

# BTL

## *Nitrol*

### Light commercial atmospheric water heater

#### **BTL 85/100**

- Atmospheric water heater, primarily intended for light commercial/industrial applications
- Replaceable magnesium anode
- Control, high limit and energy cut-off thermostats to ensure safe operation
- Safety sensor to prevent flue spillage
- Waterway access cover for comprehensive waterside tank maintenance
- Low NOx < 56mg/Kwh, meets tightened emission and efficiency requirements 26/09/18
- Stainless-steel burner for natural or LP gas



# Technical specifications

		BTL 85	BTL 100
<b>Gas data natural gas 2H (G20)</b>			
Input *	kW	19.9	18.9
Output	kW	16.8	16.6
Inlet pressure	mbar	20	20
Gas consumption**	m <sup>3</sup> /h	2.1	2.0
NOx emissions	mg/kWh GCV	22	30
<b>Gas data butane 3+ (G30)</b>			
Input *	kW	16.9	15.0
Output	kW	14.3	13.1
Inlet pressure	mbar	30	30
Gas consumption**	kg/h	1.3	1.2
NOx-emissie	mg/kWh GCV	13	15
<b>Gas data propane 3+ (G31)</b>			
Input *	kW	16.5	16.4
Output	kW	13.9	14.4
Inlet pressure	mbar	37	37
Gas consumption**	kg/h	1.3	1.3
NOx-emissie	mg/kWh GCV	9	9
<b>General</b>			
Efficiency (net)	%	84	88
Flue gas temperature	°C	142	125
Weight empty	kg	124	151
Maximum weight	kg	392	509
Storage capacity	l	268	358
Max. temperature setting	°C	80	80
Maximum working pressure	kPa (bar)	800 (8)	800 (8)
<b>Draw-off capacity ***</b>			
<b>Tset = Tmax/ Tcold = 10°C</b>			
30 min. ΔT=28°C	l	710	860
60 min. ΔT=28°C	l	960	1200
90 min. ΔT=28°C	l	1300	1400
120 min. ΔT=28°C	l	1500	1700
Continuous ΔT=28°C	l/h	520	510
Heating-up time ΔT=28°C	min.	22	29
30 min. ΔT=50°C	l	400	480
60 min. ΔT=50°C	l	540	630
90 min. ΔT=50°C	l	690	770
120 min. ΔT=50°C	l	830	910
Continuous ΔT=50°C	l/h	290	290
Heating-up time ΔT=50°C	min.	39	53
30 min. ΔT=70°C	l	290	350
60 min. ΔT=70°C	l	390	450
90 min. ΔT=70°C	l	490	550
120 min. ΔT=70°C	l	600	650
Continuous ΔT=70°C	l/h	210	210
Heating-up time ΔT=70°C	min.	54	74
<b>Shipping data</b>			
Weight incl. packaging	kg	142	169
Height packaging	mm	1640	1830
Width packaging	mm	780	780
Depth packaging	mm	870	870

\* Gas data on net value

\*\* Gas consumption at 15°C and 1013.25 mbar

\*\*\* Based on natural gas

## Ecodesign specifications

		BTL 85	BTL 100
Load Profil	-	XL	XXL
Energy labeling	-	B	C
Efficiency	%	58	58
Annual Electricity Consumption (AEC)	kWh	-	-
Annual Fuel Consumption (AFC)	GJ GCV	26	34
Mixed Water of 40°C (according V40)	ltr.	1246	648
Sound Power Level	dB	55	55
Other Load Profil	-	XXL	3XL
Efficiency	%	55	65
Annual Electricity Consumption (AEC)	kWh	-	-
Annual Fuel Consumption (AFC)	GJ GCV	35	57
Mixed Water of 40°C (according V40)	ltr.	538	649

## Exchange table

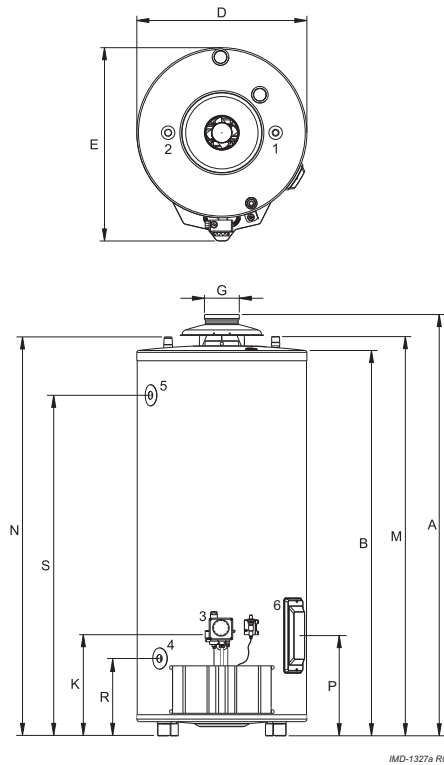
	Atmospheric new (Nitrol)			Condensing new (Innovo)					
	BTL 85	BTL 100		IR-12-160	IR-20-160	IR-12-200	IR-20-200	IR-24-245	IR-32-245
Unit to be replaced	BT 65	√		√		√			
	BTI 65	√		√		√			
	BTT 65	√		√		√			
	BT 85	√					√	√	
	BTI 85	√					√	√	
	BTT 85	√					√	√	
	BT 100		√					√	
	BTI 100		√					√	
	BTT 100		√					√	
	EQ 280	√						√	√
	EQ 380		√						√

- Proposal is based on close proximity of the tapping capacity first hour
- No rights can be derived from this proposal
- Use the table below for a detailed comparison between the new unit and the one to be replaced

Type	Volume (ltr)	Load (kW)	Continuous Δ28K ltr/h	1 <sup>st</sup> hour Δ28K ltr	Continuous Δ50K ltr/h	1 <sup>st</sup> hour Δ50K ltr	Height (+Draft hood) (mm)	Height (mm)	Diameter (mm)	Depth (mm)	Gas connection* (mm)	Cold water connection* (mm)	Warm water connection* (mm)	Flue dia- meter (mm)	Power supply
BT 65	178	16,3	390	685	220	385	1680	1510	520	610	365	1540	1540	100	x
BTI 65	178	16,3	390	685	220	385	1680	1510	520	610	365	1540	1540	100	x
BTT 65	178	16,3	390	685	220	385	1680	1510	520	610	365	1540	1540	100	x
BT 85	265	22,6	590	1025	330	575	1585	1450	645	735	375	1505	1505	130	x
BTI 85	265	22,6	590	1025	330	575	1585	1450	645	770	340	1505	1505	130	x
BTT 85	265	22,6	590	1025	330	575	1585	1450	645	735	375	1505	1505	130	x
BT 100	355	24	630	1220	355	685	1780	1640	675	765	375	1685	1685	130	x
BTI 100	355	24	630	1220	355	685	1780	1640	675	775	340	1685	1685	130	x
BTT 100	355	24	630	1220	355	685	1780	1640	675	765	375	1685	1685	130	x
EQ 280	265	22,6	590	965	330	540	1585	1450	645	735	375	1505	1505	130	x
EQ 380	355	24	630	1140	355	640	1780	1640	675	765	375	1685	1685	130	x
BTL 85	268	19,9	520	960	290	540	1595	1450	645	735	385	1510	1510	130	x
BTL 100	358	18,9	510	1200	290	630	1780	1660	704	795	375	1685	1700	130	x
IR-12-160	160	10,9	360	600	210	310		1269	560	780	870	175	1270	80/125	230V/50Hz
IR-20-160	160	18	590	820	330	440		1269	560	780	870	175	1270	80/125	230V/50Hz
IR-12-200	200	10,9	370	760	210	410		1543	560	780	870	175	1545	80/125	230V/50Hz
IR-20-200	200	18	590	990	330	540		1543	560	780	870	175	1545	80/125	230V/50Hz
IR-24-245	245	22	730	1200	410	640		1543	610	830	910	175	1545	80/125	230V/50Hz
IR-32-245	245	29	950	1400	530	760		1543	610	830	910	175	1545	80/125	230V/50Hz

\* Height of the connection

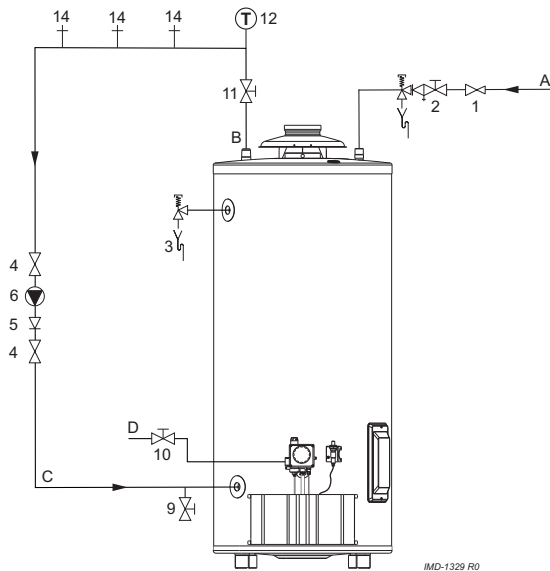
## Dimensions



	BTL 85	BTL 100	
A	1595	1780	
B	1450	1660	
D	645	705	
E	735	795	
G	130	130	
K	385	375	
M	1510	1700	
N	1510	1700	
P	370	360	
R	300	295	
S	1290	1475	
1	Cold water (male)	1 - 11.5 NPT	1.25 - 11.5 NPT
2	Hot water (male)	1 - 11.5 NPT	1.25 - 11.5 NPT
3	Gas control (female)	Rp 0.5	Rp 0.5
4	Tank drain valve (female)	0.75 - 14 NPT	0.75 - 14 NPT
5	T&P valve (female)	0.75 - 14 NPT	0.75 - 14 NPT
6	Cleaning/inspection opening	105x135	105x135

*Dimensions en mm.*  
 \* Para la altura total, hay que tener en cuenta la tubería de salida del gas de combustión; los primeros 50 cm entre la extracción de gases y el codo deben subir en posición vertical.

## Installation diagrams



- |    |                         |   |                   |
|----|-------------------------|---|-------------------|
| 1  | Pressure reducing valve | A | Cold water supply |
| 3  | T&P valve               | B | Hot water outlet  |
| 4  | Stop valve              | C | Circulation pipe  |
| 5  | Non-return valve        | D | Gas supply        |
| 6  | Circulation pump        |   |                   |
| 9  | Drain valve             |   |                   |
| 10 | Gas valve               |   |                   |
| 11 | Service valve           |   |                   |
| 12 | Temperature gauge       |   |                   |
| 14 | Hot water tap           |   |                   |
| 15 | Expansion valve         |   |                   |

A BTL water heater should be installed in accordance with local standards and ventilation requirements (category B11BS).

Este aparato debe instalarse en un piso superficie no inflamable.

In the instruction manual you will find all the necessary information regarding connection, installation and maintenance of the product.

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.es](http://www.aosmith.es).