



Brennan Industries carries a wide range of Instrumentation components that are used in MRO and OEM applications across multiple industries. With over 10,000 SKUs available, distribution/manufacturing across the globe, and a testament to quality products, Brennan Industries is a leader in the instrumentation components industry.



Originating in Israel in 1950, Ham-Let specializes in gas instrumentation fittings, valves, manifolds and innovative solutions designed for the ultra-high purity and process industries.

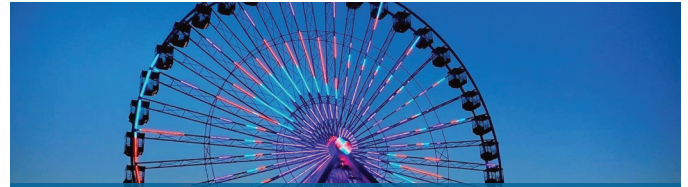


**Please contact your Brennan representative for any additional questions.**



## Aerospace/Aircraft

- Landing gear systems
- Rocket and Jet Test Stands - Use many common Stainless Steel fittings and valves
- Flight Simulators
- Breathing air testing systems



## Amusement Parks

- Special Effects systems - including the following
  - Laser/Light shows with smoke machines
  - Fire effects – propane or natural gas
  - High Pressure water systems – gysers and water jets
  - Smoke effects – various chemicals (high purity)
  - Chemical effects – Helium/Hydrogen
- Water fountain systems – fittings and valves exposed to caustic or high salinity.
- Stainless steel compression & pipe fittings
- Car & Coach - gasoline/natural gas/propane burning systems
- Paint booths



## Agricultural

- Tractor and farming machinery, including sprayers
- Stainless Steel components for chemical delivery systems – pesticides, herbicides, and other critical fluids that may be hazardous or toxic if not properly contained.
- Onsite processing applications – food packaging gases (High pressure or onsite generation)
- Testing laboratories – GC, LC/MS
- Used widely in the wine, alcohol and nutraceutical markets.



## Bottling Plants

- Packaging systems – head space filling applications (pure gas or cryogenic)
- Stainless food grade fittings



## Car/Automotive Manufacturing

- Emissions testing
- Paint booths
- Environmental monitoring
- Laser systems
- Robotic welding cells – shielding gases and critical air line connections.
- Plant air or compressed gas systems.



## Corrugated Box Plants

- Brass and steel pipe fittings are prevalent. Many pneumatic fitting opportunities as well



## Cement & Asphalt Manufacturing

- Flue and stack testing
- Analytical lab – ICP and/or ICP-MS for heavy metal testing
- Continuous monitoring testing and calibration



## Fishing

- Stainless Steel fittings used on boat cranes and in on board canneries
- Cryogenic systems and food packaging



## Food/Beef Processors

- Require 316 grade stainless steel adapters for sanitary purposes.
- Wastewater control systems – CO2 for buffering
- Food testing labs – numerous analytical devices and detectors, including; GC, LC, MS, ICP
- Cryogenic transfer lines for freezing tunnels
- Packaging gases



## Military Bases

- Vehicle Emissions testing
- Environmental testing equipment
- Field calibration equipment – pressure testing
- Emissions monitoring systems – chemical/continuous
- Laboratory Equipment – MS, LC, GC, ICP
- Sample collection equipment
- Chemical handling equipment



## Medical/Pharmaceutical

- Brennan SS Double and Single Ferrule Instrumentation Fittings are very common
- Analytical Labs – UHP gas connections
- Manufacturing applications requiring high purity/leak free connections
- Chemical Transfer lines
- Plant Air lines
- Specialty Refrigeration lines for manufacturing – free dryers
- Cryogenic liquid transfer lines
  - Control rate freezers
  - Sample storage
  - Seed banks
  - LN2 freeze dryer applications.



## Mining

- Vehicle Emission and Oxygen monitoring systems
- Field sampling connections – sample cylinders
- Calibration applications – Explosive environments
- Gas Handling equipment
- Laboratory Equipment – MS, LC, GC, ICP



## Municipalities

- Laboratory Equipment – MS, LC, GC, ICP
- Utilities—meter and regulator assemblies
- Wastewater Management – buffering CO2 and acidic treatment chemicals, gas monitoring and calibration connections.
- Parks & Recreation Departments - Ice rink refrigeration, propane, and cryogenic systems require a leak tight connection.
- Swimming Pools – water treatment with CO2



## Packaging Equipment

- Head space and preservation gas systems – Argon, Oxygen, Nitrogen, Carbon Dioxide



## Oil Rigs/Drilling

- Solutions for UPSTREAM, MIDSTREAM and DOWNSTREAM applications
- Steam system components
- Calibrating and switching modules
- Fast Loop components
- Field station replacement parts
- Sample Probe modules
- Field distribution headers
- Instrumentation monitoring system components
- Calibration connections
- Process lines and components
- Gas handling system components



## Pulp & Paper Mills

- Steam systems
- Acidic and Caustic lines
- Instrumentation monitoring system components
- Stack testing and Environmental monitoring



## Rubbish Collection and Handling

- Continuous gas monitoring systems – CH<sub>4</sub>/methane
- Laboratory Equipment – MS, LC, GC, ICP
- Landfill Area - monitoring & flue gases
- Stack testing and calibration equipment



## Clean Energy/Hydrogen

- High quality stainless steel (316/316L) parts required for hydrogen applications
- Nuclear power – turbines utilizing hydrogen for reduced resistance
- Liquid handling systems at cryogenic temperatures
- Inert gases – Helium, Argon, Nitrogen
- Calibration equipment
- Stack testing – calibration gas systems, sample cylinders, leak free component connections
- Steam system components



## Shipyards/Marine

- 316/316L SS components used throughout the shipbuilding process
- Instrumentation fittings used on welding lines – especially in facilities near saltwater environments.



## Battery/Semiconductor

- Bulk Gas Delivery System - nitrogen, helium, hydrogen and argon
- Toxic Gas Handling systems - Silane or siloxane, hexafluoride, halides, and hydrocarbons
- Cleanrooms
- Deposition machines - segmented into Chemical vapor deposition (CVD), Physical vapor deposition (PVD) and Epitaxy
- Chip manufacturers use dicing machines, probing machines, polish and edge grinders (inert atmosphere)
- Chemical mechanical planarization (CMP) and photolithography equipment
- Sliced wafer demounting and cleaning machines
- Environmental test chambers



## Chemical/Petro Chemical

- Solutions for UPSTREAM, MIDSTREAM and DOWNSTREAM applications
- Steam system components
- Calibrating and switching modules
- Fast Loop components
- Field station replacement parts
- Sample Probe modules
- Field distribution headers
- Instrumentation monitoring system components
- Calibration connections
- Process lines and components
- Gas handling system components

For additional information please visit  
[www.brennaninc.com](http://www.brennaninc.com)

### List of Analytical Devices:

**MS** = Mass Spectrometer

**ICP** = Inductively Coupled Plasma

**GC** = Gas Chromatograph

**LC** = Liquid Chromatograph

#### **NOTE:**

Some devices may be listed in combination, for example a GC-MS would be a Gas Chromatograph with an additional Mass Spectrometer analyzer built in.



## Life Sciences

- Level 3 and 4 labs – contained and require dedicated fluid supplies, including breathing air and other specialty gas supply.
- Analytical Labs – UHP gas connections
- Gas delivery systems – vacuum, air, oxygen
- Chemical Transfer lines
- Short term storage freezers – CO2 supply.
- Cryogenic liquid transfer lines
  - Control rate freezers
  - Sample storage
  - Seed banks
  - LN2 freeze dryer applications.