with YORK SHIPLEY PACKAGED BOILERS

SAVE ORIGINAL COST

The original time-tested boiler shell and burner proved in thousands of Steam-Pak installations over the years is still the heart of the 500 Series. Improved manufacturing techniques and standardized production has substantially lowered the original cost of the 500 Series to the customer. Not only have none of the features of the tried and true Steam-Pak been eliminated but many models include items as standard that were either optional or not even available in the past.

SAVE ON INSTALLATION

The 500 Series is a completely factory assembled unit with these advantages that sharply reduce installation costs: Forced Draft burner eliminates expensive chimney...steel base permits the 500 Series to be set in place on an ordinary floor...no pitting, no special pad...built-in lifting lugs for quick, easy rigging...rear stack adaptable to either vertical or horizontal discharge.

SAVE ON MAINTENANCE

Two of the new design features built into the 500 Series make great strides in lowering routine maintenance costs. One, the entire burner assembly slides in or out of the boiler in drawer-like fashion and two the rear head is sectionalized. It is not necessary to remove the entire rear head for routine maintenance and inspection of tubes. Remove 1, 2, or 3 sections of the rear head to inspect or clean as many tubes as time permits.
1—THREE PASS DESIGN. Fire tube ASME construction permits maximum absorption of heat into the boiler water. Design area proportion of all passes assures even velocity of the gases through the boiler for maximum efficiency under fire.

2—TUBES AND TUBE SHeETS. Fire tubes are electronically welded into the forming tube sheets and then upset loaded against the tube sheet. This creates a water-tight seal without resorting to welding the tube ends which can ultimately damage the pressure vessel.

3—SECTIONAL REAR HEAD. Remove 1, 2 or 3 sections of the rear head to inspect or clean as many tubes as time permits. When necessary to remove entire cover it is in 3 smaller pieces to handle sections rather than one big cover requiring a special davit on overhead riser line.

4—STEEL BASE. Complete boiler-burner package comes mounted on a steel base. It can be installed on an ordinary concrete floor. There is no foundation to dig; no pit to be lined. Steel 6” skid available as option.

5—DRY STEAM. Exclusive “Dry-Pam” baffle insures steam of low moisture content when heating by steam, and with the addition of a diffuser assures directional circulation when heating by water.

6—INSULATION. The 800 Series boiler is crowned with a 2” blanket of Fiberglas insulation and enclosed with a steel jacket. Area between legs is not insulated to prevent moisture build-up.

7—DISCHARGE STACK. Rear outlet stack can be fitted with an adapter for vertical discharge where required.

8—DOMESTIC HOT WATER. Coil for instantaneously and abundant supply of hot faucet water available as an optional extra.

9—HANDHOLES. Water side of boiler is easily inspected and/or cleaned through six large conveniently placed elliptical holes.

10—AQUA-TEMP® (Optional SPWC Units Only) Patented York-Shipley safety control automatically regulates the amount of return water coming into the boiler so that the boiler cannot be damaged through “shock” and with temperature controlling device maintains boiler temperature above 150° to forestall fireside corrosive action.
STANDARD AND OPTIONAL EQUIPMENT

LOW PRESSURE STEAM

STANDARD
1. Steam gauge
2. Safety valve
3. Gauge cocks (2)
4. Gauge glass
5. Low water cut-off with blowdown cock
6. Limit control

OPTIONAL
1. Factory assembled water column with gauge glass, gauge cocks, tri-cocks with low-water cut-off and pump control and alarm contacts
2. Blow down valve
3. Feed water pump, not mounted
4. District Police pop valve
5. Condensate tank
6. 2nd high limit control
7. 51 M-M feeder
8. 51-2 M-M feeder and low-water cut-off comb.
9. Left-hand gauge glass
10. 2nd low-water cut-off
11. Domestic hot water coils
12. Feedwater systems
1—THREE PASS DESIGN. Fire tube ASME construction permits maximum absorption of heat into the boiler water. Design area proportion of all passes assures even velocity of the gases through the boiler for longer maximum efficiency under fire.

2—TUBES AND TUBE SHEETS. Fire-tubes are electronic torque rolled into reamed tube holes and then upset flanged against the tube sheet. This creates a water-tight seal without resorting to welding the tube ends.

3—SECTIONAL REAR HEAD. Remove 1, 2 or 3 sections of the rear head to inspect or clean as many tubes as time permits. When necessary to remove entire cover it is in 3 smaller easier to handle sections rather than one big cover requiring a special dolly on overhead rigging.

4—STEEL BASE. Complete boiler-burner package comes mounted on a steel base. It can be installed on an ordinary concrete floor. There is no foundation to dig; no pit to be lined. Steel 6' skid available as option.

5—DRY STEAM. Exclusive "Dri-Pan" baffle insures steam of low moisture content when heating by steam, and with the addition of a diffuser assures directional circulation when heating by water.

6—INSULATION. The 800 Series boiler is equipped with a 2" blanket of Fiberglass insulation and enclosed with a steel jacket. Area between legs is not insulated to prevent a moisture build-up.

7—DISCHARGE STACK. Rear outlet stack can be fitted with an adaptor for vertical discharge when required.

8—DOMESTIC HOT WATER. (Not on SPAC units). Cold for instantaneus and abundant supply of hot faucet water available as an optional extra.

9—HANDHOLES. Water side of boiler is easily inspected and/or cleaned through six large conveniently placed elliptical holes.

10—AQUA-TEMP. (SPAC units only) Patented York-Shipton safety control automatically regulates the amount of return water coming into the boiler so that the boiler cannot be damaged through "shock"ing and with temperature controlling device maintains boiler temperature above 190° to forestall fineside corrosive action.
STANDARD AND OPTIONAL EQUIPMENT

HIGH PRESSURE STEAM

STANDARD
1. Steam Gauge 4½"
2. Safety Valve side outlet
3. Gauge cocks (2)
4. Gauge Glass
5. Try cocks (5)
6. 2157 Low Water cut off and pump control with alarm contacts

OPTIONAL
1. Blow down valves (single or tandem)
2. Feed water pump, not mounted
3. Condensate tank
4. 2nd high limit control
5. 2nd low water cut-off—M & M #160
6. Hand injector for feed water
7. Feedwater systems
1—THREE PASS DESIGN. Fire tube ASME construction permits maximum absorption of heat into the boiler water. Design area proportion of all passes assures even velocity of the gases through the boiler for longer maximum efficiency under fire.

2—TUBES AND TUB SHEETS. Fire-tubes are electronic torque rolled into burnished tube holes and then upset beaded against the tube sheet. This creates a water-tight seal without resorting to welding the tube ends which can ultimately damage the pressure vessel.

3—SECTIONAL REAR HEAD. Remove 1, 2 or 3 sections of the rear head to inspect or clean as many tubes as time permits. When necessary to remove entire cover it is in 3 smaller sections to handle sections rather than one big cover requiring a special dolly or overhead rigging.

4—STEEL BASE. Complete boiler-burner package comes mounted on a steel base. It can be installed on an ordinary concrete floor. There is no foundation to dig, no pit to be lined. Steel 6" skid available as option.

5—DRY STEAM. Exclusive "Dr-Fan" baffle insures steam of low moisture content when heating by steam, and with the addition of a diffuser, assures directional circulation when heating by water.

6—INSULATION. The 500 Series boiler is enclosed with a 2" blanket of Fiberglass insulation and enclosed with a steel jacket. Area between legs is not insulated to prevent a moisture build-up.

7—DISCHARGE STACK. Rear outlet stack can be fitted with an adapter for vertical discharge where required.

8—DOMESTIC HOT WATER. Call for instantaneous and abundant supply of hot faucet water available as an optional extra.

9—HANDHOLES. Water side of boiler is easily inspected and or cleaned through six large conveniently placed dished holes.

10—AQUA-TEMP® (Optional) Patented York-Shipley safety control automatically regulates the amount of return water coming into the boiler so that the boiler cannot be damaged through "shock," and with temperature controlling device maintains boiler temperature above 130° to forestall fireside corrosive action.
STANDARD AND OPTIONAL EQUIPMENT

HOT WATER BOILER

STANDARD
1. Altitude and temperature gauge
2. Relief valve
3. Limit control

OPTIONAL
1. Low-water cut-off control
2. Drain valve
3. 60°F water boilers limited to 250°F
4. 2nd High limit control
5. 6" temperature gauge (mounted on boiler or remote panel)
6. 6" pressure gauge (mounted on boiler or remote panel)
7. Domestic hot water coils
8. Aqua-Temp valve
STANDARD AND OPTIONAL EQUIPMENT / ALL UNITS

STANDARD
1. Three-pass ASME boiler
2. Gas-tight front and rear smoke box assembly
3. Rear outlet vent
4. Rear Pyrex observation port
5. Size (6) standard handhole openings
6. 2" insulation and metal jacket open to prevent corrosion (no deduction for omission)
7. Sturdy steel fabricated base
8. 2" heavy gauge fire tubes
9. Supply connection 150 psi flanged (SPLC & SPW)
10. Factory assembled and electrical test
11. Complete unit U.L. labelled
12. Front cleanout doors
13. Lifting lugs
14. 200 series boilers have 2 piece front cover

OPTIONAL
1. Vertical vent connection
2. Domestic hot water coils
3. Complete factory fire test
4. Factory production data and testing information available
5. Explosion relief doors
6. Quick opening wedge pin for rear cover
7. Stick thermometer mounted upper left hand rear plate
8. Extra size tapping supply, return
9. Front hinges
10. DC voltmeter
11. Alarm bell
12. Non-Std. voltage and cycles
13. Control transformer
14. Hinged rear cover (standard 125 & 150 H.P.)
15. Fan silencer
16. Steel 6'U.K.

ADDITIONAL STANDARD EQUIPMENT FOR CANADIAN BOILERS ONLY
2. Control Circuit Step-down transformer.
5. 2nd LWCO (150 SPLC & SPHC only).
8. Lead sulfide cell flame detector FP-2 (Gas Burner).
9. Main Gas Train consisting of: (Gas & Gas Oil Comb. Burner).
   Gas Volume Control Valve
   Lube Plug Cock
   Motorized Main Gas Valve
   Test Connections
10. Vertical Vent
11. Single Electrical Location with Fuses
## ENGINEERING SPECIFICATIONS AND DIMENSIONS

### GROSS RATING—CAPACITY SPLC, SWC & SPHC

<table>
<thead>
<tr>
<th>Series</th>
<th>25 HP</th>
<th>30 HP</th>
<th>35 HP</th>
<th>40 HP</th>
<th>45 HP</th>
<th>50 HP</th>
<th>60 HP</th>
<th>70 HP</th>
<th>80 HP</th>
<th>90 HP</th>
<th>100 HP</th>
<th>110 HP</th>
<th>125 HP</th>
<th>150 HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>S.P.L.C.</td>
<td>75</td>
<td>90</td>
<td>105</td>
<td>120</td>
<td>135</td>
<td>150</td>
<td>165</td>
<td>180</td>
<td>200</td>
<td>225</td>
<td>250</td>
<td>275</td>
<td>325</td>
<td>375</td>
</tr>
<tr>
<td>S.W.C.</td>
<td>72</td>
<td>88</td>
<td>104</td>
<td>120</td>
<td>136</td>
<td>152</td>
<td>168</td>
<td>192</td>
<td>216</td>
<td>259</td>
<td>282</td>
<td>315</td>
<td>385</td>
<td>455</td>
</tr>
<tr>
<td>S.P.H.C.</td>
<td>70</td>
<td>86</td>
<td>102</td>
<td>118</td>
<td>134</td>
<td>150</td>
<td>166</td>
<td>182</td>
<td>208</td>
<td>234</td>
<td>256</td>
<td>282</td>
<td>352</td>
<td>422</td>
</tr>
</tbody>
</table>

### CONSTRUCTION & SHIPPING DATA SPLC, SWC & SPHC

<table>
<thead>
<tr>
<th>Series</th>
<th>25 HP</th>
<th>30 HP</th>
<th>35 HP</th>
<th>40 HP</th>
<th>45 HP</th>
<th>50 HP</th>
<th>60 HP</th>
<th>70 HP</th>
<th>80 HP</th>
<th>90 HP</th>
<th>100 HP</th>
<th>110 HP</th>
<th>125 HP</th>
<th>150 HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>S.P.L.C.</td>
<td>75</td>
<td>90</td>
<td>105</td>
<td>120</td>
<td>135</td>
<td>150</td>
<td>165</td>
<td>180</td>
<td>200</td>
<td>225</td>
<td>250</td>
<td>275</td>
<td>325</td>
<td>375</td>
</tr>
<tr>
<td>S.W.C.</td>
<td>72</td>
<td>88</td>
<td>104</td>
<td>120</td>
<td>136</td>
<td>152</td>
<td>168</td>
<td>192</td>
<td>216</td>
<td>259</td>
<td>282</td>
<td>315</td>
<td>385</td>
<td>455</td>
</tr>
<tr>
<td>S.P.H.C.</td>
<td>70</td>
<td>86</td>
<td>102</td>
<td>118</td>
<td>134</td>
<td>150</td>
<td>166</td>
<td>182</td>
<td>208</td>
<td>234</td>
<td>256</td>
<td>282</td>
<td>352</td>
<td>422</td>
</tr>
</tbody>
</table>

Steam ratings are from water at 212°F to steam at 212°F. Standard pressures 25 PSI and 120 PSI. Water 30 PSI.

---

*For use with 3000 Horsepower Internal Combustion Engines*
### Specifications and Dimensions

Dimensions (inches) SPLC, SPWC & SPNC

<table>
<thead>
<tr>
<th></th>
<th>454 Series</th>
<th>548 Series</th>
<th>560 Series</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>25 HP</strong></td>
<td>114</td>
<td>120</td>
<td>122</td>
</tr>
<tr>
<td><strong>50 HP</strong></td>
<td>121</td>
<td>127</td>
<td>127</td>
</tr>
<tr>
<td><strong>75 HP</strong></td>
<td>128</td>
<td>133</td>
<td>133</td>
</tr>
<tr>
<td><strong>100 HP</strong></td>
<td>135</td>
<td>137</td>
<td>137</td>
</tr>
<tr>
<td><strong>150 HP</strong></td>
<td>145</td>
<td>148</td>
<td>148</td>
</tr>
<tr>
<td><strong>200 HP</strong></td>
<td>155</td>
<td>158</td>
<td>158</td>
</tr>
</tbody>
</table>

**Overall Length:**

- **A**
- **B**
- **C**
- **D**
- **E**
- **F**
- **G**
- **H**
- **I**
- **J**
- **K**
- **L**
- **M**
- **N**
- **O**
- **P**
- **Q**
- **R**
- **S**
- **T**

**Height of Vent Conn.:**

- **50 HP**
- **55 HP**
- **60 HP**
- **65 HP**
- **70 HP**
- **75 HP**
- **80 HP**
- **85 HP**
- **90 HP**
- **95 HP**

**Height of Water Line SPLC:**

- **50 HP**
- **55 HP**
- **60 HP**
- **65 HP**
- **70 HP**
- **75 HP**
- **80 HP**
- **85 HP**
- **90 HP**

**Height of Water Line SPNC:**

- **50 HP**
- **55 HP**
- **60 HP**
- **65 HP**
- **70 HP**
- **75 HP**
- **80 HP**
- **85 HP**
- **90 HP**

**Overall Height:**

- **60 HP**
- **65 HP**
- **70 HP**
- **75 HP**
- **80 HP**
- **85 HP**
- **90 HP**

**Floor to Burner:**

- **16 HP**
- **20 HP**

**Location Top Conn. SPLC:**

- **27 HP**
- **27 HP**
- **27 HP**
- **27 HP**
- **27 HP**
- **27 HP**
- **27 HP**

**Location Top Conn. SPNC:**

- **27 HP**
- **27 HP**
- **27 HP**
- **27 HP**
- **27 HP**
- **27 HP**
- **27 HP**

**Location Bottom Conn. SPLC:**

- **27 HP**
- **27 HP**
- **27 HP**
- **27 HP**
- **27 HP**
- **27 HP**
- **27 HP**

**Location Bottom Conn. SPNC:**

- **27 HP**
- **27 HP**
- **27 HP**
- **27 HP**
- **27 HP**
- **27 HP**
- **27 HP**

**Dist. Vent Tube Removal:**

- **30 HP**
- **30 HP**
- **30 HP**
- **30 HP**
- **30 HP**
- **30 HP**
- **30 HP**

**Dist. Front Tube Removal:**

- **36 HP**
- **36 HP**
- **36 HP**
- **36 HP**
- **36 HP**
- **36 HP**
- **36 HP**

**Burner Extension:**

- **19 HP**
- **19 HP**
- **19 HP**
- **19 HP**
- **19 HP**
- **19 HP**
- **19 HP**

**Dist. with Vertical Vent:**

- **48 HP**
- **48 HP**
- **48 HP**
- **48 HP**
- **48 HP**
- **48 HP**
- **48 HP**

**Location Blowdown Conn.:**

- **15 HP**
- **15 HP**
- **15 HP**
- **15 HP**
- **15 HP**
- **15 HP**
- **15 HP**

**Clearance for Safety Valve:**

- **542 Aqua Temp 22**
- **548 Aqua Temp 24**
- **560 Aqua Temp 25**

* Water Boilers Reverse Flow with Aqua-Temp Valve when furnished.
FORCED DRAFT BURNER.
Air is forced into front of burner by a blower which is built into the burners housing, supplying air for combustion and forcing the flue gases through the boiler passes. The forced draft burner eliminates the need for expensive draft controls and results in longer maximum efficiency under fire.

HIGH EFFICIENCY.
The Series 600 burner is guaranteed to operate at not less than 80% efficiency when burning oil or gas.

CYLINDRICAL FURNACE DESIGN.
No difficult corner welds or flat surfaces which must be stayed. No cool water legs which accumulate sludge and burn-out. Allows for a swirling flame pattern maintaining longer, intimate contact with heating surfaces.

REFRACTORY TARGET RING.
Maintains flame pattern through first pass and serves as a combustion stabilizer at all firing rates.

HINGED BURNER.
Swings easily for normal boiler-burner maintenance. For more detailed maintenance and inspection the entire burner assembly slides out in retractable fashion. Flexible electrical and oil lines allow the burner to swing without disconnecting suction and return oil lines. (optional)

ALL FUELS.
The 500 Series boiler may be fired with either light oil, heavy oil, gas or light oil/gas and heavy oil/gas combinations.
### BURNER DATA

**LIGHT OIL, LIGHT OIL - GAS COMBINATION**

<table>
<thead>
<tr>
<th>Light Oil</th>
<th>Gas</th>
<th>Combination</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### TABLE

<table>
<thead>
<tr>
<th>1N SERIES</th>
<th>1O SERIES</th>
<th>1U SERIES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**STANDARD AND OPTIONAL EQUIPMENT**

**LIGHT OIL - GAS COMBINATION**

**STANDARD**
1. Forced draft blower
2. External igniter gas burner
3. Gas-electric ignition
4. On-off operation (models 25 thru 40) Low fire start operation (models 45 & larger)
5. Air flow safety switch
6. Main gas train consisting of gas volume control valve, manual gas cock and automatic diaphragm gas valve
7. Three nozzle pressure atomizing burner
8. Two-stage direct drive oil pump
9. 10,000 V. electrical ignition
10. Oil solenoid valve
11. Oil strainer
12. Manual fuel changeover switch
13. Lead-acid cell flame detector with complete programming relay with pre-purge and post-purge.

**OPTIONAL**
1. Low fire start (Models 25 thru 40)
2. Gas-electric ignition (Models 25 thru 100)
3. Lead-acid cell flame detector (Standard over 100 HP)
4. Controls for F.M.
5. Controls for F.I.A.
6. FC-2 control
7. Remote mounted fuel pump
8. 3/8 x 30’ flexible suction, return lines
9. Motorized safety shut-off valve
## BURNER DATA

### GAS

<table>
<thead>
<tr>
<th>Model</th>
<th>300,000</th>
<th>400,000</th>
<th>500,000</th>
<th>600,000</th>
<th>700,000</th>
<th>800,000</th>
<th>900,000</th>
<th>1,000,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Btu/Hr</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>C3002</td>
<td>300,000</td>
<td>400,000</td>
<td>500,000</td>
<td>600,000</td>
<td>700,000</td>
<td>800,000</td>
<td>900,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Btu/Hr</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>C3003</td>
<td>300,000</td>
<td>400,000</td>
<td>500,000</td>
<td>600,000</td>
<td>700,000</td>
<td>800,000</td>
<td>900,000</td>
<td>1,000,000</td>
</tr>
</tbody>
</table>

### OIL FIRED

[Diagram of Oil Fired Burner]

### BURNER DATA

<table>
<thead>
<tr>
<th>Model</th>
<th>300,000</th>
<th>400,000</th>
<th>500,000</th>
<th>600,000</th>
<th>700,000</th>
<th>800,000</th>
<th>900,000</th>
<th>1,000,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Btu/Hr</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>C3002</td>
<td>300,000</td>
<td>400,000</td>
<td>500,000</td>
<td>600,000</td>
<td>700,000</td>
<td>800,000</td>
<td>900,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Btu/Hr</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>C3003</td>
<td>300,000</td>
<td>400,000</td>
<td>500,000</td>
<td>600,000</td>
<td>700,000</td>
<td>800,000</td>
<td>900,000</td>
<td>1,000,000</td>
</tr>
</tbody>
</table>
GAS BURNER

STANDARD
1. Forced draft blower
2. External mix gas burner
3. Gas-electric ignition
4. On-off operation (Models 25 thru 40) Low fire start operation (Models 45 & larger)
5. Air flow safety switch
6. Flame rod detector (thru 100 H.P.)
7. Main gas train consisting of gas volume control valve, manual gas cock and automatic diaphragm gas valve

OPTIONAL
1. Modulating firing
2. High-low firing
3. Gas controls P.M.
4. Gas controls P.I.A.
5. Gas regulators, not mounted
6. Motorized safety shutoff valve
7. Lead-sulfide cell flame detector (Standard over 100 H.P.)
8. FF-2 control
### BOILER/BURNER FEATURES

#### OIL FIRED

### BURNER DATA

**HEAVY OIL, HEAVY OIL - GAS COMBINATION**

<table>
<thead>
<tr>
<th>SP SERIES</th>
<th>IBR SERIES</th>
<th>OJ SERIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200 BTU</td>
<td>1500 BTU</td>
<td>1800 BTU</td>
</tr>
<tr>
<td>1800 BTU</td>
<td>2500 BTU</td>
<td>3000 BTU</td>
</tr>
<tr>
<td>3000 BTU</td>
<td>4000 BTU</td>
<td>5000 BTU</td>
</tr>
<tr>
<td>4000 BTU</td>
<td>5000 BTU</td>
<td>6000 BTU</td>
</tr>
<tr>
<td>5000 BTU</td>
<td>6000 BTU</td>
<td>8000 BTU</td>
</tr>
<tr>
<td>6000 BTU</td>
<td>8000 BTU</td>
<td>10000 BTU</td>
</tr>
<tr>
<td>8000 BTU</td>
<td>10000 BTU</td>
<td>12000 BTU</td>
</tr>
<tr>
<td>10000 BTU</td>
<td>12000 BTU</td>
<td>15000 BTU</td>
</tr>
</tbody>
</table>

#### Air Control All Fuels

<table>
<thead>
<tr>
<th>Position</th>
<th>Two Position</th>
<th>Two Position</th>
<th>Two Position</th>
<th>Two Position</th>
<th>Two Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Fire</td>
<td>Low Fire</td>
<td>Low Fire</td>
<td>Low Fire</td>
<td>Low Fire</td>
<td>Low Fire</td>
</tr>
<tr>
<td>Medium Fire</td>
<td>Medium Fire</td>
<td>Medium Fire</td>
<td>Medium Fire</td>
<td>Medium Fire</td>
<td>Medium Fire</td>
</tr>
<tr>
<td>High Fire</td>
<td>High Fire</td>
<td>High Fire</td>
<td>High Fire</td>
<td>High Fire</td>
<td>High Fire</td>
</tr>
</tbody>
</table>

#### NG Gas

<table>
<thead>
<tr>
<th>Gas</th>
<th>1200 BTU</th>
<th>1500 BTU</th>
<th>1800 BTU</th>
<th>2500 BTU</th>
<th>3000 BTU</th>
<th>4000 BTU</th>
<th>5000 BTU</th>
<th>6000 BTU</th>
<th>8000 BTU</th>
<th>10000 BTU</th>
<th>12000 BTU</th>
<th>15000 BTU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spill-Over Gas Pressure</td>
<td>50 PSI</td>
<td>50 PSI</td>
<td>50 PSI</td>
<td>50 PSI</td>
<td>50 PSI</td>
<td>50 PSI</td>
<td>50 PSI</td>
<td>50 PSI</td>
<td>50 PSI</td>
<td>50 PSI</td>
<td>50 PSI</td>
<td>50 PSI</td>
</tr>
<tr>
<td>Low Oil Pump Motor Size</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
</tr>
<tr>
<td>High Oil Pump Motor Size</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
</tr>
<tr>
<td>Gas Valve</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
</tr>
<tr>
<td>Low Pressure Gas Control Valve</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>High Pressure Gas Control Valve</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
</tr>
</tbody>
</table>

#### Draft Burner

<table>
<thead>
<tr>
<th>Burner</th>
<th>1200 BTU</th>
<th>1500 BTU</th>
<th>1800 BTU</th>
<th>2500 BTU</th>
<th>3000 BTU</th>
<th>4000 BTU</th>
<th>5000 BTU</th>
<th>6000 BTU</th>
<th>8000 BTU</th>
<th>10000 BTU</th>
<th>12000 BTU</th>
<th>15000 BTU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spill-Over Gas Flow</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
</tr>
<tr>
<td>Low Oil Pump Motor Size</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
</tr>
<tr>
<td>High Oil Pump Motor Size</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
</tr>
<tr>
<td>Gas Valve</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
</tr>
<tr>
<td>Low Pressure Gas Control Valve</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>High Pressure Gas Control Valve</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
</tr>
</tbody>
</table>

#### Controls

<table>
<thead>
<tr>
<th>Control</th>
<th>1200 BTU</th>
<th>1500 BTU</th>
<th>1800 BTU</th>
<th>2500 BTU</th>
<th>3000 BTU</th>
<th>4000 BTU</th>
<th>5000 BTU</th>
<th>6000 BTU</th>
<th>8000 BTU</th>
<th>10000 BTU</th>
<th>12000 BTU</th>
<th>15000 BTU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spill-Over Gas Flow</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
</tr>
<tr>
<td>Low Oil Pump Motor Size</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
</tr>
<tr>
<td>High Oil Pump Motor Size</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
</tr>
<tr>
<td>Gas Valve</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
</tr>
<tr>
<td>Low Pressure Gas Control Valve</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>High Pressure Gas Control Valve</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
</tr>
</tbody>
</table>

#### Ignition

<table>
<thead>
<tr>
<th>Ignition</th>
<th>1200 BTU</th>
<th>1500 BTU</th>
<th>1800 BTU</th>
<th>2500 BTU</th>
<th>3000 BTU</th>
<th>4000 BTU</th>
<th>5000 BTU</th>
<th>6000 BTU</th>
<th>8000 BTU</th>
<th>10000 BTU</th>
<th>12000 BTU</th>
<th>15000 BTU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spill-Over Gas Flow</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
<td>50 cubic ft</td>
</tr>
<tr>
<td>Low Oil Pump Motor Size</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
<td>1/2 HP</td>
</tr>
<tr>
<td>High Oil Pump Motor Size</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
<td>1 HP</td>
</tr>
<tr>
<td>Gas Valve</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
<td>1/8&quot;</td>
</tr>
<tr>
<td>Low Pressure Gas Control Valve</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>High Pressure Gas Control Valve</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
</tr>
</tbody>
</table>

**Note:** The table above provides specifications for boiler and burner features, including input BTU values, oil pump motor sizes, gas valve settings, and ignition types. Please review the full table for comprehensive details.
HEAVY OIL BURNER
(#5 & #6)

STANDARD
1. Forced draft blower
2. Low pressure air atomizing burner
3. Fuel oil pump with separate motor drive
4. Air compressor with separate motor drive
5. Gas-electric ignition
6. Low fire start
7. Pilot gas valve
8. Dual oil solenoid valve (single on #5 oil)
9. Suction line oil strainer
10. Nozzle line oil strainer
11. Lead-sulphate cell flame detector — PP-2
12. Nozzle line air purge assembly (#6 oil only)
13. Burner oil line heater assembly (#6 oil only)
14. Air flow safety switch
15. Complete factory fire test
16. Electric heater

OPTIONAL
1. Modulating firing
2. High-low firing
3. Controls for F.M.
4. Controls for F.I.A.
5. Second oil solenoid valve (Standard on #6 oil)
6. Steam oil preheater (high pressure)
7. Below the water line oil preheater (low pressure)
8. Bottled gas ignition

COMBINATION HEAVY OIL - GAS BURNER

STANDARD
1. Forced draft blower
2. Low pressure air atomizing burner
3. External mix gas burner
4. Fuel oil pump with separate motor drive
5. Air compressor with separate motor drive
6. Gas-electric ignition
7. Low fire start
8. Dual oil solenoid valve (Single on #5 oil)
9. Suction line oil strainer
10. Nozzle line oil strainer
11. Lead-sulphate cell flame detector — PP-2
12. Nozzle line air purge assembly (#6 oil only)
13. Burner oil line heater assembly (#6 oil only)
14. Air flow safety switch
15. Pilot gas valve, regulator, and shut off cock
16. Main gas train consisting of gas volume control valve, manual gas cock and automatic diaphragm gas valve
17. Manual fuel changeover switch
18. Complete factory fire test
19. Electric heater

OPTIONAL
1. Automatic fuel changeover controls
2. Modulating firing
3. High-low firing
4. Controls for F.M.
5. Controls for F.I.A.
6. Second oil solenoid valve (Standard on #6 oil)
BOILER/BURNER FEATURES

REAR OBSERVATION PORT.
Quick and easy checking and adjusting of the pilot and main flame for the most efficient combustion of all fuels.

PUMP SETS. (§5 and §6 oil)
Self-contained and mounted on unit, can be remote mounted if desired. Variety of sizes for greater flexibility in multiple installations.

AIR COMPRESSOR
Self contained with own motor and drive and mounted on unit.

NOZZLE LINE STRAINER.
Previously not available but now a standard feature for better filtering of oil.

ELECTRIC PREHEATERS.
New, bigger capacities for wider range of temperatures and better combustion of all grades of heavy oil.

FASTER, EASIER STARTS.
Nozzle line purge and electrically heated shut-off valves for quicker and more reliable starts when operating with §6 oil.

POSITIVE SHUT-OFF.
Dual oil solenoid valves are also included as a standard part of §6 oil piping.
UNIT IDENTIFICATION CHART

BASIC UNIT
series 542—42" shell
series 548—48" shell
series 560—60" shell

DESIGN
SPLC—low pressure
SPHC—high pressure
SPWC—hot water

FUEL
2—42 oil
3—43 light oil
5—45 heavy oil
8—46 heavy oil
N—gas

HORSEPOWER
25 to 150

Important ordering considerations:
When ordering, the following must be specified, in addition to the model numbers:
A. FUEL—Grade of oil, if fuel oil. If gas, specify whether natural, mixed, manufactured or LP; also the BTU content, and gas pressure available at boiler. Check the available pressure against our minimum gas pressure requirements.
B. ELECTRICAL—Electrical characteristics for motors 220/60/3 standard control circuit is 110/60/1, separate supply. Step down transformer for control circuit optional at extra cost. Other voltages available at extra cost.
C. OPTIONS—Refer to specification sheets for list of available optional items at extra cost. State fully all optional items desired.
D. ALTITUDE—Exact altitude if above 2000 ft.

All York-Shipley Series 500 Boilers carry a one year warranty against defective material and workmanship.

YORK-SHIPLEY, INC., P.O. BOX 349, YORK, PA./YORK-SHIPLEY OF CANADA, 446 ALBERT ST., WATERLOO, ONTARIO

PRINTED IN U.S.A.—10 63 368R 1069