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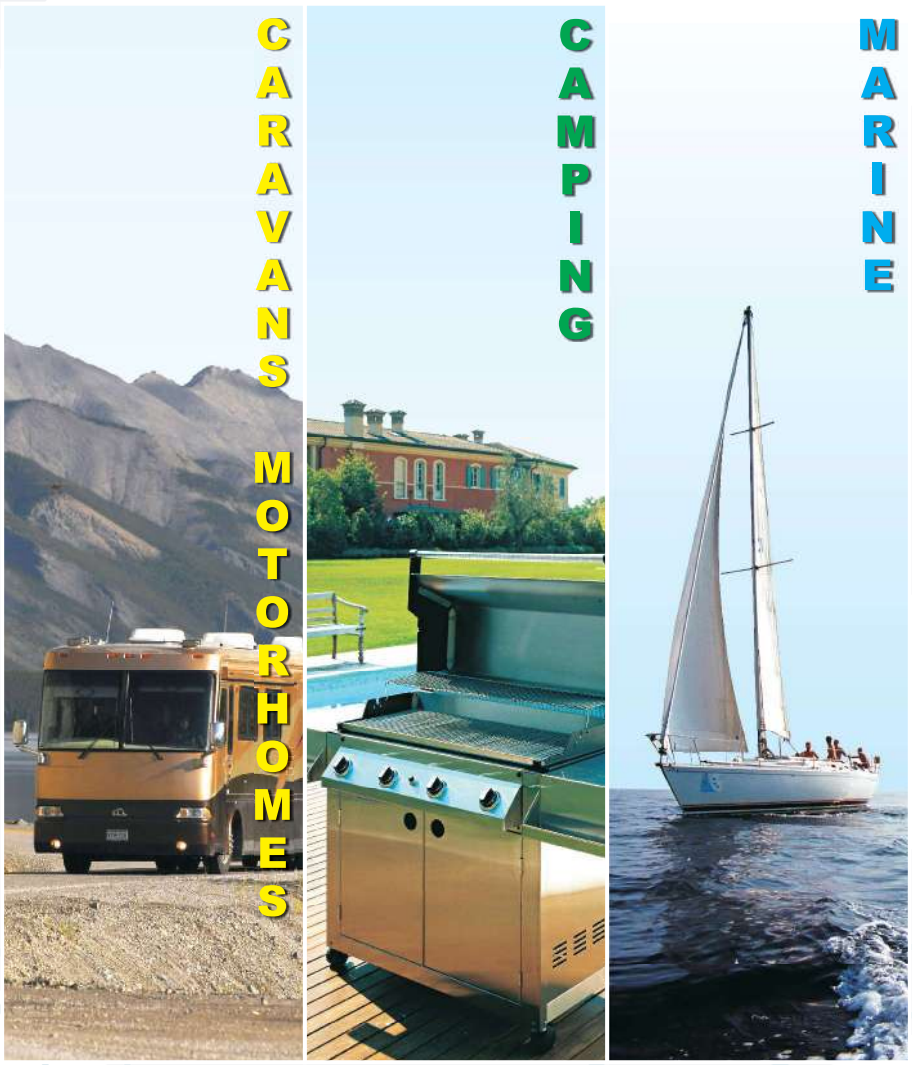
Advanced Solutions for Gas Control



Gas-pressure regulators
European product catalogue

LPG & NATURAL GAS REGULATORS DIVISION

2013 EDITION

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Advanced Solutions for Gas Control

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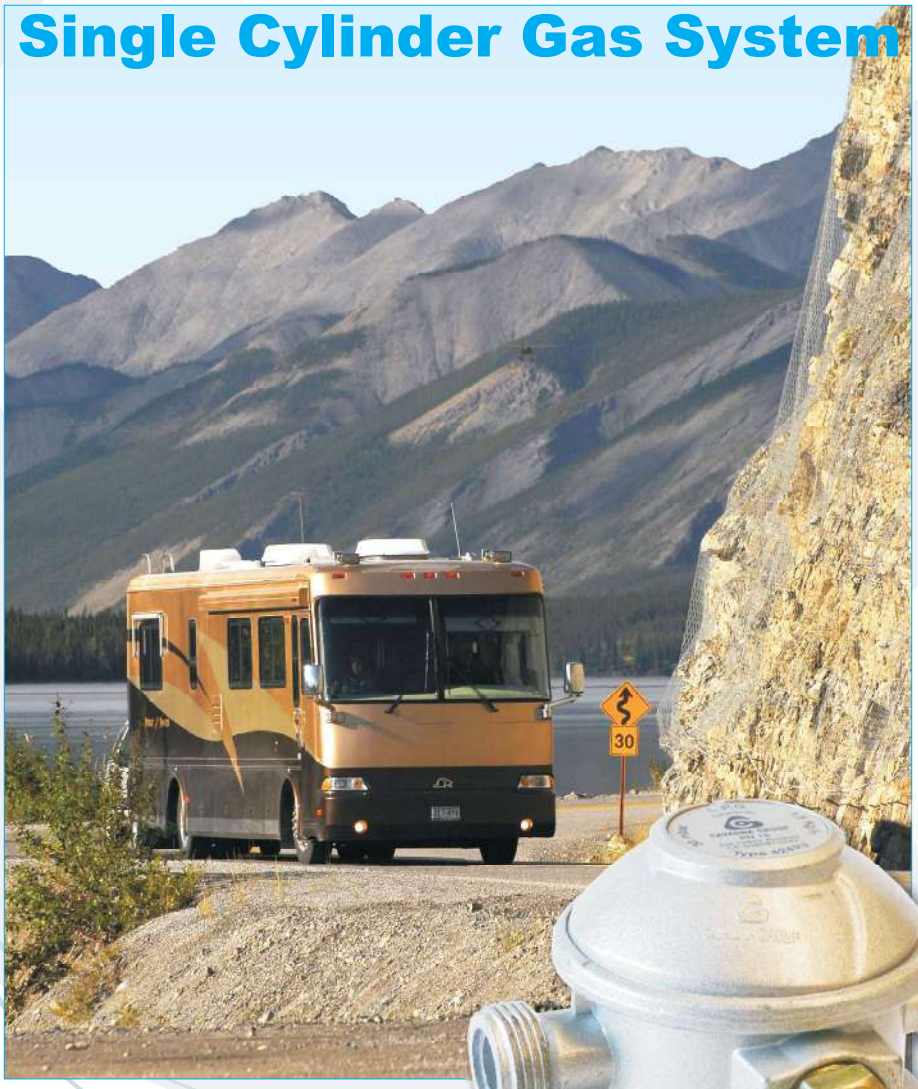
Advanced Solutions for Gas Control

LPG & NATURAL GAS REGULATORS DIVISION

Caravan & Motorhomes

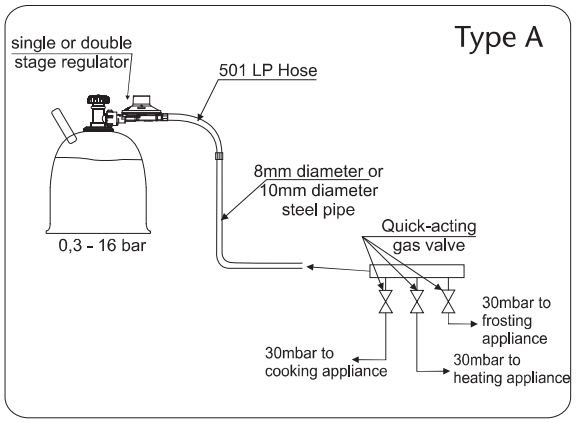
Single Cylinder Gas System



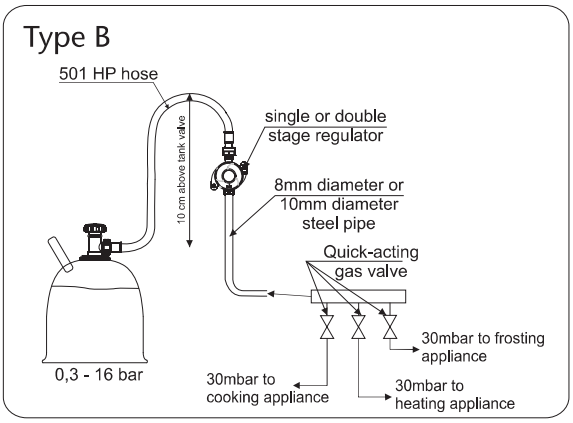
WARNING: motor home and caravan gas regulators are designed to perform with any type of liquefied petroleum gases such as: LPG, butane and propane. Nominal outlet pressure is equal to 30mbar for any European country.
Motor Home and Caravan gas regulators are in accordance with EN 12864 ANNEX D standard.
WARNING: gas regulators and gas hoses have to be replaced after 10 years from the date of manufacture.

1.1 STANDARD INSTALLATIONS

Gas cylinder mounted regulator



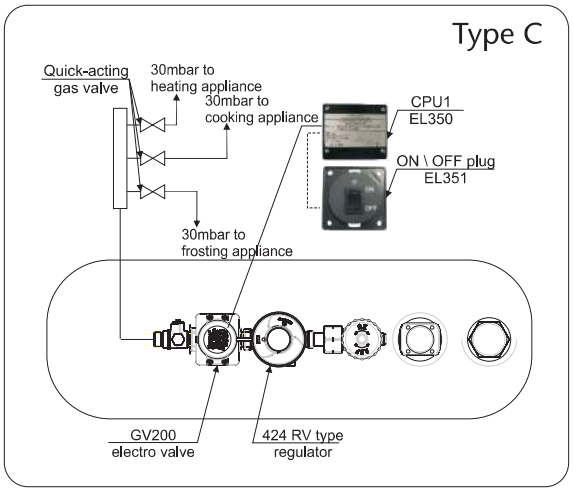
Wall mounted regulator



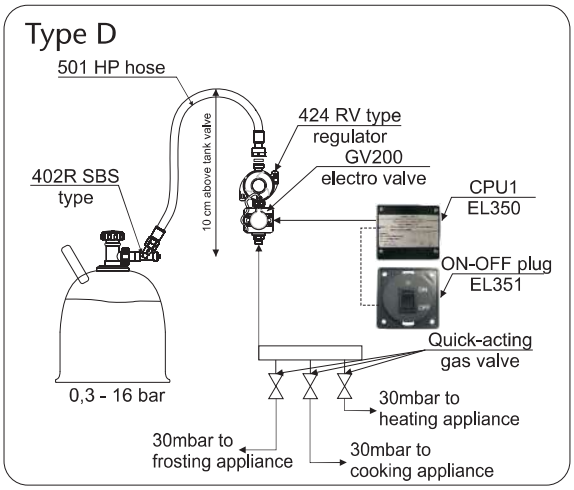
1.2 MOTOR HOME INSTALLATIONS

Gas heating equipment on while driving the vehicle

Tank mounted regulator



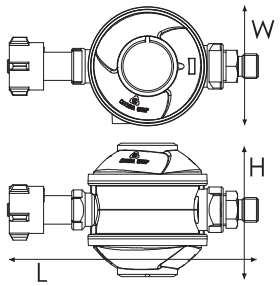
Wall mounted regulator



"Crash Protection" installation as per European Directive 2004/78/CE.
Safety devices are combined together to protect the gas system in case a violent shock hits the vehicle or the vehicle itself goes upside-down. The "crash protection" installation consists of the following safety devices:

- **"SBS" (suitable for wall mounted gas regulator only)**
- **"UDS"**
- **GV 200 electro valve A CLASS in accordance with EN161:**
  I - Normally closed
  II - 30 mbar working pressure
  III - 1 A is the consumption, when open
  IV - 20 mA is the consumption, whilst in service
- **EL 350 CPU 1: computer processing unit**
- **EL 351 On-Off plug**
- **CONNECT 352 wire cable**

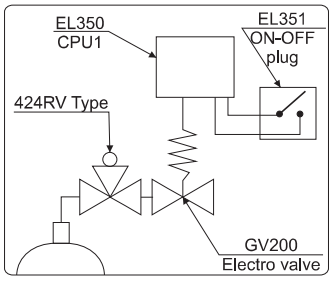
TABLE SIZE



in mm High x Width x Length

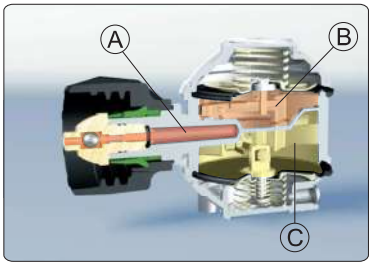
1.3 SAFETY DEVICES

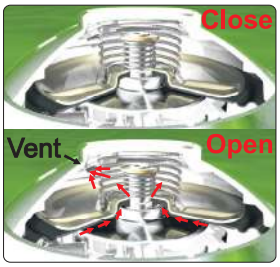
Product definition and description



CRASH PROTECTION UNIT: the new heating equipment directive has introduced stricter safety requirements for gas systems heating while driving a vehicle. "Crash protection" is a definition highlighting the combination of different safety devices: LPG regulator with electro valve and the computer processor unit, which may be installed into a vehicle, allowing the same to have L.P.G. heating appliance on, whilst on transit. Such combination of safety devices has a double-stage compact regulator called "UDS" upstream, whether the GV200 electro valve is downstream and the On-Off EL 351 plug is located into the vehicle cabin, allowing the driver to activate the whole gas system whilst driving. The GV200 electro valve is instructed by a computer processor unit designed to close it, in case it detects violent shock or vehicle crash. The On-Off EL 351 is also equipped by a yellow coloured LED indicating different functioning modes, including auto-test for the above mentioned safety devices, anytime the whole gas system is turned on.

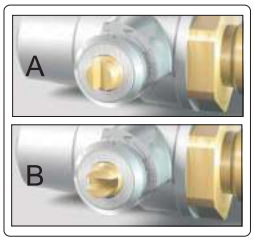
UDS:
it is the safety device presented in the building block Annex D out of the EN 12864. Anytime the gas system pressure inside the vehicle exceeds 150 mbar, "UDS" comes in to protect it. "UDS" is a double-stage compact regulator having 140 mbar as intermediate pressure. Therefore 140 mbar is the outlet pressure in case the second stage regulator fails, but it will be less than 140 mbar anytime the first stage regulator fails because of its design, which sets at less than 100 mbar its own working pressure.





PRV - Pressure Relief Valve:
It is a safety device, part of the annex D of EN12864. Anytime the gas system pressure inside the vehicle exceeds 150 mbar the PRV comes in to protect it. The relief valve is built around the diaphragm shaft and it is normally "off" with any pressure value between 30 and 35 mbar. However it turns "ON" every time the pressure reaches the range from 70 to 90 mbar, allowing to evacuate the gas through the vent hole. Therefore such safety device is recommended to outdoor vehicle installations.

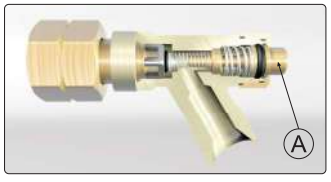
TEST POINT: We do have two types of test points:
Three ways pressure test point
The aim of the three ways test point is to allow any vehicle manufacturer to test the whole gas system against leakage. It has to be connected at the regulator outlet. There are two options of assembling:
OPTION A (see A picture on the right): "TEST OFF" position, it means that the gas regulator delivers the gas to the system, therefore the vehicle manufacturer cannot perform the leakage test of the system. This is the setting of the three ways test point, in which regulators are delivered by Re.Ca to the vehicle manufacturer.
OPTION B (see B picture on the right): "TEST ON" position, it means the vehicle manufacturer can apply 150 mbar to the gas system to perform the leakage testing of the same. The gas regulator will not deliver gas to the system and it will not be part of the leakage testing.
WARNING: The "three ways test point" is not recommended, if the gas regulator is equipped with a "PRV" safety device.




three ways pressure test point


integrated pressure test point

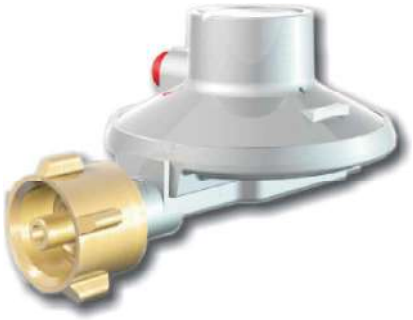
Integrated pressure test poin
The aim of this test point, as in the "three ways test point", is to allow any vehicle manufacturer to test the whole gas system against leakage. However it is cheaper and easier to be used than the "three ways" test point.
WARNING: this test point is integrated into a "UDS" regulator. Therefore the vehicle manufacturer can do the leakage testing both to the regulator and to the whole gas system.



SBS: It is a safety device by the high pressure hose. It is an integrated rupture protection safety device in the hose, that prevents from uncontrolled gas leakage from the cylinder, in case the hose breaks off or it is cut away. It has a reset A button (see picture on the left), which is naturally closed, but that comes in to cut off the gas flow, in case the hose is fully broken or cut away. The end user is supposed to press the A button to reset the whole gas system. WARNING: it is recommended to any motor home, which is allowed to have the gas heating system on while driving.

1.4 CYLINDER TANK MOUNTED REGULATORS

756 D type



Product description

The 756 D Type is a single stage regulator having 1.2 kg/h LPG flow capacity. "PRV" is the standard built in safety device. The end user manual is provided into 6 different languages: Italian, German, Dutch, Greek, English and French. The 756 D type is suitable for A Type installation, presented at page 4 of this catalogue.
The outlet thread is ¼ inch left hand male. The low pressure hose 501 Type assures the connection to gas appliances.

L 112.5 x W 71 x H 55

424 RV type

Product description

The 424 RV type is a double stage regulator with 1.5 kg/h L.P.G. flow capacity. "UDS" is the standard built in safety device. The end-user manual is provided into 6 different languages: Italian, German, Dutch, Greek, English and French. 424 RV Type is suitable for A Type installation, presented at page 4 of this catalogue.
The outlet thread is ¼ inch left hand male and the low pressure hose 501 Type assures the connection to gas appliances.

L 132.5 x W 63 x H 70.4

Type	Inlet connection		Installation type	
756D 424RV	1 2 3 4 5 6	KLF (DE) 5/8" P.O.L. LH (UK) 21.8 nut (FR - CH) .880 P.O.L. LH (SE) KOMBI (NL) W20 x 1/4" LH (IT - CY - GR - MT)	A	A at page 4

How to order 756 D type and 424 RV type:
Please combine together the codes from the above grid as follows:
Type + inlet connection + installation type. E.g.:

424RV - 3 - A

682 KOSAN type

Product description

The 682 Kosan type is known in the motor home and caravan industry for cylinder bottles equipped with 35 mm diameter valves (G.56 picture from EN 12864 standard). The 682 Kosan is a double stage regulator with 1.5 kg/h L.P.G flow capacity. "PRV" is the standard built in safety device. The end-user manual is provided in English. 682 KOSAN type is suitable for A Type installation, presented at page 4 of the present catalogue.
The outlet thread is ¼ inch left hand male. The low pressure hose 501 type assures the connection to the gas appliances.

L 100 x W 71.4 x H 82.9

Type	Inlet connection		Installation type	
682	1	JUMBO Ø35	A	A at page 4

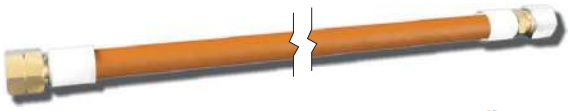
How to order NEW 682 KOSAN type:
Please combine together the codes from the above grid as follows:
Type + inlet connection + installation type. E.g.:

682 - 1 - A

1.5 LOW PRESSURE FLEXIBLE HOSE

501 LP type

Steel fittings



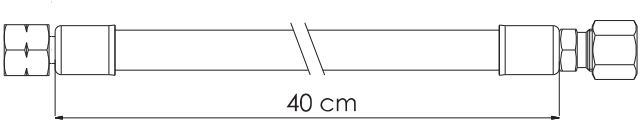
Product description

The 501 LP type is a low pressure hose designed to connect the outlet of the regulator (G ¼ LH male) to the steel gas pipe of the vehicle (Ø 8 mm or 10 mm).
501 LP type resists at a working pressure of 6 bar (PS6) in accordance with DIN 4815 Teil 1, it is thermoplastic (-20°C) or made of rubber for colder countries (-30°C).
A Type installation (at page 4 of the present catalogue) is the most popular gas installation in Germany. However it's compulsory to verify that the DIN 4815 for hoses is in accordance with the standards of the country, where the vehicle is intended for, if it is not Germany.

Type	Hose lenght		Material		Inlet connection		Outlet connection	
501LP	A	30 cm	1	Rubber -30° C	A	1/4 LH nut	1	RVS8
	B	35 cm	2	Thermoplastic -20° C			2	RVS10
	C	40 cm					3	1/4 LH nut
	D	45 cm						
	E	75 cm						

How to order 501 LP type:
Please combine together the codes from the above grid as follows:
Type + hose length + material + inlet connection + outlet connection. E.g.:

501LP - C - 2 - A - 2

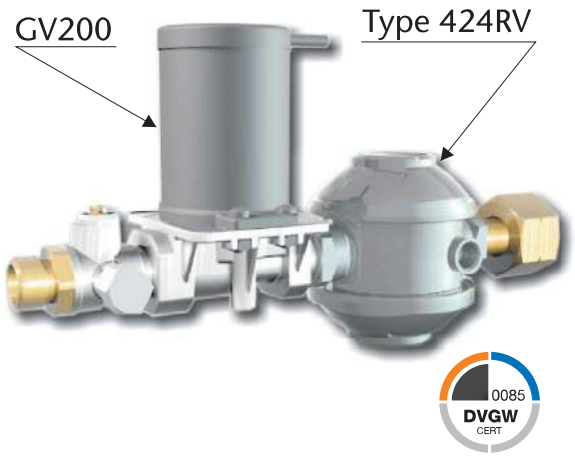


The length of the hose is measured from one end of the hose to the other, the nut should not be included in the measurement.

1.6 MOTOR HOME GAS REGULATOR

Gas heating equipment on while driving the vehicle

424 RV type + 200 GV



Product description

The new heating equipment directive has introduced stricter safety requirements for gas systems, heating while driving. The Reca Easy Motion 424 RV Type is a double stage regulator with 1.5 kg/h LPG flow capacity. "UDS" is the standard built in safety device. The 424 RV type regulator is connected to the 200 GV "three ways" electro valve, allowing to keep the motor home gas heating system on while driving. In this case the motor home has to be equipped with an authorized LPG storage tank to keep the system on, whilst driving. C Type installation, presented at page 4 of this catalogue, covers this application. You can achieve the complete installation kit by adding "Gas accessories" and "Gas fittings", presented at page 15 and page 19 of the present catalogue.
The outlet of the kit has to be connected to the gas system steel pipe of the vehicle (Ø 8 mm or 10 mm diameter).

L 216 x W 63 x H 114.2

Type	Inlet connection		Outlet connection		Installation type	
424RV + GV200	**A** **B**	GROSSE FASHEN T.B.D.	**1** **2**	M16 x 1.5 MALE RVS10	**C**	C at page 4

How to order 424 RV + 200 GV electro valve:
Please combine together the codes from the above grid as follows:
Type + inlet connection + outlet connection + installation type. E.g.:

424RV+GV200	-	B	-	2	-	C

Inlet fitting size nut 21.8 (Type G2 of EN 12864)

1.7 WALL MOUNTED GAS REGULATORS

756D type

Product description

The 756 D type is a single stage regulator with 1.2 kg/h L.P.G flow capacity. "PRV" is the standard built in safety device. 20x1.5 M is the regulator inlet, which is connected to the cylinder valve through a 501 HP Type high pressure hose, see "Gas accessories", presented at page 16 of the present catalogue. End-user manual is provided into six different languages: Italian, German, Dutch, Greek, English and French. 756 D Type is suitable for B Type installation, at page 4 of the present catalogue.

L 110.3 x W 71.5 x H 62.5

Type	Three ways test point		Outlet connection		Installation type	
756D	A	Without	1	M14 x 1.5 MALE	B	B at page 4
	B	With	2	M16 x 1.5 MALE		
			3	RVS8		
			4	RVS10		

How to order 765 D type:
Please combine together the codes from the above grid as follows:
Type +Theree ways test point + outlet connection + installation type.
E.g.:

756D	-	A	-	3	-	B

424RV type

Product description

The 424 RV type is a double stage regulator with 1.5 kg/h L.P.G. flow capacity. "UDS" is the standard built in safety device. The pressure test point is integrated in the gas regulator itself. 20x1.5 M is the regulator inlet, which is connected to the cylinder valve through a high pressure hose 501 HP Type, see "Gas accessories", at page 16 of this catalogue. End-user manual is provided into six different languages: Italian, German, Dutch, Greek, English and French. 424 RV type is suitable for B Type installation, at page 4 of this catalogue.

L 103.8 x W 80.1 x H 75.4

Type	Outlet connection		Installation type	
424RV	1	M14 x 1.5 MALE	B	B at page 4
	2	M16 x 1.5 MALE		
	3	RVS8		
	4	RVS10		

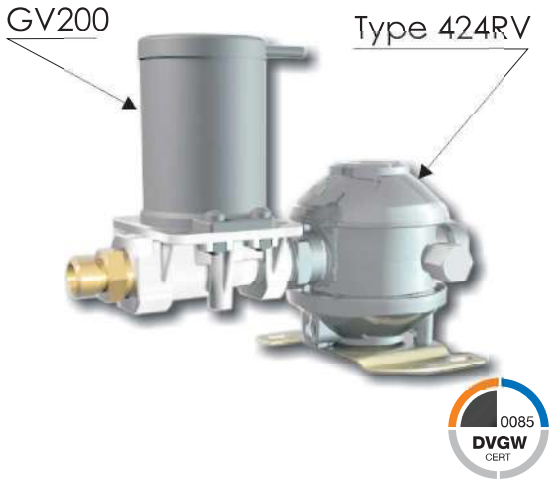
How to order 424 RV type:
Please combine together the codes from the above grid as follows:
Type + outlet connection + installation type.
E.g.:

424RV	-	3	-	B

1.8 MOTOR HOME WALL MOUNTED GAS REGULATOR

Gas heating equipment on while driving the vehicle

424 RV type + 200 GV



Product description

The new heating equipment directive has introduced stricter safety requirements for gas system, heating while driving. The 424 RV Type is a double stage regulator having 1.5 kg/h L.P.G. flow capacity. "UDS" is the standard built in safety device and the pressure test point is fully integrated into the regulator. 20 x 1.5 M is the regulator inlet, which is connected to the cylinder valve through a 501 HP high pressure hose, see "Gas accessories", page 16 of the catalogue. The 200 GV "three ways" electro valve is integral part of the Reca Easy Motion kit and it is connected to the outlet of the 424 RV type regulator, allowing to keep the motor home gas heating equipment on while driving. D Type installation, at page 4 of the present catalogue, covers this application. However you achieve the complete installation kit by adding "Gas accessories" and "Gas fittings", at page 15 and page 19 of the present catalogue.
WARNING: 200 GV electro valve has to be open while leakage testing is performed to the whole vehicle gas system, through the integrated pressure test point by the 424 RV type regulator. In this case the colour of the LED light on the 351 EL plug is green.

L 164 x W 79.1 x H 119.2

Type	Outlet connection		Installation type	
424RV + GV200	**1**	M14 x 1.5 MALE	**D**	D at page 4
	2	M16 x 1.5 MALE		
	3	RVS8		
	4	RVS10		

How to order 424 RV type + 200 GV :
Please combine together the codes from the above grid as follows:
Type + outlet connection + type of installation.
E.g.:

424RV+GV200 - 1 - D

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Advanced Solutions for Gas Control

LPG & NATURAL GAS REGULATORS DIVISION

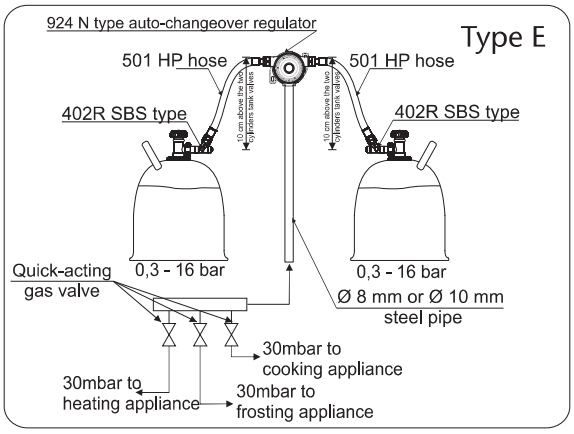
Caravan & Motorhomes

Double Cylinder Gas System

WARNING: motor home and caravan gas regulators are designed to perform with any type of liquefied petroleum gases such as: LPG, butane and propane. Nominal outlet pressure is equal to 30mbar for any type of installation and for any European country. Motor Home and Caravan gas regulators are in accordance to the EN 13786 ANNEX B standard.
WARNING: gas regulator and gas hose have to be replaced after 10 years from the date of manufacture.

2.1 STANDARD INSTALLATION

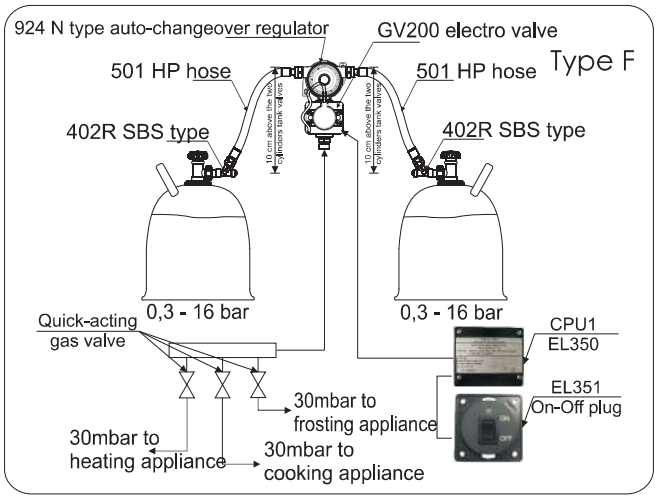
Automatic changeover regulator



2.2 MOTOR HOME INSTALLATION

Gas heating equipment on while driving the vehicle

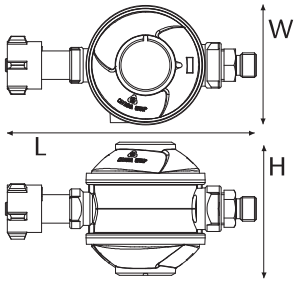
Automatic changeover regulator + GV200 electro valve



CRASH PROTECTION installation as per European Directive 2004/78/CE
Safety devices are combined together to protect the gas system in case a violent shock hits the vehicle or the vehicle itself goes upside-down. The "crash protection" installation consists in the following safety devices:

- **SBS (suitable with wall mounted gas regulator only)**
- **UDS**
- **GV 200 electro valve A CLASS in accordance to EN161:**
  I - Normally closed
  II - 30 mbar working pressure
  III - 1A is the consumption when open
  IV - 20 mA is the consumption whilst in service
- **EL 350 CPU 1: Central Processing Unit**
- **EL 351 On-Off plug**
- **CONNECT 352 wire cable**

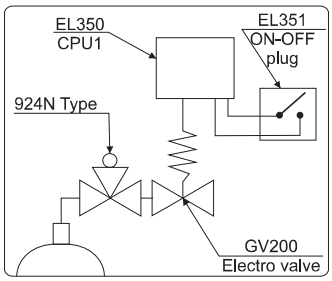
TABLE SIZE



in mm High x Width x Length

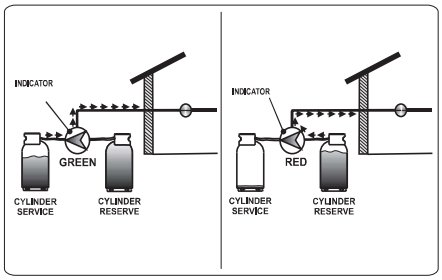
2.3 SAFETY DEVICES

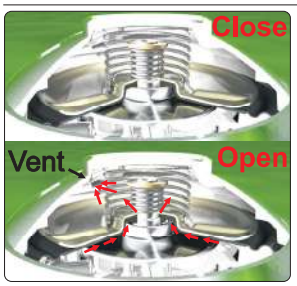
Product definition and description



CRASH PROTECTION:
The new heating equipment directive has introduced stricter safety requirements for gas systems, heating while driving a vehicle. "Crash protection" is a definition highlighting the combination of different safety devices: LPG regulator with electro valve and the computer processor unit, which may be installed into a vehicle, allowing the same to have LPG. heating appliance on whilst on transit. Such combination of safety devices has an upstream double-stage compact regulator called "UDS", whether the GV200 electro valve is downstream and the On-Off EL 351 plug is located into the vehicle cabin, allowing the driver to activate the whole gas system whilst driving.
The GV200 electro valve is instructed by a computer processor unit designed to close it, in case it detects violent shock or vehicle crash. The On-Off EL 351 is also equipped by a yellow coloured LED indicating different functioning modes including auto-test for the above mentioned safety devices, anytime the whole gas system is turned on.

AUTOMATIC CHANGEOVER: The new regulator with automatic changeover is designed for two-cylinder gas systems. The aim of this regulator is to ensure continuous gas flow to gas appliances of the vehicle, by shifting automatically from the "service gas cylinder" (empty) to the "reserve gas cylinder" (full), every time the first one gets empty. The integrated coloured status indicator shows immediately if the selected gas cylinder is ready for operating or if gas is already flowing from the reserve cylinder. Therefore:
- GREEN colour means that the vehicle gas installation is run by the "service gas cylinder";
- RED colour means that the vehicle gas installation is run by the "reserve gas cylinder". This is the case the end user has to replace the "service gas cylinder" with a new one, full of gas.

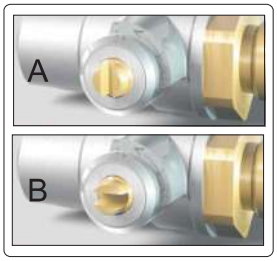


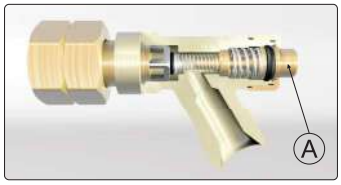


PRV - Pressure Relief Valve:
It is a safety device, part of the annex D of EN12864. Anytime the gas system pressure inside the vehicle exceeds 150 mbar the "PRV" comes in to protect it.
The relief valve is built around the diaphragm shaft and it is normally "off" with any pressure value between 30 and 35 mbar. However it turns "ON" every time the pressure reaches the range from 70 to 90 mbar, allowing to evacuate the gas through the vent hole. Therefore such safety device is recommended to outdoor vehicle installations.

PRESSURE TEST POINT :
three ways pressure test point
The aim of the three ways test point is to allow any vehicle manufacturer to test the whole gas system against leakage. It has to be connected at the regulator outlet and there are two options of assembling:
OPTION A (see A picture on the right): "TEST OFF" position, it means that the gas regulator delivers the gas to the system, therefore the vehicle manufacturer cannot perform the leakage test of the system. This is the setting of the three ways test point, in which regulators are delivered by Re.Ca to the vehicle manufacturer.
OPTION B (see B picture on the right): "TEST ON" position, it means the vehicle manufacturer can apply 150 mbar to the gas system to perform the leakage testing of the same. The gas regulator will not deliver gas to the system and it will not be part of the leakage testing.
WARNING: The "three ways test point" is not recommended, if the gas regulator is equipped with a "PRV" safety device.


three ways pressure test point





SBS:
It is a safety device by the high pressure hose. It is an integrated rupture protection safety device in the hose, that prevents from uncontrolled gas leakage from the cylinder, in case the hose breaks off or it is cut away. It has a reset A button (see picture on the left), which is naturally closed, but that comes in to cut off the gas flow, in case the hose is fully broken or cut away. The end user is supposed to press the A button to reset the whole gas system. WARNING: it is recommended to any motor home allowed to have the gas heating system on while driving.

2.4 AUTOMATIC CHANGEOVER

Gas heating equipment on while driving the vehicle

424 RV type + 200 GV

L 87.4 (110.4 with Test Point) x W 80 x H 105.1

Product description

The 924 N type is the new Reca automatic changeover gas regulator, with 1.5 kg/h L.P.G. flow capacity. The 924 N type combines together an automatic changeover with a second stage regulator and an integrated "PRV" safety device. Therefore it is the most compact gas regulation system, nowadays available all around Europe. 20x1.5 M is the regulator inlet, which is connected to the cylinder valve through a high pressure hose 501 HP Type, see "Gas accessories", at page 16 of the present catalogue. The outlet of the automatic changeover is connected directly to the installation pipe. End-user manual is provided into six different languages: Italian, German, Dutch, Greek, English and French.
924 N type is suitable for E Type installation, see page 12 at present catalogue.

Type	Outlet connection		Three ways pressure test point	
924N	A	M14 x 1.5 MALE	1	Without
	B	M16 x 1.5 MALE	2	With
	C	RVS8		
	D	RVS10		

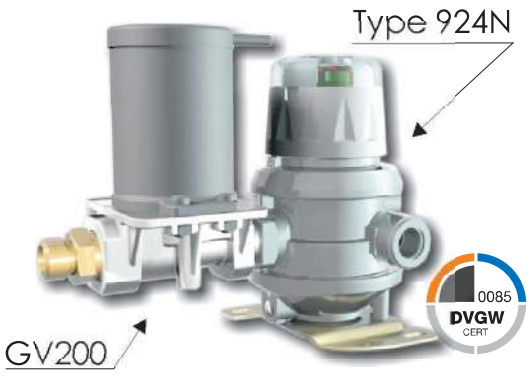
How to order 924 N type:
Please combine together the codes from the above grid as follows:
Type + outlet connection +three ways pressure test point. E.g.:

924N - A - 1

2.5 MOTOR HOME AUTOMATIC CHANGEOVER

Gas heating equipment on while driving the vehicle

924N type + 200 GV



L 149.4 (174.8 with TEST POINT) x W 80 x H 119.2

Product description

The new heating equipment directive has introduced stricter safety requirements for gas systems heating while driving a vehicle. The Free-Motion 924 N type is the new Reca gas regulator with automatic changeover, having 1.5 kg/h L.P.G. flow capacity. The 924 N type combines together an automatic changeover with a second stage regulator and an integrated "PRV" safety device. Therefore it is the most compact gas regulation system nowadays available all around Europe. 20x1.5 M is the regulator inlet, which is connected to the cylinder valve through a high pressure hose 501 HP type, see "Gas accessories" at page 16 of this catalogue. The 200 GV "three ways" electro valve is integral part of the Free Motion kit and it is connected to the outlet of the 924 N type regulator, allowing to keep the gas heating equipment on while driving the motor home. F Type installation, presented at page 12 of the present catalogue, covers this application. However you can achieve the complete installation kit by adding components from "Gas accessories" and "Gas fittings", presented at page 15 and 19 of this catalogue.

Type	Outlet connection		Three ways pressure test point	
924N+GV200	A	M14 x 1.5 MALE	1	Without
	B	M16 x 1.5 MALE	2	With
	C	RVS8		
	D	RVS10		

How to order 924 N type + 200 GV electro valve:
Please combine together the codes from the above grid as follows:
Type + outlet connection + three ways pressure test point. E.g.:

924N+GV200 - C - 2

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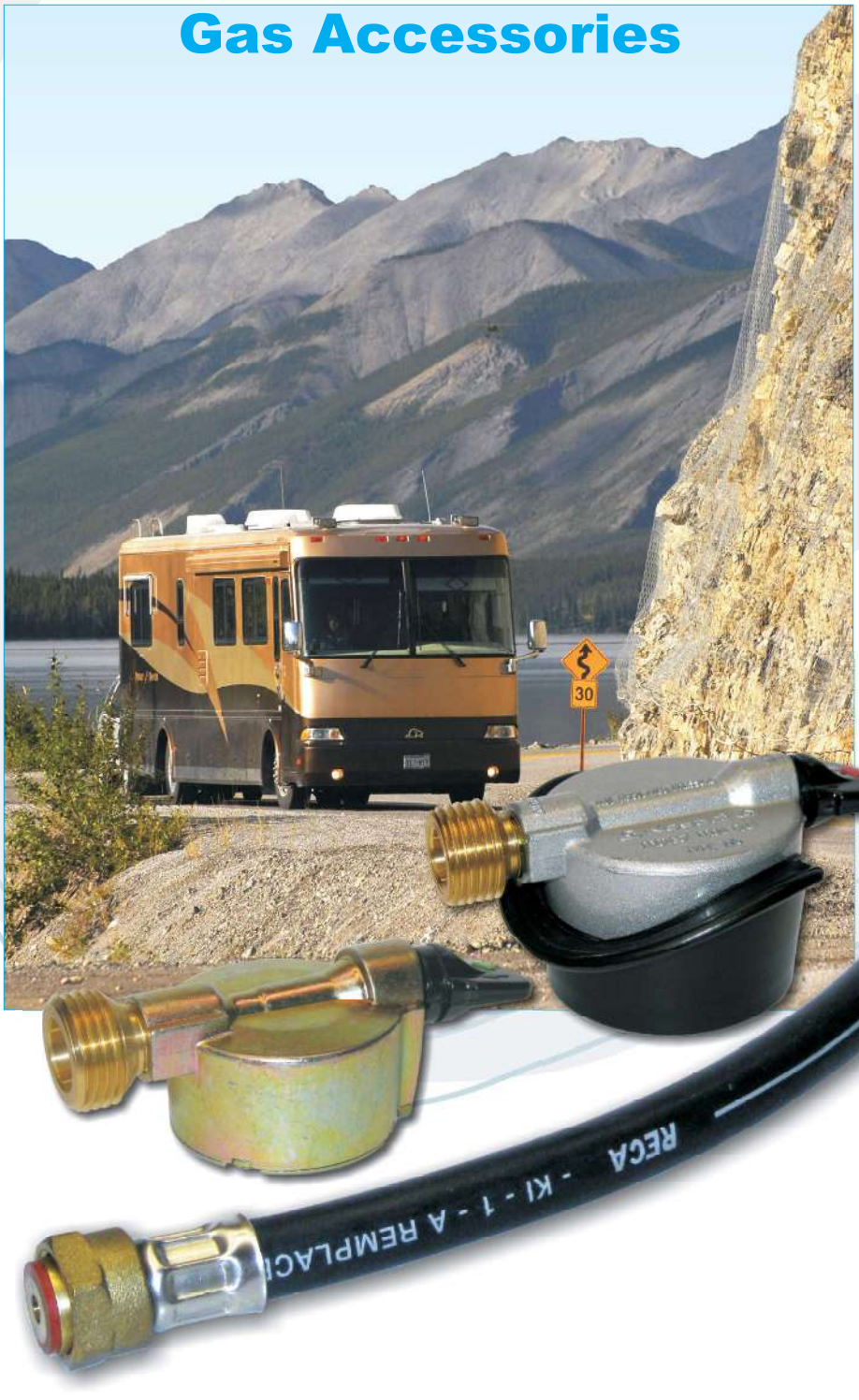
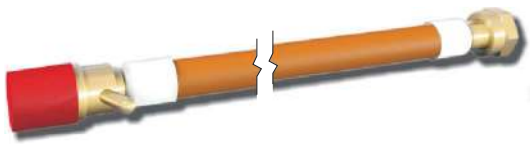
Caravan & Motorhomes

Gas Accessories



3.1 HIGH-PRESSURE GAS HOSE

501 HP type



Standard product size: L 400

Product description

The 501 HP Type refers to a range of high-pressure hoses with different connections suitable for the majority of European gas cylinders.
501 HP type hoses connect the gas cylinder to the gas regulator with a 20 x 1.5 male thread inlet connection and working with pressure equal to 20 bar.
The high pressure hose inlet connection is related to the kind of gas cylinder valves present in each European country of destination. But when couplings 511, 513 and A35S Type are used, the possible connection is only 3/8 inch thread.
The model of the hose is related to the European country it is destined to. We do have:

- France, Great Britain and Italy: NF high pressure hose;
- Germany and Sweden: DIN high pressure hose.

501 HP type hoses are suitable for B TYPE installations, presented at page 4 of the present catalogue and for E TYPE installations, see page 12 of the catalogue.

Type	Inlet connection		Outlet connection	
501HP	1	.880 P.O.L. LH (SE)	A	M20 x 1.5 FEMALE
	2	5/8" P.O.L. LH (UK)		
	3	W20x1 ¼" LH (IT)		
	4	W21.8x1 ¼" LH (DE)		
	5	Wing nut 21.8 (FR)		
	6	G3/8 nut (FR, IT, UK)		
	7	G3/8 nut (SE, DE)		
	8	Kombi (NL)		

How to order 501 HP type:
Please combine together the codes from the above grid, as follows:
Type + inlet connection + outlet connection. E.g.:

501HP - 5 - A

3.2 QUICK-ACTING GAS VALVE

MV type

Product description

The MV Type manifolds, have the function to supply gas to different applications. They have 1, 2, 3 or 4 ways and allow to feed heating system, cooker, fridge, boiler.
Some stickers help to identify the proper application's gas tap. They are part of the caravan or motor-home installations.

Type	Inlet fitting		Outlet fitting		Number of outlet fittings	
MV	1	M14x1.5 MALE	A	M14x1.5 MALE	1	1 way
	2	M16x1.5 MALE	B	RVS8	2	2 ways
	3	RVS8			3	3 ways
	4	RVS10			4	4 ways

How to order MV Type:
Please combine together the codes from the above grid, as follows:
Type + Inlet fitting + Outlet fitting + Number of outlet fittings. E.g.:

MV - 2 - A - 3

3.3 GAS COUPLING

511 type & 513 type

A35S type

Type	Inlet connection		Outlet connection	
511	1 2 3 4	Clip-on valve Ø20 mm (G.52) Clip-on valve Ø21 mm (G.53) Clip-on valve Ø22 mm (G.54) Clip-on valve bayonet	A	G 3/8 male

Type	Inlet connection		Outlet connection	
513	1	Clip-on valve Ø27 mm (G.59)	A	G 3/8 male

Type	Inlet connection		Outlet connection	
A35S	1	Clip-on valve Ø35 mm (G.56)	A	G 3/8 male

How to order 511, 513 or A35S Type:
Please, combine together the codes from the above grid, as follows:
Type + inlet connection + outlet connection. E.g.:

A35S - 1 - A

Product description

Type 511, 513 and A35S couplings are used in installations equipped with automatic valves.
They allow the connection of the automatic valve to the regulating unit through a high pressure hose, equipped with a 3/8 LH inlet nut (see Type 501 HP). These couplings are used in B and D types of installation, shown in the pictures at page 4 of the present catalogue, and in E and F types of installation, shown at page 12.
Couplings are equipped with a built-in tap that allows to open and to close the gas flow.
The coupling connection on the valve is quick-on. No tools are required to connect or disconnect the couplings. They are equipped with a "safe connection system".
Connection or disconnection can be done, if only the handle is in off position.
Considering the big dimensions of the Ø35 mm valve, couplings Type A35S are designed to limit the pressure to 3 bar between the valve and the regulator, whichever the tank gas pressure is.

3.4 MOTOR HOME GAS ACCESSORIES

Gas heating equipment on while driving the vehicle

501HP + 402R flexible hose

Product description

Although very similar to the 501 HP Type, this hose presents "SBS" safety fitting at the connection to the cylinder valve. Suitable for D type installation (see page 4) and F type of installation (see page 12).

Product size: standard length: L 400

Type	Inlet connection		Outlet connection	
501HP + 402R	1 2 3 4 5 6 7 8	.880 P.O.L. LH (SE) 5/8" P.O.L. LH (UK) W20x1 ¼" LH (IT) W21,8x1,814 (DE) Wing nut 21,8 (FR) G3/8 nut (FR, IT, UK) G3/8 nut (SE, DE) Kombi (NL)	A	M20 x 1.5 FEMALE

How to order 501HP + 402R Flexible Hose:
Please combine together the codes from the above grid as below:
Type + inlet connection + outlet connection. E.g.:

501HP+402R - 5 - A

Central Processing Unit (CPU)

Type EL350

350 EL type CPU 1: It is the central process unit of the CRASH PROTECTION SYSTEM. 350 EL CPU 1 Type is equipped with an auto-test device, which is activated anytime the gas system appliance turns on.
A blinking yellow coloured LED indicates that the 351 EL CPU 1 is processing auto-test.
Within one second from the end of the auto-test process, the electro-valve gives input to switch on the valve. Once the valve is on, the transit of the vehicle is constantly monitored by a combined sensor of acceleration and curving movements. Detected data have to remain under 2 g during 90 millisecond and from 50° to 60° degrees, otherwise gas flow will be immediately closed to the system by the valve.
A steady red coloured LED will appear on the 351 EL plug.
Under standard working conditions the power supply to the central process unit is constantly monitored by an integrated micro-processor. Whenever power supply shortage should arise, the micro-processor instructs the electro-valve to shut off the gas flow. In this case the 351 EL plug signals this anomaly by blinking a red coloured LED.

351 EL TYPE PLUG: This plug is located inside the vehicle to allow the motor home driver either to switch on and to switch off gas flow to the system.
Three different LED colours display different status of the gas system:
- LED turned off: gas appliances do not get gas from the system;
- Blinking YELLOW coloured LED: auto-test of the whole system is processing, because gas flow has been turned on;
- Steady GREEN coloured LED: the gas system is on and it is running properly. No warning has been detected;
- Steady RED coloured LED – WARNING – The sensor has detected vehicle acceleration and curving data out of the provided established range. Gas flow to the system is automatically turned OFF;
- Blinking RED coloured LED – WARNING – Power supply shortage is occurred to CPU. Gas flow to the system is automatically turned OFF.

Type EL351

Type CONNECT352

POWER CABLE – 352 TYPE:
This power cable has been designed to connect Type 351 EL Plug to Type 350 EL CPU 1. The connecting power cable length is 8 metres.

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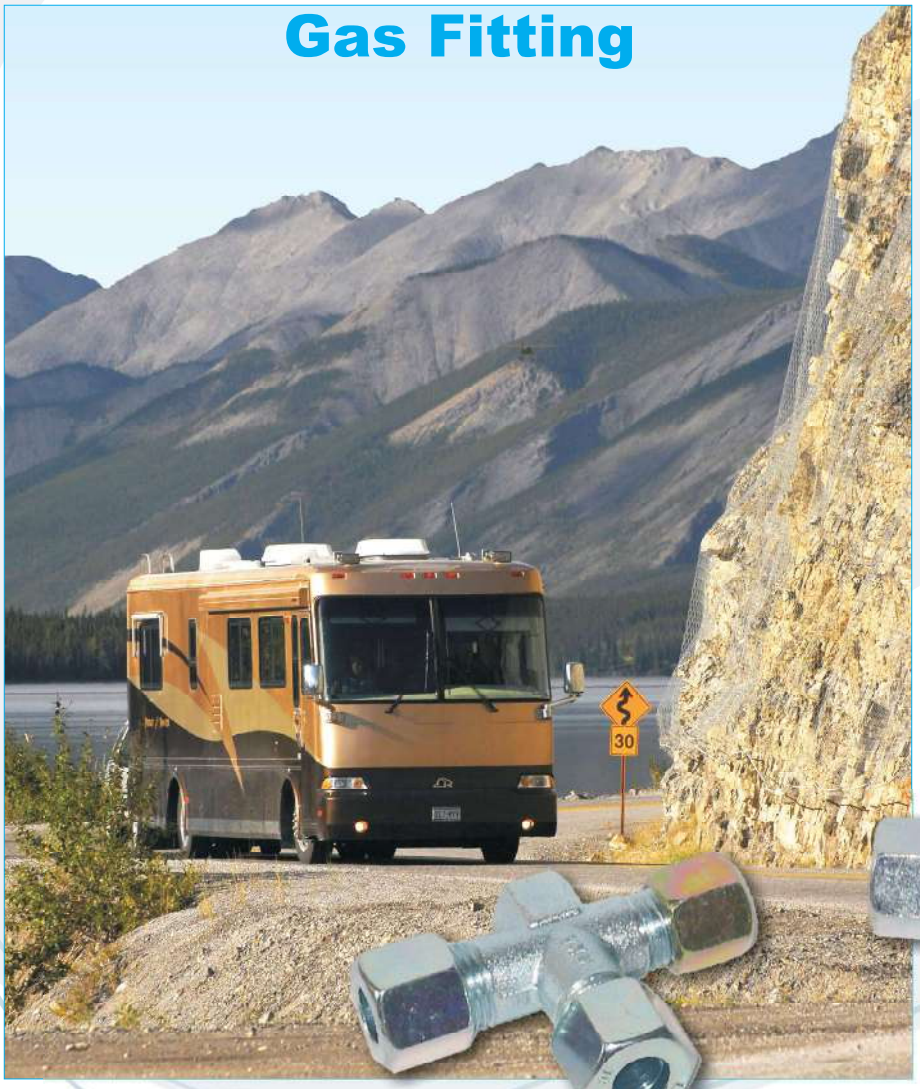
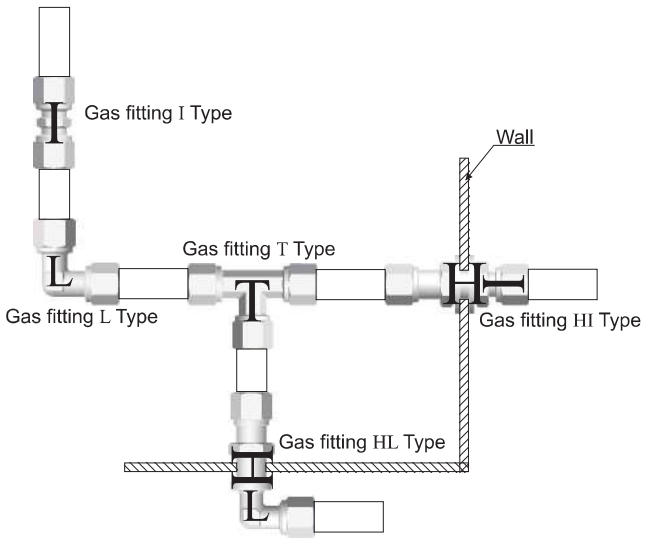
LPG & NATURAL GAS REGULATORS DIVISION

Caravan & Motorhomes

Gas Fitting



4.1 GAS FITTING CODING AND INSTALLATION



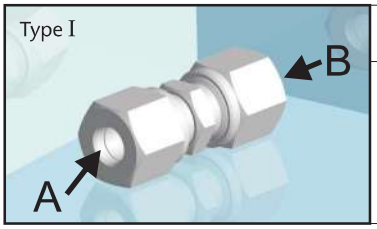
These gas fittings are meant to connect two, three or even four steel pipes. Their main usage is to create the gas steel pipe network in the vehicle, allowing the gas to flow through the gas system.
We do have four different types of fitting:
- I Type: straight gas pipe connection fittings;
- L Type: 90° gas pipe connection fitting;
- T Type 180° gas pipe connection fitting for three pipes;
- H Type: gas pipe connection fitting through walls.

The above gas fittings are made in steel, their surface has a corrosion resistant treatment.

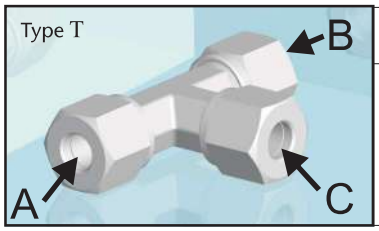
How to order gas fittings:
Type + A Type connection + B Type connection + C Type connection as optional by manufacturer's choice.
E.g.:

T	-	1	-	B	-	2

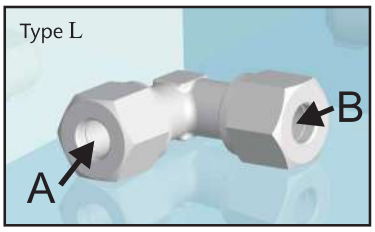
4.1 GAS FITTINGS

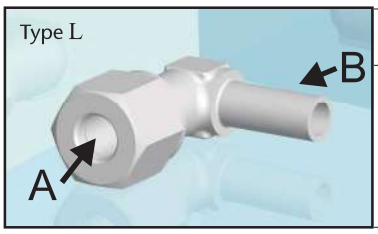


Type	A Type connection		B Type connection	
I	1	SRV8	A	SRV8
	2	SRV10	B	SRV10

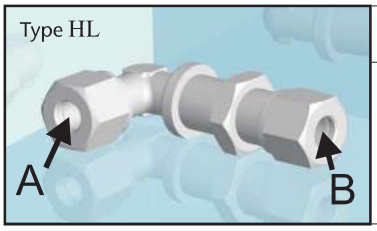


Type	A Type connection		B Type connection		C Type connection	
T	1	SRV8	A	SRV8	1	SRV8
	2	SRV10	B	SRV10	2	SRV10





Type	A Type connection		B Type connection	
L	1	SRV8	A	SRV8
	2	SRV10	B	SRV10
			C	RST8
			D	RST10



Type	A Type connection		B Type connection	
HI	1	SRV8	A	SRV8
HL	2	SRV10	B	SRV10

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Advanced Solutions for Gas Control

LPG & NATURAL GAS REGULATORS DIVISION

Camping

Gas Regulators & Gas Regulator Hose Kit

WARNING: The range of RECA gas regulators suitable for gas grilling, camping and plein air activities is wholly in accordance with EN 12864 European standard. They are single or double stage regulators supplying 30 or 50 mbar outlet pressure to gas appliances, such as outdoor gas barbecues, outdoor gas patio heaters, outdoor gas cooker panels, gas infrared heaters.
IMPORTANT: Remember that gas regulators must be sheltered from the elements.

1.1 STANDARD INSTALLATIONS

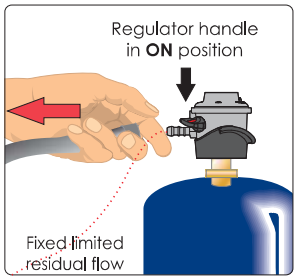
Gas train kit, regulator and connecting hose
A gas train kit is a regulator with a connected hose to the regulator outlet fitting. Every nation has got its own country standard that requires specific gas regulators and associated hoses.
Reca gas train kits are in accordance to each country standard. We do offer three different types of gas train kit connections:

- the so-called "two ears clamp connection" of the gas hose to the regulator outlet hose nozzle;

-"ferrule connection" of the gas hose to the regulator outlet;

-"hose fitting, nut and ferrule connection" by screwing the hose to the threaded regulator outlet.

1.2 SAFETY DEVICE



EFV - Excess flow valve:
Aim of this safety device is to cut the gas flow off in case of over-flow. Anytime the flow exceeds 120 % the guaranteed gas flow, EFV comes in. To reset the regulator the user has to sort out the cause that generated over-flow.
IMPORTANT: remember that the best excess flow valve performance is achieved with gas hose no longer than 2 metres.

1.3 GAS TRAIN REGULATOR-HOME KIT BY COUNTRY

Gas train kit, regulator and connecting hose
The following grid easily highlights the needed gas regulator and gas regulator with associated hose according to country of destination. Please, choose while individuating:
- the number prior to the country line;
- the alphabet letter above the gas regulator Type columns;
- the gas hose length in cm for the regulator + hose kit.

An X at the intersection of the country line and of the column of the type of gas regulator column provides you the allowed gas regulator type in the country of destination and the associated gas regulator hose kit. For example:

- Type 697, butane gas, for France: 01 - D
- Type 694, LPG, for Germany: 12 - C - 80

A gas train kit is a kit composed by a gas regulator with a connected hose to the regulator outlet fitting. Every single nation has its own country standard which requires specific gas regulators and associated hoses. Reca gas train kits are in accordance with each country standard. We do offer three different types of gas train kit connection:
- the so-called "two ears clamp connection" of the gas hose to the regulator outlet hose nozzle;
- "ferrule connection" of the gas hose to the regulator outlet;
- "hose fitting, nut and ferrule connection" by screwing the hose to the threaded regulator outlet.

IMPORTANT: country standards define the allowed value of the gas pressure drop at the hose outlet. Therefore the length of the hose must not generate higher gas pressure drop than the one allowed by the standard, 2 mbar pressure drop at 30 mbar gas outlet pressure and 5 mbar pressure drop at 50 mbar of gas outlet pressure.
IMPORTANT: Do not forget: hose length, golden role! 2 metres are the maximum suitable hose length to guarantee the above mentioned gas pressure drop values.
Therefore Reca suggests standard hose lengths:
500 mm – 800 mm – 1500 mm.
IMPORTANT: France standard hose lengths are: 500 mm – 750 mm – 1000 mm – 1250 mm – 1500 mm – 2000 mm.

			Type of regulators					
	Table of indentification products		**A**	**B**	**C**	**D**	**E**	**F**
N°	**COUNTRY**	**GAS**	**634**	**682**	**694**	**697**	**698**	**714**
01	France	Butane	X			X		
02	France	Propane	X			X		
03	Slovenia, Romania, Albania, Macedonia, Bosnia	LPG			X			
04	Italy, Greece	LPG						X
05	Herzegovina, Latvia, Lithania, Moldova	LPG			X			
06	Czech Republic	LPG			X			
07	Denmark, Finland, Norway, Spain, Portugal, Bulgaria	LPG		X				
08	Ireland, Cyprus	LPG		X				
09	Poland	LPG			X			
10	Croatia	LPG			X			
11	Malta	LPG	X					
12	Germany	LPG			X			
13	Sweden	LPG			X			X
14	Ukraine, Belarus, Estonia, Russia	LPG			X			
15	UK	Butane	X		X			
16	UK	Propane	X		X			
17	Hungary	LPG			X			
18	Holland, Luxemburg	LPG			X			X
19	Chile	LPG	X					
20	South Africa	LPG			X			
21	Australia	LPG			X			
22	USA	Propane					X	
23	Belgium	Propane			X			
24	Switzerland	LPG 30mbar			X			
25	Switzerland	LPG 50mbar			X			

1.4 GAS REGULATORS

794 type

Product description

The 794 Type is the camping gas regulator by definition. It is suitable for camping cylinder bottles with automatic cylinder valve. Its guaranteed outlet capacity is 0.8 kg/h, butane. The gas regulator 794 Type may have an excess flow safety device.
As optional the 794 Type regulator may be provided with a connected hand-wheel which allows the end user to connect the same to the cylinder valve without twisting the rubber hose.

Type	Inlet connection		Outlet connection		Outlet pressure		"EFV"		Hand wheel	
794	A B	M14 X 1.5 MALE M16 x 1.5 MALE	1 2 3 4	8 mm nozzle (H.53) 10 mm nozzle (H.51) G1/4 LH male (H.4) M20x1,5 male (H.1)	A B	28 mbar 50 mbar	1 2	With Without	A B	With Without

How to order Type 794:
Please combine together the codes from the above grid as follows:
Type + inlet connection + outlet connection + outlet pressure + EFV + hand wheel. E.g.:

794 - B - 4 - A - 1 - B

713LP type

Product description

The 713 LP Type regulator is single stage, adjustable from 30 to 50 mbar. It has got 1 kg/h flow capacity and 11 different outlet pressure value positions.
This gas regulator is suitable for small infrared heaters and thanks to the adjustable pressure knob, heating power can vary from position 1 (minimum heating value) to position 11 (maximum heating value).

Type	Inlet connection		Outlet connection	
713LP	1 2 3	KLF (G.12) .880 P.O.L. Nut 21.8x1.814	A B	8 mm nozzle (H.50) G¼ LH (H.4)

How to order Type 713 LP:
Please combine together the codes from the above grid as follows:
Type + inlet connection + outlet connection: e.g.:

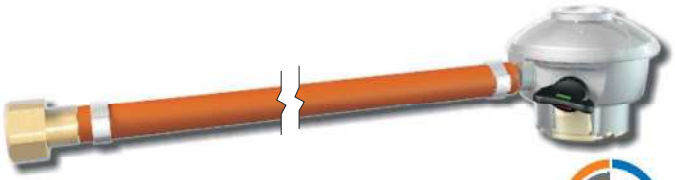
713LP - 1 - B

1.5 GAS REGULATOR+HOSE KITS

Reca complete range of gas regulators and gas hoses, consequently all Reca's complete gas trains, are suitable for any gas BBQ and patio heater. In fact they fully comply with any country standard the gas appliance is supposed to be installed in. Please, look at grid at page 23 of the present catalogue to find out what you might need.

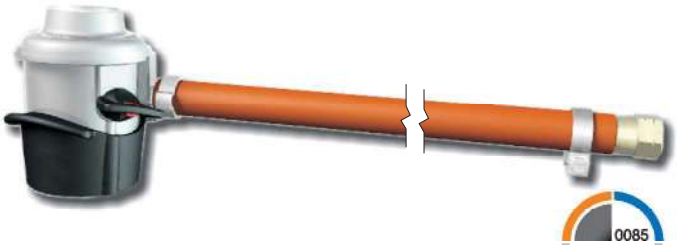
634 type

634 type KIT



682 type

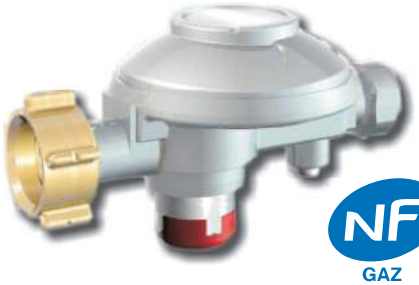
682 type KIT



694 type

694 type KIT

697 type



697 type KIT

698 type

698 type KIT

714 type

714 type KIT

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Advanced Solutions for Gas Control

LPG & NATURAL GAS REGULATORS DIVISION

Camping
Gas Accessories

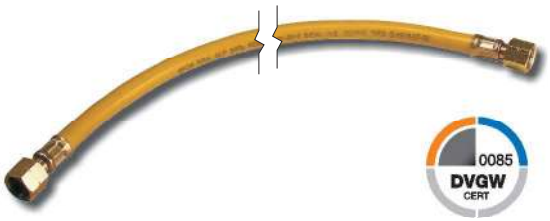
2.1 LOW PRESSURE FLEXIBLE GAS HOSES

501G Type

Product description

Gas hose 501G Type is provided to the market in coils. First of all you should define the country of destination. Then it is easy to find out the corresponding gas hose you need by reading the grid at page 23. Please refer to the grid at page 23 of the present catalogue.

501LP Type



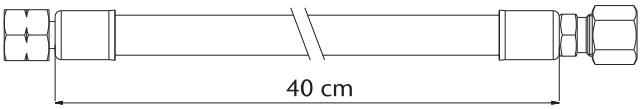
Product description

Gas hose 501 LP Type is designed to connect the regulator G ¼ left hand male outlet thread to the gas appliance G ¼ left hand male inlet thread.
501 LP Type resists at a working pressure of 10 bar (PS10) in accordance with DIN 4815 Teil 1. It is thermoplastic (-20°C) or made of rubber for colder countries(-30°C). A TYPE installation is the most popular gas installation in Germany and it is presented at page 4 of the present catalogue. If the country of destination is not Germany, it is compulsory to verify that DIN 4815 for gas hoses is in accordance with the standard of the country the vehicle is destined to.

Type	Hose length		Material		Inlet connection		Outlet connection	
501LP	A	30 cm	1	Rubber -30°C	A	Nut 1/4 LH	1	RVS8
	B	35 cm	2	Plastic -20°C			2	RVS10
	C	40 cm					3	Nut 1/4 LH
	D	45 cm						
	E	75 cm						

How to order 501 LP Type:
Please, combine together the codes from the above grid as follows:
Type + hose lenght + material + inlet connection + outlet connection:
E.g.:

501LP - C - 2 - A - 3



WARNING: the length of the hose corresponds to the hose only; the dimensions of the nuts on both sides are not included.

2.2 QUICK-ACTING GAS VALVES

MVC Type

One way

1

Two ways

2

Three ways

3

How to order MVC Type:
Please, refer to the above pictures:
E.g.:

MVC - 3

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Advanced Solutions for Gas Control

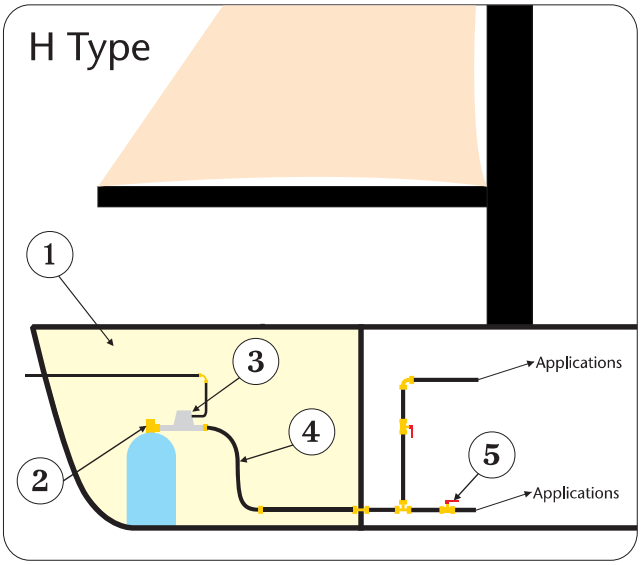
LPG & NATURAL GAS REGULATORS DIVISION

Marine

Gas Regulators & Accessories

WARNING: The range of gas regulators suitable for supplying gas to boats is designed to reduce the pressure of any type of liquefied petroleum gases, such as LPG, butane and propane. The nominal outlet pressure is set at 30 mbar for any European country.

1.1 NF EN ISO 10239 GAS INSTALLATION

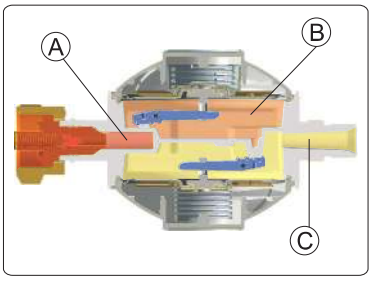


Short description of gas system parts
Please note H Type installation on the left. Gas system parts are indicated by numbers. If you combine all of them together you can achieve the configuration of the gas system installation in accordance with NF ISO 10239 standard:

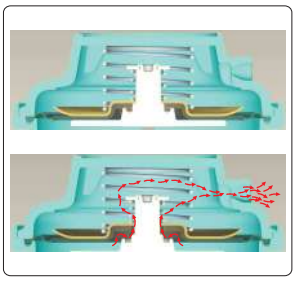
① Boat gas cylinder container;
② ON-OFF marine high pressure gas cylinder valve;
③ Boat gas boat regulator with over pressure "UDS" safety device (EN ISO 10239 chapter 5 and EN12864 Annex M);
④ Low pressure gas hose
⑤ ON-OFF marine low pressure gas valve

EXAMPLE OF INSTALLATION

1.2 SAFETY DEVICES

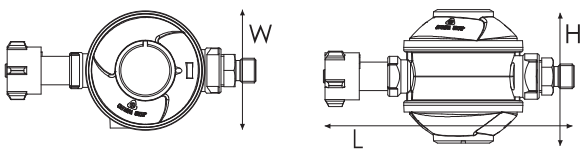


UDS:
it is the safety device, presented in the building block Annex D of the EN 12864. Anytime the gas system pressure inside the boat exceeds 150 mbar, "UDS" comes in to protect it. "UDS" is a double-stage compact regulator having 140 mbar as intermediate pressure. Therefore 140 mbar is the outlet pressure in case the second stage regulator fails, but it will be less than 140 mbar, in case the first stage regulator fails because of its design, which sets at less than 100 mbar its own working pressure.



PRV - Pressure Relief Valve:
It is a safety device, part of the annex D of EN12864. Anytime the gas system pressure inside the boat exceeds 150 mbar, the "PRV" comes in to protect it. The relief valve is built around the diaphragm shaft and it is normally "off" with any pressure value between 30 and 35 mbar. But it turns "ON" every time the pressure reaches the range from 70 to 90 mbar, allowing to evacuate the gas through the vent hole. Therefore PRV safety device is recommended to be installed outside of the boat gas system area.

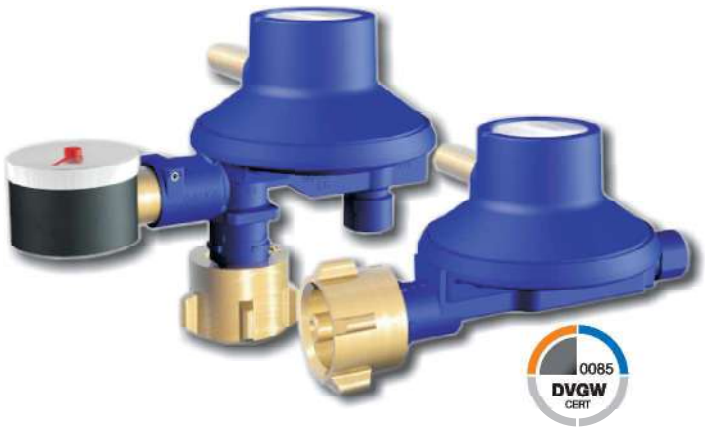
DIMENSIONS



in mm — High x Width x Length

1.3 GAS REGULATORS

696M Type



L 105.9 x W 86.5 x H 56.1 Inlet-Outlet Horizontal
L 110.6 x W 86.5 x H 78.5 Inlet-Outlet Vertical

Product description

The boat gas regulator 696 M Type is offered at the market in two configurations:
1. outlet straight fitting connection;
2. "U" shape, with or without pressure gauge.

Both of them are single stage regulators and have 30 mbar outlet pressure, flow capacity equal to 0.8 kg/h LPG, outlet fitting G ¼ M left hand (as per EN 12864 standard, see picture H.4).
The 696 M Type has a built in pressure relief valve (PRV).
All components exposed to weather conditions are made of stainless steel.
The gas regulator vent may be connected to the gas system outside by a 8 mm Ø pipe.
The 696 M Type regulator is provided with end-user manual in four different languages: French, German, English and Italian.

Type	Inlet connection		Pressure gauge		Configuration	
696M	1	KLF (G.12)	A	With	1	Straight
	2	Wing nut 21,7x1,814 - 60° (G.2)	B	Without	2	U

How to order 696 M Type:
Please, combine the codes from the above grid together, as follows:
Type + inlet connection + pressure gauge + configuration. E.g.:

696M - 1 - B - 2

424M Type

Product description

The 424 M Type is a double stage regulator and has a 30 mbar outlet pressure, flow capacity equal to 1.5 kg/h, outlet fitting: G ¼" M left hand (as per EN 12864 standard, see picture H.4).
The 424 M Type has a built in pressure relief valve (PRV).
All components exposed to weather conditions are made of stainless steel.
The gas regulator vent may be connected to the gas system outside by a 8 mm Ø pipe.
The 424 M Type regulator is provided with end-user's manual in four different languages: French, German, English and Italian.

L 93.3 x W 73.5 x H 70.4

Type	Inlet connection		Pressure gauge	
424M	1	KLF (G.12)	A	With
	2	Wing nut 21,7x1,814 - 60° (G.2)	B	Without

How to order 424M type:
Please combine together the codes from the above grid as below:
Type + inlet connection + pressure gauge: E.g.:

424M - 1 - A

1.4 HIGH PRESSURE QUICK-ACTING VALVE

RHP Type

Product description

The RHP Type valve is suitable for gas cylinder bottles equipped with M 16 x 1.5 RH automatic valves (as per EN 12864, see picture G.3). Pressure relief valve (PRV) is the built in safety device of all RHP Type gas cylinder valves.

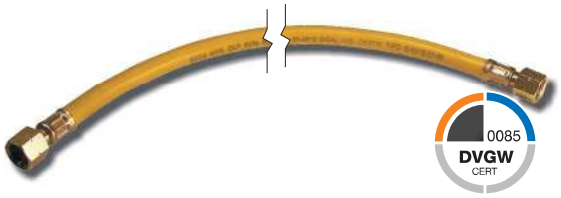
Type	Outlet connection	
RHP	1	KLF 21,8X1,814 - 55° G (G.12)
	2	21,7x1,814 - 60°(G.2)

How to order RHP Type:
Please, combine the codes from the above grid together, as follows:
Type + outlet connection. E.g.:

RHP - 1

1.5 LOW PRESSURE FLEXIBLE HOSE

501LPM Type



Product description

Gas hose 501 LPM Type is designed to connect the regulator outlet thread, G ¼ M left hand, to gas pipes or directly to gas appliances.
Working pressure is 10 bar, as per DIN 4815, Teil 1.
Gas hose fittings are stainless, made out of brass or stainless steel.

Type	Length				Hose Material		Outlet connection		Fitting material	
501LPM	A	60 cm	D	200 cm	1	Rubber -30°C	A	RVS8	1	Brass
	B	100 cm	E	250 cm	2	Plastic -20°C	B	RVS10	2	Inox
	C	150 cm	F	300 cm			C	Nut 1/4 LH		

How to order 501 LPM Type:
Please, combine together codes from the above grid, as follows:
Type + length + hose material + outlet connection + fitting material. E.g.:

501LP - C - 2 - A - 1

1.6 LOW PRESSURE CUT OFF VALVE

RLP Type

Product description

On-Off marine low-pressure gas valves are designed to shut off gas flow upstream gas appliances. Please, see H Type installation picture at page 30 of the present catalogue. RLP Type marine valves are suitable for low pressure gas installation, that are installations between 30 and 50 mbar. On-Off marine low-pressure valves are salt corrosion-resistant. End user manual is provided in four languages: French, German, English and Italian.
IMPORTANT: As on-off marine low-pressure valves are often hidden, they are provided with evident labels to be visible to the end user.

Type	Fitting type	
RLP	1	RVS8 x RVS8
	2	Hose 8 x RVS8
	3	Nut 1/4 LH x G1/4 LH

How to order RLP Type:
Please, combine together codes from the above grid, as follows:
Type + fitting type. E.g.:

RLP - 1

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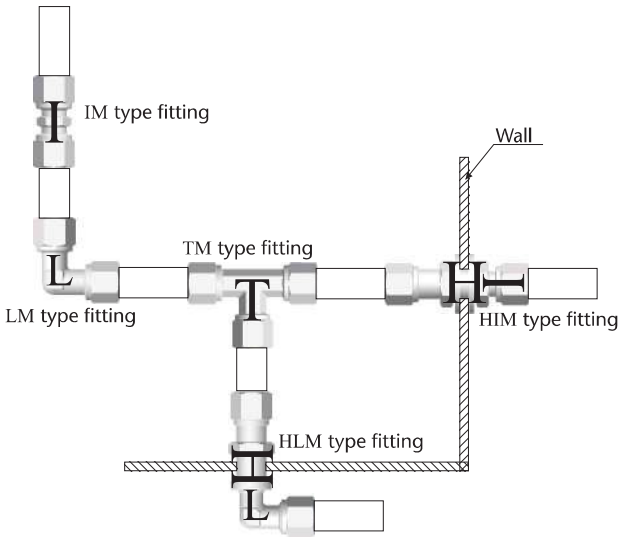
Gas Fittings

2.1 GAS FITTINGS CODING AND INSTALLATION



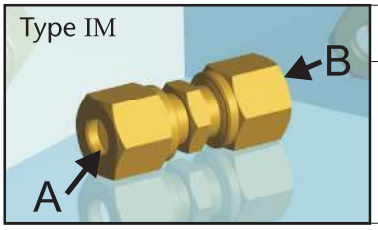
These gas fittings are designed to connect two, three or even four brass pipes. Their main role is to create the gas brass pipe network on the boat, allowing the gas to flow through the gas system of the boat.
We do have four different types of fitting:
- I Type: straight gas pipe connection fittings;
- L Type: 90° gas pipe connection fitting;
- T Type 180° gas pipe connection fitting for three pipes;
- H Type: gas pipe connection fitting through walls.

The above gas fittings are made in steel or brass; (in stell) their surface has a corrosion resistant treatment.

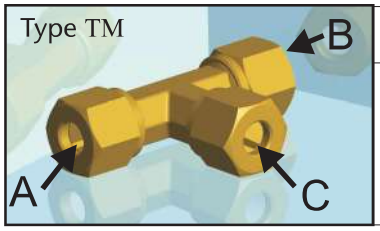
How to order gas fittings:

TM - 1 - A - 1 - Brass/steel

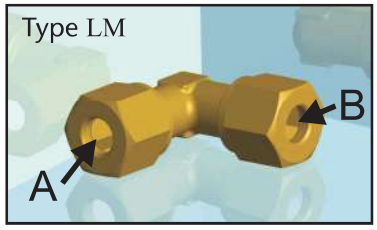
2.2 GAS FITTINGS

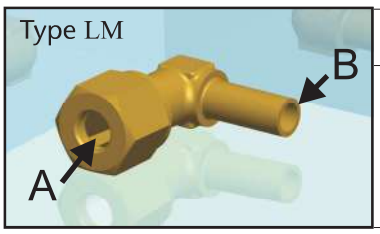


Type	A Type connection		B Type connection	
IM	1	SRV8	A	SRV8
	2	SRV10	B	SRV10

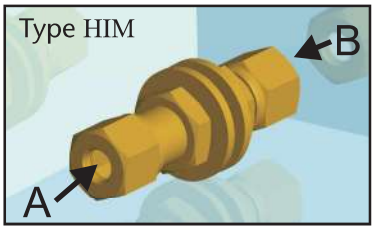


Type	A Type connection		B Type connection		C Type connection	
TM	1	SRV8	A	SRV8	1	SRV8
	2	SRV10	B	SRV10	2	SRV10





Type	A Type connection		B Type connection	
LM	1	SRV8	A	SRV8
	2	SRV10	B	SRV10
			C	RST8
			D	RST10



Type	A Type connection		B Type connection	
HIM	1	SRV8	A	SRV8
HLM	2	SRV10	B	SRV10

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Europe English Rev.2 - May '13