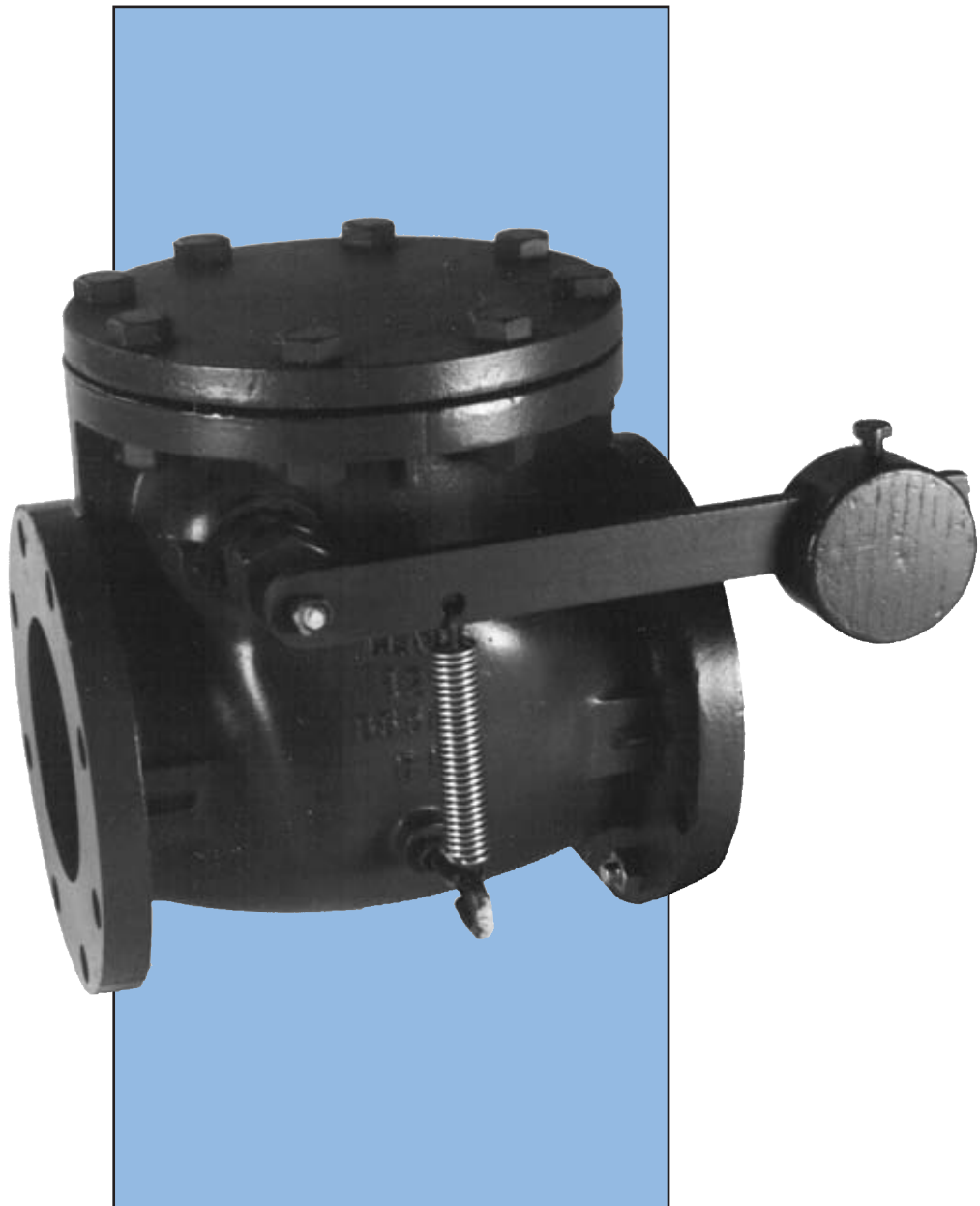


MILLIKEN

AWWA CAST IRON SWING CHECK VALVE



MILLIKEN

CAST IRON SWING CHECK

VALVES

The Milliken commitment to quality and reliability is displayed in the broad range of flanged cast iron swing check valves. Available as simple swing check or with optional outside lever with weight or spring assist closure. Milliken flanged swing check valves fully comply with both AWWA C-508-93 and MSS-SP-71.

BODY

The Milliken flanged check valve body and cover are manufactured of ASTM A-126 Class B cast iron using high pressure molding techniques for consistent quality and precision. Integral flanges are in full compliance with ANSI B16.1 Class 125.

DISC

The disc has a wide hinge support and upon closure meets the body seat without rubbing. Disc rings are available in bronze or bonded and vulcanized Buna Nitrile. Disc coatings are also available in EPDM, Viton, or Neoprene rubber. Elastomer coated discs are recommended for low pressure and air or gas applications where a repeatable tight shutoff is required. The unique disc/hinge design allows disc replacement without removing the hinge pin bearings.

HINGE PIN

The Milliken flanged check valve employs 304 stainless steel hinges or hinge pins. In the lever and weight model a cast iron adjustable gland is provided on the lever side.

BODY SEAT

Body seats are constructed of ASTM B-62 bronze and are field replaceable to extend the life of the valve. Seats can be replaced without removing the valve from the line.

- Computer Aided Design
- High integrity casting
- CNC manufacturing delivers consistent sizes on all components

All complemented by a rigorous Quality Control System

LEVER/SPRING/WEIGHT

The Figure 801 can be supplied with a carbon steel lever and adjustable weight. The lever position can be adjusted to suit either horizontal or vertical installations and to alter the closing characteristics. The Figure 801 is also available with outside lever with spring assisted closure.

FLOW

Swing check valves having six diameters of straight pipe upstream and three diameters downstream are suitable for liquid velocities of up to 10 feet per second. For turbulent flow, velocity should not exceed 6 feet per second.

INSTALLATION

Milliken swing check valves are suitable for horizontal pipelines or vertical pipelines with media flow upwards. Advise if vertical installation is required at time of order.

COATING

The exterior of all valves are furnished with our standard universal primer suitable for field coatings as required. Special coatings can be provided when required by the customer.

ELASTOMER DISC SEATS AVAILABLE

NITRILE

A general purpose material also referred to as BUNA-N or HYCAR with a -20 to 225 F temperature range. Used on sewage, water hydrocarbon and mineral oils.

EPDM

An excellent polymer for use on chilled water systems and low pressure steam applications having a temperature range of -35 to 300 F. Resistant to many acids, alkalies, detergents, phosphate esters, alcohols and glycols.

NEOPRENE

This versatile material shows outstanding resistance to abrasion and ozone. Chemical resistance to a wide variety of petroleum based products and dilute acids and alkalies. Temperature range is -20 to 225 F.

VITON

Retention of mechanical properties at high temperature is an important feature of this elastomer. Temperature range is -10 to 400 F.

Viton also has an excellent resistance to oils, fuels and most mineral acids and aromatic hydrocarbons.

TESTING

SIZE RANGE	SEAT	HYDRO
3"-12"	200 PSI	400 PSI
14"-24"	150 PSI	300 PSI

Allowable leakage rate for metal to metal valves is 1 oz per hour per inch of nominal valve size in accordance with AWWA C-508-93.

Elastomer seated valves are tested for bubble tight shut-off.

ORDERING INFORMATION

VALVE TYPE	DESIGNATION
Flanged Class 125	801

BODY SEAT

Bronze	B
Stainless Steel	S

DISC SEAT

Bronze	B
Nitrile	1
EPDM	0
Viton	2
Neoprene	3
Natural	4

OPERATOR

Plain (No Lever)	P
Outside Lever & Weight	W
Outside Lever & Spring	S

Example

4" 801 B B W

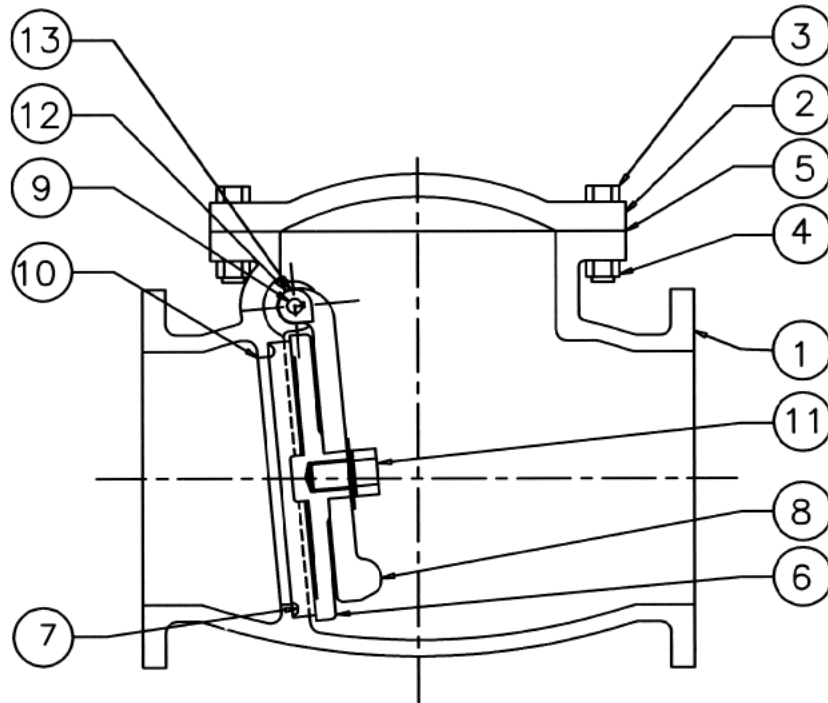
4" ANSI Class 125 Flanged Swing Check Valve with Bronze Body Seat, Bronze Disc Seat and fitted with an Outside Lever and Weight Mechanism.

ELASTOMER SELECTION CHART

Service	Elastomer	Average Useful Temp. Range	Service	Elastomer	Average Useful Temp. Range	Service	Elastomer	Average Useful Temp. Range
Acetone	EPDM	-35°F to 250°F	Caustic Soda	EPDM	-35°F to 250°F	Oil, Animal	Nitrile	-20°F to 212°F
Air	EPDM	-35°F to 250°F	Cement Slurry	EPDM	-35°F to 250°F	Oil, Mobil Therm Light	Viton	10°F to 250°F
Air w/Oil	Nitrile	0°F to 212°F	Copper Sulphate	EPDM	-35°F to 250°F	Oil, Mobil Therm 600	Viton	10°F to 250°F
Alcohol, Amyl	EPDM	0°F to 212°F	Creasote (Coal)	Nitrile	-20°F to 212°F	Oil, Mobil Therm 603	Nitrile	-20°F to 212°F
Alcohol, Aromatic	Viton	10°F to 250°F	Coal Slurry	Nitrile	-20°F to 212°F	Oil, Lubricating	Nitrile	-20°F to 212°F
Alcohol, Butyl	Neoprene	-20°F to 225°F	Diesel Fuel No. 1	Nitrile	-20°F to 212°F	Oil, Vegetable	Nitrile	-20°F to 212°F
Alcohol, Denatured	Nitrile	-20°F to 212°F	Diethylene Glycol	EPDM	-35°F to 250°F	Paint, Latex	Nitrile	-20°F to 212°F
Alcohol, Ethyl	EPDM	-35°F to 250°F	Ethylene Glycol	EPDM	-35°F to 250°F	Phosphate Ester	EPDM	-35°F to 250°F
Alcohol, Grain	Nitrile	-20°F to 225°F	Fatty Acid	Nitrile	-20°F to 212°F	Propane	Nitrile	-20°F to 212°F
Alcohol, Isopropyl	Neoprene	-20°F to 225°F	Fuel Oil No. 2	Nitrile	-20°F to 212°F	Rape Seed Oil	EPDM	-35°F to 250°F
Alcohol, Methyl	EPDM	-35°F to 250°F	Fertilizer Liquid (H ₂ N ₂ O ₂)	EPDM	-35°F to 250°F	Sewage (w/oils)	Nitrile	-20°F to 212°F
Ammonia, Anhydrous	Neoprene	-20°F to 225°F	Gasoline, Keg	Nitrile	-20°F to 212°F	Sodium Hydroxide 20%	EPDM	-35°F to 250°F
Ammonium Nitrate	EPDM	-35°F to 250°F	Gas, Natural	Nitrile	-20°F to 212°F	Starch	EPDM	-35°F to 250°F
Ammonia, Water	EPDM	-35°F to 250°F	Glue, Animal	Nitrile	-20°F to 212°F	Steam to 300°F	EPDM	-35°F to 300°F
Animal Fats	Nitrile	-20°F to 212°F	Green Liquor	EPDM	-35°F to 250°F	Stoddard Solvent	Nitrile	-20°F to 80°F
Black Liquor	EPDM	-35°F to 250°F	Hydraulic Oil (Petro)	Nitrile	-20°F to 212°F	Sulphuric Acid 10%-50%	Neoprene	-35°F to 158°F
Blast Furnace Gas	Neoprene	-20°F to 225°F	Hydrogen	Nitrile	-20°F to 212°F	Sulphuric Acid 100%	Viton	10°F to 300°F
Butane	Nitrile	-20°F to 212°F	JP4, JP5	Viton	0°F to 300°F	Trichloroethylene Dry	Viton	10°F to 250°F
Bunker Oil "C"	Nitrile	-20°F to 212°F	Kerosene	Nitrile	-20°F to 212°F	Triethanol Amine	EPDM	-35°F to 300°F
Caesium Chloride	EPDM	-35°F to 250°F	Ketone	EPDM	-35°F to 250°F	Varnish	Viton	10°F to 300°F
Carbon Dioxide	EPDM	-35°F to 250°F	Lime Slurry	EPDM	-35°F to 250°F	Water, Fresh	EPDM	-35°F to 250°F
Carbon Monoxide (Cold)	Neoprene	-20°F to 150°F	Methane	Nitrile	-20°F to 212°F	Water, Salt	EPDM	-35°F to 250°F
Carbon Monoxide (Hot)	Viton	10°F to 300°F	Methyl Ethyl Ketone	EPDM	-35°F to 250°F	Xylene	Viton	10°F to 300°F
Carbon Tetrachloride	Viton	10°F to 300°F	Naptha (Berzin)	Nitrile	-20°F to 212°F			

MILLIKEN VALVE COMPANY

FLANGED SWING CHECK

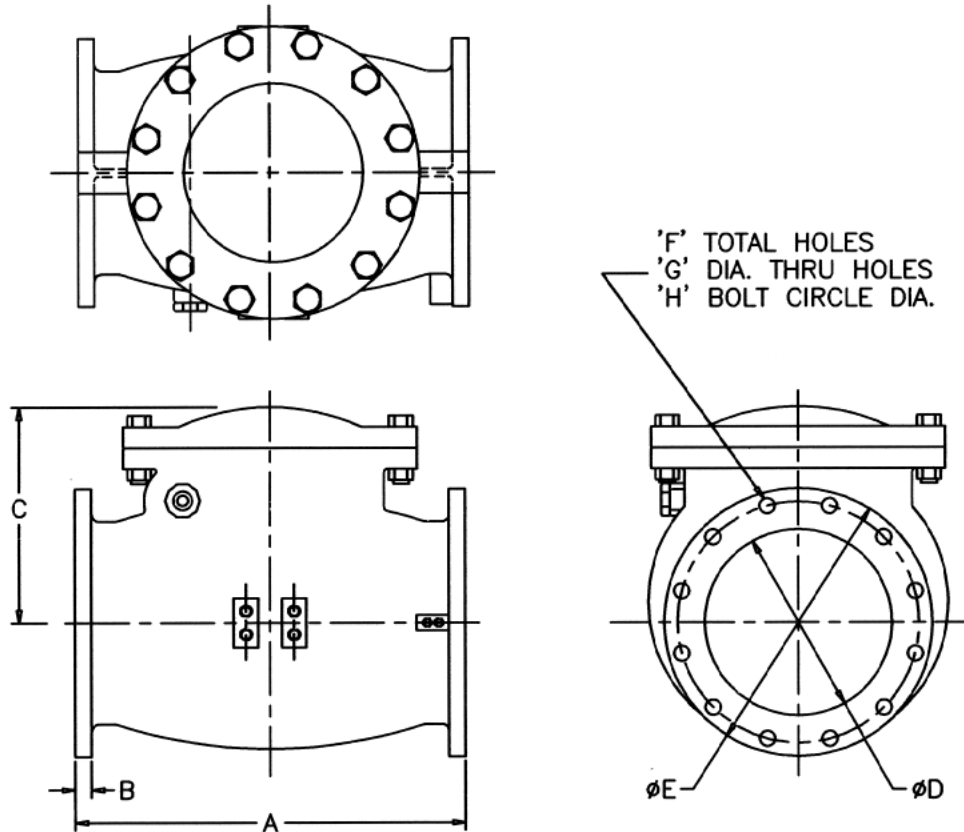


NO.	DESCRIPTION	MATERIAL	A S T M
1	BODY	CAST IRON	A126 CL B
2	CAP	CAST IRON	A126 CL B
3	CAP BOLT	STEEL	A307
4	CAP BOLT NUT	STEEL	A307
5	CAP GASKET	NON ASBESTOS	COMMERCIAL
6	DISC	CAST IRON	A126 CL B
7	DISC RING	BRONZE	B62
8	HINGE	DUCTILE IRON	A536 GR 65-45-12
9	HINGE PIN	STAINLESS STEEL	A276 TYPE 304
10	SEAT RING	BRONZE	B62
11	DISC BOLT	STEEL	A307
12	PACKING GLAND BUSHING	BRASS	B16
13	PACKING	NON ASBESTOS	COMMERCIAL

MILLIKEN VALVE COMPANY

FLANGED SWING CHECK

FIG 801



SIZE	A	B	C	D	E	F	G	H	WT. LB.
3	9.5	0.75	6.0	3.0	7.5	4	3/4	6.000	50
4	11.5	0.94	8.0	4.0	9.0	8	3/4	7.500	91
6	14.0	1.00	9.8	6.0	11.0	8	7/8	9.500	166
8	19.5	1.13	11.4	8.0	13.5	8	7/8	11.750	311
10	24.5	1.19	13.1	10.0	16.0	12	1	14.250	489
12	27.5	1.25	15.3	12.0	19.0	12	1	17.000	636

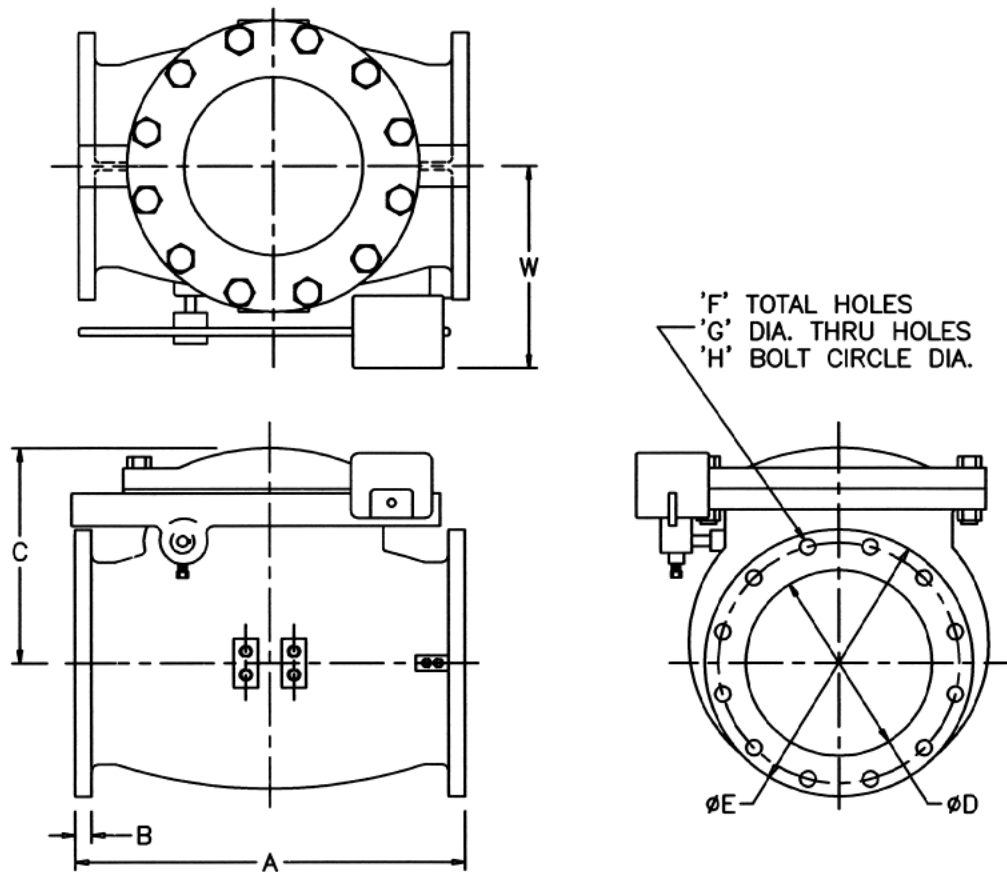
Consult Milliken for dimensions on 14" and larger

MILLIKEN VALVE COMPANY

FLANGED SWING CHECK

W/ LEVER & WEIGHT

FIG 801



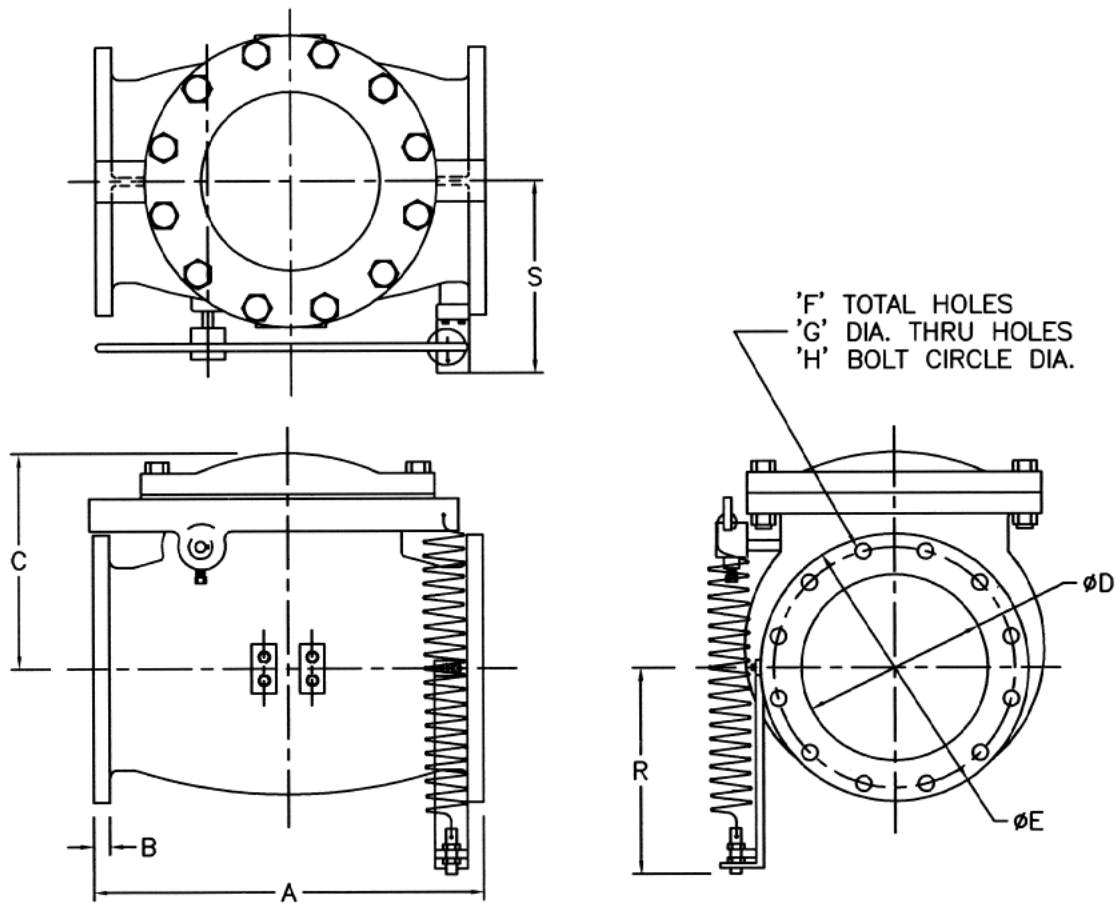
SIZE	A	B	C	D	E	F	G	H	W	WT. LB.
3	9.5	0.75	6.0	3.0	7.5	4	3/4	6.000	6.76	57
4	11.5	0.94	8.0	4.0	9.0	8	3/4	7.500	7.79	106
6	14.0	1.00	9.8	6.0	11.0	8	7/8	9.500	9.82	172
8	19.5	1.13	11.4	8.0	13.5	8	7/8	11.750	11.69	320
10	24.5	1.19	13.1	10.0	16.0	12	1	14.250	12.63	529
12	27.5	1.25	15.3	12.0	19.0	12	1	17.000	14.19	704

Consult Milliken for dimensions on 14" and larger

MILLIKEN VALVE COMPANY

FLANGED SWING CHECK W/ LEVER & SPRING

FIG 801



SIZE	A	B	C	D	E	F	G	H	R	S	WT. LB.
3	9.5	0.75	6.0	3.0	7.5	4	3/4	6.000	2.31	6.75	57
4	11.5	0.94	8.0	4.0	9.0	8	3/4	7.500	4.00	8.22	106
6	14.0	1.00	9.8	6.0	11.0	8	7/8	9.500	4.38	9.94	172
8	19.5	1.13	11.4	8.0	13.5	8	7/8	11.750	9.06	11.78	320
10	24.5	1.19	13.1	10.0	16.0	12	1	14.250	9.75	12.84	529
12	27.5	1.25	15.3	12.0	19.0	12	1	17.000	12.75	14.41	704

Consult Milliken for dimensions on 14" and larger

TECHNICAL SPECIFICATION

AWWA Flanged Check Valve 3" - 24"

Swing check valves shall be of the flanged type in full compliance with **AWWA C-508-93** and **MSS SP-71**. Valves may be supplied with external lever with weight or spring to assist closure if required by customer. The pressure rating shall be 200 for valves 12" and smaller and 150 psi for valves 14" through 24".

Valve bodies shall be of **ASTM A-126 Class B** cast iron. Flanges shall be in full compliance with **ANSI B16.1 Class 125**. Seats shall be constructed of **ASTM B-62** bronze and be mechanically retained in the valve body.

Disc shall be of cast iron **ASTM A-126 Class B** with mechanically secured bronze disc seat of **ASTM B-62** material.

The hinge shall be constructed of ductile iron **ASTM A-536 Grade 65-45-12** with a stainless steel hinge pin. Packing shall be non-asbestos type and mechanically adjustable.

Testing shall be performed in accordance with **AWWA C-508-93** with the test results being furnished to the customer upon request.

Flanged swing check valves shall be Series 800 as manufactured by **Milliken Valve Company of Bethlehem, Pennsylvania**.



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