

Series CLC Coalescer/Separator

Type 31L-CLC for Horizontal or Vertical Applications



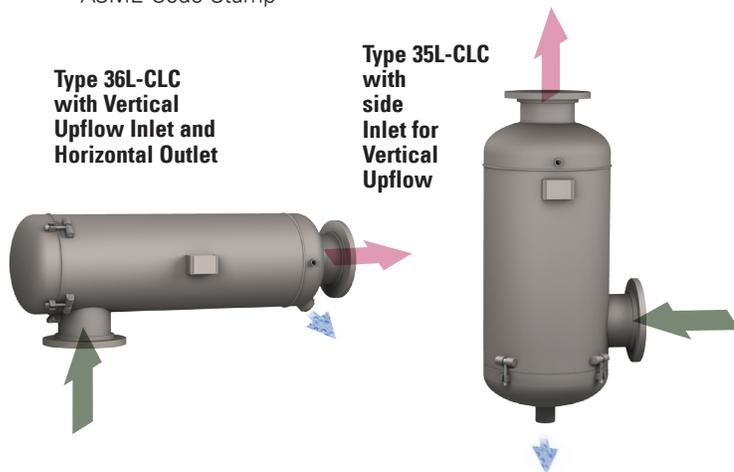
- Centrifugal In-line Gas/Liquid Separators
- Two-Stage Design for Maximum Efficiency
- Flanged Connections
- Carbon Steel or Stainless Steel Construction
- Horizontal or Vertical Flow

FEATURES

- Removes 99% of Liquid and Solid Entrainment Particles Larger Than 4 Microns
- Easy Maintenance
- Three Flow Configurations
- Gas, Steam, or Air Applications
- High Efficiency Over Wide Flow Range

OPTIONS

- ASME Code Stamp



Type 36L-CLC with Vertical Upflow Inlet and Horizontal Outlet

Type 35L-CLC with side Inlet for Vertical Upflow



Powering Business Worldwide

High-Efficiency Separation Down to 4 Microns

The unique two-stage design of these Series CLC Coalescers/Separators allows them to remove 99% of all liquid and solid particles larger than 4 microns in size. Standard, one-stage separators are only capable of removing particles larger than 10 microns in size. The efficiency of Eaton's Coalescer/Separator far exceeds that of any other type of centrifugal, cyclone, turbine or vane type separator. And it works with no moving parts to fail or wear out.

Applications

The Eaton Coalescer/Separator provides two-stage separation of liquid that is in the form of a fine mist or fog from a gas or vapor. The Coalescer/Separator is primarily used in applications where a fine mist is encountered in processes involving cooling, condensation, flashing, or evaporation, such as:

- Compressed refrigeration gases
- Evaporator overhead steam
- Compressed air prior to desiccant dryer beds
- High-pressure gas at injection wells
- Fuel gas lines to engines in power
- Industrial plants
- Natural gas and gas distribution lines
- Regulator stations

Two-Stage Separation

In the first stage, the coalescer stage, smaller liquid droplets enter a special wire mesh de-misting pad in the vessel. The pad's purpose is to increase the size of the droplets as they pass through it so they can be removed. The larger liquid droplets exit the de-misting pad and enter the second, separation stage. In the second stage, the droplets are centrifugally thrown to the outside wall of the vessel by a unique Censpellar™ and flow to the bottom for draining. Eaton's Vortex Containment Plate (VCP) prevents the droplets from being re-entrained after separation.

Easy Maintenance

The only maintenance required is the inspection, cleaning, or replacement of the de-misting pad. This is easily accomplished through either a quick-opening body closure or body flanges.

Engineering Specifications

All gas/liquid separators are fabricated carbon steel or stainless steel construction with two-stage coalescer/separator design and flanged connections. Separators have an ASME Code Stamp.

Series CLC Coalescers/Separators

Dimensions: Type 31L-CLC (in/mm)

Pipe Size	A	B	C	D	Drain NPT	Wt (lb/kg)
2-1/2	34 / 864	28 / 711	3 / 76	6.62 / 168	1	125 / 57
3	36 / 914	30 / 762	3 / 76	8.62 / 219	1-1/2	180 / 82
4	42 / 1067	34 / 864	4 / 102	10.75 / 273	1-1/2	280 / 127
5	46 / 1168	38 / 965	4 / 102	12.75 / 324	1-1/2	390 / 177
6	48 / 1219	40 / 1016	4 / 102	14 / 356	1-1/2	510 / 232
8	58 / 1473	48 / 1219	5 / 127	16 / 406	2	665 / 302
10	64 / 1626	54 / 1372	5 / 127	20 / 508	2	1060 / 482
12	72 / 1829	62 / 1575	5 / 127	24 / 610	2-1/2	1415 / 643
14	78 / 1981	68 / 1727	5 / 127	28 / 711	2-1/2	1830 / 832
16	86 / 2184	76 / 1930	5 / 127	30 / 762	3	2130 / 968

See Steam and Air Charts on the Technical Information Page for sizing information.

Dimensions: Type 36L-CLC (in/mm)

Pipe Size	C	D	T	W	X	Drain NPT	Wt (lb/kg)
2-1/2	3 / 76	6.62 / 168	7 / 178	37 / 940	30 / 762	1	130 / 59
3	3 / 76	8.62 / 219	8 / 203	41 / 1041	33 / 838	1-1/2	165 / 75
4	4 / 102	10.75 / 273	10 / 254	44 / 1118	36 / 914	1-1/2	295 / 134
5	4 / 102	12.75 / 324	11 / 279	51 / 1295	41 / 1041	1-1/2	420 / 191
6	4 / 102	14 / 356	12 / 305	54 / 1372	42 / 1067	1-1/2	475 / 216
8	5 / 127	16 / 406	13 / 330	66 / 1676	53 / 1346	2	525 / 239
10	5 / 127	20 / 508	15 / 381	77 / 1956	60 / 1524	2	590 / 268
12	5 / 127	24 / 610	17 / 432	88 / 2235	70 / 1778	2-1/2	1125 / 511
14	5 / 127	28 / 711	19 / 483	96 / 2438	77 / 1956	2-1/2	1475 / 670
16	5 / 127	30 / 762	20 / 508	101 / 2565	80 / 2032	3	1925 / 875

Dimensions: Type 35L-CLC (in/mm)

Pipe Size	C	L	O	P	Q	Drain NPT	Weight (lb/kg)
2-1/2	3 / 76	8.62 / 219	30 / 762	24 / 610	8 / 203	1	145 / 66
3	3 / 76	10.75 / 273	34 / 864	28 / 711	9 / 229	1-1/2	195 / 89
4	4 / 102	14 / 356	39 / 991	31 / 787	11 / 279	1-1/2	305 / 139
5	4 / 102	16 / 406	45 / 1143	35 / 889	12 / 305	1-1/2	435 / 198
6	4 / 102	18 / 457	50 / 1270	39 / 991	13 / 330	1-1/2	530 / 241
8	5 / 127	20 / 508	56 / 1422	45 / 1143	15 / 381	2	665 / 302
10	5 / 127	24 / 610	67 / 1702	53 / 1346	17 / 432	2	975 / 443
12	5 / 127	30 / 762	76 / 1930	61 / 1549	19 / 483	2-1/2	1390 / 632
14	5 / 127	36 / 914	86 / 2184	67 / 1702	23 / 584	2-1/2	1920 / 873
16	5 / 127	40 / 1016	98 / 2489	77 / 1956	25 / 635	3	2645 / 1202

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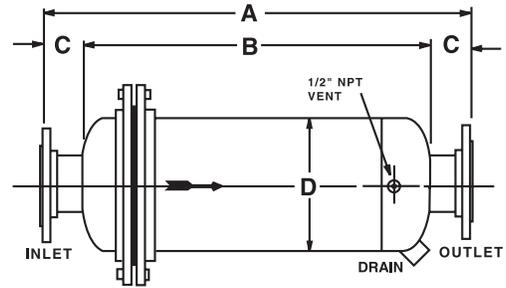
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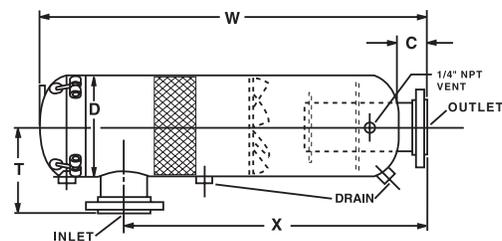
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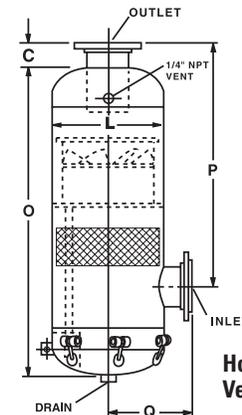
Three Flow Patterns for Application Flexibility



Horizontal Inlet and Outlet



Vertical Upflow Inlet and Horizontal Outlet



Horizontal Inlet with Vertical Upflow Outlet

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