MultiDetek2

COMPACT GC FOR MULTIPLE IMPURITIES

LDetek

With its plug and play philosophy and offering more features than ever, LDetek pushes further the possibilities with its new chromatograph system. It provides an attractive and cost effective solution for the industrial and laboratory market.

Based on the LDetek high performance detection technology, this stand-alone Gas Chromatograph is a flexible and customized platform providing the best solution for any type of gas analysis.

FEATURES & DESIGN:

- Multi trace impurities in one chassis
- Multiple configurations available in one chassis
- PED, FID, TCD compatible
- Argon,Helium,Nitrogen and Hydrogen carrier gas
- Isothermal and/or programmed ramping ovens available
- LDetek's electronic flow controllers for carrier & sample gas
- Optional purifier hooked up on the chassis
- Easy maintenance with its slide out design and front opening door
- Compact & robust industrial rackmount 6U chassis
- ppb to % application
- Large 8.4'' LCD touch screen & user friendly interface
- High performance diaphragm valves
- Ethernet connectivity for remote control
- Serial/Profibus/Modbus/Ethernet communication protocols
- Heated/purged valves box with optional monitoring system for hazardous gases
- Fast parallel chromatography

LARGE 8.4'' TOUCH SCREEN & USER FRIENDLY INTERFACE

The Multidetek-2 offers an easy and complete interface working on Windows 7 embedded. With its 8.4'' clear LCD touch screen, it allows the operator to navigate easily through the different menus. Moreover, the system includes an Ethernet port for remote control.

PUSH BUTTON

Friendly push button to open the front door.

KEYBOARD OPERATION

Beside the touch screen panel PC, each system is provided with a USB keyboard to operate the user interface.

COMPACT DESIGN

With the 6U chassis, this compact design can be installed in many areas from laboratory to process.

USB CONNECTOR/ EXTERNAL STORAGE

Data can be stored in a external drive and/or move to any other system or computer to be visualized at any time. This USB port is also available for software update or any other windows 7 interfacing.

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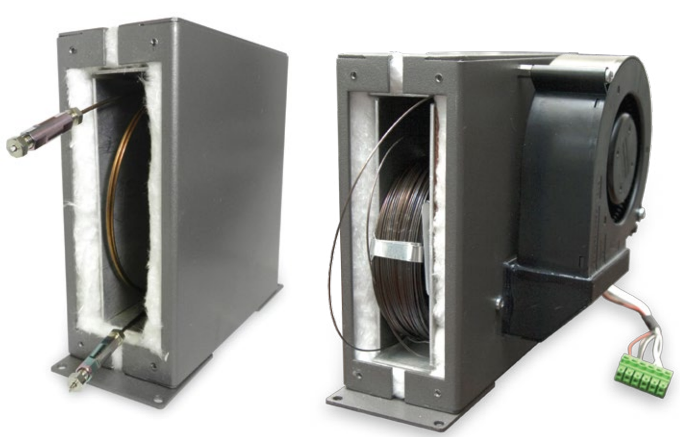
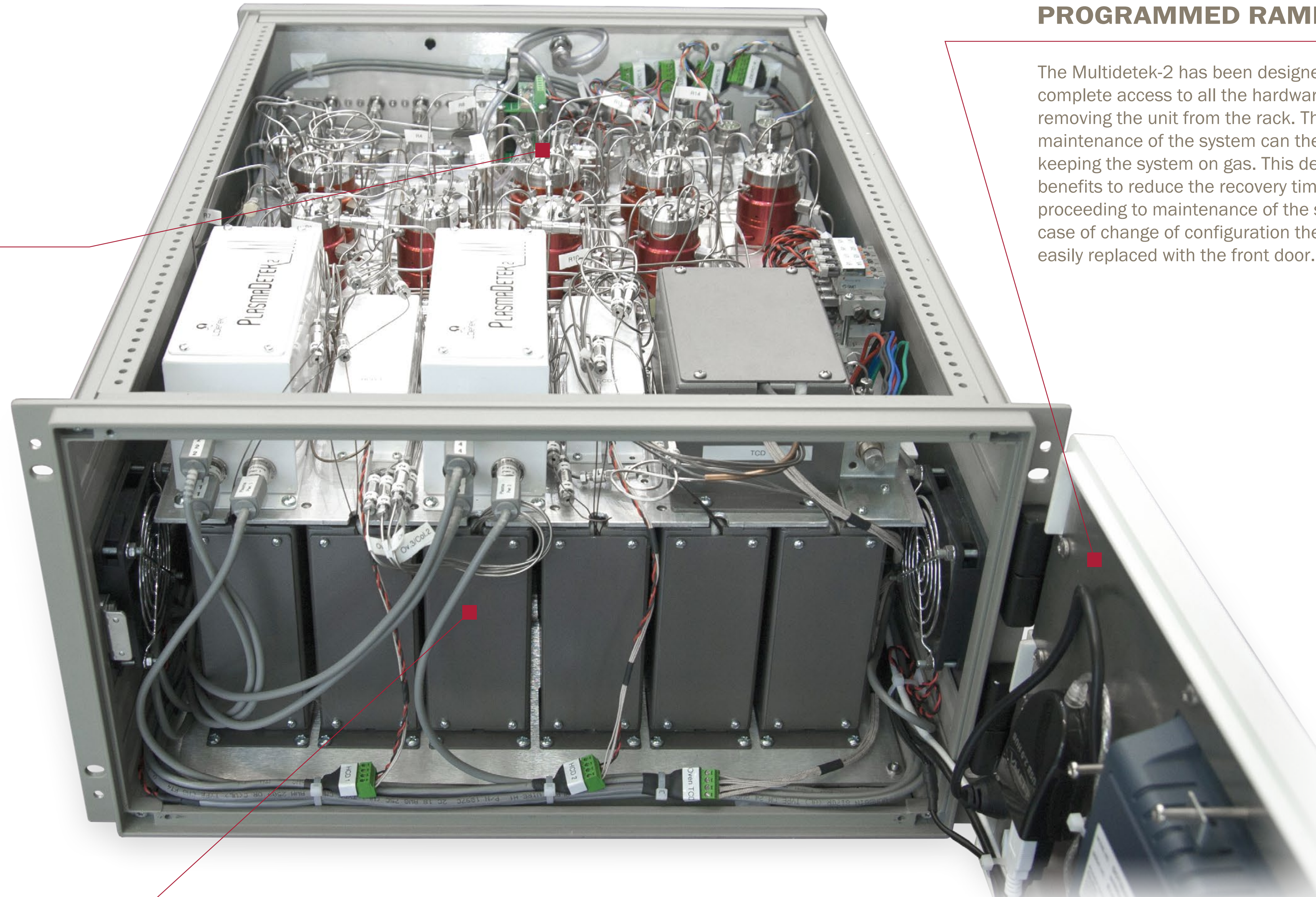
HIGH PERFORMANCE DIAPHRAGM VALVE

The use of high performance diaphragm valve bring outstanding measurement performance. A longer lifetime and better performance on common GC techniques are achieved. They also allow new analysis methods. 1/16" and/or 1/32" diaphragm valve connections, tubing and columns are used. Using 1/32" can reduce carrier gas consumption reducing operation cost. Consult LDetek application notes for more information.



ISOTHERMAL AND/OR PROGRAMMABLE OVENS FOR ANY TYPE OF COLUMNS

The oven design can accept any type of packed, micro packed and plot columns. It offers a very stable and quick temperature control able to proceed to high temperature column regeneration in the unit. With its multiple programmable ovens, more applications are feasible with reduced analysis time.



FRONT ACCESS TO THE ISOTHERMAL AND/OR PROGRAMMED RAMPING OVENS

The Multidetek-2 has been designed to give a complete access to all the hardware parts without removing the unit from the rack. The complete maintenance of the system can then be done by keeping the system on gas. This design gives the benefits to reduce the recovery time of the GC after proceeding to maintenance of the system. Also, in case of change of configuration the columns can be easily replaced with the front door.

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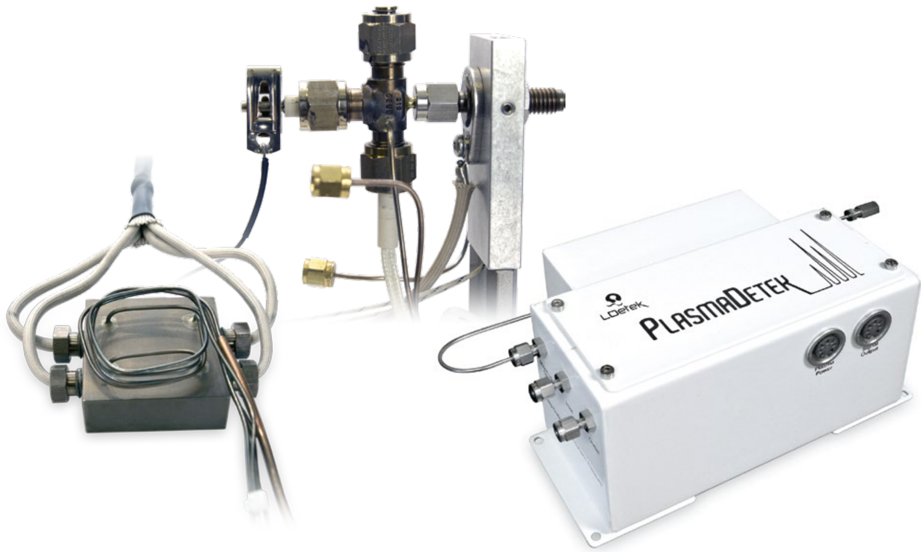


3 DETECTORS COMPATIBLE

Three detectors can be installed in the same chassis with a combination of any PED,TCD and FID detector. It gives more flexibility and possibility to measure more components with one system.

COMPACT GAS PURIFIER

Compact gas purifier mounted on the back panel. Reduce cost and simplify installation. Communication with the MultiDetek 2 is possible to monitor status of the purifier.

INPUTS/OUTPUTS INTERFACE

Many inputs/outputs are available to be able to communicate and receive information from the device: Digital outputs for device status, serial communication (RS-232/485, Profibus, Modbus), analog inputs to acquire external device signal, 4-20 mA output for results information, ethernet for remote control, USB port.

ELECTRONIC FLOW CONTROLLER

With its electronic flow controller, the MultiDetek 2 offers the possibility to have automatic flow adjustment. LDetek has developed its own valve design offering low dead volume and fast response time. A manual version is also available.

EASY MAINTENANCE WITH ITS SLIDE OUT DESIGN

The same approach has been done on the back side of the unit. Other critical components can be reached from the back for maintenance purpose using its pull out rails system. Again, it gives the benefit to perform system maintenance with reduced recovery time without removing the gas lines from the unit.

MULTIDETEK2 CHART V1

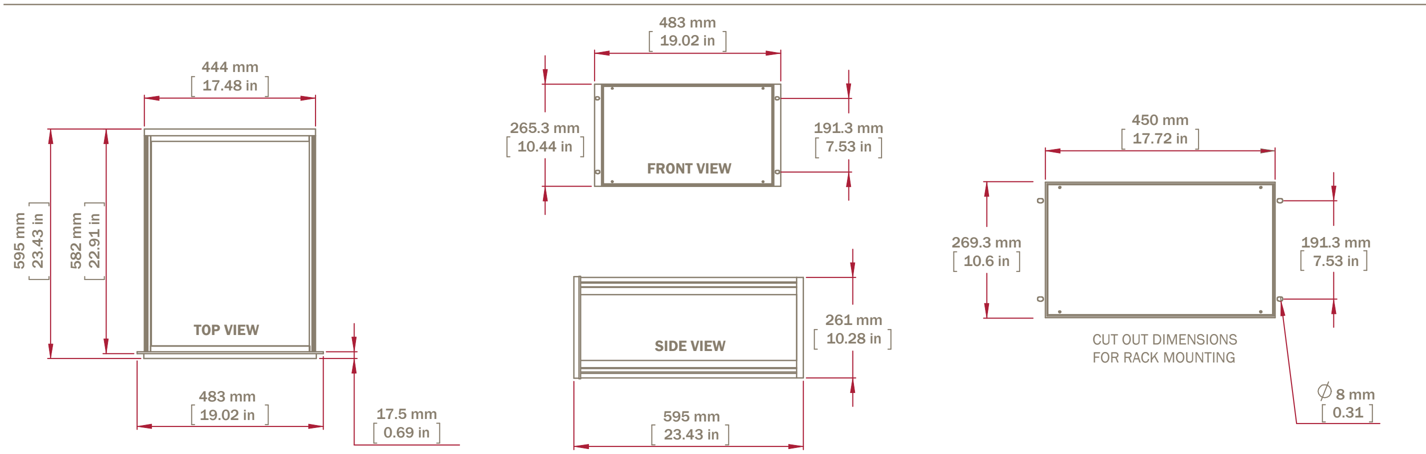
	Backgrounds →	Air	Ar	He	Ne	Kr	Xe	H_2	O_2	N_2	CH_4	CO	CO_2	N_2O	C_2H_4	C_3H_6	NH_3	CF_4	C_2F_6	SF_6	NF_3	C_4F_8	C_3F_8	C_3F_7	C_2F_5	SiH_4	HCl	Cl_2	WF_6	SiF_4	Syngas	**← Back**
Gas types	**Impurities**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**Impurities**
↓	↓	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	↓
noble	Ar (argon)	X	–	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Ar
noble	He (helium)	X	X	–	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	–	He
noble	Ne (neon)	X	X	X	–	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	–	Ne
noble	Kr (krypton)	X	X	X	X	–	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	–	Kr
noble	Xe (xenon)	X	X	X	X	X	–	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Xe
permanent	H_2 (hydrogen)	X	X	X	X	X	X	–	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	H_2
permanent	O_2 (oxygen)	X	X	X	X	X	X	X	–	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O_2
permanent	N_2 (nitrogen)	X	X	X	X	X	X	X	X	–	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	N_2
permanent	CO (carbon monoxide)	X	X	X	X	X	X	X	X	X	X	–	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	CO
permanent	CO_2 (carbon dioxide)	X	X	X	X	X	X	X	X	X	X	X	–	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	CO_2
permanent	H_2O (moisture)	X	X	X	X	X	X	X	X	X	X	X	X	X	–	–	–	X	–	–	X	–	–	–	–	–	–	–	–	–	–	H_2O
fluorocarbon	CF_4 (tetrafluoromethane)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	–	X	X	X	X	X	X	X	X	X	X	X	X	–	CF_4
fluorocarbon	C_2F_6 (hexafluoroethane)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	–	X	X	–	X	X	X	–	–	–	–	–	–	C_2F_6
greenhouse	SF_6 (sulfur hexafluoride)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	–	X	–	X	X	X	X	X	X	X	X	–	SF_6
greenhouse	N_2O (nitrous oxide)	X	X	X	X	X	X	X	X	X	X	X	X	–	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	N_2O
inorganic	NF_3 (nitrogen trifluoride)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	–	X	X	–	X	X	X	X	X	X	X	X	X	–	NF_3
inorganic/toxic	NH_3 (ammonia)	X	X	X	X	X	X	X	X	X	X	X	X	X	–	–	–	X	–	–	X	–	–	–	–	–	–	–	–	–	X	NH_3
inorganic/toxic	PH_3 (phosphine)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	–	X	X	X	X	–	–	–	–	–	–	–	–	–	X	PH_3
inorganic/toxic	AsH_3 (arsine)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	–	–	–	–	–	–	–	–	–	X	AsH_3
toxic	CH_2O (formaldehyde)	X	X	X	X	X	X	X	X	X	X	X	X	X	–	–	–	X	–	–	X	–	–	–	–	–	–	–	–	–	X	CH_2O
toxic	C_2H_4O (acetaldehyde)	X	X	X	X	X	X	X	X	X	X	X	X	X	–	–	–	X	–	–	X	–	–	–	–	–	–	–	–	–	X	C_2H_4O
hydrocarbon	CH_4 (methane)	X	X	X	X	X	X	X	X	X	–	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	CH_4
hydrocarbon	NMHC (non methane hydrocarbon)	X	X	X	X	X	X	X	X	X	X	X	X	X	–	–	X	X	X	X	X	X	X	X	X	–	–	–	–	–	–	NMHC
hydrocarbon	C_2H_2 (acetylene)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_2H_2
hydrocarbon	C_2H_4 (ethylene)	X	X	X	X	X	X	X	X	X	X	X	X	X	–	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_2H_4
hydrocarbon	C_2H_6 (ethane)	X	X	X	X	X	X	X	X	X	X	X	X	X	–	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_2H_6
hydrocarbon	C_3H_6 (propylene)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	–	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_3H_6
hydrocarbon	C_3H_8 (propane)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	–	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_3H_8
hydrocarbon	C_3H_4 (propadiene)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_3H_4
hydrocarbon	C_3H_4 (propyne)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_3H_4
hydrocarbon	C_4H_6 (1,3 butadiene)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_4H_6
hydrocarbon	C_4H_8 (butylene)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_4H_8
hydrocarbon	C_4H_{10} (isobutane)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_4H_{10}
hydrocarbon	C_5H_8 (pentadiene)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_5H_8
hydrocarbon	C_5H_{10} (pentene)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_5H_{10}
hydrocarbon	C_5H_{12} (isopentane)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_5H_{12}
hydrocarbon	C_6H_{12} (hexene)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_6H_{12}
hydrocarbon	C_6H_{14} (hexane)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_6H_{14}
hydrocarbon	C_7H_{14} (heptene)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_7H_{14}
hydrocarbon	C_7H_{16} (heptane)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_7H_{16}
hydrocarbon	C_8H_{16} (octene)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_8H_{16}
hydrocarbon	C_8H_{18} (octane)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_8H_{18}
btex/aromatic	C_6H_6 (benzene)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_6H_6
btex/aromatic	C_7H_8 (toluene)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_7H_8
btex/aromatic	C_8H_{10} (xylene)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	C_8H_{10}
sulfur	H_2S (hydrogen sulfide)	X	X	X	X	X	X	X	X	X	X	X	X	X	–	X	X	X	X	X	X	–	–	–	–	–	–	–	–	–	X	H_2S
sulfur	COS (carbonyl sulfide)	X	X	X	X	X	X	X	X	X	X	X	X	X	–	X	X	X	X	X	X	–	–	–	–	–	–	–	–	–	X	COS
sulfur	SO_2 (sulfur dioxide)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	–	–	–	–	–	–	–	–	–	X	SO_2
sulfur	CS_2 (carbon difulfide)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	–	–	–	–	–	–	–	–	–	X	CS_2
sulfur	CH_4S (methyl mercaptan)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	–	–	–	–	–	–	–	–	–	X	CH_4S
	Backgrounds →	Air	Ar	He	Ne	Kr	Xe	H_2	O_2	N_2	CH_4	CO	CO_2	N_2O	C_2H_4	C_3H_6	NH_3	CF_4	C_2F_6	SF_6	NF_3	C_4F_8	C_3F_8	C_3F_7	C_2F_5	SiH_4	HCl	Cl_2	WF_6	SiF_4	Syngas	**← Back**

Other applications are possible. Please contact LDetek for more details.

SPECIFICATIONS:

DETECTOR TYPE	PED, TCD, FID
RANGE	Application dependant
REPEATABILITY	< 1% full scale
ACCURACY	Better than ±1% full scale
STANDARD FEATURES	• Manual or autoranging (user selectable) • Microprocessor controlled • Windows 7 embedded user friendly interface • Ethernet port for remote control • Isothermal and/or programmed ramping ovens • Electronic flow control regulators for carrier & sample gases • 8.4'' LCD large touch screen • Self diagnosis system with auto-resolve alarm • 4-20 mA isolated outputs • Alarm Historic • Digital system status ouput for remote monitoring (dry relay contact) • 2 alarms contact • High resolution Chromatogram output
OPTIONS	• Serial communication (RS232/485) / Profibus / Modbus / Ethernet • Compact purifier attached to the chassis for generating high purity carrier gas • Integrated stream selector system • Digital inputs for remote starting • Analog inputs for connecting external instruments • Remote control for stream selector (LDGSS) • Purged valve box • Heated valve box • Monitoring system for hazardous gases
GAS CONNECTIONS	Sample: 1/8'' compression fittings or 1/8 VCR Vent: 1/8'' compression fitting
CALIBRATION GAS	Span: 70% to 90% of the scale
SAMPLE PRESSURE REQUIREMENTS	10 to 30 PSIG
CARRIER PRESSURE REQUIREMENTS	100 PSIG
OPERATING TEMPERATURE	10 °C to 45 °C
SUPPLY	115 VAC, 50 – 60 Hz or 220 VAC, 50 – 60 Hz
POWER CONSUMPTION	Maximum 500W
DRIFT	< ± 1% over 24 hours

DIMENSIONS:



APPLICATIONS:

Visit our web site for application notes related to many different fields **www.ldetek.com**

ENVIRONMENT

INDUSTRIAL GAS

PETROCHEMICAL

AGRICULTURE

ELECTRONIC GASES & SEMICONDUCTOR

HYDROCARBONS PROCESSING

FOOD AND BEVERAGE

PHARMACEUTICAL AND MEDECINE

HEALTH AND SAFETY

LDetek

Where innovation leads to success

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