

A.R.I. D-060 NS



Waterworks

Full-bore, Non-slam, Combination Air Valve

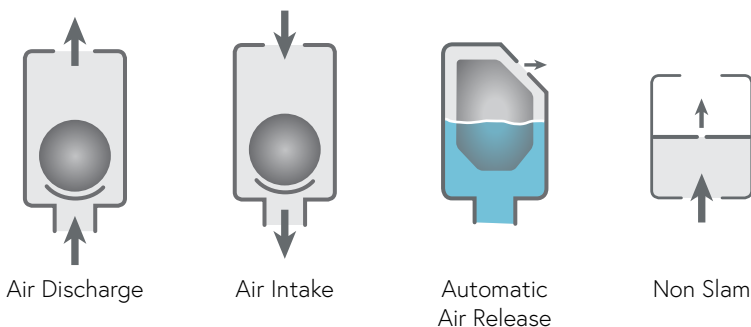
Description

A.R.I. D-060 NS (Non-slam) Series, is a full-bore, surge-dampening Combination Air Valve. Installed on liquid transmission systems, the Air Valve is designed to improve hydraulic operation by protecting the pipeline, increasing pipeline efficiency and reducing energy requirements. The Air Valve provides both high-capacity vacuum protection and efficient surge suppression.

Installation

- Pump stations: downstream of the pump and the check valve
- Downstream and upstream of shut-off valves
- Downstream of deep-well pumps
- On long constant-sloped pipeline segments
- At peaks along the pipeline and at peaks relative to hydraulic gradient
- Water pipelines with anticipated conditions of surge and water hammer
- Water pipelines where water column separation occurs
- Municipal and industrial water conveyance systems

Operation



Features and Benefits

Reliable operation	Reduces water hammer impact, saves energy and increases system efficiency
Dynamic design	No premature closure
Installation and maintenance	Easy to install and simple to maintain
Unique orifice seat / seal design	Long-term maintenance-free operation
Screen protected outlet	Prevents intrusion of insects and debris
All internal operating parts - specially selected materials	Non-corrosive and durable
Rolling seal	Leak-free sealing over a wide range of pressure differentials
Automatic air release orifice	High flow air release, lessens obstruction by debris
NS assembly located in a separate chamber	Easy maintenance, does not effect the function of the valve

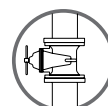
Technical Specifications

Size range	1" - 10" 2" - 8" (D-065 NS only)
Sealing pressure range	A.R.I. D-060 L NS 0.05 - 16 bar (PN16) A.R.I. D-060 NS 0.2 - 16 bar (PN16) A.R.I. D-060-C NS 0.2 - 16 bar (PN16) A.R.I. D-062 NS 0.2 - 25 bar (PN25) A.R.I. D-065 NS 0.2 - 40 bar (PN40)
Testing pressure	1.5 times maximum working pressure
Temperature	Maximum working temperature: 60° C. Maximum intermittent temperature: 90° C.
Valve coating	Fusion bonded epoxy coating in compliance with standard DIN 30677-2

Upon ordering, please specify: model, size, working pressure, thread / flange standard and type of liquid

The valve installed under the air valve must be fully open to prevent damage or malfunction and ensure performance within the specifications of the air valve.

For complete installation instructions, please refer to the IOM document.



Valve Selection Options

Models	A.R.I. D-060 NS A.R.I. D-060 C NS A.R.I. D-060 L NS A.R.I. D-062 NS A.R.I. D-065 NS
Valve connection	Threaded male BSPT/NPT (2") Flanged ends to meet various requested standard (2"-10")
Standard materials	Cast ductile iron body
Pressure rating	PN16 A.R.I. D-060 NS A.R.I. D-060 C NS A.R.I. D-060 L NS PN25 A.R.I. D-062 NS PN40 A.R.I. D-065 NS
Additional product configurations	SB Underground Air Valve System



A.R.I. D-060



A.R.I. D-060 L

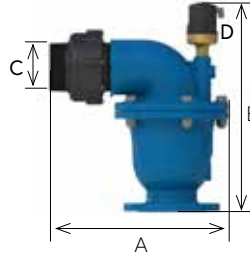


A.R.I. D-060-C
A.R.I. D-062



A.R.I. D-065

A.R.I. D-060 NS



NOTE
Dimension A in the picture and in the table shows the maximum product width. This width can be reduced by changing the cover direction. All product weights are approximate, due to the differences in flange standards, materials and variable accessories.

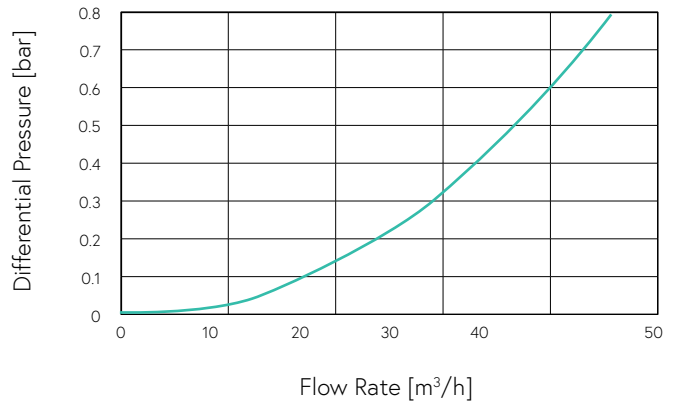
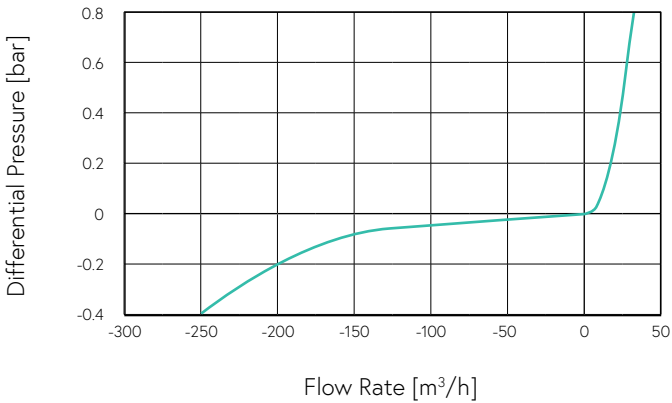
FL - Flanged THR - Threaded

Dimensions and Weight

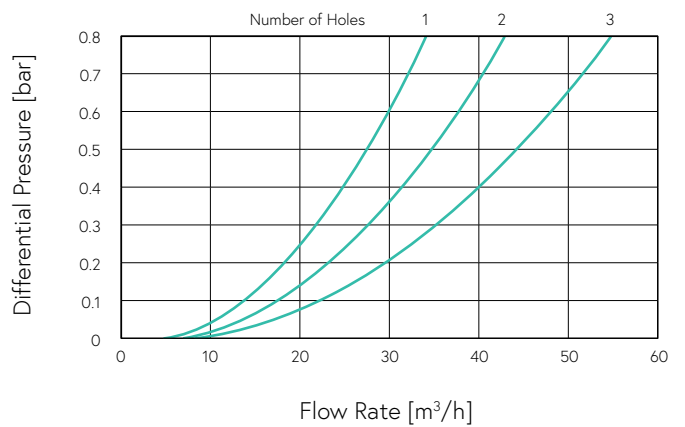
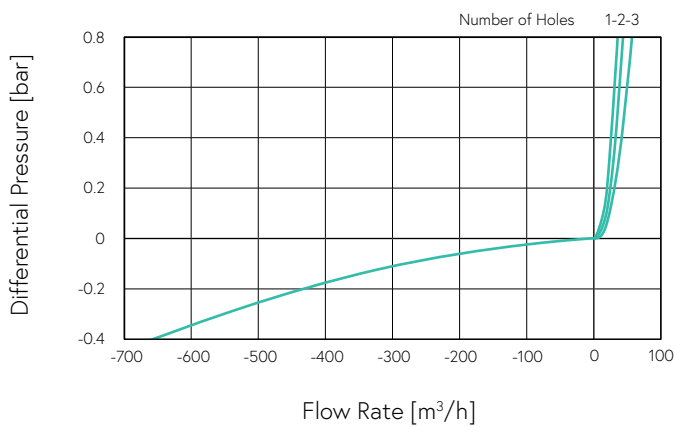
Model	Size	Dimensions (mm)		Connections		Weight (kg)	Orifice Area (mm ²)		
		max. A	B	C	D		A / V	Auto.	
D-060 NS									
Horizontal Outlet	1" (25mm) TRH	250	303	1½" Female	1/8" Female	4.4	507	12	
	2" (50mm) TRH	270	380	2" Female	1/8" Female	10.3	1960	12	
	2" (50mm) FL	270	367	2" Female	1/8" Female	12.7	1960	12	
	3" (80mm) FL	338	423	3" Female	1/8" Female	20.2	5030	12	
	4" (100mm) FL	404	480	4" Female	1/8" Female	31.5	7850	12	
Screen Cover	2" (50mm) TRH	215	367		1/8" Female	14	1960	12	
	2" (50mm) FL	215	350		1/8" Female	14	1960	12	
	3" (80mm) FL	249	422		1/8" Female	21	5030	12	
	4" (100mm) FL	286	465		1/8" Female	29	7850	12	
	6" (150mm) FL	375	689		1/8" Female	78	17662	12	
	8" (200mm) FL	463	849		1/8" Female	156	31400	12	
10" (250mm) FL	586	993		1/8" Female	291	49087	12		
D-060-C NS / D-062 NS								D-060-C NS	D-062 NS
Horizontal Outlet	1" (25mm) TRH	250	311	1½" Female	1/8" Female	5.3	507	12	9
	2" (50mm) TRH	270	388	2" Female	1/8" Female	11.3	1960	12	9
	2" (50mm) FL	270	375	2" Female	1/8" Female	13.7	1960	12	9
	3" (80mm) FL	338	431	3" Female	1/8" Female	21.7	5030	12	9
	4" (100mm) FL	404	488	4" Female	1/8" Female	32.5	7850	12	9
Screen Cover	2" (50mm) TRH	209	375		1/8" Female	15	1960	12	9
	2" (50mm) FL	209	362		1/8" Female	15	1960	12	9
	3" (80mm) FL	243	430		1/8" Female	22	5030	12	9
	4" (100mm) FL	280	473		1/8" Female	30	7850	12	9
	6" (150mm) FL	375	700		1/8" Female	93	17662	12	9
	8" (200mm) FL	463	800		1/8" Female	157	31400	12	9
10" (250mm) FL	586	987		1/8" Female	292	49087	12	9	
D-065 NS									
Horizontal Outlet	1" (25mm) TRH	312	452	1½" Female	1/2" BSP Female	9.3	507	15	
	2" (50mm) TRH	312	531	2" Female	1/2" BSP Female	15.3	1960	15	
	2" (50mm) FL	300	518	2" Female	1/2" BSP Female	17.3	1960	15	
	3" (80mm) FL	364	575	3" Female	1/2" BSP Female	24.7	5030	15	
	4" (100mm) FL	424	631	4" Female	1/2" BSP Female	36.5	7850	15	
Screen Cover	2" (50mm) TRH	246	519		1/2" BSP Female	15.3	1960	15	
	2" (50mm) FL	246	506		1/2" BSP Female	17	1960	15	
	3" (80mm) FL	280	572		1/2" BSP Female	25.5	5030	15	
	4" (100mm) FL	317	616		1/2" BSP Female	35	7850	15	
	6" (150mm) FL	382	774		1/2" BSP Female	95	17662	15	
	8" (200mm) FL	476	973		1/2" BSP Female	152	31400	15	

Flow Charts Horizontal Outlet Models

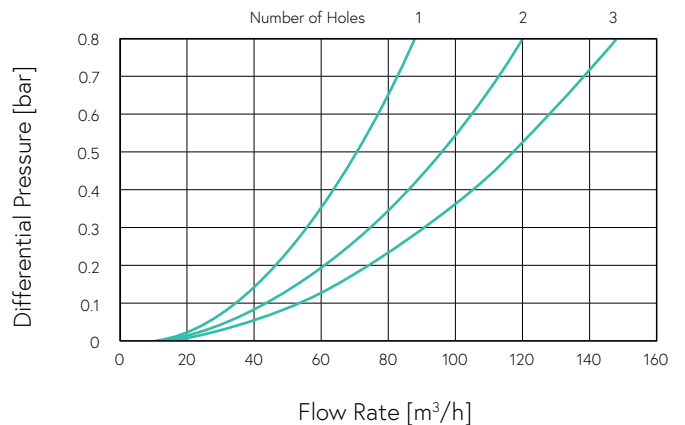
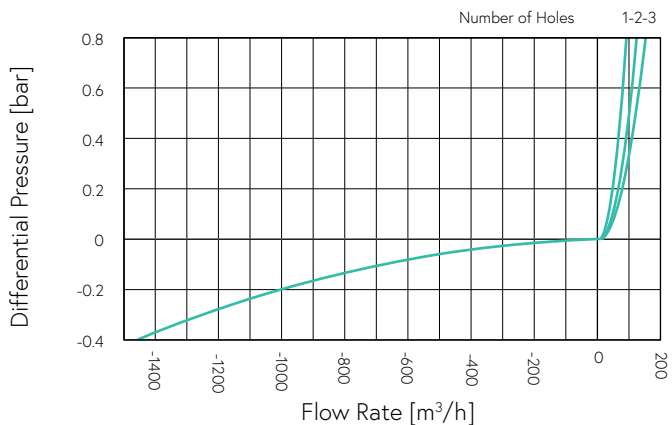
1" Adjustable NS Check Valve



2" Adjustable NS Check Valve

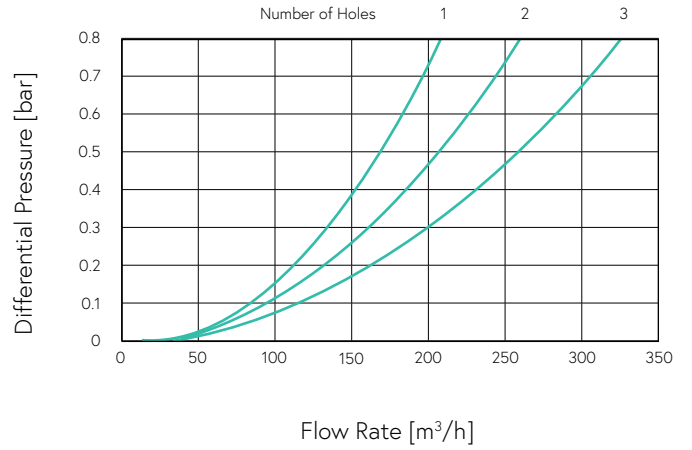
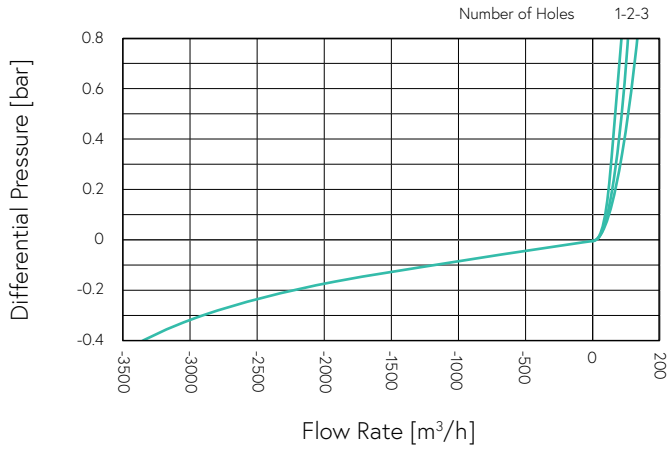


3" Adjustable NS Check Valve



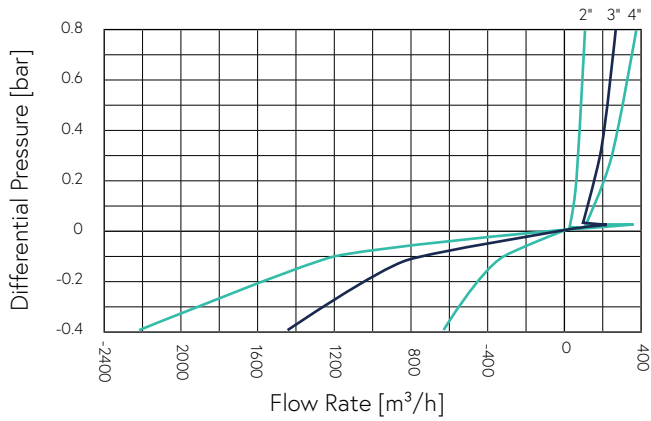
Flow Charts Horizontal Outlet Models

4" Adjustable NS Check Valve

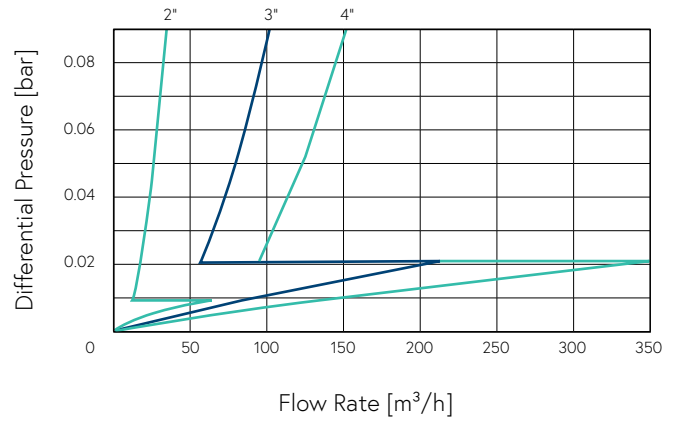


Flow Charts Screen Cover Models

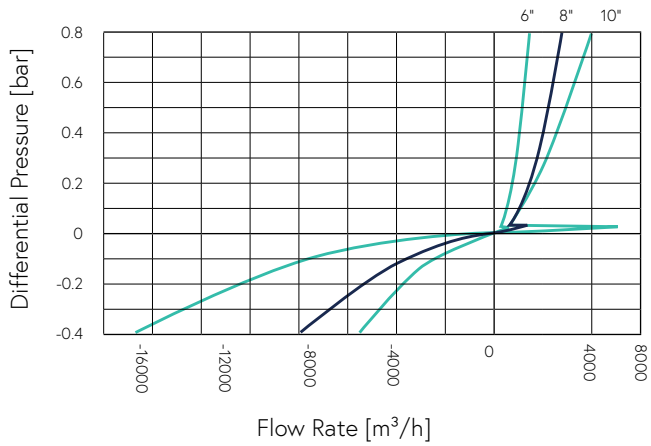
Air & Vacuum Flow Rate



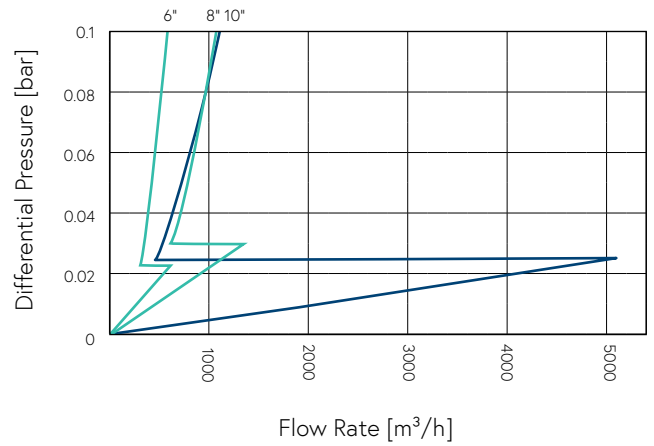
Air Discharge Switching Region



Air & Vacuum Flow Rate

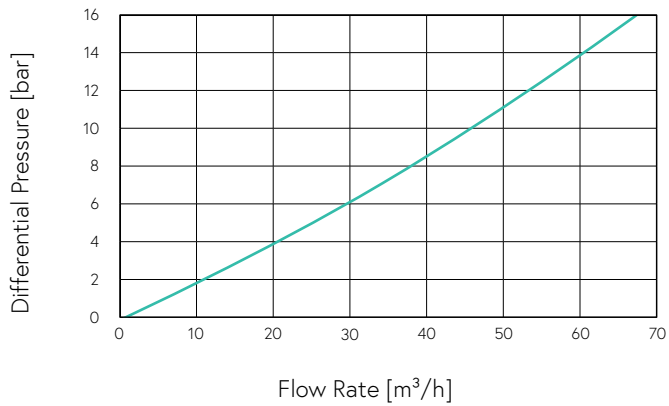


Air Discharge Switching Region

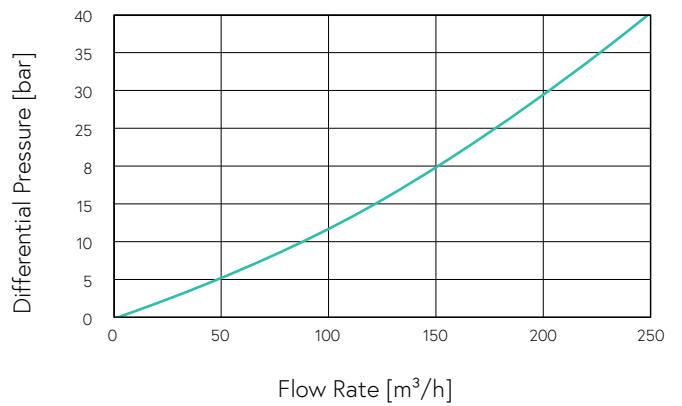


Flow Charts

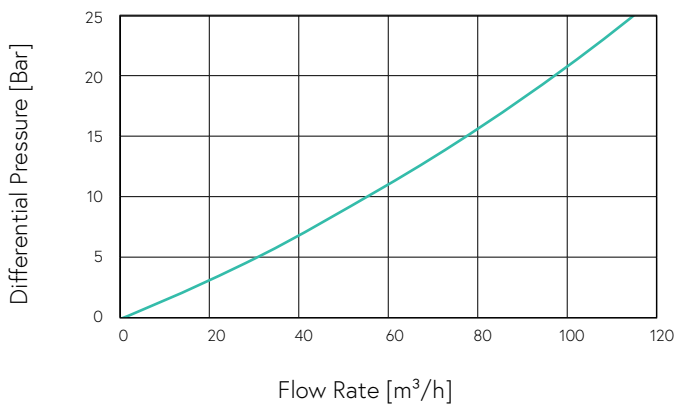
PN16 Automatic Air Release Flow Rate



PN40 Automatic Air Release Flow Rate



PN25 Automatic Air Release Flow Rate



Parts List and Specifications | 1" Horizontal Outlet Models

No.	Part	Material
1	Automatic Assembly Options	
	A.R.I. S-050	Brass, Reinforced Nylon, Polypropylene, EPDM
	A.R.I. S-050 L	Brass, Reinforced Nylon, Polypropylene, EPDM
	A.R.I. S-050 C	Ductile Iron, Brass, Reinforced Nylon, Polypropylene, EPDM
	A.R.I. S-052	Ductile Iron, Brass, Reinforced Nylon, Polypropylene, EPDM
	A.R.I. S-015	Ductile Iron, Brass, Reinforced Nylon, Polypropylene, EPDM
2	Cover Assembly	Materials
2a	Discharge Outlet	Polypropylene
2b	NS	Reinforced Nylon
2c	Cover	Ductile Iron
2d	Orifice Seat	Stainless Steel 316
2e	Orifice Seal	EPDM
3	Float	Polycarbonate/Stainless Steel SAE316
4	Body Assembly	
4a	O-ring	EPDM
4b	Bolts, Nuts & Washers	Steel Stainless Steel 316
4c	Body	Ductile Iron



Parts List and Specifications | 2"-4" Horizontal Outlet Models

No.	Part	Material
1	Automatic Assembly options	
	A.R.I. S-050	Brass, Reinforced Nylon, Polypropylene, EPDM
	A.R.I. S-050 L	Brass, Reinforced Nylon, Polypropylene, EPDM
	A.R.I. S-050 C	Ductile Iron, Brass, Reinforced Nylon, Polypropylene, EPDM
	A.R.I. S-052	Ductile Iron, Brass, Reinforced Nylon, Polypropylene, EPDM
	A.R.I. S-015	Ductile Iron, Reinforced Nylon, Polypropylene, Stainless Steel 316, EPDM
2	Cover Assembly	
2a	Cover	Ductile Iron
2b	Orifice Seat	Stainless Steel 316
2c	Orifice Seal	EPDM
3	Float	Polycarbonate / Stainless Steel 316
4	Body Assembly	
4a	O-ring	EPDM
4b	Bolts, Nuts & Washers	Steel/Stainless Steel 316
4c	Body	Ductile Iron
5	Non Slam Assy. 2"-6"	Polypropylene / Reinforced Nylon



Parts List and Specifications | 2"-10" Screen Cover Models

No.	Part	Material
1 Automatic Assembly Options		
	A.R.I. S-050	Brass, Reinforced Nylon, Polypropylene, EPDM
	A.R.I. S-050 L	Brass, Reinforced Nylon, Polypropylene, EPDM
	A.R.I. S-050 C	Ductile Iron, Brass, Reinforced Nylon, Polypropylene, EPDM
	A.R.I. S-052	Ductile Iron, Brass, Reinforced Nylon, Polypropylene, EPDM
	A.R.I. S-015	Ductile Iron, Reinforced Nylon, Polypropylene, Stainless Steel 316, EPDM
2 Cover Assembly		
2a	Screen Cover	Polypropylene/Ductile Iron
2b	Screen	Stainless Steel 316
2c	Bolts, Nuts & Washers	Stainless Steel 316
2d	Locking Ring	Stainless Steel 316
2e	Non Slam Disc Assy.	Stainless Steel 316
2f	Cover	Ductile Iron
2g	Orifice Seat	Stainless Steel 316
2h	Orifice Seal	EPDM
3 Float		
3a	Float	Polycarbonate/Stainless Steel SAE316
4 Body Assembly		
4a	O-ring	EPDM
4b	Bolts, Nuts & Washers	Steel/Stainless Steel 316
4c	Body	Ductile Iron

