

Measurement report

2000m course in Sillamäe

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2000m course in Sillamäe

The course is located near the bay on a sidewalk road. The tool used for measuring distance is called „Jones Counter“. Devices used for measuring height: Trimble R8 and Trimble TSC7. The course can be seen in extras 1 and 2.

Calibration course

Calibration course is located on Gagarin street. The calibration line was marked down using 50m steel tape and screws. Plan for the calibration course can be seen in extra 3.

Sillamäe calibration course steel taping data sheet

Measurement and calculations

Table 1. First measurement

	Distance per tape length (m)	Distance per tape length (m)	Distance per tape length (m)	Distance per tape length (m)	Distance per tape length (m)	Distance per tape length (m)	Distance per tape length (m)	Measured distance (m)
1x	28.060	42.975	41.555	40.785	39.830	42.825	43.420	279.450

Table 2. Secon measurement

	Distance per tape length (m)	Distance per tape length (m)	Distance per tape length (m)	Distance per tape length (m)	Distance per tape length (m)	Distance per tape length (m)	Distance per tape length (m)	Measured distance (m)
1x	43.420	42.825	39.825	40.780	41.550	42.970	28.060	279,430

Average raw(uncorrected) measurement of course: 279.440

Temperature correction

Formula: $1 + [0,0000116 \times (\text{outside temperature}-20)]$

Correction factor: $1 + [0,0000116 \times (5-20)] = 0.999826$

Length after the correction: $279.440 \times 0.999826 = 279.391$

Bicycle calibration data sheet in Sillamäe

Table 3. Calibration before measuring the course

Ride	Start	Finish	Difference		
1	381300	384616	3316	Average count	3315.75
2	384600	387916	3316	Start time	11.00
3	387900	391215	3315	Finish time	11.30
4	391200	394516	3316	Temperature	5
Working constant		11867.777	1.001	=	11879.645

Table 4. Calibration after measuring the course

Ride	Start	Finish	Difference		
1	448000	451315	3315	Average count	3315,75
2	451000	454316	3316	Start time	16.00
3	454000	457316	3316	Finish time	16.30
4	457000	460316	3316	Temperature	5
Working constant		11867.777	1.001	=	11879.645

Constant for the day*	11879.645	Counts/km	1count=	0,08417760	m
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Course measuring data sheet for 2000m track in Sillamäe

Table 5. Measurement data

Measured point	Counts recorded	Lap(s)	Distance from last point		Cummulative distance in metres
			Intermediate counts	Intermediate distance in metres	
Start/Finish	400000	1			
After the arc	400386	1	386	32,493	32,493
Before the arc	423353	1	22967	1933,307	1965,799
Start/finish	423761	1	408	34,344	2000,144
Desired length for the course	2000	m	Measured length of the course after corrections	2000,14	m

Table 6. Measurement data 2

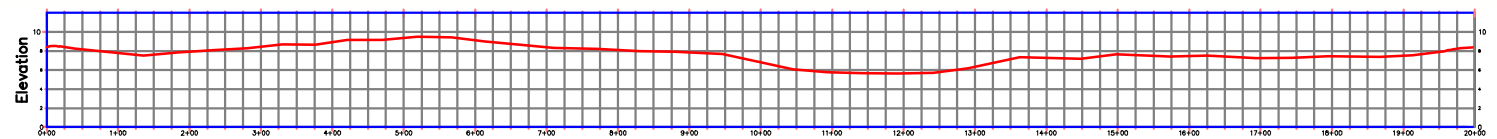
Measured point	Counts recorded	Lap(s)	Distance from last point		Cummulative distance in metres
			Intermediate counts	Intermediate distance in metres	
Start/Finish	424000	1			
After the arc	424386	1	386	32,493	32,493
Before the arc	447355	1	22969	1933,475	1965,968
Start/finish	447763	1	408	34,344	2000,312
Desired length for the course	2000	m	Measured length of the course after corrections	2000,312	m

Extra 1



— Trajectory of the 2000m track

Landscape of the track



Extra 2



- Trajectory of the 2000m track
- Axis of the road

Notes:

- Track runs on the outer side of the axis at this arc in order to achieve desired length
- Start and Finish of this track does not have to be in this exact spot and can be moved since the track is circular

Extra 3



— Calibration course