

**THE ORIGINAL**

# HID Lamp/Ballast Kits

*Metal Halide  
Pulse Start Metal Halide  
High Pressure Sodium  
Mercury Vapor*

**Maintenance Made Easy...Accept No Imitations**

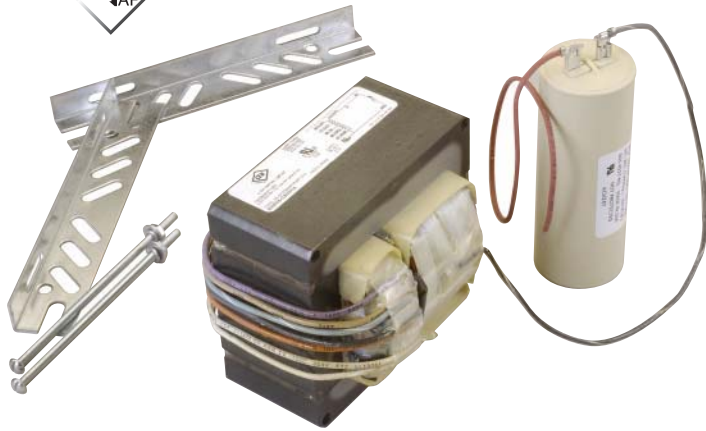


## Kit Contents

- Lamp
- Ballast
- Capacitor (HPF Only)
- Mounting brackets
- Ignitor (if necessary)
- Instructions



# ONLY THE ORIGINAL...<sup>\*\*\*</sup>



## ...expands our V-Tap offering so we can better serve our customers' needs

CEW's V-Tap series of ballasts offer all voltages required for U.S. commercial and industrial applications. Our expanded offering allows distribution the opportunity for better inventory management by stocking only one sku instead of two or more! Contractors benefit from the flexibility and ease of installing V-Tap lamp/ballast kits in retrofit applications. Both avoid the cost and inconvenience of returns because of installation errors. CEW's V-Tap offering is available in 175-1000W Metal Halide and 250-1000W High Pressure Sodium.

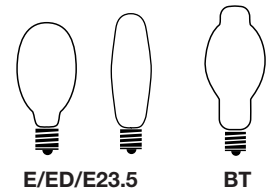
## ...provides virtually indestructible packaging

CEW's Lamp/Ballast Kit packaging has been imitated not duplicated. All components are double packed to withstand even the most turbulent handling. The specially designed outer carton, with ergonomic carrying handles, fits into compact areas and can be stacked for better space management. Lamp/Ballast Kits are color coded for quick lamp source identification. From the warehouse to the job site, CEW is the proven leader in Lamp/Ballast Kits.





## ...educates to ensure the right lamp/ballast kit is used for the fixture!

ANSI (American National Standards Institute) recently developed designations for Metal Halide and Pulse Start lamps clarifying the appropriate fixture for the specific lamp. Metal Halide and Pulse Start lamps are rated as E for Enclosed, S for Suitable, and O for Open.



- E** - Lamp must be used in enclosed fixtures which meet the requirements of UL 1598.
- S** - Lamps are considered suitable for open fixture operation only if operated in the vertical +/-15 degree position. Lamps do not meet ANSI criteria for self-containment and must be turned off at least once per week for 15 minutes if operated 24 hours per day, seven days a week.
- O** - Lamps can be operated in open or enclosed fixtures within the specified operating position limits. These types meet the ANSI criteria for containment rated operation. Special exclusionary sockets are available for these lamps.

We have noted the appropriate ANSI lamp designation on the Metal Halide and Pulse Start pages. For safety and welfare, please pay special attention to these codes when retrofitting fixtures with CEW Lamp/Ballast Kits.

**CERTIFICATIONS:** The Ballasts, Capacitors and Ignitors in the Lamp/Ballast Kits are  and  recognized by Underwriter's Laboratories, Inc.



# METAL HALIDE LAMP/BALLAST KITS

WATTS	ANSI #	PRODUCT CODE	ORDERING CODE	LAMP	INITIAL LUMENS	MEAN LUMENS	AVERAGE LIFE	BALLAST #	CIRCUIT TYPE	INPUT WATTAGE	OPEN CIRCUIT VOLTAGE	CAPACITOR #	IGNITOR	INPUT VOLTAGE(S)	STARTING/OPERATING CURRENT	MAXIMUM CURRENT	UL 1029 TEMP CODE	APPROX. WEIGHT
175	M57/E	80152	RKM175/M	MX175/U	14400	9300	10000	8M4M-C500K	CWA	210W	320V	CAP10/400		120/208/240/277	1.8/1.1/9.8	1.8/1.1/9.8	C/D/D/C	6.8
	M57/E	80473	RKM175/M5	MX175/U	14400	9300	10000	8M4M5-C500K	CWA	208W	300V	CAP10/360		120/208/240/277/480	1.9/1.1/9.5/85.50	1.9/1.1/9.5/85.50	B/B/B/B/B	6.8
	M57/E	80297	RKM175SX/M	MSX175/BU	15000	9800	10000	8M4M-C500K	CWA	210W	320V	CAP10/400		120/208/240/277	1.8/1.1/9.8	1.8/1.1/9.8	C/D/D/C	6.8
	M57/E	80301	RKM175SXH/M	MSX175/HOR	15000	9800	10000	8M4M-C500K	CWA	210W	320V	CAP10/400		120/208/240/277	1.8/1.1/9.8	1.8/1.1/9.8	C/D/D/C	6.8
	M57/E	80153	RKM175/MED/M	MX175/U/MED	14400	9300	10000	8M4M-C500K	CWA	210W	320V	CAP10/400		120/208/240/277	1.8/1.1/9.8	1.8/1.1/9.8	C/D/D/C	6.8
	M57/E	80151	RKM175/480	MX175/U	14400	9300	10000	8M4D-C500K	CWA	211W	320V	CAP10/400		480	0.45	0.45	B	6.8
	M57/E	80298	RKM175SX/480	MSX175/BU	15000	9800	10000	8M4D-C500K	CWA	211W	320V	CAP10/400		480	0.45	0.45	B	6.8
	M57/E	80302	RKM175SXH/480	MSX175/HOR	15000	9800	10000	8M4D-C500K	CWA	211W	320V	CAP10/400		480	0.45	0.45	B	6.8
	M57/E	80277	RKM175/MED/480	MX175/U/MED	14400	9300	10000	8M4D-C500K	CWA	211W	320V	CAP10/400		480	0.45	0.45	B	6.8
	250	M58/E	80155	RKM250/M	MX250/U	22000	17000	10000	8M5M-C500K	CWA	289W	305V	CAP15/400		120/208/240/277	2.5/1.45/1.25/1.1	2.5/1.45/1.25/1.1	B/B/B/B
M58/E		80469	RKM250/M5	MX250/U	22000	17000	10000	8M5M5-C500K	CWA	288W	300V	CAP15/360		120/208/240/277/480	2.45/1.4/1.21/1.1/61	A/A/A/A/A	11	
M58/E		80299	RKM250SX/M	MSX250/BU	23000	15000	10000	8M5M-C500K	CWA	289W	305V	CAP15/400		120/208/240/277	2.5/1.45/1.25/1.1	B/B/B/B	9.3	
M58/E		80303	RKM250SXH/M	MSX250/HOR	23000	15000	10000	8M5M-C500K	CWA	289W	305V	CAP15/400		120/208/240/277	2.5/1.45/1.25/1.1	B/B/B/B	9.3	
M58/E		80154	RKM250/480	MX250/U	22000	17000	10000	8M5D-C500K	CWA	295W	305V	CAP15/400		480	0.63	0.63	B	8.8
M58/E		80300	RKM250SX/480	MSX250/BU	23000	15000	10000	8M5D-C500K	CWA	295W	305V	CAP15/400		480	0.63	0.63	B	8.8
M58/E		80304	RKM250SXH/480	MSX250/HOR	23000	15000	10000	8M5D-C500K	CWA	295W	305V	CAP15/400		480	0.63	0.63	B	8.8
M59/S		80161	RKM400/M	MX400/U	36000	23500	20000	8M6M-C500K	CWA	455W	300V	CAP24/360		120/208/240/277	4.0/2.3/2.0/1.75	D/D/E/E	10.7	
M59/S		80445	RKM400/M5	MX400/U	36000	23500	20000	8M6M5-C500K	CWA	452W	315V	CAP24/365		120/208/240/277/480	4.4/2.5/2.2/1.9/1.0	D/C/D/D/D	13.2	
M59/E		80169	RKM400SX/M	MSX400/BU	42000	26000	20000	8M6M-C500K	CWA	455W	300V	CAP24/360		120/208/240/277	4.0/2.3/2.0/1.75	D/D/E/E	10.7	
400	M59/E	80171	RKM400SXH/M	MSX400/HOR	40000	26000	20000	8M6M-C500K	CWA	455W	300V	CAP24/360		120/208/240/277	4.0/2.3/2.0/1.75	D/D/E/E	10.7	
	M59/E	80446	RKM400SX/M5	MSX400/BU	42000	26000	20000	8M6M5-C500K	CWA	452W	315V	CAP24/365		120/208/240/277/480	4.0/2.3/2.0/1.7/1.0	D/C/D/D/D	13.2	
	M59/E	80447	RKM400SXH/M5	MSX400/HOR	40000	26000	20000	8M6M5-C500K	CWA	452W	315V	CAP24/365		120/208/240/277/480	4.0/2.3/2.0/1.7/1.0	D/C/D/D/D	13.2	
	M59/S	80160	RKM400/480	MX400/U	36000	23500	20000	8M6D-C500K	CWA	457W	300V	CAP24/360		480	1.00	E	11.5	
	M59/E	80168	RKM400SX/480	MSX400/BU	42000	26000	20000	8M6D-C500K	CWA	457W	300V	CAP24/360		480	1.00	E	11.5	
	M59/E	80170	RKM400SXH/480	MSX400/HOR	40000	26000	20000	8M6D-C500K	CWA	457W	300V	CAP24/360		480	1.00	E	11.5	
	M47/S	80140	RKM1000/M	MX1000/U	110000	88000	18000	8M8M-C500K	CWA	1080W	420V	CAP24/480		120/208/240/277	9.0/5.2/4.5/3.9	D/A/A/A	21.0	
	M47/S	80448	RKM1000/M5	MX1000/U	110000	88000	18000	8M8M5-C500K	CWA	1080W	425V	CAP24/480		120/208/240/277/480	9.0/5.2/4.5/3.9/2.25	E/E/D/D/D	22.0	
	M47/E	80142	RKM1000SX/M	MSX1000/BU	115000	74800	12000	8M8M-C500K	CWA	1080W	420V	CAP24/480		120/208/240/277	9.0/5.2/4.5/3.9	D/A/A/A	21.0	
	M47/E	80305	RKM1000SXH/M	MSX1000/HOR	110000	77000	10000	8M8M-C500K	CWA	1080W	420V	CAP24/480		120/208/240/277	9.0/5.2/4.5/3.9	D/A/A/A	21.0	
1500	M47/E	80449	RKM1000SX/M5	MSX1000/BU	115000	74800	12000	8M8M5-C500K	CWA	1080W	425V	CAP24/480		120/208/240/277/480	9.0/5.2/4.5/3.9/2.25	E/D/D/D/D	22.0	
	M47/E	80450	RKM1000SXH/M5	MSX1000/HOR	110000	77000	10000	8M8M5-C500K	CWA	1080W	425V	CAP24/480		120/208/240/277/480	9.0/5.2/4.5/3.9/2.25	E/D/D/D/D	22.0	
	M47/S	80139	RKM1000/480	MX1000/U	110000	88000	18000	8M8D-C500K	CWA	1080W	420V	CAP24/480		480	2.25	C	21.0	
	M47/E	80141	RKM1000SX/480	MSX1000/BU	115000	74800	12000	8M8D-C500K	CWA	1080W	420V	CAP24/480		480	2.25	C	21.0	
	M47/E	80306	RKM1000SXH/480	MSX1000/HOR	110000	77000	10000	8M8D-C500K	CWA	1080W	420V	CAP24/480		480	2.25	C	21.0	
	M48/E	80146	RKM1500/M	MX1500/BUH	170000	140000	3000	8M9M-C500K	CWA	1590W	430V	CAP32/525		120/208/240/277	13.3/7.5/6.7/5.7	G/G/G/G	32.0	
	M48/E	80145	RKM1500/480	MX1500/BUH	170000	140000	3000	8M9D-C500K	CWA	1625W	450V	CAP32/525		480	3.40	E	31.0	

NO IGNITORS

\*Temperature Range: A = < 75°C; B = 75°C < 80°C; C = 80°C < 85°C; etc. Contents: Medium or Mogul Base Lamp, Ballast, Capacitor, Ignitor (if needed), & Mounting Bracket. Mount Ignitor Within 2Ft. of the Lamp. Coated lamps available upon request.





# ESS PULSE START METAL HALIDE LAMP/BALLAST KITS

WATTS	ANSI #	PRODUCT CODE	ORDERING CODE	LAMP	INITIAL LUMENS	MEAN LUMENS	AVERAGE LIFE	BALLAST #	CIRCUIT TYPE	INPUT WATTAGE	INPUT VOLTAGE	OPEN CIRCUIT VOLTAGE	CAPACITOR#	IGNITOR	INPUT VOLTAGE(S)	STARTING/OPERATING CURRENT	MAXIMUM CURRENT	UL1029 TEMP CODE	APPROX. WEIGHT
50	M110/O	80307	RKMP50/MED/M/PS	MXP50/U/MED	3450	1900	10000	8M0M-H510K	HX-HPF	68W	265V	265V	CAP6/280	BVS-032	120/208/240/277	6.35/3.125	A/A/A/A	3.5	
70	M98/O	80310	RKMP70/MED/M/PS	MXP70/U/MED	5200	3900	15000	8M1M-H510K	HX-HPF	90W	255V	255V	CAP8/280	BVS-032	120/208/240/277	8.45/4.135	A/A/A/A	4.9	
100	M90/O	80279	RKMP100/MED/M/PS	MXP100/U/MED	8500	6400	15000	8M2M-H510K	HX-HPF	125W	270V	270V	CAP12/280	BVS-032	120/208/240/277	1.1/65/55/5	A/A/A/A	5.3	
150	M102/E	80150	RKM150/MED/M/PS	MX150/U/MED	12900	10000	15000	8M3M-H510K	HX-HPF	185W	270V	270V	CAP16/280	BVS-032	120/208/240/277	1.6/1.0/8.7	C/C/C/D	7.1	
175	M152/E	80451	RKM175/MED/M/PS	MSX175/BU/MED/PS	17500	14000	15000	8M4M-C510K/PS	CWA	208W	265V	265V	CAP12.5/330	BVS-040	120/208/240/277	1.9/1.05/95/8	B/C/A/A	8.0	
	M152/E	80452	RKM175/M/PS	MSX175/BU/PS	17500	14000	15000	8M4M-C510K/PS	CWA	208W	265V	265V	CAP12.5/330	BVS-040	120/208/240/277	1.9/1.05/95/8	B/C/A/A	8.0	
	M152/E	80461	RKM175/MED/480/PS	MSX175/BU/MED/PS	17500	14000	15000	8M4D-C510K/PS	CWA	208W	265V	265V	CAP12.5/330	BVS-040	480	0.50	C	8.0	
	M152/E	80462	RKM175/480/PS <sup>1</sup>	MSX175/BU/PS	17500	14000	15000	8M4M-C510K/PS	CWA	208W	265V	265V	CAP12.5/330	BVS-040	480	0.50	C	8.0	
200	M136/E	80463	RKM200/M/PS <sup>1</sup>	MX200/V/PS	21000	16000	15000	8M4.5M-C510K/PS	CWA	232W	240V	240V	CAP16/300	BVS-041	120/208/240/277	2.0/1.15/1.0/85	A/A/A/A	8.0	
	M136/O	80410	RKMP200/M/PS <sup>1</sup>	MXP200/V/PS	20000	16000	15000	8M4.5M-C510K/PS	CWA	232W	240V	240V	CAP16/300	BVS-041	120/208/240/277	2.0/1.15/1.0/85	A/A/A/A	8.0	
	M136/E	80427	RKM200SX/MED/M/PS <sup>1</sup>	MSX200/V/MED/PS	21000	16800	12000	8M4.5M-C510K/PS	CWA	232W	240V	240V	CAP16/300	BVS-041	120/208/240/277	2.0/1.15/1.0/85	A/A/A/A	8.0	
	M136/E	80464	RKM200/480/PS <sup>1</sup>	MX200/V/PS	21000	16000	15000	8M4.5D-C510K/PS	CWA	232W	240V	240V	CAP16/300	BVS-041	480	0.50	A	8.0	
	M136/O	80453	RKMP200/480/PS <sup>1</sup>	MXP200/V/PS	20000	16000	15000	8M4.5D-C510K/PS	CWA	232W	240V	240V	CAP16/300	BVS-041	480	0.50	A	8.0	
	M136/E	80454	RKM200SX/MED/480/PS <sup>1</sup>	MSX200/V/MED/PS	21000	16800	12000	8M4.5D-C510K/PS	CWA	232W	240V	240V	CAP16/300	BVS-041	480	0.50	A	8.0	
250	M153/E	80465	RKM250/M/PS <sup>1</sup>	MX250/V/PS	25000	20000	15000	8M5M-C510K/PS	CWA	288W	270V	270V	CAP15/400	BVS-040	120/208/240/277	2.5/1.45/1.25/1.1	B/B/A/A	10.0	
	M153/O	80425	RKMP250/M/PS <sup>1</sup>	MXP250/BU/PS	23800	19000	15000	8M5M-C510K/PS	CWA	288W	270V	270V	CAP15/400	BVS-040	120/208/240/277	2.5/1.45/1.25/1.1	B/B/A/A	10.0	
	M153/E	80466	RKM250/480/PS <sup>1</sup>	MX250/V/PS	25000	20000	15000	8M5D-C510K/PS	CWA	288W	270V	270V	CAP15/400	BVS-040	480	0.60	A	10.0	
	M153/O	80426	RKMP250/480/PS <sup>1</sup>	MXP250/BU/PS	23800	19000	15000	8M5D-C510K/PS	CWA	288W	270V	270V	CAP15/400	BVS-040	480	0.60	A	10.0	
300	M151/O	80455	RKMP300/M/PS <sup>1</sup>	MXP300/V/PS	30500	24400	20000	8M5.2M-C510K/PS	CWA	342W	250V	250V	CAP20/330	BVS-041	120/208/240/277	2.8/1.65/1.4/1.25	B/B/B/B	10.0	
	M151/O	80456	RKMP300/480/PS <sup>1</sup>	MXP300/V/PS	30500	24400	20000	8M5.2D-C510K/PS	CWA	345W	240V	240V	CAP20/330	BVS-041	480	0.75	B	10.0	
320	M154/E	80411	RKM320SX/ED28/M/PS <sup>1</sup>	MSX320/V/ED28/PS	29000	23200	20000	8M5.4M-C510K/PS	CWA	368W	265V	265V	CAP22/330	BVS-041	120/208/240/277	3.2/1.8/1.6/1.4	B/B/B/B	10.0	
	M154/O	80402	RKMP320/ED28/M/PS <sup>1</sup>	MXP320/BU/ED28/PS	32300	25800	20000	8M5.4M-C510K/PS	CWA	368W	265V	265V	CAP22/330	BVS-041	120/208/240/277	3.2/1.8/1.6/1.4	B/B/B/B	10.0	
	M154/E	80319	RKM320/M/PS <sup>1</sup>	MX320/V/ED37/PS	33000	26400	20000	8M5.4M-C510K/PS	CWA	368W	265V	265V	CAP22/330	BVS-041	120/208/240/277	3.2/1.8/1.6/1.4	B/B/B/B	10.0	
	M154/E	80412	RKM320SX/ED28/480/PS <sup>1</sup>	MSX320/V/ED28/PS	33000	26400	20000	8M5.4D-C510K/PS	CWA	368W	265V	265V	CAP22/330	BVS-041	480	0.80	D	10.5	
	M154/O	80413	RKMP320/ED28/480/PS <sup>1</sup>	MXP320/BU/ED28/PS	32300	25800	20000	8M5.4D-C510K/PS	CWA	368W	265V	265V	CAP22/330	BVS-041	480	0.80	D	10.5	
	M154/E	80467	RKM320/480/PS <sup>1</sup>	MX320/V/ED37/PS	33000	26400	20000	8M5.4D-C510K/PS	CWA	368W	265V	265V	CAP22/330	BVS-041	480	0.80	D	10.5	
350	M131/E	80283	RKM350/M/PS <sup>1</sup>	MX350/V/PS	37000	29600	20000	8M5.7M-C510K/PS	CWA	400W	245V	245V	CAP24/330	BVS-041	120/208/240/277	3.6/2.1/1.8/1.55	B/C/C/C	10.5	
	M131/E	80312	RKM350/ED28/M/PS <sup>1</sup>	MX350/V/ED28/PS	37000	29600	20000	8M5.7M-C510K/PS	CWA	400W	245V	245V	CAP24/330	BVS-041	120/208/240/277	3.6/2.1/1.8/1.55	B/C/C/C	10.5	
	M131/O	80417	RKMP350/M/PS <sup>1</sup>	MXP350/BU/PS	35200	28200	20000	8M5.7M-C510K/PS	CWA	400W	245V	245V	CAP24/330	BVS-041	120/208/240/277	3.6/2.1/1.8/1.55	B/C/C/C	10.5	
	M131/E	80288	RKM350/480/PS <sup>1</sup>	MX350/V/PS	37000	29600	20000	8M5.7D-C510K/PS	CWA	400W	245V	245V	CAP24/330	BVS-041	480	0.90	D	11.2	
	M131/E	80415	RKM350/ED28/480/PS <sup>1</sup>	MX350/V/ED28/PS	37000	29600	20000	8M5.7D-C510K/PS	CWA	400W	245V	245V	CAP24/330	BVS-041	480	0.90	D	11.2	
	M131/O	80418	RKMP350/480/PS <sup>1</sup>	MXP350/BU/PS	35200	28200	20000	8M5.7D-C510K/PS	CWA	400W	245V	245V	CAP24/330	BVS-041	480	0.90	D	11.2	
	M131/E	80414	RKM350/277/PS <sup>1</sup>	MX350/V/PS	37000	29600	20000	8M5.7C-R510K/PS	LR-HPF	380W	277V	277V	CAP18/280	BVS-041	277 (Reactor)	1.80	B	7.4	
	M131/E	80416	RKM350/ED28/277/PS <sup>1</sup>	MX350/V/ED28/PS	37000	29600	20000	8M5.7C-R510K/PS	LR-HPF	380W	277V	277V	CAP18/280	BVS-041	277 (Reactor)	1.80	B	7.4	
	M131/O	80419	RKMP350/277/PS <sup>1</sup>	MXP350/BU/PS	35200	28200	20000	8M5.7C-R510K/PS	LR-HPF	380W	277V	277V	CAP18/280	BVS-041	277 (Reactor)	1.80	B	7.4	

<sup>1</sup> Vertical burn lamps supplied. For horizontal burn, add /HOR to ordering code.

\*Temperature Range: A = < 75°C; B = 75°C < 80°C; C = 80°C < 85°C; etc. Contents: Medium or Mogul Base Lamp, Ballast, Capacitor, Ignitor (if needed), & Mounting Bracket. Mount ignitor Within 2Ft. of the Lamp. Coated lamps available upon request.





## LESS PULSE START METAL HALIDE LAMP/BALLAST KITS

WATTS	ANSI #	PRODUCT CODE	ORDERING CODE	LAMP	INITIAL LUMENS	MEAN AVERAGE LIFE	BALLAST #	CIRCUIT TYPE	INPUT WATTAGE	OPEN CIRCUIT VOLTAGE	CAPACITOR #	IGNITOR	INPUT VOLTAGE(S)	MAXIMUM STARTING/OPERATING CURRENT	UL1029 TEMP CODE	APPROX. WEIGHT
400	M155/E	80390	RKM400SX/M/PS <sup>1</sup>	MSX400/V/PS	44000	35200	8M6M-C510K/PS	CWA	450W	280V	CAP26/330	BVS-041	120/208/240/277	4.0/2.3/2.0/1.75	C/C/C/C	10.7
	M155/O	80359	RKM400/M/PS <sup>1</sup>	MXP400/BU/PS	42000	33600	8M6M-C510K/PS	CWA	450W	280V	CAP26/330	BVS-041	120/208/240/277	4.0/2.3/2.0/1.75	C/C/C/C	10.7
	M155/O	80420	RKM400/480/PS <sup>1</sup>	MXP400/BU/PS	42000	33600	8M6D-C510K/PS	CWA	455W	280V	CAP26/330	BVS-041	480	1.00	D	12.0
	M155/E	80491	RKM400SX/480/PS <sup>1</sup>	MSX400/V/PS	44000	35300	8M6D-C510K/PS	CWA	455W	280V	CAP26/330	BVS-041	480	1.00	D	12.0
	M144/O	80457	RKM450/M/PS <sup>1</sup>	MXP450/BU/PS	47500	38000	8M6.5M-C510K/PS	CWA	506W	260V	CAP32/300	BVS-041	120/208/240/277	4.4/2.5/2.2/1.9	C/D/D/D	12.4
450	M144/E	80421	RKM450SX/M/PS <sup>1</sup>	MSX450/BU/PS	50000	40000	8M6.5M-C510K/PS	CWA	506W	260V	CAP32/300	BVS-041	120/208/240/277	4.4/2.5/2.2/1.9	C/D/D/D	12.4
	M144/O	80458	RKM450/480/PS <sup>1</sup>	MXP450/BU/PS	47500	38000	8M6.5D-C510K/PS	CWA	505W	260V	CAP32/300	BVS-041	480	1.10	B	13.8
	M144/E	80422	RKM450SX/480/PS <sup>1</sup>	MSX450/BU/PS	50000	40000	8M6.5D-C510K/PS	CWA	505W	260V	CAP32/300	BVS-041	480	1.10	B	13.8
	M144/O	80423	RKM450/277/PS <sup>1</sup>	MXP450/BU/PS	47500	38000	8M6.5C-R510K/PS	LR-HPF	485W	277V	CAP22/280	BVS-041	277 (Reactor)	2.3	C	8.1
	M144/E	80492	RKM450SX/277/PS <sup>1</sup>	MSX450/BU/PS	50000	40000	8M6.5C-R510K/PS	LR-HPF	485W	277V	CAP22/280	BVS-041	277 (Reactor)	2.3	C	8.1
750	M149/E	80459	RKM750/M/PS <sup>1</sup>	MVR750/VBU/PA	80000	60000	8M7M-C510K/PS	CWA	815W	370V	CAP24/480	BVS-042	120/208/240/277	6.8/4.0/3.4/3.0	B/C/B/B	18.0
	M149/E	80460	RKM750/480/PS <sup>1</sup>	MVR750/VBU/PA	80000	60000	8M7D-C510K/PS	CWA	820W	370V	CAP24/480	BVS-042	480	1.70	D	19.0
875	TBD/E	80461	RKM875/M/PS <sup>1</sup>	MSX875/BU/BT37/PS	100600	80500	8M7.5M-C510K/PS	CWA	940W	420V	CAP22/450	BVS-020	120/208/240/277	8.0/4.5/4.0/3.45	B/A/A/A	21.0
	TBD/E	80462	RKM875/480/PS <sup>1</sup>	MSX875/BU/BT37/PS	100600	80500	8M7.5D-C510K/PS	CWA	945W	420V	CAP22/440	BVS-020	480	2.00	C	21.0
1000	M141/E	Consult	RKM1000/M/PS	MS1000/BU/BT37/PS	115000	86300	8M8M-CJ70K/PS	CWA	1080W	420V	CAP24/480	BVS-020	120/208/240/277	9/5.2/4.5/3.9	D/A/B/B	21.0
	M141/E	factory	RKM1000/480/PS	MS1000/BU/BT37/PS	115000	86300	8M8D-C70K/PS	CWA	1080W	420V	CAP24/480	BVS-020	480V	2.25	D	21.0

<sup>1</sup>Vertical burn lamps supplied. For horizontal burn, add /HOR to ordering code.

**\*Temperature Range:** A = < 75°C; B = 75°C < 80°C; C = 80°C < 85°C; etc. **Contents:** Medium or Mogul Base Lamp, Ballast, Capacitor, Ignitor (if needed), & Mounting Bracket. Mount ignitor Within 2Ft. of the Lamp. **Coated lamps available upon request.**



## The Pulse Start Metal Halide Advantage

Pulse Start Metal Halide Systems utilize a unique lamp and ballast creating an unparalleled energy efficient lighting solution. Pulse Start systems provide more light output, consistent lamp-to-lamp color, better lumen maintenance, longer life, and faster warm up and restrike time than any other HID lighting source.

In contrast to standard Metal Halide's pinched arc tube design, Pulse Start lamps contain a formed arc tube consistent with the lamp's natural arc. The improved arc tube design eliminates cold spots, which produce light loss, and maintains consistent vapor pressure for uniform lamp-to-lamp color. Higher gas fill pressure reduces the tungsten emitted from the electrodes at each start. In turn this reduces blackening and increases lumen output and lamp life.

Pulse Start lamps must use special Pulse Start ballasts. These ballasts are equipped with an ignitor, which eliminates the need for a starter electrode in the lamp. Without the use of a starter electron, the system has a faster initial warm up and short hot restrike time. Compared to standard Metal Halide systems, Pulse Start starts/restrikes 60% faster. The efficiencies of the ballast and lamp allow for a replacement of a standard 400-watt Metal Halide with a 320-watt Pulse Start system. The lower wattage system provides energy savings while still maintaining the lumen output of the 400-watt system.

When you combine the efficiencies of Pulse Start lamps and ballasts into a kit, you have the best and most energy efficient replacement for existing metal halide fixtures.





# HIGH PRESSURE SODIUM LAMP/BALLAST KITS

WATTS	ANSI #	PRODUCT CODE	ORDERING CODE	LAMP	INITIAL LUMENS	MEAN LUMENS	AVERAGE LIFE	BALLAST #	CIRCUIT TYPE	INPUT WATTAGE	OPEN CIRCUIT VOLTAGE	CAPACITOR #	IGNITOR	INPUT VOLTAGE(S)	STARTING/OPERATING CURRENT	UL1029 TEMP CODE	APPROX. WEIGHT
35	S76	80075	RKS35/MED/120	LU35/MED	2250	2050	16000	850A-R010K	R-NPF	43W	120V	NONE	HPS150-3A	120 (Reactor)	1.15	A	1.3
50	S68	80079	RKS50/MED/M	LU50/MED	4000	3600	24000	851M-H510K	HX-HPF	64W	120V	CAP5/277	HPS150-3A	120/208/240/277	1.24/.59/.5/4.4	A/A/A/A	4.1
		80077	RKS50/M	LU50	4000	3600	24000	851M-H510K	HX-HPF	64W	120V	CAP5/277	HPS150-3A	120/208/240/277	1.24/.59/.5/4.4	A/A/A/A	4.1
		80078	RKS50/MED/120	LU50/MED	4000	3600	24000	851A-R010K	R-NPF	60W	120V	NONE	HPS150-3A	120V (Reactor)	1.50	A	1.8
		80076	RKS50/120	LU50	4000	3600	24000	851A-R010K	R-NPF	60W	120V	NONE	HPS150-3A	120V (Reactor)	1.50	A	1.8
70	S62	80085	RKS70/MED/M	LU70/MED	6300	5350	24000	852M-H510K	HX-HPF	90W	120V	CAP7/280	BVS-006-A	120/208/240/277	.8/.45/.4/3.5	A/B/B/B	4.6
		80082	RKS70/M	LU70	6300	5500	24000	852M-H510K	HX-HPF	90W	120V	CAP7/280	BVS-006-A	120/208/240/277	.8/.45/.4/3.5	A/B/B/B	4.6
		80084	RKS70/MED/480	LU70/MED	6300	5350	24000	852D-H510K	HX-HPF	94W	120V	CAP7/277	HPS150-3A	480	0.34	A	6.0
		80081	RKS70/480	LU70	6300	5500	24000	852D-H510K	HX-HPF	94W	120V	CAP7/277	HPS150-3A	480	0.34	A	6.0
100	S54	80083	RKS70/MED/120	LU70/MED	6300	5500	24000	852A-R010K	R-NPF	83W	120V	NONE	HPS150-3A	120 (Reactor)	2.10	A	2.3
		80080	RKS70/120	LU70	6300	5500	24000	852A-R010K	R-NPF	83W	120V	NONE	HPS150-3A	120 (Reactor)	2.10	A	2.3
		80091	RKS100/MED/M	LU100/MED	9500	8000	24000	853M-H510K	HX-HPF	126W	130V	CAP10/280	BVS-006-A	120/208/240/277	1.1/.6/.55/.45	B/F/C/B	5.9
		80088	RKS100/M	LU100	9500	8000	24000	853M-H510K	HX-HPF	126W	130V	CAP10/280	BVS-006-A	120/208/240/277	1.1/.6/.55/.45	B/F/C/B	5.9
150	S55	80090	RKS100/MED/480	LU100/MED	9500	8000	24000	853D-H510K	HX-HPF	128W	120V	CAP10/277	HPS150-3A	480	0.54	A	5.9
		80087	RKS100/480	LU100	9500	8000	24000	853D-H510K	HX-HPF	128W	120V	CAP10/277	HPS150-3A	480	0.54	A	5.9
		80089	RKS100/MED/120	LU100/MED	9500	8000	24000	853A-R010K	R-NPF	117W	120V	CAP10/277	HPS150-3A	120 (Reactor)	2.90	A	2.5
		80086	RKS100/120	LU100	9500	8000	24000	853A-R010K	R-NPF	117W	120V	CAP10/277	HPS150-3A	120 (Reactor)	2.90	A	2.5
200	S56	80099	RKS150/MED/M	LU150/MED	15800	13400	24000	854M-H510K	HX-HPF	185W	120V	CAP14/280	BVS006-2	120/208/240/277	1.6/.85/.8/7	C/C/B/C	7.3
		80096	RKS150/M	LU150	16000	13800	24000	854M-H510K	HX-HPF	185W	120V	CAP14/280	BVS006-2	120/208/240/277	1.6/.85/.8/7	C/C/B/C	7.3
		80098	RKS150/MED/480	LU150/MED	15800	13400	24000	854D-H510K	HX-HPF	189W	120V	CAP14/277	HPS150-3A	480	0.72	B	8.7
		80095	RKS150/480	LU150	16000	13800	24000	854D-H510K	HX-HPF	189W	120V	CAP14/277	HPS150-3A	480	0.72	B	8.7
250	S57	80097	RKS150/MED/120	LU150/MED	16000	13800	24000	854A-R010K	R-NPF	171W	120V	NONE	HPS150-3	120 (Reactor)	4.40	A	3.2
		80094	RKS150/120	LU150	15800	13400	24000	854A-R010K	R-NPF	171W	120V	NONE	HPS150-3	120 (Reactor)	4.40	A	3.2
		80102	RKS200/M	LU200	22000	19800	24000	855M-C510K	CWA	240W	195V	CAP28/240	BVS-005-A	120/208/240/277	2.0/1.2/1.0/0.9	E/E/E/E	8.4
		80100	RKS200/480	LU200	22000	19800	24000	855D-C510K	CWA	240W	195V	CAP28/240	BVS-005-A	480	0.50	E	8.4
300	S58	80104	RKS250/M	LU250	29000	26100	24000	856M-C510K	CWA	295W	195V	CAP35/240	BVS-005-A	120/208/240/277	2.5/1.45/1.25/1.1	D/C/D/D	11.0
		80984	RKS250/M5	LU250	29000	26100	24000	856M5-C510K	CWA	300W	200V	CAP35/280	HPS250-3A	120/208/240/277/480	2.55/1.45/1.3/1.1/1.65	A/A/A/A/A	14.0
		80103	RKS250/480	LU250	29000	26100	24000	856D-C510K	CWA	305W	200V	CAP35/240	BVS-005-A	480	0.65	B	11.0
		80109	RKS400/M	LU400	50000	45000	24000	857M-C510K	CWA	460W	185V	CAP55/240	BVS-005-A	120/208/240/277	3.8/2.2/1.9/1.7	D/D/D/D	14.0
400	S59	80983	RKS400/M5	LU400	50000	45000	24000	857M5-C510K	CWA	465W	190V	CAP55/240	HPS400-3A	120/208/240/277/480	4/2.3/2/1.7/1.1	B/D/C/C/D	17.5
		80105	RKS400/480	LU400	50000	45000	24000	857D-C510K	CWA	460W	190V	CAP55/240	BVS-005-A	480	1.00	D	14.0
		80073	RKS1000/M	LU1000	130000	124000	24000	859M-C510K	CWA	1100W	425V	CAP26/525	BVS-020	120/208/240/277	9.5/5.5/4.75/4.2	C/C/C/C	28.0
		Consult factory	RKS1000/M5	LU1000	130000	124000	24000	859M5-C510K	CWA	1048W	440V	CAP26/525	HPS1000-4B	120/208/240/277/480	9.1/5.4/4.6/4.1/2.45	D/D/D/D/D	26.0
500	S60	80071	RKS1000/480	LU1000	130000	124000	24000	859D-C510K	CWA	1100W	430V	CAP26/525	BVS-020	480	2.30	D	28.8
		Consult factory	RKS1000/M5	LU1000	130000	124000	24000	859M5-C510K	CWA	1048W	440V	CAP26/525	HPS1000-4B	120/208/240/277/480	9.1/5.4/4.6/4.1/2.45	D/D/D/D/D	26.0

**\*Temperature Range:** A = < 75°C; B = 75°C < 80°C; C = 80°C < 85°C; etc.  
**NOTE:** For cutoff ignitor, add /CT to order code (limited range available).  
**Contents:** Medium or Mogul Base Lamp, Ballast, Capacitor, Ignitor (if needed), & Mounting Bracket. Mount ignitor Within 2Ft. of the Lamp. **Coated lamps available upon request.**





## MERCURY VAPOR LAMP/BALLAST KITS

WATTS	ANSI #	PRODUCT CODE	ORDERING CODE	LAMP	INITIAL LUMENS	MEAN LUMENS	AVERAGE LIFE	BALLAST #	CIRCUIT TYPE	INPUT WATTAGE	OPEN CIRCUIT VOLTAGE	CAPACITOR #	IGNITOR	INPUT VOLTAGE(S)	STARTING/OPERATING CURRENT	MAXIMUM CURRENT	UL 1029 TEMP CODE	APPROX. WEIGHT
50	H46	80031	RKHF50/MED/120	H46DL-50/DX	1750	1225	10000	8H0A-R001K	R-NPF	55W	220V	NONE	NONE	120 (Reactor)	0.95		A	2.3
75	H43	Consult factory		H43AV-75/DX	2900	2030	12000	8M1A-C500K	CWA	93W	250V	CAP8/280	NONE	120	.82		A	3.5
100	H38	80034	RKHF100/M	H38JA-100/DX	4600	3220	16000	8H2M-C500K	CWA	125W	250V	CAP10/240	NONE	120/208/240/277	1.05/1.6/1.52/1.45		A/A/A/A	3.8
		80033	RKHF100/480	H38JA-100/DX	4600	3220	16000	8H2D-C500K	CWA	120W	250V	CAP10/240	NONE	480	0.26		B	3.8
175	H39	80037	RKHF175/M	H39KC-175/DX	8900	6230	24000	8H4M-C500K	CWA	205W	250V	CAP17.5/240	NONE	120/208/240/277	1.8/1.1/1.9/1.78		C/C/C/C	5.3
		80053	RKHF175/480	H39KC-175/DX	8900	6230	24000	8H4D-C500K	CWA	200W	245V	CAP17.5/240	NONE	480	0.44		B	5.3
250	H37	80056	RKHF250/M	H37KC-250/DX	13500	9450	24000	8H5M-C500K	CWA	275W	250V	CAP22.5/240	NONE	120/208/240/277	2.55/1.5/1.27/1.1		C/C/C/C	6.7
		80055	RKHF250/480	H37KC-250/DX	13500	9450	24000	8H5D-C500K	CWA	285W	250V	CAP22.5/240	NONE	480	0.62		E	6.7
400	H33	80058	RKHF400/M	H33GL-400/DX	23000	16100	24000	8H6M-C500K	CWA	454W	245V	CAP35/240	NONE	120/208/240/277	3.8/2.2/1.9/1.65		C/C/C/C	9.6
		80057	RKHF400/480	H33GL-400/DX	23000	16100	24000	8H6D-C500K	CWA	454W	245V	CAP35/240	NONE	480	0.97		C	9.6
1000	H36	80045	RKHF1000/M	H36GW-1000DX	64000	51200	24000	8M8M-C500K	CWA	1080W	420V	CAP24/480	NONE	120/208/240/277	9.0/5.2/4.5/3.9		D/A/A/A	21.0
		80044	RKHF1000/480	H36GW-1000DX	64000	51200	24000	8M8D-C500K	CWA	1080W	420V	CAP24/480	NONE	480	2.25		C	21.0

\*Temperature Range: A = < 75°C; B = 75°C < 80°C; C = 80°C < 85°C; etc. Contents: Medium or Mogul Base Lamp, Ballast, Capacitor, Ignitor (if needed), & Mounting Bracket. Mount ignitor within 2ft. of the lamp. Coated lamps available upon request.  
 Note: For cutoff ignitor add /CT to order code (limited range available).



### CEW HID Lamp/Ballast Kit Disclaimer

All CEW HID Lamp/Ballast Kits contain UL recognized components. The intent of these kits is for replacement of like ballasts in existing fixtures. Follow installation instructions included with each ballast kit for proper installation.  
 Installations of CEW HID Lamp/Ballast Kits are to be performed only by qualified electricians and must comply with the National Electrical Code, ANSI standards and/or local electrical codes. Ballasts must be installed only in fixtures that have a UL listing for that ballast/fixture combination in accordance with UL 1572 High Intensity Discharge Lighting Fixtures.

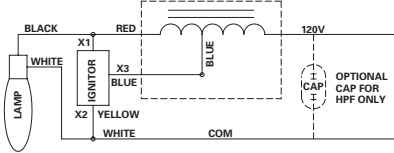
Extreme caution should be used when increasing lamp wattage and/or changing lamp type. There are two areas of concern when doing this. One is the thermal rating of the ballast. Each ballast has a UL 1029 temperature code represented on the ballast label as 1029X. The X represents a temperature range. If a fixture is listed for 1029D, then all ballasts with A, B, C or D temperature codes are acceptable for use within the fixture. In this example, if a temperature code above D is used the UL listing on the fixture is void. To ensure the correct replacement ballast is used refer to UL 1029 temperature listed on the ballast or consult fixture manufacturer for maximum allowable temperature then reference the temperature codes listed in this literature. The other concern is the fixture distribution. Reflector/refractor designs are often source dependent, and a source change may affect fixture distribution.

Contact the fixture manufacturer to address both of the above concerns. Fixture labels sometimes show maximum wattage and types allowed by UL.

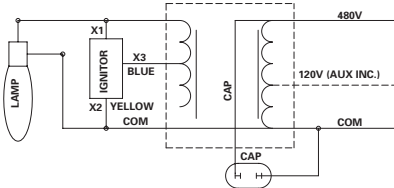


# BALLAST WIRING DIAGRAMS

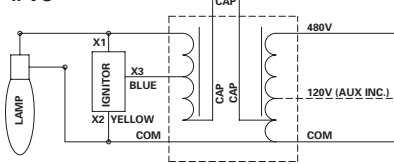
#1



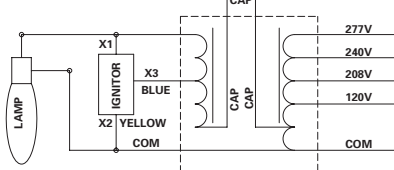
#5



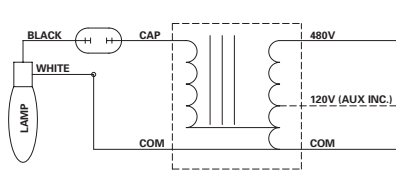
#10



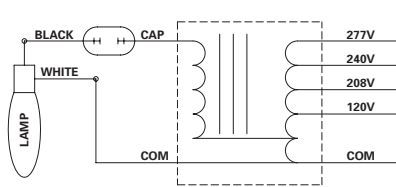
#11



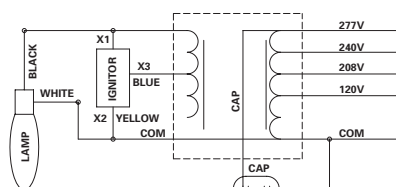
#18



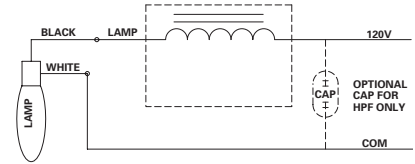
#21



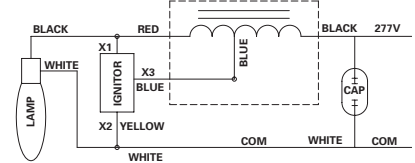
#50



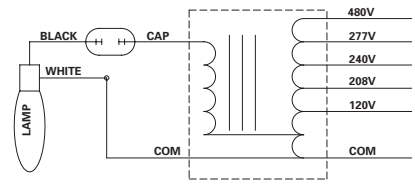
#70



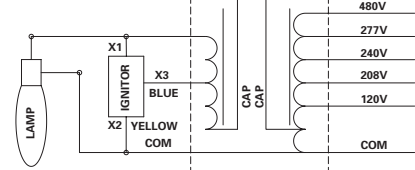
#1M



#M5A



#M5B



## METAL HALIDE

Ballast #	Wiring Diagram
8M4M-C500K	21
8M4M5-C500K	M5A
8M4D-C500K	18
8M5M-C500K	21
8M5M5-C500K	M5A
8M5D-C500K	18
8M6M-C500K	21
8M6M5-C500K	M5A
8M6D-C500K	18
8M8M-C500K	21
8M8M5-C500K	M5A
8M8D-C500K	18
8M9M-C500K	21
8M9D-C500K	18
8M0M-H510K	50
8M1M-H510K	50
8M2M-H510K	50
8M3M-H510K	50

## PULSE START METAL HALIDE

Ballast #	Wiring Diagram
8M4M-C510K/PS	50
8M4.5M-C510K/PS	11
8M4.5D-C510K/PS	10
8M5M-C510K/PS	11
8M5D-C510K/PS	10
8M5.2M-C510K/PS	11
8M5.2D-C510K/PS	10
8M5.4M-C510K/PS	11
8M5.4D-C510K/PS	10
8M5.7M-C510K/PS	11
8M5.7D-C510K/PS	10
8M5.7C-R510K/PS	1M
8M6M-C510K/PS	11
8M6D-C510K/PS	10
8M6.5M-C510K/PS	11
8M6.5D-C510K/PS	10
8M6.5C-R510K/PS	1M
8M7M-C510K/PS	11
8M7D-C510K/PS	10
8M7.5M-C510K/PS	11
8M7.5D-C510K/PS	10
8M8M-CJ70K/PS	11
8M8D-CJ70K/PS	10

## HIGH PRESSURE SODIUM

Ballast #	Wiring Diagram
8S0A-R010K	1
8S1M-H510K	4
8S1A-R010K	1
8S2M-H510K	4
8S2D-H510K	5
8S2A-R010K	1
8S3M-H510K	4
8S3D-H510K	5
8S3A-R010K	1
8S4M-H510K	4
8S4D-H510K	5
8S4A-R010K	1
8S5M-C510K	11
8S5D-C510K	10
8S6M-C510K	11
8S6M5-C510K	M5B
8S6D-C510K	10
8S7M-C510K	11
8S7M5-C510K	M5B
8S7D-C510K	10
8S9M-C510K	11
8S9M5-C510K	M5B
8S9D-C510K	10

## MERCURY VAPOR

Ballast #	Wiring Diagram
8H0A-R001K	70
8H2M-C500K	21
8H2D-C500K	18
8H4M-C500K	21
8H4D-C500K	18
8H5M-C500K	21
8H5D-C500K	18
8H6M-C500K	21
8H6D-C500K	1

