

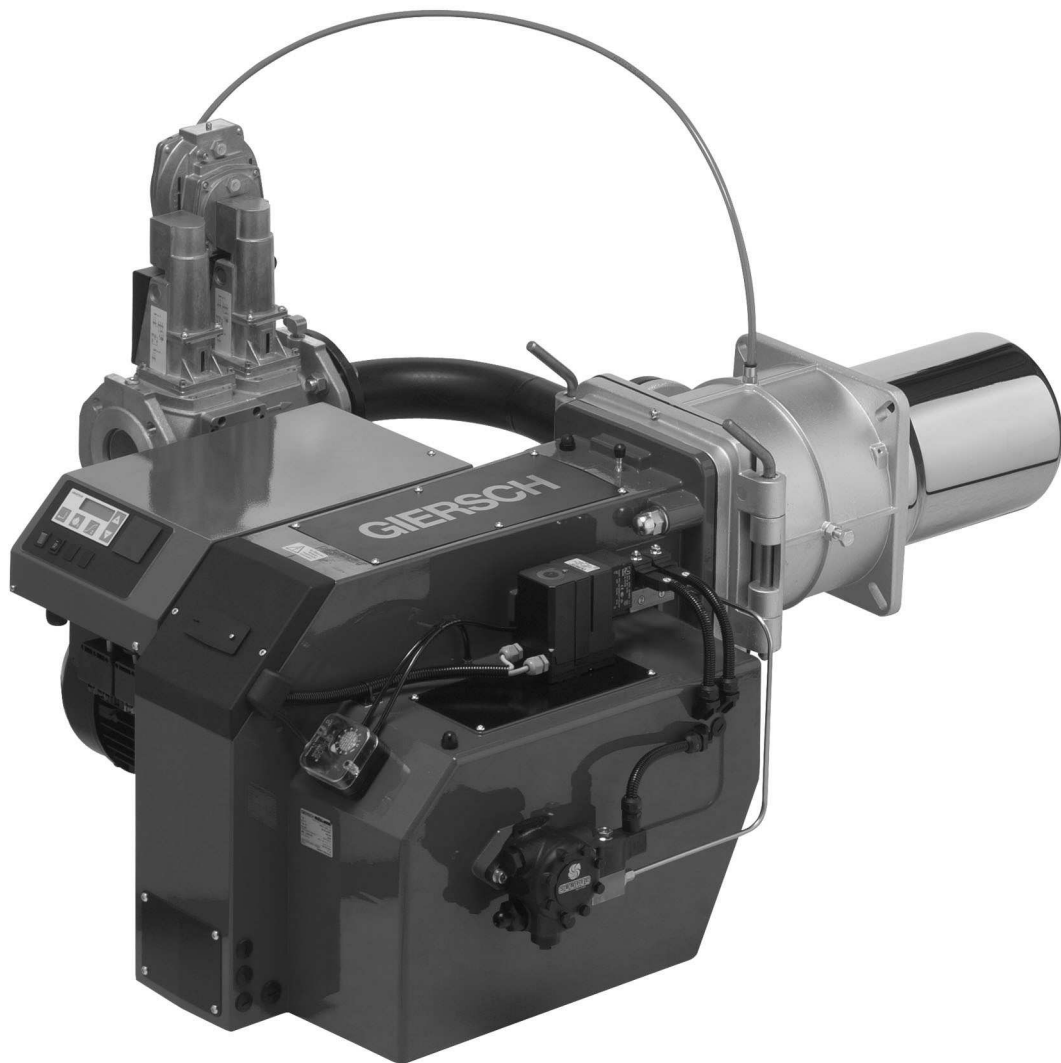
Technical Information • Installation Instructions

MK2

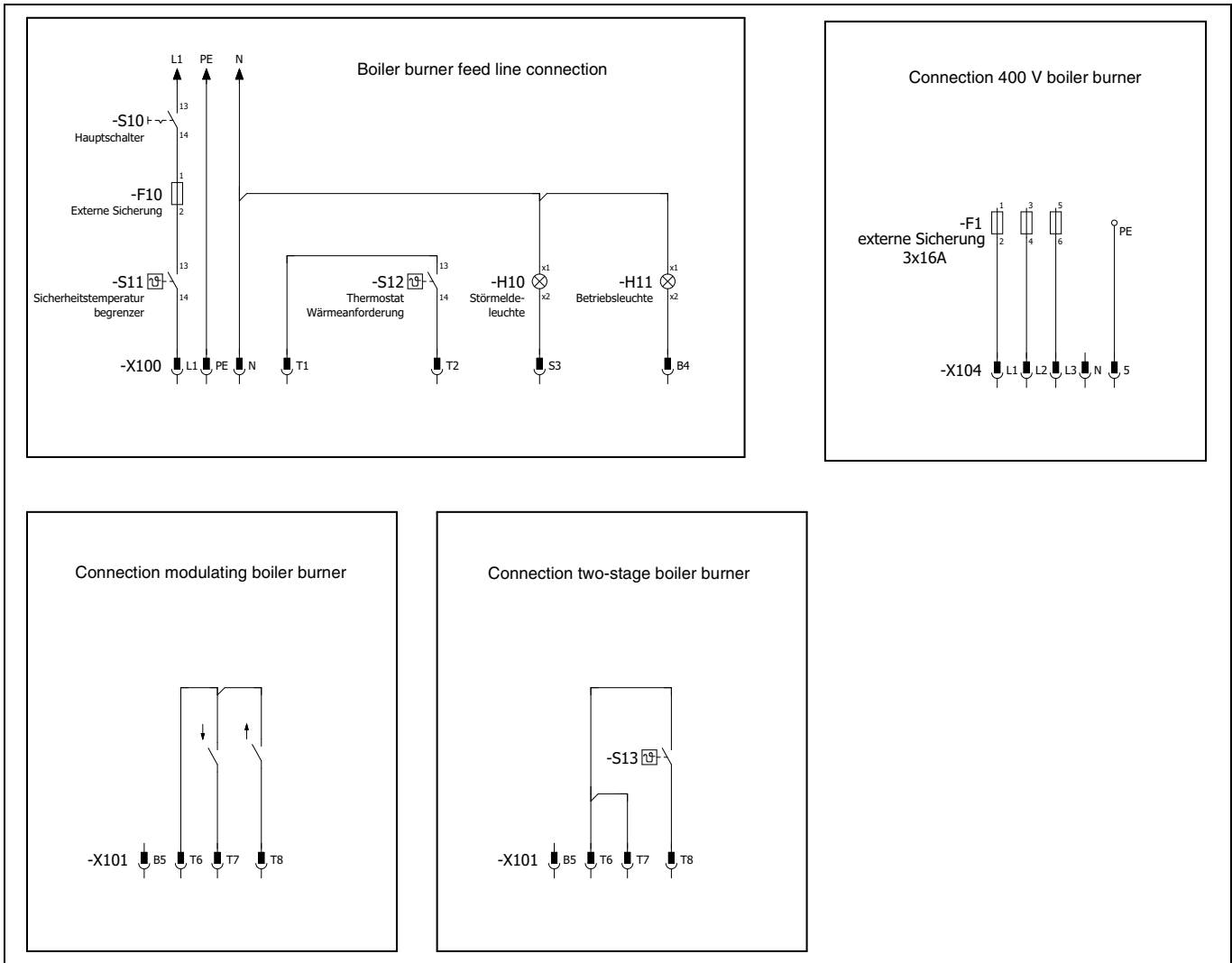
November 2022 edition

In the interests of continuous product improvement, technical specifications are subject to change without prior notice!

Oil / gas

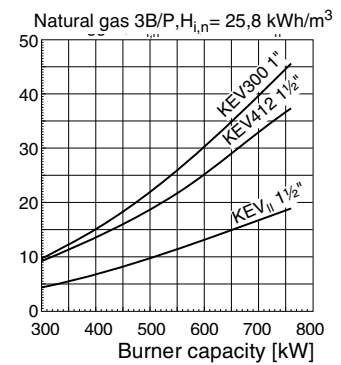
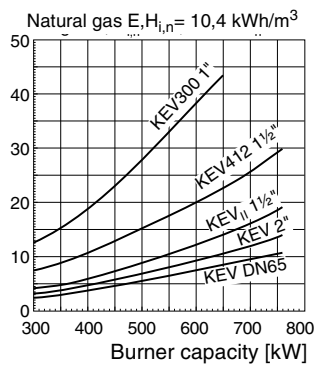
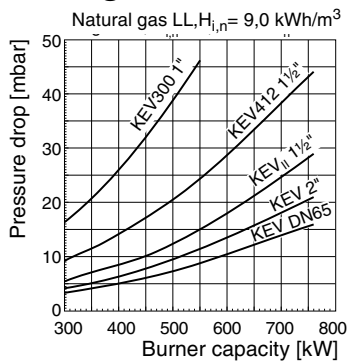


Electrical connection

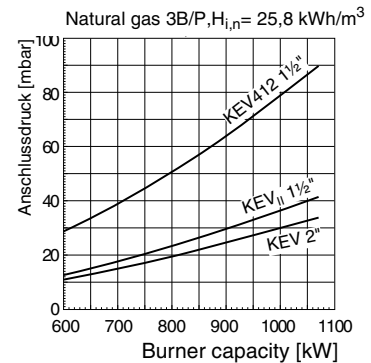
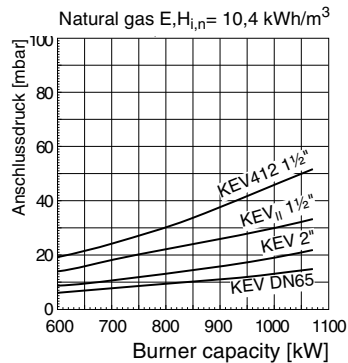
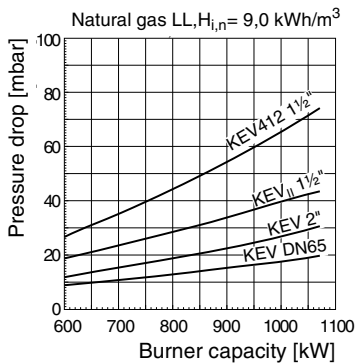


Selection diagrams

MK2.1



MK2.2



Technical specifications

Technical specifications	Burner type	
	MK2.1	MK2.2
Burner output in kW (in gas-fired operation)	279- 760	415 - 1071
Burner output (in oil-fired operation) in kg/h (in kW)	23.6 - 64.1 (280 - 760)	39.5 - 90.2 (469 - 1070)
Fuel	Heating oil in accordance with DIN 51603, natural gas LL + E, liquid gas	
Mode of operation	Optionally oil/gas two-stage or gas modulating, oil two-stage	
Voltage	3 / N / PE ~ 50 Hz / 400 V	
Power consumption at start / during operation *	6.5 A max./ 3.6 A eff.	
Electric motor power (at 2800rpm) in kW	1.1	2.2
Flame detector	KLC1000	
Control box	LMV26	
Gasburner class	2	-
NOx limit	≤ 120 mg/kWh	
Directive MPC 2015/2193/EU	-	≤ 50 MW
NOx limit for gas	-	≤ 100 mg/Nm ³
NOx limit for oil	-	≤ 200 mg/Nm ³

* The power consumption of the version with external oil pump is 2.7 A higher.

MK2.1-ZM-L					MK2.1-ZM-L-N								MK2.1-ZM-L-F				
					Natural gas L $H_{i,n} = 9.3 \text{ [kWh/m}^3\text{]}$				Natural gas H $H_{i,n} = 10.4 \text{ [kWh/m}^3\text{]}$				Liquid gas $H_{i,n} = 25.89 \text{ [kWh/m}^3\text{]}$				
Burner output [kW]		Boiler output $\eta = 92\%$ [kW]		Air flap position [°]		Gas nozzle pressure p_G [mbar]		Gas flow rate [m ³ /h]		Gas nozzle pressure p_G [mbar]		Gas flow rate [m ³ /h]		Gas nozzle pressure p_G [mbar]		Gas flow rate [m ³ /h]	
2nd st.	1st st.	2nd st.	2nd st. P 9	1st st. P 1	2nd st.	1st st.	2nd st.	1st st.	2nd st.	1st st.	2nd st.	1st st.	2nd st.	1st st.	2nd st.	1st st.	
560	280	521	37	17.5	8	2.7	62.1	31.0	6.3	2.1	55.5	27.8	8.3	2.9	22.3	11.1	
600	300	558	44	18	10	3.5	66.5	33.3	7.8	2.7	59.5	29.7	10.1	3.4	23.9	11.9	
700	350	651	72	21	12.9	4	77.6	38.8	10.1	3.1	69.4	34.7	13.5	4.5	27.9	13.9	
770	385	716	90	24	13.2	5	85.4	42.7	10.3	3.9	76.3	38.2	15.2	5.2	30.7	15.3	

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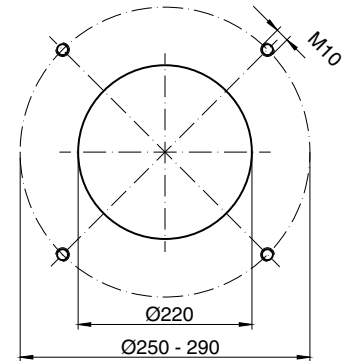
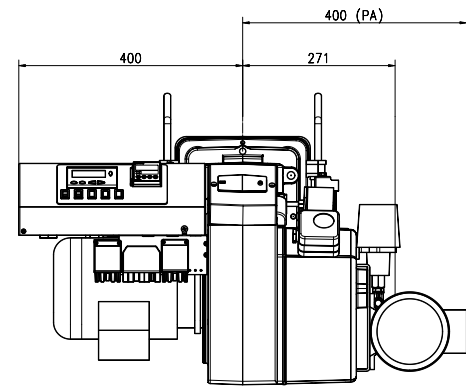
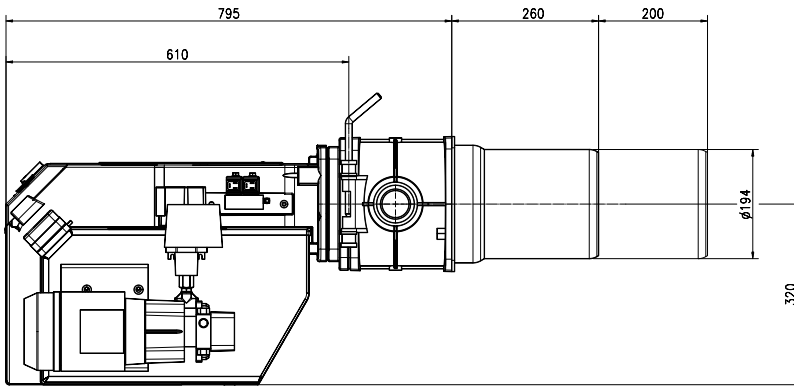
MK2.1-ZM-L								Heating oil EL $H_i = 11.86 \text{ [kWh/kg]}$					
Burner output [kW]		Boiler output $\eta = 92\%$ [kW]		Air flap position [°]				Pump pressure [bar]		Oil nozzle Steinen		Oil flow rate [kg/h]	
2nd st.	1st st.	2nd st.	P0	P1	P2 on	P2 d	P2		2. St. SS/60°	1st st. SS/60°	2nd st.	1st st.	
560	280	521	17.5	18.5	21	26	37	22	4/60°S	4/60°S	47.2	23.6	
600	300	558	18	19	22	27	44	18	5/60°S	5/60°S	50.6	25.3	
700	350	651	21	22	25	30	72	22	5/60°S	5/60°S	59.0	29.5	
770	385	716	24	25	28	33	89.9	20	6/60°S	6/60°S	64.9	32.5	

MK2.2-ZM-L					MK2.2-ZM-L-N								MK2.2-ZM-L-F			
					Natural gas L $H_{i,n} = 9.3$ [kWh/m ³]				Natural gas H $H_{i,n} = 10.4$ [kWh/m ³]				Liquid gas $H_{i,n} = 25.89$ [kWh/m ³]			
Burner output [kW]		Boiler output $\eta = 92\%$ [kW]	Air flap position [°]		Gas nozzle pressure p_G [mbar]		Gas flow rate [m ³ /h]		Gas nozzle pressure p_G [mbar]		Gas flow rate [m ³ /h]		Gas nozzle pressure p_G [mbar]		Gas flow rate [m ³ /h]	
2nd st.	1st st.	2nd st.	St. 2 P 9	St. 1 P 1	2nd st.	1st st.	2nd st.	1st st.	2nd st.	1st st.	2nd st.	1st st.	2nd st.	1st st.	2nd st.	1st st.
830	450	772	43	14	13	4	92.0	49.9	10.2	3.1	82.3	44.6	17.5	5.6	33.1	17.9
900	450	837	52	14	14	4.8	99.8	49.9	10.9	3.8	89.2	44.6	21.2	5.6	35.8	17.9
960	480	893	57	17	14.5	5	106.4	53.2	11.3	3.9	95.2	47.6	25.9	6.5	38.2	19.1
1070	540	995	85	26	16.5	7.6	118.6	59.6	12.9	5.9	106.1	53.5	29.9	7.8	42.6	21.5

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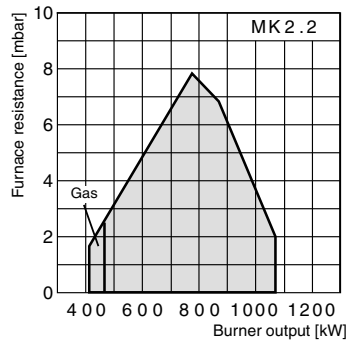
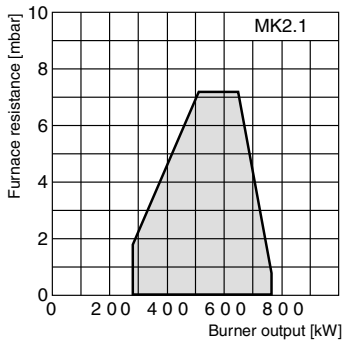
MK2.2-ZM-L								Heating oil EL $H_i = 11.86$ [kWh/kg]					
Burner output [kW]		Boiler output $\eta = 92\%$ [kW]	Air flap position [°]					Pump pressure [bar]	Oil nozzle (Steinen)		Oil flow rate [kg/h]		
2nd st.	1st st.	2nd st.	P0	P1	P2 on	P2 d	P2	2nd st. SS/60°	1st st. SS/60°	2nd st.	1st st.		
830	450	772	14	15	18	23	43	20	6/60°S	7/60°S	70.0	37.9	
900	450	837	14	15	18	23	52	20	7/60°S	7/60°S	75.9	37.9	
960	480	893	17	18	21	26	57	18	8/60°S	8/60°S	80.9	40.5	
1070	540	995	26	27	30	35	85	22	8/60°S	8/60°S	90.2	45.5	

Dimensions/Boiler connecting dimensions (All dimensions are given in mm)



ZBZ_2-564

Working ranges



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