ADVECO

MD
Boiler Range





www.adveco.co



Adveco High Efficiency Condensing Boilers

The Adveco MD is a range of four floor-standing and 10 wall mounted boilers designed to provide a high capacity and reliable solution to a building's central heating and DHW demands. Floor standing models with heat inputs from 70 to 280 kW are suitable for a wide range of heating applications. Compact wall-mounted variants offer rated heat outputs of 15, 24, 34 and 60 kW for light commercial central heating and DHW applications

The MD range delivers quality and reliability you can trust for all your commercial projects

WRAS APPROVED PRODUCT

H2O%

Fully modulating with condensing technology

Modern, innovative and compact design

Outputs from 14 kW to 2.24 MW

MD70T-MD280T Floor-Standing

106%
HIGH EFFICIENCY



LOW NO_x

34 mg/kWh

5 YEAR BURNER & HEAT EXCHANGER WARRANTY

Features & Benefits

Fully condensing with low flue gas temperatures
Improves energy efficiency
Enables use of low-cost PP flues

11 bar working pressure
Suitable for large, high pressure applications

Integrated flue gas non-return valve
Enables overpressure flue systems
Prevents flue gas recirculation

Intelligent system controller
Includes maintenance self-check
0-10, MODBUS, and alarm outputs for BMS integration

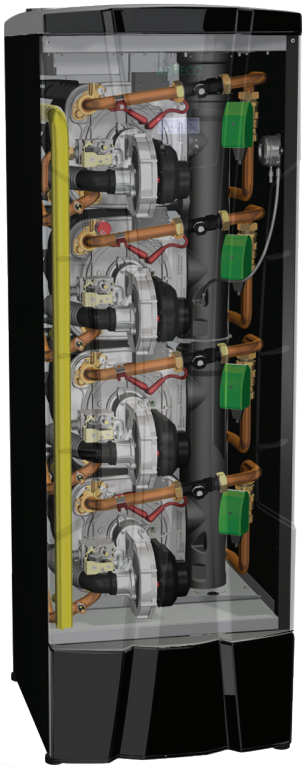
Acid condensate neutraliser
Refillable limestone bed reduces acidity

Space saving design
Stackable heat exchanger design delivers maximum output from minimal footprint

20% hydrogen blend compatible
Futureproof compatibility for a decarbonised gas network

EXPERTLY ENGINEERED FOR YOU

MD70T-MD280T Floor-Standing



The Strength To Out Perform Others

Multiple heat exchangers from MD 140T and up

Combining two, three, or four 70 kW heat engines within a single floor standing chassis. Each heat exchanger incorporates a control board providing load balancing for uniform wear and built-in redundancy

Continuous non-welded run and large bore, three-pass design

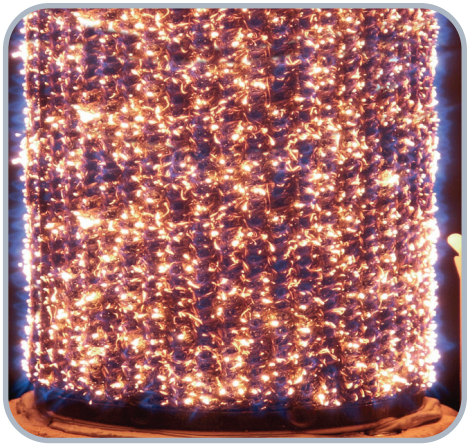
Durable and corrosion resistant titanium-stabilised stainless steel construction provides high-capacity heat transfer, high flow rates, with minimal pressure loss and reduced debris to collect

5-year heat exchanger and burner warranty

Peace of mind with long-term warranty from failure or manufacturing defect. Includes seven year warranty for all parts and labour.

Adveco MD Boiler featuring AISI 316Ti titanium-stabilised stainless steel heat exchangers

MD70T-MD280T Floor-Standing



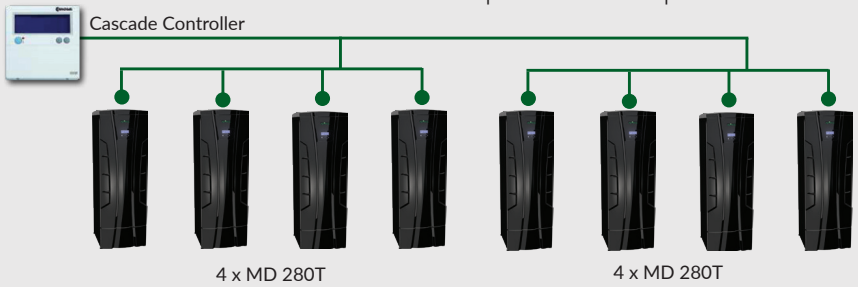
Efficient pre-mix burners available for natural gas and LPG
Achieves ideal combustion to minimise carbon and NO_X emissions.
CO as low as 19 ppm

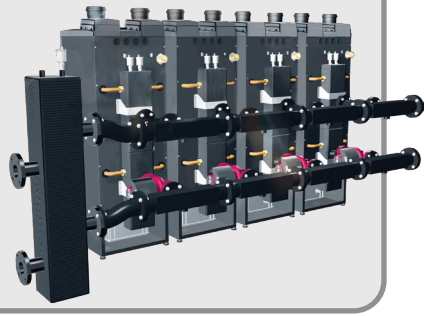
106% combustion efficiency
Reduces energy costs and emissions via efficient use of fuel energy

Low emission, NO_X class 6 appliance at 34 mg/kWh
Reduces harmful emissions and satisfies the requirements of the Energy-related Products (ErP) directive

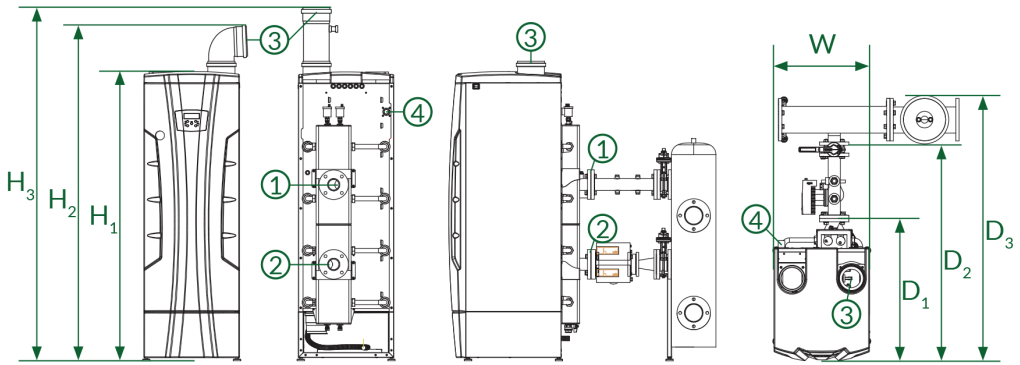
MD in Cascade

Connect up to eight MD280T units in cascade for 2240kW
No framework requirement for immediate cost savings
Occupies minimal plant room floor space





EXPERTLY ENGINEERED FOR YOU



MD70T -MD280T Dimensions and Connections

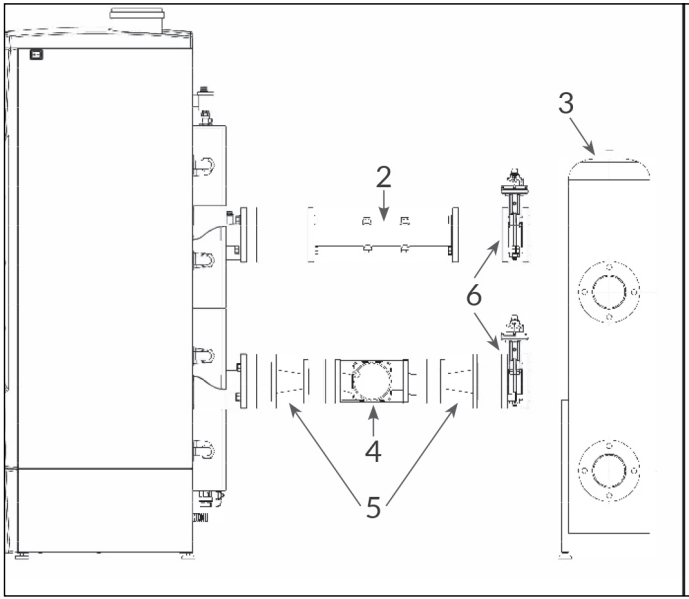
Port	MD 70T	MD 140T	MD 210T	MD 280T
1 : Flow	1 ½ ''	1 ½ ''	DN65 PN16	DN65 PN16
2 : Return	1 ½''	1 ½ ''	DN65 PN16	DN65 PN16
3 : Flue Exhaust	Ø110 mm	Ø110 mm	Ø160 mm	Ø160 mm
4 : Gas Inlet	1 ''	1 ''	1 ¼''	1 ¼''
H_1: Unit height	1180 mm	1180 mm	1880 mm	1880 mm
H_2: Height including 90° bend	1310 mm	1310 mm	2085 mm	2085 mm
H_3: Height including flue test point	1445 mm	1445 mm	2165 mm	2165 mm
W: Unit width	600 mm	600 mm	600 mm	600 mm
D_1: Unit depth	945 mm	945 mm	896 mm	896 mm
D_2: Depth including rear manifold	n/a	n/a	1356 mm	1356 mm
D_3: Depth including cascade	n/a	n/a	1664 mm	1664 mm
Front clearance	1000 mm	1000 mm	1000 mm	1000 mm
Vertical clearance	500 mm	500 mm	500 mm	500 mm
Horizontal clearance	100 mm	100 mm	100 mm	100 mm
Rear clearance	500 mm	500 mm	500 mm	500 mm

Technical Specifications		Units	MD 70T	MD 140T	MD 210T	MD 280T
Net heat input range	Maximum Minimum	kW	69.9 14.7	140.0 14.7	210.0 14.7	280.0 14.7
Heat output range (80/60)	Maximum Minimum	kW	67.9 14.1	135.8 14.1	203.7 14.1	271.6 14.1
Maximum efficiency (80/60)	At max. output At min. output	%	96.0 97.0	96.0 97.0	96.0 97.0	96.0 97.0
Heat output range (50/30)	Maximum Minimum	kW	74.0 15.6	148.0 15.6	222.0 15.6	296.0 15.6
Maximum efficiency (50/30)	At max. output At min. output	%	106.0 106.0	106.0 106.0	106.0 106.0	106.0 106.0
Efficiency at 30% load (92/42/EEC Certificate: ★★★★)		%	106.0	106.0	106.0	106.0
Nominal water flow rate		l / s	0.83	1.66	2.50	3.32
Pressure loss at nominal flow rate		kPa	48	50	50	50
Heat exchanger water capacity		l	7.57	15.14	22.71	30.28
Heating temperature range		°C	20 - 80	20 - 80	20 - 80	20 - 80
System pressure range		bar	1 - 11	1 - 11	1 - 11	1 - 11
Supply		V / Hz	230 / 50	230 / 50	230 / 50	230 / 50
Electrical consumption	Maximum Minimum	W	140 60	280 60	420 60	560 60
Gas flow rate	Natural gas LPG	m^3/h kg/h	7.40 5.43	14.80 10.87	22.20 16.30	29.61 21.73
NO_x emissions (0% O_2 with natural gas. EN 15502 Class 6)		mg/kWh GCV	34	34	34	34
CO emissions		ppm	19	19	19	19
Approved flue types			B23	B23	B23	B23
Flue gas mass flow rate		kg/h	115	230	345	460
Flue gas temperature at outlet	Maximum Minimum	°C	90 30	90 30	90 30	90 30
Appliance Mass	Empty Full	kg	98 106	147 162	211 234	249 279

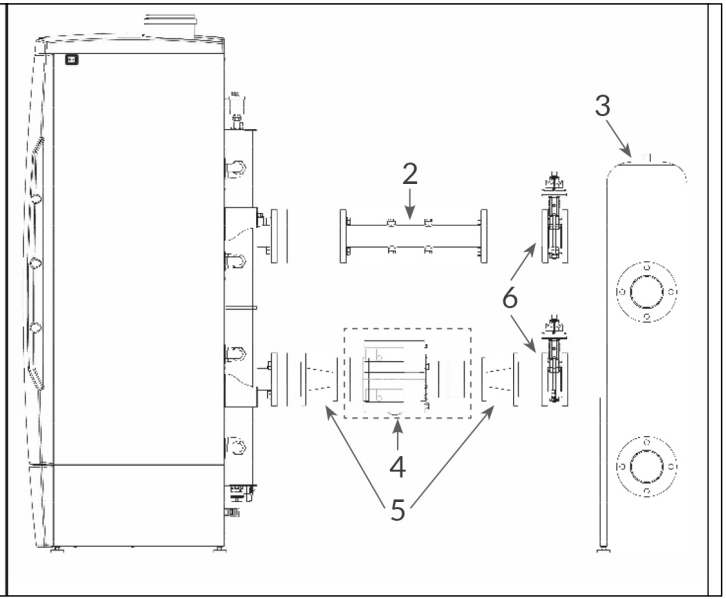
EXPERTLY ENGINEERED FOR YOU

Boiler Ancillaries	2 Manifold Spacer	3 Low Loss Header For Single Boiler	4 Pump	5 Pump Adaptor Cone	Flange Elbow Set
MD 70T	n/a	200 kW: 0310335	Single head: M0132 (1 per boiler)	n/a	n/a
MD 140T	n/a	200 kW: 0310335	Single head: M0133 (1 per boiler)	n/a	n/a
MD 210T	M0127 (1 per boiler)	DN65 360 kW: 61213005	Single head: M0063 Twin head: MB0039 (1 per boiler)	DN40-DN65: M0128A (2 per pump)	DN65: 62660010
MD 280T	M0127 (1 per boiler)	DN65 360 kW: 61213005	Single head: M0063 Twin head: MB0039 (1 per boiler)	DN40-DN65: M0128A (2 per pump)	DN65: 62660010

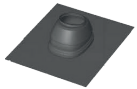
Cascade Ancillaries	1 Manifold Kit	3 Low Loss Header For Boiler Cascade	6 Isolation Valve	Cascade Sequencer
MD 210T	2 Boilers DN100: 62660011 3 Boilers DN150: 62660012 4 Boilers DN150: 62660013 5 Boilers DN150: 62660015	DN100 560 kW: 61213006 DN150 1400 kW: 61213007	DN65: 62660014 (2 per boiler)	62110095 (1 per system)
MD 280T	2 Boilers DN100: 62660011 3 Boilers DN150: 62660012 4 Boilers DN150: 62660013 5 Boilers DN150: 62660015	N/A N/A	DN65: 62660014 (2 per boiler)	62110095 (1 per system)



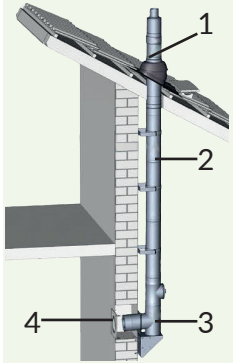
Single Pump



Twin Pump

Standard Flue	Size:	110 mm PP	160 mm PP	200 mm PP
Suitable for:		MD 70T; MD 140T	MD 210T; MD 280T *MD 70T*; MD 140T**	*MD 210T*; MD 280T**
*: Requires adaptor to upsize flue:			110-160mm: 0718025	160-200mm: 071823
Flue Terminals 	Vertical:	MB0025	0718761	0718762
	Horizontal:	MB0028	100035790094	100035790004
Flue Extension 1m 		0718102	0718122	0718132
Flue Bends 	45° Bend:	0718140	0718160	0718170
	90° Bend:	0718141	0718161	0718171
Roof Flashings 	Flat:	0146184	0746066	0146185
	15-55° Pitched:	MB0033	100035790099	100035790003
Flue Bracket 		0169158	100035790092	200050718012
Flue Test Point Extensions		*Included as standard*	*Included as standard*	*Included as standard*

External flue size:	110/160 mm PP/SS	160 mm/225 mm PP/SS	200 mm/300 mm PP/SS
Suitable for:	MD 70T; MD 140T	MD 210T; MD 280T *MD 70T*; MD 140T**	MD 210T*; MD 280T*
*: Requires adaptor:		110-160 mm: 0718025	M/F 160-200 mm: 071823



1, 3, 4: External Riser Kit:	MB0026	MB0029	MB0031
2: 1m Extension Kit:	MB0027	MB0030	MB0032
45° External Bend:	n/a	200075045316	200075045916
90° External Bend:	n/a	200075045326	200075045926

Maximum Flue Runs		110 mm PP	160 mm PP	200 mm PP
MD 70T	Straight Run: Loss Per Bend (45°/90°):	19.1 m - 1.2 m / - 2.8 m	41.1 m - 1.2 m / - 2.8 m	65.2 m - 1.2 m / - 2.8 m
MD 140T	Straight Run: Loss Per Bend (45°/90°):	10.0 m - 2.0 m / - 4.0 m	21.5 m - 1.2 m / - 2.8 m	34.1 m - 1.2 m / - 2.8 m
MD 210T & MD280T	Straight Run: Loss Per Bend (45°/90°):	n/a	10.0 m - 2.0 m / - 4.0 m	15.9 m - 1.2 m / - 2.8 m

Quality Comes As Standard

- Extremely high quality AISI 316Ti heat exchangers for lasting reliability and efficiency
- High efficiency pre-mix burner provides large modulation range
- Compact wall-hung arrangement
- Ultra-low NO_x emissions
- Available using natural gas or LPG
- Standard concentric flue systems using low cost diameter PP
- Integrated run/fault signal for connection to BMS
- Five years warranty on burner & heat exchanger
- 20% Hydrogen blend compatible



For Light Commercial Heating & Domestic Hot Water Applications

H20%



MD 15 / MD 24 / MD 34

The MD 15, 24 and 34 range is available in three variations

The MD 15C, MD 24C and MD 34C
models serve as boilers for central heating purposes only

The MD15B, 24B and 34B feature additional connections for use with an indirect water heater to provide domestic hot water

The MD 24P and 34P alternatively feature an integrated plate heat exchanger for compact and instantaneous DHW production

MD 60

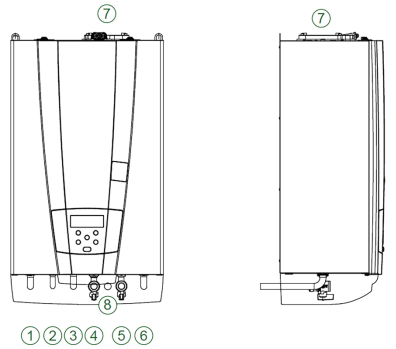
The MD60 is a wall-hung condensing boiler with a rated heat output of 60 kW

Available in two variants, the MD 60A and 60C. The MD 60C integrated system pump to overcome pressure loss within the unit

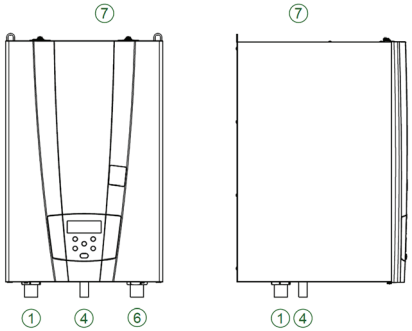


MD 15, 24, 34 & 60 Connections & Technical Specifications

MD 15 /24 /34



MD 60



Connections

Port	Purpose	MD 15 / 24	MD 34	MD 60
1	Fow to heating	¾" (20 mm)	1" (26 mm)	1 ½ " (42 mm)
2 (B)	Flow to indirect tank (present on B models only)	¾" (20 mm)		-
2 (P)	DHW flow (present on P models only)	½" (13 mm)		-
3 (B)	Indirect tank return (present on B models only)	¾" (20 mm)		-
4	Gas inlet	¾" (20 mm)		
5	Water filling connection (P models: DHW return)	½" (13 mm)		-
6	Heating return	¾" (20 mm)	1" (26 mm)	1 ½" (42 mm)
7	Flue outlet	Parallel: Ø80 mm Concentric: Ø60/100 mm		Concentric Ø80/125 mm
8	Condensate drain	¾" (20 mm)		-

Ancillaries & Flue Components

Each MD wall-mounted boiler must be equipped with one of the following flue adaptor kits:

MD 15 / 24 / 34 Boiler Adaptors

- Horizontal Coaxial Vent Kit Ø60/100 PP. Part number: 62617228
- Vertical Coaxial Adaptor Ø60/100 PP. Part number: 62617224
- Split System Vent Adaptor Ø80×2 PP. Part number: 62617226

MD 60 Bolier Adaptors

- Concentric to parallel flue adapter for separated air intake and flue gas outlet. Part number: 62617315
- Concentric flue coupling. Aluminium / PP. Part number: 62617314



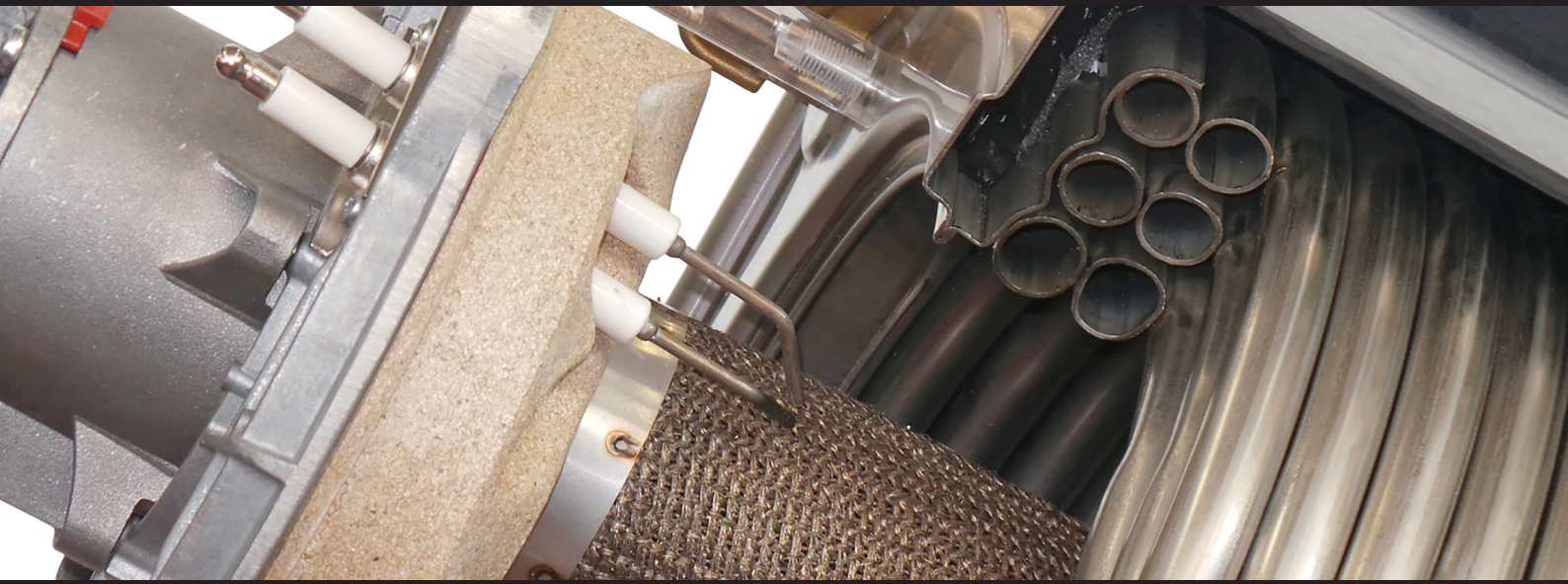
For further information and specifications on the full range of available flues and ancillaries, please contact the Adveco application design department

Technical Specifications		Units	MD 15 (C/B)	MD 24 (C/B/P)	MD 34 (C/B/P)	MD 60 (A/C)
Net heat input range	Maximum Minimum	kW	14.0 3.2	25.5 3.2	32.0 6.0	57.8 12/0
Heat output range (80/60)	Maximum Minimum	kW	13.6 3.02	24.8 3.02	30.9 5.75	56.1 11.6
Maximum efficiency (80/60)	At max. output At min. output	%	96.5 94.5	97.2 94.5	96.8 95.8	97.1 97.0
Heat output range (50/30)	Maximum Minimum	kW	14.9 3.30	27.0 3.30	33.5 6.14	60.7 12.8
Maximum efficiency (50/30)	At max. output At min. output	%	106.5 103.0	105.7 103.0	104.7 102.4	105.0 107.0
Efficiency at 30% load (92/42/EEC Certificate: ★★★★)		%	107.5	108.5	107.0	107.0
Instantaneous DHW production ΔT = 30°C			--	12.9	16.0	--
DHW minimum flow rate		l / min	--	2	2	--
Heat exchanger water capacity		l	2.9	3.4	3.4	3.2
Heating temperature range		°C	20-80	20-80	20-80	20-80
System pressure range		bar	1-3	1-3	1-3	1-4
Supply		V / Hz	230 / 50	230 / 50	230 /50	230 / 50
Electrical consumption		W	120	120	120	140 / 305
Gas flow rate	Natural gas LPG	m^3/h kg/h	1.48 1.09	2.70 1.98	3.38 2.48	6.1 4.5
Weighted NO_x emissions (0% O_2 with natural gas)		mg/kWh	25	31	24	27.9
Weighted CO emissions (0% O_2 with natural gas)		ppm	5	20	25	15
Flue gas mass flow rate		kg/h	23.0	21.8	52.6	99
Dimensions H x W x D		mm		770 x 445 x 305		685 x 445 x 484
Empty Weight		kg	38 / 36	38 / 36 / 38	38 / 36 / 38	44 / 46

EXPERTLY ENGINEERED FOR YOU

ADVECO

EXPERTLY ENGINEERED FOR YOU



Adveco Ltd. Unit 7 & 8 Armstrong Mall, Southwood Business Park, Farnborough, Hampshire GU14 0NR
Company Reg : 09493966 T : 01252 551 540 E : enquiries@adveco.co I : www.adveco.co

ADVECO powered by COSMOGAS

SR300038.r4 2022

ADVECO MD BOILERS PRODUCT GUIDE