

SFK 55 (Aqua²)

Submittal



The SFK 55, named Aqua², is a premix gas-fired condensing hot water heater that complies with ANSI Z21.10.3 • CSA 4.3 Gas-fired water heaters. The Aqua², is equipped with a Flow-tech[®] stainless steel heat exchanger that consists of a single tube coil with a diameter of 28 mm. This larger coil tube reduces the pressure drop across the heat exchanger, and prevents debris/limestone deposits and makes it much easier on maintenance. The Aqua² features a 1:10 air/gas modulation which is important for energy savings and important in providing a wide range of desired flow rates and temperatures.

MAIN FEATURES

ANTI-FREEZE FUNCTION PROTECTION

OUTDOOR RESET

WIDE MODULATING RANGE

LOW NOX EMISSIONS

PRE-WIRED ELECTRICAL LEAD

FULL GAS/AIR MODULATION

SOLAR CARD CONTROL (OPTIONAL)

TIME AND TEMPERATURE CONTROLLERS (OPTIONAL)

TECHNICAL FEATURES

MODEL	SFK 55	
Maximum input	btu/h - (kW)	187667 - (55)
Minimum input	btu/h - (kW)	18766 - (5.5)
Adjustable temperature range	°F - °C	104-140 (40-60)
Maximum operating pressure	psi - (bar)	150 - (10.34)
Energy Factor (EF)		0.966
Utilization Energy Factor (U.E.F.)		0.954
Continuous hot water flow rates: ΔT 54°F (30°C)	US gpm - (litres/min)	7.08 - (26.8)
Continuous hot water flow rates: ΔT 77°F (43°C)	US gpm - (litres/min)	5.1 - (19.3)
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.

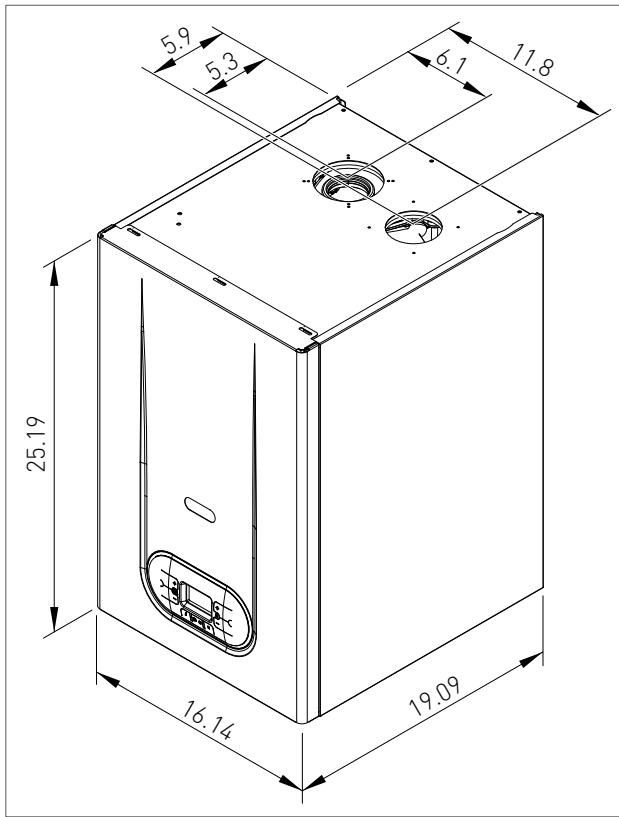
PROJECT NO.:	REPRESENTATIVE:
NAME:	DATE:
LOCATION:	
SPECIFIER:	APPROVED BY:
CONTRACTOR:	DATE:





1. SFK 55 SUBMITTAL

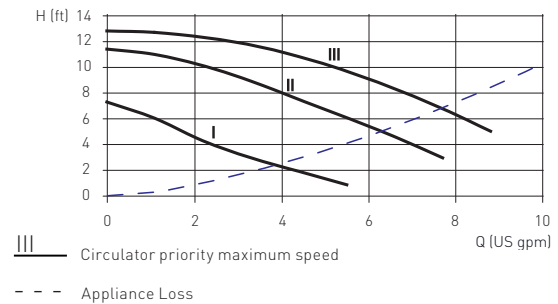
OVERALL DIMENSIONS (INCH)



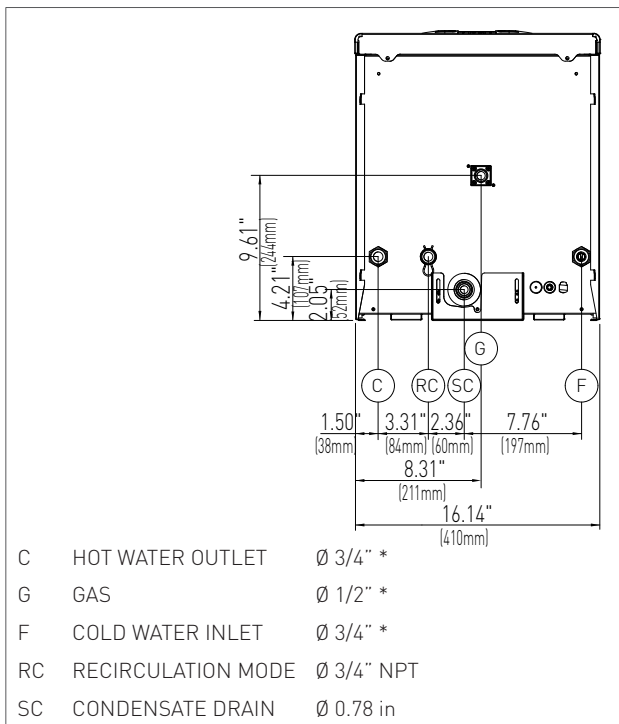
TYPES OF EXHAUST SYSTEMS

- > 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.

RECIRCULATION MODE CIRCULATOR PREVALENCE/FLOW DIAGRAM

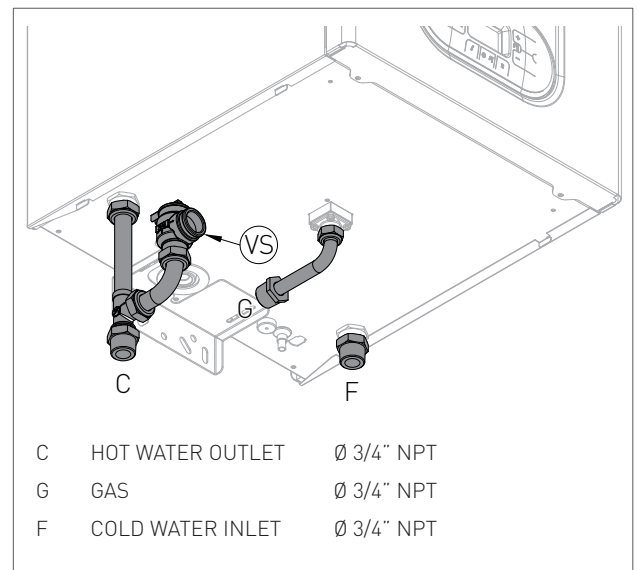


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HYDRAULIC CONNECTION KIT

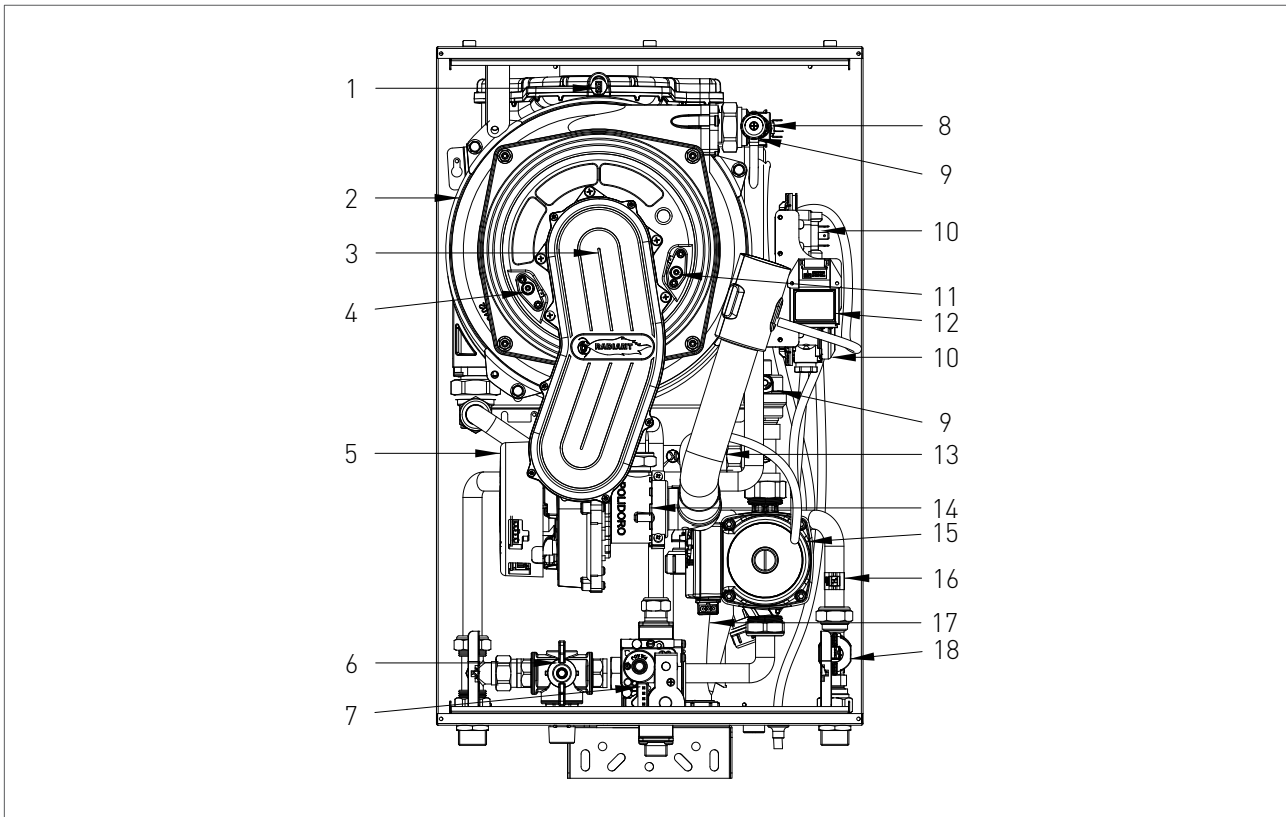
An hydraulic kit equipped with hydraulic connections and safety valve (see 'VS') is supplied by RADIANT.



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



TECHNICAL ASSEMBLY



KEY

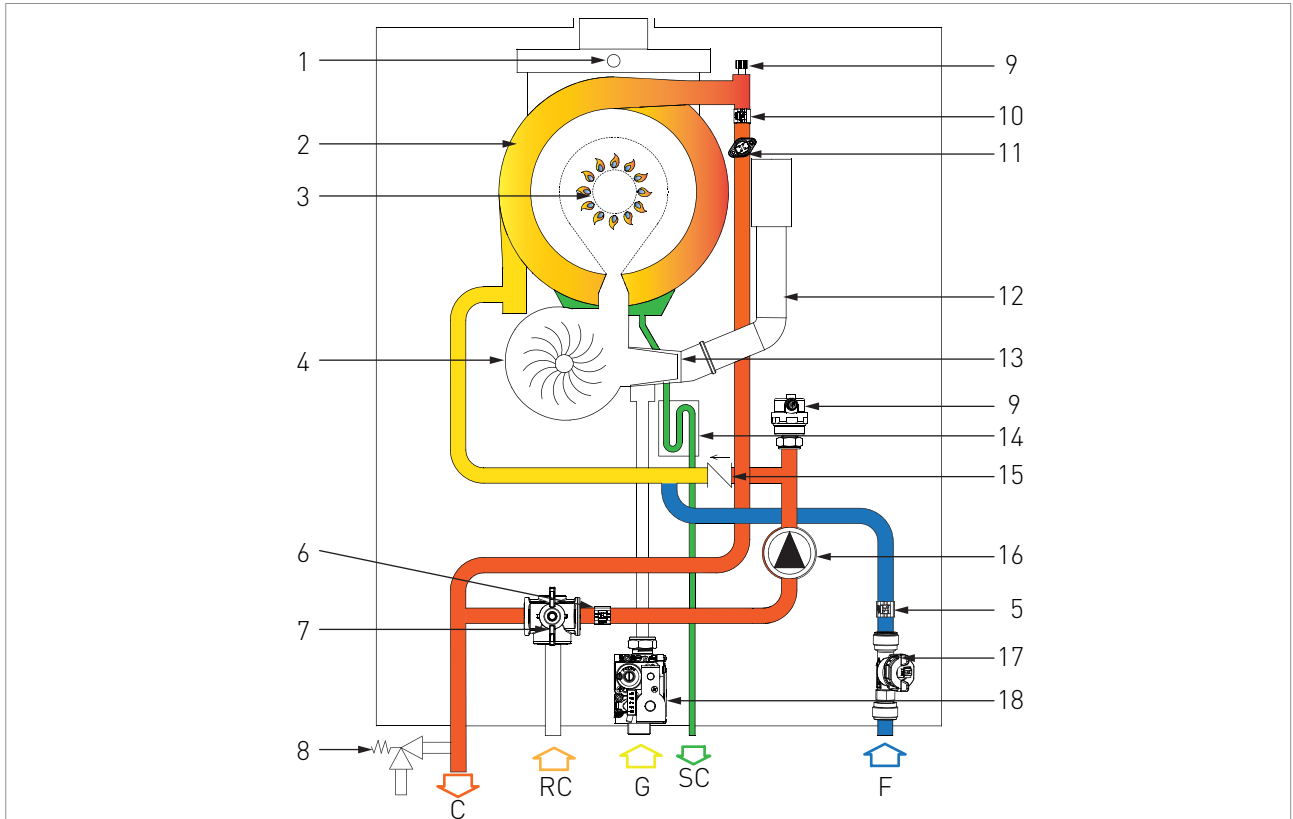
1. EXHAUST SAFETY HIGH LIMIT SWITCH
2. HEAT EXCHANGER
3. BURNER UNIT
4. IONIZATION ELECTRODE
5. COMBUSTION BLOWER
6. 3-WAY VALVE - RECIRCULATION MODE
7. GAS VALVE
8. WATER TEMPERATURE HIGH LIMIT SWITCH
9. AIR ELIMINATOR
10. AIR PRESSURE SWITCH
11. SPARK ELECTRODE
12. IGNITION TRANSFORMER
13. AIR SUCTION TUBE
14. PROPORTIONAL VENTURI
15. CIRCULATOR
16. DOMESTIC TEMPERATURE PROBE INLET
17. CONDENSATE COLLECTION SIPHON
18. FLOW METER



1. SFK 55 SUBMITTAL

HYDRAULIC BOARD

DRAW DEMAND WITH CIRCULATOR ACTIVE AND WITHOUT RECIRCULATION LINE



KEY

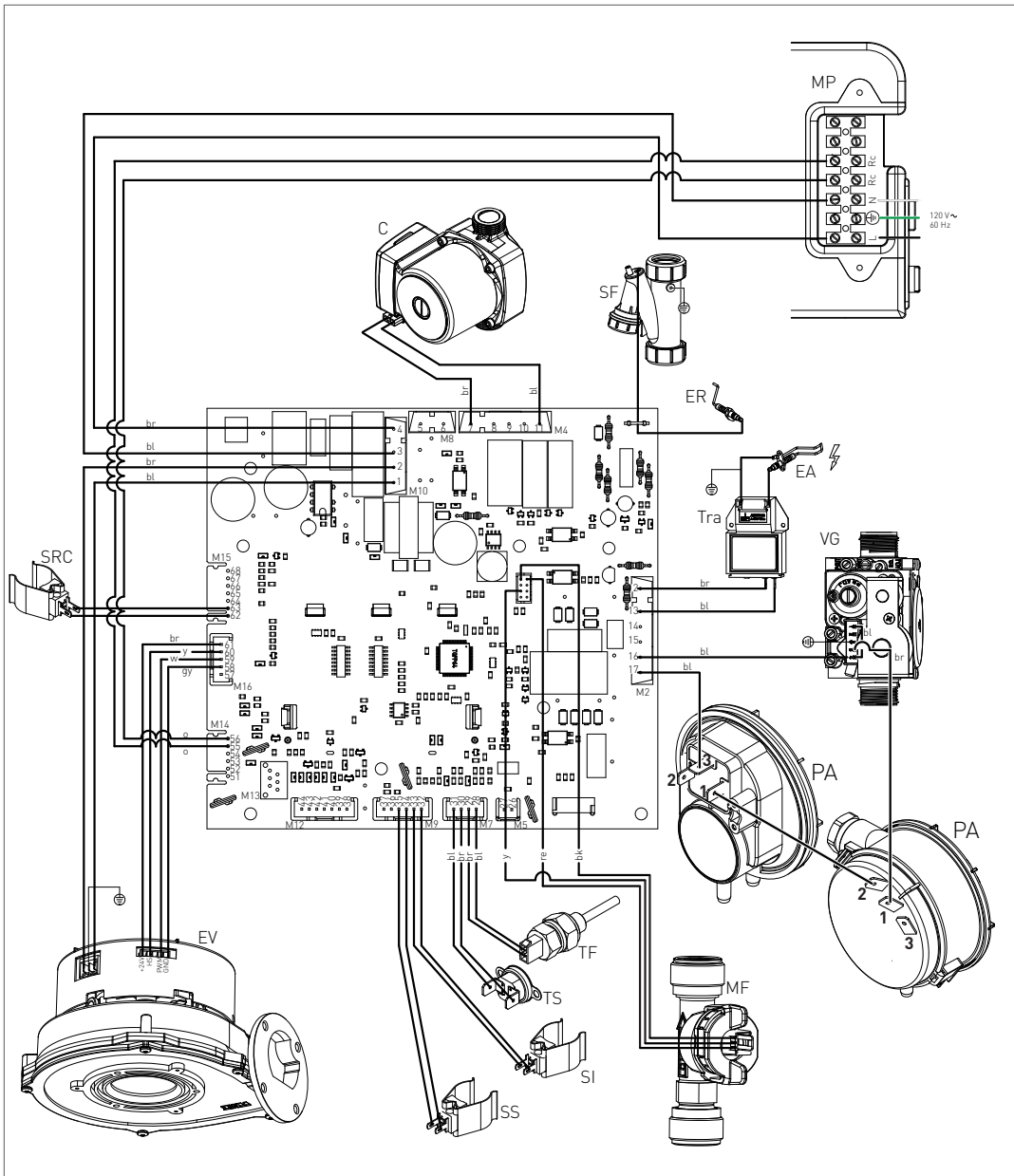
- C. DOMESTIC HOT WATER OUTLET
- F. COLD WATER INLET
- RC. RECIRCULATION MODE
- G. GAS INLET
- SC. CONDENSATE DRAIN

- 6. RECIRCULATION PROBE
- 7. 3-WAY VALVE - RECIRCULATION MODE
- 8. PRESSURE RELIEF VALVE
- 9. AIR ELIMINATOR
- 10. DOMESTIC TEMPERATURE PROBE OUTLET
- 11. WATER TEMPERATURE HIGH LIMIT SWITCH
- 12. AIR SUCTION TUBE
- 13. PROPORTIONAL VENTURI
- 14. CONDENSATE COLLECTION SIPHON
- 15. CHECK VALVE
- 16. CIRCULATOR
- 17. FLOW METER
- 18. GAS VALVE

- 1. EXHAUST SAFETY HIGH LIMIT SWITCH
- 2. HEAT EXCHANGER
- 3. BURNER UNIT
- 4. COMBUSTION BLOWER
- 5. DOMESTIC TEMPERATURE PROBE INLET



WIRING DIAGRAM



- | | | | |
|--|---|--------------------|-----------|
| ER: IONIZATION ELECTRODE | TS: WATER TEMPERATURE HIGH LIMIT SWITCH | MP: PANEL TERMINAL | BL: BLUE |
| EA: SPARK ELECTRODE | MF: FLOW METER | L: LINE | BR: BROWN |
| C: CIRCULATOR | SI: DOMESTIC TEMPERATURE PROBE INLET | N: NEUTRAL | O: ORANGE |
| VG: GAS VALVE | SS: DOMESTIC TEMPERATURE PROBE | G: GREEN | Y: YELLOW |
| TRA:IGNITION TRANSFORMER | EV: COMBUSTION BLOWER | RE: RED | W: WHITE |
| TF: EXHAUST SAFETY HIGH LIMIT SWITCH_(102°C) | PA: AIR PRESSURE SWITCH | BK: BLACK | GY: GREY |
| SRC: RECIRCULATION TEMPERATURE PROBE | SF: CONDENSATE COLLECTION SIPHON | | |
| RC: DOMESTIC HOT WATER PRE-HEATING DEACTIVATION
TIMER | | | |