

Twister

Condensing Stainless Steel Gas Fired Water Heater

TWI 35-130/45-190

Storage Capacity

130 and 190 Litres

Range of Output

30,000 Kcal/Hr and 40,000 Kcal/Hr



Twister

TWI or Twister is a fully room-sealed condensing high efficiency water heater with stainless steel tank.

FEATURES

EFFICIENCY	95% on GCV and 106% on NCV of the Gas.
IN BUILT TANK	Inbuilt Stainless steel tank with storage of 130 and 190 litres.
BURNER	Premix Low-NOx burner saves the environment.
FLUE GASES	Low flue gas temperature, low-NOx levels, environment friendly.
PLUG-AND-PLAY TECHNOLOGY	Connect air inlet, exhaust outlet, water, electricity, and gas, set the temperature and the system functions properly.
NOISE LEVEL	Whisper quiet operation, Specially designed blower and burner minimize noise.
WARRANTY	All Twister water heaters receive a five years warranty on the tank and one year on parts.
OTHER STANDARD FEATURES	<ul style="list-style-type: none">• Three external LED lights indicate operational status of water heater• Full serviceability from the front• No anodes simplify maintenance• 8 Bar Maximum working pressure
OPTIONS	Available in Natural gas and LPG.

ABOUT A. O. SMITH

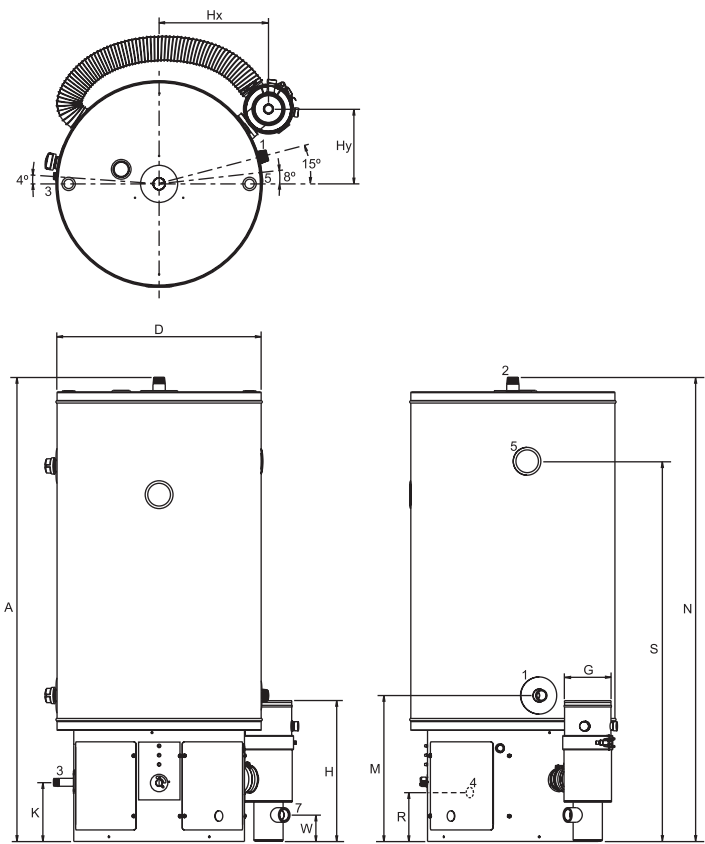
A. O. SMITH: WORLDWIDE	<p>A. O. Smith is the largest manufacturer in North America, and one of the world's leading manufacturers of residential and commercial water heating equipment, offering a comprehensive product line and featuring the best-known brands in North America and China. Through an inspired blend of innovation, teamwork, technology and industry expertise, A. O. Smith has created a full line of state-of-the-art water heaters and boilers that combine incredible performance with higher-than-ever energy efficiency. A. O. Smith is a global leader applying innovative technology and energy-efficient solutions to products marketed worldwide. A. O. Smith is also one of the largest manufacturers of electric motors for residential and commercial applications in North America.</p> <p>A. O. Smith developed and patented a process to glass-line water heaters. And over the years, A. O. Smith has gained the respect and support of homeowners, contractors, architects, and specifying engineers in over 60 countries by providing innovative energy efficient products designed for years of trouble-free service.</p>
A. O. SMITH: INDIA	<p>A. O. Smith India Water Heater Private Limited was established in 2005. Backed by 70 years of proven technological advances A. O. Smith India has created a stylish design with features demanded by the Indian consumer and successfully marketed a range of domestic water heaters that in a short period of time have become the most trusted brand in it's category.</p>

Technical specifications

		TWI 35-130	TWI 45-190
Natural gas			
Output in Kcal/hr		30,000	40,000
Output	kW	36.0	47.7
Inlet pressure	mbar	20	20
NOx-value	ppm	21	16
Gas consumption**	m³/h	3.3	4.4
Max. flue gas temperature	°C	65	65
Flue gas discharge	kg/h	61.2	78.6
LPG consumption **	Kg/hr	2.6	3.5
Draw-off capacity			
Storage capacity	l	129	189
Maximum working pressure	bar	8	8
Max. temperature setting	°C	85	85
T_{cold} = 10°C / T_{set} = 65°C			
30 min. ΔT=44°C	l	458	626
60 min. ΔT=44°C	l	810	1092
90 min. ΔT=44°C	l	1162	1558
120 min. ΔT=44°C	l	1514	2024
Continuous ΔT=44°C	l/h	704	932
Heating-up time ΔT=44°C	min.	11	12
30 min. ΔT=50°C	l	403	551
60 min. ΔT=50°C	l	713	961
90 min. ΔT=50°C	l	1023	1371
120 min. ΔT=50°C	l	1333	1781
Continuous ΔT=50°C	l/h	620	820
Heating-up time ΔT=50°C	min.	12	14
30 min. ΔT=55°C	l	366	501
60 min. ΔT=55°C	l	648	874
90 min. ΔT=55°C	l	930	1246
120 min. ΔT=55°C	l	1211	1619
Continuous ΔT=55°C	l/h	564	746
Heating-up time ΔT=55°C	min.	14	15
Electrical data			
Power consumption	W	200	300
Power supply	VAC/Hz	230 (-15% +10% VAC) / 50 (+/- 1 Hz)	
Shipping data			
Weight empty	kg	70	82
Maximum weight	kg	199	271
Weight incl. packaging	kg	88	100
Height packaging	mm	1400	1750
Width packaging	mm	780	780
Depth packaging	mm	870	870

** Gas consumption at 15°C and 1 bar, NCV of Natural Gas 8,500 Kcal/Nm³, LPG 10,750 Kcal/Kg.

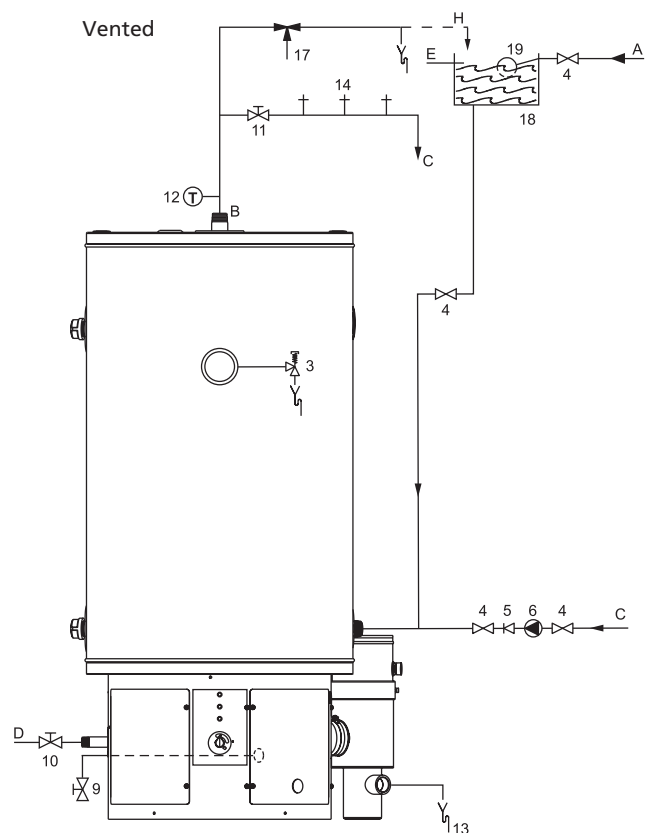
Dimensions



Dimensions in mm

	TWI 35-130	TWI 45-190
A	1270	1620
D	560	560
G	80/125	80/125
H	385	385
Hx	300	300
Hy	205	205
K	160	160
M	400	400
N	1270	1620
R	155	155
S	1040	1395
W	100	100
1 Cold water	25mm NPT	25mm NPT
2 Hot water	25mm NPT	25mm NPT
3 Gas control	12mm NPT	20mm NPT
4 Tank drain valve	20mm NPT	20mm NPT
5 T&P valve	20mm NPT	20mm NPT
7 Condensation drainage	Rp1	Rp1
All Twister water heaters receive a five years warranty on the tank and one year on parts.		

Installation diagrams

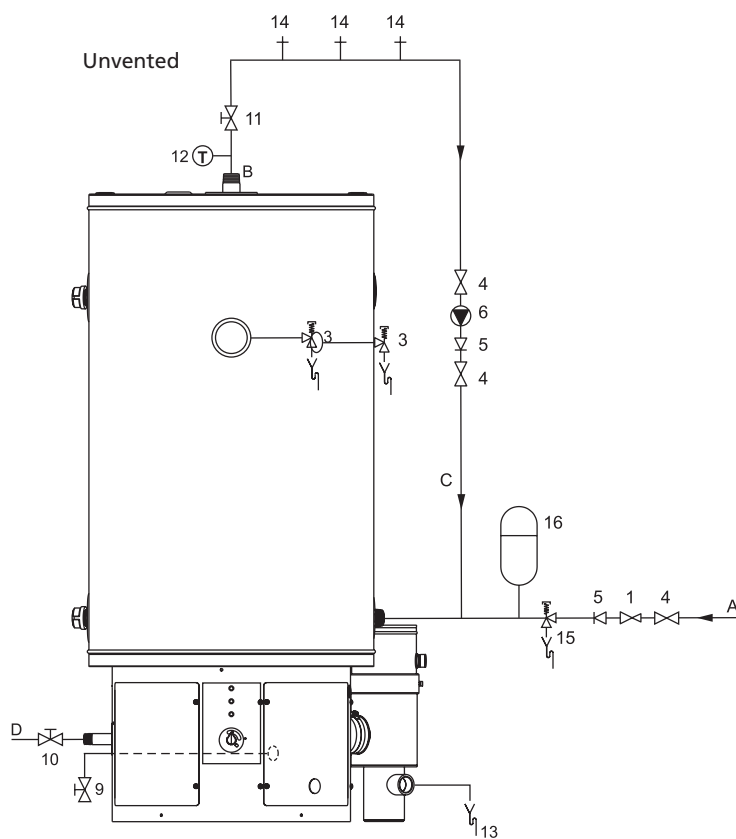


- 1 Pressure reducing valve
- 3 T&P valve
- 4 Stop valve
- 5 Non-return valve
- 6 Circulation pump
- 9 Drain valve
- 10 Gas cock
- 11 Isolating valve
- 12 Temperature gauge
- 13 Condense drain
- 14 Hot water outlets
- 15 Expansion relief valve
- 16 Expansion vessel
- 17 Three way valve
- 18 Water tank
- 19 Float valve

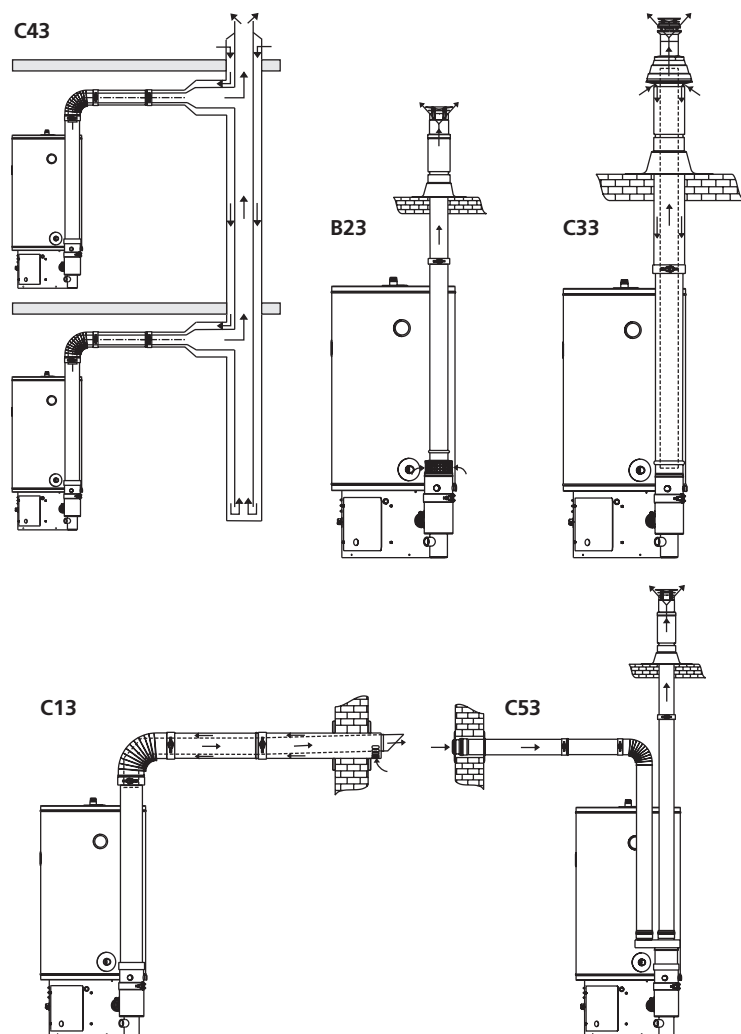
- A Cold water
- B Hot water
- C Return circulation
- D Gas supply
- E Overflow pipe
- H Expansion vent pipe

A.O. Smith unvented system kits utilise combination valves.

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



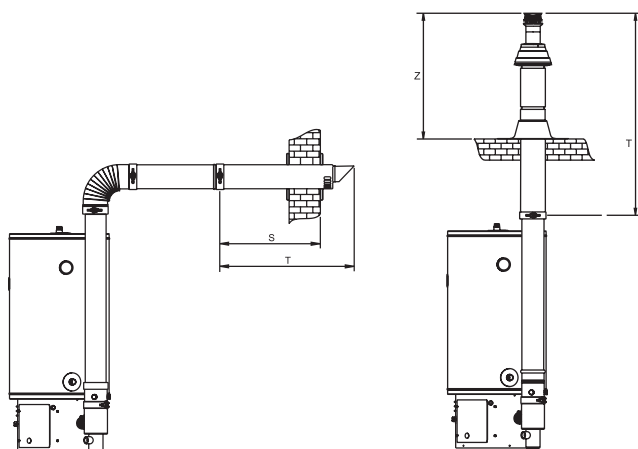
Installation options



A Twister water heater should be installed according category B23, C13, C33, C43 or C53*.

	TWI 35-130	TWI 45-190
Concentric		
Diameter (mm)	80/125	80/125
Max. length (m)	20	20
Max. 45/90° bend	5	5
Parallel (standard diameter)		
Diameter (mm)	80	80
Max. length (m)	30	20
Lequivalent/bend 90° (m)	3.9	3.9
Lequivalent/bend 45° (m)	1.1	1.1
Parallel (larger diameter for more length)		
Diameter (mm)	100	100
Max. length (m)	100	75
Lequivalent/bend 90° (m)	4.6	4.6
Lequivalent/bend 45° (m)	1.2	1.1
* All Twisters are also approved for installations where the unit is supplied without venting materials (C63).		
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		
<ul style="list-style-type: none"> - 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 towards the heater.		

Dimensions wall/roof duct



	TWI 35-130	TWI 45-190
Minimal space for wall duct (mm)		
S	590	590
T	765	765
Minimal space for roof duct (mm)		
Z	760	760
T	1345	1345
For the part numbers of components and flue gas ducts, etc. please refer to the "Maintenance and accessories" chapter.		

AC SmithTM
Innovation has a name.