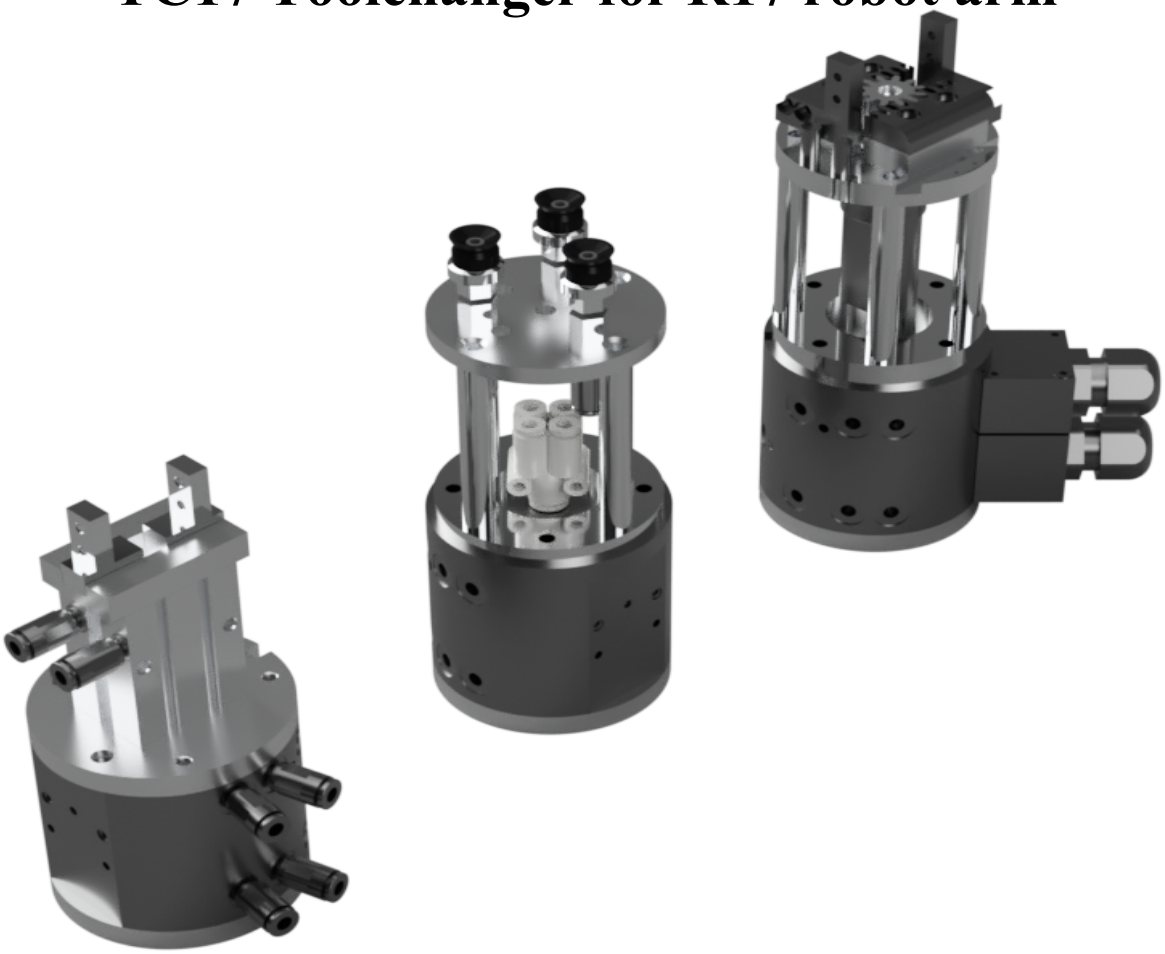
TC17 Toolchanger for R17 robot arm



The TC17 toolchanger option is designed for use with the ST Robotics R17 robot. It requires a compressed air supply to operate. It is supplied with all necessary valves and pneumatic circuit and software. The option comprises two parts, the TC17-R – robot side adaptor and the TC17-T – tool side adaptor. There can be any number of tool side adaptors.

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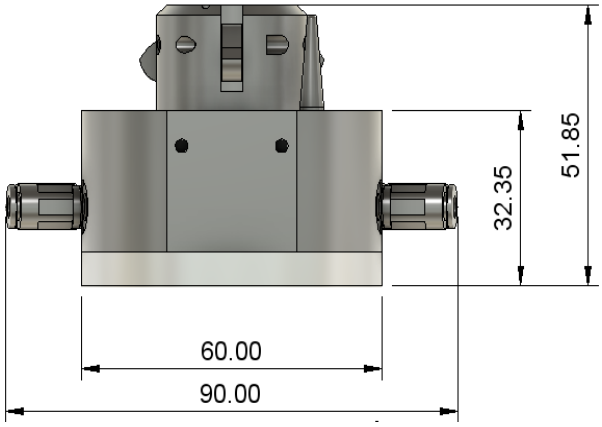
The benefit of using a tool changer is to expand the capability of a robot to handle different types and sizes of items. With multiple attachments the R17 toolchanger can work on tasks which may require very different grip or manipulation patterns.

Robot Side Adaptor

The TC17-R robot side toolchanger connector features a pneumatically powered system to expand the scope of the ST Robotics R17 robot without the need for an assistant to change the robots attachments by hand.

The robot side features six M5 threaded ports for air supply and an expansion section to allow for 18 total electrical connections.



Features

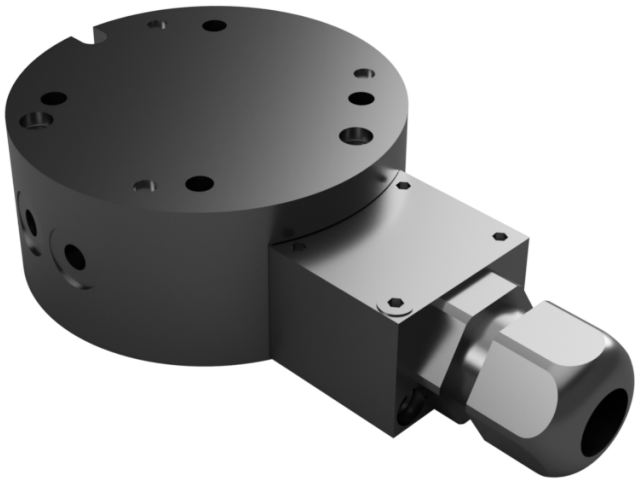
The adapter features three barbs operated by a pneumatic air supply. When operated they expand out of the central shaft and lock in the tool side connector. This option requires an external air supply.

The TC17 toolchanger can be equipped with multiple connectors as shown within the pictures and features an expansion connector for electrical connectivity, however if space is vital, this can be removed.

Specifications

Electrical contacts: 18 (rated 5A each)
Pneumatic ports: 6 (M5 threaded)
X, Y and Z position repeatability: +/-0.025mm
Moment Resistance: 29N-m
Torque Resistance: 34N-m

If your project or task for this robot requires manipulation of heavier objects then this toolchanger system can also be used with the R17HPL High Payload version of R17. It is advised to contact us with a description of your task to make sure we can suggest to you the best system available.



Tool Side Adapter

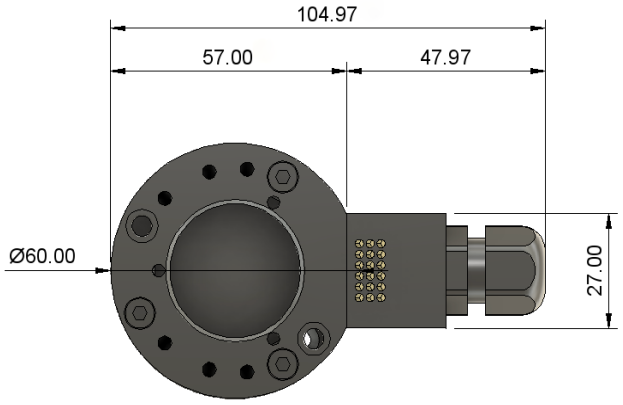
The TC17-T tool side adapter is the second part of the toolchanger kit and features a top plate that has been designed to mount all of the R17 ST Robotics attachments with ease.

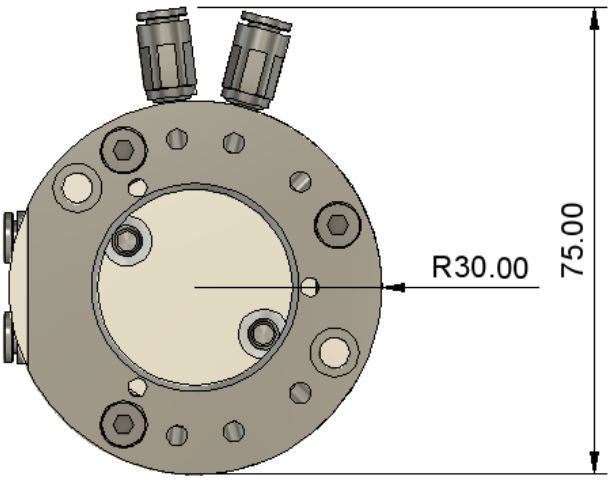
The toolside has parity with the robot side connector and features six air ports as well as 18 electrical contact points.

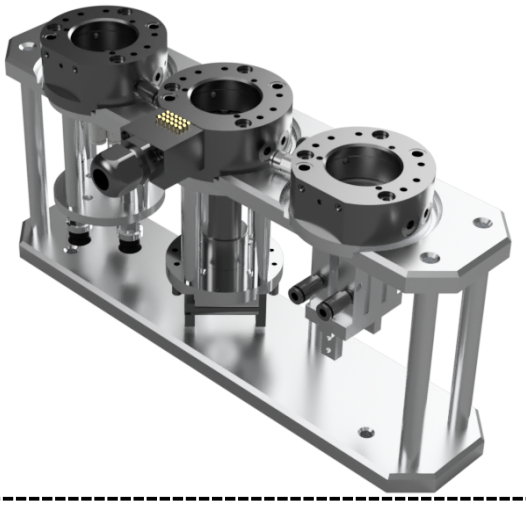
Features

The tool side adapter internally has a socket to match the expanding barbs of the robot side adaptor. It is tapered to allow for some mismatch of position.

The tool side adapter can be customised to adapt to R17 ST Robotics attachments, other third party grippers or attachments or other custom designs that may be required to complete a task or project.







Tool Rack

The TC17 toolchanger option may include a tool rack which can hold three adapters in place. 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.

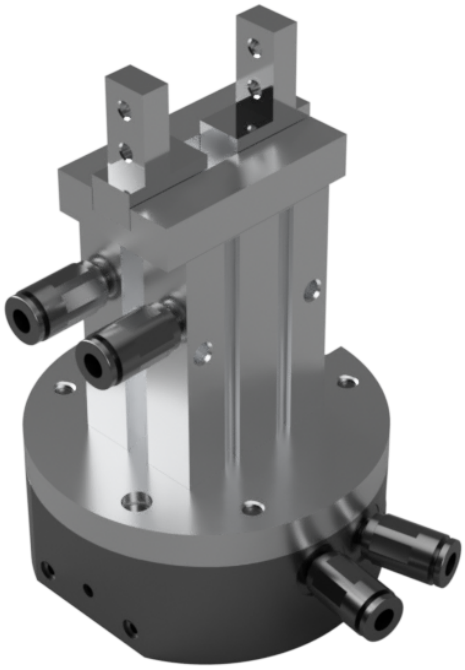
ST Robotics compatible attachments

The R17 toolchanger has been designed and adapted primarily for use with the ST Robotics R17 family of attachments. Every attachment kit we sell will be compatible with the R17 toolchanger.

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

List of compatible attachments

R17 Electric Gripper
R17 Vacuum Gripper
R17 Pneumatic Gripper
R17 6th Axis Adapter



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