

GasTrak Pro™ Delivery/Control Systems



Regulator, Purifier and Outlet Sections

Introduction

GasTrak Pro™ Systems are a unique approach to controlling and delivering high-purity gases distributed in today's modern laboratory. GasTrak Pro™ Systems offer dedicated control panels for specific functions and are designed to provide localized control of gas distributed within the laboratory. This equipment can be used as stand-alone, point-of-use gas panels or can be integrated into turnkey high-purity gas supply systems.

The basic design of the GasTrak Pro™ Systems product consists of individual panel sections snapped into place on a tube chase.

The system will accommodate any number of panel sections and future expansions can be engineered up-front decreasing the risk of the user's investment becoming obsolete. This can substantially reduce the cost normally associated with expansion or modification.

System components are designed, cleaned and built to maintain gas purity. Panels are shipped leak-tested and completely assembled, keeping overall installation costs at a minimum.

Design Features/Benefits

- Allows user to maintain a consistent high-purity gas system.
- Provides localized control of gas pressure, purity and distribution at point-of-use with gas source located in a remote area.
- Modular snap-in panel sections provide unlimited flexibility. Panel sections include:
 - Regulator Section
 - Purifier Section
 - Outlet Section
 - Expansion Section
- Easy to install - panels are shipped completely leak-tested and assembled.
- Low maintenance design - convenient access to panel sections.
- Cost savings – permits planning for future lab expansions/modifications while maintaining consistency of design and operation.
- Panels enhance safety and reduce analytical variables when used in conjunction with an integrated gas delivery system.
- Panel graphics and valve labels customized for each application.
- Complete user-defined system with many options available.

Applications

Uses of GasTrak Pro™ Systems — in an actual laboratory environment are illustrated below.

- **Figure 1** depicts the gas supply originating from gas cylinders located in a remote storage area. Different types of gases are piped to the laboratory and directly into the GasTrak Pro™ System panel sections. In this example, the gas inlets are positioned at the bottom of the panel. Instrument tubing is then connected directly to gas outlets on the panels.
- **Figure 2** illustrates a GasTrak Pro™ System consisting of eight (8) panel sections with gas inlets for helium, air and hydrogen; all supplied from a remote source. Each gas is passed through a designated regulator section; with helium passing through an additional purifier section. The gases are then piped and distributed through their respective gas outlet sections and piped to several GC analytical instruments.

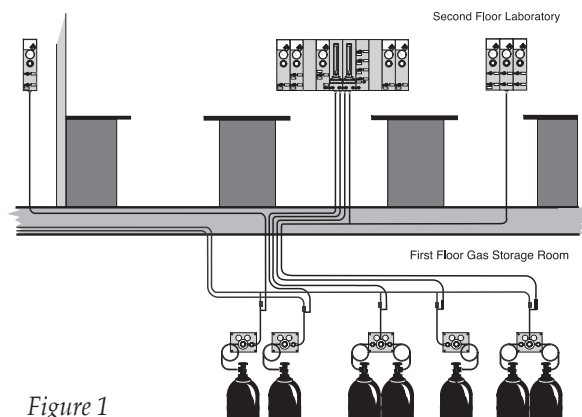


Figure 1

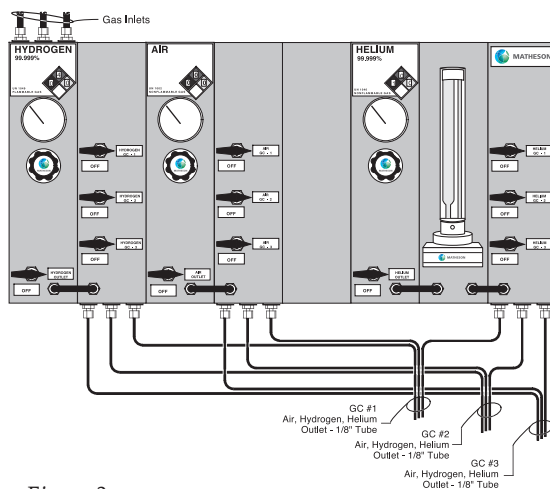


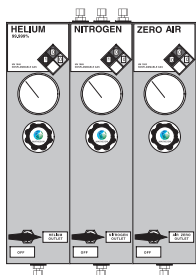
Figure 2



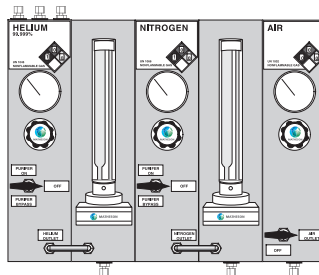
GasTrak Pro™ Delivery/Control Systems (continued)



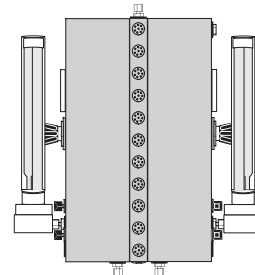
One Section Panel



Three Section Panel



Double Sided Five Section Panel



System Designs

The above examples of panel systems illustrate the flexibility of the GasTrak Pro™ Systems design. An unlimited number of panel combinations is possible. Please note the examples shown are for illustration purposes only. If you need further assistance, contact Matheson for more additional information on designing panels which meet your individual specifications.

- **One Section Panel**
Regulator section for nitrogen gas with top inlet and bottom outlets. Custom valve labels and graphics.
- **Three Section Panel**
Regulator sections for three different gases - helium, nitrogen and air.
- **Double Sided Five Section Panel**
Regulator sections for helium, nitrogen and air. Purifier sections for helium and nitrogen with moisture and oxygen traps. End view illustrates panel sections installed on opposite sides of the tube chase. This configuration is ideal for applications where instrumentation is located on either side of the lab bench.

Panel Construction

Tube Chase
The tube chase is the structural frame which holds the panel sections firmly in place and connects to the gas source supply tubing. The installation of the tube chase can be mounted on a wall, placed on a lab bench or suspended from the ceiling.



Regulator panel section removed from open-channel tube chase at rear. Sections are connected with stainless steel flexible tubing.

Materials of Construction

Tube Chase and Panel

Section Housing:

Powder-coated epoxy finish over zinc chromate treated steel

Tubing Material:

Stainless steel

Regulators:

Stainless steel

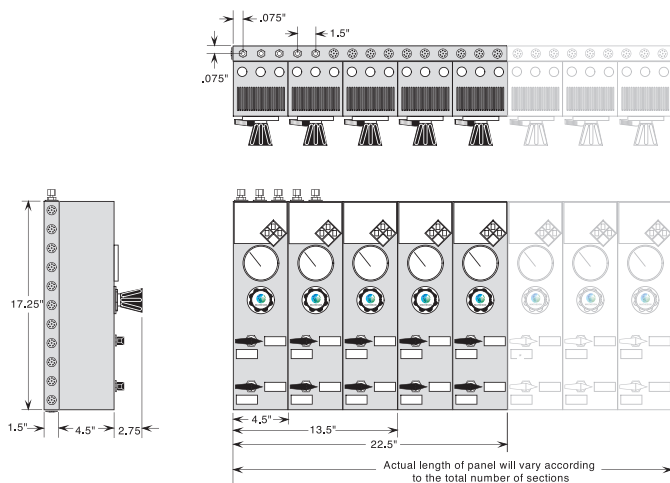
Outlet Valves:

Stainless steel

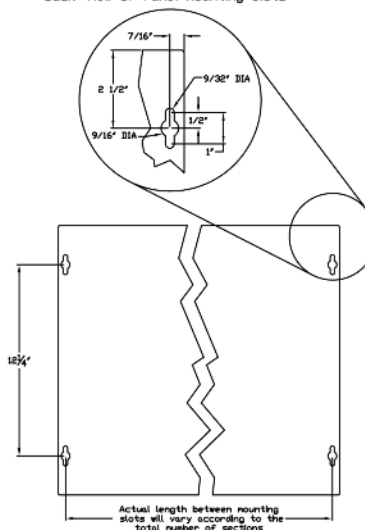
Fittings:

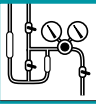
Stainless steel

Typical Key Panel Dimensions



Back View of Panel Mounting Slots





GasTrak Pro™ Delivery/Control Systems (continued)



Regulator Panel Section – L01 Series

- High purity stainless steel regulator
- Inlet pressure of 400 psig
- Gauge
- Option of one or two outlets
- Outlets on front, top or bottom
- 1/8", 1/4" or 3/8" outlets (1/4" is standard)
- Custom graphics

Ordering Information

Regulator Panel Section

Please select '1' order code from each category listed to assemble a Single Model No. for the complete Regulator Panel Section desired.

Regulator Panel Code	Gas Type Code	Internal Metal Components Code	No. of Gas Outlets Code	Outlet Pressure Code	Options Code
L01	A = Acetylene	S = Stainless Steel	1 = one	1 = 0-30 psig	2 = 1/8" Outlet
—	X = Non-corrosive	—	2 = two	2 = 0-100 psig	3 = Bottom Outlet
—	—	—	—	3 = 0-200 psig	4 = Top Outlet
—	—	—	—	4 = Acetylene	6 = 3/8" Outlet
L01	A	S	2	3	2,4

Example: Regulator Panel Model No. L01AS23-24



Purifier Panel Section – L06 Series

- Section inlet connects from a regulator section (L01) outlet
- 1/8", 1/4" or 3/8" outlets (1/4" is standard)
- Integral check valve to prevent contamination of purifier when not in use
- Purifier mounted vertically to stationary baseplate to prevent channeling and maximize performance
- Unique baseplate mounting and design allow purifier cartridges to be replaced without using tools
- Maximum inlet pressure of 150 psig

Ordering Information

Purifier Panel Section

Please select '1' order code from each category listed to assemble a Single Model No. for the complete Purifier Panel Section desired.

Purifier Panel Code	Gas Type Code	Internal Metal Components Code	Options Code
L06	0 = Non-corrosive	S = Stainless Steel	2 = 1/8" Outlet
—	—	—	3 = Bottom Outlet
—	—	—	4 = Top Outlet
—	—	—	6 = 3/8" Outlet
L06	0	S	2,3

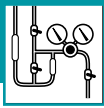
Example: Purifier Panel Model No. L060S-23

**Note: The Purifier Cartridge must be ordered separately from the panel section (refer to the table below)*

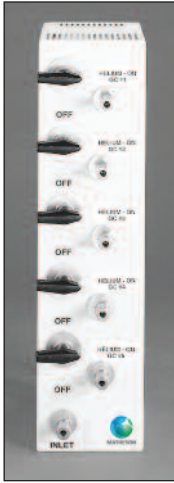
Purifier Cartridges

Model No.**	Description
CTG-0050-XX	Moisture Removing
CTG-0051-XX	Oxygen Removing
CTG-0052-XX	Hydrocarbon Removing
CTG-0053-XX	Triple: Moisture/Oxygen/Hydrocarbon Removing
CTG-0054-XX	Combi: Moisture/Oxygen Removing

***Note: All Purifier Cartridges are furnished with an integral sight indicating column to signal cartridge changeout periods.*



GasTrak Pro™ Delivery/Control Systems (continued)



Single-Gas Outlet Panel Section – L03 Series

- One to five outlets available
- Section inlet connects to left adjacent section
- Outlets located on front, top or bottom
- Vertical configuration only
- 1/8", 1/4" or 3/8" outlets (1/4" is standard)
- Stainless steel internal tubing
- Maximum pressure of 500 psig

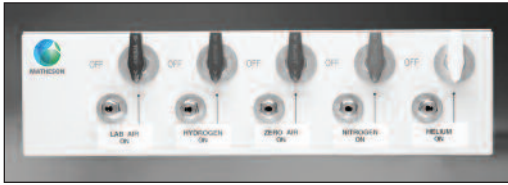
Ordering Information

Single-Gas Outlet Panel Section

Please select '1' order code from each category listed to assemble a Single Model No. for the complete Single-Gas Outlet Panel Section desired.

Single-Gas Outlet Panel Code	Gas Type Code	Gas Type Code	Internal Metal Components Code	No. of Outlets Code	Options Code
LO3	0 = Same Gas	0 = Non-corrosive	S = Stainless Steel	1 = one	2 = 1/8" Outlet
—	—	—	—	2 = two	3 = Bottom Outlet
—	—	—	—	3 = three	4 = Top Outlet
—	—	—	—	4 = four	6 = 3/8" Outlet
—	—	—	—	5 = Five	
LO3	0	0	S	2	3,6

Example: Single-Gas Outlet Panel Model No. LO300S2-36



Stand Alone Outlet Panel – L03P Series

- One to five outlets for different gases available
- Stand alone unit - can be remotely located from other panel sections
- Horizontal or vertical configuration (horizontal standard)
- Outlets located on front, top or bottom
- 1/8", 1/4" or 3/8" outlets (1/4" is standard)
- 1/4" stainless steel internal tubing
- Maximum pressure of 500 psig

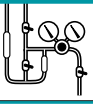
Ordering Information

Multi-Gas Outlet Panel Section

Please select '1' order code from each category listed to assemble a Single Model No. for the complete Multi-Gas Outlet Panel Section desired.

Multi-Gas Outlet Panel Code	Gas Type Code	Gas Type Code	Internal Metal Components Code	No. of Outlets Code	Options Code
LO3P	0 = Same Gas	0 = Non-corrosive	S = Stainless Steel	1 = one	2 = 1/8" Outlet
—	M = Different Gas	—	—	2 = two	3 = Bottom Outlet
—	—	—	—	3 = three	4 = Top Outlet
—	—	—	—	4 = four	6 = 3/8" Outlet
—	—	—	—	5 = Five	V = Vertical
LO3P	0	0	S	3	2,4

Example: Multi-Gas Outlet Panel Model No. LO3P00S3-24



GasTrak Pro™ Delivery/Control Systems *(continued)*



Expansion Panel Section – L09 Series

- Connects to tube chase section
- Provides for future modifications:
 - Regulator Sections
 - Purifier Sections
 - Outlet Sections

Ordering Information

Expansion Panel Section

Please select '1' order code from each category listed to assemble a Single Model No. for the complete Expansion Panel Section desired.¹

To order an Expansion Panel Section, please specify Model No. L09 and the quantity of Expansion Panels desired.

¹ Please note that preplumbing must be done when using an expansion panel for future modifications.