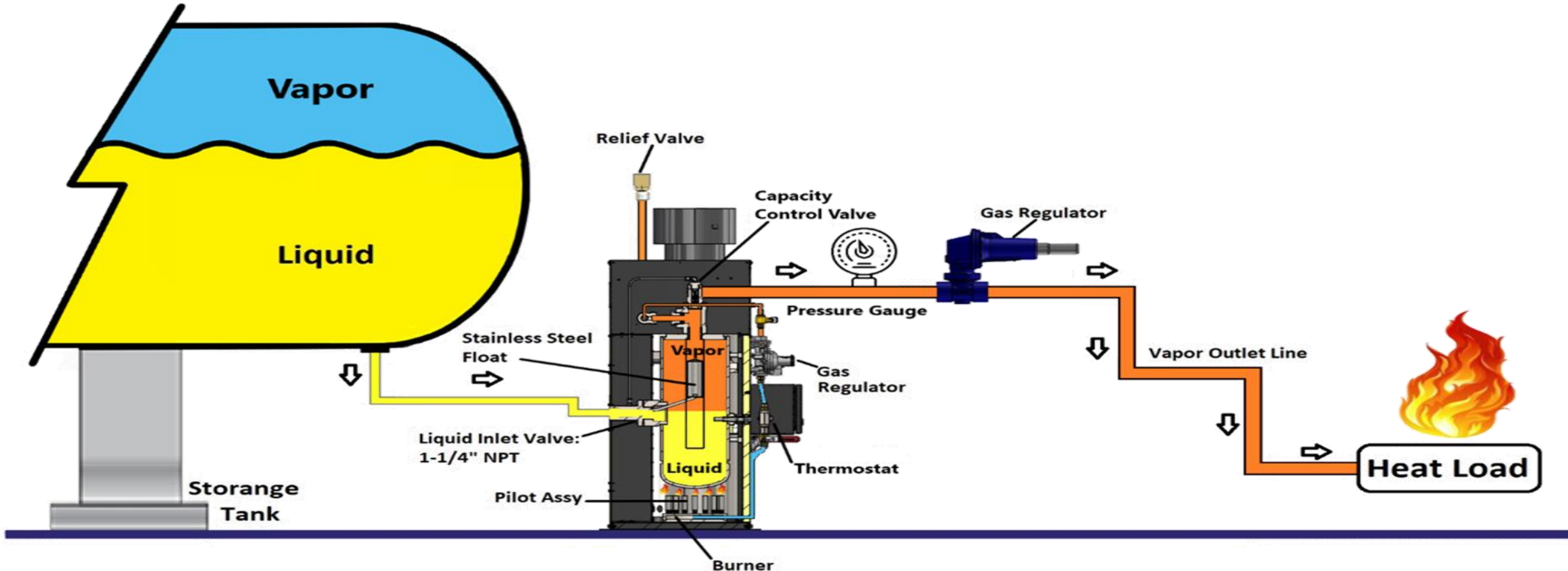




The most reliable and affordable direct fire vaporizer in the market

A vaporizer is required in the following cases:

1. When temperatures are low and the natural vaporization inside the tank is insufficient.
2. When the demand required by the consumption equipment is higher than the one the container can deliver naturally.



Vaporization Capacity

We offer two different capacities:

MODEL	VAPORIZATION CAPACITY (NOMINAL *)	
	Gal/h	MBTU/h
DS-80 WG	80 Gal/h	7,044,300
DS-120 WG	120 Gal/h	9,392,400

The volumetric flow expense are declared as “Nominal”. These may vary due to the conditions of the installation in which the equipment is located.

The actual vaporization capacity will depend on factors that are part of the installation and loss of 15% to 20% of the nominal capacity.

All our vaporizers are 100% tested, which guarantees correct operation and optimal performance.

These kits are tested on a UL reviewed test bench, with actual demand to verify vaporization capacity.

Having standard capabilities of:

- ✓ **80 WG** **7 MBTU/h**
- ✓ **120 WG** **9 MBTU/hT**

Test preform at Mexico City (Altitude 2,200 m)

- Average temperatures of 20-23 ° C
- Blend Gas LP 70-30
- Average pressure of 7-8 Kg/cm²

Vaporizers Specifications and Certifications

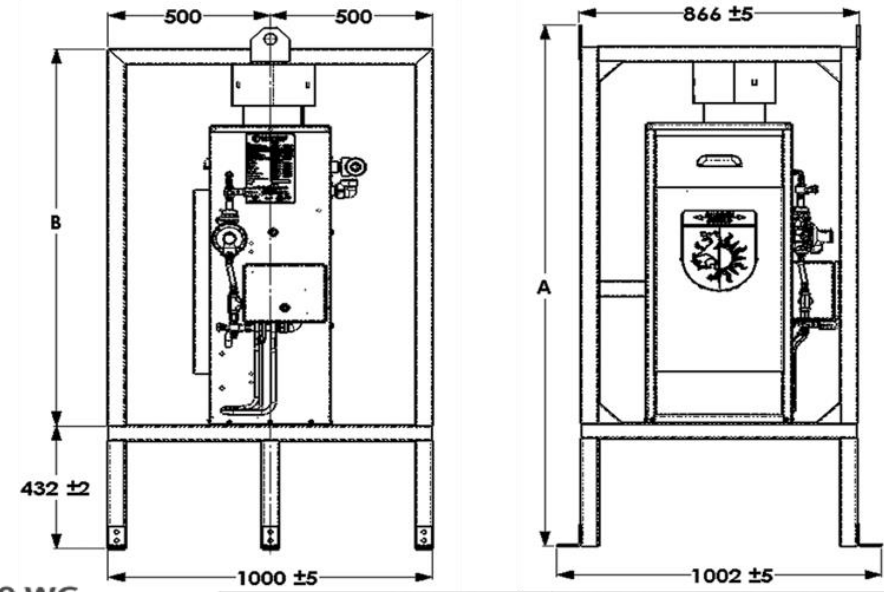
CAPACITY	80 WG	120 WG
Design Pressure	250 psig 17.2 Bar	250 psig 17.2 Bar
Relief Valve	✓	✓
Hydrostatic Pressure	435 psig 29. Bar	435 psig 29. Bar
Liquid Inlet (NPT)	1-1/4"	1-1/4"
Vapor Outlet	1"	1"
Vaporization Capacity		
US Gal/h	80	120
MBTU/h	7	9.4
Burner Outlet		
(.000) kcal/h	24,002	35,020
(.000) BTU/h	95,249	138,963
Certifications		
ASME Code	✓	✓
Coated Certification	✓	✓
Thermal Certification	✓	✓
Auto-ignition System	✓	✓
Weight		
Kg	116	133
Lb	256	293



Cage

Every Dragon Shield Direct Fired Vaporizer includes a multi-purpose cage:

- ❑ Protect the vaporizer during the transportation
- ❑ Easy handling for crane and forklift operations
- ❑ Serves as a foundation base to install the vaporizer for operation



80 WG

Code	Model	A		B		Weight	
		inches	mm	inches	mm	kg	pounds
GA51204146-U	DS 80 WG	72-11/64"	1833	52-1/4"	1327	202	445

120 WG

Code	Model	A		B		Weight	
		inches	mm	inches	mm	kg	pounds
GA51204147-U	DS 120 WG	78-35/64"	1995	58-19/32"	1488	228	503

It is constructed in structural steel and electrostatic paint, improves its useful life and allows proper handling of the Vaporizer.

The height provided by the assembly on the Cage, allows the vaporizers to be 40 cm above the floor, which helps to avoid condensation of burners in case of extreme climates (Snowfall, water or extreme heat).

Easier to work on the unit when there is snow on the ground.

Cabinet and wind trap Chimney



Our cabinet is fabricated with a heavy-duty metal frame to protect devices. The cabinet is electrostatic coated to increase its resistance to oxidation in contact with corrosive environments.

The design of our chimney with a wind trap prevents gusts of wind from entering through the shaft and turning off the burner. It also avoids continuous use of the self-ignition system and gives the battery and spark generator a longer life.

Additionally, the floor and 2 sidewalls, have a double-wall that insulates the vaporizer in extreme temperatures (-49 °C to 750 °C / -56 °F to 1382 °F) to avoid freezing or overheating of components guaranteeing it's correct operation.

The insulation on the floor prevents condensation on the burners allowing the unit to reignite all the time.

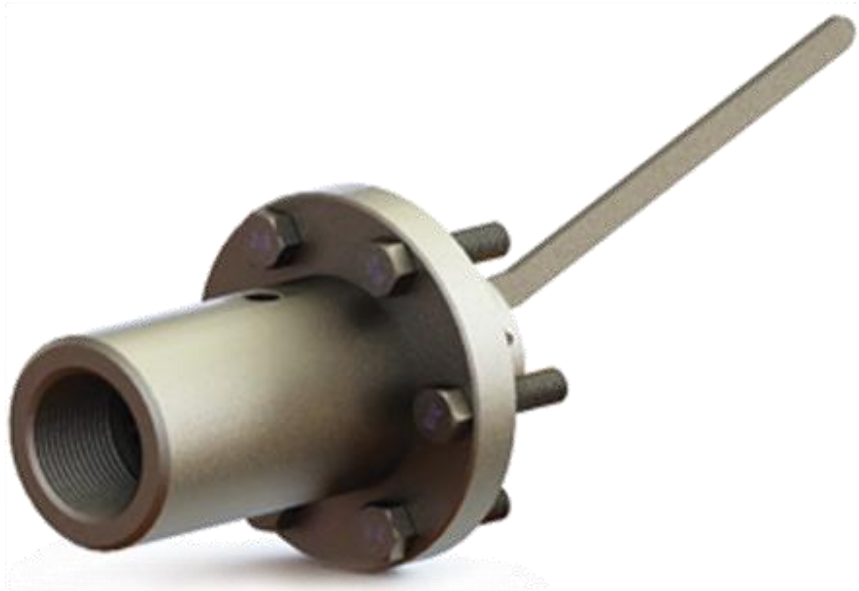
Liquid inlet valve

The design enables the device to keep a controlled liquid level inside the heat exchangers.

In addition, it regulates the vaporizers internal pressure, exchanging vapor with the storage tank.

Mechanized steel bar valve, this manufacturing process guarantees zero leakage in the valve body since there is no porosity, as is the case with competitive cast iron valves.

Tested in UL laboratories to vaporizer standards with more than 100,000 cycles of operation without failure.



Heat Exchanger (Tank)



The container is constructed with materials certified for the application of direct fire and resistance to service pressure.

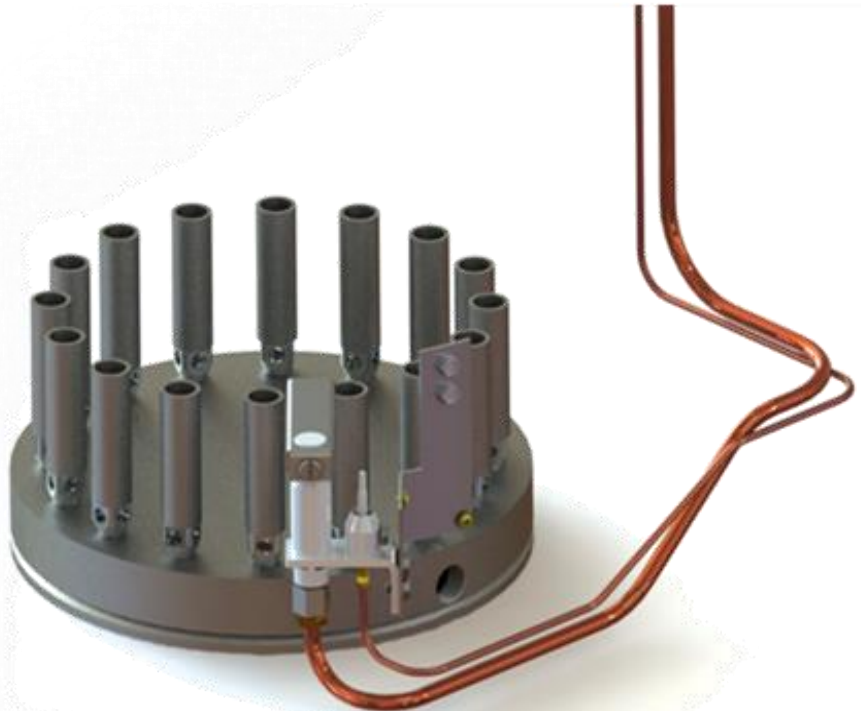
Inside, it allows for vapor to be generated in an accelerated manner.

The container is manufactured **under ASME code, Section VIII, Division 1, addenda 2019.**

Heat exchanger Manufactured by ARCOSA INDUSTRIES, guaranteeing its manufacture under high quality standards, complying with the necessary certifications and accreditations for these.



Burner and pilot



Dragon Shield design and manufactures its own burner to eliminate porosity leaks in materials. This is accomplished by utilizing a steel bar instead of cast iron.

The burner body receives a cadminization treatment, which improves resistance to acid and salt corrosion.

We manufacture our jet burner and extensions in stainless steel to eliminate leaks and corrosion.

Burner working pressure: 11PCA

Burner consumption: 95,249 Btu/h

Pilot working pressure: 332-415PCA

Pilot consumption: 0.57 m³/h

The manufacture of this type of burner guarantees its correct operation, without problems of porosity or leaks, improves performance and reduces maintenance to a great extent, thanks to the stainless materials and the anti-corrosion treatment.

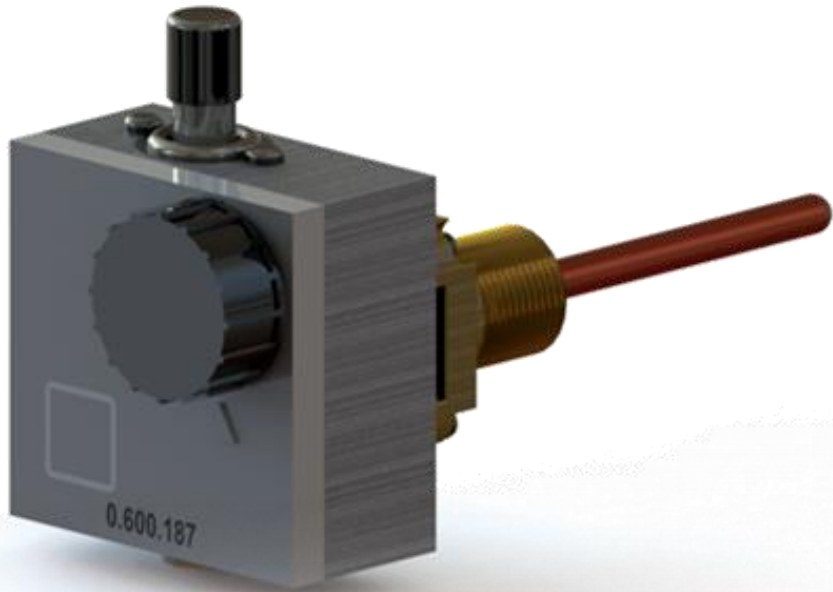


Temperature control (Thermostat)

The thermostat regulates operation cycles of the burners and pilot, and the regulation of vapor output temperature.

It is calibrated with a 140-158 °F output temperature range.

UL Recognized Element.



Capacity control valve



This mechanical device is designed to prevent the untimely over-demand of vapor, partially blocking the gas output through the hydrostatic pressure generated by excessive liquid input.

Valve manufactured with high quality materials, steels and treatments for operation with LP Gas, UL Listed seals, tested in UL laboratories according to the Vaporizers standard.



Electronic Ignition

The system detects if the pilot flame extinguishes and automatically generates a spark in the pilot to reignite it.

This guarantees that in case of extreme weather the vaporizer is automatically re-started.

System assembled with components listed and recognized by UL, guaranteeing the correct operation of the reignition system. With Lithium battery, which improves performance and reduces replacements.

Components UL

- Power generator
- Spark plug
- Lithium battery
- Cables
- Condulec box with switch



Thermal Box



The double-bottomed metal cabinet is coated to increase its resistance to oxidation in contact with corrosive environments.

Additionally, an insulation for extreme temperatures (-49 °C to 750° C / -56 °F to 1382 °F) is placed on the walls to avoid freezing or overheating of components, guaranteeing their correct operation.

Easy opening and closing allows for efficient operation.

The manufacture of this Thermal Box assembly protects the thermostat and reignition system, thanks to its double bottom and thermal insulating wall, which guarantees a correct vaporizer operation and minimizes maintenance and parts replacement.

Pressure Regulator

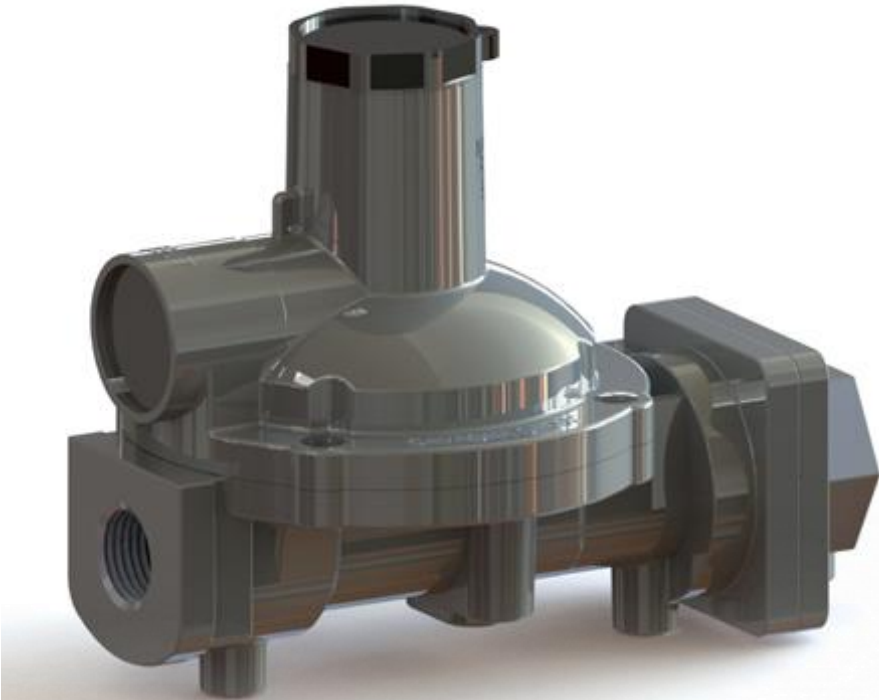
Regulates the pressure and flow of LP Gas in vapor state towards the burner and pilot.

This element is designed to work at high temperatures (-40 °C to + 74 °C) and high pressure.

It supplies to burners and pilot with maximum pressure of 20 PSI in second stage.

Double stage high temperature regulator, ideal for operation and supply to pilot and burner. (Factory installed regulator, Cavagna model)

It can be replaced by 3 models used in most competitor vaporizers as they are listed in our vaporizer manual.



- CAVAGNA 98TW-15
- REGO LV4403
- Fisher R232A-BBF

Safety Valve

The safety valve is a device used to release the fluid flow rate or excess pressure whenever it exceeds 250 psi.

Safety Valve UL listed, guarantees correct operation in case its activation is required.





DESIGNED TO OPERATE UNDER EXTREME
WEATHER CONDITIONS PROVIDING
RELIABLE SERVICE

- LOWER COST: VAPORIZER AND SERVICE PARTS
- GREATER OPERATING EFFICIENCIES BTUs
- LONGER LIFE
- LESS DOWNTIME RESULTING FROM “FLAMEOUTS” AND PART FAILURE