

# TUBE AND THREADED/TAPPING ELECTRODES



## Tube electrodes

### Copper Single channel



1-channel THIN WALLED



1-channel THICK WALLED

Length :	150 mm	300 mm	400 mm	500 mm	600 mm
<b>THIN-WALLED</b> Diameter (mm) from - to :	0,15 - 20,00	0,15 - 20,00	0,20 - 20,00	0,30 - 20,00	0,30 - 20,00
<b>THICK-WALLED</b> Diameter (mm) from - to :	1,50 - 6,00	1,50 - 6,00	1,50 - 6,00	1,50 - 6,00	1,50 - 6,00

Diameters from 0,15 to 10,00 mm in steps of 0,01 mm.  
 Diameters from 10,0 to 20,0 mm in steps of 0,5 mm.

Information about delivery of other diameters and lengths of electrodes are available on request.

### Copper Multichannel



2-channels

Length :	150 mm	300 mm	400 mm	500 mm	600 mm
<b>Diameter (mm)</b> from - to :	0,40 - 5,00	0,40 - 5,00	0,40 - 5,00	0,40 - 5,00	0,40 - 5,00

Diameters in steps of 0,01 mm.



3-channels

Length :	150 mm	300 mm	400 mm	500 mm	600 mm
<b>Diameter (mm)</b> from - to :	0,90 - 20,00	0,90 - 20,00	0,90 - 20,00	0,90 - 20,00	0,90 - 20,00

Diameters from 0,90 to 10,00 mm in steps of 0,01 mm.  
 Diameters from 10,0 to 20,0 mm in steps of 0,5 mm.

Information about delivery of other diameters, lengths and profiles of electrodes are available on request.

## Tube electrodes

### Copper Multichannel



4-channels

Length :	150 mm	300 mm	400 mm	500 mm	600 mm
Diameter (mm) from - to :	1,20 - 4,00	1,20 - 4,00	1,20 - 4,00	1,20 - 4,00	1,20 - 4,00

Diameters in steps of 0,01 mm.

Information about delivery of other diameters, lengths and profiles of electrodes are available on request.

### Copper Multichannel - inserted rods



3 channels – inserted rods

Length :	150 mm	300 mm	400 mm
3 channels / Diameter (mm) from – to:	3,00 - 15,50	3,00 - 15,50	3,00 - 15,50

Diameters from 3,00 to 10,00 in steps of 0,01 mm.

Diameters from 10,0 to 15,5 in steps of 0,5mm.

Information about delivery of other diameters and lengths of electrodes are available on request.

## Tube electrodes

### Brass Single channel



1-channel

Length :	150 mm	300 mm	400 mm	500 mm	600 mm
Diameter (mm) from - to :	0,15 – 6,00	0,15 - 6,00	0,20 - 6,00	0,30 – 6,00	0,30 – 6,00

Diameters in steps of 0,01 mm.

Information about delivery of other diameters and lengths of electrodes are available on request.

### Brass Multichannel



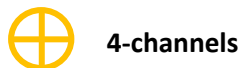
2-channels

Length :	150 mm	300 mm	400 mm	500 mm	600 mm
Diameter (mm) from - to :	0,40 - 3,00	0,40 - 3,00	0,40 - 3,00	0,40 - 3,00	0,40 - 3,00



3-channels

Length :	150 mm	300 mm	400 mm	500 mm	600 mm
Diameter (mm) from - to :	0,90 - 6,00	0,90 - 6,00	0,90 - 6,00	0,90 - 6,00	0,90 - 6,00



4-channels


Length :	150 mm	300 mm	400 mm	500 mm	600 mm
Diameter (mm) from - to :	1,20 - 4,00	1,20 - 4,00	1,20 - 4,00	1,20 - 4,00	1,20 - 4,00

Diameters in steps of 0,01 mm.

Information about delivery of other diameters, lengths and profiles of electrodes are available on request.

## Tube electrodes


### Tungsten (tungsten carbide) Single channel

 1-channel

Length :	150 mm	300 mm
Diameter (mm) from - to :	0,15 - 0,17	0,15 - 0,17
Diameter (mm) from - to ::	0,2 - 3,0	0,2 - 3,0

Information about delivery of other diameters and lengths of electrodes are available on request.

### Copper-tungsten Single channel

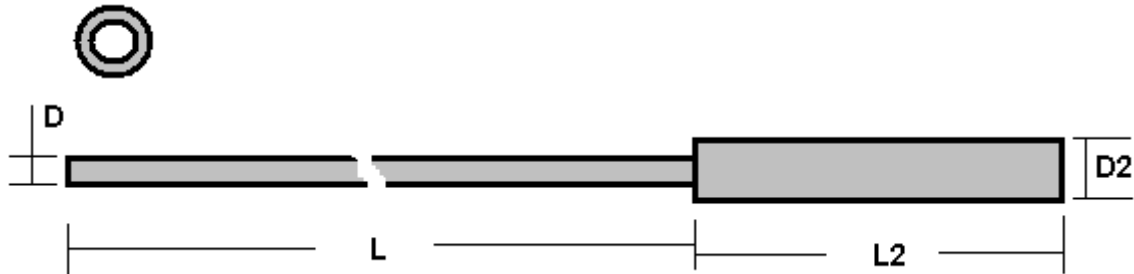
 1-channel

Outer diameter (mm)	Length 175mm	Length 200mm	Length 230mm	Length 250mm
0,15		x		
0,20 - 0,50			x	
0,60				x
0,70				x
0,80	x			x
0,90	x			x
1,00	x			x
1,10 - 2,00	x			x
2,10 - 2,40	x			x
2,50 - 2,90	x			x
3,00 and 3,50	x			
4,00 and 4,50 and 5,00	x			

Information about delivery of other diameters and lengths of electrodes are available on request.

## Tube electrodes

**TWO - STEPS** for small outer diameters : copper, brass



L = 180 mm  
 L2 = 60 mm  
 D2 = diameter 1,0 mm

D = Diameter (mm) :	0,15	0,17	0,20	0,23	0,25	0,27	0,30	0,40
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**TWO - WALL** for small inner diameters: copper



Length: 300mm and 400mm

Outer diameter (mm)	Inner diameter (mm)
2,00 - 2,50	0,20
2,60 - 3,10	0,25
3,20 - 3,90	0,30
4,00 - 4,50	0,40
4,60 - 4,90	0,50
5,00 - 5,20	0,60
5,30 - 5,40	0,70
5,50 - 5,60	0,80
5,70 - 5,80	0,90
5,90 - 6,00	1,00

Tolerance: Outer diameter +0 / - 0,04 mm  
 Inner diameter +0,05 / - 0,05 mm

Information about delivery of other diameters and lengths of electrodes are available on request.

## Electrodes for EDM

### Copper - rods



Length:	200 mm	300 mm	400 mm
Diameter (mm):	0,30 ~ 0,39	0,30 ~ 0,39	0,30 ~ 0,39
	0,40 ~ 0,49	0,40 ~ 0,49	0,40 ~ 0,49
	0,50 ~ 1,00	0,50 ~ 1,00	0,50 ~ 1,00
	1,01 ~ 2,99	1,01 ~ 2,99	1,01 ~ 2,99
	3,00 ~ 4,99	3,00 ~ 4,99	3,00 ~ 4,99
	5,00 ~ 6,00	5,00 ~ 6,00	5,00 ~ 6,00

### Brass - rods



Length:	200 mm	300 mm	400 mm
Diameter (mm):	0,30 ~ 0,39	0,30 ~ 0,39	0,30 ~ 0,39
	0,40 ~ 0,49	0,40 ~ 0,49	0,40 ~ 0,49
	0,50 ~ 1,00	0,50 ~ 1,00	0,50 ~ 1,00
	1,01 ~ 2,99	1,01 ~ 2,99	1,01 ~ 2,99
	3,00 ~ 4,99	3,00 ~ 4,99	3,00 ~ 4,99
	5,00 ~ 6,00	5,00 ~ 6,00	5,00 ~ 6,00

### Tungsten rods - the cheapest and the most used diameters and lengths



Diameter (mm):	1,0	1,6	2,0	2,4	3,2	4,0	4,8	6,4
Length:	175 mm							

Information about delivery of other diameters and lengths of electrodes are available on request.

## Electrodes for EDM

### Copper 6-edge rods with round shank



	Description	Item No.	Hexagon Size	Offset total	Clamping diameter	Hexagon Length	Total Length
		Cu6ER3-01	3 mm	- 0,1 mm	Ø6 mm	50mm	80mm
		Cu6ER4-01	4 mm	- 0,1 mm	Ø6 mm		
		Cu6ER5-01	5 mm	- 0,2 mm	Ø6 mm		
		Cu6ER5-02	5 mm	- 0,2 mm	Ø6 mm		
	Hexagon copper rods with round shank	Cu6ER6-01	6 mm	- 0,1 mm	Ø6 mm	100mm	130mm
		Cu6ER6-02	6 mm	- 0,2 mm	Ø6 mm		
		Cu6ER8-01	8 mm	- 0,1 mm	Ø6 mm		
		Cu6ER8-02	8 mm	- 0,2 mm	Ø6 mm		
		Cu6ER10-01	10 mm	- 0,1 mm	Ø6 mm		
		Cu6ER10-02	10 mm	- 0,2 mm	Ø6 mm		
		Cu6ER12-01	12 mm	- 0,1 mm	Ø6 mm		
		Cu6ER12-02	12 mm	- 0,2 mm	Ø6 mm		

Offset total -0,1mm for hexagon copper rods 5mm and bigger is suitable for EDM die sinkers without all axis CNC (without planetary function).

Offset total -0,2mm for hexagon copper rods 5mm and bigger is suitable for CNC EDM die sinkers and EDM RBT1 EDM device for removing broken taps and tools.



## Threaded / tapping electrodes

with standard pitch metric thread

Copper = planetary version



Item No.	Thread	Outer diameter (mm)	Thread length (mm)	Total length (mm)	Internal flushing
<b>CuM2</b>	<b>M 2</b>	1,4	<b>55</b>	<b>80</b>	yes
<b>CuM2,5</b>	<b>M 2,5</b>	1,9	<b>75</b>	<b>75</b>	yes
<b>CuM3</b>	<b>M 3</b>	2,3	<b>50</b>	<b>80</b>	yes
<b>CuM3,5</b>	<b>M 3,5</b>	2,6	<b>50</b>	<b>80</b>	yes
<b>CuM4</b>	<b>M 4</b>	2,9	<b>50</b>	<b>80</b>	yes
<b>CuM4,5</b>	<b>M 4,5</b>		<b>50</b>	<b>80</b>	yes
<b>CuM5</b>	<b>M 5</b>	3,8	<b>80</b>	<b>120</b>	yes
<b>CuM6</b>	<b>M 6</b>	4,5	<b>80</b>	<b>120</b>	yes
<b>CuM8</b>	<b>M 8</b>	6,0	<b>80</b>	<b>120</b>	yes
<b>CuM10</b>	<b>M 10</b>	7,9	<b>80</b>	<b>120</b>	yes
<b>CuM12</b>	<b>M 12</b>	9,4	<b>80</b>	<b>120</b>	yes
<b>CuM14</b>	<b>M 14</b>	11,1	<b>80</b>	<b>120</b>	yes
<b>CuM16</b>	<b>M 16</b>	13,1	<b>80</b>	<b>120</b>	yes
<b>CuM18</b>	<b>M 18</b>	14,4	<b>80</b>	<b>120</b>	yes
<b>CuM20</b>	<b>M 20</b>	17,0	<b>80</b>	<b>120</b>	yes
<b>CuM24</b>	<b>M 24</b>		<b>80</b>	<b>120</b>	yes

Information about delivery of other types and versions of threaded / tapping electrodes are available on request.

## Threaded / tapping electrodes with special threads

Copper = planetary version



Item No.	Thread	Thread length (mm)	Total length (mm)	Internal flushing
CuM5x0,5	M 5x0,5	80	120	yes
CuM6x0,75	M 6x0,75	80	120	yes
CuM8x0,75	M 8x0,75	80	120	yes
CuM8x1	M 8x1	80	120	yes
CuM10x1	M 10x1	80	120	yes
CuM12x1	M 12x1	80	120	yes
CuM12x1,25	M 12x1,25	80	120	yes
CuM12x1,5	M 12x1,5	80	120	yes
CuM14x1	M 14x1	80	120	yes
CuM14x1,25	M 14x1,25	80	120	yes
CuM14x1,5	M 14x1,5	80	120	yes
CuM16x1,5	M 16x1,5	80	120	yes
CuG1/2"	G 1/2"	80	120	yes
CuG1/4"	G 1/4"	80	120	yes
CuG3/8"	G 3/8"	80	120	yes
CuG1/8"	G 1/8"	80	120	yes
CuG3/4"	G 3/4"	80	120	yes
Cu 1/4-20 UNC	1/4 - 20 UNC	80	120	yes
CU 1/4-28 UNF	1/4 - 28 UNF	80	120	yes
CU 5/16-24 UNF	5/16 - 24 UNF	80	120	yes
Cu 3/8-16 UNC	3/8 – 16 UNC	80	120	yes
Cu 3/8-24UNF	3/8 – 24 UNF	80	120	yes

Information about delivery of other types and versions of threaded / tapping electrodes are available on request.

## Threaded / tapping electrodes

with standard pitch metric thread

Copper-tungsten = planetary version



Item No.	Thread	Outer diameter (mm)	Thread length (mm)	Total length (mm)	Internal flushing
WCuM1,4	M 1,4		7	30	no
WCuM1,6	M 1,6		8	30	no
WCuM2	M 2		60	86	yes/no
WCuM2,5	M 2,5		60	86	yes/no
WCuM3	M 3		60	86	yes/no
WCuM4	M 4		60	86	yes/no
WCuM5	M 5	3,8	60	86	yes/no
WCuM6	M 6	4,5	60	86	yes/no
WCuM8	M 8	6	60	86	yes/no
WCuM10	M 10	7,8	60	86	yes/no
WCuM12	M 12	9,4	60	86	yes/no
WCuM14	M 14	11,1	60	86	no
WCuM16	M 16	13,1	60	86	no
WCuM18	M 18	14,4	7	30	no

Information about delivery of other types and versions of threaded / tapping electrodes are available on request.

## Threaded / tapping electrodes

Graphite = planetary



Item No.	Thread	Outer diameter (mm)	Thread length (mm)	Total length (mm)	Internal flushing
GeM3	M 3		50	75	no
GeM4	M 4		50	75	no
GeM5	M 5		50	75	no
GeM6	M 6		50	75	no
GeM8	M 8		50	75	no
GeM10	M 10		50	75	no
GeM12	M 12		50	75	no
GeM14	M 14		50	75	no
GeM16	M 16		50	75	no
GeM18	M 18		50	75	no
GeM20	M 20		50	75	no

Information about delivery of other types and versions of threaded / tapping electrodes are available on request.

## Threaded / tapping electrodes

Silver-tungsten = planetary



Item No.	Thread	Outer diameter (mm)	Thread length (mm)	Total length (mm)	Internal flushing
AgWM1,0	M 1,0		13-15	50	no
AgWM1,2	M 1,2		22	50	no
AgWM1,4	M 1,4		30	50	no
AgWM1,6	M 1,6		30	50	no
AgWM2	M 2		30	50	no
AgWM2,5	M 2,5		35	50	no
AgWM3	M 3		35	50	no/yes
AgWM4	M 4		38	50	no/yes
AgWM5	M 5		38	50	no/yes
AgWM6	M 6		38	50	no/yes

Information about delivery of other types and versions of threaded / tapping electrodes are available on request.