

## Technical Information 404

### Workpiece pallet (WT) quick-positioning system

## ZBV-PosiFix



### Advantages of ZBV-PosiFix

- WT-change time depending on WT-size  $\leq 0.5$  s
- Positioning-/repetition accuracy  $\pm 0.05$  mm
- Vertical force load:  $\leq 1000$  N  
On request - higher loads possible
- WT-bottom remains free for processing purposes
- Variable intermediate strokes possible
- Expandable for marketable WT-pallet systems

# ZBV - PosiFix

When assembling and/or processing workpieces by WT-pallet systems in most cases cycle time problems appear due to the relatively long time needed for the workpiece pallet change of these systems. Depending on the size of workpiece pallet usually the workpiece pallet change takes place in > 2.5 seconds.

Very often the unpleasant consequence of these "dead times" is the waiting of the processing stations of the machine for the change of the workpiece pallets, which has to be carried out - with renewed positioning and adjustment. Hereby valuable cycle time is lost permanently.

A clear reduction of the workpiece pallet change time offers the WT-quick change system (positioning system) **ZBV-PosiFix**.

The rule of thumb:

**workpiece pallet change  
in ≤ 0.5 seconds.**

This system developed by ZBV enables to all marketable workpiece pallet systems a workpiece pallet change from one processing station to the next within only 0.5 seconds or less. This time specification applies to different workpiece pallet sizes up to 320 mm when having routes of transportation up to 600 mm and a WT-total weight up to 5 kg.

Due to the reciprocally working feed and indexing system no additional time for indexing the workpiece pallets is required.

The WT-quick change system locates in each case the workpiece pallets in the stations with a positioning accuracy of  $\pm 0.05$  mm. The workpiece pallets are located in the stations in X-, Y- and Z-direction, each. The cycle time of the single stations is only dependent on the ready message of the single operation processes plus the extremely shortened workpiece pallet change time.

Complicated processing stations can be equipped consequently with longer operating cycles in order to increase the production security of the total system without reducing

the output.

The feed of the workpiece pallets in the processing cell takes place via servomotor driven transportation module. By this means acceleration and braking are sinusoidally programmable.

The free-floating workpiece pallets provided by a WT-pallet system can be clocked within a standardised, flexible mounting cell through the processing stations at the same time.

Even the parallel taking in of several workpiece pallets for the simultaneous assembly of double-built processing stations is possible.

The force load of the WT in the stations is vertically  $\leq 1000$  N. By the installation of an anvil in the processing stations the WT-load carrying ability can be increased arbitrarily.

The good accessibility of the workpiece pallets underneath the conveyor section permits a processing of the workpieces

from the bottom.

The system is set up in a modular manner. It can be applied to all imaginable layout variations. A return of the workpiece pallets beyond the processing level is also as possible as a removing to clock-independent working places with suitable buffering sections.

The WT-quick change system **ZBV-PosiFix** can be also integrated into existing WT-pallet systems in order to achieve cycle time improvement.

ZBV-AUTOMATION offers the system **ZBV-PosiFix** as optional extension to the already existing flexible and modular mounting cell **ZBV-CORAcell**®.

On the basis of this modular design complex large-scale installations can be realised within a short delivery time.

The system gives you the possibility to get a high output in the production by decoupling suggestively clocked mounting ranges via free-floating inter-mediate distances from each other.

