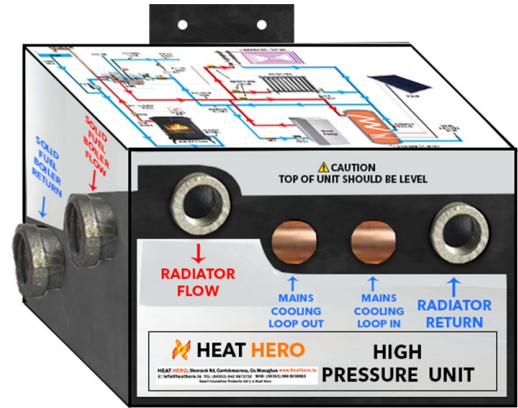




# HEAT HERO TECHNICAL MANUAL

# HIGH PRESSURE UNIT

- OPEN VENTED GRAVITY FULLY PUMPED HEATING SYSTEM
- RADIATORS AND UNDERFLOOR HEATING ARE FULLY PRESSURISED
- NO NEED TO DIG UP FLOORS
- NO NEED TO CHANGE CYLINDER
- BUILT-IN COOLING LOOP

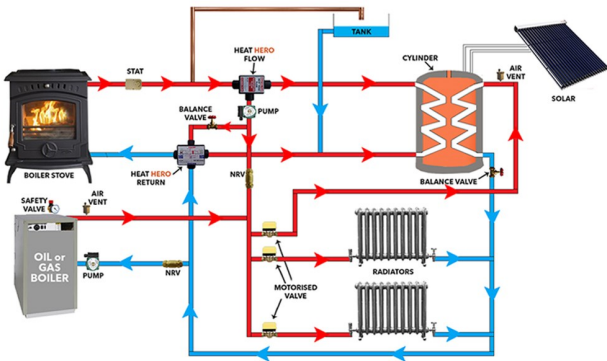


## HEAT HERO INNOVATIVE PRODUCTS



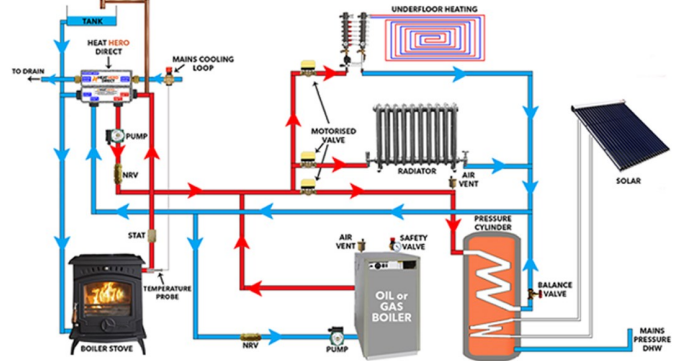
### HEAT HERO GRAVITY

- ✂ HIGHER EFFICIENCY
- ✂ STRONGER CIRCULATION
- ✂ DHW FULLY PUMPED
- ✂ BETTER HEAT TRANSFER
- ✂ EASILY INSTALLED



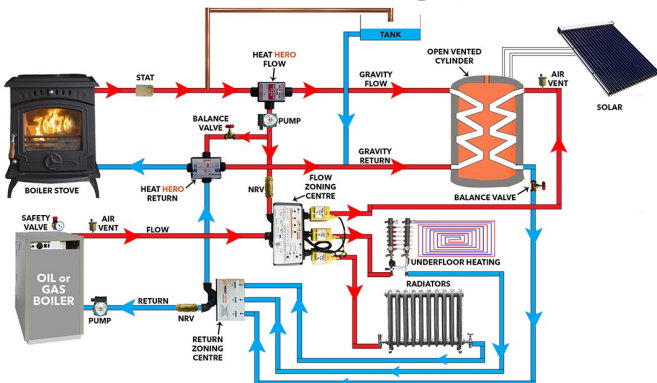
### HEAT HERO DIRECT

- ✂ DIRECT HEAT TRANSFER
- ✂ STRONG HEAT CIRCULATION
- ✂ EASILY INSTALLED & EFFICIENT
- ✂ BUILT IN 44KW COOLING LOOP
- ✂ NO DIGGING UP FLOORS OR CHANGING CYLINDER



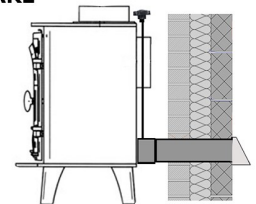
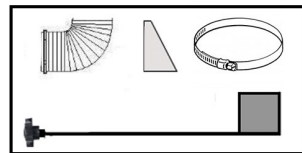
### HEAT HERO FREE FLOW ZONING CENTRE

- ✂ FREE FLOW NO BAFFLES
- ✂ LOW MAINTENANCE
- ✂ LOW RUNNING COSTS
- ✂ DUAL HEATING SYSTEMS
- ✂ EASILY INSTALLED



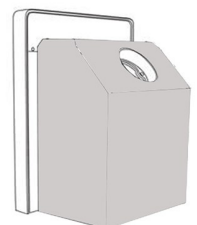
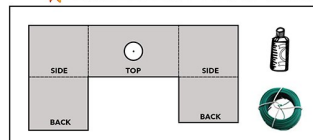
### HEAT HERO OUTSIDE AIR KIT

- ✂ COMPATIBLE WITH ALL STOVES
- ✂ LEVER TO CONTROL AIR INTAKE
- ✂ DIRECT OUTSIDE AIR



### HEAT HERO INSERT STOVE JACKET

- ✂ CERAMIC FIBRE JACKET
- ✂ HIGHER HEAT OUTPUT
- ✂ EXCELLENT HEAT CONTAINER



HEAT HERO, Shercock Rd, Carrickmacross, Co.Monaghan [www.heathero.ie](http://www.heathero.ie)

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Smart Innovation Products Ltd t/a Heat Hero



# HEAT HERO

# HIGH PRESSURE UNIT

## INSTALLATION AND TECHNICAL MANUAL

### CONTENTS:

• BENEFITS OF HEAT HERO HIGH PRESSURE UNIT AND TECHNICAL DATA	1
• HEAT HERO HIGH PRESSURE UNIT DESCRIPTION, INSTALLATION INSTRUCTIONS AND INSTRUCTIONS BEFORE LIGHTING THE STOVE	2
• DIAGRAM SHOWING HEAT HERO HIGH PRESSURE UNIT CONNECTED TO A HEAT PUMP, PRESSURE CYLINDER, RADIATORS, UNDERFLOOR HEATING AND SOLAR	3
• DIAGRAM SHOWING HEAT HERO HIGH PRESSURE UNIT CONNECTED WITH HEAT HERO FREE FLOW ZONING CENTRE	4
• THERMAL SAFETY VALVE & HEAT EXCHANGER	5
• HEAT HERO INNOVATIVE PRODUCTS	6



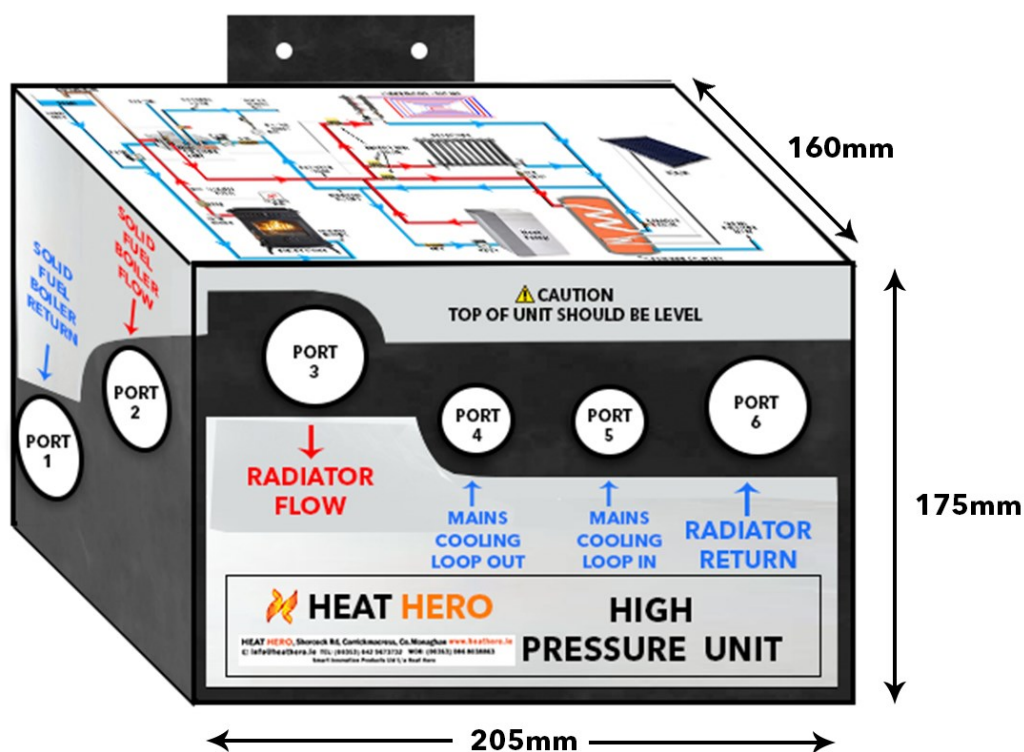
It is important that this information booklet is read and understood fully before installation.  
\*This unit **MUST** only be installed by a fully qualified person who understands and adheres to all relevant regulations.

**CAUTION: HEAT HERO HIGH PRESSURE UNIT MUST NOT BE INSTALLED AS A CONCEALED UNIT**

The following instructions are given to help the installer ensure a safe and efficient installation and to get the most heat from the solid fuel heating system.

## **BENEFITS OF HEAT HIGH PRESSURE UNIT**

- Heat Hero High Pressure Unit is a safe open vented heating system that has gravity and a built in 44 KW cooling loop that will cool the solid fuel boiler in the event of power failure.
- The heat from the solid fuel boiler is circulated through a free flow 44KW heat exchanger that allows from the maximum heat transfer from the solid fuel boiler and DHW.
- Mains water pressure is used to pressurise the radiators and underfloor side of the heating system.
- There is no need to change a single coil cylinder to a dual coil cylinder.
- Heat Hero High Pressure Unit is very easily installed and has no electrical connections.
- There is no need to dig up floors to install gravity pipes.
- The pipe thermostat is installed beside the solid fuel boiler for accurate temperature readings.
- Heat Hero High Pressure Unit is compatible with pressurised and open vented single coil cylinders.



## **TECHNICAL DATA – HEAT HERO HIGH PRESSURE UNIT**

PORT 1	1''BSP FEMALE	SOLID FUEL BOILER GRAVITY RETURN CONNECTION
PORT 2	1'' BSP FEMALE	SOLID FUEL BOILER GRAVITY FLOW CONNECTION
PORT 3	3/4'' BSP FEMALE	PRESSURISED RADIATOR FLOW CONNECTION
PORT 4	1/2'' COPPER	MAINS COOLING LOOP OUTLET
PORT 5	1/2'' COPPER	MAINS COOLING LOOP INLET
PORT 6	3/4'' BSP FEMALE	PRESSURISED RADIATOR RETURN CONNECTION

Maximum test pressure	6 Bar
Maximum work pressure	4 Bar
Maximum Heat Capacity	44 KW
Material is Mild Steel ,Brass and Copper	

OVERALL LENGTH	210 CM
OVERALL DEPTH	180 CM
OVERALL HEIGHT	220 CM

## **HEAT HERO HIGH PRESSURE UNIT DESCRIPTION**

Heat Hero High Pressure Unit is designed to link a Solid Fuel Boiler safely with a High Pressure Dual Heating System like high pressure gas boilers or heat pumps. The radiators and under-floor side of the heating system operate under mains pressure for strong circulation and the solid fuel boiler is safe with an open vent, gravity and has a built-in 44KW cooling loop in the event of electrical failure.

Heat Hero High Pressure Unit also has a built-in Free Flow 44KW heat exchanger that allows for a high efficiency heat transfer and strong circulation.

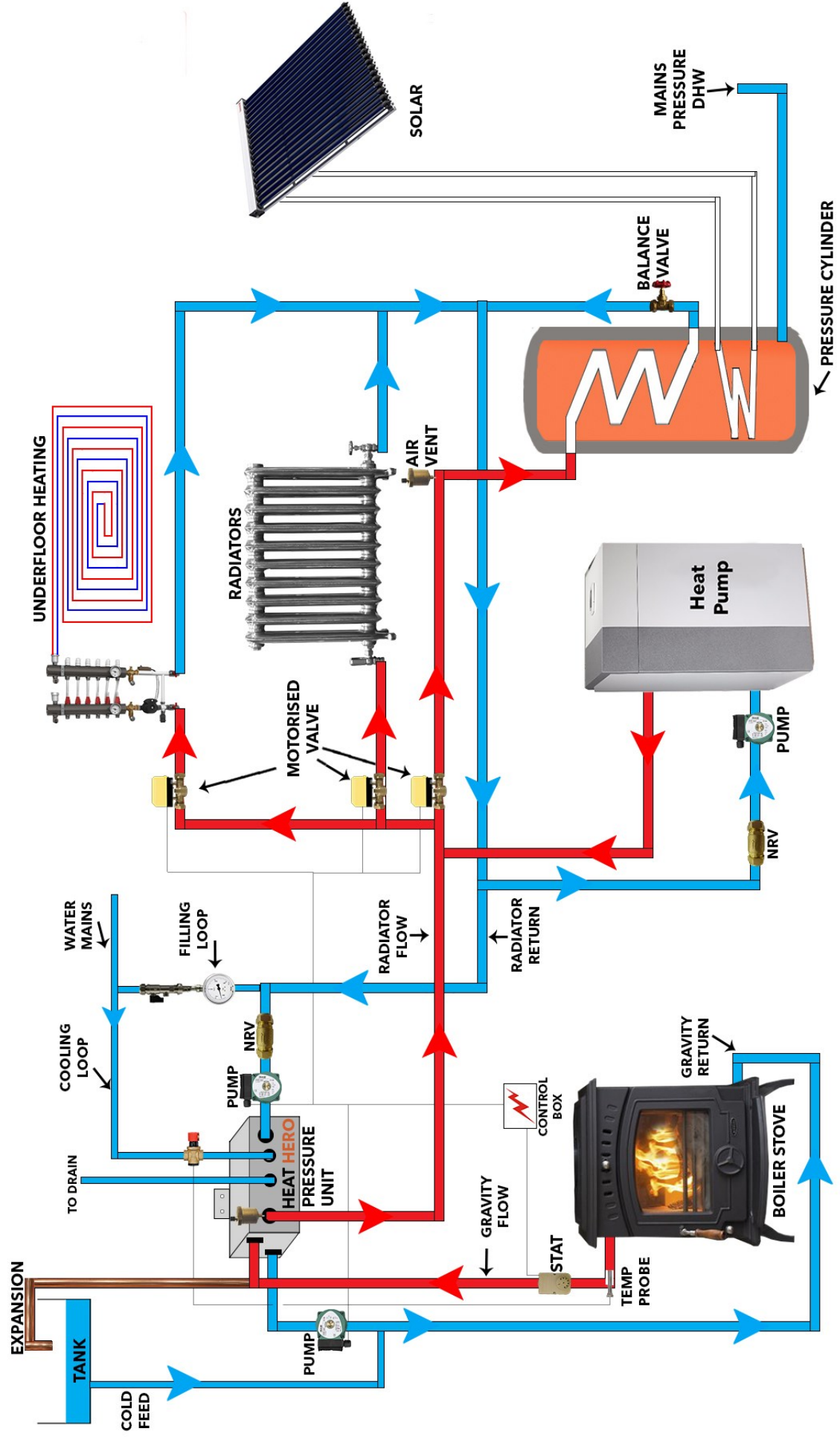
### **Installation instructions for Heat Hero High Pressure Unit**

- **Heat Hero High Pressure Unit** must be installed above the solid fuel boiler to allow gravity pass through the solid fuel boiler and the Heat Hero High Pressure unit.
- **Two Circulating pumps** must be installed in conjunction with Heat Hero High Pressure unit.  
The first circulating pump must be installed on the solid fuel gravity return as per diagram.  
The second circulating must be installed on the pressurised radiator return as per diagram.
- **The cold feed** must be connected to the solid fuel Gravity Return in front of the circulating pump as per diagram.
- **Heating storage tank** should be 1 meter above Heat Hero High Pressure Unit.
- **Expansion pipe** of minimum ¾" diameter must be connected to the solid fuel Gravity Flow and piped to the heating tank as per diagram.
- **Non Return Valves** should be of good Quality and installed as per diagram.
- **Auto Air Vents** should be of good Quality and installed as per diagram.
- **Heating Zones** If a heating system is zoned, At least one radiator zone must be open when the solid fuel thermostat turns on the circulating pump.
- **Mains Pressure** is connected to the radiator side of the heating system as per diagram.
- **A 44KW Cooling Loop** is built into the Heat Hero High Pressure Unit. If the solid fuel boiler heats above 99° the liquid filled temperature probe will open the thermal safety valve and mains water will cool the gravity circuit and the solid fuel boiler.
- **Heat transfer** from the solid fuel boiler to the radiators and underfloor heating is achieved by a 44KW free flow heat exchanger built into the Heat Hero High Pressure Unit.
- **Pipe Thermostat** must be of good quality and fitted as close to the solid fuel boiler as possible. Caution should be taken that heat from the solid fuel boiler does not damage the workings of the pipe thermostat.

### **IMPORTANT - INSTRUCTIONS BEFORE LIGHTING THE STOVE:**

1. Make sure the system is full of water.
2. Make sure that all of the valves are open.
3. Turn On and Off the circulating pump to clear any air in the heating system.
4. Turn On the circulating pump and light the stove slowly until radiators start to heat.
5. The solid fuel circulation pump should be turned up to the maximum speed and the pipe thermostat should be set at 50°-55°.

**DIAGRAM SHOWING HEAT HERO HIGH PRESSURE UNIT IN A DUAL HEATING SYSTEM CONNECTED TO A HEAT PUMP, PRESSURE CYLINDER, RADIATORS, UNDERFLOOR HEATING AND SOLAR**



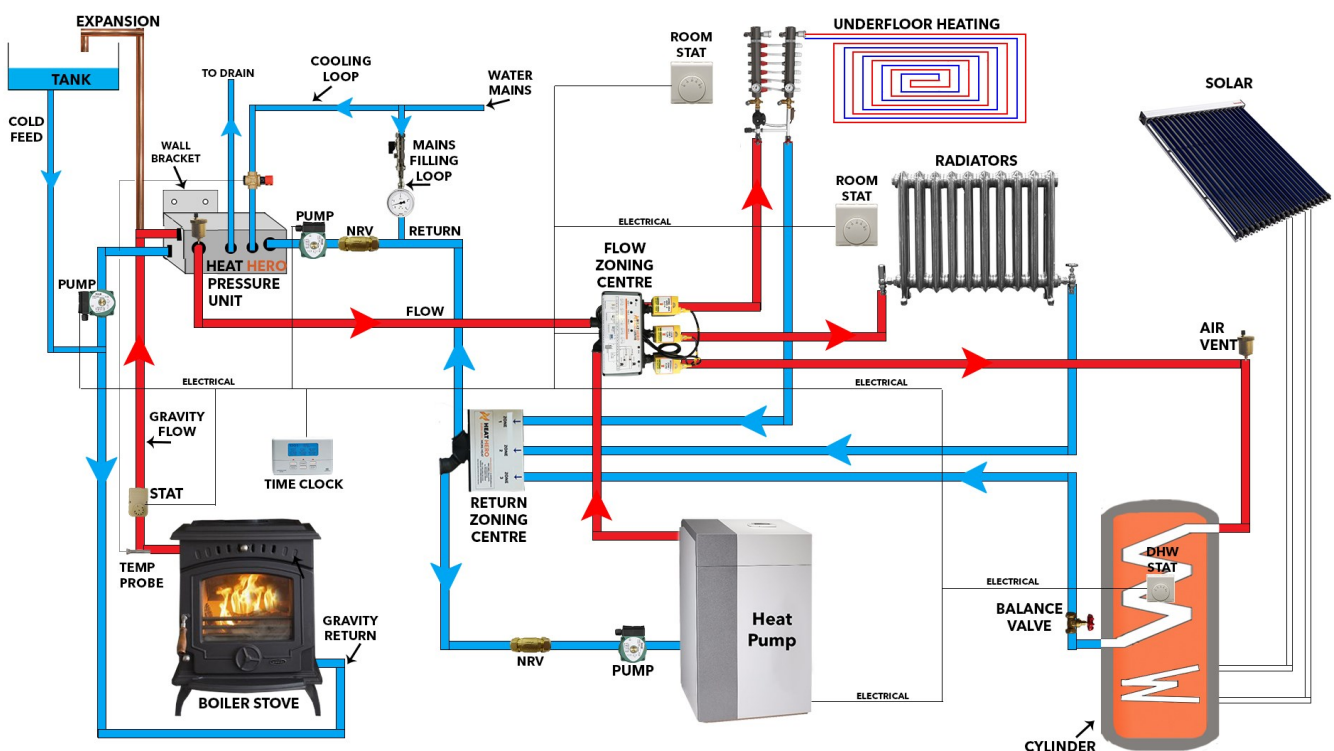
See detailed Video on website [www.heathero.ie](http://www.heathero.ie)

# HEAT HERO HIGH PRESURE UNIT CONNECTED TO HEAT HERO FREE FLOW ZONING CENTRE

## BENEFITS OF HEAT HERO FREE FLOW ZONING CENTRE

- Available in 3 or 4 Zone
- The Living Room Zone automatically turns on when the stove reaches 50°-55°.
- The Domestic Hot Water is controlled through the Thermostat on the Cylinder.
- The 3rd & 4th Zones are controlled through the 3 or 4 Zone Time Clock.
- The heat transfers quickly throughout your heating system.
- Strong circulation throughout your heating system is created by installing only one 8 metre head circulation pump at the boiler.
- Water flows freely throughout the zones without any restrictions..
- 5 Year warranty motorised valves are used to open and close zones.
- Very easily installed with low maintenance and very low running costs.
- There are no baffles that would restrict or slow down circulation.
- Motorised valves are prewired and electrical diagram is very easy to follow.
- Return manifold has valves for balancing zones.

## DIAGRAM SHOWING HEAT HERO HIGH PRESSURE UNIT CONNECTED WITH HEAT HERO FREE FLOW ZONING CENTRE



## AFRISO Thermal Safety Valve TAS 03

The AFRISO thermal safety valve TAS 03 is used for thermal protection of sealed or open solid fuel heating systems as per EN 12828 with a heating capacity of up to 100 kW (86,000 kcal). The thermal safety valve consists of a valve housing, a valve, two independent bellow type displacement probes with liquid-filled temperature probes and a pocket. The pocket is installed in the upper part of the boiler. The capillary tube (1,300 or 4,000 mm) integrated in the pocket is protected by a flexible metal hose. The thermal safety valve is connected to the hot water outlet of the water heater or to the inlet of the safety heat exchanger. If the response temperature of 99 °C is exceeded, the heat expansion of the silicone oil in the probe system causes a stroke via the bellows which opens the valve to supply cooling water from the mains system. This keeps the maximum permissible temperature in the boiler from being exceeded. If one of the temperature probes fails, the second temperature probe provides redundancy. Correct operation of the thermal safety valve TAS 03 can be verified quickly and easily by simply pressing the valve head. TAS 03 can be mounted horizontally or vertically. It must be ensured that hazards caused by hot water or vapour at the free outlet of the discharge line into the funnel are excluded. The thermal safety valve TAS 03 is suitable for operating temperatures from 5 to 115 °C and an operating pressure of up to 10 bar. Connections include two G $\frac{3}{4}$  female threads for the pocket and a G $\frac{1}{2}$  male thread.



## 44 Kw Stainless Steel Heat Exchanger used for Cooling Loop

Number of plates 20

Length / Width / Height

(without connections, in mm) 191 / 73 / 51,8

Max. flow 4 m<sup>3</sup> / h

Connecting height 12 mm

Capacity 0,018 l per plate = 0,36 Liter

Effective exchange surface 0,012 m<sup>2</sup> per plate = ca. 0,24 m<sup>2</sup>

Temperature range -195°C up to +225 °C

Temperature range 20 bar

Power max. 44 kW

Plate material stainless steel AISI 304

Connecting piece material stainless steel AISI 304

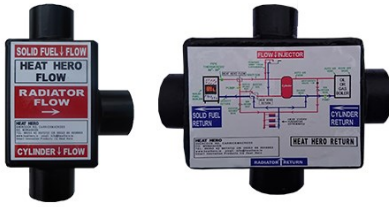
Circulation F1 -> F3 / F4 -> F2

Connectors F1 & F3 12,70mm (1/2") (according to ISO-G)



# HEAT HERO INNOVATIVE PRODUCTS

## HEAT HERO GRAVITY



-  Open Vented Gravity Fully Pumped Heating System
-  Better Heat Transfer
-  Hotter Radiators & Water
-  Burn Less Fuel
-  Easily Installed






## HEAT HERO DIRECT



-  Open Vented Gravity Fully Pumped Heating System
-  Built in 44KW Cooling Loop
-  No Need to Change Cylinder
-  No Need to Dig Up Floors
-  No Heat Exchanger on the Solid Fuel Boiler






## FREE FLOW ZONING CENTRE



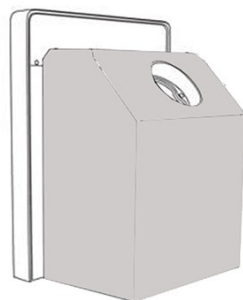
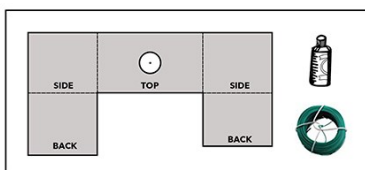
-  Pre-Wired for Dual Link Ups
-  Has Low Running Costs
-  Easily Installed and Maintained
-  EPH 5 Year Warranty Valves
-  Available in 3 or 4 Zones

## HIGH PRESSURE UNIT



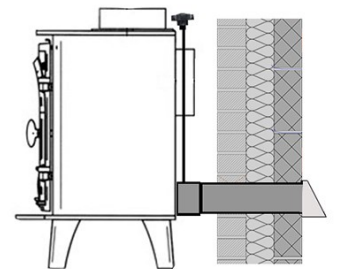
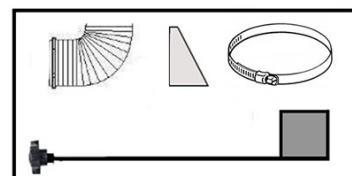
-  Sealed Heating System
-  Solid Fuel Open Vented
-  No Need to Dig Up Floors
-  No Need to Change Cylinder
-  Easily Installed
-  Built in 44KW Cooling Loop

## INSERT STOVE JACKET



-  Ceramic Fibre Jacket
-  Excellent Heat Container
-  Improves Heat Output

## OUTSIDE AIR KIT



-  Direct Outside Air
-  Compatible with All Stoves
-  Lever to Control Air Intake