kW 1200 - 12000 | TBG SERIES

Low NOx

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022

CE 0085

Gas burner compliant with European standard EN676. Operation:	TBG 1200 MC mechanical two-stage progressive	TBG 1200 ME electronic modulation	TBG 1200 ME V electronic modulation
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	o	•
Modulation ratio:	1:8	1:8	1:8
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3	class 3
Adjusting the combustion head	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•	•
Fixed boiler coupling flange	•	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•	•
Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption			•
CE version gas train is complete with operation and safety valve with electromagnetic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter	•	•	•
Fail proof connectors for burner/gas train connection	•	•	•
Gas train outlet:	down	up/down	up/down
Flame detection by ionisation electrode with connector for microamperometer	•	•	•
Control panel with display diagram for working mode with indication lights	•		
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment		•	•
Electric protection rating:	IP54	IP54	IP54

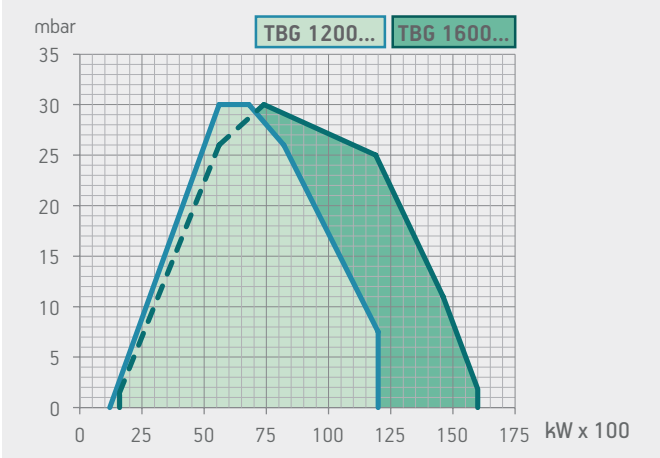
LEGEND:

o Optional, • As standard

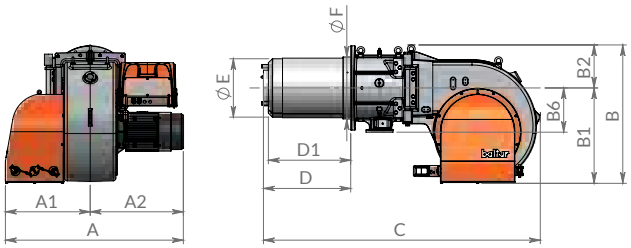
kW 1200 - 12000

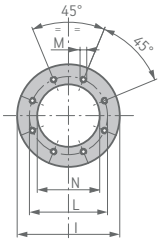
TBG SERIES

CE 0085



Model	Size of packaging L	P	H	Weight
	mm			kg
TBG 1200 MC	1950	1680	1300	648
TBG 1200 ME	1950	1680	1300	645
TBG 1200 ME V	1950	1680	1300	665





Picture 6

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	D1 mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBG 1200 MC	1470	700	770	1130	780	350	360	2290	745		485	503	685	630	M20	515	6
TBG 1200 ME	1470	700	770	1130	780	350	360	2290	745		485	503	685	630	M20	515	6
TBG 1200 ME V	1470	700	770	1130	780	350	360	2290	745		485	503	685	630	M20	515	6

Inverter	O2 Kit	CO Kit	Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Note
					Frequency 50 Hz				
			class 3	1200 ÷ 12000	**TBG 1200 MC**	**67270020**	3N AC 50Hz 400V	22	4)
			class 3	1200 ÷ 12000	**TBG 1200 ME**	**67260010**	3N AC 50Hz 400V	22	4)
●	○	○	class 3	1200 ÷ 12000	**TBG 1200 ME V**	**67260015**	3N AC 50Hz 400V	22	4) 10)
					Frequency 60 Hz				
			class 3	1200 ÷ 12000	**TBG 1200 MC**	**67275420**	3N AC 60Hz 380V	22	4)
			class 3	1200 ÷ 12000	**TBG 1200 ME**	**67265410**	3N AC 60Hz 380V	22	4)
●	○	○	class 3	1200 ÷ 12000	**TBG 1200 ME V**	**67265415**	3N AC 60Hz 380V	22	4) 10)

○ Optional, ● As standard

MODULATING MODE

DESCRIPTION	PART NO.
TBG 1200 MC: modulation kit	98000055
TBG 1200 ME: modulation kit (Included in the ME V version)	98000059
TBG 1200 MC/1200 ME: modulating probe (see page 332)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
O2 control kit NEW	98000460
CO control kit NEW	98000461
Soundproof burner cover (see page 337)	97980061

BURNER ACCESSORIES

Boiler coupling kit.

NOTE

4 Equipped with automatic air closure device.
10 Inverter supplied separately, not included on the machine.
Net calorific value at reference conditions of 0°C, 1013mbar:
Natural gas: Hi = 35,80 MJ/m^3 = 8550 kcal/m^3,
For different type of gas and pressure values, please get in contact with our commercial department.

kW 1600 - 16000 | TBG SERIES

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022

CE 0085

Gas burner compliant with European standard EN676. Operation:	TBG 1600 MC mechanical two-stage progressive	TBG 1600 ME electronic modulation	TBG 1600 ME V electronic modulation
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	o	•
Modulation ratio:	1:10	1:10	1:10
Low NOx and CO emissions gas burner according to European standard EN676:	class 2	class 2	class 2
Adjusting the combustion head	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•	•
Fixed boiler coupling flange	•	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•	•
Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption			•
CE version gas train is complete with operation and safety valve with electromagnetic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter	•	•	•
Fail proof connectors for burner/gas train connection	•	•	•
Gas train outlet:	down	up/down	up/down
Flame detection by ionisation electrode with connector for microamperometer	•	•	•
Control panel with display diagram for working mode with indication lights	•		
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment		•	•
Electric protection rating:	IP54	IP54	IP54

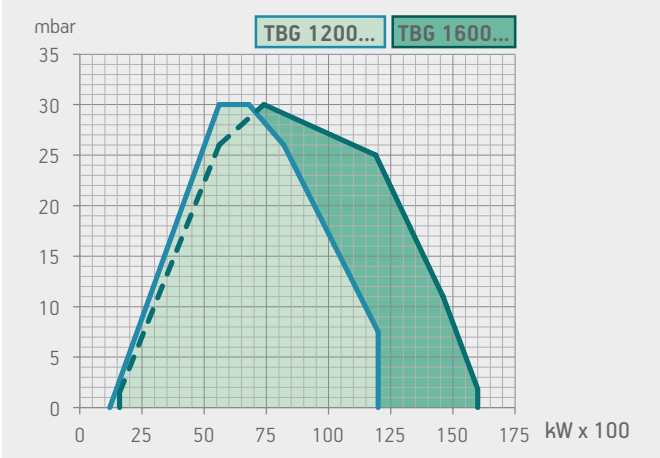
LEGEND:

o Optional, • As standard

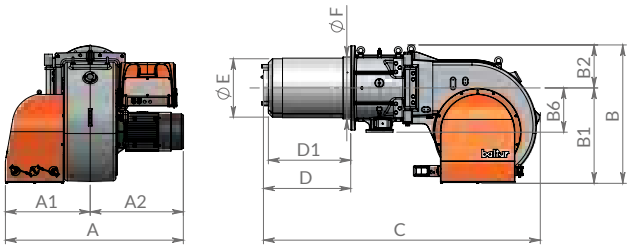
kW **1600 - 16000**

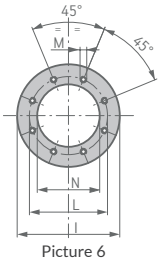
TBG SERIES

CE 0085



Model	Size of packaging L	P	H	Weight
	mm			kg
TBG 1600 MC	1950	1680	1300	705
TBG 1600 ME	1950	1680	1300	705
TBG 1600 ME V	1950	1680	1300	730





Picture 6

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBG 1600 MC	1470	700	770	1130	780	350	360	2290	735	545	503	685	630	M20	555	6
TBG 1600 ME	1470	700	770	1130	780	350	360	2290	735	545	503	685	630	M20	555	6
TBG 1600 ME V	1470	700	770	1130	780	350	360	2290	735	545	503	685	630	M20	555	6

Inverter	O2 Kit	CO Kit	Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Note
					Frequency 50 Hz				
			class 2	1600 ÷ 16000	**TBG 1600 MC**	**67490020**	3N AC 50Hz 400V	30	4)
			class 2	1600 ÷ 16000	**TBG 1600 ME**	**67480010**	3N AC 50Hz 400V	30	4)
●	o	o	class 2	1600 ÷ 16000	**TBG 1600 ME V**	**67480015**	3N AC 50Hz 400V	30	4) 10)
					Frequency 60 Hz				
			class 2	1600 ÷ 16000	**TBG 1600 MC**	**67495420**	3N AC 60Hz 380V	30	4)
			class 2	1600 ÷ 16000	**TBG 1600 ME**	**67485410**	3N AC 60Hz 380V	30	4)
●	o	o	class 2	1600 ÷ 16000	**TBG 1600 ME V**	**67485415**	3N AC 60Hz 380V	30	4) 10)

o Optional, ● As standard

MODULATING MODE

DESCRIPTION	PART NO.
TBG 1600 MC: modulation kit	98000055
TBG 1600 ME: modulation kit (Included in the ME V version)	98000059
TBG 1600 MC/1600 ME: modulating probe (see page 332)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
O2 control kit NEW	98000460
CO control kit NEW	98000461
Soundproof burner cover (see page 337)	97980061

BURNER ACCESSORIES

Boiler coupling kit.

NOTE

4 Equipped with automatic air closure device.
10 Inverter supplied separately, not included on the machine.
Net calorific value at reference conditions of 0°C, 1013mbar:
Natural gas: Hi = 35,80 MJ/m^3 = 8550 kcal/m^3,
For different type of gas and pressure values, please get in contact with our commercial department.

kW 1680 - 15050 | TBG SERIES

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022 E EN267.

CE 0085

Gas burner compliant with European standard EN676. Operation:	TBG 1600 LX ME electronic modulation	TBG 1600 LX ME V electronic modulation
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	•
Modulation ratio:	1:7	1:7
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3
Ignition by gas pilot	•	•
Pilot gas train on-board, composed by: pressure regulator with incorporated filter, minimum pressure switch, safety valve, ignition valve	•	•
72 h continuous operation	o	o
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•
Fixed boiler coupling flange	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler.	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•
CE version gas train is complete with operation and safety valve with electromagnetic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter	•	•
Fail proof connectors for burner/gas train connection	•	•
Gas train outlet:	right/left	right/left
Flame detection by UV photocell	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment	•	•
Electric protection rating:	IP54	IP54
VDS motor to reduce overall electrical energy consumption		•

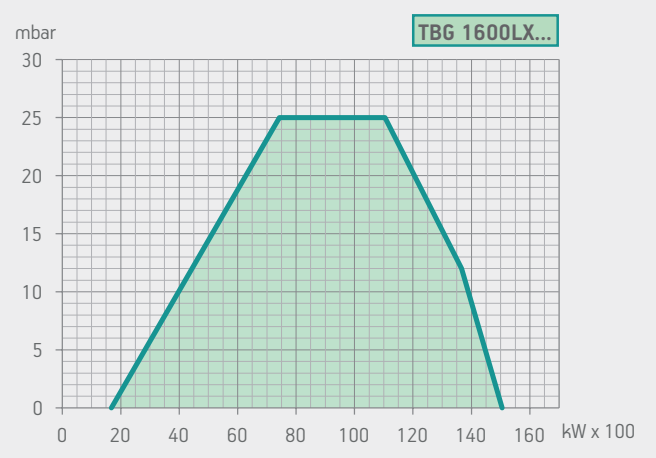
LEGEND:

o Optional, • As standard

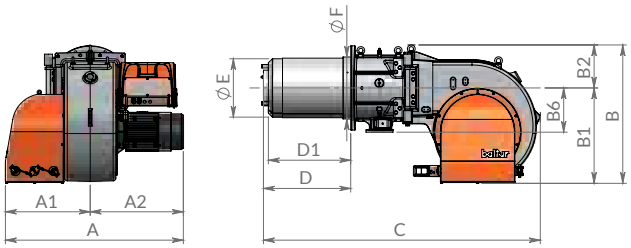
kW 1680 - 15050

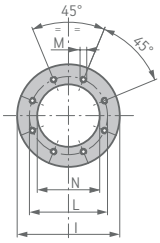
TBG SERIES

CE 0085



Model	Size of packaging L	P	H	Weight
	mm			kg
TBG 1600 LX ME	1950	1680	1340	700
TBG 1600 LX ME V	1950	1680	1340	726





Picture 6

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBG 1600 LX ME	1532	690	842	1108	765	343	359	2220	683	485	503	685	630	M20	535	6
TBG 1600 LX ME V	1532	690	842	1108	765	343	359	2220	683	485	503	685	630	M20	535	6

Inverter	O2 Kit	CO Kit	Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Note
					Frequency 50 Hz				
			class 3	1680 ÷ 15050	**TBG 1600 LX ME**	**67570010**	3N AC 50Hz 400V	30	4)
	•	o	o	class 3	1680 ÷ 15050	**TBG 1600 LX ME V**	**67570015**	3N AC 50Hz 400V	30	4) 10)
					Frequency 60 Hz				
			class 3	1680 ÷ 15050	**TBG 1600 LX ME**	**on request**	3N AC 60Hz 380V	30	4)
	•	o	o	class 3	1680 ÷ 15050	**TBG 1600 LX ME V**	**on request**	3N AC 60Hz 380V	30	4) 10)

o Optional, • As standard

MODULATING MODE

DESCRIPTION	PART NO.
Modulation kit (Included in the ME V version)	98000059

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
O2 control kit NEW	98000460
CO control kit NEW	98000461
Soundproof burner cover	97980061

BURNER ACCESSORIES

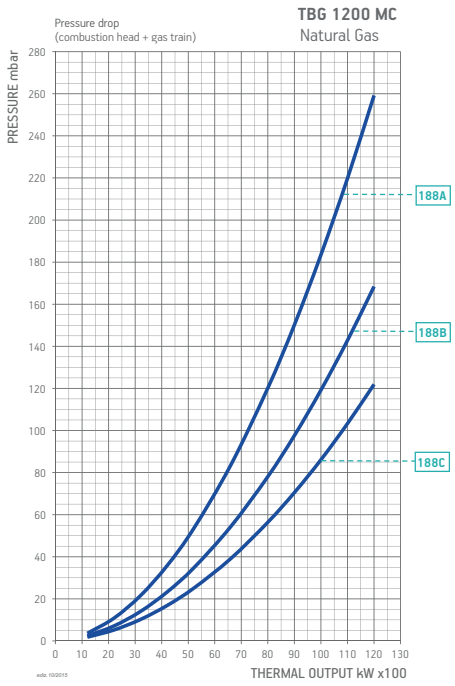
Boiler coupling kit, plug for wiring

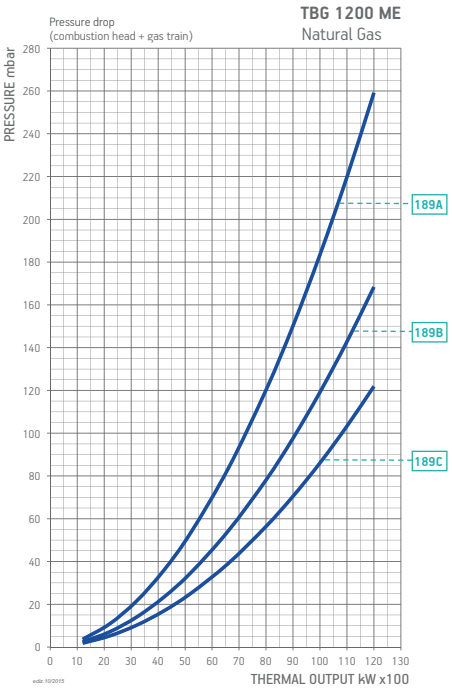
NOTE

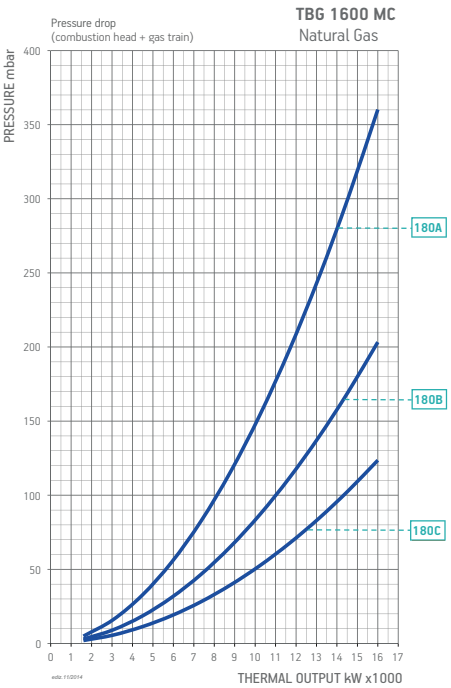
4 Equipped with automatic air closure device.
10 Inverter supplied separately, not included on the machine.
Net calorific value at reference conditions of 0°C, 1013mbar:
Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
For different type of gas and pressure values, please get in contact with our commercial department.

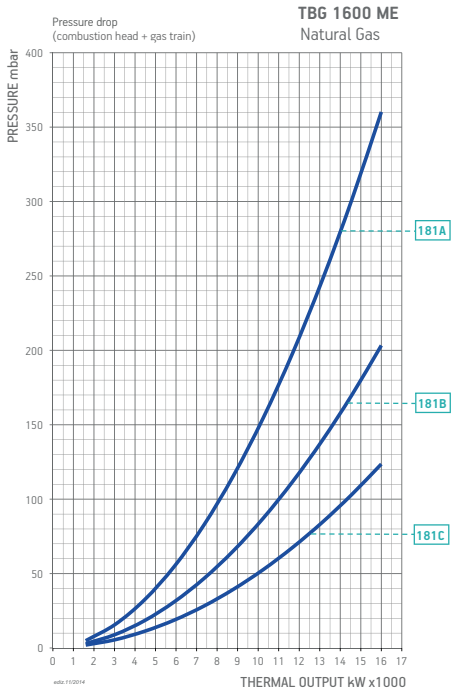
kW 1200 - 16000 | TBG SERIES

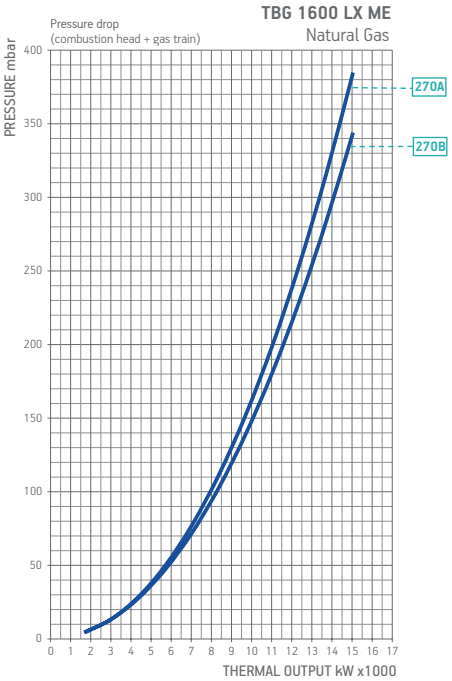
BURNER/GAS TRAIN MATCH











BURNER/GAS TRAIN MATCH

Burner model	Gas type	Curve on graph	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Note
						Part no.	Part no.	Part no.	Part no.		
TBG 1200 MC	Natural gas	188A	CE/EXP	500	CTV	19990615	Included	–	Included	D8	
		188B	CE/EXP	500	CTV	19990616	Included	–	Included	D8	
		188C	CE/EXP	500	CTV	19990617	Included	–	Included	D8	
TBG 1200 ME/ME V	Natural gas	189A	CE/EXP	500	CTV	19990606	Included	–	Included	D4	
			CE/EXP	500	CTV	19990686	Included	–	Included	D4	
		189B	CE/EXP	500	CTV	19990607	Included	–	Included	D4	
			CE/EXP	500	CTV	19990687	Included	–	Included	D4	
		189C	CE/EXP	500	CTV	19990608	Included	–	Included	D4	
			CE/EXP	500	CTV	19990688	Included	–	Included	D4	
TBG 1600 MC	Natural gas	180A	CE/EXP	500	CTV	19990615	Included	–	Included	D8	
		180B	CE/EXP	500	CTV	19990616	Included	–	Included	D8	
		180C	CE/EXP	500	CTV	19990617	Included	–	Included	D8	
TBG 1600 ME/ME V	Natural gas	181A	CE/EXP	500	CTV	19990606	Included	–	Included	D4	
			CE/EXP	500	CTV	19990686	Included	–	Included	D4	
		181B	CE/EXP	500	CTV	19990607	Included	–	Included	D4	
			CE/EXP	500	CTV	19990687	Included	–	Included	D4	
		181C	CE/EXP	500	CTV	19990608	Included	–	Included	D4	
			CE/EXP	500	CTV	19990688	Included	–	Included	D4	
TBG 1600 LX ME **TBG 1600 LX ME V**	Natural gas	270A	CE/EXP	500	CTV	19990732	Included	–	Included	D4	
			CE/EXP	500	CTV	19990687	Included	–	Included	D4	
		270B	CE/EXP	500	CTV	19990733	Included	–	Included	D4	
			CE/EXP	500	CTV	19990688	Included	–	Included	D4	

Burner model	Gas type	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	LPG kit	Pic.	Note
					Part no.	Part no.	Part no.	Part no.	Part no.		
TBG 1200 MC	LPG	CE/EXP	500	CTV	19990615	Included	–	Included	98000394	D8	
TBG 1200 ME	LPG	CE/EXP	500	CTV	19990606	Included	–	Included	98000394	D4	
TBG 1600 MC	LPG	CE/EXP	500	CTV	19990615	Included	–	Included	98000398	D8	
TBG 1600 ME	LPG	CE/EXP	500	CTV	19990606	Included	–	Included	98000398	D4	

To choose the correct gas train please refer to the information on page 17.
For information on the structure, composition, and size of the gas train please refer to the diagrams on page 338.

NOTE

CTV Gas train with valve tightness control.
**) Maximum gas inlet pressure at pressure regulator.

kW 2700 - 22000 | TBG SERIES

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022

CE 0085

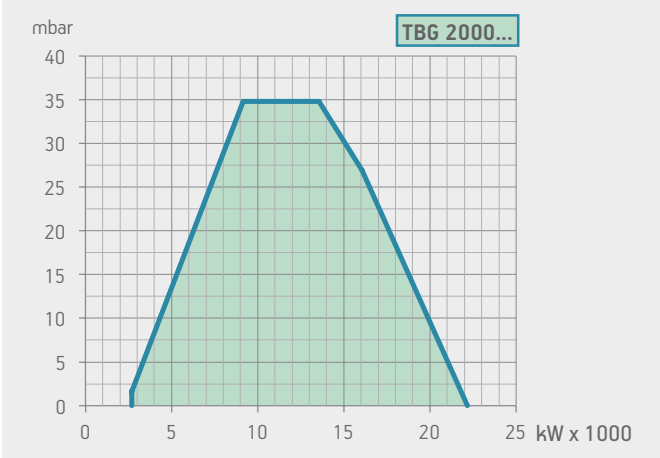
Gas burner compliant with European standard EN676. Operation:	TBG 2000 MC mechanical two-stage progressive	TBG 2000 ME electronic modulation	TBG 2000 ME V electronic modulation
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	o	•
Modulation ratio:	1:8	1:8	1:8
Low NOx and CO emissions gas burner according to European standard EN676:	class 2	class 2	class 2
Adjusting the combustion head	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•	•
Fixed boiler coupling flange	•	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•	•
Device made of sound-absorbing material to reduce fan noise	•	•	•
Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption			•
CE version gas train is complete with operation and safety valve with electromagnetic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter	•	•	•
Fail proof connectors for burner/gas train connection	•	•	•
Gas train outlet:	down	up/down	up/down
Flame detection by ionisation electrode with connector for microamperometer	•	•	•
Control panel with display diagram for working mode with indication lights	•		
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment		•	•
Electric protection rating:	IP54	IP54	IP54

LEGEND:

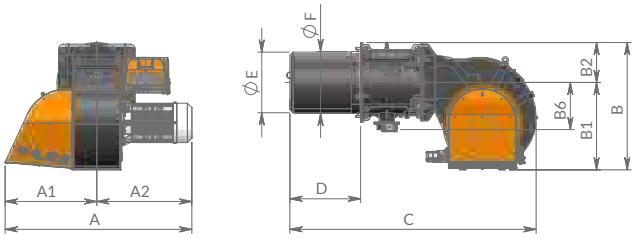
o Optional, • As standard

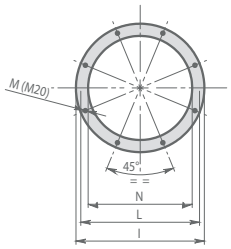
kW **2700 - 22000** | **TBG** SERIES

CE 0085



Model	Size of packaging L	P	H	Weight
	mm			kg
TBG 2000 MC	2100	2040	1380	880
TBG 2000 ME	2100	2040	1380	880
TBG 2000 ME V	2100	2040	1380	1010





Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBG 2000 MC	1860	915	945	1270	870	400	440	2340	700	600	630	790	730	M20	640	11
TBG 2000 ME	1855	913	942	1265	870	395	482	2437	700	600	625	790	730	M20	640	11
TBG 2000 ME V	1860	915	945	1270	870	400	440	2340	700	600	630	790	730	M20	640	11

Inverter	O2 Kit	CO Kit	Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Note
					Frequency 60 Hz				
			class 2	2700 ÷ 22000	**TBG 2000 MC**	**67510010**	3N AC 50Hz 400V	45	4)
			class 2	2700 ÷ 22000	**TBG 2000 ME**	**67500020**	3N AC 50Hz 400V	45	4)
●	O	O	class 2	2700 ÷ 22000	**TBG 2000 ME V**	**67500025**	3N AC 50Hz 400V	45	4) 10)
					Frequency 60 Hz				
			class 2	2700 ÷ 22000	**TBG 2000 MC**	**67515410**	3N AC 60Hz 380V	45	4)
			class 2	2700 ÷ 22000	**TBG 2000 ME**	**on request**	3N AC 60Hz 380V	45	4)
●	O	O	class 2	2700 ÷ 22000	**TBG 2000 ME V**	**on request**	3N AC 60Hz 380V	45	4) 10)

O Optional, ● As standard

MODULATING MODE

DESCRIPTION	PART NO.
TBG 2000 MC: modulation kit	98000055
TBG 2000 ME:modulation kit (Included in the ME V version)	98000059
TBG 2000 MC/2000 ME: modulating probe (see page 332)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
O2 control kit NEW	98000460
CO control kit NEW	98000461
Soundproof burner cover (see page 337)	97980063

BURNER ACCESSORIES

Boiler coupling kit.

NOTE

4 Equipped with automatic air closure device.
10 Inverter supplied separately, not included on the machine.
Net calorific value at reference conditions of 0°C, 1013mbar:
Natural gas: Hi = 35,80 MJ/m^3 = 8550 kcal/m^3,
For different type of gas and pressure values, please get in contact with our commercial department.

kW 2700 - 20700 | TBG SERIES

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022 E EN267.

CE 0085

Gas burner compliant with European standard EN676. Operation:	TBG 2000 LX ME electronic modulation	TBG 2000 LX ME V electronic modulation
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	•
Modulation ratio:	1:7	1:7
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3
Ignition by gas pilot	•	•
Pilot gas train on-board, composed by: pressure regulator with incorporated filter, minimum pressure switch, safety valve, ignition valve	•	•
72 h continuous operation	o	o
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•
Fixed boiler coupling flange	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler.	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•
CE version gas train is complete with operation and safety valve with electromagnetic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter	•	•
Fail proof connectors for burner/gas train connection	•	•
Gas train outlet:	down	down
Flame detection by UV photocell	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment	•	•
Electric protection rating:	IP54	IP54
Noise level dB(A)	86	86
VDS motor to reduce overall electrical energy consumption		•

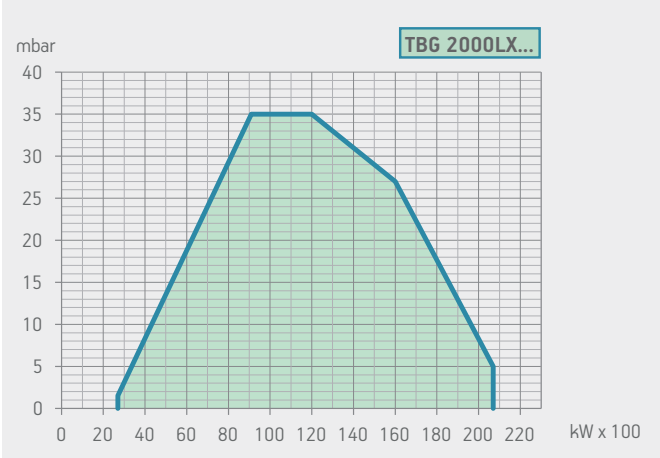
LEGEND:

o Optional, • As standard

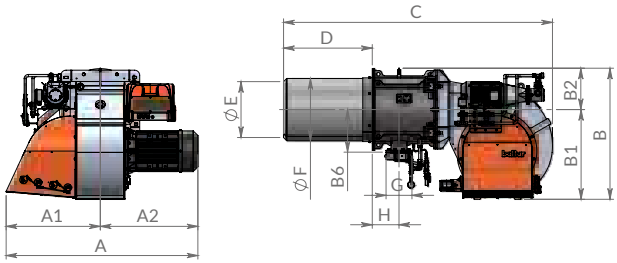
kW **2700 - 20700**

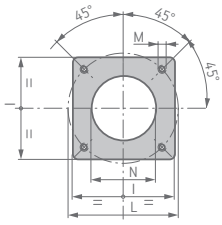
TBG SERIES

CE 0085



Model	Size of packaging L	P	H	Weight
	mm			kg
TBG 2000 LX ME	2110	2050	1390	1095
TBG 2000 LX ME V	2110	2050	1390	1125





Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBG 2000 LX ME	1855	910	945	1265	865	400	470	2560	825	600	625	790	730	M20	670	2
TBG 2000 LX ME V	1855	910	945	1265	865	400	470	2560	825	600	625	790	730	M20	670	2

inverter	O2 Kit	CO Kit	Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Note
					Frequency 50 Hz				
			class 3	2700 ÷ 20700	**TBG 2000 LX ME**	**67590010**	3N AC 50Hz 400V	45	4)
●	o	o	class 3	2700 ÷ 20700	**TBG 2000 LX ME V**	**67590015**	3N AC 50Hz 400V	45	4) 10)
					Frequency 60 Hz				
			class 3	2700 ÷ 20700	**TBG 2000 LX ME**	**on request**	3N AC 60Hz 380V	45	4)
●	o	o	class 3	2700 ÷ 20700	**TBG 2000 LX ME V**	**on request**	3N AC 60Hz 380V	45	4) 10)

o Optional, ● As standard

MODULATING MODE

DESCRIPTION	PART NO.
Modulation kit (Included in the ME V version)	98000059

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
O2 control kit NEW	98000460
CO control kit NEW	98000461
Soundproof burner cover (see page 337)	97980063

BURNER ACCESSORIES

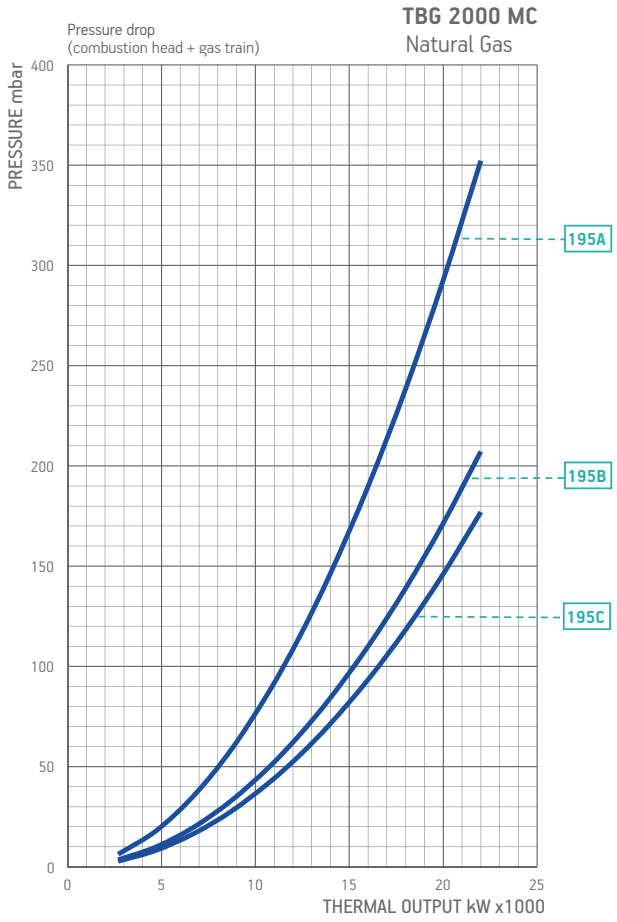
Boiler coupling kit.

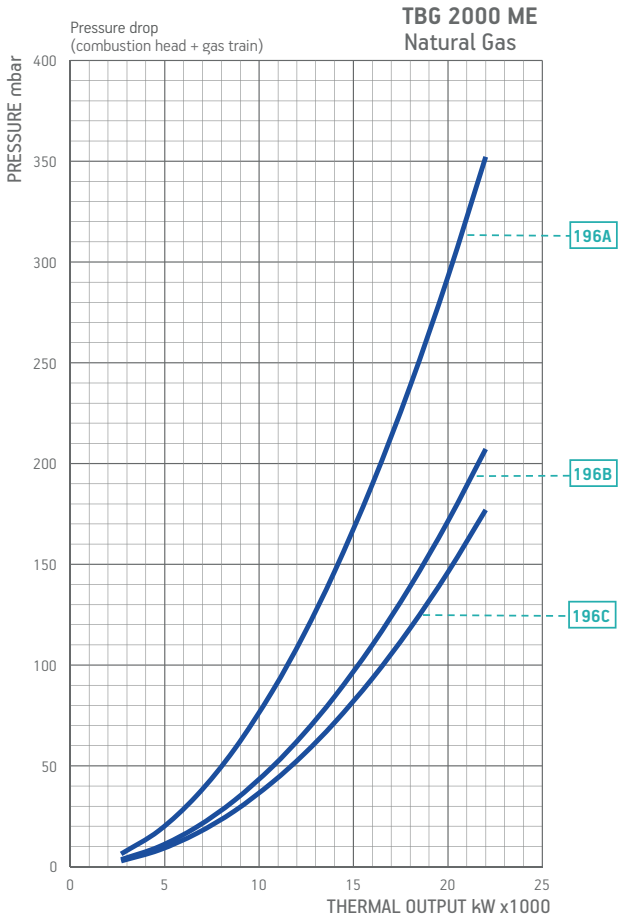
NOTE

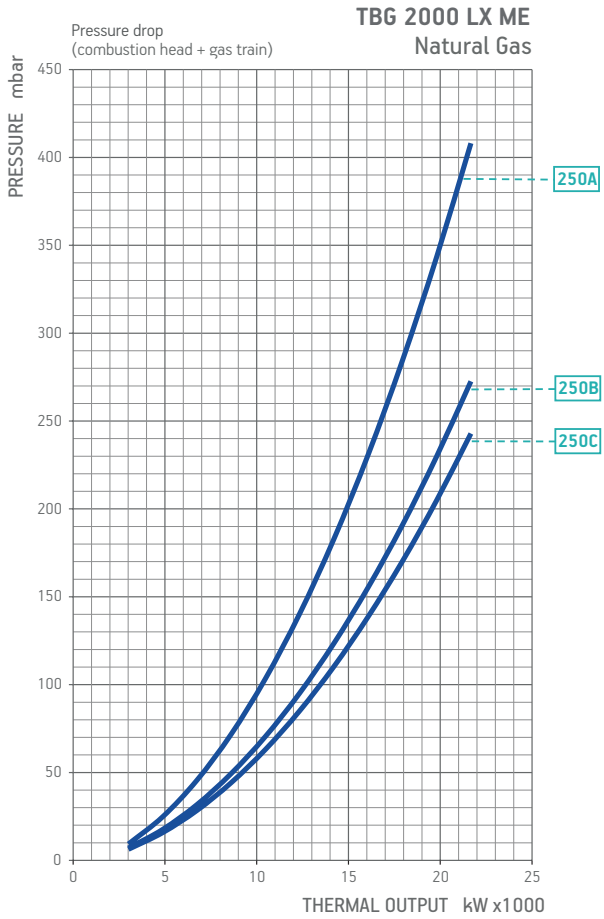
4 Equipped with automatic air closure device.
10 Inverter supplied separately, not included on the machine.
Net calorific value at reference conditions of 0°C, 1013mbar:
Natural gas: Hi = 35,80 MJ/m^3 = 8550 kcal/m^3,
For different type of gas and pressure values, please get in contact with our commercial department.

kW 2700 - 22000 | TBG SERIES

BURNER/GAS TRAIN MATCH







BURNER/GAS TRAIN MATCH

Burner model	Gas type	Curve on graph	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Note
						Part no.	Part no.	Part no.	Part no.		
TBG 2000 MC	Natural gas	195A	CE/EXP	500	CTV	19990793	Included	–	Included	D8	
			CE/EXP	500	CTV	19990796	Included	–	Included	D8	
		195B	CE/EXP	500	CTV	19990794	Included	–	Included	D8	
			CE/EXP	500	CTV	19990797	Included	–	Included	D8	
		195C	CE/EXP	500	CTV	19990795	Included	–	Included	D8	
			CE/EXP	500	CTV	19990798	Included	–	Included	D8	
TBG 2000 ME/ME V	Natural gas	196A	CE/EXP	500	CTV	19990618	Included	–	Included	D4	
			CE/EXP	500	CTV	19990689	Included	–	Included	D4	
		196B	CE/EXP	500	CTV	19990619	Included	–	Included	D4	
			CE/EXP	500	CTV	19990690	Included	–	Included	D4	
		196C	CE/EXP	500	CTV	19990620	Included	–	Included	D4	
			CE/EXP	500	CTV	19990691	Included	–	Included	D4	
TBG 2000 LX ME	Natural gas	250A	CE/EXP	500	CTV	19990648	Included	–	Included	D4	
			CE/EXP	500	CTV	19990689	Included	–	Included	D4	
		250B	CE/EXP	500	CTV	19990649	Included	–	Included	D4	
			CE/EXP	500	CTV	19990690	Included	–	Included	D4	
		250C	CE/EXP	500	CTV	19990650	Included	–	Included	D4	
			CE/EXP	500	CTV	19990691	Included	–	Included	D4	

To choose the correct gas train please refer to the information on page 17.
For information on the structure, composition, and size of the gas train please refer to the diagrams on page 338.

NOTE

CTV Gas train with Valve Tightness Control.
**) Maximum gas inlet pressure at pressure regulator.

Dual fuel burners RANGE

Simbology

TBML...
One-stage gas/light oil burners.
Dual operating mode.

TBML...P
Two-stage gas/light oil burners.
Dual operating mode.

TBML...MC
Two-stage progressive/ modulating gas/ light oil burners with mechanical cam on gas, two-stage on light oil.
Dual operation mode.

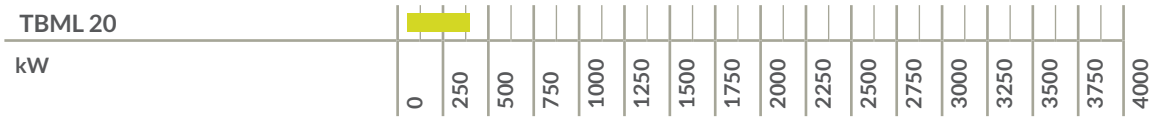
TBML 50/80 ME
TBML 120/160 ME
TBML 200/260 ME
TBML 360 ME
Modulating gas/ light oil burners with electronic modulation on gas, two-stage on light oil.
Dual operation mode.

TBML from 450 to 2000 ME
Modulating gas/ light oil burners with electronic modulation.
Dual operation mode.

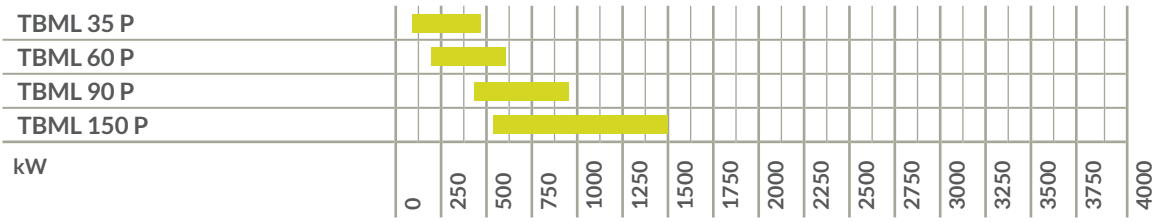
TBNM...ME
Two-stage progressive/ modulating gas/ heavy oil burners with electronic modulation..
Dual operating mode.

Low NOx
Class 3 gas side according to EN676

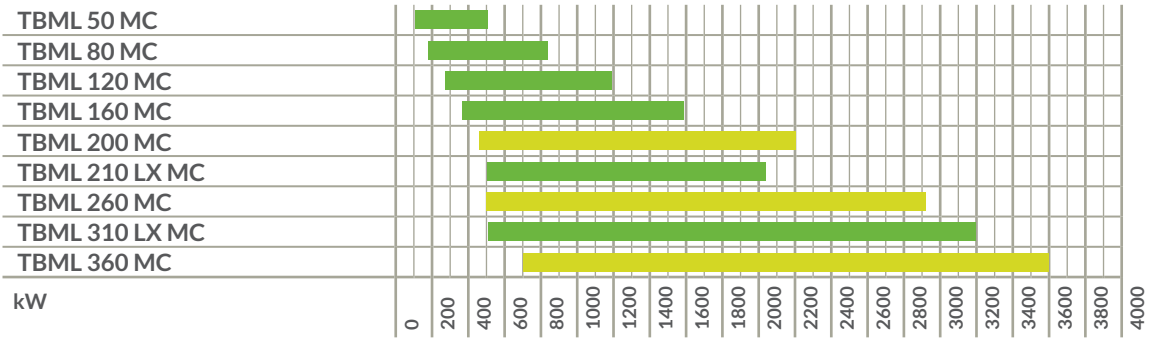
ONE-STAGE DUAL FUEL BURNERS - gas/light oil



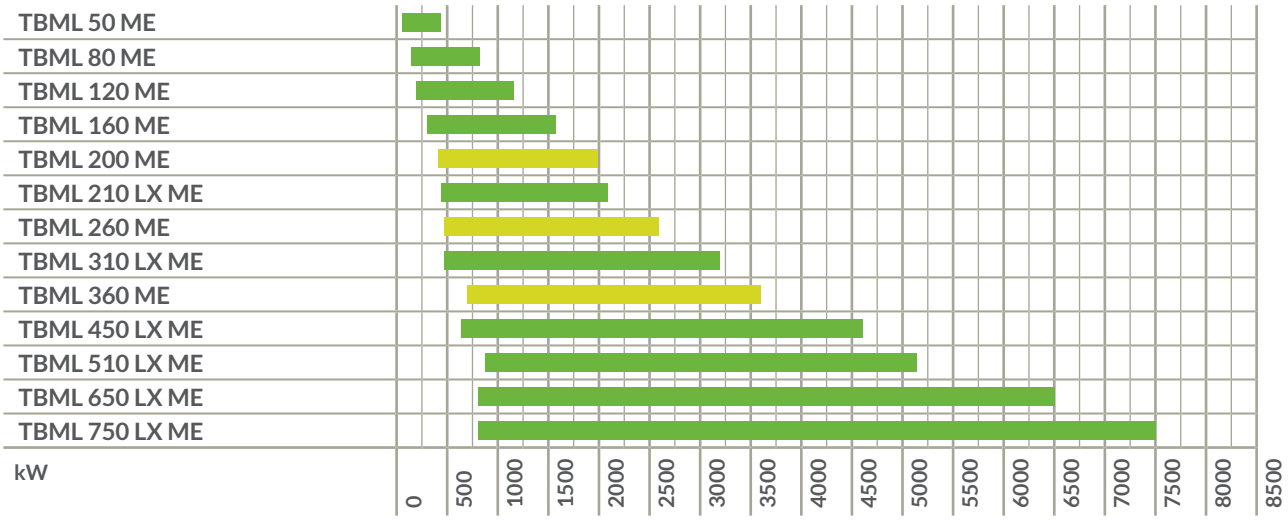
TWO-STAGE DUAL FUEL BURNERS - gas/light oil



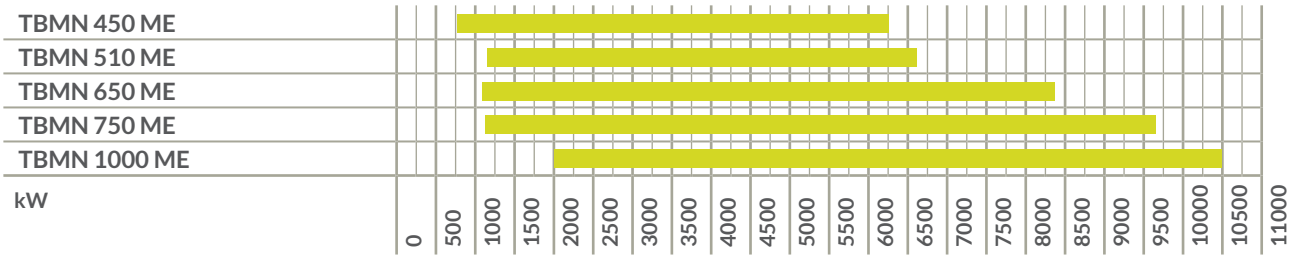
TWO-STAGE PROGRESSIVE DUAL FUEL BURNERS - gas/light oil



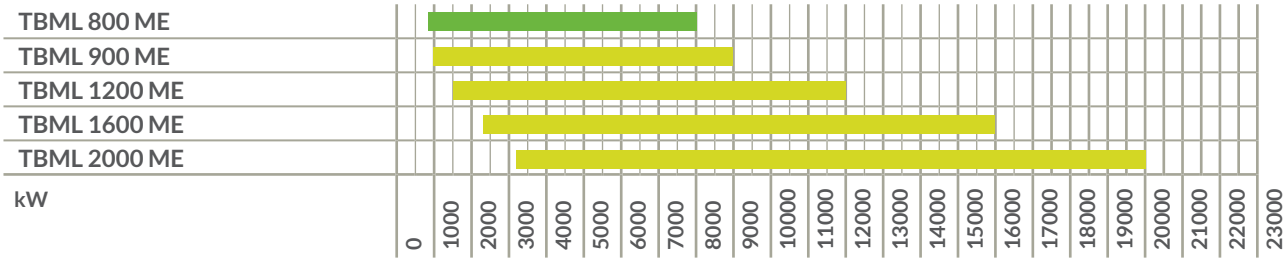
MODULATING DUAL FUEL BURNERS - gas/light oil



MODULATING DUAL FUEL BURNERS - gas/heavy oil



INDUSTRIAL DUAL FUEL BURNERS - gas/light oil



kW **100 - 400** | **TBML** SERIES

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | COMMISSION REGULATION ErP 2013/811/UE E ERP 2013/813/UE | REFERENCE STANDARD EN676:2020/AC:2022 E EN267. CE 0085

TBML 20

TBML 35 P

	TBML 20	TBML 35 P
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Operation:	**single-stage**	**two-stage**
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 2	class 2
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
High ventilation efficiency, low electrical input, low noise	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	electric ervomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney		•
CE version gas train is complete with operation and safety valve with electromagnetic drive, minimum pressure switch, pressure regulator and gas filter	•	•
Possibility to add gas train with valve tightness control	•	•
Fail proof connectors for burner/gas train connection	•	•
Gas train outlet:	down	down
Electric motor for pump drive	•	•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell	•	•
Control panel with display diagram for working mode with indication lights	•	•
Electric protection rating:	IP40	IP40

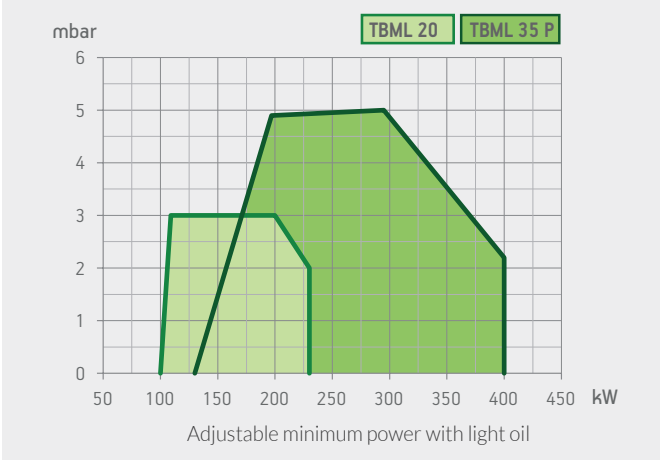
LEGEND:

o Optional, • As standard

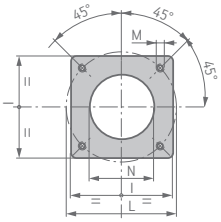
kW 100 - 400

TBML SERIES

CE 0085



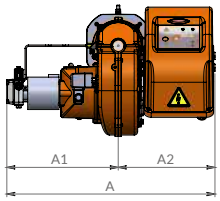
Model	Size of packaging L	P	H	Weight
	mm			kg
TBML 20	1070	800	900	45
TBML 35 P	1070	800	700	45,5

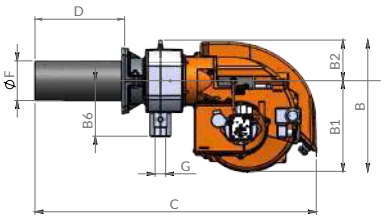


Picture 2

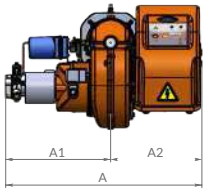
Flange dimensions and boiler drilling template.

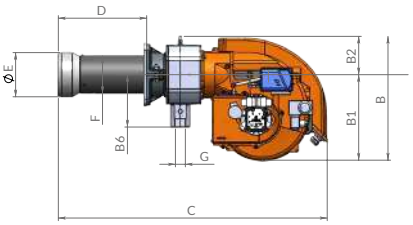
TBML 20





TBML 35 P





Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBML 20	600	320	280	380	260	120	160	910	90 ÷ 350	-	114	280	170 ÷ 210	M10	130	2
TBML 35 P	600	320	280	380	260	120	160	920	90 ÷ 360	135	114	280	170 ÷ 210	M10	140	2

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	100 ÷ 260	**TBML 20**	**54780010**	1,5	1N AC 50Hz 230V	0,25+0,1	4)
	class 2	130 ÷ 400	**TBML 35 P**	**54810010**	1,5	1N AC 50Hz 230V	0,37+0,1	4)
			Frequency 60 Hz					
	class 2	100 ÷ 260	**TBML 20**	**54785420**	1,5	1N AC 60Hz 220V	0,37+0,1	4)
	class 2	130 ÷ 400	**TBML 35 P**	**54815420**	1,5	1N AC 60Hz 220V	0,37+0,1	4)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 337)	97980054

BURNER ACCESSORIES

Flex hoses, nozzles, boiler coupling kit, plug for wiring

NOTE

4 Equipped with automatic air closure device.

Net calorific value:

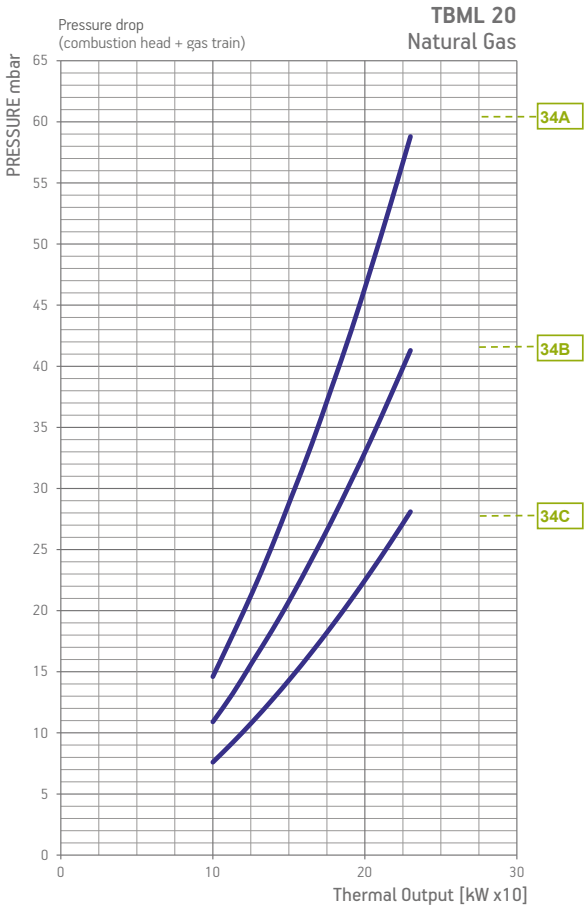
Natural gas: Hi = 35,80 MJ/m3 = 8550 kcal/m3, at reference conditions of 0°C, 1013mbar.

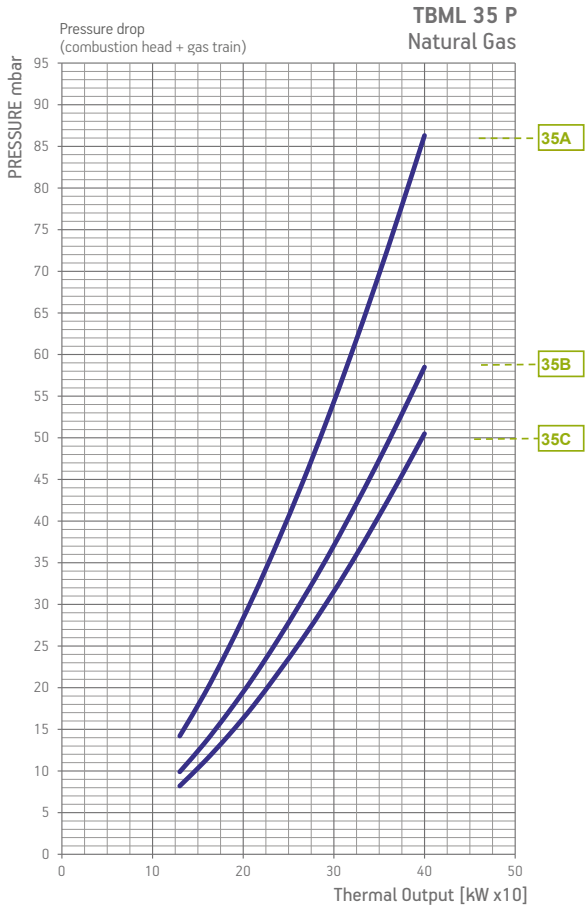
LPG: Hi = 92 MJ/m^3 = 22000 kcal/m^3, at reference conditions of 0°C, 1013mbar.

Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

For different type of gas and pressure values, please get in contact with our commercial department.

BURNER/GAS TRAIN MATCH





BURNER/GAS TRAIN MATCH

Burner model	Gas type	Curve on graph	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Note
						Part no.	Part no.	Part no.	Part no.		
TBML 20	Natural gas	34A	CE/EXP	360		19990789	Included	96000005	–	BE7	
					CTV	19990789	Included	96000005	98000101	BE7	
		34B	CE/EXP	360		19990545	Included	96000005	–	BE7	
					CTV	19990545	Included	96000005	98000101	BE7	
		34 C	CE/EXP	360		19990546	Included	96000004	–	BE7	
					CTV	19990546	Included	96000004	98000101	BE7	
TBML 35 P	Natural gas	35A	CE/EXP	360		19990790	Included	96000005	–	B2	
					CTV	19990790	Included	96000005	98000101	B2	
		35B	CE/EXP	360		19990791	Included	96000004	–	B2	
					CTV	19990791	Included	96000004	98000101	B2	
		35 C	CE/EXP	360		19990792	Included	96000004	–	B2	
					CTV	19990792	Included	96000004	98000101	B2	

To choose the correct gas train please refer to the information on page 17.
For information on the structure, composition, and size of the gas train please refer to the diagrams on page 338.

NOTE

12 Valve tightness control not required by EN676.
**) Maximum gas inlet pressure at pressure regulator.

kW 100 - 600

TBML SERIES

Low NOx

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | COMMISSION REGULATION ErP 2013/811/UE E ERP 2013/813/UE | REFERENCE STANDARD EN676:2020/AC:2022 E EN267. CE 0085

TBML 50 MC

TBML 50 ME

TBML 60 P

DUAL FUEL
GAS/LIGHT OIL BURNERS

	TBML 50 MC	TBML 50 ME	TBML 60 P
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Operation:			two-stage
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive operation on gas, two-stage on light oil	mechanical two-stage progressive/two-stage		
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Modulating operation on gas, two-stage on light oil		electronic modulation/ two-stage	
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	•	
Modulation ratio:	1:5	1:5	
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 3	class 3	class 2
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2	class 2
Adjusting the combustion head	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•	•
High ventilation efficiency, low electrical input, low noise	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam	electric servomotor	mechanical cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•	•
CE version gas train is complete with operation and safety valve with electromagnetic drive, minimum pressure switch, pressure regulator and gas filter			•
CE version gas train is complete with operation and safety valve with electromagnetic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter	•	•	
Possibility to add gas train with valve tightness control			•
Fail proof connectors for burner/gas train connection	•	•	•
Gas train outlet:	down	down	down
Electric motor for pump drive			•
Pump connected to fan motor through electromagnetic clutch	•	•	
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•	•	•
Fuel switch device:	manual	manual	manual
Flame detection by UV photocell	•	•	•
Control panel with display diagram for working mode with indication lights	•		
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment		•	
Electric protection rating:	IP40	IP40	IP40

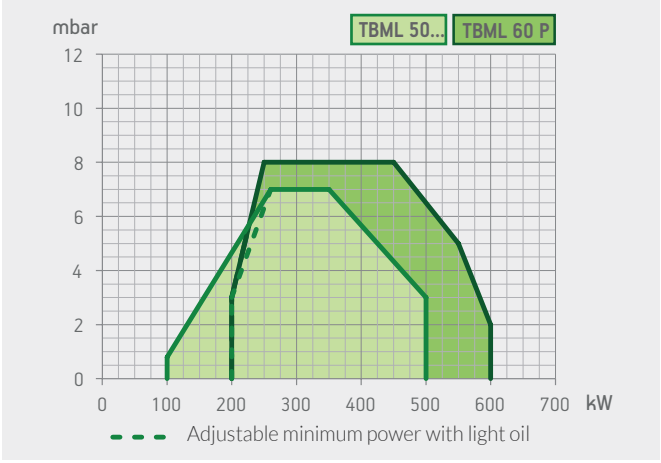
LEGEND:

o Optional, • As standard

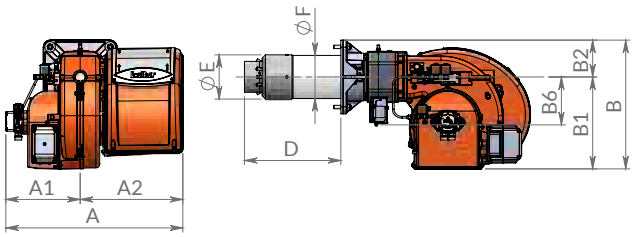
kW **100 - 600**

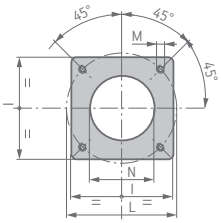
TBML SERIES

CE 0085



Model	Size of packaging L	P	H	Weight
	mm			kg
TBML 50 MC	1130	900	540	68
TBML 50 ME	1130	900	540	57
TBML 60 P	1070	800	610	62





Picture 2

Flange dimensions and boiler drilling template.

DUAL FUEL
GAS/LIGHT OIL BURNERS

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBML 50 MC	770	400	370	485	325	160	160	1020	170 ÷ 340	156	152	260	225 ÷ 300	M12	160	2
TBML 50 ME	640	270	370	485	325	160	160	1020	170 ÷ 340	156	152	260	225 ÷ 300	M12	160	2
TBML 60 P	680	400	280	485	325	160	160	980	140 ÷ 350	150	152	260	225 ÷ 300	M12	160	2

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	see page 192	100(200)* ÷ 500	**TBML 50 MC**	**56450010**	1,5	3N AC 50Hz 400V	0,65	4)
	see page 192	100(200)* ÷ 500	**TBML 50 ME**	**56460010**	1,5	3N AC 50Hz 400V	0,65	4)
	class 2	200÷600	**TBML 60 P**	**56470010**	1,5	3N AC 50Hz 400V	0,65+0,10	4)
			Frequency 60 Hz					
	see page 192	100(200)* ÷ 500	**TBML 50 MC**	**56455410**	1,5	3N AC 60Hz 380V	0,65	4)
	see page 192	100(200)* ÷ 500	**TBML 50 ME**	**56465410**	1,5	3N AC 60Hz 380V	0,65	4)
	class 2	200÷600	**TBML 60 P**	**56475410**	1,5	3N AC 60Hz 380V	0,65+0,10	4)

TO COMPLETE THE BURNER

DESCRIPTION
TBML 50 ME: modulating probe for LCM 100 (see page 332)

MODULATING MODE

DESCRIPTION	PART NO.
TBML 50 MC: modulation kit	98000057
TBML 50 MC: modulating probe (see page 332)	

NOTE

4 Equipped with automatic air closure device.
*) Min thermal capacity with light oil operation.
Net calorific value:
Natural gas: Hi = 35,80 MJ/m3 = 8550 kcal/m3, at reference conditions of 0°C, 1013mbar.
LPG: Hi = 92 MJ/m^3 = 22000 kcal/m^3, at reference conditions 0°C, 1013mbar.
Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

ACCESSORIES AVAILABLE ON REQUEST

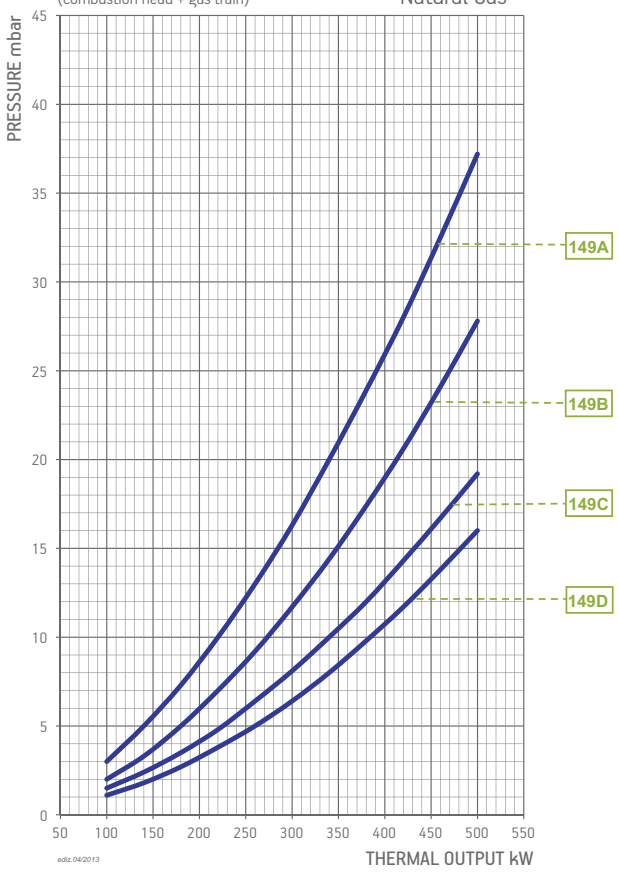
DESCRIPTION	PART NO.
TBML 60 P: line filter 3/8"	98000370
Soundproof burner cover (see page 337)	97980053

BURNER ACCESSORIES

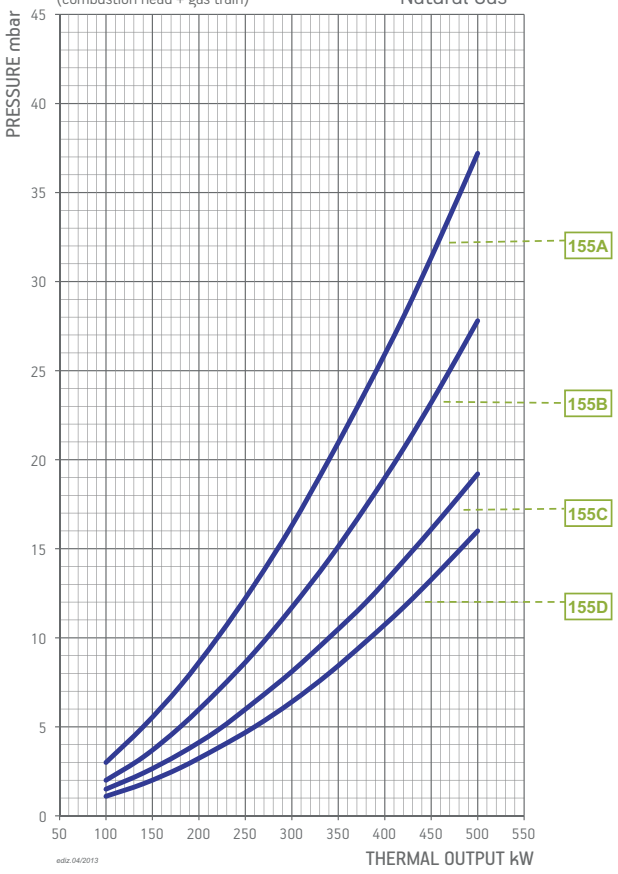
TBML 50 MC: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring
TBML 50 ME: line filter, flex hoses, nozzles, boiler coupling kit.
TBML 60 P: flex hoses, nozzles, boiler coupling kit, plug for wiring

BURNER/GAS TRAIN MATCH

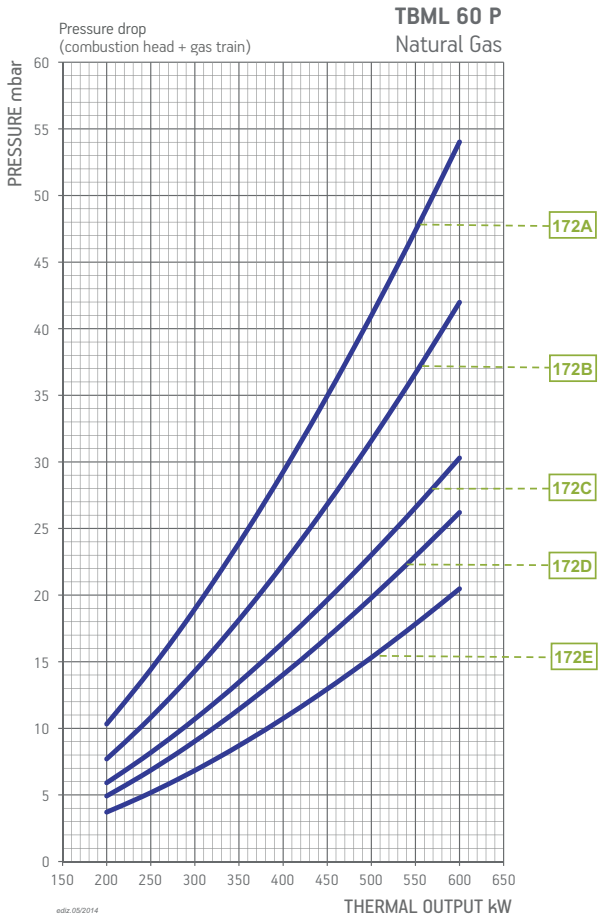
TBML 50 MC
Natural Gas



TBML 50 ME
Natural Gas



TBML 60 P
Natural Gas



BURNER/GAS TRAIN MATCH

Burner model	Gas type	Curve on graph	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Note
						Part no.	Part no.	Part no.	Part no.		
TBML 50 MC	Natural gas	149A	CE/EXP	360	CTV	19990580	Included	96000004	Included	D7	
		149B	CE/EXP	360	CTV	19990581	Included	96000004	Included	D7	
		149C	CE/EXP	360	CTV	19990582	Included	–	Included	D7	
		149D	CE/EXP	360	CTV	19990583	Included	96000013	Included	D7	
TBML 50 ME	Natural gas	155A	CE/EXP	360	CTV	19990556	Included	96000004	Included	D2	
		155B	CE/EXP	360	CTV	19990557	Included	96000004	Included	D2	
		155C	CE/EXP	360	CTV	19990558	Included	–	Included	D2	
			CE/EXP	360	CTV	19990559	Included	96000013	Included	D2	
TBML 60 P	Natural gas	172A	CE/EXP	360		19990546	Included	96000004	–	B7	
					CTV	19990546	Included	96000004	98000101	B7	12)
		172B	CE/EXP	360		19990547	Included	96000004	–	B7	
					CTV	19990547	Included	96000004	98000101	B7	12)
		172C	CE/EXP	360		19990548	Included	–	–	B7	
					CTV	19990548	Included	–	98000101	B7	12)
		172D	CE/EXP	360		19990549	Included	96000013	–	B7	
					CTV	19990549	Included	96000013	98000101	B7	12)
		172E	CE/EXP	500		19990550	Included	96000013	–	B7	
					CTV	19990550	Included	96000013	98000102	B7	12)
			CE/EXP	500		19990720	Included	96000013	–	D5	
					CTV	19990720	Included	96000013	98000102	D5	12)

Burner model	Gas type	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Note
					Part no.	Part no.	Part no.	Part no.		
TBML 50 MC	LPG	CE/EXP	360	CTV	19990580	Included	96000004	Included	D7	
TBML 50 ME	LPG	CE/EXP	360	CTV	19990556	Included	96000004	Included	D2	
TBML 60 P	LPG	CE/EXP	360		19990547	Included	96000004	–	B7	
				CTV	19990547	Included	96000004	98000101	B7	12)

To choose the correct gas train please refer to the information on page 17.
For information on the structure, composition, and size of the gas train please refer to the diagrams on page 338.

NOTE

12 Valve tightness control not required by EN676.
CTV Gas train with Valve Tightness Control.
**) Maximum gas inlet pressure at pressure regulator.

kW 180 - 950

TBML SERIES

Low NOx

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022 E EN267.

CE 0085

TBML 80 MC

TBML 80 ME

TBML 90 P

	TBML 80 MC	TBML 80 ME	TBML 90 P
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Operation:			two-stage
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive operation on gas, two-stage on light oil	mechanical two-stage progres-sive/two-stage		
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Modulating operation on gas, two-stage on light oil		electronic modulation/ two-stage	
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	•	
Modulation ratio:	1:4	1:4	
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 3	class 3	class 2
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2	class 2
Adjusting the combustion head	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•	•
High ventilation efficiency, low electrical input, low noise	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam	electric servomotor	mechanical cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•	•
Combustion air intake designed to achieve optimum linearity of the air gate opening	•	•	•
CE version gas train is complete with operation and safety valve with electromagnetic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter	•	•	•
Fail proof connectors for burner/gas train connection	•	•	•
Gas train outlet:	up	up	up
Pump connected to fan motor through electromagnetic clutch	•	•	•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•	•	•
Fuel switch device:	manual	manual	manual
Flame detection by UV photocell	•	•	•
Control panel with display diagram for working mode with indication lights	•		•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment		•	
Electric protection rating:	IP40	IP40	IP40

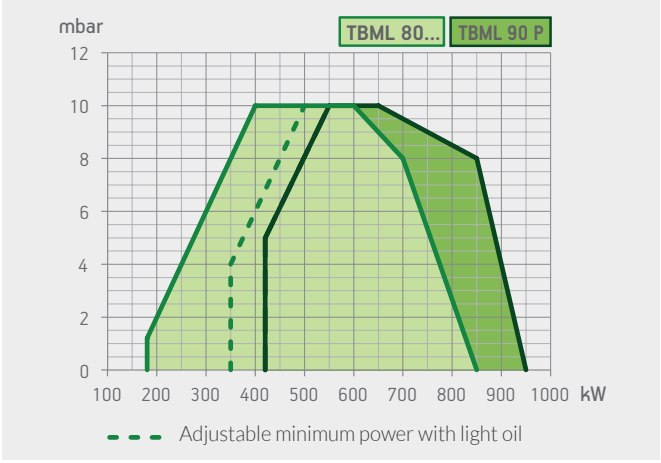
LEGEND:

o Optional, • As standard

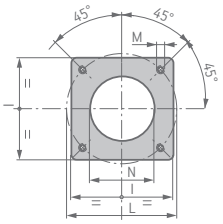
kW 180 - 950

TBML SERIES

CE 0085



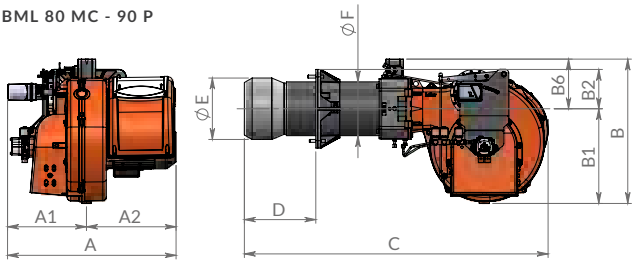
Model	Size of packaging L	P	H	Weight
	mm			kg
TBML 80 MC	1070	800	700	88
TBML 80 ME	1070	800	700	88
TBML 90 P	1070	800	700	87



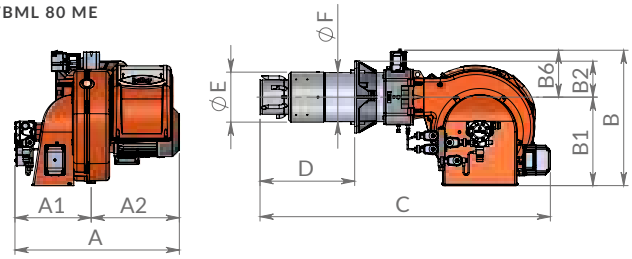
Picture 2

Flange dimensions and boiler drilling template.

TBML 80 MC - 90 P



TBML 80 ME



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBML 80 MC	700	330	370	380	380	200	200	1230	270 ÷ 440	180	178	280	250 ÷ 325	M12	190	2
TBML 80 ME	700	330	370	380	380	200	200	1250	270 ÷ 440	180	178	280	250 ÷ 325	M12	190	2
TBML 90 P	700	330	370	380	380	200	200	1250	175 ÷ 400	180	178	280	250 ÷ 325	M12	190	2

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	see page 196	180(350)* ÷ 850	**TBML 80 MC**	**56490010**	1,5	3N AC 50Hz 400V	1,1	4)
	see page 196	180(350)* ÷ 850	**TBML 80 ME**	**56500010**	1,5	3N AC 50Hz 400V	1,1	4)
	class 2	420÷950	**TBML 90 P**	**56510010**	1,5	3N AC 50Hz 400V	1,1	4)
			Frequency 60 Hz					
	see page 196	180(350)* ÷ 850	**TBML 80 MC**	**56495410**	1,5	3N AC 60Hz 380V	1,1	4)
	see page 196	180(350)* ÷ 850	**TBML 80 ME**	**56505410**	1,5	3N AC 60Hz 380V	1,1	4)
	class 2	420÷950	**TBML 90 P**	**56515410**	1,5	3N AC 60Hz 380V	1,1	4)

TO COMPLETE THE BURNER

DESCRIPTION
TBML 80 ME: modulating probe for LCM 100 (see page 332)

MODULATING MODE

DESCRIPTION	PART NO.
TBML 80 MC: modulation kit	98000057
TBML 80 MC: modulating probe (see page 332)	

NOTE

4 Equipped with automatic air closure device.
*) Min thermal capacity with light oil operation.
Net calorific value:
Natural gas: Hi = 35,80 MJ/m3 = 8550 kcal/m3, at reference conditions of 0°C, 1013mbar.
LPG: Hi = 92 MJ/m³ = 22000 kcal/m³, at reference conditions 0°C, 1013mbar.
Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
TBML 90 P: line filter 3/8"	98000370
Soundproof burner cover (see page 337)	97980053

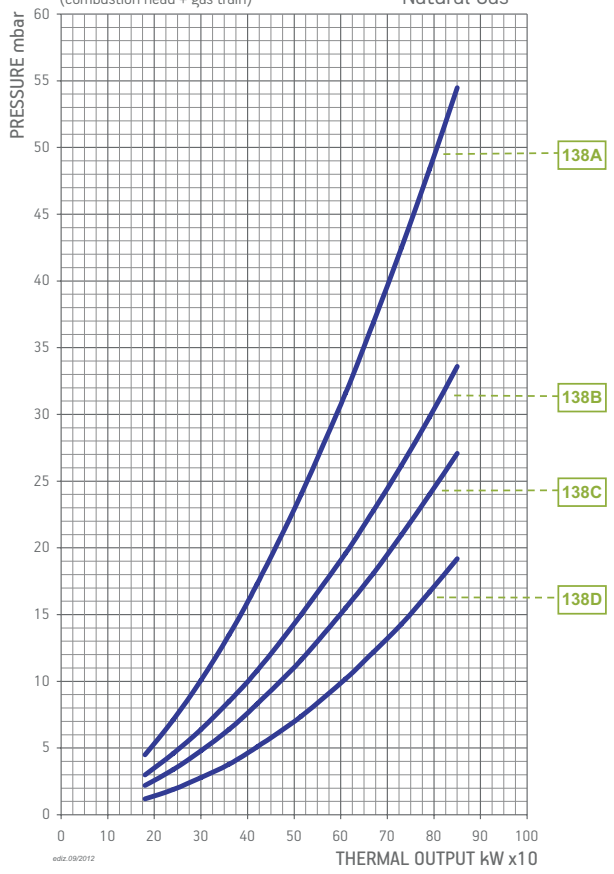
BURNER ACCESSORIES

TBML 80 MC: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring
TBML 80 ME: line filter, flex hoses, nozzles, boiler coupling kit.
TBML 90 P: flex hoses, nozzles, boiler couplinmg kit, plug for wiring

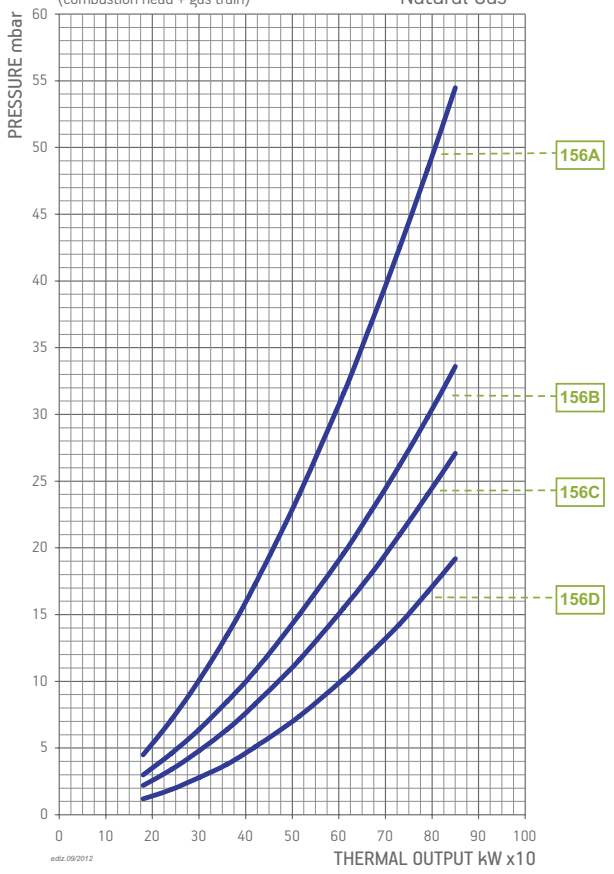
DUAL FUEL
GAS/LIGHT OIL BURNERS

BURNER/GAS TRAIN MATCH

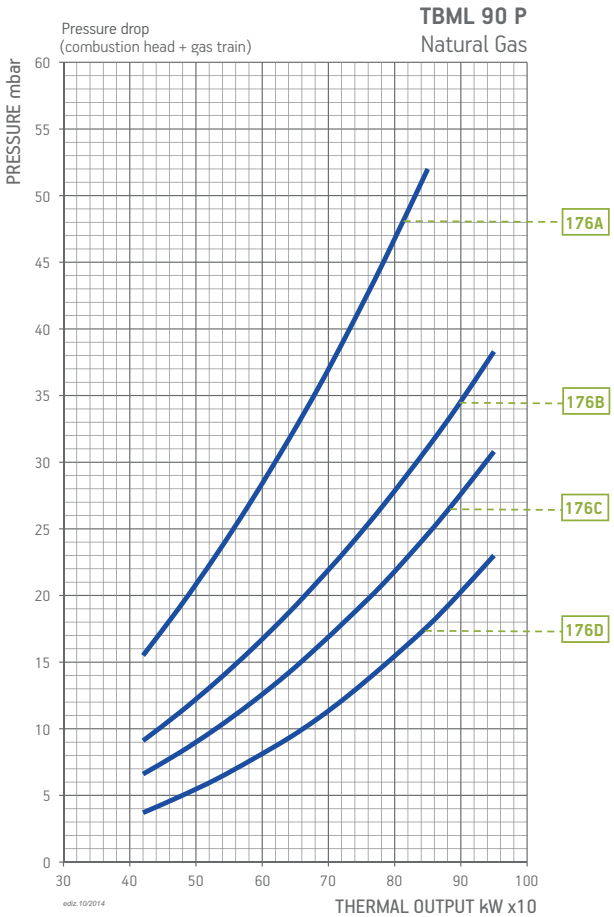
TBML 80 MC
Natural Gas



TBML 80 ME
Natural Gas



TBML 90 P
Natural Gas



BURNER/GAS TRAIN MATCH

Burner model	Gas type	Curve on graph	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Note
						Part no.	Part no.	Part no.	Part no.		
TBML 80 MC	Natural gas	138A	CE/EXP	360	CTV	19990581	Included	96000032	Included	D7	
		138B	CE/EXP	360	CTV	19990582	Included	96000007	Included	D7	
		138C	CE/EXP	360	CTV	19990583	Included	–	Included	D7	
		138D	CE/EXP	360	CTV	19990584	Included	–	Included	D7	
TBML 80 ME	Natural gas	156A	CE/EXP	360	CTV	19990557	Included	96000032	Included	D2	
		156B	CE/EXP	360	CTV	19990558	Included	96000007	Included	D2	
		156C	CE/EXP	360	CTV	19990559	Included	–	Included	D2	
		156D	CE/EXP	500	CTV	19990524	Included	–	Included	D2	
			CE/EXP	500	CTV	19990725	Included	–	Included	D4	
TBML 90 P	Natural gas	176A	CE/EXP	360		19990547	Included	96000032	–	B7	
					CTV	19990547	Included	96000032	98000101	B7	12)
		176B	CE/EXP	360		19990548	Included	96000007	–	B7	
					CTV	19990548	Included	96000007	98000101	B7	12)
		176C	CE/EXP	360		19990549	Included	–	–	B7	
					CTV	19990549	Included	–	98000101	B7	12)
		176D	CE/EXP	500		19990550	Included	–	–	B7	
					CTV	19990550	Included	–	98000102	B7	12)
			CE/EXP	500		19990720	Included	–	–	D5	
					CTV	19990720	Included	–	98000102	D5	12)

Burner model	Gas type	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Note
					Part no.	Part no.	Part no.	Part no.		
TBML 80 MC	LPG	CE/EXP	360	CTV	19990581	Included	96000032	Included	D7	
TBML 80 ME	LPG	CE/EXP	360	CTV	19990557	Included	96000032	Included	D2	
TBML 90 P	LPG	CE/EXP	360		19990547	Included	96000032	–	B7	
				CTV	19990547	Included	96000032	98000101	B7	12)

To choose the correct gas train please refer to the information on page 17.
For information on the structure, composition, and size of the gas train please refer to the diagrams on page 338.

NOTE

12 Valve tightness control not required by EN676.
CTV Gas train with Valve Tightness Control.
**) Maximum gas inlet pressure at pressure regulator.

kW 250 - 1200

TBML SERIES

Low NOx

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022 E EN267.

CE 0085

TBML 120 MC

TBML 120 ME

	TBML 120 MC	TBML 120 ME
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive operation on gas, two-stage on light oil	**Mechanical two-stage progressive/two-stage**	
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Modulating operation on gas, two-stage on light oil		**Electronic modulation/two-stage**
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	•
Modulation ratio:	1:4	1:4
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 3	class 3
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
High ventilation efficiency, low electrical input, low noise	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•
Combustion air intake designed to achieve optimum linearity of the air gate opening	•	•
CE version gas train is complete with operation and safety valve with electromagnetic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter	•	•
Fail proof connectors for burner/gas train connection	•	•
Gas train outlet:	up	up
Pump connected to fan motor through electromagnetic clutch	•	•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell	•	•
Control panel with display diagram for working mode with indication lights	•	
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment		•
Electric protection rating:	IP40	IP40

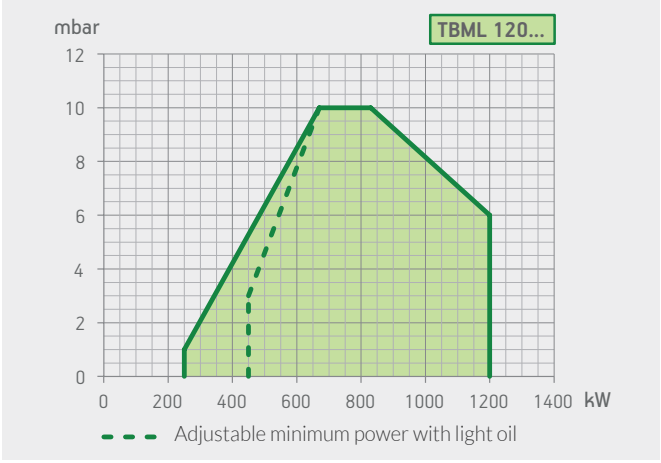
LEGEND:

o Optional, • As standard

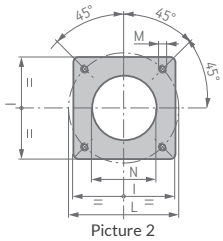
kW 250 - 1200

TBML SERIES

CE 0085



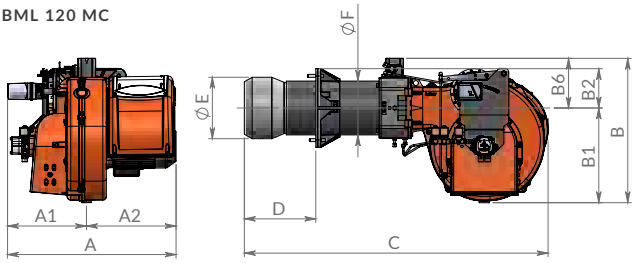
Model	Size of packaging L	P	H	Weight
	mm			kg
TBML 120 MC	1070	800	700	95
TBML 120 ME	1070	800	700	97



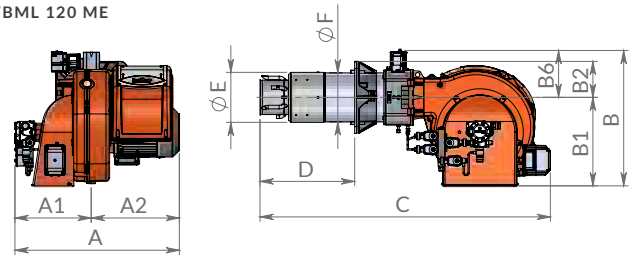
Picture 2

Flange dimensions and boiler drilling template.

TBML 120 MC



TBML 120 ME



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBML 120 MC	700	330	370	380	380	200	200	1250	285 ÷ 450	224	219	320	280 ÷ 370	M12	235	2
TBML 120 ME	700	330	370	380	380	200	200	1250	285 ÷ 450	224	219	320	280 ÷ 370	M12	235	2

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	see page 200	250(450)* ÷ 1200	**TBML 120 MC**	**56530010**	1,5	3N AC 50Hz 400V	1,5	4)
	see page 200	250(450)* ÷ 1200	**TBML 120 ME**	**56540010**	1,5	3N AC 50Hz 400V	1,5	4)
			Frequency 60 Hz					
	see page 200	250(450)* ÷ 1200	**TBML 120 MC**	**56535410**	1,5	3N AC 60Hz 380V	1,5	4)
	see page 200	250(450)* ÷ 1200	**TBML 120 ME**	**56545410**	1,5	3N AC 60Hz 380V	1,5	4)

TO COMPLETE THE BURNER

DESCRIPTION
TBML 120 ME: modulating probe for LCM 100 (see page 332)

MODULATING MODE

DESCRIPTION	PART NO.
TBML 120 MC: modulation kit	98000057
TBML 120 MC: modulating probe (see page 332)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 337)	97980053

BURNER ACCESSORIES

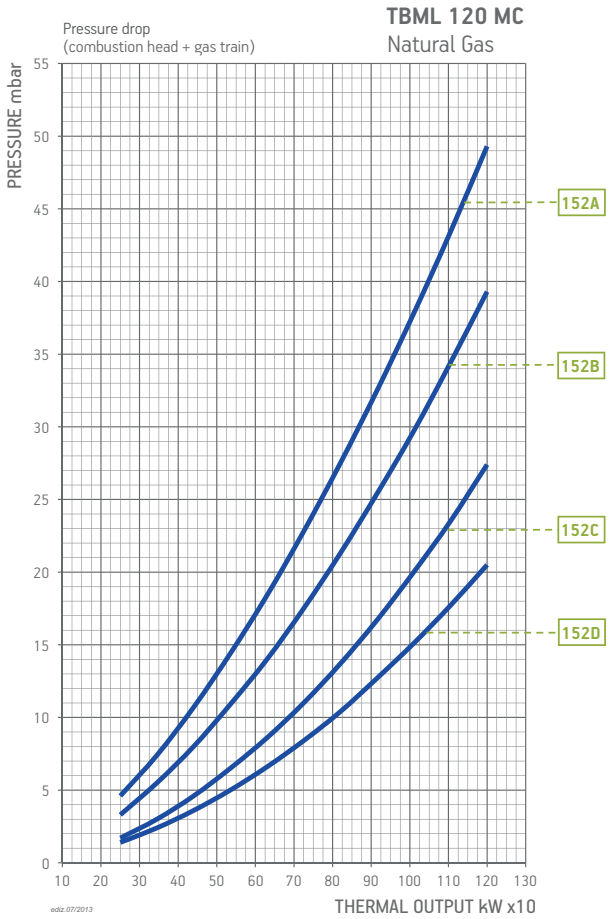
TBML 120 MC: line filter, flex hoses, nozzles, boiler coipling kit, plug for wiring

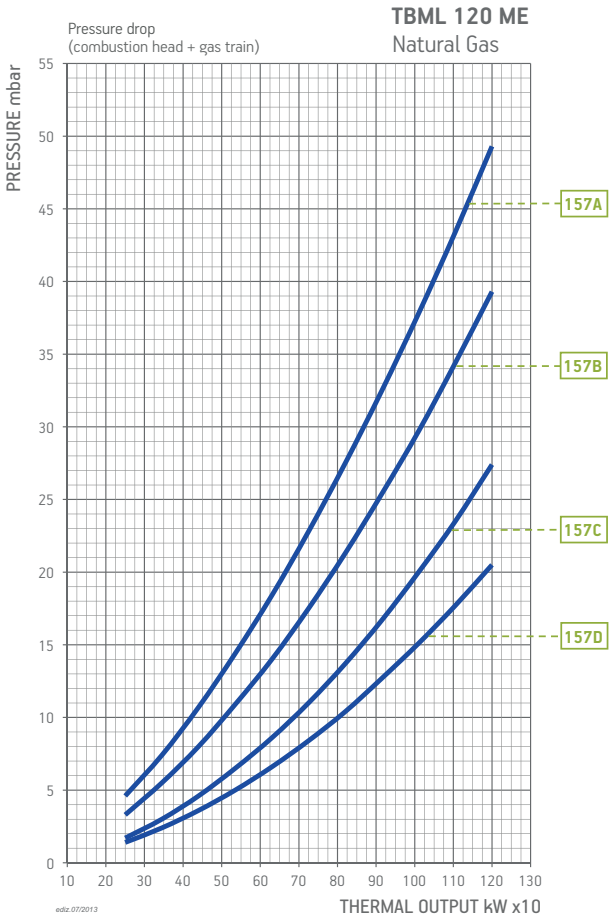
TBML 120 ME: line filter, flex hoses, nozzles, boiler coupling kit.

NOTE

4 Equipped with automatic air closure device.
*) Min thermal capacity with light oil operation.
Net calorific value:
Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³ at reference conditions of 0°C, 1013mbar.
LPG: Hi = 92 MJ/m³ = 22000 kcal/m³, at reference conditions 0°C, 1013mbar.
Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

BURNER/GAS TRAIN MATCH





BURNER/GAS TRAIN MATCH

Burner model	Gas type	Curve on graph	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Note
						Part no.	Part no.	Part no.	Part no.		
TBML 120 MC	Natural gas	152A	CE/EXP	360	CTV	19990582	Included	96000007	Included	D7	
		152B	CE/EXP	360	CTV	19990583	Included	–	Included	D7	
		152C	CE/EXP	500	CTV	19990584	Included	–	Included	D7	
		152D	CE/EXP	500	CTV	19990585	Included	–	Included	D7	
TBML 120 ME	Natural gas	157A	CE/EXP	360	CTV	19990558	Included	96000007	Included	D2	
		157B	CE/EXP	360	CTV	19990559	Included	–	Included	D2	
		157C	CE/EXP	500	CTV	19990524	Included	–	Included	D2	
			CE/EXP	500	CTV	19990725	Included	–	Included	D5	
		157D	CE/EXP	500	CTV	19990525	Included	–	Included	D2	
			CE/EXP	500	CTV	19990726	Included	–	Included	D4	

Burner model	Gas type	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Note
					Part no.	Part no.	Part no.	Part no.		
TBML 120 MC	LPG	CE/EXP	360	CTV	19990582	Included	96000007	Included	D7	
TBML 120 ME	LPG	CE/EXP	360	CTV	19990558	Included	96000007	Included	D2	

To choose the correct gas train please refer to the information on page 17.
For information on the structure, composition, and size of the gas train please refer to the diagrams on page 338.

NOTE

CTV Gas train with Valve Tightness Control.
**) Maximum gas inlet pressure at pressure regulator.

kW 350 - 1600

TBML SERIES

Low NOx

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022 E EN267.

CE 0085

TBML 150 P

TBML 160 MC

TBML 160 ME

DUAL FUEL
GAS/LIGHT OIL BURNERS

	TBML 150 P	TBML 160 MC	TBML 160 ME
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Operation:	two-stage		
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive operation on gas, two-stage on light oil		mechanical two-stage progressive/two-stage	
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Modulating operation on gas, two-stage on light oil			electronic modulation/ two-stage
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel		o	•
Modulation ratio:		1:4	1:4
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 2	class 3	class 3
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2	class 2
Adjusting the combustion head	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•	•
High ventilation efficiency, low electrical input, low noise	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam	mechanical cam	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•	•
Combustion air intake designed to achieve optimum linearity of the air gate opening	•	•	•
CE version gas train is complete with operation and safety valve with electromagnetic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter	•	•	•
Fail proof connectors for burner/gas train connection	•	•	•
Gas train outlet:	up	up	up
Pump connected to fan motor through electromagnetic clutch	•	•	•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•	•	•
Fuel switch device:	manual	manual	manual
Flame detection by UV photocell	•	•	•
Control panel with display diagram for working mode with indication lights	•	•	
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment			•
Electric protection rating:	IP40	IP40	IP40

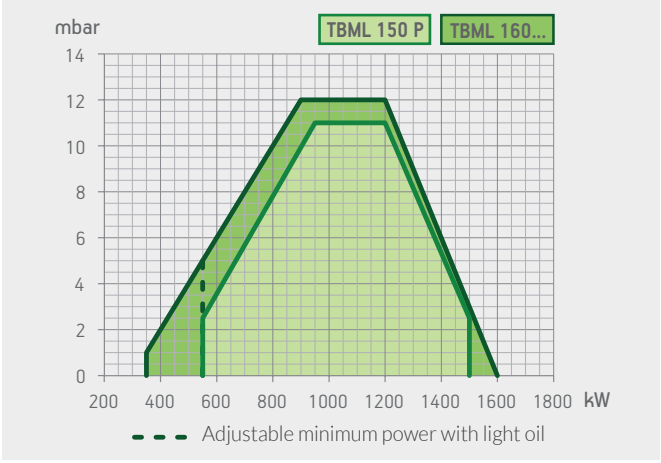
LEGEND:

o Optional, • As standard

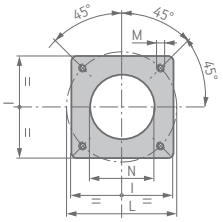
kW 350 - 1600

TBML SERIES

CE 0085



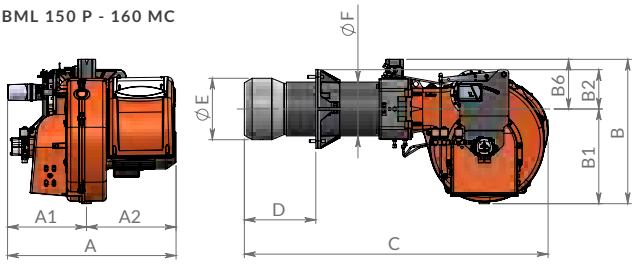
Model	Size of packaging L	P	H	Weight
	mm			kg
TBML 150 P	1070	800	700	90
TBML 160 MC	1070	800	700	105
TBML 160 ME	1070	800	700	105



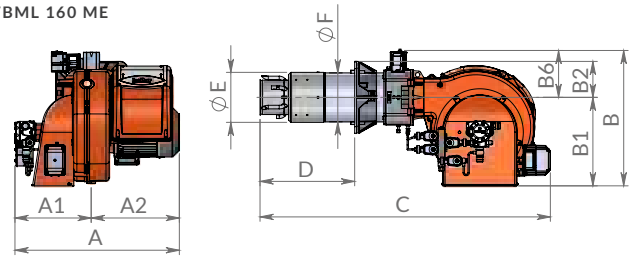
Picture 2

Flange dimensions and boiler drilling template.

TBML 150 P - 160 MC



TBML 160 ME



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBML 150 P	700	330	370	580	380	200	200	1280	200 ÷ 450	224	219	320	280 ÷ 370	M12	235	2
TBML 160 MC	700	330	370	580	380	200	200	1250	285 ÷ 450	224	219	320	280 ÷ 370	M12	235	2
TBML 160 ME	700	330	370	580	380	200	200	1250	285 ÷ 450	224	219	320	280 ÷ 370	M12	235	2

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	550 ÷ 1500	**TBML 150 P**	**56550010**	1,5	3N AC 50Hz 400V	2,2	4)
	see page 204	350(550)* ÷ 1600	**TBML 160 MC**	**56570010**	1,5	3N AC 50Hz 400V	3,0	4)
	see page 204	350(550)* ÷ 1600	**TBML 160 ME**	**56580010**	1,5	3N AC 50Hz 400V	3,0	4)
			Frequency 60 Hz					
	class 2	550 ÷ 1500	**TBML 150 P**	**56555410**	1,5	3N AC 60Hz 380V	2,6	4)
	see page 204	350(550)* ÷ 1600	**TBML 160 MC**	**56575410**	1,5	3N AC 60Hz 380V	3,5	4)
	see page 204	350(550)* ÷ 1600	**TBML 160 ME**	**56585410**	1,5	3N AC 60Hz 380V	3,5	4)

TO COMPLETE THE BURNER

DESCRIPTION
TBML 160 ME: modulating probe for LCM 100 (see page 332)

MODULATING MODE

DESCRIPTION	PART NO.
TBML 160 MC: modulation kit	98000057
TBML 160 MC: modulating probe (see page 332)	

NOTE

4 Equipped with automatic air closure device.
*) Min thermal capacity with light oil operation.
Net calorific value:
Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³ at reference conditions of 0°C, 1013mbar.
LPG: Hi = 92 MJ/m³ = 22000 kcal/m³, at reference conditions 0°C, 1013mbar.
Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

ACCESSORIES AVAILABLE ON REQUEST

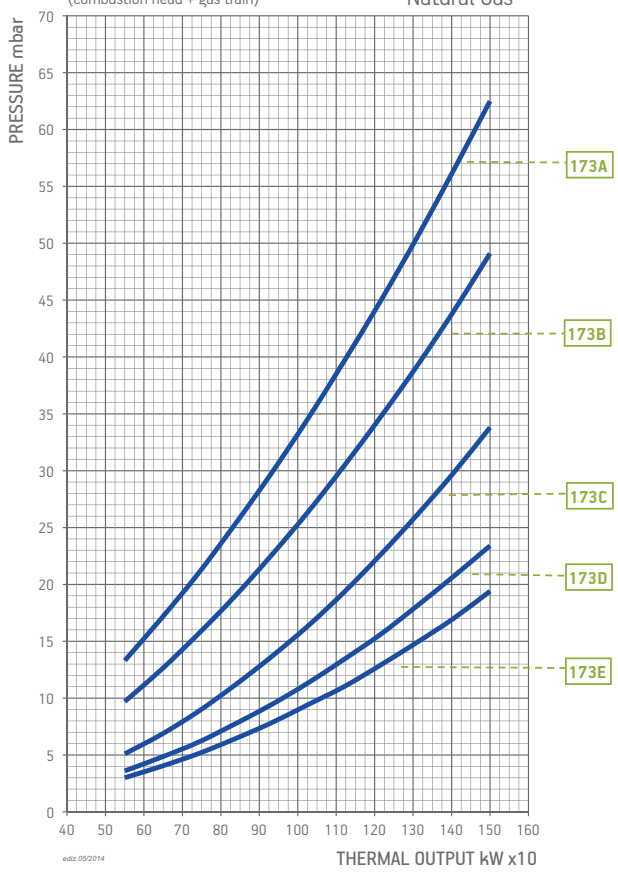
DESCRIPTION	PART NO.
TBML 150 P: line filter 3/8"	98000370
Soundproof burner cover (see page 337)	97980053

BURNER ACCESSORIES

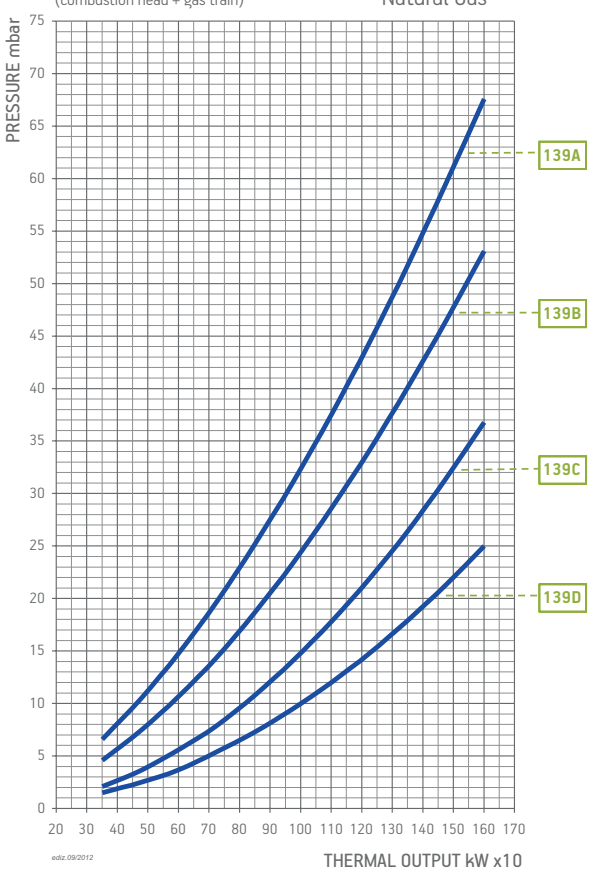
TBML 150 P: flex hoses, nozzles, boiler coupling kit, plug for wiring
TBML 160 MC: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring
TBML 160 ME: line filter, flex hoses, nozzles, boiler coupling kit.

BURNER/GAS TRAIN MATCH

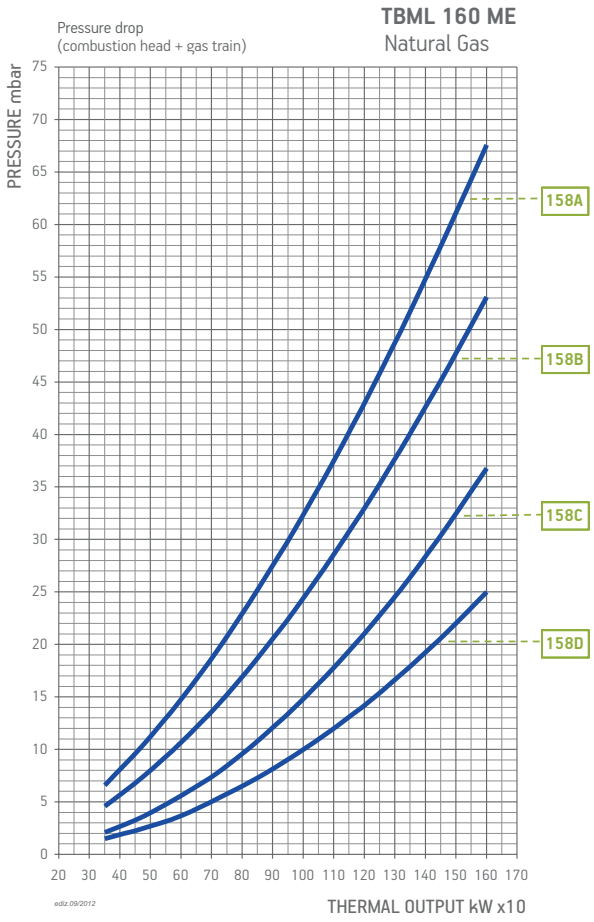
TBML 150 P
Natural Gas



TBML 160 MC
Natural Gas



TBML 160 ME
Natural Gas



kW 350 - 1600

TBML SERIES

BURNER/GAS TRAIN MATCH

Burner model	Gas type	Curve on graph	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Note
						Part no.	Part no.	Part no.	Part no.		
TBML 150 P	Natural gas	173A	CE	360	CTV	19990548	Included	96000007	98000101	BE7	11)
			EXP	360		19990548	Included	96000007	–	BE7	
					CTV	19990548	Included	96000007	98000101	BE7	
		173B	CE	360	CTV	19990549	Included	–	98000101	BE7	11)
			EXP	360		19990549	Included	–	–	BE7	
					CTV	19990549	Included	–	98000101	BE7	
		173C	CE	500	CTV	19990550	Included	–	98000102	BE7	11)
			CE	500	CTV	19990720	Included	–	98000102	D5	11)
			EXP	500		19990550	Included	–	–	BE7	
					CTV	19990550	Included	–	98000102	BE7	
			EXP	500		19990720	Included	–	–	D5	
					CTV	19990720	Included	–	98000102	D5	
		173D	CE	500	CTV	19990563	Included	–	98000101	BE7	11)
			CE	500	CTV	19990721	Included	–	98000101	D5	11)
			EXP	500		19990563	Included	–	–	BE7	
					CTV	19990563	Included	–	98000101	BE7	
			EXP	500		19990721	Included	–	–	D5	
					CTV	19990721	Included	–	98000101	D5	
		173E	CE	500	CTV	19990564	Included	–	98000101	BE7	11)
			CE	500	CTV	19990722	Included	–	98000101	D5	11)
			EXP	500		19990564	Included	–	–	BE7	
					CTV	19990564	Included	–	98000101	BE7	
			EXP	500		19990722	Included	–	–	D5	
					CTV	19990722	Included	–	98000101	D5	
TBML 160 MC	Natural gas	139A	CE/EXP	360	CTV	19990582	Included	96000007	Included	D7	
		139B	CE/EXP	360	CTV	19990583	Included	–	Included	D7	
		139C	CE/EXP	500	CTV	19990584	Included	–	Included	D7	
		139D	CE/EXP	500	CTV	19990585	Included	–	Included	D7	
TBML 160 ME	Natural gas	158A	CE/EXP	360	CTV	19990558	Included	96000007	Included	D2	
		158B	CE/EXP	360	CTV	19990559	Included	–	Included	D2	
		158C	CE/EXP	500	CTV	19990524	Included	–	Included	D2	
			CE/EXP	500	CTV	19990725	Included	–	Included	D2	
		158D	CE/EXP	500	CTV	19990525	Included	–	Included	D2	
			CE/EXP	500	CTV	19990726	Included	–	Included	D4	

Burner model	Gas type	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Note
					Part no.	Part no.	Part no.	Part no.		
TBML 150 P	LPG	CE	360	CTV	19990548	Included	96000007	98000101	BE7	11)
		EXP	360		19990548	Included	96000007	–	BE7	
				CTV	19990548	Included	96000007	98000101	BE7	
TBML 160 MC	LPG	CE/EXP	360	CTV	19990582	Included	96000007	Included	D7	
TBML 160 ME	LPG	CE/EXP	360	CTV	19990558	Included	96000007	Included	D2	

To choose the correct gas train please refer to the information on page 17.
For information on the structure, composition, and size of the gas train please refer to the diagrams on page 338.

NOTE

11) The gas train must be always completed with the valve tightness control kit to comply with the EN676 regulations.
CTV Gas train with Valve Tightness Control.
**) Maximum gas inlet pressure at pressure regulator.

kW 450 - 2000

TBML SERIES

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022 E EN267.

CE 0085

TBML 200 MC

TBML 200 ME

	TBML 200 MC	TBML 200 ME
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive operation on gas, two-stage on light oil	**mechanical two-stage progressive/two-stage**	
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Modulating operation on gas, two-stage on light oil		**modulating electronic/two-stage**
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	•
Modulation ratio:	1:4	1:4
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 2	class 2
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
High ventilation efficiency, low electrical input, low noise	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•
Combustion air intake designed to achieve optimum linearity of the air gate opening	•	•
CE version gas train is complete with operation and safety valve with electromagnetic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter	•	•
Fail proof connectors for burner/gas train connection	•	•
Gas train outlet:	up	up
Pump connected to fan motor through electromagnetic clutch	•	•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell	•	•
Control panel with display diagram for working mode with indication lights	•	
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment		•
Electric protection rating:	IP40	IP40

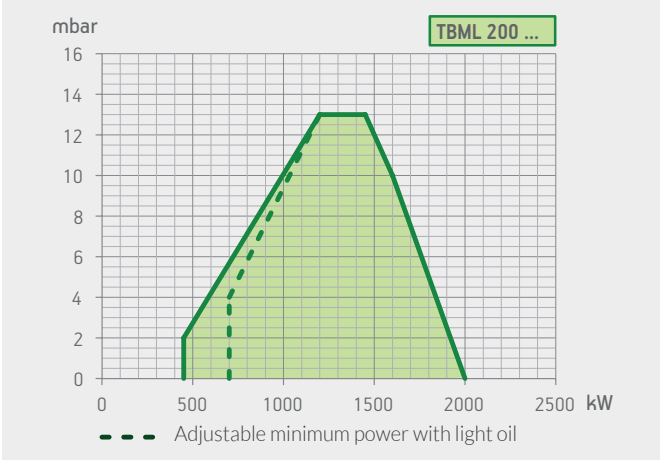
LEGEND:

o Optional, • As standard

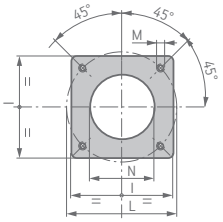
kW 450 - 2000

TBML SERIES

CE 0085



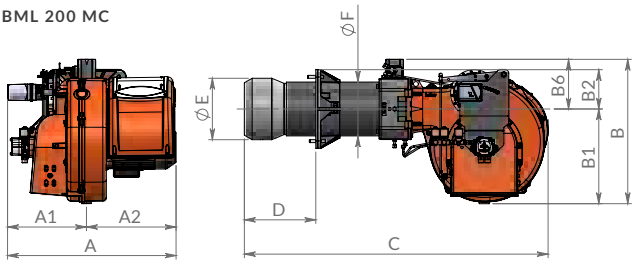
Model	Size of packaging L	P	H	Weight
	mm			kg
TBML 200 MC	1070	800	700	103
TBML 200 ME	1070	800	700	108



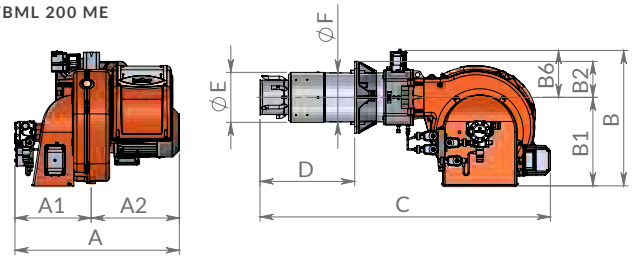
Picture 2

Flange dimensions and boiler drilling template.

TBML 200 MC



TBML 200 ME



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBML 200 MC	700	330	370	580	380	200	200	1270	300 ÷ 470	250	219	320	300 ÷ 370	M12	255	2
TBML 200 ME	700	330	370	580	380	200	200	1270	300 ÷ 470	250	219	320	300 ÷ 370	M12	255	2

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	450(700)* ÷ 2000	**TBML 200 MC**	**56610010**	1,5	3N AC 50Hz 400V	3,0	4)
	class 2	450(700)* ÷ 2000	**TBML 200 ME**	**56620010**	1,5	3N AC 50Hz 400V	3,0	4)
			Frequency 60 Hz					
	class 2	450(700)* ÷ 2000	**TBML 200 MC**	**56615410**	1,5	3N AC 60Hz 380V	3,5	4)
	class 2	450(700)* ÷ 2000	**TBML 200 ME**	**56625410**	1,5	3N AC 60Hz 380V	3,5	4)

TO COMPLETE THE BURNER

DESCRIPTION
TBML 200 ME: modulating probe for LCM 100 (see page 332)

MODULATING MODE

DESCRIPTION	PART NO.
TBML 200 MC: modulation kit	98000057
TBML 200 MC: modulating probe (see page 332)	

NOTE

4 Equipped with automatic air closure device.
*) Min thermal capacity with light oil operation.
Net calorific value:
Natural gas: Hi = 35,80 MJ/m^3 = 8550 kcal/m^3 at reference conditions of 0°C, 1013mbar.
LPG: Hi = 92 MJ/m^3 = 22000 kcal/m^3, at reference conditions 0°C, 1013mbar.
Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

ACCESSORIES AVAILABLE ON REQUEST

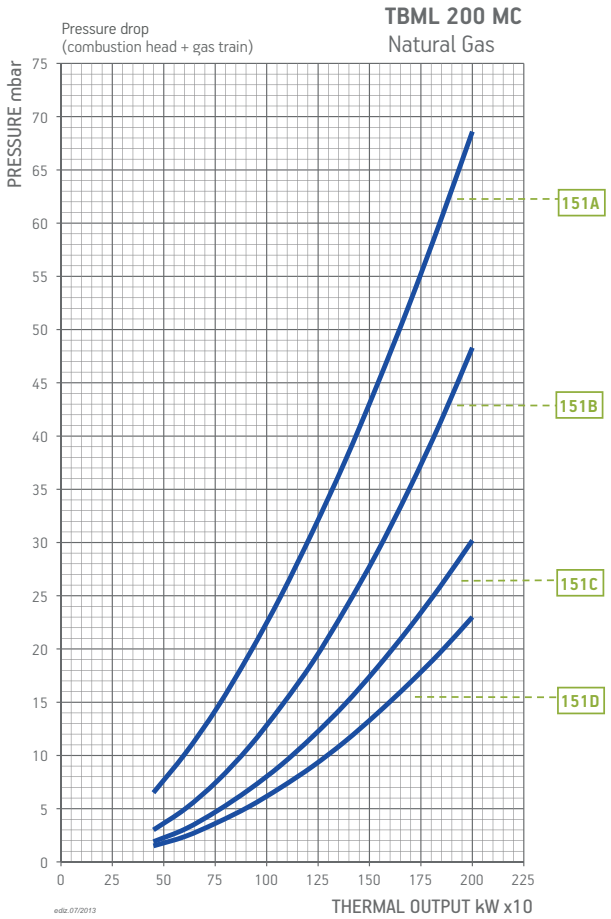
DESCRIPTION	PART NO.
Soundproof burner cover (see page 337)	97980053

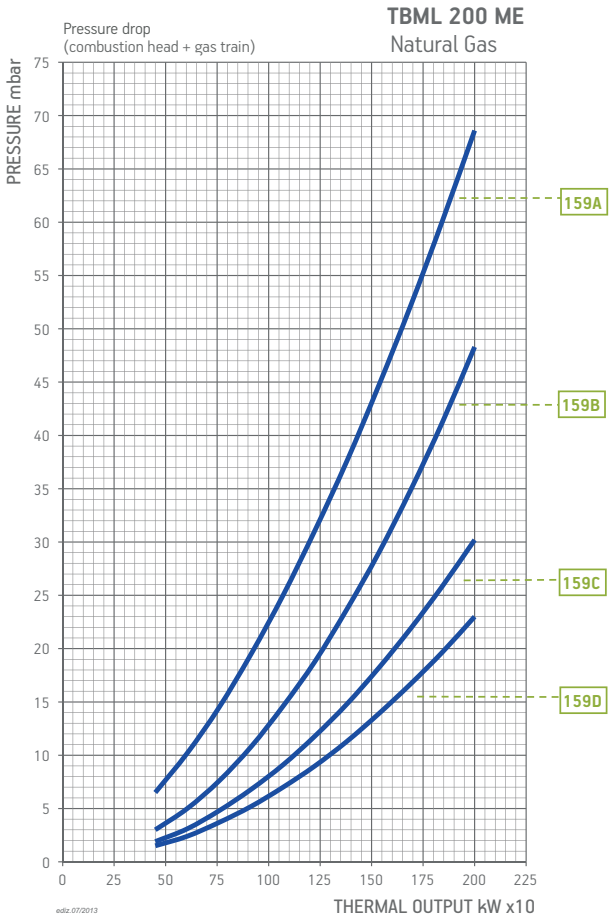
BURNER ACCESSORIES

TBML 200 MC: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring

TBML 200 ME: line filter, flex hoses, nozzles, boiler coupling kit.

BURNER/GAS TRAIN MATCH





BURNER/GAS TRAIN MATCH

Burner model	Gas type	Curve on graph	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Note
						Part no.	Part no.	Part no.	Part no.		
TBML 200 MC	Natural gas	151A	CE/EXP	360	CTV	19990583	Included	–	Included	D7	
		151B	CE/EXP	500	CTV	19990584	Included	–	Included	D7	
		151C	CE/EXP	500	CTV	19990585	Included	–	Included	D7	
		151D	CE/EXP	500	CTV	19990586	Included	–	Included	D7	
TBML 200 ME	Natural gas	159A	CE/EXP	360	CTV	19990559	Included	–	Included	D2	
		159B	CE/EXP	500	CTV	19990524	Included	–	Included	D2	
			CE/EXP	500	CTV	19990725	Included	–	Included	D4	
		159C	CE/EXP	500	CTV	19990525	Included	–	Included	D2	
			CE/EXP	500	CTV	19990726	Included	–	Included	D4	
		159D	CE/EXP	500	CTV	19990526	Included	–	Included	D2	
			CE/EXP	500	CTV	19990727	Included	–	Included	D4	

Burner model	Gas type	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Note
					Part no.	Part no.	Part no.	Part no.		
TBML 200 MC	LPG	CE/EXP	360	CTV	19990583	Included	–	Included	D7	
TBML 200 ME	LPG	CE/EXP	360	CTV	19990559	Included	–	Included	D2	

To choose the correct gas train please refer to the information on page 17.
For information on the structure, composition, and size of the gas train please refer to the diagrams on page 338.

NOTE

CTV Gas train with Valve Tightness Control.
**) Maximum gas inlet pressure at pressure regulator.

kW 450 - 2100

TBML SERIES

Low NOx

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022 E EN267.

CE 0085

TBML 210 LX MC

TBML 210 LX ME

	TBML 210 LX MC	TBML 210 LX ME
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive operation on gas, two-stage on light oil	**mechanical two-stage progressive/two-stage**	
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Modulating operation on gas, two-stage on light oil		**modulating electronic/two-stage**
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	•
Modulation ratio:	1:6	1:6
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 3	class 3
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•
Device made of sound-absorbing material to reduce fan noise	•	•
CE version gas train is complete with operation and safety valve with electromagnetic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter	•	•
Fail proof connectors for burner/gas train connection	•	•
Gas train outlet:	up	up
Pump connected to fan motor through electromagnetic clutch	•	•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell	•	•
Control panel with display diagram for working mode with indication lights	•	
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment		•
Electric protection rating:	IP40	IP40

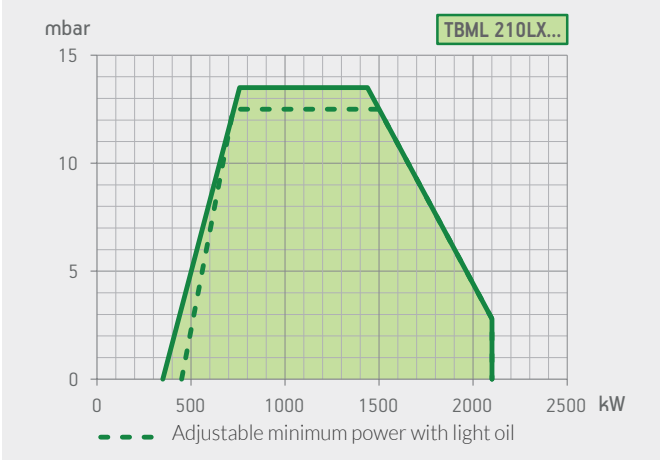
LEGEND:

o Optional, • As standard

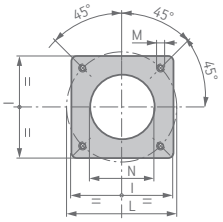
kW 450 - 2100

TBML SERIES

CE 0085



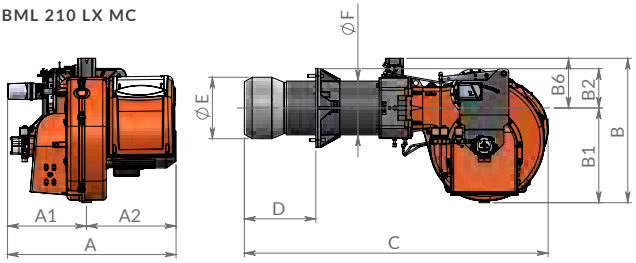
Model	Size of packaging L	P	H	Weight
	mm			kg
TBML 210 LX MC	1070	870	720	130
TBML 210 LX ME	1070	870	720	129



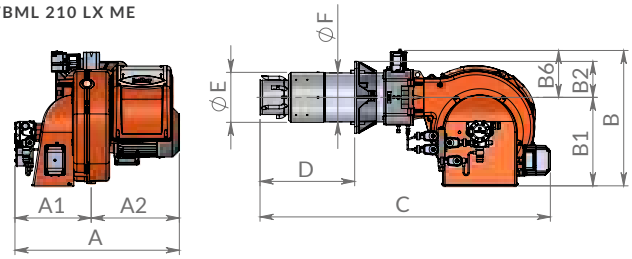
Picture 2

Flange dimensions and boiler drilling template.

TBML 210 LX MC



TBML 210 LX ME



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBML 210 LX MC	770	350	420	600	400	200	200	1300	280 - 450	224	219	320	280	M12	239	2
TBML 210 LX ME	770	350	420	600	400	200	200	1300	280 - 450	224	219	320	280	M12	239	2

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	see page 212	450(550)* ÷ 2100	**TBML 210 LX MC**	**56730010**	1,5	3N AC 50Hz 400V	5,5	4)
	see page 212	450(550)* ÷ 2100	**TBML 210 LX ME**	**56740010**	1,5	3N AC 50Hz 400V	5,5	4)
			Frequency 60 Hz					
	see page 212	450(550)* ÷ 2100	**TBML 210 LX MC**	**56735410**	1,5	3N AC 60Hz 380V	7,5	4)
	see page 212	450(550)* ÷ 2100	**TBML 210 LX ME**	**56745410**	1,5	3N AC 60Hz 380V	7,5	4)

TO COMPLETE THE BURNER

DESCRIPTION
TBML 200 ME: modulating probe for LCM 100 (see page 332)

MODULATING MODE

DESCRIPTION	PART NO.
TBML 200 MC: modulation kit	98000057
TBML 200 MC: modulating probe (see page 332)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 337)	97980053

BURNER ACCESSORIES

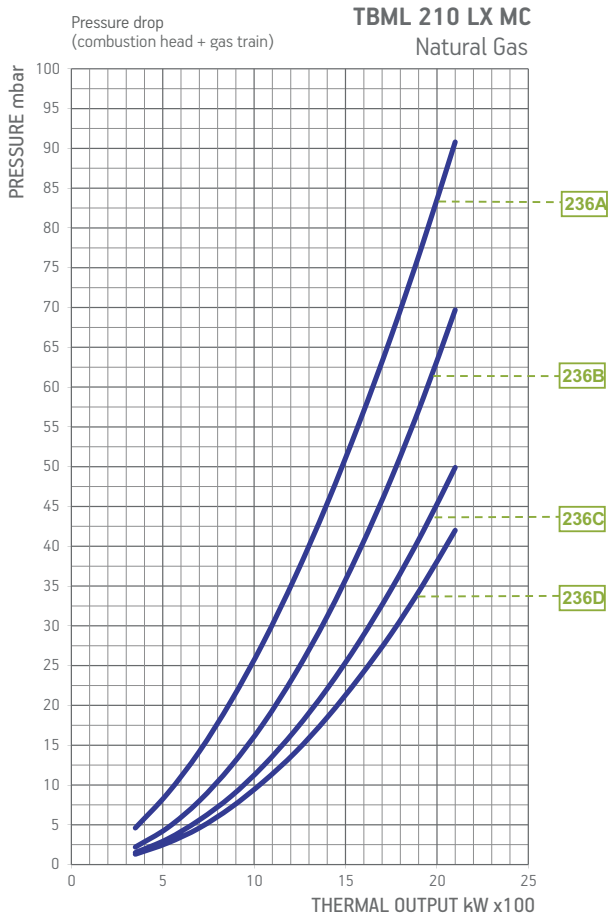
TBML 200 MC: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring

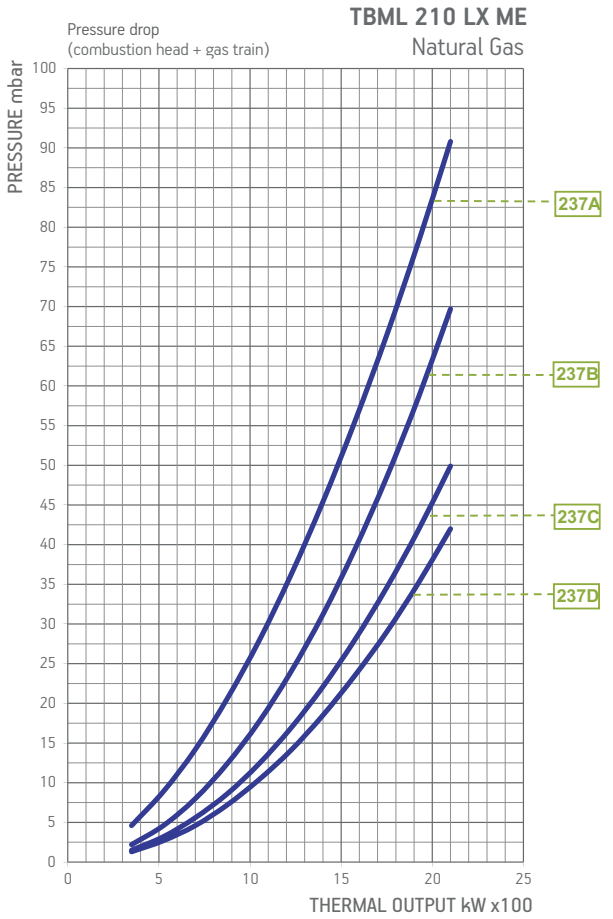
TBML 200 ME: line filter, flex hoses, nozzles, boiler coupling kit.

NOTE

4 Equipped with automatic air closure device.
*) Min thermal capacity with light oil operation.
Net calorific value:
Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³ at reference conditions of 0°C, 1013mbar.
LPG: Hi = 92 MJ/m³ = 22000 kcal/m³, at reference conditions 0°C, 1013mbar.
Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

BURNER/GAS TRAIN MATCH





BURNER/GAS TRAIN MATCH

Burner model	Gas type	Curve on graph	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Note
						Part no.	Part no.	Part no.	Part no.		
TBML 210 LX MC	Natural gas	236A	CE/EXP	360	CTV	19990624	Included	–	Included	D7	
		236B	CE/EXP	500	CTV	19990584	2”	–	Included	D7	
		236C	CE/EXP	500	CTV	19990585	DN65	–	Included	D7	
		236D	CE/EXP	500	CTV	19990586	DN80	–	Included	D7	
TBML 210 LX ME	Natural gas	237A	CE/EXP	360	CTV	19990562	Included	–	Included	D2	
		237B	CE/EXP	500	CTV	19990524	2”	–	Included	D2	
			CE/EXP	500	CTV	19990725	2”	–	Included	D4	
		237C	CE/EXP	500	CTV	19990525	DN65	–	Included	D2	
			CE/EXP	500	CTV	19990726	DN65	–	Included	D4	
		237D	CE/EXP	500	CTV	19990526	DN80	–	Included	D2	
			CE/EXP	500	CTV	19990727	DN80	–	Included	D4	

Burner model	Gas type	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Kit ugelli GPL	Pic.	Note
					Part no.	Part no.	Part no.	Part no.	Part no.		
TBML 210 LX MC	LPG	CE/EXP	360	CTV	19990624	Included	–	Included	98000397	D7	
TBML 210 LX ME	LPG	CE/EXP	360	CTV	19990562	Included	–	Included	98000397	D2	

To choose the correct gas train please refer to the information on page 17.
For information on the structure, composition, and size of the gas train please refer to the diagrams on page 338.

NOTE

CTV Gas train with Valve Tightness Control.
**) Maximum gas inlet pressure at pressure regulator.

kW 500 - 2600

TBML SERIES

CONFORM TO: E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022

CE

TBML 260 MC

TBML 260 ME

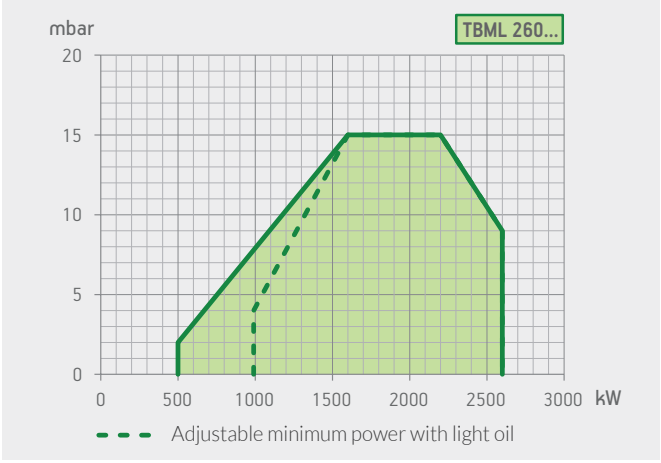
	TBML 260 MC	TBML 260 ME
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive operation on gas, two-stage on light oil	**mechanical two-stage progressive/two-stage**	
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Modulating operation on gas, two-stage on light oil		**electronic modulation/two-stage**
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	•
Modulation ratio:	1:5	1:5
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 2	class 2
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
High ventilation efficiency, low electrical input, low noise	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•
CE version gas train is complete with operation and safety valve with electromagnetic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter	•	•
Fail proof connectors for burner/gas train connection	•	•
Gas train outlet:	up	up
Pump connected to fan motor through electromagnetic clutch	•	•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell	•	•
Control panel with display diagram for working mode with indication lights	•	
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment		•
Electric protection rating:	IP40	IP40

LEGEND:

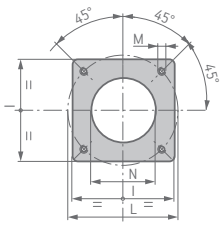
o Optional, • As standard

kW **500 - 2600**

TBML SERIES



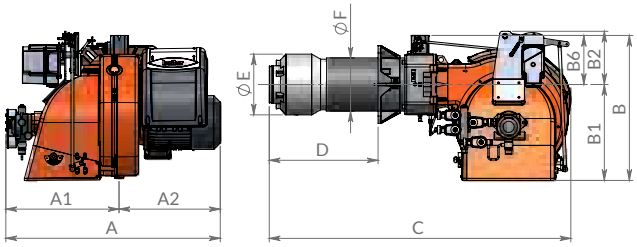
Model	Size of packaging L	P	H	Weight
	mm			kg
TBML 260 MC	1070	870	720	132
TBML 260 ME	1070	870	720	127



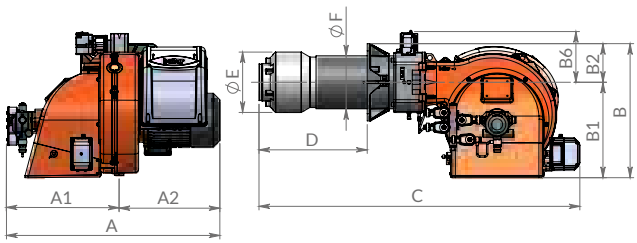
Picture 2

Flange dimensions and boiler drilling template.

TBML 260 MC



TBML 260 ME



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	B7 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBML 260 MC	765	345	420	600	400	200	200	-	1280	300 ÷ 470	270	219	320	310 ÷ 370	M12	275	2
TBML 260 ME	765	345	420	600	400	200	200	-	1280	300 ÷ 470	270	219	320	310 ÷ 370	M12	275	2

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	500(900)* ÷ 2600	**TBML 260 MC**	**56640010**	1,5	3N AC 50Hz 400V	5,5	4) 16)
	class 2	500(900)* ÷ 2600	**TBML 260 ME**	**56650010**	1,5	3N AC 50Hz 400V	5,5	4) 16)
			Frequency 60 Hz					
	class 2	500(900)* ÷ 2600	**TBML 260 MC**	**56645410**	1,5	3N AC 60Hz 380V	7,5	4)
	class 2	500(900)* ÷ 2600	**TBML 260 ME**	**56655410**	1,5	3N AC 60Hz 380V	7,5	4)

TO COMPLETE THE BURNER

DESCRIPTION
TBML 260 ME: modulating probe for LCM 100 (see page 332)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
TBML 260 MC/260 ME: soundproof burner cover (see page 337)	97980053

MODULATING MODE

DESCRIPTION	PART NO.
TBML 260 MC: modulation kit	98000057
TBML 260 MC: modulating probe (see page 332)	

BURNER ACCESSORIES

TBML 260 MC: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring

TBML 260 ME: line filter, flex hoses, nozzles, boiler coupling kit.

NOTE

4 Equipped with automatic air closure device.
16 CE certified according to Gas Directive 2009/142/EC and European standard EN267.
*) Min thermal capacity with light oil operation.
Net calorific value:
Natural gas: Hi = 35,80 MJ/m^3 = 8550 kcal/m^3 at reference conditions of 0°C, 1013mbar.
LPG: Hi = 92 MJ/m^3 = 22000 kcal/m^3, at reference conditions 0°C, 1013mbar.
Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

Low NOx

CONFORM TO: GAS DIRECTIVE EU/2016-426 | DIRECTIVE E.M.C. 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022 E EN267.

CE 0085

TBML 310 LX MC

TBML 310 LX ME

	TBML 310 LX MC	TBML 310 LX ME
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive operation on gas, two-stage on light oil	**mechanical two-stage progressive/two-stage**	
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Modulating operation on gas, two-stage on light oil		**electronic modulation/two-stage**
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	•
Modulation ratio:	1:6	1:6
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 3	class 3
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
High ventilation efficiency, low electrical input, low noise	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•
Device made of sound-absorbing material to reduce fan noise	•	•
CE version gas train is complete with operation and safety valve with electromagnetic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter	•	•
Fail proof connectors for burner/gas train connection	•	•
Gas train outlet:	up	up
Pump connected to fan motor through electromagnetic clutch	•	•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell	•	•
Control panel with display diagram for working mode with indication lights	•	
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment		•
Electric protection rating:	IP40	IP40

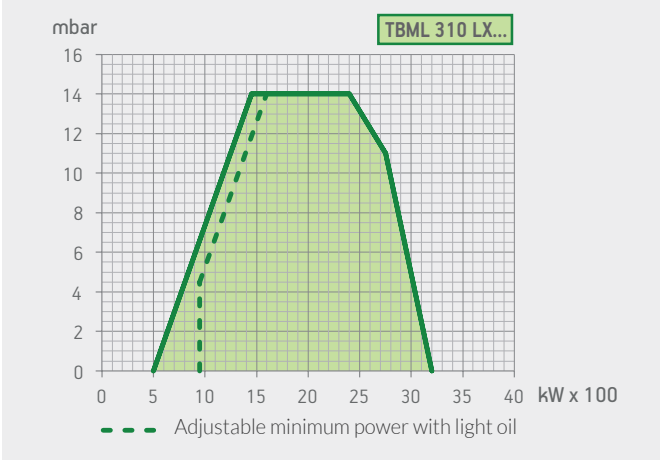
LEGEND:

o Optional, • As standard

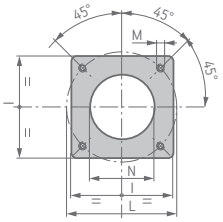
kW 500 - 3200

TBML SERIES

CE 0085



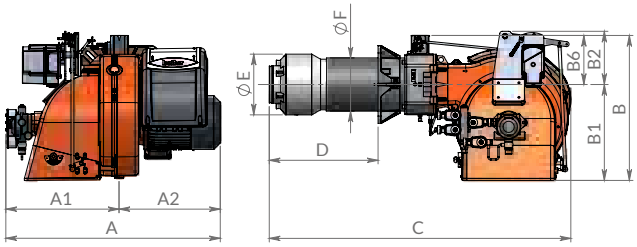
Model	Size of packaging L	P	H	Weight
	mm			kg
TBML 310 LX MC	1070	1070	810	168
TBML 310 LX ME	1070	1070	810	164



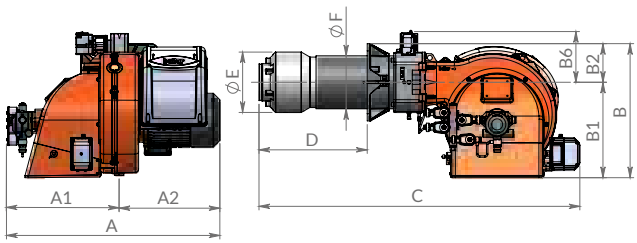
Picture 2

Flange dimensions and boiler drilling template.

TBML 310 LX MC



TBML 310 LX ME



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
TBML 310 LX MC	880	465	415	620	400	220	200	1240	230 ÷ 440	250	219	320	310 ÷ 370	M12	255	2
TBML 310 LX ME	880	465	415	600	400	200	200	1330	230 ÷ 440	250	219	320	310 ÷ 370	M12	255	2

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	see page 218	500(950)* ÷ 3200	**TBML 310 LX MC**	**56880010**	1,5	3N AC 50Hz 400V	7,5	3) 4)
	see page 218	500(950)* ÷ 3200	**TBML 310 LX ME**	**56890010**	1,5	3N AC 50Hz 400V	7,5	3) 4)
			Frequency 60 Hz					
	see page 218	500(950)* ÷ 3200	**TBML 310 LX MC**	**56885410**	1,5	3N AC 60Hz 380V	9,0	3) 4)
	see page 218	500(950)* ÷ 3200	**TBML 310 LX ME**	**56895410**	1,5	3N AC 60Hz 380V	9,0	3) 4)

TO COMPLETE THE BURNER

DESCRIPTION
TBML 310 LX ME: modulating probe for LCM 100 (see page 332)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 337)	97980057

MODULATING MODE

DESCRIPTION	PART NO.
TBML 310 LX MC: modulation kit	98000057
TBML 310 LX MC: modulating probe (see page 332)	

BURNER ACCESSORIES

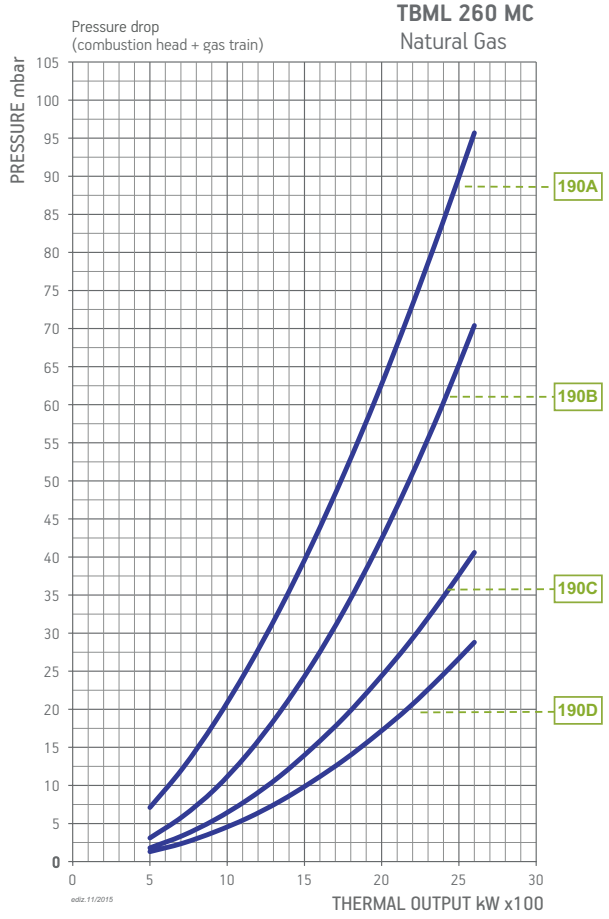
TBML 310 LX MC: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring
TBML 310 LX ME: line filter, flex hoses, nozzles, boiler coupling kit.

NOTES

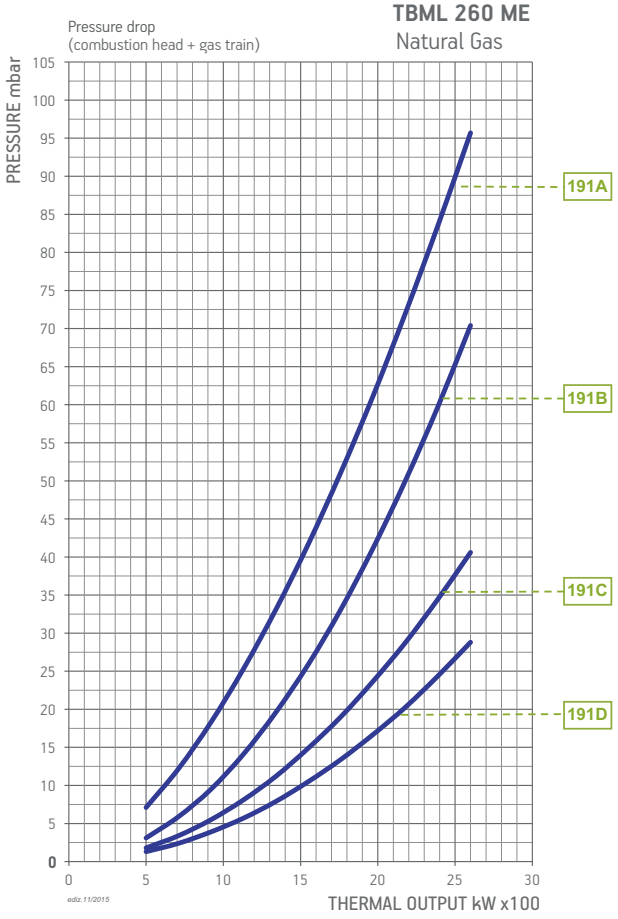
3 Sound proof lid on burner air intake.
4 Equipped with automatic air closure device.
*) Min thermal capacity with light oil operation.
Net calorific value:
Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³ at reference conditions of 0°C, 1013mbar.
LPG: Hi = 92 MJ/m³ = 22000 kcal/m³, at reference conditions 0°C, 1013mbar.
Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

BURNER/GAS TRAIN MATCH

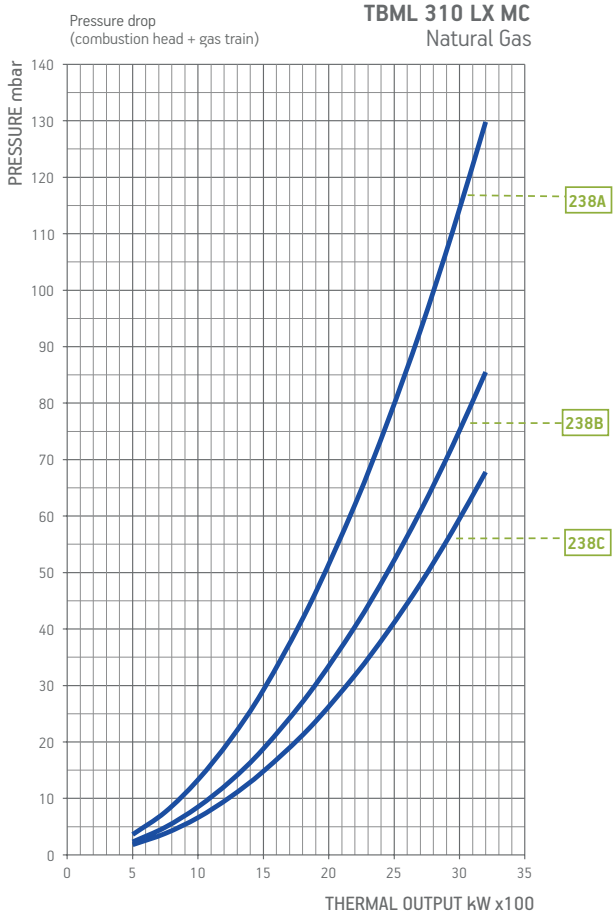
TBML 260 MC
Natural Gas



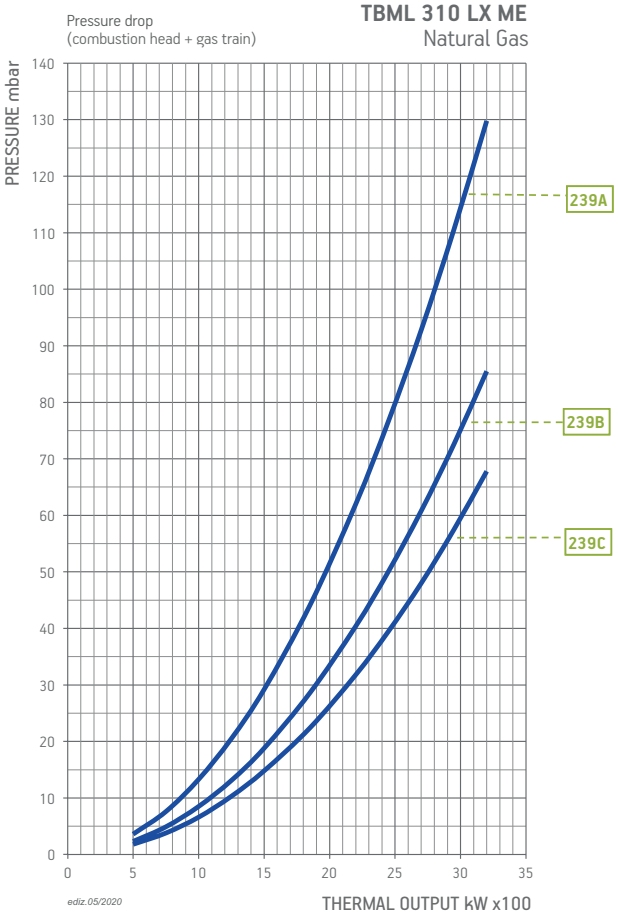
TBML 260 ME
Natural Gas



TBML 310 LX MC
Natural Gas



TBML 310 LX ME
Natural Gas



BURNER/GAS TRAIN MATCH

Burner model	Gas type	Curve on graph	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Note
						Part no.	Part no.	Part no.	Part no.		
TBML 260 MC	Natural gas	190A	CE/EXP	360	CTV	19990624	Included	–	Included	D7	
		190B	CE/EXP	500	CTV	19990584	Included	–	Included	D7	
		190C	CE/EXP	500	CTV	19990585	Included	–	Included	D7	
		190D	CE/EXP	500	CTV	19990586	Included	–	Included	D7	
TBML 260 ME	Natural gas	191A	CE/EXP	360	CTV	19990562	Included	–	Included	D2	
		191B	CE/EXP	500	CTV	19990524	Included	–	Included	D2	
			CE/EXP	500	CTV	19990725	Included	–	Included	D4	
		191C	CE/EXP	500	CTV	19990525	Included	–	Included	D2	
			CE/EXP	500	CTV	19990726	Included	–	Included	D4	
		191D	CE/EXP	500	CTV	19990526	Included	–	Included	D2	
			CE/EXP	500	CTV	19990727	Included	–	Included	D4	
TBML 310 LX MC	Natural gas	238A	CE/EXP	500	CTV	19990584	Included	–	Included	D7	
		238B	CE/EXP	500	CTV	19990585	Included	–	Included	D7	
		238C	CE/EXP	500	CTV	19990586	Included	–	Included	D7	
TBML 310 LX ME	Natural gas	239A	CE/EXP	500	CTV	19990524	Included	–	Included	D2	
			CE/EXP	500	CTV	19990725	Included	–	Included	D4	
		239B	CE/EXP	500	CTV	19990525	Included	–	Included	D2	
			CE/EXP	500	CTV	19990726	Included	–	Included	D4	
		239C	CE/EXP	500	CTV	19990526	Included	–	Included	D2	
			CE/EXP	500	CTV	19990727	Included	–	Included	D4	

Burner model	Gas type	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	LPG kit	Pic.	Note
					Part no.	Part no.	Part no.	Part no.	Part no.		
TBML 260 MC	LPG	CE/EXP	360	CTV	19990624	Included	–	Included	98000368	D7	
TBML 260 ME	LPG	CE/EXP	360	CTV	19990562	Included	–	Included	98000368	D2	
TBML 310 LX MC	LPG	CE/EXP	360	CTV	19990584	Included	–	Included		D7	
TBML 310 LX ME	LPG	CE/EXP	360	CTV	19990524	Included	–	Included		D2	

To choose the correct gas train please refer to the information on page 17.
For information on the structure, composition, and size of the gas train please refer to the diagrams on page 338.

NOTE

CTV Gas train with Valve Tightness Control.
**) Maximum gas inlet pressure at pressure regulator.

kW 700 - 3600

TBML SERIES

CONFORM TO: E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022

CE

TBML 360 MC

TBML 360 ME

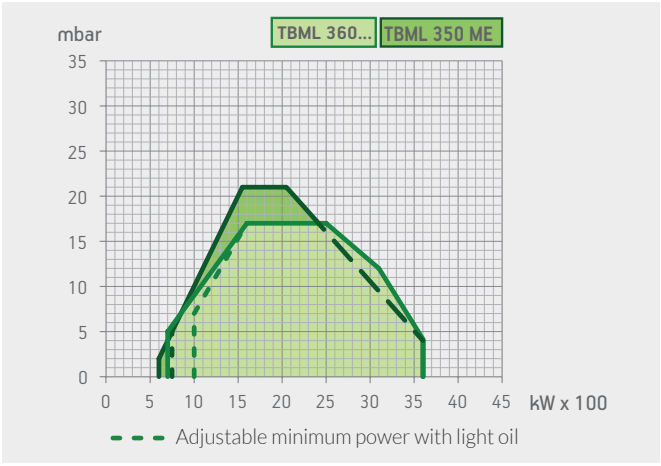
	TBML 360 MC	TBML 360 ME
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive operation on gas, two-stage on light oil	**mechanical two-stage progressive/two-stage**	
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Modulating operation on gas, two-stage on light oil		**electronic modulation/two-stage**
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	•
Modulation ratio:	1:5	1:5
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 2	class 2
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
High ventilation efficiency, low electrical input, low noise	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•
Device made of sound-absorbing material to reduce fan noise	•	•
CE version gas train is complete with operation and safety valve with electromagnetic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter	•	•
Fail proof connectors for burner/gas train connection	•	•
Gas train outlet:	up	up
Pump connected to fan motor through electromagnetic clutch	•	•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell	•	•
Control panel with display diagram for working mode with indication lights	•	
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment		•
Electric protection rating:	IP40	IP40

LEGEND:

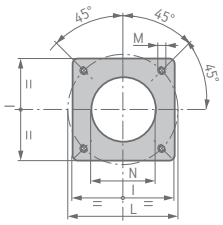
o Optional, • As standard

kW 700 - 3600

TBML SERIES



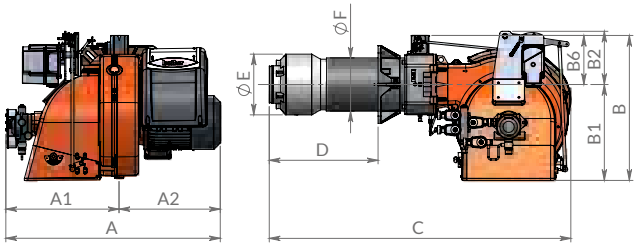
Model	Size of packaging L	P	H	Weight
	mm			kg
TBML 360 MC	1070	1070	810	168
TBML 360 ME	1070	1070	810	160



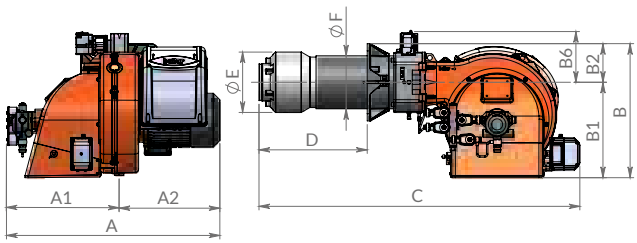
Picture 2

Flange dimensions and boiler drilling template.

TBML 360 MC



TBML 360 ME



DUAL FUEL
GAS/LIGHT OIL BURNERS

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBML 360 MC	910	490	420	600	400	200	200	1360	300 ÷ 470	270	219	320	310 ÷ 370	M12	275	2
TBML 360 ME	910	490	420	620	400	220	200	1280	300 ÷ 470	270	219	320	310 ÷ 370	M12	275	2

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	700(1000)* ÷ 3600	**TBML 360 MC**	**56670010**	1,5	3N AC 50Hz 400V	7,5	3) 4) 16)
	class 2	700(1000)* ÷ 3600	**TBML 360 ME**	**56680010**	1,5	3N AC 50Hz 400V	7,5	3) 4) 16)
			Frequency 60 Hz					
	class 2	700(1000)* ÷ 3600	**TBML 360 MC**	**56675410**	1,5	3N AC 60Hz 380V	9,0	3) 4)
	class 2	700(1000)* ÷ 3600	**TBML 360 ME**	**56685410**	1,5	3N AC 60Hz 380V	9,0	3) 4)

TO COMPLETE THE BURNER

DESCRIPTION
TBML 360 ME: modulating probe for LCM 100 (see page 332)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
TBML 360 MC/360 ME: soundproof burner cover (see page 337)	97980057

MODULATING MODE

DESCRIPTION	PART NO.
TBML 360 MC: modulation kit	98000057
TBML 360 MC: modulating probe (see page 332)	

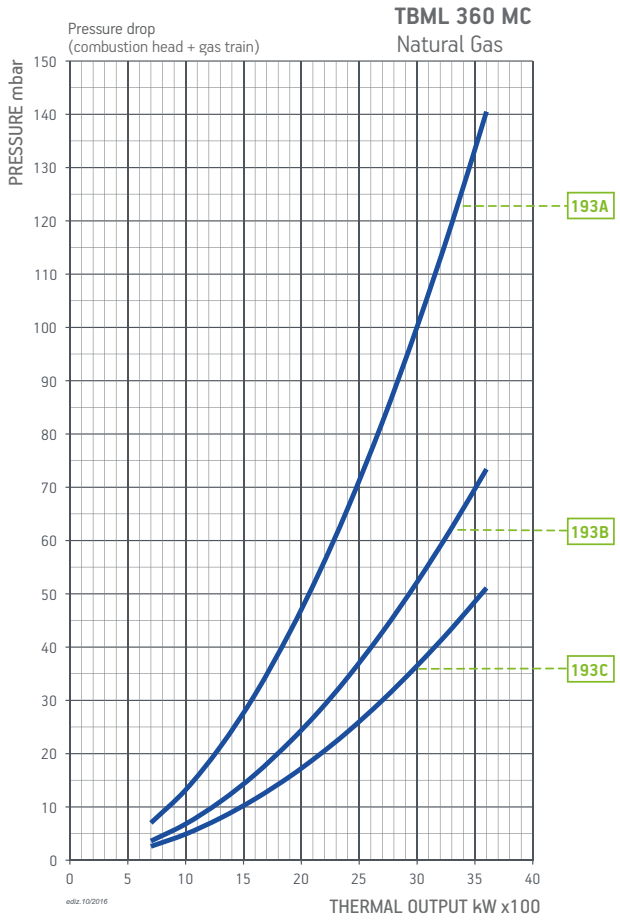
BURNER ACCESSORIES

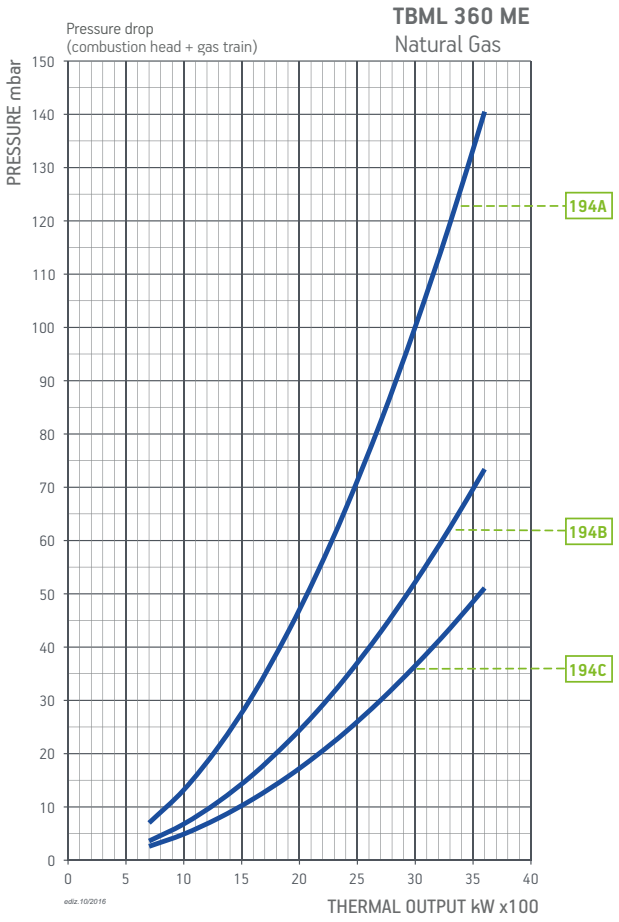
TBML 360 MC: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring
TBML 360 ME: line filter, flex hoses, nozzles, boiler coupling kit.

NOTE

3 Sound proof lid on burner air intake.
4 Equipped with automatic air closure device.
*) Min thermal capacity with light oil operation.
Net calorific value:
Natural gas: Hi = 35,80 MJ/m^3 = 8550 kcal/m^3 at reference conditions of 0°C, 1013mbar.
LPG: Hi = 92 MJ/m^3 = 22000 kcal/m^3, at reference conditions 0°C, 1013mbar.
Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

BURNER/GAS TRAIN MATCH





BURNER/GAS TRAIN MATCH

Burner model	Gas type	Curve on graph	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Note
						Part no.	Part no.	Part no.	Part no.		
TBML 360 MC	Natural gas	193A	CE/EXP	500	CTV	19990584	Included	–	Included	D7	
		193B	CE/EXP	500	CTV	19990585	Included	–	Included	D7	
		193C	CE/EXP	500	CTV	19990586	Included	–	Included	D7	
TBML 360 ME	Natural gas	194A	CE/EXP	500	CTV	19990524	Included	–	Included	D2	
			CE/EXP	500	CTV	19990725	Included	–	Included	D4	
		194B	CE/EXP	500	CTV	19990525	Included	–	Included	D2	
			CE/EXP	500	CTV	19990726	Included	–	Included	D4	
		194C	CE/EXP	500	CTV	19990526	Included	–	Included	D2	
			CE/EXP	500	CTV	19990727	Included	–	Included	D4	

Burner model	Gas type	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	LPG kit	Pic.	Note
					Part no.	Part no.	Part no.	Part no.	Part no.		
TBML 360 MC	LPG	CE/EXP	500	CTV	19990584	Included	–	Included	98000369	D7	
TBML 360 ME	LPG	CE/EXP	500	CTV	19990524	Included	–	Included	98000369	D2	

To choose the correct gas train please refer to the information on page 17.
For information on the structure, composition, and size of the gas train please refer to the diagrams on page 338.

NOTE

CTV Gas train with Valve Tightness Control.
**) Maximum gas inlet pressure at pressure regulator.

kW 600 - 4700

TBML SERIES

Low NOx

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022 E EN267.

CE 0085

DUAL FUEL
GAS/LIGHT OIL BURNERS

	TBML 450 LX ME	TBML 450 LX ME V
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive control. Modulating mode is available for both fuels by the modulation kit (supplied separately)	**electronic modulation**	**electronic modulation**
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	•
Modulation ratio:	natural gas: 1:7 light oil: 1:4	natural gas: 1:7 light oil: 1:4
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 3	class 3
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
Fixed boiler coupling flange.	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler.	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	electric cam	electric cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•
Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption		•
CE version gas train is complete with operation and safety valve with electromagnetic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter	•	•
Fail proof connectors for burner/gas train connection.	•	•
Gas train outlet:	down	down
Electric motor for pump drive	•	•
Fuel supply circuit made of gear pump with pressure adjustment, control flow valve, shut-off valves and safety valve, safety pressure switch	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment	•	•
Electric protection rating:	IP54	IP54

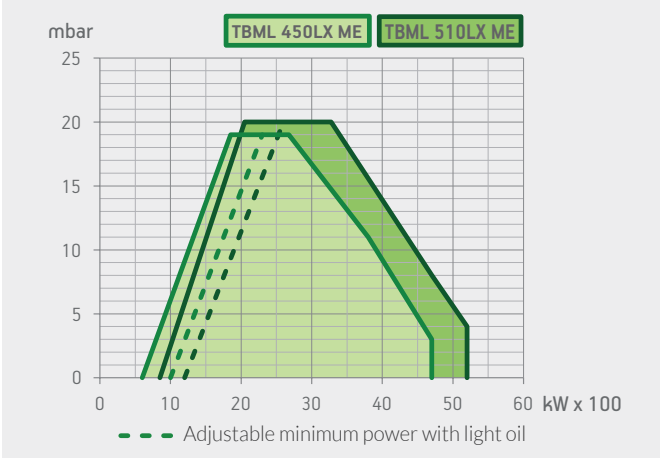
LEGEND:

o Optional, • As standard

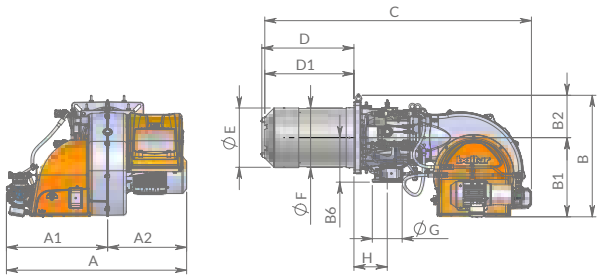
kW 600 - 4700

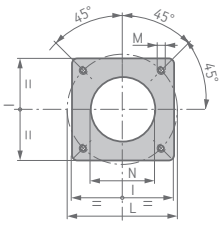
TBML SERIES

CE 0085



Model	Size of packaging L	P	H	Weight
	mm			kg
TBML 450 LX ME	1520	2000	1160	405
TBML 450 LX ME V	1520	2000	1160	410





Picture 2

Flange dimensions and boiler drilling template.

DUAL FUEL
GAS/LIGHT OIL BURNERS

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	H mm	D mm	D1 mm Min	D1 mm Max	ø E mm	G mm	ø F mm	R mm	R1 mm	I mm	ø L mm Min	ø L mm Max	M	ø N mm	Pic.
TBML 450 LX ME	1200	670	530	810	525	285	295	1850	223	650	547	597	397	DN80	410	1120	1000	480	520	600	M20	415	2
TBML 450 LX ME V	1200	670	530	810	525	285	295	1850	223	650	547	597	397	DN80	410	1120	1000	480	520	600	M20	415	2

Inverter	O2 Kit	CO Kit	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
					Frequency 50 Hz					
			see page 226	600(1000)* ÷ 4700	**TBML 450 LX ME**	**56760010**	1,5	3N AC 50Hz 400V	9,2+1,5	4) 19)
	●	o	see page 226	600(1000)* ÷ 4700	**TBML 450 LX ME V**	**56760015**	1,5	3N AC 50Hz 400V	9,2+1,5	4) 19)
					Frequency 60 Hz					
			see page 226	600(1000)* ÷ 4700	**TBML 450 LX ME**	**56765410**	1,5	3N AC 60Hz 380V	9,2+1,5	4) 19)
	●	o	see page 226	600(1000)* ÷ 4700	**TBML 450 LX ME V**	**on request**	1,5	3N AC 60Hz 380V	9,2+1,5	4) 19)

o Optional, ● As standard

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
Modulation kit (see page 332)	98000059
Modulating probe for LCM 100 (see page 332)	
Nozzle (see page 333)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
O2 control kit NEW	98000460
CO control kit NEW	98000461
Soundproof burner cover (see page 337)	97980058
Soundproof burner cover (see page 337)	97980059

NOTE

4 Equipped with automatic air closure device.
19 For applications on flame-reversing boilers, please get in contact with our commercial department.
*) Min thermal capacity with light oil operation.
Net calorific value:
Natural gas: Hi = 35,80 MJ/m^3 = 8550 kcal/m^3, at reference conditions 0°C, 1013mbar.
LPG: Hi = 92 MJ/m^3 = 22000 kcal/m^3, at reference conditions 0°C, 1013mbar.
Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

BURNER ACCESSORIES

Line filter, flex hoses, boiler coupling kit.

kW 850 - 5200

TBML SERIES

Low NOx

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022 E EN267.

CE 0085

DUAL FUEL
GAS/LIGHT OIL BURNERS

	TBML 510 LX ME	TBML 510 LX ME V
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive control. Modulating mode is available for both fuels by the modulation kit (supplied separately)	**electronic modulation**	**electronic modulation**
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	•
Modulation ratio:	natural gas: 1:6 light oil: 1:4	natural gas: 1:6 light oil: 1:4
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 3	class 3
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
Fixed boiler coupling flange.	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler.	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	electric cam	electric cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•
Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption		•
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter	•	•
Fail proof connectors for burner/gas train connection.	•	•
Gas train outlet:	down	down
Electric motor for pump drive	•	•
Fuel supply circuit made of gear pump with pressure adjustment, control flow valve, shut-off valves and safety valve, safety pressure switch	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment	•	•
Electric protection rating:	IP54	IP54

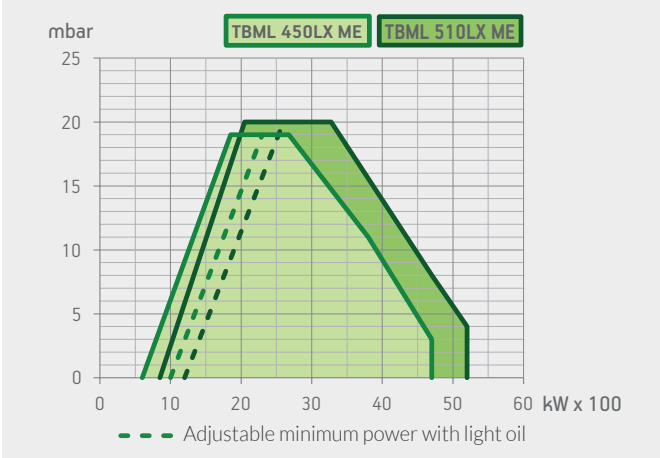
LEGEND:

o Optional, • As standard

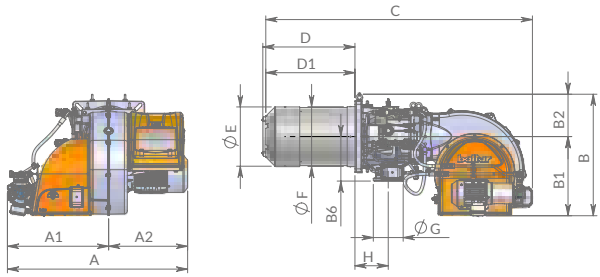
kW 850 - 5200

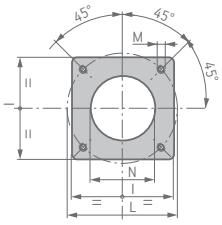
TBML SERIES

CE 0085



Model	Size of packaging L	P	H	Weight
	mm			kg
TBML 510 LX ME	1520	2000	1160	409
TBML 510 LX ME V	1520	2000	1160	425





Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	H mm	D mm	D1 mm Min	D1 mm Max	ø E mm	G mm	ø F mm	R mm	R1 mm	I mm	ø L mm Min	ø L mm Max	M	ø N mm	Pic.
TBML 510 LX ME	1200	670	530	810	525	285	295	1850	223	650	547	597	397	DN80	410	1120	1000	480	520	600	M20	415	2
TBML 510 LX ME V	1200	670	530	810	525	285	295	1850	223	650	547	597	397	DN80	410	1120	1000	480	520	600	M20	415	2

Inverter	O2 Kit	CO Kit	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
					Frequency 50 Hz					
			see page 228	850(1200)* ÷ 5200	**TBML 510 LX ME**	**56790010**	1,5	3N AC 50Hz 400V	11,0+1,5	4) 19)
	●	○	○	see page 228	850(1200)* ÷ 5200	**TBML 510 LX ME V**	**56790015**	1,5	3N AC 50Hz 400V	11,0+1,5	4) 19)
					Frequency 60 Hz					
			see page 228	850(1200)* ÷ 5200	**TBML 510 LX ME**	**56795410**	1,5	3N AC 60Hz 380V	11,0+1,5	4) 19)
	●	○	○	see page 228	850(1200)* ÷ 5200	**TBML 510 LX ME V**	**56795415**	1,5	3N AC 60Hz 380V	11,0+1,5	4) 19)

○ Optional, ● As standard

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
Modulation kit (see page 332)	98000059
Modulating probe for LCM 100 (see page 332)	
Nozzle (see page 333)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
O2 control kit NEW	98000460
CO control kit NEW	98000461
Soundproof burner cover (see page 337)	97980058
Soundproof burner cover (see page 337)	97980059

NOTE

4 Equipped with automatic air closure device.
19 For applications on flame-reversing boilers, please get in contact with our commercial department.
*) Min thermal capacity with light oil operation.
Net calorific value:
Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³, at reference conditions 0°C, 1013mbar.
LPG: Hi = 92 MJ/m³ = 22000 kcal/m³, at reference conditions 0°C, 1013mbar.
Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

BURNER ACCESSORIES

Line filter, flex hoses, boiler coupling kit.

kW 700 - 6500

TBML SERIES

Low NOx

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022 E EN267.

CE 0085

DUAL FUEL
GAS/LIGHT OIL BURNERS

	TBML 650 LX ME	TBML 650 LX ME V
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive control. Modulating mode is available for both fuels by the modulation kit (supplied separately)	**electronic modulation**	**electronic modulation**
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	•
Modulation ratio:	natural gas: 1:9 light oil: 1:4	natural gas: 1:9 light oil: 1:4
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 3	class 3
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2
Adjusting the combustion head..	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
Fixed boiler coupling flange.	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler.	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	electric cam	electric cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•
Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption		•
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter	•	•
Fail proof connectors for burner/gas train connection.	•	•
Gas train outlet:	down	down
Electric motor for pump drive	•	•
Fuel supply circuit made of gear pump with pressure adjustment, control flow valve, shut-off valves and safety valve, safety pressure switch	•	•
Fuel switch device:	•	•
Flame detection by UV photocell	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment	•	•
Electric protection rating:	IP54	IP54

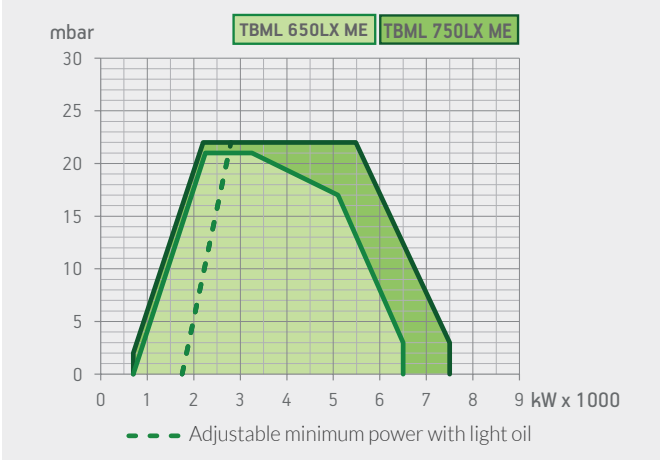
LEGEND:

o Optional, • As standard

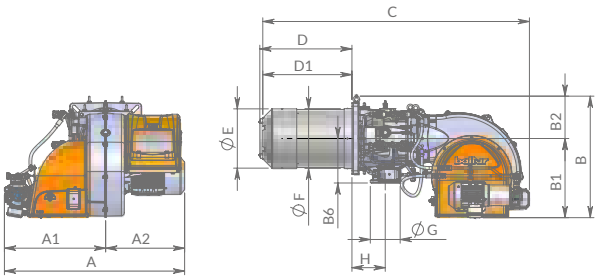
kW 700 - 6500

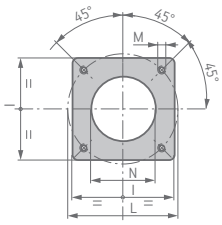
TBML SERIES

CE 0085



Model	Size of packaging L	P	H	Weight
	mm			kg
TBML 650 LX ME	1520	2000	1160	466
TBML 650 LX ME V	1520	2000	1160	481





Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	H mm	D mm	D1 mm Min	D1 mm Max	ø E mm	G mm	ø F mm	R mm	R1 mm	I mm	ø L mm Min	ø L mm Max	M	ø N mm	Pic.
TBML 650 LX ME	1250	690	560	810	525	285	295	1850	223	650	547	597	397	DN80	410	1240	1000	480	520	600	M20	415	2
TBML 650 LX ME V	1250	690	560	810	525	285	295	1850	223	650	547	597	397	DN80	410	1240	1000	480	520	600	M20	415	2

inverter	O2 Kit	CO Kit	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
					Frequency 50 Hz					
			see page 230	700(1750)* ÷ 6500	**TBML 650 LX ME**	**56820010**	1,5	3N AC 50Hz 400V	7,5+1,5	4) 19)
●	○	○	see page 230	700(1750)* ÷ 6500	**TBML 650 LX ME V**	**56820015**	1,5	3N AC 50Hz 400V	7,5+1,5	4) 19)
					Frequency 60 Hz					
			see page 230	700(1750)* ÷ 6500	**TBML 650 LX ME**	**56825410**	1,5	3N AC 60Hz 380V	7,5+1,5	4) 19)
●	○	○	see page 230	700(1750)* ÷ 6500	**TBML 650 LX ME V**	**56825415**	1,5	3N AC 60Hz 380V	7,5+1,5	

○ Optional, ● As standard

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
Modulation kit (see page 332)	98000059
Modulating probe for LCM 100 (see page 332)	
Nozzle (see page 333)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
O2 control kit NEW	98000460
CO control kit NEW	98000461
Soundproof burner cover (see page 337)	97980058
Soundproof burner cover (see page 337)	97980059

NOTE

4 Equipped with automatic air closure device.
19 For applications on flame-reversing boilers, please get in contact with our commercial department.
*) Min thermal capacity with light oil operation.
Net calorific value:
Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³, at reference conditions 0°C, 1013mbar.
LPG: Hi = 92 MJ/m³ = 22000 kcal/m³, at reference conditions 0°C, 1013mbar.
Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

BURNER ACCESSORIES

Line filter, flex hoses, boiler coupling kit.

DUAL FUEL
GAS/LIGHT OIL BURNERS

kW 700 - 7500

TBML SERIES

Low NOx

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022 E EN267.

CE 0085

DUAL FUEL
GAS/LIGHT OIL BURNERS

	TBML 750 LX ME	TBML 750 LX ME V
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive control. Modulating mode is available for both fuels by the modulation kit (supplied separately)	**electronic modulation**	**electronic modulation**
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	•
Modulation ratio:	natural gas: 1:10 light oil: 1:4	natural gas: 1:10 light oil: 1:4
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 3	class 3
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2
Adjusting the combustion head..	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
Fixed boiler coupling flange.	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler.	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	electric cam	electric cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•
Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption		•
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter	•	•
Fail proof connectors for burner/gas train connection.	•	•
Gas train outlet:	down	down
Electric motor for pump drive	•	•
Fuel supply circuit made of gear pump with pressure adjustment, control flow valve, shut-off valves and safety valve, safety pressure switch	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment	•	•
Electric protection rating:	IP54	IP54

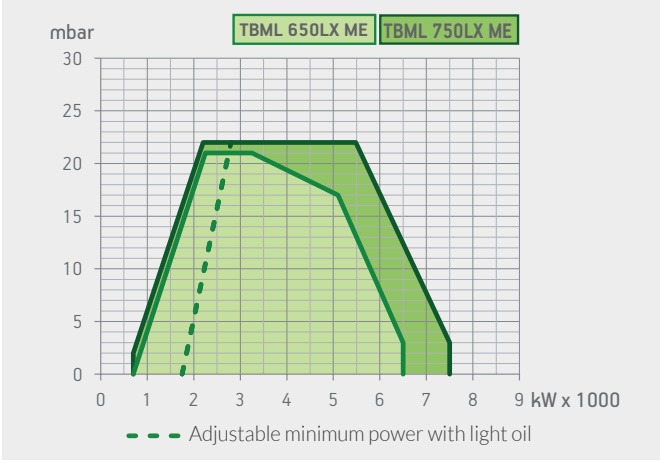
LEGEND:

o Optional, • As standard

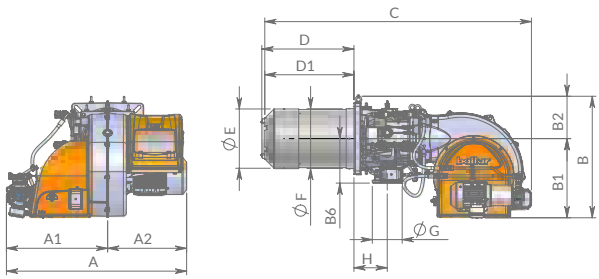
kW 700 - 7500

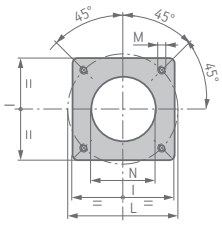
TBML SERIES

CE 0085



Model	Size of packaging L	P	H	Weight
	mm			kg
TBML 750 LX ME	1520	2000	1160	506
TBML 750 LX ME V	1520	2000	1160	521





Picture 2

Flange dimensions and boiler drilling template.

DUAL FUEL
GAS/LIGHT OIL BURNERS

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	H mm	D mm	D1 mm Min	D1 mm Max	ø E mm	G mm	ø F mm	R mm	R1 mm	I mm	ø L mm Min	ø L mm Max	M	ø N mm	Pic.
TBML 750 LX ME	1250	690	560	810	525	285	295	1850	223	650	547	597	397	DN80	410	1240	1000	480	520	600	M20	415	2
TBML 750 LX ME V	1250	690	560	810	525	285	295	1850	223	650	547	597	397	DN80	410	1240	1000	480	520	600	M20	415	2

Inverter	O2 Kit	CO Kit	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
					Frequency 50 Hz					
			see page 232	700(1750)* ÷ 7500	**TBML 750 LX ME**	**56850010**	1,5	3N AC 50Hz 400V	18,5+2,2	4) 19)
	●	○	see page 232	700(1750)* ÷ 7500	**TBML 750 LX ME V**	**56850015**	1,5	3N AC 50Hz 400V	18,5+2,2	4) 19)
					Frequency 60 Hz					
			see page 232	700(1750)* ÷ 7500	**TBML 750 LX ME**	**56855410**	1,5	3N AC 60Hz 380V	18,5+2,2	4) 19)
	●	○	see page 232	700(1750)* ÷ 7500	**TBML 750 LX ME V**	**56855415**	1,5	3N AC 60Hz 380V	18,5+2,2	4) 19)

○ Optional, ● As standard

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
Modulation kit (see page 332)	98000059
Modulating probe for LCM 100 (see page 332)	
Nozzle (see page 333)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
O2 control kit NEW	98000460
CO control kit NEW	98000461
Soundproof burner cover (see page 337)	97980058
Soundproof burner cover (see page 337)	97980059

BURNER ACCESSORIES

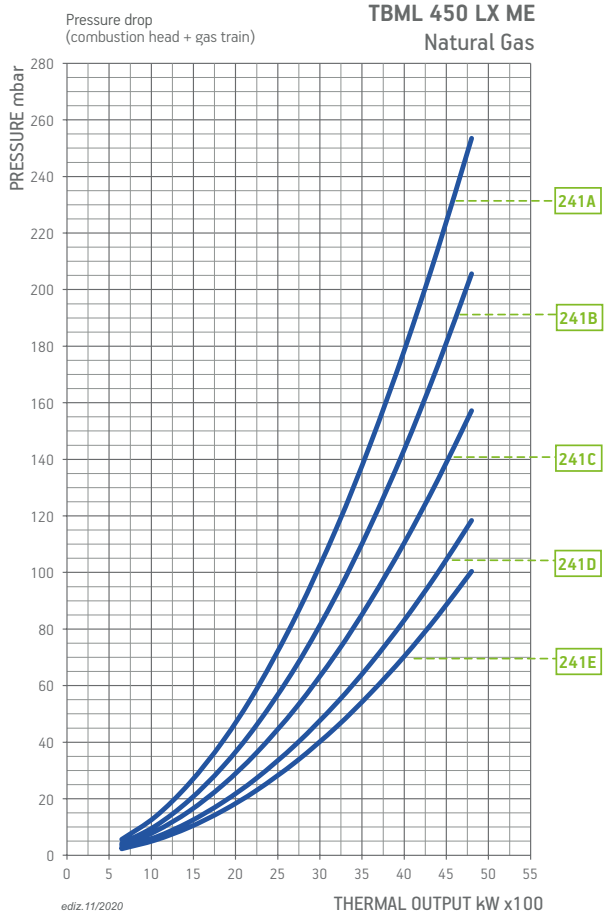
Line filter, flex hoses, boiler coupling kit.

NOTE

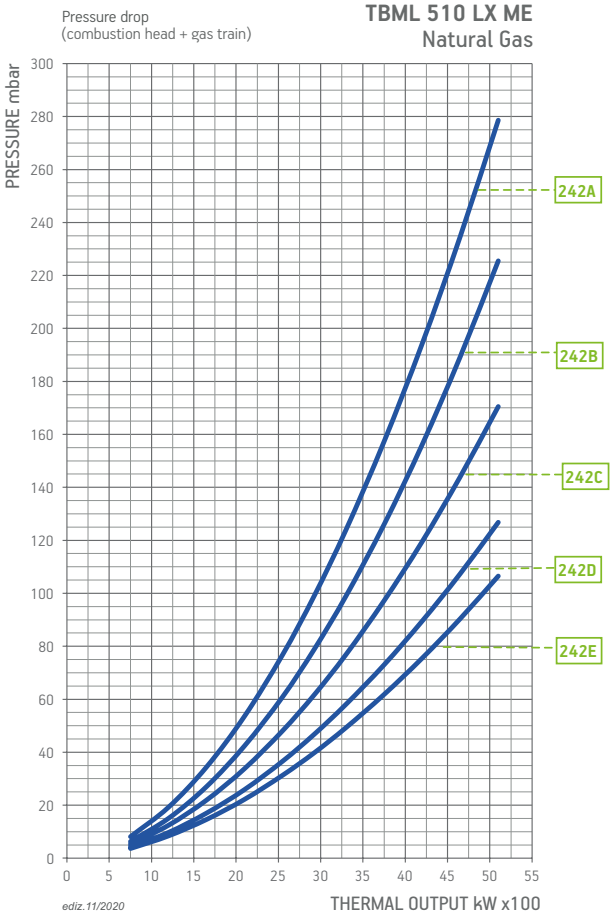
4 Equipped with automatic air closure device.
19 For applications on flame-reversing boilers, please get in contact with our commercial department.
*) Min thermal capacity with light oil operation.
Net calorific value:
Natural gas: Hi = 35,80 MJ/m^3 = 8550 kcal/m^3, at reference conditions 0°C, 1013mbar.
LPG: Hi = 92 MJ/m^3 = 22000 kcal/m^3, at reference conditions 0°C, 1013mbar.
Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

BURNER/GAS TRAIN MATCH

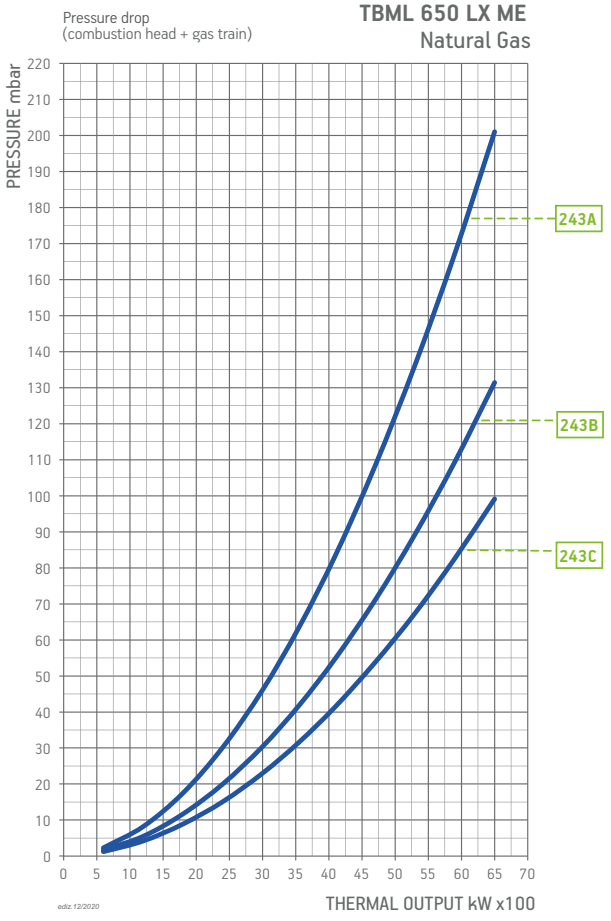
TBML 450 LX ME
Natural Gas



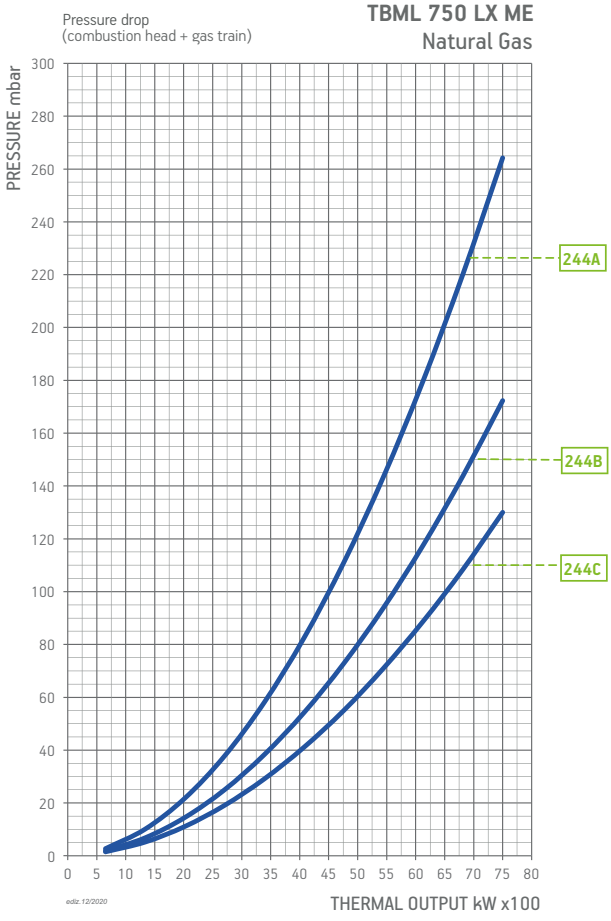
TBML 510 LX ME
Natural Gas



TBML 650 LX ME
Natural Gas



TBML 750 LX ME
Natural Gas



BURNER/GAS TRAIN MATCH

Burner model	Gas type	Curve on graph	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.
						Part no.	Part no.	Part no.	Part no.	
TBML 450 LX ME **TBML 450 LX ME V**	Natural gas	241A	CE/EXP	500	CTV	19990541	Included		Included	D4
			CE/EXP	500	CTV	19990679	Included		Included	D4
		241B	CE/EXP	500	CTV	19990666	Included		Included	D4
		241C	CE/EXP	500	CTV	19990542	Included		Included	D4
			CE/EXP	500	CTV	19990680	Included		Included	D4
		241D	CE/EXP	500	CTV	19990543	Included		Included	D4
			CE/EXP	500	CTV	19990681	Included		Included	D4
		241E	CE/EXP	500	CTV	19990544	Included		Included	D4
			CE/EXP	500	CTV	19990682	Included		Included	D4
TBML 510 LX ME **TBML 510 LX ME V**	Natural gas	242A	CE/EXP	500	CTV	19990541	Included		Included	D4
			CE/EXP	500	CTV	19990679	Included		Included	D4
		242B	CE/EXP	500	CTV	19990666	Included		Included	D4
		242C	CE/EXP	500	CTV	19990542	Included		Included	D4
			CE/EXP	500	CTV	19990680	Included		Included	D4
		242D	CE/EXP	500	CTV	19990543	Included		Included	D4
			CE/EXP	500	CTV	19990681	Included		Included	D4
		242E	CE/EXP	500	CTV	19990544	Included		Included	D4
			CE/EXP	500	CTV	19990682	Included		Included	D4
TBML 650 LX ME **TBML 650 LX ME V**	Natural gas	243A	CE/EXP	500	CTV	19990542	Included		Included	D4
			CE/EXP	500	CTV	19990680	Included		Included	D4
		243B	CE/EXP	500	CTV	19990543	Included		Included	D4
			CE/EXP	500	CTV	19990681	Included		Included	D4
		243C	CE/EXP	500	CTV	19990544	Included		Included	D4
			CE/EXP	500	CTV	19990682	Included		Included	D4
TBML 750 LX ME **TBML 750 LX ME V**	Natural gas	244A	CE/EXP	500	CTV	19990542	Included		Included	D4
			CE/EXP	500	CTV	19990680	Included		Included	D4
		244B	CE/EXP	500	CTV	19990543	Included		Included	D4
			CE/EXP	500	CTV	19990681	Included		Included	D4
		244C	CE/EXP	500	CTV	19990544	Included		Included	D4
			CE/EXP	500	CTV	19990682	Included		Included	D4

To choose the correct gas train please refer to the information on page 17.
For information on the structure, composition, and size of the gas train please refer to the diagrams on page 338.

NOTE

CTV Gas train with Valve Tightness Control.
**) Maximum gas inlet pressure at pressure regulator.

kW 800 - 8000

TBML SERIES

Low NOx

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022 E EN267.

CE 0085

DUAL FUEL
GAS/LIGHT OIL BURNERS

	TBML 800 ME	TBML 800 ME V
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Operation:	**electronic modulation**	**electronic modulation**
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive control. Modulating mode is available for both fuels by the modulation kit (supplied separately)	•	•
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	•
Modulation ratio:	natural gas: 1:7 light oil: 1:4	natural gas: 1:7 light oil: 1:4
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 3	class 3
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
Fixed boiler coupling flange	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•
Device made of sound-absorbing material to reduce fan noise	•	•
Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption		•
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter	•	•
Fail proof connectors for burner/gas train connection	•	•
Gas train outlet:	down	down
Electric motor for pump drive	•	•
Fuel supply circuit made of gear pump with pressure adjustment, control flow valve, shut-off valves and safety valve, safety pressure switch	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment	•	•
Electric protection rating:	IP54	IP54

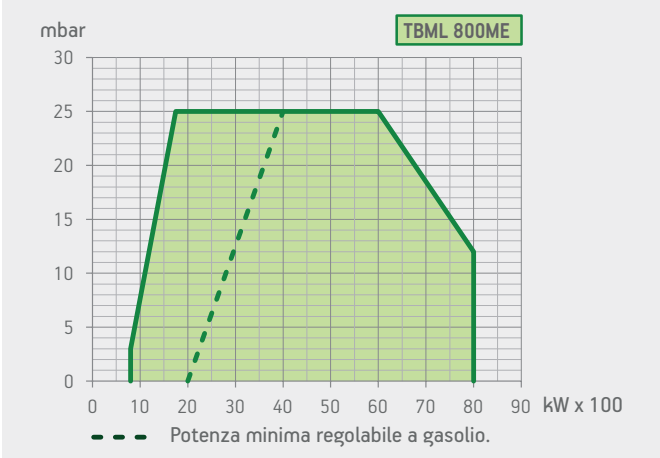
LEGEND:

o Optional, • As standard

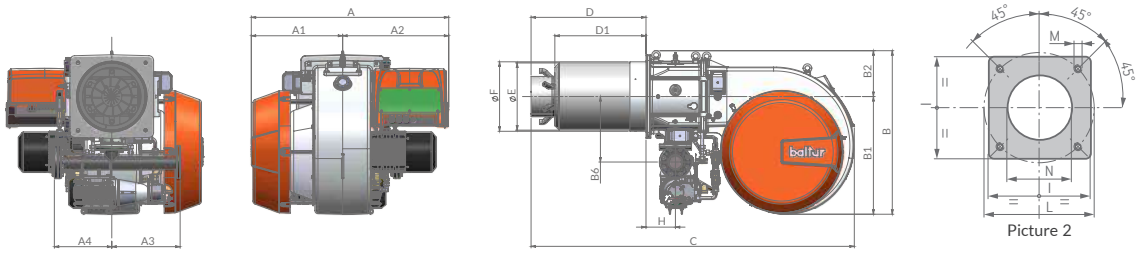
kW 800 - 8000

TBML SERIES

CE 0085



Model	Size of packaging L	P	H	Weight
	mm			kg
TBML 800 ME	2200	1460	1200	600
TBML 800 ME V	2200	1460	1200	615



Flange dimensions and boiler drilling template.

DUAL FUEL
GAS/LIGHT OIL BURNERS

Model	A mm	A1 mm	A2 mm	A3 mm	A4 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	D1 mm	E mm	F mm	H mm	I mm	L mm	M	N mm	Pic.
TBML 800 ME	1230	570	660	335	425	1000	740	260	410	2020	715	570	418	432	190	520	594	M20	440	2
TBML 800 ME V	1230	570	660	335	425	1000	740	260	410	2020	715	570	418	432	190	520	594	M20	440	2

Inverter	O2 Kit	CO Kit	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
					Frequency 50 Hz					
			see page 236	800(2000)* ÷ 8000	**TBML 800 ME**	**67320010**	1,5	3N AC 50Hz 400V	15,0+2,2	4) 19)
	●	○	see page 236	800(2000)* ÷ 8000	**TBML 800 ME V**	**67320015**	1,5	3N AC 50Hz 400V	15,0+2,2	4) 19)
					Frequency 60 Hz					
			see page 236	800(2000)* ÷ 8000	**TBML 800 ME**	**67325410**	1,5	3N AC 60Hz 380V	15,0+2,2	4) 19)
	●	○	see page 236	800(2000)* ÷ 8000	**TBML 800 ME V**	**67325415**	1,5	3N AC 60Hz 380V	15,0+2,2	4) 19)

○ Optional, ● As standard

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
Modulating probe for LCM 100 (see page 332)	
Nozzle with 1 ÷ 5 ratio (see page 333)	
Modulation kit TBML 800 ME	98000059

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
O2 control kit NEW	98000460
CO control kit NEW	98000461
Soundproof burner cover (see page 337)	97980058

NOTE

4 Equipped with automatic air closure device.
19 For applications on flame-reversing boilers, please get in contact with our commercial department.
*) Min thermal capacity with light oil operation.
Net calorific value:
Natural gas: Hi = 35,80 MJ/m^3 = 8550 kcal/m^3, at reference conditions 0°C, 1013mbar.
LPG: Hi = 92 MJ/m^3 = 22000 kcal/m^3, at reference conditions 0°C, 1013mbar.
Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

BURNER ACCESSORIES

TBML 800 ME: line filter, flex hoses, boiler coupling kit

kW 1000 - 9000

TBML SERIES

Low NOx

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022 E EN267.

CE 0085

DUAL FUEL
GAS/LIGHT OIL BURNERS

	TBML 900 ME	TBML 900 ME V
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Operation:	**electronic modulation**	**electronic modulation**
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive control. Modulating mode is available for both fuels by the modulation kit (supplied separately)	•	•
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	•
Modulation ratio:	natural gas: 1:9 light oil: 1:4	natural gas: 1:9 light oil: 1:4
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 2	class 2
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
Fixed boiler coupling flange	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	electric cam	electric cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•
Device made of sound-absorbing material to reduce fan noise	•	•
Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption		•
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter	•	•
Fail proof connectors for burner/gas train connection	•	•
Gas train outlet:	down	down
Electric motor for pump drive	•	•
Fuel supply circuit made of gear pump with pressure adjustment, control flow valve, shut-off valves and safety valve, safety pressure switch	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment	•	•
Electric protection rating:	IP54	IP54

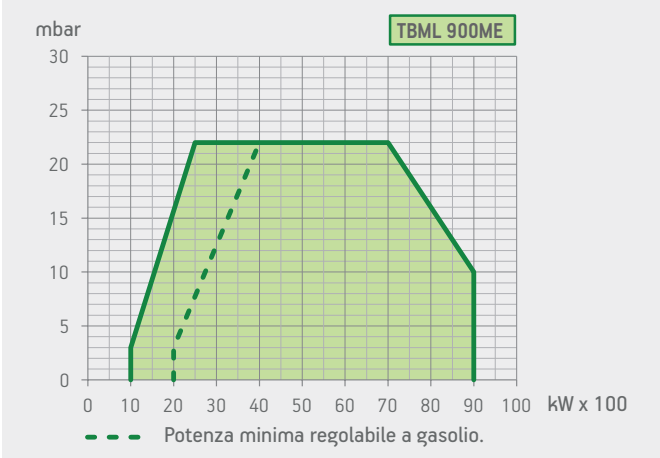
LEGEND:

o Optional, • As standard

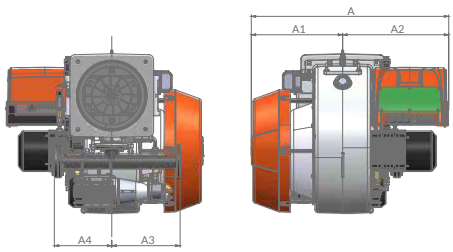
kW **1000 - 9000**

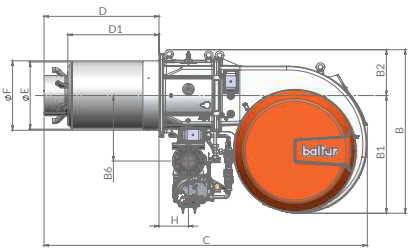
TBML SERIES

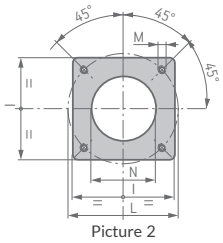
CE 0085



Model	Size of packaging L	P	H	Weight
	mm			kg
TBML 900 ME	2200	1460	1240	650
TBML 900 ME V	2200	1460	1240	665







Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	A3 mm	A4 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	D1 mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBML 900 ME	1230	570	660	334	375	1000	740	260	407	2000	670 ÷ 730	426	426	432	480	594	M20	462	2
TBML 900 ME V	1230	570	660	334	375	1000	740	260	407	2000	670 ÷ 730	426	426	432	480	594	M20	462	2

Inverter	O2 Kit	CO Kit	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
					Frequency 50 Hz					
			see page 238	1000(2000)* ÷ 9000	**TBML 900 ME**	**67380010**	1,5	3N AC 50Hz 400V	18,5+2,2	4) 19)
	●	○	see page 238	1000(2000)* ÷ 9000	**TBML 900 ME V**	**67380015**	1,5	3N AC 50Hz 400V	18,5+2,2	4) 19)
					Frequency 60 Hz					
			see page 238	1000(2000)* ÷ 9000	**TBML 900 ME**	**67385410**	1,5	3N AC 60Hz 380V	18,5+2,2	4) 19)
	●	○	see page 238	1000(2000)* ÷ 9000	**TBML 900 ME V**	**67385415**	1,5	3N AC 60Hz 380V	18,5+2,2	4) 19)

○ Optional, ● As standard

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
Modulation kit TBML 900 ME	98000059
Modulating probe for LCM 100 (see page 332)	
Nozzle with 1 ÷ 5 ratio (see page 333)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
O2 control kit NEW	98000460
CO control kit NEW	98000461
Soundproof burner cover (see page 337)	97980058

NOTE

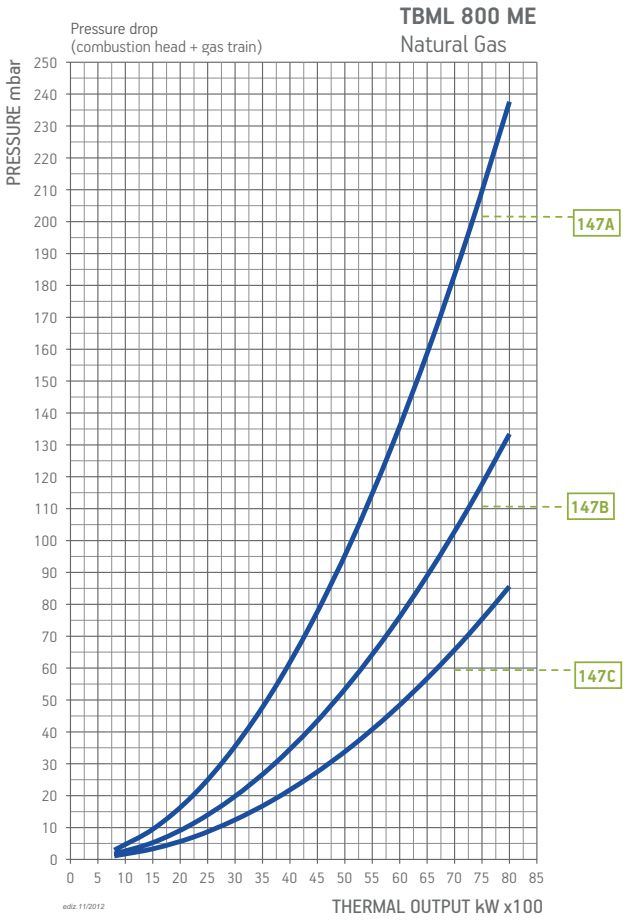
4 Equipped with automatic air closure device.
19 For applications on flame-reversing boilers, please get in contact with our commercial department.
*) Min thermal capacity with light oil operation.
Net calorific value:
Natural gas: Hi = 35,80 MJ/m^3 = 8550 kcal/m^3, at reference conditions 0°C, 1013mbar.
LPG: Hi = 92 MJ/m^3 = 22000 kcal/m^3, at reference conditions 0°C, 1013mbar.
Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

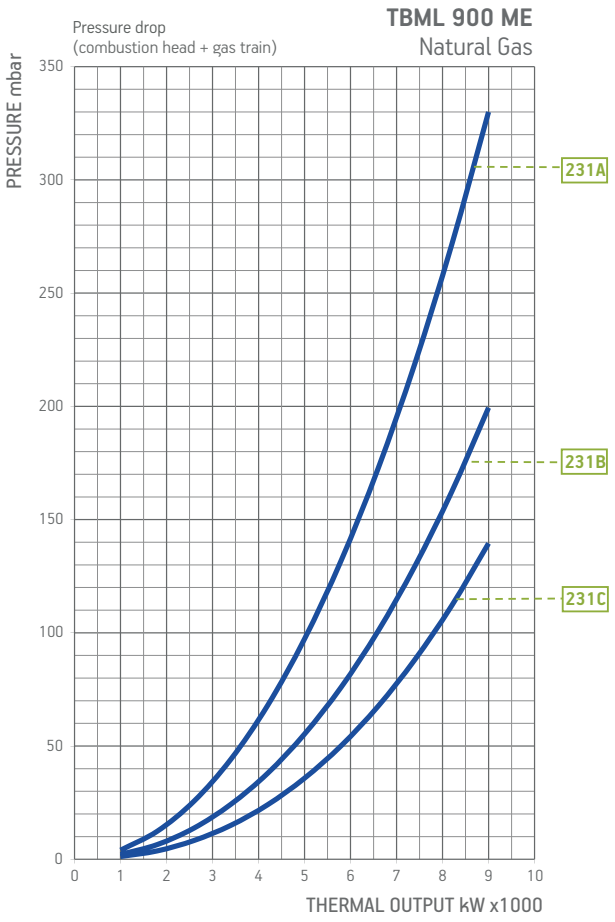
BURNER ACCESSORIES

TBML 900 ME: line filter, flex hoses, boiler coupling kit

DUAL FUEL
GAS/LIGHT OIL BURNERS

BURNER/GAS TRAIN MATCH





BURNER/GAS TRAIN MATCH

Burner model	Gas type	Curve on graph	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Note
						Part no.	Part no.	Part no.	Part no.		
TBML 800 ME **TBML 800 ME V**	Natural gas	147A	CE/EXP	500	CTV	19990588	Included	96005008	Included	D4	
			CE/EXP	500	CTV	19990743	Included	96005008	Included	D4	
		147B	CE/EXP	500	CTV	19990589	Included	-	Included	D4	
			CE/EXP	500	CTV	19990744	Included	-	Included	D4	
		147C	CE/EXP	500	CTV	19990590	Included	96005009	Included	D4	
			CE/EXP	500	CTV	19990745	Included	96005009	Included	D4	
TBML 900 ME **TBML 900 ME V**	Natural gas	231A	CE/EXP	500	CTV	19990588	Included	96005008	Included	D4	
			CE/EXP	500	CTV	19990743	Included	96005008	Included	D4	
		231B	CE/EXP	500	CTV	19990589	Included	-	Included	D4	
			CE/EXP	500	CTV	19990744	Included	-	Included	D4	
		231C	CE/EXP	500	CTV	19990590	Included	96005009	Included	D4	
			CE/EXP	500	CTV	19990745	Included	96005009	Included	D4	

Burner model	Gas type	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	LPG kit	Pic.	Note
					Part no.	Part no.	Part no.	Part no.	Part no.		
TBML 800 ME	LPG	CE/EXP	500	CTV	19990588	Included	–	Included	98000381	D4	
TBML 900 ME	LPG	CE/EXP	500	CTV	19990588	Included	–	Included	98000451	D4	

To choose the correct gas train please refer to the information on page 17.
For information on the structure, composition, and size of the gas train please refer to the diagrams on page 338.

NOTE

CTV Gas train with Valve Tightness Control.
**) Maximum gas inlet pressure at pressure regulator.

kW **1500 - 12000** | **TBML** SERIES

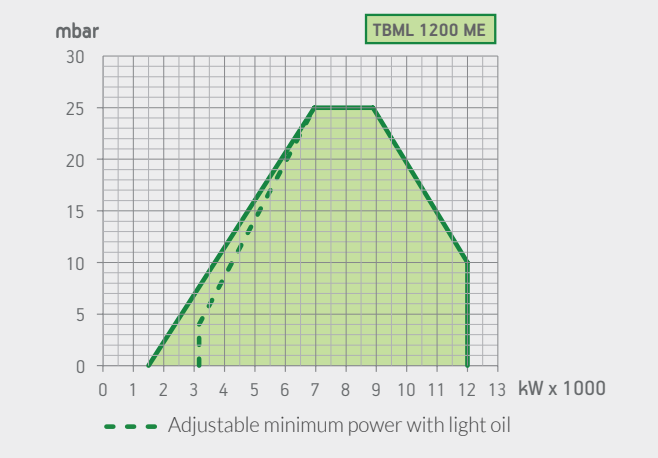
CONFORM TO: E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676 AND EN267.

	TBML 1200 ME	TBML 1200 ME V
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Operation:	**electronic modulation**	**electronic modulation**
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	•
Modulation ratio:	natural natural gas: 1:8 light oil: 1:4	natural natural gas: 1:8 light oil: 1:4
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 2	class 2
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
Fixed boiler coupling flange.	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler.	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	electric cam	electric cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•
Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption		•
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter	•	•
Fail proof connectors for burner/gas train connection.	•	•
Gas train outlet:	up/down	up/down
Electric motor for pump drive	•	•
Fuel supply circuit made of gear pump with pressure adjustment, control flow valve, shut-off valves and safety valve, safety pressure switch	•	•
Atomisation unit with solenoid valve for to control of the nozzle closing pin	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment	•	•
Electric protection rating:	IP54	IP54

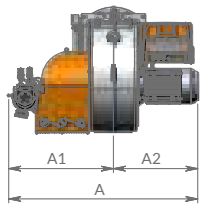
LEGEND:

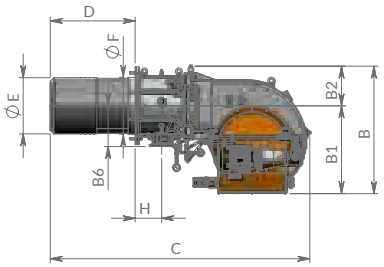
o Optional, • As standard

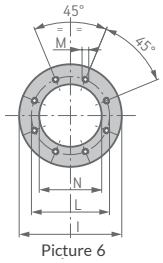
kW **1500 - 12000** | **TBML** SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
TBML 1200 ME	2610	1760	1470	850
TBML 1200 ME V	2610	1760	1470	865







Picture 6

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	E mm	F mm	H mm	I mm	L mm	M mm	N mm	Pic.
TBML 1200 ME	1650	900	750	1130	780	350	360	2285	742	496	503	235	685	630	M20	533	6
TBML 1200 ME V	1650	900	750	1130	780	350	360	2285	742	496	503	235	685	630	M20	533	6

inverter	O2 Kit	CO Kit	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
					Frequency 50 Hz					
			see page 242	1500(3160)* ÷ 12000	**TBML 1200 ME**	**67340010**	1,5	3N AC 50Hz 400V	22,0+4,0	4)
●	o	o	see page 242	1500(3160)* ÷ 12000	**TBML 1200 ME V**	**67340015**	1,5	3N AC 50Hz 400V	22,0+4,0	4)
					Frequency 60 Hz					
			see page 242	1500(3160)* ÷ 12000	**TBML 1200 ME**	**67345410**	1,5	3N AC 60Hz 380V	22,0+4,0	4)
●	o	o	see page 242	1500(3160)* ÷ 12000	**TBML 1200 ME V**	**67345415**	1,5	3N AC 60Hz 380V	22,0+4,0	4)

o Optional, ● As standard

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
Modulation kit (see page 332)	98000059
Modulating probe for LCM 100 (see page 332)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
O2 control kit NEW	98000460
CO control kit NEW	98000461
Soundproof burner cover (see page 337)	97980063

BURNER ACCESSORIES

Line filter, flex hoses, boiler coupling kit.

NOTE

4 Equipped with automatic air closure device.
*) Min thermal capacity with light oil operation.
Net calorific value:
Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³, at reference conditions 0°C, 1013mbar.
LPG: Hi = 92 MJ/m³ = 22000 kcal/m³, at reference conditions 0°C, 1013mbar.
Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

kW 2340 - 16000 | TBML SERIES

Low NOx

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022 E EN267.

CE 0085

DUAL FUEL
GAS/LIGHT OIL BURNERS

	TBML 1600 ME	TBML 1600 ME V
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Operation:	**electronic modulation**	**electronic modulation**
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	•
Modulation ratio:	natural gas: 1:8 light oil: 1:4	natural gas: 1:8 light oil: 1:4
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 2	class 2
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
Fixed boiler coupling flange.	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler.	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	electric cam	electric cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•
Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption		•
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter	•	•
Fail proof connectors for burner/gas train connection.	•	•
Gas train outlet:	down	down
Electric motor for pump drive	•	•
Fuel supply circuit made of gear pump with pressure adjustment, control flow valve, shut-off valves and safety valve, safety pressure switch	•	•
Atomisation unit with solenoid valve for to control of the nozzle closing pin	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment	•	•
Electric protection rating:	IP54	IP54

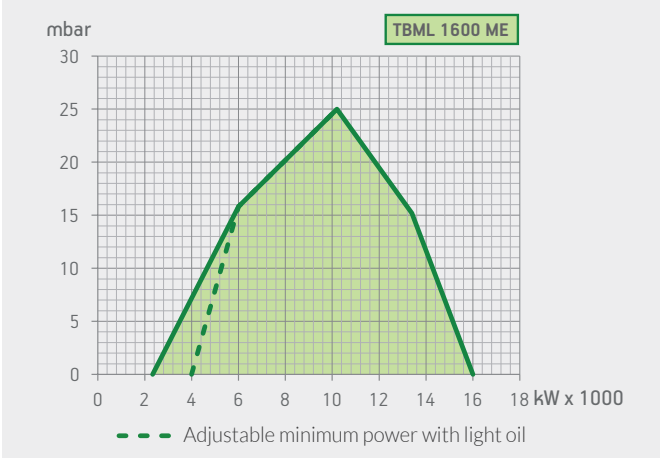
LEGEND:

o Optional, • As standard

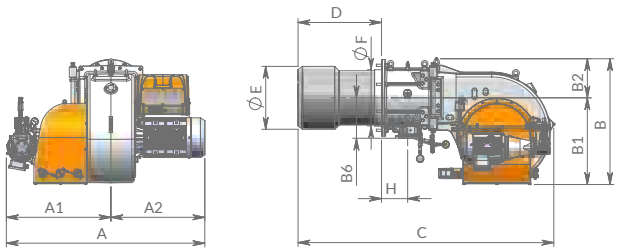
kW 2340 - 16000

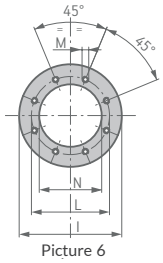
TBML SERIES

CE 0085



Model	Size of packaging L	P	H	Weight
	mm			kg
TBML 1600 ME	2470	2050	1420	860
TBML 1600 ME V	2470	2050	1420	875





Picture 6

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	E mm	F mm	H mm	I mm	L mm	M mm	N mm	Pic.
TBML 1600 ME	1742	900	842	1130	780	350	360	2295	747	563	503	235	685	630	M20	580	6
TBML 1600 ME V	1742	900	842	1130	780	350	360	2295	747	563	503	235	685	630	M20	580	6

Inverter	O2 Kit	CO Kit	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
					Frequency 50 Hz					
			see page 244	2340(4000)* ÷ 16000	**TBML 1600 ME**	**67530010**	1,5	3N AC 50Hz 400V	30,0+5,5	4) 19)
	●	○	see page 244	2340(4000)* ÷ 16000	**TBML 1600 ME V**	**67530015**	1,5	3N AC 50Hz 400V	30,0+5,5	4) 19)
					Frequency 60 Hz					
			see page 244	2340(4000)* ÷ 16000	**TBML 1600 ME**	**on request**	1,5	3N AC 60Hz 380V	30,0+5,5	4) 19)
	●	○	see page 244	2340(4000)* ÷ 16000	**TBML 1600 ME V**	**on request**	1,5	3N AC 60Hz 380V	30,0+5,5	4) 19)

○ Optional, ● As standard

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
Modulation kit (see page 332)	98000059
Modulating probe for LCM 100 (see page 332)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
O2 control kit NEW	98000460
CO control kit NEW	98000461
Soundproof burner cover (see page 337)	97980063

BURNER ACCESSORIES

Line filter, flex hoses, boiler coupling kit.

NOTE

4 Equipped with automatic air closure device.
19 For applications on flame-reversing boilers, please get in contact with our commercial department.
*) Min thermal capacity with light oil operation.
Net calorific value:
Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³, at reference conditions 0°C, 1013mbar.
LPG: Hi = 92 MJ/m³ = 22000 kcal/m³, at reference conditions 0°C, 1013mbar.
Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

kW 3200 - 20000 | TBML SERIES

Low NOx

CONFORM TO: GAS DIRECTIVE EU/2016/426 | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676:2020/AC:2022 E EN267.

CE 0085

DUAL FUEL
GAS/LIGHT OIL BURNERS

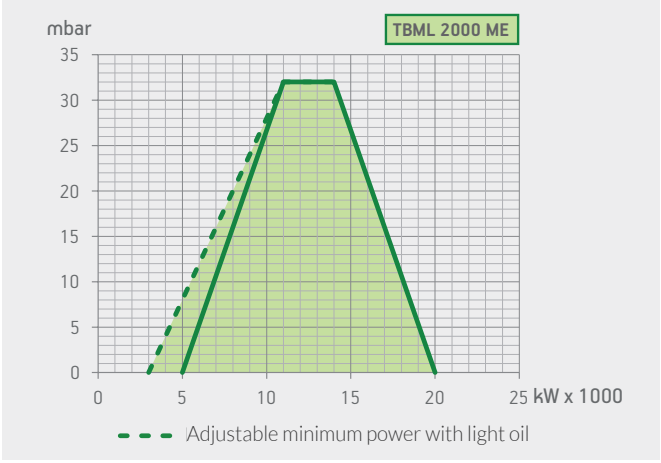
	TBML 2000 ME	TBML 2000 ME V
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive control. Modulating mode is available for both fuels by the modulation kit (supplied separately)	**electronic modulation**	**electronic modulation**
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	•
Modulation ratio:	natural gas: 1:6 light oil: 1:4	natural gas: 1:6 light oil: 1:4
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 2	class 2
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
Fixed boiler coupling flange.	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler.	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	electric cam	electric cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•
Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption		•
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter	•	•
Fail proof connectors for burner/gas train connection.	•	•
Gas train outlet:	down	down
Electric motor for pump drive	•	•
Fuel supply circuit made of gear pump with pressure adjustment, control flow valve, shut-off valves and safety valve, safety pressure switch	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment	•	•
Electric protection rating:	IP54	IP54

LEGEND:

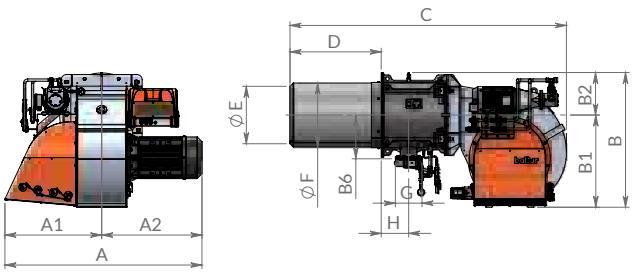
o Optional, • As standard

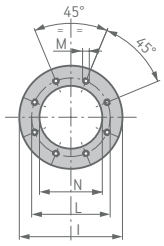
kW **3200 - 20000** | **TBML** SERIES

CE 0085



Model	Size of packaging L	P	H	Weight
	mm			kg
TBML 2000 ME	2750	2050	1520	1380
TBML 2000 ME V	2750	2050	1520	1395





Picture 6

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	E mm	F mm	G	H mm	I mm	L mm	M	N mm	Pic.
TBML 2000 ME	1855	913	942	1265	870	395	482	2595	856	600	612	DN125	258	790	730	M20	640	4
TBML 2000 ME V	1855	913	942	1265	870	395	482	2595	856	600	612	DN125	258	790	730	M20	640	4

inverter	O2 Kit	CO Kit	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
					Frequency 50 Hz					
			see page 246	3200(5000)* ÷ 20000	**TBML 2000 ME**	**67550010**	1,5	3N AC 50Hz 400V	45,0+7,5	4) 19)
	•	o	see page 246	3200(5000)* ÷ 20000	**TBML 2000 ME V**	**67550015**	1,5	3N AC 50Hz 400V	45,0+7,5	4) 19)
					Frequency 60 Hz					
			see page 246	3200(5000)* ÷ 20000	**TBML 2000 ME**	**67555410**	1,5	3N AC 60Hz 380V	45,0+7,5	4) 19)
	•	o	see page 246	3200(5000)* ÷ 20000	**TBML 2000 ME V**	**67555415**	1,5	3N AC 60Hz 380V	45,0+7,5	4) 19)

o Optional, • As standard

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
Modulation kit (see page 332)	98000059
Modulating probe for LCM 100 (see page 332)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
O2 control kit NEW	98000460
CO control kit NEW	98000461
Soundproof burner cover (see page 337)	97980063

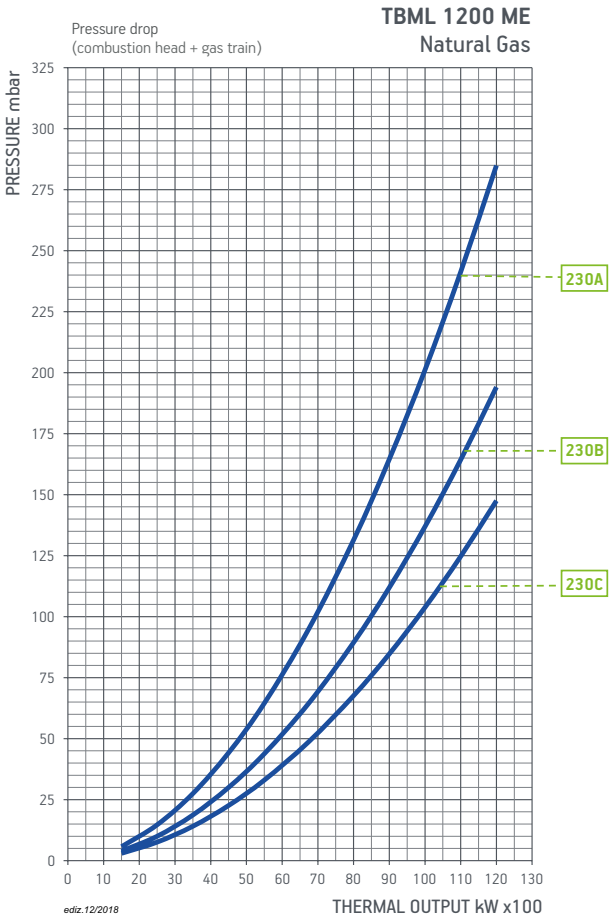
BURNER ACCESSORIES

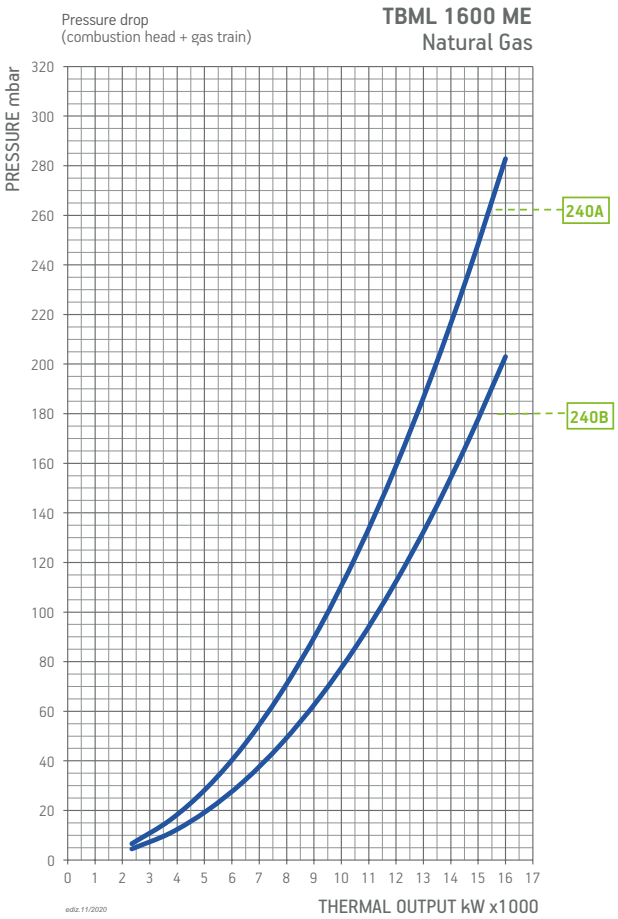
Line filter, flex hoses, boiler coupling kit.

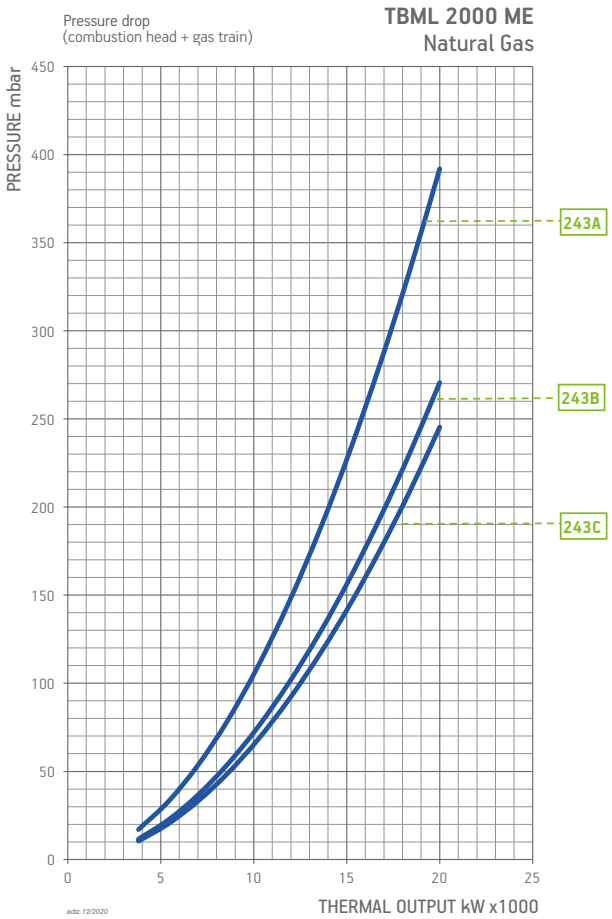
NOTE

4 Equipped with automatic air closure device.
19 For applications on flame-reversing boilers, please get in contact with our commercial department.
Net calorific value:
Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³, at reference conditions 0°C, 1013mbar.
LPG: Hi = 92 MJ/m³ = 22000 kcal/m³, at reference conditions 0°C, 1013mbar.
Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

BURNER/GAS TRAIN MATCH







BURNER/GAS TRAIN MATCH

Burner model	Gas type	Curve on graph	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Notes
						Part no.	Part no.	Part no.	Part no.		
TBML 1200 ME **TBML 1200 ME V**	Natural gas	230A	CE/EXP	500	CTV	19990606	Included		Included	D4	
			CE/EXP	500	CTV	19990686	Included		Included	D4	
		230B	CE/EXP	500	CTV	19990607	Included		Included	D4	
			CE/EXP	500	CTV	19990687	Included		Included	D4	
		230C	CE/EXP	500	CTV	19990608	Included		Included	D4	
			CE/EXP	500	CTV	19990688	Included		Included	D4	
TBML 1600 ME **TBML 1600 ME V**	Natural gas	240A	CE/EXP	500	CTV	19990640	Included		Included	D4	
			CE/EXP	500	CTV	19990687	Included		Included	D4	
		240B	CE/EXP	500	CTV	19990641	Included		Included	D4	
			CE/EXP	500	CTV	19990688	Included		Included	D4	
TBML 2000 ME **TBML 2000 ME V**	Natural gas	243A	CE/EXP	500	CTV	19990648	Included		Included	D4	
			CE/EXP	500	CTV	19990689	Included		Included	D4	
		243B	CE/EXP	500	CTV	19990649	Included		Included	D4	
			CE/EXP	500	CTV	19990690	Included		Included	D4	
		243C	CE/EXP	500	CTV	19990650	Included		Included	D4	
			CE/EXP	500	CTV	19990691	Included		Included	D4	

Burner model	Gas type	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	LPG kit	Pic.	Note
					Part no.	Part no.	Part no.	Part no.	Part no.		
TBML 1200 ME	LPG	CE/EXP	500	CTV	19990606	Included	–	Included	98000434	D4	

To choose the correct gas train please refer to the information on page 17.
For information on the structure, composition, and size of the gas train please refer to the diagrams on page 338.

NOTE

CTV Gas train with Valve Tightness Control.
** Maximum gas inlet pressure at pressure regulator.

kW 600 - 5200

TBMN SERIES

CONFORM TO: E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676.

CE

Suitable for fuel oil with a maximum viscosity of 50°E at 50°C

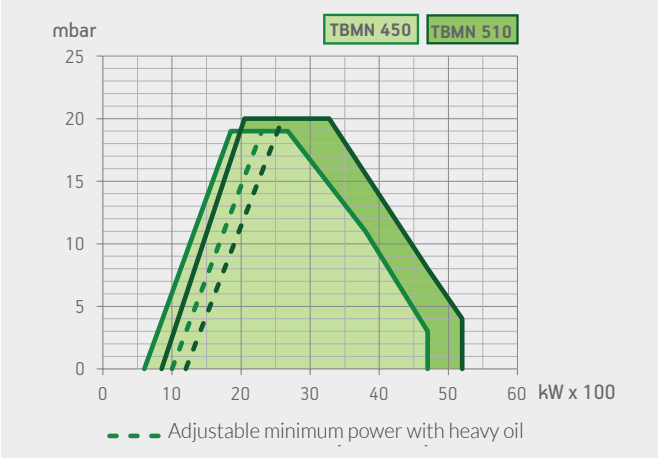
Alternating natural gas/heavy oil. Operation:	TBMN 450 ME Electronic modulation	TBMN 510 ME Electronic modulation
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	o
Modulation ratio:	1:8/1:4	1:6/1:4
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 3	class 3
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
Fixed boiler coupling flange	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	electronic cam	electronic cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, maximum and minimum pressure switch, pressure regulator and gas filter	•	•
Fail proof connectors for burner/gas train connection	•	•
Gas train outlet:	down	down
Electronic motor for pump drive	•	•
Fuel supply circuit made of gear pump with pressure adjustment, control flow valve, shut-off valves and safety valve, safety pressure switch	•	•
Electric fuel preheater with 50L volume with safety valve, self-cleaning filter, thermometer, pressure gauge, minimum and safety thermostats, electronic temperature regulator with digital interface and light signals	to be ordered separately	
Heating elements for pump, valves and atomisation unit		•
Atomisation unit with nozzle-closing pin	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment	•	•
Electric protection rating:	IP54	IP54

LEGEND:

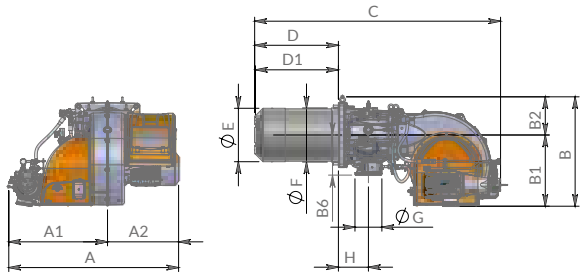
o Optional; • As standard

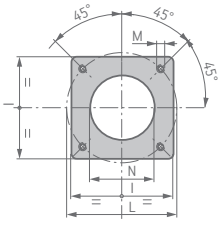
kW 600 - 5200

TBMN SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
TBMN 450 ME	2065	1525	1200	440
TBMN 510 ME	2065	1525	1200	440





Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	D1 mm	E mm	F mm	G	H mm	I mm	L mm	M	N mm
TBMN 450 ME	1265	735	530	810	525	285	295	1850	650	547-597	397	410	DN80	223	480	520÷600	M20	430
TBMN 510 ME	1265	735	530	810	525	285	295	1850	650	547-597	397	410	DN80	223	480	520÷600	M20	430

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 50°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 3	600 ÷ 4700	**TBMN 450 ME**	**56910010**	50	3N AC 50Hz 400V	9,2+2,2	4)
	class 3	850 ÷ 5200	**TBMN 510 ME**	**56930010**	50	3N AC 50Hz 400V	11,0+2,2	4)
			Frequency 60 Hz					
	class 3	600 ÷ 4700	**TBMN 450 ME**	**56915410**	50	3N AC 60Hz 380V	9,2+2,2	4)
	class 3	850 ÷ 5200	**TBMN 510 ME**	**56935410**	50	3N AC 60Hz 380V	13,0+2,2	4)

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
Modulating probe for LCM 100 (see page 332)	
Modulation kit (see page 332)	9800059
Nozzle (see page 333)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 337)	97980058
Soundproof burner cover -20 dB(A) (see page 337)	97980059

NOTE

4 Equipped with automatic air closure device.
Net calorific value:
Natural Gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³, at reference conditions of 0°C, 1013mbar.
LPG: Hi = 92 MJ/m³ = 22000 kcal/m³, at reference conditions of 0°C, 1013mbar.
Heavy oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

DUAL FUEL BURNERS ACCESSORIES

Flex hoses, dense naphtha filter, boiler coupling kit.

kW 700 - 7500

TBMN SERIES

CONFORM TO: E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676.

CE

Suitable for fuel oil with a maximum viscosity of 50°E at 50°C

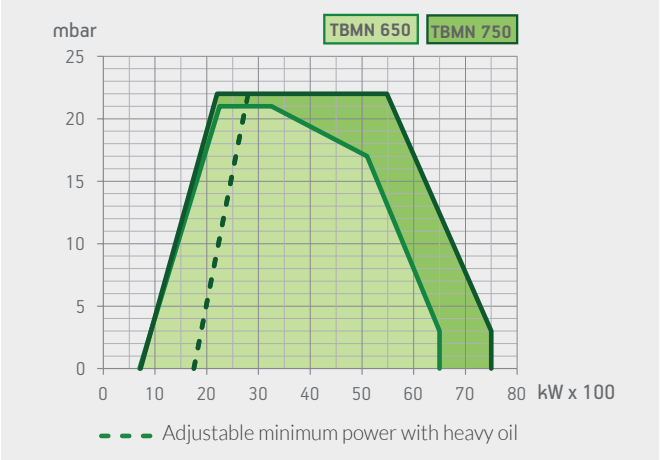
Alternating natural gas/heavy. Operation:	TBMN 650 ME Electronic modulation	TBMN 750 ME Electronic modulation
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	o
Modulation ratio:	1:9/1:4	1:10/1:4
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 3	class 3
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
Fixed boiler coupling flange	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	electronic cam	electronic cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, maximum and minimum pressure switch, pressure regulator and gas filter	•	•
Fail proof connectors for burner/gas train connection	•	•
Gas train outlet:	down	down
Electronic motor for pump drive	•	•
Fuel supply circuit made of gear pump with pressure adjustment, control flow valve, shut-off valves and safety valve, safety pressure switch	•	•
Electric fuel preheater with 50L volume with safety valve, self-cleaning filter, thermometer, pressure gauge, minimum and safety thermostats, electronic temperature regulator with digital interface and light signals	to be ordered separately	
Heating elements for pump, valves and atomisation unit	•	•
Atomisation unit with nozzle-closing pin	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment	•	•
Electric protection rating:	IP54	IP54

LEGEND:

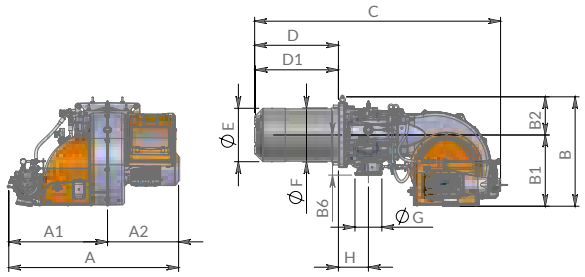
o Optional; • As standard

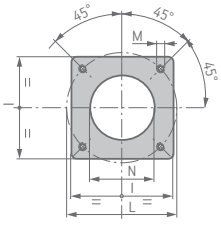
kW 700 - 7500

TBMN SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
TBMN 650 ME	2065	1525	1200	470
TBMN 750 ME	2065	1525	1200	510





Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	D1 mm	E mm	F mm	G	H mm	I mm	L mm	M	N mm
TBMN 650 ME	1385	735	650	810	525	285	295	1850	650	547-597	397	410	DN80	223	480	600	M20	430
TBMN 750 ME	1385	735	650	810	525	285	295	1850	650	547-597	397	410	DN80	223	480	600	M20	430

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 50°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 3	700 ÷ 6500	**TBMN 650 ME**	**56950010**	50	3N AC 50Hz 400V	15,0+3,0	4)
	class 3	720 ÷ 7500	**TBMN 750 ME**	**56970010**	50	3N AC 50Hz 400V	18,5+3,0	4)
			Frequency 60 Hz					
	class 3	700 ÷ 6500	**TBMN 650 ME**	**56955410**	50	3N AC 60Hz 380V	15,0+3,5	4)
	class 3	720 ÷ 7500	**TBMN 750 ME**	**56975410**	50	3N AC 60Hz 380V	18,5+3,5	4)

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
Modulating probe for LCM 100 (see page 332)	
Modulation kit (see page 332)	9800059
Nozzle (see page 333)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 337)	97980058
Soundproof burner cover -20 dB(A) (see page 337)	97980059

NOTE

4 Equipped with automatic air closure device.
Net calorific value:
Natural Gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³, at reference conditions of 0°C, 1013mbar.
LPG: Hi = 92 MJ/m³ = 22000 kcal/m³, at reference conditions of 0°C, 1013mbar.
Heavy oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

DUAL FUEL BURNERS ACCESSORIES

Flex hoses, dense naphtha filter, boiler coupling kit.

kW **2000 - 10500** | **TBMN** SERIES

CONFORM TO: E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN676.

CE

Suitable for fuel oil with a maximum viscosity of 50°E at 50°C

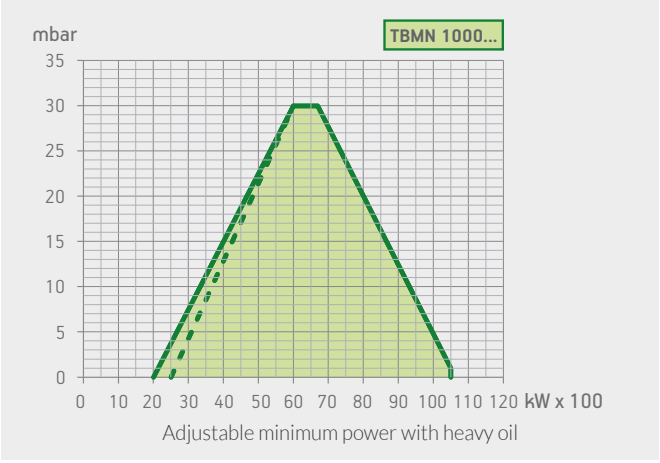
Alternating natural gas/heavy. Operation:	TBMN 1000 ME Electronic modulation
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o
Modulation ratio:	1:4/1:4
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 3
Adjusting the combustion head	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•
Fixed boiler coupling flange	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler	•
Combustion air intake with butterfly valve. Air flow adjustment:	electronic cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, maximum and minimum pressure switch, pressure regulator and gas filter	•
Fail proof connectors for burner/gas train connection	•
Gas train outlet:	up/down
Electronic motor for pump drive	•
Fuel supply circuit made of gear pump with pressure adjustment, control flow valve, shut-off valves and safety valve, safety pressure switch	•
Electric fuel preheater with 50L volume with safety valve, self-cleaning filter, thermometer, pressure gauge, minimum and safety thermostats, electronic temperature regulator with digital interface and light signals	to be ordered separately
Heating elements for pump, valves and atomisation unit	•
Atomisation unit with nozzle-closing pin	•
Fuel switch device:	manual
Flame detection by UV photocell	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment	•
Electric protection rating:	IP54

LEGEND:

o Optional; • As standard

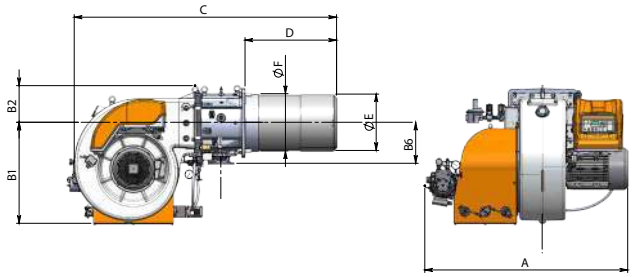
kW 2000 - 10500

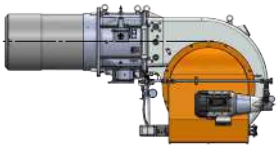
TBMN SERIES

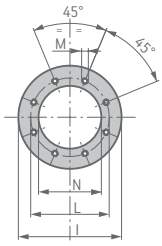


Adjustable minimum power with heavy oil

Model	Size of packaging L	P	H	Weight
	mm			kg
TBMN 1000 ME	2470	2050	1420	790







Picture 6

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B4 mm	B6 mm	C mm	D mm	E mm	F mm	G	H mm	I mm	L mm	M	N mm
TBMN 1000 ME	1549,5	903	646,5	1050	770	280	40	310	1985	692	426	432	DN 80	183	520	594	M20	440

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 50°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 3	2000 ÷ 10500	**TBMN 1000 ME**	**56990010**	50	3N AC 50Hz 400V	22 + 4	4)
			Frequency 60 Hz					
	class 3	2000 ÷ 10500	**TBMN 1000 ME**	**on request**	50	3N AC 60Hz 380V	22 + 4	4)

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
Modulating probe for LCM 100 (see page 332)	
Modulation kit (see page 332)	9800059
Nozzle (see page 333)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 337)	97980058
Soundproof burner cover -20 dB(A) (see page 337)	97980059

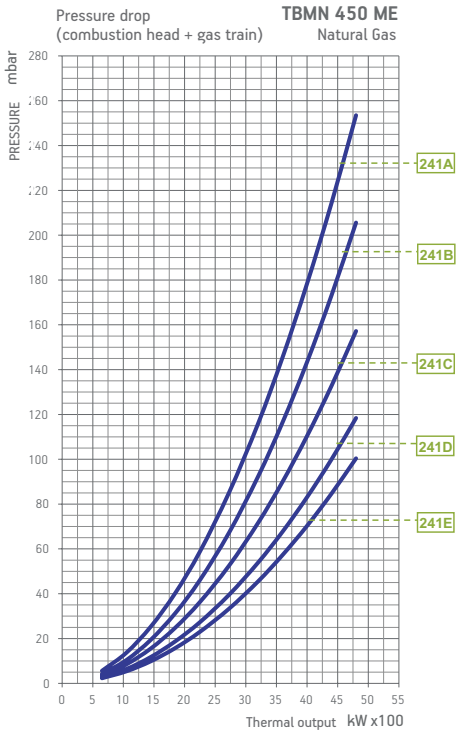
NOTE

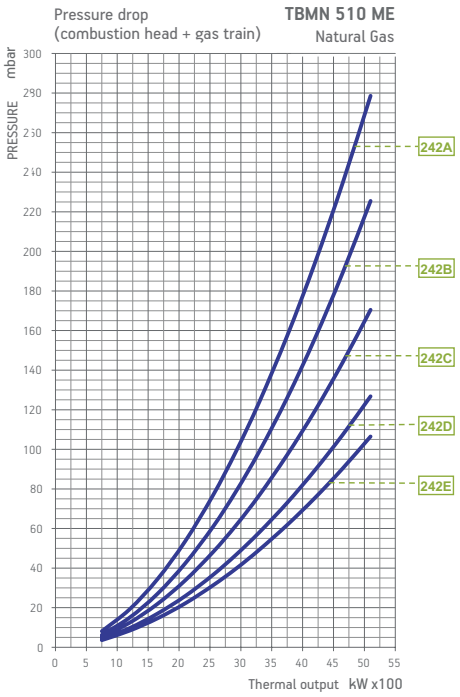
4 Equipped with automatic air closure device.
Net calorific value:
Natural Gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³, at reference conditions of 0°C, 1013mbar.
LPG: Hi = 92 MJ/m³ = 22000 kcal/m³, at reference conditions of 0°C, 1013mbar.
Heavy oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.
For different type of gas and pressure values, please get in contact with our commercial department.

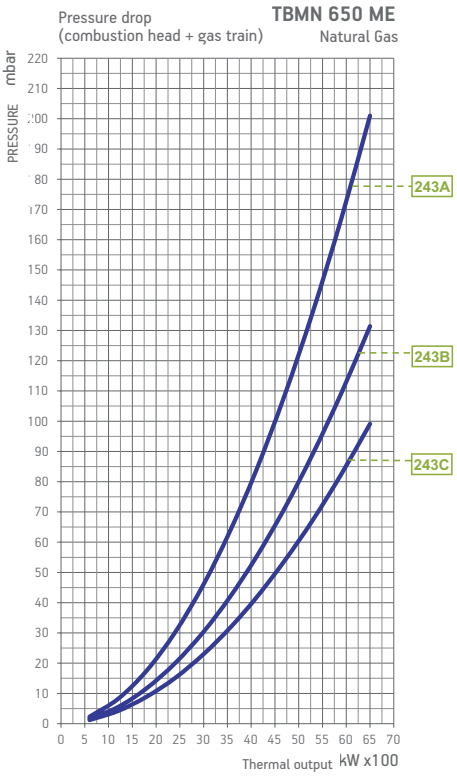
DUAL FUEL BURNERS ACCESSORIES

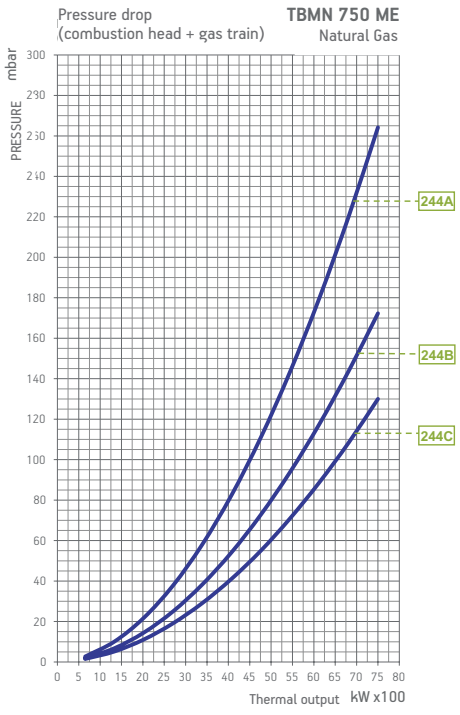
Flex hoses, dense naphtha filter, boiler coupling kit.

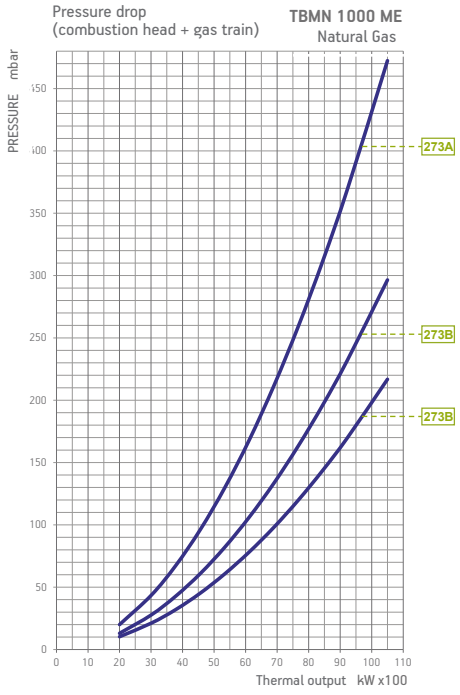
BURNER/GAS TRAIN MATCH











BURNER/GAS TRAIN MATCH

CE gas train version complies with EN676, EXP gas train version is for extra-European markets.

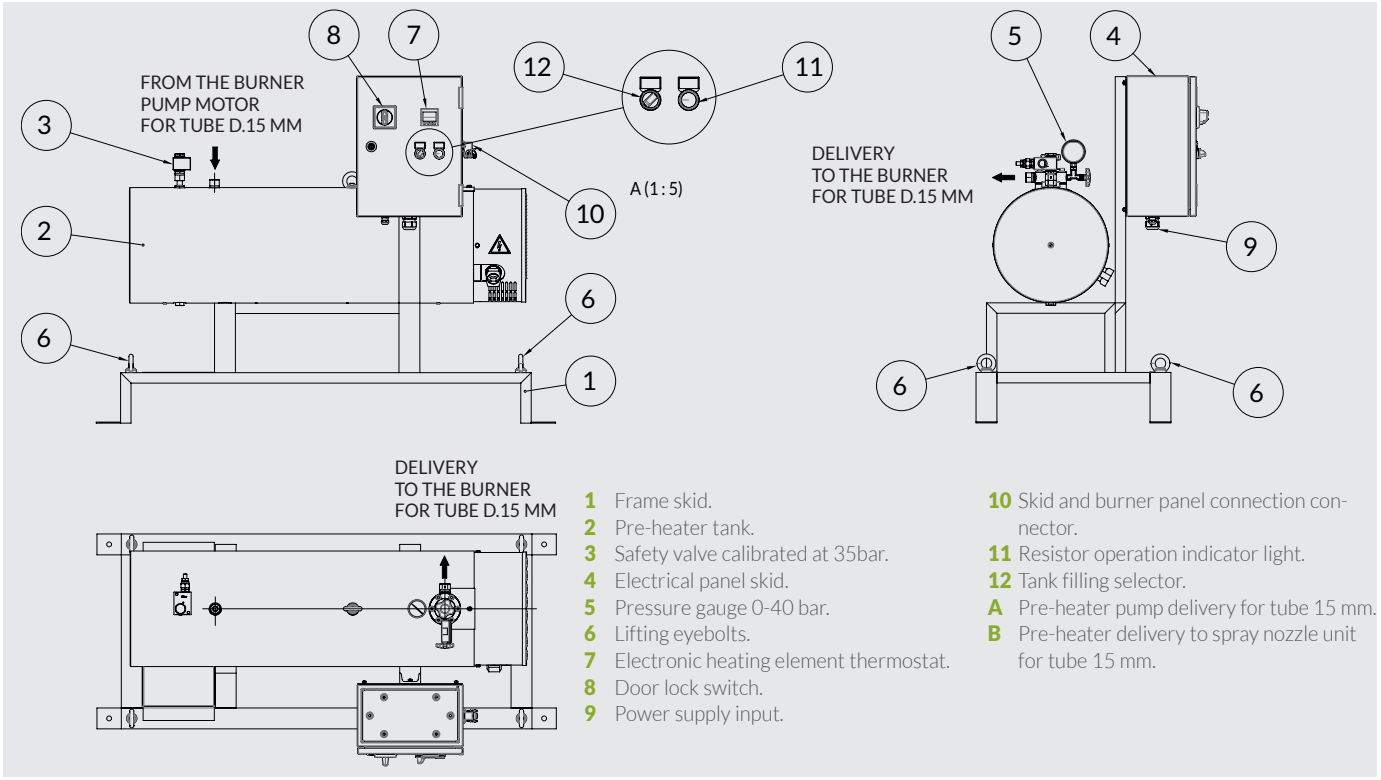
Burner model	Gas type	Curve on graph	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Valve tightness control kit	Pic.	Note
						Part no.	Part no.	Part no.	Part no.		
TBMN 450 ME	Natural gas	241A	CE/EXP	500	CTV	19990541	Included	–	Included	D4	
		241B	CE/EXP	500	CTV	19990666	Included	–	Included	D4	
		241C	CE/EXP	500	CTV	19990542	Included	–	Included	D4	
		241D	CE/EXP	500	CTV	19990543	Included	–	Included	D4	
		241E	CE/EXP	500	CTV	19990544	Included	–	Included	D4	
TBMN 510 ME	Natural gas	242A	CE/EXP	500	CTV	19990541	Included	–	Included	D4	
		242B	CE/EXP	500	CTV	19990666	Included	–	Included	D4	
		242C	CE/EXP	500	CTV	19990542	Included	–	Included	D4	
		242D	CE/EXP	500	CTV	19990543	Included	–	Included	D4	
		242E	CE/EXP	500	CTV	19990544	Included	–	Included	D4	
TBMN 650 ME	Natural gas	243A	CE/EXP	500	CTV	19990542	Included	–	Included	D4	
		243B	CE/EXP	500	CTV	19990543	Included	–	Included	D4	
		243C	CE/EXP	500	CTV	19990544	Included	–	Included	D4	
TBMN 750 ME	Natural gas	244A	CE/EXP	500	CTV	19990542	Included	–	Included	D4	
		244B	CE/EXP	500	CTV	19990543	Included	–	Included	D4	
		244C	CE/EXP	500	CTV	19990544	Included	–	Included	D4	
TBMN 1000 ME	Natural gas	273A	CE/EXP	500	CTV	19990588	Included	–	Included	D4	
		273B	CE/EXP	500	CTV	19990589	Included	–	Included	D4	
		273C	CE/EXP	500	CTV	19990590	Included	–	Included	D4	

To choose the correct gas train please refer to the information on page 17.
For information on the structure, composition, and size of the gas train please refer to the diagrams on page 338.

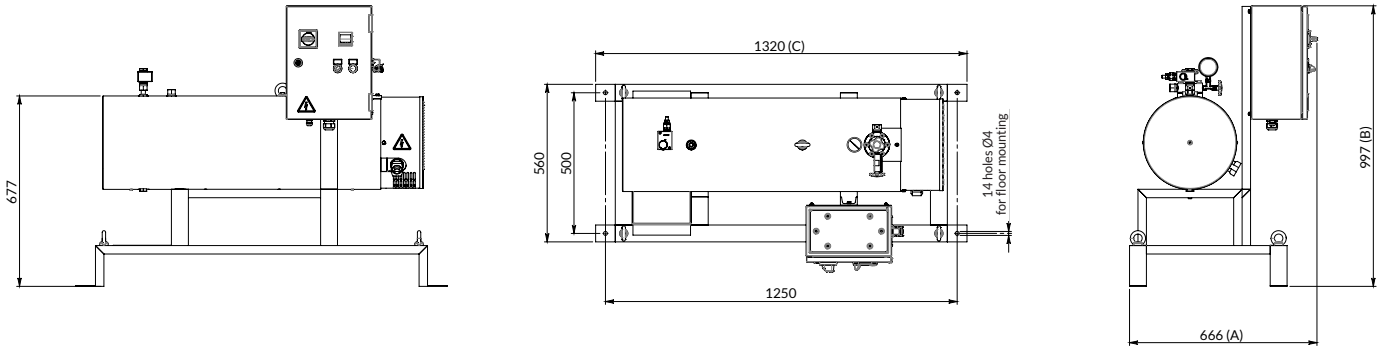
NOTE

CTV Gas train with Valve Tightness Control.
** Maximum gas inlet pressure at pressure regulator.

SKID PRER 28,5 kW TBN 450-750

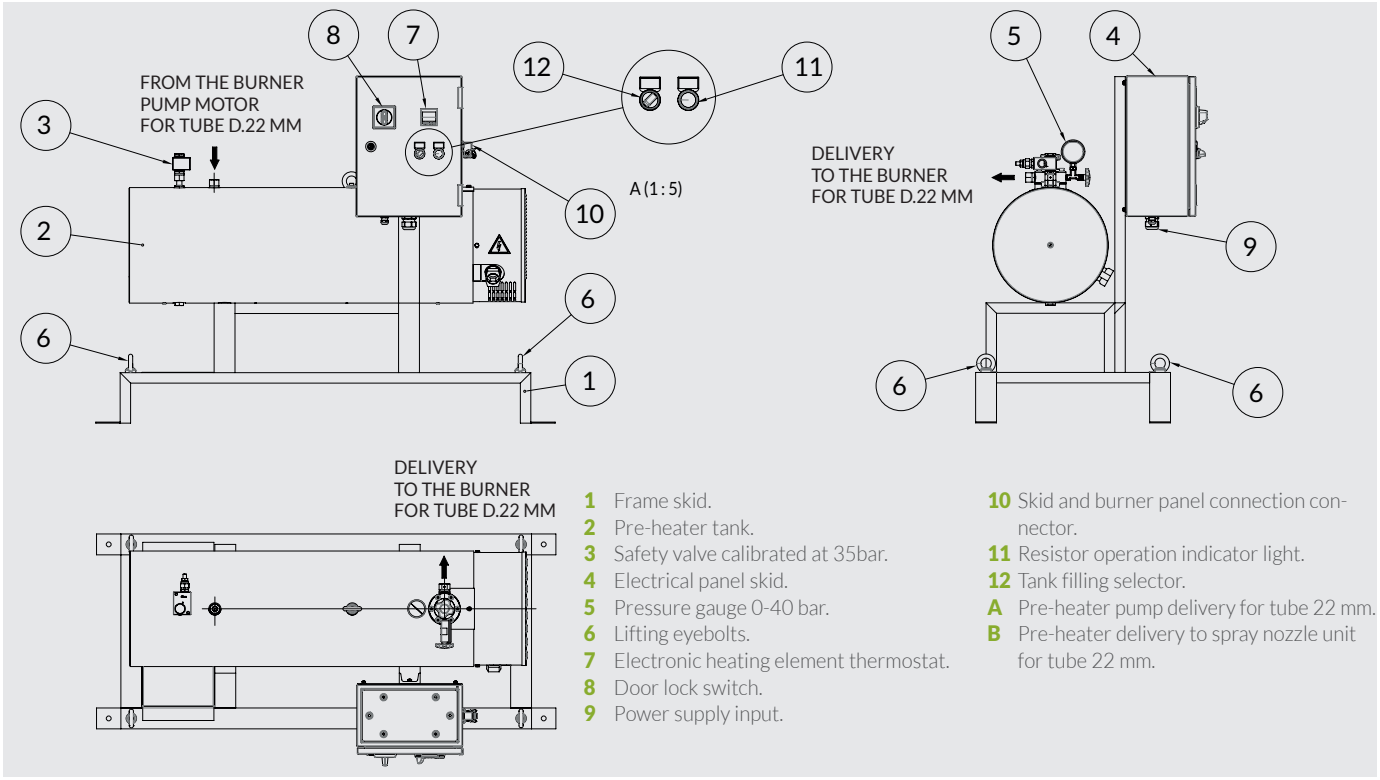


1 Frame skid.
2 Pre-heater tank.
3 Safety valve calibrated at 35bar.
4 Electrical panel skid.
5 Pressure gauge 0-40 bar.
6 Lifting eyebolts.
7 Electronic heating element thermostat.
8 Door lock switch.
9 Power supply input.
10 Skid and burner panel connection connector.
11 Resistor operation indicator light.
12 Tank filling selector.
A Pre-heater pump delivery for tube 15 mm.
B Pre-heater delivery to spray nozzle unit for tube 15 mm.

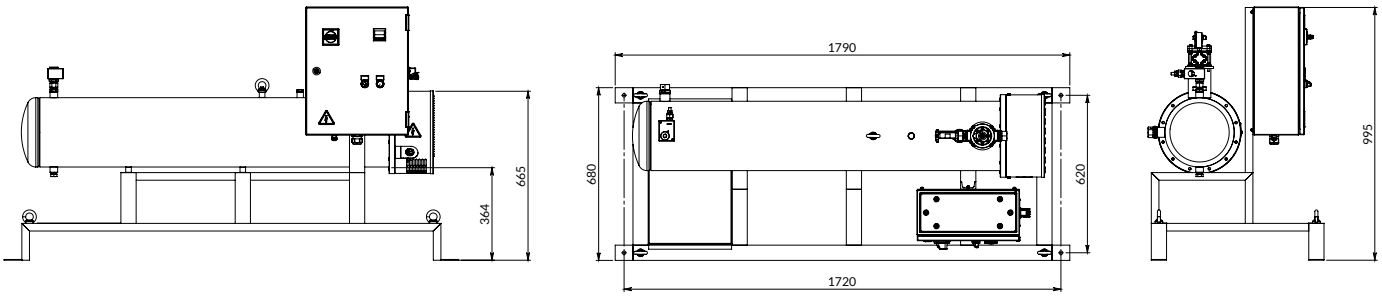


Part no.	Size of packaging L	P	H	Weight
	mm			kg
69840040	1470	970	1210	152

SKID PRER 40 kW TBN 1000



1 Frame skid.
2 Pre-heater tank.
3 Safety valve calibrated at 35bar.
4 Electrical panel skid.
5 Pressure gauge 0-40 bar.
6 Lifting eyebolts.
7 Electronic heating element thermostat.
8 Door lock switch.
9 Power supply input.
10 Skid and burner panel connection connector.
11 Resistor operation indicator light.
12 Tank filling selector.
A Pre-heater pump delivery for tube 22 mm.
B Pre-heater delivery to spray nozzle unit for tube 22 mm.



Part no.	Size of packaging L	P	H	Weight
	mm			kg
69840050	1960	1350	1400	330

Light oil burners

Simbology

BTL...
TBL...
Single-stage light oil burners.

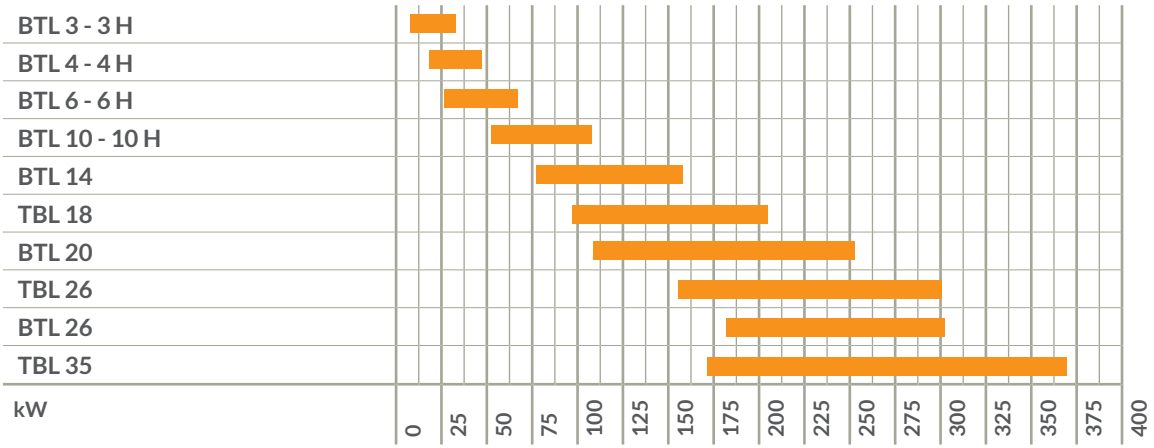
BTL...P
TBL... P
TBL...LX
BT 300 DSG 4T
BT 350 DSG
Two-stage light oil burners.

BT... DSPG
Two-stage progressive/ modulating light oil burners with mechanical cam.

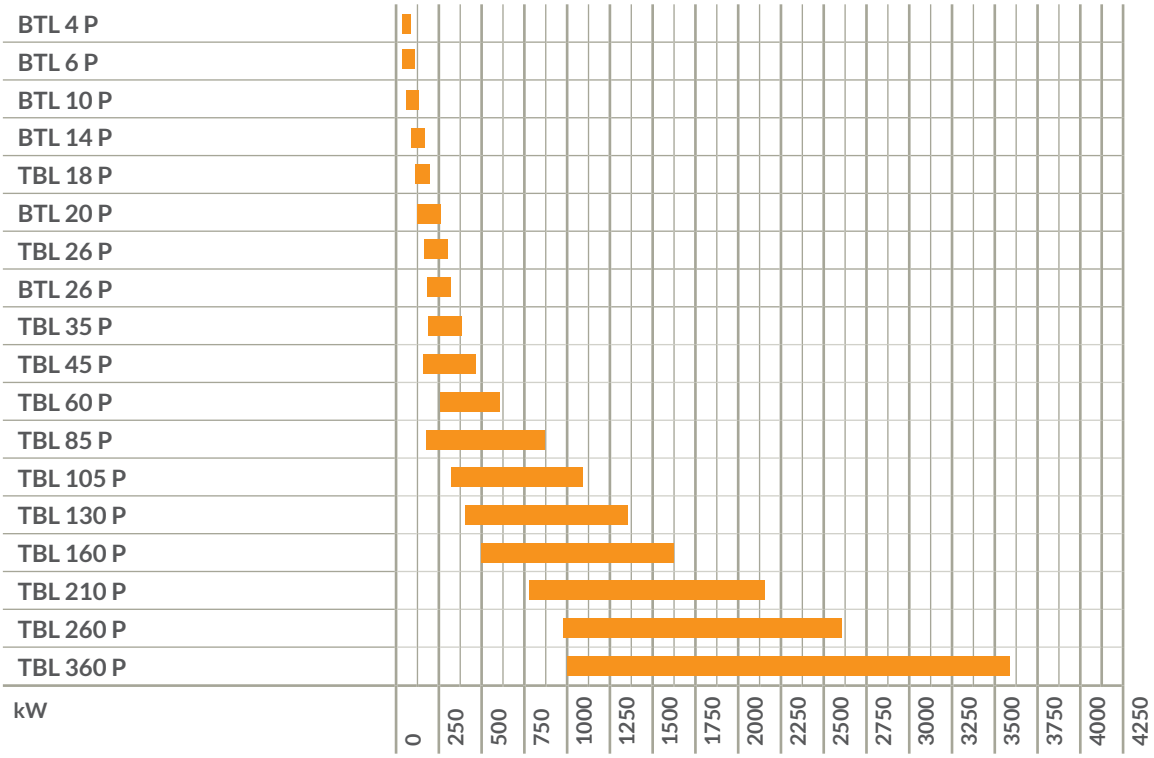
TBL... ME
Two-stage progressive/ modulating gas burners with electronic cam.

SINGLE-STAGE LIGHT OIL BURNERS

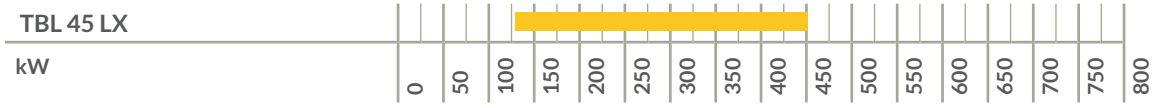
Low NOx
Class 3 according to EN267



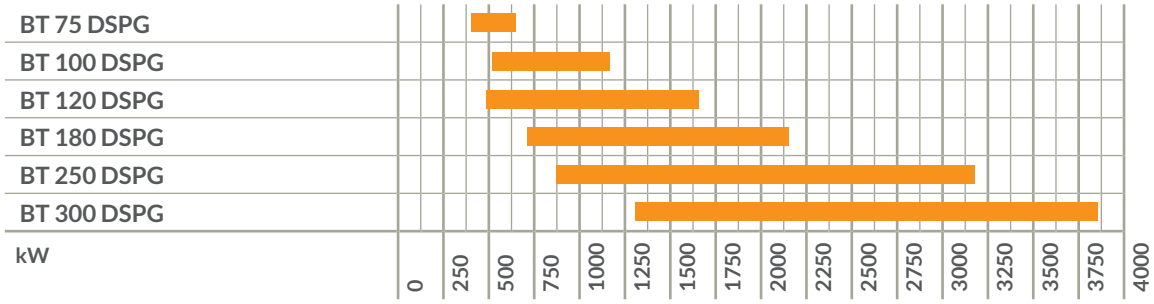
TWO-STAGE LIGHT OIL BURNERS



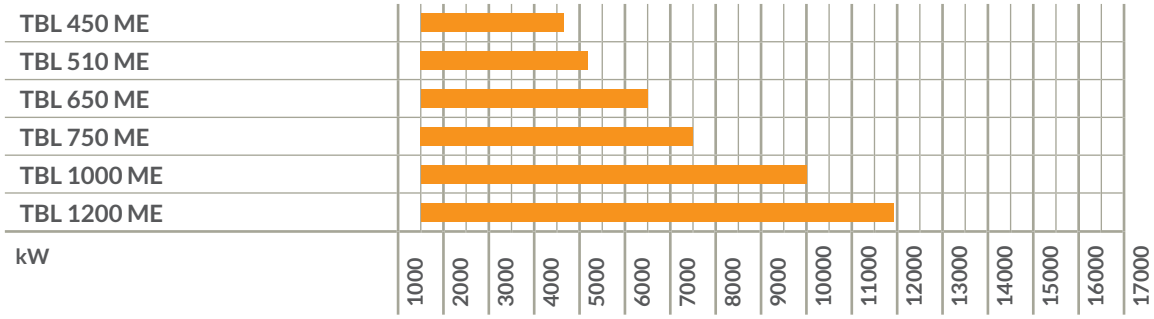
LOW NOX LIGHT OIL BURNERS



TWO-STAGE PROGRESSIVE LIGHT OIL BURNERS



TWO - STAGE PROGRESSIVE LIGHT OIL BURNERS



kW 16 - 42

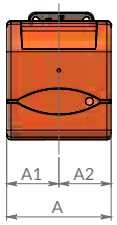
BTL SERIES

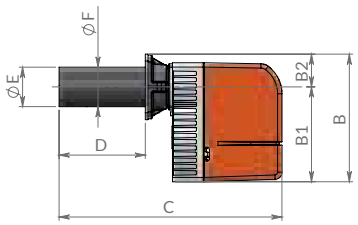
CONFORM TO: E.M.C DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/EU | MACHINERY DIRECTIVE 2006/42/CE | COMMISSION REGULATION ErP 2013/811/UE | REFERENCE STANDARD EN267

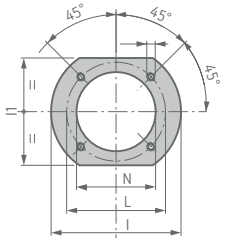
Light oil burner. Operation:	BTL 3	BTL 3 H
	single-stage	single-stage
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•
Fixed boiler coupling flange	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	manual
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves	•	•
Light oil preheater with variable capacity		•
Flame detection by phototransistor	•	•
Electric protection rating:	IP40	IP40
Sound-proof plastic protective cover	•	•

LEGEND:

- As standard



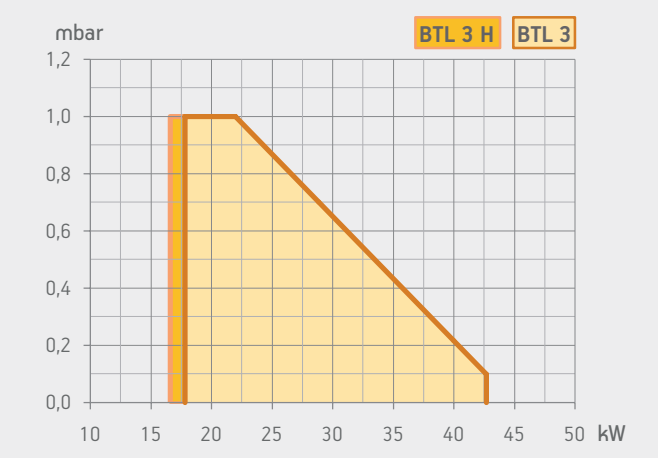




Picture 1

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	I1 mm	L mm	M	N mm	Pic.
BTL 3	250	120	130	242	170	72	330	90	80	80	170	144	135 ÷ 161	M8	85	1
BTL 3 L200	250	120	130	240	170	70	430	50 ÷ 200	80	80	170	140	130 ÷ 155	M8	85	1
BTL 3 H	250	120	130	242	170	72	330	90	80	80	170	144	135 ÷ 161	M8	85	1



Model	Size of packaging L	P	H	Weight
	mm			kg
BTL 3	400	300	280	10
BTL 3 L200	560	310	350	10
BTL 3 H	400	300	280	9

	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
		Frequency 50 Hz					
	17,8 ÷ 42,7	**BTL 3**	**35450010**	1,5	1N AC 50Hz 230V	0,09	1)
	17,8 ÷ 42,7	**BTL 3 L200**	**35450020**	1,5	1N AC 50Hz 230V	0,09	1)
	16,6 ÷ 42,7	**BTL 3 H**	**35450011**	1,5	1N AC 50Hz 230V	0,09	1) 2)
		Frequency 60 Hz					
	17,8 ÷ 42,7	**BTL 3**	**35450010**	1,5	1N AC 60Hz 220V	0,09	1)
	17,8 ÷ 42,7	**BTL 3 L200**	**35450020**	1,5	1N AC 60Hz 220V	0,09	1)
	16,6 ÷ 42,7	**BTL 3 H**	**35450011**	1,5	1N AC 60Hz 220V	0,09	1) 2)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Biodiesel operation (see note 5 page 12)	
BTL 3 long head L500 NEW 1)	98000498

BURNER ACCESSORIES

Line filter, flex hoses, nozzle, boiler coupling kit, plug for wiring

NOTE

1 Equipped with air closure device.
2 Equipped with light oil pre-heater with drop-stop device.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

N.B.

1) Conversion kit, for standard burner, by installer.
For supply of the product in long head version, please contact the sales department.

kW 26 - 56

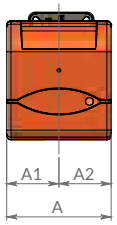
BTL SERIES

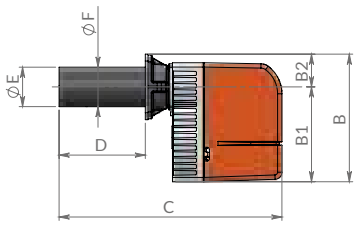
CONFORM TO: E.M.C DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/EU | MACHINERY DIRECTIVE 2006/42/CE | COMMISSION REGULATION ErP 2013/811/UE | REFERENCE STANDARD EN267

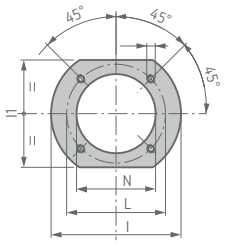
Light oil burner. Operation:	BTL 4	BTL 4 H	BTL 4 P
	single-stage	single-stage	two-stage
Adjusting the combustion head.	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	manual	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves	•	•	•
Light oil preheater with variable capacity		•	
Flame detection by phototransistor	•	•	•
Electric protection rating:	IP40	IP40	IP40
Sound-proof plastic protective cover	•	•	•

LEGEND:

- As standard



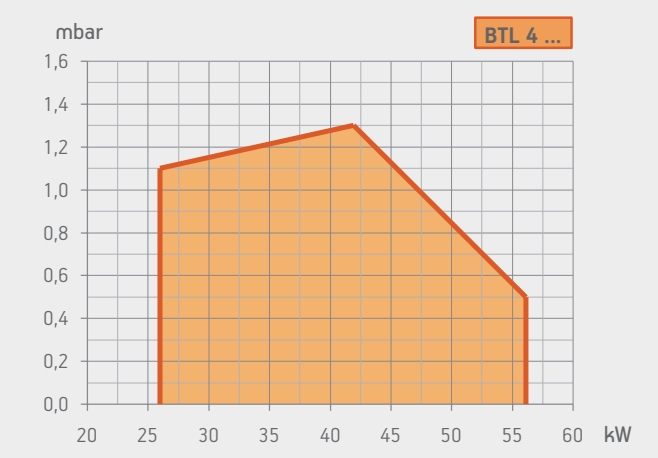




Picture 1

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	I1 mm	L mm	M	N mm	Pic.
BTL 4	246	123	123	289	219	70	410	50 ÷ 105	80	80	170	140	130 ÷ 155	M8	85	1
BTL 4 L212	246	123	123	289	219	70	520	50 ÷ 212	80	80	170	140	130 ÷ 155	M8	85	1
BTL 4 H	246	123	123	289	219	70	410	50 ÷ 105	80	80	170	140	130 ÷ 155	M8	85	1
BTL 4 P	246	123	123	289	219	70	410	50 ÷ 105	80	80	170	140	130 ÷ 155	M8	85	1



Model	Size of packaging L	P	H	Weight
	mm			kg
BTL 4	560	310	350	12
BTL 4 L212	760	310	350	12
BTL 4 H	560	310	350	12
BTL 4 P	560	310	350	12

	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
		Frequency 50 Hz					
	26,0 ÷ 56,1	**BTL 4**	**35490010**	1,5	1N AC 50Hz 230V	0,1	1)
	26,0 ÷ 56,1	**BTL 4 L212**	**35490022**	1,5	1N AC 50Hz 230V	0,1	1)
	26,0 ÷ 56,1	**BTL 4 H**	**35490011**	1,5	1N AC 50Hz 230V	0,1	1) 2)
	26,0 ÷ 56,1	**BTL 4 P**	**35500010**	1,5	1N AC 50Hz 230V	0,1	1)
		Frequency 60 Hz					
	26,0 ÷ 56,1	**BTL 4**	**35490010**	1,5	1N AC 60Hz 220V	0,1	1)
	26,0 ÷ 56,1	**BTL 4 L212**	**35490022**	1,5	1N AC 60Hz 220V	0,1	1)
	26,0 ÷ 56,1	**BTL 4 H**	**35490011**	1,5	1N AC 60Hz 220V	0,1	1) 2)
	26,0 ÷ 56,1	**BTL 4 P**	**35500010**	1,5	1N AC 60Hz 220V	0,1	1)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Biodiesel operation (see note 5 page 12)	
BTL 4 long head L500 NEW 1)	98000499

BURNER ACCESSORIES

Line filter, flex hoses, nozzle, boiler coupling kit, plug for wiring

NOTE

1 Equipped with air closure device.
2 Equipped with light oil pre-heater with drop-stop device.
5 Biodiesel secondo normativa europea EN14213-FAME.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

N.B.

1) Conversion kit, for standard burner, by installer.
For supply of the product in long head version, please contact the sales department.

kW 31 - 74

BTL SERIES

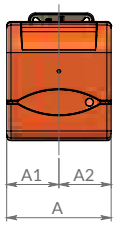
CONFORM TO: E.M.C DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/EU | MACHINERY DIRECTIVE 2006/42/CE | COMMISSION REGULATION ErP 2013/811/UE | REFERENCE STANDARD EN267

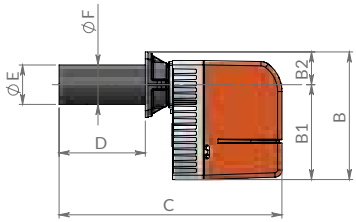
Light oil burner. Operation:	BTL 6	BTL 6 H	BTL 6 P
	single-stage	single-stage	two-stage
Adjusting the combustion head	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	manual	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.	•	•	•
Light oil preheater with variable capacity		•	
Flame detection by phototransistor	•	•	•
Electric protection rating:	IP40	IP40	IP40
Sound-proof plastic protective cover	•	•	•

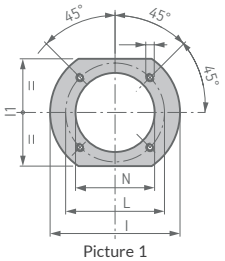
LIGHT OIL BURNERS

LEGEND:

- As standard



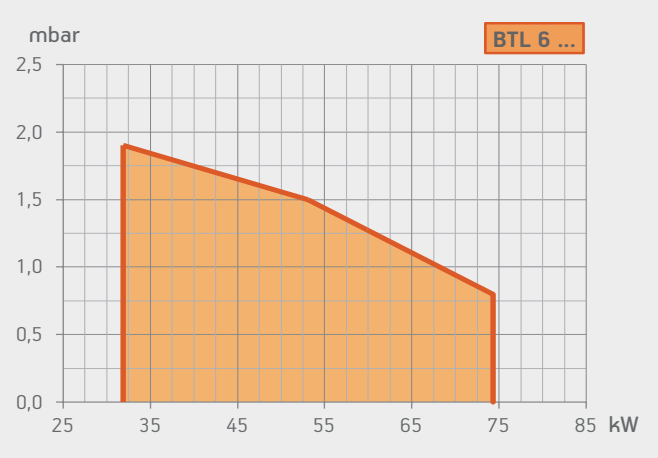




Picture 1

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	I1 mm	L mm	M	N mm	Pic.
BTL 6	246	123	123	289	219	70	455	50 ÷ 150	90	90	170	140	130 ÷ 155	M8	95	1
BTL 6 L275	246	123	123	289	219	70	580	50 ÷ 275	90	90	170	140	130 ÷ 155	M8	95	1
BTL 6 H	246	123	123	289	219	70	455	50 ÷ 150	90	90	170	140	130 ÷ 155	M8	95	1
BTL 6 P	246	123	123	289	219	70	455	50 ÷ 150	90	90	170	140	130 ÷ 155	M8	95	1
BTL 6 P L275	246	123	123	289	219	70	580	50 ÷ 275	90	90	170	140	130 ÷ 155	M8	95	1



Model	Size of packaging L	P	H	Weight
	mm			kg
BTL 6	560	310	350	12
BTL 6 L275	760	310	350	13
BTL 6 H	560	310	350	12
BTL 6 P	560	310	350	12
BTL 6 P L275	760	310	350	12

Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
	Frequency 50 Hz					
31,9 ÷ 74,3	**BTL 6**	**35510010**	1,5	1N AC 50Hz 230V	0,1	1)
31,9 ÷ 74,3	**BTL 6 L275**	**35510020**	1,5	1N AC 50Hz 230V	0,1	1)
31,9 ÷ 74,3	**BTL 6 H**	**35510011**	1,5	1N AC 50Hz 230V	0,1	1) 2)
31,9 ÷ 74,3	**BTL 6 P**	**35520010**	1,5	1N AC 50Hz 230V	0,1	1)
31,9 ÷ 74,3	**BTL 6 P L275**	**35520020**	1,5	1N AC 50Hz 230V	0,1	1)
	Frequency 60 Hz					
31,9 ÷ 74,3	**BTL 6**	**35510010**	1,5	1N AC 60Hz 220V	0,1	1)
31,9 ÷ 74,3	**BTL 6 L275**	**35510020**	1,5	1N AC 60Hz 220V	0,1	1)
31,9 ÷ 74,3	**BTL 6 H**	**35510011**	1,5	1N AC 60Hz 220V	0,1	1) 2)
31,9 ÷ 74,3	**BTL 6 P**	**35520010**	1,5	1N AC 60Hz 220V	0,1	1)
31,9 ÷ 74,3	**BTL 6 P L275**	**35520020**	1,5	1N AC 60Hz 220V	0,1	1)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Biodiesel operation (see note 5 page 12)	
BTL 6-10 long head L500 NEW 1)	98000066

BURNER ACCESSORIES

Line filter, flex hoses, nozzle, boiler coupling kit, plug for wiring

NOTE

1 Equipped with air closure device.
2 Equipped with light oil pre-heater with drop-stop device.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

N.B.

1) Conversion kit, for standard burner, by installer.
For supply of the product in long head version, please contact the sales department.

kW 60 - 118

BTL SERIES

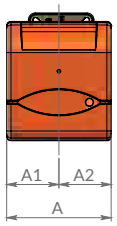
CONFORM TO: E.M.C DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/EU | MACHINERY DIRECTIVE 2006/42/CE | COMMISSION REGULATION ErP 2013/811/UE | REFERENCE STANDARD EN267

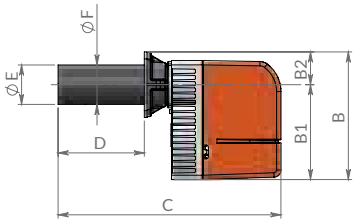
Light oil burner. Operation:	BTL 10	BTL 10 H	BTL 10 P
	single-stage	single-stage	two-stage
Adjusting the combustion head	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	manual	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves	•	•	•
Light oil preheater with variable capacity		•	
Flame detection by phototransistor	•	•	•
Electric protection rating:	IP40	IP40	IP40
Sound-proof plastic protective cover	•	•	•

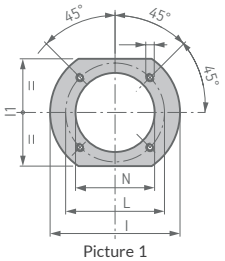
LIGHT OIL BURNERS

LEGEND:

- As standard







Picture 1

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	I1 mm	L mm	M	N mm	Pic.
BTL 10	246	123	123	289	219	70	480	50 ÷ 158	90	90	170	140	130 ÷ 155	M8	95	1
BTL 10 L250	246	123	123	289	219	70	580	50 ÷ 250	90	90	170	140	130 ÷ 155	M8	95	1
BTL 10 H	246	123	123	289	219	70	480	50 ÷ 158	90	90	170	140	130 ÷ 155	M8	95	1
BTL 10 P	246	123	123	289	219	70	480	50 ÷ 158	90	90	170	140	130 ÷ 155	M8	95	1
BTL 10 P L250	246	123	123	289	219	70	580	50 ÷ 250	90	90	170	140	130 ÷ 155	M8	95	1

Model	Size of packaging L	P	H	Weight
	mm			kg
BTL 10	560	310	350	12
BTL 10 L250	760	310	350	12
BTL 10 H	560	310	350	12
BTL 10 P	560	310	350	12
BTL 10 P L250	760	310	350	12

	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
		Frequency 50 Hz					
	60,2 ÷ 118,0	**BTL 10**	**35530010**	1,5	1N AC 50Hz 230V	0,1	1)
	60,2 ÷ 118,0	**BTL 10 L250**	**35530020**	1,5	1N AC 50Hz 230V	0,1	1)
	60,2 ÷ 118,0	**BTL 10 H**	**35530011**	1,5	1N AC 50Hz 230V	0,1	1) 2)
	60,2 ÷ 118,0	**BTL 10 P**	**35540010**	1,5	1N AC 50Hz 230V	0,1	1)
	60,2 ÷ 118,0	**BTL 10 P L250**	**35540020**	1,5	1N AC 50Hz 230V	0,1	1)
		Frequency 60 Hz					
	60,2 ÷ 118,0	**BTL 10**	**35530010**	1,5	1N AC 60Hz 220V	0,1	1)
	60,2 ÷ 118,0	**BTL 10 L250**	**35530020**	1,5	1N AC 60Hz 220V	0,1	1)
	60,2 ÷ 118,0	**BTL 10 H**	**35530011**	1,5	1N AC 60Hz 220V	0,1	1) 2)
	60,2 ÷ 118,0	**BTL 10 P**	**35540010**	1,5	1N AC 60Hz 220V	0,1	1)
	60,2 ÷ 118,0	**BTL 10 P L250**	**35540020**	1,5	1N AC 60Hz 220V	0,1	1)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Biodiesel operation (see note 5 page 12)	
BTL 6-10 long head L500 NEW 1)	98000066

BURNER ACCESSORIES

Line filter, flex hoses, nozzle, boiler coupling kit, plug for wiring

NOTE

1 Equipped with air closure device.
2 Equipped with light oil pre-heater with drop-stop device.
5 Biodiesel secondo normativa europea EN14213-FAME.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

N.B.

1) Conversion kit, for standard burner, by installer.
For supply of the product in long head version, please contact the sales department.

kW 70 - 190

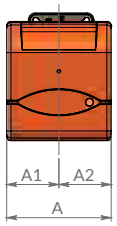
BTL SERIES

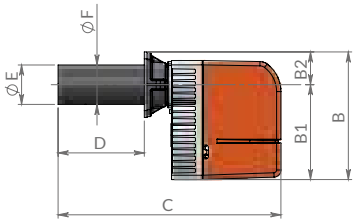
CONFORM TO: E.M.C DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | COMMISSION REGULATION ErP 2013/811/UE E ERP 2013/813/UE | REFERENCE STANDARD EN267

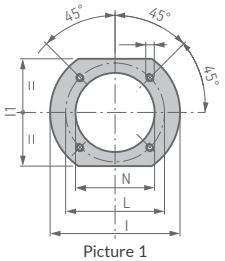
Light oil burner. Operation:	BTL 14	BTL 14 P
	single-stage	two-stage
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•
Device made of sound-absorbing material to reduce fan noise	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves	•	•
Flame detection by phototransistor	•	•
Electric protection rating:	IP40	IP40
Sound-proof plastic protective cover	•	•

LEGEND:

- As standard



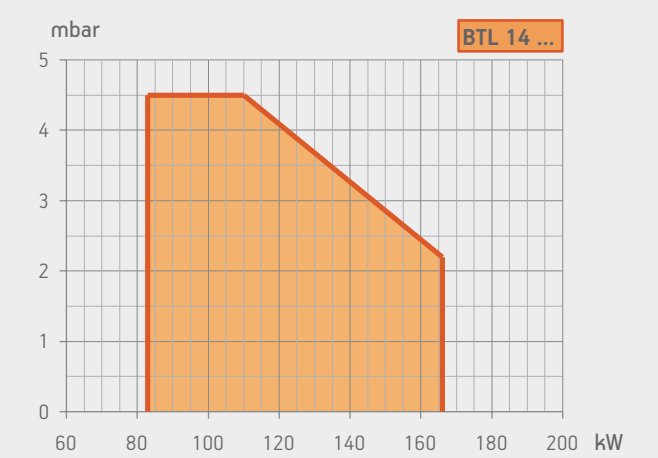




Picture 1

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
BTL 14	303	158	145	358	275	83	620	100 ÷ 250	100	100	166	150 ÷ 200	M10	110	2
BTL 14 L150	303	158	145	358	275	83	510	100 ÷ 140	100	100	166	150 ÷ 200	M10	110	2
BTL 14 L500	303	158	145	358	275	83	870	100 ÷ 500	100	100	166	150 ÷ 200	M10	110	2
BTL 14 P	303	158	145	358	275	83	620	100 ÷ 250	100	100	166	150 ÷ 200	M10	110	2
BTL 14 P L500	303	158	145	358	275	83	870	100 ÷ 500	100	100	166	150 ÷ 200	M10	110	2



Model	Size of packaging L	P	H	Weight
	mm			kg
BTL 14	780	370	410	18
BTL 14 L150	780	370	410	18
BTL 14 L500	980	370	410	19
BTL 14 P	780	370	410	18
BTL 14 P L500	980	370	410	18

Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
	Frequency 50 Hz					
83 ÷ 166	**BTL 14**	**35610010**	1,5	1N AC 50Hz 230V	0,18	1) 3)
83 ÷ 166	**BTL 14 L150**	**35610020**	1,5	1N AC 50Hz 230V	0,18	1) 3)
83 ÷ 166	**BTL 14 L500**	**35610030**	1,5	1N AC 50Hz 230V	0,18	1) 3)
83 ÷ 166	**BTL 14 P**	**35620010**	1,5	1N AC 50Hz 230V	0,18	1) 3)
83 ÷ 166	**BTL 14 P L500**	**35620030**	1,5	1N AC 50Hz 230V	0,18	1) 3)
	Frequency 60 Hz					
83 ÷ 166	**BTL 14**	**35615410**	1,5	1N AC 60Hz 220V	0,25	1) 3)
83 ÷ 166	**BTL 14 L150**	**35615411**	1,5	1N AC 60Hz 220V	0,25	1) 3)
83 ÷ 166	**BTL 14 L500**	**35610030**	1,5	1N AC 60Hz 220V	0,18	1) 3)
83 ÷ 166	**BTL 14 P**	**35625410**	1,5	1N AC 60Hz 220V	0,25	1) 3)
83 ÷ 166	**BTL 14 P L500**	**35620030**	1,5	1N AC 60Hz 220V	0,18	1) 3)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Biodiesel operation (see note 5 page 12)	
BTL 14 long head L500 NEW 1)	98000489

BURNER ACCESSORIES

Line filter, flex hoses, nozzle, boiler coupling kit, plug for wiring

NOTE

1 Equipped with air closure device.
3 Sound proof lid on burner air intake.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

kW 90 - 210

TBL SERIES

Low NOx

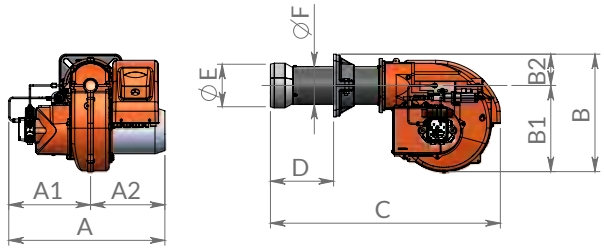
CONFORM TO: E.M.C DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | COMMISSION REGULATION ErP 2013/811/UE E ERP 2013/813/UE | REFERENCE STANDARD EN267

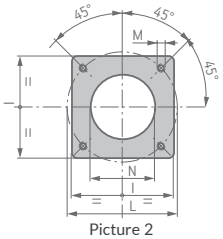
CE

Light oil burner. Operation:	TBL 18 single-stage	TBL 18 P two-stage
Low NOx and CO emissions light oil burner according to European standard EN267:	class 2	class 2
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	hydraulic jack
Device made of sound-absorbing material to reduce fan noise	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves	•	•
Flame detection by phototransistor	•	•
Electric protection rating:	IP40	IP40
Noise level dB(A)	<73	<73

LEGEND:

- As standard

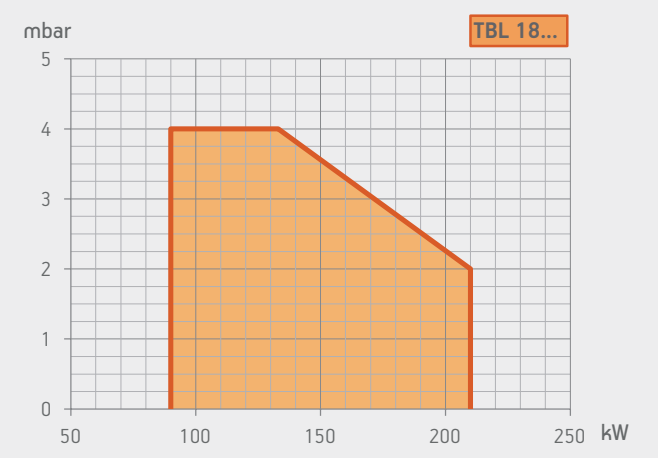




Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBL 18	440	215	225	355	262	93	690	100 ÷ 240	150	114	185	200 ÷ 245	M12	155	2
TBL 18 P	440	215	225	355	262	93	690	100 ÷ 240	150	114	185	200 ÷ 245	M12	155	2



Model	Size of packaging L	P	H	Weight
	mm			kg
TBL 18	1000	600	510	22,5
TBL 18 P	1000	600	510	23,5

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	90 ÷ 210	**TBL 18**	**35560010**	1,5	1N AC 50Hz 230V	0,25	
	class 2	90 ÷ 210	**TBL 18 P**	**35570010**	1,5	1N AC 50Hz 230V	0,25	
			Frequency 60 Hz					
	class 2	90 ÷ 210	**TBL 18**	**35565410**	1,5	1N AC 60Hz 220V	0,25	
	class 2	90 ÷ 210	**TBL 18 P**	**35575410**	1,5	1N AC 60Hz 220V	0,25	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Biodiesel operation (see note 5 page 12)	
Soundproof burner cover (see page 337)	97980054

BURNER ACCESSORIES

Flex hoses, light oil filter, nozzle.

NOTE

Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

kW 118 - 261

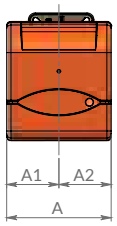
BTL SERIES

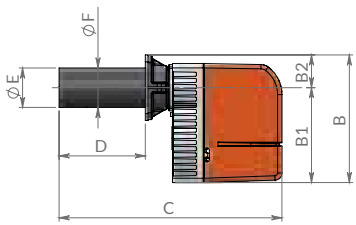
CONFORM TO: E.M.C DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | COMMISSION REGULATION ErP 2013/811/UE E ERP 2013/813/UE | REFERENCE STANDARD EN267

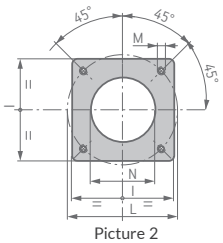
Light oil burner. Operation:	BTL 20	BTL 20 P
	single-stage	two-stage
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•
Device made of sound-absorbing material to reduce fan noise	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves	•	•
Flame detection by phototransistor	•	•
Electric protection rating:	IP40	IP40
Sound-proof plastic protective cover	•	•

LEGEND:

- As standard



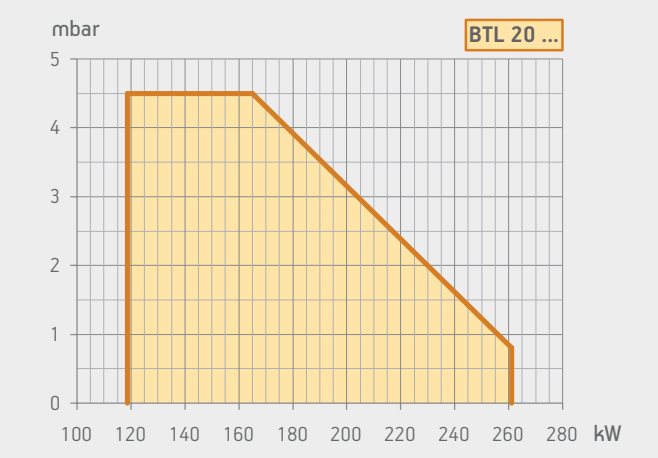




Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
BTL 20	303	158	145	368	275	93	645	100 ÷ 250	114	114	185	170 ÷ 210	M10	120	2
BTL 20 L500	303	158	145	368	275	93	890	100 ÷ 495	114	114	185	170 ÷ 210	M10	120	2
BTL 20 P	303	158	145	368	275	93	645	100 ÷ 250	114	114	185	170 ÷ 210	M10	120	2
BTL 20 P L500	303	158	145	368	275	93	890	100 ÷ 495	114	114	185	170 ÷ 210	M10	120	2



Model	Size of packaging L	P	H	Weight
	mm			kg
BTL 20	780	370	410	19
BTL 20 L500	980	370	410	19
BTL 20 P	780	370	410	20
BTL 20 P L500	980	370	410	19

	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
		Frequency 50 Hz					
	118,6 ÷ 261,0	**BTL 20**	**35630010**	1,5	1N AC 50Hz 230V	0,18	1) 3)
	118,6 ÷ 261,0	**BTL 20 L500**	**35630030**	1,5	1N AC 50Hz 230V	0,18	1) 3)
	118,6 ÷ 261,0	**BTL 20 P**	**35640010**	1,5	1N AC 50Hz 230V	0,18	1) 3)
	118,6 ÷ 261,0	**BTL 20 P L500**	**35640030**	1,5	1N AC 50Hz 230V	0,18	1) 3)
		Frequency 60 Hz					
	118,6 ÷ 261,0	**BTL 20**	**35635410**	1,5	1N AC 60Hz 220V	0,25	1) 3)
	118,6 ÷ 261,0	**BTL 20 P**	**35645410**	1,5	1N AC 60Hz 220V	0,25	1) 3)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Biodiesel operation (see note 5 page 12)	
BTL 20 long head L500 NEW 1)	98000490

BURNER ACCESSORIES

Line filter, flex hoses, nozzle, boiler coupling kit, plug for wiring

NOTE

1 Equipped with air closure device.
3 Sound proof lid on burner air intake.
5 Biodiesel secondo normativa europea EN14213-FAME.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

kW 155 - 308

TBL SERIES

Low NOx

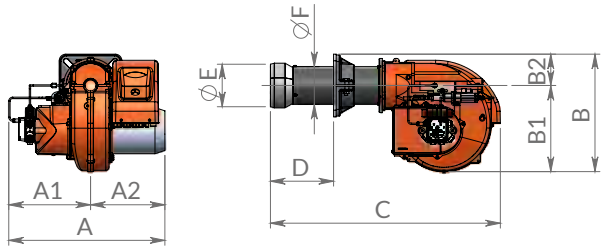
CONFORM TO: E.M.C DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | COMMISSION REGULATION ErP 2013/811/UE E ERP 2013/813/UE | REFERENCE STANDARD EN267

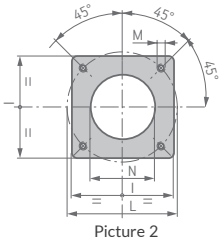
CE

Light oil burner. Operation:	TBL 26 single-stage	TBL 26 P two-stage
Low NOx and CO emissions light oil burner according to European standard EN267:	class 2	class 2
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	hydraulic jack
Device made of sound-absorbing material to reduce fan noise	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves	•	•
Flame detection by phototransistor	•	•
Electric protection rating:	IP40	IP40
Noise level dB(A)	<76	<76

LEGEND:

- As standard

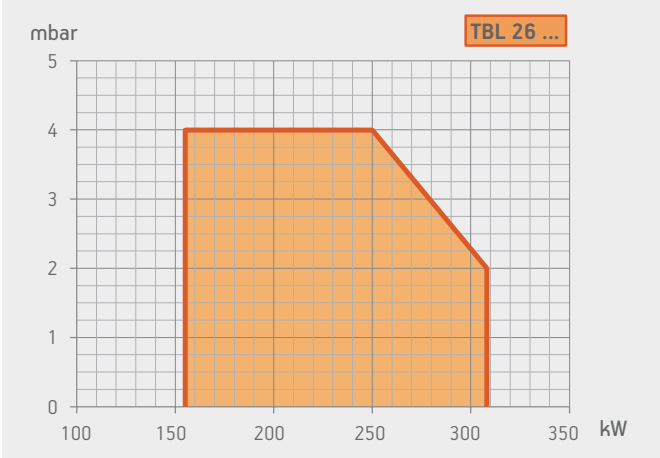




Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBL 26	440	215	225	355	262	93	700	100 ÷ 240	150	114	185	200 ÷ 245	M12	155	2
TBL 26 P	440	215	225	355	262	93	700	100 ÷ 240	150	114	185	200 ÷ 245	M12	155	2



Model	Size of packaging L	P	H	Weight
	mm			kg
TBL 26	1000	600	510	23
TBL 26 P	1000	600	510	24

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	155 ÷ 308	**TBL 26**	**35580010**	1,5	1N AC 50Hz 230V	0,37	
	class 2	155 ÷ 308	**TBL 26 P**	**35590010**	1,5	1N AC 50Hz 230V	0,37	
			Frequency 60 Hz					
	class 2	155 ÷ 308	**TBL 26**	**35585410**	1,5	1N AC 60Hz 220V	0,37	
	class 2	155 ÷ 308	**TBL 26 P**	**35595410**	1,5	1N AC 60Hz 220V	0,37	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Biodiesel operation (see note 5 page 12)	
Soundproof burner cover (see page 337)	97980054

BURNER ACCESSORIES

Flex hoses, light oil filter, nozzle.

NOTE

Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

kW 190 - 310

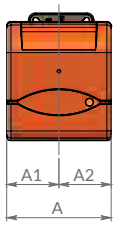
BTL SERIES

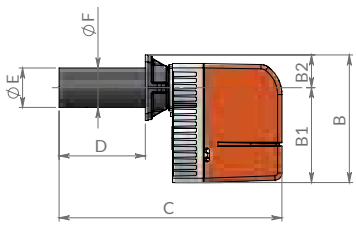
CONFORM TO: E.M.C DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | COMMISSION REGULATION ErP 2013/811/UE E ERP 2013/813/UE | REFERENCE STANDARD EN267

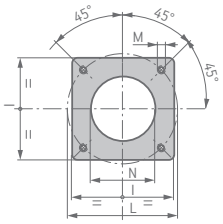
Light oil burner. Operation:	BTL 26	BTL 26 P
	single-stage	two-stage
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	electric servomotor
Device made of sound-absorbing material to reduce fan noise	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves	•	•
Flame detection by phototransistor	•	•
Electric protection rating:	IP40	IP40
Sound-proof plastic protective cover	•	•

LEGEND:

- As standard







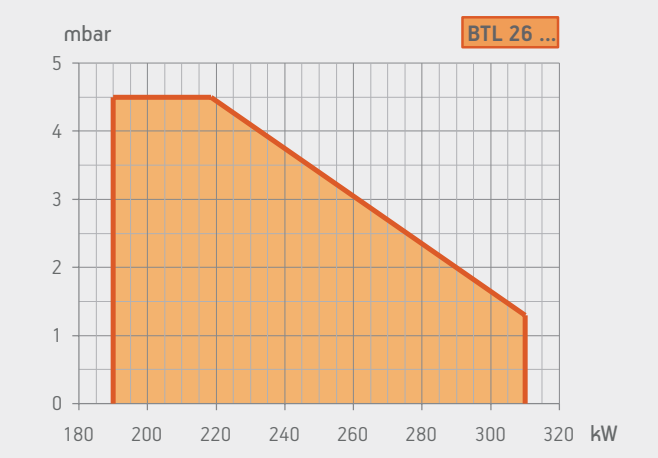
Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
BTL 26	303	158	145	368	275	93	650	100 ÷ 255	135	135	185	170 ÷ 210	M10	140	2
BTL 26 L500	303	158	145	368	275	93	890	100 ÷ 490	135	135	185	170 ÷ 210	M10	140	2
BTL 26 P	303	158	145	368	275	93	650	100 ÷ 255	135	135	185	170 ÷ 210	M10	140	2
BTL 26 P L500	303	158	145	368	275	93	890	100 ÷ 490	135	135	185	170 ÷ 210	M10	140	2

kW 190 - 310

BTL SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
BTL 26	780	370	410	19
BTL 26 L500	980	370	410	18
BTL 26 P	780	370	410	20
BTL 26 P L500	980	370	410	19

LIGHT OIL BURNERS

	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
		Frequency 50 Hz					
	190 ÷ 310	**BTL 26**	**35650010**	1,5	1N AC 50Hz 230V	0,25	3)
	190 ÷ 310	**BTL 26 L500**	**35650020**	1,5	1N AC 50Hz 230V	0,25	3)
	190 ÷ 310	**BTL 26 P**	**35660010**	1,5	1N AC 50Hz 230V	0,25	3)
	190 ÷ 310	**BTL 26 P L500**	**35660020**	1,5	1N AC 50Hz 230V	0,25	3)
		Frequency 60 Hz					
	190 ÷ 310	**BTL 26**	**35655410**	1,5	1N AC 60Hz 220V	0,25	3)
	190 ÷ 310	**BTL 26 L500**	**35655411**	1,5	1N AC 60Hz 220V	0,25	3)
	190 ÷ 310	**BTL 26 P**	**35665410**	1,5	1N AC 60Hz 220V	0,25	3)
	190 ÷ 310	**BTL 26 P L500**	**35665411**	1,5	1N AC 60Hz 220V	0,25	3)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Biodiesel operation (see note 5 page 12)	
BTL 26 long head L500 NEW 1)	98000491

BURNER ACCESSORIES

Line filter, flex hoses, nozzle, boiler coupling kit, plug for wiring

NOTE

3 Sound proof lid on burner air intake.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

kW 170 - 370

TBL SERIES

Low NOx

CONFORM TO: E.M.C DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | COMMISSION REGULATION ErP 2013/811/UE E ERP 2013/813/UE | REFERENCE STANDARD EN267

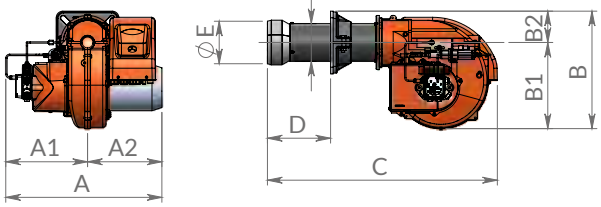
CE

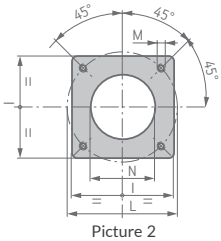
Light oil burner. Operation:	TBL 35	TBL 35 P	TBL 35 P DACA
	single-stage	two-stage	two-stage
Low NOx and CO emissions light oil burner according to European standard EN267:	class 2	class 2	class 2
Adjusting the combustion head	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	hydraulic jack	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney			•
Device made of sound-absorbing material to reduce fan noise	•	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves	•	•	•
Flame detection by phototransistor	•	•	•
Electric protection rating:	IP40	IP40	IP40
Noise level dB(A)	<74	<74	<74

LIGHT OIL BURNERS

LEGEND:

- As standard





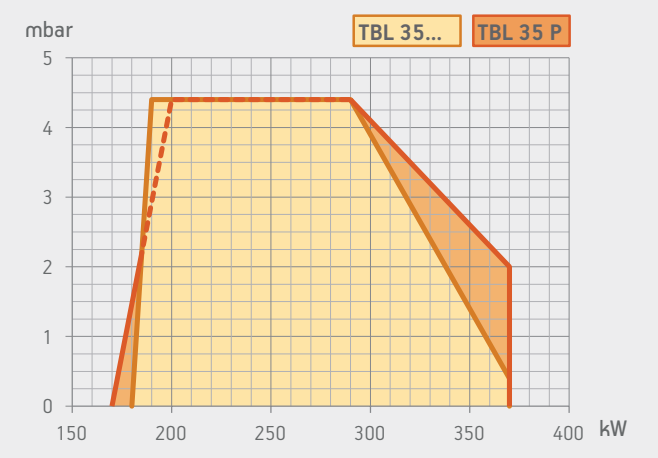
Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBL 35	440	215	225	365	260	105	780	150 ÷ 350	150	135	210	200 ÷ 245	M12	155	2
TBL 35 P	440	215	225	365	260	105	780	150 ÷ 350	150	135	210	200 ÷ 245	M12	155	2

kW 170 - 370

TBL SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
TBL 35	1000	600	510	26,0
TBL 35 P	1000	600	510	34,5
TBL 35 P DACA	1000	600	510	33,0

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	170 ÷ 370	**TBL 35**	**35680010**	1,5	1N AC 50Hz 230V	0,37	
	class 2	170 ÷ 370	**TBL 35 P**	**35690010**	1,5	1N AC 50Hz 230V	0,37	
	class 2	170 ÷ 370	**TBL 35 P DACA**	**35690110**	1,5	1N AC 50Hz 230V	0,37	4)
			Frequency 60 Hz					
	class 2	170 ÷ 370	**TBL 35**	**35685410**	1,5	1N AC 60Hz 220V	0,37	
	class 2	170 ÷ 370	**TBL 35 P**	**35695410**	1,5	1N AC 60Hz 220V	0,37	
	class 2	170 ÷ 370	**TBL 35 P DACA**	**35695420**	1,5	1N AC 60Hz 220V	0,37	4)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Biodiesel operation (see note 5 page 12)	
TBL 35 long head L500 NEW 1)	98000484
TBL 35 P long head L500 NEW 1)	98000485

BURNER ACCESSORIES

TBL 35 P/35 P DACA: flex hoses, nozzles, boiler coupling kit, plug for wiring

NOTE

4 Equipped with automatic air closure device.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

N.B.

1) Conversion kit, for standard burner, by installer.
For supply of the product in long head version, please contact the sales department.

kW 130 - 450

TBL SERIES

Low NOx

CONFORM TO: E.M.C DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | COMMISSION REGULATION ErP 2013/811/UE E ERP 2013/813/UE | REFERENCE STANDARD EN267

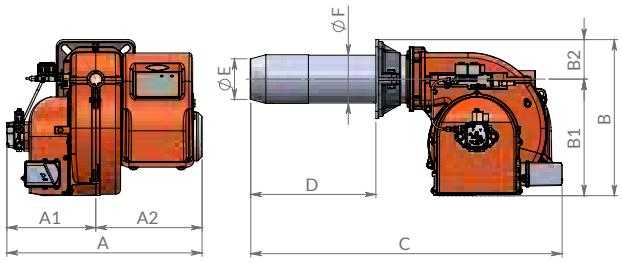
CE

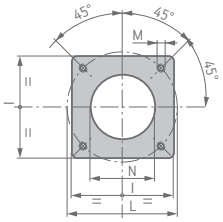
	TBL 45 P	TBL 45 P DACA	TBL 45 LX
Light oil burner. Operation:	**two-stage**	**two-stage**	**two-stage**
Low NOx and CO emissions light oil burner according to European standard EN267:	class 2	class 2	class 3
Adjusting the combustion head	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	hydraulic jack	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney		•	•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•	•	•
Flame detection by phototransistor	•	•	
Flame detection by IRD photocell			•
Electric protection rating:	IP40	IP40	IP44

LIGHT OIL BURNERS

LEGEND:

- As standard





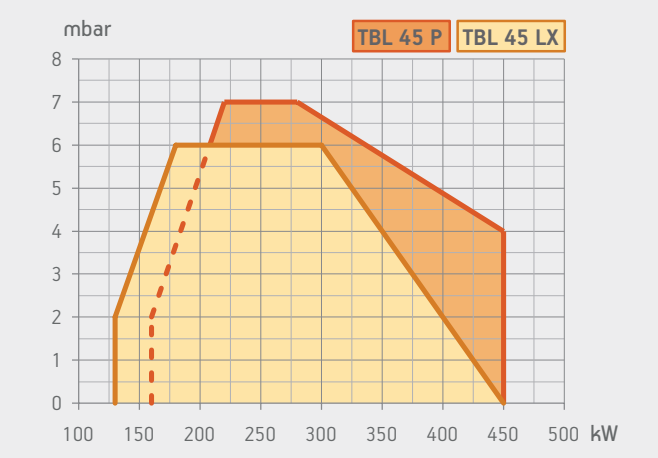
Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBL 45 P	505	260	245	433	325	108	820	120 ÷ 350	135	133	215	200 ÷ 245	M12	145	2
TBL 45 P DACA	535	260	275	433	325	108	860	120 ÷ 350	135	133	215	200 ÷ 245	M12	145	2
TBL 45 LX	535	260	275	433	325	108	860	120 ÷ 350	135	133	215	200 ÷ 245	M12	145	2

kW 130 - 450

TBL SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
TBL 45 P	1000	600	510	34
TBL 45 P DACA	1000	600	510	34
TBL 45 LX	1000	600	510	34

LIGHT OIL BURNERS

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	160 ÷ 450	**TBL 45 P**	**35710010**	1,5	1N AC 50Hz 230V	0,50	
	class 2	160 ÷ 450	**TBL 45 P**	**35710015**	1,5	3N AC 50Hz 400V	0,65	
	class 2	160 ÷ 450	**TBL 45 P DACA**	**35710110**	1,5	1N AC 50Hz 230V	0,50	4)
	class 3	130 ÷ 450	**TBL 45 LX**	**35730010**	1,5	1N AC 50Hz 230V	0,50	4)
			Frequency 60 Hz					
	class 2	160 ÷ 450	**TBL 45 P**	**35715410**	1,5	1N AC 60Hz 220V	0,50	
	class 2	160 ÷ 450	**TBL 45 P**	**35715415**	1,5	1N AC 60Hz 380V	0,65	
	class 2	160 ÷ 450	**TBL 45 P DACA**	**35715420**	1,5	1N AC 60Hz 220V	0,50	4)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Biodiesel operation (see note 5 page 12)	
TBL 45 P/45 P DACA: line filter 3/8"	98000370
Soundproof burner cover (see page 337)	97980054
TBL 45 P long head L500 NEW 1)	98000483

BURNER ACCESSORIES

TBL 45 P/45 P DACA: flex hoses, nozzles, boiler coupling kit, plug for wiring

TBL 45 LX: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring

NOTE

4 Equipped with automatic air closure device.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

N.B.

1) Conversion kit, for standard burner, by installer.
For supply of the product in long head version, please contact the sales department.

kW 250 - 600

TBL SERIES

Low NOx

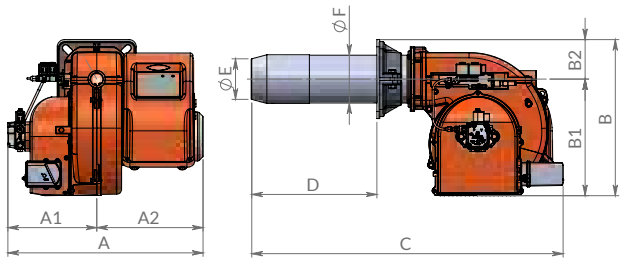
CONFORM TO: E.M.C DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | COMMISSION REGULATION ErP 2013/811/UE E ERP 2013/813/UE | REFERENCE STANDARD EN267

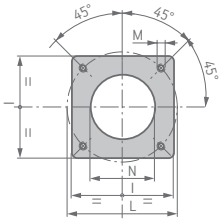
CE

	TBL 60 P	TBL 60 P DACA
Light oil burner. Operation:	**two-stage**	**two-stage**
Low NOx and CO emissions light oil burner according to European standard EN267:	class 2	class 2
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	hydraulic jack	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney		•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•	•
Flame detection by phototransistor	•	•
Electric protection rating:	IP40	IP40

LEGEND:

- As standard





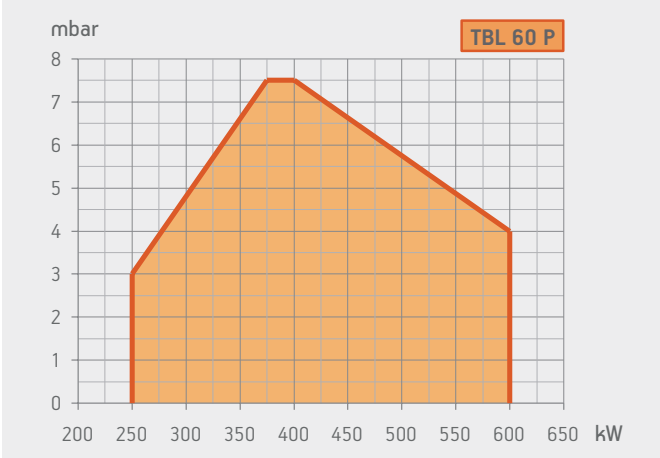
Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBL 60 P	505	260	245	455	325	130	840	140 ÷ 350	150	152	260	225 ÷ 300	M12	160	2
TBL 60 P DACA	535	260	275	455	325	130	880	140 ÷ 350	150	152	260	225 ÷ 300	M12	160	2

kW 250 - 600

TBL SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
TBL 60 P	1000	600	510	36
TBL 60 P DACA	1000	600	510	36

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	250 ÷ 600	**TBL 60 P**	**35750010**	1,5	3N AC 50Hz 400V	0,65	
	class 2	250 ÷ 600	**TBL 60 P DACA**	**35750110**	1,5	3N AC 50Hz 400V	0,65	4)
			Frequency 60 Hz					
	class 2	250 ÷ 600	**TBL 60 P**	**35755410**	1,5	3N AC 60Hz 380V	0,65	
	class 2	250 ÷ 600	**TBL 60 P DACA**	**35755420**	1,5	3N AC 60Hz 380V	0,65	4)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Biodiesel operation (see note 5 page 12)	
Line filter 3/8"	98000370
Soundproof burner cover (see page 337)	97980054
TBL 60 P long head L500 NEW 1)	98000486

BURNER ACCESSORIES

Flex hoses, nozzles, boiler coupling kit, plug for wiring

NOTE

4 Equipped with automatic air closure device.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

N.B.

1) Conversion kit, for standard burner, by installer.
For supply of the product in long head version, please contact the sales department.

kW 200 - 889

TBL - BT SERIES

Low NOx

CONFORM TO: E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE

TBL 85 P

BT 75 DSPG

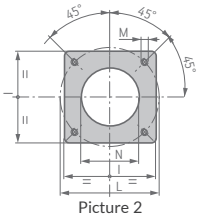
Light oil burner. Operation:	TBL 85 P two-stage	BT 75 DSPG mechanical two-stage progressive
Modulation ratio:		1:2
Low NOx and CO emissions light oil burner according to European standard EN267:	class 2	
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•
High ventilation efficiency, low electrical input, low noise	•	
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	hydraulic jack	mechanical cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney		•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•	
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve		•
Atomisation unit with solenoid valve for to control of the nozzle closing pin		•
Flame detection by photoresistance		•
Flame detection by photodiode	•	
Control panel with display diagram for working mode with indication lights	•	
Electric protection rating:	IP40	IP40

LIGHT OIL BURNERS

LEGEND:

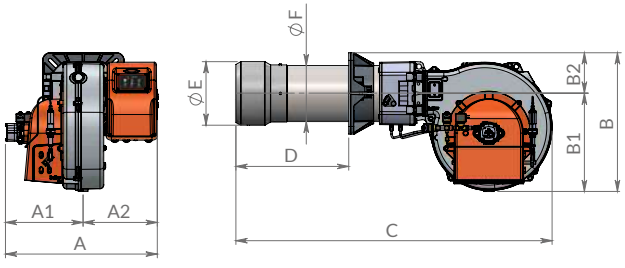
- As standard

Flange dimensions and boiler drilling template.

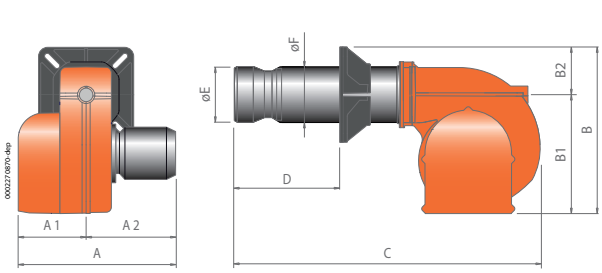


Picture 2

TBL 85 P



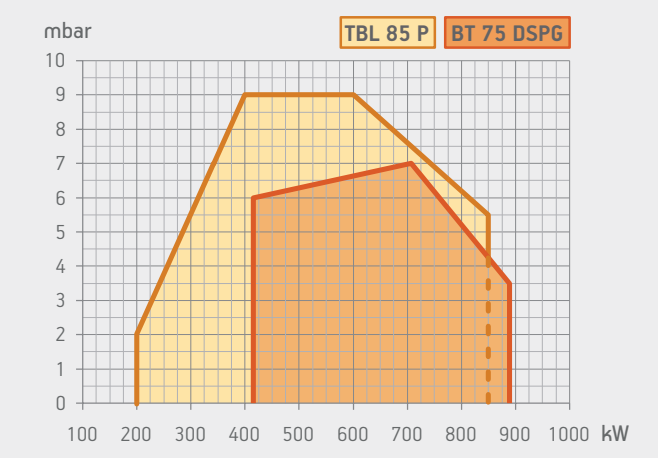
BT 75 DSPG



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBL 85 P	598	272	326	525	385	140	1200	200 ÷ 400	180	178	280	250 ÷ 325	M12	195	2
BT 75 DSPG	595	310	385	510	365	145	1215	130 ÷ 450	205	160	260	255 ÷ 300	M12	170	2

kW 200 - 889

TBL - BT SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
TBL 85 P	1070	800	700	79
BT 75 DSPG	1730	1030	880	140

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	200 ÷ 850	**TBL 85 P**	**35830010**	1,5	3N AC 50Hz 400V	1,10	
		415 ÷ 889	**BT 75 DSPG**	**3510010**	1,5	3N AC 50Hz 400V	1,10	4)
			Frequency 60 Hz					
	class 2	200 ÷ 850	**TBL 85 P**	**35835410**	1,5	3N AC 60Hz 380V	1,10	
		415 ÷ 889	**BT 75 DSPG**	**35105410**	1,5	3N AC 60Hz 380V	1,5+0,65	4)

TO COMPLETE THE BURNER

DESCRIPTION
BT 75 DSPG: nozzle with 1 ÷ 3 ratio (see page 333)

MODULATING MODE

DESCRIPTION	PART NO.
BT 75 DSPG: modulation kit	98000055
BT 75 DSPG: modulating probe (see page 332)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
TBL 85 P: biodiesel operation (see note 5 page 12)	
TBL 85 P: soundproof burner cover (see page 337)	97980053
BT 75 DSPG: soundproof burner cover (see page 337)	97980055
TBL 85 P long head L500 NEW 1)	98000463

BURNER ACCESSORIES

TBL 85 P: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring

BT 75 DSPG: line filter, flex hoses, boiler coupling kit.

NOTE

3 Sound proof lid on burner air intake.
4 Equipped with automatic air closure device.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

N.B.

1) Conversion kit, for standard burner, by installer.
For supply of the product in long head version, please contact the sales department.

kW 320 - 1186

TBL - BT SERIES

CONFORM TO: E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE

TBL 105 P

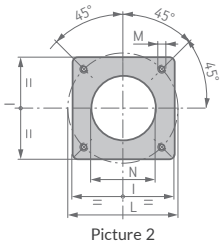
BT 100 DSPG

Light oil burner. Operation:	TBL 105 P two-stage	BT 100 DSPG mechanical two-stage progressive
Modulation ratio:		1:2
Low NOx and CO emissions light oil burner according to European standard EN267:	class 2	
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•
High ventilation efficiency, low electrical input, low noise	•	
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	hydraulic jack	mechanical cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney		•
Combustion air intake designed to achieve optimum linearity of the air gate opening	•	
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•	
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve		•
Atomisation unit with solenoid valve for to control of the nozzle closing pin		•
Flame detection by photoresistance		•
Flame detection by photodiode	•	
Control panel with display diagram for working mode with indication lights	•	
Electric protection rating:	IP40	IP40

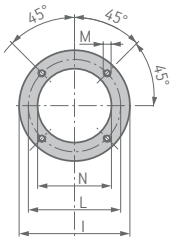
LEGEND:

- As standard

Flange dimensions and boiler drilling template.

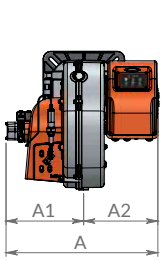


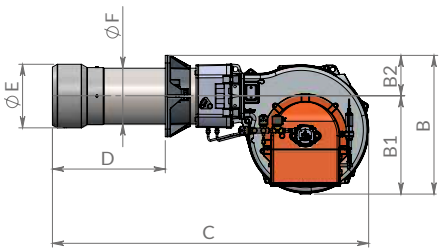
Picture 2



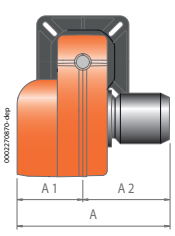
Picture 3

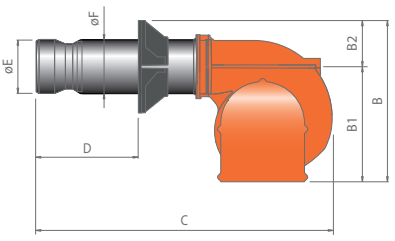
TBL 105 P - 105 DACA





BT 100 DSPG

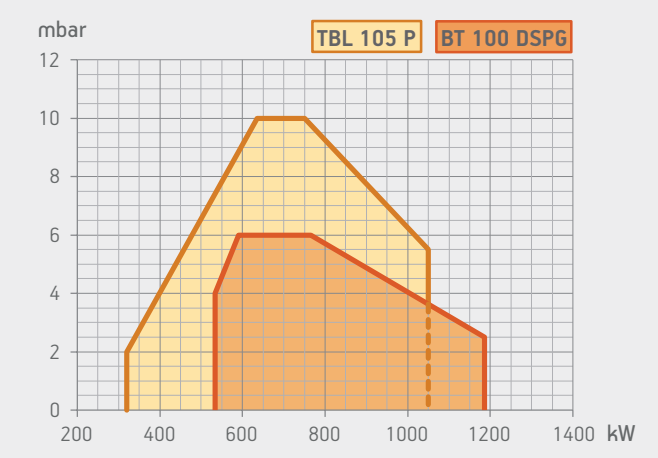




Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBL 105P	624	286	338	525	385	140	1200	200 ÷ 400	180	178	280	250 ÷ 325	M12	195	2
BT 100 DSPG	670	330	340	525	365	160	1415	210 ÷ 400	230	195	320	276	M16	240	3

kW 320 - 1186

TBL - BT SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
TBL 105 P	1070	800	700	80
BT 100 DSPG	1730	1030	880	150

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	320 ÷ 1050	**TBL 105 P**	**35880010**	1,5	3N AC 50Hz 400V	1,50	
		533 ÷ 1186	**BT 100 DSPG**	**3514010**	1,5	3N AC 50Hz 400V	1,50	4)
			Frequency 60 Hz					
	class 2	320 ÷ 1050	**TBL 105 P**	**35885410**	1,5	3N AC 60Hz 380V	1,50	
		553 ÷ 1186	**BT 100 DSPG**	**35145410**	1,5	3N AC 60Hz 380V	2,60+0,65	4)

LIGHT OIL BURNERS

TO COMPLETE THE BURNER

DESCRIPTION
BT 100 DSPG: nozzle with 1 ÷ 3 ratio (see page 333)

MODULATING MODE

DESCRIPTION	PART NO.
BT 100 DSPG: modulation kit	98000055
BT 100 DSPG: modulating probe (see page 332)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Biodiesel operation (see note 5 page 12)	
TBL 105 P: soundproof burner cover (see page 337)	97980053
BT 100 DSPG: soundproof burner cover (see page 337)	97980055
TBL 105 P - 130 P long head L600 NEW 1)	98000464

BURNER ACCESSORIES

TBL 105 P: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring
BT 100 DSPG: line filter, flex hoses, boiler coupling kit.

NOTE

3 Sound proof lid on burner air intake.
4 Equipped with automatic air closure device.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

N.B.

1) Conversion kit, for standard burner, by installer.
For supply of the product in long head version, please contact the sales department.

kW 400 - 1300

TBL SERIES

Low NOx

CONFORM TO: E.M.C DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/EU | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN267

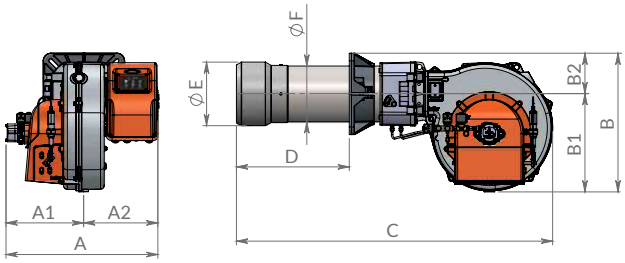
CE

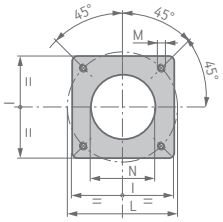
	TBL 130 P
Light oil burner. Operation:	**two-stage**
Low NOx and CO emissions light oil burner according to European standard EN267:	class 2
Adjusting the combustion head	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•
High ventilation efficiency, low electrical input, low noise	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•
Combustion air intake with butterfly valve. Air flow adjustment:	hydraulic jack
Combustion air intake designed to achieve optimum linearity of the air gate opening	•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•
Flame detection by photodiode	•
Control panel with display diagram for working mode with indication lights	•
Electric protection rating:	IP40

LIGHT OIL BURNERS

LEGEND:

- As standard





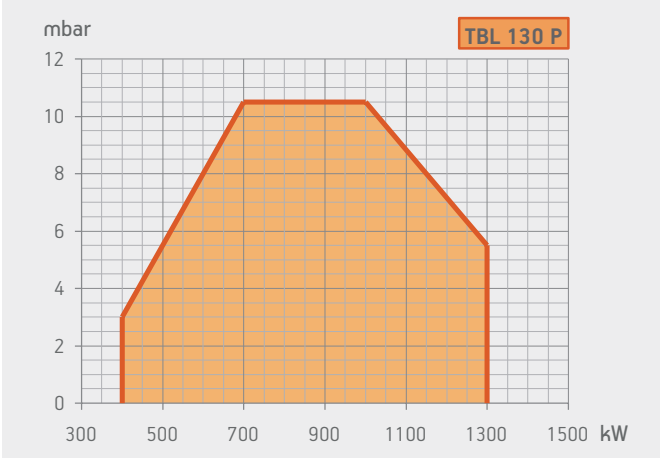
Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBL 130P	650	286	364	525	385	140	1200	200 ÷ 400	180	178	280	250 ÷ 325	M12	190	2

kW 400 - 1300

TBL SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
TBL 130 P	1070	800	700	85

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	400 ÷ 1300	**TBL 130 P**	**35930010**	1,5	3N AC 50Hz 400V	2,2	
			Frequency 60 Hz					
	class 2	400 ÷ 1300	**TBL 130 P**	**35935410**	1,5	3N AC 60Hz 380V	2,6	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Biodiesel operation (see note 5 page 12)	
Soundproof burner cover (see page 337)	97980053
TBL 105 P - 130 P long head L600 NEW 1)	98000464

BURNER ACCESSORIES

Line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring

NOTE

3 Sound proof lid on burner air intake.
4 Equipped with automatic air closure device.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

N.B.

1) Conversion kit, for standard burner, by installer.
For supply of the product in long head version, please contact the sales department.

kW 474 - 1660

TBL - BT SERIES

CONFORM TO: E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE

TBL 160 P

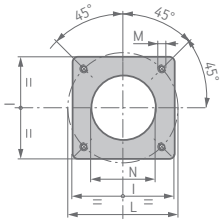
BT 120 DSPG

Light oil burner. Operation:	TBL 160 P two-stage	BT 120 DSPG mechanical two-stage progressive
Modulation ratio:		1:3
Low NOx and CO emissions light oil burner according to European standard EN267:	class 2	
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•
High ventilation efficiency, low electrical input, low noise	•	
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	hydraulic jack	mechanical cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney		•
Combustion air intake designed to achieve optimum linearity of the air gate opening	•	
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•	
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve		•
Atomisation unit with solenoid valve for to control of the nozzle closing pin		•
Flame detection by photoresistance		•
Flame detection by photodiode	•	
Control panel with display diagram for working mode with indication lights	•	
Electric protection rating:	IP40	IP40

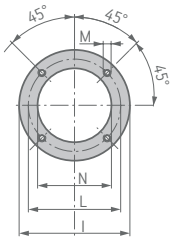
LEGEND:

- As standard

Flange dimensions and boiler drilling template.

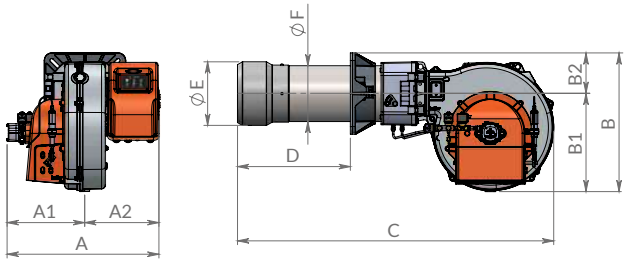


Picture 2

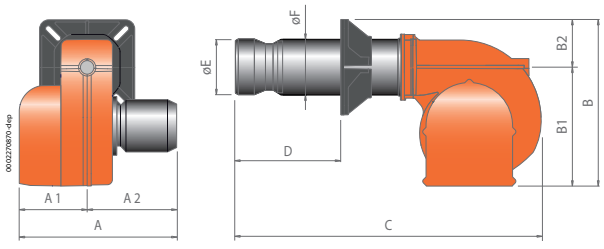


Picture 3

TBL 160 P - 160 P DACA



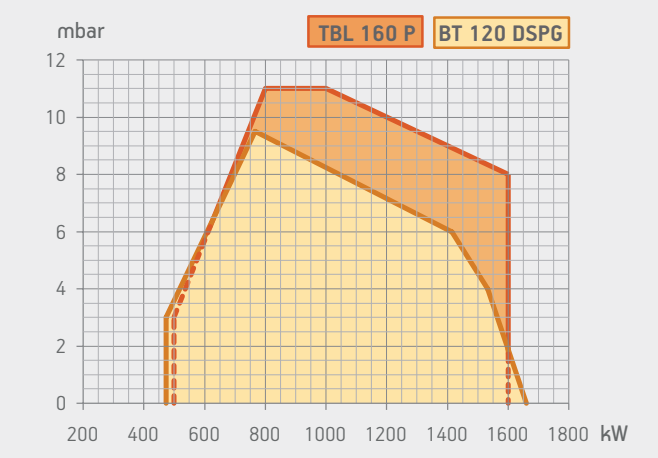
BT 120 DSPG



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBL 160P	650	286	365	545	385	160	1250	210 ÷ 450	224	219	320	280 ÷ 370	M12	235	2
BT 120 DSPG	770	390	380	610	450	160	1415	155 ÷ 500	230	195	320	276	M16	240	3

kW 474 - 1660

TBL - BT SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
TBL 160 P	1070	800	700	90
BT 120 DSPG	1730	1030	880	175

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	500 ÷ 1600	**TBL 160 P**	**35980010**	1,5	3N AC 50Hz 400V	2,2	
		474 ÷ 1660	**BT 120 DSPG**	**3518010**	1,5	3N AC 50Hz 400V	2,2	4)
			Frequency 60 Hz					
	class 2	500 ÷ 1600	**TBL 160 P**	**35985410**	1,5	3N AC 60Hz 380V	2,6	
		474 ÷ 1660	**BT 120 DSPG**	**35185410**	1,5	3N AC 60Hz 380V	3,5+1,3	4)

TO COMPLETE THE BURNER

DESCRIPTION
BT 120 DSPG: nozzle with 1 ÷ 3 ratio (see page 333)

MODULATING MODE

DESCRIPTION	PART NO.
BT 120 DSPG: modulation kit	98000055
BT 120 DSPG: modulating probe (see page 332)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
TBL 160 P: biodiesel operation (see note 5 page 12)	
TBL 160 P: soundproof burner cover (see page 337)	97980053
BT 120 DSPG: soundproof burner cover (see page 337)	97980055
TBL 160 P long head L600 NEW 1)	98000465

BURNER ACCESSORIES

TBL 160 P: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring
BT 120 DSPG: line filter, flex hoses, boiler coupling kit.

NOTE

3 Sound proof lid on burner air intake.
4 Equipped with automatic air closure device.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

N.B.

1) Conversion kit, for standard burner, by installer.
For supply of the product in long head version, please contact the sales department.

kW 712 - 2135

TBL - BT SERIES

CONFORM TO: E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE

TBL 210 P

BT 180 DSPG

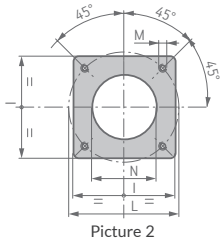
Light oil burner. Operation:	TBL 210 P	BT 180 DSPG
	two-stage	mechanical two-stage progressive
Modulation ratio:		1:3
Low NOx and CO emissions light oil burner according to European standard EN267:	class 2	
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•
High ventilation efficiency, low electrical input, low noise	•	
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	hydraulic jack	mechanical cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney		•
Combustion air intake designed to achieve optimum linearity of the air gate opening	•	
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•	
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve		•
Atomisation unit with solenoid valve for to control of the nozzle closing pin		•
Flame detection by photoresistance		•
Flame detection by photodiode	•	
Control panel with display diagram for working mode with indication lights	•	
Electric protection rating:	IP40	IP40

LIGHT OIL BURNERS

LEGEND:

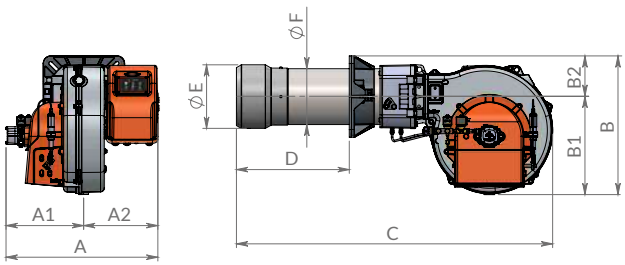
- As standard

Flange dimensions and boiler drilling template.

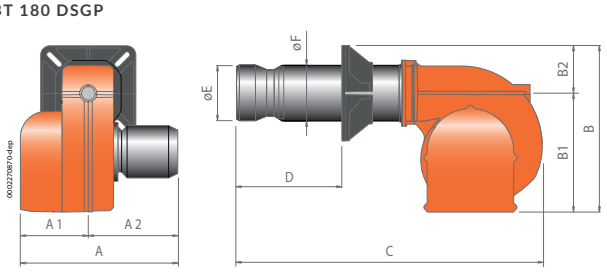


Picture 2

TBL 210 P - 210 P DACA



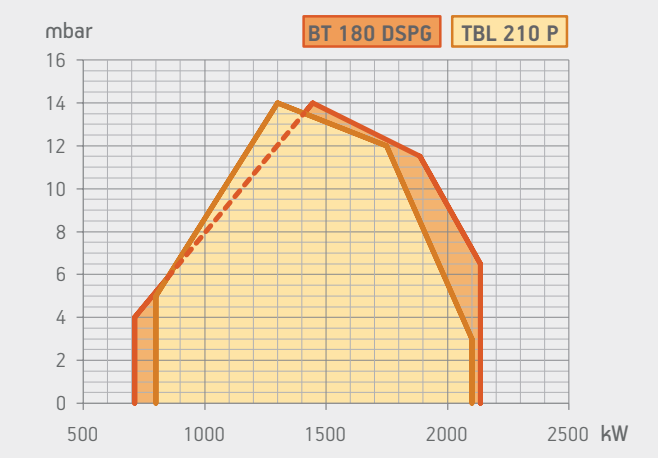
BT 180 DSGP



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBL 210P	664	286	378	545	385	160	1250	210 ÷ 450	250	219	320	280 ÷ 370	M12	255	2
BT 180 DSPG	815	390	425	650	450	200	1700	200 ÷ 535	260	220	320	280 ÷ 370	M12	230	2

kW 712 - 2135

TBL - BT SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
TBL 210 P	1070	800	700	94
BT 180 DSPG	1730	1030	880	220

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	800 ÷ 2100	**TBL 210 P**	**36030010**	1,5	3N AC 50Hz 400V	3,0	
		712 ÷ 2135	**BT 180 DSPG**	**3522010**	1,5	3N AC 50Hz 400V	3,0	4)
			Frequency 60 Hz					
	class 2	800 ÷ 2100	**TBL 210 P**	**36035410**	1,5	3N AC 60Hz 380V	2,6	
		712 ÷ 2135	**BT 180 DSPG**	**35225410**	1,5	3N AC 60Hz 380V	3,5+1,3	4)

LIGHT OIL BURNERS

TO COMPLETE THE BURNER

DESCRIPTION
BT 180 DSPG: nozzle with 1 ÷ 3 ratio (see page 333)

MODULATING MODE

DESCRIPTION	PART NO.
BT 180 DSPG: modulation kit	98000055
BT 180 DSPG: modulating probe (see page 332)	

OPTIONALS

DESCRIPTION
TBL 210 P: biodiesel operation (see note 5 page 12)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
TBL 210 P : soundproof burner cover (see page 337)	97980053
BT 180 DSPG: soundproof burner cover (see page 337)	97980057
TBL 210 P - 260 P long head L600 NEW 1)	98000466

BURNER ACCESSORIES

TBL 210 P: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring
BT 180 DSPG: line filter, flex hoses, boiler coupling kit.

NOTE

4 Equipped with automatic air closure device.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

N.B.

1) Conversion kit, for standard burner, by installer.
For supply of the product in long head version, please contact the sales department.

kW 873 - 3186

TBL - BT SERIES

CONFORM TO: E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE

TBL 260 P

BT 250 DSPG

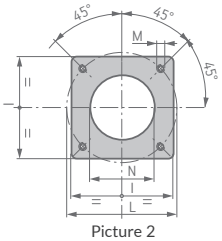
Light oil burner. Operation:	TBL 260 P two-stage	BT 250 DSPG mechanical two-stage progressive
Modulation ratio:		1:3
Low NOx and CO emissions light oil burner according to European standard EN267:	class 2	
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•
High ventilation efficiency, low electrical input, low noise	•	
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	hydraulic jack	mechanical cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney		•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•	
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve		•
Atomisation unit with solenoid valve for to control of the nozzle closing pin		•
Flame detection by photoresistance		•
Flame detection by photodiode	•	
Control panel with display diagram for working mode with indication lights	•	
Electric protection rating:	IP40	IP40

LIGHT OIL BURNERS

LEGEND:

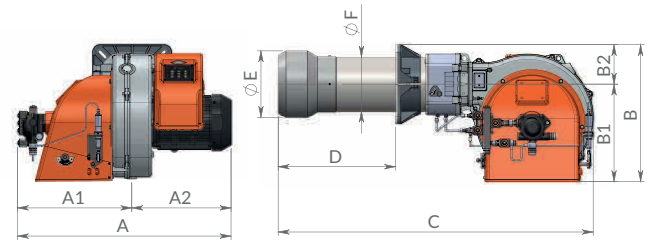
- As standard

Flange dimensions and boiler drilling template.

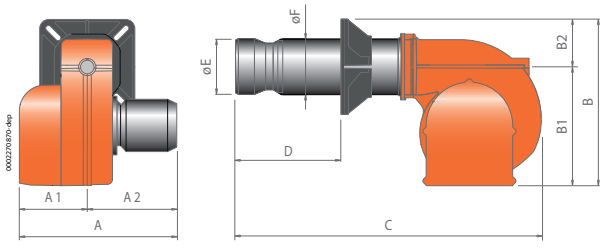


Picture 2

TBL 260 P - 260 P DACA



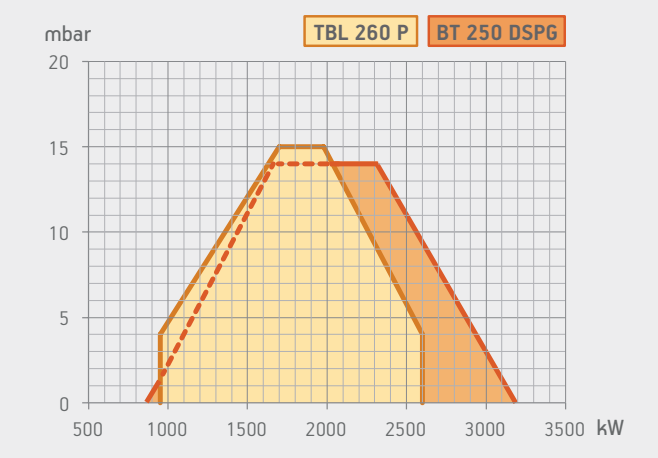
BT 250 DSGP



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBL 260P	745	320	425	557	397	160	1250	210 ÷ 450	250	219	320	280 ÷ 370	M12	255	2
BT 250 DSPG	1000	520	480	740	580	160	1700	235 ÷ 560	260	220	320	280 ÷ 370	M12	230	2

kW 873 - 3186

TBL - BT SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
TBL 260 P	1070	870	720	105
BT 250 DSPG	1030	1150	1010	256

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	950 ÷ 2600	**TBL 260 P**	**36060010**	1,5	3N AC 50Hz 400V	5,5	
		873 ÷ 3186	**BT 250 DSPG**	**3526010**	1,5	3N AC 50Hz 400V	7,5	4)
			Frequency 60 Hz					
	class 2	950 ÷ 2600	**TBL 260 P**	**36065410**	1,5	3N AC 60Hz 380V	7,5	
		873 ÷ 3186	**BT 250 DSPG**	**35265410**	1,5	3N AC 60Hz 380V	9,0+1,3	4)

LIGHT OIL BURNERS

TO COMPLETE THE BURNER

DESCRIPTION
BT 250 DSPG: nozzle with 1 ÷ 3 ratio (see page 333)

MODULATING MODE

DESCRIPTION	PART NO.
BT 250 DSPG: modulation kit	98000055
BT 250 DSPG: modulating probe (see page 332)	

OPTIONALS

DESCRIPTION
TBL 260 P: biodiesel operation (see note 5 page 12)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
TBL 260 P: soundproof burner cover (see page 337)	97980053
BT 250 DSPG: soundproof burner cover (see page 337)	97980057
TBL 210 P - 260 P long head L600 NEW 1)	98000466

BURNER ACCESSORIES

TBL 260 P: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring
BT 250 DSPG: line filter, flex hoses, boiler coupling kit.

NOTE

4 Equipped with automatic air closure device.
5 Biodiesel secondo normativa europea EN14213-FAME.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

N.B.

1) Conversion kit, for standard burner, by installer.
For supply of the product in long head version, please contact the sales department.

kW 1304 - 3854 | BT SERIES

CONFORM TO: E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE

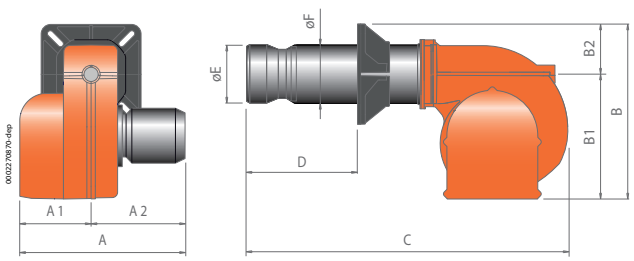
BT 300 DSPG

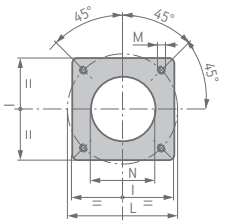
Light oil burner. Operation:	BT 300 DSPG mechanical two-stage progressive
Modulation ratio:	1:3
Adjusting the combustion head	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve	•
Atomisation unit with solenoid valve for to control of the nozzle closing pin	•
Flame detection by photoresistance	•
Electric protection rating:	IP40

LIGHT OIL BURNERS

LEGEND:

- As standard





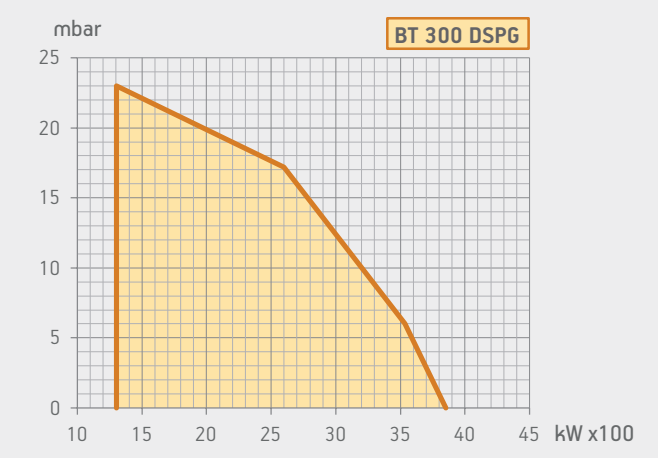
Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
BT 300 DSPG	1000	520	480	800	580	220	1900	245 ÷ 605	360	275	440	400 ÷ 540	M20	365	2

kW 1304 - 3854

BT SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
BT 300 DSPG	2030	1150	1010	290

	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
		Frequency 50 Hz					
	1304 ÷ 3854	**BT 300 DSPG**	**3530010**	1,5	3N AC 50Hz 400V	7,5	4)
		Frequency 60 Hz					
	1304 ÷ 3854	**BT 300 DSPG**	**35305410**	1,5	3N AC 60Hz 380V	9,0+1,3	4)

TO COMPLETE THE BURNER

DESCRIPTION
Nozzle with 1 ÷ 3 ratio (see page 333)

MODULATING MODE

DESCRIPTION	PART NO.
Modulation kit	98000055
Modulating probe (see page 332)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 337)	97980057

BURNER ACCESSORIES

Line filter, flex hoses, boiler coupling kit.

NOTE

4 Equipped with automatic air closure device.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

kW 1000 - 3600

TBL SERIES

Low NOx

CONFORM TO: E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE

CE

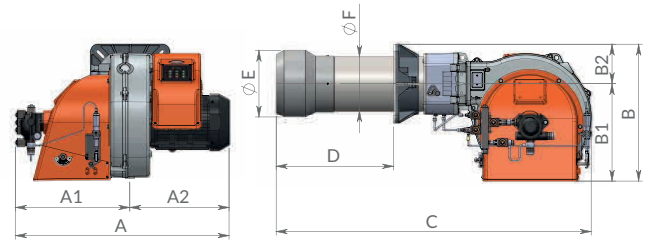
TBL 360 P

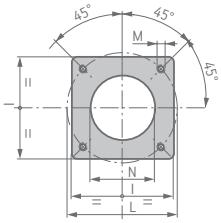
	TBL 360 P
Light oil burner. Operation:	**two-stage**
Low NOx and CO emissions light oil burner according to European standard EN267:	class 2
Adjusting the combustion head	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers	•
Combustion air intake with butterfly valve. Air flow adjustment:	hydraulic jack
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•
Flame detection by IRD photocell	•
Control panel with display diagram for working mode with indication lights	•
Electric protection rating:	IP40

LIGHT OIL BURNERS

LEGEND:

- As standard





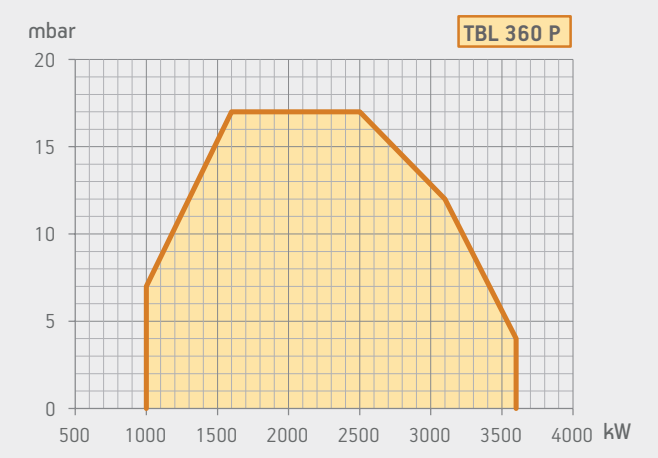
Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBL 360P	880	445	425	555	395	160	1280	240 ÷ 480	270	219	320	310 ÷ 370	M12	275	2

kW 1000 - 3600

TBL SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
TBL 360 P	1070	1070	810	154

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	1000 ÷ 3600	**TBL 360 P**	**36100010**	1,5	3N AC 50Hz 400V	7,5	
			Frequency 60 Hz					
	class 2	1000 ÷ 3600	**TBL 360 P**	**36105410**	1,5	3N AC 60Hz 380V	9,2	

LIGHT OIL BURNERS

OPTIONALS

DESCRIPTION
Biodiesel operation (see note 5 page 12)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 337)	97980057
TBL 360 P long head L600 NEW 1)	98000467

BURNER ACCESSORIES

Flex hoses, light oil filter, nozzle

NOTE

4 Equipped with automatic air closure device.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

N.B.

1) Conversion kit, for standard burner, by installer.
For supply of the product in long head version, please contact the sales department.

kW 1000 - 5200 | TBL SERIES

Low NOx

CONFORM TO: E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE

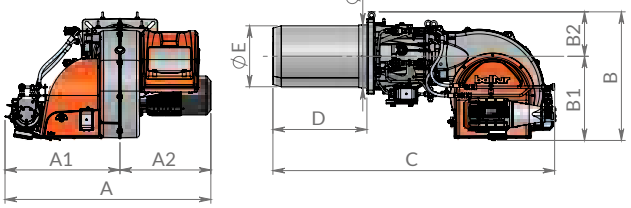
CE

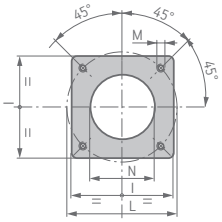
Light oil burner. Operation:	TBL 450 ME electronic modulation	TBL 510 ME electronic modulation
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	o
Modulation ratio:	1:4	1:4
Low NOx and CO emissions light oil burner according to European standard EN267:	class 2	class 2
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•
Fixed boiler coupling flange	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•
Electric motor for pump drive	•	•
Fuel supply circuit made of gear pump with pressure adjustment, flow regulator valve with servomotor, shut-off valve, two safety valves, maximum pressure switch	•	•
Flame detection by UV photocell	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment	•	•
Electric protection rating:	IP40 *)	IP40 *)
Sound-proof plastic protective cover	•	•

LIGHT OIL BURNERS

LEGEND:

*) IP54 on request; o Optional; • As standard





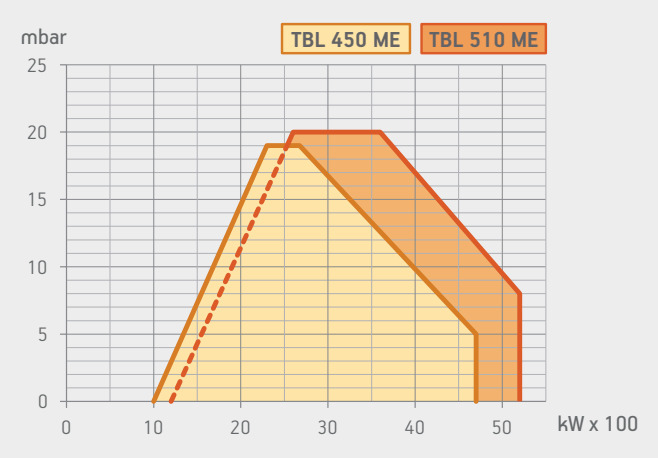
Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBL 450 ME	1200	670	530	820	535	285	1790	600	389	410	480	520 ÷ 600	M20	415	2
TBL 510 ME	1313	733	580	820	535	285	1805	600	389	410	480	520 ÷ 600	M20	415	2

kW 1000 - 5200

TBL SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
TBL 450 ME	2065	1525	1200	300
TBL 510 ME	2065	1525	1200	303

LIGHT OIL BURNERS

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	1000 ÷ 4700	**TBL 450 ME**	**36130010**	1,5	3N AC 50Hz 400V	9,2+1,5	4)
	class 2	1200 ÷ 5200	**TBL 510 ME**	**36160010**	1,5	3N AC 50Hz 400V	11,0+1,5	4)
			Frequency 60 Hz					
	class 2	1000 ÷ 4700	**TBL 450 ME**	**36135410**	1,5	3N AC 60Hz 380V	9,2+1,5	4)
	class 2	1200 ÷ 5200	**TBL 510 ME**	**36165410**	1,5	3N AC 60Hz 380V	11,0+1,5	4)

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
Modulation kit	98000059
Modulating probe for LCM 100 (see page 332)	
Nozzle with 1÷4 ratio (see page 333)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 337)	97980058
Soundproof burner cover (see page 337)	97980059

BURNER ACCESSORIES

Line filter, flex hoses, boiler coupling kit.

NOTE

4 Equipped with automatic air closure device.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

kW 1300 - 7500 | TBL SERIES

Low NOx

CONFORM TO: E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE

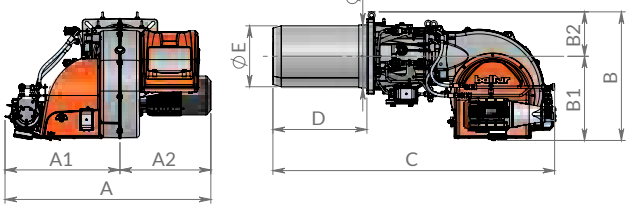
CE

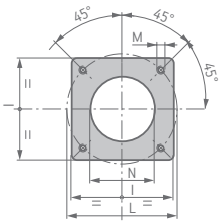
Light oil burner. Operation:	TBL 650 ME electronic modulation	TBL 750 ME electronic modulation
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	o
Modulation ratio:	1:5	1:5
Low NOx and CO emissions light oil burner according to European standard EN267:	class 2	class 2
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•
Fixed boiler coupling flange	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•
Electric motor for pump drive	•	•
Fuel supply circuit made of gear pump with pressure adjustment, flow regulator valve with servomotor, shut-off valve, two safety valves, maximum pressure switch	•	•
Flame detection by UV photocell	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment	•	•
Electric protection rating:	IP40 *)	IP40 *)
Sound-proof plastic protective cover	•	•

LIGHT OIL BURNERS

LEGEND:

*) IP54 on request; o Optional; • As standard





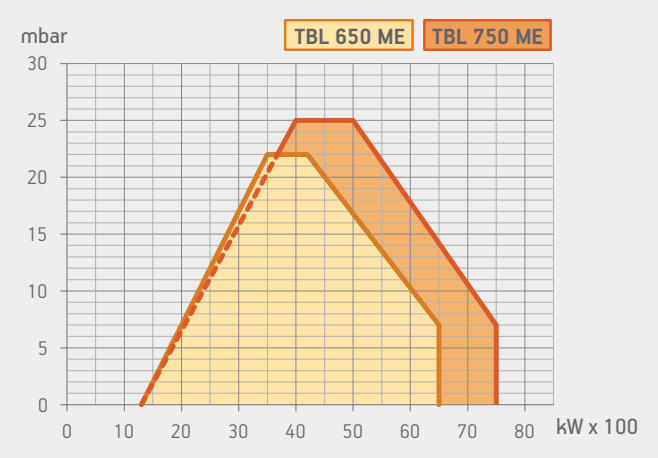
Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBL 650 ME	1313	733	580	820	535	285	1805	600	389	410	480	520 ÷ 600	M20	415	2
TBL 750 ME	1380	733	647	820	535	285	1805	600	389	410	480	520 ÷ 600	M20	415	2

kW **1300 - 7500**

TBL SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
TBL 650 ME	2065	1525	1200	330
TBL 750 ME	2065	1525	1200	360

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	1300 ÷ 6500	**TBL 650 ME**	**36190010**	1,5	3N AC 50Hz 400V	15,0+2,2	4)
	class 2	1300 ÷ 7500	**TBL 750 ME**	**36220010**	1,5	3N AC 50Hz 400V	18,5+2,2	4)
			Frequency 60 Hz					
	class 2	1300 ÷ 6500	**TBL 650 ME**	**36195410**	1,5	3N AC 60Hz 380V	15,0+2,2	4)
	class 2	1300 ÷ 7500	**TBL 750 ME**	**36225410**	1,5	3N AC 60Hz 380V	18,5+2,2	4)

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
Modulation kit	98000059
Modulating probe for LCM 100 (see page 332)	
Nozzle with 1÷4 ratio (see page 333)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 337)	97980058
Soundproof burner cover (see page 337)	97980059

BURNER ACCESSORIES

Line filter, flex hoses, boiler coupling kit.

NOTE

4 Equipped with automatic air closure device.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

kW 1500 - 12000 | TBL ME SERIES

Low NOx

CONFORM TO: E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE

CE

TBL 1000 ME

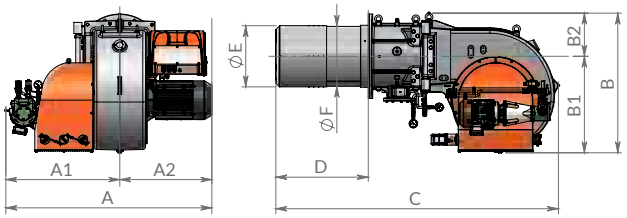
TBL 1200 ME

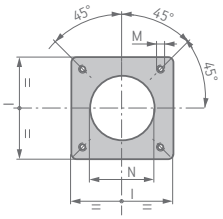
Light oil burner. Operation:	TBL 1000 ME electronic modulation	TBL 1200 ME electronic modulation
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	o
Modulation ratio:	1:5	1:4
Low NOx and CO emissions light oil burner according to European standard EN267:	class 2	class 2
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler	•	•
Fixed boiler coupling flange	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•
Electric motor for pump drive	•	•
Fuel supply circuit made of gear pump with pressure adjustment, control flow valve, shut-off valves and safety valve, safety pressure switch	•	•
Flame detection by UV photocell	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment	•	•
Electric protection rating:	IP40 *)	IP40 *)
Sound-proof plastic protective cover	•	•

LIGHT OIL BURNERS

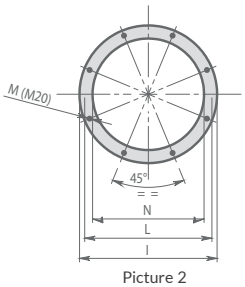
LEGEND:

*) IP54 on request; o Optional; • As standard





Picture 1



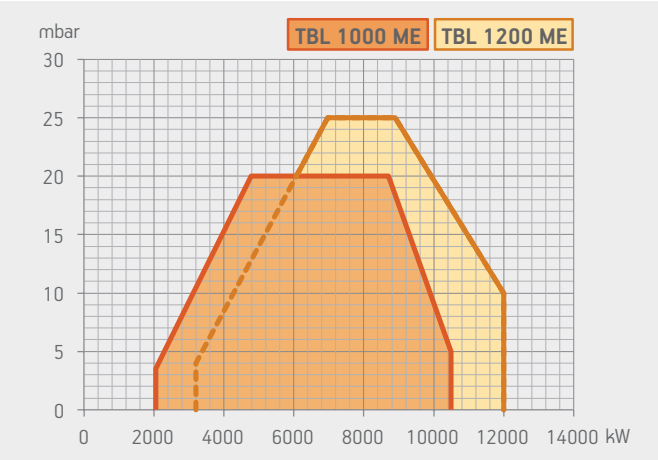
Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	D1 mm	E mm	F mm	I mm	L mm	M	N mm	Pic.
TBL 1000 ME	1 530	880	650	1050	770	280	1924 ÷ 2014	632 ÷ 722	-	426	432	520	420	M20	440	1
TBL 1200 ME	1650	900	750	1130	780	350	2300	750	-	496	503	685	630	M20	550	2

kW 1500 - 12000

TBL ME SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
TBL 1000 ME	2020	1530	1050	447
TBL 1200 ME	2610	1760	1470	637

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	class 2	2050 ÷ 10500	**TBL 1000 ME**	**36250010**	1,5	3N AC 50Hz 400V	22+4	4)
	class 2	3160 ÷ 12000	**TBL 1200 ME**	**36290010**	1,5	3N AC 50Hz 400V	22+4	4)
			Frequency 60 Hz					
	class 2	2050 ÷ 10500	**TBL 1000 ME**	**36255410**	1,5	3N AC 60Hz 380V	30+3,5	4)
	class 2	3160 ÷ 12000	**TBL 1200 ME**	**36295410**	1,5	3N AC 60Hz 380V	30+4,8	4)

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
Modulation kit (see page 332)	98000059
Modulating probe for LCM 100 (see page 332)	
TBL 1000 ME: nozzle (see page 333)	
TBL 1200 ME: nozzle included	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 337)	97980061

BURNER ACCESSORIES

TBL 1000: line filter, flex hoses, boiler coupling kit.

TBL 1200: line filter, flex hoses, boiler coupling kit, nozzle.

NOTE

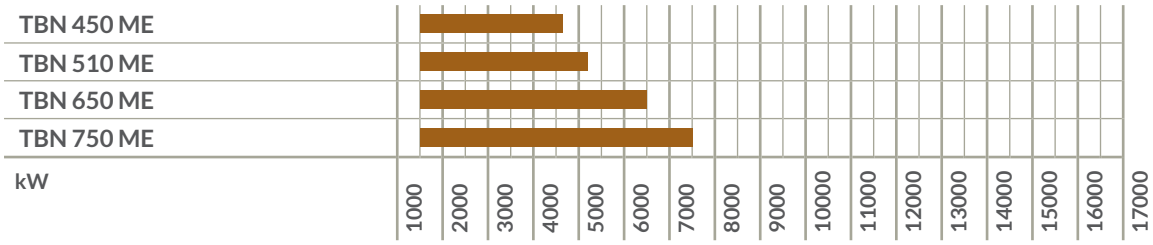
4 Equipped with automatic air closure device.

Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

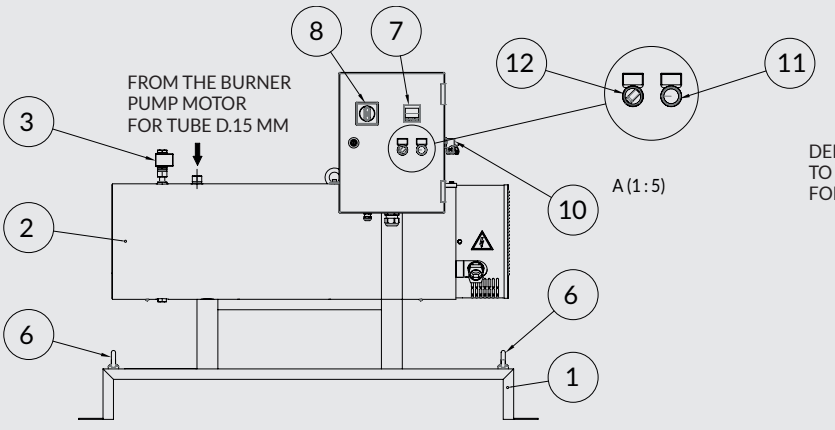
Symbology

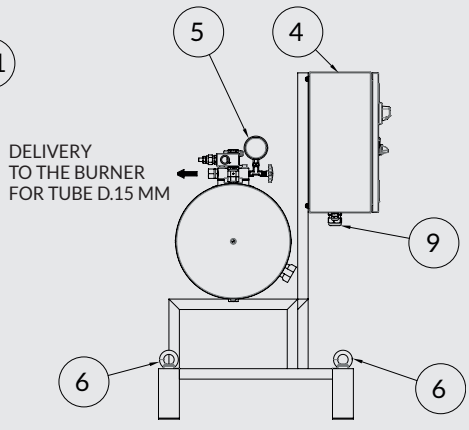
TBN...ME
Two-stage progressive / modulating heavy oil burners with electronic cam.

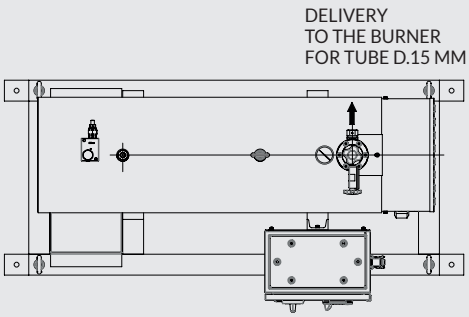
TWO - STAGE PROGRESSIVE HEAVY OIL BURNERS



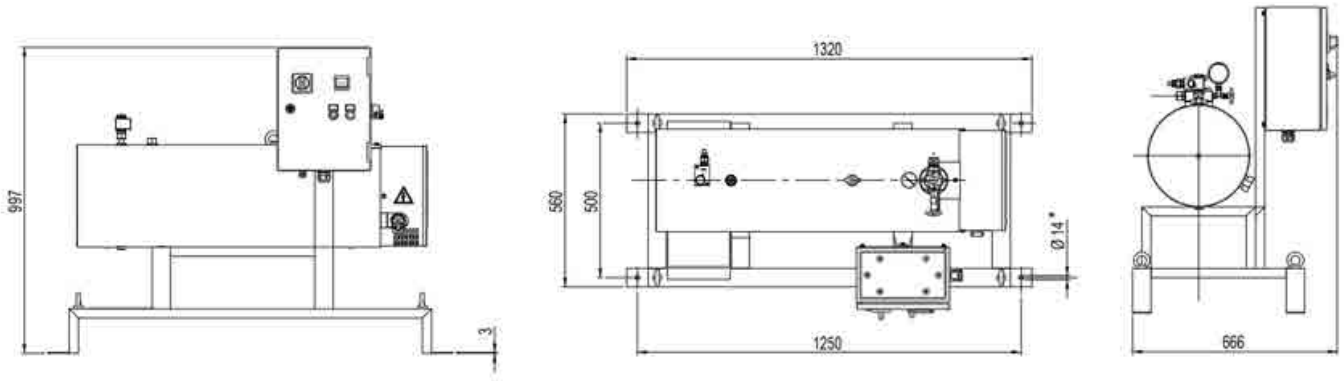
PUMPING UNIT







1 Frame skid.
2 Pre-heater tank.
3 Safety valve calibrated at 35bar.
4 Electrical panel skid.
5 Pressure gauge 0-40 bar.
6 Lifting eyebolts.
7 Electronic heating element thermostat.
8 Door lock switch.
9 Power supply input.
10 Skid and burner panel connection connector.
11 Resistor operation indicator light.
12 Tank filling selector.
A Pre-heater pump delivery for tube 15 mm.
B Pre-heater delivery to spray nozzle unit for tube 15 mm.



SKID PRER 28,5 kW TBN 450-750

Part no.	Size of packaging L	P	H	Weight
	mm			kg
69840040	1470	970	1210	152

kW **1000 - 5200** | **TBN** SERIES

CONFORM TO: E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN267

CE

Suitable for fuel oil with a maximum viscosity of 50°E at 50°C

Heavy oil burner. Operation:	TBN 450 ME Electronic modulation	TBN 510 ME Electronic modulation
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	o
Modulation ratio:	1:4	1:4
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
Fixed boiler coupling flange	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	electronic cam	electronic cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•
Electronic motor for pump drive	•	•
Fuel supply circuit made of gear pump with pressure adjustment, control flow valve, shut-off valves and safety valve, safety pressure switch	•	•
Electric fuel preheater with 50L volume with safety valve, self-cleaning filter, thermometer, pressure gauge, minimum and safety thermostats, electronic temperature regulator with digital interface and light signals. To be ordered separately	to be ordered separately	
Heating elements for pump, valves and atomisation unit	•	•
Atomisation unit with nozzle-closing pin	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment	•	•
Electric protection rating:	IP40	IP40

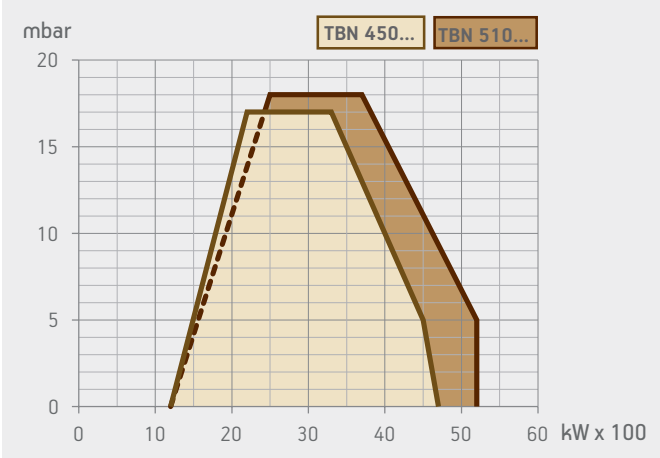
NOTE: suitable for heavy oil up to 50°E at 50°C

LEGEND:

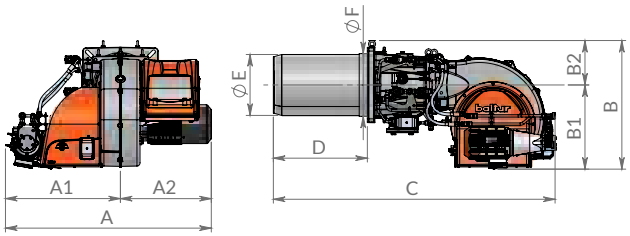
o Optional; • As standard

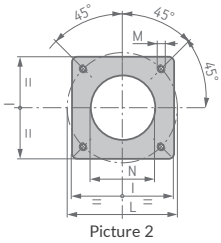
kW **1000 - 5200**

TBN SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
TBN 450 ME	2065	1525	1200	405
TBN 510 ME	2065	1525	1200	407





Flange dimensions and boiler drilling template.

Picture 2

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	D1 mm	E mm	F mm	G	H mm	I mm	L mm	M	N mm
TBN 450 ME	1265	735	530	810	525	285	295	1850	650	547-597	397	410	DN80	223	480	520-600	M20	430
TBN 510 ME	1265	735	530	810	525	285	295	1850	650	547-597	397	410	DN80	223	480	520-600	M20	430

	Thermal output kW	Model	Part no.	Max visc. °E at 50°C	Electrical supply	Motor kW	Note
		Frequency 50 Hz					
	1000 ÷ 4700	**TBN 450 ME**	**26450010**	50	3N AC 50Hz 400V	9,2+2,2	4)
	1200 ÷ 5200	**TBN 510 ME**	**26480010**	50	3N AC 50Hz 400V	11,0+2,2	4)
		Frequency 60 Hz					
	1000 ÷ 4700	**TBN 450 ME**	**26455410**	50	3N AC 60Hz 400V	9,2+2,2	4)
	1200 ÷ 5200	**TBN 510 ME**	**26485410**	50	3N AC 60Hz 400V	13,0+2,2	4)

HEAVY OIL BURNERS

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
Modulating probe for LCM 100 (see page 332)	
Modulation kit (see page 332)	9800059
Nozzle (see page 333)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 337)	97980058
Soundproof burner cover -20 dB(A) (see page 337)	97980059

DUAL FUEL BURNERS ACCESSORIES

Flex hoses, dense naphtha filter, boiler coupling kit.

NOTE

4 Equipped with automatic air closure device.
Net calorific value heavy oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.

kW **1750 - 7500** | **TBN** SERIES

CONFORM TO: E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | REFERENCE STANDARD EN267

CE

Suitable for fuel oil with a maximum viscosity of 50°E at 50°C

Heavy oil burner. Operation:	**TBN 650 ME** Electronic modulation	**TBN 750 ME** Electronic modulation
P.I.D. controller and signal receiver (0÷10V / 4÷20 mA) integrated in burner control panel	o	o
Modulation ratio:	1:4	1:4
Adjusting the combustion head	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler	•	•
Fixed boiler coupling flange	•	•
Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	electronic cam	electronic cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney	•	•
Electronic motor for pump drive	•	•
Fuel supply circuit made of gear pump with pressure adjustment, control flow valve, shut-off valves and safety valve, safety pressure switch	•	•
Electric fuel preheater with 50L volume with safety valve, self-cleaning filter, thermometer, pressure gauge, minimum and safety thermostats, electronic temperature regulator with digital interface and light signals. To be ordered separately	to be ordered separately	
Heating elements for pump, valves and atomisation unit	•	•
Atomisation unit with nozzle-closing pin	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment	•	•
Electric protection rating:	IP40	IP40

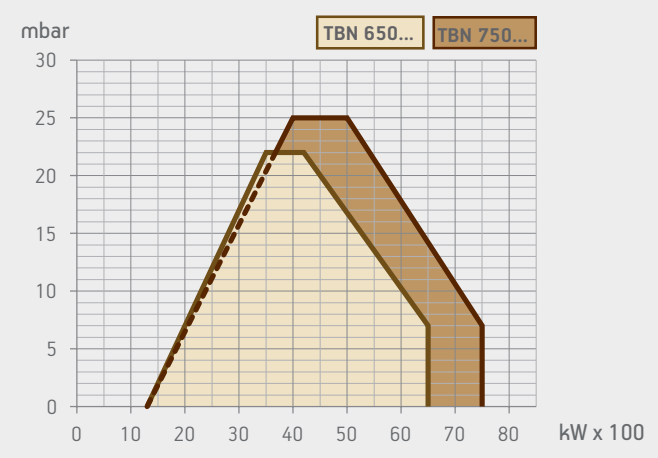
NOTE: suitable for heavy oil up to 50°E at 50°C

LEGEND:

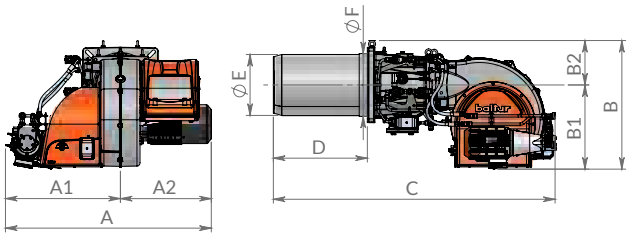
o Optional; • As standard

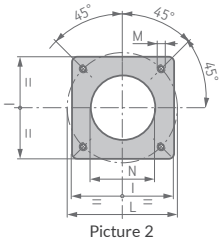
kW **1750 - 7500**

TBN SERIES



Model	Size of packaging L	P	H	Weight
	mm			kg
TBN 650 ME	2065	1525	1200	464
TBN 750 ME	2065	1525	1200	504





Picture 2

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	D1 mm	E mm	F mm	G	H mm	I mm	L mm	M	N mm
TBN 650 ME	1385	735	650	810	525	285	295	1850	650	547-597	397	410	DN80	223	480	600	M20	430
TBN 750 ME	1385	735	530	810	525	285	295	1850	650	547-597	397	410	DN80	223	480	600	M20	430

	Thermal output kW	Model	Part no.	Max visc. °E at 50°C	Electrical supply	Motor kW	Note
		Frequency 50 Hz					
	1750 ÷ 6500	**TBN 650 ME**	**26510010**	50	3N AC 50Hz 400V	15,0+3,0	4)
	1750 ÷ 7500	**TBN 750 ME**	**26540010**	50	3N AC 50Hz 400V	18,5+3,0	4)
		Frequency 60 Hz					
	1750 ÷ 6500	**TBN 650 ME**	**26515410**	50	3N AC 60Hz 400V	15,0+3,5	4)
	1750 ÷ 7500	**TBN 750 ME**	**26545410**	50	3N AC 60Hz 400V	18,5+3,5	4)

HEAVY OIL BURNERS

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
Modulating probe for LCM 100 (see page 332)	
Modulation kit (see page 332)	9800059
Nozzle (see page 333)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 337)	97980058
Soundproof burner cover -20 dB(A) (see page 337)	97980059

DUAL FUEL BURNERS ACCESSORIES

Flex hoses, dense naphtha filter, boiler coupling kit.

NOTE

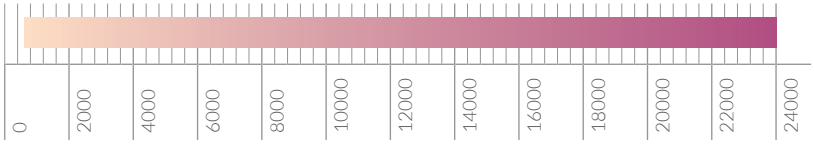
4 Equipped with automatic air closure device.
Net calorific value heavy oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.

INDUSTRIAL burners

IB Serie

Industrial dual-block burners
with separated fan

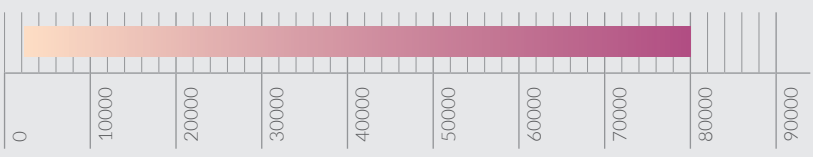
THE IB SERIE INCLUDES 8 MODELS FULLY CUSTOMIZABLE, FROM 200 KW TO 24000 KW



TBR Serie

Industrial dual-block burners
with adjustable flame geometry

TBR RANGE FROM 500 KW TO 80000 KW



Burners for SPECIAL APPLICATIONS

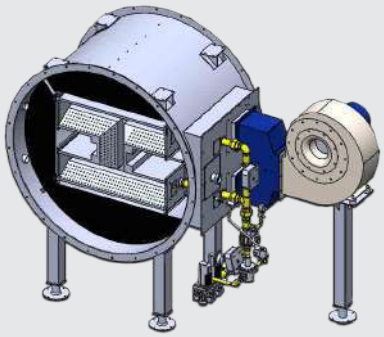
BIOGAS and SYNGAS BURNERS

Thanks to the design of the combustion head, Baltur burners are able to process biogas and syngas with power calorific value as low as 3.4 kWh/Nm^3, while ensuring stable performance.
Baltur burners can ensure low NOx emissions for both natural gas and biogas/syngas.

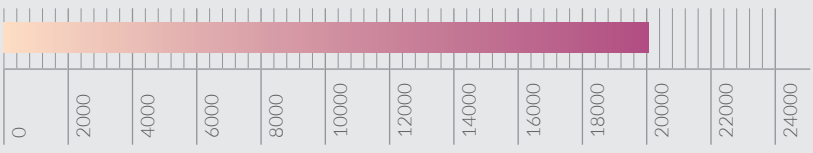
CUSTOMISABLE POWERS ACCORDING TO CUSTOMER REQUIREMENTS
MAXIMUM CONFIGURATION FLEXIBILITY

BVBD Serie

Air duct burners



BVBD RANGE FROM 70 KW TO 20000 KW



kW **200 - 24000**

IB SERIES

BURNER IN ACCORDING TO:

NORMS:	STANDARDS EXTRA EUROPEAN:	REGULATIONS AND DIRECTIVES:
• EN 676:2020 • EN 267:2020 • EN 746-2:2011	• GB/T 36699-2018	• 2006/42/CE • 2014/35/UE

The IB burner series has been designed to meet the most demanding request of industrial applications.
The modular design concept allow for the maximum flexibility of configuration enabling the IB burner to be the optimal solution for a variety of industrial applications.
The IB is composed by different functional blocks:

- Combustion head
- Ventilating unit
- Control panel
- Gas valve train (for gas aplications)
- Pumping skid (for liquid fuel applications)

LOW NOX TECHNOLOGY (IB 100-2400)

The IB series is available with different head geometries according to the requirement of the specific national regulation. Burners certified in Class 3 according to EN676 are available with NOx emissions level lower than 80mg/kWh.
These machines featured a combustion head with and enhanced premixing of air and gas streams in order to ensure a stable flame. The solution is paired off with a special design of gas nozzles which ensures a progessive combustion and reduce the formation of thermal NOx.

SUPER LOW NOX TECHNOLOGY (IB 100-850)

IB range is also available with super low emissions level, with NOx lower than 30/50 mg/kWh without FGR system.

The exclusive design of the combustion head of these burners is the result of an optimization process of gas and air flow channels with the targets to reduce NOx emissions and ensure stability over the complete working field of the machine.
The natural gas supply is separated at gas train level in two different stream lines which serve respectively the central area of the flame and the lateral one.
The independent management of gas flow over different combustion area allow to reach multiple benefits: - Great stability of root flame ain any working conditions reducing vibrations, noise and risk of shut down

- Low thermal NOx formation thanks to mixing with flue gas
- Performance of the machine granted over the complete working field thanks to fine tuning capability

LOW NOX WITH SYSTEM FGR (IB 100-2400)

IB range is finally available with minimum emissions level of NOx, lower than 30/50 mg/kWh by means of FGR system.

Recirculation of combustion products is a technique to reduce the flame temperature. It consists in withdrawing a part of combustion fumes from the chimney and dilute them with combustion air, in order to reduce the concentration of oxygen and increase the concentration of inerts (N2 and CO2), which in turn will absorb a part of the energy developed during combustion, thus reducing the flame temperature.

IB burner range allow flue gas inlet either at before or after air throttle valve. The flue gas flow rate adjustment is performed by a servocontrolled throttle valve that can be managed by the control panel. Adding a given % of recircualtion of flue gas has nevertheless an impact on burner performances. Baltur has developed a large experiece on this technology and can provide burner design and fitted with the stae-of-art technology in order to provide safe and long lasting operating life of the machine.

TECHNICAL AND FUNCTIONAL FEATURES

Industrial methane gas burner (G20) of the modulating type, suitable for gas pressures from 150 to 500 mbar (for different values contact our sales department).

- Turndow ratio 1:6 to 1:10.
- Suitable to be used on any type of furnace (check flame sizes).
- The variation between minimum and maximum capacity is controlled electronically by BMS (Burners Management System).
- Electronic servo motors directly connected to combustion air and fuel regulation components.

The combustion air that reaches the head is adjusted by the main input throttle valves. The servomotor varies the heat output through a PID-type electronic adjustment system, while keeping an optimal generator overall heat efficiency rating.

DESIGN CHARACTERISTICS

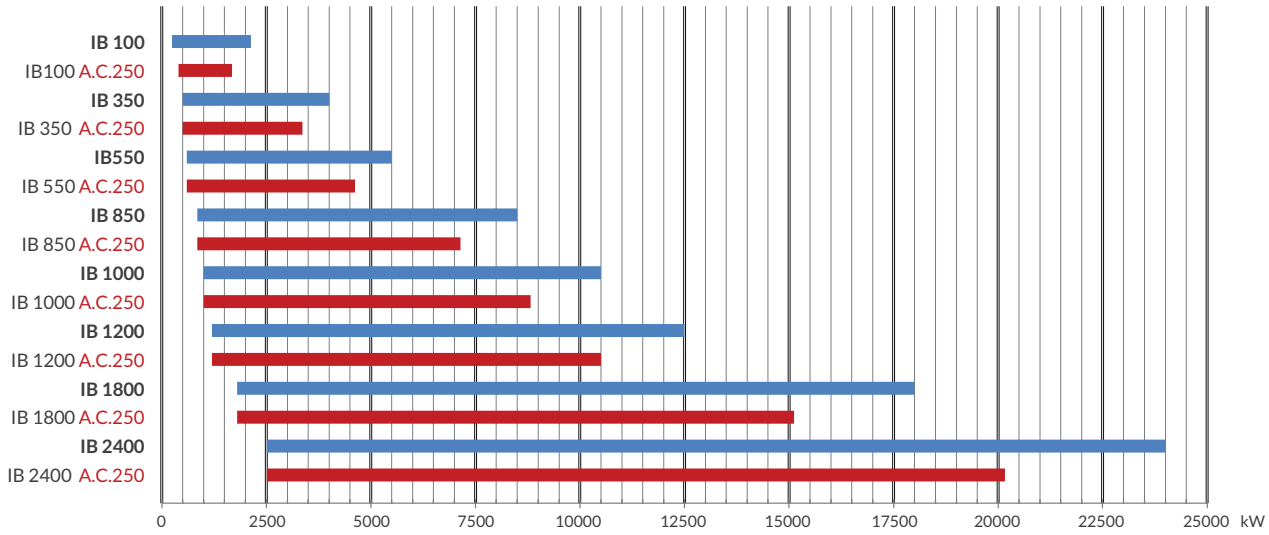
The burner consists of:

- body made of painted steel sheet fitted with connection flange and insulating gasket;
- flame pipe made of special steel, resistant to high temperatures;
- air/fuel mixing and combustion head;
- flame disc;
- flame viewer;
- multiple throttle dampers for automatic adjustment of combustion air;
- dampers fitted on bearings;
- continuous air/fuel intake modulation unit consisting of electric servomotors directly connected to regulation components for the simultaneous calibration of combustion air and fuel;
- gas intake throttle valve;
- direct ignition with electrodes (Ignition gas pilot mod. 1800 PG – 2400);
- gas supply unit to gas distributor in combustion head;
- flame detection (ionization or photocell for models with gas pilot);
- j-box containing terminals for connection to the main electric panel, ignition transformer and manual modulation control;
- electric system with protection class IP54;
- on board electronic control available

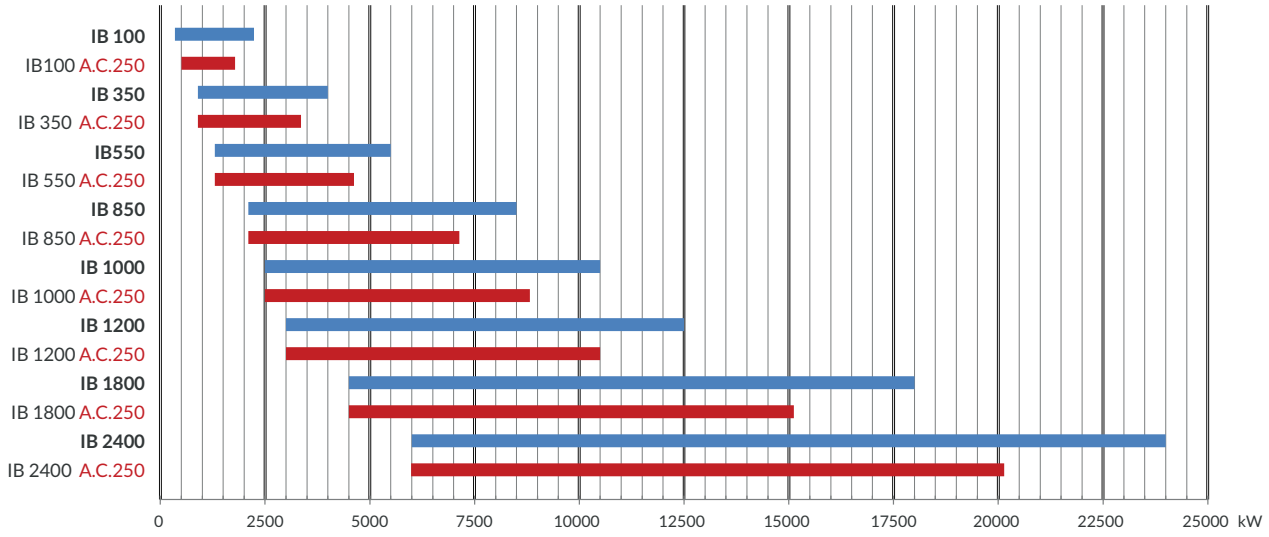
VERSIONS FOR HOT AIR

- Insulating coat.
- Flame sensor cooling system.
- Mechanical components and electric panel, distanced from machine body to make maintenance easier.
- UV photocell.

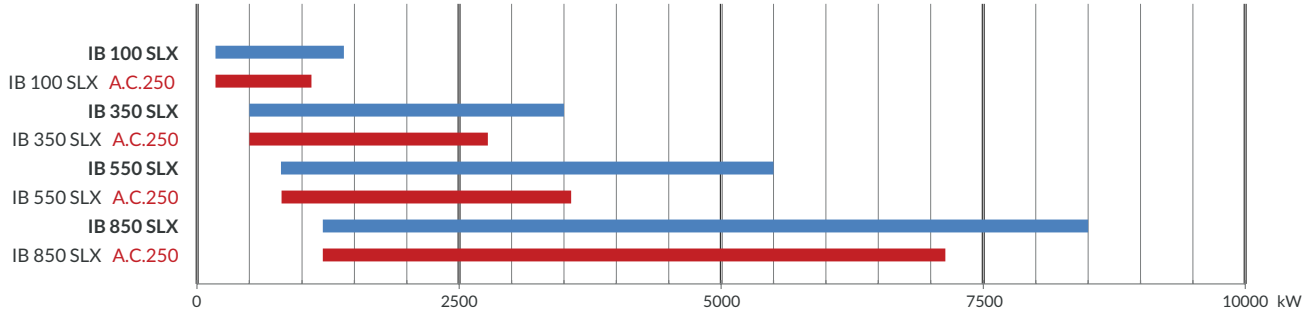
IB G WORKING FIELDS



IB L/N WORKING FIELDS



IB SLX WORKING FIELDS



SYMBOLS

1	2	3	4	5	6	7	8	9
IB	100	G	ME	LN4	FGR	AC	AIB	FR

1 TYPE OF BURNER

IB	Industrial Burners

2 CAPACITY

100 - 350 - 550 - 850 -1000 - 1200 - 1800 - 2400

3 FUEL

G	natural gas
B	biogas
P	L.P.G.
L	light oil
LA	light oil with compressed air assisted atomisation
N	heavy oil
NA	heavy oil with compressed air atomisation
NS	heavy oil with steam assisted atomisation
GL	gas/light oil combination
GN	gas/heavy oil combination
GNS	gas/heavy oil combination with steam assisted atomisation
GNA	gas/heavy oil combination with compressed air atomisation

4 AIR GAS CONTROL

ME	with electronic cams
MEV	with electronic cams and inverters
MEV O_2	with electronic cams and inverter and O_2 control
MEV CO	with electronic cams and inverters and CO control

5 NATURAL GAS NOx EMISSIONS

LN2	<120 mg/kWh
LN3	< 80 mg/kWh
LN4	< 50 mg/kWh
LN5	< 30 mg/kWh

6 FLUE RECIRCULATION

FGR	with flue gas recirculation system at 50° C
SLX	Low NOx combustion head

7 HOT AIR

/	for combustion air temperature operation at 50° C
AC	for combustion air temperature operation at 250° C

8 AIR SUPPLY

AIB	air inlet from below
AIL	air inlet from left
AIT	air inlet from top
AIR	air inlet from right

9 FUEL SUPPLY*

FR	from right
FL	from left
FB	from below
FT	from top

* this is the supply system of gaseous fuel

PRODUCT CONFIGURATION	IB ... ME	IB ... ME AC	IB ... ME FGR	IB ... ME FGR AC
Electric protection rating IP 54	●	●	●	●
Air/gas modulation check	●	●	●	●
- throttle valve	●	●	●	●
- servomotor for air and gas	●	●	●	●
- FGR adjustment unit	NA	NA	●	●
Potentiometer installed on servomotor	○	○	○	○
LPG gas nozzle kit	○	○	○	○
Nozzle kit for inversion boilers	○	○	○	○
Combustion head gas pressure port	●	●	●	●
Air pressure switch	●	●	●	●
Ignition transformer	●	●	●	●
Cable and ignition electrode	●	●	●	●
Flame detecting sensor with photocell	●	●	●	●
Flame detecting sensor with variable frequency photocell	○	○	○	○
Flame detecting sensor with photocell for continuous operation	○	○	○	○
Flame sensor cooling system preparation	○	●	○	●
Air gates	●	●	●	●
Air pressure port	●	●	●	●
Pilot gas train ignition (natural gas and LPG) for models 100 to 1200	○	○	○	○
Pilot gas train ignition (natural gas and LPG) for models 1800 to 2400	●	●	●	●
Electrical connection j-box	○	○	●	●
Lifting eyebolts	●	●	●	●
Input modulation signal 4-20 mA	○	○	○	○
Supplied with the burner: - Stud bolt screws, nuts and washers for fastening to boiler - Stud bolt screws, nuts and washers for fastening gas train - Burner flange seal - Instruction manual	●	●	●	●
External insulation for AC versions 250°C	NA	●	NA	●
Fumigated wood packaging	●	●	●	●
On board electrical panel	●	●	○	○

● As standard ○ Optional NA Not Available

NATURAL GAS

Model	IB 100 G	IB 350 G	IB 550 G	IB 850 G	IB 1000 G	IB 1200 G	IB 1800 G	IB 2400 G
Thermal power (1) kW (min-max)	200-2000	500-4000	600-5500	850-8500	1000-10500	1200-12500	1800-18000	2700-24000
Modulation ratio	1:8	1:8	1:9	1:10	1:10	1:10	1:10	1:9
Ignition system	Direct						Gas Pilot	
Maximum temperature of the combustion air °C	250	250	250	250	250	250	250	250
Min-Max operation temperature °C	-15/+60	-15/+60	-15/+60	-15/+60	-15/+60	-15/+60	-15/+60	-15/+60
Power supply voltage V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Emission class *	Class III	Class III	Class III	Class III	Class III	Class III	Class III	Class III

FGR - GAS

Model	IB 100G FGR	IB 350G FGR	IB 550G FGR	IB 850G FGR	IB 1000G FGR	IB 1200G FGR	IB 1800G FGR	IB 2400G FGR
Thermal power (1) kW (min-max)	280-1700	550-3550	600-4200	850-6600	1500-9000	1200-10500	1800-15300	2700-20400
Modulation ratio	1:6	1:6	1:7	1:7	1:6	1:6	1:8	1:7
Ignition system	Direct							
Maximum temperature of the combustion air °C	250	250	250	250	250	250	250	250
Min-max operation temperature °C	-15/+60	-15/+60	-15/+60	-15/+60	-15/+60	-15/+60	-15/+60	-15/+60
Power supply voltage V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Emission class	LN5 NOx <30 mg/kWh							

SLX - GAS

Model	IB 100G SLX	IB 350G SLX	IB 550G SLX	IB 850G SLX
Thermal power (1) kW (min-max)	175-1400	500-3500	800-5500	1200-8500
Modulation ratio	1:8	1:7	1:7	1:7
Ignition system	Direct			
Maximum temperature of the combustion air °C	250	250	250	250
Min-max operation temperature °C	-15/+60	-15/+60	-15/+60	-15/+60
Power supply voltage V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50
Emission class	LN4/LN5 Class NOx <50/30 mg/kWh (2)			

(1) Cold Air Versions
(2) Depending on the application, please refer to your reference.
* The NOx emission class (Class I ≤ 170 mg/kWh, Class II ≤ 120, Class III ≤ 80 mg/kWh) is determined according to the EN 676 in standard conditions (furnace dimensions, thermal fluid temperature, atmospheric temperature/humidity, ...) and takes into consideration the average of emissions in the operating range points. Under any operating conditions other than the standard test conditions, the emission values corresponding to the classes stated in the table are not guaranteed.

** The NOx emission class (Class II ≤ 185, Class III ≤ 120 mg/kWh) is determined according to the EN 267 in standard conditions (furnace dimensions, thermal fluid temperature, atmospheric temperature/humidity, ...) and takes into consideration the average of emissions in the operating range points. Under any operating conditions other than the standard test conditions, the emission values corresponding to the classes stated in the table are not guaranteed.

LIGHT OIL / HEAVY OIL

Model	IB 100 L/N	IB 350 L/N	IB 550 L/N	IB 850 L/N	IB 1000 L/N	IB 1200 L/N	IB 1800 L/N	IB 2400 L/N
Thermal power (1) kW (min-max)	350-2000	900-4000	1300-5500	2100-8500	2500-10500	3000-12500	4500-18000	6000-24000
Modulation ratio	1:5	1:4	1:4	1:4	1:4	1:4	1:4	1:4
Ignition system	Direct						Gas Pilot	
Maximum temperature of the combustion air °C	250	250	250	250	250	250	250	250
Min-max operation temperature °C	-15/+60	-15/+60	-15/+60	-15/+60	-15/+60	-15/+60	-15/+60	-15/+60
Power supply voltage V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Emission class light oil	Class II	Class II	Class II	Class II	Class II	Class II	Class II	Class II

DUAL FUEL GAS-LIGHT OIL - DUAL FUEL GAS-HEAVY OIL

Model	IB 100 GL/GN		IB 350 GL/GN		IB 550 GL/GN		IB 850 GL/GN		IB 1000 GL/GN		IB 1200 GL/GN		IB 1800 GL/GN		IB 2400 GL/GN	
	natural gas	light oil	natural gas	light oil	natural gas	light oil	natural gas	light oil	natural gas	light oil	natural gas	light oil	natural gas	light oil	natural gas	light oil
Thermal power (1) kW (min-max)	200-2000	350-2000	500-4000	900-4000	600-5500	1300-5500	850-8500	2100-8500	1000-10500	2500-10500	1200-12500	3000-12500	1800-18000	4500-18000	2700-24000	6000-24000
Modulation ratio	1:8	1:5	1:8	1:4	1:9	1:4	1:10	1:4	1:10	1:4	1:10	1:4	1:10	1:4	1:9	1:4
Ignition system	Direct												Gas Pilot			
Maximum temperature of the combustion air °C	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
Min-max operation temperature °C	-15/+60															
Power supply voltage V/Ph/Hz	230/1/50															
Emission class gas *	Class III		Class III		Class III		Class III		Class II		Class II		Class II		Class II	
Emission class light oil		Class II		Class II		Class II		Class II		Class II		Class II		Class II		Class II

(1) Cold Air Versions

* The NOx emission class (Class I ≤ 170 mg/kWh, Class II ≤ 120, Class III ≤ 80 mg/kWh) is determined according to the EN 676 in standard conditions (furnace dimensions, thermal fluid temperature, atmospheric temperature/humidity, ...) and takes into consideration the average of emissions in the operating range points. Under any operating conditions other than the standard test conditions, the emission values corresponding to the classes stated in the table are not guaranteed.

** The NOx emission class (Class II ≤ 185, Class III ≤ 120 mg/kWh) is determined according to the EN 267 in standard conditions (furnace dimensions, thermal fluid temperature, atmospheric temperature/humidity, ...) and takes into consideration the average of emissions in the operating range points. Under any operating conditions other than the standard test conditions, the emission values corresponding to the classes stated in the table are not guaranteed.

kW **500 - 80000** | **TBR** SERIES

BURNER IN ACCORDING TO:

NORMS:	STANDARDS EXTRA EUROPEAN:	REGULATIONS AND DIRECTIVES:
• EN 676:2020 • EN 267:2020 • EN 746-2:2011	• GB/T 36699-2018	• 2006/42/CE • 2014/35/UE

The TBR serie features an innovative design and a highly functional and versatile layout to meet the most demanding requirements in industrial applications. The TBR combustion system consists of several functional blocks:

- Combustion head
- Ventilating unit
- Control panel
- Gas valve train (for gas aplications)
- Pumping skid (for liquid fuel applications)

ENERGY SAVING

TBR burners are equipped with an electronic control, which allows the air-fuel mixture to be regulated with maximum precision as the heat load changes, optimising energy consumption. Combustion optimisation systems (O2 and CO control kits) can be combined with TBR burners to ensure significant economic 'savings'.

COMBUSTIONE HEAD

The combustion head allows combustion and flame size to be adapted in relation to the type of combustion chamber.

For gaseous fuel versions, the 'spear' design with adjustable nozzles allows for flexible combustion systems in relation to different applications, to achieve even low NOx values with and without FGR. The design ensures easy and immediate access to the combustion head.

SUPER LOW NOx (FIR) TECHNOLOGY (TBR 4-32)

TBR series burners from model 4 to 32 are also available with super LOW NOx emission levels, with NOx below 50 mg/kWh. The unique combustion head design of these burners is the result of an optimisation process of the gas and air flow channels with the aim of reducing NOx emissions and ensuring stability over the entire operating range of the machine.

LOW NOX WITH SYSTEM FGR (TBR 4-80)

TBR serie burners from model 4 to 80 are designed and prepared to be combined with the external combustion gas recirculation system, known as FGR.

This technology provides for the mixing of combustion air at burner intake with combustion gases taken from the chimney of the heat generator on which it is installed.

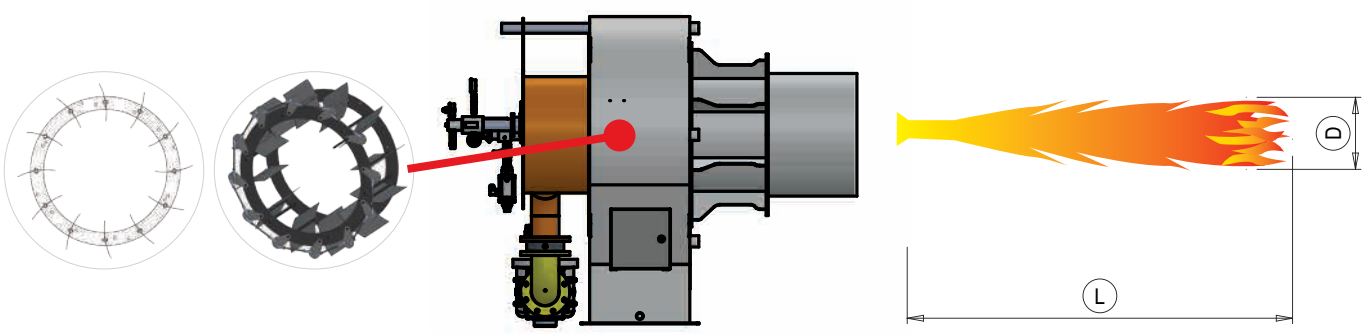
Thanks to the mixing of combustion air, flue gases (up to 40% of the total flue gas flow rate) and fuel, a flame is generated whose 'adiabatic' temperature is significantly reduced compared to that generated by a burner without FGR.

The result is a reduction in NOx values between 15 and 40 %.

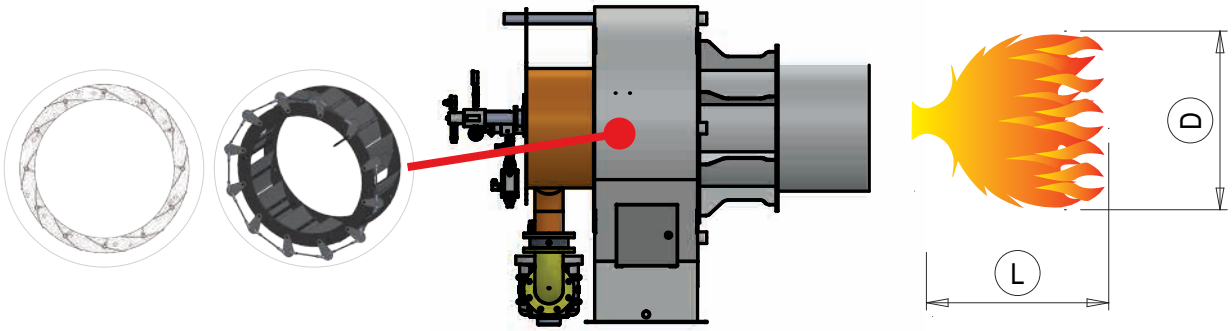
ADJUSTABLE FLAME GEOMETRY

The burner is equipped with an air regulator on the combustion head, used to modify, within broad limits, the shape of the flame (diameter-length) to adapt it to the furnace geometry.
Adjustment can be: manually by acting on the opening device of the register dampers, modifying the geometry of the combustion air flows.

Alternatively with an actuator controlled by BMS (Burners Management System) the equipment which can automatically change the position of the register and consequently the shape of the flame according to the application of the firebox, throughout the modulation range



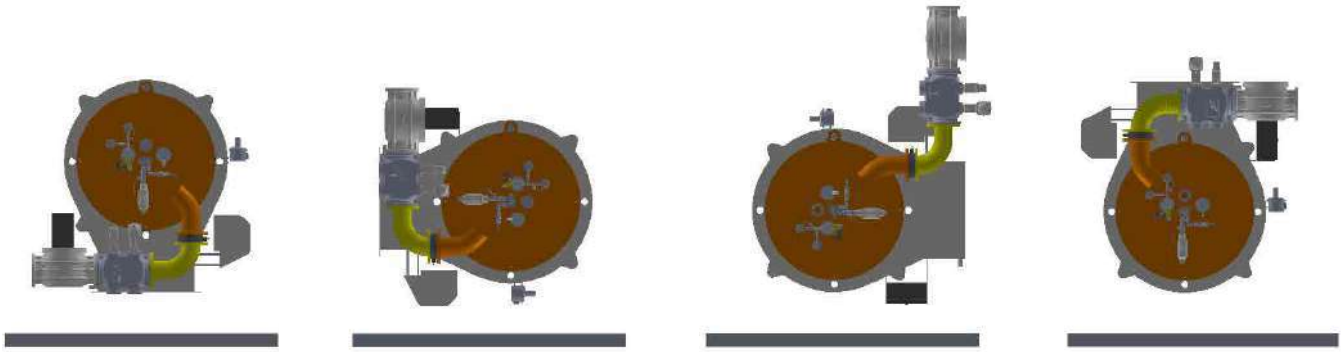
90° angle Radially positioned dampers, minimum air turbulence. **Long, narrow flame.**



20° angle High dampers inclination, strong air turbulence. **Short, wide flame.**

BURNER AND GAS TRAIN ORIENTATION

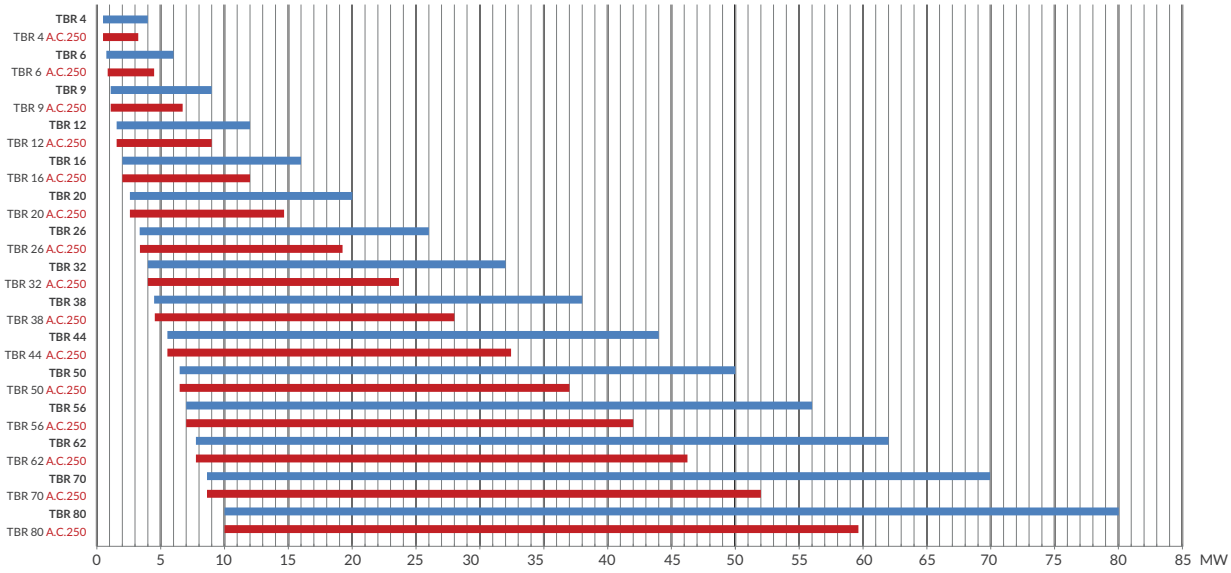
The burners of the TBR serie are designed to be absolutely versatile, so they can be installed on the heat generator in various orientations.
For example:



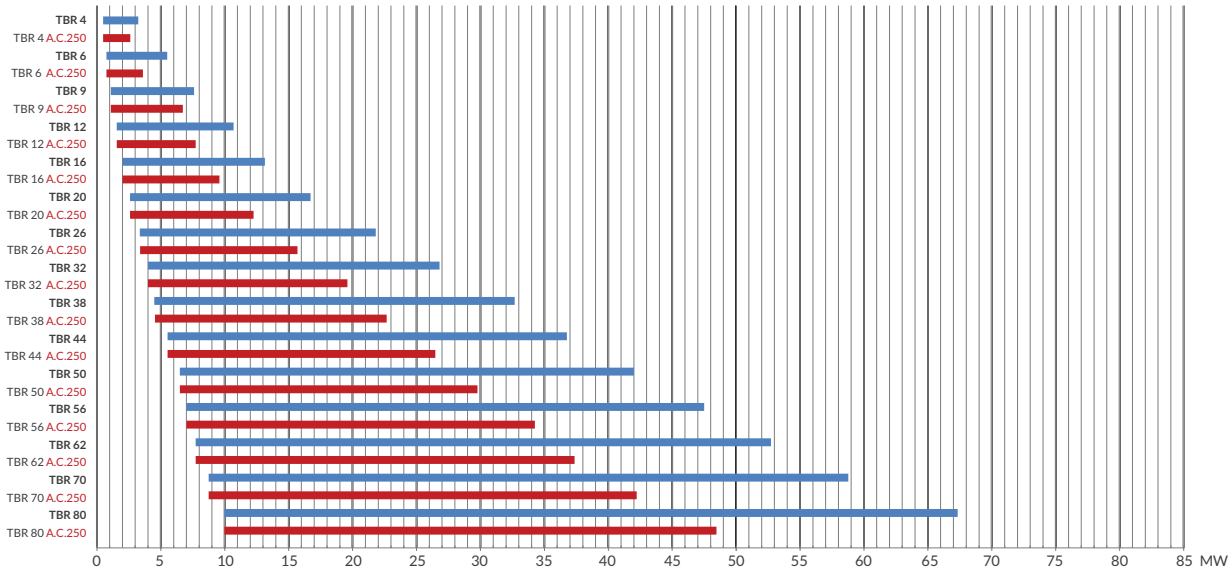
FROM BELOW | FROM THE LEFT | FROM THE RIGHT | FROM ABOVE

Wide configuration availability.

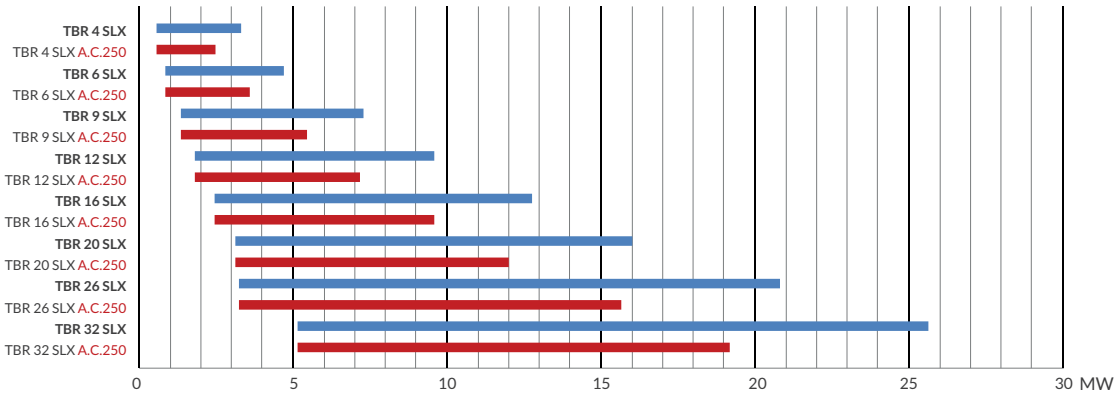
TBR G WORKING FIELDS



TBR FGR WORKING FIELDS



TBR SLX WORKING FIELDS



SYMBOLS

1	2	3	4	5	6	7	8	9
TBR	20	G	ME	LN4	FGR	AC	AIB	FR

1 TYPE OF BURNER

TBR	The Best Register

2 CAPACITY

4 - 6 - 9 - 12 - 16 - 20 - 26 - 32 - 38 - 44 - 50 - 56 - 62 - 70 - 80

3 FUEL

G	natural gas
B	biogas
P	L.P.G.
L	light oil
LA	light oil with compressed air assisted atomisation
N	heavy oil
NA	heavy oil with compressed air atomisation
NS	heavy oil with steam assisted atomisation
GL	gas/light oil combination
GN	gas/heavy oil combination
GNS	gas/heavy oil combination with steam assisted atomisation
GNA	gas/heavy oil combination with compressed air atomisation

4 AIR GAS CONTROL

ME	with electronic cams
MEV	with electronic cams and inverters
MEV O_2	with electronic cams and inverter and O_2 control
MEV CO	with electronic cams and inverters and CO control

5 NATURAL GAS NOx EMISSIONS

LN2	<120 mg/kWh
LN3	< 80 mg/kWh
LN4	< 50 mg/kWh
LN5	< 30 mg/kWh

6 FLUE RECIRCULATION

FGR	with flue gas recirculation system at 50° C
SLX	Low NOx combustion head

7 HOT AIR

/	for combustion air temperature operation at 50° C
AC	for combustion air temperature operation at 250° C

8 AIR SUPPLY

AIB	air inlet from below
AIL	air inlet from left
AIT	air inlet from top
AIR	air inlet from right

9 FUEL SUPPLY*

FR	from right
FL	from left
FB	from below
FT	from top

* this is the supply system of gaseous fuel

PRODUCT CONFIGURATION	TBR..G ME	TBR..L ME	TBR..GL ME	TBR..N ME	TBR..GN ME
Steel metal frame with sanding treatment and powder coating	●	●	●	●	●
Stainless steel metallic diffuser	●	●	●	●	●
Stainless steel metallic diffuser with extended length	○	○	○	○	○
Combustion head extraction system	●	●	●	●	●
Gas plenum chamber with lances provided with adjustable nozzles	●	ND	●	ND	●
Burner closing plate provided with centring system and atomisation lance	●	●	●	●	●
Light oil atomization lance	ND	●	●	●	●
Throttle valve for gas flow rate modulation	●	ND	●	ND	●
Manual or automatic flame register with variable geometry	●	●	●	●	●
Lifting eyebolts	●	●	●	●	●
Flame display	●	●	●	●	●
Combustion head gas pressure port	●	●	●	●	●
Intermittent operation - 1 stop every 24h -	●	●	●	●	●
Continuous operation - 1 stop every 72h -	●	●	●	●	●
Intermittent operation light oil ignition pilot	○	○	○	○	○
Continuous operation light oil ignition pilot	○	○	○	○	○
Intermittent operation gas ignition pilot (GAS or LPG)	●	●	●	●	●
Continuous operation gas ignition pilot (GAS OR LPG)	○	○	○	○	○
Pilot supply with compressed air	○	○	○	○	○
Cable and ignition electrodes (for pilot)	●	●	●	●	●
Gas train for ignition pilot (GAS or LPG)	●	●	●	●	●
Light oil train for light oil ignition pilot	○	○	○	○	○
Adjustable flame sensor support	●	●	●	●	●
UV flame sensor	●	●	●	●	●
Selective frequency flame sensor	○	○	○	○	○
Version for pre-heated combustion air up to 250°C	○	○	○	○	○
Cold air flame sensor cooling system	○	○	○	○	○
Hot air flame sensor cooling system	●	●	●	●	●
Multiple air dampers with servomotor	●	●	●	●	●
Air pressure port	●	●	●	●	●
Junction j-box for electrical connections	●	●	●	●	●
Ignition transformer	●	●	●	●	●
Operation with continuous ventilation	●	●	●	●	●
Preset for "AIR COOLING SYSTEM" with external fan cooling	○	○	○	○	○
Supplied with the burner:	●	●	●	●	●
fumigated wood packaging	●	●	●	●	●
Use of inverter on air fan	○	○	○	○	○
Use of O_2 and CO control	○	○	○	○	○
Protection rating IP65	○	○	○	○	○
Hydraulic circuit for liquid fuel according to EN267		●	●	●	●
Flow regulator for liquid fuel via actuator		●	●	●	●
Electrical heater for oil line, oil regulator and safety valve.	NA	NA	NA	●	●

● As standard ○ Optional NA Not available

Model	TBR 4	TBR 6	TBR 9	TBR 12	TBR 16	TBR 20	TBR 26	TBR 32	TBR 38	TBR 44	TBR 50	TBR 56	TBR 62	TBR 70	TBR 80
Thermal power (1) kW (min-max)	500 - 4,000	750 - 6,000	1,125 - 9,000	1,500 - 12,000	2,000 - 16,000	2,500 - 20,000	3,250 - 26,000	4,000 - 32,000	4,750 - 38,000	5,500 - 44,000	6,250 - 50,000	7000-56000	7750-62000	8750-70000	10000-80000
GAS - Modulation ratio	8 : 1	8 : 1	8 : 1	8 : 1	8 : 1	8 : 1	8 : 1	8 : 1	8 : 1	8 : 1	8 : 1	8 : 1	8 : 1	8 : 1	8 : 1
LIGHT OIL - Modulation ratio	4 : 1	4 : 1	4 : 1	4 : 1	4 : 1	4 : 1	4 : 1	4 : 1	4 : 1	4 : 1	3 : 1	3 : 1	3 : 1	3 : 1	3 : 1
HEAVY OIL - Modulation ratio	4 : 1	4 : 1	4 : 1	4 : 1	4 : 1	4 : 1	4 : 1	4 : 1	4 : 1	4 : 1	3 : 1	3 : 1	3 : 1	3 : 1	3 : 1
Ignition system	With electrode	Gas Pilot													
Maximum temperature of the combustion air °C	250 °C														
Entry couplings pilot ramp	-	-	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Diameter of the ignition pilot	-	-	48 mm	48 mm	60 mm	60 mm	60 mm	60 mm	60 mm	60 mm	60 mm	60 mm	60 mm	80 mm	80 mm
LIGHT OIL-HEAVY OIL inlet connections	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"	3/4"	1"	1"	1"	1"1/2	1"1/2	2"	2"
LIGHT OIL-HEAVY OIL outlet connections	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"	3/4"	1"	1"	1"	1"1/2	1"1/2	2"	2"
Power supply voltage V/Ph/Hz	230/1/50														
Electric protection rating	IP 54														
In according to	EN 676 - EN 267 - EN 746-2														

(1) Cold Air Version

Biogas and syngas can be a very valuable resource but still present some limitations for industrial applications. Stationary applications for heat
and power generation need:

- Constant fuel flow and stable pressure power supply
- Constant and predictable performances of burners and of heat generator

The variable composition of biogas and syngas along with the unstable availability of gas flow introduce some critical elements in the development of applications in industrial field.

Baltur has developed a burner technology able to overcome these issues and enable a safe and reliable implementation on such applications.

A SOLUTION FOR EVERY APPLICATION

The solutions developed by Baltur branch off in three directions:

1 BIOGAS AS UNIQUE ENERGY SOURCE
The burner uses a single gas

2 BIOGAS AND NATURAL GAS AS ALTERNATED ENERGY SOURCES
The burner uses two gases in alternated mode switching automatically or manually from one to another

3 BIOGAS/SYNGAS AND NATURAL GAS AS COMBINATED ENERGY SOURCES
The burner uses two gases at the same time managing automatically variable gas/gas ratio.

Thanks to the design of the burner head Baltur's burners are capable to process biogas and syngas with calorific power as little as 3,4 kWh/Sm^3 ensuring at same time stable performance.
Baltur burners can grant low NOx emissions both for natural gas and biogas/syngas as following:

FUEL	EMISSION LEVEL
Natural gas & Biogas	**NOx < 100 mg/kWh ***
Syngas	**NOx < 200 mg/kWh ***

Misured on three-pass steam generator

All the Baltur burner for biogas/syngas are **equipped with UV flame scanner** to ensure a constant and accurate flame control where traditional ionization probe may fail to have.

In addition, **Baltur's solutions can withstand H_2S content up to 1% ensuring long lasting system life**. This is especially important in case of application of biogas, where H_2S content may lead to untimely degradation of mechanical components due to generation of sulphuric acid when gas exhibits excessive humidity.

The solution can be also integrated with state-of-art technologies for achieving additional targets on safety, emission reduction or energy savings.

These are:

- Integration of pilot flame (always present for syngas applications)
- Integration of FGR to further reduce NOx emissions
- Integration of O_2/CO control to grant additional fuel savings
- Integration of VFD to ensure additional energy savings

SUCCESS STORIES

THE APPLICATION
Revamping of the old plant including an additional fuel line coming from a brand new digestor system feeded by agricoltural waste collected from suppliers.

THE CHALLENGE
Maximize energy saving and operating costs considering floating availability of alternative fuel.

THE SOLUTION
Baltur proposed a mixing fuel burner capable to manage two different fuels in variable proportion at any thermal load. The system is designed to make use of all the biogas available and compensate the missing thermal power to reach duty point with natural gas. In addition to minimize energy consumption the machine has been equipped with VFD fan motor and O2 sensor.

TBG 1100ME-V O_2 FGR
NATURAL GAS/BIOGAS

- ELECTRONIC MODULATION
- INVERTER CONTROL
- O2 CONTROL
- FLUE GAS RECIRCULATION

Burner Model	Field of Application	DISTILLERY
	Installation	Three pass steam boiler
	Firing rate	9100 kW @ 9 mbar
	Functioning	Mixing fuel
	Emissions natural gas fuel	< 100 mg/Nm^3
	Emissions Mixing fuel	< 200 mg/Nm^3
	Annual expected saving natural gas	52%
	Annual expected saving electrical power	32%
	Annual expected saving CO_2 emissions	>250 tons
	Annual expected cost saving	49%

THE APPLICATION
Brand new plant with single fuel line coming from stock of Biogas produced locally through digestor system.

THE CHALLENGE
Ensure stable performances and long lasting solution given biogas H2S content.

THE SOLUTION
Baltur proposed a single fuel burner capable to withstand content of H2S up to 1% reducing dramatically the need for continous maintenance.

TBG 360ME
BIOGAS

- ELECTRONIC MODULATION

Burner Model	Field of Application	FOOD & BEVERAGE
	Installation	Three pass steam boiler
	Firing rate	3000 kW @ 7,5 mbar
	Functioning	100% Biogas
	Emissions	< 200 mg/Nm^3
	Annual expected saving natural gas	100%
	Annual expected saving CO_2 emissions	>230 ton

THE APPLICATION
Brand new plant with dual fuel capability for refrigeration system. The machine is feeded directly by oxidating reactor with an intermediate stock.

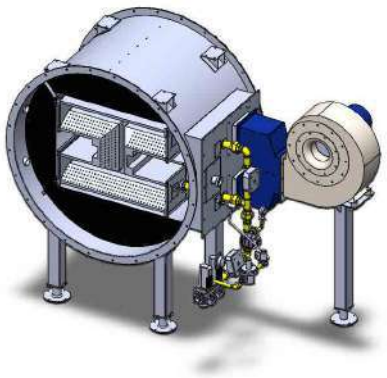
THE CHALLENGE
Ensure power continuity with fast and smooth transition from a fuel to the other one depending on availability.

THE SOLUTION
Baltur proposed a dual fuel burner capable to swith automatically from Syngas to Natural gas and viceversa depending on availability of preferred fuel (Syngas). The machine is also designed to be equipped with BUS connections for remote data monitoring.

TBG 60ME
GAS NATURALE/SYNGAS

- ELECTRONIC MODULATION

Burner Model	Field of Application	FARMING
	Firing rate	500 kW @ 3 mbar
	Application	Hot water
	Emissions natural gas fuel	< 100 mg/Nm^3
	Annual expected saving natural gas	70%
	Annual expected saving CO_2 emissions	>40 tons
	Risparmio annuo previsto di emissioni di CO_2	>230 ton



Air duck burners for drying in industrial processes

SECTORS OF USE:

- installations for paint booths;
- drying processes in the food sector;
- drying processes in the industrial sector;
- process hot air generators with large modulation ratio.

BURNER FEATURES

SHEET METAL HOUSING, COMPLETE WITH:

- burner body in galvanised sheet metal;
- stainless steel panels and combustion module;
- combustion air electric fans;
- combustion air manual regulation dampers;
- combustion air pressure switch

GAS TRAIN SET UP ACCORDING TO UNI EN 746-2, FOR NATURAL GAS/LPG SUPPLY:

- gas manual shut off valve;
- anti-vibration joint;
- pressure stabiliser + gas filter;
- class A safety solenoid valve;
- class A working solenoid valve;
- modulating valve coupled with a servomotor
- minimum and maximum gas pressure switches;
- valve seal control pressure switch;
- no. 3 pressure gauges with relative disabling push-button.

COMBUSTION AIR ELECTRIC FAN, COMPLETE WITH:

- electric motor;
- combustion air electric fan complete with;
- combustion air pressure switch.

IP54 BURNER CONTROL PANEL, COMPLETE WITH:

- ignition transformer;
- flame control equipment;
- valve seal control equipment;
- combustion air fan management and control;
- electrical power supply*: power 400V - 50Hz 3Ph+N+G, Aux. 230V – 50Hz;
- electrode ignition;
- detection by ionisation probe;

* Other power supply voltages for both power and auxiliary are also available upon request.

RANGE:

AIR DUCK BURNERS

BVDB

Traditional direct-fired gas burners for vertical dryers.

With this type of burner, the process air for drying is produced by mixing the fumes generated by the combustion (excess air) and the clean air drawn in by the dryer fan.

Thermal power from: 814 kW to 8,150 kW

BVDB

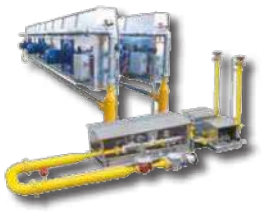
Burners for vertical dryers.

Due to their arrangement in the drying duct, they provide greater power, take up less space, and ensure a more uniform heat distribution.

Variable thermal power from: 4,884 kW to 16,280 kW

BVDB...LT

Burners for vertical dryers.
This special set-up guarantees correct operation down to a temperature of -20°C.
This set-up is also feasible for all the other series listed.
Thermal power from: 814 kW to 16,280 kW



BVDB...D

Air vein burners inserted into a pressed galvanised sheet steel duct with a rectangular or square cross-section, depending on the needs and specifications of the dryer manufacturer. Like the other burners, these also have a linear combustion body in stainless steel for high temperatures, which, exclusively in this series, can be configured in an "H" or "X" shape. These configurations, which differ from the traditional in-line configuration, allow for an increase in thermal power with the same duct cross-section.
Thermal power from: 175 kW to 4,650 kW

BVDB...CD

Air vein burners with a circular duct cross-section.
Thermal power from: 175 kW to 4,300 kW

BVDB...CDS AND BVDB...CS

The machines from these two series can have a similar duct cross-section or combustion body geometric configuration as the previous ones; they differ from them in that they are **set up to use part of combustion air as process air**.
Thermal power from: 175 kW to 4,300 kW

BVDB...PE

If the user wishes to **increase the temperature of the process air conveyed by a steel sheet duct**, one of these burners (complete with electric fan, and electric control and power panel) can be mounted on the duct itself with a special plate.
Thermal power from: 70 kW to 756 kW

BVDB...PS

On these burners, like the previous ones, **the combustion air is drawn from the process air**.
Thermal power from: 70 kW to 580 kW

BVDB...ME

While on the BVDB...P series the **burner housing is inserted into the drying air duct**, on the BVDB...ME series all the burner components are located outside the duct. Only the flame and combustion products enter the duct.
The burner is fixed to the sheet steel duct with a metal flange.
Thermal power from: 70 kW to 756 kW

BVDB...TE

These are burners for vertical dryers similar to the BVDB series.
However, they have a **smaller combustion body panel surface area to ensure a reduced power output**, which is nevertheless well distributed throughout the dryer duct.
Thermal power from: 174 kW to 1,750 kW

MODULATION

The two stage progressive burners, by installing the PID load controller and related modulating kit, can operate as modulating burners with the ability to adjust the thermic load according to boiler needs. The load adjustment is possible between the minimum and maximum burner's operating point.

How to choose the modulating kit components:
According to the parameter that it's necessary to control: temperature (°C) or pressure (bar) it's necessary to choose the range kit according to boiler operating range.

In case the value is included in two ranges it's necessary to select the lower range.

Example:
In case the required hot water boiler set point is 100°C it's necessary to select the temperature probe kit with operating range between 0 ÷ 130°C.
In case the steam boiler must operate with 8bar outlet steam pressure it's necessary to select the pressure probe kit with operating range between 0 ÷ 10 bar.

LC3 LC4 LCM100

Automatic proportional modulation regulator PID

Part no.	Kit	Burners
98000055	Modulation kit LC3	TBG 450 ÷ 2000 MC
98000056	Modulation kit LC3	TBG 35 MC
98000057	Modulation kit LC3	TBML 80 ÷ 360 MC
98000058	Modulation kit LC3	TBG 45 ÷ 60 MC
98000059	Modulation kit LCM 100	ME models
98000065	Modulation kit LC4	TBG 80 ÷ 360 MC

Temperature probe for LC3 modulation

Part no.	Temperature	Type robe	Probe length	Male coupling
98000023	0 °C ÷ 130 °C	PT 1000	85 [1)]	R 1/2"
98000021	0 °C ÷ 500 °C	PT 1000	200 [1)]	G 1/2"
98000022	0 °C ÷ 1100 °C	Thermocouple	425 [1)]	R 1/2"

Temperature probe for LCM 100 modulation

Part no.	Temperature	Type robe	Probe length	Male coupling
98000023	0 °C ÷ 130 °C	PT 1000	85 [1)]	R 1/2"
98000021	0 °C ÷ 500 °C	PT 1000	200 [1)]	G 1/2"

Temperature probe for ETAMATIC OEM control box

Part no.	Temperature	Type robe	Probe length	Male coupling
98000035	0 °C ÷ 500 °C	PT 100	100 [1)]	G 1/2"

Steam pressure probe (for all types of automatic regulator)*

Part no.	Pressure steam	Signal output	Male coupling
98000045	0 ÷ 1 bar	4 ÷ 20 mA	G 1/2"
98000046	0 ÷ 10 bar	4 ÷ 20 mA	G 1/2"
98000047	0 ÷ 16 bar	4 ÷ 20 mA	G 1/2"
98000048	0 ÷ 25 bar	4 ÷ 20 mA	G 1/2"
98000049	0 ÷ 40 bar	4 ÷ 20 mA	G 1/2"

*) In the case of using applications where temperatures exceed 90°C you need to match the kit codes: 98000062
NOTE: In combination with the LC4 modulation kit for MC models, a 12V power supply kit is mandatory.

98000482	12V power supply kit

External climate regulation

Part no.	Description	Temperature
85060070	Temperature probe PT100	-50 °C ÷ 90 °C
98000061	Interface module for LC3	

Power signal converter (TBG 45÷360 MC / LX MC)

Part no.	Description
98000063	Converter kit 0 ÷ 10 V / 4 ÷ 20 mA

UV safe kit

Part no.	Description
98000443	UV SAFE KIT TBG 80-360 FGR
98000444	UV SAFE KIT TBG 450-750 FGR
98000445	UV SAFE KIT TBG 800 FGR
98000446	UV SAFE KIT TBG 1200 FGR

Note: For different modulation values please contact our Technical Assistance Service.
1) Different lengths on request.

RETURN NOZZLES

Nozzle with fuel return for diesel and mixed series two-stage progressive / modulating and modulating burners. This kind of nozzle, while keeping the pump pressure constant, varies the amount of fuel supplied according to the return pressure of the nozzle. To be ordered together with the burner when placing the order according to the power required by the application.

Nozzles for light oil (ratio 1÷3) excluded burners: TBML 800

Part no.	Rated flow-rate kg/h	Flow-rate angle
98000201	50	45°
98000202	60	45°
98000203	70	45°
98000204	80	45°
98000205	90	45°
98000206	100	45°
98000207	125	45°
98000208	150	45°
98000209	175	45°
98000210	200	45°
98000211	225	45°
98000212	250	45°
98000213	275	45°
98000214	300	45°
98000215	325	45°
98000216	350	45°
98000217	375	45°

Part no.	Rated flow-rate kg/h	Flow-rate angle
98000218	400	45°
98000219	425	45°
98000220	450	45°
98000221	475	45°
98000222	500	45°
98000223	525	45°
98000224	550	45°
98000225	575	45°
98000226	600	45°
98000227	650	45°
98000228	700	45°
98000229	750	45°
98000230	800	45°
98000231	850	45°
98000232	900	45°
98000233	1000	45°

Nozzles for light oil (ratio 1÷4) for burners TBML 450÷900 - TBL 450÷750 - TBL 1000

Part no.	Rated flow-rate kg/h	Flow-rate angle
98000264	200	45°
98000265	225	45°
98000266	250	45°
98000267	275	45°
98000268	300	45°
98000269	330	45°
98000270	360	45°
98000272	400	45°
98000274	450	45°
98000275	500	45°

Part no.	Rated flow-rate kg/h	Flow-rate angle
98000277	550	45°
98000278	600	45°
98000279	650	45°
98000271	700	45°
98000273	750	45°
98000276	800	45°
98000286	800	50°
98000287	850	50°
98000288	900	50°

Nozzles for light oil (ratio 1÷5) for burners TBML 800 - TBL 1000

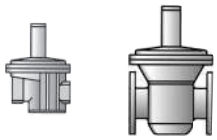
Part no.	Rated flow-rate kg/h	Flow-rate angle
98000238	200	45°
98000239	225	45°
98000240	250	45°
98000241	275	45°
98000242	300	45°
98000243	325	45°
98000244	350	45°
98000245	375	45°
98000246	400	45°
98000247	425	45°
98000248	450	45°

Part no.	Rated flow-rate kg/h	Flow-rate angle
98000249	475	45°
98000250	500	45°
98000251	525	45°
98000252	550	45°
98000253	575	45°
98000254	600	45°
98000255	650	45°
98000256	700	45°
98000257	750	45°
98000258	800	45°
98000259	850	45°
98000260	900	45°

Nozzles for heavy oil (ratio 1÷5) - Type W4

Part no.	Rated flow-rate kg/h	Flow-rate angle
98000500	300	45°
98000501	325	45°
98000502	350	45°
98000503	375	45°
98000504	400	45°
98000505	425	45°
98000506	450	45°
98000507	475	45°

Part no.	Rated flow-rate kg/h	Flow-rate angle
98000508	500	45°
98000509	525	45°
98000510	550	45°
98000511	600	45°
98000512	650	45°
98000513	700	45°
98000514	750	45°

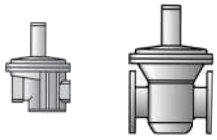


Gas pressure regulator with incorporated filter approved CE*
Control closing , pressure taps upstream side - the side valley , safety diaphragm.
Max inlet pressure : 1 bar.

Part no.	Model	Outlet pressure mbar	Gas connection
97392010	BTFR/1	40 ÷ 110	1/2"
97392020	BTFR/1	40 ÷ 110	3/4"
97392030	BTFR/1	40 ÷ 110	1"
97392040	BTFR/1	90 ÷ 190	1"1/4
97392050	BTFR/1	90 ÷ 190	1"1/2
97392060	BTFR/1	90 ÷ 190	2"
97392070	BTFR/1	110 ÷ 200	DN65 - PN16
97392080	BTFR/1	110 ÷ 200	DN80 - PN16
97392090	BTFR/1	130 ÷ 200	DN100 - PN16

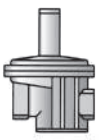
CE gas pressure regulator CE*
Control closing , pressure taps upstream side - the side valley , safety diaphragm.
Max inlet pressure : 1 bar.

Part no.	Model	Outlet pressure mbar	Gas connection
97392100	BTR/1	100 ÷ 250	DN125 - PN16
97392110	BTR/1	100 ÷ 250	DN150 - PN16



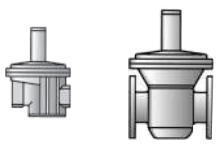
Gas pressure regulator with incorporated filter approved CE*
Control closing , pressure taps upstream side - the side valley , safety diaphragm.
Max inlet pressure : 2 bar.

Part no.	Model	Outlet pressure mbar	Gas connection
97392210	BTFR/2	40 ÷ 110	1/2"
97392220	BTFR/2	40 ÷ 110	3/4"
97392230	BTFR/2	40 ÷ 110	1"
97392240	BTFR/2	90 ÷ 190	1"1/4
97392250	BTFR/2	90 ÷ 190	1"1/2
97392260	BTFR/2	90 ÷ 190	2"
97392270	BTFR/2	110 ÷ 200	DN65 - PN16
97392280	BTFR/2	110 ÷ 200	DN80 - PN16
97392290	BTFR/2	130 ÷ 200	DN100 - PN16



Gas pressure regulator with incorporated filter approved CE*
Control closing , pressure taps upstream side - the side valley , safety diaphragm.
Max inlet pressure : 6 bar.

Part no.	Model	Outlet pressure mbar	Gas connection
97392310	BTFR/6	30 ÷ 90	1/2"
97392320	BTFR/6	30 ÷ 90	3/4"
97392330	BTFR/6	30 ÷ 90	1"



CE gas pressure regulator CE*
Control closing , pressure taps upstream side - the side valley , safety diaphragm.
Max inlet pressure : 6 bar.

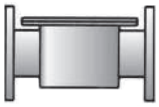
Part no.	Model	Outlet pressure mbar	Gas connection
97392340	BTR/6	85 ÷ 180	1"1/4
97392350	BTR/6	85 ÷ 180	1"1/2
97392360	BTR/6	85 ÷ 180	2"
97392370	BTR/6	110 ÷ 200	DN65 - PN16
97392380	BTR/6	110 ÷ 200	DN80 - PN16
97392390	BTR/6	110 ÷ 200	DN100 - PN16

*) All the pressure regulators in these pages have a standard spring with its own adjustment field For different delivery pressures, the able below shows the regulation field that must be used, as well as the corresponding spring to replace the standard one with.

PRESSURE REGULATOR SPRINGS

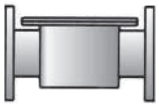
			1/2"	3/4"	1"	1"1/4	1"1/2	2"	DN 65	DN 80	DN 100	DN 125	DN 150
PRESSURE INPUT 1bar		regulator code	97392010	97392020	97392030	97392040	97392050	97392060	97392070	97392080	97392090	97392100	97392110
	code spring	97399002	9 ÷ 28	9 ÷ 28	9 ÷ 28								
		97399005	18 ÷ 40	18 ÷ 40	18 ÷ 40								
		97399007				13 ÷ 23	13 ÷ 23	13 ÷ 23					
		97399008	**40 ÷ 110***	**40 ÷ 110***	**40 ÷ 110***								
		97399009				20 ÷ 36	20 ÷ 36	20 ÷ 36					
		97399010	110 ÷ 150	110 ÷ 150	110 ÷ 150								
		97399011	150 ÷ 200	150 ÷ 200	150 ÷ 200	33 ÷ 58	33 ÷ 58	33 ÷ 58					
		97399012				55 ÷ 100	55 ÷ 100	55 ÷ 100					
		97399013							13 ÷ 27	13 ÷ 27	15 ÷ 27		
		97399014							22 ÷ 50	22 ÷ 50	22 ÷ 55		
		97399015	200 ÷ 600	200 ÷ 600	200 ÷ 600								
		97399016				**90 ÷ 190***	**90 ÷ 190***	**90 ÷ 190***					
		97399017							50 ÷ 130	50 ÷ 130	55 ÷ 130		
		97399018							**110 ÷ 200***	**110 ÷ 200***	**130 ÷ 200***		
		97399019										20 ÷ 150	20 ÷ 150
		97399020										**100 ÷ 250***	**100 ÷ 250***
		97399021										230 ÷ 350	230 ÷ 350
		97399022										300 ÷ 450	300 ÷ 450
PRESSURE INPUT 2 bar		regulator code	97392210	97392220	97392230	97392240	97392250	97392260	97392270	97392280	97392290		
	code spring	97399001	9 ÷ 22	9 ÷ 22	9 ÷ 22								
		97399005	20 ÷ 40	20 ÷ 40	20 ÷ 40								
		97399008	**40 ÷ 110***	**40 ÷ 110***	**40 ÷ 110***	12 ÷ 35	12 ÷ 35	12 ÷ 35					
		97399010	110 ÷ 150	110 ÷ 150	110 ÷ 150	30 ÷ 50	30 ÷ 50	30 ÷ 50					
		97399011	150 ÷ 200	150 ÷ 200	150 ÷ 200	40 ÷ 60	40 ÷ 60	40 ÷ 60					
		97399012				60 ÷ 95	60 ÷ 95	60 ÷ 95					
		97399013							13 ÷ 27	13 ÷ 27	15 ÷ 27		
		97399014							22 ÷ 50	22 ÷ 50	27 ÷ 55		
		97399015	200 ÷ 600	200 ÷ 600	200 ÷ 600								
		97399016				**90 ÷ 190***	**90 ÷ 190***	**90 ÷ 190***					
		97399017							50 ÷ 130	50 ÷ 130	55 ÷ 130		
		97399018							**110 ÷ 200***	**110 ÷ 200***	**130 ÷ 200***		
PRESSURE INPUT 6 bar		regulator code	97392310	97392320	97392330	97392340	97382350	97392360	97392370	97392380	97392390		
	code spring	97399003	20 ÷ 30	20 ÷ 30	20 ÷ 30								
		97399004	**30 ÷ 90***	**30 ÷ 90***	**30 ÷ 90***								
		97399006	90 ÷ 170	90 ÷ 170	90 ÷ 170								
		97399009				15 ÷ 33	15 ÷ 33	15 ÷ 33					
		97399011				32 ÷ 60	32 ÷ 60	32 ÷ 60					
		97399012				50 ÷ 95	50 ÷ 95	50 ÷ 95					
		97399013							13 ÷ 27	13 ÷ 27	13 ÷ 22		
		97399014							22 ÷ 58	22 ÷ 58	18 ÷ 40		
		97399016				**85 ÷ 180***	**85 ÷ 180***	**85 ÷ 180***					
		97399017							50 ÷ 130	50 ÷ 130	25 ÷ 120		
		97399018							**110 ÷ 200***	**110 ÷ 200***	**110 ÷ 200***		

*) of series.



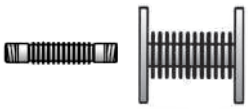
Gas filters approved CE
With pressure.
Max inlet pressure: 2 bar.

Part no.	Model	Gas connection
97410001	BTF	1/2" FF
97410002	BTF	3/4" FF
97410003	BTF	1" FF
97410004	BTF	1"1/4 FF
97410005	BTF	1"1/2 FF
97410006	BTF	2" FF
97419999	BTF	DN65 - PN16
97429999	BTF	DN80 - PN16
97439999	BTF	DN100 - PN16
97459999	BTF	DN125 - PN16
97449999	BTF	DN150 - PN16



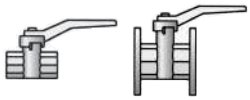
Gas filters approved CE
With pressure.
Max inlet pressure: 6 bar.

Part no.	Model	Gas connection
97410010	BTF/6	1" 1/4" FF
97410011	BTF/6	1" 1/2" FF
97410012	BTF/6	2" FF
97410013	BTF/6	DN65 - PN16
97410014	BTF/6	DN80 - PN16
97410015	BTF/6	DN100 - PN16



Anti-vibration and compensation joints approved CE
DIN 30681 stainless steel.

Part no.	Model	Gas connection
97029999	BTGA	1/2" MM
97039999	BTGA	3/4" MM
97049999	BTGA	1" MM
97059999	BTGA	1" 1/4" MM
97069999	BTGA	1" 1/2" MM
97079999	BTGA	2" MM
97089999	BTGA	DN65 - PN16
97099999	BTGA	DN80 - PN16
97109999	BTGA	DN100 - PN16
97119999	BTGA	DN125 - PN16
97129999	BTGA	DN150 - PN16

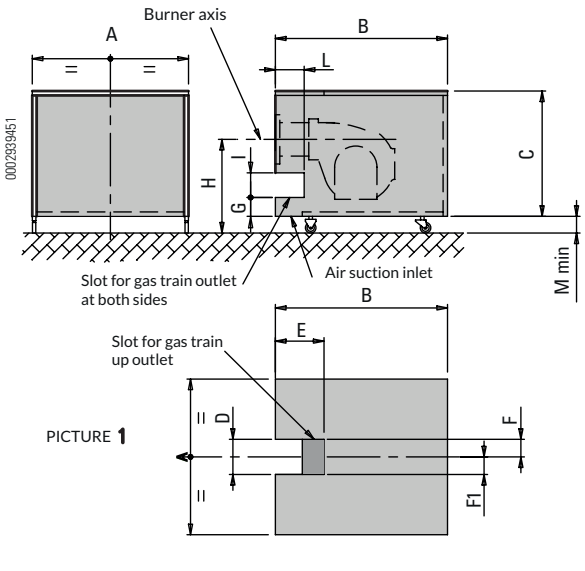


Ball valves approved CE

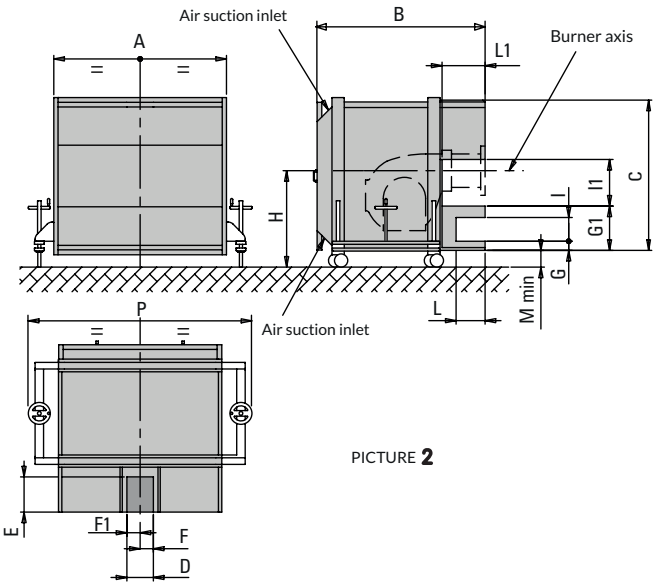
Part no.	Model	Gas connection
97679999	BTVS	3/8" FF
97689999	BTVS	1/2" FF
97699999	BTVS	3/4" FF
97709999	BTVS	1" FF
97719999	BTVS	1" 1/4" FF
97729999	BTVS	1" 1/2" FF
97739999	BTVS	2" FF
97749999	BTVS	DN65 - PN16
97759999	BTVS	DN80 - PN16
97769999	BTVS	DN100 - PN16
97179999	BTVS	DN125 - PN16
97189999	BTVS	DN150 - PN16

SOUNDPROOF BURNER

Average sound pressure reduction of about 10 dB(A) measured in a laboratory with 1 meter microphone from the burner.



PICTURE **1**



PICTURE **2**

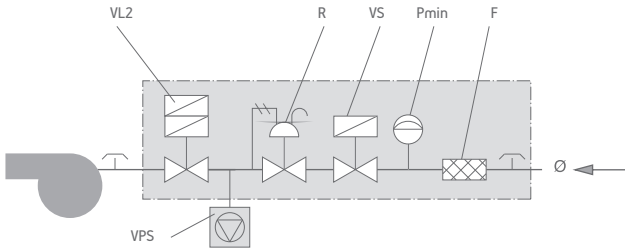
Model	Sound pressure	Pic.	A	B	C	D	E	F	F1	G	G1	H mm		I	I1	L	L1	M min	P
			mm	mm	mm	mm	mm	mm	mm	mm	mm	min	max	mm	mm	mm	mm	mm	mm
97980053*	-10 dB(A)	1	1100	1340	860	85	500	42,5	42,5	207	-	660	1350	85	-	500	-	190	-
97980054	-10 dB(A)	1	750	1080	650	85	380	42,5	42,5	157	-	560	1060	85	-	355	-	190	-
97980055	-10 dB(A)	1	1100	1340	860	85	440	42,5	42,5	–	-	650	1300	–	-	–	–	190	-
97980057	-10 dB(A)	1	1335	1655	1130	210	495	47,5	162,5	–	-	900	1700	–	-	–	–	190	-
97980058*	-10 dB(A)	1	1610	1740	1190	500	380	37,5	462,5	24,5	-	950	1700	210	-	380	-	190	-
97980059	-20 dB(A)	1	1560	1645	1190	500	380	37,5	462,5	245	-	950	1700	210	-	380	-	190	-
97980061	-20 dB(A)	2	1956	1945	1740	300	400	150	150	104	504	1450	1700	270	530	330	490	180	2540
97980063	-20 dB(A)	2	2180	1950	1830	350	410	175	175	85	480	1400	1200	310	580	345	505	195	2765

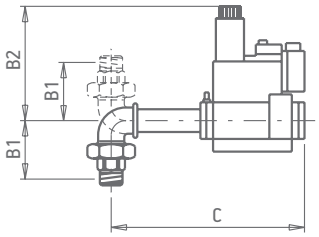
Note:
For gas burners in case of gas train up outlet it is necessary to install a 200 mm long cilindric extension.
*) To decrease the sound pressure by 20 dB(A) please contact our sales office.

ATTENTION:
It'scustomer responsability to check the correct matching of soundproof according to the height of the boiler.

GAS TRAIN STRUCTURE AND COMPOSITION

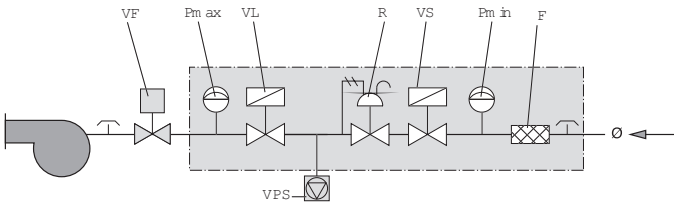
B2

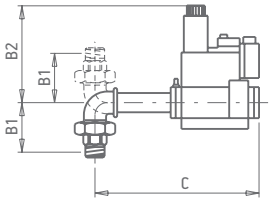




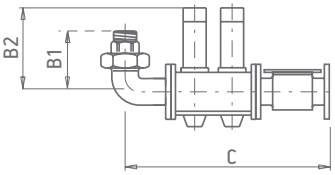
Gas train Part no.	Position							Gas train dimensions mm			Size of packaging mm	Weight
	F	Pmin	R	VL2	VPS	VS	Ø	B1	B2	C	L x P x H	kg
19990016 (MB... 405 - 1/2")	●	●	●	●	■	●	3/4"	72	210	204	300 x 210 x 300	5
19990020 (MB... 407 - 3/4")	●	●	●	●	■	●	3/4"	72	210	204	300 x 210 x 300	5
19990024 (MB... 410 - 1")	●	●	●	●	■	●	1"1/4	95	260	249	300 x 210 x 300	9
19990168 (MB... 412 - 1"1/4)	●	●	●	●	■	●	1"1/4	95	260	249	300 x 210 x 300	9
19990510 (MB... 407 - 3/4")	●	●	●	●	■	●	3/4"	72	210	365	300 x 210 x 300	5
19990511 (MB... 410 - 1")	●	●	●	●	■	●	1"1/4	95	260	410	300 x 210 x 300	9
19990512 (MB... 412 - 1"1/4)	●	●	●	●	■	●	1"1/4	95	260	410	300 x 210 x 300	9
19990513 (MB... 415 - 1"1/2)	●	●	●	●	■	●	1"1/2	103	270	500	460 x 250 x 460	12
19990514 (MB... 420 - 2")	●	●	●	●	■	●	2"	114	330	500	460 x 260 x 460	15
19990790 (MB... 407-3/4")	●	●	●	●	■	●	3/4"	72	210	365	300 x 210 x 300	5
19990791 (MB... 410-1"1/4)	●	●	●	●	■	●	1"1/4	95	260	410	300 x 210 x 300	9
19990792 (MB... 412-1"1/4)	●	●	●	●	■	●	1"1/4	95	260	410	300 x 210 x 300	9

B7





Pic. 1



Pic. 2

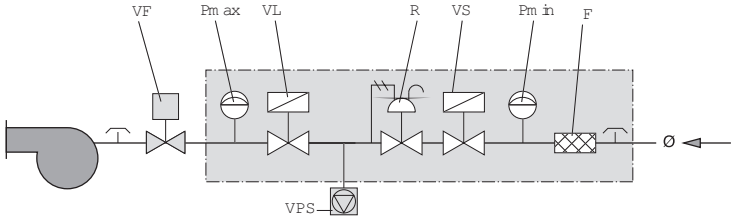
Gas train Part no.	Position								Gas train dimensions mm			Size of packaging mm	Weight	Pic..
	F	Pmax	Pmin	R	VF	VL	VPS	VS	Ø	B1	B2	C	L x P x H	kg	
19990712 (MB...412)	●	●	●	●	◆	●	▲	●	1"1/4	107	160	490	400x300x280	8	1
19990713 (MB...415)	●	●	●	●	◆	●	▲	●	1"1/2	115	170	595	460X250X460	11	1
19990714 (MB...415)	●	●	●	●	◆	●	▲	●	1"1/2	115	170	595	460X250X460	11	1
19990715 (MB...420)	●	●	●	●	◆	●	▲	●	2"	128	217	600	460X250X460	13	1
19990716 (MB...420)	●	●	●	●	◆	●	●	●	2"	128	217	600	460X250X460	13	1
19990717 (VGD20.503)	●	●	●	●	◆	●	●	●	2"	100	280	880	990X300X500	15	2
19990718 (VGD40.065)	●	●	●	●	◆	●	●	●	DN65	100	305	1120	1380X430X700	26	2
19990719 (VGD40.080)	●	●	●	●	◆	●	●	●	DN80	100	315	1190	1380X430X700	28	2

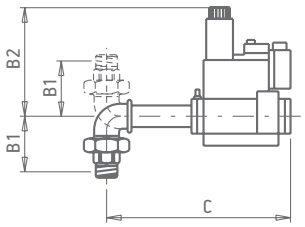
ACCESSORIES

CTV Valve tightness control.
F Filter.
LDU LDU valve tightness control.
Pct Pressure switch for gas control.
Pmax Maximum pressure switch.
Pmc Minimum and control pressure switch gas leaks.
Pmin Minimum pressure switch.
R Pressure regulator.
RF Pressure regulator with filter.
RFP Pressure regulator with filter for pilot gas train.
RM Manual flow rate regulator.
RP Pneumatic regualtor.
VF Regulator throttle valve.
VL Operating valve.
VL2 Two-stage operating valve.
VLP Operating pilot valve.
VLR Operating valve with pressure regulator.
VP Pilot valve.
VPS VPS valve tightness control.
VS Safety valve.
VSP Safety pilot valve.
Ø Gas train diameter.
Ø1 Main gas train diameter.
Ø2 Pilot gas train diameter.

● As Standard.
▲ As standard for burners with an output of more than 1200 kW, on request for burners with an output of less than 1200 kW.
■ On request.
◆ Mounted on burner.

BE7





Gas train Part no.	Position								Gas train dimensions mm			Size of packaging mm	Weight
	F	Pmin	R	VF	VL	VPS	VS	Ø	B1	B2	C	L x P x H	kg
19990548 (MB...415)	●	●	●	◆	●	▲	●	1"1/2	103	170	600	460 x 250 x 460	11
19990549 (MB...420)	●	●	●	◆	●	▲	●	2"	114	220	600	460 x 250 x 460	13
19990550 (VGD20.503)	●	●	●	◆	●	▲	●	2"	114	285	890	990 x 300 x 500	15
19990563 (VGD40.065)	●	●	●	◆	●	▲	●	DN65	114	320	1120	1380 x 430 x 700	26
19990564 (VGD40.080)	●	●	●	◆	●	▲	●	DN80	114	325	1175	1380 x 430 x 700	28
19990545 (MB...407 - 3/4")	●	●	●	◆	●	■	●	3/4"	72	210	450	300 x 210 x 300	5
19990546 (MB...410 - 1")	●	●	●	◆	●	■	●	1"1/4	95	260	490	400 x 300 x 280	8
19990547 (MB...412 - 1"1/4)	●	●	●	◆	●	■	●	1"1/4	95	260	490	400 x 300 x 280	8

CTV Valve tightness control.
F Filter.
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Pct Pressure switch for gas control.
Pmax Maximum pressure switch.
Pmc Minimum and control pressure switch gas leaks.
Pmin Minimum pressure switch.
R Pressure regulator.
RF Pressure regulator with filter.
RFP Pressure regulator with filter for pilot gas train.
RM Manual flow rate regulator.
RP Pneumatic regualtor.
VF Regulator throttle valve.
VL Operating valve.
VL2 Two-stage operating valve.
VLP Operating pilot valve.
VLR Operating valve with pressure regulator.
VP Pilot valve.
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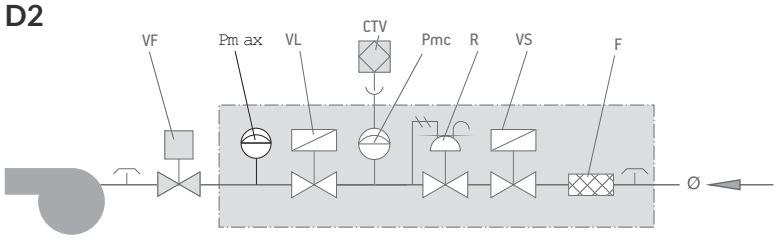
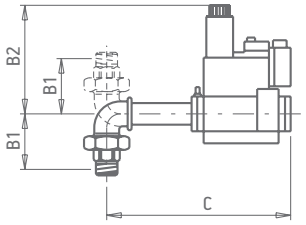
VS Safety valve.
VSP Safety pilot valve.
Ø Gas train diameter.
Ø1 Main gas train diameter.
Ø2 Pilot gas train diameter.

● As Standard.
▲ As standard for burners with an output of more than 1200 kW, on request for burners with an output of less than 1200 kW.
■ On request.
◆ Mounted on burner.

GAS TRAIN STRUCTURE AND COMPOSITION

D2





Gas train Part no.	Position									Gas train dimensions mm			Size of packaging mm	Weight
	CTV	F	Pmax	Pmc	R	VF	VL	VS	Ø	B1	B2	C	L x P x H	kg
19990524 (VGD20.503)	●	●		●	●	◆	●	●	2"	114	285	890	990 x 300 x 500	14
19990525 (VGD40.065)	●	●		●	●	◆	●	●	DN65	114	320	1120	1380 x 430 x 700	26
19990526 (VGD40.080)	●	●		●	●	◆	●	●	DN80	114	325	1175	1380 x 430 x 700	28
19990555 (MB... 407)	●	●		●	●	◆	●	●	3/4"	72	140	350	300 x 210 x 300	5
19990556 (MB... 410)	●	●		●	●	◆	●	●	1"1/4	95	160	390	300 x 210 x 300	8
19990557 (MB... 412)	●	●		●	●	◆	●	●	1"1/4	95	160	390	300 x 210 x 300	8
19990558 (MB... 415)	●	●		●	●	◆	●	●	1"1/2	103	170	490	460 x 250 x 460	11
19990559 (MB... 420)	●	●		●	●	◆	●	●	2"	114	220	520	520 x 410 x 410	13
19990561 (MB... 415)	●	●		●	●	◆	●	●	1"1/2	103	170	490	520 x 410 x 410	11
19990562 (MB... 420)	●	●		●	●	◆	●	●	2"	114	220	520	520 x 410 x 410	13
19990573 (MB... 407)	●	●		●	●	3/4"	●	●	3/4"	72	160	305	400 x 300 x 280	12
19990574 (MB... 410)	●	●		●	●	3/4"	●	●	1"1/4	95	160	355	400 x 300 x 280	15
19990575 (MB... 412)	●	●		●	●	3/4"	●	●	1"1/4	95	160	355	400 x 300 x 280	15
19990576 (MB... 415)	●	●		●	●	3/4"	●	●	1"1/2	103	170	445	520 x 410 x 410	18
19990577 (VGD40.065)	●	●		●	●	◆	●	●	DN65	125	320	760	1030 x 430 x 650	50
19990578 (VGD40.080)	●	●		●	●	◆	●	●	DN80	175	325	860	1030 x 430 x 650	57
19990748 (MB... 412)	●	●	●	●	●	◆	●	●	1"1/4	95	160	410	520 x 410 x 410	8
19990749 (MB... 415)	●	●	●	●	●	◆	●	●	1"1/2	103	170	500	520 x 410 x 410	11
19990750 (MB... 420)	●	●	●	●	●	◆	●	●	2"	114	220	500	520 x 410 x 410	13
19990754 (MB... 415)	●	●	●	●	●	◆	●	●	1"1/2	103	170	500	520 x 410 x 410	11
19990755 (MB... 420)	●	●	●	●	●	◆	●	●	2"	114	220	500	520 x 410 x 410	13

CTV Valve tightness control.
F Filter.
LDU LDU valve tightness control.
Pct Pressure switch for gas control.
Pmax Maximum pressure switch.
Pmc Minimum and control pressure switch gas leaks.
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R Pressure regulator.
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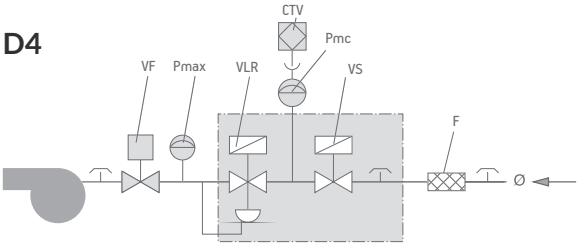
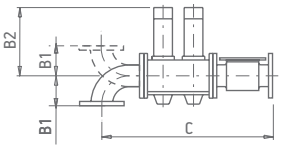
■ On request.
◆ Mounted on burner.

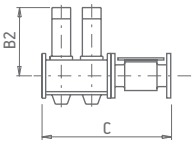
GAS TRAIN STRUCTURE AND COMPOSITION

D4

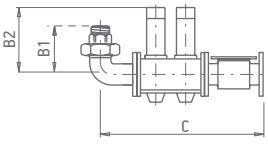




Pic. 1



Pic. 2



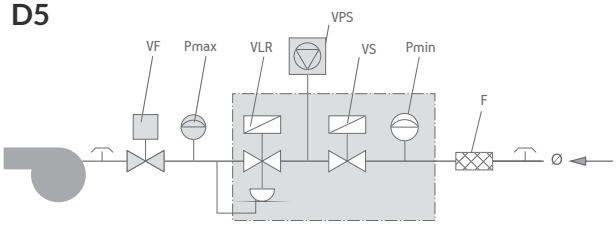
Pic. 3

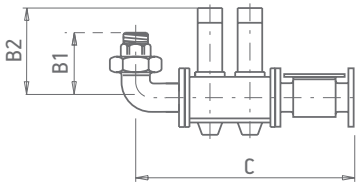
Gas train Part no.	Position								Gas train dimensions mm			Size of packaging mm	Weight	Pic.
	CTV	F	Pmax	Pmc	VF	VLR	VS	Ø	B1	B2	C	L x P x H	kg	
19990541 (VGD20.503 - 2")	●	2"	●	●	◆	●	●	2"	145	285	890	990 x 300 x 500	23	1
19990542 (VGD40.065 - 2"1/2)	●	DN65	●	●	◆	●	●	DN65	135	320	970	1380 x 430 x 700	36	1
19990543 (VGD40.080 - 3")	●	DN80	●	●	◆	●	●	DN80	135	325	1010	1380 x 430 x 700	38	1
19990544 (VGD40.100 - 4")	●	DN100	●	●	◆	●	●	DN100	175	330	1100	1380 x 430 x 700	44	1
19990588 (VGD40.065 - 2"1/2)	●	DN65	●	●	◆	●	●	DN65	–	320	580	830 x 430 x 640	26	2
19990589 (VGD40.080 - 3")	●	DN80	●	●	◆	●	●	DN80	–	325	630	830 x 430 x 640	29	2
19990590 (VGD40.100 - 4")	●	DN100	●	●	◆	●	●	DN100	–	330	730	830 x 430 x 640	40	2
19990606 (VGD40.080 - 3")	●	DN80	●	●	◆	●	●	DN80	165	325	1015	1380 x 430 x 700	38	1
19990607 (VGD40.100 - 4")	●	DN100	●	●	◆	●	●	DN100	175	330	1100	1380 x 430 x 700	44	1
19990608 (VGD40.125 - 5")	●	DN125	●	●	◆	●	●	DN125	170	350	1275	1580 x 430 x 720	60	1
19990618 (VGD40.100 - 4")	●	DN100	●	●	◆	●	●	DN100	200	330	1260	1380 x 430 x 710	45	1
19990619 (VGD40.125 - 5")	●	DN125	●	●	◆	●	●	DN125	209	350	1410	1580 x 430 x 740	83	1
19990620 (VGD40.150 - 6")	●	DN150	●	●	◆	●	●	DN150	200	370	1490	1580 x 430 x 740	95	1
19990626 (VGD40.150 - 6")	●	DN150	●	●	◆	●	●	DN150	170	370	1280	1580 x 430 x 720	95	1
19990633 (VGD40.080)	●	DN80	●	●	◆	●	●	DN80	132	314	1006	1380 x 430 x 600	17	1
19990634 (VGD40.100)	●	DN100	●	●	◆	●	●	DN100	163	331	1096	1380 x 430 x 610	30	1
19990640 (VGD40.100 - 4")	●	DN100	●	●	◆	●	●	DN100	175	330	1100	1380 x 430 x 700	44	1
19990641 (VGD40.125 - 5")	●	DN125	●	●	◆	●	●	DN125	170	350	1275	1580 x 430 x 720	60	1
19990648 (VGD40.100 - 4")	●	DN100	●	●	◆	●	●	DN100	200	330	1260	1380 x 430 x 710	45	1
19990649 (VGD40.125 - 5")	●	DN125	●	●	◆	●	●	DN125	207	350	1312	1580 x 430 x 740	83	1
19990650 (VGD40.150 - 6")	●	DN150	●	●	◆	●	●	DN150	200	370	1485	1580 x 430 x 740	95	1
19990666 (VGD20.065 - 2"1/2)	●	DN65	●	●	◆	●	●	DN65	135	285	1120	1380 x 430 x 700	45	1
19990674 (VGD40.125)	●	DN125	●	●	◆	●	●	DN125	163	349	1173	1580 x 430 x 630	42	1
19990679 (MBE 050)	●	2"	●	●	◆	●	●	2"	135	311	880	990 x 300 x 500	22	1
19990680 (MBE 065)	●	DN65	●	●	◆	●	●	DN65	105	380	970	1380 x 430 x 700	38	1
19990681 (MBE 080)	●	DN80	●	●	◆	●	●	DN80	105	380	1005	1380 x 430 x 700	40	1
19990682 (MBE 100)	●	DN100	●	●	◆	●	●	DN100	110	380	1100	1380 x 430 x 700	45	1
19990683 (MBE 080)	●	DN80	●	●	◆	●	●	DN80	105	380	1005	1380 x 430 x 700	40	1
19990684 (MBE 100)	●	DN100	●	●	◆	●	●	DN100	110	380	1100	1380 x 430 x 700	45	1
19990685 (MBE 125)	●	DN125	●	●	◆	●	●	DN125	130	380	1175	1580 x 430 x 720	58	1
19990686 (MBE 080)	●	DN80	●	●	◆	●	●	DN80	105	380	1015	1370 x 420 x 710	47	1
19990687 (MBE 100)	●	DN100	●	●	◆	●	●	DN100	110	380	1100	1380 x 430 x 700	55	1
19990688 (MBE 125)	●	DN125	●	●	◆	●	●	DN125	128	380	1280	1580 x 430 x 720	58	1
19990689 (MBE 100)	●	DN100	●	●	◆	●	●	DN100	110	380	1135	1380 x 430 x 710	46	1
19990690 (MBE 125)	●	DN125	●	●	◆	●	●	DN125	128	380	1285	1580 x 430 x 740	81	1
19990691 (MBE 150)	●	DN150	●	●	◆	●	●	DN150	142	380	1355	1580 x 430 x 740	93	1
19990725 (MBE 050)	●	2"	●	●	◆	●	●	2"	99	311	878	990 x 300 x 500	13	3
19990726 (MBE 065)	●	DN65	●	●	◆	●	●	DN65	105	380	1118	1380 x 430 x 700	28	3
19990727 (MBE 080)	●	DN80	●	●	◆	●	●	DN80	105	380	1190	1380 x 430 x 700	30	3
19990728 (MBE 065)	●	DN65	●	●	◆	●	●	DN65	125	380	760	1030 x 430 x 650	52	1
19990729 (MBE 080)	●	DN80	●	●	◆	●	●	DN80	105	380	850	1030 x 430 x 650	59	1
19990743 (MBE 065)	●	DN65	●	●	◆	●	●	DN65	105	380	582	830 x 430 x 640	28	1
19990744 (MBE 080)	●	DN80	●	●	◆	●	●	DN80	105	380	622	830 x 430 x 640	31	1
19990745 (MBE 100)	●	DN100	●	●	◆	●	●	DN100	105	380	702	830 x 430 x 640	41	1
19990751 (VGD20.050)	●	2"	●	●	◆	●	●	2"	114	255	890	990 x 300 x 500	14	3
19990752 (VGD40.065)	●	DN65	●	●	◆	●	●	DN65	114	318	1090	1380 x 430 x 700	26	3
19990753 (VGD40.080)	●	DN80	●	●	◆	●	●	DN80	114	325	1175	1380 x 430 x 700	28	3

CTV Valve tightness control.
F Filter.
LDU LDU valve tightness control.
Pct Pressure switch for gas control.
Pmax Maximum pressure switch.
Pmc Minimum and control pressure switch gas leaks.
Pmin Minimum pressure switch.
R Pressure regulator.
RF Pressure regulator with filter.
RFP Pressure regulator with filter for pilot gas train.
RM Manual flow rate regulator.
RP Pneumatic regualtor.
VF Regulator throttle valve.
VL Operating valve.
VL2 Two-stage operating valve.
VLP Operating pilot valve.
VLR Operating valve with pressure regulator.
VP Pilot valve.
VPS VPS valve tightness control.
VS Safety valve.
VSP Safety pilot valve.
Ø Gas train diameter.
Ø1 Main gas train diameter.
Ø2 Pilot gas train diameter.

● As Standard.
▲ As standard for burners with an output of more than 1200 kW, on request for burners with an output of less than 1200 kW.
■ On request.
◆ Mounted on burner.

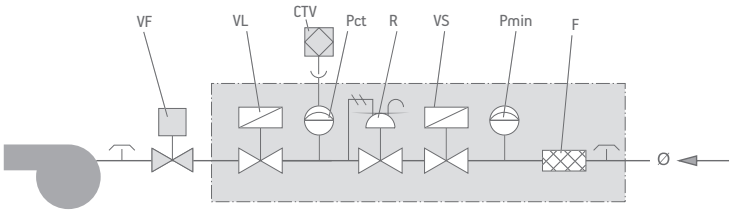
D5

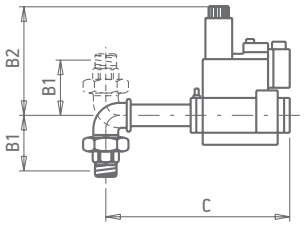




Gas train Part no.	Position							Gas train dimensions mm			Size of packaging mm	Weight
	Pmax	F	Pmin	VF	VLR	VS	Ø	B1	B2	C	L x P x H	kg
19990720 (MBE 050)	●	●	●	◆	●	●	2"	100	311	880	990X300X500	19,5
19990721 (MBE 065)	●	●	●	◆	●	●	DN65	100	381	1120	1380X430X700	45
19990722 (MBE 080)	●	●	●	◆	●	●	DN80	100	381	1190	1380X430X700	50
19990773 (MBE 050)	●	●	●	◆	●	●	2"	100	311	880	990X300X500	19,5
19990774 (MBE 065)	●	●	●	◆	●	●	DN65	100	381	1120	1380X430X700	45
19990775 (MBE 080)	●	●	●	◆	●	●	DN80	100	381	1190	1380X430X700	50
19990786 (MBE 050)	●	●	●	◆	●	●	2"	100	311	880	990X300X500	19.5
19990787 (MBE 065)	●	●	●	◆	●	●	DN65	100	381	1120	1380X430X700	45
19990788 (MBE 080)	●	●	●	◆	●	●	DN80	100	381	1190	1380X430X700	50

D7



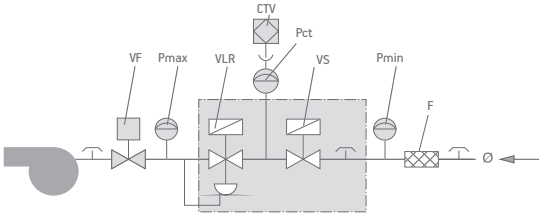


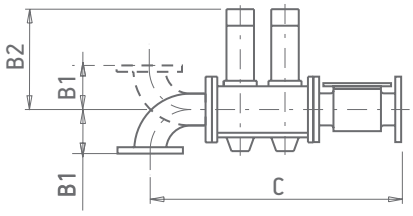
Gas train Part no.	Position									Gas train dimensions mm			Size of packaging mm	Weight
	CTV	F	Pct	Pmin	R	VF	VL	VS	Ø	B1	B2	C	L x P x H	kg
19990580 (MB...410 - 1")	●	●	●	●	●	◆	●	●	1"1/4	95	160	390	300 x 210 x 300	8
19990581 (MB...412 - 1"1/4)	●	●	●	●	●	◆	●	●	1"1/4	95	160	390	300 x 210 x 300	8
19990582 (MB...415 - 1"1/2)	●	●	●	●	●	◆	●	●	1"1/2	103	170	490	460 x 250 x 460	11
19990583 (MB...420 - 2")	●	●	●	●	●	◆	●	●	2"	114	220	520	520 x 410 x 410	13
19990584 (VGD20.503 - 2")	●	●	●	●	●	◆	●	●	2"	114	285	890	990 x 300 x 500	15
19990585 (VGD40.065 - 2"1/2)	●	●	●	●	●	◆	●	●	DN65	114	320	1120	1380 x 430 x 700	26
19990586 (VGD40.080 - 3")	●	●	●	●	●	◆	●	●	DN80	114	325	1190	1380 x 430 x 700	28
19990624 (MB...420 - 2")	●	●	●	●	●	◆	●	●	2"	114	220	520	520 x 410 x 410	13

CTV Valve tightness control.
F Filter.
LDU LDU valve tightness control.
Pct Pressure switch for gas control.
Pmax Maximum pressure switch.
Pmc Minimum and control pressure switch gas leaks.
Pmin Minimum pressure switch.
R Pressure regulator.
RF Pressure regulator with filter.
RFP Pressure regulator with filter for pilot gas train.
RM Manual flow rate regulator.
RP Pneumatic regualtor.
VF Regulator throttle valve.
VL Operating valve.
VL2 Two-stage operating valve.
VLP Operating pilot valve.
VLR Operating valve with pressure regulator.
VP Pilot valve.
VPS VPS valve tightness control.
VS Safety valve.
VSP Safety pilot valve.
Ø Gas train diameter.
Ø1 Main gas train diameter.
Ø2 Pilot gas train diameter.

● As Standard.
▲ As standard for burners with an output of more than 1200 kW, on request for burners with an output of less than 1200 kW.
■ On request.
◆ Mounted on burner.

D8



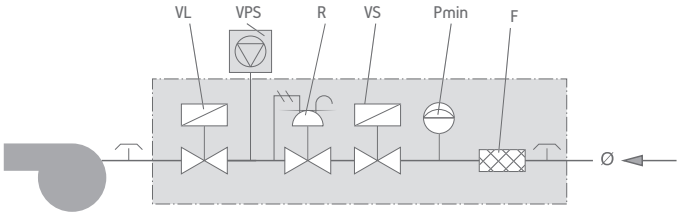


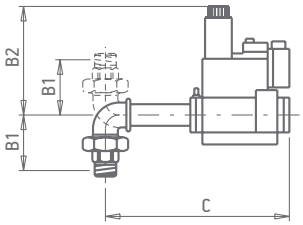
Gas train Part no.	Position									Gas train dimensions mm			Size of packagingmm	Weight
	CTV	F	Pct	Pmax	Pmin	VF	VLR	VS	Ø	B1	B2	C	L x P x H	kg
19990599 (VGD20.503 - 2")	●	2"	●	●	●	◆	●	●	2"	145	285	890	990 x 300 x 500	23
19990600 (VGD40.065 - 2"1/2)	●	DN65	●	●	●	◆	●	●	DN65	135	320	970	1380 x 430 x 700	36
19990601 (VGD40.080 - 3")	●	DN80	●	●	●	◆	●	●	DN80	135	325	1010	1380 x 430 x 700	38
19990602 (VGD40.100 - 4")	●	DN100	●	●	●	◆	●	●	DN100	175	330	1100	1380 x 430 x 700	44
19990615 (VGD40.080 - 3")	●	DN80	●	●	●	◆	●	●	DN80	165	325	1015	1380 x 430 x 700	38
19990616 (VGD40.100 - 4")	●	DN100	●	●	●	◆	●	●	DN100	175	330	1100	1380 x 430 x 700	44
19990617 (VGD40.125 - 5")	●	DN125	●	●	●	◆	●	●	DN125	170	350	1275	1580 x 430 x 720	60
19990627 (VGD40.150 - 6")	●	DN150	●	●	●	◆	●	●	DN150	170	370	1280	1580 x 430 x 720	95
19990665 (VGD20.065 - 2"1/2)	●	DN65	●	●	●	◆	●	●	DN65	135	285	1120	1380 x 430 x 700	45
19990683 (MBE 080)	●	DN80	●	●	●	◆	●	●	DN80	105	380	1005	1380 x 430 x 700	40
19990684 (MBE 100)	●	DN100	●	●	●	◆	●	●	DN100	110	380	1100	1380 x 430 x 700	45
19990685 (MBE 125)	●	DN125	●	●	●	◆	●	●	DN125	130	380	1175	1580 x 430 x 720	58
19990758 (MBE 050)	●	2"	●	●	●	◆	●	●	2"	145	311	890	990 x 300 x 500	22
19990759 (MBE 065)	●	DN65	●	●	●	◆	●	●	DN65	105	380	970	1380 x 430 x 700	38
19990760 (MBE 080)	●	DN80	●	●	●	◆	●	●	DN80	105	380	1005	1380 x 430 x 700	40
19990761 (MBE 100)	●	DN100	●	●	●	◆	●	●	DN100	110	380	1100	1380 x 430 x 700	45
19990793 (VGD40.100 - 4")	●	DN125	●	●	●	◆	●	●	DN100	205	330	1135	1380 x 430 x 710	45
19990794 (VGD40.125 - 5")	●	DN125	●	●	●	◆	●	●	DN125	210	350	1285	1580 x 430 x 740	83
19990795 (VGD40.150 - 6")	●	DN125	●	●	●	◆	●	●	DN150	205	370	1360	1580 x 430 x 740	95
19990796 (MBE 100)	●	DN125	●	●	●	◆	●	●	DN100	205	380	1135	1380 x 430 x 710	49
19990797 (MBE 125)	●	DN125	●	●	●	◆	●	●	DN125	210	380	1285	1580 x 430 x 740	84
19990798 (MBE 150)	●	DN125	●	●	●	◆	●	●	DN150	205	380	1360	1580 x 430 x 740	90

CTV Valve tightness control.
F Filter.
LDU LDU valve tightness control.
Pct Pressure switch for gas control.
Pmax Maximum pressure switch.
Pmc Minimum and control pressure switch gas leaks.
Pmin Minimum pressure switch.
R Pressure regulator.
RF Pressure regulator with filter.
RFP Pressure regulator with filter for pilot gas train.
RM Manual flow rate regulator.
RP Pneumatic regualtor.
VF Regulator throttle valve.
VL Operating valve.
VL2 Two-stage operating valve.
VLP Operating pilot valve.
VLR Operating valve with pressure regulator.
VP Pilot valve.
VPS VPS valve tightness control.
VS Safety valve.
VSP Safety pilot valve.
Ø Gas train diameter.
Ø1 Main gas train diameter.
Ø2 Pilot gas train diameter.

● As Standard.
▲ As standard for burners with an output of more than 1200 kW, on request for burners with an output of less than 1200 kW.
■ On request.
◆ Mounted on burner.

M2





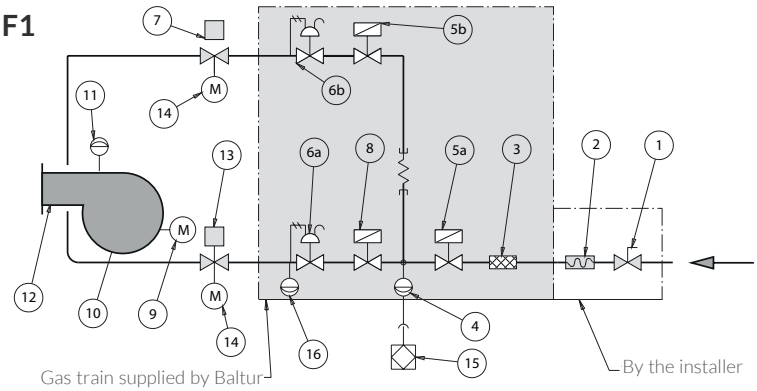
Gas train Part no.	Position							Gas train dimensions mm			Size of packaging mm	Weight
	F	Pmin	R	VL	VPS	VS	Ø	B1	B2	C	L x P x H	kg
19990002 (MB... 405)	●	●	●	●	■	●	3/4"	72	140	204	310 x 210 x 250	4
19990005 (MB... 407)	●	●	●	●	■	●	3/4"	72	140	204	310 x 210 x 250	4
19990008 (MB... 410)	●	●	●	●	■	●	1"1/4	95	160	249	310 x 210 x 250	7
19990166 (MB... 412)	●	●	●	●	■	●	1"1/4	95	160	249	310 x 210 x 250	7
19990466 (MBC... 65)	●	●	●	●		●	1/2"	67	150	198	240 x 220 x 210	2
19990545 (MB... 407)	●	●	●	●	■	●	3/4"	72	140	450	300 x 210 x 300	5
19990546 (MB... 410)	●	●	●	●	■	●	1"1/4	95	160	490	400 x 300 x 280	8
19990547 (MB... 412)	●	●	●	●	■	●	1"1/4	95	160	490	400 x 300 x 280	8
19990548 (MB... 415)	●	●	●	●	■	●	1"1/2	103	270	600	460 x 250 x 460	11
19990549 (MB... 420)	●	●	●	●	■	●	2"	114	330	600	650 x 500 x 380	13
19990789 (MB... 405)	●	●	●	●	■	●	3/4"	72	140	450	300 x 210 x 300	5

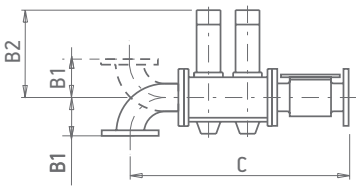
CTV Valve tightness control.
F Filter.
LDU LDU valve tightness control.
Pct Pressure switch for gas control.
Pmax Maximum pressure switch.
Pmc Minimum and control pressure switch gas leaks.
Pmin Minimum pressure switch.
R Pressure regulator.
RF Pressure regulator with filter.
RFP Pressure regulator with filter for pilot gas train.
RM Manual flow rate regulator.
RP Pneumatic regualtor.
VF Regulator throttle valve.
VL Operating valve.
VL2 Two-stage operating valve.
VLP Operating pilot valve.
VLR Operating valve with pressure regulator.
VP Pilot valve.
VPS VPS valve tightness control.
VS Safety valve.
VSP Safety pilot valve.
Ø Gas train diameter.
Ø1 Main gas train diameter.
Ø2 Pilot gas train diameter.

● As Standard.
▲ As standard for burners with an output of more than 1200 kW, on request for burners with an output of less than 1200 kW.
■ On request.
◆ Mounted on burner.

GAS TRAIN STRUCTURE AND COMPOSITION

F1





Pic. 1

Gas train Part no.	Position											Gas train dimensions mm			Size of packaging mm	Weight	Pic.
	CTV	F	Pmax	Pmc	VF	VF2	VLR	VS	R2	VS2	Ø	B1	B2	C	L x P x H	kg	
19990667 (VDG20.503)	●	2"	●	●	◆	◆	●	●	●	●	2"	165	278	755	990x300x500	23	1
19990668 (VDG40.065)	●	DN65	●	●	◆	◆	●	●	●	●	DN65	165	302	784	1380x430x700	36	1
19990675 (VDG20.503)	●	2"	●	●	◆	◆	●	●	●	●	2"	135	279	871	990x300x500	27	1
19990676 (VDG40.065)	●	DN65	●	●	◆	◆	●	●	●	●	DN65	131	303	969	1380x430x700	40	1
19990677 (VDG40.080)	●	DN80	●	●	◆	◆	●	●	●	●	DN80	131	313	1004	1380x430x700	42	1
19990678 (VDG40.100)	●	DN100	●	●	◆	◆	●	●	●	●	DN100	163	331	1096	1380x430x700	48	1
19990734 (MMBE065)	●	DN65	●	●	◆	◆	●	●	●	●	DN65	105	380	970	1380x430x700	36	1
19990762 (MMBE065)	●	DN65	●	●	◆	◆	●	●	●	●	DN65	105	380	970	1380x430x700	40	1
19990763 (MMBE080)	●	DN80	●	●	◆	◆	●	●	●	●	DN80	105	380	1005	1380x430x700	42	1
19990764 (MMBE100)	●	DN100	●	●	◆	◆	●	●	●	●	DN100	110	380	1095	1380x430x700	48	1

CTV Valve tightness control.
F Filter.
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Pmax Maximum pressure switch.
Pmc Minimum and control pressure switch gas leaks.
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R Pressure regulator.
RF Pressure regulator with filter.
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■ On request.
◆ Mounted on burner.

NOTE

NOTE

ICIM

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CERTIFICATO N. / *CERTIFICATE No.* ICIM-9001-000202-11

SI CERTIFICA CHE IL SISTEMA DI GESTIONE PER LA QUALITÀ DI
WE HEREBY CERTIFY THAT THE QUALITY MANAGEMENT SYSTEM OPERATED BY

BALTUR SPA

UNITÀ OPERATIVA / OPERATIVE UNIT

VIA FERRARESE, 10 44042 CENTO FE IT - Italia

È CONFORME ALLA NORMA / IS IN COMPLIANCE WITH THE STANDARD

UNI EN ISO 9001:2015

Sistema di Gestione per la Qualità / *Quality Management System*

PER LE SEGUENTI ATTIVITÀ / FOR THE FOLLOWING ACTIVITIES

EA: 18 - 29

Progettazione, produzione e assistenza di bruciatori e caldaie. Commercializzazione di gruppi termici, generatori di aria calda, climatizzatori, refrigeratori e unità di rinnovo aria, ventilconvettori, scaldabagno, bollitori e sistemi a energia solare.

Design, production and service of burners and boilers. Trade of heating systems, hot air generators, air-conditioners, chillers and air renewal units, fan coil units, water heaters, boilers and thermal solar systems.

Riferirsi alla documentazione del Sistema di Gestione per la Qualità adeguata per l'applicabilità dei requisiti della norma di riferimento.
Refer to the documentation of the Quality Management System for details of application to reference standard requirements.
Il presente certificato è soggetto al rispetto del documento ICIM "Regolamento per la certificazione dei sistemi di gestione" e al relativo Schema specifico.
The use and the validity of this certificate shall satisfy the requirements of the ICIM document "Rules for the certification of company management systems" and specific Scheme.
Per informazioni puntuali e aggiornate circa eventuali variazioni intervenute nello stato della certificazione di cui al presente certificato, si prega di contattare il n° telefonico +39 02 725341 o indirizzo e-mail info@icim.it.
For timely and updated information about any changes in the certification status relevant to in this certificate, please contact the number +39 02 725341 or email address info@icim.it.

DATA EMISSIONE *FIRST ISSUE*	EMISSIONE CORRENTE *CURRENT ISSUE*	DATA DI SCADENZA *EXPIRING DATE*
20/07/1994	16/07/2024	15/07/2027

Vincenzo Delacqua
Rappresentante Direzione / *Management Representative*
ICIM S.p.A.
Piazza Don Enrico Mapelli, 75 – 20099 Sesto San Giovanni (MI)
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ACCREDIA
IMS N° 0004

CISQ
www.cisq.com
CISQ è la Federazione Italiana di Organismi di Certificazione del sistema di gestione aziendale. CISQ is the Italian Federation of management system Certification Bodies

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IQNET

Building trust together.

Certificate

CISQ/ICIM S.P.A. has issued an IQNET recognized certificate that the organization:

BALTUR SPA
VIA FERRARESE, 10 44042 CENTO FE IT - Italia

has implemented and maintains a/an

Quality Management System

for the following scope:

Design, production and service of burners and boilers. Trade of heating systems, hot air generators, air-conditioners, chillers and air renewal units, fan coil units, water heaters, boilers and thermal solar systems.

which fulfils the requirements of the following standard:

ISO 9001:2015

Issued on: **2024-07-16**
First issued on: **1994-07-20**
Expires on: **2027-07-15**

Registration Number:
IT-3733 ICIM-9001-000202-11

Alex Stoichitoiu
President of IQNET

Mario Romersi
President of CISQ

CISQ

This attestation is directly linked to the IQNET Member's original certificate and shall not be used as a stand-alone document.

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Quality System Certified
UNI-EN ISO 9001 I.C.I.M. n° 202

NUMERO VERDE
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