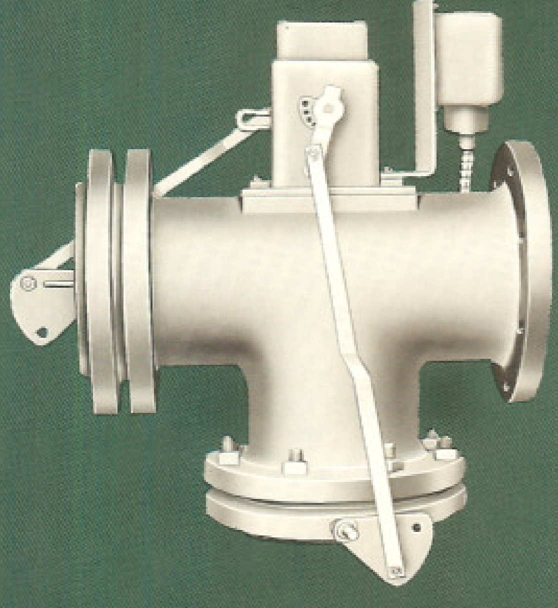
protect the life of your water boiler with an

AQUA·TEMP® Control

This Boiler-water Controlled System is Covered by U. S. Patent No. 3150187



With the increasingly automatic operation of packaged boilers the number and importance of safety controls has grown accordingly. Automatically-fired fuels—both liquid and gaseous require ignition and electrical safety devices to guard against potentially dangerous ignition failures.

Steam boilers need low water cut-offs, relief valves and pressure switches to protect boiler from damaging effects of insufficient water and excessive steam pressures.

Water boilers are similarly provided with a safety device that limits maximum temperatures.

However, this does not completely guard today's automatic water boiler.

Now, York-Shipley has developed the best in a safety control for a water boiler. This is the new AQUA TEMP® control.

AQUA·TEMP® Control

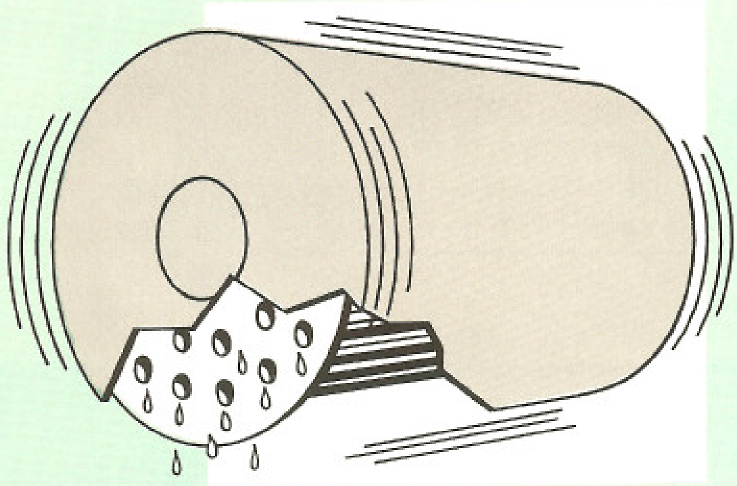
prevents thermal shock prevents condensation

here's how thermal shock and condensation occurs in boilers.

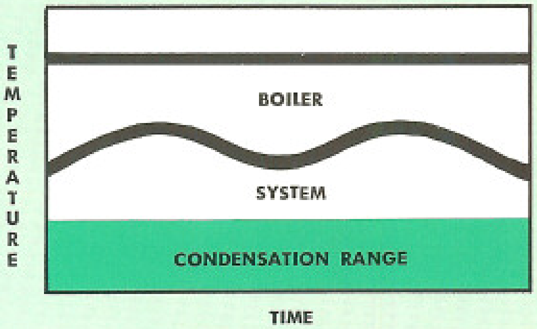
When a large quantity of cold return water from the system is rapidly dumped into a hot boiler two things occur:

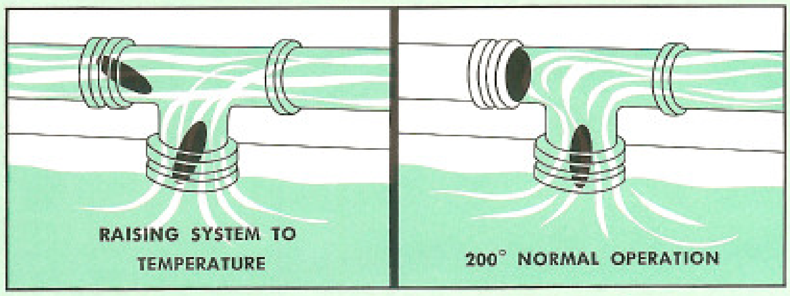
1. The boiler is "shocked"; continued shocking fatigues metal, tubes begin to leak and in severe cases the boiler itself cracks and breaks.

2. Condensation of products of combustion occurs inside heated tubes when boiler water temperature cools these gases below their dew point. Water may actually run out tube ends causing damage to metal and refractory.



here's how AQUA·TEMP® Control eliminates thermal shock and condensation:

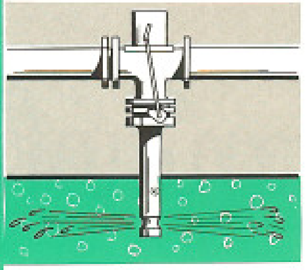




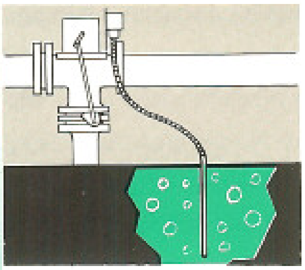
Cold water returning from the system enters the boiler and is mixed with hot boiler water. When the mixed temperature drops to the setting of the thermal shock control, the control valves are automatically re-positioned. This prevents cold return water from entering the boiler. A by-pass system around the boiler carries this cold return water off until the mixed water temperature is raised above the setting of the thermal shock control element. Then the cycle continues until system is up to temperature. This arrangement assures constant high temperatures to be maintained in the boiler while system temperatures vary with demand. This constant high temperature stays well above the dew point of products of combustion eliminating condensation.

these 10 safety and money-saving features are engineered into every

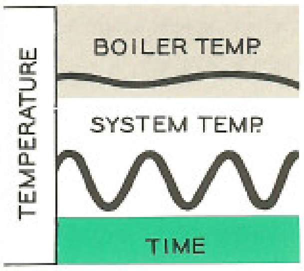
AQUA-TEMP® Control



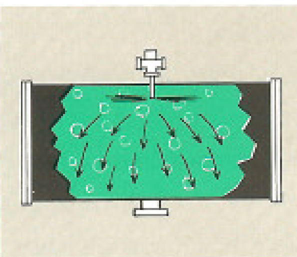
1 BLEND RETURN WATER
Water returned to the boiler is distributed through a diffuser tube which spreads the water the entire length of the boiler effecting a rapid blending action.



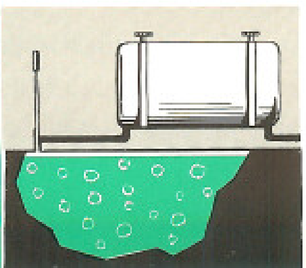
2 PROVIDE BYPASS SYSTEM
System return water is proportionately blended with hot water from the boiler to obtain desired system supply temperatures.



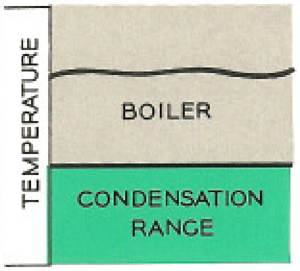
3 UNIFORM TEMPERATURE IN THE BOILER
Boiler is maintained at a uniform temperature regardless of the temperature of the system supply and return water temperatures.



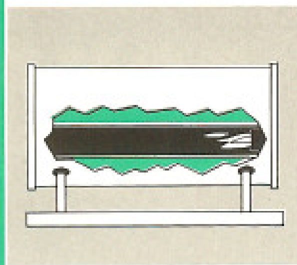
4 REVERSE FLOW OF BOILER WATER
Provides rapid air elimination, reduces temperature stratification, quickly tempers cold return water.



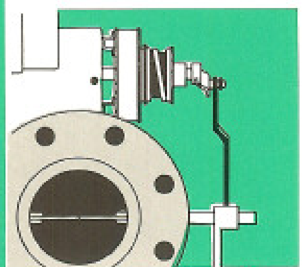
5 ELIMINATES AIR PRIOR TO CONTACT WITH HEATING SURFACES
Rapid heating of return water releases entrained air before it reaches heating surface thus preventing corrosive action.



6 STOP CONDENSATION IN PRODUCTS OF COMBUSTION
Maintenance of boiler water temperature above dew point of combustion gases regardless of system water temperature prevents condensation of moisture in the products of combustion eliminating corrosive action on tubes and damage to refractory.

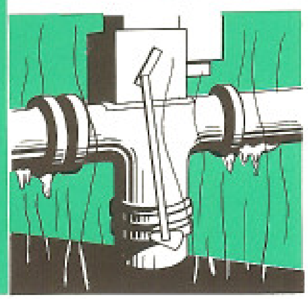


7 LOW FIRE HOLD UNTIL BOILER IS UP TO TEMPERATURE
Control element in boiler holds burner on low fire until boiler temperature reaches pre-set level then high-fire takes over to increase rate of rise.



8 SPRING RETURN MOTOR —ELECTRIC FAILURE
No chance of thermal shock in the event of a current failure as spring return motor closes valve to automatically bypass cool return water.

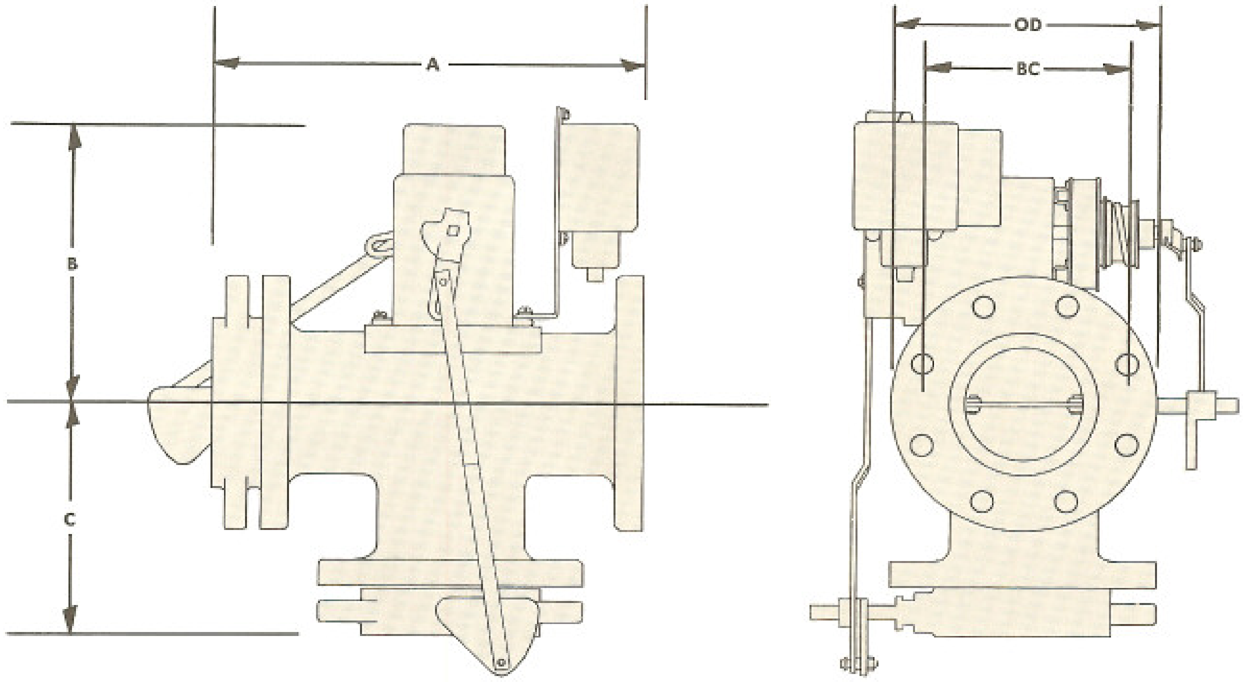
9 DOMESTIC HOT WATER
Allows boiler to heat domestic water at top efficiency even when system temperatures vary (indoor-outdoor control system.)



10 CHILLED WATER SYSTEMS
AQUA TEMP® Control is the ideal answer for rapid changeover from cooling to heating without risking damage to the boiler.

NOTE: Valve seats not drip proof. Consult factory for drip proof applications.

DIMENSIONS



SPECIFICATIONS

Size	Capacity G. P. M.	A	B	C	Flange Dimensions St'd 125 P.S.I. OD	BC	No. and Size Bolts	Diam. Holes	Weight
3″	175	12-3/4	9-1/8	7-1/4	7-1/2	6	4-5/8	3/4	100 Lb.
4″	350	14-3/4	9-3/4	8-1/4	9	7-1/2	8-5/8	3/4	130 Lb.
6″	1000	17-3/4	10-13/16	9-3/4	11	9-1/2	8-3/4	7/8	185 Lb.
8″	1750	19-3/4	11-7/8	10-3/4	13-1/2	11-3/4	8-3/4	7/8	270 Lb.

Anti Shock Control:

Capillary Lg.—5' St'd.
Bulb Fitting Size—3/4″ Male Pipe Thd.

Motor:

Power Consumption—22 watts
Voltage—24V. (step-down transformer furnished)

YORK — SHIPLEY

DONLEE TECHNOLOGIES INC.

JACKSON & CHURCH

693 North Hills Road, York, PA 17402 U.S.A. • PH: (717) 755-1081 • TLX 4761165/YRK-SHP • Fax: (717) 755-0020

York-Shipley
Boilers & Burners
693 North Hills Rd.
York, Pa. 17402

International Division
693 North Hills Rd.
York, Pa. 17402

York-Shipley of Canada
1297 Industrial Rd.
Cambridge, Ontario N3H 4W3
Tel. 519-653-7172, Telex: 069-59-374

ID-61-333-588-.5M

Printed in U.S.A.