

## **ELECTRICAL HEATING ELEMENTS**

In comparison with other means of heating, the electrical heatingel ements have many advantages – high efficiency, lower dimensions, easy controllability and protection, safe handling, easy maintenance and quick exchange, high reliability and long lifetime and thus can be considered as a general-purpose heating means for various media and environments, for electrical appliances as well as for parts of machine etc.

Company IG Service s.r.o. provides a large range of assortment of high quality sheated tubular heating elements for gas heating (air or technical gases), liquids (wather, solutions, oils, viscous liquids...) as well as for contact heating of solid elements (for example: parts of electrical appliances, pressing molds, pars of machines etc.). Furthermore he offers new customized solutions for specifics heatings. It is possible to supply complete heating solutions including controllability.

- ELEMENTS FOR HEATING OF LIQUIDS
- ELEMENTS FOR CONTACT HEATING
- **ELEMENTS FOR AIR HEATING**
- **TUBULAR HEATING ELEMENTS**
- ELECTRICAL HEATING ELEMENTS MAXIM
- **■** ELECTRICAL BAND HEATERS

### Fields of applications:

- heating of water, heating of swimming pools
- heating of galvanic and chemical bathes, solutions etc.
- heating of oils and various liquids
- heating of melts of low melting temperature metals, salts, honey, paraffin, tar etc.

### **Application example**

electrical household appliances - storage water heaters, washing machines, dishwashers, electrical boilers, oil radiators, hot water radiators, water boiling kettles, coffee makers, deep fat fries etc. In food processing industry In other industrial applications – heating of chemical bathes, galvanic bathes, solutions, high viscosity liquids, solid petroleum products, heating of gearboxes etc.



### **HEATING OF DIFFERENT OILS**

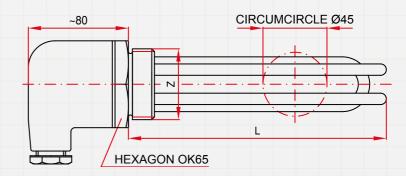
#### **IG T01**

The appliance consists of a heating element that is fixed to the flange. The element is equipped with hexagon OK 65 on the flange for screwing.

The heating element is intended for direct heating of oils that do not adverse influence on the sheath. The surface temperature is chosen so as not to set the carbonization of the oil. It must be permanently immersed up to the head during operation.

The element that will be removed from the oil must be off and cold.





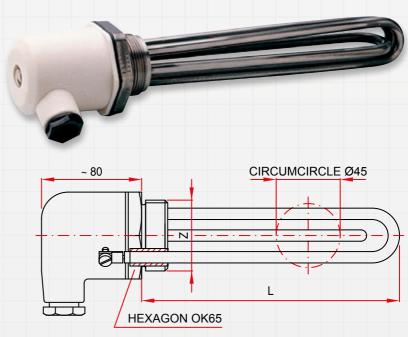
Length L	Voltage	Power input	
300 – 980 mm	230 – 400 V	500 – 2250 W	

## HEATING OF WATER AND SIMILAR LIQUIDS, ALKALINE AND ACID SOLUTIONS

#### **IG T02**

The heating element consists of three U-shaped heating branches, which are soldered into the head by means of Ag solder. Each of the branch features one third of the total power. The head is equipped with hexagon OK65 and a mounting thread M 48x2 or G ½". The heating elements are manufactured with brass or stainless steel head. The sheath of the heating branches is made of pickled copper, nickel plated copper or stainless steel. It is also possible to use all-stainless steel welded in a protective atmosphere of argon.

It must be permanently immersed up to the head during operation.

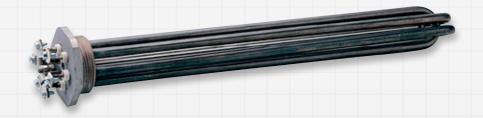


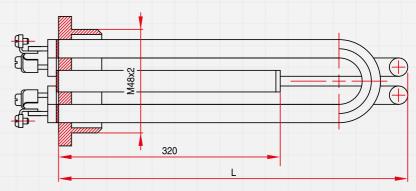
Length L	Voltage	Power input
240 – 610 mm	230, 400 V	1500 – 7500 W

## **HEATING OF SWIMMING POOLS (CHLORATED WATER)**

**IG T03** 

Elements is intended for heating of water in the swimming pools. Necessary water flow (high surface load). Nut INCOLOY 800.





Length L	Voltage	Power input
345 – 605 mm	230 – 400 V	1500 – 21000 W

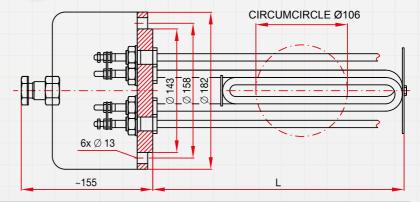
## **HEATING OF WATER AND SIMILAR LIQUIDS**

#### **IG T04**

The heating element consists of three heating branches, which are mounted into a nickel-plated steel flange with six fixing openings diam.13 mm on a circumcircle diam.158 mm.

The heating element is intended for direct heating of water and similar liquids. It must be permanently immersed during operation. Flanges and power input can be changed on request.





Length L	Voltage	Power input	
500 – 800 mm	3 x 400 V	7500 – 15000W	

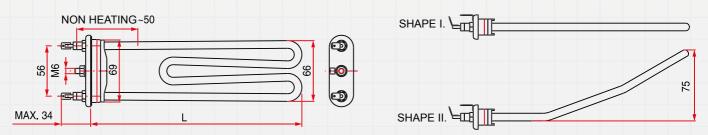
## **HEATING OF WATER IN WASHING MACHINES**

#### **IG T05**

The heating element consists of one heating branch which is fixed to the holder. It is equipped with connecting flat terminals width 6.3 mm.

The heating element is intended for direct heating of water in washing machines. It must be permanently immersed during operation.





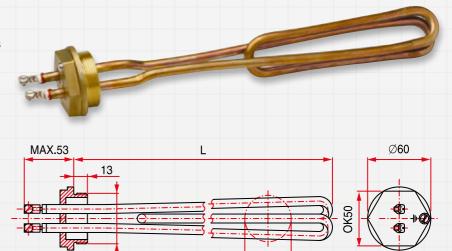
Length L	Voltage	Power input	
180 – 370 mm	230 – 400 V	1750 – 4000 W	

## **HEATING OF WATER; STORAGE WATER HEATERS**

#### **IG T06**

The heating element consists of one shaped heating branch, which is mounted into a brass head. The heating branch is equipped with connecting terminals with screws M4 for cable connection. The head is equipped with a hexagon OK 50.

The heating element is intended for direct heating of water and similar liquids (e.g. for storage water ). It must be permanently immersed up to the head during operation. Operation pressure is 0,6 MPa.



Length L	Voltage	Power input
230 – 408 mm	230 V	1000 – 2400 W

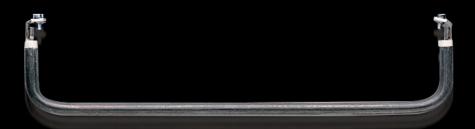
# HEATING ELEMENTS FOR CONTACT HEATING

#### FIELD OF APPLICATION

Heating of moulds for plastics and vulcanisation. Heating of moulds and core boxes for foundry industry. Heating of machine and device parts and accessories in industrial works. Warming of heating plates and boards.

#### **APLICATION EXAMPLE**

Electrical household appliances – heating panels, contact grills, electrical frying pans, cookers, deep fat fryers. Food industry – cooking panels and cooking plates and warming-up devices, frying devices for restaurants. Plastics industry, rubber industry, container heating, conduit heating.



# HEATING ELEMENTS FOR CONTACT HEATING

## HEATING OF COOKING AND WARMING PLATES IN HIGH CAPACITY KITCHENS

#### **IG T07**

The heating unit consists of a heating element and of two footing terminals with screws M4 for mains connection. The heating unit is intended for contact heating of cooking and warming plates in high capacity kitchens.





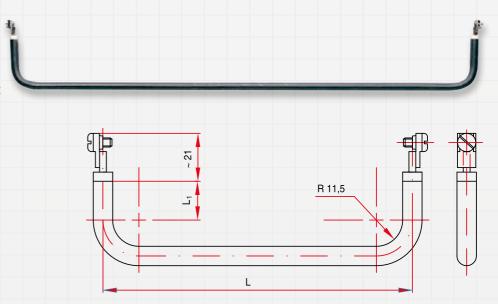
Voltage	Power input
115 V	310, 410 W

## HEATING ELEMENTS FOR CONTACT HEATING

## HEATING OF COOKING AND WARMING PLATES IN HIGH CAPACITY KITCHENS

#### **IG T08**

The heating unit consists of a heating element and of two footing terminals with screws M4 for mains connection. The heating unit is intended for contact heating of cooking and warming plates in high capacity kitchens. To ensure a long life time of the element, it is essential to provide a good contact with the heated plate or with the plate grooves.



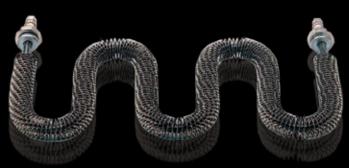
Length L	Length L1	Voltage	Power input
466,5 mm, 562 mm	16,5 mm, 35 mm	230 V	666 W

#### FIELD OF APPLICATION

- heating of steady and flowing air and technical gases
- heating of buildings and air conditioning
- heating of cabs and interiors of vehicles (tramways, trolley buses, trains)
- drying
- sterilizing devices
- Infrared heating

#### **APLICATION EXAMPLE**

Electrical household appliances – baking ovens, grills, clothes dryers, fruit dryers, convector heaters, storage heaters, infrared heaters. Food industry – confectioner's and baker's ovens, food dryers, smoke-chambers, defrosting. Heating of interiors of vehicles (tramways, trolley buses, trains).

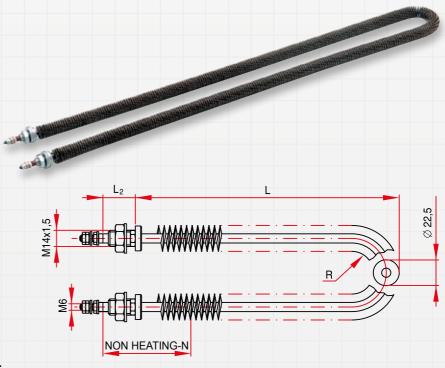


### AIR HEATING

#### **IG T09**

The heating unit consists of a heating element and two flanges. The heating part of the element is wrapped with a strip for better transfer of heat to the environment. The heating element is equipped with bolt terminals and nuts M6. The fixing flanges are fitted with a nut and a washer. The active part of the heating element is made of stainless steel, the flanges are made of steel with zinc-chromate surface treatment.

The heating element is intended for air heating. The design of the equipment, in which the heating elements shall be applied, must ensure a natural air circulation – to facilitate heat transfer. For higher efficiency of the heating elements, a forced circulation is recommended.



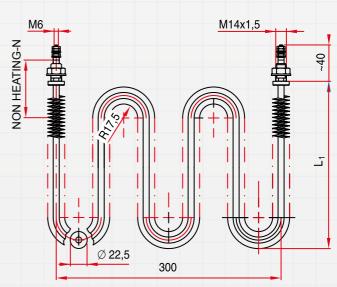
Length L	Length L2	Diameter R	Length N	Voltage	Power input
200 – 1640 mm	25 mm	17,5 a 28 mm	50, 75, 100	230, 400 V	500 – 4000 W

## HEATING OF BUILDINGS AND AIR CONDITIONING

**IG T10** 

The heating part of the element is wrapped with a strip for air conditioning and heating of buildings.



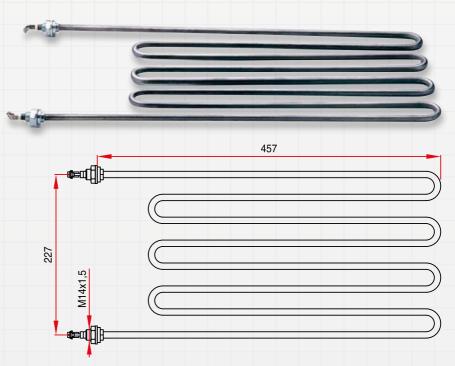


Length L1	Length N	Voltage	Power input
na zakázku	75 – 120 mm	230 V, 400 V	On request

## FOR SAUNAS

### **IG T11**

The heating element for air heating in sauna. Customised dimensions, voltage and power on request.



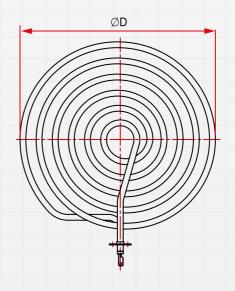
Voltage	Power
400 V	3000 W

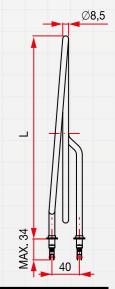
## HEATING OF BUILDINGS AND AIR CONDITIONING

#### **IG T12**

The heating element for heating of buildings and air conditioning. Customised shape and dimensions on request.







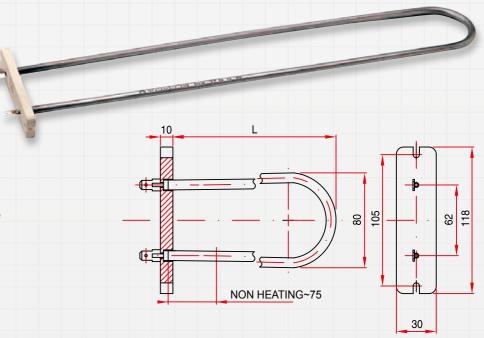
Diameter D	Length L	Voltage	Power
195, 205 mm	240 mm	230, 400 V	On request

### FOR STORAGE ROOM HEATER

### **IG T13**

The heating unit consists of two heating branches and a ceramic flange. It is equipped with a flat pin terminals width 6. 3 mm. The elements are made of stainless steel.

The heating elements are intended for storage room heaters AD. .D. For replacement of malfunctioned elements, please, refer to the manufacturer's instructions. The replacement should be performed by qualified personnel only.



Length L	Voltage	Power
511 – 1011 mm	230 V	666 – 1333 W

#### FIELD OF APPLICATION

- Contact heating of heating plates
- heating of calm or flowing air
- heating of liquids
- Anti-icing heating
- Customized dimensions and power

Heating elements comply with standards for el. Appliances. The applicable regulations must be observed when installing and connecting to the network.

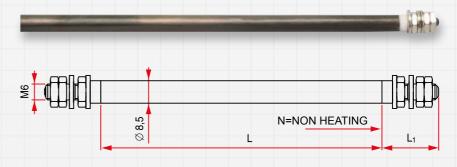


### **ELEMENTS FOR AIR HEATING AND CONTACT HEATING**

#### **IG T14**

The heating unit consists of a metal heating element and of two output pins. This type of heating elements is produced in a large range of executions, with different parameters according to their field of applications. They can be used for contact heating of the plates by enclosure or by building into the groove. For heating of calm or flowing air. Liquids can be heated only under certain conditions.

Produced length is between 300 – 6000 mm and voltage between 12 – 400 V. Power according to the heated ambient (it reflect also material of the shell – steel, stainless steel, copper).

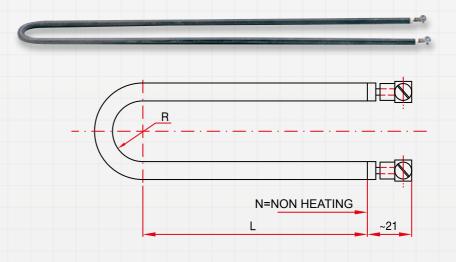


Length L	Length L1	N
300 – 3300 mm	8 – 29 mm	20 – 50 mm

### **ELEMENTS FOR AIR HEATING AND CONTACT HEATING**

#### **IG T15**

The heating element consists of a U Form heating branch and two fixing flanges with nuts. It is equipped with screw terminals with M4 screws or with terminal pins. This type of heating elements is produced in a large range of executions, with different parameters according to their field of applications. They can be used for contact heating of the plates by enclosure or by building into the groove. For heating of calm or flowing air. Liquids can be heated only under certain conditions. Produced length is between 130 - 1600 mm and voltage between 12 - 400 V. Power according to the heated ambient (it reflect also material of the shell - steel, stainless steel, copper).



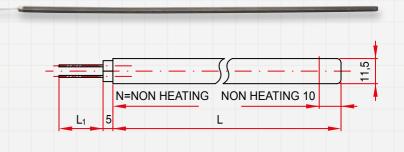
R	L	N
8,0 – 35,0 mm	130 – 1600 mm	30 – 225 mm

### **ELEMENTS FOR AIR HEATING AND CONTACT HEATING**

#### **IG T16**

Straight heating element with a metal shell and power cables. This type of heating elements is produced in a large range of executions, with different parameters according to their field of applications. They can be used for contact heating of the plates by enclosure or by building into the groove. For heating of calm or flowing air. Liquids can be heated only under certain conditions.

Produced length is between 300 – 6000 mm and voltage between 12 – 400 V. Power according to the heated ambient (it reflect also material of the shell – steel, stainless steel, copper).



L	L1	N
300 – 6000 mm	According to the customer request	30, According to the customer request

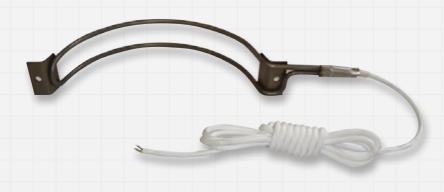
Field of applications mainly for heating of circular technological equipment, containers, reactors, etc. Further they can be used in the draying rooms with explosive ambient or for air heating, contact heating or defrosting.

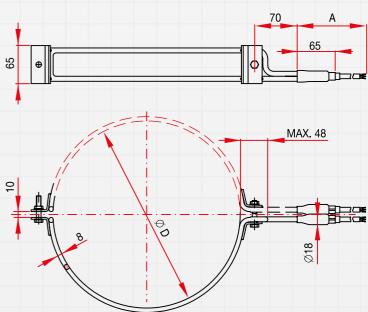


## HEATING OF CICULAR TECHNOLOGICAL EQUIPMENT, CONTAINERS, REACTORS

#### **IG M01**

Heating element for heating of circular technological equipment, containers, reactor.



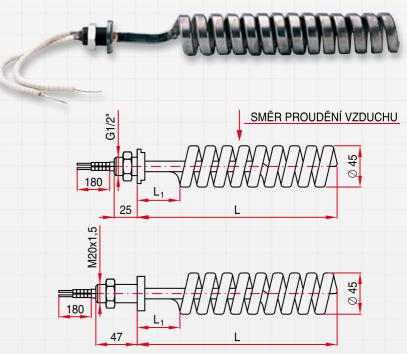


Diameter D	Length A	Voltage	Power
160 – 800 mm	20 – 270 mm	230, 400, 500 V	230, 400, 500 W

### HEATING ELEMENTS TO THE DRAYING ROOMS WITH EXPLOSIVE AMBIENT

#### **IG M02**

The heating element consists of steel heating branches that are attached to a steel flange with a nut. The heating element is either without any surface protection or it is protected by means of metal spraying (aluminium). The heating elements are intended for dryers with explosive environment. The user of these heating elements should adapt its surface temperature to the operational environment. The proper temperature is achieved by providing an appropriate heat transfer by means of flowing air of adequate velocity and volume, to meet the requirements for non-explosive environment. The flow direction should be perpendicular to the the spiral axis. The maximum surface operating temperature of the heating element is 400 °C.

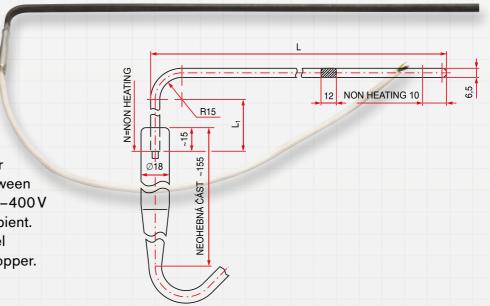


Length L	Length L1	W/cm <sup>2</sup>	Voltage	Power
310 – 1000 mm	75, 180 mm	0,50 – 1,41	76, 230, 400, 500 V	165, 500, 1000, 1200, 1250 W

## AIR HEATING, CONTACT HEATING, DEFROSTING

### **IG M03**

The heating element consists of steel heating branches and connecting cable. Cable has a waterproof connection. Different executions are possible. They can be used for contact heating of the plates by enclosure or by building into the groove, for air heating of calm and flowing air and for liquids heating. They can be used for defrosting also. Produced length is between 300–3300 mm and voltage between 12–400 V with power according to the heated ambient. It reflect also material of the shell – steel (Class 11), stainless steel (Class 17), copper.



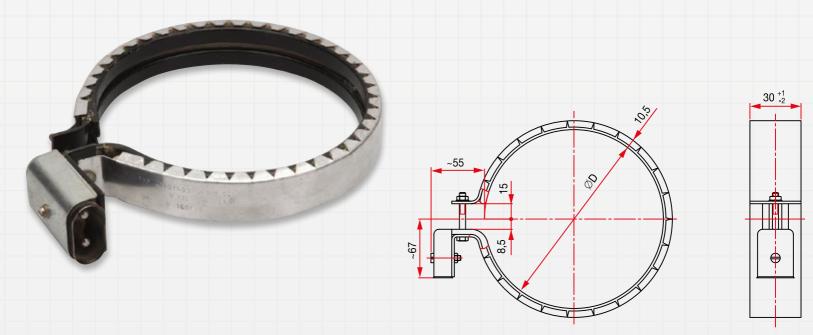
Length L	Voltage	Power
300 do 3300 mm	12 až 400 V	On request

The band heating units consists of heating elements that are mutually interconnected by means of contact pins and protected by a protective collar. Connection to the electrical network is performed by means of a cable with an appliance coupler. The surface is protected with a water-based paint. For sake of better efficiency, the heating element surface is provided with an insulation material and an aluminium sheath. The band heating elements are intended for heating of inject ion moulds for plastics up to maximum temperature of 180 °C.



## HEATING OF INJECTION MOULDS FOR PLASTICS

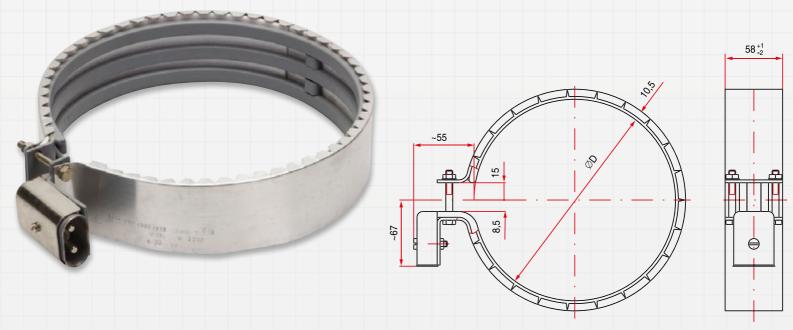
**IG F01** 



Diameter D	$W/cm^2$	Voltage	Power
125 – 500 mm	1,5 – 1,7	230 V	375 – 1550W

## HEATING OF INJECTION MOULDS FOR PLASTICS

**IG F02** 



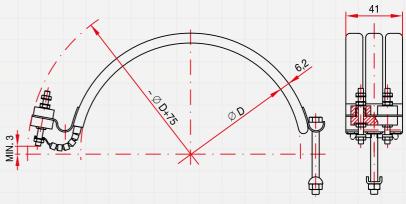
Diameter D	$W/cm^2$	Voltage	Power
125 – 500 mm	1,5 – 1,7	230 V	525 – 2200W

## FORM HEATING, HEADS OF INJECTION PRESS HEADS

#### **IG F03**

The heating element consists of three heating rods that are mutually interconnected and equipped with connecting bolt terminals M4 with nuts. The heating element is intended for heating of moulds, heating of heads of injection presses etc. with controlled operating temperature in the range of 150 °C to 300 °.



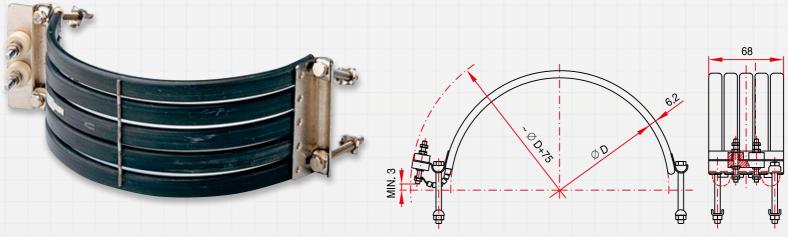


Diameter D	Voltage	Power
80 - 110 mm, 2 pcs into a circle	115, 230 V	100 – 250 W

## FORM HEATING, HEADS OF INJECTION PRESS HEADS

#### **IG F04**

The heating element consists of three heating rods that are mutually interconnected and equipped with connecting bolt terminals. The heating element is intended for heating of moulds, heating of heads of injection presses etc. with controlled operating temperature in the range of 150 °C to 300 °.



Diameter D	Voltage	Power
100 – 450 mm, 2 – 3 pcs into a circle	230, 400 V	250 – 1575 W

# HEATING CARTRIDGES

The heating cartridges are designed for high power with small dimensions. They are used for heating massive materials - molds, core boxes, welding strips, etc. The recommended hole tolerance for the cartridge is H7. The heating cartridges are UL certified.

Industrial applications: heating of moulds and heating of machine and device parts and accessories in plastics, rubber, wood, paper, shoemaking, foundry industry Welding machines for plastics, medicine and laboratory equipment. In general, at various applications, where intensive contact heating and rapid exchangebility are of primary importance.

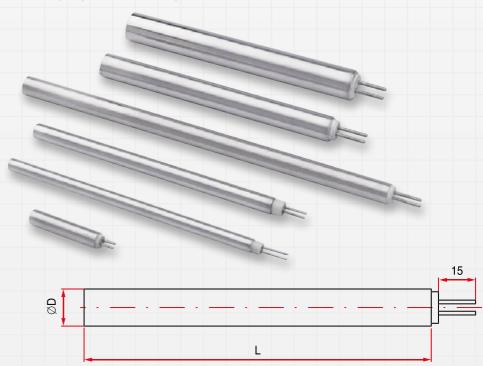
- HEATING CARTRIDGES BASIC MODEL
- HEATING CARTRIDGES WITH INTERNAL CABLE CONNECTION
- HEATING CARTRIDGES WITH EXTERNAL CABLE CONNECTION
- HEATING CARTRIDGES WITH FLEXIBLE TUBE CONNECTION
- HEATING CARTRIDGES WITH FLEXIBLE METAL BRAID



## BASIC EXECUTION OF HEATING CARTRIDGE

#### **IG P01**

Basic type of heating cartridge is fitted with 15 – 20 mm wire terminals made of pure nickel.



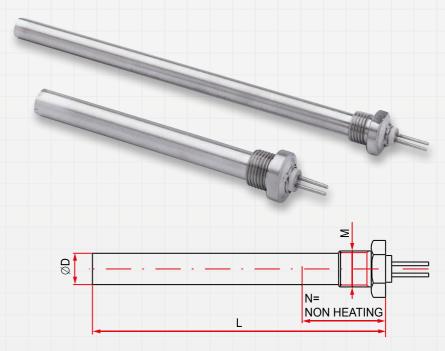
### Diameter D

 $6,5 - 25 \, \text{mm}$ 

### **HEATING CARTRIDGE WITH FLANGE**

#### **IG P02**

Cartridge heaters with flange are fitted at the terminal side with a threaded part for easy assembly and disassembly. Diameter D of the cartridge corresponds to thread dimension M on the flange, as indicated in the table.



Diameter D	Thread dimension M on the flange
6,5 – 25 mm	10x1, 12x1,5, 14x1,5, 16x1,5, 20x1,5, 27x1,5

## HEATING CARTRIDGES WITH RIGHT ANGLE OUTLET

#### **IG P03**

Right angle outlet of the heating cartridge is fitted with 15 – 20 mm wire terminals made of pure nickel.



ØD<sub>1</sub>

### Diameter D

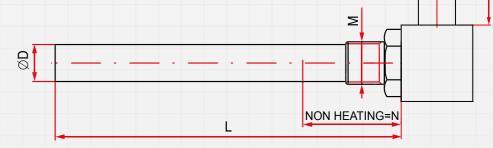
 $6,5 - 25 \, \text{mm}$ 

## HEATING CARTRIDGES - BASIC MODEL

## HEATING CARTRIDGES WITH FLANGE AND RIGHT ANGLE OUTLET

**IG P04** 

Right angle cartridge is fitted at the terminal side with a threaded part for easy assembly and disassembly. Diameter D of the cartridge corresponds to thread dimension M on the flange.



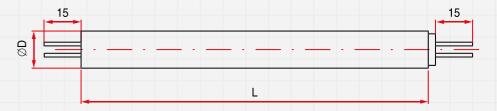
Diameter D	Thread dimension M on the flange	
6,5 – 25 mm	10x1, 12x1,5, 14x1,5, 16x1,5, 20x1,5, 27x1,5	

# HEATING CARTRIDGES - BASIC MODEL

### HEATING CARTRIDGE WITH WIRE TERMINALS ON BOTH SIDES

#### **IG P05**

Heating cartridges with wire terminals on both sides is fitted with 15 – 20 mm wire terminals made of pure nickel.



#### Diameter D

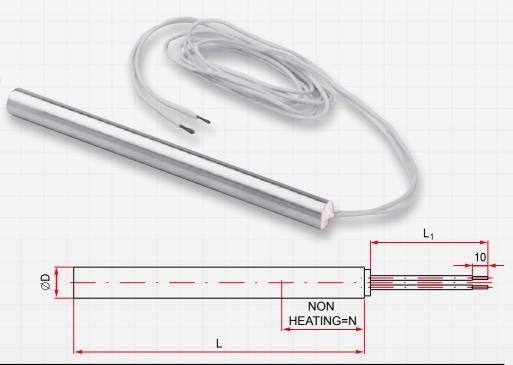
 $6,5 - 20 \, \text{mm}$ 



### HEATING CARTRIDGE WITH INTERNAL CABLE CONNECTION

#### **IG P06**

Cartridge heaters with internal cable connection are equipped with cables with a glass fibre insulation featuring enhanced thermal resistance.

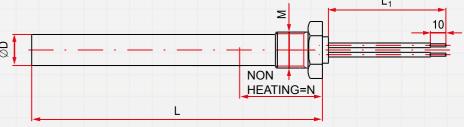


Diameter D	Standard length L1
6,5 – 25 mm	200 a 1000 mm

### HEATING CARTRIDGE WITH FLANGE AND INTERNAL CABLE CONNECTION

#### **IG P07**

Cartridge heaters with flange are fitted at the terminal side with a threaded part for easy assembly and disassembly. Diameter D of the cartridge corresponds to thread dimension M on the flange, as indicated in the table.

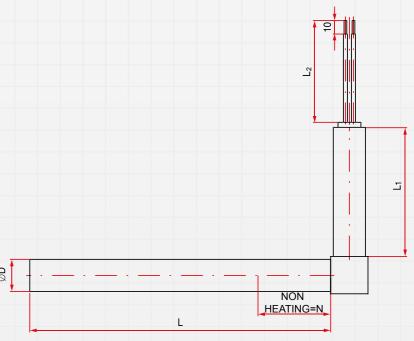


Diameter D	Thread dimension M on the flange standard length	Standard length L1
6,5 – 25 mm	10x1, 12x1,5, 14x1,5, 16x1,5, 20x1,5, 27x1,5	200 a 1000 mm

### HEATING CARTRIDGES WITH RIGHT ANGLE OUTLET AND INTERNAL CABLE CONNECTION

#### **IG P08**

Cartridge heaters with internal cable connection are equipped with cables with a glass fibre insulation featuring enhanced thermal resistance.

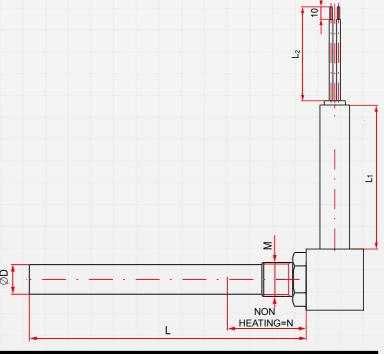


Diameter D	Standard length L1
6,5 – 25 mm	200 a 1000 mm

### HEATING CARTRIDGES WITH FLANGE RIGHT ANGLE OUTLET AND INTERNAL CABLE CONNECTION

#### **IG P09**

Right angle cartridge is fitted at the terminal side with a threaded part for easy assembly and disassembly. Diameter D of the cartridge corresponds to thread dimension M on the flange.

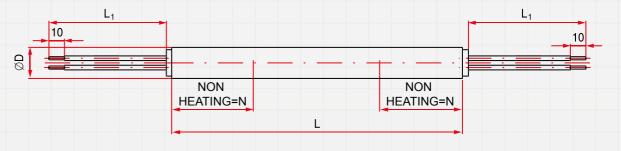


Diameter D	Thread dimension M on the flange standard length	Standard length L1
6,5 – 25 mm	10x1, 12x1,5, 14x1,5, 16x1,5, 20x1,5, 27x1,5	200 a 1000 mm

### HEATING CARTRIDGE WITH INTERNAL CABLE CONNECTION ON BOTH SIDES

#### **IG P10**

Cartridge heaters with internal cable connection are equipped on both sides with cables with a glass fibre insulation featuring enhanced thermal resistance.



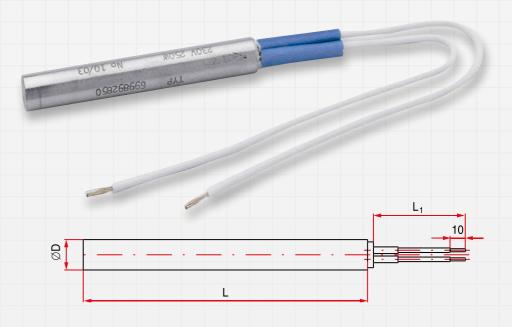
Diameter D	Standard length L1
6,5 – 25 mm	200 a 1000 mm



### HEATING CARTRIDGE WITH EXTERNAL CABLE CONNECTION

#### **IG P11**

The most frequent type of a cartridge heater with external cable connection is equipped with cables with a silicon insulation. Cartridges with external cable connection can be optionally fitted with cables with glass fibre insulation with enhanced thermal resistance.

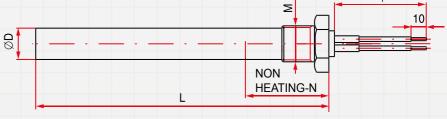


Diameter D	Standard length L1
6,5 – 20 mm	200 a 1000 mm

### HEATING CARTRIDGE WITH FLANGE AND EXTERNAL CABLE CONNECTION

#### **IG P12**

Cartridge heaters with flange are fitted at the terminal side with a threaded part for easy assembly and disassembly. Diameter D of the cartridge corresponds to thread dimension M on the flange, as indicated in the table.



Diameter D	Thread dimension M on the flange standard length	Standard length L1
6,5 – 20 mm	10x1, 12x1,5, 14x1,5, 16x1,5, 20x1,5, 27x1,5	200 a 1000 mm

### HEATING CARTRIDGES WITH RIGHT ANGLE OUTLET AND EXTERNAL CABLE CONNECTION

#### **IG P13**

Mostly supplied version of the cartridge with external cable connection is equipped with cables with a silicon insulation. Cartridges with external cable connection can be optionally fitted with cables with glass fibre insulation with enhanced thermal resistance.

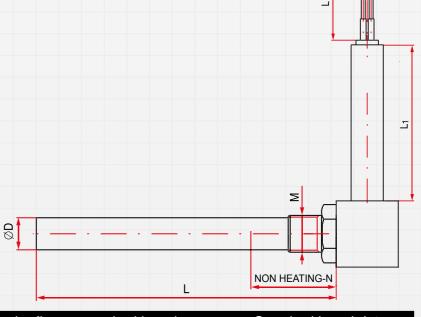


Diameter D	Standard length L1
6,5 – 20 mm	200 a 1000 mm

### HEATING CARTRIDGES WITH RIGHT ANGLE OUTLET FLANGE AND EXTERNAL CABLE CONNECTION

#### **IG P14**

Right angle cartridge is fitted at the terminal side with a threaded part for easy assembly and disassembly. Diameter D of the cartridge corresponds to thread dimension M on the flange.



Diameter D	Thread dimension M on the flange standard length	Standard length L1
6,5 – 20 mm	10x1, 12x1,5, 14x1,5, 16x1,5, 20x1,5, 27x1,5	200 a 1000 mm

### HEATING CARTRIDGES WITH EXTERNAL CABLE CONNECTION ON BOTH SIDES

#### **IG P15**

This type of a cartridge heater with external cable connection is equipped with cables with a silicon insulation. Cartridges with external cable connection can be optionally fitted with cables with glass fibre insulation with enhanced thermal resistance.



Diameter D	Standard length L1
6,5 – 20 mm	200 a 1000 mm

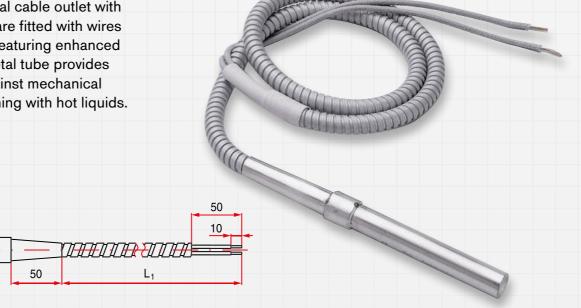


### HEATING CARTRIDGE WITH FLEXIBLE TUBE CONNECTION

#### **IG P16**

Cartridge heaters with metal cable outlet with a flexible corrugated tube are fitted with wires with glass fibre insulation featuring enhanced thermal resistance. The metal tube provides an excellent protection against mechanical damage or potential splashing with hot liquids.

NON HEATING-N

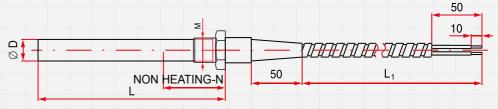


Diameter D	Standard length L1
6,5 – 20 mm	200 a 1000 mm

### HEATING CARTRIDGE WITH FLEXIBLE TUBE CONNECTION

#### **IG P17**

Cartridge heaters with flange are fitted at the terminal side with a threaded part for easy assembly and disassembly. Diameter D of the cartridge corresponds to thread dimension M on the flange.

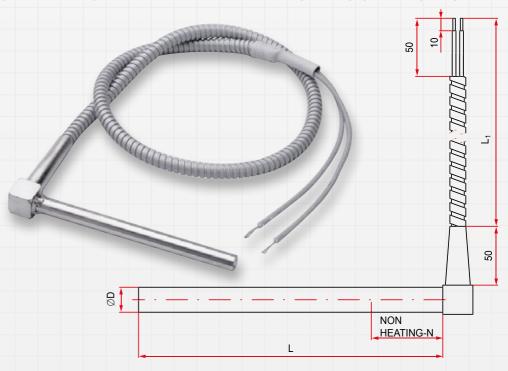


Diameter D	Thread dimension M on the flange standard length	Standard length L1
6,5 – 20 mm	10x1, 12x1,5, 14x1,5, 16x1,5, 20x1,5, 27x1,5	200 a 1000 mm

### RIGHT ANGLE HEATING CARTRIDGE WITH FLEXIBLE TUBE CONNECTION

#### **IG P18**

Cartridge heaters with metal cable outlet with a flexible corrugated tube are fitted with wires with glass fibre insulation featuring enhanced thermal resistance. The metal tube provides an excellent protection against mechanical damage or potential splashing with hot liquids.

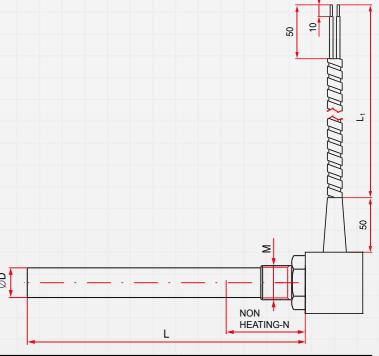


Diameter D	Standard length L1	
6,5 – 20 mm	200 a 1000 mm	

### RIGHT ANGLE HEATING CARTRIDGE WITH FLANGE AND FLEXIBLE TUBE CONNECTION

#### **IG P19**

Cartridge heaters with flange are fitted at the terminal side with a threaded part for easy assembly and disassembly. Diameter D of the cartridge corresponds to thread dimension M on the flange.

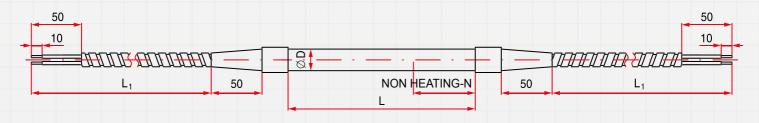


Diameter D	Thread dimension M on the flange standard length	Standard length L1
6,5 – 20 mm	10x1, 12x1,5, 14x1,5, 16x1,5, 20x1,5, 27x1,5	200 a 1000 mm

### HEATING CARTRIDGE WITH FLEXIBLE TUBE CONNECTION ON BOTH SIDES

#### **IG P20**

Cartridge heaters with metal cable outlet with a flexible corrugated tube on both sides are fitted with wires with glass fibre insulation featuring enhanced thermal resistance. The metal tube provides an excellent protection against mechanical damage or potential splashing with hot liquids.



Diameter D	Standard length L1
6,5 – 20 mm	200 a 1000 mm



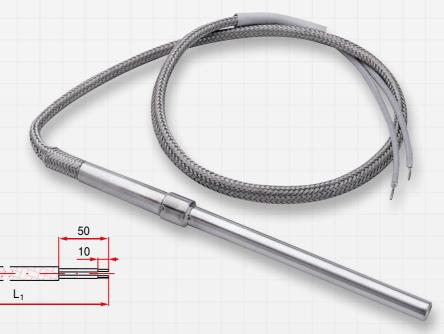
### HEATING CARTRIDGE WITH METAL BRAID

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#### **IG P21**

Cartridge heaters with cable in flexible metal braid are fitted with wires with glass fibre insulation featuring enhanced thermal resistance. The metal braid protects the cables against mechanical damage and wear, especially at bends over edges.

NON HEATING-N

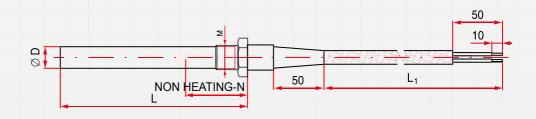


Diameter D	Standard length L1	
6,5 – 20 mm	200 a 1000 mm	

### HEATING CARTRIDGE WITH FLANGE AND METAL BRAID

#### **IG P22**

Cartridge heaters with flange are fitted at the terminal side with a threaded part for easy assembly and disassembly. Diameter D of the cartridge corresponds to thread dimension M on the flange.

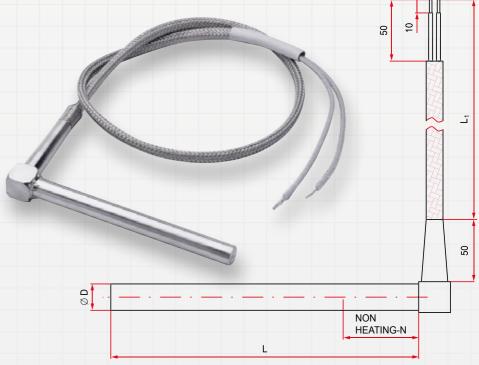


Diameter D	Thread dimension M on the flange standard length	Standard length L1
6,5 – 20 mm	10x1, 12x1,5, 14x1,5, 16x1,5, 20x1,5, 27x1,5	200 a 1000 mm

HEATING CARTRIDGE WITHRIGHT ANGLE AND METAL BRAID

#### **IG P23**

Cartridge heaters with cable in flexible metal braid are fitted with wires with glass fibre insulation featuring enhanced thermal resistance. The metal braid protects the cables against mechanical damage and wear, especially at bends over edges.

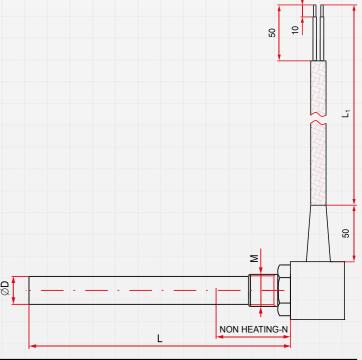


Diameter D	Standard length L1	
6,5 – 20 mm	200 a 1000 mm	

### HEATING CARTRIDGE WITH FLANGE RIGHT ANGLE AND METAL BRAID

#### **IG P24**

Right angle cartridge heaters with flange are fitted at the terminal side with a threaded part for easy assembly and disassembly. Diameter D of the cartridge corresponds to thread dimension M on the flange.



Diameter D	Thread dimension M on the flange standard length	Standard length L1
6,5 – 20 mm	10x1, 12x1,5, 14x1,5, 16x1,5, 20x1,5, 27x1,5	200 a 1000 mm

### HEATING CARTRIDGES WITH CABLES IN FLEXIBLE METAL BRAID ON BOTH SIDES

#### **IG P25**

Provedení s oboustranným vývodem s drátěným opletením je osazeno vodiči se sklotextilní izolací se zvýšenou teplotní odolností. Kovové drátěné opletení zajišťuje výbornou ochranu před mechanickým poškozením, hlavně při ohybech přes hrany nebo proti prodření.



Diameter D	Thread dimension M on the flange standard length	Standard length L1
6,5 – 20 mm	10x1, 12x1,5, 14x1,5, 16x1,5, 20x1,5, 27x1,5	200 a 1000 mm

## **COMPANY CERTIFICATION**

The quality management system at IG Service s.r.o. is certified with ISO 9001:2016. Environmental management is certified acc. To ISO 14001:2016 and security management is certified acc. to OHSAS 18001:2008.









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