

NOT to be distributed outside the FACTORY MUTUAL SYSTEM, except by CLIENT.

ANTI-WATER HAMMER CHECK VALVES

SERIES 1400 WAFER STYLE

2 THROUGH 10 IN. (50.8 THROUGH 254.0 MM)

SERIES 1800 GLOBE STYLE

2-1/2 THROUGH 12 IN. (63.5 THROUGH 304.8 MM)

SERIES 8800 DUAL DISC STYLE

2 THROUGH 12 IN. (50.8 THROUGH 304.8 MM)

from

VAL-MATIC VALVE AND MANUFACTURING CORP.

P.O. BOX 232

8448 WEST 45TH STREET

LYONS, ILLINOIS 60534

J.I. 0H3A7.AH
(1230)

SEPTEMBER 8, 1982



Factory Mutual Research

1151 Boston-Providence Turnpike
P.O. Box 688
Norwood, Massachusetts 02062



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September 8, 1982

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I INTRODUCTION

1.1 Val-Matic Valve and Manufacturing Corporation requested an approval examination of their Series 1400 Wafer style, the Series 1800 Globe style and the Series 8800 Dual Disc Silent Check Valves.

1.2 These anti-water hammer valves are approved only for use at the discharge end of a fire pump where conditions may be expected to cause serious water hammer. These valves have a 175 psi (1206.5 kPa) rated working pressure.

II DESCRIPTION

2.1 The attached manufacturer's Bulletins Nos. 1400 and 1800 show a view of wafer and globe styles check valves and the Drawing No. VM-8803 shows views of the dual disc style check valves along with other pertinent information. Also attached are flow curves and the operation, installation and maintenance instructions.

2.2 The Series 1400 wafer and 1800 globe check valves have a spring loaded center guided bronze clapper and the Series 8800 dual disc check valve has a spring loaded dual disc bronze clapper. These valves are installed between two (2) ANSI 125 or 250 lb flanges, and can be removed from the system for repairing by replacing them with an appropriate spool insert, for the duration of repairs.

OH3A7.AH

Page 3

V CONCLUSION

Val-Matic Valve and Manufacturing Corp. Series 1400 wafer, Series 1800 globe and the Series 8800 dual disc anti-water hammer check valves as discussed in this report meet Factory Mutual approval requirements. Approval is effective when the Approval Agreement is signed and returned to Factory Mutual.

FAL/hm

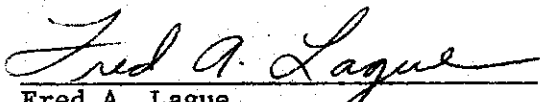
TESTS AND EXAMINATION BY: Fred A. Lague


ORIGINAL DATA: Notebook No. 82-116

ATTACHED: Manufacturer's Bulletins 1400 and 1800;
Drawing VM-8803; Operation, Installation and
Maintenance Instructions.
Primary Materials List.
Appendices I, II, III.

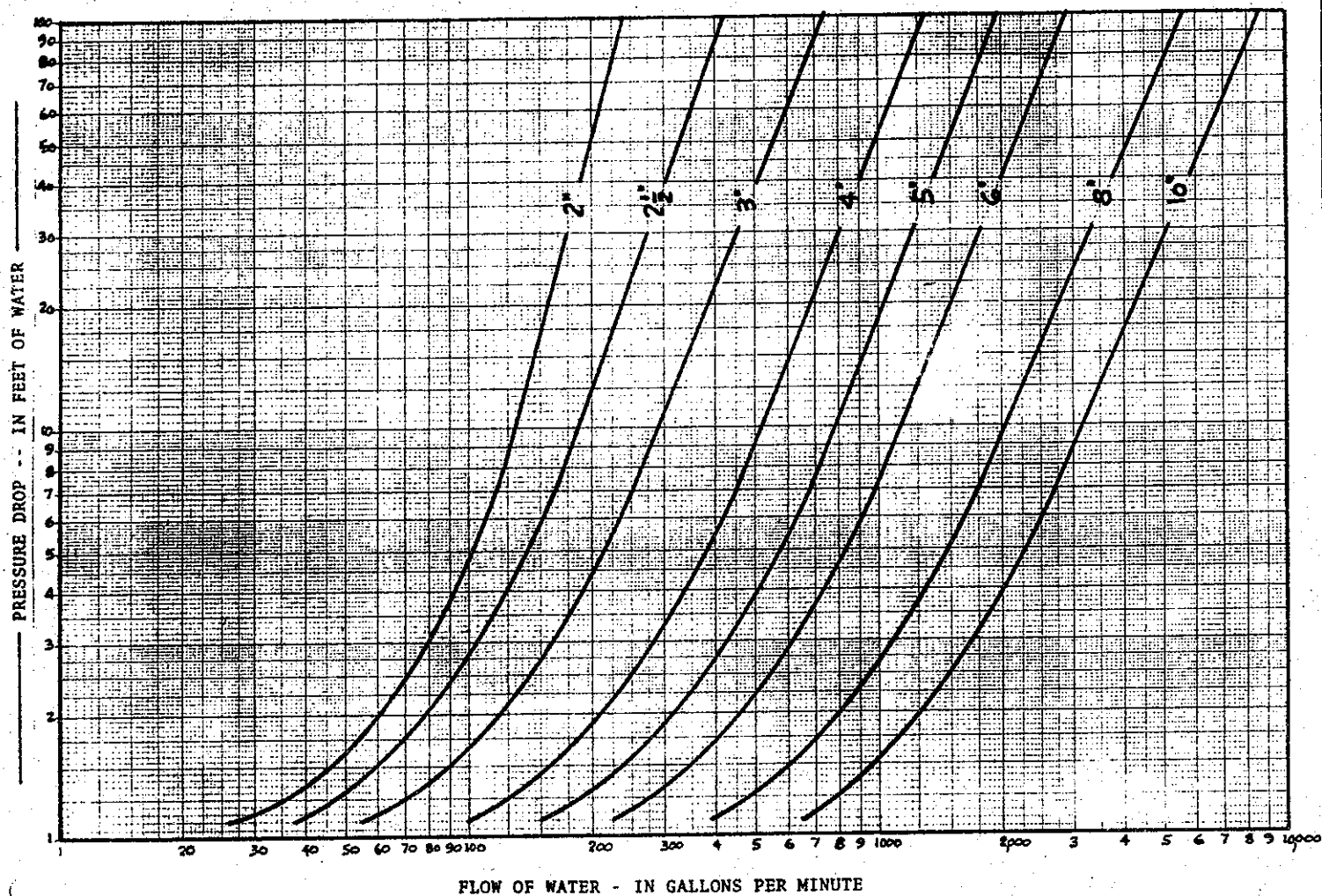
REPORT BY:

REVIEWED BY:


Fred A. Lague
Senior Engineering Assistant
Hydraulics Section


Karol R. Zenker
Manager, Hydraulics Section

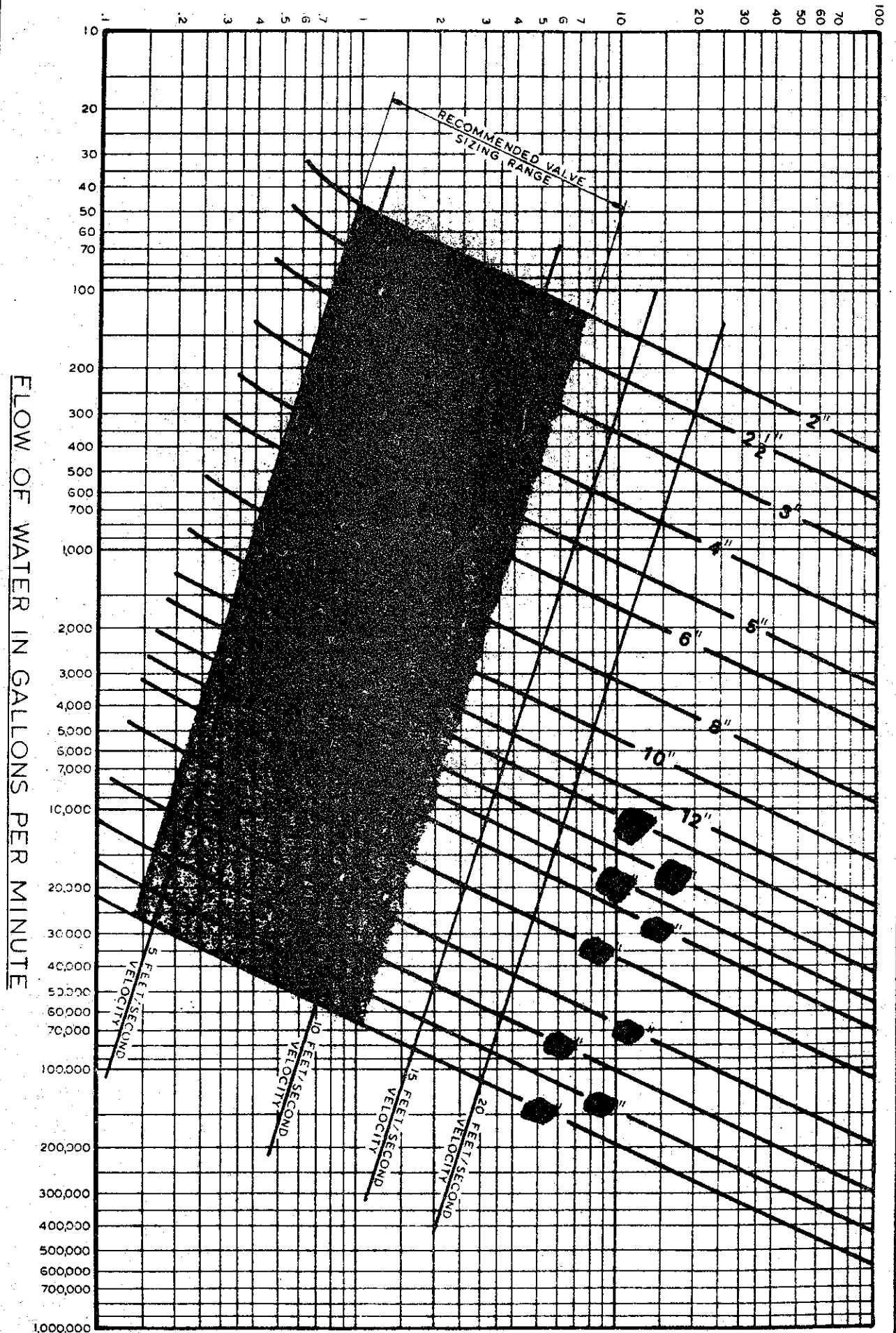
PRESSURE LOSS CURVES - WAFER STYLE SILENT CHECK VALVES

**VAL-MATIC**

VALVE AND MANUFACTURING CORP.

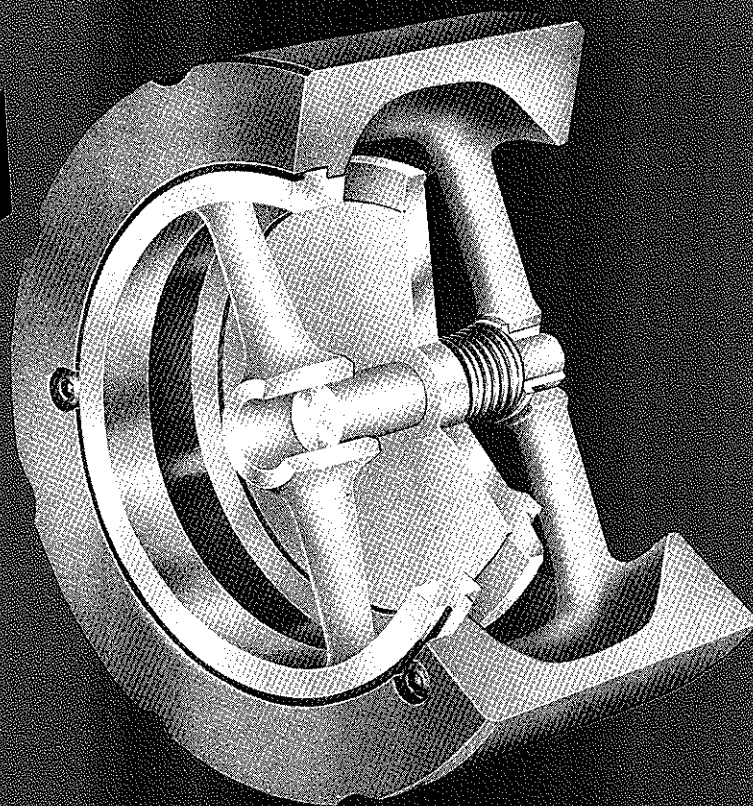
8448 WEST 45th ST. • P.O. BOX 232 • LYONS, ILLINOIS 60534 • 312/447-1990

HEAD LOSS IN FEET OF WATER



OH3AT.AH

SHOCK- PROOF PIPING SYSTEMS

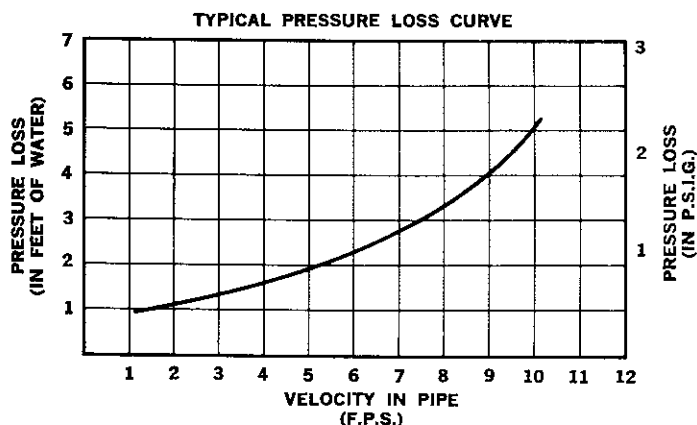


1400 SERIES

with VAL-MATIC WAFER STYLE Silent Check Valves

Designed and engineered for silent operation with low head loss in a compact wafer body. Specially designed spring controls the closure of Val-Matic Silent Check Valves . . . closing valve disc in advance of flow reversal, thereby preventing water hammer and damaging shock normally associated with valve shut-off.

Tear-Drop Contour **allows** streamline flow and combined with Full Pipe Size Area of Inner Body **assures** minimal pressure drop.



NOTE: For specific valve size pressure loss curve . . . see drwg. No. 1404.

VAL-MATIC SILENT CHECK VALVES ARE ENGINEERED FOR SILENT OPERATION / LOW HEAD LOSS *Plus...*

- Shortest Feasible Face-to-Face Dimensions
- Lightweight, Space-Saving Wafer Design
- Easily Replaceable Parts
- Functions Equally Well in All Positions
- Simple flange-supported installation
- Drop-Tight Seating
- Semi-Steel Body / Bronze or Stainless Steel Trim

NOTE:

1. Val-Matic 1400 Series Wafer-Style Silent Check Valves Are Intended for Liquid Service Only. For other service or materials of construction, consult factory.

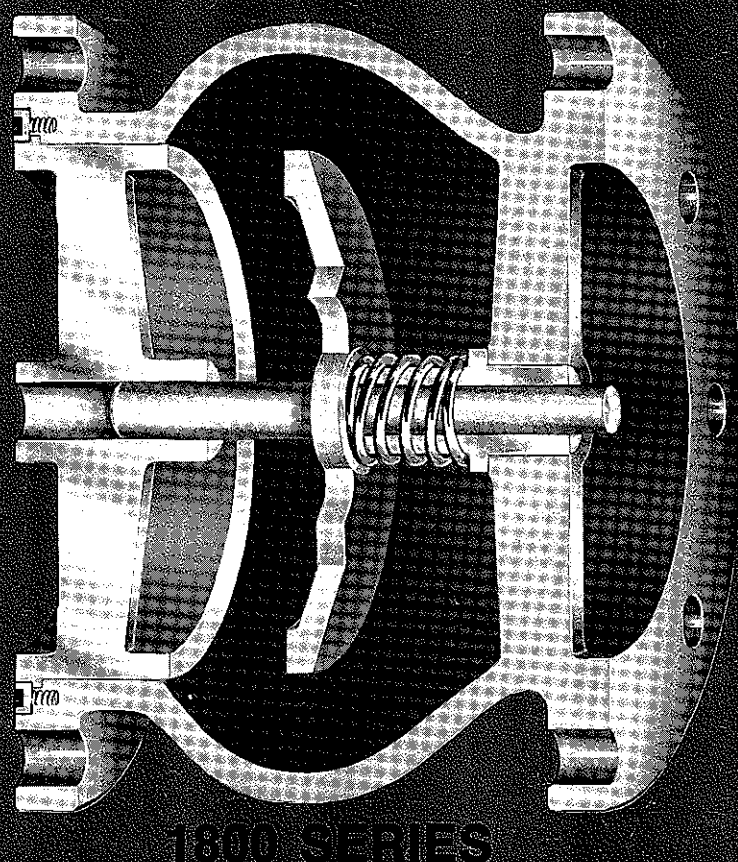
2. Globe Style Valves Also Available in 3" through 30" . . . See Val-Matic Bulletin 1800.



VAL-MATIC

VALVE AND MANUFACTURING CORP.

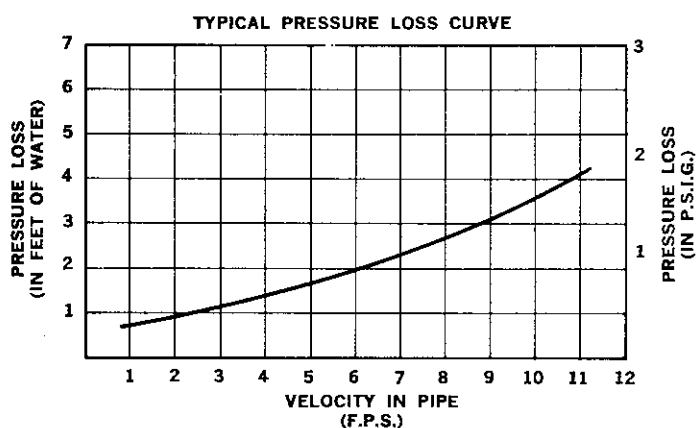
SHOCK-
PROOF
PIPING
SYSTEMS



with VAL-MATIC GLOBE STYLE Silent Check Valves

Designed and engineered for Silent operation with Low head loss. Specially designed spring controls the closure of Val-Matic Silent Check Valves . . . closing valve disc in advance of flow reversal, thereby preventing water hammer and damaging shock normally associated with valve shut-off.

Tear-Drop Contour **allows** streamline flow and combined with greater than Pipe Size Area of Inner Body **assures** minimal pressure drop.



NOTE: For specific valve size pressure loss curve . . . see drwg. No. 1404.

VAL-MATIC SILENT CHECK VALVES ARE ENGINEERED FOR SILENT OPERATION / LOW HEAD LOSS *Plus...*

- Double guided disc
- Large bearing surfaces
- Easily Replaceable Parts
- Functions Equally Well in All Positions
- Replaceable bronze bushing
- Drop-Tight Seating
- Semi-Steel Body / Bronze or Stainless Steel Trim
- Mate-ability . . . Sizes 3" thru 10" valves mate to Wafer style butterfly valves without the use of spool pieces or any other adaptors.

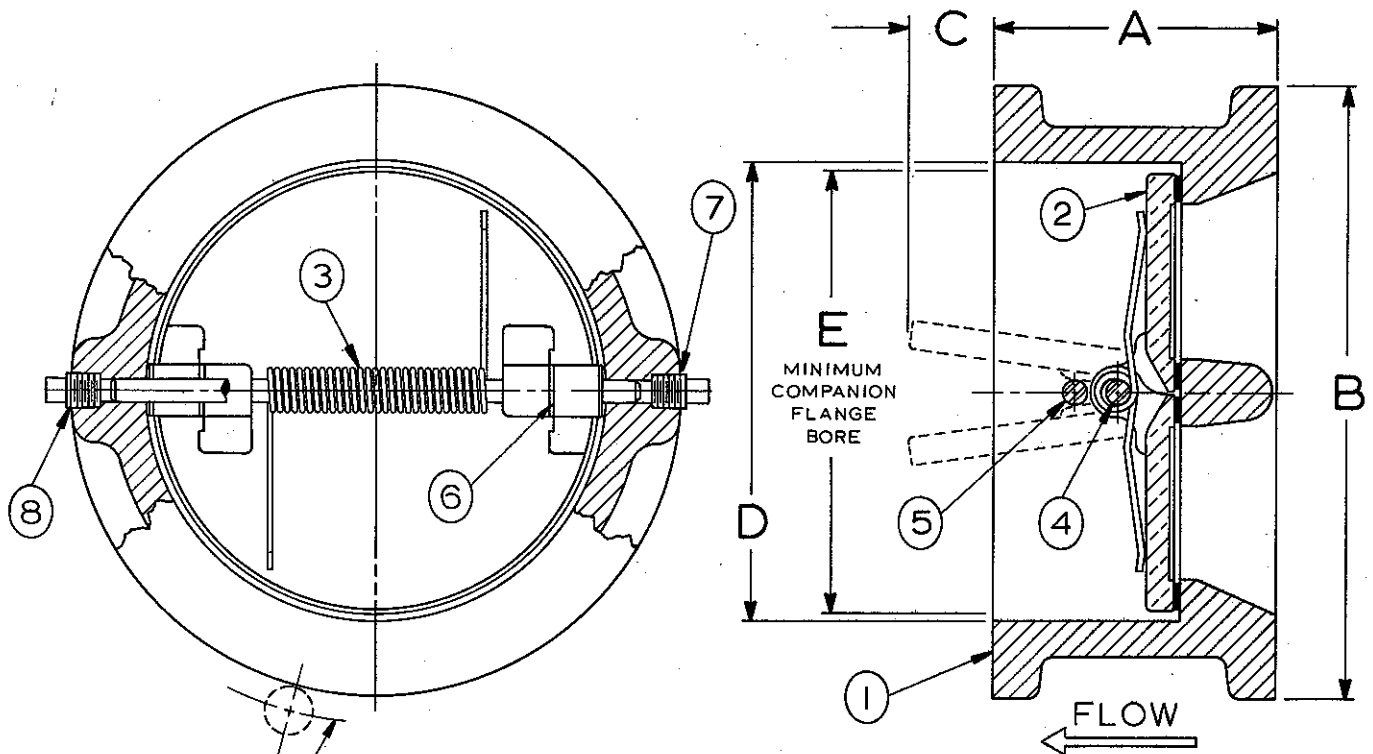
NOTE:

1. Val-Matic 1800 Series Globe-Style Silent Check Valves Are Intended for Liquid Service Only. For other service or materials of construction, consult factory.
2. Wafer Style Valves Also Available in 2" Through 10". . . See Val-Matic Bulletin 1400.



VAL-MATIC

VALVE AND MANUFACTURING CORP.



ANSI CLASS 125
BOLT CIRCLE.

PART NO.	NAME	MATERIAL
1	BODY	CAST IRON ASTM A126, CLASS B W/ BUNA-N RESILIENT SEAT MOLDED TO BODY
2	DISC	ALUMINUM BRONZE ASTM B148-9A
3	SPRING	STAINLESS STEEL T316-ASTM A313
4	DISC HINGE PIN	STAINLESS STEEL T316-ASTM A276
5	DISC STOP PIN	STAINLESS STEEL T316-ASTM A276
6	DISC THRUST BEARING	STAINLESS STEEL T316-ASTM A240
7	HINGE PIN RETAINER	STEEL
8	STOP PIN RETAINER	STEEL
9	LIFTING EYE BOLT (BOLT NOT SHOWN)	STEEL

VALVE SIZE	MODEL NO.	A	B	C	D	E
3"	8803	2 ⁵ / ₈ "	5 ³ / ₈ "	⁵ / ₈ "	3 ¹ / ₂ "	2 ⁷ / ₈ "
4"	8804	2 ⁵ / ₈ "	6 ⁷ / ₈ "	1"	4 ¹ / ₂ "	3 ⁷ / ₈ "
5"	8805	3 ¹ / ₄ "	7 ³ / ₄ "	1 ¹ / ₈ "	5 ⁹ / ₁₆ "	4 ⁷ / ₈ "
6"	8806	3 ³ / ₄ "	8 ³ / ₄ "	1 ⁵ / ₈ "	6 ⁵ / ₈ "	5 ⁷ / ₈ "
8"	8808	5"	11"	2 ¹ / ₄ "	8 ³ / ₄ "	7 ³ / ₄ "
10"	8810	5 ¹ / ₂ "	13 ³ / ₈ "	3 ¹ / ₈ "	10 ³ / ₄ "	9 ³ / ₄ "
12"	8812	7 ¹ / ₈ "	16 ¹ / ₈ "	3 ¹ / ₄ "	12 ³ / ₄ "	11 ³ / ₈ "

ANSI CLASS 125 DUAL DISC CHECK VALVE

DATE **2-15-79**

VAL-MATIC

VALVE AND MANUFACTURING CORP.

DRWG. NO.

VM-8803

VAL-MATIC SILENT CHECK VALVES

OPERATION, INSTALLATION AND MAINTENANCE INSTRUCTIONS

The Val-Matic Silent Check Valves are fully automatic valves and require no regular maintenance.

OPERATION: The valves are designed to prevent reverse flow automatically. On pump start-up, the flow of water forces the disc open, allowing the passage of fluid thru an area equal to pipe size. On pump shut-down, the special spring closes the disc before a flow reversal takes place. This type of closure, which prevents flow reversal, is the factor which allows silent operation and prevents water hammer normally associated with valve shut-off.

INSTALLATION: Valves can be installed in any position, i.e. horizontal or vertical with flow up or down. The flow arrow should be pointed in the direction of flow when the system is in operation.

When lifting, the valve should be secured by the body and never lifted by the bronze or stainless steel internal trim.

MAINTENANCE: No regular maintenance is required; however, if the valve must be serviced, it should be removed from the line by closing the discharge gate valve and bleeding off the pressure. This can be achieved by loosening the discharge flange first and then the inlet. This procedure will prevent damage to the internal trim.

Once the valve is removed from the line, all parts can be checked for wear and damage from foreign matter. Replacement parts can be ordered from the enclosed drawings and bill of materials.

NOTE: Never attempt to inspect the seating of the valve by removing the piping from the valve inlet. This will result in damage to the valve's internal seating mechanism.

OPERATION, INSTALLATION AND MAINTENANCE

DATE
7-22-69

VAL-MATIC

VALVE AND MANUFACTURING CORP.

DRWG. NO.

VM-SCV-1



PRIMARY MATERIALS LIST

COMPANY NAME		JOB IDENTIFIER
Val-Matic Valve & Mfg. Corp.		OH3A7.AH
EQUIPMENT CLASSIFICATION(S)		PROJECT ENGINEER
Class 1230		F. A. Lague
MODEL/TYPE NO.(S) INVOLVED		DATE
Series 8800 Dual Disc Silent Check Valves 2 through 12 in. (50.8 through 304.8 mm)		June 30, 1982

PRIMARY CONTROL DRAWINGS

DESCRIPTION	DRAWING NO.	ASSOCIATED MODEL/TYPE NO.	
Body	8802-1 3/3/82	Series 8800	2 in.
	P8802-1 3/10/82	" "	"
	8802-1/2 3/4/82	" "	2 1/2 in.
	P8802-1/2 2/18/82	" "	"
	8803-1 7/23/81	" "	3 in.
	P8803-1 1/23/81	" "	"
	8804-1 7/23/81	" "	4 in.
	P8804-1 8/12/80	" "	"
	8805-1 1/7/82	" "	5 in.
	P8805-1 12/15/81	" "	"
	8806-1 7/23/81	" "	6 in.
	P8806-1 8/20/80	" "	"
	8808-1 7/24/81	" "	8 in.
	P8808-1 8/12/80	" "	"
	8810-1 2/3/82	" "	10 in.
	P8810-1 8/18/81	" "	"
	8812-1 7/24/81	" "	12 in.

PRIMARY MATERIALS/PARTS

DESCRIPTION	MATERIAL/PART NO.	MANUFACTURER	ASSOCIATED MODEL/TYPE NO.
Body Seal	Buna-N	Williams Bowman Rubber Co.	Series 8800
Disc Hinge & Disc Stop Pin Stabilizer	Buna-N	Minnesota Rubber Co.	" "

COMMENTS



PRIMARY MATERIALS LIST

COMPANY NAME		JOB IDENTIFIER
Val-Matic Valve & Mfg. Corp.		0H3A7.AH
EQUIPMENT CLASSIFICATION(S)		PROJECT ENGINEER
Class 1230		F. A. Lague
MODEL/TYPE NO.(S) INVOLVED		DATE
Series 8800 Dual Disc Silent Check Valves 2 through 12 in. (50.8 through 304.8 mm)		June 30, 1982

PRIMARY CONTROL DRAWINGS		
DESCRIPTION	DRAWING NO.	ASSOCIATED MODEL/TYPE NO.
Disc	8802-2 11/23/81	Series 8800 2 in.
	P8802-2 2/23/82	" " "
	8802-2 1/2 11/23/81	" " 2 1/2 in.
	P8802-2 1/2 2/24/82	" " "
	8803-2 11/23/81	" " 3 in.
	P8803-2 2/4/81	" " "
	8804-2 11/23/81	" " 4 in.
	P8804-2 9/28/80	" " "
	8805-2 11/23/81	" " 5 in.
	P8805-2 12/21/81	" " "
	8806-2 11/23/81	" " 6 in.
	P8806-2 10/30/80	" " "
	8808-2 11/23/81	" " 8 in.
	P8808-2 9/24/80	" " "
	8810-2 11/23/81	" " 10 in.
	P8810-2 8/13/81	" " "
	8812-2 11/23/81	" " 12 in.
PRIMARY MATERIALS/PARTS	P8812-2 4/10/81	" " "
DESCRIPTION	MATERIAL/PART NO.	MANUFACTURER
		ASSOCIATED MODEL/TYPE NO.

COMMENTS



PRIMARY MATERIALS LIST

COMPANY NAME		JOB IDENTIFIER
Val-Matic Valve & Mfg. Corp.		OH3A7.AH
EQUIPMENT CLASSIFICATION(S)		PROJECT ENGINEER
Class 1230		F. A. Lague
MODEL/TYPE NO.(S) INVOLVED		DATE
Sereis 8800 Dual Disc Silent Check Valves 2 through 12 in. (50.8 through 304.8 mm)		June 30, 1982

PRIMARY CONTROL DRAWINGS

DESCRIPTION

DRAWING NO.

ASSOCIATED MODEL/TYPE NO.

Torsion Spring

8802-3 2/26/82
8802 1/2-3 3/1/82
8803-3 7/21/81
8804-3 7/21/81
8805-3 3/5/81
8806-3 7/21/81
8808-3 7/22/81
8810-3 8/14/81
8812-3 7/22/81

Series 8800 2 in.
" " 2 1/2 in.
" " 3 in.
" " 4 in.
" " 5 in.
" " 6 in.
" " 8 in.
" " 10 in.
" " 12 in.

PRIMARY MATERIALS/PARTS

DESCRIPTION

MATERIAL/PART NO.

MANUFACTURER

ASSOCIATED MODEL/TYPE NO.

COMMENTS



PRIMARY MATERIALS LIST

COMPANY NAME		JOB IDENTIFIER
Val-Matic Valve & Mfg. Corp.		OH3A7.AH
EQUIPMENT CLASSIFICATION(S)		PROJECT ENGINEER
Class 1230		F. A. Lague
MODEL/TYPE NO.(S) INVOLVED		DATE
Series 8800 Dual Disc Silent Check Valves 2 through 12 in. (50.8 through 304.8 mm)		June 30, 1982

PRIMARY CONTROL DRAWINGS

DESCRIPTION

DRAWING NO.

ASSOCIATED MODEL/TYPE NO.

Disc Hinge & Stop Pin

8802-4 3/8/82
8802 1/2-4 3/8/82
8803-4 7/21/81
8804-4 7/30/81
8805-4 1/13/82
8806-4 7/31/81
8808-4 4/17/81
8810-4 7/31/81
8812-4 7/31/81

Series 8800 2 in.
" " 2 1/2 in.
" " 3 in.
" " 4 in.
" " 5 in.
" " 6 in.
" " 8 in.
" " 10 in.
" " 12 in.

PRIMARY MATERIALS/PARTS

DESCRIPTION

MATERIAL/PART NO.

MANUFACTURER

ASSOCIATED MODEL/TYPE NO.

COMMENTS



PRIMARY MATERIALS LIST

COMPANY NAME		JOB IDENTIFIER
Val-Matic Valve & Mfg. Corp.		OH3A7.AH
EQUIPMENT CLASSIFICATION(S)		PROJECT ENGINEER
Class 1230		F. A. Lague
MODEL/TYPE NO.(S) INVOLVED		DATE
Series 1800 Glove Silent Check Valves 2 1/2 through 12 in. (63.5 through 304.8 mm)		June 30, 1982

PRIMARY CONTROL DRAWINGS

DESCRIPTION

DRAWING NO.

ASSOCIATED MODEL/TYPE NO.

Body

902 1/2-1 (3/5/79)
P902 1/2-1 (3/5/79)
903-1 (11/23/77)
P903-1 (3/5/79)
904-1 (11/28/77)
P904-1 (3/5/79)
905-1 (11/28/77)
P905-1 (3/5/79)
906-1 (11/28/77)
P906-1 (3/5/79)
908-1 (11/28/77)
P908-1 (3/5/79)
910-1 (12/28/77)
P910-1 (3/5/79)
912-1 (2/15/67)
P912-1 (3/5/79)

Series 1800 2 1/2 in.
" " "
" " 3 in.
" " "
" " 4 in.
" " "
" " 5 in.
" " "
" " 6 in.
" " "
" " 8 in.
" " "
" " 10 in.
" " "
" " 12 in.
" " "

PRIMARY MATERIALS/PARTS

DESCRIPTION

MATERIAL/PART NO.

MANUFACTURER

ASSOCIATED MODEL/TYPE NO.

COMMENTS



PRIMARY MATERIALS LIST

COMPANY NAME		JOB IDENTIFIER
Val-Matic Valve & Mfg. Corp.		OH3A7.AH
EQUIPMENT CLASSIFICATION(S)		PROJECT ENGINEER
Class 1230		F. A. Lague
MODEL/TYPE NO.(S) INVOLVED		DATE
Series 1800 Glove Silent Check Valves 2 1/2 through 12 in. (63.5 through 304.8 mm)		June 30, 1982

PRIMARY CONTROL DRAWINGS		DRAWING NO.		ASSOCIATED MODEL/TYPE NO.	
DESCRIPTION					
Disc		P702 1/2-3 (12/8/67)		Series 1800	2 1/2 in.
		P703-3 (8/8/67)		" "	3 in.
		P704-3 (8/7/67)		" "	4 in.
		P705-3 (5/22/78)		" "	5 in.
		P705-3 (5/22/78)		" "	6 in.
		P712-3 3/13/79		" "	12 in.

PRIMARY MATERIALS/PARTS			
DESCRIPTION	MATERIAL/PART NO.	MANUFACTURER	ASSOCIATED MODEL/TYPE NO.

COMMENTS



PRIMARY MATERIALS LIST

COMPANY NAME

Val-Matic Valve & Mfg. Corp.

EQUIPMENT CLASSIFICATION(S)

Class 1230

MODEL/TYPE NO.(S) INVOLVED

Series 1800 Globe Silent Check Valves
2 1/2 through 12 in. (63.5 through 204.8 mm)

JOB IDENTIFIER

OH3A7.AH

PROJECT ENGINEER

F. A. Lague

DATE

June 30, 1982

PRIMARY CONTROL DRAWINGSDESCRIPTION

Seat

DRAWING NO.

902 1/2-2 (11/9/77)
P902 1/2-2 (6/15/78)
903-2 (11/9/77)
P903-2 (11/20/67)
904-2 (11/9/77)
P904-2 (11/12/67)
905-2 6/5/67
P905-2 6/5/67
906-2 (11/9/77)
P906-2 6/6/67
908-2 (11/9/77)
P908-2 (4/10/79)
910-2 (11/9/77)
P910-2 6/6/67
912-2 (11/9/77)
P912-2 1/12/67

ASSOCIATED MODEL/TYPE NO.

Series 1800 2 1/2 in.
" " "
" " 3 in.
" " "
" " 4 in.
" " "
" " 5 in.
" " "
" " 6 in.
" " "
" " 8 in.
" " "
" " 10 in.
" " "
" " 12 in.
" " "

PRIMARY MATERIALS/PARTSDESCRIPTIONMATERIAL/PART NO.MANUFACTURERASSOCIATED MODEL/TYPE NO.**COMMENTS**



PRIMARY MATERIALS LIST

COMPANY NAME

Val-Matic Valve & Mfg. Corp.

EQUIPMENT CLASSIFICATION(S)

Class 1230

MODEL/TYPE NO.(S) INVOLVEDSeries 1800 Globe Silent Check Valves
2 1/2 through 12 in. (63.5 through 304.8 mm)**JOB IDENTIFIER**

OH3A7.AH

PROJECT ENGINEER

F. A. Lague

DATE

June 30, 1982

PRIMARY CONTROL DRAWINGSDESCRIPTIONDRAWING NO.ASSOCIATED MODEL/TYPE NO.

Plug

702 1/2-3 (11/8/77)

Series 1800 2 1/2 in.

703-3 (11/8/77)

" " 3 in.

704-3 (11/8/77)

" " 4 in.

705-3 (11/8/77)

" " 5 in.

906-3 (11/8/77)

" " 6 in.

908-3 (11/8/77)

" " 8 in.

910-3 (11/8/77)

" " 10 in.

912-3A (11/9/77)

" " 12 in.

Plug Shaft

912-3B (11/8/77)

" " 12 in.

PRIMARY MATERIALS/PARTSDESCRIPTIONMATERIAL/PART NO.MANUFACTURERASSOCIATED MODEL/TYPE NO.**COMMENTS**



PRIMARY MATERIALS LIST

COMPANY NAME Val-Matic Valve & Mfg. Corp.		JOB IDENTIFIER 0H3A7.AH
EQUIPMENT CLASSIFICATION(S) Class 1230		PROJECT ENGINEER F. A. Lague
MODEL/TYPE NO.(S) INVOLVED Series 1800 Globe Silent Check Valves 2 1/2 through 12 in. (63.5 through 304.8 mm)		DATE June 30, 1982

PRIMARY CONTROL DRAWINGS		DRAWING NO.		ASSOCIATED MODEL/TYPE NO.	
DESCRIPTION					
Spring		S-1223	6/3/82	Series 1800	2 1/2 in.
		"	"	"	3 in.
		"	"	"	4 in.
		"	"	"	5 in.
		"	"	"	6 in.
		"	"	"	8 in.
		"	"	"	10 in.
		"	"	"	12 in.

PRIMARY MATERIALS/PARTS		MATERIAL/PART NO.	MANUFACTURER	ASSOCIATED MODEL/TYPE NO.
DESCRIPTION				

COMMENTS



PRIMARY MATERIALS LIST

COMPANY NAME		JOB IDENTIFIER
Val-Matic Valve & Mfg. Corp.		OH3A7.AH
EQUIPMENT CLASSIFICATION(S)		PROJECT ENGINEER
Class 1230		F. A. Lague
MODEL/TYPE NO.(S) INVOLVED		DATE
Series 1400 Wafer Silent Check Valves 2 through 10 in. (50.8 through 254.0 mm)		June 30, 1982

PRIMARY CONTROL DRAWINGS		ASSOCIATED MODEL/TYPE NO.	
DESCRIPTION	DRAWING NO.		
Body	702-1 8/9/66	Series 1400	2 in.
	P702-1 4/17/66	" "	"
	702 1/2-1 8/9/66	" "	2 1/2 in.
	P702 1/2-1 (3/5/79)	" "	"
	703-1 (9/2/67)	" "	3 in.
	P703-1 (3/5/79)	" "	"
	704-1 (9/2/67)	" "	4 in.
	P704-1 (3/5/79)	" "	"
	705-1 (9/2/67)	" "	5 in.
	P705-1 (3/5/79)	" "	"
	706-1 (9/2/67)	" "	6 in.
	P706-1 (3/5/79)	" "	"
	708-1 (9/2/67)	" "	8 in.
	P708-1 (3/5/79)	" "	"
	710-1 (11/3/76)	" "	10 in.
	P710-1 (3/5/79)	" "	"

PRIMARY MATERIALS/PARTS		MATERIAL/PART NO.	MANUFACTURER	ASSOCIATED MODEL/TYPE NO.
DESCRIPTION				

COMMENTS



PRIMARY MATERIALS LIST

COMPANY NAME		JOB IDENTIFIER
Val-Matic Valve & Mfg. Corp.		0H7A3.AH
EQUIPMENT CLASSIFICATION(S)		PROJECT ENGINEER
Class 1230		F. A. Lague
MODEL/TYPE NO.(S) INVOLVED		DATE
Series 1400 Wafer Silent Check Valves 2 through 10 in. (50.8 through 254.0 mm)		June 30, 1982

PRIMARY CONTROL DRAWINGS	DRAWING NO.	ASSOCIATED MODEL/TYPE NO.
<u>DESCRIPTION</u>		
Disc	P702-2 4/17/66	Series 1400 2 in.
	P702 1/2-2 (12/8/67)	" " 2 1/2 in.
	P703-3 (8/8/67)	" " 3 in.
	P704-3 (8/7/67)	" " 4 in.
	P705-3 (5/2/78)	" " 5 in.
	P706-3 4/13/66	" " 6 in.
	P708-3 (7/21/67)	" " 8 in.
	P710-3 (7/21/67)	" " 10 in.

PRIMARY MATERIALS/PARTS	MATERIAL/PART NO.	MANUFACTURER	ASSOCIATED MODEL/TYPE NO.
<u>DESCRIPTION</u>			

COMMENTS

PRIMARY MATERIALS LIST

PRIMARY MATERIALS LIST		JOB IDENTIFIER
COMPANY NAME		OH3A7.AH
Val-Matic Valve & Mfg. Corp.		PROJECT ENGINEER
EQUIPMENT CLASSIFICATION(S)		F. A. Lague
Class 1230		DATE
MODEL/TYPE NO.(S) INVOLVED		June 30, 1982
Series 1400 Wafer Silent Check Valves 2 through 10 in. (50.8 through 254.0 mm)		

PRIMARY CONTROL DRAWINGS		DRAWING NO.		ASSOCIATED MODEL/TYPE NO.	
<u>DESCRIPTION</u>					
Seat		702-2	8/9/66	Series 1400	2 in.
		P702-2	4/17/66	" "	"
		702 1/2-2	(11/9/77)	" "	2 1/2 in.
		P702 1/2-2	9/25/66	" "	"
		703-2	(11/9/77)	" "	3 in.
		P703-2	4/12/66	" "	"
		704-2	(11/9/77)	" "	4 in.
		P704-2	(8/15/66)	" "	"
		705-2	(11/9/77)	" "	5 in.
		P705-2	9/13/66	" "	"
		706-2	(11/9/77)	" "	6 in.
		P706-2	(6/3/77)	" "	"
		708-2	(11/9/77)	" "	8 in.
		P708-2	4/15/66	" "	"
		710-2	(11/9/77)	" "	10 in.
		P710-2	4/25/66	" "	"

[illegible]



PRIMARY MATERIALS LIST

COMPANY NAME		JOB IDENTIFIER
Val-Matic Valve & Mfg. Corp.		0H3A7.AH
EQUIPMENT CLASSIFICATION(S)		PROJECT ENGINEER
Class 1230		F. A. Lague
MODEL/TYPE NO.(S) INVOLVED		DATE
Series 1400 Wafer Silent Check Valves 2 through 10 in. (50.8 through 254.0 mm)		June 30, 1982

PRIMARY CONTROL DRAWINGS		DRAWING NO.		ASSOCIATED MODEL/TYPE NO.	
DESCRIPTION					
Plug		702-3 (6/12/78)		Series 1400	2 in.
		702 1/2-3 (11/8/77)		" "	2 1/2 in.
		703-3 (11/8/77)		" "	3 in.
		704-3 (11/8/77)		" "	4 in.
		705-3 (11/8/77)		" "	5 in.
		706-3 (11/8/77)		" "	6 in.
		708-3 (11/8/77)		" "	8 in.
		710-3 (3/76)		" "	10 in.

PRIMARY MATERIALS/PARTS		MATERIAL/PART NO.	MANUFACTURER	ASSOCIATED MODEL/TYPE NO.
DESCRIPTION				

COMMENTS



PRIMARY MATERIALS LIST

COMPANY NAME		JOB IDENTIFIER
Val-Matic Valve & Mfg. Corp.		0H3A7. AH
EQUIPMENT CLASSIFICATION(S)		PROJECT ENGINEER
Class 1230		F. A. Lague
MODEL/TYPE NO.(S) INVOLVED		DATE
Series 1400 Wafer Silent Check Valves		June 30, 1982
2 through 10 in. (50.8 through 254.0 mm)		

PRIMARY CONTROL DRAWINGS

DESCRIPTION

DRAWING NO.

ASSOCIATED MODEL/TYPE NO.

Spring

S-1223 6/3/82

Series 1400	2 in.
" "	2 1/2 in.
" "	3 in.
" "	4 in.
" "	5 in.
" "	6 in.
" "	8 in.
" "	10 in.

PRIMARY MATERIALS/PARTS

DESCRIPTION

MATERIAL/PART NO.

MANUFACTURER

ASSOCIATED MODEL/TYPE NO.

COMMENTS



PRIMARY MATERIALS LIST

COMPANY NAME		JOB IDENTIFIER
Val-Matic Valve & Mfg. Corp.		0H3A7.AH
EQUIPMENT CLASSIFICATION(S)		PROJECT ENGINEER
Class 1230		F. A. Lague
MODEL/TYPE NO.(S) INVOLVED		DATE
Series 1400 Wafer Silent Check Valves		June 30, 1982
2 through 10 in. (50.8 through 254.0 mm)		

PRIMARY CONTROL DRAWINGS

DESCRIPTION

DRAWING NO.

ASSOCIATED MODEL/TYPE NO.

Bushing

702-5 (11/9/77)

" "

Series 1400 2 in.

" " 2 1/2 in.

703-5 (4/22/66)

" " 3 in.

703-5 (4/22/66)

" " 4 in.

705-5 (11/9/77)

" " 5 in.

705-5 (11/9/77)

" " 6 in.

708-5 (11/9/77)

" " 8 in.

710-5 (11/9/77)

" " 10 in.

PRIMARY MATERIALS/PARTS

DESCRIPTION

MATERIAL/PART NO.

MANUFACTURER

ASSOCIATED MODEL/TYPE NO.

COMMENTS