

VOLCANO Shipboard Incinerators VIM and VIRM Series

with IMO Type Approval Certificate and CE Rudder Marking

Volcano Incinerators of the VIM and VIRM series are designed and built in compliance with standard specification for shipboard incinerators, MEPC 76(40), released by IMO.

IMO regulation, MEPC 76(40), standard specification for shipboard incinerators, requires:

1. Crew's safety in operation
2. The type approval test for verifying whether the incinerator operates within the specified emission standard limits for O₂ in the combustion chamber, and CO in flue gas, soot number, unburned components in ash residue and combustion chamber flue gas outlet temperature range.

This is an essential measure for pollution control and requires the kind of combustion which can be achieved only with skilled engineering and new design criteria.

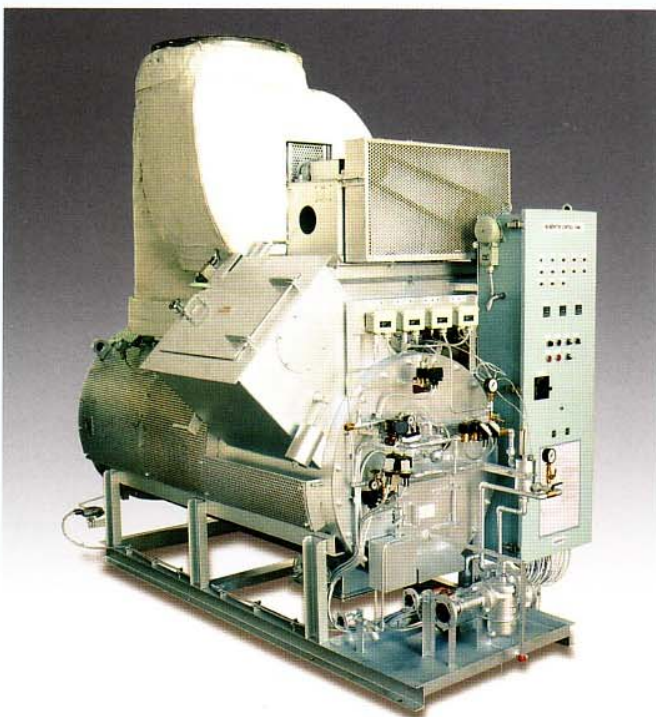
Owing to VOLCANO's proven combustion technology, the system fully conforms to the requirements and enhances further the following features

- Good incineration of a wide variety of shipboard waste oil and solid wastes
- Lightweight, compact, and yet high performance yielding
- Safe, efficient and easy operation

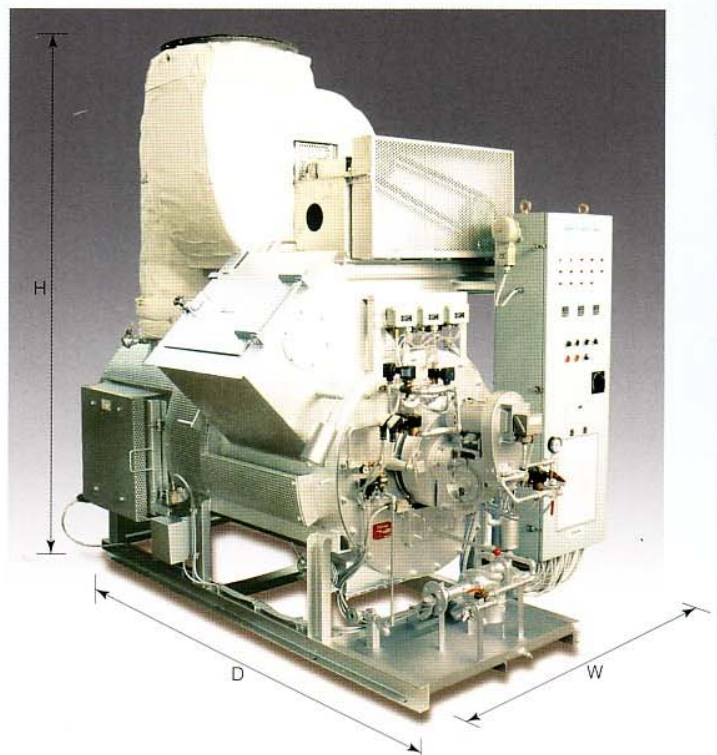
VOLCANO incinerators of the VIM and VIRM series are capable of burning solid waste and waste oil separately or simultaneously up to the listed max. disposal capacity.

Type of Incinerator		VIM-30	VIRM-30	VIM-50	VIRM-50	VIM-100	VIRM-100
Max. Disposal Capacity	kW	349		581		1163	
	Kcal/h	300,000		500,000		1,000,000	
Waste Oil Disposal Capacity	kg/h*(1)	40		58		116	
Solid Waste Disposal Capacity	kg/h*(2)	17		30		60	

Based on IMO standard fuel/waste specification *(1) CV 8600 kcal/kg, *(2) CV 2920 kcal/kg



VIM AIR JET BURNER TYPE



VIRM ROTARY BURNER TYPE

System Description

1. Construction The system consists of a combustion chamber, waste oil burner with pilot burner, induced fan, flue gas diluting damper and control panel. The combustion chamber is of **welded steel cylindrical construction and fabricated to a double casing** in order to provide a cooling air jacket. The combustion chamber inside surface is lined with castable refractory materials and the chamber outside surface is protected by punched plate insulation for safety. The VIM series combustion chamber is furnished within **a bucket type solid waste charging double door** on its side and an ash removal door on its burner front face, and the VIRM series combustion chamber is furnished within a bucket type solid waste charging double door and an ash removal door on its side.

2. Combustion System An **air jet burner** is furnished with the VIM series and a **rotary burner** with the VIRM series to burn the waste oil and both come with a diesel oil pressure jet pilot burner which is used for system startup and assisted burning of the solid waste and high water content waste oil. The system controls combustion temperature within a range of max. 1000°C ~ min. 850°C and flue gas temperature within a range of nor. 200°C. The induced fan (exhaust fan) system draws combustion and cooling air into the chamber and creates a **negative pressure state inside the chamber**. At same time, the fan draws in ambient air at the outlet of the chamber to **maintain flue gas temperature below 200°C within 2.5 meters from the combustion chamber flue gas outlet**.

3. Control System The system can be started or stopped sequentially from an auto start/stop switch. The control system monitors operation with various sensors to ensure safe operation.

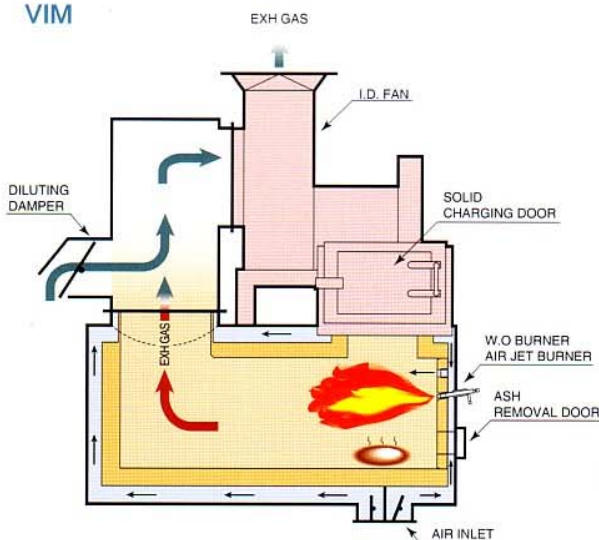
Auxiliary Equipment Specifications

Type of Incinerator			VIM-30	VIRM-30	VIM-50	VIRM-50	VIM-100	VIRM-100
Waste Oil Burner	Burner Type		Air Jet	Rotary	Air Jet	Rotary	Air Jet	Rotary
	Burning Capacity	kg/h	Nor. 40 Max. 50	Nor. 40 Max. 50	Nor. 58 Max. 84	Nor. 58 Max. 84	Nor. 116 Max. 167	Nor. 116 Max. 167
	Atomizing Air Press	MPa	0.15	—	0.25	—	0.25	—
	Atomizing Air consumption	Nm ³ /h	18.5	—	56.5	—	62.5	—
	Burner Motor	kW x p	—	0.4 x 4	—	0.75 x 4	—	1.5 x 4
	Primary Air Fan	Nm ³ /min	—	1	—	2	—	4
		kPa	—	2.45	—	2.55	—	3.63
Pilot Burner	Type		D.O.pressure jet burner					
	Burning Capacity	kg/h	9		9		17	
	Burning pressure	MPa	0.69		0.69		0.69	
Waste Oil Pump	Type		TROCHOID Pump					
	Capacity	kg/h	120		200		270	
	Discharge. Press.	MPa	0.2	0.059	0.2	0.059	0.2	0.059
Diesel Oil Pump	Type		Plunger					
	Capacity	kg/h	12		12		17	
	Del. pressure	MPa	0.69		0.69		0.69	
Induced Fan	Capacity	M ³ /min	160		265		525	
	Motor	kW x p	7.5 x 4		11 x 4		30 x 4	
	Static Pressure	kPa	0.88		0.88		0.98	
	Gas Temp.	°C	200		200		200	

Installation Dimensions and Weight

Depth (D)	mm	2,280		2,600		3,200	
Width (W)	mm	1,450		1,550		1,950	
Height (H)	mm	2,445		2,700		3,800	
Exhaust Gas outlet dia.		5K-450A		JIS F 7805 550A(F)		JIS F 7805 800A(F)	
Weight (approx.)	kg	2,500	2,500	3,000	3,000	6,000	6,000

VIM



VIRM

