

# ASCO™ Solenoid Valves

For Vacuum Service

Pilot Operated, hung diaphragm, 3/8" to 3/4" Tapped

2/2  
Series  
**210**

## Features and Benefits

- Special materials and handling procedures are used in the high vacuum valves to avoid molecular contamination
- The medium and high vacuum valves are mass spectrometer tested
- Two way shut-off pilot operated valves for air and inert gas compatible with the seal materials used
- The solenoid valves satisfy all relevant EU Directives

## General

Differential pressure

1 bar absolute [1 bar = 100 kPa]

Response time

15 - 120 ms

| Fluids (*)     | Temperature range (TS) | Seal materials (*)    |
|----------------|------------------------|-----------------------|
| air, inert gas | -20°C to +85°C         | NBR (nitrile)         |
|                | 0°C to + 90°C          | FPM (fluoroelastomer) |

## Materials in contact with fluid

(\*) Ensure that compatibility of materials in contact with fluids is verified.

|                           |                 |
|---------------------------|-----------------|
| Body                      | Brass           |
| Core tube                 | Stainless steel |
| Core and plugnut          | Stainless steel |
| Springs                   | Stainless steel |
| Seat                      | Brass           |
| Seals, diaphragm and disc | NBR or FPM      |
| Disc holder (NO function) | PA              |
| Shading coil              | Copper          |

## Electrical characteristics

Coil insulation class

F

Connector

Spade plug (cable Ø 6-10 mm)

Connector specification

ISO 4400 / EN 175301-803, form A

Electrical safety

IEC 335

Electrical enclosure protection

Moulded IP65 (EN 60529)

Standard voltages

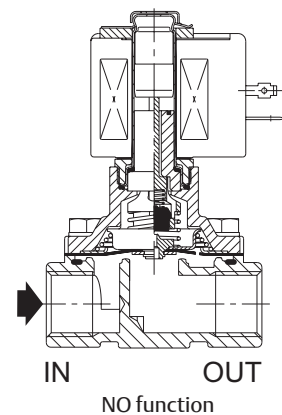
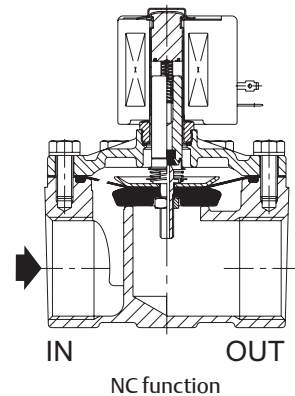
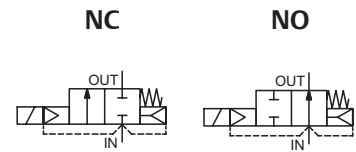
DC (=) : -

(Other voltages and 60 Hz on request)

AC (~) : 24V - 48V - 115V - 230V / 50 Hz

| Prefix option | Power ratings |              |      |               | Operator ambient temperature range (TS)<br>(C°) | Replacement coil |   | Type <sup>(1)</sup> |
|---------------|---------------|--------------|------|---------------|-------------------------------------------------|------------------|---|---------------------|
|               | Inrush<br>~   | Holding<br>~ |      | Hot/cold<br>= |                                                 | ~                | = |                     |
|               | (VA)          | (VA)         | (W)  | (W)           |                                                 | 230 V/50 Hz      | - |                     |
| SC            | 55            | 23           | 10.5 | -             | -20 to +75                                      | 400425-117       | - | 01                  |

<sup>(1)</sup> Refer to the dimensional drawings on the following page.



**Specifications**

| Pipe size                                                                           | Orifice size | Flow coefficient<br>Kv |         | Minimum absolute vacuum pressure (PS)     | Power coil (W) | Catalog number | Options                    |
|-------------------------------------------------------------------------------------|--------------|------------------------|---------|-------------------------------------------|----------------|----------------|----------------------------|
|                                                                                     |              |                        |         | Air (*)                                   |                |                | Maintained manual operator |
| Rp                                                                                  | (mm)         | (m³/h)                 | (l/min) | mbar (Torr)                               | ~              | ~              |                            |
| <b>NC - Normally closed. low vacuum range to 25 Torr. NBR seals</b>                 |              |                        |         |                                           |                |                |                            |
| 3/4"                                                                                | 19           | 4.3                    | 72      | 33.3 (25)                                 | 10.5           | SCE210D095     | MO                         |
| <b>NC - Normally closed. medium vacuum range to 10<sup>-3</sup> Torr. NBR seals</b> |              |                        |         |                                           |                |                |                            |
| 3/4"                                                                                | 19           | 4.3                    | 72      | 1.33.10 <sup>-3</sup> (10 <sup>-3</sup> ) | 10.5           | SCE210D095VM   | MO                         |
| <b>NC - Normally closed. high vacuum range to 10<sup>-6</sup> Torr. FPM seals</b>   |              |                        |         |                                           |                |                |                            |
| 3/4"                                                                                | 19           | 4.3                    | 72      | 1.33.10 <sup>-6</sup> (10 <sup>-6</sup> ) | 10.5           | SCE210D095VH   | MO                         |
| <b>NO - Normally open. low vacuum range to 25 Torr. NBR seals</b>                   |              |                        |         |                                           |                |                |                            |
| 3/8"                                                                                | 16           | 2.6                    | 43      | 33.3 (25)                                 | 10.5           | SCE210C033     | MO                         |
| 1/2"                                                                                | 16           | 3.4                    | 57      | 33.3 (25)                                 | 10.5           | SCE210C034     | MO                         |
| 3/4"                                                                                | 19           | 4.7                    | 79      | 33.3 (25)                                 | 10.5           | SCE210C035     | MO                         |
| <b>NO - Normally open. medium vacuum range to 10<sup>-3</sup> Torr. NBR seals</b>   |              |                        |         |                                           |                |                |                            |
| 3/8"                                                                                | 16           | 2.6                    | 43      | 1.33.10 <sup>-3</sup> (10 <sup>-3</sup> ) | 10.5           | SCE210C033VM   | MO                         |
| 1/2"                                                                                | 16           | 3.4                    | 57      | 1.33.10 <sup>-3</sup> (10 <sup>-3</sup> ) | 10.5           | SCE210C034VM   | MO                         |
| 3/4"                                                                                | 19           | 4.7                    | 79      | 1.33.10 <sup>-3</sup> (10 <sup>-3</sup> ) | 10.5           | SCE210C035VM   | MO                         |
| <b>NO - Normally open. high vacuum range to 10<sup>-6</sup> Torr. FPM seals</b>     |              |                        |         |                                           |                |                |                            |
| 3/8"                                                                                | 16           | 2.6                    | 43      | 1.33.10 <sup>-6</sup> (10 <sup>-6</sup> ) | 10.5           | SCE210C033VH   | MO                         |
| 1/2"                                                                                | 16           | 3.4                    | 57      | 1.33.10 <sup>-6</sup> (10 <sup>-6</sup> ) | 10.5           | SCE210C034VH   | MO                         |
| 3/4"                                                                                | 19           | 4.7                    | 79      | 1.33.10 <sup>-6</sup> (10 <sup>-6</sup> ) | 10.5           | SCE210C035VH   | MO                         |

(\*) Ensure that compatibility of materials in contact with fluids is verified.

**Options**

- Waterproof enclosure with embedded screw terminal coil according to protection class IP67, CEE-10
- Explosionproof enclosures for use in zones 1/21-2/22, categories 2-3 to ATEX Directive 2014/34/EU
- Electrical enclosures according to "NEMA" standards are available
- Compliance with "UL", "CSA" and other local approvals available on request
- Mounting brackets, suffix MB
- Other pipe connections are available on request
- Connector with visual indication and peak voltage suppression or with cable length of 2 m

**Installation**

- The solenoid valves can be mounted in any position without affecting operation
- Pipe connection identifier is E = Rp (ISO 7/1)
- Installation/maintenance instructions are included with each valve

**Spare parts kit and accessories**

| Catalogue number | Spare parts kits no. | Mounting bracket no. |
|------------------|----------------------|----------------------|
|                  | ~                    |                      |
| SCE210D095       | C302276              | 038713-000           |
| SCE210C033/C034  | C302334              | 038713-000           |
| SCE210C035       | C302335              | 038713-000           |

<sup>(1)</sup> Standard suffixes are also applicable to kits.**Ordering Examples Valves:**

|    |   |           |                 |
|----|---|-----------|-----------------|
| SC | E | 210 D 095 | 230V / 50 Hz    |
| SC | E | 210 C 033 | MO 115V / 50 Hz |
| SC | E | 210 C 034 | VM 24V / 50 Hz  |
| SC | E | 210 C 035 | VH 230V / 50 Hz |

prefix — pipe thread — basic number — voltage — suffix

**Ordering Examples Kits:**

|                        |    |
|------------------------|----|
| C302276 <sup>(1)</sup> | VM |
| C302276                | VH |
| C302276                |    |

basic number — suffix

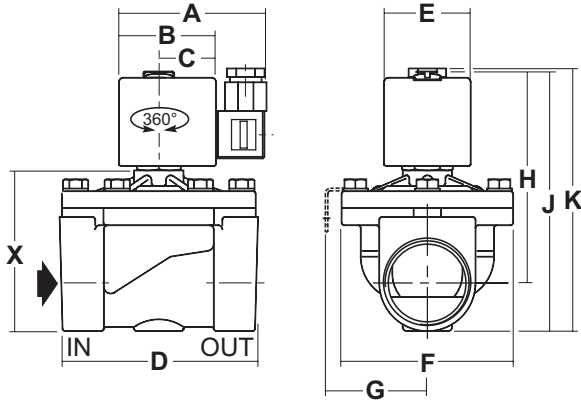
# ASCO™ Solenoid Valves

## Dimensions (mm), Weight (kg)

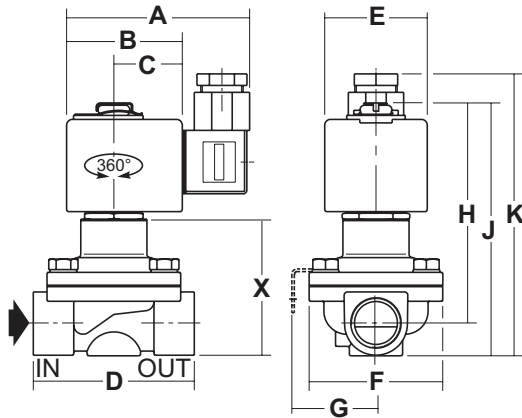


**TYPE 01**  
Prefix “SC” Solenoid  
Epoxy moulded  
IEC 335 / ISO 4400  
IP65

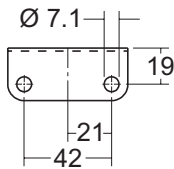
SCE210D095 (NC)



SCE210C033/C034/C035 (NO)



Mounting brackets



| Type | Prefix option | Catalog number  | A  | B  | C  | D  | E  | F  | G  | H   | J   | K   | X  | Weight <sup>(1)</sup> |
|------|---------------|-----------------|----|----|----|----|----|----|----|-----|-----|-----|----|-----------------------|
| 01   | SC            | SCE210D095      | 80 | 50 | 30 | 73 | 45 | 58 | 41 | 89  | 103 | 121 | 54 | 1                     |
|      |               | SCE210C033/C034 | 80 | 50 | 30 | 70 | 45 | 58 | 41 | 98  | 108 | 127 | 60 | 0.9                   |
|      |               | SCE210C035      | 80 | 50 | 30 | 70 | 45 | 58 | 41 | 102 | 117 | 132 | 68 | 1                     |

<sup>(1)</sup> including coil and connector.