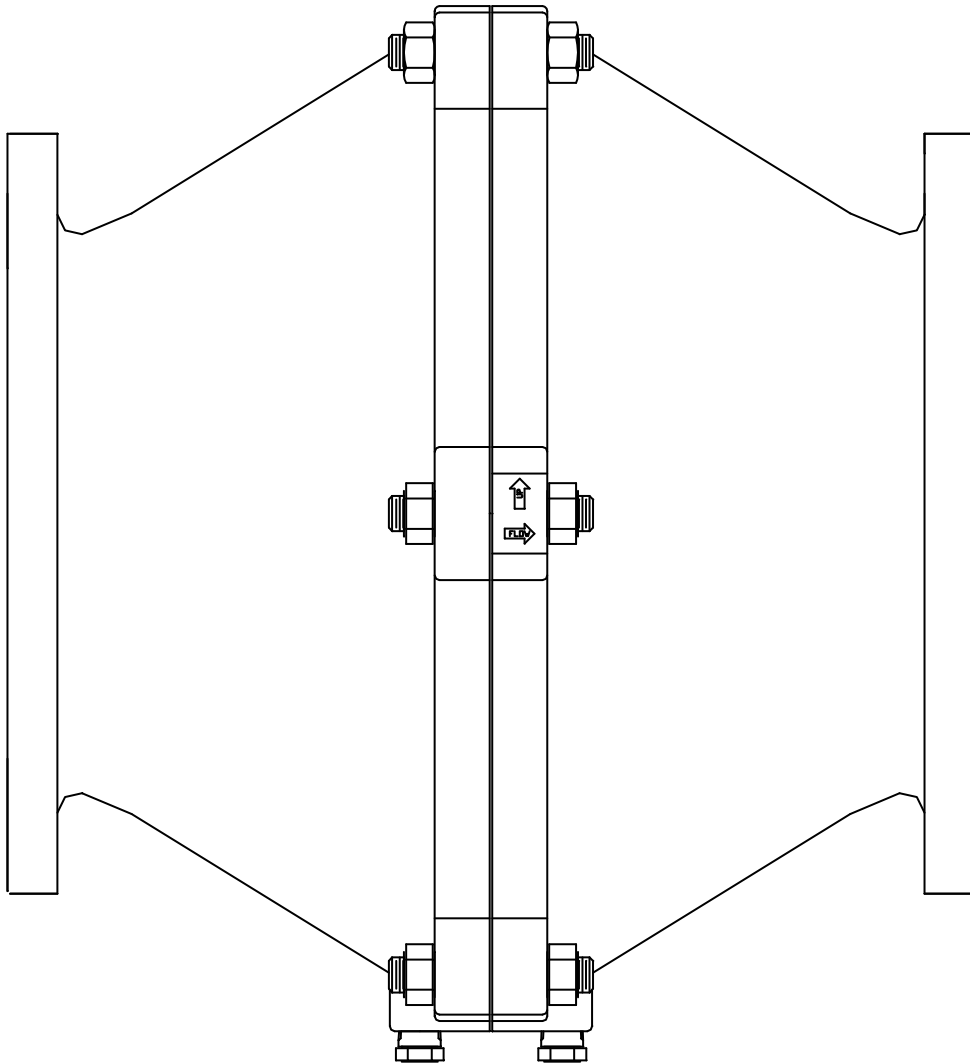

INSTALLATION, OPERATION AND MAINTENANCE
GROTH MODEL 8110
10" & 12" BACK PRESSURE CHECK VALVE



IOM 8110L.0
September, 1999



GENERAL:

The Groth Model 8110 is a swing check valve utilizing a single disk which allows flow in one direction. In the event that the downstream pressure is higher than the inlet pressure, the higher back pressure will hold the disk in the closed position. If bubble tight shut-off is required, an elastomer seat must be specified.

INSTALLATION:

The Model 8110 must be installed upright with its axis horizontal to achieve the rated flow capacity with minimal pressure drop. A tag on the valve body indicates flow direction and the upright position. Proper orientation is also important so the drain ports can be used to remove condensation from the housings.

Align and install adjacent piping so that no undue stress is imposed on the valve body. Refer to tables 1 & 2 for gasket and bolt torque recommendations. Excessive bolt torque may damage aluminum flanges.

Table 1 Body Flange Gasket Dimensions					
150# ANSI Flange	O.D.	I.D.	B.C.	Hole	Qty
10" RF	13.38"	10.80"	---	---	---
12" RF	16.12"	12.80"	---	---	---
10" FF	16.00"	10.00"	14.25"	1.00"	12
12" FF	19.00"	12.00"	17.00"	1.00"	12

* RF = Raised Face , FF = Flat Face

Table 2 Recommended Minimum Torque Values				
Size	Qty Holes	Bolt (UNC)	Torque (lb-ft)	
			RF	FF
10"	12	7/8" - 9	75	138
12"	12	7/8" - 9	93	179

*Note : Torque values are based on gasket factors
 $m = 3.5$, $y = 4000$ psi, operating pressure = 30 psi

Note: Flat face flanges require full flange gaskets.

OPERATION:

The operation of the Model 8110 is fully automatic. There are no adjustments required.

MAINTENANCE:

The check valve does not require routine lubrication. If servicing or disassembly is required, the valve must be removed from the line. Numbers in [] in this section refer to the item identification in figure 1.

SAFETY WARNINGS

Properly block and vent the line before removing the valve. Observe all plant procedures and Material Safety Data Sheet recommendations for the products in the system when removing and disassembling the valve.

Support the valve vertically on a bench with the flow direction upward. Remove the studs and hex nuts [2 & 3] and lift the downstream housing [1] from the valve. Remove the gasket [7] and the seat/disk sub-assembly.

Inspect the seat [6] and the disk [5]. Both seating surfaces must be clean and flat. If it is necessary to lap the seat, remove the bolts [9], nuts [10] and teflon washer [11] that attach the swing assembly. Clean the valve and replace all worn or damaged components before reassembly. Check the disk and link to be sure they are free to swing and that seating is uniform. Align seat ring with locating pins in upstream housing. Reassemble in the reverse order of disassembly.

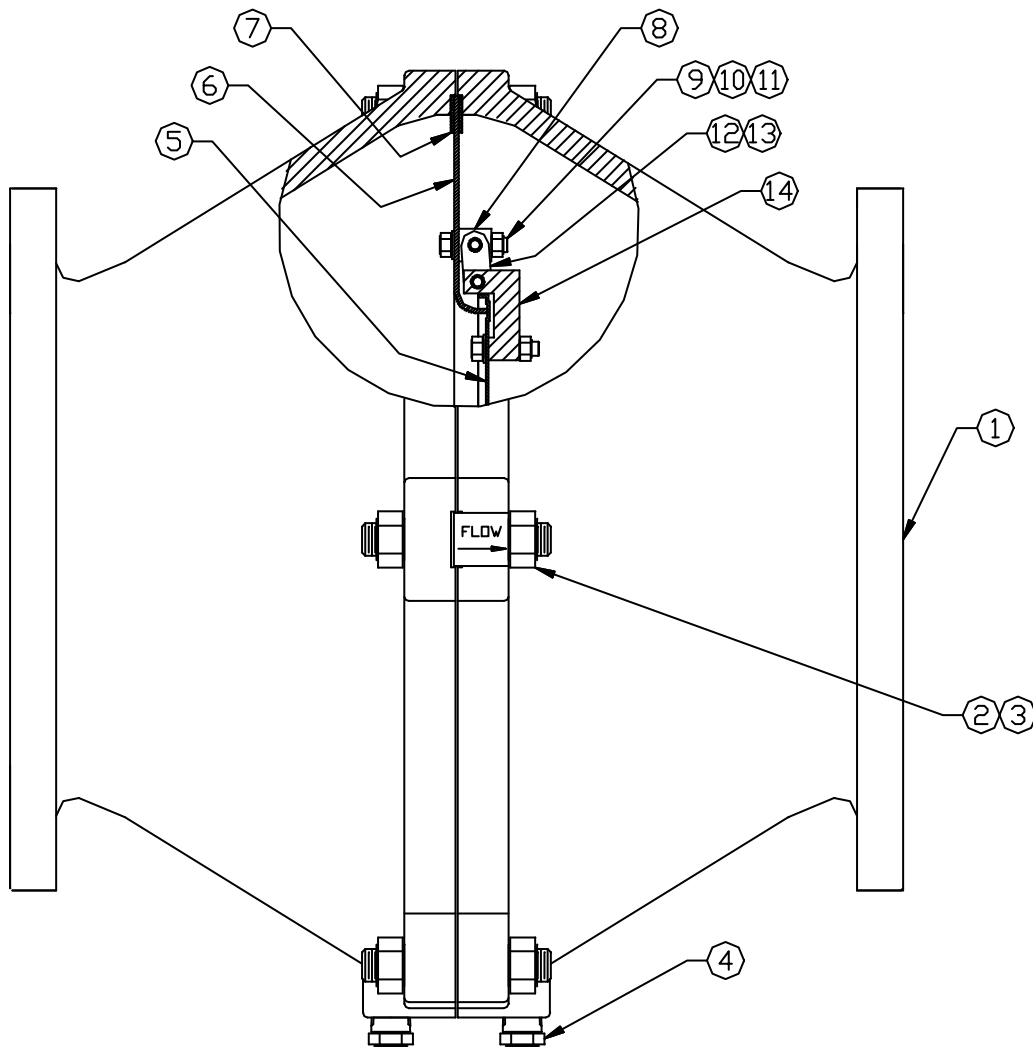
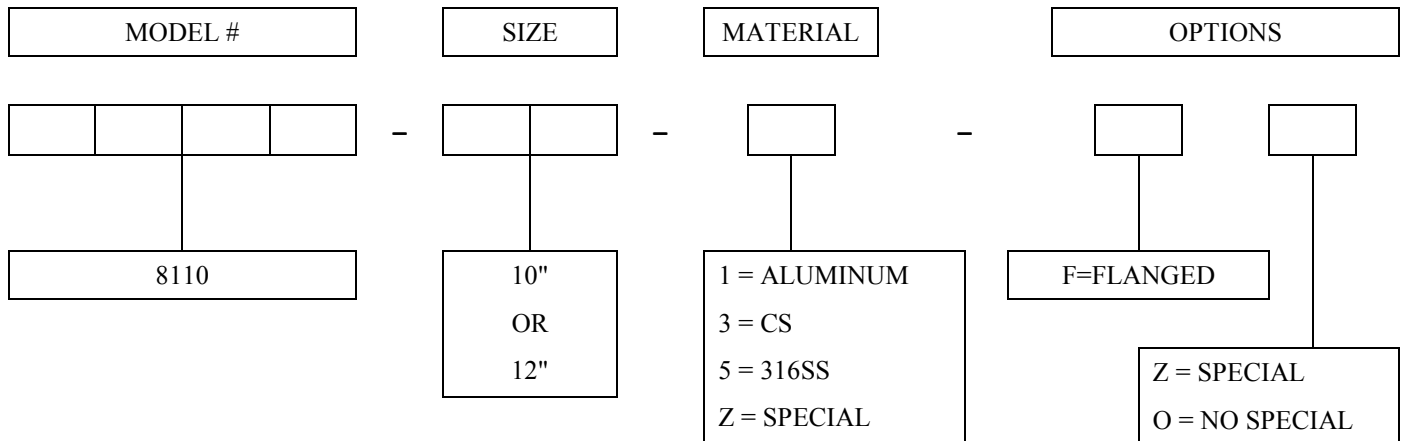


Figure 1 – Assembly Drawing

BILL OF MATERIALS					
ITEM #	DESCRIPTION	MATERIAL			
		ALUMINUM	CS	SS	
1	HOUSING	ALUMINUM	CS	316SS	
2	STUD	SS	SS	SS	
3	HEX NUT	SS	SS	SS	
4	HEX PLUG	316SS	316SS	316SS	
5	DISK	ALUMINUM	316SS	316SS	
6	SEAT PLATE	316SS	316SS	316SS	
7	GASKET	NON-ASBESTOS FIBER			√
8	BRACKET, PIVOT	ALUMINUM	316SS	316SS	
9	HEX BOLT	SS	SS	316SS	
10	HEX NUT	SS	SS	316SS	
11	FLAT WASHER	TEFLON			√
12	LINK	ALUMINUM	316SS	316SS	
13	PIN, PIVOT	SS	SS	316SS	
14	ARM, PIVOT	ALUMINUM	316SS	316SS	

✓ Recommended replacement part. See adjacent table for Groth part number. Please specify model number, size, and serial number when ordering replacement parts.	Item	Size	Replacement P/N
	7	10"	80018100
	7	12"	80018120
	11	All	87422003

The nameplate on the Groth Model 8110 Swing Check Valve contains the model number, serial number and flow capacity. The model number contains additional information about materials of construction and options. The following chart will assist in relating the model number to the specifications of your check valve:



Example: 8110-12-1-FO indicates a 12" Model 8110, aluminum body, flanged with no special options.

PRODUCT LIMITED WARRANTY

- A. Seller warrants that products which are manufactured by Seller, are manufactured in accordance with published specifications and free from defects in material and/or workmanship for a period of (12) twelve months. Seller, at its option, will repair or replace any product returned intact to the factory, transportation charges prepaid, which Seller, upon inspection shall determine to be defective in material and/or workmanship. The foregoing shall constitute the sole remedy for any breach of Seller's warranty.
- B. THERE ARE NO UNDERSTANDINGS, AGREEMENTS, REPRESENTATIONS, OR WARRANTIES, EXPRESS OR IMPLIED (INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE REGARDING PRODUCTS) UNLESS SPECIFIED IN THE SALES CONTRACT. THIS CONTRACT STATES THE ENTIRE OBLIGATION OF SELLER.
- Seller makes no warranties, either express or implied, except as provided herein, including without limitation thereof, warranties as to marketability, merchantability, for a particular purpose or use, or against infringement of any patent of products. In no event shall Seller be liable for any direct, incidental or consequential damages of any nature, or losses or expenses resulting from any defective new product or the use of any such product, including any damages for loss of time, inconvenience, or loss of use of any such product.
- C. The original Manufacturer shall be solely responsible for the design, development, supply, production, and performance of its products hereunder, and the protection of its trade name or names, if any. It assumes no responsibility, for product modified or changed in any way by its agent or customer. Any such modifications or changes to products sold by Seller hereunder shall make the product limited warranty null and void.
- D. The Manufacturer shall be under no obligation to manufacture, sell, or supply, or to continue to manufacture, sell or supply any of the Products.