

# ASCO™ Solenoid Pilot Valves

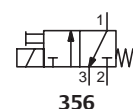
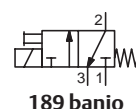
For Pneumatic Valves, 32 mm, 50 mm and 63 mm Actuators

3-way, NC, Direct Operated, 1/8" Tapped

## 189 banjo 356

### Features and Benefits

- Compact design and low weight enable easy installation on all series 290 and 390 valves with 32 mm, 50 mm and 63 mm actuators
- Manual operator allows easy installation
- AC/DC interchangeability of the solenoid without disassembly of the valve
- Simple installation (supply port, solenoid valve body, coil and connector rotatable through 360°), built-in exhaust regulator (pilot valve series 189 banjo coupling)
- Compliance with UL and CSA standards (pilot valve series 356 coupling)
- UL429 and EN 60335 certified
- The series 189 banjo pilot solenoid valves satisfy all relevant EU Directives
- The series 356 pilot solenoid valves satisfy all relevant EU and EAC directives



### General

Differential pressure

See Specifications section [1 bar = 100 kPa]

Response time

See following pages

Pilot (series)	Fluids (*)	Temperature range (TS) (1)	Seal materials (*)
189 banjo	Filtered air	-10°C to +60°C (14°F to 140°F)	NBR (nitrile)
356	Filtered air and water		FPM (fluoroelastomer)

(1) The minimum ambient temperature of the solenoid valve is determined by the limitations of minimum temperature indicated.

### Materials of components in contact with fluid

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

	189 banjo pilot	356 pilot
Body	PA, glass fibre reinforced	Brass or stainless steel AISI 316
Shading coil	Copper	Copper
Core tube	Brass	Stainless steel
Core and plugnut	Stainless steel	Stainless steel
Springs	Stainless steel	Stainless steel
Seals and disk	NBR	FPM
Seats	PA + Stainless steel	Brass or stainless steel

### Electrical characteristics

Coil insulation class

F

Connector

Spade plug (cable Ø 6-8 mm)

Connector specification

DIN 43650, 11 mm, industry standard B

Electrical safety

IEC 335

Electrical enclosure protection

Moulded IP67 (EN 60529) with plug-connector

Standard voltages

DC (=) : 12 - 24V

(Other voltages and frequencies on request)

AC (~) : 24V/50-60 Hz - 110V/50 Hz (120 V/60Hz)  
230V/50-60 Hz

Operator ambient temperature range (TS)	Power ratings			
	Inrush ~	Holding ~		Hot/cold =
°C (°F)	(VA)	(VA)	(W)	(W)
<b>189 banjo pilot (type 01)</b>				
-10 to +60 (14 to 140)	6	3.5	2.5	2.5 / 3
<b>356 pilot (type 02)</b>				
-10 to +60 (14 to 140)	-	4.5	3	-
	-	-	-	5

189 banjo pilot



356 pilot

### Options

- **189 banjo pilot:**
  - M5 exhaust regulator to fit port 3, catalogue number: **34600380**
  - Explosion-proof enclosures for use in zones 1/21-2/22, categories 2-3 to ATEX Directive 2014/34/EU (SG and PV operators)
- **356 pilot:**
  - NSF 169, EC 1935 / 2004 approval, EPDM/FPM disc and seal (Food Grade)

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**189 banjo pilot / Type 01 - Specifications**

Pipe size	Orifice size		Flow coefficient Kv				Min.	Operating pressure differential bar (psi)		Power coil (W)		Thread type	Dimensions / Type <sup>(1)</sup>	Catalog number
	2↔1	1-2→3	2↔1		1-2→3			Max.(PS)		~	=			
	mm (in)	mm (in)	m <sup>3</sup> /h (Cv)	l/min	m <sup>3</sup> /h (Cv)	l/min		Air (*)						
<b>NC - Normally closed, series 189 banjo pilot (with manual operator)</b>														
1/8" <sup>(2)</sup>	1.2 (3/64)	1.2 (3/64)	0.03 (0.034)	0.5	0.04 (0.046)	0.7	<sup>(3)</sup>	10 (145)	10 (145)	2.5	3	G	01	<b>18900032</b>
<b>NC - Normally closed, series 189 banjo pilot with built-in exhaust regulator (with manual operator)</b>														
1/8" <sup>(2)(4)</sup>	1.2 (3/64)	1.2 (3/64)	0.03 (0.034)	0.5	0.04 (0.046)	0.7	<sup>(3)</sup>	10 (145)	10 (145)	2.5	3	G	01	<b>18900047</b>

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

<sup>(1)</sup> See Dimensions (pages 5 to 14).<sup>(2)</sup> - Port 1: O.D. 4 mm instant fitting (189 banjo) / 1/8 (series 356)

- Port 2: 1/8"

- Port 3 (exhaust): M5

<sup>(3)</sup> Refer to catalog pages on series 290/390 valves which show the minimum pilot pressure for each version of the product.<sup>(4)</sup> Exhaust regulator integrated at port 3, M5.

189 banjo pilot		Response time (in seconds) for NC valve [6 bar (87 psi) pilot air]					
		Valve response times depend on the Kv of the pilot valve used and the size of the valve [orifice size 1.2 mm (3/64 in), max. pilot pressure 10 bar (145 psi)]					
Size of valve		32 mm actuator		50 mm actuator		63 mm actuator	
Ø	DN	O <sup>(6)</sup>	C <sup>(6)</sup>	O <sup>(6)</sup>	C <sup>(6)</sup>	O <sup>(6)</sup>	C <sup>(6)</sup>
3/8"	10	0.04	0.09	-	-	-	-
1/2"	15	0.04	0.09	0.15	0.25	0.12	0.53
3/4"	20	0.05	0.10	0.16	0.27	0.11	0.54
1"	25	-	-	0.4	0.3	0.17	0.52
1 1/4"	32	-	-	-	-	0.18	0.59
1 1/2"	40	-	-	-	-	0.18	0.59
2"	50	-	-	-	-	0.16	0.44

<sup>(6)</sup> For NO valves, interchange O and C values.**Ordering examples:**

Catalogue number 18900032 230V / 50 Hz  
Voltage

**356 pilot / Type 02 - Specifications <sup>(1)</sup>**

Pipe size	Orifice size	Flow coefficient Kv		Operating pressure differential bar (psi)				Power coil (W)		Thread type	dimensions / type <sup>(2)</sup>	15-DIGIT PRODUCT CODE						
				Max. (PS)								Body		Voltage code				
	mm (in)	m <sup>3</sup> /h (Cv)	(l/min)	Min.	Air (*)	Water (*)	~	=	Brass <sup>(3)</sup>					Stainless steel <sup>(3)</sup>	230 V/50-60 Hz	110 V/50 Hz (120 V/60 Hz)	24 V/50-60 Hz	12 V/DC
					~	=						~	=					
<b>356 pilot - NC - Normally closed, FPM disc and seal, with manual operator (With maintained manual operator)</b>																		
1/8"	1.6 (1/16)	0.08 (0.09)	1.33	<sup>(4)</sup>	10 (145)	-	10 (145)	-	3	-	G 02	G356C135S19FL	G356C145S19FL	FH	F0	FQ	F3	F1
					-	10 (145)	-	10 (145)	-	5	NPT 02	8356C135S19FL	8356C145S19FL					
					-	10 (145)	-	10 (145)	-	-	G 02	G356C150S19FL	G356C160S19FL					
					-	10 (145)	-	10 (145)	-	-	NPT 02	8356C150S19FL	8356C160S19FL					
<b>356 pilot - NC - Normally closed, FPM disc and seal, without manual operator</b>																		
1/8"	1.6 (1/16)	0.08 (0.09)	1.33	<sup>(4)</sup>	10 (145)	-	10 (145)	-	3	-	G 02	G356C135S19FM	G356C145S19FM	FH	F0	FQ	F3	F1
					-	10 (145)	-	10 (145)	-	5	NPT 02	8356C135S19FM	8356C145S19FM					
					-	10 (145)	-	10 (145)	-	-	G 02	G356C150S19FM	G356C160S19FM					
					-	10 (145)	-	10 (145)	-	-	NPT 02	8356C150S19FM	8356C160S19FM					

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

<sup>(1)</sup> All performances are at ambient temperature of +60°C.

<sup>(2)</sup> See Dimensions (pages 5 to 14).

<sup>(3)</sup> Solenoid valve with 1/8" adapter.

<sup>(4)</sup> Refer to leaflets on series 290/390 valves which show the minimum pilot pressure for each version of the product.

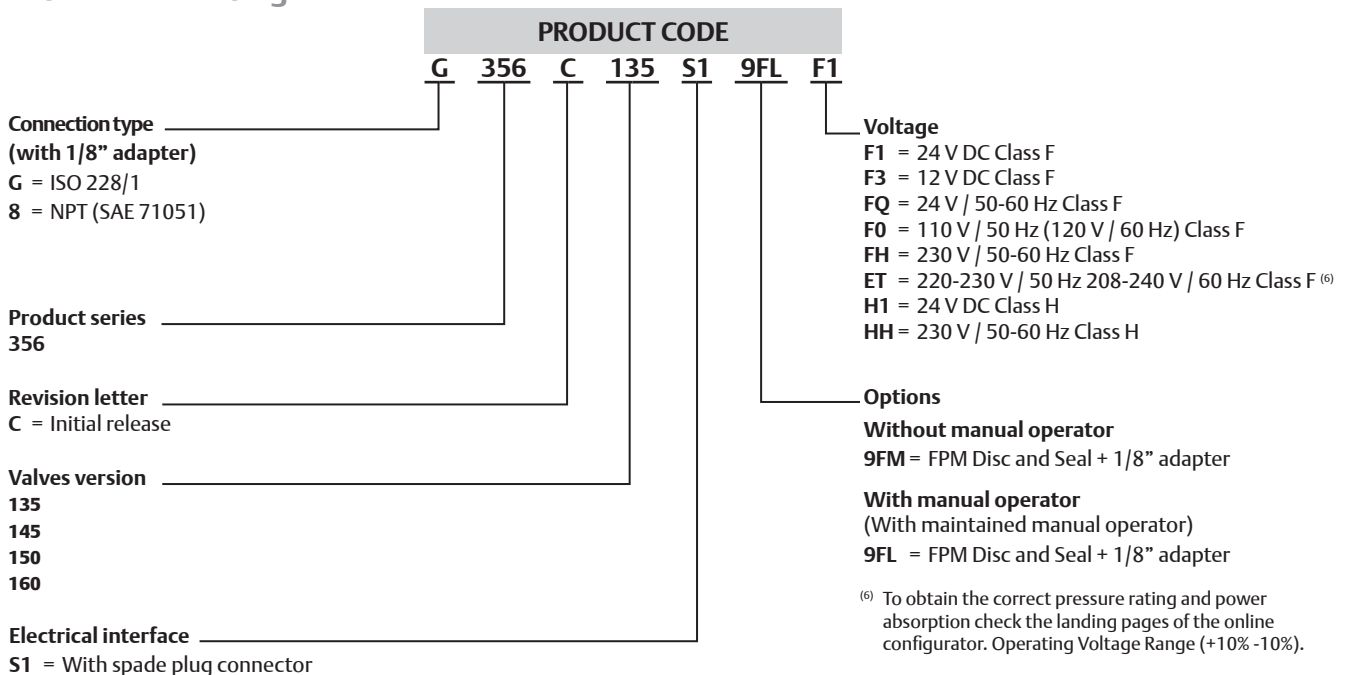
**356 pilot**

**Response time (in seconds) for NC valve [6 bar (87 psi) pilot air]**  
Valve response times depend on the Kv of the pilot valve used and the size of the valve [orifice size 1.6 mm (1/16 in), max. pilot pressure 10 bar (145 psi)]

Size of valve		32 mm actuator		50 mm actuator		63 mm actuator	
Ø	DN	O <sup>(5)</sup>	C <sup>(5)</sup>	O <sup>(5)</sup>	C <sup>(5)</sup>	O <sup>(5)</sup>	C <sup>(5)</sup>
3/8"	10	-	-	-	-	-	-
1/2"	15	-	-	0.09	0.24	0.16	0.57
3/4"	20	-	-	0.10	0.26	0.2	0.37
1"	25	-	-	0.10	0.3	0.32	0.53
1 1/4"	32	-	-	-	-	0.32	0.6
1 1/2"	40	-	-	-	-	0.32	0.9
2"	50	-	-	-	-	0.32	0.56

<sup>(5)</sup> For NO valves, interchange O and C values.

**Product selection guide**



**Repair Kits and Service Parts****356 pilot**

Spare parts kits no. (*)		
FPM disk and seal		
NC - Normally closed - 1/4" - AC (~) / DC (=)		
356C135/145/150/160	<b>M200708</b>	<b>V00</b>

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

**Installation****189 banjo pilot**

- The solenoid valves can be mounted in any position without affecting operation
- Thread connection (G) has a standard thread according to ISO 228/1
- Installation/maintenance instructions in multiple languages are available on our website

**356 pilot (with 1/8" adapter)**

- The solenoid valves can be mounted in any position without affecting operation
- Thread connection (G) has a standard thread according to ISO 228/1
- Thread connection (NPT) has standard thread according to SAE 71051
- Installation/maintenance instructions in multiple languages are available on our website

## Dimensions mm (inches), Weight kg (Lbs)

2-way - 32 mm and 50 mm actuators - 189 banjo pilot  
for series 290  
tapped body, butt welding or clamp connection

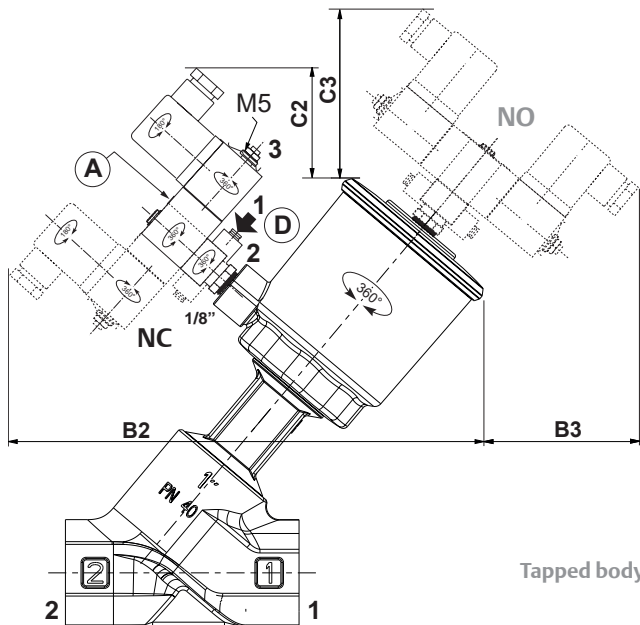


**TYPE 01**  
189 banjo pilot  
Epoxy moulded  
IEC 335 / DIN 43650  
IP65

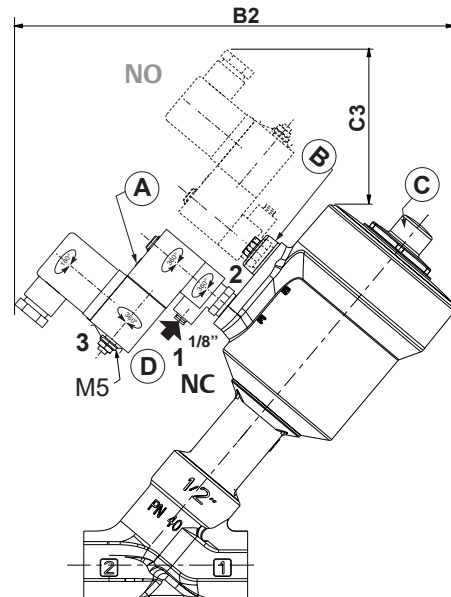
18900032 - 18900047

32 mm and 50 mm plastic actuators

32 mm and 50 mm stainless steel actuators

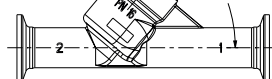
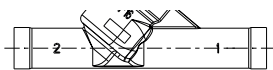


Tapped body



Butt welding connection

Clamp connection



- (A) Manual operator location
- (B) Filter-plug (non-removable)
- (C) Optical position indicator
- (D) Connection to pressure supply with quick-disconnect coupling for 4 mm OD tube

Type	Actuator diameter	ØA	Plastic actuator				Stainless steel actuator		Weight (with pilot)			
			B2 (NC)	B3 (NO)	C2 (NC)	C3 (NO)	B2 (NC)	C3 (NO)	Plastic	Stainless steel		
01	32 mm	G* 3/8"	mm	173.5	94.5	76.5	100	179	97.5	0.5	0.7	kg
		NPT 3/8"	(in)	6.831	3.720	3.012	3.937	7.047	3.839	1	1.6	(Lbs)
		G* 1/2"	mm	173.5	94.5	76.5	100	179	97.5	0.6	0.8	kg
		NPT 1/2"	(in)	6.831	3.720	3.012	3.937	7.047	3.839	1.2	1.7	(Lbs)
		G* 3/4"	mm	173.5	94.5	76.5	100	179	97.5	0.6	0.8	kg
			(in)	6.831	3.720	3.012	3.937	7.047	3.839	1.3	1.8	(Lbs)
	50 mm	G* 1/2"	mm	205.5	85	65.5	91.5	198	84.5	1	1.5	kg
		NPT 1/2"	(in)	8.091	3.346	2.579	3.602	7.795	3.327	2.1	3.2	(Lbs)
		G* 3/4"	mm	205.5	85	65.5	91.5	198	84.5	1.1	1.6	kg
		NPT 3/4"	(in)	8.091	3.346	2.579	3.602	7.795	3.327	2.3	3.4	(Lbs)
G* 1"		mm	205.5	85	65.5	91.5	198	84.5	1.4	1.9	kg	
		(in)	8.091	3.346	2.579	3.602	7.795	3.327	3	4.1	(Lbs)	

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## Dimensions mm (inches), Weight kg (Lbs)

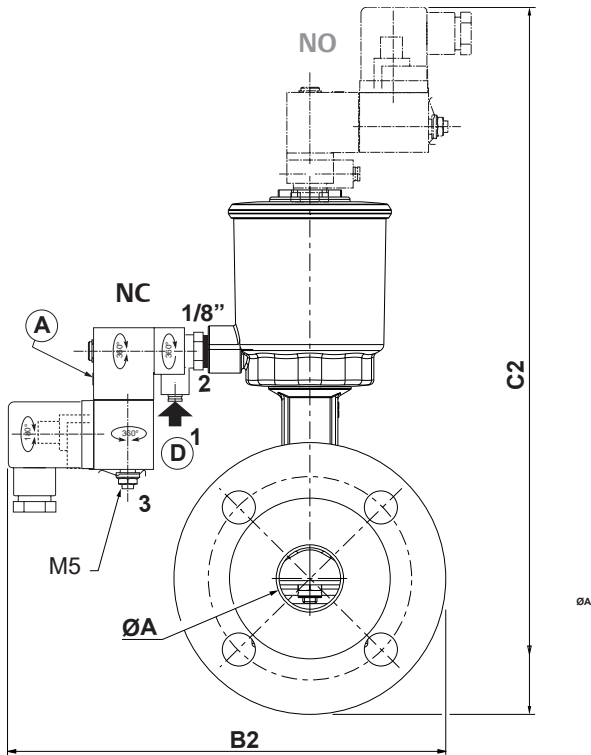
2-way - 50 mm actuator - 189 banjo pilot  
for series 290  
flanges body (ISO/ANSI)



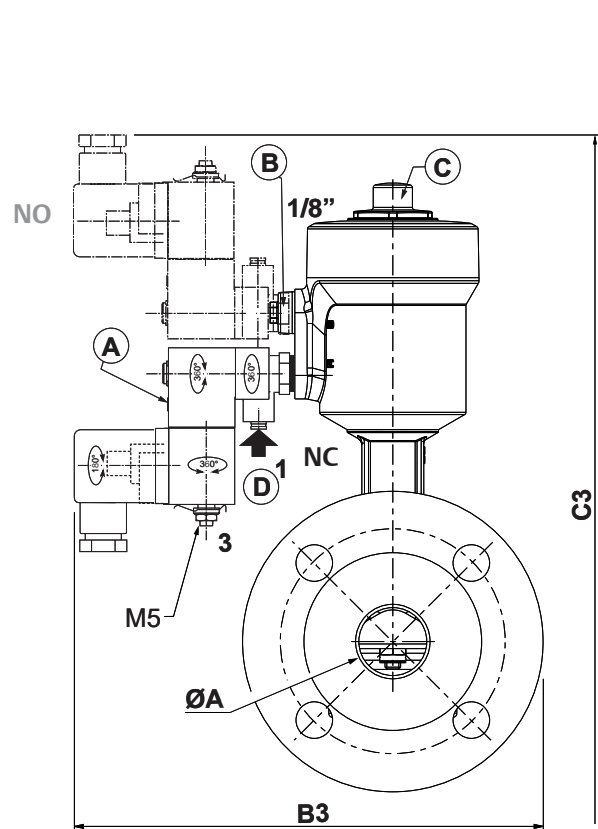
**TYPE 01**  
189 banjo pilot  
Epoxy moulded  
IEC 335 / DIN 43650  
IP65

18900032 - 18900047

Plastic actuator



Stainless steel actuator



- (A) Manual operator location
- (B) Filter-plug (non-removable)
- (C) Optical position indicator
- (D) Connection to pressure supply with quick-disconnect coupling for 4 mm OD tube

Type	Actuator diameter	DN	ØA	Plastic actuator				Stainless steel actuator				Weight (with pilot)					
				B2 (NC)		C2 (NO)		B3 (NC)		C3 (NO)		Plastic		Stainless steel			
				ISO	ANSI	ISO	ANSI	ISO	ANSI	ISO	ANSI	ISO	ANSI	ISO	ANSI		
01	50 mm	15	17.3	mm	173.5	171	287	284.5	168	165.5	235.5	233	2.7	2.3	3.1	2.7	kg
			0.681	(in)	6.831	6.732	11.299	11.201	6.614	6.516	9.272	9.173	5.8	5	6.8	6	(Lbs)
		20	22.3	mm	178.5	176	291	288.5	173	170.5	240	237.5	3.5	2.8	4	3.2	kg
			0.878	(in)	7.028	6.929	11.457	11.358	6.811	6.713	9.449	9.350	7.6	6.1	8.7	7.1	(Lbs)
		25	28.5	mm	183.5	181	304.5	302	178	175.5	253	250.5	4.2	3.5	4.7	4	kg
			1.122	(in)	7.224	7.126	11.988	11.890	7.008	6.909	9.961	9.862	9.2	7.6	10.4	8.9	(Lbs)

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## Dimensions mm (inches), Weight kg (Lbs)

**2-way - 32 mm and 50 mm actuators - 356 pilot  
for series 290  
tapped body, butt welding or clamp connection**



**TYPE 02**  
Pilot 356, brass body  
Coil size 20 mm - Thermoplastic moulded  
IEC 335 / DIN 43650  
IP67

G356C135S19FL/FM - G356C150S19FL/FM

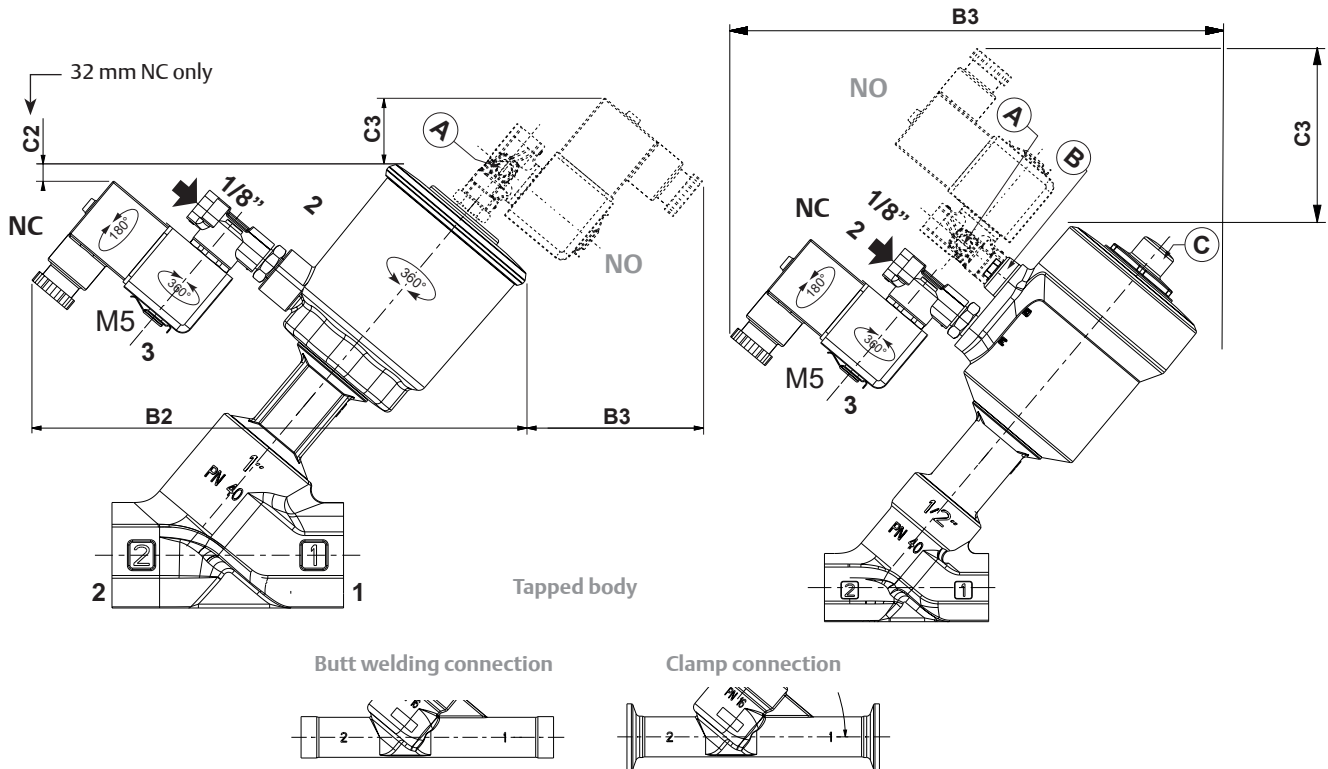


**TYPE 02**  
Pilot 356, stainless steel body  
Coil size 20 mm - Thermoplastic moulded  
IEC 335 / DIN 43650  
IP67

G356C145S19FL/FM - G356C160S19FL/FM

32 and 50 mm plastic actuators

32 and 50 mm stainless steel actuators



- (A) Manual operator location
- (B) Filter-plug (non-removable)
- (C) Optical position indicator

Type	Actuator diameter	ØA	Plastic actuator				Stainless steel actuator		Weight (with pilot)			
			B2 (NC)	B3 (NO)	C2 (NC)	C3 (NO)	B3 (NC)	C3 (NO)	Plastic	Stainless steel		
02	32 mm	G* 3/8"	mm	158.5	80.5	4.5	36.5	165.5	83.5	0.4	0.7	kg
		NPT 3/8"	(in)	6.240	3.169	0.177	1.437	6.516	3.287	0.9	1.5	(Lbs)
		G* 1/2"	mm	158.5	80.5	4.5	36.5	165.5	83.5	0.5	0.7	kg
		NPT 1/2"	(in)	6.240	3.169	0.177	1.437	6.516	3.287	1.1	1.6	(Lbs)
		G* 3/4"	mm	158.5	80.5	4.5	36.5	165.5	83.5	0.6	0.8	kg
	NPT 3/4"	(in)	6.240	3.169	0.177	1.437	6.516	3.287	1.2	1.8	(Lbs)	
	50 mm	G* 1/2"	mm	190.5	71	-	28	183	70.5	0.9	1.4	kg
		NPT 1/2"	(in)	7.5	2.8	-	1.1	7.2	2.8	2.0	3.1	(Lbs)
		G* 3/4"	mm	190.5	71	-	28	183	70.5	1.0	1.5	kg
		NPT 3/4"	(in)	7.5	2.8	-	1.1	7.2	2.8	2.2	3.3	(Lbs)
G* 1"		mm	190.5	71	-	28	183	70.5	1.3	1.8	kg	
NPT 1"	(in)	7.5	2.8	-	1.1	7.2	2.8	2.9	4.0	(Lbs)		

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## Dimensions mm (inches), Weight kg (Lbs)

2-way - 32 mm and 50 mm actuators - 356 pilot  
for series 290  
flanges body (ISO/ANSI)



**TYPE 02**

Pilot 356, brass body  
Coil size 20 mm - Thermoplastic moulded  
IEC 335 / DIN 43650  
IP67

G356C135S19FL/FM - G356C150S19FL/FM

32 and 50 mm plastic actuators

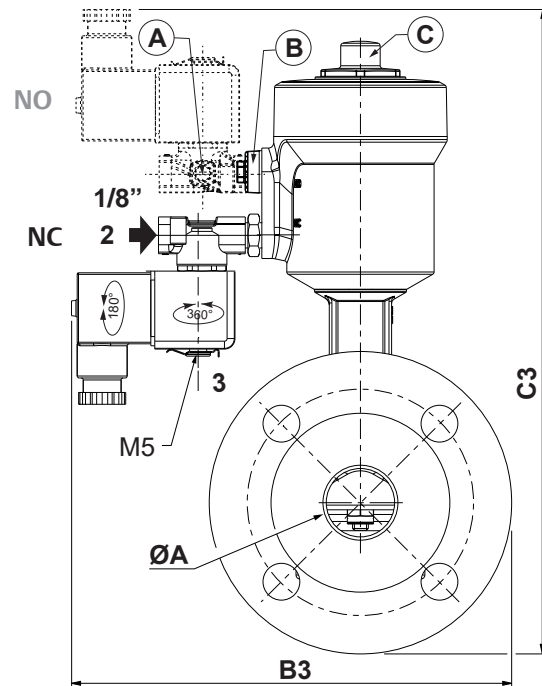
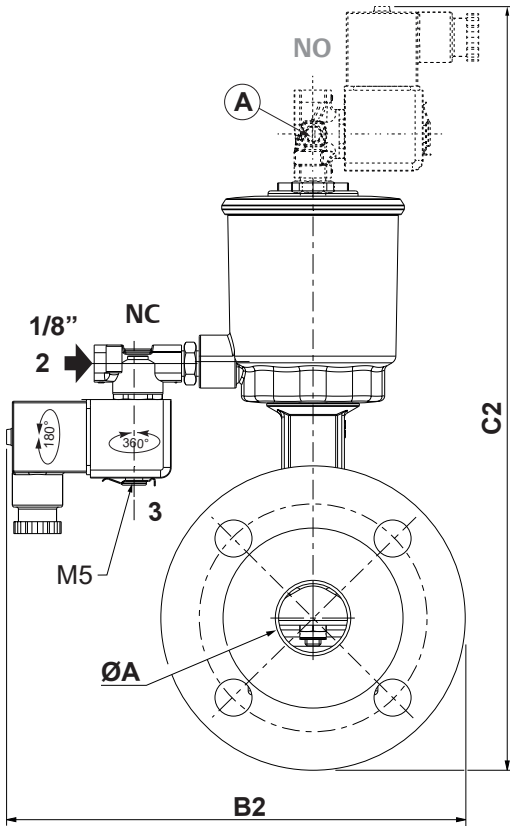


**TYPE 02**

Pilot 356, stainless steel body  
Coil size 20 mm - Thermoplastic moulded  
IEC 335 / DIN 43650  
IP67

G356C145S19FL/FM - G356C160S19FL/FM

32 and 50 mm stainless steel actuators



- (A) Manual operator location
- (B) Filter-plug (non-removable)
- (C) Optical position indicator

Type	Actuator diameter	DN	ØA	Plastic actuator				Stainless steel actuator				Weight (with pilot)					
				B2 (NC)		C2 (NO)		B3 (NC/NO)		C3 (NO)		Plastic		Stainless steel			
				ISO	ANSI	ISO	ANSI	ISO	ANSI	ISO	ANSI	ISO	ANSI	ISO	ANSI		
02	50 mm	15	17.3	mm	162	159.5	276	273.5	156.5	154	229	226.5	2.6	2.2	3.1	2.6	kg
			0.681	(in)	6.378	6.280	10.866	10.768	6.161	6.063	9.016	8.917	5.8	4.9	6.7	5.8	(Lbs)
		20	22.3	mm	167	164.5	280	277.5	161.5	159	233.5	231	3.4	2.7	3.9	3.2	kg
			0.878	(in)	6.575	6.476	11.024	10.925	6.358	6.260	9.193	9.094	7.5	6.0	8.6	7.0	(Lbs)
		25	28.5	mm	172	169.5	293.5	291	166.5	164	246.5	244	4.1	3.4	4.7	4	kg
			1.122	(in)	6.772	6.673	11.555	11.457	6.555	6.457	9.705	9.606	9.1	7.5	10.3	8.8	(Lbs)

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Dimensions mm (inches), Weight kg (Lbs)

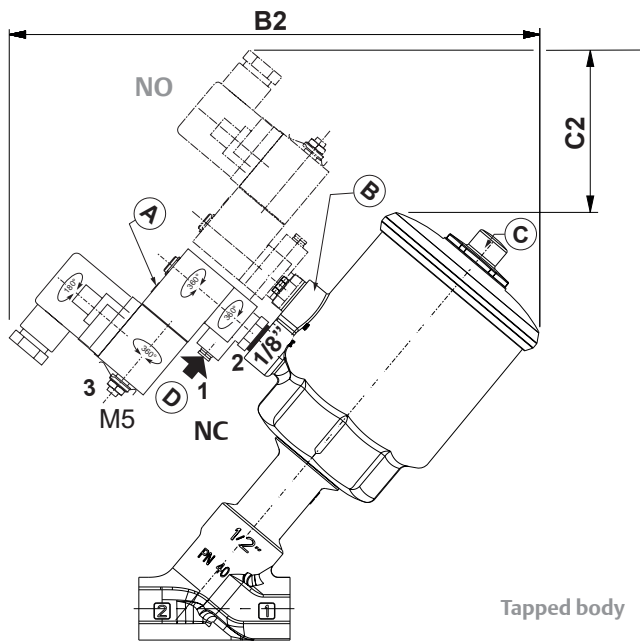
2-way - 63 mm actuator - 189 banjo pilot  
for series 290  
tapped body, butt welding or clamp connection



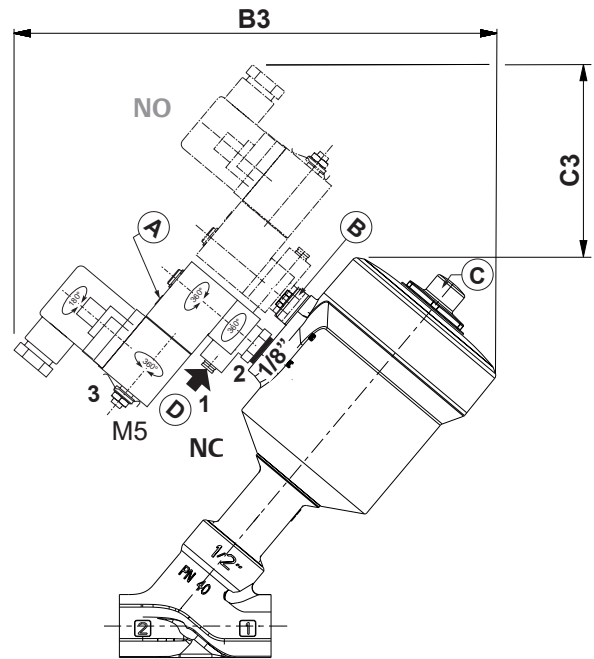
**TYPE 01**  
189 banjo pilot  
Epoxy moulded  
IEC 335 / DIN 43650  
IP65

18900032 - 18900047

63 mm plastic actuator

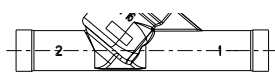


63 mm stainless steel actuator

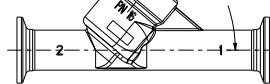


Tapped body

Butt welding connection



Clamp connection




- (A) Manual operator location
- (B) Filter-plug (non-removable)
- (C) Optical position indicator
- (D) Connection to pressure supply with quick-disconnect coupling for 4 mm OD tube

Type	Actuator diameter	ØA	Plastic actuator		Stainless steel actuator		Weight (with pilot)		
			B2 (NC)	C2 (NO)	B3 (NC)	C3 (NO)	Plastic	Stainless steel	
01	63 mm	G* 1/2" mm	228.5	70	208.5	83.5	1.2	2.0	kg
		NPT 1/2" (in)	8.996	2.756	8.209	3.287	2.5	4.3	(Lbs)
		G* 3/4" mm	228.5	70	208.5	83.5	1.3	2.1	kg
		NPT 3/4" (in)	8.996	2.756	8.209	3.287	2.8	4.5	(Lbs)
		G* 1" mm	228.5	70	208.5	83.5	1.7	2.4	kg
		NPT 1" (in)	8.996	2.756	8.209	3.287	3.6	5.2	(Lbs)
		G* 1 1/4" mm	228.5	70	208.5	83.5	2.1	2.8	kg
		NPT 1 1/4" (in)	8.996	2.756	8.209	3.287	4.5	6.1	(Lbs)
		G* 1 1/2" mm	228.5	70	208.5	83.5	2.7	3.4	kg
		NPT 1 1/2" (in)	8.996	2.756	8.209	3.287	5.8	7.4	(Lbs)
		G* 2" mm	228.5	70	208.5	83.5	3.5	4.2	kg
		NPT 2" (in)	8.996	2.756	8.209	3.287	7.6	9.2	(Lbs)

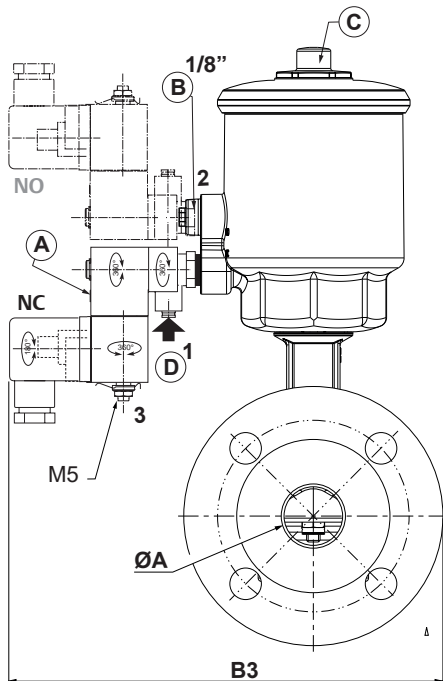
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## Dimensions mm (inches), Weight kg (Lbs)

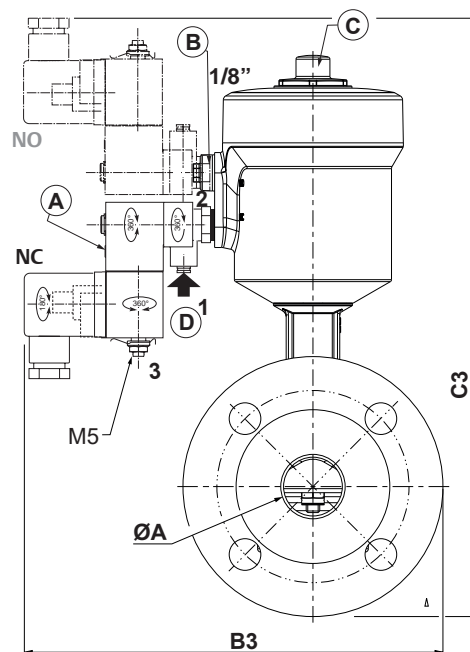
2-way - 63 mm actuator - 189 banjo pilot  
for series 290  
flanges body (ISO/ANSI)

 **TYPE 01**  
189 banjo pilot  
Epoxy moulded  
IEC 335 / DIN 43650  
IP65  
18900032 - 18900047

63 mm plastic actuator



63 mm stainless steel actuator



- (A) Manual operator location
- (B) Filter-plug (non-removable)
- (C) Optical position indicator
- (D) Connection to pressure supply with quick-disconnect coupling for 4 mm OD tube

Type	Actuator diameter	DN	ØA	Plastic actuator		Stainless steel actuator				Weight (with pilot)					
				B3 (NC/NO)		B3 (NC/NO)		C3 (NO)		Plastic		Stainless steel			
				ISO	ANSI	ISO	ANSI	ISO	ANSI	ISO	ANSI	ISO	ANSI		
01	63 mm	15	17.3	mm	180.5	178	174	171.5	248.5	246	3.0	2.6	3.6	3.2	kg
			0.681	(in)	7.106	7.008	6.850	6.752	9.783	9.685	6.5	5.6	8.0	7.1	(Lbs)
		20	22.3	mm	185.5	183	179	176.5	252.5	250	3.7	3.0	4.4	3.7	kg
			0.878	(in)	7.303	7.205	7.047	6.949	9.941	9.843	8.1	6.5	9.8	8.2	(Lbs)
		25	28.5	mm	190.5	188	184	181.5	266	263.5	4.6	3.9	5.2	4.5	kg
			1.122	(in)	7.500	7.402	7.244	7.146	10.472	10.374	10.0	8.5	11.4	9.9	(Lbs)
		32	37.2	mm	203	190.5	196.5	184	295.5	283	6.4	4.9	7.0	5.6	kg
			1.465	(in)	7.992	7.500	7.736	7.244	11.634	11.142	14.0	10.7	15.5	12.3	(Lbs)
		40	43.1	mm	208	195.5	201.5	189	297.5	285	7.4	6.2	8.1	6.9	kg
			1.697	(in)	8.189	7.697	7.933	7.441	11.713	11.220	16.2	13.6	17.9	15.1	(Lbs)
		50	54.5	mm	215.5	208	209	201.5	315.5	308	10.2	9.1	10.8	9.8	kg
			2.146	(in)	8.484	8.189	8.228	7.933	12.421	12.126	22.4	20.0	23.9	21.6	(Lbs)

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Dimensions mm (inches), Weight kg (Lbs)

2-way - 63 mm actuator - 356 pilot  
for series 290  
tapped body, butt welding or clamp connection



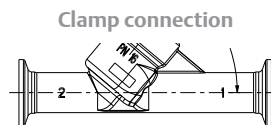
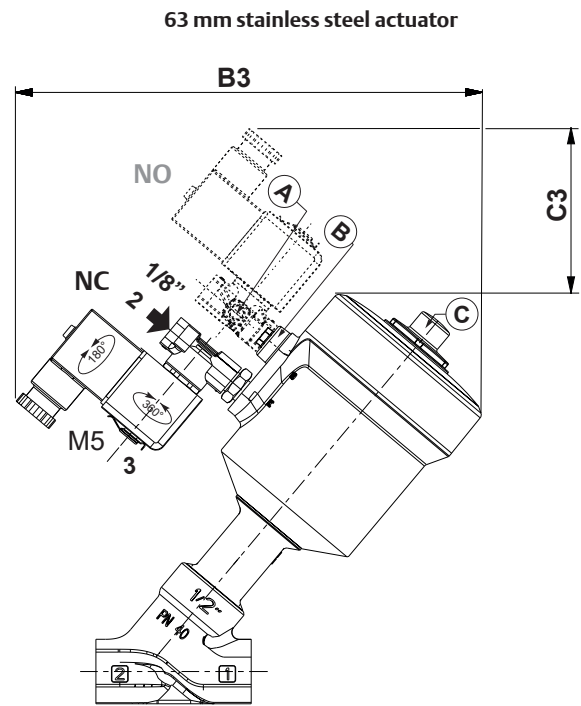
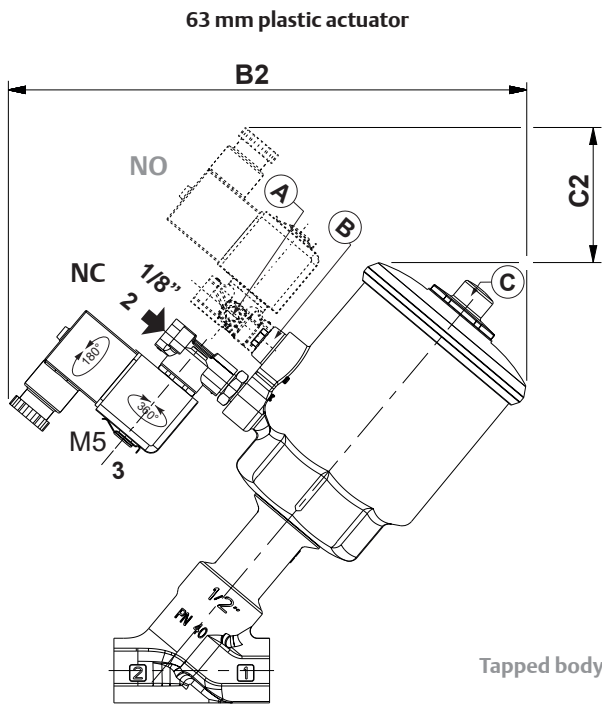
**TYPE 02**  
Pilot 356, brass body  
Epoxy moulded  
IEC 335 / DIN 43650 / IP65

G356C135S19FL/FM - G356C150S19FL/FM



**TYPE 02**  
Pilot 356, stainless steel body  
Epoxy moulded  
IEC 335 / DIN 43650 / IP65

G356C145S19FL/FM - G356C160S19FL/FM



- (A) Manual operator location
- (B) Filter-plug (non-removable)
- (C) Optical position indicator

Type	Actuator diameter	ØA	Plastic actuator		Stainless steel actuator		Weight (with pilot)			
			B2 (NC)	C2 (NO)	B3 (NC)	C3 (NO)	Plastic	Stainless steel		
02	63 mm	G* 1/2"	mm	213.5	56	193.5	69.5	1.1	1.9	kg
		NPT 1/2"	(in)	8.406	2.205	7.618	2.736	2.4	4.2	(Lbs)
		G* 3/4"	mm	213.5	56	193.5	69.5	1.2	2.0	kg
		NPT 3/4"	(in)	8.406	2.205	7.618	2.736	2.7	4.4	(Lbs)
		G* 1"	mm	213.5	56	193.5	69.5	1.6	2.3	kg
		NPT 1"	(in)	8.406	2.205	7.618	2.736	3.5	5.1	(Lbs)
		G* 1 1/4"	mm	213.5	56	193.5	69.5	2.0	2.7	kg
		NPT 1 1/4"	(in)	8.406	2.205	7.618	2.736	4.4	6.0	(Lbs)
		G* 1 1/2"	mm	213.5	56	193.5	69.5	2.6	3.3	kg
		NPT 1 1/2"	(in)	8.406	2.205	7.618	2.736	5.8	7.3	(Lbs)
		G* 2"	mm	213.5	56	193.5	69.5	3.4	4.1	kg
		NPT 2"	(in)	8.406	2.205	7.618	2.736	7.5	9.1	(Lbs)

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## Dimensions mm (inches), Weight kg (Lbs)

2-way - 63 mm actuator - 356 pilot  
for series 290  
flanges body (ISO/ANSI)



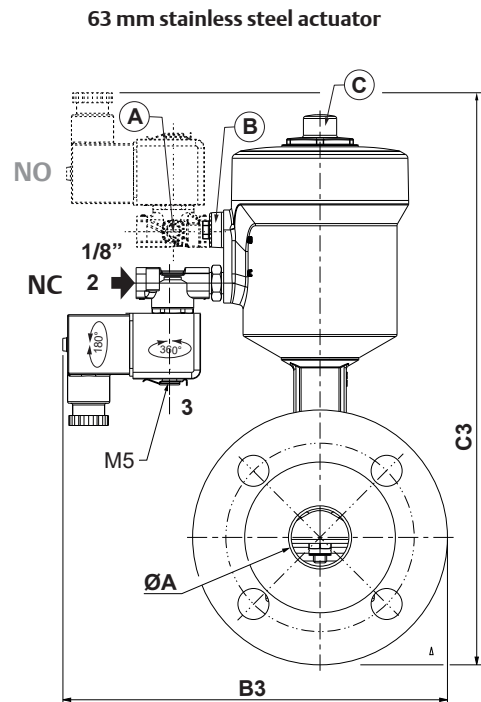
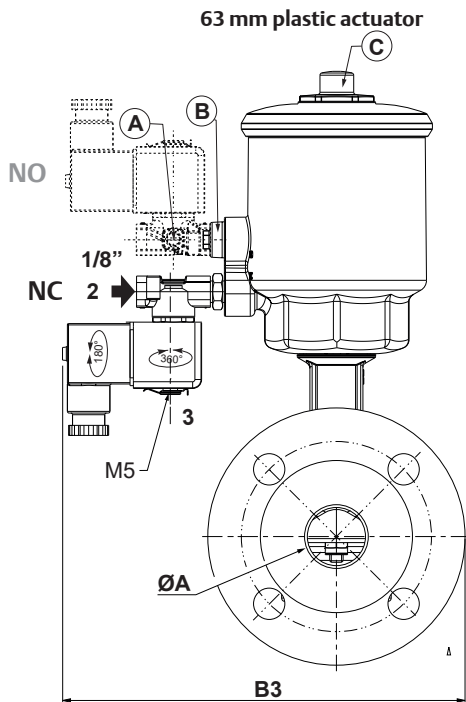
**TYPE 02**  
Pilot 356, brass body  
Epoxy moulded  
IEC 335 / DIN 43650 / IP65

G356C135S19FL/FM - G356C150S19FL/FM



**TYPE 02**  
Pilot 356, stainless steel body  
Epoxy moulded  
IEC 335 / DIN 43650 / IP65

G356C145S19FL/FM - G356C160S19FL/FM



- (A) Manual operator location
- (B) Filter-plug (non-removable)
- (C) Optical position indicator

Type	Actuator diameter	DN	ØA	Plastic actuator		Stainless steel actuator				Weight (with pilot)					
				B3 (NC/NO)		B3 (NC/NO)		C3 (NO)		Plastic		Stainless steel			
				ISO	ANSI	ISO	ANSI	ISO	ANSI	ISO	ANSI	ISO	ANSI		
02	63 mm	15	17.3	mm	169	166.5	162.5	160	241.5	239	2.9	2.5	3.6	3.2	kg
			0.681	(in)	6.654	6.555	6.398	6.299	9.508	9.409	6.4	5.5	7.9	7.0	(Lbs)
		20	22.3	mm	174	171.5	167.5	165	245.5	243	3.6	2.9	4.4	3.7	kg
			0.878	(in)	6.850	6.752	6.594	6.496	9.665	9.567	8.0	6.4	9.7	8.1	(Lbs)
		25	28.5	mm	179	176.5	172.5	170	259	256.5	4.5	3.8	5.1	4.4	kg
			1.122	(in)	7.047	6.949	6.791	6.693	10.197	10.098	9.9	8.4	11.3	9.8	(Lbs)
		32	37.2	mm	191.5	179	185	172.5	288.5	276	6.3	4.8	7.0	5.5	kg
			1.465	(in)	7.539	7.047	7.283	6.791	11.358	10.866	13.9	10.6	15.4	12.2	(Lbs)
		40	43.1	mm	196.5	184	190	177.5	290.5	278	7.3	6.1	8.1	6.8	kg
			1.697	(in)	7.736	7.244	7.480	6.988	11.437	10.945	16.1	13.5	17.8	15.0	(Lbs)
		50	54.5	mm	204	196.5	197.5	190	308.5	301	10.1	9.0	10.8	9.8	kg
			2.146	(in)	8.031	7.736	7.776	7.480	12.146	11.850	22.3	19.9	23.8	21.5	(Lbs)

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## Dimensions mm (inches), Weight kg (Lbs)

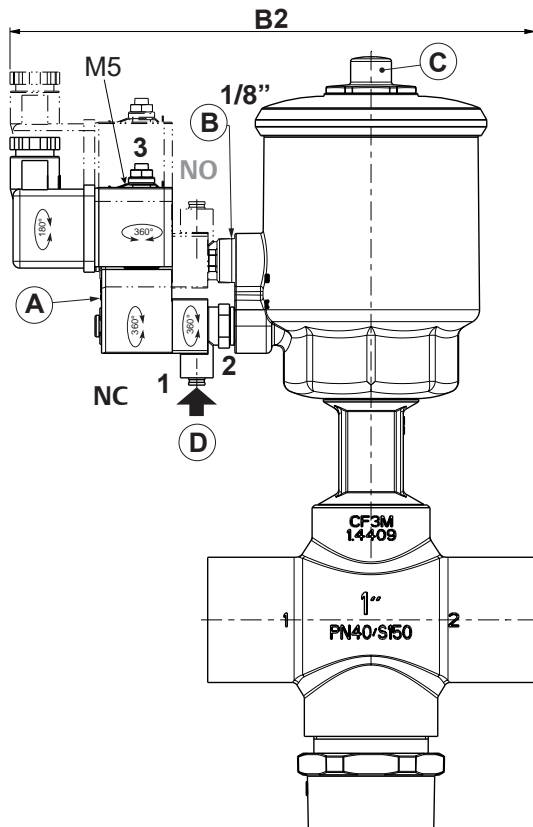
3-way - 63 mm actuator - 189 banjo pilot  
for series 390  
tapped body



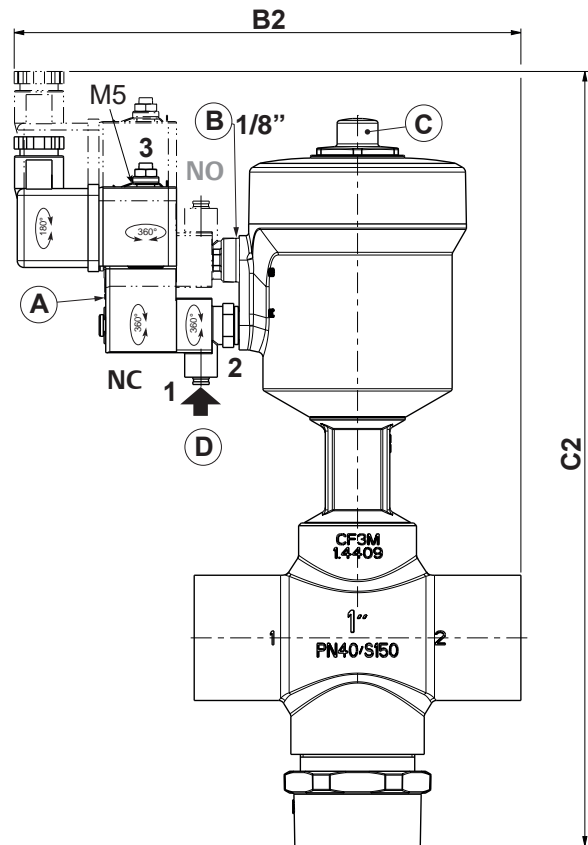
**TYPE 01**  
189 banjo pilot  
Epoxy moulded  
IEC 335 / DIN 43650  
IP65

18900032 - 18900047

63 mm plastic actuator



63 mm stainless steel actuator



- (A) Manual operator location
- (B) Filter-plug (non-removable)
- (C) Optical position indicator
- (D) Connection to pressure supply with quick-disconnect coupling for 4 mm OD tube

Type	Actuator diameter	ØA		Plastic actuator		Stainless steel actuator		Weight (with pilot)	
				B2 (NC/NO)	B2 (NC/NO)	C2 (NO)	Plastic	Stainless steel	
01	63 mm	G* 1/2"	mm	175	169	266.5	1.7	2.4	kg
		NPT 1/2"	(in)	6.894	6.638	10.492	3.8	5.2	(Lbs)
		G* 3/4"	mm	188	181	269	2.0	2.8	kg
		NPT 3/4"	(in)	7.386	7.130	10.591	4.5	6.2	(Lbs)
		G* 1"	mm	193	186	284.5	2.5	3.2	kg
		NPT 1"	(in)	7.583	7.327	11.201	5.6	7.1	(Lbs)
		G* 1 1/4"	mm	205	199	303	3.6	4.3	kg
		NPT 1 1/4"	(in)	8.075	7.819	11.929	7.9	9.4	(Lbs)
		G* 1 1/2"	mm	208	201	308.5	4.3	5.1	kg
NPT 1 1/2"	(in)	8.173	7.917	12.146	9.4	11.1	(Lbs)		

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## Dimensions mm (inches), Weight kg (Lbs)

3-way - 50 mm and 63 mm actuators - 356 pilot  
for series 390  
tapped body



**TYPE 02**  
Pilot 356, brass body  
Epoxy moulded  
IEC 335 / DIN 43650 / IP65

G356C135S19FL/FM - G356C150S19FL/FM

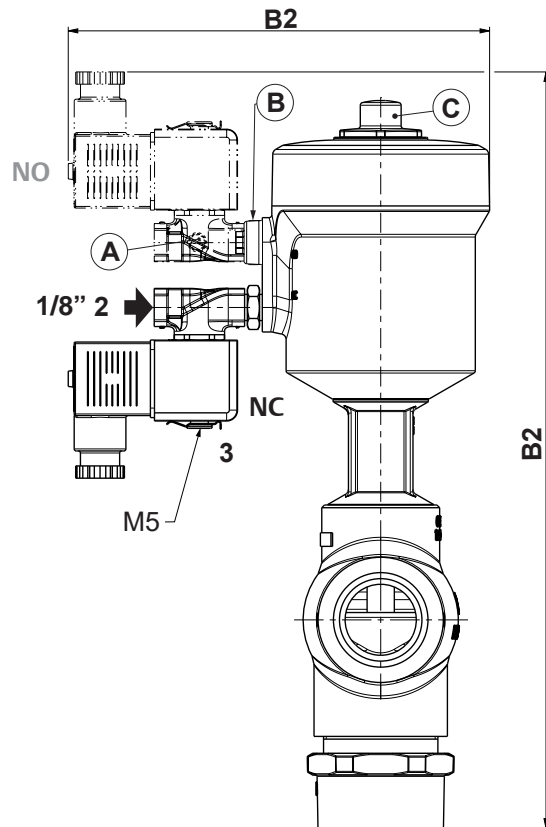
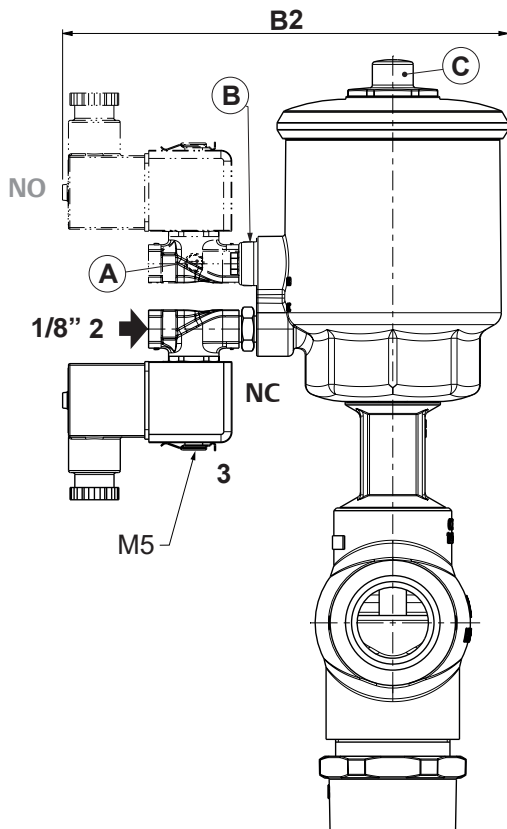


**TYPE 02**  
Pilot 356, stainless steel body  
Epoxy moulded  
IEC 335 / DIN 43650 / IP65

G356C145S19FL/FM - G356C160S19FL/FM

63 mm plastic actuator

50 and 63 mm stainless steel actuators



- (A) Manual operator location
- (B) Filter-plug (non-removable)
- (C) Optical position indicator

Type	Actuator diameter	ØA	Plastic actuator		Stainless steel actuator		Weight (with pilot)		
			B2 (NC/NO)	B2 (NC/NO)	C2 (NO)	Plastic	Stainless steel		
02	63 mm	G* 1/2"	mm	164	155	260	1.7	2.3	kg
		NPT 1/2"	(in)	6.448	6.094	10.236	3.7	5.1	(Lbs)
		G* 3/4"	mm	164	155	262.5	2.0	2.8	kg
		NPT 3/4"	(in)	6.448	6.094	10.335	4.4	6.1	(Lbs)
		G* 1"	mm	164	155	278	2.5	3.2	kg
		NPT 1"	(in)	6.448	6.094	10.945	5.5	7.0	(Lbs)
		G* 1 1/4"	mm	164	155	296.5	3.5	4.2	kg
		NPT 1 1/4"	(in)	6.448	6.094	11.673	7.8	9.3	(Lbs)
		G* 1 1/2"	mm	164	155	302	4.2	5.0	kg
NPT 1 1/2"	(in)	6.448	6.094	11.890	9.3	11.0	(Lbs)		