DRE

Electric commercial water heater

DRE - 52/80/120

Three phase electric water heater, primarily for commercial applications • Three to nine Incoloy-sheathed elements with a maximum rating of 54 kW • Each element is independently controlled via its own control thermostat (adjustable: 49 - 82°C) and a manually resetable high-limit thermostat • Cascade control of the elements for more efficient and faster heating-up times • All elements and thermostats are fuse-protected • PermaGlas Ultra Coat second-generation glass coating technology helps to prevent corrosion • Replaceable magnesium anode • Safety float switch • Optional ancillaries: Unvented kits • Destratification pump kit • Powered anodes • Alternate kW loadings

Innovation has a name.

DRE

Technical specifications

		DRE 52-9	DRE 52-18	DRE 52-36	DRE 80-9	DRE 80-18	DRE 80-36	DRE 80-54
Electrical data								
Input	kW	9	18	36	9	18	36	54
Current	A	11-13	23-25	46-50	11-13	23-25	46-50	69-75
Elements	-	3	3	6	3	3	6	9
Power supply	VAC/Hz	400(-15/+10%)/50 (± 1 Hz)						
General								
Weight empty	kg	73			110			
Maximum weight	kg	273			410			
Storage capacity	l	200			300			
Max. temperature setting	°C	82			82			
Maximum working pressure	kPa (bar)	800 (8)			800 (8)			
Draw-off capacity								
Tcold = 10°C / Tset = Tmax								
30 min. ΔT=44°C	l	341	420	578	472	551	709	868
60 min. ΔT=44°C	l	429	596	930	560	727	1061	1395
90 min. ΔT=44°C	l	517	772	1282	648	903	1413	1923
120 min. ΔT=44°C	l	605	948	1634	736	1079	1765	2451
Continuous ΔT=44°C	l/h	176	352	704	176	352	704	1055
Heating-up time ΔT=44°C	min.	68	34	17	102	51	26	17
30 min. ΔT=50°C	l	300	370	509	415	485	624	764
60 min. ΔT=50°C	l	377	525	819	493	640	934	1228
90 min. ΔT=50°C	l	455	679	1128	570	795	1243	1692
120 min. ΔT=50°C	l	532	834	1438	647	949	1553	2157
Continuous ΔT=50°C	l/h	155	310	619	155	310	619	929
Heating-up time ΔT=50°C	min.	78	39	19	116	58	29	19
30 min. ΔT=55°C	l	273	336	463	378	441	567	694
60 min. ΔT=55°C	l	343	477	744	448	582	849	1116
90 min. ΔT=55°C	l	414	618	1026	518	722	1130	1539
120 min. ΔT=55°C	l	484	758	1307	589	863	1412	1961
Continuous ΔT=55°C	l/h	141	281	563	141	281	563	844
Heating-up time ΔT=55°C	min.	85	43	21	128	64	32	21
Shipping data								
Weight incl. packaging	kg	86			125			
Width packaging	mm	680			770			
Height packaging	mm	1570			1690			
Depth packaging	mm	810			920			

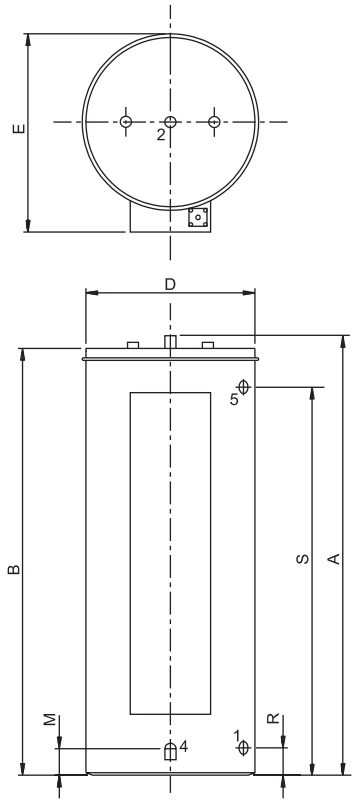
DRE

Ecodesign specifications

		DRE 52-9	DRE 52-18	DRE 52-36	DRE 80-9	DRE 80-18	DRE 80-36	DRE 80-54
Energy labeling								
Load Profil	-	XL	XL	XL	XL	XL	XL	XL
Energy labeling	-	C	C	C	C	C	C	C
Efficiency	%	38	38	38	38	38	38	38
Annual Electricity Consumption (AEC)	kWh	4372	4272	4273	4365	4365	4365	4365
Daily Electricity Consumption	kWh	20.161	20.161	20.161	20.120	20.120	20.120	20.120
Annual Fuel Consumption (AEC)	GJ GCV	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Daily Fuel Consumption	kWh GCV	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nitrogen Dioxide Emission (NO2)	mg/kWh GCV	-	-	-	-	-	-	-
Mixed Water of 40°C (according V40)	ltr.	240	465	∞	420	720	∞	∞
Sound Power Level	dB	15	15	15	15	15	15	15.0

DRE

Dimensions



	DRE 52	DRE 80
A	1460	1580
B	1420	1540
D	560	640
E	690	790
M	125	125
R	125	125
S	1230	1335

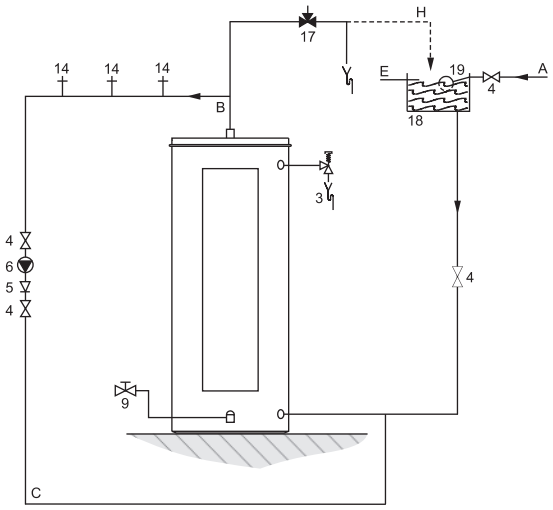
1	Cold water	1 1/4-14 NPT
2	Hot water	1 1/4-14 NPT
4	Tank drain valve	3/4-14 NPT
5	T&P valve	3/4-14 NPT
6	Anode connection	Rp3/4

Dimensions in mm.

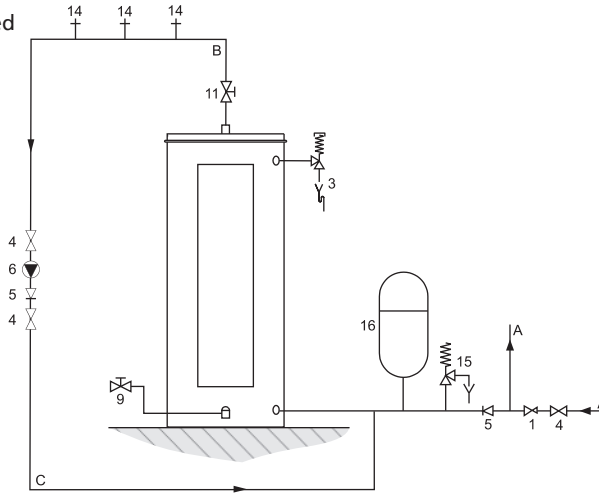
DRE

Installation diagrams

Vented



Unvented



1 Pressure reducing valve
3 T&P valve
4 Stop valve
5 Non-return valve
6 Circulation pump
9 Drain valve
11 Service valve
14 Hot water tap
15 Expansion valve
16 Expansion vessel
17 Three way valve
18 Water cistern
19 Float valve

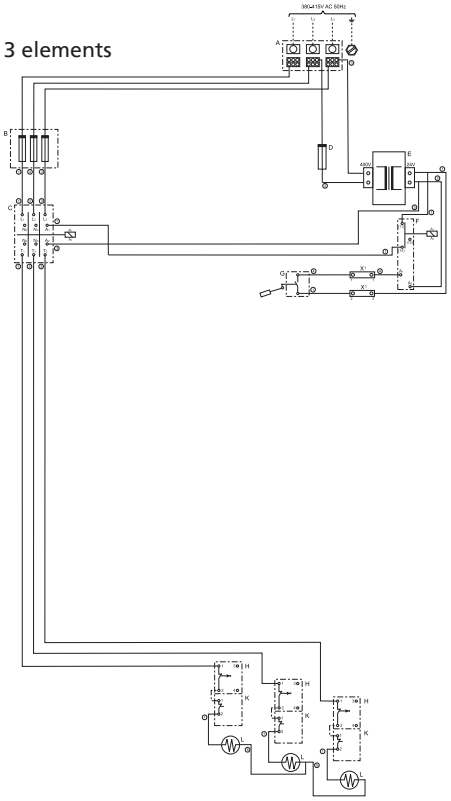
A Cold water supply
B Hot water outlet
C Circulation pipe
E Overflow pipe
H Expansion pipe

A.O. Smith unvented system kits utilise combination valves

Further installation and connection details can be found in the Installation & Commissioning Manual.

Electrical diagrams

3 elements



COMPONANTS

A Terminal block
B Fuse
C Relais
D Fuse
E Transformator
F Safety relais
G Float switch
H Maximum thermostat
K Control thermostat
L Electrical element
X[1] Terminal block

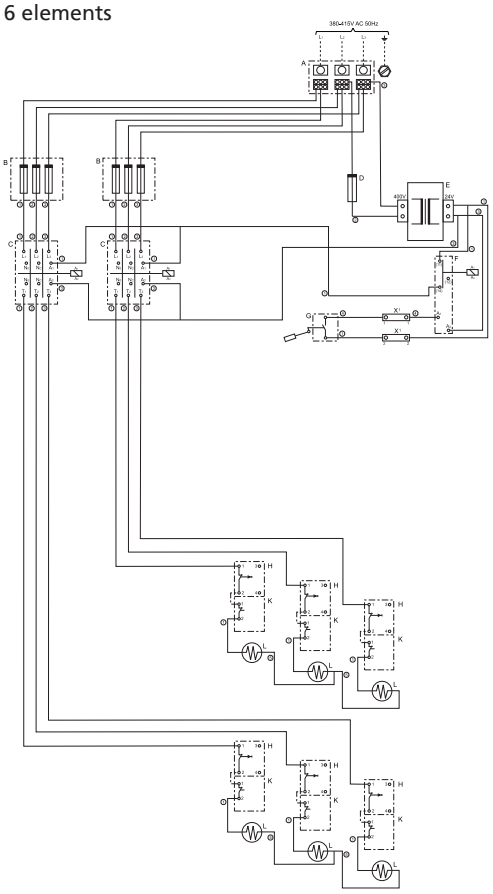
Color code cables

① Black
② Red
③ Blue
④ Brown
⑤ White

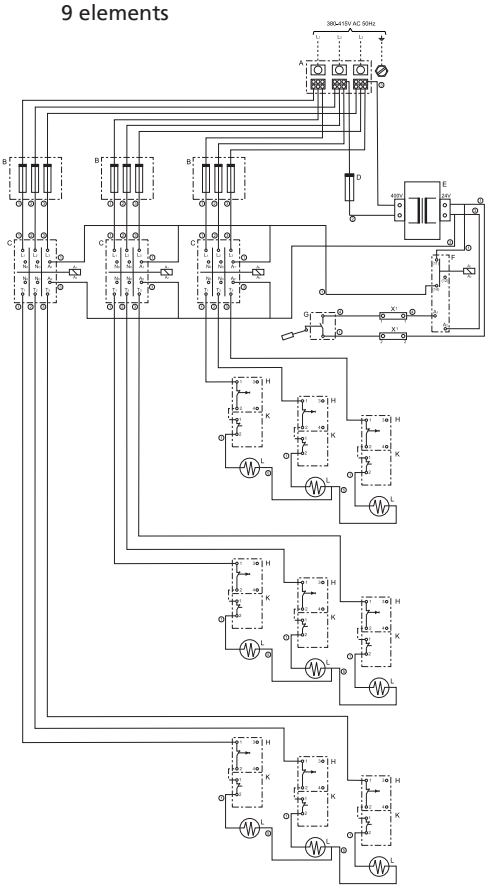
In the instruction manual you will find all the necessary information regarding connection, installation and maintenance of the product; including information on the electrical connections.

Information regarding the recycling or disposal of the product can also be found in the manual. This manual is delivered with the appliance and can also be found on our website; www.aosmith.co.uk.

6 elements



9 elements



A.O. Smith Water Heaters, Unit B8 Armstrong Mall,
Southwood Business Park, Farnborough, Hampshire, GU 14 ONR
www.aosmith.co.uk

ProMax

WALL HUNG ELECTRIC

Designed for quick delivery of lots of hot water to individual bathrooms and kitchens, easy and quick installation and of course with the well known durability and quality of A.O. Smith products.

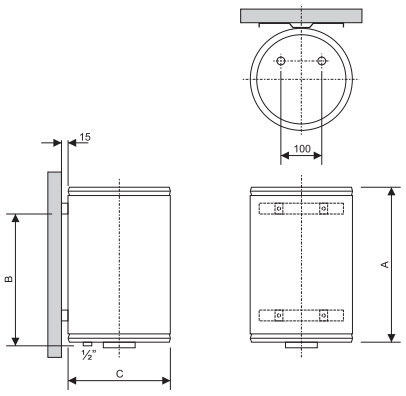
Product Features

- Proven US designed strong steel tank with the A.O. Smith manufactured special cobalt enhanced glass coating fused to the steel ensuring long lifetime and resistance to scale build up.
- Factory installed brackets for wall mounted installation
- Thick injected CFC free foam insulation 22 mm thick along the sides, 40 mm on top of the heater, minimizing heat losses.
- The tanks are tested at 16 bar hydrostatic pressure to meet strict CE standards. This results in a rated working pressure of 8 bar. Models sold in Saudi comply to the SASO standard, so maximum rated working pressure is reduced to 6 bar.
- Flange: all major parts are mounted on a stainless steel flange allowing easy maintenance and cleaning of the tank if required. On the flange you will find:
  - An electric commercial grade incoloy heating element with a low watt density, making it very suitable for usage in hard water areas.
  - A manual high temperature safety thermostat cuts of power supply to the heating element in case of overheating
  - A large magnesium replaceable anode
- Stainless steel hot water outlet pipe and cold water inlet with diffuser
- Water connections are ½ inch threaded BSP.
- Accessories supplied with the water heaters:
  - Thermometer with a clear indication of water temperature
  - Inlet mounted combined pressure relieve valve, non-return valve and drain valve for hose connection
  - For SASO models only also a top mounted additional relieve valve is included.
  - Pilot light indicating operation of the heating element
- The water heater is suitable for operation on 220 to 240 Volt single phase power supply
- Code compliance: CE, IEC 60335, SASO, 930
- 5 year limited tank warranty, two year parts warranty

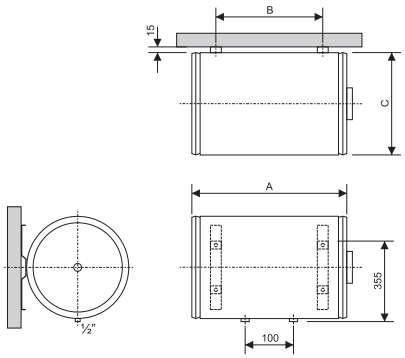
ProMax

WALL HUNG ELECTRIC

Vertical Models	Storage	Input in kW on 220 Volt, 1 phase power supply		Dimensions in MM			Nett Weight
		Standard	Maximum	A	B	Diameter	KG
MEV 50	50	1.2	2.0	545	410	425	23
MEV 80	80	1.2	2.5	785	610	425	29
MEV 100	100	1.5	2.5	958	730	425	33
Horizontal Models							
MEH 50	50	1.2	2.0	545	168	425	23
MEH 80	80	1.2	2.5	785	375	425	29
MEH 100	100	1.5	2.5	958	375	425	33



MEV MODELS (VERTICAL)



MEH MODELS (HORIZONTAL)

Sample Specifications:

The water heater shall be A.O. Smith model --- electric wall hung water heater. The water heater shall be rated for – kW and 220-240 Volts, single phase 50/60 Hz AC power supply. The storage capacity shall be --- Liter. The water heaters tank will have a test pressure of 16 bar and a rated maximum working pressure of 8 bar. The tank shall be from steel fused with glass manufactured by A.O. Smith specially for use with water heaters to form an un-detachable lining. A magnesium anode will be provided for further protection of the tank. Inlet will be of stainless steel and incorporate a diffuser to prevent mixing of incoming cold water with hot water in the tank. The outlet pipe will be of stainless steel and draw from the top of the tank. The controls will include control thermostat and high temperature cut-off thermostat. The heating element will be made of incoloy. The water heater shall be supplied with combined pressure safety valve, check valve and drain valve with hose connection.

A.O. Smith has been an innovative leader in water heaters since 1939

1939 marked the start of mass production of glass lined water heaters. A new patented process to fuse glass with steel ensures economic production of corrosion protected steel tanks. After the patent expired, glass lining quickly became the industry standard for water heaters, as it still is today. A.O. Smith continues to manufacture and develop new formula's of glass in its own glass manufacturing plant in Florence, KY., which will be applied in all factories of A.O. Smith in USA, Mexico, China, Canada, Europe and soon in India.