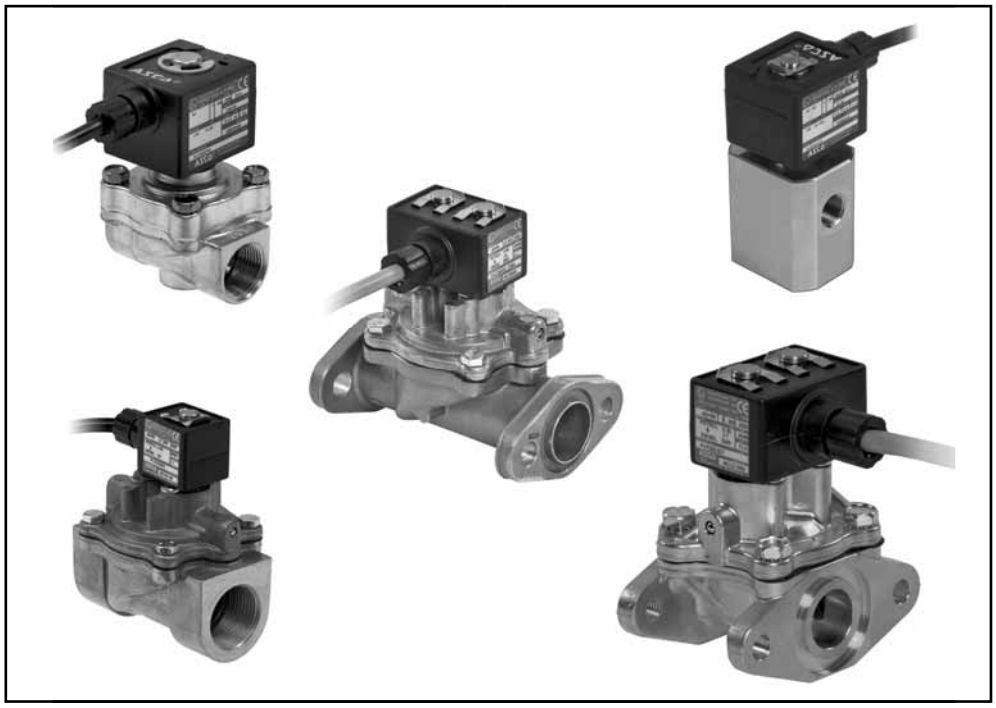
APPLICATIONS
FUEL DISPENSING
Product Index



Function	Δ P min. (bar)	Δ P max. (bar)	Temperature min. (°C)	Temperature max. (°C)		Pipe connections	Series	Page
BRASS BODY								
2/2 NC	0,3	3,5	-40	+70	Petrol vending, single flow	3/4	291	(1)
2/2 NC	0,35	2,7	-40	+40	Petrol vending, dual flow	3/4	292	(1)
2/2 NC	0,3	3,5	-40	+70	Petrol vending, proportional	3/4	291	(1)
2/2 NC	0	1	-40	+65	Vapour recovery, proportional	3/4	291	(1)
2/2 NC	0	25	-40	+65	LPG applications, single flow	1/2 - 3/4	291	(1)
2/2 NC	0	25	-40	+65	LPG applications, dual flow	3/4	291	(1)
ALUMINIUM BODY								
2/2 NC	0,35	3,5	-20	+40	Petrol vending, single flow	3/4 - 1	293	(1)
2/2 NC	0,35	3,5	-40	+40	Petrol vending, dual flow	1	T292	(1)
2/2 NC	0,35	3,5	-20	+40	Petrol vending, dual flow	3/4 - 1	292	(1)
STAINLESS STEEL BODY								
2/2 NC	10	350	-40	+70	CNG applications	3/8 - 1/2	291	(1)

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(1) See our “Solenoid Valves for the Fuel Dispensing Industry” catalogue at: www.asconumatics.eu

Applications

The valves are specifically intended for petrol pumps and other fuel dispensing systems, where filling time and accuracy are of critical importance.

These systems are often based on self-service and pre-paid computer controlled stations and require precise shut-off.

Operation

All valves are of the normally closed construction type.

- **Single flow executions**
  No flow/full flow modes
  Energised = full flow
  De-energised = closed
- **Dual flow executions**
  Low flow/full flow modes
  Single solenoid:
  Energised = full flow
  De-energised = low flow
  (constant bleed)
- **3-stage executions:**
  No flow/full flow/low flow mode

- Single solenoid (dual winding coil):
  - Full flow when both coil windings are energised.
  - Low flow when coil winding 2 is energised and 1 is de-energised.
  - Closed when both coil windings are de-energised.
- Dual solenoid:
  - Full flow when the first coil is energised.
  - Low flow when the second coil is energised.
  - Closed when both coils are de-energised.

Solenoids

For single coil types in non-hazardous applications a general service epoxy moulded coil is available with spade plug connection conforming to ISO 4400/EN 175301-803, form A and DIN 43650.

Explosionproof executions:
- encapsulated
  II 2 G Ex mb II T5 to T3,
  II 2 D Ex mD 21 IP67 100°C to 200°C
- increased safety/encapsulation
  II 2 G Ex e mb II T6 toT3
  II 2 D Ex tD A21 85°C to 200°C
- non sparking protection
  II 3 G EEx nA II T4 to T3
  II 3 D EEx nA II 135°C to 200°C

Enclosures according to NEMA are also available.

Liquefied Petroleum Gas (LPG)

Liquefied petroleum gas, as the name suggests, is partly a by-product of petroleum refining. It consists of hydrocarbons that are vapours, rather than liquids, at normal temperatures and pressures, but which turn liquid at moderate pressures; its main constituent is propane (C_3H_8), and it is sometimes referred to by that name.

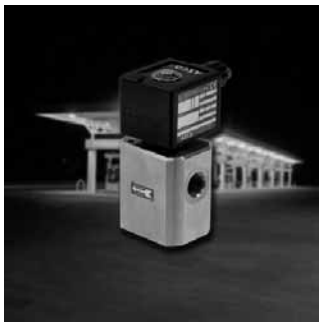
As LPG is so widely available, it is the most used "alternative" fuel. In order to liquefy the fuel, it is stored in tanks at about 20 times the atmospheric pressure.

ASCO has a range of LPG valves in their programme.

Compressed Natural Gas (CNG)

This is natural gas compressed into a high-pressure container. Since the 1960s, CNG has become a vehicle fuel alternative to oil-based gasoline and diesel fuel. If natural gas is stored onboard vehicles, this is nowadays done at pressures between 200 and 250 bar.

ASCO has introduced compact high-pressure solenoid valves to cope with the rigorous demands of Compressed Natural Gas (CNG) dispensing applications. They can be used to open and close the supply from storage tanks on single and multi bank dispensers.



Vapour Recovery

Petrol contains volatile organic compounds (VOCs) which evaporate inside the fuel tank of a vehicle and fill the air space above the liquid fuel. During refuelling, these vapours are forced out of from the fuel tank and, unless controlled, escape into the atmosphere through the filler neck of the fuel tank. Almost 5% may be released into the environment and adversely affect the human health.

ASCO Numatics has developed a range of solenoid valves that recover these harmful vapour emissions from the storage tank or from the vending pump while storage tanks or vehicules are being filled.