

VIESMANN

climate of innovation

Vitodens 222-F, B2TB Product Overview

Vitodens 222-F, B2TB

The all-in-one, smart, compact solution for space heating and DHW



+



Vitodens 222-F, B2TB

A member of the Viessmann family of heating products



- Condensing boilers
- System controls



Solar systems



DHW tanks



AirFlow*PLUS*
Hydronic Air
Handler

Vitodens 222-F, B2TB

Features:

- Heating boiler + DHW tank in one jacket
- 95% AFUE
- Fuel saving, highly efficient operation
- Compact space saving design
- Durable long lasting stainless steel construction
- Fast and easy to install
- Simple to service
- Modern appearance



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Boiler and DHW tank all in one jacket

Up Top...

- Vitodens 200 series boiler
- Vitotronic boiler control
- Expansion tank



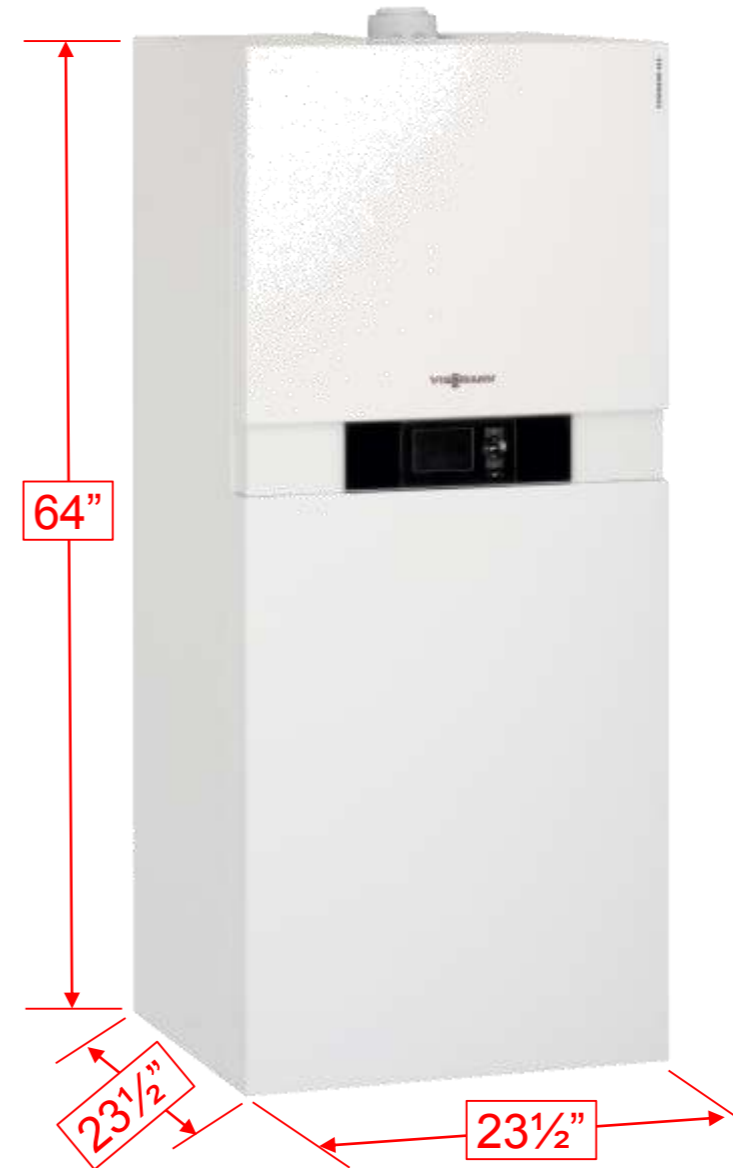
Down Low...

- Fully insulated 100L stainless steel DHW storage tank
- Tank loading heat exchanger + 2 pumps

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Compact Footprint with Zero Clearance to combustibles

- Saves space in mechanical room
- Fits in tight spaces or small locations
- Zero side clearance required



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Available in two models

Model	B2TB-19	B2TB-35
Input Max.	68 MBH 20 kW	125 MBH 37 kW
Input Min.	12 MBH 3.5 kW	19 MBH 5.5 kW
Output Max CSA/DOE	61 MBH 18 kW	114 MBH 33 kW
Output Min CSA/DOE	10.9 MBH 3.2 kW	17.4 MBH 5.1 kW
AFUE %	95	95
Temp Range	68 – 165 °F 20 – 74 °C	68 – 165 °F 20 – 74 °C

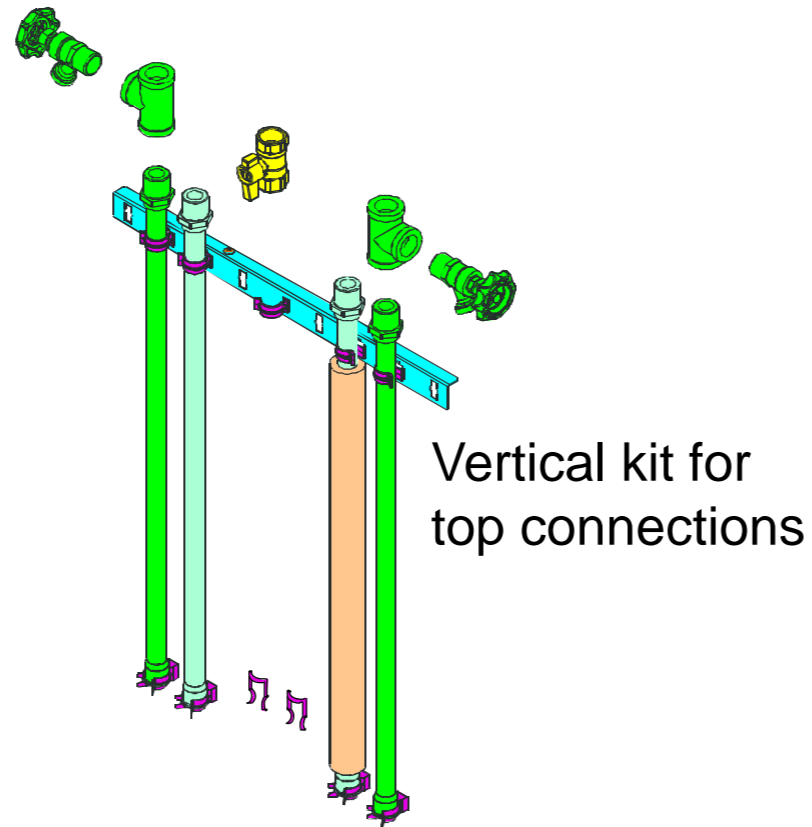
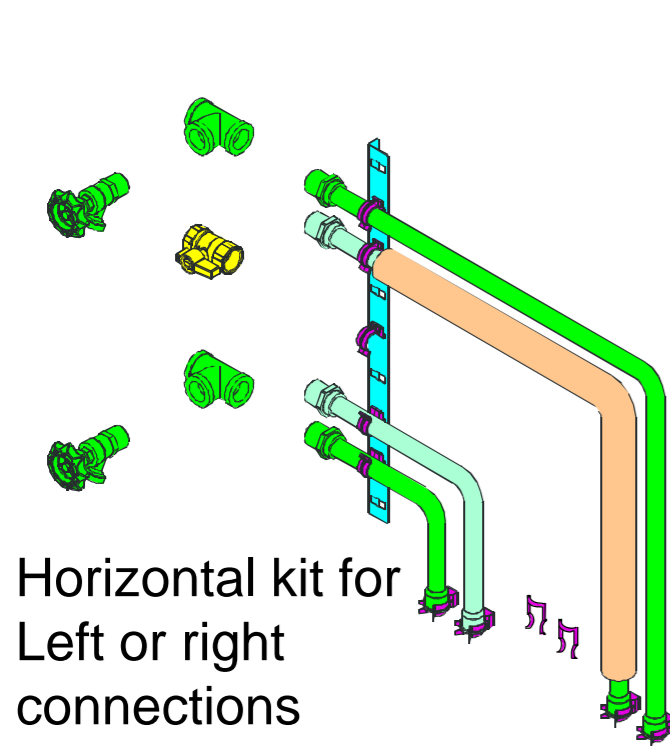
- Both models have same dimensions
- B2TB-19 operates with a 5.6 :1 turndown
- B2TB-35 operates with a 6.6 :1 turndown
- Ideal for small DHW load systems like condominiums, and small offices.



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Multiple piping connection options

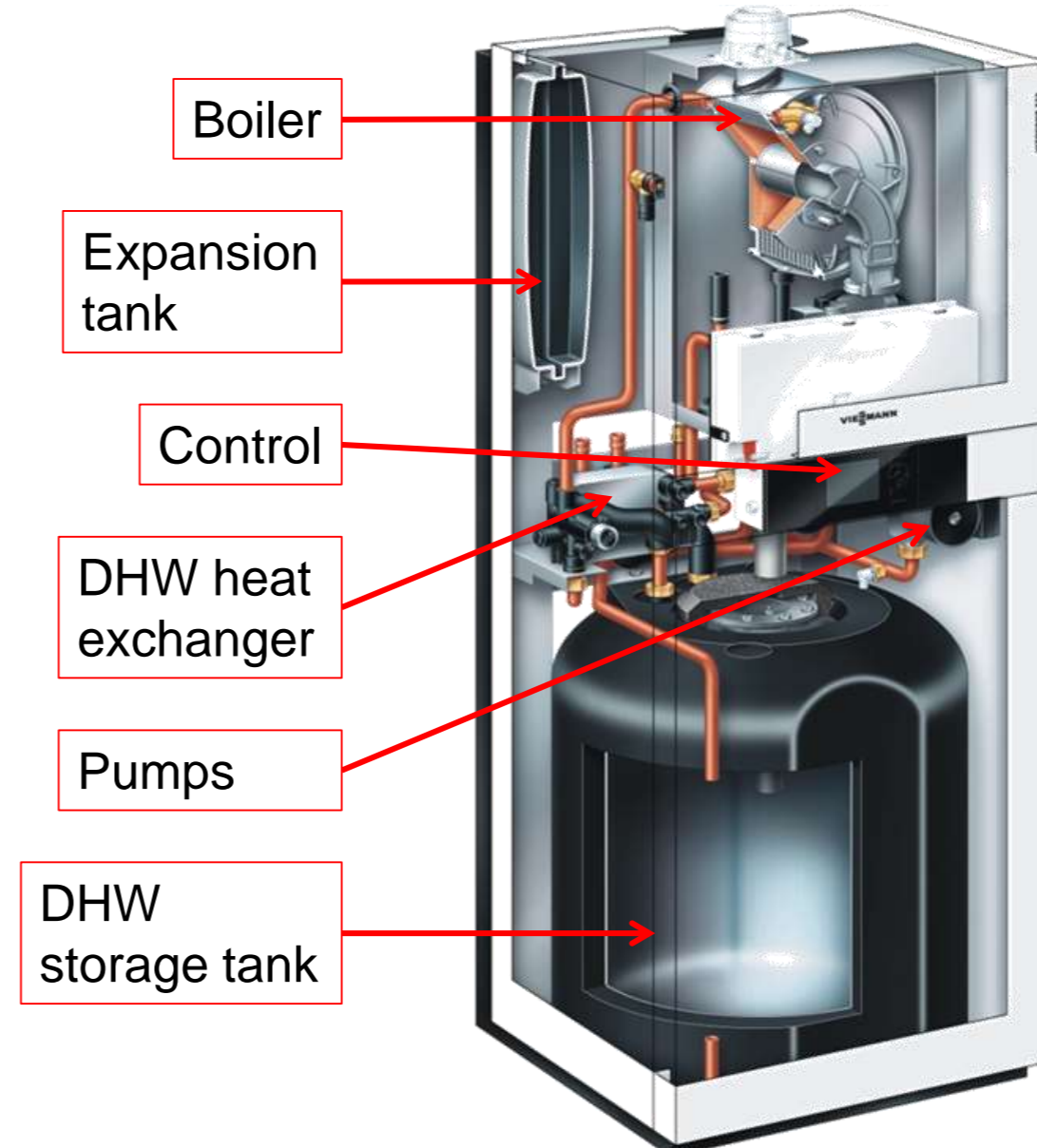
- Provides installation versatility
- Connections to suit the installation location
- Reduces on-site piping



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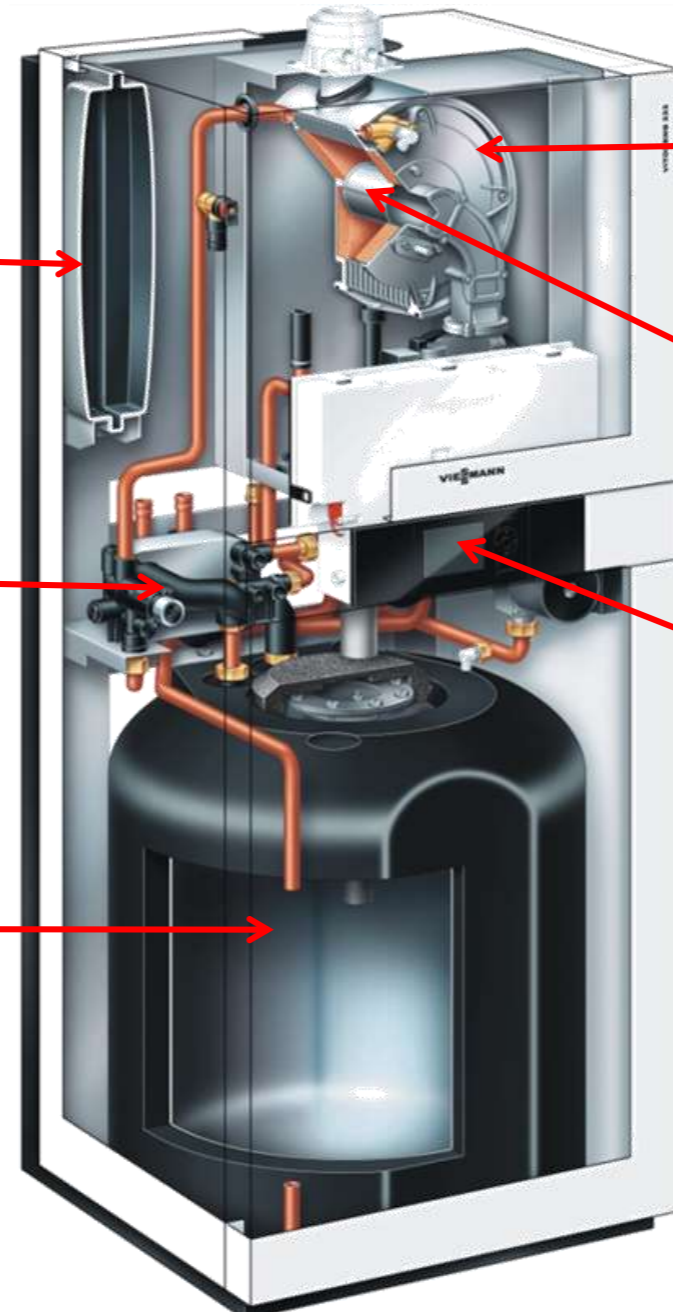
All major components factory piped and wired

- Fast and simple installations
- Minimal on-site piping and wiring
- Minimizes on-site piping errors
- Design matched components for high performance and efficiency



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Major component overview



Compact expansion tank

DHW Storage Tank Loading system with plate HX, diverting valve and pump

100L Stainless steel DHW storage tank

InoX-Radial stainless steel boiler heat exchanger

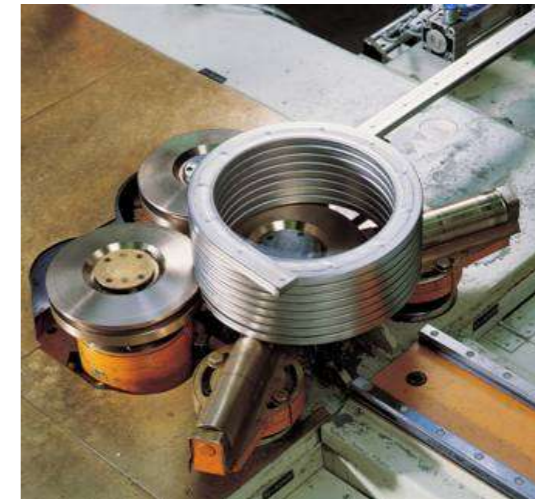
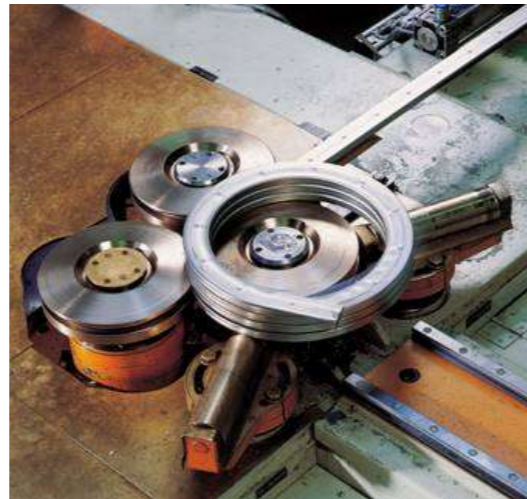
MatriX cylinder burner with Lambda Pro combustion technology

Vitotronic control with user friendly interface

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Inox-Radial heat exchanger

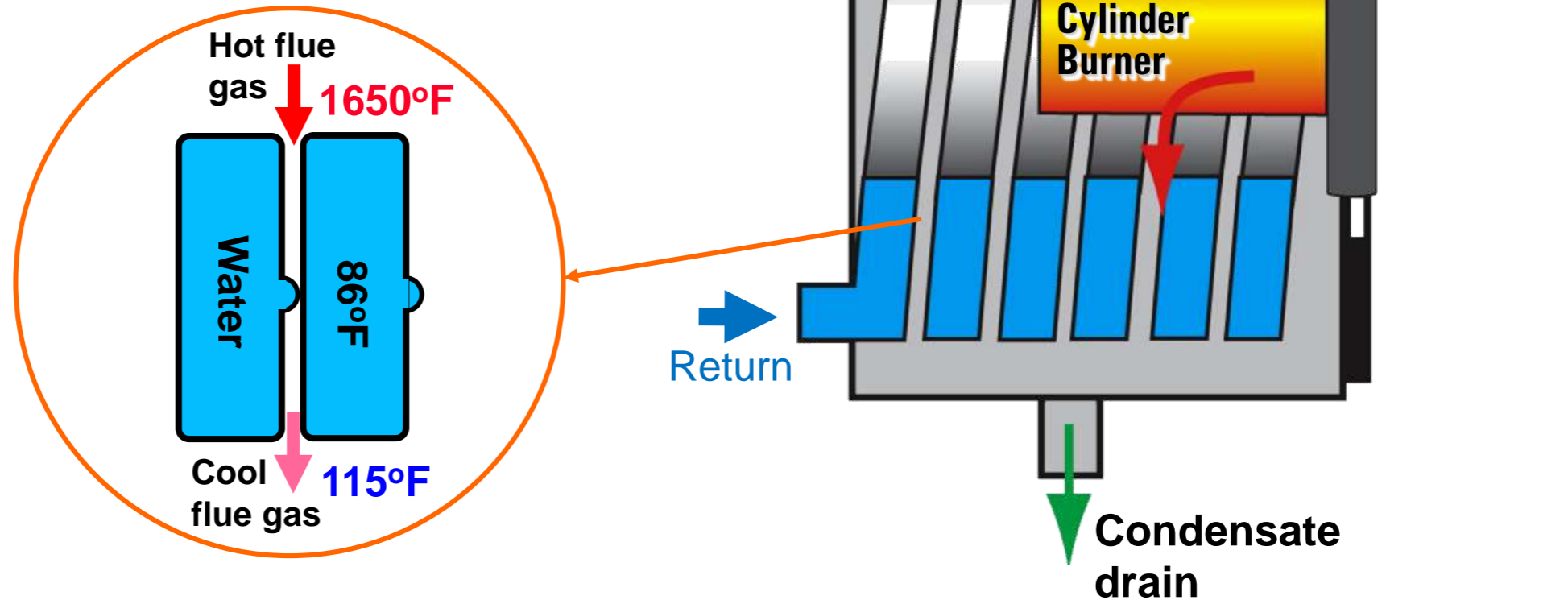
- High grade SA240 - 316Ti Stainless Steel.
 - Excellent corrosion resistance
 - Excellent heat transfer
 - Easy to clean
 - No special system fluid fill or pH
- **Developed** and manufactured by Viessmann in Germany
- **Time tested** reliability for over 15 years



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Inox-Radial heat exchanger

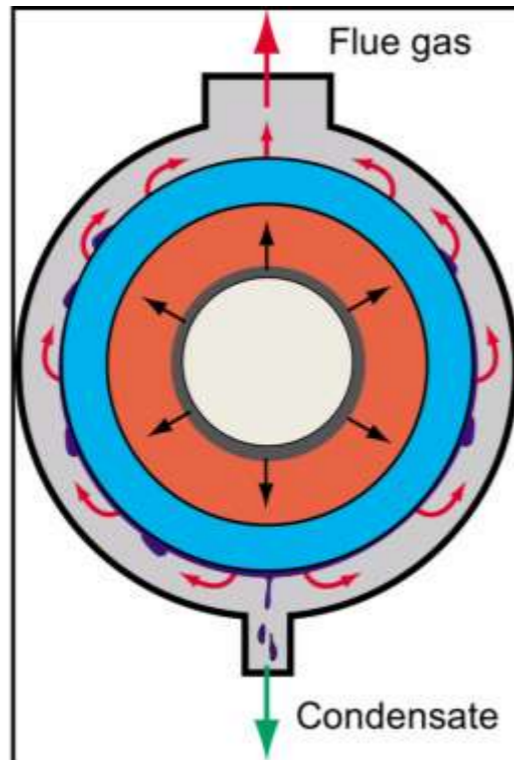
- Precise 0.8 mm gaps for highly intensive heat transfer
- Sensible and latent heat extracted



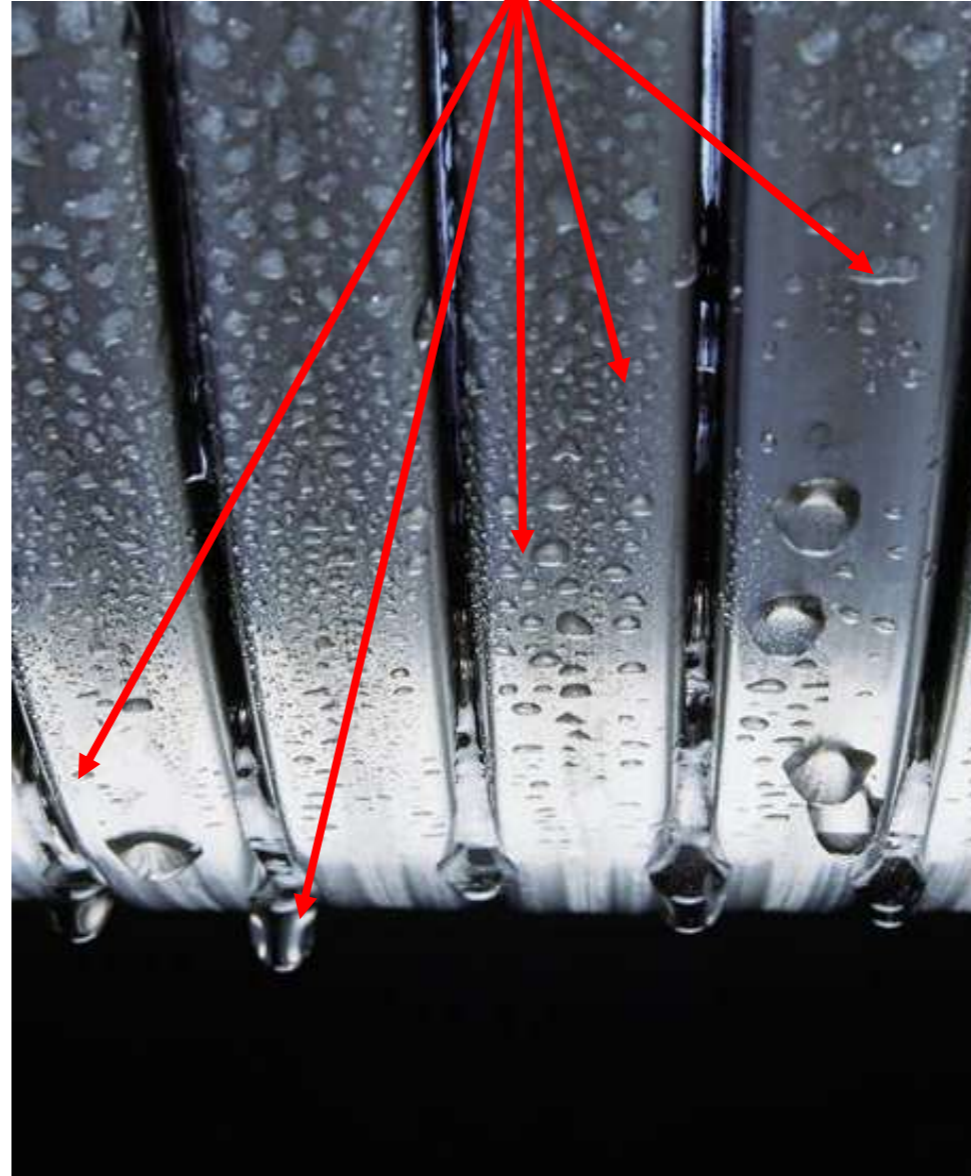
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Inox-Radial heat exchanger

- Condensation occurs on the outside of coil
- Self-cleaning on condensing surface of heat exchanger



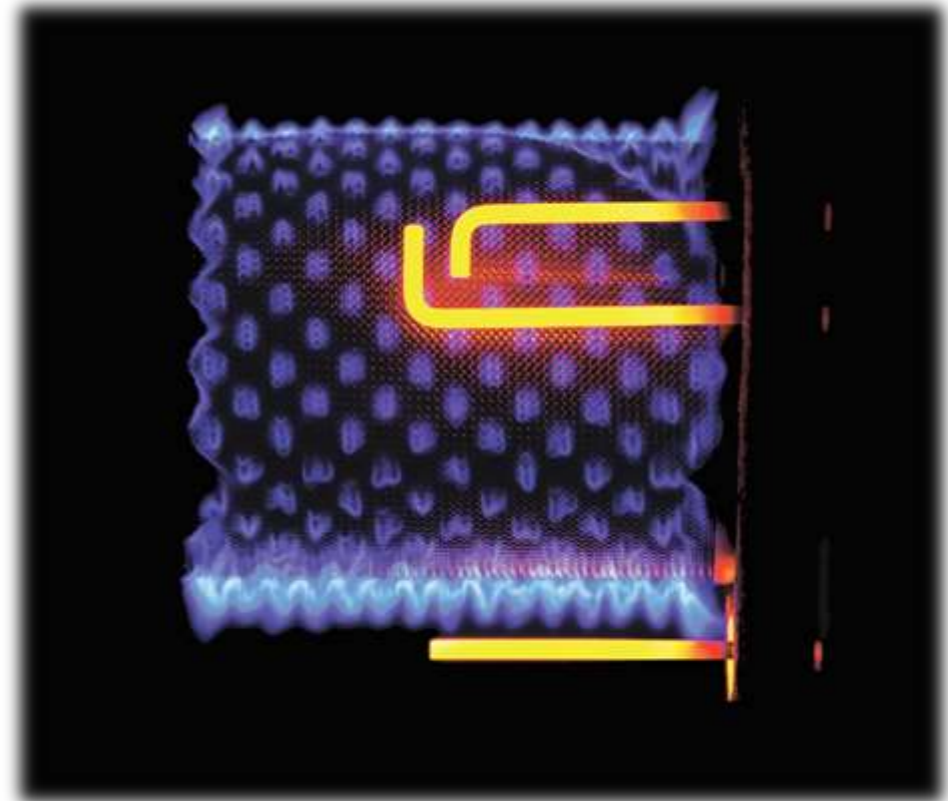
The entire surface is
condensing!



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MatriX cylinder burner

- Fully **modulating** burner
 - Up to 6.6 :1 turndown
- Natural gas or LP gas
- **Lambda Pro** Technology
- **Low NO_x** emissions (< 20 ppm)
- **Easy** to setup and service

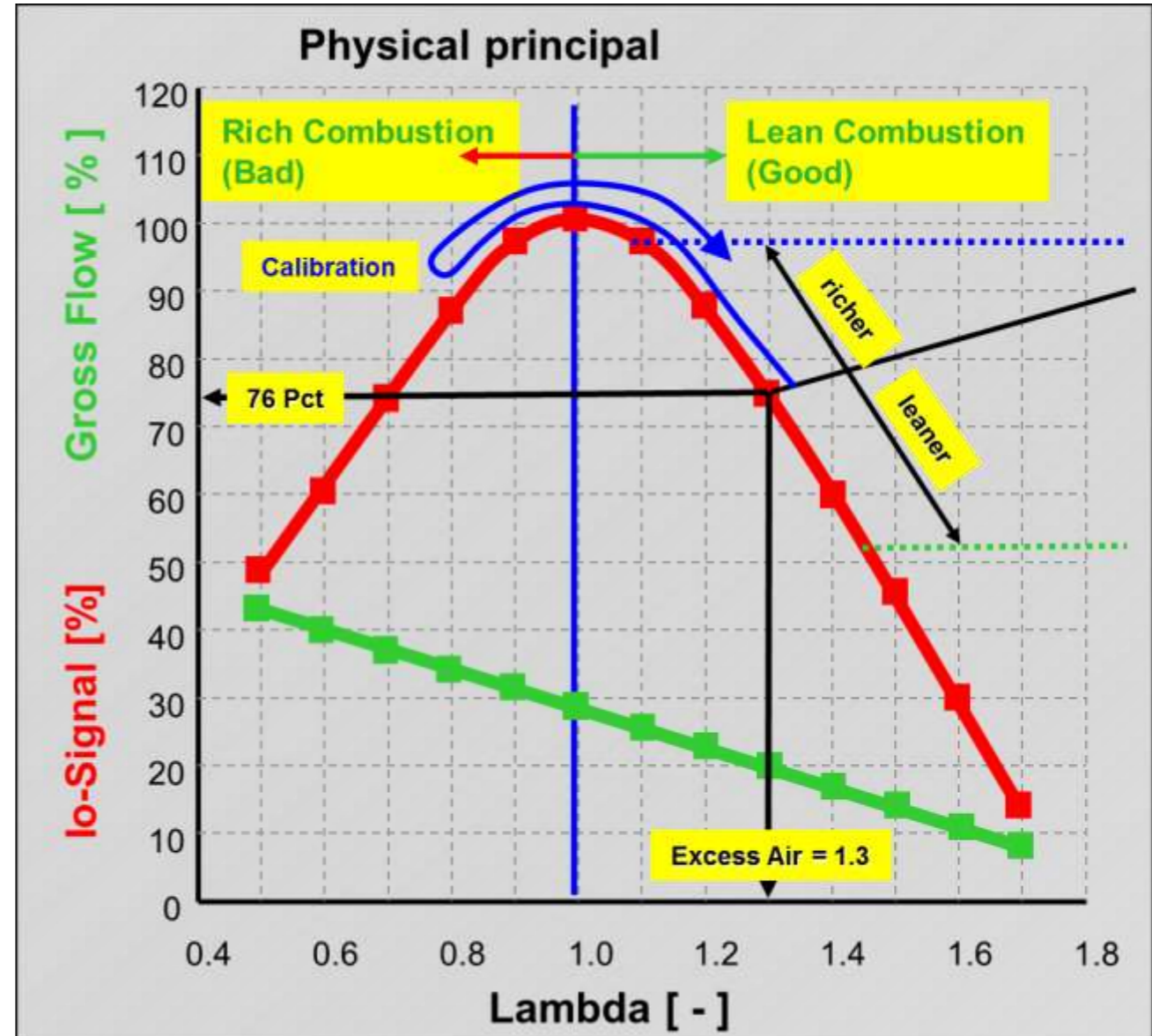
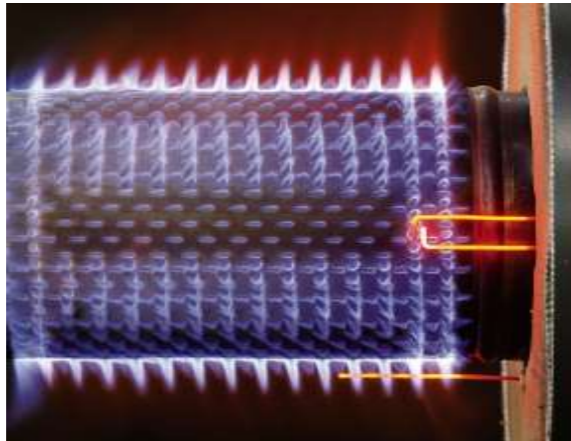


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MatriX cylinder burner

Lambda Pro Technology: What is it?

- **Self calibrating** burner and combustion management
- Automatic adjustment to **varying gas** quality / conditions
- Ensures **optimum combustion** and constant high efficiency at all times
- Easily adjusts to **NG or LP**

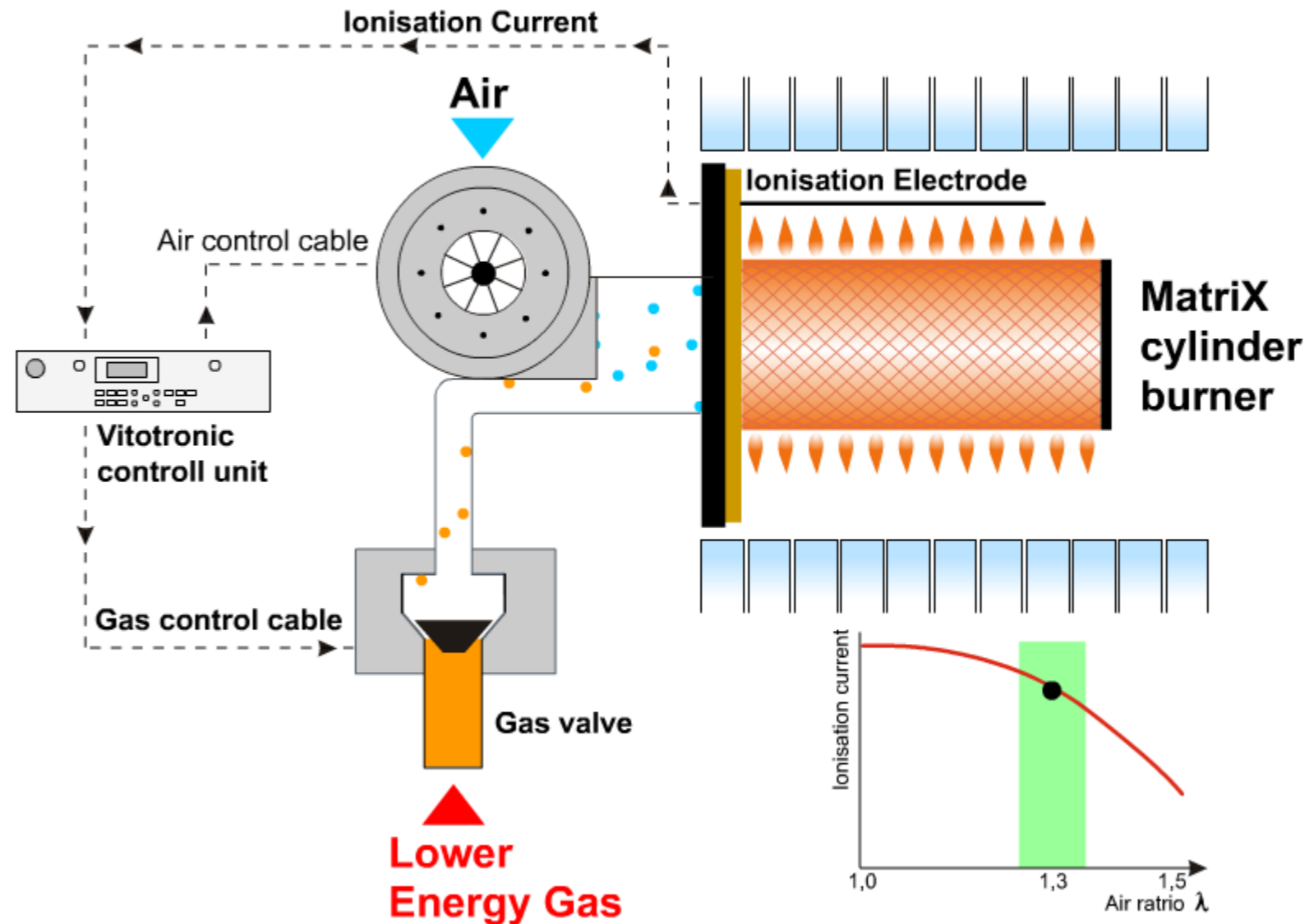


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MatriX cylinder burner

Lambda Pro Technology: How it works:

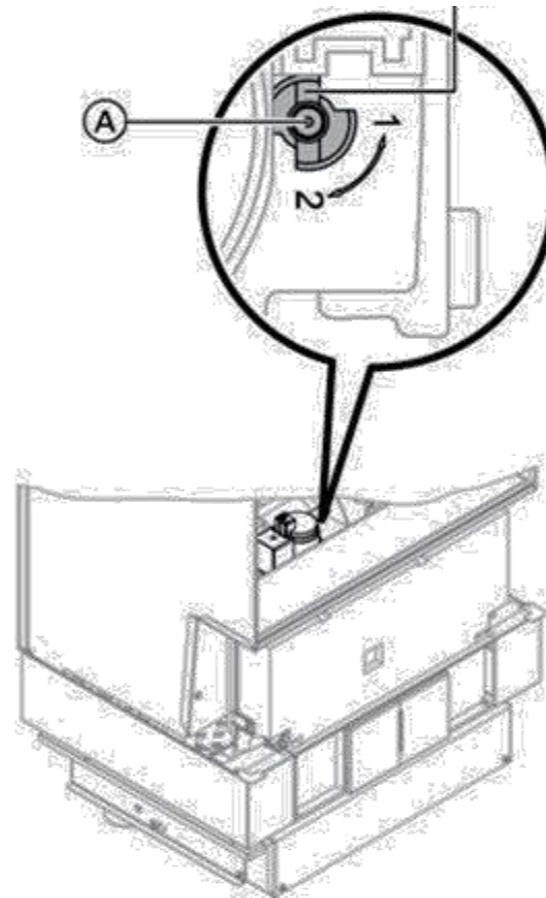
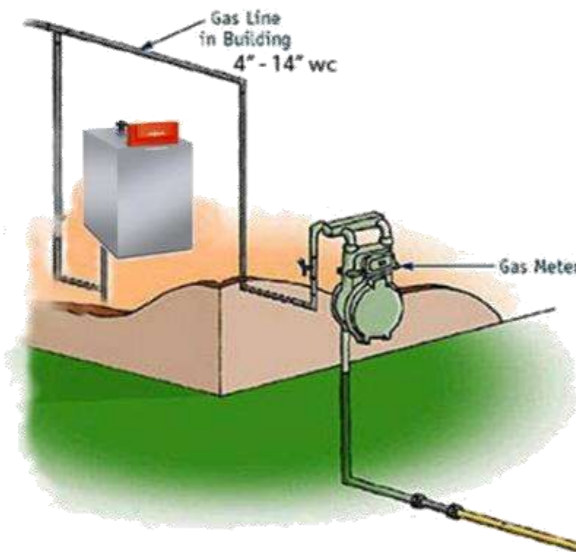
- Controls gas and air independently of each other
- **Ionization current** indicates flame quality
- Gas and air control **constantly** adjusts to changes
- **No** field adjustments required



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Natural Gas or LP Gas Operation

- Boilers are factory adjusted for **Natural Gas**
- **No additional parts** needed for conversion to LP Gas.
- **Easy conversion to LP:**
 - ¼ turn on gas valve set screw
 - Change two addresses in Coding 2
 - A combustion setting adjustment is **not normally** required



Gas Pressure requirements: B2HA/B – All models

Min Press. NG

4" wc

Min Press. LPG

10" wc

Max Press. NG/LPG

14" wc



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Innovative DHW Heating System

- Lots of hot water, whenever you need it
- Utilizes exclusive *Storage Tank Loading System (STLS)*
- Outperforms much larger storage tanks

Impressive performance:

Model	B2TB-19	B2TB-35
Max draw rate (over 10 min.)	44 gal (166 L)	60 gal (227 L)
Continuous draw rate*	1.9 gpm (7.2 Lpm)	3.3 gpm (12.5 Lpm)
*Based on 70°F Temp rise (50°F to 120°F)		

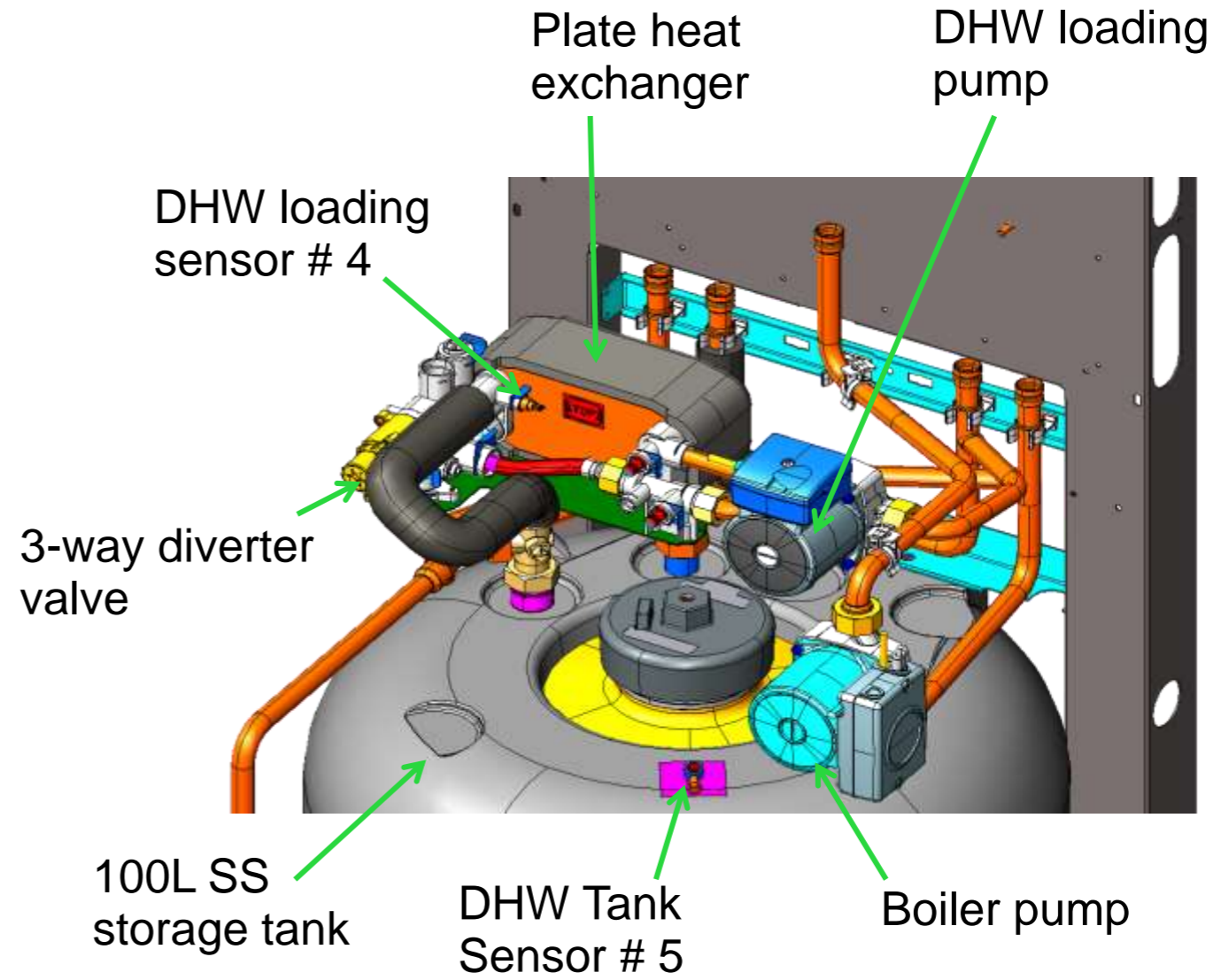


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Innovative DHW Heating System

Storage Tank Loading System – How it works:

- Main Components:
 - 100 L / 26 gal stainless steel storage tank
 - Stainless steel plate heat exchanger
 - DHW loading pump
 - 3-way diverter valve

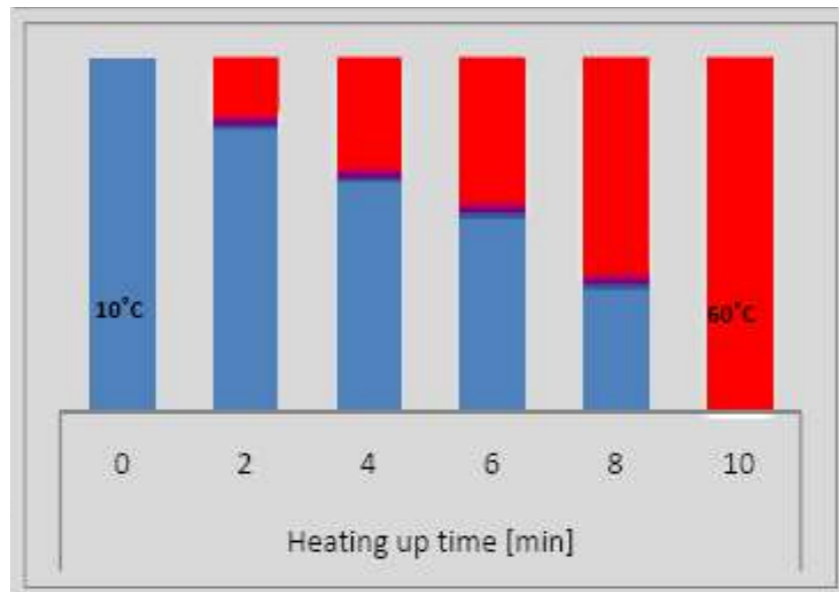


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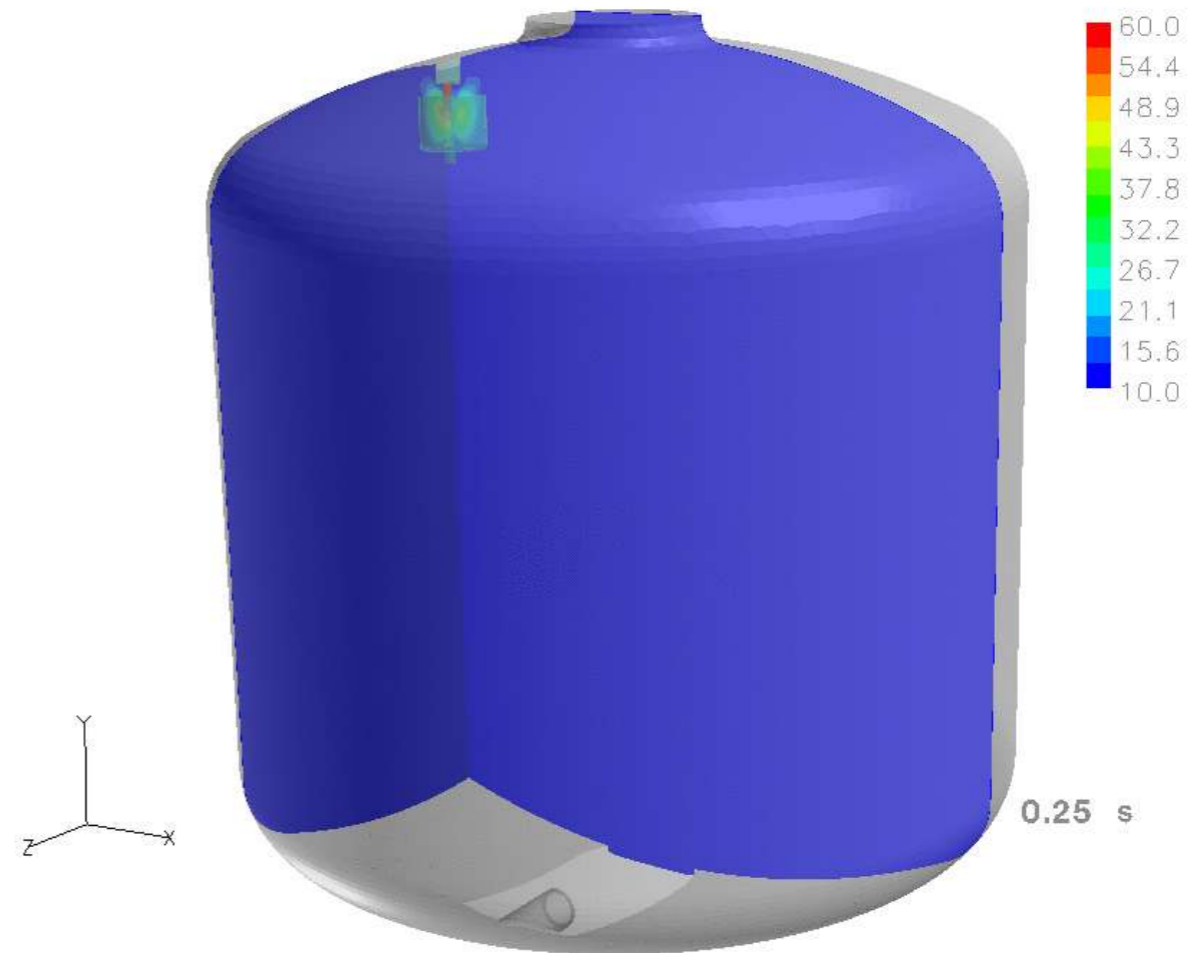
Innovative DHW Heating System

Storage Tank Loading System – How it works:

- Tank loads from top and stratifies without turbulence
- Short hot water route design guarantees improved HW draw-offs



TB 412 Fall 0602



10°C to 60°C in ten minutes!

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Multiple venting options

- Venting made easy with multiple vent material options
- Approved materials:
 - Coaxial PPs
 - Rigid PPs
 - Flexible PPs
 - CPVC
 - Stainless Steel





- Pipe in pipe
- Coaxial PPs



- Single wall pipe:
- PPs Rigid
 - PPs Flexible
 - CPVC
 - Stainless steel

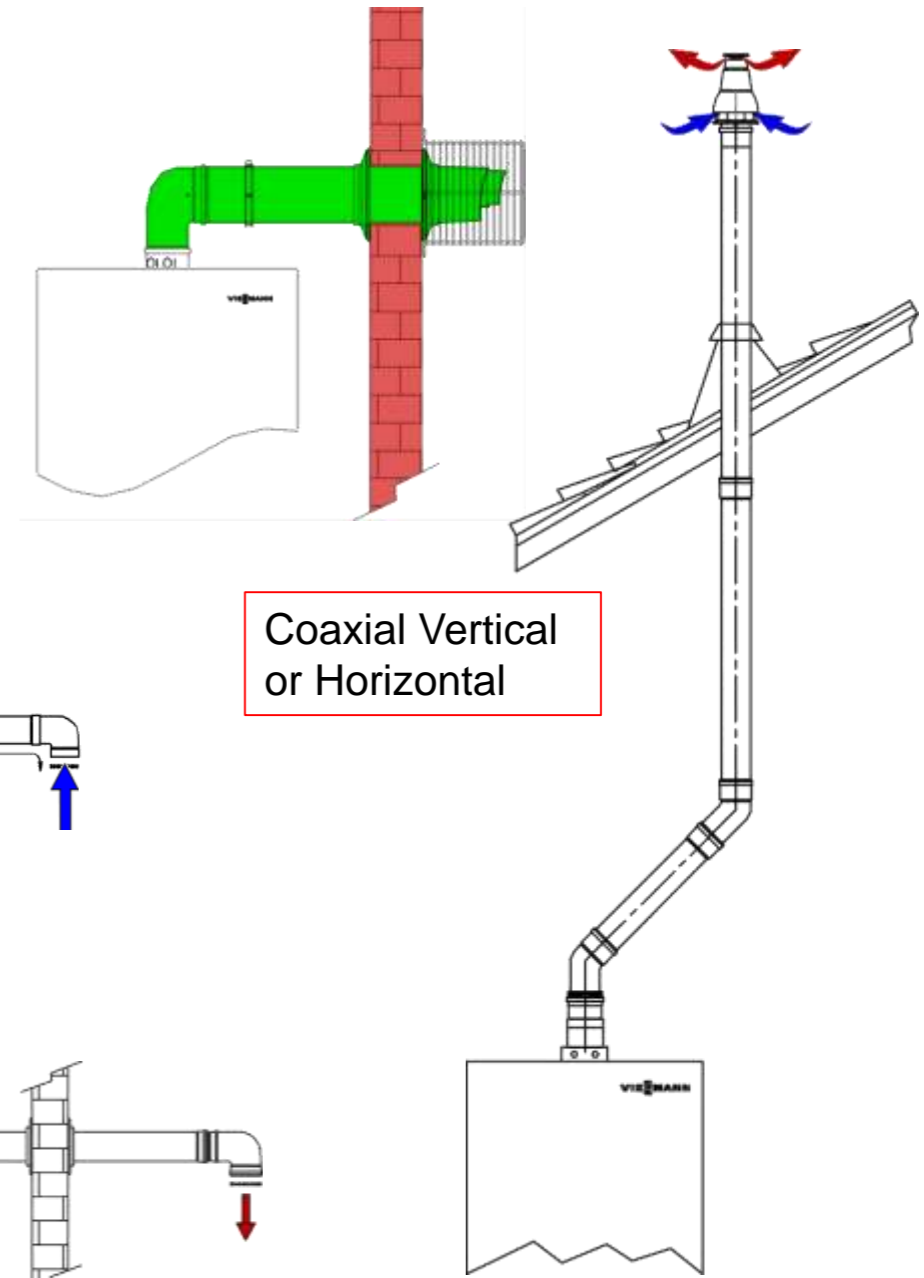
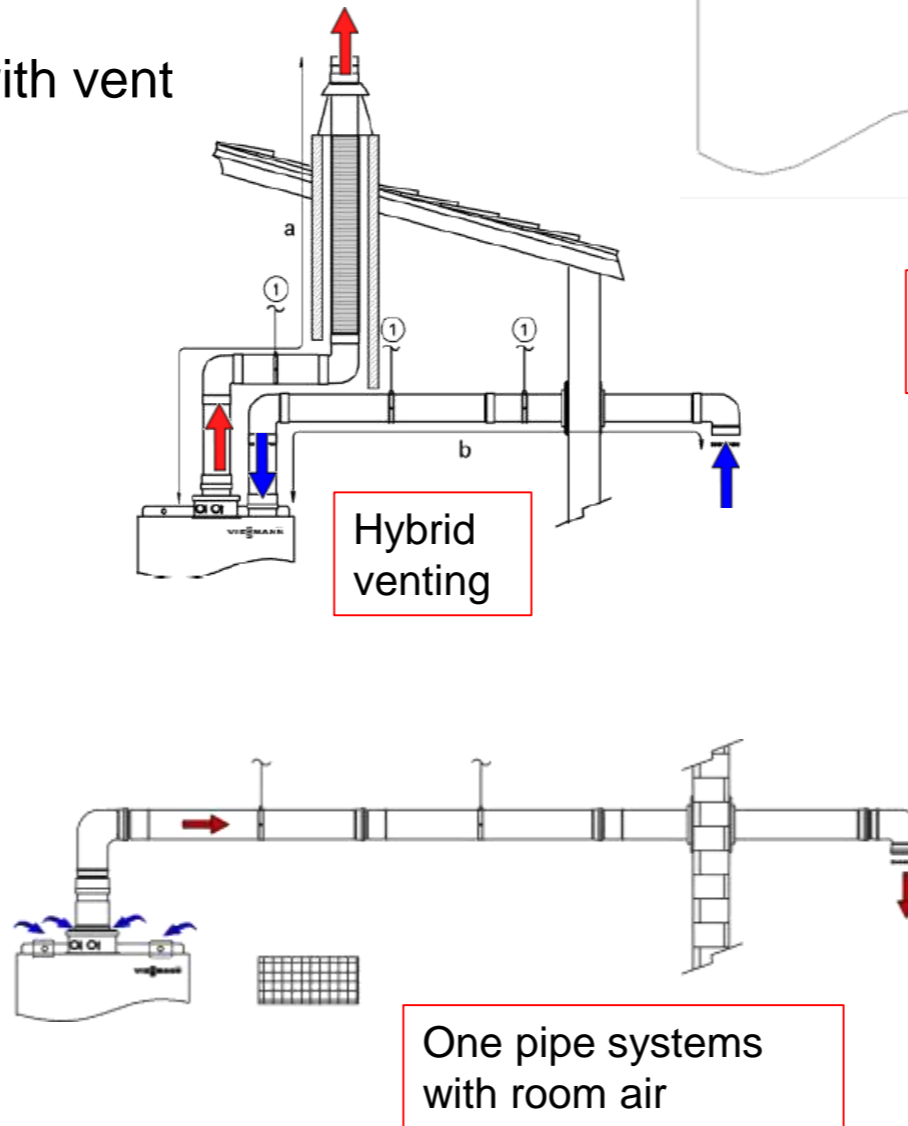
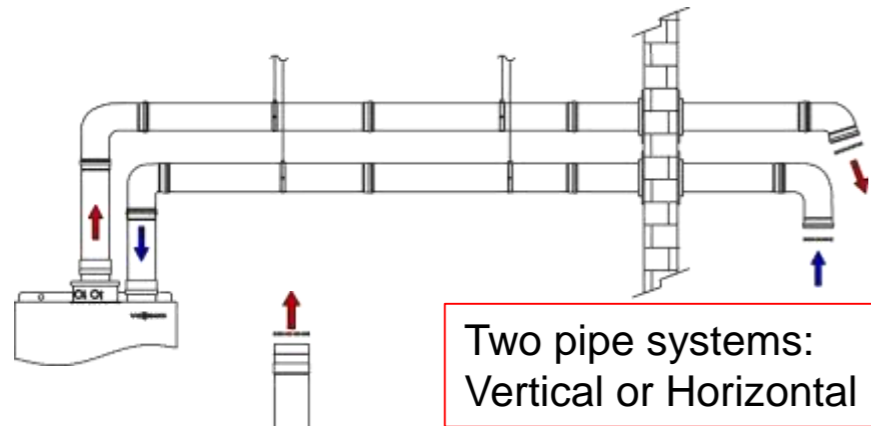
Gas Vent Type BH Class 11B 90°C c  System 636 

or System 636  Gas Vent Type BH Class 11B 90°C IPEX
IPEX x" (mm) CPVC c  Intertek Warnock Hersey ULC 636

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Multiple venting options

- Venting is easy to configure to your installation needs.
- Multiple installation layout options with vent lengths up to 180 ft



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Integrated Vitotronic control

- Built-in **multi-function** outdoor reset boiler and system control
- **Clear text** display and graphic support
- **Multi-temperature** space heating and DHW controller:
 - 1 high temperature heating circuit
 - 2 low temperature heating circuit
 - Domestic hot water priority function
 - Integrated digital clock with daily and weekly program
- **Easy communication** with BMS or Internet:
 - Vitocom 100 LAN1 – Internet communication
 - Vitogate 300 – BMS Gateway



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Integrated Vitotronic control

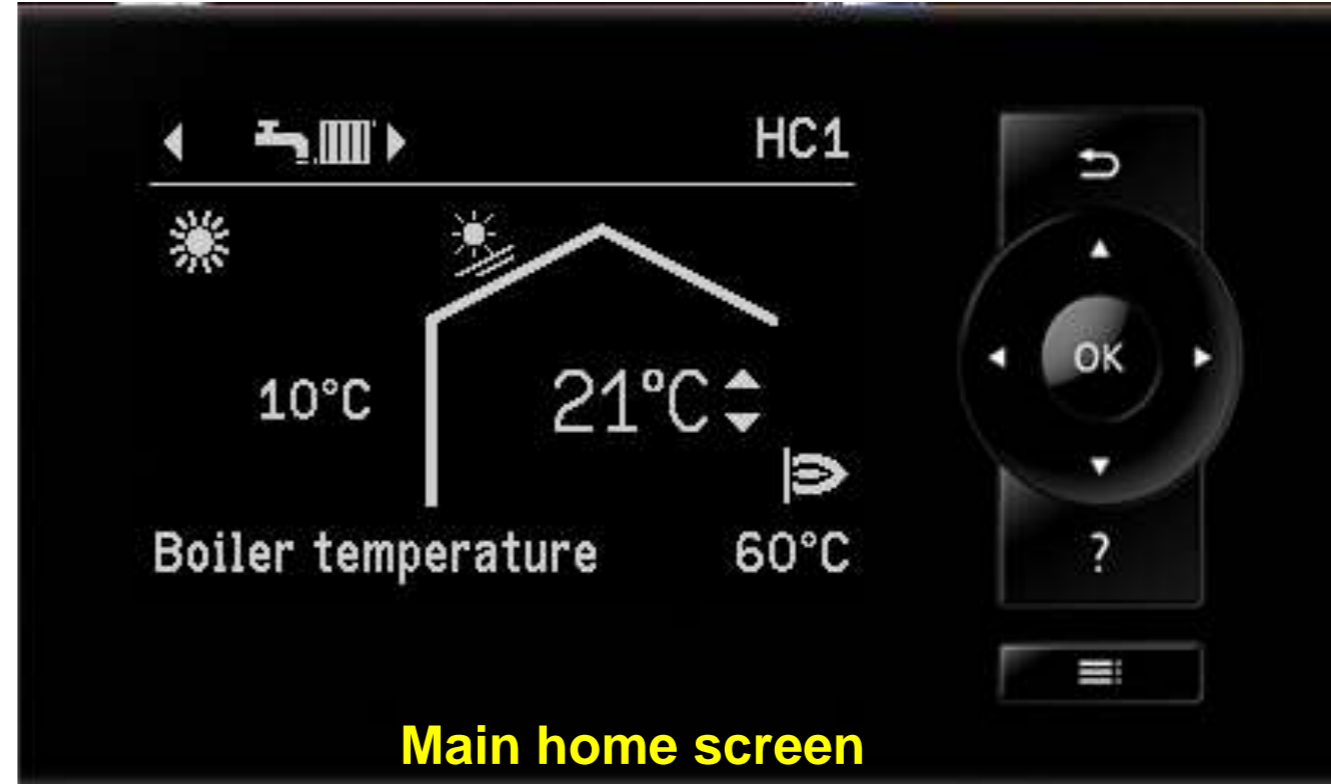
- Built-in outdoor reset control automatically adapts boiler water supply temperature to changing outdoor temperatures
 - Reduced annual fuel consumption by up to 15%
 - Provides enhanced comfort



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Integrated Vitotronic control

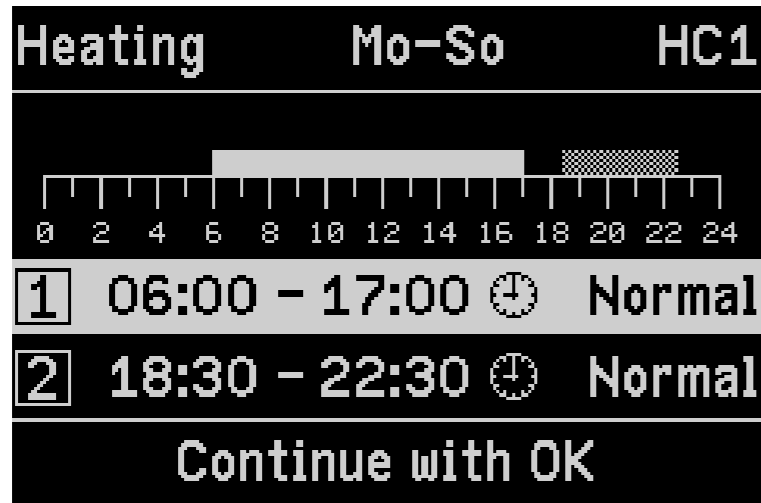
- Bright white text on black background for **easy to read** information.
- Easier to use with more **intuitive programming** functions, graphically displayed information & more features.



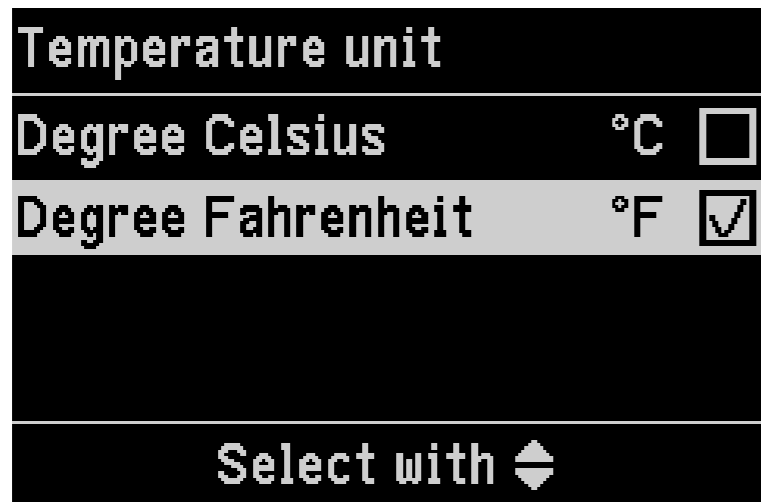
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Integrated Vitotronic control

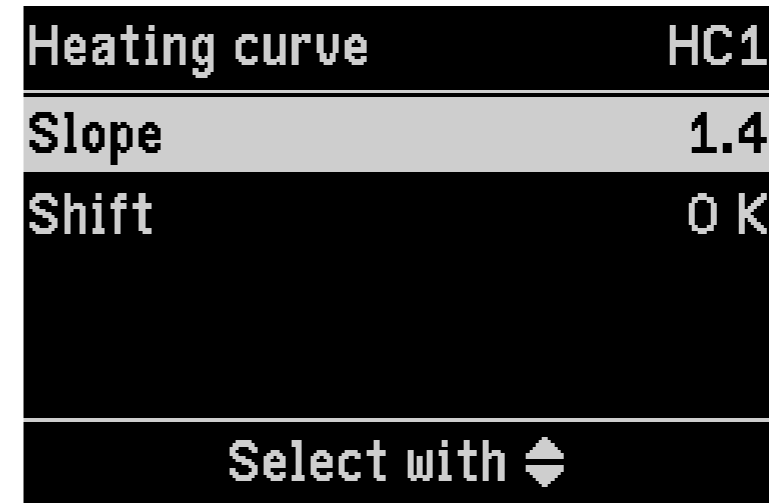
- Easy to navigate with plain text and graphics



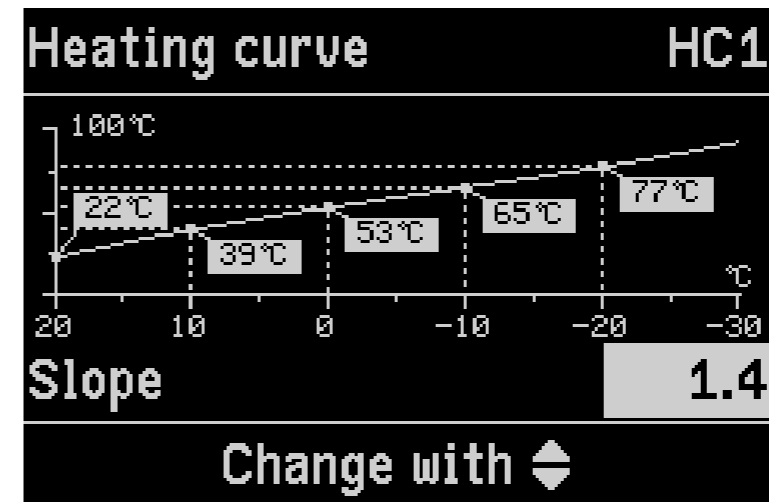
Setback
timers



Change units

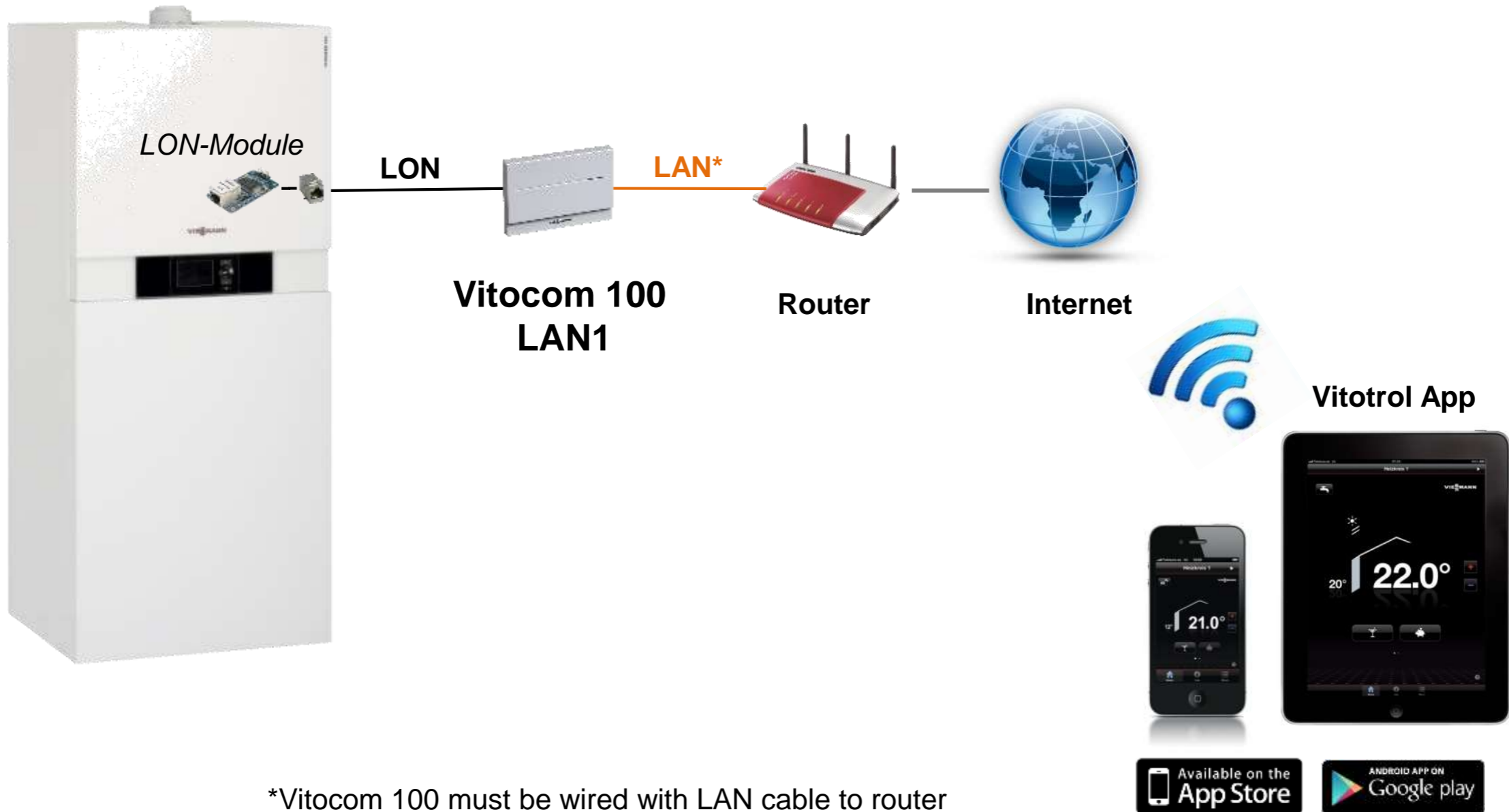


Heating curve
adjustment



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Internet ready



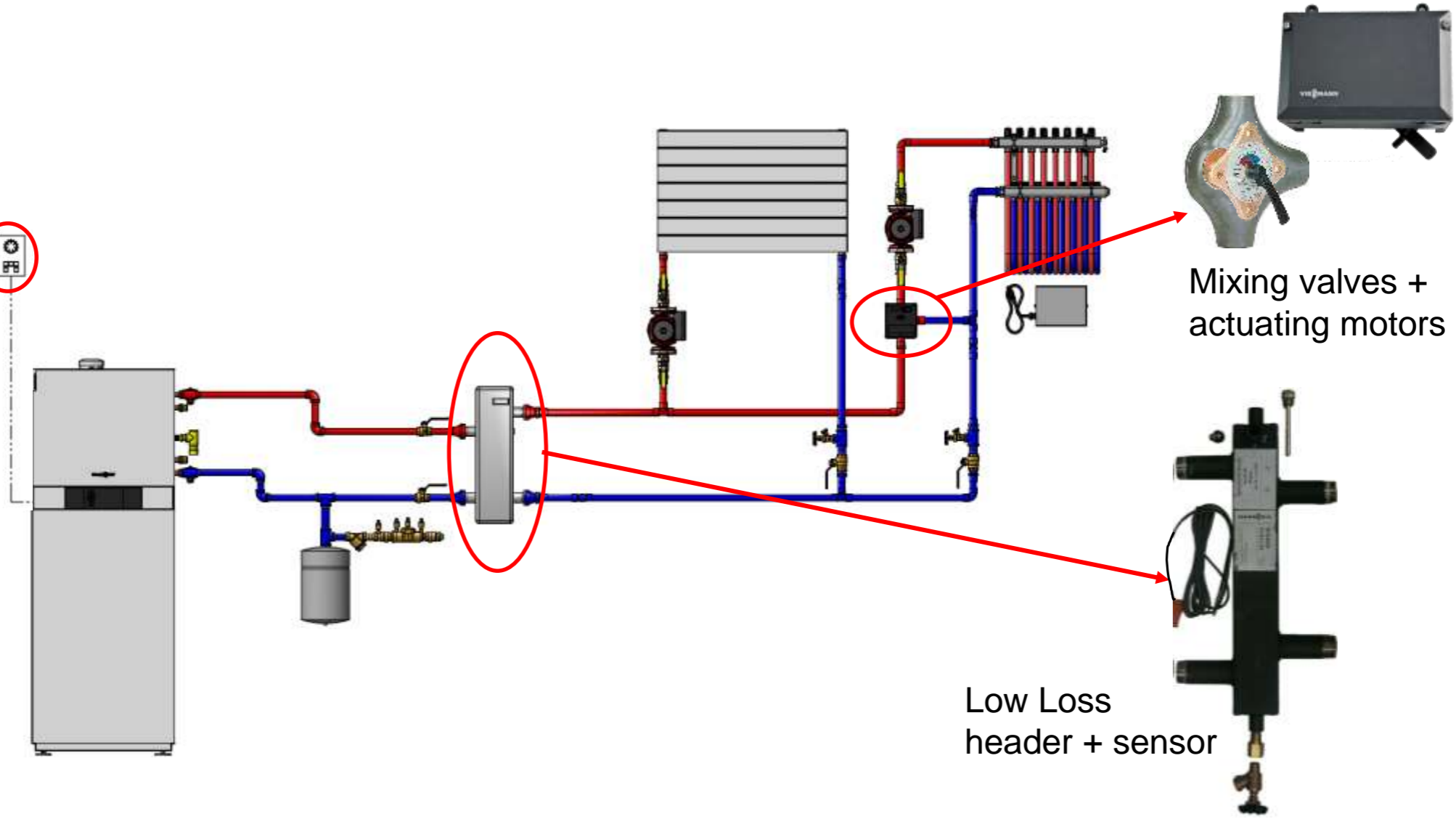
*Vitocom 100 must be wired with LAN cable to router

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Integrated Vitotronic control – Accessory options



Vitotrol
Communication
Thermostat



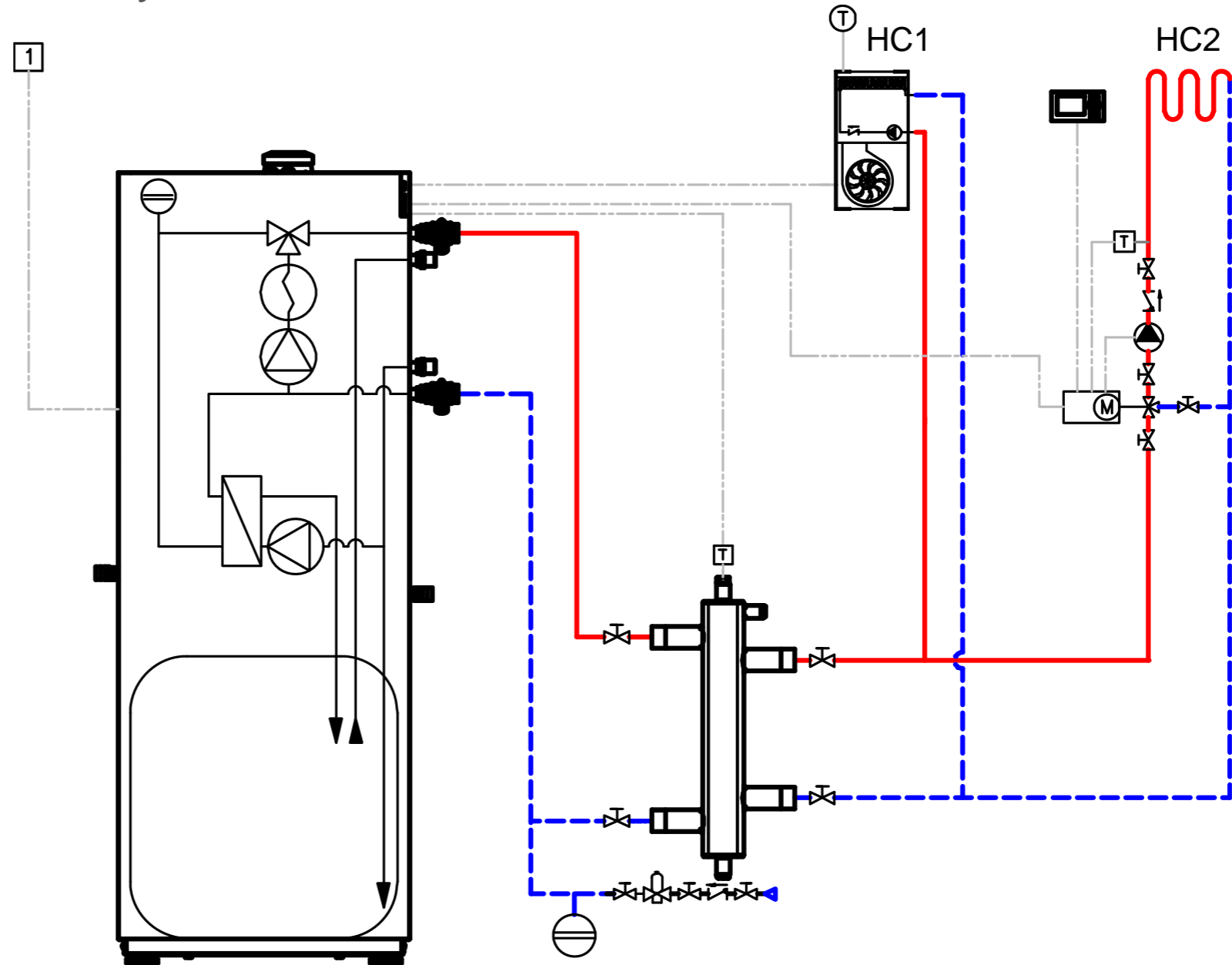
Mixing valves +
actuating motors

Low Loss
header + sensor

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Sample multi temperature system layout

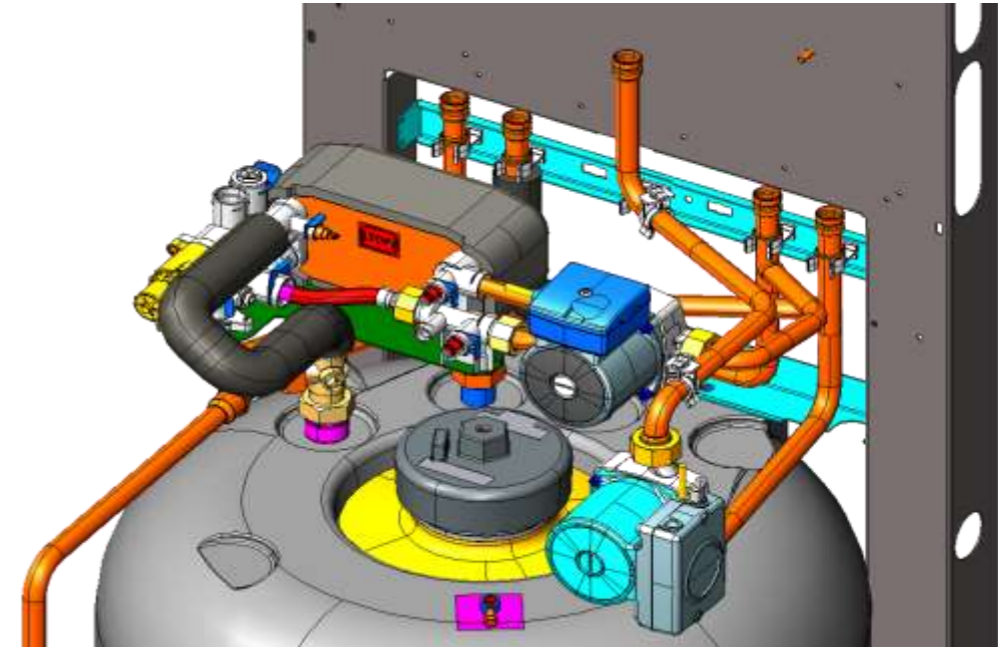
- Heating zones with primary secondary piping
- **Vitotronic** multi-temperature heating and DHW control
- Fan coil is external demand **or** operates at HC1 settings.
- Fan coil control logic is not affected by DHW priority but it will not get hot water from the boiler during DHW.



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Accessible components for easy service

- All serviceable components are accessible from the front
- No service access from side is required.
- All major components are easily removed
- Multi push-fit system
- Boiler heat exchanger easily accessible for cleaning



Easy service is the basis of design.

Vitodens 222-F, B2TB

Everything you need for your heating and DHW needs

- Highly **efficient** for dramatic fuel savings
- Space saving **compact** design
- Nearly **silent** operation
- Long service life with high quality, **durable** stainless steel construction
- **Fast** and simple to install and program
- **Easy** to service
- **Lots** of domestic hot water whenever you need it



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