What would a 30% reduction in cycle time mean to your shop?

Learn more at www.HURCO.com/UltiMotion

› Download the case study digest to read about real world results.

› Watch the webinar given by Hurco’s Paul Gray, Ph.D., that covers all the cool science stuff behind our patented motion system.

› See video comparing parts cut with and without UltiMotion.

While we’re known for inventing CNC technology that reduces setup and programming time, our newest invention reduces cycle time and also improves surface finish quality. Customers who use UltiMotion are reporting cycle time reductions of 30-40%...and it’s only available from Hurco because we invented it.
What is UltiMotion?
- UltiMotion is an entirely new way to approach motion planning.
- It is an advanced software system that determines the optimal trajectory and feed rate to run the tool.
- Cornering velocity is 2.5 times faster than conventional motion.
- Machine jerk is reduced by 50%
- Traditional look-ahead is dynamic and optimized instead of fixed.

How long did it take Hurco to invent it?
Six years.

Can I get UltiMotion on other machines?
No, Hurco invented it, so it is only available on Hurco mills.

What are the benefits?
Reduced cycle time up to 30% (or more depending on the part).
Better surface finish quality.

Which machines can run UltiMotion?
All Hurco Mills that run WinMax version 8 or later. UltiMotion is standard on all "I" series mills.

What kind of parts benefit the most from UltiMotion?
- Complex parts benefit the most.
- Parts that require:
  - complex 3-axis and 5-axis contouring
  - pocketing
  - high-speed machining
  - drilling
  - a lot of tapping
  - the spindle to change directions frequently

What parts benefit less from UltiMotion?
- Simple parts with simple geometry.
- Programs that have slow feed rates.
- For example, 1 inch/minute in standard motion will be the same with UltiMotion, but you’ll see a big difference if your feed rate is 1000 inches/minute.
- UltiMotion will interpolate the corners smoothly while standard motion will stutter and pause in tight corners.
- Programs that don’t require the mill to change direction often.

Does UltiMotion require new hardware?
No, any machine that can run WinMax version 8 or later can have UltiMotion added to it with no hardware changes.

Does UltiMotion affect graphics speed?
No. The graphics system is not part of the motion system.

My CAM already has smoothing. How can UltiMotion help me?
UltiMotion improves upon even excellent CAM output. UltiMotion is a tighter, smoother, control system that can dramatically improve cycle times and surface finish through better handling of the machine mechanics and dynamics.

Will UltiMotion change my tool paths?
No. UltiMotion optimizes the machine motion.

Do I need to change my programs or post processor?
No.

Do I need training?
No training is required to use UltiMotion.

Will my older programs work with UltiMotion?
Yes.

Does UltiMotion work for Conversational Programs?
Yes. UltiMotion runs identically for NC and Conversational.

Does UltiMotion work for 5-axis machining?
Yes, in fact, UltiMotion can provide exceptional improvement in cycle time and surface finish for simultaneous 5-axis.

How many shops use UltiMotion?
UltiMotion has been deployed on more than 200 machines worldwide.

How do I maximize the performance of UltiMotion?
Don’t over-think feed rates. UltiMotion will more consistently achieve desired feed rates than standard motion.

Should I ever turn off UltiMotion?
No. UltiMotion is superior to Standard Motion in every way.