

DRE

Electric commercial water heater

DRE - 52/80



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 resettable 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

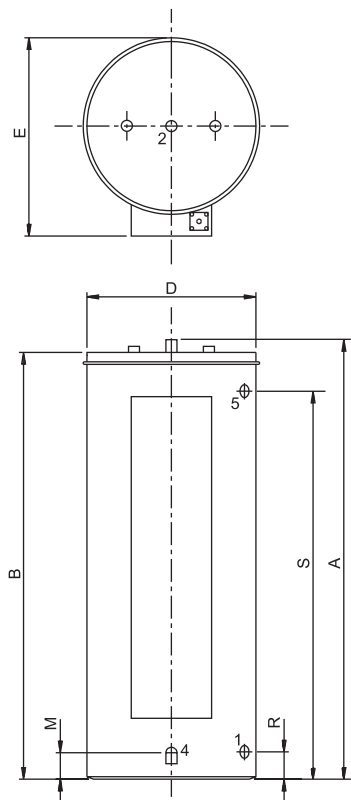
Technical specifications

		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			

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

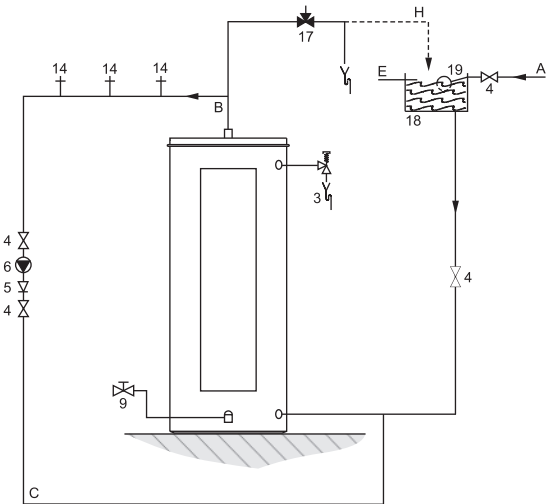
Dimensions



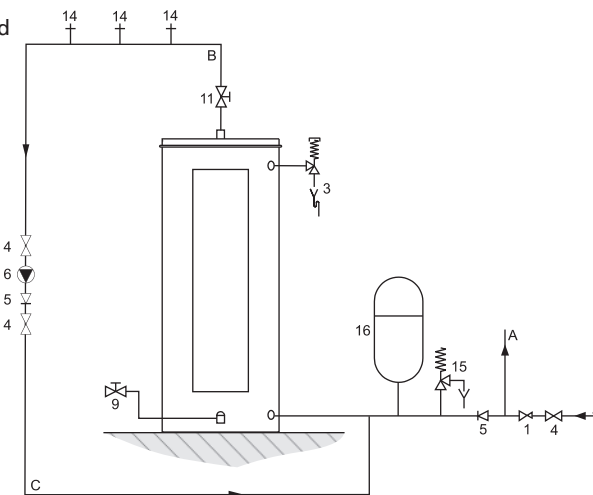
	DRE 52	DRE 80
A	1460	1580
B	1420	1540
D	560	640
E	690	790
M	125	125
R	125	125
S	1230	1335
1	Cold water	1 1/4-14 NPT
2	Hot water	1 1/4-14 NPT
4	Tank drain valve	3/4-14 NPT
5	T&P valve	3/4-14 NPT
6	Anode connection	Rp3/4
Dimensions in mm.		

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

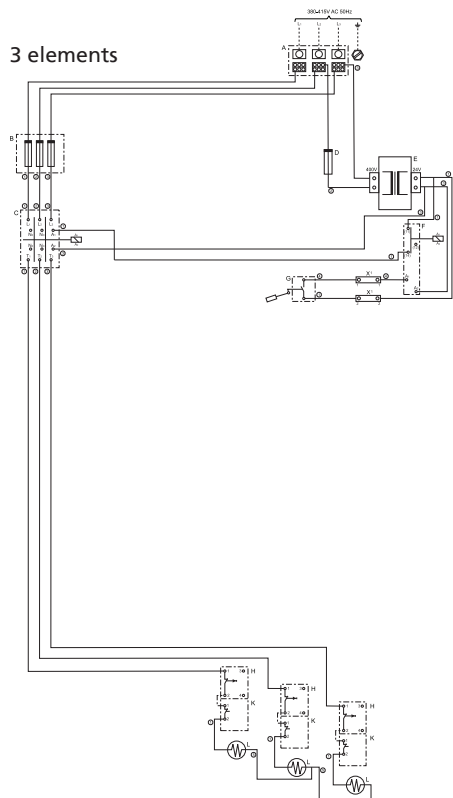
- A Cold water supply
- B Hot water outlet
- C Circulation pipe
- E Overflow pipe
- H Expansion pipe

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 Transformer
- F Safety relais
- G Float switch
- H Maximum thermostat
- K Control thermostat
- L Electrical element
- X¹ Terminal block

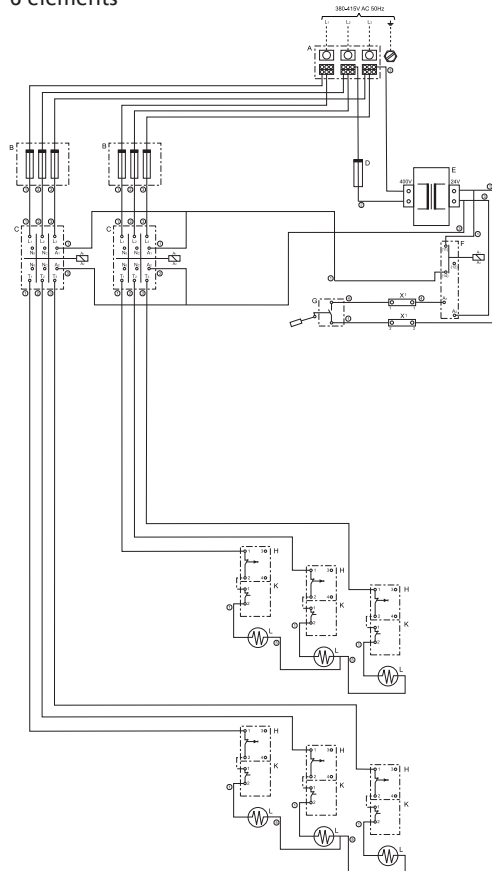
Color code cables

- 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

