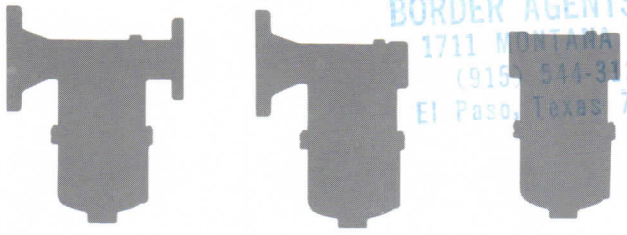
STEAM, AIR, GAS

WRIGHT-AUSTIN

1894

"T" type ENTRAINMENT SEPARATORS



The new Wright-Austin "T" type entrainment separator offers "BLC" (boundary layer control) with a separating and scrubbing action far superior to anything previously available.

Steam, air or gas enters this separator through a confined passage at high speed and follows a whirling path around the inner wall. Centrifugal action forces the heavier moisture and solids against the wall where they drain to the bottom and through the outlet to the trap.

The vertical escape chamber is designed larger than the inlet and is located in the center of the vessel, well above the bottom drain. The velocity of the flow stream is reduced upon reaching this chamber. The high level location of the outlet and freedom from further contact with the separated moisture and solids effectively prevents re-entrainment.

Wright-Austin's exclusive "BLC" design obviates the need for complex baffles, veins, deflectors and other obstructions to the flow stream. Users are thereby assured of completely clean and dry steam, air or gas with a consequent increase in operating efficiency and protection for expensive equipment.

Advantages of modified "T"

1. Hi efficiency over wide range of flow conditions
2. Compact, sturdy, lightweight construction
3. Low pressure drop
4. No moving parts, self cleaning
5. Improved, modified cyclone design
6. Greater drain capabilities
7. Quality at moderate cost

WRIGHT-AUSTIN COMPANY
DETROIT, MICHIGAN 48207

MEMBER FCI Fluid Controls Institute, INC

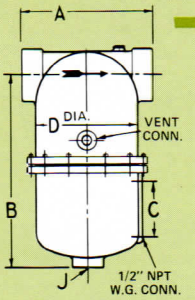
MANUFACTURERS OF
ENTRAINMENT SEPARATORS
EXHAUST HEADS
TRAPS, STRAINERS & AIR VENTS

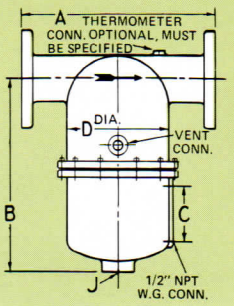
REPRESENTATIVE

TYPE "T" CAST IRON 150 PSI – 450°F

The Type "T" Separator with Boundary Layer Control is code constructed of cast iron and suitable for a wide range of applications. It is used where entrainment removal is desired in steam lines and compressed air lines having operating pressures of 150 PSI or less and temperatures of less than 450°F. Particularly suited for compressed air distribution lines.

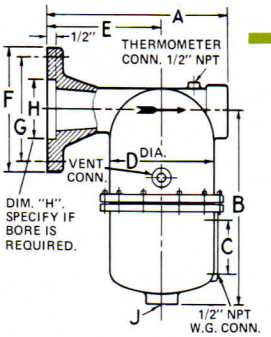
Up to 2-1/2" **threaded ends** also furnished in cast bronze (300 PSI - 500°F).

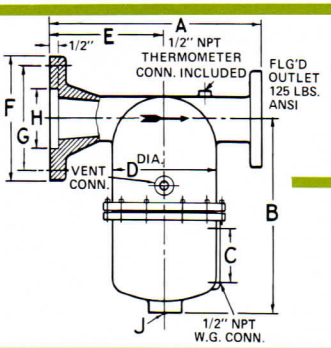




TYPE "TW" CAST IRON FOR AFTERCOOLERS 150 PSI - 450°F

Type "TW" Separator with Boundary Layer Control is code constructed of cast iron and specifically designed for use at the outlet of air aftercoolers where pressures do not exceed 150 PSI. The **inlet has been enlarged** to match the outlet end of the standard aftercooler as manufactured by the principal firms in the industry.

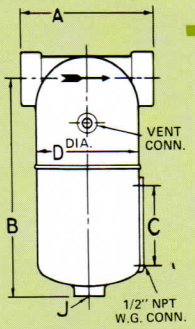


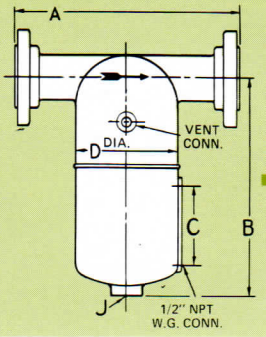


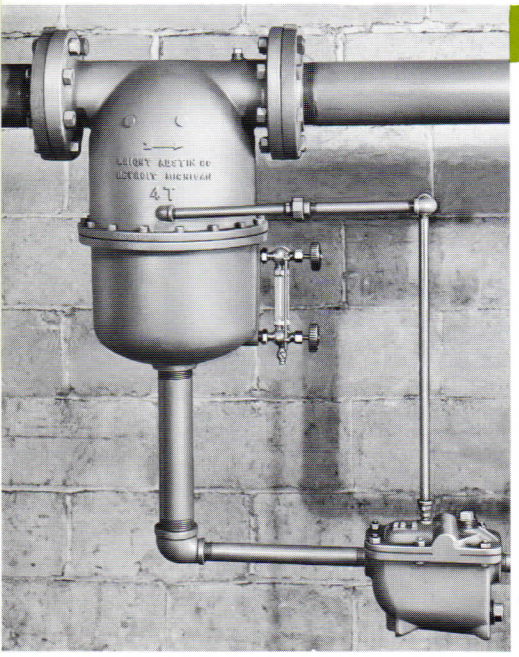
TYPE "T" CARBON STEEL 1000 PSI - 650°F

The Type "T" Separator with Boundary Layer Control is code constructed of cast carbon steel when designed for smaller steam, air and gas lines where pressures run as high as 1000 PSI and temperatures to 650°F. This series is particularly suited for installation in steam lines ahead of turbines, pressure reducing valves and other equipment where high steam purity is desired.

Also available in stainless steel.







TRAP SELECTION — *COMPRESSED AIR & GAS*

Separator Size Inches	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
½ & ¾	¾" 500AC	¾" 500AC ¾ 90AC	¾" 500AC ¾ 90AC	¾" 500AC ¾ 90AC	¾" 500AC ¾ 90AC	¾ 510AC ¾ 310AC	¾" 520AC	¾" 71AC	¾" 101AC
1 & 1¼	¾ 500AC	¾" 500AC ¾ 90AC	¾" 500AC ¾ 90AC	¾" 500AC ¾ 90AC	¾" 500AC ¾ 90AC	1 510AC 1 310AC	1 520AC	¾ 71AC	¾ 101AC
1½ & 2	¾ 500AC	¾" 500AC ¾ 90AC	¾" 500AC ¾ 90AC	¾" 500AC ¾ 90AC	¾" 500AC ¾ 90AC	1 510AC 1 310AC	1 520AC	¾ 71AC	¾ 101AC
2½	¾ 500AC	¾ 500AC 1 230AC	¾" 500AC 1 230AC	1 510AC 1 230AC	1 510AC 1 310AC	1 510AC 1 310AC	1 520AC	¾ 71AC	¾ 101AC
3	¾ 500AC	¾ 500AC 1 230AC	1 510AC 1 230AC	1 510AC 1 230AC	1 510AC 1 310AC	1 510AC 1 310AC	1¼ 520AC	¾ 71AC	¾ 101AC
4	1 510AC	1 510AC 1 230AC	1 510AC 1 230AC	1 510AC 1 230AC	1 510AC 1 310AC				
5	1 510AC	1 510AC 1 230AC	1 510AC 1 230AC	1 510AC 1 230AC	1 510AC 1 310AC				
6	1 510AC	1 510AC 1 230AC	1 510AC 1 230AC	1 510AC 1 230AC	1¼ 520AC 1 310AC				
8	1¼ 520AC	1¼ 520AC 1 230AC	1¼ 520AC 1 230AC	1¼ 520AC 1 230AC	1¼ 520AC 1 310AC				

PERFORMANCE

WRIGHT-AUSTIN separators when properly installed and drained are designed to remove virtually all entrainment down to 10 microns with an absolute minimum pressure drop.

Typical installation. 4" type "T" separator removing moisture in line carrying 2000 SCFM of air at 100 PSIA. Trap is No. 230AC. Water gage is Wright-Austin Model No. 105. (See last illustration on back page for piping arrangement which includes sediment pocket.)

TYPE "T" CAST IRON	NOMINAL PIPE SIZE - INCHES	PRINCIPAL DIMENSIONS - INCHES A	B	C	D	THERMO. CONN.*	DRAINS "J" REGULAR	OPT'L.	NPT VENT	NET WGT. LBS.	PRESSURE & TEMP. RATINGS
Threaded Ends NPT Material ASTM A-278	1/4 & 3/8	5	6-3/4		3-1/2		1/2"		1/4"	9	150 PSI @ 450° F. HYDROSTATIC TEST PRESSURE 300 LBS. 250 PSI @ 250° F. HYDROSTATIC TEST PRESSURE 500 LBS.
	1/2 & 3/4	5-1/2	9-1/4		4-1/8		3/4		1/4	14	
	1 & 1-1/4	6	9-1/4		5-1/4	1/2	1	1-1/4"	1/4	20	
	1-1/2	7-1/2	11-3/4		5-7/8	1/2	1	1-1/2	1/4	29	
	2	8-1/8	13		6-5/8	1/2	1	2	1/4	40	
	2-1/2	9-3/8	14-1/2	4-3/4	7-3/4	1/2	1	2	1/4	57	
	3	11-1/16	16-1/4	4-3/4	9-1/8	1/2	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	2	1/4	50	150 PSI @ 450° F. HYDROSTATIC TEST PRESSURE 300 LBS.
	2-1/2	11-1/2	14-1/2	4-3/4	7-3/4	1/2	1	2	1/4	70	
	3	13	16-1/4	4-3/4	9-1/8	1/2	1-1/4	2-1/2	1/4	102	
	4	15-7/8	19-1/2	5-3/4	11-1/4	1/2	1-1/4	2-1/2	3/8	130	
	5	18-5/8	24-3/4	7-7/8	13-1/2	1/2	1-1/2	2-1/2	3/8	245	

TYPE "TW" CAST IRON	NOMINAL PIPE SIZE - INCHES	INLET FLANGE DIMENSIONS - INCHES INLET	F	G	OUTLET CONN.	PRINCIPAL DIMENSIONS - INCHES A	B	C	D	E	J DRAIN	NPT VENT	NET WGT. LBS.	PRESSURE & TEMP. RATINGS
Enlarged Inlet Flanged. Threaded NPT or 125 Lb. Flanged Outlet. Material ASTM A-278	1	1-1/2 Flg.	5	3-7/8	1" NPT	7-7/8	11-1/4		5-1/4	4-3/4	1	1/4"	25	150 PSI @ 450° F. HYDROSTATIC TEST PRESSURE 300 LBS.
	1-1/4	2 Flg.	6	4-3/4	1-1/4 NPT	7-7/8	11-1/4		5-1/4	4-7/8	1	1/4	26	
	1-1/2	2-1/2 Flg.	7	5-1/2	1-1/2 NPT	9	11-3/4		5-7/8	5-1/2	1	1/4	36	
	2	3 Flg.	7-1/2	6	2 NPT	9-3/4	13		6-5/8	6	1	1/4	48	
	2-1/2	4 Flg.	9	7-1/2	2-1/2 NPT	11-1/2	14-1/2	4-3/4	7-3/4	7	1	1/4	70	
	3	5 Flg.	10	8-1/2	3 NPT	14	16-1/4	4-3/4	9-1/8	8-1/2	1-1/4	1/4	108	
	4	6 Flg.	11	9-1/2	4 Flg.	17-1/2	19-1/2	5-3/4	11-1/4	9-5/8	1-1/4	3/8	144	
	5	8 Flg.	13-1/2	11-3/4	5 Flg.	21	24-3/4	7-7/8	13-1/2	11-3/4	1-1/2	3/8	265	

TYPE "T" CARBON STEEL	SIZE	A	B	C	D	J DRAIN	NPT VENT	NET WGT. LBS.	PRESSURE & TEMPERATURE RATINGS
Material ASTM-216 Threaded Ends (NPT) Socket Weld Ends	1/4 & 3/8"	4-1/8"	7"		3-1/2"	1/2"	1/4"	10	1000 PSI @ 650° F.
	1/2 & 3/4	5-1/4	9		4-1/2	3/4	1/4	16	
	1 & 1-1/4	6-3/8	10-1/2	4-3/4"	5-1/2	1	1/4	30	
	1-1/2 & 2	7-5/8	12-1/2	4-3/4	6-5/8	1	1/4	50	
Material ASTM-216 Flanges and Drilling 150 LB. ANSI 300 LB. ANSI 600 LB. ANSI	1	10-1/2	10-1/2	4-3/4	5-1/2	1	1/4	36	150 LB. ANSI SORF FLGS. 180 PSI @ 400° F. 300 LB. ANSI SORF FLGS. 515 PSI @ 650° F. 600 LB. ANSI SORF FLGS. 1000 PSI @ 650° F.
	1-1/4	10-1/2	10-1/2	4-3/4	5-1/2	1	1/4	36	
	1-1/2	11-1/2	12-1/2	4-3/4	6-5/8	1	1/4	57	
	2	11-1/2	12-1/2	4-3/4	6-5/8	1	1/4	57	
	2-1/2	13-1/2	15	5-3/4	8-5/8	1	1/4	85	
	3	17-3/4	18	5-3/4	10-3/4	1-1/4	1/4	150	
Material ASTM A-516 Grade 70	4	18	22	5-3/4	12-3/4	1-1/4	1/2	140	150 LB. ANSI SORF FLGS. 180 PSI @ 400° F. 300 LB. ANSI SORF FLGS. 515 PSI @ 650° F.
	5	20	26	7-7/8	14	1-1/2	1/2	170	
	6	22	30	7-7/8	16	1-1/2	1/2	220	
	8	28	37	7-7/8	18	2	1/2	345	

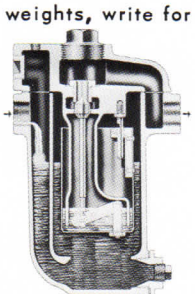
CARBON STEEL UNITS ARE HYDROSTATICALLY TESTED TO ONE AND ONE HALF THE DESIGN PRESSURE

Over 8" lines and higher pressures, use Wright-Austin Type 31L welded steel separators. Write for literature. (Bulletin 809)

All separators listed are ASME unfired pressure vessel code construction, code stamp (optional) when required.

TRAP SELECTION — *STEAM*

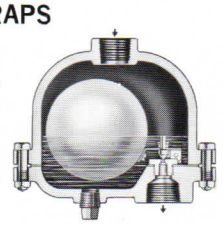
For most applications, bucket type traps (500AC, 71AC, 101AC series) should be used. Where heavy oil concentration or very low condensate flow is expected, float type traps (90AC, 230AC or 310AC series) should be used. See table at left. For detailed information on pressures, orifices, capacities, dimension and weights, write for bulletin 814.



500AC SERIES BUCKET TRAP

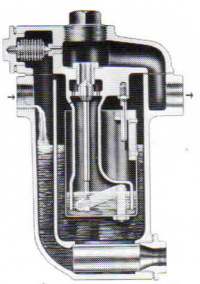
(0-300 PSI) A modification of the 500C steam trap. Simple ledge and roller device produces bucket "snap-action" without spring. Valve is open during discharge, snaps shut at end of cycle. Inspection can be made without disturbing pipe connections. 1/4" vent connection provided for installation of balance line. Over 300 PSI use 70 and 100AC series.

90AC and 95AC FLOAT TRAPS



(0-150 PSI) Loss of line pressure prevented by retention of positive water seal at all times. Internal parts are rust-proof stainless steel, including non-magnetic valve and seat and are attached to base which can be removed for inspection. Body and cover are cast iron. Has 3/8" P.T. blow down connection. Model 95AC (0-250 PSI) carbon or stainless steel.

Specify a Wright-Austin No. 500C Series Combination Steam Trap having a capacity equal to 10% of the steam flow as shown in the top chart on the back page of this bulletin. Write for Bulletin 808 for complete details.

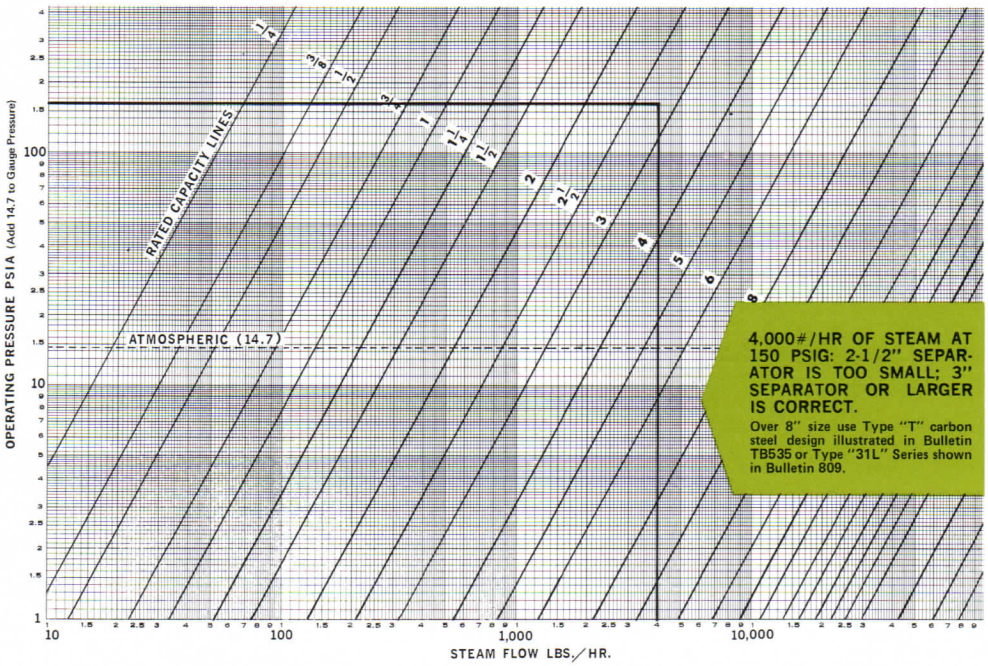


500C SERIES COMB. STEAM TRAP (0-175 PSI)

Proved by thousands of installations. Features: (1) faster warm-up through more efficient venting and discharge of air and condensate in preliminary stage, (2) ability to discharge at only 1 or 2 degrees below steam temperature, (3) smaller dimensions made possible by combined action of stainless steel thermostat (bellows style) and bucket which increase discharge capacity, (4) accessibility to all internal parts while trap is connected.

STEAM SELECTION & CAPACITY CHART

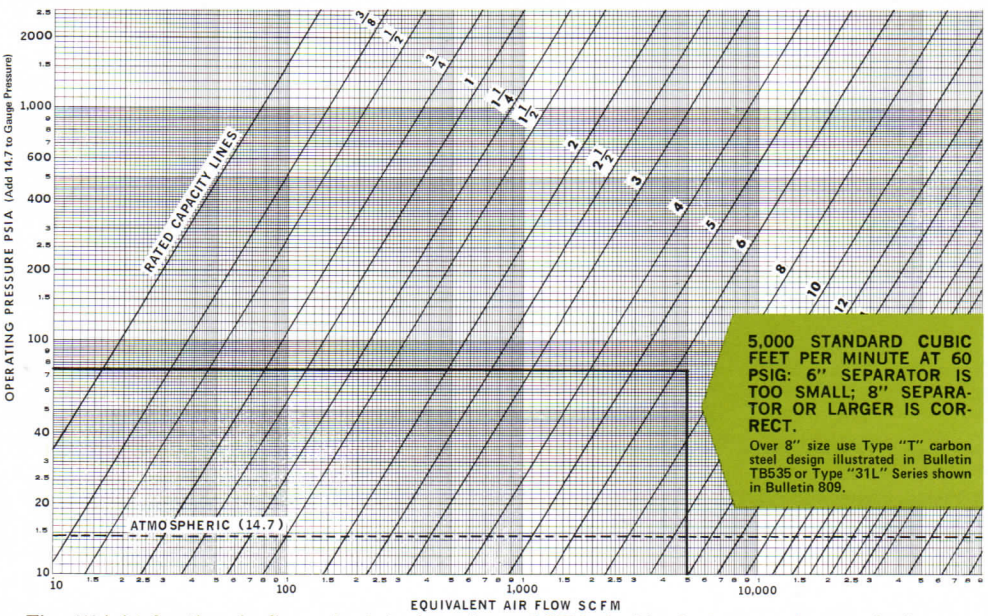
The values below represent maximum recommended STEAM FLOW (SATURATED) IN LBS. PER HOUR through standard Wright-Austin Separators.



For complete and larger chart showing pressure drop, request TB545.

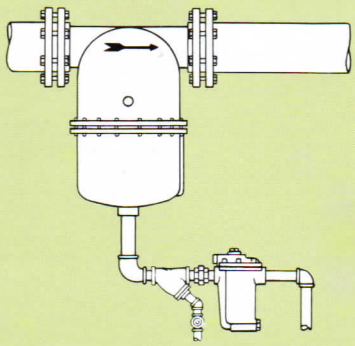
AIR SELECTION & CAPACITY CHART

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

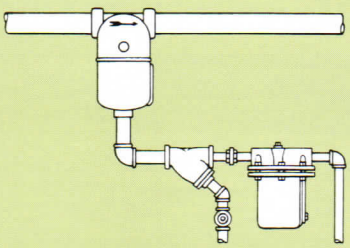


The Wright-Austin air flow chart is based on SCFM (cubic feet per minute of air measured at standard conditions of 14.7 psia and 60°F). If any of the operating conditions are varied from the above, request TB546 showing correction factors, conversions and pressure drop.

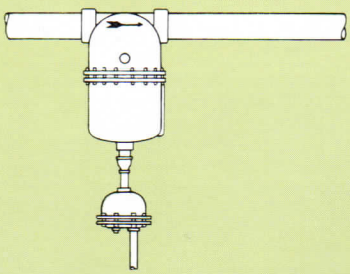
TO SPECIFY: Separator shall be line type with "BLC", of carbon steel or cast iron construction in accordance with the ASME code. Design characteristics of the vessel, shall be in excess of the maximum expected operating condition. Separator must be capable of removing 99% of all liquid and solid entrainment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



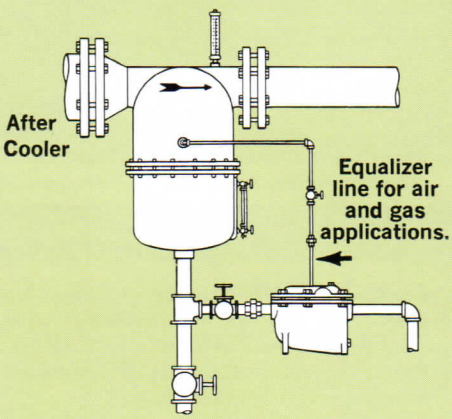
4" Type "T" cast iron Separator removing moisture from a steam header at 125 PSI. One inch cast iron "Y" strainer and 510C combination trap to drain.



2" Type "T" Separator, cast steel, installed in 300 PSI steam line to turbine. 1-1/4" Cast Steel "Y" Strainer and 3/4" No. 71 Steam 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" Type T-W 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.

WRIGHT-AUSTIN COMPANY

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