

**GMS** 

**Thermal Products Ltd**

[www.gmsthermal.co.uk](http://www.gmsthermal.co.uk)



**PLANTPAC STEAM PACKAGES**

# GMS PLANTPAC PACKAGES

- Instantaneous low temperature hot water/domestic hot water using steam primary
- With GMS ThermaFlex Plate heat exchanger
- Built in steam conditioning (with condensate pump option)
- Accurate microprocessor temperature control
- Independent high temperature cut-out with manual reset
- Full function control panel with remote start interlock and volt-free contact
- Fully packaged and skid mounted ready for connection to system

GMS PlantPac units are fully packaged to simplify system design and installation. The standard range gives outputs up to 1225 kW, with special units available for higher outputs. All necessary temperature control, steam and condensate handling components are built in. Site work is reduced to positioning, connecting up and commissioning.

**Heat exchanger:** Type ThermaFlex G with AISI 316 stainless steel plates with EPDM gaskets. Robust, compact and easily dismantled (without disturbing pipe-work) for inspection, cleaning or addition of extra plates. GMS ThermaFlex plate heat exchangers are fully described in a separate leaflet.

**Steam conditioning:** A steam separator and strainers protect components in the steam and condensate lines from liquid or dirt carried in from the steam main. If steam temperature is above 150°C (3.8 bar g.) a pressure-reducing valve and steam safety valve will be included to protect the heat exchanger.

**Temperature Controller:** A digital controller monitors and displays water temperature and operates the control valve, giving accurate temperature control at all outputs.

**System interlock:** The PlantPac can be remotely started and shut down from an external volt free contact, e.g. in an external pump control circuit to close steam valves when no water is flowing.

**Condensate Pump Option:** A steam powered pump with inlet and outlet check valves and steam trap to ensure reliable condensate removal under all operating conditions.

**Packaging:** Fully packaged and mounted on a compact frame ready for installation and connection.

**Safety Features:** Fail-safe, independent high temperature cut-out valve with manual re-set thermostat and volt-free contact for external alarm. This valve also closes if power (and/or compressed air where applicable) fails. After these are restored the unit re-sets automatically to normal operation.

**Commissioning:** GMS can commission PlantPac units on site (recommended).

## Specific Features

### Domestic Hot Water (DHW) units:

Standard units heat water from 10°C to 65°C. However flow-rate and inlet temperature can vary greatly depending on demand. This requires fast-acting temperature control to prevent over-temperature conditions.

**Pneumatically actuated control valves:** We offer fast-acting pneumatically actuated control valves for DHW units as standard. These respond almost instantly to sudden changes in demand. We include the necessary air set (filter, regulator) and electro-pneumatic valve positioner. Where a customer does not have a compressed air supply we can include a small, dedicated air compressor for little extra charge.

**Electrically actuated control valves:** In some DHW applications inlet conditions may be fairly slow-changing. This can be the case if a large buffer storage vessel is built into the DHW circuit. In these cases we may offer electrically actuated control valves.

**Shunt Pumps for DHW units:** We may offer a bronze shunt pump to circulate water through the heat exchanger. This improves temperature control in low flow conditions. It may not be required if a system already has a pumped secondary return.

**Secondary Buffer Vessels for DHW units:** We may offer a secondary buffer vessel, complete with loading pump to send water through the heat exchanger. This increases peak output capacity and may allow electrically actuated valves to be used instead of pneumatics.

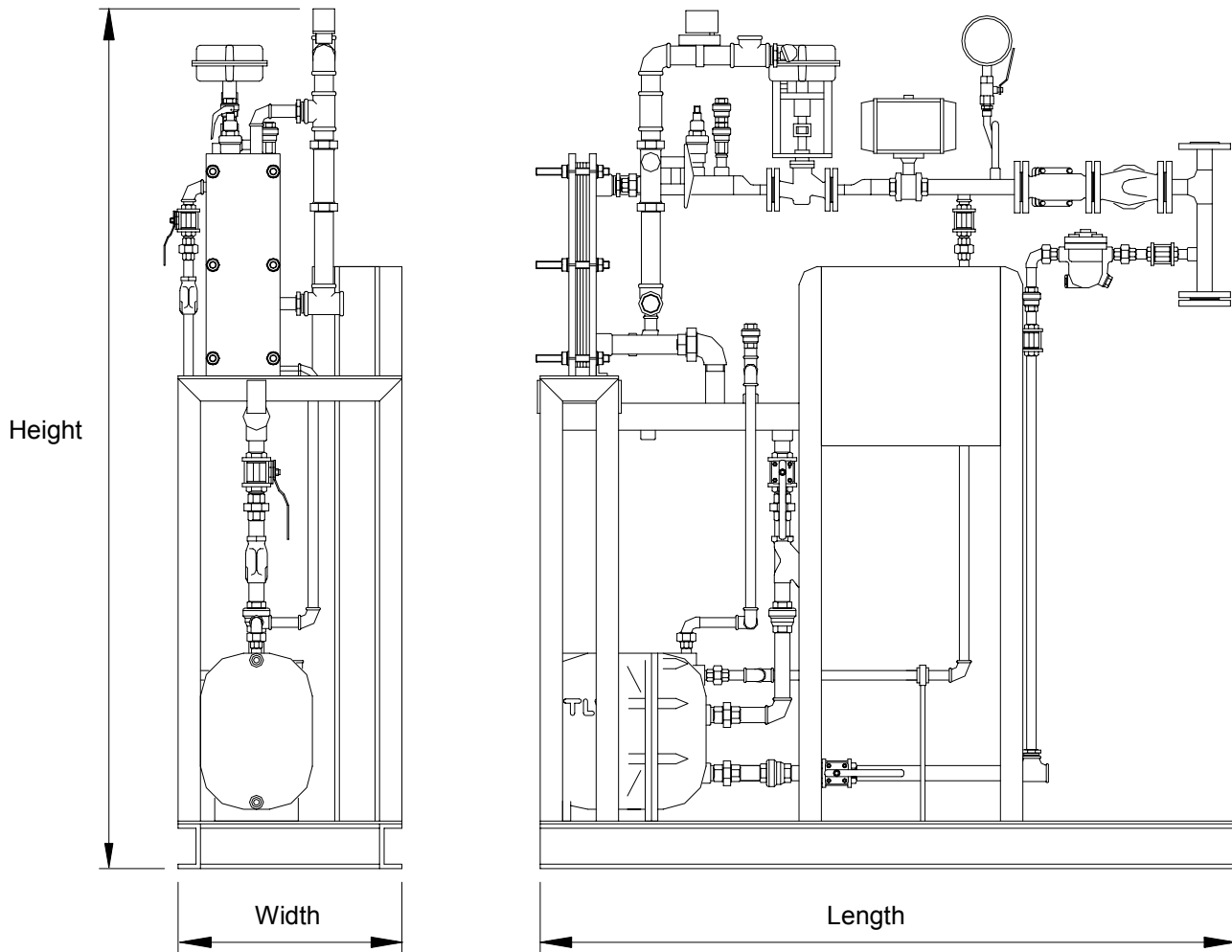
### Low Temperature Hot Water (LTHW) units:

Standard units heat water from 71°C to 82°C. Flow and inlet temperature conditions are fairly steady.

**Electrically actuated control valves:** For LTHW units these are standard. Pneumatic valves optional.

**Heat Exchanger Bypass:** To prevent heat exchanger oversizing, because of the high water flow-rates typical for LTHW systems, we may offer a bypass, with flow regulator valve, to carry some of the

# WATER HEATING MADE EASY



<b>PlantPac S Sizes</b>	<b>PPS-</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
Heat Output (Max)	kW	80	145	225	315	550	850	1225
Steam Connection	BS EN1092-1:2002 PN16	DN20	DN25	DN32	DN40	DN50	DN65	DN65
Length (Max)	mm	2000	2000	2000	2000	2250	2500	2500
Width (Max)	mm	1000	1000	1000	1000	1000	1000	1000
Height (Max)	mm	2300	2300	2300	2300	2300	2300	2300
Weight (Max)	kg	550	570	600	660	880	1050	1170
LTHW Flowrate	kg/sec	1.74	3.15	4.89	6.85	12.0	18.5	26.6
LTHW Connections	BS EN1092-1:2002 PN16	DN40	DN50	DN65	DN80	DN100	DN100	DN150
Or: DHW Flowrate	kg/sec	0.35	0.63	0.98	1.4	2.4	3.7	5.3
DHW Connections	BSP/BS EN1092-1:2002 PN16	1"	1"	1"	1¼"	1½"	2"	DN65

*Please note all information shown within this leaflet is subject to change without prior notice.*

© GMS Thermal Products 2004  
Issue 1, January 2004