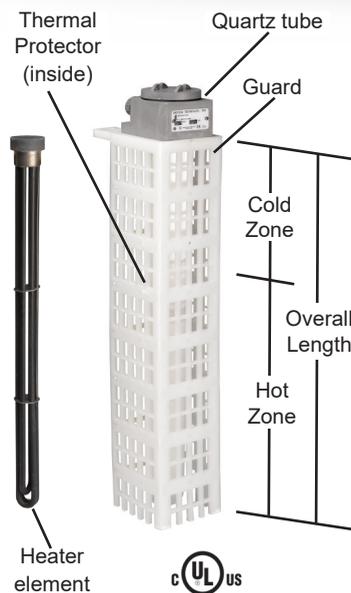




**HEATERS**



Heating element, quartz tube and single or triple guard all sold separately. Symbols in chart correspond to ordering information on reverse.

QM SERIES, QUARTZ HEATERS WITH METAL ELEMENTS						QM & 3QM SERIES GUARDS		Ship Weight	
WATTS	VOLTS	HOT ZONE	OVERALL LENGTH	ELEMENT MODEL NUMBER	TUBE MODEL NUMBER	SINGLE GUARD MODEL #	TRIPLE GUARD MODEL #	SINGLE ASSEMBLY SHIP WT.	TRIPLE ASSEMBLY SHIP WT.
		ln./(mm)	ln./(mm)					Lbs./(kg)	Lbs./(kg)
500	120	7	10	QM.5110E	QM.5110J-**	QM10G	3QM10G	9	21
	240	(178)	(254)	QM.5210E	QM.5210J-**			(4.1)	(9.5)
1000	120	7	11	QM1111E	QM1111J-**	QM11G	3QM11G	10	22
	240	(178)	(279)	QM1211E	QM1211J-**			(4.5)	(10)
1000	120	7	17	QM1117E	QM1117J-**	QM17G	3QM17G	11	26
	240	(178)	(430)	QM1217E	QM1217J-**			(5)	(11.8)
2000	240	12	17	QM2217E	QM2217J-**	QM17G	3QM17G	11	26
	480	(305)	(432)	QM2417E	QM2417J-**			(5)	(11.8)
2000	240	12	23	QM2223E	QM2223J-**	QM23G	3QM23G	14	30
	480	(305)	(584)	QM2423E	QM2423J-**			(6.4)	(13.6)
3000	240	18	23	QM3223E	QM3223J-**	QM23G	3QM23G	14	30
	480	(457)	(584)	QM3423E	QM3423J-**			(6.4)	(13.6)
3000	240	18	29	QM3229E	QM3229J-**	QM29G	3QM29G	17	34
	480	(457)	(737)	QM3429E	QM3429J-**			(7.7)	(15.4)
3500	240	21	29	QM3.5229E	QM3.5229J-**	QM29G	3QM29G	17	34
	480	(533)	(737)	QM3.5429E	QM3.5429J-**			(7.7)	(15.4)
4000	240	28	35	QM4235E	QM4235J-**	QM35G	3QM35G	20	38
	480	(711)	(889)	QM4435E	QM4435J-**			(9.1)	(17.2)
4000	240	28	41	QM4241E	QM4241J-**	QM41G	3QM41G	23	44
	480	(711)	(1041)	QM4441E	QM4441J-**			(10.4)	(20)
5000	240	33	41	QM5241E	QM5241J-**	QM41G	3QM41G	23	44
	480	(838)	(1041)	QM5441E	QM5441J-**			(10.4)	(20)
5000	240	33	47	QM5247E	QM5247J-**	QM47G	3QM47G	26	48
	480	(838)	(1194)	QM5447E	QM5447J-**			(11.8)	(21.8)
6000	240	39	47	QM6247E	QM6247J-**	QM47G	3QM47G	26	48
	480	(991)	(1194)	QM6447E	QM6447J-**			(11.8)	(21.8)
6000	240	39	52	QM6252E	QM6252J-**	QM52G	3QM52G	29	52
	480	(991)	(1321)	QM6452E	QM6452J-**			(13.2)	(23.6)
8000	240	49	59	QM8259E	QM8259J-**	QM59G	3QM59G	31	55
	480	(1245)	(1499)	QM8459E	QM8459J-**			(14.1)	(25)
10000	240	62	71	QM10271E	QM10271J-**	QM71G	3QM71G	34	65
	480	(1575)	(1803)	QM10471E	QM10471J-**			(15.4)	(29.5)

**QM Series Heater Features and Benefits**

**SUPERIOR CHEMICAL RESISTANCE:**

- ◆ For use in most aqueous acidic plating solutions and pickling tanks. Check solution recommendation chart or with your chemical supplier for proper sheath material selection.

**RUGGED CONSTRUCTION:**

- ◆ Heavy wall quartz sheath with replaceable metal element and polypropylene guards (complete assembly).

**OUTSTANDING PERFORMANCE:**

- ◆ Watt densities up to 25 watts per square inch (4 w/cm<sup>2</sup>) ensure long service life.

**CORROSION RESISTANT HEAD:**

- ◆ Vapor resistant, flame retardant polypropylene terminal enclosure with 3 ft (.9m) flexible PVC liquid tight conduit.

**SAFETY FEATURES:**

- ◆ Grounded internal metal element.
- ◆ Thermal protector built in. Replaceable P1 protector standard for solutions up to 180°F (82°C).

**CERTIFICATIONS:** cULus listed (less than 4000 watts), and CE certified (less than 600 volts).

**SIZES:** 500 watts to 10,000 watts.

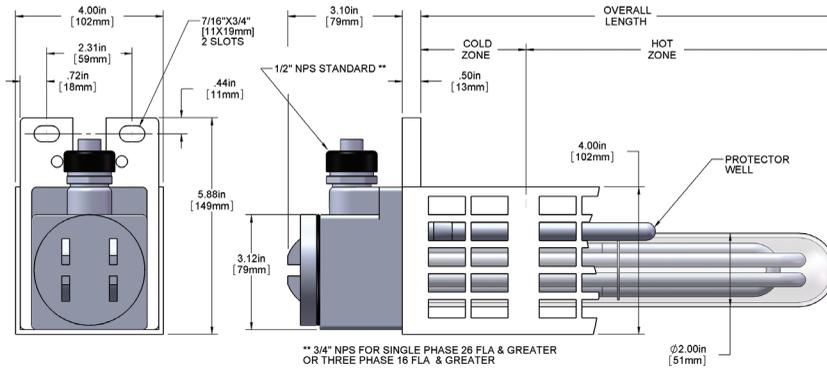
**VOLTAGES:** 120 to 600 volts.

**OPTIONS AVAILABLE (consult factory):**

- ◆ Replaceable thermal protectors:
  - P4: for solutions up to 230°F (110°C).
- ◆ Resettable thermal protectors:
  - P2: for solutions up to 180°F (82°C).
  - P6: for solutions up to 230°F (110°C).
- ◆ Special configurations and lengths.
- ◆ Longer wire and conduit lengths.
- ◆ Three phase elements.
- ◆ Fluoropolymer (PTFE) guards for chromic acid or solutions over 180°F (82°C).
- ◆ Lower watt densities for highly viscous solutions.
- ◆ Temperature and level controls sized to match the heater (sold separately).

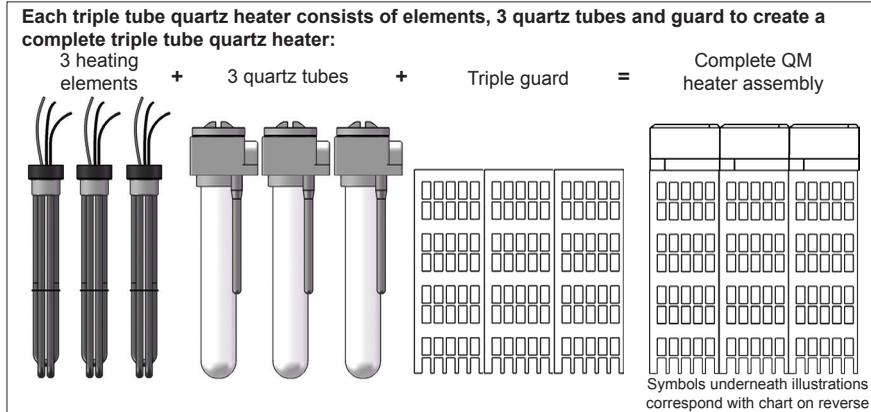
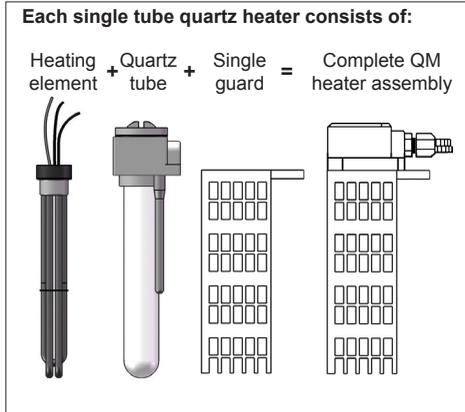
**NOTE:** Not for use in hydrofluoric acid or alkaline solutions.

## DIMENSIONS



\*\* 3/4" NPS FOR SINGLE PHASE 26 FLA & GREATER  
OR THREE PHASE 16 FLA & GREATER

Ø2.00in  
[51mm]



## SINGLE QUARTZ ELEMENT ORDERING INFORMATION

Series	Wattage	Voltage	Length	Options	Type of Protector	Wire and Conduit Length
	.5 = 500 1 = 1000 2 = 2000 3 = 3000 3.5 = 3500 4 = 4000 5 = 5000 6 = 6000 8 = 8000 10 = 10000	1 = 120 2 = 240 4 = 480 -208 = 208 -380 = 380 -415 = 415 -600 = 600	10 = .5kW 11 = 1kW 17 = 2kW 23 = 3kW 29 = 3.5kW 35 = 4kW 41 = 5kW 47 = 6kW 59 = 8kW 71 = 10kW specify custom lengths, not to exceed tank depth			36" length standard (no designator) specify variations from standard Ex: -X84 = 84"
					<b>Replaceable Protector</b>	
					P1 (std)	for solutions up to 180°F
					P4	for solutions up to 230°F
					<b>Resettable Protector</b>	
					(additional control components required)	
					P2	for solutions up to 180°F
					P6	for solutions up to 180°F
					no designator = single phase power (standard)	
					-3 = three phase power	

### ORDERING EXAMPLE:

QM3223E (element) + QM3223JP2 (tube with P2 protector) + QM23G (polypropylene guard) = 3,000 watt, 240 volt, 23" element complete heater.

