



# PAZ Plastic Series



## The new PAZ Plastic Series excels in:

- Outstanding high flow capacity – very low head loss
- Low operational pressure
- Regulating ability in a wide flow range from drip to maximal flow
- Simplicity in operation and maintenance
- Long lasting reliability

Consistent with Ooval's product development philosophy, PAZ series is produced of high quality materials - suitable for working conditions up to 10 bar.

**PAZ Series** is applicable for a broad range of flow and pressure control. The series is offered in a wide selection of connections – threaded, flanged, grooved and solvent welding.

# Main Plastic Valves Applications



## Manual

Opens and closes manually by a 3 way selector.



## Electric Control Valve

Valve opens or closes in response to an electric command using a 3 way solenoid.

Available models: 3 way normally closed, 3 way normally opened.



## Pressure Reducing

Maintains a constant downstream pressure regardless of upstream pressure or flow rate fluctuations. The set point of reduced pressure is adjustable by a 2-way or 3-way pilot valve. A spring-loaded diaphragm inside the pilot moves according to the downstream pressure changes. The pressure fluctuations are compensated by gradual opening and closing of the valve.



## Pressure Reducing with Electric Control

Maintains a constant downstream pressure regardless of upstream pressure or flow rate fluctuations. The set point of reduced pressure is adjustable by a 2-way or 3-way pilot valve. A spring-loaded diaphragm inside the pilot moves according to the downstream pressure changes. The pressure fluctuations are compensated by gradual opening and closing of the valve.

The added Solenoid enables the shut-off and opening of the valve by an electric signal from the controller.

# Main Plastic Valves Applications



## Pressure Reducing with Hydraulic Remote Control

Maintains a constant downstream pressure regardless of upstream pressure or flow rate fluctuations. The set point of reduced pressure is adjustable by a 2-way or 3-way pilot valve. A spring-loaded diaphragm inside the pilot moves according to the downstream pressure changes. The pressure fluctuations are compensated by gradual opening and closing of the valve.

The added hydraulic relay enables the opening and shut-off by hydraulic remote command.



## Pressure Sustaining with Electric Control

Maintains the minimum preset upstream pressure regardless of changes of pressure in the upstream or flow rate.

The solenoid enables electric control to open and close the valve by an electric signal from the controller.



## Pressure Reducing/Sustaining

The combined operation of the two pilots sustains a constant pressure upstream of the valve, and at the same time, reduces the downstream to a preset pressure. Both pilots have spring-loaded diaphragms. One pilot is sensitive to upstream pressure and the other to downstream pressure. The valve opens or closes gradually to maintain both required pressures simultaneously.



## Flow Rate Control Valve

The flow rate through the valve is determined indirectly using an orifice plate. Normally the valve is partially open to allow a preset constant flow rate. The pressure loss across the orifice is proportional to the actual flow rate. Upon increasing pressure loss, the valve is automatically piloted to close. When the pressure drops, the valve opens and the flow rate is maintained in spite of the line pressure fluctuations or the downstream demand.



## Main Plastic Valves Applications



### Float Level Control Valve

Used to maintain a preset water level in a reservoir or water tank. The line pressure activates the valve. The valve stays open as long as the water level in the reservoir is below a preset level. As the water level rises and floats the pilot's arm, the valve gradually closes.



### Electric Float Control Valve

The valve is a normally closed electric float control valve. A float hanging over the water surface at the desired height activates the electric circuit. When the water level drops below the float, the electric circuit is switched on and opens the valve through a solenoid valve. As the rising water reaches the float level, the circuit is disconnected and the valve closes.



### Pressure Reducing and 2 Stage Opening

Maintains a constant downstream pressure regardless of upstream pressure or flow rate fluctuations. The set point of reduced pressure is adjustable by a 2-way or 3-way pilot valve. A spring-loaded diaphragm inside the pilot moves according to the downstream pressure changes. The pressure fluctuations are compensated by the gradual opening and closing of the valve.

The added 2 stage opening control enables the prevention of rising pressure above the set point by filling the line gradually.

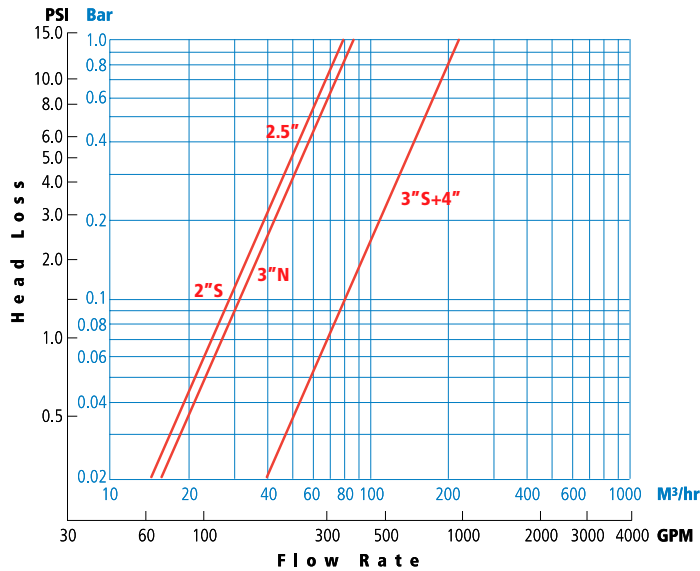


### Pressure Sustaining/Relief

Maintains the minimum preset upstream pressure regardless of changes of pressure in the downstream or flow rate. The pressure relief function releases excess flow in order to maintain the set point pressure.

# Technical Specifications

## Flow Chart

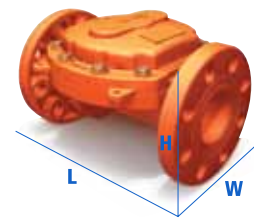


## Valve Specifications

<b>Body</b>	Reinforced Nylon
<b>Bonnet</b>	Same as above
<b>Diaphragm</b>	Natural Rubber
<b>Spring</b>	Stainless Steel
<b>Seat</b>	Acetal
<b>Bolts</b>	Steel Cobalt Coated

## Valve Dimensions

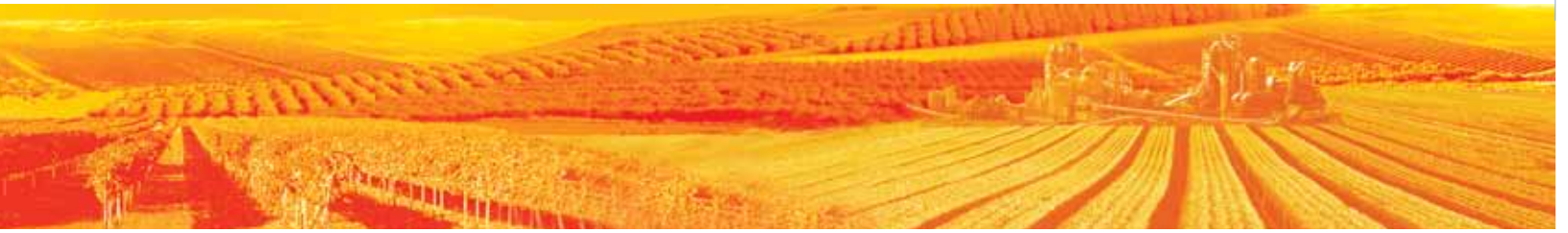
Size		Material	Connections	Length		Hight		Width		Weight	
Inch	mm			Inch	mm	Inch	mm	Inch	mm	lbs	kg
25	50	Reinforced-Nylon	Threaded	9.33	237	4.49	114	6.18	157	2.84	1.29
2.5	63	Reinforced-Nylon	Threaded	10.2	259	4.76	121	6.18	157	3.04	1.38
2.5	63	Reinforced-Nylon	Union PVC Ad.	12.99	330	4.76	121	6.18	157	4.01	1.82
3N	80	Reinforced-Nylon	Threaded	10.91	277	5.12	130	6.18	157	3.31	1.50
3N	80	Reinforced-Nylon	Flanged	11.14	283	7.80	198	7.80	198	5.59	2.54
3N	80	Reinforced-Nylon	Grooved	10.11	257	4.76	121	6.18	157	2.95	1.34
35	80	Reinforced-Nylon	Threaded	12.2	310	6.61	168	9.29	236	8.10	3.68
35	80	Reinforced-Nylon	Grooved	12.2	310	6.61	153	9.29	236	7.15	3.25
35	80	Reinforced-Nylon	Flanged	12.2	310	7.87	200	9.29	236	9.90	4.5
4	100	Reinforced-Nylon	Threaded	13.78	350	7.12	181	9.29	236	8.89	4.04
4	100	Reinforced-Nylon	Grooved	13.78	350	6.5	165	9.29	236	7.75	3.52
4	100	Reinforced-Nylon	Flanged	13.78	350	8.98	228	9.29	236	11.2	5.08



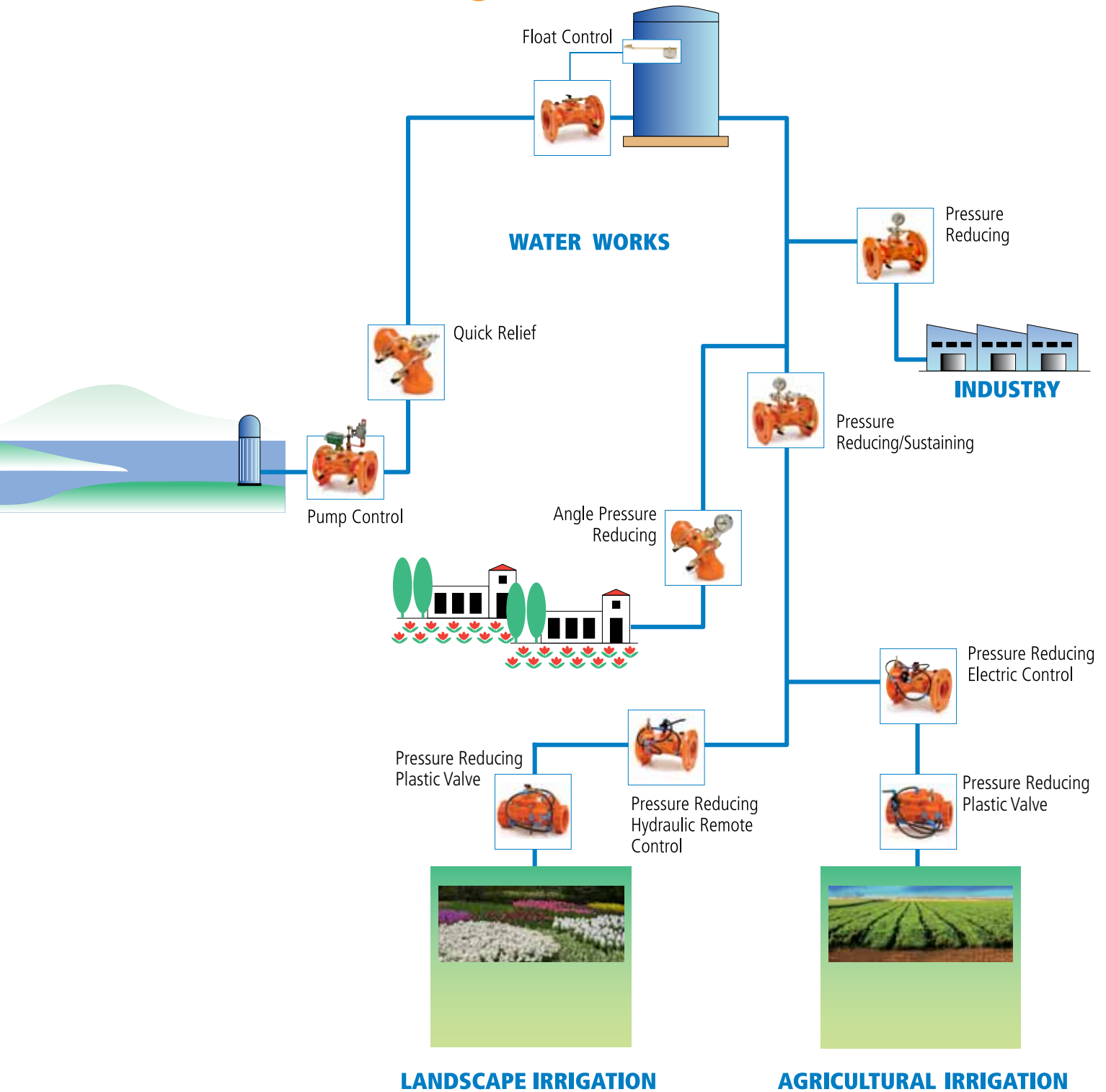
## Recommended Working Conditions

Nominal Diameter		Inlet Pressure, PSI & Bar				Flow Rate, GPM & (m³/h)				Fully Opened Valve	
Inch	mm	Minimum		Maximum		Minimum		Maximum		*Cv Factor	*Kv Factor
		PSI	Bar	PSI	Bar	GPM	(m³/h)	GPM	(m³/h)		
25"	50	6	0.4	145	10	2.2	0.5	175	40	110	89
2.5"	63	6	0.4	145	10	2.2	0.5	284	65	110	89
3N"	80	6	0.4	145	10	2.2	0.5	328	75	110	89
35"	80	6	0.4	145	10	2.2	0.5	460	105	307	260
4"	100	6	0.4	145	10	2.2	0.5	720	165	312	270

$Cv=Q/\sqrt{\Delta P}$  Where Q=Flow Rate (GPM),  $\Delta P$ =Head loss across the valve (PSI)  
 $Kv=Q/\sqrt{\Delta P}$  Where Q=Flow Rate (M³/h),  $\Delta P$ =Head loss across the valve (BARI)



# Water Works & Irrigation Solutions



P.O. Box 880  
Kiriati Malachi 83108 Israel  
Tel: +972 8 8601005  
Fax: +972 8 8601006  
E-mail info@ooval.com  
www.ooval.com