

# A.R.I. S-020 HC



Wastewater

## High Capacity Automatic Air Release Valve

### Description

The S-020, 022, 024 HC are high capacity automatic air release valves installed on pressurized wastewater transmission systems to release accumulated air, improving pipeline hydraulic efficiency by reducing head losses and improving flow. A continuous air gap in the valve body separates the wastewater from the sealing mechanism.

### Installation

- Pump stations for sewage, wastewater & water treatment plants
- Wastewater and effluent water transmission lines

### Operation



Automatic  
Air Release



One Way out

## Features and Benefits

Conical body shape & unique design	maximum air gap / minimum body length
Continuous air gap	separates the liquid from the sealing mechanism
Float assembly and sealing mechanism linkage	free movement, turbulence will not unseat the sealing mechanism
Large orifice area	high capacity air release
Funnel-shaped lower body	residue matter falls back into the system pipeline
Rolling Seal	leak-free sealing over wide range of pressure differentials
One-size orifice	covers a wide pressure range (up to 40 bar)
All internal parts - stainless steel 316, polymer, rubber materials	non-corrosive and durable
Ball valve	releases pressure and drains valve prior to maintenance

## Technical Specifications

Size Range	2" - 4"									
Sealing pressure range	<table border="0"> <tr> <td>S-020 HC</td> <td>0.05 - 16 bar</td> <td>(PN 16)</td> </tr> <tr> <td>S-022 HC</td> <td>0.05 - 25 bar</td> <td>(PN 25)</td> </tr> <tr> <td>S-024 HC</td> <td>0.05 - 40 bar</td> <td>(PN 40)</td> </tr> </table> Testing pressure: 1.5 times maximum working pressure	S-020 HC	0.05 - 16 bar	(PN 16)	S-022 HC	0.05 - 25 bar	(PN 25)	S-024 HC	0.05 - 40 bar	(PN 40)
S-020 HC	0.05 - 16 bar	(PN 16)								
S-022 HC	0.05 - 25 bar	(PN 25)								
S-024 HC	0.05 - 40 bar	(PN 40)								
Temperature	Maximum working temperature: 60° C Maximum intermittent temperature: 90° C									
Valve coating	Fusion bonded epoxy coating in compliance with standard DIN 30677-2									

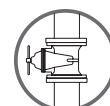
Upon ordering, please specify: model, size, working pressure, thread / flange standard and type of liquid

## Valve Selection Options

- 2" valve connections: threaded BSP /NPT or flanged
- Flanged ends to meet any requested standard
- Welded / casted bodies: steel or stainless steel
- Valve coating: Fusion bonded epoxy coating in compliance with standard DIN 30677-2  
Other coatings are available upon request
- Optional Add-on Component:  
One-way, Out-only attachment, allows for air discharge only, prevents air intake

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.

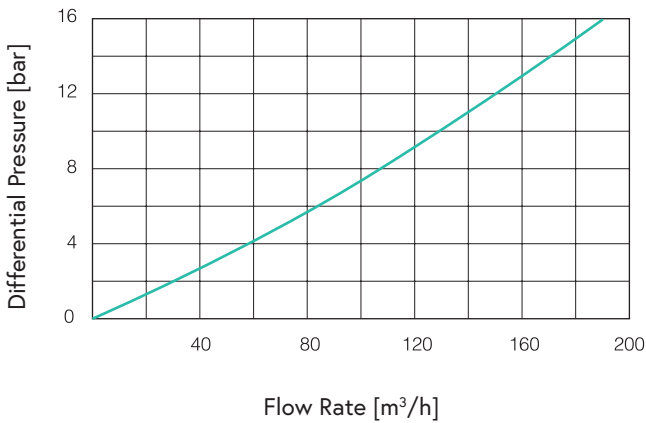
For complete installation instructions, please refer to the IOM document.



## Flow Charts

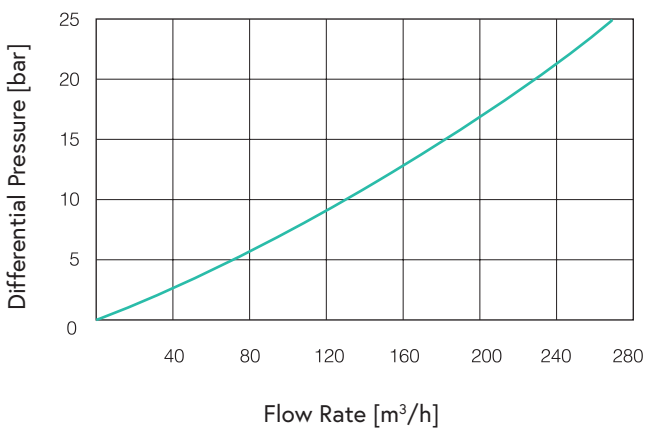
### S-020 HC PN 16

Automatic Air Release Flow Rate



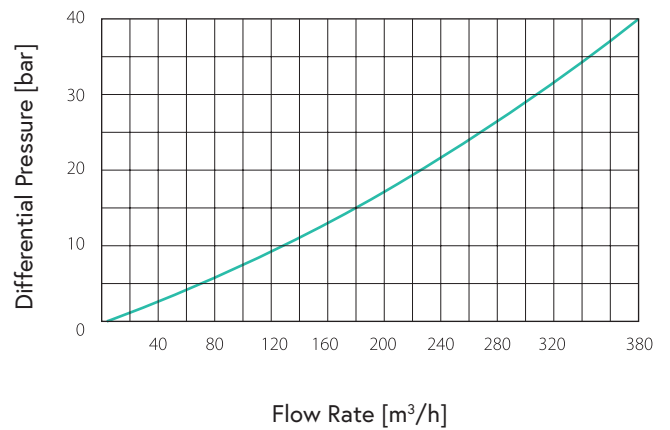
### S-022 HC PN 25

Automatic Air Release Flow Rate



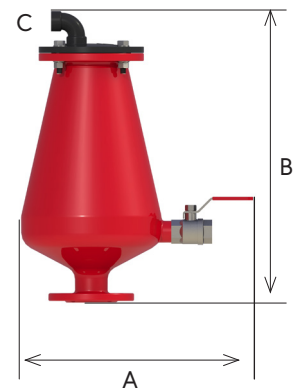
### S-024 HC PN 40

Automatic Air Release Flow Rate



## Dimensions and Weight

Size	Dimensions (mm)		Connections	Weight (kg)	Orifice Area (mm <sup>2</sup> )
	A	B	C		
2" (50 mm) THR	271	603	1"	16	40
2" (50 mm) FL	271	603	1"	16.5	40
3" (80 mm) THR	271	603	1"	16.7	40
3" (80 mm) FL	271	603	1"	16.7	40
4" (100 mm) FL	271	603	1"	17.2	40



THR - Threaded  
FL - Flanged

### NOTE

All product weights and dimensions are approximate, due to the differences in flange standards, materials and variable accessories.

## Parts List and Specification

Part	Material
<b>1. Cover Assembly</b>	
1a. Air Release Elbow	Polypropylene
1b. Cover	Reinforced Nylon / Steel Din St.37
<b>2. Seal Assembly</b>	
2a. Air Release Orifice	Reinforced Nylon
2b. Lever	Reinforced Nylon
2c. Rolling Seal	EPDM
<b>3. Float Assembly</b>	
3a. Nut & Washer	Stainless Steel 316
3b. Spring	Stainless Steel 316
3c. Float & Rod	Polypropylene / Stainless Steel 316 & Stainless Steel 316
<b>4. Body Assembly</b>	
4a. O-Ring	BUNA-N
4b. Body	Cast Steel
4c. Ball Valve	Brass, Chrome Coated / Stainless Steel 316

