

CYLINDER REGULATORS



CYLINDER REGULATOR

ECOSAVER

The GCE ECOSAVER is the high end product in the category of cylinder regulators with integrated gas economizer. It reduces shielding gas consumption during MIG/MAG/TIG welding operations by keeping high quality of the welds. It is an optimal tool for each welding shop decreasing process costs by controlling gas consumption.

Standard pressure regulator for shielding gas provides instable gas flow with flow peaks. These peaks of the waste gas increases cost of the welding operation and also leads to the poor welds. ECOSAVER optimizes gas flow keeping it constantly on the preadjusted level.

This prevents pressure and flow surges from being created in the system. Surges can create gas wastage and give rise to a poor weld. Weld quality and gas consumption are optimised when the ECO Saver is used as part of the control system.

FEATURES / ADVANTAGES / BENEFITS

- Cylinder regulator with gas saver and flow meter.
- Applicable with all type of the shielding gases for MIG/MAG/TIG welding (Ar, Ar-CO₂, Ar-CO₂-O₂, CO₂ etc)
- Provides consistent and stable gas conditions around the weld.
- Available with connections for most markets
- Less «downtime» from changing cylinders which in turn increases productivity.
- Improved weld quality with less porosity.
- Fewer spare cylinders required in stock which reduces rental charges.
- Reduces the number of deliveries required per year.



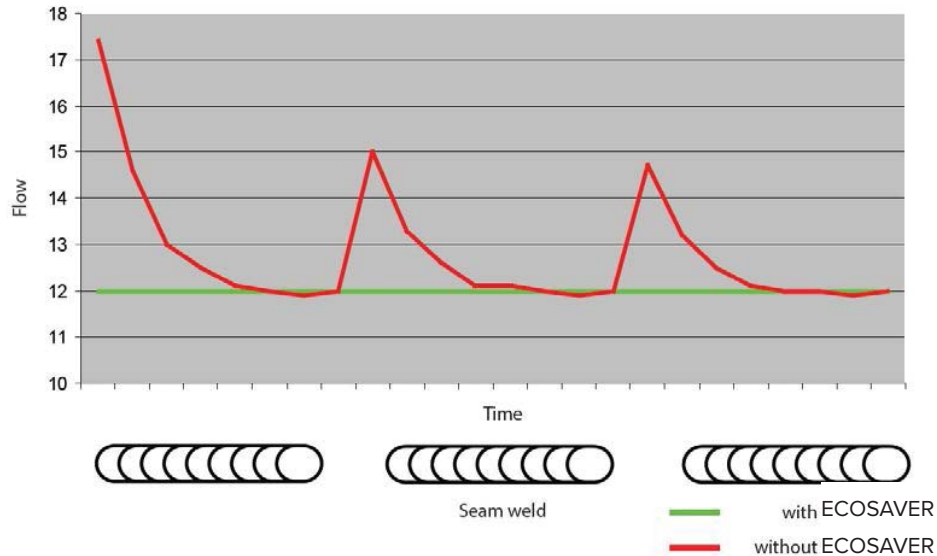
TECHNICAL DATA	
Gas	Ar, Ar/CO ₂ , CO ₂
Body	Brass forged
Bonnet	Zn/Al alloy Die Cast
Stems, nuts and fittings	Brass
Diaphragm	EPDM
Seat sealing	PA
Inlet/Outlet connection	Gas specific connection
Maximal Inlet pressure	230 or 300 bar
Outlet Pressure range	0-24l/min
Temperature range	From -20°C to 60°C
Weight	Approx. according to gas variant: 2,1 kg
ISO 2503 Class	10

GAS SAVINGS

Shielding Gas is a significant consumable cost in the welding process, and savings with ecosaver can also be very significant. The type of welding determines the savings, highest benefits during spot welding, (significant on/off cycling at the gas supply). However valuable reduction in costs can still be achieved even on longer seam runs. Typical expected savings :

TYPE OF WELD	GAS SAVING
Spot welding	40-45%
Mostly spot welding plus some seam welding	30-35%
Equal spot / seam	25-30%
Mostly seam welding	18-22%

COMPARISON OF REGULATOR WITH AND WITHOUT ECOSAVER



CYLINDER REGULATOR

DINCONTROL

Premium DINCONTROL series consists of regulators designed for the most common industrial gases and all single cylinder applications up to 300bar filling pressure. They are made to satisfy local ordinances in most countries as regards inlet and outlet fittings, pressure, pressure gauges, and safety requirements. The capacity of the regulators is sufficient for operations involving medium gas consumption.

DINCONTROL series is of robust design for daily use for indoor applications in workshops but also for outdoor on-site operations. Downwards orientated diaphragm casting (bonnet) increases safety of the handling. The material used for the regulators is chosen to suit each specific type of gas. Each regulator is individually adjusted and tested before leaving the factory. All regulators produced after ISO 2503 and tested by BAM.

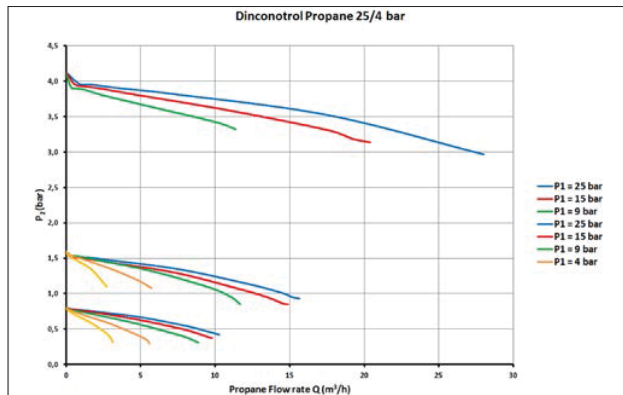
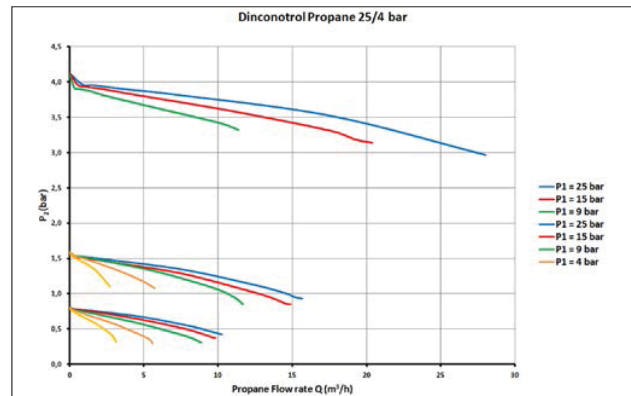
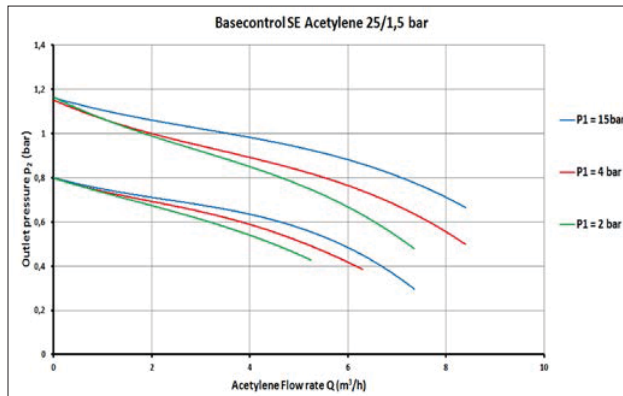
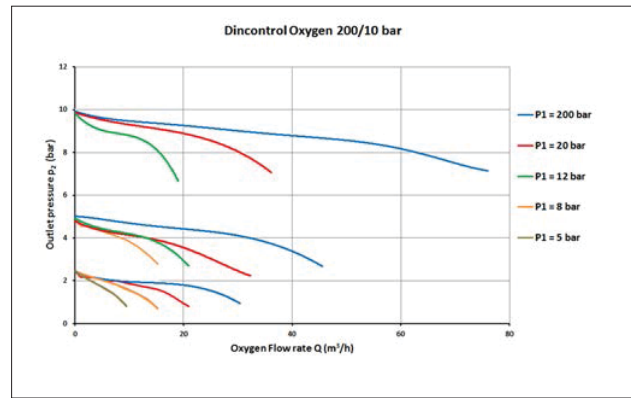
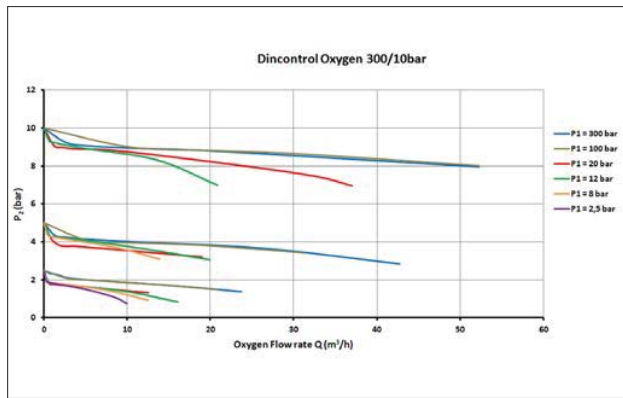
FEATURES / ADVANTAGES / BENEFITS

- The DINCONTROL regulators are single-stage with superior technical performance.
- Long lifetime thanks to rugged, reliable design.
- Diaphragm casting (bonnet) directed downwards for higher safety.
- Safety pressure relief valve incorporated in all variants to protect low-pressure part of the regulator as well as all devices installed downstream.
- Ergonomic hose coupling ready for installation of flashback arrestor.
- Excellent constant flow and pressure regulation regulation.
- Precise fine adjustment of the output working parameters.
- High precision diaphragm valve.
- Robust and protected encapsulated valve with filter, seat material specially selected for use with each gas.
- Outlet shut-off valve for fast switching off in variants with outlet pressure gauge and needle valve for precise flow adjustment in variants with flow-meter.



TECHNICAL DATA					
Gas	O ₂ , N ₂ , H ₂ , He	Ar, Ar/CO ₂	CO ₂	Acetylene	Propane
Body	Brass forged				
Bonnet	Zn/Al alloy Die Cast				
Stems, nuts and fittings	Brass				
Diaphragm	EPDM				NBR
Seat sealing	PA			CR	
Inlet/Outlet connection	Gas specific connection				
Maximal inlet pressure	200 or 300 bar		200 bar	25 bar	
Outlet pressure range	0-10 bar	0-16l/min 0-32l/min		1,5 bar	4 bar
	0-20 bar				
	0-30 bar				
	0-50 bar				
Temperature range	From -20°C to 60°C				
Weight	Approx. according to gas variant: 1,9 kg				

ISO 2503



CYLINDER REGULATOR

BASECONTROL DIN

Basecontrol DIN is a small, compact cylinder regulator dedicated for lower gas consumptions up to 230 bar inlet pressure, in accordance with ISO 2503. It is new product in GCE range of cylinder regulators completing the offer for all types of the customers and applications.

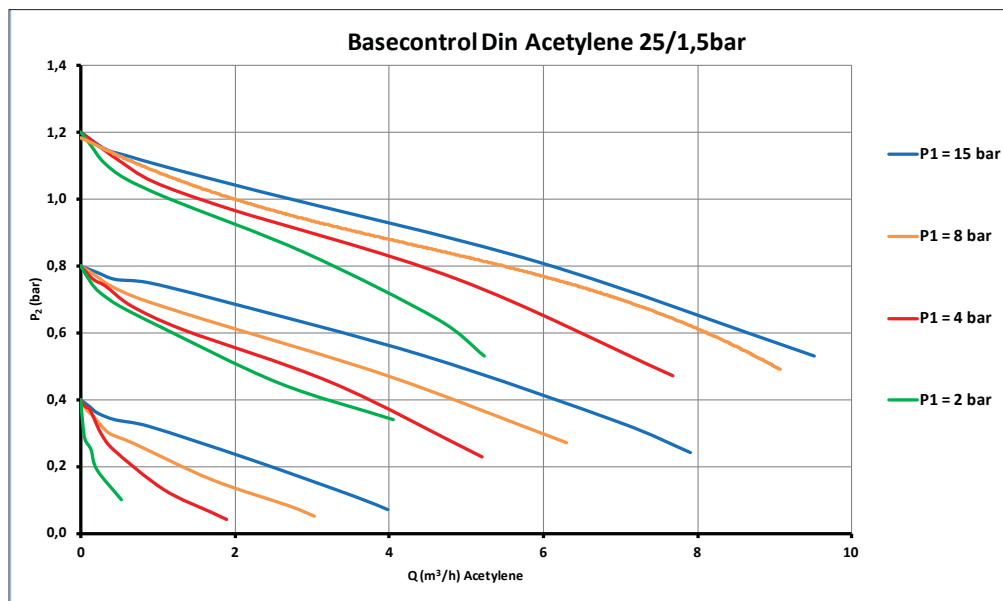
Lightweight design with robust features of Basecontrol DIN predestines its use for small size cylinders and small workshops, mobile applications and on-site applications. But it can be also used with heavy duty load in 24/7 operated industries.

FEATURES / ADVANTAGES / BENEFITS

- Single stage regulator according to ISO 2503 for operation up to 230bar service.
- Diaphragm casting (bonnet) orientated downwards for higher safety of the handling.
- Pressure gauges with three scales in bar, kPa, psi.
- Light-weight design for use with small and also standard size cylinder
- Pressure relief valve to protect against overpressurizing.
- Inlet connection complying to local standards.
- Ergonomic handwheel for easy pressure adjustment.
- Useful for common applications of technical gases.



TECHNICAL DATA					
Gas	Oxygen	Ar, Ar/CO ₂	CO ₂	Acetylene	Propane
Body	Brass forged				
Bonnet	Zn/Al alloy Die Cast				
Stems, nuts and fittings	Brass				
Diaphragm	EPDM			NBR	
Seat sealing	PA		CR		
Inlet/Outlet connection	Gas specific connection				
Maximal inlet pressure	230 bar		200 bar	25 bar	
Outlet pressure range	0-10 bar	0-24 l/min		1,5 bar	4 bar
Temperature range	From -20°C to 60°C				
Weight	Approx. according to gas variant: 1,18 kg				
Gas	3	20	20	2	1



CYLINDER REGULATOR

MULTISTAGE (S2+)

GCE multi-stage regulators designed to provide accurate, fluctuation free delivery for precision applications such as shielding gas arc welding, CNC oxy-fuel cutting or laboratory use use of technical gases.

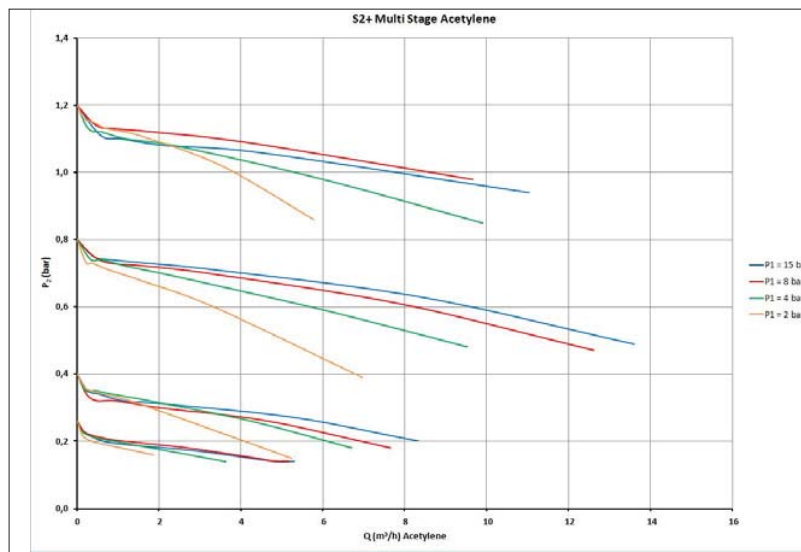
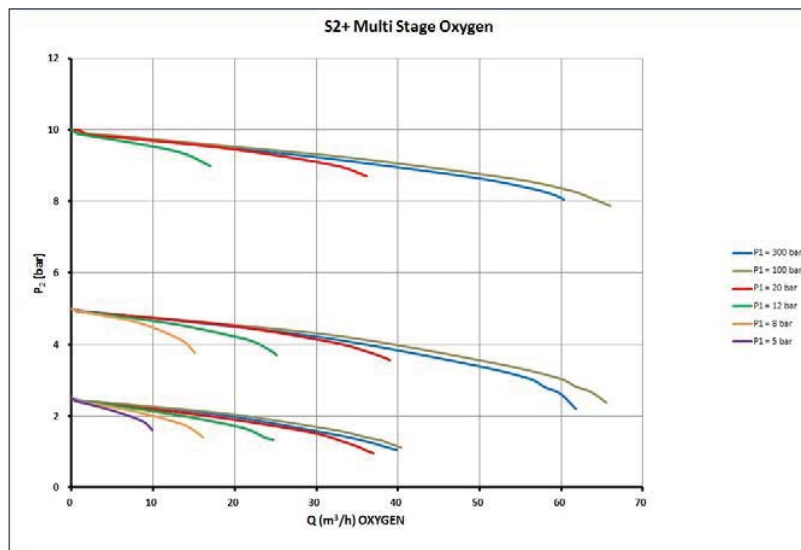
The first stage reduces the inlet pressure by over 90% and the large second stage diaphragm ensures accurate delivery pressure with keeping of enough flow for medium gas consumption applications..
GCE MULTISTAGE regulators are precision built to latest EN ISO 2503 and EN ISO 7291 standards to provide maximum accuracy and safety. These regulators have the additional feature of being able to pipe away gases from the relief valve port, and comply with the stringent requirements of EN ISO 7291 even for strict manifold application.

FEATURES / ADVANTAGES / BENEFITS

- Double stage design for high precision of the outlet pressure and flow.
- Top safe bulkhead design, high accuracy pressure gauges.
- Rugged design with big diameter of the second stage diaphragm for increased flow capacity.
- Internal pressure relief valve for the first stage and top mounted relief valve of the second regulation stage
- Inlet connection complying to local standard with both side entry and bottom entry orientation.
- Ergonomic handwheel for easy pressure adjustment.
- Body and first stage bonnet made of high quality Brass alloy.
- Second stage bonnet of Zn-Al alloy powder painted for keeping high corrosion resistance.



TECHNICAL DATA				
Gas	O ₂ , N ₂ , H ₂ , He	Ar, Ar/CO ₂	CO ₂	Acetylene
Body	Brass forged			
Bonnet	Zn/Al alloy Die Cast			
Stems, nuts and fittings	Brass			
Diaphragm	EPDM			
Seat sealing	PCTFE/CR			CR
Inlet/Outlet connection	Gas specific connection			
Maximal inlet pressure	200 or 300 bar		200 bar	25 bar
Outlet pressure range	0-1,5 bar	0-16l/min 0-35l/min		1,5 bar
	0-2 bar			
	0-4 bar			
	0-10 bar			
Temperature range	From -20°C to 60°C			
Weight	Approx. according to gas variant: 1,9 kg			
ISO 2503				



CYLINDER REGULATOR

UNICONTROL

Cylinder regulator UNICONTROL is the premium regulator for applications of all technical gases up to 300bar service. It has been designed to suit to small and medium gas consumption, in line with ISO 2503. With its compact design the regulator fits to all common cylinder guards including the latest composite cylinder designs from gas market leaders.

High reliability of the design and long lifetime enables product use in both indoor and outdoor applications. Internal encapsulated valve technology ensures stable gas and flow regulation as well as smooth parameters adjustment. With side entry and bottom entry, it can be used with all common types of cylinder valves. Variant for shielding gas arc welding with flow meter can be extended with second flow meter for two welders operation or for use with weld root shielding gas (forming gas).

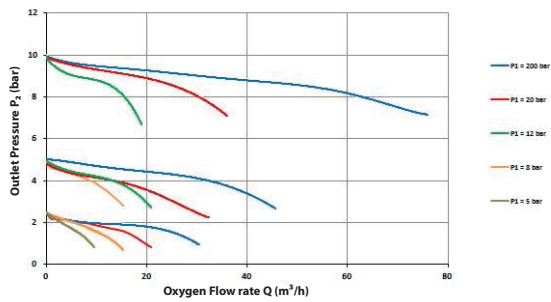
FEATURES / ADVANTAGES / BENEFITS

- UNICONTROL regulators fully conform to all paragraphs of International Standard ISO 2503.
- Uncompromised safety during handling and operation. The UNICONTROL regulators use a filter protected fully encapsulated valve, well proven over several generations of GCE regulators.
- The body is made of solid forged, high quality brass, polished and chemically stabilized.
- The zinc die-cast bonnet is protected by a double layer powder painting to providing a guarantee corrosion resistance even in very aggressive environments.
- For operational safety the intergrated Pressure Relief Valve, located on the rear of the body is designed to protect low pressure part of gas supply against overpressurizing.
- Type-tested and certified by BAM Berlin (The German State Testing Institute).

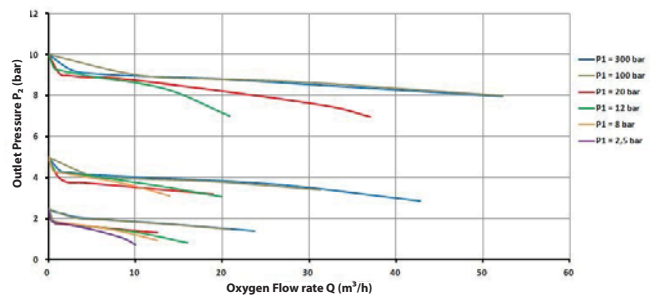


TECHNICAL DATA					
Gas	O ₂ , N ₂ , H ₂ , He	Ar, Ar/CO ₂	CO ₂	Acetylene	Propane
Body	Brass forged				
Bonnet	Zn/Al alloy Die Cast				
Stems, nuts and fittings	Brass				
Diaphragm	EPDM			NBR	
Seat sealing	PA			CR	
Inlet/Outlet connection	Gas specific connection				
Maximal inlet pressure	200 or 300 bar		200 bar	25 bar	
Outlet pressure range	0-10 bar	0-16l/min 0-32l/min	1,5 bar	4 bar	
	0-20 bar				
	0-30 bar				
	0-50 bar				
Temperature range	From -20°C to 60°C				
Weight	Approx. according to gas variant: 1,4 kg				
ISO 2503					

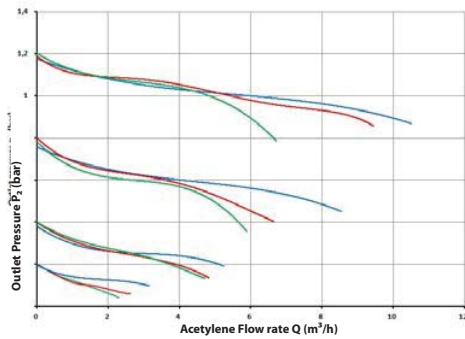
Unicontrol Oxygen 200/10 bar



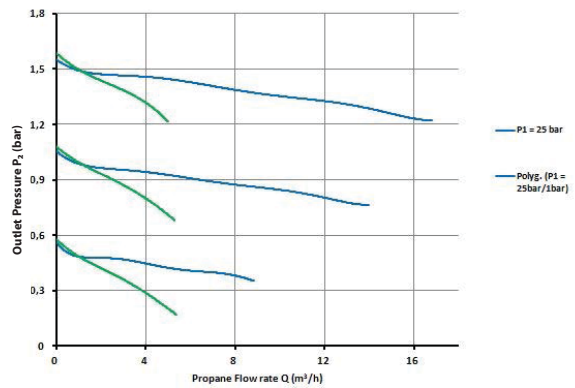
Unicontrol Oxygen 300/10 bar



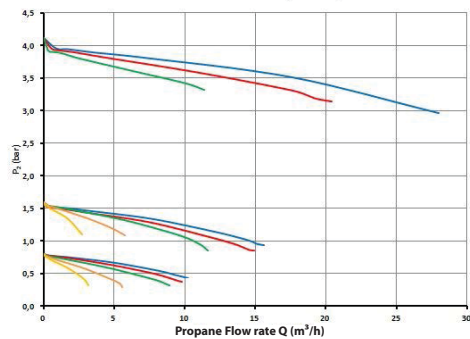
Unicontrol Acetylene 25/1,5 bar



Unicontrol Propane 25/1,5bar



Unicontrol Propane 25/4 bar



CYLINDER REGULATOR

JETCONTROL 600 (S SERIES)

JETCONTROL 600 (S Series) are single stage, two gauge cylinder regulators extensively used in oil refineries, refrigeration laboratories or industrial processes requiring precise and stable delivery of high pressure industrial gases. It is excellent tool for high pressure testing of vessels and various pipelines for gas and liquid supply.

Regulators are primarily designed, tested and manufactured to operate on max. inlet pressure up to 300 bar and providing pressure outlet up to 206 Bar. Its robust design, top grade materials and strictly controlled manufacturing and testing procedures guarantee high operational safety even if working with small molecular gases (like helium or hydrogen) at very high pressures.

Key components are manufactured from high tensile brass, use of extra safe and accurate bulkhead gauges, double layer high grade stainless steel diaphragms and efficient metal filters help to prolong regulator service life and ensure trouble-free operation of JETCONTROL 600 (S Series) regulators

FEATURES / ADVANTAGES / BENEFITS

- Robust design for high outlet pressure up to 206 bar.
- Smooth outlet pressure adjustment thanks to massive T-bar with long lever to generate bigger torque and with bronze bushing to reduce friction
- Top safe bulkhead design, high accuracy pressure gauges.
- Inlet connection complying to local standards with both side entry and bottom entry orientation.
- Body and bonnet made of a special high tensile Brass alloy.
- Easy connection of the outlet pipe with Parker fittings
- Double layer stainless steel diaphragm
- Higher corrosion resistance with transparent powder painting



CYLINDER REGULATOR

BASECONTROL SE, BE

BASECONTROL is the single stage cylinder regulator for common applications of technical gases up to 230bar service. It has been designed for small and medium gas consumption, in line with ISO 2503.

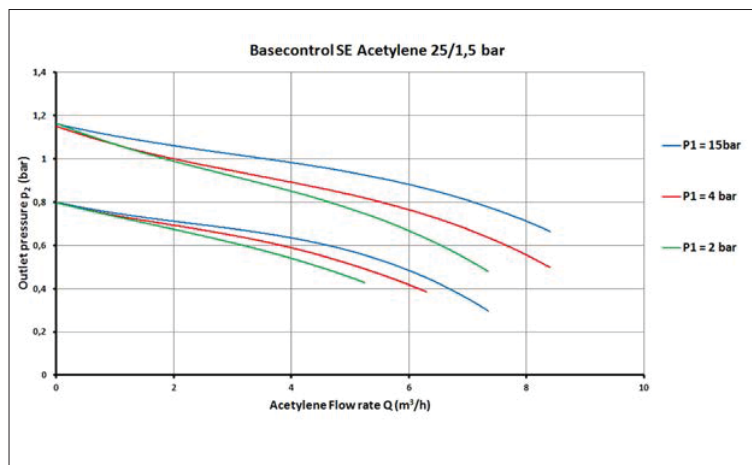
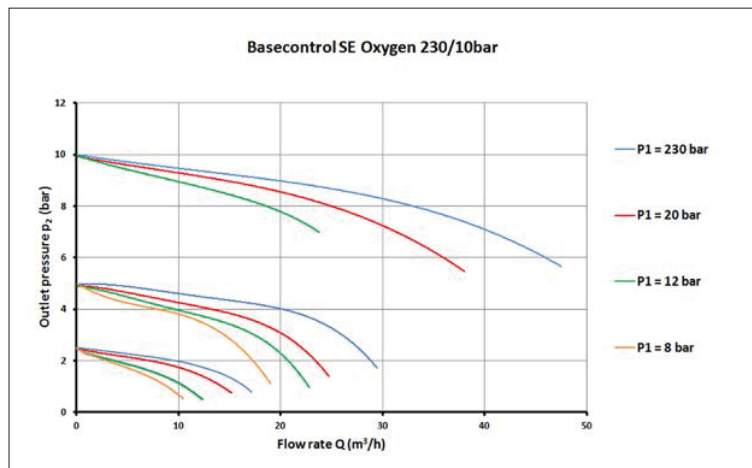
Regulator provides very good outlet pressure stability thanks to big diaphragm diameter. Compact, light-weight body fits to use during on-side handling or for maintenance operations in the workshop combined with small size cylinders (5-50 liters). Design is made with side entry (SE) and bottom entry (BE) to fit for all common types of cylinder valves.

FEATURES / ADVANTAGES / BENEFITS

- Single stage regulator according to ISO 2503 for safe operation up to 230bar service.
- Pressure gauges with three scales in bar, kPa, psi.
- Light-weight design for use with small cylinder
- Safe handling with pressure relief valve
- Inlet connection complying to local standard with both side entry (SE) and bottom entry (BE) orientation.
- Ergonomic handwheel for easy pressure adjustment.



TECHNICAL DATA					
Gas	O ₂ , N ₂ , Ar	Ar, Ar/CO ₂	CO ₂	Acetylene	Propane
Body	Brass forged				
Bonnet	Zn/Al alloy Die Cast				
Stems, nuts and fittings	Brass				
Diaphragm	EPDM				NBR
Seat sealing	PA			CR	
Inlet/Outlet connection	Gas specific connection				
Maximal inlet pressure	230 bar		200 bar	25 bar	
Outlet pressure range	0-10 bar	0-24l/min		1,5 bar	4 bar
Temperature range	From -20°C to 60°C				
Weight	Approx. according to gas variant: 1,18 kg				
ISO 2503	3	20		1	



CYLINDER REGULATOR

GAS ECONOMISIER GS40

The GCE Gas economiser is the leading accessory for shielding gas arc welding as MIG, MAG and TIG welding technologies. With its small and compact design, the GS40 can be installed downstream most common cylinder pressure regulators or outlet point regulators with flow control. GS40 stabilizes flow and optimises shielding gas pressure in the hose during welding process. Cost of the shielding gas is important factor influencing total cost balance of the welding operation. The savings with GS40 represents up to 0,5ltr of the shielding gas on each average weld. Optimal gas delivery with proper defined pressure and flow-rate improves quality of welding. Cost saving and quality improvement in this area give the advantage to the user on the competitive market.

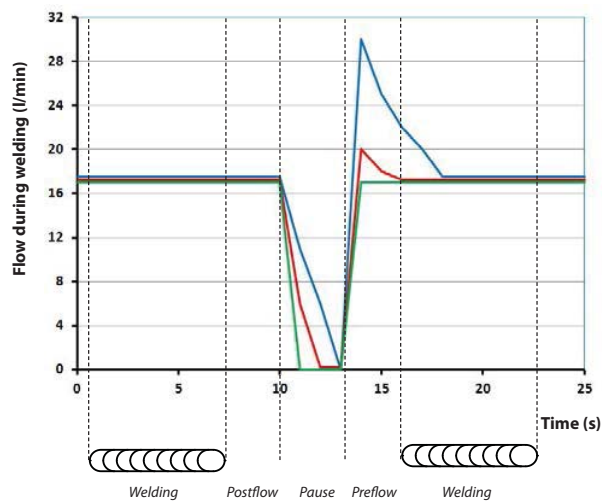
FEATURES / ADVANTAGES / BENEFITS

- Shielding gas saving up to 40%.
- Savings represents up to 0,5 ltr of the shielding gas on each average weld.
- Increases welding quality by delivering of the optimal amount of the shielding gas.
- Minimizes weld porosity.
- Stabilizes outlet pressure of the standard cylinder regulator which eliminates gas flow surges and flow turbulences.
- Can be installed with all common shielding gas regulators including outlet point regulators.
- Adjustable variant to be used with regulators with flow-meters.
- Fixed variant for regulators with litre-scaled pressure gauges.



TECHNICAL DATA	
Gas	Ar, Ar/CO ₂ , CO ₂
Body	Aluminium
Bonnet	Zn/Al alloy Die Cast
Stems, nuts and fittings	Brass
Diaphragm	EPDM
Seat sealing	PA
Inlet/Outlet connection (EN 560)	Country specific connection
Maximal inlet pressure	30 bar
Outlet Pressure range	0-32l/min
Temperature range	From -20°C to 60°C
Weight	Approx. according to gas variant: 0,4 kg

PRINCIPLE OF GAS SAVING



- Regulator without gas economiser
- Regulator with GS40F
- Regulator with GS40A



Security in action



INDUSTRIAL MANIFOLD REGULATOR **MR400**

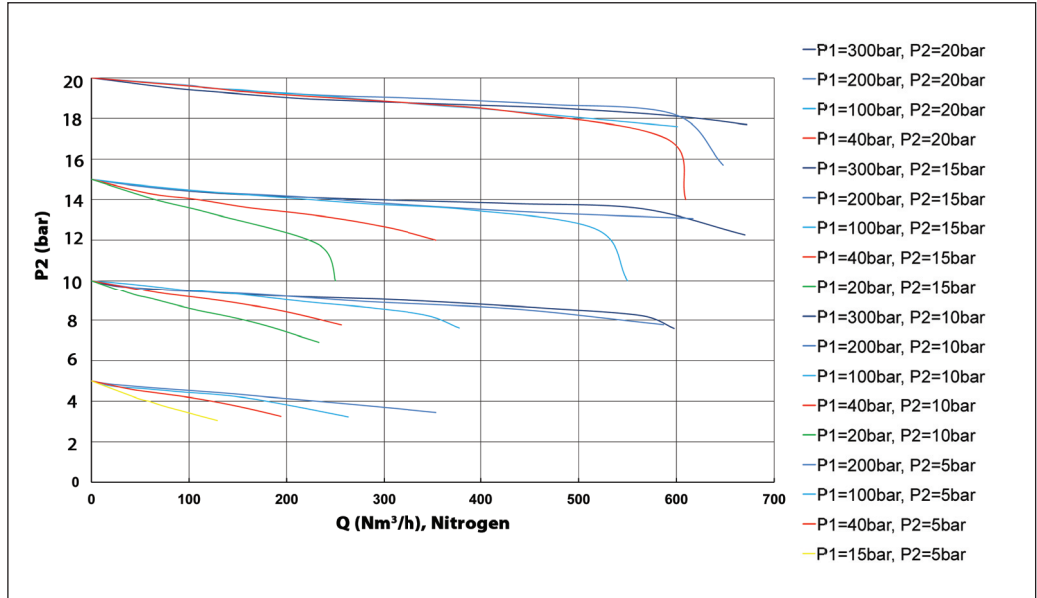
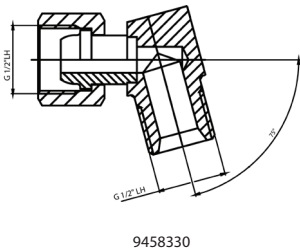
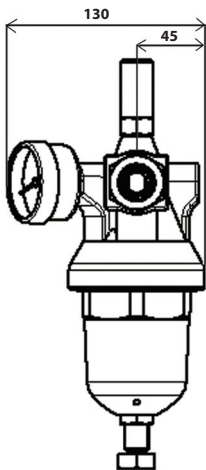
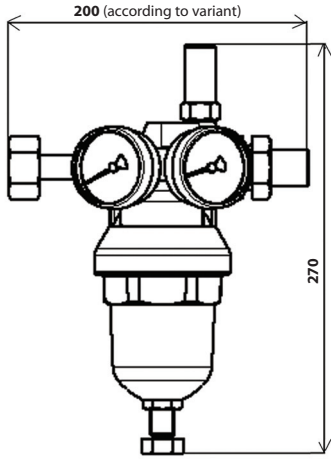


EDITION 1/2012

- MR400 is high pressure high flow regulator for industrial applications.
- Conforming to ISO 7291.
- High compressed gas service (O, D, N, CO₂, M, H) up to 600Nm³/h and up to 300 bar inlet pressure.
- 180°connectors for direct in-line mounting as manifold regulator.
- Integrated inlet filter ensures reliable function of the regulator even with old or dirty upstream pipeworks.
- Contains integrated pressure relief valve
- It can be used in many applications where is requested high-flow outlet with constant delivery pressure.
- Typical examples: Oxy-fuel cutting and other various oxy-fuel processes, laser process gas service, arc welding shielding gas pressure stabilizing, inertisation, etc.



FLOW CHARACTERISTICS



Art. Nr.	Gas	Inlet pressure	Inlet connection	Outlet pressure	Outlet conn. EN560
0762915	Oxygen	200 bar	DIN 477-1 Nr.9; G3/4"	20 bar	G1/2" male
0762929	Nitrogen	200 bar	DIN 477-1 Nr.10; W24,32x1/14"	20 bar	G1/2" male
0762931	Argon, Ar/CO ₂	200 bar	DIN 477-1 Nr.6; W21,8x1/14"	20 bar	G1/2" male
0762932	Hydrogen, Methane	200 bar	DIN 477-1 Nr.1; W21,8x1/14"LH	20 bar	G1/2"LH male
0762933	Oxygen	300 bar	DIN 477-5 Nr.59; W30x2; 18,7/17,3	20 bar	G1/2" male
0762934	Nitrogen	300 bar	DIN 477-5 Nr.54; W30x2; 20,1/15,9	20 bar	G1/2" male
0762936	Argon, Ar/CO ₂	300 bar	DIN 477-5 Nr.55; W30x2; 20,8/15,2	20 bar	G1/2" male

ACCESSORIES

Art. Nr.	Description	Gas	Max. pressure	Inlet conn. EN560	Outlet conn. EN560
9456380	Outlet conn. 75°bent, EN 560	Oxygen/Inert	PN64	G1/2" female	G1/2" male
9458330	Outlet conn. 75°bent, EN 560	Fuel gas	PN64	G1/2"LH female	G1/2"LH male

TECHNICAL DATA

Bodies and bonnet material	Brass
Diaphragm material	Butyl, NBR
Seat sealing	PA
Inlet filter	Bronze
Connectors & fittings	Brass, Stainless steel
Inlet connection	DIN477, other variants on request
Outlet connection	G1/2"
Maximal inlet pressure for oxygen	300bar
Outlet pressure range	0-20bar
Temperature range	from -20°C to 60°C
Maximal flow rate	612Nm ³ /h, Nitrogen
Nominal flow rate	400Nm ³ /h, Nitrogen
Coefficient „i“	0,026
Coefficient „R“	0,159
Weight	5,1 kg

GCE

Gas Control Equipment

GCE world-wide: <http://www.gcegroup.com>

RAITEC
Engineering & Trading Co.