



Subsidiary of Superior Holding, LLC

Macro Technologies, LLC

LNG FUELING COMPONENTS

CryoMac2™ LNG Fueling Nozzles

LNG Tank Receptacles

Fueling Caps

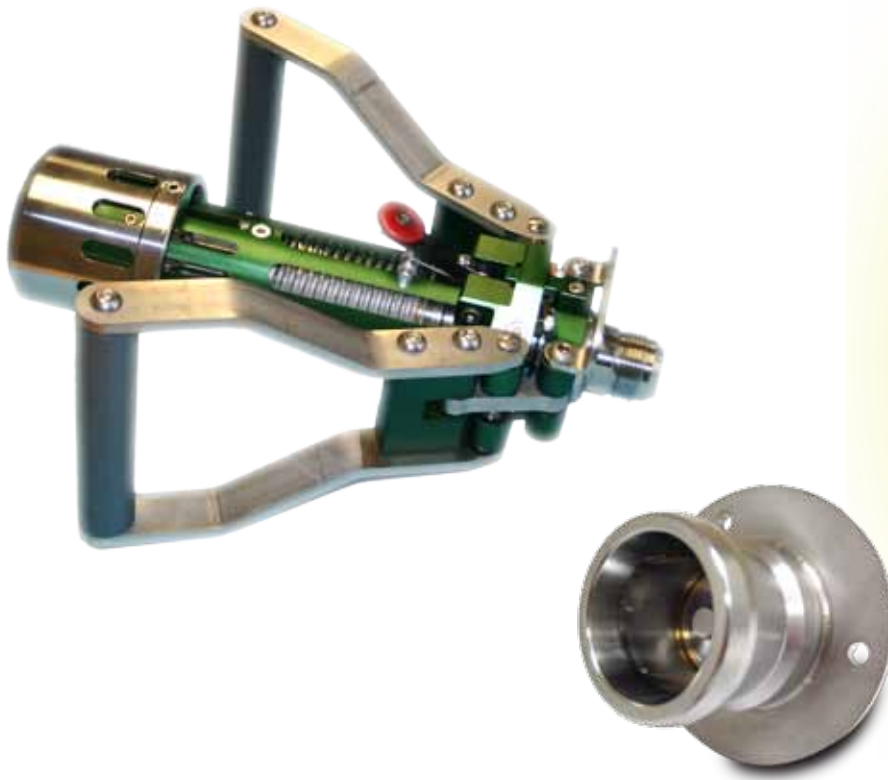
Breakaway Couplings

Cryogenic Hoses

Quick Disconnect Vents/Fill



COMPONENTS FOR LNG FUELING SYSTEMS



Industrial



Hospital



Specialty

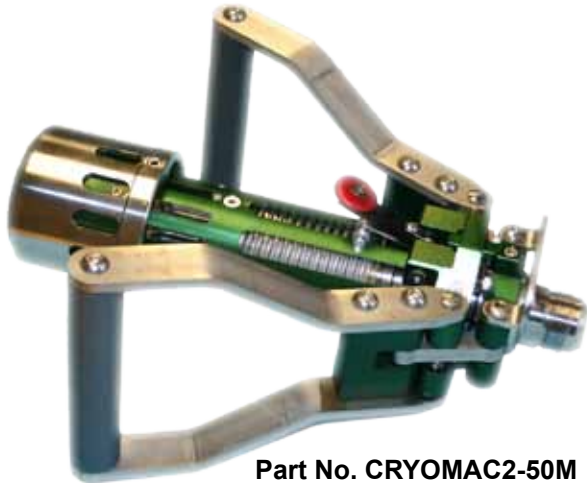


Engineering

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LNG FUELING COMPONENTS

CryoMac2™



Part No. CRYOMAC2-50M
(pictured)

CRN #OH15845.5

CryoMac2™ 50M LNG Fueling Nozzle (patent pending)

PART NUMBER	DESCRIPTION
CRYOMAC2-50M	Nozzle, 50 GPM Fueling, 1" Male JIC
CRYOMAC2-50M-S	Nozzle, 50 GPM Fueling, 1" Male JIC short handle version

CryoMac2™ 50M Features:

- **Safer!** When the handles are pulled back to remove the Nozzle, the "center section" reaches a positive stop. This lets the operator know where to stop to vent the gases that are trapped between the Nozzle and the Receptacle. Just a few seconds makes the safety difference!
- **More "User Friendly"** Lighter weight, easier to slide onto the receptacle, and less icing issues. No clamps to catch when removing!
- **Less Ice issues** Non-metallic bearings and air gaps are used.
- **Easier to Service** End Seal, Poppet, Poppet Seal, Poppet Seat and Nozzle End, can all be serviced easily. No "clamp dogs" to replace.
- **No Tie Rods** to adjust after service reduced maintenance time.
- **Reasonable Cost** Designed for reliability and manufacturability.
- **Short handle version available** for fueling vehicles with space constraints and limited clearance

LNG Tank Receptacle

PART NUMBER	DESCRIPTION
13620	LNG Male, Fueling, 50 GPM, 3/4 NPT Fe.
13705	LNG Male, Fueling, 50 GPM, 90 deg. 3/4 Flareless
13990	LNG Male, Fueling, 50 GPM, M30 x 1.5
14120	LNG Male, Fueling, 50 GPM, 3/4 Flareless
14405	LNG Male, Fueling, 50 GPM, 37 deg. SAE Male



Part No. 13620

Receptacle Features:

- Available with NPT and tube end fittings
- Max internal pressure 300 PSIG/20.7 Bar (while fueling)
- Max system pressure 550 PSIG/38 Bar (static)
- 100% pressure tested



LNG FUELING COMPONENTS



Part No. 11910

Cryogenic Hose for LNG Fueling

PART NUMBER	DESCRIPTION
11910-072	72" Cryogenic Hose, for use with LNG 50 GPM Nozzles
11910-120	120" Cryogenic Hose, for use with LNG 50 GPM Nozzles
11910-144	144" Cryogenic Hose, for use with LNG 50 GPM Nozzles
11910-180	180" Cryogenic Hose, for use with LNG 50 GPM Nozzles

Cryogenic Hose Features:

- LNG fueling hose for use with LNG 50 GPM Nozzles
- All stainless steel construction with braid armor allows hose to remain flexible while still offering superior durability
- 100% pressure tested
- 37° Female SAE flare connection, 1" OD tube size (both ends)
- Safe for cryogenic temperatures between -320°F to 500°F
- Rated up to 450 PSIG/31 Bar working pressure

Part No. CHB-440-440



LNG Vent Hose

PART NUMBER	DESCRIPTION
CHB-440-440-XXX	Cryogenic hose assembly, 1,100 PSI service
<i>XXX=length in inches</i>	
<i>Example: 10 foot assembly part number is "CHB-440-440-120"</i>	

LNG Vent Hose

- Stainless steel body
- Brass ends mate with 5/8 Tube 45° SAE flare connection,
- ø0.8750-14 (UNF THD., both ends)
- 100% pressure tested
- Working temperature range -350°F to 1500°F
- Rated up to 1100 PSIG/75.8 Bar working pressure

LNG Male Fueling Cap

PART NUMBER	DESCRIPTION
13665	Cap for Fueling Receptacle

LNG Male Fueling Cap Features:

- The only cap on the market that limits the intrusion of contamination into the LNG Receptacle.
- Safely securely seals the LNG receptacle with an O-ring seal and filtered breather.
- Positively locks on to the LNG Receptacle.
- Aluminum body, unlike rubber caps the aluminum finish will not stain or mark
- Lanyard included, prevents misplaced caps



Part No. 13665

LNG FUELING COMPONENTS



Part No. 12895



Part No. 11175

LNG Male QDV

PART NUMBER	DESCRIPTION
12895	LNG Male QDV, 10 GPM/Vent, Bulkhead, 3/8 NPT Conn.
14000	LNG Male QDV, 10 GPM/Vent, M20 x 1.5 Bulkhead
14410	LNG Male QDV, 37 degree SAE Male

LNG Female QDV

PART NUMBER	DESCRIPTION
11175	LNG Female, QDV, 10 GPM/Vent, 90deg. Tube
13775 *	LNG Female, QDV, 10 GPM/Vent, Short Str. Handle
13785 *	LNG Female, QDV, 10 GPM/Vent, Long Str. Handle

**Cryogenic Swivel (Part No. 9551-3) required*

LNG QDV Vent Features:

- Over 100,000 in service worldwide
- LNG vent/fill connection, handles both LNG Vent Gas and LNG Liquid.
- Max internal pressure 300 PSIG/20.7 Bar (while fueling)
- Max system pressure 550 PSIG/38 Bar (static)
- Dust cap included
- 100% pressure tested

Cryogenic Swivel
Part No. 9551-3



Fill Hose Breakaway Coupling

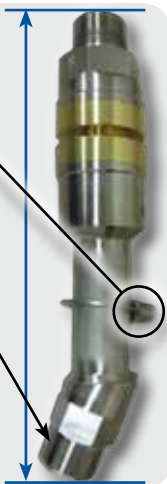
Part No. Prefix	Dash #	Style	Length
13740 (Includes 1/4" MNPT Sensor Plug)	-2	1" tube size, SAE 37°, 22.5° angled	Standard (10.50")
	-4	1" tube size, SAE 37°, 22.5° angled	Short (7.25")
14390 (Does <i>not</i> include Sensor Plug)	-6	M36-2, 22.5° angled	Standard (10.50")
	-8	M36-2, 22.5° angled	Short (7.25")

Part No. 13740-6

Sensor Plug included

M36-2, 22.5° angled

Standard Length
Standard Length: 10.50"



Breakaway Coupling Features:

- Engineered to automatically shut-off flow of LNG in case vehicle drives away from station with nozzle still connected.
- Helps to prevent damage to the fueling station if hose and nozzle are forcefully pulled from station
- LNG compatible, operating temperature -320°F to 140°F
- Rated up to 250 PSIG /17.2 Bar max fueling pressure (connected); 500 PSIG/35 Bar static (disconnected)

Part No. 14390-8



Short Length: 7.25"

Breakaway couplings listed are installed between the LNG dispenser and fueling hose, for Vent Hose Breakaway information please visit our website.

Visit us at www.macrotechnologies.com/LNG_Fueling.htm for more information



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