

Wesman Schieldrop Self-Proportioning Oil Burners are low air pressure burners that can efficiently burn any grade of fuel oil, and can be modified for gas as well.

■ SIMPLICITY OF PIPELINES

Air enters the burner through a single inlet and becomes divided into atomizing and combustion air streams inside the burner. The single air inlet makes the air pipeline distribution system very simple.

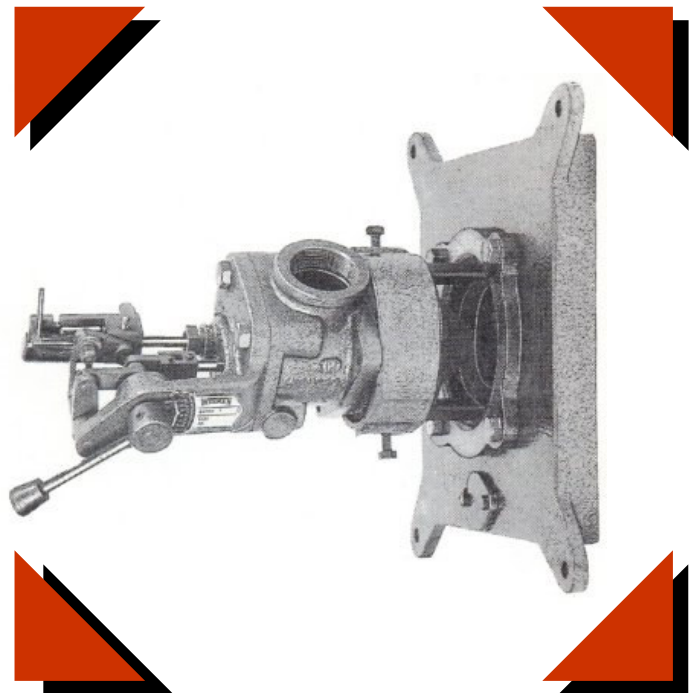
■ SIMPLICITY OF CONTROL

The burner's air and oil control valves have similar aerodynamic characteristics and are mechanically linked and operated through a single lever. Once the air/oil ratio is initially set, it is maintained constant automatically throughout its entire 5:1 turndown range, reducing dependence on operator skill.

■ PROPER ATOMIZATION

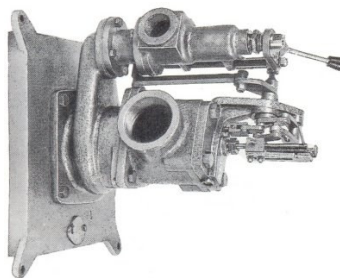
Air control through reduction of areas by cones within cones ensures constant air velocities at any point within the burner's turndown, providing constant atomizing air pressure at the point of oil atomization at all times. Unlike other burners, the Schieldrop Self-Proportioning Burner thus does not suffer from loss of atomization at lower turndown.

SCHIELDROP SELF-PROPORTIONING OIL BURNER



- Single lever for simultaneous air and oil control
- Wide range of capacity with turndown 5 to 1
- Constant air to fuel ratio at all times
- Quick removal of internal parts for cleaning
- Only one air connection per burner
- Easy to install and maintain

Can be easily converted to combination oil and gas burner with no changes to oil and air pipelines. Uses gases with calorific value above 450 BTU per cubic foot and constant pressure between 2" to 6" w.g.



COMBUSTION SPECIFICATIONS

Oil viscosity at the burner should not exceed 100 sec Redwood 1, and oil pressure should be kept constant between 5 to 15 psig. Minimum air pressure at burner is 25 to 28 inch w.g. for light distillate oil and 35 to 45 inch w.g. for residual oil. For oil with calorific value 180,000 BTU per gallon, 30 scfm of air is required per gallon of oil burned per hour.

For burner mounting details and operating instructions, please ask for separate bulletin.



WESMAN THERMAL ENGINEERING PROCESSES PVT LTD

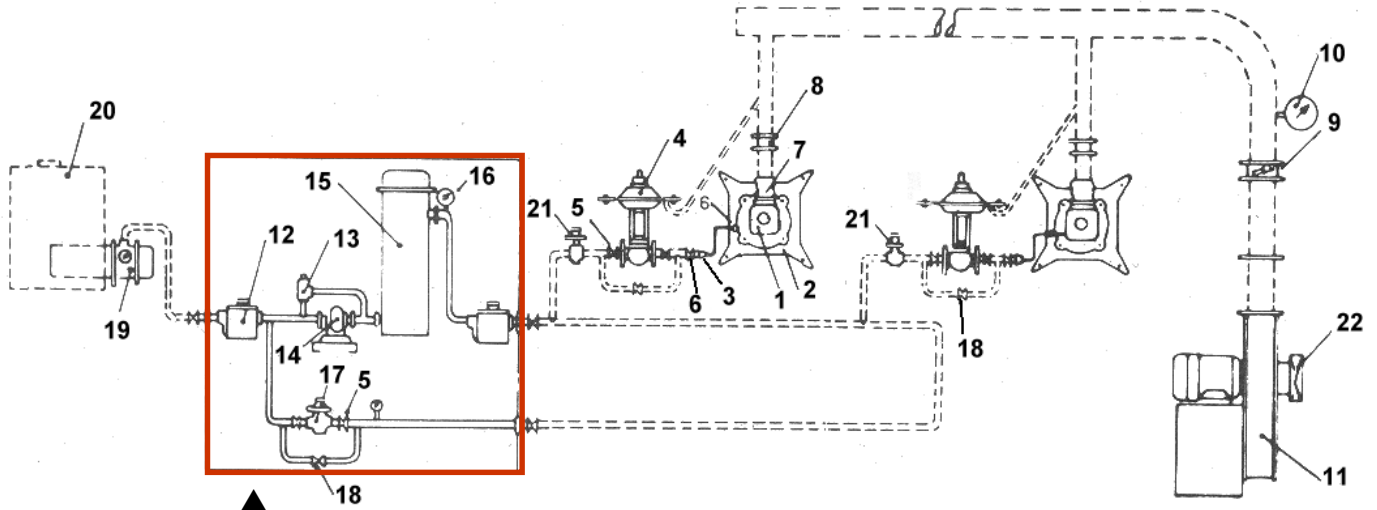
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WESMAN SCHIELDROP BURNER SIZES AND OIL FIRING CAPACITIES

| AIR PRESSURE AT BURNER (WG) | 635 MM (25") | | | | 762 MM (30") | | | | 890 MM (35") | | | | 1016 MM (40") | | | |
|-----------------------------|--------------|------|------|------|--------------|------|------|-----|--------------|------|------|------|---------------|------|------|------|
| | MAX | | MIN | | MAX | | MIN | | MAX | | MIN | | MAX | | MIN | |
| | LPH | GPH | LPH | GPH | LPH | GPH | LPH | GPH | LPH | GPH | LPH | GPH | LPH | GPH | LPH | GPH |
| 1* | 5.58 | 1.23 | 0.82 | 0.18 | 6.36 | 1.4 | 0.91 | 0.2 | 6.9 | 1.52 | 0.95 | 0.21 | 7.35 | 1.62 | 1.04 | 0.23 |
| 2 | 8.17 | 1.8 | 1.82 | 0.4 | 9.08 | 2.0 | 1.82 | 0.4 | 9.53 | 2.1 | 1.82 | 0.4 | 10.4 | 2.3 | 2.27 | 0.5 |
| 3 | 14.5 | 3.2 | 3.18 | 0.7 | 15.9 | 3.5 | 3.18 | 0.7 | 17.3 | 3.8 | 3.63 | 0.8 | 18.2 | 4.0 | 3.63 | 0.8 |
| 3A | 22.7 | 5.0 | 4.54 | 1.0 | 25.0 | 5.5 | 5.0 | 1.1 | 26.8 | 5.9 | 5.45 | 1.2 | 28.6 | 6.3 | 5.9 | 1.3 |
| 4 | 30.4 | 6.7 | 6.36 | 1.4 | 34.1 | 7.5 | 6.81 | 1.5 | 36.3 | 8.0 | 7.26 | 1.6 | 38.6 | 8.5 | 7.72 | 1.7 |
| 4A | 50.0 | 11.0 | 10.0 | 2.2 | 54.5 | 12.0 | 10.9 | 2.4 | 59.0 | 13.0 | 11.8 | 2.6 | 63.6 | 14.0 | 12.7 | 2.8 |
| 5 | 63.6 | 14.0 | 12.7 | 2.8 | 68.1 | 15.0 | 13.6 | 3.0 | 72.6 | 16.0 | 14.5 | 3.2 | 77.2 | 17.0 | 15.4 | 3.4 |
| 5A | 93.5 | 20.6 | 18.6 | 4.1 | 102.1 | 22.5 | 20.4 | 4.5 | 110.3 | 24.3 | 21.8 | 4.8 | 117.6 | 25.9 | 23.6 | 5.2 |

* SUITABLE FOR LIGHT OIL ONLY

TYPICAL AIR AND OIL PIPELINE SCHEMATIC



▲ AVAILABLE AS COMPOSITE PUMPING AND HEATING UNIT

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|---|---------------------------------------|-----------------------------------|
| 1. BURNER | 9. MAIN BUTTERFLY AIR ISOLATING VALVE | 17. OIL PRESSURE REGULATING VALVE |
| 2. FRONT PLATE | 10. AIR PRESSURE GAUGE | 18. BYPASS VALVE |
| 3. FLEXIBLE OIL PIPE | 11. BLOWER | 19. OUTFLOW HEATER |
| 4. OIL CUTOFF VALVE | 12. OIL FILTER | 20. SERVICE TANK |
| 5. OIL ISOLATING VALVE | 13. PRESSURE RELIEF VALVE | 21. OIL PRESSURE REGULATING VALVE |
| 6. REDUCING NIPPLE | 14. MOTORIZED OIL PUMP | 22. INLET AIR FILTER |
| 7. AIR FLEXIBLE PIPE | 15. ELECTRIC PREHEATER | |
| 8. INDIVIDUAL BUTTERFLY AIR ISOLATING VALVE | 16. OIL TEMPERATURE GAUGE | |

ALL BURNER ACCESSORIES INCLUDING BLOWER AND COMPOSITE PUMPING AND HEATING UNIT ARE AVAILABLE FROM WESMAN