

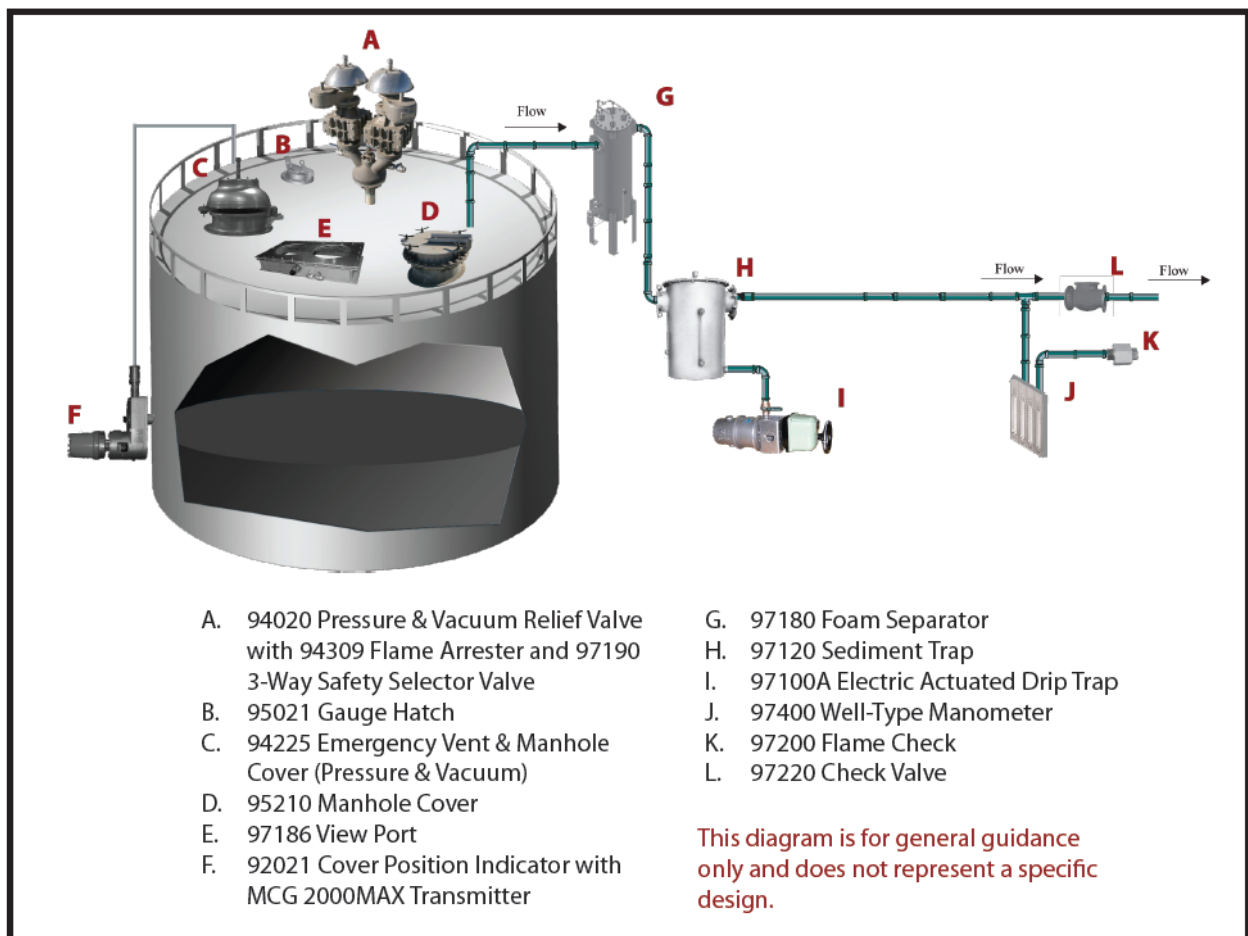
Biogas safety control equipment

As environmental concerns and energy efficiency are increasing, efficient economical and safe gas control systems become an increasingly important part of operating the modern disposal plant. A properly designed digester gas control system can virtually eliminate the release of odors and VOCs, while safely handling the flammable and possibly explosive gases generated by the digester.

Shand & Jurs Equipment can pay for itself by converting your digester gases from a liability to an asset. After dropping out sediment and condensate the cleaned gases can be used to supplement plant service gas to run boilers, heaters and other natural gas operated devices. The plant realizes huge savings by essentially powering themselves. In some cases, the excess energy can be sold and the plant can make additional profit.

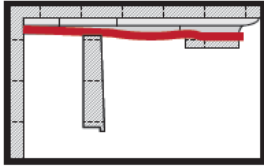
With nearly 90 years of field proven experience in vapor control, Shand & Jurs can provide you the control that you need, with the equipment that is specifically designed to be corrosion resistant to sewage gases.

Typical digester gas system

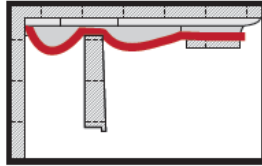


Expand-Seal™

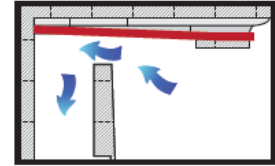
To reduce emissions, Shand & Jurs designed and patented a high performance valve sealing technology called Expand-Seal™, which has reduced tank emissions and odors in every process environment imaginable. This innovative design actually uses the internal vessel pressure to create a tighter seal the closer the pressure gets to the set point. The end result is a nearly bubble-tight seal.



When pressure inside the tank is below the set point, the deflated diaphragm rests on the seat ring in a typical manner, as with any normal valve, retaining internal pressure.



As the pressure approaches the set point, the gasket inflates and wraps around the mating seat to achieve this unique sealing effect.



When the pressure in the tank is at or above set point, the valve lifts to relieve the overpressure.

Digester cover equipments

Vertical flame arrester. Model: 94306/94406*

- Sizes: 2", 3", 4", 6", 8", 10" and 12"
- Standard aluminium or stainless steel materials
- Serves as a barrier between external flame and internal vapors
- Protects digesters containing flammable gases
- Easy inspection and maintenance due to simple removal of tube bank
- FM and ATEX* approved



Horizontal flame arrester. Model: 94307/94407*

- Sizes: 2", 3", 4", 6", 8", 10" and 12"
- Standard aluminium or stainless steel materials
- Optional sensor ports available
- Inhibits flame propagation in gas piping systems
- Protects digesters containing flammable gases
- Offset design prevents condensate from accumulating
- Easy inspection and maintenance due to simple removal of tube bank
- ATEX* approved



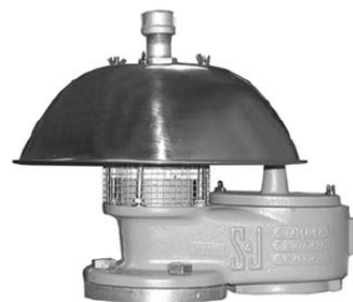
3-way safety selector valve. Model: 97190

- Sizes: 2", 3", 4", 6", 8" and 10"
- Standard aluminium or stainless steel materials
- Permits switchover function
- High flow capacity with minimal pressure drop
- Positive shutoff of isolated branch
- Low torque operation during switchover
- Provided with red position and lockout position



Pressure/vacuum relief vent. Model: 94020

- Sizes: 2", 3", 4", 6", 8", 10" and 12"
- Standard aluminium or stainless steel materials
- Open or closed options available
- Pallet reaction lip for smooth lift and reseating
- Vertical lift pallets assure reliable operation and maximum flow
- "All weather" option
- Innovative Expanda Seal™
- CE and ATEX approved



Flame arrester (plate element). Model: 94309

- Sizes: 2", 3", 4", 6", 8", 10" and 12"
- Standard aluminium or stainless steel materials
- Easy to access element/frame
- Clean and inspect in place
- Vertical or horizontal configuration
- FM approved



Combination conservation vent and flame arrester.

Model: 97570/97571

- Sizes: 2", 3", 4", 6", 8", 10" and 12"
- Standard aluminium or stainless steel materials
- Serves as a barrier between external flame and internal gases
- Provides protection against flame propagation
- Open or closed vent configurations
- Model 97571: Available with 94309 flame arrester



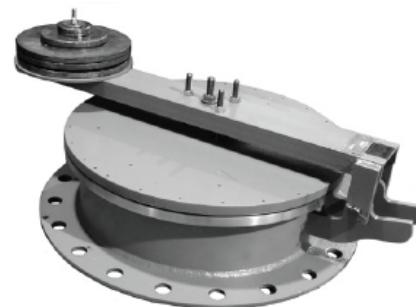
Cover position indicator. Model 92021

- Standard aluminium materials
- Other materials available
- Gauges for floating cover
- Optional switches for alarm
- Optional transmitter for remote monitoring



Emergency vent & manhole cover. Model: 94210

- Sizes: 10", 16", 20", 30" and 36"
- Materials of construction include aluminium, steel and stainless steel 316
- Easy installation and handling for inspection
- Designed to fit 150Lbs ANSI flange (other flanges available)
- CE and ATEX approved



Gauge hatch. Model: 95021

- Sizes: 4", 6", 8", 10" and 12"
- Standard aluminium, steel, stainless steel 316 and bronze
- Easy access
- Teflon diaphragm ensures safe tight seal
- "Quick-clamp" option allows for hands-free operation
- CE and ATEX approved



View port. Model: 97186

- Stainless steel construction
- Easy visual inspection of tank contents
- High strength glass window
- Corrosion resistant construction
- Gas tight
- Integrated cleaning system
- Maximum working pressure of 1 psig



Transmitter MCG 2000 MAX

- Magnetic Absolute Xmitter
- Ultra low power
- Couples to most mechanical gauges
- Easy maintenance and calibration
- Lightning and surge protection
- Not affected by power loss
- Wireless option available
- UL-listed and ATEX approved



Emergency pressure & vacuum vent/manhole cover. Model: 94225

- Sizes: 16", 18", 20" and 24"
- Materials of construction include aluminium, steel and stainless steel 316
- Design incorporates pressure and adjustable vacuum relief
- Hinged cover provides precise sealing and safety
- No unbolting of vent for seal replacement or tank examination



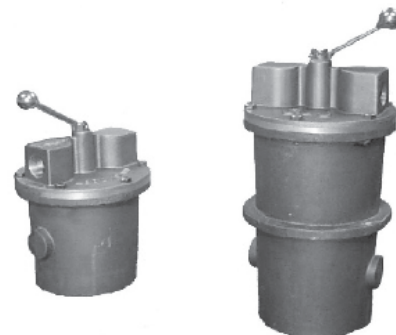
Clamping manhole cover. Model: 95210

- Sizes: 12", 16", 18", 20", 24", 30", 36" and 48"
- Materials of construction include aluminium, steel and stainless steel 316
- Steel, stainless steel, brass or bronze clamps
- Easy access to tanks for maintenance and inspection
- Threaded clamping handle provides gas-tight and watertight seal
- CE and ATEX approved



Manual drip trap. Model: 97100

- Inlet size: 1"
- Capacities: 2,7 liters y 5,4 liters
- Aluminium construction
- Positive gas shut-off while draining
- Can be operated manually or remotely with an electronic timer
- Lever sensor option
- 5 psi Standard, higher pressure available



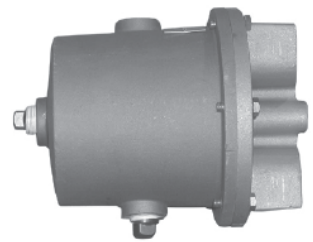
Electric actuated drip trap. Model: 97100A

- Inlet size: 1"
- Capacities: 2,7 liters y 5,4 liters
- Aluminium construction
- Positive gas shut-off while training
- Can be operated manually or remotely with an electronic timer
- Level sensor option
- 5 psi standard (higher pressure available)



Automatic drip trap. Model: 97110

- Inlet size: 1"
- Capacities: 1,8 liters
- Aluminium construction
- Positive gas shut-off while training
- Automatic unattended removal of condensate
- 5 psi standard (higher pressure available)



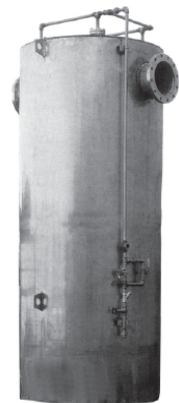
Flame trap assembly. Model: 97140/97141

- Sizes: 2", 3", 4", 6", 8", 10" and 12"
- Materials: Aluminium and stainless steel 316
- Positive emergency shutoff
- Inhibits flame propagation
- 255 °F (124 °C) fusible link
- Horizontal or vertical mounting option
- Combines 97130 thermal valve with 94307 or 94309 flame arrester



Foam separator. Model: 97180

- Sizes: 2", 3", 4", 6", 8", 10" and 12"
- Materials: steel and stainless steel
- Continuous wash spray system
- Removes foam and particles
- Large reservoir with baffle
- Optional: all stainless steel construction
- Optional: visual drain flow indicator
- Optional: alarms for high and low water level
- Optional: water solenoid valves



High pressure manual drip trap. Model: 97101

- Inlet size: 1"
- Capacity: 3,6 liters
- Positive gas shut-off while draining
- Locking lever
- 100 psi standard



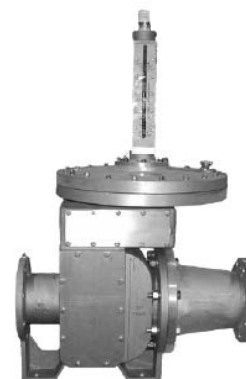
Sediment trap. Model: 97120

- Inlet sizes: 2", 3", 4", 6", 8", 10" and 12"
- Materials: steel and stainless steel
- Removes sediment and condensate
- Large capacity
- Easy cleanout
- Low pressure drop design
- Optional: sight glass and cooling coil available



Double port pressure regulator. Model: 97177

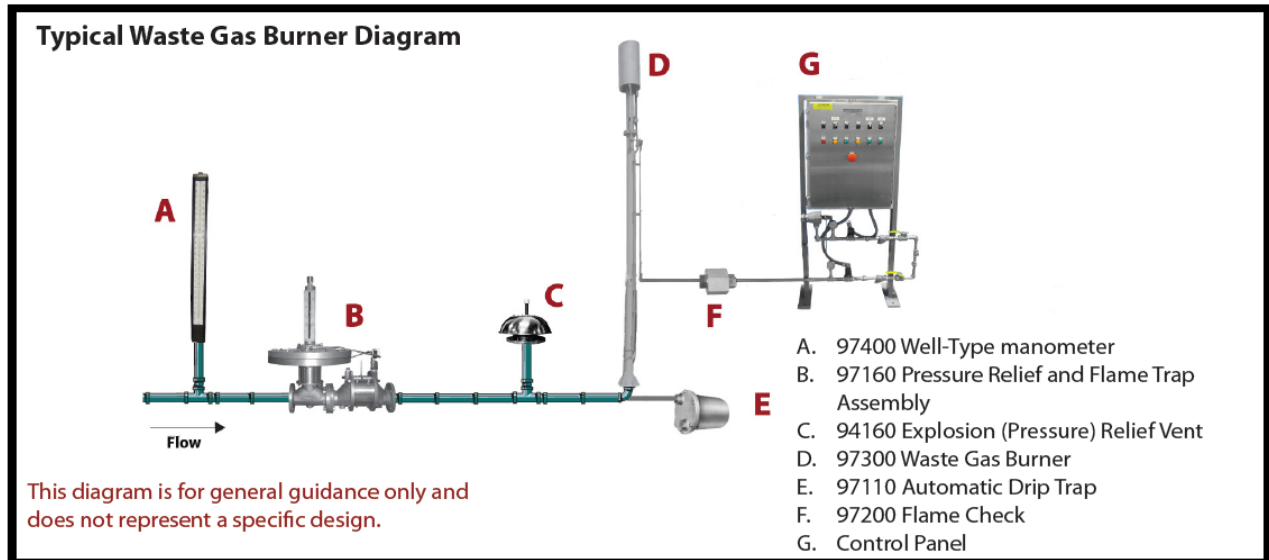
- Sizes: 2", 3", 4", 6" and 8"
- Materials: aluminium, carbon steel or cast iron
- Upstream or downstream control
- Balanced double port/plug design
- Large diaphragm for increased sensitivity
- Externally adjustable set point with visual indicator
- Fewer moving parts for longer service life
- No external power source required



Well-type manometer. Model: 97400

- Sizes: 12", 20", 24" and 30"
- Materials: aluminium or stainless steel
- Pressure or vacuum measurement
- Measures differential or point pressure readings
- Indoor or outdoor use
- Easily bank mounted
- Optional: float check, valves, vented petcock and isolation valves available





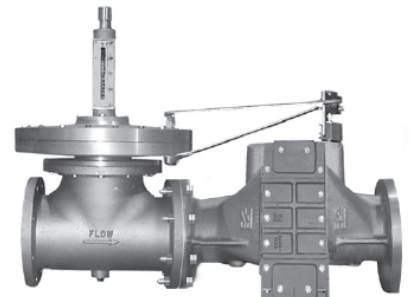
Flame check. Model: 97200

- Sizes: ¼", ½", ¾", 1", 1 ½" and 2"
- Materials: standard aluminium or stainless steel
- Prevents flame flashback in pilot or small gas lines
- High flow capacity
- 25 psig working pressure



Pressure relief and flame trap assembly. Model: 97160/97161

- Sizes: 2", 3", 4", 6", 8", 10" and 12"
- Internal sense tap (external sense tap optional)
- Positive emergency shut-off
- Maintain upstream pressure
- 255 °F (124 °C) fusible link
- Solenoid shut-off option for flare systems
- Combines 97150 pressure regulator with 94307 or 94309 flame arrester



Waste gas burner. Modelo: 97300

- Sizes: 2", 3", 4", 6", 8", 10" and 12"
- High performance stoichiometric pilot
- No flame front burn-out of pilot gas during ignition
- Burns high flow, low BTU "wet" methane
- Venturi option available
- Minimizes pilot pipe freeze potential
- State of the art digital control
- Fully automated continuous or intermittent pilot
- Provides alarm outputs



Back pressure check valve. Model: 97220

- Sizes: 2", 3", 4", 6", 8", 10" and 12"
- Eliminates reverse flow
- Replaceable pallet/seat
- Maximum flow with minimum pressure drop
- Flanged or threaded connections



Emergency relief vent. Model: 94160

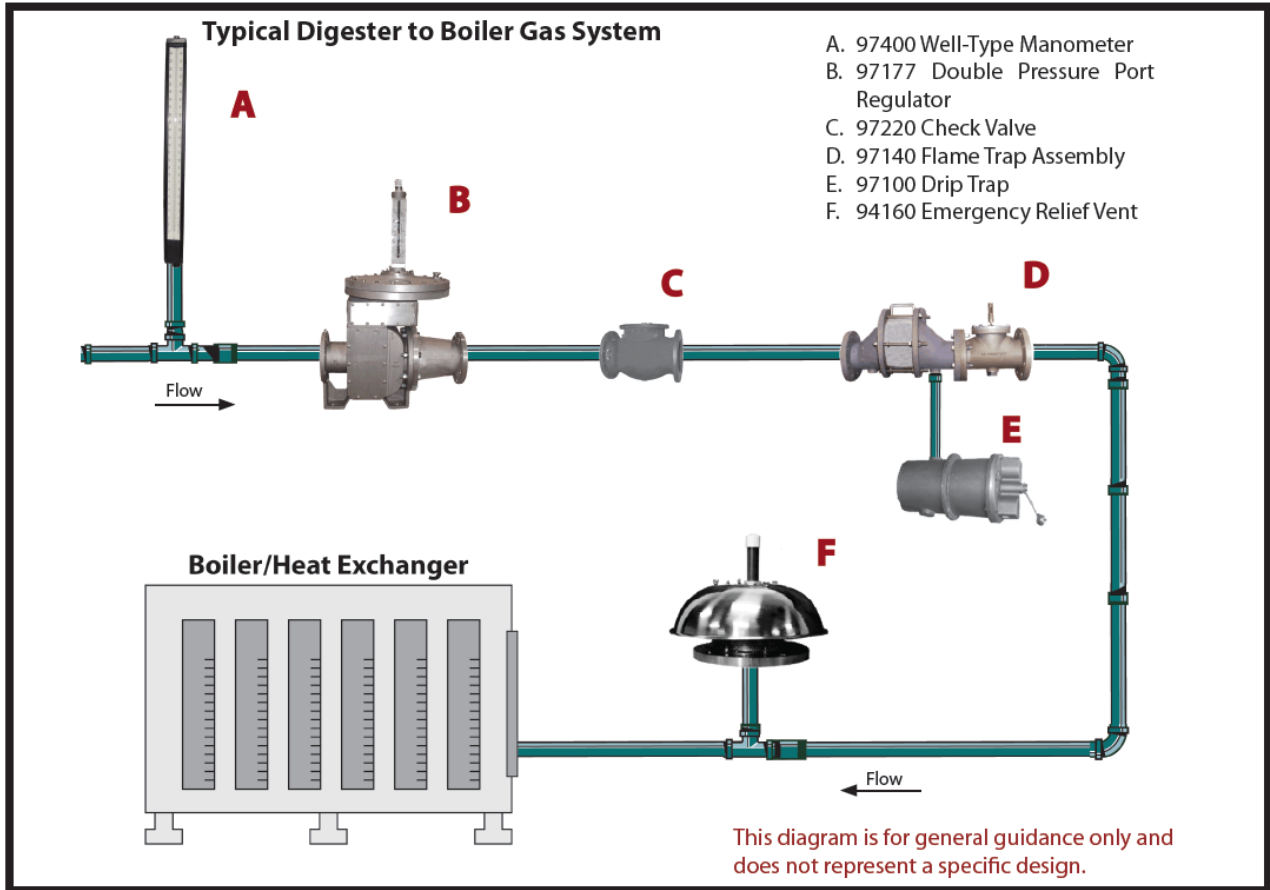
- Sizes: 2", 3", 4", 6", 8", 10" and 12"
- Standard aluminium or stainless steel materials (other materials available)
- Maximum flow capacity, minimum leakage
- Reduced number of components
- Minimized maintenance and replacement costs
- "All-weather" option
- CE and ATEX approved



Enclosed flare. Model: 97310

- No visible flame
- Controlled combustion environment including natural draft design
- High destruction removal efficiency
- Meets emission standards of EPA and local regulations
- High turn down ratios
- Convenient sampling ports
- Operates with low input pressures
- Advanced automatic ignition system





Insulation jackets

Insulation jackets provide heat retention for equipment in cold weather environments which can affect equipment operation and safety. In extreme cold weather, condensation vapors can cause freezing and plugging of flame arrester elements, valve components and diaphragm housings. Construction of the insulating jacket is silicone impregnated woven glass cloth lining with 1" thick fiber glass material. The jacket is easy to install and remove in the field and should be removed during warm months.



Pressure and vacuum relief valve (open). Model 94020.



Flame arrester Model 94309



Pressure relief and flame trap assembly. Model 97161.