Working area

This page explains how to **calculate the working area** of the NLiP parallel kinematic robot. The working area is the region inside the red rectangle in the graph below.

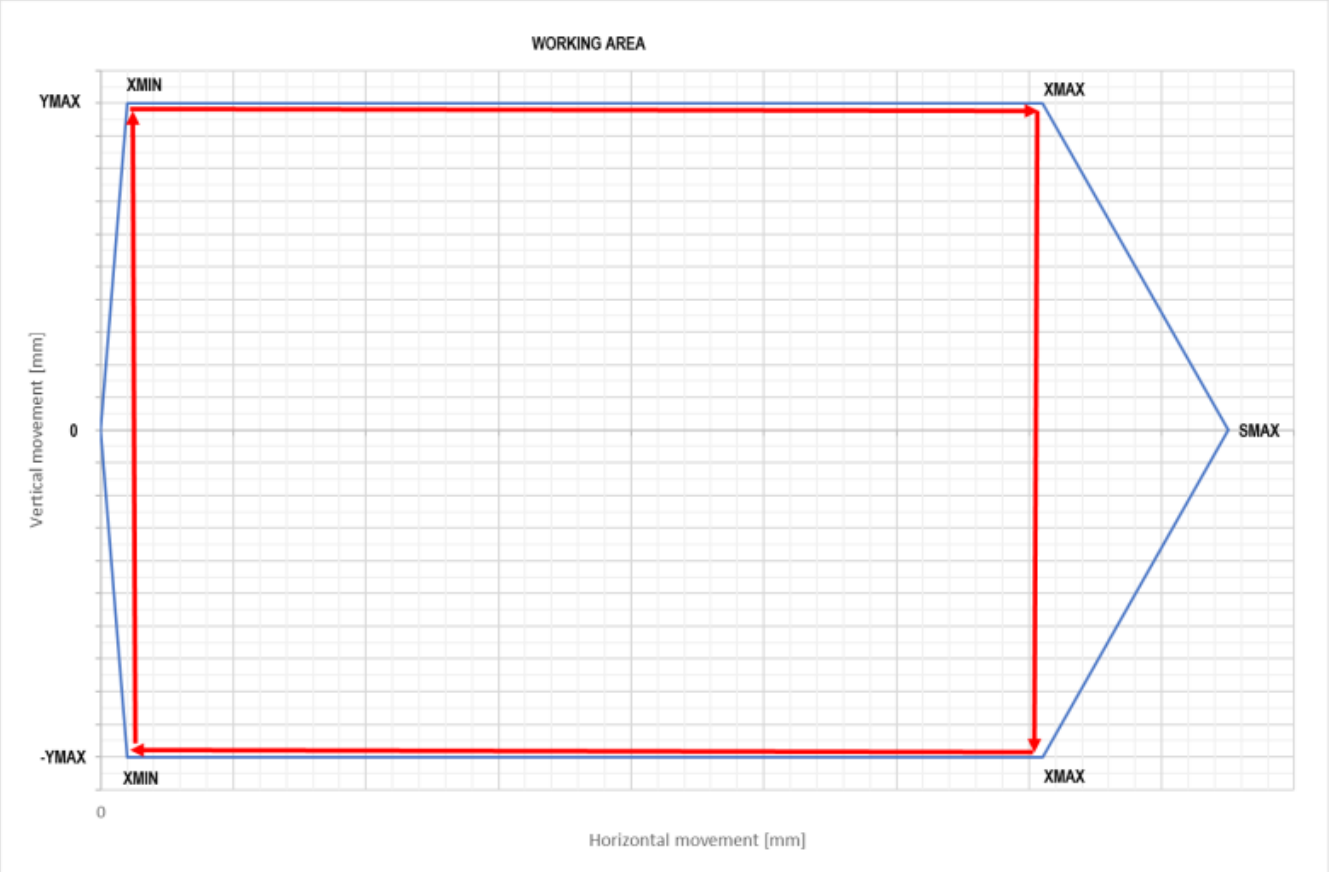
The working area inside the Red rectangle in the graph below can be calculated using the following formula.

XMIN = 10 mm.

SMAX = Linear motor total stroke.

YMAX = Robot_arm_length x SIN(40°). For example with arm length of 175mm ⇒ 110mm, -YMAX = -110mm.

XMAX = SMAX - (Robot_arm_length / 2). For example Smax = 425mm - 87,5mm ⇒ 337 mm.



Notes

- The working area is defined by XMIN, XMAX, YMAX and -YMAX. - XMIN is fixed at 10 mm; XMAX depends on the total stroke and the robot arm length. - YMAX is determined by the arm length and the 40° deflection angle. - The graph shows the reachable area for a given configuration.

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