

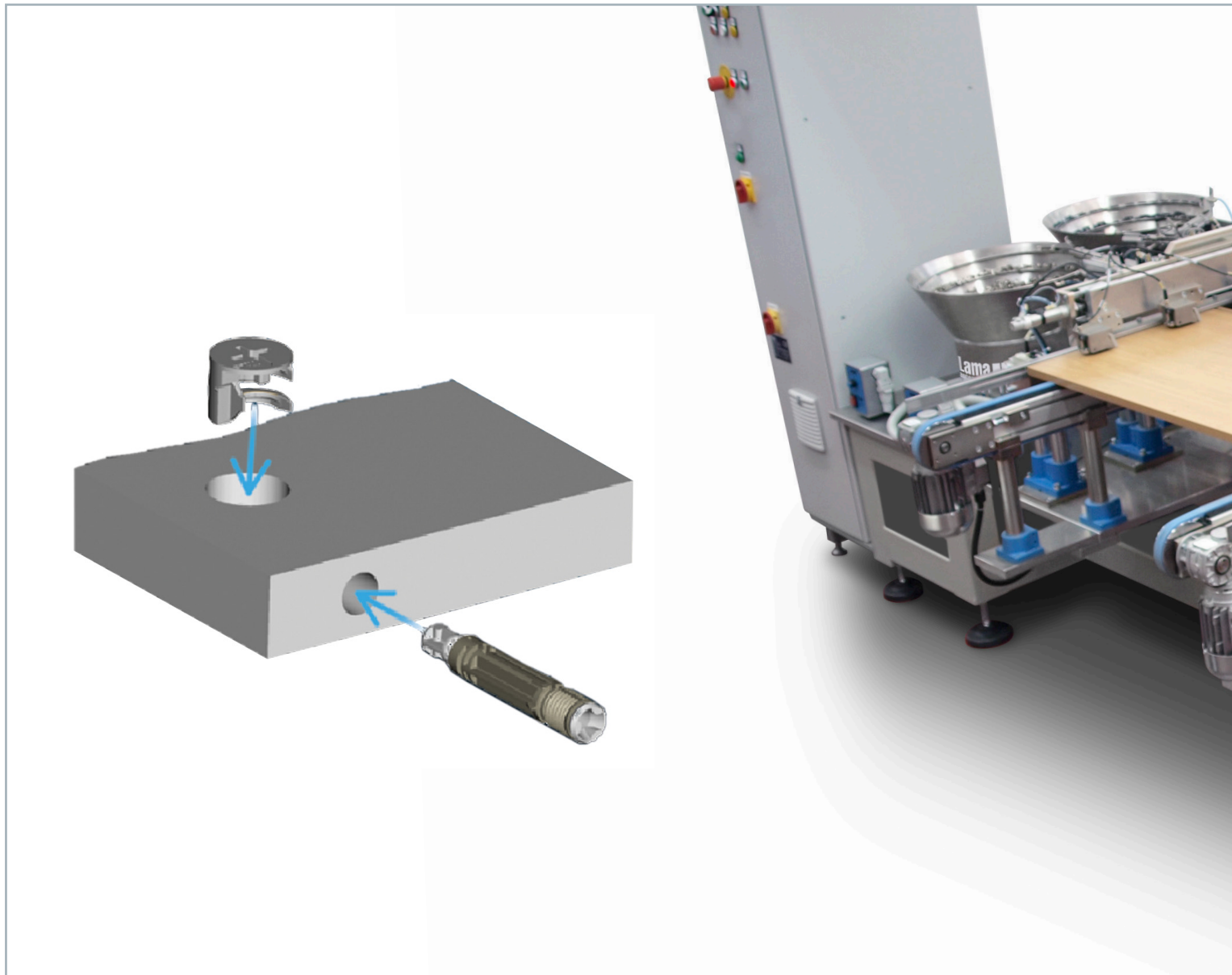


**Titus  
FastFit**

**Lama**  
automation

**2013**

# Complete solution for automated factory insertion of cams and dowels



## 'Totally integrated engineering' solution that reduces cabinet assembly time by 50%

- Increased furniture user satisfaction
- Quick and easy home furniture assembly
- Lower risk of customer claims

## Easy to adopt

- Works with standard furniture boards
- Stand alone or integrated into existing production processes
- Works with various panel sizes

## Secure choice

- Based on proven Titus cam and Quickfit TL dowel solution
- Cabinet structural strength as with standard connectors
- Years of experience in machine building from Lama Automation

# Titus FastFit Technology



## Quality

- Integrated quality checks for consistent product quality
- Robust machine construction assures life-long reliable functioning
- Cam and dowel stay securely in place due to rocket fins on dowel and cam's retaining pips

## Unique in the market

- Proprietary connectors and insertion machine
- Decades of experience and competence in development, machine building and product manufacturing

## Design support

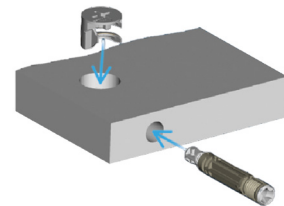
- Engineering support
- Modular machine design allows for easy integration into existing panel processing lines

# Titus FastFit Technology

## Introduction

### Titus FastFit auto insertion solution adds value to furniture and to furniture manufacturing

With Lama FastFit machine for automated insertion of cams and dowels the standard Titus cam and Quickfit TL dowel can be inserted into furniture in the factory.



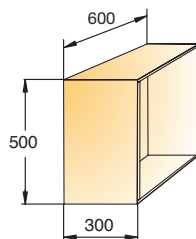
### 50% less time to assemble the cabinet carcass at home

Titus FastFit is a unique solution that reduces the time needed to assemble the cabinet carcass at home by 50%.

- Less parts
- Less types of parts
- Less actions to assemble
- Easy assembly instructions
- Lower risk of mistakes



### Cabinet assembly time comparison



Assembly with 8 pairs of cams and dowels

Cam and dowel combination			
Type of packaging			
Assembly time	150 seconds	100 seconds	50 seconds

Speed time based on in-house tests with medium experienced user.

### Perfect for the RTA market

- Fits the expected high-volume furniture manufacturing throughput rates
- Easier construction
- Fewer delays on site
- Shorter lead times: cabinet can be stored in a distribution centre and assembled when needed

**CAF** Quick & Easy  
Consumer Assembly Friendliness

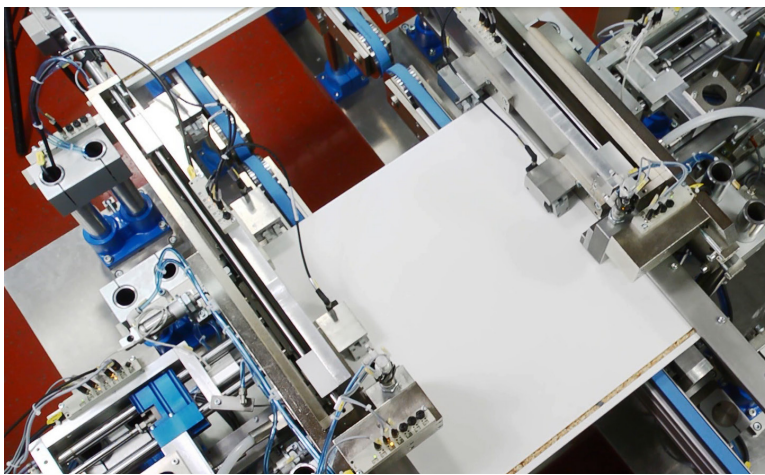
# Titus FastFit Technology Product guide

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## Lama FastFit machine

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### Equipment for auto insertion of cams and dowels



- Can be integrated into the existing panel processing lines or used on a stand alone basis
- Precise auto insertion of cams and dowels
- Works with standard furniture boards of different dimensions
- Modular design

## Titus cam and Quickfit TL dowel

8

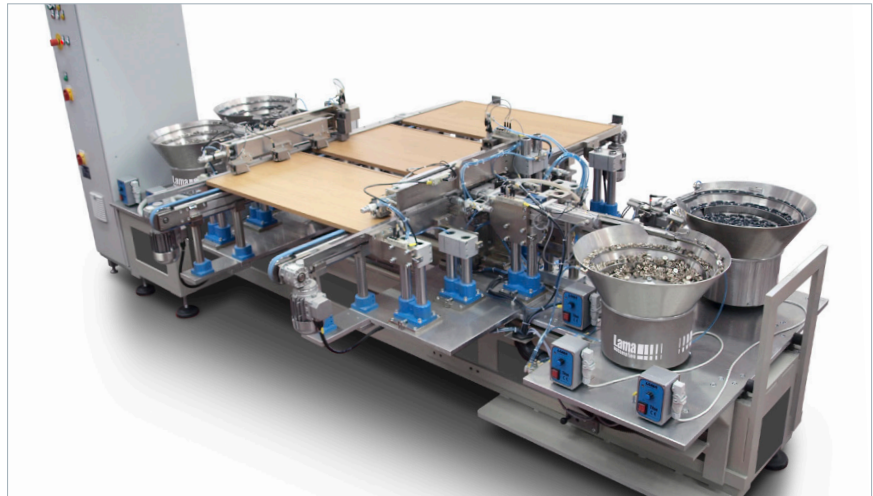
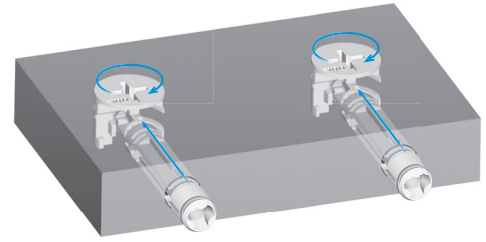


- Quickfit TL dowel is the only dowel on the market allowing for factory insertion
- Proven and worldwide accessible solution
- Securely positioned in holes



# Lama FastFit machine

For factory insertion of cams and dowels



## Technical data

- Footprint 3840 x 2816, height 2300/1500
- Electricity supply 400V 3 phase, 25A, rated power 10kW
- Compressed air supply 1/2", 6 bar, cca 30m<sup>3</sup>/h

## Modular construction

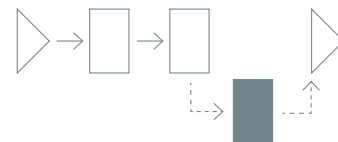
Lama FastFit machine for automatic insertion of components into furniture boards is of standard modular construction.

It is highly flexible and can be tailored to specific customer needs in terms of type and number of connectors to be inserted, panel sizes and throughput rates.

## Flexibility of throughput rates

The equipment can be used on a stand alone basis or fully integrated into the production process

**Stand alone** machine works as a single unit independent of the main panel process line. This module can insert varying number of fittings in the same panel.



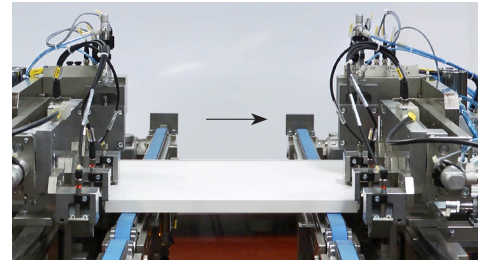
**Integrated** module works in multiple machine groups, each module inserting a single pair of fittings, and as a consequence achieves higher panel throughput speeds.



- Adapts to the manufacturers required speeds
- Uses standard furniture boards
- Uses standard Titus cam and Quickfit TL dowel
- Flexible in terms of number of connectors to be inserted
- Decades of experience in automated assembly machine building

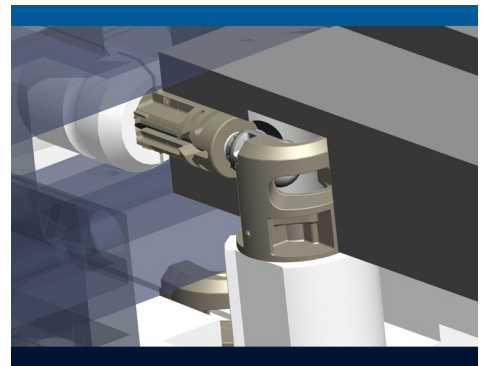
### Works on various panel sizes

Horizontally sliding table allows for quick and easy adjustment to different panel sizes approx. from 260mm to 1000mm



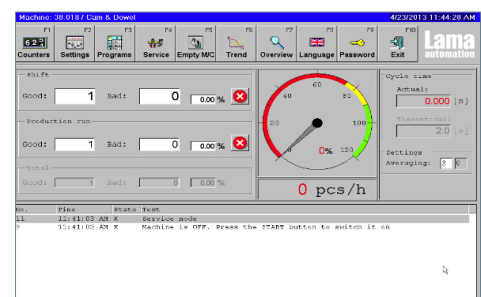
### Precise auto-insertion of cam and dowel

- Correct and precise cam and dowel alignment with holes
- Precise insertion with the possibility to overcome drilling inconsistencies in the range of  $-0.5/+0.5$ mm out of tolerances
- Easy feeding and delivery of components



### Process programming and monitoring

- Highly intuitive and user friendly
- Error history
- Display of alarm messages
- Interface language can be adapted to customer's request
- Online service enables remote maintenance, diagnostic and program errors' solving.



### Designed and built by Lama Automation

Decades of experience in automated assembly machine building.

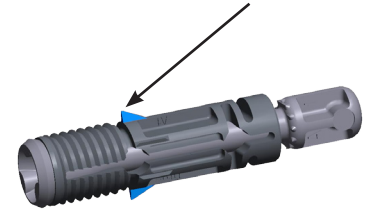
Our team of engineers provide support during all stages of process development and manufacturing in order to ensure that products are

engineered to maximize productivity, lower the manufacturing costs and shorten the time to market.

# Titus cam and Quickfit TL dowel

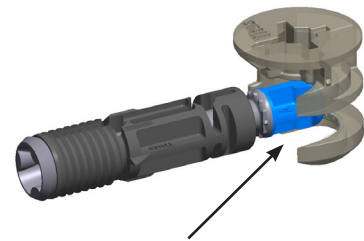
## Rocket fins on dowel

Rocket fins on Titus Quickfit TL dowel assures precise insertion depth and allows the dowel to stay securely in place prior to assembly.



## Dowel head form

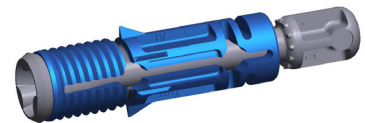
Dowel head form acts as a positive stop and ensures correct insertion depth. It provides tolerances of  $-1/+1$ mm on drilling operation ensuring the final result is a perfectly precise and aligned joint.



## Expanding plastic body

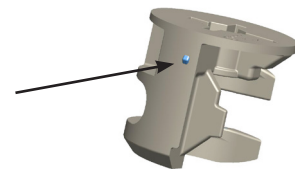
The plastic dowel body has a built-in self adjustment feature taking up any variations of drilling tolerances.

It enables stability and fixed dowel position in the hole during transport and manipulation.



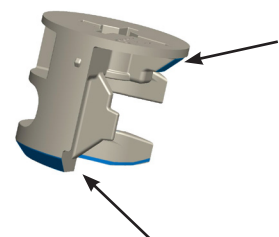
## Cam retaining pips

Cam retaining pips facilitate factory insertion and ensure that cam is held in panel position prior to assembly.



## Chamfer on cam

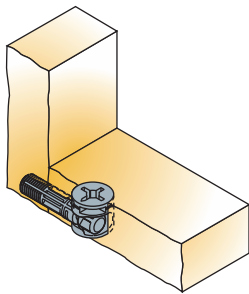
- Allows the cam to be guided into the hole during machine insertion
- Provides  $-0.5/+0.5$ mm tolerances on drilling operation
- Ensures cam positioning
- Smooth insertion preserves the chipboard quality from damages



For more information see catalogue Furniture Fittings System, chapter Connectors

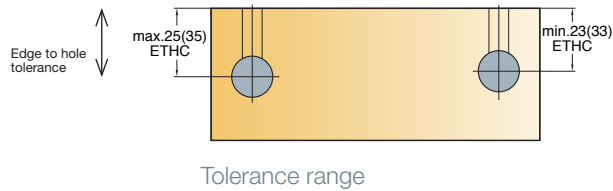
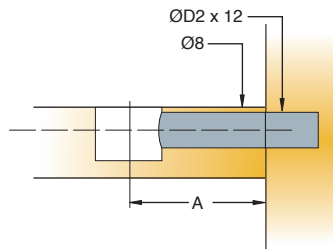


- Proven connector solution
- Quickfit TL dowel is the only dowel on the market allowing for factory insertion
- Worldwide accessibility



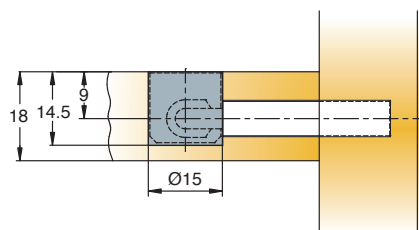
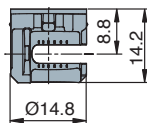
Technical and mounting details

Quickfit-TL2



2000 Pcs  
1000 Pcs (05474) Made of zinc, plastic

Cam3000

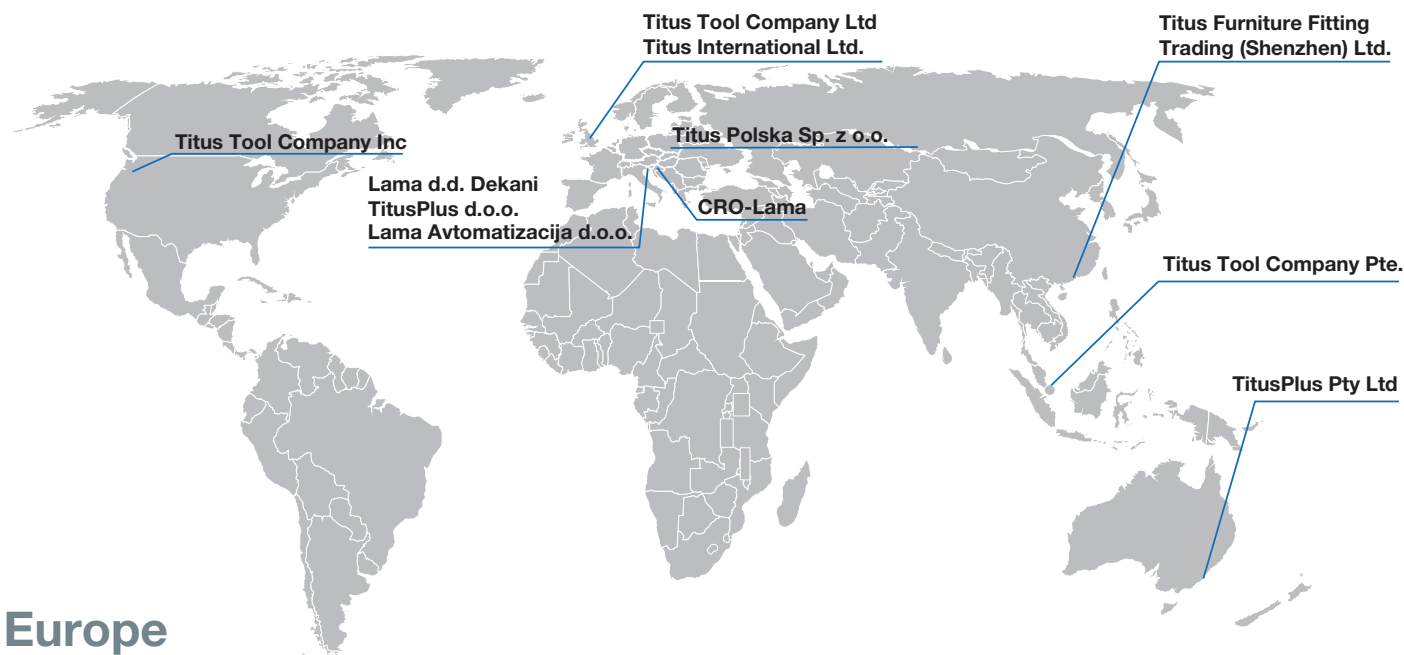


1000 Pcs Made of zinc

A	D2	Item number	Nickel plated	Dark grey
24	5	05453 →		880
34	5	05503 →		880
24	8	05441 →		880
34	8	05474 →		880
		009632 →		847

# Global player

## Worldwide design, manufacturing and distribution capabilities



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