

D06G Pressure Regulating Valve

Braukmann

PRODUCT DATA



FEATURES

- Noncorroding unitized cartridge contains all working parts and is easily replaceable.
- Outlet pressure range from 15 to 130 psi in all models, inlet rating 400 psi.
- Includes built-in strainer and thermal bypass.
- Narrow design to accommodate restricted installation requirements.
- Balanced seat construction provides superior pressure regulation.
- Inlet and outlet are internally threaded NPT, and externally threaded for use with union assemblies.
- Gauge taps provided on all models.

APPLICATION

The Honeywell Braukmann D06G Valve is a high quality pressure regulating valve that maintains a constant outlet pressure over a wide range of inlet supply pressures. It is ideally suited for potable water and irrigation applications requiring accurate regulation.

The wide outlet pressure range, high inlet pressure, and compact design allow flexibility in installation and application.

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SPECIFICATIONS

Model:

D06G Pressure Regulating Valve.

Construction Materials:

Body: Bronze.
Internal Parts: Stainless steel, NBR, and engineered plastics.
Regulator Mechanism: Fabric reinforced diaphragm.

Thermal Bypass Relief:

Integral thermal bypass relief mechanism on all models.

Seat Design:

Balanced single seat.

Inlet Pressure (Maximum):

400 psi.

Reduced Pressure Range:

15 to 130 psi (all models).

Outlet Pressure:

Factory set at 60 psi.

Differential:

14 psi minimum (for optimum regulation).

Reduced Ratio:

10:1 maximum.

Temperature (Maximum):

180°F (82°C).

Ambient Temperature Range:

33°F to 140°F (1°C to 60°C).

Pipe Sizes Available:

1-1/2 and 2 in.

Connections:

All models have internal NPT on inlet and outlet and external union connection on inlet and outlet.
One union kit is supplied.

Strainer Screen Size:

0.040 in. (1.0 mm), equivalent to 18 mesh.

Gauge Taps:

1/4 in. NPT (two, one on each side of body).

Weight (With One Union):

1-1/2 in. is 7.7 lb (3.5 kg).

2 in. is 8.5 lb (3.9 kg).

Approvals:

ASSE 1003.

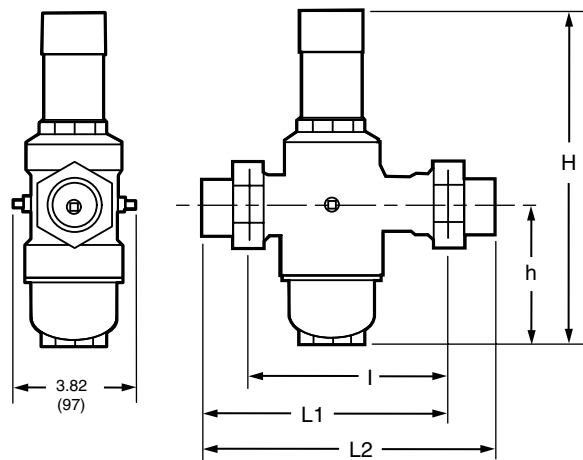
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Dimensions:

See Fig. 1.



DIMENSIONS IN IN. (MM)				THREADED		SWEAT	
SIZE	H	h	I	L1	L2	L1	L2
1-1/2	11-13/16 (299)	5 (126)	6-3/8 (163)	7-13/16 (198)	9-3/16 (234)	7-7/8 (201)	9-3/8 (239)
2	11-13/16 (299)	5 (126)	6-3/8 (163)	7-7/8 (200)	9-5/16 (237)	8-5/16 (211)	10-3/16 (259)

M11203

Fig. 1. D06G installation dimensions in in. (mm).

ORDERING INFORMATION

When purchasing replacement and modernization products from your manufacturing representative, specify the complete ordering number.

If you have additional questions, need further information, or would like to comment on our products or services, please contact:

- Honeywell Sparco/Braukmann
Customer Service
65 Access Road
Warwick, Rhode Island
www.honeywell.ca/braukmann
www.sparco-inc.com

In Canada—Contact your nearest Honeywell Home and Building Control Sales Office.

Water Capacities (See Table 1)

The suitability of a given regulator size is dependent on the pressure requirements of each installation. To determine the pressure regulator valve size required for a specific installation, calculate the following:

- ❶ Pressure differential between inlet and outlet pressure in pounds per square inch (psi).
- ❷ Capacity in gallons per minute (gpm), and
- ❸ Allowable reduced pressure falloff in psi.

Given these variables, use Table 1 to determine the proper size pressure regulator valve for your application.

Example: An installation has 135 psi inlet pressure, 60 psi outlet pressure (75 psi pressure differential). If 30 gpm capacity is required with only 10 psi falloff allowable, a 1-1/2 in. D06G is required. This pressure regulator valve allows a flow capacity up to 46 gpm with a 10 psi falloff at a no flow pressure differential of 75 psi.

Table 1. Water Capacities.

Size (in.)	Reduced Pressure Falloff (psi)	Pressure Differential Between Inlet and Outlet (psi)—No Flow							
		25		50		75		100	
		Flow Capacity (US gpm)	Velocity (ft/sec)	Flow Capacity (US gpm)	Velocity (ft/sec)	Flow Capacity (US gpm)	Velocity (ft/sec)	Flow Capacity (US gpm)	Velocity (ft/sec)
1-1/2	6	13	2.0	15	2.4	17	2.7	21	3.3
	10	36	5.7	43	6.8	46	7.2	54	8.5
	15	65	10.2	76	12.0	84	13.2	96	15.1
	20	88	13.9	102	16.1	114	18.0	132	20.8
2	6	15	1.4	18	1.7	22	2.1	27	2.6
	10	41	3.9	49	4.7	57	5.4	66	6.3
	15	75	7.2	88	8.4	101	9.7	114	10.9
	20	104	9.9	124	11.9	141	13.5	163	15.6

INSTALLATION

When Installing this Product...

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings given in these instructions and on the product to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. After installation is complete, check out the product as provided in these instructions.

Procedure

- ❶ Flush the system clear of sediment and debris.
- ❷ Close the supply valve and downstream isolating valve (if existing).
- ❸ Install the D06G with the arrow pointing in the direction of water flow (any mounting orientation is acceptable). The D06G can be installed directly onto a pipe using the female NPT threads on each end or by using single or double unions, if required. (One union is provided.)

CAUTION

Heat from soldering can damage internal parts. Always remove tailpiece or solder adapter prior to soldering.

- ❹ Open the supply valve slowly and open the downstream valve, if provided.
- ❺ Check for leaks at connections and correct, if necessary.

Adjusting Outlet Pressure (See Fig. 2)

The D06G is factory set at 60 psi (no flow). Follow this procedure if adjustment is required:

- ❶ Close the supply shutoff and open a downstream faucet to relieve pressure in the line. Remove the gauge plug and install a pressure gauge. Close the downstream faucet and open the supply valve.
- ❷ Loosen the locking screw one turn counterclockwise. Do not remove the locking screw.
- ❸ Turn the adjusting knob clockwise to increase pressure and counterclockwise to decrease pressure. When decreasing pressure, a slight downstream flow is necessary to relieve pressure. Turn the knob until the pressure gauge indicates the desired pressure (no flow set pressure).
- ❹ Tighten the locking screw.

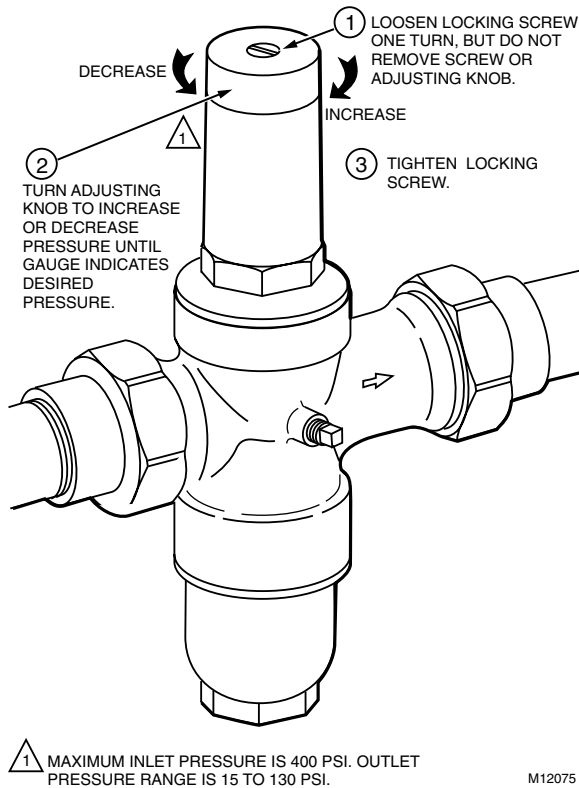


Fig. 2. Adjusting outlet pressure.

- 9 Assemble the strainer cup O-ring onto the strainer cup and insert the assembly into the body of the valve. Tighten securely using the service tool. Do not over torque.
- 10 Replace the new cartridge ensuring the O-ring is in place.
- 11 Replace the protection washer with the lip up (away from the valve body). See Fig. 6.
- 12 Replace the spring and bonnet. Tighten the bonnet using the service tool. Do not over torque.
- 13 Adjust the outlet pressure following the procedure in Adjusting the Outlet Pressure section.

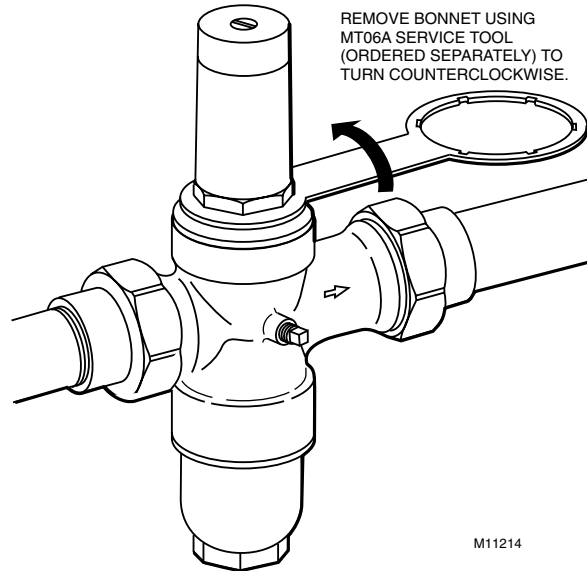


Fig. 3. Removing bonnet.

MAINTENANCE AND REPAIR

Replacing D06G Cartridge

The working parts of the D06G Valve, including diaphragm, valve seat, strainer, and disk, are all contained in a replaceable cartridge. To replace the cartridge:

- 1 Close the supply valve and relieve the downstream pressure.
- 2 Relieve pressure on the spring by loosening the locking screw (do not remove) and turning the adjusting knob counterclockwise until no resistance is felt.
- 3 Remove the bonnet (Fig. 3) by using the MT06A1009 or MT06A1017 Service Tool and turning counterclockwise. Remove the spring and protection washer (Fig. 4).
- 4 Remove the cartridge using two screwdrivers as levers (Fig. 4). Remove the cartridge O-ring.
- 5 Remove the strainer cup (Fig. 5) using the MT06A1009 or MT06A1017 Service Tool.
- 6 Remove the strainer and strainer support. Remove the U-seal.
- 7 Clean the inside of the valve and all the components.

NOTE: Replace the U seal (provided in the repair kit) for a complete cartridge repair.

- 8 Replace the U-seal by placing the U-seal on the strainer support and pushing the assembly into place. The U-seal open end must face the strainer support (Fig. 7). Replace the strainer onto the strainer support.

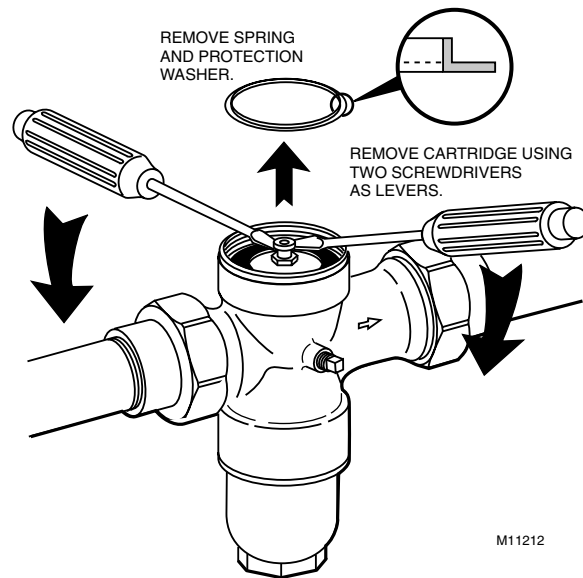


Fig. 4. Removing cartridge.

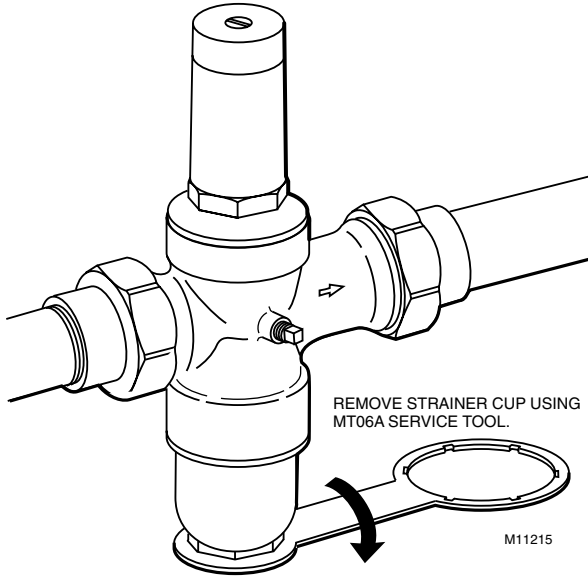


Fig. 5. Removing strainer cup.

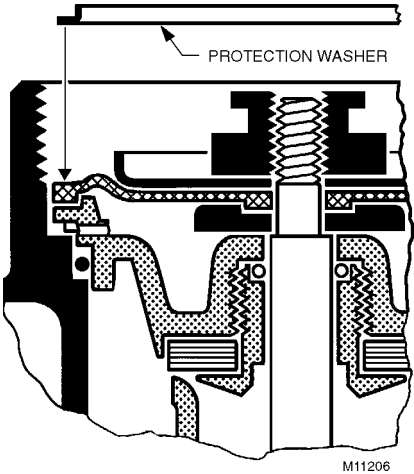


Fig. 6. Replacing protection washer.

Cleaning Strainer Screen

To clean the strainer screen:

- 1 Close the supply valve and relieve the downstream pressure.
- 2 Remove the strainer cup (Fig. 5) using the MT06A1009 or MT06A1017 Service Tool.
- 3 Remove the strainer and the strainer support. Do not remove the U-seal.
- 4 Clean the strainer cup and the strainer.
- 5 Replace the strainer on the strainer support. Insert the assembly into the valve.
- 6 Assemble the strainer cup O-ring onto the strainer cup and insert the assembly into the body of the valve. Tighten securely using the service tool. Do not over torque.

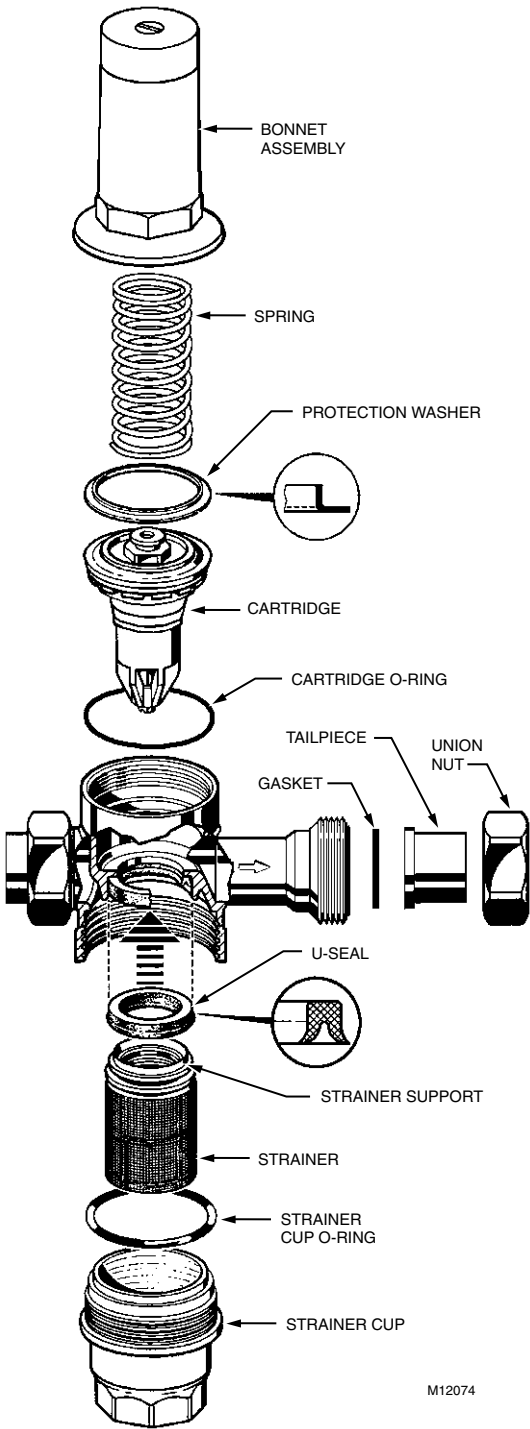


Fig. 7. Internal parts.

OPERATION

The Honeywell Braukmann D06G Valve is a balanced, direct acting pressure-regulating valve. It provides constant downstream pressure regardless of varying inlet pressures and downstream flow demands.

The spring force holds the valve in the open position until downstream pressure, sensed by a port, is sufficient to press on the underside of the diaphragm and close the valve. As

downstream pressure drops due to demand, the force on the diaphragm is reduced and the valve opens. Adjustment is made by manually turning the adjustment knob clockwise to increase the spring force and require a higher downstream pressure to close the valve. Similarly, reducing the spring force lowers the outlet set pressure.

When the outlet pressure is set, the D06G automatically regulates to maintain the downstream pressure.

TROUBLESHOOTING

Table 2 is a troubleshooting guide for the D06G Pressure Regulating Valves.

Table 2. Troubleshooting D06G Pressure Regulating Valves.

Problem	Probable Cause	Solution
Will not hold pressure or pressure gradually rises.	<ul style="list-style-type: none"> a) Thermal expansion. b) Debris on valve seat. c) Damaged valve seat. 	<ul style="list-style-type: none"> a) Install a thermal expansion tank to limit pressure rise. b) Clean valve. c) Replace cartridge.
Frozen.	<ul style="list-style-type: none"> a) Valve exposed to freezing temperatures below 32°F (0 °C). 	<ul style="list-style-type: none"> a) Inspect and replace any damaged components. Move valve to a location that remains above freezing.
Pressure gauge measures a lower pressure under flow conditions than set pressure at no flow.	<ul style="list-style-type: none"> a) This is normal and characteristic of direct-acting pressure-reducing valves. 	<ul style="list-style-type: none"> a) No action.
Low capacity, low outlet pressure.	<ul style="list-style-type: none"> a) Screen blocked with debris. b) Valve undersized. 	<ul style="list-style-type: none"> a) Clean screen. b) Check capacity versus requirements and increase valve size.

D06G PARTS AND ACCESSORIES

Order Number	Description	Order Number	Description
Replacement Parts		Union Kits	
272858	Union Gasket, fits all D06 and DS06, 1-1/2 in., 10 per bag.	K06U1037	Union Kit NPT, 1-1/2 in., includes female NPT threaded tailpiece, union nut, and gasket, and fits all 1-1/2 in. D06 and DS06 Valves.
272859	Union Gasket, fits all D06 and DS06, 2 in., 10 per bag.	K06U5034	Union Kit Sweat, 1-1/2 in., includes sweat tailpiece, union nut, and gasket, and fits all 1-1/2 in. D06 and DS06 Valves.
K06B1030	Strainer Kit for D06G and DS06G, 1-1/2 in. and 2 in., includes strainer, strainer support, and strainer cup O-ring.	K06U1045	Union Kit NPT, 2 in., includes female NPT threaded tailpiece, union nut, and gasket, and fits all 2 in. D06 and DS06 Valves.
K06D1044	Cartridge Kit for all D06 and DS06, 1-1/2 in. and 2 in., includes cartridge, cartridge O-ring, strainer cup O-ring, U-seal, and protection washer.	K06U5042	Union Kit Sweat, 2 in., includes sweat tailpiece, union nut, and gasket, and fits all 2 in. D06 and DS06 Valves.
272852	Strainer Cup for D06G and DS06G, 1-1/2 in. and 2 in., includes plastic strainer cup and strainer cup O-ring.	Service Tools	
272860	Bonnet kit for D06G, 1-1/2 in. and 2 in., includes preassembled bonnet, protection washer, and spring.	MT06A1009	Service Tool for bonnet and strainer cup, fits all 1-1/2 in. and 2 in. D06G and DS06G Valves. (Also fits D06U 1-1/2 in. Valves.)
272862	Bonnet kit for DS06G, 1-1/2 and 2 in. , includes preassembled bonnet, protection washer, and spring.	MT06A1017	Service Tool for bonnet and strainer cup, fits all 1-1/2 in. and 2 in. D06G and DS06G Valves. (Also fits D06U 2 in. Valves.)
		Pressure Gauges	
		M39A1032	Pressure Gauge with bottom inlet, 0 to 160 psi.
		M39A1056	Pressure Gauge with back inlet, 0 to 160 psi (recommended for use with D06G and DSO6G).
		MT194A1006	Pressure Gauge and recording gauge, with hose bib connection, 0 to 300 psi.

Honeywell Braukmann

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