

# PRODUCT SPECIFICATION

<b>Brand</b>	C.K
<b>Product Range</b>	Precision & Carbofib tweezers
<b>Catalogue number</b>	As listed
<b>Date</b>	20/11/2008

## Range Description

A range of professional quality tweezers

## Features

### Precision Tweezers

- Precision tweezers for the intricate gripping, positioning and holding tasks encountered in assembly and maintenance/repair work, commonly found in electronic and precision manufacturing industries.
- Manufactured using the highest quality materials and production techniques

### Carbofib Tweezers

- PA66/CF30 Polyamide 66 reinforced with 30% carbon fibre
- ESD compliant material
- Heat stabilised
- Very high rigidity, excellent tensile and flexural strength, fatigue and creep resistant
- Low friction, self lubricating properties, excellent wear and abrasion properties
- Heat resistant up to 1000°C
- Good chemical resistance (oils, grease, fuels, non-polar solvents) Not resistant to acids, alkalis, and hot water or steam
- Very low coefficient of linear thermal expansion
- Solder (soft and hard) cannot adhere to the surface

*precision*

2301



2302



2307



2308



2308A



2309



2313A



2314



2315



2316



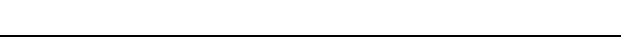
2317



2318



2319



## Ceramic Tweezers

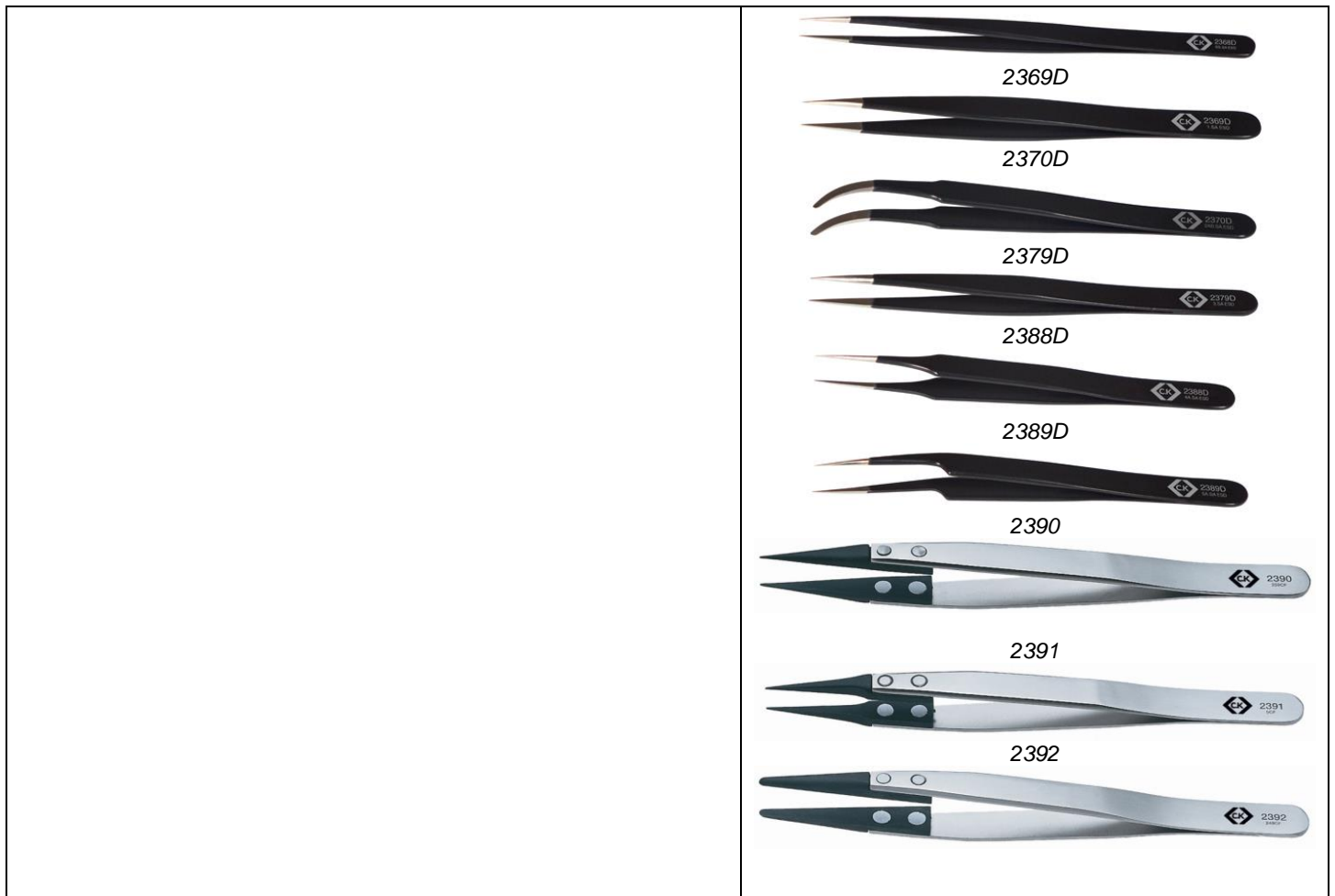
- Zirconia toughened Alumina (ZTA)
- A superior combination of high strength (from the zirconia) and high hardness (from the Alumina)
- Relatively low density
- No open porosity
- Very hard surface, good abrasion and wear resistance
- Flexible and resistant to fracture
- Excellent thermal properties and high temperature stability
- Extreme corrosion resistance, nearly chemically inert
- 100% electrically insulating

## Precision ESD Tweezers

- Low carbon austenitic stainless steel
- Antimagnetic and resistant against normal acids and vapors
- Fine polished, matt finish on the tips
- ESD-safe, black epoxy coating with a surface resistance of  $10^5$ - $10^6$







Item Number	Item Description	EAN No	Commodity code	Carton Qty
T2301	Precision Universal Tweezer 115mm	5013969424300	82032010	1
T2302	Precision Universal Tweezer Coated 115mm	5013969424409	82032010	1
T2307	Precision Universal Tweezer 145mm	5013969424904	82032010	1
T2308	Precision Universal Tweezer Coated 145mm	5013969425000	82032010	1
T2308A	Precision Universal Tweezer PVC Coated 145mm	5013969883503	82032010	1
T2309	Precision Universal Tweezer 140mm	5013969425109	82032010	1
T2313A	Precision Universal Tweezer Cross Pattern 160mm	5013969961201	82032010	1
T2314	Precision Universal Tweezer 150mm	5013969425604	82032010	1
T2315	Precision Universal Tweezer Coated 150mm	5013969425703	82032010	1
T2316	Precision Tweezer 105mm	5013969425802	82032010	1
T2317	Precision Tweezer 105mm	5013969425901	82032010	1
T2318	Precision Tweezer 130mm	5013969426007	82032010	1
T2319	Precision Tweezer 120mm	5013969426106	82032010	1
T2327	Precision Radio Tweezer 155mm	5013969111002	82032010	1
T2328	Precision Radio Tweezer Bent 155mm	5013969984125	82032010	1
T2330	Precision Tweezer 110mm	5013969983302	82032010	1

T2331	Precision Tweezer 115mm	5013969983401	82032010	1
T2334	Precision Positioning Tweezer 120mm	5013969983708	82032010	1
T2336	Precision Positioning Tweezer 120mm	5013969983906	82032010	1
T2339	Precision Tweezer 110mm	5013969183801	82032010	1
T2340	Precision Tweezer 110mm	5013969188806	82032010	1
T2340D	Precision Tweezer ESD 110mm	5013969111125	82032000	1
T2341	Precision Tweezer 110mm	5013969212709	82032010	1
T2341D	Precision Tweezer ESD 110mm	5013969111149	82032000	1
T2343	Precision Tweezer 130mm	5013969213102	82032010	1
T2345A	Precision Ceramic Tweezer 140mm	5013969815085	82032010	1
T2346	Precision Tweezer 130mm	5013969111019	82032000	1
T2346D	Precision Tweezer ESD 130mm	5013969111040	82032000	1
T2347	Precision Tweezer 120mm	5013969111026	82032000	1
T2347D	Precision Tweezer ESD 120mm	5013969111064	82032000	1
T2348	Precision Tweezer 120mm	5013969111033	82032000	1
T2348D	Precision Tweezer ESD 120mm	5013969111088	82032000	1
T2349	Precision Tweezer Cross Pattern 120mm	5013969229905	82032010	1
T2351	Precision Positioning Tweezer 115mm	5013969243505	82032010	1
T2354	Precision Positioning Tweezer 115mm	5013969244403	82032010	1
T2359	Precision Positioning Tweezer 150mm	5013969282801	82032010	1
T2360	Precision Positioning Tweezer 120mm	5013969282900	82032010	1
T2360D	Positioning Tweezer ESD 120mm	5013969111095	82032000	1
T2361D	Precision Tweezer ESD 120mm	5013969111163	82032000	1
T2362D	Positioning Tweezer ESD 120mm	5013969111170	82032000	1
T2363D	Positioning Tweezer ESD 120mm	5013969111187	82032000	1
T2364	Precision Tweezer Flat Tip 105mm	5013969236101	82032010	1
T2368D	Precision Tweezer ESD 140mm	5013969111057	82032000	1
T2369D	Precision Tweezer ESD 120mm	5013969111071	82032000	1
T2370D	Positioning Tweezer ESD 120mm	5013969111101	82032000	1
T2379D	Precision Tweezer ESD 120mm	5013969111118	82032000	1
T2381	Precision Tweezer 120mm	5013969982268	82032010	1
T2388D	Precision Tweezer ESD 110mm	5013969111132	82032000	1
T2389D	Precision Tweezer ESD 115mm	5013969111156	82032000	1
T2390	Carbofib Positioning Tweezer 130mm	5013969982343	82032010	1
T2391	Carbofib Positioning Tweezer 130mm	5013969982350	82032010	1
T2392	Carbofib Positioning Tweezer 130mm	5013969982367	82032010	1

Technical product information

**Specification**

Fig	Type	Tip Type	Material Code	Coating
T2301	Universal	Fine, blunt, 2mm wide, finely milled inside	C	Nickel
T2302	Universal	Fine, blunt, 2mm wide, finely milled inside	C	Black
T2307	Universal	Blunt, 3.5mm wide, finely milled inside	C	Nickel
T2308	Universal	Blunt, 3.5mm wide, finely milled inside	C	Black
T2308A	Universal	Blunt, 3.5mm wide, finely milled inside	C	PVC
T2309	Universal	Blunt, 2mm wide, fine cross cut inside	C	Nickel
T2313A	Cross pattern, reverse action	Fine, bent, 2.5mm wide	C	Nickel
T2314	Universal Pin Guided	Fine, blunt, 2mm wide, finely milled inside	C	Nickel
T2315	Universal Pin Guided	Fine, blunt, 2mm wide, finely milled inside	C	Black
T2316	Precision	Fine, straight	SA	None
T2317	Precision	Fine, bent	SA	None
T2318	Precision	Fine, straight, extra long	SA	None
T2319	Precision	Fine, straight, extra long	S	None
T2327	Radio	Fine, blunt, 2mm wide, finely milled inside	C	Nickel
T2328	Radio	Fine, blunt, bent, 2mm wide, finely milled inside	C	Nickel
T2330	Precision	Superfine, bent	SA	None
T2331	Precision	Superfine, offset, bent	SA	None
T2334	Positioning	For SOT-package, Monolithic chip, capacitors, etc	SA	None
T2336	Positioning	Grooved, bent, for cylindrical devices up to 1mm Dia	SA	None
T2339	Precision	Fine, Straight	SA	None
T2340	Precision	Fine, sharp, straight	SA	None
T2340D	Precision	Fine, sharp, straight	SA ESD	Conductive Polyester Epoxy
T2341	Precision	Superfine, straight	SA	None
T2341D	Precision	Superfine tips, straight	SA ESD	Conductive Polyester Epoxy
T2343	Precision	Fine, straight	SA	None
T2345A	Ceramic	Fine, straight	CER	Nickel
T2346	Precision	Straight, fine tips	SA	None
T2346D	Precision	Straight, fine tips	SA ESD	Conductive Polyester Epoxy
T2347	Precision	Strong, thick, flat edges, straight	SA	None
T2347D	Precision	Strong, thick, flat edges, straight	SA ESD	Conductive Polyester Epoxy
T2348	Precision	Flat, sharp, fine tips	SA	None
T2348D	Precision	Flat, sharp, fine tips	SA ESD	Conductive Polyester Epoxy
T2349	Cross pattern, reverse action	For SOT-package, Monolithic chip, capacitors, etc	SA	None

	T2351	Positioning	Round inside, for cylindrical devices up to 1mm Dia	SA	None
	T2354	Positioning	Round inside, for cylindrical devices up to 2mm Dia	SA	None
	T2359	Positioning	Fine, bent, cross cut inside	SA	None
	T2360	Positioning	Flat, round, straight	SA	None
	T2360D	Positioning	Flat, round, straight	SA ESD	Conductive Polyester Epoxy
	T2361D	Precision	Extremely fine tips, curved and strong	SA ESD	Conductive Polyester Epoxy
	T2362D	Positioning	For positioning and soldering 1mm wide components, 45° tips	SA ESD	Conductive Polyester Epoxy
	T2363D	Positioning	Grooved tips for positioning and soldering 1mm wide components	SA ESD	Conductive Polyester Epoxy
	T2364	Flat	Spatula flat	SA	None
	T2368D	Precision	Slim, long, superfine tips	SA ESD	Conductive Polyester Epoxy
	T2369D	Precision	Slim, straight, fine tips	SA ESD	Conductive Polyester Epoxy
	T2370D	Positioning	Flat, fine tips, curved	SA ESD	Conductive Polyester Epoxy
	T2379D	Precision	Very sharp, fine tips	SA ESD	Conductive Polyester Epoxy
	T2381	Precision	Fine, curved	SA	None
	T2388D	Precision	Extremely fine, straight tips	SA ESD	Conductive Polyester Epoxy
	T2389D	Precision	Oblique, extremely fine tips	SA ESD	Conductive Polyester Epoxy
	T2390	Positioning	Fine	CER	Nickel
	T2391	Positioning	Fine, extra slim	CER	Nickel
	T2392	Positioning	Round, 2mm wide	CER	Nickel

**Material type**

C = Hardened carbon steel

SA = 316 stainless steel

SA ESD = 316 Stainless Steel with ESD Safe Coating (Surface resistance 10<sup>5</sup> - 10<sup>6</sup>)

S = Stainless steel

CER = Ceramic (Ceramic tips held on a nickel plated carbon steel bow)

Standards compliance	Carbofib tweezers are electrostatically dissipative to DIN EN 61340 5,1 & 5,2
User health and safety information	None applicable

RoHS/WEEE compliance	This product range does not fall within the scope of RoHS or WEEE regulations
Material safety data	None applicable
Warranty	C.K Tools are guaranteed for life against imperfect materials or workmanship Normal wear and tear or damage caused through inappropriate use is not covered
Country of origin	Germany / Switzerland

## Dimensional details

Item	Product only				Product on primary packaging			
	Width mm	Depth mm	Height mm	Net weight g	Width mm	Depth mm	Height mm	Gross weight g
T2301	9	12	115	14	40	11	180	24
T2302	9	12	115	14	40	11	180	24
T2307	11	20	145	22	40	11	180	32
T2308	11	20	145	22	40	11	180	32
T2308A	13	17	145	28	40	17	203	40
T2309	11	20	140	16	40	11	180	26
T2313A	12	15	160	26	40	17	203	38
T2314	8	15	150	18	40	17	203	30
T2315	8	15	150	18	40	17	203	30
T2316	8	10	105	10	40	11	180	20
T2317	8	10	105	10	40	11	180	20
T2318	11	7	130	18	40	11	180	28
T2319	9	11	120	12	40	11	180	22
T2327	10	15	155	18	40	17	203	30
T2328	10	15	155	18	40	17	203	30
T2330	10	5	110	11	40	11	180	21
T2331	10	8	115	12	40	11	180	22
T2334	10	5	120	16	40	11	180	26
T2336	10	5	120	14	40	11	180	24
T2339	10	5	115	14	40	11	180	24
T2340	10	5	110	11	40	11	180	21
T2340D	9	9	110	11	38	10	180	22
T2341	10	5	110	12	40	11	180	22
T2341D	10	5	110	12	38	10	180	24



T2343	10	5	130	19	40	11	180	29
T2345A	10	7	140	10	40	11	180	20
T2346	11	10	127	18	38	10	180	29
T2346D	11.5	10	127	18	38	10	180	29
T2347	9.5	12.5	123	22	38	10	180	33
T2347D	9.5	12.5	122	22	38	10	180	33
T2348	11	9.5	122	17	38	10	180	27
T2348D	11	9.5	120	15	38	10	180	26
T2349	10	15	120	14	40	11	180	24
T2351	10	5	115	15	40	11	180	25
T2354	10	5	115	14	40	11	180	24
T2359	10	7	150	18	40	17	203	30
T2360	10	7	120	14	40	11	180	24
T2360D	10	10	123	17	38	10	180	29
T2361D	10	11.5	120	16	38	10	180	23
T2362D	10.5	10.5	120	16	38	10	180	28
T2363D	10	11	120	16	38	10	180	27
T2364	10	5	105	14	40	11	180	24
T2368D	8.5	10	140	13	38	10	180	27
T2369D	10.5	9.5	120	14	38	10	180	26
T2370D	10	11.5	117	16	38	10	180	27
T2379D	9.5	9.5	120	14	38	10	180	27
T2381	10	7	120	21	40	11	180	31
T2388D	10.5	10	110	13	38	10	180	25
T2389D	10.5	11	115	13	38	10	180	24
T2390	10	7	130	17	40	11	180	27
T2391	10	7	130	16	40	11	180	26
T2392	10	7	130	17	40	11	180	27

Item	Shelf box (secondary packaging)				Euro Pallet data Wi x Hi	
	Width mm	Depth mm	Height mm	Gross weight g	No of cartons on base	Number of rows high
T2301						
T2302						
T2307						
T2308						
T2308A						
T2309						
T2313A						
T2314						
T2315						
T2316						
T2317						
T2318						
T2319						
T2327						
T2328						
T2330						
T2331						
T2334						
T2336						
T2339						
T2340						
T2340D						
T2341						
T2341D						
T2343						
T2345A						
T2346						
T2346D						
T2347						
T2347D						
T2348						
T2348D						

T2349						
T2351						
T2354						
T2359						
T2360						
T2360D						
T2361D						
T2362D						
T2363D						
T2364						
T2368D						
T2369D						
T2370D						
T2379D						
T2381						
T2388D						
T2389D						
T2390						
T2391						
T2392						

**Packaging waste details**

Item	Primary Packaging				Secondary packaging			
	Plastic g	Use	Card g	Use	Plastic g	Use	Card g	Use
T2301	10	Box						
T2302	10	Box						
T2307	10	Box						
T2308	10	Box						

T2308A	12	Box						
T2309	10	Box						
T2313A	12	Box						
T2314	12	Box						
T2315	12	Box						
T2316	10	Box						
T2317	10	Box						
T2318	10	Box						
T2319	10	Box						
T2327	12	Box						
T2328	12	Box						
T2330	10	Box						
T2331	10	Box						
T2334	10	Box						
T2336	10	Box						
T2339	10	Box						
T2340	10	Box						
T2340D	11	Box						
T2341	10	Box						
T2341D	12	Box						
T2343	10	Box						
T2345A	10	Box						
T2346	11	Box						
T2347	11	Box						
T2347D	11	Box						
T2348	10	Box						
T2348D	11	Box						
T2349	10	Box						
T2351	10	Box						
T2354	10	Box						
T2359	12	Box						
T2360	10	Box						
T2360D	12	Box						
T2361D	7	Box						
T2362D	12	Box						
T2363D	11	Box						

T2364	10	Box						
T2368D	14	Box						
T2369D	12	Box						
T2370D	11	Box						
T2379D	13	Box						
T2381	10	Box						
T2388D	12	Box						
T2389D	11	Box						
T2390	10	Box						
T2391	10	Box						
T2392	10	Box						

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