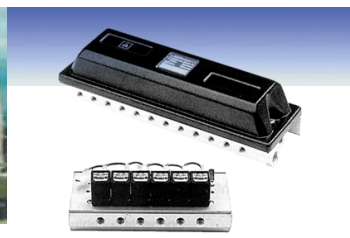
Pulse Valve and Automation Components for Dust Collector Systems



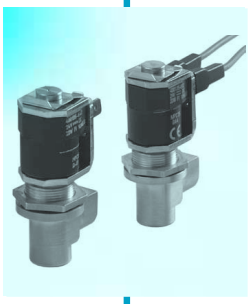


APC-Dust Collector Valve Catalog-2017/R1.0

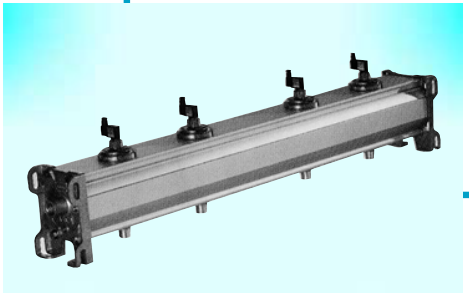
Automation Components
for Dust Collector System

Pulse valve
(integral pilot)

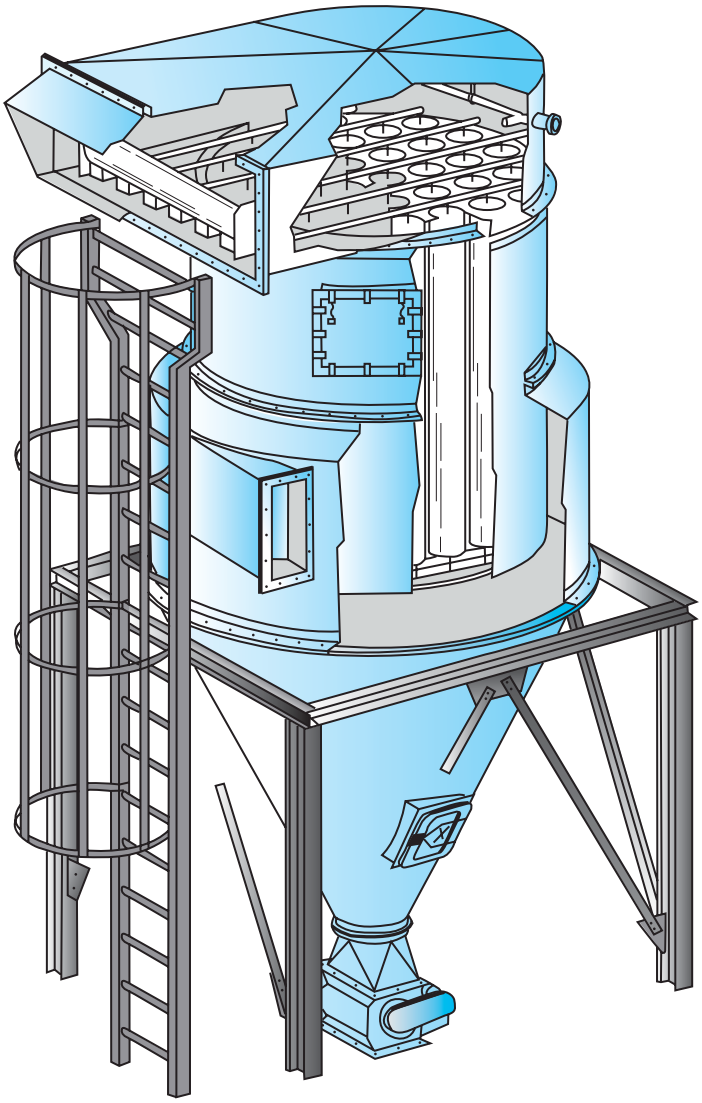


Pilot valve
(panel mounting)

Sequential controllers



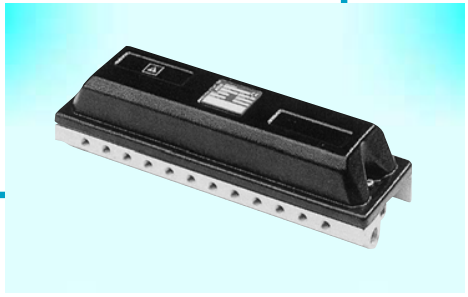
Power Pulse Tank System



Pulse valve
(remote pilot)

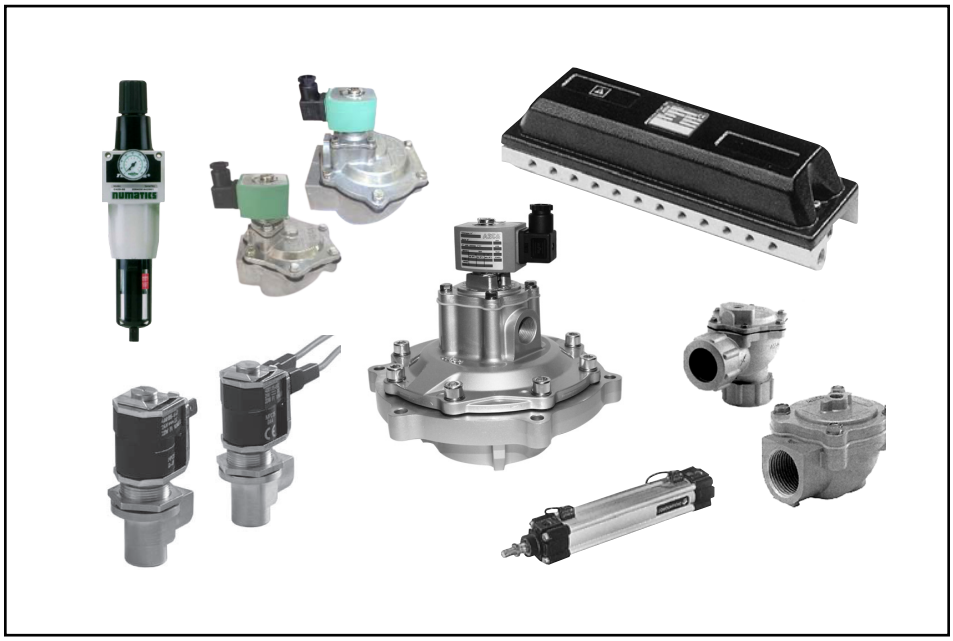
Filter Regulator
(FRL)

Pneumatic cylinders



Pilot boxes

Product Index



Please find the link for ASCO Express items
http://www.asco.com/en-cn/Pages/buy-now.aspx

APPLICATIONS FOR DUST COLLECTOR SYSTEMS

This is a short introduction of the application area Dust Collector Systems and more specific Fabric Filter systems, together with the relevant technical information on filter systems and pulse valves.

Air Pollution Control techniques

Air Pollution Control techniques, like all environmental protection systems, have become a subject of global concern. There are six (6) major technologies used for air pollution control:

- mechanical collectors
- fabric filters
- electrostatic precipitates
- wet, dry and semi-dry scrubbers
- selective catalytic reduction
- flue gas desulphurisation

An important driving factor for the investments in these systems are the local, and for Europe the European, legislations. But also the public opinion, the concern for their image can be a driving factor, especially for industrial companies, to invest in air pollution control systems.

Fabric filter systems are using pulses of air and therefore form an interesting market niche for us, being one of the leading companies for (solenoid) valves and pneumatic components.

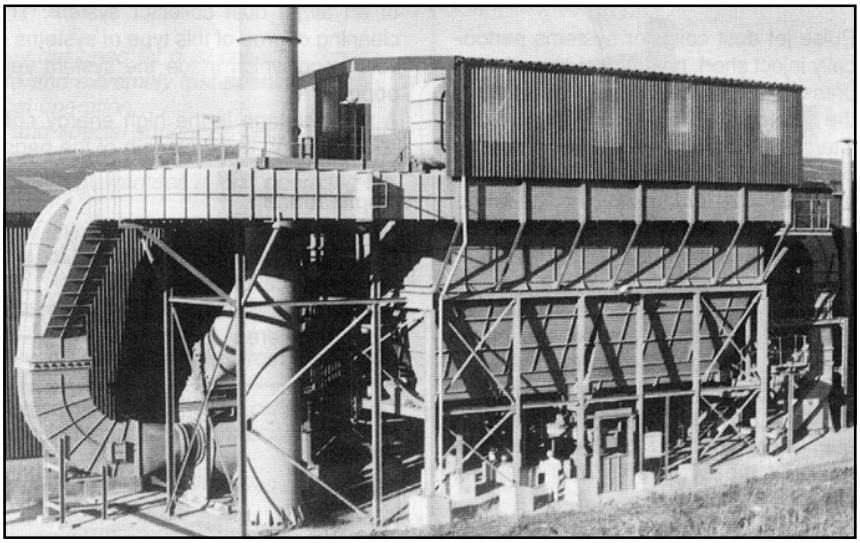
Fabric Filter Systems

The history

The first industrial applications for fabric filter systems were developed for the recovery of valuable products from dusts on fumes in nonferrous smelting and refining operations. Already in 1852 a man called S.T. Jones applied for a patent on a single bag design for the recovery of zinc oxide fume in the U.S.A.

Major improvements came after 1950, although a lot of patents and developments existed from before that time. In that period the Reverse Air Jet system was developed which had many advantages over the systems using a mechanical shaking mechanism to clean the bags.

At the end of the 50's the Pulse Jet Filtration system was introduced. This type of system provides, in a continuous cleaning filter operation, a uniform air flow and a high air-to-cloth ratio. The design is very simple and contains almost no moving mechanical parts.



In the 70's and 80's developments were speed up because legislation more and more forced industries, power stations and waste incinerators to use air pollution control systems. This of course guaranteed an interesting market potential for the filter building companies.

Type of Fabric Filter installations

In general terms a fabric filter system consists of a porous flexible layer of textile material through which a dusty gas is passed to separate particles from the gas stream. Deposits on the textile are removed periodically by powerful moving and thereby cleaning of the cloth to maintain the pressure drop across the filter within practical operating limits.
There are several methods to make the movement of the textile which we will describe later.

Depending on the physical shape of the fabric (textile) we speak about bag or hose and envelope or pocket filter systems. The filter bags consist of round, oval or square bags (hoses) with a diameter from one to several decimeters. In the envelope or pocket filters the fabric is folded in the shape of an envelope.

The dust which is collected on the fabric during the filtration process has to be removed from time to time. Several techniques have been developed to do this.

Fig. 1 gives a schematic overview of the cleaning systems most commonly used.
The cleaning system has an influence on the maximum load of the fabric. This figure also shows the type of load used on the fabric. It's also clearly visible which side of the filters is open.

The major types of filtration systems to remove dust from the filter media are:

- shaker systems
- reverse air cleaning
- pulse/jet cleaning

A short description of each technique can be found below.

Shaker filtration systems

The filter bags or envelopes are intermittent shaked by means of an eccentric rod assembly and can only take place if the filtration process through the fabric is stopped. This cleaning technique is mainly used in smaller sized filter systems as the fabric load has to stay low. In general, this system is used in combination with weaved fabric filters. The cleaning function is not optimal, therefore the use of shaker systems is decreasing and is being replaced by the following techniques.

Reverse Air Cleaning

In this type of system the air or gas stream will be forced by a ventilator in the reverse direction to clean the filter bags. During this filtration action the filter system or a relevant section has to be shut off. This type of system can be used for low up till medium fabric loads. Also, the filter medium for this system is normally a woven fabric.

Pulse/Jet Cleaning
Pulse jet dust collector systems periodically inject short, powerful pulses of compressed air, in the direction opposite to the air flow, into a filterbag or a row of filterbags. This air shot creates a sudden bag expansion that breaks the dust cake from the outer surface of the bag's fabric. The dust is efffectively removed by inertial forces as the bag reaches maximum expansion and falls down into a hopper. Depending on the type of installation, typical pulse time is around 100 msec. while the interval between the pulses in each bag or row of bags is around 3 to 6 minutes. More and more the pulse sequence will depend on the differential pressure measurements over the filter bags.

Sequential controllers or PLC's are used to program the interval time setting and commands to the pulse valves. There are systems using medium pressure (2-3 bar) and systems for high pressure (6-8 bar). Venturies are used to increase the air speed. The cleaning normally takes place while the filter system is in operation. The fabric materials used in these systems have to be adapted to:

- the particle size
- degree of filtration
- filter resistance

See also figure 2, showing a typical setup of an air/jet dust collector system. The cleaning degree of this type of systems is very good which made the system very popular. A disadvantage is the high energy consumption and limited length of the bags.

Applications
Fabric filter systems are suitable for a broad application area because:

- small particle sizes down to 0,01 micron can be filtered
- with the enormous variety in fabric materials, most particle types can be filtered
- the temperature range has been increased due to the availability of new filter materials such as PTFE for maximum 250°C and ceramic filter bags for a maximum continuous operating temperature of 1150°C
- investment level is relatively low compared to other air pollution control techniques.

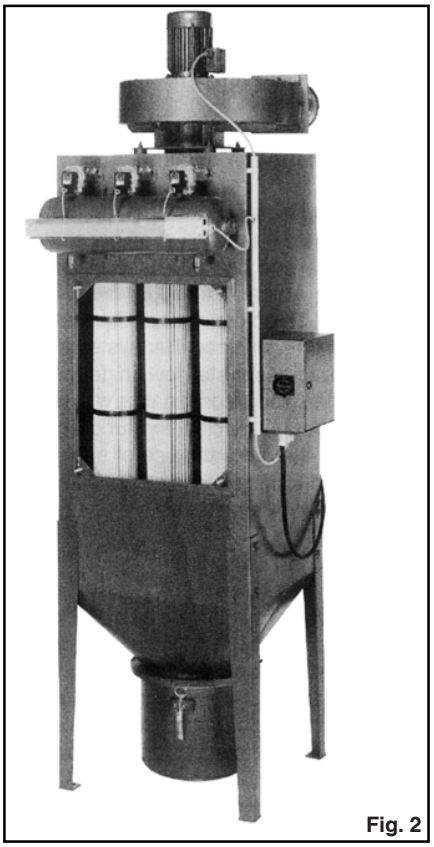


Fig. 2

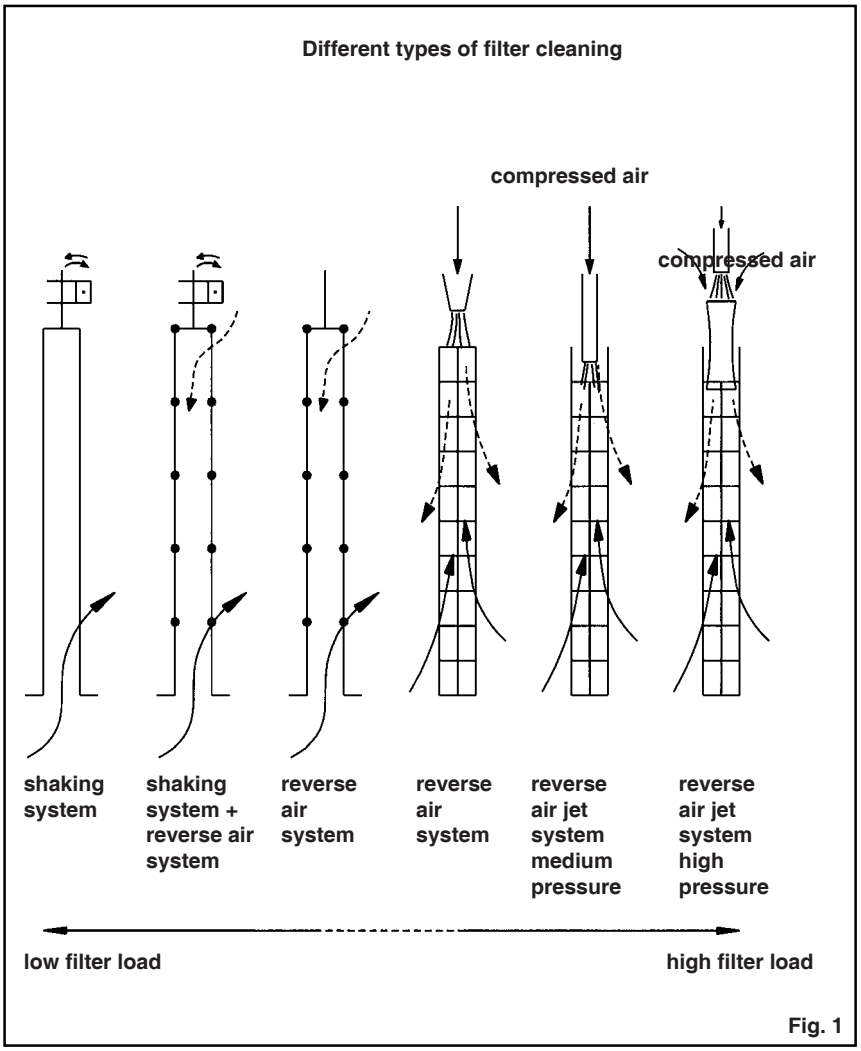


Fig. 1

Dust comes under the ATEX Directive 94/9/EC

ATEX is not just about potentially explosive gaseous environments, dust is equally dangerous. Therefore we have complemented our existing ATEX approvals for gaseous atmospheres with dust approvals for dust collector products.

The ATEX directive, which came into force on July 1, 2003, has concentrated the minds in all sectors of industry on the dangers of potentially explosive atmospheres.

The IECEx International Certification Scheme is a global certification scheme based on standards of the International Electrotechnical Commission and offers a certification of conformity with the IEC series of standards 60079, 61241 and 61779. This certification facilitates the international trade of electrical equipment intended for use in explosive atmospheres and contributes to avoiding the multiplicity of national certifications while guaranteeing an adapted level of safety. The certification is issued by an organisation recognised by IECEx, and all the certificates are available on the IECEx website.

ATEX and IECEx are more than welcome for the focus that they provide on industrial dust as a potential source of explosion.
Almost all types of industrial dust can be considered to be potentially explosive, so it comes as no surprise that the procedure for technical evaluation of safety measures used to avoid the risks of dust explosions is both complex and extensive.

In order to describe the explosion risk posed by dust, a number of factors need to be described. These include particle size, explosion limits, the maximum explosion pressure, the destructive power of the combustion, moisture content and the minimum ignition energy required.

Once the dust has been characterised, an examination then needs to be made of the industrial processes concerned. This takes into account possible ignition sources, explosive volumes, operating temperatures and an assessment of the possibility of a dust explosion under given conditions.

Helpfully for engineers involved in safety evaluations of dust-laden atmospheres, ATEX simplifies explosion protection with a three zone concept.

Zone 20 or category 1D, the most critical of the three, is an area in which an explosive atmosphere in the form of a cloud of combustible dust in the air is present continuously, or for long periods, or frequently. Typically, these conditions would be encountered on the inside of containers or pipelines and enclosed conveying equipment.

Zone 21 or category 2D, is a place in which an explosive atmosphere in the form of a cloud of combustible dust in the air is likely to occur in normal operation occasionally for example when discharging and filling equipment.

Zone 22 or category 3D, is a place in which an explosive atmosphere in the form of a cloud of combustible dust in the air is not likely to occur in normal operation but, if it does occur, will be persist for a short period only.

Areas in which dust escapes and forms deposits are included in this category.
Whatever the zone, one of the biggest risks when it comes to preventing dust explosions, is posed by enclosures.

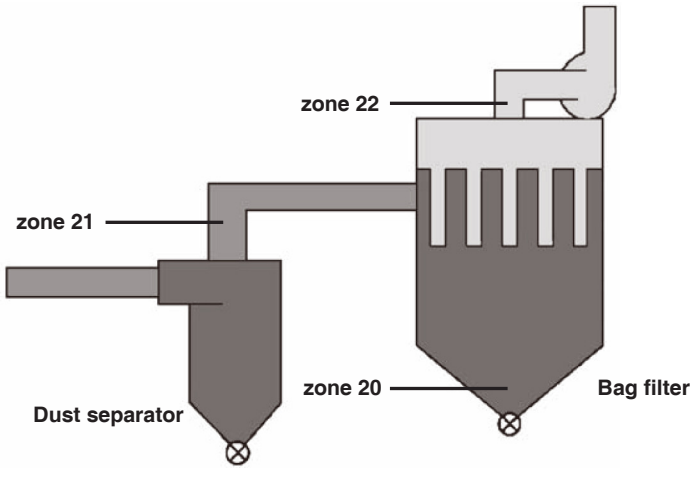
The ATEX directive defines the type of protection provided by enclosures, based on limiting the maximum surface temperature of the enclosure and using dust-tight and dust-protected enclosures to prevent dust entry.

The legislation covers two degrees of protection: dust-tight, for use of equipment in Zone 20, 21 and even 22 in the case of the presence of conductive dust; and dust protected, for use of equipment in Zone 22 areas in the presence of nonconductive dust.

The scope of the ATEX directive on enclosures is comprehensive, extending down to electrical actuators used on individual valve types. This is important due to the increasing use of solenoid valves in the dust collector systems that reduce industrial pollution.

Our know-how on explosion proof enclosures and dust collector valves has resulted in the widest range of solenoid valves complying with the new directive for use in dust-laden and of course gaseous environments. The enclosures meet the needs of all industry types, being available in metals such as aluminium, cast iron and stainless steel and also the convenient epoxy encapsulations.

In addition our pilot boxes and Power Pulse Tank Systems are ATEX approved and the latter is also IECEx approved.
Even the remote design can be offered as an ATEX approved product, following the Non-Electrical ATEX approval according to EN 13463-1.

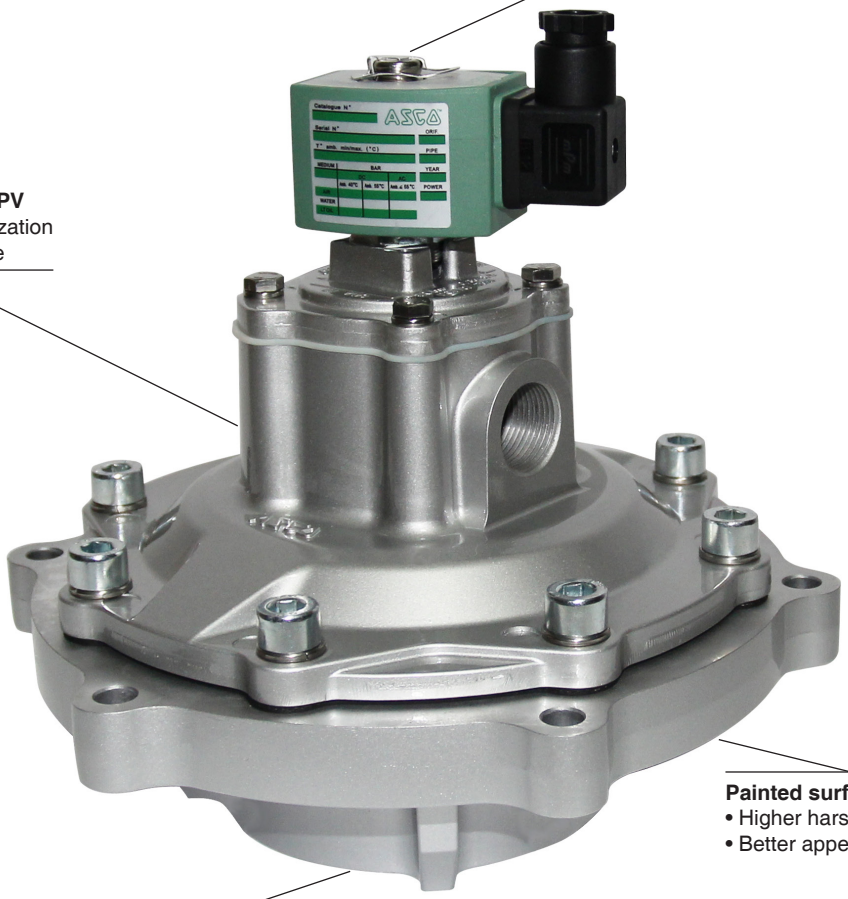


EXAMPLES OF A CLASSIFICATION INTO ZONES
Drawing of an explosive atmosphere caused by dust:

zone 20 **zone 21** **zone 22**

Red Hat II coil
- Epoxy encapsulation
- IP 65
- Less power consumption with higher performance

AC / DC common PV
- Structure rationalization
- Quick open / close

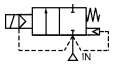


Painted surface for immersion type
- Higher harsh environment resistance
- Better appearance

High flow
- Competitive flow rate at same port size

PULSE VALVES

single stage, integral pilot
threaded body or compression fitting
3/4" to 1"

NC 

2/2
Series
353

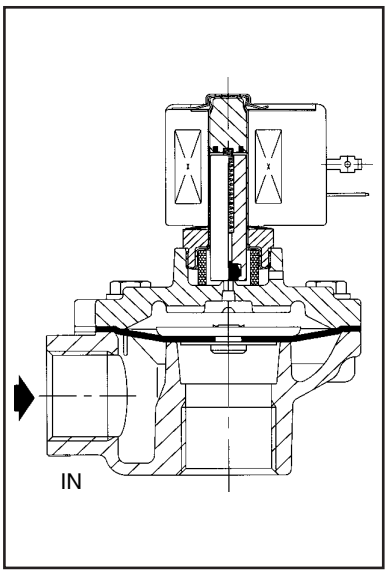
FEATURES

- *The 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 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*
- *Integral compression fittings for fast, easy, secure installation*
- *Waterproof and explosionproof solenoids for use in potentially explosive atmospheres*
- *The valves satisfy all relevant EC directives*

GENERAL

Differential pressure (PS)	0.35 - 8.5 bar [1 bar = 100kPa]
Ambient temperature range	-40 ~ +85°C

Fluids (*)	Temperature Range (TS)	Diaphragm (*)
air	-40°C ~ +85°C	TPE (hytrel)



MATERIALS IN CONTACT WITH FLUID

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

Body	Aluminium
Core tube	Stainless steel
Core and plugnut	Stainless steel
Core spring	Stainless steel
Sealings & disc	NBR
Diaphragm	TPE
Shading coil	Copper
Coil insulation class	F
Connector	Spade plug (cable Ø 6 - 10 mm)
Connector specification	ISO4400
Electrical safety	IEC335

ELECTRICAL CHARACTERISTICS

Standard voltages
(Other voltages and 60 Hz on request)

DC (=): 24V
AC (~): 24V/50; 110V/50, 120V/60; 220V/50, 240V/60

Coil Type	Nominal Power Ratings				Operator Temperature Range (TS) °C	Protection
	Inrush ~	Holding ~		Hot/Cold =		
	(VA)	(VA)	(W)	(W)		
238213-059	30	16	8.1	-	-40 ~ +85°C	IP65
238313-903	-	-	-	21.2		

SPECIFICATIONS

Pipe Size	Orifice Size	Flow Coefficient Kv		Operating Pressure Differential (bar)			Coil Type		Catalog Number		Option			
				Min.	Max. (PS) Air (*)						FPM	EPDM	CR	PTFE
	(mm)	(m^3/h)	(l/min)		~	=	~	=	Aluminium	Stainless Steel				
G - Threaded pipe connection														
3/4"	24	14	233	0.35	8.5	8.5	M6-FT	M6-FB	SCG353G043*	SCG353G132	V			
1"	27	17	283	0.35	8.5	8.5	M6-FT	M6-FB	SCG353G044*	SCG353G133	V			
Ø - Compression fitting pipe connection														
3/4"	24	14	233	0.35	8.5	8.5	M6-FT	M6-FB	SCG353G052*	-	V			
1"	27	17	283	0.35	8.5	8.5	M6-FT	M6-FB	SCG353G053*	-	V			

* Express in 10 business days, please contact with ASCO for more details.

OPTIONS

- Waterproof enclosure with embedded screw terminal coil according to protection class IP67, CEE 10
- Explosionproof solenoids for hazarous locations according to ATEX and national standards
- Compliance with "UL" standards
- Plug with visual indication and/or peak voltage suppression
- Electronic timer
- Valves can also be supplied with FPM (fluoroelastomer) diaphragms and seals. Use the appropriate optional suffix letter for identification

INSTALLATION

- The valves can be mounted in any position without affecting operation
- Threaded pipe connection is G (ISO 228/1) or compression fitting
- For compression fitting types tightness is achieved by the compressed gasket on the blow tube
- The use of the rubber gaskets as sealing members will allow a slight misalignment in piping when using compression fittings
- Other pipe threads are available on request
- Installation/maintenance instructions are included with each valve
- Spare parts kits and replacement coils are available

DIMENSIONS (mm), WEIGHT (kg)

Threaded pipe connection

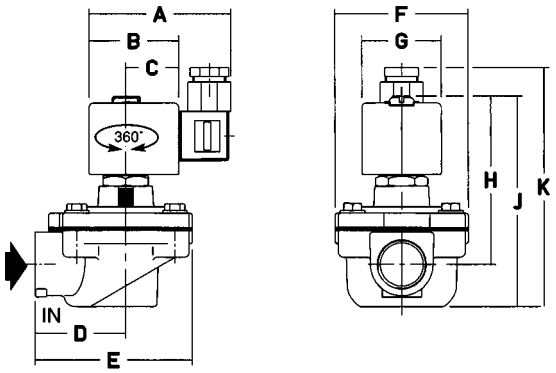


Fig. 1

Compression type fitting

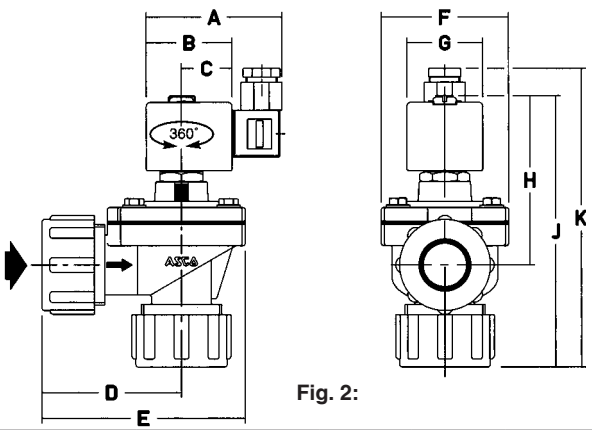


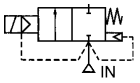
Fig. 2:

Catalog Number	A	B	C	D	E	F	G	H	J	K	Weight(1)	(C)
SCG353G043	87	52	27	51	89	75	43	92	113	130	0.70	Fig.1
SCG353G044	87	52	30	81	89	75	43	93	113	127	0.65	Fig.1
SCG353G052	87	52	27	88	125	75	43	92	175	195	0.85	Fig.2
SCG353G053	87	52	30	88	125	75	43	93	175	192	0.90	Fig.2

(1) Incl. coil and connector
(C) Construction type

PULSE VALVES

dual stage, integral pilot
threaded body 1 1/2" to 3" or
compression fitting Ø 1 1/2"

NC 

2/2
Series
353

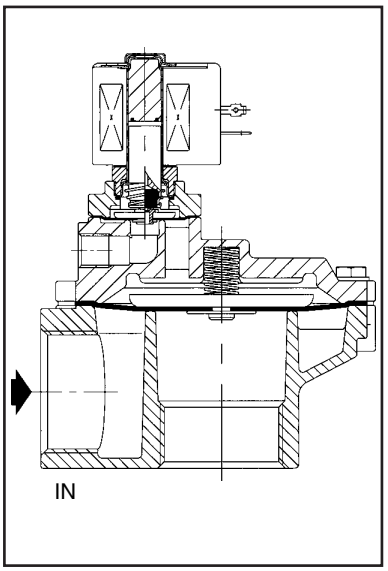
FEATURES

- *The 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*
- *Integral compression fittings for fast, easy, secure installation*
- *The high quality diaphragms are reinforced and wear resistant to guarantee a long operating life, even under harsh conditions*
- *Various optional waterproof and explosionproof solenoids for use in potentially explosive atmospheres*
- *The valves satisfy all relevant EC directives*

GENERAL

Differential pressure (PS) 0.35 - 8.5 bar [1 bar = 100kPa]
Ambient temperature range -20 ~ +85°C

Fluids (*)	Temperature Range (TS)	Diaphragm (*)
air	-20°C ~ +85°C	Chloroprene



MATERIALS IN CONTACT WITH FLUID

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

Body	Aluminium
Core tube	Stainless steel
Core and plugnut	Stainless steel
Core spring	Stainless steel
Sealings & disc	NBR
Diaphragm	Chloroprene
Shading coil	Copper
Coil insulation class	F
Connector	Spade plug (cable Ø 6 - 10 mm)
Connector specification	ISO4400
Electrical safety	IEC335

ELECTRICAL CHARACTERISTICS

Standard voltages (Other voltages and 60 Hz on request)
DC (=): 24V
AC (~): 24V/50; 110V/50, 120V/60; 220V/50, 240V/60

Coil Type	Nominal Power Ratings				Operator Temperature Range (TS) °C	Protection
	Inrush ~	Holding ~		Hot/Cold =		
	(VA)	(VA)	(W)	(W)		
238613-059	50	25	10.1	-	-20 ~ +85°C	IP65
238713-106	-	-	-	22.6		
238713-006	-	-	-	11.6		

SPECIFICATIONS

Pipe Size	Orifice Size	Flow Coefficient Kv		Operating Pressure Differential (bar)			Coil Type		Catalog Number		Option			
				Min.	Max. (PS) Air (*)						FPM	EPDM	CR	PTFE
	(mm)	(m^3/h)	(l/min)		~	=	~	=	Aluminium	Stainless Steel				
G - Threaded pipe connection														
1 1/2"	52	44	768	0.35	8.5	8.5	MXX-FT	MXX-FT	SCG353G047*	SCG353G134	V			
2"	66	77	1290	0.35	8.5	8.5	MXX-FT	MXX-FB	SCG353G050*	-	V			
2 1/2"	66	92	1540	0.35	8.5	8.5	MXX-FT	MXX-FB	SCG353G051*(1)	-	V			
3"	75	170	2833	1.0	6	6	MXX-FT	MXX-FB	SCG353G060*(2)	-	V			
Ø - Compression fitting pipe connection														
1 1/2"	52	43	717	0.35	8.5	8.5	MXX-FT	MXX-FT	SCG353G065*	-	V			

(1) Contains spring above the main diaphragm
(2) Threaded pipe connection is external (male thread)
* Express in 10 business days, please contact with ASCO for more details

OPTIONS

- Waterproof enclosure with embedded screw terminal coil according to protection class IP67, CEE 10
- Explosionproof solenoids for hazardous locations according to ATEX and national standards
- Hose connection executions (3" only)
- Compliance with "UL" standards
- Plug with visual indication and/or peak voltage suppression
- Electronic timer
- Valves can also be supplied with FPM (fluoroelastomer) diaphragms and seals. Use the appropriate optional suffix letter for identification

INSTALLATION

- The valves can be mounted in any position without affecting operation
- Threaded pipe connection is G (ISO 228/1) or compression fitting
- For compression fitting types tightness is achieved by the compressed gasket on the blow tube
- The use of the rubber gaskets as sealing members will allow a slight misalignment in piping when using compression fittings
- Other pipe threads are available on request
- Installation/maintenance instructions are included with each valve
- Spare parts kits and replacement coils are available

DIMENSIONS (mm), WEIGHT (kg)

Fig. 1: Threaded pipe connection

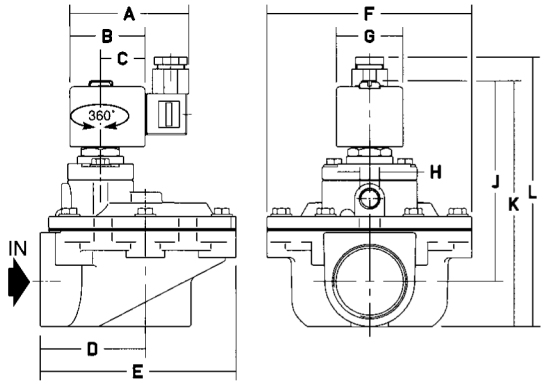


Fig. 2 Compression type fitting

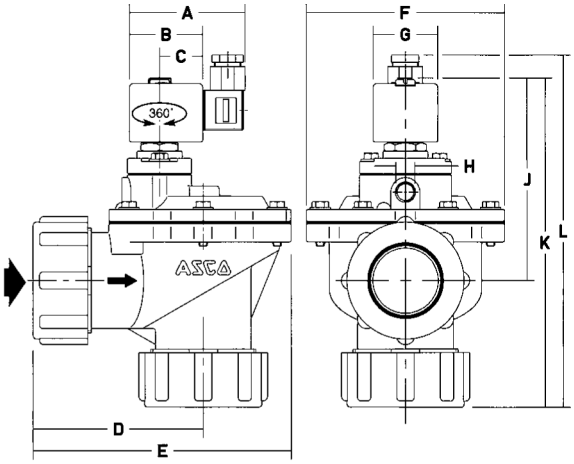
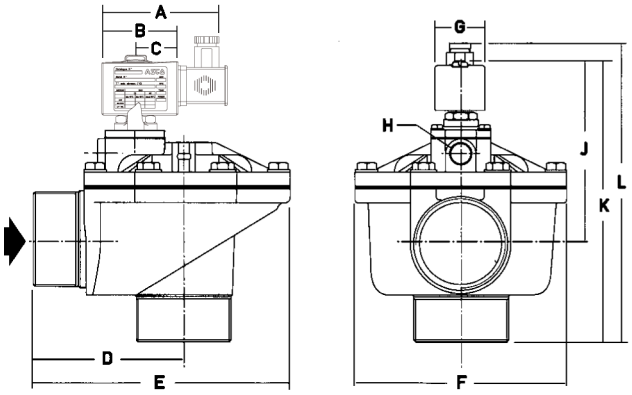


Fig. 3: External threaded type

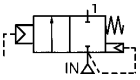


Catalog Number	A	B	C	D	E	F	G	H	J	K	L	Weight(1)	(C)
SCG353G047	94	57	31	71	130	136	49.6	G 3/8	131	161	174	1.40	Fig.1
SCG353G050	94	57	31	95	168	165	49.6	G 3/4	165	210	222	2.90	Fig.1
SCG353G051	94	57	31	95	168	165	49.6	G 3/4	165	210	222	2.60	Fig.1
SCG353G060	94	57	31	143	240	192	49.6	G 1/2	165	258	271	4.10	Fig.3
SCG353G065	94	57	31	117	177	136	49.6	G 3/8	131	225	238	1.75	Fig.2

(1) Incl. coil and connector
(C) Construction type

PULSE VALVES

single stage, remote pilot
threaded body or compression fitting
3/4" to 1 1/2"

NC 

2/2
Series
353

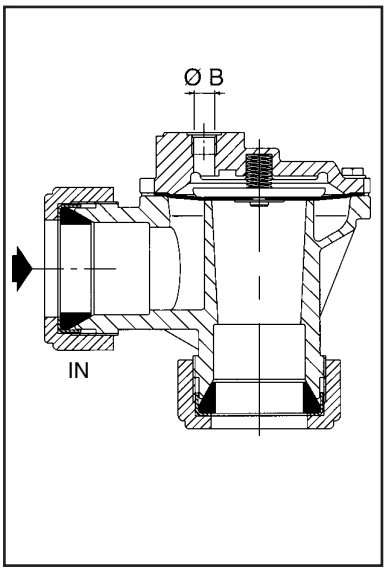
FEATURES

- *The 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 high flow, angle type bodies in combination with the special main diaphragm assemblies give the unique operating features required for dust tcollector service applications*
- *Integral compression fittings for fast, easy, secure installation*
- *Valves can be supplied according to ATEX Directive 94/9/EC for non-electrical equipment by using suffix GD*
- *The valves satisfy all relevant EC directives*

GENERAL

Differential pressure (PS) 0.35 - 8.5 bar [1 bar = 100kPa]
Ambient temperature range -20/-40 ~ +85°C

Fluids (*)	Temperature Range (TS)	Diaphragm (*)
air	-40°C ~ +85°C	TPE (3/4"&1")
air	-20°C ~ +85°C	Chloroprene



MATERIALS IN CONTACT WITH FLUID

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

Body Aluminium
Spring Stainless steel
Diaphragm TPE (Chloroprene)

PILOT SOLENOID VALVES (2/2 NC function)

Main Pulse Valve Catalog Number	Remote Pilot Connection	Recommended Executions		
		Orifice Size (mm)	Manifold Pilot Valves in a Box	Single Pilot Valves IP20
G353A041	G1/8	3.6	pilot box series 110 2 to 12 pilots 1/8	series 257
G353.055				
G353A042				
G353.056				
G353A045	G1/4	5.6	pilot box series C20 4 to 6 valves 1/4	series 262 / 272
G353.066				

SPECIFICATIONS

Pipe Size	Remote Pilot connection	Orifice Size	Flow Coefficient Kv		Operating Pressure Differential (bar)			Catalog Number		Option			
					Min.	Max. (PS) Air (*)				FPM	EPDM	CR	PTFE
G	ØB	(mm)	(m^3/h)	(l/min)		~	=	Aluminium	Stainless Steel				
G - Threaded pipe connection, TPE diaphragm													
3/4"	1/8	24	14	233	0.35	8.5	8.5	G353A041*	G353A130	V			
1"	1/8	27	17	283	0.35	8.5	8.5	G353A042*	G353A131	V			
G - Threaded pipe connection, CR diaphragm													
1 1/2"	1/4	52	46	768	0.35	8.5	8.5	G353A045	-	V			
Ø - Compression fitting pipe connection, TPE diaphragm													
3/4"	1/8	24	14	233	0.35	8.5	8.5	G353.055*	-	V			
1"	1/8	27	17	283	0.35	8.5	8.5	G353.056*	-	V			
Ø - Compression fitting pipe connection, CR diaphragm													
1 1/2"	1/4	52	43	717	0.35	8.5	8.5	G353.066*	-	V			

* Express in 10 business days, please contact with ASCO for more details

OPTIONS

- Valves can also be supplied with FPM (fluoroelastomer) diaphragms and seals. Use the appropriate optional suffix letter for identification
- Sequential controller for pilot solenoid valves
- Pilot boxes containing 2 to 12 pilot solenoid valves
- Pilot solenoid valves can be equipped with explosionproof solenoids for hazardous locations according to "ATEX" and national standards

INSTALLATION

- The valves can be mounted in any position without affecting operation
- Threaded pipe connection is G (ISO 228/1) or compression fitting
- When connecting piping or tubing to the G1/8 connection in the valve bonnet, the remote ASCO pilot valve should be mounted as close as possible to the main pulse valve. Connection tubing lengths of 3 meter or less have little effect on the pulse response. Installations with over 3 meter of tubing must be tested under actual operating conditions. Tubing with Ø 6 mm O.D. is recommended for all installations
- For compression fitting types tightness is achieved by the compressed gasket on the blow tube
- Other pipe threads are available on request
- Installation/maintenance instructions are included with each valve
- Spare parts kits and replacement coils are available

DIMENSIONS (mm), WEIGHT (kg)

Fig. 1: Threaded pipe connection

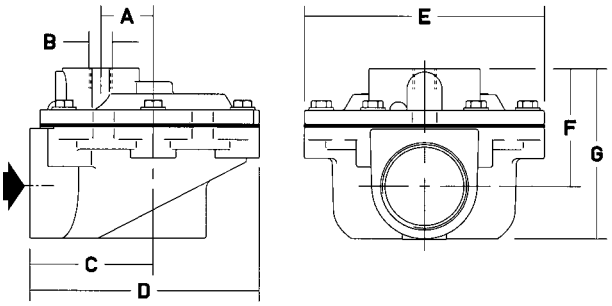
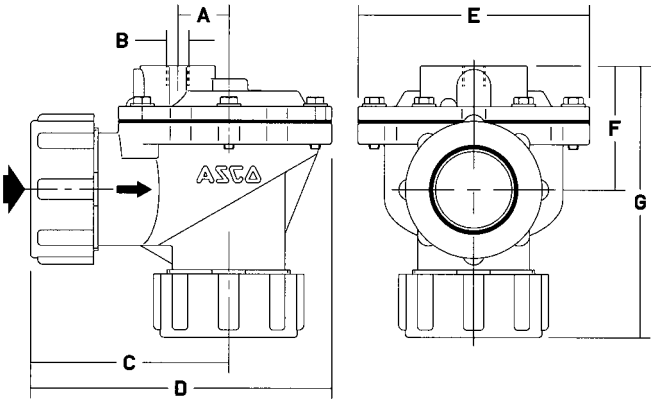


Fig. 2: Compression type fitting

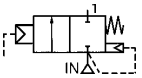


Catalog Number	A	B	C	D	E	F	G	Weight(1)	(C)
G353A041	-	G 1/8"	51	89	75	41	64	0.45	Fig.1
G353A042	-	G 1/8"	51	89	75	41	64	0.40	Fig.1
G353A045	30	G 1/4"	41	130	136	71	98	1.00	Fig.1
G353.055	-	G 1/8"	88	125	75	47	109	0.58	Fig.2
G353.056	-	G 1/8"	88	125	75	47	129	0.61	Fig.2
G353.066	30	G 1/4"	117	177	136	73	161	1.33	Fig.2

(1) Incl. coil and connector
(C) Construction type

PULSE VALVES

dual stage, remote pilot
threaded body 1 1/2" to 3" or
compression fitting Ø 1 1/2"

NC 

2/2
Series
353

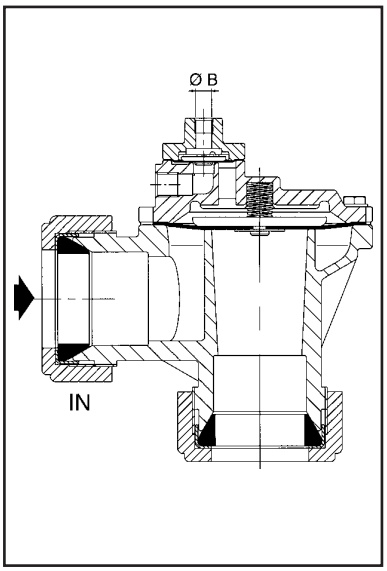
FEATURES

- *The 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 high flow, angle type bodies in combination with the special main diaphragm assemblies give the unique operating features required for dust collector service applications*
- *Integral compression fittings for fast, easy, secure installation*
- *Valves can be supplied according to ATEX Directive 94/9/EC for non-electrical equipment by using suffix GD*
- *The components satisfy all relevant EC directives*

GENERAI

Differential pressure (PS)	0.35 - 8.5 bar [1 bar = 100kPa]
Ambient temperature range	-20 ~ +85°C

Fluids	Temperature Range (TS)	Diaphragm
air	-20°C ~ +85°C	Chloroprene



CONSTRUCTION

Body	Aluminium
Springs	Stainless steel
Diaphragms	Chloroprene

PIIOT SOIENOID VAIVES (2/2 NC function)

Main Pulse Valves	Remote Pilot Connection	Recommended Executions		
		Orifice Size (mm)	Manifold Pilot Valves in a Box	Single Pilot Valves
				IP00
G353A046	G1/8	3.6	pilot box series 110 2 to 12 pilots 1/8	series 257
G353A063				
G353.048	G1/4	5.6	pilot box series C20 4 to 6 valves 1/4	-
G353.049				
G353.058				

SPECIFICATIONS

Pipe Size	Orifice Size	Flow Coefficient Kv		Operating Pressure Differential (bar)			Catalog Number	OPTION			
				Min.	Max. (PS) Air			FPM	EPDM	CR	PTFE
	(mm)	(m^3/h)	(l/min)		~	=					
G - Threaded pipe connection											
1 1/2"	52	46	768	0.35	8.5	8.5	G353A046	V			
2"	66	66	1290	0.35	8.5	8.5	G353A048	V			
2 1/2"	66	92	1540	0.35	8.5	8.5	G353A049	V			
3"	75	170	2833	1.0	6.0	6.0	G353.058 (1)	V			
Ø - Compression fitting pipe connection											
1 1/2"	52	43	717	0.35	8.5	8.5	G353A063	V			

(1) Threaded pipe connections are external (male thread).

OPTIONS

- Valves can also be supplied with FPM (fluorelastomer) diaphragms and seal materials. Use the appropriate optional suffix letter for identification
- Sequential controller for pilot solenoid valves
- Pilot boxes containing 4 to 12 pilot solenoid valves
- Pilot solenoid valves can be equipped with explosionproof solenoids for hazardous locations according to "ATEX" and national standards

INSTAIIATION

- The valves can be mounted in any position without affecting operation
- Threaded pipe connection is: G = G (ISO 228/1) or compression fittings
- When connecting piping or tubing to the G1/8 or G1/4 connection in the valve bonnet, the remote ASCO pilot valve should be mounted as close as possible to the main pulse valve. Connection tubing lengths of 3 meter or less have little effect on the pulse response. Installations with over 3 meter of tubing must be tested under actual operating conditions. Tubing with Ø 6 or Ø 8 mm O.D. is recommended for all installations
- For compression fitting types tightness is achieved by the co mpressed gasket on the blow tube
- Other pipe threads are available on request
- Installation/maintenance instructions are included with each valve
- Spare parts kit and replacement coils are available

DIMENSIONS (mm), WEIGHT (kg)

Fig.1 Threaded type

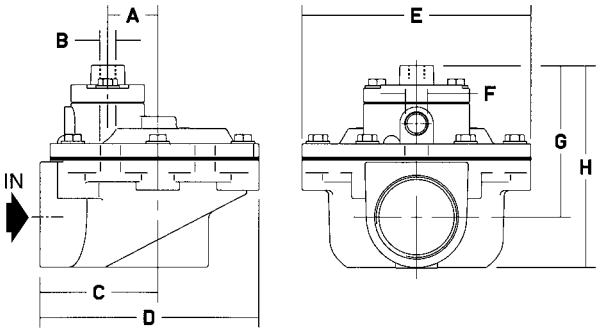


Fig.2 Compression fitting type

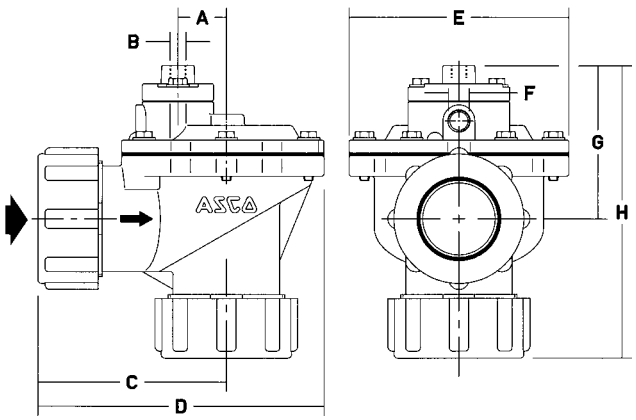
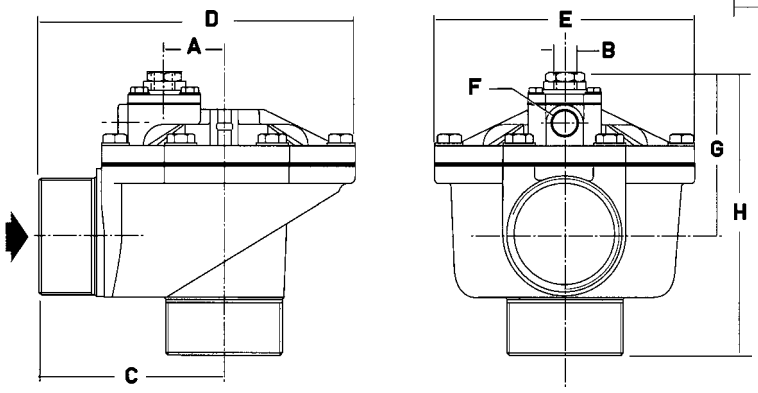


Fig. 3 External threaded type

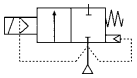


Catalog Number	A	B	C	D	E	F	G	H	Weight[1]	[C]
G353A046	30	G 1/8"	71	130	136	G 3/8"	90	120	1.10	Fig.1
G353A048	30	G 1/4"	95	168	165	G 3/4"	121	166	2.60	Fig.1
G353A049	30	G 1/4"	95	168	165	G 3/4"	121	166	2.30	Fig.1
G353.058	48	G 1/4"	143	240	192	G 1/2"	121	214	3.70	Fig.3
G353A063	30	G 1/8"	87	177	136	G 3/8"	96	183	1.43	Fig.2

[1] Incl. coil and connector
[C] Construction type

PULSE VALVES

Immersion Type
size 3"

NC 

2/2
Series
353

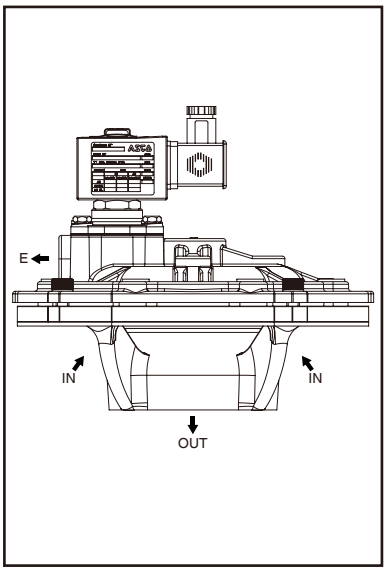
FEATURES

- *The pulse diaphragm valves are especially designed for dust collector service applications, combining high flow and long life*
- *Extra epoxy coating for*
  - *Better corrosion resistance and appearance*
  - *The valves satisfy all relevant EC directives*
- *The high quality diaphragms are wear resistant and guarantee a long operating life, even under harsh conditions*
- *Easy installation directly into header tank*

GENERAL

Differential pressure	1~6 bar [1 bar = 100kPa]
Maximum allowable pressure	6 bar
Ambient temperature range	-40 ~ +85°C

Fluid (*)	Temperature Range (TS)	Diaphragm (*)
air	-40°C ~ +85°C	Neoprene



CONSTRUCTION

Body	Aluminium
Core tube	Stainless steel
Core and plugnut	Stainless steel
Springs	Stainless steel
Seals & disc	NBR
Diaphragms	Neoprene
Shading coil	Copper
Coil insulation class	F
Connector	Spade plug(Pg11P)
Connector specification	ISO4400
Electrical safety	IEC335

ELECTRICAL CHARACTERISTICS

Standard voltages
(Other voltages and 60 Hz on request)

DC (=): 24V
AC (~): 24V/50; 110V/50, 120V/60; 220V/50, 240V/60

Coil Type	Nominal Power Ratings				Ambient Temperature Range (TS)	Protection
	Inrush ~	Holding ~		Hot/Cold =		
	(VA)	(VA)	(W)	(W)	(°C)	
238613-059	50	20	10.1	-	-40 ~ +85	IP65
238613-006	-	-	-	11.6		

SPECIFICATIONS

Pipe Size	Orifice Size	Flow Coefficient Kv		Operating Pressure Differential (bar)			Coil Type		Catalog Number
				Min.	Max. (PS)				
G	(mm)	(m^3/h)	(l/min)		~	=	~	=	
3"	75mm	170	2833	1	6	6	MXX-FT	MXX-FT	SCR353G060*

* Express in 10 business days, please contact with ASCO for more details

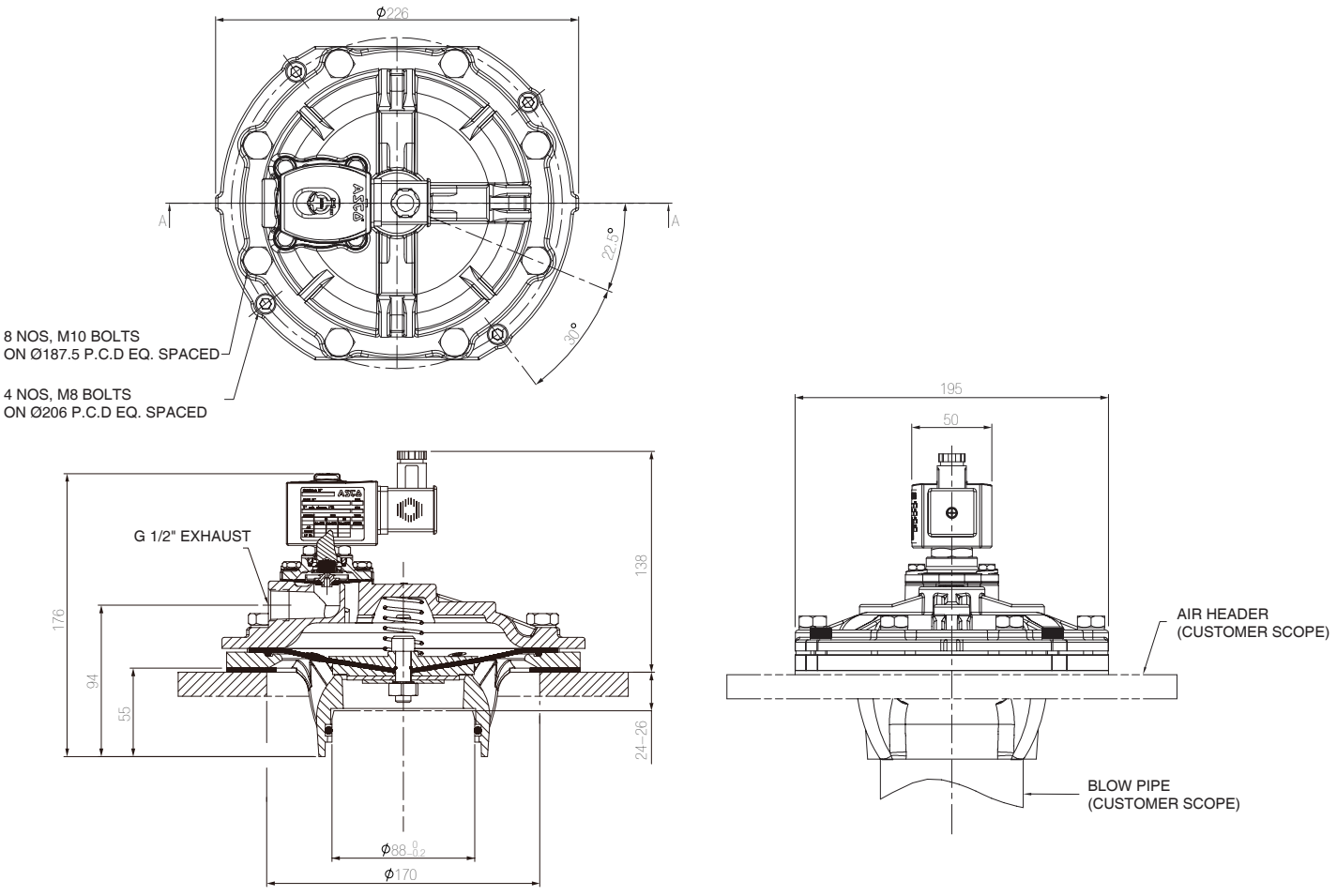
OPTIONS

- Waterproof enclosure with embedded screw terminal coil according to protection class IP67, CEE 10
- Explosionproof and watertight solenoids according to "NEMA" 4, 4X, 7 & 9, NEPSI Ex mb
- Plug with visual indicator and/or peak voltage suppression
- Electronic timer

INSTALLATION

- The valves can be mounted in any position without affecting operation
- Installation / maintenance instructions are included with each valve
- Spare parts kit and replacement coils are available
- Rubber gasket provided for mounting between valve and header tank
- 8 mounting bolts (M10) also provided

DIMENSIONS (mm), WEIGHT (kg)



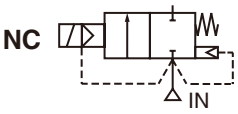
Weight (kg)	2.85

Incl. coil and connector

PULSE VALVES

Immersion Type

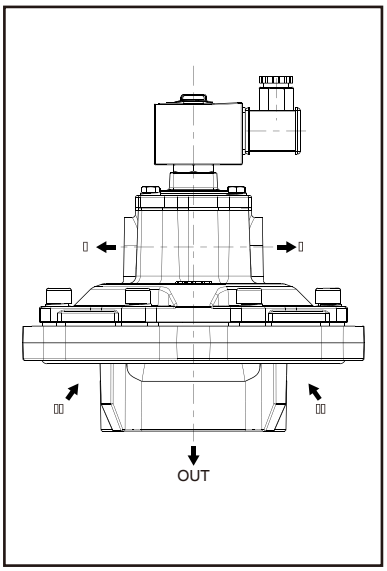
3" & 3 1/2"



2/2 Series 353

FEATURES

- *The pulse diaphragm valves are especially designed for dust collector service applications, combining high flow and long life*
- *Extra epoxy coating for*
  - *Better corrosion resistance and appearance*
  - *The valves satisfy all relevant EC directives*
- *The high quality diaphragms are wear resistant and guarantee a long operating life, even under harsh conditions*
- *Easy installation directly into header tank*
- *Special design for sharper opening & closing with higher tank performance ratio*



GENERAL

Differential pressure	1~6 bar [1 bar = 100kPa]
Ambient temperature range	-40 ~ +85°C

Fluid	Temperature Range (TS)	Diaphragm
air	-40°C ~ +85°C	Neoprene

CONSTRUCTION

Body	Aluminum
Core tube	Stainless steel
Core and plugnut	Stainless steel
Springs	Stainless steel
Seals & disc	Nylon & NBR (Nitrile)
Diaphragms	Neoprene
Shading coil	Copper
Coil insulation class	F
Connector	Spade plug
Connector specification	ISO 4400
Electrical safety	IEC 335

ELECTRICAL CHARACTERISTICS

Standard voltages	DC (=): 24V
(Other voltages and 60 Hz on request)	AC (~): 24V/50; 110V/50, 120V/60; 220V/50, 240V/60

Coil Type	Nominal Power Ratings				Ambient Temperature Range (TS)	Protection
	Inrush ~	Holding ~		Hot/Cold =		
	(VA)	(VA)	(W)	(W)	(°C)	
238613-059	50	25	10.1	-	-40 ~ +85	IP65
238613-006	-	-	-	11.6		

SPECIFICATIONS

Pipe Size	Orifice Size	Flow Coefficient Kv		Operating Pressure Differential (bar)			Coil Type	Catalog Number
				Min.	Max. (PS)			
G	(mm)	(m^3/h)	(l/min)		~	=		
Tank Mounted Version								
3"	76	210	3500	1	6	6	MXX-FT	SCR353G230*
3 1/2"	90	280	4667	1	6	6	MXX-FT	SCR353G235*

* Express in 10 business days, please contact with ASCO for more details

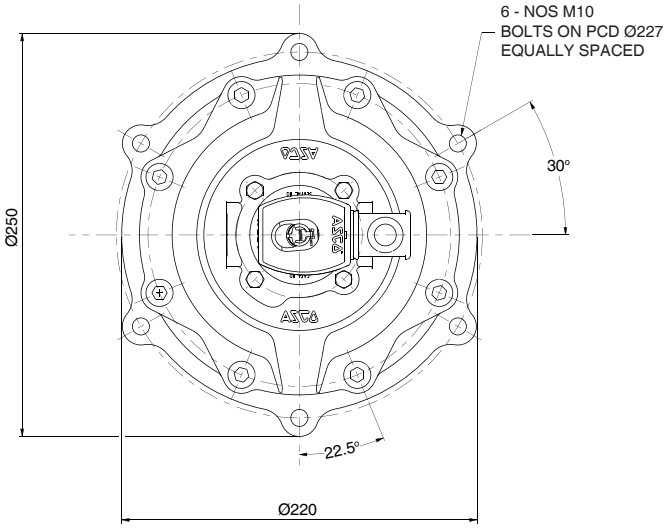
OPTIONS

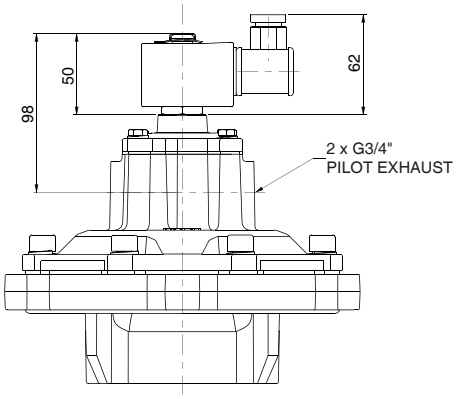
- Waterproof enclosure with embedded screw terminal coil according to protection class IP67, CEE 10
- Plug with visual indicator and/or peak voltage suppression
- Electronic timer
- Viton seal is available on request

INSTALLATION

- The valves can be mounted in any position without affecting operation, vertically upright is preferred
- Installation / maintenance instructions are included with each valve
- Spare parts kit and replacement coils are available
- Rubber gasket provided for mounting between valve and header tank
- 6 mounting bolts, nuts and washers (M10) also provided

DIMENSIONS (mm), WEIGHT (kg)

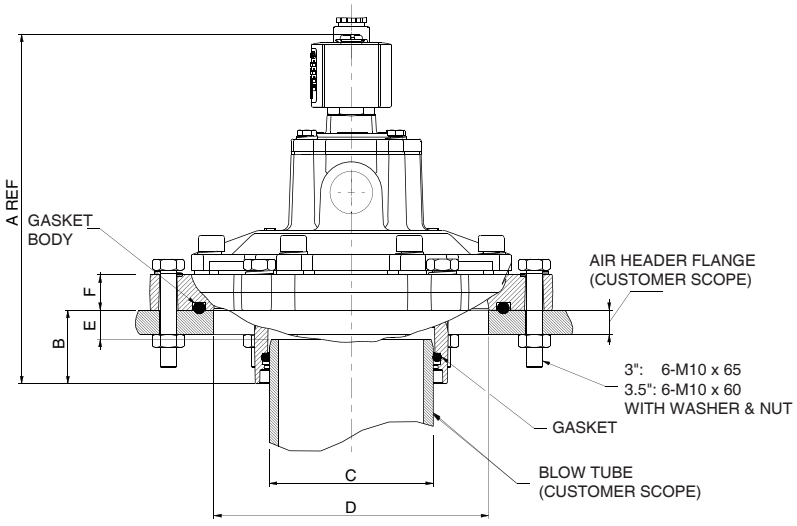




VIEW SHOWING VALVE WITHOUT AIR HEADER

ORDERING EXAMPLES

SC	R353G230	230V / 50Hz
SC	R353G235	24V / DC
prefix	basic number	voltage



*Including coil(s) and connector(s)

Catalog Number	A	B	C	D	E	F	Weight (kg)*
SCR353G230	218	32.5	Ø88 $^{0}_{-0.2}$	Ø170	-9 ~ 9	30	4.30
SCR353G235	216	46	Ø101.5 $^{0}_{-0.2}$	Ø170	12 ~ 18	22.5	4.15