TC12 Toolchanger

DATA SHEET



TC12 Toolchanger Data sheet

The R12 toolchanger option is exclusively for the ST Robotics R12 robot and does not require any external power source to operate. The option comprises two parts, the TC12-R – Robot Side and the TC12-T – Tool Side. There can be any number of tool side adaptors.

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- Page 2. The TC12-R Robot Side component
- Page 3. The TC12-T Tool Side adapter
- Page 4. The Tool Rack and paired R12 attachments

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Robot Side Connector

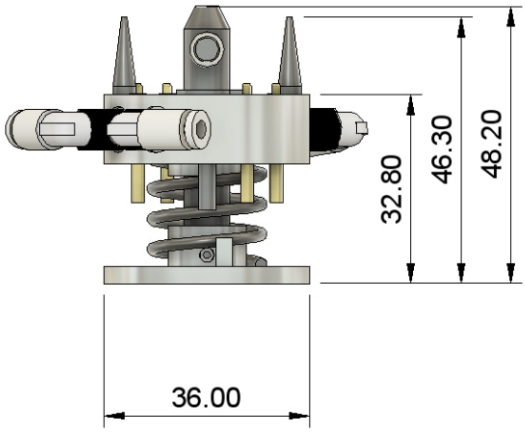
The TC12-R Robot side toolchanger connector features a passive system to expand the range of tasks that an ST Robotics R12 robot can do at any given time without the need for an assistant to change items by hand.



The Robot side features three connector ports for air supply and 5 total contact pins for electrical connectivity.

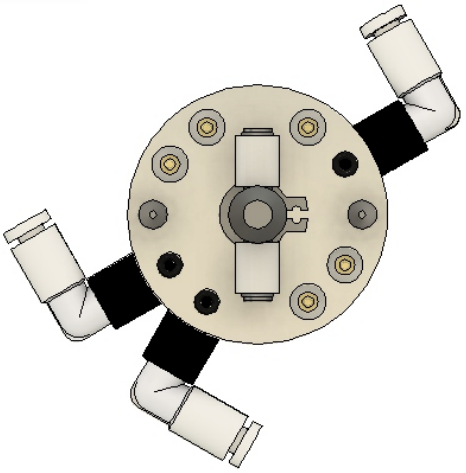
Features

The R12 tool changer features a spring loaded design where guide posts hold the tool side adapter in place while a middle connecting shaft will be rotated and locked into the adapter. This design is smooth and efficient as well as being a complete passive system, requires no external power source.



The R12 toolchanger can be outfitted with multiple connectors as shown in the pictures on the side and features multiple contact pin for electrical connectivity.

The benefit of using a toolchanger over standalone multiple tools is that the changeover time between tools can be increased and the scope of the robot is increased by being able to complete multiple tasks without downtime.



Furthermore by maintaining multiple identical tools repairs or problems with them will not cause any further downtime.

Applications

Typical applications of this toolchanger can vary from material removal and handling, pick and place routines to light assembly. As a toolchanger the best use of this attachment would involve a project which requires multiple unique points of interaction such as moving different sized items.

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Robot Side Adaptor

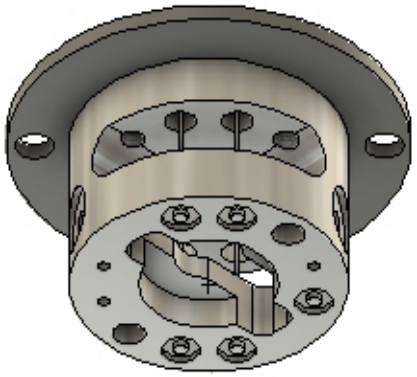
The TC12-T Tool Side adapter is the second part of the toolchanger kit. The adapter features an all in one design that is sleek and minimal to allow for use within smaller projects or tasks.



The toolside has parity with the robot side connector and features three air ports as well as 5 contact ports for electrical connectivity.

Features

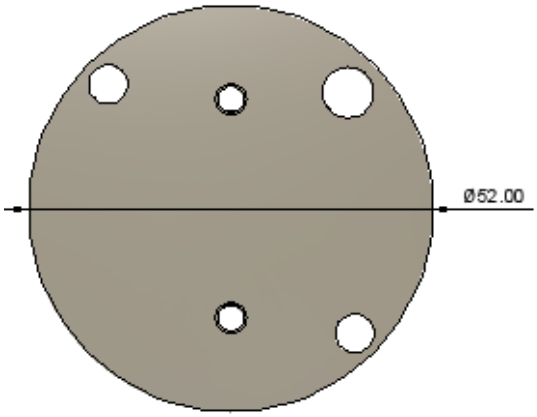
The tool side adapter features two slotted grooves for the connecting bar to quickly lock in place. With a sleek design the toolchanger is very light and can be utilised in smaller tasks or projects.



The Tool side adapter features an all in one unit that encompasses multiple features. The adapter can utilise both electrical and air supply sources easily.

Key Features

- Up to 5 electric lines
- Three pneumatic air ports (threaded m3)
- Space to allow Larger wires or external connections
- Time to close/open: 500ms



The tool side kit comes with an adapter plate which allows for easy connectivity with all of the ST Robotics branded first party attachments as well as other third party attachments.

As the toolchanger does not require electrical power to work it can also be implemented into water based projects.

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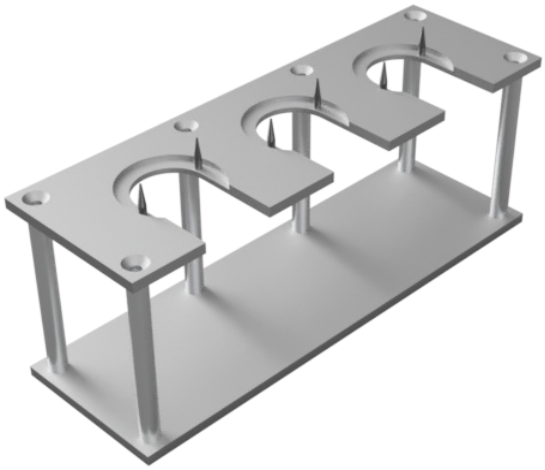
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Tool Rack

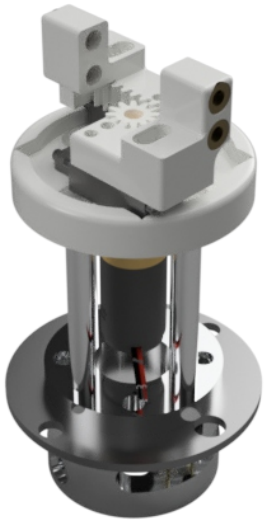
The TC12 toolchanger option may include one tool rack which can hold three adapters. This has been designed to leave enough space for ST Robotics attachments however there should be ample space for third party attachments.



The tool rack also features holes for mounting down in place for accurate grip and release actions.

Attachments in Use

The TC12 toolchanger has been designed and adapted primarily for use with the ST Robotics R12 family of attachments. Every attachment option is compatible with the R12 toolchanger.



When ordered with one of our attachments the appropriate connectors will be supplied and everything will be assembled for you on delivery.

Compatible Attachments

- R12 E1 Electric Gripper
- R12 E2 Electric Gripper
- R12 EG12 Electric Gripper
- R12 Vacuum Gripper
- R12 Pneumatic Gripper



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