Eliptix by A.R.I.
Hydraulic Control Valves

Agriculture Hydraulic Control Valves

R-30 Diaphragm Valves | **PN10/16**

A.R.I.
OPTIMAL FLOW SOLUTIONS

Redefining Reliability

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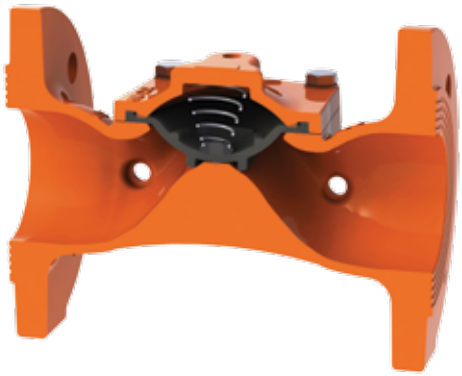
AGRICULTURE DIAPHRAGM VALVES [PN10/16]

R-30 Series

Accurate, Rapid, Reliable and Quiet



The A.R.I. R-30 Series is line of metal, diaphragm-operated hydraulic control valves.
The valves are suitable for installation in agriculture, water transmission and waterworks systems for irrigation, landscape and infrastructure applications.
The R-30 series has an innovative elliptic shaped diaphragm that integrates well with a wide variety of regulating control pilots, solenoids and control accessories.
They are compatibility designed for water level control, flow control, electric & remote control as well as pressure reducing & pressure sustaining operation.

- Excellent regulating capabilities for a wide range of flow rates from drip (500 l/h) up to maximum flow
- Operational from low pressure up to 16 bar
- Highly reliable operation and durable over time
- Quick-reaction operation
- Rapid response to changes in flow rate
- Designed to reduce cavitation damage
- Silent operation
- Low head losses
- Wide range of connections: Flanged, Threaded and Grooved
- Simple mechanism
- Easy inline maintenance
- User-friendly

Diaphragm Working Pressure

Diaphragm Model	Working Pressure
Low pressure	0.2 - 5 (bar)
Default	0.4 - 10 (bar)
High pressure	0.7 - 16 (bar)

* Other diaphragm materials available on request

About A.R.I.

A.R.I. is a leading manufacturer and provider of solutions for the protection and control of liquid transmission systems.
The company manufactures and markets its world renowned comprehensive line of air valves, check valves, and unmeasured flow reducers as well as exceptional performance hydraulic control valves. A.R.I. is known throughout the world for its expertise, service and uncompromising quality – A.R.I. Redefining Reliability

Control Valve Applications

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Product Range

R-30 R

Pressure Reducing Valve

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 reacts according to the downstream pressure changes. The pressure fluctuations are compensated by gradual opening and closing of the valve.

R-30 S

Pressure Sustaining/ Relief Valve

The pressure sustaining component maintains the minimum preset upstream pressure regardless of changes in the downstream pressure or in the flow rate. The pressure relief is a sustaining valve that releases excess flow from the system.

R-30 SR

Pressure Sustaining Reducing Valve

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.

R-30 E

Electric Control Valve

The electric valves are used for remote commands by solenoids in a normally opened or closed position and can operate in combination with all the hydraulic pilot applications.

R-30 L

Level Control Valve

The level control valves are used for a wide range of applications with a horizontal float valve, a vertical (differential) float valve with one or two setting levels or with an altitude P-36AL hydraulic pilot with adjustable settings, as well as with electric level sensors to match all different water reservoir needs.

R-30 Q

Quick Reacting Pressure Relief Valve

The valve opens instantly to high pressure readings, but closes slowly to protect the system against excessive pressure.

Control Pilot Valves

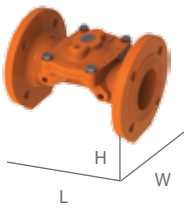
The A.R.I. series of control pilots offers a variety of pressure and flow regulating control pilots, suitable for working pressures from 0.3 bar to 16 bar. This wide range of pilots is suitable for two and three-way control circuits, either in metal or reinforced nylon. The A.R.I. series of control pilots are outstanding in their innovation, accuracy, reliability and simplicity.

Eliptix by A.R.I. Hydraulic Control Valves

Technical Information

Straight Valves

Size	End Connection	Dimensions (mm)			Weight (Kg)	Control Chamber Volume (ml)	Hydraulic Performance	
		Length	Width	Height			Working Pressure (bar)	Kv
1" (25 mm)	Threaded	128	78	55	0.9	22	0.7-16	24
1½"N (40 mm)	Threaded	140	78	70	1.2	22	0.7-16	34
1½"S (40-50-40 mm)	Threaded	176	126	82	2.7	68	0.4-16	60
2" (50 mm)	Threaded	185	126	96	2.8	68	0.4-16	95
3"R (80-50-80 mm)	Threaded	252	126	114	4.9	68	0.4-16	95
3"N (80 mm)	Threaded	254	161	128	6.4	200	0.4-16	137
3"N (80 mm)	Grooved	256	161	121	5.5	200	0.4-16	137
3"N (80 mm)	Flanged	254	200	200	13	200	0.4-16	137
3"S (80-100-80 mm)	Threaded	317	212	150	8	300	0.4-16	260
3"S (80-100-80 mm)	Flanged	254	212	200	17	300	0.4-16	260
4" (100 mm)	Grooved	305	212	147	12	300	0.4-16	270
4" (100 mm)	Flanged	305	220	220	20	300	0.4-16	270
6" (150 mm)	Grooved	436	300	212	24	1200	0.4-16	700
6" (150 mm)	Flanged	406	300	287	40	1200	0.4-16	700
8" (200 mm)	Flanged	521	343	350	47	1200	0.4-16	713
10" (250 mm)	Flanged	633	525	422	126	6900	0.4-16	1800
12" (300 mm)	Flanged	751	525	480	144	6900	0.4-16	2000
14" (350 mm)	Flanged	775	533	533	177	6900	0.4-16	2000
16" (400 mm)	Flanged	752	660	608	285	13800	0.4-16	3500



$K_v = Q/\sqrt{\Delta p}$ Where Q=Flow Rate (m^3/h), ΔP=Pressure loss across the valve (bar), when fully open

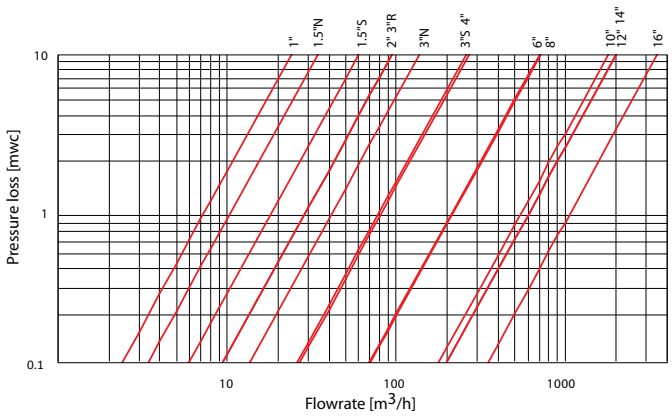
Angle Valves

Size	End Connection	Dimensions (mm)			Weight (Kg)	Control Chamber Volume (ml)	Hydraulic Performance	
		Length	Width	FTC			Working Pressure (bar)	Kv
2" (50 mm)	Threaded	158	126	118	2.9	68	0.4-16	90
3"R (80-50-80 mm)	Threaded	208	126	153	5.3	68	0.4-16	90
3"N (80 mm)	Threaded	234	161	175	6.9	200	0.4-16	187
3"N (80 mm)	Grooved	217	161	157	5.4	200	0.4-16	187
3"N (80 mm)	Flanged	254	200	154	12	200	0.4-16	187
3"S (80-100-80 mm)	Threaded	250	212	192	12	300	0.4-16	268
3"S (80-100-80 mm)	Flanged	263	212	163	17	300	0.4-16	268
4" (100 mm)	Grooved	242	212	181	11	300	0.4-16	291
4" (100 mm)	Flanged	298	220	188	20	300	0.4-16	291

FTC - Face To Center

$K_v = Q/\sqrt{\Delta p}$ Where Q=Flow Rate (m^3/h), ΔP=Pressure loss across the valve (bar), when fully open

Flow Charts for Straight Valves



Flow Charts for Angle Valves