

# ESG®

## Filling Valve

1AA Series  
27mm Actuator  
Pipe-less Filling Valve

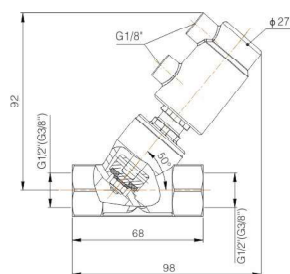


1AB Series  
Pipe-less Filling Valve

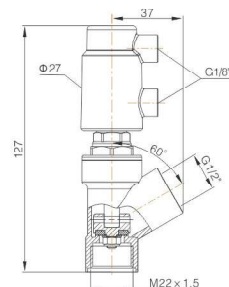


### Technical Specification

- Control type: Double acting normally closed, Double acting without spring
- Operating pressure: 0–7bar (0–102psi)
- Control medium: Filtered compressed air or neutral gas
- Control pressure: 3–4.5bar (44–65psi)
- Body material: CF8/CF8M/CF3M and other special materials
- Seal material: PTFE
- Medium temperature:  $-10^{\circ}\text{C}$  —  $+120^{\circ}\text{C}$
- Ambient temperature:  $-10^{\circ}\text{C}$  —  $+80^{\circ}\text{C}$
- Connection type: Threaded connection (BSP, BSPT, NPT)



1AA Series 27mm Actuator  
Pipe-less Filling Valve



1AB Series  
Pipe-less Filling Valve

### Advantages

- The filling valves is widely used in filling machinery, suitable for viscous, pasty and even foamy fluids with accurate and stable filling.
- 1AA series with 27mm actuator and 1AS series, the valve core made a flexible seat, it can be the self-adjustable with good sealing performance.

1AC/1AF Series  
Filling Valve with  
Internal Sealing



1AP Series  
Filling Valve with Internal  
Sealing and Suction

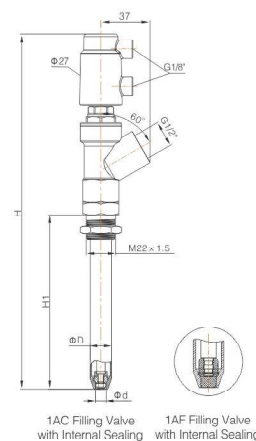


### Technical Specification

- Control type: Double acting normally closed, Double acting without spring
- Operating pressure: 0–7bar (0–102psi)
- Control pressure: 3–4.5bar (44–65psi)
- Body material: CF8M/CF3M and other special materials
- Seal material: PTFE
- Medium temperature:  $-10^{\circ}\text{C}$  —  $+120^{\circ}\text{C}$
- Ambient temperature:  $-10^{\circ}\text{C}$  —  $+80^{\circ}\text{C}$

### Advantages

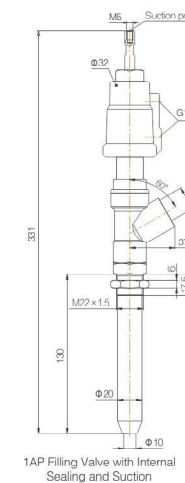
- It is widely used in filling machinery, especially for applications with viscous, pasty and even foamy fluids.
- Fast, accurate and stable filling.
- Delicate and compact, easy to arrange pipeline layout.
- Special nozzle structure and sealing design ensure no dripping leakage.
- Bottom transfer structure of the filling nozzle self-locates and enables submerged filling.
- Internal suction pipe effectively recovers dripping liquid.



1AC Filling Valve  
with Internal Sealing



1AF Filling Valve  
with Internal Sealing



1AP Filling Valve with Internal  
Sealing and Suction

### 1AC/1AF Main Dimension

Size	$\phi D$	$\phi d$	H	H1
1AC	20	10	267	130
1AC	18	9	267	130
1AF	16	8	267	130

# ESG®

## Filling Valve

1AL/1AM Series  
Filling Valve with  
Internal Sealing



1AL/1AM Series  
Filling Valve with Internal  
Sealing and Suction



1AD Series  
Filling Valve with  
External Sealing



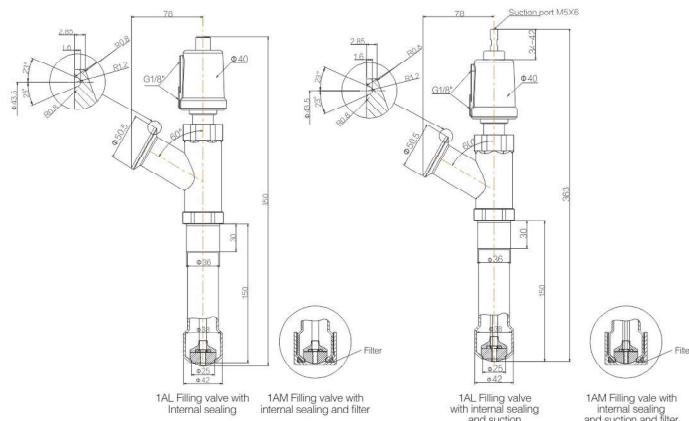
\* Accessory can be installed on top of actuator

### Technical Specification

- Control type: Double acting normally closed, Double acting without spring
- Operating pressure: 0–7bar (0–102psi)
- Control pressure: 3–4.5bar (44–65psi)
- Body material: CF8M
- Seal material: PTFE
- Medium temperature:  $-10^{\circ}\text{C}$  —  $+120^{\circ}\text{C}$
- Ambient temperature:  $-10^{\circ}\text{C}$  —  $+80^{\circ}\text{C}$

### Advantages

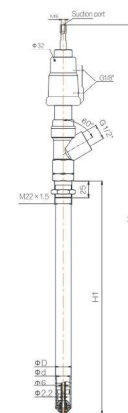
- It is widely used in filling machinery, especially for applications with viscous, pasty and even foamy fluids.
- Fast, accurate and stable filling.
- Delicate and compact, easy to arrange pipeline layout.
- Special nozzle structure and sealing design ensure no dripping leakage.
- Bottom chamfer structure of the filling nozzle self-locates and enables submerged filling.
- The head gourd shape design of the filling tube reduces weight and cost without sacrificing flow rate.
- With super strong suction function, it can timely recover the liquid sliding down the pipe wall without dripping.



1AJ/1AE/1AK Series  
Filling Valve with External  
Sealing and Suction



1AG/1AI/1AH Series  
Filling Valve with External  
Sealing and Suction



1AJ/1AG/1AE/1AI/1AK/1AH Series

### Technical Specification

- Control type: Double acting normally closed, Double acting without spring
- Operating pressure: 0–7bar (0–102psi)
- Control pressure: 3–4.5bar (44–65psi)
- Body material: CF8M/CF3M and other special materials
- Seal material: PTFE
- Medium temperature:  $-10^{\circ}\text{C}$  —  $+120^{\circ}\text{C}$
- Ambient temperature:  $-10^{\circ}\text{C}$  —  $+80^{\circ}\text{C}$

### Advantages

- Superior performance in easy foaming fluids filling.
- Delicate and compact structure easy for pipeline layout.
- Fast and stable filling.
- Special suction design ensure no dripping leakage.
- Special tip seal structure enables convenient maintenance and replacements.

### Main Dimension

Size	Φ D	Φ d	H1	H
1AJ	20	17	300	502
1AG	20	17	130	332
1AE	16	13	300	502
1AI	16	13	130	332
1AK	12	9	300	502
1AH	12	9	130	332

# ESG®

## Filling Valve

1A1 Series  
Sauce Filling Valve  
with Internal Sealing

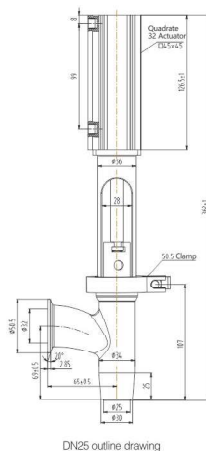
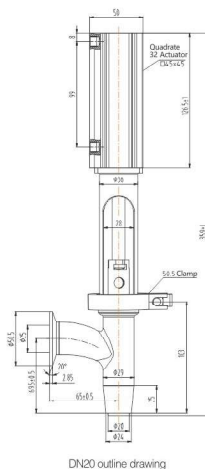


### Technical Specification

- Control type: Double acting without spring
- Operating pressure: 0–7bar (0–102psi)
- Control pressure: 4–7bar (58–102psi)
- Control medium: CF8M/CF3M and other special materials
- Seal material: UPE
- Medium temperature: –10°C — +110°C
- Ambient temperature: –10°C — +60°C

### Advantages

1. Widely used in filling machinery. Suitable for viscous, granular sauce filling. Such as beef sauce, chili sauce, bean paste, etc.
2. Fast, accurate and stable filling.
3. The internal structure adopts plunger design, resulting in easy cleaning and minimal residue.
4. The filling body and the connection are connected by tri-clamp, so that they can be installed, uninstalled, and adjusted easily.
5. Long valve stroke enables large-capacity filling.
6. Accessories, such as proximity switch and position indicator, can be installed on top of actuator to enable feedback of valve open /close state.



1A2 Series  
Filling Valve with  
Internal Sealing



\* Customization available

### Technical Specification

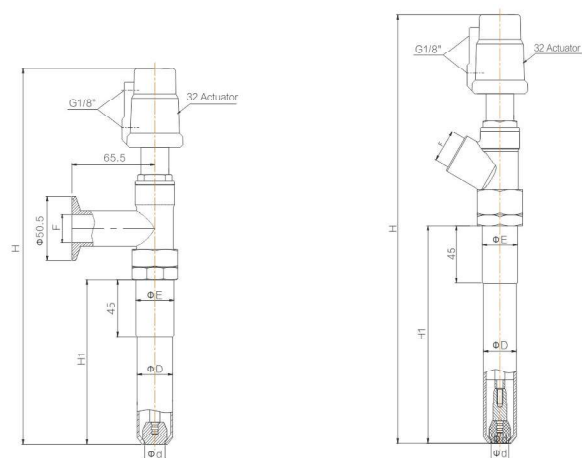
- Control type: Double acting normally closed, Double acting without spring
- Operating pressure: 0–7bar (0–102psi)
- Control pressure: 3–4.5bar (44–65psi)
- Body material: CF8M/CF3M and other special materials
- Seal material: PTFE
- Medium temperature: –10°C — +120°C
- Ambient temperature: –10°C — +80°C

### Advantages

1. It is widely used in filling machinery, especially for applications with viscous, pasty and even foamy fluids.
2. Fast, accurate and stable filling.
3. Delicate and compact, easy to arrange pipeline layout.
4. Special nozzle structure and sealing design ensure no dripping leakage.
5. Bottom chamfer structure of the filling nozzle self-locates and enables submerged filling.
6. The valve utilizes bottom seal and seal ring for connection to valve stem in order to avoid fluid residue and allow effortless cleaning.
7. Internal suction structure recovers dripping liquid along the pipe wall.

# ESG®

## Filling Valve



### Main Dimension (1A2 Series)

Size	Connection method	Actuator	ΦD	Φd	F	H	H1	Φ E (Optional)
DN15	Threaded connection Tri-clamp connection	32	12	5	G1/2 NPT1/2 BSPT1/2 Φ 16	220-540	60-380	Φ 20/M22X1.5
			14	6.5				Φ 25/M25X1.5
			16	8				
			18	9				
			20	10				
DN20	Threaded connection	32	24	13	G3/4" NPT3/4" BSPT3/4" M26X1.5	227-547	60-380	Φ 28/M28X1.5
			18	9				Φ 30/M30X1.5
			20	10				
			22	11.5				
			24	13				
			26	14				
DN25	Tri-clamp connection	32	28	16	Φ 22	227-547	60-380	Φ 30/M30X1.5
			18	9				Φ 28/M28X1.5
			20	10				
			22	11.5				
			24	13				
			26	14				
			28	16				Φ 30/M30X1.5

### Order Instruction

1AX	XXX	X	XXX	XX	XXX	X	X	XX	X	X	(*)
Series	Actuator	Control type	Inlet size	Pipe outer diameter (mm)	Pipe length (mm)	Sealing structure	Suction	Connection type	Valve securement	Body Material	Special customization EC 1935
		2:Double acting normally closed 3:Double acting without spring				I: Internal sealing E: External sealing	0: Without suction 1: With suction	G1: Threaded BSP DIN ISO 228-1 T1: Threaded BSPT DIN 2999-1/ISO7-1 N1: Threaded NPT ASMEB1.20.1 M1: M26*1.5 H7: Welded DIN11850-2/DIN11866 A H8: Welded DIN11850-3 H9: Welded Chamfer K7: Tri-clamp ISO2852-50.5	0: No securement M: Thread securement D: Pipe securement	1: CF8 2: CF8M 6: CF3M	
1AA	A27	2/3	D10	00	000	I	0	G1/T1/N1	0	1/2/6	
	A27	2/3	D15	00	000	I	0	G1/T1/N1/H7/H8/H9/K7	0	1/2/6	
1AB	A27	2/3	D15	00	000	I	0	G1/T1/N1	0	1/2/6	
1AC	A27	2/3	D15	20	130	I	0	G1/T1/N1	M/D	2/6	
	A27	2/3	D15	18	130	I	0	G1/T1/N1	M/D	2/6	
1AF	A27	2/3	D15	16	130	I	0	G1/T1/N1	M/D	2/6	
1AP	A32	2/3	D15	20	130	I	1	G1/T1/N1/K7	M/D	2/6	
1AD	A27	2/3	D15	14	175	E	0	G1/T1/N1	M/D	2/6	
1AJ	A32	2/3	D15	20	300	E	1	G1/T1/N1/k7	M/D	2/6	
1AG	A32	2/3	D15	20	130	E	1	G1/T1/N1/k7	M/D	2/6	
1AE	A32	2/3	D15	16	300	E	1	G1/T1/N1/k7	M/D	2/6	
1AI	A32	2/3	D15	16	130	E	1	G1/T1/N1/k7	M/D	2/6	
1AK	A32	2/3	D15	12	300	E	1	G1/T1/N1/k7	M/D	2/6	
1AH	A32	2/3	D15	12	130	E	1	G1/T1/N1/k7	D	2/6	
1AL	A40	2/3	D25	42	150	I	0/1	K7	D	2/6	
1AM	A40	2/3	D25	50	150	I	0/1	K7	D	2/6	
1A1	A32	3	D25	29	40	/	0	K7	/	1/2/6	
	A32	3	D32	34	40	/	0	K7	/	1/2/6	
1A2	A32	2/3	D15	12	60-380	I	0	G1/T1/N1/K7	M/D	2/6	
				14							
				16							
				18							
				20							
				24							
			D20	18				G1/T1/N1/M1			
				20							
				22							
				24							
				26							
				28							
			D25	18				K7			
				20							
				22							
				24							
				26							
				28							