

## FlexPLP - IRPLP220

### Flexible programmable Linear positioner



The FlexPLP - IRPLP220 is a highly modular Programmable Linear Positioner, designed to carry geometry tooling. Its precise motion and highly rigid structure ensures perfect and repeatable positioning of clamping or pin locator's. The result is flexible geometry tooling you can trust.

#### **Dynamic power**

The FlexPLP IRPLP220 integrates a powerful servomotor which allows for a linear axis speed of 200 mm/s and a handling capacity of 220 kg. This payload can be multiplied by the number of units in the station: a group of coordinated FlexPLP can therefore deliver the power needed to swiftly lift heavy workpieces, like a car body.

#### **High geometric accuracy**

The IRPLP220's incredible repeatability of  $\pm 0.025$  mm makes it the ideal positioner for applications that requires high geometric accuracy. Besides, its highly rigid structure ensures stability in all directions, even when external forces are applied. This means that processes like spot welding can be carried on the workpiece without risk of quality deviation.

#### **Unequaled modularity**

This new generation of ABB Flexible Programmable Linear Positioners introduces an innovative standard axis design which can be used as a standalone unit, or in a combination of up to 3 axes, available with various strokes up to 670mm (x), 590 mm (y) and 510 mm (z).

As an option, longer horizontal axes equipped with rack and pinion technology can be jointed to form one linear axis, of which the stroke length is virtually unlimited.

On such axis, it is even possible to mount multiple units with overlapping work area, allowing for even more flexibility in a compact footprint.

#### **Simplified service and programming**

Easier installation and serviceability were identified as a critical aspect in designing the new linear axis. Access to the internal components has therefore been improved, and the external cable tracks allow for customer signals or air supply to be added or serviced within minutes.

The IRPLP220 also offers ease of programming and advanced motion control by using ABB's robot controllers.

#### **Features and benefits**

- Dynamic payload of 220 kg
- Linear axis speed of 200 mm/s
- High repeatability and stiffness
- Modular, compact design
- Improved serviceability
- Built to operate in harsh environment
- ABB user-friendly robot programming and advanced motion control
- Robot Ware Add-In software package available with Soft Calibration and Shim Offset features for easy setting up and commissioning of multiple car model production.

**Specification**

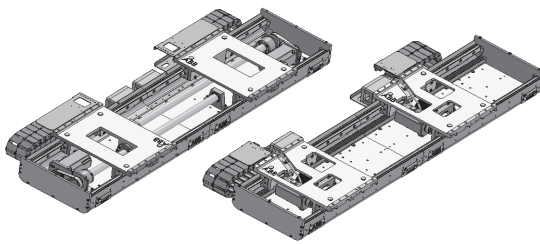
	First horizontal axis (Ball Screw)	First horizontal axis (Rack & Pinion)*	Second horizontal axis	Vertical axis
	190	990	190	190
	270	1150	270	270
Available strokes (mm)	350	1630	350	350
	430	2110	430	430
	510		510	510
	590		590	
	670			

Number of axes\*\* 1 to 3 (X, Y, Z, X+Y, X+Z, X+Y+Z)

\* Rack and pinion drive type for the first horizontal axis can have up to 2110 mm stroke for a single carriage, and can be increased in steps of 480 mm when multiple carriages are mounted.

\*\*Additional carriages can be mounted on the floor axis.  
 - 2 carriages max. on floor axis with ball screw drive type.  
 - No limit on floor axis with rack and pinion drive type.

**Protection: IP54**



**Performance (according to ISO 9283)**

Pos. repeatability	± 0.025 mm
Linear axis speed	200 mm/s
Dynamic Payload	220 kg

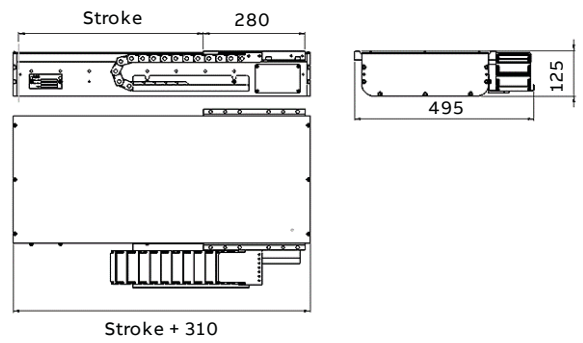
**Technical information**

**Physical Dimensions**

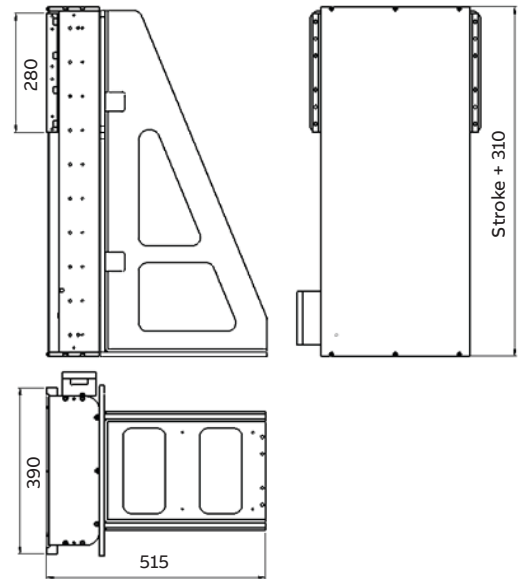
Axis length	Stroke + 310 mm
Axis width	390 mm (495 mm with cable chain)
Axis height	125 mm
Axis weight***	65 kg to 97 kg (ball screw) / 63 kg to 115 kg (rack & pinion)

\*\*\*Weight with a single carriage

**Horizontal axis**



**Vertical axis**



**3 axis unit**

