

Heavy Duty Brakes Assembly & Test Line

This semiautomatic system was developed to increase significantly the flexibility for production of product variants. Standardized ATW solutions were implemented to improve availability, MTBF, maintainability and accessibility.

- Non-synchronous system with highest process capability and reliability
- Overall system availability > 97 %

System Overview

- The line consists of 19 assembly and inline test solutions
- Transfer through the line is accomplished by a heavy duty chain driven conveyor system
- 30 multifunctional heavy duty tronion pallets are used for maximum load of approx. 350 kg each
- PC controlled work order management
- 50 different brakes can be assembled using high flexible parametric system



System Values & Benefits

- Turnkey assembly & test system with flexibility for part complexity
- Statistic analysis of faults using process data base
- Upgradeable system for increased throughput

System Highlights

- Multifunctional work piece carrier, pre-equipped for 4 brake sizes, change over by simple turning of the central shaft. Flexibility for various sizes utilizing quick change adapters
- Highly robust heavy weight system for carrier weight up to 350 kg
- Wide range of product dimensions (up to 25")
- Flexible greasing systems for automatic change over
- Torque / angle controlled screw processes up to 500 Nm, variable automatical positioning
- Several of ATW standard 3-axis drive modules
- All parts feeding central from the rear (automatic side) to the front manual operation side
- System designed for easy upgrading in terms of automatization and cycle time reduction
- System controls and design allows for lot size 1 with automatic change over
- Additional colour coding on the brake surface to visualize passed processes
- Automatic part tracking through the line
- Documentation and storage of all process data for each single brake in a central database with ATW standard software
- High flexible precision measurement systems to ensure full functionality of the product