

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.

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|------|---------|----------|-----------|
| Asco | DRAWING | DESSIN | ZEICHNUNG |
| | DISEGNO | TEKENING | |

**SERIES
PVG291A330 (EM5)**

NOTE-1:

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|----|--|
| 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 |

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| 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 |

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| Asco | DRAWING | DESSIN | ZEICHNUNG |
| | DISEGNO | TEKENING | |

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| 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 | |

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| 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 |

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| 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 | |

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| 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 | |

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| 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 | |

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| ITEMS | NEWTON.METRES | INCH.POUNDS |
| A | 6±1 | 53±9 |
| B | 11±1 | 100±10 |

TORQUE CHART

