

INSTRUCTION MANUAL

SINKER EDM



MACHINING CONDITIONS



PRECAUTIONS

1. The matters which are not covered inside this manual will not be guaranteed.
2. The notes provided in this manual must be observed. Otherwise, the function may not be executed correctly or the system could be adversely affected.
3. Specifications are subject to change for improvement without notice.
4. Please contact us if you have any uncertainty about the manual.

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1. Cu(copper) — St(steel)

Standard machining (for Model data 20)

Electrode : Cu
Workpiece : SKD-11

Electrode dimensions = □5

τ OFF ADJ = 1
Jump amount = A2
Jump cycle = 3
Jump speed = 8

E number			101	102	103	104	105	106	107	108	
Machining state	Voltage (%)		30	30	30	30	30	30	30	30	
	Current (A)		0.2	0.5	1.0	1.3	1.7	2.0	3.0	3.5	
Removal rate	Jump (g/min)		0.0008	0.0015	0.0020	0.0026	0.0038	0.0050	0.0120	0.0500	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)		6.0	7.0	8.0	10	12	15	20	26	
	Ra (μm)										
Electrode wear (%)			4.0	3.0	2.0	1.0	0.5	0.2	0.2	0.2	
One-sided exit gap (mm)			0.010	0.010	0.015	0.015	0.015	0.020	0.020	0.020	
Duty Factor (%)			35	35	38	40	41	48	52	57	
Required option											

Low wear standard machining (for Model data 120)

Electrode : Cu
Workpiece : SKD-11

Electrode dimensions = □5

τ OFF ADJ = 1
Jump amount = A2
Jump cycle = 3
Jump speed = 8

E number			111	112	113	114	115	116	117	118	
Machining state	Voltage (%)		15	15	15	15	15	15	15	15	
	Current (A)		0.2	0.5	1.0	1.5	2.0	2.5	3.5	5.0	
Removal rate	Jump (g/min)		0.0006	0.0025	0.0040	0.0048	0.0060	0.0070	0.0300	0.0800	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)		8.0	9.0	10	14	16	20	23	30	
	Ra (μm)										
Electrode wear (%)			1.8	1.2	0.8	0.6	0.4	0.3	0.1	0.1	
One-sided exit gap (mm)			0.010	0.010	0.015	0.015	0.015	0.015	0.020	0.020	
Duty Factor (%)			33	40	40	48	48	55	58	59	
Required option											

Wear shallow machining (for Model data 220)

Electrode : Cu
Workpiece : SKD-11

Electrode dimensions = □5

τ OFF ADJ = 1
Jump amount = A2
Jump cycle = 3
Jump speed = 8

E number			121	122	123	124	125	126	127	128	
Machining state	Voltage (%)		15	15	15	15	15	15	15	15	
	Current (A)		0.3	0.5	1.0	1.5	2.0	2.5	4.0	6.0	
Removal rate	Jump (g/min)		0.0010	0.0040	0.0060	0.0080	0.0100	0.0130	0.0450	0.1100	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)		8.0	9.0	10	14	16	20	23	30	
	Ra (μm)										
Electrode wear (%)			4.0	3.0	3.0	2.0	1.5	1.2	0.7	0.5	
One-sided exit gap (mm)			0.010	0.010	0.015	0.015	0.015	0.015	0.020	0.020	
Duty Factor (%)			37	40	43	45	47	47	48	48	
Required option											

Low wear shallow machining (for Model data 320)

Electrode : Cu
Workpiece : SKD-11

Electrode dimensions = □5

τ OFF ADJ = 1
Jump amount = A2
Jump cycle = 3
Jump speed = 8

E number			131	132	133	134	135	136	137	138	
Machining state	Voltage (%)		20	20	20	20	20	20	20	20	
	Current (A)		0.2	0.5	0.7	1.0	1.2	1.5	1.7	2.0	
Removal rate	Jump (g/min)		0.0005	0.0020	0.0035	0.0043	0.0053	0.0063	0.0170	0.0450	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)		8.0	9.0	10	14	16	20	23	28	
	Ra (μm)										
Electrode wear (%)			0.8	0.6	0.2	0.2	0.2	0.2	0.1	0.1	
One-sided exit gap (mm)			0.010	0.010	0.015	0.015	0.015	0.015	0.020	0.020	
Duty Factor (%)			43	45	46	47	48	48	48	50	
Required option											

Low wear machining at the pre-machined hole (for Model data 620)

Electrode : Cu
Workpiece : S55C

Electrode dimensions = □5

τ OFF ADJ = 1
Jump amount = A2
Jump cycle = 3
Jump speed = 8

E number			141	142	143	144	145	146	147	148	
Machining state	Voltage (%)		30	30	30	30	30	30	30	30	
	Current (A)		0.2	0.5	0.7	1.0	1.5	2.0	3.0	4.0	
Removal rate	Jump (g/min)		0.0020	0.0030	0.0050	0.0070	0.0100	0.0150	0.0230	0.0350	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)		8.0	9.0	10	14	16	20	23	28	
	Ra (μm)										
Electrode wear (%)			0.8	0.6	0.2	0.2	0.2	0.2	0.1	0.1	
One-sided exit gap (mm)			0.010	0.010	0.015	0.015	0.015	0.015	0.020	0.020	
Duty Factor (%)			30	31	32	32	32	32	32	33	
Required option											

Wear standard machining (for Model data 23, 24, 25)

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = φ20

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			162	163	164	165	166	167	168	
Machining state	Voltage (%)		20	20	20	15	15	20	20	
	Current (A)		6.5	8.0	9.0	11.0	14.0	20.0	24.0	
Removal rate	Jump (g/min)		0.0440	0.0750	0.1100	0.1500	0.2100	0.3100	0.4800	
	machining (mm ³ /min)									
	Pre-machined hole flushing/suction									
Surface roughness	Rz (μm)		30	40	50	60	70	80	90	
	Ra (μm)									
Electrode wear (%)			0.5	0.2	0.2	0.2	0.2	0.2	0.2	
One-sided exit gap (mm)			0.045	0.055	0.060	0.065	0.075	0.085	0.100	
Duty Factor (%)			80	79	80	79	79	80	80	
Required option										

Low wear standard machining (for Model data 123)

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				172	173	174	175	176	177	178	
Machining state	Voltage (%)			20	20	20	15	15	15	15	
	Current (A)			5.0	7.0	8.0	10.0	12.0	14.0	18.0	
Removal rate	Jump (g/min)			0.0230	0.0360	0.0730	0.1140	0.1700	0.2500	0.3200	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			25	30	40	45	55	60	70	
	Ra (μ m)										
Electrode wear (%)				0.05	0.05	0.05	0.05	0.05	0.05	0.05	
One-sided exit gap (mm)				0.030	0.040	0.050	0.055	0.075	0.095	0.120	
Duty Factor (%)				79	79	80	79	80	80	79	
Required option											

Wear shallow machining (for Model data 223)

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				182	183	184	185	186	187	188	
Machining state	Voltage (%)			8	8	6.5	6.5	5.5	5.5	5.5	
	Current (A)			10.0	12.0	14.0	15.0	20.0	23.0	25.0	
Removal rate	Jump (g/min)			0.1400	0.2000	0.3200	0.3700	0.5000	0.6000	0.7400	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			30	35	40	50	60	70	80	
	Ra (μ m)										
Electrode wear (%)				0.5	0.5	0.5	0.5	0.5	0.5	0.5	
One-sided exit gap (mm)				0.060	0.065	0.070	0.090	0.100	0.110	0.140	
Duty Factor (%)				81	80	80	79	80	80	80	
Required option											

Low wear shallow machining (for Model data 323)

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				192	193	194	195	196	197	198	
Machining state	Voltage (%)			15	11	12	11	12	10	12	
	Current (A)			7.5	9.5	12.0	13.0	18.0	22.0	26.0	
Removal rate	Jump (g/min)			0.0560	0.0840	0.1200	0.1700	0.2700	0.4300	0.5800	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			30	35	40	45	55	65	75	
	Ra (μ m)										
Electrode wear (%)				0.3	0.1	0.1	0.1	0.1	0.1	0.1	
One-sided exit gap (mm)				0.025	0.030	0.040	0.050	0.065	0.085	0.100	
Duty Factor (%)				83	82	84	84	84	84	83	
Required option											

Wear deep machining (for Model data 423)

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				202	203	204	205	206	207	208	
Machining state	Voltage (%)			15	12	15	15	15	15	20	
	Current (A)			4.0	5.0	6.0	7.0	9.0	12.0	16.0	
Removal rate	Jump (g/min)			0.0300	0.0530	0.0700	0.0910	0.1300	0.1900	0.2700	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			30	35	40	50	60	70	80	
	Ra (μ m)										
Electrode wear (%)				0.4	0.5	0.3	0.3	0.2	0.2	0.3	
One-sided exit gap (mm)				0.045	0.050	0.055	0.060	0.070	0.085	0.100	
Duty Factor (%)				49	49	49	49	49	49	49	
Required option											

Low wear deep machining (for Model data 523)

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				212	213	214	215	216	217	218	
Machining state	Voltage (%)			20	20	20	20	20	20	20	
	Current (A)			3.0	3.5	5.0	5.5	7.0	8.0	10.0	
Removal rate	Jump (g/min)			0.0130	0.0230	0.0370	0.0560	0.0900	0.1200	0.1700	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			25	30	40	45	55	60	70	
	Ra (μ m)										
Electrode wear (%)				0.05	0.05	0.05	0.05	0.05	0.05	0.05	
One-sided exit gap (mm)				0.030	0.040	0.050	0.055	0.075	0.095	0.120	
Duty Factor (%)				49	50	50	51	49	49	48	
Required option											

Low wear machining at the pre-machined hole (for Model data 623)

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				222	223	224	225	226	227	228	229
Machining state	Voltage (%)			10	10	10	10	10	10	10	10
	Current (A)			6.0	8.0	9.0	12.0	14.0	16.0	18.0	22.0
Removal rate	Jump (g/min)			0.0300	0.0700	0.1000	0.1400	0.1900	0.2300	0.2800	0.4500
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			30	40	50	60	70	80	90	100
	Ra (μ m)										
Electrode wear (%)				0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
One-sided exit gap (mm)				0.020	0.025	0.035	0.045	0.060	0.080	0.100	0.140
Duty Factor (%)				76	79	79	78	79	79	80	80
Required option											

Shallow low wear (for Model data 321)

Electrode : Cu
Workpiece : St

Electrode dimensions = □10

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				232	233	234	235	236	237	238	
Machining state	Voltage (%)			15	15	15	15	20	20	20	
	Current (A)			2.0	3.0	4.0	5.0	7.0	8.0	8.0	
Removal rate	Jump (g/min)			0.0120	0.0260	0.0410	0.0680	0.0860	0.1130	0.1670	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Bottom face roughness	Rz (μm)			16	20	25	35	40	45	55	
	Ra (μm)										
Electrode wear (%)				0.2	0.2	0.2	0.2	0.2	0.2	0.2	
One-sided exit gap (mm)				0.030	0.030	0.035	0.040	0.050	0.060	0.080	
Duty Factor (%)				65	73	79	81	82	82	80	
Required option											

Wear standard machining (for Model data 21)

Electrode : Cu
Workpiece : SKD-11

Electrode dimensions = □10

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				242	243	244	245	246	247	248	
Machining state	Voltage (%)			25	25	25	30	30	30	30	
	Current (A)			2.0	3.0	4.0	5.0	7.0	8.0	10.0	
Removal rate	Jump (g/min)			0.0088	0.0180	0.0290	0.0480	0.0660	0.0880	0.1300	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)			16	20	25	35	40	45	55	
	Ra (μm)										
Electrode wear (%)				0.2	0.2	0.2	0.2	0.2	0.2	0.2	
One-sided exit gap (mm)				0.030	0.030	0.035	0.040	0.050	0.060	0.080	
Duty Factor (%)				60	70	77	79	79	80	79	
Required option											

Low wear standard machining (for Model data 121)

Electrode : Cu
Workpiece : SKD-11

Electrode dimensions = □10

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				252	253	254	255	256	257	258	
Machining state	Voltage (%)			15	15	15	20	20	20	20	
	Current (A)			2.0	3.0	4.0	5.0	6.0	7.0	8.0	
Removal rate	Jump (g/min)			0.0100	0.0130	0.0250	0.0400	0.0530	0.0870	0.1070	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)			15	16	21	31	35	40	46	
	Ra (μm)										
Electrode wear (%)				0.05	0.05	0.05	0.05	0.05	0.05	0.05	
One-sided exit gap (mm)				0.030	0.035	0.040	0.045	0.050	0.055	0.060	
Duty Factor (%)				79	79	79	80	80	79	80	
Required option											

Wear deep machining (for Model data 421)

Electrode : Cu
Workpiece : SKD-11

Electrode dimensions = □10

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				262	263	264	265	266	267	268	
Machining state	Voltage (%)			15	15	15	20	20	20	20	
	Current (A)			1.0	2.0	3.0	4.0	5.0	6.0	7.0	
Removal rate	Jump (g/min)			0.0140	0.0200	0.0310	0.0540	0.0740	0.1020	0.1300	
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μm)			23	26	35	45	50	55	61	
	Ra (μm)										
Electrode wear (%)				0.5	0.4	0.4	0.5	0.5	0.6	0.7	
One-sided exit gap (mm)				0.030	0.030	0.035	0.040	0.050	0.060	0.065	
Duty Factor (%)				50	50	50	51	51	50	51	
Required option											

Low wear deep machining (for Model data 521)

Electrode : Cu
Workpiece : SKD-11

Electrode dimensions = □10

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				272	273	274	275	276	277	278	
Machining state	Voltage (%)			25	25	30	30	30	30	30	
	Current (A)			0.4	0.7	1.0	1.5	2.0	3.0	4.0	
Removal rate	Jump (g/min)			0.0031	0.0053	0.0088	0.0120	0.0200	0.0330	0.0470	
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μm)			14	17	21	23	33	40	52	
	Ra (μm)										
Electrode wear (%)				0.1	0.05	0.05	0.05	0.05	0.05	0.05	
One-sided exit gap (mm)				0.035	0.040	0.040	0.045	0.051	0.061	0.081	
Duty Factor (%)				45	45	45	45	45	44	44	
Required option											

Low wear machining at the pre-machined hole (for Model data 621)

Electrode : Cu
Workpiece : S55C

Electrode dimensions = □10

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				282	283	284	285	286	287	288	
Machining state	Voltage (%)			30	30	30	30	30	30	30	
	Current (A)			0.5	0.7	1.0	1.5	2.0	3.0	4.0	
Removal rate	Jump (g/min)			0.0070	0.0090	0.0160	0.0310	0.0450	0.0650	0.0920	
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μm)			16	20	25	30	40	45	55	
	Ra (μm)										
Electrode wear (%)				0.2	0.2	0.2	0.2	0.2	0.1	0.1	
One-sided exit gap (mm)				0.035	0.035	0.040	0.045	0.050	0.060	0.080	
Duty Factor (%)				48	48	48	48	49	49	49	
Required option											

Standard (for Model data 20)

Electrode : Cu
Workpiece : SKD-11

Electrode dimensions = □5

τ OFF ADJ = 1
Jump amount = A2
Jump cycle = 3
Jump speed = 8

E number			291	292	293	294					
Machining state	Voltage (%)		35	35	35	30					
	Current (A)										
Removal rate	Jump (g/min)		0.0002	0.0002	0.0001	0.0003					
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)		2.0	3.0	4.0	5.0					
	Ra (μm)										
Electrode wear (%)			29	26	15	8.0					
One-sided exit gap (mm)			0.005	0.010	0.010	0.010					
Duty Factor (%)			11	11	26	30					
Required option											

Standard (for Model data 21)

Electrode : Cu
Workpiece : SKD-11

Electrode dimensions = □10

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number					303	304	305	306	307		
Machining state	Voltage (%)				25	25	25	20	20		
	Current (A)				0.3	0.4	0.5	1.0	1.5		
Removal rate	Jump (g/min)				0.0004	0.0010	0.0019	0.0031	0.0059		
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)				4.0	6.0	8.0	10	14		
	Ra (μm)										
Electrode wear (%)					11	8.0	4.0	2.0	1.0		
One-sided exit gap (mm)					0.012	0.012	0.014	0.018	0.021		
Duty Factor (%)					31	30	35	40	50		
Required option											

Shallow high speed (for Model data 221)

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = φ10

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				312	313	314	315	316	317	318	
Machining state	Voltage (%)			8	8	6	6	6	6	6	
	Current (A)			3.0	4.0	5.0	6.0	8.0	10.0	12.0	
Removal rate	Jump (g/min)			0.0270	0.0500	0.0730	0.1100	0.1460	0.1580	0.1820	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)			18	22	27	35	45	50	60	
	Ra (μm)										
Electrode wear (%)				1.0	1.0	1.0	1.0	1.0	1.0	1.0	
One-sided exit gap (mm)				0.030	0.030	0.035	0.040	0.050	0.060	0.080	
Duty Factor (%)				78	78	78	78	78	78	78	
Required option											

Deep narrow high speed condition for gate (for Model data 721)

Electrode : Cu
Workpiece : S55C

Electrode dimensions = □10

τ OFF ADJ = 1
Jump amount = 6
Jump cycle = 3
Jump speed = 10

E number				322	323	324	325	326	327	328	
Machining state	Voltage (%)			10	10	10	10	10	10	10	
	Current (A)			1.5	1.5	1.5	1.5	1.5	1.5	1.5	
Removal rate	Jump (g/min)			0.0010	0.0020	0.0023	0.0024	0.0060	0.0060	0.0080	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)			14	17	21	23	26	35	40	
	Ra (μm)										
Electrode wear (%)				0.05	0.05	0.12	0.11	0.11	0.17	0.44	
One-sided exit gap (mm)											
Duty Factor (%)				11	11	11	11	11	11	11	
Required option											

Standard (for Model data 23)

Electrode : Cu
Workpiece : SKD-11

Electrode dimensions = φ20

Note1
τ OFF ADJ = 1 1
Jump amount = 5 5
Jump cycle = 3 3
Jump speed = 4 8

E number			Note1	Note1							
Machining state	Voltage (%)		35	35	30	40	40	35	30	20	
	Current (A)					0.5	1.0	1.5	2.5	4.0	
Removal rate	Jump (g/min)		0.0001	0.0003	0.0009	0.0018	0.0035	0.0061	0.0130	0.0290	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)		2.0	3.0	5.0	7.0	9.0	12	16	23	
	Ra (μm)										
Electrode wear (%)			29	26	16	19	14	7.0	3.0	1.0	
One-sided exit gap (mm)			0.005	0.010	0.010	0.015	0.020	0.025	0.030	0.035	
Duty Factor (%)			11	11	31	47	53	61	63	65	
Required option			Satin	Satin							

Low wear small area machining at □2 - 5

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = □3

τ OFF ADJ = 1
Jump amount = 7
Jump cycle = 3
Jump speed = 8

E number		1000	1001	1002	1003	1004	1005	1006	1007	1008	1009
Machining state	Voltage (%)	50	50	50	55	60	60	60	70	85	75
	Current (A)	1.0	1.5	2.0	2.0	2.0	2.5	3.0	3.0	3.5	4.0
Removal rate	Jump (g/min)	0.0011	0.0013	0.0025	0.0052	0.0110	0.0160	0.0210	0.0390	0.0490	0.0650
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)	9.0	10	12	14	16	21	28	36	40	45
	Ra (μm)										
Electrode wear (%)		0.1	0.1	0.1	0.05	0.01	0.01	0.01	0.01	0.01	0.01
One-sided exit gap (mm)		0.015	0.020	0.020	0.020	0.025	0.030	0.035	0.045	0.055	0.070
Duty Factor (%)		48	48	48	48	49	49	49	49	49	49
Required option											

Small area machining at □ 1 – 5

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = □ 1
Note 1 = □ 2
Note 2 = □ 3
Note 3 = □ 4

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 10

E number		1020	1021	1022	1023	1024	1025	Note 1 1026	Note 2 1027	Note 3 1028	
Machining state	Voltage (%)	25	15	15	15	15	25	25	40	40	
	Current (A)	0.1	0.2	0.3	0.5	0.8	1.0	1.5	2.0	3.0	
Removal rate	Jump (g/min)	0.0002	0.0003	0.0006	0.0009	0.0017	0.0058	0.0126	0.0180	0.0490	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)	5.0	6.0	7.0	8.0	10	15	21	32	38	
	Ra (μm)										
Electrode wear (%)		2.0	1.6	0.8	0.5	0.5	0.5	0.5	0.1	0.1	
One-sided exit gap (mm)		0.010	0.015	0.020	0.025	0.025	0.030	0.045	0.060	0.070	
Duty Factor (%)		20	20	20	20	20	20	20	38	64	
Required option											

Low wear semi-finishing

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = φ 20

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number		1200	1201	1202	1203	1204	1205	1206	1207	1208	1209
Machining state	Voltage (%)	20	20	20	20	20	20	20	20	20	20
	Current (A)	2.5	3.0	4.0	5.0	5.5	6.5	8.0	10.0	11.0	13.0
Removal rate	Jump (g/min)	0.0019	0.0028	0.0053	0.0080	0.0140	0.0220	0.0350	0.0640	0.0890	0.2300
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)	9.0	10	12	14	16	21	28	36	40	45
	Ra (μm)										
Electrode wear (%)		0.05	0.05	0.05	0.05	0.05	0.01	0.01	0.01	0.01	0.01
One-sided exit gap (mm)		0.015	0.020	0.020	0.020	0.025	0.030	0.035	0.045	0.055	0.070
Duty Factor (%)		78	79	78	79	78	78	78	79	78	78
Required option											

Low wear standard roughing

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = φ 20

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number						1304	1305	1306	1307	1308	1309
Machining state	Voltage (%)					20	20	20	20	20	20
	Current (A)					4.5	5.0	6.5	8.5	10.0	12.5
Removal rate	Jump (g/min)					0.0110	0.0230	0.0360	0.0730	0.1140	0.1700
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)					18	24	30	40	45	55
	Ra (μm)										
Electrode wear (%)						0.05	0.05	0.05	0.05	0.05	0.05
One-sided exit gap (mm)						0.025	0.030	0.040	0.050	0.055	0.075
Duty Factor (%)						78	79	79	80	79	80
Required option											

Low wear standard roughing

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number		1310	1311	1312	1313	1314					
Machining state	Voltage (%)	22	22	22	25	25					
	Current (A)	16.0	19.0	23.0	35.0	45.0					
Removal rate	Jump (g/min)	0.2500	0.3200	0.4900	0.8300	1.0300					
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	60	70	80	115	145					
	Ra (μ m)										
Electrode wear (%)		0.05	0.05	0.05	0.15	0.25					
One-sided exit gap (mm)		0.095	0.120	0.160	0.220	0.300					
Duty Factor (%)		80	79	80	81	81					
Required option											

Wear standard roughing

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number						1324	1325	1326	1327	1328	1329
Machining state	Voltage (%)					20	20	20	20	20	20
	Current (A)					4.0	5.0	6.0	8.0	10.0	13.0
Removal rate	Jump (g/min)					0.0200	0.0300	0.0530	0.0920	0.1300	0.2100
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)					24	30	42	50	60	75
	Ra (μ m)										
Electrode wear (%)						0.9	0.8	0.5	0.3	0.2	0.1
One-sided exit gap (mm)						0.030	0.035	0.045	0.055	0.060	0.075
Duty Factor (%)						78	79	79	80	79	80
Required option											

Wear standard roughing

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 20$

Note 1 = $\phi 30$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number		1330	1331	1332	1333	1334					
Machining state	Voltage (%)	20	20	25	25	25					
	Current (A)	16.0	18.0	25.0	35.0	45.0					
Removal rate	Jump (g/min)	0.2900	0.3800	0.5400	0.7900	1.0200					
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	85	95	110	130	160					
	Ra (μ m)										
Electrode wear (%)		0.1	0.1	0.1	0.12	0.26					
One-sided exit gap (mm)		0.095	0.120	0.160	0.220	0.300					
Duty Factor (%)		80	79	80	81	81					
Required option											

Low wear retract machining

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number						1504	1505	1506	1507	1508	1509
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min) machining (mm ³ /min)					0.0110	0.0190	0.0330	0.0450	0.0750	0.1120
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)					18	24	30	40	45	55
	Ra (μ m)										
Electrode wear (%)						0.1	0.1	0.1	0.1	0.1	0.1
One-sided exit gap (mm)						0.030	0.030	0.040	0.050	0.060	0.075
Duty Factor (%)						78	79	79	80	79	80
Required option											

Low wear retract machining

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number		1510	1511	1512	1513	1514					
Machining state	Voltage (%)				35	35					
	Current (A)				32.0	45.0					
Removal rate	Jump (g/min) machining (mm ³ /min)	0.1700	0.2300	0.3400	0.5000	0.6000					
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	60	70	80	115	145					
	Ra (μ m)										
Electrode wear (%)		0.1	0.1	0.1	0.15	0.15					
One-sided exit gap (mm)		0.090	0.110	0.150	0.230	0.310					
Duty Factor (%)		80	79	80	81	81					
Required option											

Low wear additional machining 2

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number						1604	1605	1606	1607	1608	1609
Machining state	Voltage (%)					13	15	11	12	11	12
	Current (A)					6.0	7.5	9.5	12.0	13.0	18.0
Removal rate	Jump (g/min) machining (mm ³ /min)					0.0310	0.0560	0.0840	0.1200	0.1700	0.2700
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)					24	30	36	42	47	56
	Ra (μ m)										
Electrode wear (%)						0.3	0.3	0.1	0.1	0.1	0.1
One-sided exit gap (mm)						0.020	0.025	0.030	0.040	0.050	0.065
Duty Factor (%)						81	83	82	84	84	84
Required option											

Low wear additional machining 2

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number		1610	1611	1612	1613	1614					
Machining state	Voltage (%)	10	12	12	15	15					
	Current (A)	22.0	26.0	36.0	42.0	55.0					
Removal rate	Jump (g/min) machining (mm ³ /min)	0.4300	0.5800	0.7900	0.8500	1.1500					
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	64	74	84	115	145					
	Ra (μ m)										
Electrode wear (%)		0.1	0.1	0.15	0.15	0.15					
One-sided exit gap (mm)		0.085	0.100	0.150	0.230	0.310					
Duty Factor (%)		84	83	84	84	84					
Required option											

Low wear machining at $\square 100$

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\square 100$

τ OFF ADJ = 1
Jump amount = 7
Jump cycle = 10
Jump speed = 2

E number			1701	1702	1703						
Machining state	Voltage (%)		30~33		23~30						
	Current (A)		2.0		3.0						
Removal rate	Jump (g/min) machining (mm ³ /min)		0.0024	0.0042	0.0065						
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		11.5	13.5	16						
	Ra (μ m)										
Electrode wear (%)			1.7	0.6	0.01						
One-sided exit gap (mm)			0.025	0.030	0.030						
Duty Factor (%)			79	78	79						
Required option											

Low wear machining at $\square 150$

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\square 150$

τ OFF ADJ = 1
Jump amount = 7
Jump cycle = 10
Jump speed = 2

E number			1801	1802	1803						
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min) machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		12	14	16						
	Ra (μ m)										
Electrode wear (%)			3.8	1.8	0.5						
One-sided exit gap (mm)			0.030	0.035	0.040						
Duty Factor (%)			80	79	79						
Required option											

Low wear machining at □200

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = □200
(Data φ50)

τ OFF ADJ = 1
Jump amount = 7
Jump cycle = 10
Jump speed = 2

E number						1904	1905	1906	1907	1908	1909
Machining state	Voltage (%)					15	15	15	15	15	15
	Current (A)					3.0	5.0	7.0	9.0	11.0	14.0
Removal rate	Jump (g/min) machining (mm ³ /min)					0.0160	0.0280	0.0500	0.0880	0.1200	0.2000
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)					21	27	34	40	45	55
	Ra (μm)										
Electrode wear (%)						0.5	0.5	0.3	0.15	0.1	0.1
One-sided exit gap (mm)						0.040	0.045	0.050	0.060	0.070	0.085
Duty Factor (%)						78	79	80	80	79	79
Required option											

Low wear machining at □200

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = □200
(Data φ50)

τ OFF ADJ = 1
Jump amount = 7
Jump cycle = 10
Jump speed = 2

E number		1910	1911	1912	1913	1914					
Machining state	Voltage (%)	15	15	15	15	15					
	Current (A)	16.0	20.0	30.0	36.0	48.0					
Removal rate	Jump (g/min) machining (mm ³ /min)	0.2800	0.3800	0.6200	0.9000	1.3000					
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)	66	74	85	102	126					
	Ra (μm)										
Electrode wear (%)		0.1	0.1	0.6	1.2	1.6					
One-sided exit gap (mm)		0.100	0.120	0.150	0.220	0.300					
Duty Factor (%)		80	81	81	80	81					
Required option											

Small area wear machining

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = □5

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number		2001	2002	2003	2004	2005					
Machining state	Voltage (%)	32	32	28	27	27					
	Current (A)	0.1	0.2	0.5	0.8	1.0					
Removal rate	Jump (g/min) machining (mm ³ /min)	0.0002	0.0003	0.0005	0.0007	0.0009					
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)	5.0	6.0	7.0	8.0	9.0					
	Ra (μm)										
Electrode wear (%)		4.0	3.0	2.0	0.4	0.2					
One-sided exit gap (mm)		0.020	0.020	0.020	0.020	0.025					
Duty Factor (%)		51	51	60	71	70					
Required option											

Small machining(for Model data 19)

Electrode : Cu
Workpiece : St

Electrode dimensions = □3

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Machining state	Voltage (%)	35	30	30	25	30	30	30	25	25	30
	Current (A)	0.5	0.5	0.5	0.5	1.0	1.0	1.0	1.0	1.0	2.0
Removal rate	Jump (g/min) machining (mm ³ /min)	0.0001	0.0001	0.0003	0.0006	0.0011	0.0021	0.0032	0.0074	0.0121	0.0131
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)	3.0	4.0	5.0	6.0	7.0	8.0	10	12	15	21
	Ra (μm)										
Electrode wear (%)		11	7.0	2.0	2.0	1.5	1.0	0.3	0.2	0.1	0.05
One-sided exit gap (mm)		0.010	0.010	0.015	0.020	0.020	0.025	0.025	0.025	0.030	0.030
Duty Factor (%)		23	42	47	51	59	66	43	39	37	31
Required option											

Small machining condition (For Model data 4)

Electrode : Cu
Workpiece : SK-11

Electrode dimensions = ~□3

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 10

E number		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min) machining (mm ³ /min)	0.0001	0.0002	0.0005	0.0007	0.0015	0.0034	0.0040	0.0100	0.0150	0.0160
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)	3.0	4.0	5.0	6.0	7.0	8.0	10	12	15	21
	Ra (μm)										
Electrode wear (%)		20	10	4.0	3.0	2.0	2.0	0.5	0.5	0.5	0.5
One-sided exit gap (mm)											
Duty Factor (%)		23	42	47	51	59	66	43	39	37	31
Required option											

High speed connector machining condition (For Model data 1001)

Electrode : Cu
Workpiece : St

Electrode dimensions = ~□10

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 10

E number		2031	2032	2033	2034	2035	2036	2037	2038	2039
Machining state	Voltage (%)									
	Current (A)									
Removal rate	Jump (g/min) machining (mm ³ /min)									
	Pre-machined hole flushing/suction									
Surface roughness	Rz (μm)		0.5	0.7	1.0	2.0	3.0	5.0	6.0	8.0
	Ra (μm)									10
Electrode wear (%)			30	25	19	22	24	20	10	3.0
One-sided exit gap (mm)										3.0
Duty Factor (%)			5	5	13	14	14	14	54	70
Required option			U-Fine	U-Fine	Satin	Satin	Satin	Satin		

High speed connector machining condition (For Model data 1001)

Electrode : Cu
Workpiece : St

Electrode dimensions = $\sim \square 10$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 10

E number		2040	2041	2042	2043						
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Bottom face roughness	Rz (μ m)	12	16	21	30						
	Ra (μ m)										
Electrode wear (%)		3.0	3.0	3.0	1.0						
One-sided exit gap (mm)											
Duty Factor (%)		75	75	75	81						
Required option											

Low wear connector machining condition (For Model data 1002)

Electrode : Cu
Workpiece : St

Electrode dimensions = $\sim \square 10$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 10

E number			2051	2052	2053	2054	2055	2056	2057	2058	2059
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		0.5	0.7	1.0	2.0	3.0	5.0	6.0	8.0	10
	Ra (μ m)										
Electrode wear (%)			30	25	19	22	24	20	4.0	3.0	2.0
One-sided exit gap (mm)											
Duty Factor (%)			5	5	13	14	14	14	60	60	68
Required option			U-Fine	U-Fine	Satin	Satin	Satin	Satin			

Low wear connector machining condition (For Model data 1002)

Electrode : Cu
Workpiece : St

Electrode dimensions = $\sim \square 10$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 10

E number		2060	2061	2062	2063						
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	12	16	21	30						
	Ra (μ m)										
Electrode wear (%)		1.0	0.5	0.5	0.1						
One-sided exit gap (mm)											
Duty Factor (%)		68	40	40	40						
Required option											

Open side machining condition (For Model data 1011)

Electrode : Cu
Workpiece : St

Electrode dimensions = $\sim \square 5$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 10

E number			2071	2072	2073	2074	2075	2076	2077		
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		7.0	9.0	12	15	21	30	40		
	Ra (μ m)										
Electrode wear (%)			7.0	5.0	3.0	2.0	2.0	2.0	1.5		
One-sided exit gap (mm)											
Duty Factor (%)			36	37	40	40	40	40	40		
Required option											

Open side machining condition (For Model data 1011)

Electrode : Cu
Workpiece : St

Electrode dimensions = $\sim \square 5$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 10

E number			2091	2092	2093	2094	2095	2096	2097		
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		0.5	0.7	1.0	2.0	3.0	4.0	5.0		
	Ra (μ m)										
Electrode wear (%)			300	300	250	200	30	25	20		
One-sided exit gap (mm)											
Duty Factor (%)			2	2	3	11	13	13	13		
Required option			U-Fine	U-Fine	Satin						

Wear machining at the wear rate of 0.3 – 0.6%

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number		2100	2101	2102	2103	2104	2105	2106	2107	2108	2109
Machining state	Voltage (%)	25	20	15	18	15	15	15	15	15	18
	Current (A)	2.0	2.0	3.0	3.0	4.0	5.0	7.0	8.0	9.0	13.0
Removal rate	Jump (g/min)	0.0033	0.0047	0.0076	0.0110	0.0180	0.0280	0.0490	0.0760	0.1000	0.1600
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	10	11	12	14	18	24	32	38	45	60
	Ra (μ m)										
Electrode wear (%)		0.6	0.5	0.6	0.4	0.5	0.4	0.4	0.3	0.3	0.3
One-sided exit gap (mm)		0.015	0.020	0.020	0.025	0.025	0.035	0.040	0.050	0.050	0.075
Duty Factor (%)		80	79	78	81	80	80	79	79	78	78
Required option											

Wear machining, finishing condition (Model data 13, 77 etc.)

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			2111	2112	2113	2114	2115	2116	2117	2118	
Machining state	Voltage (%)		30	19	25	23	25	25	22	18	
	Current (A)		0.2					0.3	0.8	3.0	
Removal rate	Jump (g/min)		0.0002	0.0006	0.0007	0.0010	0.0015	0.0035	0.0053	0.0110	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		4.0	5.0	6.0	8.0	9.0	10	12	14	
	Ra (μ m)										
Electrode wear (%)			35	12	7.0	7.0	2.0	2.0	3.0	0.4	
One-sided exit gap (mm)			0.005	0.010	0.015	0.015	0.015	0.015	0.015	0.025	
Duty Factor (%)			8	20	30	30	60	60	60	81	
Required option											

Wear, additional, finishing condition (Model data 1)

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 30$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				2212	2213	2214	2215				
Machining state	Voltage (%)			26	22	22	23				
	Current (A)			1.0	2.0	3.2	4.0				
Removal rate	Jump (g/min)			0.0030	0.0110	0.0190	0.0290				
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			9.0	12.0	16	20				
	Ra (μ m)										
Electrode wear (%)				120	43	14	3.0				
One-sided exit gap (mm)				0.020	0.025	0.025	0.025				
Duty Factor (%)				26	46	61	75				
Required option											

Wear machining at the wear rate of 5 – 10%

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				2302	2303	2304	2305	2306	2307		
Machining state	Voltage (%)			25	23	24	23	24	20		
	Current (A)					0.3	0.4	0.6	0.8		
Removal rate	Jump (g/min)			0.0007	0.0010	0.0025	0.0033	0.0060	0.0070		
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			6.0	8.0	9.0	11	12	13		
	Ra (μ m)										
Electrode wear (%)				7.0	7.0	8.0	8.0	7.0	7.0		
One-sided exit gap (mm)				0.015	0.015	0.015	0.015	0.015	0.020		
Duty Factor (%)				30	30	36	38	37	41		
Required option											

Wear, additional, finishing condition (Model data 5, 78 etc.)

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				2312	2313	2314	2315	2316	2317	2318	
Machining state	Voltage (%)			25	18	18	17	20	22	18	
	Current (A)			0.4	0.8	0.8	0.8	1.8	2.1	3.5	
Removal rate	Jump (g/min)			0.0005	0.0013	0.0015	0.0021	0.0040	0.0059	0.0200	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			4.0	5.0	6.0	8.0	10	12	17	
	Ra (μ m)										
Electrode wear (%)				45	9.0	6.0	6.0	3.0	3.0	3.0	
One-sided exit gap (mm)				0.005	0.010	0.015	0.015	0.015	0.015	0.025	
Duty Factor (%)				25	47	53	53	75	75	75	
Required option											

Large area wear machining (for Model data 27, 28)

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 20, \phi 50$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			2621	2622	2623	2624					
Machining state	Voltage (%)		30	35	35	35					
	Current (A)										
Removal rate	Jump (g/min)		0.0070	0.0080	0.0150	0.0300					
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		10	16	23	28					
	Ra (μ m)										
Electrode wear (%)			12	35	21	15					
One-sided exit gap (mm)											
Duty Factor (%)			50	35	47	58					
Required option											

Straight polarity wear machining

Electrode : Cu
Workpiece : SK-5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 6
Jump speed = 4

E number					2703	2704	2705				
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)				0.0003	0.0004	0.0006				
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)				1.0	2.0	3.0				
	Ra (μ m)										
Electrode wear (%)					27	40	49				
One-sided exit gap (mm)					0.005	0.005	0.010				
Duty Factor (%)					9	9	9				
Required option											

Satin wear finishing (Satin machining circuit is used)

Electrode : Cu
Workpiece : St

Electrode dimensions = □1~10

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number					2803	2804	2805	2806			
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)				1.0	2.0	3.0	4.0			
	Ra (μm)										
Electrode wear (%)					19	22	24	20			
One-sided exit gap (mm)					0.005	0.005	0.010	0.010			
Duty Factor (%)					8	8	8	8			
Required option					Satin	Satin	Satin	Satin			

Satin wear finishing (Satin machining circuit is used)

Electrode : Cu
Workpiece : St

Electrode dimensions = □10~20

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number					2823	2824	2825	2826			
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)				0.0001	0.0003	0.0004	0.0005			
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)				1.0	2.0	3.0	4.0			
	Ra (μm)										
Electrode wear (%)					19	22	24	20			
One-sided exit gap (mm)					0.005	0.005	0.010	0.010			
Duty Factor (%)					8	18	18	18			
Required option					Satin	Satin	Satin	Satin			

Small machining condition (Ultra-fine machining circuit is used)

Electrode : Cu
Workpiece : SKD-11

Electrode dimensions = ~□3

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 10

E number			2831	2832	2833	2834					
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)		0.5	0.7	1.0	2.0					
	Ra (μm)										
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)			3	3	8	8					
Required option			U-Fine	U-Fine	Satin	Satin					

Large area finishing (Satin machining circuit is used)

Electrode : Cu

Electrode dimensions = $\phi 20$

Workpiece : SKD-11

τ OFF ADJ = 1

Jump amount = 5

Jump cycle = 3

Jump speed = 4

E number					2923	2924	2925	2926			
Machining state	Voltage (%)				40	60	70	70			
	Current (A)										
Removal rate	Jump (g/min)				0.0004	0.0011	0.0022	0.0030			
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)				4.0	5.0	6.0	8.0			
	Ra (μ m)										
Electrode wear (%)					29	29	32	36			
One-sided exit gap (mm)											
Duty Factor (%)					14	14	14	14			
Required option					Satin	Satin	Satin	Satin			

2. Conditions for Special Machinings

- Glazed machining
- Contour machining
- Electrode dressing conditions
- Pipe electrode machining
- Glazed machining for μ SC
- Satin finishing for μ SC
- VDI Machining conditions
- Surface finishing Condition for IC mold

Glazed machining

Electrode : Cu
Workpiece : SKD-61

Electrode dimensions = □9

τ OFF ADJ = 1
Jump amount = 3
Jump cycle = 5
Jump speed = 2

E number		3100	3101	3102		3104		3106			
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)	0.2	0.3	0.4		1.5		2.2			
	Ra (μm)										
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)		14	14	14		4		6			
Required option											

Contour machining

Electrode : Cu
Workpiece : SK-5

Electrode dimensions =

Rotating speed = 300~400min⁻¹

τ OFF ADJ = 3
Jump amount = OFF
Jump cycle = OFF
Jump speed = OFF

E number							3205	3206	3207	3208	3209
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)						5.0	6.0	7.0	9.0	10
	Ra (μ m)										
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)							46	56	67	67	78
Required option											

Contour machining

Electrode : Cu
Workpiece : SK-5

Electrode dimensions =

Rotating speed = 300~400min⁻¹

τ OFF ADJ = 3
Jump amount = OFF
Jump cycle = OFF
Jump speed = OFF

E number		3210	3211	3212	3213	3214	3215	3216	3217		
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	13	15	18	24	32	40	46	55		
	Ra (μ m)										
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)		81	81	80	81	81	82	81	82		
Required option											

Contour machining

Electrode : Gr1
Workpiece : SK-5

Electrode dimensions = ϕ 20

τ OFF ADJ = 1
Jump amount = OFF
Jump cycle = OFF
Jump speed = OFF

E number							3225	3226	3227		
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)						75	85	100		
	Ra (μ m)										
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)							58	56	56		
Required option											

Electrode dressing machining

Electrode : CuW
Workpiece : Cu

Electrode dimensions =

Rotating speed = 160~200min⁻¹

τ OFF ADJ = 3
Jump amount = OFF
Jump cycle = OFF
Jump speed = OFF

E number								3306	3307	3308	
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)										
	Ra (μ m)										
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)								14	17	25	
Required option											

Pipe electrode machining

Electrode : Cu Pipe
Workpiece : SK-5

Electrode dimensions = $\phi 1 \sim 3$

Rotating speed = $400 \sim 600 \text{ min}^{-1}$
Flushing pressure = 0.05 MPa (0.5 kgf/cm^2)

τ OFF ADJ = 1
Jump amount = OFF
Jump cycle = OFF
Jump speed = OFF

Electrode dimensions =		($\phi 1$)	($\phi 2$)	($\phi 3$)	($\phi 1$)	($\phi 2$)	($\phi 3$)
E number		3401	3402	3403	3406	3407	3408
Machining state	Voltage (%)						
	Current (A)						
Removal rate	Jump (g/min)						
	machining (mm^3/min)						
	Pipe flushing (mm/min)						
Surface roughness	Rz (μm)						
	Ra (μm)						
Electrode wear (%)		15	10	10	35	35	40
One-sided exit gap (mm)							
Duty Factor (%)		40	51	51	41	50	49
Required option							

Pipe electrode machining (Satin machining circuit is used)

Electrode : Cu Pipe
Workpiece : SKD-11

Electrode dimensions = $\phi 0.1 \sim 0.8$

Rotating speed = 480 min^{-1} (Note 2 = 1000 min^{-1})
Flushing pressure = 3 MPa (30 kgf/cm^2)
Note 1 = 5 MPa (50 kgf/cm^2)
Note 2 = 6 MPa (60 kgf/cm^2)

τ OFF ADJ = 1
Jump amount = OFF
Jump cycle = OFF
Jump speed = OFF

Electrode dimensions =		($\phi 0.1$)	($\phi 0.15$)	($\phi 0.2$)	($\phi 0.3$)	($\phi 0.5$)	($\phi 0.8$)
E number		3410	3411	3412	3413	3415	3418
Machining state	Voltage (%)						
	Current (A)						
Removal rate	Jump (g/min)						
	machining (mm^3/min)						
	Pipe flushing (mm/min)		0.25		0.8	0.9	2.6
Surface roughness	Rz (μm)						
	Ra (μm)						
Electrode wear (%)		200	150	150	150	150	150
One-sided exit gap (mm)							
Duty Factor (%)		7	3	3	1	9	13
Required option		Satin	Satin	Satin	Satin	Satin	Satin

Note 2 Note 1 Note 1

Pipe electrode machining

Electrode : Cu Pipe
Workpiece : SKD-11

Electrode dimensions = $\phi 0.08 \sim 3.0$

Rotating speed = 480 min^{-1}
Flushing pressure = 1.5 MPa (15 kgf/cm^2)
Note 1 = 3 MPa (30 kgf/cm^2)
Note 2 = 6 MPa (60 kgf/cm^2)

τ OFF ADJ = 1
Jump amount = OFF
Jump cycle = OFF
Jump speed = OFF
Note 2 Jump cycle = 16

Electrode dimensions =		($\phi 0.08$)	($\phi 0.2$)	($\phi 0.3$)	($\phi 0.5$)	($\phi 0.7$)	($\phi 1.0$)	($\phi 2.0$)	($\phi 3.0$)
E number		3421	3422	3423	3424	3425	3426	3427	3428
Machining state	Voltage (%)								
	Current (A)								
Removal rate	Jump (g/min)								
	machining (mm^3/min)								
	Pipe flushing (mm/min)		0.6	0.8	0.9	0.9	0.9	0.9	0.9
Surface roughness	Rz (μm)								
	Ra (μm)								
Electrode wear (%)			300	300	300	250	210	180	150
One-sided exit gap (mm)									
Duty Factor (%)		2	8	5	7	7	8	17	31
Required option		Satin							

Note 2 Note 1

Pipe electrode machining (Satin machining circuit is used)

Electrode : Cu Pipe
Workpiece : WC

Electrode dimensions = $\phi 1 \sim 3$

τ OFF ADJ = 1
Jump amount = OFF
Jump cycle = OFF
Jump speed = OFF

Electrode dimensions = ($\phi 1$) ($\phi 2$) ($\phi 3$)

E number		3500	3501	3502						
Machining state	Voltage (%)									
	Current (A)									
Removal rate	Jump (g/min)									
	machining (mm ³ /min)									
	Pipe flushing (mm/min)									
Surface roughness	Rz (μ m)									
	Ra (μ m)									
Electrode wear (%)		110	80	95						
One-sided exit gap (mm)										
Duty Factor (%)		5	12	11						
Required option		Satin	Satin	Satin						

Pipe electrode machining (Satin machining circuit is used)

Electrode : Cu Pipe
Workpiece : WC

Electrode dimensions = $\phi 0.08 \sim 0.8$
Rotating speed = 480min⁻¹ (Note 2=1000min⁻¹)
Flushing pressure = 3MPa (30kgf/cm²)
Note 1 = 5MPa (50kgf/cm²)
Note 2 = 6MPa (60kgf/cm²)

τ OFF ADJ = 1
Jump amount = OFF
Jump cycle = OFF
Jump speed = OFF
Note 2 Jump cycle = 16

Electrode dimensions = ($\phi 0.08$) ($\phi 0.15$) ($\phi 0.2$) ($\phi 0.3$) ($\phi 0.5$) ($\phi 0.8$)

E number		3510	3511	3512	3513	3515			3518	
Machining state	Voltage (%)									
	Current (A)									
Removal rate	Jump (g/min)									
	machining (mm ³ /min)									
	Pipe flushing (mm/min)		0.9		1.7	1.5			2.2	
Surface roughness	Rz (μ m)									
	Ra (μ m)									
Electrode wear (%)			300	300	300	200			230	
One-sided exit gap (mm)										
Duty Factor (%)		2	1	1	1	9			6	
Required option		Satin	Satin	Satin	Satin	Satin			Satin	

Note 2 Note 1 Note 1

Pipe electrode machining (Carbide machining circuit is used)

Electrode : Cu Pipe
Workpiece : WC

Electrode dimensions = $\phi 0.1 \sim 3.0$
Rotating speed = 480min⁻¹ (Note 2=1000min⁻¹)
Flushing pressure = 1.5MPa (15kgf/cm²)
Note 1 = 3MPa (30kgf/cm²)
Note 2 = 6MPa (60kgf/cm²)

τ OFF ADJ = 1
Jump amount = OFF
Jump cycle = OFF
Jump speed = OFF
Note 3 Jump cycle = 16

Electrode dimensions = ($\phi 0.1$) ($\phi 0.15$) ($\phi 0.2$) ($\phi 0.3$) ($\phi 0.5$) ($\phi 0.7$) ($\phi 1.0$) ($\phi 2.0$) ($\phi 3.0$)

E number		3520	3521	3522	3523	3524	3525	3526	3527	3528	
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pipe flushing (mm/min)		0.6		0.8	1.0				1.4	
Surface roughness	Rz (μ m)										
	Ra (μ m)										
Electrode wear (%)		250	300	300	300	300	250	210	180	150	
One-sided exit gap (mm)											
Duty Factor (%)		2	5	5	6	8	9	5	5	5	
Required option		Satin	Satin	Satin	Satin	Satin	Satin	Carbide	Carbide	Carbide	

Note 2, 3 Note 2 Note 1

Glazed machining for μ SC (- □30)

Electrode : Cu
Workpiece : SKD-61

Electrode dimensions = □15

τ OFF ADJ = 1
Jump amount = 7
Jump cycle = 8
Jump speed = 6

E number			3601	3602	3603	3604					
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)		0.0002	0.0002	0.0003	0.0004					
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		0.4	0.45	0.5	0.7					
	Ra (μ m)										
Electrode wear (%)			40	40	30	30					
One-sided exit gap (mm)											
Duty Factor (%)			11	11	14	14					
Required option											

Glazed machining for μ SC (□30 - □75)

Electrode : Cu
Workpiece : SKD-61

Electrode dimensions = ϕ 50

τ OFF ADJ = 1
Jump amount = 8
Jump cycle = 12
Jump speed = 6

E number						3614	3615				
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)					0.0009	0.0012				
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)					0.9	1.0				
	Ra (μ m)										
Electrode wear (%)						40	40				
One-sided exit gap (mm)											
Duty Factor (%)						25	25				
Required option											

Glazed machining for μ SC (□75 - □150)

Electrode : Cu
Workpiece : SKD-61

Electrode dimensions = □100

τ OFF ADJ = 1
Jump amount = 8
Jump cycle = 14
Jump speed = 4

E number							3626				
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)						1.5				
	Ra (μ m)										
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)							25				
Required option											

Glazed machining for μ SC (□150 – □300)

Electrode : Cu
Workpiece : SKD-61

Electrode dimensions = □200

τ OFF ADJ = 1
Jump amount = 8
Jump cycle = 14
Jump speed = 4

E number									3637		
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)								3.0		
	Ra (μ m)										
Electrode wear (%)									50		
One-sided exit gap (mm)											
Duty Factor (%)									40		
Required option											

Glazed machining for μ SC (- □30)

Electrode : Gr1
Workpiece : SKD-61

Electrode dimensions = ϕ 20

τ OFF ADJ = 1
Jump amount = 8
Jump cycle = 12
Jump speed = 6

E number			3701	3702						
Machining state	Voltage (%)									
	Current (A)									
Removal rate	Jump (g/min)		0.0004	0.0006						
	machining (mm ³ /min)									
	Pre-machined hole flushing/suction									
Surface roughness	Rz (μ m)		2.0	4.0						
	Ra (μ m)									
Electrode wear (%)			350	350						
One-sided exit gap (mm)										
Duty Factor (%)			14	14						
Required option										

Glazed machining for μ SC (□30 - □75)

Electrode : Gr1
Workpiece : SKD-61

Electrode dimensions = ϕ 20

τ OFF ADJ = 1
Jump amount = 8
Jump cycle = 12
Jump speed = 6

E number				3712	3713					
Machining state	Voltage (%)									
	Current (A)									
Removal rate	Jump (g/min)			0.0005	0.0006					
	machining (mm ³ /min)									
	Pre-machined hole flushing/suction									
Surface roughness	Rz (μ m)			3.0	4.0					
	Ra (μ m)									
Electrode wear (%)				350	350					
One-sided exit gap (mm)										
Duty Factor (%)				14	14					
Required option										

Glazed machining for μ SC (□75 - □150)

Electrode : Gr1
Workpiece : SKD-61

Electrode dimensions = ϕ 20

τ OFF ADJ = 1
Jump amount = 8
Jump cycle = 12
Jump speed = 6

E number					3723	3724				
Machining state	Voltage (%)									
	Current (A)									
Removal rate	Jump (g/min)				0.0006	0.0060				
	machining (mm ³ /min)									
	Pre-machined hole flushing/suction									
Surface roughness	Rz (μ m)				4.0	8.0				
	Ra (μ m)									
Electrode wear (%)					350	100				
One-sided exit gap (mm)										
Duty Factor (%)					14	40				
Required option										

Glazed machining for μ SC (□150 – □200)

Electrode : Gr1
Workpiece : SKD-61

Electrode dimensions = ϕ 20

τ OFF ADJ = 1
Jump amount = 8
Jump cycle = 12
Jump speed = 6

E number						3734	3735				
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)					0.0030	0.0090				
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)					8.0	11				
	Ra (μ m)										
Electrode wear (%)						250	70				
One-sided exit gap (mm)											
Duty Factor (%)						21	40				
Required option											

Ultra-fine machining for μ SC (- □30)

Electrode : Gr2
Workpiece : SKD-61

Electrode dimensions = $\sim$ □30

τ OFF ADJ = 1
Jump amount = 6
Jump cycle = 10
Jump speed = 6

E number			3741	3742	3743						
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)		1.0	1.5	2.0						
	Ra (μ m)										
Electrode wear (%)			350	350	350						
One-sided exit gap (mm)											
Duty Factor (%)			4	4	14						
Required option			U-Fine								

Satin finishing for μ SC (Satin machining circuit is used)

Electrode : Gr1
Workpiece : SKD-61

Electrode dimensions = ϕ 20

τ OFF ADJ = 1
Jump amount = 8
Jump cycle = 12
Jump speed = 6

E number			3752	3753	3754	3755	3756	3757			
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)		4.0	5.0	6.0	8.0	10	12			
	Ra (μ m)										
Electrode wear (%)			300	270	250	230	210	140			
One-sided exit gap (mm)											
Duty Factor (%)			14	14	14	14	14	14			
Required option			Satin	Satin	Satin	Satin	Satin	Satin			

VDI Condition list(Cu-St)

Electrode : Cu
Workpiece : SKD-61

Electrode dimensions =

τ OFF ADJ = 1
Jump amount = 8
Jump cycle = 6
Jump speed = 10

E number						3804	3805	3806	3807	3808	3809
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)					3.8	4.4	6.0	6.5	9.0	12
	Ra (μm)					0.4	0.6	0.7	0.8	1.2	1.6
	VDI					12	15	17	18	21	24
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)						5	9	18	9	33	33
Required option						Satin					

VDI Condition list(Cu-St) 2

Electrode : Cu
Workpiece : SKD-61

Electrode dimensions =

τ OFF ADJ = 1
Jump amount = 8
Jump cycle = 6
Jump speed = 10

E number			3811	3812	3813	3814	3815	3816	3817		
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)		17	18	21	25	29	45	56		
	Ra (μm)		2.2	2.6	3.0	4.1	4.5	6.0	8.9		
	VDI		27	28	30	32	33	36	39		
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)			34	32	32	32	32	39	37		
Required option											

VDI Condition list(Gr-St)

Electrode : Gr
Workpiece : SKD-61

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 8
Jump cycle = 6
Jump speed = 10

E number						3854	3855	3856	3857	3858	3859
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)					4.0	4.5	5.5	7.0	9.0	12
	Ra (μ m)					0.4	0.6	0.7	0.8	1.1	1.5
	VDI					12	15	17	18	21	24
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)						5	5	9	14	15	29
Required option						Satin					

VDI Condition list(Gr-St) 2

Electrode : Gr
Workpiece : SKD-61

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 8
Jump cycle = 6
Jump speed = 10

E number			3861	3862	3863	3864	3865	3866	3867		
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		15	17	21	25	27	41	53		
	Ra (μ m)		2.2	2.5	3.2	4.0	4.3	6.0	9.0		
	VDI		27	28	30	32	33	36	39		
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)			32	32	32	41	32	33	33		
Required option											

Surface finishing Condition for IC mold (For model data 1000)

Electrode : Cu
Workpiece : St (ASP23)

Electrode dimensions =

τ OFF ADJ = 1
Jump amount = 8
Jump cycle = 4
Jump speed = 10

E number			3901	3902	3903	3904	3905	3906	3907	3908	3909
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		1.0	3.0	5.0	6.0	7.0	8.0	9.0	10	11
	Ra (μ m)		0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8
	RSm (μ m)		100	120	125	125	140	140	140	140	140
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)			4	2	1	1	1	1	1	1	1
Required option											

Surface finishing Condition for IC mold (For model data 1000)

Electrode : Cu
Workpiece : St (ASP23)

Electrode dimensions =

τ OFF ADJ = 1
Jump amount = 8
Jump cycle = 4
Jump speed = 10

E number		3910	3911								
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	13	19								
	Ra (μ m)	2.2	2.6								
	RSm (μ m)	145	145								
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)		1	3								
Required option											

3. Gr(graphite) — St(steel)

Gr1 (medium-grade graphite)

- Ibiden..... ED—3, EX—70
- Tokai Carbon..... HK—2
- Toyo Carbon..... ISO63, TC400
- Hitachi Chemical... HED—100
- POCO..... EDM—1

Gr2 (high-grade graphite)

- Ibiden..... ED—4
- Kawasaki Furnace Material· KMFC
- Tokai Carbon..... HK—3
- Toyo Carbon..... ISO88
- Hitachi Chemical..... HED—150
- POCO..... EDM—3

The above graphites are listed at random,
irrespective of quality rank.

Low wear machining at $\phi 20$

Electrode : Gr1
Workpiece : SK—5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number		4010	4011	4012						
Machining state	Voltage (%)	13	14	18						
	Current (A)	15.5	17.0	20.0						
Removal rate	Jump (g/min)	0.2200	0.3100	0.4700						
	machining (mm ³ /min)									
Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	43	47	54						
	Ra (μ m)									
Electrode wear (%)		0.01	0.01	0.01						
One-sided exit gap (mm)		0.080	0.090	0.110						
Duty Factor (%)		85	76	70						
Required option										

Low wear machining at $\phi 20$

Electrode : Gr2
Workpiece : SK—5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number		4030	4031	4032						
Machining state	Voltage (%)	17	12	22						
	Current (A)	16.0	17.0	20.0						
Removal rate	Jump (g/min)	0.2500	0.3900	0.5200						
	machining (mm ³ /min)									
Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	36	39	40						
	Ra (μ m)									
Electrode wear (%)		0.01	0.01	0.01						
One-sided exit gap (mm)		0.065	0.080	0.090						
Duty Factor (%)		75	75	75						
Required option										

Standard condition (For model data 1055)

Electrode : Gr2
Workpiece : S55C

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 12
Jump cycle = 4
Jump speed = 5000

E number		4051	4052	4053	4054	4055				
Machining state	Voltage (%)									
	Current (A)									
Removal rate	Jump (g/min)	0.1600	0.3500	0.6000	0.6400	0.6800				
	machining (mm ³ /min)									
Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	20	32	40	50	60				
	Ra (μ m)	4	5.5	7	10	11				
Electrode wear (%)		3.0	1.5	0.5	0.3	0.1				
One-sided exit gap (mm)										
Duty Factor (%)		65	65	65	65	65				
Required option										

Shallow high speed condition (For model data 1255)

Electrode : Gr2
Workpiece : S55C

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 12
Jump cycle = 4
Jump speed = 5000

E number			4071	4072	4073	4074	4075				
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)		0.2300	0.3700	0.7200	0.7600	0.8000				
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)		20	32	40	50	60				
	Ra (μ m)		4	5.5	7	10	11				
Electrode wear (%)			10	5.0	3.0	1.7	0.6				
One-sided exit gap (mm)											
Duty Factor (%)			65	65	65	65	65				
Required option											

Low wear machining at $\phi 30$

Electrode : Gr1
Workpiece : SK—5

Electrode dimensions = $\phi 30$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			4111	4112	4113						
Machining state	Voltage (%)		11	12	13						
	Current (A)		20.0	26.0	34.0						
Removal rate	Jump (g/min)		0.3010	0.4770	0.8330						
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)		47	54	62						
	Ra (μ m)										
Electrode wear (%)			0.01	0.01	0.01						
One-sided exit gap (mm)			0.090	0.110	0.140						
Duty Factor (%)			86	86	86						
Required option											

Low wear machining at $\phi 30$

Electrode : Gr2
Workpiece : SK—5

Electrode dimensions = $\phi 30$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			4131	4132	4133						
Machining state	Voltage (%)		12	13	17						
	Current (A)		16.0	18.0	24.0						
Removal rate	Jump (g/min)		0.2600	0.4400	0.6800						
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)		39	40	42						
	Ra (μ m)										
Electrode wear (%)			0.01	0.01	0.08						
One-sided exit gap (mm)			0.080	0.100	0.110						
Duty Factor (%)			80	80	80						
Required option											

Wear shallow machining (for Model data 230, 256, 257, 258)

Electrode : Gr1
Workpiece : SK—5

Electrode dimensions = $\phi 20$

Note 1 = $\phi 30$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			4141	4142	4143	4144	4145	Note 1 4146	Note 1 4147	Note 1 4148	Note 1 4149
Machining state	Voltage (%)		8	8	8	10	10	10	10	10	10
	Current (A)		6.0	8.0	11.0	13.0	15.0	18.0	23.0	30.0	40.0
Removal rate	Jump (g/min)		0.0900	0.1490	0.2200	0.2610	0.3060	0.3690	0.5050	0.8540	1.2720
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)		35	39	41	43	45	47	54	60	68
	Ra (μ m)										
Electrode wear (%)			3.5	3.5	2.5	2.5	2.5	2.0	2.0	1.5	1.5
One-sided exit gap (mm)			0.060	0.070	0.080	0.090	0.100	0.120	0.140	0.180	0.220
Duty Factor (%)			60	60	65	65	65	71	71	71	71
Required option											

Standard machining (for Model data 30, 56, 57, 58)

Electrode : Gr1
Workpiece : SK—5

Electrode dimensions = $\phi 20$

Note 1 = $\phi 30$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			4151	4152	4153	4154	4155	Note 1 4156	Note 1 4157	Note 1 4158	
Machining state	Voltage (%)		12	12	10	10	12	8	10	12	
	Current (A)		8.0	10.0	15.0	17.0	23.0	23.0	25.0	30.0	
Removal rate	Jump (g/min)		0.0980	0.1350	0.2400	0.3800	0.4890	0.4520	0.5150	0.6920	
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)		35	39	41	43	45	47	54	60	
	Ra (μ m)										
Electrode wear (%)			1.7	1.7	0.5	0.5	0.5	0.5	0.5	0.5	
One-sided exit gap (mm)			0.055	0.060	0.065	0.080	0.090	0.110	0.120	0.135	
Duty Factor (%)			79	79	84	85	85	86	86	86	
Required option											

Low Standard machining (for Model data 130, 156, 157, 158)

Electrode : Gr1
Workpiece : SK—5

Electrode dimensions = $\phi 20$

Note 1 = $\phi 30$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			4161	4162	4163	4164	4165	Note 1 4166	Note 1 4167	Note 1 4168	
Machining state	Voltage (%)		12	12	12	12	15	11	12	13	
	Current (A)		8.0	10.0	13.0	16.0	20.0	20.0	26.0	34.0	
Removal rate	Jump (g/min)		0.0980	0.1350	0.1800	0.3120	0.4590	0.4140	0.4850	0.7010	
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)		35	39	41	43	45	47	54	60	
	Ra (μ m)										
Electrode wear (%)			1.7	1.7	0.12	0.12	0.12	0.01	0.01	0.01	
One-sided exit gap (mm)			0.055	0.060	0.065	0.080	0.090	0.095	0.110	0.140	
Duty Factor (%)			79	79	84	85	85	86	86	86	
Required option											

Wear deep machining (for Model data 430, 456, 457, 458)

Electrode : Gr1
Workpiece : SK—5

Electrode dimensions = $\phi 20$

Note 1 = $\phi 30$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			4171	4172	4173	4174	4175	Note 1 4176	Note 1 4177	Note 1 4178	Note 1 4179
Machining state	Voltage (%)		10	10	10	10	10	12	12	15	15
	Current (A)		3.0	5.0	7.0	9.0	10.0	11.0	13.0	17.0	23.0
Removal rate	Jump (g/min)		0.0624	0.0961	0.1270	0.1710	0.2100	0.2250	0.2890	0.4110	0.6670
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)		35	39	41	43	45	47	54	60	68
	Ra (μ m)										
Electrode wear (%)			3.5	3.5	3.0	3.0	3.0	3.0	2.5	2.5	2.5
One-sided exit gap (mm)			0.060	0.070	0.080	0.090	0.100	0.120	0.140	0.180	0.220
Duty Factor (%)			38	42	42	44	44	44	45	45	45
Required option											

Low wear deep machining (for Model data 530, 556, 557, 558)

Electrode : Gr1
Workpiece : SK—5

Electrode dimensions = $\phi 20$

Note 1 = $\phi 30$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			4181	4182	4183	4184	4185	Note 1 4186	Note 1 4187	Note 1 4188	
Machining state	Voltage (%)		12	15	10	13	12	10	12	12	
	Current (A)		4.0	5.0	7.0	9.0	11.0	10.0	14.0	17.0	
Removal rate	Jump (g/min)		0.0360	0.0513	0.0803	0.1350	0.1820	0.1650	0.2150	0.3070	
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)		35	39	41	43	45	47	54	60	
	Ra (μ m)										
Electrode wear (%)			1.7	1.7	0.12	0.12	0.12	0.01	0.01	0.01	
One-sided exit gap (mm)			0.055	0.060	0.065	0.080	0.090	0.095	0.110	0.140	
Duty Factor (%)			49	49	49	49	49	49	49	49	
Required option											

Standard (for Model data 30, 56, 57, 58)

Electrode : Gr1
Workpiece : SK—5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			4191	4192	4193	4194	4195	4196			
Machining state	Voltage (%)		28	25	20	15	12	13			
	Current (A)		0.7	1.5	2.0	3.0	6.0	7.0			
Removal rate	Jump (g/min)		0.0021	0.0050	0.0106	0.0215	0.0420	0.0970			
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)		8.0	10	15	20	23	26			
	Ra (μ m)										
Electrode wear (%)			60	52	17	13	7	3			
One-sided exit gap (mm)			0.025	0.030	0.035	0.040	0.045	0.050			
Duty Factor (%)			40	55	65	65	66	65			
Required option											

Deep narrow high speed machining for rib (for Model data 730, 756, 757, 758)

Electrode : Gr1
Workpiece : S55C

Electrode dimensions =

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 10

E number			4201	4202	4203	4204	4205	4206	4207	4208	
Machining state	Voltage (%)		20	20	25	25	25	25	25	25	
	Current (A)		6.0	7.0	8.0	9.0	10.0	11.0	13.0	17.0	
Removal rate	Jump (g/min) machining (mm ³ /min)		0.0810	0.1340	0.2040	0.2800	0.3500	0.3860	0.4480	0.5700	
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		35	39	41	43	45	47	54	65	
	Ra (μ m)										
Electrode wear (%)			4.5	4.5	4.0	4.0	4.0	3.5	3.5	4.0	
One-sided exit gap (mm)			0.060	0.070	0.080	0.090	0.100	0.120	0.140	0.180	
Duty Factor (%)			42	42	41	41	41	40	40	40	
Required option											

Low wear machining at $\phi 50$

Electrode : Gr1
Workpiece : SK—5

Electrode dimensions = $\phi 50$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			4212	4213	4214	4215				
Machining state	Voltage (%)		8	9	9	9~11				
	Current (A)		23.0	28.0	39.0	52.0				
Removal rate	Jump (g/min) machining (mm ³ /min)		0.4600	0.6300	1.1000	1.7000				
	Pre-machined hole flushing/suction									
Surface roughness	Rz (μ m)		73	83	86	89				
	Ra (μ m)									
Electrode wear (%)			0.01	0.01	0.01	0.01				
One-sided exit gap (mm)			0.120	0.160	0.180	0.230				
Duty Factor (%)			90	90	90	90				
Required option										

Low wear machining at $\phi 50$

Electrode : Gr2
Workpiece : SK—5

Electrode dimensions = $\phi 50$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			4233	4234	4235				
Machining state	Voltage (%)		12	13	14				
	Current (A)		32.0	43.0	56.0				
Removal rate	Jump (g/min) machining (mm ³ /min)		0.5200	0.8900	1.3000				
	Pre-machined hole flushing/suction								
Surface roughness	Rz (μ m)		70	75	80				
	Ra (μ m)								
Electrode wear (%)			0.01	0.01	0.01				
One-sided exit gap (mm)			0.110	0.140	0.160				
Duty Factor (%)			84	84	84				
Required option									

Standard condition (For model data 1056 and 1057)

Electrode : Gr2
Workpiece : S55C

Electrode dimensions = □50

τ OFF ADJ = 1
Jump amount = 12
Jump cycle = 6
Jump speed = 5000

E number			4251	4252	4253	4254	4255	4256	4257		
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)		0.1700	0.3600	0.7500	0.9000	1.2700	2.0000	2.6000		
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)		20	32	40	50	60	75	85		
	Ra (μ m)		4.0	5.5	7.0	10	11	12	13		
Electrode wear (%)			3	1.5	1.0	0.5	0.2	0.1	0.1		
One-sided exit gap (mm)											
Duty Factor (%)			79	79	80	80	80	80	80		
Required option											

Shallow high speed condition (For model data 1256 and 1257)

Electrode : Gr2
Workpiece : S55C

Electrode dimensions = □50

τ OFF ADJ = 1
Jump amount = 12
Jump cycle = 6
Jump speed = 5000

E number			4271	4272	4273	4274	4275				
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)		0.3000	0.4200	0.8600	1.1000	1.4500				
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)		20	32	40	50	60				
	Ra (μ m)		4.0	5.5	7.0	10	11				
Electrode wear (%)			14	8.0	1.5	0.3	0.1				
One-sided exit gap (mm)											
Duty Factor (%)			65	74	85	85	85				
Required option											

Low wear machining at □90

Electrode : Gr1
Workpiece : SK-5

Electrode dimensions = □90

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 10
Jump speed = 4

E number					4313	4314	4315	4316	4317		
Machining state	Voltage (%)				15	12	9	10	10		
	Current (A)				30.0	42.0	55.0	64~72	80~96		
Removal rate	Jump (g/min)				0.8200	1.4000	1.8000	3.3000	5.1000		
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)				88	95	106	125	130		
	Ra (μ m)										
Electrode wear (%)					0.01	0.01	0.01	0.01	0.01		
One-sided exit gap (mm)					0.170	0.190	0.240				
Duty Factor (%)					86	82	76	77	77		
Required option								160A	160A		

Low wear machining at □90

Electrode : Gr2
Workpiece : SK—5

Electrode dimensions = □90

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 10
Jump speed = 4

E number					4333	4334	4335				
Machining state	Voltage (%)				11	11	12				
	Current (A)				32.0	44.0	56.0				
Removal rate	Jump (g/min)				1.0000	1.5000	2.1000				
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μm)				75	80	85				
	Ra (μm)										
Electrode wear (%)					0.01	0.01	0.01				
One-sided exit gap (mm)					0.130	0.150	0.180				
Duty Factor (%)					80	80	80				
Required option											

Low wear machining at 90mm by 180mm or over

Electrode : Gr1
Workpiece : SK—5

Electrode dimensions = 90 × 180

Note 1)
 τ OFF ADJ = 1 1
Jump amount = 5 OFF
Jump cycle = 12 OFF
Jump speed = 2 OFF

E number		4410	4411	4412	4413	4414		4416	4417	Note 1 4418	Note 1 4419
Machining state	Voltage (%)	10	10	10	10	10		11	11	11	11
	Current (A)	11.0	14.0	18.0	21.0	34.0		80~96	112	150	200
Removal rate	Jump (g/min)							3.6000	4.7000		
	machining (mm ³ /min)										
Pre-machined hole flushing/suction										11.0	13.5
Surface roughness	Rz (μm)	43	47	54	65	95		150	160	170	180
	Ra (μm)										
Electrode wear (%)		2.0	1.0	1.0	1.0	0.5		0.01	0.01	0.01	0.01
One-sided exit gap (mm)		0.080	0.090	0.110	0.140	0.190					
Duty Factor (%)		85	86	86	86	89		79	79	80	82
Required option								160A	160A	240A	240A

Large area machining

Electrode : Gr1
Workpiece : S55C

Electrode dimensions = □150

τ OFF ADJ = 1
Jump amount = OFF
Jump cycle = OFF
Jump speed = OFF

E number		4420	4421	4422	4423	4424	4425	4426	4427	4428	4429
Machining state	Voltage (%)										
	Current (A)	380	60	85	100	110	115	130	135	175	200
Removal rate	Jump (g/min)		2.3	4.5	5.0	6.0	6.5	8.0	8.5	9.0	10.0
	machining (mm ³ /min)										
Pre-machined hole flushing/suction		35.0									
Surface roughness	Rz (μm)	300	115	130	145	160	180	200	220	250	300
	Ra (μm)										
Electrode wear (%)		0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
One-sided exit gap (mm)		0.400	0.150	0.180	0.230	0.290	0.330	0.360	0.400	0.410	0.420
Duty Factor (%)		82	77	78	82	82	81	81	83	83	83
Required option		240A		160A	160A	160A	160A	240A	240A	240A	240A

Standard finish condition (for model data 51)

Electrode : Gr2
Workpiece : SKD-61

Electrode dimensions = ~□5

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 10

Electrode dimension =		(□1)	(□2)	(□3)	(□3)	(□3)	(□3)	(□4)	(□4)	(□5)	(□5)
E number		4430	4431	4432	4433	4434	4435	4436	4437	4438	4439
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
Pre-machined hole	flushing/suction										
Surface roughness	Rz (μ m)	6.0	7.0	9.0	12	16	18	20	25	30	40
	Ra (μ m)	1.1	1.3	1.6	2.3	3.0	3.5	4.0	4.5	5.3	5.5
Electrode wear (%)		2.0	1.5	1.0	0.9	0.8	0.7	0.4	0.3	0.2	0.2
One-sided exit gap (mm)		0.014	0.015	0.018	0.021	0.028	0.030	0.033	0.038	0.043	0.061
Duty Factor (%)		17	24	31	34	36	38	38	46	45	49
Required option											

Shallow high speed condition (for model data 251)

Electrode : Gr2
Workpiece : SKD-61

Electrode dimensions = ~□5

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 10

Electrode dimension =		(□1)	(□2)	(□3)	(□3)	(□3)	(□3)	(□4)	(□4)	(□5)	(□5)
E number		4450	4451	4452	4453	4454	4455	4456	4457	4458	4459
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
Pre-machined hole	flushing/suction										
Surface roughness	Rz (μ m)	6.0	7.0	9.0	12	16	18	20	25	30	40
	Ra (μ m)	1.1	1.3	1.6	2.3	3.0	3.5	4.0	4.5	5.3	5.5
Electrode wear (%)		2.0	1.5	1.0	1.0	0.9	0.8	0.5	0.4	0.3	0.3
One-sided exit gap (mm)		0.014	0.015	0.018	0.023	0.030	0.032	0.035	0.040	0.045	0.063
Duty Factor (%)		17	30	34	36	36	38	46	51	53	55
Required option											

Standard finish condition (for model data 1051)

Electrode : Gr2
Workpiece : SKD-61

Electrode dimensions = ~□5

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 10

Electrode dimension =		(□1)	(□2)	(□3)	(□3)	(□3)	(□4)	(□4)	(□4)	(□5)	(□5)
E number		4460	4461	4462	4463	4464	4465	4466	4467	4468	4469
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
Pre-machined hole	flushing/suction										
Surface roughness	Rz (μ m)	7.0	9.0	12	16	17	18	20	24	30	45
	Ra (μ m)	1.1	1.6	2.0	2.7	3.0	3.4	3.8	4.8	7.3	9.5
Electrode wear (%)		3.0	1.0	0.9	0.8	0.7	0.5	0.4	0.3	0.2	0.2
One-sided exit gap (mm)											
Duty Factor (%)		17	24	27	29	27	27	31	39	37	37
Required option											

Standard finish condition (for model data 51)

Electrode : Gr2
Workpiece : SKD-61

Electrode dimensions = $\sim \square 5$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 10

($\square 0.5$)

E number			4491	4492	4493	4494					
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)		2.0	3.0	4.0	5.0					
	Ra (μ m)		0.4	0.6	0.7	0.9					
Electrode wear (%)			0.2	0.3	0.4	0.7					
One-sided exit gap (mm)			0.007	0.007	0.009	0.012					
Duty Factor (%)			11	7	9	14					
Required option			Satin								

Retract machining at $\phi 20$ or less

Electrode : Gr1
Workpiece : SK-5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number						4504	4505	4506	4507	4508	4509
Machining state	Voltage (%)					20	20	20	20	20	25
	Current (A)					4.0	6.0	6.5	7.0	9.0	10.0
Removal rate	Jump (g/min)					0.0120	0.0240	0.0300	0.0400	0.0650	0.0900
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)					17	22	26	30	32	38
	Ra (μ m)										
Electrode wear (%)						0.01	0.01	0.01	0.01	0.01	0.01
One-sided exit gap (mm)						0.040	0.050	0.055	0.060	0.065	0.070
Duty Factor (%)						81	83	83	83	85	85
Required option											

Standard machining (for Model data 53)

Electrode : Gr2
Workpiece : S55C

Electrode dimensions = $\sim \square 2$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 10

E number			4521	4522	4523						
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)		20	25	30						
	Ra (μ m)		2.8	3.5	4.2						
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)			33	33	33						
Required option											

Standard machining (for Model data 53)

Electrode : Gr2
Workpiece : S55C

Electrode dimensions = □5

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 2
Jump speed = 4

E number		4530	4531	4532	4533	4534	4535	4536	4537	4538	4539
Machining state	Voltage (%)	30	30	25	20	18	18	15	15	13	8
	Current (A)				0.1	0.3	0.4	0.5	0.8	1.0	1.5
Removal rate	Jump (g/min) machining (mm ³ /min)	0.00002	0.00005	0.00008	0.0001	0.0007	0.0014	0.0023	0.0051	0.0085	0.0170
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)	2.0	3.0	4.0	5.0	6.0	7.0	9.0	12	16	18
	Ra (μm)										
Electrode wear (%)		200	170	150	110	50	20	15	8.0	5.0	4.0
One-sided exit gap (mm)											
Duty Factor (%)		7	7	15	15	16	15	20	26	30	30
Required option		Satin	Satin								

Standard low wear machining (for Model data 154)

Electrode : Gr2
Workpiece : SK—5

Electrode dimensions = φ 20
Note 1 = φ 30
Note 2 = φ 50

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			4541	4542	4543	4544	4545	Note 1 4546	Note 2 4547		
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min) machining (mm ³ /min)		0.0200	0.0330	0.0490	0.0640	0.0870	0.1660	0.3700		
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)		24	28	30	34	36	44	50		
	Ra (μm)										
Electrode wear (%)			0.6	0.6	0.7	0.6	0.1	3.2	2.0		
One-sided exit gap (mm)											
Duty Factor (%)			30	30	30	30	30	30	30		
Required option											

Standard machining (for Model data 54)

Electrode : Gr2
Workpiece : S55C

Electrode dimensions = φ 20
Note 1 = φ 30
Note 2 = φ 50

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			4551	4552	4553	4554	4555	Note 1 4556	Note 2 4557		
Machining state	Voltage (%)		15	15	12	10	10	5	5		
	Current (A)		3.0	3.0	5.5	6.0	7.0	10.0	18.0		
Removal rate	Jump (g/min) machining (mm ³ /min)		0.0321	0.0682	0.0860	0.1040	0.1430	0.2100	0.4660		
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)		20	25	30	35	41	47	53		
	Ra (μm)										
Electrode wear (%)			5.0	5.0	2.0	2.0	2.0	2.0	2.0		
One-sided exit gap (mm)			0.075	0.080	0.100	0.115	0.135	0.160			
Duty Factor (%)			30	30	30	31	30	30	30		
Required option											

Wear shallow machining (for Model data 254)

Electrode : Gr2
Workpiece : S55C

Electrode dimensions = ϕ 20
Note 1 = ϕ 30
Note 2 = ϕ 50

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			4561	4562	4563	4564	4565	4566	4567		
Machining state	Voltage (%)		12	15	15	12	12	10	8		
	Current (A)		4.0	7.0	8.0	9.0	11.0	15.0	25.0		
Removal rate	Jump (g/min)		0.0500	0.1240	0.1440	0.1880	0.2560	0.3600	0.7630		
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)		20	25	30	35	41	47	53		
	Ra (μ m)										
Electrode wear (%)			5.0	5.0	2.0	2.0	2.0	2.0	2.0		
One-sided exit gap (mm)			0.075	0.080	0.100	0.115	0.135	0.160			
Duty Factor (%)			47	47	48	48	48	49	49		
Required option											

Wear deep machining (for Model data 454)

Electrode : Gr2
Workpiece : S55C

Electrode dimensions = ϕ 20
Note 1 = ϕ 30
Note 2 = ϕ 50

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			4571	4572	4573	4574	4575	4576	4577	4578	4579
Machining state	Voltage (%)		15	15	12	12	10	10	8	8	8
	Current (A)		1.0	1.8	2.0	2.5	3.5	5.0	7.0	10.0	20.0
Removal rate	Jump (g/min)		0.0207	0.0380	0.0630	0.0700	0.1050	0.2250	0.3370	0.5410	1.2000
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)		27	31	37	45	53	60	67	72	77
	Ra (μ m)										
Electrode wear (%)			20	20	20	20	20	20	20	20	20
One-sided exit gap (mm)			0.075	0.085	0.100	0.110	0.120	0.130	0.145		
Duty Factor (%)			30	31	30	30	30	30	30	33	33
Required option											

Low wear deep machining (for Model data 554)

Electrode : Gr2
Workpiece : S55C

Electrode dimensions = ϕ 20
Note 1 = ϕ 30
Note 2 = ϕ 50

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			4581	4582	4583	4584	4585	4586	4587		
Machining state	Voltage (%)		6	8	8	8	5	5	5		
	Current (A)		1.0	1.5	1.8	2.0	3.0	3.5	6.0		
Removal rate	Jump (g/min)		0.0112	0.0220	0.0270	0.0311	0.0428	0.0725	0.1460		
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)		20	25	30	35	41	47	53		
	Ra (μ m)										
Electrode wear (%)			5.0	5.0	2.0	2.0	2.0	2.0	2.0		
One-sided exit gap (mm)			0.075	0.080	0.100	0.115	0.135	0.160			
Duty Factor (%)			10	10	10	10	10	10	10		
Required option											

Standard (for Model data 54, 1045)

Electrode : Gr2
Workpiece : S55C

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				4592	4593	4594	4595	4596			
Machining state	Voltage (%)			30	30	25	15	10			
	Current (A)					1.0	1.5	2.0			
Removal rate	Jump (g/min)			0.0001	0.0003	0.0036	0.0078	0.0130			
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)			4.0	5.0	9.0	12	16			
	Ra (μ m)										
Electrode wear (%)				150	120	43	20	9			
One-sided exit gap (mm)											
Duty Factor (%)				21	21	40	44	46			
Required option											

Wear finishing condition (Model data 31, 36 etc.)

Electrode : Gr1
Workpiece : SK—5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			4611	4612	4613	4614	4615	4616	4617	4618	4619
Machining state	Voltage (%)		32	25	23	18	18	22	27	23	27
	Current (A)		0.4	1.6	1.8	2.4	4.0	5.0	10.0	12.0	18.0
Removal rate	Jump (g/min)		0.0015	0.0031	0.0046	0.0080	0.0200	0.0630	0.1600	0.2100	0.3600
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)		8.0	10	12	14	16	21	26	34	40
	Ra (μ m)										
Electrode wear (%)			40	23	22	10	10	10	5.0	2.0	2.0
One-sided exit gap (mm)			0.020	0.020	0.020	0.030	0.030	0.035	0.045	0.055	0.070
Duty Factor (%)			52	79	79	87	86	79	83	86	85
Required option											

Wear machining at the wear rate of 1 – 5%

Electrode : Gr2
Workpiece : SK—5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			4622	4623	4624	4625	4626	4627	4628	4629
Machining state	Voltage (%)		20	23	30	30	10	10	10	17
	Current (A)		6.0	7.0	11.0	13.0	13.0	17.0	24.0	32.0
Removal rate	Jump (g/min)		0.0290	0.0490	0.1300	0.2100	0.2600	0.3000	0.5400	0.6500
	machining (mm ³ /min)									
Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		18	20	22	26	30	32	40	48
	Ra (μ m)									
Electrode wear (%)			5.0	5.0	5.0	2.0	1.0	1.0	1.0	1.0
One-sided exit gap (mm)			0.035	0.035	0.035	0.045	0.055	0.055	0.060	0.060
Duty Factor (%)			84	81	75	80	81	79	80	79
Required option										

Large area wear machining

Electrode : Gr1
Workpiece : SK—5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				4642	4643	4644	4645	4646	4647		
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)			0.0090	0.0200	0.0400	0.1100	0.1600	0.2800		
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)			14	18	23	29	36	41		
	Ra (μ m)										
Electrode wear (%)				40	17	14	5.0	3.0	3.0		
One-sided exit gap (mm)											
Duty Factor (%)				57	66	65	67	67	66		
Required option											

Large area wear machining

Electrode : Gr1
Workpiece : S55C

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				4653	4654	4655	4656			
Machining state	Voltage (%)			45	45	25	15			
	Current (A)			3.0	5.0	13.0	16.0			
Removal rate	Jump (g/min)			0.0230	0.0510	0.1700	0.2300			
	machining (mm ³ /min)									
Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			18	23	29	36			
	Ra (μ m)									
Electrode wear (%)				28	15	6.0	4.0			
One-sided exit gap (mm)										
Duty Factor (%)				47	64	67	66			
Required option										

Wear machining at the wear rate of 10%

Electrode : Gr2
Workpiece : SK—5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number						4725	4726	4727	4728	4729
Machining state	Voltage (%)					21	23	25	25	20
	Current (A)					2.5	3.0	4.0	4.0	8.5
Removal rate	Jump (g/min)					0.0090	0.0160	0.0230	0.0380	0.0800
	machining (mm ³ /min)									
Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)					12	14	16	17	19
	Ra (μ m)									
Electrode wear (%)						10	10	10	10	10
One-sided exit gap (mm)						0.030	0.030	0.030	0.030	0.030
Duty Factor (%)						80	79	77	70	66
Required option										

Wear machining at the wear rate of 20%

Electrode : Gr2
Workpiece : SK—5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number					4823	4824	4825				
Machining state	Voltage (%)				25	25	25				
	Current (A)				1.5	1.5	2.0				
Removal rate	Jump (g/min)				0.0050	0.0070	0.0080				
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)				10	11	12				
	Ra (μ m)										
Electrode wear (%)					20	20	20				
One-sided exit gap (mm)					0.025	0.030	0.030				
Duty Factor (%)					70	66	62				
Required option											

Satin wear finishing (Satin machining circuit is used)

Electrode : Gr1
Workpiece : SK—5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number					4913	4914	4915	4916	4917		
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)				0.0006	0.0010	0.0015	0.0023	0.0056		
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)				5.0	6.0	8.0	10	12.5		
	Ra (μ m)										
Electrode wear (%)					270	250	231	208	136		
One-sided exit gap (mm)					0.025	0.030	0.035	0.040	0.045		
Duty Factor (%)					14	14	14	14	14		
Required option					Satin	Satin	Satin	Satin	Satin		

Wear machining at the wear rate of 30%

Electrode : Gr2
Workpiece : SK—5

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number					4922	4923	4924	4925	4926	4927	4928	
Machining state	Voltage (%)				35	37	30	30	30	30	30	
	Current (A)				0.1	0.2	0.5	0.8	0.8	1.0	1.7	
Removal rate	Jump (g/min)						0.0010	0.0020	0.0030	0.0040	0.0050	
	machining (mm ³ /min)											
Pre-machined hole flushing/suction												
Surface roughness	Rz (μ m)				4.0	5.0	6.5	8.0	9.0	10	11	
	Ra (μ m)											
Electrode wear (%)							36	34	34	30	26	
One-sided exit gap (mm)					0.010	0.010	0.020	0.025	0.025	0.025	0.025	
Duty Factor (%)					21	21	52	52	52	52	52	
Required option												

Standard finishing condition (For model data 1055, 1056 and 1057)

Electrode : Gr2
Workpiece : S55C

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 230

E number				4952	4953	4954	4955	4956	4957		
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)			0.0001	0.0004	0.0014	0.0023	0.0055	0.0120		
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)			4.0	5.0	6.0	9.0	12	16		
	Ra (μ m)			0.7	0.9	1.4	1.6	1.8	2.6		
Electrode wear (%)				65	60	45	15	7	4		
One-sided exit gap (mm)											
Duty Factor (%)				21	30	40	55	65	65		
Required option											

Standard (for Model data 1053)

Electrode : Gr2
Workpiece : S55C

Electrode dimensions = $\sim \square 30$

τ OFF ADJ 0
Jump amount 0
Jump cycle 0
Jump speed 0

E number		5000	5001	5002	5003	5004	5005	5006	5007	5008	5009
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)	16	20	25	30	35	41	47	54	70	74
	Ra (μ m)	3.0	4.0	4.5	5.0	6.0	8.0	9.0	10	11	12
Electrode wear (%)		6.0	4.0	3.0	2.0	1.5	1.0	1.0	1.0	0.5	0.5
One-sided exit gap (mm)											
Duty Factor (%)		47	36	40	51	53	57	64	65	51	51
Required option											

Standard finish condition (for Model data 1053)

Electrode : Gr2
Workpiece : S55C

Electrode dimensions = $\sim \square 30$

τ OFF ADJ 0
Jump amount 0
Jump cycle 0
Jump speed 0

E number		5091	5092	5093	5094	5095				
Machining state	Voltage (%)									
	Current (A)									
Removal rate	Jump (g/min)									
	machining (mm ³ /min)									
Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	4.0	5.0	7.0	9.0	12				
	Ra (μ m)	0.7	0.9	1.1	1.6	2.2				
Electrode wear (%)		150	120	60	35	16				
One-sided exit gap (mm)										
Duty Factor (%)		21	25	25	42	46				
Required option										

Small area machining Start conditions 1

(□15)

Electrode : Gr1
Workpiece : SK—5

Electrode dimensions = □5~15

τ OFF ADJ = 1 1
Jump amount = 5 5
Jump cycle = 3 3
Jump speed = 8 4

Electrode dimensions =

(□5)

(□8)

(□10)

(□12.7)

(□15)

E number					5103		5105	5106	5107	5108	
Machining state	Voltage (%)				20			25	20	18	
	Current (A)				8.0		7.0	11.0	15.0	17.0	
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μm)				62		62	62	62	62	
	Ra (μm)										
Electrode wear (%)											
One-sided exit gap (mm)					0.140		0.140	0.140	0.140	0.140	
Duty Factor (%)					9		20	33	41	49	
Required option											

Small area machining Start conditions 1

(□15)

Electrode : Gr2
Workpiece : SK—5

Electrode dimensions = □3~15

τ OFF ADJ = 1 1
Jump amount = 5 5
Jump cycle = 3 3
Jump speed = 8 4

Electrode dimensions =

(□3)

(□4)

(□5)

(□6.35)

(□8)

(□10)

(□12.7)

(□15)

E number			5121	5122	5123	5124	5125	5126	5127	5128	
Machining state	Voltage (%)		42	11	13	13	33	17	20	17	
	Current (A)		0.5	1.0	1.0	3.0	6.0	8.0	9.0	19.0	
Removal rate	Jump (g/min)		0.0150	0.0320	0.0450	0.1100	0.1000	0.2700	0.3400	0.3700	
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μm)		28	28	28	28	28	39	39	39	
	Ra (μm)										
Electrode wear (%)			0.3	0.2	0.2	0.1	0.2	0.1	0.1	0.1	
One-sided exit gap (mm)			0.045	0.045	0.045	0.045	0.045	0.065	0.065	0.065	
Duty Factor (%)			20	15	20	30	49	30	59	68	
Required option											

Small area machining Start conditions 2

(□15)

Electrode : Gr2
Workpiece : SK—5

Electrode dimensions = □3~15

τ OFF ADJ = 1 1
Jump amount = 5 5
Jump cycle = 3 3
Jump speed = 8 4

Electrode dimensions =

(□3)

(□4)

(□5)

(□6.35)

(□8)

(□10)

(□12.7)

(□15)

E number			5221	5222	5223	5224	5225	5226	5227	5228	
Machining state	Voltage (%)		30~40	20	15~20	5~6	8~10	25	20~25	15	
	Current (A)		1.5~2.0	2.0	2.0	2.0~2.5	3.5	8~10	10~12	12.0	
Removal rate	Jump (g/min)		0.0110	0.0180	0.0260	0.0290	0.0410	0.1370	0.1840	0.1380	
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μm)		21	21	21	21	21	24	25	25	
	Ra (μm)										
Electrode wear (%)			0.6	0.8	0.8	0.6	0.3	0.1	0.12	0.4	
One-sided exit gap (mm)			0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040	
Duty Factor (%)			20	20	20	20	30	76	83	83	
Required option											

Small area machining Start conditions 2

Electrode : Gr1
Workpiece : SK-5

Electrode dimensions = □5~15

(□15)

τ OFF ADJ = 1 1
Jump amount = 5 5
Jump cycle = 3 3
Jump speed = 8 4

Electrode dimensions =

(□5)

(□8)

(□10)

(□12.7)

(□15)

E number					5303		5305	5306	5307	5308	
Machining state	Voltage (%)						20	15	20	13	
	Current (A)						8.0	8.0	15.0	14.0	
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)				47		47	47	47	47	
	Ra (μ m)										
Electrode wear (%)											
One-sided exit gap (mm)					0.095		0.095	0.095	0.095	0.095	
Duty Factor (%)					20		23	41	39	79	
Required option											

Low wear Rib machining condition (For model data 1144)

Electrode : Gr2
Workpiece : St

Electrode dimensions =

τ OFF ADJ = 1
Jump amount = 12
Jump cycle = 3
Jump speed = 10

E number		5420	5421	5422	5423	5424	5425	5426	5427	5428	5429
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)										
	Ra (μ m)										
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)		26	25	23	23	23	23	27	27	27	27
Required option											

Low wear Rib machining condition (For model data 1044)

Electrode : Gr2
Workpiece : St

Electrode dimensions =

τ OFF ADJ = 1
Jump amount = 12
Jump cycle = 3
Jump speed = 10

E number		5430	5431	5432	5433	5434	5435	5436	5437	5438	5439
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)	18	20	25	29	35	39	45	47	54	60
	Ra (μ m)	3.1	4.0	4.5	5.2	6.4	6.9	7.5	7.8	10	11
Electrode wear (%)		1.0	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3
One-sided exit gap (mm)											
Duty Factor (%)		26	25	23	23	23	23	26	27	27	27
Required option											

Low wear Rib machining condition (For model data 1046)

Electrode : Gr2
Workpiece : St

Electrode dimensions =

τ OFF ADJ = 1
Jump amount = 12
Jump cycle = 3
Jump speed = 10

E number		5440	5441	5442	5443	5444	5445	5446	5447	5448	5449
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)	18	20	25	29	35	39	45	47	54	60
	Ra (μ m)	3.1	4.0	4.5	5.2	6.4	6.9	7.5	7.8	10	11
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)		26	25	23	23	26	27	31	34	36	36
Required option											

Low wear Rib machining condition (For model data 1146)

Electrode : Gr2
Workpiece : St

Electrode dimensions =

τ OFF ADJ = 1
Jump amount = 12
Jump cycle = 3
Jump speed = 10

E number		5450	5451	5452	5453	5454	5455	5456	5457	5458	5459
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)										
	Ra (μ m)										
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)		26	25	23	23	26	27	31	33	35	36
Required option											

Low wear Rib machining condition (For model data 1143)

Electrode : Gr2
Workpiece : St

Electrode dimensions = □10~30

τ OFF ADJ = 1
Jump amount = 12
Jump cycle = 3
Jump speed = 10

E number		5470	5471	5472	5473	5474	5475	5476	5477	5478	5479
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)										
	Ra (μ m)										
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)		20	17	16	15	15	15	15	15	14	14
Required option											

Low wear Rib machining condition (For model data 1043)

Electrode : Gr2
Workpiece : St

Electrode dimensions = □10~30

τ OFF ADJ = 1
Jump amount = 12
Jump cycle = 3
Jump speed = 10

E number		5480	5481	5482	5483	5484	5485	5486	5487	5488	5489
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)	18	20	25	29	35	39	45	47	54	
	Ra (μ m)	3.1	4.0	4.5	5.2	6.4	6.9	7.5	7.8	10	
Electrode wear (%)		1.0	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.2	
One-sided exit gap (mm)											
Duty Factor (%)		22	22	21	21	17	16	15	13	12	11
Required option											

Low wear Rib machining condition (For model data 1043 and 1044)

Electrode : Gr2
Workpiece : St

Electrode dimensions = □10~30

τ OFF ADJ = 1
Jump amount = 12
Jump cycle = 3
Jump speed = 10

E number				5492	5493	5494	5495	5496			
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)			4.0	5.0	8.0	10	14			
	Ra (μ m)			0.7	0.9	1.1	1.6	2.2			
Electrode wear (%)				150	120	40	6	3			
One-sided exit gap (mm)											
Duty Factor (%)				21	21	25	25	26			
Required option											

Low wear Rib machining condition (For model data 1046)

Electrode : Gr2
Workpiece : St

Electrode dimensions =

τ OFF ADJ = 1
Jump amount = 12
Jump cycle = 3
Jump speed = 10

E number				5553	5554	5555	5556				
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)			5.0	8.0	10	14				
	Ra (μ m)			0.9	1.1	1.6	2.2				
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)				9	33	37	42				
Required option											

High speed Rib machining condition (For model data 1045 SPA condition)

Electrode : Gr2
Workpiece : St

Electrode dimensions = □10~30

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 2
Jump speed = 15

E number			5581	5582	5583	5584	5585	5586			
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		20	25	30	35	41	47			
	Ra (μ m)		4.0	4.5	5.0	6.0	8.0	9.0			
Electrode wear (%)			5.0	5.0	2.0	2.0	2.0	2.0			
One-sided exit gap (mm)											
Duty Factor (%)			10	10	10	10	10	10			
Required option											

4. CuW(copper tungsten) – St(steel)
AgW(argental tungsten)

Small area low wear machining at □10 or less

Electrode : CuW
Workpiece : St

Electrode dimensions =

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number		6000	6001	6002	6003	6004	6005	6006	6007	6008	
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)	10	12	14	17	20	25	30	40	55	
	Ra (μm)										
Electrode wear (%)		6.9	4.1	3.4	2.7	1.4	1.1	1.0	1.0	1.0	
One-sided exit gap (mm)		0.015	0.015	0.015	0.020	0.020	0.025	0.030	0.040	0.060	
Duty Factor (%)		48	48	48	49	49	49	49	49	49	
Required option											

Small area machining

Electrode : CuW
Workpiece : SKD-11

Electrode dimensions = $\phi 3$

τ OFF ADJ = 1
Jump amount = 8
Jump cycle = 2
Jump speed = 10

E number		6020	6021	6022	6023	6024	6025	6026	6027	6028	6029
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)	0.0002	0.0003	0.0006	0.0009	0.0014	0.0034	0.0051	0.0065	0.0130	0.0140
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)	6.0	7.0	8.0	9.0	10	11	14	17	20	30
	Ra (μm)										
Electrode wear (%)		17	15	14	13	13	8.0	4.0	4.0	1.5	1.5
One-sided exit gap (mm)											
Duty Factor (%)		33	33	33	33	33	33	34	34	33	33
Required option											

Small area machining

Electrode : CuW
Workpiece : SKD-11

Electrode dimensions = $\phi 3$

τ OFF ADJ = 1
Jump amount = 8
Jump cycle = 2
Jump speed = 10

E number		6040	6041	6042	6043	6044	6045	6046	6047	6048	6049
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)	0.0002	0.0003	0.0006	0.0007	0.0013	0.0031	0.0042	0.0065	0.0087	0.0160
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)	6.0	7.0	8.0	9.0	10	11	14	17	20	30
	Ra (μm)										
Electrode wear (%)		23	20	20	20	20	16	16	12	12	12
One-sided exit gap (mm)											
Duty Factor (%)		33	33	33	33	33	33	33	33	33	33
Required option											

Connector machining (For model data 1060)

Electrode : CuW
Workpiece : St

Electrode dimensions = $\sim \square 10$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 10

E number			6051	6052	6053	6054	6055	6056	6057	6058	6059
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		0.5	0.7	1.0	2.0	3.0	4.0	5.0	7.0	8.0
	Ra (μ m)										
Electrode wear (%)			30	25	19	22	24	20	4.0	3.0	2.0
One-sided exit gap (mm)											
Duty Factor (%)			5	5	6	6	6	6	30	26	25
Required option			U-Fine	U-Fine	Satin	Satin	Satin	Satin			

Connector machining (For model data 1060)

Electrode : CuW
Workpiece : St

Electrode dimensions = $\sim \square 10$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 10

E number		6060	6061								
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	10	12								
	Ra (μ m)										
Electrode wear (%)		1.0	0.5								
One-sided exit gap (mm)											
Duty Factor (%)		25	25								
Required option											

Low wear standard machining

Electrode : CuW
Workpiece : St

Electrode dimensions = $\phi 12$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number		6100	6101	6102	6103	6104	6105	6106	6107	6108	
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)	0.0034	0.0050	0.0070	0.0110	0.0150	0.0400	0.0680	0.1360	0.2140	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	10	12	14	17	20	25	30	40	55	
	Ra (μ m)										
Electrode wear (%)		6.9	4.1	3.4	2.7	1.4	1.1	1.0	1.0	1.0	
One-sided exit gap (mm)		0.015	0.015	0.015	0.020	0.020	0.025	0.030	0.040	0.060	
Duty Factor (%)		74	77	79	78	81	79	78	80	78	
Required option											

Low wear machining

Electrode : CuW
Workpiece : SKD-11

Electrode dimensions = $\phi 40$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number							6115	6116	6117	6118	
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)						0.0310	0.0600	0.1090	0.1530	
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)						25	30	40	50	
	Ra (μ m)										
Electrode wear (%)							0.6	1.3	2.6	1.6	
One-sided exit gap (mm)							0.035	0.040	0.045	0.055	
Duty Factor (%)							79	78	79	79	
Required option											

Wear standard machining

Electrode : CuW
Workpiece : SKD-11

Electrode dimensions = $\phi 9$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number		6200	6201	6202	6203	6204	6205	6206	6207		
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)	0.0003	0.0005	0.0008	0.0014	0.0026	0.0053	0.0091	0.0140		
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)	6.0	7.0	7.5	8.5	9.5	10.5	14	17		
	Ra (μ m)										
Electrode wear (%)		21	20	18	15	12	11	8.0	6.0		
One-sided exit gap (mm)		0.020	0.020	0.020	0.025	0.025	0.030	0.030	0.030		
Duty Factor (%)		50	50	50	53	56	59	67	67		
Required option											

Wear machining

Electrode : CuW
Workpiece : SKD-11

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number		6210	6211	6212	6213	6214	6215	6216	6217	6218	
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)	0.0002	0.0006	0.0012	0.0023	0.0047	0.0080	0.0130	0.0200	0.0270	
	machining (mm ³ /min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μ m)	4.0	5.0	6.0	8.0	10	12	15	18	22	
	Ra (μ m)										
Electrode wear (%)		22	23	22	21	13	13	8.4	5.9	4.3	
One-sided exit gap (mm)		0.010	0.015	0.015	0.015	0.020	0.020	0.025	0.030	0.030	
Duty Factor (%)		11	11	11	11	42	43	65	68	70	
Required option		Satin	Satin	Satin	Satin						

Small machining condition(For Model data 62)

Electrode : CuW
Workpiece : SKD-11

Electrode dimensions = $\sim \square 5$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 10

E number				6222	6223	6224	6225	6226	6227		
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			0.7	1.0	2.0	3.0	4.0	5.0		
	Ra (μ m)										
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)				1	8	8	9	9	9		
Required option				U-Fine	Satin	Satin	Satin	Satin	Satin		

Small machining condition(For Model data 59)

Electrode : CuW
Workpiece : SKD-11

Electrode dimensions = $\square 1 \sim 10$

τ OFF ADJ = 1
Jump amount = 7
Jump cycle = 3
Jump speed = 10

E number		6230	6231	6232							
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)	0.0014	0.0015	0.0015							
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	6.0	8.0	9.0							
	Ra (μ m)										
Electrode wear (%)		11	5.0	7.0							
One-sided exit gap (mm)											
Duty Factor (%)		7	50	50							
Required option		Satin									

Through machining at the wear rate of 5 - 30%

(pre-machined hole suction)

Electrode : CuW
Workpiece : St

Electrode dimensions =

τ OFF ADJ = 1
Jump amount = OFF
Jump cycle = OFF
Jump speed = OFF

E number					6603	6604	6605	6606	6607	6608	6609
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction				0.0050	0.0120	0.0160	0.0210	0.0310	0.0480	0.0660
Surface roughness	Rz (μ m)				7.0	8.0	9.0	11	12	13	14
	Ra (μ m)										
Electrode wear (%)					28	18	16	14	11	10	9.0
One-sided exit gap (mm)					0.005	0.005	0.008	0.010	0.010	0.015	0.015
Duty Factor (%)					15	17	17	17	26	26	36
Required option											

Through machining at the wear rate of 5 – 30%

(pre-machined hole suction)

Electrode : CuW

Electrode dimensions =

Workpiece : St

τ OFF ADJ = 1

Jump amount = OFF

Jump cycle = OFF

Jump speed = OFF

E number		6610	6611	6612	6613	6614	6615				
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction	0.1030	0.1580	0.2200	0.3150	0.4500	0.5350				
Surface roughness	Rz (μm)	15	17	19	22	26	28				
	Ra (μm)										
Electrode wear (%)		7.0	7.0	6.0	5.0	5.0	5.0				
One-sided exit gap (mm)		0.020	0.025	0.030	0.035	0.040	0.045				
Duty Factor (%)		43	43	51	51	46	41				
Required option											

Through machining at the wear rate of 10 – 15%

(pre-machined hole suction)

Electrode : CuW

Electrode dimensions = $\phi 20$

Workpiece : St

τ OFF ADJ = 1

Jump amount = OFF

Jump cycle = OFF

Jump speed = OFF

E number						6704	6705	6706	6707	6708	
Machining state	Voltage (%)					20	20	20	20	20	
	Current (A)					1.5	2.0	2.5	3.0	4.5	
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction					0.0330	0.0520	0.0770	0.1100	0.1400	
Surface roughness	Rz (μm)					11.5	12	13	14	15	
	Ra (μm)										
Electrode wear (%)						11	10	10	11	13	
One-sided exit gap (mm)						0.020	0.020	0.020	0.025	0.025	
Duty Factor (%)						17	17	13	11	11	
Required option											

Through machining at the wear rate of 20 – 50%

(pre-machined hole suction)

Electrode : CuW

Electrode dimensions = $\phi 20$

Workpiece : SKD-11

τ OFF ADJ = 1

Jump amount = OFF

Jump cycle = OFF

Jump speed = OFF

E number				6802	6803	6804	6805	6806	6807	6808	
Machining state	Voltage (%)			25	25	25	20	20	20	20	
	Current (A)			0.5	0.5	0.5	1.0	1.0	1.5	2.5	
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction			0.0044	0.0065	0.0097	0.0140	0.0220	0.0330	0.0530	
Surface roughness	Rz (μm)			5.0	6.0	7.0	8.0	9.0	10	11	
	Ra (μm)										
Electrode wear (%)				48	40	33	27	20	26	32	
One-sided exit gap (mm)				0.010	0.015	0.015	0.015	0.015	0.015	0.020	
Duty Factor (%)				18	18	18	14	9	5	5	
Required option											

5. CuW(copper tungsten) — Cu
AgW(argental tungsten)

- Electrode dressing conditions
- Electrode dressing pipe hole

CuW(copper tungsten) — WC(tungsten carbide)
AgW(argental tungsten)

Electrode dressing machining

(Carbide machining circuit and Satin machining circuit is used)

Electrode : CuW

Electrode dimensions = $\phi 10$

Workpiece : Cu

τ OFF ADJ = 1

Jump amount = 5

Jump cycle = 5

Jump speed = 8

This conditions should be used when the electrode (CuW) is installed on the table.

E number		7310	7311	7312	7313	7314	7315	7316	7317		
Machining state	Voltage (%)	40	35	35	30	25	20	12	15		
	Current (A)	0.5	1.0	2.0	2.0	4.0	6.0	6.5	7.0		
Removal rate	Jump (g/min)	0.0008	0.0070	0.0200	0.0130	0.0140	0.0790	0.1200	0.1600		
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	4.0	6.0	8.0	12	15	18	22	25		
	Ra (μ m)										
Electrode wear (%)		12.0	12.0	12.0	8.0	9.0	8.0	10.0	10.0		
One-sided exit gap (mm)											
Duty Factor (%)		15	15	15	15	12	9	3	3		
Required option		Satin	Satin	Satin	Carbide	Carbide	Carbide	Carbide	Carbide		

Low wear electrode dressing condition (For Model data 68)

(Satin machining circuit is used)

Electrode : CuW

Electrode dimensions = $\square 10$

Workpiece : Cu, CuW

τ OFF ADJ = 1

Jump amount = 5

Jump cycle = 3

Jump speed = 10

This conditions should be used when the electrode (CuW) is installed on the table.

E number			7321	7322		7324	7325	7326	7327	7328	
Machining state	Voltage (%)		3	4	6	8	10	15	20	25	
	Current (A)		0.5	0.5	1.0	2.0	3.0	3.0	4.0	4.0	
Removal rate	Jump (g/min)		0.0010	0.0050	0.0080	0.0120	0.0150	0.0270	0.0350	0.0420	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		4.0	6.0	8.0	10	11	12	13	14	
	Ra (μ m)										
Electrode wear (%)			10.0	22.0	19.0	18.0	14.0	11.0	11.0	13.0	
One-sided exit gap (mm)											
Duty Factor (%)			3	2	2	1	6	7	7	7	
Required option			Satin	Satin	Satin	Satin					

Pipe electrode dressing condition (Satin machining circuit is used)

Electrode : AgW, CuW, W

Electrode dimensions =

Workpiece : AgW, CuW

τ OFF ADJ = 1

Jump amount = OFF

Jump cycle = OFF

Jump speed = OFF

Rotating speed = 1000min⁻¹

This conditions should be used when the electrode is installed on the spindle.

E number		7330	7331	7332	7333	7334	7335	7336	7337	7338	7339
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)										
	Ra (μ m)										
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)		2	5	5	5	5	6	6	6	6	6
Required option		Satin	Satin	Satin	Satin	Satin	Satin	Satin	Satin	Satin	Satin

Electrode dressing pipe hole machining condition
(Satin machining circuit is used)

Electrode : AgW, CuW, W
Workpiece : St.WC

Electrode dimensions = $\sim \phi 1.0$

Rotating speed = 1000min^{-1}

τ OFF ADJ = 1
Jump amount = OFF
Jump cycle = OFF
Jump speed = OFF

E number		($\sim \phi 0.1$)	($\sim \phi 0.1$)	($\sim \phi 0.1$)	($\sim \phi 0.1$)	($\phi 0.1\sim$)	($\phi 0.15\sim$)	($\phi 0.3\sim$)	($\phi 0.4\sim$)	($\phi 0.5\sim$)	($\phi 0.6\sim$)
Machining state	Voltage (%)	7340	7341	7342	7343	7344	7345	7346	7347	7348	7349
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm^3/min)										
Pre-machined hole flushing/suction											
Surface roughness	Rz (μm)										
	Ra (μm)										
Electrode wear (%)											
One-sided exit gap (mm)											
Duty Factor (%)		1	1	1	1	1	1	1	1	1	1
Required option		Satin	Satin	Satin	Satin	Satin	Satin	Satin	Satin	Satin	Satin

Flushing machining standard condition
(Carbide machining circuit is used)

Electrode : CuW
Workpiece : WC

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = OFF
Jump cycle = OFF
Jump speed = OFF

E number			7501	7502	7503	7504	7505	7506	7507	7508	7509
Machining state	Voltage (%)		20	30	30	17	20	17	17	17	12
	Current (A)				0.5	1.5	2.0	4.0	8.0	12.0	16.0
Removal rate	Jump (g/min)										
	machining (mm^3/min)										
Pre-machined hole flushing/suction			0.0006	0.0025	0.0100	0.0300	0.0500	0.1000	0.1800	0.3200	0.5100
Surface roughness	Rz (μm)		3.5	4.5	5.5	6.5	8.0	9.5	11	13	14
	Ra (μm)										
Electrode wear (%)			30.0	35.0	15.0	20.0	20.0	20.0	20.0	20.0	20.0
One-sided exit gap (mm)			0.005	0.005	0.010	0.010	0.010	0.015	0.020	0.025	0.035
Duty Factor (%)			5	5	12	12	18	18	18	18	18
Required option					Carbide	Carbide	Carbide	Carbide	Carbide	Carbide	Carbide

Flushing machining standard and additional condition
(Carbide machining circuit is used)

Electrode : CuW
Workpiece : WC

Electrode dimensions = $\phi 20\sim\phi 40$

τ OFF ADJ = 1
Jump amount = OFF
Jump cycle = OFF
Jump speed = OFF

E number		Electrode dimensions = ($\phi 20$ Sta.)				($\phi 20$ Add.)		($\phi 40$ Add.)		
Machining state	Voltage (%)	7510				7513	7514		7517	7518
	Current (A)	8				16.0	18.0		16.0	18.0
Removal rate	Jump (g/min)									
	machining (mm^3/min)									
Pre-machined hole flushing/suction		0.5800				0.6000	0.6600		0.5900	0.7600
Surface roughness	Rz (μm)	16				14	16		14	16
	Ra (μm)									
Electrode wear (%)		20.0				20.0	20.0		17.0	17.0
One-sided exit gap (mm)		0.040				0.035	0.040		0.035	0.040
Duty Factor (%)		9				14	9		18	9
Required option		Carbide				Carbide	Carbide		Carbide	Carbide

Flushing semi-finishing, finishing condition

(Satin machining circuit is used)

Electrode : CuW

Workpiece : WC

Electrode dimensions = $\phi 8$

τ OFF ADJ = 1

Jump amount = OFF

Jump cycle = OFF

Jump speed = OFF

E number		7520	7521	7522	7523	7524	7525	7526	7527	7528	7529
Machining state	Voltage (%)	20	25	30	30	30	30	30	25	20	15
	Current (A)									1	1.5
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
Pre-machined hole flushing/suction		0.0001	0.0003	0.0004	0.0008	0.0015	0.0030	0.0047	0.0140	0.0240	0.0370
Surface roughness	Rz (μ m)	1.2	1.6	2.0	2.5	3.0	3.5	4.5	5.5	6.5	8.5
	Ra (μ m)										
Electrode wear (%)		14.0	11.0	10.0	10.0	25.0	18.0	18.0	19.0	16.0	15.0
One-sided exit gap (mm)		0.002	0.002	0.002	0.004	0.004	0.004	0.004	0.006	0.006	0.008
Duty Factor (%)		25	25	25	25	25	25	25	20	12	6
Required option		Satin	Satin	Satin	Satin	Satin	Satin	Satin	Satin	Satin	Satin

Carbide booster machining condition (For model data 3)

Carbide booster is used (option)

Electrode : CuW

Workpiece : WC

Electrode dimensions = $\phi 20 \sim 50$

τ OFF ADJ = 1

Jump amount = OFF

Jump cycle = OFF

Jump speed = OFF

E number									7557	7558	7559
Machining state	Voltage (%)										
	Current (A)								5.0	8.0	10.0
Removal rate	Jump (g/min)								0.5000	0.7000	1.0000
	machining (mm ³ /min)										
Pre-machined hole flushing/suction									1.0	1.4	2.0
Surface roughness	Rz (μ m)								16	20	26
	Ra (μ m)								3.0	3.6	5.0
Electrode wear (%)									16.0	16.0	16.0
One-sided exit gap (mm)									0.085	0.105	0.175
Duty Factor (%)											
Required option									CB	CB	CB

Jump machining standard condition

(Carbide machining circuit is used)

Electrode : CuW

Workpiece : WC

Electrode dimensions = $\phi 12$

τ OFF ADJ = 1

Jump amount = 5

Jump cycle = 5

Jump speed = 8

E number		7601	7602	7603	7604	7605	7606	7607	7608	
Machining state	Voltage (%)	30	18	30	30	30	30	30	20	
	Current (A)			0.3	0.5	0.8	1.0	4.0	6.0	
Removal rate	Jump (g/min)	0.0008	0.0012	0.0060	0.0140	0.0200	0.0400	0.0600	0.0800	
	machining (mm ³ /min)									
Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	3.5	4.5	5.5	6.5	8.0	9.5	11	13	
	Ra (μ m)									
Electrode wear (%)		30.0	60.0	16.0	16.0	19.0	19.0	19.0	19.0	
One-sided exit gap (mm)		0.010	0.010	0.015	0.015	0.020	0.025	0.030	0.035	
Duty Factor (%)		5	5	12	12	18	14	6	6	
Required option				Carbide	Carbide	Carbide	Carbide	Carbide	Carbide	

Jump machining semi-finishing,finishing condition

(Satin machining circuit is used)

Electrode : CuW

Workpiece : WC

Electrode dimensions = $\phi 8$

τ OFF ADJ = 1

Jump amount = 5

Jump cycle = 5

Jump speed = 8

E number		7620	7621	7622	7623	7624	7625	7626	7627	7628	7629
Machining state	Voltage (%)	20	25	30	35	40	40	40	30	30	30
	Current (A)										0.5
Removal rate	Jump (g/min)	0.00003	0.0001	0.0002	0.0003	0.0006	0.0010	0.0016	0.0034	0.0054	0.0097
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	1.2	1.6	2.0	2.5	3.0	3.5	4.5	5.5	6.5	8.5
	Ra (μ m)										
Electrode wear (%)		13.0	12.0	10.0	12.0	10.0	10.0	11.0	13.0	15.0	15.0
One-sided exit gap (mm)		0.002	0.004	0.004	0.004	0.006	0.006	0.008	0.010	0.012	0.014
Duty Factor (%)		1	5	5	5	5	5	5	5	5	4
Required option		Satin	Satin	Satin	Satin	Satin	Satin	Satin	Satin	Satin	Satin

Ultra-fine machining

(Ultra-fine machining circuit is used)

Electrode : CuW

Workpiece : WC

Electrode dimensions = $\phi 8$

τ OFF ADJ = 1

Jump amount = 5

Jump cycle = 5

Jump speed = 8

E number		7630	7631		7633	7634	7635	7636	7637	7638	
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)	0.000026	0.000028		0.000001	0.000008	0.000002	0.000008	0.000014	0.000026	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	1.2	1.6		0.3	0.4	0.5	0.6	0.7	0.9	
	Ra (μ m)										
Electrode wear (%)		15.0	15.0		400.0	300.0	15.0	15.0	15.0	15.0	
One-sided exit gap (mm)		0.002	0.003								
Duty Factor (%)		1	2		2	2	2	2	2	2	
Required option		U-Fine	U-Fine		U-Fine	U-Fine	U-Fine	U-Fine	U-Fine	U-Fine	

SPG circuit condition (For model data 2)

Electrode : CuW

Workpiece : WC

Electrode dimensions = $\phi 10$

τ OFF ADJ = 1

Jump amount = 6

Jump cycle = 3

Jump speed = 10

E number						7655	7656	7657	7658	
Machining state	Voltage (%)									
	Current (A)									
Removal rate	Jump (g/min)									
	machining (mm ³ /min)									
	Pre-machined hole flushing/suction									
Surface roughness	Rz (μ m)						0.5	0.7	1	
	Ra (μ m)						0.2	0.25	0.02	
Electrode wear (%)										
One-sided exit gap (mm)										
Duty Factor (%)						2	1	1	1	
Required option						SPG	SPG	SPG	SPG	

Jump machining standard condition

(Carbide machining circuit is used)

Electrode : CuW

Workpiece : WC

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1

Jump amount = 5

Jump cycle = 5

Jump speed = 8

E number			7701	7702	7703	7704	7705	7706	7707	7708	7709
Machining state	Voltage (%)		30	18	30	30	30	30	30	20	8
	Current (A)				0.3	0.5	0.8	1.0	4.0	6.0	6.5
Removal rate	Jump (g/min)		0.0008	0.0012	0.0050	0.0070	0.0130	0.0200	0.0600	0.0800	0.1100
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		3.5	4.5	5.5	6.5	8.0	9.5	11	13	14
	Ra (μ m)										
Electrode wear (%)			30.0	60.0	16.0	16.0	19.0	19.0	19.0	19.0	16.0
One-sided exit gap (mm)			0.010	0.010	0.015	0.015	0.020	0.025	0.030	0.035	0.040
Duty Factor (%)			5	5	12	12	18	18	15	9	3
Required option					Carbide	Carbide	Carbide	Carbide	Carbide	Carbide	Carbide

Jump machining standard and additional condition

(Carbide machining circuit is used)

Electrode : CuW

Workpiece : WC

(Flushing 0.5kg/cm² from side)

Electrode dimensions = $\phi 20$ 、 $\phi 40$

(E7710)

τ OFF ADJ = 1 1

Jump amount = 3 5

Jump cycle = 3 5

Jump speed = 7 8

E number		Electrode dimensions = ($\phi 20$ Sta.)		($\phi 20$ Add.)		($\phi 40$ Add.)	
Machining state	Voltage (%)	7710		7713	7714	7717	7718
	Current (A)	15		5	5	8	8
Removal rate	Jump (g/min)	7.0		7.0	8.0	12.0	18.0
	machining (mm ³ /min)	0.1300		0.1400	0.1900	0.2300	0.3500
	Pre-machined hole flushing/suction						
Surface roughness	Rz (μ m)						
	Ra (μ m)	16		14	16	14	16
Electrode wear (%)		18.0		18.0	18.0	15.0	16.0
One-sided exit gap (mm)		0.050		0.040	0.050	0.040	0.050
Duty Factor (%)		3		3	3	9	9
Required option		Carbide		Carbide	Carbide	Carbide	Carbide

6. Machining Conditions for Special Materials

- St (steel) — St (steel)
- Cu (copper) — HR750 (copper alloy)
- Cu (copper) — Al (hard aluminum)
- Cu (copper) — Bs (brass)
- Cu (copper) — ZAS (zinc alloy)
- Cu (copper) — CuBe (beryllium copper)
- Gr1 (medium-grade graphite) — Al (hard aluminum)
- Gr1 (medium-grade graphite) — Copper Alloy
- Gr1 (medium-grade graphite) — HR750 (copper alloy)
- Gr1 (medium-grade graphite) — ZAS (zinc alloy)
 - Cu (copper) — AMPCO940 (copper alloy)
- Gr1 (medium-grade graphite) — Ti (Titanium)

St—St

Electrode : St
Workpiece : St

Electrode dimensions = 20 × 60

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 5
Jump speed = 4

E number				8002	8003	8004	8005	8006	8007	8008	
Machining state	Voltage (%)			60	40	50	60	47	30	30	
	Current (A)			1.0	2.0	3.0	4.0	8.0	14.0	20.0	
Removal rate	Jump (g/min)			0.0040	0.0180	0.0350	0.0530	0.0910	0.2000	0.3400	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)			12	14	20	22	28	34	42	
	Ra (μm)										
Electrode wear (%)				50	28	22	18	14	13	11	
One-sided exit gap (mm)				0.016	0.024	0.034	0.041	0.052	0.075	0.110	
Duty Factor (%)				47	57	58	60	60	60	60	
Required option											

St—St Large area machining

Electrode : St
Workpiece : St

Electrode dimensions = 20 × 60

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 5
Jump speed = 4

E number				8012	8013	8014	8015	8016	8017	8018	
Machining state	Voltage (%)			50	30	40	40	40	25	20	
	Current (A)			0.5	2.0	2.5	4.0	8.0	15.0	25.0	
Removal rate	Jump (g/min)			0.0023	0.0140	0.0270	0.0440	0.1200	0.2600	0.5300	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)			12	15	19	24	28	34	42	
	Ra (μm)										
Electrode wear (%)				70	25	25	25	15	9.0	7.0	
One-sided exit gap (mm)				0.020	0.025	0.035	0.045	0.070	0.100	0.150	
Duty Factor (%)				9	20	20	31	51	60	60	
Required option											

Thin rib machining AMPCO—940

Electrode : Cu
Workpiece : AMPCO—940

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				8042	8043	8044	8045	8046			
Machining state	Voltage (%)			25	25	30	30	35			
	Current (A)			3.5	4.5	6.0	7.0	9.0			
Removal rate	Jump (g/min)			0.0040	0.0070	0.0100	0.0140	0.0220			
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			8.0	9.0	10	12	13			
	Ra (μ m)										
Electrode wear (%)				9.0	10	10	12	14			
One-sided exit gap (mm)											
Duty Factor (%)				50	50	50	50	50			
Required option											

Low wear machining Copper Alloy

Electrode : Cu
Workpiece : Copper Alloy

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number		8080	8081	8082	8083	8084	8085	8086	8087	8088	
Machining state	Voltage (%)	38	35	38	32	35	38	40	25	25	
	Current (A)	5.0	8.0	10.0	12.0	15.0	24.0	32.0	38.0	52.0	
Removal rate	Jump (g/min)	0.0088	0.0140	0.0210	0.0330	0.0540	0.1000	0.1500	0.2600	0.4700	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	12	15	20	23	28	35	40	45	41	
	Ra (μ m)										
Electrode wear (%)		1.0	0.8	1.0	1.5	1.3	0.9	0.9	0.5	2.1	
One-sided exit gap (mm)		0.030	0.035	0.040	0.045	0.060	0.085	0.120	0.150	0.180	
Duty Factor (%)		78	79	80	79	80	79	80	76	76	
Required option											

Wear machining Copper Alloy

Electrode : Cu
Workpiece : Copper Alloy

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				8092	8093	8094	8095	8096	8097		
Machining state	Voltage (%)			60	60	55	55	50	50		
	Current (A)			0.5	1.0	1.0	2.0	3.0	3.0		
Removal rate	Jump (g/min)			0.0008	0.0010	0.0012	0.0024	0.0032	0.0033		
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			2.5	3.0	4.0	5.0	6.0	8.0		
	Ra (μ m)										
Electrode wear (%)				14	8.0	8.0	4.0	4.0	3.0		
One-sided exit gap (mm)				0.008	0.009	0.012	0.015	0.016	0.016		
Duty Factor (%)				47	53	53	75	75	60		
Required option											

Low wear machining Al

Electrode : Cu
Workpiece : Al

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				8102	8103	8104	8105	8106	8107	8108	
Machining state	Voltage (%)			20	15	15	15	15	15	20	
	Current (A)			4.5	7.0	8.0	10.0	13.0	20.0	24.0	
Removal rate	Jump (g/min)			0.0280	0.0530	0.0800	0.1000	0.1600	0.2900	0.4200	
	machining (mm ³ /min)			10.0	19.0	28.0	36.0	58.0	100.0	150.0	
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			32	40	47	52	64	85	110	
	Ra (μ m)										
Electrode wear (%)				0.1	0.1	0.1	0.1	0.1	0.1	0.1	
One-sided exit gap (mm)				0.040	0.080	0.090	0.100	0.130	0.180	0.230	
Duty Factor (%)				78	79	80	79	80	79	80	
Required option											

Wear machining Al

Electrode : Cu
Workpiece : Al

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				8202	8203	8204	8205	8206	8207		
Machining state	Voltage (%)			25	25	25	25	25	25		
	Current (A)			0.5	1.0	1.0	1.5	2.0	2.0		
Removal rate	Jump (g/min)			0.0020	0.0022	0.0029	0.0058	0.0094	0.0130		
	machining (mm ³ /min)			0.7	0.8	1.0	2.1	3.4	4.8		
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			7.0	8.0	9.0	12	13	20		
	Ra (μ m)										
Electrode wear (%)				5.0	3.0	3.0	1.0	1.0	0.2		
One-sided exit gap (mm)				0.010	0.015	0.015	0.020	0.025	0.030		
Duty Factor (%)				47	53	53	75	75	60		
Required option											

Low wear machining Al (for Model data 81)

Electrode : Cu
Workpiece : Al

Electrode dimensions = $\square 5$

τ OFF ADJ = 1
Jump amount = 8
Jump cycle = 3
Jump speed = 8

E number				8112	8113	8114	8115				
Machining state	Voltage (%)			20	20	25	25				
	Current (A)			1.5	2.0	3.0	3.5				
Removal rate	Jump (g/min)			0.0064	0.0110	0.0220	0.0360				
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			25	31	49	55				
	Ra (μ m)										
Electrode wear (%)				1.0	0.5	0.5	0.5				
One-sided exit gap (mm)				0.030	0.035	0.055	0.070				
Duty Factor (%)				49	50	50	50				
Required option											

Wear machining AI (for Model data 81)

Electrode : Cu
Workpiece : Al

Electrode dimensions = □5

τ OFF ADJ = 1
Jump amount = 8
Jump cycle = 3
Jump speed = 8

E number				8212	8213	8214	8215	8216	8217		
Machining state	Voltage (%)			25	25	25	25	25	25		
	Current (A)			0.1	0.2	0.3	0.5	0.8	1.0		
Removal rate	Jump (g/min)			0.0001	0.0003	0.0005	0.0010	0.0023	0.0035		
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)			4.0	6.0	8.0	10	14	19		
	Ra (μm)										
Electrode wear (%)				8.0	6.0	5.0	4.0	2.0	1.5		
One-sided exit gap (mm)				0.007	0.010	0.012	0.015	0.015	0.020		
Duty Factor (%)				20	30	40	46	50	55		
Required option											

Low wear machining Bs

Electrode : Cu
Workpiece : Bs

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 6

E number				8222	8223	8224	8225	8226	8227	8228	
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)			0.0190	0.0300	0.0480	0.0690	0.1300	0.1500	0.2700	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			17	29	35	54	72	84	93	
	Ra (μ m)										
Electrode wear (%)				0.7	0.2	0.5	0.3	0.5	0.5	0.4	
One-sided exit gap (mm)				0.045	0.065	0.085	0.085	0.120	0.140	0.180	
Duty Factor (%)				80	80	80	81	79	81	81	
Required option											

Wear machining Bs

Electrode : Cu
Workpiece : Bs

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 6

E number							8325	8326	8327		
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)						0.0032	0.0042	0.0090		
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)						5.0	6.0	9.0		
	Ra (μ m)										
Electrode wear (%)							3.0	2.0	7.0		
One-sided exit gap (mm)							0.020	0.025	0.030		
Duty Factor (%)							75	75	60		
Required option											

Low wear machining ZAS

Electrode : Cu
Workpiece : ZAS

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				8302	8303	8304	8305	8306	8307	8308	
Machining state	Voltage (%)			20	15	15	15	15	15	20	
	Current (A)			5.0	8.0	11.0	12.0	15.0	22.0	30.0	
Removal rate	Jump (g/min)			0.1400	0.2400	0.3400	0.4400	0.6000	0.9000	1.2000	
	machining (mm ³ /min)			0.0210	0.0350	0.0500	0.0640	0.0880	0.1300	0.1700	
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			40	50	60	82	95	110	140	
	Ra (μ m)										
Electrode wear (%)				0.1	0.1	0.1	0.1	0.1	0.1	0.2	
One-sided exit gap (mm)				0.065	0.110	0.130	0.140	0.180	0.250	0.320	
Duty Factor (%)				78	79	80	79	80	79	80	
Required option											

Wear machining ZAS

Electrode : Cu
Workpiece : ZAS

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				8402	8403	8404	8405	8406	8407		
Machining state	Voltage (%)			20	20	20	20	20	20		
	Current (A)			0.5	0.5	1.0	1.5	2.0	2.5		
Removal rate	Jump (g/min)			0.0088	0.0110	0.0130	0.0320	0.0410	0.0550		
	machining (mm ³ /min)			0.0013	0.0016	0.0019	0.0047	0.0061	0.0081		
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			9.0	10	11	17	19	24		
	Ra (μ m)										
Electrode wear (%)				0.8	0.5	0.5	0.3	0.2	0.1		
One-sided exit gap (mm)				0.020	0.025	0.025	0.040	0.040	0.045		
Duty Factor (%)				47	53	53	75	75	60		
Required option											

Low wear machining CuBe

Electrode : Cu
Workpiece : CuBe

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number		8420	8421	8422	8423	8424	8425	8426	8427	8428	
Machining state	Voltage (%)	25	15	19	19	19	19	19	13	13	
	Current (A)	1.5	1.8	1.8	3.5	5.0	6.0	8.0	10.0	12.0	
Removal rate	Jump (g/min)	0.0021	0.0032	0.0047	0.0094	0.0150	0.0220	0.0370	0.0510	0.0760	
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	7.5	9.0	10	13	13	18	21	30	40	
	Ra (μ m)										
Electrode wear (%)		1.0	0.8	0.7	0.8	0.8	0.6	0.8	0.9	0.8	
One-sided exit gap (mm)		0.020	0.023	0.025	0.030	0.031	0.038	0.046	0.056	0.074	
Duty Factor (%)		48	48	48	78	78	78	79	78	78	
Required option											

Wear machining CuBe

Electrode : Cu
Workpiece : CuBe

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number				8522	8523	8524	8525	8526			
Machining state	Voltage (%)			32	38	32	26	32			
	Current (A)			0.2	0.2	0.6	0.8	1.6			
Removal rate	Jump (g/min)			0.0007	0.0014	0.0015	0.0019	0.0036			
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)			1.8	1.9	4.3	5.2	6.5			
	Ra (μ m)										
Electrode wear (%)				23	7.0	5.0	5.0	3.0			
One-sided exit gap (mm)				0.012	0.014	0.014	0.016	0.020			
Duty Factor (%)				25	47	53	53	80			
Required option											

Low wear machining Gr1—Al

Electrode : Gr1
Workpiece : Al

Electrode dimensions = $\phi 30$
Note 1 = $\phi 50$
Note 2 = $\square 90$

Note 2)
 τ OFF ADJ = 1 1
Jump amount = 5 5
Jump cycle = 3 10
Jump speed = 4 4

E number					8503	8504	8505	8506	8507		
Machining state	Voltage (%)				10	10	10	10	10		
	Current (A)				18.0	22.0	29.0	48.0	56.0		
Removal rate	Jump (g/min)				0.3300	0.5000	0.7800	1.1000	2.3000		
	machining (mm ³ /min)				120.0	180.0	280.0	360.0	760.0		
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)				92	96	100	110	120		
	Ra (μ m)										
Electrode wear (%)					0.5	0.5	0.8	0.4	0.5		
One-sided exit gap (mm)					0.130	0.140	0.150	0.190	0.230		
Duty Factor (%)					86	86	86	90	76		
Required option											

Wear machining Gr1—Al

Electrode : Gr1
Workpiece : Al

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			8601	8602	8603	8604	8605	8606	8607	8608	8609
Machining state	Voltage (%)		30	20	20	20	25	25	25	20	20
	Current (A)		0.5	1.0	1.5	2.5	4.0	4.5	8.0	10.0	14.0
Removal rate	Jump (g/min)		0.0040	0.0060	0.0100	0.0170	0.0300	0.0480	0.1000	0.1500	0.2600
	machining (mm ³ /min)		1.4	1.8	3.6	6.1	11.0	17.0	36.0	54.0	94.0
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		11	15	17	20	21	37	48	60	65
	Ra (μ m)										
Electrode wear (%)			10	6.0	5.0	3.0	3.0	3.0	2.0	1.0	1.0
One-sided exit gap (mm)			0.025	0.035	0.040	0.050	0.050	0.050	0.065	0.080	0.090
Duty Factor (%)			52	79	79	87	86	79	83	86	85
Required option											

Wear machining Gr1—HR750

Electrode : Gr1
Workpiece : HR750

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number		8730	8731	8732	8733	8734	8735	8736	8737	8738	8739
Machining state	Voltage (%)	25	25	25	10	15	20	15	15	15	10
	Current (A)	1.5	2.0	4.0	6.0	2.0	3.0	4.0	5.0	6.0	10.0
Removal rate	Jump (g/min)	0.0022	0.0040	0.0063	0.0159	0.0136	0.0227	0.0344	0.0669	0.0872	0.2278
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)	8.0	15	21	23	29	30	30	39	48	52
	Ra (μ m)										
Electrode wear (%)		50	30	26	20	50	45	40	35	30	20
One-sided exit gap (mm)											
Duty Factor (%)		44	44	43	44	10	10	10	10	10	10
Required option											

Standard rough machining (For Model data 89)

Electrode : Gr1
Workpiece : Copper Alloy

Electrode dimensions = $\phi 30$
Note 1 = $\phi 50$
Note 2 = $\square 90$

Note 2)
 τ OFF ADJ = 1 1
Jump amount = 5 5
Jump cycle = 3 10
Jump speed = 4 4

E number			8741	8742	8743	8744	8745	8746	8747		
Machining state	Voltage (%)		9	10	10	10	13	10	10		
	Current (A)		20.0	22.0	34.0	42.0	60.0	100.0	120.0		
Removal rate	Jump (g/min)		0.1000	0.1600	0.2500	0.3900	1.1800	2.5500	3.4200		
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		33	36	40	42	53	54	55		
	Ra (μ m)										
Electrode wear (%)			7.2	6.2	6.1	5.0	5.8	5.0	5.2		
One-sided exit gap (mm)			0.065	0.075	0.085	0.100	0.120				
Duty Factor (%)			72	72	72	72	72	72	72		
Required option								160A	160A		

Standard machining (For Model data 89)

Electrode : Gr1
Workpiece : Copper alloy

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			8751	8752	8753	8754	8755	8756	8757		
Machining state	Voltage (%)		32	25	25	25	25	19	25		
	Current (A)		2.0	3.0	4.0	5.0	10.0	11.0	14.0		
Removal rate	Jump (g/min)		0.0030	0.0040	0.0070	0.0140	0.0300	0.0500	0.0600		
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		8.0	10	11	12	14	19	21		
	Ra (μ m)										
Electrode wear (%)			70	40	45	58	42	24	30		
One-sided exit gap (mm)			0.015	0.020	0.020	0.025	0.030	0.040	0.045		
Duty Factor (%)			72	71	72	72	72	72	71		
Required option											

Standard machining (For Model data 1082)

Electrode : Gr1
Workpiece : Copper alloy

Electrode dimensions =

τ OFF ADJ
Jump amount
Jump cycle
Jump speed

E number			8771	8772	8773	8774	8775	8776	8777	8778	8779
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)		22	26	33	35	38	40	42	45	48
	Ra (μm)		4.2	4.7	5.3	5.8	6.5	7.0	8.0	9.0	10
Electrode wear (%)			3.0	4.0	2.3	4.3	3.4	4.3	3.0	4.4	5.0
One-sided exit gap (mm)											
Duty Factor (%)			72	72	71	71	71	71	71	69	66
Required option											

Standard machining (For Model data 1082)

Electrode : Gr1
Workpiece : Copper alloy

Electrode dimensions =

τ OFF ADJ
Jump amount
Jump cycle
Jump speed

E number			8791	8792	8793	8794	8795				
Machining state	Voltage (%)										
	Current (A)										
Removal rate	Jump (g/min)										
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)		7.0	10	14	15	19				
	Ra (μm)		1.1	1.6	2.2	2.4	3.5				
Electrode wear (%)			300	100	50	30	10				
One-sided exit gap (mm)											
Duty Factor (%)			40	46	46	69	72				
Required option											

Low wear machining Gr1—ZAS

Electrode : Gr1
Workpiece : ZAS

Electrode dimensions = $\phi 30$
Note 1 = $\phi 50$
Note 2 = $\square 90$
Note 3 = 90×180

Note2)Note3)
 τ OFF ADJ = 1 1 1
Jump amount = 5 5 OFF
Jump cycle = 3 10 OFF
Jump speed = 4 4 OFF

E number					8703	8704	8705	8706	8707	8708	8709
Machining state	Voltage (%)				10	12	10	10	8	10	10
	Current (A)				22.0	28.0	37.0	48.0	52.0	55.0	73.0
Removal rate	Jump (g/min)				0.8800	1.1000	1.5000	1.8000	3.4000		
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction									6.7	7.5
Surface roughness	Rz (μ m)				80	82	85	92	98	110	130
	Ra (μ m)										
Electrode wear (%)					0.4	0.7	0.8	0.7	0.8	1.8	2.3
One-sided exit gap (mm)					0.150	0.160	0.170	0.200	0.230		
Duty Factor (%)					86	86	86	90	76	59	46
Required option											160A

Wear machining Gr1—ZAS

Electrode : Gr1
Workpiece : ZAS

Electrode dimensions = $\phi 20$

τ OFF ADJ = 1
Jump amount = 5
Jump cycle = 3
Jump speed = 4

E number			8801	8802	8803	8804	8805	8806	8807	8808	8809
Machining state	Voltage (%)		30	20	23	17	17	18	18	13	18
	Current (A)		1.0	1.5	2.0	4.0	5.0	6.0	12.0	15.0	22.0
Removal rate	Jump (g/min)		0.0120	0.0300	0.0400	0.0700	0.1100	0.1400	0.2900	0.4800	0.6100
	machining (mm ³ /min)		2.1	4.5	6.2	11.0	16.0	22.0	43.0	68.0	87.0
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μ m)		15	21	23	29	30	30	39	48	52
	Ra (μ m)										
Electrode wear (%)			9.0	4.0	4.0	2.0	2.0	5.0	3.0	2.0	2.0
One-sided exit gap (mm)			0.025	0.035	0.040	0.050	0.050	0.050	0.060	0.065	0.080
Duty Factor (%)			52	79	79	87	86	79	83	86	85
Required option											

Flushing machining standard condition
(Titanium Booster is used, for model data 52)

Electrode : Gr
 Workpiece : Ti

Electrode dimensions = □10~100

τ OFF ADJ = 1
 Jump amount = 10
 Jump cycle = 4
 Jump speed = 10

E number							8865	8866	8867	8868	8869
Machining state	Voltage (%)						20	20	20	20	20
	Current (A)						2.0	2.0	3.0	3.0	3.0
Removal rate	Jump (g/min)						0.0002	0.0005	0.0024	0.0060	0.0110
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)						7.0	10	13	17	23
	Ra (μm)						0.8	1.2	1.8	2.7	3.2
Electrode wear (%)							330	200	170	100	95
One-sided exit gap (mm)											
Duty Factor (%)							13	13	20	20	20
Required option											

Flushing machining standard condition
(Titanium Booster is used, for model data 52)

Electrode : Gr
 Workpiece : Ti

Electrode dimensions = □10~100

τ OFF ADJ = 1
 Jump amount = 10
 Jump cycle = 4
 Jump speed = 10

E number		8870	8871	8872	8873	8874	8875	8876	8877	8878	8879
Machining state	Voltage (%)	20	20	20	20	20	20	20	20	20	20
	Current (A)	3.0	4.0	5.0	7.0	8.0	9.0	12.0	16.0	20.0	30+15
Removal rate	Jump (g/min)	0.0150	0.0350	0.0900	0.1300	0.2300	0.3000	0.4600	0.7300	0.9600	2.0900
	machining (mm ³ /min)										
	Pre-machined hole flushing/suction										
Surface roughness	Rz (μm)	27	35	42	58	68	106	130	132	135	142
	Ra (μm)	4.0	5.5	7.0	9.5	12.0	16.0	19.0	21.0	22.0	24.0
Electrode wear (%)		76.0	44.0	28.0	24.0	18.0	14.0	12.0	12.0	9.0	8.0
One-sided exit gap (mm)											
Duty Factor (%)		20	29	34	35	35	33	33	33	33	35
Required option									TB	TB	TB

7. Model Data

How to refer to model data table

Model data No. : 23

Electrode material : Cu

Electrode dimensions : □12~50

Workpiece material : St

Finished roughness : 2μmRz

Selecting start MC condition	
23	Standard
123	Standard low wear
223	Shallow high speed
323	Shallow low wear
423	Deep high speed
523	Deep low wear
623	Low wear aft. pre mill

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	90	80	70	60	50	40	30	23	16	12	9	7	4.5	3	2
(μmRa)	14.00	13.00	11.00	10.00	9.00	7.00	5.00	4.50	3.20	2.20	1.60	1.10	0.80	0.56	0.40
(VDI)	43	42	41	40	39	37	34	33	30	27	24	21	18	15	12
MC condition (E****)	168	167	166	165	164	163	162	338	337	336	335	334	333	332	331
Bottom remain (μm)	487	409	337	278	229	189	147	113	77	54	40	27	17	9	4
Side remain (μm)	284	246	209	178	151	128	101	82	59	40	28	18	11	5	2
Bottom gap (μm)	150	130	115	100	90	83	68	53	45	38	30	23	15	9	4
Side gap (μm)	100	85	75	65	60	55	45	35	30	25	20	15	10	5	2
Removal rate	-517	-511	-673	-652	-638	-626	-615	-610	-745	-721	-712	-863	-831	-987	-942
Electrode wear (%)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	3	7	14	19	16	26	29
Time cont. area							□70	□60	□40	□35	□30	□20	□15	*	*
Minimum reduction per side by MC depth (μm)	2mm	320	270	235	200	170	145	115							
	5mm	370	300	260	220	185	160	125							
	10mm	430	335	285	245	205	175	140							
	15mm	460	360	305	260	220	185	150							
	20mm	490	385	330	280	240	200	160							
	40mm														
Min. spark area(mm)															
Max. spark area(mm)													□80	□50	□30
Required option														Satin	Satin

Electrode/workpiece •• Electrode and workpiece material applicable for each model data.

Electrode dimensions •• Spark area applicable for each model data.

Finished roughness ••• Minimum surface roughness of each model data.

Selecting start MC condition ••• When model data with table of "Selecting start MC condition" is used, selecting start machining condition is available.

Standard •••••••• Machining depth is as long as electrode width.
 Shallow(Additional) ••• Machining depth is half as long as electrode width.
 Deep (Retract) ••••• Machining depth is 5 times as long as electrode width.
 Aft. pre mill •••••••• After pre milled and removal stock is small.
 Deep narrow •••••••• Deep and narrow machining like rib or pin gate.
 High speed (Wear) •••• Machining with high removal rate and relatively high electrode wear
 Low wear •••••••••• Machining with low electrode wear

Roughness •••••••• Surface roughness of each process No.

MC condition •••••••• Machining condition applied for each process No.
 When "Selecting start MC condition" is used, MC condition may be changed.

Bottom remain •••••••• Bottom remaining amount set for each process No. by retracting target position from finish dimension.

Side remain •••••••• Side remaining amount set for each process No. by reducing the orbiting radius.
 (Orbiting radius = Electrode reduction - Side remain)

Bottom/side gap***** Spark gap per one side of bottom and side for each process No.

Removal rate***** Only for machining time estimation.

Electrode wear***** Electrode wear rate of each process No.

Time cont. area***** Spark area that time control machining is recommended to use.
Time control machining must be used on the process “*” is marked in “Time cont. area”
for all the jobs.

Minimum reduction

per side *** Required minimum electrode reduction per side to decide start process No.

by MC depth If pre milling is done, see line of “2mm”.

Ex.) Depth 5mm, electrode reduction 200μm (per side), without pre milling

See line of “5mm” from the left side and find process No. which value is 200 or less.

Since the value of process No.5 corresponds to the requirement, the start process is No.5.

Min. spark area***** Minimum spark area applicable for the specific process of model data.

Max. spark area***** Maximum spark area to be finished for the specific process of model data.

Required option***** Required optional specification or optional equipment to use specific machining condition.

Satin***** Applicable for all EDAC1, EDFH1, EDAF series, and EDNC6
Either of below-mentioned optional equipment is required for EDNC series except for EDNC6.

•Satin machining circuit

•Package of satin machining circuit and carbide machining circuit

UF ***** Applicable for all EDAC1 and EDFH1.
Either of below-mentioned optional equipment is required for EDAF series and EDNC6.

•Package of ultra-fine machining circuit and carbide machining circuit

•Super surface Gr.

WC***** Either of below-mentioned optional equipment is required.
•Carbide machining circuit (Optional equipment for EDAC1, EDFH1 and EDAF series)
•Package of ultra-fine machining circuit and carbide machining circuit
(Optional equipment for EDAF series and EDNC6)
•Package of satined machining circuit and carbide machining circuit
(Optional equipment for EDNC series except for EDNC6)
•Super surface Gr.(Optional equipment for EDAF series and EDNC6)
•Carbide booster (Optional specification for EDAF series)

CB***** Carbide booster is required. (Optional specification for EDAF series)

TB***** Titanium booster is required. (Optional equipment for EDNC series)

SPG***** SPG machining circuit is required. (Standard specification for EDAC1 and EDFH1)

A** One of the below option is required.

•Power supply (160A or 240A)

Model data No. : 1

Electrode material : Cu

Electrode dimensions : □20~

Workpiece material : St

Finished roughness : 9μmRz

Selecting start MC condition	E No.
1 Standard low wear	13**
101 Additional low wear	16**
201 Retract low wear	15**
301 Standard wear	13**
401 Additional wear	16**
501 Retract wear	15**

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)						80.0	70.0	55.0	45.0	40.0	30.0	20.0	16.0	12.0	9.0
(μmRa)						12.50	11.50	10.00	9.00	7.00	5.30	4.00	3.00	2.20	1.60
(VDI)						42	41	40	39	37	34	32	30	27	24
MC condition (E****)						1312	1311	1309	1308	1307	1306	2215	2214	2213	2212
Bottom remain (μm)						546	466	286	220	188	150	85	60	45	30
Side remain (μm)						343	293	200	160	140	115	65	45	30	15
Bottom gap (μm)						250	200	155	135	120	100	75	50	40	30
Side gap (μm)						200	170	135	120	110	75	55	35	25	15
Removal rate						-514	-698	-648	-633	-622	-614	-610	-766	-738	-710
Electrode wear (%)						0.1	0.1	0.1	0.1	0.1	0.1	3	14	43	12
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm					370	320	215	175	150	125				
	5mm					420	360	245	195	175	140				
	10mm					470	400	275	220	190	160				
	15mm					500	430	295	235	210	170				
	20mm					530	460	315	250	220	180				
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 2

Electrode material : CuW

Electrode dimensions : ~□10

Workpiece material : WC

Finished roughness : 0. 5μmRz

*In case of iron, the surface roughness gets rougher by 0.1μmRz than that of WC.

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)												1.0	0.7	0.5	
(μmRa)												0.28	0.25	0.20	
(VDI)												9	8	6	
MC condition (E****)												7658	7657	7656	
Bottom remain (μm)												6	3	1	
Side remain (μm)												6	3	1	
Bottom gap (μm)												3	2	1	
Side gap (μm)												3	2	1	
Removal rate															
Electrode wear (%)															
Time cont. area												*	*	*	
Minimum reduction per side by MC depth (μm)	2mm														
	5mm														
	10mm														
	15mm														
	20mm														
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option												SPG	SPG	SPG	

Model data No. : 3

Electrode material : CuW

Electrode dimensions : □10~50

Workpiece material : WC

Finished roughness : 1. 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	26.0	20.0	16.0	14.0	13.0	11.0	9.5	8.0	6.5	5.5	4.5	3.5	2.5	1.6	1.2
(μmRa)	5.00	3.60	3.00	2.40	2.30	2.00	1.70	1.50	1.10	1.00	0.80	0.60	0.60	0.40	0.30
(VDI)	34	31	30	28	27	26	25	24	21	20	18	16	16	12	10
MC condition (E****)	7559	7558	7557	7709	7708	7707	7706	7705	7628	7627	7626	7625	7623	7621	7620
Bottom remain (μm)	455	280	190	95	77	64	53	43	34	26	19	14	10	7	4
Side remain (μm)	420	260	145	75	62	49	39	30	22	16	11	7	4	3	2
Bottom gap (μm)	250	150	145	75	50	40	30	25	20	15	13	10	7	5	4
Side gap (μm)	160	140	115	65	40	30	25	20	15	10	8	6	4	3	2
Removal rate	-414	-410	-570	-612	-788	-766	-722	-714	-859	-838	-818	-811	-929	-909	-903
Electrode wear (%)	16	16	17	19	19	19	19	19	15	13	11	10	12	12	12
Time cont. area										*	*	*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm	460	340	220	90	85	60	40	30	25					
	5mm	490	370	245	100	90	70	50	35						
	10mm	540	420	280	110	105	75								
	15mm	590	470	330											
	20mm	640	520	380											
	40mm														
Min. spark area(mm)	□20	□10	□10												
Max. spark area(mm)															
Required option	CB	CB	CB	WC	WC	WC	WC	WC	Satin	Satin	Satin	Satin	Satin	Satin	Satin

Model data No. : 4

Electrode material : Cu

Electrode dimensions : ~□5

Workpiece material : St

Finished roughness : 0. 5μmRz

Cavity type : Small area machining

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		21.0	15.0	12.0	10.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0	0.7	0.5
(μmRa)		4.00	2.40	2.20	1.80	1.50	1.30	1.10	1.00	0.70	0.55	0.40	0.27	0.25	0.20
(VDI)		32	27	26	25	24	23	21	20	17	15	12	9	8	6
MC condition (E****)		2029	2028	2027	2026	2025	2024	2023	2022	2021	2020	2834	2833	2832	2831
Bottom remain (μm)		129	98	74	62	50	42	34	27	21	16	11	7	3	1
Side remain (μm)		102	78	59	49	39	33	27	21	16	12	8	5	2	1
Bottom gap (μm)		90	70	55	45	35	31	25	20	15	10	8	4	2	1
Side gap (μm)		65	50	40	30	28	21	20	15	12	8	6	3	1	1
Removal rate		-756	-752	-735	-714	-712	-853	-825	-818	-953	-918	-911	-910	-906	-903
Electrode wear (%)		0.5	0.5	0.5	0.5	2	2	3	4	10	20	22	19	25	30
Time cont. area							□10	□8	□8	□7	□7	□6	□5	□5	□5
Minimum reduction per side by MC depth (μm)	2mm		105	80	60	50	40	35	30	25					
	5mm		120	90											
	10mm														
	15mm														
	20mm														
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option												Satin	Satin	UF	UF

Model data No. : 5

Electrode material : Cu

Electrode dimensions : □10~30

Workpiece material : St

Finished roughness : 4μmRz

Selecting start MC condition		E No.
5	Standard low wear	13**
105	Additional low wear	16**
205	Retract low wear	15**
305	Standard wear	13**
405	Additional wear	16**
505	Retract wear	15**

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		80.0	70.0	55.0	45.0	40.0	30.0	21.0	16.0	12.0	10.0	8.0	6.0	5.0	4.0
(μmRa)		12.50	11.50	10.00	9.50	7.00	5.30	4.00	3.00	2.30	1.70	1.50	1.10	1.00	0.70
(VDI)		42	41	40	39	37	34	32	30	27	25	24	21	20	17
MC condition (E****)		1312	1311	1309	1308	1307	1306	1205	2318	2317	2316	2315	2314	2313	2312
Bottom remain (μm)		557	477	297	231	199	161	112	76	54	43	31	25	20	15
Side remain (μm)		362	312	215	175	155	130	94	61	42	32	20	15	11	7
Bottom gap (μm)		250	200	155	135	120	100	80	55	50	40	30	25	20	15
Side gap (μm)		200	170	135	120	110	75	55	38	30	25	20	15	11	7
Removal rate		-514	-698	-648	-633	-622	-614	-777	-770	-721	-714	-873	-852	-845	-816
Electrode wear (%)		0.1	0.1	0.1	0.1	0.1	0.1	0.1	3	3	3	6	6	9	45
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm		370	320	225	185	160	135	100						
	5mm		420	360	255	205	180	155	115						
	10mm		470	400	285	230	200	170	125						
	15mm		500	430	305	245	220	180	135						
	20mm		530	460	325	265	230	195	145						
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 6

Electrode material : Cu

Electrode dimensions : □5~15

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				36.0	28.0	21.0	16.0	14.0	12.0	10.0	10.0	8.0	6.0	5.0	4.0
(μmRa)				6.00	5.00	4.00	3.00	2.50	2.20	1.70	1.70	1.50	1.10	1.00	0.70
(VDI)				36	34	32	30	28	27	25	25	24	21	20	17
MC condition (E****)				1207	1206	1205	1204	1003	1002	1001	2316	2315	2314	2313	2312
Bottom remain (μm)				208	173	128	98	78	65	55	44	31	25	20	15
Side remain (μm)				130	120	95	70	53	42	38	33	21	15	11	7
Bottom gap (μm)				110	95	80	65	52	48	45	40	31	25	20	15
Side gap (μm)				85	75	55	47	40	35	30	25	21	15	11	7
Removal rate				-622	-612	-777	-749	-716	-876	-840	-714	-873	-852	-845	-816
Electrode wear (%)				0.1	0.1	0.1	0.1	0.1	0.1	0.1	3	6	6	9	45
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm			140	130	105	80	70	60	55					
	5mm			160	150	120	90	80	75	70					
	10mm			180	165	130	95	90	85						
	15mm			195	180	140	105	95							
	20mm			205	190	150	110								
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 7

Electrode material : Cu

Electrode dimensions : □200~300

Workpiece material : St

Finished roughness : 16μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				126.0	102.0	85.0	74.0	66.0	55.0	45.0	40.0	34.0	28.0	23.0	16.0
(μmRa)				20.00	17.00	13.00	12.00	10.50	10.00	9.00	7.00	6.00	5.20	4.50	3.00
(VDI)				46	45	42	42	40	40	39	37	36	34	33	30
MC condition (E****)				1914	1913	1912	1911	1910	1909	1908	1907	1906	2624	2623	2622
Bottom remain (μm)				610	533	453	378	303	233	168	135	100	67	47	30
Side remain (μm)				405	360	315	266	222	182	142	118	93	60	40	26
Bottom gap (μm)				300	280	250	200	180	155	135	120	100	60	40	30
Side gap (μm)				250	230	200	170	150	135	120	110	75	40	30	26
Removal rate				-544	-531	-521	-513	-696	-668	-641	-630	-617	-610	-752	-728
Electrode wear (%)				1.6	1.2	0.6	0.1	0.1	0.1	0.1	0.2	0.3	15	21	35
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm			450	400	350	295	245	205	160	130	105			
	5mm			495	440	385	325	270	225	175	145	115			
	10mm			550	490	430	365	305	250	195	165	130			
	15mm			595	530	465	395	330	270	210	175	140			
	20mm			635	565	495	415	350	285	225	185	145			
	40mm														
Min. spark area(mm)															
Max. spark area(mm)													□300	□250	□200
Required option															

Model data No. : 8

Electrode material : Cu

Electrode dimensions : □100~200

Workpiece material : St

Finished roughness : 10μmRz

Selecting start MC condition		E No.
8	Standard low wear	13**
108	Additional low wear	16**
208	Retract low wear	15**
308	Standard wear	13**
408	Additional wear	16**
508	Retract wear	15**

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				80.0	70.0	55.0	45.0	40.0	30.0	24.0	18.0	16.0	14.0	12.0	10.0
(μmRa)				12.50	11.50	10.00	9.00	7.00	5.30	4.50	3.50	3.00	2.40	2.30	1.70
(VDI)				42	41	40	39	37	34	33	31	30	28	27	25
MC condition (E****)				1312	1311	1309	1308	1307	1306	1305	1304	1803	1802	1801	2621
Bottom remain (μm)				530	450	270	205	175	140	110	90	77	65	55	30
Side remain (μm)				359	309	216	176	156	131	101	81	68	56	46	26
Bottom gap (μm)				250	200	155	135	120	100	85	65	55	45	35	30
Side gap (μm)				200	170	135	120	110	75	60	55	50	40	30	26
Removal rate				-514	-698	-648	-633	-622	-614	-784	-749	-718	-711	-866	-724
Electrode wear (%)				0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	1.8	3.8	12
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm			410	355	240	195	175	145	115	90	75	65		
	5mm			440	380	265	215	190	160	125	100	85	70		
	10mm			490	420	295	240	215	180	140	110	95			
	15mm			530	455	320	260	230	195	150	120				
	20mm			560	485	340	275	245	205	160	130				
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 9

Electrode material : Cu

Electrode dimensions : □50~100

Workpiece material : St

Finished roughness : 10μmRz

Selecting start MC condition	E No.
9 Standard low wear	13**
109 Additional low wear	16**
209 Retract low wear	15**
309 Standard wear	13**
409 Additional wear	16**
509 Retract wear	15**

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				80.0	70.0	55.0	45.0	40.0	30.0	24.0	18.0	16.0	13.5	11.5	10.0
(μmRa)				12.50	11.50	10.00	9.00	7.00	5.30	4.50	3.50	3.00	2.40	2.20	1.70
(VDI)				42	41	40	39	37	34	33	31	30	28	27	25
MC condition (E****)				1312	1311	1309	1308	1307	1306	1305	1304	1703	1702	1701	2621
Bottom remain (μm)				530	450	270	205	175	140	110	90	77	65	55	30
Side remain (μm)				359	309	216	176	156	131	101	81	68	56	46	26
Bottom gap (μm)				250	200	155	135	120	100	85	65	55	45	35	30
Side gap (μm)				200	170	135	120	110	75	60	55	50	40	30	26
Removal rate				-514	-698	-648	-633	-622	-614	-784	-749	-722	-714	-882	-724
Electrode wear (%)				0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6	1.7	12
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm			410	355	240	195	175	145	115	90	75	65		
	5mm			440	380	265	215	190	160	125	100	85	70		
	10mm			490	420	295	240	215	180	140	110	95			
	15mm			530	455	320	260	230	195	150	120				
	20mm			560	485	340	275	245	205	160	130				
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 10

Electrode material : Cu

Electrode dimensions : □1~5

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)						38.0	32.0	21.0	15.0	10.0	8.0	8.0	6.0	5.0	4.0
(μmRa)						7.00	5.50	4.00	2.40	1.70	1.50	1.50	1.10	0.90	0.70
(VDI)						37	35	32	28	25	24	24	21	19	17
MC condition (E****)						1028	1027	1026	1025	1024	1023	2114	2113	2112	2111
Bottom remain (μm)						162	142	122	82	62	47	35	27	20	15
Side remain (μm)						113	95	77	61	45	38	23	16	11	7
Bottom gap (μm)						110	90	70	55	45	35	31	25	20	15
Side gap (μm)						80	65	50	40	30	28	21	15	11	7
Removal rate						-611	-741	-729	-713	-839	-821	-835	-824	-819	-984
Electrode wear (%)						0.1	0.1	0.5	0.5	0.5	0.5	7	7	12	35
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm					160	130	105	75	60	50				
	5mm					180	150	120	90	60	50				
	10mm					200	165	130	95	70	60				
	15mm					220	180	140	105	80					
	20mm					230	190	150	110	90					
	40mm														
Min. spark area(mm)						□5	□4	□2	□1						
Max. spark area(mm)															
Required option															

Model data No. : 11

Electrode material : Cu

Electrode dimensions : □3~10

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		45.0	40.0	36.0	28.0	21.0	16.0	14.0	12.0	10.0	9.0	8.0	6.0	5.0	4.0
(μmRa)		9.00	7.00	6.00	5.00	4.00	3.00	2.40	2.00	1.70	1.60	1.50	1.10	1.00	0.70
(VDI)		39	37	36	34	32	30	28	26	25	24	24	21	20	17
MC condition (E****)		1009	1008	1007	1006	1005	1004	1003	1002	1001	1000	2115	2113	2112	2111
Bottom remain (μm)		300	230	208	173	134	104	84	71	64	57	42	30	21	15
Side remain (μm)		200	170	130	120	92	67	52	43	39	34	26	17	12	7
Bottom gap (μm)		155	135	110	95	80	65	52	48	40	35	30	25	20	15
Side gap (μm)		135	120	85	75	55	47	40	35	30	25	20	15	11	7
Removal rate		-620	-615	-612	-764	-749	-734	-716	-876	-840	-834	-852	-824	-819	-984
Electrode wear (%)		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	7	7	12	35
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm		200	175	140	120	95	80	70	60	55	50			
	5mm		205	180	150	125	100	90	80	75	70	65			
	10mm		210	190	160	135	110	95	90						
	15mm		220	200	170	145	120								
	20mm		230	210	180	155									
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 12

Electrode material : Cu

Electrode dimensions : □5~15

Workpiece material : St

Finished roughness : 5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					36.0	28.0	21.0	16.0	14.0	12.0	10.0	10.0	8.0	6.0	5.0
(μmRa)					6.00	5.00	4.00	3.00	2.40	2.00	1.70	1.70	1.50	1.10	0.90
(VDI)					36	34	32	30	28	26	25	25	24	21	19
MC condition (E****)					1207	1206	1205	1204	1003	1002	1001	2116	2114	2113	2112
Bottom remain (μm)					208	173	128	98	78	65	55	44	31	25	20
Side remain (μm)					130	120	95	70	53	42	38	33	21	15	11
Bottom gap (μm)					110	95	80	65	52	48	45	40	31	25	20
Side gap (μm)					85	75	55	47	40	35	30	25	21	15	11
Removal rate					-622	-612	-777	-749	-716	-876	-840	-714	-835	-824	-819
Electrode wear (%)					0.1	0.1	0.1	0.1	0.1	0.1	0.1	2	7	7	12
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm				140	130	105	80	70	60	55				
	5mm				160	150	120	90	80	75	70				
	10mm				180	165	130	95	90	85					
	15mm				195	180	140	105	95						
	20mm				205	190	150	110							
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 13

Electrode material : Cu

Electrode dimensions : □10~25

Workpiece material : St

Finished roughness : 5μmRz

Selecting start MC condition	E No.
13 Standard low wear	13**
113 Additional low wear	16**
213 Retract low wear	15**
313 Standard wear	13**
413 Additional wear	16**
513 Retract wear	15**

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			80.0	70.0	55.0	45.0	40.0	30.0	21.0	14.0	12.0	10.0	8.0	6.0	5.0
(μmRa)			12.50	11.50	10.00	9.00	7.00	5.30	4.00	2.40	2.00	1.70	1.50	1.10	0.90
(VDI)			42	41	40	39	37	34	32	28	26	25	24	21	19
MC condition (E****)			1312	1311	1309	1308	1307	1306	1205	2118	2117	2116	2114	2113	2112
Bottom remain (μm)			560	480	300	234	202	164	115	82	55	43	31	25	20
Side remain (μm)			360	310	220	180	160	135	95	65	41	30	20	15	11
Bottom gap (μm)			250	200	155	135	120	100	80	55	50	40	30	25	20
Side gap (μm)			200	170	135	120	110	75	55	38	30	25	20	15	11
Removal rate			-514	-698	-648	-633	-622	-614	-777	-738	-718	-714	-835	-824	-819
Electrode wear (%)			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	3	2	7	7	12
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm		370	320	225	180	160	135	100						
	5mm		420	360	255	205	180	150	115						
	10mm		470	400	285	230	200	170	125						
	15mm		500	430	305	245	220	180	135						
	20mm		530	460	325	265	230	195	145						
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 14

Electrode material : Cu

Electrode dimensions : □2~5

Workpiece material : St

Finished roughness : 5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)						21.0	16.0	14.0	12.0	10.0	9.0	8.0	7.0	6.0	5.0
(μmRa)						4.00	3.00	2.40	2.30	1.70	1.60	1.50	1.30	1.10	0.90
(VDI)						32	30	28	27	25	24	24	22	21	19
MC condition (E****)						1005	1004	1003	1002	1001	1000	2004	2003	2002	2001
Bottom remain (μm)						128	98	78	65	57	50	41	33	26	20
Side remain (μm)						99	74	57	46	41	35	28	21	15	11
Bottom gap (μm)						80	65	52	48	40	35	30	27	23	20
Side gap (μm)						55	47	40	35	30	25	20	17	13	11
Removal rate						-749	-734	-716	-876	-840	-834	-823	-816	-987	-956
Electrode wear (%)						0.1	0.1	0.1	0.1	0.1	0.1	0.4	2	3	4
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm					105	80	70	60	55	50				
	5mm					120	90	80	75	70	65				
	10mm					130	95	90							
	15mm					140									
	20mm														
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 15

Electrode material : Cu

Electrode dimensions : □5~15

Workpiece material : St

Finished roughness : 5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				36.0	28.0	21.0	16.0	14.0	12.0	10.0	9.0	8.0	7.0	6.0	5.0
(μmRa)				6.00	5.00	4.00	3.00	2.40	2.30	1.70	1.60	1.50	1.30	1.10	0.90
(VDI)				36	34	32	30	28	27	25	24	24	22	21	19
MC condition (E****)				1207	1206	1205	1204	1003	1002	1001	1000	2004	2003	2002	2001
Bottom remain (μm)				208	173	128	98	78	65	57	50	41	33	25	20
Side remain (μm)				133	123	98	73	56	45	41	35	28	21	15	11
Bottom gap (μm)				110	95	80	65	52	48	40	35	30	27	23	20
Side gap (μm)				85	75	55	47	40	35	30	25	20	17	13	11
Removal rate				-622	-612	-777	-749	-716	-876	-840	-834	-823	-816	-987	-956
Electrode wear (%)				0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	2	3	4
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm			140	130	105	80	70	60	55	50				
	5mm			160	150	120	90	80	75	70	65				
	10mm			180	165	130	95	90	85						
	15mm			195	180	140	105	95							
	20mm			205	190	150	110								
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 16

Electrode material : Cu

Electrode dimensions : □2~5

Workpiece material : St

Finished roughness : 0. 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				21.0	16.0	14.0	12.0	10.0	9.0	8.0	6.0	3.0	1.0	0.4	0.2
(μmRa)				4.00	3.00	2.40	2.30	1.70	1.60	1.50	1.10	0.55	0.27	0.20	0.14
(VDI)				32	30	28	27	25	24	24	21	15	9	6	3
MC condition (E****)				1005	1004	1003	1002	1001	1000	2115	2113	2705	2703	3102	3100
Bottom remain (μm)				150	120	100	87	80	73	61	50	37	12	4	0
Side remain (μm)				121	96	79	68	63	57	48	38	25	8	2	0
Bottom gap (μm)				80	65	52	48	45	40	31	25	20	12	4	0
Side gap (μm)				55	47	40	35	35	25	21	15	10	8	2	0
Removal rate				-749	-734	-716	-876	-840	-834	-852	-824	-815	-960	-906	-903
Electrode wear (%)				0.1	0.1	0.1	0.1	0.1	0.1	7	7	49	27	100	100
Time cont. area													*	*	*
Minimum reduction per side by MC depth (μm)	2mm			135	110	90	75	70	65						
	5mm			150	120	100	85	80	70						
	10mm			165	130	110	95								
	15mm			180	145	120									
	20mm			190	150										
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 17

Electrode material : Cu

Electrode dimensions : □5~15

Workpiece material : St

Finished roughness : 0. 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		36.0	28.0	21.0	16.0	14.0	12.0	10.0	10.0	8.0	6.0	3.0	1.0	0.4	0.2
(μmRa)		6.00	5.00	4.00	3.00	2.40	2.30	1.70	1.70	1.50	1.10	0.55	0.27	0.20	0.14
(VDI)		36	34	32	30	28	27	25	25	24	21	15	9	6	3
MC condition (E****)		1207	1206	1205	1204	1003	1002	1001	2116	2114	2113	2705	2703	3102	3100
Bottom remain (μm)		233	198	153	123	103	90	80	69	56	50	37	12	4	0
Side remain (μm)		153	143	118	93	76	65	61	56	44	38	25	8	2	0
Bottom gap (μm)		110	95	80	65	52	48	45	40	31	25	20	12	4	0
Side gap (μm)		85	75	55	47	40	35	35	25	21	15	10	8	2	0
Removal rate		-622	-612	-777	-749	-716	-876	-840	-714	-835	-824	-815	-960	-906	-903
Electrode wear (%)		0.1	0.1	0.1	0.1	0.1	0.1	0.1	2	7	7	49	27	100	100
Time cont. area													*	*	*
Minimum reduction per side by MC depth (μm)	2mm		170	160	130	105	85	75	70						
	5mm		190	175	145	115	95	80	75						
	10mm		210	195	165	130	105	90							
	15mm		225	210	175	140	115								
	20mm		240	225	185	145									
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 18

Electrode material : Cu

Electrode dimensions : □10~25

Workpiece material : St

Finished roughness : 0. 2μmRz

Selecting start MC condition	E No.
18 Standard low wear	13**
118 Additional low wear	16**
218 Retract low wear	15**
318 Standard wear	13**
418 Additional wear	16**
518 Retract wear	15**

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		55.0	45.0	40.0	30.0	21.0	16.0	12.0	10.0	8.0	6.0	3.0	1.0	0.4	0.2
(μmRa)		10.00	9.20	7.00	5.30	4.00	3.00	2.30	1.70	1.50	1.10	0.55	0.27	0.20	0.14
(VDI)		40	39	37	34	32	30	27	25	24	21	15	9	6	3
MC condition (E****)		1309	1308	1307	1306	1205	2318	2317	2316	2315	2314	2705	2703	3102	3100
Bottom remain (μm)		322	256	224	186	137	101	79	68	56	50	37	12	4	0
Side remain (μm)		238	198	178	153	117	84	65	55	43	38	25	8	2	0
Bottom gap (μm)		155	135	120	100	80	55	50	40	30	25	20	12	4	0
Side gap (μm)		135	120	110	75	55	38	30	25	20	15	10	8	2	0
Removal rate		-648	-633	-622	-614	-777	-770	-721	-714	-873	-852	-815	-960	-906	-903
Electrode wear (%)		0.1	0.1	0.1	0.1	0.1	3	3	3	6	6	49	27	100	100
Time cont. area													*	*	*
Minimum reduction per side by MC depth (μm)	2mm		255	210	190	160	130								
	5mm		280	235	210	180	140								
	10mm		315	260	235	200	160								
	15mm		340	280	250	215	170								
	20mm		360	300	265	230	180								
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 19

Electrode material : Cu

Electrode dimensions : □1~5

Workpiece material : St

Finished roughness : 1μmRz

Cavity type : Small area machining with low wear

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				21.0	15.0	12.0	10.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0
(μmRa)				4.00	2.60	2.30	1.70	1.50	1.30	1.10	0.90	0.70	0.55	0.40	0.27
(VDI)				32	28	27	25	24	22	21	19	17	15	12	9
MC condition (E****)				2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2804	2803
Bottom remain (μm)				126	95	71	59	47	39	31	24	18	13	8	4
Side remain (μm)				100	76	57	47	37	31	25	19	14	10	6	3
Bottom gap (μm)				90	70	55	45	35	31	25	20	15	10	8	4
Side gap (μm)				65	50	40	30	28	21	20	15	12	8	6	3
Removal rate				-745	-742	-726	-711	-873	-838	-821	-810	-921	-920	-944	-911
Electrode wear (%)				0.1	0.1	0.2	0.3	1	1.5	2	2	7	11	22	19
Time cont. area										□10	□8	□8	□7	□7	□6
Minimum reduction per side by MC depth (μm)	2mm			105	80	60	50	40	35	30					
	5mm			120	90	75	65	55							
	10mm			130	100	85									
	15mm			140											
	20mm			150											
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option														Satin	Satin

Model data No. : 20

Electrode material : Cu

Electrode dimensions : □1~5

Workpiece material : St

Finished roughness : 2μmRz

Cavity type : General small area machining

Selecting start MC condition		E No.
20	Standard	10*
120	Standard low wear	11*
220	Shallow high speed	12*
620	Low wear aft.pre mill	14*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				26.0	20.0	15.0	12.0	10.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
(μmRa)				5.00	4.00	2.60	2.30	1.70	1.50	1.30	1.10	0.90	0.70	0.55	0.40
(VDI)				34	32	28	27	25	24	22	21	19	17	15	12
MC condition (E****)				108	107	106	105	104	103	102	101	294	293	292	291
Bottom remain (μm)				160	130	104	81	61	46	34	25	18	12	7	4
Side remain (μm)				137	110	88	72	58	45	34	25	18	12	7	4
Bottom gap (μm)				60	52	52	48	40	35	30	24	15	10	7	4
Side gap (μm)				55	50	40	35	30	25	20	18	11	8	6	4
Removal rate				-622	-753	-722	-717	-712	-889	-867	-835	-813	-944	-987	-942
Electrode wear (%)				0.2	0.2	0.2	0.5	1	2	3	4	8	15	26	29
Time cont. area										□10	□8	□8	□7	□7	□6
Minimum reduction per side by MC depth (μm)	2mm			130	90	80	70	60	50	40	30				
	5mm			150	100										
	10mm														
	15mm														
	20mm														
	40mm														
Min. spark area(mm)				□5	□4	□4	□3	□3	□2	□1	□1				
Max. spark area(mm)															
Required option														Satin	Satin

Model data No. : 21

Electrode material : Cu

Electrode dimensions : □5~12

Workpiece material : St

Finished roughness : 2μmRz

Selecting start MC condition	E No.
21 Standard	24*
121 Standard low wear	25*
221 Shallow high speed	31*
321 Shallow low wear	23*
421 Deep high speed	26*
521 Deep low wear	27*
621 Low wear aft.pre mill	28*
721 Deep narrow high speed	32*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		55.0	45.0	40.0	35.0	25.0	20.0	16.0	14.0	10.0	8.0	6.0	4.0	3.0	2.0
(μmRa)		10.00	9.00	7.00	5.60	4.50	4.00	3.20	2.50	1.70	1.60	1.10	0.70	0.60	0.40
(VDI)		40	39	37	35	33	32	30	28	25	24	21	17	16	12
MC condition (E****)		248	247	246	245	244	243	242	307	306	305	304	303	332	331
Bottom remain (μm)		280	237	197	161	132	107	85	68	55	38	28	20	13	8
Side remain (μm)		185	154	129	109	93	78	67	56	45	31	23	16	10	7
Bottom gap (μm)		157	131	112	99	85	74	63	50	38	27	21	14	11	8
Side gap (μm)		83	73	66	58	50	44	39	33	26	19	14	11	8	7
Removal rate		-645	-630	-623	-617	-610	-762	-731	-720	-711	-866	-835	-815	-987	-942
Electrode wear (%)		0.2	0.2	0.2	0.2	0.2	0.2	0.2	1	2	4	8	11	26	29
Time cont. area										□17	□11	□11	□9	□8	□6
Minimum reduction per side by MC depth (μm)	2mm	195	165	140	120	100	90	80							
	5mm	220	185	160	140	120	105	95							
	10mm	250	210	180	160	140	120	110							
	15mm	270	225	195	175	155	130	120							
	20mm	290	245	210	190	170	145	130							
	40mm														
Min. spark area(mm)		□14	□11	□9	□7	□6	□5	□4							
Max. spark area(mm)															
Required option														Satin	Satin

Model data No. : 23

Electrode material : Cu

Electrode dimensions : □12~50

Workpiece material : St

Finished roughness : 2μmRz

Selecting start MC condition	E No.
23 Standard	16*
123 Standard low wear	17*
223 Shallow high speed	18*
323 Shallow low wear	19*
423 Deep high speed	20*
523 Deep low wear	21*
623 Low wear aft.pre mill	22*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	90.0	80.0	70.0	60.0	50.0	40.0	30.0	23.0	16.0	12.0	9.0	7.0	4.5	3.0	2.0
(μmRa)	14.00	13.00	11.00	10.00	9.00	7.00	5.00	4.50	3.20	2.20	1.60	1.10	0.80	0.56	0.40
(VDI)	43	42	41	40	39	37	34	33	30	27	24	21	18	15	12
MC condition (E****)	168	167	166	165	164	163	162	338	337	336	335	334	333	332	331
Bottom remain (μm)	489	411	339	280	231	191	149	115	79	56	42	29	19	9	4
Side remain (μm)	286	248	211	180	153	130	103	84	61	42	30	20	13	5	2
Bottom gap (μm)	150	130	115	100	90	83	68	53	45	38	30	23	15	9	4
Side gap (μm)	100	85	75	65	60	55	45	35	30	25	20	15	10	5	2
Removal rate	-517	-511	-673	-652	-638	-626	-615	-610	-745	-721	-712	-863	-831	-987	-942
Electrode wear (%)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	3	7	14	19	16	16	19
Time cont. area							□70	□60	□40	□35	□30	□20	□15	*	*
Minimum reduction per side by MC depth (μm)	2mm	320	270	235	200	170	145	115							
	5mm	370	300	260	220	185	160	125							
	10mm	430	335	285	245	205	175	140							
	15mm	460	360	305	260	220	185	150							
	20mm	490	385	330	280	240	200	160							
	40mm														
Min. spark area(mm)															
Max. spark area(mm)													□80	□50	□30
Required option														Satin	Satin

Model data No. : 24

Electrode material : Cu

Electrode dimensions : □50~100

Workpiece material : St

Finished roughness : 5μmRz

Selecting start MC condition	E No.
24 Standard	16*
124 Standard low wear	17*
224 Shallow high speed	18*
324 Shallow low wear	19*
424 Deep high speed	20*
524 Deep low wear	21*
624 Low wear aft.pre mill	22*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		90.0	80.0	70.0	60.0	50.0	40.0	30.0	23.0	16.0	12.0	10.0	8.0	6.0	5.0
(μmRa)		14.00	13.00	11.00	10.00	9.00	7.00	5.00	4.50	3.00	2.20	1.70	1.60	1.10	0.90
(VDI)		43	42	41	40	39	37	34	33	30	27	25	24	21	19
MC condition (E****)		168	167	166	165	164	163	162	338	337	336	2621	2926	2925	2924
Bottom remain (μm)		487	409	337	278	229	189	147	113	77	54	41	28	15	5
Side remain (μm)		282	244	207	176	149	126	99	80	57	38	27	19	11	5
Bottom gap (μm)		150	130	115	100	90	83	68	53	45	38	30	25	15	5
Side gap (μm)		100	85	75	65	60	55	45	35	30	25	26	19	11	5
Removal rate		-517	-511	-673	-652	-638	-626	-615	-610	-745	-721	-724	-710	-877	-838
Electrode wear (%)		0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	3	7	12	36	32	29
Time cont. area		□250	□200	□160	□130	□110	□100	□70	□60	□40	*	*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm		345	285	240	195	175	150	115						
	5mm		380	310	265	220	195	165	125						
	10mm		425	345	295	245	215	180	140						
	15mm		460	370	320	260	235	195	150						
	20mm		485	390	340	280	245	210	160						
	40mm														
Min. spark area(mm)															
Max. spark area(mm)										□200	□170	□150	□150	□130	□110
Required option													Satin	Satin	Satin

Model data No. : 25

Electrode material : Cu

Electrode dimensions : □100~200

Workpiece material : St

Finished roughness : 10μmRz

Selecting start MC condition	E No.
25 Standard	16*
125 Standard low wear	17*
225 Shallow high speed	18*
325 Shallow low wear	19*
425 Deep high speed	20*
525 Deep low wear	21*
625 Low wear aft.pre mill	22*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					90.0	80.0	70.0	60.0	50.0	40.0	30.0	23.0	16.0	12.0	10.0
(μmRa)					14.00	13.00	11.00	10.00	9.00	7.00	5.00	4.50	3.00	2.20	1.70
(VDI)					43	42	41	40	39	37	34	33	30	27	25
MC condition (E****)					168	167	166	165	164	163	162	338	337	336	2621
Bottom remain (μm)					476	398	326	267	218	178	136	102	66	43	30
Side remain (μm)					281	243	206	175	148	125	98	79	56	37	26
Bottom gap (μm)					150	130	115	100	90	83	68	53	45	38	30
Side gap (μm)					100	85	75	65	60	55	45	35	30	25	26
Removal rate					-517	-511	-673	-652	-638	-626	-615	-610	-745	-721	-724
Electrode wear (%)					0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	3	7	12
Time cont. area															*
Minimum reduction per side by MC depth (μm)	2mm				355	285	240	195	175	145	115				
	5mm				380	310	265	215	190	160	125				
	10mm				420	340	295	240	215	180	140				
	15mm				460	370	320	260	230	195	150				
	20mm				485	390	340	275	245	205	160				
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 26

Electrode material : Cu

Electrode dimensions : □50~100

Workpiece material : St

Finished roughness : 5μmRz

Selecting start MC condition	E No.
26 Standard	13**
126 Standard low wear	13**
226 Shallow high speed	16**
326 Shallow low wear	16**
426 Deep high speed	15**
526 Deep low wear	15**

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	110.0	95.0	75.0	60.0	50.0	42.0	30.0	24.0	16.0	13.5	11.5	10.0	8.0	6.0	5.0
(μmRa)	18.00	15.00	12.00	10.50	9.50	8.00	5.30	4.50	3.00	2.50	2.20	1.70	1.60	1.10	0.90
(VDI)	45	44	42	40	40	38	34	33	30	28	27	25	24	21	19
MC condition (E****)	1332	1331	1329	1328	1327	1326	1325	1324	1703	1702	1701	2621	2926	2925	2924
Bottom remain (μm)	541	461	281	216	186	151	121	101	88	76	66	41	28	15	5
Side remain (μm)	360	310	217	177	157	132	102	82	69	57	47	27	19	11	5
Bottom gap (μm)	250	200	155	135	120	100	85	65	55	45	35	30	25	15	5
Side gap (μm)	200	170	135	120	110	75	60	55	50	40	30	26	19	11	5
Removal rate	-519	-513	-673	-645	-632	-618	-610	-769	-722	-714	-882	-724	-710	-877	-838
Electrode wear (%)	0.1	0.1	0.1	0.2	0.3	0.5	0.8	0.9	0.1	0.6	1.7	12	36	32	29
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm	400	345	240	195	175	150	115	95	75	65				
	5mm	440	380	265	220	195	165	125	100	85	70				
	10mm	490	425	295	245	215	180	140	115	95					
	15mm	530	460	320	260	235	195	150	125						
	20mm	565	485	340	280	245	210	160	130						
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option													Satin	Satin	Satin

Model data No. : 27

Electrode material : Cu

Electrode dimensions : □100~200

Workpiece material : St

Finished roughness : 10μmRz

Selecting start MC condition	E No.
27 Standard	13**
127 Standard low wear	13**
227 Shallow high speed	16**
327 Shallow low wear	16**
427 Deep high speed	15**
527 Deep low wear	15**

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				110.0	95.0	75.0	60.0	50.0	42.0	30.0	24.0	16.0	14.0	12.0	10.0
(μmRa)				18.00	15.00	12.00	10.00	9.50	8.00	5.30	4.50	3.00	2.40	2.30	1.70
(VDI)				45	44	42	40	40	38	34	33	30	28	27	25
MC condition (E****)				1332	1331	1329	1328	1327	1326	1325	1324	1803	1802	1801	2621
Bottom remain (μm)				530	450	270	205	175	140	110	90	77	65	55	30
Side remain (μm)				359	309	216	176	156	131	101	81	68	56	46	26
Bottom gap (μm)				250	200	155	135	120	100	85	65	55	45	35	30
Side gap (μm)				200	170	135	120	110	75	60	55	50	40	30	26
Removal rate				-519	-513	-673	-645	-632	-618	-610	-769	-718	-711	-866	-724
Electrode wear (%)				0.1	0.1	0.1	0.2	0.3	0.5	0.8	0.9	0.5	1.8	3.8	12
Time cont. area															*
Minimum reduction per side by MC depth (μm)	2mm			410	355	240	195	175	145	115	90	75	65		
	5mm			440	380	265	215	190	160	125	100	85	70		
	10mm			490	420	295	240	215	180	140	110	95			
	15mm			530	455	320	260	230	195	150	120				
	20mm			560	485	340	275	245	205	160	130				
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 28

Electrode material : Cu

Electrode dimensions : □200~300

Workpiece material : St

Finished roughness : 16μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				126.0	102.0	85.0	74.0	66.0	55.0	45.0	40.0	34.0	28.0	23.0	16.0
(μmRa)				20.00	17.00	13.00	12.00	10.50	10.00	9.00	7.00	6.00	5.00	4.50	3.00
(VDI)				46	45	42	42	40	40	39	37	36	34	33	30
MC condition (E****)				1914	1913	1912	1911	1910	1909	1908	1907	1906	2624	2623	2622
Bottom remain (μm)				610	533	453	378	303	233	168	135	100	67	47	30
Side remain (μm)				405	360	315	266	222	182	142	118	93	60	40	26
Bottom gap (μm)				300	280	250	200	180	155	135	120	100	60	40	30
Side gap (μm)				250	230	200	170	150	135	120	110	75	40	30	26
Removal rate				-544	-531	-521	-513	-696	-668	-641	-630	-617	-610	-752	-728
Electrode wear (%)				1.6	1.2	0.6	0.1	0.1	0.1	0.1	0.2	0.3	15	21	35
Time cont. area					□400	□250	□200	□170	*	*	*	*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm			450	400	350	295	245	205	160	130	105			
	5mm			495	440	385	325	270	225	175	145	115			
	10mm			550	490	430	365	305	250	195	165	130			
	15mm			595	530	465	395	330	270	210	175	140			
	20mm			635	565	495	415	350	285	225	185	145			
	40mm														
Min. spark area(mm)															
Max. spark area(mm)													□400	□300	□300
Required option															

Model data No. : 29

Electrode material : Cu

Electrode dimensions : ~□30

Workpiece material : St

Finished roughness : 0. 2μmRz

Cavity type : Glazed machining (Additional Model)

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)													1.0	0.4	0.2
(μmRa)													0.27	0.20	0.14
(VDI)													9	6	3
MC condition (E****)													2703	3102	3100
Bottom remain (μm)													12	4	0
Side remain (μm)													8	2	0
Bottom gap (μm)													12	4	0
Side gap (μm)													8	2	0
Removal rate													-960	-906	-903
Electrode wear (%)													27	100	100
Time cont. area													*	*	*
Minimum reduction per side by MC depth (μm)	2mm														
	5mm														
	10mm														
	15mm														
	20mm														
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 30

Electrode material : Gr1

Electrode dimensions : □20~500

Workpiece material : St

Finished roughness : 8μmRz

Selecting start MC condition	E No.
30 Standard	415*
130 Standard low wear	416*
230 Shallow high speed	414*
430 Deep high speed	417*
530 Deep low wear	418*
730 Deep narrow high speed	420*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		60.0	54.0	47.0	45.0	43.0	41.0	39.0	35.0	26.0	23.0	20.0	15.0	10.0	8.0
(μmRa)		11.00	10.50	10.30	10.20	9.00	8.00	7.00	6.00	5.00	4.50	4.00	2.50	1.80	1.60
(VDI)		41	40	40	40	39	38	37	36	34	33	32	28	25	24
MC condition (E****)		4158	4157	4156	4155	4154	4153	4152	4151	4196	4195	4194	4193	4192	4191
Bottom remain (μm)		440	400	360	320	280	240	210	180	145	111	91	76	62	50
Side remain (μm)		330	244	224	204	184	164	144	124	94	66	52	42	33	25
Bottom gap (μm)		160	160	160	160	150	100	100	100	100	85	70	60	55	50
Side gap (μm)		80	80	80	80	75	70	50	50	50	40	35	30	30	25
Removal rate		-524	-518	-516	-517	-513	-683	-647	-640	-634	-610	-752	-726	-711	-859
Electrode wear (%)		0.5	0.5	0.5	0.5	0.5	0.5	1.7	1.7	3	7	13	17	52	60
Time cont. area		□250	□250	□200	□190	□160	□130	□90	□80	□80	□60	□50	□35	□30	□25
Minimum reduction per side by MC depth (μm)	2mm		400	260	230	210	190	170	150	130					
	5mm		450	270	240	230	210	190	160	140					
	10mm		480	330	260	250	230	210	180	150					
	15mm		510	370	290	270	250	230	200	180					
	20mm		560	410	320	300	270	250	230	200					
	40mm														
Min. spark area(mm)															
Max. spark area(mm)							□600	□500	□400	□400	□300	□250	□170	□140	□120
Required option															

Model data No. : 31

Electrode material : Gr1

Electrode dimensions : □60~100

Workpiece material : St

Finished roughness : 5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	86.0	62.0	54.0	47.0	40.0	34.0	26.0	21.0	16.0	14.0	12.0	10.0	8.0	6.0	5.0
(μmRa)	13.00	11.00	10.00	9.00	7.00	6.00	5.00	4.00	3.00	2.40	2.30	1.70	1.50	1.10	0.90
(VDI)	42	41	40	39	37	36	34	32	30	28	27	25	24	21	19
MC condition (E****)	4214	4113	4112	4111	4619	4618	4617	4616	4615	4614	4917	4916	4915	4914	4913
Bottom remain (μm)	500	450	410	370	275	230	180	140	120	100	80	65	50	40	30
Side remain (μm)	385	335	295	255	195	155	125	105	90	75	60	45	35	25	15
Bottom gap (μm)	160	160	160	160	160	150	100	100	85	70	60	45	35	35	30
Side gap (μm)	80	80	80	80	80	75	50	50	40	35	30	27	25	25	15
Removal rate	-538	-529	-517	-511	-513	-673	-656	-622	-770	-728	-719	-876	-850	-833	-820
Electrode wear (%)	0.1	0.1	0.1	0.1	2	2	5	10	10	10	130	210	230	250	270
Time cont. area											*	*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm	450	390	280	260										
	5mm	500	440	310	290										
	10mm	540	470	340	310										
	15mm	580	500	360	330										
	20mm	630	550	390	360										
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option											Satin	Satin	Satin	Satin	Satin

Model data No. : 32

Electrode material : Gr1

Electrode dimensions : □60~100

Workpiece material : St

Finished roughness : 12μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		130.0	125.0	106.0	86.0	62.0	54.0	47.0	40.0	34.0	26.0	21.0	16.0	14.0	12.0
(μmRa)		21.00	20.00	17.00	13.00	11.00	10.00	9.00	7.00	6.00	5.00	4.00	3.00	2.40	2.30
(VDI)		46	46	45	42	40	40	39	37	36	34	32	30	28	27
MC condition (E****)		4317	4316	4315	4214	4113	4112	4111	4619	4618	4617	4616	4615	4614	4613
Bottom remain (μm)		649	619	549	479	429	389	349	249	204	154	115	95	75	60
Side remain (μm)		507	477	407	337	287	247	207	147	107	77	57	47	37	30
Bottom gap (μm)		200	180	160	160	160	160	160	160	150	100	100	85	70	60
Side gap (μm)		100	90	80	80	80	80	80	80	75	50	50	40	35	30
Removal rate		-599	-564	-535	-538	-529	-517	-511	-513	-673	-656	-622	-770	-728	-716
Electrode wear (%)		0.1	0.1	0.1	0.1	0.1	0.1	0.1	2	2	5	10	10	10	22
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm		590	550	540	450	390	280	260						
	5mm		690	650	630	500	440	310	290						
	10mm		750	700	680	540	470	340	310						
	15mm		790	740	720	580	500	360	330						
	20mm		860	800	780	630	550	390	360						
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option		160A	160A												

Model data No. : 33

Electrode material : Gr1

Electrode dimensions : □100~150

Workpiece material : St

Finished roughness : 12μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		160.0	150.0	106.0	86.0	62.0	54.0	47.0	40.0	34.0	26.0	21.0	16.0	14.0	12.0
(μmRa)		27.00	25.00	17.00	13.00	12.50	10.00	9.00	7.00	6.00	5.00	4.00	3.00	2.40	2.30
(VDI)		49	48	45	42	42	40	39	37	36	34	32	30	28	27
MC condition (E****)		4417	4416	4315	4214	4113	4112	4111	4619	4618	4617	4616	4615	4614	4613
Bottom remain (μm)		699	649	549	479	429	389	349	249	204	154	115	95	75	60
Side remain (μm)		557	507	407	337	287	247	207	147	107	77	57	47	37	30
Bottom gap (μm)		200	180	160	160	160	160	160	160	150	100	100	85	70	60
Side gap (μm)		100	90	80	80	80	80	80	80	75	50	50	40	35	30
Removal rate		-411	-585	-535	-538	-529	-517	-511	-513	-673	-656	-622	-770	-728	-716
Electrode wear (%)		0.1	0.1	0.1	0.1	0.1	0.1	0.1	2	2	5	10	10	10	22
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm		650	590	540	450	390	280	260						
	5mm		760	690	630	500	440	310	290						
	10mm		820	750	680	540	470	340	310						
	15mm		870	790	720	580	500	360	330						
	20mm		950	860	780	630	550	390	360						
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option		160A	160A												

Model data No. : 34

Electrode material : Gr1

Electrode dimensions : □150~300

Workpiece material : St

Finished roughness : 14μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			160.0	150.0	106.0	86.0	62.0	54.0	48.0	41.0	36.0	29.0	23.0	18.0	14.0
(μmRa)			27.00	25.00	17.00	13.00	11.00	10.00	9.00	8.00	6.00	5.20	4.50	3.50	2.50
(VDI)			49	48	45	42	41	40	39	38	36	34	33	31	28
MC condition (E****)			4417	4416	4315	4414	4413	4412	4411	4647	4646	4645	4644	4643	4642
Bottom remain (μm)			705	645	555	485	435	385	335	265	205	165	122	91	70
Side remain (μm)			563	513	413	343	293	253	213	163	123	93	72	56	40
Bottom gap (μm)			200	180	160	160	160	160	160	160	150	100	100	85	70
Side gap (μm)			105	95	85	85	85	85	85	85	80	55	55	45	40
Removal rate			-411	-585	-535	-538	-529	-517	-511	-511	-661	-642	-615	-776	-734
Electrode wear (%)			0.1	0.1	0.1	0.1	0.1	0.1	0.1	3	3	5	14	17	40
Time cont. area					□500	□400	□250	*	*	*	*	*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm		650	590	540	450	390	280	260						
	5mm		760	690	630	500	440	310	290						
	10mm		820	750	680	540	470	340	310						
	15mm		870	790	720	580	500	360	330						
	20mm		950	860	780	630	550	390	360						
	40mm														
Min. spark area(mm)															
Max. spark area(mm)													□400	□300	□300
Required option			160A	160A											

Model data No. : 35

Electrode material : Gr1

Electrode dimensions : ~□20

Workpiece material : St

Finished roughness : 8μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)							38.0	32.0	26.0	22.0	17.0	14.0	12.0	10.0	8.0
(μmRa)							7.00	5.50	5.00	4.50	3.00	2.40	2.30	1.70	1.50
(VDI)							37	35	34	33	30	28	27	25	24
MC condition (E****)							4509	4508	4506	4505	4504	4614	4613	4612	4611
Bottom remain (μm)							262	192	156	123	93	76	67	58	50
Side remain (μm)							174	134	104	79	59	45	38	31	25
Bottom gap (μm)							160	150	120	100	90	70	60	55	50
Side gap (μm)							80	75	60	50	40	35	30	30	25
Removal rate							-631	-623	-610	-784	-742	-728	-716	-711	-852
Electrode wear (%)							0.1	0.1	0.1	0.1	0.1	10	22	23	40
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm						170	160	130	120	100				
	5mm						195	180	150	140	115				
	10mm						220	200	170	160	130				
	15mm						235	215	180	170	140				
	20mm						250	230	190	180	150				
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 36

Electrode material : Gr1

Electrode dimensions : □20~25

Workpiece material : St

Finished roughness : 8μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					54.0	47.0	40.0	34.0	26.0	21.0	16.0	14.0	12.0	10.0	8.0
(μmRa)					10.00	9.00	7.00	6.00	5.00	4.00	3.00	2.40	2.30	1.70	1.50
(VDI)					40	39	37	36	34	32	30	28	27	25	24
MC condition (E****)					4112	4111	4619	4618	4617	4616	4615	4614	4613	4612	4611
Bottom remain (μm)					406	366	266	186	136	101	89	76	67	58	50
Side remain (μm)					253	233	173	123	93	68	58	45	38	31	25
Bottom gap (μm)					160	160	160	150	100	100	85	70	60	55	50
Side gap (μm)					80	80	80	75	50	50	40	35	30	30	25
Removal rate					-517	-511	-513	-673	-656	-622	-770	-728	-716	-711	-852
Electrode wear (%)					0.1	0.1	2	2	5	10	10	10	22	23	40
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm				250	240									
	5mm				250	240									
	10mm				330	260									
	15mm				370	290									
	20mm				410	320									
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 37

Electrode material : Gr1

Electrode dimensions : □25~40

Workpiece material : St

Finished roughness : 8μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				62.0	54.0	47.0	40.0	34.0	26.0	21.0	16.0	14.0	12.0	10.0	8.0
(μmRa)				10.50	10.00	9.00	7.00	6.00	5.00	4.00	3.00	2.30	2.20	1.70	1.50
(VDI)				40	40	39	37	36	34	32	30	27	27	25	24
MC condition (E****)				4113	4112	4111	4619	4618	4617	4616	4615	4614	4613	4612	4611
Bottom remain (μm)				438	398	358	258	178	128	100	88	76	67	58	50
Side remain (μm)				325	235	215	155	115	85	65	55	45	38	31	25
Bottom gap (μm)				160	160	160	160	150	100	100	85	70	60	55	50
Side gap (μm)				80	80	80	80	75	50	50	40	35	30	30	25
Removal rate				-529	-517	-511	-513	-673	-656	-622	-770	-728	-716	-711	-852
Electrode wear (%)				0.1	0.1	0.1	2	2	5	10	10	10	22	23	40
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm			400	290	270									
	5mm			450	320	300									
	10mm			480	350	320									
	15mm			510	370	340									
	20mm			560	410	370									
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 38

Electrode material : Gr1

Electrode dimensions : □40~60

Workpiece material : St

Finished roughness : 8μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		89.0	86.0	62.0	54.0	47.0	40.0	34.0	26.0	21.0	16.0	14.0	12.0	10.0	8.0
(μmRa)		13.50	13.00	11.00	10.00	9.00	7.00	6.00	5.00	4.00	3.00	2.40	2.20	1.70	1.50
(VDI)		43	42	41	40	39	37	36	34	32	30	28	27	25	24
MC condition (E****)		4215	4214	4113	4112	4111	4619	4618	4617	4616	4615	4614	4613	4612	4611
Bottom remain (μm)		530	510	460	420	380	280	220	170	131	111	91	76	62	50
Side remain (μm)		395	375	325	235	215	155	115	85	65	55	45	38	31	25
Bottom gap (μm)		160	160	160	160	160	160	150	100	100	85	70	60	55	50
Side gap (μm)		80	80	80	80	80	80	75	50	50	40	35	30	30	25
Removal rate		-559	-538	-529	-517	-511	-513	-673	-656	-622	-770	-728	-716	-711	-852
Electrode wear (%)		0.1	0.1	0.1	0.1	0.1	2	2	5	10	10	10	22	23	40
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm		510	460	400	290	270								
	5mm		600	510	450	320	300								
	10mm		640	550	480	350	320								
	15mm		680	590	510	370	340								
	20mm		740	640	560	410	370								
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 39

Electrode material : Gr1

Electrode dimensions : □300~

Workpiece material : St

Finished roughness : 18μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				160.0	150.0	106.0	86.0	62.0	54.0	48.0	41.0	36.0	29.0	23.0	18.0
(μmRa)				27.00	25.00	17.00	13.00	11.00	10.00	9.00	8.00	6.00	5.30	4.50	3.50
(VDI)				49	48	45	42	41	40	39	38	36	34	33	31
MC condition (E****)				4417	4416	4315	4414	4413	4412	4411	4647	4656	4655	4654	4653
Bottom remain (μm)				700	630	540	470	420	370	320	250	190	150	110	80
Side remain (μm)				550	500	400	330	280	240	200	150	110	80	60	45
Bottom gap (μm)				200	180	160	160	160	160	160	160	150	100	100	80
Side gap (μm)				110	100	90	90	90	90	90	90	80	60	60	45
Removal rate				-411	-585	-535	-538	-529	-517	-511	-511	-688	-665	-619	-787
Electrode wear (%)				1	1	1	1	1	1	1	3	4	6	15	28
Time cont. area				□900	□700	□500	□400	□250	*	*	*	*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm			650	590	540	450	390	280	260					
	5mm			760	690	630	500	440	310	290					
	10mm			820	750	680	540	470	340	310					
	15mm			870	790	720	580	500	360	330					
	20mm			950	860	780	630	550	390	360					
	40mm														
Min. spark area(mm)															
Max. spark area(mm)										□800	□800	□800	□800	□800	□700
Required option				160A	160A										

Model data No. : 40

Electrode material : Gr2

Electrode dimensions : □3~4

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)								28.0	21.0	16.0	12.0	10.0	8.0	5.0	4.0
(μmRa)								5.00	4.00	3.00	2.30	1.70	1.50	0.90	0.70
(VDI)								34	32	30	27	25	24	19	17
MC condition (E****)								5121	5221	4727	4725	4823	4925	4923	4922
Bottom remain (μm)								196	156	92	69	54	41	27	15
Side remain (μm)								163	123	81	58	46	34	20	10
Bottom gap (μm)								100	60	60	50	44	35	25	15
Side gap (μm)								50	35	35	30	27	25	15	10
Removal rate								-738	-728	-780	-731	-717	-870	-818	-809
Electrode wear (%)								0.3	0.6	10	10	20	34	50	60
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm							175	130						
	5mm							190	140						
	10mm							215	155						
	15mm							240	170						
	20mm							265	185						
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 41

Electrode material : Gr2

Electrode dimensions : □4~5

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)								28.0	21.0	16.0	12.0	10.0	8.0	5.0	4.0
(μmRa)								5.00	4.00	3.00	2.30	1.70	1.50	0.90	0.70
(VDI)								34	32	30	27	25	24	19	17
MC condition (E****)								5122	5222	4727	4725	4823	4925	4923	4922
Bottom remain (μm)								196	156	92	69	54	41	27	15
Side remain (μm)								163	123	81	58	46	34	20	10
Bottom gap (μm)								100	60	60	50	44	35	25	15
Side gap (μm)								50	35	35	30	27	25	15	10
Removal rate								-782	-746	-780	-731	-717	-870	-818	-809
Electrode wear (%)								0.2	0.8	10	10	20	34	50	60
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm							175	130						
	5mm							190	140						
	10mm							215	155						
	15mm							240	170						
	20mm							265	185						
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 42

Electrode material : Gr2

Electrode dimensions : □5~6.5

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)								28.0	21.0	16.0	12.0	10.0	8.0	5.0	4.0
(μmRa)								5.00	4.00	3.00	2.30	1.70	1.50	0.90	0.70
(VDI)								34	32	30	27	25	24	19	17
MC condition (E****)								5123	5223	4727	4725	4823	4925	4923	4922
Bottom remain (μm)								196	156	92	69	54	41	27	15
Side remain (μm)								163	123	81	58	46	34	20	10
Bottom gap (μm)								100	60	60	50	44	35	25	15
Side gap (μm)								50	35	35	30	27	25	15	10
Removal rate								-611	-766	-780	-731	-717	-870	-818	-809
Electrode wear (%)								0.2	0.8	10	10	20	34	50	60
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm							175	130						
	5mm							190	140						
	10mm							215	155						
	15mm							240	170						
	20mm							265	185						
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 43

Electrode material : Gr2

Electrode dimensions : □6.5~8

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)								28.0	21.0	16.0	12.0	10.0	8.0	5.0	4.0
(μmRa)								5.00	4.00	3.00	2.30	1.70	1.50	0.90	0.70
(VDI)								34	32	30	27	25	24	19	17
MC condition (E****)								5124	5224	4727	4725	4823	4925	4923	4922
Bottom remain (μm)								196	156	92	69	54	41	27	15
Side remain (μm)								163	123	81	58	46	34	20	10
Bottom gap (μm)								100	60	60	50	44	35	25	15
Side gap (μm)								50	35	35	30	27	25	15	10
Removal rate								-628	-774	-780	-731	-717	-870	-818	-809
Electrode wear (%)								0.1	0.6	10	10	20	34	50	60
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm							175	130						
	5mm							190	140						
	10mm							215	155						
	15mm							240	170						
	20mm							265	185						
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 44

Electrode material : Gr2

Electrode dimensions : □8~10

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)								28.0	21.0	16.0	12.0	10.0	8.0	5.0	4.0
(μmRa)								5.00	4.00	3.00	2.30	1.70	1.50	0.90	0.70
(VDI)								34	32	30	27	25	24	19	17
MC condition (E****)								5125	5225	4727	4725	4823	4925	4923	4922
Bottom remain (μm)								196	156	92	69	54	41	27	15
Side remain (μm)								163	123	81	58	46	34	20	10
Bottom gap (μm)								100	60	60	50	44	35	25	15
Side gap (μm)								50	35	35	30	27	25	15	10
Removal rate								-625	-610	-780	-731	-717	-870	-818	-809
Electrode wear (0.1%)								0.2	0.3	10	10	20	34	50	60
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm							175	130						
	5mm							190	140						
	10mm							215	155						
	15mm							240	170						
	20mm							265	185						
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 45

Electrode material : Gr2

Electrode dimensions : □10~13

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)								39.0	24.0	19.0	16.0	12.0	10.0	8.0	5.0
(μmRa)								7.00	4.50	4.00	3.00	2.30	1.70	1.50	0.90
(VDI)								37	33	32	30	27	25	24	19
MC condition (E****)								5126	5226	4729	4727	4725	4823	4925	4923
Bottom remain (μm)								256	226	116	92	69	54	41	27
Side remain (μm)								186	166	86	74	58	46	34	20
Bottom gap (μm)								100	100	60	60	50	44	35	25
Side gap (μm)								50	50	35	35	30	27	25	15
Removal rate								-669	-635	-628	-780	-731	-717	-870	-818
Electrode wear (0.1%)								0.1	0.1	10	10	10	20	34	50
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm							205	175						
	5mm							220	190						
	10mm							245	215						
	15mm							270	230						
	20mm							295	245						
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 46

Electrode material : Gr2

Electrode dimensions : □13~15

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)							39.0	25.0	19.0	16.0	12.0	10.0	8.0	5.0	4.0
(μmRa)							7.00	4.50	4.00	3.00	2.30	1.70	1.50	0.90	0.70
(VDI)							37	33	32	30	27	25	24	19	17
MC condition (E****)							5127	5227	4729	4727	4725	4823	4925	4923	4922
Bottom remain (μm)							256	226	116	92	69	54	41	27	15
Side remain (μm)							186	166	86	74	58	46	34	20	10
Bottom gap (μm)							100	100	60	60	50	44	35	25	15
Side gap (μm)							50	50	35	35	30	27	25	15	10
Removal rate							-687	-647	-628	-780	-731	-717	-870	-818	-809
Electrode wear (0.1%)							0.1	0.1	10	10	10	20	34	50	60
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm						205	175							
	5mm						220	190							
	10mm						245	215							
	15mm						270	230							
	20mm						295	245							
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 47

Electrode material : Gr2

Electrode dimensions : □15~20

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)							39.0	25.0	19.0	16.0	12.0	10.0	8.0	5.0	4.0
(μmRa)							7.00	4.50	4.00	3.00	2.30	1.70	1.50	0.90	0.70
(VDI)							37	33	32	30	27	25	24	19	17
MC condition (E****)							5128	5228	4729	4727	4725	4823	4925	4923	4922
Bottom remain (μm)							256	226	116	92	69	54	41	27	15
Side remain (μm)							186	166	86	74	58	46	34	20	10
Bottom gap (μm)							100	100	60	60	50	44	35	25	15
Side gap (μm)							50	50	35	35	30	27	25	15	10
Removal rate							-513	-635	-628	-780	-731	-717	-870	-818	-809
Electrode wear (0.1%)							0.1	0.4	10	10	10	20	34	50	60
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm						205	175							
	5mm						220	190							
	10mm						245	215							
	15mm						270	230							
	20mm						295	245							
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 48

Electrode material : Gr2

Electrode dimensions : □20~30

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					42.0	40.0	36.0	26.0	19.0	16.0	12.0	10.0	8.0	5.0	4.0
(μmRa)					8.00	7.00	6.00	5.00	4.00	3.00	2.30	1.70	1.50	0.90	0.70
(VDI)					38	37	36	34	32	30	27	25	24	19	17
MC condition (E****)					4133	4132	4030	4625	4729	4727	4725	4823	4925	4923	4922
Bottom remain (μm)					334	324	254	164	114	90	67	52	39	25	15
Side remain (μm)					240	230	170	110	80	68	52	40	28	16	10
Bottom gap (μm)					150	150	100	100	60	60	50	44	35	25	15
Side gap (μm)					75	75	50	50	35	35	30	27	25	15	10
Removal rate					-524	-515	-687	-673	-628	-780	-731	-717	-870	-818	-809
Electrode wear (0.1%)					0.1	0.1	0.1	2	10	10	10	20	34	50	60
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm				280	230	190	140							
	5mm				290	240	195	145							
	10mm				300	250	200	150							
	15mm				310	260	205	155							
	20mm				320	270	210	160							
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 49

Electrode material : Gr2

Electrode dimensions : □40~60

Workpiece material : St

Finished roughness : 8μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					80.0	75.0	70.0	40.0	36.0	26.0	19.0	16.0	12.0	10.0	8.0
(μmRa)					13.00	12.00	11.50	7.00	6.00	5.00	4.00	3.00	2.30	1.70	1.50
(VDI)					42	42	41	37	36	34	32	30	27	25	24
MC condition (E****)					4235	4234	4233	4132	4030	4625	4729	4727	4725	4823	4925
Bottom remain (μm)					430	400	330	320	250	160	110	86	63	48	35
Side remain (μm)					297	277	237	227	167	107	77	65	49	37	25
Bottom gap (μm)					160	160	150	150	100	100	60	60	50	44	35
Side gap (μm)					80	80	75	75	50	50	35	35	30	27	25
Removal rate					-545	-531	-518	-515	-687	-673	-628	-780	-731	-717	-870
Electrode wear (0.1%)					0.1	0.1	0.1	0.1	0.1	2	10	10	10	20	34
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm				370	320	280	250	185						
	5mm				420	350	300	280	205						
	10mm				440	370	320	310	230						
	15mm				460	390	340	335	245						
	20mm				490	420	370	355	265						
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 50

Electrode material : Gr2

Electrode dimensions : □60~100

Workpiece material : St

Finished roughness : 8μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					85.0	80.0	75.0	40.0	36.0	26.0	19.0	16.0	12.0	10.0	8.0
(μmRa)					13.00	12.50	12.00	7.00	6.00	5.00	3.50	3.00	2.30	1.70	1.50
(VDI)					42	42	42	37	36	34	31	30	27	25	24
MC condition (E****)					4335	4334	4333	4132	4030	4625	4729	4727	4725	4823	4925
Bottom remain (μm)					490	430	360	320	250	160	110	86	63	48	35
Side remain (μm)					367	307	267	227	167	107	77	65	49	37	25
Bottom gap (μm)					150	150	150	150	100	100	60	60	50	44	35
Side gap (μm)					75	75	75	75	50	50	35	35	30	27	25
Removal rate					-541	-529	-519	-515	-687	-673	-628	-780	-731	-717	-870
Electrode wear (0.1%)					0.1	0.1	0.1	0.1	0.1	2	10	10	10	20	34
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm				440	350	310	250	185						
	5mm				490	380	340	280	205						
	10mm				510	400	350	310	230						
	15mm				530	430	370	335	245						
	20mm				560	450	400	355	265						
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 51

Electrode material : Gr2

Electrode dimensions : ~□5

Workpiece material : St

Finished roughness : 2μmRz

Selecting start MC condition		E No.
51	Standard	443*
251	Shallow high speed	445*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		45.0	30.0	24.0	20.0	18.0	17.0	16.0	12.0	9.0	7.0	5.0	4.0	3.0	2.0
(μmRa)		9.50	7.30	4.80	3.80	3.40	3.00	2.70	2.00	1.60	1.10	0.90	0.70	0.55	0.40
(VDI)		40	37	34	32	31	30	29	26	24	21	19	17	15	12
MC condition (E****)		4439	4438	4437	4436	4435	4434	4433	4432	4431	4430	4494	4493	4492	4491
Bottom remain (μm)		200	161	132	106	86	72	61	51	42	28	20	13	7	4
Side remain (μm)		180	145	120	99	84	72	61	51	42	28	20	13	7	4
Bottom gap (μm)		103	84	68	52	42	35	28	25	21	14	12	11	7	4
Side gap (μm)		62	52	43	37	33	28	24	23	19	13	11	11	7	4
Removal rate		-620	-610	-605	-790	-770	-750	-730	-720	-710	-830	-810	-950	-920	-910
Electrode wear (0.1%)		0.2	0.2	0.3	0.4	0.5	0.7	0.8	0.9	1	3	5	10	20	200
Time cont. area														□5	□5
Minimum reduction per side by MC depth (μm)	2mm		200	150	120	100	90	80	70	60	50	40			
	5mm														
	10mm														
	15mm														
	20mm														
	40mm														
Min. spark area(mm)		□5	□5	□4	□4	□3	□3	□3	□3	□2	□1	□0.5			
Max. spark area(mm)															
Required option															Satin

Model data No. : 52

Electrode material : Gr2

Electrode dimensions : □10~100

Workpiece material : Ti

Finished roughness : 7μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	142.0	135.0	132.0	130.0	106.0	68.0	58.0	42.0	35.0	27.0	23.0	17.0	13.0	10.0	7.0
(μmRa)	24.00	22.00	21.00	18.00	16.00	12.00	9.50	7.00	5.50	4.00	3.20	2.70	1.80	1.20	0.80
(VDI)	48	47	46	45	44	42	40	37	35	32	30	29	25	22	18
MC condition (E****)	8879	8878	8877	8876	8875	8874	8873	8872	8871	8870	8869	8868	8867	8866	8865
Bottom remain (μm)	962	821	683	557	448	350	275	218	166	119	87	65	44	26	13
Side remain (μm)	915	781	650	530	426	333	263	211	155	117	85	64	39	22	10
Bottom gap (μm)	236	208	202	157	131	120	99	88	81	51	40	37	30	17	13
Side gap (μm)	189	166	162	126	105	96	79	70	65	41	32	29	24	14	10
Removal rate	-410	-549	-536	-523	-515	-511	-665	-645	-617	-775	-755	-730	-712	-825	-810
Electrode wear (0.1%)	8	9	12	12	14	18	24	28	44	76	95	99	169	303	329
Time cont. area													*	*	*
Minimum reduction per side by MC depth (μm)	2mm	935	800	670	555	455	355	275	225	165	140				
	5mm	940	805	675	565	460	370	290	240	185	150				
	10mm	945	810	685	575	470	385	310	255	200	160				
	15mm	970	830	710	600	490	405	330	275	220	180				
	20mm	1000	860	735	630	515	430	355	300	240	200				
	40mm														
Min. spark area(mm)	□50	□50	□50	□40	□40	□30	□20	□15	□15	□10					
Max. spark area(mm)															
Required option	TB	TB	TB												

Model data No. : 53

Electrode material : Gr2

Electrode dimensions : □0.5~5

Workpiece material : St

Finished roughness : 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			30.0	25.0	20.0	18.0	16.0	12.0	9.0	7.0	6.0	5.0	4.0	3.0	2.0
(μmRa)			5.30	4.50	4.00	3.50	3.00	2.30	1.60	1.30	1.10	0.90	0.70	0.55	0.40
(VDI)			34	33	32	31	30	27	24	22	21	19	17	15	12
MC condition (E****)			4523	4522	4521	4539	4538	4537	4536	4535	4534	4533	4532	4531	4530
Bottom remain (μm)			164	130	120	110	85	70	50	37	27	18	12	6	4
Side remain (μm)			130	120	100	95	75	60	48	37	27	18	12	6	4
Bottom gap (μm)			100	60	55	53	49	41	36	31	22	16	11	6	4
Side gap (μm)			50	45	40	41	36	31	26	21	16	12	9	6	4
Removal rate			-622	-619	-617	-779	-739	-724	-711	-864	-832	-946	-937	-923	-909
Electrode wear (0.1%)			2	2	2	4	5	8	15	20	50	110	150	170	200
Time cont. area													□5	□4	□3
Minimum reduction per side by MC depth (μm)	2mm		150	125	100	95	80	70	60	50	40	30	20	10	
	5mm														
	10mm														
	15mm														
	20mm														
	40mm														
Min. spark area(mm)			□5	□5	□5	□5	□4	□3	□2	□2	□1	□1	□1	□0.5	
Max. spark area(mm)															
Required option														Satin	Satin

Model data No. : 54

Electrode material : Gr2

Electrode dimensions : □10~30

Workpiece material : St

Finished roughness : 4μmRz

Selecting start MC condition		E No.
54	Standard	455*
154	Standard low wear	454*
254	Shallow high speed	456*
454	Deep high speed	457*
554	Deep low wear	458*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				53.0	47.0	41.0	35.0	30.0	25.0	20.0	16.0	12.0	9.0	5.0	4.0
(μmRa)				10.00	9.00	8.00	6.00	5.00	4.50	4.00	3.00	2.20	1.60	0.90	0.70
(VDI)				40	39	38	36	34	33	32	28	27	24	19	17
MC condition (E****)				4557	4556	4555	4554	4553	4552	4551	4596	4595	4594	4593	4592
Bottom remain (μm)				249	224	214	209	164	130	105	69	52	39	25	15
Side remain (μm)				215	190	165	130	110	105	95	58	43	28	16	10
Bottom gap (μm)				120	120	110	110	100	60	55	50	44	35	25	15
Side gap (μm)				60	60	55	55	50	45	40	35	29	25	15	10
Removal rate				-516	-674	-650	-637	-630	-624	-611	-746	-723	-713	-811	-928
Electrode wear (0.1%)				2	2	2	2	2	5	5	9	20	43	120	150
Time cont. area											□25	□20	□18	□14	□8
Minimum reduction per side by MC depth (μm)	2mm			225	200	175	140	120	110	100					
	5mm			240	210	185	150	130	120	110					
	10mm			260	230	200	160	140	130	120					
	15mm			280	250	220	175	150	140	130					
	20mm			305	270	235	185	160	150	140					
	40mm														
Min. spark area(mm)				□18	□10	□7	□6	□5	□5	□3	□2	□2			
Max. spark area(mm)															
Required option															

Model data No. : 55

Electrode material : Gr2

Electrode dimensions : □20~

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				48.0	40.0	32.0	30.0	26.0	19.0	16.0	12.0	10.0	8.0	5.0	4.0
(μmRa)				9.00	7.00	5.50	5.30	5.00	3.50	3.00	2.30	1.70	1.50	1.00	0.80
(VDI)				39	37	36	34	34	31	30	27	25	24	21	18
MC condition (E****)				4629	4628	4627	4626	4625	4729	4727	4725	4823	4925	4923	4922
Bottom remain (μm)				249	224	214	209	164	114	90	67	52	39	25	15
Side remain (μm)				175	160	150	145	110	80	68	52	40	28	16	10
Bottom gap (μm)				120	120	110	110	100	60	60	50	44	35	25	15
Side gap (μm)				60	60	55	55	50	35	35	30	27	25	15	10
Removal rate				-523	-519	-510	-691	-673	-628	-780	-731	-717	-870	-817	-806
Electrode wear (0.1%)				1	1	1	1	2	10	10	10	20	34	50	60
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm			225	200	175	140	120							
	5mm			240	210	185	150	130							
	10mm			260	230	200	160	140							
	15mm			280	250	220	175	150							
	20mm			305	270	235	185	160							
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 56

Electrode material : Gr1

Electrode dimensions : □20~40

Workpiece material : St

Finished roughness : 4μmRz

Selecting start MC condition	E No.
56 Standard	415*
156 Standard low wear	416*
256 Shallow high speed	414*
456 Deep high speed	417*
556 Deep low wear	418*
756 Deep narrow high speed	420*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	54.0	47.0	45.0	43.0	41.0	39.0	35.0	26.0	23.0	20.0	15.0	10.0	8.0	5.0	4.0
(μmRa)	10.50	10.30	10.20	9.00	8.00	7.00	6.00	5.00	4.50	4.00	2.50	1.80	1.60	0.90	0.70
(VDI)	40	40	40	39	38	37	36	34	33	32	28	25	24	19	17
MC condition (E****)	4157	4156	4155	4154	4153	4152	4151	4196	4195	4194	4193	4192	4191	4593	4592
Bottom remain (μm)	384	344	304	264	224	194	164	129	95	75	60	46	34	20	10
Side remain (μm)	242	222	202	182	162	142	122	92	64	50	40	31	23	8	0
Bottom gap (μm)	160	160	160	150	100	89	79	74	69	54	44	32	23	10	10
Side gap (μm)	80	80	80	75	70	60	50	43	38	33	28	16	14	4	0
Removal rate	-518	-517	-516	-513	-683	-647	-640	-634	-610	-752	-726	-711	-859	-811	-928
Electrode wear (0.1%)	0.5	0.5	0.5	0.5	0.5	1.7	1.7	3	7	13	17	52	60	120	150
Time cont. area											□35	□30	□25	*	*
Minimum reduction per side by MC depth (μm)	2mm	260	230	210	190	170	150	130							
	5mm	270	240	230	210	190	160	140							
	10mm	330	260	250	230	210	180	150							
	15mm	370	290	270	250	230	200	180							
	20mm	410	320	300	270	250	230	200							
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 57

Electrode material : Gr1

Electrode dimensions : □40~80

Workpiece material : St

Finished roughness : 4μmRz

Selecting start MC condition	E No.
57 Standard	415*
157 Standard low wear	416*
257 Shallow high speed	414*
457 Deep high speed	417*
557 Deep low wear	418*
757 Deep narrow high speed	420*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	54.0	47.0	45.0	43.0	41.0	39.0	35.0	26.0	23.0	20.0	15.0	10.0	8.0	5.0	4.0
(μmRa)	10.50	10.30	10.20	9.00	8.00	7.00	6.00	5.00	4.50	4.00	2.50	1.80	1.60	0.90	0.70
(VDI)	40	40	40	39	38	37	36	34	33	32	28	25	24	19	17
MC condition (E****)	4157	4156	4155	4154	4153	4152	4151	4196	4195	4194	4193	4192	4191	4593	4592
Bottom remain (μm)	379	339	299	259	219	189	159	124	90	70	55	41	29	15	5
Side remain (μm)	241	221	201	181	161	141	121	91	63	49	39	30	17	2	0
Bottom gap (μm)	160	160	160	150	100	86	74	69	64	49	39	27	21	8	5
Side gap (μm)	80	80	80	75	70	59	49	42	37	32	27	15	10	0	0
Removal rate	-518	-516	-517	-513	-683	-647	-640	-634	-610	-752	-726	-711	-859	-811	-928
Electrode wear (0.1%)	0.5	0.5	0.5	0.5	0.5	1.7	1.7	3	7	13	17	52	60	120	150
Time cont. area								□80	□60	□50	*	*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm	260	230	210	190	170	150	130							
	5mm	270	240	230	210	190	160	140							
	10mm	330	260	250	230	210	180	150							
	15mm	370	290	270	250	230	200	180							
	20mm	410	320	300	270	250	230	200							
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 58

Electrode material : Gr1

Electrode dimensions : □80~

Workpiece material : St

Finished roughness : 8μmRz

Selecting start MC condition	E No.
58 Standard	415*
158 Standard low wear	416*
258 Shallow high speed	414*
458 Deep high speed	417*
558 Deep low wear	418*
758 Deep narrow high speed	420*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		60.0	54.0	47.0	45.0	43.0	41.0	39.0	35.0	26.0	23.0	20.0	15.0	10.0	8.0
(μmRa)		11.00	10.50	10.30	10.20	9.00	8.00	7.00	6.00	5.00	4.50	4.00	2.50	1.80	1.60
(VDI)		41	40	40	40	39	38	37	36	34	33	32	28	25	24
MC condition (E****)		4158	4157	4156	4155	4154	4153	4152	4151	4196	4195	4194	4193	4192	4191
Bottom remain (μm)		407	367	327	287	247	207	177	147	112	78	58	44	29	17
Side remain (μm)		312	226	206	186	166	146	126	106	76	48	34	24	15	7
Bottom gap (μm)		125	125	125	125	115	82	67	57	52	47	37	27	22	17
Side gap (μm)		62	62	62	62	57	52	44	34	27	22	17	12	12	7
Removal rate		-524	-518	-516	-517	-513	-683	-647	-640	-634	-610	-752	-726	-711	-859
Electrode wear (0.1%)		0.5	0.5	0.5	0.5	0.5	0.5	1.7	1.7	3	7	13	17	52	60
Time cont. area		□250	□250	□200	□190	□160	□130	□90	*	*	*	*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm	400	260	230	210	190	170	150	130						
	5mm	450	270	240	230	210	190	160	140						
	10mm	480	330	260	250	230	210	180	150						
	15mm	510	370	290	270	250	230	200	180						
	20mm	560	410	320	300	270	250	230	200						
	40mm														
Min. spark area(mm)															
Max. spark area(mm)							□600	□500	□400	□400	□300	□250	□170	□140	□120
Required option															

Model data No. : 59

Electrode material : CuW

Electrode dimensions : □1~10

Workpiece material : St

Finished roughness : 1μmRz

Cavity type : Connector mold machining

※Ultra-precision machining circuit II (Optional equipment) is necessary for process No.15

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			30.0	20.0	17.0	14.0	11.0	10.0	9.0	8.0	6.0	4.0	3.0	2.0	1.0
(μmRa)			5.30	4.00	3.00	2.40	2.00	1.80	1.70	1.30	0.90	0.70	0.55	0.40	0.25
(VDI)			34	32	30	28	26	25	25	22	19	17	15	12	8
MC condition (E****)			6029	6028	6027	6026	6025	6024	6232	6231	6230	2805	2804	2803	2832
Bottom remain (μm)			185	140	105	79	59	44	36	30	18	10	8	5	1
Side remain (μm)			125	95	75	56	42	31	25	21	13	7	5	3	0
Bottom gap (μm)			100	80	60	50	40	30	20	16	12	9	8	5	1
Side gap (μm)			75	65	50	40	35	20	15	12	8	7	4	3	0
Removal rate			-752	-748	-724	-719	-713	-852	-841	-841	-838	-806	-944	-911	-906
Electrode wear (0.1%)			1.5	1.5	4	4	8	13	7	5	11	24	22	19	25
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm		110	90	65	60	55	40	30	25	20				
	5mm		125	95	70	65	60	50	40	35	25				
	10mm		140	105	80										
	15mm		150												
	20mm														
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option											Satin	Satin	Satin	Satin	UF

Model data No. : 60

Electrode material : CuW

Electrode dimensions : □3~10

Workpiece material : St

Finished roughness : 6μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					55.0	40.0	30.0	25.0	17.0	14.0	11.0	8.5	7.5	7.0	6.0
(μmRa)					10.50	7.00	5.30	4.50	3.00	2.40	2.00	1.60	1.40	1.30	1.10
(VDI)					40	37	34	33	30	28	26	24	23	22	21
MC condition (E****)					6008	6007	6006	6005	6207	6206	6205	6203	6202	6201	6200
Bottom remain (μm)					325	233	175	130	95	69	49	34	26	20	15
Side remain (μm)					212	162	123	93	68	49	35	24	18	14	10
Bottom gap (μm)					155	120	100	85	65	50	35	28	20	17	15
Side gap (μm)					130	110	75	60	50	40	25	18	14	11	10
Removal rate					-638	-624	-612	-607	-749	-732	-718	-849	-829	-817	-812
Electrode wear (0.1%)					1	1	1	1.1	6	8	11	15	18	20	21
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm				235	180	140	105	80	60					
	5mm				260	200	155	115	90	70					
	10mm				290	220	170	130	100						
	15mm				315	240	185	140							
	20mm				335	255	195	150							
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 61

Electrode material : CuW

Electrode dimensions : □10~

Workpiece material : St

Finished roughness : 6μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					55.0	40.0	30.0	25.0	17.0	14.0	11.0	8.5	7.5	7.0	6.0
(μmRa)					10.50	7.00	5.30	4.50	3.00	2.40	2.00	1.60	1.40	1.30	1.10
(VDI)					40	37	34	33	30	28	26	24	23	22	21
MC condition (E****)					6108	6107	6106	6105	6207	6206	6205	6203	6202	6201	6200
Bottom remain (μm)					325	233	175	130	95	69	49	34	26	20	15
Side remain (μm)					212	162	123	93	68	49	35	24	18	14	10
Bottom gap (μm)					155	120	100	85	65	50	35	28	20	17	15
Side gap (μm)					130	110	75	60	50	40	25	18	14	11	10
Removal rate					-675	-647	-624	-614	-749	-732	-718	-849	-829	-817	-812
Electrode wear (0.1%)					1	1	1	1.1	6	8	11	15	18	20	21
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm				235	180	140	105	80	60					
	5mm				260	200	155	115	90	70					
	10mm				290	220	170	130	100						
	15mm				315	240	185	140							
	20mm				335	255	195	150							
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 62

Electrode material : CuW

 Electrode dimensions : $\sim \square 5$

Workpiece material : St

 Finished roughness : 0.7 μ mRz

Cavity type : Connector mold machining

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μ mRz)										5.0	4.0	3.0	2.0	1.0	0.7
(μ mRa)										0.90	0.70	0.55	0.40	0.27	0.25
(VDI)										19	17	15	12	9	8
MC condition (E****)										6227	6226	6225	6224	6223	6222
Bottom remain (μ m)										29	21	16	11	7	3
Side remain (μ m)										24	16	12	8	5	2
Bottom gap (μ m)										20	15	10	8	4	2
Side gap (μ m)										15	12	8	6	3	1
Removal rate										-921	-944	-911	-910	-910	-906
Electrode wear (0.1%)										20	20	24	22	20	25
Time cont. area										$\square 8$	$\square 7$	$\square 7$	$\square 6$	$\square 5$	$\square 5$
Minimum reduction per side by MC depth (μ m)	2mm									25					
	5mm									25					
	10mm														
	15mm														
	20mm														
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option										Satin	Satin	Satin	Satin	Satin	UF

Model data No. : 63

Electrode material : CuW

 Electrode dimensions : $\square 1 \sim 10$

Workpiece material : St

 Finished roughness : 2 μ mRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μ mRz)				30.0	20.0	17.0	14.0	11.0	10.0	8.0	7.0	5.0	4.0	3.0	2.0
(μ mRa)				5.30	4.00	3.00	2.40	2.00	1.70	1.50	1.30	0.90	0.70	0.55	0.40
(VDI)				34	32	30	28	26	25	24	22	19	17	15	12
MC condition (E****)				6049	6048	6047	6046	6045	6044	6042	6041	2806	2805	2804	2803
Bottom remain (μ m)				185	140	105	79	59	44	36	30	18	10	8	5
Side remain (μ m)				110	90	65	56	42	31	25	21	13	7	5	3
Bottom gap (μ m)				100	80	60	50	40	30	20	16	12	9	8	5
Side gap (μ m)				75	65	50	40	35	20	15	12	8	7	4	3
Removal rate				-759	-732	-724	-715	-711	-849	-823	-997	-809	-806	-944	-911
Electrode wear (0.1%)				12	12	12	16	16	20	20	20	20	24	22	19
Time cont. area												$\square 8$	$\square 8$	$\square 6$	$\square 3$
Minimum reduction per side by MC depth (μ m)	2mm			110	90	65	60	50	35	30	25				
	5mm			125	95	70	65								
	10mm			140	105	80									
	15mm			150											
	20mm														
	40mm														
Min. spark area(mm)				$\square 11$	$\square 6$	$\square 5$	$\square 4$	$\square 3$	$\square 3$	$\square 2$	$\square 1$				
Max. spark area(mm)															
Required option												Satin	Satin	Satin	Satin

Model data No. : 64

Electrode material : CuW

Electrode dimensions : □1~3

Workpiece material : St

Finished roughness : 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				30.0	20.0	17.0	14.0	11.0	10.0	8.0	7.0	5.0	4.0	3.0	2.0
(μmRa)				5.30	4.00	3.00	2.40	2.00	1.70	1.50	1.30	0.90	0.70	0.55	0.40
(VDI)				34	32	30	28	26	25	24	22	19	17	15	12
MC condition (E****)				6029	6028	6027	6026	6025	6024	6022	6021	2806	2805	2804	2803
Bottom remain (μm)				185	140	105	79	59	44	36	30	18	14	9	5
Side remain (μm)				130	100	75	56	42	31	25	21	13	10	6	3
Bottom gap (μm)				100	80	60	50	40	30	20	16	12	9	8	5
Side gap (μm)				75	65	50	40	35	20	15	12	8	7	4	3
Removal rate				-752	-748	-724	-719	-713	-852	-822	-811	-809	-806	-944	-911
Electrode wear (0.1%)				1.5	1.5	4	4	8	13	14	15	20	24	22	19
Time cont. area												□8	□8	□6	□3
Minimum reduction per side by MC depth (μm)	2mm			110	90	65	60	50	35	30	25				
	5mm			125	95	70	65								
	10mm			140	105	80									
	15mm			150											
	20mm														
	40mm														
Min. spark area(mm)				□3	□3	□2	□2	□2	□1	□1					
Max. spark area(mm)															
Required option												Satin	Satin	Satin	Satin

Model data No. : 65

Electrode material : CuW

Electrode dimensions : □10~15

Workpiece material : St

Finished roughness : 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		55.0	40.0	30.0	25.0	17.0	14.0	11.0	8.5	7.5	7.0	5.0	4.0	3.0	2.0
(μmRa)		10.50	7.00	5.30	4.00	3.00	2.40	2.00	1.60	1.50	1.30	0.90	0.70	0.55	0.40
(VDI)		40	37	34	32	30	28	26	24	24	22	19	17	15	12
MC condition (E****)		6008	6007	6006	6005	6207	6206	6205	6203	6202	6201	2806	2805	2804	2803
Bottom remain (μm)		333	241	183	138	103	77	57	42	34	28	18	14	10	6
Side remain (μm)		217	167	128	98	73	54	40	29	23	19	10	7	5	3
Bottom gap (μm)		155	120	100	85	70	55	45	35	25	20	16	12	8	6
Side gap (μm)		135	110	75	60	50	40	30	20	15	12	8	6	4	3
Removal rate		-638	-624	-612	-607	-749	-732	-718	-849	-829	-817	-809	-806	-944	-911
Electrode wear (0.1%)		1	1	1	1.1	6	8	11	15	18	20	20	24	22	19
Time cont. area									□20	□17	□15	□8	□8	*	*
Minimum reduction per side by MC depth (μm)	2mm		240	185	145	110	90	60	50						
	5mm		265	205	160	120	95	70							
	10mm		300	230	175	135	105								
	15mm		320	250	190	145									
	20mm		340	265	200	155									
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option												Satin	Satin	Satin	Satin

Model data No. : 66

Electrode material : CuW

Electrode dimensions : □15~

Workpiece material : St

Finished roughness : 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		55.0	40.0	30.0	25.0	17.0	14.0	11.0	8.5	7.5	7.0	5.0	4.0	3.0	2.0
(μmRa)		10.50	7.00	5.30	4.50	3.00	2.40	2.00	1.60	1.50	1.30	0.90	0.70	0.55	0.40
(VDI)		40	37	34	33	30	28	26	24	24	22	19	17	15	12
MC condition (E****)		6108	6107	6106	6105	6207	6206	6205	6203	6202	6201	2826	2825	2824	2823
Bottom remain (μm)		336	244	186	141	106	80	60	45	37	31	18	14	10	6
Side remain (μm)		219	169	130	100	75	56	42	31	25	21	10	7	5	3
Bottom gap (μm)		155	120	100	85	70	55	45	35	25	20	16	12	8	6
Side gap (μm)		135	110	75	60	50	40	30	20	15	12	8	6	4	3
Removal rate		-675	-647	-624	-614	-749	-732	-718	-849	-829	-817	-818	-812	-987	-923
Electrode wear (0.1%)		1	1	1	1.1	6	8	11	15	18	20	20	24	22	19
Time cont. area								□30	□20	□17	□15	*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm		245	190	145	110	90	65	50						
	5mm		270	210	160	125	95	70							
	10mm		300	230	180	140	105								
	15mm		325	250	195	150									
	20mm		345	265	205	160									
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option												Satin	Satin	Satin	Satin

Model data No. : 67

Electrode material : CuW

Electrode dimensions : □30~50

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			50.0	40.0	30.0	25.0	22.0	18.0	15.0	12.0	10.0	8.0	6.0	5.0	4.0
(μmRa)			9.50	7.00	5.30	4.50	4.00	3.50	2.60	2.30	1.70	1.50	1.10	0.90	0.70
(VDI)			40	37	34	33	32	31	28	27	25	24	21	19	17
MC condition (E****)			6118	6117	6116	6115	6218	6217	6216	6215	6214	6213	6212	6211	6210
Bottom remain (μm)			274	217	171	142	121	99	81	64	51	36	25	16	8
Side remain (μm)			219	178	144	119	104	87	71	58	46	34	24	15	5
Bottom gap (μm)			60	55	45	30	20	20	20	15	15	15	11	9	8
Side gap (μm)			60	55	45	25	20	20	15	15	10	12	8	6	5
Removal rate			-654	-638	-621	-611	-795	-770	-746	-728	-717	-881	-842	-821	-981
Electrode wear (0.1%)			1.6	2.6	1.3	0.6	4.3	5.9	8.4	13	13	21	22	23	22
Time cont. area											□30	□30	□20	*	*
Minimum reduction per side by MC depth (μm)	2mm		245	200	160	135	120	100	85	70	55				
	5mm		270	220	180	150	130	110	90	75					
	10mm		305	250	205	170	150	125	105						
	15mm		330	270	220	180	160	135	110						
	20mm		350	285	230	195	170	145							
	40mm														
Min. spark area(mm)															
Max. spark area(mm)														□50	□25
Required option												Satin	Satin	Satin	Satin

Model data No. : 68

Electrode material : CuW

Electrode dimensions :

Workpiece material : Cu、CuW

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)								15.0	14.0	13.0	12.0	10.0	8.0	6.0	4.0
(μmRa)								2.80	2.60	2.40	2.30	1.70	1.50	1.10	0.70
(VDI)								30	29	28	27	25	24	21	17
MC condition (E****)								7328	7327	7326	7325	7324	7323	7322	7321
Bottom remain (μm)								100	78	59	43	30	20	13	10
Side remain (μm)								72	56	42	30	21	14	10	8
Bottom gap (μm)								42	38	33	28	22	18	13	10
Side gap (μm)								29	26	23	20	16	13	10	8
Removal rate								-650	-630	-600	-780	-750	-720	-700	-880
Electrode wear (0.1%)								13	11	11	14	18	19	22	11
Time cont. area												□20	□18	□15	□8
Minimum reduction per side by MC depth (μm)	2mm							80	65	50	40				
	5mm							90	75	60	45				
	10mm							110	105						
	15mm														
	20mm														
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option												Satin	Satin	Satin	Satin

Model data No. : 69

Electrode material : CuW

Electrode dimensions : □15~20

Workpiece material : WC

Finished roughness : 1. 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			16.0	14.0	13.0	11.0	9.5	8.0	6.5	5.5	4.5	3.5	2.5	1.6	1.2
(μmRa)			3.00	2.40	2.30	2.00	1.70	1.50	1.10	1.00	0.80	0.60	0.55	0.40	0.20
(VDI)			30	28	27	26	25	24	21	20	18	16	15	12	6
MC condition (E****)			7710	7709	7708	7707	7706	7705	7628	7627	7626	7625	7623	7631	7630
Bottom remain (μm)			102	85	77	64	53	43	34	26	19	14	10	7	4
Side remain (μm)			89	70	62	49	39	30	22	16	11	7	4	3	2
Bottom gap (μm)			80	70	50	40	30	25	20	15	13	10	7	5	4
Side gap (μm)			65	55	40	30	25	20	15	10	8	6	4	3	2
Removal rate			-614	-612	-788	-766	-722	-714	-859	-838	-818	-811	-929	-427	-425
Electrode wear (0.1%)			18	16	19	19	19	19	15	13	11	10	12	15	15
Time cont. area											*	*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm		95	90	85	60	40	30	25						
	5mm		105	100	90	70	50	35							
	10mm		115	110	105	75									
	15mm														
	20mm														
	40mm														
Min. spark area(mm)			□15	□15	□10										
Max. spark area(mm)															
Required option			WC	WC	WC	WC	WC	WC	Satin	Satin	Satin	Satin	Satin	UF	UF

Model data No. : 70

Electrode material : CuW

Electrode dimensions : ~□10

Workpiece material : WC

Finished roughness : 0.5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	13.0	11.0	9.5	8.0	6.5	5.5	4.5	3.5	2.5	1.6	1.2	0.9	0.7	0.6	0.5
(μmRa)	2.30	2.00	1.70	1.50	1.10	1.00	0.80	0.60	0.55	0.50	0.30	0.27	0.25	0.22	0.20
(VDI)	27	26	25	24	21	20	18	16	15	14	10	9	8	7	6
MC condition (E****)	7608	7607	7606	7605	7628	7627	7626	7625	7623	7621	7620	7638	7637	7636	7635
Bottom remain (μm)	79	66	55	45	36	28	21	16	12	9	5	4	3	2	1
Side remain (μm)	63	50	40	31	23	17	12	8	5	4	3	2	2	1	1
Bottom gap (μm)	50	40	30	25	20	15	13	10	7	5	4	3	2	2	1
Side gap (μm)	40	30	25	20	15	10	8	6	4	3	2	2	1	1	1
Removal rate	-788	-766	-744	-722	-859	-838	-818	-811	-929	-909	-903	-903	-902	-901	-901
Electrode wear (0.1%)	19	19	19	19	15	13	11	10	12	12	13	15	15	15	15
Time cont. area							□8	□6	□3	□2	□1	*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm	85	60	45	30	25									
	5mm	90	70	50	35										
	10mm	105	75												
	15mm														
	20mm														
	40mm														
Min. spark area(mm)															
Max. spark area(mm)										□9	□5	□5	□5	□5	□5
Required option	WC	WC	WC	WC	Satin	Satin	Satin	Satin	Satin	Satin	Satin	UF	UF	UF	UF

Model data No. : 71

Electrode material : CuW

Electrode dimensions : □3~15

Workpiece material : WC

Finished roughness : 2.5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)								13.0	11.0	9.5	8.0	6.5	5.5	3.5	2.5
(μmRa)								2.30	2.00	1.70	1.50	1.10	1.00	0.60	0.55
(VDI)								27	26	25	24	21	20	16	15
MC condition (E****)								7608	7607	7606	7605	7604	7603	7602	7601
Bottom remain (μm)								77	57	42	30	22	16	11	7
Side remain (μm)								74	54	39	27	19	13	8	5
Bottom gap (μm)								50	40	30	25	20	15	10	7
Side gap (μm)								40	30	25	20	15	10	8	5
Removal rate								-788	-766	-744	-722	-715	-866	-813	-985
Electrode wear (0.1%)								19	19	19	19	16	16	60	30
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm							85	60	45	30	25			
	5mm							90	70	50	35				
	10mm							105	75						
	15mm														
	20mm														
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option								WC	WC	WC	WC	WC	WC	WC	WC

Model data No. : 72

Electrode material : CuW

Electrode dimensions : □15~

Workpiece material : WC

Finished roughness : 3. 5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)						16.0	14.0	13.0	11.0	9.5	8.0	6.5	5.5	4.5	3.5
(μmRa)						3.00	2.40	2.30	2.00	1.70	1.50	1.10	1.00	0.80	0.60
(VDI)						30	28	27	26	25	24	21	20	18	16
MC condition (E****)						7710	7709	7708	7707	7706	7705	7704	7703	7702	7701
Bottom remain (μm)						87	82	77	57	42	30	22	16	11	7
Side remain (μm)						84	79	74	54	39	27	19	13	8	5
Bottom gap (μm)						80	70	50	40	30	25	20	15	10	7
Side gap (μm)						65	55	40	30	25	20	15	10	8	5
Removal rate						-614	-612	-788	-766	-722	-714	-877	-855	-813	-985
Electrode wear (0.1%)						18	16	19	19	19	19	16	16	60	30
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm					95	90	85	60	45	30	25			
	5mm					105	100	90	70	50	35				
	10mm					115	110	105	75						
	15mm														
	20mm														
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option						WC	WC	WC	WC	WC	WC	WC	WC	WC	WC

Model data No. : 73

Electrode material : CuW

Electrode dimensions : □3~15

Workpiece material : WC

Finished roughness : 1. 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					13.0	11.0	9.5	8.0	6.5	5.5	4.5	3.5	2.5	1.6	1.2
(μmRa)					2.30	2.00	1.70	1.50	1.10	1.00	0.80	0.60	0.55	0.50	0.30
(VDI)					27	26	25	24	21	20	18	16	15	14	10
MC condition (E****)					7608	7607	7606	7605	7628	7627	7626	7625	7623	7621	7620
Bottom remain (μm)					75	62	51	41	32	24	17	12	8	6	4
Side remain (μm)					62	49	39	30	22	16	11	7	4	3	2
Bottom gap (μm)					50	40	30	25	20	15	13	10	7	5	4
Side gap (μm)					40	30	25	20	15	10	8	6	4	3	2
Removal rate					-788	-766	-744	-722	-859	-838	-818	-811	-929	-909	-903
Electrode wear (0.1%)					19	19	19	19	15	13	11	10	12	12	13
Time cont. area									□18	□13	□8	□6	*	*	*
Minimum reduction per side by MC depth (μm)	2mm				85	60	45	30	25						
	5mm				90	70	50	35							
	10mm				105	75									
	15mm														
	20mm														
	40mm														
Min. spark area(mm)															
Max. spark area(mm)													□15	□9	□5
Required option					WC	WC	WC	WC	Satin	Satin	Satin	Satin	Satin	Satin	Satin

Model data No. : 74

Electrode material : CuW

Electrode dimensions : □15~

Workpiece material : WC

Finished roughness : 1. 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			16.0	14.0	13.0	11.0	9.5	8.0	6.5	5.5	4.5	3.5	2.5	1.6	1.2
(μmRa)			3.00	2.40	2.30	2.00	1.70	1.50	1.10	1.00	0.80	0.60	0.55	0.35	0.30
(VDI)			30	28	27	26	25	24	21	20	18	16	15	11	10
MC condition (E****)			7710	7709	7708	7707	7706	7705	7628	7627	7626	7625	7623	7621	7620
Bottom remain (μm)			102	85	77	64	53	43	34	26	19	14	10	7	4
Side remain (μm)			89	70	62	49	39	30	22	16	11	7	4	3	2
Bottom gap (μm)			80	70	50	40	30	25	20	15	13	10	7	5	4
Side gap (μm)			65	55	40	30	25	20	15	10	8	6	4	3	2
Removal rate			-614	-612	-788	-766	-722	-714	-859	-838	-818	-811	-929	-909	-903
Electrode wear (0.1%)			18	16	19	19	19	19	15	13	11	10	12	12	12
Time cont. area					□90	□80	□50	□25	□18	□13	*	*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm		95	90	85	60	40	30	25						
	5mm		105	100	90	70	50	35							
	10mm		115	110	105	75									
	15mm														
	20mm														
	40mm														
Min. spark area(mm)															
Max. spark area(mm)									□110	□80	□50	□40	□15	□9	□5
Required option			WC	WC	WC	WC	WC	WC	Satin	Satin	Satin	Satin	Satin	Satin	Satin

Model data No. : 75

Electrode material : Cu

Electrode dimensions : □1~5

Workpiece material : St

Finished roughness : 1μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			38.0	32.0	21.0	15.0	10.0	8.0	8.0	6.0	5.0	4.0	3.0	2.0	1.0
(μmRa)			7.00	5.50	4.00	2.40	1.70	1.50	1.50	1.10	0.90	0.70	0.55	0.40	0.27
(VDI)			37	35	32	28	25	24	24	21	19	17	15	12	9
MC condition (E****)			1028	1027	1026	1025	1024	1023	2114	2113	2112	2806	2805	2804	2803
Bottom remain (μm)			172	152	132	92	72	57	45	37	30	23	17	11	6
Side remain (μm)			123	105	87	71	55	48	33	26	21	16	12	9	5
Bottom gap (μm)			110	90	70	55	45	35	31	25	20	16	12	9	6
Side gap (μm)			80	65	50	40	30	28	21	15	11	9	8	6	5
Removal rate			-611	-741	-729	-713	-839	-821	-835	-824	-819	-809	-806	-944	-911
Electrode wear (0.1%)			0.1	0.1	0.5	0.5	0.5	0.5	7	7	12	20	24	22	19
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm		140	120	100	80	65	55							
	5mm		150	130	110	90	70	60							
	10mm		170	145	120	100	75	70							
	15mm		185	155	130	105									
	20mm		195	165	140										
	40mm														
Min. spark area(mm)			□5	□4	□2	□1									
Max. spark area(mm)															
Required option												Satin	Satin	Satin	Satin

Model data No. : 76

Electrode material : Cu

Electrode dimensions : □3~10

Workpiece material : St

Finished roughness : 1μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	36.0	28.0	21.0	16.0	14.0	12.0	10.0	9.0	8.0	6.0	5.0	4.0	3.0	2.0	1.0
(μmRa)	6.00	5.00	4.00	3.00	2.30	2.00	1.70	1.60	1.50	1.10	0.90	0.70	0.55	0.40	0.27
(VDI)	36	34	32	30	27	26	25	25	24	21	19	17	15	12	9
MC condition (E****)	1007	1006	1005	1004	1003	1002	1001	1000	2115	2113	2112	2806	2805	2804	2803
Bottom remain (μm)	253	218	179	140	120	97	80	66	51	39	30	21	17	12	8
Side remain (μm)	149	139	111	86	71	62	52	43	35	26	21	15	12	8	5
Bottom gap (μm)	110	95	80	65	52	48	45	40	31	25	20	19	14	10	8
Side gap (μm)	85	75	55	47	40	35	30	25	21	15	11	10	9	7	5
Removal rate	-612	-764	-749	-734	-716	-876	-840	-834	-852	-824	-819	-809	-806	-944	-911
Electrode wear (0.1%)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	7	7	12	20	24	22	19
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm	160	150	120	100	80	70	65							
	5mm	175	165	130	100	85	75	70							
	10mm	195	180	130	105	90									
	15mm	210	195	140	110	100									
	20mm	225	205	150	120										
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option												Satin	Satin	Satin	Satin

Model data No. : 77

Electrode material : Cu

Electrode dimensions : □5~15

Workpiece material : St

Finished roughness : 1μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	36.0	28.0	21.0	16.0	14.0	12.0	10.0	10.0	8.0	6.0	5.0	4.0	3.0	2.0	1.0
(μmRa)	6.00	5.00	4.00	3.00	2.40	2.30	1.70	1.70	1.50	1.10	0.90	0.70	0.55	0.40	0.27
(VDI)	36	34	32	30	28	27	25	25	24	21	19	17	15	12	9
MC condition (E****)	1207	1206	1205	1204	1003	1002	1001	2116	2114	2113	2112	2806	2805	2804	2803
Bottom remain (μm)	234	199	154	124	104	91	79	65	48	38	29	21	17	12	8
Side remain (μm)	147	137	112	87	70	59	52	45	32	25	20	15	12	8	5
Bottom gap (μm)	110	95	80	65	52	48	45	40	31	25	20	19	14	10	8
Side gap (μm)	85	75	55	47	40	35	30	25	21	15	11	10	9	7	5
Removal rate	-622	-612	-777	-749	-716	-876	-840	-714	-835	-824	-819	-809	-806	-944	-911
Electrode wear (0.1%)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2	7	7	12	20	24	22	19
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm	155	145	120	100	80	70	65							
	5mm	170	160	135	105	85	75	75							
	10mm	190	180	145	110	90									
	15mm	205	190	155	120	100									
	20mm	220	205	165	125										
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option												Satin	Satin	Satin	Satin

Model data No. : 78

Electrode material : Cu

Electrode dimensions : □10~25

Workpiece material : St

Finished roughness : 1μmRz

Selecting start MC condition	E No.
78 Standard low wear	130*
178 Additional low wear	160*
278 Retract low wear	150*
378 Standard wear	130*
478 Additional wear	160*
578 Retract wear	150*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	55.0	45.0	40.0	30.0	21.0	16.0	12.0	10.0	8.0	6.0	5.0	4.0	3.0	2.0	1.0
(μmRa)	10.00	9.00	7.00	5.30	4.00	2.40	2.00	1.70	1.50	1.10	0.90	0.70	0.55	0.40	0.27
(VDI)	40	39	37	34	32	28	26	25	24	21	19	17	15	12	9
MC condition (E****)	1309	1308	1307	1306	1205	2318	2317	2316	2315	2314	2313	2826	2825	2824	2823
Bottom remain (μm)	300	250	200	155	115	85	65	53	43	35	28	22	16	12	8
Side remain (μm)	216	176	156	131	101	66	49	39	29	24	20	15	13	11	5
Bottom gap (μm)	155	135	120	100	80	55	50	40	30	25	20	19	14	10	8
Side gap (μm)	135	120	110	75	55	38	30	25	20	15	11	10	9	7	5
Removal rate	-648	-633	-622	-614	-777	-770	-721	-714	-873	-852	-845	-818	-812	-987	-923
Electrode wear (0.1%)	0.1	0.1	0.1	0.1	0.1	3	3	3	6	6	9	20	24	22	19
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm	240	195	175	145	115									
	5mm	265	215	190	160	125									
	10mm	295	240	215	180	140									
	15mm	320	260	230	195	150									
	20mm	340	280	245	210	160									
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option												Satin	Satin	Satin	Satin

Model data No. : 79

Electrode material : Cu

Electrode dimensions : □50~100

Workpiece material : St

Finished roughness : 5μmRz

Selecting start MC condition	E No.
79 Standard low wear	130*
179 Additional low wear	160*
279 Retract low wear	150*
379 Standard wear	130*
479 Additional wear	160*
579 Retract wear	150*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	80.0	70.0	55.0	45.0	40.0	30.0	24.0	18.0	16.0	13.5	11.5	10.0	8.0	6.0	5.0
(μmRa)	12.50	11.50	10.00	9.50	7.00	5.30	4.50	3.50	3.00	2.40	2.30	1.70	1.50	1.10	0.90
(VDI)	42	41	40	39	37	34	33	31	30	28	27	25	24	21	19
MC condition (E****)	1312	1311	1309	1308	1307	1306	1305	1304	1703	1702	1701	2621	2926	2925	2924
Bottom remain (μm)	541	461	281	216	186	151	121	101	88	76	66	41	28	15	5
Side remain (μm)	360	310	217	177	157	132	102	82	69	57	47	27	19	11	5
Bottom gap (μm)	250	200	155	135	120	100	85	65	55	45	35	30	25	15	5
Side gap (μm)	200	170	135	120	110	75	60	55	50	40	30	26	19	11	5
Removal rate	-514	-698	-648	-633	-622	-614	-784	-749	-722	-714	-882	-724	-710	-877	-838
Electrode wear (0.1%)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6	1.7	12	36	32	29
Time cont. area													*	*	*
Minimum reduction per side by MC depth (μm)	2mm	400	345	240	195	175	150	115	95						
	5mm	440	380	265	220	195	165	125	100						
	10mm	490	425	295	245	215	180	140	115						
	15mm	530	460	320	260	235	195	150	125						
	20mm	565	485	340	280	245	210	160	130						
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option													Satin	Satin	Satin

Model data No. : 80

Electrode material : Gr

Electrode dimensions :

Workpiece material : HR750

Finished roughness : 8μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)						62.0	52.0	45.0	40.0	31.0	27.0	18.0	14.0	10.0	8.0
(μmRa)						11.00	9.50	8.50	7.00	5.60	5.00	3.50	2.40	1.70	1.50
(VDI)						41	40	39	37	35	34	31	28	25	24
MC condition (E****)						8739	8738	8737	8736	8735	8734	8733	8732	8731	8730
Bottom remain (μm)						500	300	200	155	120	90	65	45	30	20
Side remain (μm)						450	293	225	183	143	105	75	50	29	15
Bottom gap (μm)						147	135	129	87	77	65	42	32	25	20
Side gap (μm)						90	75	71	50	43	41	31	25	23	15
Removal rate						-675	-629	-622	-611	-775	-745	-752	-721	-713	-873
Electrode wear (0.1%)						20	30	35	40	45	50	20	26	30	50
Time cont. area													□100	□80	□50
Minimum reduction per side by MC depth (μm)	2mm					500	300	250	200	150	120				
	5mm					500	300	250	200	150	120				
	10mm					500	300	250	200	150	130				
	15mm					520	320	265	215	160	130				
	20mm					540	340	280	230	170	140				
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 81

Electrode material : Cu

Electrode dimensions : □3~10

Workpiece material : Al

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)						55.0	49.0	31.0	24.5	19.0	13.5	10.0	8.0	6.0	4.0
(μmRa)						10.00	9.50	5.30	4.50	3.50	2.40	1.70	1.50	1.10	0.70
(VDI)						40	40	34	33	31	28	25	24	21	17
MC condition (E****)						8115	8114	8113	8112	8217	8216	8215	8214	8213	8212
Bottom remain (μm)						190	155	115	82	60	46	34	24	17	12
Side remain (μm)						165	135	100	72	51	39	31	24	18	13
Bottom gap (μm)						99	82	64	49	35	29	25	19	15	12
Side gap (μm)						87	69	48	39	31	26	22	19	16	13
Removal rate						-612	-773	-737	-721	-712	-877	-833	-817	-810	-933
Electrode wear (0.1%)						0.5	0.5	0.5	1	1.5	2	4	5	6	8
Time cont. area											□12	□9	□7	□5	□3
Minimum reduction per side by MC depth (μm)	2mm					190	160	120	85	60					
	5mm					220	180	140	105	75					
	10mm					250	220	170							
	15mm														
	20mm														
	40mm														
Min. spark area(mm)						□8	□6	□4	□3						
Max. spark area(mm)															
Required option															

Model data No. : 82

Electrode material : Cu

Electrode dimensions :

Workpiece material : Al

 Finished roughness : 7 μ mRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μ mRz)			110.0	85.0	64.0	52.0	47.0	40.0	32.0	20.0	13.0	12.0	9.0	8.0	7.0
(μ mRa)			18.00	13.00	11.00	9.50	9.00	7.00	5.50	4.00	2.40	2.30	1.70	1.50	1.10
(VDI)			45	42	41	40	39	37	35	32	28	27	25	24	21
MC condition (E****)			8108	8107	8106	8105	8104	8103	8102	8207	8206	8205	8204	8203	8202
Bottom remain (μ m)			701	601	376	294	254	206	145	96	73	59	44	36	30
Side remain (μ m)			444	381	265	215	190	159	121	77	56	44	31	25	20
Bottom gap (μ m)			310	265	215	185	170	155	114	76	61	59	42	37	30
Side gap (μ m)			258	215	175	150	135	120	80	55	44	42	29	25	20
Removal rate			-541	-528	-516	-698	-678	-652	-627	-613	-792	-757	-728	-722	-720
Electrode wear (%)			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	1	1	3	3	5
Time cont. area					□140	□110	□90	□80	□40	□30	□19	□15	□11	□10	□10
Minimum reduction per side by MC depth (μ m)	2mm		520	450	310	250	225	190	140	90					
	5mm		590	510	355	285	250	210	160	100					
	10mm		660	560	400	320	280	235	175	110					
	15mm		700	600	425	345	305	250	190	120					
	20mm		740	640	455	370	320	270	205	130					
	40mm														
Min. spark area(mm)			□25	□20	□14	□11	□9								
Max. spark area(mm)									□190	□160	□90	□70	□60	□50	□50
Required option															

Model data No. : 83

Electrode material : Gr1

Electrode dimensions :

Workpiece material : Al

 Finished roughness : 11 μ mRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μ mRz)		120.0	110.0	100.0	96.0	92.0	65.0	60.0	48.0	37.0	21.0	20.0	17.0	15.0	11.0
(μ mRa)		20.00	18.00	16.00	15.00	13.50	12.00	11.00	9.00	7.00	4.10	4.00	3.00	2.60	2.00
(VDI)		46	45	44	44	43	42	41	39	37	32	32	30	28	26
MC condition (E****)		8507	8506	8505	8504	8503	8609	8608	8607	8606	8605	8604	8603	8602	8601
Bottom remain (μ m)		640	614	549	497	445	315	211	146	100	85	68	56	44	34
Side remain (μ m)		619	589	514	379	349	259	184	139	101	86	67	56	46	37
Bottom gap (μ m)		230	230	230	225	210	140	135	110	85	70	65	54	44	34
Side gap (μ m)		290	290	290	285	260	175	160	125	95	80	67	56	46	37
Removal rate		-413	-411	-576	-549	-532	-525	-515	-698	-647	-629	-617	-798	-759	-739
Electrode wear (%)		0.5	0.4	0.8	0.5	0.5	1	1	2	3	3	3	5	6	10
Time cont. area					□200	□160	□140	□90	□90	□50	□30	□25	□20	□15	□15
Minimum reduction per side by MC depth (μ m)	2mm		685	650	565	420	385	285	205	155	115				
	5mm		755	715	625	460	425	315	225	170	125				
	10mm		840	800	700	515	475	355	250	190	140				
	15mm		910	865	755	560	515	380	270	205	150				
	20mm		965	920	800	590	545	405	290	220	160				
	40mm														
Min. spark area(mm)		□50	□40	□25	□20	□20	□20	□13	□13	□7					
Max. spark area(mm)										□250	□160	□120	□100	□70	□70
Required option															

Model data No. : 84

Electrode material : Cu

Electrode dimensions :

Workpiece material : ZAS

Finished roughness : 9μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			140.0	110.0	95.0	82.0	60.0	50.0	40.0	24.0	19.0	17.0	11.0	10.0	9.0
(μmRa)			23.00	18.00	15.00	13.00	11.00	9.50	7.00	4.50	3.50	3.00	2.00	1.70	1.60
(VDI)			47	45	44	42	41	40	37	33	31	30	26	25	24
MC condition (E****)			8308	8307	8306	8305	8304	8303	8302	8407	8406	8405	8404	8403	8402
Bottom remain (μm)			985	845	530	414	358	292	206	138	105	85	64	54	45
Side remain (μm)			629	541	378	308	273	230	177	116	86	69	51	42	35
Bottom gap (μm)			365	315	275	240	210	185	146	106	89	87	59	57	45
Side gap (μm)			310	260	225	190	170	146	114	78	67	63	42	40	35
Removal rate			-549	-537	-525	-518	-514	-698	-657	-622	-617	-613	-753	-745	-736
Electrode wear (%)			0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.5	0.8
Time cont. area				□200	□140	□110	□90	□80	□40	□30	□19	□15	□11	□10	□10
Minimum reduction per side by MC depth (μm)	2mm		740	640	450	360	320	270	200	130	95				
	5mm		840	720	510	410	360	300	230	150	110				
	10mm		940	800	570	460	400	340	250	165	120				
	15mm		1000	860	610	490	440	360	270	175	130				
	20mm		1060	920	650	530	460	390	290	190	140				
	40mm														
Min. spark area(mm)			□25	□20	□14	□11	□9	□8	□6						
Max. spark area(mm)									□200	□160	□90	□80	□60	□50	□50
Required option															

Model data No. : 85

Electrode material : Gr1

Electrode dimensions :

Workpiece material : ZAS

Finished roughness : 15μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		98.0	94.0	85.0	82.0	80.0	52.0	48.0	39.0	30.0	30.0	29.0	23.0	21.0	15.0
(μmRa)		16.00	15.00	13.50	13.20	12.50	9.50	9.00	7.00	5.50	5.50	5.30	4.50	4.00	2.60
(VDI)		44	44	43	42	42	40	39	37	35	35	34	33	32	28
MC condition (E****)		8707	8706	8705	8704	8703	8809	8808	8807	8806	8805	8804	8803	8802	8801
Bottom remain (μm)		838	733	658	598	538	388	268	193	141	123	103	90	76	64
Side remain (μm)		705	560	525	390	360	270	195	150	112	97	86	75	65	56
Bottom gap (μm)		200	200	200	200	200	200	176	159	130	123	103	90	76	64
Side gap (μm)		150	150	150	150	150	148	129	117	98	96	86	75	65	56
Removal rate		-414	-574	-561	-545	-536	-525	-520	-512	-657	-645	-629	-616	-612	-749
Electrode wear (%)		0.8	0.7	0.8	0.7	0.4	2	2	3	5	2	2	4	4	9
Time cont. area					□200	□160	□140	□90	□90	□50	□30	□25	□20	□15	□15
Minimum reduction per side by MC depth (μm)	2mm		780	620	580	430	400	300	215	165	125				
	5mm		860	680	640	475	440	330	240	185	140				
	10mm		960	760	715	530	490	370	265	205	155				
	15mm		1035	825	770	575	530	400	290	220	165				
	20mm		1100	875	820	610	560	420	305	235	175				
	40mm														
Min. spark area(mm)		□50	□40	□30	□25	□20	□20	□13	□13						
Max. spark area(mm)										□250	□160	□120	□100	□70	□70
Required option															

Model data No. : 86

Electrode material : Cu

Electrode dimensions :

Workpiece material : Copper Alloy

Finished roughness : 2. 5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	48.0	45.0	40.0	35.0	28.0	23.0	20.0	15.0	12.0	8.0	6.0	5.0	4.0	3.0	2.5
(μmRa)	9.50	9.00	7.00	6.00	5.00	4.50	4.00	2.60	2.30	1.50	1.10	0.90	0.70	0.55	0.50
(VDI)	40	39	37	36	34	33	32	28	27	24	21	19	17	15	14
MC condition (E****)	8088	8087	8086	8085	8084	8083	8082	8081	8080	8097	8096	8095	8094	8093	8092
Bottom remain (μm)	540	456	276	221	196	156	131	106	76	52	39	30	19	14	10
Side remain (μm)	355	305	205	175	155	125	105	85	59	39	28	21	12	8	5
Bottom gap (μm)	390	330	270	220	190	150	130	105	75	50	35	30	19	14	10
Side gap (μm)	250	200	150	130	110	80	70	60	40	30	25	20	14	8	5
Removal rate	-515	-681	-647	-631	-617	-610	-766	-744	-728	-710	-710	-876	-838	-831	-825
Electrode wear (%)	2	0.5	0.9	0.9	1.3	1.5	1	0.8	1	3	4	4	8	8	14
Time cont. area					□140	□110	□90	□80	□40	□30	□19	□15	□11	□10	□10
Minimum reduction per side by MC depth (μm)	2mm	410	350	240	200	180	150	130	100	70					
	5mm	440	380	270	220	200	170	140	105	75					
	10mm	490	420	300	230	210	185	150	110						
	15mm	530	455	320	250	220	200	160							
	20mm	560	490	340	260	230	210	170							
	40mm														
Min. spark area(mm)	□50	□40	□25	□20	□14	□11	□9	□8	□6						
Max. spark area(mm)									□190	□160	□90	□70	□60	□50	□50
Required option															

Model data No. : 87

Electrode material : Cu

Electrode dimensions :

Workpiece material : Bs

Finished roughness : 5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)						93.0	84.0	72.0	54.0	35.0	29.0	17.0	9.0	6.0	5.0
(μmRa)						15.00	13.00	12.00	10.00	6.00	5.00	3.00	1.60	1.10	0.90
(VDI)						44	42	42	40	36	34	30	24	21	19
MC condition (E****)						8228	8227	8226	8225	8224	8223	8222	8327	8326	8325
Bottom remain (μm)						288	261	206	161	133	113	90	65	45	30
Side remain (μm)						230	207	169	134	116	98	73	44	29	20
Bottom gap (μm)						270	210	180	135	130	105	70	45	40	30
Side gap (μm)						180	145	120	90	85	70	45	30	25	20
Removal rate						-575	-542	-536	-519	-513	-683	-653	-625	-612	-789
Electrode wear (%)						0.4	0.5	0.5	0.3	0.5	0.2	0.7	7	2	3
Time cont. area								□140	□110	□90	□80	□60	□30	□19	□15
Minimum reduction per side by MC depth (μm)	2mm					250	230	185	150	130	110	80			
	5mm					280	250	200	160	140	120	90			
	10mm					320	290	240	190	160	140				
	15mm					340	310	253	200	170					
	20mm					370	330	270	215	190					
	40mm														
Min. spark area(mm)						□25	□20	□14	□11	□9	□8	□6			
Max. spark area(mm)													□160	□90	□70
Required option															

Model data No. : 88

Electrode material : Cu

Electrode dimensions :

Workpiece material : CuBe

Finished roughness : 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		40.0	30.0	21.0	18.0	15.0	13.0	10.0	9.0	7.0	6.0	5.0	4.0	3.0	2.0
(μmRa)		7.00	5.50	4.00	3.50	2.60	2.30	1.70	1.60	1.30	1.10	0.90	0.70	0.60	0.50
(VDI)		37	35	32	31	28	27	25	24	22	21	19	17	16	14
MC condition (E****)		8428	8427	8426	8425	8424	8423	8422	8421	8420	8526	8525	8524	8523	8522
Bottom remain (μm)		280	240	208	173	128	98	78	65	55	44	31	25	20	15
Side remain (μm)		210	170	130	120	95	70	53	42	38	33	21	15	11	7
Bottom gap (μm)		150	125	110	95	80	65	52	48	45	40	31	25	20	15
Side gap (μm)		125	100	85	75	55	47	40	35	30	25	21	15	11	7
Removal rate		-627	-618	-613	-777	-752	-733	-716	-711	-873	-713	-866	-852	-849	-823
Electrode wear (%)		0.8	0.9	0.8	0.6	0.8	0.8	0.7	0.8	1	3	5	5	7	23
Time cont. area			□70	□60	□50	□40	□30	□25	□25	□19	□15	□11	□10	□10	□10
Minimum reduction per side by MC depth (μm)	2mm		225	190	140	130	105	80	70	60	55				
	5mm		255	210	160	150	120	90	80	75	70				
	10mm		285	235	180	165	130	95	90	85					
	15mm		305	255	195	180	140	105	95						
	20mm		325	270	205	190	150	110							
	40mm														
Min. spark area(mm)		□14	□11	□9	□8	□6	□5	□4	□3						
Max. spark area(mm)										□90	□70	□60	□50	□50	□50
Required option															

Model data No. : 89

Electrode material : Gr1

Electrode dimensions :

Workpiece material : Copper Alloy

Finished roughness : 8μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		55.0	54.0	53.0	42.0	40.0	36.0	33.0	21.0	19.0	14.0	12.0	11.0	10.0	8.0
(μmRa)		10.10	10.00	9.90	9.00	7.00	6.00	5.50	4.00	3.50	2.40	2.30	2.00	1.70	1.50
(VDI)		40	40	40	39	37	36	35	32	31	28	27	26	25	24
MC condition (E****)		8747	8746	8745	8744	8743	8742	8741	8757	8756	8755	8754	8753	8752	8751
Bottom remain (μm)		454	433	384	335	300	272	244	174	142	107	80	66	52	42
Side remain (μm)		355	334	285	236	201	172	144	102	74	54	39	32	25	21
Bottom gap (μm)		140	126	112	112	112	112	112	112	105	70	70	60	49	42
Side gap (μm)		70	63	56	56	56	56	56	56	53	35	35	28	24	21
Removal rate		-566	-551	-523	-676	-649	-631	-619	-619	-616	-794	-744	-722	-713	-894
Electrode wear (%)		5	5	6	5	6	6	7	30	25	40	60	45	40	70
Time cont. area						□250	□200	□160	□140	□90	□90	□50	□30	□25	□20
Minimum reduction per side by MC depth (μm)	2mm		330	310	300	250	215	145							
	5mm		365	345	330	270	235	170							
	10mm		405	380	370	295	255	185							
	15mm		440	410	400	320	280	200							
	20mm		475	440	430	350	305	215							
	40mm														
Min. spark area(mm)		□90	□70	□50	□40	□25	□20	□17	□17	□13					
Max. spark area(mm)												□250	□160	□120	□100
Required option		160A	160A												

Model data No. : 1000

Electrode material : Cu

Electrode dimensions : □5~30

Workpiece material : St

Finished roughness : 1μmRz

Cavity type : Flower pattern

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				19.0	13.0	11.0	10.0	9.0	8.0	7.0	6.0	5.0	3.0	1.0	
(μmRa)				2.60	2.20	1.80	1.60	1.40	1.20	1.00	0.80	0.60	0.40	0.20	
(VDI)				28	27	25	24	23	22	20	18	16	12	6	
MC condition (E****)				3911	3910	3909	3908	3907	3906	3905	3904	3903	3902	3901	
Bottom remain (μm)				49	38	35	31	24	20	16	13	9	5	4	
Side remain (μm)				36	25	24	21	15	12	10	8	5	5	4	
Bottom gap (μm)				20	17	16	15	17	15	12	9	6	4	2	
Side gap (μm)				17	11	11	11	12	10	8	6	4	4	2	
Removal rate															
Electrode wear (%)															
Time cont. area				*	*	*	*	*	*	*	*	*	*	*	
Minimum reduction per side by MC depth (μm)	2mm														
	5mm														
	10mm														
	15mm														
	20mm														
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 1001

Electrode material : Cu

Electrode dimensions : ~□10

Workpiece material : St

Finished roughness : 0.5μmRz

Cavity type : Connector mold machining (High speed)

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			30.0	21.0	16.0	12.0	10.0	8.0	6.0	5.0	3.0	2.0	1.0	0.7	0.5
(μmRa)			5.00	4.00	3.00	2.30	1.50	1.10	1.00	0.70	0.50	0.40	0.30	0.20	0.20
(VDI)			34	32	30	27	25	24	21	19	15	12	9	8	6
MC condition (E****)			2043	2042	2041	2040	2039	2038	2037	2036	2035	2034	2033	2032	2031
Bottom remain (μm)			149	109	79	59	47	38	31	22	16	12	9	6	4
Side remain (μm)			133	99	67	51	41	31	25	18	14	10	8	6	4
Bottom gap (μm)			100	80	55	50	38	25	18	15	12	9	8	6	4
Side gap (μm)			75	55	38	30	25	19	15	10	8	7	6	5	4
Removal rate			-623	-617	-770	-721	-712	-825	-953	-818	-812	-987	-923	-906	-903
Electrode wear (%)			1	3	3	3	3	3	10	20	24	22	19	25	30
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm		150	120	80	60	50	40	30	20					
	5mm														
	10mm														
	15mm														
	20mm														
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option										Satin	Satin	Satin	Satin	UF	UF

Model data No. : 1002

Electrode material : Cu

Electrode dimensions : ~□10

Workpiece material : St

Finished roughness : 0. 5μmRz

Cavity type : Connector mold machining (Low wear)

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			30.0	21.0	16.0	12.0	10.0	8.0	6.0	5.0	3.0	2.0	1.0	0.7	0.5
(μmRa)			5.00	4.00	3.00	2.30	1.50	1.10	1.00	0.70	0.50	0.40	0.30	0.20	0.20
(VDI)			34	32	30	27	25	24	21	19	15	12	9	8	6
MC condition (E****)			2063	2062	2061	2060	2059	2058	2057	2056	2055	2054	2053	2052	2051
Bottom remain (μm)			153	113	83	63	51	42	34	24	17	13	9	6	4
Side remain (μm)			137	103	72	55	45	35	28	20	15	11	8	6	4
Bottom gap (μm)			100	80	55	50	38	25	18	15	12	9	8	6	4
Side gap (μm)			75	55	38	30	25	19	15	10	8	7	6	5	4
Removal rate			-764	-762	-714	-712	-816	-987	-956	-818	-812	-987	-923	-906	-903
Electrode wear (%)			0.1	0.5	0.5	1	2	3	4	20	24	22	19	25	30
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm		150	120	80	60	50	40	30	20					
	5mm														
	10mm														
	15mm														
	20mm														
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option										Satin	Satin	Satin	Satin	UF	UF

Model data No. : 1011

Electrode material : Cu

Electrode dimensions : ~□5

Workpiece material : St

Finished roughness : 0. 5μmRmax

Cavity type : Open side machining

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		40.0	30.0	21.0	15.0	12.0	9.0	7.0	5.0	4.0	3.0	2.0	1.0	0.7	0.5
(μmRa)		7.00	5.00	4.00	2.60	2.30	1.70	1.50	0.70	0.50	0.40	0.30	0.20	0.10	0.10
(VDI)		37	34	32	28	26	24	21	19	17	15	12	9	8	6
MC condition (E****)		2077	2076	2075	2074	2073	2072	2071	2097	2096	2095	2094	2093	2092	2091
Bottom remain (μm)		195	152	121	95	72	56	41	26	17	12	8	5	3	1
Side remain (μm)		150	120	100	80	60	50	36	21	14	10	6	3	2	1
Bottom gap (μm)		120	95	75	55	41	30	25	19	15	9	6	4	3	1
Side gap (μm)		100	75	65	45	37	27	22	15	11	7	5	3	2	1
Removal rate		-755	-750	-712	-710	-726	-816	-987	-848	-812	-987	-923	-906	-903	-903
Electrode wear (%)		1.5	2	2	2	3	5	7	20	25	30	200	250	300	300
Time cont. area											*	*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm		150	120	100	80	60	50	40	30	20				
	5mm														
	10mm														
	15mm														
	20mm														
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option													Satin	UF	UF

Model data No. : 1043

Selecting start MC condition	E No.
1043 Standard	548*
1143 Standard low wear	547*

Electrode material : Gr2

Rib length : ~30mm

Workpiece material : St

Finished roughness : 4μmRmax

Cavity type : Rib machining (Low wear)

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		54.0	47.0	45.0	39.0	35.0	29.0	25.0	20.0	18.0	14.0	10.0	8.0	5.0	4.0
(μmRa)		10.00	7.80	7.50	6.90	6.40	5.20	4.50	4.00	3.10	2.20	1.60	1.10	0.90	0.70
(VDI)		40	39	38	37	36	34	33	32	30	27	24	21	19	17
MC condition (E****)		5488	5487	5486	5485	5484	5483	5482	5481	5480	5496	5495	5494	5493	5492
Bottom remain (μm)		285	245	215	200	176	149	122	95	75	56	40	25	12	3
Side remain (μm)		250	224	197	170	140	120	100	72	55	38	26	16	8	2
Bottom gap (μm)		120	115	106	96	91	86	53	41	33	25	15	10	6	3
Side gap (μm)		95	83	75	68	65	58	46	43	30	15	11	7	4	2
Removal rate		-653	-648	-632	-624	-617	-615	-603	-753	-744	-728	-723	-711	-928	-920
Electrode wear (%)		0.2	0.3	0.3	0.3	0.4	0.5	0.5	0.5	1	3	6	40	120	150
Time cont. area											□25	□20	□18	□14	□8
Minimum reduction per side by MC depth (μm)	2mm	250	225	200	175	140	120	100	75	55	40				
	5mm	260	235	215	185	150	130	110	80	60	45				
	10mm	275	250	225	200	160	140	120	85	65	50				
	15mm	285	265	240	210	175	150	130	90	70	55				
	20mm	300	280	250	225	185	160	140	95	75	60				
	40mm														
Min. spark area(mm)		□10	□8	□6	□5	□4	□3	□2	□2	□2	□2				
Max. spark area(mm)															
Required option															

Model data No. : 1044

Selecting start MC condition	E No.
1044 Standard	543*
1144 Standard low wear	542*

Electrode material : Gr2

Rib length : 30mm~50mm

Workpiece material : St

Finished roughness : 4μmRz

Cavity type : Rib machining (Low wear)

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	60.0	54.0	47.0	45.0	39.0	35.0	29.0	25.0	20.0	18.0	14.0	10.0	8.0	5.0	4.0
(μmRa)	11.00	10.00	7.80	7.50	6.90	6.40	5.20	4.50	4.00	3.10	2.20	1.60	1.10	0.90	0.70
(VDI)	41	40	39	38	37	36	34	33	32	30	27	24	21	19	17
MC condition (E****)	5439	5438	5437	5436	5435	5434	5433	5432	5431	5430	5496	5495	5494	5493	5492
Bottom remain (μm)	311	286	262	239	210	183	157	130	103	79	59	40	25	12	3
Side remain (μm)	274	244	214	188	166	140	117	98	71	54	38	26	16	8	2
Bottom gap (μm)	125	120	115	106	96	91	86	53	41	33	25	15	10	6	3
Side gap (μm)	105	95	83	75	68	65	58	46	43	30	15	11	7	4	2
Removal rate	-522	-693	-664	-640	-625	-618	-616	-604	-754	-745	-728	-723	-711	-928	-920
Electrode wear (%)	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	1	3	6	40	120	150
Time cont. area											□25	□20	□18	□14	□8
Minimum reduction per side by MC depth (μm)	2mm	275	245	220	190	170	140	120	100	75	55	40			
	5mm	285	255	230	200	180	150	130	110	80	60	45			
	10mm	300	270	240	210	190	160	140	120	85	65	50			
	15mm	320	280	255	225	200	170	150	130	90	70	55			
	20mm	340	300	270	240	215	185	160	140	95	75	60			
	40mm														
Min. spark area(mm)	□14	□12	□11	□10	□10	□10	□10	□10	□10	□10	□10				
Max. spark area(mm)															
Required option															

Model data No. : 1045

Electrode material : Gr2

Rib length : ~50mm

Workpiece material : St

Finished roughness : 4μmRz

Cavity type : Rib machining (High speed)

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					47.0	41.0	35.0	30.0	25.0	20.0	16.0	12.0	9.0	5.0	4.0
(μmRa)					9.00	8.00	6.00	5.00	4.50	4.00	3.00	2.20	1.60	0.90	0.70
(VDI)					39	38	36	34	33	32	28	27	24	19	17
MC condition (E****)					5586	5585	5584	5583	5582	5581	4596	4595	4594	4593	4592
Bottom remain (μm)					208	193	171	149	111	90	55	40	25	12	3
Side remain (μm)					200	175	140	120	105	85	54	39	20	8	2
Bottom gap (μm)					106	96	96	86	46	41	36	30	21	12	3
Side gap (μm)					75	68	65	58	53	43	33	27	18	8	2
Removal rate					-634	-620	-614	-612	-610	-605	-746	-723	-713	-811	-928
Electrode wear (%)					2	2	2	2	5	5	9	20	43	120	150
Time cont. area											□25	□20	□18	□14	□8
Minimum reduction per side by MC depth (μm)	2mm				200	175	140	120	110	100					
	5mm				210	185	150	130	120	110					
	10mm				230	200	160	140	130	120					
	15mm				250	220	175	150	140	130					
	20mm				270	235	185	160	150	140					
	40mm														
Min. spark area(mm)					□10	□7	□6	□5	□5	□3	□2	□2			
Max. spark area(mm)															
Required option															

Model data No. : 1046

Electrode material : Gr2

Electrode dimensions : 50mm~

Workpiece material : St

Finished roughness : 5μmRz

Cavity type : Rib machining (High speed)

Selecting start MC condition		E No.
1046	Standard	544*
1146	Standard low wear	545*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		60.0	54.0	47.0	45.0	39.0	35.0	29.0	25.0	20.0	18.0	14.0	10.0	8.0	5.0
(μmRa)		11.00	10.00	7.80	7.50	6.90	6.40	5.20	4.50	4.00	3.10	2.20	1.60	1.10	0.90
(VDI)		41	40	39	38	37	36	34	33	32	30	27	24	21	19
MC condition (E****)		5449	5448	5447	5446	5445	5444	5443	5442	5441	5440	5556	5555	5554	5553
Bottom remain (μm)		336	306	276	246	219	189	163	138	109	85	60	40	25	12
Side remain (μm)		310	270	230	202	177	151	128	108	81	65	43	29	17	8
Bottom gap (μm)		130	125	120	115	106	96	91	86	53	41	33	25	15	12
Side gap (μm)		115	105	95	83	75	68	65	58	46	43	30	15	11	8
Removal rate		-530	-514	-672	-645	-630	-623	-620	-610	-760	-750	-725	-720	-707	-925
Electrode wear (%)		0.1	0.1	0.2	0.4	0.5	0.5	0.5	0.5	0.5	1	3	6	40	120
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm		310	270	230	205	180	155	130	110	85				
	5mm		320	275	235	210	185	160	135	115	85				
	10mm		330	285	245	220	190	165	140	120	90				
	15mm		340	295	255	230	195	170	145	125	95				
	20mm		350	300	260	235	200	175	150	130	100				
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 1051

Electrode material : Gr2

Electrode dimensions : ~□5

Workpiece material : St

Finished roughness : 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		45.0	30.0	24.0	20.0	18.0	17.0	16.0	12.0	9.0	7.0	5.0	4.0	3.0	2.0
(μmRa)		9.50	7.30	4.80	3.80	3.40	3.00	2.70	2.00	1.60	1.10	0.90	0.70	0.55	0.40
(VDI)		40	37	34	32	31	30	29	26	24	21	19	17	15	12
MC condition (E****)		4469	4468	4467	4466	4465	4464	4463	4462	4461	4460	4494	4493	4492	4491
Bottom remain (μm)		200	161	132	106	86	72	61	51	42	27	19	12	7	2
Side remain (μm)		180	145	120	99	84	72	61	51	42	27	19	12	7	2
Bottom gap (μm)		103	84	68	52	42	35	28	25	21	14	12	11	7	2
Side gap (μm)		62	52	43	37	33	28	24	23	19	13	11	11	7	2
Removal rate		-620	-610	-605	-790	-770	-750	-730	-720	-710	-830	-810	-950	-920	-910
Electrode wear (%)		0.2	0.2	0.3	0.4	0.5	0.7	0.8	0.9	1	3	5	10	20	200
Time cont. area															*
Minimum reduction per side by MC depth (μm)	2mm		200	150	120	100	90	80	70	60	50	40			
	5mm														
	10mm														
	15mm														
	20mm														
	40mm														
Min. spark area(mm)		□5	□5	□4	□4	□4	□3	□3	□3	□2	□1	□0.5			
Max. spark area(mm)															
Required option															Satin

Model data No. : 1053

Electrode material : Gr2

Electrode dimensions : ~□30

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	74.0	70.0	54.0	47.0	41.0	35.0	30.0	25.0	20.0	16.0	12.0	9.0	7.0	5.0	4.0
(μmRa)	12.00	11.00	10.00	9.00	8.00	6.00	5.00	4.50	4.00	3.00	2.20	1.60	1.10	0.90	0.70
(VDI)	42	41	40	39	38	36	34	33	32	30	27	24	21	19	17
MC condition (E****)	5009	5008	5007	5006	5005	5004	5003	5002	5001	5000	5095	5094	5093	5092	5091
Bottom remain (μm)	670	500	330	285	245	210	165	130	105	69	52	39	25	15	5
Side remain (μm)	350	290	230	200	175	140	120	107	87	57	42	27	15	10	4
Bottom gap (μm)	155	140	125	115	105	100	90	50	45	40	34	25	20	15	5
Side gap (μm)	84	74	64	59	54	49	44	39	34	29	23	19	11	9	4
Removal rate	-550	-540	-516	-674	-650	-637	-630	-624	-611	-746	-723	-713	-824	-811	-928
Electrode wear (%)	0.5	0.5	1	1	1	1.5	2	3	4	6	16	35	60	120	150
Time cont. area															
Minimum reduction per side by MC depth (μm)	2mm	350	290	230	200	180	140	120	110	100	70	50			
	5mm	355	295	235	205	185	145	125	115	405	75	55			
	10mm	360	300	240	210	190	150	130	120	110	80	60			
	15mm	365	305	245	215	195	155	135	125	115	85	65			
	20mm	370	310	250	220	200	160	140	130	120	90	70			
	40mm														
Min. spark area(mm)	□20	□18	□15	□13	□10	□8	□7	□6	□5						
Max. spark area(mm)															
Required option															

Model data No. : 1055

Electrode material : Gr2

Electrode dimensions : □15~30

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					60.0	50.0	40.0	32.0	20.0	16.0	12.0	9.0	6.0	5.0	4.0
(μmRa)					11.00	10.00	7.00	5.50	4.00	2.60	1.80	1.60	1.10	0.90	0.70
(VDI)					40	40	37	36	32	28	25	24	21	19	17
MC condition (E****)					4055	4054	4053	4052	4051	4957	4956	4955	4954	4953	4952
Bottom remain (μm)					303	243	187	139	105	75	56	41	26	17	8
Side remain (μm)					252	202	166	121	92	68	51	37	23	14	5
Bottom gap (μm)					130	115	100	69	57	43	36	29	18	14	8
Side gap (μm)					105	90	78	60	50	36	29	24	16	11	5
Removal rate					-517	-513	-683	-634	-610	-726	-711	-859	-835	-811	-928
Electrode wear (%)					0.1	0.3	0.5	1.5	3	4	7	15	45	60	65
Time cont. area											□30	□25	*	*	*
Minimum reduction per side by MC depth (μm)	2mm				250	225	175	125	100	80	70	60			
	5mm				250	225	175	125	100	85	75	65			
	10mm				300	250	200	150	100	90	80	70			
	15mm				300	250	200	150	100						
	20mm				300	250	200	150	100						
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 1056

Electrode material : Gr2

Electrode dimensions : □30~50

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			85.0	75.0	60.0	50.0	40.0	32.0	20.0	16.0	12.0	9.0	6.0	5.0	4.0
(μmRa)			13.00	12.00	11.00	10.00	7.00	5.50	4.00	2.60	1.80	1.60	1.10	0.90	0.70
(VDI)			42	41	40	40	37	36	32	28	25	24	21	19	17
MC condition (E****)			4257	4256	4255	4254	4253	4252	4251	4957	4956	4955	4954	4953	4952
Bottom remain (μm)			497	417	357	287	221	152	107	75	56	41	26	17	8
Side remain (μm)			422	347	282	232	184	131	94	68	51	37	23	14	5
Bottom gap (μm)			320	250	175	155	125	70	55	43	36	29	18	14	8
Side gap (μm)			250	195	135	118	95	56	46	36	29	24	16	11	5
Removal rate			-545	-531	-518	-515	-513	-634	-610	-726	-711	-859	-835	-811	-928
Electrode wear (%)			0.1	0.1	0.2	0.5	1	1.5	3	4	7	15	45	60	65
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm		450	350	250	225	175	150	100	80	70	60			
	5mm		450	350	250	225	175	150	100	85	75	65			
	10mm		500	400	300	250	200	150	100	90	80	70			
	15mm		500	400	300	250	200	150	100						
	20mm		500	400	300	250	200	150	100						
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option															

Model data No. : 1057

Electrode material : Gr2

Electrode dimensions : □50~150

Workpiece material : St

Finished roughness : 5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				85.0	75.0	60.0	50.0	40.0	32.0	20.0	16.0	12.0	9.0	6.0	5.0
(μmRa)				13.00	12.00	11.00	10.00	7.00	5.50	4.00	2.60	1.80	1.60	1.10	0.90
(VDI)				42	41	40	40	37	36	32	28	25	24	21	19
MC condition (E****)				4257	4256	4255	4254	4253	4252	4251	4957	4956	4955	4954	4953
Bottom remain (μm)				494	414	354	284	218	149	104	78	55	40	25	14
Side remain (μm)				422	347	282	232	184	131	94	71	50	36	22	11
Bottom gap (μm)				320	250	175	155	125	70	55	49	40	28	20	14
Side gap (μm)				250	195	135	118	95	56	46	37	32	22	15	11
Removal rate				-545	-531	-518	-515	-513	-634	-610	-726	-711	-859	-835	-811
Electrode wear (%)				0.1	0.1	0.2	0.5	1	1.5	3	4	7	15	45	60
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm			450	350	250	225	175	150	100	80	70	60		
	5mm			450	350	250	225	175	150	100	85	75	65		
	10mm			500	400	300	250	200	150	100	90	80	70		
	15mm			500	400	300	250	200	150	100					
	20mm			500	400	300	250	200	150	100					
	40mm														
Min. spark area(mm)															
Max. spark area(mm)												□140	□120	□100	□100
Required option															

Model data No. : 1060

Electrode material : CuW

Electrode dimensions : ~□10

Workpiece material : St

Finished roughness : 0.5μmRz

Cavity type : Connector mold machining

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					12.0	10.0	8.0	7.0	5.0	4.0	3.0	2.0	1.0	0.7	0.5
(μmRa)					2.30	1.50	1.10	0.90	0.70	0.60	0.50	0.40	0.30	0.20	0.15
(VDI)					27	25	24	21	19	17	15	12	9	8	6
MC condition (E****)					6061	6060	6059	6058	6057	6056	6055	6054	6053	6052	6051
Bottom remain (μm)					81	61	49	40	33	22	16	12	8	5	3
Side remain (μm)					67	50	40	34	28	19	15	11	8	6	4
Bottom gap (μm)					47	42	30	27	16	13	10	9	7	5	3
Side gap (μm)					34	26	21	18	14	12	10	9	7	6	4
Removal rate					-714	-712	-853	-825	-818	-818	-812	-987	-923	-906	-903
Electrode wear (%)					0.5	1	2	3	4	20	24	22	19	25	30
Time cont. area											*	*	*	*	*
Minimum reduction per side by MC depth (μm)	2mm				100	80	60	50	40	30					
	5mm														
	10mm														
	15mm														
	20mm														
	40mm														
Min. spark area(mm)															
Max. spark area(mm)															
Required option										Satin	Satin	Satin	Satin	UF	UF

Model data No. : 1082

Electrode material : Gr1

Electrode dimensions :

Workpiece material : Copper Alloy

Finished roughness : 7 μ mRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μ mRz)		48.0	45.0	42.0	40.0	38.0	35.0	33.0	26.0	22.0	19.0	15.0	14.0	10.0	7.0
(μ mRa)		10.00	9.00	8.00	7.00	6.50	5.80	5.30	4.70	4.20	3.50	2.40	2.20	1.60	1.10
(VDI)		40	39	38	37	36	35	34	33	32	31	28	27	24	21
MC condition (E****)		8779	8778	8777	8776	8775	8774	8773	8772	8771	8795	8794	8793	8792	8791
Bottom remain (μ m)		403	359	319	280	242	204	169	139	111	88	64	44	26	10
Side remain (μ m)		308	272	240	209	179	150	124	100	79	62	43	29	17	7
Bottom gap (μ m)		130	125	120	115	106	96	86	53	51	33	28	25	15	10
Side gap (μ m)		113	103	95	83	75	65	58	46	43	30	20	16	14	7
Removal rate		-653	-648	-632	-624	-617	-615	-603	-753	-744	-728	-723	-711	-928	-920
Electrode wear (%)		5	4.4	3	4.3	3.4	4.3	2.3	4	3	10	30	50	100	300
Time cont. area															
Minimum reduction per side by MC depth (μ m)	2mm		310	275	240	210	180	150	125	100	80				
	5mm		330	295	260	225	195	165	140	110	85				
	10mm		355	320	280	245	215	185	155	125	90				
	15mm		380	340	300	265	235	205	170	140	95				
	20mm		400	360	320	280	250	220	185	150	100				
	40mm														
Min. spark area(mm)		□20	□14	□12	□11	□10	□8	□7	□6	□5					
Max. spark area(mm)															
Required option															

Model data No. : 1 inch order

Electrode material : Cu

Electrode dimensions : □0.8~

Workpiece material : St

Finished roughness : 9μmRz

Selecting start MC condition	E No.
1 Standard low wear	13**
101 Additional low wear	16**
201 Retract low wear	15**
301 Standard wear	13**
401 Additional wear	16**
501 Retract wear	15**

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)						80.0	70.0	55.0	45.0	40.0	30.0	20.0	16.0	12.0	9.0
(μmRa)						12.50	11.50	10.00	9.00	7.00	5.30	4.00	3.00	2.20	1.60
(VDI)						42	41	40	39	37	34	32	30	27	24
MC condition (E****)						1312	1311	1309	1308	1307	1306	2215	2214	2213	2212
Bottom remain (tenth)						215	183	113	87	74	59	33	24	18	12
Side remain (tenth)						135	115	79	63	55	45	26	18	12	6
Bottom gap (tenth)						98	79	61	53	47	39	30	20	16	12
Side gap (tenth)						79	67	53	47	43	30	22	14	10	6
Removal rate						-514	-698	-648	-633	-622	-614	-610	-766	-738	-710
Electrode wear (%)						0.1	0.1	0.1	0.1	0.1	0.1	3	14	43	12
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch					146	126	85	69	59	49				
	0.2 inch					165	142	96	77	69	55				
	0.4 inch					185	157	108	87	75	63				
	0.6 inch					197	169	116	93	83	67				
	0.8 inch					209	181	124	98	87	71				
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 2 inch order

Electrode material : CuW

Electrode dimensions : ~□0.4

Workpiece material : WC

Finished roughness : 0. 5μmRz

*In case of iron, the surface roughness gets rougher by 0.1μmRz than that of WC.

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)												1.0	0.7	0.5	
(μmRa)												0.28	0.25	0.20	
(VDI)												9	8	6	
MC condition (E****)												7658	7657	7656	
Bottom remain (tenth)												2	1	0	
Side remain (tenth)												2	1	0	
Bottom gap (tenth)												1	1	0	
Side gap (tenth)												1	1	0	
Removal rate															
Electrode wear (%)															
Time cont. area												*	*	*	
Minimum reduction per side by MC depth (tenth)	0.1 inch														
	0.2 inch														
	0.4 inch														
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option												SPG	SPG	SPG	

Model data No. : 3 inch order

Electrode material : CuW

Electrode dimensions : □O. 4~2

Workpiece material : WC

Finished roughness : 1. 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	26.0	20.0	16.0	14.0	13.0	11.0	9.5	8.0	6.5	5.5	4.5	3.5	2.5	1.6	1.2
(μmRa)	5.00	3.60	3.00	2.40	2.30	2.00	1.70	1.50	1.10	1.00	0.80	0.60	0.60	0.40	0.30
(VDI)	34	31	30	28	27	26	25	24	21	20	18	16	16	12	10
MC condition (E****)	7559	7558	7557	7709	7708	7707	7706	7705	7628	7627	7626	7625	7623	7621	7620
Bottom remain (tenth)	179	110	75	37	30	25	21	17	13	10	7	6	4	3	2
Side remain (tenth)	165	102	57	30	24	19	15	12	9	6	4	3	2	1	1
Bottom gap (tenth)	98	59	57	30	20	16	12	10	8	6	5	4	3	2	2
Side gap (tenth)	63	55	45	26	16	12	10	8	6	4	3	2	2	1	1
Removal rate	-414	-410	-570	-612	-788	-766	-722	-714	-859	-838	-818	-811	-929	-909	-903
Electrode wear (%)	16	16	17	19	19	19	19	19	15	13	11	10	12	12	12
Time cont. area										*	*	*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch	181	134	87	35	33	24	16	12	10					
	0.2 inch	193	146	96	39	35	28	20	14						
	0.4 inch	213	165	110	43	41	30								
	0.6 inch	232	185	130											
	0.8 inch	252	205	150											
	1.6 inch														
Min. spark area(inch)	□0.8	□0.4	□0.4												
Max. spark area(inch)															
Required option	CB	CB	CB	WC	WC	WC	WC	WC	Satin	Satin	Satin	Satin	Satin	Satin	Satin

Model data No. : 4 inch order

Electrode material : Cu

Electrode dimensions : ~□0.2

Workpiece material : St

Finished roughness : 0. 5μmRz

Cavity type : Small area machining

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		21.0	15.0	12.0	10.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0	0.7	0.5
(μmRa)		4.00	2.40	2.20	1.80	1.50	1.30	1.10	1.00	0.70	0.55	0.40	0.27	0.25	0.20
(VDI)		32	27	26	25	24	23	21	20	17	15	12	9	8	6
MC condition (E****)		2029	2028	2027	2026	2025	2024	2023	2022	2021	2020	2834	2833	2832	2831
Bottom remain (tenth)		51	39	29	24	20	17	13	11	8	6	4	3	1	0
Side remain (tenth)		40	31	23	19	15	13	11	8	6	5	3	2	1	0
Bottom gap (tenth)		35	28	22	18	14	12	10	8	6	4	3	2	1	0
Side gap (tenth)		26	20	16	12	11	8	8	6	5	3	2	1	0	0
Removal rate		-756	-752	-735	-714	-712	-853	-825	-818	-953	-918	-911	-910	-906	-903
Electrode wear (%)		0.5	0.5	0.5	0.5	2	2	3	4	10	20	22	19	25	30
Time cont. area							□0.4	□0.3	□0.3	□0.3	□0.3	□0.25	□0.2	□0.2	□0.2
Minimum reduction per side by MC depth (tenth)	0.1 inch		41	31	24	20	16	14	10						
	0.2 inch		47	35											
	0.4 inch														
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option												Satin	Satin	UF	UF

Model data No. : 5 inch order

Electrode material : Cu

Electrode dimensions : □0.4~1.2

Workpiece material : St

Finished roughness : 4μmRz

Selecting start MC condition	E No.
5 Standard low wear	13**
105 Additional low wear	16**
205 Retract low wear	15**
305 Standard wear	13**
405 Additional wear	16**
505 Retract wear	15**

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		80.0	70.0	55.0	45.0	40.0	30.0	21.0	16.0	12.0	10.0	8.0	6.0	5.0	4.0
(μmRa)		12.50	11.50	10.00	9.50	7.00	5.30	4.00	3.00	2.30	1.70	1.50	1.10	1.00	0.70
(VDI)		42	41	40	39	37	34	32	30	27	25	24	21	20	17
MC condition (E****)		1312	1311	1309	1308	1307	1306	1205	2318	2317	2316	2315	2314	2313	2312
Bottom remain (tenth)		219	188	117	91	78	63	44	30	21	17	12	10	8	6
Side remain (tenth)		143	123	85	69	61	51	37	24	17	13	8	6	4	3
Bottom gap (tenth)		98	79	61	53	47	39	31	22	20	16	12	10	8	6
Side gap (tenth)		79	67	53	47	43	30	22	15	12	10	8	6	4	3
Removal rate		-514	-698	-648	-633	-622	-614	-777	-770	-721	-714	-873	-852	-845	-816
Electrode wear (%)		0.1	0.1	0.1	0.1	0.1	0.1	0.1	3	3	3	6	6	9	45
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch		146	126	89	73	63	53	39						
	0.2 inch		165	142	100	81	71	61	45						
	0.4 inch		185	157	112	91	79	67	49						
	0.6 inch		197	169	120	96	87	71	53						
	0.8 inch		209	181	128	104	91	77	57						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 6 inch order

Electrode material : Cu

Electrode dimensions : □0.2~0.6

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				36.0	28.0	21.0	16.0	14.0	12.0	10.0	10.0	8.0	6.0	5.0	4.0
(μmRa)				6.00	5.00	4.00	3.00	2.50	2.20	1.70	1.70	1.50	1.10	1.00	0.70
(VDI)				36	34	32	30	28	27	25	25	24	21	20	17
MC condition (E****)				1207	1206	1205	1204	1003	1002	1001	2316	2315	2314	2313	2312
Bottom remain (tenth)				82	68	50	39	31	26	22	17	12	10	8	6
Side remain (tenth)				51	47	37	28	21	17	15	13	8	6	4	3
Bottom gap (tenth)				43	37	31	26	20	19	18	16	12	10	8	6
Side gap (tenth)				33	30	22	19	16	14	12	10	8	6	4	3
Removal rate				-622	-612	-777	-749	-716	-876	-840	-714	-873	-852	-845	-816
Electrode wear (%)				0.1	0.1	0.1	0.1	0.1	0.1	0.1	3	6	6	9	45
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch			55	51	41	31	28	24	22					
	0.2 inch			63	59	47	35	31	30	28					
	0.4 inch			71	65	51	37	35	33						
	0.6 inch			77	71	55	41	37							
	0.8 inch			81	75	59	43								
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 7 inch order

Electrode material : Cu

Electrode dimensions : □8~12

Workpiece material : St

Finished roughness : 16μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				126.0	102.0	85.0	74.0	66.0	55.0	45.0	40.0	34.0	28.0	23.0	16.0
(μmRa)				20.00	17.00	13.00	12.00	10.50	10.00	9.00	7.00	6.00	5.20	4.50	3.00
(VDI)				46	45	42	42	40	40	39	37	36	34	33	30
MC condition (E****)				1914	1913	1912	1911	1910	1909	1908	1907	1906	2624	2623	2622
Bottom remain (tenth)				240	210	178	149	119	92	66	53	39	26	19	12
Side remain (tenth)				159	142	124	105	87	72	56	46	37	24	16	10
Bottom gap (tenth)				118	110	98	79	71	61	53	47	39	24	16	12
Side gap (tenth)				98	91	79	67	59	53	47	43	30	16	12	10
Removal rate				-544	-531	-521	-513	-696	-668	-641	-630	-617	-610	-752	-728
Electrode wear (%)				1.6	1.2	0.6	0.1	0.1	0.1	0.1	0.2	0.3	15	21	35
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch			177	157	138	116	96	81	63	51	41			
	0.2 inch			195	173	152	128	106	89	69	57	45			
	0.4 inch			217	193	169	144	120	98	77	65	51			
	0.6 inch			234	209	183	156	130	106	83	69	55			
	0.8 inch			250	222	195	163	138	112	89	73	57			
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)													□12	□10	□8
Required option															

Model data No. : 8 inch order

Electrode material : Cu

Electrode dimensions : □4~8

Workpiece material : St

Finished roughness : 10μmRz

Selecting start MC condition	E No.
8	Standard low wear
108	Additional low wear
208	Retract low wear
308	Standard wear
408	Additional wear
508	Retract wear

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				80.0	70.0	55.0	45.0	40.0	30.0	24.0	18.0	16.0	14.0	12.0	10.0
(μmRa)				12.50	11.50	10.00	9.00	7.00	5.30	4.50	3.50	3.00	2.40	2.30	1.70
(VDI)				42	41	40	39	37	34	33	31	30	28	27	25
MC condition (E****)				1312	1311	1309	1308	1307	1306	1305	1304	1803	1802	1801	2621
Bottom remain (tenth)				209	177	106	81	69	55	43	35	30	26	22	12
Side remain (tenth)				141	122	85	69	61	52	40	32	27	22	18	10
Bottom gap (tenth)				98	79	61	53	47	39	33	26	22	18	14	12
Side gap (tenth)				79	67	53	47	43	30	24	22	20	16	12	10
Removal rate				-514	-698	-648	-633	-622	-614	-784	-749	-718	-711	-866	-724
Electrode wear (%)				0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	1.8	3.8	12
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch			161	140	94	77	69	57	45	35	30	26		
	0.2 inch			173	150	104	85	75	63	49	39	33	28		
	0.4 inch			193	165	116	94	85	71	55	43	37			
	0.6 inch			209	179	126	102	91	77	59	47				
	0.8 inch			220	191	134	108	96	81	63	51				
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 9 inch order

Electrode material : Cu

Electrode dimensions : □2~4

Workpiece material : St

Finished roughness : 10μmRz

Selecting start MC condition	E No.
9 Standard low wear	13**
109 Additional low wear	16**
209 Retract low wear	15**
309 Standard wear	13**
409 Additional wear	16**
509 Retract wear	15**

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				80.0	70.0	55.0	45.0	40.0	30.0	24.0	18.0	16.0	13.5	11.5	10.0
(μmRa)				12.50	11.50	10.00	9.00	7.00	5.30	4.50	3.50	3.00	2.40	2.20	1.70
(VDI)				42	41	40	39	37	34	33	31	30	28	27	25
MC condition (E****)				1312	1311	1309	1308	1307	1306	1305	1304	1703	1702	1701	2621
Bottom remain (tenth)				209	177	106	81	69	55	43	35	30	26	22	12
Side remain (tenth)				141	122	85	69	61	52	40	32	27	22	18	10
Bottom gap (tenth)				98	79	61	53	47	39	33	26	22	18	14	12
Side gap (tenth)				79	67	53	47	43	30	24	22	20	16	12	10
Removal rate				-514	-698	-648	-633	-622	-614	-784	-749	-722	-714	-882	-724
Electrode wear (%)				0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6	1.7	12
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch			161	140	94	77	69	57	45	35	30	26		
	0.2 inch			173	150	104	85	75	63	49	39	33	28		
	0.4 inch			193	165	116	94	85	71	55	43	37			
	0.6 inch			209	179	126	102	91	77	59	47				
	0.8 inch			220	191	134	108	96	81	63	51				
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 10 inch order

Electrode material : Cu

Electrode dimensions : □0.04~0.2

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)						38.0	32.0	21.0	15.0	10.0	8.0	8.0	6.0	5.0	4.0
(μmRa)						7.00	5.50	4.00	2.40	1.70	1.50	1.50	1.10	0.90	0.70
(VDI)						37	35	32	28	25	24	24	21	19	17
MC condition (E****)						1028	1027	1026	1025	1024	1023	2114	2113	2112	2111
Bottom remain (tenth)						64	56	48	32	24	19	14	11	8	6
Side remain (tenth)						44	37	30	24	18	15	9	6	4	3
Bottom gap (tenth)						43	35	28	22	18	14	12	10	8	6
Side gap (tenth)						31	26	20	16	12	11	8	6	4	3
Removal rate						-611	-741	-729	-713	-839	-821	-835	-824	-819	-984
Electrode wear (%)						0.1	0.1	0.5	0.5	0.5	0.5	7	7	12	35
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch					63	51	41	30	24	20				
	0.2 inch					71	59	47	35	24	20				
	0.4 inch					79	65	51	37	28	24				
	0.6 inch					87	71	55	41	31					
	0.8 inch					91	75	59	43	35					
	1.6 inch														
Min. spark area(inch)						□0.2	□0.16	□0.08	□0.04						
Max. spark area(inch)															
Required option															

Model data No. : 11 inch order

Electrode material : Cu

Electrode dimensions : □0.12~0.4

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		45.0	40.0	36.0	28.0	21.0	16.0	14.0	12.0	10.0	9.0	8.0	6.0	5.0	4.0
(μmRa)		9.00	7.00	6.00	5.00	4.00	3.00	2.40	2.00	1.70	1.60	1.50	1.10	1.00	0.70
(VDI)		39	37	36	34	32	30	28	26	25	24	24	21	20	17
MC condition (E****)		1009	1008	1007	1006	1005	1004	1003	1002	1001	1000	2115	2113	2112	2111
Bottom remain (tenth)		118	91	82	68	53	41	33	28	25	22	17	12	8	6
Side remain (tenth)		79	67	51	47	36	26	20	17	15	13	10	7	5	3
Bottom gap (tenth)		61	53	43	37	31	26	20	19	16	14	12	10	8	6
Side gap (tenth)		53	47	33	30	22	19	16	14	12	10	8	6	4	3
Removal rate		-620	-615	-612	-764	-749	-734	-716	-876	-840	-834	-852	-824	-819	-984
Electrode wear (%)		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	7	7	12	35
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch		79	69	55	47	37	31	28	24	22	20			
	0.2 inch		81	71	59	49	39	35	31	30	28	26			
	0.4 inch		83	75	63	53	43	37	35						
	0.6 inch		87	79	67	57	47								
	0.8 inch		91	83	71	61									
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 12 inch order

Electrode material : Cu

Electrode dimensions : □0.2~0.6

Workpiece material : St

Finished roughness : 5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					36.0	28.0	21.0	16.0	14.0	12.0	10.0	10.0	8.0	6.0	5.0
(μmRa)					6.00	5.00	4.00	3.00	2.40	2.00	1.70	1.70	1.50	1.10	0.90
(VDI)					36	34	32	30	28	26	25	25	24	21	19
MC condition (E****)					1207	1206	1205	1204	1003	1002	1001	2116	2114	2113	2112
Bottom remain (tenth)					82	68	50	39	31	26	22	17	12	10	8
Side remain (tenth)					51	47	37	28	21	17	15	13	8	6	4
Bottom gap (tenth)					43	37	31	26	20	19	18	16	12	10	8
Side gap (tenth)					33	30	22	19	16	14	12	10	8	6	4
Removal rate					-622	-612	-777	-749	-716	-876	-840	-714	-835	-824	-819
Electrode wear (%)					0.1	0.1	0.1	0.1	0.1	0.1	0.1	2	7	7	12
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch				55	51	41	31	28	24	22				
	0.2 inch				63	59	47	35	31	30	28				
	0.4 inch				71	65	51	37	35	33					
	0.6 inch				77	71	55	41	37						
	0.8 inch				81	75	59	43							
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 13 inch order

Electrode material : Cu

Electrode dimensions : □0.4~1.0

Workpiece material : St

Finished roughness : 5μmRz

Selecting start MC condition	E No.
13 Standard low wear	13**
113 Additional low wear	16**
213 Retract low wear	15**
313 Standard wear	13**
413 Additional wear	16**
513 Retract wear	15**

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			80.0	70.0	55.0	45.0	40.0	30.0	21.0	14.0	12.0	10.0	8.0	6.0	5.0
(μmRa)			12.50	11.50	10.00	9.00	7.00	5.30	4.00	2.40	2.00	1.70	1.50	1.10	0.90
(VDI)			42	41	40	39	37	34	32	28	26	25	24	21	19
MC condition (E****)			1312	1311	1309	1308	1307	1306	1205	2118	2117	2116	2114	2113	2112
Bottom remain (tenth)			220	189	118	92	80	65	45	32	22	17	12	10	8
Side remain (tenth)			142	122	87	71	63	53	37	26	16	12	8	6	4
Bottom gap (tenth)			98	79	61	53	47	39	31	22	20	16	12	10	8
Side gap (tenth)			79	67	53	47	43	30	22	15	12	10	8	6	4
Removal rate			-514	-698	-648	-633	-622	-614	-777	-738	-718	-714	-835	-824	-819
Electrode wear (%)			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	3	2	7	7	12
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch		146	126	89	71	63	53	39						
	0.2 inch		165	142	100	81	71	59	45						
	0.4 inch		185	157	112	91	79	67	49						
	0.6 inch		197	169	120	96	87	71	53						
	0.8 inch		209	181	128	104	91	77	57						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 14 inch order

Electrode material : Cu

Electrode dimensions : □0.08~0.2

Workpiece material : St

Finished roughness : 5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)						21.0	16.0	14.0	12.0	10.0	9.0	8.0	7.0	6.0	5.0
(μmRa)						4.00	3.00	2.40	2.30	1.70	1.60	1.50	1.30	1.10	0.90
(VDI)						32	30	28	27	25	24	24	22	21	19
MC condition (E****)						1005	1004	1003	1002	1001	1000	2004	2003	2002	2001
Bottom remain (tenth)						50	39	31	26	22	20	16	13	10	8
Side remain (tenth)						39	29	22	18	16	14	11	8	6	4
Bottom gap (tenth)						31	26	20	19	16	14	12	11	9	8
Side gap (tenth)						22	19	16	14	12	10	8	7	5	4
Removal rate						-749	-734	-716	-876	-840	-834	-823	-816	-987	-956
Electrode wear (%)						0.1	0.1	0.1	0.1	0.1	0.1	0.4	2	3	4
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch					41	31	28	24	22	20				
	0.2 inch					47	35	31	30	28	26				
	0.4 inch					51	37	35							
	0.6 inch					55									
	0.8 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 15 inch order

Electrode material : Cu

Electrode dimensions : □0.2~0.6

Workpiece material : St

Finished roughness : 5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				36.0	28.0	21.0	16.0	14.0	12.0	10.0	9.0	8.0	7.0	6.0	5.0
(μmRa)				6.00	5.00	4.00	3.00	2.40	2.30	1.70	1.60	1.50	1.30	1.10	0.90
(VDI)				36	34	32	30	28	27	25	24	24	22	21	19
MC condition (E****)				1207	1206	1205	1204	1003	1002	1001	1000	2004	2003	2002	2001
Bottom remain (tenth)				82	68	50	39	31	26	22	20	16	13	10	8
Side remain (tenth)				52	48	39	29	22	18	16	14	11	8	6	4
Bottom gap (tenth)				43	37	31	26	20	19	16	14	12	11	9	8
Side gap (tenth)				33	30	22	19	16	14	12	10	8	7	5	4
Removal rate				-622	-612	-777	-749	-716	-876	-840	-834	-823	-816	-987	-956
Electrode wear (%)				0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	2	3	4
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch			55	51	41	31	28	24	22	20				
	0.2 inch			63	59	47	35	31	30	28	26				
	0.4 inch			71	65	51	37	35	33						
	0.6 inch			77	71	55	41	37							
	0.8 inch			81	75	59	43								
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 16 inch order

Electrode material : Cu

Electrode dimensions : □0.08~0.2

Workpiece material : St

Finished roughness : 0. 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				21.0	16.0	14.0	12.0	10.0	9.0	8.0	6.0	3.0	1.0	0.4	0.2
(μmRa)				4.00	3.00	2.40	2.30	1.70	1.60	1.50	1.10	0.55	0.27	0.20	0.14
(VDI)				32	30	28	27	25	24	24	21	15	9	6	3
MC condition (E****)				1005	1004	1003	1002	1001	1000	2115	2113	2705	2703	3102	3100
Bottom remain (tenth)				59	47	39	34	31	29	24	20	15	5	2	0
Side remain (tenth)				48	38	31	27	25	22	19	15	10	3	1	0
Bottom gap (tenth)				31	26	20	19	18	16	12	10	8	5	2	0
Side gap (tenth)				22	19	16	14	14	10	8	6	4	3	1	0
Removal rate				-749	-734	-716	-876	-840	-834	-852	-824	-815	-960	-906	-903
Electrode wear (%)				0.1	0.1	0.1	0.1	0.1	0.1	7	7	49	27	100	100
Time cont. area													*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch			53	43	35	30	28	26						
	0.2 inch			59	47	39	33	31	28						
	0.4 inch			65	51	43	37								
	0.6 inch			71	57	47									
	0.8 inch			75	59										
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 17 inch order

Electrode material : Cu

Electrode dimensions : □0.2~0.6

Workpiece material : St

Finished roughness : 0. 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		36.0	28.0	21.0	16.0	14.0	12.0	10.0	10.0	8.0	6.0	3.0	1.0	0.4	0.2
(μmRa)		6.00	5.00	4.00	3.00	2.40	2.30	1.70	1.70	1.50	1.10	0.55	0.27	0.20	0.14
(VDI)		36	34	32	30	28	27	25	25	24	21	15	9	6	3
MC condition (E****)		1207	1206	1205	1204	1003	1002	1001	2116	2114	2113	2705	2703	3102	3100
Bottom remain (tenth)		92	78	60	48	41	35	31	27	22	20	15	5	2	0
Side remain (tenth)		60	56	46	37	30	26	24	22	17	15	10	3	1	0
Bottom gap (tenth)		43	37	31	26	20	19	18	16	12	10	8	5	2	0
Side gap (tenth)		33	30	22	19	16	14	14	10	8	6	4	3	1	0
Removal rate		-622	-612	-777	-749	-716	-876	-840	-714	-835	-824	-815	-960	-906	-903
Electrode wear (%)		0.1	0.1	0.1	0.1	0.1	0.1	0.1	2	7	7	49	27	100	100
Time cont. area													*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch		67	63	51	41	33	30	28						
	0.2 inch		75	69	57	45	37	31	30						
	0.4 inch		83	77	65	51	41	35							
	0.6 inch		89	83	69	55	45								
	0.8 inch		94	89	73	57									
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 18 inch order

Electrode material : Cu

Electrode dimensions : □0.4~1.0

Workpiece material : St

Finished roughness : 0. 2μmRz

Selecting start MC condition	E No.
18 Standard low wear	13**
118 Additional low wear	16**
218 Retract low wear	15**
318 Standard wear	13**
418 Additional wear	16**
518 Retract wear	15**

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		55.0	45.0	40.0	30.0	21.0	16.0	12.0	10.0	8.0	6.0	3.0	1.0	0.4	0.2
(μmRa)		10.00	9.20	7.00	5.30	4.00	3.00	2.30	1.70	1.50	1.10	0.55	0.27	0.20	0.14
(VDI)		40	39	37	34	32	30	27	25	24	21	15	9	6	3
MC condition (E****)		1309	1308	1307	1306	1205	2318	2317	2316	2315	2314	2705	2703	3102	3100
Bottom remain (tenth)		127	101	88	73	54	40	31	27	22	20	15	5	2	0
Side remain (tenth)		94	78	70	60	46	33	26	22	17	15	10	3	1	0
Bottom gap (tenth)		61	53	47	39	31	22	20	16	12	10	8	5	2	0
Side gap (tenth)		53	47	43	30	22	15	12	10	8	6	4	3	1	0
Removal rate		-648	-633	-622	-614	-777	-770	-721	-714	-873	-852	-815	-960	-906	-903
Electrode wear (%)		0.1	0.1	0.1	0.1	0.1	3	3	3	6	6	49	27	100	100
Time cont. area													*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch		100	83	75	63	51								
	0.2 inch		110	93	83	71	55								
	0.4 inch		124	102	93	79	63								
	0.6 inch		134	110	98	85	67								
	0.8 inch		142	118	104	91	71								
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 19 inch order

Electrode material : Cu Electrode dimensions : □0.04~0.2

Workpiece material : St Finished roughness : 1μmRz

Cavity type : Small area machining with low wear

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				21.0	15.0	12.0	10.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0	1.0
(μmRa)				4.00	2.60	2.30	1.70	1.50	1.30	1.10	0.90	0.70	0.55	0.40	0.27
(VDI)				32	28	27	25	24	22	21	19	17	15	12	9
MC condition (E****)				2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2004	2003
Bottom remain (tenth)				50	37	28	23	19	15	12	9	7	5	3	2
Side remain (tenth)				39	30	22	19	15	12	10	7	6	4	2	1
Bottom gap (tenth)				35	28	22	18	14	12	10	8	6	4	3	2
Side gap (tenth)				26	20	16	12	11	8	8	6	5	3	2	1
Removal rate				-745	-742	-726	-711	-873	-838	-821	-810	-921	-920	-944	-911
Electrode wear (%)				0.1	0.1	0.2	0.3	1	1.5	2	2	7	11	22	19
Time cont. area									□0.4	□0.3	□0.3	□0.3	□0.3	□0.25	□0.2
Minimum reduction per side by MC depth (tenth)	0.1 inch			41	31	24	20	16	14	12					
	0.2 inch			47	35	30	26	22							
	0.4 inch			51	39	33									
	0.6 inch			55											
	0.8 inch			59											
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option														Satin	Satin

Model data No. : 20 inch order

Electrode material : Cu Electrode dimensions : □0.04~0.2

Workpiece material : St Finished roughness : 2μmRz

Cavity type : General small area machining

Selecting start MC condition		E No.
20	Standard	10*
120	Standard low wear	11*
220	Shallow high speed	12*
620	Low wear aft.pre mill	14*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				26.0	20.0	15.0	12.0	10.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
(μmRa)				5.00	4.00	2.60	2.30	1.70	1.50	1.30	1.10	0.90	0.70	0.55	0.40
(VDI)				34	32	28	27	25	24	22	21	19	17	15	12
MC condition (E****)				108	107	106	105	104	103	102	101	294	293	292	291
Bottom remain (tenth)				63	51	41	32	24	18	13	10	7	5	3	2
Side remain (tenth)				54	43	35	28	23	18	13	10	7	5	3	2
Bottom gap (tenth)				24	20	20	19	16	14	12	9	6	4	3	2
Side gap (tenth)				22	20	16	14	12	10	8	7	4	3	2	2
Removal rate				-622	-753	-722	-717	-712	-889	-867	-835	-813	-944	-987	-942
Electrode wear (%)				0.2	0.2	0.2	0.5	1	2	3	4	8	15	26	29
Time cont. area										□0.4	□0.3	□0.3	□0.3	□0.3	□0.25
Minimum reduction per side by MC depth (tenth)	0.1 inch			51	35	31	28	24	20	16	12				
	0.2 inch			59	39										
	0.4 inch														
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)				□0.2	□0.16	□0.16	□0.12	□0.12	□0.08	□0.04	□0.04				
Max. spark area(inch)															
Required option														Satin	Satin

Model data No. : 21 inch order

Electrode material : Cu

Electrode dimensions : □0.2~0.5

Workpiece material : St

Finished roughness : 2μmRz

Selecting start MC condition	E No.
21 Standard	24*
121 Standard low wear	25*
221 Shallow high speed	31*
321 Shallow low wear	23*
421 Deep high speed	26*
521 Deep low wear	27*
621 Low wear aft.pre mill	28*
721 Deep narrow high speed	32*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		55.0	45.0	40.0	35.0	25.0	20.0	16.0	14.0	10.0	8.0	6.0	4.0	3.0	2.0
(μmRa)		10.00	9.00	7.00	5.60	4.50	4.00	3.20	2.50	1.70	1.60	1.10	0.70	0.60	0.40
(VDI)		40	39	37	35	33	32	30	28	25	24	21	17	16	12
MC condition (E****)		248	247	246	245	244	243	242	307	306	305	304	303	332	331
Bottom remain (tenth)		110	93	78	63	52	42	33	27	22	15	11	8	5	3
Side remain (tenth)		73	61	51	43	37	31	26	22	18	12	9	6	4	3
Bottom gap (tenth)		62	52	44	39	33	29	25	20	15	11	8	6	4	3
Side gap (tenth)		33	29	26	23	20	17	15	13	10	7	6	4	3	3
Removal rate		-645	-630	-623	-617	-610	-762	-731	-720	-711	-866	-835	-815	-987	-942
Electrode wear (%)		0.2	0.2	0.2	0.2	0.2	0.2	0.2	1	2	4	8	11	26	29
Time cont. area										□0.65	□0.45	□0.45	□0.35	□0.3	□0.25
Minimum reduction per side by MC depth (tenth)	0.1 inch		77	65	55	47	39	35	31						
	0.2 inch		87	73	63	55	47	41	37						
	0.4 inch		98	83	71	63	55	47	43						
	0.6 inch		106	89	77	69	61	51	47						
	0.8 inch		114	96	83	75	67	57	51						
	1.6 inch														
Min. spark area(inch)		□0.55	□0.45	□0.35	□0.3	□0.25	□0.2	□0.16							
Max. spark area(inch)															
Required option														Satin	Satin

Model data No. : 23 inch order

Electrode material : Cu

Electrode dimensions : □0.5~2.0

Workpiece material : St

Finished roughness : 2μmRz

Selecting start MC condition	E No.
23 Standard	16*
123 Standard low wear	17*
223 Shallow high speed	18*
323 Shallow low wear	19*
423 Deep high speed	20*
523 Deep low wear	21*
623 Low wear aft.pre mill	22*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	90.0	80.0	70.0	60.0	50.0	40.0	30.0	23.0	16.0	12.0	9.0	7.0	4.5	3.0	2.0
(μmRa)	14.00	13.00	11.00	10.00	9.00	7.00	5.00	4.50	3.20	2.20	1.60	1.10	0.80	0.56	0.40
(VDI)	168	167	166	165	164	163	162	338	337	336	335	334	333	332	331
MC condition (E****)	193	162	133	110	91	75	59	45	31	22	17	11	7	4	2
Bottom remain (tenth)	113	98	83	71	60	51	41	33	24	17	12	8	5	2	1
Side remain (tenth)	59	51	45	39	35	33	27	21	18	15	12	9	6	4	2
Bottom gap (tenth)	39	33	30	26	24	22	18	14	12	10	8	6	4	2	1
Side gap (tenth)	-517	-511	-673	-652	-638	-626	-615	-610	-745	-721	-712	-863	-831	-987	-942
Removal rate	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	3	7	14	19	16	16	19
Electrode wear (%)							□2.8	□2.4	□1.6	□1.4	□1.2	□0.8	□0.6	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch	126	106	93	79	67	57	45							
	0.2 inch	146	118	102	87	73	63	49							
	0.4 inch	169	132	112	96	81	69	55							
	0.6 inch	181	142	120	102	87	73	59							
	0.8 inch	193	152	130	110	94	79	63							
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)													□3.0	□2.0	□1.2
Required option														Satin	Satin

Model data No. : 24 inch order

Electrode material : Cu

Electrode dimensions : □2~4

Workpiece material : St

Finished roughness : 5μmRz

Selecting start MC condition	E No.
24 Standard	16*
124 Standard low wear	17*
224 Shallow high speed	18*
324 Shallow low wear	19*
424 Deep high speed	20*
524 Deep low wear	21*
624 Low wear aft.pre mill	22*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		90.0	80.0	70.0	60.0	50.0	40.0	30.0	23.0	16.0	12.0	10.0	8.0	6.0	5.0
(μmRa)		14.00	13.00	11.00	10.00	9.00	7.00	5.00	4.50	3.00	2.20	1.70	1.60	1.10	0.90
(VDI)		43	42	41	40	39	37	34	33	30	27	25	24	21	19
MC condition (E****)		168	167	166	165	164	163	162	338	337	336	2621	2926	2925	2924
Bottom remain (tenth)		192	161	133	109	90	74	58	44	30	21	16	11	6	2
Side remain (tenth)		111	96	81	69	59	50	39	31	22	15	11	7	4	2
Bottom gap (tenth)		59	51	45	39	35	33	27	21	18	15	12	10	6	2
Side gap (tenth)		39	33	30	26	24	22	18	14	12	10	10	7	4	2
Removal rate		-517	-511	-673	-652	-638	-626	-615	-610	-745	-721	-724	-710	-877	-838
Electrode wear (%)		0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	3	7	12	36	32	29
Time cont. area		□10	□8.0	□6.5	□5.0	□4.5	□4.0	□2.8	□2.4	□1.6	*	*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch		136	112	94	77	69	59	45						
	0.2 inch		150	122	104	87	77	65	49						
	0.4 inch		167	136	116	96	85	71	55						
	0.6 inch		181	146	126	102	93	77	59						
	0.8 inch		191	154	134	110	96	83	63						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)										□8.0	□6.5	□6.0	□6.0	□5.0	□4.5
Required option													Satin	Satin	Satin

Model data No. : 25 inch order

Electrode material : Cu

Electrode dimensions : □4~8

Workpiece material : St

Finished roughness : 10μmRz

Selecting start MC condition	E No.
25 Standard	16*
125 Standard low wear	17*
225 Shallow high speed	18*
325 Shallow low wear	19*
425 Deep high speed	20*
525 Deep low wear	21*
625 Low wear aft.pre mill	22*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					90.0	80.0	70.0	60.0	50.0	40.0	30.0	23.0	16.0	12.0	10.0
(μmRa)					14.00	13.00	11.00	10.00	9.00	7.00	5.00	4.50	3.00	2.20	1.70
(VDI)					43	42	41	40	39	37	34	33	30	27	25
MC condition (E****)					168	167	166	165	164	163	162	338	337	336	2621
Bottom remain (tenth)					187	157	128	105	86	70	54	40	26	17	12
Side remain (tenth)					111	96	81	69	58	49	39	31	22	15	10
Bottom gap (tenth)					59	51	45	39	35	33	27	21	18	15	12
Side gap (tenth)					39	33	30	26	24	22	18	14	12	10	10
Removal rate					-517	-511	-673	-652	-638	-626	-615	-610	-745	-721	-724
Electrode wear (%)					0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	3	7	12
Time cont. area															*
Minimum reduction per side by MC depth (tenth)	0.1 inch				140	112	94	77	69	57	45				
	0.2 inch				150	122	104	85	75	63	49				
	0.4 inch				165	134	116	94	85	71	55				
	0.6 inch				181	146	126	102	91	77	59				
	0.8 inch				191	154	134	108	96	81	63				
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 26 inch order

Electrode material : Cu

Electrode dimensions : □2~4

Workpiece material : St

Finished roughness : 5μmRz

Selecting start MC condition	E No.
26 Standard	13**
126 Standard low wear	13**
226 Shallow high speed	16**
326 Shallow low wear	16**
426 Deep high speed	15**
526 Deep low wear	15**

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	110.0	95.0	75.0	60.0	50.0	42.0	30.0	24.0	16.0	13.5	11.5	10.0	8.0	6.0	5.0
(μmRa)	18.00	15.00	12.00	10.50	9.50	8.00	5.30	4.50	3.00	2.50	2.20	1.70	1.60	1.10	0.90
(VDI)	45	44	42	40	40	38	34	33	30	28	27	25	24	21	19
MC condition (E****)	1332	1331	1329	1328	1327	1326	1325	1324	1703	1702	1701	2621	2926	2925	2924
Bottom remain (tenth)	213	181	111	85	73	59	48	40	35	30	26	16	11	6	2
Side remain (tenth)	142	122	85	70	62	52	40	32	27	22	19	11	7	4	2
Bottom gap (tenth)	98	79	61	53	47	39	33	26	22	18	14	12	10	6	2
Side gap (tenth)	79	67	53	47	43	30	24	22	20	16	12	10	7	4	2
Removal rate	-519	-513	-673	-645	-632	-618	-610	-769	-722	-714	-882	-724	-710	-877	-838
Electrode wear (%)	0.1	0.1	0.1	0.2	0.3	0.5	0.8	0.9	0.1	0.6	1.7	12	36	32	29
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch	157	136	94	77	69	59	45	37	30	26				
	0.2 inch	173	150	104	87	77	65	49	39	33	28				
	0.4 inch	193	167	116	96	85	71	55	45	37					
	0.6 inch	209	181	126	102	93	77	59	49						
	0.8 inch	222	191	134	110	96	83	63	51						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option													Satin	Satin	Satin

Model data No. : 27 inch order

Electrode material : Cu

Electrode dimensions : □4~8

Workpiece material : St

Finished roughness : 10μmRz

Selecting start MC condition	E No.
27 Standard	13**
127 Standard low wear	13**
227 Shallow high speed	16**
327 Shallow low wear	16**
427 Deep high speed	15**
527 Deep low wear	15**

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				110.0	95.0	75.0	60.0	50.0	42.0	30.0	24.0	16.0	14.0	12.0	10.0
(μmRa)				18.00	15.00	12.00	10.00	9.50	8.00	5.30	4.50	3.00	2.40	2.30	1.70
(VDI)				45	44	42	40	40	38	34	33	30	28	27	25
MC condition (E****)				1332	1331	1329	1328	1327	1326	1325	1324	1803	1802	1801	2621
Bottom remain (tenth)				209	177	106	81	69	55	43	35	30	26	22	12
Side remain (tenth)				141	122	85	69	61	52	40	32	27	22	18	10
Bottom gap (tenth)				98	79	61	53	47	39	33	26	22	18	14	12
Side gap (tenth)				79	67	53	47	43	30	24	22	20	16	12	10
Removal rate				-519	-513	-673	-645	-632	-618	-610	-769	-718	-711	-866	-724
Electrode wear (%)				0.1	0.1	0.1	0.2	0.3	0.5	0.8	0.9	0.5	1.8	3.8	12
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch			161	140	94	77	69	57	45	35	30	26		
	0.2 inch			173	150	104	85	75	63	49	39	33	28		
	0.4 inch			193	165	116	94	85	71	55	43	37			
	0.6 inch			209	179	126	102	91	77	59	47				
	0.8 inch			220	191	134	108	96	81	63	51				
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 28 inch order

Electrode material : Cu

Electrode dimensions : □8~12

Workpiece material : St

Finished roughness : 16μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				126.0	102.0	85.0	74.0	66.0	55.0	45.0	40.0	34.0	28.0	23.0	16.0
(μmRa)				20.00	17.00	13.00	12.00	10.50	10.00	9.00	7.00	6.00	5.00	4.50	3.00
(VDI)				46	45	42	42	40	40	39	37	36	34	33	30
MC condition (E****)				1914	1913	1912	1911	1910	1909	1908	1907	1906	2624	2623	2622
Bottom remain (tenth)				240	210	178	149	119	92	66	53	39	26	19	12
Side remain (tenth)				159	142	124	105	87	72	56	46	37	24	16	10
Bottom gap (tenth)				118	110	98	79	71	61	53	47	39	24	16	12
Side gap (tenth)				98	91	79	67	59	53	47	43	30	16	12	10
Removal rate				-544	-531	-521	-513	-696	-668	-641	-630	-617	-610	-752	-728
Electrode wear (%)				1.6	1.2	0.6	0.1	0.1	0.1	0.1	0.2	0.3	15	21	35
Time cont. area					□16	□10	□8.0	□6.5	*	*	*	*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch			177	157	138	116	96	81	63	51	41			
	0.2 inch			195	173	152	128	106	89	69	57	45			
	0.4 inch			217	193	169	144	120	98	77	65	51			
	0.6 inch			234	209	183	156	130	106	83	69	55			
	0.8 inch			250	222	195	163	138	112	89	73	57			
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)													□16	□12	□12
Required option															

Model data No. : 29 inch order

Electrode material : Cu

Electrode dimensions : ~□1.2

Workpiece material : St

Finished roughness : 0. 2μmRz

Cavity type : Glazed machining (Additional Model)

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)													1.0	0.4	0.2
(μmRa)													0.27	0.20	0.14
(VDI)													9	6	3
MC condition (E****)													2703	3102	3100
Bottom remain (tenth)													5	2	0
Side remain (tenth)													3	1	0
Bottom gap (tenth)													5	2	0
Side gap (tenth)													3	1	0
Removal rate													-960	-906	-903
Electrode wear (%)													27	100	100
Time cont. area													*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch														
	0.2 inch														
	0.4 inch														
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 30 inch order

Electrode material : Gr1

Electrode dimensions : □0.8~20

Workpiece material : St

Finished roughness : 8μmRz

Selecting start MC condition	E No.
30 Standard	415*
130 Standard low wear	416*
230 Shallow high speed	414*
430 Deep high speed	417*
530 Deep low wear	418*
730 Deep narrow high speed	420*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		60.0	54.0	47.0	45.0	43.0	41.0	39.0	35.0	26.0	23.0	20.0	15.0	10.0	8.0
(μmRa)		11.00	10.50	10.30	10.20	9.00	8.00	7.00	6.00	5.00	4.50	4.00	2.50	1.80	1.60
(VDI)		41	40	40	40	39	38	37	36	34	33	32	28	25	24
MC condition (E****)		4158	4157	4156	4155	4154	4153	4152	4151	4196	4195	4194	4193	4192	4191
Bottom remain (tenth)		173	157	142	126	110	94	83	71	57	44	36	30	24	20
Side remain (tenth)		130	96	88	80	72	65	57	49	37	26	20	17	13	10
Bottom gap (tenth)		63	63	63	63	59	39	39	39	39	33	28	24	22	20
Side gap (tenth)		31	31	31	31	30	28	20	20	20	16	14	12	12	10
Removal rate		-524	-518	-516	-517	-513	-683	-647	-640	-634	-610	-752	-726	-711	-859
Electrode wear (%)		0.5	0.5	0.5	0.5	0.5	0.5	1.7	1.7	3	7	13	17	52	60
Time cont. area		□10	□10	□8.0	□7.6	□6.4	□5.2	□3.6	□3.0	□3.0	□2.5	□2.0	□1.4	□1.2	□1.0
Minimum reduction per side by MC depth (tenth)	0.1 inch		157	102	91	83	75	67	59	51					
	0.2 inch		177	106	94	91	83	75	63	55					
	0.4 inch		189	130	102	98	91	83	71	59					
	0.6 inch		201	146	114	106	98	91	79	71					
	0.8 inch		220	161	126	118	106	98	91	79					
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)							□24	□20	□16	□16	□12	□10	□6.5	□5.5	□4.5
Required option															

Model data No. : 31 inch order

Electrode material : Gr1

Electrode dimensions : □2.4~4.0

Workpiece material : St

Finished roughness : 5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	86.0	62.0	54.0	47.0	40.0	34.0	26.0	21.0	16.0	14.0	12.0	10.0	8.0	6.0	5.0
(μmRa)	13.00	11.00	10.00	9.00	7.00	6.00	5.00	4.00	3.00	2.40	2.30	1.70	1.50	1.10	0.90
(VDI)	42	41	40	39	37	36	34	32	30	28	27	25	24	21	19
MC condition (E****)	4214	4113	4112	4111	4619	4618	4617	4616	4615	4614	4917	4916	4915	4914	4913
Bottom remain (tenth)	197	177	161	146	108	91	71	55	47	39	31	26	20	16	12
Side remain (tenth)	152	132	116	100	77	61	49	41	35	30	24	18	14	10	6
Bottom gap (tenth)	63	63	63	63	63	59	39	39	33	28	24	18	14	14	12
Side gap (tenth)	31	31	31	31	31	30	20	20	16	14	12	11	10	10	6
Removal rate	-538	-529	-517	-511	-513	-673	-656	-622	-770	-728	-719	-876	-850	-833	-820
Electrode wear (%)	0.1	0.1	0.1	0.1	2	2	5	10	10	10	130	210	230	250	270
Time cont. area											*	*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch	177	154	110	102										
	0.2 inch	197	173	122	114										
	0.4 inch	213	185	134	122										
	0.6 inch	228	197	142	130										
	0.8 inch	248	217	154	142										
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option											Satin	Satin	Satin	Satin	Satin

Model data No. : **32** inch order

Electrode material : Gr1 Electrode dimensions : □2.4~4.0

Workpiece material : St Finished roughness : 12μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		130.0	125.0	106.0	86.0	62.0	54.0	47.0	40.0	34.0	26.0	21.0	16.0	14.0	12.0
(μmRa)		21.00	20.00	17.00	13.00	11.00	10.00	9.00	7.00	6.00	5.00	4.00	3.00	2.40	2.30
(VDI)		46	46	45	42	40	40	39	37	36	34	32	30	28	27
MC condition (E****)		4317	4316	4315	4214	4113	4112	4111	4619	4618	4617	4616	4615	4614	4613
Bottom remain (tenth)		256	244	216	189	169	153	137	98	80	61	45	37	30	24
Side remain (tenth)		200	188	160	133	113	97	81	58	42	30	22	19	15	12
Bottom gap (tenth)		79	71	63	63	63	63	63	63	59	39	39	33	28	24
Side gap (tenth)		39	35	31	31	31	31	31	31	30	20	20	16	14	12
Removal rate		-599	-564	-535	-538	-529	-517	-511	-513	-673	-656	-622	-770	-728	-716
Electrode wear (%)		0.1	0.1	0.1	0.1	0.1	0.1	0.1	2	2	5	10	10	10	22
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch		232	217	213	177	154	110	102						
	0.2 inch		272	256	248	197	173	122	114						
	0.4 inch		295	276	268	213	185	134	122						
	0.6 inch		311	291	283	228	197	142	130						
	0.8 inch		339	315	307	248	217	154	142						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option		160A	160A												

Model data No. : **33** inch order

Electrode material : Gr1 Electrode dimensions : □4.0~6.0

Workpiece material : St Finished roughness : 12μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		160.0	150.0	106.0	86.0	62.0	54.0	47.0	40.0	34.0	26.0	21.0	16.0	14.0	12.0
(μmRa)		27.00	25.00	17.00	13.00	12.50	10.00	9.00	7.00	6.00	5.00	4.00	3.00	2.40	2.30
(VDI)		49	48	45	42	42	40	39	37	36	34	32	30	28	27
MC condition (E****)		4417	4416	4315	4214	4113	4112	4111	4619	4618	4617	4616	4615	4614	4613
Bottom remain (tenth)		275	256	216	189	169	153	137	98	80	61	45	37	30	24
Side remain (tenth)		219	200	160	133	113	97	81	58	42	30	22	19	15	12
Bottom gap (tenth)		79	71	63	63	63	63	63	63	59	39	39	33	28	24
Side gap (tenth)		39	35	31	31	31	31	31	31	30	20	20	16	14	12
Removal rate		-411	-585	-535	-538	-529	-517	-511	-513	-673	-656	-622	-770	-728	-716
Electrode wear (%)		0.1	0.1	0.1	0.1	0.1	0.1	0.1	2	2	5	10	10	10	22
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch		256	232	213	177	154	110	102						
	0.2 inch		299	272	248	197	173	122	114						
	0.4 inch		323	295	268	213	185	134	122						
	0.6 inch		343	311	283	228	197	142	130						
	0.8 inch		374	339	307	248	217	154	142						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option		160A	160A												

Model data No. : **34** inch order

Electrode material : Gr1 Electrode dimensions : □6.0~12.0

Workpiece material : St Finished roughness : 14μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			160.0	150.0	106.0	86.0	62.0	54.0	48.0	41.0	36.0	29.0	23.0	18.0	14.0
(μmRa)			27.00	25.00	17.00	13.00	11.00	10.00	9.00	8.00	6.00	5.20	4.50	3.50	2.50
(VDI)			49	48	45	42	41	40	39	38	36	34	33	31	28
MC condition (E****)			4417	4416	4315	4414	4413	4412	4411	4647	4646	4645	4644	4643	4642
Bottom remain (tenth)			278	254	219	191	171	152	132	104	81	65	48	36	28
Side remain (tenth)			222	202	163	135	115	100	84	64	48	37	28	22	16
Bottom gap (tenth)			79	71	63	63	63	63	63	63	59	39	39	33	28
Side gap (tenth)			41	37	33	33	33	33	33	33	31	22	22	18	16
Removal rate			-411	-585	-535	-538	-529	-517	-511	-511	-661	-642	-615	-776	-734
Electrode wear (%)			0.1	0.1	0.1	0.1	0.1	0.1	0.1	3	3	5	14	17	40
Time cont. area					□20	□16	□10	*	*	*	*	*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch		256	232	213	177	154	110	102						
	0.2 inch		299	272	248	197	173	122	114						
	0.4 inch		323	295	268	213	185	134	122						
	0.6 inch		343	311	283	228	197	142	130						
	0.8 inch		374	339	307	248	217	154	142						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)													□16	□12	□12
Required option			160A	160A											

Model data No. : **35** inch order

Electrode material : Gr1 Electrode dimensions : ~□0.8

Workpiece material : St Finished roughness : 8μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)							38.0	32.0	26.0	22.0	17.0	14.0	12.0	10.0	8.0
(μmRa)							7.00	5.50	5.00	4.50	3.00	2.40	2.30	1.70	1.50
(VDI)							37	35	34	33	30	28	27	25	24
MC condition (E****)							4509	4508	4506	4505	4504	4614	4613	4612	4611
Bottom remain (tenth)							103	76	61	48	37	30	26	23	20
Side remain (tenth)							69	53	41	31	23	18	15	12	10
Bottom gap (tenth)							63	59	47	39	35	28	24	22	20
Side gap (tenth)							31	30	24	20	16	14	12	12	10
Removal rate							-631	-623	-610	-784	-742	-728	-716	-711	-852
Electrode wear (%)							0.1	0.1	0.1	0.1	0.1	10	22	23	40
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch						67	63	51	47	39				
	0.2 inch						77	71	59	55	45				
	0.4 inch						87	79	67	63	51				
	0.6 inch						93	85	71	67	55				
	0.8 inch						98	91	75	71	59				
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 36 inch order

Electrode material : Gr1 Electrode dimensions : □0.8~1.0

Workpiece material : St Finished roughness : 8μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					54.0	47.0	40.0	34.0	26.0	21.0	16.0	14.0	12.0	10.0	8.0
(μmRa)					10.00	9.00	7.00	6.00	5.00	4.00	3.00	2.40	2.30	1.70	1.50
(VDI)					40	39	37	36	34	32	30	28	27	25	24
MC condition (E****)					4112	4111	4619	4618	4617	4616	4615	4614	4613	4612	4611
Bottom remain (tenth)					160	144	105	73	54	40	35	30	26	23	20
Side remain (tenth)					100	92	68	48	37	27	23	18	15	12	10
Bottom gap (tenth)					63	63	63	59	39	39	33	28	24	22	20
Side gap (tenth)					31	31	31	30	20	20	16	14	12	12	10
Removal rate					-517	-511	-513	-673	-656	-622	-770	-728	-716	-711	-852
Electrode wear (%)					0.1	0.1	2	2	5	10	10	10	22	23	40
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch				98	94									
	0.2 inch				98	94									
	0.4 inch				130	102									
	0.6 inch				146	114									
	0.8 inch				161	126									
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 37 inch order

Electrode material : Gr1 Electrode dimensions : □1.0~1.6

Workpiece material : St Finished roughness : 8μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				62.0	54.0	47.0	40.0	34.0	26.0	21.0	16.0	14.0	12.0	10.0	8.0
(μmRa)				10.50	10.00	9.00	7.00	6.00	5.00	4.00	3.00	2.30	2.20	1.70	1.50
(VDI)				40	40	39	37	36	34	32	30	27	27	25	24
MC condition (E****)				4113	4112	4111	4619	4618	4617	4616	4615	4614	4613	4612	4611
Bottom remain (tenth)				172	157	141	102	70	50	39	35	30	26	23	20
Side remain (tenth)				128	93	85	61	45	33	26	22	18	15	12	10
Bottom gap (tenth)				63	63	63	63	59	39	39	33	28	24	22	20
Side gap (tenth)				31	31	31	31	30	20	20	16	14	12	12	10
Removal rate				-529	-517	-511	-513	-673	-656	-622	-770	-728	-716	-711	-852
Electrode wear (%)				0.1	0.1	0.1	2	2	5	10	10	10	22	23	40
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch			157	114	106									
	0.2 inch			177	126	118									
	0.4 inch			189	138	126									
	0.6 inch			201	146	134									
	0.8 inch			220	161	146									
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 38 inch order

Electrode material : Gr1 Electrode dimensions : □1.6~2.4

Workpiece material : St Finished roughness : 8μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		89.0	86.0	62.0	54.0	47.0	40.0	34.0	26.0	21.0	16.0	14.0	12.0	10.0	8.0
(μmRa)		13.50	13.00	11.00	10.00	9.00	7.00	6.00	5.00	4.00	3.00	2.40	2.20	1.70	1.50
(VDI)		43	42	41	40	39	37	36	34	32	30	28	27	25	24
MC condition (E****)		4215	4214	4113	4112	4111	4619	4618	4617	4616	4615	4614	4613	4612	4611
Bottom remain (tenth)		209	201	181	165	150	110	87	67	52	44	36	30	24	20
Side remain (tenth)		156	148	128	93	85	61	45	33	26	22	18	15	12	10
Bottom gap (tenth)		63	63	63	63	63	63	59	39	39	33	28	24	22	20
Side gap (tenth)		31	31	31	31	31	31	30	20	20	16	14	12	12	10
Removal rate		-559	-538	-529	-517	-511	-513	-673	-656	-622	-770	-728	-716	-711	-852
Electrode wear (%)		0.1	0.1	0.1	0.1	0.1	2	2	5	10	10	10	22	23	40
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch		201	181	157	114	106								
	0.2 inch		236	201	177	126	118								
	0.4 inch		252	217	189	138	126								
	0.6 inch		268	232	201	146	134								
	0.8 inch		291	252	220	161	146								
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 39 inch order

Electrode material : Gr1 Electrode dimensions : □12~

Workpiece material : St Finished roughness : 18μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				160.0	150.0	106.0	86.0	62.0	54.0	48.0	41.0	36.0	29.0	23.0	18.0
(μmRa)				27.00	25.00	17.00	13.00	11.00	10.00	9.00	8.00	6.00	5.30	4.50	3.50
(VDI)				49	48	45	42	40	40	39	38	36	34	33	31
MC condition (E****)				4417	4416	4315	4414	4413	4412	4411	4647	4656	4655	4654	4653
Bottom remain (tenth)				276	248	213	185	165	146	126	98	75	59	43	31
Side remain (tenth)				217	197	157	130	110	94	79	59	43	31	24	18
Bottom gap (tenth)				79	71	63	63	63	63	63	63	59	39	39	31
Side gap (tenth)				43	39	35	35	35	35	35	35	31	24	24	18
Removal rate				-411	-585	-535	-538	-529	-517	-511	-511	-688	-665	-619	-787
Electrode wear (%)				1	1	1	1	1	1	1	3	4	6	15	28
Time cont. area				□35	□27	□20	□16	□10	*	*	*	*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch			256	232	213	177	154	110	102					
	0.2 inch			299	272	248	197	173	122	114					
	0.4 inch			323	295	268	213	185	134	122					
	0.6 inch			343	311	283	228	197	142	130					
	0.8 inch			374	339	307	248	217	154	142					
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)										□32	□32	□32	□32	□32	□27
Required option				160A	160A										

Model data No. : 40 inch order

Electrode material : Gr2

Electrode dimensions : □0.12~0.16

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)								28.0	21.0	16.0	12.0	10.0	8.0	5.0	4.0
(μmRa)								5.00	4.00	3.00	2.30	1.70	1.50	0.90	0.70
(VDI)								34	32	30	27	25	24	19	17
MC condition (E****)								5121	5221	4727	4725	4823	4925	4923	4922
Bottom remain (tenth)								77	61	36	27	21	16	11	6
Side remain (tenth)								64	48	32	23	18	13	8	4
Bottom gap (tenth)								39	24	24	20	17	14	10	6
Side gap (tenth)								20	14	14	12	11	10	6	4
Removal rate								-738	-728	-780	-731	-717	-870	-818	-809
Electrode wear (%)								0.3	0.6	10	10	20	34	50	60
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch							69	51						
	0.2 inch							75	55						
	0.4 inch							85	61						
	0.6 inch							94	67						
	0.8 inch							104	73						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 41 inch order

Electrode material : Gr2

Electrode dimensions : □0.16~0.2

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)								28.0	21.0	16.0	12.0	10.0	8.0	5.0	4.0
(μmRa)								5.00	4.00	3.00	2.30	1.70	1.50	0.90	0.70
(VDI)								34	32	30	27	25	24	19	17
MC condition (E****)								5122	5222	4727	4725	4823	4925	4923	4922
Bottom remain (tenth)								77	61	36	27	21	16	11	6
Side remain (tenth)								64	48	32	23	18	13	8	4
Bottom gap (tenth)								39	24	24	20	17	14	10	6
Side gap (tenth)								20	14	14	12	11	10	6	4
Removal rate								-782	-746	-780	-731	-717	-870	-818	-809
Electrode wear (%)								0.2	0.8	10	10	20	34	50	60
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch							69	51						
	0.2 inch							75	55						
	0.4 inch							85	61						
	0.6 inch							94	67						
	0.8 inch							104	73						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : **42** inch order

Electrode material : Gr2

Electrode dimensions : □0.2~0.25

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)								28.0	21.0	16.0	12.0	10.0	8.0	5.0	4.0
(μmRa)								5.00	4.00	3.00	2.30	1.70	1.50	0.90	0.70
(VDI)								34	32	30	27	25	24	19	17
MC condition (E****)								5123	5223	4727	4725	4823	4925	4923	4922
Bottom remain (tenth)								77	61	36	27	21	16	11	6
Side remain (tenth)								64	48	32	23	18	13	8	4
Bottom gap (tenth)								39	24	24	20	17	14	10	6
Side gap (tenth)								20	14	14	12	11	10	6	4
Removal rate								-611	-766	-780	-731	-717	-870	-818	-809
Electrode wear (%)								0.2	0.8	10	10	20	34	50	60
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch							69	51						
	0.2 inch							75	55						
	0.4 inch							85	61						
	0.6 inch							94	67						
	0.8 inch							104	73						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : **43** inch order

Electrode material : Gr2

Electrode dimensions : □0.25~0.32

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)								28.0	21.0	16.0	12.0	10.0	8.0	5.0	4.0
(μmRa)								5.00	4.00	3.00	2.30	1.70	1.50	0.90	0.70
(VDI)								34	32	30	27	25	24	19	17
MC condition (E****)								5124	5224	4727	4725	4823	4925	4923	4922
Bottom remain (tenth)								77	61	36	27	21	16	11	6
Side remain (tenth)								64	48	32	23	18	13	8	4
Bottom gap (tenth)								39	24	24	20	17	14	10	6
Side gap (tenth)								20	14	14	12	11	10	6	4
Removal rate								-628	-774	-780	-731	-717	-870	-818	-809
Electrode wear (%)								0.1	0.6	10	10	20	34	50	60
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch							69	51						
	0.2 inch							75	55						
	0.4 inch							85	61						
	0.6 inch							94	67						
	0.8 inch							104	73						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : **44** inch order

Electrode material : Gr2

Electrode dimensions : □0.32~0.4

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)								28.0	21.0	16.0	12.0	10.0	8.0	5.0	4.0
(μmRa)								5.00	4.00	3.00	2.30	1.70	1.50	0.90	0.70
(VDI)								34	32	30	27	25	24	19	17
MC condition (E****)								5125	5225	4727	4725	4823	4925	4923	4922
Bottom remain (tenth)								77	61	36	27	21	16	11	6
Side remain (tenth)								64	48	32	23	18	13	8	4
Bottom gap (tenth)								39	24	24	20	17	14	10	6
Side gap (tenth)								20	14	14	12	11	10	6	4
Removal rate								-625	-610	-780	-731	-717	-870	-818	-809
Electrode wear (0.1%)								0.2	0.3	10	10	20	34	50	60
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch							69	51						
	0.2 inch							75	55						
	0.4 inch							85	61						
	0.6 inch							94	67						
	0.8 inch							104	73						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : **45** inch order

Electrode material : Gr2

Electrode dimensions : □0.4~0.5

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)								39.0	24.0	19.0	16.0	12.0	10.0	8.0	5.0
(μmRa)								7.00	4.50	4.00	3.00	2.30	1.70	1.50	0.90
(VDI)								37	33	32	30	27	25	24	19
MC condition (E****)								5126	5226	4729	4727	4725	4823	4925	4923
Bottom remain (tenth)								101	89	46	36	27	21	16	11
Side remain (tenth)								73	65	34	29	23	18	13	8
Bottom gap (tenth)								39	39	24	24	20	17	14	10
Side gap (tenth)								20	20	14	14	12	11	10	6
Removal rate								-669	-635	-628	-780	-731	-717	-870	-818
Electrode wear (0.1%)								0.1	0.1	10	10	10	20	34	50
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch							81	69						
	0.2 inch							87	75						
	0.4 inch							96	85						
	0.6 inch							106	91						
	0.8 inch							116	96						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : **46** inch order

Electrode material : Gr2

Electrode dimensions : □0.5~0.6

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)							39.0	25.0	19.0	16.0	12.0	10.0	8.0	5.0	4.0
(μmRa)							7.00	4.50	4.00	3.00	2.30	1.70	1.50	0.90	0.70
(VDI)							37	33	32	30	27	25	24	19	17
MC condition (E****)							5127	5227	4729	4727	4725	4823	4925	4923	4922
Bottom remain (tenth)							101	89	46	36	27	21	16	11	6
Side remain (tenth)							73	65	34	29	23	18	13	8	4
Bottom gap (tenth)							39	39	24	24	20	17	14	10	6
Side gap (tenth)							20	20	14	14	12	11	10	6	4
Removal rate							-687	-647	-628	-780	-731	-717	-870	-818	-809
Electrode wear (0.1%)							0.1	0.1	10	10	10	20	34	50	60
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch						81	69							
	0.2 inch						87	75							
	0.4 inch						96	85							
	0.6 inch						106	91							
	0.8 inch						116	96							
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : **47** inch order

Electrode material : Gr2

Electrode dimensions : □0.6~0.8

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)							39.0	25.0	19.0	16.0	12.0	10.0	8.0	5.0	4.0
(μmRa)							7.00	4.50	4.00	3.00	2.30	1.70	1.50	0.90	0.70
(VDI)							37	33	32	30	27	25	24	19	17
MC condition (E****)							5128	5228	4729	4727	4725	4823	4925	4923	4922
Bottom remain (tenth)							101	89	46	36	27	21	16	11	6
Side remain (tenth)							73	65	34	29	23	18	13	8	4
Bottom gap (tenth)							39	39	24	24	20	17	14	10	6
Side gap (tenth)							20	20	14	14	12	11	10	6	4
Removal rate							-513	-635	-628	-780	-731	-717	-870	-818	-809
Electrode wear (0.1%)							0.1	0.4	10	10	10	20	34	50	60
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch						81	69							
	0.2 inch						87	75							
	0.4 inch						96	85							
	0.6 inch						106	91							
	0.8 inch						116	96							
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : **48** inch order

Electrode material : Gr2

Electrode dimensions : □0.8~1.2

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					42.0	40.0	36.0	26.0	19.0	16.0	12.0	10.0	8.0	5.0	4.0
(μmRa)					8.00	7.00	6.00	5.00	4.00	3.00	2.30	1.70	1.50	0.90	0.70
(VDI)					38	37	36	34	32	30	27	25	24	19	17
MC condition (E****)					4133	4132	4030	4625	4729	4727	4725	4823	4925	4923	4922
Bottom remain (tenth)					131	128	100	65	45	35	26	20	15	10	6
Side remain (tenth)					94	91	67	43	31	27	20	16	11	6	4
Bottom gap (tenth)					59	59	39	39	24	24	20	17	14	10	6
Side gap (tenth)					30	30	20	20	14	14	12	11	10	6	4
Removal rate					-524	-515	-687	-673	-628	-780	-731	-717	-870	-818	-809
Electrode wear (0.1%)					0.1	0.1	0.1	2	10	10	10	20	34	50	60
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch				110	91	75	55							
	0.2 inch				114	94	77	57							
	0.4 inch				118	98	79	59							
	0.6 inch				122	102	81	61							
	0.8 inch				126	106	83	63							
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : **49** inch order

Electrode material : Gr2

Electrode dimensions : □1.6~2.4

Workpiece material : St

Finished roughness : 8μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					80.0	75.0	70.0	40.0	36.0	26.0	19.0	16.0	12.0	10.0	8.0
(μmRa)					13.00	12.00	11.50	7.00	6.00	5.00	4.00	3.00	2.30	1.70	1.50
(VDI)					42	42	41	37	36	34	32	30	27	25	24
MC condition (E****)					4235	4234	4233	4132	4030	4625	4729	4727	4725	4823	4925
Bottom remain (tenth)					169	157	130	126	98	63	43	34	25	19	14
Side remain (tenth)					117	109	93	89	66	42	30	26	19	15	10
Bottom gap (tenth)					63	63	59	59	39	39	24	24	20	17	14
Side gap (tenth)					31	31	30	30	20	20	14	14	12	11	10
Removal rate					-545	-531	-518	-515	-687	-673	-628	-780	-731	-717	-870
Electrode wear (0.1%)					0.1	0.1	0.1	0.1	0.1	2	10	10	10	20	34
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch				146	126	110	98	73						
	0.2 inch				165	138	118	110	81						
	0.4 inch				173	146	126	122	91						
	0.6 inch				181	154	134	132	96						
	0.8 inch				193	165	146	140	104						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 50 inch order

Electrode material : Gr2

Electrode dimensions : □2.4~4.0

Workpiece material : St

Finished roughness : 8μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					85.0	80.0	75.0	40.0	36.0	26.0	19.0	16.0	12.0	10.0	8.0
(μmRa)					13.00	12.50	12.00	7.00	6.00	5.00	3.50	3.00	2.30	1.70	1.50
(VDI)					42	42	42	37	36	34	31	30	27	25	24
MC condition (E****)					4335	4334	4333	4132	4030	4625	4729	4727	4725	4823	4925
Bottom remain (tenth)					193	169	142	126	98	63	43	34	25	19	14
Side remain (tenth)					144	121	105	89	66	42	30	26	19	15	10
Bottom gap (tenth)					59	59	59	59	39	39	24	24	20	17	14
Side gap (tenth)					30	30	30	30	20	20	14	14	12	11	10
Removal rate					-541	-529	-519	-515	-687	-673	-628	-780	-731	-717	-870
Electrode wear (0.1%)					0.1	0.1	0.1	0.1	0.1	2	10	10	10	20	34
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch				173	138	122	98	73						
	0.2 inch				193	150	134	110	81						
	0.4 inch				201	157	138	122	91						
	0.6 inch				209	169	146	132	96						
	0.8 inch				220	177	157	140	104						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 51 inch order

Electrode material : Gr2

Electrode dimensions : ~□0.2

Workpiece material : St

Finished roughness : 2μmRz

Selecting start MC condition		E No.
51	Standard	443*
251	Shallow high speed	445*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		45.0	30.0	24.0	20.0	18.0	17.0	16.0	12.0	9.0	7.0	5.0	4.0	3.0	2.0
(μmRa)		9.50	7.30	4.80	3.80	3.40	3.00	2.70	2.00	1.60	1.10	0.90	0.70	0.55	0.40
(VDI)		40	37	34	32	31	30	29	26	24	21	19	17	15	12
MC condition (E****)		4439	4438	4437	4436	4435	4434	4433	4432	4431	4430	4494	4493	4492	4491
Bottom remain (tenth)		79	63	52	42	34	28	24	20	17	11	8	5	3	2
Side remain (tenth)		71	57	47	39	33	28	24	20	17	11	8	5	3	2
Bottom gap (tenth)		41	33	27	20	17	14	11	10	8	6	5	4	3	2
Side gap (tenth)		24	20	17	15	13	11	9	9	7	5	4	4	3	2
Removal rate		-620	-610	-605	-790	-770	-750	-730	-720	-710	-830	-810	-950	-920	-910
Electrode wear (0.1%)		0.2	0.2	0.3	0.4	0.5	0.7	0.8	0.9	1	3	5	10	20	200
Time cont. area														□0.2	□0.2
Minimum reduction per side by MC depth (tenth)	0.1 inch		79	59	47	39	35	31	28	24	20	16			
	0.2 inch														
	0.4 inch														
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)		□0.2	□0.2	□0.16	□0.16	□0.12	□0.12	□0.12	□0.12	□0.08	□0.04	□0.02			
Max. spark area(inch)															
Required option															Satin

Model data No. : 52 inch order

Electrode material : Gr2 Electrode dimensions : □0.4~4.0

Workpiece material : Ti Finished roughness : 7μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	142.0	135.0	132.0	130.0	106.0	68.0	58.0	42.0	35.0	27.0	23.0	17.0	13.0	10.0	7.0
(μmRa)	24.00	22.00	21.00	18.00	16.00	12.00	9.50	7.00	5.50	4.00	3.20	2.70	1.80	1.20	0.80
(VDI)	48	47	46	45	44	42	40	37	35	32	30	29	25	22	18
MC condition (E****)	8879	8878	8877	8876	8875	8874	8873	8872	8871	8870	8869	8868	8867	8866	8865
Bottom remain (tenth)	379	323	269	219	176	138	108	86	65	47	34	26	17	10	5
Side remain (tenth)	360	307	256	209	168	131	104	83	61	46	33	25	15	9	4
Bottom gap (tenth)	93	82	80	62	52	47	39	35	32	20	16	15	12	7	5
Side gap (tenth)	74	65	64	50	41	38	31	28	26	16	13	11	9	6	4
Removal rate	-410	-549	-536	-523	-515	-511	-665	-645	-617	-775	-755	-730	-712	-825	-810
Electrode wear (0.1%)	8	9	12	12	14	18	24	28	44	76	95	99	169	303	329
Time cont. area													*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch	368	315	264	219	179	140	108	89	65	55				
	0.2 inch	370	317	266	222	181	146	114	94	73	59				
	0.4 inch	372	319	270	226	185	152	122	100	79	63				
	0.6 inch	382	327	280	236	193	159	130	108	87	71				
	0.8 inch	394	339	289	248	203	169	140	118	94	79				
	1.6 inch														
Min. spark area(inch)	□2.0	□2.0	□2.0	□1.6	□1.6	□1.2	□0.8	□0.6	□0.6	□0.4					
Max. spark area(inch)															
Required option	TB	TB	TB												

Model data No. : 53 inch order

Electrode material : Gr2 Electrode dimensions : □0.02~0.2

Workpiece material : St Finished roughness : 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			30.0	25.0	20.0	18.0	16.0	12.0	9.0	7.0	6.0	5.0	4.0	3.0	2.0
(μmRa)			5.30	4.50	4.00	3.50	3.00	2.30	1.60	1.30	1.10	0.90	0.70	0.55	0.40
(VDI)			34	33	32	31	30	27	24	22	21	19	17	15	12
MC condition (E****)			4523	4522	4521	4539	4538	4537	4536	4535	4534	4533	4532	4531	4530
Bottom remain (tenth)			65	51	47	43	33	28	20	15	11	7	5	2	2
Side remain (tenth)			51	47	39	37	30	24	19	15	11	7	5	2	2
Bottom gap (tenth)			39	24	22	21	19	16	14	12	9	6	4	2	2
Side gap (tenth)			20	18	16	16	14	12	10	8	6	5	4	2	2
Removal rate			-622	-619	-617	-779	-739	-724	-711	-864	-832	-946	-937	-923	-909
Electrode wear (0.1%)			2	2	2	4	5	8	15	20	50	110	150	170	200
Time cont. area													□5	□4	□3
Minimum reduction per side by MC depth (tenth)	0.1 inch		59	49	39	37	31	28	24	20	16	12	8	4	
	0.2 inch														
	0.4 inch														
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)			□0.2	□0.2	□0.2	□0.2	□0.16	□0.12	□0.08	□0.08	□0.04	□0.04	□0.04	□0.02	
Max. spark area(inch)															
Required option														Satin	Satin

Model data No. : 54 inch order

Electrode material : Gr2

Electrode dimensions : □0.4~1.2

Workpiece material : St

Finished roughness : 4μmRz

Selecting start MC condition		E No.
54	Standard	455*
154	Standard low wear	454*
254	Shallow high speed	456*
454	Deep high speed	457*
554	Deep low wear	458*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				53.0	47.0	41.0	35.0	30.0	25.0	20.0	16.0	12.0	9.0	5.0	4.0
(μmRa)				10.00	9.00	8.00	6.00	5.00	4.50	4.00	3.00	2.20	1.60	0.90	0.70
(VDI)				40	39	38	36	34	33	32	28	27	24	19	17
MC condition (E****)				4557	4556	4555	4554	4553	4552	4551	4596	4595	4594	4593	4592
Bottom remain (tenth)				98	88	84	82	65	51	41	27	20	15	10	6
Side remain (tenth)				85	75	65	51	43	41	37	23	17	11	6	4
Bottom gap (tenth)				47	47	43	43	39	24	22	20	17	14	10	6
Side gap (tenth)				24	24	22	22	20	18	16	14	11	10	6	4
Removal rate				-516	-674	-650	-637	-630	-624	-611	-746	-723	-713	-811	-928
Electrode wear (0.1%)				2	2	2	2	2	5	5	9	20	43	120	150
Time cont. area											□1.0	□0.8	□0.7	□0.55	□0.3
Minimum reduction per side by MC depth (tenth)	0.1 inch			89	79	69	55	47	43	39					
	0.2 inch			94	83	73	59	51	47	43					
	0.4 inch			102	91	79	63	55	51	47					
	0.6 inch			110	98	87	69	59	55	51					
	0.8 inch			120	106	93	73	63	59	55					
Min. spark area(inch)				□0.7	□0.4	□0.3	□0.25	□0.2	□0.2	□0.12	□0.08	□0.08			
Max. spark area(inch)															
Required option															

Model data No. : 55 inch order

Electrode material : Gr2

Electrode dimensions : □0.8~

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				48.0	40.0	32.0	30.0	26.0	19.0	16.0	12.0	10.0	8.0	5.0	4.0
(μmRa)				9.00	7.00	5.50	5.30	5.00	3.50	3.00	2.30	1.70	1.50	1.00	0.80
(VDI)				39	37	36	34	34	31	30	27	25	24	21	18
MC condition (E****)				4629	4628	4627	4626	4625	4729	4727	4725	4823	4925	4923	4922
Bottom remain (tenth)				98	88	84	82	65	45	35	26	20	15	10	6
Side remain (tenth)				69	63	59	57	43	31	27	20	16	11	6	4
Bottom gap (tenth)				47	47	43	43	39	24	24	20	17	14	10	6
Side gap (tenth)				24	24	22	22	20	14	14	12	11	10	6	4
Removal rate				-523	-519	-510	-691	-673	-628	-780	-731	-717	-870	-817	-806
Electrode wear (0.1%)				1	1	1	1	2	10	10	10	20	34	50	60
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch			89	79	69	55	47							
	0.2 inch			94	83	73	59	51							
	0.4 inch			102	91	79	63	55							
	0.6 inch			110	98	87	69	59							
	0.8 inch			120	106	93	73	63							
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 56 inch order

Electrode material : Gr1

Electrode dimensions : □0.8~1.6

Workpiece material : St

Finished roughness : 4μmRz

Selecting start MC condition	E No.
56 Standard	415*
156 Standard low wear	416*
256 Shallow high speed	414*
456 Deep high speed	417*
556 Deep low wear	418*
756 Deep narrow high speed	420*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	54.0	47.0	45.0	43.0	41.0	39.0	35.0	26.0	23.0	20.0	15.0	10.0	8.0	5.0	4.0
(μmRa)	10.50	10.30	10.20	9.00	8.00	7.00	6.00	5.00	4.50	4.00	2.50	1.80	1.60	0.90	0.70
(VDI)	40	40	40	39	38	37	36	34	33	32	28	25	24	19	17
MC condition (E****)	4157	4156	4155	4154	4153	4152	4151	4196	4195	4194	4193	4192	4191	4593	4592
Bottom remain (tenth)	151	135	120	104	88	76	65	51	37	30	24	18	13	8	4
Side remain (tenth)	95	87	80	72	64	56	48	36	25	20	16	12	9	3	0
Bottom gap (tenth)	63	63	63	59	39	35	31	29	27	21	17	13	9	4	4
Side gap (tenth)	31	31	31	30	28	24	20	17	15	13	11	6	6	2	0
Removal rate	-518	-517	-516	-513	-683	-647	-640	-634	-610	-752	-726	-711	-859	-811	-928
Electrode wear (0.1%)	0.5	0.5	0.5	0.5	0.5	1.7	1.7	3	7	13	17	52	60	120	150
Time cont. area											□1.4	□1.2	□1.0	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch	102	91	83	75	67	59	51							
	0.2 inch	106	94	91	83	75	63	55							
	0.4 inch	130	102	98	91	83	71	59							
	0.6 inch	146	114	106	98	91	79	71							
	0.8 inch	161	126	118	106	98	91	79							
1.6 inch															
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 57 inch order

Electrode material : Gr1

Electrode dimensions : □1.6~3.2

Workpiece material : St

Finished roughness : 4μmRz

Selecting start MC condition	E No.
57 Standard	415*
157 Standard low wear	416*
257 Shallow high speed	414*
457 Deep high speed	417*
557 Deep low wear	418*
757 Deep narrow high speed	420*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	54.0	47.0	45.0	43.0	41.0	39.0	35.0	26.0	23.0	20.0	15.0	10.0	8.0	5.0	4.0
(μmRa)	10.50	10.30	10.20	9.00	8.00	7.00	6.00	5.00	4.50	4.00	2.50	1.80	1.60	0.90	0.70
(VDI)	40	40	40	39	38	37	36	34	33	32	28	25	24	19	17
MC condition (E****)	4157	4156	4155	4154	4153	4152	4151	4196	4195	4194	4193	4192	4191	4593	4592
Bottom remain (tenth)	149	133	118	102	86	74	63	49	35	28	22	16	11	6	2
Side remain (tenth)	95	87	79	71	63	56	48	36	25	19	15	12	7	1	0
Bottom gap (tenth)	63	63	63	59	39	34	29	27	25	19	15	11	8	3	2
Side gap (tenth)	31	31	31	30	28	23	19	17	15	13	11	6	4	0	0
Removal rate	-518	-516	-517	-513	-683	-647	-640	-634	-610	-752	-726	-711	-859	-811	-928
Electrode wear (0.1%)	0.5	0.5	0.5	0.5	0.5	1.7	1.7	3	7	13	17	52	60	120	150
Time cont. area								□3.2	□2.4	□2.0	*	*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch	102	91	83	75	67	59	51							
	0.2 inch	106	94	91	83	75	63	55							
	0.4 inch	130	102	98	91	83	71	59							
	0.6 inch	146	114	106	98	91	79	71							
	0.8 inch	161	126	118	106	98	91	79							
1.6 inch															
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 58 inch order

Electrode material : Gr1

Electrode dimensions : □3.2~

Workpiece material : St

Finished roughness : 8μmRz

Selecting start MC condition	E No.
58 Standard	415*
158 Standard low wear	416*
258 Shallow high speed	414*
458 Deep high speed	417*
558 Deep low wear	418*
758 Deep narrow high speed	420*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		60.0	54.0	47.0	45.0	43.0	41.0	39.0	35.0	26.0	23.0	20.0	15.0	10.0	8.0
(μmRa)		11.00	10.50	10.30	10.20	9.00	8.00	7.00	6.00	5.00	4.50	4.00	2.50	1.80	1.60
(VDI)		41	40	40	40	39	38	37	36	34	33	32	28	25	24
MC condition (E****)		4158	4157	4156	4155	4154	4153	4152	4151	4196	4195	4194	4193	4192	4191
Bottom remain (tenth)		160	144	129	113	97	81	70	58	44	31	23	17	11	7
Side remain (tenth)		123	89	81	73	65	57	50	42	30	19	13	9	6	3
Bottom gap (tenth)		49	49	49	49	45	32	26	22	20	19	15	11	9	7
Side gap (tenth)		24	24	24	24	22	20	17	13	11	9	7	5	5	3
Removal rate		-524	-518	-516	-517	-513	-683	-647	-640	-634	-610	-752	-726	-711	-859
Electrode wear (0.1%)		0.5	0.5	0.5	0.5	0.5	0.5	1.7	1.7	3	7	13	17	52	60
Time cont. area		□10	□10	□8.0	□7.6	□6.4	□5.2	□3.6	*	*	*	*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch	157	102	91	83	75	67	59	51						
	0.2 inch	177	106	94	91	83	75	63	55						
	0.4 inch	189	130	102	98	91	83	71	59						
	0.6 inch	201	146	114	106	98	91	79	71						
	0.8 inch	220	161	126	118	106	98	91	79						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)							□24	□20	□16	□16	□12	□10	□6.5	□5.5	□4.5
Required option															

Model data No. : 59 inch order

Electrode material : CuW

Electrode dimensions : □0.04~0.4

Workpiece material : St

Finished roughness : 1μmRz

Cavity type : Connector mold machining

※Ultra-precision machining circuit II (Optional equipment) is necessary for process No.15

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			30.0	20.0	17.0	14.0	11.0	10.0	9.0	8.0	6.0	4.0	3.0	2.0	1.0
(μmRa)			5.30	4.00	3.00	2.40	2.00	1.80	1.70	1.30	0.90	0.70	0.55	0.40	0.25
(VDI)			34	32	30	28	26	25	25	22	19	17	15	12	8
MC condition (E****)			6029	6028	6027	6026	6025	6024	6232	6231	6230	2805	2804	2803	2832
Bottom remain (tenth)			73	55	41	31	23	17	14	12	7	4	3	2	0
Side remain (tenth)			49	37	30	22	17	12	10	8	5	3	2	1	0
Bottom gap (tenth)			39	31	24	20	16	12	8	6	5	4	3	2	0
Side gap (tenth)			30	26	20	16	14	8	6	5	3	3	2	1	0
Removal rate			-752	-748	-724	-719	-713	-852	-841	-841	-838	-806	-944	-911	-906
Electrode wear (0.1%)			1.5	1.5	4	4	8	13	7	5	11	24	22	19	25
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch		43	35	26	24	22	16	12	10	8				
	0.2 inch		49	37	28	26	24	20	16	14	10				
	0.4 inch		55	41	31										
	0.6 inch		59												
	0.8 inch														
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option											Satin	Satin	Satin	Satin	UF

Model data No. : 60 inch order

Electrode material : CuW Electrode dimensions : □0.12~0.4

Workpiece material : St Finished roughness : 6μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					55.0	40.0	30.0	25.0	17.0	14.0	11.0	8.5	7.5	7.0	6.0
(μmRa)					10.50	7.00	5.30	4.50	3.00	2.40	2.00	1.60	1.40	1.30	1.10
(VDI)					40	37	34	33	30	28	26	24	23	22	21
MC condition (E****)					6008	6007	6006	6005	6207	6206	6205	6203	6202	6201	6200
Bottom remain (tenth)					128	92	69	51	37	27	19	13	10	8	6
Side remain (tenth)					83	64	48	37	27	19	14	9	7	6	4
Bottom gap (tenth)					61	47	39	33	26	20	14	11	8	7	6
Side gap (tenth)					51	43	30	24	20	16	10	7	6	4	4
Removal rate					-638	-624	-612	-607	-749	-732	-718	-849	-829	-817	-812
Electrode wear (0.1%)					1	1	1	1.1	6	8	11	15	18	20	21
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch				93	71	55	41	31	24					
	0.2 inch				102	79	61	45	35	28					
	0.4 inch				114	87	67	51	39						
	0.6 inch				124	94	73	55							
	0.8 inch				132	100	77	59							
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 61 inch order

Electrode material : CuW Electrode dimensions : □0.4~

Workpiece material : St Finished roughness : 6μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					55.0	40.0	30.0	25.0	17.0	14.0	11.0	8.5	7.5	7.0	6.0
(μmRa)					10.50	7.00	5.30	4.50	3.00	2.40	2.00	1.60	1.40	1.30	1.10
(VDI)					40	37	34	33	30	28	26	24	23	22	21
MC condition (E****)					6108	6107	6106	6105	6207	6206	6205	6203	6202	6201	6200
Bottom remain (tenth)					128	92	69	51	37	27	19	13	10	8	6
Side remain (tenth)					83	64	48	37	27	19	14	9	7	6	4
Bottom gap (tenth)					61	47	39	33	26	20	14	11	8	7	6
Side gap (tenth)					51	43	30	24	20	16	10	7	6	4	4
Removal rate					-675	-647	-624	-614	-749	-732	-718	-849	-829	-817	-812
Electrode wear (0.1%)					1	1	1	1.1	6	8	11	15	18	20	21
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch				93	71	55	41	31	24					
	0.2 inch				102	79	61	45	35	28					
	0.4 inch				114	87	67	51	39						
	0.6 inch				124	94	73	55							
	0.8 inch				132	100	77	59							
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : **62** inch order

Electrode material : CuW Electrode dimensions : ~□0.2

Workpiece material : St Finished roughness : 0.7μmRz

Cavity type : Connector mold machining

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)										5.0	4.0	3.0	2.0	1.0	0.7
(μmRa)										0.90	0.70	0.55	0.40	0.27	0.25
(VDI)										19	17	15	12	9	8
MC condition (E****)										6227	6226	6225	6224	6223	6222
Bottom remain (tenth)										11	8	6	4	3	1
Side remain (tenth)										9	6	5	3	2	1
Bottom gap (tenth)										8	6	4	3	2	1
Side gap (tenth)										6	5	3	2	1	0
Removal rate										-921	-944	-911	-910	-910	-906
Electrode wear (0.1%)										20	20	24	22	20	25
Time cont. area										□0.3	□0.3	□0.3	□0.25	□0.2	□0.2
Minimum reduction per side by MC depth (tenth)	0.1 inch									10					
	0.2 inch									10					
	0.4 inch														
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option										Satin	Satin	Satin	Satin	Satin	UF

Model data No. : **63** inch order

Electrode material : CuW Electrode dimensions : □0.04~0.4

Workpiece material : St Finished roughness : 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				30.0	20.0	17.0	14.0	11.0	10.0	8.0	7.0	5.0	4.0	3.0	2.0
(μmRa)				5.30	4.00	3.00	2.40	2.00	1.70	1.50	1.30	0.90	0.70	0.55	0.40
(VDI)				34	32	30	28	26	25	24	22	19	17	15	12
MC condition (E****)				6049	6048	6047	6046	6045	6044	6042	6041	2806	2805	2804	2803
Bottom remain (tenth)				73	55	41	31	23	17	14	12	7	4	3	2
Side remain (tenth)				43	35	26	22	17	12	10	8	5	3	2	1
Bottom gap (tenth)				39	31	24	20	16	12	8	6	5	4	3	2
Side gap (tenth)				30	26	20	16	14	8	6	5	3	3	2	1
Removal rate				-759	-732	-724	-715	-711	-849	-823	-997	-809	-806	-944	-911
Electrode wear (0.1%)				12	12	12	16	16	20	20	20	20	24	22	19
Time cont. area												□0.3	□0.3	□0.25	□0.12
Minimum reduction per side by MC depth (tenth)	0.1 inch			43	35	26	24	20	14	12	10				
	0.2 inch			49	37	28	26								
	0.4 inch			55	41	31									
	0.6 inch			59											
	0.8 inch														
	1.6 inch														
Min. spark area(inch)				□0.45	□0.25	□0.2	□0.16	□0.12	□0.12	□0.08	□0.04				
Max. spark area(inch)															
Required option												Satin	Satin	Satin	Satin

Model data No. : **64** inch order

Electrode material : CuW

Electrode dimensions : □0.04~0.12

Workpiece material : St

Finished roughness : 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				30.0	20.0	17.0	14.0	11.0	10.0	8.0	7.0	5.0	4.0	3.0	2.0
(μmRa)				5.30	4.00	3.00	2.40	2.00	1.70	1.50	1.30	0.90	0.70	0.55	0.40
(VDI)				34	32	30	28	26	25	24	22	19	17	15	12
MC condition (E****)				6029	6028	6027	6026	6025	6024	6022	6021	2806	2805	2804	2803
Bottom remain (tenth)				73	55	41	31	23	17	14	12	7	6	4	2
Side remain (tenth)				51	39	30	22	17	12	10	8	5	4	2	1
Bottom gap (tenth)				39	31	24	20	16	12	8	6	5	4	3	2
Side gap (tenth)				30	26	20	16	14	8	6	5	3	3	2	1
Removal rate				-752	-748	-724	-719	-713	-852	-822	-811	-809	-806	-944	-911
Electrode wear (0.1%)				1.5	1.5	4	4	8	13	14	15	20	24	22	19
Time cont. area												□0.3	□0.3	□0.25	□0.12
Minimum reduction per side by MC depth (tenth)	0.1 inch			43	35	26	24	20	14	12	10				
	0.2 inch			49	37	28	26								
	0.4 inch			55	41	31									
	0.6 inch			59											
	0.8 inch														
	1.6 inch														
Min. spark area(inch)				□0.12	□0.12	□0.08	□0.08	□0.08	□0.04	□0.04					
Max. spark area(inch)															
Required option												Satin	Satin	Satin	Satin

Model data No. : **65** inch order

Electrode material : CuW

Electrode dimensions : □0.4~0.6

Workpiece material : St

Finished roughness : 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		55.0	40.0	30.0	25.0	17.0	14.0	11.0	8.5	7.5	7.0	5.0	4.0	3.0	2.0
(μmRa)		10.50	7.00	5.30	4.00	3.00	2.40	2.00	1.60	1.50	1.30	0.90	0.70	0.55	0.40
(VDI)		40	37	34	32	30	28	26	24	24	22	19	17	15	12
MC condition (E****)		6008	6007	6006	6005	6207	6206	6205	6203	6202	6201	2806	2805	2804	2803
Bottom remain (tenth)		131	95	72	54	41	30	22	17	13	11	7	6	4	2
Side remain (tenth)		85	66	50	39	29	21	16	11	9	7	4	3	2	1
Bottom gap (tenth)		61	47	39	33	28	22	18	14	10	8	6	5	3	2
Side gap (tenth)		53	43	30	24	20	16	12	8	6	5	3	2	2	1
Removal rate		-638	-624	-612	-607	-749	-732	-718	-849	-829	-817	-809	-806	-944	-911
Electrode wear (0.1%)		1	1	1	1.1	6	8	11	15	18	20	20	24	22	19
Time cont. area									□0.8	□0.65	□0.6	□0.3	□0.3	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch		94	73	57	43	35	24	20						
	0.2 inch		104	81	63	47	37	28							
	0.4 inch		118	91	69	53	41								
	0.6 inch		126	98	75	57									
	0.8 inch		134	104	79	61									
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option												Satin	Satin	Satin	Satin

Model data No. : **66** inch order

Electrode material : CuW

Electrode dimensions : □0.6~

Workpiece material : St

Finished roughness : 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		55.0	40.0	30.0	25.0	17.0	14.0	11.0	8.5	7.5	7.0	5.0	4.0	3.0	2.0
(μmRa)		10.50	7.00	5.30	4.50	3.00	2.40	2.00	1.60	1.50	1.30	0.90	0.70	0.55	0.40
(VDI)		40	37	34	33	30	28	26	24	24	22	19	17	15	12
MC condition (E****)		6108	6107	6106	6105	6207	6206	6205	6203	6202	6201	2826	2825	2824	2823
Bottom remain (tenth)		132	96	73	56	42	31	24	18	15	12	7	6	4	2
Side remain (tenth)		86	67	51	39	30	22	17	12	10	8	4	3	2	1
Bottom gap (tenth)		61	47	39	33	28	22	18	14	10	8	6	5	3	2
Side gap (tenth)		53	43	30	24	20	16	12	8	6	5	3	2	2	1
Removal rate		-675	-647	-624	-614	-749	-732	-718	-849	-829	-817	-818	-812	-987	-923
Electrode wear (0.1%)		1	1	1	1.1	6	8	11	15	18	20	20	24	22	19
Time cont. area								□1.2	□0.8	□0.65	□0.6	*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch		96	75	57	43	35	26	20						
	0.2 inch		106	83	63	49	37	28							
	0.4 inch		118	91	71	55	41								
	0.6 inch		128	98	77	59									
	0.8 inch		136	104	81	63									
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option												Satin	Satin	Satin	Satin

Model data No. : **67** inch order

Electrode material : CuW

Electrode dimensions : □1.2~2.0

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			50.0	40.0	30.0	25.0	22.0	18.0	15.0	12.0	10.0	8.0	6.0	5.0	4.0
(μmRa)			9.50	7.00	5.30	4.50	4.00	3.50	2.60	2.30	1.70	1.50	1.10	0.90	0.70
(VDI)			40	37	34	33	32	31	28	27	25	24	21	19	17
MC condition (E****)			6118	6117	6116	6115	6218	6217	6216	6215	6214	6213	6212	6211	6210
Bottom remain (tenth)			108	85	67	56	48	39	32	25	20	14	10	6	3
Side remain (tenth)			86	70	57	47	41	34	28	23	18	13	9	6	2
Bottom gap (tenth)			24	22	18	12	8	8	8	6	6	6	4	4	3
Side gap (tenth)			24	22	18	10	8	8	6	6	4	5	3	2	2
Removal rate			-654	-638	-621	-611	-795	-770	-746	-728	-717	-881	-842	-821	-981
Electrode wear (0.1%)			1.6	2.6	1.3	0.6	4.3	5.9	8.4	13	13	21	22	23	22
Time cont. area											□30	□30	□20	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch			96	79	63	53	47	39	33	28	22			
	0.2 inch			106	87	71	59	51	43	35	30				
	0.4 inch			120	98	81	67	59	49	41					
	0.6 inch			130	106	87	71	63	53	43					
	0.8 inch			138	112	91	77	67	57						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)														□2	□1
Required option												Satin	Satin	Satin	Satin

Model data No. : 68 inch order

Electrode material : CuW Electrode dimensions :

Workpiece material : Cu、CuW Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)								15.0	14.0	13.0	12.0	10.0	8.0	6.0	4.0
(μmRa)								2.80	2.60	2.40	2.30	1.70	1.50	1.10	0.70
(VDI)								30	29	28	27	25	24	21	17
MC condition (E****)								7328	7327	7326	7325	7324	7323	7322	7321
Bottom remain (tenth)								39	31	23	17	12	8	5	4
Side remain (tenth)								28	22	17	12	8	6	4	3
Bottom gap (tenth)								17	15	13	11	9	7	5	4
Side gap (tenth)								11	10	9	8	6	5	4	3
Removal rate								-650	-630	-600	-780	-750	-720	-700	-880
Electrode wear (0.1%)								13	11	11	14	18	19	22	11
Time cont. area												□0.8	□0.7	□0.6	□0.3
Minimum reduction per side by MC depth (tenth)	0.1 inch							31	26	20	16				
	0.2 inch							35	30	24	18				
	0.4 inch							43	41						
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option												Satin	Satin	Satin	Satin

Model data No. : 69 inch order

Electrode material : CuW Electrode dimensions : □0.6~0.8

Workpiece material : WC Finished roughness : 1. 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			16.0	14.0	13.0	11.0	9.5	8.0	6.5	5.5	4.5	3.5	2.5	1.6	1.2
(μmRa)			3.00	2.40	2.30	2.00	1.70	1.50	1.10	1.00	0.80	0.60	0.55	0.40	0.20
(VDI)			30	28	27	26	25	24	21	20	18	16	15	12	6
MC condition (E****)			7710	7709	7708	7707	7706	7705	7628	7627	7626	7625	7623	7631	7630
Bottom remain (tenth)			40	33	30	25	21	17	13	10	7	6	4	3	2
Side remain (tenth)			35	28	24	19	15	12	9	6	4	3	2	1	1
Bottom gap (tenth)			31	28	20	16	12	10	8	6	5	4	3	2	2
Side gap (tenth)			26	22	16	12	10	8	6	4	3	2	2	1	1
Removal rate			-614	-612	-788	-766	-722	-714	-859	-838	-818	-811	-929	-427	-425
Electrode wear (0.1%)			18	16	19	19	19	19	15	13	11	10	12	15	15
Time cont. area											*	*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch		37	35	33	24	16	12	10						
	0.2 inch		41	39	35	28	20	14							
	0.4 inch		45	43	41	30									
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)			□0.6	□0.6	□0.4										
Max. spark area(inch)															
Required option			WC	WC	WC	WC	WC	WC	Satin	Satin	Satin	Satin	Satin	UF	UF

Model data No. : 70 inch order

Electrode material : CuW

Electrode dimensions : ~□0.4

Workpiece material : WC

Finished roughness : 0.5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	13.0	11.0	9.5	8.0	6.5	5.5	4.5	3.5	2.5	1.6	1.2	0.9	0.7	0.6	0.5
(μmRa)	2.30	2.00	1.70	1.50	1.10	1.00	0.80	0.60	0.55	0.50	0.30	0.27	0.25	0.22	0.20
(VDI)	27	26	25	24	21	20	18	16	15	14	10	9	8	7	6
MC condition (E****)	7608	7607	7606	7605	7628	7627	7626	7625	7623	7621	7620	7638	7637	7636	7635
Bottom remain (tenth)	31	26	22	18	14	11	8	6	5	4	2	2	1	1	0
Side remain (tenth)	25	20	16	12	9	7	5	3	2	2	1	1	1	0	0
Bottom gap (tenth)	20	16	12	10	8	6	5	4	3	2	2	1	1	1	0
Side gap (tenth)	16	12	10	8	6	4	3	2	2	1	1	1	0	0	0
Removal rate	-788	-766	-744	-722	-859	-838	-818	-811	-929	-909	-903	-903	-902	-901	-901
Electrode wear (0.1%)	19	19	19	19	15	13	11	10	12	12	13	15	15	15	15
Time cont. area							□0.3	□0.25	□0.12	□0.08	□0.04	*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch	33	24	18	12	10									
	0.2 inch	35	28	20	14										
	0.4 inch	41	30												
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)										□0.35	□0.2	□0.2	□0.2	□0.2	□0.2
Required option	WC	WC	WC	WC	Satin	Satin	Satin	Satin	Satin	Satin	Satin	UF	UF	UF	UF

Model data No. : 71 inch order

Electrode material : CuW

Electrode dimensions : □0.12~0.6

Workpiece material : WC

Finished roughness : 2.5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)								13.0	11.0	9.5	8.0	6.5	5.5	3.5	2.5
(μmRa)								2.30	2.00	1.70	1.50	1.10	1.00	0.60	0.55
(VDI)								27	26	25	24	21	20	16	15
MC condition (E****)								7608	7607	7606	7605	7604	7603	7602	7601
Bottom remain (tenth)								30	22	17	12	9	6	4	3
Side remain (tenth)								29	21	15	11	7	5	3	2
Bottom gap (tenth)								20	16	12	10	8	6	4	3
Side gap (tenth)								16	12	10	8	6	4	3	2
Removal rate								-788	-766	-744	-722	-715	-866	-813	-985
Electrode wear (0.1%)								19	19	19	19	16	16	60	30
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch							33	24	18	12	10			
	0.2 inch							35	28	20	14				
	0.4 inch							41	30						
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option								WC	WC	WC	WC	WC	WC	WC	WC

Model data No. : 72 inch order

Electrode material : CuW

Electrode dimensions : □0.6~

Workpiece material : WC

Finished roughness : 3. 5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)						16.0	14.0	13.0	11.0	9.5	8.0	6.5	5.5	4.5	3.5
(μmRa)						3.00	2.40	2.30	2.00	1.70	1.50	1.10	1.00	0.80	0.60
(VDI)						30	28	27	26	25	24	21	20	18	16
MC condition (E****)						7710	7709	7708	7707	7706	7705	7704	7703	7702	7701
Bottom remain (tenth)						34	32	30	22	17	12	9	6	4	3
Side remain (tenth)						33	31	29	21	15	11	7	5	3	2
Bottom gap (tenth)						31	28	20	16	12	10	8	6	4	3
Side gap (tenth)						26	22	16	12	10	8	6	4	3	2
Removal rate						-614	-612	-788	-766	-722	-714	-877	-855	-813	-985
Electrode wear (0.1%)						18	16	19	19	19	19	16	16	60	30
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch					37	35	33	24	18	12	10			
	0.2 inch					41	39	35	28	20	14				
	0.4 inch					45	43	41	30						
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option						WC	WC	WC	WC	WC	WC	WC	WC	WC	WC

Model data No. : 73 inch order

Electrode material : CuW

Electrode dimensions : □0.12~0.6

Workpiece material : WC

Finished roughness : 1. 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					13.0	11.0	9.5	8.0	6.5	5.5	4.5	3.5	2.5	1.6	1.2
(μmRa)					2.30	2.00	1.70	1.50	1.10	1.00	0.80	0.60	0.55	0.50	0.30
(VDI)					27	26	25	24	21	20	18	16	15	14	10
MC condition (E****)					7608	7607	7606	7605	7628	7627	7626	7625	7623	7621	7620
Bottom remain (tenth)					30	24	20	16	13	9	7	5	3	2	2
Side remain (tenth)					24	19	15	12	9	6	4	3	2	1	1
Bottom gap (tenth)					20	16	12	10	8	6	5	4	3	2	2
Side gap (tenth)					16	12	10	8	6	4	3	2	2	1	1
Removal rate					-788	-766	-744	-722	-859	-838	-818	-811	-929	-909	-903
Electrode wear (0.1%)					19	19	19	19	15	13	11	10	12	12	13
Time cont. area									□0.7	□0.5	□0.3	□0.25	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch				33	24	18	12	10						
	0.2 inch				35	28	20	14							
	0.4 inch				41	30									
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)													□0.6	□0.35	□0.2
Required option					WC	WC	WC	WC	Satin	Satin	Satin	Satin	Satin	Satin	Satin

Model data No. : 74 inch order

Electrode material : CuW

Electrode dimensions : □0.6~

Workpiece material : WC

Finished roughness : 1. 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			16.0	14.0	13.0	11.0	9.5	8.0	6.5	5.5	4.5	3.5	2.5	1.6	1.2
(μmRa)			3.00	2.40	2.30	2.00	1.70	1.50	1.10	1.00	0.80	0.60	0.55	0.35	0.30
(VDI)			30	28	27	26	25	24	21	20	18	16	15	11	10
MC condition (E****)			7710	7709	7708	7707	7706	7705	7628	7627	7626	7625	7623	7621	7620
Bottom remain (tenth)			40	33	30	25	21	17	13	10	7	6	4	3	2
Side remain (tenth)			35	28	24	19	15	12	9	6	4	3	2	1	1
Bottom gap (tenth)			31	28	20	16	12	10	8	6	5	4	3	2	2
Side gap (tenth)			26	22	16	12	10	8	6	4	3	2	2	1	1
Removal rate			-614	-612	-788	-766	-722	-714	-859	-838	-818	-811	-929	-909	-903
Electrode wear (0.1%)			18	16	19	19	19	19	15	13	11	10	12	12	12
Time cont. area					□3.5	□3.0	□2.0	□1.0	□0.7	□0.5	*	*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch		37	35	33	24	16	12	10						
	0.2 inch		41	39	35	28	20	14							
	0.4 inch		45	43	41	30									
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)									□4.5	□3.0	□2.0	□1.6	□0.6	□0.35	□0.2
Required option			WC	WC	WC	WC	WC	WC	Satin	Satin	Satin	Satin	Satin	Satin	Satin

Model data No. : 75 inch order

Electrode material : Cu

Electrode dimensions : □0.04~0.2

Workpiece material : St

Finished roughness : 1μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			38.0	32.0	21.0	15.0	10.0	8.0	8.0	6.0	5.0	4.0	3.0	2.0	1.0
(μmRa)			7.00	5.50	4.00	2.40	1.70	1.50	1.50	1.10	0.90	0.70	0.55	0.40	0.27
(VDI)			37	35	32	28	25	24	24	21	19	17	15	12	9
MC condition (E****)			1028	1027	1026	1025	1024	1023	2114	2113	2112	2806	2805	2804	2803
Bottom remain (tenth)			68	60	52	36	28	22	18	15	12	9	7	4	2
Side remain (tenth)			48	41	34	28	22	19	13	10	8	6	5	4	2
Bottom gap (tenth)			43	35	28	22	18	14	12	10	8	6	5	4	2
Side gap (tenth)			31	26	20	16	12	11	8	6	4	4	3	2	2
Removal rate			-611	-741	-729	-713	-839	-821	-835	-824	-819	-809	-806	-944	-911
Electrode wear (0.1%)			0.1	0.1	0.5	0.5	0.5	0.5	7	7	12	20	24	22	19
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch		55	47	39	31	26	22							
	0.2 inch		59	51	43	35	28	24							
	0.4 inch		67	57	47	39	30	28							
	0.6 inch		73	61	51	41									
	0.8 inch		77	65	55										
	1.6 inch														
Min. spark area(inch)			□0.2	□0.16	□0.08	□0.04									
Max. spark area(inch)															
Required option												Satin	Satin	Satin	Satin

Model data No. : 76 inch order

Electrode material : Cu Electrode dimensions : □0.12~0.4

Workpiece material : St Finished roughness : 1μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	36.0	28.0	21.0	16.0	14.0	12.0	10.0	9.0	8.0	6.0	5.0	4.0	3.0	2.0	1.0
(μmRa)	6.00	5.00	4.00	3.00	2.30	2.00	1.70	1.60	1.50	1.10	0.90	0.70	0.55	0.40	0.27
(VDI)	36	34	32	30	27	26	25	25	24	21	19	17	15	12	9
MC condition (E****)	1007	1006	1005	1004	1003	1002	1001	1000	2115	2113	2112	2806	2805	2804	2803
Bottom remain (tenth)	100	86	70	55	47	38	31	26	20	15	12	8	7	5	3
Side remain (tenth)	59	55	44	34	28	24	20	17	14	10	8	6	5	3	2
Bottom gap (tenth)	43	37	31	26	20	19	18	16	12	10	8	7	6	4	3
Side gap (tenth)	33	30	22	19	16	14	12	10	8	6	4	4	4	3	2
Removal rate	-612	-764	-749	-734	-716	-876	-840	-834	-852	-824	-819	-809	-806	-944	-911
Electrode wear (0.1%)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	7	7	12	20	24	22	19
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch	63	59	47	39	31	28	26							
	0.2 inch	69	65	51	39	33	30	28							
	0.4 inch	77	71	51	41	35									
	0.6 inch	83	77	55	43	39									
	0.8 inch	89	81	59	47										
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option												Satin	Satin	Satin	Satin

Model data No. : 77 inch order

Electrode material : Cu Electrode dimensions : □0.2~0.6

Workpiece material : St Finished roughness : 1μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	36.0	28.0	21.0	16.0	14.0	12.0	10.0	10.0	8.0	6.0	5.0	4.0	3.0	2.0	1.0
(μmRa)	6.00	5.00	4.00	3.00	2.40	2.30	1.70	1.70	1.50	1.10	0.90	0.70	0.55	0.40	0.27
(VDI)	36	34	32	30	28	27	25	25	24	21	19	17	15	12	9
MC condition (E****)	1207	1206	1205	1204	1003	1002	1001	2116	2114	2113	2112	2806	2805	2804	2803
Bottom remain (tenth)	92	78	61	49	41	36	31	26	19	15	11	8	7	5	3
Side remain (tenth)	58	54	44	34	28	23	20	18	13	10	8	6	5	3	2
Bottom gap (tenth)	43	37	31	26	20	19	18	16	12	10	8	7	6	4	3
Side gap (tenth)	33	30	22	19	16	14	12	10	8	6	4	4	4	3	2
Removal rate	-622	-612	-777	-749	-716	-876	-840	-714	-835	-824	-819	-809	-806	-944	-911
Electrode wear (0.1%)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2	7	7	12	20	24	22	19
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch	61	57	47	39	31	28	26							
	0.2 inch	67	63	53	41	33	30	30							
	0.4 inch	75	71	57	43	35									
	0.6 inch	81	75	61	47	39									
	0.8 inch	87	81	65	49										
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option												Satin	Satin	Satin	Satin

Model data No. : 78 inch order

Electrode material : Cu

Electrode dimensions : □0.4~1.0

Workpiece material : St

Finished roughness : 1μmRz

Selecting start MC condition	E No.
78 Standard low wear	130*
178 Additional low wear	160*
278 Retract low wear	150*
378 Standard wear	130*
478 Additional wear	160*
578 Retract wear	150*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	55.0	45.0	40.0	30.0	21.0	16.0	12.0	10.0	8.0	6.0	5.0	4.0	3.0	2.0	1.0
(μmRa)	10.00	9.00	7.00	5.30	4.00	2.40	2.00	1.70	1.50	1.10	0.90	0.70	0.55	0.40	0.27
(VDI)	40	39	37	34	32	28	26	25	24	21	19	17	15	12	9
MC condition (E****)	1309	1308	1307	1306	1205	2318	2317	2316	2315	2314	2313	2826	2825	2824	2823
Bottom remain (tenth)	118	98	79	61	45	33	26	21	17	14	11	9	6	5	3
Side remain (tenth)	85	69	61	52	40	26	19	15	11	9	8	6	5	4	2
Bottom gap (tenth)	61	53	47	39	31	22	20	16	12	10	8	7	6	4	3
Side gap (tenth)	53	47	43	30	22	15	12	10	8	6	4	4	4	3	2
Removal rate	-648	-633	-622	-614	-777	-770	-721	-714	-873	-852	-845	-818	-812	-987	-923
Electrode wear (0.1%)	0.1	0.1	0.1	0.1	0.1	3	3	3	6	6	9	20	24	22	19
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch	94	77	69	57	45									
	0.2 inch	104	85	75	63	49									
	0.4 inch	116	94	85	71	55									
	0.6 inch	126	102	91	77	59									
	0.8 inch	134	110	96	83	63									
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option												Satin	Satin	Satin	Satin

Model data No. : 79 inch order

Electrode material : Cu

Electrode dimensions : □2~4

Workpiece material : St

Finished roughness : 5μmRz

Selecting start MC condition	E No.
79 Standard low wear	130*
179 Additional low wear	160*
279 Retract low wear	150*
379 Standard wear	130*
479 Additional wear	160*
579 Retract wear	150*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	80.0	70.0	55.0	45.0	40.0	30.0	24.0	18.0	16.0	13.5	11.5	10.0	8.0	6.0	5.0
(μmRa)	12.50	11.50	10.00	9.50	7.00	5.30	4.50	3.50	3.00	2.40	2.30	1.70	1.50	1.10	0.90
(VDI)	42	41	40	39	37	34	33	31	30	28	27	25	24	21	19
MC condition (E****)	1312	1311	1309	1308	1307	1306	1305	1304	1703	1702	1701	2621	2926	2925	2924
Bottom remain (tenth)	213	181	111	85	73	59	48	40	35	30	26	16	11	6	2
Side remain (tenth)	142	122	85	70	62	52	40	32	27	22	19	11	7	4	2
Bottom gap (tenth)	98	79	61	53	47	39	33	26	22	18	14	12	10	6	2
Side gap (tenth)	79	67	53	47	43	30	24	22	20	16	12	10	7	4	2
Removal rate	-514	-698	-648	-633	-622	-614	-784	-749	-722	-714	-882	-724	-710	-877	-838
Electrode wear (0.1%)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6	1.7	12	36	32	29
Time cont. area													*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch	157	136	94	77	69	59	45	37						
	0.2 inch	173	150	104	87	77	65	49	39						
	0.4 inch	193	167	116	96	85	71	55	45						
	0.6 inch	209	181	126	102	93	77	59	49						
	0.8 inch	222	191	134	110	96	83	63	51						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option													Satin	Satin	Satin

Model data No. : 80 inch order

Electrode material : Gr Electrode dimensions :

Workpiece material : HR750 Finished roughness : 8μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)						62.0	52.0	45.0	40.0	31.0	27.0	18.0	14.0	10.0	8.0
(μmRa)						11.00	9.50	8.50	7.00	5.60	5.00	3.50	2.40	1.70	1.50
(VDI)						41	40	39	37	35	34	31	28	25	24
MC condition (E****)						8739	8738	8737	8736	8735	8734	8733	8732	8731	8730
Bottom remain (tenth)						197	118	79	61	47	35	26	18	12	8
Side remain (tenth)						177	115	89	72	56	41	30	20	11	6
Bottom gap (tenth)						58	53	51	34	30	26	17	13	10	8
Side gap (tenth)						35	30	28	20	17	16	12	10	9	6
Removal rate						-675	-629	-622	-611	-775	-745	-752	-721	-713	-873
Electrode wear (0.1%)						20	30	35	40	45	50	20	26	30	50
Time cont. area													□4	□3	□2
Minimum reduction per side by MC depth (tenth)	0.1 inch					197	118	98	79	59	47				
	0.2 inch					197	118	98	79	59	47				
	0.4 inch					197	118	98	79	59	51				
	0.6 inch					205	126	104	85	63	51				
	0.8 inch					213	134	110	91	67	55				
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 81 inch order

Electrode material : Cu Electrode dimensions : □0.12~0.4

Workpiece material : Al Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)						55.0	49.0	31.0	24.5	19.0	13.5	10.0	8.0	6.0	4.0
(μmRa)						10.00	9.50	5.30	4.50	3.50	2.40	1.70	1.50	1.10	0.70
(VDI)						40	40	34	33	31	28	25	24	21	17
MC condition (E****)						8115	8114	8113	8112	8217	8216	8215	8214	8213	8212
Bottom remain (tenth)						75	61	45	32	24	18	13	9	7	5
Side remain (tenth)						65	53	39	28	20	15	12	9	7	5
Bottom gap (tenth)						39	32	25	19	14	11	10	7	6	5
Side gap (tenth)						34	27	19	15	12	10	9	7	6	5
Removal rate						-612	-773	-737	-721	-712	-877	-833	-817	-810	-933
Electrode wear (0.1%)						0.5	0.5	0.5	1	1.5	2	4	5	6	8
Time cont. area											□0.45	□0.35	□0.3	□0.2	□0.12
Minimum reduction per side by MC depth (tenth)	0.1 inch					75	63	47	33	24					
	0.2 inch					87	71	55	41	30					
	0.4 inch					98	87	67							
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)						□0.3	□0.25	□0.16	□0.12						
Max. spark area(inch)															
Required option															

Model data No. : **82** inch order

Electrode material : Cu

Electrode dimensions :

Workpiece material : Al

Finished roughness : 7 μ mRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μ mRz)			110.0	85.0	64.0	52.0	47.0	40.0	32.0	20.0	13.0	12.0	9.0	8.0	7.0
(μ mRa)			18.00	13.00	11.00	9.50	9.00	7.00	5.50	4.00	2.40	2.30	1.70	1.50	1.10
(VDI)			45	42	41	40	39	37	35	32	28	27	25	24	21
MC condition (E****)			8108	8107	8106	8105	8104	8103	8102	8207	8206	8205	8204	8203	8202
Bottom remain (tenth)			276	237	148	116	100	81	57	38	29	23	17	14	12
Side remain (tenth)			175	150	104	85	75	63	48	30	22	17	12	10	8
Bottom gap (tenth)			122	104	85	73	67	61	45	30	24	23	17	15	12
Side gap (tenth)			102	85	69	59	53	47	31	22	17	17	11	10	8
Removal rate			-541	-528	-516	-698	-678	-652	-627	-613	-792	-757	-728	-722	-720
Electrode wear (%)			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	1	1	3	3	5
Time cont. area					□5.5	□4.5	□3.5	□3.0	□1.6	□1.2	□0.75	□0.6	□0.45	□0.4	□0.4
Minimum reduction per side by MC depth (tenth)	0.1 inch		205	177	122	98	89	75	55	35					
	0.2 inch		232	201	140	112	98	83	63	39					
	0.4 inch		260	220	157	126	110	93	69	43					
	0.6 inch		276	236	167	136	120	98	75	47					
	0.8 inch		291	252	179	146	126	106	81	51					
	1.6 inch														
Min. spark area(inch)			□1.0	□0.8	□0.55	□0.45	□0.35								
Max. spark area(inch)									□7.5	□6.5	□3.5	□2.8	□2.4	□2.0	□2.0
Required option															

Model data No. : **83** inch order

Electrode material : Gr1

Electrode dimensions :

Workpiece material : Al

Finished roughness : 11 μ mRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μ mRz)		120.0	110.0	100.0	96.0	92.0	65.0	60.0	48.0	37.0	21.0	20.0	17.0	15.0	11.0
(μ mRa)		20.00	18.00	16.00	15.00	13.50	12.00	11.00	9.00	7.00	4.10	4.00	3.00	2.60	2.00
(VDI)		46	45	44	44	43	42	41	39	37	32	32	30	28	26
MC condition (E****)		8507	8506	8505	8504	8503	8609	8608	8607	8606	8605	8604	8603	8602	8601
Bottom remain (tenth)		252	242	216	196	175	124	83	57	39	33	27	22	17	13
Side remain (tenth)		244	232	202	149	137	102	72	55	40	34	26	22	18	15
Bottom gap (tenth)		91	91	91	89	83	55	53	43	33	28	26	21	17	13
Side gap (tenth)		114	114	114	112	102	69	63	49	37	31	26	22	18	15
Removal rate		-413	-411	-576	-549	-532	-525	-515	-698	-647	-629	-617	-798	-759	-739
Electrode wear (%)		0.5	0.4	0.8	0.5	0.5	1	1	2	3	3	3	5	6	10
Time cont. area					□8.0	□6.5	□5.5	□3.5	□3.5	□2.0	□1.2	□1.0	□0.8	□0.6	□0.6
Minimum reduction per side by MC depth (tenth)	0.1 inch		270	256	222	165	152	112	81	61	45				
	0.2 inch		297	281	246	181	167	124	89	67	49				
	0.4 inch		331	315	276	203	187	140	98	75	55				
	0.6 inch		358	341	297	220	203	150	106	81	59				
	0.8 inch		380	362	315	232	215	159	114	87	63				
	1.6 inch														
Min. spark area(inch)		□2.0	□1.6	□1.0	□0.8	□0.8	□0.8	□0.5	□0.5	□0.3					
Max. spark area(inch)										□10	□6.5	□4.5	□4.0	□2.8	□2.8
Required option															

Model data No. : **84** inch order

Electrode material : Cu

Electrode dimensions :

Workpiece material : ZAS

Finished roughness : 9μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			140.0	110.0	95.0	82.0	60.0	50.0	40.0	24.0	19.0	17.0	11.0	10.0	9.0
(μmRa)			23.00	18.00	15.00	13.00	11.00	9.50	7.00	4.50	3.50	3.00	2.00	1.70	1.60
(VDI)			47	45	44	42	41	40	37	33	31	30	26	25	24
MC condition (E****)			8308	8307	8306	8305	8304	8303	8302	8407	8406	8405	8404	8403	8402
Bottom remain (tenth)			388	333	209	163	141	115	81	54	41	33	25	21	18
Side remain (tenth)			248	213	149	121	107	91	70	46	34	27	20	17	14
Bottom gap (tenth)			144	124	108	94	83	73	57	42	35	34	23	22	18
Side gap (tenth)			122	102	89	75	67	57	45	31	26	25	17	16	14
Removal rate			-549	-537	-525	-518	-514	-698	-657	-622	-617	-613	-753	-745	-736
Electrode wear (%)			0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.5	0.8
Time cont. area				□8.0	□5.5	□4.5	□3.5	□3.0	□1.6	□1.2	□0.75	□0.6	□0.45	□0.4	□0.4
Minimum reduction per side by MC depth (tenth)	0.1 inch		291	252	177	142	126	106	79	51	37				
	0.2 inch		331	283	201	161	142	118	91	59	43				
	0.4 inch		370	315	224	181	157	134	98	65	47				
	0.6 inch		394	339	240	193	173	142	106	69	51				
	0.8 inch		417	362	256	209	181	154	114	75	55				
	1.6 inch														
Min. spark area(inch)			□1.0	□0.8	□0.55	□0.45	□0.35	□0.3	□0.25						
Max. spark area(inch)									□8.0	□6.5	□3.5	□3.0	□2.5	□2.0	□2.0
Required option															

Model data No. : **85** inch order

Electrode material : Gr1

Electrode dimensions :

Workpiece material : ZAS

Finished roughness : 15μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		98.0	94.0	85.0	82.0	80.0	52.0	48.0	39.0	30.0	30.0	29.0	23.0	21.0	15.0
(μmRa)		16.00	15.00	13.50	13.20	12.50	9.50	9.00	7.00	5.50	5.50	5.30	4.50	4.00	2.60
(VDI)		44	44	43	42	42	40	39	37	35	35	34	33	32	28
MC condition (E****)		8707	8706	8705	8704	8703	8809	8808	8807	8806	8805	8804	8803	8802	8801
Bottom remain (tenth)		330	289	259	235	212	153	106	76	56	48	41	35	30	25
Side remain (tenth)		278	220	207	154	142	106	77	59	44	38	34	30	26	22
Bottom gap (tenth)		79	79	79	79	79	79	69	63	51	48	41	35	30	25
Side gap (tenth)		59	59	59	59	59	58	51	46	39	38	34	30	26	22
Removal rate		-414	-574	-561	-545	-536	-525	-520	-512	-657	-645	-629	-616	-612	-749
Electrode wear (%)		0.8	0.7	0.8	0.7	0.4	2	2	3	5	2	2	4	4	9
Time cont. area					□8.0	□6.5	□5.5	□3.5	□3.5	□2.0	□1.2	□1.0	□0.8	□0.6	□0.6
Minimum reduction per side by MC depth (tenth)	0.1 inch		307	244	228	169	157	118	85	65	49				
	0.2 inch		339	268	252	187	173	130	94	73	55				
	0.4 inch		378	299	281	209	193	146	104	81	61				
	0.6 inch		407	325	303	226	209	157	114	87	65				
	0.8 inch		433	344	323	240	220	165	120	93	69				
	1.6 inch														
Min. spark area(inch)		□2.0	□1.6	□1.2	□1.0	□0.8	□0.8	□0.5	□0.5						
Max. spark area(inch)										□10	□6.5	□4.5	□4.0	□2.8	□2.8
Required option															

Model data No. : **86** inch order

Electrode material : Cu Electrode dimensions :

Workpiece material : Copper Alloy Finished roughness : 2. 5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	48.0	45.0	40.0	35.0	28.0	23.0	20.0	15.0	12.0	8.0	6.0	5.0	4.0	3.0	2.5
(μmRa)	9.50	9.00	7.00	6.00	5.00	4.50	4.00	2.60	2.30	1.50	1.10	0.90	0.70	0.55	0.50
(VDI)	40	39	37	36	34	33	32	28	27	24	21	19	17	15	14
MC condition (E****)	8088	8087	8086	8085	8084	8083	8082	8081	8080	8097	8096	8095	8094	8093	8092
Bottom remain (tenth)	213	180	109	87	77	61	52	42	30	20	15	12	7	6	4
Side remain (tenth)	140	120	81	69	61	49	41	33	23	15	11	8	5	3	2
Bottom gap (tenth)	154	130	106	87	75	59	51	41	30	20	14	12	7	6	4
Side gap (tenth)	98	79	59	51	43	31	28	24	16	12	10	8	6	3	2
Removal rate	-515	-681	-647	-631	-617	-610	-766	-744	-728	-710	-710	-876	-838	-831	-825
Electrode wear (%)	2	0.5	0.9	0.9	1.3	1.5	1	0.8	1	3	4	4	8	8	14
Time cont. area					□5.5	□4.5	□3.5	□3.0	□1.6	□1.2	□0.75	□0.6	□0.45	□0.4	□0.4
Minimum reduction per side by MC depth (tenth)	0.1 inch	161	138	94	79	71	59	51	39	28					
	0.2 inch	173	150	106	87	79	67	55	41	30					
	0.4 inch	193	165	118	91	83	73	59	43						
	0.6 inch	209	179	126	98	87	79	63							
	0.8 inch	220	193	134	102	91	83	67							
	1.6 inch														
Min. spark area(inch)	□2.0	□1.6	□1.0	□0.8	□0.55	□0.45	□0.35	□0.3	□0.25						
Max. spark area(inch)									□7.5	□6.5	□3.5	□2.8	□2.4	□2.0	□2.0
Required option															

Model data No. : **87** inch order

Electrode material : Cu Electrode dimensions :

Workpiece material : Bs Finished roughness : 5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)						93.0	84.0	72.0	54.0	35.0	29.0	17.0	9.0	6.0	5.0
(μmRa)						15.00	13.00	12.00	10.00	6.00	5.00	3.00	1.60	1.10	0.90
(VDI)						44	42	42	40	36	34	30	24	21	19
MC condition (E****)						8228	8227	8226	8225	8224	8223	8222	8327	8326	8325
Bottom remain (tenth)						113	103	81	63	52	44	35	26	18	12
Side remain (tenth)						91	81	67	53	46	39	29	17	11	8
Bottom gap (tenth)						106	83	71	53	51	41	28	18	16	12
Side gap (tenth)						71	57	47	35	33	28	18	12	10	8
Removal rate						-575	-542	-536	-519	-513	-683	-653	-625	-612	-789
Electrode wear (%)						0.4	0.5	0.5	0.3	0.5	0.2	0.7	7	2	3
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch					98	91	73	59	51	43	31			
	0.2 inch					110	98	79	63	55	47	35			
	0.4 inch					126	114	94	75	63	55				
	0.6 inch					134	122	100	79	67					
	0.8 inch					146	130	106	85	75					
	1.6 inch														
Min. spark area(inch)						□1	□0.8	□0.55	□0.45	□0.35	□0.3	□0.25			
Max. spark area(inch)													□6.4	□3.6	□2.8
Required option															

Model data No. : **88** inch order

Electrode material : Cu Electrode dimensions :

Workpiece material : CuBe Finished roughness : 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		40.0	30.0	21.0	18.0	15.0	13.0	10.0	9.0	7.0	6.0	5.0	4.0	3.0	2.0
(μmRa)		7.00	5.50	4.00	3.50	2.60	2.30	1.70	1.60	1.30	1.10	0.90	0.70	0.60	0.50
(VDI)		37	35	32	31	28	27	25	24	22	21	19	17	16	14
MC condition (E****)		8428	8427	8426	8425	8424	8423	8422	8421	8420	8526	8525	8524	8523	8522
Bottom remain (tenth)		110	94	82	68	50	39	31	26	22	17	12	10	8	6
Side remain (tenth)		83	67	51	47	37	28	21	17	15	13	8	6	4	3
Bottom gap (tenth)		59	49	43	37	31	26	20	19	18	16	12	10	8	6
Side gap (tenth)		49	39	33	30	22	19	16	14	12	10	8	6	4	3
Removal rate		-627	-618	-613	-777	-752	-733	-716	-711	-873	-713	-866	-852	-849	-823
Electrode wear (%)		0.8	0.9	0.8	0.6	0.8	0.8	0.7	0.8	1	3	5	5	7	23
Time cont. area			□2.8	□2.4	□2.0	□1.6	□1.2	□1.0	□1.0	□0.75	□0.6	□0.45	□0.4	□0.4	□0.4
Minimum reduction per side by MC depth (tenth)	0.1 inch		89	75	55	51	41	31	28	24	22				
	0.2 inch		100	83	63	59	47	35	31	30	28				
	0.4 inch		112	93	71	65	51	37	35	33					
	0.6 inch		120	100	77	71	55	41	37						
	0.8 inch		128	106	81	75	59	43							
	1.6 inch														
Min. spark area(inch)		□0.55	□0.45	□0.35	□0.3	□0.25	□0.2	□0.16	□0.12						
Max. spark area(inch)										□3.5	□2.8	□2.4	□2.0	□2.0	□2.0
Required option															

Model data No. : **89** inch order

Electrode material : Gr1 Electrode dimensions :

Workpiece material : Copper Alloy Finished roughness : 8μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		55.0	54.0	53.0	42.0	40.0	36.0	33.0	21.0	19.0	14.0	12.0	11.0	10.0	8.0
(μmRa)		10.10	10.00	9.90	9.00	7.00	6.00	5.50	4.00	3.50	2.40	2.30	2.00	1.70	1.50
(VDI)		40	40	40	39	37	36	35	32	31	28	27	26	25	24
MC condition (E****)		8747	8746	8745	8744	8743	8742	8741	8757	8756	8755	8754	8753	8752	8751
Bottom remain (tenth)		179	170	151	132	118	107	96	69	56	42	31	26	20	17
Side remain (tenth)		140	131	112	93	79	68	57	40	29	21	15	13	10	8
Bottom gap (tenth)		55	50	44	44	44	44	44	44	41	28	28	24	19	17
Side gap (tenth)		28	25	22	22	22	22	22	22	21	14	14	11	9	8
Removal rate		-566	-551	-523	-676	-649	-631	-619	-619	-616	-794	-744	-722	-713	-894
Electrode wear (%)		5	5	6	5	6	6	7	30	25	40	60	45	40	70
Time cont. area						□10	□8.0	□6.5	□5.5	□3.5	□3.5	□2.0	□1.2	□1.0	□0.8
Minimum reduction per side by MC depth (tenth)	0.1 inch		130	122	118	98	85	61	57						
	0.2 inch		144	136	130	106	93	67	61						
	0.4 inch		159	150	146	116	100	73	67						
	0.6 inch		173	161	157	126	110	79	73						
	0.8 inch		187	173	169	138	120	85	79						
	1.6 inch														
Min. spark area(inch)		□3.5	□3.0	□2.0	□1.6	□1.0	□0.8	□0.65	□0.65	□0.5					
Max. spark area(inch)											□10	□6.5	□4.5	□4.0	
Required option		160A	160A												

Model data No. : 1000 inch order

Electrode material : Cu Electrode dimensions : □0.2~1.2

Workpiece material : St Finished roughness : 1μmRz

Cavity type : Flower pattern

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				19.0	13.0	11.0	10.0	9.0	8.0	7.0	6.0	5.0	3.0	1.0	
(μmRa)				2.60	2.20	1.80	1.60	1.40	1.20	1.00	0.80	0.60	0.40	0.20	
(VDI)				28	27	25	24	23	22	20	18	16	12	6	
MC condition (E****)				3911	3910	3909	3908	3907	3906	3905	3904	3903	3902	3901	
Bottom remain (tenth)				19	15	14	12	9	8	6	5	4	2	2	
Side remain (tenth)				14	10	9	8	6	5	4	3	2	2	2	
Bottom gap (tenth)				8	7	6	6	7	6	5	4	2	2	1	
Side gap (tenth)				7	4	4	4	5	4	3	2	2	2	1	
Removal rate															
Electrode wear (%)															
Time cont. area				*	*	*	*	*	*	*	*	*	*	*	
Minimum reduction per side by MC depth (tenth)	0.1 inch														
	0.2 inch														
	0.4 inch														
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 1001 inch order

Electrode material : Cu Electrode dimensions : ~□0.4

Workpiece material : St Finished roughness : 0.5μmRz

Cavity type : Connector mold machining (High speed)

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			30.0	21.0	16.0	12.0	10.0	8.0	6.0	5.0	3.0	2.0	1.0	0.7	0.5
(μmRa)			5.00	4.00	3.00	2.30	1.50	1.10	1.00	0.70	0.50	0.40	0.30	0.20	0.20
(VDI)			34	32	30	27	25	24	21	19	15	12	9	8	6
MC condition (E****)			2043	2042	2041	2040	2039	2038	2037	2036	2035	2034	2033	2032	2031
Bottom remain (tenth)			59	43	31	23	19	15	12	9	6	5	4	2	2
Side remain (tenth)			52	39	26	20	16	12	10	7	6	4	3	2	2
Bottom gap (tenth)			39	31	22	20	15	10	7	6	5	4	3	2	2
Side gap (tenth)			30	22	15	12	10	7	6	4	3	3	2	2	2
Removal rate			-623	-617	-770	-721	-712	-825	-953	-818	-812	-987	-923	-906	-903
Electrode wear (%)			1	3	3	3	3	3	10	20	24	22	19	25	30
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch		59	47	31	24	20	16	12	8					
	0.2 inch														
	0.4 inch														
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option										Satin	Satin	Satin	Satin	UF	UF

Model data No. : 1002 inch order

Electrode material : Cu Electrode dimensions : ~□O. 4

Workpiece material : St Finished roughness : 0. 5μmRz

Cavity type : Connector mold machining (Low wear)

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			30.0	21.0	16.0	12.0	10.0	8.0	6.0	5.0	3.0	2.0	1.0	0.7	0.5
(μmRa)			5.00	4.00	3.00	2.30	1.50	1.10	1.00	0.70	0.50	0.40	0.30	0.20	0.20
(VDI)			34	32	30	27	25	24	21	19	15	12	9	8	6
MC condition (E****)			2063	2062	2061	2060	2059	2058	2057	2056	2055	2054	2053	2052	2051
Bottom remain (tenth)			60	44	33	25	20	17	13	9	7	5	4	2	2
Side remain (tenth)			54	41	28	22	18	14	11	8	6	4	3	2	2
Bottom gap (tenth)			39	31	22	20	15	10	7	6	5	4	3	2	2
Side gap (tenth)			30	22	15	12	10	7	6	4	3	3	2	2	2
Removal rate			-764	-762	-714	-712	-816	-987	-956	-818	-812	-987	-923	-906	-903
Electrode wear (%)			0.1	0.5	0.5	1	2	3	4	20	24	22	19	25	30
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch		59	47	31	24	20	16	12	8					
	0.2 inch														
	0.4 inch														
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option										Satin	Satin	Satin	Satin	UF	UF

Model data No. : 1011 inch order

Electrode material : Cu Electrode dimensions : ~□O. 2

Workpiece material : St Finished roughness : 0. 5μmRmax

Cavity type : Open side machining

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		40.0	30.0	21.0	15.0	12.0	9.0	7.0	5.0	4.0	3.0	2.0	1.0	0.7	0.5
(μmRa)		7.00	5.00	4.00	2.60	2.30	1.70	1.50	0.70	0.50	0.40	0.30	0.20	0.10	0.10
(VDI)		37	34	32	28	26	24	21	19	17	15	12	9	8	6
MC condition (E****)		2077	2076	2075	2074	2073	2072	2071	2097	2096	2095	2094	2093	2092	2091
Bottom remain (tenth)		77	60	48	37	28	22	16	10	7	5	3	2	1	0
Side remain (tenth)		59	47	39	31	24	20	14	8	6	4	2	1	1	0
Bottom gap (tenth)		47	37	30	22	16	12	10	7	6	4	2	2	1	0
Side gap (tenth)		39	30	26	18	15	11	9	6	4	3	2	1	1	0
Removal rate		-755	-750	-712	-710	-726	-816	-987	-848	-812	-987	-923	-906	-903	-903
Electrode wear (%)		1.5	2	2	2	3	5	7	20	25	30	200	250	300	300
Time cont. area											*	*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch		59	47	39	31	24	20	16	12	8				
	0.2 inch														
	0.4 inch														
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option													Satin	UF	UF

Model data No. : 1043 inch order

Selecting start MC condition	E No.
1043 Standard	548*
1143 Standard low wear	547*

Electrode material : Gr2

Rib length : ~1. 2in.

Workpiece material : St

Finished roughness : 4μmRmax

Cavity type : Rib machining (Low wear)

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		54.0	47.0	45.0	39.0	35.0	29.0	25.0	20.0	18.0	14.0	10.0	8.0	5.0	4.0
(μmRa)		10.00	7.80	7.50	6.90	6.40	5.20	4.50	4.00	3.10	2.20	1.60	1.10	0.90	0.70
(VDI)		40	39	38	37	36	34	33	32	30	27	24	21	19	17
MC condition (E****)		5488	5487	5486	5485	5484	5483	5482	5481	5480	5496	5495	5494	5493	5492
Bottom remain (tenth)		112	96	85	79	69	59	48	37	30	22	16	10	5	1
Side remain (tenth)		98	88	78	67	55	47	39	28	22	15	10	6	3	1
Bottom gap (tenth)		47	45	42	38	36	34	21	16	13	10	6	4	2	1
Side gap (tenth)		37	33	30	27	26	23	18	17	12	6	4	3	2	1
Removal rate		-653	-648	-632	-624	-617	-615	-603	-753	-744	-728	-723	-711	-928	-920
Electrode wear (%)		0.2	0.3	0.3	0.3	0.4	0.5	0.5	0.5	1	3	6	40	120	150
Time cont. area											□1	□0.8	□0.7	□0.6	□0.3
Minimum reduction per side by MC depth (tenth)	0.1 inch	98	89	79	69	55	47	39	30	22	16				
	0.2 inch	102	93	85	73	59	51	43	31	24	18				
	0.4 inch	108	98	89	79	63	55	47	33	26	20				
	0.6 inch	112	104	94	83	69	59	51	35	28	22				
	0.8 inch	118	110	98	89	73	63	55	37	30	24				
	1.6 inch														
Min. spark area(inch)		□0.4	□0.32	□0.24	□0.2	□0.16	□0.12	□0.08	□0.08	□0.08	□0.08				
Max. spark area(inch)															
Required option															

Model data No. : 1044 inch order

Selecting start MC condition	E No.
1044 Standard	543*
1144 Standard low wear	542*

Electrode material : Gr2

Rib length : 1. 2in. ~2. 0in.

Workpiece material : St

Finished roughness : 4μmRz

Cavity type : Rib machining (Low wear)

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	60.0	54.0	47.0	45.0	39.0	35.0	29.0	25.0	20.0	18.0	14.0	10.0	8.0	5.0	4.0
(μmRa)	11.00	10.00	7.80	7.50	6.90	6.40	5.20	4.50	4.00	3.10	2.20	1.60	1.10	0.90	0.70
(VDI)	41	40	39	38	37	36	34	33	32	30	27	24	21	19	17
MC condition (E****)	5439	5438	5437	5436	5435	5434	5433	5432	5431	5430	5496	5495	5494	5493	5492
Bottom remain (tenth)	122	113	103	94	83	72	62	51	41	31	23	16	10	5	1
Side remain (tenth)	108	96	84	74	65	55	46	39	28	21	15	10	6	3	1
Bottom gap (tenth)	49	47	45	42	38	36	34	21	16	13	10	6	4	2	1
Side gap (tenth)	41	37	33	30	27	26	23	18	17	12	6	4	3	2	1
Removal rate	-522	-693	-664	-640	-625	-618	-616	-604	-754	-745	-728	-723	-711	-928	-920
Electrode wear (%)	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	1	3	6	40	120	150
Time cont. area											□1.0	□0.8	□0.7	□0.6	□0.3
Minimum reduction per side by MC depth (tenth)	0.1 inch	108	96	87	75	67	55	47	39	30	22	16			
	0.2 inch	112	100	91	79	71	59	51	43	31	24	18			
	0.4 inch	118	106	94	83	75	63	55	47	33	26	20			
	0.6 inch	126	110	100	89	79	67	59	51	35	28	22			
	0.8 inch	134	118	106	94	85	73	63	55	37	30	24			
	1.6 inch														
Min. spark area(inch)	□0.55	□0.5	□0.45	□0.4	□0.4	□0.4	□0.4	□0.4	□0.4	□0.4	□0.4				
Max. spark area(inch)															
Required option															

Model data No. : 1045 inch order

Electrode material : Gr2

Rib length : ~2in.

Workpiece material : St

Finished roughness : 4μmRz

Cavity type : Rib machining (High speed)

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					47.0	41.0	35.0	30.0	25.0	20.0	16.0	12.0	9.0	5.0	4.0
(μmRa)					9.00	8.00	6.00	5.00	4.50	4.00	3.00	2.20	1.60	0.90	0.70
(VDI)					39	38	36	34	33	32	28	27	24	19	17
MC condition (E****)					5586	5585	5584	5583	5582	5581	4596	4595	4594	4593	4592
Bottom remain (tenth)					82	76	67	59	44	35	22	16	10	5	1
Side remain (tenth)					79	69	55	47	41	33	21	15	8	3	1
Bottom gap (tenth)					42	38	38	34	18	16	14	12	8	5	1
Side gap (tenth)					30	27	26	23	21	17	13	11	7	3	1
Removal rate					-634	-620	-614	-612	-610	-605	-746	-723	-713	-811	-928
Electrode wear (%)					2	2	2	2	5	5	9	20	43	120	150
Time cont. area											□1.0	□0.8	□0.7	□0.6	□0.3
Minimum reduction per side by MC depth (tenth)	0.1 inch				79	69	55	47	43	39					
	0.2 inch				83	73	59	51	47	43					
	0.4 inch				91	79	63	55	51	47					
	0.6 inch				98	87	69	59	55	51					
	0.8 inch				106	93	73	63	59	55					
	1.6 inch														
Min. spark area(inch)					□0.4	□0.3	□0.25	□0.2	□0.2	□0.12	□0.08	□0.08			
Max. spark area(inch)															
Required option															

Model data No. : 1046 inch order

Electrode material : Gr2

Electrode dimensions : 2in. ~

Workpiece material : St

Finished roughness : 5μmRz

Cavity type : Rib machining (High speed)

Selecting start MC condition		E No.
1046	Standard	544*
1146	Standard low wear	545*

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		60.0	54.0	47.0	45.0	39.0	35.0	29.0	25.0	20.0	18.0	14.0	10.0	8.0	5.0
(μmRa)		11.00	10.00	7.80	7.50	6.90	6.40	5.20	4.50	4.00	3.10	2.20	1.60	1.10	0.90
(VDI)		41	40	39	38	37	36	34	33	32	30	27	24	21	19
MC condition (E****)		5449	5448	5447	5446	5445	5444	5443	5442	5441	5440	5556	5555	5554	5553
Bottom remain (tenth)		132	120	109	97	86	74	64	54	43	33	24	16	10	5
Side remain (tenth)		122	106	91	80	70	59	50	43	32	26	17	11	7	3
Bottom gap (tenth)		51	49	47	45	42	38	36	34	21	16	13	10	6	5
Side gap (tenth)		45	41	37	33	30	27	26	23	18	17	12	6	4	3
Removal rate		-209	-202	-265	-254	-248	-245	-244	-240	-299	-295	-285	-283	-278	-364
Electrode wear (%)		0.1	0.1	0.2	0.4	0.5	0.5	0.5	0.5	0.5	1	3	6	40	120
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch		122	106	91	81	71	61	51	43	33				
	0.2 inch		126	108	93	83	73	63	53	45	33				
	0.4 inch		130	112	96	87	75	65	55	47	35				
	0.6 inch		134	116	100	91	77	67	57	49	37				
	0.8 inch		138	118	102	93	79	69	59	51	39				
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 1051

inch order

Electrode material : Gr2

Electrode dimensions : ~□0.2

Workpiece material : St

Finished roughness : 2μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		45.0	30.0	24.0	20.0	18.0	17.0	16.0	12.0	9.0	7.0	5.0	4.0	3.0	2.0
(μmRa)		9.50	7.30	4.80	3.80	3.40	3.00	2.70	2.00	1.60	1.10	0.90	0.70	0.55	0.40
(VDI)		40	37	34	32	31	30	29	26	24	21	19	17	15	12
MC condition (E****)		4469	4468	4467	4466	4465	4464	4463	4462	4461	4460	4494	4493	4492	4491
Bottom remain (tenth)		79	63	52	42	34	28	24	20	17	11	7	5	3	1
Side remain (tenth)		71	57	47	39	33	28	24	20	17	11	7	5	3	1
Bottom gap (tenth)		41	33	27	20	17	14	11	10	8	6	5	4	3	1
Side gap (tenth)		24	20	17	15	13	11	9	9	7	5	4	4	3	1
Removal rate		-620	-610	-605	-790	-770	-750	-730	-720	-710	-830	-810	-950	-920	-910
Electrode wear (%)		0.2	0.2	0.3	0.4	0.5	0.7	0.8	0.9	1	3	5	10	20	200
Time cont. area															*
Minimum reduction per side by MC depth (tenth)	0.1 inch		79	59	47	39	35	31	28	24	20	16			
	0.2 inch														
	0.4 inch														
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)		□0.2	□0.2	□0.16	□0.16	□0.16	□0.12	□0.12	□0.12	□0.08	□0.04	□0.02			
Max. spark area(inch)															
Required option															Satin

Model data No. : 1053

inch order

Electrode material : Gr2

Electrode dimensions : ~□1. 2

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)	74.0	70.0	54.0	47.0	41.0	35.0	30.0	25.0	20.0	16.0	12.0	9.0	7.0	5.0	4.0
(μmRa)	12.00	11.00	10.00	9.00	8.00	6.00	5.00	4.50	4.00	3.00	2.20	1.60	1.10	0.90	0.70
(VDI)	42	41	40	39	38	36	34	33	32	30	27	24	21	19	17
MC condition (E****)	5009	5008	5007	5006	5005	5004	5003	5002	5001	5000	5095	5094	5093	5092	5091
Bottom remain (tenth)	264	197	130	112	96	83	65	51	41	27	20	15	10	6	2
Side remain (tenth)	138	114	91	79	69	55	47	42	34	22	17	11	6	4	2
Bottom gap (tenth)	61	55	49	45	41	39	35	20	18	16	13	10	8	6	2
Side gap (tenth)	33	29	25	23	21	19	17	15	13	11	9	7	4	4	2
Removal rate	-550	-540	-516	-674	-650	-637	-630	-624	-611	-746	-723	-713	-824	-811	-928
Electrode wear (%)	0.5	0.5	1	1	1	1.5	2	3	4	6	16	35	60	120	150
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch	138	114	91	79	71	55	47	43	39	28	20			
	0.2 inch	140	116	93	81	73	57	49	45	159	30	22			
	0.4 inch	142	118	94	83	75	59	51	47	43	31	24			
	0.6 inch	144	120	96	85	77	61	53	49	45	33	26			
	0.8 inch	146	122	98	87	79	63	55	51	47	35	28			
	1.6 inch														
Min. spark area(inch)	□0.8	□0.7	□0.6	□0.5	□0.4	□0.3	□0.25	□0.23	□0.2						
Max. spark area(inch)															
Required option															

Model data No. : 1055

inch order

Electrode material : Gr2

Electrode dimensions : □0. 6~1. 2

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					60.0	50.0	40.0	32.0	20.0	16.0	12.0	9.0	6.0	5.0	4.0
(μmRa)					11.00	10.00	7.00	5.50	4.00	2.60	1.80	1.60	1.10	0.90	0.70
(VDI)					40	40	37	36	32	28	25	24	21	19	17
MC condition (E****)					4055	4054	4053	4052	4051	4957	4956	4955	4954	4953	4952
Bottom remain (tenth)					119	96	74	55	41	30	22	16	10	7	3
Side remain (tenth)					99	80	65	48	36	27	20	15	9	6	2
Bottom gap (tenth)					51	45	39	27	22	17	14	11	7	6	3
Side gap (tenth)					41	35	31	24	20	14	11	9	6	4	2
Removal rate					-517	-513	-683	-634	-610	-726	-711	-859	-835	-811	-928
Electrode wear (%)					0.1	0.3	0.5	1.5	3	4	7	15	45	60	65
Time cont. area											□1.2	□1	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch				98	89	69	49	39	31	28	24			
	0.2 inch				98	89	69	49	39	33	30	26			
	0.4 inch				118	98	79	59	39	35	31	28			
	0.6 inch				118	98	79	59	39						
	0.8 inch				118	98	79	59	39						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 1056

inch order

Electrode material : Gr2

Electrode dimensions : □1. 2~2

Workpiece material : St

Finished roughness : 4μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)			85.0	75.0	60.0	50.0	40.0	32.0	20.0	16.0	12.0	9.0	6.0	5.0	4.0
(μmRa)			13.00	12.00	11.00	10.00	7.00	5.50	4.00	2.60	1.80	1.60	1.10	0.90	0.70
(VDI)			42	41	40	40	37	36	32	28	25	24	21	19	17
MC condition (E****)			4257	4256	4255	4254	4253	4252	4251	4957	4956	4955	4954	4953	4952
Bottom remain (tenth)			196	164	141	113	87	60	42	30	22	16	10	7	3
Side remain (tenth)			166	137	111	91	72	52	37	27	20	15	9	6	2
Bottom gap (tenth)			126	98	69	61	49	28	22	17	14	11	7	6	3
Side gap (tenth)			98	77	53	46	37	22	18	14	11	9	6	4	2
Removal rate			-545	-531	-518	-515	-513	-634	-610	-726	-711	-859	-835	-811	-928
Electrode wear (%)			0.1	0.1	0.2	0.5	1	1.5	3	4	7	15	45	60	65
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch		177	138	98	89	69	59	39	31	28	24			
	0.2 inch		177	138	98	89	69	59	39	33	30	26			
	0.4 inch		197	157	118	98	79	59	39	35	31	28			
	0.6 inch		197	157	118	98	79	59	39						
	0.8 inch		197	157	118	98	79	59	39						
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option															

Model data No. : 1057

inch order

Electrode material : Gr2

Electrode dimensions : □2~6

Workpiece material : St

Finished roughness : 5μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)				85.0	75.0	60.0	50.0	40.0	32.0	20.0	16.0	12.0	9.0	6.0	5.0
(μmRa)				13.00	12.00	11.00	10.00	7.00	5.50	4.00	2.60	1.80	1.60	1.10	0.90
(VDI)				42	41	40	40	37	36	32	28	25	24	21	19
MC condition (E****)				4257	4256	4255	4254	4253	4252	4251	4957	4956	4955	4954	4953
Bottom remain (tenth)				194	163	139	112	86	59	41	31	22	16	10	6
Side remain (tenth)				166	137	111	91	72	52	37	28	20	14	9	4
Bottom gap (tenth)				126	98	69	61	49	28	22	19	16	11	8	6
Side gap (tenth)				98	77	53	46	37	22	18	15	13	9	6	4
Removal rate				-545	-531	-518	-515	-513	-634	-610	-726	-711	-859	-835	-811
Electrode wear (%)				0.1	0.1	0.2	0.5	1	1.5	3	4	7	15	45	60
Time cont. area												*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch			177	138	98	89	69	59	39	31	28	24		
	0.2 inch			177	138	98	89	69	59	39	33	30	26		
	0.4 inch			197	157	118	98	79	59	39	35	31	28		
	0.6 inch			197	157	118	98	79	59	39					
	0.8 inch			197	157	118	98	79	59	39					
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)												□5.5	□4.5	□4	□4
Required option															

Model data No. : 1060

inch order

Electrode material : CuW

Electrode dimensions :

Workpiece material : St

Finished roughness : 0.5μmRz

Cavity type : Connector mold machining

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)					12.0	10.0	8.0	7.0	5.0	4.0	3.0	2.0	1.0	0.7	0.5
(μmRa)					2.30	1.50	1.10	0.90	0.70	0.60	0.50	0.40	0.30	0.20	0.15
(VDI)					27	25	24	21	19	17	15	12	9	8	6
MC condition (E****)					6061	6060	6059	6058	6057	6056	6055	6054	6053	6052	6051
Bottom remain (tenth)					32	24	19	16	13	9	6	5	3	2	1
Side remain (tenth)					26	20	16	13	11	7	6	4	3	2	2
Bottom gap (tenth)					19	17	12	11	6	5	4	4	3	2	1
Side gap (tenth)					13	10	8	7	6	5	4	4	3	2	2
Removal rate					-714	-712	-853	-825	-818	-818	-812	-987	-923	-906	-903
Electrode wear (%)					0.5	1	2	3	4	20	24	22	19	25	30
Time cont. area											*	*	*	*	*
Minimum reduction per side by MC depth (tenth)	0.1 inch				39	31	24	20	16	12					
	0.2 inch														
	0.4 inch														
	0.6 inch														
	0.8 inch														
	1.6 inch														
Min. spark area(inch)															
Max. spark area(inch)															
Required option										Satin	Satin	Satin	Satin	UF	UF

Model data No. : 1082 inch order

Electrode material : Gr1 Electrode dimensions :

Workpiece material : Copper Alloy Finished roughness : 7μmRz

Process No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Roughness (μmRz)		48.0	45.0	42.0	40.0	38.0	35.0	33.0	26.0	22.0	19.0	15.0	14.0	10.0	7.0
(μmRa)		10.00	9.00	8.00	7.00	6.50	5.80	5.30	4.70	4.20	3.50	2.40	2.20	1.60	1.10
(VDI)		40	39	38	37	36	35	34	33	32	31	28	27	24	21
MC condition (E****)		8779	8778	8777	8776	8775	8774	8773	8772	8771	8795	8794	8793	8792	8791
Bottom remain (tenth)		403	359	319	280	95	80	67	55	44	35	25	17	10	4
Side remain (tenth)		308	272	240	209	70	59	49	39	31	24	17	11	7	3
Bottom gap (tenth)		130	125	120	115	42	38	34	21	20	13	11	10	6	4
Side gap (tenth)		113	103	95	83	30	26	23	18	17	12	8	6	6	3
Removal rate		-653	-648	-632	-624	-617	-615	-603	-753	-744	-728	-723	-711	-928	-920
Electrode wear (%)		5	4.4	3	4.3	3.4	4.3	2.3	4	3	10	30	50	100	300
Time cont. area															
Minimum reduction per side by MC depth (tenth)	0.1 inch		122	108	94	83	71	59	49	39	31				
	0.2 inch		130	116	102	89	77	65	55	43	33				
	0.4 inch		140	126	110	96	85	73	61	49	35				
	0.6 inch		150	134	118	104	93	81	67	55	37				
	0.8 inch		157	142	126	110	98	87	73	59	39				
	1.6 inch														
Min. spark area(inch)		□0.55	□0.50	□0.35	□0.30	□0.27	□0.23	□0.20	□0.15	□0.01					
Max. spark area(inch)															
Required option															

