

3.3 Technical information UltraGas® (250D-700D)

Type		(250D)	(300D)	(400D)	(500D)	(600D)	(700D)
• Nominal heat output at 80/60 °C, natural gas	kW	25-228	25-278	39-370	44-462	51-556	51-648
• Nominal heat output at 40/30 °C, natural gas	kW	28-250	28-300	44-400	49-500	57-600	58-700
• Nominal heat output at 50/30 °C, natural gas ³⁾	kW	27-246	28-300	42-386	48-486	55-588	56-688
• Nominal heat output at 80/60 °C, propane ²⁾	kW	31-226	35-276	63-370	78-454	80-546	95-626
• Nominal heat output at 40/30 °C, propane ²⁾	kW	34-250	39-300	70-400	87-500	91-600	109-700
• Nominal heat output at 50/30 °C, propane ³⁾	kW	33-246	39-300	68-388	85-486	88-588	105-688
• Nominal load with natural gas ¹⁾	kW	26-232	26-282	40-376	45-470	52-566	53-660
• Nominal load with propane ²⁾	kW	32-232	36-282	65-376	80-470	84-566	100-660
• Operating pressure heating min./max. (PMS)	bar	1/5	1/5	1/5	1/5	1/5	1/6
• Operating temperature max. (T _{max})	°C	90	90	90	90	90	90
• Boiler water content (V _(H2O))	l	412	388	719	682	636	857
• Flow resistance boiler		see diagram					
• Minimum circulation water quantity	l/h	-	-	-	-	-	-
• Boiler weight (without water content, incl. casing)	kg	868	916	1282	1348	1452	1762
• Boiler efficiency at 80/60 °C in full-load operation (NCV/GCV)	%	97.9/88.2	97.8/88.1	97.9/88.2	97.9/88.2	98.0/88.3	98.2/88.5
• Boiler efficiency at 30 % partial load (NCV/GCV)	%	108.1/97.4	108.0/97.3	108.1/97.4	108.1/97.4	108.0/97.3	108.0/97.3
• NOx class (EN 15502)		6	6	6	6	6	6
• Nitrogen oxide emissions (EN 15502) (GCV)	NOx mg/kWh	32	29	31	36	31	34
• Carbon monoxide emissions (full-load operation, 3% O ₂)	CO mg/Nm ³	13	18	11	18	22	14
• Content of CO ₂ in the flue gas minimum/maximum output	%	8.8/9.0	8.8/9.0	8.8/9.0	8.8/9.0	8.8/9.0	8.8/9.0
• Heat loss in standby mode	Watt	960	960	1060	1060	1060	1500
• Dimensions		see table of dimensions					
• Gas flow pressure minimum/maximum							
- Natural gas E/LL	mbar	17.4-80	17.4-80	17.4-80	17.4-80	17.4-80	17.4-80
- Propane	mbar	37-57	37-57	37-57	37-57	37-57	37-57
• Gas connection value at 15 °C/1013 mbar:							
- Natural gas E (Wo = 15.0 kWh/m ³) NCV = 9.97 kWh/m ³	m ³ /h	2.6-23.3	2.6-28.3	4.0-37.7	4.5-47.1	5.2-56.8	5.3-66.2
- Natural gas LL (Wo = 12.4 kWh/m ³) NCV = 8.57 kWh/m ³	m ³ /h	3.0-27.1	3.0-32.9	4.7-43.9	5.3-54.8	6.1-66.0	6.2-77.0
- Propane ²⁾ (NCV = 25.9 kWh/m ³)	m ³ /h	1.2-8.9	1.4-10.9	2.5-14.5	3.1-18.1	3.2-21.9	3.9-25.5
• Operation voltage	V/Hz	230/50	230/50	230/50	230/50	230/50	230/50
• Electrical power consumption min./max.	Watt	40/332	40/490	38/280	40/444	44/688	46/656
• Stand-by	Watt	18	18	18	18	18	18
• IP rating (integral protection)	IP	20	20	20	20	20	20
• Permitted ambient temperature during operation	°C	5-40	5-40	5-40	5-40	5-40	5-40
• Sound power level							
- Heating noise (EN 15036 part 1) (room air dependent)	dB(A)	72	75	69	72	75	77
- Exhaust noise is radiated from the mouth (DIN 45635 part 47) (room air dependent/room air independent)	dB(A)	68	70	65	68	69	74
• Condensate quantity (natural gas) at 40/30 °C	l/h	21.7	26.5	35.3	44.2	53.2	61.3
• pH value of the condensate	approx.	4.2	4.2	4.2	4.2	4.2	4.2
• Construction type		B23P, C53, C63					
• Flue gas system							
- Temperature class		T120	T120	T120	T120	T120	T120
- Flue gas mass flow at nominal heat load (dry)	kg/h	383	468	624	780	940	1082
- Flue gas mass flow at lowest nominal heat load (dry)	kg/h	39.1	39.1	60.2	67.7	78.2	79.8
- Flue gas temperature at nominal output and operation 80/60 °C	°C	69	71	69	70	71	69
- Flue gas temperature at nominal output and operation 40/30 °C	°C	48	49	48	49	49	46
- Flue gas temp. at lowest nominal heat load and operation 40/30 °C	°C	32	32	32	32	32	32
- Maximum permitted temperature of the combustion air	°C	50	50	50	50	50	50
- Volume flow rate combustion air	Nm ³ /h	286	349	465	582	701	807
- Maximum supply pressure for supply air and flue gas line	Pa	60	60	60	60	60	60
- Maximum draught/depression at flue gas outlet	Pa	-50	-50	-50	-50	-50	-50

¹⁾ Data related to NCV. The boiler series is tested for EE/H-settings. With a factory setting of the Wobbe coefficient of 15.0 kWh/m³ operation at a Wobbe coefficient of 12.0 up to 15.7 kWh/m³ is possible without new settings.

²⁾ Data related to NCV. UltraGas® (250D-700D) can also be operated with propane.

³⁾ Factory measurements