

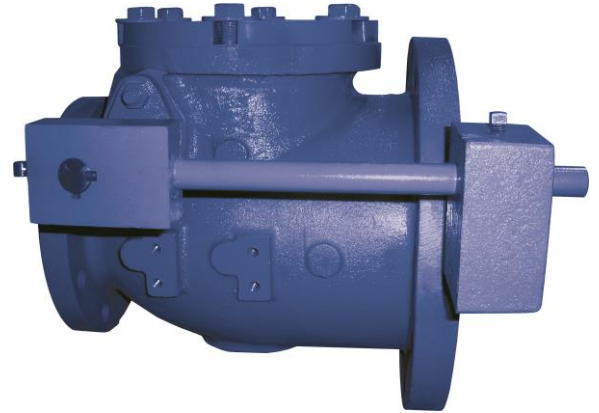
# Figure 221-DS, 222-DS Increasing Size Lever & Weight Swing Check Valve

## Description

VAG/GA Industries Figures 221-DS and 222-DS are heavy duty, customizable swing check valves that utilize an adjustable counterweight assisted closure to minimize slam and hammer. In addition, the valve's outlet connection is expanded one or two sizes larger than the inlet connection which can eliminate the need for an increaser fitting on the pump discharge.

Normally installed in the discharge of a pump to prevent backflow when the pump is off line, it opens smoothly at pump start and closes quickly and quietly upon pump shutdown.

Figures 221-DS and 222-DS meet the design, materials of construction and testing required by AWWA C508 and is suitable for use with water or sewage.



## Product Features

- Heavy duty construction withstands rigors of pump station operation
- Expanded outlet connection can eliminate need for increaser fitting
- Full flow area when swung only 25° away from seat for low head loss and reduced pumping cost
- Replaceable rubber disc seat for tight seating at low and high pressure
- Lever & weight field convertible right hand to left hand side, and from horizontal to vertical installation

## Standard Materials

- Body & Disc Cast Iron, ASTM A126 Class B
- Cover Steel, ASTM A36
- Body Seat Stainless Steel, Type 316
- Disc Seat Buna-N
- Hinge Shaft Stainless Steel, Type 303
- External Fasteners Steel, A307, Zinc Plated

## Corrosion Protection

- Standard: Uncoated Internal, Enamel Primer External

See Option P2 and P3 for upgraded corrosion protection packages

## Approvals & Certifications

- NSF-61 Certified for Contact with Drinking Water
- NSF-372 Certified Lead Free (Max 0.25% Lead Content by Weighted Average)

## Options

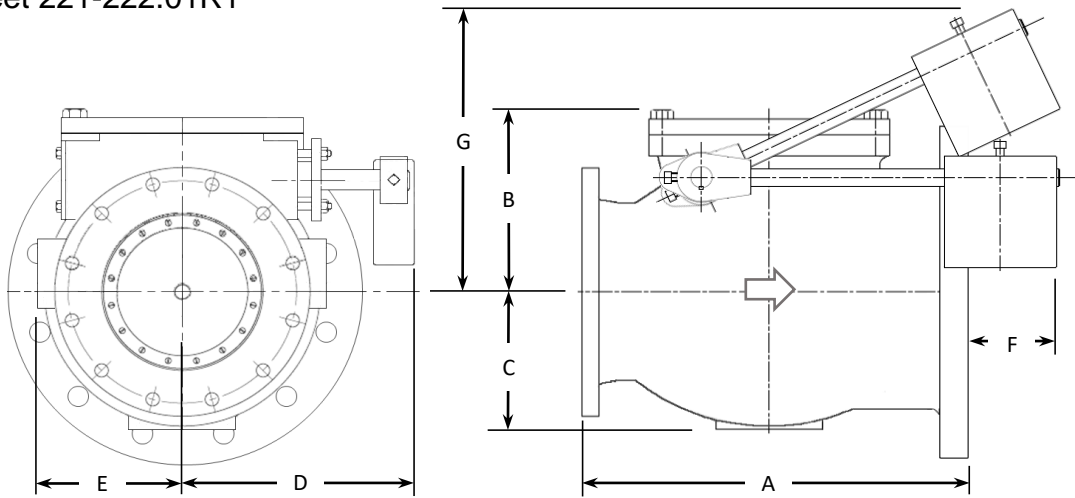
- Option P2: Minimum 6 mil Internal and External 2-Part NSF-61 Carboline 891 Epoxy and 316 SS External Fasteners
- Option P3: Minimum 6 mil Internal and External 2-Part NSF-61 Carboline 891 Epoxy, 316 SS Hinge Shaft and External Fasteners
- Option 1D: With Honeywell HDLS NEMA 1, 3, 4, 4X, 6, 6P, 12 & 13 DPDT Limit Switch
- Option LH: With Lever & Weight Factory Installed on Left Side Facing Inlet
- Option VI: Configured for Vertical Installation (Flow Up)

## Ordering Data

- Figure Number (221-DS or 222-DS)
- Size
- Options and/or Accessories

Non-Shock Working Water Pressure at up to 150F (66C)		
Figure No.	221-DS Single Increasing	222-DS Double Increasing
Size (Inlet x Outlet) Inlet is Nominal Valve Size	3" x 4" 4" x 6" 8" x 10" 10" x 12"	4" x 8" 6" x 10" 8" x 12"
Flange	ANSI B16.1 Class 125	
Max Working Pressure	200 PSI	
Shell Test	400 PSI	

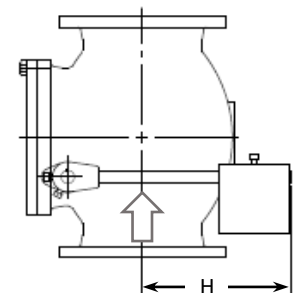
Data Sheet 221-222.01R1



### Installation Dimensions

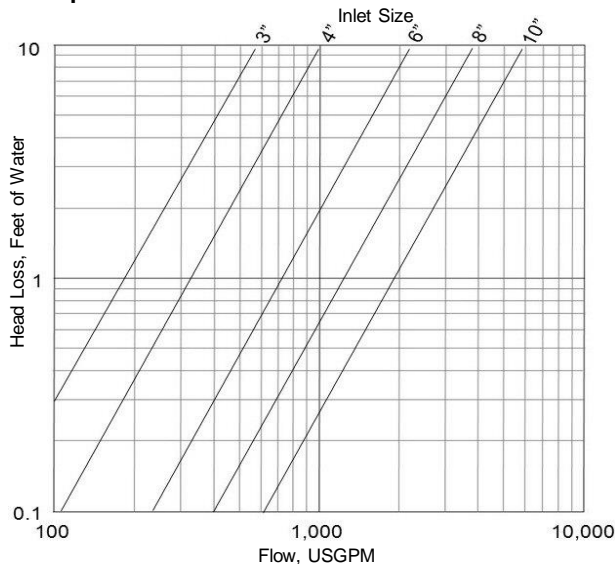
	FIGURE 221-DS SINGLE INCREASING					FIGURE 222-DS DOUBLE INCREASING		
	3" x 4"	4" x 6"	6" x 8"	8" x 10"	10" x 12"	4" x 8"	6" x 10"	8" x 12"
A	12	13	17½	18	23	13½	18⅞	22¼
B	7	8½	9	12	14	8½	9	12
C	5	5	6	9	9	5	6	9
D	10	11	12	14	15	11	12	14
E	5	5	7	8	9	5	7	8
F	5	5	3	3	--	4½	1⅝	--
G	15	16	19	21	23	16	19	21
H	9¼	8½	10⅝	9	9	8½	10⅝	9
WGT	120	175	250	350	525	180	270	390

VERTICAL INSTALLATION



- Size is Inlet x Expanded Outlet
- Dimension G is valve fully open. Dimensions F and H are valve fully closed.
- Dimensions in inches, weight in pounds and are approximate. Request certified drawings if critical.

### Full Open Head Loss



Revised 4-5-19