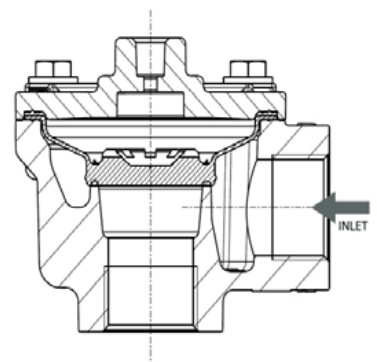
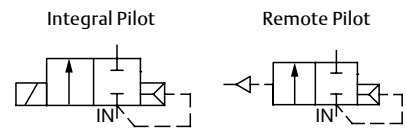
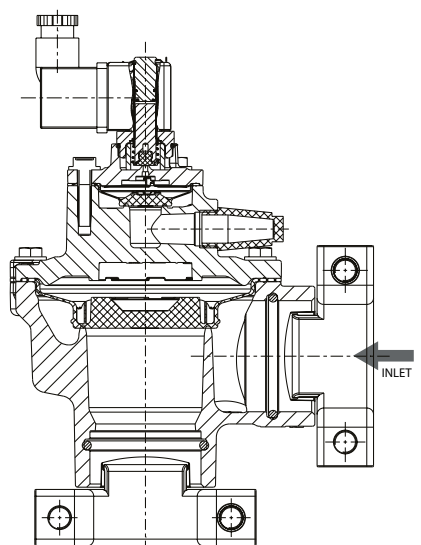


- The springless one-piece diaphragm pulse valves are especially designed for dust collector service applications, combining high flow, long life and extremely fast opening and closing to produce reliable and economical operation. The valves are selectable with integral or remote piloting.
- The high flow, angle type bodies, springless construction, in combination with the special diaphragm assemblies give the unique operating features required for dust collector service applications.
- Engineered to deliver a high-energy pulse of air while minimizing compressed air consumption. The valve delivers an average compressed air savings of 15%. Specific system savings can be calculated using this compressed air calculator. [Series 353 Air Savings Calculator](#)
- The design with patented Quick Mount Clamp connections eliminates the time consuming thread cutting and sealing resulting in maximum flexibility while the valve will be anchored to the pipes.
- Built-in silencers guarantee noise free operation and avoid foreign particles entering the valve.
- The integral operators are provided with epoxy moulded F-class coils. Various optional waterproof and explosionproof solenoids for use in potentially explosive atmospheres (gas & dust) according to Directive ATEX 2014/34/EU available.
- The valves satisfy all relevant EC directives.
- UL Recognized / CSA and RoHS compliant.



Threaded pipe connection



Quick Mount Clamp connection

General Valve Information

| | | |
|--|---|--|
| Body | Aluminium | |
| Core tube, core spring, core and plugnut | Stainless Steel | |
| Shading coil | Copper | |
| Sealings and disc | NBR (Nitrile) | |
| Diaphragm | TPE / TPE-LT | |
| Temperature range | TPE - Standard Ambient -20°C to +85°C (-4°F to 185°F) Medium -20°C to +140°C (-4°F to 284°F) | TPE - Low-Temp Ambient -40°C to +60°C (-40°F to 140°F) Medium -40°C to +60°C (-40°F to 140°F) |

Electrical Characteristic (1)

| | |
|---------------------------------|---|
| Relative Duty Time | 10%, max. on time 1 min. |
| Coil insulation class | F - 155°C (311°F) |
| Electrical enclosure protection | Moulded enclosure IP 65 |
| Electrical interface | Spade plug (Cable Ø 6 - 8 mm (0.24 - 0.32 inches)), DIN 46244 |
| Electrical safety | IEC 335 |
| Voltage | DC 24V; AC 24V/50-60Hz, 120/60 - 110/50V/Hz, 230V/50-60Hz |

(1) More Information see pages 2 and 9 to 12

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Specifications

| Pipe Size (in) | Orifice Size | Flow Factor | | Operating Pressure Differential bar (psi) | | Coil Wattage (1) | | Connection Type | Catalog Number | Electrical Interface (2) | Options (3) | Voltage Code | | | | | Dimension Type (4) | | | | | | | |
|--|--------------|-------------|-----------|---|-----------|------------------|----|----------------------|----------------|------------------------------|-------------|--------------|-----------|----------------|-----------|----------------------|--------------------|------------------------------|-----|----|-----------|----|----|------------|
| | | mm (in) | Kv (m³/h) | Cv | Min | Max. | AC | | | | | DC | 24/50-60 | 120/60, 110/50 | 230/50-60 | 24/DC | | Remote | | | | | | |
| 2-Way Normally Closed Aluminum Valve, TPE (One-Piece Diaphragm) | | | | | | | | | | | | | | | | Drawing | | | | | | | | |
| 3/4" | 32 (1-1/4") | 13 | 15 | 2 | 8,5 (125) | | | NPT-Thread | 8353K111... | 0X (Remote Pilot) | A00 | | | | 00 | 4 | | | | | | | | |
| | | | | | | | | G-Thread | G353K111... | | | | | | | 4 | | | | | | | | |
| | | | | | | | | Clamp (NPT - Bonnet) | K353K111... | | | | | | | 2 | | | | | | | | |
| | | | | | | | | Clamp (G - Bonnet) | K353K111... | | | | | | | 2 | | | | | | | | |
| | | | | | | | | 6,3 | 22 | | | | | | | NPT-Thread | 8353K111... | S1 - DIN Coil (w/ connector) | A00 | FQ | F0 | FH | F1 | 3 |
| | | | | | | | | | | | | | | | | G-Thread | G353K111... | | | | | | | 3 |
| | | | | | | | | | | | | | | | | Clamp | K353K111... | | | | | | | 1 |
| | | | | | | | | | | | | | | | | 1" | 32 (1-1/4") | 20 | 23 | 2 | 8,5 (125) | | | NPT-Thread |
| G-Thread | G353K211... | 4 | | | | | | | | | | | | | | | | | | | | | | |
| Clamp (NPT - Bonnet) | K353K211... | 2 | | | | | | | | | | | | | | | | | | | | | | |
| Clamp (G - Bonnet) | K353K211... | 2 | | | | | | | | | | | | | | | | | | | | | | |
| 6,3 | 22 | | | | | | | NPT-Thread | 8353K211... | S1 - DIN Coil (w/ connector) | A00 | FQ | F0 | FH | F1 | | | | | | | | | 3 |
| | | | | | | | | G-Thread | G353K211... | | | | | | | | | | | | | | | 3 |
| | | | | | | | | Clamp | K353K211... | | | | | | | | | | | | | | | 1 |
| | | | | | | | | 1 1/2" | 55 (1-1/2") | 49 | 57 | 2 | 8,5 (125) | | | | | | | | | | | NPT-Thread |
| | | | | | | | | | | | | | | | | G-Thread | G353K311... | 8 | | | | | | |
| | | | | | | | | | | | | | | | | Clamp (NPT - Bonnet) | K353K311... | 6 | | | | | | |
| Clamp (G - Bonnet) | K353K311... | 6 | | | | | | | | | | | | | | | | | | | | | | |
| 6,3 | 22 | | | | | | | | | | | | | | | NPT-Thread | 8353K311... | S1 - DIN Coil (w/ connector) | A00 | FQ | F0 | FH | F1 | 7 |
| | | | | | | | | | | | | | | | | G-Thread | G353K311... | | | | | | | 7 |
| | | | | | | | | | | | | | | | | Clamp | K353K311... | | | | | | | 5 |

(1) Detailed technical information on the following page(s).

(2) Electrical operator types on the following page(s).

(3) More options for each construction type on the following page(s).

(4) Dimensions, see drawing(s) for each construction type on the following page(s).

Quick Mount Clamp Connection - Remote Pilot Valves

| Pipe Size (in) | Connection Type | Catalog Number (Standard) | Catalog Number (Low-Temp) | Valve Details |
|----------------|----------------------|---------------------------|---------------------------|-----------------------------------|
| 3/4" | Clamp (NPT - Bonnet) | K353K1110X6AG00 | K353K1120X6AG00 | 3/4", Clamp, Remote, NPT Bonnet |
| | Clamp (G - Bonnet) | K353K1110XA0000 | K353K1120XA0000 | 3/4", Clamp, Remote, G Bonnet |
| 1" | Clamp (NPT - Bonnet) | K353K2110X6AG00 | K353K2120X6AG00 | 1", Clamp, Remote, NPT Bonnet |
| | Clamp (G - Bonnet) | K353K2110XA0000 | K353K2120XA0000 | 1", Clamp, Remote, G Bonnet |
| 1 1/2" | Clamp (NPT - Bonnet) | K353K3110X6AG00 | K353K3120X6AG00 | 1 1/2", Clamp, Remote, NPT Bonnet |
| | Clamp (G - Bonnet) | K353K3110XA0000 | K353K3120XA0000 | 1 1/2", Clamp, Remote, G Bonnet |

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How To Order

G 353 K 1 1 1 SO A00 F1

Connection Type
G = ISO 228/1 "G" body connections
K = Quick Connect / Clamp (5)
8 = NPT inlet connection

Product Series
353 = Pulse Valves

Revision
K = Initial Release

Pipe Size
1 = 3/4"
2 = 1"
3 = 1 1/2"

Body Material
1 = Aluminium
3 = Aluminium Anodized

Voltage
00 = All remote valves no voltage required
F1 = 24/DC Class F
F0 = 120/60, 110/50 Class F
FQ = 24V/50-60Hz Class F
FH = 230/50-60 Class F
Other voltages on request

Options
A00 = w/out option
6AG = NPT Bonnet (Must select when ordering Clamp (K) connection & Remote Pilot (0X) only)
A01 = w/out silencer (only solenoid)
600 = Fitting for Tube 6mm (remote only)
601 = Fitting for Tube 8mm (remote only)
6AH = Clamp connection on inlet
9DQ = Inlet clamp connection only + fitting for tube 6mm (remote pilot + clamp only)
9DR = Inlet clamp connection only + fitting for tube 8mm (remote pilot + clamp only)
9DT = Inlet clamp connection only + without silencer (solenoid + clamp only)
9DU = Inlet clamp connection only + NPT bonnet and remote pilot connections (remote pilot + clamp connection only)

Further options on request

Temperature range / Sealing

- 1 = TPE Standard
(Ambient: -20°C (-4°F) to 85°C (185°F). Medium -20°C (-4°F) to 140°C (284°F)
- 2 = TPE Low-Temp
(Ambient: -40°C (-40°F) to 60°C (140°F). Medium -40°C (-40°F) to 60°C (140°F)

Electrical interface & explosion proof options

- 0X = All remote pilot valves no voltages required (6)
- S0 = Spade plug, 3x DIN 46244 without connector (equivalent to old **SC** prefix)(7)
- S1 = Spade plug, 3x DIN 46244, IP65 (equivalent to old **SC** prefix) (7)
- C0 = Moulded coil with leads, conduit hub 1/2" NPT zinc plated carbon steel, watertight types 2, 3, 3S, 4, 4X
- SG = Moulded coil with connector, epoxy encapsulated, ATEX II 3GD Ex ec IIC Gc / II 3GD Ex tc IIIC Dc, zone 22 (equivalent to **SG** prefix) (7) (9) (9)
- FN = Aluminium enclosure, 1/2 NPT conduit, IECEx/ATEX II 2G Ex db IIC Gb / II 2D Ex tb IIIC Db, zone 1-21 (equivalent to **NF** prefix) (7) (9) (9)
- MV = Steel enclosure, M20 cable gland, IECEx/ATEX II 2G Ex eb mb IIC Gb/II2D Ex tb IIIC Db, zone 1-21 (equivalent to **EM** prefix) (7) (9) (9)
- A7 = Moulded enclosure, epoxy encapsulated, integrated cable, IECEx/ATEX II 2G Ex mb IIC Gb / II 2D Ex mb IIIC Db, zone 1-21 (equivalent to **PV** prefix) (7) (9) (9)
- MA = Water Proof Enclosure, Zink plated steel (epoxy coated), IP67 (equivalent to **WP** prefix) (7) (9)
- H0 = Moulded coil with leads, epoxy encapsulated, conduit hub 1/2" NPT zinc plated carbon steel NEMA Types 7 and 9, Class 1&Div.2, UL/CSA (equivalent to **EF** prefix) (7) (9) (9)
- VA = Moulded coil, 1/2" NPT aluminum junction box, Ex d mb II CT3~T6 Gb, Ex mbD 21 tD A21 Directive Chinese Standard GB
- ... = **Other operators on request**

(5) Selecting G for Connection Type will also include G thread for the Remote Pilot Port and selecting 8 for Connection Type will include NPT thread for the Remote Pilot Port. To select the thread type on the Remote Pilot Port for the Clamp Connections, please choose the appropriate Option in digits 11-13 (i.e. 6AG for NPT thread).

(6) NON-ATEX VERSIONS 353-SERIES USABLE IN ATEX ZONES
This product category does not require certification. There is no potential ignition risk to the products themselves. These product categories are named simple mechanical products. These products can be used in specific explosion zones 1 and 21 in compliance with our installation instructions. Pulse Valves and their accessories are capable for use in explosive atmospheres in the form of gas, steam, mists and dust.

(7) Dimensions on page 10 to 12 to find.

(8) Search prefix in www.emerson.com/asco to get detailed technical information. Please note that the valve pressure ratings with some of the ATEX enclosures will be reduced.
To obtain the correct pressure rating please check the landing pages of the "2-Way Solenoid Pulse Valve Configurator".

(9) Coils class F only.

Dimensions: mm (inches)

Version with Quick Mount Clamp connection

Fig.1: Integral pilot operated

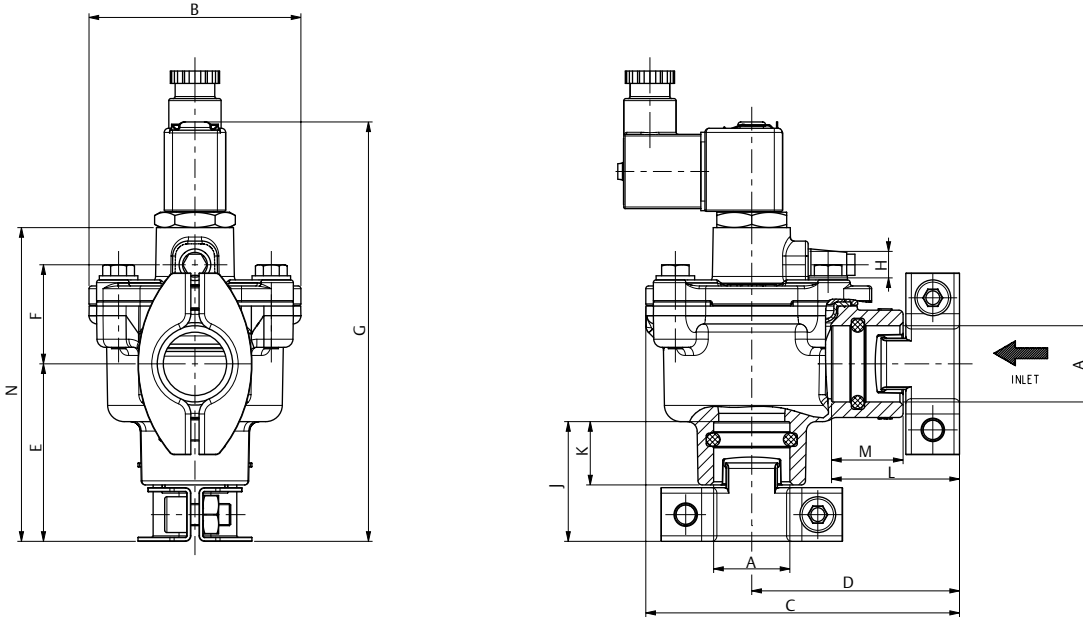
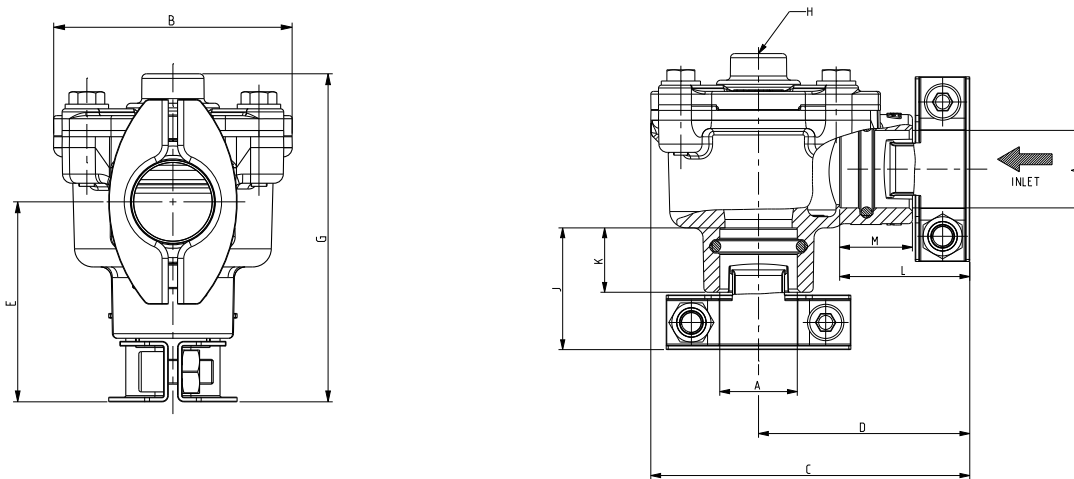


Fig.2: Remote pilot operated



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| Fig. | A | B | C | D | E | F | G | H | J | K | L | M | N | Weight kg (lbs) |
|------|--------------------|---------------|----------------|-----------------|-----------------|---------------|----------------|-------------------|-----------------|---------------|-----------------|---------------|----------------|-----------------|
| 1 | G 3/4" NPT 3/4" | 77 (3.032) | 114 (4.488) | 76 (2.992) | 65 (2.559) | 36 (1.417) | 152 (5.984) | G1/8" NPT 1/8" | 43.5 (1.713) | 23 (0.906) | 46.5 (1.831) | 26 (1.024) | 114 (4.488) | 0.76 (1.68) |
| | G 1" NPT 1" | 77 (3.032) | 120 (4.724) | 82 (3.228) | 71 (2.795) | 40 (1.575) | 162 (6.378) | G1/8" NPT 1/8" | 44.5 (1.752) | 23 (0.906) | 44.5 (1.752) | 23 (0.906) | 124 (4.882) | 0.90 (1.98) |
| | 3/4" NPT 3/4" | 77 (3.032) | 114 (4.488) | 75.5 (2.972) | 64.5 (2.539) | - | 106 (4.173) | G1/8" NPT 1/8" | 43.5 (1.713) | 23 (0.906) | 46.5 (1.831) | 26 (1.024) | - | 0.56 (1.23) |
| 2 | G 1" NPT 1" | 77 (3.032) | 120 (4.724) | 81.5 (3.209) | 70.5 (2.776) | - | 116 (4.567) | G1/8" NPT 1/8" | 44.5 (1.752) | 23 (0.906) | 44.5 (1.752) | 23 (0.906) | - | 0.69 (1.53) |

Dimensions: mm (inches)

Version with threaded pipe connection

Fig.3: Integral pilot operated

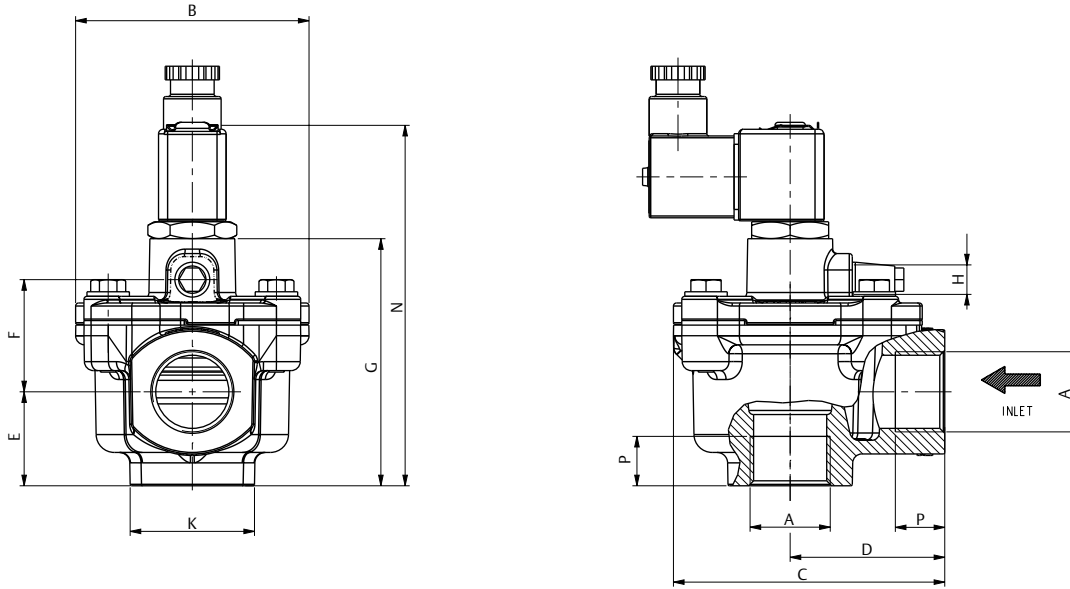
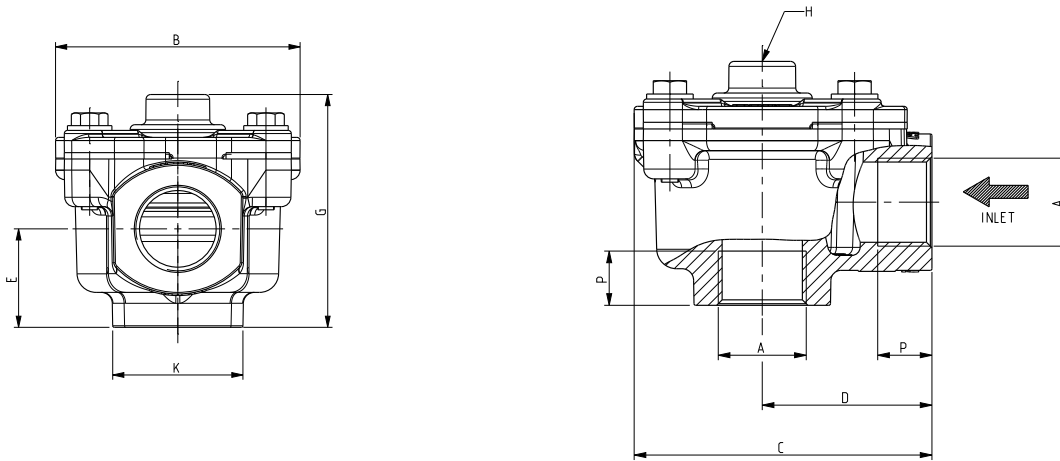


Fig.4: Remote pilot operated



| Fig. | A | B | C | D | E | F | G | H | K | N | P | Weight kg (lbs) |
|------|----------|---------|---------|---------|---------|---------|---------|----------|---------|---------|---------|-----------------|
| 3 | G 3/4" | 77 | 90 | 51 | 31 | 37 | 81.5 | G 1/8" | 41 | 119 | 16 | 0.57 |
| | NPT 3/4" | (3.032) | (3.543) | (2.008) | (1.221) | (1.457) | (3.209) | NPT 1/8" | (1.614) | (4.685) | (0.630) | (1.26) |
| 4 | G 1" | 77 | 90 | 51 | 31 | 37 | 81.5 | G 1/8" | 41 | 119 | 16 | 0.53 |
| | NPT 1" | (3.032) | (3.543) | (2.008) | (1.221) | (1.457) | (3.209) | NPT 1/8" | (1.614) | (4.685) | (0.630) | (1.17) |
| 4 | G 3/4" | 77 | 89.5 | 51 | 31 | - | 73.3 | G 1/8" | 41 | - | 16 | 0.41 |
| | NPT 3/4" | (3.032) | (3.524) | (2.008) | (1.221) | - | (2.886) | NPT 1/8" | (1.614) | - | (0.630) | (0.90) |
| 4 | G 1" | 77 | 89.5 | 51 | 31 | - | 73.3 | G 1/8" | 41 | - | 16 | 0.38 |
| | NPT 1" | (3.032) | (3.524) | (2.008) | (1.221) | - | (2.886) | NPT 1/8" | (1.614) | - | (0.630) | (0.83) |

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Dimensions: mm (inches)

Version with Quick Mount Clamp connection

Fig.5: 1 1/2" Integral pilot operated

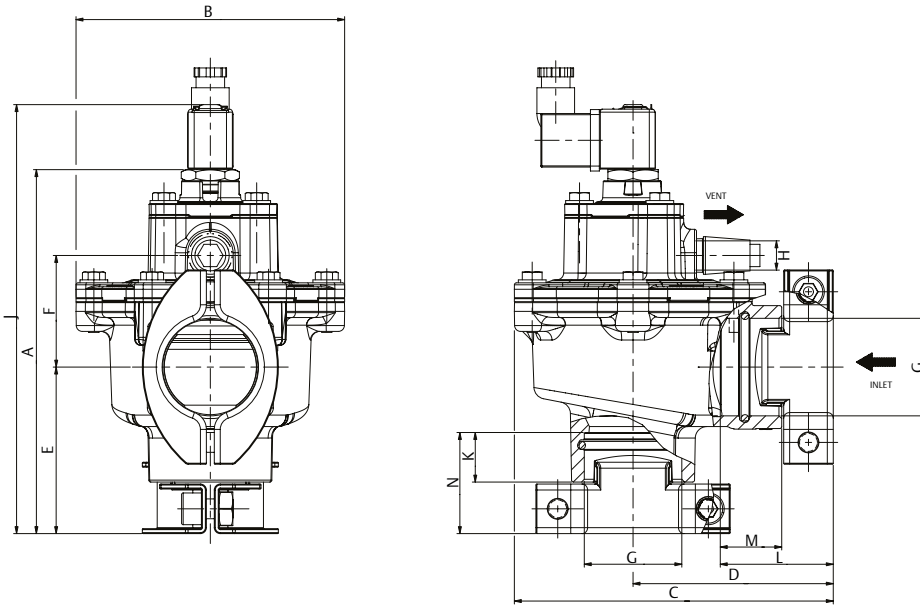
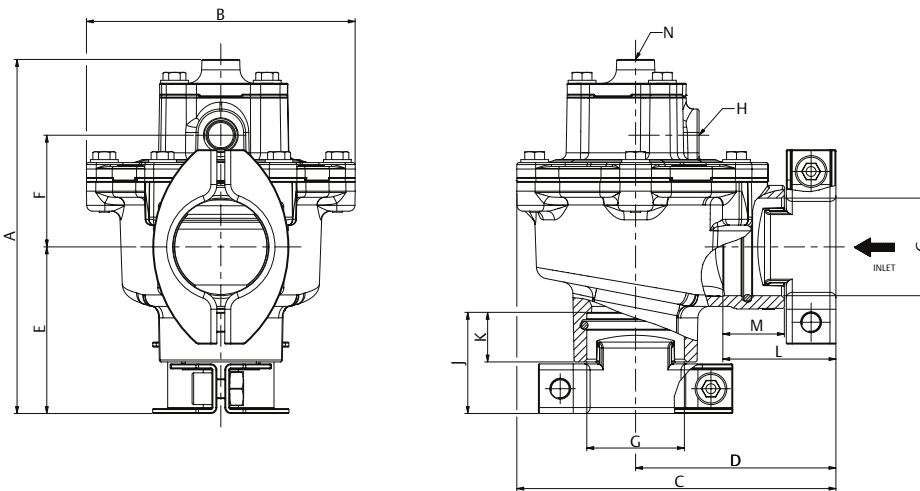


Fig.6: 1 1/2" Remote pilot operated



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| Fig. | A | B | C | D | E | F | G | H | J | K | L | M | N | Weight kg (lbs) |
|------|------------------|------------------|----------------|----------------|---------------|-----------------|--------|-------|----------------|---------------|---------------|---------------|---------------|-----------------|
| 5 | 183.6 (7.228) | 135.5 (5.335) | 161 (6.339) | 101 (3.976) | 84 (3.307) | 56.3 (2.217) | 1 1/2" | G3/8" | 216 (8.504) | 25 (0.984) | 57 (2.244) | 31 (1.220) | 51 (5.008) | 1.78 (3.92) |
| 6 | 178.5 (7.028) | 135.5 (5.335) | 161 (6.339) | 101 (3.976) | 84 (3.307) | 56.5 (2.224) | 1 1/2" | G3/8" | 51 (2.008) | 25 (0.984) | 57 (5.244) | 31 (1.220) | G 1/4" | 1.68 (3.70) |

Dimensions: mm (inches)

Version with threaded pipe connection

Fig.7: 1 1/2" Integral pilot operated

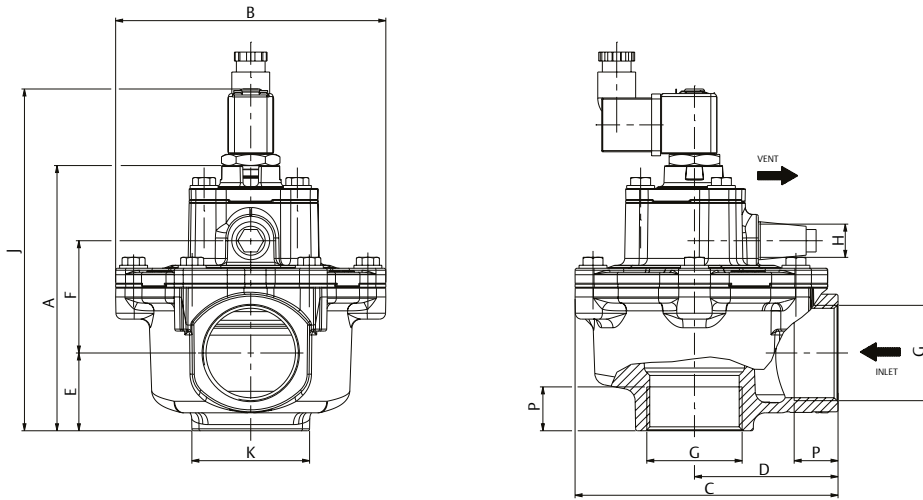
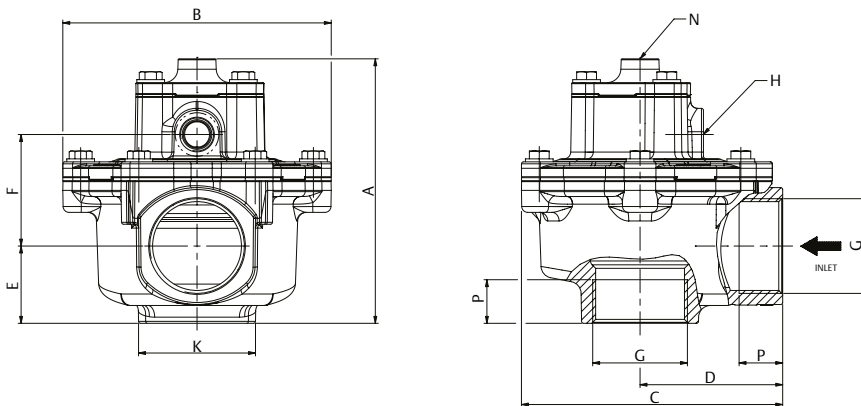


Fig.8: 1 1/2" Remote pilot operated



| Fig. | A | B | C | D | E | F | G | H | J | K | N | P | Weight kg (lbs) |
|------|------------------|------------------|----------------|---------------|---------------|-----------------|--------|--------|----------------|---------------|---------------|---------------|-----------------|
| 7 | 133 (5.236) | 135.5 (5.335) | 132 (5.197) | 72 (2.835) | 39 (1.535) | 56.5 (2.224) | 1 1/2" | G 3/8" | 171 (6.732) | - | 59 (2.323) | 22 (0.867) | 1.24 (2.73) |
| 8 | 133.5 (5.256) | 135.5 (5.335) | 132 (5.197) | 72 (2.835) | 39 (1.535) | 56.5 (2.224) | 1 1/2" | G 3/8" | - | 59 (2.323) | G 1/4" | 22 (0.867) | 1.14 (2.51) |

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Special designs and accessories

- ASCO Series E909 sequential controller to pilot valve Series 262 / 257.
- ASCO Series 110 / 125 pilot boxes containing 2 to 12 pilot solenoid valves
- The springless one-piece diaphragm pulse valves and the pilot valves can be equipped with explosion-proof solenoids in accordance with ATEX directives and national standards.
- Waterproof enclosure with embedded screw terminal coil according to CEE 10 (IP67)
- Further versions on request.

Installation

- The package consists of a pulse valve, solenoid (pre-assembled) and connector (supplied loose).
- The pulse valves can be mounted in any position without affecting operation. A strainer or filter for compressed air cleaning to be installed as close as possible to the air reservoir.
- Threaded connections G (ISO 228/1), NPT, or patented Quick Mount Clamp connection.
- In the patented Quick Mount Clamp connection tightness is achieved by the o-ring sealing on the pipes (3/4" = 26.4mm (1.0") to 27.4mm (1.1"); 1" = 33.2mm (1.3") to 34.2mm (1.4") and 1 1/2" = 47.8mm (1.88") to 48.8mm (1.92")) according to ISO 4200.
- Installation and maintenance instructions are included with each valve.
- Declarations of conformity are available on request.
- Version Ex e mb Magnet housings have a cable gland with internal strain relief for cables with an outside diameter of 7 to 12 mm and the housing is equipped with an internal and external connection option for an earthing or equipotential bonding conductor.
- The Ex d enclosure is equipped with a cable entry with 1/2" NPT thread - M20 x 1.5 is optionally available. The housings are supplied without cable gland.

Remote Pilot

- When connecting the piping to the G or NPT 1/8" connection in the valve bonnet, the external ASCO™ pilot valve must be mounted as close as possible to the main pulse valve.
- Installations with pipe lengths of more than 3 meters (9.8 feet) must be tested under operating conditions.
- Pipe diameters of 8 mm (0,31 inches) or 6 mm (0.24 inches) are recommended.

Explanations of temperatures

| | |
|------------------------------------|---|
| Valve temperature range | The temperature range for the pulse valve is determined by selecting the diaphragm (TPE or TPE-LT). |
| Operator ambient temperature range | The ambient temperature range for the operator is determined by the selected power level and type of protection. |
| Total temperature range | The temperature range of the entire pulse valve is determined by the limits of the two temperature ranges listed above. |
| Medium temperature range | Temperature range with the TPE standard diaphragm is -20°C (-4°F) to 140°C (284°F). Temperature range with the TPE low-temp diaphragm is -40°C (-40°F) to 60°C (140°F) |

Rebuild Kits ⁽¹⁾

| Pipe Size (in) | Base Catalog 353 | Diaphragm Kit (1pc) | Diaphragm Kit (10 pcs) | Clamp Kit (1x) |
|---------------------|------------------|---------------------|------------------------|----------------|
| TPE Standard | | | | |
| 3/4" | 353K111 | M200697 | M200699 | M200701 |
| 1" | 353K211 | | | M200702 |
| 1 1/2" | 353K311 | M200755 | M200756 | M200761 |
| TPE Low-Temp | | | | |
| 3/4" | 353K112 | M200698 | M200700 | M200701 |
| 1" | 353K212 | | | M200702 |
| 1 1/2" | 353K312 | M200757 | M200758 | M200761 |

(1) See installation and maintenance instruction for detailed information.

| Pipe Size (in) | Rebuild Kit TPE Standard diaphragm | | Rebuild Kit TPE Low-Temp diaphragm | |
|------------------|------------------------------------|---------|------------------------------------|---------|
| | 3/4" - 1" | 1 1/2" | 3/4" - 1" | 1 1/2" |
| Base Catalog 353 | 353K111 353K211 | 353K311 | 353K112 353K212 | 353K312 |
| Operator | Rebuild kit | | | |
| SC | M200695 | M200759 | M200696 | M200760 |
| SG | M200926 | M200928 | M200927 | M200929 |
| WP | M200839 | M200853 | M200840 | M200854 |
| WS | M200841 | M200855 | M200842 | M200856 |
| EM AC voltage | M200843 | M200857 | M200844 | M200858 |
| EM DC voltage | M200879 | M200885 | M200880 | M200886 |
| WSEM AC voltage | M200881 | M200887 | M200882 | M200888 |
| WSEM DC voltage | M200883 | M200889 | M200884 | M200890 |
| EF | M200849 | M200863 | M200850 | M200864 |
| EV | M200851 | M200865 | M200852 | M200866 |
| NF | M200845 | M200859 | M200846 | M200860 |
| WSNF | M200847 | M200861 | M200848 | M200862 |

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Electrical characteristics

Coil insulation class **F**

Electrical safety **IEC 335**

Voltages

DC (=) 24 V, permissible voltage tolerance ± 10%

AC (~) 24V / 50-60Hz, 120/60 - 110/50V/Hz, 230V / 50-60Hz (other voltages on request)

| Digits | Solenoid operator | Max. power | | Operator ambient temperature EN °C (°F) | Electrical Enclosure and Connections | Safety code | Electrical enclosure protection (EN 60529) | Replacement coil 24V/50-60 Hz | Replacement coil 230V/50/60 Hz | Replacement coil 120/60-110/50 Hz | Replacement coil 24 V/DC |
|--------|----------------------------------|------------|------|--|---|--|--|-------------------------------|--------------------------------|-----------------------------------|--------------------------|
| | | AC | DC | | | | | | | | |
| S0 | SC without Connector (SD, SC US) | 6,3 | 22 | -40 to +75 (-40 to +167) | Spade plug, 3x DIN 46244 without connector | - | IP65, moulded | 400129-502 | 400129-528 | 400127-225 | 400127-642 |
| S1 | SC IP65 ISO 4400 | 6,3 | 22 | -40 to +75 (-40 to +167) | Cable gland connector EN175301-803A (ISO 4400) for cables with an O.D. from 6 to 10 mm (0.24 to 0.39 inches) | - | IP65, moulded | 400129-502 | 400129-528 | 400127-225 | 400127-642 |
| C0 | FT, HAT | 10,1 | 11,6 | 0 to +55 (32 to +131) | Epoxy Coil with integrated 1/2" NPT conduit and 18" (458 mm) leads | - | Ordinary location | 238610-005-D | 238610-058-D | 238610-032-D | 238710-006-D |
| SG | SG ATEX IIBD | 6,3 | 22 | -10 to +60 (-14 to +140) | Cable gland connector EN175301-803A (ISO 4400) for cables with an O.D. from 6 to 10 mm (0.24 to 0.39 inches). | IIB GD Exec IIC T6-T4 Gc, Ex tc IIIC T110°C Dc | IP65X, moulded | M20040905GA00FQ | M20040905GA00FH | M20040905GA00FO | M20040905GA00F1 |
| FN | NF ATEX | 16,7 | 19,7 | -60 to +40/60 (-76 to +104/140) | Junctionbox, Threaded conduit 1/2" NPT supplied without cable gland | II2GD Ex db IIC Gb T4 / Ex tb IIIC T135°C Db | IP66/67, Aluminum | 400405-201 | 400405-217 | 400405-225 | 400405-342 |
| FT | NFET ATEX | 16,7 | 19,7 | -60 to +40/60 (-76 to +104/140) | Junctionbox, Cable entry with thread M20 x 1.5 are supplied without cable gland | II2GD Ex db IIC Gb T4 / Ex tb IIIC T135°C Db | IP66/67, Aluminum | 400405-201 | 400405-217 | 400405-225 | 400405-342 |
| FS | WSNF ATEX | 16,7 | 19,7 | -60 to +40/60 (-76 to +104/140) | Stainless Steel Junctionbox, Threaded conduit 1/2" NPT supplied without cable gland | II2GD Ex db IIC Gb T4 / Ex tb IIIC T135°C Db | IP66/67, Stainless Steel | 400405-201 | 400405-217 | 400405-225 | 400405-342 |
| FU | WSNFET ATEX | 16,7 | 19,7 | -60 to +40/60 (-76 to +104/140) | Stainless Steel Junctionbox, Cable entry with thread M20 x 1.5 are supplied without cable gland | II2GD Ex db IIC Gb T4 / Ex tb IIIC T135°C Db | IP66/67, Stainless Steel | 400405-201 | 400405-217 | 400405-225 | 400405-342 |
| MV | EM ATEX | 10,5 | 16,8 | -40 to +40 (-40 to +104) | Junctionbox, M20-Synthetic cable gland for cables with an O.D. from 7 to 12 mm | II2GD Ex e mb IIC Gb T3 Ex tb IIIC T200°C Db | IP66/67, Aluminum | 400909-101 ⁽¹⁾ | 400909-117 ⁽¹⁾ | 400909-118 ⁽²⁾ | 400914-142 |
| MN | EMT ATEX | 10,5 | 16,8 | -40 to +40 (-40 to +104) | Junctionbox, Threaded conduit 1/2" NPT supplied without cable gland | II2GD Ex e mb IIC Gb T3 Ex tb IIIC T200°C Db | IP66/67, Aluminum | 400909-101 ⁽¹⁾ | 400909-117 ⁽¹⁾ | 400909-118 ⁽²⁾ | 400914-142 |
| MT | EMET ATEX | 10,5 | 16,8 | -40 to +40 (-40 to +104) | Junctionbox, Cable entry with thread M20 x 1.5 are supplied without cable gland | II2GD Ex e mb IIC Gb T3 Ex tb IIIC T200°C Db | IP66/67, Aluminum | 400909-101 ⁽¹⁾ | 400909-117 ⁽¹⁾ | 400909-118 ⁽²⁾ | 400914-142 |
| MW | WSEM ATEX | 10,5 | 16,8 | -40 to +40 (-40 to +104) | Stainless Steel Junctionbox, M20-Synthetic cable gland for cables with an O.D. from 7 to 12 mm | II2GD Ex e mb IIC Gb T3 Ex tb IIIC T200°C Db | IP66/67, Stainless Steel | 400909-101 ⁽¹⁾ | 400909-117 ⁽¹⁾ | 400909-118 ⁽²⁾ | 400914-142 |
| MS | WSEMT ATEX | 10,5 | 16,8 | -40 to +40 (-40 to +104) | Stainless Steel Junctionbox, Threaded conduit 1/2" NPT supplied without cable gland | II2GD Ex e mb IIC Gb T3 Ex tb IIIC T200°C Db | IP66/67, Stainless Steel | 400909-101 ⁽¹⁾ | 400909-117 ⁽¹⁾ | 400909-118 ⁽²⁾ | 400914-142 |
| MU | WSEMET ATEX | 10,5 | 16,8 | -40 to +40 (-40 to +104) | Stainless Steel Junctionbox, Cable entry with thread M20 x 1.5 are supplied without cable gland | II2GD Ex e mb IIC Gb T3 Ex tb IIIC T200°C Db | IP66/67, Stainless Steel | 400909-101 ⁽¹⁾ | 400909-117 ⁽¹⁾ | 400909-118 ⁽²⁾ | 400914-142 |

(1) 50 Hz frequency only

(2) 115 V 50 Hz

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Electrical characteristics

Coil insulation class F

Electrical safety IEC 335

Voltages

DC (=) 24 V, permissible voltage tolerance ± 10%

AC (~) 24V / 50-60Hz, 120/60 - 110/50V/Hz, 230V / 50-60Hz (other voltages on request)

| Digits | Solenoid operator | Max. power | | Operator ambient temperature EN °C (°F) | Electrical Enclosure and Connections | Safety code | Electrical enclosure protection (EN 60529) | Replacement coil 24V/50-60 Hz | Replacement coil 230V/50/60 Hz | Replacement coil 120/60-110/50 Hz | Replacement coil 24 V/DC |
|--------|---------------------|------------|------|--|--|---|---|-------------------------------|--------------------------------|-----------------------------------|--------------------------|
| | | AC | DC | | | | | | | | |
| A7 | PV ATEX | 6,3 | 22 | -40 to +40/65 (-40 to +104/149) | Epoxy Coil with integrated cable, 2m (6'5") long (other lengths on request) | ATEX II 2G Ex mb IIC T5-T3 Gb / II 2D Ex mb III C T100°C-T200°C Db IP67 | IP65, moulded | - | - | - | - |
| MA | WP IP67 | 10,5 | 19,7 | -40 to +75 (-40 to +167) | Junctionbox, M20-Synthetics cable gland for cables with an O.D. from 7 to 12 mm. | - | IP67, Steel | 400405-101 ⁽¹⁾ | 400405-117 ⁽¹⁾ | 400405-118 ⁽²⁾ | 400405-342 |
| MF | WS IP67 | 10,5 | 19,7 | -40 to +75 (-40 to +167) | Stainless Steel Junctionbox, M20-Synthetics cable gland for cables with an O.D. from 7 to 12 mm. | - | IP67, Stainless Steel | 400405-101 ⁽¹⁾ | 400405-117 ⁽¹⁾ | 400405-118 ⁽²⁾ | 400405-342 |
| H0 | EF, EFHT, EFHB NEMA | 10,1 | 11,6 | -60 to +40/52 (-76 to +104/125) | Epoxy Coil with integrated 1/2" NPT conduit and 18" (458 mm) leads | Class I, Division 1 | NEMA type 7 and 9, zinc plated carbon steel | On Request | On Request | On Request | On Request |
| H1 | EV NEMA | 10,1 | 11,6 | -60 to +40/52 (-76 to +104/125) | Epoxy Coil with integrated 1/2" NPT Stainless Steel conduit and 18" (458 mm) leads | Class I, Division 1 | NEMA type 7 and 9, stainless steel | On Request | On Request | On Request | On Request |
| VA | VCEF AM | 10,1 | 11,6 | -40 to +52/55 (-40 to +125/131) | Aluminum Junction Box, 1/2 NPT Condiut Orientation A | Ex d mb II C T4 Gb, Ex mb D 21 tD A21 - Directive Chinese Standard - GB | IP66/67 T135°C, Aluminum | On Request | On Request | On Request | On Request |
| VC | VCEFBM | 10,1 | 11,6 | -40 to +52/55 (-40 to +125/131) | Aluminum Junction Box, 1/2 NPT Condiut Orientation B | Ex d mb II C T4 Gb, Ex mb D 21 tD A21 - Directive Chinese Standard - GB | IP66/67 T135°C, Aluminum | On Request | On Request | On Request | On Request |
| VE | VCEFCM | 10,1 | 11,6 | -40 to +52/55 (-40 to +125/131) | Aluminum Junction Box, 1/2 NPT Condiut Orientation C | Ex d mb II C T4 Gb, Ex mb D 21 tD A21 - Directive Chinese Standard - GB | IP66/67 T135°C, Aluminum | On Request | On Request | On Request | On Request |
| VG | VCEFD M | 10,1 | 11,6 | -40 to +52/55 (-40 to +125/131) | Aluminum Junction Box, 1/2 NPT Condiut Orientation D | Ex d mb II C T4 Gb, Ex mb D 21 tD A21 - Directive Chinese Standard - GB | IP66/67 T135°C, Aluminum | On Request | On Request | On Request | On Request |

(1) 50 Hz frequency only

(2) 115 V 50 Hz

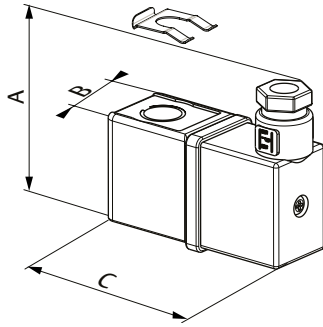
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Dimensions: mm (inch)



Type 01

“S1”, “S0” Solenoid
with spade plug connector size 22 - 11mm (0.43 inches)
EN 175301-803 Industry standard form B / IP65

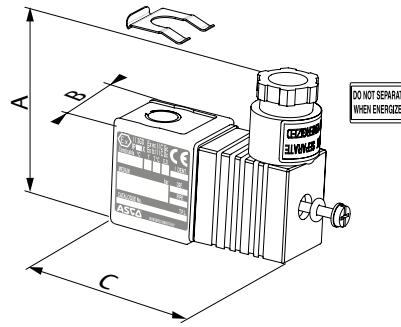


| A | B | C | Weight kg (lbs) |
|---------------|---------------|---------------|-----------------|
| 49 (1.929) | 22 (0.866) | 61 (2.401) | 0.08 (0.18) |



Type 02

“SG” Solenoid
with spade plug connector size 22- 11mm (0.43 inches)
EN 175301-803 Industry standard form B / IP65
II 3G Ex ec IIC T4 Gc, II 3D Ex tc IIIC T110°C Dc IP65X



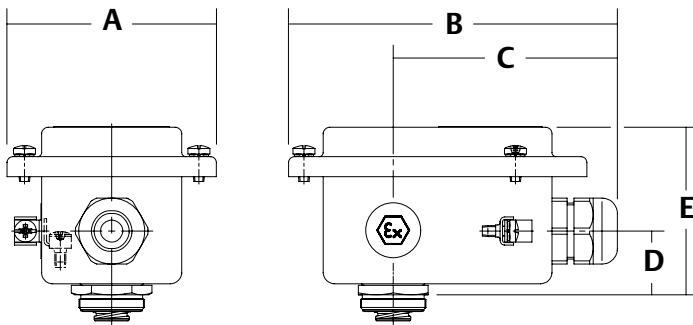
| A | B | C | Weight kg (lbs) |
|---------------|---------------|---------------|-----------------|
| 49 (1.929) | 22 (0.866) | 61 (2.401) | 0.08 (0.18) |

Dimensions: mm (inch)



Type 03⁽¹⁾

Prefix “EM”, “WSEM” solenoids / Electrical interface MV/MW/MT/MS/MN/MU
Pull-type solenoid operator
Metal enclosure, epoxy coated or stainless steel
EN-IEC 60079-7, EN-IEC 60079-18 and EN-IEC 60079-31
II 2G Ex e mb IIC Gb, II 2D Ex tb IIIC Db IP66/67



| series/size | A | B | C | D | E | weight kg (lbs) |
|-------------|---------------|----------------|---------------|---------------|---------------|-----------------|
| EM/WSEM-MXX | 77 (0.031) | 120 (4.724) | 82 (3.228) | 23 (0.906) | 62 (2.441) | 0.55 (1.21) |

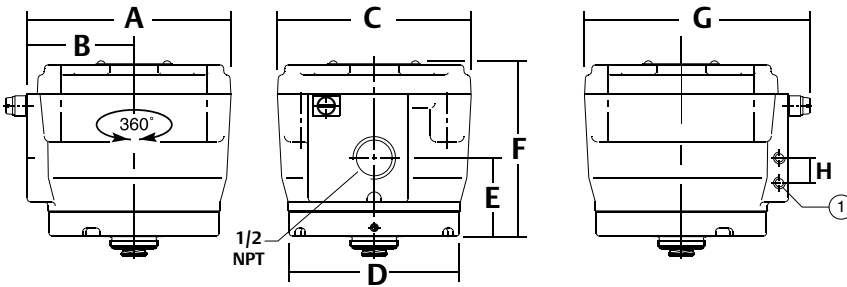
(1) Prefix “WP”, “WS” solenoids / Electrical interface MA/MF Pull-type solenoid operator Metal enclosure, epoxy coated or stainless steel IP66/67

Dimensions: mm (inch)

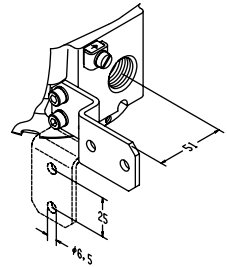


Type 04

Prefix "NF", "WSNF" Solenoid / Electrical interface FN/FS/FT/FU
Aluminium, stainless steel
(NF, epoxy coated)
EN-IEC 60079-1 and EN-IEC 60079-31
II 2G Ex d IIC T6..T4 Gb, II 2D Ex tb IIIC 85°C..135°C Db IP66/67



Mounting Bracket



Bracket kit no. **C139824**
contains: Stainless steel 304 SS
screws and bracket

| size | A | B | C | D | E | F | G | H | weight (1) |
|------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|--------------|
| NF | 102 (4.016) | 54 (2.126) | 97 (3.818) | 86 (3.386) | 39 (1.535) | 89 (3.504) | 115 (4.528) | 15 (0.591) | 1.4 (3.1) |
| WSNF | 102 (4.016) | 54 (2.126) | 97 (3.818) | 86 (3.386) | 39 (1.535) | 89 (3.504) | 115 (4.528) | 15 (0.591) | 2.7 (5.9) |

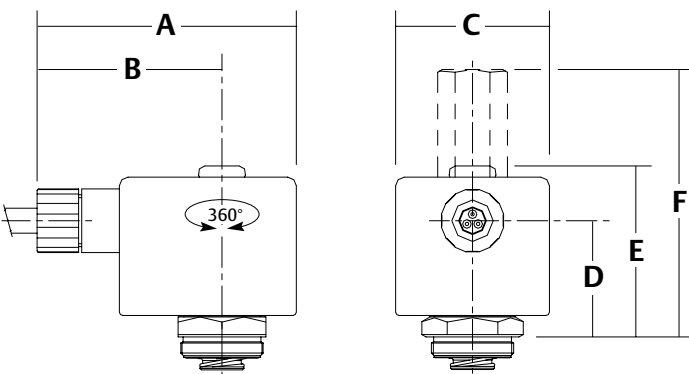
① 2 mounting holes M5,
depth 9 mm

Dimensions: mm (inch)



Type 05

Prefix "PV" solenoids / Electrical interface A7
Epoxy coated
EN-IEC 60079-18
II 2G Ex mb IIC Gb - II 2D Ex mb IIIC Db IP67



| size | A | B | C | D | E | F | weight (1) |
|------|---------------|---------------|---------------|---------------|-----------------|---------------|------------------|
| EM5 | 60 (2.362) | 45 (1.772) | 29 (1.142) | 21 (0.827) | 38.5 (1.516) | 66 (2.598) | 0.113 (0.249) |

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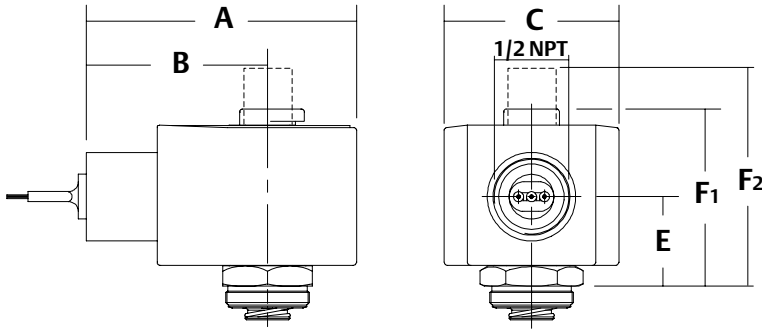
Dimensions: mm (inch)



Type 06
“EF”, “EV” Solenoid
Epoxy encapsulated
NEMA type 7, 9 / ICS-6 ANSI



Type 07
“C0” RedHat II coil Class F
Epoxy encapsulated
Type 2 Dripproof, Types 2 and 3S Raintight and Types 4 and 4X Watertight

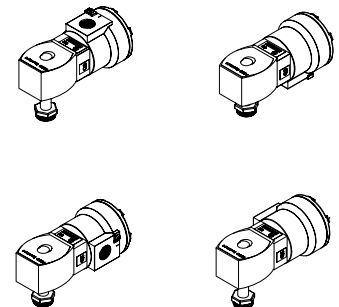
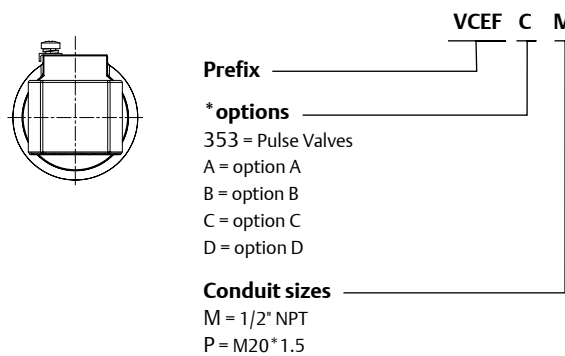
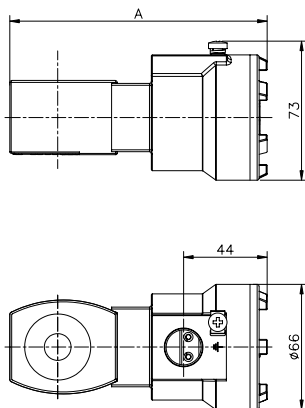


| A | B | C | Weight kg (lbs) |
|---------------|---------------|---------------|-----------------|
| 49 (1.929) | 22 (0.866) | 61 (2.401) | 0,08 (0.18) |

Dimensions: mm (inch)



Type 08
Prefix VCEF solenoids / Electrical interface VA/VB/VC/VD/VE/VF/VG/VH
Explosion proof Junction Box Enclosure
Intended for use in potentially explosive atmospheres, according to Directive Chinese Standard - GB
Ex d mb II CT3~T6 Gb, Ex mbD 21 tD A21 IP66/67 T85°C~T200°C



| A | weight kg (lbs) |
|---------------|-----------------|
| 129 (5.08) | 0.75 (1.65) |

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