

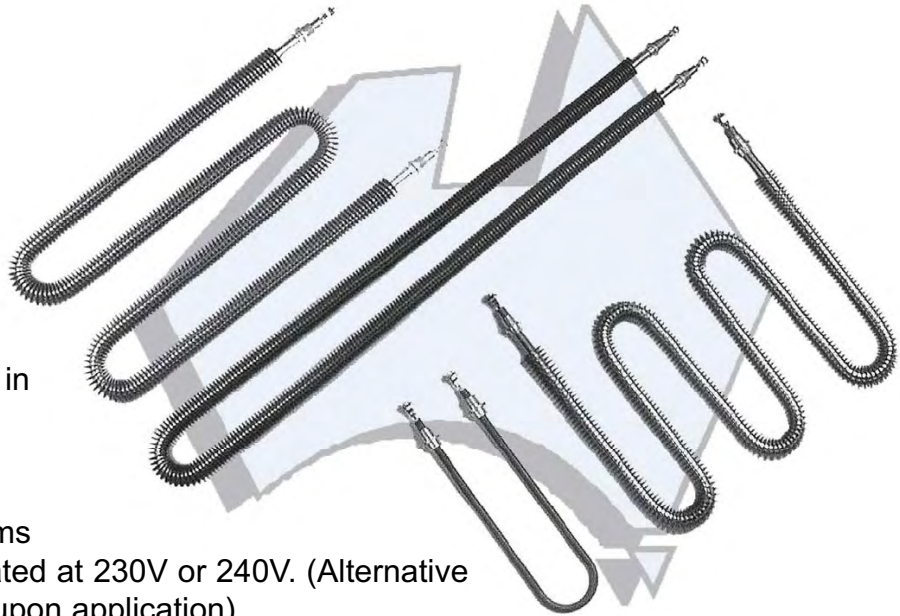
AIR HEATING ELEMENTS AND BANKS

Grimwood Heaters meet the wide variety of requirements by producing seven extensive series of air heaters; five series finned and two unfinned.

Each series is specified and tabulated in this brochure. All of these elements can be purchased individually.

Specifications:

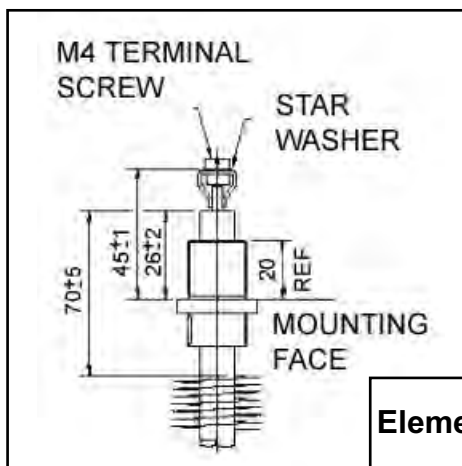
Elements are available in
Straight,
U bend,
W - double U bend
or **T** - triple U bend forms
as tabulated and are rated at 230V or 240V. (Alternative voltages are available upon application).



Stainless terminals, complete with screws and saddle washers, are provided for electrical connection.

Mounting bushes are fixed to each end of the U, W & T form elements, whilst Straight elements have 1 fixed and 1 floating bush.

Securing nuts and washers are provided.



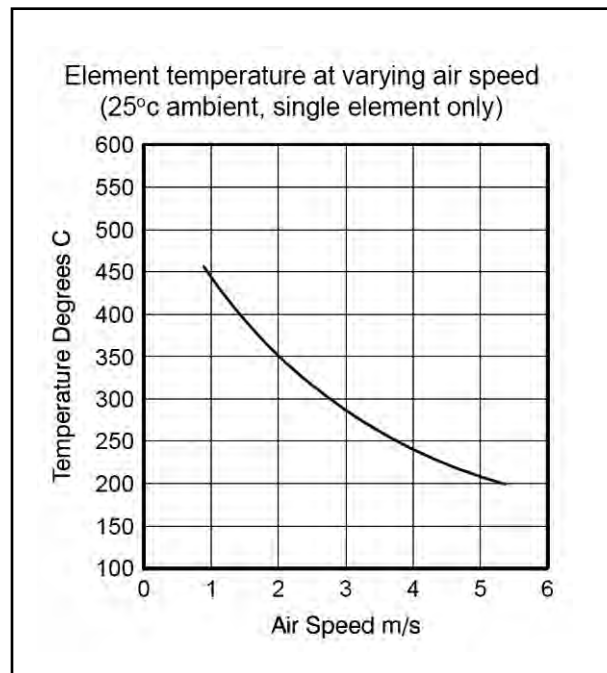
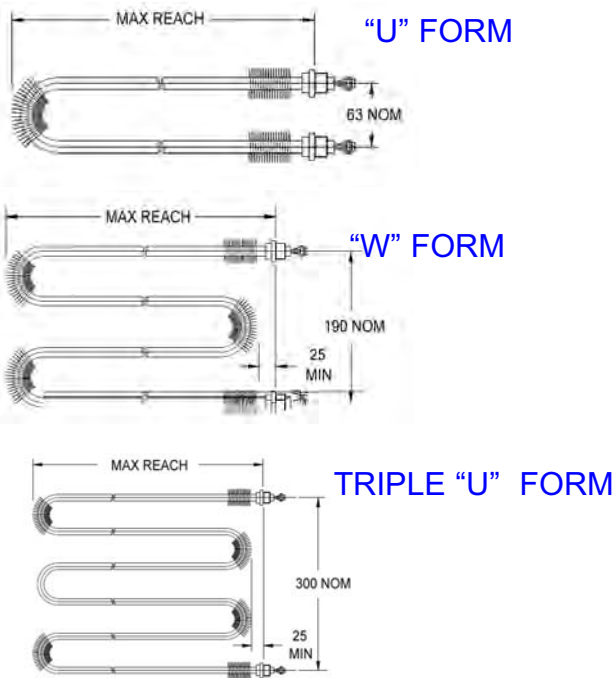
**Element Mounting
Detail**

All elements are designed and manufactured to comply with the requirements of AS3100, UL1030 and IEC 60335-1 : 2001. This range of elements is suitable for use in heating units manufactured to comply with the requirements of AS1668.1

STAINLESS STEEL "S" SERIES — FINNED AIR HEATERS

- WATTS DENSITY CONSTRUCTION** Sheath 64kW/m² Fin and Sheath total 10kW/m² at 230 Volts.
Continuous spiral stainless steel grade 321 fin on 11.1 mm dia stainless steel grade 321 element.
Dia over fin 27mm. Fin pitch 5.1mm
- FINISH** Black Oxide Annealed
- MOUNTING** Zinc plated steel bushes with 16mm conduit thread 20mm long.
Clearance hole of 18mm required. Nuts (**QB79R0**) and washers (**QB67S0**) available separately.
- SELECTION** When making your element selection, please refer to the Australian Standards (bottom of page) & the Element Temperature chart below.

WATTS	Kg	"U" FORM		"W" FORM		TRIPLE "U" FORM	
		CAT No	MAX.REACH	CAT No	MAX.REACH	CAT No	MAX.REACH
750	0.39	S075U	226				
1000	0.51	S100U	281	S100W	154		
1250	0.57	S125U	346	S125W	184		
1500	0.68	S150U	406	S150W	218		
1750	0.8	S175U	459	S175W	240		
2000	0.91	S200U	526	S200W	278		
2500	1.1	S250U	638	S250W	334	S250T	239
3000	1.27	S300U	747	S300W	384	S300T	276
3500	1.56	S350U	858	S350W	439	S350T	315
4000	1.66	S400U	973	S400W	500	S400T	357
4500	1.79	S450U	1109	S450W	569	S450T	403
5000	2.04	S500U	1235	S500W	632	S500T	447
6000	2.3	S600U	1453	S600W	738	S600T	523



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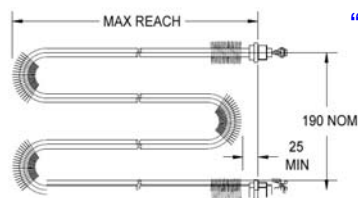
STAINLESS STEEL "P" SERIES — FINNED AIR HEATERS

- WATTS DENSITY** Sheath 44.5kW/m² Fin and Sheath total 7.0kW/m² at 230 Volts.
- CONSTRUCTION** Continuous spiral stainless steel grade 321 fin on 11.10 mm dia stainless steel grade 321 element.
Dia over fin 27mm. Fin pitch 5.1mm
- FINISH** Black Oxide Annealed
- MOUNTING** Zinc plated steel bushes with 16mm conduit thread 20mm long.
Clearance hole of 18mm required. Nuts (**QB79R0**) and washers (**QB67S0**) available separately.
- SELECTION** When making your element selection, please refer to the Australian Standards (bottom of page) & the Element Temperature chart below.

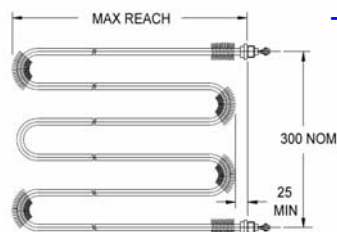
WATTS	Kg	"U" FORM		"W" FORM		TRIPLE "U" FORM	
		CAT No	MAX.REACH	CAT No	MAX.REACH	CAT No	MAX.REACH
750	0.48	P075U	298	PO75W	164		
1000	0.55	P100U	381	P100W	205		
1250	0.76	P125U	465	P125W	243		
1500	0.85	P150U	548	P150W	286		
1750	1.09	P175U	632	P175W	331	P175T	237
2000	1.14	P200U	716	P200W	373	P200T	266
2500	1.61	P250U	883	P250W	456	P250T	324
3000	1.8	P300U	1050	P300W	537	P300T	383
3500	1.91	P350U	1217	P350W	623	P350T	441
4000	2.3	P400U	1384	P400W	707	P400T	499
4500	2.75	P450U	1552	P450W	788	P450T	558
5000	3.3	P500U	1718	P500W	874	P500T	616



"U" FORM

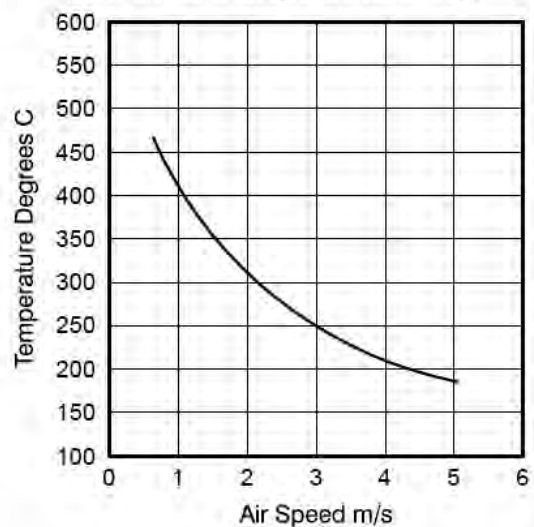


"W" FORM



TRIPLE "U" FORM

Element temperature at varying air speed
(25°C ambient, single element only)



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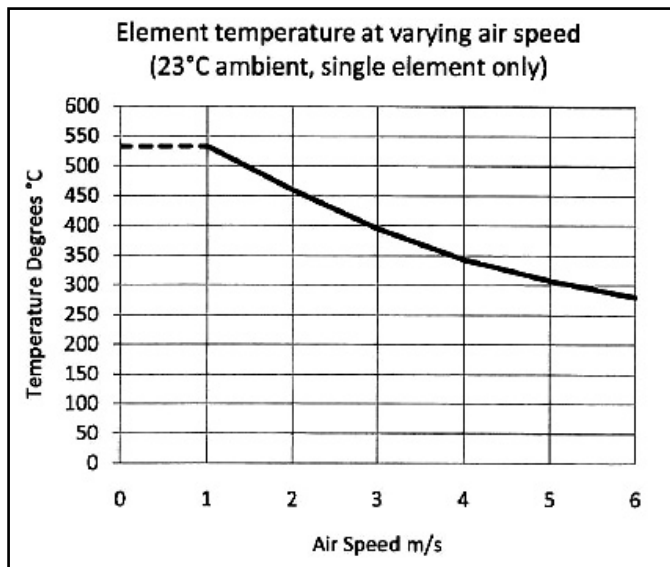
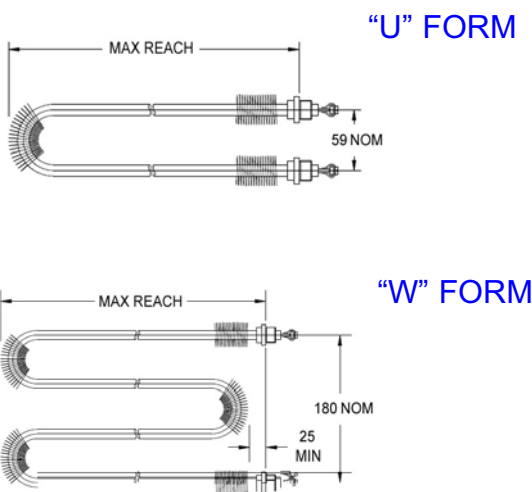


NICKEL PLATED STEEL “M” SERIES — FINNED AIR HEATERS

- WATTS DENSITY** Sheath 93kW/m² Fin and Sheath total 14.5kW/m² at 230 Volts.
- CONSTRUCTION** Continuous spiral stainless steel grade 321 fin on 11.10 mm dia stainless steel grade 321 element. Dia over fin 27mm. Fin pitch 5.1mm
- FINISH** Black Oxide Annealed
- MOUNTING** Zinc plated steel bushes with 16mm conduit thread 20mm long. Clearance hole of 18mm required. Nuts (**QB79R0**) and washers (**QB67S0**) available separately.
- SELECTION** When making your element selection, please refer to the Australian Standards (bottom of page) & the Element Temperature chart below.

NOTE: This product range is undergoing a running change, from plated M.S. to a 100% S.S. construction. The heater penetration and power rating will remain unchanged.

WATTS	Kg	“U” FORM		“W” FORM	
		CAT No	MAX.REACH	CAT No	MAX.REACH
750	0.26	M075U	164		
1000	0.33	M100U	204		
1250	0.38	M125U	240	M125W	133
1500	0.51	M150U	284	M150W	155
1750	0.53	M175U	324	M175W	175
2000	0.60	M200U	358	M200W	188
2500	0.77	M250U	440	M250W	233
3000	0.91	M300U	524	M300W	275
3500	1.04	M350U	603	M350W	315
4000	1.16	M400U	683	M400W	355
4500	1.38	M450U	758	M450W	388
5000	1.53	M500U	840	M500W	433



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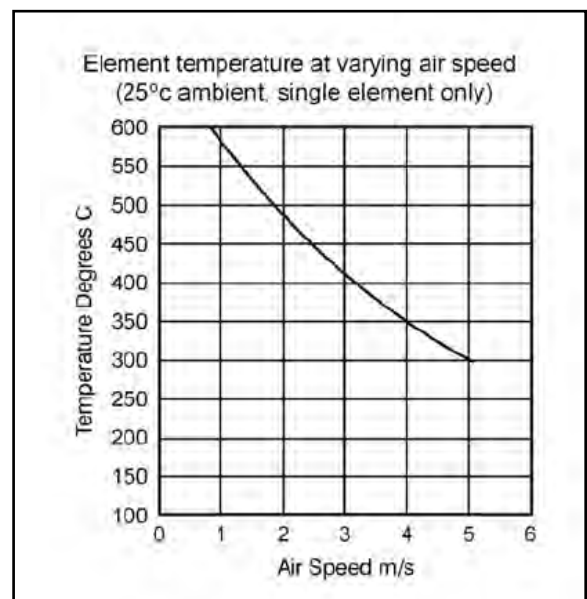
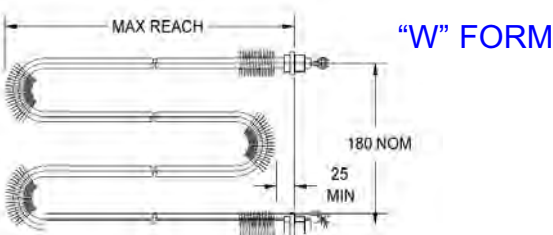
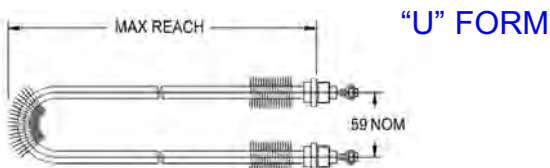
NICKEL PLATED STEEL PM SERIES — FINNED AIR HEATERS

WATTS DENSITY	Sheath 101kW/m ² Fin and Sheath total 18.2kW/m ² at 240 Volts.
CONSTRUCTION	Continuous spiral steel fin on 8.13 mm dia steel element. Dia over fin 28mm. Fin pitch 6.25mm
FINISH	Nickel Plated
MOUNTING	Nickel plated bushes with 16mm conduit thread 20mm long. Clearance hole of 18mm required. Nuts (QB79R0) and washers (QB67S0) available separately.
SELECTION	When making your element selection, please refer to the Australian Standards (bottom of page) & the Element Temperature chart below.

WATTS	Kg	"U" FORM		"W" FORM	
		CAT No	MAX.REACH	CAT No	MAX.REACH
600	0.31	PM59A000	220		
900	0.31	PM59B000	220		
1200	0.35	PM59C000	275		
1800	0.48			PM60A000	205
2000	0.51			PM60B000	220
2400	0.6			PM60C000	260
3000	0.72			PM60D000	315
3600	0.83	PM59J000	710	PM60E000	370
4800	1.11	PM59K000	925		



Load Bank - Element Application in use.



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UNFINNED AIR HEATERS - GENERAL PURPOSE

CONSTRUCTION Stainless steel grade 321 tubular element 8.13 mm dia with tightly adherent high emissivity oxide finish.

MOUNTING Zinc plated steel bushes with 16mm conduit thread 20mm long. Clearance hole of 18mm required. Nuts (**QB79R0**) and washers (**QB67S0**) available separately..

SELECTION When making your element selection, please refer to the Australian Standards (bottom of page) & the Element Temperature chart below.

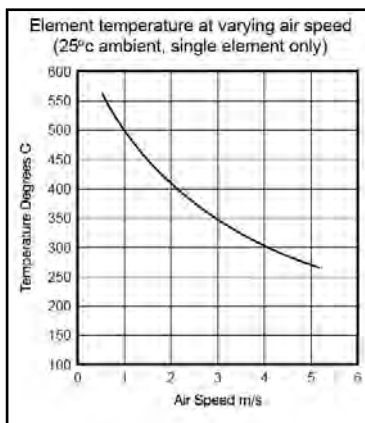
WATTS DENSITY 50kW/m² at 240 Volts. Maximum permissible temperature when operating 650°C.

WATTS	Kg	STRAIGHT LENGTH		"U" FORM		"W" FORM	
		CAT No	MAX.REACH	CAT No	MAX.REACH	CAT No	MAX.REACH
500	0.15			PH44A000	230	PG96A000	125
750	0.23			PH44B000	335	PG96B000	180
1000	0.27			PH44C000	445	PG96C000	230
1250	0.36			PH44D000	550	PG96D000	285
1500	0.4			PH44E000	655	PG96E000	335
1800	0.5			PH44F000	780	PG96F000	400
2000	0.7	PR11G000	1762	PH44G000	865	PG96G000	445
2500	0.8	PR11H000	2282	PH44H000	1130	PG96H000	575
3000	0.9	PR11J000	2602	PH44J000	1290	PG96J000	655

WATTS DENSITY 35kW/m² at 240 Volts. Maximum permissible temperature when operating 650°C.

WATTS	Kg	STRAIGHT LENGTH		"U" FORM		"W" FORM	
		CAT No	MAX.REACH	CAT No	MAX.REACH	CAT No	MAX.REACH
500	0.23	PR20A000	697	PQ47A000	335	PQ49A000	180
750	0.32	PR20B000	1017	PQ47B000	495	PQ49B000	260
1000	0.4	PR20C000	1332	PQ47C000	655	PQ49C000	335
1250	0.7	PR20D000	1122			PQ49D000	420
1500	0.78	PR20E000	1652	PQ47E000	970	PQ49E000	495
1800	0.82	PR20F000	1967				
2000	0.9	PR20G000	2602	PQ47G000	1290	PQ49G000	655
2500	1.0	PR20H000	3237			PQ49H000	815

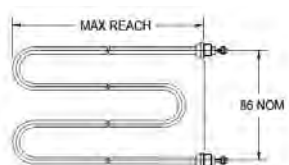
50kW/m² GRAPH



"S" FORM

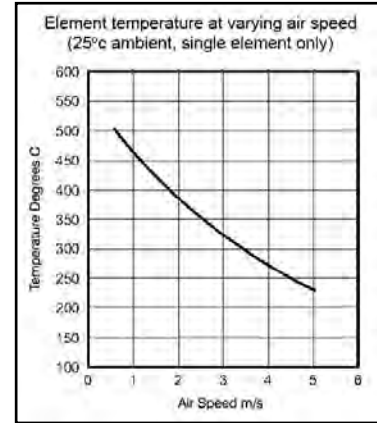


"U" FORM



"W" FORM

35kW/m² GRAPH



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