

# HIGH INTENSITY DISCHARGE BALLASTS



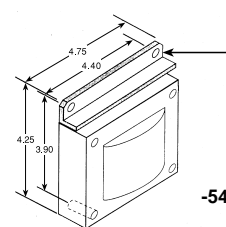
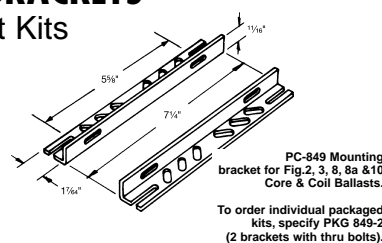
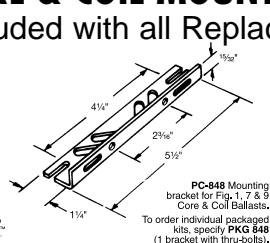
## Core & Coil Replacement Kits METAL HALIDE

Input Volts	Catalog Number	Circuit Type	Total Weight (Lbs)	Certifications	
<b>70 Watt Lamp, ANSI Code M98</b>					
120/208/240/277	71A5292-001D	HX-HPF	5.2	✓	✓
<b>100 Watt Lamp, ANSI Code M90/M140</b>					
120/208/240/277	71A5390-001D	HX-HPF	6.0	✓	✓
<b>175/150 Watt Lamp, ANSI Code M57/M107 or H39</b>					
120/208/240/277	71A5570-001D	CWA	8.5	✓	✓
480	71A5540-001D	CWA	8.5	✓	✓
<b>175 Watt Lamp, ANSI Code M137/M152</b>					
120/208/240/277	71A5593-001D	CWA	10.0	✓	✓
<b>200 Watt Lamp, ANSI Code M136</b>					
277	71A5637-001D*	Linear Reactor HPF	6.0	✓	
120/208/240/277	71A5692-001D	Super CWA	8.0	✓	✓
<b>250 Watt Lamp, ANSI Code M58 or H37</b>					
120/208/240/277	71A5770-001D	CWA 4 1/4 x 4 3/4 Core	13.0	✓	✓
120/208/240/277/480	71A5750-001D		10.0	✓	✓
480	71A5740-001D		12.0	✓	✓
120/208/240/277	71A5771-001D	CWA 3x4 Core	11.0	✓	✓
480	71A5741-001D	CWA 3x4 Core	10.0	✓	✓
<b>250 Watt Lamp, ANSI Code M138</b>					
277	71A5737-001D	Linear Reactor HPF	7.0	✓	✓
120/208/240/277	71A5792-001D	Super CWA	9.0	✓	✓
<b>320 Watt Lamp, ANSI Code M132</b>					
277	71A5837-001D*	Linear Reactor HPF	9.5	✓	
120/208/240/277	71A5892-001D	Super CWA	11.0	✓	✓
480-T	71A5842-001DT	SCWA	12.8	✓	✓
<b>350 Watt Lamp, ANSI Code M131</b>					
277	71A5937-001D*	Linear Reactor HPF	10.0	✓	
120/208/240/277	71A5993-001D	Super CWA	11.0	✓	✓

\* Includes -540 bracket. See drawing below for details.

## CORE & COIL MOUNTING BRACKETS

Included with all Replacement Kits



-540 Bracket Detail

## METAL HALIDE

Input Volts	Catalog Number	Circuit Type	Total Weight (Lbs)	Certifications	
<b>400 Watt Lamp, ANSI Code M59 or H33</b>					
277	71A6037-001D*	Linear Reactor HPF	9.0	✓	
120/208/240/277	71A6071-001D	CWA	11.5	✓	✓
120/208/240/277/480	71A6051-001D	CWA	14.0	✓	✓
480	71A6041-001D	CWA	12.0	✓	✓
<b>400 Watt Lamp, ANSI Code M135</b>					
277	71A6137-001D*	Linear Reactor HPF	9.0	✓	
120/208/240/277	71A6092-001D	Super CWA	11.0	✓	✓
<b>Two 400 Watt Lamps, ANSI Code M59 or H33</b>					
120/277	71A6382-001D	CWA Independent Lamp Operation	31.0	✓	✓
480	71A6342-001D	CWA Independent Lamp Operation	31.0	✓	✓
<b>450 Watt Lamp, ANSI Code M144</b>					
277	71A6337-001D	Linear Reactor HPF	9.0	✓	
120/208/240/277	71A6393-001D	Super CWA	11.0	✓	✓
<b>1000 Watt Lamp, ANSI Code M47 or H36</b>					
120/208/240/277	71A6572-001	CWA	28.0	✓	✓
120/208/240/277/480	71A6552-001	CWA	22.0	✓	✓
480	71A6542-001	CWA	28.0	✓	✓
<b>1500 Watt Lamp, ANSI Code M48</b>					
120/208/240/277	71A6772-001	CWA	31.0	✓	✓
480	71A6742-001	CWA	31.0	✓	✓

\* Includes -540 bracket. See drawing below for details.

**Note:**  
175, 250, and 400-watt metal halide kits now include dry capacitors!

(see page 5-4 for a full explanation of the features and benefits of dry capacitors)



HID REPLACEMENT KITS

# HIGH INTENSITY DISCHARGE BALLASTS

## Encapsulated Core & Coil

Where quiet performance is required, the standard open core & coil ballasts are encapsulated (potted) in a cube-shaped steel can utilizing Class H (180°C) polyester compound. These ballasts carry a Class A noise rating up through 175 watts and Class B for 250 and 400 watts. As with the open core & coil, the capacitor (and ignitor where included) are mounted separately within the fixture.

## Fluorescent Can (F-Can)

For indoor commercial applications of HID lighting such as offices, schools and retail stores, ballast noise must be minimized. Ballasts for these fixtures are most often encased and potted in fluorescent ballast type cans and utilize Class A (90°C) asphalt insulating materials (the same as used in fluorescent lamp ballasts).

The Advance line of F-can ballasts comes in two dual-voltage configurations: 120/277 volt for the US market, and 120/347 volt for the Canadian market. Each unit has built-in, automatically resetting, thermal protectors which disconnect the ballast from the power line in the event of overheating. All units are high power factor and include the capacitor within the can. All models for high pressure sodium, low-wattage metal halide, and pulse-start metal halide lamps also include the ignitor in the can.

## Indoor Enclosed

These units are designed for use indoors where the ballast must be mounted remotely from the luminaire. They are most typically used in factories where the luminaire may be mounted in a high-bay where very high ambient temperatures may be experienced. In these instances, the remotely-mounted ballast operates cooler, subsequently providing longer life because it is away from both the heat of the ceiling ambient and lamp heat within the fixture.

The case contains the core & coil potted in a Class H (180°C) heat-dissipating resin. The capacitor(s) and ignitor are contained within a separate compartment. Knockouts in both ends of the case facilitate hook-up in the most convenient manner. Wall mounting is accomplished through flanges on the top and bottom of the case. The ballast is a UL Listed product.

## Outdoor Weatherproof

Weatherproof ballasts are designed for remote, pole-mounting outdoor applications under all weather conditions. They may also be placed inside of a transformer pole base, but care must be taken to avoid areas prone to flooding because weatherproof ballasts are not water-submersible.

The core & coil with its capacitor and ignitor (where required) are firmly mounted to the heat-sink base. An aluminum cover is placed over the core-&-coil assembly and is bolted with a weather-tight gasket to the base. An integral 1" threaded nipple with locknut facilities hook-up to electrical conduit or to the mounting bracket when used on a pole. The weatherproof ballast may also be placed nipple-up, with a drip loop in the leads, inside a pole base.

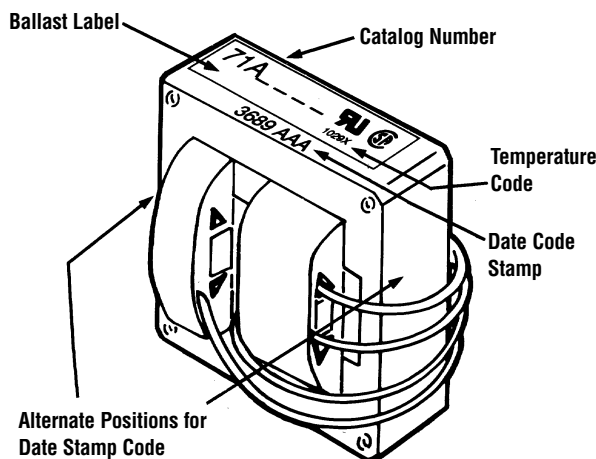
## Postline

Lantern-type fixtures mounted on slender poles often require ballasts which will fit into these poles. Special, elongated core & coil ballasts are potted in resin in cylindrical cans having a 2.55" outside diameter. All include leads necessary for direct connection to a photocell.

The capacitor and ignitor (where required) are included within this can. A 1/2" threaded nipple is used for vertical mounting, and leads extend from both ends of the can for ease of installation. The input leads to the ballast also provide for proper connection to the photocell if such is included within the fixture.

To help prevent overheating, one to three feet of air space should be allowed in the pole above the ballast, and the ballast should be positioned against the post interior wall to provide a heat-sink. All units rated 100W and above now include a mounting kit consisting of an 18" chain to hang the ballast within the pole and a spring clip to force the ballast's cylindrical can to make line contact with the pole's interior surface to maximize heat transfer, thus prolonging the ballast life.

## BALLAST DATE AND TEMPERATURE CODES



ADVANCE® HID Core & Coil ballasts are date stamped on either the top surface or the side surface of the ballast core. The four-digit number represents the *week* and *year* of manufacture. The first two numbers indicate the week and the last two indicate the year the ballast was manufactured. The example shows a ballast manufactured during the 36th week of 1989. The three letters are an Advance factory code. The ballast's UL Bench Top Rise Temperature Code is shown on the label (see below).

## UL BENCH TOP RISE TEMPERATURE CODE

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

UL Bench Top Rise Letter Code	Temperature Range for Class H (180°C) Ballasts	Temperature Range for Class N (200°C) Ballasts
A	less than 75°C	less than 95°C
B	75°C < 80°C	95°C < 100°C
C	80°C < 85°C	100°C < 105°C
D	85°C < 90°C	105°C < 110°C
E	90°C < 95°C	110°C < 115°C
F	95°C < 100°C	115°C < 120°C
etc.	etc.	etc.

## CERTIFICATIONS



Indicates ballast is listed by Underwriters Laboratories, Inc. in accordance with UL 1029 Standard for HID Ballasts. Each ballast is marked appropriately.



Indicates ballast is component recognized by Underwriters Laboratories, Inc. in accordance with UL 1029 Standard for HID Ballasts. Each ballast is marked appropriately.



Indicates ballast is certified by Canadian Standards Association in accordance with CAN/CSA-22.2 No. 74-92. Each ballast is marked appropriately.



All HID Ballasts are designed and manufactured in accordance with the American National Standards Institute Standard for HID Ballasts, ANSI C82.4.



## ORDERING INFORMATION

### How to Order

Advance Transformer has developed the industry's broadest selection of HID ballasts. More than 3000 stocking distributors nationwide. For information on the distributor best able to serve your needs, please call 800-372-3331.

### Advance HID Ballast Part Number Explanation

<b>71A</b>	<b>60</b>	<b>9</b>	<b>1</b>	<b>-500D</b>								
<p><b>Suffix Code* (as applicable)</b></p> <ul style="list-style-type: none"> <li>-001DB ballast replacement kit with dry capacitor and integral ignitor</li> <li>-001D ballast replacement kit with dry film capacitor</li> <li>-001 ballast replacement kit with oil filled capacitor</li> <li>-500D core &amp; coil ballast with dry film capacitor</li> <li>-500 core &amp; coil ballast with oil filled capacitor</li> <li>-510D core &amp; coil ballast with welded bracket and dry film capacitor</li> <li>-510 core &amp; coil ballast with welded bracket and oil filled capacitor</li> <li>-540D core &amp; coil ballast with welded angle bracket and dry film capacitor</li> <li>-600 core &amp; coil ballast (no capacitor)</li> <li>-610 core &amp; coil ballast with welded bracket (no capacitor)</li> </ul> <p>* Add additional feature codes to the end of suffix where applicable. i.e. -B = Integral Ignitor, -P = Thermally Protected, -J = J-Box Mounting</p>												
<b>Design Code</b>												
<table style="width: 100%; border: none;"> <tr> <td style="width: 30%;"></td> <td style="text-align: center;"><b>60 Hz Voltages</b></td> <td style="width: 40%;"></td> <td style="text-align: center;"><b>50 Hz Voltages</b></td> </tr> <tr> <td style="vertical-align: top;"><b>INPUT VOLTAGE CODE</b></td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> <li>0 = 120V</li> <li>1 = 208V</li> <li>2 = 240V</li> <li>3 = 277V</li> <li>4 = 480V</li> <li>5 = 120/240V or 120/208/240/277/480V</li> <li>6 = 240/480V</li> <li>7 = 120/208/240/277V</li> <li>8 = 120/277V</li> <li>9 = 120/208/240/277V</li> </ul> </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> <li>A = 120/277/347V</li> <li>B = 347V</li> <li>C = 120/347V</li> <li>D = 120/240/347V</li> <li>E = 120/208/240V or 208/240V</li> <li>F = 277/480V, 277/347V, 277/347/480V or 347/480V</li> <li>H = 127/220V</li> <li>J = 220V or 220/240V</li> <li>Y = 100V or 100/200V</li> </ul> </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> <li>M = 100/200V</li> <li>N = 120/220-240V</li> <li>R = 220/240V</li> </ul> </td> </tr> </table>						<b>60 Hz Voltages</b>		<b>50 Hz Voltages</b>	<b>INPUT VOLTAGE CODE</b>	<ul style="list-style-type: none"> <li>0 = 120V</li> <li>1 = 208V</li> <li>2 = 240V</li> <li>3 = 277V</li> <li>4 = 480V</li> <li>5 = 120/240V or 120/208/240/277/480V</li> <li>6 = 240/480V</li> <li>7 = 120/208/240/277V</li> <li>8 = 120/277V</li> <li>9 = 120/208/240/277V</li> </ul>	<ul style="list-style-type: none"> <li>A = 120/277/347V</li> <li>B = 347V</li> <li>C = 120/347V</li> <li>D = 120/240/347V</li> <li>E = 120/208/240V or 208/240V</li> <li>F = 277/480V, 277/347V, 277/347/480V or 347/480V</li> <li>H = 127/220V</li> <li>J = 220V or 220/240V</li> <li>Y = 100V or 100/200V</li> </ul>	<ul style="list-style-type: none"> <li>M = 100/200V</li> <li>N = 120/220-240V</li> <li>R = 220/240V</li> </ul>
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<b>Lamp Type/Wattage/Ballast Circuit Code</b>												
<b>Ballast Type</b>	<ul style="list-style-type: none"> <li>71A = Core and Coil Ballast</li> <li>72C = F-Can Ballast</li> <li>73B = Encapsulated Core and Coil Ballast</li> <li>74P = Postline Ballast</li> <li>77K = Val-U-Pak Replacement Ballast Kit</li> <li>77L = Val-U-Pak Plus Replacement Ballast kit (includes lamp)</li> <li>78E = Indoor Enclosed Ballast</li> <li>79W = Outdoor Weatherproof Ballast</li> </ul>											



# HID Replacement Kits

Lamp Type	Lamp Watts	ANSI Code	Input Volts	Catalog Number	Circuit Type	Input Power (Watts)	Max. <sup>1</sup> Input Current
Mercury	50W	H46	120	<b>71A1800-001</b>	HX-NPF	74	2.1
	100W	H38 or H44	120/208/240/277	<b>71A2571-001D</b>	CWA	125	1.1/0.6/0.6/0.5
			120	<b>71A2800-001</b>	HX-NPF	125	3.6
	175W	H39	120/208/240/277	<b>71A3072-001D</b>	CWA	205	1.9/1.1/1.0/0.9
			480	<b>71A3042-001D</b>	CWA	200	0.5
			120	<b>71A3301-001</b>	HX-NPF	200	6.0
	250W	H37	120/208/240/277	<b>71A3572-001D</b>	CWA	285	2.5/1.4/1.3/1.1
			480	<b>71A3542-001D</b>	CWA	285	0.7
	400W	H33	120/208/240/277	<b>71A4071-001D</b>	CWA	454	3.9/2.2/2.0/1.7
			480	<b>71A4041-001D</b>	CWA	454	1.0
	(2) 400W	H33	120	<b>71A4300-001</b>	CWI (2 lamps in series)	880	7.5
			277	<b>71A4330-001</b>	CWI (2 lamps in series)	880	3.3
			480	<b>71A4340-001</b>	CWI (2 lamps in series)	880	1.9
	1000W	H36	120/208/240/277	<b>71A5070-001</b>	CWA	1075	9.8/5.6/4.9/4.3
480			<b>71A5040-001</b>	CWA	1080	2.3	
Metal Halide	70W	M98 or M143	120/208/240/277	<b>71A5292-001D</b>	HX-HPF	90	1.9/1.0/0.9/0.8
	100W	M90 or M140	120/208/240/277	<b>71A5390-001D</b>	HX-HPF	129	2.6/1.5/1.3/1.2
	175W	M57 or H39	120/208/240/277	<b>71A5570-001D</b>	CWA	210	1.8/1.1/0.9/0.8
			480	<b>71A5540-001D</b>	CWA	210	0.5
	175W Pulse Start	M137 or M152	120/208/240/277	<b>71A5593-001D</b>	CWA	208	1.8/1.1/0.9/0.8
	200W Pulse-Start	M136	277	<b>71A5637-001D</b>	Linear Reactor HPF	218	1.3
			120/208/240/277	<b>71A5692-001D</b>	Super CWA	232	2.0/1.2/1.0/0.9
	250W	M58 or H37	120/208/240/277	<b>71A5770-001D</b>	CWA 4 1/2 x 4 3/4 Core	295	2.5/1.4/1.3/1.1
			120/208/240/277/480	<b>71A5750-001D</b>	CWA 4 1/2 x 4 3/4 Core	290	2.6/1.5/1.4/1.1/0.7
			480	<b>71A5740-001D</b>	CWA 4 1/2 x 4 3/4 Core	295	0.7
			120/208/240/277	<b>71A5771-001D</b>	CWA 3 x 4 Core	294	2.6/1.5/1.3/1.1
			480	<b>71A5741-001D</b>	CWA 3 x 4 Core	298	0.7
	250W Pulse-Start	M138 or M153	277	<b>71A5737-001D</b>	Linear Reactor HPF	272	1.5
			120/208/240/277	<b>71A5792-001D</b>	Super CWA	292	2.5/1.4/1.3/1.1
	320W Pulse-Start	M132 or M154	277	<b>71A5837-001D</b>	Linear Reactor HPF	342	1.9
			120/208/240/277	<b>71A5892-001D</b>	Super CWA	368	3.3/1.9/1.7/1.4
	350W Pulse-Start	M131	277	<b>71A5937-001D</b>	Linear Reactor HPF	375	2.1
			120/208/240/277	<b>71A5993-001D</b>	Super CWA	400	3.4/2.0/1.7/1.5
	400W	M59 or H33	277	<b>71A6037-001D</b>	Linear Reactor HPF	425	2.1
			120/208/240/277	<b>71A6071-001D</b>	CWA	458	4.0/2.3/2.0/1.7
			120/208/240/277/480	<b>71A6051-001D</b>	CWA	460	4.1/2.3/2.0/1.7/1.0
			480	<b>71A6041-001D</b>	CWA	462	1.0
	400W Pulse-Start	M135 or M155	277	<b>71A6137-001D</b>	Linear Reactor HPF	425	2.1
			120/208/240/277	<b>71A6092-001D</b>	Super CWA	452	3.8/2.2/1.9/1.7
	(2) 400W	M59 or H33	120/277	<b>71A6382-001D</b>	CWA (independent lamp operation)	890	8.2/3.6
			480	<b>71A6342-001D</b>	CWA (independent lamp operation)	890	2.05
	450W Pulse-Start	M144	277	<b>71A6337-001D</b>	Linear Reactor HPF	480	2.4
			120/208/240/277	<b>71A6393-001D</b>	Super CWA	508	4.3/2.5/2.2/1.9
	1000W	M47 or H36	120/208/240/277	<b>71A6572-001</b>	CWA	1080	9.0/5.2/4.5/3.9
			120/208/240/277/480	<b>71A6552-001</b>	CWA	1080	9.0/5.6/4.7/4.1/2.4
480			<b>71A6542-001</b>	CWA	1080	2.2	
1500W	M48	120/208/240/277	<b>71A6772-001</b>	CWA	1605	13.5/7.8/6.8/5.9	
		480	<b>71A6742-001</b>	CWA	1625	3.4	

<sup>1</sup> For CWA and CWI circuits, figure is operating current.

For additional lamp applications and a complete ballast listing, visit [www.advancetransformer.com](http://www.advancetransformer.com).

