



High performance wires for spark erosion

Reliability – Innovation – Precision

bedra
intelligent wires



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Quality is a matter of precision



Karl Berkenhoff - founder of the company

Spark erosion has enabled perfectly accurate production, and mass production, of the most complicated workpiece shapes. An achievement to which we have significantly contributed. Founded over 120 years ago in Germany, we developed high quality products and specific customer solutions – and advanced our industry through continuous innovation.

Our high-tech wire electrodes for spark erosion excel through precision and reliability, thus making our brand bedra an undisputed quality and market leader in this segment. Our versatile range of fine wires – made of copper, brass, bronze and nickel silver, coated and plain – is distributed in more than 80 countries worldwide.

Highest precision is the basis of all our actions and our benchmark in terms of international cooperation, innovative solutions, excellence in quality and customized services.

Welcome to Berkenhoff!

Business fields

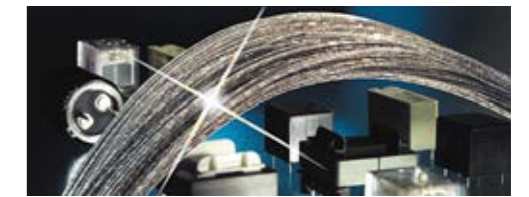
bedraedm

Innovative wire electrodes for all fields of application in wire erosion. Learn more on the following pages!



bedraelectronics

Customized wire solutions for electronics. Competence in material, shape and surface coating.



bedrawelding

High-tech wires as filler metals in a variety of alloys for welding and brazing.



bedraspecialties

Anchor wires for toothbrushes, optical wires for glasses, resistance wires and special wire solutions for several applications.



Content

Promoting competence – advancing innovation



Competence is a prerequisite for success – and besides quality the best sales argument. Hence, the primary focus of the bedra Competence Center is training and information as well as service and product development of Berkenhoff GmbH. Theory and practice go hand-in-hand: Training takes place in modern seminar rooms and practical research is done in the lab which is equipped with the most advanced wire EDM machines of all renowned manufacturers.

Apart from the basic research, we are working on development projects with our customers to deliver tailor-made solutions and technologies, taking into account up-to-date market analyses as well as suggestions from our customers. We cooperate in national projects and joint research projects and we are in close contact with EDM machine manufacturers and renowned universities. It is our high innovation standard that drives us to assure a continuous leading position of the brand bedra in quality, competence and performance.

Your leading edge in quality and performance

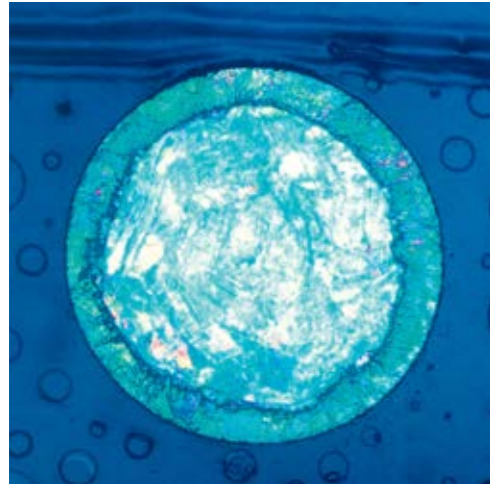
Strict quality assurance is the guarantee of reliability of our products. Our “100 % in-house“ concept has proven successful. We are the only manufacturer of EDM wires to offer not only product development, sales and service, but also the complete production process: casting, rolling, drawing, annealing and electroplating. In our own foundry only metals of highest purity are used. This production process guarantees complete quality control. For this reason, bedra is certified in accordance with DIN EN ISO 9001:2008. Furthermore, our Environmental Management was successfully audited according to ISO 14001:2009 by the Germanischer Lloyd Certification GmbH.

We use our know-how in the fields of metallurgy and chemical and physical engineering technology to optimise the production process and assure total quality control.



Our 100% inhouse - concept offers the complete production process - casting, rolling, drawing, annealing and electroplating - from a single source.





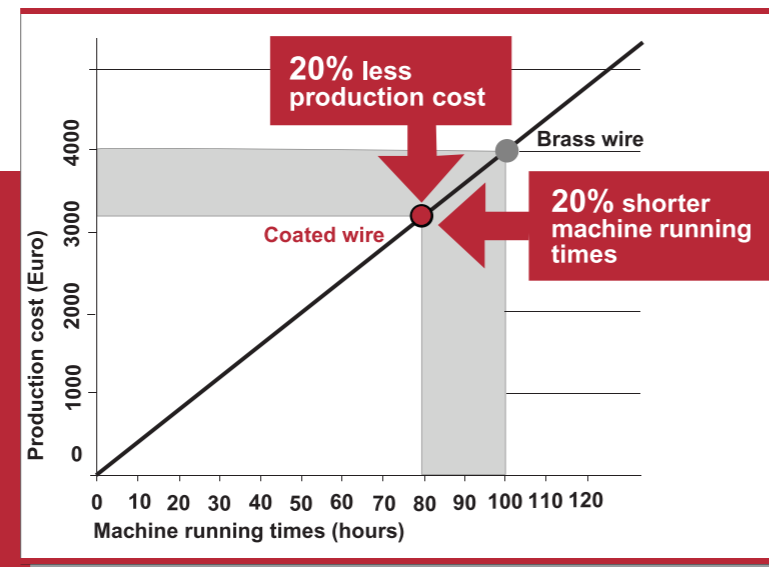
Cross-section of a coated wire electrode

Coated high-tech wires for spark erosion

Since the beginnings of spark erosion cutting, bedra has significantly contributed to the further development of technology and production processes in mould and tool making.

With the functional coatings for wire electrodes developed by bedra, an enormous increase in removal performance – and hence in productivity – can be achieved. Moreover, a reproducible high precision and surface quality is attained.

For decades, renowned customers throughout the world have relied on coated wires from bedra. They successfully showed that the quality products **topas[®] plus**, **cobracut[®]**, **broncocut[®]**, **megacut[®]** and **microcut[®]** achieved sustained success.



Coated wire electrodes from bedra perform significantly faster than brass wires.

Wire electrodes at a glance

Get a general view of the appropriate wire electrodes for your EDM machine. Or visit the bedra internet site at www.bedra.com to find the right wire for your application.

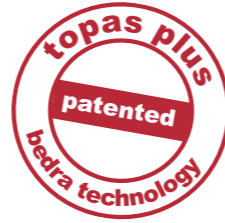


Agie	topas [®] plus G	topas [®] plus H	topas [®] plus D	cobracut [®]	cobracut [®] type A	cobracut [®] type G	cobracut [®] type D	cobracut [®] type S	cobracut [®] type AS	microcut [®]
	AC x20, x50, x70 AC HSS AC Evolution AC Classic AC Excellence AC Challenge AC Progress AC Vertex AC Classic V AC Challenge V AC Progress V/VP AC Vertex II/III	• • • • • • • • • • • • •	• • • • • • • • • • • • •	• • • • • • • • • • • • •	• • • • • • • • • • • • •	• • • • • • • • • • • • •	• • • • • • • • • • • • •	• • • • • • • • • • • • •	• • • • • • • • • • • • • •	• • • • • • • • • • • • • •
AgieCharmilles	CUT 20P / Cut 30P	•	•	•	•	•	•	•	•	•
	CUT 1000 / 1000 Oil	•	•	•	•	•	•	•	•	•
	CUT 2000 / 2000 Oil	•	•	•	•	•	•	•	•	•
	CUT 3000	•	•	•	•	•	•	•	•	•
		•	•	•	•	•	•	•	•	•
Charmilles	topas [®] plus G	topas [®] plus X	topas [®] plus H	topas [®] plus S	broncocut [®] type X	cobracut [®] type W	microcut [®]	cobracut [®] type A / type AS	cobracut [®]	
	x00/x000	•	•	•	•	•	•	•	•	
	x020/x030/x050	•	•	•	•	•	•	•	•	
	290/3x0/5x0/690	•	•	•	•	•	•	•	•	
	290F/3x0F/5x0F	•	•	•	•	•	•	•	•	
	x40cc/x40ccs	•	•	•	•	•	•	•	•	
	x40/x40 SL/x40SLP	•	•	•	•	•	•	•	•	
x050TW / TWO	•	•	•	•	•	•	•	•		
further	topas [®] plus D	topas [®] plus H	topas [®] plus S	megacut [®] type A	megacut [®] type T	megacut [®] type D	megacut plus	microcut [®]		
	Fanuc	•	•	•	•	•	•	•		
	Makino	•	•	•	•	•	•	•		
	Mitsubishi	•	•	•	•	•	•	•		
	ONA	•	•	•	•	•	•	•		
	Seibu	•	•	•	•	•	•	•		
	Sodick	•	•	•	•	•	•	•		
		•	•	•	•	•	•	•		

topas® plus



With topas® plus bedra has developed a high speed cutting wire that combines an excellent price-performance ratio with universal application on all standard EDM machines while ensuring highest quality.



SUPERFINISH

	core material	coating material	tensile strength	elongation	colour
topas® plus G	CuZn36	special layer	900 MPa	1%	grey-gold
Ø [mm]	0,20	0,25			
spools / kg bedra8 / 8,0 bedra16 / 16,0	• •	• •			
spools / kg K250 / 25,0	•	•			



topas® plus G

- gamma phase wire with high tensile strength
- outstanding surface quality and precision
- up to 10% higher cutting speed as compared to brass wire

topas® plus H

- gamma phase wire with high tensile strength
- particularly suited for machines which require straightened wires for threading
- up to 20 % higher cutting speed as compared to brass wire



	core material	coating material	tensile strength	elongation	colour
topas® plus H	CuZn36	special layer	800 MPa	>1%	grey-gold
Ø [mm]	0,20	0,25	0,30	0,33	
spools / kg bedra8 / 8,0 bedra16 / 16,0	• •	• •	• •	•	
spools / kg K250 / 25,0 K355 / 45,0	• •	• •	• •	•	
spools / kg P5 / 5,0 P10 / 10,0 P15 / 20,0	• • •	• • •	• • •	•	

topas® plus S

- soft gamma phase wire with high elongation
- universally applicable on Charmilles machines
- perfectly suited for taper cutting on all other machine types
- up to 20% higher cutting speed as compared to brass wire



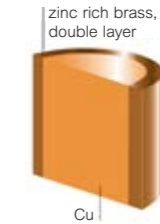
	core material	coating material	tensile strength	elongation	colour
topas® plus S	CuZn36	special layer	500 MPa	>10%	grey-gold
Ø [mm]	0,25	0,30			
spools / kg bedra8 / 8,0 bedra16 / 16,0	• •	• •			
spools / kg K250 / 25,0	•	•			

topas® plus



topas® plus X

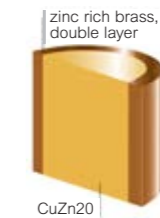
- gamma phase wire with up to 35 % higher cutting speed as compared to brass wire and, at that, with high precision
- developed especially for the X technology on Charmilles machines



	core material	coating material	tensile strength	elongation	colour
topas® plus X	Cu	zinc rich brass, double layer	500 MPa	1%	brown
Ø [mm]	0,25	0,30	0,33		
spools / kg bedra8 / 8,0 bedra16 / 16,0	• •	• •	• •		
spools / kg K250 / 25,0 K355 / 45,0	• •	• •	• •		
spools / kg P10 / 10,0 P15 / 20,0	• •	• •	• •		

topas® plus D

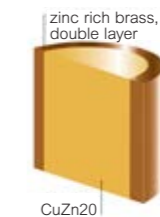
- gamma phase wire for highest demands of cutting performance (+35%) and process stability on Agie and Japanese machines
- hard gamma phase wire, especially suited for tall parts
- for all machines which require straightened wires for threading



	core material	coating material	tensile strength	elongation	colour
topas® plus D	CuZn20	zinc rich brass	800 MPa	>1%	grey-brown
Ø [mm]	0,25	0,30	0,33		
spools / kg bedra8 / 8,0 bedra16 / 16,0	• •	• •	•		
spools / kg K250 / 25,0 K355 / 45,0	• •	• •	• •		
spools / kg P5 / 5,0 P10 / 10,0 P15 / 20,0	• • •	• • •	• • •		

topas® H.E.A.T.

- high performance EDM wire specially developed for Makino machines with H.E.A.T. option
- double cutting speed with topas H.E.A.T. on machines with H.E.A.T. option in comparison to plain wire



	core material	coating material	tensile strength	elongation	colour
topas® H.E.A.T.	CuZn20	zinc rich brass, double layer	800 MPa	>1%	grey-gold
Ø [mm]	0,25	0,30			
spools / kg bedra8 / 8,0 bedra16 / 16,0	• •	• •			
spools / kg P5 / 5,0 P10 / 10,0 P15 / 20,0	• • •	• • •			

cobracut®



The **cobracut®** series of coated wire electrodes was developed together with Agie. They are suitable for a number of different machine models and practical applications.

cobracut®
THE ORIGINAL
bedra top quality

cobracut®

- zinc-coated wire electrode
- particularly suitable for high tapering due to its high elongation
- limited suitability for secure automatic threading



	core material	coating material	tensile strength	elongation	colour
cobracut®	CuZn36	Zn treated	500 MPa	15%	light grey
Ø [mm]	0,20	0,25			
spools / kg					
bedra4 / 4,0	•	•			
bedra8 / 8,0	•	•			
bedra16 / 16,0	•	•			
spools / kg					
K160 / 6,0	•	•			
K250 / 25,0	•	•			

cobracut® type A

- our recommendation hard zinc-coated wire electrode
- for highest demands on reproducible precision and surface quality
- high straightness for proper automatic threading



	core material	coating material	tensile strength	elongation	colour
cobracut® type A	CuZn36	Zn	900 MPa	1%	bright silver
Ø [mm]	0,15	0,20	0,25	0,30	
spools / kg					
bedra4 / 4,0	• ¹	•	• ¹	• ¹	
bedra8 / 8,0	•	•	•	•	
bedra16 / 16,0	•	•	•	•	
spools / kg					
K250 / 25,0	•	•	•	•	
K355 / 45,0	•	•	•	•	

¹ automatic threading not guaranteed

cobracut® type G

- harder surface than type A
- particularly suited for taper cutting on Agie machines with toroid guides
- excellent cylindricities and surfaces, particularly with higher workpieces on machines of the Evolution and Vertex series



	core material	coating material	tensile strength	elongation	colour
cobracut® type G	CuZn36	Zn treated	900 MPa	1%	light grey
Ø [mm]	0,15	0,20	0,25	0,30	
spools / kg					
bedra8 / 8,0	•	•	• ¹	• ¹	
bedra16 / 16,0	•	•	•	•	
spools / kg					
K250 / 25,0	•	•	•	•	
K355 / 45,0	•	•	•	•	

¹ automatic threading not guaranteed

cobracut®



cobracut® type D

- developed for EDM machines with high-power generators
- high thermal and electrical conductivity
- for speed cutting as well as contour precision enables cutting
- enables automatic threading



	core material	coating material	tensile strength	elongation	colour
cobracut® type D	CuZn20	CuZn50	800 MPa	1%	yellow brown
Ø [mm]	0,15	0,20	0,25	0,30	
spools / kg					
bedra8 / 8,0	•	•	•	•	
bedra16 / 16,0	•	•	•	•	
spools / kg					
K250 / 25,0	•	•	•	•	
K355 / 45,0	•	•	•	•	

cobracut® type S

- improvement of the **cobracut®** type D: better removal performance due to its thicker diffusion layer
- particularly suitable for EDM mass production
- enables automatic threading



	core material	coating material	tensile strength	elongation	colour
cobracut® type S	CuZn20	CuZn50	800 MPa	1%	yellow brown
Ø [mm]	0,30	0,33			
spools / kg					
bedra16 / 16,0	•	•			
spools / kg					
K250 / 25,0	•	•			
K355 / 45,0	•	•			

cobracut® type W

- suitable for all types of machines
- particularly suitable for high tapering
- very high cutting rates



	core material	coating material	tensile strength	elongation	colour
cobracut® type W	CuZn20	CuZn50	430 MPa	>30%	yellow brown
Ø [mm]	0,25				
spools / kg					
bedra4 / 4,0	•				
bedra8 / 8,0	•				
bedra16 / 16,0	•				

cobracut® AS



cobracut® AS

Your ticket to the A class

There are many zinc-coated wire electrodes in the market. However, none have the performance potential of cobracut® A, the ORIGINAL from bedra. The products which have tried to imitate ours are now joined by an economical alternative with proven cobracut® A technology: the new **cobracut® AS** from Berkenhoff – your ticket to the original A class.

cobracut® AS

- zinc-coated wire electrode for Agie machines
- modified primary material
- optimisation of the drawing and annealing process
- reliable quality
- excellent value for money



	core material	coating material	tensile strength	elongation	colour
cobracut® type AS	CuZn36	Zn	950 MPa	1%	bright silver
Ø [mm]	0,25				
spool / kg					
K200 / 16,0	•				

cobracut® – the comparison

	cobracut® AS	cobracut® A	cobracut® G
General	Zinc-coated, straightened wire electrode for Agie machines.	The original zinc-coated wire electrode for professional use with Agie and Charmilles machines.	Wire electrode with especially wear-resistant special layer on zinc basis for perfect usage with Agie machines.
Manufacturing	Cost-optimised galvanising and drawing processes, using a "speed annealing" process in proven bedra quality.	Absolute process security due to unique manufacturing processes and annealing treatment. Manufactured according to original specifications; unrivalled for more than 30 years.	Best process security due to precision-oriented manufacturing for a select circle of customers.
Precision/ Surface	Reliable quality level for classic requirements for reproducible precision and surface quality.	Fulfils the strictest requirements for precision and surface quality for cylindrical cuts (< 7° cone). ¹	For the best parallelism with high work pieces (70 - 100 mm). Fulfils the highest quality requirements, especially with the cutting of cones (> 7°). ²
Automatic threading	Greatest reliability for automatic threading, straightness pursuant to Agie Charmilles specification.		
Target group	EDM specialists who appreciate above average performance at an affordable entry level price.	Precision specialists in tool and mould making.	Businesses with an uncompromising orientation toward technology leadership.

¹ first choice for the processing of carbide and PCD
² on Agie machines with toroid guides

megacut®



megacut® type A

- zinc-coated precision wire
- suitable for extra-fine surfaces
- excellent cutting results – particularly for carbide machining



The high quality coated **megacut®** electrodes were especially developed for Japanese EDM machines.

	core material	coating material	tensile strength	elongation	colour
megacut® type A	CuZn36	Zn treated	900 MPa	1%	light grey
Ø [mm]	0,15	0,20	0,25	0,30	
spools / kg					
bedra8 / 8,0	•	•	•	•	
bedra16 / 16,0	•	•	•	•	
spools / kg					
P5 / 5,0	•	•	•	•	
P10 / 10,0	•	•	•	•	
P15 / 20,0	•	•	•	•	

megacut® type T

- particularly suitable for high tapering with highest precision
- limited suitability for automatic threading



	core material	coating material	tensile strength	elongation	colour
megacut® type T	CuZn36	Zn treated	500 MPa	15%	light grey
Ø [mm]	0,20	0,25			
spools / kg					
bedra8 / 8,0	•	•			
bedra16 / 16,0	•	•			
spools / kg					
P5 / 5,0	•	•			
P10 / 10,0	•	•			
P15 / 20,0	•	•			

megacut® type D

- high-performance cutting characteristics due to its special coating
- particularly effective when operating under poor flushing conditions (tall workpieces, interrupted cuts, staked parts)



	core material	coating material	tensile strength	elongation	colour
megacut® type D	CuZn20	CuZn50	800 MPa	1%	yellow brown
Ø [mm]	0,20	0,25	0,30		
spools / kg					
bedra8 / 8,0	•	•	•		
bedra16 / 16,0	•	•	•		
spools / kg					
K355 / 45,0		•	•		
spools / kg					
P5 / 5,0	•	•	•		
P10 / 10,0	•	•	•		
P15 / 20,0	•	•	•		

megacut®



megacut® plus

- gamma phase wire for all standard brass wire technologies
- high cutting speed and precision
- very good wire threading
- significant time and cost savings compared to pure brass wire



	core material	coating material	tensile strength	elongation	colour
megacut® plus	CuZn36	special layer	900 MPa	1%	yellow gold
Ø [mm]	0,25				
spools / kg K160 / 8,0	•				
spools / kg P5 / 5,0 P10 / 10,0 P15 / 20,0	• • •				

megacut® type HS

- improvement of **megacut®** type D
- the thicker diffusion layer provides better removal performance
- particularly suitable for economical EDM mass production



	core material	coating material	tensile strength	elongation	colour
megacut® type HS	CuZn20	CuZn50	800 MPa	1%	yellow brown
Ø [mm]	0,30	0,33			
spools / kg bedra8 / 8,0 bedra16 / 16,0	• •	• •			
spools / kg K355 / 45,0	•	•			
spools / kg P10 / 10,0 P15 / 20,0	• •	• •			

broncocut® type X

The classic wire for Charmilles machines.



broncocut® type X

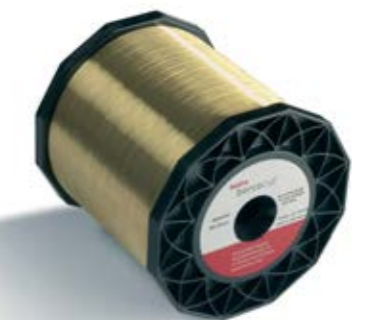
- high-performance, multipurpose wire electrode with CuZn coating
- particularly suited for precision cutting as well as high-speed cutting



	core material	coating material	tensile strength	elongation	colour
broncocut® type X	Cu	CuZn50	520 MPa	1%	brown
Ø [mm]	0,25	0,30			
spools / kg bedra4 / 4,0 bedra8 / 8,0 bedra16 / 16,0	• • •	• •			
spools / kg K250 / 25,0 K355 / 45,0	• •	• •			
spools / kg P5 / 5,0 P10 / 10,0 P15 / 25,0	• • •	• •			

bercocut®

Our programme of high-performance wires covers the full spectrum and with the **bercocut®** series it also comprises plain brass wires. Like the coated products, the brass EDM wires are subject to strict production standards and therefore enable reliable cutting performances.



bercocut® special

- hard, straightened brass wire
- recommended and homologated for all Agie machines



	material	tensile strength	elongation	colour
bercocut® spezial	CuZn36	900 MPa	1%	gold
Ø [mm]	0,15	0,20	0,25	0,30
spools / kg bedra4 / 4,0 bedra8 / 8,0 bedra16 / 16,0	• •	• •	• •	• •
spools / kg K250 / 25,0 K355 / 45,0			• •	•
spools / kg P5 / 5,0 P10 / 10,0 P15 / 20,0	•	•	• • •	

bercocut®



bercocut® pro 500

- soft, paraffin-free brass wire
- suitable for taper cutting



	material	surface	tensile strength	elongation	colour
bercocut® pro 500	CuZn36	paraffin-free	500 MPa	15%	gold
Ø [mm]	0,25				
spools / kg					
K160 / 8,0	•				
K200 / 16,0	•				
K250 / 25,0	•				

bercocut® pro 900

- hard, straightened brass wire
- paraffin-free grade
- recommended for use on all Japanese machines



	material	surface	tensile strength	elongation	colour
bercocut® pro 900	CuZn36	paraffin-free	900 MPa	1%	gold
Ø [mm]	0,20	0,25	0,30		
spools / kg					
K160 / 8,0	•	•	•		
K200 / 16,0		•	•		
K250 / 25,0		•	•		
K355 / 45,0		•	•		
spools / kg					
P5 / 5,0	•	•	•		
P10 / 10,0		•	•		
P15 / 20,0		•	•		

megacut® pro

- reliable brass wire as economical alternative for Japanese machines
- precise automatic threading
- paraffin free, specially refined quality



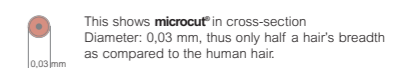
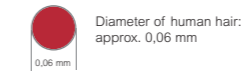
	material	surface	tensile strength	elongation	colour
megacut® pro	CuZn36	paraffin-free	900 MPa	1%	gold
Ø [mm]	0,25	0,30			
spools / kg					
K160 / 8,0	•	•			
K200 / 16,0	•	•			
K250 / 25,0	•	•			
K355 / 45,0	•	•			
spools / kg					
P5 / 5,0	•	•			
P10 / 10,0	•	•			
P15 / 20,0	•	•			

microcut®

worldwide patented!



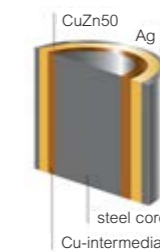
Microerosion makes highest demands on precision and process stability. The fine wires of the **microcut®** family combine highest tensile strength with tightest tolerances, and, at that, with diameters thinner than a human hair.



	core material	coating material	tensile strength	elongation	colour
microcut®	steel, Cu-treated	CuZn50, Ag	2.000 MPa	1%	gold
Ø [mm]	0,02	0,03	0,04	0,05	0,06
spools BK100					
5.000 m	•	•	•	•	•
10.000 m					
Ø [mm]	0,07	0,08	0,09	0,10	
spools BK100					
5.000 m	•	•	•	•	•
10.000 m	•	•	•	•	•
spools bedra4					
20.000 m	•	•	•	•	•
30.000 m	•	•	•	•	•

microcut®

- a high-tensile steel core reliably sustains high wire pre-loads, even with the smallest diameters
- functional layer composition for finest machining with absolute reproducibility



	core material	coating material	tensile strength	elongation	colour
microcut® CCA	CuZn36	Zn treated	1.000 MPa	1%	grey
Ø [mm]	0,05	0,06	0,07	0,08	0,09
spools bedra4					
10.000 m	•	•	•	•	•
20.000 m	•	•	•	•	•
30.000 m	•	•	•	•	•
60.000 m	•	•	•	•	•

microcut® CCA

- combines the best properties of **cobracut®** and **microcut®**, thereby providing reproducible results with best surface quality, even in the case of very small energy pulses.



- due to its high tensile strength and minimal tolerance of the wire diameter particularly suited for precise fine contours

	core material	tensile strength	elongation	colour
microcut® BR	CuZn36	1.000 MPa	1%	gold
Ø [mm]	0,05	0,06	0,07	0,08
spools bedra4				
10.000 m	•	•	•	•
20.000 m	•	•	•	•
30.000 m	•	•	•	•
60.000 m	•	•	•	•

microcut® BR

- for standard requirements in microerosion



Data for your production planning

type of spool	wire diameters mm	nominal weight per spool, approx. kg	nominal length per spool ¹ (m)	run-off times per spool at run-off time speeds			
				6 m/min (h)	9 m/min (h)	12 m/min (h)	15 m/min (h)
bedra4	0,15	4	26.800	74	50	37	30
	0,20	4	15.000	42	28	21	17
	0,25	4	9.600	27	18	13	11
	0,30	4	6.600	18	12	9	7
bedra8 and K160 - 8 kg	0,15	8	53.600	149	99	74	60
	0,20	8	30.000	83	56	42	33
	0,25	8	19.200	53	36	27	21
	0,30	8	13.200	37	24	18	15
	0,33	8	10.700	30	20	15	12
bedra16	0,20	16	60.000	167	111	83	67
	0,25	16	38.400	107	71	53	43
	0,30	16	26.400	73	49	37	29
	0,33	16	21.400	59	40	30	24
K100	0,15	1.6	10.500	29	19	15	12
	0,20	1.6	6.000	17	11	8	7
	0,25	1.6	3.700	10	7	5	4
	0,30	1.6	2.600	7	5	4	3
K125	0,15	3.5	23.000	64	43	32	26
	0,20	3.5	12.500	35	23	17	14
	0,25	3.5	8.000	22	15	10	9
	0,30	3.5	5.500	5	10	8	6
K160 - 6 kg	0,15	6	39.000	108	72	54	43
	0,20	6	22.000	61	41	31	24
	0,25	6	14.000	39	26	19	16
	0,30	6	9.800	27	18	14	11
K200	0,20	15.7	57.500	160	106	80	64
	0,25	15.7	37.000	103	69	51	41
	0,30	15.7	25.800	72	48	36	29
	0,33	15.7	21.200	59	39	29	24
K250	0,20	25	93.750	260	174	130	104
	0,25	25	60.000	167	111	83	67
	0,30	25	41.250	115	76	57	46
	0,33	25	33.500	93	62	47	37
K355	0,20	45	165.000	458	306	229	183
	0,25	45	106.000	294	196	147	118
	0,30	45	73.500	204	136	102	82
	0,33	45	60.700	167	112	84	67
P3	0,15	3	19.700	55	36	27	22
	0,20	3	11.000	31	20	15	12
	0,25	3	7.000	19	13	10	8
	0,30	3	4.900	14	9	7	5
P5	0,15	5	32.600	91	60	45	36
	0,20	5	18.300	51	34	25	20
	0,25	5	11.700	33	22	16	13
	0,30	5	8.100	23	15	11	9
	0,33	5	6.740	19	12	9	7
P10	0,20	10	36.600	102	68	51	41
	0,25	10	23.400	65	43	33	26
	0,30	10	16.200	45	30	23	18
	0,33	10	13.500	36	25	19	15
P15	0,20	20	73.500	204	136	102	82
	0,25	20	46.800	130	87	65	52
	0,30	20	32.400	90	60	45	36
	0,33	20	27.000	75	50	37	30
BK100	0,02-0,10		5.000	14	9	7	5
bedra4	0,02-0,10		10.000	28	18	14	11
			20.000	56	36	28	22

¹Valid for full spools with CuZn alloys with a density of 8,67 kg/dm³

Packing units

	weight / spool (kg)	spools / carton	weight / carton (kg)	cartons / layer	weight 1 layer (kg)	weight 2 layers (kg)	weight 3 layers (kg)	weight 4 layers (kg)
bedra4	4	4	16	6	96	192	288	384
bedra8	8	2	16	10	160	320	480	640
bedra16	16	1	16	12	192	384	576	
K125	3,5	4	14	6	84	168	252	336
K160	8	2	16	10	160	320	480	640
K200	16	1	16	12	192	384	576	
K250	25	1	25	12	300	600		
K355	45	1	45	3	135			
P5	5	4	20	8	160	320	480	640
P10	10	2	20	8	160	320	480	640
P15	20	1	20	16	320	640		

standard pallet = EURO PALETT (processed timber)
Minimum quantity for special trade: 1 layer

Wire storage

Please note:

1. Always store spools in their original packaging in a dry area

The spools are packed in shock, dust and oxidation-proof material to protect the wire from shipping damage and contamination. The wire should be stored in the original packaging until ready for use. This will ensure the highest quality for your EDM applications.

2. Used spools handling procedures

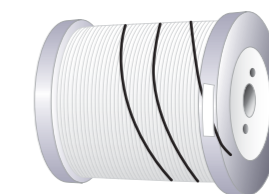
It is very important to properly secure the loose end of the wire on partially used spools. This will prevent the wire from shifting on the spool and becoming tangled. Improper handling and storage techniques can cause unwinding problems and unnecessary wire breakage. Figures 1 and 2 show two correct ways to secure the loose end of the wire.

Figures 3 and 4 show incorrect ways and should definitely be avoided. Partially used spools should be stored in their original packaging material when not in use. This will minimize contamination and shifting of the wire on the spool.

Warranty will be voided in case of improper storage!

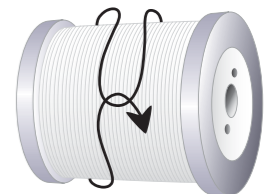
Proper handling of partially used spools:

Figure 1



Attach wire to spool flange with tape.

Figure 2



Attach wire by making a loop and securing it to itself. Make sure that the wire is snug.

Strictly avoid:

Figure 3



Do not tape wire to the spooled material!

Figure 4



Do not thread the wire underneath itself so as to overlap!

bedra high-performance wire electrodes are available through authorized dealers and the original equipment manufacturers. We will gladly recommend a distributor close to you.

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