

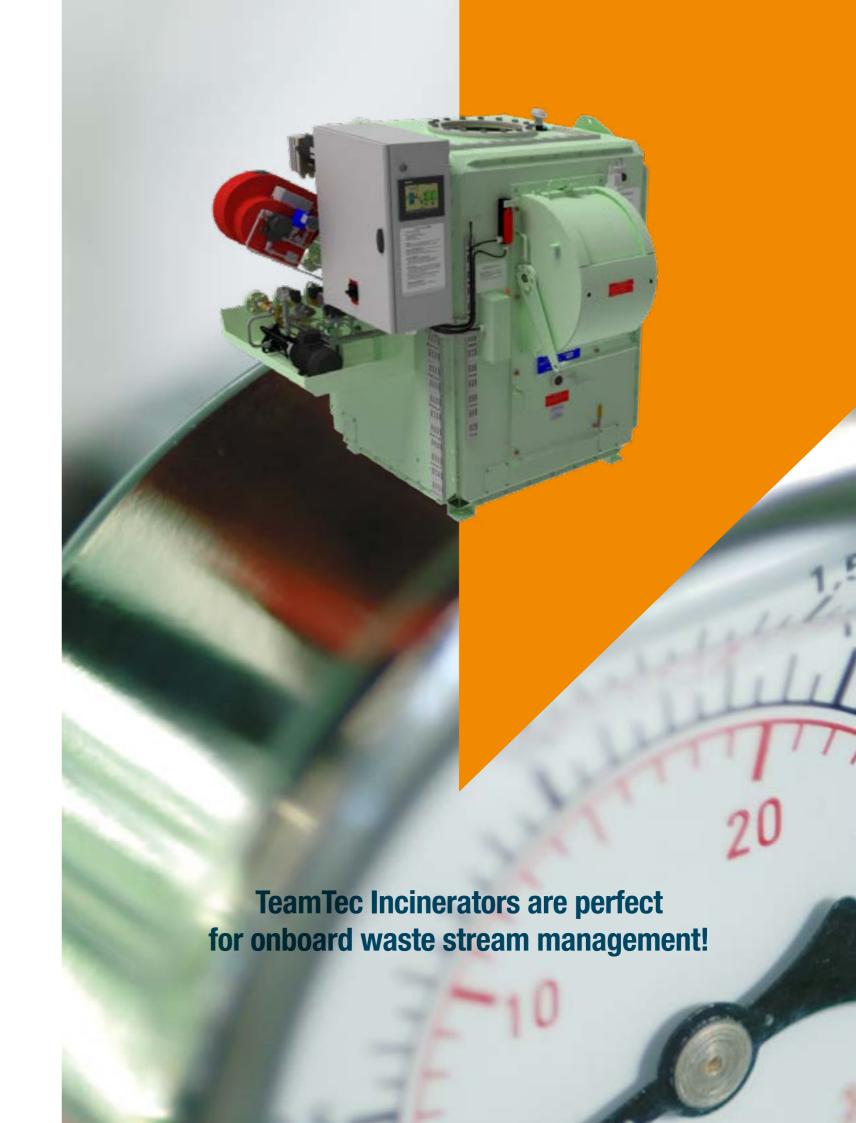
# INCINERATORS

# TeamTec

#### Norwegian traditions – a business with deep roots

TeamTec is continuing a tradition of marine industrial activity at Tangen in Tvedestrand, Norway, dating back to around 1700. Today our company is one of the world leaders in marine waste incinerating systems and stripping ejectors to the shipbuilding industry. TeamTec was founded on May 17, 1984 by a small group of enthusiastic pioneers. Their enthusiasm and passion is carried forward by the entire TeamTec staff, and we are confident that our products will continue to be in the forefront of international marine technology in the future. We are proud to supply our quality products to a demanding shipping and offshore market.





# TEAMTEC INCINERATORS

INCINERATION IS AN EFFICIENT METHOD FOR HANDLING SOLID AND LIQUID WASTE, MAINLY ONBOARD VESSELS AND AT OFFSHORE INSTALLATIONS, BUT ALSO USED ON-SHORE.

### **TEAMTEC INCINERATOR ADVANTAGES:**

- · Automatic control and operation (no filters, no strainers, self cleaning nozzle)
- Low maintenance cost
- Minimum fuel consumption
- . Modular construction with a compact and sturdy design
- Easy retrofit equipment package
- Top professional service engineers for commissioning and start-ups
- · A large stock of genuine spare parts
- Customized documentation

### TEAMTEC INCINERATORS ARE INSTALLED ON/AT:

- All major shipping companies
- All major cruise lines
- Navy fleets and Coast Guards world wide
- · Floating and fixed production units
- Offshore and specialized vessels
- Land based power plants
- Holiday resorts

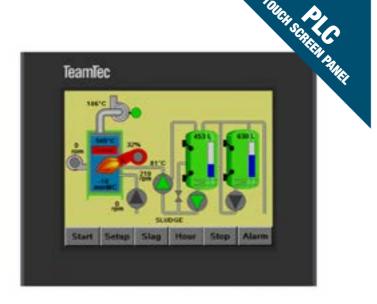


# INCINERATOR MODELS

# THE TEAMTEC INCINERATORS ARE CERTIFIED IN COMPLIANCE WITH:

- IMO-RESOLUTION MEPC. 244(66) adopted April 4th 2014, previous 76(40)
- "Standard Specifications of Shipboard Incinerators"
- IMO MARPOL ANNEX VI, adopted 26. September 1997
- Type approved by:
   DNV GL, ABS, BV, LRS, CCS, NKK,
   (USCG), RMRS and RRR



















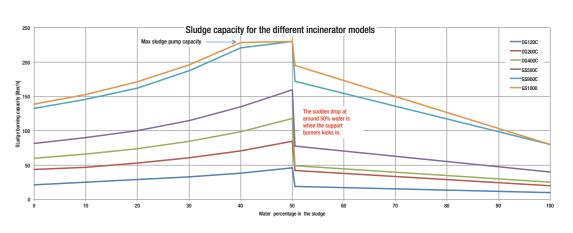


# CAPACITY OVERVIEW

# CRITERIA FOR SELECTION OF PROPERLY SIZED INCINERATOR AND SLUDGE TANK:

- Sludge tank capacity: 2 % / 0.5 % of ship's HFO/MGO consumption per 24 hrs
- Incinerator capacity: Sludge capacity sufficient to burn 1 % / 0.25 % of ship's HFO/MGO consumption per 24 hrs during 8-12 hrs/day operation
- Solid waste generation: 2 kg/person/day (ranges 1 2.5)





				SLUDGE	SOLID WA	STE			WATER (Optional)	FUEL	EL. POWER	DIMENSIONS			APPROX. WE	IGHT	RECOMMENDED TANK(S)	
Incinerator model	Version	Max thermal capacity [kcal/h]	Max thermal capacity [kW]	Capacity [I/h] (IMO spec. 20% water)	Solid waste batch feeding capacity [l/load]	Kg/batch load (IMO spec, 130 kg/m3)	Sluice load [l/load]	Solid waste capacity range [kg/h]	Bilge water [I/h]	Approx. diesel [kg/h] or [kg]	App. rated el. Power (440V/60Hz) kW	Incinerator L x W x H [mm]	Minimum maintenance space L x W x H [mm]	Flue gas duct DN	Incinerator chamber [kg]	Flue gas fan [kg]	Sludge tank(s) [liters]	Diesel oil tank liters
0G120C	С	190.000	220	29	200					11*	11	1033 x 1445 x 1836	2350 x 2060 x 2200	200	1268	175	700	400
	CW					26				10	7	1013 x 1445 x 1834	2350 x 2060 x 2200		1245			
0G200C	C**	400.000	465	53 (70**)	400	F0.			127	7*	15	1350 x 1900 x 1960	2400 x 2475 x 2200	300	2544	326	1100	400
	CW	(541.900**)	(630**)			52				20	12	1350 x 1900 x 1960	2400 x 2400 x 2200		2503			
	CS**			53 (70**)			50	20-50	127	7*	15	1697 x 1900 x 1960	2400 x 2475 x 2200		2650		1100	
	CSW									20	12	1697 x 1900 x 1960	2400 x 2400 x 2200		2609			
0G400C	C**	512000	596	74 (81**)	400	50			140	14*	15	1350 x 1900 x 1960	2400 x 2475 x 2200	350	2544	330	1700	400
	CW	(625.300**)	(727**)			52				28	12	1350 x 1900 x 1960	2400 x 2400 x 2200		2503			
	CS**			74 (81**)			50	20-50	140	14*	15	1697 x 1900 x 1960	2400 x 2475 x 2200		2650		1700	
	CSW									28	12	1697 x 1900 x 1960	2400 x 2400 x 2200		2609			
GS500C	CS**	731.000	850	100 (120**)	500	CF.	125	50-135	153	16*	27	2457 x 1902 x 2117	3300(2450***) x 2420 x 2200	400	3956	526	2000	400
	CSW	(775.000**)				65				36		2457 x 1902 x 2117	3300(2450***) x 2420 x 2200		3926			
	CGSW		791					60-150			35	2937 x 1902 x 2167	3790 x 2440 x 2200		3880			400 or 700
	CFGSW		808					75-200			55	4587 x 2869 x 2172	6050 x 2800 x 2300		6550			700 or 1100
GS500CIC	CICS	800.000	930	105	500	05	125	50-135		36	31	2457 x 1902 x 2117	3300(2450***) x 2420 x 2200	400	4080	541	2000	400
GS900C	CX	1 177 300	1369	162	600	65	125			25*	45	2926 x 1807 x 2140	3740 x 2450 x 2200	500/600	4148	800	2000 (+ 3000)	400
	CSRX					78		50-135				2926 x 1914 x 2583	3740 x 2450 x 2650		4365			
GS1000C	CX	1 290 000	1500	171	600	70	125		237	25*	45	2926 x 1807 x 2140	3740 x 2450 x 2200	500/600	4222	800	2000 + 3000	400
	CSRX					78		50-135				2926 x 1914 x 2583	3740 x 2450 x 2650		4443			

#### **VERSION CODES**

### CODE FEATURE DESCRIPTION

- C Standard Computerized automation/control (PLC)
- F Auto feeding of solid waste (hopper, shredder, screw feeder)
- G Stirrer for solid waste
- I Water injection
- IC Increased capacity
- S/RS Sluice for solid waste
- W Incinerator for solid waste only
- X Large single door opening

## VERSION CODES POSSIBLE ADDITIONAL FEATURES

- CODE FEATURE DESCRIPTION

  A Ampere meter for flue gas fan
- B Diesel oil booster pump
- Dual sludge tanks
- Cooling of control cabinet
- Sludge tank level readout in display panel
- M Flue gas fan motor heater
- Frequency controlled flue gas fan
- Z CCS centr. control station slave display
- Y Twin tanks
- \* Expected daily consumption when burning sludge with less than 50 % water content
- \* With optional bilge water injection (I)
- \*\*\* Front sided sluice solution





BILGE WATER INJECTION FOR TEAMTEC INCINERATORS

#### **Purpose and Benefits**

- Supplement to the OWS
- Developed primarily for disposal of bilge water
- · Increased sludge burning capacity
- Reduced NOx emission
- No filters or strainers
- No chemicals
- No more "magic pipes"
- Inexpensive
- IMO certified
- Quick and simple upgrading of existing incinerators



### SLUDGE PREPARATION TANK

### **Sludge heating/mixing tanks**

For the best economical operation and optimal efficiency of any incinerating plant we recommend installing two cylindrical sludge tanks allowing for proper water settling and drainage. One tank is used for settling and the second is the service tank. All TeamTec tanks are complete with sludge circulation pump, level switches and thermostat.









# **HEATING OPTIONS**





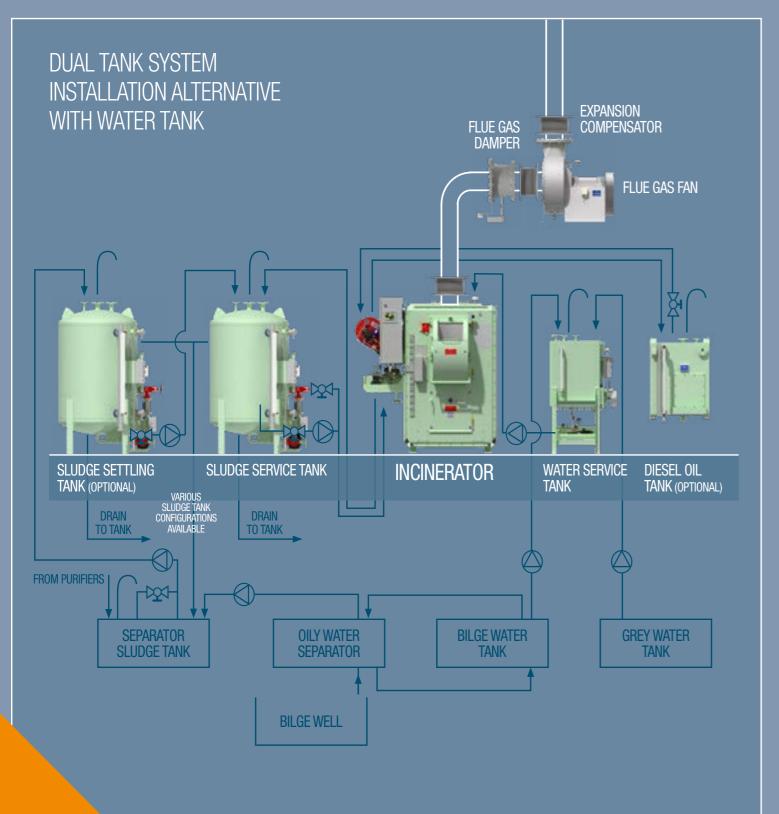


# OPTIONAL SUPPLEMENTS

- Level transmitter for read out on incinerator display
- TeamTec water in oil monitor for a perfect control of your sludge oil quality, available upon request

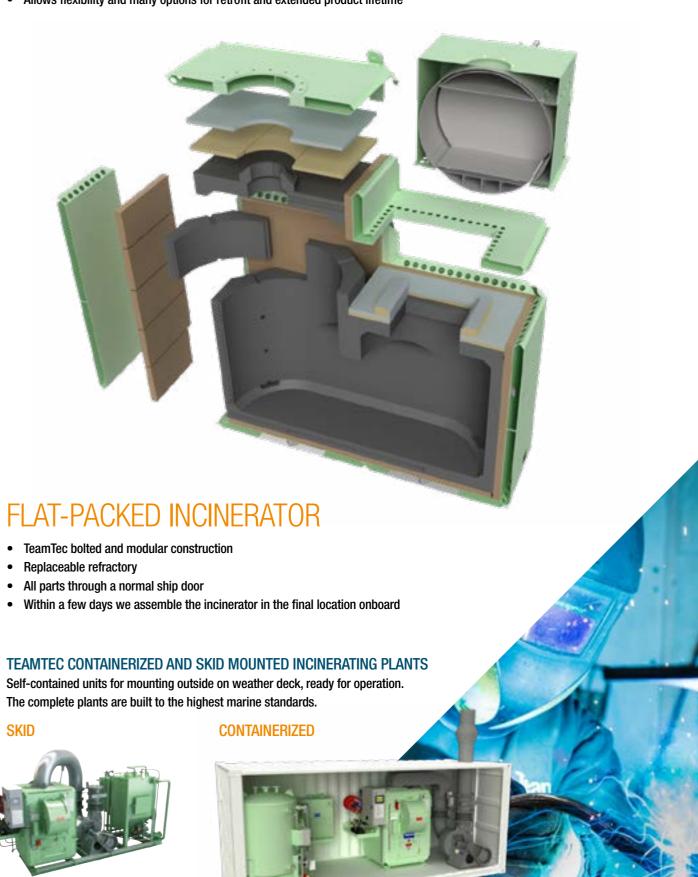
Туре	Heating by steam - thermal oil	Heating by el. power	Circ. pump el. power	L x W x H mm	kg
435 I				1528 x 905 x 1767	370
700 I		12 kW		1422 x 836 x 2016	500
1100 I	50 kg/h - 6-10 bar		2,5 kW	1632 x 1251 x 2050	500
1700 I	30 kg/11 0 10 bai		2,5 KW	1905 x 1439 x 2110	590
2000 I		16 kW		1815 x 1439 x 2360	630
3000 I				2030 x 1660 x 2470	750
400 I	Diesel oil tank			910 x 750 x 1167	190
435 I	Water service tank	(12 kW)		1528 x 846 x 2308	491

# RECOMMENDED SHIP'S INCINERATOR INSTALLATION



## **MODULAR DESIGN**

· Allows flexibility and many options for retrofit and extended product lifetime





# LIFECYCLE SERVICE

TeamTec provides comprehensive lifecycle service for all TeamTec products.

#### **SPARE PARTS**

- Tailored spare part kits
- Prolonged life-time of the units
- Trouble-free operation
- Avoid unnecessary downtime and costs
- · Parts in stock can be sent the same day as the order is received

Contact us: spares@teamtec.no

#### **UPGRADES**

- Improved technology has many advantages; keywords are automation, increased capacity and lower fuel consumption
- · We can offer various upgrades of both software and hardware
- · Additional equipment and features can be retrofitted to further improve the versatility
- · Upgrading kits make older incinerators more cost-efficient and environmentally friendly

Contact us: spares@teamtec.no

#### **SERVICE**

A combination of experienced and highly qualified staff plus extensive know-how guarantees our customers will receive the highest level of customer care.

#### **OUR SERVICE DEPARTMENT PROVIDES THE FOLLOWING:**

- Commissioning
- Repair service
- Pre-installation survey

#### SERVICE AGREEMENT AND TRAINING:

- Annual service visits
- Technical seminars
- · Required training of the crew operating the incinerator
- Simplify acceptance by local port authorities

Contact us: service@teamtec.no



# GLOBAL PRESENCE

The TeamTec head office and manufacturing is located in Southern Norway, and we also have a sales and service office in Singapore. A global network of representatives is ready to support our customers 24/7.

The TeamTec incinerators are well known in the market under different brand names including Golar and Kværner. Additionally, our incinerators are manufactured at our assembly line in China, Nanjing Luzhou Machine Company, to serve the Asian market.





