



# UM SAFE-FIX

Optimisation models | Complete tooling programmes | Customised tools | Tool maintenance | Tool management systems | Training and education

## TOOLING THAT CUTS YOUR COSTS



### Customer

The Danish window manufacturer VELUX A/S contacted KYOCERA UNIMERCO because they were looking for a new tooling system capable of improving their tenoning process.

### Task and requirements

- The surface quality of the tenons should be of high quality.
- In order to increase the output from the window production, the wood parts are processed closely placed side-by-side in the double-end tenoner.
- This way of processing requires tools with controlled and optimised chip flow.

### Before

- Before, VELUX used normal HSS brazed tooling in order to obtain optimum surface quality of the tenoned parts.

- In each series, VELUX processed 13,000 wood parts with the HSS tooling.
- However, they felt that the cost of using HSS tools has increased and become too high.

### After

- KYOCERA UNIMERCO manufactured and supplied the newest generation of the UM Safe-Fix System with optimised geometries and controlled chip flow together with the best possible placement of and cutting angles on the spurs.
- With this tool solution, VELUX can produce 45,000 wood parts in a very good quality.

### Conclusion

- In general, VELUX remains very satisfied with their UM Safe-Fix System and uses the system in several factories around the world.

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