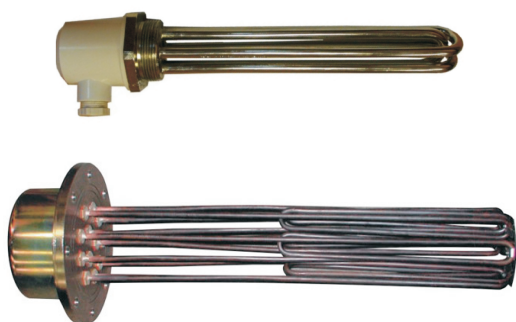


HEATING ELEMENTS FOR LIQUID HEATING

power 500W - 50 000W
water and similar
liquid heating



DESCRIPTION:

- flange material: steel including rubber seal, galvanized steel, brass nickel-plated/stainless steel, stainless steel 17 240/1.4301; 17 346/1.4401
- rods material: copper - nickel-plated/stainless steel, stainless steel 17 240/1.4301; 17 346/1.4401

APPLICATION:

- electric appliances – boilers, washing machines, dishwashers, electric-boilers, oil radiators, hotwater radiators, kettles, coffee machines, deep fryers
 - food industry and gastronomy
 - water heaters, various brewing and boiling machines, gas chambers, deep fryers and frying devices
- transportation and industry – heating of coolants and transmission oils in motor vehicles during winter operation

TECHNICAL PARAMETERS:

- power: 500-50 000W
- power supply: 110, 230, 400, 480V, individual
- IP protection: IP 00 - IP 68

SPECIFICATION:

Heating elements are designed for water and similar liquid heating without risk of medium carbonisation on the elements surface. They consist of heating rods in desired shape and of attachment flange according to application and use. The heating rods are usually made of copper, copper with surface working, various classes of stainless steel, may be teflon-plated. Flanges are made of brass, steel and various classes of stainless steel. Loading of the heating rods is dependant on liquid flow and usually ranges within 6-9W/cm², according to the actual application there is an option of adjustments for higher/lower loading. Power supply of the heating rods is optional according to customer requirements 110V, 230V, 400V, 480V, 500V. On individual request the heating elements may be supplied with other adjustments: atypical shape of heating rods, individual connected flanges, other materials or surface working.

Socket heating element

Type: 5107; 14006950; 16.xxx

SPECIFICATION:

Heating element consists of heating rod connected to the oval-shaped flange. Outlets feature flat pins. Designed for direct water heating in electric water heaters, during operation it must be fully immersed up to the flange. Attachment performed by means of threaded pin M6, sealing by rubber gasket, which is part of the flange.

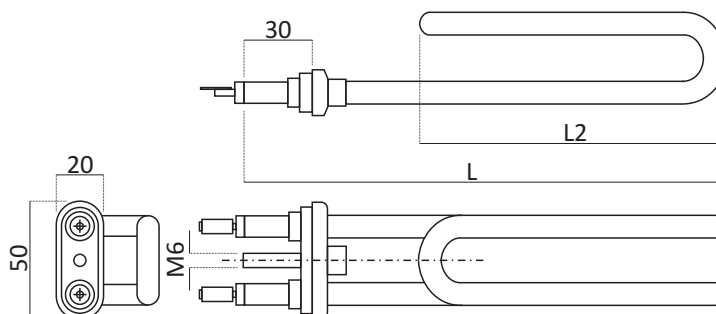
DESCRIPTION:

- heating rods: copper - nickel-plated
- flange: brass - nickel-plated, including rubber gasket
- PN: 6bar



TECHNICAL PARAMETERS:

Type	Supply (V)	Power (W)	L (mm)	L2 (mm)	Thread		
5107/7	140695070	16.121	230	850	170	94	Oval flange 20x50 mm
5107/1	140695010	16.102	230	1000	205	121	
5107/8	140695020	16.131	230	1350	230	146	
5107/3	140695030	16.141	230	1600	330	236	
5107/9	1406950740	16.151	230	1750	290	213	
5107/6	140695060	16.161	230	2000	325	208	
5107/5	140695050	16.171	230	2400	400	313	



Threaded heating element

Type: 5101 / 5102; 14010970; 40.xxx

SPECIFICATION:

Heating element consists of one heating rod, attached to a brass head (M48x2/G6/4"). Heating rod is terminated by connection clamps with M4 screws, which serve for inlet cable connection. Designed for water and similar liquid heating (boilers), during operation it must be fully immersed up to the head. For flange sealing it is recommended to use copper, klingerit or other appropriate gasket under the thread.

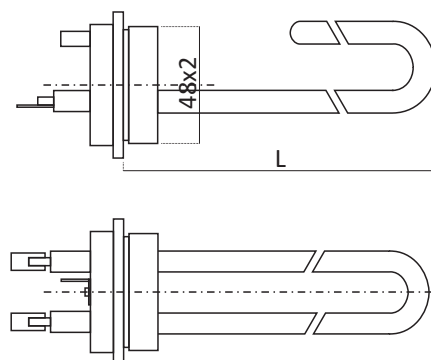
DESCRIPTION:

- heating rods: copper - nickel-plated
- flange: brass - nickel-plated,
- PN: 6bar



TECHNICAL PARAMETERS:

Type	Supply (V)	Power (W)	L (mm)	L2 (mm)	Thread		
5101/011	1401097010	40.800	230	800	285	M48x2 G6/4"	
5101/013	1401097020	40.1000	230	1000	370		
5102/011	1401097030	40.1600	230	1600	293		220
5101/018	1401097040	40.2000	230	2000	353		
5102/012	1401097050	40.2400	230	2400	363		300



Threaded heating element IP 44

Type: 5144; 14011900; 40.xxx



SPECIFICATION:

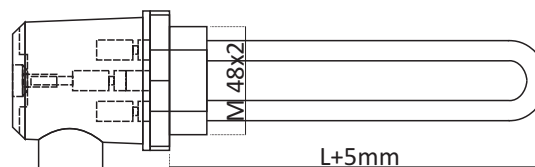
Heating element consists of three U-shaped heating rods fixed to a brass head with lid (protection IP 54) and with el. bushing PG13,5. Flange attachment hexagon of size 65. Designed for direct water and similar liquid heating in water heaters, electro-boilers, etc. During operation it must be constantly immersed up to the head.

DESCRIPTION:

- heating rods: copper - nickel-plated/stainless steel
- flange: brass - nickel-plated/ stainless steel
- PN: 10bar
- atypical adjustments: individual connectors – clamp, flanges according to DIN, other threads, etc.
- customized heating rods – length, shape, diameter, surface finish
- el. connection – voltage, power supply change

TECHNICAL PARAMETERS:

Type	Supply (V)	Power (W)	L (mm)	Thread
5144/1 1401190091	230/3x230	1500	148	M48x2 G6/4"
5144/2 1401190081	230/3x230	2000	178	
5144/3 1401190010 40.911	230/3x230	2400	203	
5144/4 1401190020 40.921	230/3x230	3000	240	
5144/5 1401190030 40.931	230/3x230	4000	303	
5144/6 1401190040 40.941	230/3x230	4500	333	
5144/7 1401190050 40.951	230/3x230	6000	428	
5144/8 1401190060 40.961	400/3x400	7500	520	



Heating element for washing machines

Type: 14089; 02.xxx



SPECIFICATION:

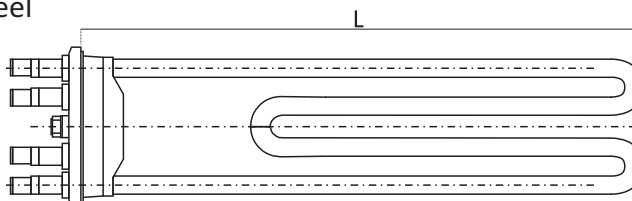
Heating element for direct water heating in automatic washing machines. There is a flat-oval hole 18x70 serving for installation, sealing is done by means of one screw M8. Heating rod is made of copper or stainless steel and must be immersed during all operation.

DESCRIPTION:

- heating rods: copper - nickel-plated / stainless steel
- flange: steel including rubber seal
- PN: 6bar
- optional individual adjustments: length, shape, power

TECHNICAL PARAMETERS:

Type	Supply (V)	Power (W)	L (mm)	L2 (mm)	Thread
1408990060 02.1750	230	1750	190		Oval flange for hole 70x18 mm
1408990040 02.2000	230	2000	225		
1408990100 02.2500	230	2500	180	220	
1408990150 02.2800	230	2800	300		
1408990050 02.3000	380	3000	370	300	
1408990080 02.4000	380	4000	370		



Heating element for industrial washing machines

Type: 309/989; K048,052

SPECIFICATION:

Heating element is designed for direct water heating in industrial washing machines, it has two U-shaped heating rods placed in one flange with rubber seal, determined into hole 70x18mm. Sealing is done by means of one screw M8. Heating rod is made of copper or stainless steel and must be fully immersed during operation. Heating elements are to be connected on nominal voltage as per wiring diagram of appliance for which they are designed.

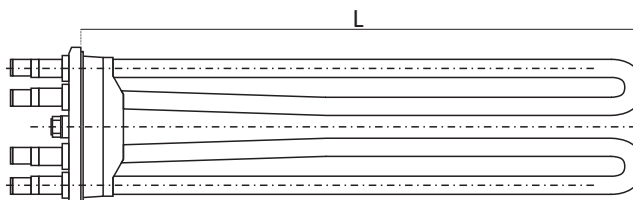
DESCRIPTION:

- heating elements: copper - nickel-plated / stainless steel
- flange: steel including rubber seal
- PN: 6bar
- option of individual adjustments: length, shape, power



TECHNICAL PARAMETERS:

Type		Supply (V)	Power (W)	L (mm)	Material	Thread
309	K052	230	2x2000	300	Copper	Oval flange for hole 70x18 mm
309		230	2x2000	350	Copper	
309		230	2x2000	470	Copper	
309	K048	230	2x3000	470	Copper	



Heating element for dish washers

Type: 14520

SPECIFICATION:

Heating element designed for dish washers produced by ALBA Hořovice company. Heating rods material - stainless steel, flange is made of brass.

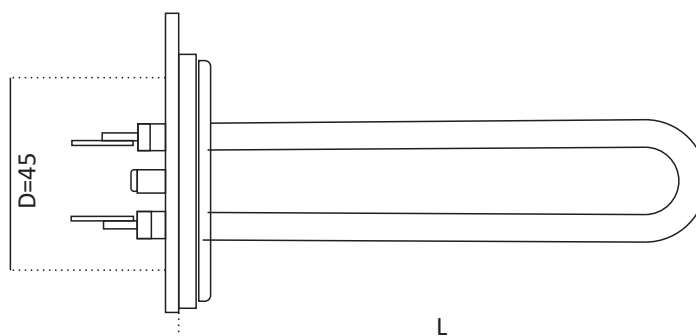
DESCRIPTION:

- stainless steel
- flange: brass
- PN: 6bar



TECHNICAL PARAMETERS:

Type	Supply (V)	Power (W)	L (mm)	Note
1452090000	3x230	3x2000	326	
1452090010	3x230	3x1333	326	
1452090030	3x230	3x2000	326	only with hole
1452090040	3x230	3x2000	326	with well
1452090050	3x230	3x1333	326	Cu-Ms/Ni
1452090060	3x400	3x3000	440	with well
1452090070	3x400	3x1333	326	



FLANGE HEATING ELEMENT UP TO 15 000W

type 14063 / 4034
7 500-15 000W



DESCRIPTION:

- steel cover of the terminal board IP 42
 - heating rods: copper, steel, stainless steel 17 240/1.4301; 17 346/1.4401
 - flange: galvanized steel, stainless steel 17 240/1.4301; 17 346/1.4401
- flange DIN 2501, EN 1092-1, ANSI B16,5, individual

APPLICATION:

- power engineering
- mechanical engineering
 - food industry
- pharmaceutical industry
- automotive industry

TECHNICAL PARAMETERS:

- power: 7 500, 9 000, 12 000, 15 000W, individual
 - power supply 120, 230, 400, 480, 500V
- atypical adjustments: increased IP, inbuilt el. control, inbuilt thermostat control, limit switches etc.
 - individual length and shape of heating rods

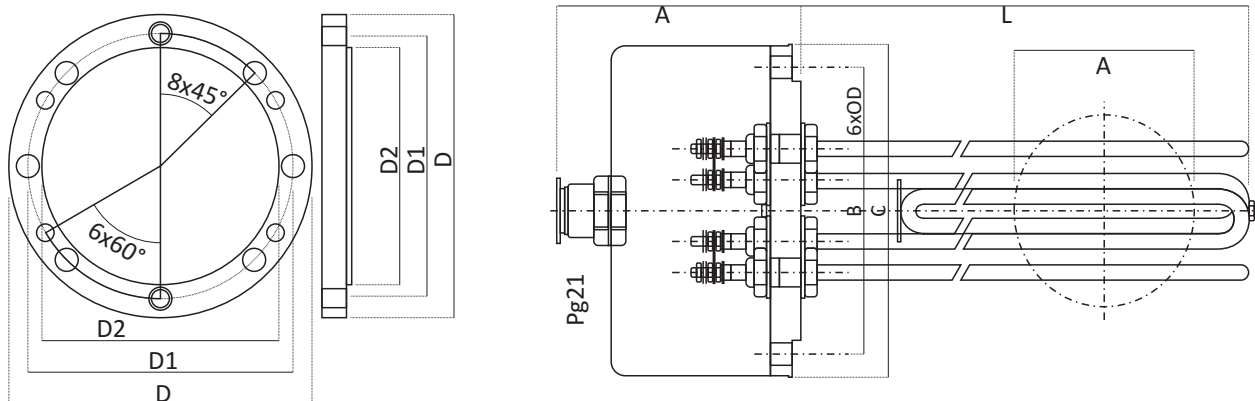
SPECIFICATION:

Heating rods are designed for direct water and similar liquid heating. During operation the rods must be fully immersed in the liquid.

Max. permissible pressure 1MPa. Heating rods with longer submersible length than 700mm should be supported.

Flange heating elements consist of steel/stainless steel flange (according to DIN 2501, EN 1092-1, ANSI B16,5/ alternatively on request) and three heating rods. Ceramic terminal board is protected by steel cover with el. bushing GP21/18, ensuring IP 42.

Type		Power supply (V)	Power (W)	L (mm)	Coating material
1406390010	403491010	3x400	7500	500	copper rods
1406390020	403491020	3x400	9000	500	copper rods
1406390030	403491050	3x400	12000	700	copper rods
1406390040	403491070	3x400	15000	800	copper rods
1406390060		3x480	7500	500	copper rods
1406390060		3x480	9000	700	copper rods
	403493010	3x400	7500	500	stainless steel rods
	403493020	3x400	9000	500	stainless steel rods
	403493050	3x400	12000	700	stainless steel rods
	403493070	3x400	15000	800	stainless steel rods



Connection flange dimensions according to PN					
PN(MPa)	D(mm)	D1(mm)	A(mm)	Screw	Test pressure MPa
1,0	182	158	14	6xM12	1,3
Dimensions in mm					
A	B	C	D	E	
155	158	182	13	106	

Customized adjustments:

Power supply: 120, 230, 400, 480, 500V

Length and shape of heating rods: on individual requirements

Heating rods material: copper, steel, stainless steel 17 240/1.4301; 17 346/1.4401, teflon-plated

Flange design: flanges according to DIN 2501, EN 1092-1, ANSI B16,5, individual

Flange material: galvanized steel, stainless steel 17 240/1.4301; 17 346/1.4401

Atypical adjustments: increased IP protection, inbuilt el. control, inbuilt thermostat control, limit switches, etc.

FLANGE HEATING ELEMENT UP TO 50 000W

type 14071 / 4407
15 000-50 000W



DESCRIPTION:

- steel cover of terminal board IP 44
 - heating rods: copper, steel, stainless steel 17 240/1.4401; 17 346/1.4403
 - flange: galvanized steel, stainless steel 17 240/1.4401; 17 346/1.4403
- flange DIN 2501, EN 1092-1, ANSI B16,5, individual

APPLICATION:

- power-engineering
- mechanical engineering
 - food industry
- pharmaceutical industry
- automotive industry

TECHNICAL PARAMETERS:

- power: 15 000, 18 000, 24 000, 30 000, 50 000W, individual
- power supply 120, 230, 400, 480, 500V
- atypical adjustments: increased IP protection, inbuilt el. control, inbuilt thermostat control, limit switches etc.
- individual adjustments of length and shape of heating rods
 - pressure load : PN 0,6 / 1,0 / 2,5 / 6,4MPa

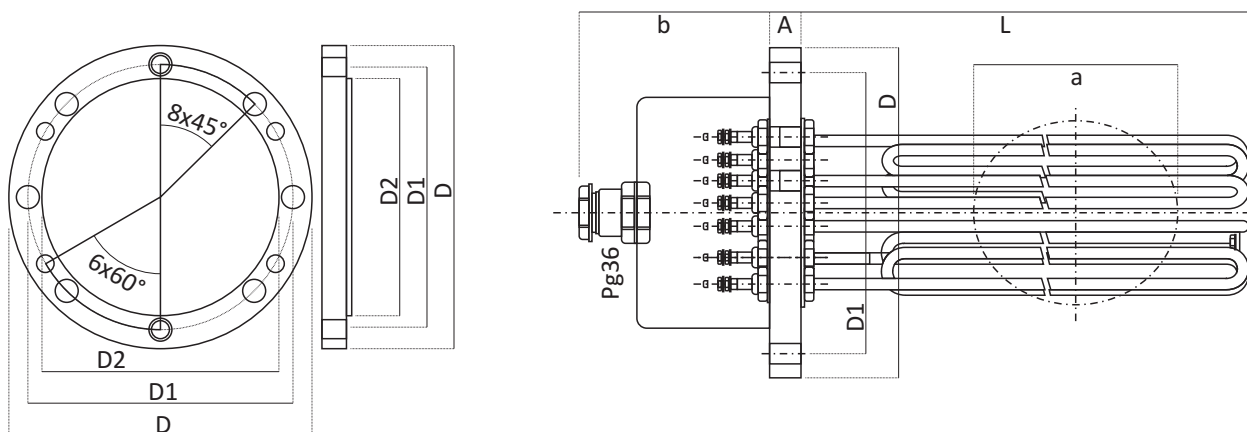
SPECIFICATION:

Heating rods are designed for direct water or similar liquid heating. During operation the rods must be fully immersed in the liquid.

Max permissible pressure up to 6,4MPa. Heating elements with submersible length over 700mm should be supported.

Flange heating elements consist of steel/ stainless steel flange (according to DIN 2501, EN 1092-1, ANSI B16,5/ alternatively on request) and three heating rods. Ceramic terminal board is protected by a steel cover with el. bushing GP36/28, ensuring IP 42.

Type	Power supply (V)	Power (W)	L (mm)	PN (MPa)	Rod material	
14071190010	440790010	3x400	15000	505	0,6	copper
14071190020	440790020	3x400	18000	575	0,6	copper
14071190030	440790050	3x400	24000	735	0,6	copper
14071190040	440790060	3x400	30000	870	0,6	copper
14071190050	440790110	3x500	15000	505	0,6	copper
14071190070	440790210	3x400	15000	505	1,0	copper
14071190080	440790220	3x400	18000	575	1,0	copper
14071190090	440790250	3x400	24000	735	1,0	copper
14071190100	440790260	3x400	30000	870	1,0	copper
14071190110	440790310	3x500	15000	505	1,0	copper
14071190120	440790360	3x500	30000	870	1,0	copper
<p>0 - determines the heating rod material is COPPER 3 - determines the heating rod material is STAINLESS STEEL 17 240/1.4401</p>						



Dimensions of connecting flange according to PN

PN(MPa)	D(mm)	D1(mm)	A(mm)	Screw	Test pressure MPa
0,6	260	225	20	8xM16	0,78
1,0	280	240	24	8xM20	1,3
2,5	270	220	22	8xM24	3,25
6,4	295	240	30	8xM27	8,3
Dimensions in mm					
a			b		
145			160		

Customized adjustments:

Power supply: 120, 230, 400, 480, 500V

Length and shape of heating rods: on individual requirements

Heating rods material: copper, steel, stainless steel 17 240/1.4401; 17 346/1.4403, teflon-plated

Flange design: flanges according to DIN 2501, EN 1092-1, ANSI B16,5

Flange material: galvanized steel, stainless steel 17 240/1.4401; 17 346/1.4403

Atypical adjustments: increased IP protection, inbuilt el. control, inbuilt thermostat control, limit switches, etc.