Steam Traps

Watts manufactures a variety of steam traps. To determine which trap is best for your application it is helpful to understand how each style of steam trap works. Below is a brief description of the operating principal of Thermostatic, Float & Thermostatic, Open Float & Thermostatic, Inverted Bucket, and Thermodynamic steam traps.

Thermostatic Radiator Traps

The thermostatic element in a radiator trap responds to temperature to open or close. At start-up when air and condensate are cooler the thermostatic element (diaphragm) contracts pulling the valve head off of the valve seat. The trap then opens and discharges air and cool condensate. As the condensate gets hotter the element expands driving the valve head into the valve seat closing the trap. The trap will stay closed until the condensate cools enough to contract the element and open the trap.

- These traps are recommended for radiators and convectors.

Float & Thermostatic Traps

Float & Thermostatic steam traps contain a sealed stainless steel thermostatic air vent and stainless steel ball float. The thermostatic air vent is open at start-up to discharge large volumes of air to the condensate return. As steam enters the trap body the air vent closes. The float is closed at start-up and stays in the closed position while steam is in the trap body. When the steam condenses, the hot condensate lifts the float moving the valve head off the seat opening the trap to discharge condensate. As condensate discharges steam enters the trap body, the float falls and drives the valve head into the valve seat closing the trap.

- These traps are designed to continuously discharge condensate in modulating conditions. Perfect for heat exchangers, air handling coils and steam main drip stations.

Open Float & Thermostatic Traps

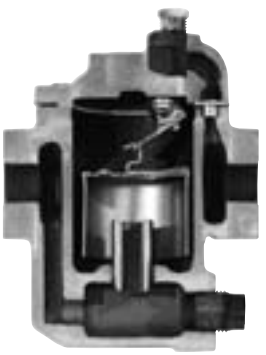
Open Float & Thermostatic traps are designed to provide continuous air venting and condensate drainage using an open float, fail-safe design. In case of float failure, the trap will discharge condensate and air. The trap is designed with straight thru piping for easy installation.

Condensate fills the trap until it overflows into float. When the weight of the condensate overcomes the buoyancy of the float, the float begins to drop independent of the float valve head. The float continues to drop until the collar at the bottom of the valve stem engages the internal stop. At this impact point, the float falls to the bottom of the trap snapping the valve open. Condensate travels up the discharge tube, through the orifice and out the outlet port. The float will remain at the bottom with valve fully open so long as there is sufficient condensate entering the trap. As the discharge drains the float, buoyancy returns and the float begins to rise. The valve head is snapped closed into the valve seat by the velocity of the discharging condensate.

- These traps are ideal for low to medium pressure main drip applications as well as heat exchangers, air handling coils and other process applications.

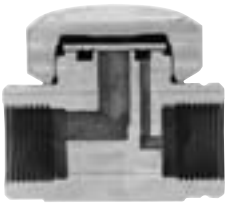
Inverted Bucket Traps

Inverted Bucket Traps must be manually primed at start-up to create the water seal around the inverted bucket which allows the trap to operate. At start-up the trap is open and air and condensate enters the trap body. Air is discharged through a small vent on the top of the inverted bucket while condensate fills the trap body and is discharged through the valve seat located on the top of the trap body. When steam enters the trap body it collects in the inverted bucket. The buoyancy of the steam raises the inverted bucket which pushes the valve head into the valve seat, closing the trap. When the steam condenses the bucket is no longer buoyant causing the bucket to drop, opening the valve seat and allowing condensate to discharge to the condensate return line.



- These traps are ideal for use as main drip traps up to 250psi and on some steam equipment where minimal air venting capability is acceptable.

Thermodynamic Traps



At start-up, air and condensate under pressure raise the disc off of the valve seat opening the trap allowing discharge into the condensate return line. Hot condensate flashes to steam as it goes through the trap body. The velocity of the flash steam creates a lower pressure area under the disc causing the disc to seat. The pressure of the flash steam in the cap keeps the disc on the valve seat, closing the trap. The trap remains closed until the flash steam condenses allowing system pressure to raise the disc off of the valve seat.

- These traps are ideal for use as high pressure main distribution line traps from 75-600psi.

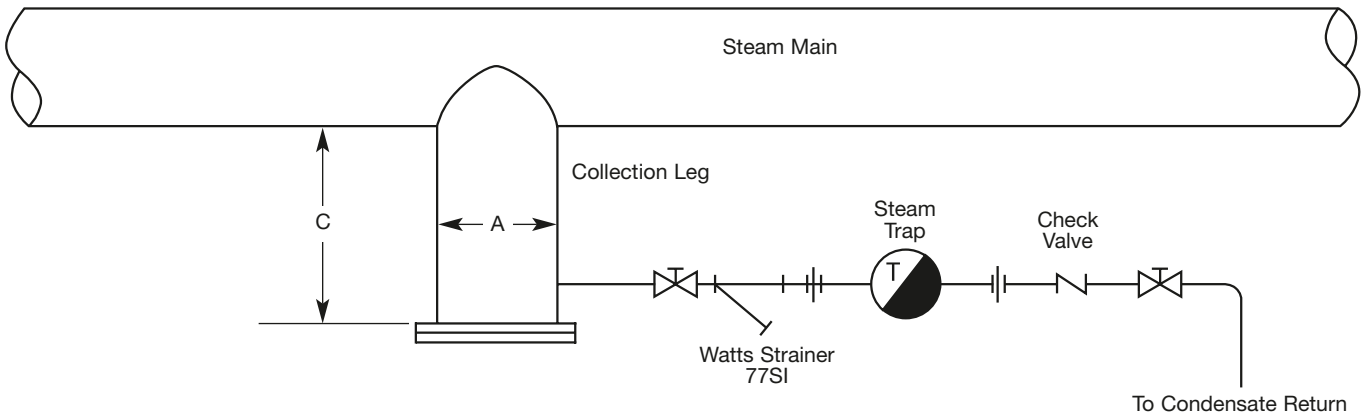
Steam Trap Selection Guide

Main Drip Applications

A main drip trap should be used every 100-150 feet of straight piping run. Traps should be used at each change of piping elevation and at risers as well as in front of expansion loops. The condensate load in a typical main drip application is small. It is unusual for main drip steam traps to be larger than ¾" (20mm).

PSI Range	Applicable Products
0-75psi	WFT, WIB
76-125psi	WTD 600, WFT, WIB
126-250psi	WTD 600, WIB
251-600psi	WTD 600

Typical Steam Main Drip Station



Size of Steam Main	Collection Leg Diameter A
½" to 4" (13 to 102mm)	Same as main
5" (127mm) & larger	2 to 3 pipe sizes smaller than main, but never smaller than 4" (102mm)

Length C of collection leg
Automatic Start Up: Length to be 28" (711mm) or more
Supervised Start Up: Length to be 1½ times steam main diameter, but never shorter than 8" (203mm).

Series G, GH, MG, MGH

Thermostatic Radiator Steam Traps

For operating pressures up to 65psi (4.5 bar)
Sizes: ½" – 1" (15 – 25mm)

Series G, GH, MG, MGH Thermostatic Radiator Steam Traps are designed to remove condensate, air and non-condensable gases from heating systems. The balanced pressure duplex phosphor bronze diaphragm is a highly sensitive modulating unit thermally programmed to provide accurate steam conserving operation. Available in a choice of various body patterns including angle, straightway, left hand corner, right hand corner, vertical and vertical double union.

Features

- Rugged brass construction with union inlet. Duplex phosphor bronze diaphragm sensitive within 3°F
- Hardened stainless steel valve
- Stainless steel valve seat
- Diaphragm and seat both replaceable
- Uniform operation within pressure range
- Superior operation under highest vacuum
- Each trap factory tested
- Standard patterns in ½", ¾", and 1" (15, 20, 25mm)

For additional information, request literature ES-G/GH/MG/MGH.

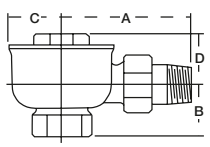
Applications

Models G and GH – 25" HG vacuum to 25psi (172 kPa)

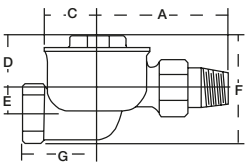
- Low pressure and vacuum heating
- Convectors
- Unit Ventilators
- Radiators
- Fin pipes
- Drip points
- Air vents

Models MG and MGH – 25" HG vacuum to 65psi (448 kPa)

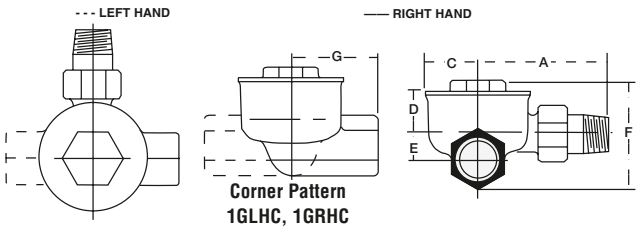
- Medium pressure heating equipment
- Process equipment
- Sterilizers
- Autoclaves
- Tracer lines
- Cooking equipment



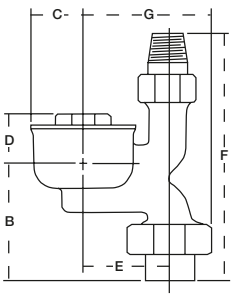
Angle Pattern
1GAP, 3GHAP, 5MGHAP



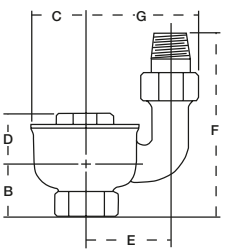
Straightway Pattern
1GHSW, 3GHSW



Corner Pattern
1GLHC, 1GRHC



Vertical Pattern
Double Union
1 VGDU



Vertical Pattern
Single Union
1VG

MODEL	PATTERNS	TAPPING				DIMENSIONS												WEIGHT	
		Inlet		Outlet		Male Tailpiece A		B		C		D		E		F		G			
		in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lbs.*	*kgs.*
1GAP-1MGAP	Angle	½	15	½	15	2⅞	73	1⅛	29	1 3/16	35	1⅜	35	–	–	–	–	–	–	1.2	.54
1GRHC-1GLHC	Corner	½	15	½	15	2⅞	73	–	–	1 3/16	35	1⅜	35	9/16	14	2⅝	67	1⅝	41	1.4	.64
1GSW-1MGSW	Straightway	½	15	½	15	2⅞	73	–	–	1 3/16	35	1⅜	35	9/16	14	2⅝	67	1⅝	41	1.2	.54
1VG	Vert. S.U.	½	15	½	15	–	–	1⅛	29	1 3/16	35	1⅜	35	1⅞	48	4	102	2⅝	67	1.4	.64
1VGDU	Vert. D.U.	½	15	½	15	–	–	2 9/16	65	1 3/16	35	1⅜	35	1⅞	48	5⅜	137	2¾	70	1.7	.77
3GH-3MGH	Angle	¾	20	¾	20	3⅛	79	1⅜	35	1 3/16	35	1⅝	41	–	–	–	–	–	–	1.5	.68
3GH-3MGH	Straight	¾	20	¾	20	3⅛	79	–	–	1 3/16	35	1 9/16	40	⅜	10	2¾	70	1⅞	48	1.5	.68
5MGH	Angle	1	25	1	25	3⅝	92	1½	38	1½	38	1 11/16	43	–	–	–	–	–	–	2.5	1.13

Series QF

Quick-Fix™ Radiator Steam Trap Replacement Kits

Series QF Quick-Fix™ Radiator Steam Trap Replacement Kits are used to repair old or obsolete radiator steam traps without the cost of replacing the steam trap body or expensive repiping. The stainless steel capsule and valve seat are designed as original equipment parts for many hard to find or obsolete radiator steam traps.

Remove the cover of the old steam trap and take out any remaining trap parts. Install the stainless steel Quick-Fix™ seat and snap the stainless steel capsule onto the new seat. Replace the cover and the radiator steam trap has been repaired.

Contact Watts for any model radiator traps not listed below.

Traps with Replaceable Seats

Model No.	*Manufacturer*	*½" Traps*	*¾" Traps*
QF-1	Warren Webster	02H, 02V, 502, 502V-1 702, 702V-1, 712, 902V	503, 703, 713
QF-2	Warren Webster	512, 512H-1, 512G-1 522, 522H, 522HB 712HB, 722HB	513, 533 523A, 523H-1**, 5236-1** 713HB, 733, 733HB 723A
QF-3	Warren Webster	902H	
QF-4	Warren Webster		913A, 913H
QF-5	Sarco TB25, TS25 T65 Erwel Illinois Trane Marsh Monash-Younker	E, H, S65, TB25, TS25 T65 R30 1G B1* 1 30	E, H, S65 3GH
QF-6	Hoffman	17C	8C
QF-14	Marsh		2-4, 2-7
QF-15	Sterling	7-50A	
QF-16 Dunham-Bush	Trane	 TH2A	B3

Traps with Integral Seats

QF-7	Dunham-Bush Trane Sarco	1B, 1C, 1R, V18 B2	 T25
QF-8	Sarco Hoffman	T25 8	
QF-9	Illinois	1T, 2T	
QF-10	Barnes & Jones	122A, 122S, 3045	
QF-11	Barnes & Jones		134A, 134S
QF-12	Trane	B1*	
QF-13	Trane		B3

Replacement Air Vents for F&T Traps (15 and 30psi)

QF-25	Sarco		Series FT ¾" - 2"
QF-26	Trane		686/55AL ¾" - 1"

Replacement Thermal Capsule Only

QFC-10	ALL	ALL	ALL

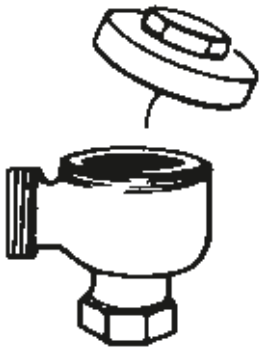
* Except vertical models

** Old style omits "-1" from symbol. For traps built since 1931 only.

For additional information, request literature ES-QF.

Quick, Easy installation

1.

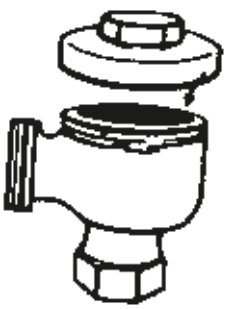


Remove cover of trap and old trap parts.

2.

Install seat adapter, then snap capsule onto it.

3.



Replace original cover.

Once the Quick-Fix™ kits are installed, most subsequent trap repairs require only replacement of the capsule, which is the same for all trap kits.

Series WFT

Float & Thermostatic Steam Traps

For operating pressures up to 125psi (8.6 bar)
Sizes: ¾" – 2" (20 – 50mm)

Series WFT Float & Thermostatic Steam Traps are designed to provide continuous air venting and separate condensate draining with maximum efficiency and service. The "H" pattern body on all ¾", 1" (15, 30, 75, 125psi) and 1¼" (15, 30psi) has been designed to offer maximum installation flexibility. Four possible hookup combinations, combined with similar piping dimensions to other major manufacturers, make this the "universal" replacement trap. For larger sized traps, 1½", 2" (15, 30, 75, 125psi) and 1¼" (75, 125psi), the inlet and outlet taps are located in the cover. This design allowing for the larger capacities needed. Series WFT traps can also be serviced without disturbing system piping.

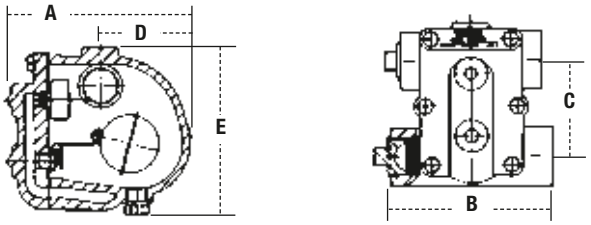
Features:

- Universal 4-port design
- All stainless steel internal components protect against erosion and corrosion
- Balanced pressure thermostatic element
- Extra-long life and dependable service
- Water hammer resistant
- Can be serviced without disturbing system piping

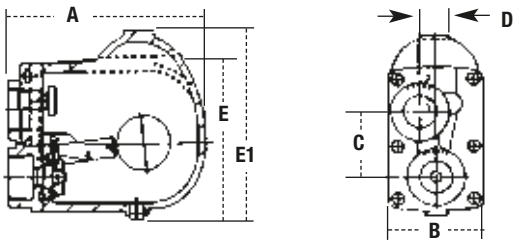
Applications:

- Unit heaters and other space heating equipment
- Heat exchangers/reboilers
- Air heating coils
- Steam main drips
- Process equipment

All ¾", 1" WFT, 1¼" WFT–15, WFT–30



All 1½", 2" WFT, 1¼" WFT-75, WFT-125



MODEL	SIZE (DN)		DIMENSIONS												WEIGHT	
			A		B		C		D		E		E1			
	in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lbs.*	*kgs.*
WFT-15	¾	20	6¼	159	5½	140	3 5/16	84	3	76	5¾	146	–	–	9	4.1
WFT-15	1	25	6¼	159	5½	140	3 5/16	84	3	76	5¾	146	–	–	9	4.1
WFT-15	1¼	32	6¼	159	5¾	146	3 5/16	84	3	76	5¾	146	–	–	9.5	4.3
WFT-15	1½	40	8½	216	4¼	108	3	76	11/16	17	–	–	8⅜	213	18	8.2
WFT-15	2	50	9 13/16	249	4 15/16	125	4 15/16	125	⅛	3	9⅛	231	–	–	26	11.8
WFT-30	¾	20	6¼	159	5½	140	3 5/16	84	3	76	5¾	146	–	–	9	4.1
WFT-30	1	25	6¼	159	5½	140	3 5/16	84	3	76	5¾	146	–	–	9	4.1
WFT-30	1¼	32	6¼	159	5¾	146	3 5/16	84	3	76	5¾	146	–	-	9.5	4.3
WFT-30	1½	40	8½	216	4¼	108	3	76	11/16	17	–	–	8⅜	213	18	8.2
WFT-30	2	50	9 13/16	249	4 15/16	125	4 15/16	125	⅛	3	9⅛	231	–	–	26	11.8
WFT-75	¾	20	6¼	159	5½	140	3 5/16	84	3	76	5¾	146	–	–	9	4.1
WFT-75	1	25	6¼	159	5½	140	3 5/16	84	3	76	5¾	146	–	–	9	4.1
WFT-75	1¼	32	8½	216	4¼	108	3	76	11/16	17	–	–	8⅜	213	18	8.2
WFT-75	1½	40	8½	216	4¼	108	3	76	11/16	17	–	–	8⅜	213	18	8.2
WFT-75	2	50	9 13/16	249	4 15/16	125	4 15/16	125	⅛	3	9⅛	231	–	–	26	11.8
WFT-125	¾	20	6¼	159	5½	140	3 5/16	84	3	76	5¾	146	–	–	9	4.1
WFT-125	1	25	6¼	159	5½	140	3 5/16	84	3	76	5¾	146	–	–	9	4.1
WFT-125	1¼	32	8½	216	4¼	108	3	76	11/16	17	–	–	8⅜	213	18	8.2
WFT-125	1½	40	8½	216	4¼	108	3	76	11/16	17	–	–	8⅜	213	18	8.2
WFT-125	2	50	9 13/16	249	4 15/16	125	4 15/16	125	⅛	3	9⅛	231	–	–	26	11.8

Series WFT Float & Thermostatic Steam Trap Capacities
Hot Condensate (lbs. per hr.)

	Size NPT		PSIG	DIFFERENTIAL PRESSURE (psi)													
Model	in	mm	Orifice	¼	½	1	2	5	10	15	20	25	30	40	50	75	100	125
WFT-15	¾"	20	.218	279	369	489	650	785	1000	1075								
WFT-15	1"	25	.218	279	369	489	650	785	1000	1075								
WFT-15	1¼"	32	.312	600	770	980	1240	1640	2000	2340								
WFT-15	1½"	40	.500	1100	1700	2400	3300	5000	6600	7600								
WFT-15	2"	50	.625	2300	2800	3600	4650	6900	9000	10900								
WFT-30	¾"	20	.218	279	369	489	650	785	1000	1075	1210	1300	1370					
WFT-30	1"	25	.218	279	369	489	650	785	1000	1075	1210	1300	1370					
WFT-30	1¼"	32	.228	375	500	690	910	1200	1500	1680	1800	1900	2000					
WFT-30	1½"	40	.390	1000	1300	1700	2300	3400	4600	5500	6000	6600	7000					
WFT-30	2"	50	.500	1300	1800	2500	3400	5200	6800	7800	8600	9300	10000					
WFT-75	¾"	20	.166	160	213	280	365	520	700	795	875	930	970	1120	1230	1450		
WFT-75	1"	25	.166	160	213	280	365	520	700	795	875	930	970	1120	1230	1450		
WFT-75	1¼"	32	.312	550	725	960	1300	1900	2650	3050	3400	3700	4000	4400	4750	5400		
WFT-75	1½"	40	.312	550	725	960	1300	1900	2650	3050	3400	3700	4000	4400	4750	5400		
WFT-75	2"	50	.421	850	1100	1500	2000	3100	4150	4750	5200	5500	5800	6400	6800	7700		
WFT-125	¾"	20	.125	100	135	175	230	330	415	500	585	620	685	750	830	970	1110	1190
WFT-125	1"	25	.125	100	135	175	230	330	415	500	585	620	685	750	830	970	1110	1190
WFT-125	1¼"	32	.246	400	520	680	890	1300	1700	2050	2300	2500	2700	3000	3200	3800	4200	4500
WFT-125	1½"	40	.246	400	520	680	890	1300	1700	2050	2300	2500	2700	3000	3200	3800	4200	4500
WFT-125	2"	50	.332	550	675	880	1225	1950	2600	3000	3250	3500	3800	4200	4600	5500	6100	6600

For additional information, request literature ES-WFT.

Series WFTC, WFTK

Float & Thermostatic Steam Trap Cover Assemblies and Repair kits

Sizes: ¾" – 2" (20 – 50mm)

Series WFTC, WFTK Float & Thermostatic Steam Trap Cover Assemblies & Repair Kits are designed for use on Watts and select Spirax-Sarco F&T steam traps.

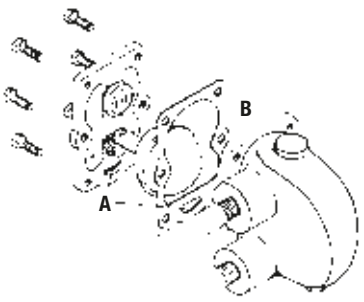
Features

- Quick, easy and economical
- Simplifies and standardizes inventory
- All stainless steel corrosion resistant internal parts

Models

WFTC Cover assembly consists of a complete factory assembled unit which simply bolts on for ease of repair. No pipe connections need to be broken. There will be no reduction in the original trap's capacity.

WFTK Designed for large traps that have piping connections into the cover plate. To avoid the "breaking" of piping connections, these kits are installed by removing the trap body. Each complete kit contains the thermostatic air vent, float, linkage, valve, seat and body gasket. These kits were designed to ensure ease of installation

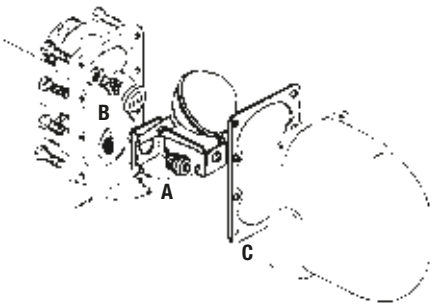


WFTC

Series WFTC cover assemblies include the cast iron cover, condensate valve assembly, float and linkage, thermostatic vent in one factory assembled unit (A) and cover gasket (B).

WFTC

WFTK



WFTK

Series WFTK Repair Kits include condensate valve assembly - float and linkage (A), thermostatic vent and seat (B), and cover gasket (C).

Dimensions – Weights

MODEL	MANUFACTURERS		LINE SIZE		WEIGHT	
	Model	*Trap*	*in.*	*mm*	*lbs.*	*kgs.*
¾-WFTC-15	Spirax-Sarco	FT-15	¾	20	3.0	6.6
¾-WFTC-30	Spirax-Sarco	FT-30	¾	20	3.0	6.6
1-WFTC-15	Spirax-Sarco	FT-15	1	25	3.0	6.6
1-WFTC-30	Spirax-Sarco	FT-30	1	25	3.0	6.6
1¼-WFTC-15	Spirax-Sarco	FT-15	1¼	32	3.0	6.6
1¼-WFTC-30	Spirax-Sarco	FT-30	1¼	32	3.0	6.6
1½-WFTK-15	Spirax-Sarco	FT-15	1½	40	1.5	3.3
1½-WFTK-30	Spirax-Sarco	FT-30	1½	40	1.5	3.3
2-WFTK-15	Spirax-Sarco	FT-15	2	50	1.5	3.3
2-WFTK-30	Spirax-Sarco	FT-30	2	50	1.5	3.3

For models of 75 or 125psi, please contact your Watts Representative for ordering information.

For additional information, request literature ES-WFTC/WFTK.

Series G, MG

Float & Thermostatic Steam Traps

For operating pressures up to 50psi (345 kPa)
Sizes: ¾" – 2" (20 – 50mm)

Series G, MG Float & Thermostatic Steam Traps are designed for use on modulating process equipment and as main distribution line drip traps. Series G Float & Thermostatic steam traps feature a straight through design for fast simple installation. Stainless steel valve head and seats provide long service life.

G, MG series steam traps have excellent air venting capability and discharge condensate at near to steam temperature so the steam space remains free of condensate providing improved steam system efficiency.

Features

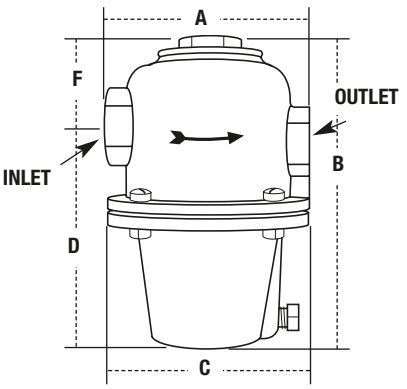
- Fail safe – In case of float failure, trap will discharge condensate and air; no unit freeze-up
- Air vent parts – accessible without disturbing piping
- Inlet baffle – breaks up water hammer; prevents damage to parts
- Snap action valve – no wire-drawing or valve chatter
- Two moving parts – no levers, hinges or pins to corrode or jam
- Straight-through connections – saves installation time, labor, space, headroom
- Stainless valves and valve seats
- Seamless copper float – no seams to develop leaks
- Uniform operations – not affected by changes in load or pressures
- Condensate valve rotates – ensures even wear, longer valve and seat life

Applications

- Steam coils
- Unit heaters
- Drip points
- Heat exchangers
- Water heaters
- Absorption machines
- Unit ventilators
- Air handlers
- Make-up air coils
- Re-heat coils
- Jacketed kettles

Models

G-15 — 25" Hg to 15psi (103 kPa)
MG-30 — 25" Hg to 30psi (207 kPa)
MG-50 — 25" Hg to 50psi (345 kPa)



MODEL	TAPPING (NPT)		DIMENSIONS										WEIGHT	
			A		B		C		D		F			
	in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*n.*	*mm*	*lbs.*	*kgs.*
6G-15	¾	20	4½	114	6½	165	4½	114	4 15/16	125	1⅞	48	6	152
7G-15	1	25	5½	140	7½	191	5½	140	5⅝	143	2 1/16	52	9	229
8G-15	1¼	32	5½	140	8	203	6	152	5½	140	2	51	12	305
91G-15	1½	40	7⅝	194	11¾	298	8 9/16	217	9 1/16	230	2 3/16	71	39	991
101G-15	2	50	9 5/16	237	13 13/16	351	10⅜	263	10 15/16	278	2⅜	60	59	1499
111G-15	2	50	10⅜	264	15¼	387	11⅝	295	11⅞	302	2¾	70	85	2159
7MG-30	1	25	5½	140	7½	191	5½	140	5⅝	143	2 1/16	52	9	229
8MG-30	1¼	32	5½	140	8	203	6	152	5½	140	2	51	12	305
91MG-30	1½	40	7⅝	194	11¾	298	8 9/16	217	9 1/16	230	2 3/16	71	39	991
101MG-30	2	50	9 5/16	237	13 13/16	351	10⅜	263	10 15/16	278	2⅜	60	59	1499
111MG-30	2	50	10⅜	264	15¼	387	11⅝	295	11⅞	302	2¾	70	85	2159
6MG-50	¾	20	4½	114	6½	165	4½	114	4 15/16	125	1⅞	48	6	152
7MG-50	1	25	5½	140	7½	191	5½	140	5⅝	143	2 1/16	52	9	229
8MG-50	1¼	32	5½	140	8	203	6	152	5½	140	2	51	12	305
91MG-50	1½	40	7⅝	194	11¾	298	8 9/16	217	9 1/16	230	2 3/16	71	39	991
101MG-50	2	50	9 5/16	237	13 13/16	351	10⅜	263	10 15/16	278	2⅜	60	59	1499
111MG-50	2	50	10⅜	264	15¼	387	11⅝	295	11⅞	302	2¾	70	85	2159

Maximum Trap Capacities

Pounds Condensate Per Hour, MBH, and Square Feet EDR

Model	Valve Seat Orifice Diameter	Pressure Differential Lat. Ht. Value	¼ 969.8	½ 969.3	1 968	2 966	5 961	10 952	15 945	20 939	30 929	50 912	75 895	100 881	125 868	150 857	175 847
¾-6G-15	**Capacities According to Recommended Shema Standards	Lbs. Cond./Hr.	70	100	140	200	210	220	230								
		MBH	68	97	136	193	202	209	217								
		EDR	282	404	566	804	841	870	904								
1-7G-15		Lbs. Cond./Hr.	175	250	350	500	525	550	575								
		MBH	170	242	339	483	505	524	543								
		EDR	708	1008	1413	2012	2104	2183	2263								
1¼-8G-15		Lbs. Cond./Hr.	425	600	850	1200	1260	1320	1280								
		MBH	412	582	823	1159	1211	1257	1304								
		EDR	1717	2423	3428	4830	5045	5236	5434								
1½-91G-15		Lbs. Cond./Hr.	850	1200	1700	2400	2520	2640	2760								
		MBH	824	1163	1646	2318	2422	2513	2608								
		EDR	3435	4847	6857	9660	10091	10472	10868								
2-101G-15		Lbs. Cond./Hr.	1775	2500	3550	5000	5250	5500	5750								
		MBH	1721	2423	3436	4830	5045	5236	5434								
		EDR	7172	10096	14318	20125	21021	21817	22641								
2-111MG-15	21/32	Lbs. Cond./Hr.	2200	2900	3920	5200	7600	10100	12000								
		MBH	2133	2811	3795	5023	7304	9615	11340								
¾-30-30*	5/32	Lbs. Cond./Hr.	175	235	315	420	570	670	825	935	1160						
		MBH	170	228	305	406	548	638	780	878	1078						
1-7MG-30	1/8	Lbs. Cond./Hr.	95	127	170	228	335	445	530	600	700						
		MBH	92	123	165	220	322	424	501	563	650						
1¼-8MG-30	5/32	Lbs. Cond./Hr.	156	210	280	375	550	740	870	980	1160						
		MBH	151	204	271	362	529	704	822	920	1078						
1½-91MG-30	19/64	Lbs. Cond./Hr.	525	700	940	1250	1850	2450	2930	3300	3900						
		MBH	509	679	910	1208	1778	2332	2769	3099	3623						
2-101MG-30	11/32	Lbs. Cond./Hr.	670	890	1180	1580	2340	3120	3700	4150	4900						
		MBH	650	863	1142	1526	2249	2970	3497	3897	4552						
2-111MG-30	15/32	Lbs. Cond./Hr.	1300	1750	2340	3120	4600	6100	7200	8200	9700						
		MBH	1261	1696	2265	3014	4421	5807	6804	7700	9011						
¾-6MG-50	3/32	Lbs. Cond./Hr.	52	69	92	122	180	240	285	320	380	470					
		MBH	50	67	89	118	173	228	269	300	353	429					
1-7MG-50	7/64	Lbs. Cond./Hr.	81	108	143	190	280	375	440	500	590	730					
		MBH	79	105	138	184	269	357	416	470	548	666					
1¼-8MG-50	1/8	Lbs. Cond./Hr.	102	138	182	245	355	475	565	630	750	920					
		MBH	99	134	176	237	341	452	534	591	697	839					
1½-91MG-50	15/64	Lbs. Cond./Hr.	360	480	640	860	1260	1680	2000	2250	2670	3300					
		MBH	349	465	620	831	1211	1599	1890	2113	2480	3010					
2-101MG-50	9/32	Lbs. Cond./Hr.	460	610	820	1100	1600	2140	2520	2841	3350	4150					
		MBH	446	591	794	1063	1538	2037	2381	2667	3112	3785					
2-111MG-50	21/64	Lbs. Cond./Hr.	630	850	1140	1520	2220	2950	3500	3950	4700	5800					
		MBH	611	824	1104	1468	2133	2808	3308	3709	4366	5290					

The basic capacity ratings are expressed in pounds condensate per hour at various pressure differentials.

For ease of trap selection the tables also give the heating value in MBH of the steam condensed. This is arrived at by multiplying the condensate rating by the appropriate Latent Heat Value and dividing by 1,000 to determine MBH.

For low pressure heating service traps the capacities are also expressed in square feet Equivalent Direct Radiation. This is determined by dividing the heating capacity in BTU/Hr. (MBH x 1,000) by 240 BTU/Hr./Square Foot Equivalent Direct Radiation.

Example:

Select a trap for a Unit Heater with a heating capacity of 170 MBH operating on a 5psi line. A 2 to 1 capacity factor is desired.

MBH rating for selection purposes = 2 x 170 = 340 MBH. Read down 5psi column and select the smallest trap whose MBH rating exceeds 340 MBH.

A 1-7G actual capacity 505, MBH, 525 pounds condensate per hour on 2,012 square feet Equivalent Direct Radiation would be the correct trap.

*Also available in ½" (15mm) pipe size

Note: The condensate capacities for GF or MGF traps are the same as shown for G or MG float and thermostatic traps and selection should be made in the same manner.

**Ratings are in accordance with the recommended standards adopted by the Steam Heating Equipment Manufacturers Association. Select trap directly from table for the lowest differential that may exist in the system. Traps may be applied directly and no safety factor need be applied.

For additional information, request literature ES-G/MG.

Series WIB

Inverted Bucket Steam Traps

For operating pressures up to 250psi (17 bar)
Sizes: ½" – 1" (15 – 25mm)

Series WIB Inverted Bucket Steam Traps are designed for reliable condensate removal on steam main line drips for system pressure up to 250psi. Series WIB Inverted Bucket Traps have an excellent reputation as a long lasting, rugged steam trap, naturally resistant to water hammer.

WIB 80

WIB 81

Features

- In-line connections
- Hardened stainless steel valve and seat
- Cast iron body construction; Class 250
- Stainless steel bucket
- Test plug
- Drain plug

Models

WIB 80 – ½" – ¾" (15–20mm) for operating pressures up to 150psi (10 bar)

WIB 81 – ½" – 1" (15–25mm) for operating pressures up to 250psi (17 bar)

Pressure — Temperature

WIB 80

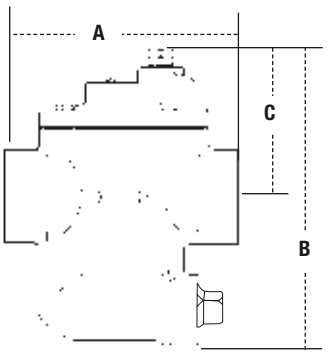
Maximum Allowable Pressure: 150psi (10 bar)
Maximum Allowable Temperature: 406°F (208°C)
Maximum Operating Pressure: 150psi (10 bar)

WIB 81

Maximum Allowable Pressure: 250psi (17 bar)
Maximum Allowable Temperature: 406°F (208°C)
Maximum Operating Pressure: 250psi (17 bar)

Applications

- Steam main drips
- Process applications requiring minimal air venting



SIZE (DN) NPT		DIMENSIONS A		B		C		WEIGHT	
in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lbs.*	*kgs.*
WIB 80									
½	15	5	127	8⅛	206	3¼	83	5.5	2.5
¾	20	5	127	8⅛	206	3¼	83	5.5	2.5
WIB 81									
½	15	5	127	7⅝	194	3¼	83	6	2.7
¾	20	5	127	7⅝	194	3¼	83	6	2.7
1	25	5	127	7⅝	194	3¼	83	6	2.7

Maximum Trap Capacities - WIB 80

DIFFERENTIAL Pressure		ORIFICE Size		Model
psi	*bar*	*in.*	*mm*	*80*
¼	.02	3/16"	5	139
½	.03	3/16"	5	200
¾	.05	3/16"	5	240
1	.07	3/16"	5	270
2	.14	3/16"	5	340
3	.21	3/16"	5	390
4	.28	3/16"	5	425
5	.35	3/16"	5	450
10	.69	3/16"	5	560
15	1	3/16"	5	640
20	1	3/16"	5	690
25	2	1/8"	3	460
30	2	1/8"	3	500
40	3	1/8"	3	550
50	3	1/8"	3	580
60	4	1/8"	3	635
70	5	1/8"	3	660
80	6	1/8"	3	690
100	7	#38	–	860
125	9	#38	–	950
130	9	#38	–	550
150	10	#38	–	570
180	12	#38	–	—
200	14	#38	–	—
225	16	#38	–	—
250	17	#38	–	—

Maximum Trap Capacities - WIB 81

DIFFERENTIAL Pressure		Orifice		Model
psi	*bar*	*In.*	*mm*	*81*
¼	.02	¼	8	191
½	.03	¼	8	300
¾	.05	¼	8	395
1	.07	¼	8	450
2	.14	¼	8	590
3	.21	¼	8	680
4	.28	¼	8	750
5	.35	¼	8	830
10	.69	¼	8	950
15	1	¼	8	1,060
20	1	3/16--	5	880
25	2	3/16	5	950
30	2	3/16	5	1,000
40	3	5/32	4	770
50	3	5/32	4	840
60	4	5/32	4	900
70	5	5/32	4	950
80	6	1/8	3	800
100	7	1/8	3	860
125	9	1/8	3	950
130	9	7/64	2.7	780
150	10	7/64	2.7	810
180	12	7/64	2.7	850
200	14	7/64	2.7	860
225	16	#38	–	730
250	17	#38	–	760

Note: Capacities given are continuous discharge capacities in pounds of hot condensate per hour at differential indicated.

For additional information, request literature ES-WIB.

Series WTD 600

Thermodynamic Steam Traps

For operating pressures up to 600psi (41 bar)
Sizes: ⅜" – 1" (10 – 25mm)

Series WTD 600 Thermodynamic Steam Traps are economical and compact, designed to efficiently drain steam mains, steam tracing lines, and small process equipment. The WTD 600 Steam Trap discharges condensate at near to steam temperatures, so the steam space remains free of condensate. Their tight shut-off feature ensures that valuable steam energy is not wasted. The WTD 600's hard-ened disc is the only moving part, assuring a long service life, easy low cost main-tainability, and improved steam system efficiency.

Features

- Inexpensive: low initial purchase price and lower maintenance costs than traps requiring expensive repair kits
- Compact design; light weight and easy to install. Provides longer service life with simple maintainability. The only moving part is the hardened stainless steel disc
- Rugged all stainless steel: resistant to water hammer, freezing, superheat and corrosion for extra long service life
- Audible discharge cycle: checking trap operation is simple and does not require any special devices
- Blast discharge of condensate: eliminates dirt build up and provides a tight shutoff, saving valuable steam energy

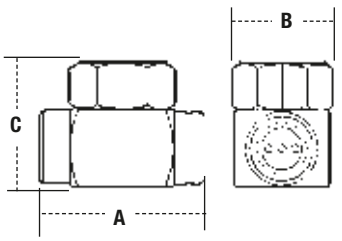
Pressure – Temperature

Maximum Operating Pressure: 600psi (42 bar)
Maximum Operating Temperature: 800°F (427°C)
Maximum Allowable Pressure: 600psi (42 bar)
Maximum Allowable Temperature: 800°F (427°C)

Applications

- Steam main drainage
- Superheat steam applications
- Steam tracing lines
- Freeze protection for outside applications
- Small process equipment

SIZE (DN)		DIMENSIONS						WEIGHT	
		A		B		C			
in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lbs.*	*kg.*
⅜	10	2	51	1¾	45	1¾	45	.8	.36
½	15	2 11/16	68	1¾	45	2"	51	1.2	.54
¾	20	2 13/16	71	2 5/16	59	2 7/16	62	1.8	.82
1	25	3 5/16	84	2½	64	2⅞	73	3.1	1.41



Maximum Capacity – Lbs./Hr. at Saturation Steam Temperature

NPT CONNECTION		PSIG (BAR)													
in.	*mm*	3.5 *(0.24)*	5 *(0.34)*	10 *(0.7)*	20 *(1.4)*	30 *(2.1)*	50 *(3.4)*	75 *(5.2)*	100 *(6.9)*	150 *(10.3)*	200 *(13.8)*	300 *(20.7)*	400 *(27.6)*	500 *(34.5)*	600 *(41.8)*
⅜"	10	180	185	190	200	215	245	305	370	500	610	790	960	1100	1250
½"	15	300	310	345	410	465	575	700	810	1000	1140	1410	1630	1830	2000
¾"	20	405	420	470	550	640	810	1000	1160	1450	1670	2100	2430	2750	3050
1"	25	640	670	725	865	980	1200	1470	1750	2200	2600	3250	3780	4250	4700

For Kg./Hr. multiply by .454

For additional information, request literature ES-WTD.