**MH 70 WATT**

- 60 Hz
- Minimum starting temperature: -30° C
- Normal and High Power Factor models available

**HID CORE & COIL BALLASTS**
**METAL HALIDE**

### Input Volts | Catalog Number | Circuit Type | Watts | Input Current | Nom Open Circuit Voltage | Fuse Rating | WIR Dwg | Ref Dwg | Cap Dwg | Dimensions | Capacitor | Total Weight (lbs.) | Ignitor | Part Number | Max Distance to lamp (ft) | UL Bench Top Rise
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
| 208 | 11310-497 | HX-HFP | 95 | 1.04 | 245 | 3 | 2 | 2 | 1.3 | 2.6 | 8 | 277 | 1.58 | 2.68 | 1.3x2.15 | 2.69 | 4.3 | MH100-3A | 5 | A
| 220 | 11310-498 | HX-HFP | 95 | 0.93 | 245 | 3 | 2 | 2 | 1.3 | 2.6 | 8 | 277 | 1.58 | 2.68 | 1.3x2.15 | 2.69 | 4.3 | MH100-3A | 5 | A
| 240 | 11310-500 | HX-HFP | 95 | 0.87 | 245 | 3 | 2 | 2 | 1.3 | 2.6 | 8 | 277 | 1.58 | 2.68 | 1.3x2.15 | 2.69 | 4.3 | MH100-3A | 5 | C
| 277 | 11310-502 | HX-HFP | 95 | 0.60 | 245 | 3 | 2 | 2 | 1.3 | 2.6 | 8 | 277 | 1.58 | 2.68 | 1.3x2.15 | 2.69 | 4.3 | MH100-3A | 5 | C

### DESCRIPTION

For Ballast Only 000
For Bracket Only (see pg. 5-6) 200
For Capacitor Only (see pg. 5-5) 500
For Distributor Replacement Kit (see pg. 5-12 thru 5-13) 500K
For Canadian Distributor Replacement Kit (see pg. 5-12, 5-14) 502K
For Dry-Capacitor & Ballast (see pg. 5-5) 518
For Bracket & Capacitor (see pg. 5-5, 5-6) 700
For Bracket & Dry-Capacitor (see pg. 5-5, 5-6) 718

### REFERENCE DRAWING PCI

<table>
<thead>
<tr>
<th>Part Ref.</th>
<th>Measurement</th>
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<tbody>
<tr>
<td>PCI 1, 2</td>
<td>2.438&quot;</td>
</tr>
<tr>
<td>5.25&quot;</td>
<td>1.25&quot;</td>
</tr>
<tr>
<td>4.60&quot;</td>
<td>0.25&quot;</td>
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</table>

WIRING DIAGRAMS

**Wiring Diagram 2**

**Wiring Diagram 3**

**Wiring Diagram 4**

**Wiring Diagram 4A**

**Wiring Diagram 6**

FOR MORE INFORMATION CALL 1-800-BALLAST (225-5278)
Product Overview

Core & Coil
Core & coil ballasts are used in over 90% of all HID fixtures. MagneTek's core & coil models are available for all HID lamp types, including single-, dual-, tri-, and multi-voltage designs. For added versatility and reduced inventory costs, MagneTek has also introduced the industry's first Multi-5 ballast (120, 208, 240, 277, or 480 volt), featuring a 480-volt tap on a conventional multi-voltage ballast.

Our core & coil models are ideal for a wide variety of lighting applications, including factories, warehouses, gymnasiums and retail stores. All these ballasts feature precision-wound coils, ensuring even heat dissipation and the highest electrical integrity.

MagneTek's Universal Precise™ is the next generation in core & coil technology, featuring a smaller, lightweight design and improved temperature performance. Universal Precise™ fits virtually all applications, and has no exposed live metal parts. There are no plastic extrusions, which prevents breakage during shipping. Color-coded leads make installation easy.

Electronic Metal Halide Ballasts
Our new electronic models provide very high frequency lamp operation (>250 kHz), plus controlled wattage regulation +/- 1% for excellent lamp color uniformity through life. They feature a smaller, lighter package in keeping with new fixture designs.

50 Hertz
MagneTek offers 50 Hz core & coil ballasts to meet the rapid growth in demand in international markets. Our ballasts are available for 220, 230, and 240 volt electrical systems.

F-Can
These ballasts are used primarily for indoor downlighting applications where quiet operation is essential. All the components of these ballasts are enclosed in a fluorescent-style ballast can and are thermally protected.

Potted Core & Coil
Our potted core & coil ballasts are designed for applications requiring quieter or cooler operation than provided by standard coil & coil ballasts. The potting material is a sand-filled polyester which provides excellent sound-deadening and heat transfer qualities.

Weatherproof
MagneTek's weatherproof ballasts are designed to stand up to the toughest outdoor conditions. They can be mounted remotely in the pole base or pole top. Since they’re not hermetically sealed, they should not be mounted in areas prone to water accumulation.

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Product Overview

Postline
Rely on MagneTek for postline ballasts designed for mounting inside the support poles of lanterns or similar fixtures. They are suitable for outdoor use as long as the ballast is installed in a dry location.

Indoor Encased
Our HID indoor encased ballasts can be mounted remotely, which lets you use a smaller HID fixture while ensuring quiet operation. If necessary, these ballasts can be specified with an integral capacitor and starter.

Capacitors
MagneTek has a comprehensive line of capacitors in metal cases (up to 520V ratings) and plastic cases (up to 400V ratings) — plus metal cases for dual-level operation. All MagneTek capacitors are designed for 60,000 hours of continuous life. They’re exceptionally reliable because we put them through accelerated life testing at 125% rated voltage and rated temperature +10°C.

Dual-Level Dimming
Our Ballastar® Dual-Level Dimming HID system offers outstanding energy savings for convention centers, gymnasiums and warehouses. This product easily retrofits into existing HID systems or can be included in new construction — and can save up to 40% on power consumption by dimming lights when spaces are unoccupied.

Ignitors
MagneTek offers the industry’s most complete line of ignitors, including standard, automatic shutoff, instant restrike, and long distance ignitors.

Capacitors
MagneTek capacitors are normally packaged with ballasts. They may also be ordered separately, bulk packaged, or individually boxed with the suffix “BH” (metal cases only). Capacitor weights vary from 1/4 lb. to 1 lb. each.

For maximum safety and reliability, all MagneTek capacitors come with built-in bleed resistors (patented by MagneTek). All MagneTek capacitors are recognized by UL (UL file #E68320 for metal cases and #E182721 for plastic cases) and approved by CSA (CSA file #LR51331, metal cases only). Environmental safety is assured by use of biodegradable, nontoxic (no PCBs) dielectric fluid (soybean oil), patented by MagneTek for use in capacitors. Dry-film capacitors do not include protective devices. Since they can fail in a hazardous manner, it is the responsibility of the purchaser to take appropriate precautions.

For more information, contact our capacitor plant in Bridgeport, CT at (203) 336-0161.
### Nomenclature

#### UNIVERSAL PRECISE™

**ABBREVIATIONS**

- **CWA**: Constant Wattage Autotransformer
- **CWI**: Constant Wattage Isolated
- **ISO**: Reg
- **R-HPF**: Reactor High Power Factor
- **R-NPF**: Reactor—Normal Power Factor
- **HX-HPF**: Lag Type — High Reactance Autotransformer—High Power Factor
- **HX-NPF**: Lag Type — High Reactance Autotransformer—Normal Power Factor

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#### UL Bench Top Rise Temperature Code

To facilitate UL inspection, the UL Bench Top Rise Temperature Code is shown on the MagneTek Core & Coil Ballast label as 1029X. 1029 is the UL Standard for HID Ballasts, and the X is the temperature code. If a fixture is UL listed for 1029D, then automatically all ballasts with an A, B, C or D temperature classification are acceptable for use within that same fixture.

#### UL Bench Top Rise Letter Code

**Temperature Range for Class H (180°C) Ballasts**

- A: 75°C < 80°C
- B: 80°C < 85°C
- C: 85°C < 90°C
- D: 90°C < 95°C
- E: 95°C < 100°C

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#### Lamp Type Code

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(M) Metal Halide, (P) Pulse Start, (S) High Pressure Sodium, (H) Mercury</td>
</tr>
<tr>
<td>2</td>
<td>35 to 2000 Watts (Varies from two to four digits)</td>
</tr>
<tr>
<td>3</td>
<td>(MLT) Quad, (ML5) Multi-5, (TRI) TriVolt, (48T) 480/120, (120) 120, (277) 277, (230) 230V/50Hz</td>
</tr>
<tr>
<td>4</td>
<td>(R) Reactor, (A) CWA, (I) CWI, (O) IsoReg, (L) High Reactance/Lag, (M) MagLag</td>
</tr>
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<td>6</td>
<td>(E) E&amp;I, (3) 3x4, (4) 4-3/4, (5) 5-3/4, (X) Non Core and Coil</td>
</tr>
<tr>
<td>7</td>
<td>(M) Mogul or Medium, (D) Double Ended, (X) Multiple Lamps, (L) Low Loss</td>
</tr>
<tr>
<td>8</td>
<td>Pack Code (000 to 999, per pack code listing)</td>
</tr>
<tr>
<td>9</td>
<td>(C) Carton, (T) Tray, (I) Individual, (K) Kit</td>
</tr>
</tbody>
</table>

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For More Information Call 1-800-BALLAST (225-5278)
Specifications

TYPICAL SPECIFICATIONS
FOR HID BALLASTS

1. Ballasts shall be designed in accordance with all applicable ANSI specifications including ANSI C82.4.

2. The Core & Coil ballast shall be designed with class "H" (180°C) or higher insulation system and vacuum impregnated with a 100% solid based resin.

3. All coils shall be precision wound.

4. Core & Coil ballasts shall be designed to operate at least 180 cycles of 12 hours on and 12 hours off, with the lamp circuit in an open or short-circuited condition and without undue reduction in ballast life.

5. Core & Coil ballast and starter combinations shall be designed to provide a reliable lamp starting down to \(-40°C\) for High Pressure Sodium and \(-30°C\) for Metal Halide at minimum rated line voltage.

6. Manufacturer shall provide written warranty against defects in workmanship, including replacement, for two years from date of manufacture.

CAPACITORS

1. All capacitors will be provided with a self-contained internal bleeder resistor.

2. All oil-filled capacitors will be housed in corrosion-resistant steel cans and contain .25" quick disconnect terminals.

3. All capacitors will be manufactured by the ballast manufacturer.

IGNITORS

1. All igniters will be epoxy-filled with either a plastic or aluminum external housing.

2. The ignitor shall be so designed to provide six months of lamp open circuit operation without failure.

KITS

1. All HID kits shall be precision wound to insure proper insulation.

2. All HID kits shall be pre-wired.

3. All HID kits shall be built with color-coded leads.

4. All HID kits are to be UL and CSA recognized following the guidelines found in UL 1029 and CAN/CSA-22.2 No. 74-92 (part 2 and 3).

7. MagneTek Model ___________________________ (or approved equal).

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