

# Příloha 3

## Protokoly z měření

## Rovinnost vzorku 1 před navařováním



Horská 3, 128 00, Praha 2, tel.: +420221990900, fax.: +420221990999

### Protokol z měření na SMS Mitutoyo Crysta-Plus M 544

Jméno dílu

mereni karel simecek

27.05.2015 14:24

El. No.	Line No	Element	Pnt. Ref.	X-Coord. X-Angle Nominal	Y-Coord. Y-Angle Up/Lo	Z-Coord. Z-Angle Actual	Diameter Dist./Ang. Dev./Error	Variance
1	3	Rovina Gauss	4	0.029	0.001	29.217		0.009
				89:56:37	89:59:53	0:03:23		
1	3	Pásmka Gauss	3	-0.421	207.310	0.000	207.310	0.006
				0:06:59	89:53:01	90:00:00		
2	3	Pásmka Gauss	3	202.150	0.175	0.000	202.150	0.003
				90:02:59	0:02:59	90:00:00		
100	3	Dummy Element øzu		201.971	207.310	0.000		
1	4	bod roviny Gauss	1	28.019	87.997	-0.002		0.000
2	7	bod roviny Gauss	1	27.999	78.015	0.005		0.000
3	10	bod roviny Gauss	1	28.019	68.005	0.010		0.000
4	13	bod roviny Gauss	1	28.018	58.000	0.012		0.000
5	16	bod roviny Gauss	1	28.012	48.008	0.014		0.000
6	19	bod roviny Gauss	1	28.009	38.012	0.011		0.000
7	22	bod roviny Gauss	1	28.014	28.011	0.006		0.000
8	25	bod roviny Gauss	1	27.998	18.009	0.002		0.000
9	28	bod roviny Gauss	1	38.017	18.011	0.004		0.000
10	31	bod roviny Gauss	1	38.032	27.964	0.010		0.000
11	34	bod roviny Gauss	1	38.020	38.003	0.013		0.000
12	37	bod roviny Gauss	1	38.017	48.007	0.015		0.000
13	40	bod roviny Gauss	1	38.032	58.025	0.016		0.000
14	43	bod roviny Gauss	1	38.015	68.030	0.016		0.000
15	46	bod roviny Gauss	1	38.016	78.014	0.009		0.000
16	49	bod roviny Gauss	1	38.036	88.021	0.004		0.000
17	52	bod roviny Gauss	1	48.015	87.996	0.007		0.000
18	55	bod roviny Gauss	1	48.025	78.023	0.012		0.000
19	58	bod roviny Gauss	1	48.023	68.014	0.016		0.000
20	61	bod roviny Gauss	1	48.022	58.007	0.016		0.000
21	64	bod roviny Gauss	1	48.015	48.033	0.017		0.000
22	67	bod roviny Gauss	1	48.019	38.019	0.013		0.000
23	70	bod roviny Gauss	1	48.020	28.009	0.010		0.000
24	73	bod roviny Gauss	1	48.020	18.004	0.003		0.000
25	76	bod roviny Gauss	1	58.019	18.037	0.002		0.000
26	79	bod roviny Gauss	1	58.040	28.015	0.006		0.000
27	82	bod roviny Gauss	1	58.059	38.048	0.012		0.000
28	85	bod roviny Gauss	1	58.029	48.018	0.016		0.000
29	88	bod roviny Gauss	1	58.012	58.021	0.017		0.000
30	91	bod roviny Gauss	1	58.019	68.015	0.016		0.000
31	94	bod roviny Gauss	1	58.019	78.026	0.013		0.000
32	97	bod roviny Gauss	1	58.018	88.007	0.007		0.000
33	100	bod roviny Gauss	1	68.009	88.009	0.009		0.000

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**Protokol z měření na SMS Mitutoyo Crysta-Plus M 544**

El. No.	Line No	Element	Pnt. Ref.	X-Coord. X-Angle Nominal	Y-Coord. Y-Angle Up/Lo	Z-Coord. Z-Angle Actual	Diameter Dist./Ang. Dev./Error	Variance
34	103	bod roviny Gauss	1	68.020	78.013	0.013		0.000
35	106	bod roviny Gauss	1	68.012	68.029	0.016		0.000
36	109	bod roviny Gauss	1	68.003	58.001	0.018		0.000
37	112	bod roviny Gauss	1	68.037	48.014	0.016		0.000
38	115	bod roviny Gauss	1	68.004	38.002	0.012		0.000
39	118	bod roviny Gauss	1	68.008	28.009	0.007		0.000
40	121	bod roviny Gauss	1	68.014	18.010	-0.001		0.000
41	124	bod roviny Gauss	1	78.035	17.993	-0.004		0.000
42	127	bod roviny Gauss	1	78.048	28.027	0.005		0.000
43	130	bod roviny Gauss	1	78.069	38.026	0.013		0.000
44	133	bod roviny Gauss	1	78.017	48.007	0.019		0.000
45	136	bod roviny Gauss	1	78.038	58.024	0.018		0.000
46	139	bod roviny Gauss	1	78.014	68.033	0.019		0.000
47	142	bod roviny Gauss	1	78.035	78.059	0.015		0.000
48	145	bod roviny Gauss	1	78.003	88.011	0.009		0.000
2	148	rovinost zkouska Gauss	48	0.000	0.000	0.004		0.021
				90:00:13	90:00:15	0:00:19		
2	149	rovinost zkouska Rovinnost			0.050	0.021	0.021	***_

## Rovinnost vzorku 1 po navařování



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### Protokol z měření na SMS Mitutoyo Crysta-Plus M 544

Jméno dílu

mereni karel simecek

04.06.2015 11:13

El. No.	Line No	Element	Pnt. Ref.	X-Coord. X-Angle Nominal	Y-Coord. Y-Angle Up/Lo	Z-Coord. Z-Angle Actual	Diameter Dist./Ang. Dev./Error	Variance
1	3	Rovina Gauss	4	0.084	0.045	83.913		0.036
				89:56:34	89:58:08	0:03:55		
1	3	Přímka Gauss	3	0.092	267.058	0.000	267.058	0.068
				0:01:11	90:01:11	90:00:00		
2	3	Přímka Gauss	3	256.925	0.794	0.000	256.927	0.000
				90:10:37	0:10:37	90:00:00		
1000	3	Dummy Element		256.103	267.058	0.000		
1	4	bod roviny Gauss	1	28.035	88.026	0.207		0.000
2	7	bod roviny Gauss	1	28.020	78.005	0.275		0.000
3	10	bod roviny Gauss	1	28.020	68.023	0.264		0.000
4	13	bod roviny Gauss	1	28.024	58.029	0.229		0.000
5	16	bod roviny Gauss	1	28.023	48.041	0.184		0.000
6	19	bod roviny Gauss	1	28.031	38.037	0.134		0.000
7	22	bod roviny Gauss	1	28.026	28.021	0.078		0.000
8	25	bod roviny Gauss	1	28.036	18.015	0.009		0.000
9	28	bod roviny Gauss	1	38.010	18.021	-0.031		0.000
10	31	bod roviny Gauss	1	38.003	28.008	0.060		0.000
11	34	bod roviny Gauss	1	38.009	38.007	0.133		0.000
12	37	bod roviny Gauss	1	37.997	48.012	0.201		0.000
13	40	bod roviny Gauss	1	38.018	58.011	0.263		0.000
14	43	bod roviny Gauss	1	38.011	68.009	0.323		0.000
15	46	bod roviny Gauss	1	38.007	78.006	0.355		0.000
16	49	bod roviny Gauss	1	38.003	88.008	0.283		0.000
17	52	bod roviny Gauss	1	48.018	88.008	0.313		0.000
18	55	bod roviny Gauss	1	48.014	78.012	0.388		0.000
19	58	bod roviny Gauss	1	48.021	68.008	0.348		0.000
20	61	bod roviny Gauss	1	48.023	58.011	0.276		0.000
21	64	bod roviny Gauss	1	48.024	48.017	0.205		0.000
22	67	bod roviny Gauss	1	48.027	38.027	0.126		0.000
23	70	bod roviny Gauss	1	48.001	28.011	0.041		0.000
24	73	bod roviny Gauss	1	48.004	18.012	-0.061		0.000
25	76	bod roviny Gauss	1	58.015	17.998	-0.065		0.000
26	79	bod roviny Gauss	1	58.017	28.021	0.039		0.000
27	82	bod roviny Gauss	1	58.013	38.010	0.126		0.000
28	85	bod roviny Gauss	1	58.006	48.008	0.205		0.000
29	88	bod roviny Gauss	1	58.004	58.021	0.280		0.000
30	91	bod roviny Gauss	1	57.998	68.005	0.355		0.000
31	94	bod roviny Gauss	1	58.014	78.020	0.387		0.000
32	97	bod roviny Gauss	1	58.011	88.008	0.307		0.000
33	100	bod roviny Gauss	1	68.011	88.016	0.269		0.000

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**Protokol z měření na SMS Mitutoyo Crysta-Plus M 544**

El. No.	Line No	Element	Pnt. Ref.	X-Coord. X-Angle Nominal	Y-Coord. Y-Angle Up/Lo	Z-Coord. Z-Angle Actual	Diameter Dist./Ang. Dev./Error	Variance
34	103	bod roviny Gauss	1	68.015	78.018	0.353		0.000
35	106	bod roviny Gauss	1	68.016	68.032	0.337		0.000
36	109	bod roviny Gauss	1	68.019	58.012	0.273		0.000
37	112	bod roviny Gauss	1	68.023	48.012	0.204		0.000
38	115	bod roviny Gauss	1	68.024	38.017	0.135		0.000
39	118	bod roviny Gauss	1	68.028	28.007	0.061		0.000
40	121	bod roviny Gauss	1	68.034	18.018	-0.033		0.000
41	124	bod roviny Gauss	1	78.012	18.025	0.012		0.000
42	127	bod roviny Gauss	1	78.009	28.010	0.076		0.000
43	130	bod roviny Gauss	1	78.008	38.026	0.131		0.000
44	133	bod roviny Gauss	1	78.006	48.022	0.181		0.000
45	136	bod roviny Gauss	1	78.007	58.021	0.230		0.000
46	139	bod roviny Gauss	1	78.004	67.999	0.269		0.000
47	142	bod roviny Gauss	1	78.013	78.003	0.265		0.000
48	145	bod roviny Gauss	1	78.011	88.008	0.184		0.000
2	148	rovinnost zkouska Gauss	48	0.000	0.000	-0.061		0.266
				90:00:09	89:43:31	179:43:31		
2	149	rovinnost zkouska Rovinnost			0.050	0.266	0.266	0.216  -->>

## Rovinnost vzorku 2 před navařováním



Horská 3, 128 00, Praha 2, tel.: +420221990900, fax.: +420221990999

### Protokol z měření na SMS Mitutoyo Crysta-Plus M 544

Jméno dílu

mereni karel simecek

27.05.2015 15:09

El. No.	Line No	Element	Pnt. Ref.	X-Coord. X-Angle Nominal	Y-Coord. Y-Angle Up/Lo	Z-Coord. Z-Angle Actual	Diameter Dist./Ang. Dev./Error	Variance
1	3	Rovina Gauss	4	-0.004 90:00:29	-0.023 90:02:44	28.782 0:02:47		0.005
1	3	Přímka Gauss	3	3.169 0:51:58	209.619 90:51:58	0.000 90:00:00	209.643	0.036
2	3	Přímka Gauss	3	196.216 90:02:32	0.144 0:02:32	0.000 90:00:00	196.216	0.012
100	3	Dummy Element øezu		196.062	209.643	0.000		
1	4	bod roviny Gauss	1	28.033	88.010	0.006		0.000
2	7	bod roviny Gauss	1	28.030	78.009	0.013		0.000
3	10	bod roviny Gauss	1	28.042	68.003	0.017		0.000
4	13	bod roviny Gauss	1	28.027	58.009	0.018		0.000
5	16	bod roviny Gauss	1	28.024	47.995	0.018		0.000
6	19	bod roviny Gauss	1	28.011	38.010	0.014		0.000
7	22	bod roviny Gauss	1	28.010	28.018	0.009		0.000
8	25	bod roviny Gauss	1	28.027	18.015	-0.001		0.000
9	28	bod roviny Gauss	1	38.021	18.006	-0.006		0.000
10	31	bod roviny Gauss	1	38.038	28.003	0.006		0.000
11	34	bod roviny Gauss	1	38.022	38.021	0.013		0.000
12	37	bod roviny Gauss	1	38.021	48.028	0.016		0.000
13	40	bod roviny Gauss	1	38.031	58.030	0.018		0.000
14	43	bod roviny Gauss	1	38.040	68.006	0.017		0.000
15	46	bod roviny Gauss	1	38.023	78.013	0.012		0.000
16	49	bod roviny Gauss	1	38.012	88.004	0.007		0.000
17	52	bod roviny Gauss	1	48.021	88.015	0.005		0.000
18	55	bod roviny Gauss	1	48.010	78.006	0.010		0.000
19	58	bod roviny Gauss	1	48.023	68.000	0.015		0.000
20	61	bod roviny Gauss	1	48.012	58.015	0.018		0.000
21	64	bod roviny Gauss	1	48.033	48.000	0.015		0.000
22	67	bod roviny Gauss	1	48.025	37.999	0.011		0.000
23	70	bod roviny Gauss	1	48.030	28.024	0.004		0.000
24	73	bod roviny Gauss	1	48.015	18.019	-0.006		0.000
25	76	bod roviny Gauss	1	58.015	18.013	-0.006		0.000
26	79	bod roviny Gauss	1	58.013	28.014	0.007		0.000
27	82	bod roviny Gauss	1	58.017	38.008	0.011		0.000
28	85	bod roviny Gauss	1	58.036	48.010	0.014		0.000
29	88	bod roviny Gauss	1	58.009	58.009	0.015		0.000
30	91	bod roviny Gauss	1	58.045	68.041	0.016		0.000
31	94	bod roviny Gauss	1	58.031	78.098	0.011		0.000
32	97	bod roviny Gauss	1	58.021	88.021	0.005		0.000
33	100	bod roviny Gauss	1	68.023	88.043	0.005		0.000

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**Protokol z měření na SMS Mitutoyo Crysta-Plus M 544**

El. No.	Line No	Element	Pnt. Ref.	X-Coord. Nominal	Y-Coord. Up/Lo	Z-Coord. Actual	Diameter Dist./Ang. Dev./Error	Variance
34	103	bod roviny Gauss	1	68.002	78.021	0.011		0.000
35	106	bod roviny Gauss	1	68.013	68.007	0.016		0.000
36	109	bod roviny Gauss	1	68.012	57.996	0.017		0.000
37	112	bod roviny Gauss	1	68.014	48.007	0.015		0.000
38	115	bod roviny Gauss	1	68.009	37.998	0.013		0.000
39	118	bod roviny Gauss	1	68.028	28.005	0.004		0.000
40	121	bod roviny Gauss	1	68.034	18.013	-0.006		0.000
41	124	bod roviny Gauss	1	78.014	18.007	-0.002		0.000
42	127	bod roviny Gauss	1	78.015	28.025	0.008		0.000
43	130	bod roviny Gauss	1	78.028	38.020	0.013		0.000
44	133	bod roviny Gauss	1	78.039	48.026	0.017		0.000
45	136	bod roviny Gauss	1	78.034	58.007	0.019		0.000
46	139	bod roviny Gauss	1	78.042	68.028	0.015		0.000
47	142	bod roviny Gauss	1	78.015	77.998	0.011		0.000
48	145	bod roviny Gauss	1	78.037	88.006	0.005		0.000
2	148	rovinost zkouska Gauss	48	0.000	0.000	0.004		0.020
				89:59:57	90:00:27	0:00:27		
2	149	rovinost zkouska Rovinnost			0.050	0.020	0.020	***_

## Rovinnost vzorku 2 po navařování



Horská 3, 128 00, Praha 2, tel.: +420221990900, fax.: +420221990999

### Protokol z měření na SMS Mitutoyo Crysta-Plus M 544

Jméno dílu

mereni karel simecek

04.06.2015 13:34

El. No.	Line No	Element	Pnt. Ref.	X-Coord. X-Angle Nominal	Y-Coord. Y-Angle Up/Lo	Z-Coord. Z-Angle Actual	Diameter Dist./Ang. Dev./Error	Variance
1	3	Rovina Gauss	4	-0.301 90:12:32	-0.006 90:00:15	82.394 0:12:33		0.004
1	3	Přímka Gauss	3	-0.248 0:03:12	266.720 89:56:48	0.000 90:00:00	266.720	0.026
2	3	Přímka Gauss	3	257.215 90:05:37	0.421 0:05:37	0.000 90:00:00	257.215	0.050
1000	3	Dummy Element øezu		256.779	266.720	0.000		
1	4	bod roviny Gauss	1	28.007	88.006	0.236		0.000
2	7	bod roviny Gauss	1	27.996	78.016	0.255		0.000
3	10	bod roviny Gauss	1	28.005	68.001	0.267		0.000
4	13	bod roviny Gauss	1	28.004	58.015	0.227		0.000
5	16	bod roviny Gauss	1	28.006	48.025	0.247		0.000
6	19	bod roviny Gauss	1	28.009	38.027	0.221		0.000
7	22	bod roviny Gauss	1	28.003	28.020	0.227		0.000
8	25	bod roviny Gauss	1	28.011	18.013	0.148		0.000
9	28	bod roviny Gauss	1	38.013	18.004	0.196		0.000
10	31	bod roviny Gauss	1	38.023	28.016	0.321		0.000
11	34	bod roviny Gauss	1	38.027	38.003	0.342		0.000
12	37	bod roviny Gauss	1	38.011	48.018	0.382		0.000
13	40	bod roviny Gauss	1	38.022	58.013	0.358		0.000
14	43	bod roviny Gauss	1	38.033	68.040	0.395		0.000
15	46	bod roviny Gauss	1	38.011	78.025	0.366		0.000
16	49	bod roviny Gauss	1	38.018	88.000	0.329		0.000
17	52	bod roviny Gauss	1	48.018	88.031	0.370		0.000
18	55	bod roviny Gauss	1	48.012	78.012	0.412		0.000
19	58	bod roviny Gauss	1	48.006	68.009	0.444		0.000
20	61	bod roviny Gauss	1	48.008	58.007	0.421		0.000
21	64	bod roviny Gauss	1	48.008	48.015	0.441		0.000
22	67	bod roviny Gauss	1	48.013	38.018	0.395		0.000
23	70	bod roviny Gauss	1	47.998	28.028	0.360		0.000
24	73	bod roviny Gauss	1	48.017	18.017	0.217		0.000
25	76	bod roviny Gauss	1	58.021	18.011	0.226		0.000
26	79	bod roviny Gauss	1	58.029	28.016	0.362		0.000
27	82	bod roviny Gauss	1	58.037	38.052	0.397		0.000
28	85	bod roviny Gauss	1	58.020	48.032	0.440		0.000
29	88	bod roviny Gauss	1	58.028	58.033	0.424		0.000
30	91	bod roviny Gauss	1	58.008	68.015	0.443		0.000
31	94	bod roviny Gauss	1	58.017	78.040	0.411		0.000
32	97	bod roviny Gauss	1	58.003	88.012	0.370		0.000
33	100	bod roviny Gauss	1	68.041	88.010	0.328		0.000



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**Protokol z měření na SMS Mitutoyo Crysta-Plus M 544**

El. No.	Line No	Element	Pnt. Ref.	X-Coord. Nominal	Y-Coord. Up/Lo	Z-Coord. Actual	Diameter Dist./Ang. Dev./Error	Variance
34	103	bod roviny Gauss	1	68.030	78.027	0.370		0.000
35	106	bod roviny Gauss	1	68.022	68.008	0.394		0.000
36	109	bod roviny Gauss	1	68.010	58.020	0.371		0.000
37	112	bod roviny Gauss	1	68.003	48.022	0.384		0.000
38	115	bod roviny Gauss	1	68.022	38.006	0.349		0.000
39	118	bod roviny Gauss	1	68.010	28.015	0.326		0.000
40	121	bod roviny Gauss	1	68.001	18.027	0.213		0.000
41	124	bod roviny Gauss	1	78.021	18.024	0.144		0.000
42	127	bod roviny Gauss	1	78.030	28.020	0.193		0.000
43	130	bod roviny Gauss	1	78.023	38.022	0.193		0.000
44	133	bod roviny Gauss	1	78.017	48.019	0.209		0.000
45	136	bod roviny Gauss	1	78.023	58.015	0.207		0.000
46	139	bod roviny Gauss	1	78.032	68.023	0.238		0.000
47	142	bod roviny Gauss	1	78.022	78.065	0.241		0.000
48	145	bod roviny Gauss	1	78.008	88.028	0.214		0.000
2	148	rovinnost zkouska Gauss	48	0.000	0.000	0.254		0.276
				89:59:03	90:04:48	0:04:53		
2	149	rovinnost zkouska Rovinnost			0.050	0.276	0.276	0.226  --->>

## Rovinnost vzorku 3 před navařováním



Horská 3, 128 00, Praha 2, tel.: +420221990900, fax.: +420221990999

### Protokol z měření na SMS Mitutoyo Crysta-Plus M 544

Vzorek číslo 3

27.05.2015 15:34

El. No.	Lin No	Element Tolerance	Pnt. Ref	X-Coord. X-Angle Nominal	Y-Coord. Y-Angle Up/Lo	Z-Coord. Z-Angle Actual	Diameter Dist./Ang. Dev./Error	Variance
1	3	Rovina Gauss	4	0.006	0.024	29.110		0.019
				89:59:16	89:57:10	0:02:56		
1	3	Přímka Gauss	3	-3.634	201.614	0.000	201.646	0.012
				1:01:58	88:58:02	90:00:00		
2	3	Přímka Gauss	3	200.762	0.193	0.000	200.763	0.019
				90:03:18	0:03:18	90:00:00		
100	3	Dummy Element řezu		200.569	201.646	0.000		
1	4	bod roviny Gauss	1	28.057	88.029	0.003		0.000
2	7	bod roviny Gauss	1	28.041	78.018	0.009		0.000
3	10	bod roviny Gauss	1	28.030	68.036	0.016		0.000
4	13	bod roviny Gauss	1	28.016	58.022	0.013		0.000
5	16	bod roviny Gauss	1	28.053	48.032	0.007		0.000
6	19	bod roviny Gauss	1	28.018	38.043	0.002		0.000
7	22	bod roviny Gauss	1	28.060	28.037	-0.008		0.000
8	25	bod roviny Gauss	1	28.017	18.000	-0.017		0.000
9	28	bod roviny Gauss	1	38.028	18.011	-0.029		0.000
10	31	bod roviny Gauss	1	38.042	28.011	-0.017		0.000
11	34	bod roviny Gauss	1	38.032	38.029	-0.012		0.000
12	37	bod roviny Gauss	1	38.024	48.025	-0.005		0.000
13	40	bod roviny Gauss	1	38.052	58.031	-0.002		0.000
14	43	bod roviny Gauss	1	38.037	68.030	-0.002		0.000
15	46	bod roviny Gauss	1	38.026	78.020	-0.004		0.000
16	49	bod roviny Gauss	1	38.007	88.053	-0.008		0.000
17	52	bod roviny Gauss	1	48.013	88.007	-0.018		0.000
18	55	bod roviny Gauss	1	48.037	78.013	-0.011		0.000
19	58	bod roviny Gauss	1	48.041	68.003	-0.007		0.000
20	61	bod roviny Gauss	1	48.014	58.011	-0.009		0.000
21	64	bod roviny Gauss	1	48.029	48.022	-0.013		0.000
22	67	bod roviny Gauss	1	48.034	37.985	-0.017		0.000
23	70	bod roviny Gauss	1	48.046	28.030	-0.025		0.000
24	73	bod roviny Gauss	1	48.018	18.008	-0.034		0.000
25	76	bod roviny Gauss	1	58.017	18.003	-0.031		0.000
26	79	bod roviny Gauss	1	58.017	27.987	-0.020		0.000
27	82	bod roviny Gauss	1	58.028	38.009	-0.014		0.000
28	85	bod roviny Gauss	1	58.048	48.028	-0.008		0.000
29	88	bod roviny Gauss	1	58.031	58.010	-0.004		0.000
30	91	bod roviny Gauss	1	58.026	68.019	-0.010		0.000
31	94	bod roviny Gauss	1	58.018	78.010	-0.014		0.000
32	97	bod roviny Gauss	1	58.020	88.013	-0.019		0.000
33	100	bod roviny Gauss	1	68.011	87.999	-0.019		0.000

GEOPAK Opakovací režim SMS v2.4.R10 Edition 10 in MCOSMOS-1

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Horská 3, 128 00, Praha 2, tel.: +420221990900, fax.: +420221990999

Protokol z měření na SMS Mitutoyo Crysta-Plus M 544

El. No.	Lin No	Element Tolerance	Pnt. Ref	X-Coord. X-Angle Nominal	Y-Coord. Y-Angle Up/Lo	Z-Coord. Z-Angle Actual	Diameter Dist./Ang. Dev./Error	Variance
34	103	bod roviny Gauss	1	68.022	78.018	-0.010		0.000
35	106	bod roviny Gauss	1	68.017	68.035	-0.005		0.000
36	109	bod roviny Gauss	1	68.025	58.076	-0.003		0.000
37	112	bod roviny Gauss	1	68.025	48.011	0.000		0.000
38	115	bod roviny Gauss	1	68.007	38.031	-0.005		0.000
39	118	bod roviny Gauss	1	68.042	28.047	-0.015		0.000
40	121	bod roviny Gauss	1	68.016	18.002	-0.022		0.000
41	124	bod roviny Gauss	1	78.017	18.020	-0.006		0.000
42	127	bod roviny Gauss	1	78.045	28.029	0.006		0.000
43	130	bod roviny Gauss	1	78.025	38.014	0.010		0.000
44	133	bod roviny Gauss	1	78.021	48.016	0.011		0.000
45	136	bod roviny Gauss	1	78.035	58.021	0.011		0.000
46	139	bod roviny Gauss	1	78.029	68.036	0.005		0.000
47	142	bod roviny Gauss	1	78.022	78.006	-0.002		0.000
48	145	bod roviny Gauss	1	78.024	88.016	-0.012		0.000
2	148	rovinnost zkouska Gauss	48	0.000	0.000	-0.016		0.042
				89:59:59	89:59:27	179:59:27		
2	149	rovinnost zkouska Rovinnost			0.050	0.042	0.042	0.042 *****

## Rovinnost vzorku 3 po navařování



Horská 3, 128 00, Praha 2, tel.: +420221990900, fax.: +420221990999

### Protokol z měření na SMS Mitutoyo Crysta-Plus M 544

Jméno dílu

mereni karel simecek

08.06.2015 10:28

El. No.	Line No	Element	Pnt. Ref.	X-Coord. X-Angle Nominal	Y-Coord. Y-Angle Up/Lo	Z-Coord. Z-Angle Actual	Diameter Dist./Ang. Dev./Error	Variance
1	3	Rovina Gauss	4	-0.150 90:06:13	0.050 89:57:56	83.067 0:06:33		0.021
1	3	Pásmka Gauss	3	0.257 0:03:26	257.053 90:03:26	0.000 90:00:00	257.053	0.068
2	3	Pásmka Gauss	3	240.653 90:02:21	0.164 0:02:21	0.000 90:00:00	240.653	0.014
100	3	Dummy Element øzu		240.478	257.053	0.000		
1	4	bod roviny Gauss	1	28.007	88.019	0.051		0.000
2	7	bod roviny Gauss	1	28.018	78.034	0.129		0.000
3	10	bod roviny Gauss	1	28.027	68.016	0.164		0.000
4	13	bod roviny Gauss	1	28.036	58.023	0.159		0.000
5	16	bod roviny Gauss	1	28.007	48.023	0.130		0.000
6	19	bod roviny Gauss	1	28.023	38.014	0.099		0.000
7	22	bod roviny Gauss	1	28.030	28.010	0.072		0.000
8	25	bod roviny Gauss	1	28.011	18.013	0.046		0.000
9	28	bod roviny Gauss	1	38.005	18.013	0.045		0.000
10	31	bod roviny Gauss	1	38.013	28.022	0.131		0.000
11	34	bod roviny Gauss	1	38.003	38.013	0.189		0.000
12	37	bod roviny Gauss	1	38.008	48.011	0.244		0.000
13	40	bod roviny Gauss	1	37.996	58.007	0.274		0.000
14	43	bod roviny Gauss	1	38.008	68.042	0.247		0.000
15	46	bod roviny Gauss	1	37.999	78.030	0.147		0.000
16	49	bod roviny Gauss	1	38.020	88.012	0.023		0.000
17	52	bod roviny Gauss	1	48.016	88.020	0.005		0.000
18	55	bod roviny Gauss	1	48.026	78.009	0.140		0.000
19	58	bod roviny Gauss	1	48.014	68.024	0.275		0.000
20	61	bod roviny Gauss	1	48.022	58.012	0.355		0.000
21	64	bod roviny Gauss	1	48.033	48.013	0.358		0.000
22	67	bod roviny Gauss	1	48.018	38.003	0.290		0.000
23	70	bod roviny Gauss	1	48.023	28.017	0.165		0.000
24	73	bod roviny Gauss	1	48.032	18.017	0.033		0.000
25	76	bod roviny Gauss	1	58.043	18.022	0.026		0.000
26	79	bod roviny Gauss	1	58.018	28.018	0.163		0.000
27	82	bod roviny Gauss	1	58.012	38.007	0.295		0.000
28	85	bod roviny Gauss	1	58.018	48.038	0.358		0.000
29	88	bod roviny Gauss	1	58.008	58.010	0.349		0.000
30	91	bod roviny Gauss	1	58.016	68.010	0.262		0.000
31	94	bod roviny Gauss	1	58.006	78.027	0.138		0.000
32	97	bod roviny Gauss	1	58.008	88.018	0.005		0.000
33	100	bod roviny Gauss	1	68.010	88.017	0.017		0.000

**Protokol z měření na SMS Mitutoyo Crysta-Plus M 544**

El. No.	Line No	Element	Pnt. Ref.	X-Coord. Nominal	Y-Coord. Up/Lo	Z-Coord. Actual	Diameter Dist./Ang. Dev./Error	Variance
34	103	bod roviny Gauss	1	68.017	78.023	0.120		0.000
35	106	bod roviny Gauss	1	68.031	68.014	0.185		0.000
36	109	bod roviny Gauss	1	68.028	58.026	0.236		0.000
37	112	bod roviny Gauss	1	68.033	48.011	0.268		0.000
38	115	bod roviny Gauss	1	68.004	38.014	0.253		0.000
39	118	bod roviny Gauss	1	68.014	28.014	0.157		0.000
40	121	bod roviny Gauss	1	68.024	18.008	0.034		0.000
41	124	bod roviny Gauss	1	78.019	18.018	0.060		0.000
42	127	bod roviny Gauss	1	78.008	28.056	0.129		0.000
43	130	bod roviny Gauss	1	78.000	38.024	0.150		0.000
44	133	bod roviny Gauss	1	78.015	48.047	0.136		0.000
45	136	bod roviny Gauss	1	78.003	58.012	0.109		0.000
46	139	bod roviny Gauss	1	78.006	68.070	0.080		0.000
47	142	bod roviny Gauss	1	78.007	78.029	0.066		0.000
48	145	bod roviny Gauss	1	78.001	88.020	0.028		0.000
2	148	rovinost zkouska Gauss	48	0.000	0.000	0.179		0.344
				89:59:19	89:59:04	0:01:10		
2	149	rovinost zkouska Rovinnost			0.050	0.344	0.344	0.294  --->>

## Rovinnost vzorku 4 před navařováním



Horská 3, 128 00, Praha 2, tel.: +420221990900, fax.: +420221990999

### Protokol z měření na SMS Mitutoyo Crysta-Plus M 544

Jméno dílu

mereni karel simecek

27.05.2015 16:03

El. No.	Line No	Element	Pnt. Ref.	X-Coord. X-Angle Nominal	Y-Coord. Y-Angle Up/Lo	Z-Coord. Z-Angle Actual	Diameter Dist./Ang. Dev./Error	Variance
1	3	Rovina Gauss	4	-0.035 90:04:15	-0.021 90:02:32	28.525 0:04:57		0.002
1	3	Pásmka Gauss	3	-5.270 1:30:18	200.557 88:29:42	0.000 90:00:00	200.626	0.014
2	3	Pásmka Gauss	3	204.813 90:02:48	0.167 0:02:48	0.000 90:00:00	204.814	0.007
100	3	Dummy Element		204.650	200.626	0.000		
1	4	bod roviny Gauss	1	28.014	87.989	-0.001		0.000
2	7	bod roviny Gauss	1	28.042	78.022	-0.001		0.000
3	10	bod roviny Gauss	1	28.011	68.016	-0.002		0.000
4	13	bod roviny Gauss	1	28.013	58.036	0.001		0.000
5	16	bod roviny Gauss	1	28.035	48.040	0.003		0.000
6	19	bod roviny Gauss	1	28.013	38.009	0.004		0.000
7	22	bod roviny Gauss	1	28.017	28.008	0.003		0.000
8	25	bod roviny Gauss	1	28.009	18.006	0.000		0.000
9	28	bod roviny Gauss	1	38.027	18.018	0.002		0.000
10	31	bod roviny Gauss	1	38.037	28.013	0.004		0.000
11	34	bod roviny Gauss	1	38.024	38.018	0.004		0.000
12	37	bod roviny Gauss	1	38.028	48.021	0.002		0.000
13	40	bod roviny Gauss	1	38.009	58.027	0.000		0.000
14	43	bod roviny Gauss	1	38.003	68.014	-0.001		0.000
15	46	bod roviny Gauss	1	38.010	78.035	-0.002		0.000
16	49	bod roviny Gauss	1	38.015	88.015	0.001		0.000
17	52	bod roviny Gauss	1	48.009	88.036	-0.001		0.000
18	55	bod roviny Gauss	1	48.040	78.007	-0.003		0.000
19	58	bod roviny Gauss	1	48.043	68.019	-0.002		0.000
20	61	bod roviny Gauss	1	48.010	58.028	0.001		0.000
21	64	bod roviny Gauss	1	48.020	48.018	0.003		0.000
22	67	bod roviny Gauss	1	48.036	38.033	0.004		0.000
23	70	bod roviny Gauss	1	48.021	28.013	0.006		0.000
24	73	bod roviny Gauss	1	48.019	18.019	0.004		0.000
25	76	bod roviny Gauss	1	58.010	18.024	0.004		0.000
26	79	bod roviny Gauss	1	58.009	28.000	0.005		0.000
27	82	bod roviny Gauss	1	58.065	38.021	0.003		0.000
28	85	bod roviny Gauss	1	58.010	48.026	0.002		0.000
29	88	bod roviny Gauss	1	58.012	58.020	0.002		0.000
30	91	bod roviny Gauss	1	58.015	68.046	-0.001		0.000
31	94	bod roviny Gauss	1	58.029	78.040	-0.002		0.000
32	97	bod roviny Gauss	1	58.033	88.024	0.000		0.000
33	100	bod roviny Gauss	1	68.037	88.037	0.000		0.000

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**Protokol z měření na SMS Mitutoyo Crysta-Plus M 544**

El. No.	Line No	Element	Pnt. Ref.	X-Coord. Nominal	Y-Coord. Up/Lo	Z-Coord. Actual	Diameter Dist./Ang. Dev./Error	Variance
34	103	bod roviny Gauss	1	68.019	78.025	-0.003		0.000
35	106	bod roviny Gauss	1	68.022	68.019	-0.002		0.000
36	109	bod roviny Gauss	1	68.018	58.007	0.000		0.000
37	112	bod roviny Gauss	1	68.018	48.001	0.001		0.000
38	115	bod roviny Gauss	1	68.017	38.011	0.004		0.000
39	118	bod roviny Gauss	1	68.007	28.006	0.004		0.000
40	121	bod roviny Gauss	1	68.029	17.999	0.002		0.000
41	124	bod roviny Gauss	1	78.042	18.023	0.004		0.000
42	127	bod roviny Gauss	1	78.018	28.016	0.005		0.000
43	130	bod roviny Gauss	1	78.024	38.028	0.005		0.000
44	133	bod roviny Gauss	1	78.043	48.023	0.004		0.000
45	136	bod roviny Gauss	1	78.024	58.013	0.002		0.000
46	139	bod roviny Gauss	1	78.041	68.017	-0.001		0.000
47	142	bod roviny Gauss	1	78.021	78.024	-0.003		0.000
48	145	bod roviny Gauss	1	78.030	88.016	-0.001		0.000
2	148	rovinost zkouska Gauss	48	0.000	0.000	0.005		0.007
				90:00:02	89:59:42	0:00:18		
2	149	rovinost zkouska Rovinnost			0.050	0.007	0.007	**----

## Rovinnost vzorku 4 po navařování



Horská 3, 128 00, Praha 2, tel.: +420221990900, fax.: +420221990999

### Protokol z měření na SMS Mitutoyo Crysta-Plus M 544

mereni karel simecek

08.06.2015 10:03

El. No.	Lin No	Element Tolerance	Pnt. Ref	X-Coord. X-Angle Nominal	Y-Coord. Y-Angle Up/Lo	Z-Coord. Z-Angle Actual	Diameter Dist./Ang. Dev./Error	Variance
1	3	Rovina Gauss	4	-0.044 90:01:49	-0.086 90:03:34	82.954 0:04:00	0.034	
1	3	Přímka Gauss	3	-0.410 0:05:30	256.320 89:54:30	0.000 90:00:00	256.321 0.117	
2	3	Přímka Gauss	3	242.306 90:09:20	0.657 0:09:20	0.000 90:00:00	242.307 0.030	
100	3	Dummy Element řezu		241.612	256.321	0.000		
1	4	bod roviny Gauss	1	28.016	88.018	0.277	0.000	
2	7	bod roviny Gauss	1	28.010	78.019	0.314	0.000	
3	10	bod roviny Gauss	1	28.014	68.014	0.289	0.000	
4	13	bod roviny Gauss	1	28.011	58.011	0.246	0.000	
5	16	bod roviny Gauss	1	28.004	48.019	0.210	0.000	
6	19	bod roviny Gauss	1	28.006	38.028	0.177	0.000	
7	22	bod roviny Gauss	1	28.016	28.004	0.146	0.000	
8	25	bod roviny Gauss	1	28.017	18.007	0.111	0.000	
9	28	bod roviny Gauss	1	38.021	18.030	0.071	0.000	
10	31	bod roviny Gauss	1	38.004	28.011	0.111	0.000	
11	34	bod roviny Gauss	1	38.018	38.036	0.153	0.000	
12	37	bod roviny Gauss	1	38.012	48.015	0.195	0.000	
13	40	bod roviny Gauss	1	38.010	58.010	0.243	0.000	
14	43	bod roviny Gauss	1	38.026	68.013	0.311	0.000	
15	46	bod roviny Gauss	1	38.011	78.015	0.359	0.000	
16	49	bod roviny Gauss	1	38.012	88.021	0.330	0.000	
17	52	bod roviny Gauss	1	48.017	88.017	0.350	0.000	
18	55	bod roviny Gauss	1	48.001	78.003	0.381	0.000	
19	58	bod roviny Gauss	1	48.002	68.019	0.319	0.000	
20	61	bod roviny Gauss	1	48.020	58.015	0.243	0.000	
21	64	bod roviny Gauss	1	48.000	48.019	0.184	0.000	
22	67	bod roviny Gauss	1	48.003	38.007	0.138	0.000	
23	70	bod roviny Gauss	1	48.010	28.014	0.096	0.000	
24	73	bod roviny Gauss	1	48.012	18.014	0.053	0.000	
25	76	bod roviny Gauss	1	58.010	18.017	0.063	0.000	
26	79	bod roviny Gauss	1	58.027	28.031	0.102	0.000	
27	82	bod roviny Gauss	1	58.041	38.016	0.138	0.000	
28	85	bod roviny Gauss	1	58.020	48.023	0.183	0.000	
29	88	bod roviny Gauss	1	58.022	58.034	0.247	0.000	
30	91	bod roviny Gauss	1	58.021	68.020	0.322	0.000	
31	94	bod roviny Gauss	1	58.016	78.023	0.382	0.000	
32	97	bod roviny Gauss	1	58.030	88.006	0.351	0.000	
33	100	bod roviny Gauss	1	68.017	88.057	0.327	0.000	





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Protokol z měření na SMS Mitutoyo Crysta-Plus M 544

El. No.	Lin No	Element	Pnt.	X-Coord.	Y-Coord.	Z-Coord.	Diameter	Variance
		Tolerance	Ref	X-Angle Nominal	Y-Angle Up/Lo	Z-Angle Actual	Dist./Ang. Dev./Error	
34	103	bod roviny Gauss	1	67.998	78.007	0.361		0.000
35	106	bod roviny Gauss	1	68.023	68.008	0.313		0.000
36	109	bod roviny Gauss	1	68.007	58.012	0.245		0.000
37	112	bod roviny Gauss	1	68.014	48.023	0.189		0.000
38	115	bod roviny Gauss	1	68.021	38.024	0.152		0.000
39	118	bod roviny Gauss	1	67.999	28.018	0.123		0.000
40	121	bod roviny Gauss	1	68.010	18.014	0.09		0.000
41	124	bod roviny Gauss	1	78.021	18.015	0.137		0.000
42	127	bod roviny Gauss	1	78.033	28.005	0.161		0.000
43	130	bod roviny Gauss	1	78.014	38.022	0.176		0.000
44	133	bod roviny Gauss	1	78.027	48.015	0.204		0.000
45	136	bod roviny Gauss	1	78.013	58.044	0.244		0.000
46	139	bod roviny Gauss	1	78.027	68.003	0.289		0.000
47	142	bod roviny Gauss	1	77.998	78.025	0.311		0.000
48	145	bod roviny Gauss	1	78.021	88.030	0.269		0.000
2	148	rovinnost zkouska Gauss	48	0.000	0.000	0.143		0.302
				89:59:44	89:46:41	179:46:41		
2	149	rovinnost zkouska Rovinnost			0.050	0.302	0.302	0.252  --->>

## Rovinnost vzorku 5 před navařováním



Horská 3, 128 00, Praha 2, tel.: +420221990900, fax.: +420221990999

### Protokol z měření na SMS Mitutoyo Crysta-Plus M 544

Jméno dílu

mereni karel simecek

27.05.2015 16:29

El. No.	Line No	Element	Pnt. Ref.	X-Coord. X-Angle Nominal	Y-Coord. Y-Angle Up/Lo	Z-Coord. Z-Angle Actual	Diameter Dist./Ang. Dev./Error	Variance
1	3	Rovina Gauss	4	-0.026 90:03:07	-0.009 90:01:01	28.668 0:03:17		0.007
1	3	Pásmka Gauss	3	-3.523 1:00:18	200.836 88:59:42	0.000 90:00:00	200.867	0.026
2	3	Pásmka Gauss	3	200.293 89:58:51	-0.067 0:01:09	0.000 90:00:00	200.293	0.027
100	3	Dummy Element øzu		200.360	200.867	0.000		
1	4	bod roviny Gauss	1	28.013	88.013	0.015		0.000
2	7	bod roviny Gauss	1	28.022	78.023	0.030		0.000
3	10	bod roviny Gauss	1	28.032	67.994	0.034		0.000
4	13	bod roviny Gauss	1	28.017	58.015	0.037		0.000
5	16	bod roviny Gauss	1	28.021	48.014	0.034		0.000
6	19	bod roviny Gauss	1	28.022	38.018	0.026		0.000
7	22	bod roviny Gauss	1	28.017	28.020	0.017		0.000
8	25	bod roviny Gauss	1	28.026	18.010	0.001		0.000
9	28	bod roviny Gauss	1	38.013	18.006	-0.002		0.000
10	31	bod roviny Gauss	1	38.025	28.010	0.014		0.000
11	34	bod roviny Gauss	1	38.030	38.022	0.025		0.000
12	37	bod roviny Gauss	1	38.030	48.003	0.031		0.000
13	40	bod roviny Gauss	1	38.007	58.018	0.035		0.000
14	43	bod roviny Gauss	1	38.010	68.032	0.032		0.000
15	46	bod roviny Gauss	1	38.005	78.009	0.025		0.000
16	49	bod roviny Gauss	1	38.019	88.021	0.012		0.000
17	52	bod roviny Gauss	1	48.020	88.025	0.009		0.000
18	55	bod roviny Gauss	1	48.032	78.015	0.024		0.000
19	58	bod roviny Gauss	1	48.020	68.013	0.032		0.000
20	61	bod roviny Gauss	1	48.012	58.011	0.034		0.000
21	64	bod roviny Gauss	1	48.036	48.017	0.031		0.000
22	67	bod roviny Gauss	1	48.031	38.019	0.023		0.000
23	70	bod roviny Gauss	1	48.035	28.003	0.012		0.000
24	73	bod roviny Gauss	1	48.028	18.004	-0.002		0.000
25	76	bod roviny Gauss	1	58.024	18.014	0.000		0.000
26	79	bod roviny Gauss	1	58.021	28.011	0.017		0.000
27	82	bod roviny Gauss	1	58.008	38.028	0.026		0.000
28	85	bod roviny Gauss	1	58.009	48.028	0.034		0.000
29	88	bod roviny Gauss	1	58.013	58.004	0.035		0.000
30	91	bod roviny Gauss	1	58.042	68.017	0.030		0.000
31	94	bod roviny Gauss	1	58.005	78.013	0.049		0.000
32	97	bod roviny Gauss	1	58.028	88.015	0.009		0.000
33	100	bod roviny Gauss	1	68.017	88.019	0.009		0.000

**Protokol z měření na SMS Mitutoyo Crysta-Plus M 544**

El. No.	Line No	Element	Pnt. Ref.	X-Coord. Nominal	Y-Coord. Up/Lo	Z-Coord. Actual	Diameter Dist./Ang. Dev./Error	Variance
34	103	bod roviny Gauss	1	68.030	78.034	0.022		0.000
35	106	bod roviny Gauss	1	68.028	68.008	0.033		0.000
36	109	bod roviny Gauss	1	68.044	58.025	0.036		0.000
37	112	bod roviny Gauss	1	68.017	48.014	0.033		0.000
38	115	bod roviny Gauss	1	68.047	38.012	0.029		0.000
39	118	bod roviny Gauss	1	68.019	27.976	0.017		0.000
40	121	bod roviny Gauss	1	68.048	18.040	0.002		0.000
41	124	bod roviny Gauss	1	78.051	18.025	0.009		0.000
42	127	bod roviny Gauss	1	78.023	28.023	0.023		0.000
43	130	bod roviny Gauss	1	78.020	38.011	0.034		0.000
44	133	bod roviny Gauss	1	78.019	48.010	0.041		0.000
45	136	bod roviny Gauss	1	78.002	58.005	0.042		0.000
46	139	bod roviny Gauss	1	78.033	68.015	0.037		0.000
47	142	bod roviny Gauss	1	78.012	78.020	0.026		0.000
48	145	bod roviny Gauss	1	78.013	88.021	0.003		0.000
2	148	rovinnost zkouska Gauss	48	0.000	0.000	0.011		0.049
				90:00:13	90:00:35	0:00:37		
2	149	rovinnost zkouska Rovinnost			0.050	0.049	0.049	0.049 *****

**Protokol z měření na SMS Mitutoyo Crysta-Plus M 544**

Jméno dílu

mereni karel simecek

04.06.2015 13:53

El. No.	Line No	Element Tolerance	Pnt. Ref.	X-Coord. X-Angle Nominal	Y-Coord. Y-Angle Up/Lo	Z-Coord. Z-Angle Actual	Diameter Dist./Ang. Dev./Error	Variance
1	3	Rovina Gauss	4	0.445 89:41:04	-1.179 90:50:06	80.873 0:53:34		0.019
1	3	Přímka Gauss	3	0.390 0:05:00	268.547 90:05:00	0.000 90:00:00	268.547	0.023
2	3	Přímka Gauss	3	255.092 90:00:15	0.018 0:00:15	0.000 90:00:00	255.092	0.063
1000	3	Dummy Element øezu		255.073	268.547	0.000		
1	4	bod roviny Gauss	1	28.021	87.975	0.166		0.000
2	7	bod roviny Gauss	1	28.034	78.017	0.149		0.000
3	10	bod roviny Gauss	1	28.033	68.017	0.128		0.000
4	13	bod roviny Gauss	1	28.015	58.016	0.147		0.000
5	16	bod roviny Gauss	1	28.027	47.989	0.167		0.000
6	19	bod roviny Gauss	1	28.009	38.004	0.173		0.000
7	22	bod roviny Gauss	1	28.025	28.041	0.188		0.000
8	25	bod roviny Gauss	1	28.042	17.996	0.135		0.000
9	28	bod roviny Gauss	1	38.022	18.000	0.181		0.000
10	31	bod roviny Gauss	1	38.014	28.012	0.263		0.000
11	34	bod roviny Gauss	1	38.006	38.004	0.281		0.000
12	37	bod roviny Gauss	1	38.006	48.013	0.293		0.000
13	40	bod roviny Gauss	1	38.004	58.018	0.270		0.000
14	43	bod roviny Gauss	1	38.019	68.091	0.248		0.000
15	46	bod roviny Gauss	1	37.996	78.009	0.244		0.000
16	49	bod roviny Gauss	1	38.011	88.007	0.240		0.000
17	52	bod roviny Gauss	1	48.018	88.001	0.297		0.000
18	55	bod roviny Gauss	1	48.034	78.012	0.325		0.000
19	58	bod roviny Gauss	1	48.018	67.998	0.371		0.000
20	61	bod roviny Gauss	1	48.016	58.002	0.361		0.000
21	64	bod roviny Gauss	1	48.019	48.005	0.397		0.000
22	67	bod roviny Gauss	1	48.008	38.002	0.358		0.000
23	70	bod roviny Gauss	1	48.021	28.030	0.347		0.000
24	73	bod roviny Gauss	1	48.038	18.031	0.252		0.000
25	76	bod roviny Gauss	1	58.011	18.007	0.280		0.000
26	79	bod roviny Gauss	1	58.026	28.034	0.385		0.000
27	82	bod roviny Gauss	1	58.016	38.016	0.408		0.000
28	85	bod roviny Gauss	1	58.017	48.034	0.446		0.000
29	88	bod roviny Gauss	1	58.002	58.021	0.423		0.000
30	91	bod roviny Gauss	1	58.026	68.051	0.423		0.000
31	94	bod roviny Gauss	1	58.004	78.009	0.369		0.000
32	97	bod roviny Gauss	1	58.011	88.021	0.324		0.000
33	100	bod roviny Gauss	1	68.027	88.007	0.318		0.000

**Protokol z měření na SMS Mitutoyo Crysta-Plus M 544**

El. No.	Line No	Element	Pnt. Ref.	X-Coord. Nominal	Y-Coord. Up/Lo	Z-Coord. Actual	Diameter Dist./Ang. Dev./Error	Variance
34	103	bod roviny Gauss	1	68.040	78.027	0.377		0.000
35	106	bod roviny Gauss	1	68.014	67.993	0.434		0.000
36	109	bod roviny Gauss	1	68.034	58.002	0.436		0.000
37	112	bod roviny Gauss	1	68.017	48.017	0.454		0.000
38	115	bod roviny Gauss	1	68.024	38.034	0.420		0.000
39	118	bod roviny Gauss	1	68.012	28.012	0.393		0.000
40	121	bod roviny Gauss	1	68.035	18.020	0.294		0.000
41	124	bod roviny Gauss	1	78.016	17.999	0.228		0.000
42	127	bod roviny Gauss	1	78.003	28.026	0.305		0.000
43	130	bod roviny Gauss	1	78.011	38.009	0.325		0.000
44	133	bod roviny Gauss	1	78.008	48.060	0.351		0.000
45	136	bod roviny Gauss	1	78.006	58.014	0.339		0.000
46	139	bod roviny Gauss	1	78.018	68.019	0.336		0.000
47	142	bod roviny Gauss	1	78.007	78.009	0.290		0.000
48	145	bod roviny Gauss	1	78.018	88.001	0.233		0.000
2	148	rovinost zkouska Gauss	48	0.000	0.000	0.119		0.285
				90:11:34	90:00:25	0:11:35		
2	149	rovinost zkouska Rovinnost			0.050	0.285	0.285	0.235  -->>

## Rovinnost vzorku 6 před navařováním



Horská 3, 128 00, Praha 2, tel.: +420221990900, fax.: +420221990999

### Protokol z měření na SMS Mitutoyo Crysta-Plus M 544

Jméno dílu

mereni karel simecek

28.05.2015 11:46

El. No.	Line No	Element	Pnt. Ref.	X-Coord. X-Angle Nominal	Y-Coord. Y-Angle Up/Lo	Z-Coord. Z-Angle Actual	Diameter Dist./Ang. Dev./Error	Variance
1	3	Rovina Gauss	4	0.004	-0.057	124.949		0.003
				89:59:53	90:01:35	0:01:35		
1	3	Přímka Gauss	3	-0.221	251.265	0.000	251.265	0.030
				0:03:02	89:56:58	90:00:00		
2	3	Přímka Gauss	3	259.229	-0.077	0.000	259.229	0.008
				89:58:59	0:01:01	90:00:00		
1000	3	Dummy Element		259.303	251.265	0.000		
1	4	bod roviny Gauss	1	28.020	88.023	0.007		0.000
2	7	bod roviny Gauss	1	28.017	78.016	0.010		0.000
3	10	bod roviny Gauss	1	28.001	68.033	0.009		0.000
4	13	bod roviny Gauss	1	28.031	58.087	0.005		0.000
5	16	bod roviny Gauss	1	28.021	48.039	0.003		0.000
6	19	bod roviny Gauss	1	28.012	38.031	0.008		0.000
7	22	bod roviny Gauss	1	28.005	28.048	0.005		0.000
8	25	bod roviny Gauss	1	28.034	18.099	0.007		0.000
9	28	bod roviny Gauss	1	38.020	18.012	0.007		0.000
10	31	bod roviny Gauss	1	38.034	28.021	0.008		0.000
11	34	bod roviny Gauss	1	38.038	37.999	0.002		0.000
12	37	bod roviny Gauss	1	38.027	48.004	-0.031		0.000
13	40	bod roviny Gauss	1	38.031	58.020	-0.027		0.000
14	43	bod roviny Gauss	1	38.044	68.019	0.007		0.000
15	46	bod roviny Gauss	1	38.046	78.021	0.010		0.000
16	49	bod roviny Gauss	1	38.014	88.028	0.009		0.000
17	52	bod roviny Gauss	1	48.014	88.017	0.011		0.000
18	55	bod roviny Gauss	1	48.004	78.005	0.010		0.000
19	58	bod roviny Gauss	1	48.024	68.029	-0.024		0.000
20	61	bod roviny Gauss	1	48.012	58.030	-0.031		0.000
21	64	bod roviny Gauss	1	48.006	48.031	0.000		0.000
22	67	bod roviny Gauss	1	48.004	38.015	-0.026		0.000
23	70	bod roviny Gauss	1	48.032	28.013	0.008		0.000
24	73	bod roviny Gauss	1	48.026	18.012	0.011		0.000
25	76	bod roviny Gauss	1	58.055	18.004	0.009		0.000
26	79	bod roviny Gauss	1	58.015	28.013	0.010		0.000
27	82	bod roviny Gauss	1	58.017	38.014	-0.025		0.000
28	85	bod roviny Gauss	1	58.036	48.021	-0.028		0.000
29	88	bod roviny Gauss	1	58.042	58.017	-0.027		0.000
30	91	bod roviny Gauss	1	58.049	68.024	-0.017		0.000
31	94	bod roviny Gauss	1	58.063	78.008	0.006		0.000
32	97	bod roviny Gauss	1	58.021	88.016	0.006		0.000
33	100	bod roviny Gauss	1	68.010	88.009	0.009		0.000

**Protokol z měření na SMS Mitutoyo Crysta-Plus M 544**

El. No.	Line No	Element	Pnt. Ref.	X-Coord. Nominal	Y-Coord. Up/Lo	Z-Coord. Actual	Diameter Dist./Ang. Dev./Error	Variance
34	103	bod roviny Gauss	1	67.993	78.015	0.008		0.000
35	106	bod roviny Gauss	1	68.011	68.019	0.007		0.000
36	109	bod roviny Gauss	1	67.998	58.008	-0.016		0.000
37	112	bod roviny Gauss	1	68.014	47.999	-0.021		0.000
38	115	bod roviny Gauss	1	68.015	38.012	0.007		0.000
39	118	bod roviny Gauss	1	67.999	28.021	0.007		0.000
40	121	bod roviny Gauss	1	68.023	18.023	0.009		0.000
41	124	bod roviny Gauss	1	78.026	18.032	0.009		0.000
42	127	bod roviny Gauss	1	78.035	28.096	0.010		0.000
43	130	bod roviny Gauss	1	78.049	38.030	0.005		0.000
44	133	bod roviny Gauss	1	78.030	48.020	0.009		0.000
45	136	bod roviny Gauss	1	78.034	58.017	0.008		0.000
46	139	bod roviny Gauss	1	78.045	68.026	0.008		0.000
47	142	bod roviny Gauss	1	78.055	78.046	0.011		0.000
48	145	bod roviny Gauss	1	78.019	88.017	0.007		0.000
2	148	rovinost zkouska Gauss	48	0.000	0.000	-0.003		0.043
				89:59:51	89:59:58	179:59:51		
2	149	rovinost zkouska Rovinnost			0.050	0.043	0.043	*****_

## Rovinnost vzorku 6 po navařování



Horská 3, 128 00, Praha 2, tel.: +420221990900, fax.: +420221990999

### Protokol z měření na SMS Mitutoyo Crysta-Plus M 544

Jméno dílu

mereni karel simecek

04.06.2015 13:01

El. No.	Line No	Element	Pnt. Ref.	X-Coord. X-Angle Nominal	Y-Coord. Y-Angle Up/Lo	Z-Coord. Z-Angle Actual	Diameter Dist./Ang. Dev./Error	Variance
1	3	Rovina Gauss	4	-0.015	-0.061	124.870		0.005
				90:00:25	90:01:40	0:01:43		
1	3	Přímka Gauss	3	-0.100	267.915	0.000	267.915	0.006
				0:01:17	89:58:43	90:00:00		
2	3	Přímka Gauss	3	256.868	-0.045	0.000	256.868	0.006
				89:59:24	0:00:36	90:00:00		
100	3	Dummy Element		256.915	267.915	0.000		
1	4	bod roviny Gauss	1	28.021	88.016	0.024		0.000
2	7	bod roviny Gauss	1	28.018	78.009	0.028		0.000
3	10	bod roviny Gauss	1	28.010	68.010	0.031		0.000
4	13	bod roviny Gauss	1	28.009	58.020	0.028		0.000
5	16	bod roviny Gauss	1	28.006	48.007	0.028		0.000
6	19	bod roviny Gauss	1	28.011	38.018	0.031		0.000
7	22	bod roviny Gauss	1	28.007	28.013	0.026		0.000
8	25	bod roviny Gauss	1	28.019	18.022	0.027		0.000
9	28	bod roviny Gauss	1	38.030	18.009	0.032		0.000
10	31	bod roviny Gauss	1	38.014	27.999	0.036		0.000
11	34	bod roviny Gauss	1	38.018	38.019	0.034		0.000
12	37	bod roviny Gauss	1	38.020	48.001	0.000		0.000
13	40	bod roviny Gauss	1	38.005	57.999	0.003		0.000
14	43	bod roviny Gauss	1	38.010	68.015	0.038		0.000
15	46	bod roviny Gauss	1	38.012	78.001	0.037		0.000
16	49	bod roviny Gauss	1	38.015	88.010	0.032		0.000
17	52	bod roviny Gauss	1	48.015	88.010	0.037		0.000
18	55	bod roviny Gauss	1	48.012	78.014	0.040		0.000
19	58	bod roviny Gauss	1	48.004	68.014	0.008		0.000
20	61	bod roviny Gauss	1	48.017	58.015	0.003		0.000
21	64	bod roviny Gauss	1	48.013	48.018	0.034		0.000
22	67	bod roviny Gauss	1	48.009	38.011	0.007		0.000
23	70	bod roviny Gauss	1	48.005	27.994	0.039		0.000
24	73	bod roviny Gauss	1	48.016	18.018	0.038		0.000
25	76	bod roviny Gauss	1	58.025	18.012	0.033		0.000
26	79	bod roviny Gauss	1	58.007	28.005	0.040		0.000
27	82	bod roviny Gauss	1	58.012	38.007	0.006		0.000
28	85	bod roviny Gauss	1	58.020	48.007	0.005		0.000
29	88	bod roviny Gauss	1	58.020	58.018	0.007		0.000
30	91	bod roviny Gauss	1	58.023	68.025	0.017		0.000
31	94	bod roviny Gauss	1	58.027	78.004	0.037		0.000
32	97	bod roviny Gauss	1	58.037	88.011	0.034		0.000
33	100	bod roviny Gauss	1	68.040	88.010	0.031		0.000



Horská 3, 128 00, Praha 2, tel.: +420221990900, fax.: +420221990999

**Protokol z měření na SMS Mitutoyo Crysta-Plus M 544**

El. No.	Line No	Element	Pnt. Ref.	X-Coord. Nominal	Y-Coord. Up/Lo	Z-Coord. Actual	Diameter Dist./Ang. Dev./Error	Variance
34	103	bod roviny Gauss	1	68.018	78.021	0.034		0.000
35	106	bod roviny Gauss	1	68.020	68.018	0.035		0.000
36	109	bod roviny Gauss	1	68.014	58.013	0.013		0.000
37	112	bod roviny Gauss	1	68.008	48.004	0.007		0.000
38	115	bod roviny Gauss	1	68.008	38.002	0.033		0.000
39	118	bod roviny Gauss	1	68.000	28.022	0.032		0.000
40	121	bod roviny Gauss	1	68.011	18.014	0.030		0.000
41	124	bod roviny Gauss	1	78.020	18.008	0.024		0.000
42	127	bod roviny Gauss	1	78.024	28.006	0.027		0.000
43	130	bod roviny Gauss	1	78.024	38.017	0.024		0.000
44	133	bod roviny Gauss	1	78.033	48.014	0.029		0.000
45	136	bod roviny Gauss	1	78.035	58.006	0.029		0.000
46	139	bod roviny Gauss	1	78.019	68.029	0.028		0.000
47	142	bod roviny Gauss	1	78.018	78.028	0.029		0.000
48	145	bod roviny Gauss	1	78.024	88.016	0.022		0.000
2	148	rovinost zkouska Gauss	48	0.000	0.000	0.027		0.041
				89:59:55	90:00:02	0:00:05		
2	149	rovinost zkouska Rovinnost			0.050	0.041	0.041	*****_