

# Wafer 80-800mm

*Automatic Balacing Valve - Pre-Set Cartridge(s)*



## SPECIFICATIONS - CLASS 150 WAFER

Pressure rating:	1400 kPa, 203 psi
Temperature rating:	+120°C, +248°F
Material:	
- Body:	Grey Iron ASTM A126-61T, Class 20
- Cartridge:	AISI Type 304 stainless steel AISI Type 17-7 PH stainless steel spring
- O-rings:	EPDM
Body tappings:	1/4" NPT
End connections:	Sizes 80-600mm: ANSI B 16.5-1968 150 lb. steel flanges (compatible to DIN flanges according to EN1092-1, PN25+) 800 mm: MSS-SP-44 150 lb. steel flanges or ANSI B 16.1-1967 125 lb. cast iron flanges (compatible to DIN flanges according to EN1092-1, PN10+) Flanges are not supplied by FlowCon.

## SPECIFICATIONS - CLASS 300 WAFER

Pressure rating:	3400 kPa, 493 psi
Temperature rating:	+175°C, +347°F
Material:	
- Body:	Ductile Iron ASTM A536-65T, Class 60 45 18
- Cartridge:	AISI Type 304 stainless steel AISI Type 17 7 PH stainless steel spring
- O-rings:	EPDM
Body tappings:	1/4" NPT
End connections:	Sizes 80-500mm: ANSI B 16.5-1968 300 lb. steel flanges. 800mm: MSS-SP-44 150 lb. steel flanges or ANSI B 16.1-1967 250 lb. cast iron flanges Flanges are not supplied by FlowCon.

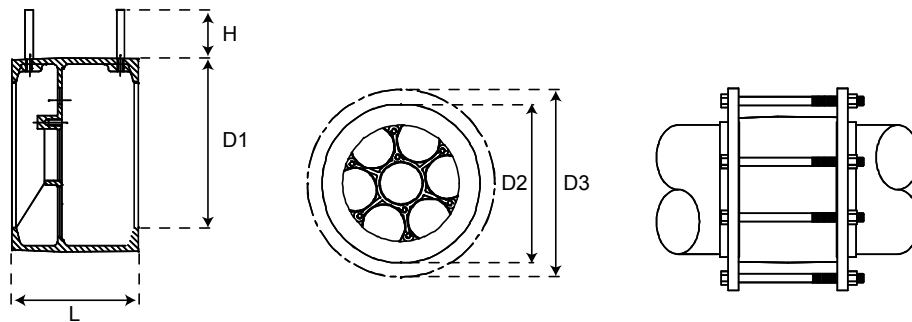
# CLASS 150 WAFER

## DIMENSIONS AND WEIGHTS (NOMINAL) (measured in mm unless noted)

Model no.	Size D1 (mm)	Size D1 (")	L (±0.76)	D2 (±1.5)	D3 Nominal ANSI Flg. Diam.	H	Studs <sup>1</sup>		Weight (Kgs.)	Number of 3" cartridges per Wafer
							Quantity	Size (")		
F329x	80	3	171.45	136.65	190.50	139.70	4	5/8	8	1
F332x	100	4	196.85	174.75	228.60	139.70	8	5/8	15	2
F334x	150	6	184.15	218.95	279.40	139.70	8	3/4	19	4
F337x	200	8	184.15	276.35	342.90	139.70	8	3/4	26	7
F368x	250	10	203.20	341.38	406.40	139.70	12	7/8	42.5	11
F369x	300	12	203.20	406.40	482.60	139.70	12	7/8	62.5	15
F339x	350	14	203.20	447.80	533.40	139.70	12	1	81.5	19
F384x	400 <sup>2</sup>	16	241.30	511.05	596.90	139.70	16	1	133	24
F385x	450 <sup>2</sup>	18	241.30	546.10	635.00	139.70	16	1 1/8	184	31
F338x	500 <sup>2</sup>	20	279.40	606.55	698.50	139.70	20	1 1/8	236	37
F386x	600 <sup>2</sup>	24	279.40	714.25	812.80	139.70	20	1 1/4	407	55
F330x	800 <sup>2</sup>	30	431.80	882.65	984.25	139.70	28	1 1/4	664	85

Note 1: Plated steel studs and nuts are supplied by FlowCon.

Note 2: 400mm and larger supplied with eyebolt for fitting.



## MODEL NUMBER SELECTION<sup>3</sup>

Insert body size:

**29**=80mm, 3" **32**=100mm, 4" **34**=150mm, 6" **37**=200mm, 8"  
**68**=250mm, 10" **69**=300mm, 12" **39**=350mm, 14" **84**=400mm, 16"  
**85**=450mm, 18" **38**=500mm, 20" **86**=600mm, 24" **30**=800mm, 30"

Insert a kPaD control range:

**0**=None  
 STANDARD: **1**=10-135 and 28-135 **2**=22-210 and 55-210 **4**=40-390 **8**=90-880  
 HI-FLOW: **3**=20-125 **5**=35-220

Insert p/t plug requirement:

**B**=Pressure/temperature plugs

Note 3: Model no. and flow rate are indicated on label affixed to body.

**F3** . . . . .

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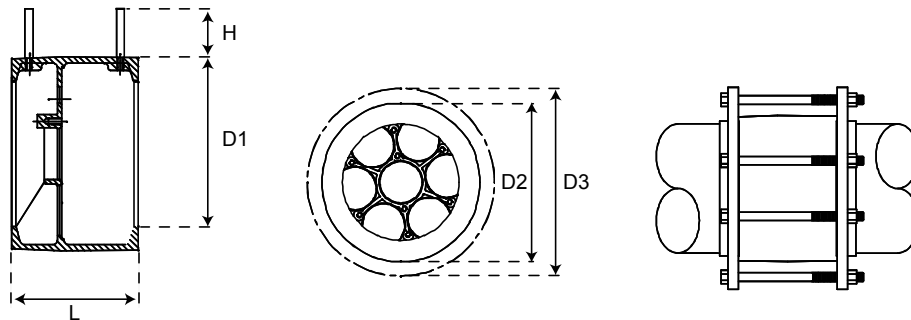
# CLASS 300 WAFER

## DIMENSIONS AND WEIGHTS (NOMINAL) (measured in mm unless noted)

Model no.	Size D1 (mm)	Size D1 (")	L (±0.76)	D2 (±1.5)	D3 Nominal ANSI Flg. Diam.	H	Studs <sup>4</sup>		Weight (Kgs.)	Number of 3" cartridges per Wafer
							Quantity	Size (")		
F345x	80	3	171.45	149.35	209.55	139.70	8	3/4	12.0	1
F346x	100	4	196.85	181.10	254.00	139.70	8	3/4	22.5	2
F347x	150	6	184.15	250.95	317.50	139.70	12	3/4	28.5	4
F348x	200	8	184.15	308.10	381.00	139.70	12	7/8	47.0	7
F343x	250	10	203.20	358.65	444.50	139.70	16	1	73.0	11
F344x	300	12	203.20	419.10	520.70	139.70	16	1 1/8	110.0	15
F349x	350	14	203.20	485.90	584.20	139.70	20	1 1/8	166.0	19
F350x	500 <sup>5</sup>	20	279.40	654.05	774.70	139.70	24	1 1/4	386.0	37
F351x	800 <sup>5</sup>	30	431.80	952.50	1092.20	139.70	28	1 3/4	983.0	85

Note 4: Plated steel studs and nuts are supplied by FlowCon.

Note 5: 500mm and larger supplied with eyebolt for fitting.



## MODEL NUMBER SELECTION<sup>6</sup>

Insert body size:

**45**=80mm, 3" **46**=100mm, 4" **47**=150mm, 6"  
**48**=200mm, 8" **43**=250mm, 10" **44**=300mm, 12"  
**49**=350mm, 14" **50**=500mm, 20" **51**=800mm, 30"

Insert a kPaD control range:

**0**=None  
 STANDARD: **1**=10-135 and 28-135 **2**=22-210 and 55-210 **4**=40-390 **8**=90-880  
 HI-FLOW: **3**=20-125 **5**=35-220

Insert p/t plug requirement:

**B**=Pressure/temperature plugs

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Note 6: Model no. and flow rate are indicated on label affixed to body.

## FLOW RATE TABLE PER TYPE OF CARTRIDGE

80mm · 3" · stainless steel cartridge, standard flow						
Pressure range, ΔP:			10-135 kPaD 1-20 psid	22-210 kPaD 2-32 psid	40-390 kPaD 4-57 psid	90-880 kPaD 8-128 psid
Size (mm)	Size (")	min. available l/sec l/sec increments	Type 1	Type 2	Type 4	Type 8
			0.88 0.126	1.10 0.158	1.47 0.208	2.21 0.316
80	3	Maximum l/sec	3.79	4.73	6.31	9.46
100	4		7.58	9.46	12.62	18.92
150	6		15.16	18.92	25.24	37.84
200	8		26.58	33.11	44.17	66.22
250	10		41.69	52.03	69.41	104.06
300	12		56.85	70.95	94.65	141.90
350	14		72.01	89.87	119.89	179.74
400	16		90.96	113.52	151.44	227.04
450	18		117.49	146.63	195.61	293.26
500	20		140.23	175.01	233.47	350.02
600	24		208.45	260.15	347.05	520.30
800	30		322.15	402.05	536.35	804.10

Accuracy: ±5% of controlled flow rate.

80mm · 3" · stainless steel cartridge, high capacity				
Pressure range, ΔP:		28-135 kPaD 4-20 psid	55-210 kPaD 8-32 psid	
		Type 1	Type 2	
Size (mm)	Size (")	l/sec increments	1.262	1.577
80	3	Minimum l/sec	5.68	6.94
		Maximum l/sec	8.20	10.09

Accuracy: ±5% of controlled flow rate.

80mm · 3" · stainless steel cartridge, high flow						
Pressure range, ΔP:			20-125 kPaD 3-18 psid		35-220 kPaD 5-32 psid	
Size (mm)	Size (")	l/sec increments	Type 3	Type 3 (all hi-flow cartridge)	Type 5	Type 5 (all hi-flow cartridge)
			0,126	n/a	0,158	n/a (for flow rate in between min. and max. contact FlowCon)
80	3	Minimum l/sec	n/a	n/a	n/a	n/a
		Maximum l/sec	n/a		n/a	
100	4	Minimum l/sec	7.19	12.62	9.62	17.04
		Maximum l/sec	10.10		17.35	25.24
150	6	Minimum l/sec	7.19	25.24	9.62	34.08
		Maximum l/sec	22.72		42.59	50.48
200	8	Minimum l/sec	7.19	44.17	9.62	59.64
		Maximum l/sec	41.65		80.45	88.34
250	10	Minimum l/sec	7.19	69.41	9.62	93.72
		Maximum l/sec	66.89		130.93	138.82
300	12	Minimum l/sec	7.19	94.65	9.62	127.80
		Maximum l/sec	92.13		181.41	189.30
350	14	Minimum l/sec	7.19	119.89	9.62	161.88
		Maximum l/sec	117.37		231.89	239.78
400	16	Minimum l/sec	7.19	151.44	9.62	204.48
		Maximum l/sec	148.92		294.99	302.88
450	18	Minimum l/sec	7.19	195.61	9.62	264.12
		Maximum l/sec	193.09		383.33	391.22
500	20	Minimum l/sec	7.19	233.47	9.62	315.24
		Maximum l/sec	230.95		459.05	466.94
600	24	Minimum l/sec	7.19	347.05	9.62	468.60
		Maximum l/sec	344.53		686.21	694.10
800	30	Minimum l/sec	7.19	536.36	9.62	724.20
		Maximum l/sec	533.85		1064.81	1072.70

Accuracy: ±5% of controlled flow rate.

## GENERAL SPECIFICATIONS

### 1. AUTOMATIC BALANCING VALVES CLASS 150 WAFER

- 1.1. Contractor shall install automatic balancing valves where indicated in drawings.
- 1.2. Valve shall consist of a dynamic, flow limiting device.

### 2. VALVE HOUSING

- 2.1. Class 150 Wafer valve housings shall consist of grey iron ASTM A126-61T, Class 20 rated at no less than 1400 kPa static pressure at +120°C; shall have single or multiple, parallel-installed stainless steel cartridge assemblies, (noted in section 3.0), to provide rated flow rate. Valve shall include all plated steel studs and nuts required for installation.
- 2.2. Valve shall be permanently marked to show direction of flow.
- 2.3. Dual pressure/temperature test plugs for verifying accuracy of flow performance shall be provided for all valve sizes.
- 2.4. Sizes 80-600mm shall be compatible with ANSI B 16.5-1968 150 lb. steel flanges and DIN flanges according to EN1092-1; 800mm shall be compatible with MSS-SP-44 150 lb. steel flanges and DIN flanges according to EN1092-1.
- 2.5. Sizes 500mm and larger shall be provided with eyelet bolts for lifting.

### 3. FLOW REGULATOR / AUTOMATIC BALANCING UNIT

- 3.1. Flow regulation unit assembly shall be precision ground, all AISI type 304 stainless steel; shall be available in four kPaD control ranges; minimum range shall be capable of being activated by minimum 10 kPa; and shall be capable of controlling flow within  $\pm 5\%$  of rated flow.

### 4. ACCESSORIES

- 4.1 Adhesive or hanging identification tag shall be available for all valves; tag can be indelibly marked with flow rate, model number and dP range as well as optional cells for e.g. location.

# CLASS 300 WAFER

## GENERAL SPECIFICATIONS

### 1. AUTOMATIC BALANCING VALVES CLASS 300 WAFER

- 1.1. Contractor shall install automatic balancing valves where indicated in drawings.
- 1.2. Valve shall consist of a dynamic, flow limiting device.

### 2. VALVE HOUSING

- 2.1. Class 300 Wafer valve housings shall consist of ductile iron ASTM A536-65T, Class 60-45-18; rated at no less than 3400 kPa static pressure at +175°C; shall have single or multiple, parallel-installed stainless steel cartridge assemblies, (noted in section 3.0), to provide rated flow rate. Valve shall include all plated steel studs and nuts required for installation.
- 2.2. Valve shall be permanently marked to show direction of flow.
- 2.3. Dual pressure/temperature test plugs for verifying accuracy of flow performance shall be provided for all valve sizes.
- 2.4. Sizes 80-500mm shall be compatible with ANSI B 16.5-1968 300 lb. steel flanges. 800mm shall be compatible with MSS-SP-44 300 lb. steel flanges.
- 2.5. Sizes 500mm and larger shall be provided with eyelet bolts for lifting.

### 3. FLOW REGULATOR / AUTOMATIC BALANCING UNIT

- 3.1. Flow regulation unit assembly shall be precision ground, all AISI type 304 stainless steel; shall be available in four kPaD control ranges; minimum range shall be capable of being activated by minimum 10 kPa; and shall be capable of controlling flow within  $\pm 5\%$  of rated flow.

### 4. ACCESSORIES

- 4.1. Adhesive or hanging identification tag shall be available for all valves; tag can be indelibly marked with flow rate, model number and dP range as well as optional cells for e.g. location.

## UPDATES

**For latest updates please see [www.flowcon.com](http://www.flowcon.com)**

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