



TERMODA

INTELLIGENT ENERGY SOLUTIONS!

PRODUCT CATALOGUE

TMM&TDM Series | Multi-Flame Burners

AUGUST 2025

Where the world meets energy | WWW.TERMODA.COM



ABOUT TERMODA | INTELLIGENT ENERGY SOLUTIONS

At TERMODA, we believe the future of energy is intelligent, integrated, and sustainable. Founded with a vision to become a truly global player in the energy sector, TERMODA is registered in the United Kingdom and strategically headquartered in the United Arab Emirates – the crossroads where the world meets. From here, we connect innovation with opportunity, delivering advanced energy solutions to clients across the globe, from North America to Asia, from Europe to Africa.



We are more than a supplier – we are a partner in performance. Our scope covers the full spectrum of energy technologies, including:

- Heating Solutions – Industrial and commercial boilers, high-efficiency burners, steam systems, and complete boiler room packages.
- Cooling Solutions – Chillers, industrial refrigeration, HVAC systems, and district cooling technologies.
- CHP (Combined Heat & Power) – Gas and liquid fuel-based cogeneration systems for maximum efficiency.
- Renewable Energy – Solar photovoltaic and thermal systems, wind power integration, biomass solutions.
- Energy Storage – Thermal and electrical storage systems to balance supply and demand.
- Engineering & Automation – Turnkey plant design, energy optimization, control systems, and performance monitoring.
- Fuel Systems & Combustion – From heavy oil atomization to gas firing, we cover the most advanced combustion technologies.

Our multidisciplinary expertise enables us to address the entire energy chain – from production and conversion to distribution, utilization, and optimization. Whether upgrading existing facilities or designing new, state-of-the-art systems, we combine engineering excellence with a strong commitment to sustainability.

OUR PEOPLE – EXPERIENCE THAT POWERS PROGRESS

TERMODA is driven by a leadership team with decades of hands-on experience in the energy industry. Our executives and engineers have successfully delivered projects in power generation, industrial process heating, CHP, district cooling, and renewable integration for clients in oil & gas, manufacturing, utilities, commercial real estate, and governmental sectors.

We bring a proven track record in global sourcing, engineering design, project execution, and after-sales support. This background allows us to manage complex, multinational projects seamlessly – meeting the highest technical standards while respecting local regulations and cultural expectations.

OUR VISION

To be the world's most trusted provider of intelligent energy solutions, recognized for innovation, reliability, and sustainability – enabling industries and communities to thrive while reducing environmental impact.

OUR MISSION

We aim to: Deliver integrated energy solutions that combine heating, cooling, power, and renewables into high-performance systems.

- Lead in engineering innovation that optimizes energy use and lowers emissions.
- Provide end-to-end project execution, from concept and design to commissioning and lifecycle support.
- Build long-term partnerships with clients, suppliers, and communities worldwide.

WHY UAE?

The UAE is a natural hub for our operations – a place where global trade routes, cultures, and technologies converge. From this strategic location, TERMODA can respond quickly to markets in the Middle East, Africa, Asia, and Europe, while maintaining strong connections to our UK base and international clients.

GLOBAL REACH – LOCAL EXPERTISE

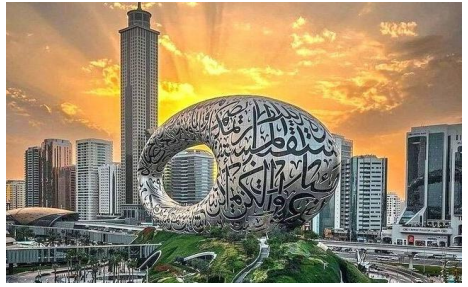
We supply and export energy technologies to diverse markets including the United States, Canada, the UK, Germany, Turkey, India, Southeast Asia, and the African continent. Our network of trusted partners and distributors ensures local support wherever our systems are installed.

SUSTAINABILITY AT THE CORE

At TERMODA, we see energy efficiency and environmental responsibility not as optional extras, but as essential drivers of our business. By integrating renewable sources, smart controls, and waste-heat recovery into our solutions, we help our clients cut operating costs while reducing their carbon footprint.

TERMODA | Intelligent Energy Solutions

- Where innovation meets reliability
- Where engineering meets sustainability
- Where the world meets energy.



WE ARE ALL TERMODA!



HVAC SOLUTIONS!



AUTOMATION SOLUTIONS!



RENEWABLE SOLUTIONS!



COMBUSTION SOLUTIONS – POWERING EFFICIENCY WITH PRECISION

At TERMODA, we deliver advanced combustion solutions that maximize performance, efficiency, and environmental compliance. Our portfolio includes high-efficiency industrial and commercial burners, multi-fuel systems, and complete combustion packages designed for boilers, CHP plants, and process heating applications. Leveraging decades of engineering expertise, we integrate state-of-the-art controls, fuel atomization technologies, and emission-reduction systems to meet the most demanding operational and regulatory requirements. Whether for new installations or retrofit projects, TERMODA provides turnkey combustion solutions that ensure reliable operation, optimal fuel utilization, and a lower carbon footprint.

BURNERS – FROM 0.5 MW TO 60 MW

TERMODA designs and manufactures burners for a wide range of industrial and commercial applications, with firing capacities up to 60 MW. Available in various configurations, our burners are engineered to match specific process requirements and fuel types, delivering consistent, clean combustion across the full power range. Our electronic modular mono-block burners, available up to 25 MW, combine compact design with advanced control technology, ensuring precise modulation, high efficiency, and low emissions. These burners are ideal for applications where space efficiency, performance, and automation are equally critical.

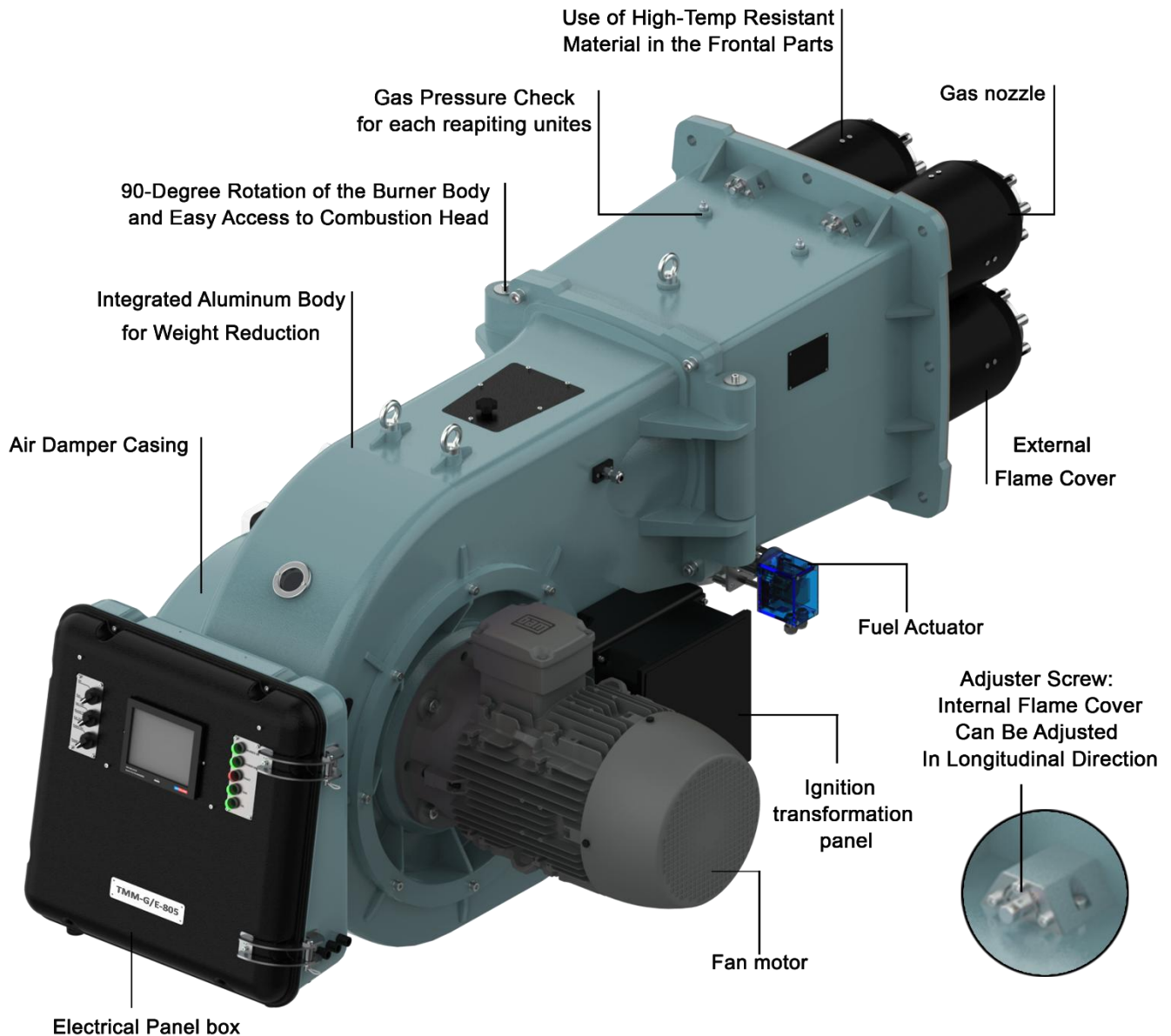
TERMODA Multi-Flame Burner

TERMODA's Multi-Flame burners, with repeating units, produce short but wide flames compared to conventional burners. A repeating unit is a smaller, independent combustion head that produces a controlled, short flame. When these units are combined, they form a larger, unified combustion head for the main burner. The units are arranged in a precise, engineered pattern, with each repeating unit producing a short flame, resulting in an overall flame that is short in length but wider in diameter. The number and configuration of these units are tailored to match the capacity and size of the furnace. For example, an 8 MW Multi-Flame burner consists of four 2 MW units, each with a flame length of 2.5 meters. The overall flame consists of four 2.5-meter-long flames arranged side by side. These burners are customizable to meet specific furnace requirements.

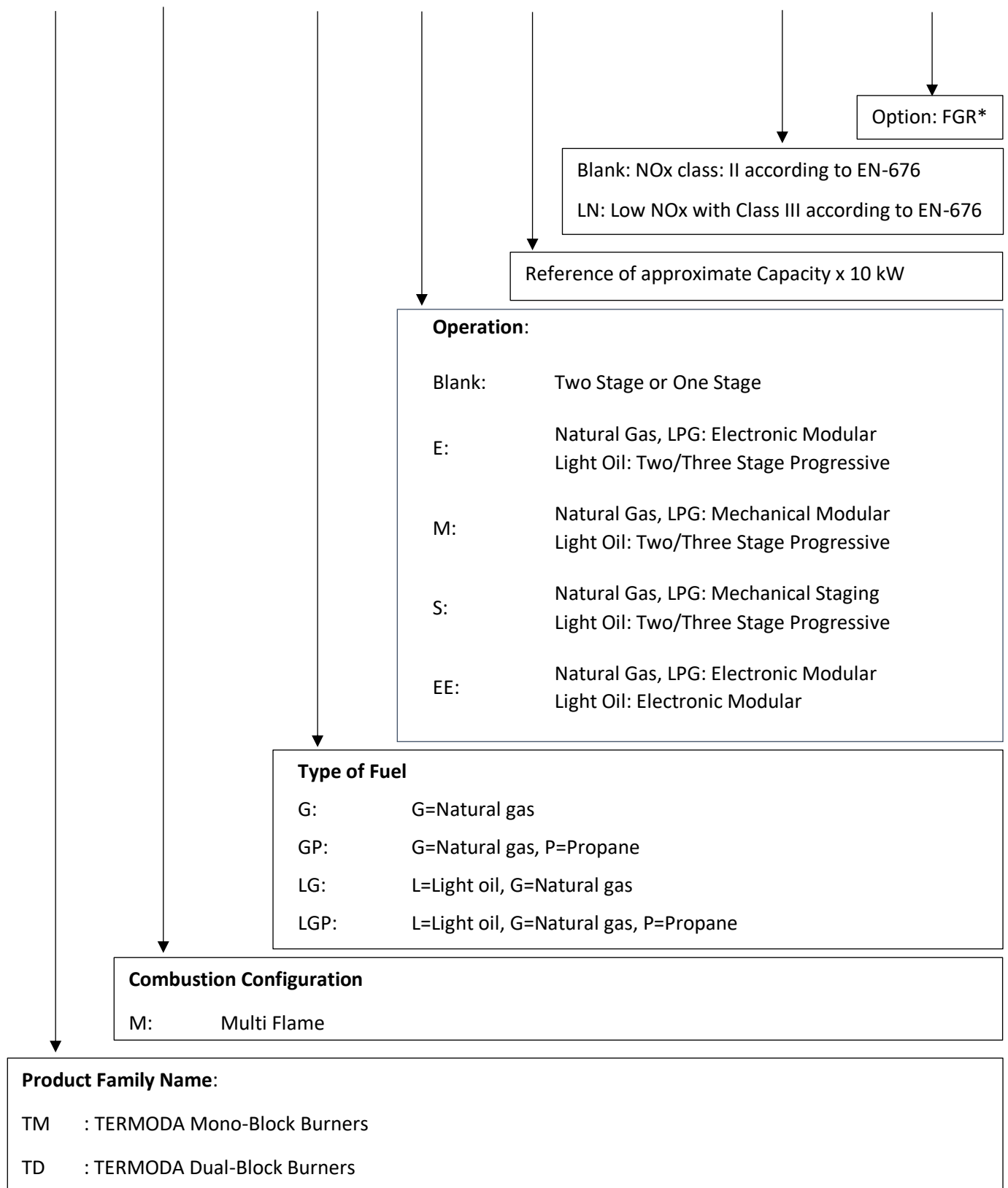
Features of TERMODA's Multi-Flame Burners:

- Patent by TERMODA
- Very short flame length
- Controlled flame with high safety standards
- Special design of repeating units to prevent flame interference, thereby avoiding high NOx emissions
- Capable of operating with three types of fuel: natural gas, liquid fuel, and LPG.
- Air supply via a central fan
- Supplying gas to all repeating units by a single gas train
- Equipped with a unified control system
- Equipped with one actuator on the air inlet and another on the gas inlet to control the burner air and gas flow
- Capable of operating with flame detection systems for each repeating unit or as a whole for the burner
- Capable of operating with an FGR system

TERMODA's multi-flame burners are currently designed and manufactured in capacities ranging from 600 to 10,500 kW in two categories: Monoblock and Dual Block. In Monoblock burners, the air block and combustion block are integrated into a single body, while in Dual Block burners, the combustion block and air block are provided separately. Each category has its own advantages and disadvantages, which are chosen based on the intended application. Additionally, both categories of these products are capable of operating with gas and diesel fuels.



TM M - GL/E - 805 / LN-FGR



*FGR=Flue Gas Recirculation

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Multi-flame Mono-block Burner



Mono-Block burners firing rate
Mono-Block burners technical
Mono-Block burners dimension

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Multi-flame Dual-block Burner



Dual-Block burners firing rate
Dual-Block burners technical
Dual-Block burners dimension

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Burner ventilation system

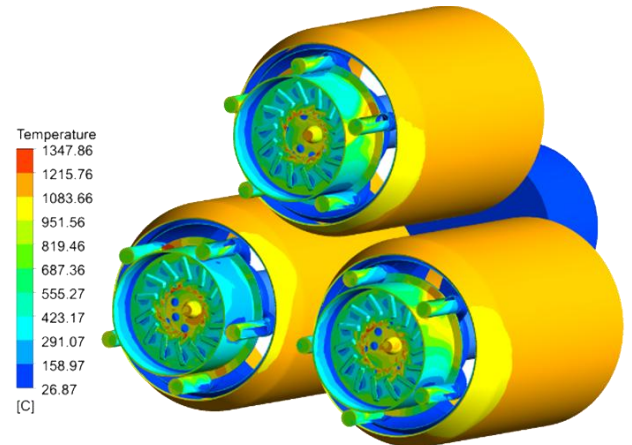


Introduce Burner Ventilation system for
Multi-flame Dual Block Burner

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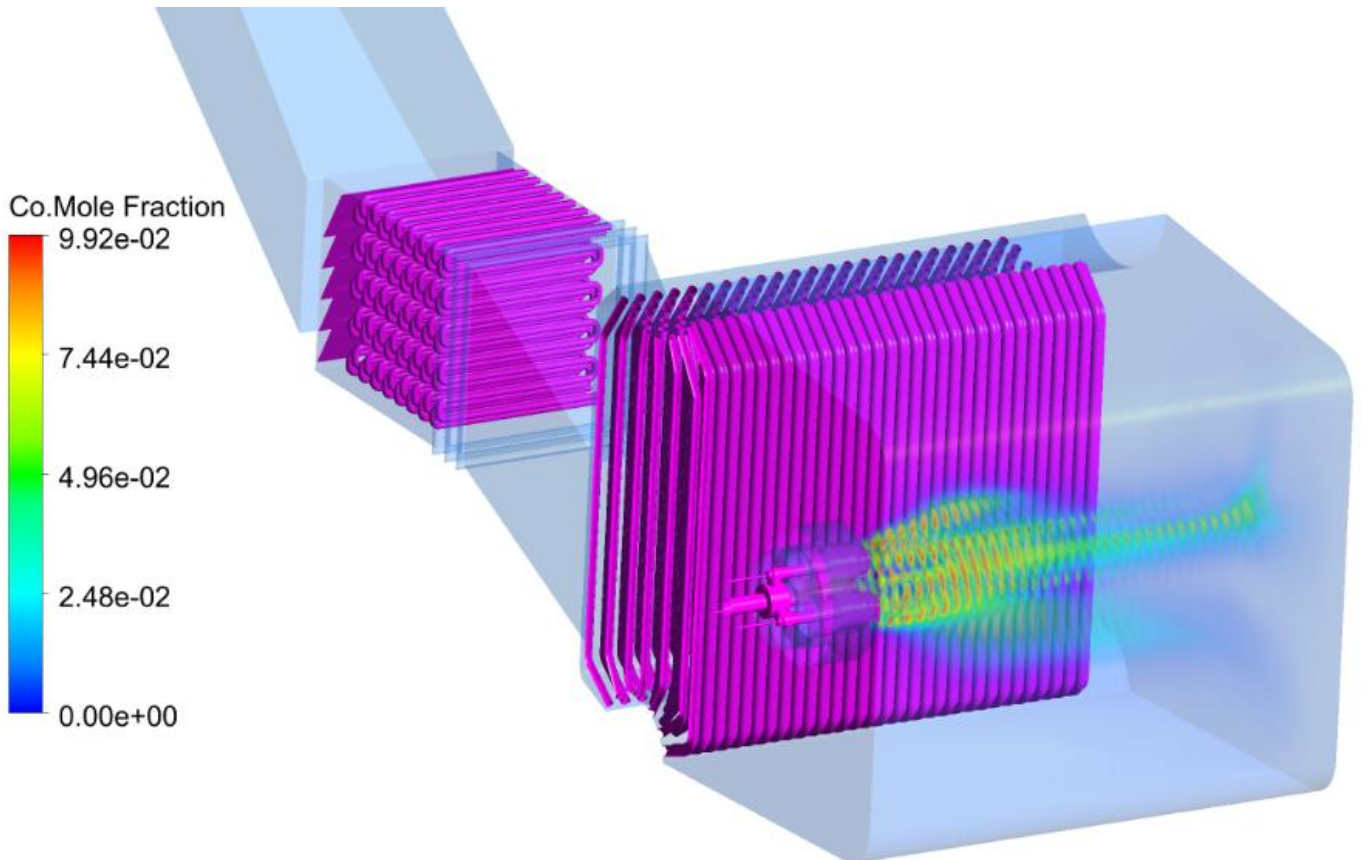
CFD Experts in R&D Department

The industrial sector depends on the heat generated by burners in various combustion systems. Optimizing burner performance is critical to complying with stringent emissions requirements and to improve industrial productivity. Engineers engaged in the design and construction of advanced combustion equipment for the hydrocarbon process industries frequently employ advanced CFD to advance new burner technology.



The science and technology of Computational Fluid Dynamics (CFD) has reached a level of maturity where performance predictions can be made with a significant degree of confidence. These predictions are derived from models covering a wide range of complex furnace, burner, and reactor geometries. While tremendous advances have been made in understanding the fundamentals of combustion, the remaining challenges are complex.

In the simulation of TERMODA multi-flame burners, after the initial design of the burner, combustion simulation is performed to obtain the air and gas pressure drop, the flow and temperature pattern in the burner and combustion chamber, the flame shape, and the emission rate of air pollutants. At this stage, the collision of the flames with each other can be detected and the arrangement of the burners can be changed in such a way as to prevent the flames from colliding with each other.



Burner Management System Overview

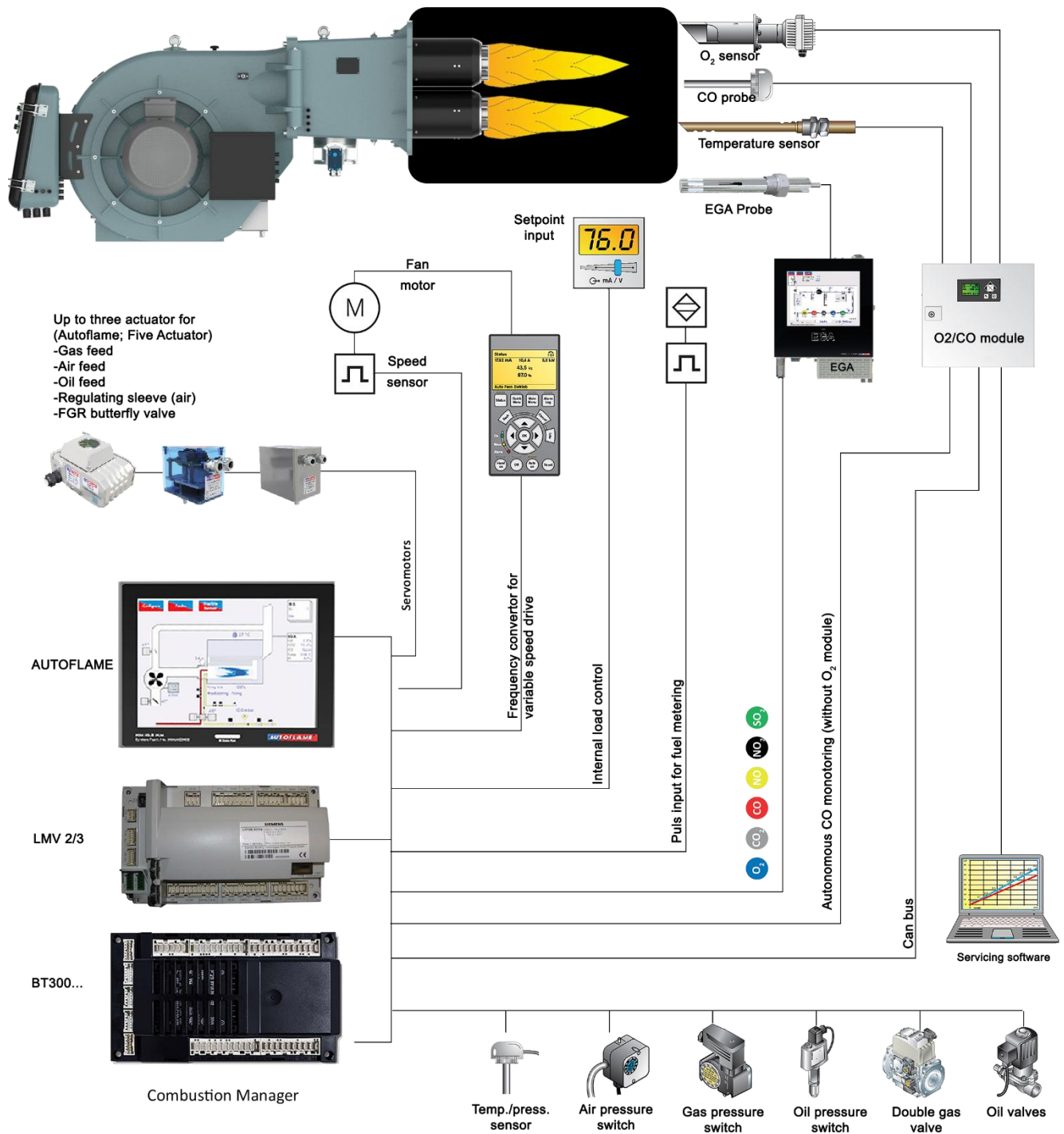
Burner control systems, as one of the key components in thermal and industrial equipment, play a vital role in optimizing combustion processes, enhancing safety, and reducing energy consumption. These systems ensure optimal burner operation by closely monitoring parameters such as fuel and air flow, temperature, and pressure, preventing issues like incomplete combustion or sudden shutdowns.

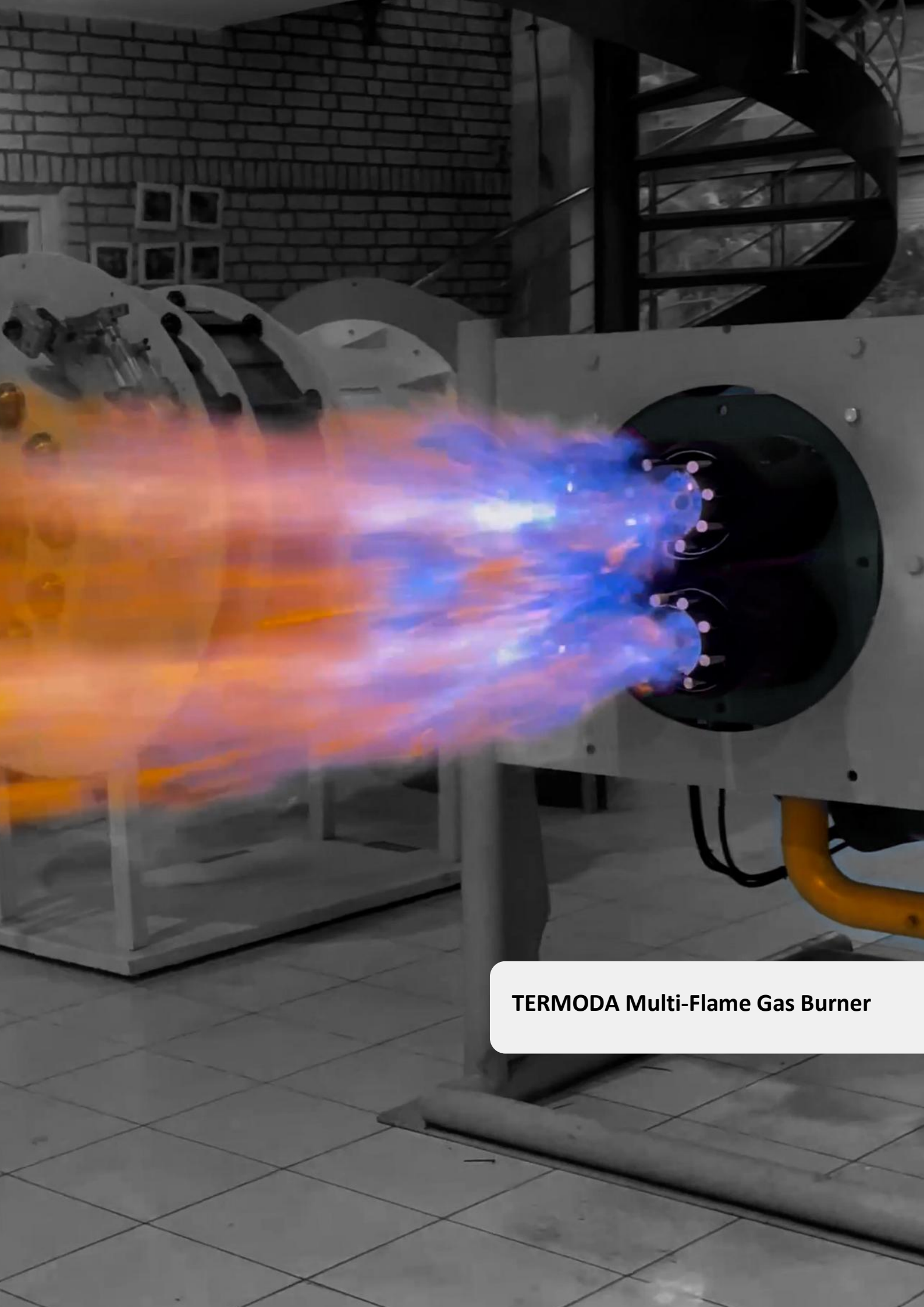
Today, various types of burner control systems are available to industries, ranging from simple mechanical controls to advanced electronic and intelligent systems. Each system offers different capabilities based on the specific needs and applications, making the right selection crucial for improving equipment efficiency and performance.

TERMODA Multi-flame burners are equipped with a modular electronic control system. Notable features of these systems include reduction in temperature and pressure fluctuations, compatibility with intelligent energy management systems, and high adaptability in various applications. Other advantages of this method are listed below.

- Integrated linkage-free control, burner flame safeguard, and PID modulation control
- Single, dual, or multi-fuel application
- Controls up to five independent actuators for optimal efficiency in low NOx burners
- Integrated PID temperature and pressure controller with auto-tuning for highly accurate process control
- Variable Speed Drive (VSD) control with an actual RPM speed sensor ensures reliable, efficient, and safe operation of the combustion air blower.
- Optional O₂-CO trim is available in LAMTEC and SIEMENS systems, while simultaneous and continuous sampling of up to six exhaust gases (O₂, CO₂, CO, NO, NO₂, SO₂) in AUTOFLAME
- An integrated gas valve proving system checks for leaks during every burner cycle, ensuring enhanced safety
- Allows up to 10 programmable points per fuel-air ratio curve, providing greater flexibility and more precise control
- Up to 999 highly repeatable actuator positions for precise control
- digital positioning feedback from actuators ensures unmatched repeatability
- Independent ignition position
- Capability to connect to a building management system using various types of protocols
- Worldwide approvals and technical support
- Fuel/Air ratio control
- Full-color touchscreen in AUTOFLAME

Electrical Modulating Burner Management System





TERMODA Multi-Flame Gas Burner

SECTIONAL CATALOGUE

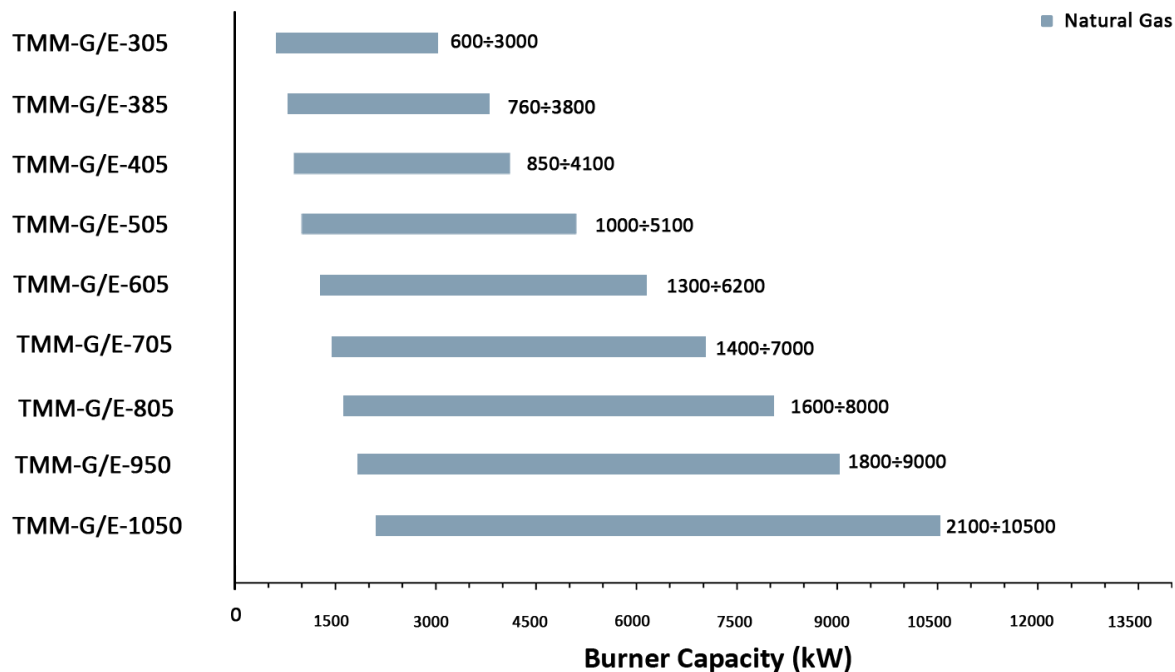
TMM Series | Mono-Block Multi-Flame Burners



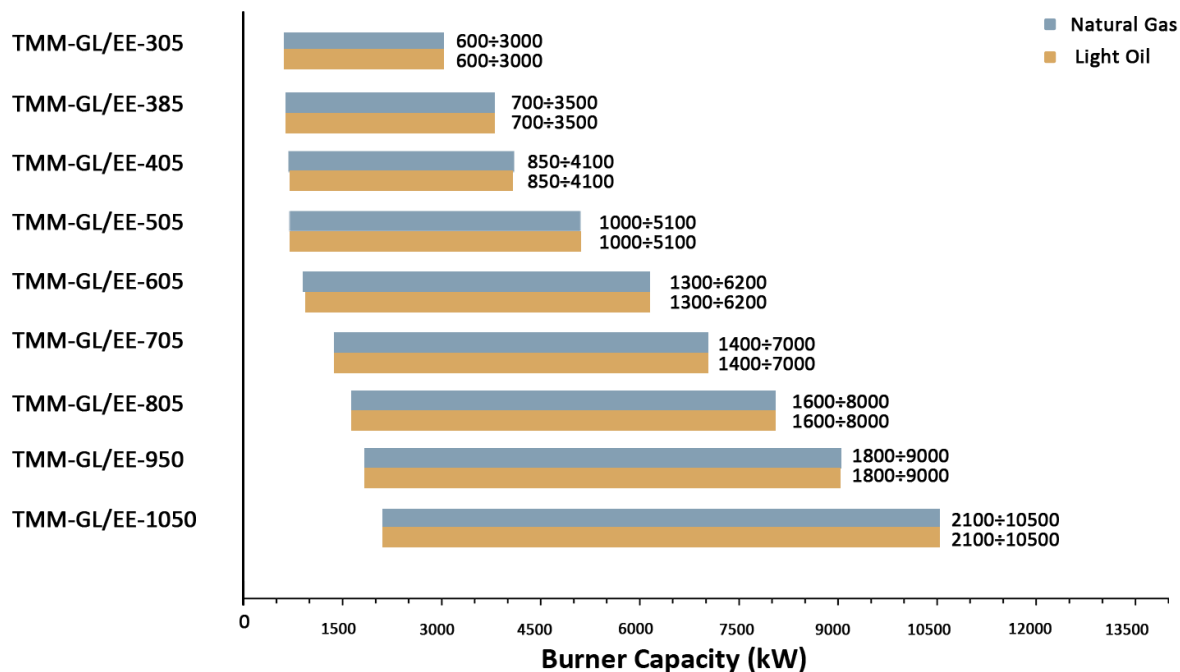
TERMODA Multi-Flame Mono-Block Burner

TERMODA's multi-flame burners, featuring repeating units, have been tested and evaluated in accordance with International Standard BS-EN 676 and BS-EN 267 for both gas and oil operation.

Multi-flame gas burner



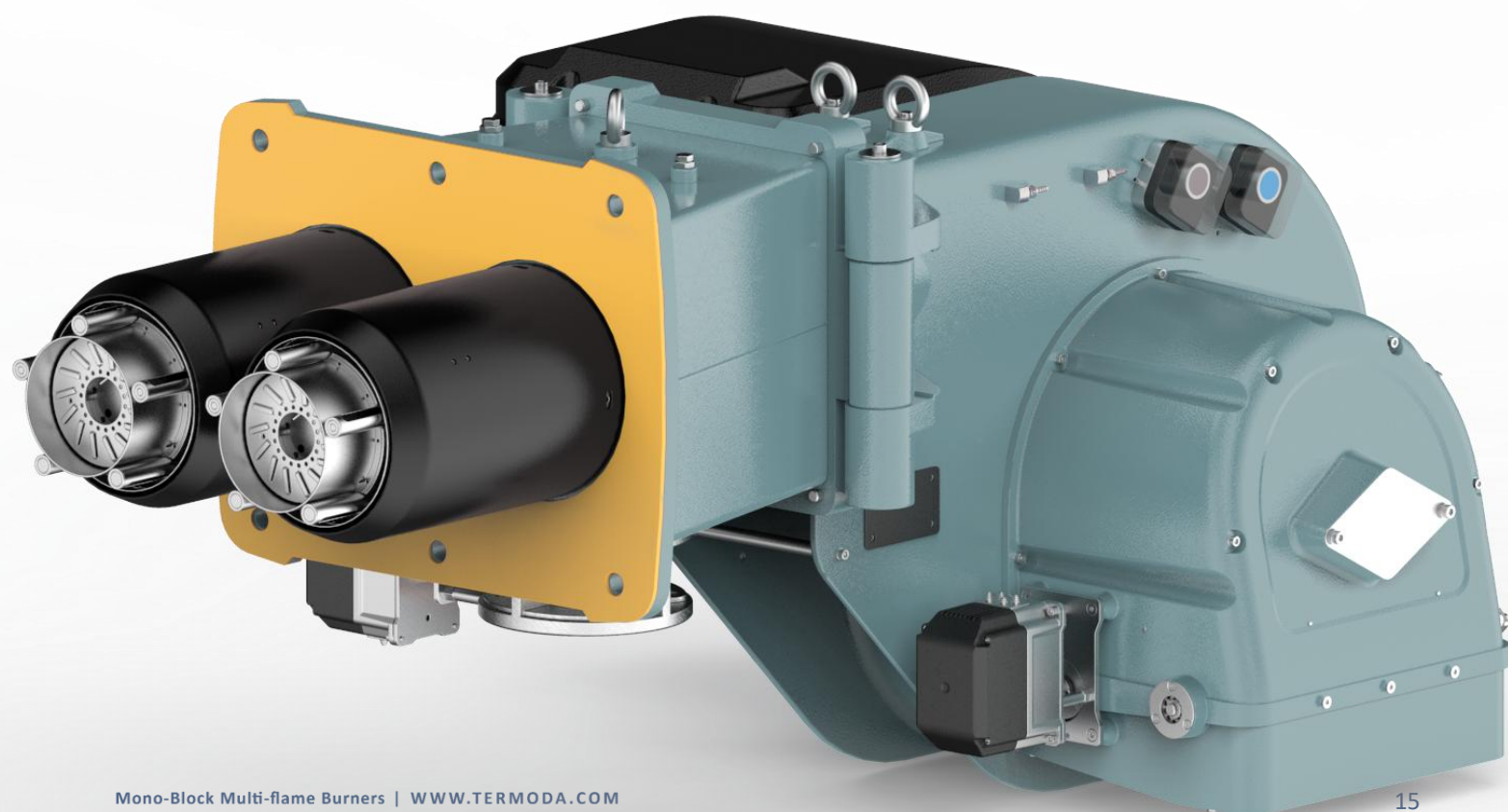
Multi-flame dual burner



Technical Data: TMM Series

- N.G operation: Electrical Modulating

Power system		Power management system			
Burner	Motor(kW/PH/V/HZ/rpm)	Controller		Actuator(N.M)	
		Brand	Model	Air	Fuel
TMM-G/E-305	7.5 /3 /380-400 /50 /2840	LAMTEC	BT320	3	1.2
		SIEMENS	LMV3...	3	1.2
		AUTOFLAME	Mini MK8/MK8	4	4
TMM-G/E-385	7.5 /3 /380-400 /50 /2840	LAMTEC	BT320	3	1.2
		SIEMENS	LMV3...	3	1.2
		AUTOFLAME	Mini MK8/MK8	4	4
TMM-G/E-405	11/3 /380-400 /50 /2840	LAMTEC	BT320	9	1.2
		SIEMENS	LMV3...	10	1.2
		AUTOFLAME	Mini MK8/MK8	4	4
TMM-G/E-505	11/3 /380-400 /50 /2840	LAMTEC	BT320	9	1.2
		SIEMENS	LMV3...	10	1.2
		AUTOFLAME	Mini MK8/MK8	25	4
TMM-G/E-605	15/3 /380-400 /50 /2840	LAMTEC	BT320	9	1.2
		SIEMENS	LMV3...	10	1.2
		AUTOFLAME	Mini MK8/MK8	25	4
TMM-G/E-705	18.5 /3 /380-400 /50 /2840	AUTOFLAME	Mini MK8/MK8	25	4
TMM-G/E-805	18.5 /3 /380-400 /50 /2840	AUTOFLAME	Mini MK8/MK8	25	4
TMM-G/E-950	22/3 /380-400 /50 /2840	AUTOFLAME	Mini MK8/MK8	25	4
TMM-G/E-1050	22/3 /380-400 /50 /2840	AUTOFLAME	Mini MK8/MK8	25	4

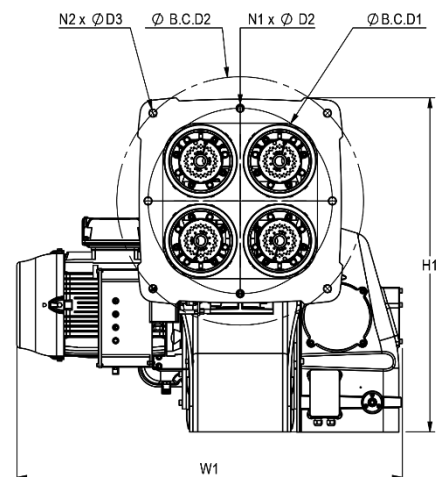
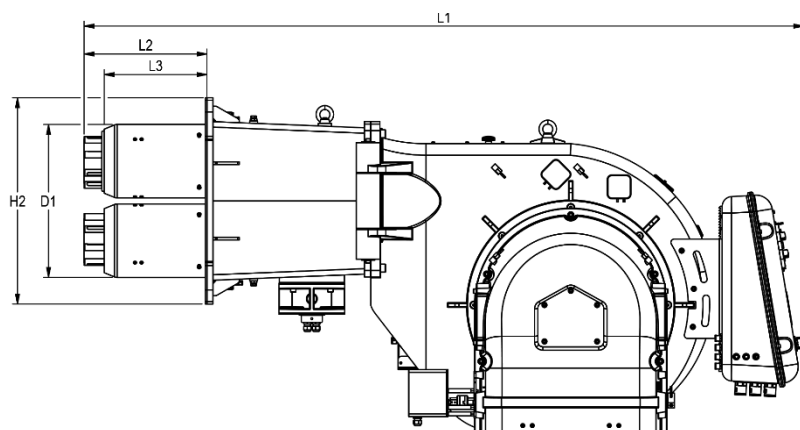


Technical Data: TMM-GL-EE-X Series

- N.G operation: Electrical Modulating
- LFO operation: Electrical Modulating

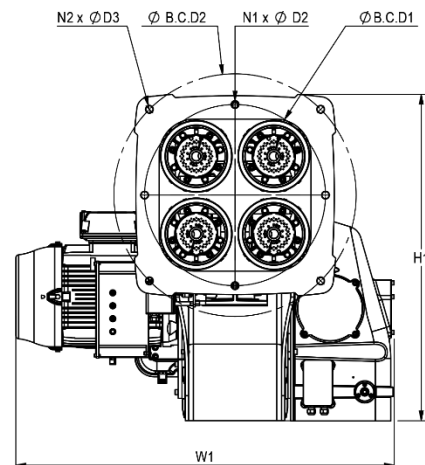
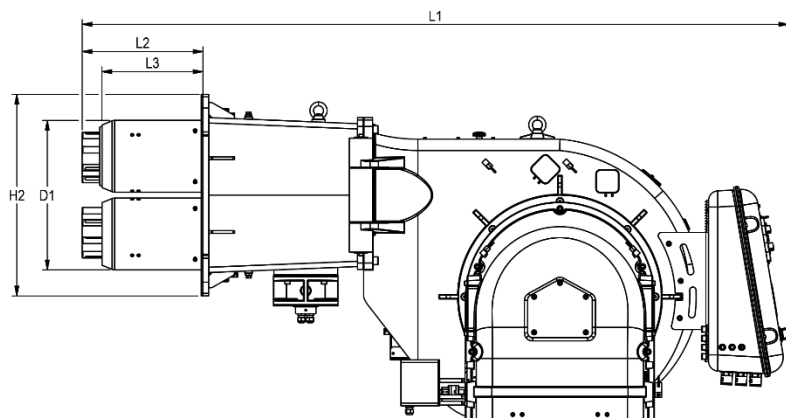
Power system		Power management system			
Burner	Motor(kW/PH/V/HZ/rpm)	Controller		Actuator(N.M)	
		Brand	Model	Air	Fuel
TMM-GL/EE-305	7.5 /3 /380-400 /50 /2840	LAMTEC	BT340	3	1.2
		SIEMENS	LMV2...	3	1.2
		AUTOFLAME	Mini MK8/MK8	4	4
TMM-GL/EE-385	7.5 /3 /380-400 /50 /2840	LAMTEC	BT340	3	1.2
		SIEMENS	LMV2...	3	1.2
		AUTOFLAME	Mini MK8/MK8	4	4
TMM-GL/EE-405	11/3 /380-400 /50 /2840	LAMTEC	BT340	9	1.2
		SIEMENS	LMV2...	10	1.2
		AUTOFLAME	Mini MK8/MK8	4	4
TMM-GL/EE-505	11/3 /380-400 /50 /2840	LAMTEC	BT340	9	1.2
		SIEMENS	LMV2...	10	1.2
		AUTOFLAME	Mini MK8/MK8	25	4
TMM-GL/EE-605	15/3 /380-400 /50 /2840	LAMTEC	BT340	9	1.2
		SIEMENS	LMV2...	10	1.2
		AUTOFLAME	Mini MK8/MK8	25	4
TMM-GL/EE-705	18.5 /3 /380-400 /50 /2840	AUTOFLAME	Mini MK8/MK8	25	4
TMM-GL/EE-805	18.5 /3 /380-400 /50 /2840	AUTOFLAME	Mini MK8/MK8	25	4
TMM-GL/EE-950	22/3 /380-400 /50 /2840	AUTOFLAME	Mini MK8/MK8	25	4
TMM-GL/EE-1050	22/3 /380-400 /50 /2840	AUTOFLAME	Mini MK8/MK8	25	4

General Dimension: MF Series



Burner Type	L ₁	L ₂	L ₃	W ₁	H ₁	H ₂	D ₁	D ₂	D ₃	N ₁	N ₂	B.C.D1*	B.C.D2*
TMM-G/E-305	1580	372	307	927	721	410	400	20	--	4	-	550	--
TMM-G/E-385	o	o	o	o	o	o	o	o	o	o	o	o	o
TMM-G/E-405	o	o	o	o	o	o	o	o	o	o	o	o	o
TMM-G/E-505	o	o	o	o	o	o	o	o	o	o	o	o	o
TMM-G/E-605	o	o	o	o	o	o	o	o	o	o	o	o	o
TMM-G/E-705	o	o	o	o	o	o	o	o	o	o	o	o	o
TMM-G/E-805	2187	378	312	1171	1010	623	462	22	22	4	4	560	750
TMM-G/E-950	o	o	o	o	o	o	o	o	o	o	o	o	o
TMM-G/E-1050	o	o	o	o	o	o	o	o	o	o	o	o	o

o: on request



Burner Type	L ₁	L ₂	L ₃	W ₁	H ₁	H ₂	D ₁	D ₂	D ₃	N ₁	N ₂	B.C.D1	B.C.D2
TMM-GL/EE-305	1580	372	307	--	721	410	400	20	--	4	-	550	--
TMM-GL/EE-385	o	o	o	o	o	o	o	o	o	o	o	o	o
TMM-GL/EE-405	o	o	o	o	o	o	o	o	o	o	o	o	o
TMM-GL/EE-505	o	o	o	o	o	o	o	o	o	o	o	o	o
TMM-GL/EE-605	o	o	o	o	o	o	o	o	o	o	o	o	o
TMM-GL/EE-705	o	o	o	o	o	o	o	o	o	o	o	o	o
TMM-GL/EE-805	2187	378	312	--	1010	623	462	22	22	4	4	560	750
TMM-GL/EE-950	o	o	o	o	o	o	o	o	o	o	o	o	o
TMM-GL/EE-1050	o	o	o	o	o	o	o	o	o	o	o	o	o

o: on request



TERMODA multi-flame dual block burner

SECTIONAL CATALOGUE

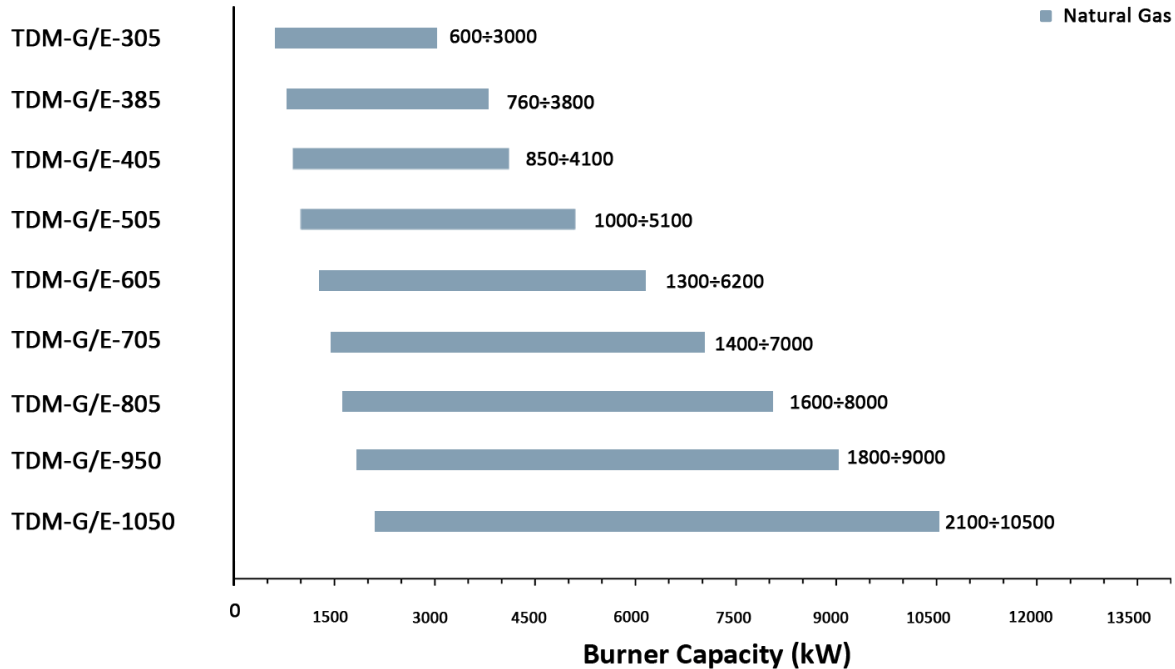
TDM Series | Dual-Block Multi-Flame Burners



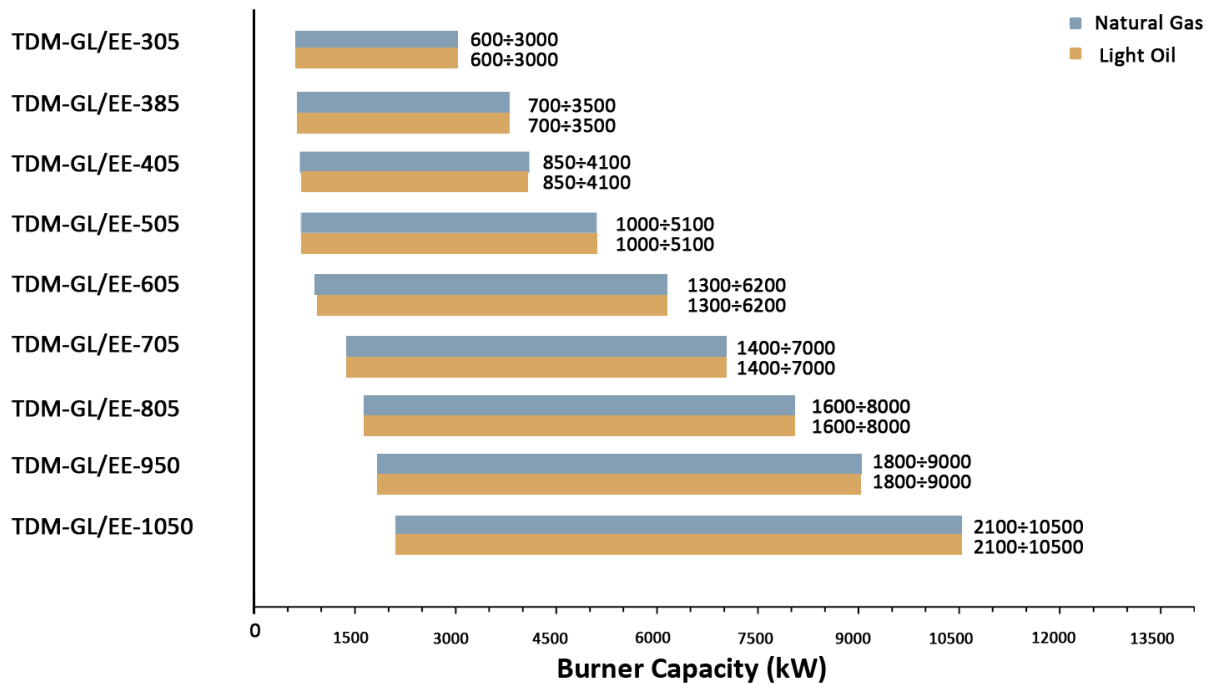
TERMODA Dual Block Multi-Flame Burner

TERMODA's multi-flame burners, featuring repeating units, have been tested and evaluated in accordance with International Standard BS-EN 676 and BS-EN 267 for both gas and oil operation.

Multi-flame gas burner



Multi-flame gas burner



Technical Data: TDM-G/E-X Series

- N.G operation: Electrical Modulating
- LFO operation: Electrical Modulating

Power management system				
Burner	Controller		Actuator(N.M)	
	Brand	Model	Air	Fuel
TDM-G/E-305	LAMTEC	BT320	3	1.2
	SIEMENS	LMV3...	3	1.2
	AUTOFLAME	Mini MK8/MK8	4	4
TDM-G/E-385	LAMTEC	BT320	3	1.2
	SIEMENS	LMV3...	3	1.2
	AUTOFLAME	Mini MK8/MK8	4	4
TDM-G/E-405	LAMTEC	BT320	9	1.2
	SIEMENS	LMV3...	10	1.2
	AUTOFLAME	Mini MK8/MK8	4	4
TDM-G/E-505	LAMTEC	BT320	9	1.2
	SIEMENS	LMV3...	10	1.2
	AUTOFLAME	Mini MK8/MK8	25	4
TDM-G/E-605	LAMTEC	BT320	9	1.2
	SIEMENS	LMV3...	10	1.2
	AUTOFLAME	Mini MK8/MK8	25	4
TDM-G/E-705	AUTOFLAME	Mini MK8/MK8	25	4
TDM-G/E-805	AUTOFLAME	Mini MK8/MK8	25	4
TMM-G/E-950-DB	AUTOFLAME	Mini MK8/MK8	25	4
TDM-G/E-1050	AUTOFLAME	Mini MK8/MK8	25	4

Note: The motor capacity for these types of burners is determined according to the burner capacity and the ventilation system.

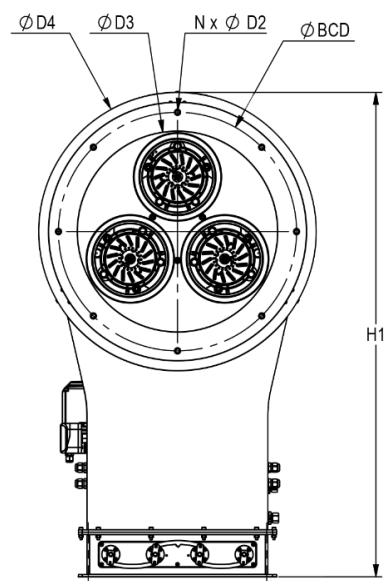
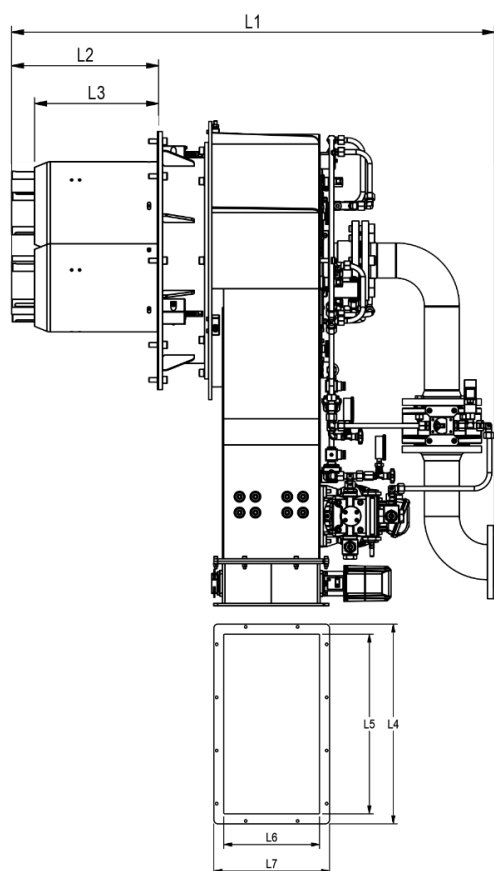
Technical Data: TDM-GL/EE-X Series

- N.G operation: Electrical Modulating
- LFO operation: Electrical Modulating

Power management system				
Burner	Controller		Actuator(N.M)	
	Brand	Model	Air	Fuel
TDM-GL/EE-305	LAMTEC	BT340	3	1.2
	SIEMENS	LMV2...	3	1.2
	AUTOFLAME	Mini MK8/MK8	4	4
TDM-GL/EE-385	LAMTEC	BT340	3	1.2
	SIEMENS	LMV2...	3	1.2
	AUTOFLAME	Mini MK8/MK8	4	4
TDM-GL/EE-405	LAMTEC	BT340	9	1.2
	SIEMENS	LMV2...	10	1.2
	AUTOFLAME	Mini MK8/MK8	4	4
TDM-GL/EE-505	LAMTEC	BT340	9	1.2
	SIEMENS	LMV2...	10	1.2
	AUTOFLAME	Mini MK8/MK8	25	4
TDM-GL/EE-605	LAMTEC	BT340	9	1.2
	SIEMENS	LMV2...	10	1.2
	AUTOFLAME	Mini MK8/MK8	25	4
TDM-GL/EE-705	AUTOFLAME	Mini MK8/MK8	25	4
TMM-GL/EE-805-DB	AUTOFLAME	Mini MK8/MK8	25	4
TMM-GL/EE-950-DB	AUTOFLAME	Mini MK8/MK8	25	4
TDM-GL/EE-1050	AUTOFLAME	Mini MK8/MK8	25	4

Note: The motor capacity for these types of burners is determined according to the burner capacity and the ventilation system.

General Dimension: MF Series



Gas Burner												
Burner Type	L ₁	L ₂	L ₃	L ₄	L ₅	L ₆	L ₇	D ₃	D ₄	H ₁	N	B.C.D
TDM-G/E-305	o	o	o	o	o	o	o	o	o	o	o	o
TDM-G/E-385	o	o	o	o	o	o	o	o	o	o	o	o
TDM-G/E-405	o	o	o	o	o	o	o	o	o	o	o	o
TDM-G/E-505	1217	371	312	500	450	240	290	500	700	1218	8	600
TDM-G/E-605	o	o	o	o	o	o	o	o	o	o	o	o
TDM-G/E-705	o	o	o	o	o	o	o	o	o	o	o	o
TDM-G/E-805	o	o	o	o	o	o	o	o	o	o	o	o
TDM-G/E-950	o	o	o	o	o	o	o	o	o	o	o	o
TDM-G/E-1050	o	o	o	o	o	o	o	o	o	o	o	o
Dual Fuel Burner												
Burner Type	L ₁	L ₂	L ₃	L ₄	L ₅	L ₆	L ₇	D ₃	D ₄	H ₁	N	B.C.D
TDM-GL/EE-305	o	o	o	o	o	o	o	o	o	o	o	o
TDM-GL/EE-385	o	o	o	o	o	o	o	o	o	o	o	o
TDM-GL/EE-405	o	o	o	o	o	o	o	o	o	o	o	o
TDM-GL/EE-505	1217	371	312	500	450	240	290	500	700	1218	8	600
TDM-GL/EE-605	o	o	o	o	o	o	o	o	o	o	o	o
TDM-GL/EE-705	o	o	o	o	o	o	o	o	o	o	o	o
TDM-GL/EE-805	o	o	o	o	o	o	o	o	o	o	o	o
TDM-GL/EE-950	o	o	o	o	o	o	o	o	o	o	o	o
TDM-GL/EE-1050	o	o	o	o	o	o	o	o	o	o	o	o

o: on request

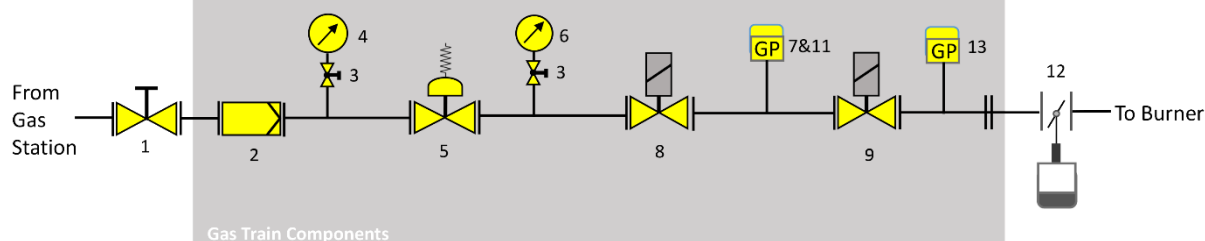
innovative solution for small combustion chambers



ERMODA

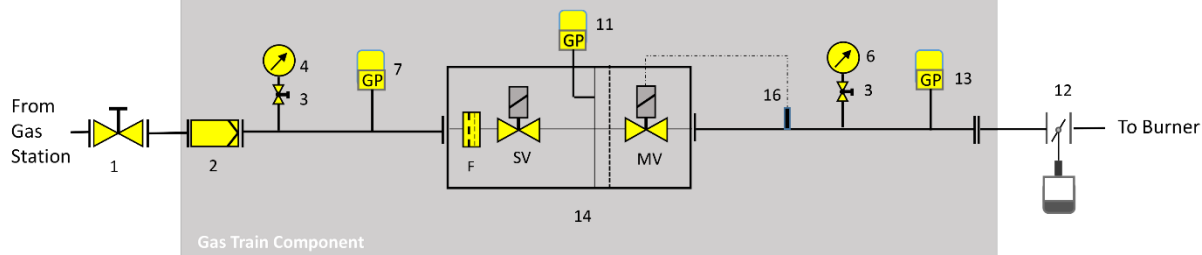
Gas Train Diagram

GT2 (Pressure input <360 mbar, separate items)



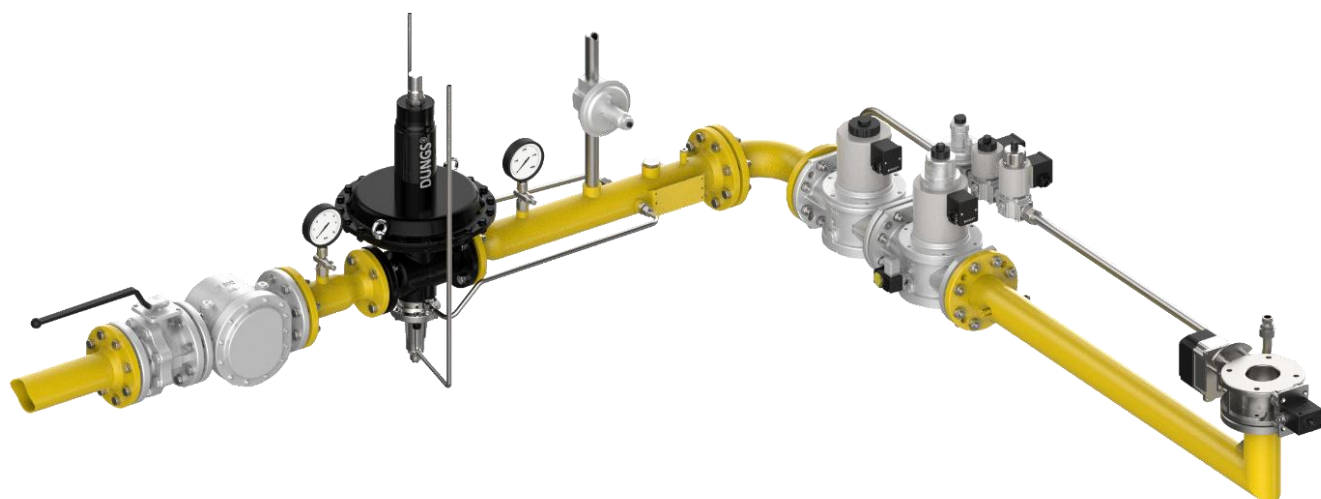
Gas Train Components

GT3 (Pressure input <360 mbar, multibloc gas train)

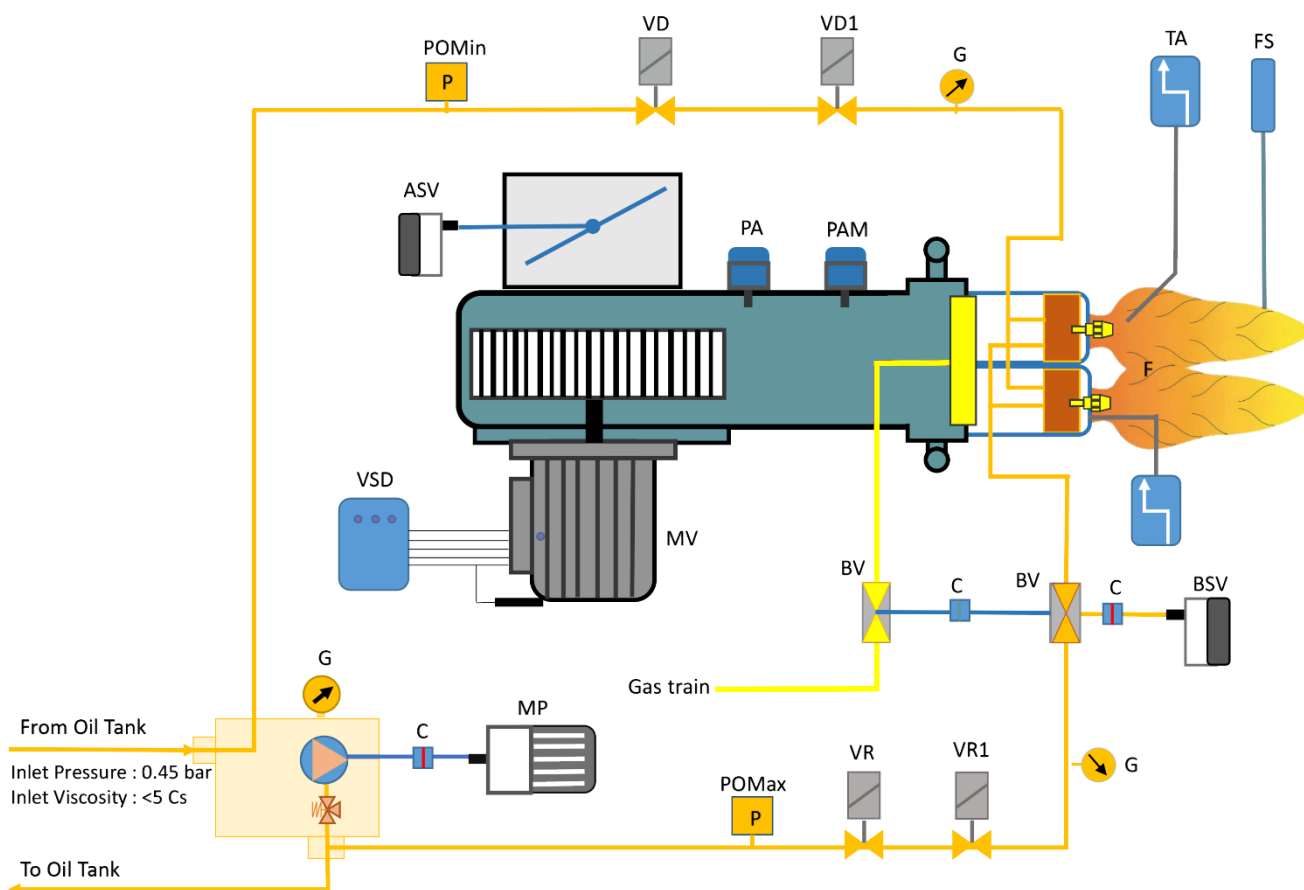


Gas Train Component

- | | |
|---------------------------------------|-----------------------------------|
| 1: Ball valve | 9: Main gas valve |
| 2: Gas filter | 11: Leak Test gas pressure switch |
| 3: Push button valve | 12: Butterfly valve |
| 4: Pressure Gauge | 13: Max. gas pressure switch |
| 5: Pressure regulator (Low- pressure) | 14: Multi block Solenoid valve |
| 6: Pressure Gauge | 15: valve proving system |
| 7: Min. gas pressure switch | 16: Pressure transmitter |
| 8: Safety gas valve | |



TERMODA dual-fuel, multi-flame burners have been tested and evaluated in accordance with the International Standards BS-EN 676 and BS-EN 267 for the operation of both gas and oil. The oil supply system for the multi-flame burners is presented in the diagram below.



PA: Min. Air pressure switch

BSV: Butterfly valve servomotor

G: Gauge

Burner Ventilation System

The Fan blade design is the result of extensive research and analysis resulting in high-performing and efficient centrifugal fans. Our R&D team will ensure the fans are complied with all safety certifications at the design stage regarding stability, reliability and safety.

Thanks to improved CFD simulations and FEM analysis, blade design simultaneously is optimized from structural and aerodynamic point of view. It also helps to provide customized solutions for market requirements. Our team surveys cover a complex step-by-step analysis of a centrifugal fan from its design to an advanced CFD & FEA simulation, including FSI and modal analysis.



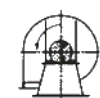
Air Block

Note: The housing arrangement is to be considered as viewed from the drive side of the fan. Subsequent alteration of alignment of the fan to its base is not possible, as the two parts are welded together during manufacturing.

Type L90



Type L180



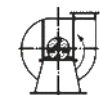
Type R90



Type R180



Type L270



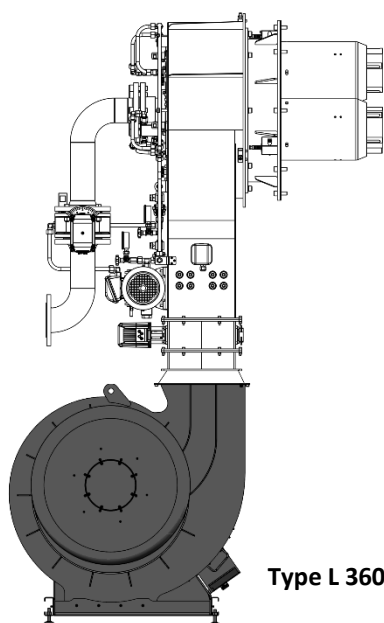
Type L360



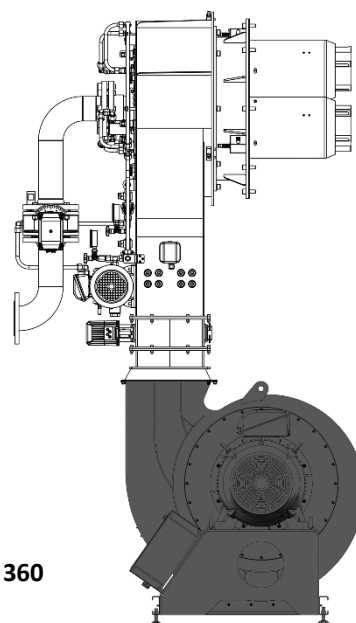
Type R270



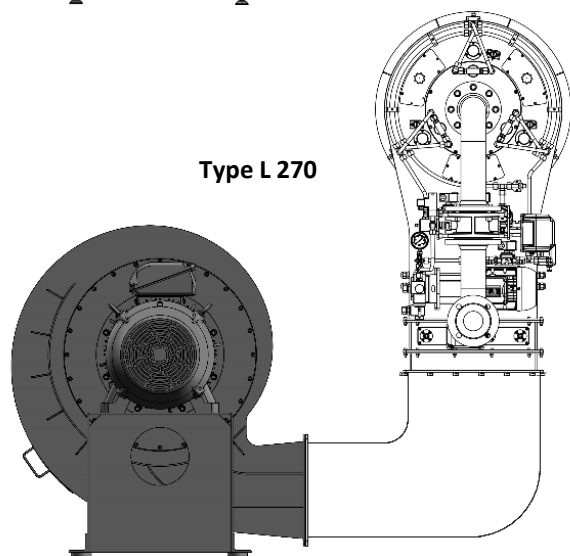
Type R360



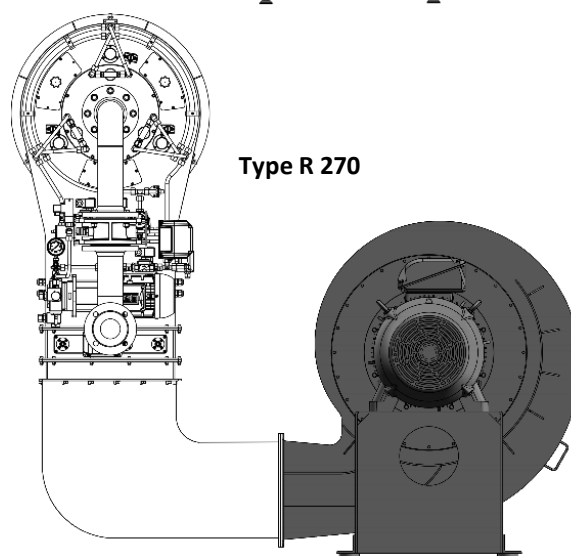
Type L 360



Type R 360



Type L 270



Type R 270

[illegible]



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