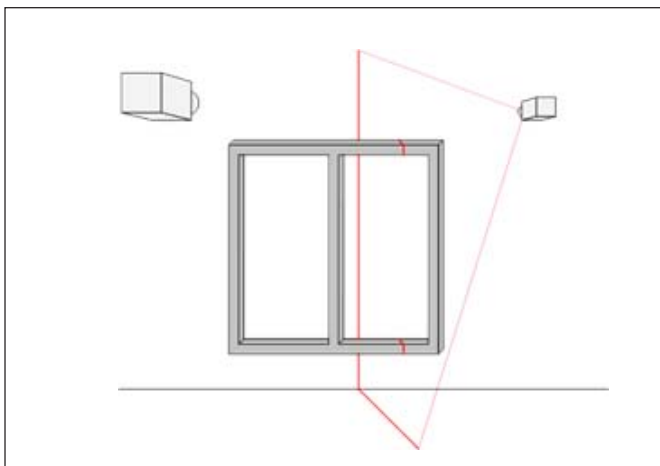
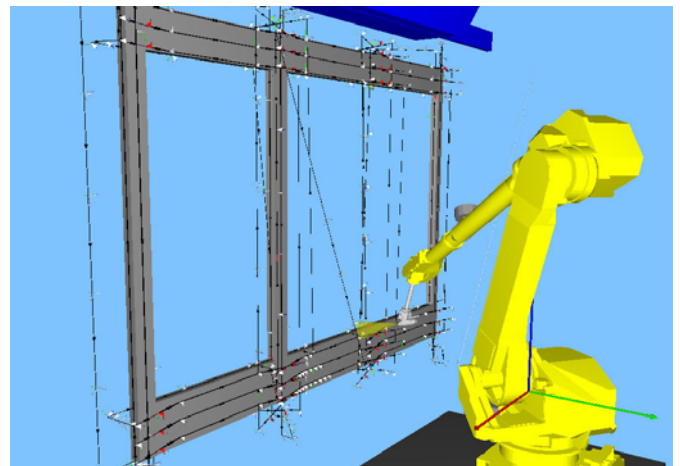


# ROWINCO

## Scan automatic programming system for windows and doors



Measuring the window with 3D scanner



Robot program is computed automatically

The automatic programming system consists of a fully automated measuring- and robot programming system for measuring the shape of the window and calculating a robot program for painting the window with sufficient quality.

### Measuring the window

The measuring system consists of a 3D scanner in which a laser projects a plane of laser light on to the window which is shown as a visible line where the laser light intersects with the part. The camera detects the laser line on the window surface and the position of points on the line can be calculated based on triangulation. A full 3D-CAD model of the window by this method created automatically on-the-fly.

### Creating the robot program

The CAD model is analysed by the Reiter robot programming software and a robot program is generated automatically. The robot program does not need any pre-programmed paths, but only a set of parameter, such as which brush to select, which speed to use, the speed of the conveyor etc. At this, an online check registers the faulty painting before the actual painting event.

The robot programs for painting the window is adapted to the customer setup in such a way that it fits the physical

conditions. The program can be made for 2 robots – placed on opposite sides of the window, or it can be made for one robot which paints first one side and then the back side.

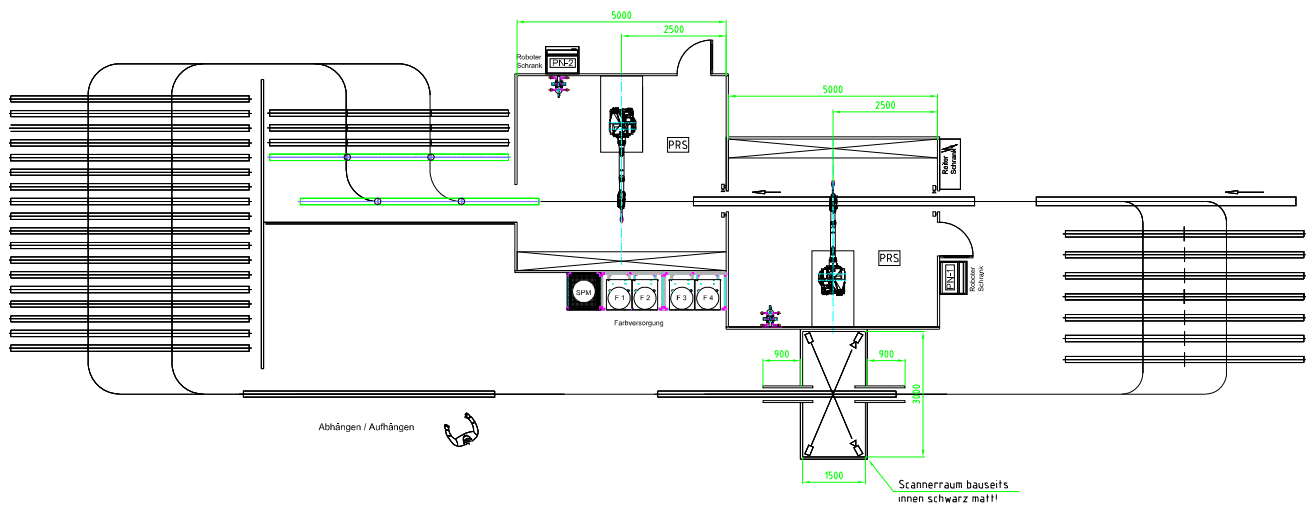
### Dimensions of the windows

The standard system handles windows up to 2.6m in height, 200mm in depth and no limitation on the length. If any of the dimensional specifications deviates it will be possible to adapt the system to other dimensions by adding to the standard setup.

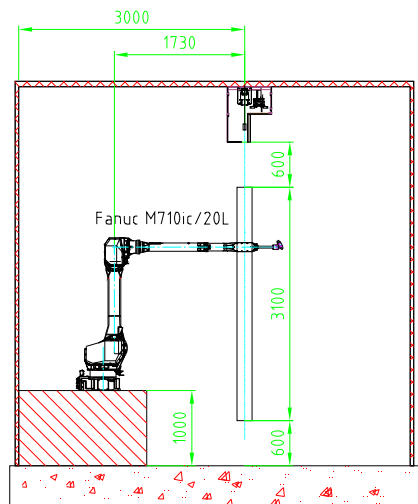


PERFECT FINISH – PAINTED BY THE SPECIALIST.

### Example layout top coat painting line



### Example booth cross section



### Example of different window forms

