

Cycle Time Log

Sample document with complete example values. It shows the report the purchased export produces for YOUR input - it is not itself a report for any part.

Project: Sample project

Part/Position: no real part

Prepared by: Sample, not released

Total cycle time of the sequence: 1.9 s over 3 blocks (2 travel blocks, 1 pauses).

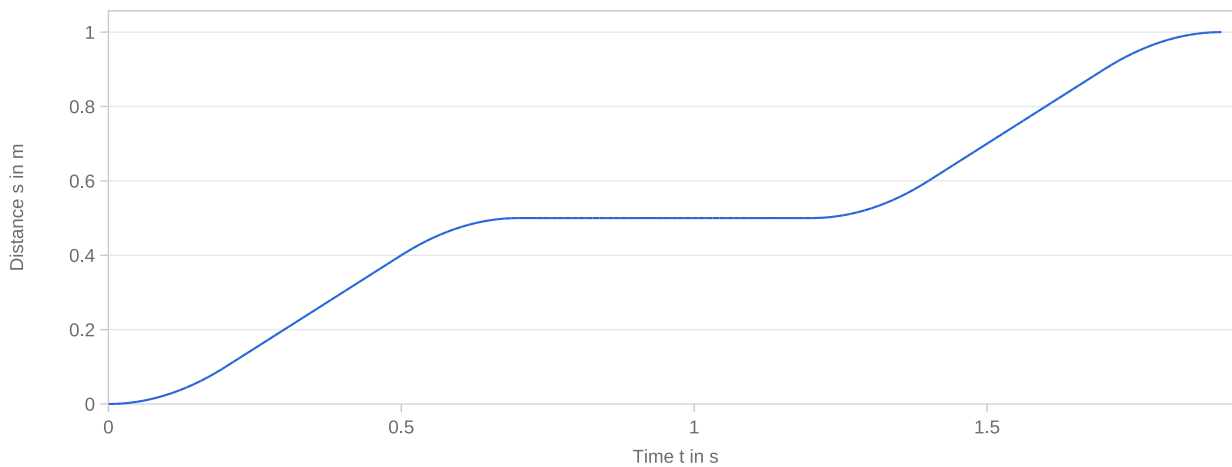
Sequence

Total cycle time	1.9 s
Sum of travel-block times	1.4 s
Sum of pauses	0.5 s
Total travel distance	1 m
Highest peak velocity	1 m/s
Number of blocks	3

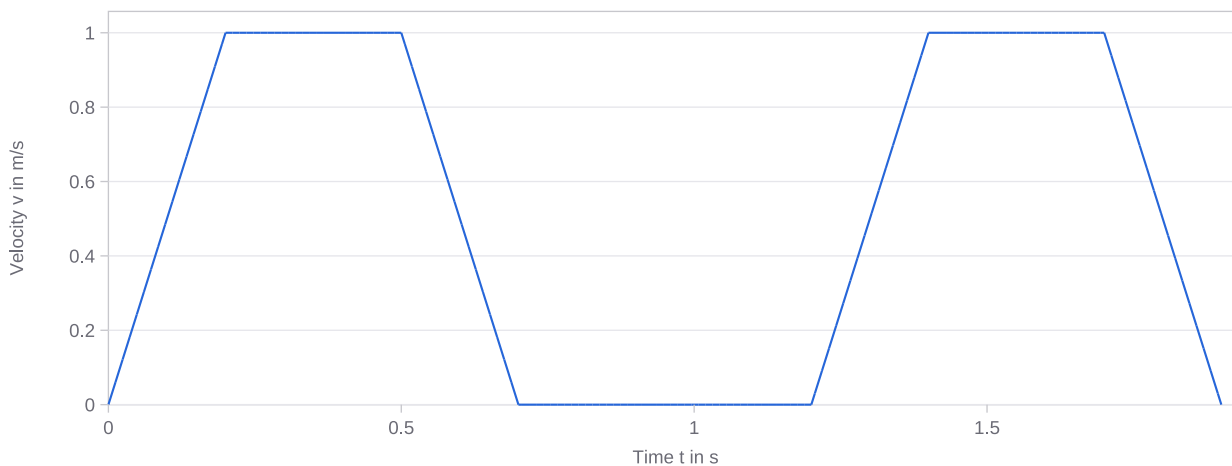
Blocks

No.	Type	s [m]	v_peak [m/s]	Profile	t [s]
1	Travel (Trapezoidal)	0.5	1	Trapezoidal	0.7
2	Pause	-	-	-	0.5
3	Travel (Trapezoidal)	0.5	1	Trapezoidal	0.7

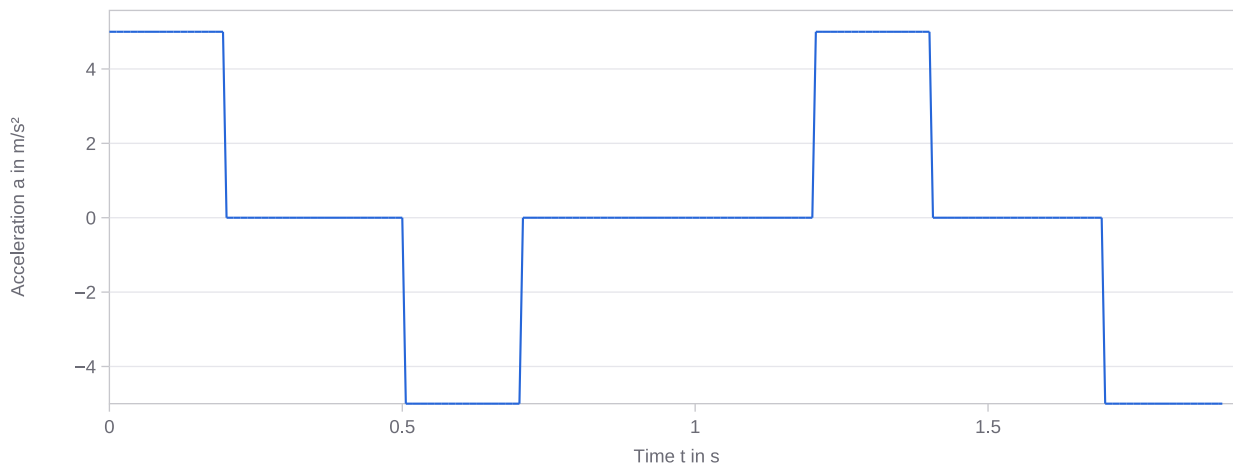
Distance profile over the sequence



Velocity profile over the sequence



Acceleration profile over the sequence



Calculation basis

For each travel block, the limit distance $s_{\text{lim}} = v_{\text{max}}^2/a$ determines whether the axis reaches v_{max} . For $s \geq s_{\text{lim}}$, the trapezoidal profile results, with $t = v_{\text{max}}/a + s/v_{\text{max}}$; otherwise the triangular profile applies, with $v_{\text{peak}} = \sqrt{s \cdot a}$ and $t = 2 \cdot \sqrt{s/a}$. The S-curve profile extends each acceleration ramp approximately by the jerk time a/j ($t_{\text{S}} = t_{\text{base}} + 2 \cdot a/j$). The total cycle time is the sum of all travel-block times and pauses; the chart view arranges all blocks consecutively on a common time axis, with pauses shown as $v = 0$.

About this sample

All values on these pages come from a freely chosen example calculation and belong to no real part. The purchased export contains the same sections with your input, your header data (project, part, prepared by) and as searchable text. Pricing and scope: maschinenbaurechner.de/en/pricing

Note: The results are design and orientation aids. They do not replace independent verification, calculation and approval by a qualified person. The terms of use at maschinenbaurechner.de apply.