MESURA Nirmal
Gas Controls

Natural Gas / LPG Regulators

INDIAN SUB CONTINENT CATALOG 2015 - 2016

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MESURA
Gas Cor

Mesura, the French leading manufacturer of components, systems and services for regulating and measuring natural gas, and **Nirmal Industrial Controls,** India's consolidated market leader in the field of pressure reducing stations, set up a joint venture in India in 2014 to produce one of the world's top lines of Natural Gas regulators. The brand new **Mesura Nirmal** plant is situated in the state of Gujarat, just one hour's flight from Mumbai. It consists of 1,700 square metres of factory space and offices.

Nirmal Controls

Mesura Nirmal develops and produces dual stage direct acting spring loaded natural gas regulators, covering a flow range of between six and two hundred cubic metres of gas per hour. **Mesura Nirmal** will also act as a distribution hub for the entire **Kosan+** range, the **Cavagna Group**'s top line of LPG regulators for residential, commercial and industrial use. This new partnership aims to serve the customer base located in India even more effectively and will put **Mesura**'s trusted technical and manufacturing capabilities together with **Nirmal** Industries's insight and knowledge of the Indian Market into a package of services and products you can truly rely on.

Reliable Partners

MESURA®
Gas Solutions

About Mesura

Mesura, was founded in 1949 with headquarters in Forbach in east France. It is the head of a group of companies that design, manufacture and sell components, systems and services for regulating and measuring Natural Gas. Our group's wares are for domestic and industrial applications. Continual innovation and constant improvement in the performance of our products lie at the heart of our strategy. Today Mesura has production plants in France, Tunisia, India and Italy. In 2012, Mesura's companies joined the Cavagna Group, one of the top manufacturers of equipment and components for compressed gas control (gases for energy, alternative fuel gases, medical gases, industrial gases, cryogenic gases and special gases).

For further info visit www.mesura.com

Nirmal™
INDUSTRIAL CONTROLS PVT. LTD.

About Nirmal Industrial Controls PVT. LTD.

Established in 1973, as an expert in control valve solutions for tricky and hazardous services, Nirmal has today emerged as the pioneer and leader in India, in the field of self actuated pressure control valves, low pressure nitrogen blanketing systems, gas pressure reducing station with safety shut off, High Pressure Natural Gas Pressure Regulators and Slam Shut Valves, Gas Conditioning, Regulating & Metering skids.

For further info please visit www.nirmalindustries.com

cavagna group
Advanced solutions for gas control

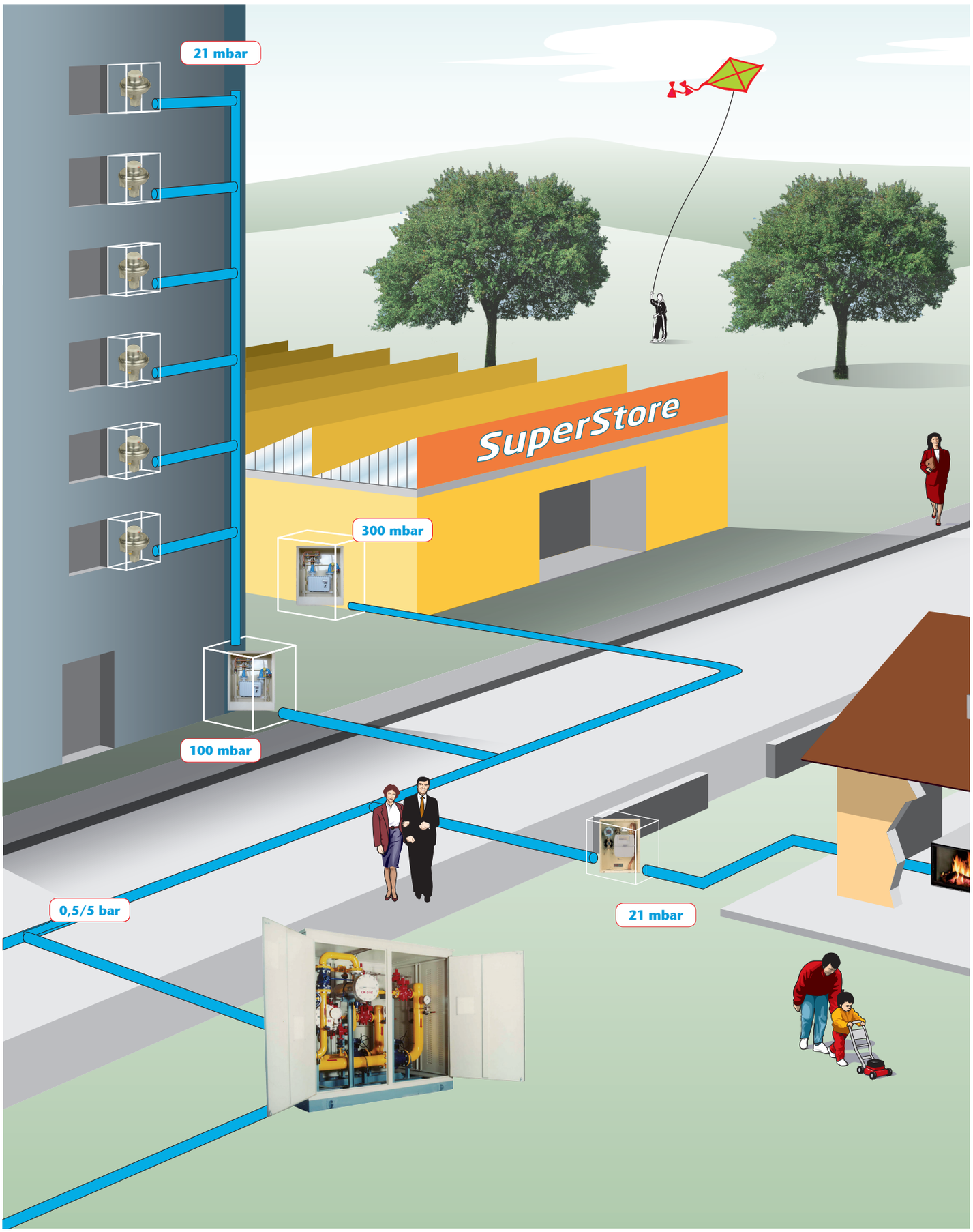
About Cavagna Group

The Cavagna Group is the world leading manufacturer of equipment and components for controlling compressed gases (energy gases, alternative fuel gases, medical gases, industrial gases, and specialty and cryogenic gases).

It was founded in 1949 with headquarters in Northern Italy, close to Brescia, which is historically renowned for its metal processing industry. The Group consists of nine vertically integrated production companies in Italy and nine others spread across the five continents.

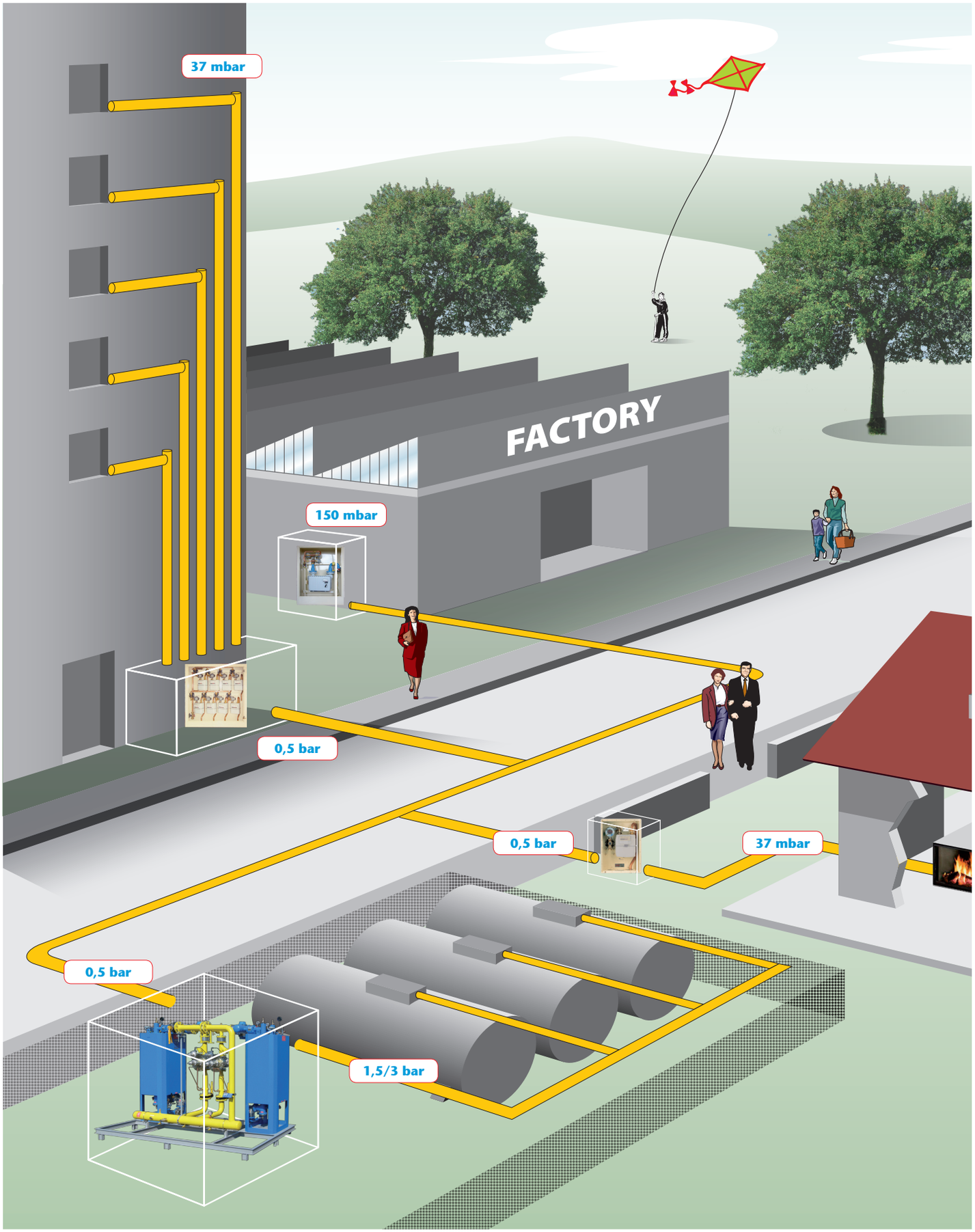
The Cavagna Group now sells in more than 140 countries worldwide through a distribution network consisting of fifteen fully owned additional distribution companies. In 2012, Cavagna Group acquired Mesura.

For further info visit www.cavagnagroup.com


21 mbar
SuperStore
300 mbar
100 mbar
0,5/5 bar
21 mbar

EXAMPLE OF APPLICATION

NATURAL GAS


37 mbar
FACTORY
150 mbar
0,5 bar
0,5 bar
37 mbar
0,5 bar
1,5/3 bar

EXAMPLE OF APPLICATION
LPG

MESURA Nirmal
Gas Controls

Twin Stage Natural Gas / LPG Regulators

Twin Stage Natural Gas / LPG Regulators

1 SCOPE

The Regulator B6M is a two stage regulator for medium inlet pressure with high precision class and comply with EN 334 / EN88 specifications (Compliance according to PED 97/23/CE art. 3.3).

B6M

2 DESCRIPTION

Design for use on Domestic or Industrial applications on Natural Gas used in cabinets, building gas line with or without meter for domestic or commercial applications.

3 TECHNICAL DATA

Body and cover : Die Cast Aluminum Alloy
Internal parts : Nitrile NBR, Stainless Steel, Brass, Aluminium

Upstream pressure	Downstream pressure	Flow rate
bar	mbar	B6
0,5 to 5	21 Mbar pre-setted	6 Nm3/h NG 3,8 Nm3/h Propane or 7,6 kg/h Propane

3.1 SPECIFICATIONS

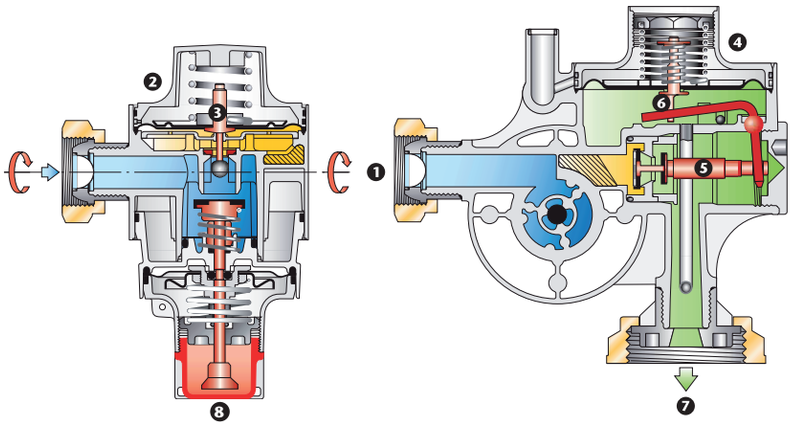
Working temperature: Standard use -20°C to +60°C
Nominal Capacity up to 7.2 M3/Hr of Natural Gas at 0.5 Bar inlet pressure
Inlet connection: ½'' Loose Nut
Outlet connection: ¾''Loose Nut

3.2 OTHERS

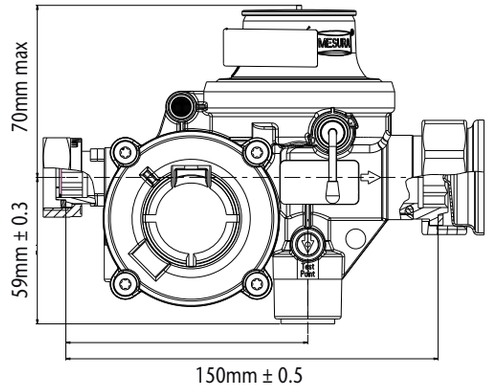
Maximum inlet pressure up to 6 Bar
It can be mounted in either position Horizontally or Vertically
Other Inlet and Outlet connections on request
Adjustable outlet pressure on request

SECTIONAL VIEW

❶ - Inlet
❷ - First-stage pressure regulation
❸ - First-stage control valve
❹ - Second-stage pressure regulation
❺ - Second-stage control valve
❻ - Pressure relief valve
❼ - Outlet
❽ - Slam Shut Valve



3.3 OVERALL DIMENSIONS B6M



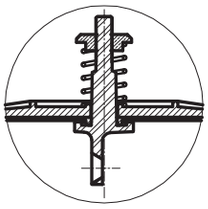
3.4 SAFETY SYSTEMS

- Over Pressure Slam Shut Valve
- Under Pressure Slam Shut Valve
- Excess Flow Slam Shut Valve
- Slam Shut due to 2nd stage diaphragm bursting
- Integrated Automatic Relief Valve
- Filter at the inlet of the regulator
- All shut-off device are with manual reset

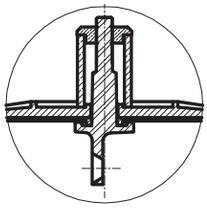
Pressure relief valve

This pressure relief valve can be provided with an adjustable safety device or without safety device. In this latter case the relief function is nullified.

ADJUSTABLE SAFETY DEVICE



WITHOUT SAFETY DEVICE



1 SCOPE

The Regulator B10M is two stage regulator for medium inlet pressure with high precision class and in accordance to EN 334 / EN88 specifications (compliance according to PED 97/23/CE art. 3.3).

B10M

2 DESCRIPTION

Design for use on Domestic or Industrial applications on Natural Gas used in cabinets, building gas line with or without meter for domestic or commercial applications.

3 TECHNICAL DATA

Body and cover : Die Cast Aluminum Alloy
Internal parts : Nitrile NBR, Stainless Steel, Brass, Aluminium

Upstream pressure	Downstream pressure	Flow rate
bar	mbar	B10
0,5 to 5	24 Mbar / 110 Mbar (Others on request)	10 Nm3/h NG 6,3 Nm3/h Propane or 12,6 kg/h Propane

3.1 SPECIFICATIONS

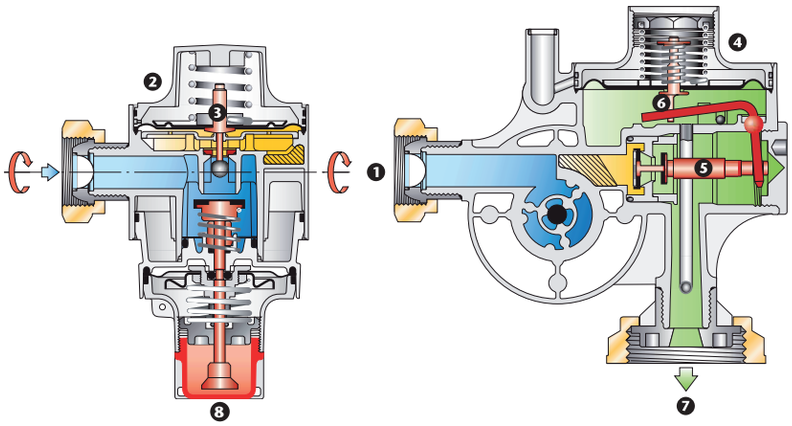
Working temperature: Standard use -20°C to +60°C
Inlet connection: ¾'' Loose Nut
Outlet connection: 1''Loose Nut

3.2 OTHERS

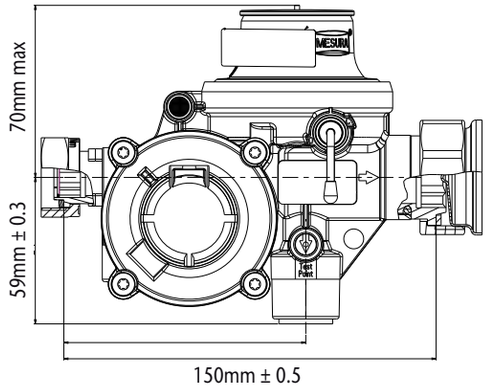
Maximum inlet pressure up to 6 Bar
It can be mounted in either position Horizontally or Vertically
Other Inlet and Outlet connections on request
Adjustable outlet pressure on request

SECTIONAL VIEW

❶ - Inlet
❷ - First-stage pressure regulation
❸ - First-stage control valve
❹ - Second-stage pressure regulation
❺ - Second-stage control valve
❻ - Pressure relief valve
❼ - Outlet
❽ - Slam Shut Valve



3.3 OVERALL DIMENSIONS B10M



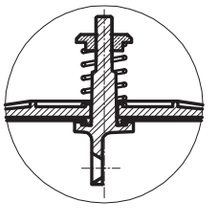
3.4 SAFETY SYSTEMS

- Over Pressure Slam Shut Valve
- Under Pressure Slam Shut Valve
- Excess Flow Slam Shut Valve
- Slam Shut due to 2nd stage diaphragm bursting
- Integrated Automatic Relief Valve
- Filter at the inlet of the regulator
- All shut-off device are with manual reset

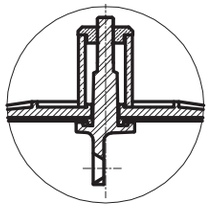
Pressure relief valve

This pressure relief valve can be provided with an adjustable safety device or without safety device. In this latter case the relief function is nullified.

ADJUSTABLE SAFETY DEVICE



WITHOUT SAFETY DEVICE



1 SCOPE

The Regulator B25 is two stage regulator for medium inlet pressure with high precision class and in accordance to EN 334 / EN88 specifications (compliance according to PED 97/23/CE art. 3.3).

B25M

2 DESCRIPTION

Design for use on Domestic or Industrial applications on Natural Gas used in cabinets, building gas line with or without meter for domestic or commercial applications.

3 TECHNICAL DATA

Body and cover: Die Cast Aluminum Alloy
Internal parts: Nitrile NBR, Stainless Steel, Brass, Aluminium

Upstream pressure	Downstream pressure	Flow Rate
bar	mbar	B25
0,5 to 5	24 Mbar / 75 Mbar / 110 Mbar (Others on request)	25 Nm3/h NG 15,6 Nm3/h Propane or 31,2 kg/h Propane

3.1 SPECIFICATIONS

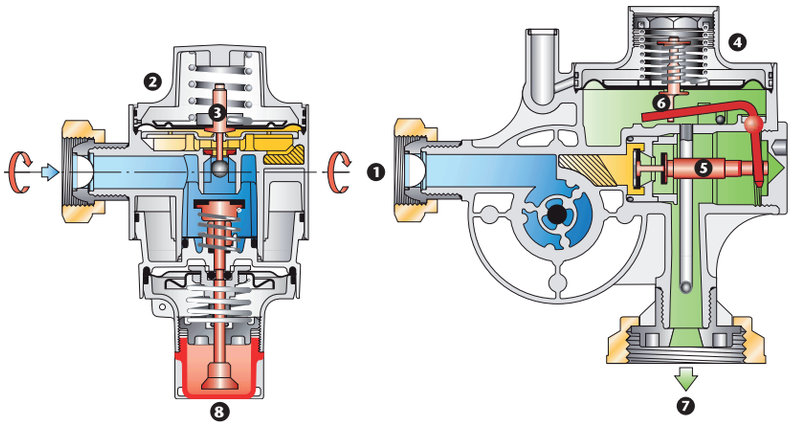
Working temperature: Standard use -20°C to +60°C
Inlet connection: ¾'' Loose Nut
Outlet connection: 1''/ 1¼" Loose Nut

3.2 OTHERS

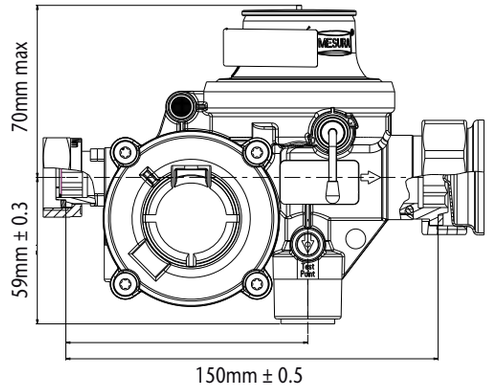
Maximum inlet pressure up to 6 Bar
It can be mounted in either position Horizontally or Vertically
Other Inlet and Outlet connections on request
Adjustable outlet pressure on request

SECTIONAL VIEW

❶ - Inlet
❷ - First-stage pressure regulation
❸ - First-stage control valve
❹ - Second-stage pressure regulation
❺ - Second-stage control valve
❻ - Pressure relief valve
❼ - Outlet
❽ - Slam Shut Off



3.3 OVERALL DIMENSIONS B25M



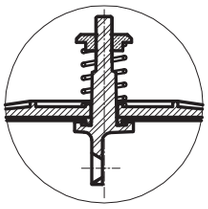
3.4 SAFETY SYSTEMS

- Over Pressure Slam Shut Valve
- Under Pressure Slam Shut Valve
- Excess Flow Slam Shut Valve
- Slam Shut due to 2nd stage diaphragm bursting
- Integrated Automatic Relief Valve
- Filter at the inlet of the regulator
- All shut-off device are with manual reset

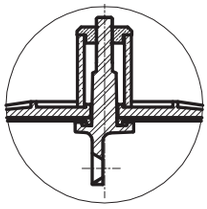
Pressure relief valve

This pressure relief valve can be provided with an adjustable safety device or without safety device. In this latter case the relief function is nullified.

ADJUSTABLE SAFETY DEVICE



WITHOUT SAFETY DEVICE



1 SCOPE

The Regulator B50M is two stage regulator for medium inlet pressure with precision class in accordance with EN 334 / EN88 specifications (compliance according to PED 97/23/CE art. 3.3)

B50M

2 DESCRIPTION

Design for use on Domestic or Industrial applications on Natural Gas used in cabinets, building gas line with or without meter for domestic or commercial applications.

3 TECHNICAL DATA

Body and cover : Die Cast Zinc Alloy according to ISO: ZnAl4
Internal parts : Nitrile NBR; Stainless Steel; Brass; Aluminium

Upstream pressure (bar)	Downstream pressure (mbar)	Flow Rate
B50		50
0,5 to 5 bar	75 Mbar / 110 Mbar (Others on request)	50 Nm3/h NG 31,5 Nm3/h Propane or 63 kg/h Propane

3.1 SPECIFICATIONS

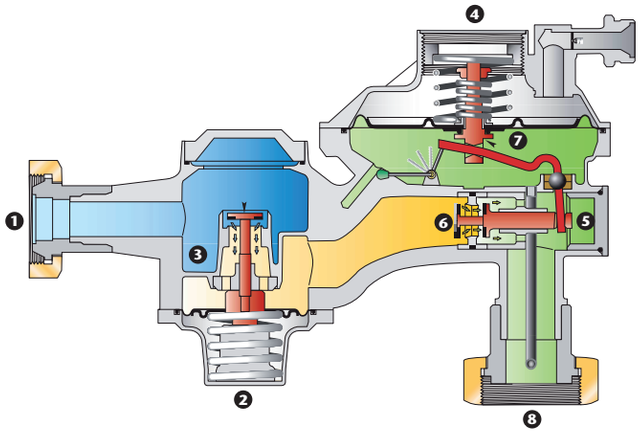
Operating temperature: Standard use -20°C to +60°C
Inlet connection: ¾'' Loose Nut
Outlet connection: 1¼" Loose Nut

3.2 OTHERS

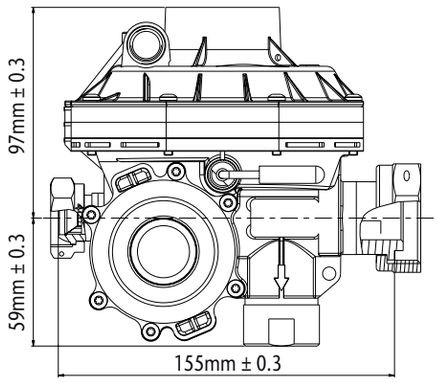
Maximum inlet pressure up to 6 Bar
It can be mounted in either position Horizontally or Vertically
Other Inlet and Outlet connections on request
Adjustable outlet pressure on request

SECTIONAL VIEW

❶ - Inlet
❷ - First-stage pressure regulation
❸ - First-stage control valve
❹ - Second-stage pressure regulation
❺ - Second-stage control valve
❻ - Safety valve
❼ - Pressure relief valve
❽ - Outlet



3.3 OVERALL DIMENSIONS B50M



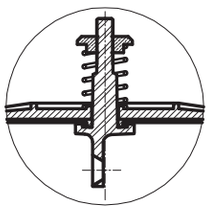
3.4 SAFETY SYSTEMS

- Over Pressure Slam Shut Valve
- Under Pressure Slam Shut Valve
- Excess Flow Slam Shut Valve
- Slam Shut due to 2nd stage diaphragm bursting
- Integrated Automatic Relief Valve
- Filter at the inlet of the regulator
- All shut-off device are with manual reset

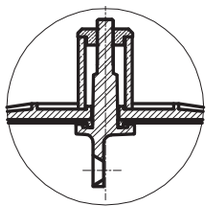
Pressure relief valve

This pressure relief valve can be provided with an adjustable safety device or without safety device.
In this latter case the relief function is nullified.

ADJUSTABLE SAFETY DEVICE



WITHOUT SAFETY DEVICE



1 SCOPE

The Regulator D100M is two stage regulator for medium inlet pressure with precision class in accordance with EN 334 / EN88 specifications (compliance according to PED 97/23/CE art. 3.3)

D100M

2 DESCRIPTION

Design for use on Domestic or Industrial applications on Natural Gas used in cabinets, building gas line with or without meter for domestic or commercial applications.

3 TECHNICAL DATA

Body and cover : Die Cast Zinc Alloy according to ISO: ZnAl4
Internal parts : Nitrile NBR; Stainless Steel; Brass; Aluminium

Upstream pressure (bar)	Downstream pressure (mbar)	Flow rate
D100		
1 to 5	110 Mbar (Others on request)	100 Nm3/h NG 63 Nm3/h Propane or 126 kg/h Propane

3.1 SPECIFICATIONS

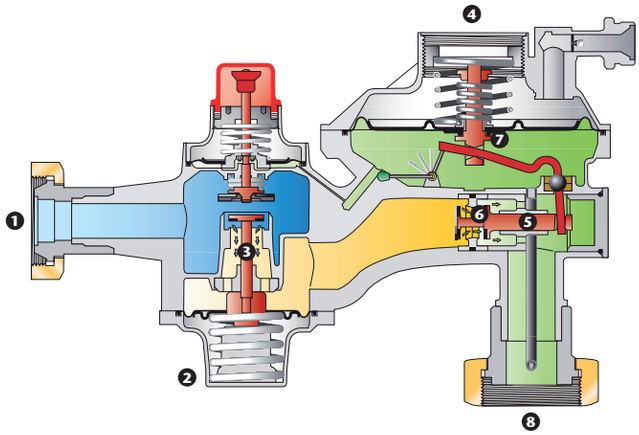
Working temperature: Standard use -20°C to +60°C
Inlet connection: 1'' Loose Nut
Outlet connection: 2" Loose Nut

3.2 OTHERS

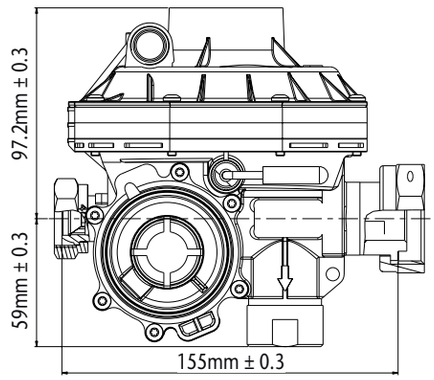
Maximum inlet pressure up to 6 Bar
It can be mounted in either position Horizontally or Vertically
Other Inlet and Outlet connections on request
Adjustable outlet pressure on request

SECTIONAL VIEW

❶ - Inlet
❷ - First-stage pressure regulation
❸ - 1st stage control valve
❹ - Second-stage pressure regulation
❺ - 2nd stage control valve
❻ - Safety valve
❼ - Pressure relief valve
❽ - Outlet



3.3 OVERALL DIMENSIONS D100M



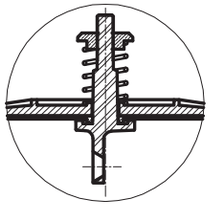
3.4 SAFETY SYSTEMS

- Over Pressure Slam Shut Valve
- Under Pressure Slam Shut Valve
- Excess Flow Slam Shut Valve
- Slam Shut due to 2nd stage diaphragm bursting
- Integrated Automatic Relief Valve
- Filter at the inlet of the regulator
- All shut-off device are with manual reset

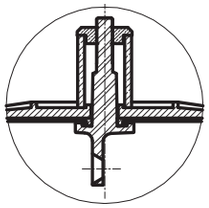
Pressure relief valve

This pressure relief valve can be provided with an adjustable safety device or without safety device.
In this latter case the relief function is nullified.

ADJUSTABLE SAFETY DEVICE



WITHOUT SAFETY DEVICE



1 SCOPE

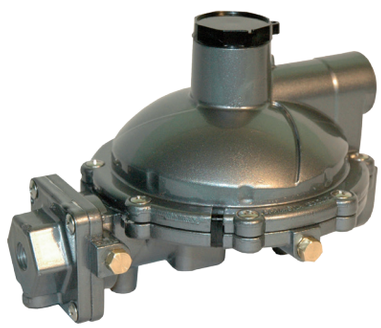
The twin stage regulator is a regulator consisting of two regulation levels, which regulates the inlet pressure, coming from the withdrawal cylinder or tank directly to the inlet pressure of the user appliance.

988TW

2 DESCRIPTION

In the standard version, Type 988 TW regulators are delivered with vent-hole turned in line with to the outlet fitting.

998TW



3 TECHNICAL DATA

The body (frame) and the bonnets are in Aluminium (AlSi11Cu2(Fe)). The connecting flange is in cast iron.

Type	Capacities in BTU\hr (SCMH) propane	Inlet connection, inches	Outlet connection, inches	Outlet adjustment range, inches W.C. (mbar)	Outlet pressure setting, inches W.C. (mbar)
988TW - 15	750,000 (8.44)	1/4" NPT	1/2" NPT	9 to 13 (22 to 32)	11 (27)
988TW - 16[1]					
998TW - 20					
998TW - 11	1,400,000 (15.76)		3/4" NPT		
998TW - 12[1]					
988TW - 28	750,000 (8.44)	POL	1/2" NPT		
988TW - 17					
988TW - 18[1]					
998TW - 21					
998TW - 13	1,400,000 (15.76)		3/4" NPT		
998TW - 14[1]					
988TW - 27	450,000 (16.43)	1/4" NPT	3/4" NPT	1 to 2.2 PSIG (0.069 to 0.15 bar)	2 PSIG (0.14 bar)
998TW - 23	1,460,000 (16.43)	1/4" NPT	3/4" NPT	1 to 2.2 PSIG (0.069 to 0.15 bar)	2 PSIG (0.14 bar)

[1] First and Second-Stage spring case vents opposite gauge taps.

MESURA
Nirmal
Gas Controls

MESURA Nirmal
Gas Controls

Single Stage Natural Gas / LPG Regulators

Single Stage Natural Gas / LPG Regulators

1 SCOPE

The regulators Type “A” due to their operating specifications are mainly used in those system where sudden capacity varations are required, or else, where the cut-off of the gas distribution is controlled by solenoid valve.
They can be used with natural gas, air, propane and other gases, as long as they do not containe a high percentage of benzole.

A100Z

2 DESCRIPTION

The regulator is provided with a single-stage pressure reducing and it is adjustable, allowing the regulation of the downstream pressure without changing the spring that manage the pressure. The adjustment range is equal to ±10 mbar of the nominal pressure. The regulator is painted.

3 TECHNICAL DATA

The body (frame) and the bonnets are in Aluminium (AlSi11Cu2(Fe)).
The connecting flange is in cast iron.

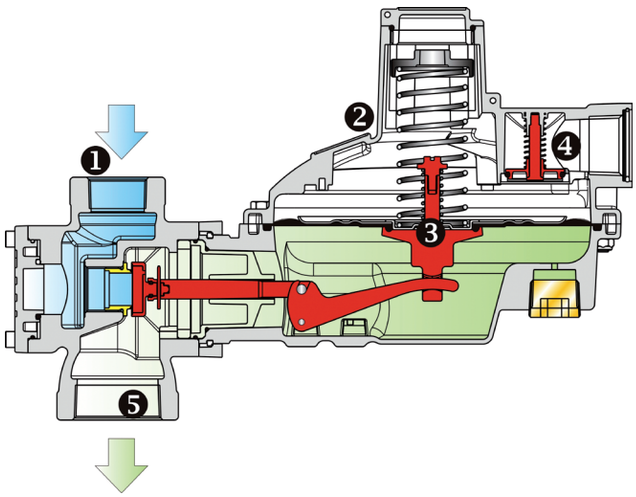
Upstream Pressure	Downstream Pressure	Flow Rate
(bar)	mbar	A100
0,1 up to 8.6	9 up to 380	100 Nm3/h NG 62,4 Nm3/h Propane or 124,8 kg/h Propane

3.1 SPECIFICATIONS

Working temperature: Standard use -20°C to +60°C

SECTIONAL VIEW

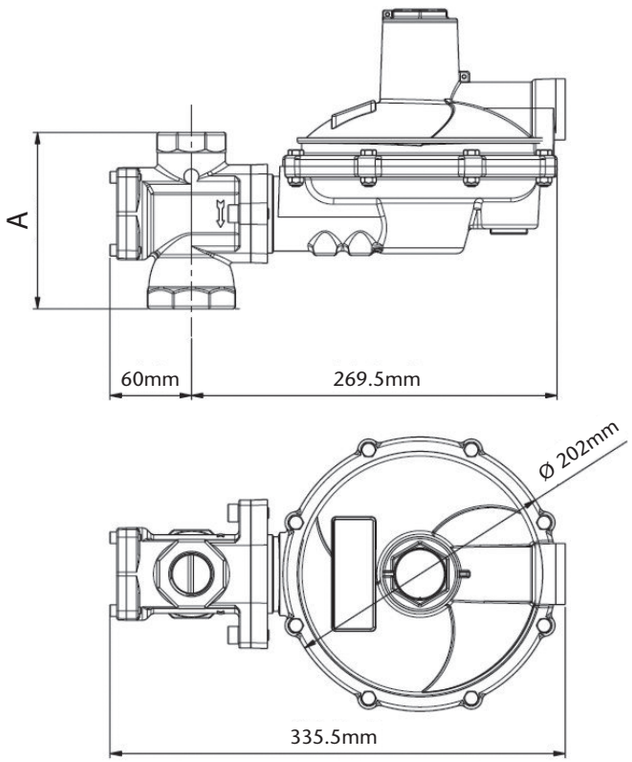
❶ - Inlet
❷ - Pressure regulation stage
❸ - Pressure Relief Valve
❹ - Vent Valve
❺ - Outlet



3.2 CONNECTION OPTIONS

INLET	OUTLET	A (mm)
1″	1″	100
1″	1-1/4″	130
1″	1-1/2″	130
2″	2″	127

3.3 OVERALL DIMENSIONS



3.4 SAFETY SYSTEMS

- Vent valve against overpressure: it is a valve which releases excess gas from the cover of the regulator in case there is a overpressure in the system.

1 SCOPE

The regulator Type “L” due to their operating specifications are mainly used in those system where sudden capacity varations are required, or else, where the cut-off of the gas distribution is controlled by solenoid valve.
They can be used with natural gas, air, propane and other gases, as long as they do not containe a high percentage of benzole.
The regulator Type “L” is equipped with a counterbalanced nozzle, that allows and guarantees higher stability of regulation and higher flow rate.

L200Z

2 DESCRIPTION

The regulator is provided with a single-stage pressure reducing and it is adjustable, allowing the regulation of the downstream pressure without changing the spring that manage the pressure. The adjustment range is equal to ±10 mbar of the nominal pressure. The regulator is painted.

3 TECHNICAL DATA

The body (frame) and the bonnets are in Aluminium (AlSi11Cu2(Fe)).
The connecting flange is in cast iron.

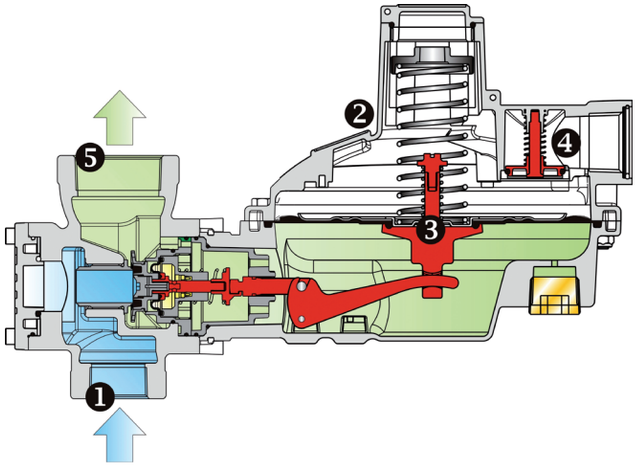
Upstream Pressure	Downstream Pressure	Flow Rate
(bar)	mbar	L200
0,1 up to 8.6	9 up to 380	200 Nm3/h Ng 124,8 Nm3/h Propane or 249,6 kg/h Propane

3.1 SPECIFICATIONS

Working temperature: Standard use -20°C to +60°C

SECTIONAL VIEW

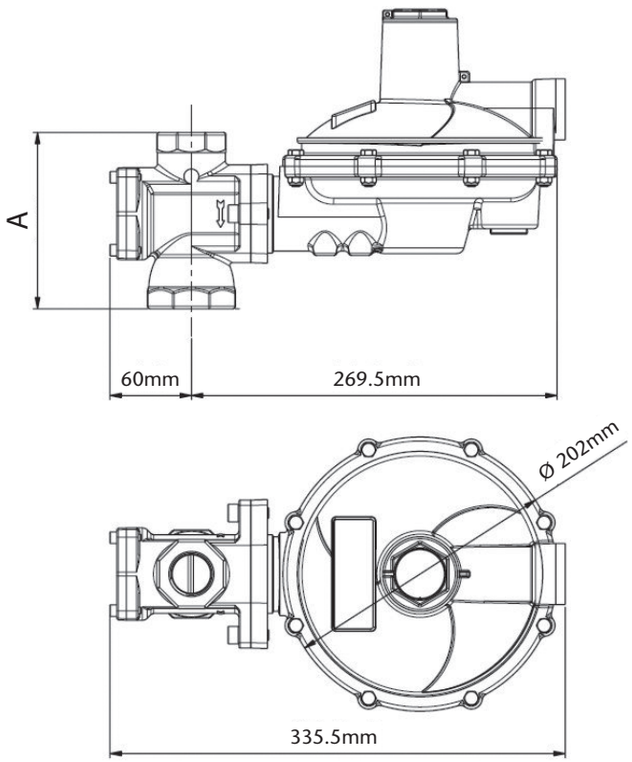
❶ - Inlet
❷ - Pressure regulation stage
❸ - Pressure Relief Valve
❹ - Vent Valve
❺ - Outlet



3.2 CONNECTION OPTIONS

INLET	OUTLET	A (mm)
1″	1″	100
1″	1-1/4″	130
1″	1-1/2″	130
2″	2″	127

3.3 OVERALL DIMENSIONS



3.4 SAFETY SYSTEMS

- Vent valve against overpressure: it is a valve which releases excess gas from the cover of the regulator in case there is a overpressure in the system.

1 SCOPE

The regulator Type “H” due to their operating specifications are mainly used in those system where sudden capacity varations are required, or else, where the cut-off of the gas distribution is controlled by solenoid valve.
They can be used with natural gas, air, propane and other gases, as long as they do not contain a high percentage of benzole.
The regulator Type “H” is equipped with a counterbalanced nozzle, that allows and guarantees higher stability of regulation and higher flow rate. In addition, it equipped with a ISV Max-Min, that includes a safety-device OPSO for overpressure.

H200Z

2 DESCRIPTION

The regulator is provided with a single-stage pressure reducing and it is adjustable, allowing the regulation of the downstream pressure without changing the spring that manage the pressure. The adjustment range is equal to ±10 mbar of the nominal pressure. The regulator is painted.

3 TECHNICAL DATA

The body (frame) and the bonnets are in Aluminium (AlSi11Cu2(Fe)).
The connecting flange is in cast iron.

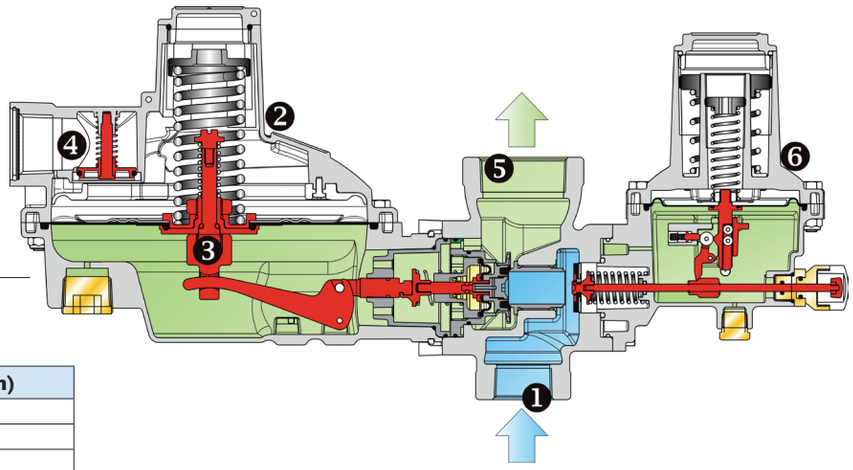
Upstream Pressure	Downstream Pressure	Flow Rate
(bar)	mbar	H200
0,1 up to 8.6	9 up to 380	200 Nm3/h NG 124,8 Nm3/h Propane or 249,6 kg/h Propane

3.1 SPECIFICATIONS

Working temperature: Standard use -20°C to +60°C

SECTIONAL VIEW

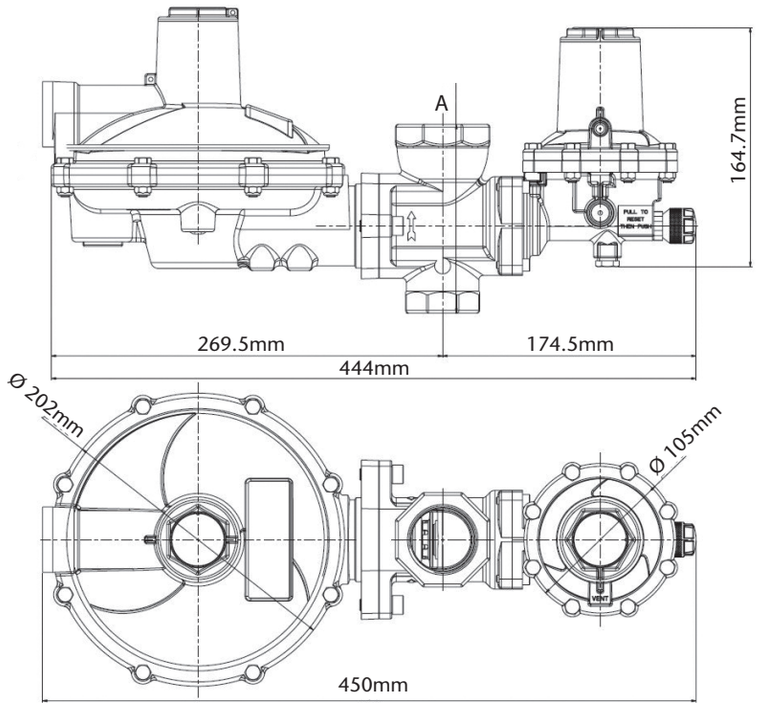
❶ - Inlet
❷ - Pressure regulation stage
❸ - Pressure Relief Valve
❹ - Vent Valve
❺ - Outlet
❻ - OPSO-UPSO



3.2 CONNECTION OPTIONS

INLET	OUTLET	A (mm)
1″	1″	100
1″	1-1/4″	130
1″	1-1/2″	130
2″	2″	127

3.3 OVERALL DIMENSIONS



3.4 SAFETY SYSTEMS

- Vent valve against overpressure: it is a valve which releases excess gas from the cover of the regulator in case there is a overpressure in the system.

1 SCOPE

The regulator Type “I” due to their operating specifications are mainly used in those system where sudden capacity varations are required, or else, where the cut-off of the gas distribution is controlled by solenoid valve.
They can be used with natural gas, air, propane and other gases, as long as they do not contain a high percentage of benzole.
The regulator Type “L” is equipped with a counterbalanced nozzle, that allows and guarantees higher stability of regulation and higher flow rate. In addition, it equipped with a ISV Max-Min, that includes a safety-device OPSO for overpressure and a safety-device UPSO for underpressure.

I200Z

2 DESCRIPTION

The regulator is provided with a single-stage pressure reducing and it is adjustable, allowing the regulation of the downstream pressure without changing the spring that manage the pressure. The adjustment range is equal to ±10 mbar of the nominal pressure. The regulator is painted.

3 TECHNICAL DATA

The body (frame) and the bonnets are in Aluminium (AlSi11Cu2(Fe)).
The connecting flange is in cast iron.

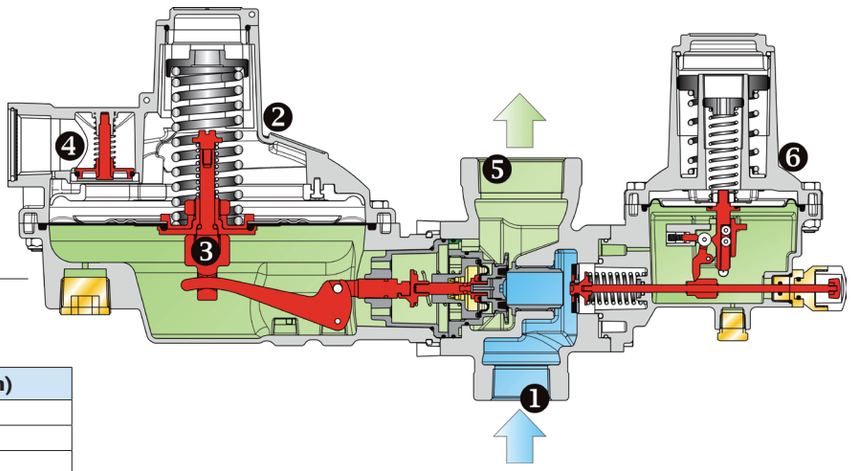
Upstream Pressure	Downstream Pressure	Flow Rate
(bar)	mbar	I200
0,1 up to 8.6	9 up to 380	200 Nm3/h NG 124,8 Nm3/h Propane or 249,6 kg/h Propane

3.1 SPECIFICATIONS

Working temperature: Standard use -20°C to +60°C

SECTIONAL VIEW

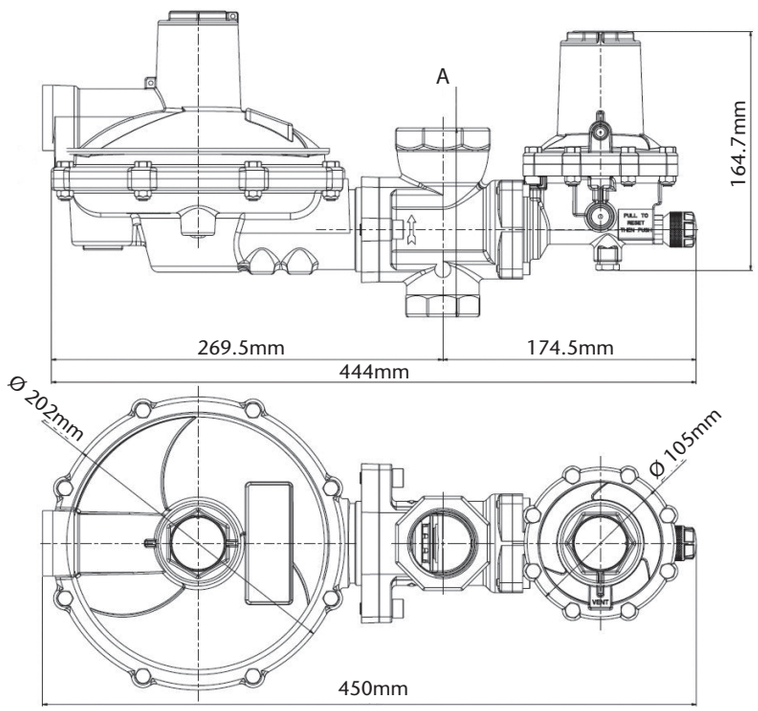
❶ - Inlet
❷ - Pressure regulation stage
❸ - Pressure Relief Valve
❹ - Vent Valve
❺ - Outlet
❻ - OPSO-UPSO



3.2 CONNECTION OPTIONS

INLET	OUTLET	A (mm)
1″	1″	100
1″	1-1/4″	130
1″	1-1/2″	130
2″	2″	127

3.3 OVERALL DIMENSIONS



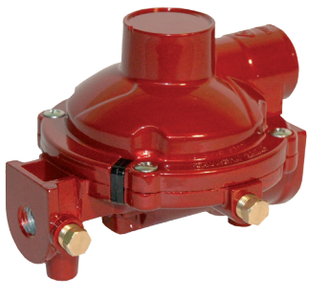
3.4 SAFETY SYSTEMS

- Vent valve against overpressure: it is a valve which releases excess gas from the cover of the regulator in case there is a overpressure in the system.

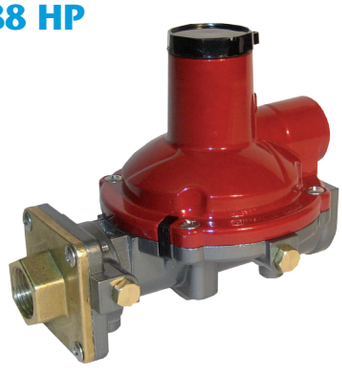
1 SCOPE

The first stage regulator is a regulator reducing the inlet pressure, coming from the withdrawal cylinder, to a medium level suitable to feed a second stage regulator consequently.

984 HP



988 HP



2 DESCRIPTION

First stage regulators have to be used outdoors in correct mounting position with vent-hole turned downwards. In their standard version the Type 988 HP regulators are delivered with vent-hole turned in line with the outlet fitting.

3 TECHNICAL DATA

The body (frame) and the bonnets are in Aluminium (AlSi11Cu2(Fe)). The connecting flange is in cast iron.

Type	Capacities in BTU\hr (SCMH) propane	Inlet connection, inches	Outlet connection, inches	Outlet adjustment range, PSIG (bar)	Outlet pressure setting, PSIG (bar)
984HP - 04	1,000,000 (11.26)	1/4" NPT	1/2" NPT	No adjustment	10 (0.69)
988HP - 07	2,000,000 (22.51)	1/2" NPT		4 to 6 (0.28 to 0.41)	5 (0.34)
988HP - 08		POL			
988HP - 09	2,250,000 (25.33)		3/4" NPT		
988HP - 04	2,100,000 (23.64)	1/2" NPT	1/2" NPT	8 to 12 (0.55 to 0.83)	10 (0.69)
988HP - 01	2,400,000 (27.01)	3/4" NPT	3/4" NPT		
988HP - 05	2,100,000 (23.64)	POL	1/2" NPT		
988HP - 06	2,250,000 (25.33)		3/4" NPT		

1 SCOPE

The second stage regulator is a regulator reducing the pressure coming from a first stage regulator directly to the inlet pressure of the user appliance or to a medium pressure value in case of installations with Pressure Line Regulators.

998 LP

988 LP

2 DESCRIPTION

Second stage regulators have to be used outdoors in correct mounting position with venthole turned downwards. In the standard version these regulators are delivered with vent-hole in line with the inlet fitting.

3 TECHNICAL DATA

The body (frame) and the bonnets are in Aluminium (AlSi11Cu2(Fe)). The connecting flange is in cast iron.

Type	Capacities in BTU\hr (SCMH) propane	Inlet connection, inches	Outlet connection, inches	Outlet pressure range, inches W.C. (mbar)	Outlet pressure setting, inches W.C. (mbar)
988LP - 03	800,000 (9.01)	1/2" NPT	1/2" NPT	9 to 13 (22 to 32)	11 (27)
998LP - 19					
998LP - 22	1,000,000 (11.26)				
998LP - 01	1,400,000 (15.76)		3/4" NPT		
998LP - 28 [1]					
998LP - 02		3/4" NPT			
998LP - 05	920,000 (10.36)		3/4" NPT LAT		
998LP - 03	1,000,000 (11.26)	1/2" NPT	3/4" NPT 90°		
998LP - 04		3/4" NPT			
998LP - 29 [1]					
998LP - 10	2,300,000 (25.89)		3/4" NPT		
998LP - 09		1" NPT	1" NPT		

[1] Vent-hole in line with the outlet fitting.

1 SCOPE

The 49 series direct operated regulators are designed for high pressure service and can be used on either vapor or liquid applications. Their outlet pressure ranges from 3 to 135 PSIG.
High pressure regulators usually reduce tank pressure to an intermediate pressure for use by another regulator.

2 DESCRIPTION

NOTE: Type 49 regulators do not have internal relief valves, so these regulators can not be installed in fixed piping serving 0.5 appliance systems. Type 492HP regulator is an adjustable high pressure regulator with handwheel adjustment. Type 493HP regulator is an adjustable high pressure regulator with wrench adjustment and 3 spring ranges from 3 to 100 PSIG. Type 494HP regulator is a fixed high pressure regulator with no field adjustment. It is very compact. Type 495HP regulator is an adjustable high pressure regulator with a dial cap adjustment. This cap eliminates the need for a gauge on portable applications. All types are equipped with a 1/4" FNPT side outlet which is normally plugged and provides an opening for an outlet pressure gauge.

3 TECHNICAL DATA

The body (frame) and the bonnets are in Aluminium (AlSi11Cu2(Fe)). The connecting flange is in cast iron.

Type	Description	Capacity BTU\hr	Outlet pressure setting	Outlet adjustment range
492HP - 01	Basic Regulator (Handwheel Adjustment)	650,000	15 PSIG	3-20 PSIG
492HP - 02		750,000	20 PSIG	3-35 PSIG
492HP - 03		1,200,000	40 PSIG	30-60 PSIG
492HP - 04		1,000,000	50 PSIG	50-135 PSIG
492HP - 05 [1]		750,000	20 PSIG	5-35 PSIG
493HP - 02	Basic Regulator (Wrench Adjustment)	650,000	15 PSIG	3-20 PSIG
493HP - 01		750,000	20 PSIG	3-35 PSIG
493HP - 03		1,200,000	40 PSIG	30-60 PSIG
493HP - 04		1,000,000	50 PSIG	50-135 PSIG
493HP - 05 [1]		750,000	20 PSIG	5-35 PSIG
494HP - 02	Non-adjustable	400,000	10 PSIG	Non-Adjustable
494HP - 01		400,000	15 PSIG	
494HP - 03		750,000	20 PSIG	
495HP - 01	Dial Cap Adjustment	650,000	15 PSIG	5-20 PSIG
495HP - 02		750,000	20 PSIG	5-30 PSIG
495HP - 03		1,200,000	40 PSIG	20-50 PSIG

1 SCOPE

The 94 series direct operated regulators are designed for high pressure service and can be used on either vapor or liquid applications. Their outlet pressure ranges from 0.5 to 4 Bar.
High pressure regulators usually reduce tank pressure to an intermediate pressure for use by another regulator. They are also used for final stage service on particular applications, as high pressure burners as well as other medium sized commercial industrial applications.

942HP

2 DESCRIPTION

The 94 series direct operated regulators are designed for high pressure service and can be used on either vapor or liquid applications.
High pressure regulators usually reduce tank pressure to an intermediate pressure for use by another regulator. They are also used for final stage service on particular applications, as high pressure burners as well as other medium sized commercial industrial applications.
Type 942HP regulator is an adjustable high pressure regulator with a wide range of outlet pressures. It is not equipped with an internal relief valve. Both types are equipped with a NPT side outlet which is normally plugged and provides an opening for an outlet pressure.

3 TECHNICAL DATA

The body (frame) and the bonnets are in Aluminium (AlSi11Cu2(Fe)).
The connecting flange is in cast iron.

Type	Description	Capacity Nm3/h	Inlet & Outlet connections	Outlet pressure setting	Outlet adjustment range
942HP-16	Basic Regulator	100	Rp 1" Female	10 PSIG	0.5 to 4 Bar

1 SCOPE

Series 46 regulators have been designed for reducing pressure in commercial and small industrial installations.
Series 46 are equipped with a smal and light flange.

464

2 DESCRIPTION

Series 46 regulators can be protected with OPSO against underpressure issues and well protected against corrosion with a consistent powder coating. They also feature an extreme temperature resistant diaphragm and stainless steel screws and bolts.

3 TECHNICAL DATA

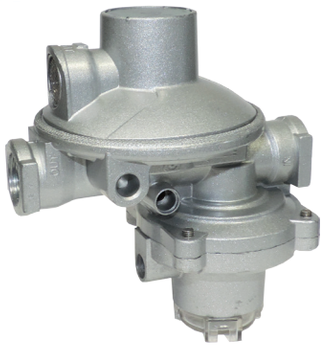
The body (frame) and the bonnets are in Aluminium (AlSi11Cu2(Fe)).
The connecting flange is in cast iron.

Regulator	Capacity Nm3/h	Inlet Connection	Outlet Connection	Outlet pressure setting	Temperature Range
464	30	Rp 1/2" ISO 7	Rp 1" ISO 7	30-300 Mbar	-40°F ÷ +130°F (-40°C ÷ +55°C)

1 SCOPE

781 and 782 regulators have been designed for reducing pressure in residential and commercial installations.

781



2 DESCRIPTION

781 and 782 regulators are equipped with two types of overpressure protection systems, including pressure relief valves and Overpressure shutoff (OPSO) valves. They are equipped with an underpressure system (UPSO).
781 and 782 regulators are well protected against corrosion with a consistent powder coating.

782

3 TECHNICAL DATA

The body (frame) and the bonnets are in Zamak (ZA4G).
The connecting flange is in cast iron.

Regulator	Maximum Service Pressure	Inlet Connection	Outlet Connection	Outlet pressure setting	Temperature Range
781	2 bar (781 Single Stage)	.880 P.O.L. Male .880 P.O.L. Female 1/4" NPT Customizable upon request	1/2" NPT / 3/4" NPT	29 mbar 37 mbar 50 mbar 100 mbar	-40°F / +130°F (-40°C / +55°C)
782	16 bar (782 twin)				

1 SCOPE

The Domestic Gas Regulator M2.5 is a low inlet pressure regulator popularly known as meter regulator and is used for supplying Natural Gas/LPG for residential household/domestic purpese whlch comply wlth EN 88-1/PRS3. The M2.5 regulator is a spring loaded direct-operated regulator including an excess flow protection which closes in case of high flow or low inlet pressure, and reverts automatically to open position when conditions are back to normal.

2 DESCRIPTION

The M2.5 regulator is designed for low pressure domestic applications with inlet pressure up to 200 mBar, and is avallable with integral under pressure cut-off (UPCO). It can be mounted In either a vertical or horizontal orientation.
The M2.5 regulator is installed directly on te hub of a gas meter.

3 TECHNICAL DATA

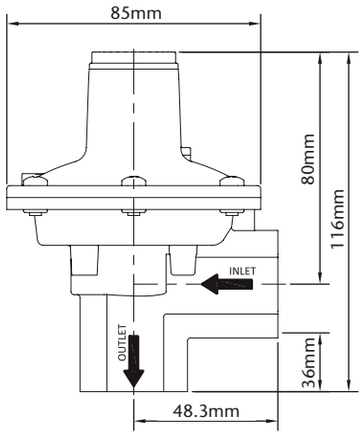
Body & Cover: Die Cast Aluminum
Internal Parts: Nitrile NBR, Brass, Stainless Steel

Upstream pressure	Downstream pressure
bar	mbar
0,2	15 to 25

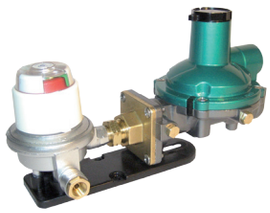
3.1 SPECIFICATIONS

Working temperature:
Standard use: -20°C to +60°C
Inlet & Outlet Connection: 3/4" BSP F

3.2 OVERALL DIMENSIONS M2.5



Type 524AC



L 9.921 x W 4.212 x H 5.275”

TECHNICAL DATA

Body And Cover Of The Automatic Changeover: Zamak
Diaphragm: Reinforced
Supplying Pressure: 25-250 PSIG
Cover Screws: Stainless Steel
Fittings: Brass
Gas: Propane Gas
Setting Point: Inlet Pressure 100 PSIG, 140,000 BTU, Outlet Pressure: 11 WC
Provided Flows: Flow Based On 25 PSIG (1.725 Bar) Inlet Pressure And 20% Drop (In accordance with UL144 Standard)
Regulator Specifications: See table

The double stage automatic changeover regulator Type 524 AC is a combination consisting of an automatic changeover working as a 1st stage coupled to a 2nd stage regulator. The 1st stage automatic changeover works as per the description found on the next page titled “functioning of the automatic changeover”, which is connected to the 2nd stage regulator: Type 988 LP (see page 11 of the present catalogue). Since the regulator body is made of zinc alloy, it is necessary to use the proper plastic mounting bracket for this type of regulator. Please refer to recommendations on page 8 of the present catalogue.

Type	Capacities in BTU\hr (SCMH) propane	Inlet connection, inches	Outlet connection, inches	Vent size, inches
524AC	600,000 (6.75)	1/4 Inverted Flare	1/2 NPT	3/4 NPT

Type 528B

L 7.677 x W 4.212 x H 4.094”

TECHNICAL DATA

Body And Cover Of The Automatic Changeover: Zamak
Diaphragm: Reinforced
Supplying Pressure: 25-250 PSIG
Fittings: Brass
Gas: Propane Gas
Setting Point: Inlet Pressure 100 PSIG, 140,000 BTU, Outlet Pressure: 11 WC
Provided Flows: Flow Based On 25 PSIG (1.725 Bar) Inlet Pressure And 20% Drop (In accordance with UL144 Standard)
Regulator Specifications: See table

Type	Capacities in BTU\hr (SCMH) propane	Inlet connection, inches	Outlet connection, inches	Vent size, inches
528B	450,000 (5.07)	1/4 Inverted Flare	3/8 NPT	3/8 NPT

Type 924N

L 5.314 x W 3.11 x H 3.897”

TECHNICAL DATA

Body And Cover Of The Automatic Changeover: Zamak
Supplying Pressure: 25-250 PSIG
Fittings: Brass
Gas: Propane Gas
Setting Point: Inlet Pressure 100 PSIG, 70,000 BTU, Outlet Pressure: 11 WC
Provided Flows: Flow Based On 25 PSIG (1.725 Bar) Inlet Pressure And 20% Drop (In accordance with UL144 Standard)
Regulator Specifications: See table

Type	Capacities in BTU\hr (SCMH) propane	Inlet connection, inches	Outlet connection, inches
924N	160,000 (1.80)	1/4 Inverted Flare	3/8 NPT

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5MN1534 - Rev.0 ENG. – 06/15

MESURA Nirmal
Gas Controls

Mesura Nirmal Gas Controls

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