HMELEMENTS

HEATING RESISTORS

ELEMENTS FOR RESISTANCE HEATING

Heatmasters' preheat and post-weld heat treatment elements are designed to ensure that the right heating element is used for the right job. The company also manufactures tailor-made heating elements to clients' specifications.

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the wizards of metal

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QUALITY MEANS LONGER LIFE

Heating elements are designed to take the demands of the process and working conditions into account. Over thirty years of experience in on-site work have shown which constructions and materials are the most suitable.

CONSTRUCTION DETAILS

The resistance wire used in heating mats is NiCr 80/20, which is the most suitable for the job. The wire material used in the tails is nickel which does not heat up during the heating process.
In heating elements like types VLV, VLH, VPE and furnace elements, the wire is solid NiCr (80/20) wire in the form of a spiral.

The tail wire and the resistance wire are welded together to form a reliable joint.

Beads in heating elements are high-quality aluminium oxide (Al2O3 ; 95 %) ceramic. The material is according to IEC 672 group C-700. Basic colours are: white and pink

Heating elements in which there is a risk of tail breakage are equipped with tail supports. This construction ensures a longer product life.

ELEMENT TYPES

Type	°Cmax	Application
VHV	1050	Basic heating mat for preheating and annealing
VHVP	1050	Half size heating mat for preheating and annealing
VHK	1050	Flexible haeting mat for preheating and annealing of cone shaped objects
VHY	1050	Heating mat for preheating and annealing of studtype joints
VLV	800	Channel heater
VLH	800	Four bank channel heater
VETS	450	Flexible heating element for preheating
VET	450	Flexible heating element for preheating
VPE	800	Chamber heater for preheating

Fixing the heating elements is easy, using a steel band or magnetic clamps. The banding tools - band tensioner and sealer - are easy to use.

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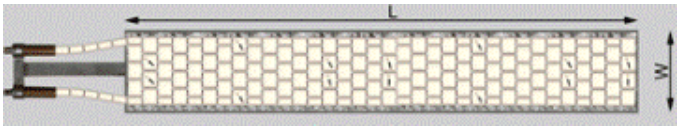
PREHEATING ELEMENTS

VET-Flexible preheating element

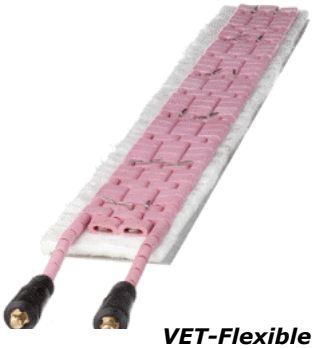
Insulated VET-preheaters are suitable for the preheating of flat or round workpieces, and are easy to use. The thermal insulation is part of the element. Fixing onto the workpiece is simple and fast using steel banding or clamping magnets.



Average heating power 3,0 kW/67 V
Operating temperature 0 ... 450 °C

No	Type	Size
1405002	VET-450	P= 2,9kW/67V, 200x450 mm
1405004	VET-450C	P= 2,9kW/67V, 200x450 mm
1405006	VET-800	P= 2,9kW/67V, 125x800 mm
1405008	VET-800C	P= 2,9kW/67V, 125x800 mm
1405010	VET-950	P= 3,0kW/67V, 100x950 mm
1405012	VET-950C	P= 3,0kW/67V, 100x950 mm
1405014	VET-1450	P= 2,9kW/67V, 55x1450 mm
1405016	VET-1450C	P= 2,9kW/67V, 55x1450 mm

C = camlock type connectors, others with dinse type connectors

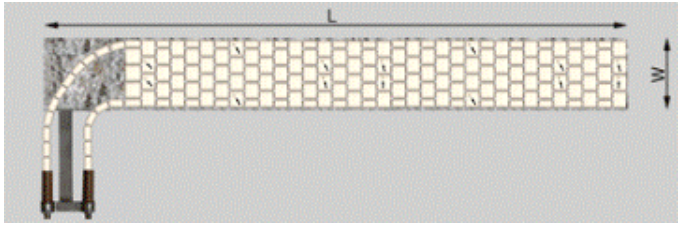


Camlock type connectors

VET-Flexible preheating element

VETS-Flexible preheating element

Insulated VET-preheaters are suitable for the preheating of flat or round workpieces, and are easy to use. The thermal insulation is part of the element. Fixing onto the workpiece is simple and fast using steel banding or clamping magnets. Connectors for the power supply are located in the side of the element



Average heating power 3,0 kW/67 V
Operating temperature 0 ... 450 °C

No	Type	Size
1405502	VETS-500	P= 3,1kW/67V, 200x500 mm
1405504	VETS-500C	P= 3,1kW/67V, 200x500 mm
1405506	VETS-730	P= 2,8kW/67V, 125x730 mm
1405508	VETS-730C	P= 2,8kW/67V, 125x730 mm
1405510	VETS-800	P= 2,9kW/67V, 125x800 mm
1405512	VETS-800C	P= 2,9kW/67V, 125x800 mm
1405514	VETS-1000	P= 3,2kW/67V, 100x1000 mm
1405516	VETS-1000C	P= 3,2kW/67V, 100x1000 mm
1405518	VETS-1500	P= 3,1kW/67V, 55x1500 mm
1405520	VETS-1500C	P= 3,1kW/67V, 55x1500 mm

C = camlock type connectors, others with dinse type connectors

Camlock type connectors

VETS-flexible preheating element

PREHEATING AND ANNEALING ELEMENTS

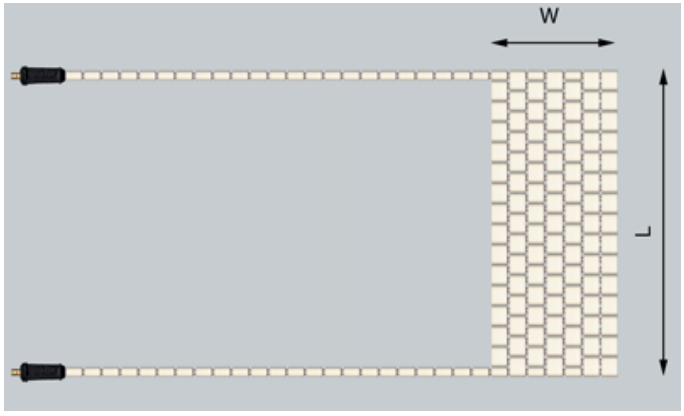
Construction of VHV-, VHVP- and VHM type heating elements are the same, only sizes, use and technical data are different.

VHV-heating mat

VHV-heating mats are suitable for preheating and post-weld heat treatments, process heating etc. VHV-heating elements are used for flat or round workpieces

Heating power 3,0 ... 3,6 kW/67 V
Operating temperature 0 ... 1050 °C

No	Type	Size
2000601	VHV-30x2170 (1x101)	P=3,4kW/67V, L=30 mm W=2170 mm
2000602	VHV-55x1095 (2x51)	P=3,4kW/67V, L=55 mm W=1095 mm
2000603	VHV-80x730 (3x34)	P=3,4kW/67V, L=80 mm W=730 mm
2000604	VHV-105x540 (4x25)	P=3,4kW/67V, L=105 mm W=540 mm
2000605	VHV-130x430 (5x20)	P=3,4kW/67V, L=130 mm W=430 mm
2000606	VHV-160x365 (6x17)	P=3,4kW/67V, L=160 mm W=365 mm
2000607	VHV-185x325 (7x15)	P=3,3kW/67V, L=185 mm W=325 mm
2000608	VHV-210x280 (8x13)	P=3,3kW/67V, L=210 mm W=280 mm
2000609	VHV-235x235 (9x11)	P=3,5kW/67V, L=235 mm W=235 mm
2000610	VHV-260x215 (10x10)	P=3,4kW/67V, L=260 mm W=215 mm
2000611	VHV-285x195 (11x9)	P=3,5kW/67V, L=285 mm W=195 mm
2000612	VHV-315x195 (12x9)	P=3,2kW/67V, L=315 mm W=195 mm
2000613	VHV-340x170 (13x8)	P=3,3kW/67V, L=340 mm W=170 mm
2000614	VHV-365x150 (14x7)	P=3,5kW/67V, L=365 mm W=150 mm
2000615	VHV-390x150 (15x7)	P=3,3kW/67V, L=390 mm W=150 mm
2000616	VHV-415x130 (16x6)	P=3,6kW/67V, L=415 mm W=130 mm
2000617	VHV-445x130 (17x6)	P=3,4kW/67V, L=445 mm W=136 mm
2000618	VHV-470x130 (18x6)	P=3,2kW/67V, L=470 mm W=130 mm
2000619	VHV-495x110 (19x5)	P=3,6kW/67V, L=495 mm W=110 mm
2000620	VHV-520x110 (20x5)	P=3,5kW/67V, L=520 mm W=110 mm
2000621	VHV-545x110 (21x5)	P=3,3kW/67V, L=545 mm W=110 mm
2000622	VHV-570x110 (22x5)	P=3,2kW/67V, L=570 mm W=110 mm
2000623	VHV-600x85 (23x4)	P=3,7kW/67V, L=600 mm W=85 mm
2000624	VHV-625x85 (24x4)	P=3,6kW/67V, L=625 mm W=85 mm
2000625	VHV-650x85 (25x4)	P=3,5kW/67V, L=650 mm W=85 mm
2000626	VHV-675x85 (26x4)	P=3,4kW/67V, L=675 mm W=85 mm
2000627	VHV-700x85 (27x4)	P=3,2kW/67V, L=700 mm W=85 mm
2000628	VHV-730x85 (28x4)	P=3,1kW/67V, L=730 mm W=85 mm
2000629	VHV-755x85 (29x4)	P=3,0kW/67V, L=755 mm W=85 mm
2000630	VHV-780x85 (30x4)	P=3,0kW/69V, L=780 mm W=85 mm
2000631	VHV-805x85 (31x4)	P=2,9kW/67V, L=805 mm W=85 mm
2000632	VHV-830x65 (32x3)	P=3,6kW/67V, L=830 mm W=65 mm
2000633	VHV-855x65 (33x3)	P=3,5kW/67V, L=855 mm W=65 mm
2000634	VHV-885x65 (34x3)	P=3,4kW/67V, L=885 mm W=65 mm
2000635	VHV-910x65 (35x3)	P=3,4kW/67V, L=910 mm W=65 mm
2000636	VHV-935x65 (36x3)	P=3,3kW/67V, L=935 mm W=65 mm
2000637	VHV-960x65 (37x3)	P=3,2kW/67V, L=960 mm W=65 mm
2000638	VHV-985x65 (38x3)	P=3,1kW/67V, L=985 mm W=65 mm
2000639	VHV-1015x65 (39x3)	P=3,0kW/67V, L=1015 mm W=65 mm
2000640	VHV-1040x45 (40x2)	P=2,9kW/67V, L=1040 mm W=65 mm
2000641	VHV-1065x65 (41x3)	P=2,9kW/67V, L=1065 mm W=65 mm
2000642	VHV-1090x65 (42x3)	P=2,8kW/67V, L=1090 mm W=65 mm
2000643	VHV-1115x65 (43x3)	P=2,8kW/67V, L=1115 mm W=65 mm
2000644	VHV-1140x65 (44x3)	P=2,7kW/67V, L=1140 mm W=65 mm
2000645	VHV-1170x65 (45x3)	P=2,7kW/67V, L=1170 mm W=65 mm
2000646	VHV-1195x65 (46x3)	P=2,6kW/67V, L=1195 mm W=65 mm
2000647	VHV-1220x65 (47x3)	P=2,6kW/67V, L=1220 mm W=65 mm
2000648	VHV-1245x45 (48x2)	P=3,7kW/67V, L=1245 mm W=45 mm
2000649	VHV-1270x45 (49x2)	P=3,6kW/67V, L=1270 mm W=45 mm
2000650	VHV-1295x45 (50x2)	P=3,5kW/67V, L=1295 mm W=45 mm



VHV-, VHVP- and VHM- type heating mat

VHY-type heating mat

VHK-type heating mat

VHV heating mats with Dinse connectors (with Camlock connectors 2000701 ... 2000750)

VHVP-heating mat for annealing

VHVP-heating mats are about half size of VHV-type heating mat and they are designed especially for Heatmasters' inverters and Heatmasters' thyristor type power sources.

Two VHVP-heating mats must have a series connection when using normal standard voltage power sources.

Heating power 5,9 ...7,2 kW/67 V
Operating temperature 0 ... 1050 °C

No	Type	Size
2001101	VHVp-30x1075(1x50)	P=6,7kW/67V, L=30, W=1075mm
2001102	VHVp-55x540(2x25)	P=6,8kW/67V, L=55, W=540mm
2001103	VHVp-80x365(3x17)	P=6,7kW/67V, L=80, W=365mm
2001104	VHVp-105x280(4x13)	P=6,6kW/67V, L=105, W=280mm
2001105	VHVp-130x215(5x10)	P=6,8kW/67V, L=130, W=215mm
2001106	VHVp-160x195(6x9)	P=6,7kW/67V, L=160, W=195mm
2001107	VHVp-185x150(7x7)	P=7,0kW/67V, L=185, W=150mm
2001108	VHVp-210x130(8x6)	P=7,1kW/67V, L=210, W=130mm
2001109	VHVp-235x130(9x6)	P=6,4kW/67V, L=235, W=130mm
2001110	VHVp-260x110(10x5)	P=6,9kW/67V, L=260, W=110mm
2001111	VHVp-285x110(11x5)	P=6,3kW/67V, L=285, W=110mm
2001112	VHVp-315x85(12x4)	P=7,2kW/67V, L=315, W=85mm
2001113	VHVp-340x85(13x4)	P=6,7kW/67V, L=340, W=85mm
2001114	VHVp-365x85(14x4)	P=6,2kW/67V, L=365, W=85mm
2001115	VHVp-390x85(15x4)	P=5,9kW/67V, L=390, W=85mm
2001116	VHVp-415x65(16x3)	P=7,2kW/67V, L=415, W=65mm
2001117	VHVp-445x65(17x3)	P=6,8kW/67V, L=445, W=65mm
2001118	VHVp-470x65(18x3)	P=6,5kW/67V, L=470, W=65mm
2001119	VHVp-495x65(19x3)	P=6,2kW/67V, L=495, W=65mm
2001120	VHVp-520x65(20x3)	P=5,9kW/67V, L=520, W=65mm
2001121	VHVp-545x65(21x3)	P=5,7kW/67V, L=545, W=65mm
2001122	VHVp-570x65(22x3)	P=5,4kW/67V, L=570, W=65mm
2001123	VHVp-600x65(23x3)	P=5,2kW/67V, L=600, W=65mm
2001124	VHVp-625x45(24x2)	P=7,3kW/67V, L=625, W=45mm
2001125	VHVp-650x45(25x2)	P=7,0kW/67V, L=650, W=45mm
2001126	VHVp-675x45(26x2)	P=6,8kW/67V, L=675, W=45mm
2001127	VHVp-700x45(27x2)	P=6,6kW/67V, L=700, W=45mm
2001128	VHVp-730x45(28x2)	P=6,4kW/67V, L=730, W=45mm
2001129	VHVp-755x45(29x2)	P=6,2kW/67V, L=755, W=45mm
2001130	VHVp-780x45(30x2)	P=6,0kW/67V, L=780, W=45mm
2001131	VHVp-805x45(31x2)	P=5,8kW/67V, L=805, W=45mm
2001132	VHVp-830x45(32x2)	P=5,7kW/67V, L=830, W=45mm

VHVp heating mats with Dince connectors (with Camlock connectors 2001201 ... 2001216)

VHY-Stud heater

VHY-stud heater is used for pre- and post weld heating of studs and outlet tubes. The form of VHY-stud heater enables to fix the heater near around the weld.

Heating power 3,0 ... 3,4 kW/67 V
Operating temperature 0 ... 1050 °C

No	Type	Description
1403002	VHY-260	Stud heater, slot 110 mm
1403004	VHY-260C	Stud heater, slot 110 mm
1403006	VHY-285	Stud heater, slot 90 mm
1403008	VHY-285C	Stud heater, slot 90 mm
1403010	VHY-310	Stud heater, slot 52 mm
1403012	VHY-310C	Stud heater, slot 52 mm

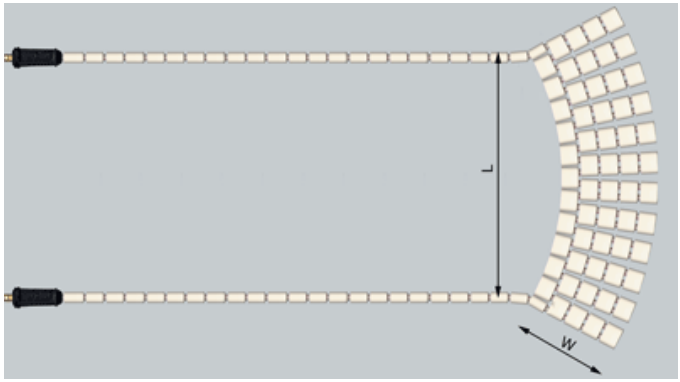
C = Camlock type -connectors, others with Dinse type -connectors

VHK-Flexible cone heater

VHK-heating mat spreads like fingers and is suitable for use on cone-shaped workpieces. It is used typically on the welds of studs and outlet tubes etc.

Heating power 3,0 ... 3,4 kW/67 V
Operating temperature 0 ... 1050 °C

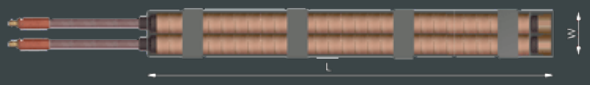
No	Type	Description
1402502	VHK-310	Cone heater
1402504	VHK-310C	Cone heater
1402506	VHK-360	Cone heater
1402508	VHK-360C	Cone heater
1402510	VHK- 420	Cone heater
1402512	VHK- 420C	Cone heater
1402514	VHK-520	Cone heater
1402516	VHK-520C	Cone heater
1402518	VHK-650	Cone heater
1402520	VHK-650C	Cone heater
1402522	VHK-910	Cone heater
1402524	VHK-910C	Cone heater



C = Camlock type -connectors, others with Dinse type -connectors

CHANNEL HEATERS

VLV-Channel heater



The VLV-channel heater is designed for pre- and post-weld heating with normal heat treatment devices. It is used for the internal heating of tubes and other cylindrical workpieces as well as for heating temporary furnaces.

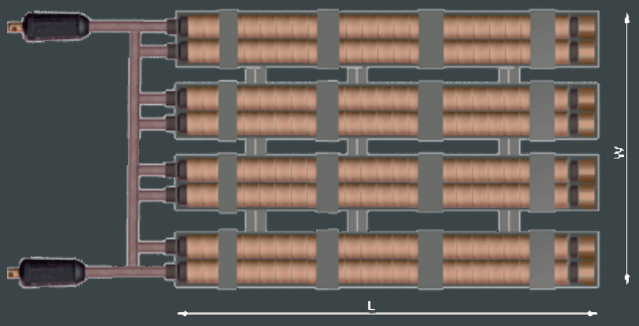
Average heating power 3,0 kW/67 V
Operating temperature 800 °C

No	Type	Size
1404002	VLV-700 channel heater	700x65x20 mm
1404006	VLV-1200 channel heater	1200x65x30 mm
1404010	VLV-1600 channel heater	1600x65x30 mm

VLV-Channel heater

Dinse type -connectors

VLH-Channel heater



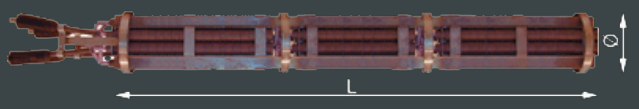
The VLH-Channel heater is designed for pre- and post-weld heating using normal heat treatment devices. VLH is used primarily for preheating and for temporary heat treatment furnaces but is also suitable for many other applications.

Average heating power 12,0 kW/67 V
Operating temperature 800 °C

No	Type	Description
1404502	VLH-700	Four bank channel heater
1404506	VLH-1200	Four bank channel heater

Dinse type -connectors

VPE-Chamber heater



The VPE-chamber heater is designed for preheating pipes and tubes from the inside using normal heat treatment devices. There are two standard sizes, others are designed and produced according by the order. Maximum produced lenght is 7,0 m

Average heating power 12,0 ... 36,0 kW/67 V
Operating temperature 800 °C

No	Type	Size
1408506	VPE-Ø135-2250	L = 2250 mm
1408508	VPE-Ø150-2250	L = 2250 mm

Dinse type -connectors

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