

# INDIRECT FIRED WATER BATH

## IFWB VAPORIZERS



Product Datasheet **8.0**

**Thermax Indirect Fired Water Bath (IFWB) Vaporizers** are typically used for LNG satellite plants, LNG peak shaving, LNG virtual pipeline, oxygen, nitrogen, argon or carbon dioxide (CO<sub>2</sub>) gas supply installations and large scale oxygen and nitrogen plant back-up systems.

The water bath ensures smooth and continuous operation, even in case of power failure.

Product range includes stationary and trailer mounted mobile units.

IFWB vaporizers consist of a **Thermax Vortex-Flow™** vaporizing tube bundle that is submerged in a water bath. The water bath is indirectly heated and temperature controlled by hot combustion gases flowing through the **Thermax Vortex-Flow™** submerged fire tube. The unit comes complete with fuel train burner(s), blower(s), ASME code stamped tube bundle, water bath shell and controls. The burner and blower are enclosed in a weather proof protective shield.

### Standard features

- ASME Sect VIII Div. 1 code stamp on bundle
- Auto-fill water level switch & valve
- Fully assembled with fuel train, blower and burner automatic control system
- NEMA 4 electrical cabinet & gas train
- On demand spark ignition with auto-reset after power outage
- Stainless steel removable tube bundle
- Temperature gauge & Sight glass
- Man-way for easy access
- NFPA 87 – Integrated controls
- High/low water temperature sensor
- First Out Annunciation Burner Controls



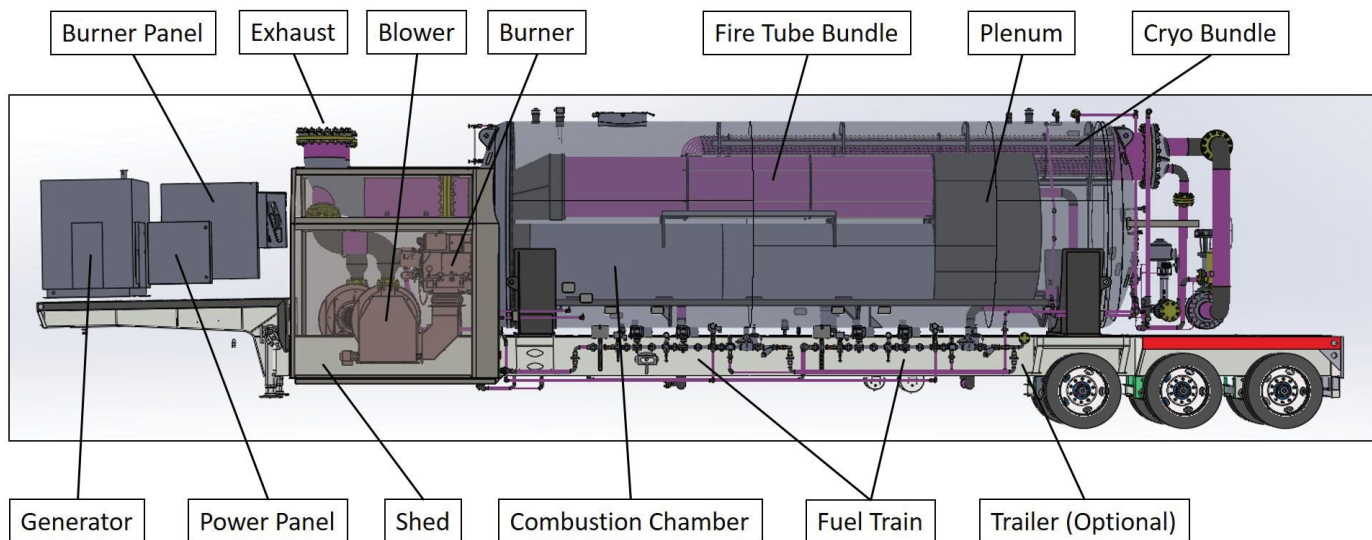
### Options

- Low NOX and Ultra-Low NOX Emission Combustion Systems
- Approval for CSA components, CRN registration
- Low/high temperature kit
- Coil bundle made from Hasteloy, Monel, Duplex or Titanium
- Fail safe process gas shut down valve
- Dual redundant burner system (lead lag or standby)
- Low temperature process gas sensor
- Oversized tanks for up to 30 minutes of ballast
- Dual process bundle
- Pressure build circuit
- Tank insulation
- Trailer Mounted Mobile Units
- Digital Output to Plant Control Room



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### PERFORMANCE:

Thermax IFWB vaporizers offer a safe and reliable cryogenic or liquefied gas source for standby or continuous operation. IFWB vaporizers go from cold start to full capacity within ten minutes of start-up or instantaneously when left in standby mode.

The large capacity vaporizers have rated flows up to 6,000 MSFH (O<sub>2</sub>, N<sub>2</sub>, or LNG) in standard models.

**IFWB Product Line**

Model	LNG (SCFH)		LOX/LN <sub>2</sub> /LAR (SCFH)		CO <sub>2</sub> (LB/HR) @ 200 PSIG		MAWP PSI	Burners MMBTU/Hr	Tank Diameter		Connection (PS)	
	Min	Max	Min	Max	Min	Max			in	mm	in	mm
IFWB1.0	18,000	55,000	23,000	60,000	1,500	5,000	450	1	86	2,184	2	51
IFWB3.0	43,750	150,000	41,250	165,000	3,500	14,500	450	3	156	3,962	2	51
IFWB7.5	106,250	350,000	100,000	400,000	8,800	35,200	450	8	291	7,391	4	102
IFWB15	218,750	725,000	206,250	825,000	17,500	70,000	450	15	312	7,925	4	102
IFWB30	437,500	1,500,000	412,500	1,650,000	35,000	140,000	275	30	240	6,096	6	152
IFWB60	875,000	2,900,000	812,500	3,250,000	67,500	270,000	275	60	315	8,001	10	254

All tables shown on this Datasheet are intended as a guide that reflect our experience on these models. Actual performance may vary. Please call Chart Inc. for specific applications. This product and/or data was designed and/or developed by Thermax Inc. and shall not be used in any way injurious to the interests of Chart Inc.