

VERTICAL GAS / LIQUID SEPARATORS

FOR HIGH, MEDIUM
AND LOW PRESSURE
AIR, GAS OR STEAM



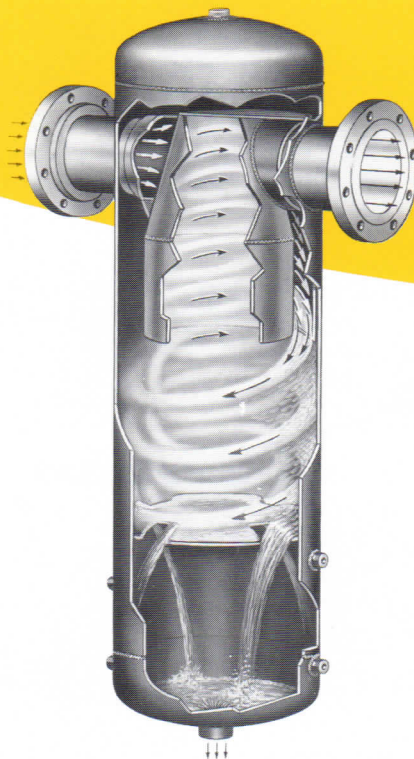
WRIGHT-AUSTIN'S EXCLUSIVE "VCP" VORTEX CONTAINMENT PLATE

In the past, separators often operated at less than peak efficiency due to the re-entrainment of separated liquid at normal and high flow rates.

Wright-Austin solved this problem through the development of a vortex containment plate system now standard in all our vertical type gas/liquid separators.

"VCP" is accomplished through the use of scientifically designed rings, ribs and plates that shield the separated liquid from the vortex action within the separator and direct it toward the drain.

Sheltered in this manner from the turbulence of the swirling gas or air flow the liquid cannot be re-entrained after separation.

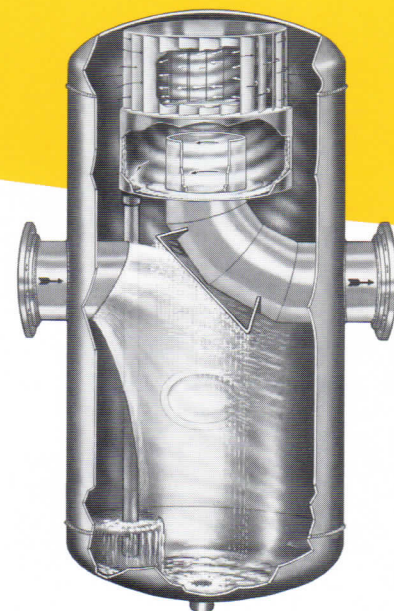


Wright-Austin vertical series gas/liquid separators are required when operating conditions will not permit the use of our "line type" separators, as illustrated in our Bulletins 809 and 810. For these more demanding requirements, we recommend one of the gas/liquid separators illustrated above.

These vertical type gas/liquid

separators are used on applications with unusual liquid/vapor ratios, often with large amounts of liquid and a small amount of gas.

Drainage is frequently accomplished by level control equipment and condensate pumping devices on applications in the negative pressure or vacuum operating range.



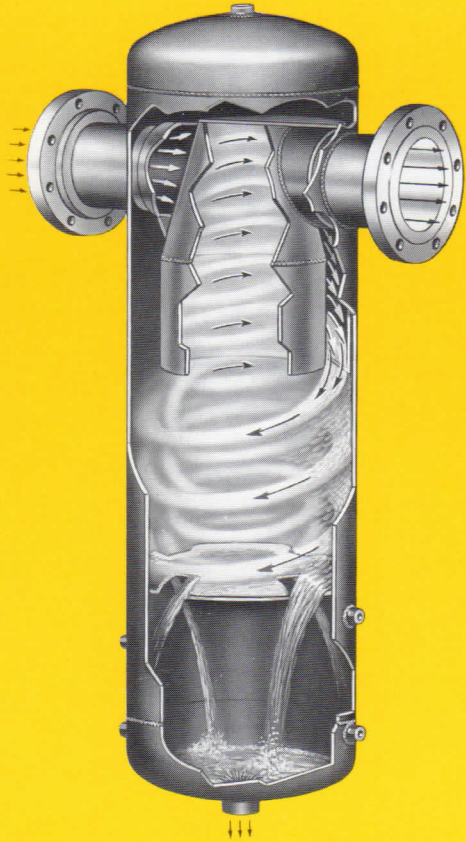
WRIGHT-AUSTIN COMPANY

DETROIT, MICHIGAN 48207

MANUFACTURERS OF
GAS/LIQUID SEPARATORS
EXHAUST HEADS
TRAPS, STRAINERS & AIR VENTS

REPRESENTATIVE

WRIGHT-AUSTIN TYPE "TS" GAS / LIQUID SEPARATORS



APPLICATION

The Wright-Austin type "TS" gas/liquid separator is designed for applications where heavier than normal liquid loading causes a "slugging" problem. These applications are widely found in refineries and chemical plants. In many cases, there is a liquid holdup requirement where instrumentation is provided for controlling the level of the liquid in the reservoir of the vessel. Some common applications are: upstream of gas turbines, absorption towers, gas scrubbers and steam generator outlets.

OPERATION

The moisture laden gas or vapor enters the inlet of the gas/liquid separator where it is deflected in a centrifugal downward motion. The entrained moisture is separated out by reduction in velocity. Separated liquid then falls below the "Vortex Containment Plate" (VCP) where it cannot be re-entrained. Dry, clean vapor or gas then flows upward and exits through the outlet of the separator.

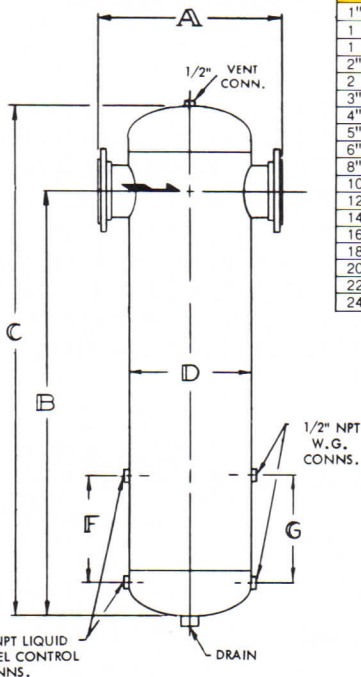
PERFORMANCE

The WRIGHT-AUSTIN type "TS" gas/liquid separator when properly sized, installed and drained, will remove 99% of all liquid and solid entrainment where the particle size is ten microns or larger.

DIMENSIONS AND WEIGHTS

Pipe Size	Thr'd. & Sock. Weld. A	Flanged A	B	C	D	F	G	NPT Drain		Thr'd. & Sock. Weld.	Design 1000 PSIG @ 650° F Wgt.	Design 200 PSIG @ 300° F Wgt.	Design 500 PSIG @ 650° F Wgt.	Liquid Hold Up Capacity (Cubic Feet)
								Std.	Opt'l.					
1"	6 7/8"	10 1/2"	22"	28"	5 9/16"	-	7 7/8"	1"	1 1/2"	-	44	47	49	0.19
1 1/4"	6 7/8"	10 1/2"	22"	28"	5 9/16"	-	7 7/8"	1"	1 1/2"	-	45	50	52	0.19
1 1/2"	7 7/8"	11 1/2"	24"	30"	6 5/8"	9 1/8"	9 1/8"	1"	2"	-	83	69	75	0.20
2"	7 7/8"	11 1/2"	24"	30"	6 5/8"	9 1/8"	9 1/8"	1"	2"	-	85	74	78	0.20
2 1/2"	-	16"	27"	35"	8 5/8"	9 1/8"	9 1/8"	1"	2"	-	-	122	132	0.39
3"	-	18"	30"	38"	10 3/4"	9 1/8"	9 1/8"	1 1/2"	2 1/2"	-	-	170	180	0.66
4"	-	20"	36"	45"	12 3/4"	10 1/4"	10 1/4"	1 1/2"	2 1/2"	-	-	225	250	1.07
5"	-	22"	40"	50"	14"	10 1/4"	10 1/4"	1 1/2"	2 1/2"	-	-	265	335	1.35
6"	-	24"	55"	66"	16"	10 1/4"	10 1/4"	1 1/2"	2 1/2"	-	-	400	435	3.03
8"	-	28"	62"	75"	18"	11 7/8"	11 7/8"	2"	3"	-	-	545	700	3.83
10"	-	34"	76"	91"	24"	11 7/8"	11 7/8"	2"	3"	-	-	800	1355	6.94
12"	-	38"	82"	99"	28"	11 7/8"	11 7/8"	2 1/2"	4"	-	-	1090	1735	11.74
14"	-	42"	89"	108"	32"	12 5/8"	12 5/8"	2 1/2"	4"	-	-	1335	2535	16.81
16"	-	47"	98"	119"	36"	12 5/8"	12 5/8"	3"	5"	-	-	1850	3200	20.22
18"	-	54"	108"	132"	42"	12 5/8"	12 5/8"	3"	5"	-	-	2600	5025	22.99
20"	-	62"	118"	145"	48"	15"	15"	3"	5"	-	-	3275	6480	26.47
22"	-	64"	121"	149"	48"	15"	15"	3"	5"	-	-	3450	7000	26.47
24"	-	70"	127"	158"	54"	15"	15"	4"	6"	-	-	4940	9020	32.64

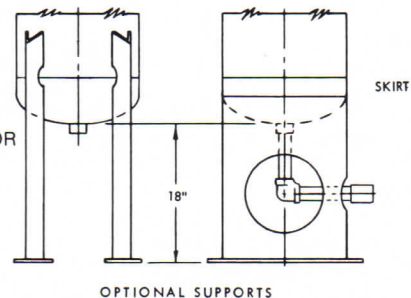
*Flanged Drain



VESSEL DESIGN

The type "TS" gas/liquid separators are of welded steel construction in accordance with the ASME Code, Section VIII, Division 1. Available with stamp.

FOUR ANGLE LEGS OR BASE PLATES ARE OPTIONAL ON BOTH "TS" AND "10-R" SEPARATORS.



OPTIONAL SUPPORTS

WRIGHT-AUSTIN RECEIVER TYPE "10-R" GAS / LIQUID SEPARATORS

APPLICATION

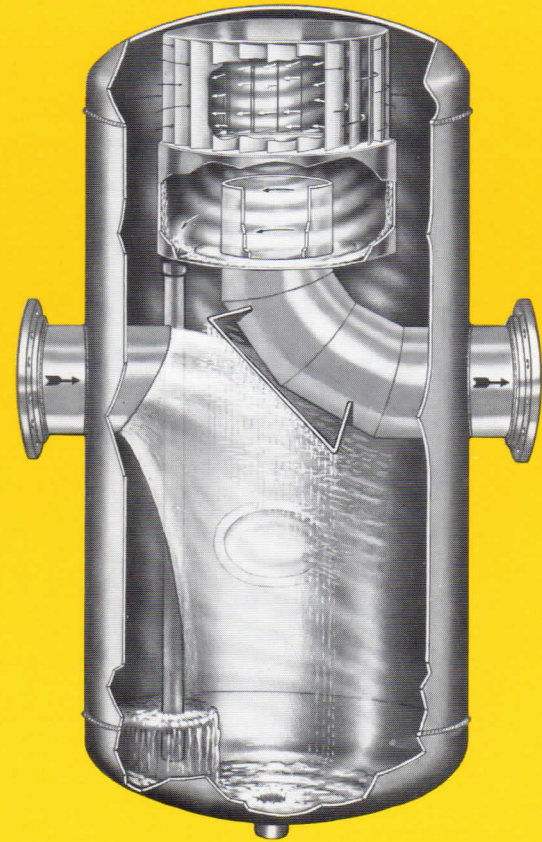
This separator is designed for liquid "slugs" or heavy liquid loads and can be provided with a large reservoir to meet liquid holdup requirements. Instrumentation is usually provided for level control purposes. These separators are widely used in the chemical and process industries where large volumes of liquid must be separated from gases. They also may be used as a flash or surge tank, or as a "scrubber" or "demister" ahead of steam turbines.

OPERATION

These separators have two stages for separating large volumes of liquid from a smaller volume of gas or vapor. In stage one, the liquid enters the inlet and is deflected downward losing velocity, this causes the majority of the liquid to drop into the reservoir. In stage two, the moisture-laden gas passes through a vaned element where the remaining moisture is separated and flows down to the reservoir.

PERFORMANCE

The "10-R" separators when properly sized, installed and drained, are guaranteed to remove 99% of all liquid and solid entrainment, where particle size is 10 microns, or larger.



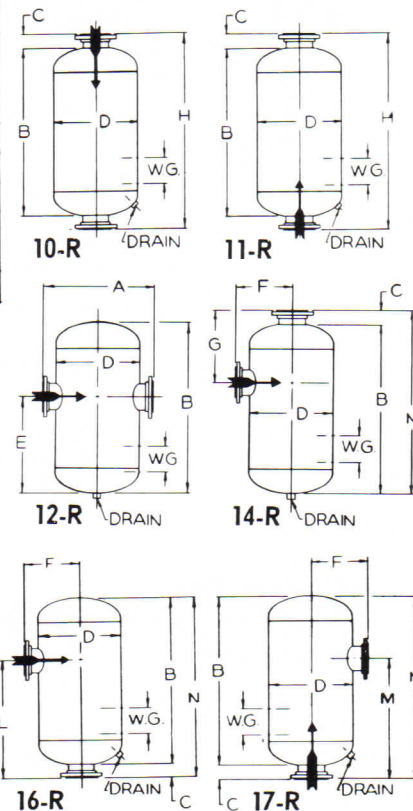
STANDARD SIZE DIMENSIONS (MINIMUM SIZES ALSO AVAILABLE)

ELEMENT SIZE	INLET & OUTLET	A	B	C	D	E	F	G	H	K	L	M	N	GAUGE CONNECT. CENTER TO CENTER	DRAIN (NPT)
3"	3"	24"	32"	4"	16"	18"	12"	15"	40"	22"	22"	22"	36"	6-3/4"	1-1/2"
4"	4"	26"	36"	4"	18"	23"	13"	16"	44"	23"	27"	27"	40"	7-7/8"	1-1/2"
5"	5"	30"	40"	5"	20"	24"	15"	20"	50"	28"	29"	29"	45"	7-7/8"	1-1/2"
6"	6"	34"	48"	5"	24"	29"	17"	23"	58"	33"	34"	34"	53"	7-7/8"	1-1/2"
8"	8"	40"	60"	5"	30"	38"	20"	26"	70"	38"	43"	43"	65"	9-1/8"	2"
10"	10"	48"	72"	6"	36"	44"	24"	33"	84"	48"	50"	50"	78"	9-1/8"	2"
12"	12"	54"	84"	6"	42"	52"	27"	36"	96"	55"	58"	58"	90"	10-1/4"	2-1/2"
14"	14"	62"	96"	7"	48"	58"	31"	42"	110"	63"	65"	65"	103"	10-1/4"	2-1/2"
16"	16"	68"	108"	7"	54"	64"	34"	46"	122"	73"	71"	71"	115"	10-1/4"	3"

STANDARD SIZE DIMENSIONS (MINIMUM SIZES ALSO AVAILABLE)

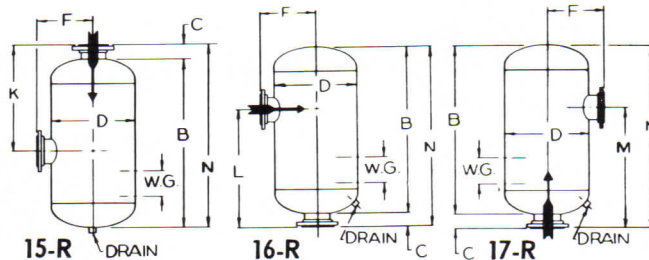
ELEMENT SIZE	TOTAL VOLUME CU. FT.	CU. FT. OF VOLUME PER INCH OF SHELL	LIQUID HOLDUP (CU. FT.)						
			10-R	11-R	12-R	14-R	15-R	16-R	17-R
3"	3.16	.10	.26	.67	.80	.60	.28	.80	.67
4"	4.93	.13	.54	1.26	1.43	1.35	.60	1.43	1.32
5"	6.62	.16	1.01	2.00	2.32	2.25	1.11	2.21	2.12
6"	11.44	.23	2.49	4.21	4.85	4.60	2.61	4.24	3.98
8"	22.67	.36	6.10	10.04	11.09	10.90	6.78	10.20	7.53
10"	33.51	.52	11.45	18.11	17.91	18.48	12.82	16.18	11.96
12"	60.97	.73	20.86	31.41	30.49	32.09	20.06	24.82	20.86
14"	91.15	.96	30.40	53.04	43.48	46.62	29.34	36.22	31.01
16"	129.95	1.21	46.76	67.32	61.00	67.62	41.11	52.87	43.13

RECEIVER TYPE "10-R" SERIES ENTRAINMENT SEPARATORS



VESSEL DESIGN

The receiver type gas/liquid separators are of welded steel construction in accordance with the ASME Code, Section VIII, Division 1. Available with stamp.



WRIGHT-AUSTIN TYPE 35L-CLC COALESCER/SEPARATOR

APPLICATION

The Wright-Austin type 35L-CLC coalescer/separator is a two-stage vessel designed for separation of liquid in the form of a fine mist or fog from a gas or vapor. The coalescer/separator is primarily used in applications where fine mists are encountered in processes involving cooling or condensation, flashing or evaporation. A few of these applications would be separating liquid (i.e. water or oil) from: 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 and industrial plants, natural gas and gas distribution lines or regulator stations.

OPERATION

The operation of a Wright-Austin coalescer/separator can be divided into two stages. In the first stage, the coalescer stage, the smaller liquid droplets enter a wire mesh pad in the vessel. As these small droplets travel through the mesh pad they grow in size. The larger liquid droplets then enter the second stage or separation stage where they are centrifugally thrown to the outside wall and flow to the bottom of the vessel and drain out. By the use of our "Vortex Containment Plate" (VCP), these droplets are prevented from being re-entrained after separation.



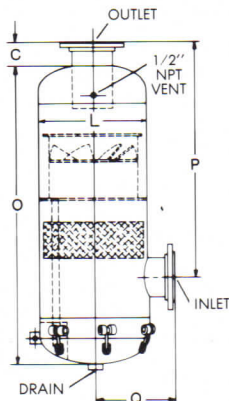
PERFORMANCE

The Wright-Austin coalescer/separator, when properly installed and drained, will remove 99% of all liquid and solid entrainment when particle size is four microns or larger.

VESSEL DESIGN

The coalescer/separator is of welded steel construction in accordance with the ASME Code, Section VIII, Division 1. Available with stamp.

DIMENSIONS



Size	C	L	O	P	Q	Drain NPT	Wt. # (Est.)
2 1/2"	3"	8 5/8"	30"	24"	8"	1"	145
3"	3"	10 3/4"	34"	28"	9"	1 1/2"	195
4"	4"	14"	39"	31"	11"	1 1/2"	305
5"	4"	16"	45"	35"	12"	1 1/2"	435
6"	4"	18"	50"	39"	13"	1 1/2"	530
8"	5"	20"	56"	45"	15"	2"	665
10"	5"	24"	67"	53"	17"	2"	975
12"	5"	30"	76"	61"	19"	2 1/2"	1390
14"	5"	36"	86"	67"	23"	2 1/2"	1920
16"	5"	40"	98"	77"	25"	3"	2645

Dimensions for larger sizes, higher design pressures and temperatures upon request.



WRIGHT-AUSTIN COMPANY

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