

# Ergonomic unloading of processing machines

How QuickMOVE efficiently decouples bending cells and reduces work paths



## Challenges and initial situation

In production with multiple bending cells, the main challenge was to make loading and unloading the machines ergonomic, efficient, and adaptable to different variants. Employees should be able to load and unload at a fixed workstation without having to walk long distances or adhere to rigid cycle times.

The following requirements also had to be taken into account:

- Packaging at the same location as loading of the system
- Reduction of walking distances & creation of time for secondary activities such as inspections
- Low-threshold investment despite high variety
- Handling of up to 48 different component variants
- Loading and unloading of the processing cell exclusively by the robot

Originally, interchangeable parts were planned for the fixtures in order to accommodate the wide variety of variants. However, as the project progressed, it became apparent that these could be completely avoided through clever design and position-oriented insertion of the parts into the transport units.

## The Solution

The implementation was carried out using a QuickMOVE overhead conveyor, which was installed directly on the machining cell. The transport units are loaded horizontally via a cycle belt operated by the machining robot. After completion of the machining step, the components are transported back to the exact same position for removal via the QuickMOVE conveyor.



Image: Installed QuickMOVE equipment @customer site

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The track is identical in length and position to the loading side, allowing employees to unload ergonomically without changing their workplace. This design allows them to work completely independently of cycle times and to flexibly combine their activities with testing or secondary tasks.

The system is designed as a cycle-end system and has been used successfully in identical systems for years. The desired increase in efficiency has been achieved sustainably, with low maintenance requirements. The system requires only an annual inspection and does not require any complex additional equipment.



Image: QuickMOVE drive unit and flex fixtures

The system offers additional expansion potential. By extending the buffer, the decoupling between employees and machines can be further increased. In the future, it will also be possible to integrate loading into the system so that QuickMOVE can operate in carousel mode, enabling further savings to be realized in the overall process.

## Contact

Please feel free to contact us and we will provide you with a personal consultation:



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