Takt and cycle time study — HB-200 hinge bracket

All records

CAPSULEM8
CM8-286 · Takt & Cycle Time Analyser
August 9, 2026

TAKT TIME
60.0 s
900 units/day over 2 shifts · 450 min available each

BOTTLENECK STEP
Op 30 weld
62.0 s mean · 2.0 s over takt

STEPS OVER TAKT
1 of 4
this step cannot hold the customer rate on its own

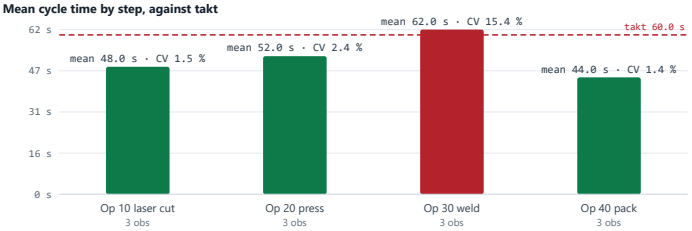
LEAST REPEATABLE STEP
Op 30 weld
CV 15.4 % — above your 15 % threshold

OBSERVATIONS RECORDED
13
1 excluded as abnormal · 4 steps

TOTAL LINE CYCLE
206.0 s
3.43 × takt — at least 4 balanced stations to hold the rate

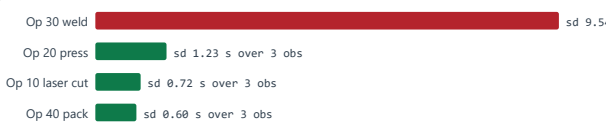
13 of 13 record(s) included. All records. Amounts in USD.

Mean cycle time by step, against takt



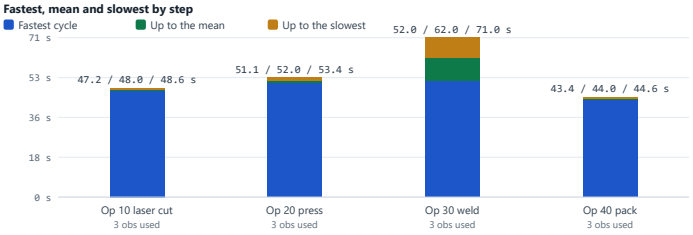
Mean of the non-excluded readings for each step. A bar above the takt line is a step that will fall behind demand however hard anybody works; a bar far below it is spare capacity, not a saving. Mean of the non-excluded readings for each step. A bar above the takt line is a step that will fall behind demand however hard anybody works; a bar far below it is spare capacity, not a saving.

Variation by step



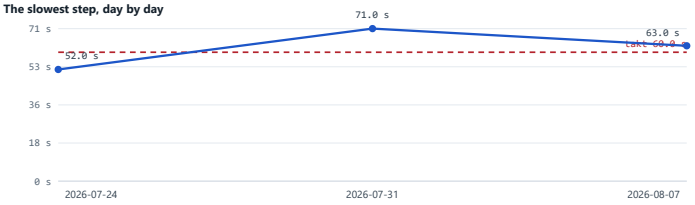
CV is the standard deviation as a percentage of the mean, so steps of different lengths can be compared directly. Red means the step is above your threshold: fix the variation before you try to balance the line against it. CV is the standard deviation as a percentage of the mean, so steps of different lengths can be compared directly. Red means the step is above your threshold: fix the variation before you try to balance the line against it.

Fastest, mean and slowest by step



The bottom block is the fastest cycle recorded, the next reaches the mean and the top reaches the slowest. A tall band is an unrepeatable step; a short one is a step you could write a standard for today. The bottom block is the fastest cycle recorded, the next reaches the mean and the top reaches the slowest. A tall band is an unrepeatable step; a short one is a step you could write a standard for today.

The slowest step, day by day



One point per date, so a step that is quietly getting slower shows up before anyone feels it. Points from a single reading move a long way on their own — read the shape, not the wobble. One point per date, so a step that is quietly getting slower shows up before anyone feels it. Points from a single reading move a long way on their own — read the shape, not the wobble.

Cycle time study

PROCESS STEP	OBS USED	EXCLUDED	MIN	MEAN	MEDIAN	MAX	SD	CV %	VS TAKT	VERDICT
Op 10 laser cut	3	–	47.2	48.0	48.2	48.6	0.72	1.5	−12.0 s	Under takt
Op 20 press	3	–	51.1	52.0	51.5	53.4	1.23	2.4	−8.0 s	Under takt
Op 30 weld	3	1	52.0	62.0	63.0	71.0	9.54	15.4	+2.0 s	Over takt
Op 40 pack	3	–	43.4	44.0	44.0	44.6	0.60	1.4	−16.0 s	Under takt
Line total (sum of step means)				**206.0**					**3.43 × takt**	**needs 4 balanced stations**

Observations

PROCESS STEP	STATION	OBS #	TIME (S)	DATE	CONDITIONS	EXCLUDED	NOTES
Op 10 laser cut	Laser cell 1	1	48.6	2026-07-24	First-off		First cycle after start-up; the sheet was loaded from the…
Op 10 laser cut	Laser cell 1	2	47.2	2026-07-31	Normal		—
Op 10 laser cut	Laser cell 1	3	48.2	2026-08-07	Normal		—
Op 20 press	Press 4	1	51.5	2026-07-24	Normal		—
Op 20 press	Press 4	2	53.4	2026-07-31	Normal		Operator reached twice for the locating gauge — it is not…
Op 20 press	Press 4	3	51.1	2026-08-07	Normal		—
Op 30 weld	Weld booth 2	1	52.0	2026-07-24	Normal		Experienced welder, jig already loaded when the cycle sta…
Op 30 weld	Weld booth 2	2	71.0	2026-07-31	New operator		Second week on the booth. Kept the method, simply slower …
Op 30 weld	Weld booth 2	3	89.0	2026-08-07	Machine	✓	Wire feed stalled mid-seam; the welder cleared it and com…
Op 30 weld	Weld booth 2	4	63.0	2026-08-07	Normal		Re-timed straight after the feed fault was cleared.
Op 40 pack	Pack bench	1	43.4	2026-07-24	Normal		—
Op 40 pack	Pack bench	2	44.6	2026-07-31	Normal		Carton blank had to be folded before the part could go in…
Op 40 pack	Pack bench	3	44.0	2026-08-07	Normal		—

Timed observations

PRODUCT	STEP	STATION	OBS #	TIME	DATE	OBSERVER	CONDITIONS	ABNORMAL	EXCLUDED
HB-200 hinge bracket	Op 10 laser cut	Laser cell 1	1	48.60	2026-07-24	M. Okafor	First-off	No	–
HB-200 hinge bracket	Op 10 laser cut	Laser cell 1	2	47.20	2026-07-31	M. Okafor	Normal	No	–
HB-200 hinge bracket	Op 10 laser cut	Laser cell 1	3	48.20	2026-08-07	S. Lindqvist	Normal	No	–
HB-200 hinge bracket	Op 20 press	Press 4	1	51.50	2026-07-24	M. Okafor	Normal	No	–
HB-200 hinge bracket	Op 20 press	Press 4	2	53.40	2026-07-31	M. Okafor	Normal	No	–
HB-200 hinge bracket	Op 20 press	Press 4	3	51.10	2026-08-07	S. Lindqvist	Normal	No	–
HB-200 hinge bracket	Op 30 weld	Weld booth 2	1	52.00	2026-07-24	M. Okafor	Normal	No	–
HB-200 hinge bracket	Op 30 weld	Weld booth 2	2	71.00	2026-07-31	M. Okafor	New operator	No	–
HB-200 hinge bracket	Op 30 weld	Weld booth 2	3	89.00	2026-08-07	S. Lindqvist	Machine	Yes	Excluded
HB-200 hinge bracket	Op 30 weld	Weld booth 2	4	63.00	2026-08-07	S. Lindqvist	Normal	No	–
HB-200 hinge bracket	Op 40 pack	Pack bench	1	43.40	2026-07-24	M. Okafor	Normal	No	–
HB-200 hinge bracket	Op 40 pack	Pack bench	2	44.60	2026-07-31	M. Okafor	Normal	No	–
HB-200 hinge bracket	Op 40 pack	Pack bench	3	44.00	2026-08-07	S. Lindqvist	Normal	No	–

Notes

Sample study — three cycles per step over three days, which is enough to see the shape of the process and nowhere near enough to set a standard from. Replace every reading with your own before relying on anything here.

> Three observations describe a tendency, not a process. Every mean, median and standard deviation here is computed from the readings you entered, and a handful of cycles taken on one shift, from one operator, on one batch of material will not represent normal running. Time more cycles before you set a standard, and re-time after any change to the method, the tooling,

the material or the layout — an old time study quietly becomes a work of fiction. The takt figure is only as sound as the available time and the demand you put into the settings. This is a calculation and record-keeping aid, not industrial engineering advice, and it makes no judgement about whether a pace is safe or sustainable for the people working it.