

Quality Engineering Built To Last

For over a quarter of a century BEMCO has led the field in the design and manufacture of equipment for the Surface Finishing Industry.

Our products are used daily in the *Aerospace*, *Automotive*, *Medical*, *PCB*, *Electronics* and *Engineering Industries* throughout the **UK**, **Europe** and **Globally**.

A company built on integrity and reliability, actively developing new products to enhance our existing range.

Many of the original fixtures and wire forms designed by BEMCO are still in common use to this day.







Electroplating Fixtures

Electroplating Jigs

Paint Fixtures

Standard Titanium Anodising Jigs Part 1

Standard Titanium Anodising Jigs Part 2

> Titanium Jig Accessories & Fasteners

Titanium Clips Part 1

Titanium Clips Part 2

Blocks & Cradles

Bespoke Titanium Jigs

Anodes

Heaters: VAT Hairpin H + S Tube Type 'U' Type Phosphate Tubular Heater Controls

Process Tanks

Panels

Coils

Metal Finishing Accessories

Globemarket t/a BEMCO

Unit 101 - 102 Middlemore Industrial Estate

Middlemore Road

Smethwick Birmingham

B66 2EP

Phone: 0121 236 5868

Email:

What We Do

Heaters

Corrosion resistant sheaths in Titanium, Mild Steel, Stainless Steel, Teflon and Lead available from stock in 1-18kW loadings, for over-the-side and through tank wall immersion, with or without thermostatic control. Separate thermostats and pockets. Flanged and screwed versions available.

Jigs and Fixtures

For electroplating, anodising, paint and electroless applications. Standard designs and custom built jigs are our speciality. Quick prototypes and fast turn round refurbishing service is offered.

Coils and Thermal Panels

Maintenance free heating and cooling of all types of process solutions, chemicals and foodstuffs. Thermal panels and coils are available in Titanium, Stainless Steel, Mild Steel and Inconel/Incoloy. Both panels and coils are sized and designed to suit the size of process tanks.

Anode Baskets and Cages

Titanium baskets with a variety of meshes for Nickel, Copper and Acid-zinc plating. Heavy gauge Mild Steel cages for Cyanide-zinc. Complete range of dipping baskets with wire mesh and perforated metals. Titanium anodising baskets made to order and refurbished.

Titanium Fasteners and Turned Parts

Wide range of UNC and metric threaded bolts, screws and hexagon nuts available from stock. Other sizes are available and made to order. Titanium anode hooks, anodising ancillaries and other turned parts are also available.

PVC Coatings

Where practical any product mentioned can be PVC covered in our renowned "Super Beckon". Our coating and stripping facilities are available on sub-contract basis. Collection and redelivery can be arranged if required. Other finishes including Halar and Flurene 177 available on request.

Tanks and Fabrications

Tanks, vessels, ducting, frames and pipework designed and constructed in wide range of metals and plastics. Coded welding and fabrication service available to meet clients specifications including ASME IX particularly Titanium, Stainless, Inconel/Incoloy.

ID Tags

On all of our jigs we provide an ID tagging system that allows customers to identify the correct jigs when repeat orders are placed. This means you can simply quote the ID tag number and we will know exactly what you want. The tags supplied can be attached to frames, crossbars, coils, panels or stems. The tags will remain visible even after electroplating, anodising or painting. Also it allows customers to easily see which part goes on each specific contact when loading a jig.



ID Tag Machine



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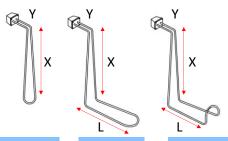
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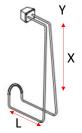
Heaters

At BEMCO we offer various types of heaters. These heaters are designed to be installed into **electroplating**, **anodising**, **chemical or aqueous** VAT's or Tanks. The types we offer are as follows:

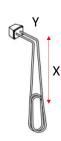
- VAT Heater
- 'U' Type Heater
- H + S Type Heater
- Thermostat with Sealed Pocket

VAT Heaters









Standard

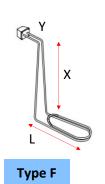
Type A

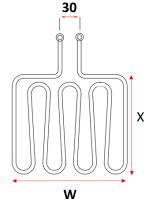
Type B

Type C 1

Type D Double Loop

Type E Triple Loop





Type G1 Phase Only

L = 90mm Minimum
 W = 356mm Minimum
 X = Depth of tank
 clearance which allows
 for pipework and sludge
 if necessary
 Y = 125mm Standard

Note = Tape on each heater supplied indicates the minimum solution level required

H + S Type Heaters



V Type TC Heater



Thermostat with Sealed Pocket

Available in Stainless (JSP), Titanium (JTP) or PVC Coated (JPP).

Temperature Range: 0 −100°C

Standard Size: Y = 125mm X = 525mm

Custom lengths available



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VAT Type Heaters

"V" type Hairpin Heaters are designed for clamping over the side of Metal Finishing Chemical/Water Vats. BEMCO offer a wide range of single and 3 phase electric VAT heaters from stock. Most dimensional and corrosion resistance requirements can be catered for. BEMCO specialise in producing heaters to individual customer's requirements or can offer to carry a design or a specification study on behalf of a client. Elements are available sheathed in; Titanium or Stainless Steel Type 316. A range of single and triple element heaters, with loadings from 2 to 18 kW can be supplied from stock. Elements are mineral-filled and rated 230v single phase, multi-element units are rated 400v three phase, at stated kW loadings. N.B. Whilst ready to advise on the type of heater required, BEMCO recommend that customers check with the suppliers of the solution to be heated as to the suitability of the sheathed material to be used. To ensure the safety of operating personnel, we strongly urge that all heaters be protected by earth leakage circuit breakers which should be installed to current I.E.E. regulations. Complete with ABS plastic terminal box to IP65 rating. Lead Cladding is also available on the standard range of VAT Type Heater.

Standard Range						
Sheath Material	eath Material No Thermostat With Thermos					
Stainless Steel	VS	VS TC				
Titanium	VT	VT TC				

Load Kw	Surface	Rating	Cold Leg (mm)	Vertical Leg (mm)	Order Reference		Weight (KG)
	W/cm ²	W/in ²			S.S 316	Titanium	
2	7.5	48	170	500	VS226	VT226	1
3	7.5	48	340	850	VS338	VT338	1.3
4	7.8	50	340	1000	VS444	VT444	1.5
6	78	50	340	1350	VS658	VT658	1.8
6	7.5	48	170	500	VS626	VT626	3.5
9	7.5	48	340	850	VS938	VT938	3.8
12	7.8	50	340	1000	VS1244	VT1244	4.2
18	7.8	50	340	1350	VS1858	VT1858	5

"TC" Heaters with Built-in thermostats 2 to 4kW, 1 phase. TC Type heaters incorporate an integral 16 amp rated thermostat unit which opens on a rising temperature: range is from 0-100°C (32-212°F). Loadings are available from 2 to 4 kW and are otherwise to the same specification as the V type range.

	TC Type									
Load Kw	Surface	Rating	Cold Leg (mm)	Vertical Leg (mm)	Order Reference		Weight (KG)			
	W/cm²	W/in²			S.S 316	Titanium				
2	7.5	48	170	500	VS226 TC	VT226 TC	1.5			
3	7.5	48	340	850	VS338 TC	VT338 TC	1.6			
4	7.8	50	340	1000	VS444 TC	VT444 TC	1.8			

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H + S Type Tube Heaters

Low watts density, withdrawable core, corrosion resistant, metal sheathed vat heaters are available for vertical (H Type) and horizontal (S Type) mounting for electroplating, anodising, chemical and aqueous vats. **Advantages**:

- Have a much lower working surface rating (lower watts density) than conventional vat heaters.
- Elements encased in their own individual corrosion resistant metal sleeve. They are less prone to scale build up and mechanical damage.
- Withdrawable core permits easy replacement of elements and eliminates the need to drain tanks (vats) when servicing.

	H Type									
Load Kw	Phases	Surface Rating		Cold Leg (mm)	Vertical Leg (mm)	Order Reference		Weight (KG)		
		W/cm²	W/in²			S.S 316	Titanium			
2	1	2.4	15	228	762	HS230	HT230	2.4		
3	1	3.6	23	280	889	HS335	HT335	2.6		
4	1	3.6	23	330	1067	HS442	HT442	3.2		
6	1 or 3	2.4	15	228	762	HS630	HT630	7		
9	1 or 3	3.6	23	280	889	HS935	HT935	8		
12	1 or 3	3.6	23	330	1067	HS124	HT124	9		

	S Type										
Load Kw	Phases	Surface Rating		Cold Leg (mm)	Vertical Leg (mm)	Order Reference		Weight (KG)			
		W/cm²	W/in²			S.S 316	Titanium				
2	1	2.4	15	228	762	SS230	ST230	3.2			
3	1	3.6	23	280	889	SS335	ST335	3.8			
4	1	3.6	23	330	1067	SS442	ST442	4.2			
6	1 or 3	2.4	15	228	762	SS630	ST630	11.4			
9	1 or 3	3.6	23	280	889	SS935	ST935	12.4			
12	1 or 3	3.6	23	330	1067	SS124	ST124	13.4			

S Type for side entry, vertical & horizontal mounting 2, 3 and 4kW are available on BS10 Table E, 2 inch nominal bore flange as standard. Triple elements 6, 9 and 12kW are available on their own heavy duty rectangular flange.

Mounting: H Type for tank rim mounting. S Type, flange or screwed boss fixing of single phased units.

Voltage: 230v single phase, 400v 3 phase star connection to give full kW ratings.

Note: Lower voltages will reduce kW rating.

Elements: High quality wire surrounded by mineral insulating powder encased by 2" inch, stainless steel type 316 or titanium tube.

Operating Temperature and Pressure: Working temperature is up to 150°C (300°F) maximum. Heaters have a maximum working pressure of (150 psi) 10 bar. Higher working pressures made to order.

Thermostat: Supplied at extra cost. Customer to specify temperature range required **Optional Extras:** Mounting flanges, 2¼" BSP weld sockets, thermostats and pockets, length extension and element replacements.

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'U' Type Heaters

At BEMCO we offer a specialist range of Industrial Immersion Heaters with 2¼" BSP head. **Stainless Steel Type 316L...Type US/Titanium...Type UT**. The BEMCO range of specialist industrial immersion heaters is designed for use where standard heaters are unsuitable for many arduous conditions. They are suitable for both vertical and horizontal mounting.

	SS316L Stainless Steel 11mm Diameter Elements										
Load	Number of	Phases	Surface	Rating	Immersed Length		Order	Weight (KG)			
(Kw)	Elements		W/cm²	W/in²	mm	in	Reference				
2	1	1	6.5	42	432	17	US17-2/1	1.5			
3	1	1	7.3	47	585	23	US23-3/1	1.6			
4	1	1	13	84	432	17	US17-4/1	1.5			
4	1	1	7.8	50	737	29	US29-4/1	1.7			
6	2	1	7.3	47	585	23	US23-6/2	2.1			
6	3	1 or 3	6.5	42	432	17	US17-6/3	2.5			
9	3	1 or 3	7.3	47	585	23	US23-9/3	2.6			
12	3	1 or 3	7.8	50	737	29	US29-12/3	3			

	Titanium 11mm Diameter Elements									
Load	Number of	Phases	Surface	Rating	Immersed Length		Order	Weight (KG)		
(Kw)	Elements		W/cm²	W/in²	mm	in	Reference			
2	1	1	6.5	42	432	17	UT17-2/1	1.5		
3	1	1	7.3	47	585	23	UT23-3/1	1.6		
4	1	1	7.8	50	737	29	UT29-4/1	1.7		
4	2	1	6.5	42	432	17	UT17-4/2	2		
6	2	1	7.3	47	585	23	UT23-6/2	2.1		
6	3	1 or 3	6.5	42	432	17	UT17-6/3	2.5		
8	2	1	7.8	50	737	29	UT29-8/2	2.5		
9	3	1 or 3	6.5	42	585	23	UT23-9/3	2.7		
12	3	1 or 3	7.8	50	737	29	UT29-12/3	3		





Head: 2¼" BSP male thread in stainless steel type 316 (US) or titanium (UT) Voltage: 230v single phase, 400v 3 phase star connection to give full kW ratings. Elements: High quality wire surrounded by mineral insulating powder encased by stainless steel type 316 or titanium with a 38mm dead leg on wet side of head. Operating Temperature and Pressure: Working temperature is up to 150°C (300°F) maximum. Heaters have a maximum working pressure of (150 psi) 10 bar. Higher working pressures made to order.

Thermostat: Supplied at extra cost. Customer to specify temperature range required **Optional Extras:** Mounting flanges, 2¼" BSP weld sockets, thermostats and pockets, length extension and element replacements.

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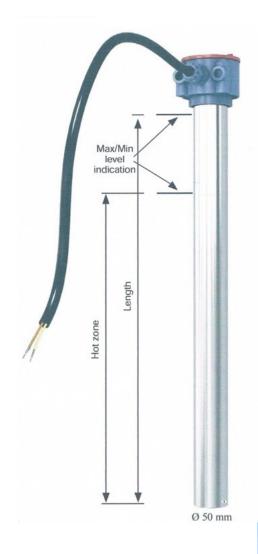
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Phosphate Heaters

Certified Tubular Heater: Rigid Phosphate Heater— Model SFO for vertical use. Special heater for Phosphate bath.

- SFO is the answer for heavy duty service.
- Heating element are cast in aluminium inside a tube, outside diameter is 54mm
- Tube of Stainless Steel 2350
- * Excellent heat transfer
- Ratings from 1000-3300
 Watts
- 1-phase 230 Volts & 3-phase 400 Volts
- Heat sealing reinforced PP, diameter 85mm. Threaded lid, sealed with O-rings. Sealing IP66
- Impact resistant
- Can withstand mechanical cleaning



Model	Watts	Length	Hot Zone	HES (Watts/cm²)
SFO 60100 + V	1000	580mm	450mm	1.5
SFO 80018 + V	1800	780mm	550mm	2
SFO 10022 + V	2200	980mm	720mm	2
SFO 12528 + V	2800	1230mm	870mm	2
SFO 15033 + V	3300	1470mm	1120mm	2

Specify + V:

HES = Heat Exchange Surface watt/cm²

1 for 1 phase 230V

2 for 3 phase 230V

3 for 3 phase 400V

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Tubular Heaters

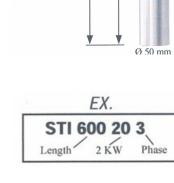
Certified Tubular Heaters 1000—4500 Watts, in Steel, Stainless Steel and Titanium.

- * Head— Sealing IP66. Reinforced PP, diameter 85mm. Threaded lid, sealed with O-rings. Easy opening head to replace conduit or heating element.
- * **Heating Element**—Heat resistant 304 Stainless Steel element, which can easily be changed if necessary.
- * **Conduit of PVC**—Earthed to metal parts with a standard length of 2 metres. Other lengths available on request.

Titanium (STI) Grade 2 commercial pure									
Diamete	Diameter 50mm , Thickness 0.9mm								
Model No. Watts Length Hot Zone HES									
STI50010 + V	1000	480mm	370	2.1					
STI60020 + V	2000	570mm	460	3					
STI80020 + V	2000	780mm	610	2.3					
STI80025 + V	2500	780mm	610	2.9					
STI10030 + V	3000	980mm	780	2.6					
STI12535 + V	3500	1210mm	900	2.6					
STI15045 + V	4500	1470mm	1150	2.6					

Stainless Steel tubes (SRF) EN10217-7 Stainless Steel nr.1.4571 Diameter 50mm , Thickness 1.5mm							
Model No.	Watts	Length	Hot Zone	HES			
SRF50010 + V	1000	480mm	370	2.1			
SRF60020 + V	2000	570mm	460	3			
SRF80020 + V	2000	780mm	610	2.3			
SRF80025 + V	2500	780mm	610	2.9			
SRF10030 + V	3000	980mm	780	2.6			
SRF12535 + V	3500	1210mm	900	2.6			
SRF15045 + V	4500	1470mm	1150	2.6			

Steel tubes (SST) EN10025:2004 Steel nr.S235							
	er 50mm ,						
Model No.	Watts	Length	Hot Zone	HES			
SST50010 + V	1000	480mm	370	2.1			
SST60020 + V	2000	570mm	460	3			
SST80020 + V	2000	780mm	610	2.3			
SST80025 + V	2500	780mm	610	2.9			
SST10030 + V	3000	980mm	780	2.6			
SST12535 + V	3500	1210mm	900	2.6			
SST15045 + V	4500	1470mm	1150	2.6			



Max/Min level indication

Length

Hot zone

Specify + V:

1 for 1 phase 230V

2 for 3 phase 230V

3 for 3 phase 400V

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Heater Controls

Thermostat—Isabelle Style

Non indicating thermostat with plastic junction box

Temperature sensor covered with Teflon for resistance in chemical solutions



Product Code	Power	Max Wattage	Max Amps	Temp Range	Sensor Length	Accuracy
Isabelle 1	230V	3100	16	30-90°C	1.5m	±1.5°C
Isabelle 2	3x400V	9000	16	30-90°C	1.5m	±1.5°C

Digital Thermal Regulator—Kelvin Style

- Dual LED display to set points
- * Provides precise control in most aqueous processes
- Use with PT-100 sensor
- Temperature range with PT-100 sensor
 -50°C to + 180°C. Accuracy ±0.6°C
- * Power 230V, 50/60Hz
- * Additional features Type J, K, T thermocouples



PT-100 Sensor Rigid

- Probe in Stainless Steel (SS) coated in Teflon (PTFE)
- * Standard lengths 300mm, 400mm, 500mm and 800mm
- * Optional length available
- * Temperature range -50°C to +180°C



PT-100 Sensor Flexible

- Teflon coated
- Standard lengths 1.5m
- * Optional length available
- * Temperature range -50°C to +180°C



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