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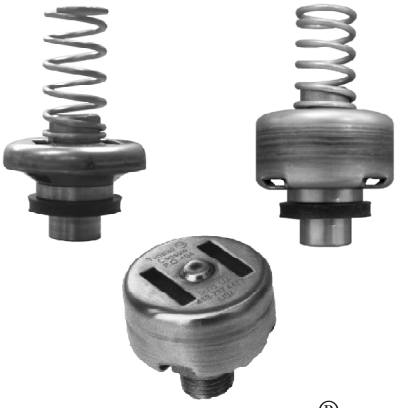
Tunstall®

Est. 1958

Steam Products



Tunstall Capsule®

Thermostatic Radiator Steam Traps

Thermal-Disc Steam Traps

Float & Thermostatic Steam Traps

Inverted Bucket Steam Traps

Pressure Action Pumps

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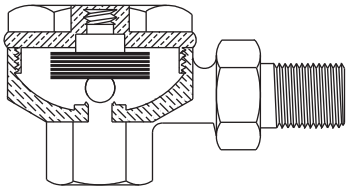
Tunstall Steam Trap Capsules®

100% Stainless Steel

"Made in America"



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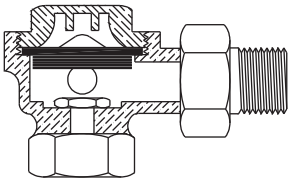

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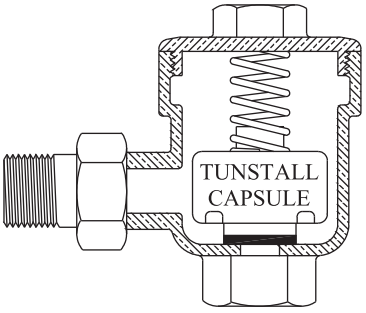

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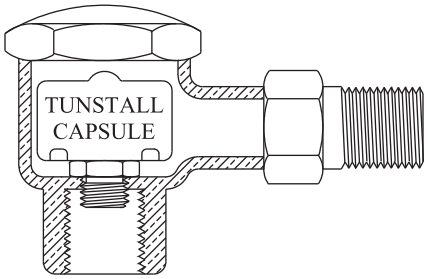

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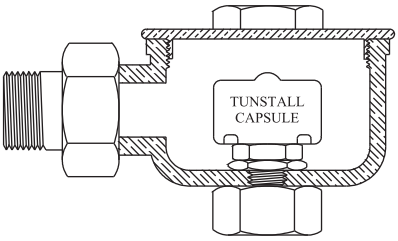
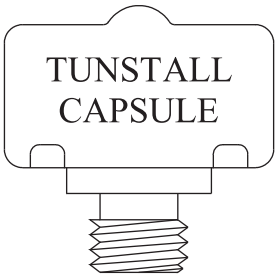


Warren Webster 512
TCWW-2507



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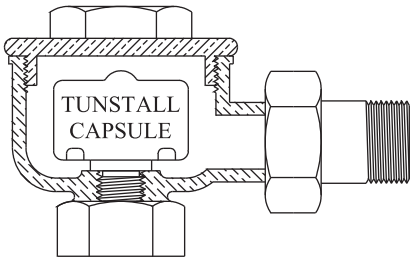

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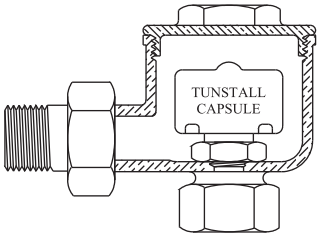

Warren Webster 02H
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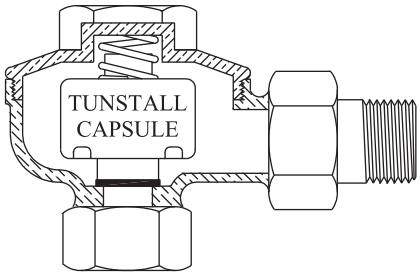

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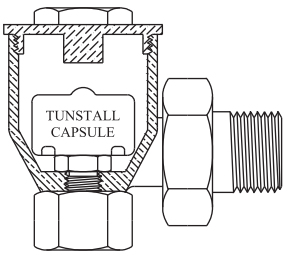
TCBJ-1001



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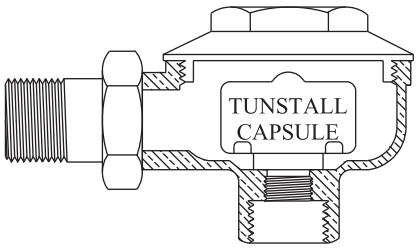

Tunstall TA-1/2-A
TCTA-2901

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Toll Free: 1-800-423-5578

At **TUNSTALL** we specialize in the manufacturing of interior thermostatic elements for steam traps using state-of-the-art technology. For maximum reliability and long term performance our **Tunstall Steam Trap Capsules®** are made of a 10 plate TIG welded stainless steel bellows and feature **orifice diameters up to 5/16", custom tooling, a one-year warranty, and pressure ratings from vacuum to 125 psig.** Each capsule is individually tested and calibrated before shipment. Now you can economically increase the performance of your old steam traps by replacing the interiors with new **Tunstall** technology. Made to retrofit almost all thermostatic steam traps, **Tunstall** Steam Trap Capsules® are by far the best choice for repairing or upgrading existing traps.

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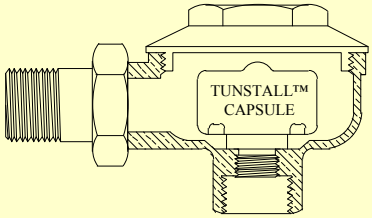
STAINLESS STEEL STEAM TRAP CAPSULES



Having been in service since 1985, with virtually failure-free performance, Tunstall Capsules® can offer your system years of trouble-free service.

For a FREE sample and complete catalog, call toll-free 1-800-423-5578. Please have the make, model and size of your steam trap. Your Free sample will be shipped the very same day.

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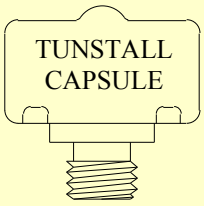

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FOR ALL F&T TRAPS

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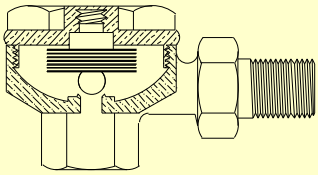
STAINLESS STEEL STEAM TRAP CAPSULES

"Leading the Industry in Quality Steam Trap Repair"



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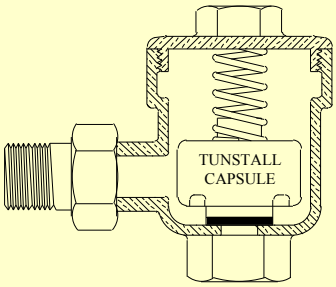
TCDB-1301



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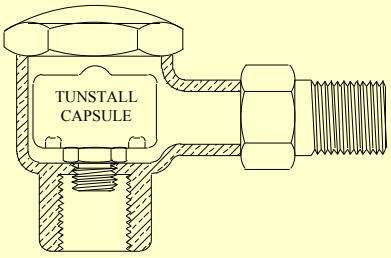

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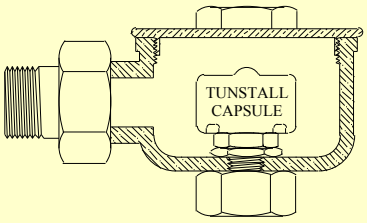

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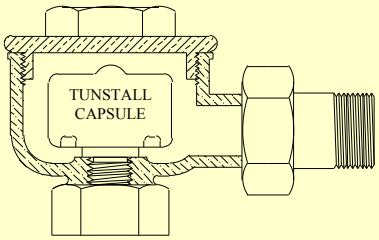
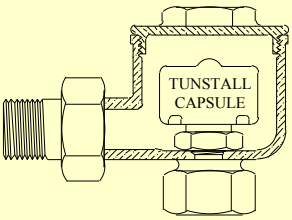
TCWW-2507



ILLINOIS 1G
TCIL-1501



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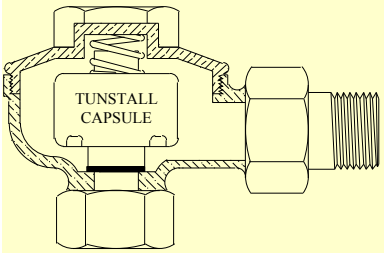
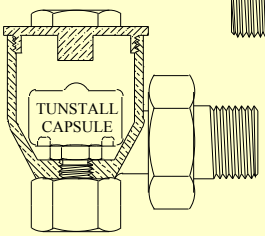
TCWW-2501



BARNES & JONES 122A
TCBJ-1001



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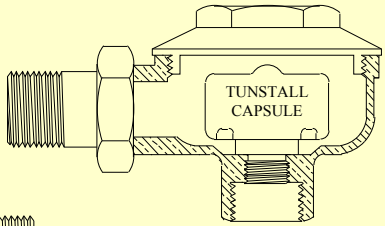
TCHF-1409



TUNSTALL TA-1/2-A
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TUNSTALL STEAM TRAP CAPSULES®

Catalog #795D

Selection Chart

Tunstall®

Established 1958

TCSA-2204
(Thread Type)

TCBJ-1001
(Spring Type)

TCWW-2501
(Thread Type)

....The Best Source for Steam Trap Repair....

Tunstall Steam Trap Capsules®

Quality Engineering

Made in USA

Tunstall Steam Trap Capsules® have been in service since 1985. Their warranty performance since that time has resulted in a practically nonexistent failure rate. The ***Tunstall Steam Trap Capsule®*** has changed the nature of the steam trap repair business.

Before the advent of stainless steel forming and TIG welding technology, steam traps consisted of thermostatic parts made by crimping and soldering of plated materials; this system resulted in products that had built in obsolescence. Hydro formed phosphor bronze bellows were more successful but the cost was considerably higher than common diaphragm cage assemblies.

Tunstall Steam Trap Capsules® are fabricated of TIG welded stainless steel which take advantage of existing Aerospace Technology, with extremely close manufacturing tolerances. Their stainless steel bellows counterparts can be found on commercial aircraft and aerospace equipment throughout the world.

Tunstall Steam Trap Capsules® retrofit almost all thermostatic steam traps made in this century. Each capsule is individually tested and calibrated before shipment. We believe ***Tunstall Steam Trap Capsules®*** are by far the best way to repair and upgrade existing traps for years of trouble free service.

We will be glad to manufacture steam trap interiors for any thermostatic trap assembly ever made. Our products provide the simplest, most effective installation and removal process in the business. We warranty all materials and take pride in being the best product available today.

Sincerely,

Timothy P. Tunstall
Woody Tunstall
Thomas P. Tunstall
Timothy F. Tunstall

Fluid Controls Institute Member

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Tunstall Steam Trap Capsules®

ARMSTRONG

Size	Armstrong Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½", ¾"	TS-2	TCAR-3001	Thread	3		NA
½"	TS-3	TCAR-3002	Thread	2		NA
All	B Series F&T	TCAR-3003	Thread	3		NA
2"	75A-4 & K50 F&T	TCAR-3004	Thread	3		NA
All	A Series F&T	TCAR-3005	Thread	3		NA
1"	TS-3	TCAR-3006	Thread	2		NA
¾"	TS-3	TCAR-3007	Thread	2		NA
1"	#8	TCAR-3008	Thread	3		NA
¾"	2011 F&T	TCAR-3009	Thread	3		NA

AMERICAN STERILIZER

Size	American Sterilizer Model	Tunstall Capsule #	Type	Class	Comments	B&J #
1/8" x ¼"		TCAS-3101	Spring	3		NA
½", ¾"	N-125	TCAS-3102	Spring	3		NA

BARNES & JONES

Size	Barnes & Jones Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	122A, 122S & 132	TCBJ-1001	Spring	2		1721
½"	3045	TCBJ-1002	Spring	2		1721
½"	C	TCBJ-1003	Spring	2		1748
½"	D	TCBJ-1004	Spring	2		1781
½"	120T & 122T	TCBJ-1005	Spring	2		3515
½"	120V, 12V & 122V	TCBJ-1006	Spring	2		2132
¾"	134A & 134S	TCBJ-1007	Spring	2		1929
¾"	134V	TCBJ-1008	Spring	2		4105
¾"	C	TCBJ-1009	Spring	2		1775
¾"	D	TCBJ-1010	Spring	2		1783
½"	2EBA & 2EBS	TCBJ-1011	Spring	2		4329
¾"	3EBA & 3EBS	TCBJ-1012	Spring	2		4330
1"	147	TCBJ-1013	Spring	2		4326
1"	C	TCBJ-1014	Spring	2		2103
1¼"	C	TCBJ-1015	Spring	2		2182
1"	D	TCBJ-1016	Spring	2		2000
1¼"	D	TCBJ-1017	Spring	2		2023
¾"	6	TCBJ-1018	Spring	2		1760
¾"	13	TCBJ-1019	Spring	2		1794
1"	14 & 3110	TCBJ-1020	Spring	2		1932
3/8"	N11	TCBJ-1021	Spring	2		4272
½"	N120	TCBJ-1022	Spring	2		4272
¾"	N13	TCBJ-1023	Spring	2		4273
¾"	N14	TCBJ-1024	Spring	2		4274

Tunstall Steam Trap Capsules®

BARNES & JONES (CONT.)

Size	Barnes & Jones Model	Tunstall Capsule #	Type	Class	Comments	B&J #
1"	N14	TCBJ-1025	Spring	2		4274
3/8"	1EBA	TCBJ-1026	Spring	2		4329
½"	2EBA	TCBJ-1027	Spring	2		4329
½"	2EBS	TCBJ-1028	Spring	2		4329
¾"	3EBS	TCBJ-1029	Spring	2		4330
¾"	3EBS	TCBJ-1030	Spring	2		4330
½"	2GW	TCBJ-1031	Spring	3		3834
¾"	3GW	TCBJ-1032	Spring	3		3834
½"	S SW	TCBJ-1033	Spring	4		3795
¾"	S SW	TCBJ-1034	Spring	4		3795
1"	4S	TCBJ-1035	Spring	4		3795
½"	P PW	TCBJ-1036	Spring	4		4167
¾"	P PW	TCBJ-1037	Spring	4		4170
1"	P	TCBJ-1038	Spring	4		4217
1¼"	P	TCBJ-1039	Spring	4		4217
1½"	P	TCBJ-1040	Spring	4		4214
2"	P	TCBJ-1041	Spring	4		4214
¾"	41T & 653 F&T Traps	TCBJ-1042	Thread	3		159P
1"	42T & 654 F&T Traps	TCBJ-1043	Thread	3		159P
1¼"	43T & 655 F&T Traps	TCBJ-1044	Spring	3		1955
1½"	44T & 656 F&T Traps	TCBJ-1045	Spring	3		1955
2"	457T F&T Traps	TCBJ-1046	Spring	3		1955
¾"	753 & 1" 754 F&T Traps	TCBJ-1047	Thread	3		159X
1¼"	755 & 1½" 756 F&T Traps	TCBJ-1048	Spring	3		101X
¾"-2"	Series 2000 15#, 30#	TCBJ-1049	Thread	3		1750
¾"-2"	Series 2000 75#, 125#	TCBJ-1050	Thread	3		1751
½" x ¾"	#12	TJBJ-1051	Spring	2	New Cover Req'd	

BARNES & JONES (Traps previously converted with Barnes & Jones Repair Parts)

Size	Barnes & Jones Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"-¾"	159	TCBJ-159	Thread	3		159
½"	1721	TCBJ-1721	Spring	2		1721
½"	1764	TCBJ-1764	Spring	2		1764
½"	1781	TCBJ-1781	Spring	2		1781
½"	1927	TCBJ-1927	Spring	2		1927
¾"	1929	TCBJ-1929	Spring	2		1929
½"	1950	TCBJ-1950	Spring	2		1950
1¼"-2"	1955	TCBJ-1955	Spring	2		1955
½"	1972	TCBJ-1972	Spring	2		1972
¾"	1990	TCBJ-1990	Spring	2		1990
½"	2168	TCBJ-2168	Spring	2		2168
½"	2818	TCBJ-2818	Spring	2		2818
½"-¾"	3146	TCBJ-3146	Spring	2		3146

Tunstall Steam Trap Capsules®

BARNES & JONES (Traps previously converted with Barnes & Jones Repair Parts)

Size	Barnes & Jones Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	3421	TCBJ-3421	Spring	2		3421
½"	3500	TCBJ-3500	Spring	2		3500
¾"	3507	TCBJ-3507	Spring	2		3507
½"	4116	TCBJ-4116	Spring	2		4116
½"	4117	TCBJ-4117	Spring	2		4117
½"	4320	TCBJ-4320	Spring	2		4320
½"-¾"	5000	TCBJ-5000	Spring	2		5000

Class 1 Tunstall Capsule Model "TF" equal to Barnes & Jones Type "A" Cage Unit (Post and Spring)

B&J #	Tunstall Capsule #	B&J #	Tunstall Capsule #	B&J #	Tunstall Capsule #	B&J #	Tunstall Capsule #
159P	TFBJ-159	1998	TFBJ-1998	2114	TFBJ-2114	2211	TFBJ-2211
1721	TFBJ-1721	2000*	TFBJ-2000*	2118	TFBJ-2118	2213	TFBJ-2213
1730	TFBJ-1730	2001*	TFBJ-2001*	2123*	TFBJ-2123*	2214	TFBJ-2214
1733	TFBJ-1733	2003*	TFBJ-2003*	2124*	TFBJ-2124*	2215	TFBJ-2215
1748	TFBJ-1748	2005*	TFBJ-2005*	2132	TFBJ-2132	2217	TFBJ-2217
1760	TFBJ-1760	2007	TFBJ-2007	2134*	TFBJ-2134*	2218	TFBJ-2218
1762*	TFBJ-1762*	2021	TFBJ-2021	2136*	TFBJ-2136*	2220	TFBJ-2220
1764	TFBJ-1764	2022	TFBJ-2022	2147	TFBJ-2147	2226	TFBJ-2226
1767*	TFBJ-1767*	2031*	TFBJ-2031*	2148	TFBJ-2148	2230	TFBJ-2230
1775	TFBJ-1775	2032*	TFBJ-2032*	2149*	TFBJ-2149*	2231	TFBJ-2231
1781	TFBJ-1781	2034	TFBJ-2034	2155	TFBJ-2155	2244*	TFBJ-2244*
1783	TFBJ-1783	2035	TFBJ-2035	2157	TFBJ-2157	2253*	TFBJ-2253*
1785	TFBJ-1785	2043*	TFBJ-2043*	2159	TFBJ-2159	2261*	TFBJ-2261*
1797*	TFBJ-1797*	2045	TFBJ-2045	2163*	TFBJ-2163*	2272*	TFBJ-2272*
1915	TFBJ-1915	2051*	TFBJ-2051*	2164*	TFBJ-2164*	2279	TFBJ-2279
1927*	TFBJ-1927*	2052*	TFBJ-2052*	2166*	TFBJ-2166*	2781	TFBJ-2781
1929	TFBJ-1929	2054	TFBJ-2054	2167	TFBJ-2167	2790	TFBJ-2790
1930*	TFBJ-1930*	2063	TFBJ-2063	2168	TFBJ-2168	2791	TFBJ-2791
1940	TFBJ-1940	2066*	TFBJ-2066*	2171	TFBJ-2171	2805	TFBJ-2805
1950*	TFBJ-1950*	2068*	TFBJ-2068*	2173	TFBJ-2173	2806*	TFBJ-2806*
1955	TFBJ-1955	2074*	TFBJ-2074*	2175	TFBJ-2175	2808	TFBJ-2808
1964*	TFBJ-1964*	2075	TFBJ-2075	2176	TFBJ-2176	2813	TFBJ-2813
1965	TFBJ-1965	2078*	TFBJ-2078*	2177	TFBJ-2177	2815	TFBJ-2815
1966	TFBJ-1966	2080*	TFBJ-2080*	2182	TFBJ-2182	2818*	TFBJ-2818*
1967	TFBJ-1967	2085	TFBJ-2085	2188	TFBJ-2188	2825	TFBJ-2825
1968	TFBJ-1968	2086*	TFBJ-2086*	2189	TFBJ-2189	2826*	TFBJ-2826*
1971*	TFBJ-1971*	2087	TFBJ-2087	2192	TFBJ-2192	2830	TFBJ-2830
1972	TFBJ-1972	2091	TFBJ-2091	2193	TFBJ-2193	2835	TFBJ-2835
1973	TFBJ-1973	2095	TFBJ-2095	2194	TFBJ-2194	2836*	TFBJ-2836*
1974*	TFBJ-1974*	2098	TFBJ-2098	2198	TFBJ-2198	2840	TFBJ-2840
1985	TFBJ-1985	2103	TFBJ-2103	2200	TFBJ-2200	2849*	TFBJ-2849*
1990*	TFBJ-1990*	2104	TFBJ-2104	2203	TFBJ-2203	2850*	TFBJ-2850*
1997	TFBJ-1997	2106	TFBJ-2106	2208	TFBJ-2208	2852*	TFBJ-2852*

*New cover required for first time application

Tunstall Steam Trap Capsules®

Class 1 Tunstall Capsule Model "TF" equal to Barnes & Jones Type "A" Cage Unit (Post and Spring)

B&J #	Tunstall Capsule #	B&J #	Tunstall Capsule #	B&J #	Tunstall Capsule #	B&J #	Tunstall Capsule #
2854	TFBJ-2854	3072	TFBJ-3072	3186	TFBJ-3186	3380	TFBJ-3380
2857	TFBJ-2857	3073	TFBJ-3073	3188*	TFBJ-3188*	3384*	TFBJ-3384*
2863	TFBJ-2863	3083	TFBJ-3083	3196	TFBJ-3196	3387	TFBJ-3387
2864	TFBJ-2864	3084*	TFBJ-3084*	3197*	TFBJ-3197*	3393	TFBJ-3393
2865	TFBJ-2865	3085	TFBJ-3085	3199	TFBJ-3199	3395*	TFBJ-3395*
2866	TFBJ-2866	3087	TFBJ-3087	3206	TFBJ-3206	3396	TFBJ-3396
2879	TFBJ-2879	3097*	TFBJ-3097*	3209*	TFBJ-3209*	3397	TFBJ-3397
2880	TFBJ-2880	3099*	TFBJ-3099*	3217	TFBJ-3217	3398	TFBJ-3398
2881*	TFBJ-2881*	3100	TFBJ-3100	3219*	TFBJ-3219*	3399	TFBJ-3399
2884*	TFBJ-2884*	3103*	TFBJ-3103*	3224*	TFBJ-3224*	3400	TFBJ-3400
2885	TFBJ-2885	3104	TFBJ-3104	3225*	TFBJ-3225*	3401	TFBJ-3401
2896*	TFBJ-2896*	3105	TFBJ-3105	3230*	TFBJ-3230*	3402*	TFBJ-3402*
2901*	TFBJ-2901*	3107*	TFBJ-3107*	3232*	TFBJ-3232*	3406	TFBJ-3406
2907*	TFBJ-2907*	3108*	TFBJ-3108*	3234	TFBJ-3234	3407*	TFBJ-3407*
2911*	TFBJ-2911*	3110	TFBJ-3110	3244	TFBJ-3244	3409*	TFBJ-3409*
2925*	TFBJ-2925*	3111	TFBJ-3111	3246	TFBJ-3246	3410	TFBJ-3410
2926*	TFBJ-2926*	3115*	TFBJ-3115*	3247	TFBJ-3247	3413	TFBJ-3413
2929*	TFBJ-2929*	3116	TFBJ-3116	3251	TFBJ-3251	3414	TFBJ-3414
2931*	TFBJ-2931*	3118*	TFBJ-3118*	3263	TFBJ-3263	3417	TFBJ-3417
2947	TFBJ-2947	3119*	TFBJ-3119*	3266	TFBJ-3266	3419	TFBJ-3419
2948	TFBJ-2948	3125	TFBJ-3125	3268	TFBJ-3268	3420	TFBJ-3420
2953*	TFBJ-2953*	3128	TFBJ-3128	3271	TFBJ-3271	3421*	TFBJ-3421*
2959*	TFBJ-2959*	3133*	TFBJ-3133*	3275*	TFBJ-3275*	3427*	TFBJ-3427*
2961	TFBJ-2961	3141	TFBJ-3141	3282	TFBJ-3282	3429*	TFBJ-3429*
2964	TFBJ-2964	3142	TFBJ-3142	3284	TFBJ-3284	3430*	TFBJ-3430*
2983	TFBJ-2983	3143	TFBJ-3143	3288*	TFBJ-3288*	3431	TFBJ-3431
2987	TFBJ-2987	3145	TFBJ-3145	3297*	TFBJ-3297*	3433	TFBJ-3433
3012*	TFBJ-3012*	3146	TFBJ-3146	3298	TFBJ-3298	3434*	TFBJ-3434*
3015*	TFBJ-3015*	3150	TFBJ-3150	3306	TFBJ-3306	3435*	TFBJ-3435*
3016	TFBJ-3016	3151*	TFBJ-3151*	3311	TFBJ-3311	3436	TFBJ-3436
3019	TFBJ-3019	3152*	TFBJ-3152*	3313*	TFBJ-3313*	3437	TFBJ-3437
3022*	TFBJ-3022*	3153*	TFBJ-3153*	3314	TFBJ-3314	3438	TFBJ-3438
3023	TFBJ-3023	3155	TFBJ-3155	3329	TFBJ-3329	3439	TFBJ-3439
3029	TFBJ-3029	3158	TFBJ-3158	3335	TFBJ-3335	3440*	TFBJ-3440*
3030	TFBJ-3030	3159	TFBJ-3159	3336*	TFBJ-3336*	3441	TFBJ-3441
3034*	TFBJ-3034*	3163*	TFBJ-3163*	3337	TFBJ-3337	3442	TFBJ-3442
3036	TFBJ-3036	3165	TFBJ-3165	3338	TFBJ-3338	3444	TFBJ-3444
3046	TFBJ-3046	3166	TFBJ-3166	3354	TFBJ-3354	3445	TFBJ-3445
3047*	TFBJ-3047*	3167	TFBJ-3167	3357	TFBJ-3357	3446	TFBJ-3446
3048	TFBJ-3048	3168	TFBJ-3168	3358	TFBJ-3358	3447*	TFBJ-3447*
3050*	TFBJ-3050*	3170	TFBJ-3170	3361	TFBJ-3361	3448*	TFBJ-3448*
3053*	TFBJ-3053*	3172	TFBJ-3172	3362	TFBJ-3362	3449*	TFBJ-3449*
3054	TFBJ-3054	3174*	TFBJ-3174*	3368	TFBJ-3368	3460*	TFBJ-3460*
3059*	TFBJ-3059*	3176*	TFBJ-3176*	3375	TFBJ-3375	3461	TFBJ-3461
3066*	TFBJ-3066*	3178	TFBJ-3178	3376	TFBJ-3376	3465*	TFBJ-3465*
3071	TFBJ-3071	3184	TFBJ-3184	3379*	TFBJ-3379*	3466*	TFBJ-3466*

*New cover required for first time application

Tunstall Steam Trap Capsules®

Class 1 Tunstall Capsule Model "TF" equal to Barnes & Jones Type "A" Cage Unit (Post and Spring)

B&J #	Tunstall Capsule #	B&J #	Tunstall Capsule #	B&J #	Tunstall Capsule #	B&J #	Tunstall Capsule #
3467*	TFBJ-3467*	3537	TFBJ-3537	3598*	TFBJ-3598*	4050	TFBJ-4050
3470*	TFBJ-3470*	3538	TFBJ-3538	3632	TFBJ-3632	4051	TFBJ-4051
3471	TFBJ-3471	3539*	TFBJ-3539*	4000*	TFBJ-4000*	4052	TFBJ-4052
3472	TFBJ-3472	3542	TFBJ-3542	4001	TFBJ-4001	4053	TFBJ-4053
3474	TFBJ-3474	3543	TFBJ-3543	4002	TFBJ-4002	4054	TFBJ-4054
3475*	TFBJ-3475*	3545*	TFBJ-3545*	4003	TFBJ-4003	4055*	TFBJ-4055*
3476*	TFBJ-3476*	3546*	TFBJ-3546*	4005	TFBJ-4005	4057	TFBJ-4057
3477	TFBJ-3477	3548	TFBJ-3548	4006	TFBJ-4006	4058*	TFBJ-4058*
3479	TFBJ-3479	3549*	TFBJ-3549*	4008	TFBJ-4008	4059*	TFBJ-4059*
3484	TFBJ-3484	3551	TFBJ-3551	4009*	TFBJ-4009*	4060	TFBJ-4060
3487*	TFBJ-3487*	3552	TFBJ-3552	4010*	TFBJ-4010*	4062	TFBJ-4062
3488	TFBJ-3488	3553	TFBJ-3553	4012*	TFBJ-4012*	4063	TFBJ-4063
3490	TFBJ-3490	3555*	TFBJ-3555*	4014*	TFBJ-4014*	4064	TFBJ-4064
3491	TFBJ-3491	3556*	TFBJ-3556*	4015*	TFBJ-4015*	4065	TFBJ-4065
3493	TFBJ-3493	3559*	TFBJ-3559*	4016	TFBJ-4016	4066*	TFBJ-4066*
3494	TFBJ-3494	3560*	TFBJ-3560*	4017*	TFBJ-4017*	4069	TFBJ-4069
3495	TFBJ-3495	3561	TFBJ-3561	4018*	TFBJ-4018*	4070	TFBJ-4070
3496	TFBJ-3496	3562	TFBJ-3562	4019	TFBJ-4019	4071	TFBJ-4071
3497	TFBJ-3497	3563	TFBJ-3563	4020*	TFBJ-4020*	4072	TFBJ-4072
3499	TFBJ-3499	3565*	TFBJ-3565*	4021	TFBJ-4021	4073	TFBJ-4073
3500	TFBJ-3500	3566*	TFBJ-3566*	4022	TFBJ-4022	4075*	TFBJ-4075*
3501*	TFBJ-3501*	3567*	TFBJ-3567*	4023	TFBJ-4023	4076	TFBJ-4076
3502	TFBJ-3502	3568*	TFBJ-3568*	4024*	TFBJ-4024*	4077	TFBJ-4077
3503*	TFBJ-3503*	3569*	TFBJ-3569*	4025*	TFBJ-4025*	4078	TFBJ-4078
3504	TFBJ-3504	3570	TFBJ-3570	4026	TFBJ-4026	4079	TFBJ-4079
3507	TFBJ-3507	3571*	TFBJ-3571*	4027	TFBJ-4027	4080	TFBJ-4080
3508	TFBJ-3508	3572*	TFBJ-3572*	4028*	TFBJ-4028*	4081	TFBJ-4081
3509	TFBJ-3509	3573*	TFBJ-3573*	4029	TFBJ-4029	4082*	TFBJ-4082*
3510	TFBJ-3510	3574	TFBJ-3574	4030*	TFBJ-4030*	4083	TFBJ-4083
3511	TFBJ-3511	3575*	TFBJ-3575*	4031*	TFBJ-4031*	4084	TFBJ-4084
3515	TFBJ-3515	3576*	TFBJ-3576*	4032*	TFBJ-4032*	4085	TFBJ-4085
3517	TFBJ-3517	3577*	TFBJ-3577*	4033*	TFBJ-4033*	4086	TFBJ-4086
3518*	TFBJ-3518*	3578*	TFBJ-3578*	4034*	TFBJ-4034*	4087*	TFBJ-4087*
3520	TFBJ-3520	3579*	TFBJ-3579*	4036	TFBJ-4036	4088	TFBJ-4088
3523	TFBJ-3523	3580	TFBJ-3580	4037	TFBJ-4037	4089	TFBJ-4089
3524*	TFBJ-3524*	3581*	TFBJ-3581*	4038	TFBJ-4038	4090	TFBJ-4090
3525	TFBJ-3525	3582*	TFBJ-3582*	4039*	TFBJ-4039*	4091	TFBJ-4091
3526*	TFBJ-3526*	3584*	TFBJ-3584*	4040	TFBJ-4040	4093*	TFBJ-4093*
3527*	TFBJ-3527*	3587	TFBJ-3587	4041	TFBJ-4041	4096	TFBJ-4096
3529	TFBJ-3529	3588*	TFBJ-3588*	4042	TFBJ-4042	4097	TFBJ-4097
3530	TFBJ-3530	3590*	TFBJ-3590*	4043*	TFBJ-4043*	4098	TFBJ-4098
3531	TFBJ-3531	3591	TFBJ-3591	4044*	TFBJ-4044*	4100*	TFBJ-4100*
3532	TFBJ-3532	3592*	TFBJ-3592*	4045	TFBJ-4045	4102	TFBJ-4102
3533	TFBJ-3533	3595	TFBJ-3595	4047	TFBJ-4047	4106	TFBJ-4106
3534	TFBJ-3534	3596*	TFBJ-3596*	4048*	TFBJ-4048*	4107	TFBJ-4107
3536	TFBJ-3536	3597*	TFBJ-3597*	4049*	TFBJ-4049*	4109*	TFBJ-4109*

*New cover required for first time application

Tunstall Steam Trap Capsules®

Class 1 Tunstall Capsule Model "TF" equal to Barnes & Jones Type "A" Cage Unit (Post and Spring)

B&J #	Tunstall Capsule #	B&J #	Tunstall Capsule #	B&J #	Tunstall Capsule #	B&J #	Tunstall Capsule #
4111*	TFBJ-4111*	4156	TFBJ-4156	4223	TFBJ-4223	4301	TFBJ-4301
4112	TFBJ-4112	4157*	TFBJ-4157*	4224*	TFBJ-4224*	4302	TFBJ-4302
4113*	TFBJ-4113*	4158	TFBJ-4158	4225	TFBJ-4225	4303	TFBJ-4303
4114	TFBJ-4114	4159	TFBJ-4159	4230*	TFBJ-4230*	4305	TFBJ-4305
4115	TFBJ-4115	4160	TFBJ-4160	4231	TFBJ-4231	4307	TFBJ-4307
4116	TFBJ-4116	4161	TFBJ-4161	4232	TFBJ-4232	4308	TFBJ-4308
4117	TFBJ-4117	4163	TFBJ-4163	4233*	TFBJ-4233*	4311*	TFBJ-4311*
4119*	TFBJ-4119*	4169*	TFBJ-4169*	4235	TFBJ-4235	4314*	TFBJ-4314*
4120	TFBJ-4120	4171	TFBJ-4171	4236	TFBJ-4236	4316	TFBJ-4316
4121	TFBJ-4121	4172*	TFBJ-4172*	4237	TFBJ-4237	4318	TFBJ-4318
4123*	TFBJ-4123*	4173	TFBJ-4173	4238	TFBJ-4238	4319	TFBJ-4319
4124*	TFBJ-4124*	4174	TFBJ-4174	4240	TFBJ-4240	4320*	TFBJ-4320*
4125*	TFBJ-4125*	4180	TFBJ-4180	4241	TFBJ-4241	4321*	TFBJ-4321*
4126	TFBJ-4126	4181	TFBJ-4181	4242	TFBJ-4242	4322*	TFBJ-4322*
4127*	TFBJ-4127*	4182	TFBJ-4182	4244	TFBJ-4244	4323	TFBJ-4323
4128	TFBJ-4128	4186*	TFBJ-4186*	4245*	TFBJ-4245*	4332	TFBJ-4331
4131	TFBJ-4131	4187*	TFBJ-4187*	4246	TFBJ-4246	4337	TFBJ-4337
4132	TFBJ-4132	4189*	TFBJ-4189*	4249	TFBJ-4249	4345	TFBJ-4345
4133*	TFBJ-4133*	4190	TFBJ-4190	4250	TFBJ-4250	4349*	TFBJ-4349*
4134	TFBJ-4134	4191*	TFBJ-4191*	4251	TFBJ-4251	4353	TFBJ-4353
4135	TFBJ-4135	4194	TFBJ-4194	4262*	TFBJ-4262*	4359*	TFBJ-4359*
4136	TFBJ-4136	4197*	TFBJ-4197*	4266*	TFBJ-4266*	4364*	TFBJ-4364*
4137	TFBJ-4137	4198	TFBJ-4198	4267*	TFBJ-4267*	4365	TFBJ-4365
4138*	TFBJ-4138*	4199*	TFBJ-4199*	4270	TFBJ-4270	4380	TFBJ-4380
4139	TFBJ-4139	4200	TFBJ-4200	4277	TFBJ-4277	4382*	TFBJ-4382*
4140	TFBJ-4140	4202*	TFBJ-4202*	4278*	TFBJ-4278*	4385*	TFBJ-4385*
4141	TFBJ-4141	4203*	TFBJ-4203*	4279*	TFBJ-4279*	4388	TFBJ-4388
4142*	TFBJ-4142*	4204	TFBJ-4204	4280*	TFBJ-4280*	4396	TFBJ-4396
4143*	TFBJ-4143*	4205	TFBJ-4205	4281	TFBJ-4281	4409	TFBJ-4409
4144	TFBJ-4144	4206	TFBJ-4206	4282*	TFBJ-4282*	4412	TFBJ-4412
4145*	TFBJ-4145*	4207	TFBJ-4207	4284*	TFBJ-4284*	4414	TFBJ-4414
4146	TFBJ-4146	4208	TFBJ-4208	4285	TFBJ-4285	4416	TFBJ-4416
4147*	TFBJ-4147*	4209*	TFBJ-4209*	4286*	TFBJ-4286*	4999	TFBJ-4999
4148*	TFBJ-4148*	4210	TFBJ-4210	4290	TFBJ-4290	5000*	TFBJ-5000*
4149	TFBJ-4149	4216*	TFBJ-4216*	4292*	TFBJ-4292*	5001	TFBJ-5001
4150	TFBJ-4150	4218	TFBJ-4218	4293	TFBJ-4293	5006	TFBJ-5006
4151	TFBJ-4151	4219*	TFBJ-4219*	4294	TFBJ-4294		
4152	TFBJ-4152	4220*	TFBJ-4220*	4295	TFBJ-4295		
4153	TFBJ-4153	4221	TFBJ-4221	4298	TFBJ-4298		
4154*	TFBJ-4154*	4222	TFBJ-4222	4300*	TFBJ-4300*		

New covers can be provided as required.

*New cover required for first time application

Tunstall Steam Trap Capsules®

BESTOBEL

Size	Bestobel Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	GMR3 (Made in U.K.)	TFBE-3201	Thread	1		4425

BISHOP, BABCOCK & BECKER

Size	Bishop, Babcock & Becker Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	3	TCBB-1101	Thread	2		3159
¾"	3	TCBB-1102	Thread	2		3019
½"	4	TCBB-1103	Thread	2		4014
½"	6	TCBB-1104	Thread	2		4232
½"	6	TCBB-1105	Thread	2		4220
½"	6G	TCBB-1106	Thread	2		1762
¾"	6	TCBB-1107	Thread	2		1733
½"	8	TCBB-1108	Thread	2		3409
½"	8 (New Cap)	TCBB-1109	Spring	2		3225
½"	8A	TCBB-1110	Thread	2		4147
½"	BB & B - VACU	TCBB-1111	Thread	2		2034
½"x¾"	BB - WW502	TCBB-1112	Thread	2		4244
½"	G	TCBB-1113	Thread	2		2035
½"	G	TCBB-1114	Thread	2		3306
	ADAPTO - TRAP	TCBB-1115	Thread	2		2034
½"	B & B	TCBB-1116	Thread	2		2173
½"	BBB	TCBB-1117	Thread	2		4081
½"	VACU	TCBB-1118	Thread	2		2218
½"	BBB - RETURN	TCBB-1119	Thread	2		2948
½"	BBB - VACU	TCBB-1120	Thread	2		2034
½"	BB - MULTI	TCBB-1121	Thread	2		2106
½"	B & B	TCBB-1122	Thread	2		3085
½"	B & B VACU	TCBB-1123	Thread	2		3438
½"	G - VACU	TCBB-1124	Thread	2		2791
¾"	B & B	TCBB-1125	Thread	2		4112
¾"	B & B	TCBB-1126	Thread	2		2032
¾"	BBB - VACU	TCBB-1127	Thread	2		2217
¾"	BB-MULTI	TCBB-1128	Thread	2		2198
¾"	6	TCBB-1129	Thread	2		2043
1"	B & B	TCBB-1130	Thread	2		1785
1"	B & B	TCBB-1131	Thread	2		2052
¾"	G-VACU	TCBB-1132	Thread	2		2008
¾"	G-VACU	TCBB-1133	Thread	2		2192
¾"	BBB - VACU	TCBB-1134	Thread	2		2041
1"	G-VACU	TCBB-1135	Thread	2		2205
1"	6	TCBB-1136	Thread	2		4296

Tunstall Steam Trap Capsules®

BRAUKMANN

Size	Braukmann Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	KS510 Integral Seat (25 psi)	TCBK-2601	Spring	2		4409
½"	KS510 Removable Seat (25 psi)	TCBK-2602	Thread	2		4409
½"	KS510 Integral Seat (65 psi)	TCBK-2603	Spring	2		4410
½"	KS510 Removable Seat (65 psi)	TCBK-2604	Thread	2		4410
½"	KS510 Integral Seat (125 psi)	TCBK-2605	Spring	3		4411
½"	KS510 Removable Seat (125 psi)	TCBK-2606	Thread	3		4411

CASHIN/THERMOFLEX

Size	Cashin / Thermoflex Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	1	TCCT-1201	Thread	2		2001
¾"	1	TCCT-1202	Thread	2		2866
1"	1	TCCT-1203	Thread	2		2003
½"	2	TCCT-1204	Thread	2		2001
¾"	2	TCCT-1205	Thread	2		2001
½"	3	TCCT-1206	Thread	2		2865
¾"	3	TCCT-1207	Thread	2		2865
¾", 1", 1¼"	4-4M	TCCT-1208	Thread	2		3168
¾", 1", 1¼"	4-4M	TCCT-1209	Thread	2		2866
½"	12 (Removable Seat)	TCCT-1210	Spring	2		3421
½"	12 (Integral Seat)	TCCT-1211	Spring	2		2896
½"	100A	TCCT-1212	Thread	2		4331
¾"-1"	100A	TCCT-1213	Thread	2		4327
¾"	120	TCCT-1214	Thread	2		4034
½"	121	TCCT-1215	Thread	2		4230
¾"	122	TCCT-1216	Thread	2		3206
½"	A200, B200, B200M	TCCT-1217	Thread	2		3421
½"	B200, C200	TCCT-1218	Thread	2		4230
½"	V200	TCCT-1219	Thread	2		4345
¾"	V400	TCCT-1220	Thread	2		4345
¾"	V700	TCCT-1221	Thread	2		4345
½", ¾"	W200	TCCT-1222	Thread	2		4223
¾"	W400	TCCT-1223	Thread	2		4223
¾"	A400	TCCT-1224	Spring	2		4015
	B400, B400M	TCCT-1225	Thread	2		4141
¾"	B700, B700M	TCCT-1226	Thread	2		4351
¾"	B700	TCCT-1227	Thread	2		4316
¾", 1", 1¼"	251, 352, 353, 251M, 252M, 353M	TCCT-1228	Thread	3		3597
1"	100	TCCT-1229	Thread	2		4279
1¼"	100	TCCT-1230	Thread	2		4280

CLARK MFG. CO.

Size	Clark Mfg. Co. Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	Series A	TCCL-3301	Thread	4		NA

Tunstall Steam Trap Capsules®

DUNHAM-BUSH/MEPCO

Size	Dunham-Bush / Mepco Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	1 (1A, 1B, 1C, 1D, 1E)	TCDB-1301	As Req'd	2		1950
½"	2, V2, 3, V3 (Cover dia. 3-7/8" Int. Seat 3/8")	TCDB-1302	As Req'd	2		1964
¾"	2, 2E	TCDB-1303	As Req'd	2		1990
¾"	2A, 2B, 2C, 2D, 2F	TCDB-1304	As Req'd	2		1990
½"	Midget # 1 (1/4" Orifice)	TCDB-1305	As Req'd	2		3133
¾"	2, 2C, 3 (Cover dia. 3-7/8" Int. Seat 3/8")	TCDB-1306	As Req'd	2		1964
¾"	3, V2, V3 (Cover dia. 3-7/8" Int. Seat 5/8")	TCDB-1307	As Req'd	2		2163
½"	3A (3/8" orifice)	TCDB-1308	As Req'd	2		1990
¾"	3A (5/8" orifice)	TCDB-1309	As Req'd	2		2163
¾"	3SB	TCDB-1310	As Req'd	2		4148
¾"	4(Bolted cover)	TCDB-1311	As Req'd	3		3035
¾"	4A	TCDB-1312	As Req'd	3		2208
¾"	6	TCDB-1313	As Req'd	2		4047
¾"	2B, 2E, V3B (Cover dia. 3" Int. Seat 5/8")	TCDB-1314	As Req'd	2		2163
1"	5A	TCDB-1315	As Req'd	3		4051
¾"	Series 40 F&T 3/4", 1", 1¼	TCDB-1316	As Req'd	3		4318
¾"	3C - 3/4",1"	TCDB-1317	As Req'd	2		2163
½"	1E Removable Seat	TCDB-1318	As Req'd	2		4412
¾"	2E Removable Seat	TCDB-1319	As Req'd	2		4414
½"	TH1A	TCDB-1320	As Req'd	3		4093
¾"	TH2A	TCDB-1321	As Req'd	3		4242
½" - 1¼"	Series 30 F&T	TCDB-1322	As Req'd	3		1950
1½" - 2"	Series 30 F&T	TCDB-1323	As Req'd	3		2163
¾" - 2"	Series 40 Low Pressure F&T	TCDB-1324	As Req'd	3		4318
¾" - 2"	Series 40 Medium Pressure F&T	TCDB-1325	As Req'd	3		4335
¾" x ½"	1E VST (¾" M x ½" F)	TCDB-1326	Thread	2		

ERWEL

Size	Erwel Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	R30	TCER-2701	Thread	2		3146
½"	R30 Seat In	TCER-2702	Spring	2		4117
¾"	R30	TCER-2703	Thread	2		3146
¾"	R30 Seat In	TCER-2704	Spring	2		4116
1"	R30	TCER-2705	Thread	3		3071
½"	R30 Vertical	TCER-2706	Thread	2		3146
¾"	R30 Vertical	TCER-2707	Thread	2		3146
½"	R75, R125	TCER-2708	Thread	2		4418
¾"	R75, R125	TCER-2709	Thread	2		4318
1"	R125	TCER-2710	Thread	3		4363
½"	R75 Vertical	TCER-2711	Thread	2		4362
¾"	F15 F&T	TCER-2712	Thread	3		4319
1"	F15 F&T	TCER-2713	Thread	3		4319

Tunstall Steam Trap Capsules®

HOFFMAN

Size	Hoffman Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	8 Intergral Seat	TCHF-1401	Spring	2		2168
½"	8(Class I) Removable Seat	TCHF-1402	Thread	2		3494
½"	8A	TCHF-1403	Spring	2		2148
½"	8H	TCHF-1404	Thread	2		4149
½"	8D (Integral Seat)	TCHF-1405	Spring	2		4037
½"	8D(Removable Seat)	TCHF-1406	Thread	2		2148
½"	17A(Integral Seat) Most Common	TCHF-1407	Spring	2		3066
½"	17A(Removable Seat)	TCHF-1408	Thread	2		2836
½"	17C	TCHF-1409	Thread	2		3500
½"	17D	TCHF-1410	Thread	2		3500
½"	18-18C	TCHF-1411	Spring	2		2211
½"	18A	TCHF-1412	Spring	2		2098
½"	20	TCHF-1413	Thread	2		3542
¾"	8C	TCHF-1414	Thread	2		3507
¾"	9(Integral Seat) Most Common	TCHF-1415	Spring	2		2167
¾"	9(Removable Seat)	TCHF-1416	Thread	2		3494
¾"	9A(Removable Seat)9C, 9D	TCHF-1417	Thread	2		2835
All	53-58 F&T traps	TCHF-1418	Thread	3		4396
All	542-548 F&T traps	TCHF-1419	Thread	3		4397
All	FT015H F&T traps	TCHF-1420	Thread	3		4396

ILLINOIS

Size	Illinois Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	1G on Cover	TCIL-1501	Thread	2		2818
½"	1G on Body	TCIL-1502	Spring	2		2819
½"	1 Outboard, 1T	TCIL-1503	Spring	2	New Cover	1930
½"	2G	TCIL-1504	Thread	2		2175
½"	2 Outboard, 2T	TCIL-1505	Spring	2	New Cover	2959
¾"	2A Outboard-L,2T	TCIL-1506	Spring	2	New Cover	2959
¾"	3G-L	TCIL-1507	Thread	2		2947
¾"	3 Outboard-L	TCIL-1508	Spring	2	New Cover	3084
¾"	4G	TCIL-1509	Thread	2		3165
1"	5G	TCIL-1510	Thread	2		4175
¾"-2"	6G, 7G, 8G, 9G & 10G F&T	TCIL-1511	Thread	3		2818

MARSH

Size	Marsh Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	1N	TCMA-1601	Thread	2		4416
½"	1	TCMA-1602	Thread	2		1927
½"	2	TCMA-1603	Thread	2		1971
½"	½" & ¾" 2-7 & ¾" 2	TCMA-1604	Thread	2		2086
½"	1 REFLUX	TCMA-1605	Thread	2		2074
¾"	1 REFLUX	TCMA-1606	Thread	2		2806

Tunstall Steam Trap Capsules®

MARSH (CONT.)

Size	Marsh Model	Tunstall Capsule #	Type	Class	Comments	B&J #
¾"	2-4	TCMA-1607	Thread	2		3053
¾"	12(F&T)	TCMA-1608	Thread	3		1927
1¼"	8(F&T)	TCMA-1609	Thread	3		1927
¾"	17(F&T)	TCMA-1610	Thread	3		4359
1½"	14(F&T)	TCMA-1611	Thread	3		3549
½"	1N (with Seat In)	TCMA-1612	Spring	2		NA

McALEAR

Size	McAlear Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	10	TCMC-1701	Thread	2		2253
½"	20	TCMC-1702	Thread	2		2244
½"	30	TCMC-1703	Thread	2		3379
½"	24	TCMC-1704	Thread	2		4225
½"	Outboard (Cover dia. 2-3/8")	TCMC-1705	Thread	2		3313

MILWAUKEE (MILVACO)

Size	Milwaukee (Milvaco) Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	1 Outboard	TCMI-1801	Thread	2		2261
½"	25-2	TCMI-1802	Thread	2		3539
½"	25-BE	TCMI-1803	Thread	2		4083
½"	H-100	TCMI-1804	Spring	2		2164
½"	H-100-6	TCMI-1805	Spring	2		3143
½"	H350	TCMI-1806	Spring	2		3047
½"	H350-6	TCMI-1807	Thread	2		3073
½"	V01-6 Outboard	TCMI-1808	Thread	2		3219
½"	V0-2 Outboard	TCMI-1809	Spring	2		3475
½"	Outboard (Cover dia. 2-3/16")	TCMI-1810	Thread	2	New Cover Req'd	2953
¾"	13-16 & 13-10, F&T	TCMI-1811	Thread	3		3153
¾"	H100-6	TCMI-1812	Thread	2		3143
¾"	H350	TCMI-1813	Spring	2		3143
¾"	H400	TCMI-1814	Thread	2		3152
¾"	H400-6	TCMI-1815	Thread	2		3263
¾"	H750	TCMI-1816	Thread	2		3118
¾"	H750-6	TCMI-1817	Thread	2		3499

MONASH-YOUNKER

Size	Monash-Younker Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	30	TCMY-1901	Thread	2		4294
½"-¾"	35,35B Inboard, 34(Most Common)	TCMY-1902	Thread	2		2080
½"	35 Outboard	TCMY-1903	Thread	2		2901
½"	36B	TCMY-1904	Thread	2		2188
½"	36-BX	TCMY-1905	Thread	2		3508
½"	Type C-Radifier #10	TCMY-1906	Thread	2		3108

Tunstall Steam Trap Capsules®

MONASH-YOUNKER (CONT.)

Size	Monash-Younker Model	Tunstall Capsule #	Type	Class	Comments	B&J #
¾"	36-BX	TCMY-1907	Thread	2		2193
¾"	38	TCMY-1908	Thread	2		3199
½"	6B	TCMY-1909	Thread	2		4289
¾"	48	TCMY-1910	Thread	2		NA

NAFCO

Size	Nafco Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	1	TCNF-2001	Thread	2		3141
¾"	4-6	TCNF-2002	Thread	2		3142
¾"	¾" & 1" 6	TCNF-2003	Thread	2		3537

NATIONAL PUMP-AMERICAN STEAM

Size	National Pump - American Steam Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½" - ¾"	2N (Removable Seat)	TCNP-2801	Drop-In	2		5001
½" - ¾"	2N (Integral Seat)	TCNP-2802	Drop-In	2		5006
½" Vert.	2NC	TCNP-2803	Drop-In	2		5005
¾" - 2"	Type A F&T Traps	TCNP-2804	Thread	3		4318

NICHOLSON

Size	Nicholson Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½" - ¾"	2A	TCNI-2101	Thread	2		3561
½" - ¾"	4A	TCNI-2102	Thread	2		3563
½" - ¾"	N-125	TCNI-2103	Thread	3		4253
½" - ¾"	N-200	TCNI-2104	Thread	3		3564
½" - ¾"	N-200L	TCNI-2105	Thread	2		3560
½" - ¾"	N-300	TCNI-2106	Thread	3		4162
½" - ¾"	N-300L	TCNI-2107	Thread	3		4155
¾"	B-41	TCNI-2108	Spring	4		4170
1¼"	C-61	TCNI-2109	Thread	4		NA
¾"	A, AU, AHV-41	TCNI-2110	Thread	3		4367
½"	A, AU, AHV-31	TCNI-2111	Thread	4		4367
¾"	AHC-41	TCNI-2112	Thread	4	High Capacity	NA

SARCO

Size	Sarco Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	E(Integral or Removable Seat)Seat In	TCSA-2201	Spring	2	D.D.	4114
½"	E(Removable Seat)Seat Out	TCSA-2202	Thread	2		3128
½"	H & TH25, TH125	TCSA-2203	Thread	2		4117
½"	H(Removable Seat)Seat Out	TCSA-2204	Thread	2		3146
½"	S65-L.P.	TCSA-2205	Thread	2		4008
½"	Midget	TCSA-2206	Thread	2		4117

Tunstall Steam Trap Capsules®

SARCO (CONT.)

Size	Sarco Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	Type D	TCSA-2208	Thread	2		3467
½"	E Old Style	TCSA-2209	Spring	2		1940
½"	H Old Style	TCSA-2210	Thread	2		3246
½"	S65	TCSA-2211	Thread	3		4008
½"	S75	TCSA-2212	Thread	3		4057
¾"	B-E	TCSA-2213	Thread	2		4089
¾"	E(Integral or Removable Seat)Seat In	TCSA-2214	Spring	2		4115
¾"	E(Removable Seat)Seat Out	TCSA-2215	Thread	2		3128
¾"	FTL-00 F&T	TCSA-2216	Thread	3		3496
¾"	H & TH25, TH125	TCSA-2217	Thread	2		4116
¾"	H(Removable Seat)Seat Out	TCSA-2218	Thread	2		3146
¾"	H-I F&T	TCSA-2219	Thread	2		3493
¾"	S-65, N100	TCSA-2220	Thread	3		4285
½" - ¾"	S-65, N100	TCSA-2221	Thread	3		4383
½" - ¾"	H (Integral Seat)	TCSA-2222	Spring	2	Integral Seat	4236
½" or ¾"	T25	TCSA-2223	Drop-In	2		4999
1"	#1	TCSA-2224	Thread	3		4281
1"	E	TCSA-2225	Thread	3		3072
1"	H	TCSA-2226	Thread	3		3071
1¼"	9-125	TCSA-2227	Thread	3		4444
1¼"	9-225	TCSA-2228	Thread	3		4444
¾"-2"	FTL F&T All Sizes	TCSA-2229	Thread	3		3496
¾"-2"	FT-15 F&T All Sizes	TCSA-2230	Thread	3		4319
½"	½" & ¾" TB25, TA125	TCSA-2231	Drop-In	2		5000
½"	½" & ¾" H Vertical & E Vertical	TCSA-2232	Thread	2		3146
All Sizes	FT1, FT14, FTB	TCSA-2233	Thread	3		1751
¾"	Sarco (PAT Oct 21 1913 on side)	TCSA-2234	Thread	3		NA
½"	BPT-TVA	TCSA-2235	Thread	3		NA
½" & ¾"	9-125	TCSA-2236	Thread	3		4370
1"	9-125	TCSA-2237	Thread	3		4444
½" & ¾"	E&H (with Seat In)	TCSA-2238	Spring	2		4114
	FT10 All Sizes	TCSA-UK10	Thread	3		NA
	FT14 All Sizes	TCSA-UK14	Thread	3		NA

STERLING

Size	Sterling Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	5 Outboard	TCST-2301	Thread	2		2929
½"	7	TCST-2302	Thread	2		3471
½"	421	TCST-2303	Thread	2		3533
½"	434, 435, 6A36	TCST-2304	Spring	2		3059
½"	7-50, 7-50A, 7-70L, 7-70R, 7-70S	TCST-2305	Spring	2		3472
¾"	7-52, 7-53, 7-53A, 7-73S	TCST-2306	Spring	2		3472
½"	M7-50A	TCST-2307	Spring	2		3472
¾"	M7-53A	TCST-2308	Spring	2		3472

Tunstall Steam Trap Capsules®

STERLING (CONT.)

Size	Sterling Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	T Ser. 71-44 adj. outlet stwy	TCST-2309	Thread	2		3471
½"	7-40 & 7-80 Vertical	TCST-2310	Spring	2		4295
¾"	6	TCST-2311	Spring	2		3188
1"	74C F&T	TCST-2312	Spring	3		3472
1¼"	75C F&T	TCST-2313	Spring	3		3472
1½"	78D F&T	TCST-2314	Spring	3		3472
2"	80B F&T	TCST-2315	Spring	3		3472
¾"	69B F&T	TCST-2316	Thread	3		NA

TRANE

Size	Trane Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	8 Thermetal	TCTR-2401	Spring	2		2161
½"	B-1 (Removable Bellows Integral Seat)	TCTR-2402	Spring	2		2854
½"	B-1 (Integral Bellows Integral Seat)	TCTR-2403	Spring	2		4320
½"	B-1 Vertical (Integral Seat)	TCTR-2404	Spring	2		4221
½"	B-2 (Removable Bellows Integral Seat)	TCTR-2405	Spring	2		1965
½"	B-2 (Integral Bellows Integral Seat)	TCTR-2406	Spring	2		4321
½"	B-1 (Integral Bellows Removable Seat)	TCTR-2407	Thread	2		4270
½"	B-2 (Integral Bellows Removable Seat)	TCTR-2408	Thread	2		3444
½"	C	TCTR-2409	Spring	2		1965
½"	W-1 & S-1 F&T	TCTR-2410	Spring	3		3511
¾"	B-3 (Removable Bellows Integral Seat)	TCTR-2411	Spring	2		1966
¾"	B-3 (Integral Bellows Integral Seat)	TCTR-2412	Spring	2		4322
¾"	S-3	TCTR-2413	Spring	2		4106
1"	B-4 (Removable Bellows Integral Seat)	TCTR-2414	Spring	3		3580
1"	B-4 (Integral Bellows Integral Seat)	TCTR-2415	Spring	3		4323
	All Ser. F&T (All Sizes)	TCTR-2416	Thread	3		3354
¾"	B-3 (Removable Seat)	TCTR-2417	Thread	2		3442
1"	B-4 (Removable Seat)	TCTR-2418	Thread	2		
All	All Series F&T (Threaded Style)	TCTR-2419	Thread	3		

TUNSTALL

Size	Tunstall Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½", ¾"	Series EC (½", ¾")	TFTA-2901	Thread	1		NA
½", ¾"	TA-½-A, TA-¾-A Angle & Straight	TCTA-2901	Thread	2		NA
½", ¾"	TA-½-A, TA-¾-A Angle & Straight	TCTA-2902	Spring	2	Sam Brown	NA
¾"-2"	TA-FT F&T Traps All Sizes	TCTA-2903	Thread	3		NA
1"	TA-1-A	TCTA-2904	Thread	2		NA
¾"-2"	TA-FTSW Straight Way F&T Traps	TCTA-2905	Thread	3		NA
¾" & 2"	TA-FT 125 psi	TCTA-2906	Thread	3		NA

Tunstall Steam Trap Capsules®

WARREN WEBSTER

Size	Warren Webster Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½"	02H	TCWW-2501	Thread	2		1972
½"	22H5, 23H5	TCWW-2502	Thread	3		1797
½"	412H	TCWW-2503	Thread	2		1998
½"	422	TCWW-2504	Thread	2		2066
½"	502	TCWW-2505	Thread	2		1972
½"	502V-1, O2V-1	TCWW-2506	Thread	2		1972
½"	512	TCWW-2507	Thread	2		1998
½"	522	TCWW-2508	Thread	2		1985
½"	522HB	TCWW-2509	Thread	2		1985
¾"	523	TCWW-2510	Thread	2		1985
1"	524	TCWW-2511	Thread	3		1985
½"	702	TCWW-2512	Thread	2		1972
½"	702V, 02V	TCWW-2513	Thread	2		4157
½"	702V-1	TCWW-2514	Thread	2		1972
½"	712, 712HB, 723A, 724AH	TCWW-2515	Thread	2		1764
½"	722, 22H7	TCWW-2516	Thread	2		1997
½"	902H	TCWW-2517	Thread	2		4172
½"	902V-1	TCWW-2518	Thread	2		1972
¾"	00026T F&T	TCWW-2519	Thread	3		3434
¾"	513	TCWW-2520	Thread	2		1998
¾"	513A	TCWW-2521	Thread	2		1972
¾"	533	TCWW-2522	Thread	2		1982
¾"	713HB	TCWW-2523	Thread	2		3155
¾"	713A	TCWW-2524	Thread	2		1972
¾"	723HB	TCWW-2525	Thread	2		3150
¾"	733	TCWW-2526	Thread	2		1991
¾"	913H	TCWW-2527	Thread	2		1972
1"	0026T F&T	TCWW-2528	Thread	3		3479
1"	524AH	TCWW-2529	Thread	3		4344
1"	534	TCWW-2530	Thread	3		1982
1"	544	TCWW-2531	Thread	3		3547
1"	724HB	TCWW-2532	Thread	3		4122
1¼"	745	TCWW-2533	Thread	3		3058
1¼"	026 TD-1-5	TCWW-2534	Thread	3		4278
1¼"	0026T F&T	TCWW-2535	Thread	3		4006
1¼"	026 F&T	TCWW-2536	Thread	3		3046
1¼"	126T F&T	TCWW-2537	Thread	3		4032
1½"	1½" & 2" Series 27 F&T	TCWW-2538	Thread	3		4301
1"	744	TCWW-2539	Thread	3		2245
1"	734	TCWW-2540	Thread	3		3191
1"	44H5	TCWW-2541	Thread	3		2053
1"	02A12	TCWW-2542	Drop-In	3		NA
1"	784-2	TCWW-2543	Thread	3		4344

Tunstall Steam Trap Capsules®

WARREN WEBSTER (CONT.)

Size	Warren Webster Model	Tunstall Capsule #	Type	Class	Comments	B&J #
1¼"	545	TCWW-2544	Thread	3		2054
¾", 1", 1¼"	Series 27 F&T	TCWW-2545	Thread	10		NA
	781-1, 781-3, 782-2, 782-3, 783-2, 783-3, 784-2, 784-3	TCWW-2546	Thread	3		4324
1"	34H5	TCWW-2547	Thread	3		NA

YARWAY

Size	Yarway Model	Tunstall Capsule #	Type	Class	Comments	B&J #
½", ¾"	1/2" 50-2 and 3/4" 50-3	TCYR-3701	Spring	3		3834

Capsule Information

Class 1: Two plate stainless steel bellows, low pressure applications, Vac. to 45 psi
Class 2: Ten plate stainless steel bellows, Vac. to 125 psi, extended life for low pressure applications
Class 3: Ten plate stainless steel bellows, Vac. to 125 psi, float and thermostatic air vent or custom capsule
Class 4: Ten plate stainless steel bellows, Vac. to 125 psi, custom capsule
Class 10: Ten plate stainless steel bellows, Vac. to 125 psi, modulating orifice capsule

Warranty: All Tunstall Capsules are under warranty for a period of 12 months from date of purchase against faulty workmanship or defective material under normal usage and service. Under the warranty we will replace any product or part F.O.B. our factory when goods have been returned prepaid to us, and which upon our examination shall disclose to have been defective. The company shall not be held liable for consequential damage of any kind and no other claims will be met. All goods repaired under warranty will be shipped back to customer transportation collect.

Products: Tunstall Corporation reserves the right to change the product's design, composition and/or specifications without notice.

Tunstall Steam Trap Capsules®

Quality Engineering

Typical Specification

Thermostatic steam trap repair units shall be ***Tunstall Steam Trap Capsule®*** (1-800-423-5578) or approved equal. Capsules to be rated for Vac to 125 psig working pressure. Due to the extended life of high pressure bellows units on low pressure applications, only high pressure bellows units will be acceptable.

Capsule to be made entirely of corrosion resistant stainless steel with TIG welded construction. The actuator shall be a ten plate stainless steel bellows, with heat treated hardened ball bearing close off mechanism. Bellows shall be entirely enclosed in a protective stainless steel capsule to prevent damage from water hammer and debris build-up.

The replacement capsule shall include integral welded stainless steel seat able to fit directly into the condensate portion of the steam trap body. Diaphragm, Nozzle, Orifice, Venturi, Quick Fix, Wafer, Nugget or low pressure units are not acceptable.

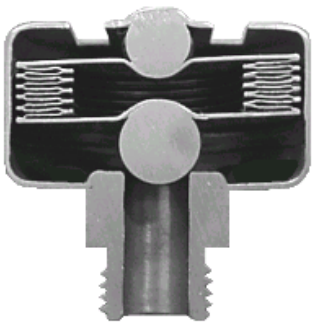
The replacement Tunstall unit must be of universal design, able to retrofit the existing thermostatic steam traps.

New covers may be necessary and shall be provided as required.

Typical Examples

TF (Class 1) Post & Spring Style

TC (Class 2) Post & Spring Style



TC (Class 2) Thread Style Cut Away
Available in Class 1 & Class 2

Top View

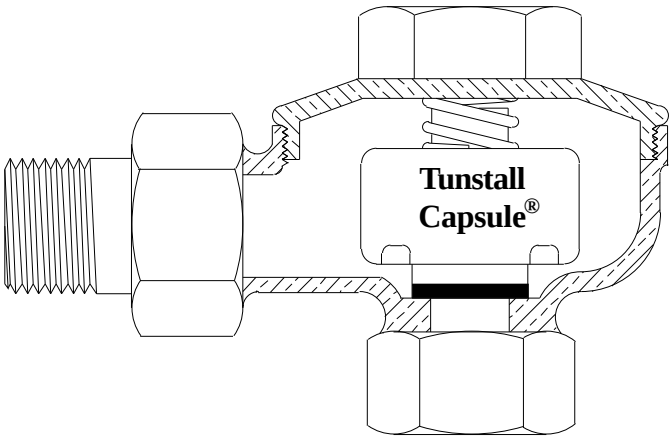
TC Tool

Tunstall Steam Trap Capsules®

Quality Engineering

Typical Spring Type

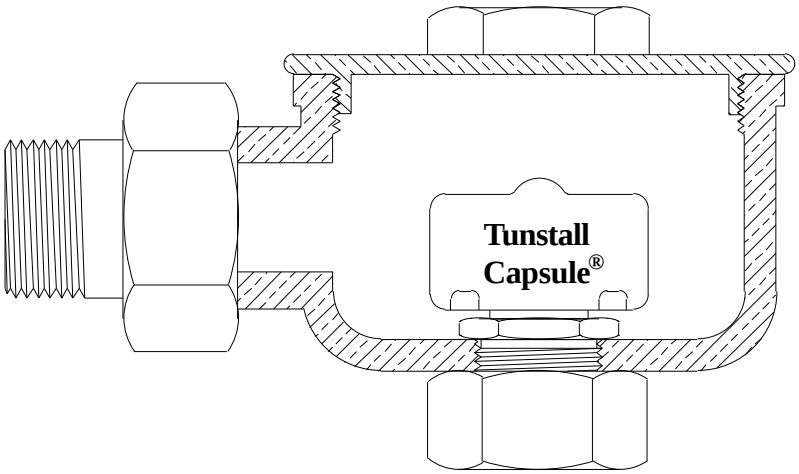
- TCBJ-1001
- Typical for Barnes & Jones Thermostatic Traps
- Drop-In Assembly
- Always in stock for volume purchases
- We retrofit all original Barnes & Jones Traps



Barnes & Jones 122A Illustrated

Typical Thread Type

- TCWW-2515
- Typical for Warren Webster Traps
- Designed for Vari-Vac systems or high pressure
- Always in stock for volume purchases
- We retrofit original Warren Webster Traps



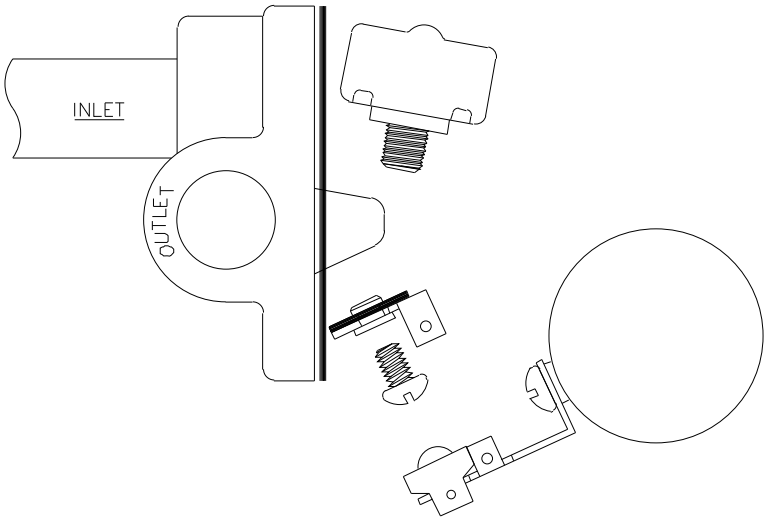
Warren Webster 712 Illustrated

Tunstall F&T Face Plates & Repair Kits

Quality Engineering

Typical F&T Repair Kit

Barnes & Jones 41T Illustrated
Tunstall Repair Kit #1FT-BJ-15



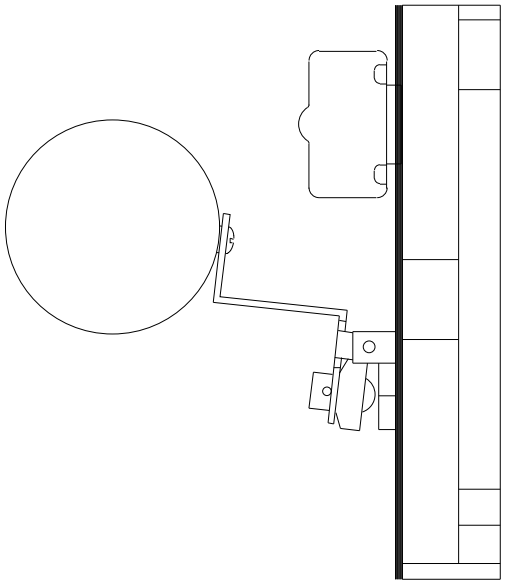
Features:

- Tunstall Stainless Steel Air Vent
- Stainless Steel Seat
- All Stainless Steel Float & Valve Assembly
- Body Gasket

Note: See Tunstall Bulletin #FTR-599 for a complete list of repair kits

Typical F&T Face Plate Kit

Sarco 3/4" FT-15 (Illustrated)
Tunstall Repair Kit #1FP-SA-15



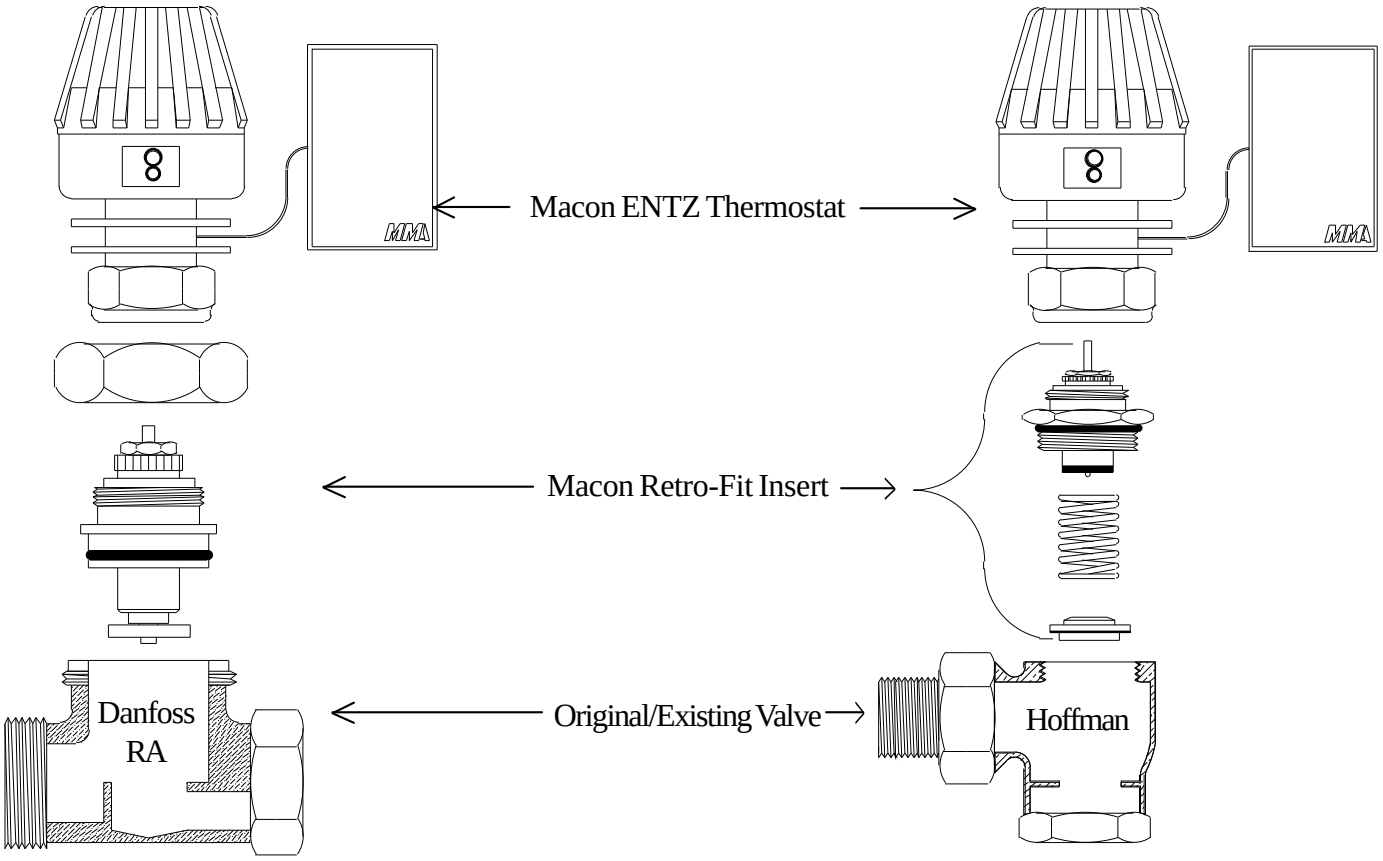
Features:

- Tunstall Stainless Steel Air Vent
- Stainless Steel Seat
- All Stainless Steel Float & Valve Assembly
- Body Gasket
- Face Plate with above components Installed for quick change

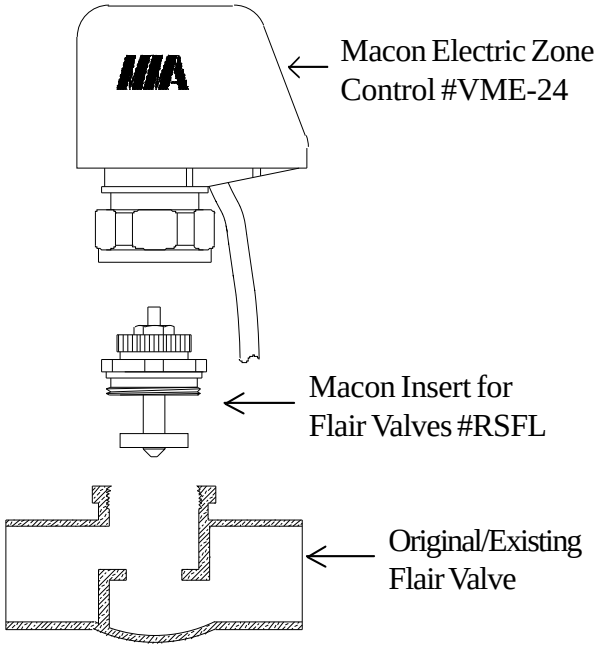
Note: See Tunstall Bulletin #FTR-599 for a complete list of repair kits

MACON THERMOSTATIC CONVERSION KITS

Upgrade your existing manual and thermostatic valves to the Macon standard of quality



Macon Insert #RSDNF



Macon Conversion Kits for Manual Valves

- Barnes & Jones 88, Series F&K
- Dunham-Bush 740A
- Hoffman 180 (Illustrated)
- Illinois Valve Co. 65-65 A
- Sarco (All)
- Warren Webster (All)

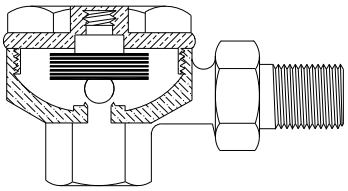
Macon Conversion Kits for Thermostatic Valves

- Ammark
- Armstrong
- Bell & Gossett
- Braukmann 100 & 110 Series
- Danfoss RA Series (Illustrated), RAV, RA2000
- Drayton
- Flair (Illustrated)
- Honeywell
- Oventrop
- Sparco
- Taco
- Tour & Andersson

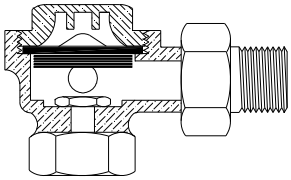
Consult Factory for Other Applications

Tunstall Steam Trap Capsules®

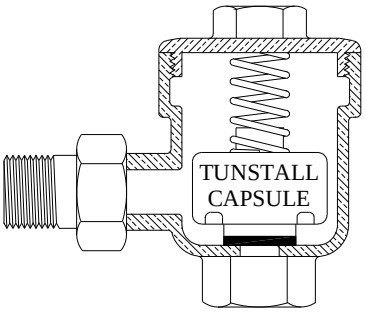
100% Stainless Steel



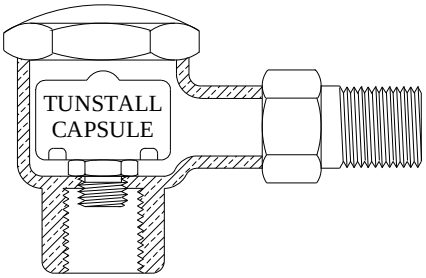
Dunham-Bush #1E
TCDB-1301



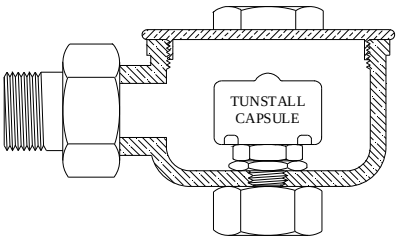
Sarco TB25
TCSA-2231



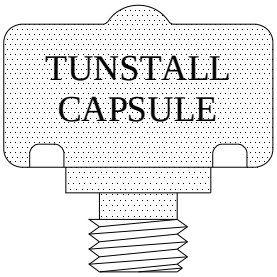
Trane B1
TCTR-2402



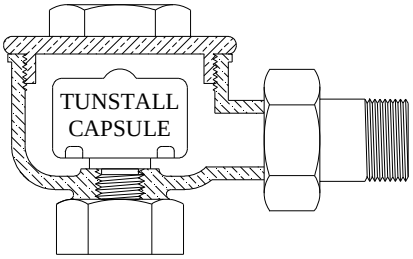
Sarco H
TCSA-2203



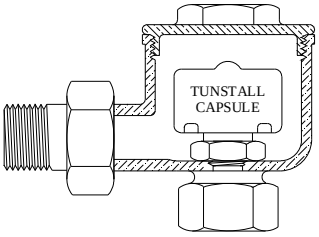
Warren Webster 512
TCWW-2507



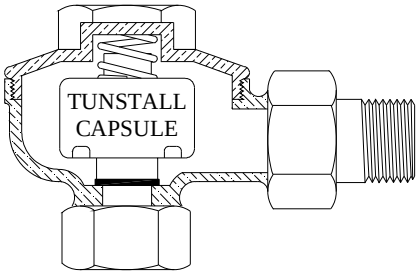
Sarco FT-15
Air Vent
TCSA-2230



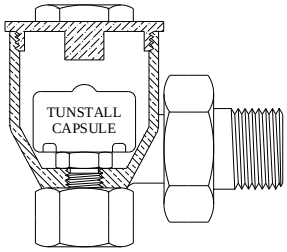
Illinois 1G
TCIL-1501



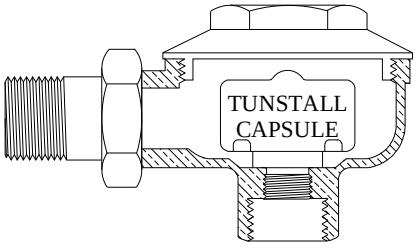
Warren Webster 02H
TCWW-2501



Barnes & Jones 122A
TCBJ-1001



Hoffman 17C
TCHF-1409



Tunstall TA-1/2-A
TCTA-2901

118 Exchange Street · Chicopee, MA 01013 · Phone: (413)594-8695 · Fax: (413)598-8109
Toll Free: 1-800-423-5578

www.tunstall-inc.com

Tunstall®

Est. 1958

Steam Products

Tunstall Capsule®

Thermostatic Radiator Steam Traps

Thermal-Disc Steam Traps

Float & Thermostatic Steam Traps

Inverted Bucket Steam Traps

Pressure Action Pumps

Distributed By:

Tunstall Corporation • 118 Exchange Street • Chicopee, MA 01013 • Phone: (413) 594-8695 • Fax: (413) 598-8109

Tunstall®
Established 1958

Tunstall Steam Trap Capsules®
Submittal Data

Project:
Engineer:
Contractor:
Representative/Supplier:

Post & Spring Style

Thread Style

Installation Tool

Features

- 100% Stainless Steel Thermostatic Capsule, TIG Welded Construction
- Stainless Steel Spring (If Required)
- Stainless Steel Seat
- Stainless Steel Bellows
- EPDM Gasket Rated to 300°F (Saturated Steam)
- 12 Month Warranty

Specifications

Spring Type

For low pressure steam radiator traps vacuum to 125 psig. Stainless steel bellows with corrosion resistant stainless steel plug and seat. All parts calibrated inside a heavy duty stainless steel capsule (housing) with a stainless steel spring inserted on a stainless steel post at the top of capsule (housing). The seat projection to be unthreaded to facilitate easy installation where the orifice in the trap body has no threads.

Thread Type

For low pressure steam radiator traps vacuum to 125 psig. Stainless steel bellows with corrosion resistant stainless steel plug and seat. All parts calibrated inside a heavy duty stainless steel capsule (housing). The seat projection to be threaded to facilitate easy installation where the orifice in the trap body is threaded. TC Tool to be provided for ease of installation.

New steam trap covers may be necessary to facilitate the capsule installation and will be provided as required.

Tunstall Corporation
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Tunstall®

Established 1958

Tunstall Steam Trap Capsules®
Submittal Data

Identifying Characteristics

Make:

Model:

Configuration: Angle Straight Vertical

Pipe Size:

TF Capsule Vac. To 45 psi

TF (Class 1) Post & Spring Style

TC Capsule Vac. To 125 psi

TC (Class 2) Post & Spring Style

TF (Class 1) Thread Style

TC (Class 2) Thread Style
Shown with Adaptor (as required)

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Tunstall®

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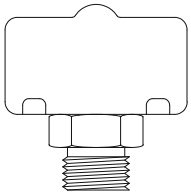
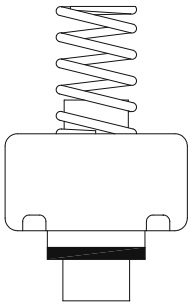
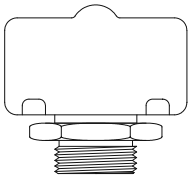
Tunstall Capsule®
Most Popular Model
Cross Reference Sheet



TCSA-2204



TCBJ-1001



TCWW-2501

Barnes & Jones #	Tunstall #	Trap Model #
159	TCBJ-1042	Barnes & Jones ¾" 41T & 1" 42T F&T
1721	TCBJ-1001	Barnes & Jones ½" 122A & 122S, ½" x ¾" 12A
1764 (3155)	TCWW-2515	Warren Webster ¾" 512, 513, 712
1927	TCMA-1601	Marsh ½" #
1929	TCBJ-1007	Barnes & Jones ¾" 134A & 134S
1950	TCDB-1301	Dunham Bush ½" 1E
1955	TCBJ-1044	Barnes & Jones 1¼" 43T, 1½" 44T & 2" 457T F&T
1972	TCWW-2501	Warren Webster ½" 02 Series
1990	TCDB-1302	Dunham Bush ½" 2E
2818	TCIL-1501	Illinois ½" 1G
2947	TCIL-1507	Illinois ½" 3G
3053	TCMA-1607	Marsh ¾" 2-4
3146	TCER-2701	Erwell ½" R30
3146 (4116)	TCSA-2218	Sarco ¾" H
3500	TCHF-1409	Hoffman ½" 17C
3507	TCHF-1414	Hoffman ¾" 8C
4117 (3146)	TCSA-2204	Sarco ½" H
4270	TCTR-2407	Trane ½" B-1 (Int. Bellows, Rem. Seat)
4320	TCTR-2403	Trane ½" B-1 (Int. Bellows, Int. Seat)
4409	TCBK-2601	Braukmann ½" KS510
5000	TCSA-2223	Sarco ½" & ¾" T25
None Available	TCAR-3003	Armstrong "B" Series F&T
None Available	TCAR-3005	Armstrong "A" Series F&T
None Available	TCTA-2901	Tunstall ½" & ¾" TA Angle & Straight

Note: The Tunstall Capsule® can be made with similar dimensions with post and spring (drop in type Units) simply by ordering the Barnes & Jones cage unit # preceded by the suffix TCBJ. (IE: TCBJ-1721 or TCBJ-1972 etc.)

Tunstall®

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Tunstall F&T
Most Popular Model
Cross Reference Sheet

TUNSTALL F&T REPAIR KIT SELECTOR

Armstrong

Trap Model	Size	Tunstall Kit #**	Face Plate
B3	¾"	1RK-AR-15	No
B4	1"	2RK-AR-15	No

Barnes & Jones

Trap Model	Size	Tunstall Kit #**	Face Plate
41T	¾"	1FT-BJ	No
42T	1"	2FT-BJ	No
FT2015-3	¾"	1FP-BJ-15*	Yes
FT2015-4	1"	2FP-BJ-15*	Yes
FT-2015-5	1¼"	3FP-BJ-15*	Yes

Dunham Bush

Trap Model	Size	Tunstall Kit #**	Face Plate
40-215	¾"	1FP-DB-15*	Yes
40-415	1"	2FP-DB-15*	Yes
40-515	1¼"	3RK-DB-15	No

Hoffman

Trap Model	Size	Tunstall Kit #**	Face Plate
53	¾"	1FP-HF-15	Yes
54	1"	2FP-HF-15	Yes
56	1¼"	3FP-HF-15	Yes
57	1½"	4FP-HF-15	Yes
58	2"	5FP-HF-15	Yes

Sarco

Trap Model	Size	Tunstall Kit #**	Face Plate
FT-15	¾"	1FP-SA-15*	Yes
FT-15	1"	2FP-SA-15*	Yes
FT-15	1¼"	3FP-SA-15*	Yes
FT-15	1½"	4RK-SA-15	No
FT-15	2"	5RK-SA-15	No

…Repair Kits are also available for Erwell, Tunstall, Watts & Watson McDaniel…

* Note: These models are available as Repair Kits without Face Plates
** Note: Repair Kits listed here are for low pressure applications. High pressure Kits available consult factory for availability.

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Tunstall®

Established 1958

Tunstall Steam Products

Capsule Classification List

Class	Description	Class	Description	Class	Description
2	TUNSTALL CAPSULE	3	TUNSTALL F&T AIR VENTS & CUSTOM TUNSTALL CAPSULE	4	CUSTOM TUNSTALL CAPSULE

Tunstall Capsule #	Class	Tunstall Capsule #	Class	Tunstall Capsule #	Class	Tunstall Capsule #	Class	Tunstall Capsule #	Class	Tunstall Capsule #	Class
TCAR-3001	3	TCBJ-1030	2	TCBJ-4320	2	TCBK-2602	2	TCDB-1304	2	TCHF-1405	2
TCAR-3002	2	TCBJ-1031	3	TCBJ-5000	2	TCBK-2603	2	TCDB-1305	2	TCHF-1406	2
TCAR-3003	3	TCBJ-1032	3	TCBB-1101	2	TCBK-2604	2	TCDB-1306	2	TCHF-1407	2
TCAR-3004	3	TCBJ-1033	4	TCBB-1102	2	TCBK-2605	3	TCDB-1307	2	TCHF-1408	2
TCAR-3005	3	TCBJ-1034	4	TCBB-1103	2	TCBK-2606	3	TCDB-1308	2	TCHF-1409	2
TCAR-3006	2	TCBJ-1035	4	TCBB-1104	2	TCCT-1201	2	TCDB-1309	2	TCHF-1410	2
TCAR-3007	2	TCBJ-1036	4	TCBB-1105	2	TCCT-1202	2	TCDB-1310	2	TCHF-1411	2
TCAR-3008	3	TCBJ-1037	4	TCBB-1106	2	TCCT-1203	2	TCDB-1311	3	TCHF-1412	2
TCAS-3101	3	TCBJ-1038	4	TCBB-1107	2	TCCT-1204	2	TCDB-1312	3	TCHF-1413	2
TCAS-3102	3	TCBJ-1039	4	TCBB-1108	2	TCCT-1205	2	TCDB-1313	2	TCHF-1414	2
TCBJ-1001	2	TCBJ-1040	4	TCBB-1109	2	TCCT-1206	2	TCDB-1314	2	TCHF-1415	2
TCBJ-1002	2	TCBJ-1041	4	TCBB-1110	2	TCCT-1207	2	TCDB-1315	3	TCHF-1416	2
TCBJ-1003	2	TCBJ-1042	3	TCBB-1111	2	TCCT-1208	2	TCDB-1316	3	TCHF-1417	2
TCBJ-1004	2	TCBJ-1043	3	TCBB-1112	2	TCCT-1209	2	TCDB-1317	2	TCHF-1418	3
TCBJ-1005	2	TCBJ-1044	3	TCBB-1113	2	TCCT-1210	2	TCDB-1318	2	TCHF-1419	3
TCBJ-1006	2	TCBJ-1045	3	TCBB-1114	2	TCCT-1211	2	TCDB-1319	2	TCIL-1501	2
TCBJ-1007	2	TCBJ-1046	3	TCBB-1115	2	TCCT-1212	2	TCDB-1320	3	TCIL-1502	2
TCBJ-1008	2	TCBJ-1047	3	TCBB-1116	2	TCCT-1213	2	TCDB-1321	3	TCIL-1503	2
TCBJ-1009	2	TCBJ-1048	3	TCBB-1117	2	TCCT-1214	2	TCDB-1322	3	TCIL-1504	2
TCBJ-1010	2	TCBJ-1049	3	TCBB-1118	2	TCCT-1215	2	TCDB-1323	3	TCIL-1505	2
TCBJ-1011	2	TCBJ-1050	3	TCBB-1119	2	TCCT-1216	2	TCDB-1324	3	TCIL-1506	2
TCBJ-1012	2	TCBJ-159	3	TCBB-1120	2	TCCT-1217	2	TCDB-1325	3	TCIL-1507	2
TCBJ-1013	2	TCBJ-1721	2	TCBB-1121	2	TCCT-1218	2	TCER-2701	2	TCIL-1508	2
TCBJ-1014	2	TCBJ-1764	2	TCBB-1122	2	TCCT-1219	2	TCER-2702	2	TCIL-1509	2
TCBJ-1015	2	TCBJ-1781	2	TCBB-1123	2	TCCT-1220	2	TCER-2703	2	TCIL-1510	2
TCBJ-1016	2	TCBJ-1927	2	TCBB-1124	2	TCCT-1221	2	TCER-2704	2	TCIL-1511	3
TCBJ-1017	2	TCBJ-1929	2	TCBB-1125	2	TCCT-1222	2	TCER-2705	3	TCMA-1601	2
TCBJ-1018	2	TCBJ-1950	2	TCBB-1126	2	TCCT-1223	2	TCER-2706	2	TCMA-1602	2
TCBJ-1019	2	TCBJ-1955	3	TCBB-1127	2	TCCT-1224	2	TCER-2707	2	TCMA-1603	2
TCBJ-1020	2	TCBJ-1972	2	TCBB-1128	2	TCCT-1225	2	TCER-2708	2	TCMA-1604	2
TCBJ-1021	2	TCBJ-1990	2	TCBB-1129	2	TCCT-1226	2	TCER-2709	2	TCMA-1605	2
TCBJ-1022	2	TCBJ-2168	2	TCBB-1130	2	TCCT-1227	2	TCER-2710	3	TCMA-1606	2
TCBJ-1023	2	TCBJ-2818	2	TCBB-1131	2	TCCT-1228	3	TCER-2711	2	TCMA-1607	2
TCBJ-1024	2	TCBJ-3146	2	TCBB-1132	2	TCCT-1229	2	TCER-2712	3	TCMA-1608	3
TCBJ-1025	2	TCBJ-3421	2	TCBB-1133	2	TCCT-1230	2	TCER-2713	3	TCMA-1609	3
TCBJ-1026	2	TCBJ-3500	2	TCBB-1134	2	TCCL-3301	4	TCHF-1401	2	TCMA-1610	3
TCBJ-1027	2	TCBJ-3507	2	TCBB-1135	2	TCDB-1301	2	TCHF-1402	2	TCMA-1611	3
TCBJ-1028	2	TCBJ-4116	2	TCBB-1136	2	TCDB-1302	2	TCHF-1403	2	TCMC-1701	2
TCBJ-1029	2	TCBJ-4117	2	TCBK-2601	2	TCDB-1303	2	TCHF-1404	2	TCMC-1702	2

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Established 1958

Tunstall Steam Products
Capsule Classification List

Class	Description	Class	Description	Class	Description
2	TUNSTALL CAPSULE	3	TUNSTALL F&T AIR VENTS & CUSTOM TUNSTALL CAPSULE	4	CUSTOM TUNSTALL CAPSULE

Tunstall Capsule #	Class	Tunstall Capsule #	Class	Tunstall Capsule #	Class	Tunstall Capsule #	Class	Tunstall Capsule #	Class	Tunstall Capsule #	Class
TCMC-1703	2	TCNI-2106	3	TCSA-2234	3	TCVR-3501	2	TCWW-2534	3		
TCMC-1704	2	TCNI-2107	3	TCSA-UK10	3	TCVR-3502	2	TCWW-2535	3		
TCMC-1705	2	TCNI-2108	4	TCSA-UK14	3	TCVR-3503	2	TCWW-2536	3		
TCMI-1801	2	TCNI-2109	4	TCST-2301	2	TCVR-3504	2	TCWW-2537	3		
TCMI-1802	2	TCNI-2110	3	TCST-2302	2	TCVR-3505	2	TCWW-2538	3		
TCMI-1803	2	TCNI-2111	4	TCST-2303	2	TCVR-3506	3	TCWW-2539	3		
TCMI-1804	2	TCNI-2112	4	TCST-2304	2	TCWW-2501	2	TCWW-2540	3		
TCMI-1805	2	TCSA-2201	2	TCST-2305	2	TCWW-2502	3	TCWW-2541	3		
TCMI-1806	2	TCSA-2202	2	TCST-2306	2	TCWW-2503	2	TCWW-2542	3		
TCMI-1807	2	TCSA-2203	2	TCST-2307	2	TCWW-2504	2	TCWW-2543	3		
TCMI-1808	2	TCSA-2204	2	TCST-2308	2	TCWW-2505	2	TCWW-2544	3		
TCMI-1809	2	TCSA-2205	2	TCST-2309	2	TCWW-2506	2	TCWW-2545	10		
TCMI-1810	2	TCSA-2206	2	TCST-2310	2	TCWW-2507	2	TCWM-3401	2		
TCMI-1811	3	TCSA-2208	2	TCST-2311	2	TCWW-2508	2	TCWM-3402	3		
TCMI-1812	2	TCSA-2209	2	TCST-2312	3	TCWW-2509	2				
TCMI-1813	2	TCSA-2210	2	TCST-2313	3	TCWW-2510	2				
TCMI-1814	2	TCSA-2211	3	TCST-2314	3	TCWW-2511	3				
TCMI-1815	2	TCSA-2212	3	TCST-2315	3	TCWW-2512	2				
TCMI-1816	2	TCSA-2213	2	TCTR-2401	2	TCWW-2513	2				
TCMI-1817	2	TCSA-2214	2	TCTR-2402	2	TCWW-2514	2				
TCMY-1901	2	TCSA-2215	2	TCTR-2403	2	TCWW-2515	2				
TCMY-1902	2	TCSA-2216	3	TCTR-2404	2	TCWW-2516	2				
TCMY-1903	2	TCSA-2217	2	TCTR-2405	2	TCWW-2517	2				
TCMY-1904	2	TCSA-2218	2	TCTR-2406	2	TCWW-2518	2				
TCMY-1905	2	TCSA-2219	2	TCTR-2407	2	TCWW-2519	3				
TCMY-1906	2	TCSA-2220	3	TCTR-2408	2	TCWW-2520	2				
TCMY-1907	2	TCSA-2221	3	TCTR-2409	2	TCWW-2521	2				
TCNF-2001	2	TCSA-2222	3	TCTR-2410	3	TCWW-2522	2				
TCNF-2002	2	TCSA-2223	2	TCTR-2411	2	TCWW-2523	2				
TCNF-2003	2	TCSA-2224	3	TCTR-2412	2	TCWW-2524	2				
TCNP-2801	2	TCSA-2225	3	TCTR-2413	2	TCWW-2525	2				
TCNP-2802	2	TCSA-2226	3	TCTR-2414	3	TCWW-2526	2				
TCNP-2803	2	TCSA-2227	3	TCTR-2415	3	TCWW-2527	2				
TCNP-2804	3	TCSA-2228	3	TCTR-2416	3	TCWW-2528	3				
TCNI-2101	2	TCSA-2229	3	TCTR-2417	2	TCWW-2529	3				
TCNI-2102	2	TCSA-2230	3	TCTA-2901	2	TCWW-2530	3				
TCNI-2103	3	TCSA-2231	2	TCTA-2902	2	TCWW-2531	3				
TCNI-2104	3	TCSA-2232	2	TCTA-2903	3	TCWW-2532	3				
TCNI-2105	2	TCSA-2233	3	TCTA-2904	2	TCWW-2533	3				

Tunstall Corporation
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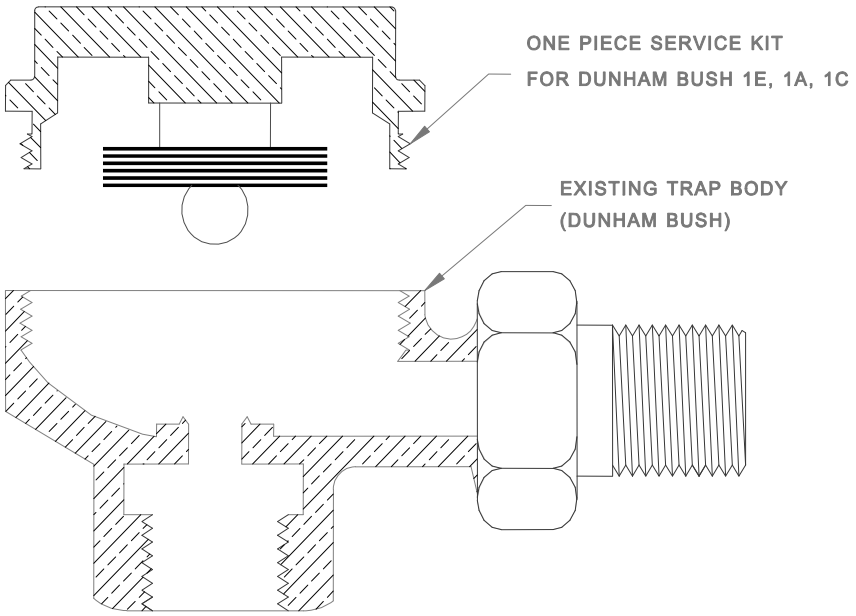
www.maconbalancing.com

Established 1958

Tunstall Thermostatic Service Kit
TCTA-SK



Features

- ONE PIECE DROP-IN SERVICE KIT
- 100% STAINLESS STEEL BELLOWS RATED FOR VAC. TO 125 PSIG
- 10 PLATE SEAMLESS WELD BELLOWS
- HARDENED, TIG WELDED STAINLESS STEEL BALL
- COVER AND BELLOWS AVAILABLE SEPARATELY

Specifications

The Tunstall Thermostatic Bellows is designed to remove air and condensate automatically for steam applications.

Working Capacities* - Square Feet EDR

Pressure Differential in PSIG	1/2	1	1-1/2
TCTA-SK	120	170	230

*Nominal, based on original equipment

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Thermostatic Radiator Steam Traps
Series TA

Established 1958

Operation

Tunstall Corporation produces a complete line of thermostatic radiator steam traps with ratings up to 125 psi. Each unit is tested and inspected before leaving the factory guaranteeing years of trouble free service. All units are "normally open" to expel air and water and will "close" at saturated steam temperature thereby preventing steam from entering into condensate return lines. Each Tunstall Steam Trap features the Tunstall Capsule® which has become the best steam trap replacement bellows available today.

Tunstall Capsule®

Features

- Heavy duty forged brass
- TIG welded stainless steel Tunstall Capsule® with balanced pressure stainless steel bellows
- Calibrated, inspected and tested
- Ratings from 25" Hg vacuum to 125 psi
- Available in 1/2" & 3/4" straight or angle, 1/2" x 3/4" angle, 1/2" vertical and 1" angle patterns

Benefits

- Simple installation
- Corrosion resistant stainless steel internals
- Extended life on low pressure applications

Applications

- Cast Iron Radiators
- Finned Tube Radiation
- Convectors
- Air Coils
- Sterilizers
- Drips

Typical Specification

Furnish and install Tunstall Thermostatic Steam Traps as shown or as specified on plans and in accordance with manufacturer's instructions, sizes 1/2", 3/4" or 1". The trap body and cover shall be forged brass and provided with an entirely stainless steel Tunstall Capsule®. Rating shall be _____ lbs/hr at _____ PSIG pressure differential. Each unit shall be guaranteed for 12 months from date of installation.

The Tunstall Capsule® professionally upgrades all thermostatic steam traps. Refer to catalog #795 or www.tunstall-inc.com for more detailed information.

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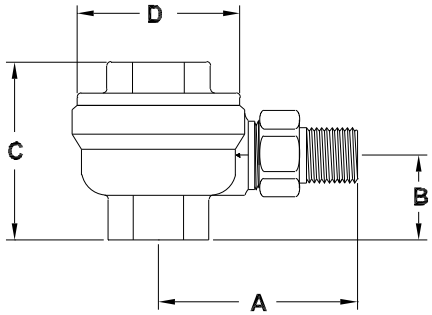
Thermostatic Radiator Steam Traps - *Series TA*

Engineering Specifications

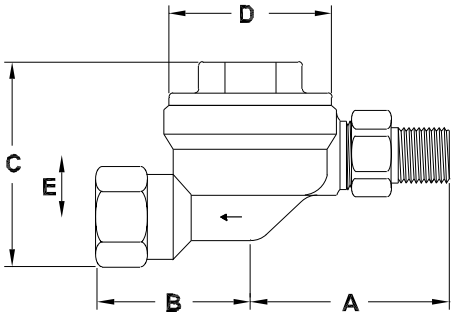
CAPACITIES*

			DIFFERENTIAL PRESSURE (PSI)									
			Square Feet EDR**							lbs Condensate per hour***		
Model	**Size NPT**	**PSIG Orifice**	**1/2**	**1**	**1-1/2**	**2**	**5**	**10**	**25**	**50**	**75**	**125**
TA-1/2-A	1/2”	5/16	120	165	200	230	320	500	825	1400	1700	1950
TA-3/4-A	3/4”	5/16	230	330	400	465	730	1050	1700	2375	2680	3300
TA-1-A	1”	1/4	430	590	700	760	1200	1750	4100	4050	4700	5500
TA-1/2x3/4-A	1/2”x3/4”	5/16	230	330	400	465	730	1050	1700	2375	2680	3300
TA-1/2-S	1/2”	5/16	120	165	200	230	320	500	825	1400	1700	1950
TA-3/4-S	3/4”	5/16	230	330	400	465	730	1050	1700	2375	2680	3300
TA-1/2-V	1/2”	5/16	120	165	200	230	320	500	825	1400	1700	1950

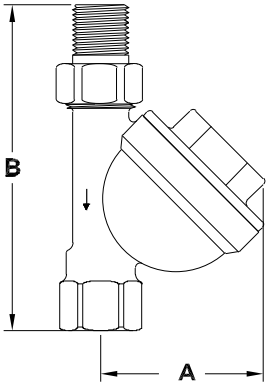
* Ratings are in accordance with standards established by The Steam Heating Equipment Manufacturers Association (SHEMA). No safety factor required.
** To convert Square Feet EDR to pounds of condensate per hour: Divide the square foot ratings by 4.
One Square Foot EDR is equivalent to net emission of 240 BTU per hour with 215°F steam in the radiator surrounded by 70°F air temperature.
*** Basic ratings for trap pressures greater than 25psi are given in lbs of condensate per hour.
One pound of condensate is equivalent to approximately 1000 BTU; 1000 BTU is equivalent to approximately 4 square feet EDR.



Angle Pattern (A)



Straight Pattern (S)



Vertical Pattern (V)

Model No.	Pipe Size	A	B	C	D	E	Weight	Capsule
TA-1/2-A	1/2” Angle	3.00	1.25	2.57	2.56	--	1.75 lbs	TCTA-2901
TA-3/4-A	3/4 Angle	3.38	1.37	2.87	2.56	--	1.84 lbs	TCTA-2901
TA-1-A	1” Angle	4.13	2.00	4.12	2.08	--	2.50 lbs	TCTA-2904
TA-1/2-S	1/2” Straight	3.00	2.15	3.00	2.50	1.00	1.94 lbs	TCTA-2901
TA-3/4-S	3/4” Straight	3.38	2.15	3.00	2.50	1.00	2.05 lbs	TCTA-2901
TA-1/2x3/4-A	1/2” x 3/4” Angle	3.38	1.25	2.57	2.56	--	1.75 lbs	TCTA-2901
TA-1/2-V	1/2” Vertical	2.50	4.85	--	--	--	1.65 lbs	TCTA-2901

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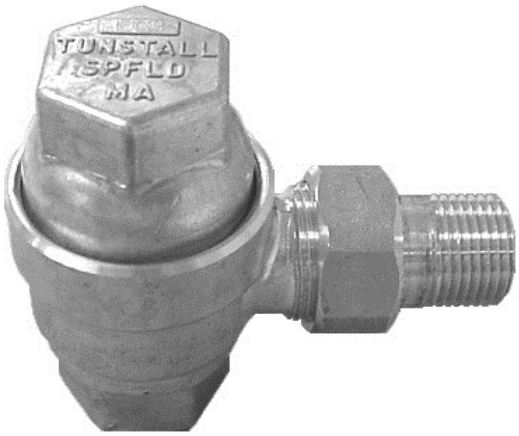
Tunstall®

Established 1958

Thermostatic Radiator Steam Traps
Series EC

Operation

Tunstall Corporation produces a complete line of thermostatic radiator steam traps with ratings from vacuum to 25 psi. Each unit is tested and inspected before leaving the factory guaranteeing years of trouble free service. All units are "normally open" to expel air and water and will "close" at saturated steam temperature thereby preventing steam from entering into condensate return lines. Each Tunstall Steam Trap features the Tunstall Capsule® which has become the best steam trap replacement bellows available today.



Features

- Forged brass body, cover, nut and tail piece
- TIG welded stainless steel Tunstall Capsule®
- Calibrated, inspected and tested
- Vacuum to 25 psi
- Available in 1/2" & 3/4" angle, 1/2" vertical and 1/2" straight patterns

Applications

- Cast Iron Radiators
- Finned Tube Radiation
- Convectors
- Air Coils
- Sterilizers
- Drips

Benefits

- Simple installation
- Corrosion resistant stainless steel internals
- Extended life on low pressure applications

Typical Specification

Furnish and install Tunstall Thermostatic Steam Traps Series EC as shown or as specified on plans and in accordance with manufacturer's instructions, sizes 1/2" or 3/4". The trap body and cover shall be forged brass and provided with an entirely stainless steel Tunstall Capsule®. Rating shall be _____ lbs/hr at _____ PSIG pressure differential. Each unit shall be guaranteed for 12 months from date of installation.

The Tunstall Capsule® professionally upgrades all thermostatic steam traps. Refer to catalog #795 or www.tunstall-inc.com for more detailed information.

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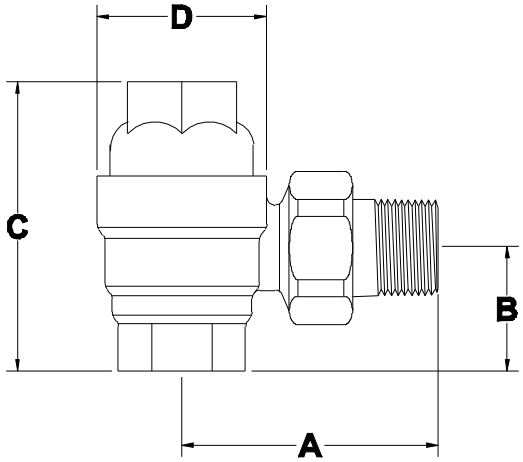
Engineering Specifications

CAPACITIES*

			DIFFERENTIAL PRESSURE (PSI)								
			Square Feet EDR**								
Model	**Size NPT**	**PSIG Orifice**	**1/4**	**1/2**	**1**	**1-1/2**	**2**	**5**	**10**	**15**	**25**
EC2-A	1/2”	5/16	90	120	165	200	230	320	500	625	825
EC3-A	3/4”	5/16	150	230	330	400	465	730	1040	1050	1700

* Ratings are in accordance with standards established by The Steam Heating Equipment Manufacturers Association (SHEMA). No safety factor required.

** To convert Square Feet EDR to pounds of condensate per hour: Divide the square foot ratings by 4.
One Square Foot EDR is equivalent to net emission of 240 BTU per hour with 215°F steam in the radiator surrounded by 70°F air temperature.
One pound of condensate is equivalent to approximately 1000 BTU; 1000 BTU is equivalent to approximately 4 square feet EDR.



EC2-A, EC3-A

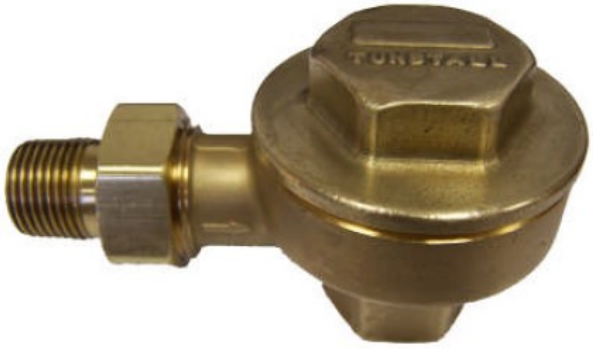
Model No.	Pipe Size	A	B	C	D	Weight	Capsule
EC2-A	1/2” Angle	2.60	1.35	3.00	1.82	1.15 lbs	TFTA-2901
EC3-A	3/4 Angle	2.60	1.35	3.00	1.82	1.25 lbs	TFTA-2901

Tunstall®
Established 1958

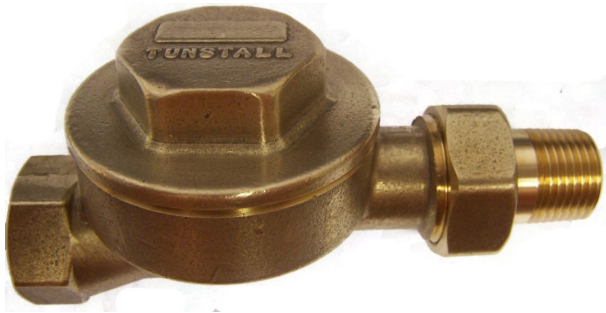
Thermostatic Radiator Steam Traps
Series DBC
Direct Replacement for Dunham Bush 1E and MEPCO 1E

Operation

Tunstall Corporation produces a complete line of thermostatic radiator steam traps with ratings from 25" HG vacuum to 25 psig. All units are "normally open" to expel air and water and will "close" at saturated steam temperature thereby preventing steam from entering into condensate return lines. Each Tunstall Steam Trap features the Tunstall Capsule® which has become the best steam trap replacement element available today.



Angle



Straight

Features

- Forged brass body, cover, nut and tail piece
- No need to change piping when replacing Dunham Bush 1/2" 1E and MEPCO 1/2" 1E, Dunham Bush 3/4" 2E and MEPCO 3/4" 2E, identical nut, tail piece and rough-in dimensions
- TIG welded stainless steel Tunstall Capsule®
- Calibrated, inspected and tested
- Removable and replaceable in-line threaded stainless steel non-corrosive seat

Benefits

- Simple installation
- Corrosion resistant stainless steel internals
- Calibrated Tunstall Capsule® for uniform balanced pressure operation
- Energy and fuel savings

Applications

- Cast Iron Radiators
- Finned Tube Radiation
- Convectors
- Air Coils
- Sterilizers
- Drips
- Replaces existing Dunham Bush/MEPCO

Typical Specification

Furnish and install Tunstall Thermostatic Steam Traps Series DBC as shown or as specified on plans and in accordance with manufacturer's instructions. The trap body and cover shall be forged brass and provided with an entirely stainless steel Tunstall Capsule®. Rating shall be _____ lbs/hr at _____ PSIG pressure differential. Each unit shall be guaranteed for 12 months from date of installation.

The Tunstall Capsule® professionally upgrades all thermostatic steam traps. Refer to catalog #795 or www.tunstall-inc.com for more detailed information.

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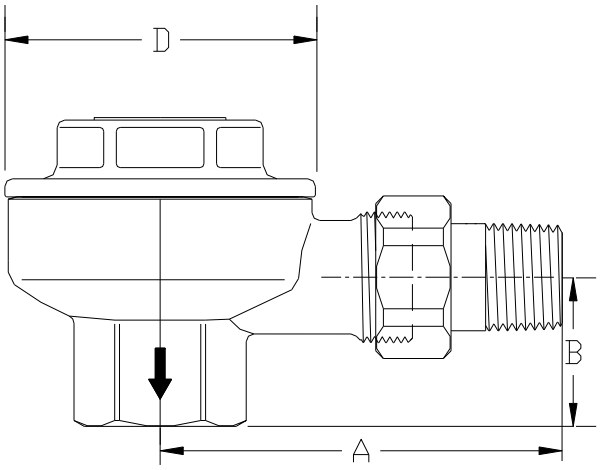
Engineering Specifications

CAPACITIES*

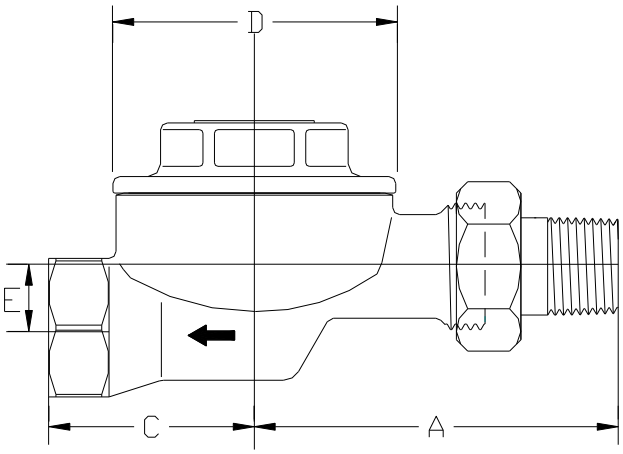
			DIFFERENTIAL PRESSURE (PSI)								
			Square Feet EDR**								
Model	**Size NPT**	**PSIG Orifice**	**1/4**	**1/2**	**1**	**1-1/2**	**2**	**5**	**10**	**15**	**25**
TA-1/2-DBC-A	1/2”	5/16	90	120	165	200	230	320	500	625	825
TA-1/2-DBC-S	1/2”	5/16	90	120	165	200	230	320	500	625	825
TA-3/4-DBC-A	3/4”	5/16	90	120	165	200	230	320	500	625	825
TA-3/4-DBC-S	3/4”	5/16	90	120	165	200	230	320	500	625	825

* Ratings are in accordance with standards established by The Steam Heating Equipment Manufacturers Association (SHEMA). No safety factor required.

** To convert Square Feet EDR to pounds of condensate per hour: Divide the square foot ratings by 4.
One Square Foot EDR is equivalent to net emission of 240 BTU per hour with 215°F steam in the radiator surrounded by 70°F air temperature.
One pound of condensate is equivalent to approximately 1000 BTU; 1000 BTU is equivalent to approximately 4 square feet EDR.



Angle



Straight

Model No.	Pipe Size	Pattern	A	B	C	D	E	Weight	Capsule
TA-1/2-DBC-A	1/2”	Angle	3-1/8”	1-1/8”	--	2-7/16”	--	1.25 lbs	TFTA-2901
TA-1/2-DBC-S	1/2”	Straight	3-1/8”	--	1-3/4”	2-7/16”	1/2”	1.40 lbs	TFTA-2901
TA-3/4-DBC-A	3/4”	Angle	3-1/4”	1-1/8”	--	3”	--	1.25 lbs	TFTA-2901
TA-3/4-DBC-S	3/4”	Straight	3-1/4”	--	1-3/4”	3”	7/16”	1.40 lbs	TFTA-2901

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Tunstall®

Established 1958

Thermal-Disc™ Steam Traps
Series TA-TD

Operation

Tunstall Corporation produces a full line of Thermal-Disc™ Steam Traps. Available in 3/8", 1/2", 3/4" and 1" NPT connections, all the internal parts are stainless steel for long service life.

The Tunstall Thermal-Disc™ operates using Bernoulli's Theorem; as condensate enters the Thermal-Disc™ Trap, it lifts the thermal disc and discharges through outlet ports. Multiple outlet ports assure that the lift of the disc is parallel to the seat for efficient operation. Once the condensate reaches its flash point, the pressure on the top of the disc increases, due to higher velocity steam, causing the disc to snap closed. As the steam above the disc condenses, pressure above the disc will lower, and allow the disc to lift again and repeat the process.

Features

- In-Line Connection
- Compact Size
- High Strength Stainless Steel Construction
- Low Maintenance (Only one moving part)
- Can be installed Vertically for "Freeze Proof" installation

Applications

- Steam Main Drainage
- High Pressure Drips
- Tracer Lines
- Process Equipment
- Laundry Equipment
- Kitchen Equipment
- Superheated Steam applications
- Outdoor installations subject to freezing

Materials of Construction	
Body	Stainless Steel AISI 420F
Cap	Stainless Steel AISI 416
Disc	Stainless Steel AISI 420

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Engineering Specifications

Installation

Valve installation is typically in the horizontal position as close to the equipment being drained as possible. A 20 mesh strainer is recommended upstream of the trap as is an isolation valve. Piping to and from the trap should be equal to the trap connection (one size larger is acceptable). Body material is not suitable for welding.

Freeze proof installation is achieved by installing the trap vertically, discharging downward. All drains must be pitched towards the trap. Discharge piping must be self-draining.

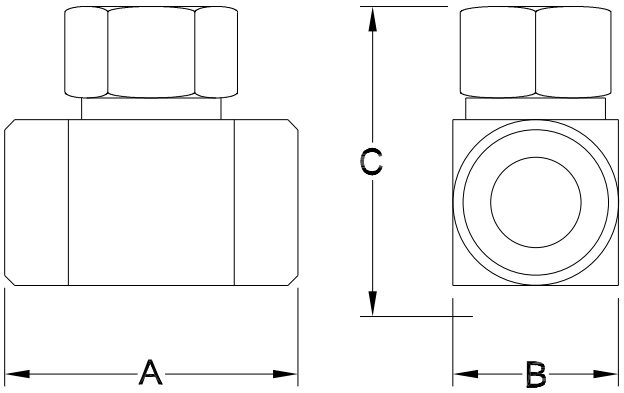
Pressure / Temperature Rating

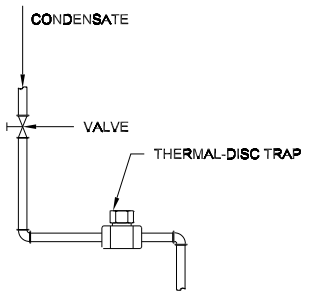
PMA - Max. Allowable Pressure: 600 psi
TMA - Max. Allowable Temperature: 800º F
PMO - Max. Operating Pressure: 600 psi
TMO - Max. Operating Temperature: 800º F

Capacities - lbs. of condensate/hr

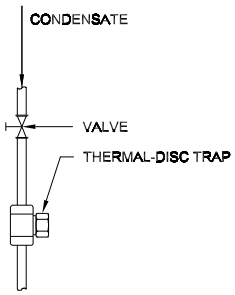
Inlet (psig)	TA-TD-38	TA-TD-50	TA-TD-75	TA-TD-100
3.5	180	300	415	650
5	185	315	430	680
10	190	350	475	740
15	195	380	520	815
20	200	415	565	885
25	215	440	610	940
30	220	470	650	1000
40	230	515	720	1080
50	250	580	825	1225
75	310	710	1020	1500
100	375	825	1185	1800
150	500	1020	1480	2215
200	620	1165	1710	2625
250	710	1300	1950	2935
300	800	1440	2110	3300
350	825	1565	2265	3600
400	900	1670	2490	3875
450	1070	1775	2625	4120
500	1120	1880	2780	4350
550	1185	1960	2985	4560
600	1290	2060	3140	4840

NOTE: Max. back pressure should not exceed 80% of the inlet pressure under any conditions of operation, otherwise the trap may not shut.





TYPICAL INSTALLATION



FREEZE-PROOF INSTALLATION

Dimensions and Weights						Repair Kit
Model	**Size**	**A**	**B**	**C**	**Weight**	
TA-TD-38	3/8”	1-3/8	2	1-11/16	0.75	TA-TD-DISC-38
TA-TD-50	1/2”	1-1/2	2-11/16	2	1.25	TA-TD-DISC-50
TA-TD-75	3/4”	1-3/4	2-13-16	2-3/8	2.00	TA-TD-DISC-75
TA-TD-100	1”	2-1/8	3-3/16	2-13/16	3.00	TA-TD-DISC-100

Note: Dimensions in inches & Weights in pounds

Tunstall Corporation
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Tunstall *Angle* Apollo Steam Modulators™

New Hybrid Technology

- Linear constant flow technology
- Instant prime
- Highly efficient: 99%+
- Protects system from water hammer
- Built with precision machine shop tolerances and specifications long overdue for the HVAC industry
- Excellent reliability and long life under extreme conditions
- Simple to inspect and service
- The modern method to blend existing steam principles with high tech manufacturing
- Operating on a close approach flow limit principal
    - Continuously modulates with an effective range of 15” vacuum to 250 psi steam

Energy Conservation Today

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Thermostatic Steam Modulators - *Series TA-SM*

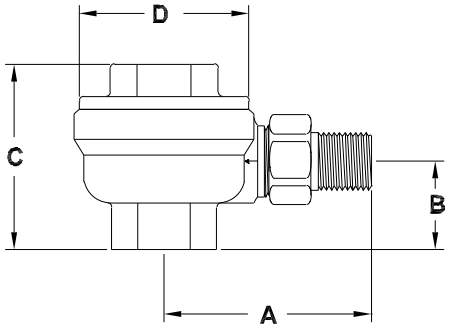
Engineering Specifications

Capacities*			DIFFERENTIAL PRESSURE (PSI)									
			Square Feet EDR**							lbs Condensate per hour***		
Model	Size NPT	PSIG Orifice	1/2	1	1-1/2	2	5	10	25	50	75	125
TA-SM-1/2-A	1/2”	5/16	120	175	210	230	330	370	410	1400	1700	1950
TA-SM-3/4-A	3/4”	5/16	230	270	400	460	540	690	880	2375	2680	3300
TA-SM-1-A	1”	1/4	480	550	600	660	880	1170	2200	4050	4700	5500
TA-SM-1/2X3/4-A	1/2”x3/4”	5/16	230	270	400	460	540	690	880	2375	2680	3300
TA-SM-1/2-S	1/2”	5/16	120	175	210	230	330	370	410	1400	1700	1950
TA-SM-3/4-S	3/4”	5/16	230	270	400	460	540	690	880	2375	2680	3300
TA-SM-1/2-V	1/2”	5/16	120	175	210	230	330	370	410	1400	1700	1950

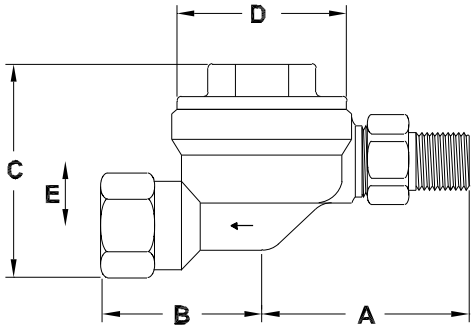
* Ratings are in accordance with standards established by The Steam Heating Equipment Manufacturers Association (SHEMA). No safety factor required.

** To convert Square Feet EDR to pounds of condensate per hour: Divide the square foot ratings by 4. One Square Foot EDR is equivalent to net emission of 240 BUT per hour with 215°F steam in the radiator surrounded by 70°F air temperature.

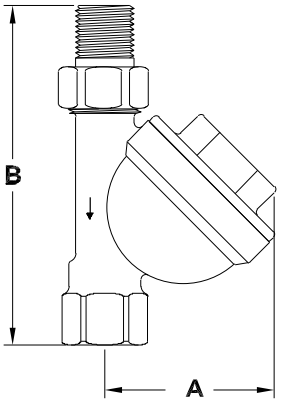
*** Basic ratings for trap pressures greater than 25psi are given in lbs of condensate per hour. One pound of condensate is equivalent to approximately 1000 BTU; 1000 BTU is equivalent to approximately 4 square feet EDR.



Angle Pattern (A)



Straight Pattern (S)



Vertical Pattern (V)

Model No.	Pipe Size / Pattern	A	B	C	D	E	Weight
TA-SM-1/2-A	1/2” Angle	3.00	1.25	2.57	2.56	--	1.75 lbs
TA-SM-3/4-A	3/4” Angle	3.38	1.37	2.87	2.56	--	1.84 lbs
TA-SM-1-A	1” Angle	4.13	2.00	4.12	2.08	--	2.50 lbs
TA-SM-1/2X3/4-A	1/2”x3/4” Angle	3.38	1.25	2.57	2.56	--	1.75 lbs
TA-SM-1/2-S	1/2” Straight	3.00	2.15	3.00	2.50	1.00	1.94 lbs
TA-SM-3/4-S	3/4” Straight	3.38	2.15	3.00	2.50	1.00	2.05 lbs
TA-SM-1/2-V	1/2” Vertical	2.50	4.85	--	--	--	1.65 lbs

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Tunstall®

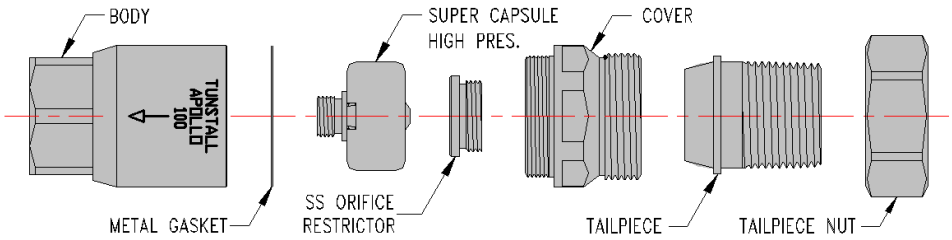
Established 1958

APOLLO TA GREEN-LINE™
THERMOSTATIC STEAM MODULATORS

Features

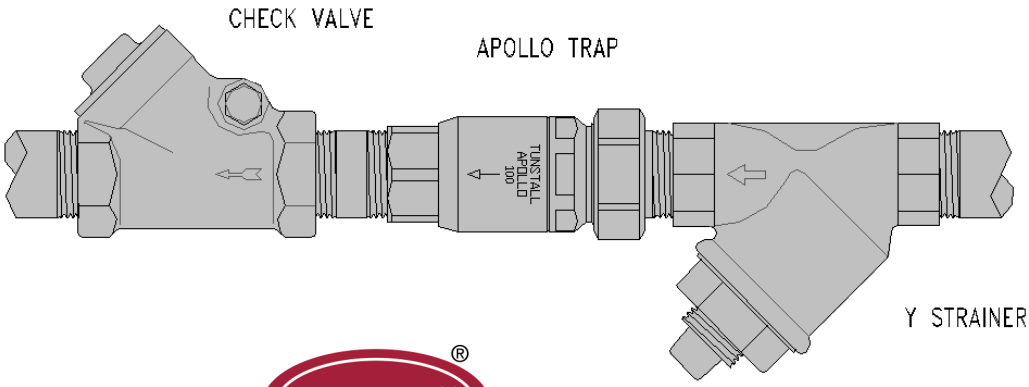
- Valve and seat are made from Hardened Stainless Steel TIG welded stainless steel Tunstall Capsule® with balanced pressure stainless steel bellows
- For added protection against Thermal Shock and Water Hammer the Gemini comes equipped with a Variable Orifice Restrictor.
- Can be installed Vertically for "Freeze Proof" installation
- Functions as an efficient steam service AIR VENT as supplied, no modifications required
- Can be mounted either horizontally or vertically
- Stainless Steel Orifice Diameters can be specified to meet particular loads and pressure demands.
- Field Repairable with High Pressure Capsules available from Tunstall Inventory
- Hybrid Technology controls multiple steam and condensate demands
- Replace Inverted Bucket Traps - No priming required
- Replace Float and Thermostatic Traps
- Simple - Fast - Economical

PRESSURES TO 300 PSIG • TEMPERATURES TO 420°F



SAVE ENERGY TODAY!

TYPICAL APPLICATION



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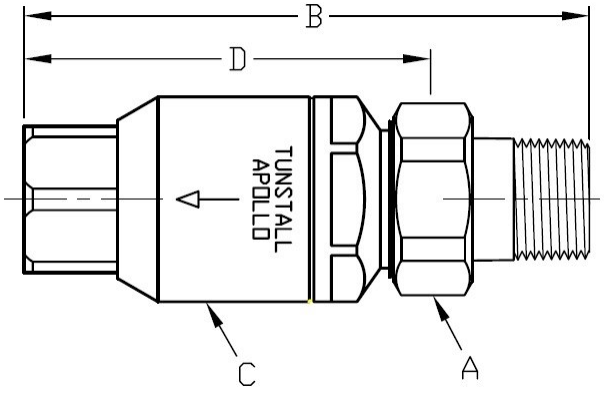
APOLLO TA GREEN-LINE™
THERMOSTATIC STEAM MODULATORS

Thermal Disc & Thermostatic Traps

APPLICATIONS

- Steam Tracing
- Sterilizers
- Drip Legs
- Cooking Equipment
- Plating Tanks
- Tire Presses
- Air Vents
- Unit Heaters
- Laundry Equipment
- Process Equipment
- Radiators
- Optional Modulating Orifice Technology



DIMENSIONS

Model No.	Pipe Size IN	Pipe Size OUT	A	B	C	D (less union)
TA-APOLLO-50	1/2 NPT M	1/2 NPT FM	1/2" Union	4-21/32"	1-3/4" Dia.	3-15/32"
TA-APOLLO-75	3/4 NPT M	3/4 NPT FM	3/4" Union	4-27/32"	1-3/4" Dia.	3-1/2"
TA-APOLLO-100	1 NPT M	1 NPT FM	1" Union	5-1/8"	1-3/4" Dia.	3-1/2"
TA-APOLLO-125	1-1/4 NPT M	1-1/4 NPT FM	1-1/4" Union	6-1/8"	2-1/4" Dia.	4-1/2"
TA-APOLLO-HC-200	2 NPT M	2 NPT FM	2" Union	6-3/4"	3" Dia.	4-3/4"

WORKING CAPACITY - PROCESS APPLICATIONS (LBS. Con / HR)

Model No.	DIFFERENTIAL PRESSURE (PSIG)												Repair Kit
	1.0	2.0	5.0	10	15	30	70	100	125	150	200	250	
TA-APOLLO-50	148	208	330	470	570	750	1240	1480	1650	1810	2090	2340	TA-APOLLO-RK-50
TA-APOLLO-75													TA-APOLLO-RK-75
TA-APOLLO-100													TA-APOLLO-RK-100
TA-APOLLO-125													TA-APOLLO-RK-125
APOLLO HIGH CAPACITY													Repair Kit
TA-APOLLO-HC-75	1320	1870	2950	4170	5110	7230	10920	12720	14040	15240	17410	19320	TA-APOLLO-RK-HC-75
TA-APOLLO-HC-100													TA-APOLLO-RK-HC-100
TA-APOLLO-HC-125													TA-APOLLO-RK-HC-125
TA-APOLLO-HC-200													TA-APOLLO-RK-HC-200

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Tunstall®

Established 1958

Float & Thermostatic Steam Traps
Series TA-FT

Operation

Tunstall Corporation produces a full line of Float & Thermostatic Steam Traps containing a float valve mechanism which modulates to discharge condensate continuously, while non-condensable gases are released by a separate internal balanced pressure thermostatic air vent (The Tunstall Capsule®).

The "H" pattern body on all ¾", 1" (15, 30, 75 & 125 psig) and 1-1/4" (15 & 30 psig) has been designed to offer maximum installation flexibility.

For larger sizes 1-1/2", 2" (15, 30, 75 & 125 psig) and 1-1/4" (75 & 125 psig), the inlet and outlet taps are located in the cover. This design allows for higher capacities and direct retrofits for older piping systems. All Tunstall float and thermostatic traps can be serviced without disturbing system piping.

Features

- Variety of piping connections.
- Stainless steel balanced pressure thermostatic air vent (Tunstall Capsule®).
- All stainless steel internal components
- Wide selection ¾"-2" @ 15, 30 , 75 & 125 psig differential pressures.
- Designed to withstand water hammer & high load demands.
- Designed for In-line repair.

Construction

Tunstall float and thermostatic traps feature all stainless steel interiors, heavy duty trap housings, easy access to internal parts and convenient piping connections.

Materials of Construction

Body & Cover	Cast Iron-ASTMA 126CI B
Valve Head	Stainless Steel
Valve Seat	Stainless Steel
Valve Seat Gasket	Non-Asbestos
Float	Stainless Steel
Bracket & Lever Assembly	Stainless Steel
Thermostatic Air Vent	Tunstall Capsule® Stainless Steel
Cover Bolts	Carbon Steel Grade 5
Cover Gasket	Non-Asbestos
Draining Plug	Stainless Steel

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Float & Thermostatic Steam Traps - *Series TA-FT*

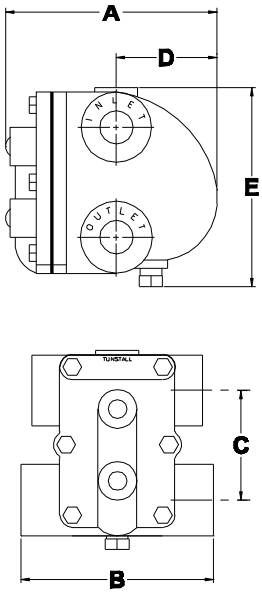
Engineering Specifications

Capacities
lbs. Condensate per hour

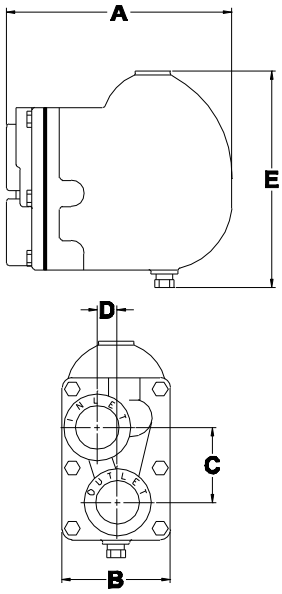
Model	Size NPT	PSIG Orifice	Differential Pressure (PSI) 1/4	1/2	1	2	5	10	15	20	25	30	40	50	75	100	125
TA-FT3-15	3/4”	.218	279	369	489	650	785	1000	1075								
TA-FT4-15	1”	.218	279	369	489	650	785	1000	1075								
TA-FT5-15	1-1/4”	.312	600	770	980	1240	1640	2000	2340								
TA-FT6-15	1-1/2”	.500	1100	1700	2400	3300	5000	6600	7600								
TA-FT8-15	2”	.625	2300	2800	3600	4650	6900	9000	10900								
TA-FT3-30	3/4”	.218	279	369	489	650	785	1000	1075	1210	1300	1370					
TA-FT4-30	1”	.218	279	369	489	650	785	1000	1075	1210	1300	1370					
TA-FT5-30	1-1/4”	.228	375	500	690	910	1200	1500	1680	1800	1900	2000					
TA-FT6-30	1-1/2”	.390	1000	1300	1700	2300	3400	4600	5500	6000	6600	7000					
TA-FT8-30	2”	.500	1300	1800	2500	3400	5200	6800	7800	8600	9300	10000					
TA-FT3-75	3/4”	.166	160	213	280	365	520	700	795	875	930	970	1120	1230	1450		
TA-FT4-75	1”	.166	160	213	280	365	520	700	795	875	930	970	1120	1230	1450		
TA-FT5-75	1-1/4”	.312	550	725	960	1300	1900	2650	3050	3400	3700	4000	4400	4750	5400		
TA-FT6-75	1-1/2”	.312	550	725	960	1300	1900	2650	3050	3400	3700	4000	4400	4750	5400		
TA-FT8-75	2”	.421	850	1100	1500	2000	3100	4150	4750	5200	5500	5800	6400	6800	7700		
TA-FT3-125	3/4”	.125	100	135	175	230	330	415	500	585	620	685	750	830	970	1110	1190
TA-FT4-125	1”	.125	100	135	175	230	330	415	500	585	620	685	750	830	970	1110	1190
TA-FT5-125	1-1/4”	.246	400	520	680	890	1300	1700	2050	2300	2500	2700	3000	3200	3800	4200	4500
TA-FT6-125	1-1/2”	.246	400	520	680	890	1300	1700	2050	2300	2500	2700	3000	3200	3800	4200	4500
TA-FT8-125	2”	.332	550	675	880	1225	1950	2600	3000	3250	3500	3800	4200	4600	5500	6100	6600

Float & Thermostatic Traps

3/4” & 1” TA-FT-All PSIG
1-1/4” TA-FT-15 & 30



1-1/4” TA-FT-75 & 125
All 1-1/2” & 2” TA-FT



Model	Size	DIMENSIONS (Inches) A	B	C	D	E	Weight (lbs.)	Repair Kit
TA-FT3-15	3/4”	6.25	5.50	3.31	3.00	5.75	9	TA-1FP-TA-15
TA-FT4-15	1”	6.25	5.50	3.31	3.00	5.75	9	TA-2FP-TA-15
TA-FT5-15	1-1/4”	6.25	5.75	3.00	3.81	5.75	9.5	TA-3FP-TA-15
TA-FT6-15	1-1/2”	8.50	4.25	3.00	0.70	8.40	18	TA-4RK-TA-15
TA-FT8-15	2”	9.81	4.94	4.94	0.12	9.12	26	TA-5RK-TA-15
TA-FT3-30	3/4”	6.25	5.50	3.31	3.00	5.75	9	TA-1FP-TA-30
TA-FT4-30	1”	6.25	5.50	3.31	3.00	5.75	9	TA-2FP-TA-30
TA-FT5-30	1-1/4”	6.25	5.75	3.00	3.81	5.75	9.5	TA-3FP-TA-30
TA-FT6-30	1-1/2”	8.50	4.25	3.00	0.70	8.40	18	TA-4RK-TA-30
TA-FT8-30	2”	9.81	4.94	4.94	0.12	9.12	26	TA-5RK-TA-30
TA-FT3-75	3/4”	6.25	5.50	3.31	3.00	5.75	9	TA-1FP-TA-75
TA-FT4-75	1”	6.25	5.50	3.31	3.00	5.75	9	TA-2FP-TA-75
TA-FT5-75	1-1/4”	8.50	4.25	3.00	0.70	8.40	18	TA-3RK-TA-75
TA-FT6-75	1-1/2”	8.50	4.25	3.00	0.70	8.40	18	TA-4RK-TA-75
TA-FT8-75	2”	9.81	4.94	4.94	0.12	9.12	26	TA-5RK-TA-75
TA-FT3-125	3/4”	6.25	5.50	3.31	3.00	5.75	9	TA-1FP-TA-125
TA-FT4-125	1”	6.25	5.50	3.31	3.00	5.75	9	TA-2FP-TA-125
TA-FT5-125	1-1/4”	8.50	4.25	3.00	0.70	8.40	18	TA-3RK-TA-125
TA-FT6-125	1-1/2”	8.50	4.25	3.00	0.70	8.40	18	TA-4RK-TA-125
TA-FT8-125	2”	9.81	4.94	4.94	0.12	9.12	26	TA-5RK-TA-125

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Tunstall®
Established 1958

Float & Thermostatic Steam Traps
Series TA-FTH
(High Capacity)

Operation

Tunstall Corporation produces a full line of Float & Thermostatic Steam Traps containing a float valve mechanism which modulates to discharge condensate continuously, while non-condensable gases are released by a separate internal balanced pressure thermostatic air vent (The Tunstall Capsule®).

The "FTH" series traps are designed for use in systems that produce an exceptionally large amount of condensate (625 to 24,000 lbs. of condensate per hour). Two sizes (1-1/2" & 2") available for low, medium and high pressure applications with a "H" pattern piping connection for maximum installation flexibility.

All Tunstall float and thermostatic traps can be serviced without disturbing system piping.

Features

- Rapid condensate removal.
- Stainless steel balanced pressure thermostatic air vent (Tunstall Capsule®).
- All stainless steel internal components
- Variety of piping connections.
- Designed to withstand water hammer & high load demands.
- Designed for In-line repair.
- Made in the U.S.A.
- Either upper connection used for Inlet, either lower connection used for outlet.

Construction

Tunstall float and thermostatic traps feature all stainless steel interiors, heavy duty trap housings, easy access to internal parts and convenient piping connections.

Materials of Construction

Body & Cover	Cast Iron-ASTMA 126CI B
Valve Head	Stainless Steel
Valve Seat	Stainless Steel
Valve Seat Gasket	Non-Asbestos
Float	Stainless Steel
Bracket & Lever Assembly	Stainless Steel
Thermostatic Air Vent	Tunstall Capsule® Stainless Steel
Cover Bolts	Carbon Steel Grade 5
Cover Gasket	Non-Asbestos
Draining Plug	Stainless Steel

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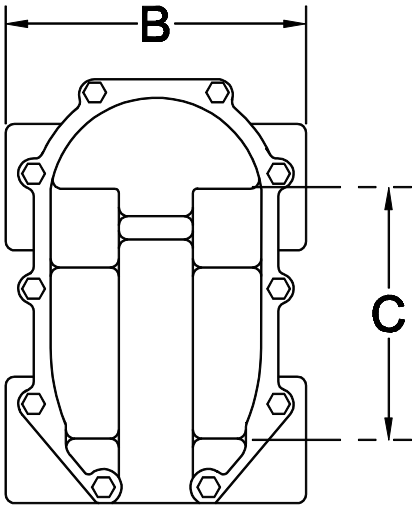
Float & Thermostatic Steam Traps - *Series TA-FTH*

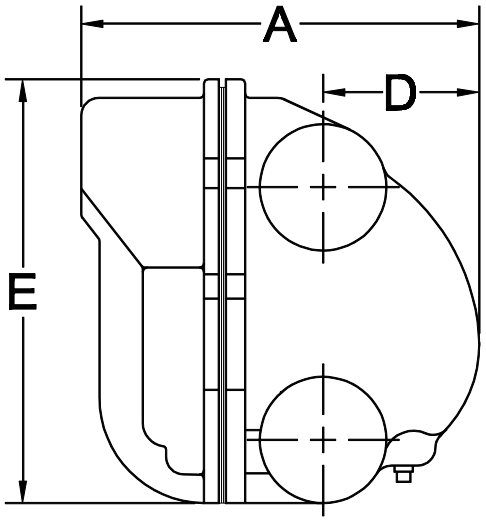
Engineering Specifications

Capacities lbs. Condensate per hour			Differential Pressure (PSI)														
Model	**Size NPT**	**PSIG Orifice**	**1/4**	**1/2**	**1**	**2**	**5**	**10**	**15**	**20**	**25**	**30**	**40**	**50**	**75**	**100**	**125**
TA-FTH6-15	1-1/2”	1.032	6400	7500	9300	13000	16500	21000	24000								
TA-FTH8-15	2”	1.032	6400	7500	9300	13000	16500	21000	24000								
TA-FTH6-30	1-1/2”	.762	2575	4500	5650	8750	11800	14500	17500	19500	20600	21600					
TA-FTH8-30	2”	.762	2575	4500	5650	8750	11800	14500	17500	19500	20600	21600					
TA-FTH6-75	1-1/2”	.500	1500	2750	3500	4750	6300	7750	9250	10500	12250	12500	13500	14500	17000		
TA-FTH8-75	2”	.500	1500	2750	3500	4750	6300	7750	9250	10500	12250	12500	13500	14500	17000		
TA-FTH6-125	1-1/2”	.328	625	825	1100	1550	2100	3000	3500	3900	4200	4400	5000	5500	6750	7750	8700
TA-FTH8-125	2”	.328	625	825	1100	1550	2100	3000	3500	3900	4200	4400	5000	5500	6750	7750	8700

All 1-1/2” & 2” SERIES TA-FTH Float & Thermostatic Traps



Front View



Side View

Model	Size	DIMENSIONS (Inches)					Weight (lbs.)	Repair Kit
		A	B	C	D	E		
TA-FTH6-15	1-1/2”	11.00	8.50	7.00	4.25	12.00	48	TA-4FPH-TA-15
TA-FTH8-15	2”	11.00	8.50	7.00	4.25	12.00	48	TA-5FPH-TA-15
TA-FTH6-30	1-1/2”	11.00	8.50	7.00	4.25	12.00	48	TA-4FPH-TA-30
TA-FTH8-30	2”	11.00	8.50	7.00	4.25	12.00	48	TA-5FPH-TA-30
TA-FTH6-75	1-1/2”	11.00	8.50	7.00	4.25	12.00	48	TA-4FPH-TA-75
TA-FTH8-75	2”	11.00	8.50	7.00	4.25	12.00	48	TA-5FPH-TA-75
TA-FTH6-125	1-1/2”	11.00	8.50	7.00	4.25	12.00	48	TA-4FPH-TA-125
TA-FTH8-125	2”	11.00	8.50	7.00	4.25	12.00	48	TA-5FPH-TA-125

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Tunstall®

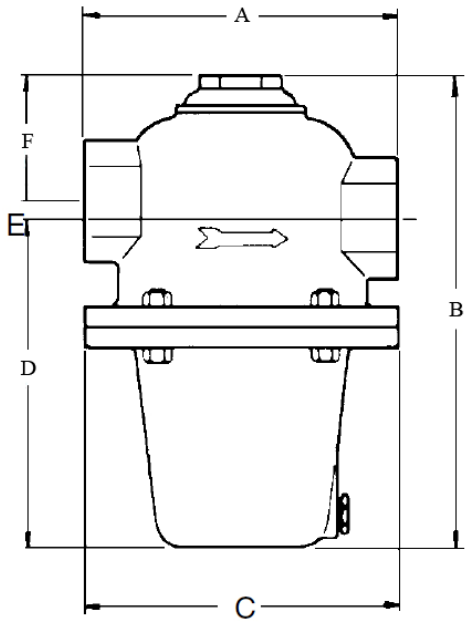
Established 1958

Straight-Way Float & Thermostatic Traps

Series TA-FTSW

Materials of Construction

Body and Cover	Cast Iron (125 psi Class)
Thermal Element Cover	Forged Brass
Thermal Element	Phosphor Bronze with #416 Stainless Valve
Thermal Element Seat	#416 Stainless
Float	Seamless Copper
Condensate Valve and Seat	Hardened #416 Stainless
Valve Stems	#416 Stainless
Discharge Tubes	Brass
Valve Stem Guide	Sizes 3, 4 and 5 - Brass Sizes 6 and 8 - Cast Iron



Dimensions Table

Model	Size	Weight Lbs.	Dimensions					
			A	B	C	D	E	F
TA-FTSW3	3/4	6	4-1/2	6-1/2	4-1/2	4-5/16	5/16	1-7/8
TA-FTSW4	1	9	5-1/2	7-7/8	5-1/2	5-5/8	3/16	2-1/16
TA-FTSW5	1-1/4	12	5-1/2	8	6	5-1/2	1/2	2
TA-FTSW6	1-1/2	37	7-5/8	11-3/4	8-9/16	9-1/16	1/2	2-3/16
TA-FTSW8	2	59	9-5/16	13-13/16	10-3/8	10-15/16	1/2	2-3/8

Capacity Table

Model	Max. Pres.	Orifice		Capacity - Pounds per Hour* Pressure Differential - Lbs. per Sq. In.												
		No.	Dia.	1/8	1/4	1/2	3/4	1	2	5	10	15	20	30	40	50
TA-FTSW3-15	15*			50	70	100	120	140	200	210	220	230	--	--	--	--
TA-FTSW4-15				125	175	250	300	350	500	525	550	575	--	--	--	--
TA-FTSW5-15				300	425	600	735	850	1200	1260	1320	1380	--	--	--	--
TA-FTSW6-15				600	850	1200	1470	1700	2400	2520	2640	2760	--	--	--	--
TA-FTSW8-15				1250	1775	2500	3060	3550	5000	5250	5500	5750	--	--	--	--
				Capacity - Pounds per Hour - Continuous Discharge** Differential Pressure (PSI)												
TA-FTSW4-30	30**	D	1/8	71	95	127	--	170	228	335	445	530	600	700	--	--
TA-FTSW5-30		C	5/32	118	156	210	--	280	375	550	740	870	980	1160	--	--
TA-FTSW6-30		91-30	19/64	390	525	700	--	940	1250	1850	2450	2930	3300	3900	--	--
TA-FTSW8-30		101-30	11/32	500	670	890	--	1180	1580	2340	3120	3700	4150	4900	--	--
TA-FTSW3-50	50**	S	3/32	39	52	69	--	92	122	180	240	285	320	380	430	470
TA-FTSW4-50		E	7/64	60	81	108	--	143	190	280	375	440	500	590	670	730
TA-FTSW5-50		D	1/8	75	102	138	--	182	245	355	475	565	630	750	840	920
TA-FTSW6-50		91-50	15/64	270	360	480	--	640	860	1260	1680	2000	2250	2670	3000	3300
TA-FTSW8-50		101-50	9/32	345	460	610	--	820	1100	1600	2140	2520	2840	3350	3800	4150

* Capacities according to recommended SHEMA Standards.

** Capacities based on FCI 65-3 standard for determining industrial steam trap capacity rating.

Tunstall®

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118 Exchange Street · Chicopee, MA 01013
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Tunstall®
Established 1958

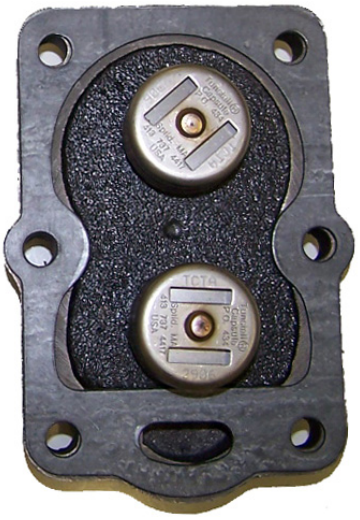
Float-Free Thermostatic Steam Traps
Series TA-TNT

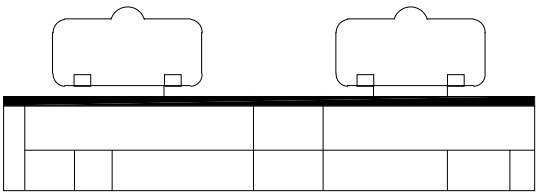
Operation

The next evolution in replacing float & thermostatic traps. A quantum leap in repairing float & thermostatic traps. Replacement face plate has no moving parts, no float or arms to fatigue and wear out. Complete traps now available. Float-free with Tunstall Stainless Steel vacuum breaker assembly.

The "H" pattern body on all ¾", 1" (15, 30, 75 & 125 psig) and 1-1/4" (15 & 30 psig) has been designed to offer maximum installation flexibility.

For larger sizes 1-1/2", 2" (15, 30, 75 & 125 psig) and 1-1/4" (75 & 125 psig), the inlet and outlet taps are located in the cover. This design allows for higher capacities and direct retrofits for older piping systems. All Tunstall thermostatic and thermostatic traps can be serviced without disturbing system piping.





Features

- Variety of piping connections.
- Two Stainless steel balanced pressure thermostatic air vent (Tunstall Capsule®).
- All stainless steel internal components
- Pressure range is no longer an issue. Capsules will accommodate pressures from vacuum 0 - 150 PSIG.
- Designed to withstand water hammer & high load demands.
- Designed for In-line repair.
- Made in the U.S.A.

Construction

Tunstall float and thermostatic traps feature all stainless steel interiors, heavy duty trap housings, easy access to internal parts and convenient piping connections.

Materials of Construction	
Body & Cover	Cast Iron-ASTMA 126CI B
Thermostatic Air Vent	(2) Tunstall Capsule® Stainless Steel
Cover Bolts	Carbon Steel Grade 5
Cover Gasket	Non-Asbestos
Draining Plug	Stainless Steel

Tunstall®
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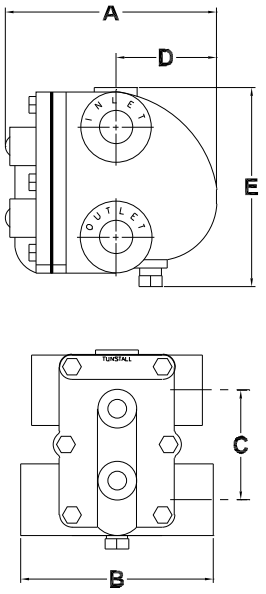
Float-Free Thermostatic Steam Traps - *Series TA-TNT*

Engineering Specifications

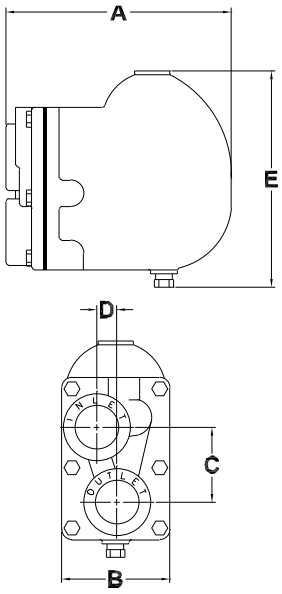
Capacities
lbs. Condensate per hour

Model	Size NPT	PSIG Orifice	Differential Pressure (PSI) 1/4	1/2	1	2	5	10	15	20	25	30	40	50	75	100	125
TA-FT3-15	3/4”	.218	279	369	489	650	785	1000	1075								
TA-FT4-15	1”	.218	279	369	489	650	785	1000	1075								
TA-FT5-15	1-1/4”	.312	600	770	980	1240	1640	2000	2340								
TA-FT6-15	1-1/2”	.500	1100	1700	2400	3300	5000	6600	7600								
TA-FT8-15	2”	.625	2300	2800	3600	4650	6900	9000	10900								
TA-FT3-30	3/4”	.218	279	369	489	650	785	1000	1075	1210	1300	1370					
TA-FT4-30	1”	.218	279	369	489	650	785	1000	1075	1210	1300	1370					
TA-FT5-30	1-1/4”	.228	375	500	690	910	1200	1500	1680	1800	1900	2000					
TA-FT6-30	1-1/2”	.390	1000	1300	1700	2300	3400	4600	5500	6000	6600	7000					
TA-FT8-30	2”	.500	1300	1800	2500	3400	5200	6800	7800	8600	9300	10000					
TA-FT3-75	3/4”	.166	160	213	280	365	520	700	795	875	930	970	1120	1230	1450		
TA-FT4-75	1”	.166	160	213	280	365	520	700	795	875	930	970	1120	1230	1450		
TA-FT5-75	1-1/4”	.312	550	725	960	1300	1900	2650	3050	3400	3700	4000	4400	4750	5400		
TA-FT6-75	1-1/2”	.312	550	725	960	1300	1900	2650	3050	3400	3700	4000	4400	4750	5400		
TA-FT8-75	2”	.421	850	1100	1500	2000	3100	4150	4750	5200	5500	5800	6400	6800	7700		
TA-FT3-125	3/4”	.125	100	135	175	230	330	415	500	585	620	685	750	830	970	1110	1190
TA-FT4-125	1”	.125	100	135	175	230	330	415	500	585	620	685	750	830	970	1110	1190
TA-FT5-125	1-1/4”	.246	400	520	680	890	1300	1700	2050	2300	2500	2700	3000	3200	3800	4200	4500
TA-FT6-125	1-1/2”	.246	400	520	680	890	1300	1700	2050	2300	2500	2700	3000	3200	3800	4200	4500
TA-FT8-125	2”	.332	550	675	880	1225	1950	2600	3000	3250	3500	3800	4200	4600	5500	6100	6600

All 3/4”, 1”, 1-1/4”
TA-FT-15 & TA-FT-30



All 1-1/4”, 1-1/2”, 2”
TA-FT-75 & TA-FT-125



Model	Size	DIMENSIONS (Inches) A	B	C	D	E	Weight (lbs.)	Repair Kit
TA-FT3-15	3/4”	6.25	5.50	3.31	3.00	5.75	9	TA-1FP-TA-TNT-15
TA-FT4-15	1”	6.25	5.50	3.31	3.00	5.75	9	TA-2FP-TA-TNT-15
TA-FT5-15	1-1/4”	6.25	5.75	3.00	3.81	5.75	9.5	TA-3FP-TA-TNT-15
TA-FT6-15	1-1/2”	8.50	4.25	3.00	0.70	8.40	18	TA-4RK-TA-TNT-15
TA-FT8-15	2”	9.81	4.94	4.94	0.12	9.12	26	TA-5RK-TA-TNT-15
TA-FT3-30	3/4”	6.25	5.50	3.31	3.00	5.75	9	TA-1FP-TA-TNT-30
TA-FT4-30	1”	6.25	5.50	3.31	3.00	5.75	9	TA-2FP-TA-TNT-30
TA-FT5-30	1-1/4”	6.25	5.75	3.00	3.81	5.75	9.5	TA-3FP-TA-TNT-30
TA-FT6-30	1-1/2”	8.50	4.25	3.00	0.70	8.40	18	TA-4RK-TA-TNT-30
TA-FT8-30	2”	9.81	4.94	4.94	0.12	9.12	26	TA-5RK-TA-TNT-30
TA-FT3-75	3/4”	6.25	5.50	3.31	3.00	5.75	9	TA-1FP-TA-TNT-75
TA-FT4-75	1”	6.25	5.50	3.31	3.00	5.75	9	TA-2FP-TA-TNT-75
TA-FT5-75	1-1/4”	8.50	4.25	3.00	0.70	8.40	18	TA-3RK-TA-TNT-75
TA-FT6-75	1-1/2”	8.50	4.25	3.00	0.70	8.40	18	TA-4RK-TA-TNT-75
TA-FT8-75	2”	9.81	4.94	4.94	0.12	9.12	26	TA-5RK-TA-TNT-75
TA-FT3-125	3/4”	6.25	5.50	3.31	3.00	5.75	9	TA-1FP-TA-TNT-125
TA-FT4-125	1”	6.25	5.50	3.31	3.00	5.75	9	TA-2FP-TA-TNT-125
TA-FT5-125	1-1/4”	8.50	4.25	3.00	0.70	8.40	18	TA-3RK-TA-TNT-125
TA-FT6-125	1-1/2”	8.50	4.25	3.00	0.70	8.40	18	TA-4RK-TA-TNT-125
TA-FT8-125	2”	9.81	4.94	4.94	0.12	9.12	26	TA-5RK-TA-TNT-125

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Tunstall®

Established 1958

Float & Thermostatic Repair & Face Plate Kits

For Other Manufacturers' Float & Thermostatic Traps

Tunstall Corporation produces a full line of Float & Thermostatic repair kits with all stainless steel mechanisms and the stainless steel Tunstall Capsule® air vent.

Tunstall Corporation is currently working on manufacturing repair kits for F&T traps made by all manufacturers. If you are looking for a manufacturer or trap not listed, please contact us at 800 -423-5578.

Armstrong

Tunstall No.	Size	For trap Model No.	Head
TA-1RK-15-B3	3/4"	15-B3	N/A
TA-2RK-15-B4	1"	15-B4	N/A
TA-1RK-30-A3	3/4"	30-A3	N/A
TA-2RK-30-A4	1"	30-A4	N/A

Barnes & Jones

Tunstall No.	B&J Kit No.	Size	For trap Model #	Head
1FT-BJ-15	1FT	3/4"	41T	N/A
2FT-BJ-15	2FT	1"	42T	N/A
3FT-BJ-15	3FT	1¼"	43T	N/A
4FT-BJ-15	4FT	1½"	44T	N/A
5FT-BJ-15	5FT	2"	457T	N/A
61FT-BJ-75	61FT	3/4"	653	N/A
62FT-BJ-75	62FT	1"	654	N/A
63FT-BJ-75	63FT	1¼"	655	N/A
64FT-BJ-75	64FT	1½"	656	N/A
65FT-BJ-75	65FT	2"	657	N/A
71FT-BJ-125	71FT	3/4"	753	N/A
72FT-BJ-125	72FT	1"	754	N/A
73FT-BJ-125	73FT	1¼"	755	N/A
74FT-BJ-125	74FT	1½"	756	N/A
1FP-BJ-15	RK2015-3	3/4"	FT2015-3	YES
2FP-BJ-15	RK2015-4	1"	FT2015-4	YES
3FP-BJ-15	RK2015-5	1¼"	FT2015-5	YES
4RK-BJ-15	RK2015-6	1½"	FT2015-6	N/A
5RK-BJ-15	RK2015-8	2"	FT2015-8	N/A
1FP-BJ-30	RK2030-3	3/4"	FT2030-3	YES
2FP-BJ-30	RK2030-4	1"	FT2030-4	YES
3FP-BJ-30	RK2030-5	1¼"	FT2030-5	YES
4RK-BJ-30	RK2030-6	1½"	FT2030-6	N/A
5RK-BJ-30	RK2030-8	2"	FT2030-8	N/A

Barnes & Jones

Tunstall No.	B&J Kit No.	Size	For trap Model #	Head
1FP-BJ-75	RK2075-3	3/4"	FT2075-3	YES
2FP-BJ-75	RK2075-4	1"	FT2075-4	YES
3RK-BJ-75	RK2075-5	1¼"	FT2075-5	N/A
4RK-BJ-75	RK2075-6	1½"	FT2075-6	N/A
5RK-BJ-75	RK2075-8	2"	FT2075-8	N/A
1FP-BJ-125	RK2125-3	3/4"	FT2125-3	YES
2FP-BJ-125	RK2125-4	1"	FT2125-4	YES
3RK-BJ-125	RK2125-5	1¼"	FT2125-5	N/A
4RK-BJ-125	RK2125-6	1½"	FT2125-6	N/A
5RK-BJ-125	RK2125-8	2"	FT2125-8	N/A

Barnes & Jones In-Line Traps

1-FPI-BJ-15	FTI-15	½-1"	FTI-2015	YES
1-FPI-BJ-30	FTI-30	½-1"	FTI-2030	YES
1-FPI-BJ-75	FTI-75	½-1"	FTI-2075	YES
1-FPI-BJ-125	FTI-125	½-1"	FTI-2125	YES

Dunham Bush / Mepco

Tunstall No.	Size	For trap Model No.	Head
1FP-DB-15	3/4"	40-215 & 44-215	YES
2FP-DB-15	1"	40-415 & 44-415	YES
TUN-3FP-DB-515	1¼"	40-515 & 44-515	YES
TUN-4FP-DB-715	1½"	40-715 & 44-715	YES
RK-DB-30-2A	3/4"	30-2A	N/A
RK-DB-30-4	1"	30-4	N/A
RK-DB-30-5	1¼"	30-5	N/A
RK-DB-30-6	1½"	30-6	N/A
RK-DB-30-7	1½"	30-7	N/A
RK-DB-30-7A	1½"	30-7A	N/A
RK-DB-30-8A	2"	30-8A	N/A

Erwell

Tunstall No.	Size	For trap Model No.	Head
1FP-ER-15	3/4"	F-15	YES
2FP-ER-15	1"	F-15	YES
1FP-ER-30	3/4"	F-30	YES
2FP-ER-30	1"	F-30	YES
1FP-ER-75	3/4"	F-75	YES
2FP-ER-75	1"	F-75	YES
1FP-ER-125	3/4"	F-125	YES
2FP-ER-125	1"	F-125	YES

For other models, sizes and pressures, Consult Factory.

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Tunstall Float & Thermostatic Repair & Face Plate Kits

Hoffman

Tunstall No.	Size	For trap Model No.	Head
1FP-HF-15	3/4”	53, 55	YES
2FP-HF-15	1”	54, 55	YES
3FP-HF-15	1¼”	56, 55	YES
4FP-HF-15	1½”	57, 55	YES
5FP-HF-15	2”	58, 55	YES
6FP-HF-15	3/4”	FT015H	YES
7FP-HF-15	1”	FT015H	YES
8FP-HF-15	1¼”	FT015H	YES
9FP-HF-15	1½”	FT015H	YES
10FP-HF-15	2”	FT015H	YES

Sarco

Tunstall No.	Size	For trap Model No.	Head
1FP-SA-15	3/4”	FT15	YES
2FP-SA-15	1”	FT15	YES
3FP-SA-15	1¼”	FT15	YES
4RK-SA-15	1½”	FT15	N/A
5RK-SA-15	2”	FT15	N/A
1FP-SA-30	3/4”	FT30	YES
2FP-SA-30	1”	FT30	YES
3FP-SA-30	1¼”	FT30	YES
4RK-SA-30	1½”	FT30	N/A
5RK-SA-30	2”	FT30	N/A
1FP-SA-75	3/4”	FT75	YES
2FP-SA-75	1”	FT75	YES
3FP-SA-75	1¼”	FT75	YES
4RK-SA-75	1½”	FT75	N/A
5RK-SA-75	2”	FT75	N/A
1FP-SA-125	3/4”	FT125	YES
2FP-SA-125	1”	FT125	YES
3FP-SA-125	1¼”	FT125	YES
4RK-SA-125	1½”	FT125	N/A
5RK-SA-125	2”	FT125	N/A

Sarco In-Line Traps

1FPI-SA-15	½-1”	FTI-15	YES
1FPI-SA-30	½-1”	FTI-30	YES
1FPI-SA-75	½-1”	FTI-75	YES
1FPI-SA-125	½-1”	FTI-125	YES

Strong

Tunstall No.	Size	For trap Model No.	Head
1FP-SG-15	3/4”	11T	YES
2FP-SG-15	1”	12T	YES
3FP-SG-15	1¼”	13T	YES
4FP-SG-15	1½”	14T	YES
5FP-SG-15	2”	15T	YES

For other models, sizes and pressures, Consult Factory.

Trane

Tunstall No.	Size	For trap Model No.	Head
1RK-TR-55AL	3/4” & 1”	55AL	N/A
1RK-TR-55AM	3/4” & 1”	55AM	N/A
1RK-TR-66CL	1¼”	66CL	N/A
1RK-TR-66CM	1¼”	66CM	N/A
RK-TR-77HL	1½” & 2”	77HL	N/A
1RK-TR-675-1	1¼”	675 Series	N/A

Tunstall

Tunstall No.	Size	For trap Model No.	Head
1FP-TA-15	3/4”	FT3-15	YES
2FP-TA-15	1”	FT4-15	YES
3FP-TA-15	1¼”	FT5-15	YES
4RK-TA-15	1½”	FT6-15	N/A
5RK-TA-15	2”	FT8-15	N/A
1FP-TA-30	3/4”	FT3-30	YES
2FP-TA-30	1”	FT4-30	YES
3FP-TA-30	1¼”	FT5-30	YES
4RK-TA-30	1½”	FT6-30	N/A
5RK-TA-30	2”	FT8-30	N/A
1FP-TA-75	3/4”	FT3-75	YES
2FP-TA-75	1”	FT4-75	YES
3RK-TA-75	1¼”	FT5-75	N/A
4RK-TA-75	1½”	FT6-75	N/A
5RK-TA-75	2”	FT8-75	N/A
1FP-TA-125	3/4”	FT3-125	YES
2FP-TA-125	1”	FT4-125	YES
3RK-TA-125	1¼”	FT5-125	N/A
4RK-TA-125	1½”	FT6-125	N/A
5RK-TA-125	2”	FT8-125	N/A

Warren Webster

Tunstall No.	Size	For trap Model No.	Head
RK-WW-273	3/4”	273	N/A
RK-WW-274	1”	274	N/A
TCWW-2545	¾-1”	Air Vent Only for 273 & 274	N/A

Watson McDaniel

1FP-WM-15	3/4”	FT-3	YES
2FP-WM-15	1”	FT-4	YES
3FP-WM-15	1¼”	FT-6	YES
4FP-WM-15	1½”	FT-7	YES
5FP-WM-15	2”	FT-8	YES

Watts

1FP-WA-15	3/4”	WFT-3	YES
2FP-WA-15	1”	WFT-4	YES
3FP-WA-15	1¼”	WFT-6	YES
4RK-WA-15	1½”	WFT-7	N/A
5RK-WA-15	2”	WFT-8	N/A

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Tunstall®

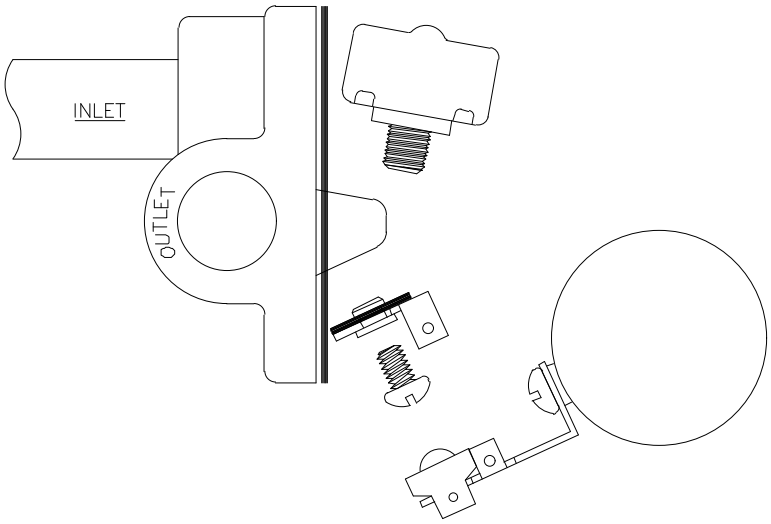
Established 1958

Tunstall F & T Face Plates & Repair Kits

Quality Engineering

Typical F&T Repair Kit

Barnes & Jones 41T Illustrated
Tunstall Repair Kit #1FT-BJ-15

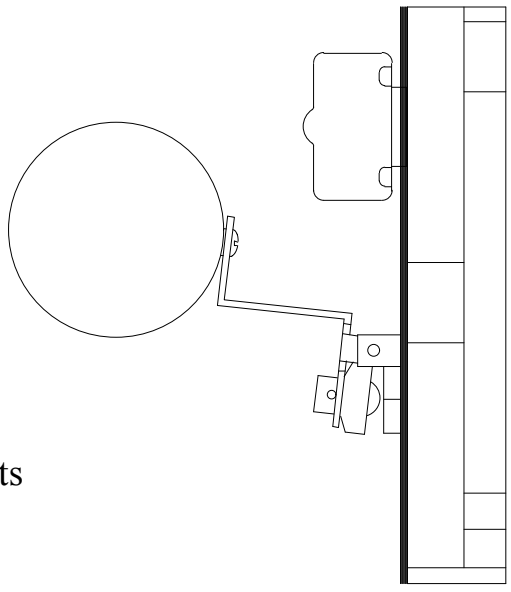


Features:

- Tunstall Stainless Steel Air Vent
- Stainless Steel Seat
- All Stainless Steel Float & Valve Assembly
- Body Gasket

Typical F&T Face Plate Kit

Sarco 3/4” FT-15 Illustrated
Tunstall Repair Kit #1FP-SA-15



Features:

- Tunstall Stainless Steel Air Vent
- Stainless Steel Seat
- All Stainless Steel Float & Valve Assembly
- Body Gasket
- Face Plate with above components installed for quick change

Note: See Tunstall Bulletin TA-FT-RK for a complete list of repair kits.

Tunstall®

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Tunstall®

Established 1958

Inverted Bucket Steam Traps
Series TA-IB (Models 8080 & 8181)

Operation

Tunstall Associates, Inc. produces a full line of Inverted Bucket Steam Traps containing a stainless steel bucket and valve mechanism which are either in a full closed position, or a full open position to discharge condensate.

As the system starts, air and non-condensable gases vent through the orifice in the bucket; condensate also enters through the standpipe which forms a water seal in the bottom of the bucket. As steam enters the trap a simple lever mechanism attached to the inverted bucket snaps shut; then as the steam condenses the buoyancy of the bucket changes thus opening the lever mechanism, and allowing pressure to force the condensate out of the trap. This process repeats itself exactly and continuously to maximize the efficient use of energy. No cooling leg required. Refer to capacity charts when ordering.

Features

- In-Line Connection
- High Strength Cast Iron Body
- Hardened Stainless Steel Valve & Seat
- Stainless Steel Bucket
- Test Plug
- Low Maintenance

Applications

- Converters
- Dryers
- High-Pressure Drip
- Laundry Equipment
- Oil Pre-heaters
- Pressing Machinery
- Process Equipment
- Steam Cookers
- Steam Heated Vats
- Unit Heater

Materials of Construction	
Body & Cover	Cast Iron-ASTM-A-126-7 Class B
Bucket & Linkage	Stainless Steel
Valve & Seat	Hardened Stainless Steel
Standpipe	Steel Pipe
Cover Gasket	Non-Asbestos

Model 8080

Max. Operating Pressure: 150 PSIG
Max. Allowable Temperature: 366°F

Model 8181

Max. Operating Pressure: 250 PSIG
Max. Allowable Temperature: 450°F

Inverted Bucket traps

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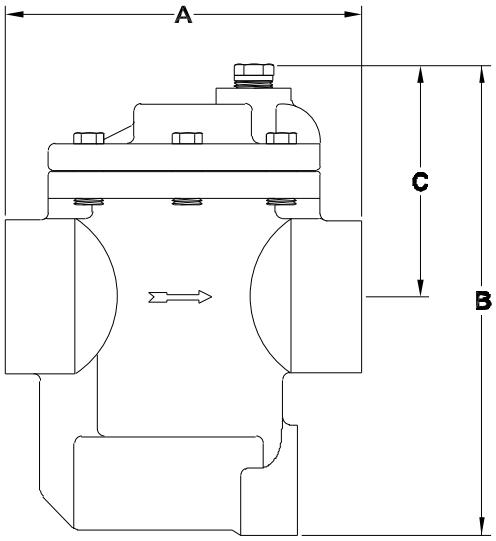
Engineering Specifications



Model 8080 & Model 8181

Capacity Chart

Differential Pressure PSI	Model 8080		Model 8181	
	Orifice Size (In.)	Condensate Per hour	Orifice Size (In.)	Condensate Per hour
1/4	↑	139	↑	191
1/2		200		300
3/4		240		395
1		270		450
2		340		590
3		390		680
4		425		750
5		450		830
10		560		950
15		640	1/4	1060
20	3/16	690	↑	585
25	↑	460		655
30		500	3/16	710
40		550	↑	770
50		580		840
60		635		900
70		660	5/32	950
80	1/8	690	↑	800
100	↑	500		860
125		550		950
150	#38	570		660
180		--		670
200		--	7/64	700
225		--	↑	730
250		--	#38	760

Capacities given are in pounds of hot condensate per hour at differential indicated.

Weights and Dimensions

Model Number	Size (in.) NPT	Weight (lbs.)	Dimensions		
			A	B	C
8080	1/2	5	5.000	5.875	3.125
8080	3/4	5	5.000	5.875	3.125
8181	1/2	6	5.000	6.875	2.625
8181	3/4	6	5.000	6.875	2.625
8181	1	6	5.000	6.875	2.625

Repair Kit

Specify maximum working pressure when ordering repair kits

8080	TA-IB-RK-8080
8080	
8181	TA-IB-RK-8181
8181	
8181	

Inverted Bucket traps

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Tunstall®

Established 1958

Pressure Action Pump
AP-400 Series

Pressure Action Pumps

Pressure power pumps have been part of our steam heritage since the early 1900's. Are you tired of paying fulltime crews to repair or replace the same Electro-mechanical pumps over and over?

Tunstall Pressure Action Pumps are the maintenance free solution for peace of mind and long term savings.

Operation

The Tunstall AP-400 Series Pressure Action Pump is the low maintenance, non-electric solution to move condensate or other liquids from low points, low pressures or vacuum spaces to an area of higher elevation or pressure. Condensate can be returned at temperatures well above the 210°F limit of conventional electric pumps without the headaches of leaking seals or cavitation problems.

Features

- Non-electric - utilizes inexpensive steam, air or gas to operate the action pump.
- Explosion Proof - Intrinsically safe.
- Low Maintenance - No leaking seals, impeller or motor problems.
- All stainless steel internals.
- Externally removable/replaceable seats - valve & seats can be replaced or cleaned without removing pump cap from body.

Table 1-1 AP-400 Series - Piping Dimensions

Connections	Model Number							
	AP-404		AP-406		AP-408		AP-412	
	in	mm	in	mm	in	mm	in	mm
Inlet	1	25	1½	40	2	50	3	80
Outlet	1	25	1½	40	2	50	2	50
Motive Pressure	½	15	½	15	½	15	½	15
Vent	1	25	1	25	1	25	1	25
Gauge Glass	½	15	½	15	½	15	½	15

Table 1-2 AP-400 Series - List of Materials

Name of Part	Description
Cap, Body and Bolting	Fabricated Steel 150 psi ASME Sec. VIII
Cap Gasket	Compressed Non-Asbestos
Inlet Valve Assembly	Stainless Steel
Vent Valve Assembly	Stainless Steel
Valve Assembly Wash-ers	Zinc-Plated Steel
Plug	Steel
Mechanism Assembly: Float and Springs	Stainless Steel

*Series AP-400 available in all stainless steel. Consult Factory.

Pressure Action Pump

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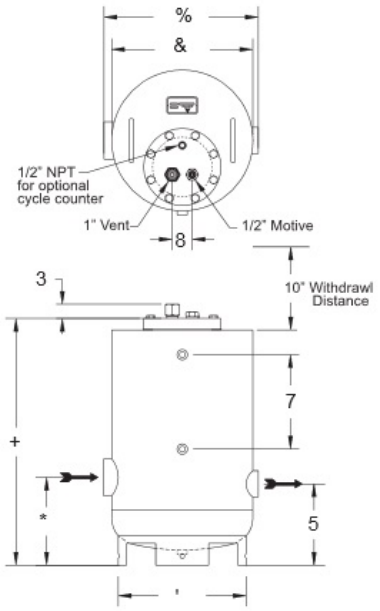
Pressure Action Pump - *AP-400 Series*

Table 2-1 AP-400 Series - Physical Data								
Model Number	**AP-404**		**AP-406**		**AP-408**		**AP-412**	
	in	**mm**	**in**	**mm**	**in**	**mm**	**in**	**mm**
A*	28¼	718	30½	775	32¼	820	36½	928
B*	17½	445	17½	445	17½	445	17½	445
C*	5	127	6	152	7¼	184	11½	292
D	5¾	146	7	178	7½	191	7½	191
E	10	254	10	254	10	254	10	254
F	9¼	235	9¼	235	9¼	235	9¼	235
G	28	711	28	711	28	711	28	711
H	10	254	10	254	10	254	10	254
I	16	406	16	406	16	406	16	406
J	$19^3/_8$	492	$19^3/_8$	492	$19^3/_8$	492	$19^3/_8$	492
Action Pump Weight	166 lbs / (75) kg							
Bronze Check Valve	4 / (2)		9 / (4)		16 / (7)		29 / (13)	
Stainless Check Valve	4 / (2)		9 / (4)		15 / (7)		38 / (17)	

*This dimension is an approximation based on user supplied nipples.
Max. operating pressure 125 psig (9 bar)
Max. allowable pressure (vessel Design) 150 psig (10 bar) @ 650°F (353°C)



General Applications

"OPEN SYSTEMS" - For the majority of applications, a steam trap is recommended on each piece of heat exchange equipment. The steam trap, or traps, discharge to a vented receiver where flash steam will be vented to the atmosphere. The action pump is located down stream and below the vented receiver allowing for proper fill head height. See Table 4-2 for vented receiver and vent sizing for an "open system".

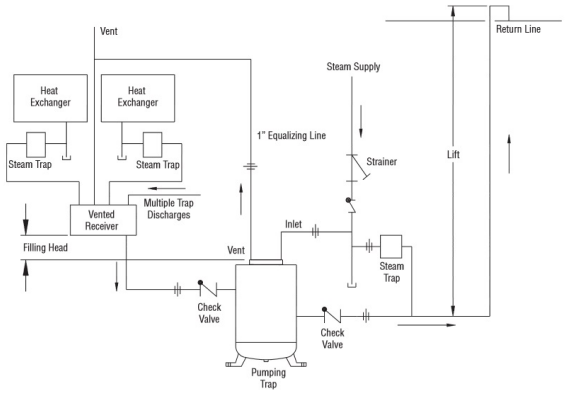


Fig. 2-1 Multiple or single traps discharging to vented receiver.

"CLOSED SYSTEMS" - Applications exist where it is desirable to tie the vent line back into the heat exchange space equalizing the pressure in the heat exchanger, reservoir/piping and the action pump. This allows water to flow by gravity down to the pump where it can be returned. Valuable Btu's remain within the system due to no flash steam loss to the atmosphere through the vent. Closed system applications can also be used to drain liquid from the equipment under a vacuum.

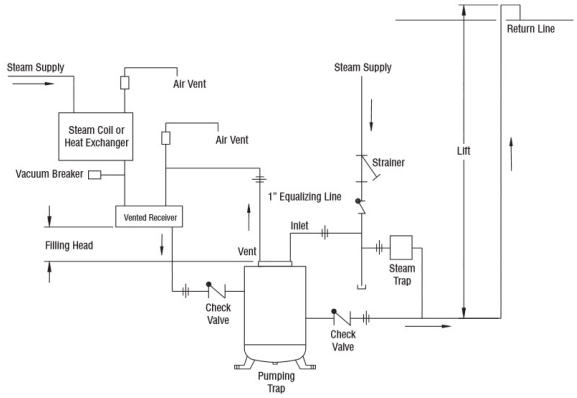


Fig. 2-2 Draining steam coil or heat exchanger when pressure is lower than return line pressure. Note that a steam trap is not requited in this application. If steam pressure exceeds the steam line pressure, a steam trap would be required on the discharge side of the action pump.

Pressure Action Pump

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Pressure Action Pump - *AP-400 Series*

Table 3-1 AP-400 Series - Capacities for Steam

Operating Inlet Pressure		Total Lift or Back Pressure		Filling Head 12" Liquid Specific Gravity 0.09 - 1.0							
				AP-404		AP-406		AP-408		AP-412	
				1" x 1"		1½" x 1½"		2" x 2"		3" x 2"	
psig	bar	psig	bar	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
15	1.0	5	0.34	1900	862	3100	1406	4500	2041	7500	3402
25	1.7			2500	1134	4600	2086	6600	2994	11000	4990
50	3.5			3100	1406	4900	2222	7100	3220	11700	5307
75	5.0			3400	1542	5200	2359	7200	3266	12000	5443
100	7.0			3500	1588	5400	2449	7300	3311	12100	5489
125	8.5			3600	1633	5500	2495	7400	3357	12200	5534
25	1.7	15	1	2200	999	3500	1588	5400	2449	7200	3266
50	3.5			2600	1179	4100	1860	6300	2857	10400	4717
75	5.0			2800	1270	4300	1950	6500	2948	10800	4899
100	7.0			3100	1406	4800	2177	6700	3039	11000	4989
125	8.5			3200	1451	4900	2222	6800	3084	11200	5080
35	2.5	25	1.5	2000	907	2900	1315	4200	1905	6900	3130
50	3.5			2400	1088	4000	1814	5800	2631	9700	4400
75	5.0			2600	1179	4400	1996	6000	2721	10000	4536
100	7.0			2800	1270	4700	2132	6100	2767	10200	4627
125	8.5			2900	1315	4800	2711	6200	2812	10400	4717
50	3.5	40	3	1900	862	3300	1451	4350	1973	5800	2631
60	4.0			2200	999	3600	1633	5100	2313	6900	3130
75	5.0			2400	1088	4000	1814	5700	2585	7600	3447
100	7.0			2500	1135	4200	1905	6000	2721	8100	3674
125	8.5			2700	1225	4500	2041	6400	2903	8500	3855
75	5.0	60	4	2000	907	3500	1588	4100	1859	5400	2503
100	7.0			2300	1233	3700	1678	4500	2041	6000	2721
125	8.5			2400	1088	3800	1724	4800	2177	6400	2903

Note: Published capacities based on use of external check valve supplied by Tunstall. Although motive pressures are shown at high pressure differentials (difference between motive inlet pressure and total lift or back pressure, it is preferable to use a motive pressure of 10-15 psig (0.65-1.0 bar) above discharge (outlet) pressure. This ensures longevity of economical (brass) check valves and reduces both venting time and temperature differential (on steam).

Table 3-2 Capacity Conversion Factors

For Motive Gas (other than steam)
Back Pressure vs. Motive Pressure

% back pressure vs. motive pressure (bp÷mp) = %	Capacity Conversion Factors
10%	1.04
20%	1.06
30%	1.08
40%	1.10
50%	1.12
60%	1.15
70%	1.18
80%	1.23
90%	1.28

Table 3-3 Capacity Conversion Factors

For Other Fill Heads

Filling Head					
in	**6**	**12**	**18**	**24**	**36**
mm	**152**	**305**	**457**	**610**	**914**
AP-404	0.7	1.0	1.1	1.2	1.35
AP-406	0.7	1.0	1.1	1.2	1.35
AP-408	0.7	1.0	1.1	1.2	1.35
AP-412	0.7	1.0	1.04	1.08	1.2

Note: Fill head measured from drain point to top of cap. See Fig. 2-1 and 2-2.

Sizing and Selection

To correctly size and select an action pump that meets the requirements of the application, specific data is needed as follows:

1. Condensate load in lb/hr or kg/hr
2. Motive pressure available steam or air
3. Vertical lift-see Fig. 2-1 or 2-2
4. Return line pressure
5. Fill head-see Fig. 2-1 or 2-2

Example:

1. Condensate load = 5,000 lb/hr (2,268 kg/hr)
2. Motive Pressure = 25 psig steam (1.7 bar)
3. Total Vertical Lift = Steam 23 feet (7 meters)
4. Return Line Pressure = 5 psig (0.34 bar)
5. Fill Head = 12 inches (305 mm)

Solution:

1. Calculate total back pressure. Back pressure is vertical lift multiplied by 0.433 plus the pressure in the return line. (23 ft. x 0.433) + 5 psig = 15 psig
2. From the capacity Table 3-1, select a pump with 25 psig motive pressure and a 15 psig total back pressure. An AP-408 action pump would be the correct choice.

Notes from capacity conversion factors Tables 3-2 and 3-3

I. If the motive pressure was air in the example above:

Determine correction factor for air, divide total back pressure by motive pressure available (bp÷mp) 15÷25 = .60 (60%)

Conversion factor from Table 3-2 is 1.15

Multiply condensate load by conversion factor. 5,400 lb/hr x 1.15 = 6,210 lb/hr.
An AP-408 action pump would still be the choice, but would have a capacity of 6,210 lb/hr using air as the motive pressure.

II. If a larger fill head is available, determine capacity by multiplying conversion factor in Table 3-3 by the capacity. Example - using above conditions with a 24" fill head 5,400 lb/hr x 1.2 = 6,400 lb/hr

An AP-408 would still be the choice with a capacity of 6,480 lb/hr. An AP-106 would still be small for the 5,000 lb/hr requirement - 3,500 lb/hr x 1.2 = 4,200 lb/hr.

Conversion Factors

GMP to lb/hr : GPM x 500
Lb/hr to GPM : lb/hr x 0.002
Lb/hr to kg/hr : lb/hr x 0.4536

Pressure Action Pump

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Table 4-1 Inlet Reservoir Pipe Sizing for Closed Systems

Condensate Load lbs/hr	Reservoir Pipe Diameter (in)					
	2"	3"	4"	6"	8"	10"
up to	Length of Pipe (feet)					
1000	4½	2	1½			
1500	7	3	2			
2000	9	4	2½			
3000	13½	6	3½	2		
4000	18	8½	5	2½		
5000		10	6	3	1½	
6000		12	7	3½	2	
7000		14½	8½	4	2	
8000		16½	9½	4½	2½	1½
9000			11	5	3	2
10000			12	5½	3	2
11000			13	6	3½	2
12000			14	6½	4	2½

Note: Inlet reservoir pipe sizing. When draining condensate from a single piece of equipment in a "**closed system**" to achieve maximum energy efficiency (see Fig. 2-2), a reservoir should be installed horizontally above and ahead of the action pump. Sufficient reservoir volume is required above the filling head level to hold condensate during the action pump discharge cycle. The chart above shows the minimum reservoir sizing, based on the condensate load to prevent equipment flooding during the action pump discharge cycle.

Table 4-2 Vented Receiver Sizing for an Open System

*Flash Steam Lbs/hr	Receiver Diameter	Receiver Length	Vent Line Diameter
up to			
75	4"		1½"
150	6"		2"
300	8"		2½"
600	10"	36"	3"
900	12"		4"
1200	16"		6"
2000	20"		8"

Important Note: Vented Receiver Sizing. When draining from single or multiple pieces of equipment in an "**open system**", a vented receiver should be installed horizontally above and ahead of the action pump (See Fig. 2-1). In addition to sufficient holding volume of the condensate above the fill head of the action pump to hold the condensate during the action pump cycle, the receiver must also be sized to allow enough area for flash steam and condensate separation. An overflow could also be added when required. The minimum recommended water seal is 12". The chart above shows proper receiving tank sizing based on flash steam present. See chart 4-3 to calculate the % of flash steam at a given pressure drop.

Pressure Action Pump

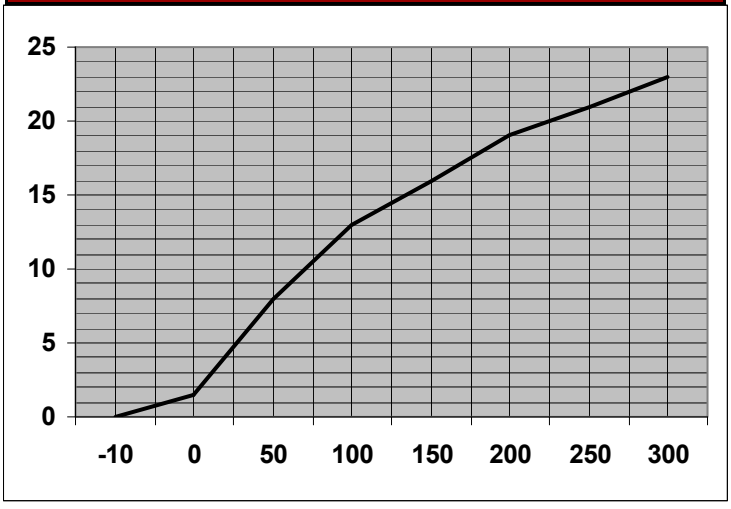
Suggested Specification

The non-electric condensate pump shall be Tunstall International AP-400 series operated by steam, compressed air or other pressurized gas up to 125 psig. Electricity, seals or packings shall not be used.

AP-400 series body construction shall be of carbon steel and vessel shall be ASME Section VIII "U" stamp code.

Pump internals shall consist of all stainless steel float operated mechanical mechanisms. Motive and vent valve/seats shall be externally removable without removing cap from the vessel body for ease of maintenance and inspection.

Chart 4-3 Percentage of flash steam formed When discharging condensate to reduce pressure



PSI from which condensate is discharged
Note: Back pressure lbs/sq. in. = 0

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Tunstall®

Established 1958

Tunstall Non-Electric Steam / Air Powered *Pump Retrofit Assembly*

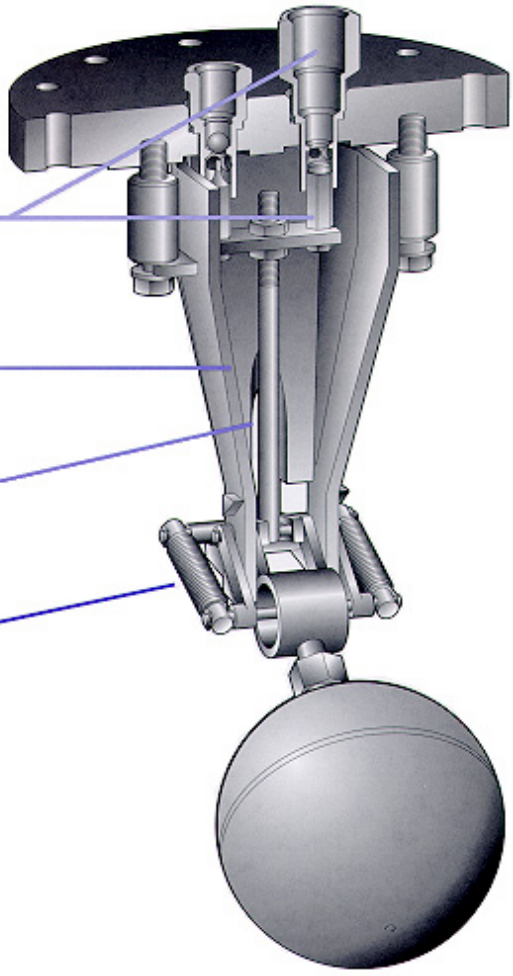
YES	NO	
☐	☐	Do you experience spring failures?
☐	☐	Are you dumping valuable condensate because of frequent maintenance?
☐	☐	Do you have to remove the complete cap assembly to view, clean Or replace the motive or vent valve?

Externally replaceable valve and seat assembly
Maintenance is a "snap" with stainless steel valves that can be cleaned or replaced without cap removal.

Wear and corrosion resistance
Mechanism frame assembly is constructed of rugged investment cast stainless steel components.

Long Life and dependable service
Simple float/spring operation and rugged all stainless Steel construction allow for long, trouble-free service life.

Stress chloride corrosion resistance
Inconel X-750 springs have higher resistance to the Stress that causes lower-grade stainless steel Springs to fail.



Pressure Action Pump

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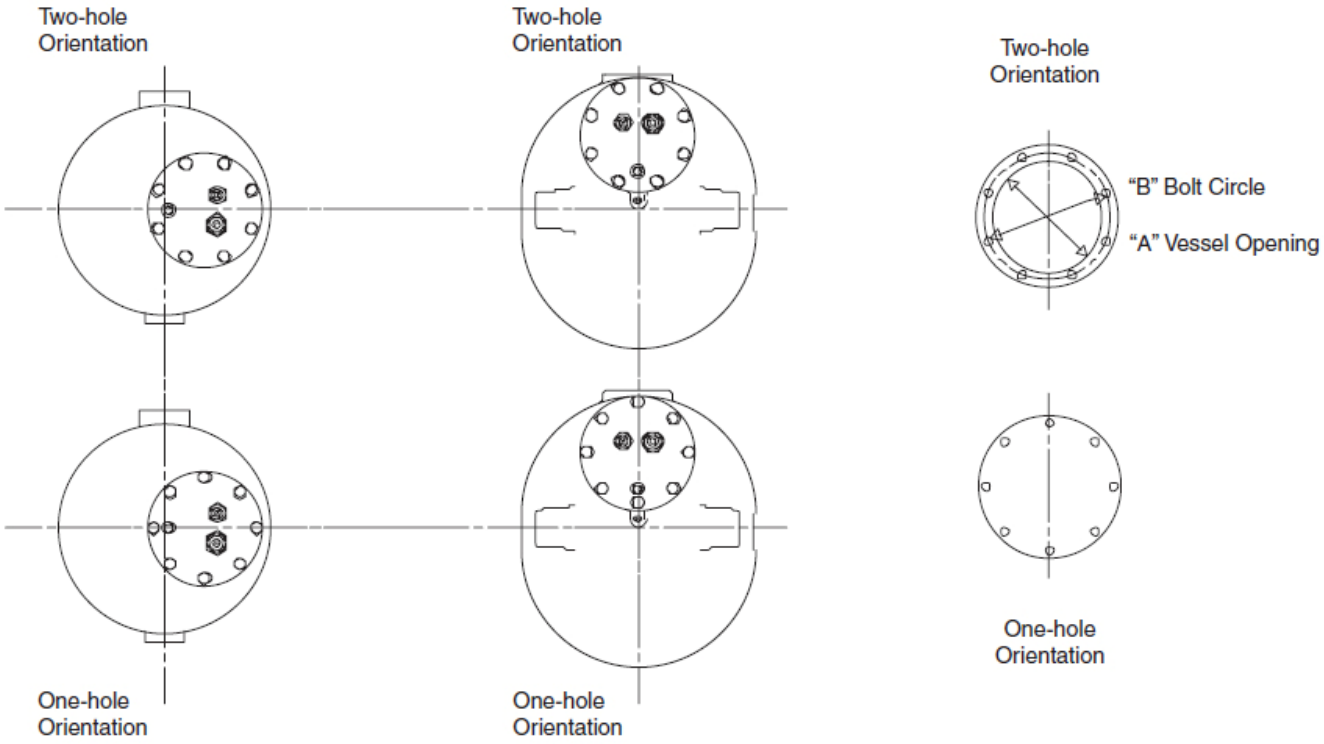
Tunstall Non-Electric Steam / Air Powered - *Pump Retrofit Assembly*

Tunstall's non-electric steam/air powered pump retrofit cap and mechanism assembly fits most competitive models.

To assure proper fit, please provide the following information:

- Manufacturer's Name : _____
- Manufacturer's Model Number : _____
- Number of bolt holes in cap : _____
- Bolt circle dimension "B" : _____
- Inside diameter of vessel opening "A" : _____
- Bolt hole orientation = One Hole or Two Holes



Pressure Action Pump

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Tunstall Air Valves

Established 1958

About Tunstall Air Valves (Steam)

- Tunstall steam air valves are made, assembled, tested and inspected in the U.S.
- Each unit is individually packaged with external labeling for inventory convenience and maintenance.
- Steam valves have brass internals with nickel plated and hand polished exterior.
- 1P vents have a wide adjustment range, which simplifies the balancing of heat to each radiator.

Steam Valves

Quick, uniform distribution of heat to all radiation is essential to one pipe steam performance. This requires balancing the radiation by controlled venting. Tunstall's #1P valves are adjustable and all steam air valves are designed for positive action and straight-line venting. They function automatically to vent the air.

TUNSTALL STEAM VENTS					
USE FOR	**NO.**	**CONNECTION**	**VENT PORT**	**MAX OPER. PRESSURE**	**OVERALL HEIGHT**
FREE STANDING RADIATORS	1P	1/8" ADJUSTABLE	3/32"	3 PSI	3-1/4"
	11P	1/8" MALE	1/16"	6 PSI	2-3/4"
CONVECTOR AND RISERS	31P	1/8" MALE	1/16"	6 PSI	3-3/4"
	33P	1/4" MALE	1/16"	6 PSI	3-3/4"
MAIN VENTS	35P	3/4" MALE x 1/2" FEMALE	3/32"	3 PSI	3-1/4"
	75P		3/32"	5 PSI	4-5/8"

NOTES:

1. Maximum operating pressure or drop away pressure is the maximum pressure at which the vent will continue to open and close by gravity.
2. One pipe steam systems function best when pressure is less than 2 psi.
3. The lower the pressure at which a system is operated, the greater its efficiency will be.

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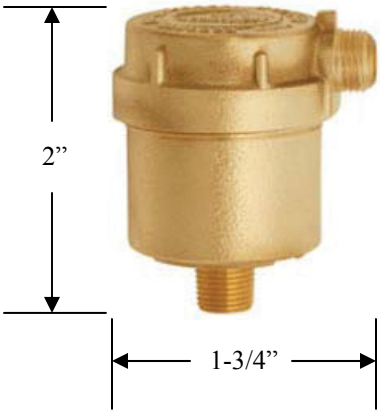
Tunstall Air Valves

TUNSTALL HOT WATER VENTS			
USE FOR	**NO.**	**CONNECTION**	**MAX OPER. PRESSURE**
RADIATORS	9P	1/8” MALE	150 PSI
	10P		
AS REQUIRED	700P	1/8” MALE	50 PSI
	14, 14A		150 PSI

700P



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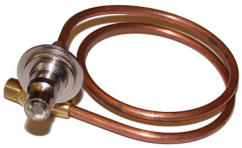


10P

10-4P

14A

9P

TUNSTALL REPLACEMENT GUIDE			
TUNSTALL #	**DOLE #**	**Connection Size / Description**	**Steam (S) or Hot Water (HW)**
1P	1A	1/8” M Angle, Adjustable	S
9P	9	1/8” M Coin Valve	HW
10P	10	1/8” M Key Valve	HW
10-4P	10-4	KEY for #10	HW
11P	1933	1/8” M Angle	S
31P	1933	1/8” M Straight	S
33P	1933	1/4” M Straight	S
35P	1933	3/4” M x 1/2” F Straight	S
75P	3C	3/4” x 1/2” Vent for Mains	S
700P	2000	1/8” M Straight, Hydronic Float Vent	HW
14	14	1/8” M Key Air Valve Assembly, 20” x 3/16” Tubing	HW
14A	14A	1/8” M Coin Air Valve Assembly, 20” x 3/16” Tubing	HW

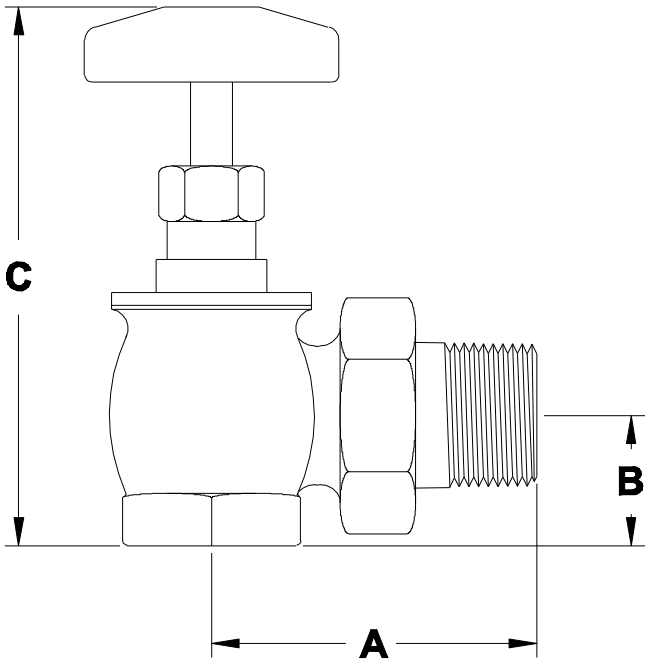
Tunstall Corporation
118 Exchange Street · Chicopee, MA 01013
Phone (413) 594-8695 · Fax (413) 598-8109
www.maconbalancing.com

Tunstall®
Established 1958

Manual Radiator Valves
0.50" to 1.50"
Series RV

Operation
Ideal for use with Macon OPSK
(one-pipe steam non-electric thermostatic valve)

Construction
- Heavy duty bronze construction
- Available in 1/2" through 1-1/2" sizes
- For low pressure steam or circulated hot water
- 15 PSI Working Steam Pressure
- 60 PSI Non-Shock Hot Water
- Adjustable packing
- Rising stem
- Heat resistant hand wheel



Dimensions

Model #	Size	A	B	C*	Weight in lbs.
TA-RV-50	1/2"	2.12	1.00	3.82	0.85
TA-RV-75	3/4"	2.54	1.04	4.25	1.15
TA-RV-100	1"	2.75	1.30	4.82	1.64
TA-RV-125	1-1/4"	3.25	1.38	5.35	2.25
TA-RV-150	1-1/2"	3.68	1.72	5.95	3.00

*Overall height in full open position

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Tunstall®

Established 1958

Vacuum Breakers
Series VB

Operation

The Tunstall Vacuum Breaker is a simple device which provides a dependable means of relieving an unwanted vacuum condition. Available with either a brass or Stainless Steel body, the rugged body provides for long life. With four different NPT pipe sizes available*, installation is simple.

A soft resilient EPDM seat provides for quiet opening and closing. This, combined with the internal spring, prevents "chatter" when the valve is operating.

Benefits

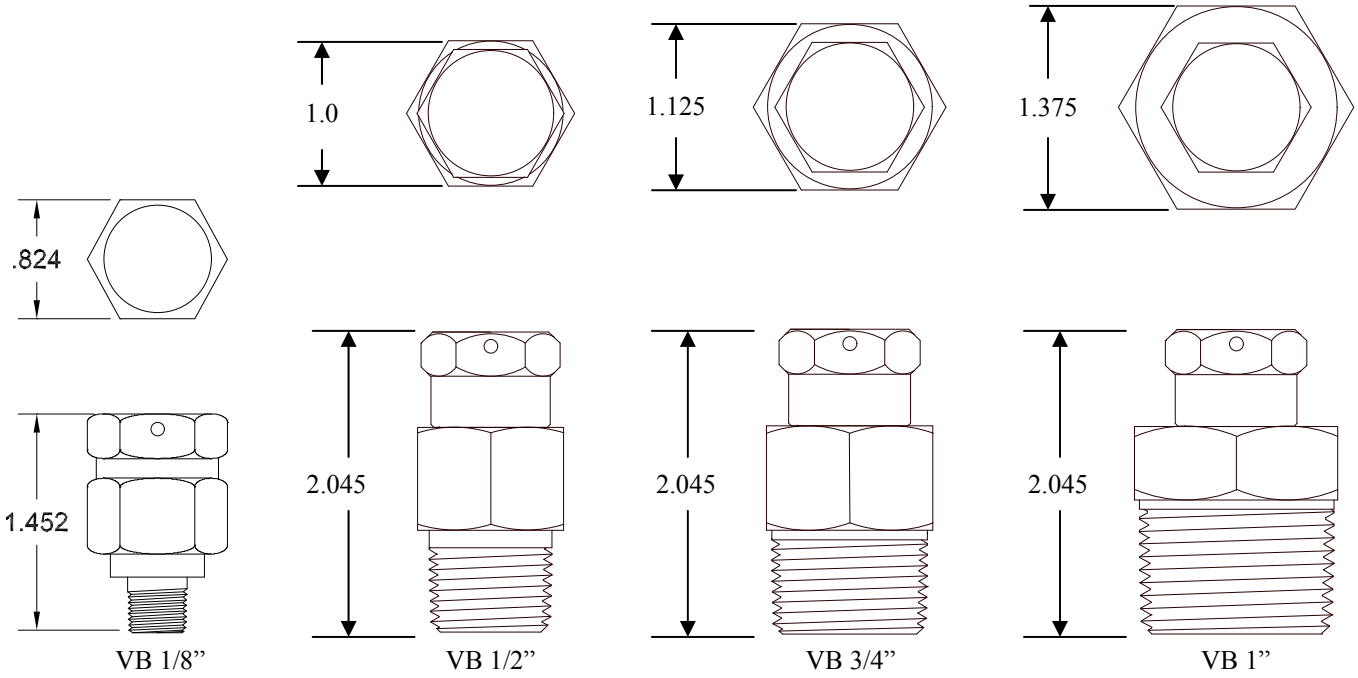
- Prevent possible equipment damage
- Improve system efficiency
- Maintenance free operation
- Easy installation

Applications

- Condensate Lines
- Heating Coils
- Heat Exchangers
- Jacketed Kettles
- Make-up Air Coils
- One Pipe Steam Non-Electric Valves
- Steam Boilers
- Storage Heaters
- Steam Mains
- Textile Dry Cans
- Unit Heaters

Technical

- Pressures up to 125 PSIG (8.6 Bar)
- Temperatures up to 350º
- Horizontal Break Point 2.5 inches of HG
- Vertical Break Point 2.5 inches of HG
- Available in either Brass or Stainless Steel
- *4 different NPT sizes:
  Brass - 1/8", 1/2" & 3/4"
  Stainless Steel - 1/8", 1/2", 3/4" & 1"



Miscellaneous

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TUNSTALL CORPORATON

118 Exchange Street
Chicopee, MA 01013
Phone: (413) 594-8695
Fax: (413) 598-8109

Date:_____

Customer:_____

Information Required For Tunstall Steam Trap Capsule™ Replacements:

Size:_____

Pattern (Straight, Angle, Vertical):_____

Manufacturer:_____

Model #:_____

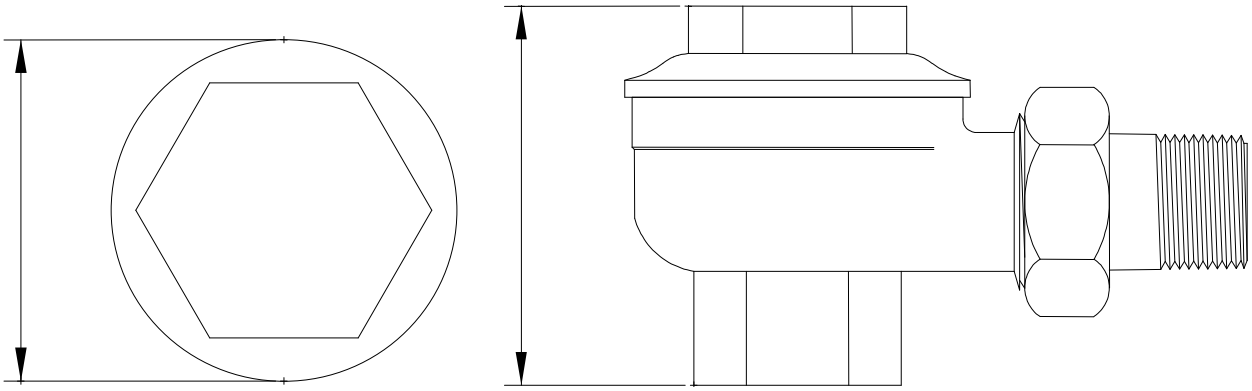
Identifying Characteristics:_____

Seat (Integral or Removable):_____

Cover Characteristics:_____

Existing Element Description, or Sample:_____

_____



Provide Sample Trap?

If Sample Trap Provided, We Will Return At Once With Fitted Tunstall Capsule Replacement.

Tunstall Will Also Provide a New Tunstall Trap in Exchange if Desired.

Selection/Tunstall Capsule #:_____

STEAM TRAP SURVEY

Tunstall Corporation
118 Exchange Street
Chicopee, MA 01013

Email: tunstall@tunstall-inc.com
Phone: (413) 594-8695
Fax: (413) 598-8109

Date:
Page #:
Institution:
For Bldg:
Address:

SEE BELOW FOR EXPLANATION OF SURVEY HEADINGS. PLEASE BE AS SPECIFIC AS POSSIBLE.

1		2	3	4	5	6	7	8	9	10	11
Trap location in building. Use location or trap tag # (if all traps in building have been sequentially numbered for identification.)		Mftr's name	Pipe size	Model #	System operating pressure	Trap pressure rate	Type of unit trapped	Other information sq.ft. (EDR)	Square feet radiation (est.)	Tunstall capsule #	Macon self contained valve

1. Where trap is physically located in building.
2. Name of manufacturer. Located on side or top of trap.
3. Size of the pipe entering the steam trap.
4. Model number. Usually on top or side of trap.
5. Steam pressure of unit being trapped.
6. Manufacturer's rated trap pressure. On top or side of trap.
7. Heating unit being trapped, e.g. radiator, fan coil unit etc.
8. Miscellaneous information about trap performance. History of trap problems. Date last repaired. Complete or parts.
9. Estimated square feet of radiation using dimensions of htg unit.
10. Maintain service record on complete trap replacement or repair parts installation.

STEAM RADIATORS

The stylish alternative to bulky cast iron!

STEAM RADIATORS

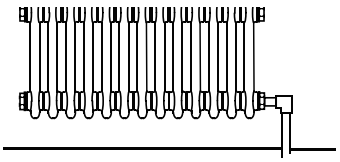
Style: Sleek 4" profile. Available in two heights (16" and 24") and five lengths (24", 36", 48", 60", and 72")

Immediate Delivery: Available for immediate delivery in white and two weeks for steel gray. Hundreds of colors are available by special order.

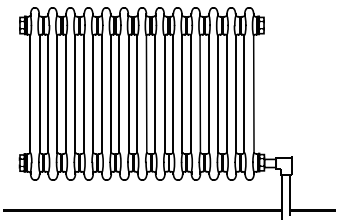
Quick and Easy Installation: The Charleston Pro is made for both one pipe and two pipe steam systems. Single piece construction, continuous mounting, individual wrapping and tagging, and uniform fittings (which allow the radiators to be piped six ways) make the Charleston Pro easy to specify and install.

Durability: The Charleston Pro's all-welded steel construction ensures a long service life. Proprietary internal construction guards against steam corrosion. All Charleston Pro Radiators have a five-year limited warranty.

16"



24"



CHARLESTON PRO CAPACITIES					
Nominal Length	24"	36"	48"	60"	72"
BTU/H OUTPUTS					
16" HEIGHT	2,990	4,370	5,980	7,590	8,970
24" HEIGHT	4,654	6,820	9,308	11,814	13,962

Tunstall®

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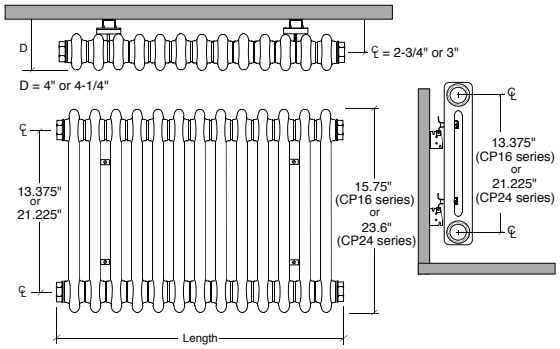
Steam Radiator Installation Tips

ROUGHING-IN



16" HIGH MODEL	CP16-24	CP16-36	CP16-48	CP16-60	CP16-72
Nominal Length	24"	36"	48"	60"	72"
LENGTH (IN.)	25.1"	35.98"	48.66"	61.34"	72.2"
WEIGHT (LBS)	21 lbs	30.3 lbs	40.5 lbs	51.3 lbs	60.5 lbs

24" HIGH MODEL	CP24-24	CP24-36	CP24-48	CP24-60	CP24-72
Nominal Length	24"	36"	48"	60"	72"
LENGTH (IN.)	25.1"	35.98"	48.66"	61.34"	72.2"
WEIGHT (LBS)	29.2 lbs	42.4 lbs	57.8 lbs	73.2 lbs	86.4 lbs

MOUNTING

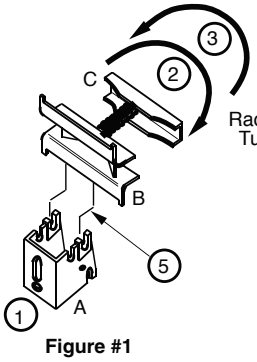
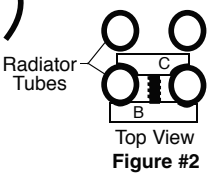
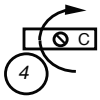


Figure #1



Top View
Figure #2



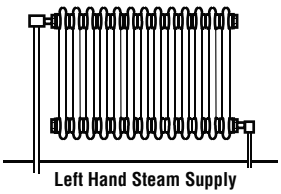
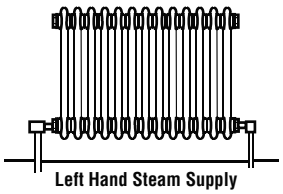
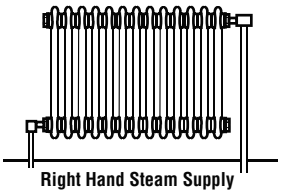
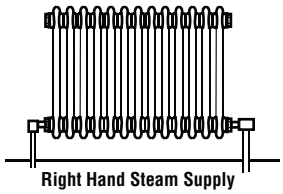
Front View
Figure #3

Mounting Tips:

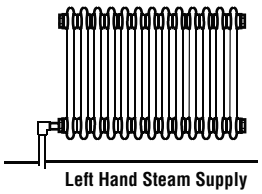
1. Lay out the desired position of the radiator on the wall. Determine the locations of solid wall members (wall studs, bracing, etc.). Mark the positions for the wall mounting brackets (A), noting that each bracket should fit in the center of the space between adjacent radiator tubes. Fasten all part A wall brackets securely to the wall using appropriate mounting fasteners (by others).
   Note: All of the brackets supplied should be used, half as top supports and half as bottom supports.
2. Rotate part C at a 90° angle to part B, and insert part C between two adjacent rear tubes of the radiator so that the bracket assembly B-C will line up with it's corresponding slot on part A.
3. Rotate part C back 90° in the opposite direction, so that the bracket assembly B-C "captures" the two adjacent rear tubes of the radiator (see Figure #2).
4. Tighten the screw on part C (see Figure #3), so that the bracket assembly B-C tightly clamps the radiator's rear tubes. Repeat steps 2, 3, and 4 for all remaining bracket assemblies.
5. Mount the radiator to the wall by placing parts B into the mounting slots of Parts A, Check to make sure that the radiator tilts at least 1/16" per foot towards the condensate return. If necessary, loosen all parts C slightly and adjust the radiator to get the proper radiator tilt.

PIPING

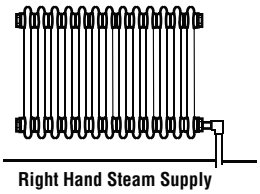
2-PIPE STEAM SYSTEM

PREFERRED	ALTERNATE
	
Left Hand Steam Supply	Left Hand Steam Supply
	
Right Hand Steam Supply	Right Hand Steam Supply

1-PIPE STEAM SYSTEM



Left Hand Steam Supply



Right Hand Steam Supply

GENERAL INSTALLATION TIPS

2- Pipe Steam System

1. A 1" NPT tapping is included on each corner of the radiator. Two 1" plugs are provided to plug the two unused radiator tappings. Use a 5/8" allen wrench to tighten these plugs. A third plug with a 1/8" vent tapping is also included. Pipe dope should be applied to the plugs.
2. The installer should supply and install the proper size reducing bushing for the steam trap to be used.
3. The mounting brackets must be secured to a load-bearing wall member (like a wall stud or solid backing) capable of handling the radiator's weight.
4. The radiator should be tilted a minimum of 1/16" per foot toward the condensate return.

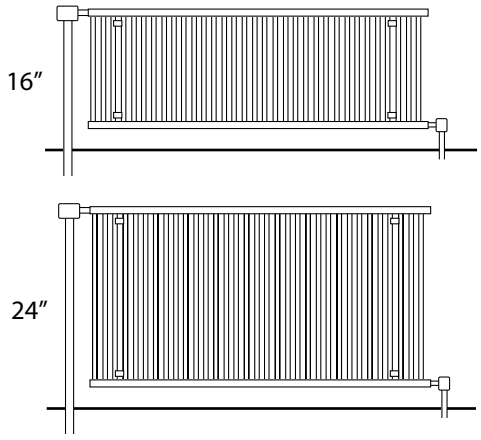
1- Pipe Steam System

1. A 1" NPT tapping is included on each corner of the radiator. Two 1" plugs are provided to plug the two unused radiator tappings. Use a 5/8" allen wrench to tighten these plugs. A third plug with a 1/8" vent tapping is also included. Pipe dope should be applied to the plugs.
2. The installer should supply and install the proper one pipe steam air vent or control valve in the 1/8" vent tapping.
3. The mounting brackets must be secured to a load-bearing wall member (like a wall stud or solid backing) capable of handling the radiator's weight.
4. The radiator should be tilted a minimum of 1/16" per foot toward the condensate return.

STEAM RADIATORS

The stylish alternative to bulky cast iron!

STEAMRADIATORS



Style: Sleek 2 ½″ profile. Available in two heights (16″ and 24″) and five lengths (24″, 36″, 48″, 60″, and 72″)

Immediate Delivery: Available for immediate delivery in white. Hundreds of colors are available by special order.

Quick and Easy Installation: The Steamview is made for both one pipe and two pipe steam systems. Single piece construction, continuous mounting, individual wrapping and tagging, and uniform fittings (which allow the radiators to be piped six ways) make Steamview easy to specify and install.

Durability: The Steamview's all-welded steel construction ensures a long service life. Proprietary internal construction guards against steam corrosion. All Steamview Radiators have a five-year limited warranty.

STEAMVIEW CAPACITIES					
Nominal Length	24″	36″	48″	60″	72″
BTU / H OUTPUTS					
16″ HEIGHT	2,564	3,763	5,104	6,306	7,646
24″ HEIGHT	3,553	5,225	7,106	8,778	10,659

Tunstall®

Tunstall Corporation
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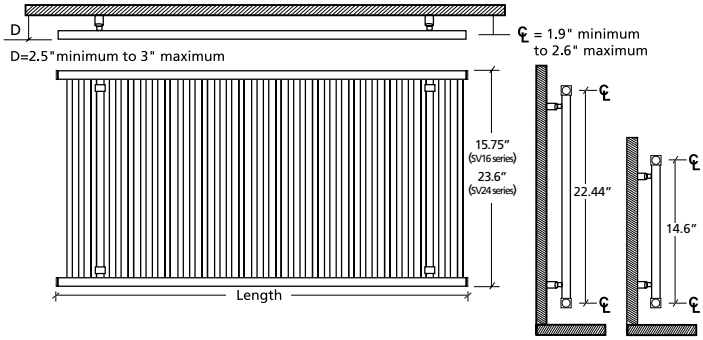
Steam Radiator Installation Tips

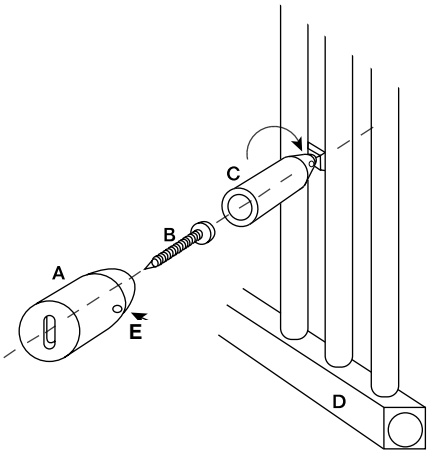
ROUGHING-IN



16" MODEL	SV16-24	SV16-36	SV16-48	SV16-60	SV16-72
Nominal Length	24"	36"	48"	60"	72"
LENGTH (IN.)	23.34"	34.68"	47.44"	58.78"	71.53"
WEIGHT (LBS)	10 lbs	15 lbs	22 lbs	27 lbs	33 lbs

24" MODEL	SV24-24	SV24-36	SV24-48	SV24-60	SV24-72
Nominal Length	24"	36"	48"	60"	72"
LENGTH (IN.)	23.34"	34.68"	47.44"	58.78"	71.53"
WEIGHT (LBS)	14 lbs	21 lbs	30 lbs	37 lbs	46 lbs

MOUNTING

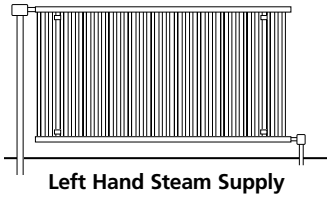
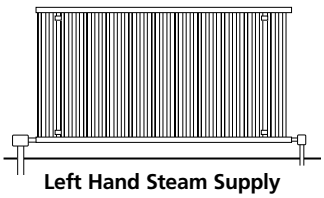
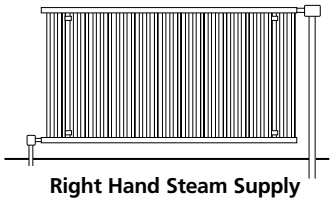
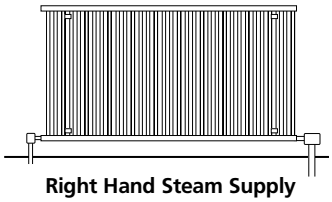


Mounting Tips:

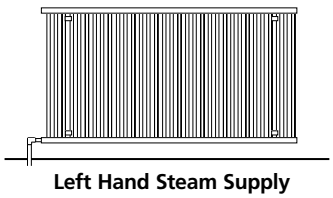
1. Lay out the desired position of the radiator on the wall. Determine the locations of solid wall members (wall studs, bracing, etc.). Mark the positions for the mounting brackets, noting that each bracket should fit in the center of the space between adjacent radiator tubes. **Note: All of the brackets supplied with the radiator should be used, half as top supports and half as bottom supports.**
2. Attach all of the bracket sleeves (A) to solid wall members, using the appropriate mounting fastener (B) (by others).
3. Position mounting bracket cylinders (C) between adjacent radiator(D) tubes, so that the cylinders (C) will line up with the bracket sleeves (A), mounted on the wall.
4. Rotate cylinder (C) to tighten and clamp the cylinder's end piece between the radiator's tubes.
5. Slide the cylinders (C) into the mounting sleeves (A), making final adjustments by loosening cylinder (C), sliding it into final alignment, and re-tightening it. Secure cylinder (C) to sleeve (A) by tightening up allen head screw (E). **Note: The radiator should tilt towards the condensate return at a rate of 1/16" per foot of radiator length.**

PIPING

2-PIPE STEAM SYSTEM

PREFERRED	ALTERNATE
	
Left Hand Steam Supply	Left Hand Steam Supply
	
Right Hand Steam Supply	Right Hand Steam Supply

1-PIPE STEAM SYSTEM



Left Hand Steam Supply

Right Hand Steam Supply

GENERAL INSTALLATION TIPS

2- Pipe Steam System

1. A 1" NPT tapping is included on each corner of the radiator. Two 1" plugs are provided to plug the two unused radiator tappings. Use a 5/8" allen wrench to tighten these plugs. A third plug with a 1/8" vent tapping is also included. Pipe dope should be applied to the plugs.
2. The installer should supply and install the proper size reducing bushing for the steam trap to be used.
3. The mounting brackets must be secured to a load-bearing wall member (like a wall stud or solid backing) capable of handling the radiator's weight.
4. The radiator should be tilted a minimum of 1/16" per foot toward the condensate return.

1- Pipe Steam System

1. A 1" NPT tapping is included on each corner of the radiator. Two 1" plugs are provided to plug the two unused radiator tappings. Use a 5/8" allen wrench to tighten these plugs. A third plug with a 1/8" vent tapping is also included. Pipe dope should be applied to the plugs.
2. The installer should supply and install the proper one pipe steam air vent or control valve in the 1/8" vent tapping.
3. The mounting brackets must be secured to a load-bearing wall member (like a wall stud or solid backing) capable of handling the radiator's weight.
4. The radiator should be tilted a minimum of 1/16" per foot toward the condensate return.

Model 2010

Three-Way Thermostatic Valve

2010	2” NPT
2010-1	1 1/2” NPT
2010J24	1 1/2” SAE O-Ring
A2010J32	2” SAE O-Ring
F2010	2” 125# FF Flange
SF2010	2” 150# RF Flange
SF2010X	2” 300# RF Flange

Tunstall (TFT) Thermostatic Valves utilize the principle of expanding wax, which in the semi-liquid state undergoes large expansion rates within a relatively narrow temperature range. The self-contained element activates a stainless steel sleeve, which directs flow. All TFT Thermostatic Valves are factory set at predetermined temperatures: no further adjustments are necessary. A wide range of temperatures are available for water and oil temperature control applications.

When used in a diverting application, on start-up the total fluid flow is routed back to the main system. As fluid temperature rises to the control range, some fluid is diverted to the cooling system. As fluid temperature continues to increase, more flow is diverted. When the thermostat is in a fully stroked condition, all fluid flow is directed to the cooling system. TFT Thermostatic Valves may also be used in a mixing application.

In a mixing application, hot fluid enters the “B” port and colder fluid enters the “C” port. The flows mix and the thermostat adjusts to reach the desired temperature, exiting the “A” port.

Standard TFT thermostatic valve housings are made from aluminum and grey iron castings, however, ductile iron, bronze, steel and stainless steel housings are available.

Available Connections: NPT, SAE O-Ring, 125# FF Flange, 150# and 300# RF Flange.

Optional features: High over temperature element, plated element. Other options available upon request.

Features

- Wide Range of Temperatures
- Heavy Duty
- Self-Contained
- Replaceable Element
- Non-Adjustable
- Rugged Construction
- Tamper-Proof
- Operate in Any Position
- Compact
- Available for Refrigeration Service

Tunstall®

Tunstall Corporation
118 Exchange Street
Chicopee, MA 01013
PH: 800-423-5578
Fax: 413-598-8109
www.tunstall-inc.com

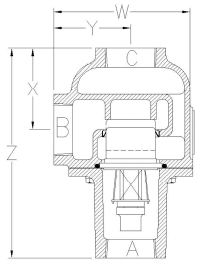
ISO 9001-2000

MADE IN U. S. A

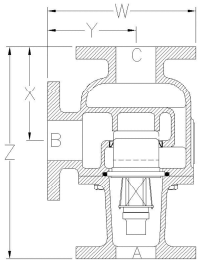
Model 2010

MODEL NUMBER	BODY MATERIAL (*)	NOMINAL PIPE SIZE	PRINCIPAL DIMENSIONS (UNITS in. & (mm)) "X"	"Y"	"W"	"Z"	MAX WIDTH IN THE OTHER PLANE	FLANGE DRILLING NO. OF HOLES	DIA. OF HOLES	BOLT CIRCLE	NO. OF ELEMENTS	APPROX. SHIPPING WEIGHT	NOTES OR NUMBERED ENDNOTES
*2010-1	A, B, D S, SS	1 1/2" NPT	3 13/16 (96.84)	3 9/16 (90.49)	6 5/16 (160.34)	9 3/4 (247.65)	5 1/2 (139.70)	N/A	N/A	N/A	1	A & D=21#, B=24# S & SS=23#	
*2010	A, B, D S, SS	2" NPT	3 13/16 (96.84)	3 9/16 (90.49)	6 5/16 (160.34)	9 3/4 (247.65)	5 1/2 (139.70)	N/A	N/A	N/A	1	A & D=21#, B=24# S & SS=23#	
*2010J24	A, B, D S, SS	SAE 24 1 1/2"	3 13/16 (96.84)	3 9/16 (90.49)	6 5/16 (160.34)	9 3/4 (247.65)	5 1/2 (139.70)	N/A	N/A	N/A	1	A & D=21#, B=24# S & SS=23#	
*2010J32	A, B, D S, SS	SAE 32 2"	3 13/16 (96.84)	3 9/16 (90.49)	6 5/16 (160.34)	9 3/4 (247.65)	5 1/2 (139.70)	N/A	N/A	N/A	1	A & D=21#, B=24# S & SS=23#	
*F2010	A, B, D	2" 125# FF FLANGE	4 3/4 (120.65)	4 9/16 (115.89)	7 9/16 (192.09)	10 5/8 (269.88)	6 (152.40)	4	3/4 (19.05)	4 3/4 (120.65)	1	A=32#, B=40# D=32#	
	S, SS	2" 150# RF FLANGE	4 7/8 (123.83)	4 9/16 (115.89)	7 9/16 (192.09)	10 7/8 (276.23)	6 (152.40)	4	3/4 (19.05)	4 3/4 (120.65)	1	S & SS=34#	
*F2010X	S, SS	2" 300# RF FLANGE	5 (127.00)	4 11/16 (119.06)	7 15/16 (201.61)	11 1/8 (282.58)	6 1/2 (165.10)	8	3/4 (19.05)	5 (127.00)	1	S & SS=36#	

* (Replace * with body material type; A=Cast Iron, B=Bronze, D=Ductile, S=Steel, SS=Stainless Steel)

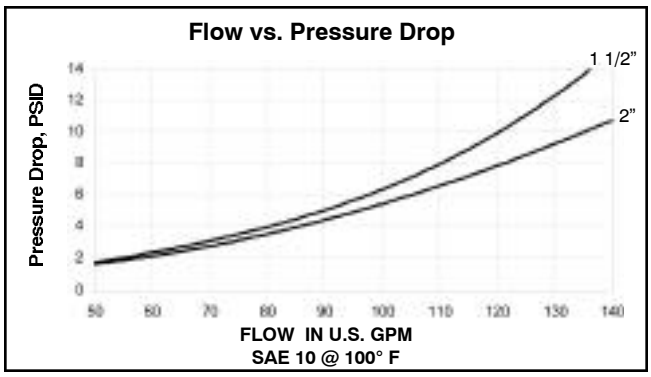


*2010-1, *2010, *2010J



*F2010, *F2010X

PRESSURE RATINGS	
MATERIAL	PSI
A, B	150
D	250
S, SS	500
SF, SSF	275
SFX, SSFX	720



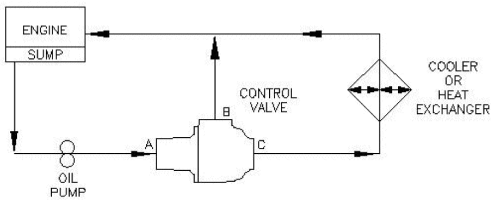
Recommended Pressure Drop is 2 to 7 PSI

PART #	DESCRIPTION
*2010	VALVE BODY (*See table for material)
*2020	VALVE COVER (*See table for material)
1570**	O-RING (Standard material is Buna-N)
2071	LIP SEAL
2050-Temp	THERMOSTAT (Temp to follow dash)
1600	HEX BOLT
1601	LOCK WASHER
FPE Model 2000 Replacement Kit** (*Includes the following:*)	
1570**	BUNA O-RING (Standard material is Buna-N)
2071	LIP SEAL
2050-Temp	THERMOSTAT (Temp to follow dash)

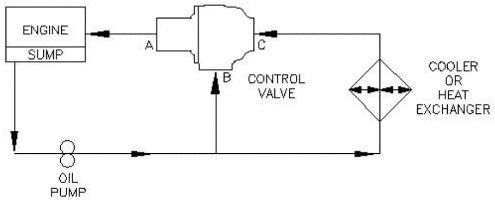
(For Viton® (V) or Neoprene (E) O-Ring material, replace ** with V or E)

Viton® is a registered trademark of Dupont Dow Elastomers

APPLICATION CHARTS



DIVERTING SYSTEM



MIXING SYSTEM

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118 Exchange Street
Chicopee, MA 01013
PH: 800-423-5578
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To Order

Specify Model Number, nominal temperature desired, and housing material. For Model coding information, visit our website or consult your factory representative.

MACON® CONTROLS

A respected national supplier of radiator valves and regulating sensors for the heating and cooling industry since 1975, ***Macon Controls*** *- a division of the Tunstall Corporation - maintains a solid reputation for energy-efficient products, trouble-free service, and virtually non-existent failure rates. Distinguished by superior quality and performance, all Macon valves and controls conform to ASHRAE Standard 102P-1983 and European Standard EN 215/1215 and carry a 12-month warranty.*

Macon Controls are ideal for hydronic and low-pressure steam heating applications – and they deliver up to 30 percent energy savings. A complete line of valve sizes and non-electric control models is available, allowing for temperature regulation of radiators, convectors, fin-tube baseboard, fan coils or wherever individual control is required.

As a pioneer and developer of "smart solutions", Macon also offers high quality, innovative accessories, including Umbrella adaptors ™ to upgrade existing thermostatic controls to Macon operators and E-Z Fit ™ Conversion kits which transform manual radiator valves to temperature sensitive self-acting valves.

NT SERIES VALVES

NON-ELECTRIC OPERATORS

ELECTRIC OPERATORS

ONE-PIPE STEAM

NT SERIES VALVE ACCESSORIES

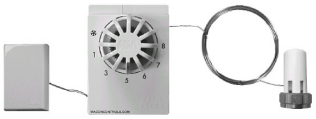
E-Z FIT™ CONVERSION INSERTS

UMBRELLA ADAPTORS

Tunstall Corporation
118 Exchange St • Chicopee, MA 01013
Phone: 413-594-8695 • Fax: 413-598-8109
www.maconcontrols.com

MACON® CONTROLS

Macon Controls Product Line

Vertical Angle Valve	Straight Valve	Horizontal Valve	Sweat Valve
			
Thermostatic Diverter or Mixing Valve	**MTW**	**EVOZ (formerly MTWZ)**	**ENTL B46000**
			
ENTLZ B56000	**VM Series**	**ZMC - ES & DDC Series**	**MVA 2-10V**
			
OPSK	**NT Series Valve Inserts**	**E-Z Fit ™ Conversion Kits**	**Umbrella Adaptors**
			

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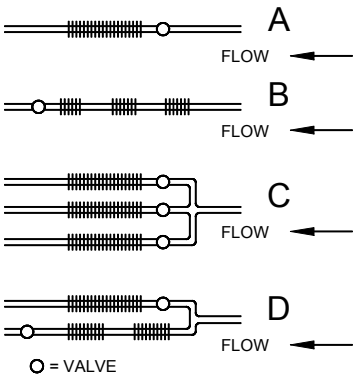
Operation

The *Macon* valve is designed to save energy by controlling hot water or low pressure steam heat in freestanding radiators, convectors, baseboards, fan coil units and the like in a loop, a zone or a unit. The valve, coupled with a *Macon* operator, provides a reliable automatic modulating unit. As room temperature drops, the *Macon* valve opens to allow more hot water or steam to flow through the radiator, thus allowing more heat into the room. When the room approaches the selected temperature, the operator causes the valve to begin closing off the flow of hot water or steam. This continued monitoring of the temperature is fully automatic, using no electricity whatsoever. The *Macon* valve can be equipped with any wide variety of *Macon* operators.

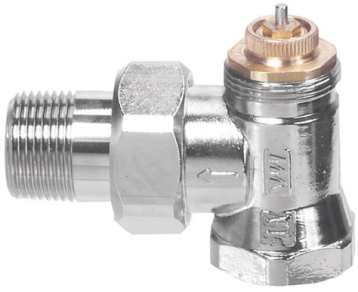
Features

- Compact dimensions
- Replaceable insert
- Stainless steel spindle
- Individual room control
- Easy one-trade installation
- Fuel savings up to 30%
- Prevents over- and under-heating
- Helps balance the heating system
- Same valve used for hot water or low pressure steam
- All NPT are forged brass nickel-plated
- Minimizes or eliminates expansion noises
- Suitable for nearly any hydronic heating application
- Operators can be changed without draining the system
- Shipped with a protective cap that can be used to control heating during the installing period



VALVE LOCATION IN SINGLE AND MULTIZONE HEATING SYSTEMS.

Vertical angle valve with straight nipple. NPT - female inlet, male union outlet.



N10637 - 1/2”
N10657 - 3/4”
N10677 - 1”
N10697 - 1-1/4”

Straight valve with straight nipple. NPT - female inlet, male union outlet.

N10737 - 1/2”
N10757 - 3/4”
N10777 - 1”
N10797 - 1-1/4”

Horizontal angle valve with straight nipple. NPT - female inlet, male union outlet.

N10837 - 1/2”
N10857 - 3/4”
N10877 - 1”
N10897 - 1-1/4”

Sweat valve with female inlet and outlet.

N10930 - 1/2”
N10950 - 3/4”
N10970 - 1”

Fail closed valves also available, consult factory.
All Macon valves and thermostats conform to ASHRAE Standard 102P-1983 and European Standard EN 215/1215. We are also ISO 9001 certified (1994) and ISO 14001 certified (1998).

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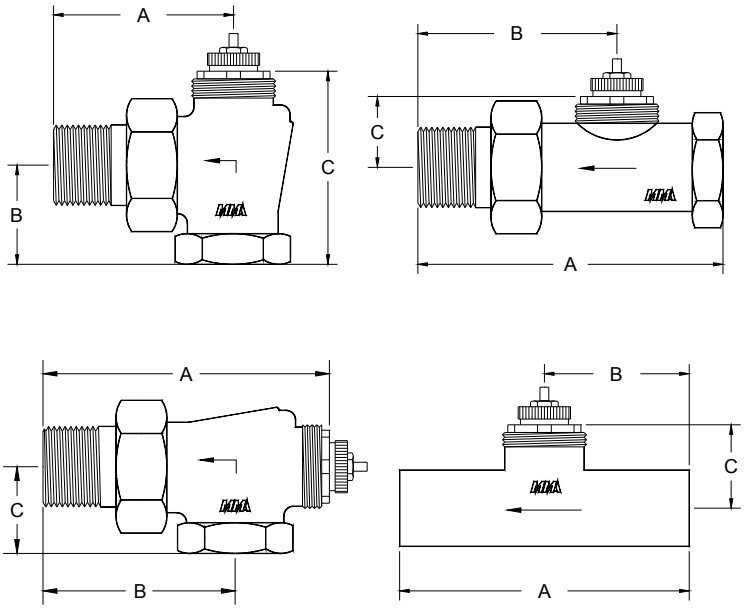
DATA - Macon Valves for NT Series

Vertical Angle NPT
1/2”, 3/4”, 1”, 1-1/4”

Straight NPT
1/2”, 3/4”, 1”, 1-1/4”

Horizontal Angle NPT
1/2”, 3/4”, 1”, 1-1/4”

Straight Female Sweat
1/2”, 3/4”, 1”



Disc Material: EPDM
Body Styles: Straightway or angle
Maximum steam pressure: 15 psig
Maximum static pressure: 145 PSI
Maximum water temperature: 250°F
Body tappings: Female inlet, male union outlet, Female sweat
Body Material: Forged brass, NPT valves are nickel-plated
Max. Differential pressure: 20 psi H_2O, refer to thermostat specs
Suggested Differential Pressure = 0.5 to 2.9 psi
Overall Height: Add thermostat dimensions less 1/4”

Macon NT Series Valves are in an open position when no operator is attached.

CV: 1/2” = 1.8
3/4” = 2.5
1” = 2.74
1-1/4” = 3.5

DIMENSIONS

VERTICAL ANGLE

BODY #	SIZE	A	B	C
N10637	1/2”	2-1/4”	1”	1-3/4”
N10657	3/4”	2-1/2”	1-1/8”	2-1/8”
N10677	1”	3”	1-3/8”	2-1/4”
N10697	1-1/4”	3-1/4”	1-3/4”	2-3/4”

STRAIGHTWAY

BODY #	SIZE	A	B	C
N10737	1/2”	3-1/2”	2-1/16”	1”
N10757	3/4”	4”	2-1/2”	1”
N10777	1”	4-5/8”	2-15/16”	1”
N10797	1-1/4”	5-1/4”	3-3/8”	1-1/8”

HORIZONTAL ANGLE

BODY #	SIZE	A	B	C
N10837	1/2”	3-3/8”	2-3/16”	1-1/2”
N10857	3/4”	3-3/4”	2-1/2”	1-1/4”
N10877	1”	4-3/16”	3”	1-3/8”
N10897	1-1/4”	4-3/4”	3-1/4”	1-7/8”

SWEAT VALVES

BODY #	SIZE	A	B	C
N10930	1/2”	2-3/16”	1-3/32”	1”
N10950	3/4”	2-11/16”	1-11/32”	7/8”
N10970	1”	3-5/32”	1-9/16”	1”

STEAM

BTU/hour

P.D.* with 10 PSI Inlet	3.5 C_v 1-1/4" Valves	2.74 C_v 1" Valves	2.5 C_v 3/4" Valves	1.8 C_v 1/2" Valves
1 psi	48,000	39,000	36,000	28,000
3 psi	87,000	70,000	65,000	46,000
5 psi	113,000	91,000	84,000	63,000
7 psi	130,000	104,000	96,000	72,000
10 psi	162,000	130,000	120,000	90,000

*P.D. = Pressure Drop
Capacity measured with 10 psi inlet pressure.
EDR = Equivalent Direct Radiation (in ft.^{2})

$$EDR = \frac{BTU/hr}{240} \qquad BTU/hr = 240 \times EDR$$

BTU/hour = lbs. steam/hour x 1000

HOT WATER

BTU/hour**

** Pressure Drop Ft.	P.D. PSI	3.5 C_v 1-1/4" Valves	2.74 C_v 1" Valves	2.5 C_v 3/4" Valves	1.8 C_v 1/2" Valves
1	.43	21,000	17,000	16,500	12,000
2	.87	28,000	23,000	22,000	15,500
4	1.7	44,000	35,000	32,500	23,500
6	2.6	53,000	43,000	40,000	29,000
8	3.5	64,000	51,000	47,000	33,500
10	4.3	70,000	56,000	52,000	37,500
12	5.2	77,000	62,000	57,000	41,000
14	6.1	83,000	67,000	62,000	44,500
16	7.0	88,000	71,000	66,000	47,500

** Assumes 20°F drop in water temperature through radiation.

GPM = $C_v \sqrt{P.D.}$ 1psi = 2.31 Ft. H_2O
BTU/hour = GPM x 10,000 1Ft. H_2O = .433 psi

EDR (Equivalent Direct Radiation in ft.^{2}) for Hot Water

Water Temperature	Cast Iron Radiator	Convector
200°F	209	205
190°F	187	183

BTU/hour = EDR in ft.^{2} x (Appropriate number from above EDR Table)
For example: 205 for 200°F water in convector

COMPARISON CHART

Description	MACON	Ammark		Bell & Gossett (ITT)	Honeywell Braukmann	Honeywell Sparco/ Braukamnn	Danfoss RA 2000	Taco	
		Old (SYR)	New					Series 53 (Old)	Series 54 (New)
½" Vertical Angle	N10637	70	60	TM12-50	V110E1004	V100E1055/5030	013G8014	5323	5423
½" Horizontal Angle	N10837	77	67	TM42-50	V110F1002	V100f1054	013G8013	5322	5422
½" Straight	N10737	71	61	TM21-50	V110D1000	V100D1056/5057	013G8015	5321	5421
½" Sweat	N10930	-	-	-	-	V100G5054	013G8042	-	5424
¾" Vertical Angle	N10657	70	60	TM12-75	V110E1012	V100E1063	013G8019	5333	5433
¾" Horizontal Angle	N10857	77	67	TM42-75	V110F1010	V100F1062	013G8018	5332	5432
¾" Straight	N10757	71	61	TM21-75	V110D1008	V100D1008	013G8020	5331	5431
¾" Sweat	N10950	-	-	-	-	V100G5062	013G8044	-	5434
1" Vertical Angle	N10677	70	60	TM12-100	V110E1020	V100E1071	013G8024	-	5443
1" Horizontal Angle	N10877	77	67	TM42-100	V110F1018	V100F1070	013G8023	-	5442
1" Straight	N10777	71	61	TM21-100	V110D1016	V100D1072	013G8025	-	5441
1" Sweat	N10970	-	-	-	-	-	-	-	5444
1¼" Vertical Angle	N10697	70	60	-	V110E1028	-	013G8031	-	5453
1¼" Horizontal Angle	N10897	77	67	-	V110F1026	-	013G8030	-	5452
1¼" Straight	N10797	71	61	-	V110D1024	-	013G8032	-	5451
Direct Mount T-Stat	ENT B26000	72	62	TM5	T104A1018/1040	T100A1028/1018	013G8200	5201	5401
Direct Mount T-Stat	MTW-28	72	62	TM5	T104A1018/1040	T100A1028/1018	013G8250	5201-3	5401
Remote Sensor T-Stat	EVOZ/MTWZ	73	63	TM6	T104F1021/1512	T100F1395/1021	013G8252	5203	5403
Remote Dial T-Stat	ENTL B46000	76	66	TM9	T104B1019/1038	T100B1035/1387	013G8562	5206	5406
Remote Sensor & Dial	ENTLZ B56000	74	-	-	T104C1015/1036	T100C1026/1015	013G8564	5211	5411
One Pipe Steam Valve	OPSK	-	-	TM1PS	Y108P	Y100P	013G0140	5213	5413

	 MTW*	 MTW-HS*	 EVOZ (MTWZ)	 ENTL B46000	 ENTLZ B56000	 VM-24 Volt
 Vertical Angle	Not recommended (may shut off prematurely due to poor air circulation)	Yes	Yes	Yes	Yes	Yes
 Straight	Yes, if thermostat is mounted inverted or horizontal	Yes	Yes	Yes	Yes	Yes
 Horizontal Angle	Yes	Yes	Yes	Yes	Yes	Yes
 Sweat	Yes, if thermostat is mounted inverted or horizontal	Yes	Yes	Yes	Yes	Yes

*Not recommended within enclosure.

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Valves - Macon Straight, Vertical Angle, Horizontal Angle or Copper x Copper Sweat as Required:
Forged brass, nickel plated, female inlet, male union outlet or copper x copper brass body.
EPDM seat suitable for 15 psi steam, 250°F hot water, maximum static pressure 145psi.
Replaceable insert assembly with raised knurled serrations and stainless steel spindle and stainless steel spring.

Vertical Angle Valve with straight nipple. NPT - female inlet, male union outlet.
½" N10637
¾" N10657
1" N10677
1¼" N10697

Straight valve with straight nipple NPT - female inlet, male union outlet.
½" N10737
¾" N10757
1" N10777
1¼" N10797

Horizontal angle valve with straight nipple. NPT - female inlet, male union outlet.
½" N10837
¾" N10857
1" N10877
1¼" N10897

Sweat valve with female inlet and outlet.
½" N10930
¾" N10950
1" N10970

Direct Mount Thermostat - Macon Model MTW:
Direct acting, built in sensor, wax filled, hysteresis .9°F, max movement per 1°F = .007
Range 46°-82°F with limit and locking features
Must have positive shut off, maximum differential pressure 20psi H2O
Heat diffusing rings and knurled serration that lock the thermostatic dial to the valve body
Tamper proof, Non-Removable high impact plastic protection rings
12 month warranty, and must conform to ASHRAE Standard 102p-1983

MTW

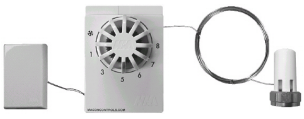
Remote Sensor Thermostat - Macon Model EVOZ (formerly MTWZ):
Valve mounted setting knob with remote temperature sensor
Capillary to be stainless steel, 78" long minimum
Provide high impact plastic sensor guard
Temperature range 50-82°F, with limit and locking features
Must have positive shut off, maximum differential pressure 20psi H2O
Heat diffusing rings and knurled serration that lock the thermostatic dial to the valve body
12 month warranty, and must conform to ASHRAE Standard 102p-1983

EVOZ (Shown with Valve)

Remote Dial Thermostat Model Macon ENTL-B46000:
Remote mounted dial with sensor behind dial, minimum 78" stainless steel capillary
High impact plastic dial operator, range 46°-80°F with limit and locking features
Must have positive shut off, maximum pressure differential 20psi H2O
12 month warranty, and must conform to ASHRAE Standard 102p-1983

ENTL B46000
(Shown with Valve)

Combination Remote Dial / Remote Sensor Thermostat - Macon Model ENTLZ-B56000:
Combination remote setting dial/remote sensor, minimum 78" stainless steel capillary to
Setting dial and 78" stainless steel capillary to temperature sensor
Requires the capability to remove temperature sensor from dial with minimum 78" S.S. capillary
Provide high impact plastic sensor guard
Temperature range 46-80°F, with limit and locking features
Must have positive shut off, maximum differential pressure 20psi H2O
12 month warranty, and must conform to ASHRAE Standard 102p-1983



ENTLZ B56000

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HELPFUL HEATING HINTS

- 1 sq. ft. steam radiation in a room at 70° gives off 240 BTU/hr.
- 1 boiler horsepower is equivalent to 134 sq. ft. of steam radiation.
- 1 gal. of oil per hour heats 400 sq. ft. of steam radiation in 0°F weather.
- 1/3 gal. of oil per hour produces 1 boiler horsepower.
- 1 lb. of steam per hour is equivalent to 4 sq. ft. EDR.
- 1 lb. of steam per hour produces 1000BTU/hr.
- 1 boiler horsepower equals 33,500 BTU/hr.
- 1 kw equals 3412 BTU.
- 1 ton of refrigeration equals 12,000 BTU/hr.
- When multiple zoning and existing single zone system, be sure to install a condensate pump and vacuum breakers to avoid water hammer and related problems.
- On steam to water heat exchanges with steam in the shell, a vacuum breaker is required to break any induced vacuum.
- 1 GPM flowing through a heating system produces 10,000 BTU/hr. based on 20°F temperature drop.
- Based on a 20°F temperature drop:
  ¾” copper will handle up to 35,000 BTU
  1” copper will handle up to 75,000 BTU
  1-1/4” copper will handle up to 130,000 BTU
  1-1/2” copper will handle up to 200,000 BTU
- To estimate heat loss for a concrete block warehouse with average amount of glass, multiply length x width x height x 6 to arrive at BTU/hr.

+

=

Existing Warren Webster 1/2" Sylphon Hand Valve

Tunstall/Macon E-Z Fit Conversion Kit #RSWW-1/2-SYL

New Self-Contained Valve w/Macon ENTZ Thermostatic Operator Shown

+

=

Existing Honeywell Braukmann V110 Series Valve with Remote Dial

Tunstall/Macon E-Z Fit Conversion Kit #RSBRK

New Self-Contained Valve w/Macon ENTL Thermostatic Operator Shown

+

=

Existing Flair Valve with Direct Mount

Tunstall/Macon E-Z Fit Conversion Kit #RSFL

New Self-Contained Valve w/Macon ENT Thermostatic Operator Shown

NOTE: ENT (old style) = MTW-28 (new style)
ENTZ (old style) = MTWZ (new style)

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Existing Flair Valve with Direct Mount T'Stat

+

Tunstall/Macon E-Z Fit Conversion Kit #RSFL

=

New Self-Contained Valve w/Macon ENT Thermostatic Operator Shown

Existing Danfoss RA with RA-6 Control

+

Tunstall/Macon E-Z Fit Conversion Kit #RSDNF-RA

=

New Self-Contained Valve w/Macon ENTZ Thermostatic Operator Shown

Existing Danfoss RA2000 1/2" #013G8015

+

Tunstall/Macon E-Z Fit Conversion Kit #RSDNF-TT4

=

New Self-Contained Valve w/Macon ENT Thermostatic Operator Shown

CONVERSION INSERTS

NOTE: ENT (old style) = MTW-28 (new style)
ENTZ (old style) = MTWZ (new style)

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Phone (413) 594-8695 · Fax (413) 598-8109
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Tunstall / Macon E-Z Fit™ Conversion Kits for Manual Radiator Valve Applications

Part #	Valve Manufacturer
RSARM	Armstrong MV2, MV3
RSBJ	Barnes & Jones Series 88
RSBJ-F,K	Barnes & Jones Series F,K
RSDL	DAHL - Canada
RSDNB	Dunham 740, 840
RSHA	Hammond
RSHF	Hoffman 180
RSIL	Illinois 65
RSMA	Marsh
RSMEP	MEPCO
RSSA	Sarco
RSST	Sterling
RSTR	Trane
RSWW	Warren Webster
RSWW-SYL	Warren Webster Sylphon

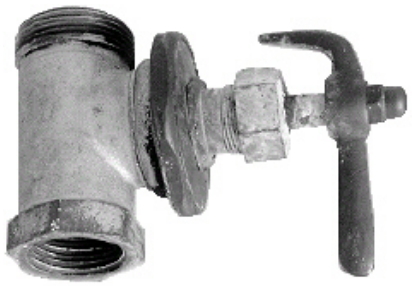
Macon RS Inserts for Conversion to Macon Thermostatic Operators

Part #	Valve Manufacturer
RSAMK-TT6	Ammark-SYR ½, ¾ 70 Series
RSBRK	Braukmann: V110, V105
RSB&G	Bell & Gossett (ITT)
RSDNF-RA	Danfoss: RA
RSDNF-TT1	Danfoss: RAV ¾" & 1" Hor. Angle
RSDNF-TT2	Danfoss: RAV ½", ¾" Vert. Angle, Straight
RSDNF-TT3	Danfoss: RA2000 ¾" Vert. Angle, Straight
RSDNF-TT4	Danfoss: RA2000 ½" Vert. Angle, Straight
RSFL	Flair
RSBRK-V100	Honeywell Braukmann V100
T23000	Minneapolis Honeywell V5061
RSTACO	Taco (Heat - Gard)
RSTACO-TT5	Taco (1990 On), Eire Techmate
RSTND	Tour & Andersson

If not listed, contact a distributor.

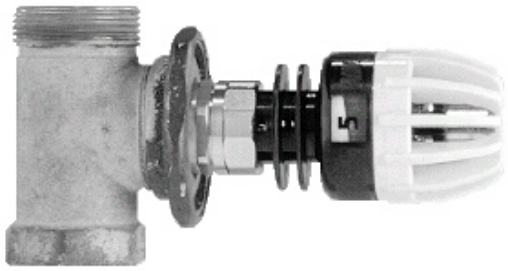
Tunstall E-Z Fit conversions can be engineered for all manual radiator valves. Sample may be required.

If not listed, contact your representative or the engineering staff at Tunstall Corporation.



Manual Radiator Valve

Converts into:



Macon ENT B26000 (old style shown)
Macon MTW-28 (new style)

Tunstall Corporation
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12-Month Warranty

WARRANTY: All MACON products are under warranty for a period of 12 months from date of purchase against faulty workmanship or defective material under normal usage and service. Under the warranty we will replace any product or part F.O.B. our factory when goods have been returned prepaid to us, and which upon our examination shall disclose to have been defective. The company shall not be held liable for consequential damage of any kind and no other claims will be met. All goods repaired under warranty will be shipped back to customer transportation collect. Under no circumstances is the valve to be subjected to more than 15 psi steam.

RETURNED GOODS: Unauthorized return of materials is not accepted. Credit for authorized returns only will be issued at the invoice price or prevailing price, if lower, less a restocking charge of minimum 25%. Minimum charge $25.00.

Obsolete materials and articles made to order or specification cannot be returned.

If inspection shows goods returned are defective due to:

1. Manufacture - goods will be replaced or repaired at no charge under the guarantee and shipping costs will be reimbursed.
2. Usage - e.g., valves full of dirt, rust or any foreign material, incorrect usage, overtightening on threads, abuse or incorrect reassembly, etc. Goods will be replaced or repaired at cost and charged to the user, and cost of shipment will be charged to user.

Macon Controls obligation under this warranty is limited to the repair or replacement of defective parts and does not include reimbursement for expense of removing or installing the product.

NOTES:

- Prices subject to change without notice
- Design, specification and details subject to change without notice
- Full Terms and Conditions can be found at www.tunstall-inc.com