

30A 45A 60A APPLICATION NOTE

INDEX

SURFACE FINISH IN EDM 2

(90 V) ELECTROLYTIC COPPER(+) - STEEL 3

(90 V) GRAPHITE(+) - STEEL 11

(260 V) ELECTROLYTIC COPPER (+) - STEEL 17

(260 V) ELECTROLYTIC COPPER (-) - STEEL 19

(90 V) ELECTROLYTIC COPPER (-) - COPPER 21

(260 V, 90 V) STEEL - STEEL 23

(260 V, 90 V) ELECTROLYTIC COPPER (+) - STEEL 25

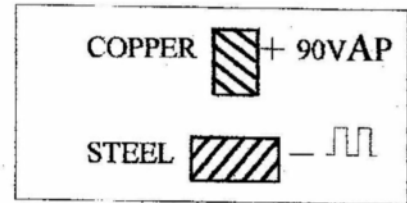
(90 V) COPPER TUNGSTEN (-) - TUNGSTEN CARBIDE 27

SURFACE FINISH IN EDM

SURFACF FINISH IN EDM

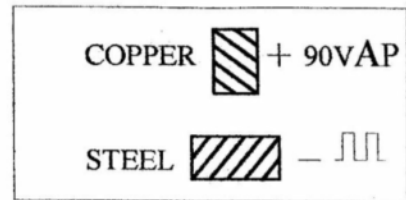
SKM (VDI	SAMPLE 3400)	Ra μ m
	12	=0.40
	15	=0.56
	18	=0.80
	21	=1.12
	24	=1.60
	27	=2.24
	30	=3.15
	33	=4.50
	36	=6.30
	39	=9.00
	42	=12.5
	45	=18.0

(90V) ELECTROLYTIC COPPER (+) - STEEL



TEST CONDITION

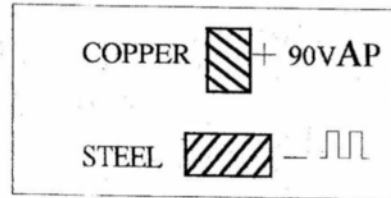
ELECTRODE	ELECTROLYTIC COPPER
POLARITY ELECTRODE	POSITIVE
WORKPIECE	STEEL
DIELECTRIC	CPC KEROSENE
INJECTION	: 0.5kg / cm ²
TEST AREA	: 20ømm



CURRENT POS	ON TIME	OFF TIME	VOLTAGE	SAMPLE SKM VDI 3400	WEAR RATE	REMOVAL RATE	GAP	
A P	T A	T B	V		%	mm ³ /min	GAP. 1 mm 2 x G1	GAP. 2 mm 2 x G2
1.5	2	1	50	20	8	0.5	0.036	0.046
1.5	4	1	50	21	6.5	0.7	0.038	0.050
1.5	6	1	50	21	5	1.0	0.040	0.052
1.5	8	1	50	22	4	1.5	0.042	0.054
1.5	10	1	50	23	3	2	0.046	0.060
1.5	15	1	50	24	2.5	3	0.050	0.066
1.5	20	1	50	25	2	3.5	0.056	0.074
1.5	30	1	50	26	1.5	3	0.060	0.080
1.5	45	1	50	27	0.5	2	0.065	0.087
1.5	60	1	50	28	-	1.5	0.070	0.095
3	2	1	45	22	12	1	0.045	0.060
3	4	1	45	23	10	2	0.048	0.063
3	6	1	45	24	9	2.8	0.050	0.065
3	8	1	45	24	7	4	0.052	0.070
3	10	1	45	25	6	5	0.055	0.073
3	15	1	45	26	4.5	7	0.060	0.080
3	20	1	45	27	2.5	8	0.065	0.087
3	30	1	45	28	1.5	8.5	0.070	0.095
3	45	1	45	29	0.8	7	0.075	0.103
3	60	1	45	30	0.5	6	0.080	0.112
3	90	1	45	31	-	4.5	0.085	0.120
3	120	1	45	32	-	3	0.090	0.130

NOTE:

TB setting test always AT1, if EDM burns unstable, increase TB setting to 2-6(4us-30us). TB setting, when the frontal area of the electrode is smaller than the current POS., that results in the unsteady sparking, please set TB stage to extend and note the gap voltage should be set on 30V-40V for efficiency. Always select proper AP setting for electrode surface (see page 4, power / surface ratio table). If power is increased beyond normal setting, reduce TB setting (4-12). Gap voltage should always be set at voltage level given in table (tolerance +10V).



CURRENT POS	ON TIME	OFF TIME	VOLTAGE	SAMPLE SKM VDI 3400	WEAR RATE	REMOVAL RATE	GAP	
A P	T A	T B	V		%	mm ³ / min	GAP. 1 mm 2 x G1	GAP. 2 mm 2 x G2
4.5	2	1	40	23	21	1.7	0.050	0.064
4.5	4	1	40	24	19	2	0.054	0.070
4.5	6	1	40	25	16	4.5	0.058	0.076
4.5	8	1	40	25	14	8	0.062	0.080
4.5	10	1	40	26	10	9	0.065	0.085
4.5	15	1	40	27	7	16	0.073	0.095
4.5	20	1	40	28	5	19	0.075	0.100
4.5	30	1	40	29	3	22	0.080	0.105
4.5	45	1	40	30	1.5	24	0.085	0.110
4.5	60	1	40	31	1.2	21	0.095	0.130
4.5	90	1	40	32	0.8	17	0.100	0.140
4.5	120	1	40	32	0.5	12	0.110	0.150
4.5	150	1	40	33	-	10	0.120	0.165
4.5	200	1	40	34	-	8	0.130	0.180
6	2	1	40	24	35	2.5	0.056	0.072
6	4	1	40	25	28	4	0.060	0.078
6	6	1	40	25	24	6	0.065	0.083
6	8	1	40	26	20	13	0.068	0.086
6	10	1	40	27	13	18	0.070	0.090
6	15	1	40	28	10	20	0.075	0.095
6	20	1	40	29	5.5	23	0.080	0.108
6	30	1	40	30	4.0	26	0.090	0.122
6	45	1	40	31	2.5	29	0.100	0.135
6	60	1	40	32	2.0	30	0.110	0.150
6	90	1	40	32	1.0	25	0.115	0.160
6	120	1	40	33	0.8	22	0.120	0.165
6	150	1	40	34	0.5	18	0.130	0.180
6	200	1	40	35	-	15	0.140	0.196

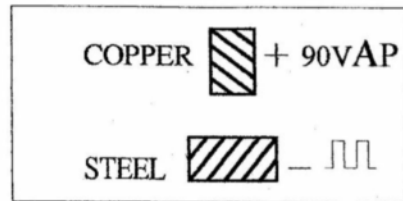
NOTE:

TB setting test always AT1, if EDM burns unstable, increase TB setting to 2~6(4us-30us). TB setting, when the frontal area of the electrode is smaller than the current POS., that results in the unsteady sparking, please set TB stage to extend and note the gap voltage should be set on 30V-40V for efficiency. Always select proper AP setting for electrode surface (see page 4, power / surface ratio table). If power is increased beyond normal setting, reduce TB setting(4-12). Gap voltage should always be set at voltage level given in table (tolerance +10V).

30A
45A
60A

ANOTRONIC™ SKM

APPLICATION NOTE



CURRENT POS	ON TIME	OFF TIME	VOLTAGE	SAMPLE SKM VDI 3400	WEAR RATE	REMOVAL RATE	GAP	
A P	T A	T B	V		%	mm ³ /min	GAP. 1 mm 2 x G1	GAP. 2 mm 2 x G2
9	10	1	40	27	21	20	0.075	0.097
9	15	1	40	28	28	28	0.080	0.105
9	20	1	40	30	30	34	0.085	0.117
9	30	1	40	31	31	38	0.095	0.130
9	45	1	40	32	32	42	0.105	0.145
9	60	1	40	33	33	45	0.115	0.160
9	90	1	40	34	34	47	0.125	0.175
9	120	1	40	35	35	44	0.135	0.191
9	150	1	40	36	36	40	0.150	0.213
9	200	1	40	37	37	37	0.160	0.230
12	10	1	35	28	23	25	0.080	0.150
12	15	1	35	29	18	38	0.085	0.113
12	20	1	35	30	13	47	0.090	0.122
12	30	1	35	32	8	55	0.100	0.140
12	45	1	35	33	6	62	0.110	0.155
12	60	1	35	34	4	67	0.120	0.170
12	90	1	35	35	3	72	0.130	0.186
12	120	1	35	36	2	70	0.140	0.203
12	150	1	35	37	1.5	66	0.155	0.225
12	200	1	35	38	0.5	63	0.170	0.246
12	300	1	35	39	-	60	0.180	0.270
12	400	1	35	40	-	55	0.195	0.295

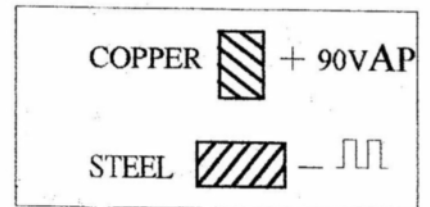
NOTE:

TB setting test always AT1, if EDM burns unstable, increase TB setting to 2~6(4us-30us). TB setting, when the frontal area of the electrode is smaller than the current POS., that results in the unsteady sparking, please set TB stage to extend and note the gap voltage should be set on 30V-40V for efficiency. Always select proper AP setting for electrode surface(see page 4, power / surface ratio table). If power is increased beyond normal setting, reduce TB setting(4-12). Gap voltage should always be set at voltage level given in table(tolerance+10V).

30A
45A
60A

ANOTRONIC™  SKM

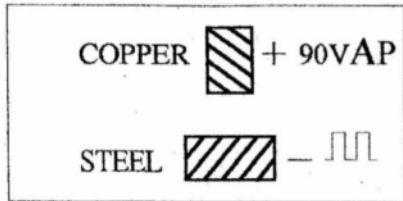
APPLICATION NOTE



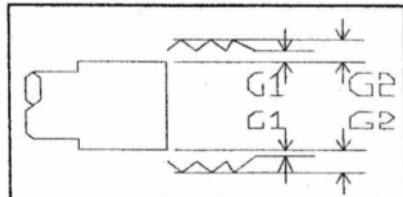
CURRENT POS	ON TIME	OFF TIME	VOLTAGE	SAMPLE SKM VDI 3400	WEAR RATE	REMOVAL RATE	Diagram	
A P	T A	T B	V		%	$\frac{\text{mm}^3}{\text{min}}$	GAP. 1	GAP. 2
							mm 2 x G1	mm 2 x G2
15	10	1	35	29	25	35	0.085	0.113
15	15	1	35	30	20	50	0.090	0.122
15	20	1	35	31	16	76	0.100	0.135
15	30	1	35	33	10	85	0.110	0.150
15	45	1	35	34	7	91	0.120	0.170
15	60	1	35	35	5	95	0.130	0.186
15	90	1	35	36	3.8	97	0.140	0.203
15	120	1	35	37	2.5	100	0.150	0.220
15	150	1	35	38	1.5	105	0.165	0.245
15	200	1	35	39	1.0	96	0.280	0.265
15	300	1	35	40	0.5	92	0.295	0.295
15	400	1	35	41	-	88	0.210	0.322
15	500	1	35	42	-	76	0.225	0.350
21	10	1	35	30	28	48	0.095	0.127
21	15	1	35	31	24	92	0.105	0.140
21	20	1	35	32	19	98	0.115	0.155
21	30	1	35	33	15	115	0.128	0.175
21	45	1	35	35	10	138	0.140	0.196
21	60	1	35	36	8	145	0.155	0.218
21	90	1	35	37	5	147	0.165	0.238
21	120	1	35	38	4	150	0.175	0.257
21	150	1	35	39	3	155	0.190	0.280
21	200	1	35	40	1.5	150	0.205	0.305
21	300	1	35	41	1.0	150	0.220	0.330
21	400	1	35	42	0.5	135	0.235	0.355
21	500	1	35	43	0.3	130	0.245	0.370
21	600	1	35	43	-	115	0.270	0.410

NOTE:

TB setting test always AT1, if EDM burns unstable, increase TB setting to 2~6(4us-30us). TB setting, when the frontal area of the electrode is smaller than the current POS., that results in the unsteady sparking, please set TB stage to extend and note the gap voltage should be set on 30V-40V for efficiency. Always select proper AP setting for electrode surface(see page 4, power / surface ratio table). If power is increased beyond normal setting, reduce TB setting(4-12). Gap voltage should always be set at voltage level given in table(tolerance+10V).



CURRENT POS	ON TIME	OFF TIME	VOLTAGE	SAMPLE SKM VDI 3400	WEAR RATE	REMOVAL RATE	GAP. 1		GAP. 2	
A P	T A	T B	V		%	mm ³ /min	mm	mm	mm	mm
							2 x G1		2 x G2	
30	10	1	35	31	32	70	0.100		0.145	
30	15	1	35	32	27	125	0.115		0.155	
30	20	1	35	33	22	130	0.125		0.170	
30	30	1	35	34	18	165	0.140		0.190	
30	45	1	35	36	15	185	0.155		0.218	
30	60	1	35	37	12	205	0.170		0.240	
30	90	1	35	38	9	210	0.185		0.265	
30	120	1	35	39	7.5	215	0.200		0.290	
30	150	1	35	40	6	220	0.215		0.315	
30	200	1	35	41	3.5	220	0.230		0.332	
30	300	1	35	42	2	230	0.240		0.366	
30	400	1	35	43	1	220	0.255		0.395	
30	500	1	35	44	0.5	210	0.270		0.430	
30	600	1	35	44	0.5	205	0.285		0.445	
30	700	1	35	45	0.5	200	0.300		0.480	
30	900	1	35	46	0.5	200	0.300		0.530	



GAP. 1	GAP. 2
mm	mm
2 x G1	2 x G2

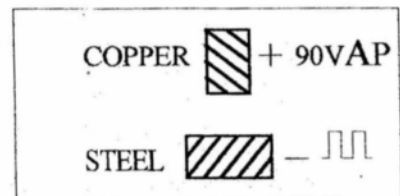
NOTE:

TB setting test always AT1, if EDM burns unstable, increase TB setting to 2~6(4us-30us). TB setting, when the frontal area of the electrode is smaller than the current POS., that results in the unsteady sparking, please set TB stage to extend and note the gap voltage should be set on 30V-40V for efficiency. Always select proper AP setting for electrode surface(see page 4, power / surface ratio table). If power is increased beyond normal setting, reduce TB setting(4-12). Gap voltage should always be set at voltage level given in table(tolerance+10V).

30A
45A
60A

ANOTRONIC™ SKM

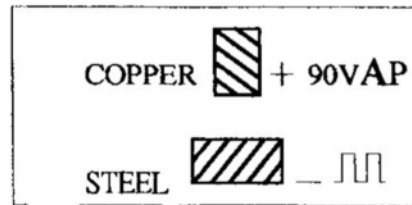
APPLICATION NOTE



CURRENT POS	ON TIME	OFF TIME	VOLTAGE	SAMPLE	WEAR RATE	REMOVAL RATE	Diagram	
A P	T A	T B	V	SKM VDI 3400	%	$\frac{\text{mm}^3}{\text{min}}$	GAP. 1	GAP. 2
							mm 2 x G1	mm 2 x G2
45	10	1	35	32	35	130	0.125	0.165
45	15	1	35	33	32	165	0.130	0.175
45	20	1	35	34	30	190	0.140	0.190
45	30	1	35	35	25	240	0.155	0.211
45	45	1	35	37	20	290	0.170	0.240
45	60	1	35	38	16	320	0.185	0.265
45	90	1	35	39	13	340	0.200	0.290
45	120	1	35	40	10	350	0.215	0.315
45	150	1	35	41	8	360	0.230	0.332
45	200	1	35	42	6	370	0.250	0.376
45	300	1	35	43	4	370	0.270	0.410
45	400	1	35	44	2.5	360	0.290	0.450
45	500	1	35	45	1.5	350	0.310	0.490
45	600	1	35	46	1.0	340	0.325	0.525
45	700	1	35	47	0.8	330	0.340	0.560
45	900	1	35	49	0.5	310	0.380	0.620

NOTE:

TB setting test always AT1, if EDM burns unstable, increase TB setting to 2~6(4us-30us). TB setting, when the frontal area of the electrode is smaller than the current POS., that results in the unsteady sparking, please set TB stage to extend and note the gap voltage should be setted on 30V-40V for efficiency. Always select proper AP setting for electrode surface(see page 4, power / surface ratio table). If power is increased beyond normal setting, reduce TB setting(4-12). Gap voltage should always be set at voltage level given in table(tolerance+10V).



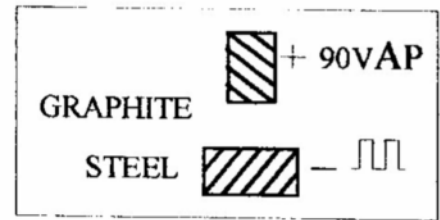
CURRENT POS	ON TIME	OFF TIME	VOLTAGE	SAMPLE-SKM VDI 3400	WEAR RATE	STOCK REMOVAL	Diagram	
A P	T A	T B	V		%	$\frac{\text{mm}^3}{\text{min}}$	GAP. 1	GAP. 2
							mm 2 x G1	mm 2 x G2

60	10	1	35	33	38	180	0.140	0.185
60	15	1	35	34	34	240	0.145	0.195
60	20	1	35	35	28	290	0.150	0.206
60	30	1	35	36	25	340	0.165	0.228
60	45	1	35	38	22	380	0.185	0.265
60	60	1	35	39	18	420	0.200	0.290
60	90	1	35	40	15	440	0.220	0.320
60	120	1	35	41	12	460	0.235	0.337
60	150	1	35	42	10	470	0.250	0.376
60	200	1	35	43	7	480	0.265	0.405
60	300	1	35	44	4	465	0.285	0.445
60	400	1	35	45	2	460	0.300	0.480
60	500	1	35	46	1	450	0.325	0.525
60	600	1	35	47	0.5	435	0.340	0.560
60	700	1	35	48	0.5	420	0.360	0.600
60	900	1	35	50	0.5	400	0.400	0.660
60	1800	1	35	52	0.5	350	0.480	0.740

NOTE:

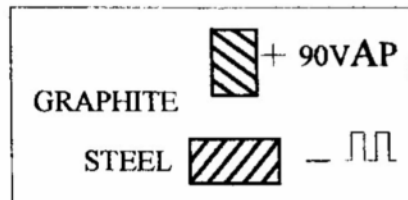
TB setting test always AT1, if EDM burns unstable, increase TB setting to 2~6(4us-30us). TB setting, when the frontal area of the electrode is smaller than the current POS., that results in the unsteady sparking, please set TB stage to extend and note the gap voltage should be set on 30V-40V for efficiency. Always select proper AP setting for electrode surface(see page 4, power / surface ratio table). If power is increased beyond normal setting, reduce TB setting(4-12). Gap voltage should always be set at voltage level given in table(tolerance+10V).

(90V) GRAPHITE (+) - STEEL



TEST CONDITION

ELECTRODE	GRAPHITE
POLARITY ELECTRODE	POSITIVE
WORKPIECE	STEEL
DIELECTRIC	CPC KEROSENE
INJECTION	: 0.5kg / cm ²
TEST AREA	: 20ømm



CURRENT POS	ON TIME	OFF TIME	VOLTAGE	SAMPLE-SKM VDI 3400	WEAR RATE	STOCK REMOVAL	GAP. 1		GAP. 2	
A P	T A	T B	V		%	$\frac{\text{mm}^3}{\text{min}}$	mm	mm	mm	mm
							2 x G1	2 x G2	2 x G1	2 x G2
6	2	1	40	24	37	20	0.048	0.064		
6	4	1	40	25	34	25	0.051	0.069		
6	6	1	40	27	31	43	0.055	0.075		
6	8	1	40	28	25	68	0.066	0.087		
6	10	1	40	29	20	95	0.070	0.098		
6	15	1	40	30	16	15	0.078	0.110		
6	20	1	40	31	10	21	0.086	0.121		
6	30	1	40	32	6	20	0.098	0.137		
6	45	1	40	33	2	19	0.105	0.150		
6	60	1	40	33	1.0	17	0.114	0.162		
6	90	1	40	34	0.5	15	0.125	0.180		
9	2	1	40	25	32	52	0.055	0.075		
9	4	1	40	26	28	65	0.057	0.078		
9	6	1	40	28	25	78	0.062	0.084		
9	8	1	40	29	20	105	0.068	0.096		
9	10	1	40	30	18	12	0.072	0.102		
9	15	1	40	31	14	20	0.080	0.115		
9	20	1	40	32	8	27	0.090	0.126		
9	30	1	40	33	5	38	0.105	0.138		
9	45	1	40	34	1.8	41	0.117	0.162		
9	60	1	40	35	1.0	42	0.120	0.168		
9	90	1	40	36	0.5	40	0.135	0.182		
9	120	1	40	37	-	32	0.150	0.205		
9	150	1	40	38	-	27	0.165	0.220		

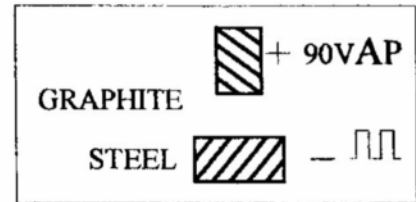
NOTE:

TB setting test always AT1, if EDM burns unstable, increase TB setting to 2-6(4us-30us) TB setting, when the frontal area of the electrode is smaller than the current POS., that results in the unsteady sparking, please set TB stage to extend and note the gap voltage should be set on 30V-40V for efficiency. Always select proper AP setting for electrode surface(see page 4, power / surface ratio table). If power is increased beyond normal setting, reduce TB setting(4-12). Gap voltage should always be set at voltage level given in table(tolerance+10V).

30A
45A
60A

ANOTRONIC™ SKM

APPLICATION NOTE



CURRENT POS	ON TIME	OFF TIME	VOLTAGE	SAMPLE-SKM VDI 3400	WEAR RATE	STOCK REMOVAL	Diagram	
A P	T A	T B	V	%	mm ³ min		GAP. 1	GAP. 2
							mm 2 x G1	mm 2 x G2

12	10	1	40	30	18	32	0.082	0.114
12	15	1	40	31	14	41	0.087	0.125
12	20	1	40	32	10	50	0.096	0.140
12	30	1	40	34	7	58	0.110	0.152
12	45	1	40	35	4.5	65	0.120	0.174
12	60	1	40	36	3.2	60	0.130	0.182
12	90	1	40	37	2.0	55	0.145	0.195
12	120	1	40	38	1.5	52	0.155	0.220
12	150	1	40	39	0.8	49	0.170	0.245
12	200	1	40	41	-	44	0.185	0.275
15	10	1	40	31	16	37	0.084	0.118
15	15	1	40	32	12	48	0.090	0.130
15	20	1	40	33	9	60	0.098	0.147
15	30	1	40	35	6	68	0.115	0.160
15	45	1	40	36	4	85	0.130	0.180
15	60	1	40	37	3	90	0.140	0.195
15	90	1	40	38	1.5	82	0.155	0.210
15	120	1	40	39	0.8	78	0.165	0.228
15	150	1	40	40	0.5	72	0.175	0.255
15	200	1	40	41	-	64	0.190	0.280
15	300	1	40	42	-	52	0.210	0.310

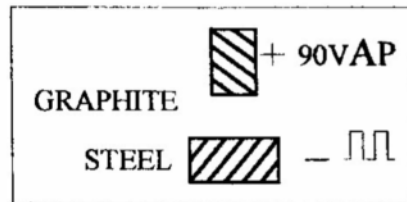
NOTE:

TB setting test always AT1, if EDM burns unstable, increase TB setting to 2~6(4us-30us). TB setting, when the frontal area of the electrode is smaller than the current POS., that results in the unsteady sparking, please set TB stage to extend and note the gap voltage should be set on 30V-40V for efficiency. Always select proper AP setting for electrode surface(see page 4, power / surface ratio table). If power is increased beyond normal setting, reduce TB setting(4-12). Gap voltage should always be set at voltage level given in table(tolerance+10V).

30A
45A
60A

ANOTRONIC™ SKM

APPLICATION NOTE



CURRENT POS	ON TIME	OFF TIME	VOLTAGE	SAMPLE-SKM VDI 3400	WEAR RATE	STOCK REMOVAL	GAP	
A P	T A	T B	V		%	$\frac{\text{mm}^3}{\text{min}}$	GAP. 1	GAP. 2
							mm 2 x G1	mm 2 x G2
21	10	1	40	33	12	55	0.090	0.130
21	15	1	40	34	9	75	0.095	0.142
21	20	1	40	35	7	84	0.102	0.158
21	30	1	40	36	4	105	0.115	0.178
21	45	1	40	37	2.5	138	0.132	0.202
21	60	1	40	38	1.5	145	0.150	0.225
21	90	1	40	39	1.0	140	0.165	0.260
21	120	1	40	40	0.8	130	0.175	0.270
21	150	1	40	41	0.3	125	0.200	0.295
21	200	1	40	42	-	105	0.225	0.325
21	300	1	40	43	-	91	0.245	0.350
21	400	1	40	43	-	75	0.270	0.390
30	10	1	40	34	9	82	0.108	0.152
30	15	1	40	35	7	110	0.120	0.175
30	20	1	40	36	5	132	0.135	0.200
30	30	1	40	37	3	150	0.145	0.215
30	45	1	40	38	1.5	185	0.160	0.240
30	60	1	40	39	1.0	190	0.170	0.250
30	90	1	40	40	0.5	210	0.190	0.290
30	120	1	40	41	-	220	0.105	0.300
30	150	1	40	42	-	192	0.220	0.330
30	200	1	40	43	-	185	0.260	0.370
30	300	1	40	43	-	165	0.300	0.425
30	400	1	40	44	-	138	0.330	0.470

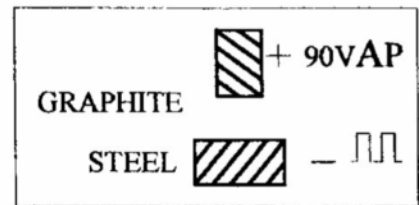
NOTE:

TB setting test always AT1, if EDM burns unstable, increase TB setting to 2-6(4us-30us). TB setting, when the frontal area of the electrode is smaller than the current POS., that results in the unsteady sparking, please set TB stage to extend and note the gap voltage should be set on 30V-40V for efficiency. Always select proper AP setting for electrode surface(see page 4, power / surface ratio table). If power is increased beyond normal setting, reduce TB setting(4-12). Gap voltage should always be set at voltage level given in table(tolerance+10V).

30A
45A
60A

ANOTRONIC™ 

APPLICATION NOTE



CURRENT POS	ON TIME	OFF TIME	VOLTAGE	SAMPLE-SKM VDI 3400	WEAR RATE	STOCK REMOVAL	GAP. 2	
A P	T A	T B	V		%	$\frac{\text{mm}^3}{\text{min}}$	GAP. 1	GAP. 2
							mm 2 x G1	mm 2 x G2
45	10	1	40	35	8	130	0.120	0.165
45	15	1	40	36	5	175	0.135	0.190
45	20	1	40	37	3.8	200	0.145	0.205
45	30	1	40	38	2.5	225	0.165	0.235
45	45	1	40	39	1.5	265	0.180	0.270
45	60	1	40	40	1.0	290	0.190	0.285
45	90	1	40	41	0.5	320	0.215	0.305
45	120	1	40	42	0.3	315	0.230	0.335
45	150	1	40	43	0.3	310	0.250	0.375
45	200	1	40	44	0.3	300	0.280	0.400
45	300	1	40	45	0.3	270	0.320	0.460
45	400	1	40	45	0.3	235	0.360	0.540

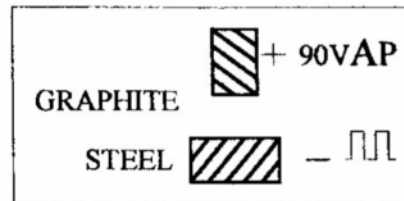
NOTE:

TB setting test always AT1, if EDM burns unstable, increase TB setting to 2~6(4us-30us). TB setting, when the frontal area of the electrode is smaller than the current POS., that results in the unsteady sparking, please set TB stage to extend and note the gap voltage should be set on 30V-40V for efficiency. Always select proper AP setting for electrode surface(see page 4, power / surface ratio table). If power is increased beyond normal setting, reduce TB setting(4-12). Gap voltage should always be set at voltage level given in table(tolerance+10V).

30A
45A
60A

ANOTRONIC™ SKM

APPLICATION NOTE

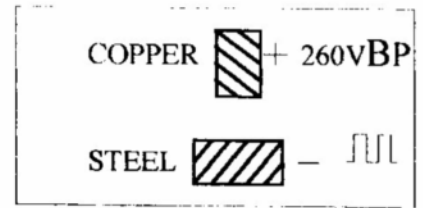


CURRENT POS	ON TIME	OFF TIME	VOLTAGE	SAMPLE-SKM VDI 3400	WEAR RATE	STOCK REMOVAL	GAP. 1		GAP. 2	
A P	T A	T B	V		%	$\frac{\text{mm}^3}{\text{min}}$	mm	mm	mm	mm
							2 x G1	2 x G2	2 x G1	2 x G2
60	10	1	40	36	6	195	0.130	0.185		
60	15	1	40	37	4	250	0.145	0.205		
60	20	1	40	38	3	270	0.160	0.230		
60	30	1	40	39	2	300	0.175	0.255		
60	45	1	40	40	1	350	0.200	0.300		
60	60	1	40	41	0.5	375	0.215	0.320		
60	90	1	40	42	0.3	415	0.235	0.350		
60	120	1	40	43	0.3	395	0.260	0.380		
60	150	1	40	44	0.3	380	0.295	0.435		
60	200	1	40	45	0.3	350	0.330	0.470		
60	300	1	40	45	0.3	335	0.370	0.530		
60	400	1	40	46	0.3	320	0.410	0.610		
60	500	1	40	47	0.3	300	0.450	0.700		

NOTE:

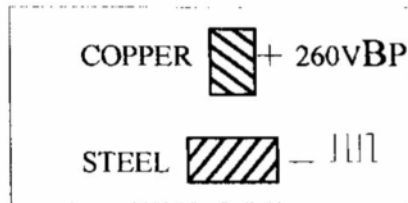
TB setting test always AT1, if EDM burns unstable, increase TB setting to 2~6(4us-30us). TB setting, when the frontal area of the electrode is smaller than the current POS., that results in the unsteady sparking, please set TB stage to extend and note the gap voltage should be set on 30V-40V for efficiency. Always select proper AP setting for electrode surface(see page 4, power / surface ratio table). If power is increased beyond normal setting, reduce TB setting(4-12). Gap voltage should always be set at voltage level given in table(tolerance+10V).

(260V) ELECTROLYTIC COPPER (+) - STEEL



TEST CONDITION

ELECTRODE	ELECTROLYTIC COPPER
POLARITY ELECTRODE	POSITIVE
WORKPIECE	STEEL
DIELECTRIC	CPC KEROSENE
INJECTION	: 0.5kg / cm ²
TEST AREA	: 20ømm

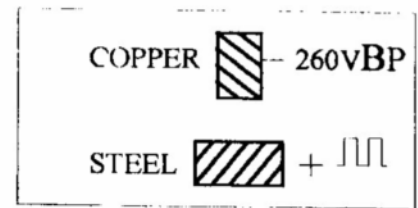


CURRENT POS	ON TIME	OFF TIME	VOLTAGE	SAMPLE-SKM VDI 3400	WEAR RATE	STOCK REMOVAL	Diagram	
A P	T A	T B	V		%	mm ³ min	GAP. 1	GAP. 2
							mm 2 x G1	mm 2 x G2
1	8	1	80	18	3	<1	0.042	0.050
1	10	1	80	20	4	<1	0.045	0.055
1	30	1	80	22	1	1.5	0.048	0.060
1	60	1	80	24	0.5	1.0	0.052	0.068
2	10	1	80	24	6	2.5	0.050	0.066
2	30	1	80	25	1.5	4.5	0.055	0.073
2	60	1	80	26	0.5	3.5	0.067	0.082
3	10	1	80	26	7	4	0.053	0.078
3	30		80	28	2.5	6	0.068	0.093
3	60	1	80	29	0.5	5	0.075	0.103
4	10	1	80	27	8.5	5.5	0.058	0.087
4	30	1	80	29	3	7.5	0.072	0.100
4	60	1	80	30	1	6	0.080	0.116
5	10	1	80	28	10	7	0.065	0.093
5	30	1	80	30	4	9	0.075	0.107
5	60	1	80	31	1.5	8	0.080	0.115
3	90	1	80	33	0.5	6.5	0.095	0.141

NOTE:

TB setting test always AT1, if EDM burns unstable, increase TB setting to 2~6(4us-30us).TB setting, when the frontal area of the electrode is smaller than the current POS., that results in the unsteady sparking, please set TB stage to extend and note the gap voltage should be setted on 30V-40V for efficiency. Always select proper AP setting for electrode surface(see page 4, power / surface ratio table). If power is increased beyond normal setting, reduce TB setting(4-12). Gap voltage should always be set at voltage level given in table(tolerance+10V).

(260V) ELECTROLYTIC COPPER (-) - STEEL






TEST CONDITION

ELECTRODE	ELECTROLYTIC COPPER
POLARITY ELECTRODE	NEGATIVE
WORKPIECE	STEEL
DIELECTRIC	CPC KEROSENE
INJECTION	: 0.5kg / cm ²
TEST AREA	: 20ømm

30A
45A
60A

ANOTRONIC™ SKM
APPLICATION NOTE

銅 COPPER  260VBP
鋼 STEEL  + 

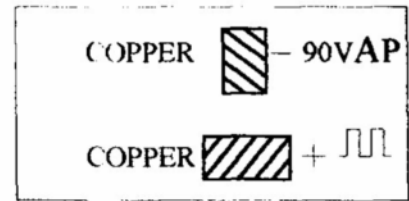
CURRENT POS	ON TIME	OFF TIME	VOLTAGE	SAMPLE-SKM VDI 3400	WEAR RATE	STOCK REMOVAL	Diagram	
B P	T A	T B	V		%	$\frac{\text{mm}^3}{\text{min}}$	GAP. 1	GAP. 2
							mm 2 x G1	mm 2 x G2

0.5	2	1	150	12	25	<1	0.028	0.034
1	2	1	150	15	26	<1	0.030	0.038
2	2	1	150	20	28	<1	0.033	0.045
3	2	1	150	23	30	<1	0.036	0.050
4	2	1	150	26	31	1.3	0.042	0.062
5	2	1	150	29	32	2.5	0.056	0.084

NOTE:

TB setting test always AT1, if EDM burns unstable, increase TB setting to 2~6(4us-30us). TB setting, when the frontal area of the electrode is smaller than the current POS., that results in the unsteady sparking, please set TB stage to extend and note the gap voltage should be set on 30V-40V for efficiency. Always select proper AP setting for electrode surface(see page 4, power / surface ratio table). If power is increased beyond normal setting, reduce TB setting(4-12). Gap voltage should always be set at voltage level given in table(tolerance+10V).

(90V) ELECTROLYTIC COPPER (-) - COPPER



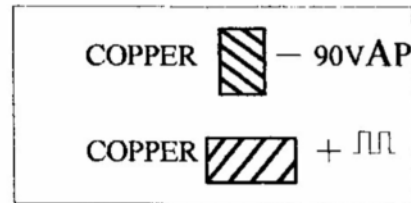
TEST CONDITION

ELECTRODE	ELECTROLYTIC COPPER
POLARITY ELECTRODE	NEGATIVE
WORKPIECE	COPPER
DIELECTRIC	CPC KEROSENE
INJECTION	: 0.5kg / cm ²
TEST AREA	: 20ømm

30A
45A
60A

ANORONIC™ SKM

APPLICATION NOTE

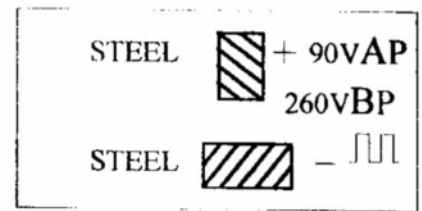


CURRENT POS	ON TIME	OFF TIME	VOLTAGE	SAMPLE-SKM VDI 3400	WEAR RATE	STOCK REMOVAL	GAP. 1	
A P	T A	T B	V		%	mm ³ min	mm 2 x G1	mm 2 x G2
3	2	3	40	18	42	<1	0.050	0.058
4.5	2	3	40	19	40	<1	0.052	0.061
6	2	3	40	20	38	<1	0.055	0.065
9	2	3	40	22	35	1	0.060	0.072
12	6	4	40	24	30	3.5	0.080	0.096
15	6	4	40	25	27	5.5	0.085	0.103
21	10	5	35	27	23	16	0.100	0.122
30	10	5	35	29	20	27	0.125	0.153
30	15	5	35	30	20	48	0.135	0.167
30	20	6	35	31	25	36	0.150	0.185
45	15	5	35	32	20	65	0.180	0.220
60	15	5	35	33	20	90	0.225	0.270

NOTE:

TB setting test always AT1, if EDM burns unstable, increase TB setting to 2-6(4us-30us). TB setting, when the frontal area of the electrode is smaller than the current POS., that results in the unsteady sparking, please set TB stage to extend and note the gap voltage should be set on 30V-40V for efficiency. Always select proper AP setting for electrode surface(see page 4, power / surface ratio table). If power is increased beyond normal setting, reduce TB setting(4-12). Gap voltage should always be set at voltage level given in table(tolerance+10V).

(260V, 90V) STEEL - STEEL



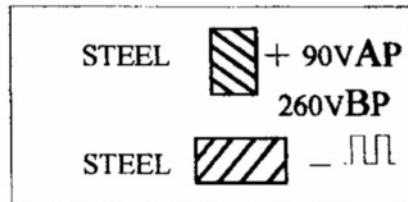
TEST CONDITION

ELECTRODE	STEEL
POLARITY ELECTRODE	POSITIVE
WORKPIECE	STEEL
DIELECTRIC	CPC KEROSENE
INJECTION	: 0.5kg / cm ²
TEST AREA	: 20ømm

30A
45A
60A

ANOTRONIC™ SKM

APPLICATION NOTE

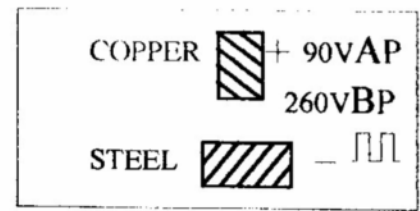


HI CURRENT POS		LOW CURRENT POS		ON TIME	OFF TIME	VOLTAGE	SAMPLE-SKM VDI 3400	WEAR RATE	STOCK REMOVAL	Diagram	
B P	A P	T A	T B							V	%
										mm	mm
										2 x G1	2 x G2
0.5	1.5	2	3	80	22	80	<1	0.040	0.052		
1	3	2	3	80	23	65	<1	0.045	0.059		
1	4.5	2	3	80	24	60	0.8	0.050	0.066		
1	6	2	3	80	25	55	1.5	0.055	0.073		
2	9	2	4	80	26	50	2.0	0.057	0.077		
2	12	2	4	80	27	45	3.0	0.060	0.082		
3	15	2	4	80	28	42	4.5	0.065	0.090		
3	15	6	4	70	31	30	12	0.085	0.120		
3	15	10	4	70	32	28	20	0.120	0.160		
3	15	15	4	70	33	25	25	0.150	0.195		
3	15	20	4	70	34	18	30	0.180	0.230		
3	15	30	4	60	35	12	38	0.210	0.266		
3	15	45	5	60	36	10	45	0.230	0.293		
3	15	60	5	60	37	7	55	0.250	0.320		
3	15	90	5	60	38	6	60	0.270	0.350		
3	15	120	6	60	39	5	65	0.280	0.370		
3	15	150	6	60	40	4.5	65	0.290	0.390		
3	15	200	7	60	41	4	70	0.310	0.422		
3	15	300	7	60	42	3	72	0.330	0.456		
3	15	400	7	60	43	2	75	0.340	0.480		
3	15	500	8	60	44	2	75	0.350	0.510		
3	21	500	8	60	45	2	90	0.400	0.580		
3	30	500	8	60	45	2.5	125	0.450	0.630		
3	30	600	8	60	45	2	135	0.470	0.670		
5	45	600	9	60	47	3	190	0.540	0.760		
5	60	600	9	60	49	3	250	0.620	0.880		

NOTE:

TB setting test always AT1, if EDM burns unstable, increase TB setting to 2~6(4us-30us).
 TB setting, when the frontal area of the electrode is smaller than the current POS., that results in the unsteady sparking, please set TB stage to extend and note the gap voltage should be set on 30V-40V for efficiency. Always select proper AP setting for electrode surface(see page 4, power / surface ratio table). If power is increased beyond normal setting, reduce TB setting(4-12). Gap voltage should always be set at voltage level given in table(tolerance+10V).

(260V,90V) ELECTROLYTIC COPPER(+) - STEEL



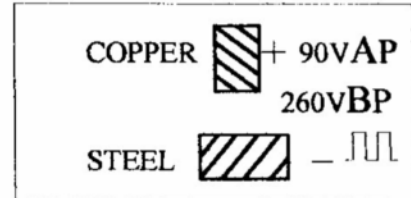
TEST CONDITION

ELECTRODE	ELECTROLYTIC COPPER
POLARITY ELECTRODE	POSITIVE
WORKPIECE	STEEL
DIELECTRIC	CPC KEROSENE
INJECTION	: 0.5kg / cm ²
TEST AREA	: 20ømm

30A
45A
60A

ANOTRONIC™ SKM

APPLICATION NOTE



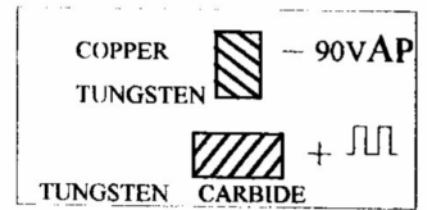
HI CURRENT POS	LOW CURRENT POS	ON TIME	OFF TIME	VOLTAGE	SAMPLE-SKM VDI 3400	WEAR RATE	STOCK REMOVAL	Diagram	
B P	A P	T A	T B	V	%	mm ³ min		GAP. 1	GAP. 2
								mm 2 x G1	mm 2 x G2

1	1.5	2	1	60	21	10	0.7	0.045	0.057
1	1.5	4	1	60	22	8	1.0	0.050	0.062
1	1.5	6	1	60	22	6.5	1.5	0.060	0.072
1	1.5	8	1	60	23	5	2.5	0.065	0.079
1	1.5	10	1	60	24	4.5	4	0.070	0.086
1	1.5	15	1	60	25	3	4.5	0.075	0.093
1	1.5	20	1	60	26	2.5	5	0.080	0.100
1	1.5	30	1	60	27	2	5	0.085	0.107
1	1.5	45	1	60	28	1.5	4	0.090	0.115
1	1.5	60	1	60	29	1.0	3	0.092	0.120
1	1.5	90	1	60	30	0.5	2	0.095	0.127
1	1.5	120	1	60	30	-	1.5	0.100	0.132
1	3	2	1	60	23	13	1.5	0.055	0.070
1	3	4	1	60	24	12	2.5	0.060	0.075
1	3	6	1	60	25	10	3.5	0.062	0.080
1	3	8	1	60	25	8.5	5	0.065	0.083
1	3	10	1	60	26	7	6.5	0.070	0.090
1	3	15	1	60	27	5.5	8	0.075	0.097
1	3	20	1	60	28	4	9.5	0.080	0.105
1	3	30	1	60	29	2.5	11	0.085	0.113
1	3	45	1	60	30	1.5	10	0.095	0.127
1	3	60	1	60	31	1.0	8	0.100	0.135
1	3	90	1	60	32	0.5	6	0.105	0.145
1	3	120	1	60	33	-	5	0.110	0.155

NOTE:

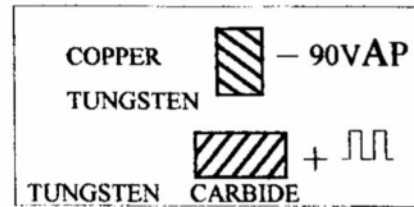
TB setting test always AT1, if EDM burns unstable, increase TB setting to 2~6(4us-30us). TB setting, when the frontal area of the electrode is smaller than the current POS., that results in the unsteady sparking, please set TB stage to extend and note the gap voltage should be set on 30V-40V for efficiency. Always select proper AP setting for electrode surface(see page 4, power / surface ratio table). If power is increased beyond normal setting, reduce TB setting(4-12). Gap voltage should always be set at voltage level given in table(tolerance+10V).

(90V) COPPER TUNGSTEN (-) -TUNGSTEN CARBIDE



TEST CONDITION

ELECTRODE	COPPER TUNGSTEN
POLARITY ELECTRODE	NEGATIVE
WORKPIECE	TUNGSTEN CARBIDE
DIELECTRIC	CPC KEROSENE
INJECTION	: 0.5kg / cm ²
TEST AREA	: 20ømm



CURRENT POS		OFF TIME		SAMPLE-SKM VDI 3400	WEAR RATE	STOCK REMOVAL	GAP		
A P	T A	T B	V				GAP. 1	GAP. 2	
						mm ³ min		mm 2 x G1	mm 2 x G2
3	2	2	30	14	16	1.3	0.036	0.044	
4.5	2	2	30	16	16	1.8	0.038	0.048	
6	2	2	30	17	16	2.1	0.041	0.052	
6	30	3	30	22	20	5.5	0.048	0.060	
9	4	2	30	19	17	2.6	0.045	0.055	
9	30	3	30	25	22	8	0.050	0.063	
12	4	2	30	20	18	4	0.048	0.060	
12	30	3	30	27	23	11	0.054	0.068	
15	4	2	30	22	18	5.5	0.050	0.064	
15	30	4	30	28	23	13	0.058	0.083	
21	4	2	30	25	18	8	0.056	0.072	
21	30	5	30	31	25	18	0.065	0.097	
30	4	2	30	26	18	11	0.060	0.077	
30	30	5	30	33	26	25	0.080	0.125	
45	4	2	30	27	18	13	0.068	0.085	
45	30	6	30	35	27	32	0.094	0.150	
60	4	2	30	30	18	16	0.080	0.112	
60	30	6	30	38	27	40	0.110	0.190	

NOTE:

TB setting test always AT1, if EDM burns unstable, increase TB setting to 2~6(4us-30us). TB setting, when the frontal area of the electrode is smaller than the current POS., that results in the unsteady sparking, please set TB stage to extend and note the gap voltage should be setted on 30V-40V for efficiency. Always select proper AP setting for electrode surface(see page 4, power / surface ratio table). If power is increased beyond normal setting, reduce TB setting(4-12). Gap voltage should always be set at voltage level given in table(tolerance+10V).