Final Design

# Description

Read the end of year reports in “\9. Deliverables” to read a description of the final end-effector design.

# Process

* A cable to be routed is gripped between the driven and loaded wheels as the spin.
* The cable is then fed to the aligning wheel which will place the cable into the channel and half press-fit it.
* The push roller will then roll over the half pressed cable and fully press-fit it into the channel.

# Connection to Robot Arm

A dovetail shaped mount is bolted onto either the KR16 or UR5e robot arm. Then the frame of the end-effector is slid on the dovetail and bolted with a through-hole.

# Issues:

* Feed wheels sometime slip
* Does not accommodate different cable sizes
* Stepper motor struggles (might just be making lots of noise)

# Results:

Successfully routed 11 out of 12 initial runs with a 10mm stranded core cable. The failure mode was only slight lifting of the cable, but not removal from the channel.

Routes path in 16s.

Can also route 12mm solid core cables, however, no records were taken from this.