

# Models: 1605, 1645

## Carbon Steel or Stainless Steel CHEXTER™ Check Valves Sizes: 2" - 24" (50 - 600mm)

Pressure/Temperature - Non-Shock		
Model	Material	Rating
1605-A	Carbon Steel	1480psi @ 100°F
		102.04 bar @ 37.78°C
		1235psi @ 450°F
1605-C	Stainless Steel	85.15 bar @ 232.22°C
		1440psi @ 100°F
		99.28 bar @ 37.78°C
		992psi @ 450°F
		68.40 bar @ 232.22°C

**1605**  
**1645**

**Class 600, RF**  
**Class 600, RTJ**



Model 1605  
Front



Open

### Typical Services

Can be used in a vast number of industries and applications. Included are:

- Commercial Construction (institutions, multi-story buildings, schools, etc.)
  - Chilled and hot water systems
  - Refrigeration, plumbing, air conditioning
- Industrial and Marine
  - Gas and liquid applications
  - Water filtration, oxygen systems, boiler feed lines
  - Centrifugal pump and compressor systems
- Utilities
  - All gas and liquid applications
- Process Industries (Refining, petro-chemical, mining, textiles, pulp and paper, etc.)
  - Variety of materials and trims for corrosive services

### Features

- Compact design with short face-to-face dimensions for minimum space requirements.
- Single moving part insures long, trouble-free service life.
- Seal-ring is one piece, easily replaceable in the field.
- Interchangeable parts for ease of maintenance.
- Operates fully at low pressure differential.
- Spring returns disc to fully closed position prior to reverse flow, minimizing water hammer.
- Disc is counter-weighted, utilizing gravity to additionally insure closure.
- Soft seal is located out of the flow path to reduce erosion effects.
- High  $C_v$  values due to aerodynamic disc shape and near full port opening.
  - Superior to other check valve designs, similar to Butterfly valves

### Construction

- Robust cast body is wafer style, featuring compact face-to-face dimensions to fit in small spaces.
- Designed to fit within ANSI bolt circles.
- Variety of trim and seat materials are available, both soft and metal-to-metal.
  - Parts are interchangeable
- Disc rotates on the hinge pin, creating very low pivot friction, so little wear in operation.
- Model 1605 features RF facing, Model 1645 has RTJ facing.

### Installation

- Can be installed horizontally or vertically.
  - Consult factory for downward vertical flow applications.
  - In horizontal applications, valve should be installed top up, with shaft aligned horizontally with the top up (hinge pin plugs are above the pipe centerline)
- Good piping practice recommends installing a distance of 5 to 10 pipe diameters from elbows, pumps, or others turbulence-creating devices.
- Mueller Steam Specialty strongly recommends the installation of a strainer ahead of the pump to ensure protection of both the pump and the valve from foreign particles.

Job Name \_\_\_\_\_

Contractor \_\_\_\_\_

Job Location \_\_\_\_\_

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

Contractor's P.O. No. \_\_\_\_\_

Approval \_\_\_\_\_

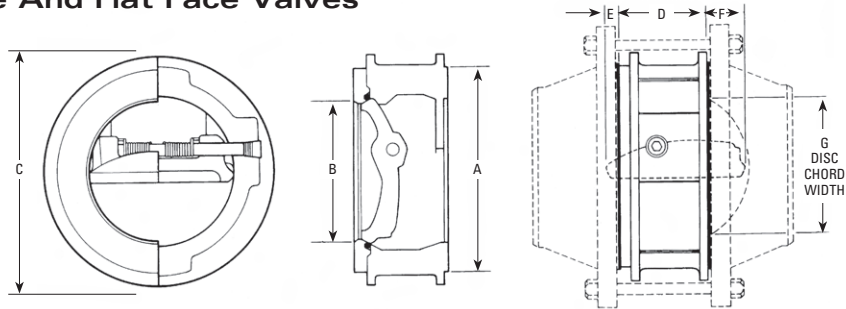
Representative \_\_\_\_\_

## Materials

- See Information section of the CHEXTER™ Check section of the Mueller Steam Specialty Engineering binder for standard materials
- See Information section of the CHEXTER™ Check section of the Mueller Steam Specialty Engineering binder for How to Order instructions.

## Dimensions

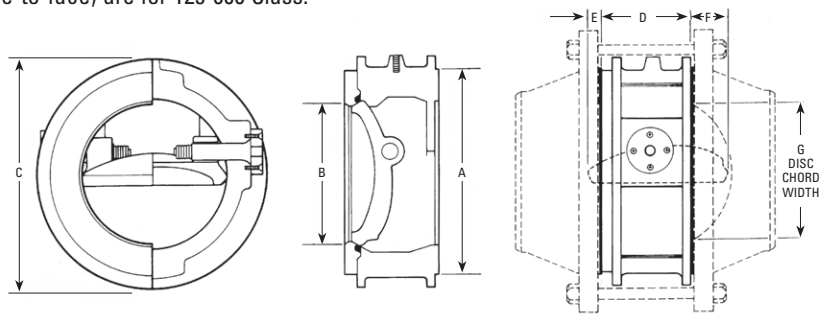
### Raised Face And Flat Face Valves



2" – 14" (50 – 350)

LINE SIZE		DIMENSIONS												
		A		B	C 600 CLASS		D*		E		F		G	
in.	mm	in.	mm	SAME VALVE FITS SCHEDULE 40 AND 80 LINE SIZES	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
2	50	3 <sup>3</sup> / <sub>8</sub>	92.1		4 <sup>3</sup> / <sub>8</sub>	111.1	1 <sup>1</sup> / <sub>2</sub>	38.1	0	0	1/2	12.7	1 <sup>15</sup> / <sub>16</sub>	33.3
2 <sup>1</sup> / <sub>2</sub>	65	4 <sup>1</sup> / <sub>8</sub>	104.8		5 <sup>1</sup> / <sub>8</sub>	130.2	1 <sup>15</sup> / <sub>16</sub>	49.2	1/16	1.6	9/16	14.3	2 <sup>7</sup> / <sub>8</sub>	60.3
3	80	5	127.0		5 <sup>7</sup> / <sub>8</sub>	149.2	2 <sup>1</sup> / <sub>8</sub>	54.0	1/8	3.2	3/4	19.1	2 <sup>7</sup> / <sub>8</sub>	73.0
4	100	6 <sup>3</sup> / <sub>16</sub>	157.2		7 <sup>7</sup> / <sub>8</sub>	193.7	2 <sup>3</sup> / <sub>4</sub>	69.9	1/8	3.2	1 <sup>1</sup> / <sub>8</sub>	28.6	3 <sup>7</sup> / <sub>8</sub>	98.4
5	125	7 <sup>5</sup> / <sub>16</sub>	185.7		9 <sup>1</sup> / <sub>2</sub>	241.3	3 <sup>1</sup> / <sub>2</sub>	88.9	7/16	11.1	1 <sup>1</sup> / <sub>8</sub>	34.9	4 <sup>1</sup> / <sub>16</sub>	103.2
6	150	8 <sup>1</sup> / <sub>2</sub>	215.9		10 <sup>1</sup> / <sub>2</sub>	266.7	4 <sup>1</sup> / <sub>8</sub>	104.8	5/8	15.9	1 <sup>1</sup> / <sub>4</sub>	31.8	4 <sup>15</sup> / <sub>16</sub>	125.4
8	200	10 <sup>3</sup> / <sub>8</sub>	269.9		12 <sup>5</sup> / <sub>8</sub>	320.7	5 <sup>3</sup> / <sub>8</sub>	136.5	1	25.4	1 <sup>15</sup> / <sub>16</sub>	49.2	6 <sup>7</sup> / <sub>8</sub>	174.6
10	250	12 <sup>3</sup> / <sub>4</sub>	323.9		15 <sup>3</sup> / <sub>4</sub>	400.1	6 <sup>11</sup> / <sub>16</sub>	169.9	1 <sup>1</sup> / <sub>2</sub>	38.1	2 <sup>3</sup> / <sub>8</sub>	60.3	8 <sup>3</sup> / <sub>8</sub>	212.7
12	300	15	381.0		18	457.2	8	203.2	2 <sup>1</sup> / <sub>16</sub>	52.4	2 <sup>7</sup> / <sub>16</sub>	61.9	9 <sup>3</sup> / <sub>8</sub>	238.1
14	350	16 <sup>1</sup> / <sub>4</sub>	412.8	19 <sup>3</sup> / <sub>8</sub>	492.1	8 <sup>3</sup> / <sub>4</sub>	222.3	1 <sup>1</sup> / <sub>2</sub>	38.1	2 <sup>1</sup> / <sub>4</sub>	57.2	9 <sup>1</sup> / <sub>4</sub>	235.0	

\*"D" dimensions (overall face-to-face) are for 125-600 Class.



16" – 24" (400 – 600)

LINE SIZE		DIMENSIONS												
		A		B	C 600 CLASS		D*		E		F		G	
in.	mm	in.	mm	SAME VALVE FITS SCHEDULE 40 AND 80 LINE SIZES	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
16	400	18 <sup>1</sup> / <sub>2</sub>	469.9		22	558.8	9 <sup>1</sup> / <sub>4</sub>	235.0	1 <sup>11</sup> / <sub>16</sub>	42.9	4 <sup>5</sup> / <sub>8</sub>	117.5	13 <sup>3</sup> / <sub>4</sub>	349.3
18	450	21	533.4		23 <sup>3</sup> / <sub>4</sub>	603.3	10 <sup>3</sup> / <sub>8</sub>	263.5	1 <sup>1</sup> / <sub>2</sub>	38.1	5"	127.0	15 <sup>1</sup> / <sub>2</sub>	393.7
20	500	23	584.2		26 <sup>1</sup> / <sub>2</sub>	673.1	11 <sup>1</sup> / <sub>4</sub>	285.8	2 <sup>1</sup> / <sub>2</sub>	63.5	6 <sup>1</sup> / <sub>8</sub>	155.6	17 <sup>5</sup> / <sub>8</sub>	447.7
24	600	27 <sup>1</sup> / <sub>4</sub>	692.2		30 <sup>3</sup> / <sub>4</sub>	781.1	12 <sup>1</sup> / <sub>2</sub>	317.5	3 <sup>1</sup> / <sub>4</sub>	82.6	6 <sup>3</sup> / <sub>4</sub>	171.5	20 <sup>3</sup> / <sub>4</sub>	527.1

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