

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

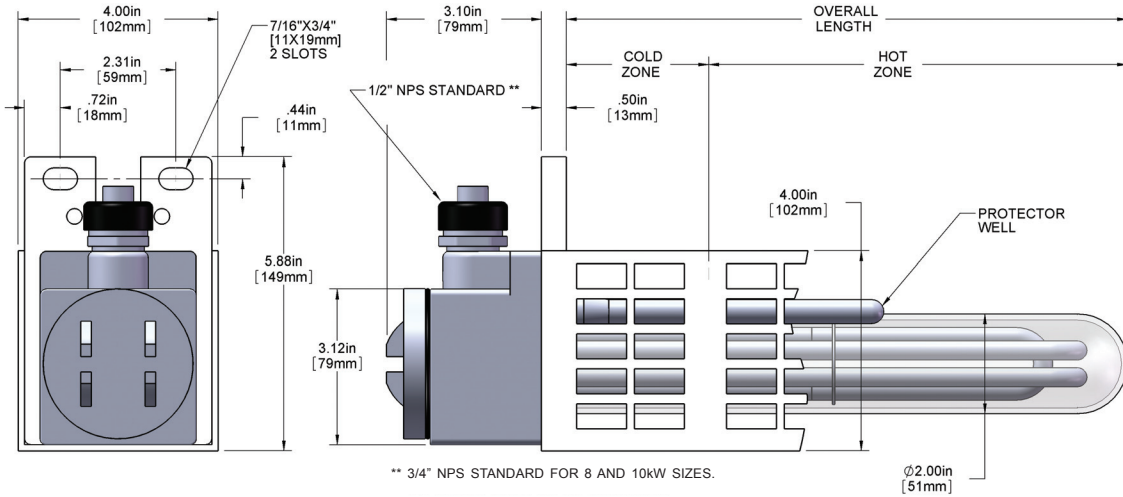
QM SERIES, QUARTZ HEATERS WITH METAL ELEMENTS						QM & 3QM SERIES GUARDS		Ship Weight	
WATTS	VOLTS	HOT ZONE	OVERALL LENGTH	ELEMENT MODEL NUMBER	TUBE MODEL NUMBER	SINGLE GUARD MODEL #	TRIPLE GUARD MODEL #	SINGLE ASSEMBLY SHIP WT.	TRIPLE ASSEMBLY SHIP WT.
		In./(mm)	In./(mm)	△	▲	★	❖	Lbs./(kg)	Lbs./(kg)
500	120	7	10	QM.5110E	QM.5110J-**	QM10G	3QM10G	9	21
	240	(180)	(255)	QM.5210E	QM.5210J-**			(4)	(10)
1000	120	7	11	QM1111E	QM1111J-**	QM11G	3QM11G	10	22
	240	(180)	(280)	QM1211E	QM1211J-**			(4.5)	(10)
1000	120	7	17	QM1117E	QM1117J-**	QM17G	3QM17G	11	26
	240	(180)	(430)	QM1217E	QM1217J-**			(5)	(12)
2000	240	12	17	QM2217E	QM2217J-**	QM17G	3QM17G	11	26
	480	(305)	(430)	QM2417E	QM2417J-**			(5)	(12)
2000	240	12	23	QM2223E	QM2223J-**	QM23G	3QM23G	14	30
	480	(305)	(585)	QM2423E	QM2423J-**			(6.5)	(14)
3000	240	18	23	QM3223E	QM3223J-**	QM23G	3QM23G	14	30
	480	(460)	(585)	QM3423E	QM3423J-**			(6.5)	(14)
3000	240	18	29	QM3229E	QM3229J-**	QM29G	3QM29G	17	34
	480	(460)	(735)	QM3429E	QM3429J-**			(8)	(15.5)
3500	240	21	29	QM3.5229E	QM3.5229J-**	QM29G	3QM29G	17	34
	480	(535)	(735)	QM3.5429E	QM3.5429J-**			(8)	(15.5)
4000	240	28	35	QM4235E	QM4235J-**	QM35G	3QM35G	20	38
	480	(710)	(890)	QM4435E	QM4435J-**			(9)	(17)
4000	240	28	41	QM4241E	QM4241J-**	QM41G	3QM41G	23	44
	480	(710)	(1040)	QM4441E	QM4441J-**			(10.5)	(20)
5000	240	33	41	QM5241E	QM5241J-**	QM41G	3QM41G	23	44
	480	(840)	(1040)	QM5441E	QM5441J-**			(10.5)	(20)
5000	240	33	47	QM5247E	QM5247J-**	QM47G	3QM47G	26	48
	480	(840)	(1195)	QM5447E	QM5447J-**			(12)	(22)
6000	240	39	47	QM6247E	QM6247J-**	QM47G	3QM47G	26	48
	480	(990)	(1195)	QM6447E	QM6447J-**			(12)	(22)
6000	240	39	52	QM6252E	QM6252J-**	QM52G	3QM52G	29	52
	480	(990)	(1320)	QM6452E	QM6452J-**			(13)	(24)
8000	240	49	59	QM8259E	QM8259J-**	QM59G	3QM59G	31	55
	480	(1245)	(1500)	QM8459E	QM8459J-**			(14)	(25)
10000	240	62	71	QM10271E	QM10271J-**	QM71G	3QM71G	34	65
	480	(1575)	(1805)	QM10471E	QM10471J-**			(15.5)	(30)

Product 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.
- ◆ **MATERIALS OF CONSTRUCTION:** Heavy wall quartz sheath with replaceable metal element and polypropylene guards (complete assembly).
- ◆ **OUTSTANDING PERFORMANCE:** Watt densities of 25 watts per square inch (4 w/cm²) ensure long service life.
- ◆ **CORROSION RESISTANT HEAD:** Vapor resistant, flame retardant polypropylene terminal enclosure with 3-foot (.9m) flexible PVC liquid tight conduit.
- ◆ **SAFETY FEATURES:**
 - Grounded construction
 - Thermal protector built in. Replaceable P1 fuse standard for solutions up to 180°F (82°C).
- ◆ **CERTIFICATIONS:** UL listed to U.S. and Canadian safety requirements (less than 4000 watts), and 600 volt CSA only.
- ◆ **SIZES:** 500 watts to 10,000 watts.
- ◆ **VOLTAGES:** 120 to 600 volts. Single phase standard, three phase available.
- ◆ **OPTIONS AVAILABLE (consult factory):**
 - Replaceable thermal protectors:
 - P4: for solutions from 180°F (82°C) to 230°F (110°C).
 - Resettable thermal protectors:
 - P2: for solutions up to 180°F (82°C).
 - P6: for solutions from 180°F (82°C) 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.

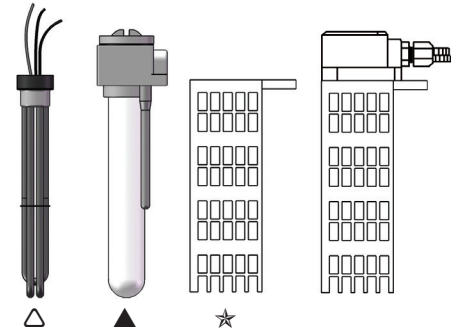
NOTE: Not for use in hydrofluoric acid or alkaline solutions.

DIMENSIONS



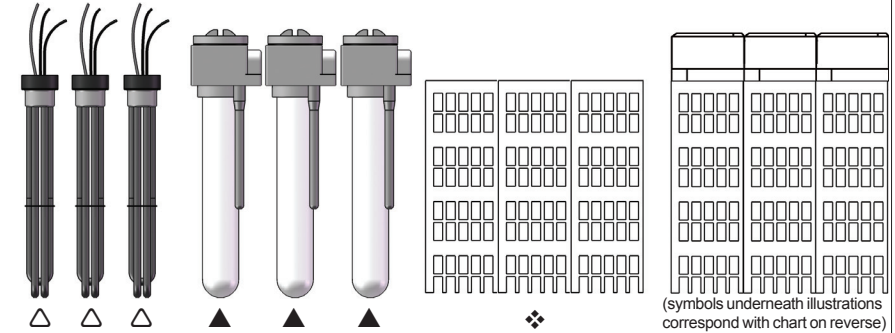
Each single tube quartz heater consists of:

Heating element + Quartz tube + Single guard = Complete QM heater assembly



Each triple tube quartz heater consists of elements, 3 quartz tubes and guard to create a complete triple tube quartz heater:

3 heating elements + 3 quartz tubes + Triple guard = Complete 3QM heater assembly



SINGLE QUARTZ ELEMENT ORDERING INFORMATION

Series	Wattage	Voltage	Length	Phase 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 3 = 380 4 = 480 5 = 415 6 = 600	10 = .5kW 11 or 17 = 1kW 17 or 23 = 2kW 23 or 29 = 3kW 29 or 35 = 3.5kW 35 or 41 = 4kW 41 or 47 = 5kW 47 or 52 = 6kW 59 = 8kW 71 = 10kW				no designator = 36" length standard specify variations from standard Ex: -X84 = 84"													
	QM = Quartz		1 inch = 25.4mm																	
					<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Replaceable Fuse</th> </tr> </thead> <tbody> <tr> <td style="width: 20%;">P1 (std)</td> <td>for solutions up to 180°F</td> </tr> <tr> <td>P4</td> <td>for 180° - 230°F solutions</td> </tr> <tr> <th colspan="2" style="text-align: center;">Resettable Fuse</th> </tr> <tr> <td colspan="2" style="text-align: center;">(additional control components required)</td> </tr> <tr> <td>P2</td> <td>for solutions up to 180°F</td> </tr> <tr> <td>P6</td> <td>for 180° - 230°F solutions</td> </tr> </tbody> </table>		Replaceable Fuse		P1 (std)	for solutions up to 180°F	P4	for 180° - 230°F solutions	Resettable Fuse		(additional control components required)		P2	for solutions up to 180°F	P6	for 180° - 230°F solutions
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ORDERING EXAMPLE:

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

**PROCESS
TECHNOLOGY**