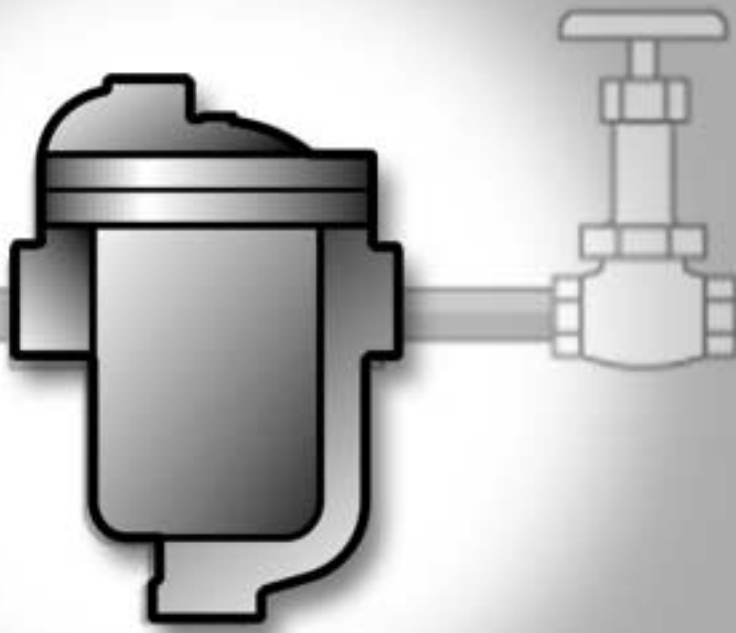


**Steam Trapping
and Steam Tracing
Equipment**



Armstrong



Armstrong®

Intelligent System Solutions™

STEAM • AIR • HOT WATER



Pay less money for energy— and more attention to the environment.

It's pretty obvious, really. An efficient steam trap wastes less energy, which means you burn less fuel and reduce emissions. The results are energy savings and a cleaner, healthier environment. By helping companies manage energy, Armstrong steam traps are also helping protect the world we all share.

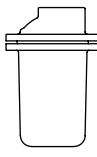
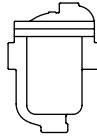
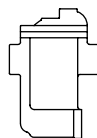
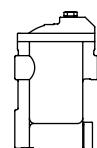
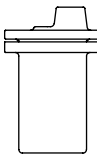
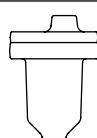
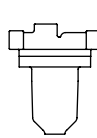
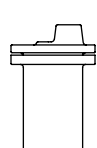
As a steam trap wears, it loses efficiency and begins to waste energy. But Armstrong inverted bucket traps last years longer than other traps. They operate more efficiently longer because the inverted bucket is the most reliable steam trap operating principle known.

Clearly, the longer an efficient trap lasts, the more it reduces energy wasted, fuel burned and pollutants released into the air. It's an all-around positive situation that lets the environment win, too. Bringing energy down to earth in your facility could begin with a renewed focus on your steam system, especially your steam traps. Said another way: Zeroing in your steam traps is an easy way to pay less money for energy—and more attention to the environment.

Companies around the world are beginning to realize that rather than being separate challenges, energy and the environment are and have always been a single mission. And that quality management in one area will surely impact the other.



Armstrong Steam Trap ID Charts

Illustration	Type	Flow Direction	Connection Type	Max. Allow. Press. psig	TMA °F	Body Material	Model	Max. Oper. Press. psig	Connection Size							Located on Page
									1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	
	Series 200 Inverted Bucket Capacities to 20,000 lb/hr	↑	Screwed	250	450	ASTM A48 Class 30 Cast Iron	211	250	●							ST-11
							212	250	●	●						
							213	250	●	●	●					
							214	250			●	●				
							215	250			●	●	●			
							216	250					●	●		
	Series 800 Inverted Bucket Capacities to 20,000 lb/hr	→	Screwed	250	450	ASTM A48 Class 30 Cast Iron	800	150	●	●					ST-13	
							811	250	●	●	●					
							812	250	●	●						
							813	250			●	●				ST-15
							814	250			●	●	●			
							815	250			●	●	●	●		
816	250					●	●									
	Series 880 Inverted Bucket Capacities to 4,400 lb/hr	→	Screwed	250	450	ASTM A48 Class 30 Cast Iron	880	150	●	●					ST-17	
							881	250	●	●	●					
							882	250	●	●						
							883	250			●	●	●			
	Series 980 Inverted Bucket Capacities to 4,400 lb/hr	→	Screwed Socketweld Flanged†	600	650	ASTM A216 WCB Carbon Steel	981	600	●	●				ST-19		
							983	600			●	●				
	Series 300 Inverted Bucket Capacities to 20,000 lb/hr	↑	Screwed Socketweld Flanged†	★★		ASTM A105 Forged Steel	310	400	●	●				ST-21		
				770			312	600	●	●	●					
				600	★★		700	313	650	●	●	●				
				1,080			314	650			●	●	●			
				1,130			315	650			●	●	●		●	
				965			316	650					●		●	
1,050																
	Series 411G Inverted Bucket Capacities to 1,300 lb/hr	↑	Screwed Socketweld Flanged†	★★	★★	ASTM A105 Forged Steel	411G	1,000	●	●				ST-23		
	Series 421 Inverted Bucket Capacities to 1,300 lb/hr	→	Screwed Socketweld Flanged†	★★	★★	Body ASTM A105 Forged Steel Cap ASTM A216 WCB	421	1,000	●	●				ST-23		
	Series 400 Inverted Bucket Capacities to 20,000 lb/hr	↑	Screwed Socketweld Flanged†	★★	★★	ASTM A182 F22 Forged Steel	413	1,000	●	●	●			ST-25		
				1,080	850		415	1,000			●	●				
				1,350			416	1,000				●	●			

★★ See tables on pages ST-21, ST-24 and ST-26 for complete temperature/pressure rating information.

†Operating pressure and temperature may be limited depending on the class of flange selected.



Armstrong® Steam Trap ID Charts

Steam Trapping and Steam Tracing Equipment

Illustration	Type	Flow Direction	Connection Type	Max. Allow. Press. psig	TMA °F	Body Material	Model	Max. Oper. Press. psig	Connection Size							Located on Page	
									3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"		
	Series 401-SH Inverted Bucket Capacities to 770 lb/hr	↑	Screwed Socketweld Flanged†	1,000	800	Carbon Steel ASTM A106 Gr. B	401-SH	1,000		●	●						ST-27
	Series 501-SH Inverted Bucket Capacities to 950 lb/hr	↑	Screwed Socketweld Flanged†	1,540	850	316L Stainless Steel ASTM A312	501-SH	1,540		●	●						ST-27
	Series 5000 Inverted Bucket Capacities to 5,150 lb/hr	↑	Socketweld Flanged†	★★ 1,730	★★ 900	ASTM A182 F22 Forged Steel	5133G	1,500		●	●	●					ST-29
				★★ 2,070			5155G	1,800			●	●	●				
	Series 6000 Inverted Bucket Capacities to 6,500 lb/hr	↑	Socketweld Flanged†	★★ 3,090	★★ 900	ASTM A182 F22 Forged Steel	6155G	2,700				●	●				ST-31
	Series 1000 Inverted Bucket Capacities to 4,400 lb/hr	↑	Screwed Socketweld	400	800	304L Stainless Steel	1010	150		●	●						ST-35
				400	800		1011	400		●	●						
				650	600		1022	650			●						
				450	800		1013	450				●					
	Series U-1000 Inverted Bucket Capacities to 2,380 lb/hr	↗	Screwed Socketweld	400	500	304L Stainless Steel (optional strainer is carbon steel)	U-1010	150		●	●						ST-35
				400	500		U-1011	400		●	●						
				450	500		U-1022	450			●						
	Series 1800 Inverted Bucket Capacities to 2,380 lb/hr	→	Screwed Socketweld	400	800	304L Stainless Steel	1810	200	●	●						ST-37	
				400	800		1811	400		●	●						
				650	600		1822	650			●	●	●				
	Series 2000 Inverted Bucket Capacities to 1,300 lb/hr	↕	Screwed Socketweld	400	800	304L Stainless Steel	2010	200		●	●	●				ST-39	
				400	800		2011	400		●	●	●					
				650	600		2022	650			●	●	●				
	Series 20-DC Automatic Differential Controllers Capacities to 20,000 lb/hr	↑ ↓	Screwed	250	450	ASTM A48 Class 30 Cast Iron	21-DC	250		●						ST-41	
							22-DC	250			●						
							23-DC	250				●					
							24-DC	250					●				
							25-DC	250						●			
							26-DC	250									●

★★ See tables on pages ST-30 and ST-32 for complete temperature/pressure rating information.
†Operating pressure and temperature may be limited depending on the class of flange selected.

Steam Trap ID Charts



Illustration	Type	Flow Direction	Connection Type	Max. Allow. Press. psig	TMA °F	Body Material	Model	Max. Oper. Press. psig	Connection Size							Located on Page			
									1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"		3"		
	Series 80-DC Automatic Differential Controllers Capacities to 20,000 lb/hr		Screwed	250	450	ASTM A48 Class 30 Cast Iron	81-DC 82-DC 83-DC 84-DC 85-DC 86-DC	250 250 250 250 250 250		●								ST-43	
	Series TVS 80-DC Automatic Differential Controllers Capacities to 4,400 lb/hr		Screwed	250	450	ASTM A48 Class 30 Cast Iron	TVS 81-DC TVS 82-DC TVS 83-DC	250 250 250	●	●								ST-45	
	Series 30-DC Automatic Differential Controllers Capacities to 20,000 lb/hr		Screwed	1,080 1,130 1,015 1,100	700	ASTM A105 Forged Steel	33-DC 34-DC 35-DC 36-DC	650 650 650 650			●			●		●		ST-47	
	Series B & BI F&T Capacities to 8,900 lb/hr		Screwed	125	353	ASTM A48 Class 30 Cast Iron	B2, BI2 B3, BI3	30 30	●▲	●▲								ST-51	
				175	377		B4, BI4 B5 B6 B8	30 30 30 30		●▲	●	●		●					
	Series A & AI F&T Capacities to 8,600 lb/hr		Screwed	175	377	ASTM A48 Class 30 Cast Iron	A12 A3, AI3 A4, AI4 A5 A6 A8	175 175 175 175 175 175	▲	●▲	●▲	●	●		●			ST-53	
	Series J&K F&T Capacities to 105,000 lb/hr		Screwed	175	450	ASTM A48 Class 30 Cast Iron	J8 K10	175 50							●			ST-55	
	Series L&M F&T Capacities to 208,000 lb/hr		Screwed Flanged† (screw on)	250	450	ASTM A48 Class 30 Cast Iron	L8 L10 M12	250 250 250						●		●		ST-57	
	Series CS F&T Capacities to 13,281 lb/hr		Screwed Socketweld Flanged†	600	650	Cast Steel	CS	465	●	●	●	●	●	●				ST-59	
	Series LS&MS F&T Capacities to 280,000 lb/hr		Screwed Socketweld Flanged†	450	650	ASTM A216 WCB Carbon Steel	LS8 LS10 MS12	450 450 450						●		●		ST-61	

▲ Series AI and BI for in-line connection.

†Operating pressure and temperature may be limited depending on the class of flange selected.



Armstrong® Steam Trap ID Charts

Steam Trapping and Steam Tracing Equipment

Illustration	Type	Flow Direction	Connection Type	Max. Allow. Press. psig	TMA °F	Body Material	Model	Max. Oper. Press. psig	Connection Size				Located on Page	
									3/8"	1/2"	3/4"	1"		
	TVS 800 Trap Valve Station Capacities to 4,400 lb/hr	→	Screwed	250	450	ASTM A48 Class 30 Cast Iron	TVS 811 TVS 812 TVS 813	250 250 250		●	●	●	●	ST-63
	TVS 4000 Trap Valve Station	↕	Screwed Socketweld	650	600	ASTM A351 Gr. CF8M	TVS 4000	650		●	●			ST-67
	TVS 2000 Trap Valve Station	↕	Screwed Socketweld	600	500	304-L Stainless Steel	TVS 2000	600		●	●			ST-71
	Series CD-33 Disc Capacities to 2,428 lb/hr	↔	Screwed	915	752	ASTM A743 Gr. CA40	CD-33	600		●	●	●	ST-75	
	Series CD-33S Disc w/Integral Strainer Capacities to 2,428 lb/hr	↕					CD-33L		●	●				
		↕					CD-33S		●	●	●			
	Series CD-3300 Disc Capacities to 800 lb/hr	↕	Screwed Socketweld	720	750	Stainless Steel	CD-3300	450		●	●	●	ST-78	
	Series CD-40 Controlled Disc Capacities to 2,850 lb/hr	↔	Screwed	600	500	Carbon Steel	CD-41	600	●	●		ST-79		
		↕					CD-42	600		●				
		↕					CD-43	600			●			
	Series CD-60 Controlled Disc Capacities to 2,850 lb/hr	↔	Screwed Socketweld	600	750	Forged Carbon Steel	CD-61	600	●	●		ST-79		
		↕					CD-62	600		●				
		↕					CD-63	600			●			
	Series WT Thermostatic Wafer Cold Water Start-up Capacities to 1,600 lb/hr	↔	Screwed Socketweld	400	650	304-L Stainless Steel	WT-1	400		●	●	ST-81		
		↕		600	750	C1018 Carbon Steel	WT-3	600		●	●			
		↕		400	650	304-L Stainless Steel	WT-2000	400		●	●		●	
	Series MT Thermostatic Wafer Cold Water Start-up Capacities to 1,000 lb/hr	↔	Screwed Socketweld Flanged †	250	400	304-L Stainless Steel	WMT-1	250	1/4" 3/8"	●		ST-83		
		↕		350	662	Carbon Steel	MT-2	250		●	●			

†Operating pressure and temperature may be limited depending on the class of flange selected.

Steam Trap ID Charts



Illustration	Type	Flow Direction	Connection Type	Max. Allow. Press. psig	TMA °F	Body Material	Model	Max. Oper. Press. psig	Connection Size				Located on Page
									3/8"	1/2"	3/4"	1"	
	Model SH Bimetallic		Screwed NPT BSPT Socketweld Flanged†	350	662	Carbon Steel	SH-250	250		●	●	●	ST-84
	Cold Water Start-up Capacities to 11,000 lb/hr		Screwed NPT BSPT Socketweld Buttweld Flanged†	900	900	Stainless Steel	SH-900	L = 650* H = 900*		●	●		ST-84
			Buttweld Flanged†									●	
	Series TT Thermostatic Bellows		Screwed	300	450	304-L Stainless Steel	TTF-1	300		●	●		ST-85
							TTF-1R			●	●		
	Capacities to 3,450 lb/hr		Screwed Socketweld				TT-2000		●	●	●		
	Series TS-2/TS-3 Radiator		Threaded	50	300	Bronze	TS-2	50		●	●		ST-88
	Capacities to 1,600 lb/hr			65	315		TS-3	65		●	●	●	
	TAVB Thermostatic Bellows w/Integral Vacuum Breaker		Straight-Thru Screwed	300	450	304-L Stainless Steel	TAVB-2 TAVB-3	175		●	●		ST-87
	Series TC Thermostatic Clean Steam Clamped		Sanitary	120	350	Stainless Steel	TC-C	100		●	●	●	
	Series TC Thermostatic Clean Steam Sealed		Sanitary	150	366	Stainless Steel	TC-S	120		●	●	●	ST-89
			Threaded							●	●		
	Capacities to 3,775 lb/hr		Tube End							●	●		
	Series TC Thermostatic Clean Steam Repairable		Sanitary	120	350	Stainless Steel	TC-R	100		●	●	●	
			Threaded							●	●		
	Capacities to 3,775 lb/hr		Tube End							●	●		

† Operating pressure and temperature may be limited depending on the class of flange selected.

* L = low pressure, H = high pressure.