

Type L

Horizontal or Vertical Fabricated Construction

- 10 Models for Application Flexibility
- Low Profile
- Horizontal or Vertical Flow
- Flanged Connections
- Fabricated Carbon Steel or Stainless Steel Construction

FEATURES

- Compact Design
- No Required Maintenance
- Removes 99% of Liquid and Solid Entrainment Particles Larger Than 10 Microns
- Gas, Steam, or Air Applications

OPTIONS

- Oversized Inlet Connections
- Reduced Size Inlet and Outlet Connections
- Different Flow Patterns
- Integral Sump
- ASME Code Stamp
- Support Legs



Model 31-L

High Efficiency – No Maintenance

The Eaton Type L Gas/Liquid Separator automatically removes 99% of all liquid and solid entrainment particles 10 microns in size or larger. And it does so with no moving parts to break or wear out. Series L Gas/Liquid Separators perform to specification year in and year out with no maintenance.

helps direct the clean, dry flow to the outlet of the separator.

There are 10 different models available to match the needs of just about any application no matter what the flow direction or piping system orientation.

Type L with In-line Piping Connections

The Model 31-L Separator is an in-line separator that can be installed horizontally or vertically for downflow applications. Models installed horizontally can be ordered with sump and water gauge mountings. Horizontally and vertically installed models can be furnished with reduced size inlet and outlet flanges to accommodate higher flow rates in smaller pipelines with an acceptable pressure drop. In all, five different configurations are offered to meet exact application requirements. The Model 32-L is an in-line vertical upflow separator.

Operation

Moisture-laden gas enters the inlet of the separator where it is deflected through a unique Cempellar™ into a centrifugal motion. The entrained solids and moisture droplets are separated out by a reduction in velocity of the flow. Separated liquids and solids fall out of the gas stream below the exclusive Eaton Vortex Containment Plate (VCP) where they cannot be re-entrained. The VCP eliminates the need for the expensive, delicate baffles used in other separators, and

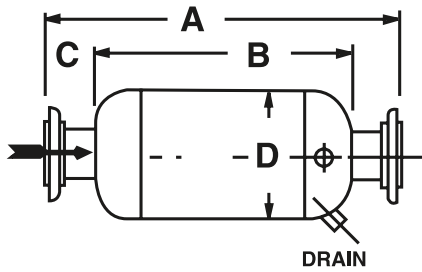


Model 32-L

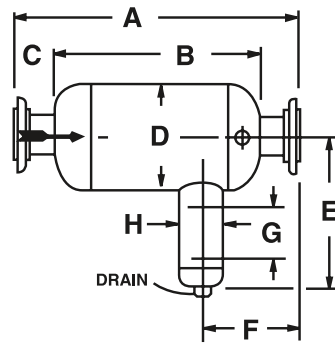


Model 31-LS

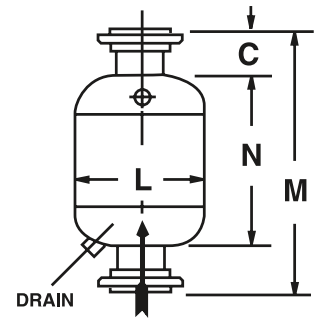
Standard Type L Separators for Horizontal or Vertical Upflow Applications



Model 31-L (Standard Model)

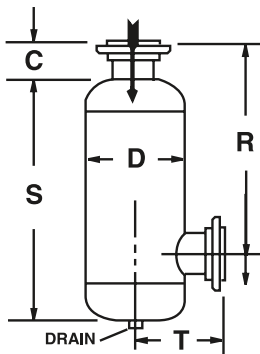


Model 31-LS with Optional Sump

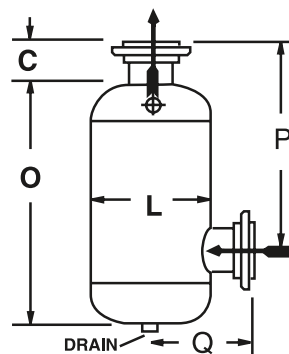


Model 32-L Vertical Upflow Separator

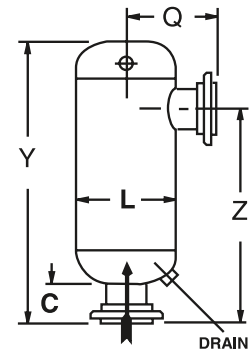
Type L Separators with Offset Piping Connections



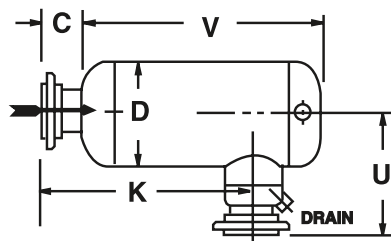
Model 33-L Vertical Downflow with Offset Outlet



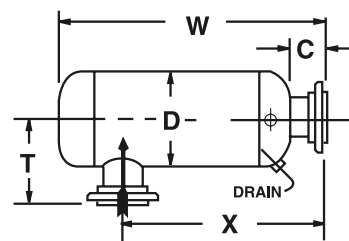
Model 35-L Vertical Upflow with Offset Inlet



Model 37-L Vertical Upflow with Offset Outlet



Model 34-L Horizontal Downflow with Offset Outlet



Model 36-L Vertical Upflow with Horizontal Outlet

Dimensions: Type L Gas/Liquid Separators (in/mm)

Size	1-1/2	2	2-1/2	3	4	5	6	8	10	12	14	16	18	20	22	24	26	28	30	36	42
A	20.00 508	22.00 559	22.00 559	24.00 610	30.00 762	34.00 864	36.00 914	46.00 1168	52.00 1321	60.00 1524	66.00 1676	74.00 1880	80.00 2032	86.00 2184	96.00 2438	106.00 2692	120.00 3048	132.00 3353	142.00 3607	166.00 4216	190.00 4826
B	15.00 381	16.00 406	16.00 406	18.00 457	22.00 559	26.00 660	28.00 711	36.00 914	42.00 1067	50.00 1270	56.00 1422	64.00 1626	68.00 1727	74.00 1880	84.00 2134	94.00 2388	104.00 2642	114.00 2896	122.00 3099	144.00 3658	166.00 4216
C	3.00 76	3.00 76	3.00 76	3.00 76	4.00 102	4.00 102	4.00 102	5.00 127	5.00 127	5.00 127	5.00 127	5.00 127	6.00 152	6.00 152	6.00 152	6.00 152	8.00 203	9.00 229	10.00 254	11.00 279	12.00 305
D	5.56 141	6.63 168	6.63 168	8.63 219	10.75 273	12.75 324	14.00 356	16.00 406	20.00 508	24.00 610	28.00 711	30.00 762	36.00 914	36.00 914	42.00 1067	42.00 1067	48.00 1219	54.00 1372	54.00 1372	66.00 1676	78.00 1981
E	14.00 356	14.50 368	14.50 368	16.50 419	17.50 445	19.50 495	21.00 533	24.00 610	27.00 686	30.00 762	33.00 838	35.00 889	39.00 991	42.00 1067	46.00 1168	47.00 1194	50.00 1270	54.00 1372	55.00 1397	63.00 1600	70.00 1778
F	8.50 216	9.00 229	9.00 229	10.00 254	12.00 305	13.00 330	14.00 356	16.00 406	19.00 483	20.00 508	23.00 584	24.00 610	27.00 686	28.00 711	31.00 787	31.00 787	36.00 914	38.00 965	43.00 1092	48.00 1219	56.00 1422
G	6.75 171	6.75 171	6.75 171	6.75 171	6.75 171	6.75 171	6.75 171	7.88 200	7.88 200	7.88 200	7.78 198	7.78 198	9.13 232	9.13 232	10.25 260	10.25 260	10.25 260	10.25 260	10.25 260	11.88 302	11.88 302
H	2.38 60	2.88 73	2.88 73	3.50 89	4.50 114	5.56 141	6.63 168	8.63 219	10.75 273	10.75 273	12.75 324	14.00 356	16.00 406	18.00 457	20.00 508	20.00 508	22.00 559	22.00 559	24.00 610	30.00 762	36.00 914
J	21.00 533	23.00 584	23.00 584	25.00 635	32.00 813	36.00 914	40.00 1016	48.00 1219	58.00 1473	65.00 1651	71.00 1803	80.00 2032	86.00 2184	92.00 2337	103.00 2616	114.00 2896	128.00 3251	140.00 3556	152.00 3861	178.00 4521	202.00 5131
K	15.50 394	17.00 432	17.00 432	19.00 483	24.00 610	28.00 711	31.00 787	40.00 1016	47.00 1194	54.00 1372	60.00 1524	68.00 1727	77.00 1956	83.00 2108	90.00 2286	101.00 2565	112.00 2845	122.00 3099	136.00 3454	158.00 4013	184.00 4674
L	6.63 168	8.63 219	8.63 219	10.75 273	14.00 356	16.00 406	18.00 457	20.00 508	24.00 610	30.00 762	36.00 914	40.00 1016	42.00 1067	48.00 1219	48.00 1219	54.00 1372	60.00 1524	66.00 1676	72.00 1829	78.00 1981	96.00 2438
M	17.00 432	19.00 483	19.00 483	22.00 559	28.00 711	30.00 762	33.00 838	39.00 991	48.00 1219	54.00 1372	60.00 1524	66.00 1676	72.00 1829	78.00 1981	83.00 2108	88.00 2235	98.00 2489	106.00 2692	114.00 2896	134.00 3404	142.00 3607
N	12.00 305	13.00 330	13.00 330	16.00 406	20.00 508	22.00 559	25.00 635	29.00 737	38.00 965	44.00 1118	50.00 1270	56.00 1422	60.00 1524	66.00 1676	71.00 1803	76.00 1930	82.00 2083	88.00 2235	94.00 2388	112.00 2845	118.00 2997
O	19.00 483	20.00 508	20.00 508	26.00 660	28.00 711	33.00 838	37.00 940	45.00 1143	54.00 1372	66.00 1676	73.00 1854	85.00 2159	90.00 2286	97.00 2464	105.00 2667	113.00 2870	122.00 3099	130.00 3302	140.00 3556	166.00 4216	180.00 4572
P	15.00 381	16.00 406	16.00 406	21.00 533	23.00 584	27.00 686	30.00 762	37.00 940	44.00 1118	52.00 1321	58.00 1473	68.00 1727	72.00 1829	78.00 1981	84.00 2134	90.00 2286	98.00 2489	105.00 2667	114.00 2896	135.00 3429	144.00 3658
Q	6.00 152	8.00 203	8.00 203	9.00 229	11.00 279	12.00 305	13.00 330	15.00 381	17.00 432	20.00 508	23.00 584	25.00 635	27.00 686	30.00 762	30.00 762	33.00 838	38.00 965	42.00 1067	46.00 1168	50.00 1270	60.00 1524
R	12.50 318	14.00 356	14.00 356	16.00 406	20.00 508	24.00 610	27.00 686	33.00 838	40.00 1016	46.00 1168	52.00 1321	59.00 1499	68.00 1727	74.00 1880	81.00 2057	87.00 2210	96.00 2438	104.00 2642	112.00 2845	134.00 3404	160.00 4064
S	16.00 406	18.00 457	18.00 457	21.00 533	25.00 635	30.00 762	34.00 864	41.00 1041	50.00 1270	58.00 1473	65.00 1651	74.00 1880	85.00 2159	92.00 2337	101.00 2565	108.00 2743	118.00 2997	127.00 3226	136.00 3454	163.00 4140	194.00 4928
T	5.50 140	7.00 178	7.00 178	8.00 203	10.00 254	11.00 279	12.00 305	13.00 330	15.00 381	17.00 432	19.00 483	20.00 508	24.00 610	24.00 610	27.00 686	27.00 686	32.00 813	36.00 914	37.00 940	44.00 1118	51.00 1295
U	8.50 216	10.00 254	10.00 254	11.00 279	14.00 356	15.00 381	17.00 432	19.00 483	22.00 559	25.00 635	28.00 711	29.00 737	33.00 838	34.00 864	38.00 965	38.00 965	44.00 1118	48.00 1219	51.00 1295	59.00 1499	68.00 1727
V	20.00 508	22.00 559	22.00 559	25.00 635	30.00 762	36.00 914	40.00 1016	50.00 1270	59.00 1499	68.00 1727	76.00 1930	86.00 2184	96.00 2438	104.00 2642	114.00 2896	126.00 3200	137.00 3480	149.00 3785	165.00 4191	192.00 4877	223.00 5664
W	24.00 610	26.00 660	26.00 660	29.00 737	36.00 914	41.00 1041	45.00 1143	58.00 1473	68.00 1727	79.00 2007	89.00 2261	99.00 2515	109.00 2769	118.00 2997	131.00 3327	144.00 3658	163.00 4140	177.00 4496	189.00 4801	222.00 5639	255.00 6477
X	18.00 457	20.00 508	20.00 508	22.00 559	28.00 711	32.00 813	35.00 889	46.00 1168	54.00 1372	53.00 1346	71.00 1803	80.00 2032	87.00 2210	95.00 2413	108.00 2743	117.00 2972	131.00 3327	143.00 3632	153.00 3886	180.00 4572	207.00 5258
Y	25.00 635	27.00 686	27.00 686	31.00 787	38.00 965	43.00 1092	46.00 1168	59.00 1499	67.00 1702	78.00 1981	87.00 2210	96.00 2438	105.00 2667	113.00 2870	126.00 3200	138.00 3505	155.00 3937	167.00 4242	180.00 4572	210.00 5334	244.00 6198
Z	18.00 457	20.00 508	20.00 508	22.00 559	28.00 711	32.00 813	34.00 864	45.00 1143	51.00 1295	60.00 1524	67.00 1702	75.00 1905	81.00 2057	88.00 2235	99.00 2515	109.00 2769	122.00 3099	133.00 3378	144.00 3658	168.00 4267	194.00 4928
NPT Drain	1.00	1.00	1.00	1.50	1.50	1.50	1.50	2.00	2.00	2.50	2.50	3.00	3.00	4.00*	4.00*	4.00*	4.00*	4.00*	4.00*	4.00*	4.00*

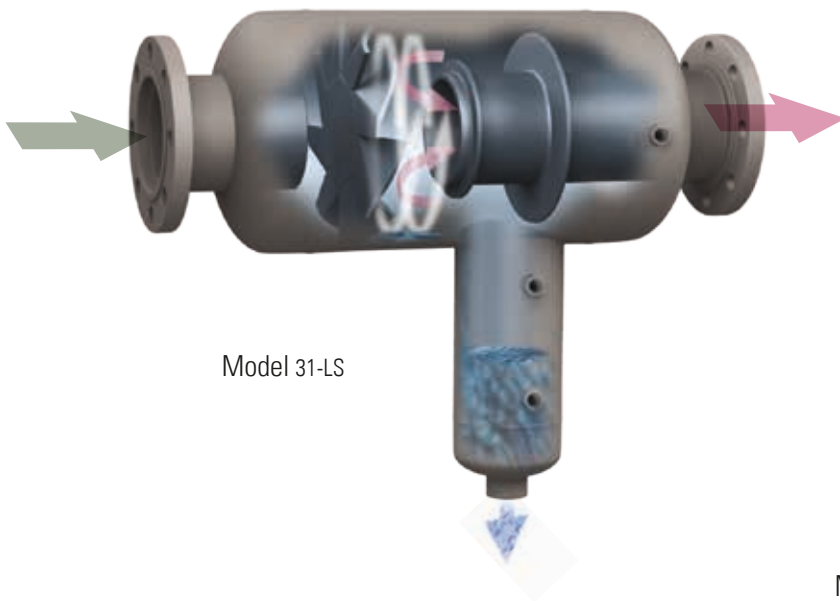
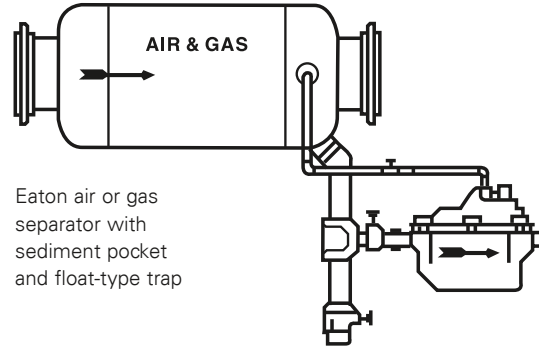
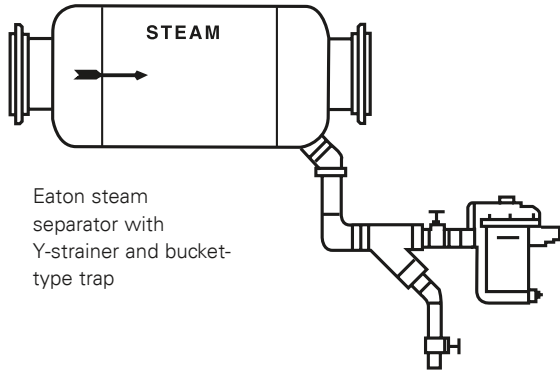
* Flanged drain

Notes: 1. Dimensions shown for 1-1/2" through 6" are valid for 150 lb., 300 lb., and 600 lb. ANSI flanges
Dimensions for 8" size and larger are valid for 150 lb. and 300 lb. flanges. Four inch drains and larger have flanged fittings

2. Designed and constructed for the latest ASME code for unfired vessels. Section VIII, division 1, with stamp

Type L Fabricated Gas/Liquid Separators

Installation Suggestions



Notes:

1. In air or gas installations, keep piping between separator and trap as short as possible and add 1/4" balance line as indicated.
2. For positive drainage of separator, install trap a minimum of 6" below separator drain. For every inch of horizontal piping to trap, add 1" to the vertical piping. Never allow the top of the trap to extend above drain connection.

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