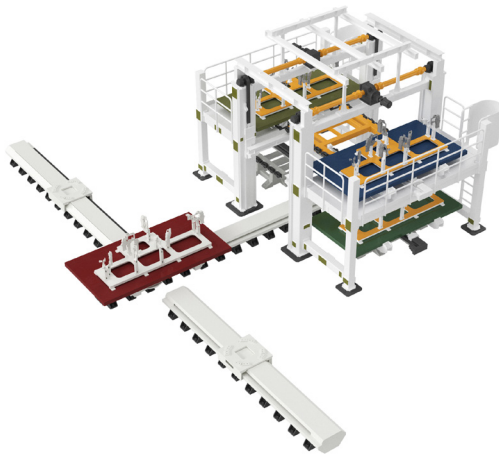


# ModulFlex

## Flexible sub-assemblies



The ABB ModulFlex defined a new era of body-in-white assembly. Designed for multiple model production with fast change-over ensures reuse of hardware and maximizes the return on investment.

### Offering vertical and horizontal storage

The ModulFlex allows different sub-assemblies to be produced in the same station, unlocking the full potential of flexible automation like robotics. This is done by swapping different tooling into the workstation which are held in storage.

### Flexibility in your subassemblies

The ABB ModulFlex is able to store and exchange 6 different tooling jigs. This allows multiple parts to be produced on the same station thus reusing the investment across these parts. It also allows the introduction of future parts onto the same line.

The ModulFlex allows fully random production, without affecting the cycle time of the production line. The result is the production planner has freedom to adjust production levels according to the plant requirement.

### Faster, safer, and more simple

The ABB ModulFlex can be installed on any shop floor without the need of a pit or elevated hardware. All motion is controlled through the ABB Robot controller, the IRC5. The ModulFlex uses the IRC5's advanced coordinated motion and multi-tasking abilities, removing this complexity from the operator and programmer. This makes commissioning and operation of the machine simpler, safer and faster.

### Modular design

The modular concept allows new tooling can be added over time with no effect to the existing production. This allows gradually investment over time as more flexibility can be introduced when needed.

### Standardized and easy to maintain

The ABB ModulFlex replaces custom machines with a reliable robust product. Its standardized design is validated, and uses proven components and technology. Tooling can be repaired offline and maintained in its storage, resulting in higher up-time of the production line. The offer includes full product support, comprehensive documentation, maintenance info, and spare parts information and spare parts.

### Main characteristics

- Up to 6 different sub assembly tools
- Up to 4 robots in each welding station
- Simple programming using IRC5 Robot controller
- Modular design allowing gradual investment
- Manual or robotic loading of parts
- ModulFlex vertical saves up to 35% floor space comparing to ModulFlex horizontal

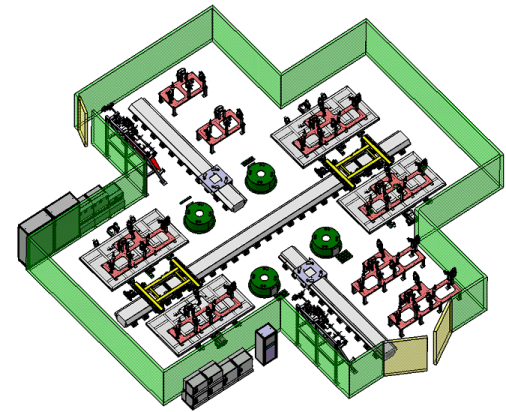
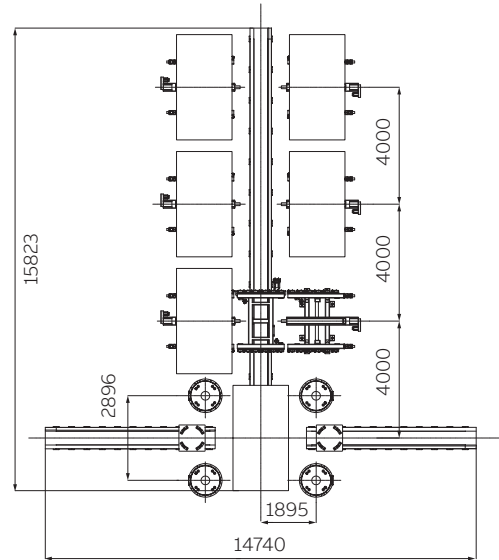
## Specification

### Technical information

Tooling Dimension	2150 x 1900 mm	
	3600 x 1900 mm	
	4000 x 1900 mm	
	4400 x 1900 mm	
Repeatability	+/- 0.25mm (in X, Y or Z direction, with max payload)	
Max Tooling Weight	2950 kg	
Stiffness	0.01mm/daN	
Lifetime	1 million cycles	
Flexibility Capacity	Up to six models (Random)	
Number of robots in the station	4x SW, 2x MH (Typical)	
Options	Fluid, Air and Electric Coupler	
	Horizontal	Vertical
Tooling Plate Change Time (Typical)	12 seconds	14 seconds
Tooling Plate Sorting Time (Typical)	18 seconds	27 seconds (2nd floor storage to 1st floor storage)

Data and dimensions may be changed without notice.

## Data and dimensions



## ModuFlex Vertical, height allowance

