

Uflex™

UFLEX

ULTIMATE FLEXIBILITY. SIMPLIFIED AUTOMATION.

The Uflex™ flexible automation platform breaks traditional automation barriers with the ability to easily reconfigure for a wide range of applications. It accommodates an array of different process modules and feeding options to perform virtually any automation task, supporting up to four independent modules.

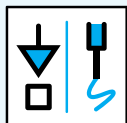
Uflex is the ultimate flexible assembly cell for all forms of odd-form insertion and mechanical assembly operations, alleviating the need for dedicated, hard-tooled systems. Features include:

- Inserts axial, radial and press-fit components
- Easily adapts to new applications/processes
- Small footprint: only 1.0m wide x 1.7m deep
- Supports a combination of up to 4 total pneumatic grippers and/or vacuum grippers/nozzles
- Accommodates large substrates
- Handles a variety of large/heavy components
- Available offline programming

VIDEO



BENEFITS & VALUE



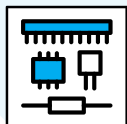
SUPPORTS A VARIETY OF PROCESSES

Pick-and-place, insertion, dispensing, screw driving, labeling, test handling, and more



SUPPORT FOR EXTREME APPLICATIONS

Large substrates up to **630mm x 508mm**; Components up to **127mm x 127mm, 70mm tall** and **450g** in weight



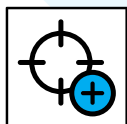
HANDLES MOST COMPONENTS

Versatile tooling supports full range of radial, axial and press-fit components



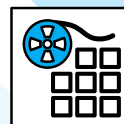
LOW COST PER INSERTION

Can lower the cost per insertion by **>95%** versus manual assembly while substantially improving quality and yield



HIGH INSERTION ACCURACY

100% vision of all leads and features before inserting



SUPPORT FOR A VARIETY OF INPUT TYPES

Portfolio of reliable feeding solutions accommodate a range of components and packaging: tape, tray, tube, track, and bowl

UFLEX VERSATILITY

DISPENSING AUGER



SCREWDRIVER



LASER INSPECTION



LASER HEIGHT SENSING



P&P SERVO THETA



CLINCH



VISION INSPECTION



PRESSURE SENSE



PNEUMATIC GRIPPER



Uflex Specifications

Positioning System	Single-gantry leadscrew
Heads	Supports 1 to 4 heads
Component Picking Method	Supports a combination of up to 4 total pneumatic grippers and vacuum grippers/nozzles
Cameras	1 ULC for components / 1 PEC camera for fiducials
Feeder Inputs	10 (standard), 20 (optional)
Insertion Rate	1.4 seconds/pc ¹
Throughput	2,570 cph
Insertion Success Rate	>99% ²
Insertion Accuracy (Cpk ≥ 1.00)	±50µm
Insertion Repeatability	XY < 8µm
Max Placement Force	10kg (22lb.)
PCB Dimensions	Minimum board width: 150mm (50mm optional) Maximum size: 300mm [W] x 508mm [L] (standard); 630mm [W] x 508mm [L] (option)
PCB Thickness	Bare board 1.2-2.0mm / Carrier ≤10mm
Max Component Size	127mm x 127mm; height: 70mm; weight: 450g
Max Weight of PCB & Carrier	6kg

Notes:

1. Using standard components and nozzles under optimal conditions
2. PWB hole ≥ component PIN diameter 0.6mm

Comprehensive feeder portfolio

Uflex supports a range of robust component input solutions, with many application-specific and specialized feeding options available.

- Stacking tray feeding with optional end-effector component rotation
- Pre-sequencing shuttles with vibration tables for bulk components
- Stacking feeders for thin lead frame/preform components
- Lead forming radial feeders for simple or complex lead bends

