

3A EXH Series Explosionproof Electric Air Heaters

Cl. I, Div. 1 & 2, Groups C, D Explosionproof
 Cl. II, Div. 1, Groups E, F, G Dust-Ignitionproof
 Cl. II, Div. 2, Groups F, G
 NEMA 7CD, 9EFG

Applications:

EXH explosionproof electric heaters are used:

- In areas made hazardous by the presence of flammable gases and vapors, and combustible dusts
- For rugged locations including: oil refineries, petrochemical plants, rigs, pumping stations, turbine compressors, pulp and paper mills, coal mines, grain elevators, etc.
- In areas where flammable vapors or gases or highly combustible dusts may be present due to accidental or abnormal conditions
- For standby heat to prevent process heat loss, or for personnel comfort during maintenance/repair operations

Features:

- Split fan guard for easy access to fan
- Compact design makes handling during installation easy
- Evacuated cores heat up quickly with even heat distribution
- Larger models offer greater kilowatt range providing more economical means to heat large areas
- Permanently sealed cores improve reliability and make field servicing easier
- Control box provides easy access for installation and maintenance

Certifications and Compliances:

- Class I, Division 1 & 2, Groups C, D
- Class II, Division 1, Groups E, F, G
- Class II, Division 2, Groups F, G
- NEMA: 7CD, 9EFG
- UL Standard: 823
- CSA Standard: C22.2 Nos. 25, 30, 46

Standard Materials and Finishes:

- Fan – Aluminum blade; steel spider and hub with 5/8 in. (15.875 mm.) bore
- Core – Steel with integral aluminum fins, vacuum charged and hermetically sealed
- Heating Elements – Three long life, low watt-density, high grade metal sheathed elements
- Heat Transfer Fluid – Long life formulated ethylene glycol and water, freeze protected to -49°F (-45°C)
- Cabinet Material – 14 gauge (0.075 in.) (1.90 mm) steel; epoxy coated with 5 stage pre-treatment including iron phosphate
- Conduit Material – Heavy walled, 0.122 in (3.1 mm.) steel cadmium plated



Heater shown has optional built-in thermostat.

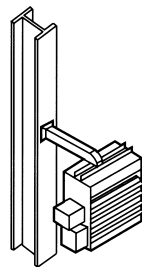
Options:

The following special options are available:

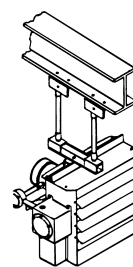
| Description | Suffix |
|---|--------|
| Built-in disconnect switch | D |
| Built-in pilot light | P |
| 3-way switch | S |
| Built-in thermostat | T |
| Built-in HRC1 explosionproof thermostat | HRC |

Accessories:

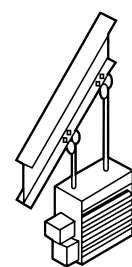
- Basic mounting kit – suitable for applications where the support arm can be bolted or welded directly to structural steel or concrete.
Cat. # BMK-EXH5 (insert fan size: 12, 16 or 20)
- Wall mounting kit – suitable for mounting on Z sections.
Cat. # WMK-EXH5 (insert fan size: 12, 16 or 20)
- Hanging mounting kit – simple and economical if adequate overhead structure exists. Requires 1/2" pipe, cut and threaded – not supplied.
Cat. # HMK-EXH5
- Swivel hanging mount kit – swivels 360°. Requires 1/2" pipe, cut and threaded – not supplied.
Cat. # SHMK-EXH5 (insert fan size: 12, 16 or 20)
- Pipe mounting kit – useful in buildings with insufficient strength to use other types of mounts. requires 3" pipe.
Cat. # PMKEXH5 (insert fan size: 12, 16 or 20)



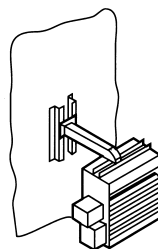
BMK Basic Mounting Kit



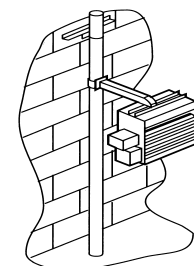
SHMK Swivel Hanging Mounting Kit



HMK Hanging Mounting Kit



WMK Wall Mounting Kit



PMK Pipe Mounting Kit

Crouse-Hinds
 by **E.T.N**

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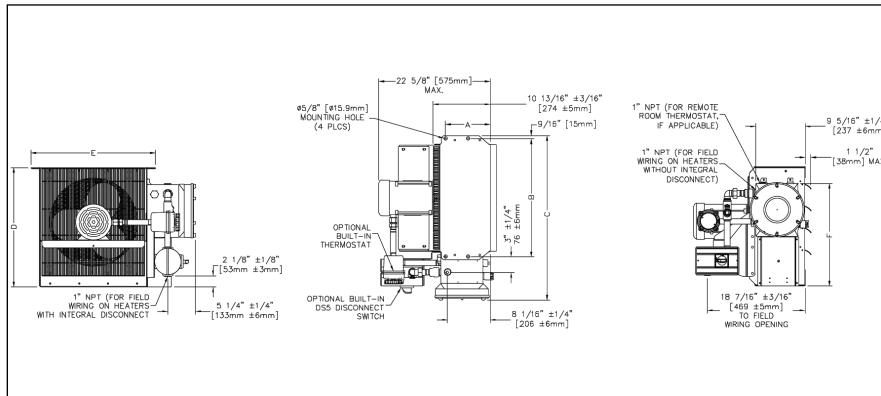
Specifications:

| | Nominal kW | EXH512 | | | | EXH516 | | EXH520 | | |
|----------------------------------|----------------------|--------|-------|--------|-------|--------|-------|--------|-------|-------|
| | | 3 | 5 | 7.5 | 10 | 15 | 20 | 25 | 30 | 35 |
| Maximum Altitude | (ft.) | 12,000 | 8,000 | 10,000 | 7,000 | 10,000 | 7,000 | 10,000 | 7,000 | 6,000 |
| | (m.) | 3,658 | 2,438 | 3,048 | 2,134 | 3,048 | 2,134 | 3,048 | 2,134 | 1,829 |
| Air Delivery @70°F @ 21°C | (CFM) | 500 | 500 | 850 | 850 | 1750 | 1750 | 3600 | 3600 | 3,950 |
| | (m ³ /hr) | 850 | 850 | 1444 | 1444 | 2973 | 2973 | 6116 | 6116 | 6,711 |
| Horizontal Throw | (ft.) | 15 | 15 | 30 | 30 | 40 | 40 | 70 | 70 | 70 |
| | (m.) | 4.6 | 4.6 | 9.1 | 9.1 | 12.2 | 12.2 | 21.3 | 21.3 | 21.3 |
| Max. Mounting Height | (ft.) | 7 | 7 | 10 | 10 | 10 | 10 | 20 | 20 | 20 |
| | (m.) | 2.1 | 2.1 | 3.0 | 3.0 | 3.0 | 3.0 | 6.1 | 6.1 | 6.1 |
| Motor Power | (HP) | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| | (kW) | 0.187 | 0.187 | 0.187 | 0.187 | 0.187 | 0.187 | 0.373 | 0.373 | 0.373 |
| Fan Diameter | (in.) | 12 | 12 | 12 | 12 | 16 | 16 | 20 | 20 | 20 |
| | (mm.) | 305 | 305 | 305 | 305 | 406 | 406 | 508 | 508 | 508 |
| Net Weight | (lbs.) | 140 | 140 | 140 | 140 | 168 | 168 | 201 | 201 | 201 |
| | (kg.) | 63.5 | 63.5 | 63.5 | 63.5 | 76.2 | 76.2 | 91.2 | 91.2 | 91.2 |
| Shipping Weight | (lbs.) | 194 | 194 | 194 | 194 | 218 | 218 | 252 | 252 | 252 |
| | (kg.) | 88 | 88 | 88 | 88 | 98.9 | 98.9 | 114.3 | 114.3 | 114.3 |

- Motor Type** Explosionproof. Thermally protected. Permanently lubricated ball bearings. 1725 RPM.
- Fan Guard** Split design with close wiring spacing. 1/4 in. (6.3mm.) probe will not enter.
- Heating Elements** Three long-life, low watt-density, high grade metal-sheathed elements.
- Temperature High-Limit** Automatic reset type, snap-action bimetal, open on temperature rise. Rated 100,000 cycles at 10 amps, handles 0.128 amps.
- Control Circuit** 120 Volts, 0.128 ams, 15 VA.
- Control Transformer** Multi-tap primary, 120V secondary, 50 VA.
- Contactor** 60 or 100 amp. rated 1,000,000 cycles at maximum capacity, operating at not more than 84% full load. 120V, 15 VA fuse protected coil.
- Overpressure Protection** Fusible alloy plug 170 psi (1.17 MPa).
- Temperature Code Rating** T3B 165°C (329°F) Class I & II.
- Temperature Limitations** Operational; -49°F to 176°F (-45°C to 80°C), short term to 248°F (120°C).

Dimensions

In Inches:



| Dimension | 2.5 - 12.5 - 20.9 - Dim. | | | Tolerance ± |
|-----------|---|--|---|-------------|
| | 10 kW | 20 kW | 35 kW | |
| A | in. 8 ⁷ / ₁₆ mm 215 | 8 ⁷ / ₁₆ 215 | 8 ⁷ / ₁₆ 215 | 1/8 3 |
| B | in. 18 ³ / ₁₆ mm 462 | 22 ⁵ / ₁₆ 566 | 26 ¹ / ₄ 667 | 1/8 3 |
| C | in. 27 mm 686 | 31 787 | 35 889 | 3/16 4 |
| D | in. 18 ¹ / ₂ mm 470 | 22 ¹ / ₂ 572 | 26 ¹ / ₂ 674 | 1/8 3 |
| E | in. 19 ⁹ / ₁₅ mm 494 | 23 ⁷ / ₁₆ 596 | 27 ⁷ / ₁₆ 697 | 3/8 10 |
| F | in. 17 ¹ / ₂ mm 444 | 19 ¹ / ₂ 495 | 21 ¹³ / ₁₆ 554 | 5/16 8 |

Dimensional tolerances ±1/8" (3.2mm) unless otherwise specified.

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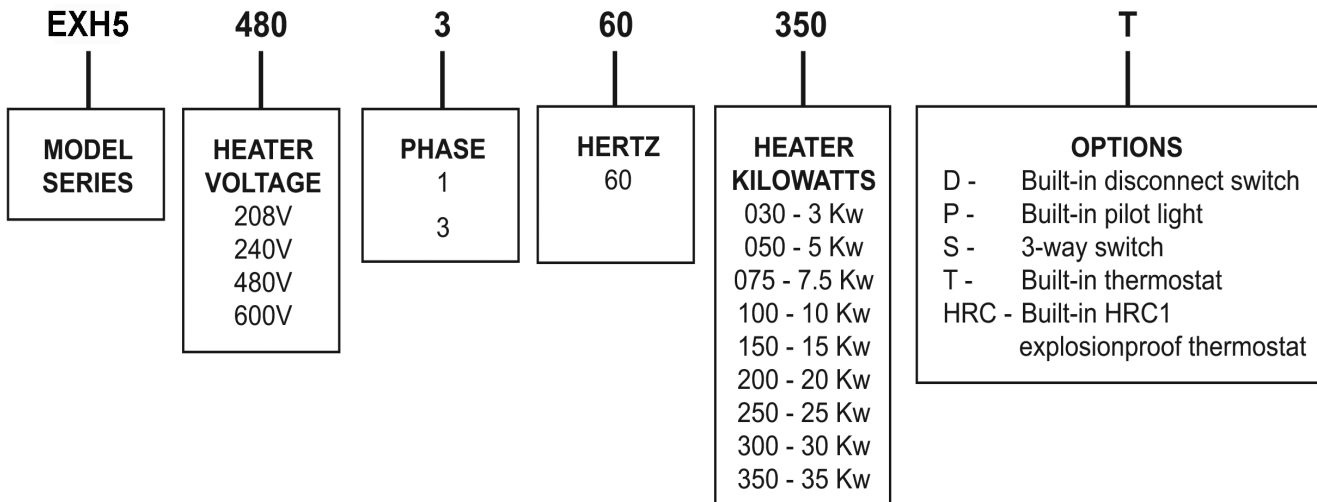
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Ordering Information:

| | Nominal Wattage (kW) | Voltage | Phase | Cat. # | Maximum Total Current (Amperes) | Temperature Rise °F | Temperature Rise °C | Heat Output BTU/Hr. |
|--------|----------------------|---------|-------|------------------|---------------------------------|---------------------|---------------------|---------------------|
| | 3.0 | 208 | 1 | EXH5-208160-030 | 14.4 | 11.2 | 6.2 | 10,250 |
| | 3.0 | 208 | 3 | EXH5-208360-030 | 8.3 | 11.2 | 6.2 | 10,250 |
| | 3.0 | 240 | 1 | EXH5-240160-030 | 12.5 | 11.2 | 6.2 | 10,250 |
| | 3.0 | 240 | 3 | EXH5-240360-030 | 7.2 | 11.2 | 6.2 | 10,250 |
| | 3.0 | 480 | 1 | EXH5-480160-030 | 6.3 | 11.2 | 6.2 | 10,250 |
| | 3.0 | 480 | 3 | EXH5-480360-030 | 3.6 | 11.2 | 6.2 | 10,250 |
| | 3.0 | 600 | 3 | EXH5-600360-030 | 2.9 | 11.2 | 6.2 | 10,250 |
| | 5.0 | 208 | 1 | EXH5-208160-050 | 24.0 | 18.6 | 10.3 | 17,100 |
| | 5.0 | 208 | 3 | EXH5-208360-050 | 13.9 | 18.6 | 10.3 | 17,100 |
| | 5.0 | 240 | 1 | EXH5-240160-050 | 20.8 | 18.6 | 10.3 | 17,100 |
| | 5.0 | 240 | 3 | EXH5-240360-050 | 12.0 | 18.6 | 10.3 | 17,100 |
| | 5.0 | 480 | 1 | EXH5-480160-050 | 10.4 | 18.6 | 10.3 | 17,100 |
| | 5.0 | 480 | 3 | EXH5-480360-050 | 6.0 | 18.6 | 10.3 | 17,100 |
| | 5.0 | 600 | 3 | EXH5-600360-050 | 4.8 | 18.6 | 10.3 | 17,100 |
| EXH512 | 7.5 | 208 | 1 | EXH5-208160-075 | 36.1 | 27.9 | 15.5 | 26,600 |
| | 7.5 | 208 | 3 | EXH5-208360-075 | 20.8 | 27.9 | 15.5 | 26,600 |
| | 7.5 | 240 | 1 | EXH5-240160-075 | 31.3 | 27.9 | 15.5 | 26,600 |
| | 7.5 | 240 | 3 | EXH5-240360-075 | 18.0 | 27.9 | 15.5 | 26,600 |
| | 7.5 | 480 | 1 | EXH5-480160-075 | 15.6 | 27.9 | 15.5 | 26,600 |
| | 7.5 | 480 | 3 | EXH5-480360-075 | 9.0 | 27.9 | 15.5 | 26,600 |
| | 7.5 | 600 | 3 | EXH5-600360-075 | 7.2 | 27.9 | 15.5 | 26,600 |
| | 10.0 | 208 | 3 | EXH5-208360-100 | 27.8 | 37.2 | 20.7 | 34,150 |
| | 10.0 | 240 | 1 | EXH5-240160-100* | 41.7 | 37.2 | 20.7 | 34,150 |
| | 10.0 | 240 | 3 | EXH5-240360-100 | 24.1 | 37.2 | 20.7 | 34,150 |
| | 10.0 | 480 | 1 | EXH5-480160-100 | 20.8 | 37.2 | 20.7 | 34,150 |
| | 10.0 | 480 | 3 | EXH5-480360-100 | 12.0 | 37.2 | 20.7 | 34,150 |
| | 10.0 | 600 | 3 | EXH5-600360-100 | 9.6 | 37.2 | 20.7 | 34,150 |
| | 15.0 | 240 | 3 | EXH5-240360-150 | 36.1 | 27.1 | 15.1 | 51,200 |
| | 15.0 | 480 | 1 | EXH5-480160-150 | 31.3 | 27.1 | 15.1 | 51,200 |
| EXH516 | 15.0 | 480 | 3 | EXH5-480360-150 | 18.0 | 27.1 | 15.1 | 51,200 |
| | 15.0 | 600 | 3 | EXH5-600360-150 | 14.4 | 27.1 | 15.1 | 51,200 |
| | 20.0 | 480 | 1 | EXH5-480160-200 | 41.7 | 36.1 | 20.1 | 68,300 |
| | 20.0 | 480 | 3 | EXH5-480360-200 | 24.1 | 36.1 | 20.1 | 68,300 |
| | 20.0 | 600 | 3 | EXH5-600360-200 | 19.2 | 36.1 | 20.1 | 68,300 |
| | 25.0 | 480 | 3 | EXH5-480360-250 | 30.1 | 45.2 | 25.1 | 85,400 |
| | 25.0 | 600 | 3 | EXH5-600360-250 | 24.1 | 45.2 | 25.1 | 85,400 |
| EXH520 | 30.0 | 480 | 3 | EXH5-480360-300 | 36.1 | 26.4 | 14.6 | 102,360 |
| | 30.0 | 600 | 3 | EXH5-600360-300 | 28.9 | 26.4 | 14.6 | 102,360 |
| | 35.0 | 480 | 3 | EXH5-480360-350 | 42.1 | 30.7 | 17.1 | 119,450 |
| | 35.0 | 600 | 3 | EXH5-600360-350 | 33.7 | 30.7 | 17.1 | 119,450 |

Catalog Number Example:



* Not available with built-in disconnect switch (option D).