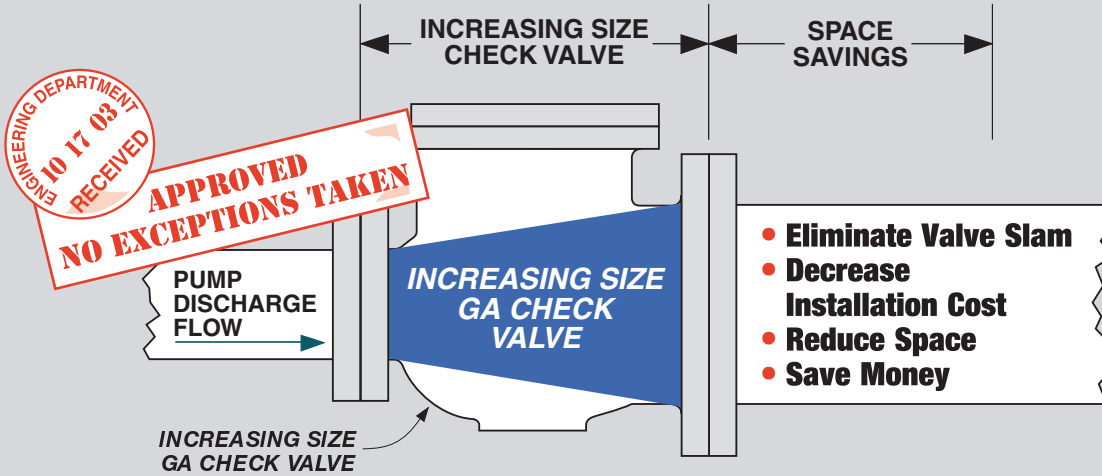


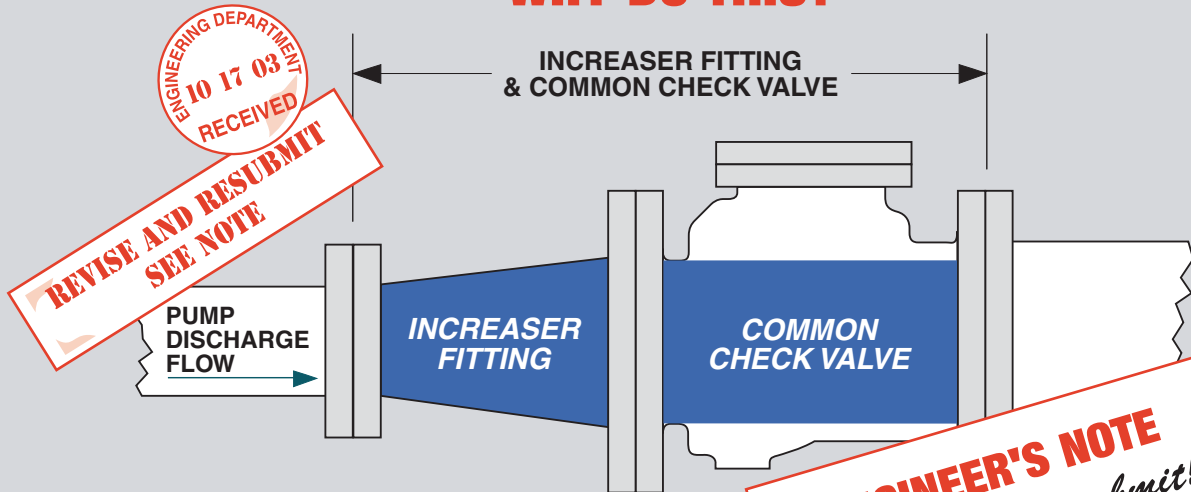
GOLDEN-ANDERSON[®]

INCREASING SIZE CUSHIONED SWING CHECK VALVES

YOU CAN DO THIS!



WHY DO THIS?



ENGINEER'S NOTE
 Revise and Resubmit!
 Eliminate the increaser fitting and replace common check valve with GA Industries Increasing Size Check Valve. MC

GA Industries Inc.

GA Industries Inc.



MANUFACTURERS OF GOLDEN ANDERSON[®] VALVES

Made in the U.S.A.
Bulletin 251-I

fittings, **DECREASE INSTALLATION COSTS** and **REDUCE SPACE** in the pump station, perhaps arrange for a smaller overall building or pump station and **SAVE MONEY**.

The increasing midsection provides full port area for minimum headloss and decreased pumping costs.

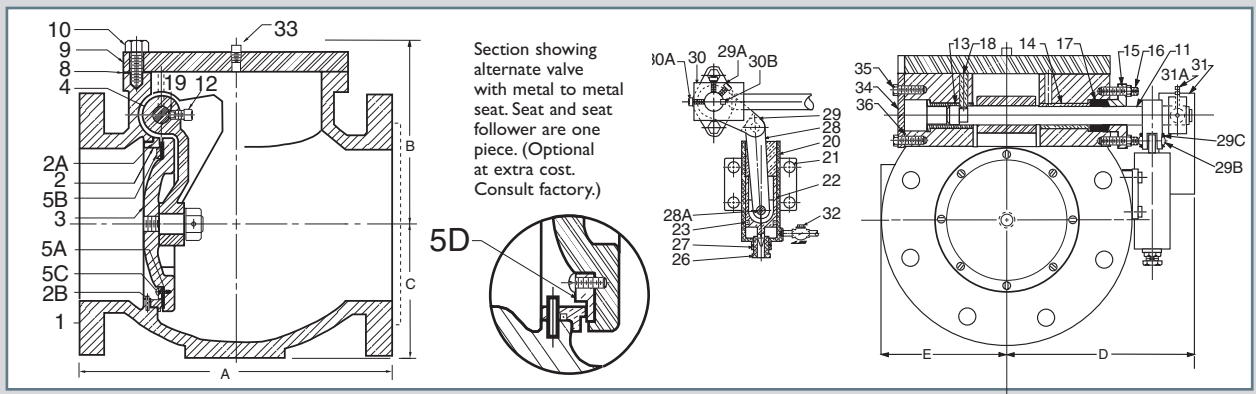
The special configuration of the body and disc along with the external weight and cushion chamber enable the valve to close quietly without a slam.

Resilient faced disc and stainless steel body seat provide drop tight shutoff and superior corrosion resistance.

Adjustable shaft packing reduces maintenance time.

- **Eliminate Valve Slam**
- **Decrease Installation Cost**
 - **Reduce Space**
 - **Save Money**

INCREASING SIZE CUSHIONED SWING CHECK VALVES



LIST OF PARTS

- | | | | |
|-----------------------|-------------------------|----------------------|--------------------------|
| 1. Body | 6B. Disc Nut Pin | 19. Disc Arm Key | 29C. Lever Cotter Pin |
| 2. Body Seat | 8. Cover Gasket | 20. Cushion Chamber | 30. Counterweight Arm |
| 2A. Seat O-Ring | 9. Cover | 21. Chamber Screw | 30A. CVVT Arm Set Screws |
| 2B. Seat Pins | 10. Cover Bolts | 22. Plunger | 30B. CWT Arm Key |
| 3. Disc & Center Pin | 11. Shaft | 23. Plunger-O-Ring | 31. Counterweight |
| 4. Disc Arm | 12. Disc Arm Set Screws | 26. Adjusting Sleeve | 31A. CWT Set Screw |
| 5A. Renewable Seat | 13. Inner Bushing | 27. Sleeve Lock Nut | 32. Check Valve |
| 5B. Seat Follower | 14. Outer Bushing | 28. Link | 33. Cover Plug |
| 5C. Seat Screws | 15. Gland | 28A. Link Pin | 34. Shaft End Plate |
| 5D. Metal Seat Washer | 16. Gland Studs | 29. Lever | 35. End Plate Bolts |
| 6. Disc Nut | 17. Gland Packing | 29A. Lever Set Screw | 36. End Plate Seal |
| 6A. Disc Nut Washer | 18. Shaft Lock Pin | 29B. Lever Pin | |

GENERAL DIMENSIONS - Inches & Millimeters

Figure 251 : Single Increasing Valve

VALVE SIZE	IN	3 X 4	4 X 6	6 X 8	8 X 10	10 X 12
	MM	76 X 101	101 X 152	152 X 203	203 X 254	254 X 304
A	IN	12	13	17 1/2	18	23
	MM	305	330	445	457	584
B	IN	7	8 1/2	9	12	14
	MM	178	216	229	305	356
C	IN	5	6	7	9	9
	MM	127	153	177	229	229
D	IN	10	11	12	14	15
	MM	254	279	305	356	381
E	IN	5	5	7	8	9
	MM	127	127	178	203	229
Shipping Weight	LBS	120	175	250	350	525
	KGS	54	79	113	158	238

The single increasing valve has an outlet flange on nominal pipe size larger than the inlet flange.

Figure 252 : Double Increasing Valve

VALVE SIZE	IN	3 X 6	4 X 8	6 X 10	8 X 12	10 X 14
	MM	76 X 152	101 X 203	152 X 254	203 X 304	254 X 356
A	IN	13	13 1/2	18 7/8	22 1/4	25 1/4
	MM	330	343	479	565	641
B	IN	7	8 1/2	9	12	14
	MM	178	216	229	305	356
C	IN	4 1/2	5 1/2	7	8	10
	MM	115	140	178	203	254
D	IN	10	11	12	14	15
	MM	254	279	305	356	381
E	IN	5	5	7	8	9
	MM	127	127	178	203	229
Shipping Weight	LBS	145	180	270	390	595
	KGS	66	82	122	177	270

The double increasing valve has an outlet flange two nominal pipe sizes larger than the inlet flange.

MATERIALS OF CONSTRUCTION

PRINT	MATERIAL	ASTM or SAE	PRINT	MATERIAL	ASTM or SAE
Body, Cover, Disc, Levers, Disc Arm	Cast Iron or Cast Steel	A 126 C1.B. A 216 C1. WCB	Hinge Shaft	Stainless Steel	Type 303 Commercial
Body Seat	Stainless Steel (to 12") Bronze (14" up)	A 157-C9 (STD) B62 (Standard)	Studs, Bolts, Nuts	Steel	Commercial
Seat Ring	Rubber Metal	80 Dur. (Rubber) Bronze/Stainless Steel	Cushion Chamber Assembly	Bronze Trim	B62
Cover Gasket	Composition	Garlock 660	Stuffing Box Packing	Composition	Garlock 234 or equal.

NOTES:

- Smaller flange size is always the inlet, larger flange size is the outlet.
- Flanges per ANSI B16.1 are standard.

- Please consult factory for larger sizes or optional equipment such as limit switches, rubber coatings, special materials, special flanges, higher pressures, etc.

SPECIFICATIONS

The increasing size cushioned swing check valve shall be constructed with heavy-duty cast iron body, stainless steel body seat ring, resilient faced disc, stainless steel shaft for attachment of weight and lever, and bronze cushion chamber.

It shall absolutely prevent return of fluid back through the valve when the inlet pressure decreases below the delivery pressure. The valve must be tight seating and must operate without hammer or check. The seat ring must be renewable.

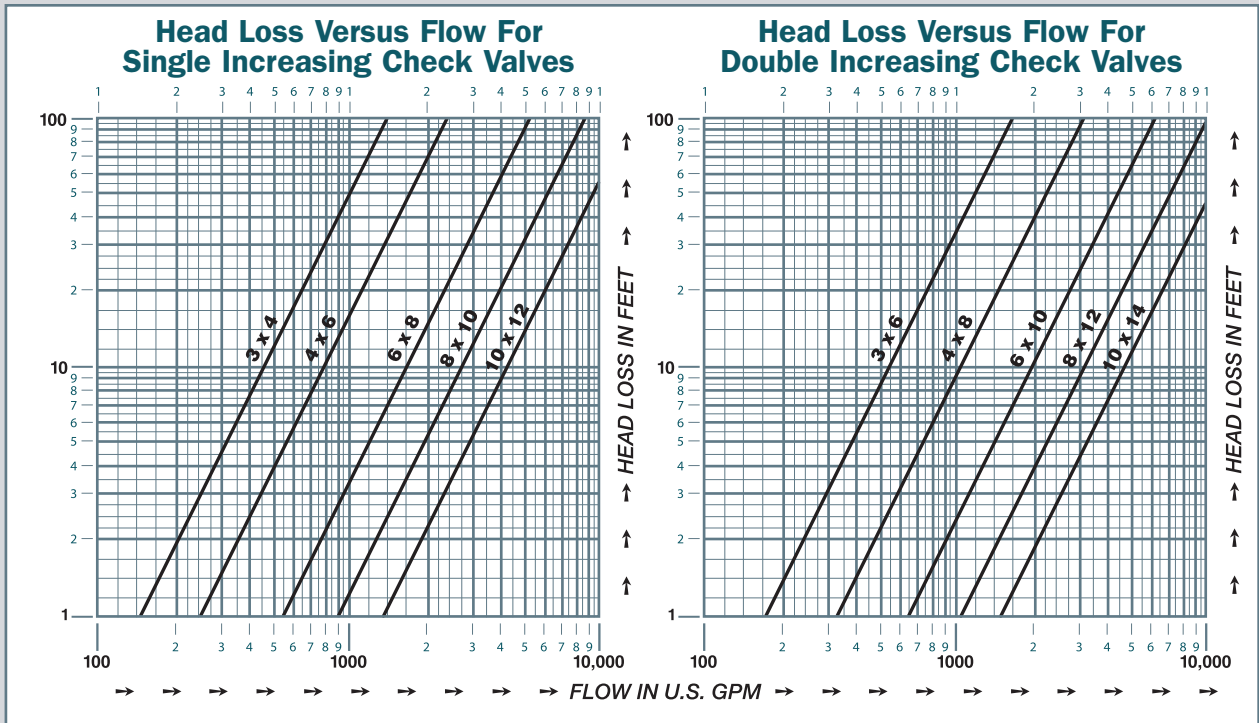
The air cushion chamber shall be attached to the side of the valve body externally and so constructed with a piston operating in the chamber that will effectively permit the valve to be operated without any hammering action. The cushion chamber shall be so arranged that the final increment of closing will be adjustable to meet the service requirements.

The valve disc shall be of cast iron and shall be suspended from a stainless steel shaft which will pass through an adjustable packing gland and be connected to the cushion chamber on the outside of the valve.

The valve body shall be of the increasing design and shall have an integrally cast outlet flange larger than the inlet flange. Flange adapters or separate increasers are not permitted.

All material and workmanship shall be first class throughout and the purchaser reserves the right to inspect this valve before shipment.

The valve will be a GA Industries Figure 251-D single increasing or Figure 252-D double increasing cushioned swing check valve.



We recommended the Increasing Cushioned Swing Check Valve for use on all pumps including Variable Speed or Frequency Drive Pumps.

- Automatically responds to varying pump output.
- Closes quickly and quietly on power outage or pump failure.
- Positively protects system against backflow.
- No outside power source required for operation.
- Ideal for sewage lift station applications.



OUR GUARANTEE

We guarantee these valves to be made of first grade materials and workmanship. Should any valve fail to operate satisfactorily from lack of either or both of these factors, we will accept return of the valve F.O.B. our plant and refund the purchase price. Any part of the valve which fails due to poor quality within one year of shipment from our plant will be replaced without charge. This is not meant to include labor cost of installing the part in the valve.

We reserve the right to substitute materials which, in our opinion, are of equal or superior quality, in the construction of any valve for a particular application.

GA Industries Inc.

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