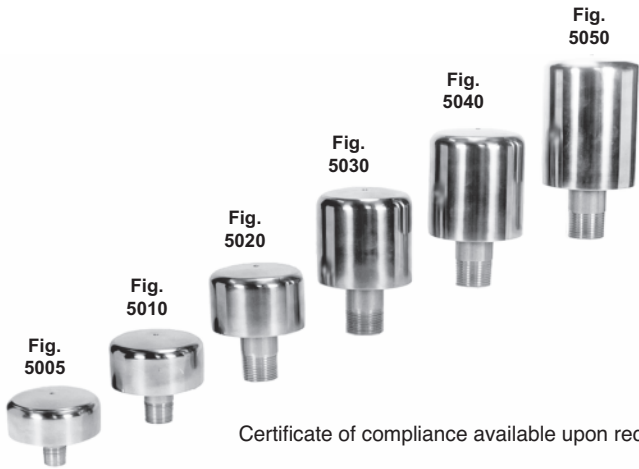
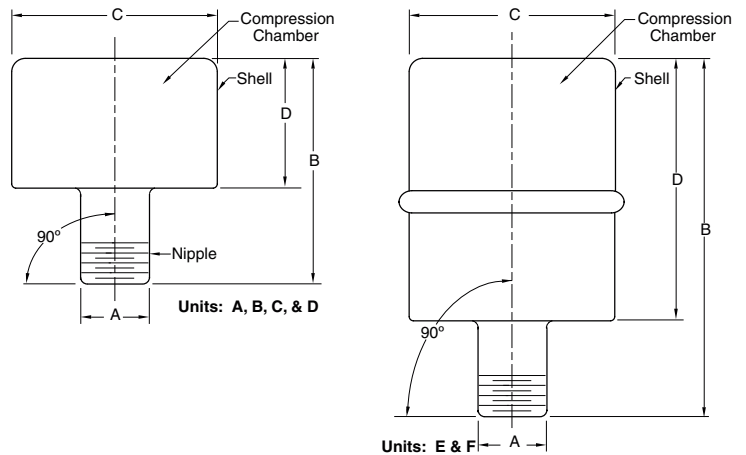


FUNCTION: Quick closing electrical, pneumatic, spring loaded valves or devices, and the quick hand closure of fixture trim can cause destructive "water hammer". Engineered water hammer arresters ("Hydrotrols") employ a permanently sealed cushion of air or gas which absorbs the energy of water hammer and reduces pressure rise in the piping system to a safe level. Hydrotrol units, correctly sized and placed at specific locations in the water piping system will control the destructive shock of water hammer.



Certificate of compliance available upon request.



Hydrotrols Fig. 5005 to 5050 inclusive have been tested and certified in accordance with the Plumbing and Drainage Institute "Standard P.D.I. WH-201"

Hydrotrols are pre-charged and permanently sealed at the factory. All hydrotrols are constructed entirely of stainless steel.

Fig. 5060

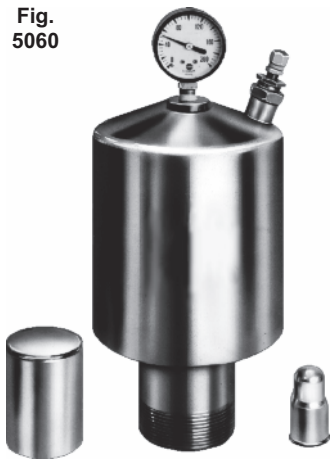
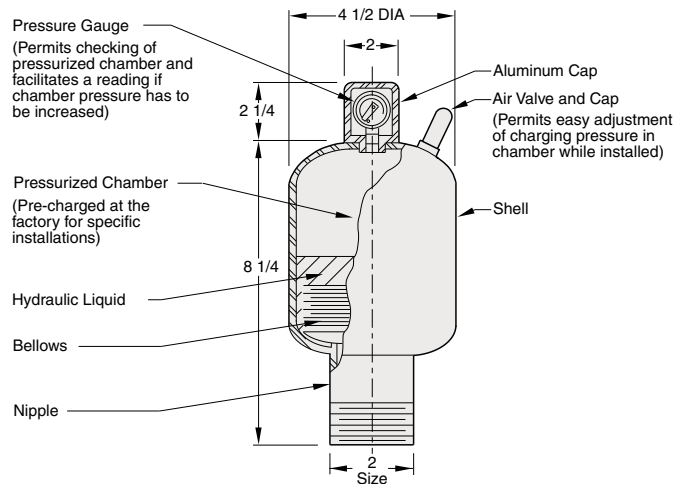


Fig. 5060 - "HY-DUTY" HYDROTROL



The "Hy-Duty" HYDROTROL has been specially designed to absorb and control the extreme hydrostatic shock pressures that occur in applications such as commercial and institutional laundries, bus and truck washing stations, pumping systems and other large piping systems. Because of the special nature of this unit, all requests for sizing should be sent to the Smith Engineering Dept. for review. To enable the company to properly size units for specific jobs, the following information must be furnished.

1. Length of piping run from main to location of discharge valves for equipment.
2. Size of branch pipe and main.
3. Velocity (flow rate) through the branch and main.
4. Water pressure - both static and flowing.
5. Types of equipment served - name, number, flow rate.
6. Sketch or layout of the complete piping system related to the equipment to be protected. This is desirable so that a complete survey of the installation can be made.

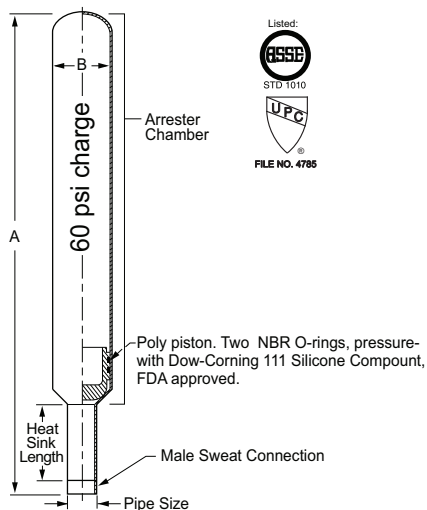
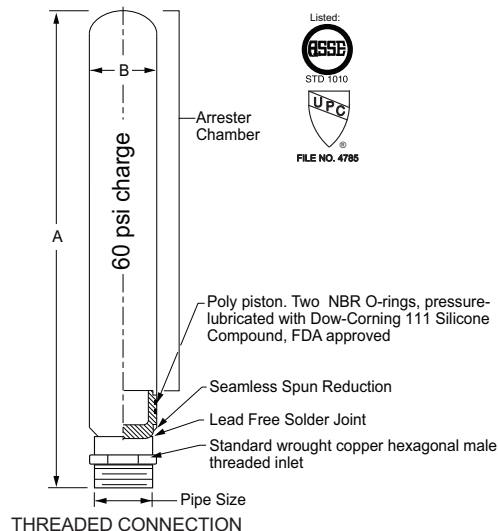
FIG. NO.	PDI SIZE	FIXTURE UNIT CAPACITY	A PIPE SIZE	B HEIGHT	C DIA.	D	STAINLESS STEEL	APPROX WEIGHT LBS
5005	A	1-11	3/4" NPT	2 5/8"	3 1/4"	1 7/16"	549.00	1
5010	B	12-32	1" NPT	2 7/8"	3 1/4"	1 3/4"	1,119.00	2
5020	C	33-60	1" NPT	3 1/2"	3 1/4"	2 1/4"	1,671.00	3
5030	D	61-133	1" NPT	4 1/2"	3 1/4"	3 1/4"	4,191.00	3
5040	E	115-154	1" NPT	5 1/2"	3 1/4"	4 1/8"	4,731.00	4
5050	F	155-330	1" NPT	6 5/8"	3 1/4"	5 1/4"	5,814.00	4
5060	—	—	2" NPT	10 1/2"	4 1/2"	—	9,332.00	8

RECOMMENDED SPECIFICATION FOR HYDROSTATIC SHOCK CONTROL

Smith series 5000 "Hydrotrol" all stainless steel shock absorbers shall be installed at all solenoid, remote operated or quick closing valves and at each plumbing fixture or battery of plumbing fixtures. Install on both hot and cold water branch lines in an upright position as close as possible to the valve or valves being served. Sizes and locations as indicated on drawings.

FIG. 5205-5250 PISTON TYPE WATER HAMMER ARRESTERS - LEAD FREE

Maximum working pressure - Designed to keep residential, commercial, and industrial water lines @ 350 p.s.i. maximum working pressure during pressure surges following quick valve closure. Working TEMPERATURE RANGE - From 33 degrees to 250 degrees F.



INSTALLATION

The piston unit can be installed in new construction or renovation/remodel by threading into properly sized female I.P.S. fitting (wrench or hex). It can be installed at any angle to accommodate structural limitations, and should be placed as close to the shut-off valve as possible, one on each hot and cold line. The piston unit is seamless, factory charged and is maintenance free and does not require access panels. It cannot be charged in the field.

TYPICAL INSTALLATIONS

- Properly sized and placed (see tables below) the piston unit can be set in a multiple fixture branch for commercial/institutional/industrial/residential applications.
- As a tee configuration with stub outs in walls behind sinks, lavatories, and water closets.
- MIP Threaded model - Threaded into female I.P.S. connections in tub and shower valves.
- In supply lines of clothes washers and dishwashers. (AA not recommended for these applications)
- Into cold inlet and hot outlet of water heater for general protection.

NOTE: For additional Hydrotrol sizing and placement data go to our web site at www.jrsmith.com or contact your local Jay R. Smith Representative.

NOTE: Systems exceeding 60 PSI (414kPa) shall be installed with a pressure reducing valve upstream of the unit per ASSE Standard #1010.

NOTE: The wetted surface of the product contacted by consumable water contributes less than one quarter of one percent of lead by weight.

PISTON UNITS Comply with the following:

ASSE/ANSI 1010 Water Hammer Arrester

IMPORTANT

INSTALL USING WRENCH ON HEX ABOVE THREADS
PROTECT PRESSURE CHAMBER FROM DENTING.

FIG. NO.	SIZING SYMBOL	FIXTURE UNIT CAPACITY	A PIPE SIZE	AIR CHARGE	THREADED CONN.	DIMENSIONS		SWEAT CONN. (-SC)	DIMENSIONS		APPROX WEIGHT LBS
						A	B DIA		A	B DIA	
*5201	AA	1 to 3	1/2 IPS	60 psig	136.00	5.56	.875"	136.00	5.62	.875	.5
5205	A	4 to 11	1/2 IPS	60 psig	174.00	6.875	1.125	174.00	6.56	1.125	.5
5210	B	12 to 32	3/4 IPS	60 psig	336.00	8.69	1.38	336.00	10.81	1.38	.5
5220	C	33 to 60	1 IPS	60 psig	530.00	12.00	1.38	530.00	14.03	1.38	1
5230	D	61 to 113	1 1/4 IPS	60 psig	1,120.00	12.00	2.13	1,120.00	13.53	2.13	1
5240	E	114 to 154	1 1/2 IPS	60 psig	1,390.00	14.56	2.13	1,390.00	16.84	2.13	1
5250	F	155 to 330	2 IPS	60 psig	1,654.00	16.38	2.13	1,654.00	14.122	2.63	2

*For use in residential applications only.

FIXTURE	TYPE OF SUPPLY CONTROL	WEIGHT IN FIXTURE UNITS					
		PUBLIC			PRIVATE		
		TOTAL	C.W.	H.W.	TOTAL	C.W.	H.W.
WATER CLOSET	FLUSH VALVE	10	10	-	6	6	-
WATER CLOSET	FLUSH TANK	5	5	-	3	3	-
PEDESTAL URINAL	FLUSH VALVE	10	10	-	-	-	-
STALL OR WALL URINAL	FLUSH VALVE	5	5	-	-	-	-
STALL OR WALL URINAL	FLUSH TANK	3	3	-	-	-	-
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

ASSE/PDI WATER HAMMER ARRESTER SIZING CHART

FOR FLOW PRESSURE UP TO 65 P.S.I.G						
LENGTH OF PIPE	NOMINAL PIPE DIAMETER					
	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
25'	A	A	B	C	D	E
50'	A	B	C	D	E	F
75'	B	C	D	AE	F	EF
100'	C	D	E	F	CF	FF
125'	C	D	F	AF	EF	EFF
150'	D	E	F	DF	FF	FFF