



# Factory acceptance test according to KRONES spe- cification

FAT (Factory Acceptance Test)  
KRONES packers and palletisers



## Table of Contents

---

<b>1</b>	<b>Definition of factory acceptance test</b>	<b>3</b>
<b>2</b>	<b>Requirements and basic conditions</b>	<b>4</b>
<b>3</b>	<b>Sequence of the factory acceptance test</b>	<b>5</b>
<b>4</b>	<b>Test content</b>	<b>6</b>
	4.1 Static test	6
	4.2 Dynamic test	6
<b>5</b>	<b>How to handle deviations from the factory acceptance test specification</b>	<b>7</b>

---

# 1 Definition of factory acceptance test

A factory acceptance test is the acceptance of a product at the manufacturer's location. The factory acceptance test is conducted jointly by the purchaser and contractor, or their authorised representatives.

The acceptance test includes the following procedures:

- The machine or line is checked to ensure all its components are complete. For machines with stand-alone machine guards, the guards are not installed during the FAT. The test is based on the machine order document and, where appropriate, other changes agreed after the signing of the contract, if incorporated into the contract.
- In addition, a functional test is carried out as far as possible due to the machine design. The functional test determines if all of the agreed functions are provided and the final equipment result conforms to the specified requirements. This is particularly important in order to detect damage occurred during transit and final assembly for example.
- The aim is to verify that the machine has been assembled correctly in accordance with the specifications and works properly.
- Alternatively, the purchaser may, at his own discretion, accept the machine in spite of the defects identified.

## 2 Requirements and basic conditions

### Purchaser and contractor

The purchaser defines the equipment to be tested in the test run at set-up speed when awarding the contract.

As a rule, the set-up speed does not correspond to the rated speed as no recirculation is intended.

The contractor specifies the quantity and quality of the test material required for the test run and requests the material from the purchaser in good time prior to testing. The purchaser is responsible for assuring the timely delivery of the material to the contractor. If the test material is not delivered on schedule, there is a chance that the FAT will not be performed.

### Basic conditions

- The elements of the individual machine to be included in the factory acceptance test must be defined. For a standard FAT, no container feeds are installed in the packer for non-returnables in front of the machine and shrinking tunnel. No top discharge will be installed for the Pressant Universal 1A-0143 sweep-off depalletiser. For palletisers with a top feed, this is provided at ground level. These components are only delivered onto the installation site and installed there.
- In the standard scope of delivery, a complete set of equipment is subjected to the acceptance test, which can be defined by the customer if the test run material is provided for this purpose. If the customer has not made an appropriate selection, reference equipment is used for acceptance. If necessary, the contractor reserves the right to use substitute material.
- A change-over to another type can be carried out if this is possible on the first day. If the time required for the processes requested by the customer exceeds one day, all days from the second day onwards are subject to a charge.
- The factory acceptance test normally starts at 08:00 a.m. and ends at 04:00 p.m. Deviations from this time schedule are possible based on an individual arrangement and in compliance with working time legislation.
- Photography inside the assembly hall is only allowed if the contractor agrees to it.
- The purchaser is generally entitled to access the machine's risk assessment. On request, the risk assessment can be provided in German. To enable this, notification of any such request must be made in writing two weeks before the scheduled FAT date at the latest.

### 3 Sequence of the factory acceptance test

- Inspection of the machine with a brief induction into its method of operation.
- Joint inspection and assessment of the test material (containers, packs and other customer objects) with regard to processability and possible manufacturing faults which might influence the test result.
- Check that the scope of delivery agreed in this contract is complete, considering the installed scope.
- Checking of all components against the contractual specifications.
- Checking of the protective devices.
- Test run of the machine without production.
- Test run of the machine with production at set-up speed.
- Equipment change-over for machines with several equipment variants, provided this is possible in one day.
- Proof of function through short test runs, if these have been agreed for further equipment.
- In the factory acceptance tests, each day must end with a final daily review meeting during which the test points covered are summarised.
- After testing all of the agreed equipment variants, a final review meeting is held. The factory acceptance test (FAT) ends with a mutual agreement (customer/supplier) that the machine can be delivered to the operating company. This means that no critical defects/faults were identified during machine testing and that any defects have been documented in the acceptance test report.



## 4 Test content

### 4.1 Static test

- Check that the machine design complies with the order document, e.g. machine size, pitch, running direction, layout configuration, and dimensions.
- Check that the scope of supply agreed in the contract is complete.
- Checking of the components against the contractual specifications such as manufacturers of purchased parts or special requirements (special customer requests) regarding the design of mechanical or electrical components.
- Checking of the machine's safety devices. Guard door switches, light curtains, EMERGENCY STOP switches, etc. and marking of peril points. Electronic safety components are installed provisionally.

\*For further tests, see the "Dynamic test" test item.

### 4.2 Dynamic test

- Machine test run without production at nominal speed, simulation of machine malfunctions, alarms and resetting/acknowledging the alarm.
- Test run of the machine with production in set-up speed and simulation of an EMERGENCY STOP with subsequent restart. The possible duration is limited by the circumstances of the test set-up. Without special measures resulting in additional costs, these are approx. 2 layers at the palletiser, 6 packs in the packer for non-returnables and approximately one block length in the packer for non-returnables.
- Joint assessment of the result in terms of machine function and quality.

## 5 How to handle deviations from the factory acceptance test specification

- Deviations from the scheduled test sequence or the scope of testing are only permitted with the consent of both parties.
- The FAT does not include functional testing of the secondary machinery provided by the customer.
- Equipment faults due to the test material not conforming to the specifications are not subject to assessment. It is generally permissible for the machine manufacturer to furnish proof of such faults by performing test runs with proper test material.
- Requested changes to the contractually specified scope of supply shall not result in the failure of the FAT. In such a case, the supplier reserves the right to check what additional costs would be incurred for the purchaser and to stipulate the time of the change would be made according to the effort and expense involved. The execution of the agreed requested changes shall take place exclusively on the installation site.
- A non-critical deviation in the quality of the created packs away from the agreed limit values shall not result in a failure of the FAT. The machine manufacturer must instead verify the agreed limit values during the course of the site acceptance test at the customer's location.