



## Models

Q90-50

Q90-75

Q90-100

# Q90-50/75/100 Series 2

# Q90-100 Series 3

GAS-FIRED, DIRECT VENT,  
CONDENSING, HOT WATER BOILER

## PARTS, KITS AND OPTIONAL ACCESSORIES

### Ordering Instructions

Order Parts through your nearest supplier.

When ordering parts, obtain Model Number and Serial Number from data plate on your boiler.

Include following information when ordering.

Part Number \_\_\_\_\_

Part Description \_\_\_\_\_

Boiler Model Number \_\_\_\_\_

Boiler Serial Number \_\_\_\_\_



An ISO 9001-2008 Certified Company

**Manufactured by:**

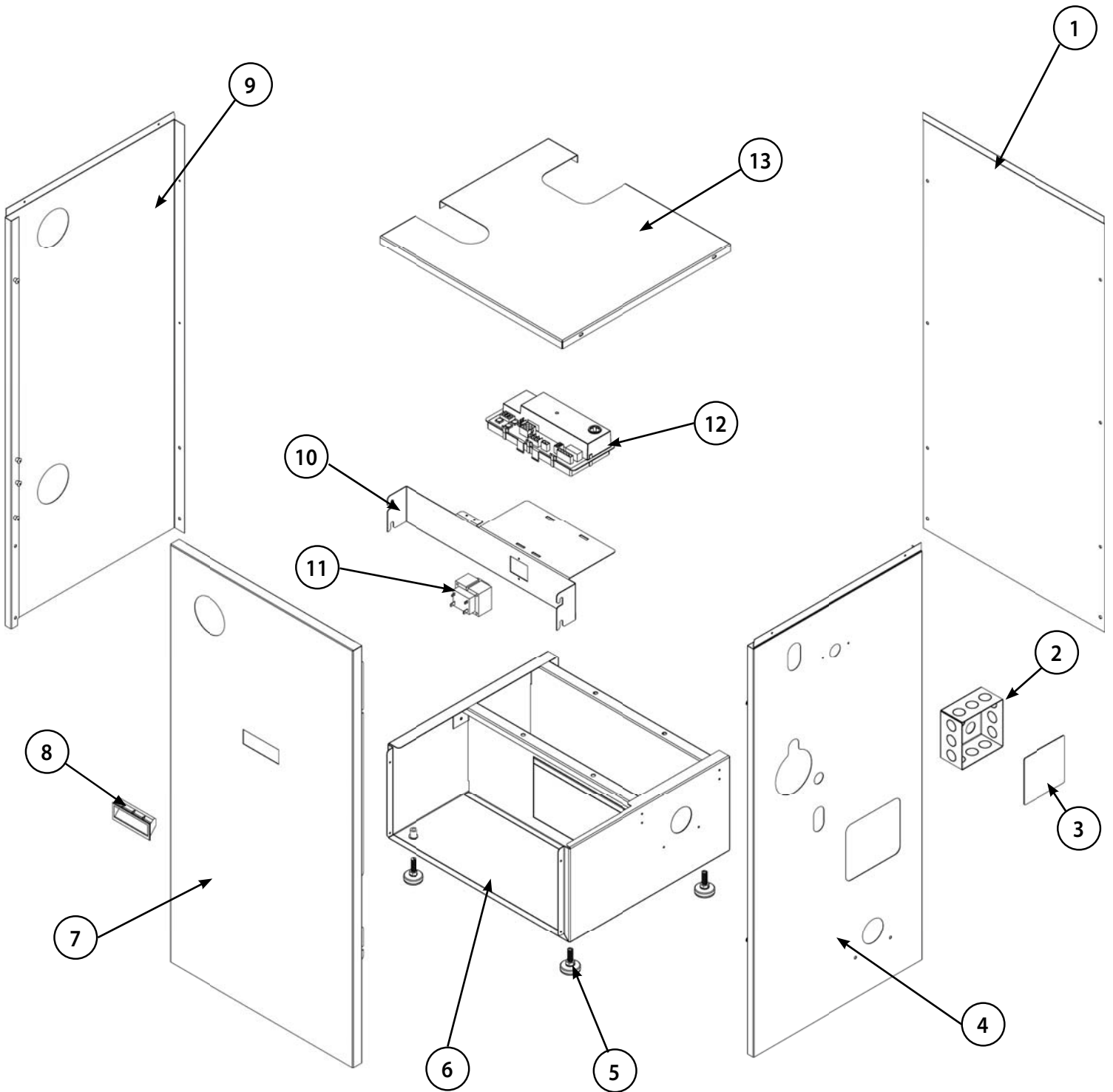
**ECR International, Inc.**

2201 Dwyer Avenue, Utica NY 13501

web site: [www.ecrinternational.com](http://www.ecrinternational.com)

P/N# 240009426 Rev. C [09/2012]

Jacket and Base Assembly



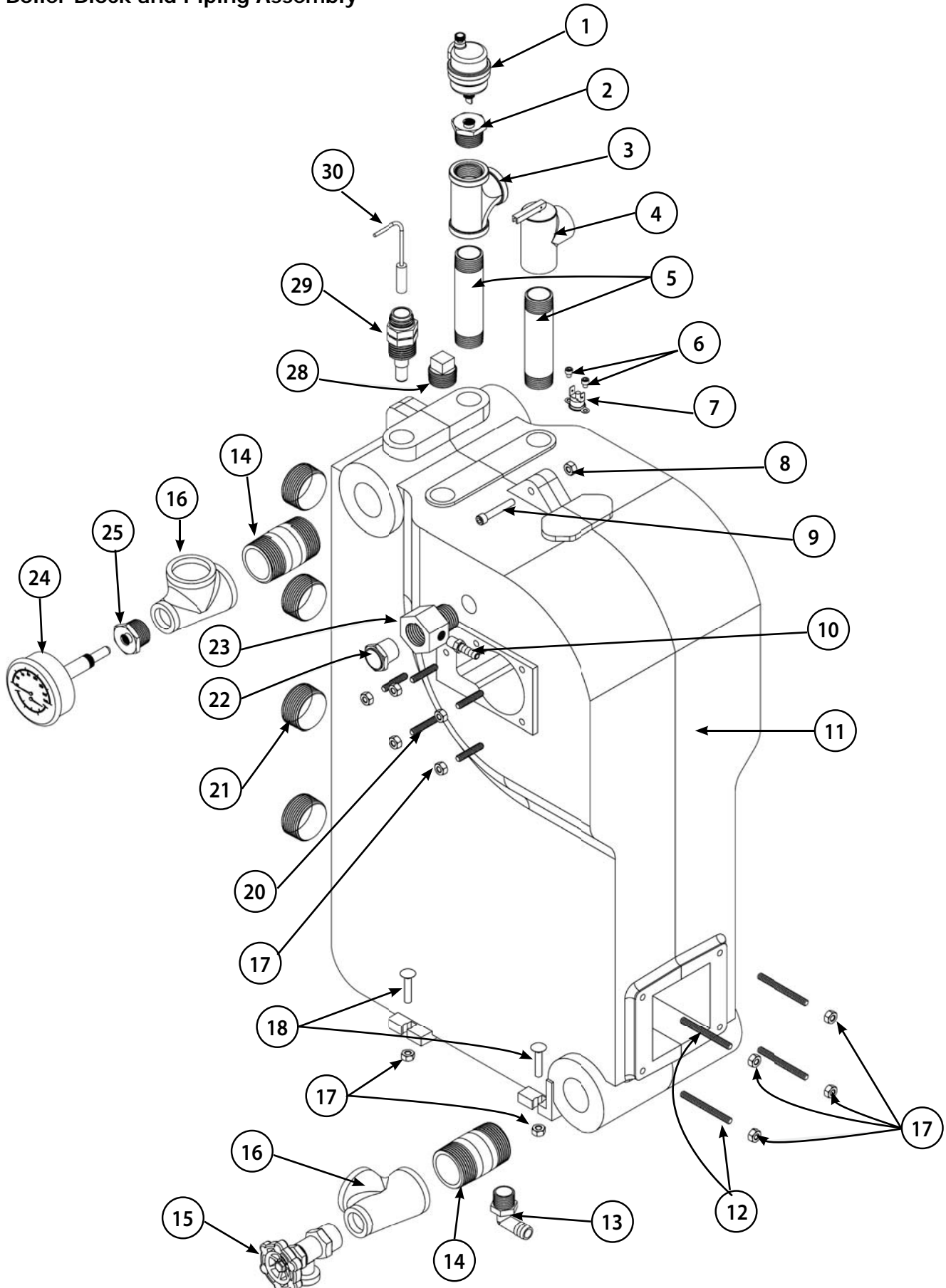
**REPAIR PARTS**

**Jacket And Base Assembly**

| KEY # | DESCRIPTION                                 | QUANTITY | ITEM NUMBER               |
|-------|---|----------|---------------------------|
| 1     | BACK PANEL                                  | 1        | 109008720AC               |
| 2     | RACO 232 4x4x2½ BOX                         | 1        | 14631316                  |
| 3     | COVER PLATE BLANK 4" SQUARE                 | 1        | 212000009                 |
| 4     | RIGHT PANEL                                 | 1        | 109008718AC               |
| 5     | CO-2366 GLIDE                               | 4        | 14631091                  |
| 6     | REPLACEMENT BASE ASSEMBLY (Includes item 5) | 1        | 550002650                 |
| 7     | DOOR PULL                                   | 1        | 28673                     |
| 8     | FRONT PANEL                                 | 1        | 109008717AC               |
| 9     | LEFT PANEL                                  | 1        | 109008719AC               |
| 10    | CONTROL PANEL                               | 1        | 109008721                 |
| 11    | 120VAC/24VAC 40VA TRANSFORMER               | 1        | <a href="#">240005330</a> |
| 12    | S9381A INTEGRATED BOILER CONTROL            | 1        | 240009282                 |
| 13    | TOP PANEL                                   | 1        | 109008732AC               |
| ‡     | TACO CIRCULATING PUMP                       | 1        | CI-001.03                 |
| ‡     | GRUNDFOS CIRCULATING PUMP                   | 1        | C1-006.01                 |
| ‡     | CIRCULATING PUMP HARNESS                    | 1        | 43300826                  |
| ‡     | JACKET COMPLETE (Includes 1, 4, 8, 9, 13)   | ----     | 550002588                 |
| ‡     | 3" CONCENTRIC VENT KIT                      | 1        | 29571                     |
| ‡     | 2" CONCENTRIC VENT KIT                      | 1        | 29570                     |

‡ - Not Shown

Boiler Block and Piping Assembly



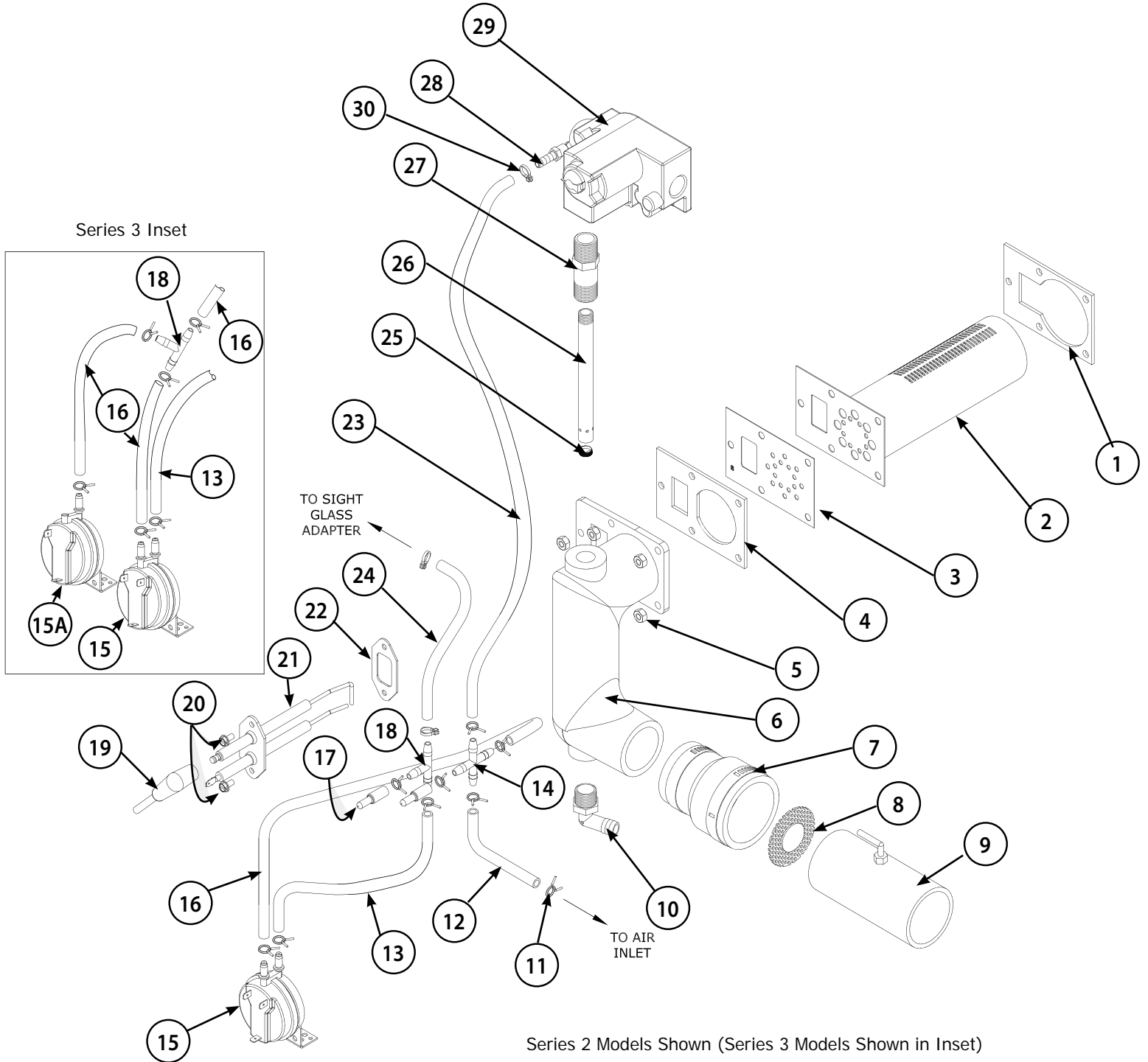
**REPAIR PARTS**

**Boiler Block and Piping Assembly**

|   | KEY #   | ITEM NUMBER | DESCRIPTION  | QTY                             |   |
|---|---|-------------|--|---------------------------------|---|
| <b>550002627<br/>INCLUDES<br/>ITEMS<br/>LISTED HERE</b> | 11  | 550002627   | KIT BLOCK REPL Q90-100 SERIES 2                                | 1                               |   |
|   | 5   | 14607202    | NPL,3/4X4½,BI,STD  | 2                               |   |
|   | 6   | 14695802    | SCR,8-32 X 3/16,RH,ALH,CAP                                     | 2                               |   |
|   | 7   | 14631000    | SWITCH CASTING TEMP Q90 36T26-42930 300                        | 1                               |   |
|   | 10  | 14631005    | FITTING, 125HBL-4-2 <sup>1</sup> / <sub>8</sub> " X 1/4" BR.B+ | 1                               |   |
|   | 12  | 240009021   | STUD, THREADED, 1/4-20 X 2-1/4                                 | 4                               |   |
|   | 13  | 240009285   | ELB,TBE, ½"NPT X 5/8" ID,HB, 62044                             | 1                               |   |
|   | 14  | 14607044    | NPL,1-1/4X2-1/2,BI,STD   | 2                               |   |
|   | 16  | 1510001     | TEE,RDCR,1-1/4" X 3/4" X 1-1/4"                                | 2                               |   |
|   | 17  | 14695810    | NUT, 1/4-20, HWS   | 13                              |   |
|   | 18  | 14695040    | BOLT, 1/4-20 X 1-1/4", CARRIAGE                                | 4                               |   |
|   | 20  | 14695805    | STUD, THREADED, 1/4-20 X 1 1/4"                                | 5                               |   |
|   | 22  | 14619002    | OBSERVATION GLASS, 3/4"  | 1                               |   |
|   | 23  | 14631004    | ADAPTER, SIGHT GLASS   | 1                               |   |
|   | **  | 240009284   | EXHAUST SPACER BUSHING 1/4X3/8X7/8 LONG                        | 4                               |   |
|   | **  | 240009583   | GASKET, EXHAUST SPACER   | 4                               |   |
|   | **  | 1250010     | GASKET IGNITER   | 1                               |   |
|   | **  | 14631023    | GASKET BURNER  | 1                               |   |
|   | **  | 14631025    | GASKET MIXER   | 1                               |   |
|   | **  | 14695809    | SCREW, 10-32 X 3/8"  | 2                               |   |
|   | --- * NOTE: #8, 9, 21, AND 28 INSTALLED IN HEAT EXCHANGER --- |             |  |                                 |   |
|   |   | 8*          | 14695810   | NUT, 1/4-20,HWS                 | 5 |
|   |   | 9*          | 14695801   | SCR, 1/4-20 X 1-1/2",RH,ALH,CAP | 5 |
|   |   | 21*         | 1395002  | 1-1/4 HEX SOCKET PLUG           | 8 |
|   |   | 28*         | 1395001  | 3/4" SQ HD PLUG                 | 1 |
|   |   | 1           | 1580006  | VENT AIR PURGE Q SERIES         | 1 |
|   |   | 2           | 14693001   | BSHG, 3/4" X 1/8",BLK           | 1 |
|   |   | 3           | 14693076   | TEE,BLK, 3/4"                   | 1 |
|   | 4   | 14622011    | VLV,SAFETY,RLF,30PSI,3/4,10-408-05                             | 1                               |   |
|   | 15  | 240009323   | VLV,DRN,3/4,   | 1                               |   |
|   | 24  | 1260006     | GAUGE,TEMP/PRESS,2" SHANK                                      | 1                               |   |
|   | 25  | 1060002     | BUSHING, 3/4" x 1/4" BLK                                       | 1                               |   |
|   | 29  | 240009283   | WELL, SHORT, 1½" INSRT, HL, 48-205                             | 1                               |   |
|   | 30  | 240009339   | SENSOR, HIGH LIMIT, 24" HW, 50001465-003                       | 1                               |   |
|   | **  | 240008013   | SENSOR MOUNTING CLIP, HW 32002656                              | 1                               |   |

\*\* Not Shown

Mixer and Air Pressure Switch Assembly



Series 2 Models Shown (Series 3 Models Shown in Inset)

Mixer and Air Pressure Switch Assembly

| KEY # | DESCRIPTION   | QUANTITY | ITEM NUMBER              |
|-------|---|----------|--------------------------|
| 1     | BURNER GASKET   | 1        | <a href="#">14631023</a> |
| 2     | BURNER KIT, 90-50/75/100 SERIES 2/SERIES 3 NAT/LP, 0'-10,000' (Contains: 1, 2, 4, ) | 1        | 550002632                |
| 3     | RESTRICTOR PLATE 90-50 SERIES 2   | 1        | 109006405                |
|       | RESTRICTOR PLATE 90-75 SERIES 2   | 1        | 109006406                |
| 4     | MIXER GASKET  | 1        | <a href="#">14631025</a> |
| 5     | ¼"-20 HEX NUT W/SERRATED WASHER HEAD  | 5        | 14695810                 |

**MIXER AND AIR PRESSURE SWITCH ASSEMBLY - CONTINUED**

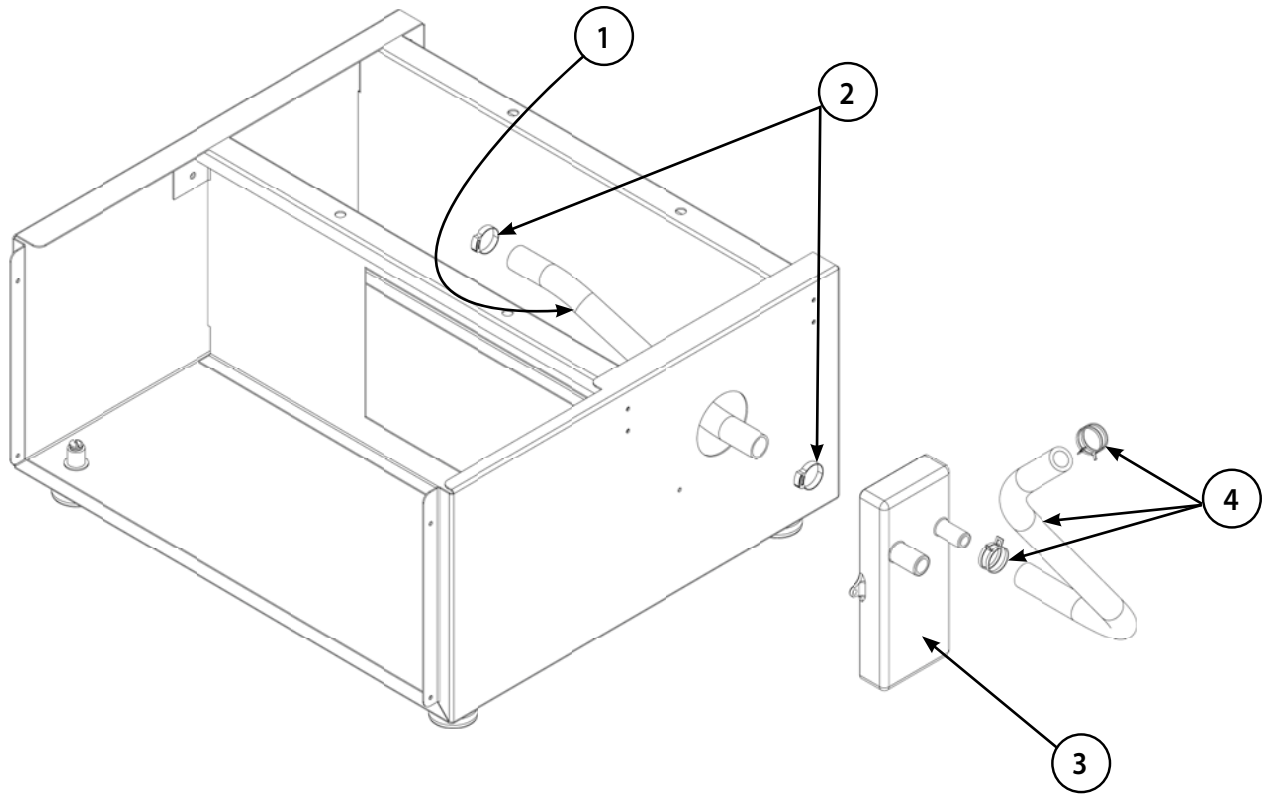
|     |  |                                  |                          |
|-----|--|----------------------------------|--------------------------|
| 6   | MIXER CASTING MACHINED                                 | 1                                | 12101008                 |
| 7   | 2" x 1½" FLEXIBLE COUPLING                             | 1                                | 14631311                 |
| 8   | 90-100 SERIES 2 AIR BAFFLE 0.50" DISC                  | 1                                | 42531100                 |
|     | 90-100 SERIES 3 AIR BAFFLE 1.00" DISC                  | 1                                | 109008977                |
|     | 90-75 SERIES 2 AIR BAFFLE 1.17" DISC                   | 1                                | 109008915                |
|     | 90-50 SERIES 2 AIR BAFFLE 1.55" DISC                   | 1                                | 109008916                |
| 9   | AIR INLET  | 1                                | 43800007                 |
| 10  | 62043 ½" NPT 1/2" ID TUBE ELBOW                        | 1                                | 14631103                 |
| 11  | 3/8" HOSE CLAMP HC-6ST                                 | 9 for SERIES 2 / 13 for SERIES 3 | 14631143                 |
| 12  | 59006 1/4" ID X 3/8" OD VINYL TUBING                   | AS REQUIRED                      | 14631033                 |
| 13  | 1/4" ID 3/8" OD VINYL TUBING (RED)                     | AS REQUIRED                      | 14631314                 |
| 14  | ¼" ID TUBE 4-WAY CONNECTOR                             | 1                                | 14631313                 |
| 15  | 90-100 SERIES 2 DIFFERENTIAL AIR PRESSURE SWITCH 1.00" | 1                                | <a href="#">14631312</a> |
|     | 90-100 SERIES 3 DIFFERENTIAL AIR PRESSURE SWITCH 1.35" | 1                                | 14631010                 |
|     | 90-75 SERIES 2 DIFFERENTIAL AIR PRESSURE SWITCH 1.60"  | 1                                | 240009612                |
|     | 90-50 SERIES 2 DIFFERENTIAL AIR PRESSURE SWITCH 2.10"  | 1                                | 240009613                |
| 15A | 90-100 SERIES 3 NEGATIVE PRESSURE SWITCH -0.50"        | 1                                | 240009793                |
| 16  | 59006 1/4" ID X 3/8" OD VINYL TUBING                   | AS REQUIRED                      | 14631033                 |
| 17  | PC250-12 VINYL CAP                                     | 2                                | 14631151                 |
| 18  | 62064 ¼" ID TUBE TEE                                   | 1 for SERIES 2 / 2 for SERIES 3  | 14631104                 |
| 19  | IGNITION CABLE   | 1                                | 240009290                |
| 20  | 10-32"x 3/8" MACHINE SCREW                             | 2                                | 14695809                 |
| 21* | DIRECT SPARK IGNITER KIT (FOR 50/75/100 SERIES 2)      | 1                                | 550002633                |
| 22  | IGNITER GASKET   | 1                                | 1250010                  |
| 23  | 59006 1/4" ID X 3/8" OD VINYL TUBING                   | AS REQUIRED                      | 14631033                 |
| 24  | 3/16" ID SILICONE TUBING                               | AS REQUIRED                      | 1552014                  |
| 25  | 1/8" NPT BRASS PLUG - 3/16" HEX SOCKET                 | 1                                | 14693805                 |

**NOTE: 90-100 SERIES 2 MODELS ARE NOT APPROVED FOR PROPANE. DO NOT USE PROPANE ORIFICES OR PROPANE CONVERSION KITS ON 90-100 SERIES 2 MODELS.**

|      |   |   |                          |
|------|---|---|--------------------------|
| 26** | GAS ORIFICE NATURAL, 100N (0.0860, #44) 0-10,000' SERIES 2/SERIES 3         | 1 | 43331090                 |
|      | GAS ORIFICE NATURAL, 75N (0.0760, #48) 0-10,000' SERIES 2                   | 1 | 43331092                 |
|      | GAS ORIFICE NATURAL, 50N (0.0615) 0-10,000' SERIES 2                        | 1 | 43331094                 |
|      | GAS ORIFICE PROPANE, 100P (0.0670, #51) 0-10,000' SERIES 3 <b>ONLY</b>      | 1 | 43331091                 |
|      | GAS ORIFICE PROPANE, 75P (0.0531) 5,000-10,000' SERIES 2                    | 1 | 43331096                 |
|      | GAS ORIFICE PROPANE, 75P (0.0605) 0-5,000' SERIES 2                         | 1 | 43331093                 |
|      | GAS ORIFICE PROPANE, 50P (0.0492) 0-10,000' SERIES 2                        | 1 | 43331095                 |
| 27   | BUSHING WITH HEX, Q90 SERIES 2 MIXER  | 1 | 240009289                |
| 28   | 5/16-24 1/4 HOSE ID BRASS BARB FITTING                                      | 1 | 14631308                 |
| 29   | HONEYWELL GAS VALVE VR8205 (INCLUDES ITEM 28)                               | 1 | <a href="#">14631307</a> |
| -    | NATURAL TO PROPANE CONVERSION KIT, 90-50 SERIES 2, 0'-10,000'               | 1 | 550002631                |
| -    | NATURAL TO PROPANE CONVERSION KIT, 90-75 SERIES 2, 0'-5,000'                | 1 | 550002630                |
| -    | NATURAL TO PROPANE CONVERSION KIT, 90-75 SERIES 2, 5,000'-10,000'           | 1 | 550002629                |
| -    | NATURAL TO PROPANE CONVERSION KIT, 90-100 SERIES 3 <b>ONLY</b> , 0'-10,000' | 1 | 550002700                |
| -    | PROPANE TO NATURAL CONVERSION KIT, 90-50 SERIES 2, 0-10,000'                | 1 | 550002635                |
| -    | PROPANE TO NATURAL CONVERSION KIT, 90-75 SERIES 2, 0-10,000'                | 1 | 550002634                |
| -    | PROPANE TO NATURAL CONVERSION KIT, 90-100 SERIES 3 <b>ONLY</b> , 0-10,000'  | 1 | 550002701                |
| 30   | TIE, NYLON, PANDUIT, 4"   | 3 | 14691002                 |

\* - Includes item numbers 20, 21 & 22. \*\* - Includes item number 25

Condensate Drain Trap Assembly

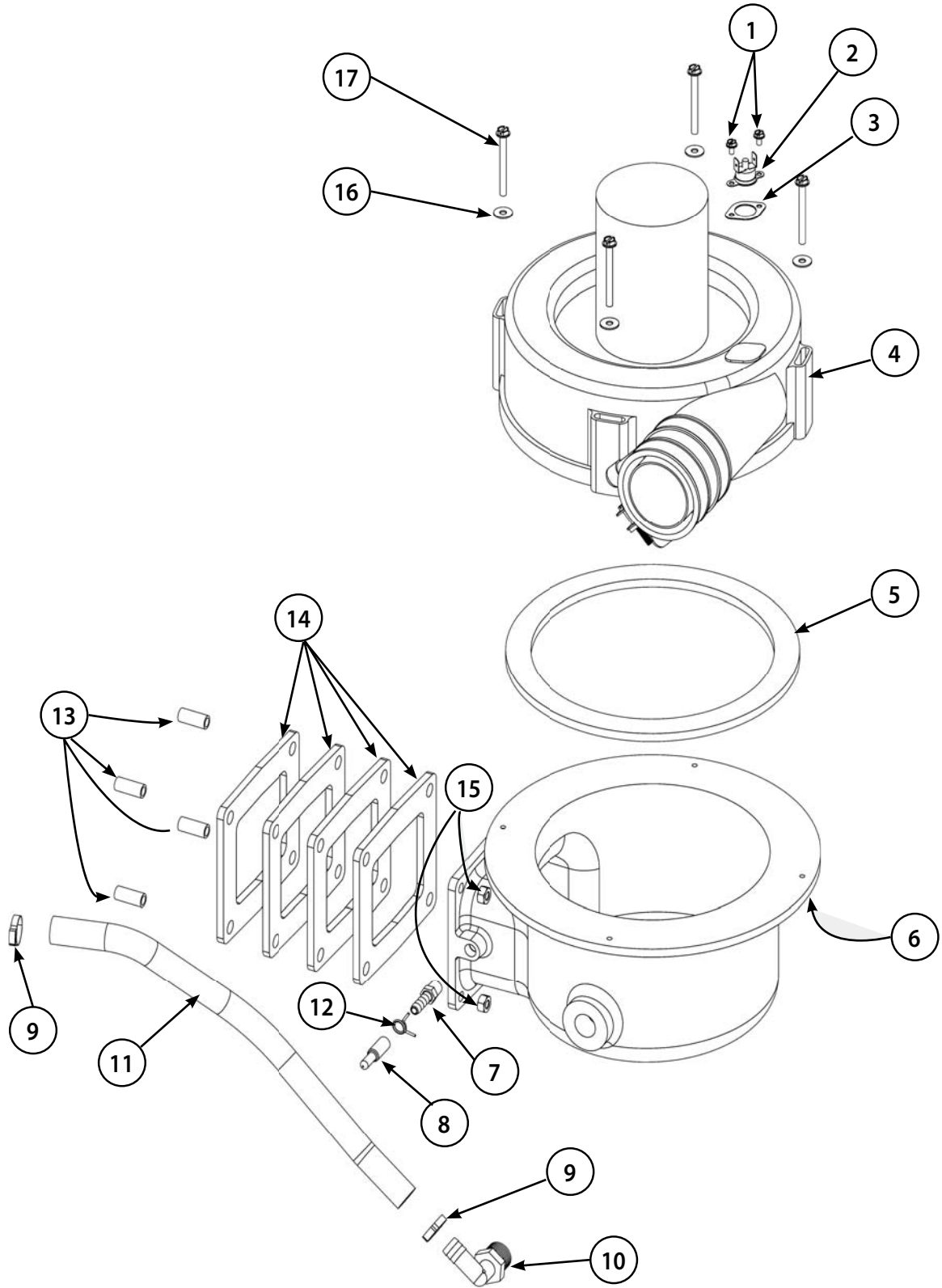


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**Condensate Drain Trap Assembly**

| KEY # | DESCRIPTION                            | QUANTITY | ITEM NUMBER |
|-------|--|----------|-------------|
| 1     | 59020 TUBE, VINYL, 5/8" ID x 13/16" OD | 9.5"     | 240009291   |
| 2     | 57134 3/4" SNAP GRIP CLAMP             | 2        | 14631141    |
| 3     | CONDENSATE TRAP ASSEMBLY               | 1        | 240009287   |
| 4     | TUBE 1/2" ID EPDM60 WITH CLAMPS        | 1        | 240006662   |

Flue Adapter and Exhaust Assembly



**REPAIR PARTS**

**Flue Adapter and Exhaust Assembly**

|                              | KEY # | DESCRIPTION  | QTY.     | ITEM NUMBER              |
|------------------------------|-------|--|----------|--------------------------|
| Kit<br>550002628<br>Includes |       | <b>INDUCED DRAFT BLOWER KIT FOR MODELS 50/75/100 SERIES 2<br/>[INCLUDES items 1,2,3,4,5,16,17]</b> | <b>1</b> | <b>550002628</b>         |
|                              | 1     | SCREW, 6 X 1/4, SLT, HH  | 2        | HW06501                  |
|                              | 2     | 36T X 11-22491 INDUCER TEMP SAFETY SWITCH  | 1        | <a href="#">14631303</a> |
|                              | 3     | VENT SWITCH GASKET   | 1        | 14631028                 |
|                              | 4     | FLUE GAS BLOWER WITH VENT PIPE CONNECTOR SERIES 2  | 1        | 240009288                |
|                              | 5     | BLOWER GASKET  | 1        | <a href="#">14631026</a> |
|                              | 16    | WASHER, #10 X 1/2" OD  | 4        | 240006203                |
|                              | 17    | SCREW, 10-24X3" SLT HWH SZN  | 4        | 240007745                |
| Kit<br>550002699<br>Includes |       | <b>INDUCED DRAFT BLOWER KIT FOR MODEL 100 SERIES 3<br/>[INCLUDES items 1,2,3,4,5,16,17]</b>        | <b>1</b> | <b>550002699</b>         |
|                              | 1     | SCREW, 6 X 1/4, SLT, HH  | 1        | HW06501                  |
|                              | 2     | 36T X 11-22491 INDUCER TEMP SAFETY SWITCH  | 1        | <a href="#">14631303</a> |
|                              | 3     | VENT SWITCH GASKET   | 1        | 14631028                 |
|                              | 4     | FLUE GAS BLOWER WITH VENT PIPE CONNECTOR SERIES 3  | 1        | 240009791                |
|                              | 5     | BLOWER GASKET  | 1        | <a href="#">14631026</a> |
|                              | 16    | WASHER, #10 X 1/2" OD  | 4        | 240006203                |
|                              | 17    | SCREW, 10-24X3" SLT HWH SZN  | 4        | 240007745                |
|                              | 6     | FLUE ADAPTER   | 1        | <a href="#">12101021</a> |
|                              | 7*    | 1/8" NPT 1/4" HOSE ID BRASS BARB FITTING   | 1        | 14631005                 |
|                              | 8     | PC250-12 VINYL CAP   | 1        | 14631151                 |
|                              | 9     | 57134 3/4" SNAP GRIP CLAMP   | 2        | 14631141                 |
|                              | 10    | 62043 1/2" NPT' x 1/2" ID TUBE ELBOW   | 1        | 14631103                 |
|                              | 11    | 59019 1/2" ID' x 1/8" THK VINYL TUBE   | 22"      | 14631035                 |
|                              | 12    | 3/8" HOSE CLAMP HC-6ST   | 1        | 14631143                 |
|                              | 13    | EXHAUST SPACER BUSHING 1/4 ID X 3/8 OD X 7/8 LONG  | 4        | 240009284                |
|                              | 14    | GASKET, EXHAUST SPACER   | 4        | 240009583                |
|                              | 15    | 1/4"-20 HEX NUT W/SERRATED WASHER HEAD   | 4        | 14695810                 |
|                              | **    | VENT PIPE 2" CPVC SCH-40 X 29 1/2" LONG S636   | 2        | 240006820                |
|                              | **    | VENT PIPE COUPLING 2" CPVC SCH-80 S636   | 1        | 240006822                |
|                              | **    | VENT PIPE ELBOW 2" CPVC SCH 40 S636  | 1        | 240009663                |
|                              | **    | VENT PIPE 2" CPVC SCH-40 X 2 1/2" LONG S636  | 1        | 240006821                |

\* - Combustion Test Port

\*\* - Not shown



**DUNKIRK BOILERS**

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