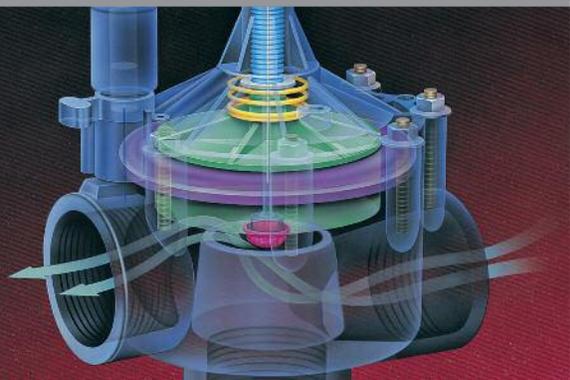


**TORO**

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# 100 Series Plus

## Micro-Irrigation



### Application:

These heavy-duty globe/angle valves offer superior performance and durability under the most demanding conditions. The 100 Series Century Plus valve delivers a host of features and reliable performance, which makes it suitable for agricultural, commercial and industrial applications.

### 1", 1½", 2" and 3" plastic models

#### Features:

#### Performance

- Flow range from 5-300 GPM
- Pressure range from 10-200 psi; 10-100 psi (102 models)
- Manual internal bleed
- Manual external bleed (flush mode)
- Brass flow control stem (2 and 3-inch models)
- Flow control allows precise flow adjustment and manual shutoff

#### Anti - Contamination 102 models

- Electric valves with 150-mesh external control water filter and three-way solenoid
- Non-continuous metering system for dirty or effluent water applications
- Small exchange of control water allows minimum filter capacity
- Control water filter allows easy external service
- Selectable normally open or normally closed mode
- Working pressure range from 10-100 psi

#### Quality Construction

- Glass-reinforced nylon, stainless steel and brass construction withstands high temperatures and system surges under pressure
- Rugged, nylon-reinforced Buna-N diaphragm provides leak-proof seal
- Buna-N valve seat seal
- Captive plunger
- Stainless steel metering
- Molded-in and anchored studs allow positive bonnet attachment and removal
- Easily serviced without removal from the system



# 100 Series Plus

## Globe Angle Valves

### Pressure Regulation 213 Models

- Manual downstream pressure regulating valves
- Available in downstream sensing in 20–100 or 0–30 psi (1,4–6,9 or 0–2 bar) range
- Self-modulating pressure regulator maintains constant downstream pressure within +/- 2 psi (0,14 bar) of pressure setting [for in-valve sensing; within +/- 1 psi (0,07 bar) for downstream sensing]
- All flow ranges must be within recommended range indicated on pressure loss chart — minimum 15 gpm (0,9 l/s) recommended for 103 and 213 models
- Inlet pressure must be 15 psi (1,03 bar) greater than desired outlet pressure

### Electrical Specifications

- Solenoid: 24 VAC
- Inrush volt-amp: 24 VAC-11.50 VA
- Inrush current: .4 amp (102 models: .48 amp)
- Holding volt-amp: 24 VAC-5.75 VA
- Holding current: .2 amp (102 models: .24 amp)

### Optional Accessories

- Hydraulic conversion kit (HVC-Kit)
- Reclaimed water kit (RW60-Kit)
- DC latching solenoid (E2002)

#### Example:

How To Order:

A-100P			1	-LS
Model	Size	Solenoid		
A-100P1	1"	yes		
A-100P1.5	1.5"	yes		
A-100P2	2"	yes		
A-100P3	3"	yes		
A-100P1-LS	1"	no		
A-100P1.5LS	1.5"	no		
A-100P2-LS	2"	no		
A-100P3-LS	3"	no		

A-102P			1	DS
Model	Size	Solenoid		
A-102P1	1"	yes		
A-102P1.5	1.5"	yes		
A-102P2	2"	yes		
A-102P3	3"	yes		

#### Pressure Regulating

##### Downstream Sensing 0–100psi

213P1-100DS	1"	no
213P1.5-100DS	1.5"	no
213P2-100DS	2"	no

##### Downstream Sensing 0–30psi

213P1-30DS	1"	no
213P1.5-30DS	1.5"	no
213P2-30DS	2"	no

Model	Style	Size	Flow Rate (GPM)																	Pressure Loss PSI				
			10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	175	200		225	250	275	300
A-100P1/A-102P1 213P1-100DS 213P1-30DS	Globe	1"	4.2	3.2	4.1	7.2	10.9																	
	Angle		4.2	3.1	2.7	4.8	7.9																	
A-100P1.5/A-102P1.5 213P1.5-100DS 213P1.5-30DS	Globe	1 1/2"			1.6	2.3	3.6	5.2	7.0	9.2	11.7	14.4	17.5											
	Angle				1.3	1.6	2.8	4.0	5.5	7.1	9.0	11.0	13.3											
A-100P2/A-102P2 213P2-100DS 213P2-30DS	Globe	2"								2.1	2.7	3.3	4.0	4.8	5.6	6.5	7.5							
	Angle										1.2	1.6	2.0	2.4	2.8	3.3	3.9	4.4						
A-100P3/A-102P3 213P3-100DS 213P3-30DS	Globe	3"														2.5	3.0	4.1	5.3	6.7	8.3	10.1		
	Angle																1.9	2.4	3.3	4.3	5.5	6.9	8.5	

- NOTES: (1) When designing a system, the industry standard for flow rate velocity through pipes and fittings is 5 Fps (2m/s).  
 (2) Pressure loss data is derived from valves independently tested by C.I.T., Fresno, CA.  
 (3) Hydraulic actuated valves vented to atmosphere will show lower pressure loss figures at low flows (HVC-Kit).  
 (4) Pressure regulating valves must operate in the recommended flow ranges – For the best pressure regulation the valves should be sized at the upper end of the flow range. ex: for 100 gpm the 1 1/2" valve should be specified instead of the 2" valve.

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