

Standard Industrial Centrifugal Droplet Separator

VentilationComponents.com's centrifugal droplet separators are durable and cost effective.



Application

- Removes mist and wetted particulate from an airstream.
- Various sizes built to service airflows ranging from 3,000cfm to 138,000cfm available, with larger sizes available upon request
- Pressure ratings ranging from 15inWC to 50inWC available, with higher pressure ratings up to 100inWC available upon request

Features

- Intermittent cleaning showers
- Compact centrifugal separator with sweeping air inlet
- Top axial outlet with vortex breaker, drain, high level overflow, and inspection port

Benefits

- Intermittent cleaning water system with minimal water consumption
- Large orifice cleaning shower nozzles reduce the likelihood of plugging
- Simple, reliable, and easy to maintain
- Heavy duty construction

Function

- An internal vortex is created as the air enters tangentially
- Droplets separate from the airstream due to centrifugal action
- The water is drained and the vortex breaker stops the rotating airflow as the air exits the separator

Options

Size

Tank sizes ranging from 30.00in diameter to 198.00in diameter are available. Larger sizes are available upon request.

Pressure rating

Three different pressure ratings are offered: up to 15inWC, up to 30inWC, and up to 50inWC. Custom pressure ratings up to 100inWC are available upon request.

Flange bolt pattern

The flange bolt patterns follow our standard. Different patterns are available upon request.

Drain

The drain protrudes from the tank wall and its placement is customer specified.

Materials

The materials offered suit a variety of different applications.

Internal material

- 316 stainless steel

External material

- 304 stainless steel

Hardware material

- 316 stainless steel

Gasket material

- EPDM

Other materials not listed are available upon request.

Inspection port

The inspection port placement and hinge side is customer specified.

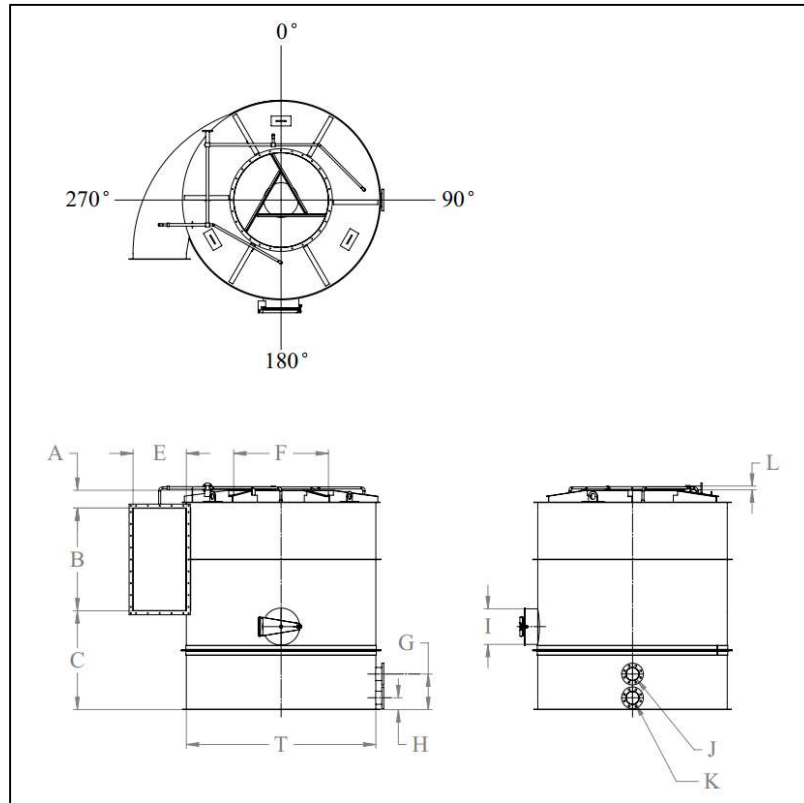
High level overflow

The placement of the high level overflow is customer specified. A flapper valve can be supplied.

Efficiency Rate

The efficiency of the separator is application dependent and is provided during the ordering stage.

Data and dimensions



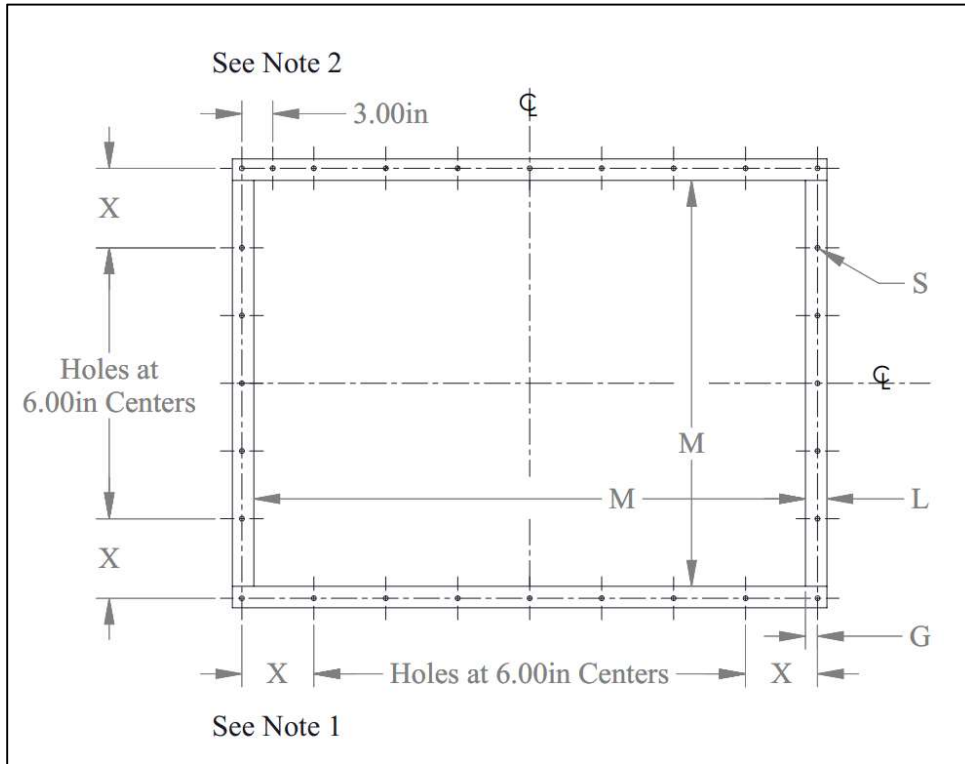
Item Number	"T" Tank Size	Nominal Pressure Rating	Nominal Capacity	"A"	"B" Inlet Height	"C"	"E" Inlet Width	"F" Outlet Diameter	"G" Drain Height	"H" Overflow Height	"I" Inspection Port Size	"J" Overflow Size	"K" Drain Size	"L" Spray Shower Inlet Pipe Size
	inches	inWC	cfm	inches	inches	inches	inches	inches	inches	inches	inches	nominal pipe	nominal pipe	nominal pipe
DS-01-30-15	30.00	15	3,300	4.00	18.50	22.00	9.00	15.00	6.50	19.00	14.00	P4	P4	P0.5
DS-01-30-30	30.00	30	3,300	4.00	18.50	22.00	9.00	15.00	6.50	19.00	14.00	P4	P4	P0.5
DS-01-30-50	30.00	50	3,300	4.00	18.50	22.00	9.00	15.00	6.50	19.00	14.00	P4	P4	P0.5
DS-01-36-15	36.00	15	4,700	4.00	21.00	25.00	10.00	18.00	6.50	19.00	14.00	P6	P6	P0.75
DS-01-36-30	36.00	30	4,700	4.00	21.00	25.00	10.00	18.00	6.50	19.00	14.00	P6	P6	P0.75
DS-01-36-50	36.00	50	4,700	4.00	21.00	25.00	10.00	18.00	6.50	19.00	14.00	P6	P6	P0.75
DS-01-42-15	42.00	15	6,400	4.00	24.50	28.00	11.00	21.00	6.50	19.00	14.00	P6	P6	P0.75
DS-01-42-30	42.00	30	6,400	4.00	24.50	28.00	11.00	21.00	6.50	19.00	14.00	P6	P6	P0.75
DS-01-42-50	42.00	50	6,400	4.00	24.50	28.00	11.00	21.00	6.50	19.00	14.00	P6	P6	P0.75
DS-01-48-15	48.00	15	8,300	4.00	27.00	31.00	12.00	24.00	6.50	19.00	14.00	P6	P6	P0.75
DS-01-48-30	48.00	30	8,300	4.00	27.00	31.00	12.00	24.00	6.50	19.00	14.00	P6	P6	P0.75
DS-01-48-50	48.00	50	8,300	4.00	27.00	31.00	12.00	24.00	6.50	19.00	14.00	P6	P6	P0.75
DS-01-54-15	54.00	15	10,500	4.00	30.00	34.00	14.00	27.00	6.00	19.00	14.00	P6	P6	P0.75
DS-01-54-30	54.00	30	10,500	4.00	30.00	34.00	14.00	27.00	6.00	19.00	14.00	P6	P6	P0.75
DS-01-54-50	54.00	50	10,500	4.00	30.00	34.00	14.00	27.00	6.00	19.00	14.00	P6	P6	P0.75
DS-01-60-15	60.00	15	12,900	4.00	33.00	37.00	16.00	30.00	6.00	19.00	14.00	P6	P6	P1
DS-01-60-30	60.00	30	12,900	4.00	33.00	37.00	16.00	30.00	6.00	19.00	14.00	P6	P6	P1
DS-01-60-50	60.00	50	12,900	4.00	33.00	37.00	16.00	30.00	6.00	19.00	14.00	P6	P6	P1
DS-01-66-15	66.00	15	15,600	4.00	36.00	40.00	18.00	33.00	6.00	19.00	14.00	P6	P6	P1
DS-01-66-30	66.00	30	15,600	4.00	36.00	40.00	18.00	33.00	6.00	19.00	14.00	P6	P6	P1
DS-01-66-50	66.00	50	15,600	4.00	36.00	40.00	18.00	33.00	6.00	19.00	14.00	P6	P6	P1

Item Number	"T" Tank Size	Nominal Pressure Rating	Nominal Capacity	"A"	"B" Inlet Height	"C"	"E" Inlet Width	"F" Outlet Diameter	"G" Drain Height	"H" Overflow Height	"I" Inspection Port Size	"J" Overflow Size	"K" Drain Size	"L" Spray Shower Inlet Pipe Size
	inches	inWC	cfm	inches	inches	inches	inches	inches	inches	inches	inches	Nominal Pipe	Nominal Pipe	Nominal Pipe
DS-01-72-15	72.00	15	18,600	4.00	39.00	43.00	20.00	36.00	6.00	19.00	14.00	P6	P6	P1
DS-01-72-30	72.00	30	18,600	4.00	39.00	43.00	20.00	36.00	6.00	19.00	14.00	P6	P6	P1
DS-01-72-50	72.00	50	18,600	4.00	39.00	43.00	20.00	36.00	6.00	19.00	14.00	P6	P6	P1
DS-01-78-15	78.00	15	21,800	4.00	42.00	48.00	22.00	39.00	6.00	19.00	18.00	P6	P6	P1.5
DS-01-78-30	78.00	30	21,800	4.00	42.00	48.00	22.00	39.00	6.00	19.00	18.00	P6	P6	P1.5
DS-01-78-50	78.00	50	21,800	4.00	42.00	48.00	22.00	39.00	6.00	19.00	18.00	P6	P6	P1.5
DS-01-84-15	84.00	15	25,200	6.00	45.00	51.00	24.00	42.00	6.00	19.00	18.00	P6	P6	P1.5
DS-01-84-30	84.00	30	25,200	6.00	45.00	51.00	24.00	42.00	6.00	19.00	18.00	P6	P6	P1.5
DS-01-84-50	84.00	50	25,200	6.00	45.00	51.00	24.00	42.00	6.00	19.00	18.00	P6	P6	P1.5
DS-01-90-15	90.00	15	28,900	6.00	48.00	54.00	25.50	45.00	6.00	19.00	18.00	P6	P6	P1.5
DS-01-90-30	90.00	30	28,900	6.00	48.00	54.00	25.50	45.00	6.00	19.00	18.00	P6	P6	P1.5
DS-01-90-50	90.00	50	28,900	6.00	48.00	54.00	24.50	45.00	6.00	19.00	18.00	P6	P6	P1.5
DS-01-96-15	96.00	15	32,900	6.00	52.50	58.00	27.00	48.00	6.00	19.00	18.00	P8	P6	P1.5
DS-01-96-30	96.00	30	32,900	6.00	52.50	58.00	27.00	48.00	6.00	19.00	18.00	P8	P6	P1.5
DS-01-96-50	96.00	50	32,900	6.00	52.50	58.00	27.00	48.00	6.00	19.00	18.00	P8	P6	P1.5
DS-01-102-15	102.00	15	37,200	6.00	56.50	62.00	28.50	51.00	6.00	24.50	18.00	P8	P6	P1.5
DS-01-102-30	102.00	30	37,200	6.00	56.50	62.00	28.50	51.00	6.00	24.50	18.00	P8	P6	P1.5
DS-01-102-50	102.00	50	37,200	6.00	56.50	62.00	28.50	51.00	6.00	24.50	18.00	P8	P6	P1.5
DS-01-108-15	108.00	15	41,600	6.00	60.00	66.00	30.00	54.00	6.00	24.50	18.00	P8	P6	P1.5
DS-01-108-30	108.00	30	41,600	6.00	60.00	66.00	30.00	54.00	6.00	24.50	18.00	P8	P6	P1.5
DS-01-108-50	108.00	50	41,600	6.00	60.00	66.00	30.00	54.00	6.00	24.50	18.00	P8	P6	P1.5
DS-01-114-15	114.00	15	46,400	6.00	63.00	69.00	31.50	57.00	6.00	24.50	18.00	P8	P6	P1.5
DS-01-114-30	114.00	30	46,400	6.00	63.00	69.00	31.50	57.00	6.00	24.50	18.00	P8	P6	P1.5
DS-01-114-50	114.00	50	46,400	6.00	63.00	69.00	31.50	57.00	6.00	24.50	18.00	P8	P6	P1.5
DS-01-120-15	120.00	15	51,400	6.00	66.00	74.00	33.00	60.00	6.00	24.50	22.00	P8	P6	P1.5
DS-01-120-30	120.00	30	51,400	6.00	66.00	74.00	33.00	60.00	6.00	24.50	22.00	P8	P6	P1.5
DS-01-120-50	120.00	50	51,400	6.00	66.00	74.00	33.00	60.00	6.00	24.50	22.00	P8	P6	P1.5
DS-01-126-15	126.00	15	56,600	6.00	69.00	77.00	34.50	63.00	6.00	24.50	22.00	P8	P6	P1.5
DS-01-126-30	126.00	30	56,600	6.00	69.00	77.00	34.50	63.00	6.00	24.50	22.00	P8	P6	P1.5
DS-01-126-50	126.00	50	56,600	6.00	69.00	77.00	34.50	63.00	6.00	24.50	22.00	P8	P6	P1.5
DS-01-132-15	132.00	15	62,200	8.00	72.00	80.00	36.00	66.00	7.50	24.50	22.00	P8	P8	P1.5
DS-01-132-30	132.00	30	62,200	8.00	72.00	80.00	36.00	66.00	7.50	24.50	22.00	P8	P8	P1.5
DS-01-132-50	132.00	50	62,200	8.00	72.00	80.00	36.00	66.00	7.50	24.50	22.00	P8	P8	P1.5
DS-01-138-15	138.00	15	68,500	8.00	75.00	83.00	37.50	69.00	7.50	24.50	22.00	P10	P8	P2
DS-01-138-30	138.00	30	68,500	8.00	75.00	83.00	37.50	69.00	7.50	24.50	22.00	P10	P8	P2
DS-01-138-50	138.00	50	68,500	8.00	75.00	83.00	37.50	69.00	7.50	24.50	22.00	P10	P8	P2
DS-01-144-15	144.00	15	74,400	8.00	78.00	86.00	39.00	72.00	7.50	24.50	22.00	P10	P8	P2
DS-01-144-30	144.00	30	74,400	8.00	78.00	86.00	39.00	72.00	7.50	24.50	22.00	P10	P8	P2
DS-01-144-50	144.00	50	74,400	8.00	78.00	86.00	39.00	72.00	7.50	24.50	22.00	P10	P8	P2
DS-01-150-15	150.00	15	80,200	8.00	81.00	89.00	40.50	75.00	7.50	24.50	22.00	P10	P8	P2
DS-01-150-30	150.00	30	80,200	8.00	81.00	89.00	40.50	75.00	7.50	24.50	22.00	P10	P8	P2
DS-01-150-50	150.00	50	80,200	8.00	81.00	89.00	40.50	75.00	7.50	24.50	22.00	P10	P8	P2
DS-01-156-15	156.00	15	86,800	8.00	84.00	92.00	42.00	78.00	7.50	24.50	22.00	P10	P8	P2
DS-01-156-30	156.00	30	86,800	8.00	84.00	92.00	42.00	78.00	7.50	24.50	22.00	P10	P8	P2
DS-01-156-50	156.00	50	86,800	8.00	84.00	92.00	42.00	78.00	7.50	24.50	22.00	P10	P8	P2
DS-01-162-15	162.00	15	94,000	8.00	87.00	95.00	44.00	81.00	7.50	24.50	22.00	P10	P8	P2
DS-01-162-30	162.00	30	94,000	8.00	87.00	95.00	44.00	81.00	7.50	24.50	22.00	P10	P8	P2
DS-01-162-50	162.00	50	94,000	8.00	87.00	95.00	44.00	81.00	7.50	24.50	22.00	P10	P8	P2
DS-01-168-15	168.00	15	101,200	8.00	90.00	98.00	46.00	84.00	7.50	24.50	22.00	P10	P8	P2
DS-01-168-30	168.00	30	101,200	8.00	90.00	98.00	46.00	84.00	7.50	24.50	22.00	P10	P8	P2
DS-01-168-50	168.00	50	101,200	8.00	90.00	98.00	46.00	84.00	7.50	24.50	22.00	P10	P8	P2
DS-01-174-15	174.00	15	108,000	8.00	93.00	101.00	48.00	87.00	7.50	24.50	22.00	P10	P8	P2
DS-01-174-30	174.00	30	108,000	8.00	93.00	101.00	48.00	87.00	7.50	24.50	22.00	P10	P8	P2
DS-01-174-50	174.00	50	108,000	8.00	93.00	101.00	48.00	87.00	7.50	24.50	22.00	P10	P8	P2
DS-01-180-15	180.00	15	115,000	8.00	96.00	104.00	50.00	90.00	7.50	24.50	22.00	P10	P8	P2
DS-01-180-30	180.00	30	115,000	8.00	96.00	104.00	50.00	90.00	7.50	24.50	22.00	P10	P8	P2
DS-01-180-50	180.00	50	115,000	8.00	96.00	104.00	50.00	90.00	7.50	24.50	22.00	P10	P8	P2
DS-01-186-15	186.00	15	122,800	8.00	99.00	107.00	52.00	93.00	7.50	24.50	22.00	P10	P8	P2
DS-01-186-30	186.00	30	122,800	8.00	99.00	107.00	52.00	93.00	7.50	24.50	22.00	P10	P8	P2
DS-01-186-50	186.00	50	122,800	8.00	99.00	107.00	52.00	93.00	7.50	24.50	22.00	P10	P8	P2
DS-01-192-15	192.00	15	130,600	8.00	102.00	110.00	54.00	96.00	7.50	24.50	22.00	P10	P8	P2
DS-01-192-30	192.00	30	130,600	8.00	102.00	110.00	54.00	96.00	7.50	24.50	22.00	P10	P8	P2
DS-01-192-50	192.00	50	130,600	8.00	102.00	110.00	54.00	96.00	7.50	24.50	22.00	P10	P8	P2
DS-01-198-15	198.00	15	138,000	8.00	105.00	113.00	57.00	99.00	7.50	24.50	22.00	P10	P8	P2
DS-01-198-30	198.00	30	138,000	8.00	105.00	113.00	57.00	99.00	7.50	24.50	22.00	P10	P8	P2
DS-01-198-50	198.00	50	138,000	8.00	105.00	113.00	57.00	99.00	7.50	24.50	22.00	P10	P8	P2

Notes

1. 3D model files and general arrangement drawings with installation details available upon order.
2. Customer to specify inspection port, drain, and overflow position, and inspection port hinge side.

Standard rectangular flange details

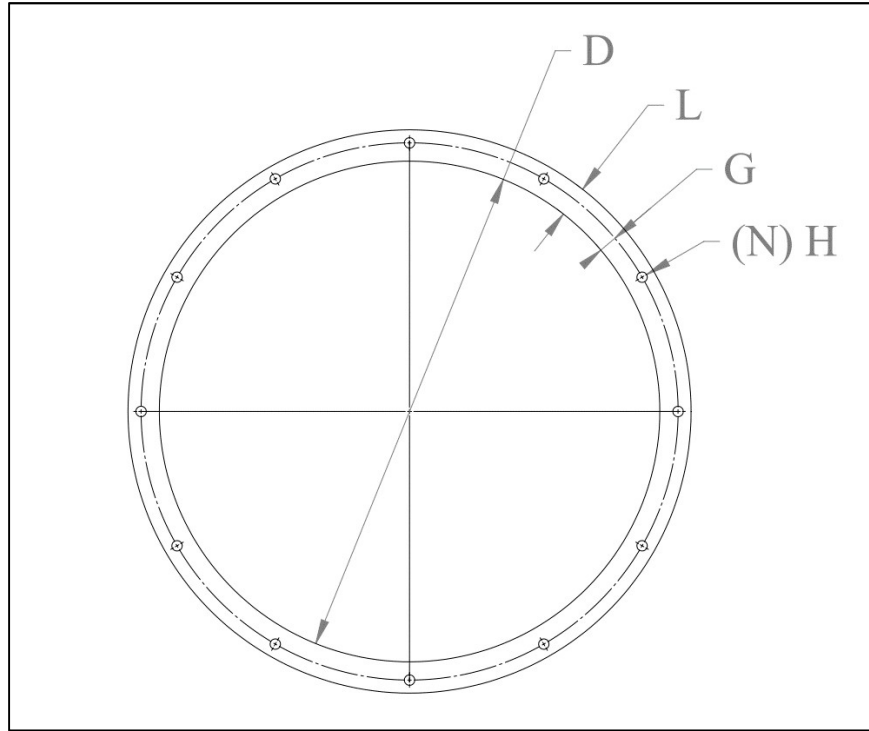


"M" Largest Dimension Width or Height		"L" Flange Leg	"G" Gauge	"S" Hole Diameter	Bolt Size
M _{LOWER}	M _{UPPER}				
inches	inches	inches	inches	inches	inches
0	31.00	1.50	0.875	0.500	3/8
31.01	39.00	2.00	1.125	0.500	3/8
39.01	78.00	2.50	1.375	0.625	1/2
78.01	101.00	3.00	1.750	0.625	1/2
101.01	120.00	4.00	2.250	0.625	1/2

Notes

1. "X" is minimum 2.50in and maximum 8.50in.
2. If "X" is greater than 6.00in, add an extra hole 3.00in from corner hole.
3. Holes always land on centerlines and corners.

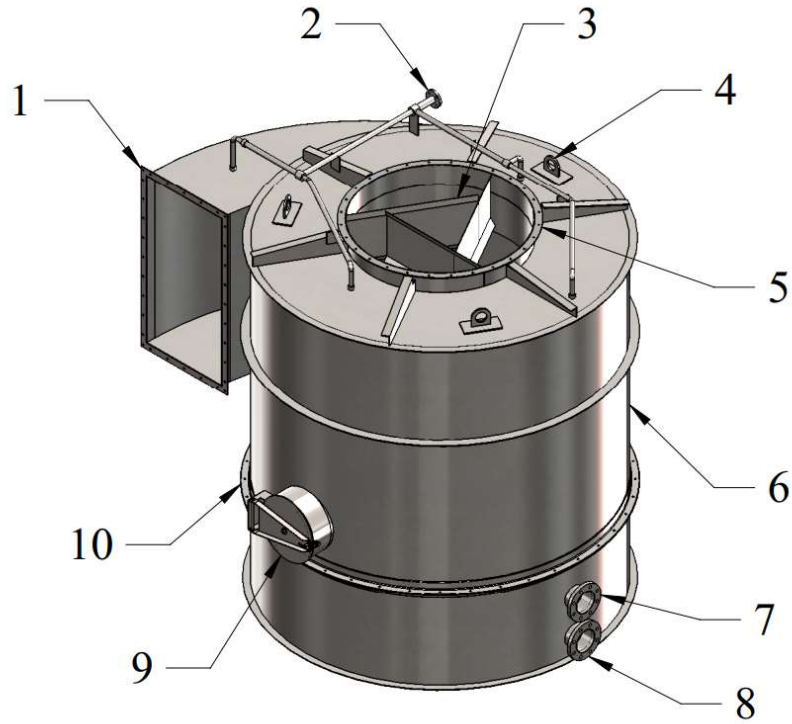
Standard round flange details



"D" Nominal Size		"L" Flange Leg	"G" Gauge	"N" Number of Holes	"H" Hole Diameter	Bolt Size
D _{LOWER}	D _{UPPER}					
inches	inches	inches	inches	quantity	inches	inches
0	8.00	1.50	0.875	4	0.500	3/8
8.01	16.00	1.50	0.875	8	0.500	3/8
16.01	24.00	1.50	0.875	12	0.500	3/8
24.01	31.00	1.50	0.875	16	0.500	3/8
31.01	39.00	2.00	1.125	20	0.500	3/8
39.01	46.00	2.50	1.375	24	0.625	1/2
46.01	54.00	2.50	1.375	28	0.625	1/2
54.01	62.00	2.50	1.375	32	0.625	1/2
62.01	70.00	2.50	1.375	36	0.625	1/2
70.01	78.00	2.50	1.375	40	0.625	1/2
78.01	86.00	3.00	1.750	44	0.625	1/2
86.01	94.00	3.00	1.750	48	0.625	1/2
94.01	101.00	3.00	1.750	52	0.625	1/2
101.01	108.00	4.00	2.250	56	0.625	1/2
108.01	120.00	4.00	2.250	60	0.625	1/2

Notes

1. Holes always land on centerlines.



Parts list

Number	Quantity	Description
1	1	Inlet
2	1	Spray shower water inlet
3	1	Vortex breaker
4	Varies	Lifting lug
5	1	Outlet
6	1	Tank
7	1	Overflow drain
8	1	Drain
9	1	Inspection port
10	Varies	Tank split

Notes

1. All hardware provided. For most sizes, the unit is delivered split for shipping purposes.

How to order

To fully specify the DS-01 Centrifugal Droplet Separator, make a selection from the code boxes below.

Example: DS-01-90-1-1-1-30-S-C-C-C, shown below, is a centrifugal droplet separator with a 90.00in diameter tank, 316 stainless steel as the internal material, 304 stainless steel as the external material, 316 stainless steel hardware, a 30inWC pressure rating, and our standard bolt pattern. The customer has specified the inspection port, overflow, and drain details.

1	2	3	4	5	6	7	8	9	10	11
DS	01	90	1	1	1	30	S	C	C	C
Specifications										
Please provide a drawing for our approval of the specified centrifugal droplet separator with an inspection port at 180° and an observer's left hand hinge, an overflow drain at 90° with a flapper valve, and a drain at 90°.										

1	Equipment type									
DS	Droplet Separator									
2	Equipment sub-type									
01	Centrifugal Droplet Separator									
3	Nominal size									
30	Nominal ø30.00in [ø762.0mm], 3,300cfm				120	Nominal ø120.00in [ø3048.0mm], 51,400cfm				
36	Nominal ø36.00in [ø914.4mm], 4,700cfm				126	Nominal ø126.00in [ø3200.4mm], 56,600cfm				
42	Nominal ø42.00in [ø1066.8mm], 6,400cfm				132	Nominal ø132.00in [ø3352.8mm], 62,200cfm				
48	Nominal ø48.00in [ø1219.2mm], 8,300cfm				138	Nominal ø138.00in [ø3505.2mm], 68,500cfm				
54	Nominal ø54.00in [ø1371.6mm], 10,500cfm				144	Nominal ø144.00in [ø3657.6mm], 74,400cfm				
60	Nominal ø60.00in [ø1524.0mm], 12,900cfm				150	Nominal ø150.00in [ø3810.0mm], 80,200cfm				
66	Nominal ø66.00in [ø1676.4mm], 15,600cfm				156	Nominal ø156.00in [ø3962.4mm], 86,800cfm				
72	Nominal ø72.00in [ø1828.8mm], 18,600cfm				162	Nominal ø162.00in [ø4114.8mm], 94,000cfm				
78	Nominal ø78.00in [ø1981.2mm], 21,800cfm				168	Nominal ø168.00in [ø4267.2mm], 101,200cfm				
84	Nominal ø84.00in [ø2133.6mm], 25,200cfm				174	Nominal ø174.00in [ø4419.6mm], 108,000cfm				
90	Nominal ø90.00in [ø2286.0mm], 28,900cfm				180	Nominal ø180.00in [ø4572.0mm], 115,000cfm				
96	Nominal ø96.00in [ø2438.4mm], 32,900cfm				186	Nominal ø186.00in [ø4724.4mm], 122,800cfm				
102	Nominal ø102.00in [ø2590.8mm], 37,200cfm				192	Nominal ø192.00in [ø4876.8mm], 130,600cfm				
108	Nominal ø108.00in [ø2743.2mm], 41,600cfm				198	Nominal ø198.00in [ø5029.2mm], 138,000cfm				
114	Nominal ø114.00in [ø2895.6mm], 46,400cfm				C	Customer Specified Size				
4	Internal material									
1	316 Stainless Steel				C	Customer Specified Material				
5	External material									
1	304 Stainless Steel				C	Customer Specified Material				
6	Hardware material									
1	316 Stainless Steel				C	Customer Specified Material				
7	Pressure rating									
15	15inWC, Up to 4500fpm				50	50inWC, Up to 4500fpm				
30	30inWC, Up to 4500fpm				C	Customer Specified Pressure Rating				
8	Flange bolt patterns									
S	Standard				C	Customer Specified Flange Bolt Pattern				
9	Inspection port placement and hinge side									
C	Customer Specified									
10	Overflow drain placement and optional flapper valve									
C	Customer Specified									
11	Drain placement									
C	Customer Specified									

Many types of customizations are available upon request.

Note: There are various factors which should be considered when selecting a droplet separator for a specific application. Some of these factors are outside of the scope of this data sheet. If you have any questions regarding the application, compatibility, or use of this droplet separator, contact VentilationComponents.com for more information.

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