

500MJ MANUAL DUAL STAGE REGULATOR (6060523)

DESCRIPTION

Double-stage low-pressure regulator

2 stage LPG regulator. Includes plastic bracket and screws to fit (as well as a copper adaptor (5050420 - ¼" NPT M x 7/16" SAE Inv Flare). Model 524B.

Often used for domestic houses connected to 2 x 45kg LPG cylinders.



HOW IT WORKS

LPG gas enters the regulator through a pigtail from a gas cylinder. The gas enters the regulator at a pressure of about 700kPa to 1300kPa from a 45kg cylinder. The actual pressure depends on the ambient temperature, how full the cylinder is and the volume of the gas cylinder. The first stage of the regulator reduces the pressure to about 70kPa (no matter what the entering pressure was) and then the second stage reduces the pressure again to a nominal 2.75kPa.

When 2 cylinders are connected, a manual changeover valve (1210302) is used. The pigtail/cylinder that the lever points to is the gas cylinder that the gas is being drawn from. When the cylinder is empty there will be no gas flow and appliances will not work. The lever then needs to be manually turned over the full cylinder to draw gas from it. The gas company then should be called to replace the empty gas cylinder.

ADJUSTING PRESSURE

The outlet pressure of the second stage can be adjusted from about 2.6kPa to 3.2kPa depending on the flow rate. To adjust the pressure, unscrew the plastic cap and use a large flat head screwdriver, turn the knob accordingly for more or less pressure.

TESTING OUTLET PRESSURE

A test point can be connected to the outlet of the regulator to check the pressure. To test, ensure the line has no leaks, turn all appliances on, or at least 10% of the regulator capacity (50MJ flow for the 500MJ regulator) and connect a manometer to the test point to ensure the pressure is 2.75kPa.

SAFETY PRESSURE RELIEF VALVE

Bromic regulators are approved to UL144. According to section 15.3, we have a type 2 pressure relief valve instead of an OPSO. This relieves pressure through the vent, so the pressure downstream doesn't exceed 14kPa.



Figure 1. a) 1 cylinder and pigtail connected into top of regulator. b) 2 pigtails connected via manual changeover valve

SPECIFICATIONS

- Gas type: Propane
- Model: 6060523 (524B)
- Capacity: 500 MJ/hr (11 kg/hr propane)
- Outlet pressure: 2.8 kPa (28 mbar)
- Inlet Pressure (Max.): 1750 kPa (17.5 bar)
- Operating temperature: -20°C to +50°C
- Body: Die cast Zinc alloy/ painted
- Diaphragm: Approved NBR (fabric reinforced)
- Inlet connection: ¼" NPT F
- Outlet connection: 1/2" NPT F
- Adaptor connection: ¼" NPT M x 7/16" Inv flare
- Warranty: 1 year replacement warranty

WARNING

- Leaking gas can cause fires or explosions.
- Only licensed gas fitters should work on gas systems
- Inspect gas systems regularly.
- Replace regulators every 10 years or sooner, depending on the condition of the regulator.

IMPORTANT SAFETY INFORMATION

1. All Bromic regulators shall be installed or serviced by a licensed Gas Fitter. All Bromic regulators shall be installed in accordance with **AS5601** and comply with any local amendments to the installation standard.
2. It is the responsibility of the sellers, installation and maintenance personnel and the end user to be aware of and in compliance with all the applicable standards, codes of practice, regulations and laws.
3. Always destroy damaged or worn regulators, pipes and parts so they cannot be reused.
4. Bromic regulators must be routinely inspected and replaced after 10 years of use. Regulators that are exposed to extreme heat, cold or other severe environmental conditions must be inspected and replaced more often as dictated by their condition and performance.

REGULATOR INSTALLATION GUIDELINES

1. Blow out all the lines before installing the regulator. If foreign matter should become embedded in the regulator seat, it could cause high lockup pressure. The rising pressure could activate the pressure relief device inside the regulator. Make sure the lines to the regulator are free from all foreign matter.
2. Connect regulator inlet to the cylinder valve. Connect the regulator outlet to system service piping.
3. The regulator should be installed with the 2nd stage vent directed downward and /or under a covering to protect it from the ingress of rainwater.
4. Before turning on any gas at the cylinder, make certain that any valves at the appliance are fully closed.
5. Check each joint and connection for gas leaks by using an adequate leak detection method.

COMPATIBLE PRODUCTS

Product	SKU	Description	Where does it fit
Changeover valve	1210302	7/16" Inv Flare x 1/4" NPT M	Into top of regulator
Pigtail	6HPT0450	Rubber 7/16" I/Flare x POL 450mm	Into adaptor (supplied with kit) in top of regulator, or 2 x into manual changeover valve
	6HPT0650	Rubber 7/16" I/Flare x POL 650mm	
	6LCC270450FLA	SS 7/16" I/Flare x Type 27 450mm	
	6LCC270600FLA	SS 7/16" I/Flare x Type 27 600mm	
	6SFN0300	SS 7/16" I/Flare x POL 300mm	
	6SFN0450	SS 7/16" I/Flare x POL 450mm	
	6SFN0600	SS 7/16" I/Flare x POL 600mm	
	6SHW0450	SS 7/16" I/Flare x POL H/Wheel 450mm	
	6SHW0600	SS 7/16" I/Flare x POL H/Wheel 600mm	
	6360510	Copper 7/16" I/Flare x POL 450mm	
6360511	Copper 7/16" I/Flare x POL 600mm		
Bracket	6060993	Plastic bracket w/ screws (as supplied in kit)	Screwed into back of regulator to mount/ screw onto wall
	6060992	Metal bracket (doesn't include screws)	
Weather kit	9999585	Includes metal cover for regulator, snap hook, split link, 1.6m long chain, 2x brackets for mounting	Screwed onto wall
Adaptor	5050420/ AC29	1/4" NPT M x 7/16" SAE Inv Flare. Copper	In regulator inlet. Supplied in all packs
	6160674	1/2" BSPT M x 1/2" SAE M and nut. Brass	In regulator outlet
Test point adaptors	6160674	1/2" BSP M x 1/2" SAE M & nut adaptor	In regulator outlet

	6160676	½" BSPT M x ¾" SAE F & nut. Brass	
Drain kit	6060920	½" BSPP F inlet and outlet. Includes ball valve	Doesn't fit directly on regulator outlet
Compliance plate	9999950	Used in NSW to record regulator and installation details	Screwed onto wall next to regulator

KITS AVAILABLE

Product number	Description	Pigtail/s	Extra items
6060527	Reg Single 500Mj c/w Bracket + 1 C/Pigtail + Adapt	6360510 - copper, 450mm, 7/16" inv flare	
6060546	Reg Manual C/Over 500Mj c/w Bracket + 2 C/Pigtail	6360510 - copper, 450mm, 7/16" inv flare	1210302 - manual changeover valve
6060548	500Mj MCO Regulator Kit with 600mm Long Pigtails	6360511 - copper, 600mm, 7/16" inv flare	1210302 - manual changeover valve
6060551	Reg Manual C/Over 500Mj Brkt 2x C/Pigtail 3/4UNF A	6360510 - copper, 450mm, 7/16" inv flare	1210302 - manual changeover valve 6060992 - metal bracket 6160674 - ½" BSPT M x ½" SAE M and nut adaptor
6060565	500Mj Man Reg Kit + Chain Kit + 600mm SS Pigtails	6SHW0600 - SS, 600mm, 7/16" inv flare	1210302 - manual changeover valve
6060568	Reg C/O 500Mj w Pigtail + Metal Brkt	6360510 - copper, 450mm, 7/16" inv flare	1210302 - manual changeover valve 6060992 - metal bracket

SAFETY DEVICES

Protection device in case of overpressure

The overpressure value (14 kPa), which is accepted by the UL standard 144/ AS 1596, in case of working problems or anomalies, is controlled by a safety device consisting of a flow limiter working together with a safety valve. This device keeps the over-pressure value widely lower than the value expected by the standard without releasing high quantities, of propane gas into the atmosphere through the vent hole.

Protection device in case of an excess flow

The "excess flow" device assembled into the regulator operates (at 140% of the guaranteed flow rate) by limiting the gas flow (to 50 Mj/hr) in the event of a sudden increase in the desired flow, as in the case of a hose rupture or accidental disconnect from the outlet of the regulator while in use.

FAQS

What standard are the regulators approved to? Bromic regulators are approved to UL144. They comply with AS/NZS 1596, Section 5.5.8 of AS/NZS 1596 says "Regulators shall comply with UL144..."

Is the regulator AGA approved? Bromic's dual stage regulators do not have AGA approval, but instead has UL144 approval which comply with AS/NZS 1596, Section 5.5.8 of AS/NZS 1596 says "Regulators shall comply with UL144...". The UL Report File is under MH12419. This is the location of the approval
<https://productiq.ulprospector.com/en/profile/3662835/yksr.mh12419?term=YKSR&page=1>

Does this regulator have an OPSO? No, Bromic regulators are approved to UL144. According to section 15.3, we have a type 2 pressure relief valve instead of an OPSO. This relieves pressure through the vent, so the pressure downstream doesn't exceed 14kPa.

Does this regulator have an UPSO? No.

Do I have to have both gas bottles open? No, they can be either open or closed, as long as the cylinder in usage is open and both pigtails are connected. When the cylinder empties, the manual changeover valve is switched over and the corresponding gas cylinder should also be opened.

Does the vent have a threaded connection? No, for outdoor use only.

Can they be installed horizontally or vertically? No, they must be installed with the vent facing down as per the manual.

Where were these regulators manufactured? In Italy, by Cavagna.

END TECHNICAL DATA SHEET