

R1K 55

Submittal



The R1K 55 is a premier premix gas-fired boiler that complies with ANSI Z21.13 and CSA 4.9 GAS FIRED LOW PRESSURE STEAM AND HOT WATER BOILERS. The Combi-Tech® R1K 55 models are heating only units made by RADIANT. The R1K 55 consists of Radiant's Combi-Tech® R1K revolutionary stainless steel exchanger, which maintains high efficiencies in all conditions. Larger coil tube with an inner diameter of 28 mm reduces the load losses, and prevents debris/limestone deposits and makes it much easier on maintenance. The R1K 55 model features a 1:9 air/gas modulation which is important for energy savings and prevents frequent cycling of the boiler. The R1K 55 includes improved overall ergonomics and better access for service and maintenance. The Digitech® controls provide intelligence and simplicity in the operating of the R1K 55.

MAIN FEATURES

ANTI-FREEZE FUNCTION PROTECTION

OUTDOOR RESET

WIDE MODULATING RANGE

LOW NOX EMISSIONS

AUTOMATIC BY-PASS FITTED

PRE-WIRED ELECTRICAL LEAD

FULL GAS/AIR MODULATION

MIXED ZONE CARD (OPTIONAL)

SOLAR CARD CONTROL (OPTIONAL)

TIME AND TEMPERATURE CONTROLLERS (OPTIONAL)

TECHNICAL FEATURES

MODEL		R1K 55
Maximum central heating input	btu/h - (kW)	187667 - (55)
Minimum central heating input	btu/h - (kW)	18766 - (5.5)
Adjustable central heating range	°F - (°C)	86-167 / 77-113 (30-75 / 25-45)
Maximum operating temperature for central heating	°F - (°C)	203 - (95)
Maximum operating pressure for central heating	psi - (bar)	60 - (4.1)
Width	in - (mm)	16.14 - (410)
Depth	in - (mm)	19.09 - (485)
Height	in - (mm)	25.19 - (640)
Gross weight	lb - (Kg)	110 - (50)
Electric consumption - normal	W	180
Electric consumption - Standby	W	3.5

WARRANTY HEAT EXCHANGER: 12 YEARS;

WARRANTY COMPONENTS: 2 YEARS.

PROJECT NO.:

REPRESENTATIVE:

NAME:

DATE:

LOCATION:

SPECIFIER:

APPROVED BY:

CONTRACTOR:

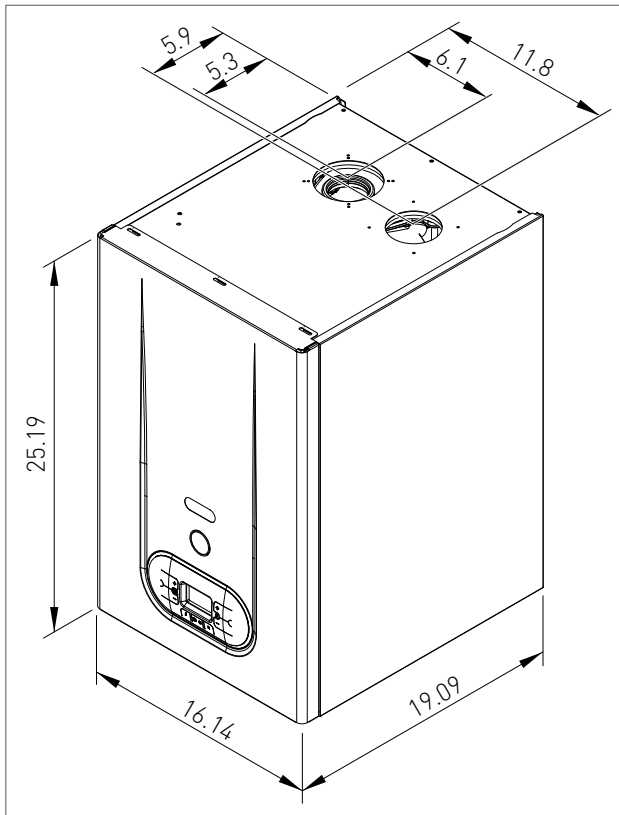
DATE:





1. R1K 55 SUBMITTAL

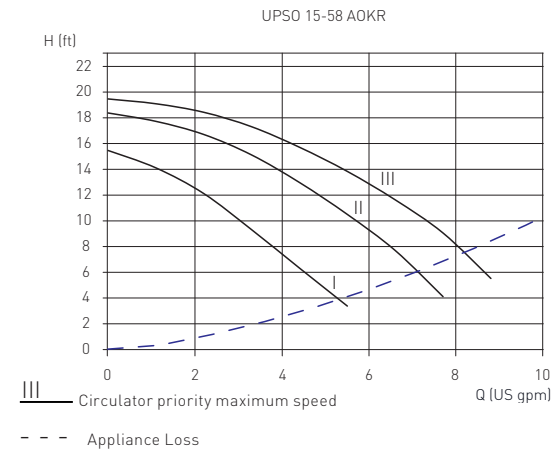
OVERALL DIMENSIONS (INCH)



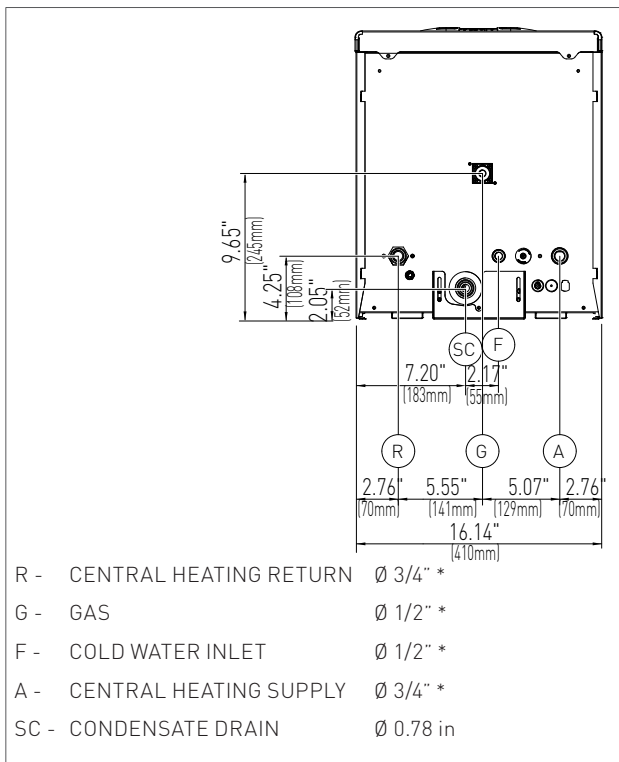
TYPES OF EXHAUST SYSTEMS

- > COLLINEAR VENT, CO-AXIAL VENT AND SINGLE VENT.
- > PVC, CPVC AND POLYPROPYLENE FOR SIZES 2", 3" AND 4" DIAMETERS.
- > FOR CANADA USE GAS VENTING SYSTEMS CERTIFIED TO ULC S636.

CIRCULATOR PREVALENCE/FLOW DIAGRAM

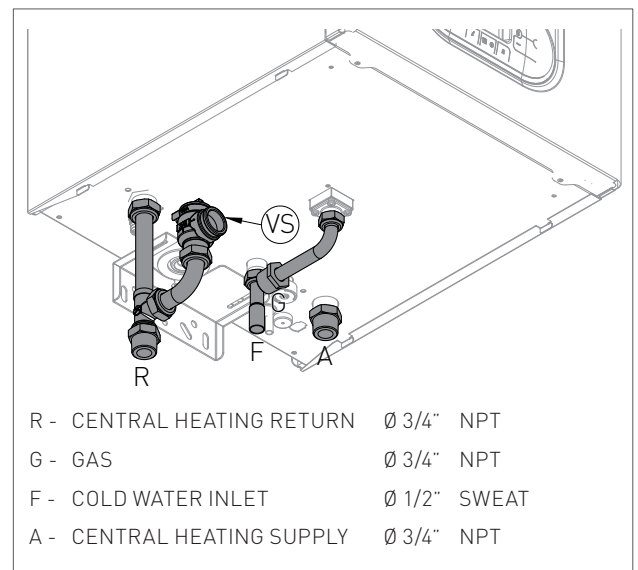


JIG



HYDRAULIC CONNECTION KIT

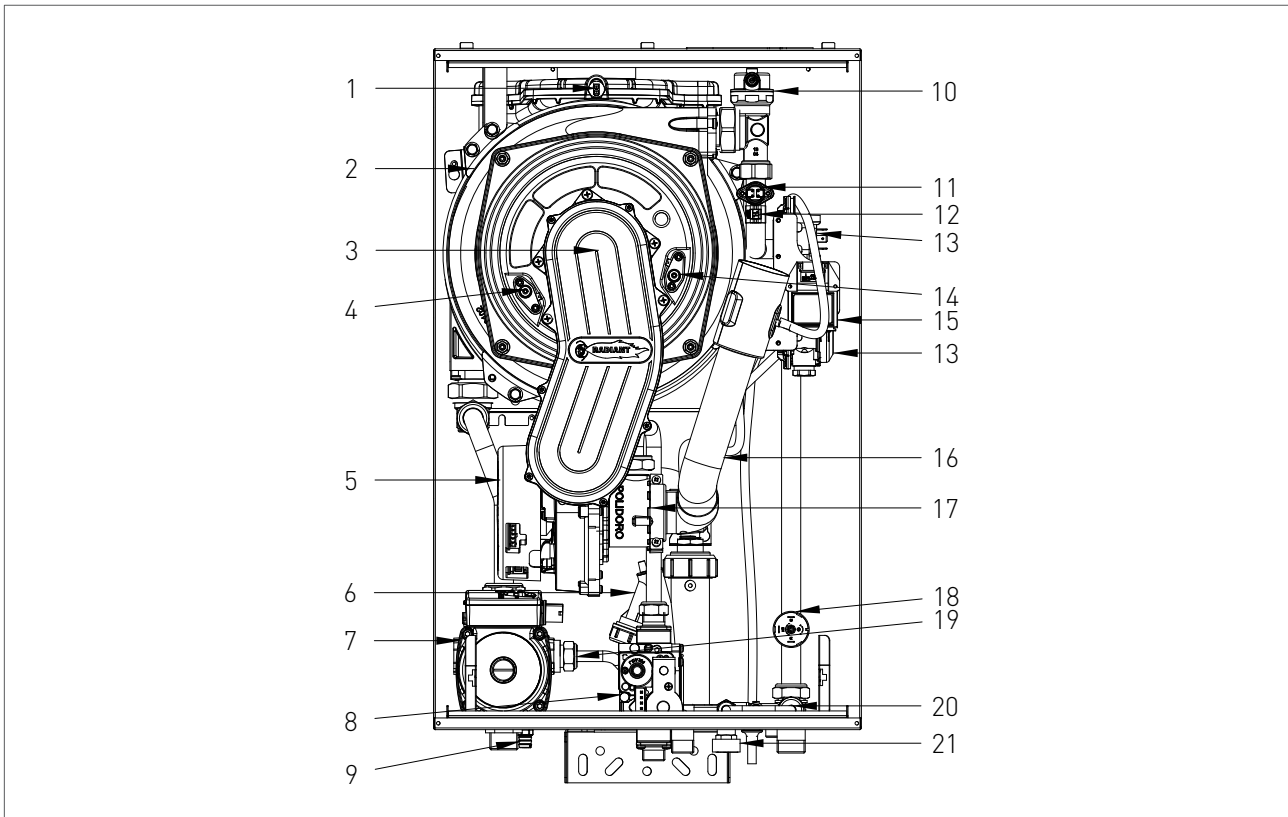
An hydraulic kit equipped with hydraulic connections and safety valve (see 'VS' fig.3) is supplied by RADIANT.



(*) NOTE: THESE ARE CONNECTION SIZES BEFORE VALVE KIT/CONNECTION CONVERSION KIT IS INSTALLED.



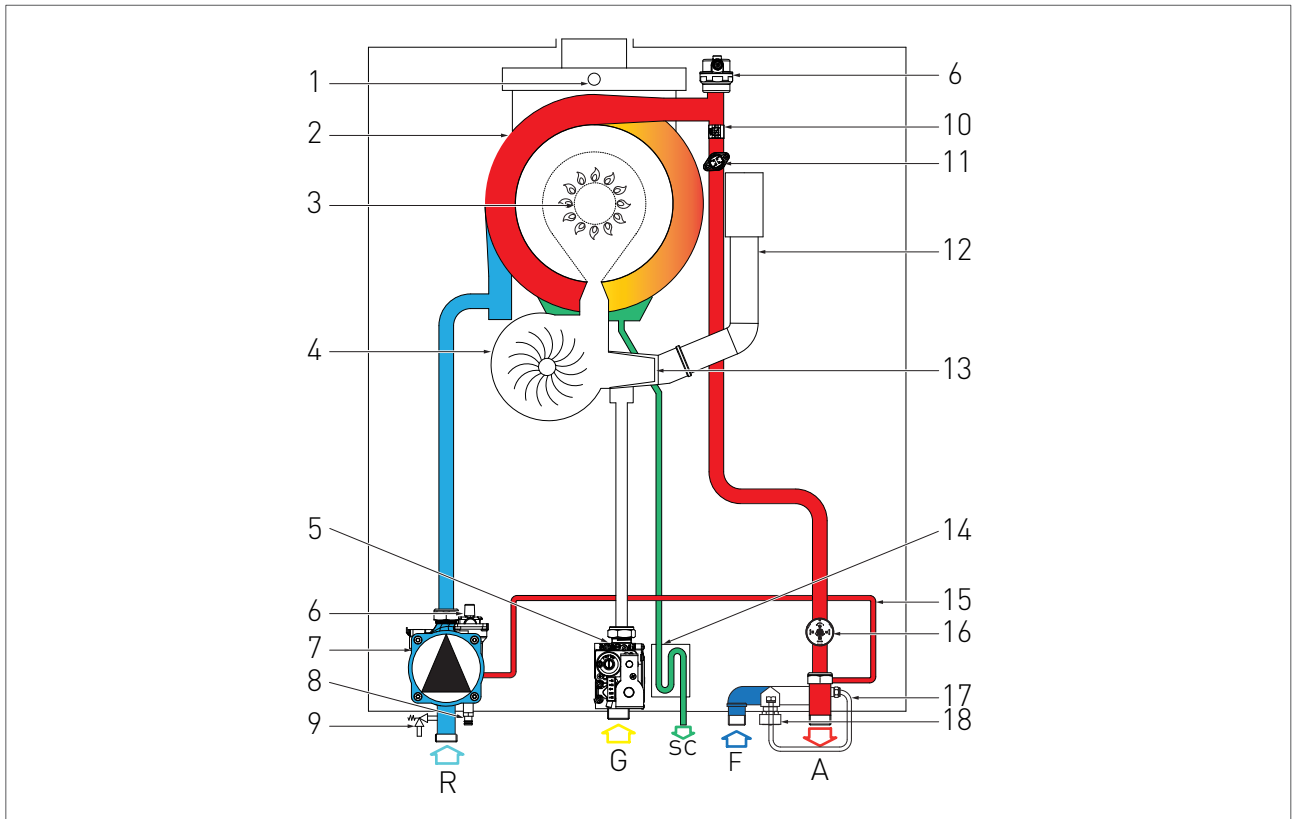
TECHNICAL ASSEMBLY



KEY

- 1. EXHAUST SAFETY HIGH LIMIT SWITCH
- 2. HEAT EXCHANGER
- 3. BURNER UNIT
- 4. IONIZATION ELECTRODE
- 5. COMBUSTION BLOWER
- 6. CONDENSATE COLLECTION SIPHON
- 7. CIRCULATOR
- 8. GAS VALVE
- 9. SYSTEM DRAINING TAP
- 10. AIR ELIMINATOR
- 11. WATER TEMPERATURE HIGH LIMIT SWITCH
- 12. CENTRAL HEATING TEMPERATURE PROBE
- 13. AIR PRESSURE SWITCHES
- 14. SPARK ELECTRODE
- 15. IGNITION TRANSFORMER
- 16. AIR SUCTION TUBE
- 17. PROPORTIONAL VENTURI
- 18. WATER PRESSURE SWITCH
- 19. BY-PASS
- 20. CHECK VALVE
- 21. SYSTEM FILLING TAP

HYDRAULIC BOARD



KEY

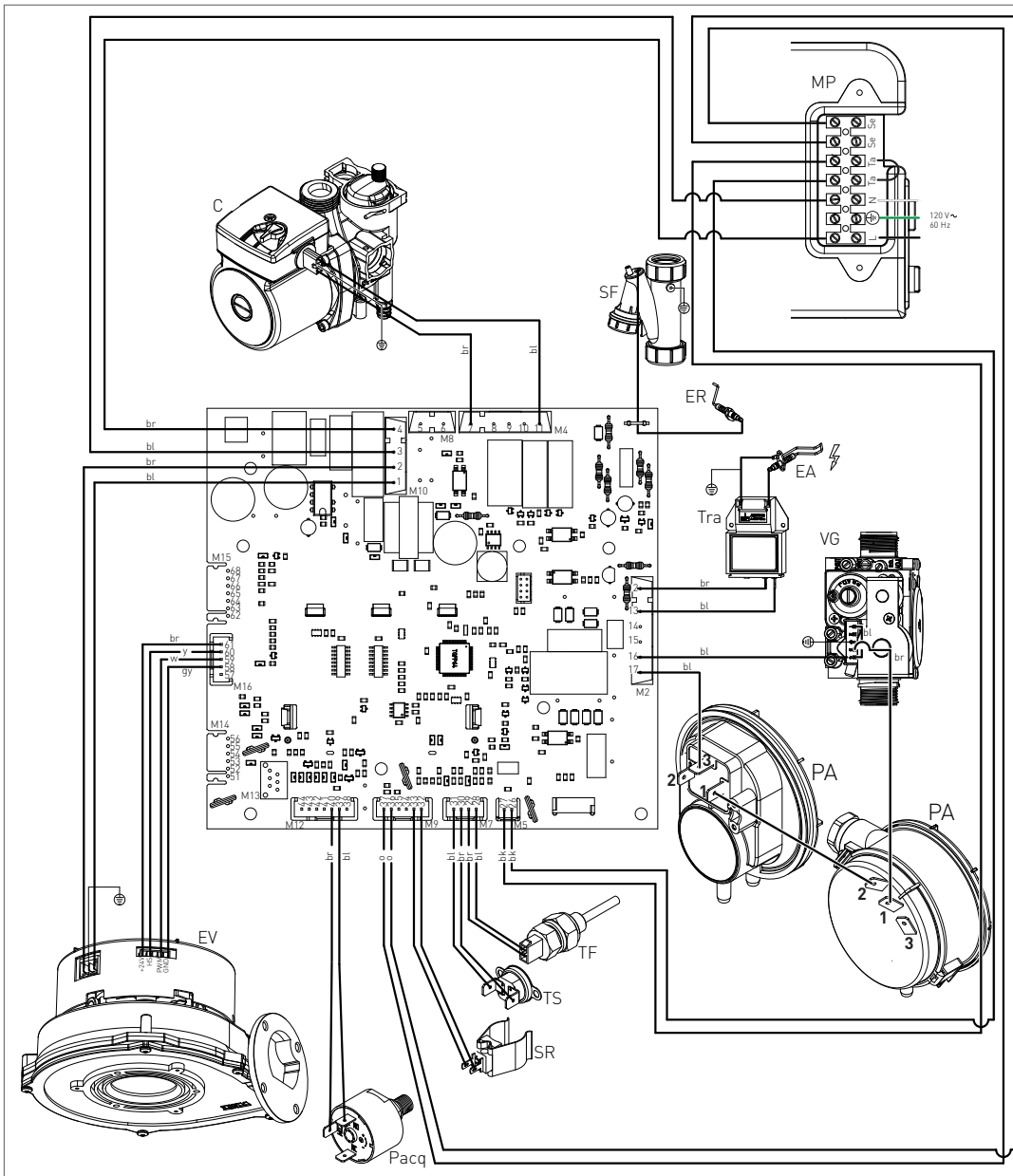
- R. CENTRAL HEATING RETURN
- G. GAS INLET
- SC. CONDENSATE DRAIN
- A. CENTRAL HEATING SUPPLY

18. SYSTEM FILLING TAP

- 1. EXHAUST SAFETY HIGH LIMIT SWITCH
- 2. HEAT EXCHANGER
- 3. BURNER UNIT
- 4. COMBUSTION BLOWER
- 5. GAS VALVE
- 6. AIR ELIMINATOR
- 7. CIRCULATOR
- 8. SYSTEM DRAINING TAP
- 9. PRESSURE RELIEF VALVE 30 psi (2 bar)
- 10. CENTRAL HEATING TEMPERATURE PROBE
- 11. WATER TEMPERATURE HIGH LIMIT SWITCH
- 12. AIR SUCTION TUBE
- 13. PROPORTIONAL VENTURI
- 14. CONDENSATE COLLECTION SIPHON
- 15. BY-PASS
- 16. WATER PRESSURE SWITCH
- 17. CHECK VALVE



WIRING DIAGRAM



- | | | | |
|--|---|----------------------------|----------------------------------|
| ER: IONIZATION ELECTRODE | TS: WATER TEMPERATURE HIGH LIMIT SWITCH | MP: PANEL TERMINAL | BL: BLUE |
| EA: SPARK ELECTRODE | PACQ: WATER PRESSURE SWITCH | SE: OUTDOOR TEMPERATURE | BR: BROWN |
| C: CIRCULATOR | SR: CENTRAL HEATING TEMPERATURE PROBE | TA: ENVIRONMENT THERMOSTAT | O: ORANGE |
| VG: GAS VALVE | EV: COMBUSTION BLOWER | L: LINE | Y: YELLOW |
| TRA: IGNITION TRANSFORMER | PA: AIR PRESSURE SWITCH | N: NEUTRAL | W: WHITE |
| TF: EXHAUST SAFETY HIGH LIMIT SWITCH_(102°C) | | BK: BLACK | GY: GREY |
| | | G: GREEN | SF: CONDENSATE COLLECTION SIPHON |