Product data PE1 Pellet

PE1 Pellet 7-35

PE1 Pellet Unit 7-20

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1 Technical specifications

1.1 PE1 Pellet 7-10 / PE1 Pellet Unit 7-10

Description		PE1 Pellet	
		7	10
Nominal output	kW	7	10
Output range		2.1 - 7	3 - 10
Boiler efficiency (NCV) at nominal/partial load	%	94.4 / 90.9	95.0 / 90.9
Electrical connection		230V / 50Hz / fused C16A	
Boiler weight	kg	200	200
Total boiler capacity (water)	l	25	25
Pellet container capacity		35	35
Ash box capacity		14.5	14.5
Water pressure drop (ΔT = 20 K)	mbar	0.8	2.1
Maximum boiler temperature setting	°C	90	
Minimum boiler temperature setting		40	
Permitted operating pressure (hot water)	bar	3	
Airborne sound level	dB(A)	< 70	
Boiler class as per EN 303-5:2012		5	
Permitted fuel as per EN ISO 17225[1)]		Fuel as per EN ISO 17225 – Part 2: wood pellets Class A1 / D06	
Test book number		PB 071	PB 072

1. Detailed information on the fuel can be found in the operating instructions in the section entitled “Permitted fuels”

Description		PE1 Pellet Unit	
		7	10
Heat output boiler element	kW	37.6	37.6
Total weight	kg	415	415
Total moisture content	l	37	37
Boiler domestic hot water content		122	122
Permitted operating pressure (domestic hot water)	bar	6	6
Test over-pressure (domestic hot water)		9	9
Permitted operating temperature (domestic hot water)	°C	110	
Performance indicator as per DIN 4708		NL = 1.2	
Standby heat loss as per EN 15332		Q_B = 1.24 kWh / 24 h	

Product data in accordance with the regulations (EU) 2015/1187 and 2015/1189

Description		PE1 Pellet / PE1 Pellet Unit	
		7	10
Heating up mode		automatic	
Condensing boiler		No	
Solid fuel boiler for combined heat and power		No	
Combined heating system		No	
Storage tank volume		➲ "Storage tank" [▸ 10]	
Preferred fuel		Compressed wood in the form of pellets	
Useful heat delivered at rated heat output (P_n)	kW	7.0	10.0
Useful heat delivered at 30% of rated heat output (P_p)		2.1	3.0
Fuel efficiency at rated heat output (η_n)	%	87.6	88.1
Fuel efficiency at 30% of rated heat output (η_p)		84.3	84.3
Auxiliary current consumption at rated heat output (el_{max})	kW	0.038	0.044
Auxiliary current consumption at 30% of rated heat output (η_p)		0.030	0.030
Auxiliary current consumption in standby mode (P_{SB})		0.010	0.010
Energy efficiency class of the boiler		116	117
Energy efficiency index (EEI) of the boiler		A+	A+
Temperature controller used		Lambdatronic P 3200	
Class of the temperature controller		II	II
Contribution of the temperature controller to the energy efficiency index of a combined system	%	2	2
Energy efficiency index (EEI) of the combined boiler and controller[1)]		118	119
Energy efficiency class of the combined boiler and controller[1)]		A+	A+
Heating space annual rate of use ηs	%	77	78
Annual space heating emissions of dust (PM)[2)]	mg/m³	8	9
Annual space heating emissions of gaseous organic compounds (GOC)[2)]	mg/m³	2	2
Annual space heating emissions of carbon monoxide (CO)[2)]	mg/m³	21	21
Annual space heating emissions of nitrogen oxides (NOx)[2)]	mg/m³	150	150

1. The information on the energy efficiency index EEI of the combined boiler and controller and the energy efficiency class of the combined boiler and controller applies only if the Fröling control components supplied as standard with the respective boiler are used.
2. Specified emission values refer to dry flue gas with an oxygen content of 10 % and under standard conditions at 0°C and 1013 millibars.
   The evaluation values reported are rounded to the nearest whole number.
   Values labelled with "<" represent the relative detection limit of the measuring methods or measuring device configurations used.

1.2 PE1 Pellet 15-20 / PE1 Pellet Unit 15-20

Description		PE1 Pellet	
		15	20
Nominal output	kW	15	20
Output range		4.5 - 15	6 - 20
Boiler efficiency (NCV) at nominal/partial load	%	95.8 / 93.5	94.6 / 93.5
Electrical connection		230V / 50Hz / fused C16A	
Boiler weight	kg	250	250
Total boiler capacity (water)	l	38	38
Pellet container capacity		41	41
Ash box capacity		20	20
Water pressure drop (ΔT = 20 K)	mbar	4.0	5.0
Maximum boiler temperature setting	°C	90	
Minimum boiler temperature setting		40	
Permitted operating pressure (hot water)	bar	3	
Airborne sound level	dB(A)	< 70	
Boiler class as per EN 303-5:2012		5	
Permitted fuel as per EN ISO 17225[1)]		Fuel as per EN ISO 17225 – Part 2: wood pellets Class A1 / D06	
Test book number		PB 073	PB 074

1. Detailed information on the fuel can be found in the operating instructions in the section entitled “Permitted fuels”

Description		PE1 Pellet Unit	
		15	20
Heat output boiler element	kW	37.6	37.6
Weight per unit	kg	440	440
Total boiler capacity Unit (water)	l	50	50
Boiler domestic hot water content	l	122	122
Permitted operating pressure (domestic hot water)	bar	6	6
Test over-pressure (domestic hot water)	bar	9	9
Permitted operating temperature (domestic hot water)	°C	110	
Performance indicator as per DIN 4708		NL = 1.6	
Standby heat loss as per EN 15332		Q_B = 1.24 kWh / 24 h	

Product data in accordance with the regulations (EU) 2015/1187 and 2015/1189

Description		PE1 Pellet / PE1 Pellet Unit	
		15	20
Heating up mode		automatic	
Condensing boiler		No	
Solid fuel boiler for combined heat and power		No	
Combined heating system		No	
Storage tank volume		➲ "Storage tank" [▸ 10]	
Preferred fuel		Compressed wood in the form of pellets	
Useful heat delivered at rated heat output (P_n)	kW	15.0	20.0
Useful heat delivered at 30% of rated heat output (P_p)		4.5	6.0
Fuel efficiency at rated heat output (η_n)	%	88.9	87.6
Fuel efficiency at 30% of rated heat output (η_p)		86.9	86.9
Auxiliary current consumption at rated heat output (el_{max})	kW	0.050	0.060
Auxiliary current consumption at 30% of rated heat output (η_p)		0.033	0.033
Auxiliary current consumption in standby mode (P_{SB})		0.010	0.010
Energy efficiency class of the boiler		121	121
Energy efficiency index (EEI) of the boiler		A+	A+
Temperature controller used		Lambdatronic P 3200	
Class of the temperature controller		II	II
Contribution of the temperature controller to the energy efficiency index of a combined system	%	2	2
Energy efficiency index (EEI) of the combined boiler and controller[1)]		123	123
Energy efficiency class of the combined boiler and controller[1)]		A+	A+
Heating space annual rate of use ηs	%	82	82
Annual space heating emissions of dust (PM)[2)]	mg/m³	8	9
Annual space heating emissions of gaseous organic compounds (GOC)[2)]	mg/m³	1	1
Annual space heating emissions of carbon monoxide (CO)[2)]	mg/m³	22	23
Annual space heating emissions of nitrogen oxides (NOx)[2)]	mg/m³	153	154

1. The information on the energy efficiency index EEI of the combined boiler and controller and the energy efficiency class of the combined boiler and controller applies only if the Fröling control components supplied as standard with the respective boiler are used.
2. Specified emission values refer to dry flue gas with an oxygen content of 10 % and under standard conditions at 0°C and 1013 millibars.
   The evaluation values reported are rounded to the nearest whole number.
   Values labelled with "<" represent the relative detection limit of the measuring methods or measuring device configurations used.

1.3 PE1 Pellet 25-30

Description		PE1 Pellet	
		25	30
Nominal heat output	kW	25	30
Output range		7.5	9
Boiler efficiency (NCV) at nominal/partial load	%	94.2 / 94.7	94.2 / 94.7
Electrical connection		230V / 50Hz / fused C16A	
Boiler weight	kg	380	380
Total boiler capacity (water)	l	60	60
Pellet container capacity		76	76
Ash box capacity		23	23
Water pressure drop (ΔT = 20K)	mbar	7.0	11.0
Maximum boiler temperature setting	°C	90	
Minimum boiler temperature setting		50	
Permitted operating pressure (hot water)	bar	3	
Airborne sound level	dB(A)	< 70	
Boiler class as per EN 303-5:2012		5	
Permitted fuel as per EN ISO 17225[1)]		Fuel as per EN ISO 17225 – Part 2: wood pellets Class A1 / D06	
Test book number		PB 075	PB 076

1. Detailed information on the fuel can be found in the operating instructions in the section entitled “Permitted fuels”

Product data in accordance with the regulations (EU) 2015/1187 and 2015/1189

Description		PE1 Pellet	
		25	30
Heating up mode		automatic	
Condensing boiler		No	
Solid fuel boiler for combined heat and power		No	
Combined heating system		No	
Storage tank volume		➲ "Storage tank" [▶ 10]	
Preferred fuel		Compressed wood in the form of pellets	
Useful heat delivered at rated heat output (P_n)	kW	25.0	30.0
Useful heat delivered at 30% of rated heat output (P_p)		7.5	9.0
Fuel efficiency at rated heat output (η_n)	%	87.3	87.3
Fuel efficiency at 30% of rated heat output (η_p)		87.6	87.6
Auxiliary current consumption at rated heat output (el_{max})	kW	0.070	0.074
Auxiliary current consumption at 30% of rated heat output (η_p)		0.038	0.038
Auxiliary current consumption in standby mode (P_{SB})		0.010	0.010
Energy efficiency class of the boiler		123	123

Description		PE1 Pellet	
		25	30
Energy efficiency index (EEI) of the boiler		A+	A+
Temperature controller used		Lambdatronic P 3200	
Class of the temperature controller		II	II
Contribution of the temperature controller to the energy efficiency index of a combined system	%	2	2
Energy efficiency index (EEI) of the combined boiler and controller[1)]		125	125
Energy efficiency class of the combined boiler and controller[1)]		A++	A++
Heating space annual rate of use ηs	%	83	83
Annual space heating emissions of dust (PM)[2)]	mg/m³	9	9
Annual space heating emissions of gaseous organic compounds (GOC)[2)]	mg/m³	1	1
Annual space heating emissions of carbon monoxide (CO)[2)]	mg/m³	24	25
Annual space heating emissions of nitrogen oxides (NOx)[2)]	mg/m³	134	134

1. The information on the energy efficiency index EEI of the combined boiler and controller and the energy efficiency class of the combined boiler and controller applies only if the Fröling control components supplied as standard with the respective boiler are used.
2. Specified emission values refer to dry flue gas with an oxygen content of 10 % and under standard conditions at 0°C and 1013 millibars.
   The evaluation values reported are rounded to the nearest whole number.
   Values labelled with "<" represent the relative detection limit of the measuring methods or measuring device configurations used.

1.4 PE1 Pellet 32-35

Description		PE1 Pellet	
		32	35
Nominal output	kW	32	35
Output range		9.6 – 32	10.5 - 35
Boiler efficiency (NCV) at nominal/partial load	%	94.2 / 94.7	94.3 / 94.7
Electrical connection		230V / 50Hz / fused C16A	
Boiler weight	kg	380	380
Total boiler capacity (water)	l	60	60
Pellet container capacity		76	76
Ash box capacity		23	23
Water pressure drop (ΔT = 20K)	mbar	12.0	14.0
Maximum boiler temperature setting	°C	90	
Minimum boiler temperature setting		50	
Permitted operating pressure (hot water)	bar	3	
Airborne sound level	dB(A)	< 70	
Boiler class as per EN 303-5:2012		5	
Permitted fuel as per EN ISO 17225[1)]		Fuel as per EN ISO 17225 – Part 2: wood pellets Class A1 / D06	
Test book number		PB 077	PB 078

1. Detailed information on the fuel can be found in the operating instructions in the section entitled “Permitted fuels”

Product data in accordance with the regulations (EU) 2015/1187 and 2015/1189

Description		PE1 Pellet	
		32	35
Heating up mode		automatic	
Condensing boiler		No	
Solid fuel boiler for combined heat and power		No	
Combined heating system		No	
Storage tank volume		➲ "Storage tank" [▶ 10]	
Preferred fuel		Compressed wood in the form of pellets	
Useful heat delivered at rated heat output (P_n)	kW	32.0	35.0
Useful heat delivered at 30% of rated heat output (P_p)		9.6	10.5
Fuel efficiency at rated heat output (η_n)	%	87.3	87.2
Fuel efficiency at 30% of rated heat output (η_p)		87.6	87.6
Auxiliary current consumption at rated heat output (el_{max})	kW	0.075	0.067
Auxiliary current consumption at 30% of rated heat output (η_p)		0.038	0.038
Auxiliary current consumption in standby mode (P_{SB})		0.010	0.010
Energy efficiency class of the boiler		123	123

Description		PE1 Pellet	
		32	35
Energy efficiency index (EEI) of the boiler		A+	A+
Temperature controller used		Lambdatronic P 3200	
Class of the temperature controller		II	II
Contribution of the temperature controller to the energy efficiency index of a combined system	%	2	2
Energy efficiency index (EEI) of the combined boiler and controller[1)]		125	125
Energy efficiency class of the combined boiler and controller[1)]		A++	A++
Heating space annual rate of use ηs	%	83	84
Annual space heating emissions of dust (PM)[2)]	mg/m³	9	10
Annual space heating emissions of gaseous organic compounds (GOC)[2)]	mg/m³	1	1
Annual space heating emissions of carbon monoxide (CO)[2)]	mg/m³	26	25
Annual space heating emissions of nitrogen oxides (NOx)[2)]	mg/m³	134	140

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   The evaluation values reported are rounded to the nearest whole number.
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2 Storage tank

In principle it is not necessary to use a storage tank for the system to run smoothly. However we recommend that you use the system with a storage tank, as this ensures a continuous supply of fuel in the ideal output range of the boiler.

For the correct dimensions of the storage tank and the line insulation (in accordance with ÖNORM M 7510 or guideline UZ37) please consult your installer or Fröling.

Certain subsidy guidelines prescribe compulsory requirements for the installation of storage tanks. Up-to-date information about individual subsidy guidelines can be found at www.froeling.com.

Requirements for Switzerland in accordance with LRV Appendix 3, section 523

Automatic boilers for wood pellets with a rated thermal output of more than 70 kW must be equipped with a heat accumulator of a volume of at least 25 litres per kW rated thermal output. These dimensioning specifications apply up to 500 kW nominal heat output.

Hot water tank in accordance with Commission Regulation (EU) 2015/ 1189 (Ecodesign Requirements)

It is recommended to operate the boiler with a hot water tank. The recommended storage volume = 20 x Pr, where Pr is the rated heat output and is indicated in kW.

Manufacturer’s address

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