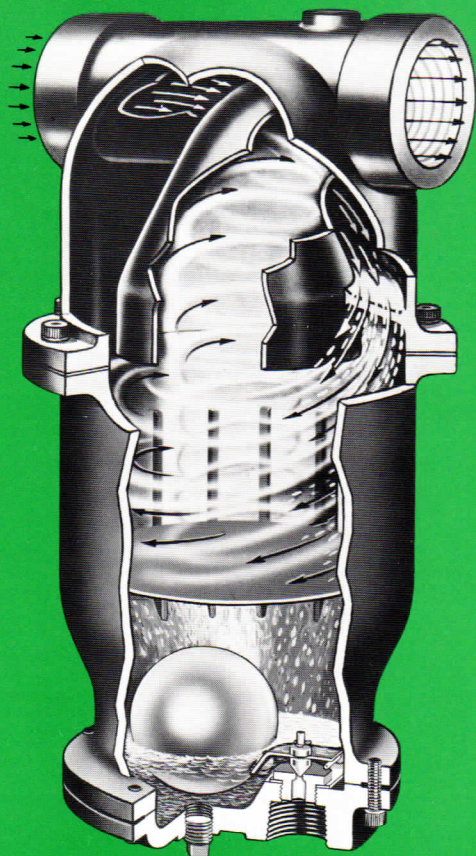




# “ST” & “T” TYPE GAS / LIQUID SEPARATORS



## ADVANTAGES OF THE “ST” DESIGN.

1. Highest efficiency over a wide range of flow conditions.
2. Compact, sturdy, light-weight construction.
3. Minimal line pressure drop.
4. High efficiency cyclonic principle.
5. Greater drain capabilities.
6. A quality product at moderate cost.

Wright-Austin's "ST" design with the exclusive "VCP" design is an efficient and economical combined separator and trap for use with air, steam or gas service.

Naturally generated centrifugal force whirls the steam, air or gas which throws the entrainment to the inner wall where it drains safely to the reservoir.

The trap mechanism is a fool-proof design which automatically ejects condensate when it reaches a predetermined level, without causing loss of line pressure.

Tests show consistently efficient performance of these separator-traps over a wide range of flows. Entrainment removal efficiency exceeds 99% over the entire velocity range.

The "ST" is very compact, is easily installed and can be supported by the line. Removal of the bottom plate releases the entire trap mechanism for convenient inspection or maintenance.

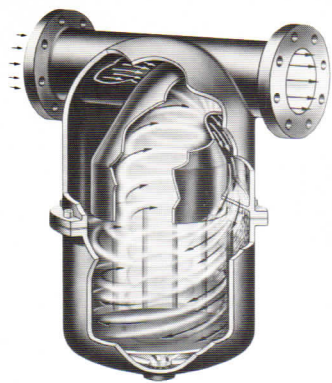
Wright-Austin's exclusive "VCP" design eliminates the need for complex baffles, vanes, or deflectors which obstruct the flow stream. "VCP" assures completely clean and dry steam, air or gas with no loss of line pressure and the ultimate in protection for your expensive equipment.

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

REPRESENTED BY

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

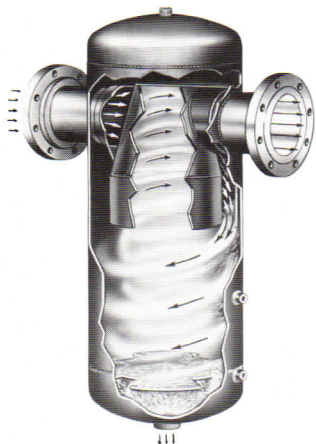
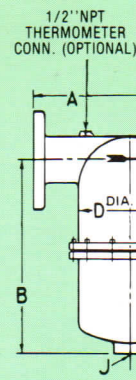
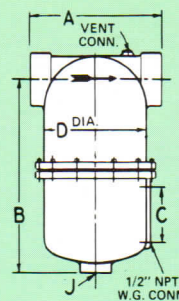




## TYPE "T" CAST IRON 160 PSI-450°F or 250 PSI-250°F

The type "T" separator with Vortex Containment Plate is code constructed of cast iron and suitable for a wide range of applications. It is used on steam line, where pressures do not exceed 160 PSI and temperatures not more than 450°F, or on compressed air lines having operating pressures not exceeding 250 PSI at 250°F. Particularly suited for compressed air distribution lines. However, the code stamp is not available on pressures exceeding 160 PSI.

Up to 2-1/2" threaded ends also furnished in cast bronze (300 PSI-500°F).

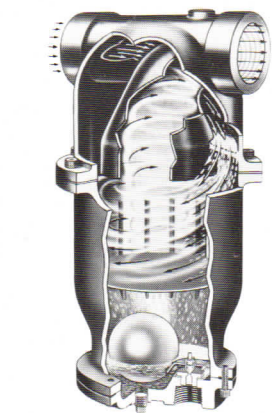
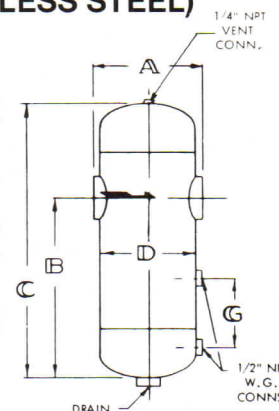


## TYPE "T" GAS/LIQUID SEPARATOR (CARBON OR STAINLESS STEEL)

The Type "T" entrainment separator, when properly sized, installed and drained, will remove 99% of all liquid droplet and solid particle entrainment where the droplet and/or particle size equals or exceeds ten microns. Suitable for steam, air and gas applications.

Moisture laden gas enters the inlet of the 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 gas then flows upward and exits through the outlet of the separator.

These Type "T" separators are of welded steel construction in accordance with Section VIII, Division I of the ASME Code for unfired pressure vessels. Inlet and outlet connections can be rotated radially upon request.



## TYPE "ST" ("STH") COMBINATION SEPARATOR TRAP 160 PSI-450°F or 250 PSI-250°F

The type "ST" unit with "VCP" is a well designed, economical, combined separator and trap for steam, air or gas service. The separator employs centrifugal force, whirling the steam, air or gas to throw the entrainment to the walls where it is unable to reach the outlet and drains into the reservoir.

The trap mechanism is a fool-proof design which automatically ejects the condensate, without loss of line pressure, when it reaches a predetermined level.

Tests show that this separator-trap combination, when properly installed and drained, will afford superior performance — removing over 99% of entrainment and particulate down to 10 microns, without loss of line pressure.

The "ST" is compact, easily installed, can be supported by the line. Removal of the bottom flange releases the trap mechanism for inspection or maintenance.

### SPECIFICATIONS

The combination Separator-Trap with "VCP" is available in cast iron conforming to ASTM-A-278. Design and construction is in accordance with ASME code for unfired pressure vessels. Design pressure 250 PSI @ 250°F with hydrostatic test of 500 PSI. Flanged units limited to 150 PSI @ 450°F with Hydrostatic Test of 300 PSI. Destruction tests run between 1200 and 1400 PSI. ASME code stamp available at extra charge. Internal trap parts are stainless steel including non magnetic 18-8 stainless valve and seat.

The "STH" Model includes a 50 watt, 110 volt, brass-copper, self limiting heating element to keep fluid above freezing, does not add to line temperature. Easily removed for inspection.

### TRAP SELECTOR FOR TYPE "T" SEPARATORS

Separator Size Inches	0-5 PSI	5-40 PSI	40-80 PSI	80-125 PSI	125-150 PSI	150-200 PSI
¾	¾ 500AC	¾ 500AC ¾ 90AC	¾ 500AC ¾ 90AC	¾ 500AC ¾ 90AC	¾ 500AC ¾ 90AC	¾ 510AC ¾ 90AC
1 & 1 ¼	¾ 500AC	¾ 500AC ¾ 90AC	¾ 500AC ¾ 90AC	¾ 500AC ¾ 90AC	¾ 500AC ¾ 90AC	1 510AC ¾ 90AC
1 ½ & 2	¾ 500AC	¾ 500AC ¾ 90AC	¾ 500AC ¾ 90AC	¾ 500AC ¾ 90AC	¾ 500AC ¾ 90AC	1 510AC ¾ 90AC
2 ½	¾ 500AC	¾ 500AC 1 230AC	¾ 500AC 1 230AC	1 510AC 1 230AC	1 510AC 1 310AC	1 510AC 1 310AC
3	¾ 500AC	¾ 500AC 1 230AC	1 510AC 1 230AC	1 510AC 1 230AC	1 510AC 1 310AC	1 510AC 1 310AC
4	1 510AC	1 510AC 1 230AC	1 510AC 1 230AC	1 510AC 1 230AC	1 510AC 1 310AC	1 510AC 1 310AC
5	1 510AC	1 510AC 1 230AC	1 510AC 1 230AC	1 510AC 1 230AC	1 510AC 1 310AC	1 510AC 1 310AC

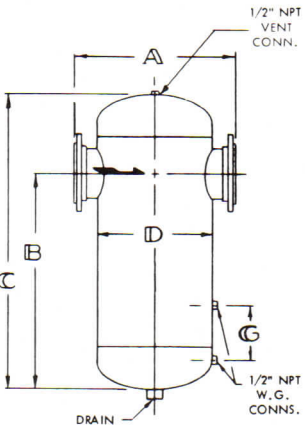
SIZE	CAPACITIES							
	MAXIMUM AIR FLOW RATING IN SCFM							
	25 PSIG	50 PSIG	100 PSIG	150 PSIG	200 PSIG	250 PSIG		
¾"	55	75	105	125	150	170		
1"	82	110	155	190	220	255		
1-1/4"	130	175	245	300	345	400		
1-1/2"	185	245	345	425	485	560		
2"	330	445	620	770	870	1000		
2-1/2"	500	680	945	1170	1350	1550		
3"	750	1000	1400	1750	1950	2300		
4"	1325	1775	2500	3075	3600	4000		
5"	2050	2750	3800	4750	5600	6200		
Rated Δ P PSI	0.88	0.99	1.19	1.40	1.60	1.85		
¾"-4" Liq. Discharge Lbs./Hr.	502	790	785	1273	1130	1370	1550	1750
Orifice* Dia.	1/8"	5/32"	1/8"	5/32"	1/8"	1/8"	1/8"	1/8"
5" Liquid Discharge Lbs./Hr.	790		1273		1850		2250	
5" Orifice* Dia.	5/32"		5/32"		5/32"		5/32"	

\* The 1/8" orifice is the standard for the ¾" to 4" type ST. The ¾" to 4" type ST may be fitted with a 5/32" orifice where a higher drainage rate is needed and where the operating pressure does not exceed 75 PSI. SPECIFY A "HARD VALVE SEAT" FOR STEAM AND OTHER HEAVY DUTY APPLICATIONS.

We guarantee all above separators, when properly installed and drained, to remove 99% of all liquid and solid entrainment, 10 micron size or larger.



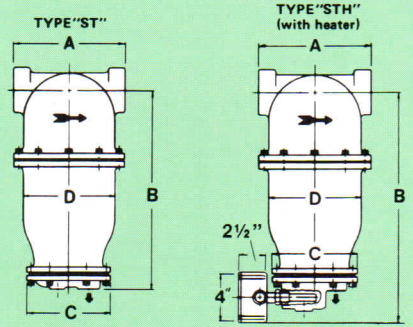
TYPE "T" CAST IRON	NOMINAL PIPE SIZE - INCHES	Dimensions in inches and Weight in lbs., net							PRESSURE & TEMP. RATINGS	
		A	B	C	D	"J" NPT DRAINS		NPT VENT		LBS.
						REGULAR	OPT'L.			
Threaded Ends NPT Material ASTM A-278	3/4	5-1/2	9-1/4		4-1/8	3/4			14	160 PSI @ 450° F. HYDROSTATIC TEST PRESSURE 320 PSI 250 PSI @ 250° F HYDROSTATIC TEST PRESSURE 500 PSI
	1	6	9-1/4		4-3/4	1			16	
	1-1/4	6	9-1/4		5-1/4	1	1-1/4"	1/4	19	
	1-1/2	7-1/4	11-3/4		5-7/8	1	1-1/2	1/4	29	
	2	8-1/8	13		6-5/8	1		1/4	40	
	2-1/2	9-3/8	14-1/2	4-3/4	7-3/4	1	2	1/4	57	
	3	11-1/16	16-1/4	4-3/4	9-1/8	1-1/4	2-1/2	1/4	90	
Flanged Ends 125 lb. ANSI Flat Face and Drilling Material ASTM A-278	2	10-3/4	13		6-5/8	1	2	1/4	47	150 PSI @ 450° F HYDROSTATIC TEST PRESSURE 300 PSI
	2-1/2	11-1/2	14-1/2	4-3/4	7-3/4	1	2	1/4	70	
	3	14-1/4	16-1/4	4-3/4	9-1/8	1-1/4	2-1/2	1/4	98	
	4	15-7/8	19-1/2	5-3/4	11-1/4	1-1/4	2-1/2	1/4	138	
	5	18-5/8	24-3/4	7-7/8	13-5/8	1-1/2	2-1/2	1/4	305	



Pipe Size	Thr'd. & Sock. Weld. A	Dimensions in inches and Weight in lbs., net										Thr'd & Sock. Weld. Design 1000 PSIG @ 650° F Wgt.	150# Fig's Design 150 PSIG @ 450° F Wgt.	300# Fig's Design 500 PSIG @ 650° F Wgt.	600# Fig's Design 750 PSIG @ 650° F Wgt.
		150# Flanged A	600# Flanged A	B	Cast C	Fab'd C	D	G	NPT Drain						
		Std.	Opt'l.	Std.	Opt'l.	Std.	Opt'l.	Std.	Opt'l.						
1	6-3/8	10-1/2	12	10-1/2	12	16	5-9/16	4-3/4	1	1-1/2	29	33	35	37	
1-1/4	6-3/8	10-1/2	12	10-1/2	12	16	5-9/16	4-3/4	1	1-1/2	30	35	37	42	
1-1/2	7-5/8	11-1/2	14	12-1/2	14	19	6-5/8	4-3/4	1	2	55	50	56	59	
2	7-7/8	11-1/2	14	12-1/2	14	19	6-5/8	4-3/4	1	2	57	55	59	54	
2-1/2	-	16	18	15	-	22	8-5/8	5-3/4	1	2	-	100	110	125	
3	-	18	20	18	-	26	10-3/4	5-3/4	1-1/2	2-1/2	-	140	150	175	
4	-	20	22	22	-	31	12-3/4	5-3/4	1-1/2	2-1/2	-	195	220	295	
5	-	22	24	26	-	36	14	7-7/8	1-1/2	2-1/2	-	230	290	435	
6	-	24	28	30	-	41	16	7-7/8	1-1/2	2-1/2	-	350	380	715	
8	-	28	32	37	-	50	18	7-7/8	2	3	-	475	610	1070	
10	-	34	38	55	-	70	24	7-7/8	2	3	-	780	1180	2065	
12	-	38	42	58	-	75	28	7-7/8	2-1/2	4*	-	940	1510	2750	
14	-	42	46	60	-	79	32	7-7/8	2-1/2	4*	-	1155	2205	3400	
16	-	47	51	68	-	89	36	7-7/8	3	5*	-	1605	2785	4750	
18	-	54	58	85	-	109	42	9-1/8	3	5*	-	2260	4370	6295	
20	-	62	66	99	-	126	48	9-1/8	3	5*	-	2845	5635	8600	
22	-	64	68	102	-	130	48	10-1/4	3	5*	-	3000	6085	10900	
24	-	70	74	109	-	140	54	10-1/4	4*	6*	-	4295	7845	14000	

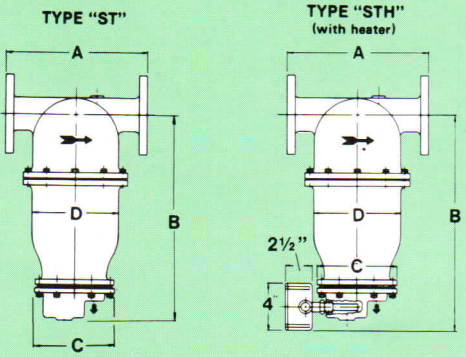
\* Flanged Drain

**TYPE "ST" & "STH" THREADED INLET & OUTLET  
NPT connections – STH has 50 watt heater**



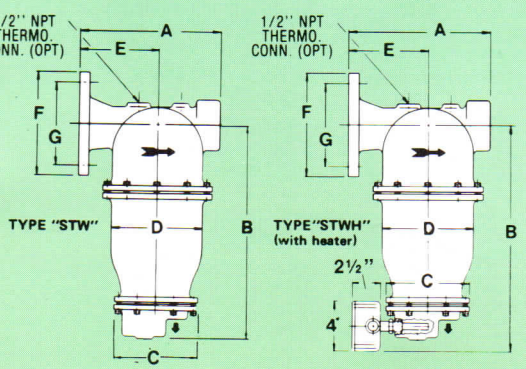
PIPE SIZE	Dimensions in inches and Weight in lbs., net						Lbs.	
	A	B(ST)	B(STH)	C	D	DRAIN	ST	STH
3/4	5-1/2	10-1/2	13	6-1/8	4-1/8	3/4	20	23
1	6	10-1/2	13	6-1/8	4-3/4	3/4	20	23
1-1/4	6	12-1/4	14-3/4	6-1/8	5-1/4	3/4	22	25
1-1/2	7-1/2	13-3/4	14-3/4	6-1/8	5-7/8	3/4	30	33
2	8-1/8	15-3/8	16-1/2	6-1/8	6-5/8	3/4	42	45
2-1/2	9-3/8	18-7/8	20	6-1/8	7-3/4	3/4	66	69
3	11-1/16	20-3/8	21-1/2	6-1/8	9-1/8	3/4	100	103

**TYPE "ST" & "STH" 125 lb. FLANGED INLET & OUTLET  
Large, flat face, drilled flanges. Material ASTM-A278**



Pipe Size Inches	Dimensions in inches and Weight in lbs., net						Lbs.	
	A	ST B	STH B	C	D	Drain	ST	STH
2	10-3/4	15-3/8	16-1/2	6-1/8	6-5/8	3/4	50	53
2-1/2	11-1/2	18-7/8	20	6-1/8	7-3/4	3/4	80	83
3	14-1/4	20-3/8	21-1/16	6-1/8	9-1/8	3/4	110	113
4	15-7/8	23-1/2	24-1/2	6-1/8	11-1/4	3/4	152	155
5	18-5/8	30	31	7	13-5/8	1	311	314

**TYPE "STW" & "STWH" 125 lb. FLANGED INLET  
& THREADED OR 125 lb. FLANGED OUTLET  
Enlarged inlet and outlet. Material ASTM – A278**

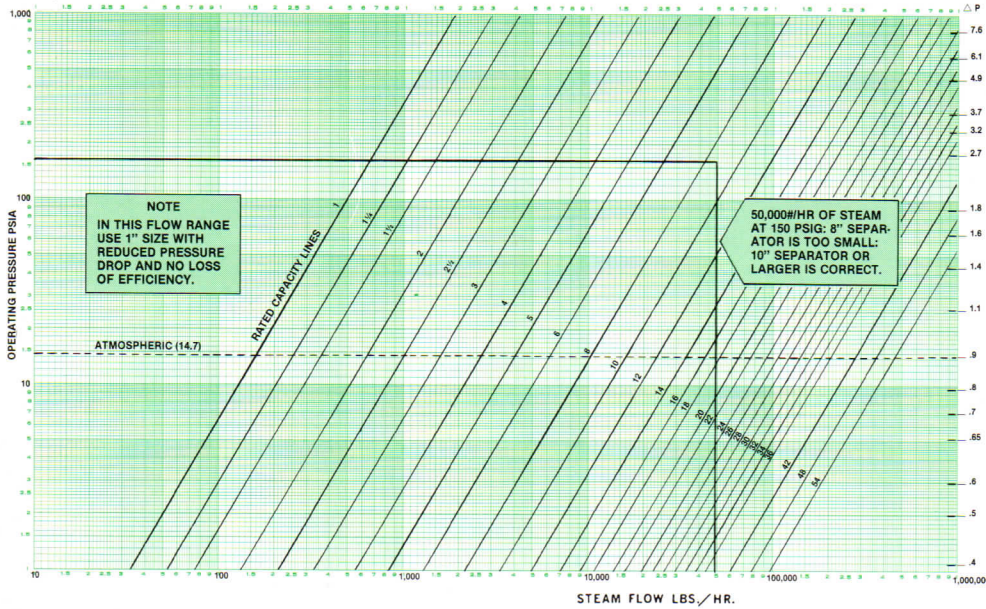


Unit Size Inches	Dimensions in inches and Weight in lbs., net											Lbs.	
	125# Inlet Flange			Outlet Conn.	A	STW B	STWH B	C	D	E	NPT Drain	STW	STWH
	Size	F	G										
1-1/2	2-1/2	7	5-1/2	2NPT	9-1/4	13-3/4	14-3/4	6-1/8	5-7/8	5-3/8	3/4	38	41
2	3	7-1/2	6	2 1/2 NPT	10-1/4	15-3/8	16-1/2	6-1/8	6-5/8	5-3/4	3/4	54	57
2-1/2	4	9	7-1/2	3NPT	11-3/4	18-7/8	20	6-1/8	7-3/4	6-3/4	3/4	84	87
3	5	10	8-1/2	4Flg.	15	20-3/8	21-1/2	6-1/8	9-1/8	8-1/2	3/4	130	133
4	6	11	9-1/2	5Flg.	17-1/2	23-1/2	24-1/2	6-1/8	11-1/4	9-1/2	3/4	169	172
5	8	13-1/2	11-3/4	6Flg.	21	30	31	7	13-5/8	11-3/4	1	331	334



# STEAM SELECTION & CAPACITY CHART

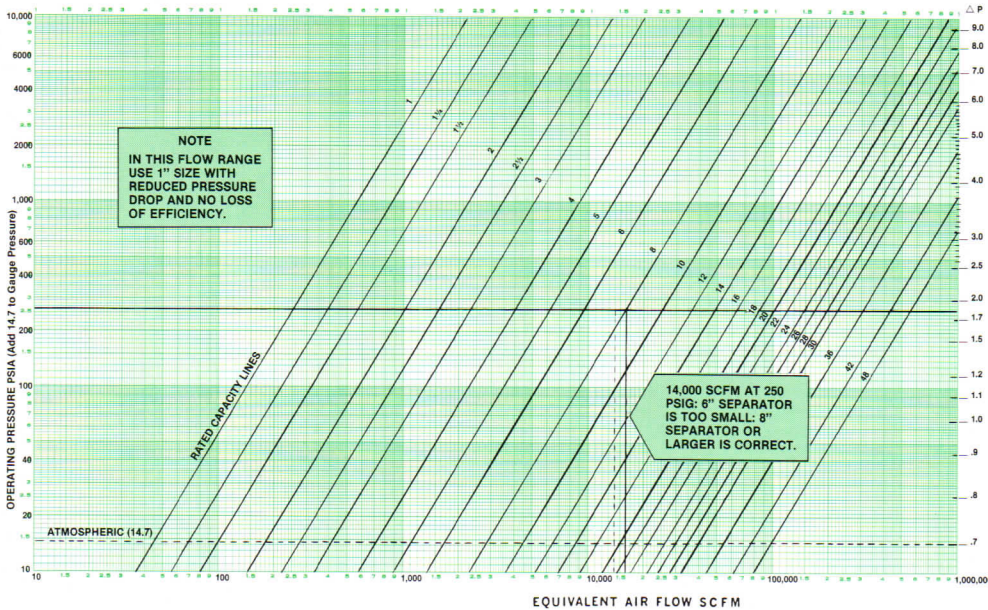
The values below represent maximum recommended STEAM FLOW (SATURATED) IN LBS. PER HOUR through standard Wright-Austin Separators.



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

# 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.

TO SPECIFY: Separator shall be line type with "VCP", of carbon steel or cast iron construction in accordance with the ASME code. Design characteristics of the vessel, shall be in excess of the maximum expected operating condition. Separator must be capable of removing 99% of all liquid and solid entrainment where the particle size exceeds ten microns. Separator to be Wright-Austin Type "T" or "ST" design.

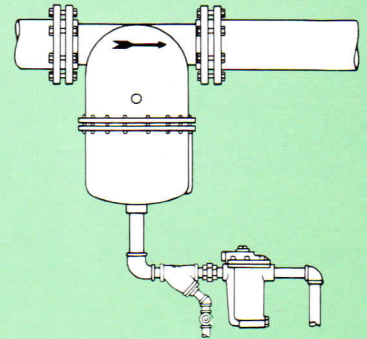


## WRIGHT-AUSTIN COMPANY

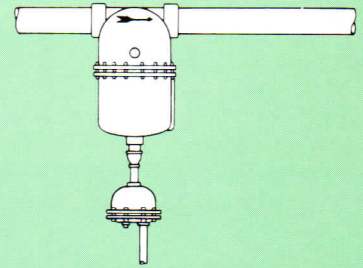
WRIGHT-AUSTIN LIMITED  
P.O. Box 7267  
Windsor, Ontario N9C 3Z1  
Phone: (519) 255-9740  
FAX: (519) 255-7448

# TYPICAL INSTALLATIONS

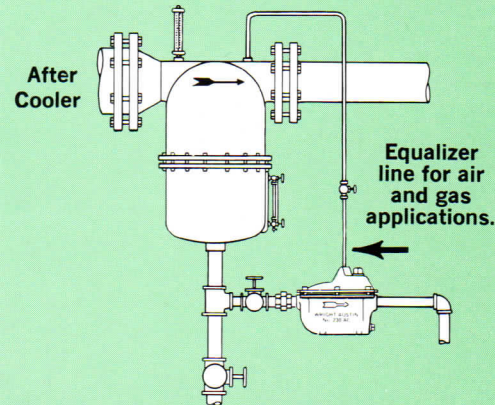
For positive drainage of separator, install trap a minimum of 6" below separator drain. For every inch of horizontal piping to trap, add one inch to the vertical piping. Never allow the top of the trap to extend above separator drain connection.



4" Type "T" cast iron Separator removing moisture from a steam header at 125 PSI. One inch cast iron "Y" strainer and 510C combination trap to drain.



2" Type "T" cast iron Separator removing moisture from compressed air distribution line. 3/4" No. 90AC Float Trap installed below Separator, to drain.



4" Model TW cast iron Separator removing moisture and oil from after-cooler outlet. No. 230AC Trap to drain. For air and gas service a sediment pocket, as shown, should be provided instead of a strainer.

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