

# 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/In<sup>2</sup>)
- ✓ 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 1/2" thermowell for thermostat bulb and a 1/8" 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.

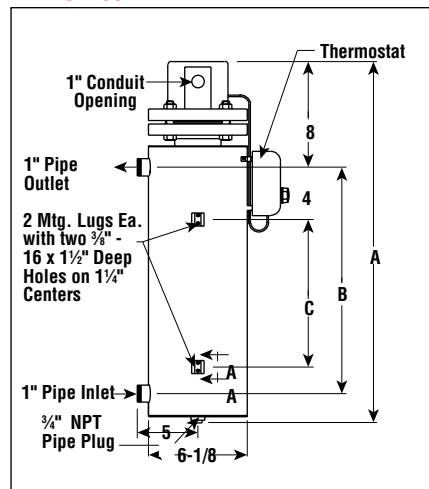
**Controls:** Series 03 and 06 stock and assembly stock heaters come equipped with side mounted thermostat. Series 18, 27 and 45 are furnished without thermostat.

**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.

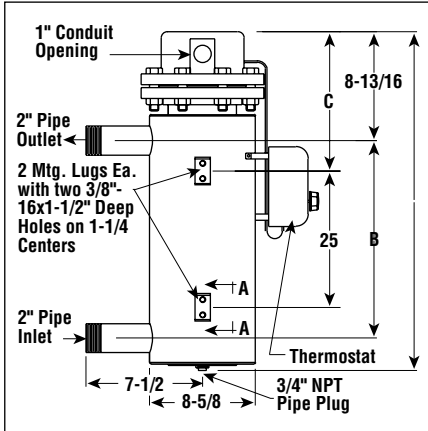
To Order							
kW	Volts	Circuit & Phase	Dimensions (in)			Model No.	Wt. (lb)
			A	B	C		
Series 03 — 3" 150 lb carbon steel vessel — 3 steel elements (15 W/In <sup>2</sup> ) with side mounted thermostat — 1 NPT pipe inlet and outlet							
3	240	1-1	32 <sup>15</sup> / <sub>16</sub>	22 <sup>1</sup> / <sub>2</sub>	16 <sup>1</sup> / <sub>2</sub>	NWHOR-03-003P-E1/240	70
3	240	1-3	32 <sup>15</sup> / <sub>16</sub>	22 <sup>1</sup> / <sub>2</sub>	16 <sup>1</sup> / <sub>2</sub>	NWHOR-03-003P-E1/240/3P	70
3	480	1-1	32 <sup>15</sup> / <sub>16</sub>	22 <sup>1</sup> / <sub>2</sub>	16 <sup>1</sup> / <sub>2</sub>	NWHOR-03-003P-E1/480	70
3	480	1-3	32 <sup>15</sup> / <sub>16</sub>	22 <sup>1</sup> / <sub>2</sub>	16 <sup>1</sup> / <sub>2</sub>	NWHOR-03-003P-E1/480/3P	70
4	240	1-1	42 <sup>15</sup> / <sub>16</sub>	32 <sup>1</sup> / <sub>2</sub>	26 <sup>1</sup> / <sub>2</sub>	NWHOR-03-004P-E1/240	80
4	240	1-3	42 <sup>15</sup> / <sub>16</sub>	32 <sup>1</sup> / <sub>2</sub>	26 <sup>1</sup> / <sub>2</sub>	NWHOR-03-004P-E1/240/3P	80
4	480	1-1	42 <sup>15</sup> / <sub>16</sub>	32 <sup>1</sup> / <sub>2</sub>	26 <sup>1</sup> / <sub>2</sub>	NWHOR-03-004P-E1/480	80
4	480	1-3	42 <sup>15</sup> / <sub>16</sub>	32 <sup>1</sup> / <sub>2</sub>	26 <sup>1</sup> / <sub>2</sub>	NWHOR-03-004P-E1/480/3P	80
6	240	1-1	55 <sup>7</sup> / <sub>16</sub>	45	39	NWHOR-03-006P-E1/240	94
6	240	1-3	55 <sup>7</sup> / <sub>16</sub>	45	39	NWHOR-03-006P-E1/240/3P	94
6	480	1-1	55 <sup>7</sup> / <sub>16</sub>	45	39	NWHOR-03-006P-E1/480	94
6	480	1-3	55 <sup>7</sup> / <sub>16</sub>	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.

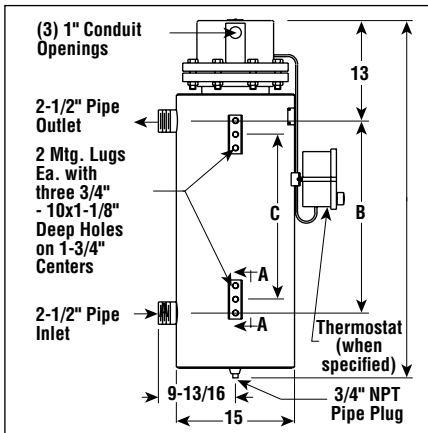
# MEDIUM, HEAVY AND FUEL OIL APPLICATIONS

## NWHOR & NWHORB Series

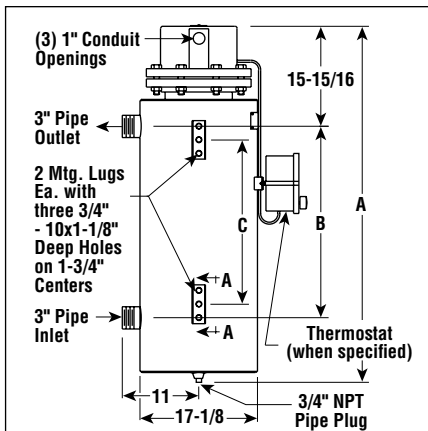
Dimensions (Inches)  
NWHO-06



NWHOR-18



NWHOR-27



**MOST POPULAR MODELS HIGHLIGHTED!**

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

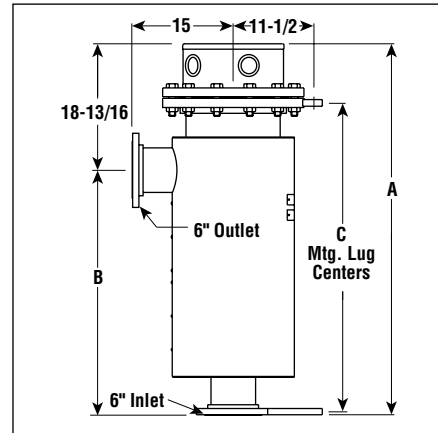
Ordering Example: NWHOR-18-030P-E1/240 is a 30 kW, 240 Volt Heater.

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

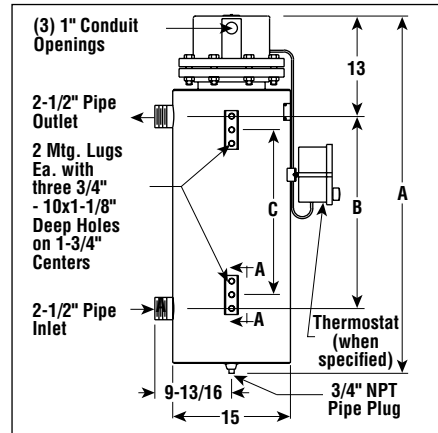


**To Order (Specify Model Number)** **MOST POPULAR ITEMS HIGHLIGHTED**

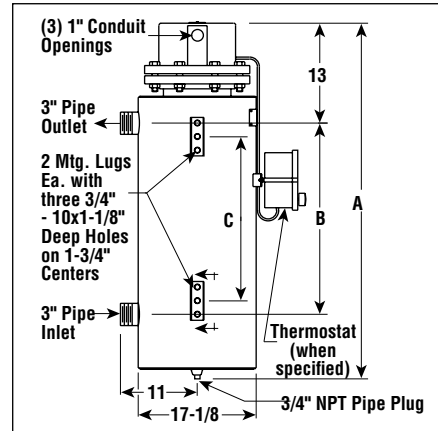
kW	Volts	Ckt & Phase	Dimensions (In.)			Model No.	Wt. (Lbs.)
			A	B	C		
<b>Series 18 — 8 inch 150 lb carbon steel vessel — 18 baffled steel elements (12 W/In<sup>2</sup>) — 2½" NPT pipe inlet and outlet</b>							
20	240	3-3	53¼	32 <sup>11</sup> / <sub>16</sub>	29 <sup>9</sup> / <sub>16</sub>	NWHORB-18-020P-E1/240	456
20	480	3-3	53¼	32 <sup>11</sup> / <sub>16</sub>	29 <sup>9</sup> / <sub>16</sub>	NWHORB-18-020P-E1/480	456
25	240	3-3	60¼	39 <sup>11</sup> / <sub>16</sub>	36 <sup>3</sup> / <sub>16</sub>	NWHORB-18-025P-E1/240	506
25	480	3-3	60¼	39 <sup>11</sup> / <sub>16</sub>	36 <sup>3</sup> / <sub>16</sub>	NWHORB-18-025P-E1/480	506
30	240	3-3	67 <sup>7</sup> / <sub>16</sub>	47 <sup>9</sup> / <sub>16</sub>	43 <sup>1</sup> / <sub>16</sub>	NWHORB-18-030P-E1/240	571
30	480	3-3	67 <sup>7</sup> / <sub>16</sub>	47 <sup>9</sup> / <sub>16</sub>	43 <sup>1</sup> / <sub>16</sub>	NWHORB-18-030P-E1/480	571
35	240	3-3	77 <sup>7</sup> / <sub>16</sub>	56 <sup>19</sup> / <sub>16</sub>	53 <sup>3</sup> / <sub>16</sub>	NWHORB-18-035P-E1/240	656
35	480	3-3	77 <sup>7</sup> / <sub>16</sub>	56 <sup>19</sup> / <sub>16</sub>	53 <sup>3</sup> / <sub>16</sub>	NWHORB-18-035P-E1/480	656
40	240	3-3	86 <sup>3</sup> / <sub>16</sub>	65 <sup>9</sup> / <sub>16</sub>	62 <sup>5</sup> / <sub>16</sub>	NWHORB-18-040P-E1/240	731
40	480	3-3	86 <sup>3</sup> / <sub>16</sub>	65 <sup>9</sup> / <sub>16</sub>	62 <sup>5</sup> / <sub>16</sub>	NWHORB-18-040P-E1/480	731
45	240	3-3	96 <sup>3</sup> / <sub>16</sub>	75 <sup>9</sup> / <sub>16</sub>	72 <sup>5</sup> / <sub>16</sub>	NWHORB-18-045P-E1/240	821
45	480	3-3	96 <sup>3</sup> / <sub>16</sub>	75 <sup>9</sup> / <sub>16</sub>	72 <sup>5</sup> / <sub>16</sub>	NWHORB-18-045P-E1/480	821
<b>Series 27 — 10 inch, 150 lb carbon steel vessel — 27 baffled steel elements (12 W/In<sup>2</sup>) — 3" NPT pipe inlet and outlet</b>							
50	240	3-3	77 <sup>7</sup> / <sub>16</sub>	52	48½	NWHORB-27-080P-E1/240	736
50	480	3-3	77 <sup>7</sup> / <sub>16</sub>	52	48½	NWHORB-27-080P-E1/480	736
60	240	3-3	87 <sup>7</sup> / <sub>16</sub>	62	58½	NWHORB-27-090P-E1/240	756
60	480	3-3	87 <sup>7</sup> / <sub>16</sub>	62	58½	NWHORB-27-090P-E1/480	756
70	240	3-3	97 <sup>7</sup> / <sub>16</sub>	72	68½	NWHORB-27-100P-E1/240	776
70	480	3-3	97 <sup>7</sup> / <sub>16</sub>	72	68½	NWHORB-27-120P-E1/480	776

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

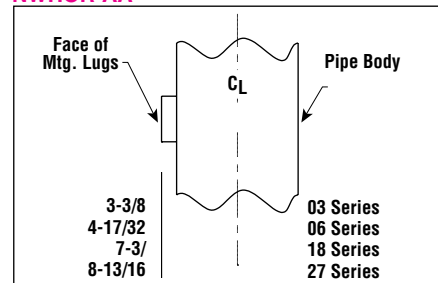
NWHORB-18



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
RB	Internal Baffles
<b>Code</b>	<b>Number of Elements</b>
03	Three
06	Six
18	Eighteen
<b>Code</b>	<b>kW</b>
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
<b>Code</b>	<b>Terminal Enclosure</b>
E1	General Purpose
E2	Moisture Resistant/Explosion Resistant
E3	Explosion Resistant
E4	Moisture Resistant
NWHORB 18	030P E1
Typical Model Number	