# AUTOMATIC TOOL CHANGERS

## Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQC/RTP</td>
<td>3</td>
</tr>
<tr>
<td>QC/TP</td>
<td>21</td>
</tr>
<tr>
<td>RHC</td>
<td>37</td>
</tr>
<tr>
<td>CH (Horizontal Compliance Device)</td>
<td>47</td>
</tr>
</tbody>
</table>

Dimensions and technical information are subject to change without notice.
**DESTACO Automatic Tool Changers** allows multiple tooling applications to be achieved using one robot with exceptional repeatability, high rigidity and load capacity.

Each Series offers:

- Durable locking components
- Heavy-duty locking spring mechanisms on certain models
- Optional air, electric and fluid ports modules
- Available in NPT, BSPP, and BSPT
- ISO pattern for direct robot arm mount
- Different models and sizes available to handle light-duty to heavy-duty applications.

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**Technical Information**

**Pneumatic Specification**

<table>
<thead>
<tr>
<th>Pressure Range (Locked Cylinder)</th>
<th>3<del>7 bar [40</del>100 psi] (QC/TP, RHC Series)</th>
<th>4<del>7 bar [60</del>100 psi] (RQC/RTP Series)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cylinder Type</td>
<td>Double Acting, Spring Assist</td>
<td></td>
</tr>
<tr>
<td>Valve Required to Actuate</td>
<td>3-way, 2-position (QC-30 only)</td>
<td>4-way, 2-Position</td>
</tr>
</tbody>
</table>

**Air Quality Requirements**

- Air Filtration: 40 Microns or Better
- Air Lubrication: Not Necessary*
- Air Humidity: Low Moisture Content (Dry)

(*)Addition of lubrication will greatly increase service life.

**Temperature Operating Range**

| Buna-N-Seals: | -35°~80° C [-30°~180° F] (All Models) |
| Viton® Seals: | -30°~150° C [-20°~300° F] (RHC Series) |

**Maintenance Specification**

- Expected Life: Normal Application: 5 Million Cycles
- With Preventative Maintenance: 10+ Million Cycles
- Repeatability: ±0.025mm [±0.001 in]
- Field Repairable: Yes
- Seal Repair Kits Available: Yes

**Application Restrictions**

- Dirty or Gritty Environments
- Machining Operations Generating Chips
- Environments with Loose Particulates

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**Features and Benefits**

**Robotic applications:** Perfect for those flexible/multiple tooling applications utilizing one Robot. This product was designed with exceptional repeatability, high rigidity & load capacity to make it ideal for any robotic application.

**Automation applications:** End effector tooling and interchangeable fixturing can be changed quickly and easily to accommodate many different styles of parts on the same assembly machine or machining center.

**Highly configurable, modular design (RQC/RTP):** The Modular RQC series easily accommodates up to (4) optional modular interfaces, offering a high level of flexibility.
Additional Optional Air, Fluid, Electrical Modules are Available.
Air and fluid ports modules are available in NPT, BSPP, and BSPT (See Page 17)

Optional 6 Port Pneumatic Module
Optional 19 Pin I/O Module
Spring loaded contacts are recessed for a better protection
V-Seal provides moisture resistance

Optional (4) Self-Sealing Air Ports Module
(sizes 800 & 1200 only)

Locking Mechanisms
Made from hardened stainless steel, they provide a low stress, highly rigid locking capability

Latch/Unlatch Switch
RQC’s are pre-equipped for latch, unlatch (all sizes) and part presence sensing (sizes 800 & 1200 only)
Dry contact or inductive sensors with or w/o connectors are available

Robot Side Tool Side

Robot Half Adaptor
has counterbored holes for mounting with a dowel pin hole, a raised boss for location, and features a ISO9409-1 mounting pattern

Tool Half Adaptor
has tapped holes, two dowel pin holes for accurate location of payload, and features a ISO9409-1 mounting pattern

Locating Pins

Back Side of Robot Half Adaptor

Dimensions and technical information are subject to change without notice
### Automatic Tool Changers | Technical Information

**RQC/RTP SERIES**

#### RQC-200/RTP-200

- **Combined Weight:** 3 Kg [6.7 lb]
- **Max. Payload:** 90 Kg [200 lb]
- **Max. Moment:** 810 Nm [7200 in.-lb.]

**Dimensions and technical information are subject to change without notice**

#### RQC-400/RTP-400

- **Combined Weight:** 4.7 Kg [10.4 lb]
- **Max. Payload:** 180 Kg [400 lb]
- **Max. Moment:** 1580 Nm [14000 in.-lb.]

#### RQC-800/RTP-800

- **Combined Weight:** 7.1 Kg [15.8 lb]
- **Max. Payload:** 360 Kg [800 lb]
- **Max. Moment:** 2490 Nm [22000 in.-lb.]

#### RQC-1200/RTP-1200

- **Combined Weight:** 8.3 Kg [18.4 lb]
- **Max. Payload:** 550 Kg [1200 lb]
- **Max. Moment:** 3390 Nm [30000 in.-lb.]

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<table>
<thead>
<tr>
<th>Model</th>
<th>Weight</th>
<th>Payload</th>
<th>Moment</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQC-200</td>
<td>3 Kg</td>
<td>90 Kg</td>
<td>810 Nm</td>
</tr>
<tr>
<td>RQC-400</td>
<td>4.7 Kg</td>
<td>180 Kg</td>
<td>1580 Nm</td>
</tr>
<tr>
<td>RQC-800</td>
<td>7.1 Kg</td>
<td>360 Kg</td>
<td>2490 Nm</td>
</tr>
<tr>
<td>RQC-1200</td>
<td>8.3 Kg</td>
<td>550 Kg</td>
<td>3390 Nm</td>
</tr>
</tbody>
</table>
RQC-200/RTP-200
Automatic Tool Changers | Module Usage Illustrations

RQC-200
Robot Adaptor Module with Optional Modules (Robot Side)

RTP-200
Tool Adaptor Module with Optional Modules (Tool Side)

Dimensions and technical information are subject to change without notice
**RQC-200/RTP-200**

**Automatic Tool Changers | Ordering Information**

<table>
<thead>
<tr>
<th>Base Model</th>
<th>Model Size</th>
<th>Port Options (RQC-only)</th>
<th>Sensing (RQC-only)</th>
<th>Side A MODULES</th>
<th>Side B MODULES</th>
<th>Side C MODULES</th>
<th>Side D MODULES</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQC</td>
<td>200</td>
<td>N</td>
<td>L0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>RTP</td>
<td>200</td>
<td>N</td>
<td>L0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

- **RQC**: Robot Side
- **RTP**: Tool Side

**Max. Payload**: 90 kg [200 lb]

**Port Options**
- **N**: 1/8 NPT
- **M**: 1/8 BSPP
- **A**: 1/8 BSPT

**Sensing Options**
- **L0**: No Sensing
- **LP**
- **CP**
- **CN**
- **LD**
- **CD**

- **LP**: PNP Inductive Sensing
- **CP**: PNP Inductive Sensing with M12 connector
- **CN**: NPN Inductive Sensing
- **LD**: Dry contact sensor
- **CD**: Dry contact sensor with M12 connector

*Requires E19 or G19 module mounted on Side C.
†Cordset or plug are sold separately.

**Optional Electrical, Air and Vacuum Modules**

- **E19†**: 19 pin, 3 Amp, 48 VDC Module w/Turck M12 Conn., w/o Cordset
- **G19†**: 19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable
- **FN**: 6 X 1/8" NPT Air Ports Module, Face Seal, 10 Bar
- **FP**: 6 X 1/8" BSPP Air Ports Module, Face Seal, 10 Bar
- **FT**: 6 X 1/8" BSPT Air Ports Module, Face Seal, 10 Bar
- **VN**: 2 X 3/4" Vacuum + 4 X 1/4" Air NPT Ports Module, Face Sealing
- **VP**: 2 X 3/4" Vacuum + 4 X 1/4" Air BSPP Ports Module, Face Sealing
- **VT**: 2 X 3/4" Vacuum + 4 X 1/4" Air BSPT Ports Module, Face Sealing

†Cordset or plug are sold separately. ***Not compatible with CD, CP or CN sensing option.

**NOTE**: Only (1) module can be mounted per side. Modules usage is based on the size of the Base Model and which side the module can be mounted.

**Dimensions and technical information are subject to change without notice**

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**EE-ATC | 6**

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**DESTACO**

**Company**

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**RQC-200 (ROBOT SIDE)**

Automatic Tool Changers | Technical Specifications | Dimensions

**Specification:**
- Max. Payload $W$: 90 Kg [200 lb]
- Cylinder Bore: $\varnothing53$mm [2.09in]
- Displacement: $41.3$ cm$^3$ [2.52in$^3$]

**Loading Capacity:**
- Max. Tensile $T$: 1330 N [300 lb]
- Max. Compressive $C$: 1780 N [400 lb]
- Max. Moment $(M_x/M_y/M_z)$: 1580 Nm [810 in.-lb.]

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**FAILSAFE OPERATION:**

4-WAY VALVES WITH A SPRING RETURN ARE RECOMMENDED TO MAINTAIN AIR PRESSURE TO THE LOCK PORT DURING EMERGENCY STOP CONDITIONS.

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**UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW**

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Dimensions and technical information are subject to change without notice
**RTP-200 (TOOLING SIDE)**

Automatic Tool Changers | Technical Specifications | Dimensions

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**Specification:**
Max. Payload **W**: 180 Kg [400 lb]

**Loading Capacity:**
Max. Tensile **T**: 2670 N [600 lb]
Max. Compressive **C**: 3560 N [800 lb]
Max. Moment (**Mx**/**My**/**Mz**): 1580 Nm [14000 in.-lb.]

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**SIDE C**
- ISO9409-1-A80 MOUNTING PATTERN
- 6 x [M8] EQUALLY SPACED (SEE DETAIL)
- [0.0787] Ø8[h8] - 2 DEEP
- (3) HOLES FOR MODULES (SEE DETAIL)

**SIDE D**
- [4.53] 115
- [3.1496] Ø80
- [3.15] Ø80 9 DEEP
- (3) HOLES FOR MODULES (SEE DETAIL)

**SIDE B**
- [0.0787] Ø8[h8] - 2 DEEP
- (3) HOLES FOR MODULES (SEE DETAIL)

**SIDE A**
- [1.77] 45
- [1.85] 47.1
- [0.25] 6.4
- [1.00] 25.4
- [1.9685 S.F.] Ø50H7
- (3) HOLES FOR MODULES (SEE DETAIL)

**SIDE**
- [0.35] 9
- [1.77] 45
- [1.77] 45
- [0.39] 10 (M5 LENGTH)

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SIDE A, B, C & D ARE IDENTICAL

---

UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

- **DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE**
- **THIRD ANGLE PROJECTION**
- **ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE ±0.005° OR ±0.013MM**
- **METRIC THREADS COURSE PITCH**
- **IMPERIAL (IN.)** 0.00 = ± 0.01 0.000 = ± 0.005
- **METRIC (MM)** 0 [0] = ± 0.25 0.00 [0.00] = ± 0.13 0.000 [0.000] = ± 0.013

Dimensions and technical information are subject to change without notice
RQC-400, 800, 1200/RTP-400, 800, 1200

Automatic Tool Changers | Module Usage Illustrations

**RQC-400**
Robot Adaptor Module
with Optional Modules
(Robot Side)

**RTP-400**
Tool Adaptor Module
with Optional Modules
(Tool Side)

**RQC-800/RQC-1200**
Robot Adaptor Module
with Optional Modules
(Robot Side)

**RTP-800/RTP-1200**
Tool Adaptor Module
with Optional Modules
(Tool Side)

NOTE: Only (1) module can be mounted per side (except 2E19, 2G19 which are composed of (2) modules)

Dimensions and technical information are subject to change without notice.
RQC-400, 800, 1200/RTP-400, 800, 1200

Automatic Tool Changers | Ordering Information

### Base Model

<table>
<thead>
<tr>
<th>Model Size</th>
<th>Sensing</th>
<th>Port Options</th>
<th>Side A Modules</th>
<th>Side B Modules</th>
<th>Side C Modules</th>
<th>Side D Modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQC-400</td>
<td>400</td>
<td>L0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>RQC-800</td>
<td>800</td>
<td>L0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>RQC-1200</td>
<td>1200</td>
<td>L0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Side A Modules:**
- E19: 19 pin, 3 Amp, 48 VDC Module w/Turck M12 Conn, w/o Cordset
- G19: 19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable
- 2E19: 2 x 19 pin, 3 Amp, 48 VDC Module w/Turck M12 Conn, w/o Cordset
- 2G19: 2 x 19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable

**Side B Modules:**
- FN: 6 X 1/8" NPT Air Ports Module, Face Seal, 10 Bar
- FP: 6 X 1/8" BSPP Air Ports Module, Face Seal, 10 Bar
- FT: 6 X 1/4" NPT Air Ports Module, Face Seal, 10 Bar
- PN: 6 X 1/4" NPT Air Ports Module, Face Seal, 10 Bar
- PP: 6 X 1/4" BSPP Air Ports Module, Face Seal, 10 Bar
- PT: 6 X 1/4" BSPP Air Ports Module, Face Seal, 10 Bar
- SN: 6 X 1/4" NPT Air Ports Module, Self Sealing, 10 Bar
- SP: 6 X 1/4" BSPP Air Ports Module, Self Sealing, 10 Bar
- ST: 6 X 1/4" BSPP Air Ports Module, Self Sealing, 10 Bar
- VN: 2 X 3/4" Vacuum + 4 X 1/4" Air NPT Ports Module, Face Sealing
- VP: 2 X 3/4" Vacuum + 4 X 1/4" Air BSPP Ports Module, Face Sealing
- VT: 2 X 3/4" Vacuum + 4 X 1/4" Air BSPP Ports Module, Face Sealing
- HN: 4 X 3/8" NPT Fluid Ports Module, 100 Bar
- HP: 4 X 3/8" BSPP Fluid Ports Module, 100 Bar
- HT: 4 X 3/8" BSPP Fluid Ports Module, 100 Bar

**Side C Modules:**
- No Sensing
- LP: PNP Inductive Sensing
- CP: PNP Inductive Sensing with M12 connector
- LN: NPN Inductive Sensing
- CN: NPN Inductive Sensing with M12 connector
- LD: Dry contact sensor
- CD: Dry contact sensor with M12 connector

**Side D Modules:**
- No Module

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**Electrical and pneumatic accessories are ordered separately.**

Please note some electrical accessories can only be used with certain modules for either RQC or RTP "Base Models".

For pneumatic accessories, size of "Base Model" is considered.

**Electrical Accessories**
- ELCT-048: 90° Female Plug, w/o Cable, Solder Type, Cable Clamp for G19 (RQC Only)
- ELCT-049: 90° Male Plug, w/o Cable, Solder Type, Cable Clamp for G19 (RTP Only)
- CABL-029: 90° Male Cordset with 4M Cable for E19 (RQC Only)
- CABL-031: 90° Male Cordset with 4M Cable for E19 (RTP Only)
- OSRK-004: PNP Inductive Sensor Repair Kit (RQC Only)
- OSRK-005: NPN Inductive Sensor Repair Kit (RQC Only)
- OSRK-006: Dry Contact Sensor Repair Kit (RQC Only)

**Pneumatic Accessories**
- SLKT-402: RQC-400 Standard Seal Repair Kit
- SLKT-403: RQC-800 Standard Seal Repair Kit
- SLKT-404: RQC-1200 Standard Seal Repair Kit

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Dimensions and technical information are subject to change without notice

EE-ATC | 10
RQC-400 (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

**Specification:**
- Max. Payload **W**: 180 Kg [400 lb]
- Cylinder Bore: Ø73mm [2.87in]
- Displacement: 80.9 cm³ [4.93in³]

**Loading Capacity:**
- Max. Tensile **T**: 2670 N [600 lb]
- Max. Compressive **C**: 3560 N [800 lb]
- Max. Moment (Mx/My/Mz): 1580 Nm [14000 in.-lb.]

Dimensions and technical information are subject to change without notice.
**Specification:**
Max. Payload \( W \): 180 Kg [400 lb]

**Loading Capacity:**
Max. Tensile \( T \): 2670 N [600 lb]
Max. Compressive \( C \): 3560 N [800 lb]
Max. Moment \( M_{x/y/z} \): 1580 Nm [14000 in.-lb.]
RQC-800, RQC-1200 (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

**RQC-800 Specification:**
Max. Payload \( W \): 360 Kg [800 lb]
RQC-800 Cyl. Bore: \( \varnothing 80 \text{mm} \) [3.15\text{in}]
RQC-800 Displacement: 95.6 cm\(^3\) [5.83in\(^3\)]

**Loading Capacity:**
Max. Tensile \( T \): 5340 N [1200 lb]
Max. Compressive \( C \): 7120 N [1600 lb]
Max. Moment \( (M_x/M_y/M_z) \): 2490 Nm [22000 in.-lb.]

**RQC-1200 Specification:**
Max. Payload \( W \): 550 Kg [1200 lb]
RQC-1200 Cyl. Bore: \( \varnothing 95 \text{mm} \) [3.74\text{in}]
RQC-1200 Displacement: 153.7 cm\(^3\) [9.38in\(^3\)]

**Loading Capacity:**
Max. Tensile \( T \): 8000 N [1800 lb]
Max. Compressive \( C \): 10700 N [2400 lb]
Max. Moment \( (M_x/M_y/M_z) \): 3390 Nm [30000 in.-lb.]

### Dimensions

**Model Number**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>&quot;A&quot;</th>
<th>&quot;B&quot;</th>
<th>&quot;C&quot;</th>
<th>&quot;D&quot;</th>
<th>&quot;E&quot;</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQC-800</td>
<td>170</td>
<td>160</td>
<td>94.75</td>
<td>50.8</td>
<td>71.75</td>
<td>6.3 kg</td>
</tr>
<tr>
<td>RQC-1200</td>
<td>178.0</td>
<td>168.0</td>
<td>103.6</td>
<td>57.15</td>
<td>84.15</td>
<td>6.4 kg</td>
</tr>
</tbody>
</table>

- Dimensions and technical information are subject to change without notice.
**RTP-800, RTP-1200 (TOOLING SIDE)**

**Automatic Tool Changers | Technical Specifications | Dimensions**

**RTP-800 Specification:**
Max. Payload $W$: 360 Kg [800 lb]  
Loading Capacity:  
Max. Tensile $T$: 5340 N [1200 lb]  
Max. Compressive $C$: 7120 N [1600 lb]  
Max. Moment $(M_x/M_y/M_z)$: 2490 Nm [22000 in.-lb.]

**RTP-1200 Specification:**
Max. Payload $W$: 550 Kg [1200 lb]  
Loading Capacity:  
Max. Tensile $T$: 8000 N [1800 lb]  
Max. Compressive $C$: 10700 N [2400 lb]  
Max. Moment $(M_x/M_y/M_z)$: 3390 Nm [30000 in.-lb.]

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**Dimensions and technical information are subject to change without notice**

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**MODEL NUMBER**

<table>
<thead>
<tr>
<th>Model</th>
<th>&quot;A&quot;</th>
<th>&quot;B&quot;</th>
<th>&quot;C&quot;</th>
<th>&quot;D&quot;</th>
<th>&quot;E&quot;</th>
<th>&quot;F&quot;</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTP-800</td>
<td>[6.69]</td>
<td>[6.2992]</td>
<td>[2.56]</td>
<td>[1.10]</td>
<td>[0.22]</td>
<td>[0.39]</td>
<td>[4.00 lb]</td>
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<tr>
<td>RTP-1200</td>
<td>[7.01]</td>
<td>[6.6142]</td>
<td>[2.71]</td>
<td>[1.25]</td>
<td>[0.13]</td>
<td>[0.30]</td>
<td>[2.90 lb]</td>
</tr>
</tbody>
</table>
RQC/RTP SERIES
Automatic Tool Changers | Technical Specifications | Dimensions

19 Pin Module 3 Amp - 48 VDC

ROBOT HALF

TOOL HALF

Module kits above include: 90° Plug Support (without cable), indexing sleeves and hardware.

19 Pin Module 5 Amp - 120 VDC

ROBOT HALF

TOOL HALF

Module kits above include: 90° Plug support (without cable), indexing sleeves and hardware.

Dimensions and technical information are subject to change without notice.
Reserved Pin Numbers on E19/G19

<table>
<thead>
<tr>
<th>Sensor/Switch</th>
<th>RQC 400</th>
<th>RQC 800 &amp; 1200</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQC-400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RQC-800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RQC-1200</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Lock/Unlock Tool Plate Presence Sensing Options
(with inductive Sensors and Dry Contact Switches)

Dimensions and technical information are subject to change without notice.
6 x 1/8” Air Ports Module | Face Seal (for RQC/RTP-200 & RQC/RTP-400)

- **ROBOT HALF**
  - 6 x 1/8” Air Ports Module | Face Seal
  - (2) INDEXING SLEEVES
  - (8) X “A” (SEE TABLE)

- **TOOL HALF**
  - 6 x 1/8” Air Ports Module | Face Seal
  - (2) M5 SHCS
  - (8) X “A” (SEE TABLE)

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6 x 1/4” Air Ports Module | Face Seal (for RQC/RTP-800 & RQC/RTP-1200)

- **ROBOT HALF**
  - 6 x 1/4” Air Ports Module | Face Seal
  - (2) AIR PORTS FOR RQC ACTUATION WHEN MODULE IS MOUNTED ON SIDE “A”

- **TOOL HALF**
  - 6 x 1/4” Air Ports Module | Face Seal
  - (2) M5 SHCS
  - (6) X “A” (SEE TABLE)

---

**Module kits above include:** Couplings, indexing sleeves and hardware.

**Module Replacement**

<table>
<thead>
<tr>
<th>FOR RQC-200/400</th>
<th>FOR RQC 800/1200</th>
</tr>
</thead>
<tbody>
<tr>
<td>FN KFN-RQC200</td>
<td>KFN-RQC800</td>
</tr>
<tr>
<td>FP KFP-RQC200</td>
<td>KFP-RQC800</td>
</tr>
<tr>
<td>FT KFT-RQC200</td>
<td>KFT-RQC800</td>
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</table>

<table>
<thead>
<tr>
<th>FOR RTP-200/400</th>
<th>FOR RTP 800/1200</th>
</tr>
</thead>
<tbody>
<tr>
<td>FN KFN-RTP200</td>
<td>KFN-RTP800</td>
</tr>
<tr>
<td>FP KFP-RTP200</td>
<td>KFP-RTP800</td>
</tr>
<tr>
<td>FT KFT-RTP200</td>
<td>KFT-RTP800</td>
</tr>
</tbody>
</table>

Dimensions and technical information are subject to change without notice.
2 x 3/4” Vacuum Ports Module | Face Seal (for RQC/RTP-200 & RQC/RTP-400)

Module kits above include: Couplings, indexing sleeves and hardware.
RQC/RTP SERIES

Automatic Tool Changers | Technical Specifications | Dimensions

6 x 1/4” Air Ports Module | Face Seal (for RQC/RTP-800 & RQC/RTP-1200)

Module kits above include:
Couplings, indexing sleeves and hardware.

4 x 3/8” Fluid Ports Module | Non Spilling | Double Shut-Off
(for RQC/RTP-800 & RQC/RTP-1200)

Module kits above include:
Couplings, indexing sleeves and hardware.
DOUBLE SHUT-OFF

Module kits above include: Couplings, indexing sleeves and hardware.

ROBOT HALF

[0.20] Ø5.0
(6) SHUT-OFF SOCKET WITH AIR PORTS

TOOL HALF

[0.20] Ø5.0
(6) SHUT-OFF SOCKET WITH AIR PORTS

SEE DETAIL ABOVE

SEE DETAIL BELOW

DOUBLE SHUT-OFF

FOR RQC/RTP-800 & RQC/RTP-1200

6 x 1/4” Air Ports Module | Single Shut-Off Flat Face (RN/RP/RT)
or 6 x 1/4” Air Ports Module | Double Shut-Off Flat Face (SN/SP/ST)
**QC/TP SERIES**

Automatic Tool Changers | Features and Benefits

**Failsafe Operation**
Failsafe locking spring keeps units coupled in the event of pressure loss

**Durable Components**
Locking components are made from hardened bearing & tool steels

**Self Lubricating Seals**
Self lubricating dynamic seals

**Offboard I/O Block**
with heavy-duty pins offer reliable contact points

**Robot Side**

**Switches for Couple/Uncouple/Ready-to-Couple**
Switch for latch (size 150 only)

**Heavy-Duty Locking Mechanism**
Improved rigidity for heavy-duty and in-process changing

**Tool Side**

**Module Mounting Surface**
Flat for optional pneumatic, fluid or electric module

---

Mounting Information

**Robot Half Adaptor**
has counterbored holes for mounting and two dowel pins for hole location (size 30 has pilot boss)

**Tool Half Adaptor**
has counterbored holes for mounting and two dowel pins for hole location (size 30 has pilot boss)
Combined Weight: 0.34 Kg [0.75 lbs]
Max. Payload: 13.6 Kg [30 lbs]
Max. Moment: 22.6 Nm [200 in-lbs]

QC-30/TP-30

QC-60/TP-60

Combined Weight: 1.27 Kg [2.8 lbs]
Max. Payload: 27 Kg [60 lbs]
Max. Moment: 88.1 Nm [780 in-lbs]

QC-60-10P/TP-60-10P

Combined Weight: 1.27 Kg [2.8 lbs]
Max. Payload: 27 Kg [60 lbs]
Max. Moment: 88.1 Nm [780 in-lbs]

QC-60-10P/TP-60-10P

Combined Weight: 3.2 Kg [7.1 lbs]
Max. Payload: 68 Kg [150 lbs]
Max. Moment: 215 Nm [1900 in-lbs]

QC-150/TP-150

Dimensions and technical information are subject to change without notice
**QC/TP SERIES**

Automatic Tool Changers | How to Order

---

**Base Model**

<table>
<thead>
<tr>
<th>Model Size</th>
<th>Port Options (QC-only)</th>
<th>I/O Block</th>
<th>Optional Modules*</th>
<th>10-Port (QC/TP-60 only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>QC 30</td>
<td>Blank 1/8 NPT</td>
<td>E15</td>
<td>E26 26-PIN 5A Module</td>
<td></td>
</tr>
<tr>
<td>QC 60</td>
<td>15-pin, Sub-D</td>
<td></td>
<td>E19' 19-PIN 5A Module</td>
<td></td>
</tr>
<tr>
<td>QC 150</td>
<td>12-pin, Turck</td>
<td></td>
<td>E10 10-PIN 13A Module</td>
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</tr>
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</table>

**Robot Side**

<table>
<thead>
<tr>
<th>Model Size</th>
<th>Port Options (QC-only)</th>
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</tr>
</tbody>
</table>

**Tool Side**

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<tr>
<th>Model Size</th>
<th>Port Options (QC-only)</th>
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</thead>
<tbody>
<tr>
<td>TP 30</td>
<td>Blank 1/8 NPT</td>
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<td>12-pin, Turck</td>
<td></td>
<td>E10 10-PIN 13A Module</td>
<td></td>
</tr>
</tbody>
</table>

---

**Pneumatic Accessories**

- **SLKT-387**: Seal Repair Kit (QC-30)
- **SLKT-388**: Face Seal Repair Kit (QC-30)
- **SLKT-389**: Seal Repair Kit (QC-60)
- **SLKT-390**: Face Seal Repair Kit (QC-60/150)
- **SLKT-392**: Face Seal Repair Kit (QC-60-10P)
- **SLKT-393**: Seal Repair Kit (QC-150)

---

**Electric and Pneumatic Accessories (Ordered Separately)**

**Electrical Accessories**

- **ELCT-047**: Straight Female 12-pin D-Sub User Plug, w/o Cable, Solder Type for E15 (QC/TP-60/150)
- **CABL-021**: 90° Female Cordset 4M for E12 (QC-30/60/150)
- **CABL-023**: 90° Male Cordset 2M for E12 (TP-30/60/150)
- **CABL-024**: Straight Male Cordset 1.2M for E15 (QC/TP-30)
- **OSRK-009**: NPN Inductive Sensor Repair Kit (QC-150 Only)
- **OSRK-010**: PNP Inductive Sensor Repair Kit (QC-150 Only)

**Pneumatic Accessories**

- **SLKT-387**: Seal Repair Kit (QC-30)
- **SLKT-388**: Face Seal Repair Kit (QC-30)
- **SLKT-389**: Seal Repair Kit (QC-60)
- **SLKT-390**: Face Seal Repair Kit (QC-60/150)
- **SLKT-392**: Face Seal Repair Kit (QC-60-10P)
- **SLKT-393**: Seal Repair Kit (QC-150)

---

*QC/TP-30 and QC/TP-60-10P cannot be ordered with optional modules*
QC-30 (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

QC-30 Specification:
- Max. Payload: 13.6 Kg [30 lbs]
- Max. Moment Rating: 22.6 Nm [200 in-lbs]
- Weight of QC Unit only: 0.23 Kg [0.50 lbs]
- Weight of Coupled Units: 0.34 Kg [0.75 lbs]
- Bore Ø: 25.4 mm [1.00 in]
- Displacement: 3.9 cm³ [0.24 in³]

Loading Capacity
- Max. Tensile: 311 N [70 lb]
- Max. Compressive: 445 N [100 lb]
- Max. Moment (Mx/My/Mz): 22.6 Nm [200 in.-lb.]

Dimensions and technical information are subject to change without notice.
**TP-30 Specification:**

Max. Payload: 13.6 Kg [30 lbs]

Max. Moment Rating: 22.6 Nm [200 in-lbs]

Weight of TP Unit only : 0.11 Kg [0.25 lbs]

Weight of Coupled Units: 0.34 Kg [0.75 lbs]

**Loading Capacity**

Max. Tensile T: 311 N [70 lb]

Max. Compressive C: 445 N [100 lb]

Max. Moment (Mx/My/Mz): 22.6 Nm [200 in.-lb.]

---

**Dimensions and technical information are subject to change without notice**
**QC-60 Specification:**
- **Max. Payload:** 27 Kg [60 lbs]
- **Max. Moment Rating:** 88.1 Nm [780 in-lbs]
- **Weight of QC Unit only:** 0.86 Kg [1.9 lbs]
- **Weight of Coupled Units:** 1.27 Kg [2.8 lbs]
- **Bore Ø:** 44.5 mm [1.75 in]
- **Displacement:** 9.2 cm³ [0.56 in³]

**Loading Capacity**
- **Max. Tensile T:** 445 N [100 lb]
- **Max. Compressive C:** 534 N [120 lb]
- **Max. Moment (Mx/My/Mz):** 88.1 Nm [780 in-lbs]

---

**QC-60 (ROBOT SIDE)**

**Automatic Tool Changers | Technical Specifications | Dimensions**

---

**Fail-safe operation:**
4-way valves with a spring return are recommended to maintain air pressure to the lock port during emergency stop conditions.

---

**Dimensions and technical information are subject to change without notice**
**TP-60 Specification:**

- Max. Payload: 27 Kg [60 lbs]
- Max. Moment Rating: 88 Nm [780 in-lbs]
- Weight of TP Unit only: 0.41 Kg [0.90 lbs]
- Weight of Coupled Units: 1.27 Kg [2.8 lbs]

**Loading Capacity**

- Max. Tensile T: 445 N [100 lb]
- Max. Compressive C: 534 N [120 lb]
- Max. Moment (Mx/My/Mz): 88.1 Nm [780 in.-lb.]

---

**VIEW F**

- Module mounting
- 5 x M4 [9 DP]
- 2 x [5SH7 x 9.5 DP] *:
- Flat for module mounting 0.26 [6.6] thick

---

**Block E12**

- E12 I/O block
- 12 contact 2A-75VDC with industrial connector
- Wire output direction

---

**UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW**

| DIMENSIONS ARE | SYMMETRICAL ABOUT CENTERLINE |
| THIRD ANGLE PROJECTION | ALL DOWEL HOLES ARE SF [SUIT FIT], LOCATIONAL TOLERANCES ±0.005" OR ±0.013-MM |
| METRIC THREADS | COURSE PITCH |

**IMPERIAL ([IN.])**

- 0.00 " = ±0.01
- 0.000 = ±0.005
- 0.0000 = ±0.0005

**METRIC (MM)**

- [0] = ±0.25
- [0.0] = ±0.13
- [0.00] = ±0.013
**QC-60-10P (ROBOT SIDE)**

Automatic Tool Changers | Technical Specifications | Dimensions

**QC-60-10P Specification:**
- Max. Payload: 27 Kg [60 lbs]
- Max. Moment Rating: 88.1 Nm [780 in-lbs]
- Weight of QC Unit only: 0.86 Kg [1.9 lbs]
- Weight of Coupled Units: 1.27 Kg [2.8 lbs]
- Bore Ø: 44.5 mm [1.75 in]
- Displacement: 9.2 cm³ [0.56 in³]

**Loading Capacity**
- Max. Tensile T: 445 N [100 lb]
- Max. Compressive C: 534 N [120 lb]
- Max. Moment (Mx/My/Mz): 88.1 Nm [780 in-lb.]

---

**Dimensions and technical information are subject to change without notice.**

**Failsafe operation:**
4-way valves with a spring return are recommended to maintain air pressure to the lock port during emergency stop conditions.

**QC-60-10P**
- Max. Payload: 27 Kg [60 lbs]
- Max. Moment Rating: 88.1 Nm [780 in-lbs]
- Weight of QC Unit only: 0.86 Kg [1.9 lbs]
- Weight of Coupled Units: 1.27 Kg [2.8 lbs]
- Bore Ø: 44.5 mm [1.75 in]
- Displacement: 9.2 cm³ [0.56 in³]

**Loading Capacity**
- Max. Tensile T: 445 N [100 lb]
- Max. Compressive C: 534 N [120 lb]
- Max. Moment (Mx/My/Mz): 88.1 Nm [780 in-lb.]

---

**Dimensions and technical information are subject to change without notice.**

**Failsafe operation:**
4-way valves with a spring return are recommended to maintain air pressure to the lock port during emergency stop conditions.

**QC-60-10P Specification:**
- Max. Payload: 27 Kg [60 lbs]
- Max. Moment Rating: 88.1 Nm [780 in-lbs]
- Weight of QC Unit only: 0.86 Kg [1.9 lbs]
- Weight of Coupled Units: 1.27 Kg [2.8 lbs]
- Bore Ø: 44.5 mm [1.75 in]
- Displacement: 9.2 cm³ [0.56 in³]

**Loading Capacity**
- Max. Tensile T: 445 N [100 lb]
- Max. Compressive C: 534 N [120 lb]
- Max. Moment (Mx/My/Mz): 88.1 Nm [780 in-lb.]

---

**Dimensions and technical information are subject to change without notice.**

**Failsafe operation:**
4-way valves with a spring return are recommended to maintain air pressure to the lock port during emergency stop conditions.
TP-60-10P Specification:
Max. Payload: 27 Kg [60 lbs]
Max. Moment Rating: 88 Nm [780 in-lbs]
Weight of TP Unit only: 0.41 Kg [0.90 lbs]
Weight of Coupled Units: 1.27 Kg [2.8 lbs]

Loading Capacity
Max. Tensile T: 445 N [100 lb]
Max. Compressive C: 534 N [120 lb]
Max. Moment (Mx/My/Mz): 88.1 Nm [780 in.-lb.]
QC-150 Specification:
Max. Payload: 68 Kg [150 lbs]
Max. Moment Rating: 215 Nm [1900 in-lbs]
Weight of QC Unit only: 2.2 Kg [4.8 lbs]
Weight of Coupled Units: 3.2 Kg [7.1 lbs]
Bore Ø: 66.8 mm [2.63 in]
Displacement: 25.4 cm³ [1.55 in³]

Loading Capacity
Max. Tensile T: 890 N [200 lb]
Max. Compressive C: 1334 N [300 lb]
Max. Moment (Mx/My/Mz): 214 Nm [1900 in.-lb.]
TP-150 Specification:
Max. Payload: 68 Kg [150 lbs]
Max. Moment Rating: 215 Nm [1900 in-lbs]
Weight of TP Unit only: 1.0 Kg [2.3 lbs]
Weight of Coupled Units: 3.2 Kg [7.1 lbs]

Loading Capacity
Max. Tensile T: 890 N [200 lb]
Max. Compressive C: 1334 N [300 lb]
Max. Moment \( (M_x/M_y/M_z) \): 214 Nm [1900 in.-lb.]

UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW
**Automatic Tool Changers | Dimensions | 10-Pin Module 5Amp @ 120VDC Electric Module**

**10-Pin Module 5Amp @ 120VDC Electric Module**

**Module** | **Model** | **Robot Side** | **Tool Side** | **Accessory**
---|---|---|---|---
QC/TP60 | E10 | KE10-QC60 | KE10-TP60 | ELCT-041 (Female)
QC/TP60 | E10 | KE10-QC150 | KE10-TP150 | ELCT-042 (Male)

*Straight Plug, (w/o Cable), Solder Type, Cable Clamp

Module kits above include: Flat for module mounting, straight plug (without cable), locating pins and hardware.

---

**19-Pin Module 5Amp @ 120VDC Electric Module**

**Module** | **Model** | **Robot Side** | **Tool Side** | **Accessory**
---|---|---|---|---
QC/TP60 | E19 | KE19-QC60 | KE19-TP60 | ELCT-043 (Female)
QC/TP60 | E19 | KE19-QC150 | KE19-TP150 | ELCT-044 (Male)

*Straight Plug, (w/o Cable), Solder Type, Cable Clamp

Module kits above include: Flat for module mounting, straight plug (without cable), locating pins and hardware.
Automatic Tool Changers | Dimensions | 26-Pin Module 5Amp @ 120VDC Electric Module

Flat for module mounting not shown: See QC or TP drawings.

<table>
<thead>
<tr>
<th>Model</th>
<th>Module</th>
<th>Robot Side</th>
<th>Tool Side</th>
<th>*Accessory</th>
</tr>
</thead>
<tbody>
<tr>
<td>QC/TP60</td>
<td>E26</td>
<td>KE26-QC60</td>
<td>KE26-TP60</td>
<td>ELCT-045 (Female)</td>
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<tr>
<td>QC/TP150</td>
<td>E26</td>
<td>KE26-QC150</td>
<td>KE26-TP150</td>
<td>ELCT-046 (Male)</td>
</tr>
</tbody>
</table>

*Straight Plug, (w/o Cable), Solder Type, Cable Clamp

Module kits above include: Flat for module mounting, straight plug (without cable), locating pins and hardware.

2 X 1/4” Air Port Module | Face Seal

Flat for module mounting not shown: See QC or TP drawings.

For QC/TP-60

<table>
<thead>
<tr>
<th>Module</th>
<th>Robot Side</th>
<th>Tool Side</th>
</tr>
</thead>
<tbody>
<tr>
<td>PN14</td>
<td>KPN14-QC60</td>
<td>KPN14-TP60</td>
</tr>
<tr>
<td>PP14</td>
<td>KPP14-QC60</td>
<td>KPP14-TP60</td>
</tr>
<tr>
<td>PT14</td>
<td>KPT14-QC60</td>
<td>KPT14-TP60</td>
</tr>
<tr>
<td>Seal Kit</td>
<td>SLKT-395</td>
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</table>

For QC/TP-150

<table>
<thead>
<tr>
<th>Module</th>
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<th>Tool Side</th>
</tr>
</thead>
<tbody>
<tr>
<td>PN14</td>
<td>KPN14-QC150</td>
<td>KPN14-TP150</td>
</tr>
<tr>
<td>PP14</td>
<td>KPP14-QC150</td>
<td>KPP14-TP150</td>
</tr>
<tr>
<td>PT14</td>
<td>KPT14-QC150</td>
<td>KPT14-TP150</td>
</tr>
<tr>
<td>Seal Kit</td>
<td>SLKT-395</td>
<td>---</td>
</tr>
</tbody>
</table>

Module kits include: Flat for module mounting, seals, locating pins and hardware.
For QC/TP-60

Module | Robot Side | Tool Side
PN18 | KPN18-QC60 | KPN18-TP60
PP18 | KPP18-QC60 | KPP18-TP60
PT18 | KPT18-QC60 | KPT18-TP60

Seal Kit | SLKT-391

For QC/TP-150

Module | Robot Side | Tool Side
PN18 | KPN18-QC150 | KPN18-TP150
PP18 | KPP18-QC150 | KPP18-TP150
PT18 | KPT18-QC150 | KPT18-TP150

Seal Kit | SLKT-391

Module kits include: Flat for module mounting, seals, locating pins and hardware.

Dimensions and technical information are subject to change without notice.
### QC/TP SERIES

**Automatic Tool Changers | Dimensions | Sub-D Conn and User Plug IO Block**

See individual datasheets for dimensions.

<table>
<thead>
<tr>
<th>15 Pin w/Sub-D Conn and User Plug w/o cable</th>
<th>12 Pin w/Turck M12 Conn w/o Cordset</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td><strong>Module</strong></td>
</tr>
<tr>
<td>QC/TP30</td>
<td>E15</td>
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<tr>
<td>QC/TP60</td>
<td>E15</td>
</tr>
<tr>
<td>QC/TP150</td>
<td>E15</td>
</tr>
</tbody>
</table>

Dimensions and technical information are subject to change without notice.
**RHC SERIES**

Automatic Tool Changers | Features and Benefits

**Durable Components**
Locking components are made from hardened bearing & tool steels

**Self Lubricating Seals**
Self lubricating dynamic seals

**Quality Materials**
Each body is made of lightweight 7075-T6 aircraft quality aluminum

**Pneumatic Ports**
User pneumatic ports

**Robot Side**

**Tool Side**

**Durable Finish**
Bodies have hard-coat anodize 60RC with Teflon® impregnation

**Electrical Contacts**
(Sold Separately- See “How to Order” Section for more info)

**Precision Cone Positioning**
Machine tool proven mating conical coupling

**Failsafe Operation**
Failsafe locking spring keeps units coupled in the event of pressure loss

**Mounting Information**

**Robot Half Adaptor**
mounts with screws from behind or through the front and locates with dowel pins for accuracy.

**Tool Half Adaptor**
mounts payload with screws from behind or through the front and locates with dowel pins for accuracy. Protect cone surfaces from debris to insure proper positioning.

Dimensions and technical information are subject to change without notice.
## RHC SERIES

### Automatic Tool Changers | Ordering Information

<table>
<thead>
<tr>
<th>Robot Side</th>
<th>Tool Side</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHC-1-R</td>
<td>RHC-1-T</td>
</tr>
<tr>
<td>RHC-2-R</td>
<td>RHC-2-T</td>
</tr>
<tr>
<td>RHC-3-R</td>
<td>RHC-3-T</td>
</tr>
<tr>
<td>RHC-4-R</td>
<td>RHC-4-T</td>
</tr>
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</table>

### Base Model

<table>
<thead>
<tr>
<th>Base Model</th>
<th>Metric</th>
<th>Adapter Module</th>
<th>Seals</th>
<th>Contacts</th>
<th>Sensor</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHC-1</td>
<td>1</td>
<td>Blank Imperial M</td>
<td>Viton® Seals</td>
<td>OHCC-009</td>
<td>P NP Sensors</td>
</tr>
<tr>
<td>RHC-2</td>
<td>M</td>
<td>Robot Side Adaptor Module</td>
<td>R</td>
<td>R</td>
<td>N NPN Sensors</td>
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<tr>
<td>RHC-3</td>
<td>M</td>
<td>Tool Side Adaptor Module</td>
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<td>T</td>
<td>No Sensors</td>
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<tr>
<td>RHC-4</td>
<td>M</td>
<td>Robot Side Adaptor Module</td>
<td>R</td>
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</tbody>
</table>

#### Optional Contacts

**Robot Side**
- OHCC-009: 15 Pin D-Sub Contacts (RHC-1)
- OHCC-001: 26 Pin D-Sub Contacts (RHC-1)
- OHCC-011: 15 Pin D-Sub Contacts (RHC-2, -3)
- OHCC-003: 25 Pin D-Sub Contacts (RHC-2, -3)
- OHCC-005: 19 Pin Mil. Spec. Contacts (RHC-3)
- OHCC-007: 38 Pin Mil. Spec. Contacts (RHC-3)
- OHCC-021: 24 Pin Mil. Spec. Contacts (RHC-4)

**Tool Side**
- OHCC-010: 15 Pin D-Sub Contacts (RHC-1)
- OHCC-002: 26 Pin D-Sub Contacts (RHC-1)
- OHCC-012: 15 Pin D-Sub Contacts (RHC-2, -3)
- OHCC-004: 25 Pin D-Sub Contacts (RHC-2, -3)
- OHCC-006: 19 Pin Mil. Spec. Contacts (RHC-3)
- OHCC-027: 24 Pin Mil. Spec. Contacts (RHC-4)
- OHCC-023: 24 Wire Single Pigtail Connector (RHC-4)
- OHCC-022: 24 Wire Double Pigtail Connector (RHC-4)

### Sensor and Pneumatic Accessories (Ordered Separately)

#### Sensor Accessories
- OSMK-064: Replacement Sensor Mounting Kit (RHC-3-R)
- OISP-009: Replacement Locked Position NPN Inductive Sensor with Hard Wired Cable (RHC-3-R)
- OISP-009: Replacement Locked Position NPN Inductive Sensor with Hard Wired Cable (RHC-4-R)
- OSMK-063: Replacement Sensor Mounting Kit (RHC-4-R)
- OISN-008: Replacement Locked Position NPN Inductive Sensor with Hard Wired Cable (RHC-3-R)
- OISP-008: Replacement Locked Position PNP Inductive Sensor with Hard Wired Cable (RHC-4-R)

#### Pneumatic Accessories
- SLKT-028: Standard Seal Repair Kit (RHC-1-R)
- SLKT-028V: Viton Seal Repair Kit (RHC-1-R)
- SLKT-029: Standard Seal Repair Kit (RHC-2-R)
- SLKT-029V: Viton Seal Repair Kit (RHC-2-R)
- SLKT-030: Standard Seal Repair Kit (RHC-3-R)
- SLKT-030V: Viton Seal Repair Kit (RHC-3-R)
- SLKT-031: Standard Seal Repair Kit (RHC-4-R)
- SLKT-031V: Viton Seal Repair Kit (RHC-4-R)

Dimensions and technical information are subject to change without notice.
**RHC-1-R Specification:**
- Max. Payload (W): 9 Kg [20 lbs]
- Weight of -R Unit only: 0.18 Kg [0.41 lbs]
- Weight of Coupled Units: 0.28 Kg [0.63 lbs]
- Bore Ø: 19 mm [0.75 in]
- Displacement: 4.18 cm³ [0.255 in³]

**Loading Capacity**
- Max. Tensile T: 890 N [200 lb]
- Max. Compressive C: 2224 N [500 lb]
- Max. Moment (Mx/My): 14 Nm [125 in-lb.]
- Max. Moment (Mz): 28 Nm [250 in-lb.]

---

**Model Robot Side Description Specification**

<table>
<thead>
<tr>
<th>Model</th>
<th>Robot Side</th>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHC-1</td>
<td>OHCC-009</td>
<td>15 Pin D-Sub Contacts</td>
<td>15 Pin @ 3 AMPS</td>
</tr>
<tr>
<td></td>
<td>OHCC-001</td>
<td>26 Pin D-Sub Contacts</td>
<td>26 Pin @ 3 AMPS</td>
</tr>
</tbody>
</table>

---

Dimensions and technical information are subject to change without notice.
RHC-1-T Specification:
Max. Payload (W): 9 Kg [20 lbs]
Weight of -T Unit only: 0.09 Kg [0.22 lbs]
Weight of Coupled Units: 0.28 Kg [0.63 lbs]

Loading Capacity
Max. Tensile T: 890 N [200 lb]
Max. Compressive C: 2224 N [500 lb]
Max. Moment (Mx/My): 14 Nm [125 in.-lb.]
Max. Moment (Mz): 28 Nm [250 in.-lb.]

RHC-1-T (Tooling Side)

Automatic Tool Changers | Technical Specifications | Dimensions

Dimensions and technical information are subject to change without notice
**RHC-2-R (ROBOT SIDE)**

Automatic Tool Changers | Technical Specifications | Dimensions

---

**RHC-2 Specification:**
- **Max. Payload (W):** 59 Kg [130 lbs]
- **Weight of -R Unit only:** 0.44 Kg [0.99 lbs]
- **Weight of Coupled Units:** 0.82 Kg [1.81 lbs]
- **Bore Ø:** 28.57 mm [1.125 in]
- **Displacement:** 12.22 cm³ [0.746 in³]

**Loading Capacity**
- **Max. Tensile T:** 3336 N [750 lb]
- **Max. Compressive C:** 6672 N [1500 lb]
- **Max. Moment (Mₓ/Mᵧ):** 90 Nm [800 in.-lb.]
- **Max. Moment (Mz):** 136 Nm [1200 in.-lb.]

---

**Dimensions and technical information are subject to change without notice**

<table>
<thead>
<tr>
<th>Model</th>
<th>Robot Side</th>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHC-2</td>
<td>OHCC-011</td>
<td>15 Pin D-Sub Contacts</td>
<td>15 Pin @ 3 AMPS</td>
</tr>
<tr>
<td></td>
<td>OHCC-003</td>
<td>25 Pin D-Sub Contacts</td>
<td>25 Pin @ 3 AMPS</td>
</tr>
</tbody>
</table>

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Dimensions and technical information are subject to change without notice.
RHC-2-T Specification:
Max. Payload (W): 59 Kg [130 lbs]
Weight of -T Unit only: 0.37 Kg [0.82 lbs]
Weight of Coupled Units: 0.82 Kg [1.81 lbs]

Loading Capacity
Max. Tensile T: 3336 N [750 lb]
Max. Compressive C: 6672 N [1500 lb]
Max. Moment (Mx/My): 90 Nm [800 in.-lb.]
Max. Moment (Mz): 136 Nm [1200 in.-lb.]

Dimensions and technical information are subject to change without notice

25 PIN OR 15 PIN D-SUB ELECTRICAL CONTACTS

Model | Tool Side | Description | Specification
--- | --- | --- | ---
RHC-2 | OHCC-012 | 15 Pin D-Sub Contacts | 15 Pin @ 3 AMPS
OHCC-004 | 25 Pin D-Sub Contacts | 25 Pin @ 3 AMPS
**RHC-3-R Specification:**
Max. Payload (W): 136 Kg [300 lbs]
Weight of -R Unit only: 1.79 Kg [3.95 lbs]
Weight of Coupled Units: 3.1 Kg [6.7 lbs]
Bore Ø: 44.45 mm [1.750 in]
Displacement: 44.34 cm³ [2.706 in³]

**Loading Capacity**
Max. Tensile T: 8896 N [2000 lb]
Max. Compressive C: 17793 N [4000 lb]
Max. Moment (Mx/My): 678 Nm [6000 in.-lb.]
Max. Moment (Mz): 1017 Nm [9000 in.-lb.]

**Dimensions and technical information are subject to change without notice**
**RHC-3-T Specification:**
Max. Payload (W): 136 Kg [300 lbs]
Weight of -T Unit only: 1.29 Kg [2.85 lbs]
Weight of Coupled Units: 3.1 Kg [6.7 lbs]

**Loading Capacity**
Max. Tensile T: 8896 N [2000 lb]
Max. Compressive C: 17793 N [4000 lb]
Max. Moment (Mx/My): 678 Nm [6000 in.-lb.]
Max. Moment (Mz): 1017 Nm [9000 in.-lb.]

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<table>
<thead>
<tr>
<th>Model</th>
<th>Tool Side</th>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHC-3</td>
<td>OHCC-010</td>
<td>15 Pin D-Sub Contacts</td>
<td>15 Pin @ 3 AMPS</td>
</tr>
<tr>
<td></td>
<td>OHCC-002</td>
<td>25 Pin D-Sub Contacts</td>
<td>25 Pin @ 3 AMPS</td>
</tr>
<tr>
<td></td>
<td>OHCC-006</td>
<td>19 Pin Mil. Spec. Contacts</td>
<td>19 Pin @ 3 AMPS</td>
</tr>
</tbody>
</table>

Dimensions and technical information are subject to change without notice.
**RHC-4-R Specification:**
- **Max. Payload (W):** 454 Kg [1000 lbs]
- **Weight of -R Unit only:** 6.52 Kg [12.39 lbs]
- **Weight of Coupled Units:** 22 Kg [10 lbs]
- **Bore Ø:** 57.15 mm [2.250 in]
- **Displacement:** 85.52 cm³ [85.52 in³]

**Loading Capacity**
- **Max. Tensile T:** 35586 N [8000 lb]
- **Max. Compressive C:** 71171 N [16000 lb]
- **Max. Moment (Mx/My):** 2825 Nm [25000 in.-lb.]
- **Max. Moment (Mz):** 2825 Nm [25000 in.-lb.]

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**Model** | **Robot Side** | **Description** | **Specification**
--- | --- | --- | ---
RHC-4 | OHCC-021 | 24 Pin Mil. Spec. Contacts | 24 Pin @ 3 AMPS

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Dimensions and technical information are subject to change without notice.
RHC-4-T Specification:
Max. Payload (W): 454 Kg [1000 lbs]
Weight of -T Unit only: 4.35 Kg [9.61 lbs]
Weight of Coupled Units: 10 Kg [22 lbs]

Loading Capacity
Max. Tensile T: 35586 N [8000 lb]
Max. Compressive C: 71171 N [16000 lb]
Max. Moment (Mx/My): 2825 Nm [25000 in.-lb.]
Max. Moment (Mz): 2825 Nm [25000 in.-lb.]

<table>
<thead>
<tr>
<th>Model</th>
<th>Tool Side</th>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHC-4</td>
<td>OHCC-027</td>
<td>24 Pin Mil. Spec. Contacts</td>
<td>24 Pin @ 3 AMPS</td>
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<tr>
<td></td>
<td>OHCC-023</td>
<td>24 Wire Single Pigtail Connector</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OHCC-022</td>
<td>24 Wire Double Pigtail Connector</td>
<td></td>
</tr>
</tbody>
</table>
**Flexibility of the tool:**
Cylindrical Horizontal compliance devices are used for inserting components that may be misaligned with the tool. They allow a horizontal displacement that compensates for part placing inaccuracies.

**For precision applications:**
The use of high quality components allow to get centering repeatability from 0.02mm and angular repeatability from ±10°.

**Harsh environments:**
The enclosed design of this series allows them to be used in harsh environments.

**Spring assist:**
Due to the optional spring assist, compliance may be used in single acting mode.

**Air Ports**
Side or top airports (top ports require O-rings)

**Quality Components**
Made from aluminum alloy hard coat anodization. Main components are made of hardened and precision ground steel

**Mounting Information**

The compliance is located using a pilot boss and a dowel pin and assembled using 4 or 6 through body screws

Tooling is located using a centering and a dowel pin and assembled using 4 screws

Dimensions and technical information are subject to change without notice.
Pneumatic Specification
Pressure Range (w/o springs): 2-7 bar [30-100 psi]
Pressure Range (w/springs CH-50): 3-7 bar [43-100 psi]
Pressure Range (w/springs): 4-7 bar [60-100 psi]
Cylinder Type: Double Acting, Double Acting Spring Assist, or Single Acting Spring Return
Dynamic Seals: Internally Lubricated Buna-N
Valve Required to Actuate: Double Acting: 4-way, 2-Position; Single Acting (-RL or -RA Option): 3-way, 2-Position

Air Quality Requirements
Air Filtration: 40 Microns or Better
Air Lubrication: Not Necessary*
Air Humidity: Low Moisture Content (Dry)
(*)Addition of lubrication will greatly increase service life.

Temperature Operating Range
Buna-N-Seals (Standard): -25°~80° C [-10°~180° F]

Maintenance Specification
Expected Life: Normal Application: 5 Million Cycles
With Preventative Maintenance: 6+ Million Cycles
Field Repairable: Yes
Seal Repair Kits Available: Yes

How to Order

<table>
<thead>
<tr>
<th>Base Model</th>
<th>Spring Assist</th>
<th>Misalignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH-50</td>
<td>RA</td>
<td>XX</td>
</tr>
<tr>
<td>CH-50</td>
<td></td>
<td>Special Misalignment x 10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ie: 15 is for ± 1.5 mm)</td>
</tr>
<tr>
<td>CH-80</td>
<td></td>
<td>Leave Blank. Standard Capability</td>
</tr>
<tr>
<td>CH-110</td>
<td>RA</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tool Recentering</td>
</tr>
<tr>
<td>CH-140</td>
<td>RL</td>
<td>Tool Release</td>
</tr>
<tr>
<td>CH-165</td>
<td></td>
<td>Leave Blank. No Spring Option (Standard)</td>
</tr>
</tbody>
</table>

Max. Payload: CH-50: 2 Kg [4.4 lbs], CH-80: 8 Kg [17.6 lbs], CH-110: 14 Kg [30.8 lbs], CH-140: 30 Kg [66.12 lbs], CH-165: 40 Kg [88.18 lbs]

Dimensions and technical information are subject to change without notice.

EE-ATC | 48
**CH-50P Specification:**
Centering Force @ 7 bar [100 psi]: 322 N [74 lbs]
Max. Payload: 2 Kg [4.4 lbs]
Misalignment Capability: ±3 mm [± 0.12 in]
Weight: 0.195 Kg [0.43 lbs]
Cylinder Bore: 34 mm [1.34 in]
Displacement: 5.2 cm³ [0.32 in³ lbs]
Actuation: 0.07 sec [0.07 sec]
Repeatability: ±0.02 mm [±0.0008 in]
Angular Repeatability: ±10 mm

**Loading Capacity (View A):**
Max. Tensile T: 75 N [17 lb]
Max. Compressive C: 75 N [17 lb]
Max. Moment (Mx/Mz): 2 Nm [17.7 in.-lb.]
Max. Moment (Mz): 1 Nm [8.8 in.-lb.]

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**Dimensions and technical information are subject to change without notice**
**CH-80P Specification:**
- Centering Force @ 7 bar [100 psi]: 1035 N [232 lbs]
- Max. Payload: 8 Kg [17.6 lbs]
- Misalignment Capability: ±5 mm [± 0.20 in]
- Weight: 0.750 Kg [1.65 lbs]
- Cylinder Bore: 60 mm [2.37 in]
- Displacement: 26.8 cm³ [1.64 in³ lbs]
- Actuation: 0.08 sec [0.08 sec]
- Repeatability: ±0.02 mm [±0.0008 in]
- Angular Repeatability: ±10 mm

**Loading Capacity (View A):**
- Max. Tensile T: 160 N [36 lb]
- Max. Compressive C: 160 N [36 lb]
- Max. Moment (Mx/My): 8 Nm [71 in.-lb.]
- Max. Moment (Mz): 6 Nm [53 in.-lb.]

**Dimensions and technical information are subject to change without notice**
**CH-110P Specification:**
- **Centering Force @ 7 bar [100 psi]:** 1660 N [373 lbs]
- **Max. Payload:** 14 Kg [30.8 lbs]
- **Misalignment Capability:** ±6.5 mm [± 0.25 in]
- **Weight:** 2.10 Kg [4.6 lbs]
- **Cylinder Bore:** 76 mm [3.0 in]
- **Displacement:** 56 cm³ [3.42 in³ lbs]
- **Actuation:** 0.1 sec [0.1 sec]
- **Repeatability:** ±0.04 mm [±0.0016 in]
- **Angular Repeatability:** ±15 mm

**Loading Capacity (View A):**
- **Max. Tensile T:** 190 N [43 lb]
- **Max. Compressive C:** 190 N [43 lb]
- **Max. Moment (Mx/My):** 12 Nm [106 in.-lb.]
- **Max. Moment (Mz):** 18 Nm [159 in.-lb.]

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**Dimensions and technical information are subject to change without notice.**
**CH-140P Specification:**
- Centering Force @ 7 bar [100 psi]: 3170 N [712 lbs]
- Max. Payload: 30 Kg [66.1 lbs]
- Misalignment Capability: ±8 mm [± 0.31 in]
- Weight: 4.31 Kg [9.5 lbs]
- Cylinder Bore: 105 mm [4.13 in]
- Displacement: 148 cm³ [9.03 in³ lbs]
- Actuation: 0.02 sec [0.02 sec]
- Repeatability: ±0.06 mm [± 0.0024 in]
- Angular Repeatability: ±20 mm

**Loading Capacity (View A):**
- Max. Tensile T: 225 N [50 lb]
- Max. Compressive C: 225 N [50 lb]
- Max. Moment (Mx/My): 19 Nm [168 in.-lb.]  
- Max. Moment (Mz): 20 Nm [177 in.-lb.]

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**Dimensions and technical information are subject to change without notice.**

Dimensions and technical information are subject to change without notice.
CH-165P Specification:
Centering Force @ 7 bar [100 psi]: 4140 N [931 lbs]
Max. Payload: 40 Kg [88.2 lbs]
Misalignment Capability: ±12 mm [± 0.47 in]
Weight: 8.7 Kg [19.2 lbs]
Cylinder Bore: 120 mm [4.72 in]
Displacement: 236 cm³ [14.40 in³ lbs]
Actuation: 0.36 sec [0.36 sec]
Repeatability: ±0.06 mm [±0.0024 in]
Angular Repeatability: ±20 mm

Loading Capacity (View A):
Max. Tensile T: 230 N [52 lb]
Max. Compressive C: 230 N [52 lb]
Max. Moment (Mx/My): 23Nm [203 in.-lb.]
Max. Moment (Mz): 28 Nm [248 in.-lb.]

Dimensions and technical information are subject to change without notice.