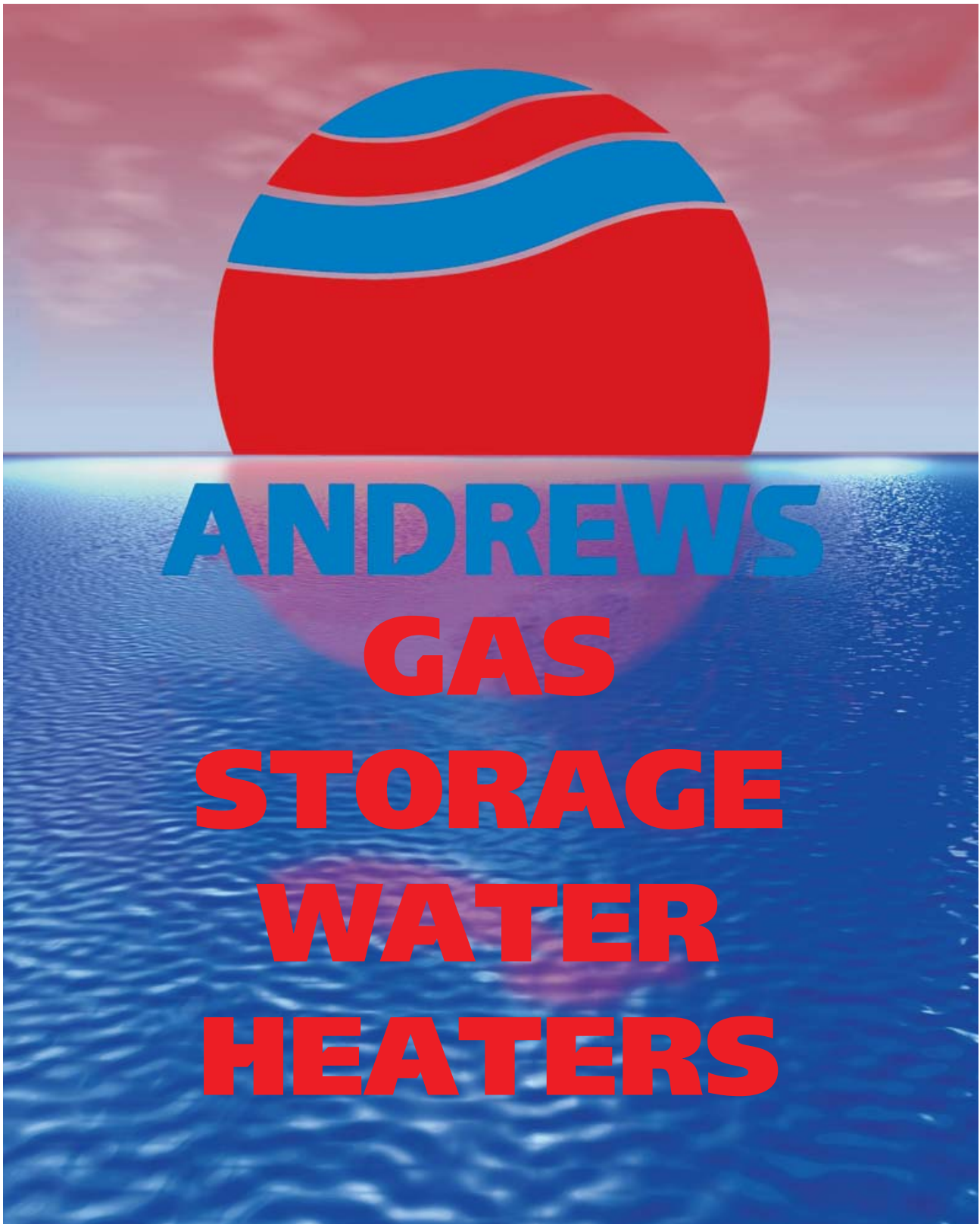


CI/Sfb	(53.5)	Xh
March 2001		



- **Conventional Flue**
- **Fan Flued**
- **Balanced Flue**
- **Direct Storage Tanks**



# Standard Range

STANDARD RANGE											
Andrews Model No.	24/39		32/40		40/61		63/62		84/87		
	SI Metric	Imp.	SI Metric	Imp.	SI Metric	Imp.	SI Metric	Imp.	SI Metric	Imp.	
Storage Capacity	109 lts	24 galls	145 lts	32 galls	182 lts	40 galls	286 lts	63 galls	382 lts	84 galls	
Recovery Rate/Hr @ 44°C/80°F Rise	178 l/hr	39 gph	182 l/hr	40 gph	278 l/hr	61 gph	281 l/hr	62 gph	397 l/hr	87 gph	
@ 56°C/100°F Rise	142 l/hr	31 gph	146 l/hr	32 gph	222 l/hr	49 gph	227 l/hr	50 gph	316 l/hr	70 gph	
Heat Input	12.0 kW	40,944 Btu/hr	12.5 kW	42,650 Btu/hr	19 kW	65,000 Btu/hr	19 kW	65,000 Btu/hr	26.0 kW	88,712 Btu/hr	
Diameter	457 mm	18 in	508 mm	20 in	508 mm	20 in	622 mm	24½ in	718 mm	28½ in	
Height to Flue	1276 mm	50½ in	1327 mm	52½ in	1589 mm	62½ in	1669 mm	65½ in	1788 mm	70½ in	
Flue Diameter	100 mm	4 in	100 mm	4 in	100 mm	4 in	125 mm	5 in	125 mm	5 in	
Weight Empty	43 kg	94 lbs	57 kg	126 lbs	65 kg	144 lbs	110 kg	244 lbs	181 kg	400 lbs	
Weight Full	151 kg	334 lbs	202 kg	446 lbs	247 kg	544 lbs	396 kg	874 lbs	562 kg	1240 lbs	
Cold Feed Connection	R1	1 in BSPT/Ext	R1	1 in BSPT/Ext	R1	1 in BSPT/Ext	R1	1 in BSPT/Ext	R1½	1½ in BSPT/Ext	
Hot Water Connection	R1	1 in BSPT/Ext	R1	1 in BSPT/Ext	R1	1 in BSPT/Ext	R1	1 in BSPT/Ext	R1½	1½ in BSPT/Ext	
Drain Port Size	R½	½ in BSP/Int	R½	½ in BSP/Int	R½	½ in BSP/Int	R½	½ in BSP/Int	R½	½ in BSP/Int	
Gas Connection	Rp½	½ in BSP/int	Rp½	½ in BSP/int	Rp½	½ in BSP/int	Rp½	½ in BSP/int	Rp½	½ in BSP/int	

## Features of Standard Range models

- Can be supplied for LPG or natural gas
- BBA approved for unvented system applications
- Permanent pilot with piezo ignition as standard
- Draught diverter supplied

## Optional ancillaries

- Correx® powered anodes
- Fully automatic control including BEMS interface
- Solenoid control for interface with flue fans or time switch
- Exhausto flue fan available for 63/62 and 84/87 (use with auto or solenoid kit control)
- Pilot monitoring kit


\*Data sheets are available from Andrews sales office for ancillary components.



# Andrews Storage Water Heaters

For the continuous production of hot water in domestic, commercial and industrial applications Andrews Storage Water Heaters are the perfect answer. Efficiency and economy of operation are achieved by separating the hot water generation from the space heating requirement. The heaters can be sized to accommodate specific applications and in many instances, located close to the point of use eliminating transmission losses and reducing installation and running costs. For applications where there is a constant demand for hot water or where demand peaks at specific times the fast recovery rates guarantee hot water when needed. Of particular significance to the healthcare sector, Andrews Storage Water Heaters eliminate the conditions that allow legionellae to be present. The extensive range comprises eleven models with recovery rates from 178 to approximately 2000 litres per hour at 44°C rise.

## General features of all models (Additional features are shown for each range)

- CE approved to European Water Heater Standard EN89. 
- WRc listed under the Water Regulations Advisory Scheme
- Manufactured under ISO9001 approved quality system
- Heavy gauge steel tank with Vitraglass® lining
- Comprehensive instruction manual
- Enamelled appliance grade outer casing
- Can be supplied for vented or unvented applications
- Non CFC foam insulation gives low standby losses
- BS approved gas cock and water drain valve
- Factory installed di-electric nipples
- Protective magnesium anodes

# Hi - Flo Range

HI-FLO RANGE												
Andrews Model No.	32/143		65/173		81/264		62/341		54/418		54/440	
	SI Metric	Imp.	SI Metric	Imp.	SI Metric	Imp.	SI Metric	Imp.	SI Metric	Imp.	SI Metric	Imp.
Storage Capacity	145 lts	32 galls	295 lts	65 galls	368 lts	81 galls	282 lts	62 galls	245 lts	54 galls	245 lts	54 galls
Recovery Rate/Hr @ 44°C/80°F Rise	649 l/hr	143 gph	786 l/hr	173 gph	1199 l/hr	264 gph	1549 l/hr	341 gph	1899 l/hr	418 gph	1988 l/hr	440 gph
@ 56°C/100°F Rise	517 l/hr	114 gph	629 l/hr	138 gph	959 l/hr	211 gph	1239 l/hr	273 gph	1520 l/hr	334 gph	1598 l/hr	352 gph
Heat Input	42.8 kW	146,034 Btu/hr	50.0 kW	170,600 Btu/hr	80.0 kW	272,960 Btu/hr	102.0 kW	348,024 Btu/hr	128.0 kW	436,735 Btu/hr	139.0 kW	474,268 Btu/hr
Diameter	711 mm	28 in	711 mm	28 in	711 mm	28 in	711 mm	28 in	711 mm	28 in	711 mm	28 in
Height to Flue	1343 mm	53 in	1982 mm	78 in	2261 mm	89 in	1985mm	78½ in	1985 mm	78½ in	1985 mm	78½ in
Flue Diameter	150 mm	6 in	150 mm	6 in	200 mm	8 in	200 mm	8 in	250 mm	10 in	250 mm	10 in
Weight Empty	190 kg	419 lbs	200 kg	441 lbs	289 kg	637 lbs	234 kg	515 lbs	269 kg	594 lbs	269 kg	594 lbs
Weight Full	335 kg	738 lbs	495 kg	1091 lbs	656 kg	1447 lbs	515 kg	1135 lbs	514 kg	1134 lbs	514 kg	1134 lbs
Cold Feed Connection	R1½	1½ in BSPT/Ext	R1½	1½ in BSPT/Ext	R1½	1½ in BSPT/Ext	R1½	1½ in BSPT/Ext	R1½	1½ in BSPT/Ext	R1½	1½ in BSPT/Ext
Hot Water Connection	R1½	1½ in BSPT/Ext	R1½	1½ in BSPT/Ext	R1½	1½ in BSPT/Ext	R1½	1½ in BSPT/Ext	R1½	1½ in BSPT/Ext	R1½	1½ in BSPT/Ext
Drain Port Size	R¾	¾ in BSPT/Ext	R¾	¾ in BSPT/Ext	R¾	¾ in BSPT/Ext	R¾	¾ in BSPT/Ext	R¾	¾ in BSPT/Ext	R¾	¾ in BSPT/Ext
Gas Connection	Rp¾	¾ in BSP/Int	Rp¾	¾ in BSP/Int	Rp¾	¾ in BSP/Int	Rp¾	¾ in BSP/Int	Rp¾	¾ in BSP/Int	Rp¾	¾ in BSP/Int

## Features of Hi-Flo models

- Can be supplied for LPG or natural gas
- Factory fitted Hydrojet® tank recirculation system
- Permanent pilot with piezo ignition as standard
- Draught diverter supplied
- Hand hole clean out door

## Optional ancillaries

- Factory fitted fully automatic control including interface for BEMS, flue fan, flue damper or time switch. (Natural gas models)
- Switching kit interfaces with flue fan or time switch
- Flue damper to reduce standby losses (use with auto control)
- Exhausto flue fan (use with auto control or switching kit)
- Correx® powered anodes



Hi-Flo model shown with automatic control.

# Fan Flued Range

The Andrews RFF 190 and RFF 280 water heaters offer all the advantages of the established range of direct gas-fired water heaters with the addition of a fan-assisted flue. (Not room sealed.) This range therefore offers the ideal solution for a variety of applications where conventional flue runs are difficult.

## Features of Fan Flued range

- Factory fitted Flue fan linked to main burner
- Factory fitted Solenoid kit for remote switching
- Horizontal or Vertical flue kits included, only 80mm diameter for simple installation
- Hydrojet® tank recirculation system
- Available for natural gas only
- BBA Approved

## Optional ancillaries

- Correx® powered anodes
- Additional flue components for horizontal or vertical flue system



RFF 190

FAN FLUED RANGE				
Andrews Model No.	RFF 190		RFF 280	
	SI Metric	Imp.	SI Metric	Imp.
Storage Capacity	190 lts	42 galls	280 lts	62 galls
Recovery Rate/Hr @ 44°C/80°F Rise	291 l/hr	64 gph	339 l/hr	75 gph
@ 56°C/100°F Rise	232 l/hr	51 gph	272 l/hr	60 gph
Heat Input	19.5 kW	66,534 Btu/hr	23.0 kW	78,476 Btu/hr
Diameter	559 mm	22 in	660 mm	26 in
Height to Flue	419 mm	16½ in	419 mm	16½ in
Flue Diameter	80 mm	3 in	80 mm	3 in
Weight Empty	75 kg	165 lbs	132 kg	292 lbs
Weight Full	273 kg	603 lbs	418 kg	908 lbs
Cold Feed Connection	Rp¾	¾ in BSP	Rp¾	¾ in BSP
Hot Water Connection	Rp¾	¾ in BSP	Rp¾	¾ in BSP
Drain Port Size	R¾	¾ in BSP	R¾	¾ in BSP
Gas Connection	Rp½	½ in BSP	Rp½	½ in BSP
Electricity supply	220/240V 50 Hz, Fuse 5Amp, power consumption 236W			

**Each water heater is delivered with the following horizontal or vertical flue components.**

### Horizontal Models

Flue adaptor, 90° elbow, 1x1000mm and 2x500mm lengths of flue and wall outlet complete with wallplates.

Additional 90°, 45° bends and 1000mm flue lengths are available as optional extras (see price list) enabling maximum horizontal flue runs up to 7000mm (RFF 190) and 4000mm (RFF280). Decrease the flue run by 1000mm for every 90° bend and 500mm for every 45° bend installed.

### Vertical Models

Flue adaptor 1x1000mm and 2x500mm lengths of flue and a cowl.

Additional flue components are available as above with maximum vertical flue of 8000mm (RFF 190) and 5000mm (RFF280). Decrease the flue height by 1000mm for every 90° bend and 500mm for every 45° bend installed.

*Before designing the installation contact the Andrews sales office for an installation manual.*

# Balanced Flue Range

BALANCED FLUE RANGE												
Andrews Model No.	RSC 150		RSC 190		CSC 39*		CSC 59*		CSC 78*		CSC 93*	
	SI Metric	Imp.	SI Metric	Imp.	SI Metric	Imp.	SI Metric	Imp.	SI Metric	Imp.	SI Metric	Imp.
Storage Capacity	150 lts	33 galls	190 lts	42 galls	276 lts	61 galls	276 lts	61 galls	276 lts	61 galls	350 lts	77 galls
Recovery Rate/Hr @ 44°C/80°F Rise	159 l/hr	35 gph	181 l/hr	40 gph	749 l/hr	165 gph	1149 l/hr	253 gph	1517 l/hr	334gph	1808 l/hr	398 gph
@ 56°C/100°F Rise	127 l/hr	28 gph	145 l/hr	32 gph	600 l/hr	132 gph	922 l/hr	203 gph	1213 l/hr	267 gph	1445 l/hr	318 gph
Heat Input	9.5 kW	32,414 Btu/hr	10.5 kW	35,826 Btu/hr	44.0 kW	150,128 Btu/hr	66.0 kW	225,192 Btu/hr	88.0 kW	300,256 Btu/hr	106.0 kW	361,672 Btu/hr
Diameter	508 mm	20 in	508 mm	20 in	720 mm	28½ in	720 mm	28½ in	720 mm	28½ in	720 mm	28½ in
Height to Flue	2170 mm	85 in	2398 mm	94 in	2337 mm	92 in	2337mm	92 in	2269 mm	89 in	2269mm	89 in
Flue Diameter	80/125mm	Concentric	80/125mm	Concentric	100/150mm		100/150mm		130/200mm		130/200mm	
Weight Empty	66 kg	145 lbs	74 kg	163 lbs	340 kg	750 lbs	340 kg	750 lbs	345 kg	760 lbs	381 kg	840 lbs
Weight Full	216 kg	475 lbs	264 kg	583 lbs	636 kg	1402 lbs	636 kg	1402 lbs	641 kg	1412 lbs	727 kg	1603 lbs
Cold Feed Connection	Rp¾	¾ in BSP	Rp¾	¾ in BSP	Rp1½	1½ in BSP	Rp1½	1½ in BSP	Rp1½	1½ in BSP	Rp1½	1½ in BSP
Hot Water Connection	Rp¾	¾ in BSP	Rp¾	¾ in BSP	Rp1½	1½ in BSP	Rp1½	1½ in BSP	Rp1½	1½ in BSP	Rp1½	1½ in BSP
Drain Port Size	R¾	¾ in BSP	R¾	¾ in BSP	R¾	¾ in BSP	R¾	¾ in BSP	R¾	¾ in BSP	R¾	¾ in BSP
Gas Connection	Rp½	½ in BSP	Rp½	½ in BSP	Rp¾	¾ in BSP	Rp¾	¾ in BSP	Rp¾	¾ in BSP	Rp¾	¾ in BSP
Electrical supply	Not required				220/240V 50Hz, Fuse 5Amp, power consumption 236W							

The Andrews balanced flue models offer all the advantages of the established range of storage water heaters with the addition of **balanced, sealed combustion flue system**. This adaptable, concentric flue system draws all primary and secondary air from outside the building and provides solutions for those otherwise troublesome installations - contaminated atmospheres, areas where air extract canopies cause problems and difficult flue runs. CSC models have a fan assisted flue.



## Features of Models RSC150 & RSC 190

- Horizontal or vertical concentric flue kit included
- Hydrojet® tank recirculation
- Room sealed flue system
- BBA approved

## Optional Ancillaries

- Fully automatic control with BEMS interface
- Correx® powered anodes
- Solenoid control kit
- Additional flue components

**Each Water Heater** is delivered with the following horizontal or vertical flue components

### Horizontal flue

500mm flue piece 90° elbow 750mm terminal outlet with wall plates

### Vertical flue

1m vertical + 750mm terminal outlet. Additional flue components are available (see price list)



## Features of Models CSC 39, 59, 78 and 93

- Horizontal or vertical concentric flue kit included
- Hydrojet® tank recirculation
- Available for natural gas or LPG
- Fully automatic control
- BEMS interface (Natural gas models)

## Optional Ancillaries

- Correx® powered anodes
- Additional flue components

**The following concentric flue components complete with heater connections are supplied with each water heater.**

### Horizontal models

- 90° elbow and horizontal flue terminal (approximately 0.9m long) complete with wallplate.

### Vertical models

- Vertical flue terminal (approximately 0.8m long) A wide range of additional flue components are available ex. stock from Andrews Water Heaters.

\*Maximum horizontal or vertical flue length 7.0m, each 90° elbow reduces this distance by 1000mm. Before designing the installation contact the Andrews sales office for an installation manual.

\***Note:** On all flue installations, for distance over 1.5 metres we recommend that a condensate trap is fitted (see ancillary price list).

# Options

## Storage water tanks - Direct

ANDREWS MODEL NO.	ST66		ST100		ST166	
	SI Units	Imp.	SI Units	Imp.	SI Units	Imp.
Storage Capacity	300 Litres	66 gallons	455 Litres	100 gallons	755 Litres	166 gallons
Flow Connection	Rc2	2 in BSP T/int.	Rc2	2 in BSP t/int.	Rc2	2 in BSP T/int.
Inlet Connection	Rc2	2 in BSP T/int.	Rc2	2 in BSP t/int.	Rc2	2 in BSP T/int.
Return Connection	Rc2	2 in BSP T/int.	Rc2	2 in BSP t/int.	Rc2	2 in BSP T/int.
Thermostat Connection	Rc $\frac{1}{4}$	$\frac{3}{4}$ in BSP T/int.	Rc $\frac{1}{4}$	$\frac{3}{4}$ in BSP t/int.	Rc $\frac{1}{4}$	$\frac{3}{4}$ in BSP T/int.
Weight Empty	95.2 kg	210 lbs	141 kg	310 lbs	245 kg	541 lbs
Weight Full	395 kg	870 lbs	594 kg	1310 lbs	998 kg	2201 lbs
Maximum Working Pressure	10.3 bar 150 psi	10.3 bar 150 psi	10.3 bar 150 psi	10.3 bar 150 psi	10.3 bar 150 psi	10.3 bar 150 psi
Maximum Test Pressure	20.6 bar 300 psi	20.6 bar 300 psi	20.6 bar 300 psi	20.6 bar 300 psi	20.6 bar 300 psi	20.6 bar 300 psi
Shipping Weight	107 kg	235 lbs	154 kg	340 lbs	263 kg	581 lbs
Shipping Height	1537 mm	60 $\frac{1}{2}$ "	1638 mm	64 $\frac{1}{2}$ "	2019 mm	79 $\frac{1}{2}$ "
Crate Width	667mm	26 $\frac{1}{4}$ "	787mm	31"	889mm	35"
Dimensions Depth	667mm	26 $\frac{1}{4}$ "	762mm	30"	889mm	35"



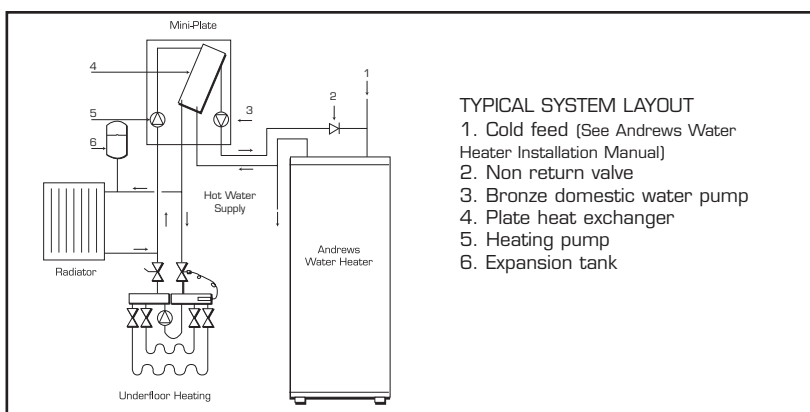
Of similar construction but without burner and heat exchanger the ST storage tanks are complimentary to the water heaters where extra storage is required to satisfy heavy peak demands.

### Features

- **Foamlock Insulation** - a full 2" of polyurethane foam exceeds the insulating value of 5" of  $\frac{1}{2}$ lb density fibreglass insulation and gives extra rigidity.
- **BBA approved**
- **Vitraglas lined tank** - storage tanks are protected from the corrosive effects of hot water by an exclusive ceramic porcelain-like coating called Vitraglas<sup>®</sup>. This provides a tough interior surface for storage tanks, which must withstand the wearing effects of high volume and high temperature hot water.
- **Factory installed dielectric nipples** - no dielectric fittings or unions needed.
- **Two magnesium anode rods** - for more even distribution of corrosion protection and longer service life.
- **Hand hole clean-out** - for removal of accumulated lime and sediment deposits.
- **Solid brass drain valve**
- **Steel tank** - heavy gauge steel automatically formed, rolled and welded to assure a continuous seam or glass lining. Each tank is triple tested to insure quality.

## Mini-Plate space heating package

When the heating demand is small but high volume hot water is required the combination of an Andrews MiniPlate and an Andrews Water Heater provides the complete solution. A plate heat exchanger, pumps and electronic control assembly neatly packaged inside a compact enclosure provide an add-on space heating function for Andrews Water Heaters.



#### TECHNICAL DATA

Maximum capacity of heat exchanger*	23kW
Water connection heating side	22mm
Water connection, domestic side	15mm
Electrical supply	230V 1ph 50Hz
Electrical load, pumps	104W
Electrical load, control panel	20W

\*Dependant upon water temperatures



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