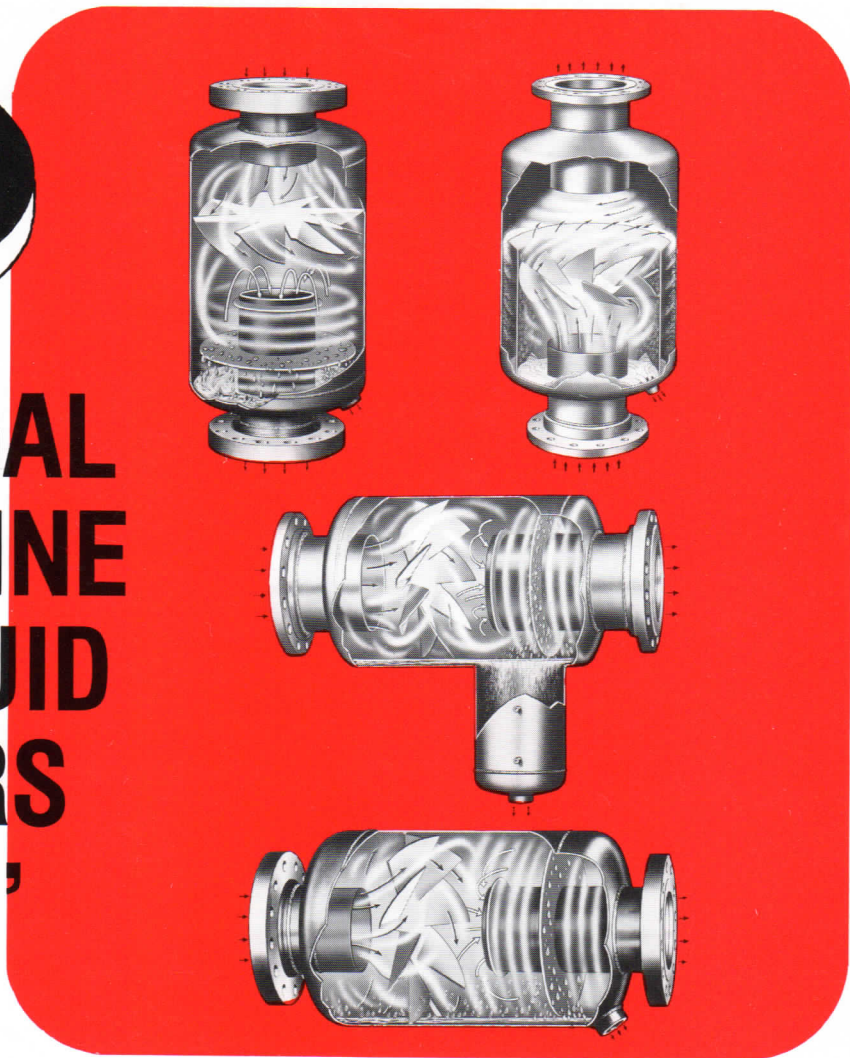




# CENTRIFUGAL TYPE, IN-LINE GAS / LIQUID SEPARATORS with "VCP"



## 30L SERIES FOR HIGH, MEDIUM AND LOW PRESSURE AIR, GAS OR STEAM

Wright-Austin's 30L series gas/liquid separators are suitable for the wide range of applications found in industry today. They embody a number of highly efficient, proved separator principles.

On entering these units, the steam, air or gas encounters curved stationary blading, creating controlled centrifugal action. As the whirling takes place, entrained liquids and solids are forced to the outer wall. The steam, air or gas then escapes through the outlet tube completely free of impurities.

The separators are compact and require scarcely more space than the line itself. The design holds pressure drop to a minimum. There are no moving parts, they are self-cleaning and require no maintenance. When combined with proper type trap, optimum performance is assured.

### WRIGHT-AUSTIN'S EXCLUSIVE "VCP" (Vortex Containment Plate)

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

Wright-Austin has solved this problem through the development of a vortex containment plate system, now standard on all "30-L" series separators.

This "VCP" system is accomplished through the use of carefully placed rings 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.

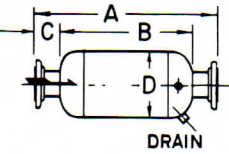
**WRIGHT-AUSTIN COMPANY**  
DETROIT, MICHIGAN 48207

REPRESENTED BY

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

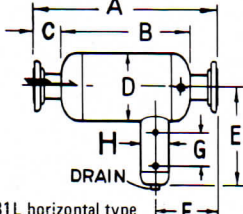
# 30L SERIES GAS / LIQUID SEPARATORS with "VCP" for Steam, Air and Gas Purification

TYPE 31-L



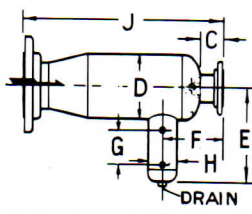
Can be installed horizontally, or vertically for down-flow operation.

TYPE 31-LS

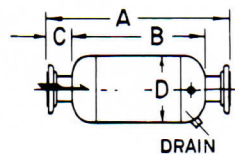


A 31L horizontal type with sump and water gauge mountings added.

TYPE 31-LSW

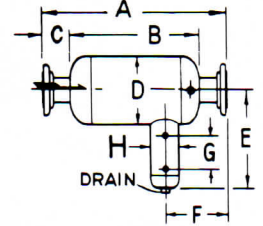


TYPE 31-LR



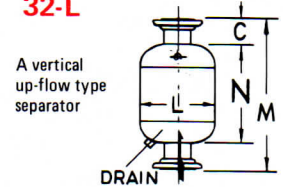
Inlet and outlet flanges are reduced one pipe size. Recommended where flow-through pipe exceeds chart values or where pressure drop must be less than rated drop. (31LSR-with sump)

TYPE 31-LSR



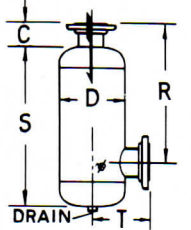
## DIMENSIONS

TYPE 32-L

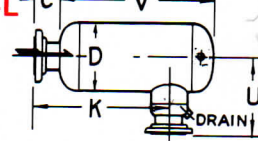


A vertical up-flow type separator

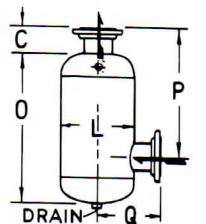
TYPE 33-L



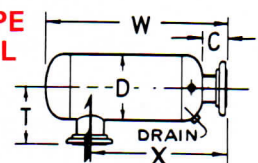
TYPE 34-L



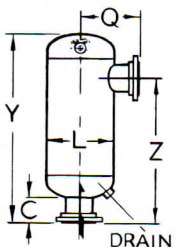
TYPE 35-L



TYPE 36-L



TYPE 37-L



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	22	22	24	30	34	36	46	52	60	66	74	80	86	96	106	120	132	142	166	190
B	15	16	16	18	22	26	28	36	42	50	56	64	68	74	84	94	104	114	122	144	166
C	2-1/2	3	3	3	4	4	4	5	5	5	5	6	6	6	6	6	8	9	10	11	12
D	5-9/16	6-5/8	6-3/8	8-5/8	10-3/4	12-3/4	14	16	20	24	28	30	36	36	42	42	48	54	54	66	78
E	14	14-1/2	14-1/2	16-1/2	17-1/2	19-1/2	21	24	27	30	33	35	39	42	46	47	50	54	55	63	70
F	8-1/2	9	9	10	12	13	14	16	19	20	23	24	27	28	31	31	36	38	40	48	56
G	6-3/4	6-3/4	6-3/4	6-3/4	6-3/4	6-3/4	6-3/4	7-7/8	7-7/8	7-7/8	7-7/8	7-7/8	9-1/8	9-1/8	10-1/4	10-1/4	10-1/4	10-1/4	10-1/4	11-7/8	11-7/8
H	2-3/8	2-7/8	2-7/8	3-1/2	4-1/2	5-9/16	6-5/8	8-5/8	10-3/4	10-3/4	12-3/4	14	16	18	20	22	22	22	24	30	36
J	21	23	23	25	32	36	40	48	58	65	71	80	86	92	103	114	128	140	152	178	202
K	15-1/2	17	17	19	24	28	31	40	47	54	60	68	77	83	90	101	112	122	136	158	184
L	6-5/8	8-5/8	8-5/8	10-3/4	14	16	18	20	24	30	36	40	42	48	48	54	60	66	72	78	96
M	17	19	19	22	28	30	33	39	48	54	60	66	72	78	83	88	98	106	114	134	142
N	12	13	13	16	20	22	25	29	38	44	50	56	60	66	71	76	82	88	94	112	118
O	19	20	20	26	28	33	37	45	54	66	73	85	90	97	105	113	122	130	140	166	180
P	15	16	16	21	23	27	30	37	44	52	58	68	72	78	84	90	98	105	114	135	144
Q	6	8	8	9	11	12	13	15	17	20	23	25	27	30	30	33	38	42	46	50	60
R	12-1/2	14	14	16	20	24	27	33	40	46	52	59	68	74	81	87	96	104	112	134	160
S	16	18	18	21	25	30	34	41	50	58	65	74	85	92	101	108	118	127	136	163	194
T	5-1/2	7	7	8	10	11	12	13	15	17	19	20	24	24	27	27	32	36	37	44	51
U	8-1/2	10	10	11	14	15	17	19	22	25	28	29	33	34	38	38	44	48	51	59	68
V	20	22	22	25	30	36	40	50	59	68	76	86	96	104	114	126	137	149	165	192	223
W	24	26	26	29	36	41	45	58	68	79	89	99	109	118	131	144	163	177	189	222	255
X	18	20	20	22	28	32	35	46	54	63	71	80	87	95	108	117	131	143	153	180	207
Y	25	27	27	31	38	43	46	59	67	78	87	96	105	113	126	138	155	167	180	210	244
Z	18	20	20	22	28	32	34	45	51	60	67	75	81	88	99	109	122	133	144	168	194
DRAIN NPT	1	1	1	1-1/2	1-1/2	1-1/2	1-1/2	2	2	2-1/2	2-1/2	3	3	4*	4*	4*	4*	4*	4*	4*	4*

\* Flanged drain.

NOTE—Dimensions shown for 1-1/2" through 6" 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.

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

## FLANGES AND VESSEL RATINGS

150 Lb. ANSI Flanges — 75 PSIG at 450<sup>o</sup>F  
 150 Lb. ANSI Flanges — 150 PSIG at 450<sup>o</sup>F  
 150 Lb. ANSI Flanges — 200 PSIG at 300<sup>o</sup>F

300 Lb. ANSI Flanges — 250 PSIG at 650<sup>o</sup>F  
 300 Lb. ANSI Flanges — 350 PSIG at 650<sup>o</sup>F  
 300 Lb. ANSI Flanges — 500 PSIG at 650<sup>o</sup>F

**TO ORDER:** State pipe size, flow, maximum pressure, temperature, molecular weights of gases and vapors, pressure drop allowable and flange rating desired. See proper chart on back page for sizing and capacities.

## APPLICATIONS

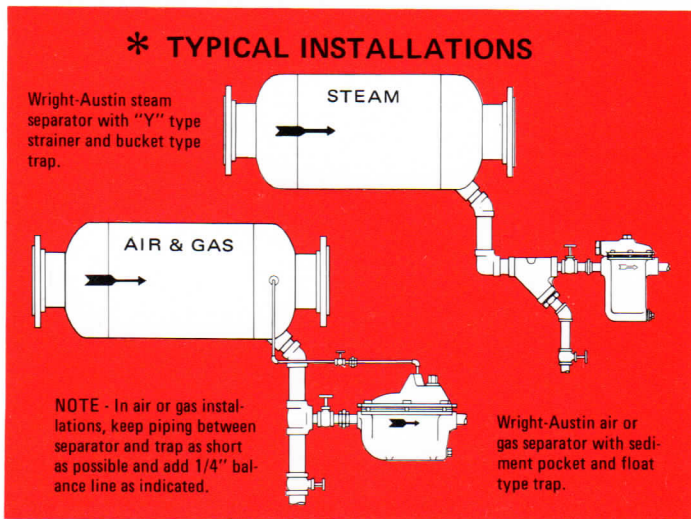
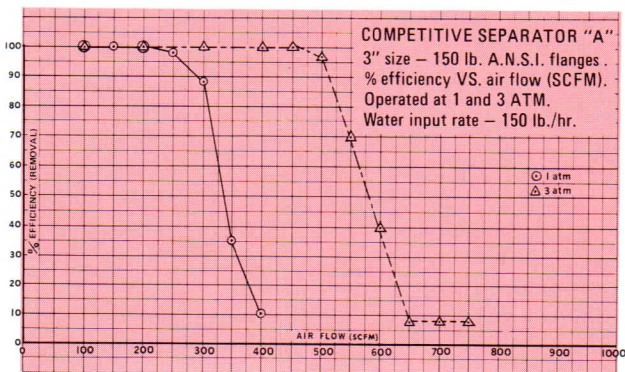
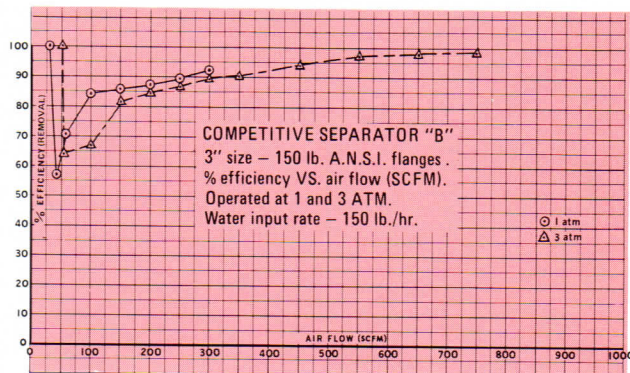
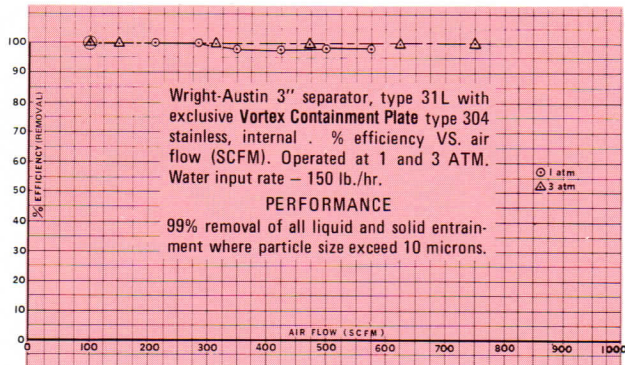
**STEAM 1.** Installation ahead of Steam Turbines to protect blading against erosive action of wet steam, pipe scale and other entrained solids. **2.** Used in steam distribution lines to assure clean, dry steam entering Heat Exchangers, Pressure Reducing Valves, Temperature Regulators, Meters and other Process Equipment.

**COMPRESSED AIR 1.** Installation following Intercoolers and Aftercoolers to remove entrained moisture which may otherwise cause damage in successive stages of compression or to subsequent processes. **2.** For entrainment removal in primary Air Lines leading to air

using equipment, such as: Air Chucks, Air Nozzles and Paint Spray equipment. Particularly suitable for long runs of pipe and where wide temperature differentials are to be found. **3.** Highly efficient for moisture separation of Refrigerated Air Dryer packages.

**COMPRESSED GAS 1.** For use in conjunction with Intercooler and Aftercooler equipment installed on Gas Compressors. The units are highly effective and eliminate OIL, TAR, WATER and other objectional entrainment.

## VORTEX CONTAINMENT PLATE COMPARATIVE TESTS



\* 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 separator drain connection.

### TRAP SELECTION - AIR AND GAS SERVICE (Ask for Bulletin 814)

SIZE	0-5 PSI	5-40 PSI	40-80 PSI	80-125 PSI	125-150 PSI	150-200 PSI	200-300 PSI	300-400 PSI	400-700 PSI
1-1/2" to 2-1/2"	3/4"500AC	3/4"500AC 1"230AC	3/4"500AC 1"230AC	3/4"500AC 1"230AC	3/4"500AC 1"310AC	1"510AC 1"310AC	1"510AC	3/4"71AC	3/4"101AC
3"	3/4"500AC	3/4"500AC 1"230AC	1"510AC 1"230AC	1"510AC 1"230AC	1"510AC 1"310AC	1"510AC 1"310AC	1"510AC	3/4"71AC	3/4"101AC
4"	1"510AC	1"510AC 1"230AC	1"510AC 1"230AC	1"510AC 1"230AC	1"510AC 1"310AC	1"510AC 1"310AC	1"510AC	3/4"71AC	3/4"101AC
5"	1"510AC	1"510AC 1"230AC	1"510AC 1"230AC	1"510AC 1"230AC	1"510AC 1"310AC	1"510AC 1"310AC	1"510AC	3/4"71AC	3/4"101AC
6"	1"510AC	1"510AC 1"230AC	1"510AC 1"230AC	1"510AC 1"230AC	1"510AC 1"310AC	1-1/4"520AC 1"310AC	1-1/4"520AC	3/4"71AC	3/4"101AC
8"	1-1/4"520AC	1-1/4"520AC 1"230AC	1-1/4"520AC 1"230AC	1-1/4"520AC 1"230AC	1-1/4"520AC 1"310AC	1-1/4"520AC 1"310AC	1-1/4"520AC	3/4"71AC	3/4"101AC
10"	1-1/4"520AC	1-1/4"520AC 1"310AC	1-1/4"520AC 1"310AC	1-1/4"520AC 1"310AC	1-1/4"520AC 1"310AC	1-1/4"520AC 1"310AC	1-1/4"520AC	3/4"71AC	3/4"101AC
12"	1-1/4"520AC	1-1/4"520AC 1"310AC	1-1/4"520AC 1"310AC	1-1/4"520AC 1"310AC	1-1/4"520AC 1"310AC	1-1/4"520AC 1"310AC	1-1/4"520AC	1"72AC	3/4"101AC
14"	1-1/4"520AC	1-1/4"520AC 1-1/4"320AC	1-1/4"520AC 1-1/4"320AC	1-1/4"520AC 1-1/4"320AC	1-1/4"520AC 1-1/4"320AC	1-1/4"520AC 1-1/4"320AC	1-1/4"520AC	1"72AC	3/4"101AC
16"	1-1/4"520AC	1-1/4"520AC 1-1/4"320AC	1-1/4"520AC 1-1/4"320AC	1-1/4"520AC 1-1/4"320AC	1-1/4"520AC 1-1/4"320AC	1-1/4"520AC 1-1/4"320AC	1-1/4"520AC	1"72AC	3/4"101AC
18"	1-1/2"530AC	1-1/2"530AC 1-1/2"330AC	1-1/2"530AC 1-1/2"330AC	1-1/2"530AC 1-1/2"330AC	1-1/2"530AC 1-1/2"330AC	1-1/2"530AC 1-1/2"330AC	1-1/2"530AC	1"72AC	1-1/4"103AC
20"	1-1/2"530AC	1-1/2"530AC 1-1/2"330AC	1-1/2"530AC 1-1/2"330AC	1-1/2"530AC 1-1/2"330AC	1-1/2"530AC 1-1/2"330AC	1-1/2"530AC 1-1/2"330AC	1-1/2"530AC	1"72AC	1-1/4"103AC
24"	1-1/2"530AC	1-1/2"530AC 1-1/2"330AC	1-1/2"530AC 1-1/2"330AC	1-1/2"530AC 1-1/2"330AC	1-1/2"530AC 2"340AC	1-1/2"530AC 2"340AC	1-1/2"530AC	1"72AC	1-1/4"103AC

### TRAP SELECTION - STEAM

When selecting trap for STEAM service use condensate capacity equal to 10% of value shown on STEAM Flow Chart (Back Page). Ask for Bulletin 808 on Cast Iron Traps for pressures up to 250 PSI and Bulletin TB-565 for Carbon or Stainless Traps up to 700 PSI.

### PERFORMANCE

The Wright-Austin 30-L Series Gas/Liquid 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.

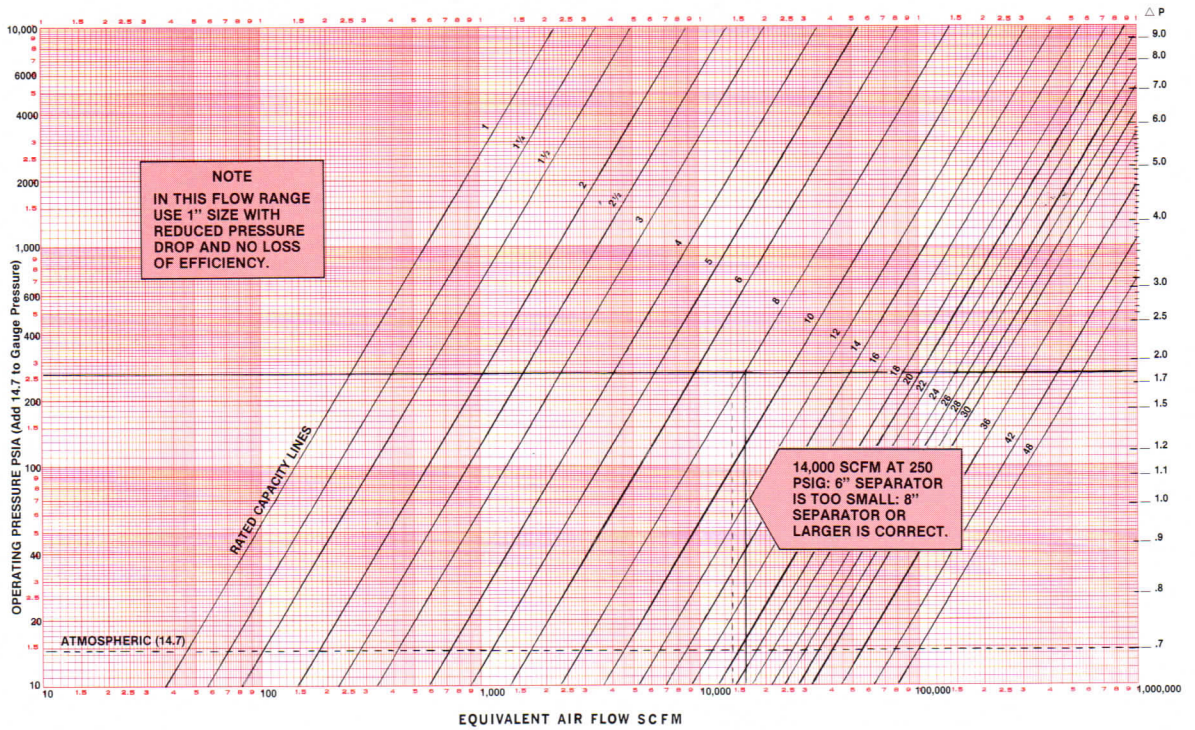
**TO SPECIFY** — Shall be line type carbon steel construction in accordance with the ASME Code, Section VIII, Division 1, with stamp.

Unit to have Type 304L stainless steel separating element with vortex containment plate capable of removing 99% of all liquid and solid entrainment

where particle size is 10 microns or larger. Separator to be Wright-Austin Type 30L Series with vortex containment plate. Separator to be selected in accordance with Wright-Austin Steam, Air or Gas Flow Charts, TB-546 or TB-547, latest revision.

# AIR SELECTION & CAPACITY CHART

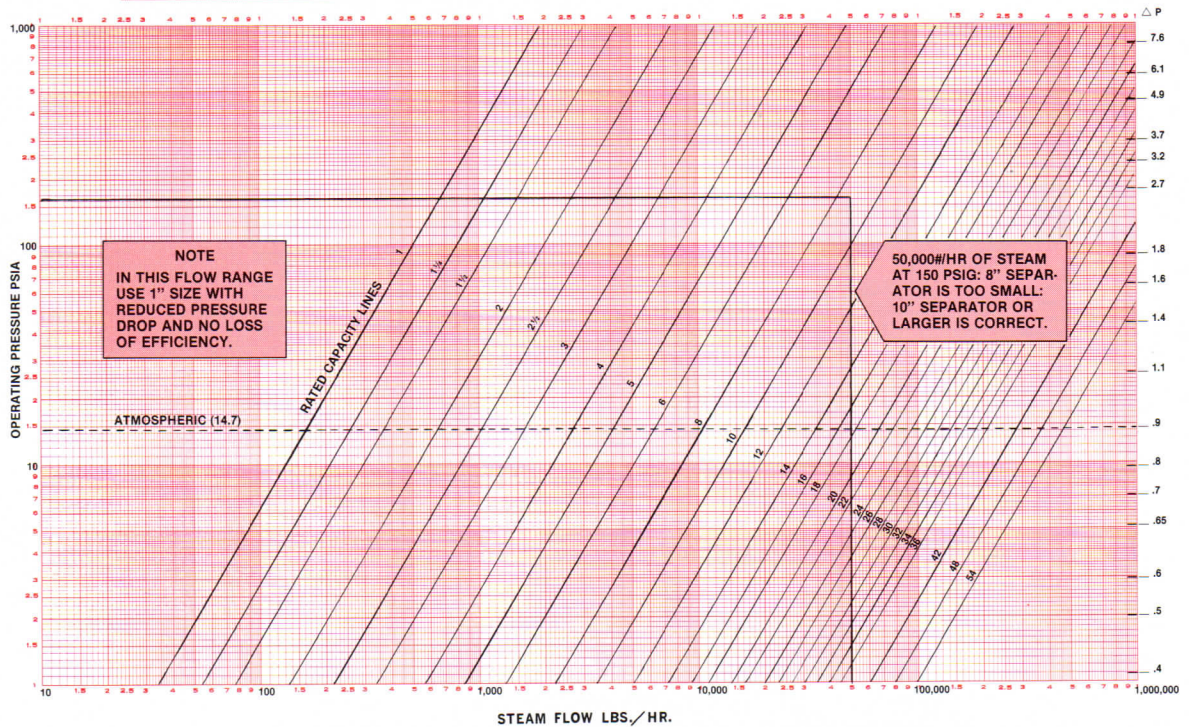
The values below represent maximum recommended AIR FLOW IN STANDARD CUBIC FEET PER MINUTE through standard Wright-Austin Separators.



The Wright-Austin air flow chart is based on SCFM (cubic feet per minute of air measured at standard conditions of 14.7 psia and 60°F). If any of the operating conditions are varied from the above, request TB546 showing correction factors, conversions and pressure drop.

# STEAM SELECTION & CAPACITY CHART

The values below represent maximum recommended STEAM FLOW (SATURATED) IN LBS. PER HOUR through standard Wright-Austin Separators.



For complete and larger chart showing pressure drop, request TB-547.



## WRIGHT-AUSTIN COMPANY

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