

Single phase standard. Three phase available as option, add "-3" before thermal protector designator. Standard guard is polypropylene. Fluoropolymer (PTFE) guards available for chromic acid and high temperature applications (180°F and higher).

## QM SERIES, QUARTZ HEATERS WITH METAL ELEMENTS

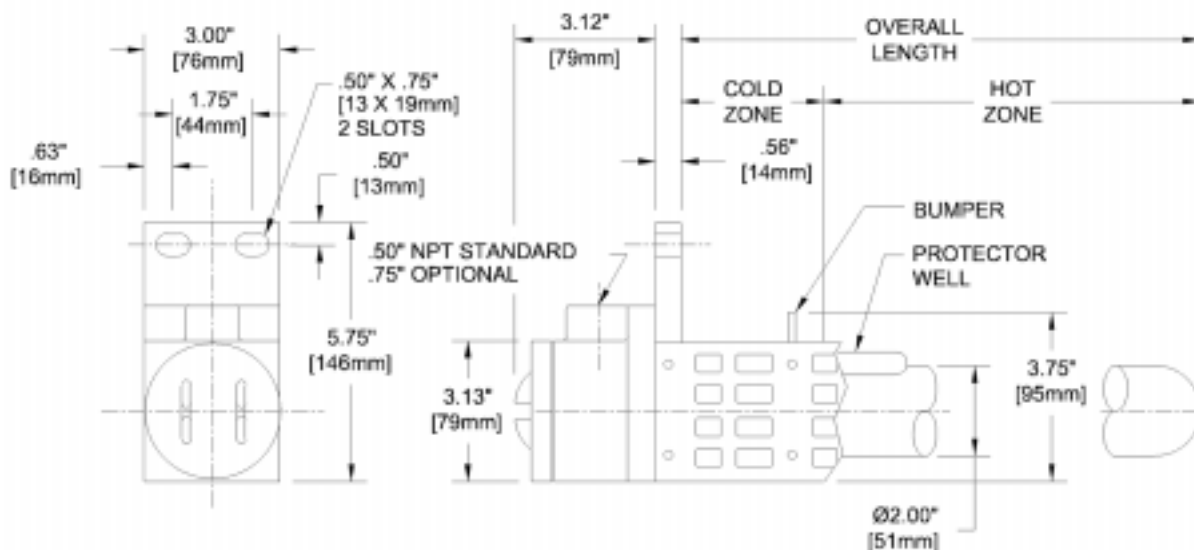
WATTS	VOLTS	HOT ZONE	OVERALL LENGTH	MODEL NUMBER	SHIP WGT. Lbs./ (kg)
		In./ (mm)	In./ (mm)		
500	120	6	10	QM.5110C-**-	9
	240	(155)	(255)	QM.5210C-**-	(4)
1000	120	7	11	QM1111C-**-	10
	240	(180)	(280)	QM1211C-**-	(4.5)
1000	120	7	17	QM1117C-**-	11
	240	(180)	(430)	QM1217C-**-	(5)
2000	240	12	17	QM2217C-**-	11
	480	(305)	(430)	QM2417C-**-	(5)
2000	240	12	23	QM2223C-**-	14
	480	(305)	(585)	QM2423C-**-	(6.5)
3000	240	18	23	QM3223C-**-	14
	480	(460)	(585)	QM3423C-**-	(6.5)
3000	240	18	29	QM3229C-**-	17
	480	(460)	(735)	QM3429C-**-	(8)
3500	240	21	29	QM3.5229C-**-	17
	480	(535)	(735)	QM3.5429C-**-	(8)
4000	240	28	35	QM4235C-**-	20
	480	(710)	(890)	QM4435C-**-	(9)
4000	240	28	41	QM4241C-**-	23
	480	(710)	(1040)	QM4441C-**-	(10.5)
5000	240	33	41	QM5241C-**-	23
	480	(840)	(1040)	QM5441C-**-	(10.5)
5000	240	33	47	QM5247C-**-	26
	480	(840)	(1195)	QM5447C-**-	(12)
6000	240	39	47	QM6247C-**-	26
	480	(990)	(1195)	QM6447C-**-	(12)
6000	240	39	52	QM6252C-**-	29
	480	(990)	(1320)	QM6452C-**-	(13)
8000	240	49	59	QM8259C-**-	31
	480	(1245)	(1500)	QM8459C-**-	(14)
10000	240	62	71	QM10271C-**-	34
	480	(1575)	(1805)	QM10471C-**-	(15.5)

## 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/cm<sup>2</sup>) ensure long service life.
- ◆ **CORROSION RESISTANT HEAD:** Vapor tight, flame retardant polypropylene terminal enclosure with 3-foot (.9m) flexible PVC liquid tight conduit.
- ◆ **SAFETY FEATURES:**
  - Grounded construction
  - Thermal protector built in. Replaceable PQI fuse standard for solutions up to 180°F (82°C).
- ◆ **CERTIFICATIONS:** UL, CSA, and CE.
- ◆ **SIZES:** 500 watts to 10,000 watts.
- ◆ **VOLTAGES:** 120, 240 or 480 volts. 208, 380, 415, 600 and other voltages available. Single phase standard, three phase available.
- ◆ **OPTIONS AVAILABLE (consult factory):**
  - Replaceable thermal protectors:
    - PQIM: for solutions from 180°F (82°C) to 230°F (110°C).
  - Resettable thermal protectors:
    - PQII: for solutions up to 180°F (82°C).
    - PQIIM: 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



### SINGLE TUBE QUARTZ OVER THE SIDE HEATER

Series	Wattage	Voltage	Length	Options	Type of Fuse	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  QM = Quartz	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"															
					<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">Replaceable Fuse</th> </tr> <tr> <td style="width: 30%;">-PQI (std)</td> <td>for solutions up to 180°F</td> </tr> <tr> <td>-PQIM</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>-PQII</td> <td>for solutions up to 180°F</td> </tr> <tr> <td>-PQIIM</td> <td>for 180° - 230°F solutions</td> </tr> </table>	Replaceable Fuse		-PQI (std)	for solutions up to 180°F	-PQIM	for 180° - 230°F solutions	Resettable Fuse		(additional control components required)		-PQII	for solutions up to 180°F	-PQIIM	for 180° - 230°F solutions		
Replaceable Fuse																					
-PQI (std)	for solutions up to 180°F																				
-PQIM	for 180° - 230°F solutions																				
Resettable Fuse																					
(additional control components required)																					
-PQII	for solutions up to 180°F																				
-PQIIM	for 180° - 230°F solutions																				
					<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>-C = heater with Polypropylene guard</td> </tr> <tr> <td>-H = heater less guard</td> </tr> <tr> <td>-J = quartz tube only</td> </tr> <tr> <td>-E = element only</td> </tr> <tr> <td>-X = any special configuration not called out in the part number (specify in clear text)</td> </tr> <tr> <td>no designator = single phase power (standard)</td> </tr> <tr> <td>-3 = three phase power</td> </tr> </table>	-C = heater with Polypropylene guard	-H = heater less guard	-J = quartz tube only	-E = element only	-X = any special configuration not called out in the part number (specify in clear text)	no designator = single phase power (standard)	-3 = three phase power									
-C = heater with Polypropylene guard																					
-H = heater less guard																					
-J = quartz tube only																					
-E = element only																					
-X = any special configuration not called out in the part number (specify in clear text)																					
no designator = single phase power (standard)																					
-3 = three phase power																					
			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: center;">COMPLETE HEATER</th> <th style="text-align: center;">LESS GUARD</th> <th style="text-align: center;">HEATING ELEMENT ONLY</th> <th style="text-align: center;">TUBE ONLY</th> <th style="text-align: center;">GUARD ONLY</th> </tr> <tr> <th style="text-align: center;">C</th> <th style="text-align: center;">H</th> <th style="text-align: center;">E</th> <th style="text-align: center;">J</th> <th style="text-align: center;">G</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	COMPLETE HEATER	LESS GUARD	HEATING ELEMENT ONLY	TUBE ONLY	GUARD ONLY	C	H	E	J	G								
COMPLETE HEATER	LESS GUARD	HEATING ELEMENT ONLY	TUBE ONLY	GUARD ONLY																	
C	H	E	J	G																	

### ORDERING EXAMPLE:

QM3223C-PQII-X52

Quartz, 3000 watts, 240 volts, 23" overall length, complete heater, PQII fuse, 52" wire and conduit.

