Catalog Folder No. 54A

10/4775 10/4775

Dependable

Protection and Control

GUARD

HOT WATER SPACE HEATING SYSTEMS

against

Boiler explosions

STEAM HEATING SYSTEMS

against

Dangerous low water conditions

DOMESTIC HOT WATER SUPPLY HEATING SYSTEMS

against

Dangerous overheating — scalding hazards
— explosions

WATTS REGULATOR COMPANY

LAWRENCE, MASSACHUSETTS

A. File No. 30-C-3

#### THE LARGEST LINE OF ITS KIND ...

From the time water boilers and steam boilers were used to heat homes and domestic hot water supply systems became available, Watts Regulator Company has engineered and produced protective and control devices that make plumbing and heating systems safe, dependable and automatic. Watts engineering experience, manufacturing efficiency and skilled craftsmanship provide you with quality controls at favorable prices which enables you to render real service to your customers. A longer life of safe, dependable service from the equipment you install is assured when you include Watts controls as an integral part of each system.

Space here does not permit cataloging the entire Watts line—the largest line of its kind. Illustrated and described here are the most typical and popular of our products for domestic hot water supply heating systems, hot water and steam space heating systems. For more specific and detailed information on any product, contact our nearest representative or write direct to our main offices. You will find Watts Regulator Company a complete and dependable source of supply for protection and control specialties. Some of Watts important services for your installations are listed below.

are listed below.
DOMESTIC HOT WATER SUPPLY SYSTEMS CODE
Temperature relief protection to prevent dangerous overheating
WATER SUPPLY SYSTEMS
Pressure relief protection for well pumping systems
Pressure reduction on high pressure service lines
HOT WATER SPACE HEATING SYSTEMS
A.S.M.E. boiler safety relief protection to prevent dangerous excessive pressure
pressure
Combined feed water regulation and pressure relief protection in a single unit
STEAM BOILER HEATING SYSTEMS
Automatic boiler water feeding to maintain proper water level
INDUSTRIAL, INSTITUTIONAL and
COMMERCIAL INSTALLATIONS
Steam, water and air pressure regulation  R, S, J  Water level controls for high pressure process steam boilers  Air or water service strainers  L
Safety relief valves—temperature, pressure, for larger installations

CODE	SERIES No	PAGE
A	N40, 140, 240,	1 4
	340	5
8	54	6
C	5,410)	6
D)	31 174F	7 (
	310	,
2		
	53	6
G	5.30	6
H	36, 32*	3
I	71	3
<u>J</u>	135, 223	9
K	188-83*	1
L	34, 37	9
AA	74, 174	8
N	1 35 HW	11
0	45A, 450A	11
P	60, 76	10
0	89A, 101A	
	93A, 193A 50A	10
<u>a</u> ,	127*, 125*, 152*	
S	26AC 263AC	9
	57*, 110*	
T	81*	
U <sup>III</sup>	142*, 144*	

INDEX

#### DEPENDABLE PROTECTION AND CONTROL BY

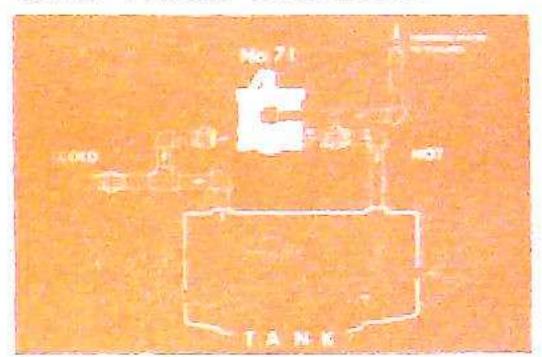
## ATTS

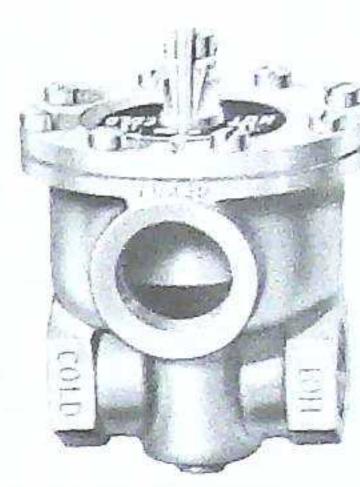
#### No. 71 WATER TEMPERING VALVE . . .

Domestic hot water as supplied by tank or tankless type heaters is frequently far above a safe temperature for personal use. Danger of scalding is always present. This hot water tempering valve eliminates scalding hazards, conserves the hot water supply and reduces the load upon the heater or boiler. It automatically mixes cold with the hot water as it is drawn and delivers safely tempered water to the service outlets.

Construction is heavy bronze throughout and it features a special bi-metal, corrosion resistant thermostat for sensitive control and long life. Regularly furnished with 140° setting. Adjustable range is 80° to 200°. S.P.S. Female Connections.

Size	Width	Height	Weight
1/2"	25/8"	3%"	$2\frac{1}{2}$ lbs.
3/4"	3"	41/2"	3% lbs.
1"	3"	41/2"	37/8 lbs.





No. 71

#### No. 188 SIPHON VACUUM BREAKER . . .

In such fixtures as old style lavatories, bath tubs, clothes and dish washers, chemical and process tanks and other similar devices where the water supply enters below the flood rim, it is possible for polluted water to be siphoned back into the potable water supply line if a vacuum condition should develop. The resulting menace to good health is obvious. A Watts siphon vacuum breaker installed in the supply line to these fixtures prevents this possibility by venting air into the line thereby breaking the vacuum. Construction is bronze body and internal trim with Hy-car rubber disc. Available in plain brass or polished chrome finish. Maximum pressure is 175 lbs. water pressure, maximum temperature 250° F. Non-adjustable. S.P.S. Female connections.

Size	Width	Height	Weight
1/4"	11/2"	316"	½ lb.
36"	11/2"	314"	½ lb.
1/2"	11%"	311"	1 lb.
3/4"	21/4"	315"	1½ lb.
1"	25/8"	4%"	1¼ lb.





No. 188

#### No. 36 VACUUM RELIEF VALVE . . .

Used on domestic hot water supply systems to prevent vacuum conditions which could siphon the water from the system and burn out a heater or collapse a tank. Silicone disc withstands great heat and will not stick to seat. Closes quickly and tightly under pressure and opens at less than  $\frac{1}{2}$  vacuum. Tested up to 270 lbs. pressure, non-adjustable. Listed by A.G.A.

Size 1/2" Male inlet. Width 13/4". Hght. 23/4". Wgt. 1/2 lb.

NOTE: Vacuum Breakers and Vacuum Relief Valves do not perform the same function. A siphon breaker prevents back-siphonage of polluted water into potable water supply by breaking the siphoning action. A vacuum relief valve prevents damage to hot water tanks and equipment in the event of vacuum conditions caused by a reversal of water flow within the system.





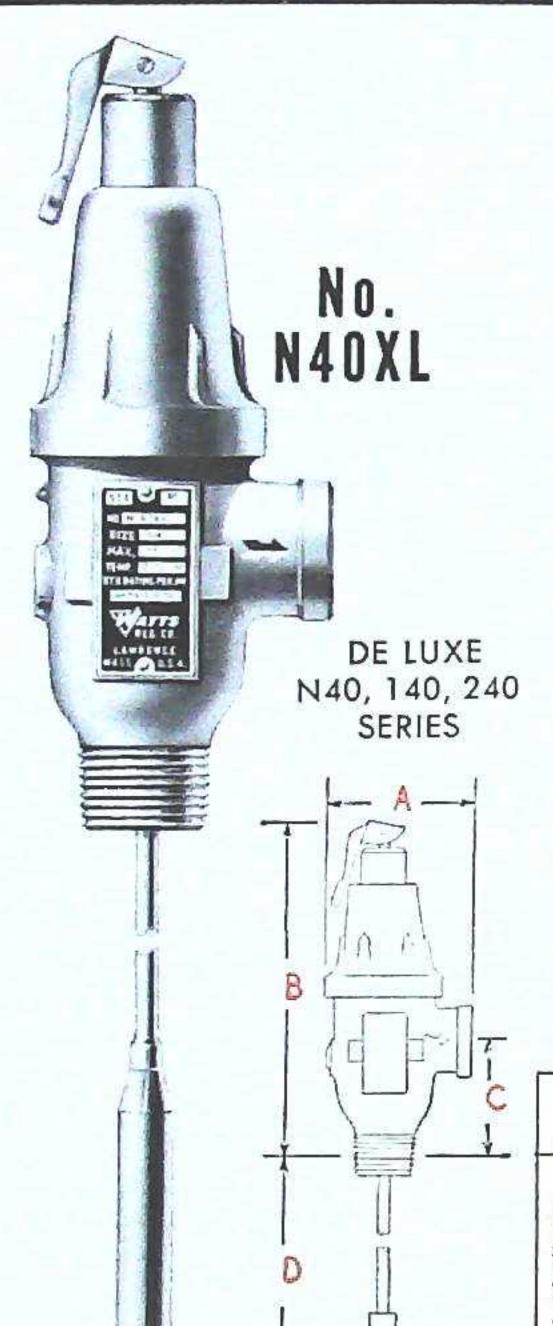
No. 36

ATTS REGULATOR CO. . LAWRENCE, MASS

#### WATTS PLUMBING SPECIALTIES

N40, 140 and 240 Series

SELF CLOSING AUTOMATIC TEMPERATURE and PRESSURE RELIEF VALVES



#### WATTS AUTO-THER-MATIC DESIGN

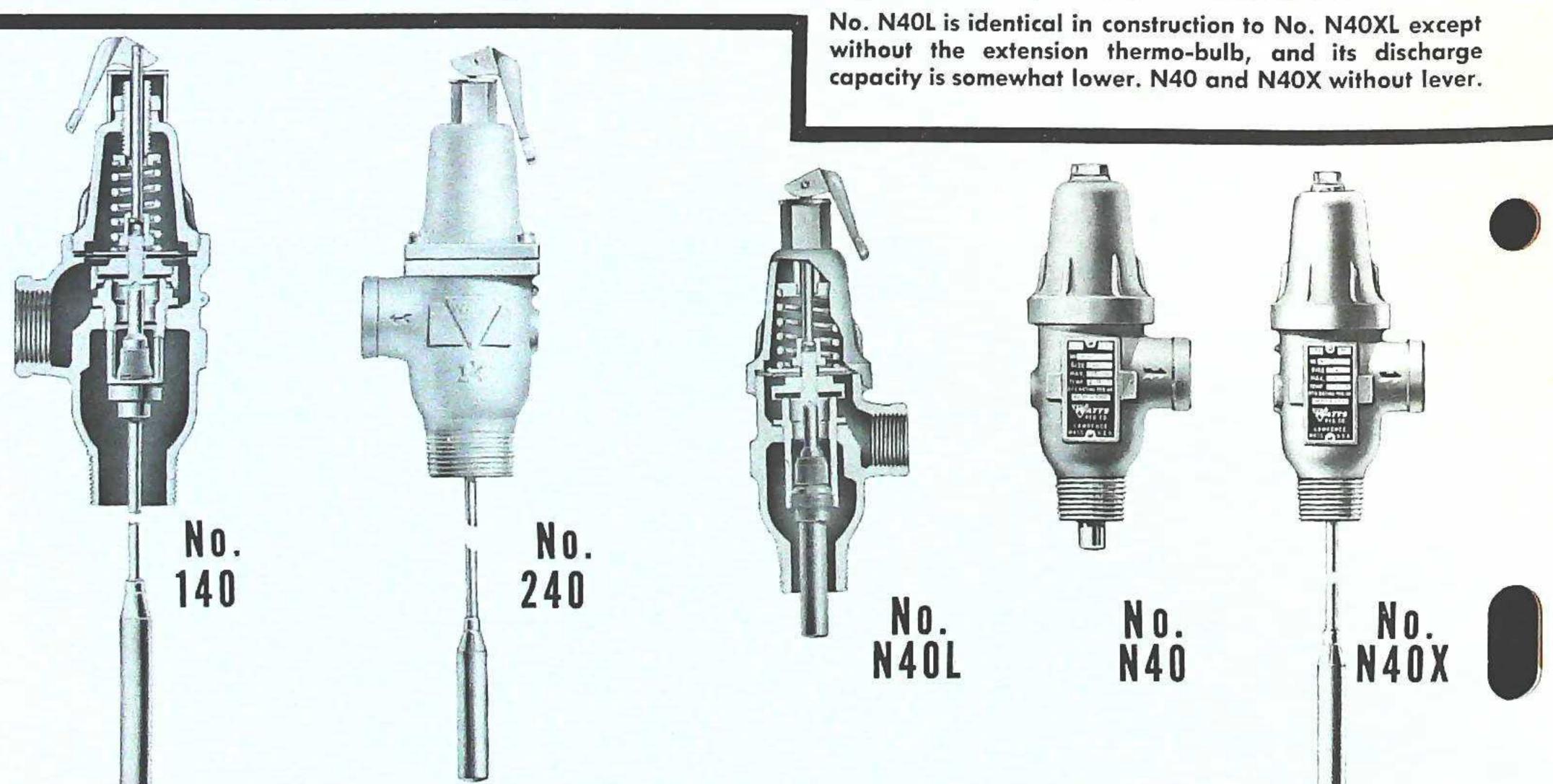
These are the latest designs of the original fully automatic temperature and pressure relief valve developed by Watts. They represent the most advanced protection for hot water supply systems. Features include large internal body flow area; a high temperature resisting and corrosion-proof diaphragm seal to isolate working parts from water; and a powerful solid wall hydraulic principle piston type thermostat. No guides on pressure side of the valve—bronze body—silicone disc—renewable thermostat and seat assembly

N40 series is universal for any residential systems, and they are also adequate for many commercial systems having less than a half million BTU/HR heat input. Four models are available as shown. Test levers and extension type thermostats are optional equipment to the basic valve at slight additional cost. Test levers are recommended by leading authorities. Unless a valve thermostat can be located within 2" of the tank tapping, an extended thermostat is necessary to prevent serious thermal lag. Watts exclusive thermo-bulb design contain more lifting fluid which enables a wider valve opening and therefore a higher discharge capacity. Short thermostat types are preferably used only where direct tank installation is possible. Valve construction is identical to extension types except without the thermo-bulb.

No. 140 and No. 240. For medium to large hot water supply storage tanks in commercial, industrial, and institutional systems. Watts Nos. 140 and 240 fill a need for intermediate sizes and ratings for hot water storage tanks of over 500,000 BTU/HR and up to 1,125,000 BTU/HR.

Size	Type No.		Dimen	sions		Weight	The same of the sa	I. Rating G.A.
		Α	В	С	D			
3/4" male inlet 1/2" female outlet	N40, N40L	2 1/2 "	5 3/4 "	2 1/8"	1"	1 5/8 lb.	Up to	400,000
3/4" male inlet 1/2" female outlet	N40X, N40XL	2 1/2"	5 3/4 "	2 1/8 "	6"	1 3/4 lb.	Up to	500,000
1" male inlet 3/4" female outlet	140	2 3/4 "	63/8"	2 1/8 "	6"	2 lb.	Up to	750,000
1 1/4" male inlet 3/4" female outlet	240	3''	7 1/8"	2 3/8 "	5 3/8 "	3 lb.	Up to	1,125,000

Range 75-150 lbs. Standard Setting 125 lbs. Temp. 210°. — Listed by AGA



#### DEPENDABLE PROTECTION AND CONTROL BY



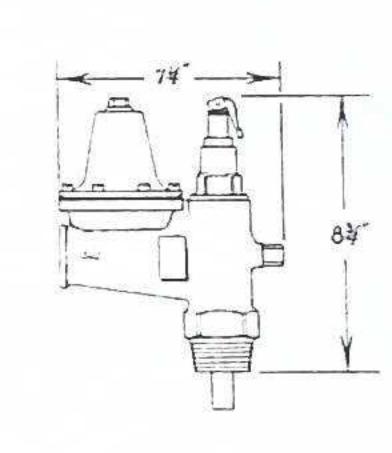
#### No. 340 - Pilot-Operated . . . .

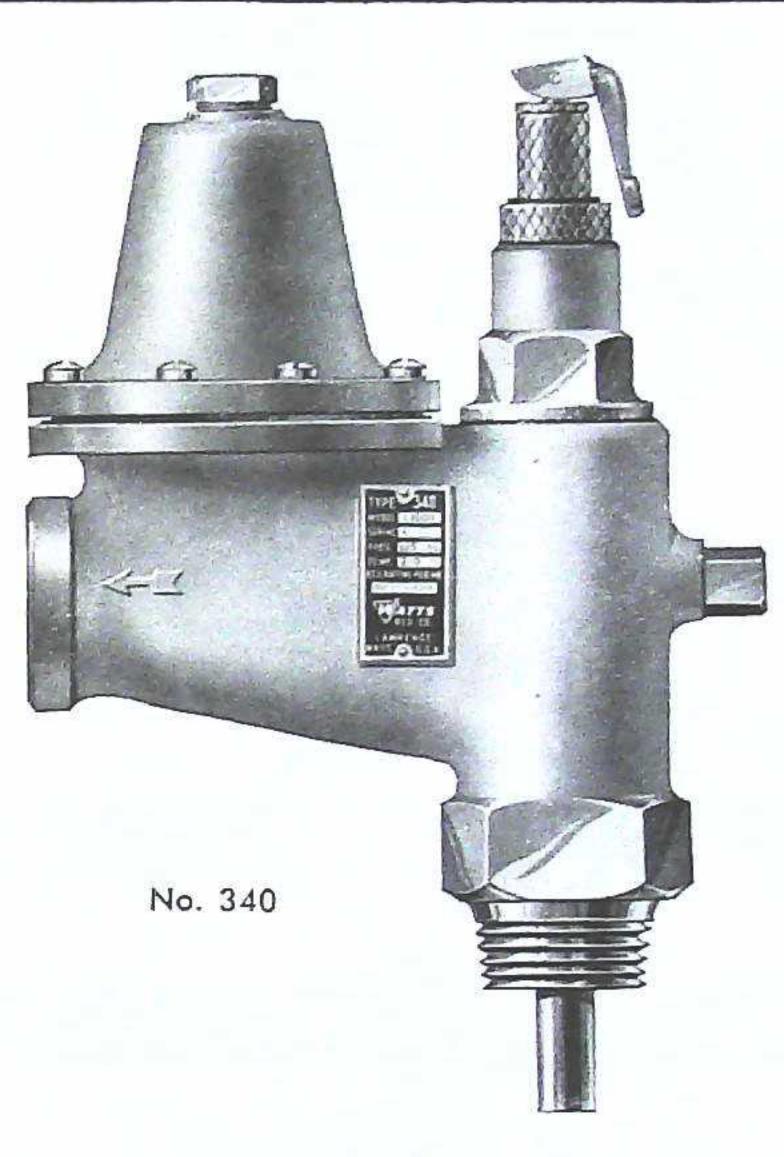
It has been apparent for some time that most of the larger domestic hot water supply heating systems are not adequately protected against excessive temperature hazards by the application of conventional, lower rated relief valves. Watts No. 340 was designed especially for large hot water storage tanks and hot water supply boilers. They have been proven thoroughly reliable by over six years of field service and are still the only valves of their type and high discharge capacity that are available. There is a big and increasing demand by industrials, public buildings, institutions, schools and hospitals for the high capacity temperature and pressure protection that No. 340 provides.

This is our newly redesigned fully automatic temperature and pressure relief valve for large domestic hot water storage systems. It is a combination of a basic "autotherm" relief valve and large capacity diaphragm

relief valve. In the case of either temperature or pressure relief, the "autotherm" unit serves as a pilot valve to open the diaphragm valve which then discharges water in sufficient volume to restore safe conditions. Built only in one size—but through the pilot principle, discharge capacity is in no way limited. All bronze construction with silicone disc and new type thermostat.

Over 1,000,000 B.T.U. per hr. and up to 4,000,000 B.T.U. depending on line pressure. Size 1½" S.P.S. Male inlet and 1" Female drain. Range 75-150 lbs. Standard Setting 125 lbs. Temp. 210° Weight 10½ lbs.



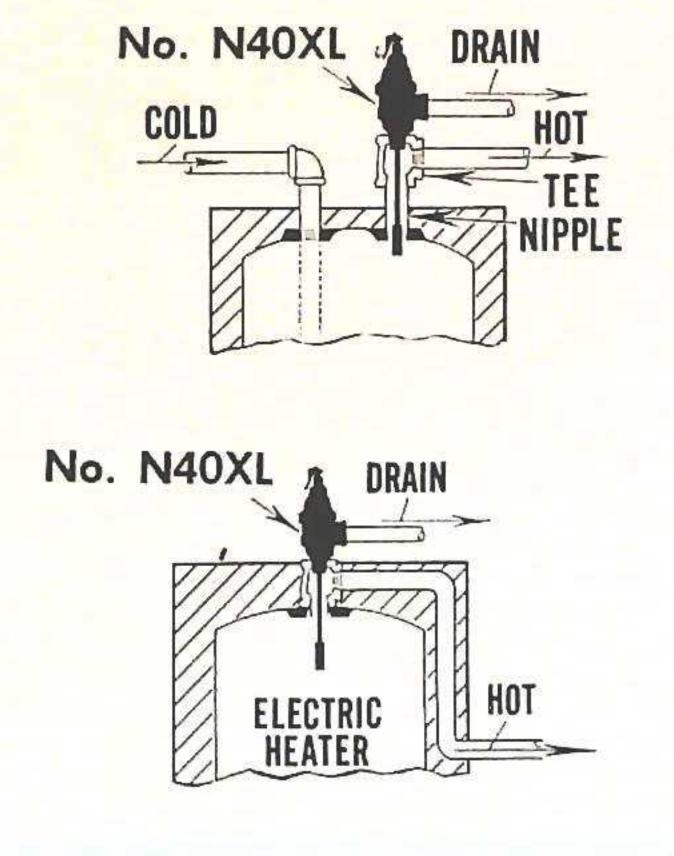


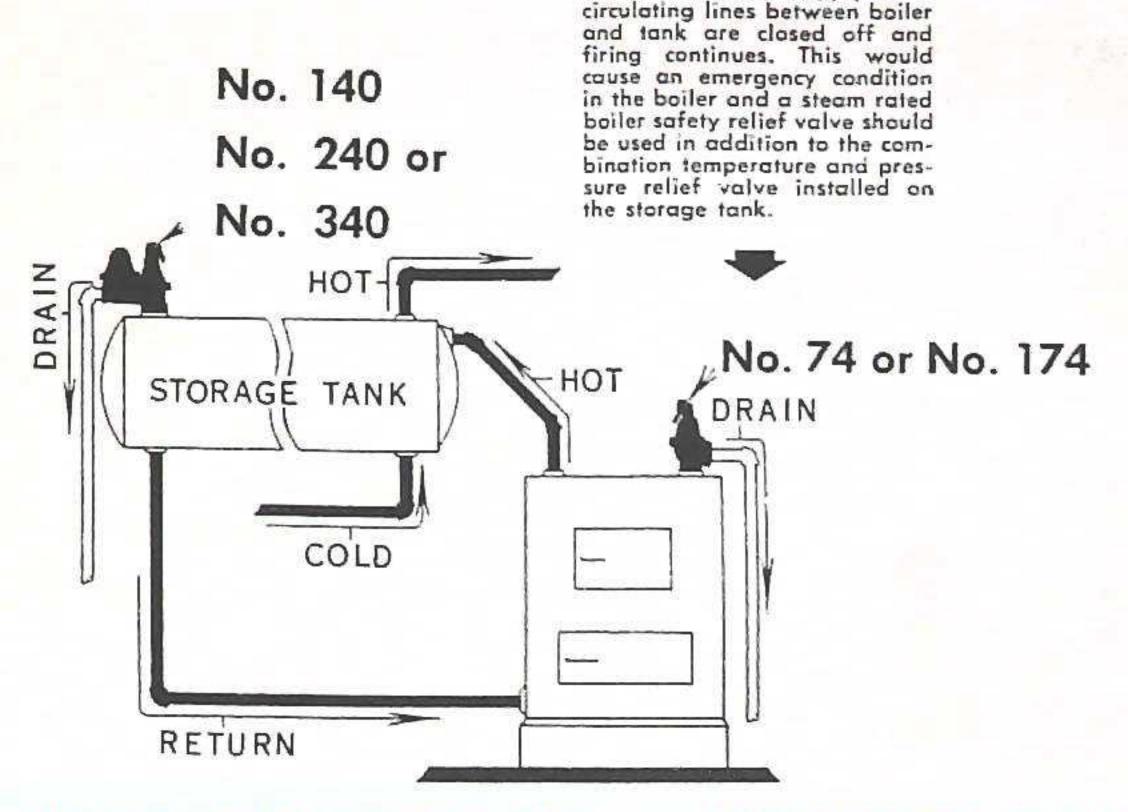
This added A.S.M.E. protection is recommended in case of fail-

ure of the water supply or it

#### TYPICAL INSTALLATIONS

#### FOR DOMESTIC HOT WATER SUPPLY BOILERS



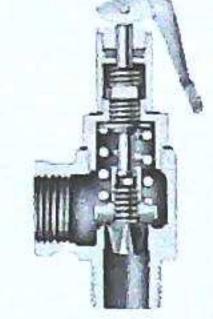


ATTS REGULATOR CO. . LAWRENCE, MAS

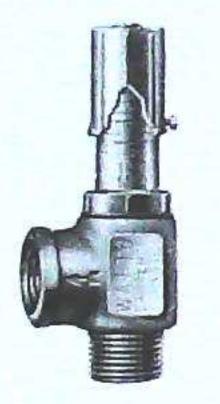
#### PLUMBING SPECIALTIES

#### Relief Valves - Poppet Type . . .

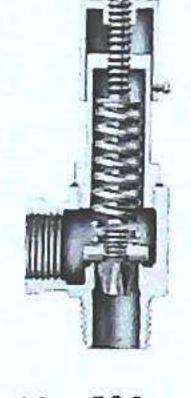
PRESSURE RELIEF ONLY







No. 530



No. 530

#### SERIES 53 (Listed by AGA)

An all bronze poppet type pressure relief valve with stainless steel spring. Popularly priced yet well made for protection against excessive pressure. Series 53 is used on domestic range boilers or storage tanks where a low-priced relief valve is adequate. Can be used as a by-pass relief valve on pump discharge lines. Adjustable.

No. 53 without test lever—3" high. No. 53L with test lever—37/s" high. Standard setting 125 lbs. Adjustable range 30-150 lbs.

> 1/2" male inlet-1/2" female drain. Weight 3/8 lbs. 3/4" male inlet-1/2" female drain. Weight 3/4" lbs.

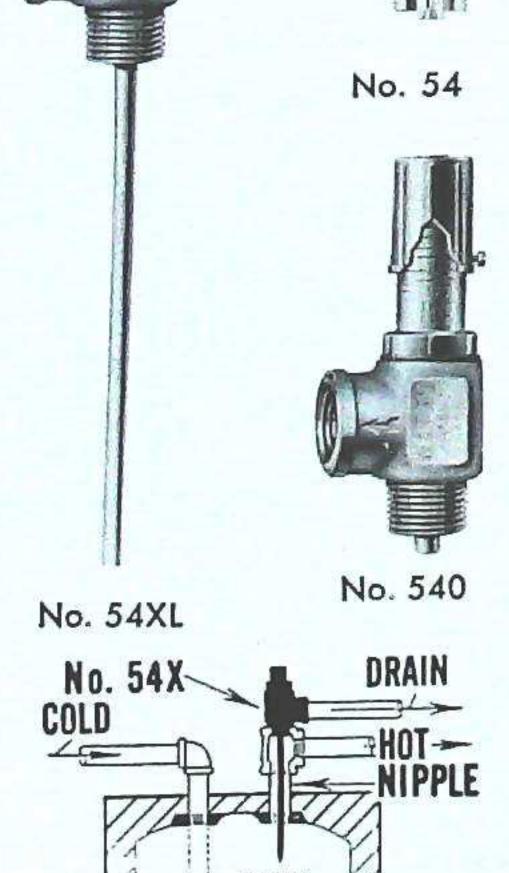
#### No. 530 CALIBRATED (Listed by AGA)

These valves have calibrated adjustment scales. Can be set to required relieving pressure without the use of a gauge. Equipped with locking device. Can be tested by turning adjusting cap counterclockwise until water runs from valve and then turning back to original setting. Standard set 125 lbs. Adjustable range 25-175 lbs. 4" high. Other specifications same as No. 53 series.

#### Combined Temperature and Pressure . . .

FUSIBLE PLUG TYPES

# No. 54



#### SERIES 54 (Listed by AGA)

Same construction as 53 series except fusible plug is located in valve stem, to provide temperature protection as well as pressure protection for domestic hot water supply tanks. Fusible plug holder extends slightly beyond valve inlet connection for contact with the hottest water. Also available with 6" extension thermo-tube. Two extra fusible plugs included with each valve. Relieving pressure adjustable -plug melts 210°. Rating 125,000 B.T.U. per hour. No. 54 without test lever. No. 54X 6" extension, without lever. No. 54L with test lever. No. 54XL with test lever, 6" extension. Adjustable range 75-150 lbs.

#### No. 540 CALIBRATED (Listed by AGA)

Exactly the same construction as No. 530 except that fusible plug is added in valve stem to make this valve a combination temperature and pressure relief valve. Fusible plug melts at 210° allowing hot water to escape before it becomes dangerously overheated. Specifications are the same as No. 530

#### DEPENDABLE PROTECTION AND CONTROL BY



#### Relief Valves - Diaphragm Type . . .

PRESSURE RELIEF ONLY

#### SERIES 30 DIAPHRAGM TYPE RELIEF VALVE

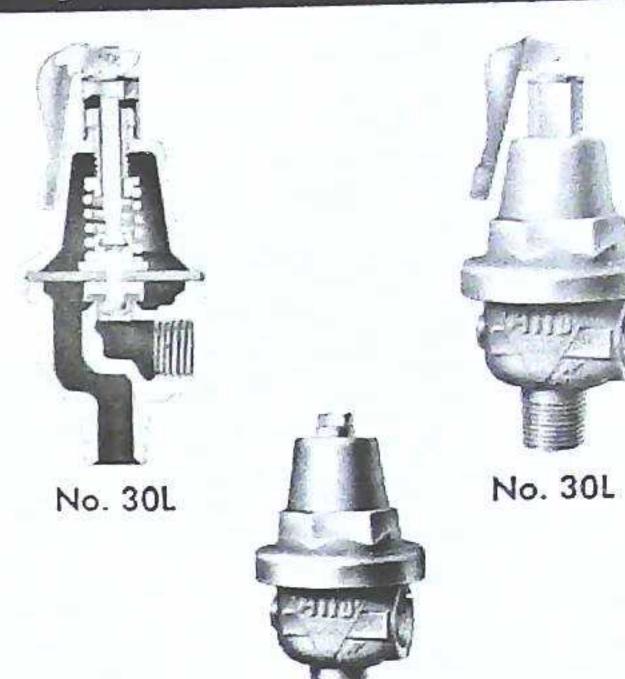
All bronze relief valve with flexible. high temperature and corrosion resisting diaphragm. Diaphragm transmits great power for opening and also seals working parts from water. Sturdily built-accurately tested. Recommended for all closed systems to guard against excessive pressure. Opens automatically to relieve high pressure and reseats when normal pressure is restored. Used extensively to protect storage tanks but can also be used as by-pass relief valve in pump discharge lines. Adjustable.

No. 30-without test lever. No. 30L-with test lever.

Size 1/2" S.P.S. Male inlet—Female Drain—No. 30—41/2" high. No. 30L

Size 3/4" S.P.S. Male inlet-Female Drain-No. 30-43/4" high. No. 30L 53/4" high.

Factory set at 125 lbs. unless otherwise specified. Adjustable range 30-150 lbs.



No. 30

#### Combined Temperature & Pressure . . .

FUSIBLE PLUG TYPES

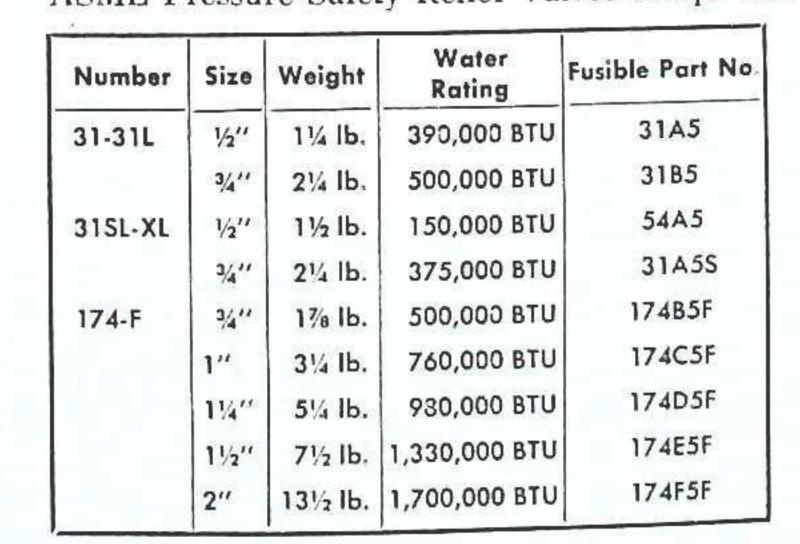
#### No. 31 Series DIAPHRAGM TYPE T& PRELIEF VALVES

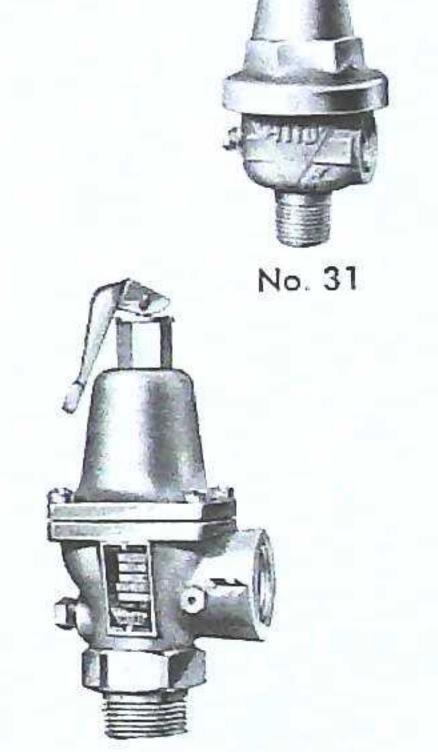
These relief valves are identical to No. 30 series except that a fusible plug is added to provide temperature relief as well as pressure relief. Fusible plug is located inside valve body and may be replaced without removing valve from the line. Simply remove threaded pipe plug, insert new fusible plug on handy driving holder. drive firmly into place, remove driving holder, replace pipe plug and the valve is ready to protect your system again if necessary. Fusible plug melts 210° Two extra fusible plugs with each valve. Adjustable range 75-150 lbs.

#### Nos. 315L and 31XL (Listed by AGA)

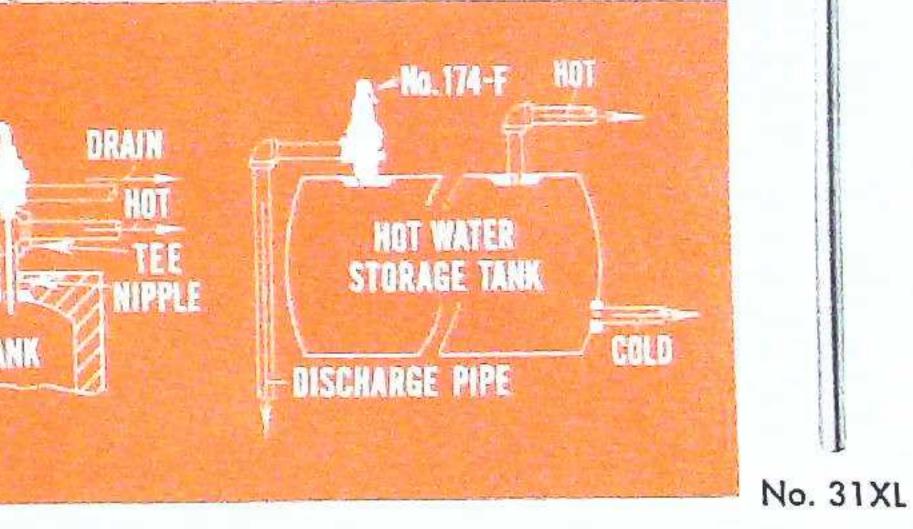
These are identical in construction to 31L except that a fusible plug is added and located at the end of a tube connected to the inner valve body. This provides accurate contact with hottest water when valve cannot be located close to tank or heater because of heavy insulation or other restrictions. Fusible plug melts 210°. Two extra fusible plugs with each valve. Length of tube beyond inlet connection 31SL-1/2"-31XL-5".

For storage tanks that require larger sizes beyond the capacity of No. 31 series. Order No. 174-F. Sizes 3/1" to 2" inclusive. Same as No. 174 ASME Pressure Safety Relief Valves except with added fusible plug.





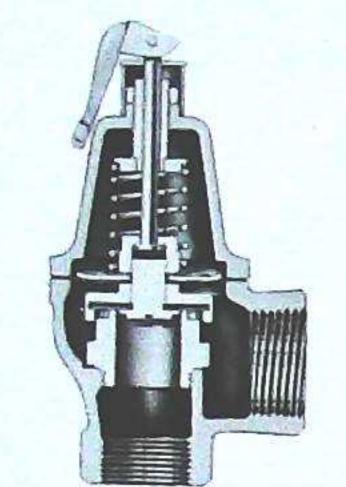
No. 174-F



WATTS REGULATOR CO. . LAWRENCE,

#### PLUMBING and HEATING SPECIALTIES

#### Pressure Safety Relief Valves — A.S.M.E.



No. 74

# 10) No. 174

DIMENSIONS

SIZE	No.	A	В	С	D
4×1"	74	25/6"	5916"	17/6"	113/6"
3/4"	174	21/2"	51/2"	13/8"	15/8"
1"	174	23/4"	73/8"	25/6"	129/32
11/4"	174	4"	81/8"	213/6"	25/6"
11/2"	174	41/2"	95/8"	31/6"	2%6"
2"	174	6"	101/2"	312"	33/8"

#### FOR HOT WATER HEATING BOILERS and HOT WATER SUPPLY BOILERS

Modern A.S.M.E. tested and rated safety relief valves are primarily water relief valves for thermal expansion pressure; but, because steam may be generated during periods of runaway firing, the A.S.M.E. code requires that they must also provide emergency steam pressure relief protection to maintain safe pressure limits. All A.S.M.E. valves are, therefore, rated on their B.T.U. steam discharge capacities.

SERIES 74-174 SAFETY RELIEF VALVES Watts has developed a complete line of boiler safety relief valve sizes from 3/4" through 2" inclusive and with corresponding high B.T.U. discharge capacity ratings. Watts No. 74-174 series were the first to offer this full selection, which affords complete pressure protection for nearly 100% of all hot water heating and supply boilers with a single valve.

Cast bronze body and internal trim, heat-resisting silicone rubber disc, stainless steel spring, and nylon reinforced hycar diaphragm. Unusually high lift prevents wire drawing of seat and disc. Diaphragm pressure seal isolates all working parts against flow of water or steam. Silicone disc is flexible and resilient and cannot vulcanize to valve seat. Bronze seat is renewable. Test lever cannot be restrained to make valve inoperative.

No. 74, the first of the series introduced about two years ago, has adequate capacity to protect over 80% of all boiler installations; and the 3/4" No. 174 is the most recent addition to our modern line. Each of these valves are provided with female inlet and female drain connections.

No. 174 series, sizes 1" to 2" inclusive, are proportionately larger to No. 74 embodying the same advanced design and materials but provided with male inlets and female drains of the same size. These were designed for institutional, industrial, and commercial installations to protect the high B.T.U. rated boilers that need greater relief capacities.

74-3/4"x1" 174-3/4" 174-1" 174-11/4" 174-11/2" 174-2''Weights: 21/2 lbs. 17/8 lbs. 31/4 lbs. 51/4 lbs.  $7\frac{3}{4}$  lbs. 13¾ lbs. Roughing-in dimensions for all sizes are shown at the lower left.

#### WATTS A.S.M.E. BOILER SAFETY RELIEF VALVE CAPACITIES

Stock settings and A.S.M.E. rated relieving capacities are shown in the chart below. Special settings available upon request

Size	Series No.	30#	50#	75#	100#	125#	150#
3,4"	<b>=74-30</b> #	480,000					1 17
3,5"	74-50		699,300				
3/4"	74-75			1,025,100			
3/4"	74-100				1,325,700		-
3,4"	74-125		#T# .			1,543,500	
3/4"	74-150					1,040,000	*1.820,000
34"	174-30	441,000					*1,020,000
3/4"	174-50		646,000			100-00-00-00-00-00-00-00-00-00-00-00-00-	
3/4"	174-75		V	904,000	1		
3/4"	174-100				1,165,000		
3/4"	174-125					1,422,000	
3/4"	174-150					1,422,000	1,674,000
100	174-30	716,400					1,074,000
1"	174-50		1,036,800				
1"	174-75			1,416,600			
1"	174-100				1,765,800		
1"	174-125					2,097,900	
1"	174-150					2722.0.99	*2,450,000
11/4"	174-30	1,065,600					2,400,000
11/4"	174-50		1,505,700				
11/4"	174-75			2,176,200			
11/4"	174-100				2,717,100		
11/4"	174-125					3,197,700	
11/4"	174-150						*3,780,000
11/2"	174-30	1,395,000					
11/2"	174-50		2,065,500				
11/2"	174-75			2,835,000			
11/2"	174-100				3,636,900		
11/2"	174-125					4,333,500	
11/2"	174-150						<b>*5,120,000</b>
2"	174-30	2,528,100					- 4 - 4
2"	174-50		3,638,700				
2"	174-75			4,731,300			
2"	174-100				6,225,300		
2"	174-125	7.54				7,039,800	
2"	174-150		-				*8,200,000

#### DEPENDABLE PROTECTION AND CONTROL BY



#### Pressure Regulators · Strainers . . .

#### No. 135 REDUCING VALVE and STRAINER

An all-bronze, one-piece regulator and strainer for household service as well as many industrial applications on water or air. Valve features a renewable stainless steel seat and design permits removal of seat or disc without dismantling regulator. Diaphragm material is high temperature resisting and oil proof for hot water or oil laden air service. For initial pressure up to 250 lbs. and reduced pressure range of approximately 20 to 75 lbs. Furnished with stock setting to reduce to 45 lbs. unless otherwise specified. Adjustable, see chart below. Female connections. For reduced pressure settings lower than those shown on chart below, specify No. 135HW.

SIZE	LENGTH	HEIGHT	WEIGHT
1/4"	5"	61/2"	4 lbs.
34"	514"	7"	5 lbs.
1"	6"	71/2"	7 lbs

#### No. 223 HIGH CAPACITY REDUCING VALVE

A simple, durably constructed all-bronze regulator for industrial, commercial, or residential requirements on water service. Initial pressures up to 250 lbs. Adjustable, see chart below. Furnished to reduce to 45 lbs. unless otherwise specified. Female inlet and outlet connections. Sizes 11/4" to 2" have renewable seat ring.

Size	<b>⅓</b> ''	3/4	I.	1 1/4	1 1/2	2 **
Length	3 1/2 ''	4	4 1/2	6'	6 1/2 **	8 ½ "
Height	6 1/8	6 3/4	8 1/2 "	9'	103/2"	111/8"
Weight	3 % lbs	5 lbs	6 1/4 lbs.	12 lbs.	17 lbs.	24 lbs.

For smaller sizes specify No. 26AC.

#### No. 2235 REDUCING VALVE and STRAINER COMBINATION No. 223 ptus No. 34 Strainer furnished assembled with nipple.

### REDUCED PRESSURE RANGES Type 135

#### No. 26AC PRESSURE REGULATOR

A small, compact, and dependable regulator for water, air, oil. Readily meets requirements for air-conditioning, paint spraying, drinking fountains, and many similar services. Forged bronze with sensitive rubber diaphragm. For initial pressures up to 300 lbs. Reduced pressure ranges 1-25 lbs., 3-50 lbs., 10-125 lbs., 50-175 lbs.

SIZE	HEIGHT	DIAMETER	WEIGHT
1/8"-1/4"	4"	2 1/2 "	1 1/2 lbs.
3/8 "	41/4"	2 1/2 "	134 lbs.

#### No. 37 STRAINER

Small all-bronze strainer for convenient attachment to various types of equipment. Heavy copper screen, easily removed for cleaning. 1/2" size has S.P.S. Female inlet and Male outlet. All other sizes S.P.S. Female inlet and outlet connections.

#### REDUCED PRESSURE RANGES

	Types	223-2	235	
Initial	1/2-	-3/4	1—	21/2
Press.	Min.	Max.	Min.	Max
50	15	50	15	50
100	18	75	20	75
150	21	78	25	80
200	24	81	30	85
250	27	84	35	90

#### No. 263AC PRESSURE REGULATOR

Identical in purpose and construction to 26AC but is provided with an extra low pressure side tapping for gauge or extra low pressure line, same size as inlet and outlet.

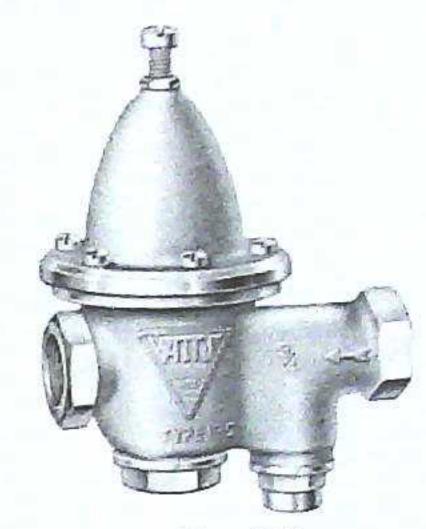
Initial pressures up to 300 lbs. Reduced pressure ranges 1-25 lbs., 3-50 lbs., 10-125 lbs., 50-175 lbs.

SIZE HEIGHT DIAMETER WEIGHT 11/4 lbs. 214"

#### No. 34 STRAINER

Heavy duty all-bronze strainer for water or air lines. Large settling chamber with clean-out plug. Heavy perforated copper screen easily removed for cleaning. S.P.S. Female inlet and outlet connections.

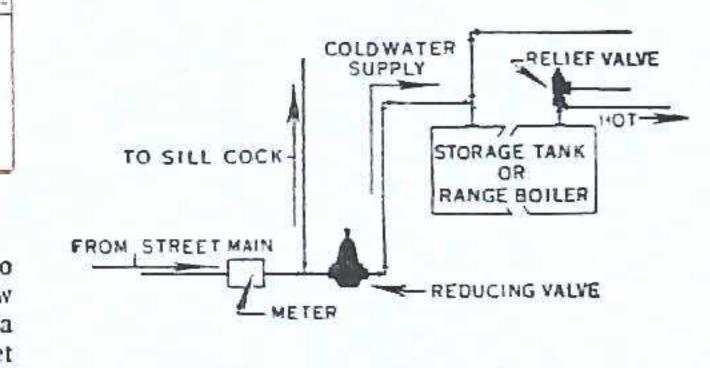
Size	Height	Width	Wt.
14, **	4 3 "	2 % "	1 15 lbs.
3/1 19	4 3% "	3 1/8 "	2 lbs
1"	5 1/4 "	314,"	2 % lbs.
114"	514 *	4"	4 lbs.
114."	6"	41/2"	414 lbs.
2"	714,"	61/4"	8 lbs
21/5"	71/2"	7"	11 lbs
2 //2	1.72		11 103

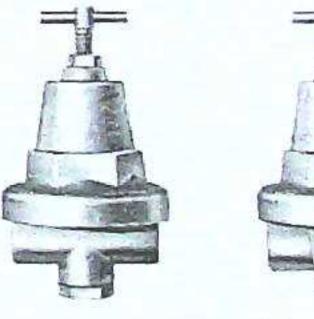


No. 135



No. 223





No. 263AC No. 26AC



WATTS REGULATOR CO. . LAWRENCE, MASS.

#### HEATING SPECIALTIES

#### Steam Boiler Water Level Controls . . .

#### SERIES 60 BOILER WATER FEEDERS

No. 76LWD

No. 89A

No. 93A

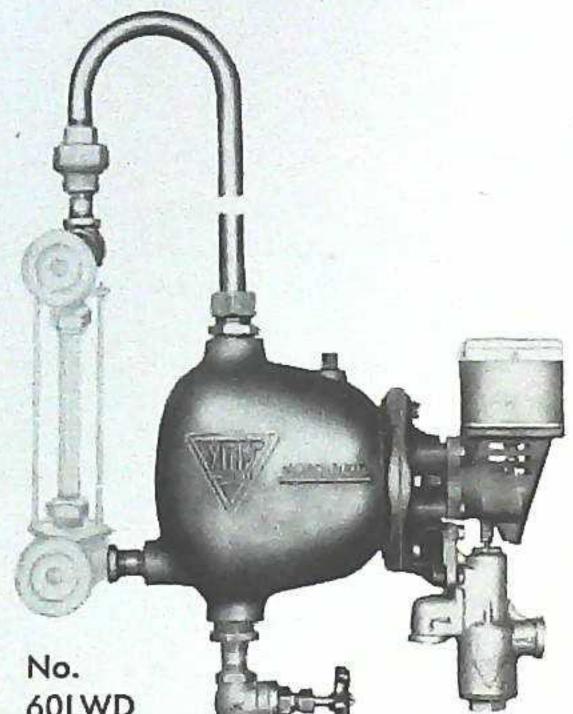
No. 193A

Automatically maintains most efficient boiler water level and guards against burn-outs due to water loss. All Watts feed valves have soft silicone disc-to-metal seating, which has been proven the most trouble-free design yet developed. Latest model feed valves have enlarged strainer area and sediment chamber and are furnished as standard equipment. Present 60 series also includes a new gate type, drain valve that strictly complies with the intentions of the ASME low pressure heating boiler code. Furnished complete with fittings for easy gauge glass attachment.

No. 60 FEEDER ONLY - Recommended for all manually fired, low pressure steam boilers.

No. 60LWD FEEDER and CUT-OFF with ALARM SWITCH - Recommended for all automatically fired low pressure steam boilers. Modern double throw mercury switch for cut-off alarm cannot arc or fuse contacts together.

Series 60 capacity up to 5,000 sq. ft. of radiation. Maximum steam pressure 35 lbs. — maximum water pressure 150 lbs. Has 1/4" tapping for pressure switch. Water valve connections 1/2" S.P.S. – Gauge glass connections 1/2" S.P.S. Height (float chamber only) 81/2". Width 51/2". Length 121/2". Weight 30 lbs.



#### SERIES 76 BOILER WATER FEEDERS

For boilers over 5000 sq. ft. radiation. Maximum steam pressure 35 lbs. Maximum water pressure 150 lbs.

Provided with 1/4" tapping for pressure switch. Water valve connections 3/4" S.P.S. Female. Float chamber connections 1" S.P.S. Female. Switch-feed valve assembly identical to 60 series.

No. 76 BOILER WATER FEEDER. No. 76LWD BOILER WATER FEEDER WITH LOW WATER CUT-OFF AND ALARM SWITCH.

Width 91/2". Length 141/2". Height 131/4". Weight 55 lbs.

All Watts low water cut-offs and combination feeder-cut-offs employ a standard mercury switch to break the electrical circuit to the burner or stoker. It is practically fool-proof with no mechanical parts to wear, stick or fuse together. Double throw switches for cut-offs available at extra cost.

#### No. 89A LOW WATER CUT-OFF

For gauge glass installation on low pressure steam boilers. Features include large deep sediment bowl and surge-snubbing float chamber to prevent fouling and stabilize float action for positive switch service. Furnished complete with all attachment fittings. Gauge glass connections 1/2" S.P.S. and 1/4" tapping for pressure switch.

Height (float chamber only) 61/2", Width 4", Length 9", Weight 10 lbs.

#### No. 101A LOW WATER CUT-OFF

De luxe built-in type with deep sediment chamber for steam boilers with standard 21/2" S.P.S. tapping. Maximum steam pressure 25 lbs. Additional 1/4" tapping for pressure switch.

Width 3", Length 101/2", Height 6", Weight 71/4 lbs. Length outside of boiler 93/4".

#### No. 93A LOW WATER CUT-OFF

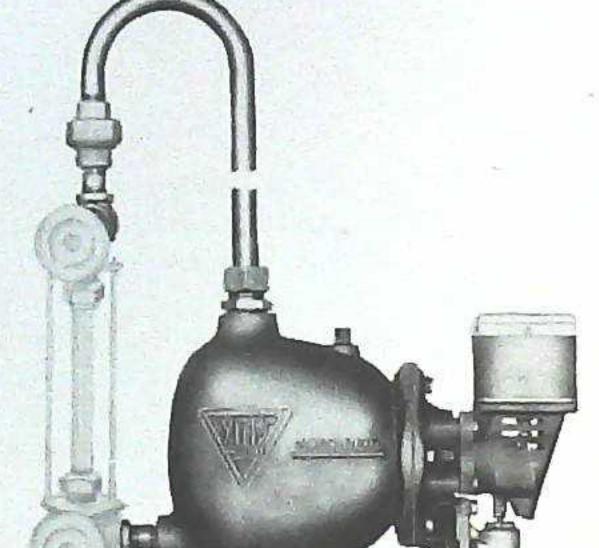
Built-in type for modern boilers with standard 21/2" S.P.S. tapping and limited space in jacket. Maximum steam pressure 25 lbs. 1/4" tapping for pressure switch. Length 23/4" inside boiler. 43/4" outside boiler. Width 3". Weight 31/2 lbs.

#### No. 193A LOW WATER CUT-OFF

Built-in type low water cut-off with 21/2" S.P.S. tapping used where shallow sections and depth of jacket prevent the use of 93A. Maximum steam pressure 25 lbs. 1/4" tapping for pressure switch. Length outside of boiler 7". Width 3". Weight 5 lbs.

#### No. 50A LOW WATER CUT-OFF

Designed for use with small or medium sized process boilers and hot water space heating boilers. Also used as float control on steam pressure cooking kettles. Maximum steam pressure 50 lbs. 1" S.P.S. top and bottom float chamber connections. Height 6", Length 9". Weight 11 lbs.



#### DEPENDABLE PROTECTION AND CONTROL BY

#### Hot Water Heating Specialties . . .

The prevention of excessive pressure and the assurance of a supply of water at all times are the first considerations to safe hot water heating boiler operation. Watts No. 74 A.S.M.E. Boiler Safety Relief Valve described on Page 8 and the 135HW Pressure Feed Water Regulator shown here provide an unbeatable combination for hot water boiler controls.

#### No. 74 A.S.M.E. PRESSURE RELIEF VALVE

The high B.T.U. steam discharge capacity in this one valve alone provides full pressure protection for over 80% of all hot water space heating installations.

Construction: Cast bronze body and internal trim, silicone rubber disc, stainless steel spring with hycar and nylon back pressure seal. Size 3/4" S.P.S. Female Inlet—1" S.P.S. Female Discharge. Weight 2½ lbs.

#### No. 135HW AUTOMATIC FEED VALVE AND STRAINER

This control is identical to the No. 135 described on Page 9 with the exception of a bottom spring to provide for more sensitive control under 30 lbs. It automatically feeds water to the system and maintains minimum pressure requirements. Any loss of boiler water is replaced immediately. The valve is factory set to deliver 15 lbs. but may be adjusted to suit installation requirements.

#### INSTALLATION OF WATTS Nos. 74 and 135HW

Installation drawing is typical of No. 74 and 135HW as used for the protection and control of hot water space heating boilers. Feed water regulator is set to deliver 15 lbs. and the A.S.M.E. boiler safety relief valve is set to relieve at 30 lbs.

#### No. 45A HOT WATER HEATING DUAL CONTROL UNIT

De luxe dual control regulator for hot water heating systems. Reducing valve employs new principle of operation which provides unusually large capacity for QUICK FEEDING. Enables a full flow to fill system and then AUTOMATICALLY regulates system pressure. By AUTOMATIC FAST FEEDING, a by-pass is not only unnecessary, but undesirable. A large area, fine mesh copper screen strainer surrounds the seat. The relief valve has operational characteristics never before incorporated in dual control construction. It not only will discharge excessive water pressure from thermal expansion, but also can discharge steam pressure. Accurate relieving and positive reseating is assured because of superior disc and seat construction design.

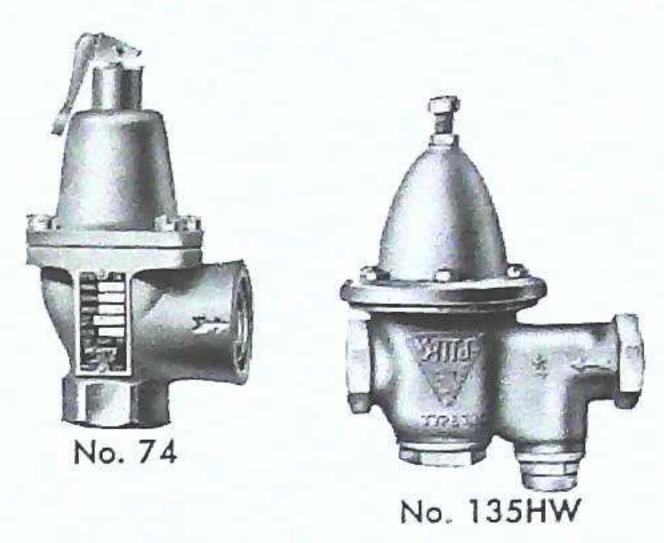
Set to deliver 12 lbs. and relieve at 30 lbs. Size 1/2" S.P.S. female connections.

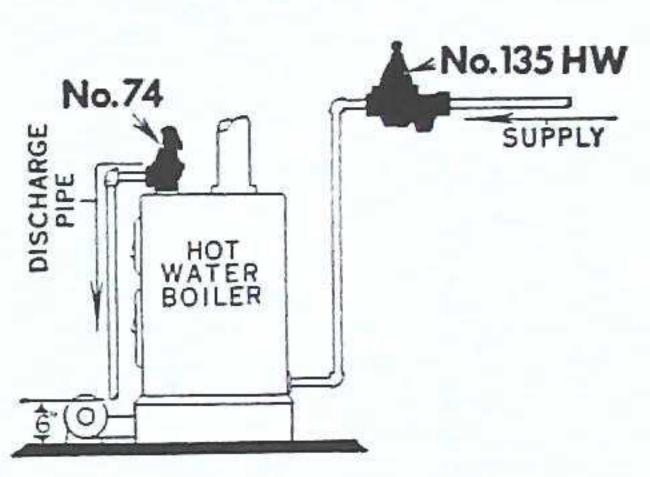
Height 53/4". Length 61/2". Weight 51/3 lbs.

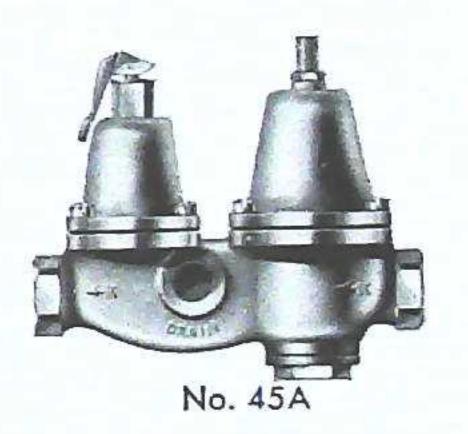
#### No. 450A HOT WATER HEATING DUAL CONTROL UNIT

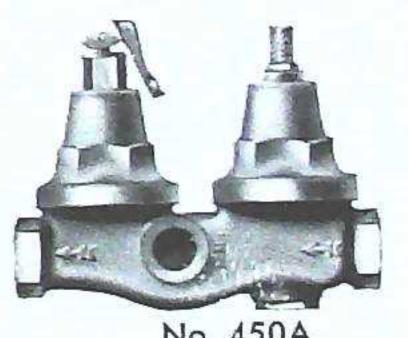
Excepting some construction refinements, slightly smaller and somewhat different body design, it has the same principle of operation as the 45A. Slight difference in construction enables Watts to offer advanced design for a low priced dual control. Widely used in housing projects. Size 1/2" S.P.S. female connections.

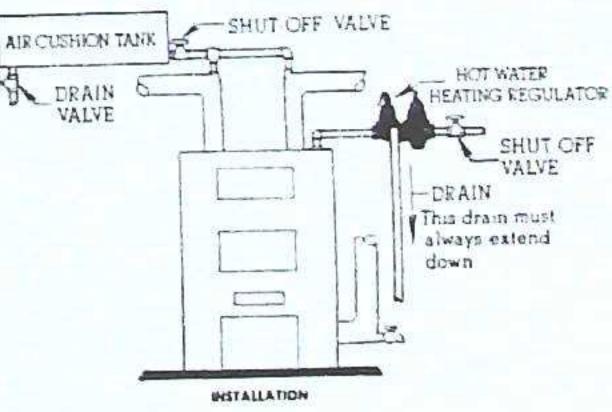
Height 5". Length 61/4". Weight 33/4 lbs.

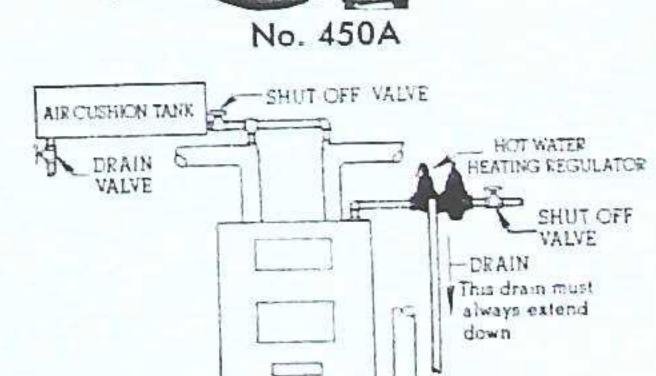






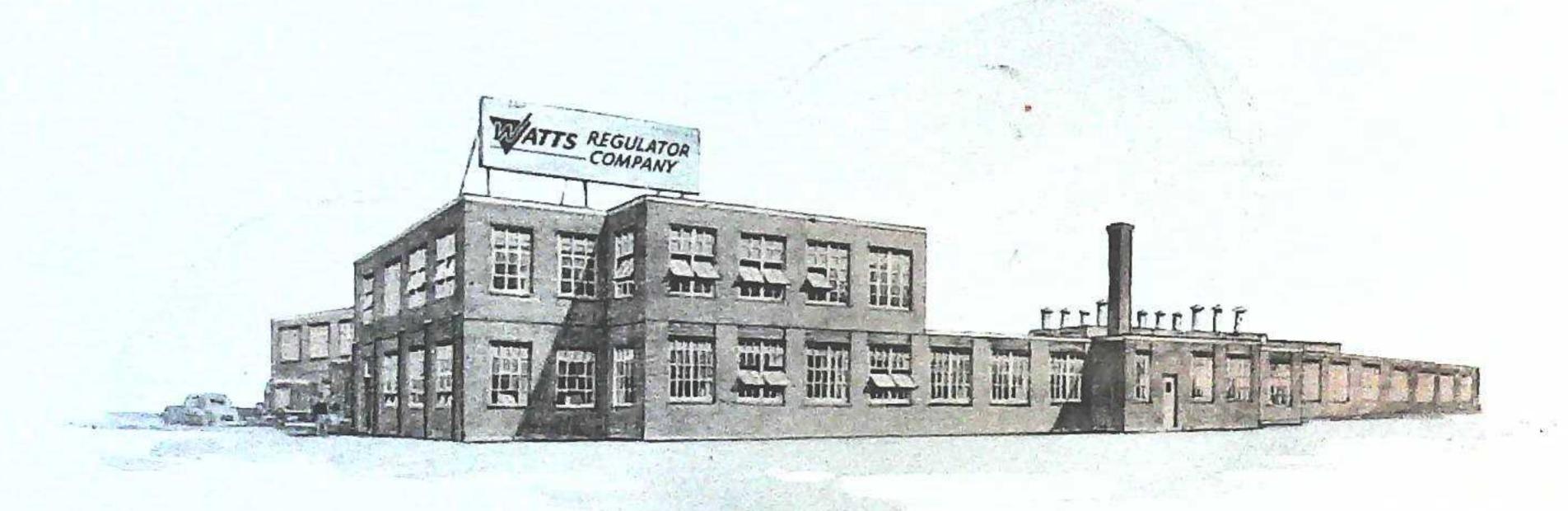






WATTS REGULATOR CO. . LAWRENCE, MASS.





#### representatives...

northeastern states	Boston, Mass.—John Dale, 109 Dartmouth St., (16) New York City—J. G. Kelly, Inc., 40-05 Crescent St., L. I., N. Y., (1) Binghamton, N. Y.—Peter Brandes, 15 Crestmont Rd. Philadelphia, Pa.—Heating Products, Inc., 902 W. Lycoming St., (40) Pittsburgh, Pa.—R. F. Luley, 2961 W. Liberty Ave., Rm. 210, (16) Washington, D. C.—R. W. Rassbach, 7706 - 14th St., N.W., (12)
southeastern states	Charlotte, N. C.—T. A. Cooper Co., 121 E. Third St., (2) Atlanta, Ga.—Spotswood Parker & Co., 313 Techwood Drive Tampa, Fla.—B. A. Thomas, 2925 W. Hillsboro Ave., (3)
mid-west northern states	Cincinnati, Ohio—J. M. Beglen, Rm. 711, 307 E. Fourth St., (2) Cleveland, Ohio—A. J. Harvey, Jr., Rm. 314, 7016 Euclid Ave. Detroit, Mich. – Ernest Sanger, 1045 Wayburn Ave., (30) Milwaukee, Wisc.—Richard Bentzien, 5625 W. Wells St., (13) Chicago, III. Mike Mercury Co., Inc., 1348-50 W. Washington Blvd., (7)
north central states	Des Moines, Iowa—Ostrander-McDonald Co., 3939 East 14th St., (13) Minneapolis, Minn.—R. H. Sweeney Company, 208 - 11th Ave., S., (15) Kansas City, Mo.—F. A. Griffin, Jr., 614 West 26th St., (8)
south central states	St. Louis, Mo.—T. H. Liebig Co., 1245 Big Bend Boulevard, (17)  New Orleans, La.—Dave Ebeling, P. O. Box 703  Dallas, Texas —J. L. FitzGerald, 4608 Cole Ave., (5)
western states	Denver, Colo. –Empire Sales Agency, 1527 - 17th St.  Los Angeles, Cal.—C. S. Bigelow & Associates, 5420 E. Washington Blvd., (San Francisco, Cal.—F. M. Gabbert, 924 Regal Rd., Berkeley, (8)  Portland, Ore. —Wayne S. Janes & Associates, 510 Bldrs. Ex. Bldg., (4)  Seattle, Wash. —Anderson-Beck Co., 1108 Westlake No., (9)
canada	Toronto, Ont.—H. Potter Associates, 245 Gerrard St., E., (2) Vancouver, B. C.—W. W. Tom Donaldson, 5969 Hudson St., (13)
export agency hdqrs	Wellesley, Mass.—Donald J. Moore, P. O. Box 146, (81)
	Litho in U.S.A 100m/2/54

MANUFACTURERS OF

PLUMBING and HEATING . . . SAFETY VALVES AND CONTROLS



LAWRENCE, MASSACHUSETTS, U.S.A.

MANUFACTURERS OF . . . AUTOMATIC TEMPERATURE AND PRESSURE REGULATING SAFETY DEVICES

June, 1954

#### Gentlemen:

30

PROTECTION AND CONTROL is our business, but it is an important part of your business, too. Attached is our revised Catalog Folder 54A together with current net trade price sheet. This material illustrates our complete line of plumbing and heating safety valves and controls.

In the field of protective-control devices, we constantly bring improved construction designs and new features to the industry. Our research and development staff is continually working on advanced designs which make the Watts line outstanding.

With reference to page 9, our Series 135 and 135HW are now being standardly furnished with high temperature resisting and oil-proof disc and diaphragm material, and also with stainless steel renewable seats. Also note our Series 223 and 223S which replaces the former Series 123 and 123S. Size for size it has much greater capacity and other internal design refinements for maintenance.

Please write us when you have any problems on water, steam, or air safety and control devices. We assure you of our fullest cooperation, and our representative in your territory is glad to be of service at all times.

Very truly yours,

WATTS REGULATOR COMPANY



By Invitation Member

Business Character
RICE LEADERS
OF THE WORLD
ASSOCIATION
Represents High Standing in
Name Product Stay