GENERAL BRUCIATORI

GB-S

DuoBlock fixed-flame burners with electronic cam, available in heating outputs from 220 to 25,500 kW.

General Features

- Dedicated fixed-flame combustion head design ensures stable and reliable flame development throughout the operating range. Its robust construction and proven flame profile make it an effective solution for applications requiring dependable combustion performance and easy integration with standard furnace geometries.
- Designed for installation on most hot water, steam, and diathermic oil boilers, as well as asphalt plants, dryers, kilns, and incinerators. Thanks to its design, it can be easily adapted and integrated into both new and existing systems, making it an ideal solution for retrofit projects.
- Is designed to operate with different kind of standard fuels like gas, diesel, heavy oil or dual fuel system. On demand, it is possible to operate with special fuels as bio-gas, ethanol, waste gas, coal gas and many others.
- On request, multi-fuel versions are also available with simultaneous operation.
- The modular construction concept provides a wide range of customization options to suit any installation requirement.
- Can be equipped with ETC or LAMTEC control systems and associated burner peripherals, allowing the integration of advanced functions such as O2/CO control, flame monitoring, servomotor control, HMI operation, sensors, and communication interfaces for connection to plant and management systems.
- On all versions the modulation kit (Sensor + PID) is available
- Dedicated flame disk design, depending on the fuel that is burned, in order to grant the optimal turbulence and perfect combustion values.

InnoBurn
Customized Combustion Solutions

Complete customization

Complete customization at the technical and layout level includes:

- EM version with electronic control box and modulating system
- O2 and O2/CO control with efficiency calculation
- Frequency converter operation
- Separate or on-board control panel
- Plant Master for integrated boiler-burner management through a single interface
- Fuel flow meters for consumption monitoring
- Ex-d flame detectors and Ex-d servomotors
- Explosion-proof execution according to ATEX regulations

Burner body

- Powder coated carbon steel body guarantees robustness and ease of use.
- High quality and heat resistant steel for best wear and heat resistance.
- Free from plastic components, Ideal for heavy duty applications
- Possibility of gas train installation from left or right side as standard according to gas piping line
- Easy maintenance thanks to wide cover opening
- Wide flame viewer on the rear part of the burner

Combustion head

- Combustion head and flame stability disk in stainless steel
- Dedicated flame disk design, depending on the fuel that is burned, in order to grant the optimal turbulence and perfect combustion values
- Pilot flame ignition system to prevent pulsation or defective ignition
- Low NOx blast pipe design (on demand)

Fan

Combustion air fan is available and customizable in accordance to installation layout and technical specification

Gas Train

- Gas filter
- Main gas Valve with actuators
- Minimum gas pressure switch
- Maximum gas pressure switch (The maximum gas pressure switch is installed on the gas flow adjustment butterfly on burner board)
- it is possible to manufacture gas ramps in accordance with different customer specifications for any application

On demand

- ✓ Anti-Vibrating joint
- ✓ Ball Valve
- ✓ Gas pressure reducer
- ✓ Safety shut off valve
- ✓ ATEX execution
- ✓ IP65 execution

Control panels

- Main switch with door coupling
- BMS unit
- User interface
- Fan control
- Oil pump control
- Pre-heater oil control
- Overcurrent protection devices
- Terminal strips
- Signal lamps
- Failure reset Botton
- Burner control switch
- Auxiliary relays

On demand

- ✓ PID controller
- ✓ Remote start/stop
- ✓ Main electrical supply
- ✓ Alarm ball
- ✓ Potential free-alarms

Heavy oil pushing unit

- Containment tank in painted carbon steel
- Degassing tank
- Ball valves
- Self cleaning oil filter
- Oil filter
- Oil pressure gauge on the supply circuit (installed on burner)
- Oil pump with pressure control valve
- Electromotor
- Flexible pipes
- Electrical oil pre-heater
- Safety valve
- Temperature probe

On demand

- ✓ Electrical and steam oil preheater
- ✓ Oil inlet pressure gauge
- ✓ Minimum oil supply Pressure switch
- ✓ Minimum oil ring Pressure switch
- ✓ Control panel
- ✓ Twin pump group with filter and bypass
- ✓ Pumping unit for main ring line
- ✓ Control panel for ring line pump unit

Light oil pushing unit

- Containment tank in painted carbon steel
- Degassing tank
- Ball valves
- Oil filter
- Oil pressure gauge on the supply circuit (installed on burner)
- Oil pump with pressure control valve
- Electromotor
- Flexible pipes

On demand

- ✓ Oil inlet pressure gauge
- ✓ Minimum oil supply Pressure switch
- ✓ Control panel
- ✓ Twin pump group with filter and bypass
- ✓ Pumping unit for main ring line
- ✓ Control panel for ring line pump unit

Certifications

Compliant with EU safety rules (CE Standards) and built according to EN ISO 9001:2015 Quality System

Model			GB-S 1	GB-S 2	GB-S 3	GB-S 4
Heating Output	Output	Min* - Max (Kw)	220 - 1,300	420 - 2,500	600 - 3,500	750 - 4,500
Main Fuel Data	H.F.O Flow Rate	Min - Max (Kg/h)	20 - 116	60 - 225	55 -315	67 - 400
	HFO Viscosity	°E - cSt	50°C E at 50°C - 400 cSt at 50°C			
	Light Oil Flow Rate	Min - Max (Kg/h)	19 - 110	35 - 221	51 - 295	63 - 380
	Light Oil Viscosity	°E - cSt	1.5°C E at 50°C - 6 cSt at 50°C			
	Natural Gas (G20) Flow Rate		22 - 130	42 - 250	60 - 350	75 - 450
	Max Gas Pressure	mbar	500			
Operational Data	Standard Configuration		To be installed in safe area-one stop each 24hrs operation is required (72hrs operation with self-check available on demand)			
	Available Execution		Mechanical Modulation-electronic Modulation			
	Modulating Ratio		1:6 Gas Firing - 1:3 light Oil - 1:3 Heavy Oil			
	Working Temperature	Min - Max (°C)	-20°C + 50°C			
Electrical data / Ignition	Electric Supply	V - Hz	230 V - 50 Hz / 220 V - 60 Hz (On Demand)			
	Light Oil Ignition Transformer	V2 - 12 mA	13,000 V - 35 mA			
	Gas Ignition Transformer	V2 - 12 mA	8,000 V - 20 mA			
	Ignition Type		Pilot Burner On Gas / Direct Spark On Oil Side			
	Auxiliary Electrical Installed Power	Kw	0.65			
	Protection Level	IP	54			
Approvals	Directive		2006/42/CE - 2006/95CE - 2011/65/CE - 2004/108/CE			
	In Accordance Of		EN 60204-1 / EN 62233 / EN 61000-6-2 EN 61000-6-4 / EN 60529			

* Refer to natural gas . Reference conditions : Air temperature 20°C , Pressure 1013.5 mbar , Altitude 0 m a.s.l

The whole range is available with Low Nox configuration :

- Gas fired in Class III in accordance with EN 676 and related specification about combustion chamber dimensions and thermal load.The NOx level refer to the average NOx among the burner's working curve.

- Light Oil fired Low NOx in accordance to EN 267

PLease note that fuel consumption might also affect the NOx levels

Model			GB-S 6	GB-S 8	GB-S 10	GB-S 13
Heating Output	Output	Min* - Max (Kw)	1,100 - 6,500	1,450 - 85,000	1,750 - 10,500	2,250 - 13,500
Main Fuel Data	H.F.O Flow Rate	Min - Max (Kg/h)	100 - 580	130 - 760	157 - 940	202 - 1,210
	HFO Viscosity	°E - cSt	50°C E at 50°C - 400 cSt at 50°C			
	Light Oil Flow Rate	Min - Max (Kg/h)	95 - 548	122 - 715	150 - 885	190 - 1,138
	Light Oil Viscosity	°E - cSt	1.5°C E at 50°C - 6 cSt at 50°C			
	Natural Gas (G20) Flow Rate		110 - 650	145 - 850	175 - 1,050	225 - 1,350
	Max Gas Pressure	mbar	500			
Operational Data	Standard Configuration		To be installed in safe area-one stop each 24hrs operation is required (72hrs operation with self-check available on demand)			
	Available Execution		Mechanical Modulation-electronic Modulation			
	Modulating Ratio		1:6 Gas Firing - 1:3 light Oil - 1:3 Heavy Oil			
	Working Temperature	Min - Max (°C)	-20°C + 50°C			
Electrical data / Ignition	Electric Supply	V - Hz	230 V - 50 Hz / 220 V - 60 Hz (On Demand)			
	Light Oil Ignition Transformer	V2 - 12 mA	13,000 V - 35 mA			
	Gas Ignition Transformer	V2 - 12 mA	8,000 V - 20 mA			
	Ignition Type		Pilot Burner On Gas / Direct Spark On Oil Side			
	Auxiliary Electrical Installed Power	Kw	0.65			
	Protection Level	IP	54			
Approvals	Directive		2006/42/CE - 2006/95CE - 2011/65/CE - 2004/108/CE			
	In Accordance Of		EN 60204-1 / EN 62233 / EN 61000-6-2 EN 61000-6-4 / EN 60529			

* Refer to natural gas . Reference conditions : Air temperature 20°C , Pressure 1013.5 mbar , Altitude 0 m a.s.l

The whole range is available with Low Nox configuration :

- Gas fired in Class III in accordance with EN 676 and related specification about combustion chamber dimensions and thermal load.The NOx level refer to the average NOx among the burner's working curve.

- Light Oil fired Low NOx in accordance to EN 267

PLease note that fuel consumption might also affect the NOx levels

Model			GB-S 15	GB-S 17	GB-S 22	GB-S 25
Heating Output	Output	Min* - Max (Kw)	2,580 - 15,500	2,950 - 17,500	3,750 - 22,500	4,250 - 25,500
Main Fuel Data	H.F.O Flow Rate	Min - Max (Kg/h)	231 - 1,390	264 - 1,568	335 - 2,105	380 - 2,284
	HFO Viscosity	°E - cSt	50°C E at 50°C - 400 cSt at 50°C			
	Light Oil Flow Rate	Min - Max (Kg/h)	218 - 1,307	250 - 1,475	315 - 1,897	355 - 2,150
	Light Oil Viscosity	°E - cSt	1.5°C E at 50°C - 6 cSt at 50°C			
	Natural Gas (G20) Flow Rate		258 - 1,550	295 - 1,750	375 - 2,250	425 - 2,550
	Max Gas Pressure	mbar	500			
Operational Data	Standard Configuration		To be installed in safe area-one stop each 24hrs operation is required (72hrs operation with self-check available on demand)			
	Available Execution		Mechanical Modulation-electronic Modulation			
	Modulating Ratio		1:6 Gas Firing - 1:3 light Oil - 1:3 Heavy Oil			
	Working Temperature	Min - Max (°C)	-20°C + 50°C			
Electrical data / Ignition	Electric Supply	V - Hz	230 V - 50 Hz / 220 V - 60 Hz (On Demand)			
	Light Oil Ignition Transformer	V2 - 12 mA	13,000 V - 35 mA			
	Gas Ignition Transformer	V2 - 12 mA	8,000 V - 20 mA			
	Ignition Type		Pilot Burner On Gas / Direct Spark On Oil Side			
	Auxiliary Electrical Installed Power	Kw	0.65			
	Protection Level	IP	54			
Approvals	Directive		2006/42/CE - 2006/95CE - 2011/65/CE - 2004/108/CE			
	In Accordance Of		EN 60204-1 / EN 62233 / EN 61000-6-2 EN 61000-6-4 / EN 60529			

* Refer to natural gas . Reference conditions : Air temperature 20°C , Pressure 1013.5 mbar , Altitude 0 m a.s.l

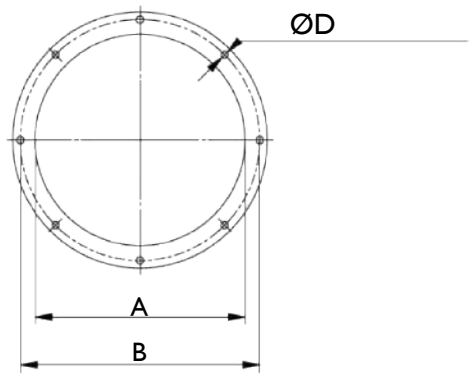
The whole range is available with Low Nox configuration :

- Gas fired in Class III in accordance with EN 676 and related specification about combustion chamber dimensions and thermal load.The NOx level refer to the average NOx among the burner's working curve.

- Light Oil fired Low NOx in accordance to EN 267

PLease note that fuel consumption might also affect the NOx levels

Model	A	B	C	F	ØH	L	M	N	P	Q	R-(MC)	R-(EM)	S	T	V	X	X*	ØD	E	E	E	E	E	E	E
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Type × mm	1"1/2	2"	DN 65	DN 80	DN 100	DN 125	DN 150
GB-S 2	250	305	240	198	14	300	230	322	185	355	445	300	730	136	890	420	420	M12 × 50	295	307	357	—	—	—	—
GB-S 3	290	356	276	193	14	330	271	360	200	415	460	395	780	160	960	420	420	M12 × 50	312	324	374	—	—	—	—
GB-S 4	320	396	306	193	14	345	320	422	222	477	480	420	823	186	1,034	500	525	M12 × 50	400	351	391	421	—	—	—
GB-S 6	370	466	356	233	14	313	359	492	250	485	520	440	846	221	1,092	500	526	M12 × 50	440	391	431	461	461	—	—
GB-S 8	440	466	426	233	14	313	359	492	250	485	520	440	846	221	1,092	500	526	M12 × 50	440	391	431	461	461	—	—
GB-S 10	440	536	426	253	14	348	429	530	285	585	545	475	968	245	1,226	500	536	M12 × 50	—	515	555	496	561	627	—
GB-S 13	500	602	486	308	14	381	487	596	325	670	595	503	1,136	273	1,434	500	540	M12 × 50	—	–	605	546	611	677	—
GB-S 15	560	602	546	308	14	381	487	596	325	670	595	503	1,136	273	1,434	500	540	M12 × 50	—	–	605	546	611	677	—
GB-S 17	560	662	546	319	14	404	539	650	355	686	605	530	1,180	300	1,505	500	553	M14 × 50	—	–	664	664	664	724	794
GB-S 22	620	722	606	334	14	434	598	708	385	725	646	560	1,260	328	1,614	500	550	M14 × 50	—	–	—	694	694	754	824
GB-S 25	670	772	656	339	14	459	653	758	410	786	661	585	1,320	353	1,698	500	556	M16 × 50	—	–	—	705	705	765	835



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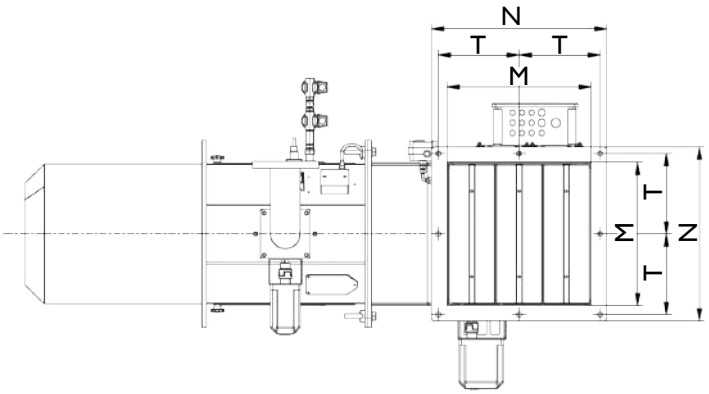
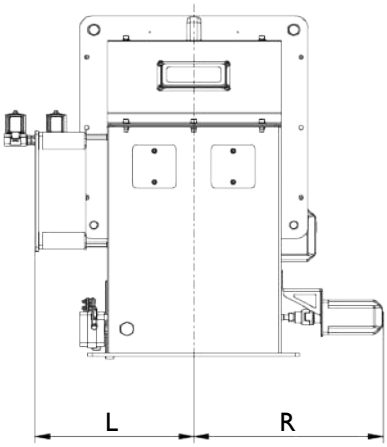
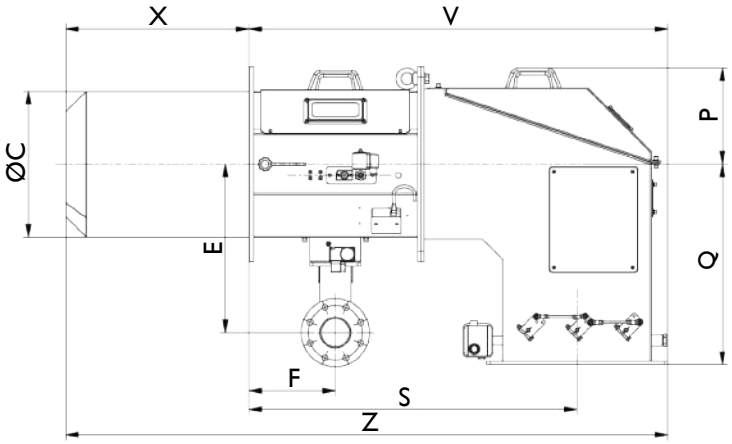


Bottom View

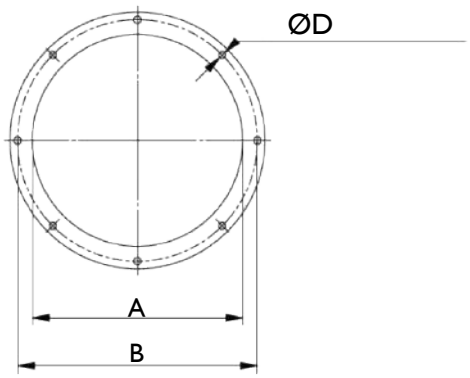


Rear View



Side View

Model	A	B	C	F	ØH	L	M	N	P	Q	R-(MC)	R-(EM)	S	T	V	X	ØD
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Type × mm
GB-S 2	250	305	240	198	14	300	230	322	185	355	445	300	730	136	890	420	M12 × 50
GB-S 3	290	356	276	193	14	330	271	360	200	415	460	395	780	160	960	420	M12 × 50
GB-S 4	320	396	306	193	14	345	320	422	222	477	480	420	823	186	1,034	500	M12 × 50
GB-S 6	370	466	356	233	14	313	359	492	250	485	520	440	846	221	1,092	500	M12 × 50
GB-S 8	440	466	426	233	14	313	359	492	250	485	520	440	846	221	1,092	500	M12 × 50
GB-S 10	440	536	426	253	14	348	429	530	285	585	545	475	968	245	1,226	500	M12 × 50
GB-S 13	500	602	486	308	14	381	487	596	325	670	595	503	1,136	273	1,434	500	M12 × 50
GB-S 15	560	602	546	308	14	381	487	596	325	670	595	503	1,136	273	1,434	500	M12 × 50
GB-S 17	560	662	546	319	14	404	539	650	355	686	605	530	1,180	300	1,505	500	M14 × 50
GB-S 22	620	722	606	334	14	434	598	708	385	725	646	560	1,260	328	1,614	500	M14 × 50
GB-S 25	670	772	656	339	14	459	653	758	410	786	661	585	1,320	353	1,698	500	M16 × 50



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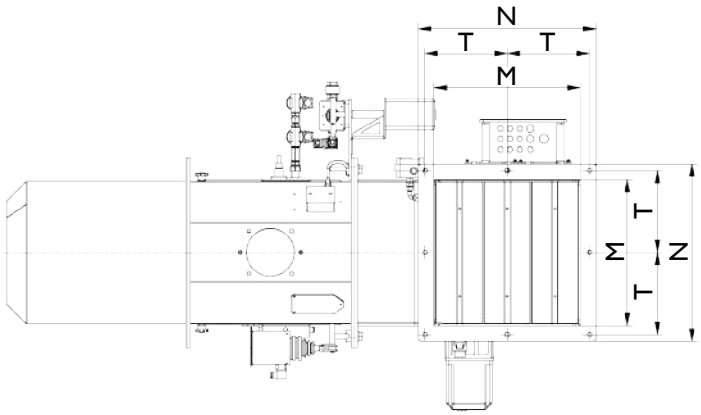
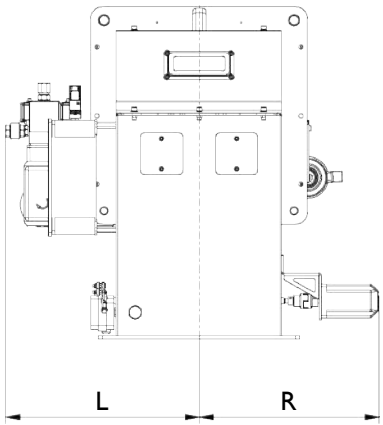
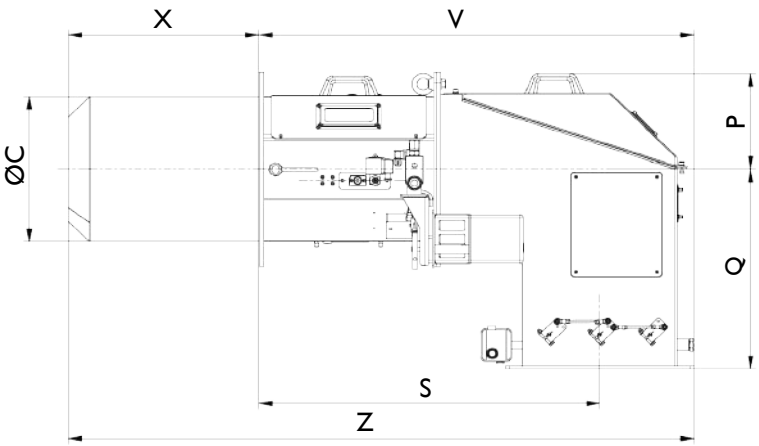


Bottom View

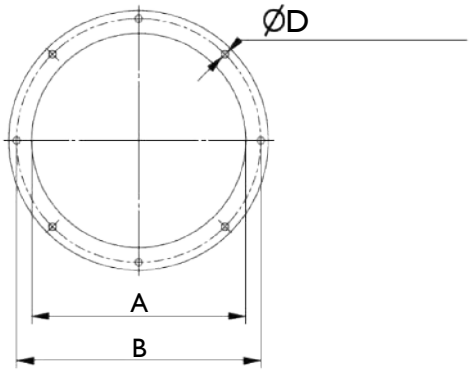


Rear View



Side View

Model	A	B	C	F	ØH	L	M	N	P	Q	R-(MC)	R-(EM)	S	T	V	X	X*	ØD	E	E	E	E	E	E	E
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Type × mm	1"1/2	2"	DN 65	DN 80	DN 100	DN 125	DN 150
GB-S 2	250	305	240	198	14	300	230	322	185	355	445	300	730	136	890	420	420	M12 × 50	295	307	357	—	—	—	—
GB-S 3	290	356	276	193	14	330	271	360	200	415	460	395	780	160	960	420	420	M12 × 50	312	324	374	—	—	—	—
GB-S 4	320	396	306	193	14	345	320	422	222	477	480	420	823	186	1,034	500	525	M12 × 50	400	351	391	421	—	—	—
GB-S 6	370	466	356	233	14	313	359	492	250	485	520	440	846	221	1,092	500	526	M12 × 50	440	391	431	461	461	—	—
GB-S 8	440	466	426	233	14	313	359	492	250	485	520	440	846	221	1,092	500	526	M12 × 50	440	391	431	461	461	—	—
GB-S 10	440	536	426	253	14	348	429	530	285	585	545	475	968	245	1,226	500	536	M12 × 50	—	515	555	496	561	627	—
GB-S 13	500	602	486	308	14	381	487	596	325	670	595	503	1,136	273	1,434	500	540	M12 × 50	—	–	605	546	611	677	—
GB-S 15	560	602	546	308	14	381	487	596	325	670	595	503	1,136	273	1,434	500	540	M12 × 50	—	–	605	546	611	677	—
GB-S 17	560	662	546	319	14	404	539	650	355	686	605	530	1,180	300	1,505	500	553	M14 × 50	—	–	664	664	664	724	794
GB-S 22	620	722	606	334	14	434	598	708	385	725	646	560	1,260	328	1,614	500	550	M14 × 50	—	–	—	694	694	754	824
GB-S 25	670	772	656	339	14	459	653	758	410	786	661	585	1,320	353	1,698	500	556	M16 × 50	—	–	—	705	705	765	835



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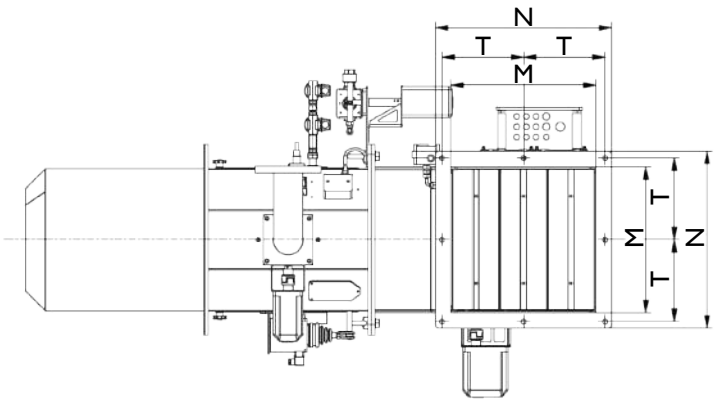
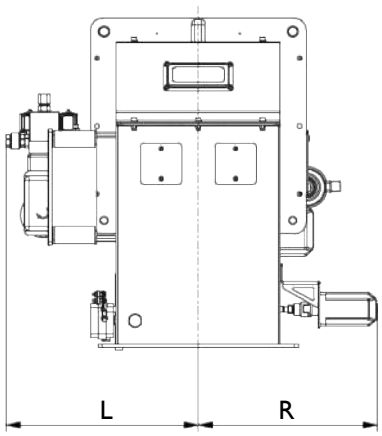
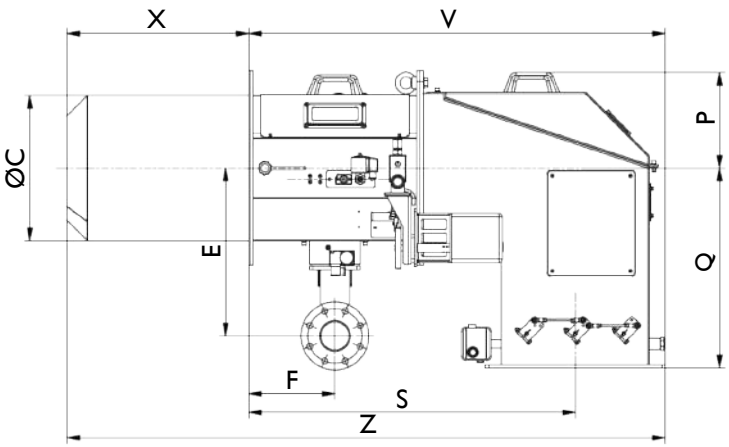


Bottom View



Rear View



Side View