

BUMES Optimization and Vision

Universal Robotics Arms Supporting Documentation

ME500 Advanced Manufacturing Final Project

Spring 2025

Wednesday AM Lab Group

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Overview

This document contains descriptions of each .urp file created for the Universal Robotics Arms, Mary (Station 3) and Edie (Station 4). For instructions on how these programs are incorporated into BUMES, see document titled “ME500 Final Project WedsAM BUMES Guide.” All .urp files and their .txt counterparts of the same name can be found within the shared folder. Mary’s files can be found in a sub-folder called “Mary Programs,” and Edie’s can be found within a sub-folder called “Edie Programs.” There are 7 individual .urp files per robot.

Mary

gravityFeederW.urp

Takes W (lid) stock from gravity feeder and squares stock using squaring fixture.

gravityFeederZ.urp

Takes Z (body) stock from gravity feeder and squares stock using squaring fixture.

_adminCG-WXYZLoadMillMakeLid.urp

Loads W stock into Cayenne and mills a lid from updated CAM.

_adminCG-WXYZUnoadMillLid.urp

Removes milled lid from Cayenne and places in vertical vise at Station 1.

_adminCG-WXYZLoadMillMakeBody.urp

Loads Z stock into Cayenne and mills a body from updated CAM.

_adminCG-WXYZUnoadMillBody.urp

Removes milled body from Cayenne and places onto conveyor at Station 1.

_adminCG-AssembleAToB.urp

Grabs lid from below at vertical vise, squares lid at squaring fixture, then places lid on top of body at conveyor for assembly.

Edie

gravityFeederW.urp

Takes W (lid) stock from gravity feeder and squares stock using squaring fixture.

gravityFeederZ.urp

Takes Z (body) stock from gravity feeder and squares stock using squaring fixture.

_adminCG-WXYZLoadMillMakeLid.urp

Loads W stock into Paprika and mills a lid from updated CAM.

_adminCG-WXYZUnoadMillLid.urp

Removes milled lid from Paprika and places in vertical vise at Station 1.

_adminCG-WXYZLoadMillMakeBody.urp

Loads Z stock into Paprika and mills a body from updated CAM.

_adminCG-WXYZUnoadMillBody.urp

Removes milled body from Paprika and places onto conveyor at Station 1.

_adminCG-AssembleCLidToD.urp

Grabs lid from below at vertical vise, squares lid at squaring fixture, then places lid on top of body at conveyor for assembly.