

**DESCRIPTION**

Series 291 are 2-way normally closed internal pilot operated single high flow solenoid valves, designed for LPG fuel service. The valve body is brass with stainless steel internal parts.

**INSTALLATION**

ASCO™ components are intended to be used only within the technical characteristics as specified on the nameplate. Changes to the equipment are only allowed after consulting the manufacturer or its representative. Before installation depressurise the piping system and clean internally. The equipment may be mounted in any position. The flow direction and pipe connection of valves are indicated on the body.

The pipe connections have to be in accordance with the size indicated on the nameplate and fitted accordingly.

**CAUTION:**

- Reducing the connections may cause improper operation or malfunctioning.
- For the protection of the equipment install a strainer or filter suitable for the service involved in the inlet side as close to the product as possible.
- If tape, paste, spray or a similar lubricant is used when tightening, avoid particles entering the system.
- Use proper tools and locate wrenches as close as possible to the connection point.
- To avoid damage to the equipment, DO NOT OVERTIGHTEN pipe connections.
- Do not use valve or solenoid as a lever.
- The pipe connections should not apply any force, torque or strain to the product.

**ELECTRICAL INSTALLATION/ CONNECTION**

In case of electrical connections, they are only to be made by trained personnel and have to be in accordance with the local regulations and standards.

Wiring must comply with local and national regulations of explosion proof equipment. The electrical connection is made via a 4 core cable. The green/yellow coloured lead is the internal ground wire. The dual winding solenoid types contain two individual coil windings connected via (brown) and (black) line leads and a common neutral lead (blue or grey). The cable of the solenoid must be static at -40°C and may be flexed above -8°C. The solenoid shall be connected to a supply, protected by fuse capable of extinguishing a prospective short current.

**CAUTION:**

- Turn off electrical power supply and de-energise the electrical circuit and voltage carrying parts before starting work.
- All electrical screw terminals must be properly tightened according to the standards before putting into service.
- Dependent upon the voltage electrical components must be provided with an earth connection and satisfy local regulations and standards.

**GROUNDING**

To minimise the possibility of personal or property damage, ensure that grounding of the coils is maintained through the life of the valve. The Clip, retaining (item-1) provides reliable connection between the coil and the Sol.base sub-assembly if correctly maintained.

**PUTTING INTO SERVICE**

Before pressurising the system, first carry-out an electrical test. In case of solenoid valves, energise the coil a few times and check the valve operation.

**SERVICE**

Most of the solenoid valves are equipped with coils for continuous duty service. To prevent the possibility of personal or property damage do not touch the solenoid which can become hot under normal operation conditions. If the solenoid valve is easily accessible, the installer must provide protection preventing accidental contact.

**SOUND EMISSION**

The emission of sound depends on the application, medium and nature of the equipment used. The exact determination of the sound level can only be carried out by the user having the valve installed in his system.

**MAINTENANCE**

Maintenance of ASCO products is dependent on service conditions. Periodic cleaning is recommended, the timing of which will depend on the media and service conditions. During servicing, components should be examined for excessive wear. A complete set of internal parts is available as a spare parts kit. If a problem occurs during installation/maintenance or in case of doubt please contact ASCO or authorised representatives.

**VALVE DISASSEMBLY**

Disassemble in an orderly fashion. Pay careful attention to exploded views provided for identification of parts.

1. Remove retaining clips and coil from solenoid base sub-assemblies. CAUTION : when metal retaining clip disengages it can spring upwards.
2. Unscrew the solenoid base sub-assemblies.
3. Remove core/spring assembly and O-ring bonnet.
4. Remove bonnet screws/washers, valve bonnet, spring piston, piston assembly, lip seal, support, O-ring eyelet, eyelet and body gasket.
5. All parts are now accessible for cleaning or replacement.

**VALVE REASSEMBLY**

Reassemble in reverse order of disassembly paying careful attention to exploded views provided for identification and placement of parts.

1. NOTE : Lubricate all gaskets/ O-rings with high quality silicone grease. Replace body gasket, O-ring eyelet, eyelet, support, lip seal, piston assembly, spring piston, valve bonnet, washers/screw, O-ring bonnet, core/spring assembly and solenoid base sub-assemblies. Torque solenoid base sub-assemblies and screws according to torque chart.
2. Replace coil and retaining clips.
3. After maintenance, operate the valve a few times to be sure of proper operation.

For additional information visit our website: [www.asco.com](http://www.asco.com).

Asco	DRAWING	DESSIN	ZEICHNUNG
	DISEGNO	TEKENING	

**SERIES  
PVG291A330 (EM5)**

**NOTE-1:**

GB	Piston must ride tightly through lipseal
FR	Le piston doit traverser le joint à lèvres sans laisser de jeu
DE	Kolben muss dicht in der Lippendichtung sitzen
IT	Il pistone deve inserirsi stretto nella tenuta a labbro
NL	Zuiger moet strak door lipafdichting gaan

Ø	Catalogue number Code électrovanne Katalognummer Código de la electroválvula Codice elettrovalvola Catalogusnummer	Spare part kit Code pochette de rechange Ersatzteilsatz Código del kit de recambio Kit parti di ricambio Vervangingsset
3/4	PVG291A330	C 326264

Asco	DRAWING	DESSIN	ZEICHNUNG
	DISEGNO	TEKENING	

GB	DESCRIPTION	
1.	Clip, retaining	10. Piston assembly
2.	Coil/Nameplate	11. Seal lip, piston
3.	Sol. base sub-assembly	12. Support
4.	Core/Spring Assembly	13. Eyelet
5.	O-ring, sol. base sub-assembly/bonnet	14. O-ring, eyelet
6.	Screw, bonnet (4x)	15. Gasket, body
7.	Washer, spring (4x)	16. Body
8.	Bonnet	
9.	Spring, piston	

FR	DESCRIPTION	
1.	Clip de maintien	8. Couvercle
2.	Bobine/plaque d'identification	9. Ressort, piston
3.	Sous-ensemble de la base de la tête magnétique	10. Ensemble du piston
4.	Ensemble noyau/ressort	11. Joint à lèvres, piston
5.	Joint torique, sous-ensemble/ couvercle de la base de la tête magnétique	12. Support
6.	Vis, couvercle (4x)	13. Œillet
7.	Rondelle élastique, ressort (4x)	14. Joint torique, œillet
		15. Joint d'étanchéité, corps
		16. Corps

DE	BESCHREIBUNG	
1.	Klammerhalterung	10. Kolbenbaugruppe
2.	Spule/Typenschild	11. Dichtungslippe, Kolben
3.	Haltemutter	12. Halterung
4.	Magnetanker-/Federbaugruppe	13. Öse
5.	O-Ring, Haltemutter/Ventildeckel	14. O-Ring, Öse
6.	Schraube, Ventildeckel (4x)	15. Dichtung, Gehäuse
7.	Federschelbe (4x)	16. Gehäuse
8.	Ventildeckel	
9.	Kolbenfeder	

IT	DESCRIZIONE	
1.	Clip di fissaggio	10. Gruppo pistone
2.	Bobina/Targhetta	11. Tenuta a labbro, pistone
3.	Gruppo canotto solenoide	12. Supporto
4.	Gruppo canotto/molla	13. Occhiello
5.	O-ring gruppo canotto solenoide/coperchio	14. O-ring, occhiello
6.	Vite, coperchio (4x)	15. Guarnizione, corpo
7.	Rondella, molla (4x)	16. Corpo
8.	Coperchio	
9.	Molla, pistone	

NL	BESCHRIJVING	
1.	Bevestigingsclip	10. Zuiger
2.	Spoel/typeplaatje	11. Afdichtingslipje, zuiger
3.	Kopstuk/deksel-combinatie	12. Steun
4.	plunjer/veer-combinatie	13. Oog
5.	O-ring, kopstuk/deksel-combinatie/klepdeksel	14. O-ring, oog
6.	Bout, klepdeksel (4x)	15. Afdichting, afsluiterhuis
7.	Rondel, veer (4x)	16. Huis
8.	Klepdeksel	
9.	Veer, zuiger	

	TORQUE CHART	
A	6±1	53±9
B	11±1	100±10

ITEMS	NEWTON.METRES	INCH.POUNDS
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GB	* Supplied in spare part kit
FR	* Livrées en pochette de rechange
DE	* Enthalten im Ersatzteilsatz
IT	* Disponibile nel Kit parti di ricambio
NL	* Geleverd in vervangingsset









