

Zimmer™

Dry-Electric LPG Vaporizer



ZIMMER Technical Specifications

Vaporizer Type/Model	Indirect	Dry-Electric	Feed Out		
	Model	Z40	Z100	Z150	
Hazardous Area Classification		Class I, Division 1, Group D, T3; Ex db IIA T3 Gb (Zone 1)			
Approvals		UL/ULc, CE (ATEX & IECEx), PED (SEP)	UL/ULc, CE (ATEX & IECEx), PED (Category I)		
Vaporization Capacity*	Kg/hr	40	100	150	
	US Gal/hr	20	50	75	
	MMBTU/hr	1.8	4.5	6.8	
Liquid Inlet Connection		1/2" FNPT	3/4" FNPT		
Vapor Outlet Connection		1/2" FNPT	3/4" FNPT		
Design Pressure (MAWP)		250 psig - 17.2 barg			
Relief Valve Set Point		250 psig - 17.2 barg			
Hydrostatic Test Pressure		375 psig - 25.9 barg			
Unit Dimensions		26.9" L x 9.5" H x 8.3" W	67.4" L x 9.5" H x 8.3" W		
		677 mm L x 241 mm H x 210 mm W	1706 mm L x 241 mm H x 210 mm W		
Shipping Dimensions		34" L x 11" H x 14" W	75" L x 11" H x 14" W		
		863 mm L x 280 mm H x 356 mm W	1905 mm L x 280 mm H x 356 mm W		
Shipping Weight		55 lb / 25 Kg	145 lb / 66 Kg		
Optional Accessories		Tank Mount Kit; Tank Mount Piping Kit; Wall Mount Kit; Strainer and Piping Kit for Wall Mount; Regulator/Gauge for Wall Mount; Drain Valve Kit	Floor Mount Kit; Wall Mount Kit; Strainer and Piping Kit; Regulator/Gauge Kit; Drain Valve Kit		

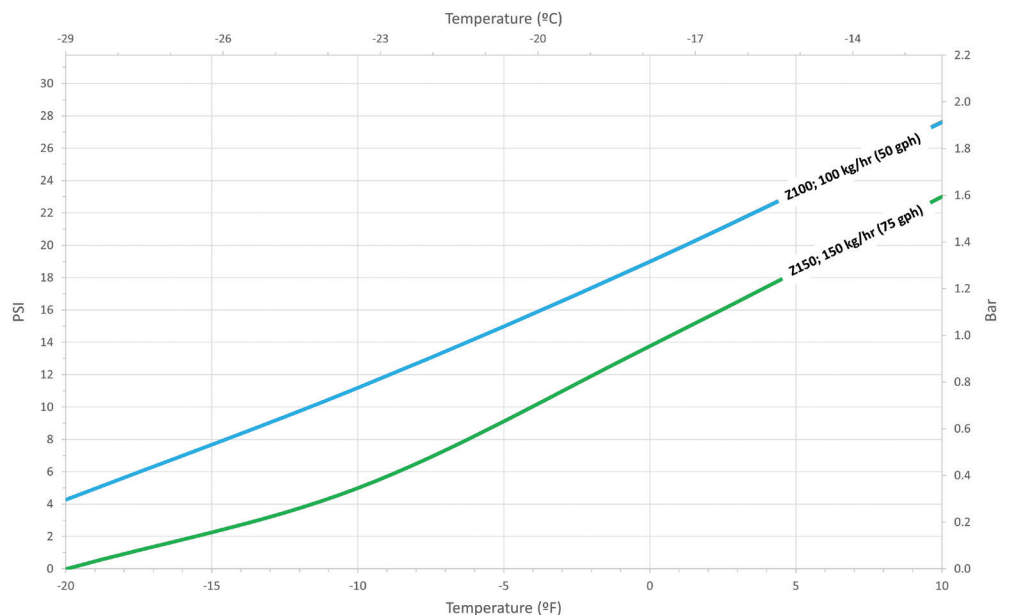
*Capacity rating may vary with ambient conditions

Under low ambient temperature conditions and when operating with 100% propane, the pressure drop through the heat exchangers of models Z100 and Z150 limits the pressure at the outlet of the vaporizer necessary to achieve full capacity through the high pressure regulator. Use the Vaporizer Outlet Pressure chart to determine the Z100 and Z150 outlet pressure at various liquid propane inlet temperatures. If the outlet pressure is not sufficient to achieve the required flow rate, a liquid pump needs to be installed in the system. For additional information on the Z100 and Z150 outlet pressure as a function of the flow rate and liquid inlet temperature, refer to detailed charts located on our website or contact the factory for application assistance.

Note: Vaporizer outlet pressure chart is for use with above ground tanks only, does not apply to buried or mounded tanks, and assumes LPG composition is 100% propane, no liquid pump in the system, no vapor withdrawal from the tank, and liquid propane in the tank is at ambient temperature.

Vaporizer Outlet Pressure at Full Capacity

(Models Z100 and Z150)



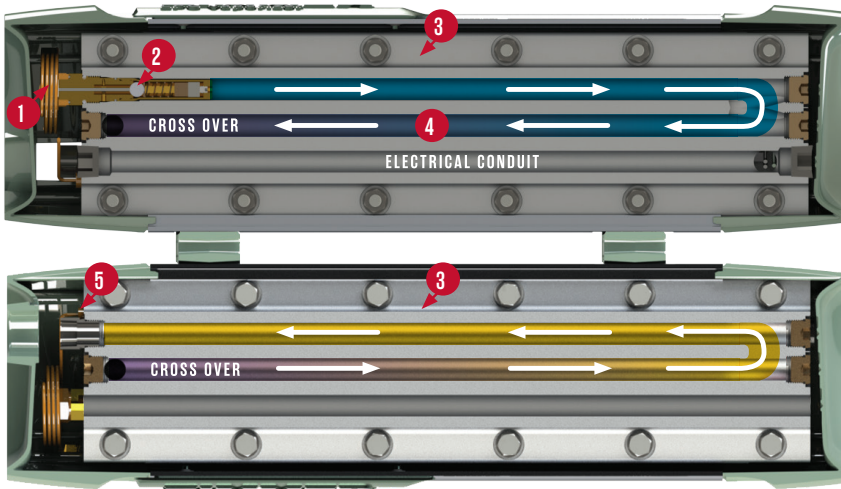
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ZIMMER Operational Overview

Liquid LPG enters the inlet valve **1** and is controlled by a metal-to-metal seat and ball **2**. Infinite seating positions of the ball provide repeatable and reliable operation.

Energy transfers from the heat exchanger **3** into the LPG as it passes through the easy-to-maintain tubes **4**, causing the LPG to boil. The aluminum heat exchanger provides excellent heat transfer and corrosion-free operation. Energy drawn from the heat exchanger is replenished by energy efficient, self-modulating heaters, consuming only as much energy as required for vaporization. The self-regulating heaters eliminate the need for switches, temperature sensors, contactors and other controls and won't overheat by nature of their design.

Exiting LPG vapor heats or cools a temperature-sensing bulb **5**, providing feedback to the inlet valve. The inlet valve combines this feedback with pressure feedback to ensure only superheated LPG vapor exits the Zimmer.

Electrical Specifications

ZIMMER's design allows multiple power supply options, 50Hz or 60Hz, to be supplied to the vaporizer without the need to change wiring inside the vaporizer. Power supply options for the Z25-Z50 range from 100-277VAC single phase. Power supply options for the Z100 and Z150 range from 100-277VAC single phase or up to 480VAC 3 phase, 4-wire Wye configuration.

A properly sized D or J type circuit breaker (UL 489 or CE equivalent) is required for use with the ZIMMER to allow a high level of inrush current on start-up. For 3 phase 4 wire Wye wiring, a 4 pole circuit breaker is required for the electrical installation.

SINGLE PHASE WIRING

Voltage L1 to Neutral [VAC]		100*	120*	208	220	240	277
Z40	Power [kW]***	3.6	3.6	4.8	4.8	4.8	4.8
	Current at rated Capacity [A]***	35.7	29.8	22.9	21.6	19.8	17.2
	Circuit Breaker D/J Type [A] (125%)	45	40	30	30	25	25
Voltage L1, L2 or L3 to Neutral [VAC]		100*	120*	208	220	240	277
Z100 **	Power [kW]***	8.9	8.9	11.9	11.9	11.9	11.9
	Current at rated Capacity [A]***	29.8	24.8	22.9	21.6	19.8	17.2
	Circuit Breaker D/J Type [A] (125%)	40	35	30	30	25	25
Voltage L1, L2 or L3 to Neutral [VAC]		100*	120*	208	220	240	277
Z150 **	Power [kW]***	13.4	13.4	17.9	17.9	17.9	17.9
	Current at rated Capacity [A]***	44.6	37.2	28.6	27.0	24.8	21.5
	Circuit Breaker D/J Type [A] (125%)	60	40	50	35	35	30

THREE PHASE WIRING (4 Wire Wye)

Line to Line Voltage [VAC]		173*	208*	360	380	415	480
Voltage L1, L2 or L3 to Neutral [VAC]		100*	120*	208	220	240	277
Z100	Power [kW]***	8.9	8.9	11.9	11.9	11.9	11.9
	Current at rated Capacity [A]***	29.8	24.8	22.9	21.6	19.8	17.2
	Circuit Breaker D/J Type [A] (125%)	40	35	30	30	25	25
Line to Line Voltage [VAC]		173*	208*	360	380	415	480
Voltage L1, L2 or L3 to Neutral [VAC]		100*	120*	208	220	240	277
Z150	Power [kW]***	13.4	13.4	17.9	17.9	17.9	17.9
	Current at rated Capacity [A]***	44.6	37.2	28.6	27.0	24.8	21.5
	Circuit Breaker D/J Type [A] (125%)	60	50	40	35	35	30

*25% capacity derate with 100-120V line to neutral voltage

**Requires three (3) single phase breakers, one for each leg (L1, L2, L3)

***Operating conditions affect power and current