

SINGLE PHASE TYPES: Nicrofer® 3220 - ALLOY 800

1 1/4" BSP 240 VOLTS 77.5 kW/m² SHEATH LOADING



1 1/4" Terminal Cover
KH35A0



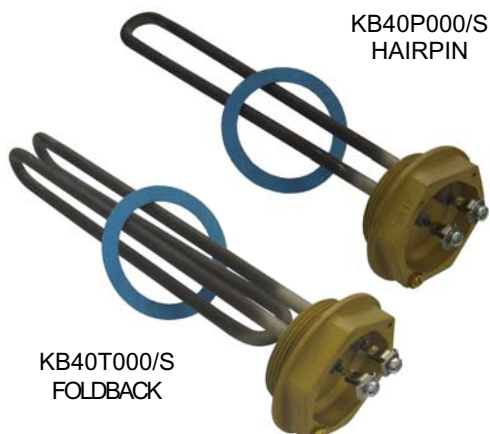
PART No.	WATTAGE	PENETRATION
KH39A000	1200W	210mm
KH39B000	1800W	235mm
KH39C000	2400W	260mm

Small sized industrial immersion heater for water heating where long element life is required. Thermostat pocket fitted.

BSP ELEMENTS 120 kW/m²



KB 39 SERIES 1 1/4" BSP	WATTS	PENETRATION	PART No. INDIVIDUALLY PACKED	WITH 7mm ID THERMOWELL	FORM
	600	190 mm	KB39N000/S		HAIRPIN
	900	200 mm	KB39P000/S		HAIRPIN
	1200	235 mm	KB39Q000/S		HAIRPIN
	1500	285 mm	KB39R000/S		HAIRPIN
	1800	200 mm		KB39ST00	FOLDBACK
	2400	247 mm	KB39U000/S		FOLDBACK
	3000	298 mm	KB39V000/S		FOLDBACK
	3600	349 mm	KB39W000/S		FOLDBACK



KB 40 SERIES 2" BSP	WATTS	PENETRATION	PART No. INDIVIDUALLY PACKED	FORM
	1200	210 mm	KB40N000/S	HAIRPIN
	1500	265 mm	KB40P000/S	HAIRPIN
	2400	220 mm	KB40S000/S	FOLDBACK
	3000	270 mm	KB40T000/S	FOLDBACK
	3600	320 mm	KB40U000/S	FOLDBACK
	4800	420 mm	KB40V000/S	FOLDBACK
	6000	550 mm	KB40W000/S	FOLDBACK
	3600	260 mm	KB40X000/S	DOUBLE F/B
4800	320 mm	KB40Y000/S	DOUBLE F/B	

THREE PHASE TYPES: Nicrofer 3220 (ALLOY 800) 2" BSP

ALL SERIES HAVE INTEGRAL THERMOWELL



KH31C000

31kW/m² 240V SERIES LOW POWER DENSITY SHEATH LOADINGS FOR USE WHERE HEAT SENSITIVE SOLUTIONS ARE BEING HEATED OR WHERE BUILD UP OF SOLIDS ON THE ELEMENT SHEATH IS LIKELY.

ALLOY 800 BRASS BOSS	SS316 BOSS	ALLOY 825 SS316 BOSS	WATTAGE	PENETRATION	BUGLE FORM	PENETRATION	415V DELTA @ 93kW/m ²
KH41A000			1500W	500 mm			
KH41B000			2400W	600 mm			
KH41C000			3600W	620 mm	KH41C00B	360 mm	10,800W
KH41D000			4800W	825 mm			14,400W
KH41E000	KH41E00S	KH41E825	6000W	1260 mm			18,000W

78kW/m² 240V SERIES

CATALOGUE No.	WATTAGE	ALLOY 825 SS316 BOSS	PENETRATION	BUGLE FORM	PENETRATION	ALTERNATIVE CONNECTIONS 240V SERIES @ 9kW/m ²
KH50A000	3600W	KH50A825	330 mm			400W
KH50B000	4800W		380 mm			533W
KH500000	6000W		560 mm			667W
KH50C000	7200W		730 mm			800W
KH50D000	9600W		965 mm	KH50D000B	550 mm	1066W

415V SERIES

CATALOGUE No.	WATTAGE	PENETRATION	BUGLE FORM	PENETRATION	240V STAR @ 26kW/m ²	240V SERIES @ 3kW/m ²
KH31A000	3600W	330 mm			1200W	133W
KH31B000	4800W	380 mm			1600W	178W
KH310000	6000W	560 mm			2000W	222W
KH31C000	7200W	730 mm			2400W	267W
KH31D000	9600W	965 mm	KH31D000B	550 mm	3200W	355W

116kW/m² 240V SERIES HIGH POWER SERIES FOR USE IN WATER HEATING OR STEAM BOILERS WHERE SPACE IS CONFINED AND GLYCOL REHEATERS.

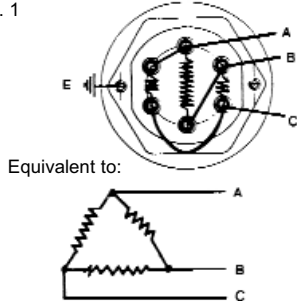
CATALOGUE No.	WITH 1M LEADS	WATTAGE	PENETRATION	BUGLE FORM	PENETRATION	ALLOY 825 SS316 BOSS	240V SERIES @ 13kW/m ²
KJ04A000		10kW	620 mm	KJ04A00B	333 mm		1,111W
KJ04B000	VY06B000	15kW	930 mm			KJ04B825	1,667W
KJ04C000		20kW	1180 mm				2,222W
KJ04E000		20kW	1395 mm				

415V SERIES

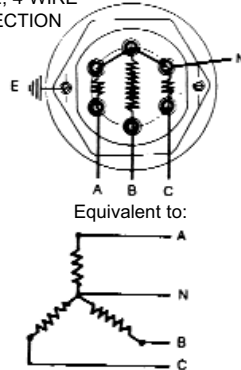
CATALOGUE No.	WITH 1M LEADS	WATTAGE	PENETRATION	ALLOY 825 SS316 BOSS	240V STAR @ 39kW/m ²	240V SERIES @ 4kW/m ²
KJ04D000		7.2kW	620 mm			
KJ04A001		10kW	620 mm		3,300W	370W
KJ04B001	VY06A000	15kW	930 mm	KJ04B826	5,000W	555W
KJ04C001	VY060000	20kW	1180 mm		6,666W	740W
	VY06C000	25kW	1430 mm		8,333W	940W
HQ0067		24kW	1500 mm			

THREE PHASE HEATERS WIRING DIAGRAMS

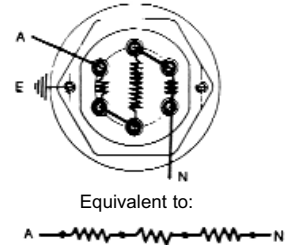
415V, 3 PHASE, 3 WIRE
"DELTA" CONNECTION
Fig. 1



240V, 3 PHASE, 4 WIRE
"STAR" CONNECTION
Fig. 2



240V, 1 PHASE, 2 WIRE
SERIES CONNECTION
Fig. 3



(For 415V series connection, wiring is as per Fig. 3 but connected phase to phase).

• FOR SINGLE PHASE 2" AND 1 1/4" REFER TO SECTION 8

For installations relying on natural convection, elements **MUST** be installed in the horizontal position.

ACCESSORIES - Screw in Immersion Heaters

SEPARATE THERMOSTAT POCKETS

These pockets are for use where separate control thermostat is required to control temperature remote from heater elements.

• SEE SECTION 15-10

TERMINAL COVERS

- Note these covers are intended for mechanical protection only and are NOT IP rated.
- Special IP66 enclosures are available on request.

RF0700/S: Stainless steel terminal cover for all 2" BSP units below 10kW and where no integral thermostat is required.



KD9300: For use on all 2" BSP elements of 10kW and above. Also all 2" BSP units where integral thermostats are used. Plated steel.



ALSO AVAILABLE

- 316 Stainless Steel boss
- **Nicrofer® 4221**(alloy 825) elements
- TIG welded construction (with SS boss)
- Welded on leads
- Bugle form elements to reduce the overall length

Nicrofer® 4221 - alloy 825

Nicrofer 4221 is a titanium-stabilised fully austenitic nickel-iron-chromium alloy with additions of copper and molybdenum. Nicrofer 4221 is characterised by:

- good resistance to stress-corrosion cracking
- improved resistance to pitting and crevice corrosion
- good resistance to oxidising and non-oxidising hot acids
- good mechanical properties at both room and elevated temperatures, up to approximately 550°C (1020°F)

• FOR CONTROLS REFER TO SECTION 7 AND 15-9

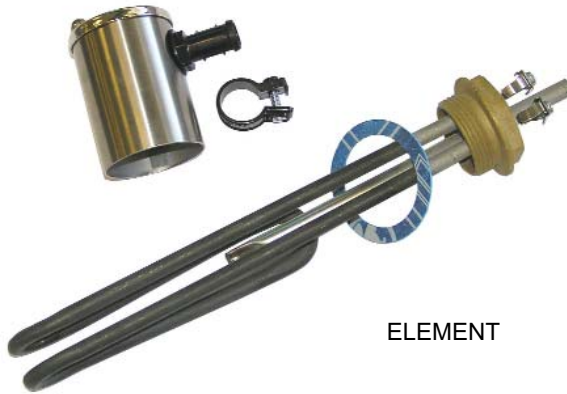
BIO-DIESEL HEATERS

ELECTRONIC CONTROLLER



IP65 ENCLOSURE

PROBE



ELEMENT

BIO-DIESEL HEATERS

MODELS	TYPE OF CONTROL	PRE WIRED	PRE PROGRAMMED	POWER	IMMERSION	WATTS DENSITY
BDK1	Thermostat	✓		1500W	400mm	45 kW/m ²
BDK2	Electronic	✓	✓	1500W	400mm	45 kW/m ²
BDK3	Electronic			2400W	260mm	77 kW/m ²
BDK4	Thermostat	✓	✓		400mm	45 kW/m ²
0TS24TLD	SEE 15-5-2					

Recommended Max Watts Density - Bio-Diesel static = 46 Kw/m²

2.4 Kw heats up 100 Ltr Bio-Diesel up 40°C in 1 hr

1" BSP Nicrofer® - 3220

ALLOY 800 ELEMENT

232 kW/m² SERIES

NOTE: These high watts density products are intended for use with flow over the element.
THEY ARE NOT SUITABLE FOR USE IN STATIC TANKS.



HAIRPIN

WATTS	PENETRATION	PART No. BULK QTY	ALLOY 825 SS316 BOSS	FORM
1200	205 mm	KD52Q000		HAIRPIN
1500	205 mm	KD52R000		HAIRPIN
1800	205 mm	KD52S000	KD52S825	HAIRPIN
2000	225 mm	KD52T000		HAIRPIN
2400	260 mm	KD52U000		HAIRPIN
3600	205 mm	KD52W000	KD52W825	FOLDBACK
4800	260 mm	KD52Y000		FOLDBACK

155 kW/m² SERIES

2400	205 mm	KD52W002		FOLDBACK
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130 kW/m² SERIES

2000	205 mm	KD52W001		FOLDBACK
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116 kW/m² SERIES



FOLDBACK

WATTS	PENETRATION	PART No. BULK QTY	WITH 7mm ID THERMOWELL	FORM
900	205 mm	KD67P000		HAIRPIN
1200	245 mm	KD67Q000		HAIRPIN
1500	295 mm	KD67R000		HAIRPIN
1800	200 mm	KD67S000	KD67ST00	FOLDBACK
2000	215 mm	KD67T000		FOLDBACK
2400	245 mm	KD67U000		FOLDBACK
2400	470 mm	KZ25H000		HAIRPIN
3000	295 mm	KD67V000		FOLDBACK
3600	345 mm	KD67W000		FOLDBACK
4800	445 mm	KD67X000		FOLDBACK

GASKET

	KQ99Q0	1" BSP GASKET
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