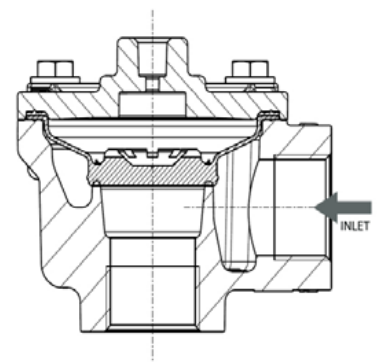
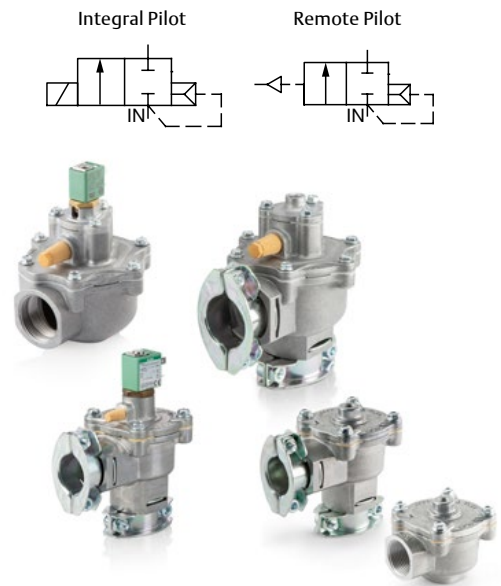
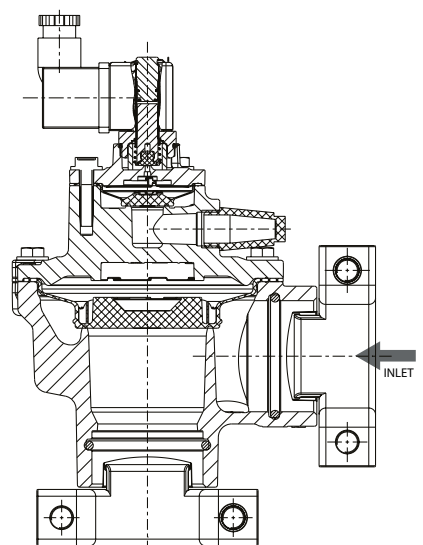


- The springless one-piece diaphragm pulse valves are especially designed for dust collector service applications, combining high flow, long life and extremely fast opening and closing to produce reliable and economical operation. The valves are selectable with integral or remote piloting.
- The high 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	<b>TPE - Standard</b> Ambient -20°C to +85°C (-4°F to 185°F) Medium -20°C to +140°C (-4°F to 284°F)	<b>TPE - Low-Temp</b> 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						
<b>2-Way Normally Closed Aluminum Valve, TPE (One-Piece Diaphragm)</b>															<b>Drawing</b>									
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.

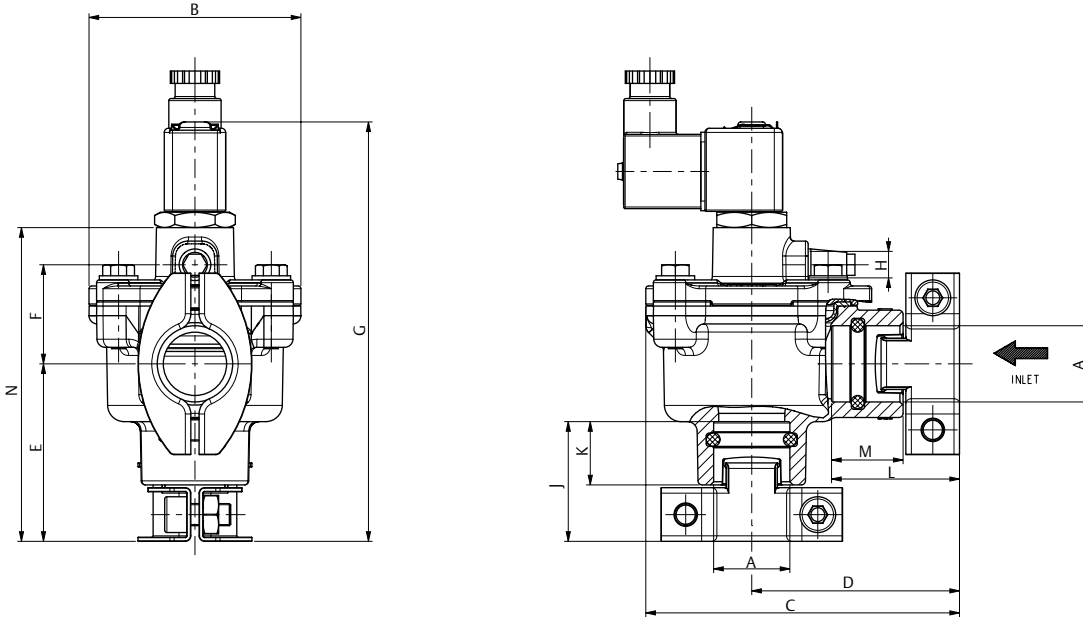
(8) Search prefix in [www.emerson.com/asco](http://www.emerson.com/asco) to get detailed technical information. Please note that the valve pressure ratings with some of the ATEX enclosures will be reduced.  
To obtain the correct pressure rating please check the landing pages of the "2-Way Solenoid Pulse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

(9) Coils class F only.

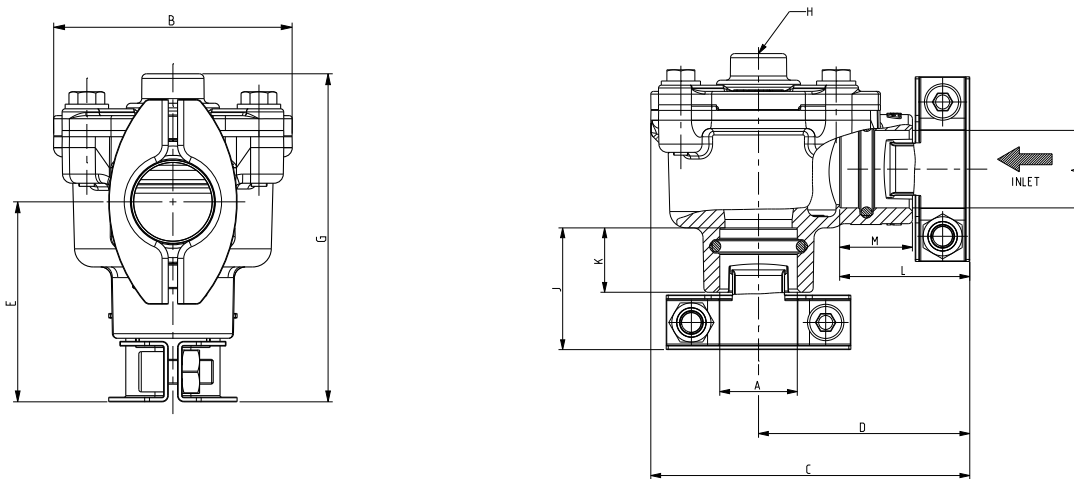
**Dimensions: mm (inches)**

**Version with Quick Mount Clamp connection**

**Fig.1: Integral pilot operated**



**Fig.2: Remote pilot operated**



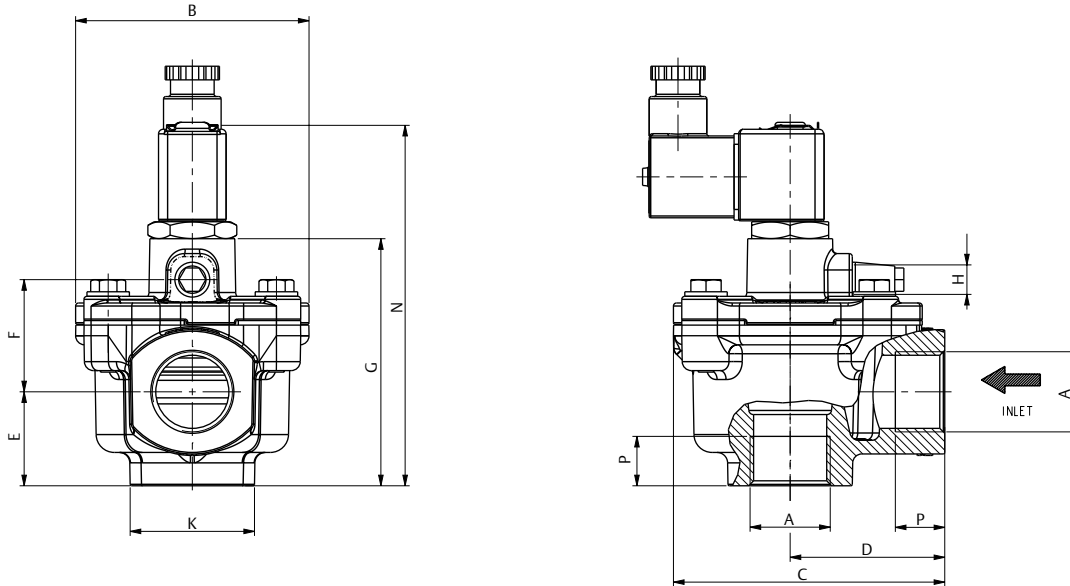
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Fig.	A	B	C	D	E	F	G	H	J	K	L	M	N	Weight kg (lbs)
1	G 3/4" NPT 3/4"	77 (3.032)	114 (4.488)	76 (2.992)	65 (2.559)	36 (1.417)	152 (5.984)	G1/8" NPT 1/8"	43.5 (1.713)	23 (0.906)	46.5 (1.831)	26 (1.024)	114 (4.488)	0.76 (1.68)
	G 1" NPT 1"	77 (3.032)	120 (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**

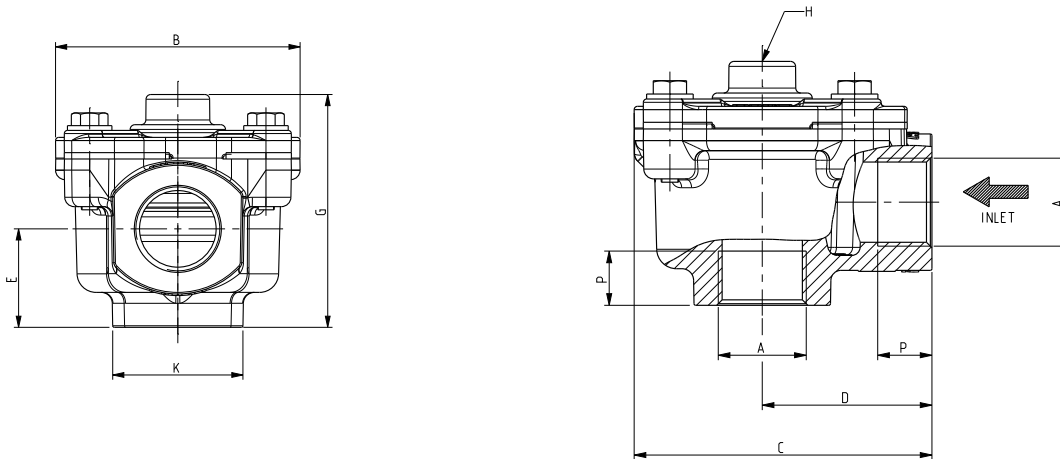


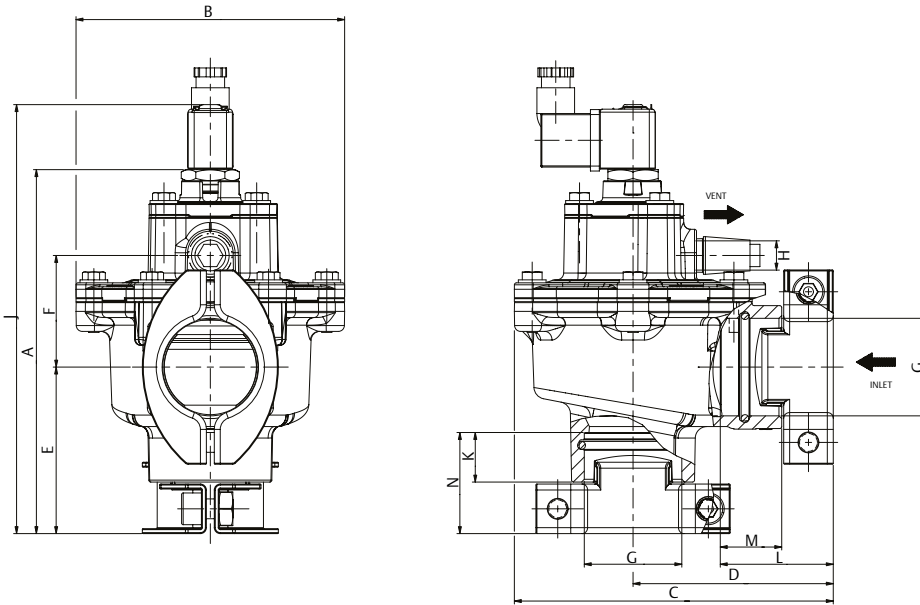
Fig.	A	B	C	D	E	F	G	H	K	N	P	Weight kg (lbs)
3	G 3/4"	77	90	51	31	37	81.5	G 1/8"	41	119	16	0.57
	NPT 3/4"	(3.032)	(3.543)	(2.008)	(1.221)	(1.457)	(3.209)	NPT 1/8"	(1.614)	(4.685)	(0.630)	(1.26)
4	G 1"	77	90	51	31	37	81.5	G 1/8"	41	119	16	0.53
	NPT 1"	(3.032)	(3.543)	(2.008)	(1.221)	(1.457)	(3.209)	NPT 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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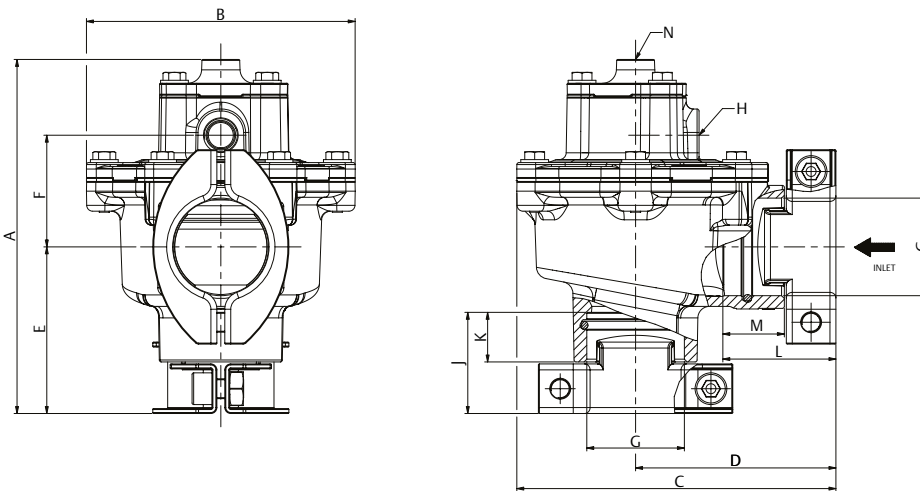
**Dimensions: mm (inches)**

**Version with Quick Mount Clamp connection**

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



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



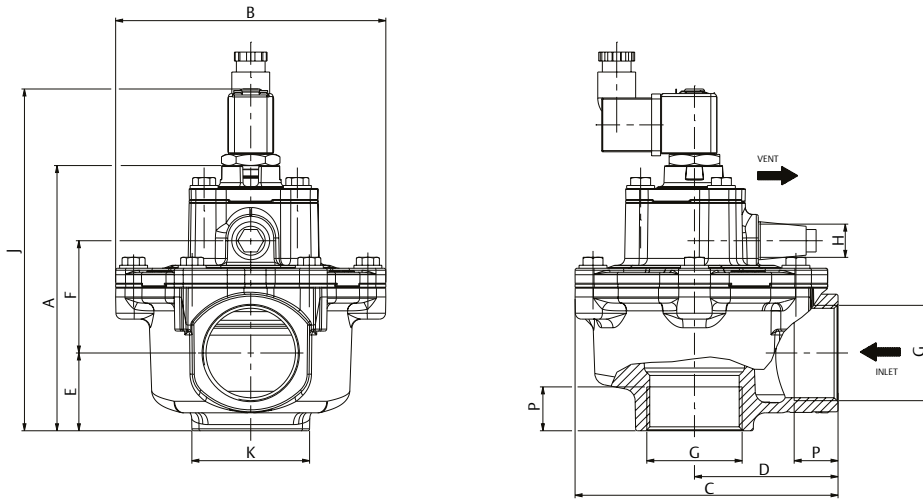
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Fig.	A	B	C	D	E	F	G	H	J	K	L	M	N	Weight kg (lbs)
5	183.6 (7.228)	135.5 (5.335)	161 (6.339)	101 (3.976)	84 (3.307)	56.3 (2.217)	1 1/2"	G3/8"	216 (8.504)	25 (0.984)	57 (2.244)	31 (1.220)	51 (5.008)	1.78 (3.92)
6	178.5 (7.028)	135.5 (5.335)	161 (6.339)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

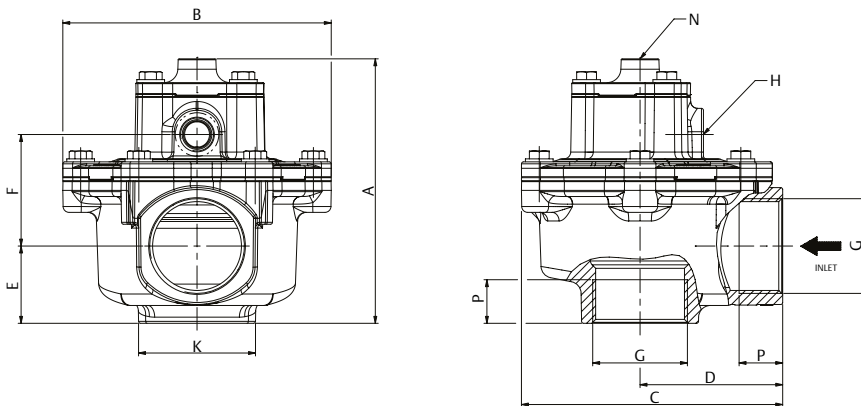


Fig.	A	B	C	D	E	F	G	H	J	K	N	P	Weight kg (lbs)
7	133 (5.236)	135.5 (5.335)	132 (5.197)	72 (2.835)	39 (1.535)	56.5 (2.224)	1 1/2"	G 3/8"	171 (6.732)	-	59 (2.323)	22 (0.867)	1.24 (2.73)
8	133.5 (5.256)	135.5 (5.335)	132 (5.197)	72 (2.835)	39 (1.535)	56.5 (2.224)	1 1/2"	G 3/8"	-	59 (2.323)	G 1/4"	22 (0.867)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

Pipe Size (in)	Base Catalog 353	Diaphragm Kit (1pc)	Diaphragm Kit (10 pcs)	Clamp Kit (1x)
<b>TPE Standard</b>				
3/4"	353K111	M200697	M200699	M200701
1"	353K211			M200702
1 1/2"	353K311	M200755	M200756	M200761
<b>TPE Low-Temp</b>				
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 <sup>(1)</sup>	400909-117 <sup>(1)</sup>	400909-118 <sup>(2)</sup>	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 <sup>(1)</sup>	400909-117 <sup>(1)</sup>	400909-118 <sup>(2)</sup>	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 <sup>(1)</sup>	400909-117 <sup>(1)</sup>	400909-118 <sup>(2)</sup>	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 <sup>(1)</sup>	400909-117 <sup>(1)</sup>	400909-118 <sup>(2)</sup>	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 <sup>(1)</sup>	400909-117 <sup>(1)</sup>	400909-118 <sup>(2)</sup>	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 <sup>(1)</sup>	400909-117 <sup>(1)</sup>	400909-118 <sup>(2)</sup>	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 <sup>(1)</sup>	400405-117 <sup>(1)</sup>	400405-118 <sup>(2)</sup>	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 <sup>(1)</sup>	400405-117 <sup>(1)</sup>	400405-118 <sup>(2)</sup>	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

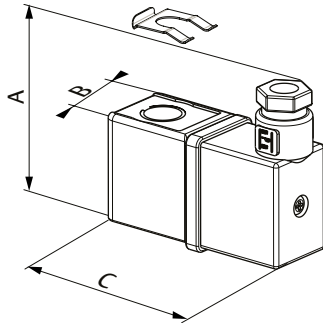
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## Dimensions: mm (inch)



### Type 01

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

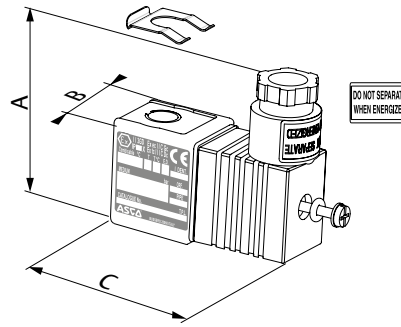


A	B	C	Weight kg (lbs)
49 (1.929)	22 (0.866)	61 (2.401)	0.08 (0.18)



### 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



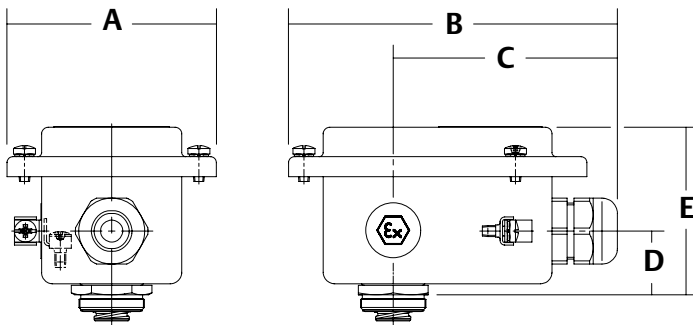
A	B	C	Weight kg (lbs)
49 (1.929)	22 (0.866)	61 (2.401)	0.08 (0.18)

## Dimensions: mm (inch)



### Type 03<sup>(1)</sup>

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)

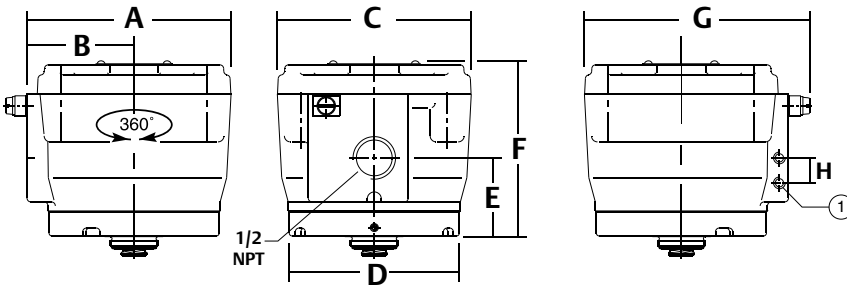
(1) Prefix “WP”, “WS” solenoids / Electrical interface MA/MF Pull-type solenoid operator Metal enclosure, epoxy coated or stainless steel IP66/67

**Dimensions: mm (inch)**

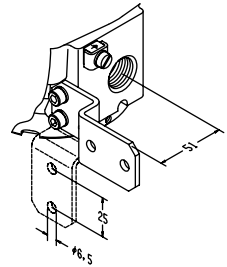


**Type 04**

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)

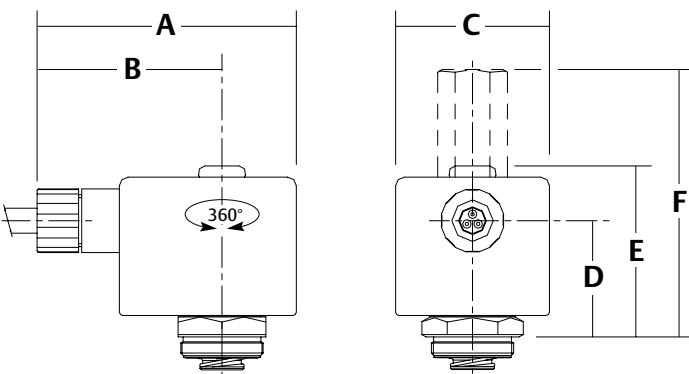
① 2 mounting holes M5,  
depth 9 mm

**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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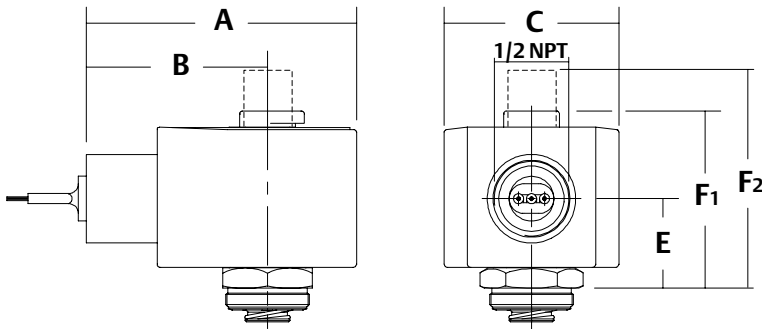
## Dimensions: mm (inch)



**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

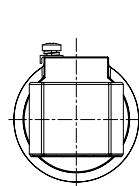
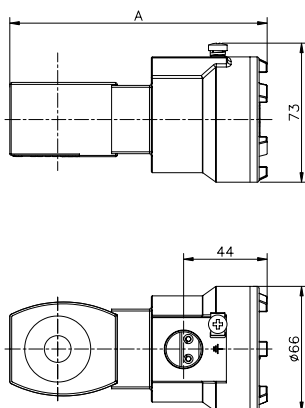


A	B	C	Weight kg (lbs)
49 (1.929)	22 (0.866)	61 (2.401)	0,08 (0.18)

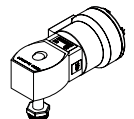
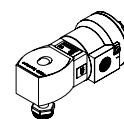
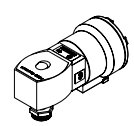
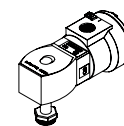
## Dimensions: mm (inch)



**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



Prefix ——— V C E F C M  
\* options ———  
353 = Pulse Valves  
A = option A  
B = option B  
C = option C  
D = option D  
Conduit sizes ———  
M = 1/2" NPT  
P = M20\*1.5



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

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