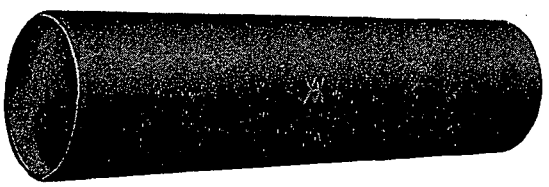
Westinghouse Air Brake Company

Pittsburgh, Pa., U. S. A.



Reservoirs and Reservoir Unions

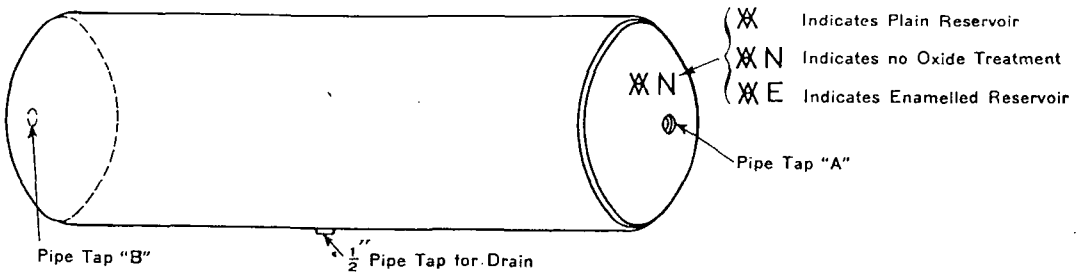
Part Catalog No. 3206-1 May, 1939

(SUPERSEDING ISSUE OF AUGUST, 1934)

RESERVOIR SPECIFICATIONS

(Auxiliary, Supplementary, Service and Emergency)

All Car Reservoirs have electrically welded seams and convex heads and, unless otherwise ordered, are given a "No-Ox-Id" coating on the inside. This has been found particularly effective in preserving the metal against corrosion as it forms a semi-hard surface over the interior. However, if plain or enameled reservoirs are desired, order should so state. .



Piece No.	Outside Diameter Inches		Length Over All, Inches		Pipe Tap		Name of Reservoir	Approx. Volume Cu. In.	Shell Thickness Inches	Head Thickness Inches	Approx. Net Weight Lbs.
	Designated	*Actual Nominal	Designated	Actual Nominal	A Inches	B Inches					
96989	10	10 3/16	12	10	1	3/4	Auxiliary	650	3/32	1/8	16
96801	10	10 3/16	14 1/2	12	1	3/4	Auxiliary	800	3/32	1/8	18
505070	10	10 3/16	16 1/2	14 1/2	1	3/4	Auxiliary	960	3/32	1/8	20
96993	10	10 3/16	20	17 1/2	1	3/4	Auxiliary	1250	3/32	1/8	24
96995	10	10 3/16	24	21 1/2	1	3/4	Auxiliary	1550	3/32	1/8	27
96997	10	10 3/16	33	29 1/2	1	3/4	Aux. or Suppl.	2150	3/32	1/8	33
97141	12	12 1/4	27	24 1/2	1	3/4	Auxiliary	2500	1/8	5/32	46
97143	12	12 1/4	33	29 1/2	1	3/4	Aux. or Suppl.	3100	1/8	5/32	55
97145	14	14 1/4	33	30 1/2	1	3/4	Aux. or Suppl.	4300	1/8	3/16	70
503483	14	14 1/4	33	30 1/2	1	1	Aux. or Suppl.	4300	1/8	3/16	70
97147	16	16 5/16	33	30 1/2	1	3/4	Aux. or Suppl.	5600	5/32	3/16	100
97149	16	16 5/16	42	39	1	3/4	Aux. or Suppl.	7350	5/32	3/16	120
97151	16	16 5/16	48	45	1	3/4	Aux. or Suppl.	8500	5/32	3/16	134
502890	16	16 5/16	54	54	1	3/4	Aux. or Suppl.	10300	5/32	3/16	148
502891	16	16 5/16	72	72	1	3/4	Aux. or Suppl.	13900	5/32	3/16	186
505167	18 1/2	18 3/8	30	30	1	3/4	Service	6830	3/16	7/32	148
85931	18 1/2	18 3/8	42	42 1/2	1	1/2	Ser. or Emer.	10000	3/16	7/32	175
97153	20 1/2	20 3/8	36	36	1	3/4	Ser. or Suppl.	10300	3/16	7/32	175
85936	20 1/2	20 3/8	42	42	1	1/2	Emergency	12100	3/16	7/32	185
85937	20 1/2	20 3/8	48	47 1/2	1	1/2	Emer. or Suppl.	14000	3/16	7/32	200
85938	20 1/2	20 3/8	54	54	1	3/4	Emergency	16000	3/16	7/32	210
85932	22 1/2	22 3/8	36	35 1/4	1	3/4	Emergency	12100	3/16	7/32	185
85933	22 1/2	22 3/8	48	47 1/4	1	1/2	Emergency	16700	3/16	7/32	235
85934	22 1/2	22 3/8	54	52 1/4	1	3/4	Emergency	19100	3/16	7/32	255
85935	22 1/2	22 3/8	60	59 1/4	1	1/2	Emergency	21200	3/16	7/32	285

* In providing hangers, allowance should be made for possible tolerance of ± 1/8" from the nominal O.D.

Prices will be quoted upon application

Orders should give PIECE NUMBER and NAME of part wanted

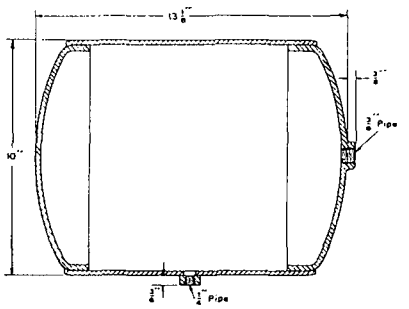
RESERVOIRS FOR FREIGHT CAR BRAKE EQUIPMENT

Combined Auxiliary and Emergency Reservoir with ¾" Reinforced Flanged Unions for "AB" 10" Freight Brake Equipment, see Part Catalog 3225-1.

Single Cylinder Freight Brake Equipments Types "K" and "H" include cast iron auxiliary reservoirs, either detached or combined, see Part Catalog 3214-3.

Empty and Load Freight Brake Equipments include cast iron reservoirs, either detached or combined, see Part Catalog 3214-3, Sups. 1 and 3.

EQUALIZING RESERVOIR



Net Weight 33 lbs.

(Thickness of Shell .190" and Head ¼")

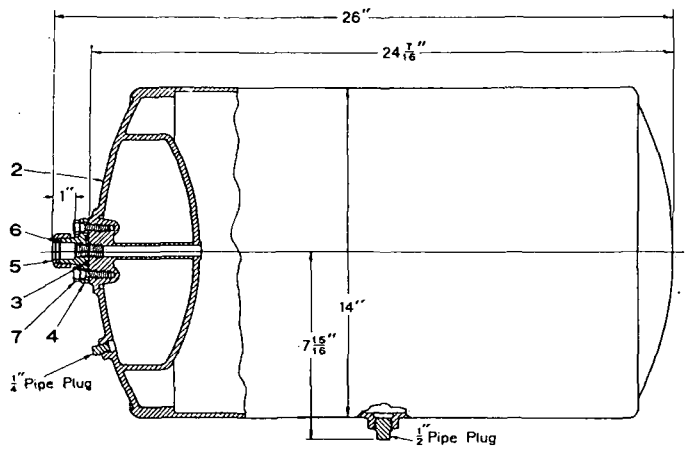
Piece No. 99574 10"x12" Equalizing Reservoir. (Plain)

Piece No. 99575 10"x12" Equalizing Reservoir. (Enameled)

For use in connection with Automatic Brake Valves. Tapped for ⅜" pipe.

COMBINED EQUALIZING AND REDUCTION RESERVOIR

(For No. 8-ET Equipment)



Piece No. 98349 Combined Equalizing and Reduction Reservoir, complete. (Plain)

Piece No. 99898 Combined Equalizing and Reduction Reservoir, complete. (Enameled)

Pc. No.	Ref. No.	
98513	2	Combined Equalizing and Reduction Reservoir, less Flanged Unions. (Plain)
500935	2	Combined Equalizing and Reduction Reservoir, less Flanged Unions. (Enameled)
93844		⅜" Straight Reinforced Flanged Union, complete (includes 4, 5 and 6)
93839	3	⅜" Flanged Union Gasket (2 Req'd)
93830	4	⅜" Flanged Union Body (2 Req'd)
93831	5	⅜" Flanged Union Nut (2 Req'd)
93836	6	⅜" Flanged Union Ring (2 Req'd)
15784	7	⅜"x1⅛" Hex. Hd. Cap Screw (4 Req'd)
33310		½" Pipe Plug
1635		¼" Pipe Plug

Prices will be quoted upon application

Orders should give *PIECE NUMBER* and NAME of part wanted

MAIN RESERVOIRS

Main Reservoirs enameled by special process are strongly recommended on account of their durability and because both inside and outside surfaces are protected against corrosion, oxidation, etc., thereby preserving the initial factor of safety.

Working Pressure and Shop Tests

Standard Reservoirs are built to our regular specifications and designed for working pressures not exceeding 140 pounds. All standard reservoirs are carefully tested before shipment, first under a hydrostatic test at 210 pounds and, second, with air at 160 pounds per square inch.

We are prepared to build Reservoirs for working pressures of more than 140 pounds, or in accordance with special design or specifications; however, for prompt delivery, Reservoirs of standard construction and sizes should be used wherever possible.

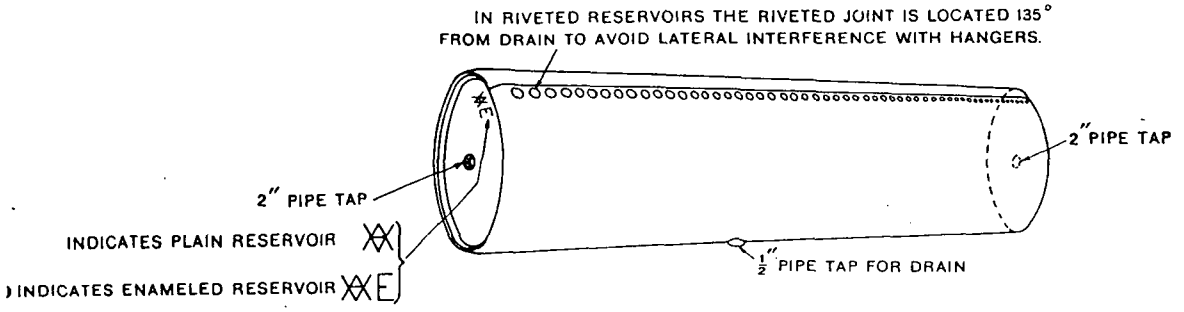
Capacity

Main reservoir capacity for passenger and switch engines should not be less than 40,000 cubic inches, and for freight engines not less than 60,000 cubic inches, an increase of not less than 25 per cent above these figures being desirable when the air compressor displacement is 120 cubic feet or more per minute.

We strongly recommend dividing the main reservoir capacity into two reservoirs of such suitable dimensions, so located and connected by piping, as to give the greatest possible radiating surface for cooling the air to atmospheric temperature, and consequently inducing the precipitation of moisture before the air is used in the brake system. Main reservoirs should be located in as cool a position as possible and never at the side of the fire box.

To ascertain the approximate capacity in cubic inches of any size not given, multiply the square of the inside diameter (which is approx. ½″ less than the outside diameter) by .7854, and the product by the over-all length in inches less 3″ for the insertion of both heads.

MAIN RESERVOIR SPECIFICATIONS
FOR STEAM LOCOMOTIVE USE*



Reservoirs of the following sizes are manufactured regularly.

Type Construction	Shell, O.D. Tube Semi-Convex Heads Welded in				Shell, Riveted Joint Semi-Convex Heads Welded in				Shell, Riveted Joint Semi-Convex Heads Riveted in		
Designated Outside Diameter	‡10"	12"	14"	16"	18½"	20½"	22½"	24½"	26½"	28½"	30½"
†Actual Nominal Outside Diameter	10"	12"	14"	16"	18½"	20½"	22⅜"	24½"	26⅜"	28⅜"	30⅜"
Thickness Stock, Shell	.190"	.200"	.218"	.250"	¼"				¼"	9/32"	
Thickness Stock, Head	¼"	5/16"			5/16"				5/16"	⅜"	
Overall Length	36" to 168" in steps of 6". NOTE: The 14" and 16" Diameters are also available in 33" length.										

‡ Convex Heads Brazed in.

† In providing Hangers, allowance should be made for possible tolerance of ±⅛" from the nominal O.D. for Tube Reservoirs and of ±⅛" for other sizes.

To avoid interference with reservoir hangers, pipe tap for drain is located 6" off longitudinal center in all standard Main Reservoirs 84" long or over, and 4" off center in all Main Reservoirs less than 84" long.

The longitudinal seam bears a fixed relation to the tap for drain, being 135 degrees from the latter. This provides for the reservoirs being installed so that the seam is on the upper side in all cases (whether on the right or left of the vehicle), thus insuring against accumulation of moisture and dirt along this joint, as well as locating the rivets at a point where they will not interfere with the hangers.

The 8"x8"x10", 9½"x9½"x10" and 11"x11"x12" Single Stage Steam Driven Air Compressors have 1¼" discharge; and the 8½" and 10½" Cross Compound Compressors 1½" discharge connection. We recommend that our reservoir unions, (see page 6) which are also reducers, be used for connecting the compressor discharge pipe to the reservoir.

*NOTE—Reservoirs for Electric Locomotives are shown in Catalog T-3506-1 covering traction brake reservoirs.

STANDARD MAIN RESERVOIRS
FOR STEAM LOCOMOTIVES

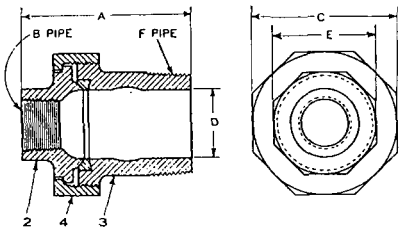
In the following table are listed our Standard sizes of Main Reservoirs for Steam Locomotives; we endeavor to carry these sizes in stock. Special effort should be made to see that these sizes are specified wherever possible.

Size Inches	Approx. Capacity Cu. In.	Net Weight Lbs.	Size Inches	Approx. Capacity Cu. In.	Net Weight Lbs.
16 x 36	6300	176	20½x 60	17850	392
16 x 48	8575	216	20½x 66	19775	420
16 x 60	10850	256	20½x 72	21700	453
16 x 84	15425	336	20½x 84	25550	514
16 x 96	17700	376	20½x 96	29400	575
16 x120	22275	456	20½x102	31325	605
			20½x120	37100	697
18½x 60	14750	339	.....	.....	.....
18½x 72	17900	393	22½x 72	25825	498
18½x 84	21025	447	22½x 84	30325	564
18½x 96	24175	500	.....	.....	...
18½x102	25750	527	.....	.....	...
18½x120	30450	607	.....	.....	...

NOTE—Orders for main reservoirs differing from those listed above must invariably specify the outside diameter, length over all in inches, finish (plain or enameled), working pressure, and should include a sketch showing location and size of tapping, hand holes and any other special features required.

AAR RESERVOIR UNIONS

(For 300 lbs. Pressure)

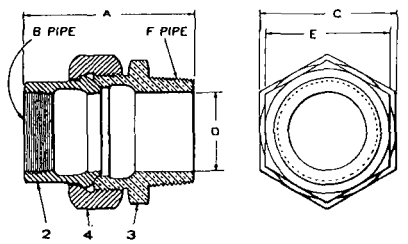


Size	A	B	C	D	E	F	Net Wt. (Lbs.) Each
2″x1″	3 13/16″	1″	3 3/8″	1 5/8″	2 7/16″	2″	2
2″x1 1/4″	4 1/16″	1 1/4″	3 3/8″	1 5/8″	2 7/16″	2″	3
2″x1 1/2″	4 1/8″	1 1/2″	3 3/8″	1 5/8″	2 7/16″	2″	3 1/2
2″x2″	4 5/16″	2″	4 1/16″	1 13/16″	2 1/2″	2″	4 1/4″

Ref. No.	DESCRIPTION	Pc. No. 2″x1″	Pc. No. 2″x1 1/4″	Pc. No. 2″x1 1/2″	Pc. No. 2″x2″
	Union, complete	93352	93355	93364	93365
2	Union Swivel	96327	96330	96333	96336
3	Union Stud	96328	96328	96328	96328
4	Union Nut	96329	96329	96329	96329

KEWANEE UNIONS

(For 300 lbs. Pressure)

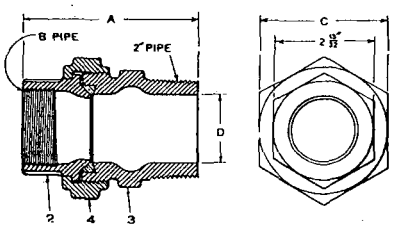


Size	A	B	C	D	E	F	Ne t Wt. Lbs.
1 1/4″x1″	3 13/32″	1″	2 3/8″	1 3/16″	2 1/16″	1 1/4″	1 1/2
2″x1″	3 1/2″	1″	2 3/8″	1 3/4″	2 1/2″	2″	2 1/4
2″x1 1/2″	3 11/16″	1 1/2″	2 31/32″	1 3/4″	2 3/4″	2″	3
2″x2″	3 3/4″	2″	3 5/8″	1 3/4″	3 3/8″	2″	4

Ref. No.	DESCRIPTION	Pc. No. 1 1/4″x1″	Pc. No. 2″x1″	Pc. No. 2″x1 1/2″	Pc. No. 2″x2″
	Union, complete	33144	34104	33160	34103
2	Union Swivel	33145	33145	33161	34482
3	Union Stud	33146	34487	33162	34483
4	Union Nut	33147	33147	33163	34484

RESERVOIR UNIONS

(For 250 lbs. Pressure)



Size	A	B	C	D	Net Wt. Lbs.
2″x1″	3 13/16″	1″	3″	1 5/8″	1 1/2
2″x1 1/4″	3 29/32″	1 1/4″	3″	1 5/8″	2 3/4
2″x1 1/2″	4 1/16″	1 1/2″	3″	1 5/8″	3
2″x2″	4 1/4″	2″	3 1/2″	1 3/4″	3 3/4

Ref. No.	DESCRIPTION	Pc. No. 2″x1″	Pc. No. 2″x1 1/4″	Pc. No. 2″x1 1/2″	Pc. No. 2″x2″
	Union, complete	51447	51451	51455	51459
2	Union Swivel	51450	51452	51453	51462
3	Union Stud	51448	51448	51448	51460
4	Union Nut	51449	51449	51449	51461

Prices will be quoted upon application

Orders should give PIECE NUMBER and NAME of part wanted

3206-1

Westinghouse Air Brake Company

Pittsburgh, Pa., U. S. A.

WORKS AT WILMERDING, PA.

OFFICES

ATLANTA	Candler Building
BOSTON	Statler Building
CHICAGO	Railway Exchange Building
CLEVELAND	Midland Building
DENVER	Denver National Building
HOUSTON, TEX.	Commerce Building
LOS ANGELES	Pacific Electric Building
MEXICO CITY, MEXICO	3a Puente de Alvarado, No. 67
NEW YORK	Empire State Building
ST. LOUIS	Broadway and Tyler Street
ST. PAUL	Endicott Building
SAN FRANCISCO	Matson Building
SEATTLE	Securities Building
TOPEKA	Columbian Building
WASHINGTON, D. C.	Munsey Building

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