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The World's Leading Provider of Process and Mechanical Solutions

Kinetics GP 100

Gas Distribution Panel - Manual Operation

- **Simple—simple flow path ensures continuous, reliable operation**
- **Efficient—economical price, panel mounted on rack or within gas cabinet**
- **Reliable—proven components, accessible layout**

System Overview

The Kinetics GP 100 Manual Gas Panel is a low-cost, easy-to-operate manual gas dispense panel, intended primarily for non-hazardous gases, such as O_2, N_2, CF_4, SF_6, and He. This manually operated gas panel is intended for operations where enclosed gas cabinets are not required or will not fit within the facility. The system has a manually operated gas shut-off valve as standard configuration. An optional automatic gas shut-off valve (with simple controller) is available, when required for safety reasons.

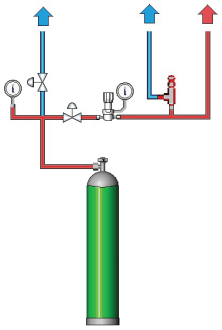
Key Features:

- Manual gas shut-off valve
- Accommodates one or two gas cylinders
- Mechanical switch-over, when two cylinders are utilized
- Manual venting to exhaust line

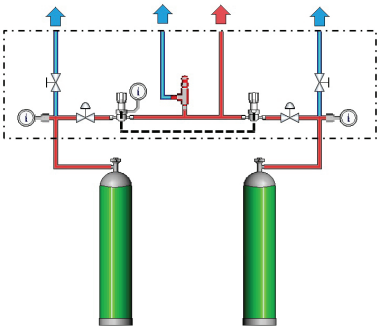
Options:

- Automatic gas shut-off valve, for emergencies
- Analog gauge on high-pressure side of regulator, with electrical contact to indicate empty cylinder. Connects to an external Building Automation System (one per cylinder)
- Analog gauge on high-pressure side, with signal to indicate an empty cylinder. Includes simple controller with "Cylinder Empty" light (one per cylinder)
- Purge gas connection, for cylinder changes (one per cylinder)
- Cylinder Scale, for determining an empty cylinder for liquid gases (one per cylinder)
- Gas Sensor in the exhaust line, for leak detection

Process Flow Diagrams



Configuration with single gas cylinder, automatic shut-off valve



Configuration with dual gas cylinders, automatic shut-off valves

Reliability[1]

- Availability > 99.999 %
- MTBF > 8000 Hours
- MTBA > 6000 Hours
- MTTR < 2 Hours

[1] Reliability figures represent typical performance.

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Technical Data

Controls

The Kinetics GP 100 Manual Gas Panel has no electronic controller, in the standard configuration. An optional PLC Controller is available to:

- Shut down gas flow under emergency conditions
- Responds to a gas leak in the exhaust line
- Indicates when a gas cylinder is empty

Safety Features

All Kinetics gas panels comply with applicable guidelines by:

- OSHA, TGO, CE
- Uniform Fire Code (UFC80) and National Fire Protection Agency (NFPA 318)
- Semi S2-0200
- NRTL Listing

Specifications

Parameter	Capability
Application	Distribution of non-critical gases. Examples include: O_2, N_2, CF_4, SF_6, Ar, He
Typical Gas Purity Levels	Total Purity ≥ 99.999999%
Process Gas Dispense Rate	≤ 3 M^3/hr, with ¼" flow path
Process Gas Pressure, Max	• Inlet: 3000 psi (205 bar) • Delivery: 100 psi (7 bar)[1]
Back-Panel Material	Aluminum, standard 304 Stainless Steel, optional
Panel Dimensions (WxDxH)	14" x 5" x 12" (350mm x 120mm x 300mm)
Component Materials	Electropolished 316L Stainless Steel
Interior Surface Finish of Components	10 RA
Type of Valves and Pressure Regulator	Stainless Steel Diaphragm

[1]Other maximum gas outlet pressures are available, as options.

Facility Requirements

Utility	Requirement	Connection Type
Process Gas Outlet	n/a	¼" VCR (½"VCR, optional)
Vent Outlet	n/a	⅜" (Tube Stub)
CDA for optional shut-off valve	75 – 100 psi (5 - 7 bar)	¼" Compression Fitting
N_2 for optional gas purge	75 – 100 psi (5 - 7 bar) 1.2 M^3/hr	¼" VCR
Electrical (for optional scale or cylinder-empty warning)	110-240 VAC, 50-60 HZ, Single Phase, 0.60 - 0.35 Amp	½" Conduit