ARMADA [SM]

HOT WATER SYSTEM FOR HEALTHCARE

Armstrong®

REPORTING

POINT OF USE

GENERATION
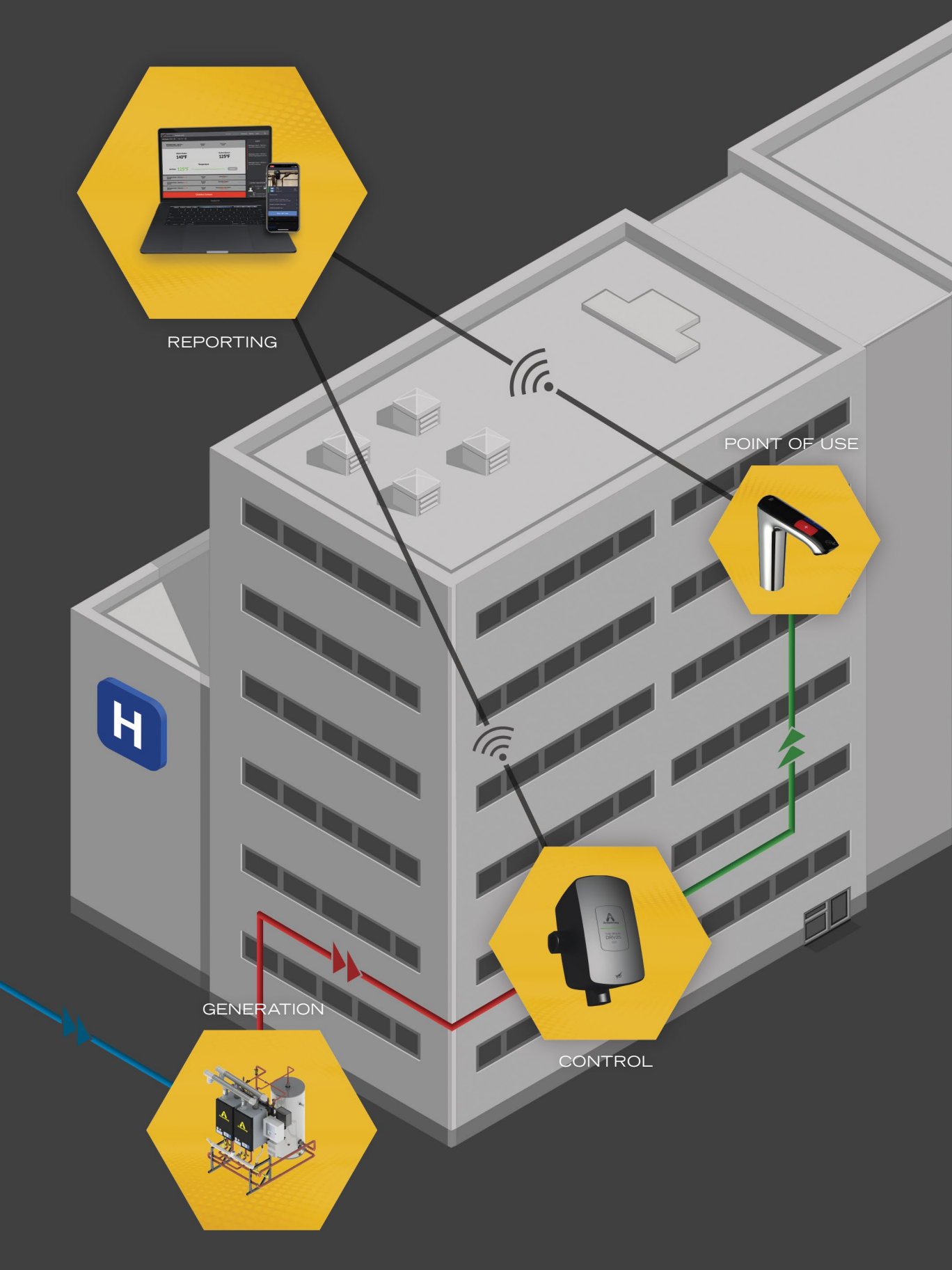
CONTROL

ARMADA℠ SMARTER HOT WATER FOR HEALTHCARE

Superior user safety, infection control and compliance, from the mechanical room to point of use.

Armstrong brings you a total, end-to-end domestic hot water solution that combines leading-edge hot water generation, precise digital temperature control, state-of-the-art digital faucets, and advanced monitoring and reporting software.

ARMADA℠ IS ENGINEERED TO SOLVE SOME OF THE HEALTHCARE INDUSTRY'S MOST DIFFICULT CHALLENGES BY:

| Mitigating incubation of waterborne pathogens

| Resisting infection surface transfer

| Reducing scalding risks

| Supporting hospital accreditation requirements and compliance with a Standard of Care such as the CMS mandate, ASHRAE 188 and VA 1061

THE COMPLETE ARMADA℠ SOLUTION

Armstrong water heaters, The Brain® Digital Recirculation Valves, Rada Digital Faucets, and SAGE® Smart Hot Water System Monitoring, Reporting and Documentation Software are essential components of Armada℠ Smarter Hot Water.

ARMADA℠
HOT WATER SYSTEM FOR HEALTHCARE

ARMSTRONG WATER HEATERS

Comprehensive steam, boiler water and new-era, high-efficiency, gas-fired hot water generation and control pre-piped packaged solutions.

DIGITAL-FLO® WATER HEATERS

Armstrong's industry-changing series of water heaters achieves a higher level of hot water system temperature control accuracy. All Digital-Flo® Water Heaters are equipped with The Brain® Digital Recirculation Valve (DRV), our revolutionary digital water temperature control technology, and come SAGE®-enabled, for a complete, factory-integrated hot water system solution.

FEATURES

❙ The Brain® ASSE 1017 certified DRV

❙ Optional SAGE® building system interface with integral data-logging to support AHSRAE 188 monitoring and reporting compliance
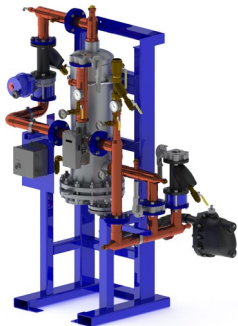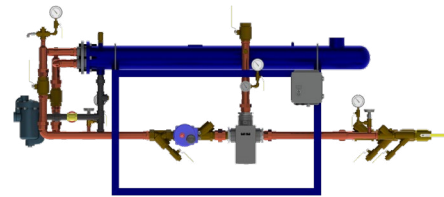
DIGITAL-FLO® SEMI-INSTANTANEOUS STEAM/WATER HEATER

❙ Choose from 16 standard assemblies or customize

❙ Compact vertical design, small footprint

❙ Simple tube bundle access

❙ Water temperature raised above Legionella survival levels on every recirculation cycle
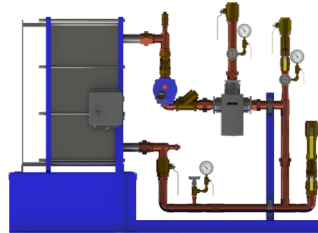
DIGITAL-FLO® INSTANTANEOUS BOILER WATER/WATER PHE WATER HEATER

❙ Choose from 40 standard assemblies or customize

❙ No need for modulating pump control

DIGITAL-FLO® INSTANTANEOUS STEAM/WATER SHELL & TUBE WATER HEATER

❙ Choose from 48 standard assemblies or customize

❙ Separate steam control valve not required

❙ Water temperature raised above Legionella survival levels on every recirculation cycle

ABH GAS-FIRED WATER HEATERS

ABH Gas Fired Water Heaters deploy an innovative, multiple pass condensing technology to deliver operating efficiencies as high as 99.8%. During operation, energy from latent and sensible heat from the combustion process is fully optimized by the heat exchanger.

The unique, patented Cold Water Injection System (CWIS) within the storage tank ensures that the lowest achievable temperature cold water and/or system return water enters the heat exchanger of the ABH. This design maximizes the condensing condition across a broader operational range than competitive, high-efficiency technologies.

Cooled condensate that results from the process is evacuated to drain through an integral neutralization system. Residual flue gas exits the system at temperatures so low that a simplified, lower cost, PVC/CPVC vent system is appropriate under most operating conditions.
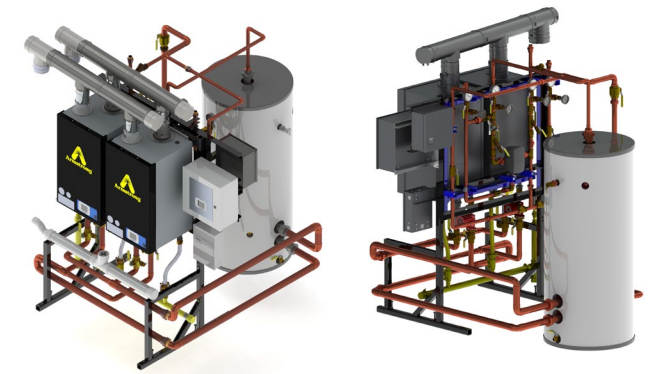
ABH299
Minimum 299,000 BTU, plus storage
Maximum potential BTU 2,400MBTU

ABH399
Minimum 399,000 BTU, plus storage
Maximum potential BTU 3,200MBTU

ABH599
Minimum 599,000 BTU, plus storage
Maximum potential BTU 5,040MBTU

FEATURES

❙ Up to 99.8% efficiency—Features efficient condensing technology, 316L heat exchanger design with a 5:1 turndown

❙ Pre-piped package solution can be tailored to fit space of any size

❙ Turnkey installation resulting from pre-piped, single-point utility connections—electrical, gas and venting

❙ Customized for your unique requirements—Accessorize to suit with circulation pumps, expansion tanks, additional heat exchangers and related componentry

❙ Reduced risks for Legionella and scalding—Inhibited incubation of waterborne pathogens and enhanced protection against water temperature injury provides optimized compliance with ASHRAE188 and other Standards of Care

❙ Integral MODBUS RTU for direct connectivity to BAS in all primary protocols

❙ Configurable rack mount modular water heaters provide multiple storage tank options with up to 40:1 turndown

❙ Standard and configurable custom hot water generation and digital temperature control solutions with The Brain® DRV and BAS or SAGE® Smart Hot Water System Management

THE BRAIN® DIGITAL RECIRCULATION VALVE (DRV)

As a stand-alone DRV or a pre-piped digital mixing center, The Brain® improves the performance and safety of institutional hot water systems by delivering unparalleled water temperature control.

Engineered exclusively for continuously recirculating hot water systems, The Brain® simplifies your hot water system to deliver accuracy, stability and safety. Features include programmable temperature alerts and a program to promote compliance with recommended Legionella guidelines.

With four assembly configurations proportionate to ease of installation, The Brain® improves the performance of hot water systems that use all types of water heating technologies. Choose from 40 standard models to accommodate flow rates up to 400 gpm (@ 10 psid), or contact us to discuss a solution custom to your specifications. Include SAGE® technology for optimum monitoring and reporting.

FEATURES

| Component self-diagnostics

| Programmable set point and alerts

| Programmable thermal disinfection

SAFETY

| Over temperature shutoff

| Power failure shutoff

| Emergency mode

PERFORMANCE

| +/- 2°F / 1°C control

| 1°F / 1°C minimum system temperature loss

RADA DIGITAL FAUCETS

The Brain® digital performance, microsized in a point-of-use faucet. Hands-free activation and temperature control with programmable thermal disinfection, automatic flush, bacterial-resistant design and ASSE 1070 certified.

Rada Digital Faucets combine innovative design and state-of-the-art technology in a smart, easy-to-clean solution that delivers precise temperature control, resists transmission of disease and reduces the risk of scalding.

RADA DIGITAL FAUCETS OFFER:

| The Brain® digital performance, microsized in a point-of-use faucet

| Programmable hands-free activation and temperature control

| ASSE 1070 approved – no requirement for separate under-sink TMV

| Bluetooth® technology for programming and information management

| Programmable automatic faucet flush to evacuate stagnant water

| Sensible thermal disinfection protocol – one faucet at a time

| Innovative bacterial-resistant internal design

| Integration with The Brain® for complete hot water system monitoring and temperature control

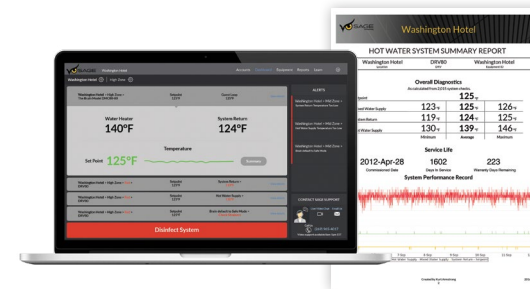| SAGE® software for system performance monitoring, recording and documentation

SAGE® SMART HOT WATER SYSTEM MONITORING AND REPORTING

Simple, effective monitoring, logging and remote alerting of key temperature control components of a hot water system safety risk management plan. Real-time dashboard monitoring, temperature and system diagnostic alerts, digital documentation and recordkeeping.

This fully integrated software tool brings you the next level in smart hot water system monitoring and reporting. SAGE® works seamlessly with all our real-time monitoring products, including The Brain®, as it analyzes data to track behavior and performance—ensuring full compliance with VA, ASHRAE and World Health Organization hot water system safety guidelines and requirements. By providing regular updates and real-time alerts, SAGE® keeps you informed, 24 hours a day.

SAGE® offers simple, effective monitoring, logging and remote alerting of key temperature control components of a hot water system safety risk management plan, for a modest monthly fee.

CONNECTIVITY

| Integral Modbus RTU interface (The Brain®)

| SAGE® building system interface module

| Web-enabled

| Modbus, BACnet™ and LonWorks™

FEATURES

| You own your data and it is always safe and protected by high-level security

| Dashboard monitoring in real time

| Secure remote programming—you are in control

| Multi-location view of all properties simultaneously, or filtered

| Temperature and system diagnostic alerts in real time

| Unlimited digital data logging, automated report generation and record retention for simplified compliance monitoring and documentation

CONTACT ARMSTRONG INTERNATIONAL

For additional information on Armada℠ Smarter Hot Water, or to find an Armstrong representative near you, visit **armstrong**international.com/contact-us

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