GAS COMPONENTS

Premium Gas Supply Components For Laboratory

CONTENTS

ADVANCELAB

An ISO 9001 & 18001 company headquartered in Singapore. A company built on passion and people; we are committed to delivering a leading customer experience.

We are an engineering and construction solution provider for technology companies. We offer full spectrum support to industrial, commercial and governmental clients across multiple markets; specialising in scientific construction. We are also an established manufacturer.

We manufacture laboratory infrastructure equipment and install

- AdvancelabPro® steel casework
- Fume hoods
- Laminar flow cabinets
- Biological safety cabinets
- Safety storage cabinets
- Exhaust ducting in PVC, PPS, SS304 and SS316
- Gas distribution systems
- Plastic fabrication services
- Stainless steel fabrication

Our fundamental business strategy is developing long term relationships with clients and providing a complete turnkey solution.

Point of Use Regulator

EMD 400 Labsystem

Single-stage
For inert, reactive, flammable and oxidizing gases and gas mixtures
Purity max 6.0
Inlet pressure EMD 400: 40 bar / 600 Psi
Outlet pressure range 0,1 - 1.5 bar (1-20 Psi), 0,2 -6 bar (1-65 Psi), 0,5 -10, 5 bar (1-150 psi)

Highlights

- ECD-suitable
- Great variety of assembly possibilities in laboratory furniture due to the modular design of the Labsystem
- Gas type specific colour indication labels according to DIN 13792
- Analysis version available (low hysteresis, inlet pressure max. 12 bar)

Features

Standard version regulator with gauge, inlet from rear, top or bottom, outlet downwards. May be combined with inlet shut-off valve MVA 400, metering valve MVR 400G and MVR 400W (both optional), several gauges and accessory

Application

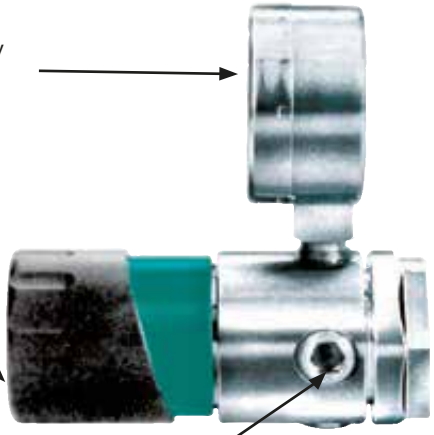
For wall: EMD 400-06, 10 x 10 cm stainless steel plate, 4 fixing holes
For bench: EMD 400-41, 15 cm brass ni/cr or stainless steel column (bottom inlet G1/4" female)
For furniture integration: several options available

EMD 400-06
Wall Mounted

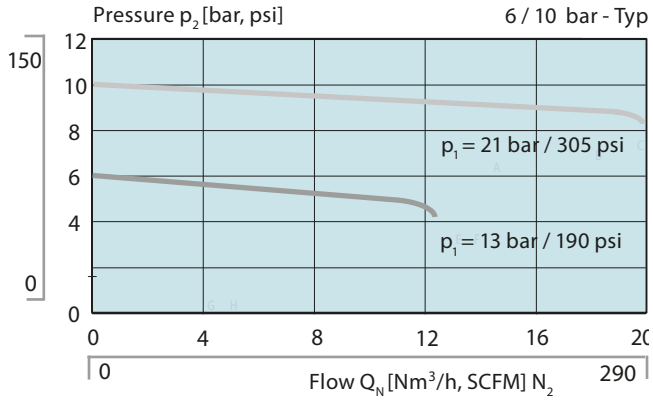
EMD 400-41
Bench Version

Point of Use Regulator

EMD 400



Technical Data

Body material:	Stainless steel 316L (1.4404) specially cleaned and electropolished or brass CW614 (CuZn39Pb3) specially cleaned , chrome-plated
Seat seals:	FKM and FFKM with stainless steel, FKM and EPDM with brass
Body seals:	PCTFE with stainless steel and PVDF with brass
Pressure gauge range:	0-2, 5/6/16 bar (0-35/85/235 Psi) Type 404; 0-3/6 bar (0-45/85 Psi)
Weight:	0.8kg
Inlet-outlet:	G 3/8"f - G 1/4"f
Performance data according to ISO 2503:	

Line Regulator

LMD 500 - 01 / - 03

Single-stage
For inert, reactive, flammable and oxidizing gases and gas mixtures
Purity max 6.0
Inlet pressure LMD 500: 40 bar / 600 Psi
Option 230 bar/3300 Psi, including relief valve
Downstream pressure range LMD 500: 0.2 - 14 bar/3 - 200 Psi 0.2-50 bar/3-725 Psi

Special Features

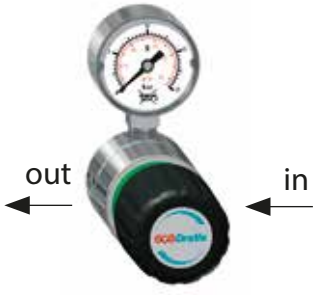
- Excellent pressure adjustment
- Compact design
- 4 or 6 port configuration

Description

A wide application spectrum as per the 4-port configuration (type -01) or 6-Port-configuration (type -03), with a relief valve for the optional 230 bar version. Type-03 can come with a contact gauge (accessories) in conjunction with alarm box (accessories), facilitates the monitoring of gas reserves.

Application

The LMD 500 reduces the line pressure to give a lower supply pressure. The compact design of this regulator makes it fit well for usage in analytical or chemical apparatus or processes.



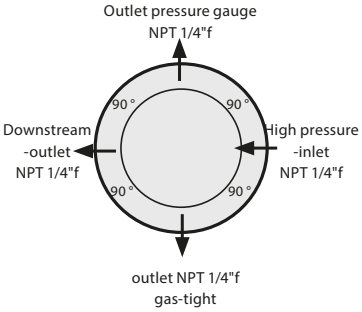
LMD 500/530-01

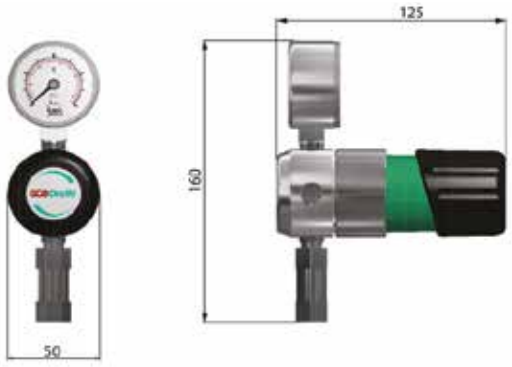
LMD 500/530-01 AV

Line Regulator

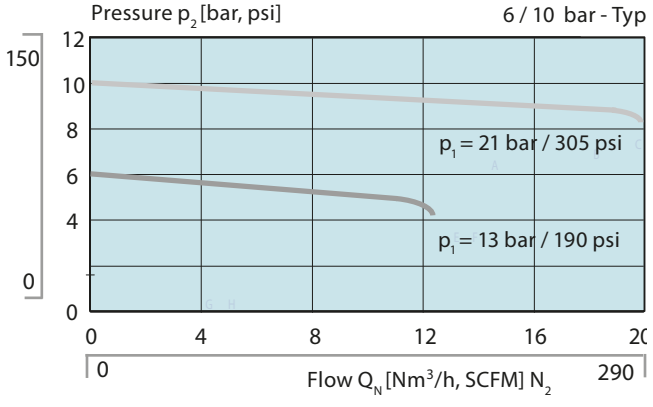
LMD 500 - 01 / -03

TYPE -01/-04



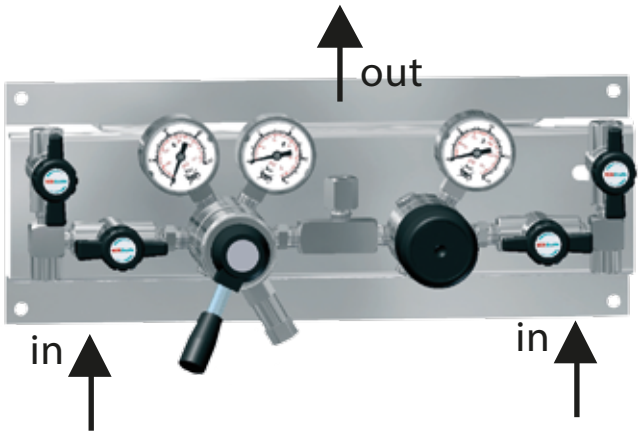


Application

Body material:	Stainless steel 316L (1.4404) specially cleaned and electro polished or brass CW614 (CuZn39Pb3) specially cleaned, nickel-plated and chrome-plated
Seat seals:	PCTFE (Brass, Stainless steel)
Body seals:	PCTFE, PVDF (Brass)
Relief valve seat seals:	SS: FKM, (EPDM, FFKM)*, Brass: EPDM, (FKM)*
Pressure gauge range:	-1-5 bar (-15 -73 Psi) / -1-10 bar (-15 -145 Psi) 0-25 bar (0-365 Psi) / 0-40bar (0-600 Psi) 0-80 bar (0-1150 Psi) / 0-315 bar (0-4500 Psi) 0-400 bar (0-5800 Psi)
Weight:	approx. 1.1kg
Dimensions (WxHxD):	approx. 115mm x 140mm x 120mm to 140mm
Inlet-outlet:	NPT 1/4"f, tube fitting optional
Performance data according to ISO 2503:	

Semi Switch Over

BMD 500 - 35



Single-stage
For inert, reactive, flammable and oxidizing gases and gas mixtures
Purity max 6.0
Inlet pressure 230/315 bar 3300/4500 psi (300 bar service available)
Downstream pressure range 14 or 50 bar - 200/720 psi

Special Features

- Uninterrupted gas supply with semiautomatic switch over
- Indicator for active cylinder (lever shows towards the active cylinder)
- Low gas level alarm signal with via inductive contact guage (optional)
- Upgradeable to 2x2, 2x3, 2x4 cylinders

Description

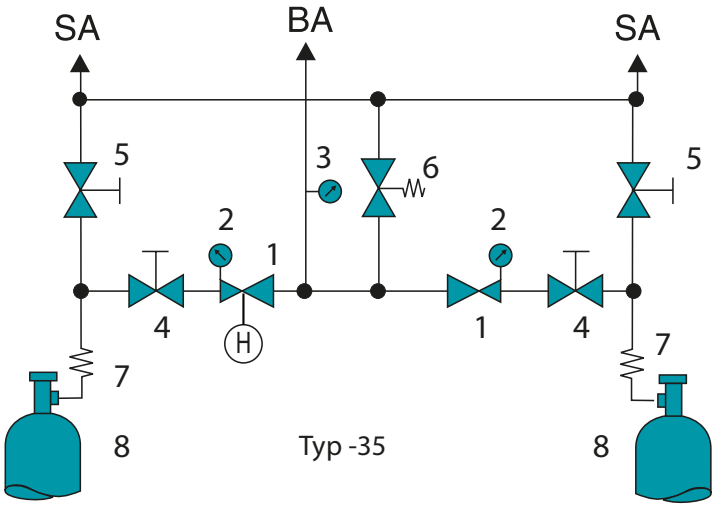
Pressure decreases in the active cylinder (or bundle) below a preset level which causes a semi-automatic switch to switch over to the full cylinder. This is achieved by two integrated pressure regulators (preset to slightly different delivery pressure levels), connected at their outlet ports. Moving the level towards the full bank allows the disconnection and replacement of empty cylinder without interruption to the gas flow.
The use of contact guage (accessories) in conjunction with alarm box (accessories) allows the monitoring of gas reserves. Internal gas purge is a feature of the BMD 500-35. Vent piping for connection of the purge valve with the relief valve can be ordered optionally for type-35.

Application

This gas supply panel, with semi-automatic switch over, is used if uninterupted gas supply is required.

Semi Switch Over

BMD 500 - 35



1	Pressure regulator
2	Upstream pressure gauge
3	Downstream pressure gauge
4	Process gas valve
5	Purge gas outlet valve
6	Relief valve
7	Connection spirals
8	Gas cylinder
H	Lever
BA	Process gas outlet
SA	Purge gas outlet

Technical Data

Body material:	Stainless steel 316L (1.4404) specially cleaned and electro polished or brass CW614 (CuZn39Pb3) specially cleaned , nickel-plated and chrome-plated
Relief valve:	Outlet NPT 1/4"f
Seat seals:	PCTFE
Body seals:	PCTFE with stainless steel and PVDF with brass
Relief valve seat seals:	FKL, (EPDM, FFKM)*, EPDM, (FKM)*
Pressure gauge range:	-1 -18 bar (-15 -260 Psi) / 0-315 bar (0-4500 Psi) 0-400 bar (0-5800 Psi)
Dimensions (WxHxD):	approx. 400mm x 150mm x 200mm
Weight:	approx. 5.5kg
Preset downstream pressure:	14 bar +/-2 bar; 200 +/- Psi
Flow rate:	25Nm³/h N_2 (14 bar - type at 29 bar inlet pressure) [ISO 2503]
Inlet:	NPT 1/4"f, M 14x1.5 (optional)
Outlet:	NPT 1/4"f, optional tube fitting

Signal Box

DGM - SK 2 /4 / 6 /10 - [Ex version optional]

Special Features

- Optional Fax-/SMS alarm
- Low supply pressure monitoring with contact gauges
- Collective alarm for control room
- Fast system overview
- Installation outside the Ex-Zone
- Available as DGM - SK 2/4/6/10 - EX

Description

The gas management signal box DGM-SK it a fault indicating unit and can monitor up to 10 electrical circuits for deviation from the normal. An integrated lamp and signal horn allows for testing the correct operation of the instrument. If one or more alarm signals occur (e.g. gas failure) an acoustic (buzzing noise) and an optical signal (red LED) are emitted for each channel.
The acoustic signal is acknowledged by pressing a button, the optical signal does not switch off until all malfunctions have been remedied. The instrument is equipped with a collective alarm to notify a main central office, a control unit or an external signalling device. Any equipment is possible for use as a signal transmitter as long as it has either a mechanical contact or an inductive contact in accordance with DIN 19234 NAMUR.

Application

The DGM-SK is used for all kinds of alarm signalling, predominantly for monitoring gas supply or metered flow in gas applications. Monitoring of gas supply can be done by controlling the upstream or downstream pressure (using contact gauges), the weight of the bottle or through monitoring rupture disks, dependent upon model for 2 - 10 cylinders simultaneously. Flow-switchs, floaters or mass flow controllers are suitable as signal transmitters for the monitoring of metered flow (all options). Individual faults can be passed on by SMS or fax on request. For every individual alarm you then may program an individual text or an SMS.

Signal Box

DGM - SK 2 /4 / 6 /10

Technical Data

Connection Load	
Power supply:	230V AC, 50Hz, 5VA; 110V AC, 60Hz (option)
Fuse:	3, 15 mA slow-blow
Note:	Defective fuses may only be replaced by the manufacturer
Inlets	
Signal transmitter:	Zero potentail, mechanical contact, initiators comply with DIN 19234 (NAMUR)
Effective direction:	NC (normally closed)
Connection system:	2 wires
Signal transmitter supply:	10Vmax. Throughout the instrument, 10mA max. (short circuit proof)
Max. load/circuit:	330 mH/4.0 µF (EEx ib IIC); 1000 mH/30.0 µF (EEx ib IIB)
Cabel monitoring (optional):	Short circuit I> 6 mA, cable break I<80 µA
Connection cross section:	2.5 mm^2 max.
Outlet (collective alarm)	
Alarm output:	2* relay output (1 change over contact)
Contact load:	Max. 230V~, 50 Hz, 100 VA max. 48V, 1A
Internal Alarm Equipment	
Signal lamp:	LED green 5 mm
Acoustic alarm:	Piezo buzzer, f=3.3 kHz
Collective alarm:	Via zero potential break contact
Ambient Conditions	
Ambient temperature:	Max. 40°C
Humidity:	0-95% rel. humidity, not condensing
Design	
Housing:	Polystyrene colour similar to RAL 7035 (light grey)
Protection category:	IP 54
Dimensions (WxHxD):	200mm x 160mm x 60mm
Installation position:	Upright
Cable glands:	Blue: 1 each of PG 9 and PG 11; grey: 1 each of PG 11 and PG 13.5

Accessories

A1 Spirals

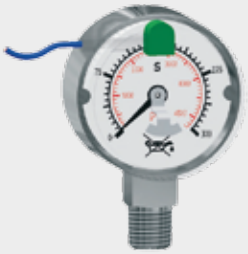
- Connection between BMD 500-35 (see page 8) and the pressure cylinder

A2 Flexible Hose

- Connection between BMD 500-35 (see page 8) and the pressure cylinder (specify length)

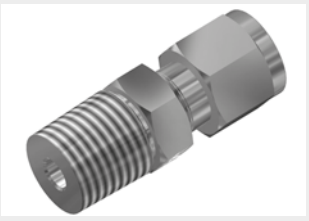
A3 Contact Gauge

- Optional electric device to get an alarm if the cylinder pressure is low (individual alarm level setting)



A4 Connection Fittings

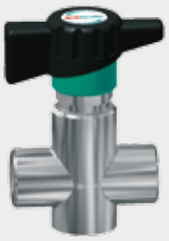
- Connects a gas component to copper or stainless steel tube (specify dimension, threading, material)



Accessories

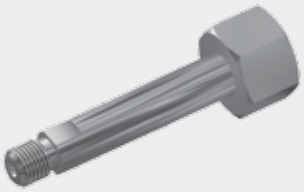
A5 Valve

- Optional high or low pressure shut off valve for brass or stainless steel tube. Shall be combined with tube fittings (see A4)



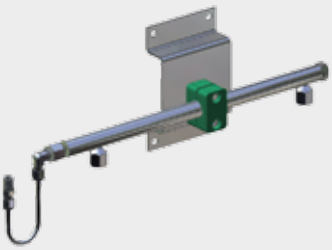
A6 Cylinder Connector

- Gas specific connector (comes with spiral or flexible hose, see A1 + A2)



A7 Extentions

- Option for BMD 500-35 (page 8) for usage of 2x2, 2x3, 2x4 cylinders left / right side instead of 1 x 2 cylinders



A8 Cylinder Wall Holder

- Holder to be used to prevent cylinder from falling

Warranty

Products Manufactured by Advancelab: Advancelab(S) Pte.Ltd., warrants products that it manufactures to be free from defects for a period of 12 months for parts, commencing from the date of shipment. Advancelab's sole responsibility is to repair or replace, at its option, any part of the product that proves defective or malfunctioning during this time limit. This warranty is void if the equipment is abused or modified by the customer, is operated outside Advancelab's operating instructions or specifications, or is used in any application other than that for which it is specified. This warranty does not include routine maintenance or service procedures, breakage, shipping damage, nor damage from misuse, intentional or unintentional abuse, neglect, natural disasters, or acts of God.

Freight Shortage or Damage: Upon receipt of any equipment from Advancelab, customer shall immediately unpack and inspect for damage or shortage. The customer shall not accept a damaged package or a short shipment until the carrier makes a "damage or shortage" notation on both the carrier's and customer's copy of the freight bill or delivery receipt. Service title passes when the shipment is loaded, so customer is responsible for filing and collecting a freight claim. Any replacement products must be ordered and paid for separately.

Generally, customers can improve the chance of collecting on a freight claim by following these procedures:

1. Formally requesting that the carrier inspect the shipment immediately upon suspecting damage or shortage to verify condition.
2. Notifying the carrier upon discovery of concealed damage and requesting an inspection within 15 days of receipt, both in person or phone and following up via mail.
3. Keeping the shipment as intact as possible, including retaining original packaging materials and keeping the product as close to the original receiving location as possible.
4. Holding salvage for disposition by the carrier.

All Claims: Advancelab (S) Pte.Ltd., expressly disclaims all other warranties, expressed or implied or implied by statute, including the warranties of merchantability or fitness for intended use. Advancelab is not responsible for consequential or incidental damages arising out of the purchase or use of the products supplied by Advancelab. Advancelab is not liable for damage to facilities, other equipment, products, property or personnel of others, or of their agents, suppliers, or affiliated parties, which is caused or alleged to have been caused by products supplied by Advancelab. In any event or series of events, Advancelab's total liability for any and all damages whatsoever is limited to the lesser of the actual damages or the original invoice cost of the items alleged to have caused the damage. The customer's sole and exclusive remedy for any cause of action whatsoever is repair or replacement of the non-conforming products or refund of the actual purchase price, at the sole option of Advancelab. All claims must be made in writing within 90 days of the date the product was shipped. Any claims not made within this time limit shall be deemed waived by the customer. Advancelab is not responsible for any additional costs of repair caused by poor packaging or in-shipment damage during return.

Warranty Returns: All warranty returns must be authorized in advance by Advancelab and approved by writing. Unless approved in advance for good reason, all returns must be in original condition, including all manuals, and must be packaged in original packaging materials. All returned goods are to be shipped to Advancelab, freight prepaid at customer's expense.

AdvanceLab has built a rock steady reputation for solutions where most fail. Since our establishment in 2003, we have positioned ourselves as the premier facility solution provider for the scientific industry; designing, building and delivering quickly and without fuss. We have also taken our brand of expertise globally; now with exports of laboratory casework, fume hoods, laminar flow cabinets and clean booths heading to 30 countries, covering all continents.

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