

Unvented Water Heaters

The Proteus water heaters provide large quantities of stored water at balanced pressure making them suitable for supplying sports clubs, hotels, hospitals, restaurants, schools, nursing homes and leisure centres.

Unvented water heaters are connected directly onto the incoming cold water mains or pressure set, therefore they can be located virtually anywhere on site because they are not dependent on feed and expansion tanks.

Benefits of unvented system

- » Choice of location within the building(s).
- » Requires less space than a vented system, ie no header tanks.
- » Provides balanced water pressure at all outlets.
- » Easy to install – less pipework.
- » Less chance of contamination as the system is sealed.

Features of PROTEUS

- » Capacities from 450 to 3000 litres.
- » Hard wearing Plastisol outer skin.
- » Non corrosive duplex stainless steel water chamber therefore no sacrificial anodes required.
- » Low loss CFC/HCFC free foam insulation. Ozone depletion factor zero.
- » Expansion kit supplied.
- » Secondary return fitted as standard.
- » Indirect and direct units available.
- » Stainless steel primary coil on indirect units.
- » Choice of electrical loadings available.
- » Working pressures of up to 6 bar g

Direct and Indirect 450 to 900 litre systems available from stock. Larger sizes are made to order

Recovery Chart

Approximate time in minutes to heat water

| Capacity Litres | Maximum Loading in kW possible | | | | | | | | | Coil Rating kW | Via Indirect Coil |
|---|--------------------------------|------|------|-----|-----|-----|-----|-----|-----|----------------|-------------------|
| | 3 | 6 | 9 | 12 | 18 | 24 | 36 | 48 | 54 | | |
| Approximate time in minutes to heat water through 55°C | | | | | | | | | | | |
| | 576 | 288 | 192 | 144 | 96 | 72 | 48 | 36 | | 54* | 64 |
| | 895 | 448 | 298 | 224 | 149 | 112 | 75 | 56 | | 54* | 99 |
| | 1599 | 799 | 533 | 400 | 266 | 200 | 133 | 100 | 89 | 54* | 178 |
| | 2238 | 1119 | 746 | 560 | 373 | 280 | 187 | 140 | 124 | 54* | 249 |
| | 3198 | 1599 | 1066 | 799 | 533 | 400 | 266 | 200 | 178 | 54* | 355 |



Loose fittings

Expansion vessel + relief valve.
Pressure reducing valve + check valve.
Temp & Press relief valve.

Sizing

Typical Demand Requirements

Maximum Demand Rates(Litres/hour)

| Installation | Private Hand Basin | Public Hand Basin | Public Hand Basin | Shower* | Bath | Slop Sink | Bar Sink | Kitchen Sink | Pantry Sink | Laboratory Sink | Load Factor |
|----------------------------|--------------------|-------------------|-------------------|---------|------|-----------|----------|--------------|-------------|-----------------|-------------|
| Hospital | 10 | 15 | 70 | 70 | 50 | 50 | | 80 | | | 0.7 |
| Hotel and Residential Hall | | | | | | | | | | | |
| Day School | 5 | 20 | 180 | 180 | | 40 | | 80 | | | 0.8 |
| Sports Centre | | | | | | | | | | | |
| Restaurant | 5 | 25 | | | | 100 | 100 | 140 | 120 | | 1.0 |
| University | | | | | | | | | | | |
| Offices | 5 | 10 | | | | 40 | | 40 | | 40 | 1.0 |
| Factory | | | | | | | | | | | |

* Where a shower and bath are combined in a single cubicle it is only necessary to use one demand rate and the total number of cubicles

Sizing Example

45 Bedroom Hotel with restaurant attached

| | | |
|----------------------------|----------------|---------------|
| 45 Combined Bath/Shower | 50 x 45 = 2250 | = 3400 Litres |
| 45 Private Hand Basins | 10 x 45 = 450 | per Hour |
| 12 Public Hand Basins | 5 x 12 = 60 | = 0.5 |
| 2 Kitchen Sinks | 80 x 2 = 160 | |
| 1 Restaurant Slop Sink | 100 x 1 = 100 | |
| 2 Restaurant Kitchen Sinks | 140 x 2 = 280 | = 3400 x 0.5 |
| 2 Washing Machines | 50 x 2 = 100 | = 1700 Litres |

4 Room Student accommodation

| | | | |
|--------------------------|--------------|--------------------|--------------|
| 4 Combined Baths/Showers | 4 x 50 = 200 | Total | = 560 Litres |
| 4 Private Hand Basins | 4 x 10 = 40 | | per Hour |
| 4 Sinks | 4 x 80 = 320 | Load Factor | = 0.5 |
| | | Required | |
| | | Storage | = 560 x 0.5 |
| | | | = 280 Litres |

| Product code (Indirect Coil Fitted) | Product code (Electric Only) | Height (mm) | Diameter (mm) | Outlet (Inch Bsp) | Inlet&Return (Inch Bsp) | Volume litres | Coil rating (Indirect models) | Weight Dry (Kg) | Weight full (kg) | Heat Loss in 24hrs (Kw) |
|-------------------------------------|------------------------------|-------------|---------------|-------------------|-------------------------|---------------|-------------------------------|-----------------|------------------|-------------------------|
| PROTEUS/IND/45/*+* | PROTEUS/45/*+*+* | 1870 | 690 | 1 | 1 | 450 | 54 | 160 | 610 | 1.75 |
| PROTEUS/IND/55/*+* | PROTEUS/55/*+*+* | 2230 | 690 | 1 | 1 | 550 | 54 | 195 | 745 | 2.1 |
| PROTEUS/IND/70/*+* | PROTEUS/70/*+*+* | 2320 | 750 | 1 | 1 | 700 | 54 | 240 | 940 | 2.53 |
| PROTEUS/IND/90/*+* | PROTEUS/90/*+*+* | 1750 | 1080 | 1 ½ | 1 ½ | 900 | 54 | 278 | 1178 | 2.53 |
| PROTEUS/IND/125/*+* | PROTEUS/125/*+*+* | 2300 | 1080 | 1 ½ | 1 ½ | 1250 | 54 | 327 | 1577 | 3.3 |
| PROTEUS/IND/150/*+* | PROTEUS/150/*+*+* | 2700 | 1080 | 1 ½ | 1 ½ | 1500 | 54 | 355 | 1855 | 3.86 |
| PROTEUS/IND/175/*+* | PROTEUS/175/*+*+* | 2550 | 1180 | 2 | 2 | 1750 | 54 | 413 | 2163 | 4.1 |
| PROTEUS/IND/200/*+* | PROTEUS/200/*+*+* | 2870 | 1180 | 2 | 2 | 2000 | 54 | 466 | 2466 | 4.6 |
| PROTEUS/IND/250/*+* | PROTEUS/250/*+*+* | 2600 | 1380 | 2 | 2 | 2500 | 54 | 536 | 3036 | 5.1 |
| PROTEUS/IND/300/*+* | PROTEUS/300/*+*+* | 3040 | 1380 | 2 | 2 | 3000 | 54 | 630 | 3630 | 5.8 |

Example: **PROTEUS/IND/45/6+6** = 450 ltr Indirect Coil cylinder with 2 x 6kw Heaters OR **PROTEUS/45/6+6+6** = 450 ltr cylinder with 3 x 6kw Heaters
Heaters available : 3kw,6kw,9kw,12kw & 18kw

Also Available to Order

PROTEUS Solar Water Heaters

The proteus range has been enhanced by the addition of dedicated solar vessels to take advantage of renewable energy from the sun.

The cylinders are available as single coil preheat, single coil with direct electric heating, or Twin coil units for use with renewable and Traditional primary heating sources. The Proteus solar range benefits from the use of high efficiency corrugated coil technology and have "clear skies" recognition (sc2097)

Features of Proteus Solar

- Capacities from 450 to 3000 litres
- Single coil solar preheat vessels.
- Single coil plus Direct Electric heating.
- Twin coil.
- High efficiency corrugated coils.

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