

SUF COMMERCIAL CONDENSING HIGH EFFICIENCY RANGE

SUF - 60-120/100-150/100-199/100-250/
120-400/120-500



The SUF range direct-fired gas water heaters provide a new level of economy and efficiency in hot water production. All models are fully condensing and incorporate a burner modulation giving up to 97% thermal efficiency and are designed to operate as a room sealed system in both vented and unvented commercial/industrial applications. With vertical or horizontal concentric or parallel flue kits, up to 100 meter in length, the range is particularly useful where extensive conventional flues are either not possible or practical.

- Nominal output of 31.0 to 121.8 kW
- Capacity of 217 up to 480 litres
- Fully room-sealed condensing high-efficiency water heater 109% (nett)
- Automatic gas/air premix burning system including burner modulation
- Delivered with low-maintenance inert anodes
- NOx emission ≤ 30 ppm (dry – air free) – NOx class 5
- Quiet operation <45 dB(A)
- Temperature setting from 40°C to 80°C with use of week timer
- Flexible flue options, up to a 100 meters
- Easy fault diagnosis and computer controlled digital week timer
- Programmable for legionella purge cycle
- Voltage-free contact for general fault indication to BMS



Gas Appliances
Regulation



ROHS



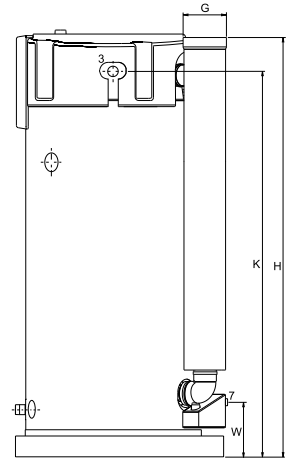
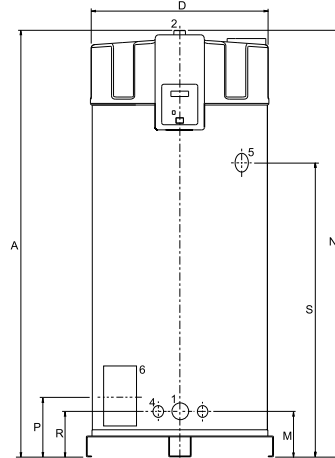
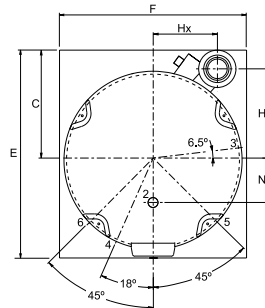
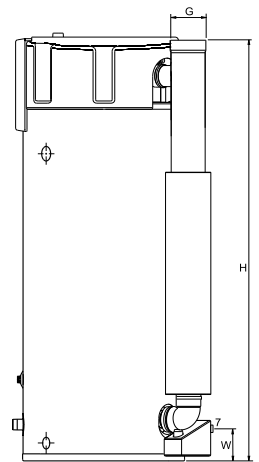
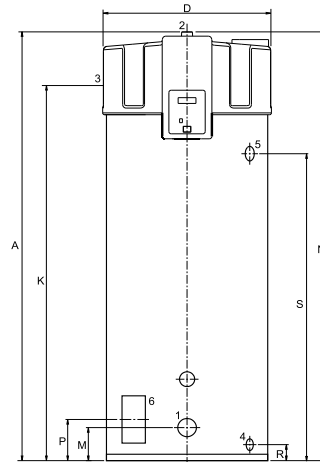
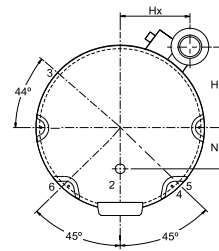
		SUF 60-120	SUF 100-150	SUF 100-199	SUF 100-250	SUF 120-300	SUF 120-400	SUF 120-500
Gas data natural gas 2H (G20)								
Input*	kW	29.0	30.0	47.0	57.0	78.0	95.0	116.0
Output	kW	31.0	32.7	50.3	60.4	84.2	100.7	121.8
Inlet pressure	mbar	20	20	20	20	20	20	20
Gas consumption**	m3/h	3.1	3.2	5.0	6.0	8.3	10.1	12.3
Gas data propane 3P (G31)								
Input*	kW	29,0	30,0	47,0	57,0	78,0	95,0	116,0
Output	kW	31,0	32,7	50,3	60,4	84,2	100,7	121,8
Inlet pressure	mbar	37	37	37	37	37	37	37
Gas consumption**	kg/h	2.3	2.3	3.7	4.4	6.1	7.4	9.0
General								
Nox	ppm	30	29	29	27	31	30	29
Noise level	dB(A)	45	45	45	45	45	45	45
Efficiency gross	%	107	109	107	106	108	106	105
Wieht empty	kg	177	214	214	214	480	480	480
Maximum weight	kg	394	582	582	582	960	960	960
Storage capacity	l	217	368	368	368	480	480	480
Max. temperature setting	°C	80	80	80	80	80	80	80
Maximum working pressure	kPa (bar)	800 (8)	800 (8)	800 (8)	800 (8)	800 (8)	800 (8)	800 (8)
Flue gas discharge	°C	45	50	60	65	50	55	60
Electrical data								
Power consumption	W	45	45	75	115	95	145	240
Power supply	VAC/Hz	230 (-15% +10% VAC)/50 (±1Hz)						
Shipping data								
Weight incl. packaging	kg	196	235	235	235	501	501	501
Width packaging	mm	790	790	790	790	920	920	920
Height packaging	mm	1550	2080	2080	2080	2060	2060	2060
Depth packaging	mm	950	950	950	950	1020	1020	1020

		SUF 60-120	SUF 100-150	SUF 100-199	SUF 100-250	SUF 120-300	SUF 120-400	SUF 120-500
Tset = Tmax/Tcold = 10°C								
30 min. ΔT=28°C	l	730	950	1300	1500	1900	2100	2400
60 min. ΔT=28°C	l	1300	1500	2100	2400	3100	3600	4300
90 min. ΔT=28°C	l	1700	2000	200	3300	4400	5200	6100
120 min. ΔT=28°C	l	2200	2500	3600	4200	5700	6700	8000
Continuous ΔT=28°C	l/h	960	1100	1600	1900	2600	3100	3800
Heating-up time ΔT=28°C	min.	14	22	14	12	11	9	8
30 min. ΔT=50°C	l	360	450	620	720	910	1100	1300
60 min. ΔT=50°C	l	630	730	1100	1300	1700	2000	2300
90 min. ΔT=50°C	l	900	1100	1500	1800	2400	2800	3400
120 min. ΔT=50°C	l	1200	1300	2000	2300	3100	3700	4400
Continuous ΔT=50°C	l/h	540	570	870	1100	1500	1800	2100
Heating-up time ΔT=50°C	min.	24	39	26	21	20	17	14
30 min. ΔT=70°C	l	210	240	370	440	540	640	760
60 min. ΔT=70°C	l	400	440	670	810	1100	1300	1600
90 min. ΔT=70°C	l	600	640	980	1200	1600	1900	2300
120 min. ΔT=70°C	l	790	840	1300	1600	2100	2500	3000
Continuous ΔT=70°C	l/h	390	410	620	750	1100	1300	1500
Heating-up time ΔT=70°C	min.	34	55	36	30	28	23	19

	SUF 60-120	SUF 100-150	SUF 100-199	SUF 100-250	SUF 120-300	SUF 120-400	SUF 120-500
A	1390	1925	1925	1925	2060	2060	2060
C	-	-	-	-	530	530	530
D	705	705	705	705	850	850	850
E	-	-	-	-	1000	1000	1000
F	-	-	-	-	900	900	900
G	100/150	100/150	100/150	100/150	130/200	130/200	130/200
H	1365	1890	1890	1890	1995	1995	1995
Hx	265	265	265	265	310	310	310
Hy	375	375	375	375	440	440	440
K	1285	1815	1815	1815	1855	1855	1855
M	170	160	160	160	225	225	225
N	1390	195	195	195	2060	2060	2060
Ny	205	205	205	205	205	205	205
P	170	175	175	175	290	290	290
R	85	75	75	75	225	225	225
S	900	1410	1410	1410	1425	1425	1425
W	150	150	150	150	240	240	240

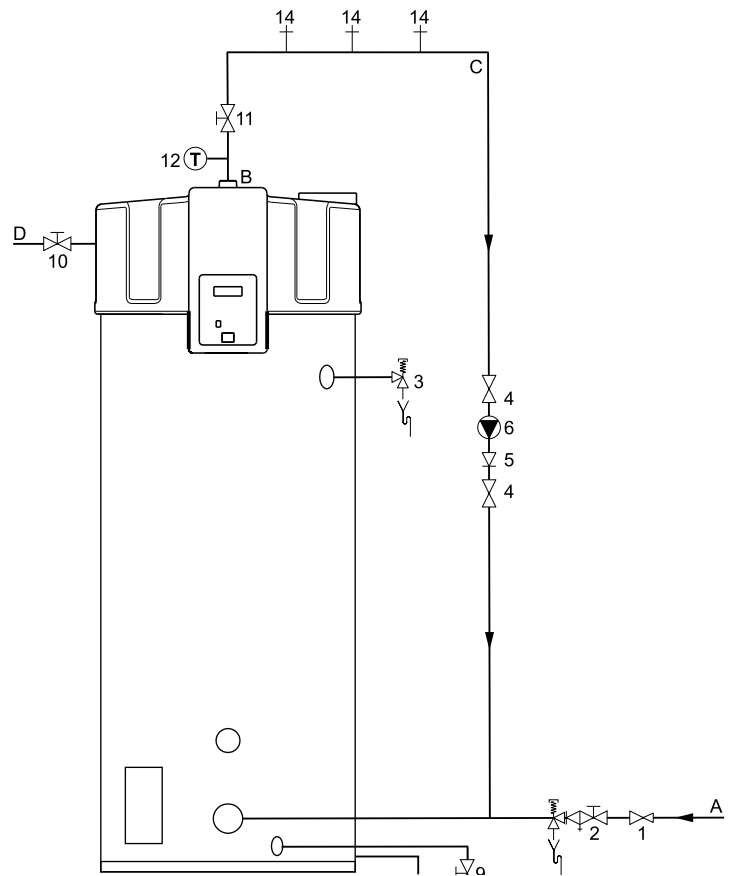
1	Cold water (internal)	R 11/2
2	Hot water (internal)	R 11/2
3	Gas control (external)	R 3/4"
4	Tank drain valve (internal)	1" (26-60) 3/4" (80-120)
5	T&P valve (internal)	1" - 11.5 NPT
6	Cleaning and inspection opening	95 x 70
7	Condensation drainage (internal)	Ø 40

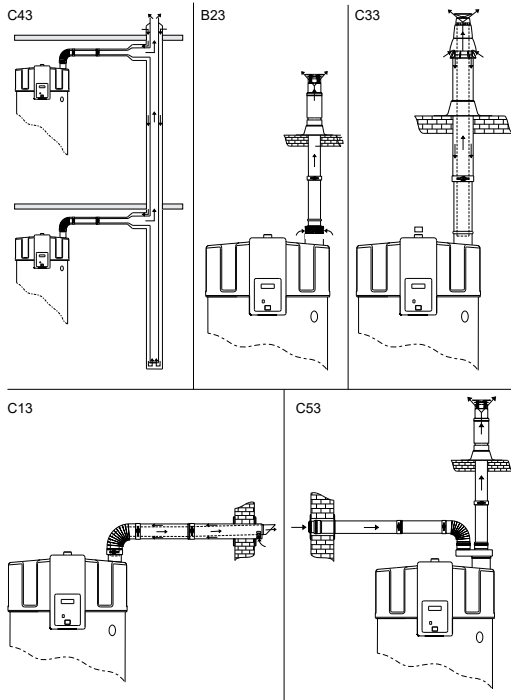
All dimensions are in mm



- 1 Pressure reducing valve
 - 2 Inlet combination
 - 3 T&P valve
 - 4 Stop valve
 - 5 Non-return valve
 - 6 Circulation pump
 - 9 Drain valve
 - 10 Gas valve
 - 11 Service valve
 - 12 Temperature meter
 - 13 Condense drain
 - 14 Hot water tap
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- A Cold water supply
 - B Hot water outlet
 - C Circulation pipe
 - D Gas supply

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.statewaterheatersme.com





	SUF 60-120 - 100-250	SUF 120-300 - 120-500
Concentric		
Diameter (mm)	100/150	130/200
Max. length (m)	40	15
Max. 45/90° bends	7	4
Parallel (standard diameter)		
Diameter (mm)	100	130
Max. length (m)	55	65
$L_{\text{equivalent}}$ /bend 90° (m)	4.6	2.4
$L_{\text{equivalent}}$ /bend 45° (m)	1.2	1.4
Parallel (larger diameter for more length)		
Diameter (mm)	130	150
Max. length (m)	100	100
$L_{\text{equivalent}}$ /bend 90° (m)	2.4	2.6
$L_{\text{equivalent}}$ /bend 45° (m)	1.4	1.6

Concentric flues

It is **not** permitted to use more than the specified number of bends, even when the duct is shorter than the maximum length. A 45° bend is equivalent to a 90° bend.

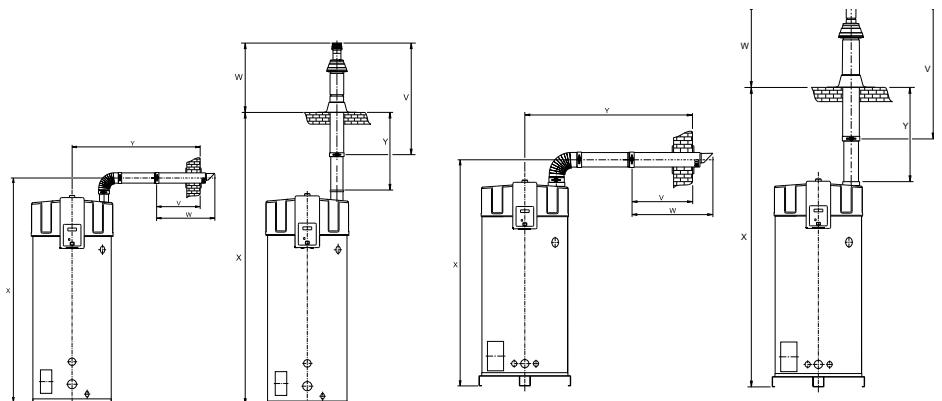
Parallel flues

- The maximum permissible length should be reduced by the equivalent length of each bend. (Note: for a parallel installation this means that 3 changes in direction amount to 6 bends (3 in the supply duct and 3 in the flue).)
- The maximum length also applies if a parallel installation has different supply and flue duct lengths (B23, C53).
- Combined flues (C43) shall be fitted with a condensate drain.

Note: horizontal flue runs must be installed with a fall of at least 5 mm per metre.

Further information on the flue gas discharge materials can be found in the Installation Manual.

	SUF 60-120	SUF 100-150 - 100-250	SUF 120-300 - 120-500
Minimal space for wall duct (mm)			
V	550	550	640
W	790	790	940
X	1535	2075	2320
X*	1985	2525	2680
Y	1480	1480	1620
Y*	1030	1030	1170
Minimal space for roof duct (mm)			
V	1500	1500	1730
W	1035	1035	1120
X	2965	3325	3620
X**	2015	2375	2670
Y	1415	1415	1560
Y**	465	465	610



* Distance without concentric pipe between bend and wall duct.

** Distance without concentric pipe between appliance and roof duct.