

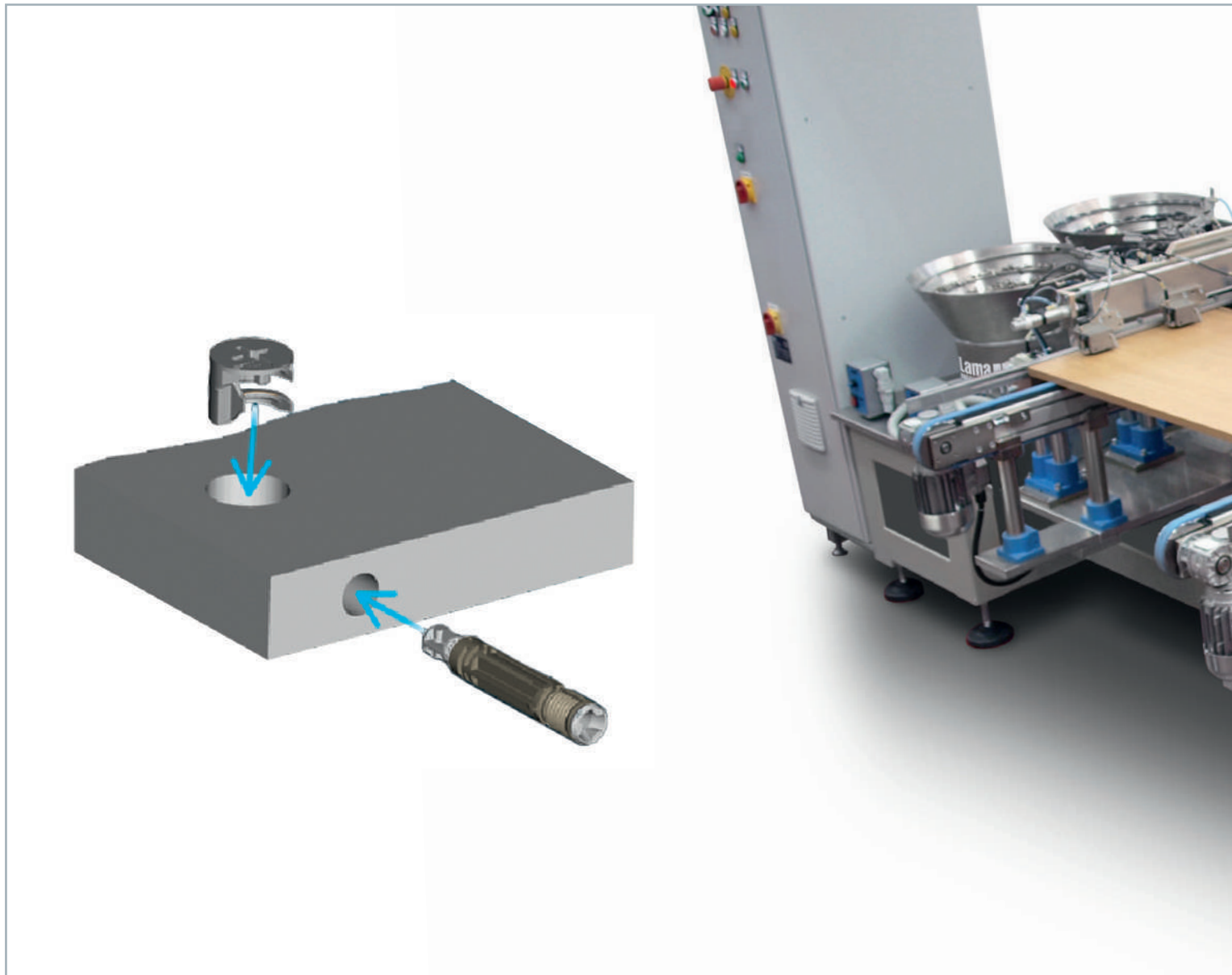


Lama
automation

Titus FastFit

2014

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 and fittings

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 function
- Cams and dowels stay securely in place due to integral design features on the part

Unique in the market

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

Design support

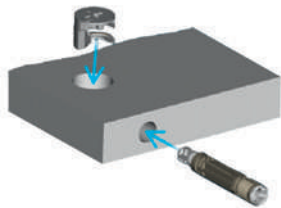
- Engineering support
- Modular machine design allows for easy integration into existing panel processing lines

Titus FastFit Technology

Introduction

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

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



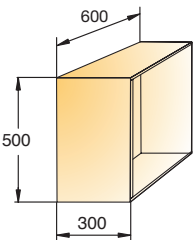
50% less time to assemble the cabinet carcass at home

Titus FastFit system 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

- Suits 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

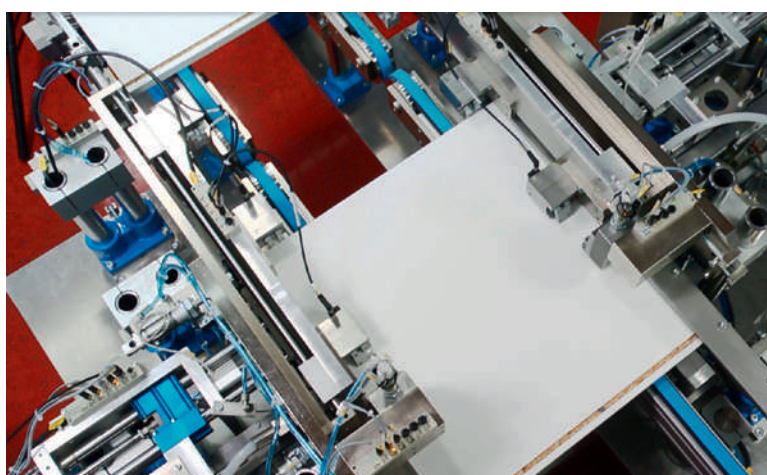
Product guide

page

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

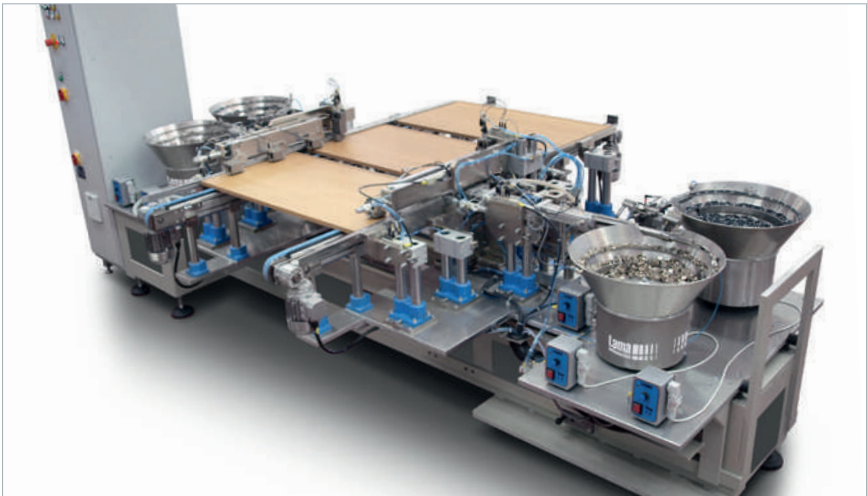
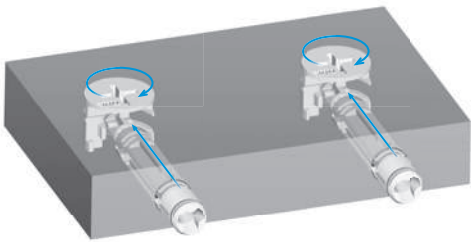
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- Quickfit TL dowel is the only dowel on the market allowing for factory insertion
- Proven and worldwide accessible solution
- Securely positioned in holes

Lama FastFit machine

For factory insertion of cams and dowels



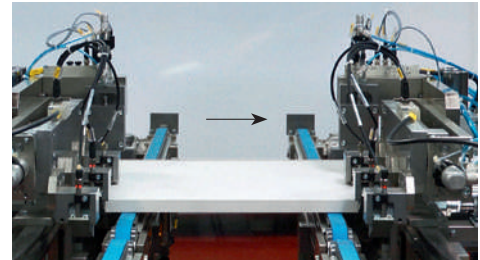
Technical data	<ul style="list-style-type: none"> · Footprint · Electricity supply · Compressed air supply 	3840 x 2816, height 2300/1500 400V 3 phase, 25A, rated power 10kW ½", 6 bar, cca 30m³/h
Modular construction	Lama FastFit machine for automatic insertion of components into furniture boards is of standard modular construction.	It is 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	<div data-bbox="679 1774 1053 1921"> <p>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.</p> </div> <div data-bbox="679 1952 1016 2123"> <p>Integrated module works in multiple machine groups, each module inserting a single pair of fittings, and as a consequence achieves higher panel throughput speeds.</p> </div>
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- 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

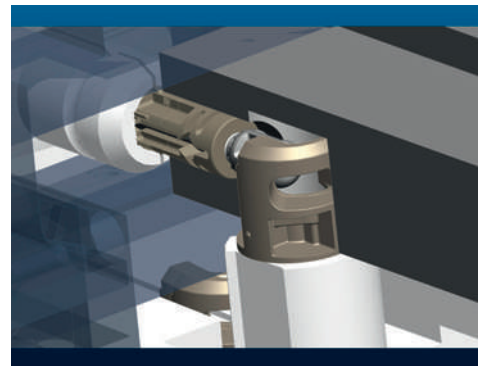
Works on various panel sizes

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



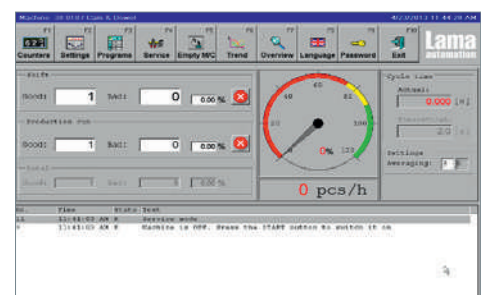
Precise auto-insertion of cam and dowel

- 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.

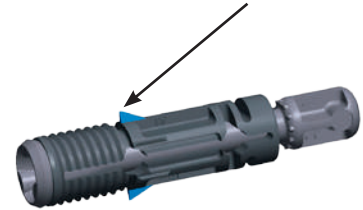
Our team of engineers provide support during all stages of process development and manufacturing in order to ensure that products are

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

Titus cam and Quickfit TL dowel

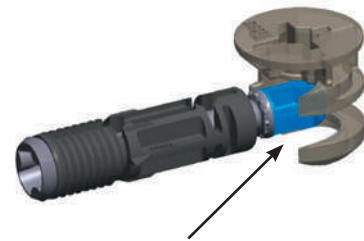
Rocket fins on dowel

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 $-1/+1\text{mm}$ 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.



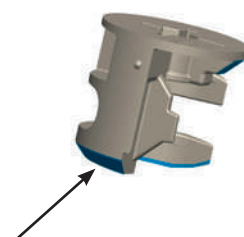
Cam retaining pips

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



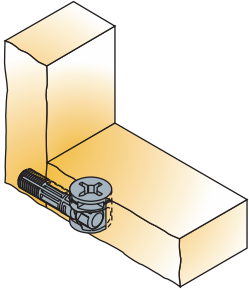



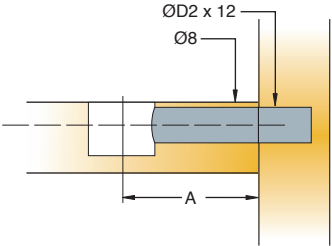
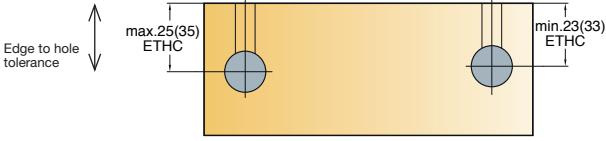

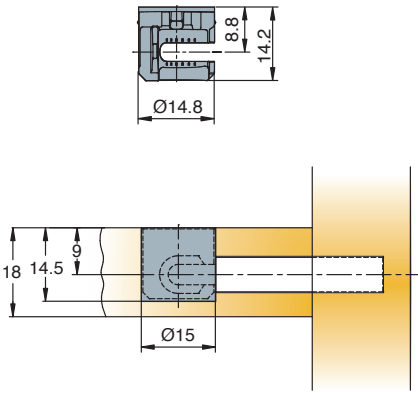
Chamfer on cam

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



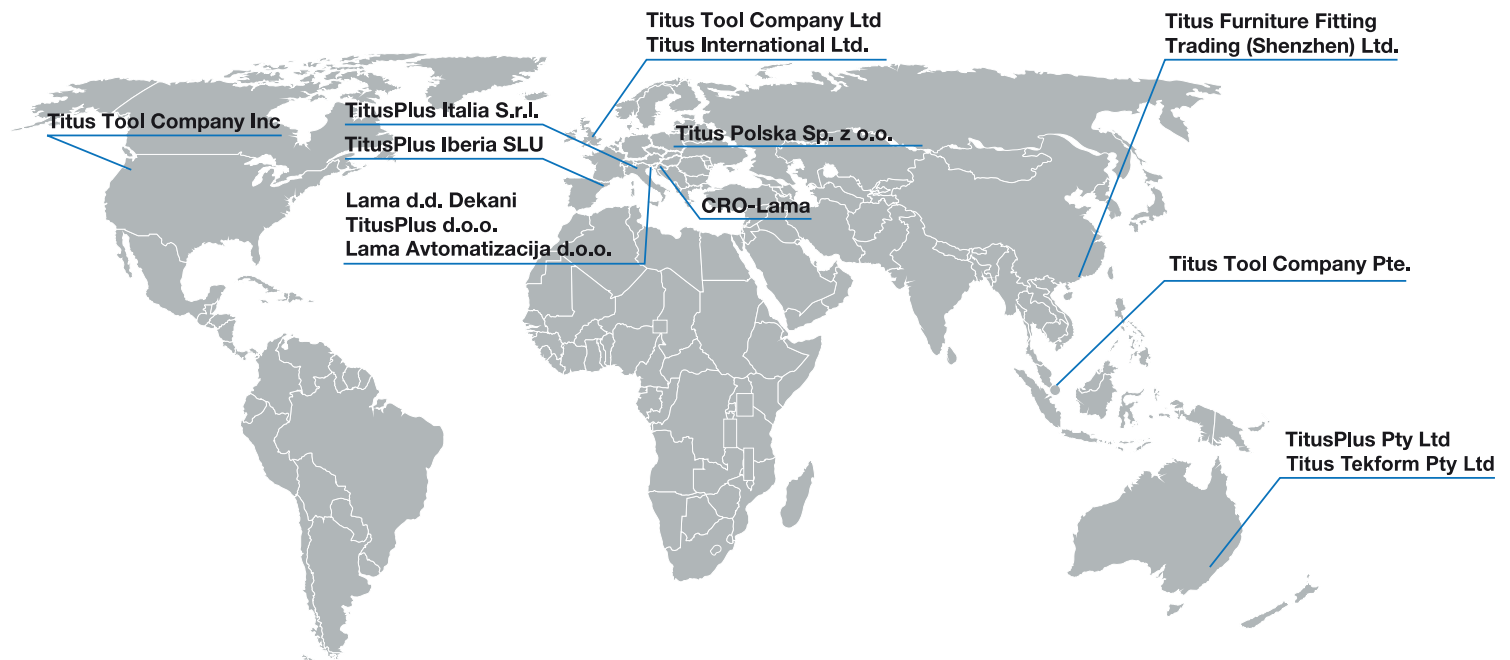
For more information see catalogue Furniture Fittings System, chapter Connectors

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

<div>  <div>Technical and mounting details</div> </div>		A	D2		
		Drilling distance	Drilling diameter for dowel thread	Item number	<div>   </div> <div>Nickel platedDark grey</div>
<div> <div>Quickfit-TL2</div>    <div> <div> <div>2000 Pcs</div> <div>1000 Pcs (05474)</div> </div> <div>Made of zinc, plastic</div> </div> </div>		24	5	05453 →	880
		34	5	05503 →	880
		24	8	05441 →	880
		34	8	05474 →	880
<div> <div>Cam3000</div>   <div> <div>1000 Pcs</div> <div>Made of zinc</div> </div> </div>				09633 →	847

Global player

Worldwide design, manufacturing and distribution capabilities



Europe

Titus Technologies
Lama Avtomatizacija d.o.o.
Dekani 5
SI-6271 Dekani
Slovenia
+386 5 66 90 432
+386 5 66 90 431 Fax

TitusPlus d.o.o.
Dekani 5
SI-6271 Dekani
Slovenia
+386 5 66 90 213
+386 5 66 90 205 Fax

Lama d.d. Dekani
Dekani 5
SI-6271 Dekani
Slovenia
+386 5 66 90 213
+386 5 66 90 205 Fax

Titus Tool Company Ltd.
10 Blackburn Industrial Estate
Enterprise Way
Sherburn in Elmet
LS25 6NA
United Kingdom
+44 1977 682 582
+44 1977 680 481 Fax

CRO-Lama
Rakitska 10a
Rakitje
HR-10437 Bestovje
Croatia
+385 1 3323 033
+385 1 3323 233 Fax

Titus Polska Sp. z o.o.
ul. Stefańskiego 17 A
PL-62-002 Suchy Las/Poznań
Poland
+48 61 811 5402 Phone/Fax
+48 61 811 5684 Phone/Fax
+48 61 821 9362

America

Titus Tool Co. Inc.
800 5th Avenue
Suite 4100
Seattle, WA 98104
USA
800 762 1616 toll free
+1 253 872 2829
+1 253 872 2827 Fax

Australia

TitusPlus Pty Ltd
PO Box 51
Oatley NSW 2223
Australia
+61 2 9016 3958
+61 2 8078 3807 Fax

Titus Tekform Pty Ltd
Unit 1, 41-43 Whyalla Place
Prestons NSW 2170
Australia
+61 2 9286 0007
+61 2 9826 0074 Fax

Asia

Titus Tool Co. Pte. Ltd.
5004 Ang Mo Kio Ave 5
Techplace II #04-01
Singapore 569872
+65 6383 3922
+65 6383 3178 Fax

Titus Furniture Fitting Trading Shenzhen Ltd
80B ShenFu Bao
Building 128
Ronghua Road
Futian Free Trade Zone
Shenzhen
China
Pc 518038
+867 558 348 0916
+867 558 359 2676 Fax

Headquarters

Titus International Ltd
Brook House
54a Cowely Mill Road
Uxbridge, Middlesex
UB8 2QE
United Kingdom
+44 1895 203 730
+44 1895 252 793 Fax

info@titusplus.com
www.titusplus.com

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