BUILDING AN EOAT PROJECT

An automation system should incorporate high efficiency, process reliability, and cost savings.

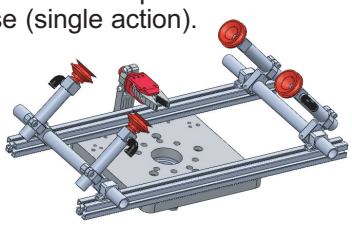
TUBE PROFILES -
Tube profiles are an excellent choice when adjustablility and light weighty is needed. Nippers, grippers, vacuum cups etc. are often mounted on tube profiles because of the ease of adjustment and extended angle adjustments they can provide.

EXTRUSION PROFILES -
Extrusion profiles are grooved along their entire length. Nippers, grippers, vacuum cups etc. are attached to the profile using brackets and nuts and bolts which slide into the grooves.

MIX AND MATCH WITH EXTRUSION AND TUBE PROFILES -
When you have rigidity and adjustability concerns, then you have to adopt extrusion profiles as the base framework and tube profiles connecting components for maximum positioning adjustability. Extrusion profiles and brackets allow for easy linear adjustments. Round elbow angle adjusters provide a wide range of angle adjustments as well as rotational adjustability.

VACUUM CUPS -
Vacuum cups are the most popular and economical method for the EOAT to grip and properly position items. Most robots come standard with a vacuum detection circuit that monitors for a minimum vacuum level. If a vacuum cup has missed or dropped a part, the vacuum detection circuit senses low vacuum and prevents the robot or machine from starting a new cycle until corrected. Therefore, additional part verification is not normally needed. This eliminates the need for separate parts sensors which can add both cost and weight to the EOAT. Vacuum cups are available in a wide range of styles, sizes and materials to suit a wide range of application needs.

SPRUE GRIPPERS -
Sprue grippers are commonly used to grip sprues but they are often used to grip parts as well. While grippers usually work like fingers that come together to grasp something, they can also be placed inside of a part and spread apart to apply pressure from within. Grippers attach to the EOAT using special gripper brackets. Some use compressed air to both open and close the fingers (double acting). Others combine the use of compressed air with a spring to open or close (single action).



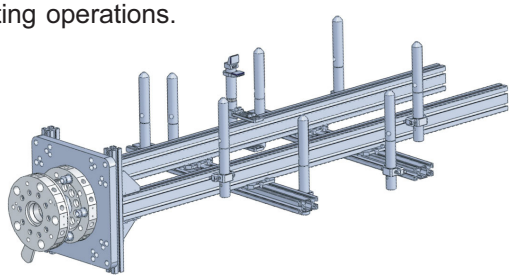
MOUNTING CLAMPS -
Mounting Clamps are used with tube profiles and/or gripper mounting arms on one end, and cups, adapters, holders, suspensions, sprue grippers, and/or nipper brackets on the other end, making the EOAT adjustable and better able to hold the part. They are more versatile than others and have changeable direction.

SUSPENSIONS -
Suspensions have tube profiles, gripper mounting arms, and/or mounting clamps on one end, and an adapter cup on the other end, making it more adjustable and strong. They are available in both rotating and non-rotating versions.

GRIPPER MOUNTING ARMS -
Gripper mounting arms have either tube profiles or clamps on one end, and sprue grippers, cups with adapters or holders, suspensions, or nipper brackets on the other end. They are available in both rotating and non-rotating varieties.

NIPPERS -
Nippers (or sprue cutters) are most often used to cut (or degate) sprues and/or runners from parts. Styles include both single and double-acting models as well as sliding models. Nippers can be mounted either on the EOAT or at a separate degating station. By using the appropriate mounting bracket, nippers can be mounted onto either round or slotted profiles. Some round-bodied nippers have mounting threads on their bottom and other nipper bodies have mounting threads on square slide surfaces which can provide a low-cost alternative to mounting clamps.

SLIDING NIPPERS -
This style nipper allows the blade to cut flush against the part. After the blade is positioned between the runner and part, compressed air is applied to activate the pull-sliding stroke. This moves the blade flush against the part. Compressed air is then applied to the blade resulting in the cutting action. Spring action returns the sliding body to its normal position. Compressed air is supplied to two parts, allowing for independent control over the sliding stroke and cutting operations.



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