

For Residential Applications

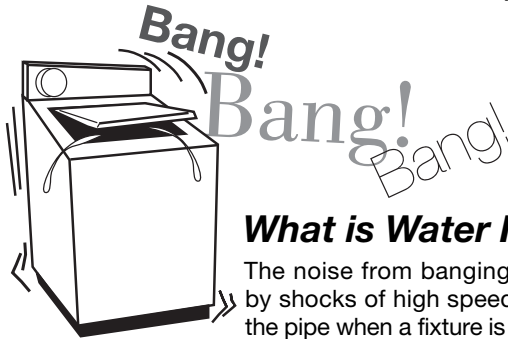
Job Name _____
 Job Location _____
 Engineer _____
 Approval _____

Contractor _____
 Approval _____
 Contractor P.O. No. _____
 Representative _____

Series 150A

Water Hammer Arrestors

Recommended for residential/domestic water system applications



What is Water Hammer?

The noise from banging pipes is caused by shocks of high speed water flowing in the pipe when a fixture is suddenly closed.

Sudden stoppage causes a "bounceback" of the water and is called water hammer. It might be compared to driving your car at slow speed into a wall where the effect is negligible. However, if you drove the car at a much higher speed, the impact would be greater, and consequently so would the bounceback or shock.

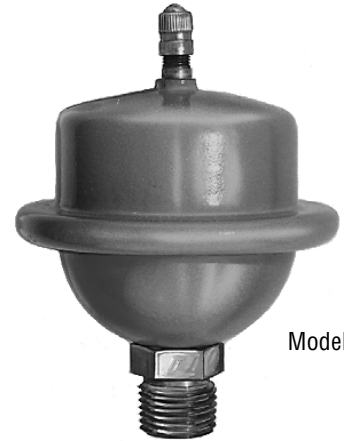
Dishwashers, clothes washers, quick closing faucets all contribute to creating water hammer which is not only annoying but damaging to pipes and appliances. The simple, economical solution is Watts No. 150A designed with a pre-charged air chamber and a rugged sealed-in diaphragm which flexes to absorb the shock. It can be installed vertically, horizontally or at any angle.

Features

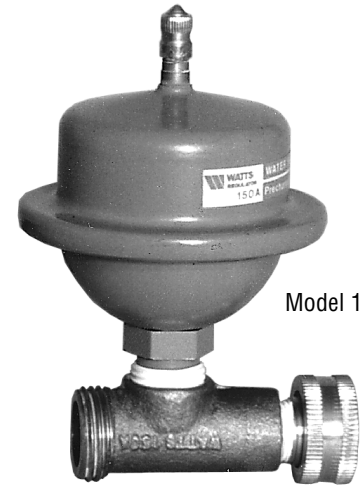
- Pre-charged air chamber
- Sealed in diaphragm
- Rechargeable

Specifications

For residential/domestic water systems only. Size 1/2".
 Maximum working pressure 150 PSIG. Maximum temperature 180°F. Maximum velocity 10 F.P.S. Maximum shock pressure 200 PSIG. Complete stainless steel chamber construction. 10 cu. inch total volume. Weight 12 oz.



Model 150A



Model 150A-HA

Model No.	Ordering Code No.	Size
WATER HAMMER ARRESTOR (only)		
150A	0269503	1/2"
FITTING only for 1/2" SHOCK ARRESTOR for WASHING MACHINES with 3/4" hose thread connection		
150-HA	0269505	3/4" HT
WATER HAMMER ARRESTOR and FITTING with 3/4" hose thread connection for washing machines		
150A-HA	0269508	3/4" HT

NOTE: Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.



For Commercial Applications

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

Series 15M2

Water Hammer Arrestors

Sizes: 1/2" - 1" (15-25mm)

What is Water Hammer?

The noise from banging pipes is caused by shocks of high speed water flowing in the piping system when a fixture is suddenly closed. Sudden stoppage of the water (a non-compressible liquid) flowing at a given pressure and velocity causes a surge or spike of pressure and is called water hammer. When this occurs, a pressure wave travels back through the piping until it finds a point of relief.

Dishwashers, clothes washers, fast closing positive shutoff valves incorporated in the system all contribute to creating water shock which is not only annoying but damaging to pipes and appliances. The Watts Series 15M2 incorporates a pre-charged, permanent sealed air chamber to absorb the shock. The sealed chamber prevents the loss of air to the water and insures long and trouble-free life.

Features

- NPT solid hex brass adapter or solder end connection for easy installation
- Approved for installation with no access panel required
- May be installed in new or existing plumbing systems with a standard pipe tee vertically, horizontally or at any angle
- PDI Listed (PDI WH201)
- Maintenance free – piston is the only moving part
- Air pre-load is 60psi (4.2 bar)
- Factory air charged and permanently sealed

Standards



Standard: Listed by IAPMO, ASSE 1010 approved, ANSI A112.26.1M approved, PDI WH201 approved and certified.



15M2

Pressure - Temperature

Operating Pressure: Designed to operate on all domestic and commercial lines @ 150psi (10.6 bar) working pressure.

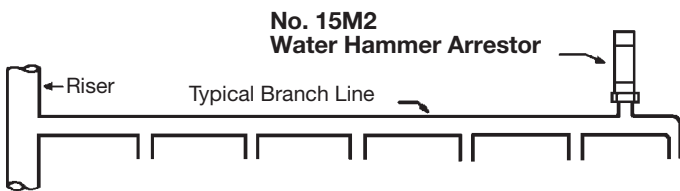
Temperature Range: 33°F to 180°F (0.5°C to 82°C).

Materials

Body:	Copper tubing
Piston:	Polypropylene
Adapter:	Brass
O-ring:	EPDM

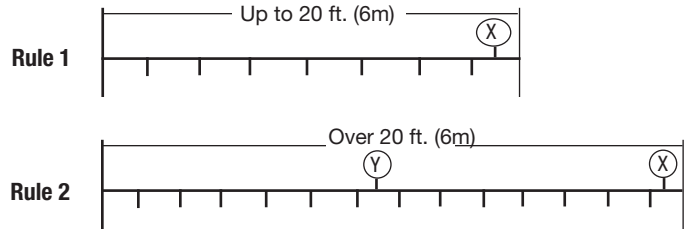
Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

Sizing and Placement



As shown, it has been established that the preferred location for the water hammer arrestor is at the end of the branch line between the last two fixtures served.

The location of the water hammer arrestor shown above applies to branch lines that do not exceed 20 ft. (6m) in length, from the start of the horizontal branch line to the last fixture supply on this branch line. When the branch line exceeds the 20 ft. (6m) length, an additional water hammer arrestor should be used. This practice is best defined by two rules which have been established to cover the placement of water hammer arrestors.



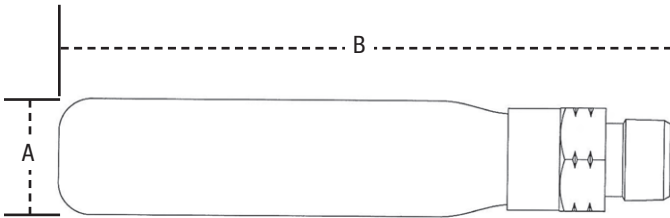
Rule 1 covers multiple fixture branch lines which do not exceed 20 ft. (6m) in length.

Explanation - Fixture-unit sizing and selection table is used to select the required PDI unit (water hammer arrestor).

Rule 2 covers multiple fixture branch lines which do exceed 20 ft. (6m) in length.

Explanation - Fixture-unit sizing and selection table is used to select the required PDI unit (water hammer arrestor). The sum of the fixture units rating of units X and Y shall be equal to or greater than the demand of the branches.

Dimensions - Weight



SIZE (DN)	DIMENSIONS				WEIGHT	
	A		B		(lbs)	(kgs)
	in.	mm	in.	mm		
Threaded						
1/2" 15M2-A	1 1/8	28.5	5 5/16	150.9	0.5	0.2
3/4" 15M2-B	1 3/8	34.9	8 9/16	218.0	0.9	0.4
1" 15M2-C	1 5/8	41.3	8 13/16	223.5	1.3	0.6
1" 15M2-D	2 1/8	54.0	9 5/16	252.5	2.0	0.9
1" 15M2-E	2 1/8	54.0	12 1/16	322.5	2.3	1.1
1" 15M2-F	2 5/8	66.7	11 3/32	283.5	2.7	1.2

Sizing and Selection Table

SIZE (DN)	MODEL	ORDER CODE	CROSS FIXTURE UNITS	REF. PDI STANDARD
<i>in. mm</i>	<i>Threaded</i>			
1/2" 15	15M2-A	0750140	1-11	A
3/4" 20	15M2-B	0750141	12-32	B
1" 25	15M2-C	0750142	33-60	C
1" 25	15M2-D	0750143	61-113	D
1" 25	15M2-E	0750144	114-154	E
1" 25	15M2-F	0750145	155-330	F

Fixture Units Sizing Information

FIXTURE	TYPE OF SUPPLY CONTROL	FIXTURE UNITS					
		PUBLIC			PRIVATE		
		TOTAL	C.W.	H.W.	TOTAL	C.W.	H.W.
Water Closet 1.66 PF	Flush Valve	8	8	-	5	5	-
Water Closet 1.66 PF	Flush Tank	5	5	-	2.5	2.5	-
Pedestal Urinal 1.06 PF	Flush Valve	4	4	-	-	-	-
Stall or Wall Urinal	Flush Valve 1.06 PF	4	4	-	-	-	-
Stall or Wall Urinal	Flush Tank 1.06 PF	2	2	-	-	-	-
Lavatory	Faucet	2	1 1/2	1 1/2	1	1	1
Bathtub	Faucet	4	2	3	2	1 1/2	1 1/2
Shower Head	Mixing Valve	4	2	3	2	1	2
Bathroom Group	Flush Valve Closet	-	-	-	8	8	3
Bathroom Group	Flush Tank Closet	-	-	-	6	6	3
Separate Shower	Mixing Valve	-	-	-	2	1	2
Service Sink	Faucet	3	3	3	-	-	-
Laundry Tubs (1-3)	Faucet	-	-	-	3	3	3
Combination Fixture	Faucet	-	-	-	3	3	3

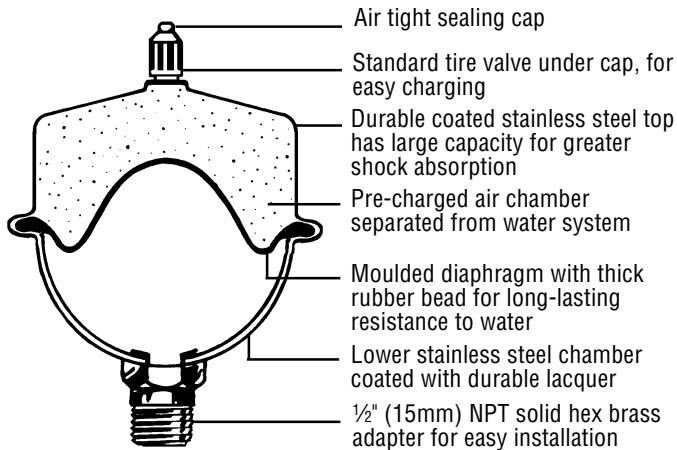


A Watts Water Technologies Company

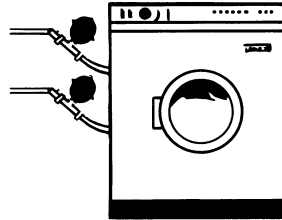


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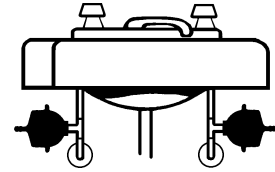
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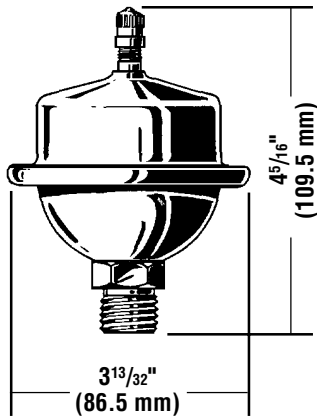
Clothes Washers



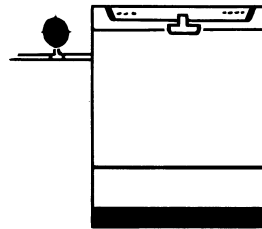
Quick-Closing Faucets



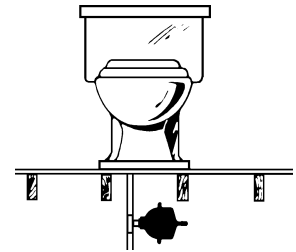
Dimensions - Weight



Dishwashers



Fast-Fill Toilets



Nominal Pipe Size	Length Pipe Up to	Flow Pressure - PSIG and Number of 150A valves to install															
		psi 30	bar 2.11	psi 40	bar 2.81	psi 50	bar 3.52	psi 60	bar 4.22	psi 70	bar 4.92	psi 80	bar 5.62	psi 90	bar 6.33	psi 100	bar 7.03
1/2"	15	50	15.24	150A	→	→	→	→	→	→	→	→	2-150A	→	→	→	→
	75	22.86	150A	→	→	→	→	→	→	→	→	→	→	→	→	→	→
	100	30.48	150A	→	→	→	→	→	→	→	→	→	→	→	→	→	→
3/4"	25	7.62	150A	→	→	→	→	→	→	→	→	→	2-150A	→	→	→	→
	50	15.24	150A	→	→	→	→	→	→	→	→	→	→	→	→	→	→
	75	22.86	150A	→	→	→	→	→	→	→	→	→	→	→	→	→	→
1"	25	7.62	150A	→	→	→	→	→	→	→	→	→	2-150A	→	→	→	→
	50	15.24	2-150A	→	→	→	→	→	→	→	→	→	→	→	→	→	→
	75	22.86	2-150A	→	→	→	→	→	→	→	→	→	→	→	→	→	→
1 1/4"	32	25	7.62	2-150A	→	→	→	→	→	→	→	→	→	→	→	→	→

Chart based on 10 F.P.S. (3.05 MPS) velocity and 150 PSIG (10.55 Bar) shock pressure. **Note:** Metric equivalents shown are for comparison reference only.

A LEADER IN VALVE TECHNOLOGY

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