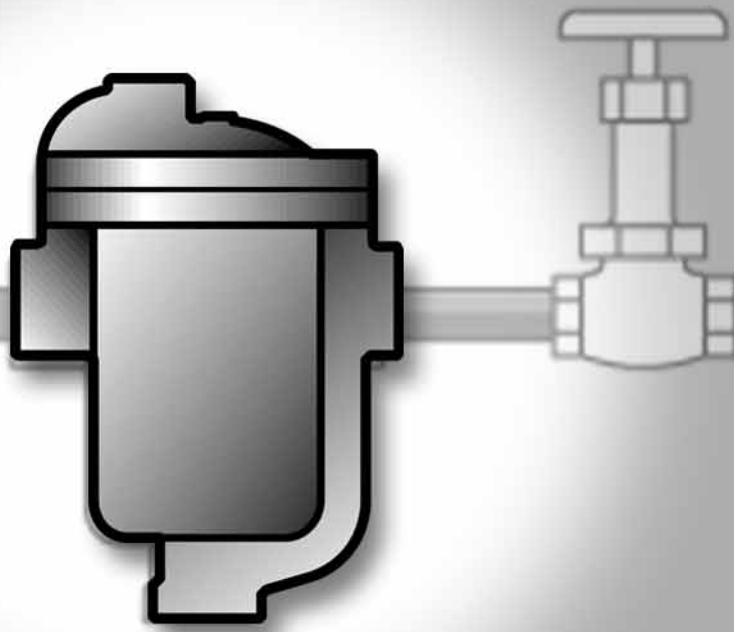


Steam Trapping  
and Steam Tracing  
Equipment



**Armstrong**



**Armstrong**<sup>®</sup>

Intelligent System Solutions<sup>™</sup>

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.

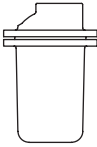
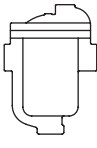
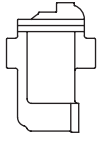
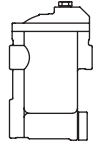
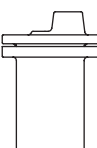
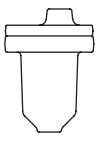
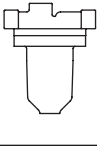
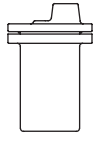
As a steam trap wears, it loses efficiency and begins to waste energy. But Armstrong inverted bucket traps last years longer than other traps. They operate more efficiently longer because the inverted bucket is the most reliable steam trap operating principle known.

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 on 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	600		●	●	●							
				600	1,080		●	●	●							
				1,130	965		●	●	●	●						
				965	1,050			●	●	●	●					
				1,050	650			●	●	●	●					
	Series 411G Inverted Bucket  Capacities to 1,300 lb/hr	↑	Screwed Socketweld Flanged †	★★	★★	ASTM A105 Forged Steel	411G	1,000	●	●				ST-23		
				1,000	700											
	Series 421 Inverted Bucket  Capacities to 1,300 lb/hr	→	Screwed Socketweld Flanged †	★★	★★	Body ASTM A105 Forged Steel	421	1,000	●	●				ST-23		
				1,000	700	Cap ASTM A216 WCB										
	Series 400 Inverted Bucket  Capacities to 20,000 lb/hr	↑	Screwed Socketweld Flanged †	★★	★★	ASTM A182 F22 Forged Steel	413	1,000	●	●	●			ST-25		
				1,050	850											
				1,080					●	●	●					
				1,350			416	1,000			●	●				

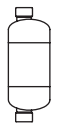
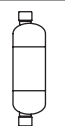
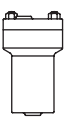
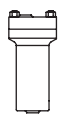
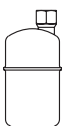
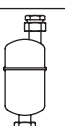
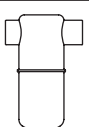
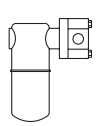
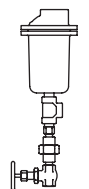
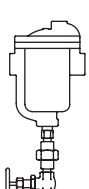
★★ See tables on pages ST-21, ST-24 and ST-26 for complete temperature/pressure rating information.

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



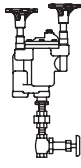

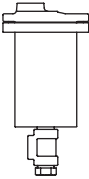





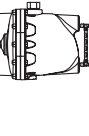

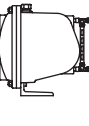





# Armstrong® Steam Trap ID Charts

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 1,802 lb/hr	→	Screwed Socketweld	400	800	304L Stainless Steel	1810	200	●	●						ST-37	
				650	600		1811	400		●	●						
							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 Condensate 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							●		
	Series 80 DC Automatic Differential Condensate Controllers Capacities to 20,000 lb/hr	↕	Screwed	250	450	ASTM A48 Class 30 Cast Iron	81-DC	250			●				ST-43		
							82-DC	250			●						
							83-DC	250				●					
							84-DC	250					●				
							85-DC	250						●			
							86-DC	250								●	

★★ See tables on page 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 TVS 80-DC Automatic Differential Condensate Controllers Capacities to 4,400 lb/hr		Screwed	250	450	ASTM A48 Class 30 Cast Iron	TVS 81-DC	250	●	●								ST-45		
							TVS 82-DC	250	●	●										
							TVS 83-DC	250		●	●									
	Series 30-DC Automatic Differential Condensate Controllers Capacities to 20,000 lb/hr		Screwed		700	ASTM A105 Forged Steel	33-DC	650			●							ST-47		
							34-DC	650			●									
							35-DC	650				●								
							36-DC	650					●							
	Series B & BI F&T Capacities to 8,900 lb/hr		Screwed	125	353	ASTM A48 Class 30 Cast Iron	B2, BI2	30	▲								ST-51			
							B3, BI3	30		▲										
				175	377		B4, BI4	30			▲		●							
							B5	30				●								
							B6	30					●							
B8	30							●												
	Series A & AI F&T Capacities to 8,600 lb/hr		Screwed	175	377	ASTM A48 Class 30 Cast Iron	AI2	175	▲								ST-53			
							A3, AI3	175		▲										
							A4, AI4	175			▲		●							
							A5	175				●								
							A6	175					●							
							A8	175						●						
	Series JD & KD F&T Capacities to 142,000 lb/hr		Screwed Flanged	300	650	ASTM A395 Ductile Iron	15-JD	15						●			ST-55			
							20-JD	20							●					
							30-JD	30							●					
							75-JD	75							●					
							125-JD	125							●					
							175-JD	175							●					
							250-JD	250							●					
							300-JD	300							●					
							30-KD	30								●				
							50-KD	50										●		
300-KD	300										●									
	Series L & M F&T Capacities to 208,000 lb/hr		Screwed Flanged † (screw on)	250	450	ASTM A48 Class 30 Cast Iron	L8	250						●			ST-57			
							L10	250							●					
							M12	250										●		
	Series FT-4000 Capacities to 1,080 lb/hr		Screwed Socketweld	485	600	ASTM A240 Grade 304L	FT-4075	75	●	●	●						ST-59			
							FT-4150	150	●	●	●									
							FT-4225	225	●	●	●									
							FT-4300	300	●	●	●									
							FT-4465	465	●	●	●									
	Series CS F&T Capacities to 13,281 lb/hr		Screwed Socketweld Flanged †	600	650	Cast Steel	CS	465	●	●	●	●	●	●			ST-61			

▲ Series AI and BI for in-line connection.

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

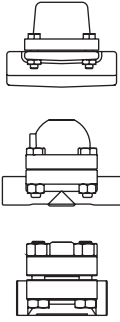



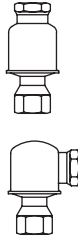
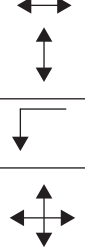



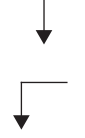
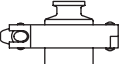



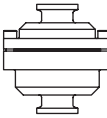



# Armstrong® Steam Trap ID Charts

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"	2"	2-1/2"	3"		
	Series LS&MS F&T Capacities to 280,000 lb/hr		Screwed Socketweld Flanged †	450	650	ASTM A216 WCB Carbon Steel	LS8	450						●			ST-63
							LS10	450					●				
							MS12	450									
	TVS 800 Trap Valve Station Capacities to 4,400 lb/hr		Screwed	250	450	ASTM A48 Class 30 Cast Iron	TVS 811	250		●	●						ST-65
							TVS 812	250		●	●						
							TVS 813	250			●	●					
	TVS 4000 Trap Valve Station		Screwed Socketweld	650	600	ASTM A351 Gr. CF8M	TVS 4000	650		●	●						ST-69
	Series CD-33 Disc Capacities to 2,428 lb/hr		Screwed	915	752	ASTM A743 Gr. CA40	CD-33	600		●	●	●					ST-75
							CD-33L		●	●	●						
	Series CD-33S Disc w/Integral Strainer Capacities to 2,428 lb/hr		Screwed	915	752	ASTM A743 Gr. CA40	CD-33S	600		●	●	●					ST-75
							CD-33SL			●	●						
	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 MT Thermostatic Wafer Cold Water Start-up Capacities to 1,000 lb/hr		Screwed	250	400	304L Stainless Steel	WMT-1	250	1/4" 3/8"	●							ST-80
			Screwed Socketweld Flanged †	350	662	Carbon Steel	MT-2	250		●	●						
	Series WT Thermostatic Wafer Cold Water Start-Up Capacities to 1,600 lb/hr		Screwed	400	650	304L Stainless Steel	WT-1	400		●	●						ST-81
			Screwed	600	750	C1018 Carbon Steel	WT-3	600		●	●						
		Screwed Socketweld	400	650	304L Stainless Steel	WT-2000	400		●	●	●						

† 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  Cold Water Start-up Capacities to 11,000 lb/hr		Screwed NPT BSPT Socketweld Flanged†	350	662	Carbon Steel	SH-250	250		●	●	●	ST-83
			Screwed NPT BSPT Socketweld Buttweld Flanged†	900	900	Stainless Steel	SH-900	L = 650* H = 900*		●	●		
			Buttweld Flanged†									●	
			Socketweld Buttweld Flanged†	1,800	1,050	ASTM 217 Cer. C12A	SH-1500	1,800			●	●	
	Series AB-2000 Bimetallic Steam Trap  Capacities to 4,630 lb/hr		Screwed	400	650	ASTM A240 304L Stainless Steel	AB-2000	320		●	●	●	ST-85
	Series TT Thermostatic Bellows  Capacities to 3,450 lb/hr		Screwed	300	450	304L Stainless Steel	TTF-1	300		●	●		ST-87
							TTF-1R			●	●		
			Screwed Socketweld					TT-2000		●	●	●	
	TAVB Thermostatic Bellows w/Integral Vacuum Breaker		Straight-Thru Screwed	300	365	304L Stainless Steel	TAVB-2 TAVB-3	150		●	●		ST-89
	Series TS-2/TS-3 Radiator  Capacities to 1,600 lb/hr		Threaded	50	300	Bronze	TS-2	50		●	●		ST-90
				65	315		TS-3	65		●	●	●	
	Series TC Thermostatic Clean Steam Clamped  Capacities to 3,450 lb/hr		Sanitary	120	350	Stainless Steel	TC-C	100		●	●	●	
	Series TC Thermostatic Clean Steam Sealed  Capacities to 3,775 lb/hr		Sanitary	150	366	Stainless Steel	TC-S	120		●	●	●	ST-91
			Threaded							●	●		
			Tube End							●	●		
	Series TC Thermostatic Clean Steam Repairable  Capacities to 3,775 lb/hr		Sanitary	120	350	Stainless Steel	TC-R	100		●	●	●	
			Threaded							●	●		
			Tube End							●	●		

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

\* L = low pressure H = high pressure