

MEDIUM, HEAVY & FUEL OIL APPLICATIONS

NWHOR & NWHORB Series

- ✓ 3 to 14" ANSI Blind Flange Design
- ✓ 3 to 14" Carbon Steel Pipe Body, 150 lb Construction
- ✓ 3 to 120 kW
- ✓ 240 and 480V, 1 & 3 Phase
- ✓ General Purpose, Moisture Resistant/Explosion Resistant, Explosion Resistant or Moisture Resistant Terminal Enclosure
- ✓ 0.475" Dia. Steel Sheath Low Watt Density Elements (12 to 15 W/In²)
- ✓ With & Without Side Mounted AR Thermostat (60 to 250°F)
- ✓ UL, CSA and Other Third Party Approval, Listing or Certification Available

APPLICATIONS

Medium and Heavy Weight Oil: Low watt density reduces the risk of damaging highly viscous fluids. Improve flow ability of fuel oils.

FEATURES

Terminal Enclosure: E1 General Purpose is standard. E2 Moisture Resistant/Explosion Resistant, E3 Explosion Resistant or E4 Moisture Resistant Enclosures available.

Elements: 0.475" diameter steel sheath elements.

Flange: 3 to 14" ANSI B-16.5 Blind flange with ½" thermowell for thermostat bulb and a ½ NPT threaded opening for a thermocouple or RTD.

Vessel: Pipe body and nozzles are ASTM A53B carbon steel pipe. The end disk is ASTM A516 Grade 70 carbon steel plate. Provided with thermal insulation and painted sheet metal jacket.

Wiring: Convenient field wiring terminals are provided for easy installation.

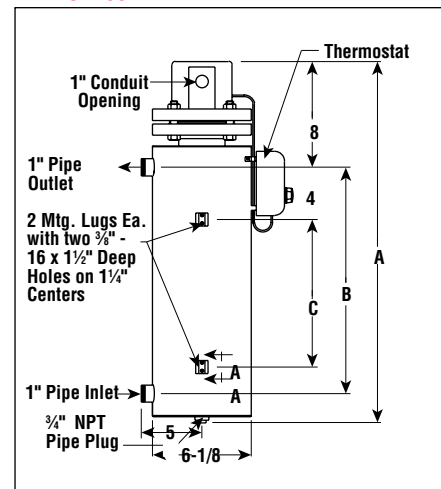
Controls: Series 03 and 06 stock and assembly stock heaters come equipped with side mounted thermostat. Series 18, 27 and 45 are furnished without thermostat.

WARNING: Hazard of Fire. These devices function as temperature controls only. Because they do not fail-safe, an approved temperature and/or pressure safety control must be used for safe operation. Consult Controls online.



NWHOR-03-003P-E1/240 shown smaller than actual size.

Dimensions: inches
NWHOR-03



Note: Add 2" to A dimension for E2 enclosure.

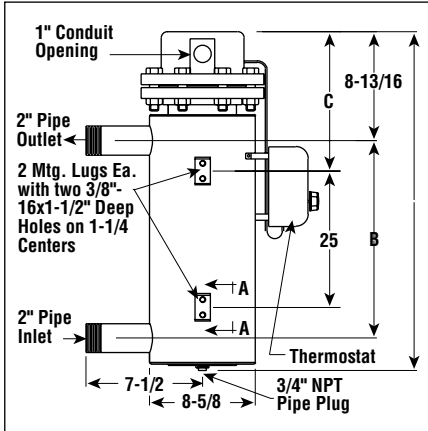
| To Order | | | | | | | |
|---|-------|-----------------|----------------------------------|-----|-----|-------------------------|----------|
| kW | Volts | Circuit & Phase | Dimensions (in) | | | Model No. | Wt. (lb) |
| | | | A | B | C | | |
| Series 03 — 3" 150 lb carbon steel vessel — 3 steel elements (15 W/In ²) with side mounted thermostat — 1 NPT pipe inlet and outlet | | | | | | | |
| 3 | 240 | 1-1 | 32 ¹⁵ / ₁₆ | 22½ | 16½ | NWHOR-03-003P-E1/240 | 70 |
| 3 | 240 | 1-3 | 32 ¹⁵ / ₁₆ | 22½ | 16½ | NWHOR-03-003P-E1/240/3P | 70 |
| 3 | 480 | 1-1 | 32 ¹⁵ / ₁₆ | 22½ | 16½ | NWHOR-03-003P-E1/480 | 70 |
| 3 | 480 | 1-3 | 32 ¹⁵ / ₁₆ | 22½ | 16½ | NWHOR-03-003P-E1/480/3P | 70 |
| 4 | 240 | 1-1 | 42 ¹⁵ / ₁₆ | 32½ | 26½ | NWHOR-03-004P-E1/240 | 80 |
| 4 | 240 | 1-3 | 42 ¹⁵ / ₁₆ | 32½ | 26½ | NWHOR-03-004P-E1/240/3P | 80 |
| 4 | 480 | 1-1 | 42 ¹⁵ / ₁₆ | 32½ | 26½ | NWHOR-03-004P-E1/480 | 80 |
| 4 | 480 | 1-3 | 42 ¹⁵ / ₁₆ | 32½ | 26½ | NWHOR-03-004P-E1/480/3P | 80 |
| 6 | 240 | 1-1 | 55 ⁷ / ₁₆ | 45 | 39 | NWHOR-03-006P-E1/240 | 94 |
| 6 | 240 | 1-3 | 55 ⁷ / ₁₆ | 45 | 39 | NWHOR-03-006P-E1/240/3P | 94 |
| 6 | 480 | 1-1 | 55 ⁷ / ₁₆ | 45 | 39 | NWHOR-03-006P-E1/480 | 94 |
| 6 | 480 | 1-3 | 55 ⁷ / ₁₆ | 45 | 39 | NWHOR-03-006P-E1/480/3P | 94 |

Ordering Examples: NWHOR-03-004P-E1/240, 4 kW, 1 phase, 240V heater.
NWHOR-03-006P-E1/480/3P, 6 kW (1 to 3) phase, 480V heater.

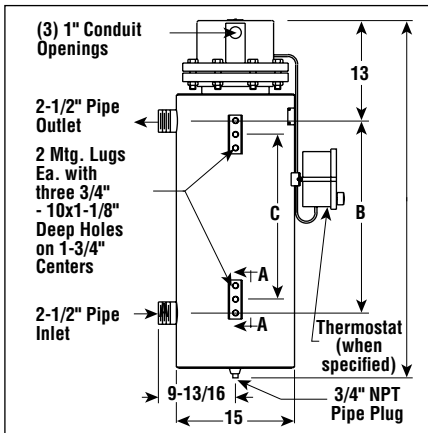
MEDIUM, HEAVY AND FUEL OIL APPLICATIONS

NWHOR & NWHORB Series

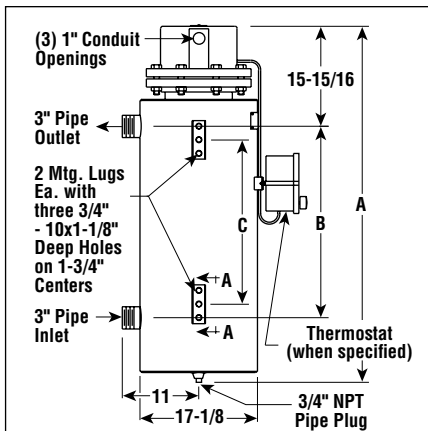
Dimensions (Inches) NWHO-06



NWHOR-18



NWHOR-27



MOST POPULAR MODELS HIGHLIGHTED!

| To Order (Specify Model Number) | | | | | | | | | |
|---|-------|-------------|---------------------------------|----------------------------------|----------------------------------|----------------------|----------|------------|--|
| kW | Volts | Ckt & Phase | Dimensions (in) | | | Model No. | Price | Wt. (Lbs.) | |
| | | | A | B | C | | | | |
| Series 06 — 5", 150 lb carbon steel vessel — 6 steel elements (15 W/In²) with side mounted thermostat — 2 NPT pipe inlet and outlet | | | | | | | | | |
| 8 | 240 | 1-3 | 41 ³ / ₄ | 30 | 11 ³ / ₁₆ | NWHOR-06-012P-E1/240 | \$6100 | 140 | |
| 8 | 480 | 1-3 | 41 ³ / ₄ | 30 | 11 ³ / ₁₆ | NWHOR-06-012P-E1/480 | 6100 | 140 | |
| 10 | 240 | 1-3 | 48 ³ / ₄ | 37 | 14 ³ / ₁₆ | NWHOR-06-015P-E1/240 | 7000 | 155 | |
| 10 | 480 | 1-3 | 48 ³ / ₄ | 37 | 14 ³ / ₁₆ | NWHOR-06-015P-E1/480 | 7000 | 155 | |
| Series 18 — 8", 150 lb carbon steel vessel — 18 steel elements (12 W/In²) — 2 1/2" NPT pipe inlet and outlet | | | | | | | | | |
| 20 | 240 | 3-3 | 53 ³ / ₄ | 32 ¹ / ₁₆ | 29 ³ / ₁₆ | NWHOR-18-020P-E1/240 | \$9950 | 450 | |
| 20 | 480 | 3-3 | 53 ³ / ₄ | 32 ¹ / ₁₆ | 29 ³ / ₁₆ | NWHOR-18-020P-E1/480 | 9950 | 450 | |
| 25 | 240 | 3-3 | 60 ³ / ₄ | 39 ¹ / ₁₆ | 36 ³ / ₁₆ | NWHOR-18-025P-E1/240 | 11,100 | 500 | |
| 25 | 480 | 3-3 | 60 ³ / ₄ | 39 ¹ / ₁₆ | 36 ³ / ₁₆ | NWHOR-18-025P-E1/480 | 11,100 | 500 | |
| 30 | 240 | 3-3 | 67 ⁷ / ₁₆ | 47 ⁷ / ₁₆ | 43 ⁷ / ₁₆ | NWHOR-18-030P-E1/240 | 12,400 | 565 | |
| 30 | 480 | 3-3 | 67 ⁷ / ₁₆ | 47 ⁷ / ₁₆ | 43 ⁷ / ₁₆ | NWHOR-18-030P-E1/480 | 12,400 | 565 | |
| 35 | 240 | 3-3 | 77 ⁷ / ₁₆ | 56 ¹ / ₁₆ | 53 ³ / ₁₆ | NWHOR-18-035P-E1/240 | 14,000 | 650 | |
| 35 | 480 | 3-3 | 77 ⁷ / ₁₆ | 56 ¹ / ₁₆ | 53 ³ / ₁₆ | NWHOR-18-035P-E1/480 | 14,000 | 650 | |
| 40 | 240 | 3-3 | 86 ³ / ₁₆ | 65 ¹ / ₁₆ | 62 ³ / ₁₆ | NWHOR-18-040P-E1/240 | 15,550 | 725 | |
| 40 | 480 | 3-3 | 86 ³ / ₁₆ | 65 ¹ / ₁₆ | 62 ³ / ₁₆ | NWHOR-18-040P-E1/480 | 15,550 | 725 | |
| 45 | 240 | 3-3 | 96 ³ / ₁₆ | 75 ¹ / ₁₆ | 72 ³ / ₁₆ | NWHOR-18-045P-E1/240 | 17,250 | 815 | |
| 45 | 480 | 3-3 | 96 ³ / ₁₆ | 75 ¹ / ₁₆ | 72 ³ / ₁₆ | NWHOR-18-045P-E1/480 | 17,250 | 815 | |
| Series 27 — 10", 150 lb carbon steel vessel — 27 steel elements (12 W/In²) — 3 NPT pipe inlet and outlet | | | | | | | | | |
| 50 | 240 | 3-3 | 77 ⁹ / ₁₆ | 52 | 48 ¹ / ₂ | NWHOR-27-050P-E1/240 | \$18,900 | 730 | |
| 50 | 480 | 3-3 | 77 ⁹ / ₁₆ | 52 | 48 ¹ / ₂ | NWHOR-27-050P-E1/480 | 18,900 | 730 | |
| 60 | 240 | 3-3 | 87 ⁹ / ₁₆ | 62 | 58 ¹ / ₂ | NWHOR-27-060P-E1/240 | 21,400 | 750 | |
| 60 | 480 | 3-3 | 87 ⁹ / ₁₆ | 62 | 58 ¹ / ₂ | NWHOR-27-060P-E1/480 | 21,400 | 750 | |
| 70 | 240 | 3-3 | 97 ⁹ / ₁₆ | 72 | 68 ¹ / ₂ | NWHOR-27-070P-E1/240 | 23,850 | 770 | |
| 70 | 480 | 3-3 | 97 ⁹ / ₁₆ | 72 | 68 ¹ / ₂ | NWHOR-27-070P-E1/480 | 23,850 | 770 | |
| Series 45 — 14", 150 lb carbon steel vessel — 45 steel elements (15 W/In²) — 6" flanged pipe inlet and outlet | | | | | | | | | |
| 90 | 480 | 3-3 | 76 | 57 ³ / ₁₆ | 66 ¹ / ₁₆ | NWHOR-45-090P-E1/480 | \$29,900 | 830 | |
| 125 | 480 | 3-3 | 91 | 72 ³ / ₁₆ | 81 ¹ / ₁₆ | NWHOR-45-125P-E1/480 | 36,050 | 960 | |
| 150 | 480 | 3-3 | 106 | 87 ³ / ₁₆ | 96 ¹ / ₁₆ | NWHOR-45-150P-E1/480 | 41,100 | 1080 | |
| 175 | 480 | 3-3 | 121 | 102 ³ / ₁₆ | 111 ¹ / ₁₆ | NWHOR-45-175P-E1/480 | 46,200 | 1200 | |
| 200 | 480 | 3-3 | 128 ¹ / ₂ | 109 ¹ / ₁₆ | 119 ¹ / ₁₆ | NWHOR-45-200P-E1/480 | 50,100 | 1320 | |

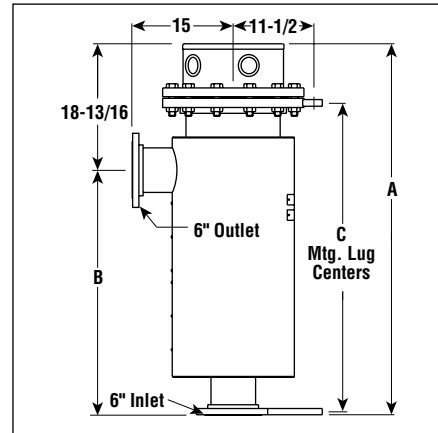
Ordering Example: NWHOR-18-030P-E1/240 is a 30 kW, 240 Volt Heater, \$12,400.

Note — Refer to the Controls section for side mounted controls or control panels.

HEAVY & FUEL OIL APPLICATIONS (BAFFLED)

NWHOR & NWHORB Series

Dimensions (Inches)
NWHOR-45

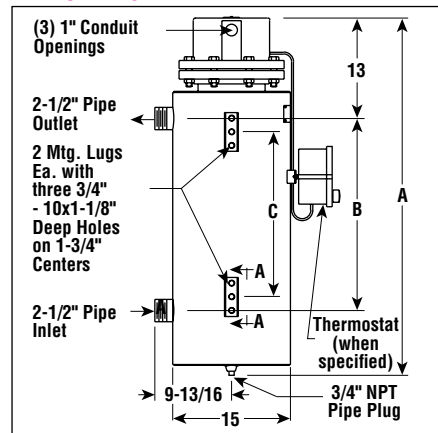


To Order (Specify Model Number) **MOST POPULAR ITEMS HIGHLIGHTED**

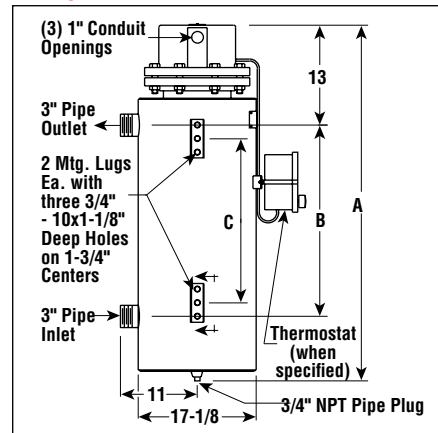
| kW | Volts | Ckt & Phase | Dimensions (In.) | | | Model No. | Price | Wt. (Lbs.) |
|---|-------|-------------|------------------|-----|-----|-----------------------|--------|------------|
| | | | A | B | C | | | |
| Series 18 — 8 inch 150 lb carbon steel vessel — 18 baffled steel elements (12 W/In²) — 2½" NPT pipe inlet and outlet | | | | | | | | |
| 20 | 240 | 3-3 | 53¼ | 32⅞ | 29⅞ | NWHORB-18-020P-E1/240 | \$6611 | 456 |
| 20 | 480 | 3-3 | 53¼ | 32⅞ | 29⅞ | NWHORB-18-020P-E1/480 | 6611 | 456 |
| 25 | 240 | 3-3 | 60¼ | 39⅞ | 36⅞ | NWHORB-18-025P-E1/240 | 6686 | 506 |
| 25 | 480 | 3-3 | 60¼ | 39⅞ | 36⅞ | NWHORB-18-025P-E1/480 | 6686 | 506 |
| 30 | 240 | 3-3 | 67⅞ | 47⅞ | 43⅞ | NWHORB-18-030P-E1/240 | 7064 | 571 |
| 30 | 480 | 3-3 | 67⅞ | 47⅞ | 43⅞ | NWHORB-18-030P-E1/480 | 7064 | 571 |
| 35 | 240 | 3-3 | 77⅞ | 56⅞ | 53⅞ | NWHORB-18-035P-E1/240 | 7795 | 656 |
| 35 | 480 | 3-3 | 77⅞ | 56⅞ | 53⅞ | NWHORB-18-035P-E1/480 | 7795 | 656 |
| 40 | 240 | 3-3 | 86⅞ | 65⅞ | 62⅞ | NWHORB-18-040P-E1/240 | 8522 | 731 |
| 40 | 480 | 3-3 | 86⅞ | 65⅞ | 62⅞ | NWHORB-18-040P-E1/480 | 8522 | 731 |
| 45 | 240 | 3-3 | 96⅞ | 75⅞ | 72⅞ | NWHORB-18-045P-E1/240 | 9035 | 821 |
| 45 | 480 | 3-3 | 96⅞ | 75⅞ | 72⅞ | NWHORB-18-045P-E1/480 | 9035 | 821 |
| Series 27 — 10 inch, 150 lb carbon steel vessel — 27 baffled steel elements (12 W/In²) — 3" NPT pipe inlet and outlet | | | | | | | | |
| 50 | 240 | 3-3 | 77⅞ | 52 | 48½ | NWHORB-27-080P-E1/240 | 9218 | 736 |
| 50 | 480 | 3-3 | 77⅞ | 52 | 48½ | NWHORB-27-080P-E1/480 | 9218 | 736 |
| 60 | 240 | 3-3 | 87⅞ | 62 | 58½ | NWHORB-27-090P-E1/240 | 9781 | 756 |
| 60 | 480 | 3-3 | 87⅞ | 62 | 58½ | NWHORB-27-090P-E1/480 | 9781 | 756 |
| 70 | 240 | 3-3 | 97⅞ | 72 | 68½ | NWHORB-27-100P-E1/240 | 10,972 | 776 |
| 70 | 480 | 3-3 | 97⅞ | 72 | 68½ | NWHORB-27-120P-E1/480 | 10,972 | 776 |

Ordering Example: NWHORB-18-035P-E1/240 is a 35 kW, 240 Volt Heater, \$7795.
Note — Refer to the Controls section for side mounted controls or control panels.

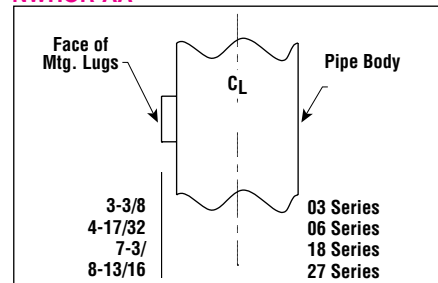
NWHORB-18



NWHORB-27



NWHOR-AA



Ordering Information
To Order — Complete the Model Number using the Matrix provided.

| Model | Medium, Heavy and Fuel Oil |
|----------------------|--|
| NWHOR | Oil Circulation Heater |
| | Low Watt Density Elements |
| B | Internal Baffles |
| | |
| Code | Number of Elements |
| 03 | Three |
| 06 | Six |
| 18 | Eighteen |
| | 27 |
| | Forty Five |
| Code | kW |
| 003P | 3 |
| 004P | 4 |
| 006P | 6 |
| 008P | 8 |
| 010P | 10 |
| 012P | 12 |
| 020P | 20 |
| 025P | 25 |
| 030P | 30 |
| 035P | 35 |
| 040P | 40 |
| 045P | 45 |
| 050P | 50 |
| 060P | 60 |
| 070P | 70 |
| 090P | 90 |
| 125P | 125 |
| 150P | 150 |
| 175P | 175 |
| 200P | 200 |
| 015P | 15 |
| 018P | 18 |
| Code | Terminal Enclosure |
| E1 | General Purpose |
| E2 | Moisture Resistant/Explosion Resistant |
| E3 | Explosion Resistant |
| E4 | Moisture Resistant |
| NWHORB 18 | 030P E1 |
| Typical Model Number | |