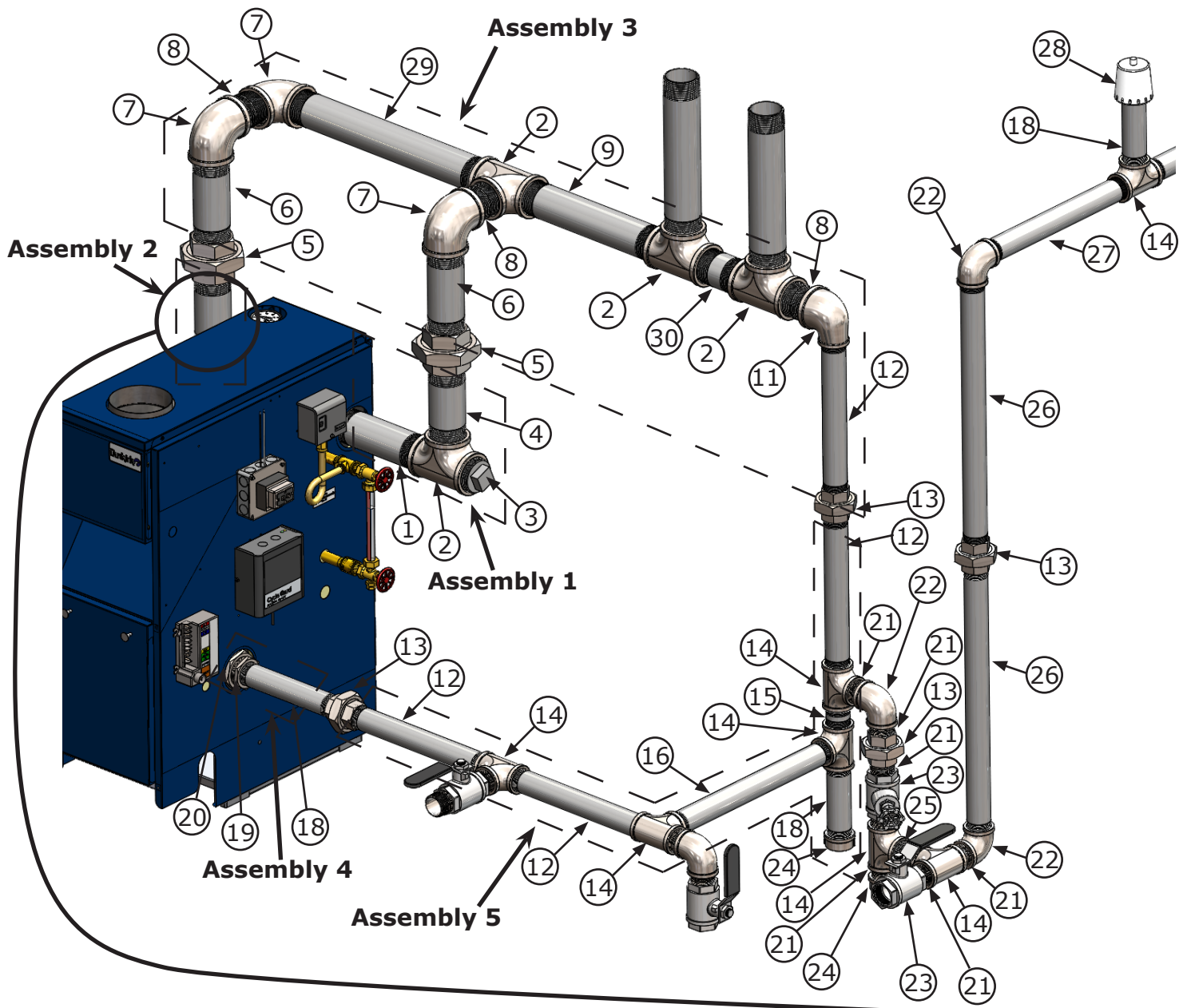
- Attach assembly 3 to both assembly 1 & 2

- Finish near boiler piping

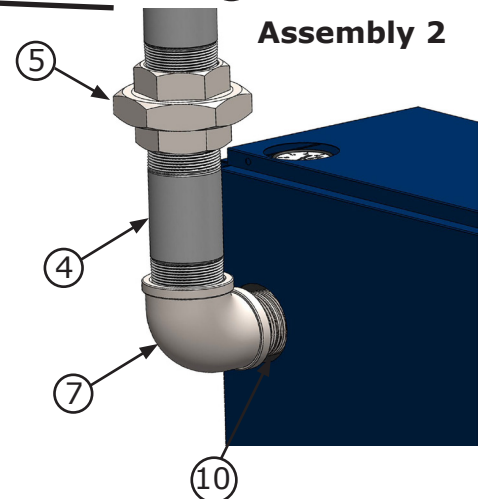
1. Pipe 21 to tee 14 from assy 3
2. Elbow 22 to pipe 21
3. Pipe 21 to elbow 22
4. Union 13 to pipe 21
5. Pipe 21 to union 13
6. Valve 23 to pipe 21
7. Pipe 21 to valve 23
8. Tee 14 to pipe 21
9. Pipe 21 to tee 14
10. Cap 24 to pipe 21
11. Pipe 25 to tee 14
12. Tee 14 to pipe 25
13. Pipe 21 to tee 14
14. Valve 23 to pipe 21
15. Pipe 21 to tee 14
16. Elbow 22 to pipe 21
17. Pipe 26 to elbow 22
18. Union 13 to pipe 26
19. Pipe 26 to union 13
20. Elbow 22 to pipe 26
21. Pipe 27 to elbow 22
22. Tee 14 to pipe 27
23. Pipe 18 to tee 14
24. Air Vent 28 to pipe 18

TWO SUPPLY TAPPING

APPLICABLE FOR ALL MODELS. REQUIRED FOR 5 SECTION OR LARGER BOILERS



- All installations shall follow National/Local codes and requirements mentioned in boiler installation manual.
- It is recommended to apply Teflon tape or quality pipe dope on all threaded connections.
- Engagement depth for all piping is normally around $1\frac{9}{32}$ " per threaded connection.
- Engagement depth of threaded connection depends on quality and supplier of parts. Installer is responsible for making sure each connection is fully engaged, secure, and leak free.
- General guide only. Check dimensions of specific install location and adjust piping as needed to meet requirements in IOM.
- This guide is not intended to require replacement of existing piping. Existing piping may meet the requirements outlined in the IOM.



TWO SUPPLY TAPPING - LIST OF PARTS

| Item # | Description | Length | Quantity Required |
|--------|--------------------------------|---|-------------------|
| 1 | 2 ½" NPT,Nipple | 9" | 1 |
| 2 | 2 ½" NPT,Tee Connector | n/a | 3 |
| 3 | 2 ½" NPT,Plug | n/a | 1 |
| 4 | 2 ½" NPT,Nipple | 7" | 2 |
| 5 | 2 ½" NPT,Union | n/a | 2 |
| 6 | 2 ½" NPT,Nipple | 8" | 2 |
| 7 | 2 ½" NPT,Elbow Connector | n/a | 4 |
| 8 | 2 ½" NPT,Nipple | 3" | 3 |
| 9 | 2 ½" NPT,Nipple | 14" | 1 |
| 10 | 2 ½" NPT,Nipple | 2 ½" | 1 |
| 11 | 2 ½" to 1 ½" NPT,Elbow Reducer | n/a | 1 |
| 12 | 1 ½" NPT,Nipple | 14" | 4 |
| 13 | 1 ½" NPT,Union | n/a | 3 |
| 14 | 1 ½" NPT,Tee Connector | n/a | 7 |
| 15 | 1 ½" NPT,Nipple | 2 ½" | 1 |
| 16 | 1 ½" NPT,Nipple | 18" | 1 |
| 18 | 1 ½" NPT,Nipple | 7" | 3 |
| 19 | 2"-1 ½" Bushing Reducer | n/a | 1 |
| 20 | 2 ½"-2" Bushing Reducer | n/a | 1 |
| 21 | 1 ½" NPT,Nipple | 1 ¾" | 7 |
| 22 | 1 ½" NPT,Elbow Connector | n/a | 3 |
| 23 | Gate/Ball Valve | n/a | 2 |
| 24 | 1 ½" NPT,Cap | n/a | 2 |
| 25 | 1 ½" NPT,Nipple | 3" | 1 |
| 26 | 1 ½" NPT,Nipple | 24" | 2 |
| 27 | 1 ½" NPT,Nipple | 16" | 1 |
| 28 | Air Vent | n/a | 1 |
| 29 | 2 ½" NPT,Nipple | 3 Sec - 16" 4 Sec - 19" 5 Sec - 22 1/2" 6 Sec - 26" 7 Sec - 29" 8 Sec - 32" 9 Sec - 35 1/2" | 1 |
| 30 | 2 ½" NPT,Nipple | 4 ½" | 1 |

TWO SUPPLY TAPPING - ASSEMBLY PROCEDURE

- Assembly 1

1. Secure Pipe 1 to boiler
2. Tee 2 to pipe 1
3. Plug 3 to tee 2
4. Pipe 4 to tee 2
5. Union 5 to pipe 4

- Assembly 2

1. Secure pipe 10 to boiler
2. Elbow 7 to pipe 10
3. Pipe 4 to elbow 7
4. Union 5 to pipe 4

- Assembly 3

1. Half of union 5 to pipe 6
2. Elbow 7 to pipe 6
3. Pipe 8 to elbow 7
4. Tee 2 to pipe 8
5. Pipe 29 to tee 2
6. Elbow 7 to pipe 29
7. Pipe 8 to elbow 7
8. Elbow 7 to pipe 8
9. Pipe 6 to elbow 7
10. Half of union 5 to pipe 6
11. Pipe 9 to tee 2
12. Tee 2 to pipe 9
13. Pipe 30 to Tee 2
14. Tee 2 to pipe 30
15. Pipe 8 to tee 2
16. Elbow reducer 11 to pipe 8
17. Pipe 12 to elbow reducer 11
18. Half of union 13 to pipe 12.

- Attach assembly 3 to both assembly 1 & 2

- Assembly 4

1. Secure reducer 20 to boiler
2. Reducer 19 to reducer 20
3. Pipe 18 to reducer 19
4. Half union 13 to pipe 18

- Assembly 5

1. Half of union 13 to pipe 12
2. Tee 14 to pipe 12
3. Pipe 15 to tee 14
4. Tee 14 to pipe 15
5. Pipe 18 to tee14
6. Cap 24 to pipe 18
7. Pipe 16 to tee 14
8. Tee 14 to pipe 16
9. Pipe 12 to tee 14
10. Tee 14 to pipe 12
11. Pipe 12 to tee 14
12. Half of union 13 to pipe 12

- Attach assembly 5 to both assembly 3 & 4

- Finish near boiler piping

1. Pipe 21 to tee 14 from assy 5
2. Elbow 22 to pipe 21
3. Pipe 21 to elbow 22
4. Union 13 to pipe 21
5. Pipe 21 to union 13
6. Valve 23 to pipe 21
7. Pipe 21 to valve23
8. Tee 14 to pipe 21
9. Pipe 21 to tee 14
10. Cap 24 to pipe 21
11. Pipe 25 to tee 14
12. Tee 14 to pipe 25
13. Pipe 21 to tee 14
14. Valve 23 to pipe 21
15. Pipe 21 to tee 14
16. Elbow 22 to pipe 21
17. Pipe 26 to elbow 22
18. Union 13 to pipe 26
19. Pipe 26 to union 13
20. Elbow 22 to pipe 26
21. Pipe 27 to elbow 22
22. Tee 14 to pipe 27
23. Pipe 18 to tee 14
24. Air Vent 28 to pipe 18



2201 Dwyer Avenue, Utica, NY 13501
Tel. 800 253 7900
www.ecrinternational.com

All specifications subject to change without notice.
©2018 ECR International, Inc.