


# Automatic Tool Changers (TC)

Full catalogue 2024

11/20/2024

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Házgyári út 7.

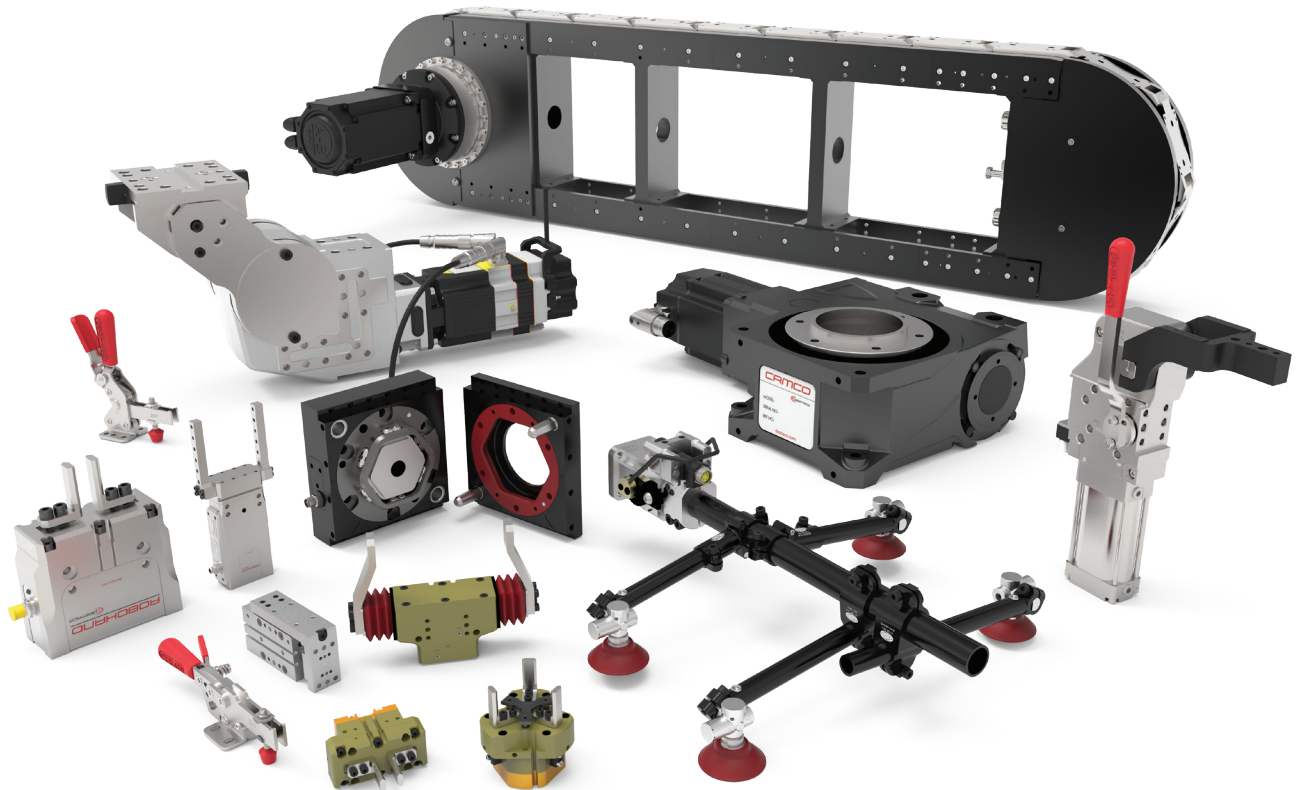
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Magyarország

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# Automatic Tool Changers (TC)

11/20/2024

This catalog is a custom document and the products included is based on your unique selection from portions of complete catalogs that already exist. Please refer to our full catalogs for more information on products not included in this customized document.

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# Automatic Tool Changers (TC)

11/20/2024

## Table of Contents (continued)

# SIZING AND APPLICATION CHART

## Tool Changers

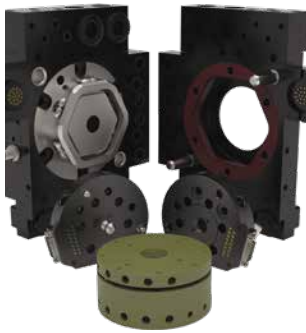
### Manual Tool Changer

See Page TC-TC1-1



Specifications:	TC1	
Max. Payload:	Kg [lb]	10 [22]
Coupled Weight:	Kg [lb]	0.33 [0.73]
Max Moment (My, Mz, Mx)	Nm [in-lb]	100 [885]
Max Force (Fy, Fz)	N [lbf]	1000 [225]
Max Force (Fx)	N [lbf]	100 [22.5]

### Automatic Tool Changers



Series	Page-TC-#	Max Moment Kg [lb]								Max Payload Kg [lb]				Weight Kg [lb]				Features								
		0 to 50 [0 to 110]	50 to 100 [110 to 220]	100 to 500 [220 to 1100]	500 to 1000 [1100 to 2200]	1000 to 2000 [2200 to 4400]	2000 to 3000 [4400 to 6600]	3000 to 4000 [6600 to 8800]	4000+ [9120+]	0 to 50 [0 to 110]	50 to 100 [110 to 220]	100 to 500 [220 to 1100]	500 to 1000 [1100 to 2200]	1000+ [2280+]	0 to 2 [0 to 4.4]	2 to 4 [4.4 to 8.8]	4 to 6 [8.8 to 13.2]	6 to 8 [13.2 to 17.6]	8+ [17.6+]	Optional Modules	High Temperature	Round Design	Rectangular Design	Failsafe Locking		
RQC/RTP-200	RQTP-3				●						●									●			✓		✓	✓
RQC/RTP-400	RQTP-7				●						●						●						✓		✓	✓
RQC/RTP-800	RQTP-7					●					●						●						✓		✓	✓
RQC/RTP-1200	RQTP-7						●				●							●					✓		✓	✓
RQC/RTP-2400	RQTP-13							●				●						●					✓		✓	✓
QC/TP-30	QCTP-5	●							●										●				✓		✓	✓
QC/TP-60	QCTP-7		●						●														✓		✓	✓
QC/TP-60-10	QCTP-9		●						●														✓		✓	✓
QC/TP-150	QCTP-11			●					●														✓		✓	✓
RHC-1	RHC-3	●							●														✓	✓	✓	✓
RHC-2	RHC-5		●						●														✓	✓	✓	✓
RHC-3	RHC-7				●				●														✓	✓	✓	✓
RHC-4	RHC-9					●			●														✓	✓	✓	✓

### Technical Information

#### Pneumatic Specification

Pressure Range (Locked Cylinder):

3~7 bar [40~100 psi] (QC/TP, RHC Series)

4~7 bar [60~100 psi] (RQC/RTP Series)

Cylinder Type: Double Acting, Spring Assist

Valve Required to Actuate:

3-way, 2-position (QC-30 only)

4-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: -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

# SIZING AND APPLICATION CHART

## Cylindrical Horizontal Compliance Device



Series	Page-TC-#	Max Centering Force Kg [lb]					Max Payload Kg [lb]			Weight Kg [lb]		Misalignment ±mm [±in]		Features										
		0 to 500 [0 to 1100]	500 to 1000 [1100 to 2200]	1000 to 2000 [2200 to 4400]	2000 to 3000 [4400 to 6600]	3000 to 4000 [6600 to 8800]	4000+ [9120+]	0 to 5 [0 to 110]	5 to 10 [110 to 220]	10 to 20 [220 to 1100]	20 to 40 [1100 to 2200]	0 to 1 [0 to 4.4]	1 to 2 [4.4 to 8.8]	2 to 4 [8.8 to 13.2]	4+ [17.6+]	3 [0.12]	5 [0.20]	6.5 [0.25]	8 [0.31]	12 [0.47]	Custom Misalignment	Optional Spring Assist	Harsh Environments	Field Repairable
	CH-50-P	CH-3	●				●			●				●							✓	✓	✓	✓
	CH-80-P	CH-4		●				●		●					●						✓	✓	✓	✓
	CH-110-P	CH-5			●				●			●					●				✓	✓	✓	✓
	CH-140-P	CH-6				●			●				●				●				✓	✓	✓	✓
	CH-165-P	CH-7					●			●			●				●				✓	✓	✓	✓

### Technical Information

#### 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

# ROBOTIC TOOLING SOLUTIONS

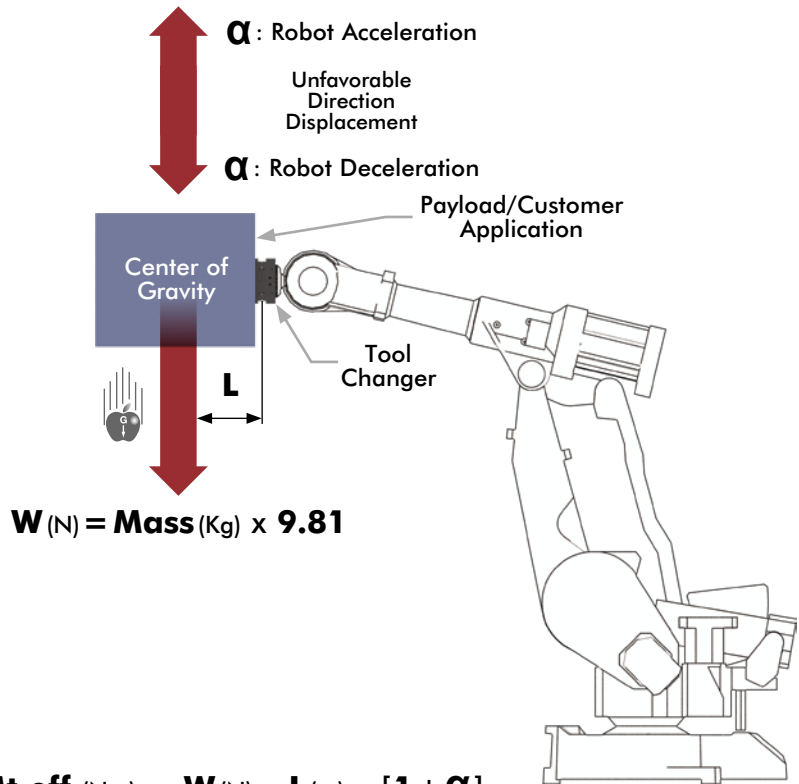
## Automatic Tool Changer Sizing Guide

For tool changer sizing, the maximum effective moment during displacement will be considered. The effective moment will be calculate in the worst case of the application, and must consider:

- The weight of the tool
- The position of the center of gravity
- The dynamic effect due to the maximum acceleration or deceleration. (Emergency stop for example)

See below the simplified calculation formula to estimate the effective moment of your application.

Required Information		
<b>M</b>	Mass of the tool attached on the tool changer	<b>Kg</b>
<b>L</b>	Distance from the payload center of gravity to the tool changer	<b>m</b>
<b>α</b>	Maximum acceleration or deceleration of the robot	<b>g</b>



**Effective Moment** → **Mt eff (Nm) = W(N) x L(m) x [1 + α]**

**CAUTION: Applications with high and wide loads:** in case of heavy application, we strongly recommend to strengthen the cylindrical and diamond indexing pins, between tool changer and tool plate, by adding larger diameter pins, the farthest to the center of changer tool, incorporated into the design of the tooling.

## Application Example

Application Data	
Mass of tool	90 kg
Center of gravity / Tool Changer	0.5 m
Acceleration (or deceleration) of displacement	2 g

$$Mt \text{ eff} = (90 \times 9.81) \times 0.5 \times (1 + 2)$$

$$Mt \text{ eff} = 883 \times 0.5 \times 3$$

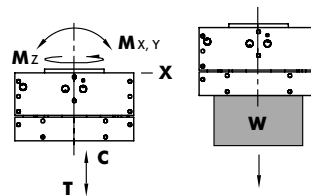
$$Mt \text{ eff} = 1324.5 \text{ Nm}$$

### 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]**



The obtained value 1324.5 Nm should be compared to the technical data of our products in this catalog in the "loading capacity information" section. For this application, the choice will be a RQC-400M tool changer that has a qualifying capacity, in terms of torque, of 1580Nm, over than the 1325Nm of the application.

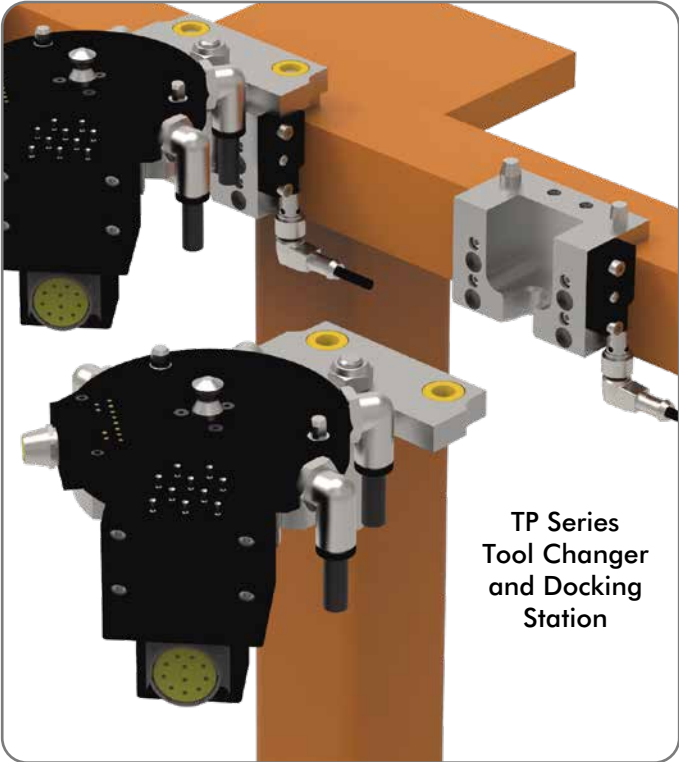
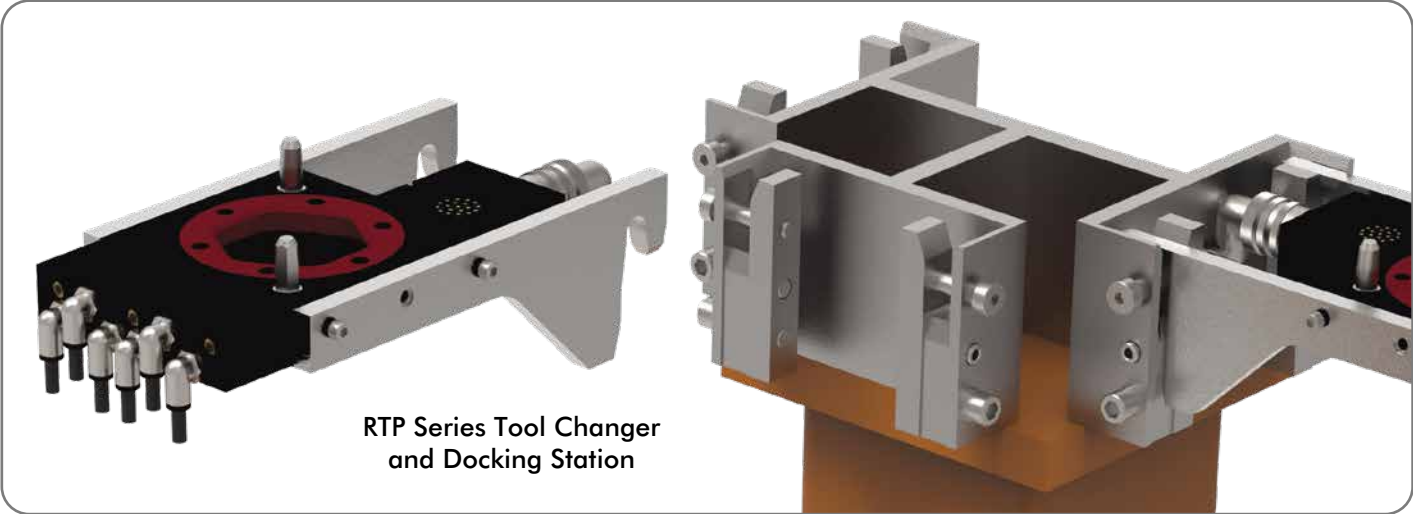
# ROBOTIC TOOLING SOLUTIONS

## Tool Changer Docking Station

Destaco offers custom and standard Docking Stations to fit customers needs. Please contact Destaco Sales for more information.

**Key Features:**

- Allows for quick changing of tooling
- Reducing machine down-time
- Safely stores tooling when not in use
- Standard or custom stations



# TC1 SERIES

## Manual Tool Changers | Ordering Information

**Base Model**      **Model Size**      **Robot or Tool Plate**

**TC1**

**050**

**M-01**

— **Robot Plate**

**M-00** Application Specific - User adds mounting hole pattern

**M-01** ISO-9409-1-50-4-M6 mounting pattern with boss

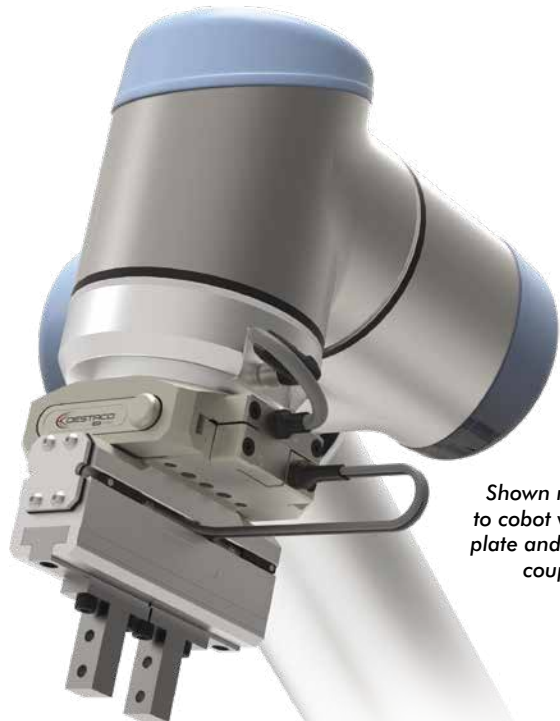
(See robot compatibility table on next page)

**Tool Plate**

**T-00** Application Specific - User adds mounting hole pattern

**T-01** DirectConnect mounting to DESTACO Robohand products

**T-02** ISO-9409-1-50-4-M6 mounting pattern



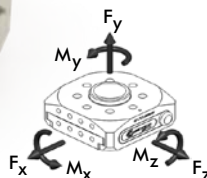
Shown mounted to cobot with robot plate and tool plate coupled.



Compatible with multiple brands of cobots.

**TC1-050M-01**  
Robot Plate  
ISO 9409 Mounting  
(see page 3).

Patent Pending



Specifications:		TC1
Max. Payload:	Kg [lb]	10 [22]
Coupled Weight:	Kg [lb]	0.33 [0.73]
Robot Plate Weight:	Kg [lb]	0.20 [0.44]
Tool Plate Weight:	Kg [lb]	0.13 [0.29]
Repeatability:	mm [in]	±0.025 [0.001]
Temperature Range:	C° [F°]	-30° to 66° [-22° to 151°]
Max Moment (My, Mz, Mx)	Nm [in-lb]	100 [885]
Max Force (Fy, Fz)	N [lbf]	1000 [225]
Max Force (Fx)	N [lbf]	100 [22.5]

### Optional Accessories

Description	Order no.
8-Pin M8 Socket Connector Electrical Pass-thru for Robot Plate	<b>TC1-E01M-C01</b>
8-Pin M8 Plug Connector Electrical Pass-thru for Robot Plate	<b>TC1-E02M-C01</b>
8-Pin M8 Plug Connector Electrical Pass-thru for Tool Plate	<b>TC1-E01T-C01</b>
8-Pin M8 Socket Connector Electrical Pass-thru for Tool Plate	<b>TC1-E02T-C01</b>
PNP Magneto-resistive 4mm Sensing Module for Tool Plate	<b>TC1-E01T-P01</b>
NPN Magneto-resistive 4mm Sensing Module for Tool Plate	<b>TC1-E02T-N01</b>
Tool Plate Holder	<b>TC1-050H-01</b>
Seal Replacement Kit	<b>SLKT-480</b>

**TC1-050T-01**  
Tool Plate with DirectConnect  
Robohand Mounting.

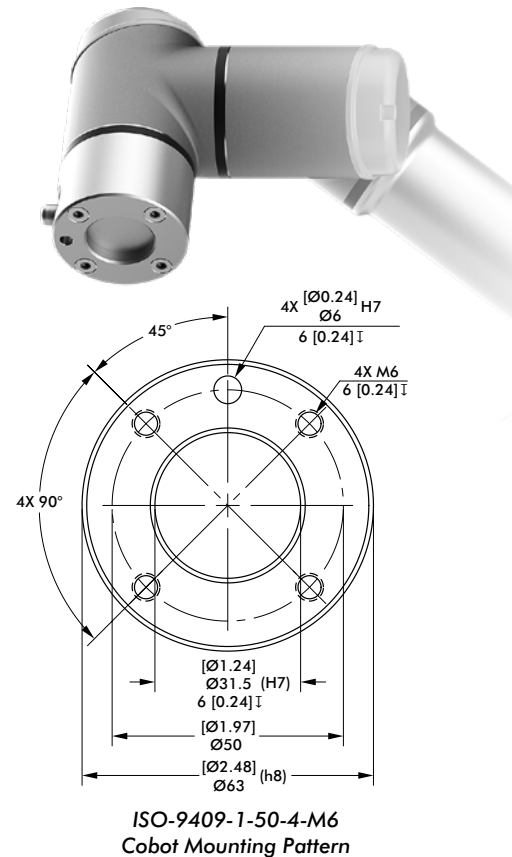


# TC1 SERIES

## Manual Tool Changers | Compatibility Charts

### TC1-050M-01 Robot Plate - Robot Compatibility

Robot Manufacturer	Model
GENERIC	Any model with ISO-9409-1-50-4-M6 Pattern
STAUBLI	TX2touch-90, 90L, 90XL
UNIVERSAL ROBOTS	UR3, UR5, UR10, UR16
TECHMAN/OMRON	TM5-700, TM5-900, TM12, TM14
KUKA	LBR iiwa 7 R800, LBR iiwa 14 R820
AUBO	I3, I5, I7, I10
ESI	C-7, C-15
F&P PERSONAL ROBOTICS	P-ROB 2R-24V, 48V
HANWHA PRECISION MACHINERY	HCR-3, 5, 12
JAKA/KUNLIN	ZU 7, 12
MODBOT	COBOT, SCARA
ROZUM	PULSE 75, 90
SIASUN	GCR5, GCR14, GCR20, SCR3, SCR5
HAN'S ROBOTS	ELFIN 3, 5, 10
FRANKA EMIKA	PANDA



### TC1-050T-01 Tool Plate - Robohand Compatibility

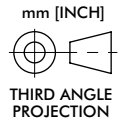
Robohand Products	Compatible Series	Description
DPE	200-25	Electric 2 Jaw Parallel Gripper
DGC	All Sizes	
DPDL	047, 056, 088, 125	
DPDS		
DPG	All Sizes	
DPL	2520, 2535	
DPP	All Sizes	
DPW	250M, 375M, 500M	
G110, G120	All Sizes	Pneumatic 2 Jaw Angular Gripper
DCT	12M, 16M, 20M, 25M	
DRF	All Sizes	Rotary Actuator
DRG		
DLM		Miniature Linear Rail Thruster Slide
DLT	06, 08, 10, 12, 16	Linear Thruster Slide
DLB		Linear Base Slide



Shown with G120 Parallel Gripper and TC1-E01T-P01 Magneto-resistive Sensors.

# TC1 ROBOT PLATE

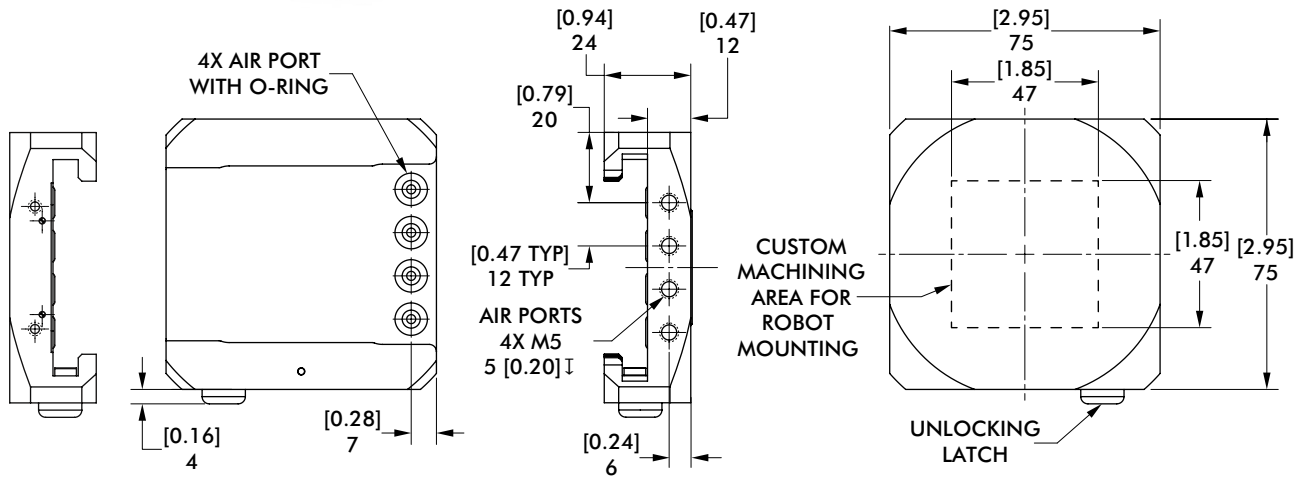
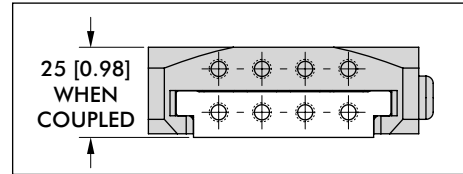
## Manual Tool Changers | Dimensions



### TC1-050M-00 Blank Robot Plate (general unit dimensions shown apply to all models)



Requires mounting pattern added by user for their specific application.

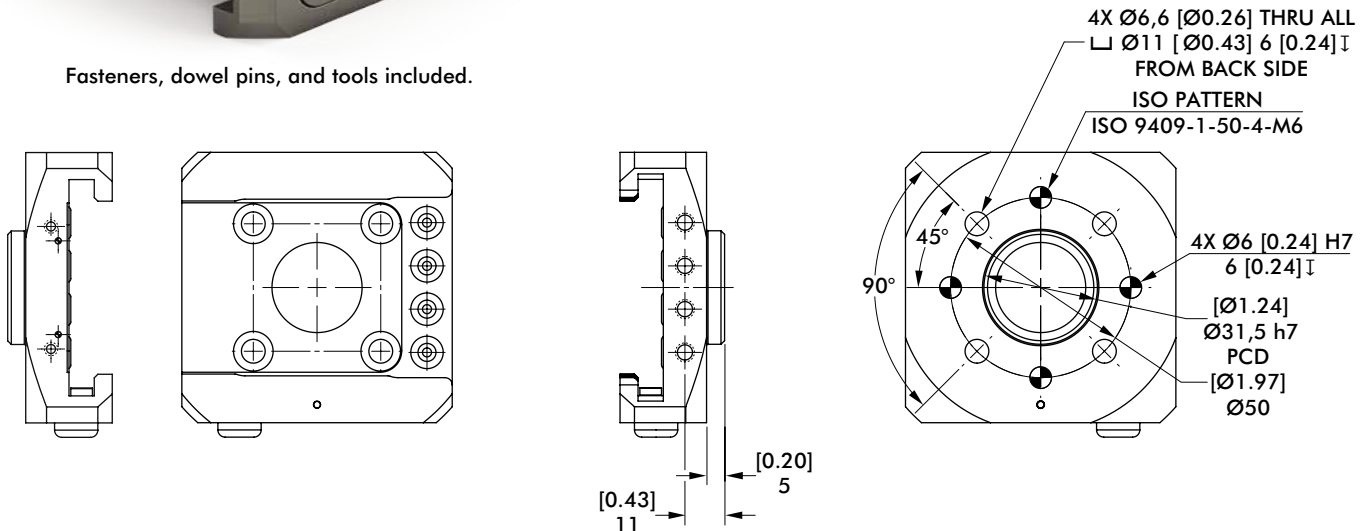
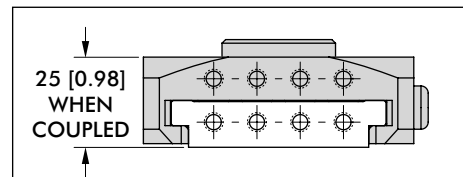


### TC1-050M-01 ISO 9409 Robot Plate (see TC1-050M-00 for general dimensions)

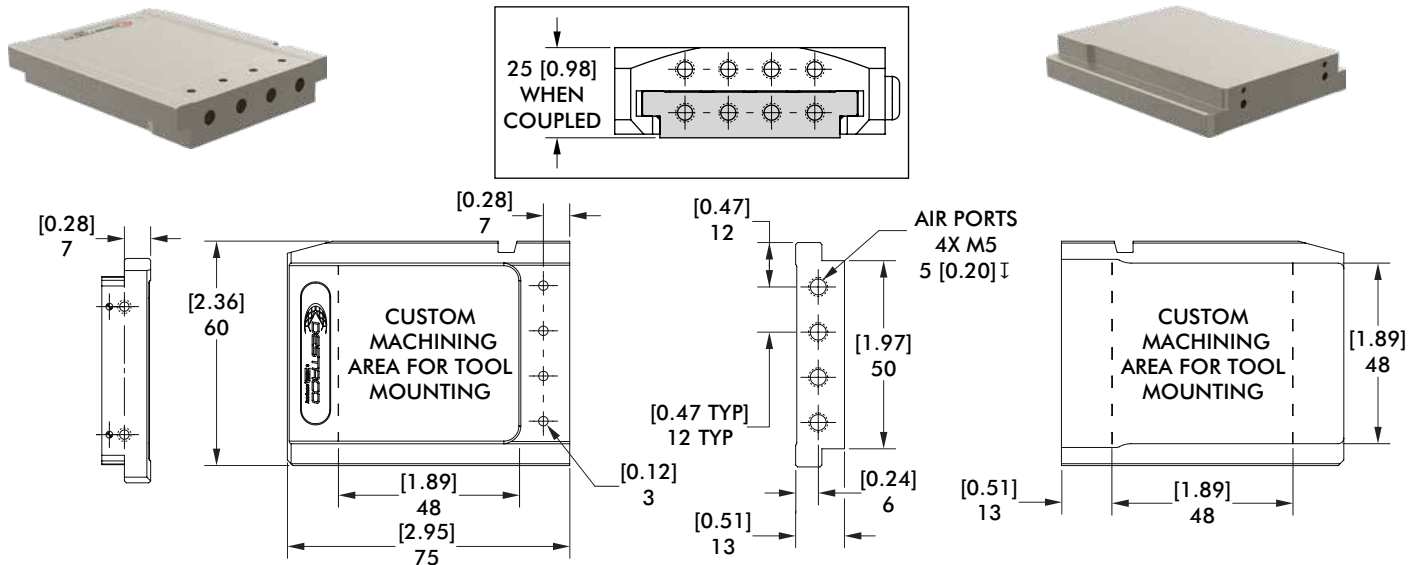


Fasteners, dowel pins, and tools included.

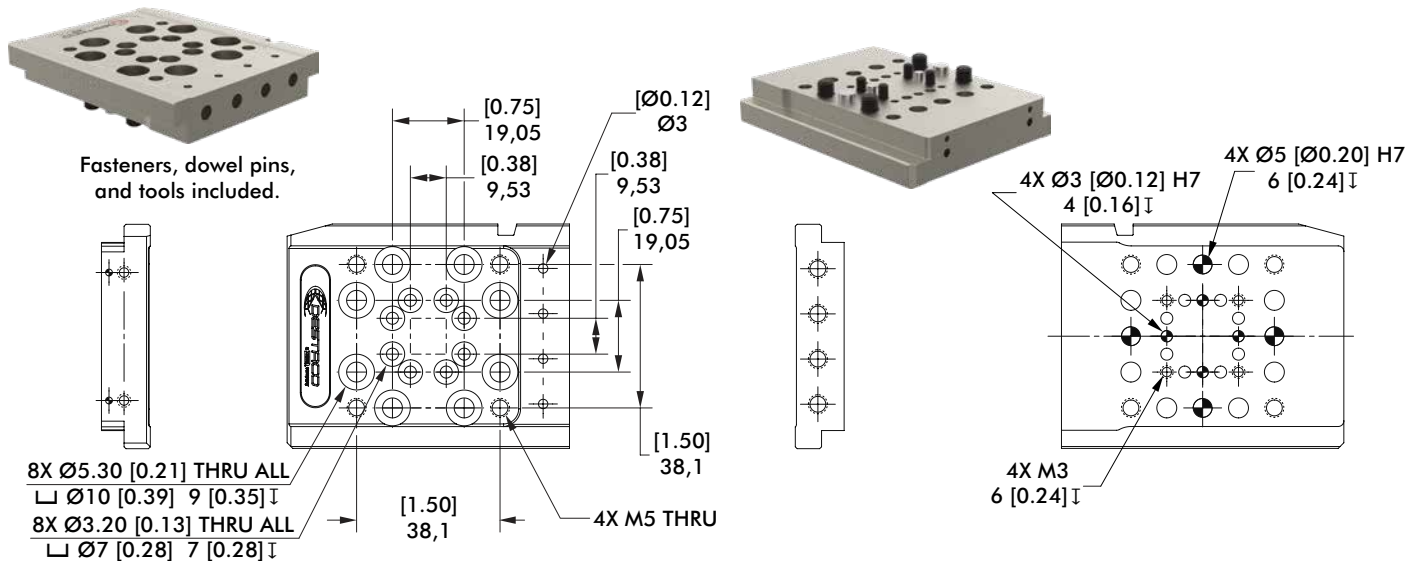
Compatible with multiple brands of cobots. Verify cobot arm mounting pattern.



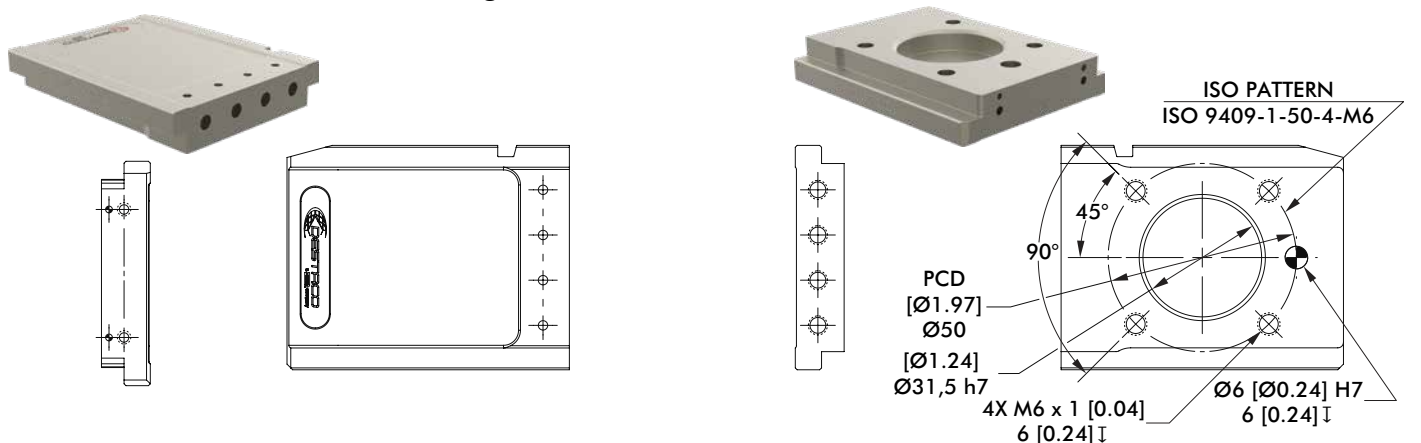
### TC1-050T-00 Blank Tool Plate (general unit dimensions shown apply to all models)



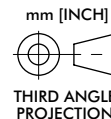
### TC1-050T-01 DirectConnect Robohand Mounting Tool Plate (see TC1-050T-00 for general dimensions)



### TC1-050T-02 ISO 9409 Mounting Pattern Tool Plate (see TC1-050T-00 for general dimensions)



# TC1 ELECTRICAL MODULES



## Manual Tool Changers | Dimensions and Specifications

**TC1-E01M-C01** 8-Pin M8 Socket Electrical Pass-thru Module for Robot Plate (Universal Robot Compatible)

**TC1-E02M-C01** 8-Pin M8 Plug Electrical Pass-thru Module for Robot Plate (TechMan Cobot Compatible)

CABLE LENGTH  
**TC1-E01M-C01** 145 [5.71]  
**TC1-E02M-C01** 175 [6.80]

2X Ø3 [0.12] THRU ALL  
 √Ø6 [0.24] x 90°

PLUG CONNECTOR TC1-E02M-C01    SOCKET CONNECTOR TC1-E01M-C01    INTERFACE PINS

PLUG CONNECTOR TC1-E02M-C01	SOCKET CONNECTOR TC1-E01M-C01	INTERFACE PIN
1	1	1
2	2	2
3	3	3
4	4	4
5	5	8
6	6	5
7	7	6
8	8	7

**TC1-E01M-C01** with 8-Pin M8 Socket shown.  
 Fasteners and tools included.

ELECTRIC SPECIFICATION					
SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNIT
V <sub>dd</sub>	CONDUCTOR VOLTAGE	-	-	30	V
I <sub>dd</sub>	CONDUCTOR CURRENT	-	-	1.5	A

**TC1-E01T-C01** 8-Pin M8 Plug Electrical Pass-thru Module for Tool Plate (Universal Robot Compatible)

**TC1-E02T-C01** 8-Pin M8 Socket Electrical Pass-thru Module for Tool Plate (TechMan Cobot Compatible)

2X Ø3 [0.12] THRU ALL  
 √Ø6 [0.24] x 90°

CABLE LENGTH  
 155 [6.10]

PLUG CONNECTOR TC1-E01T-C01    SOCKET CONNECTOR TC1-E02T-C01    INTERFACE PINS

PLUG CONNECTOR TC1-E01T-C01	SOCKET CONNECTOR TC1-E02T-C01	INTERFACE PIN
1	1	1
2	2	2
3	3	3
4	4	4
5	5	8
6	6	5
7	7	6
8	8	7

**TC1-E01T-C01** with 8-Pin M8 Plug shown.  
 Fasteners and tools included.

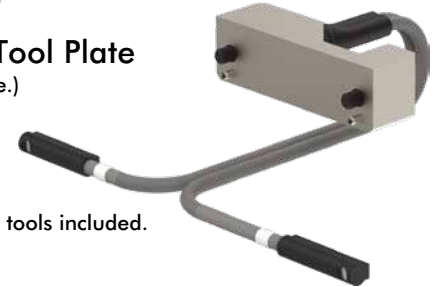
ELECTRIC SPECIFICATION					
SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNIT
V <sub>dd</sub>	CONDUCTOR VOLTAGE	-	-	30	V
I <sub>dd</sub>	CONDUCTOR CURRENT	-	-	1.5	A

# TC1 ELECTRICAL MODULES

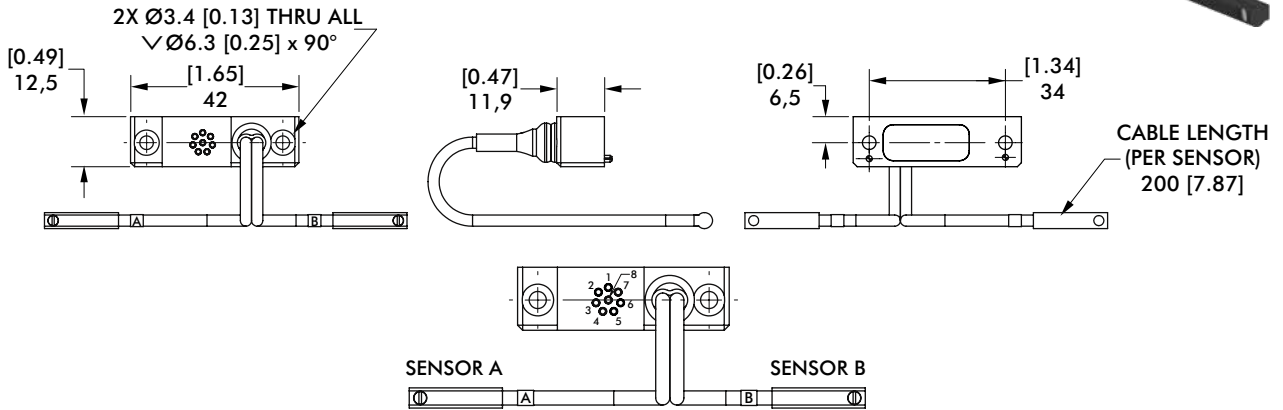
## Manual Tool Changers | Dimensions and Specifications

**TC1-E01T-P01** PNP Magneto Resistive 4mm Sensing Module for Tool Plate  
(For use with grippers to detect jaw positioning. Universal Robot Compatible.)

**TC1-E02T-N01** NPN Magneto Resistive 4mm Sensing Module for Tool Plate  
(For use with grippers to detect jaw positioning. TechMan Cobot Compatible.)



Fasteners and tools included.



INTERFACE PIN		SIGNAL DESCRIPTION
TC1-E01T-P01	TC1-E02T-N01	
3	3	SIGNAL A
4	2	SIGNAL B
8	1	POWER (4.5~28VDC)
7	7	GND (OV)

ELECTRIC SPECIFICATION					
SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNIT
V <sub>dd</sub>	SUPPLY VOLTAGE	4.5	-	28	V DC
I <sub>dd</sub>	OUTPUT CURRENT (PER SENSOR)	-	-	100	mA
I <sub>q</sub>	QUIESCENT (IDLE) CURRENT	-	20	-	mA



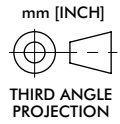
Tool Changer shown with **TC1-E01M-C01** and **TC1-E01T-C01** modules installed.



Tool Changer shown with **TC1-E01M-C01** and **TC1-E01T-P01** modules installed.

# TC1 TOOL HOLDER

Manual Tool Changers | Dimensions

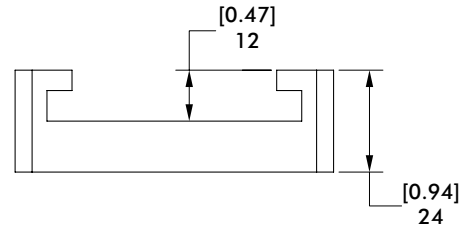
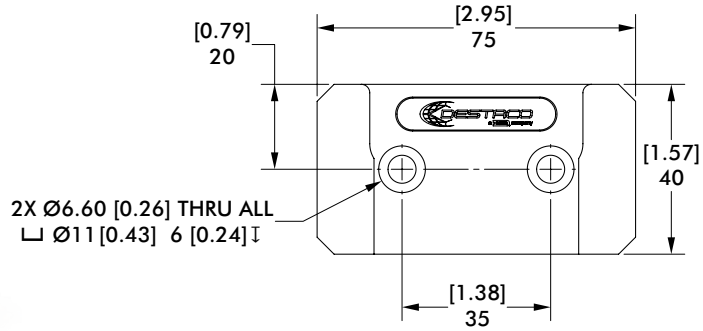


## TC1-050H-01 Tool Holder



Fasteners and tools included.

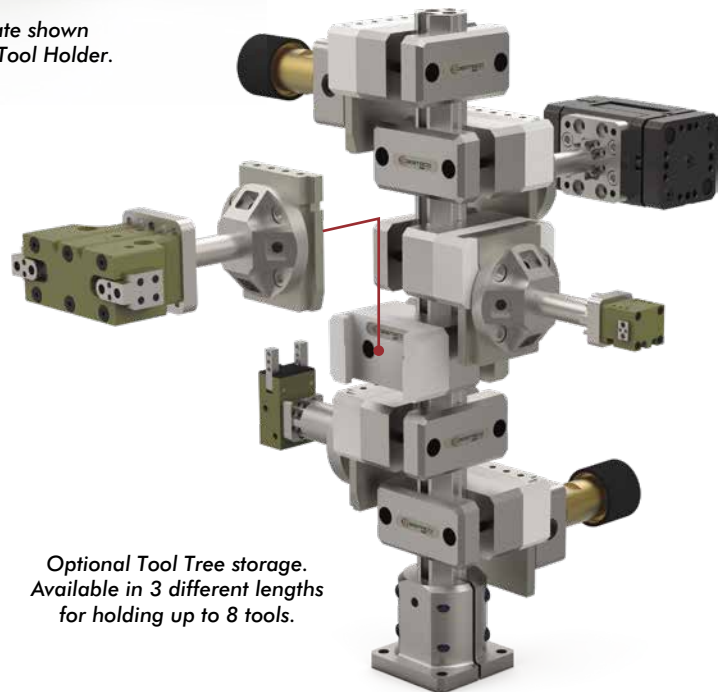
Material: Acetal Plastic



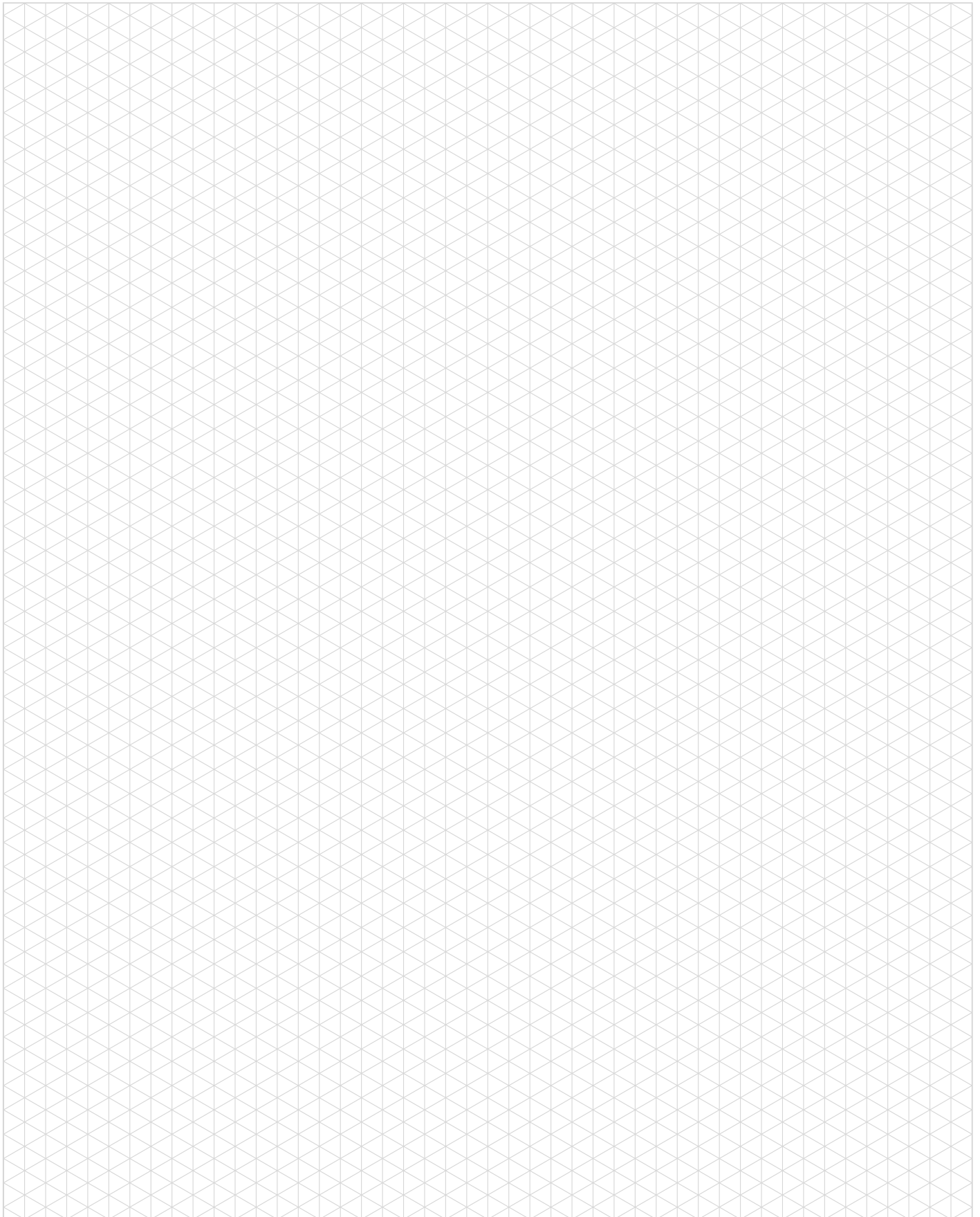
Tool Plate shown with a Robohand DPE-200 Electric Parallel Gripper placed in Tool Holder.



Tool Plate shown placed in Tool Holder.



Optional Tool Tree storage. Available in 3 different lengths for holding up to 8 tools.



# RQC/RTP SERIES

## Automatic Tool Changers | 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 TC-RQTP-17)

### Optional 19 Pin I/O Module

Spring loaded contacts are recessed for a better protection

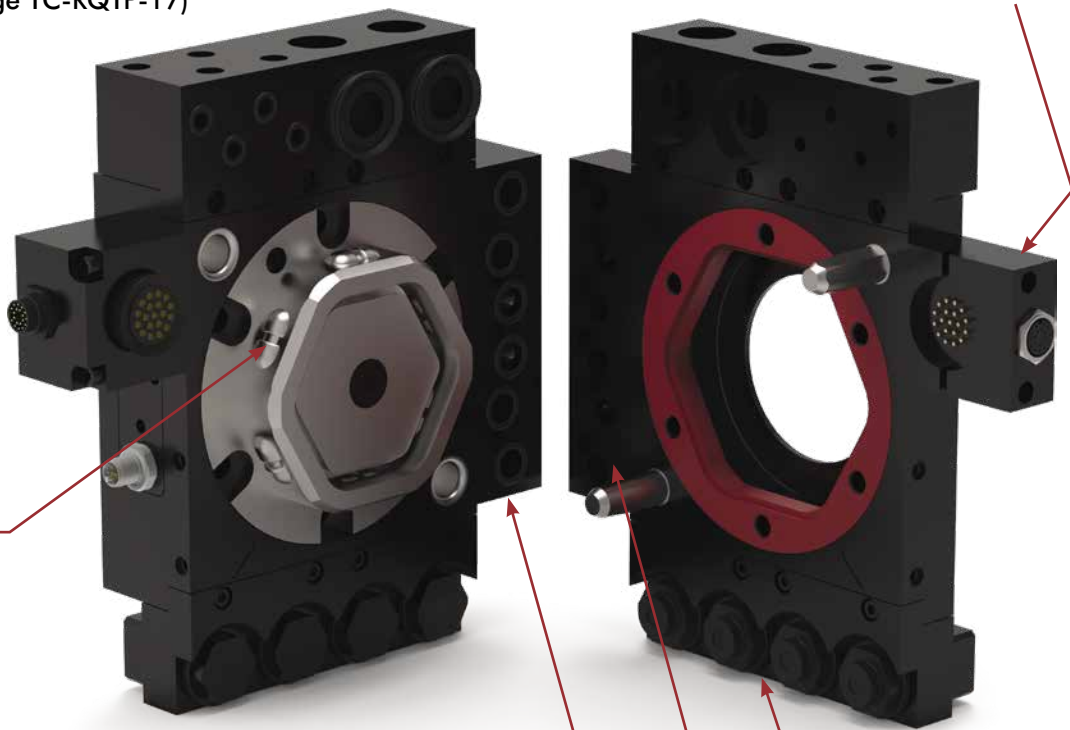
V-Seal provides moisture resistance

Robot Plate

Tool Plate

### 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

### Optional 6 Port Pneumatic Module

Locating Pins

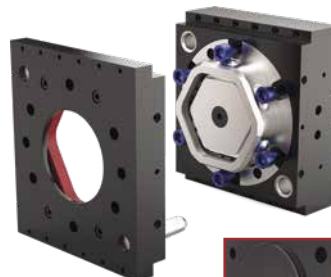
### Optional (4) Self-Sealing Fluid Module

(sizes 800, 1200 & 2400 only)



### Tool Plate

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



### Robot Plate

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



Back Side of Robot Plate

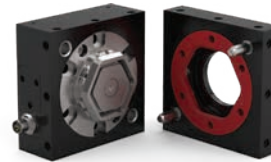
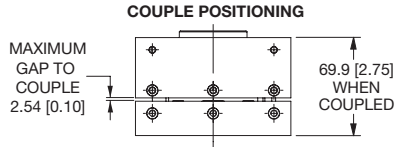


# RQC/RTP SERIES

## Automatic Tool Changers | Technical Information

### RQC-200/RTP-200

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

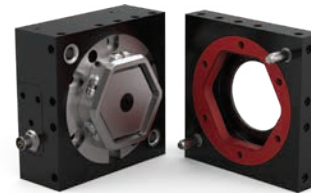
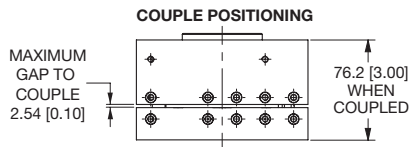


**RQC-200**  
Robot Plate

**RTP-200**  
Tool Plate

### 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]

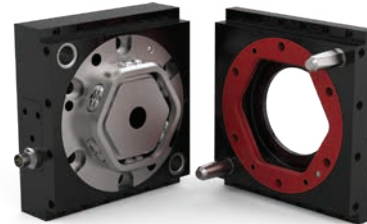
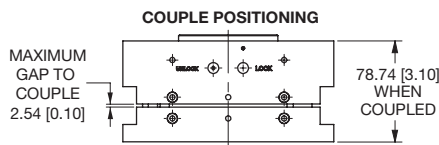


**RQC-400**  
Robot Plate

**RTP-400**  
Tool Plate

### 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]

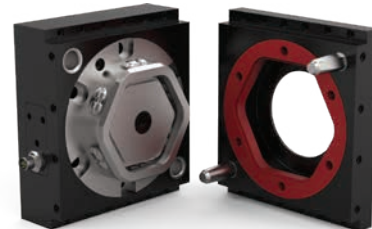
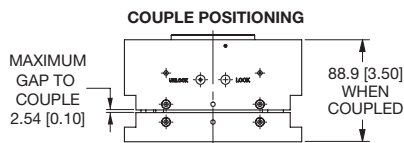


**RQC-800**  
Robot Plate

**RTP-800**  
Tool Plate

### 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]

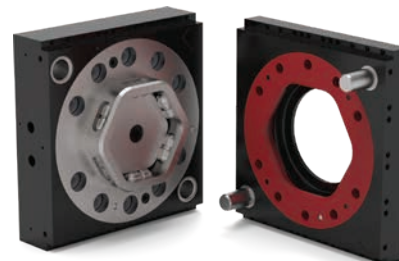
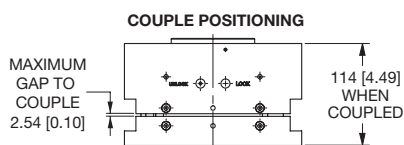


**RQC-1200**  
Robot Plate

**RTP-1200**  
Tool Plate

### RQC-2400/RTP-2400

**Combined Weight:** 30 Kg [66.1 lb]  
**Max. Payload\*:** 1089 Kg [2400 lb]  
**Max. Moment:** 7000 Nm [61955 in-lb]



**RQC-2400**  
Robot Plate

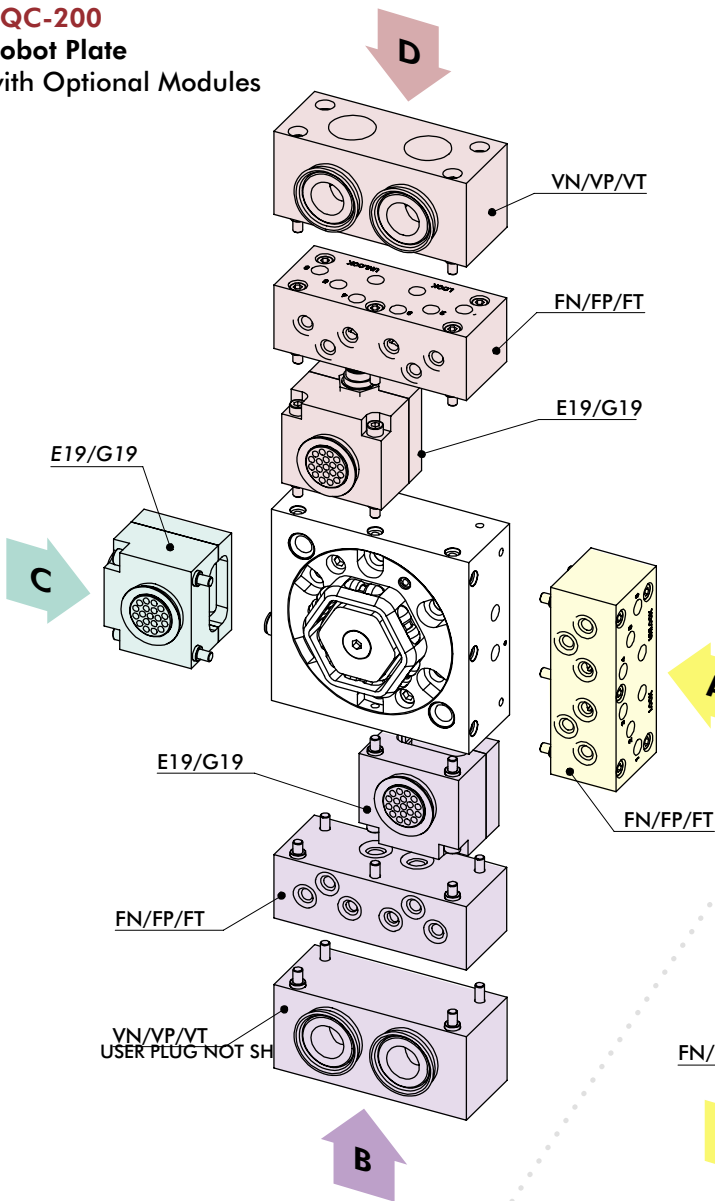
**RTP-2400**  
Tool Plate

\*Depending on your application parameters please contact DESTACO for validation.

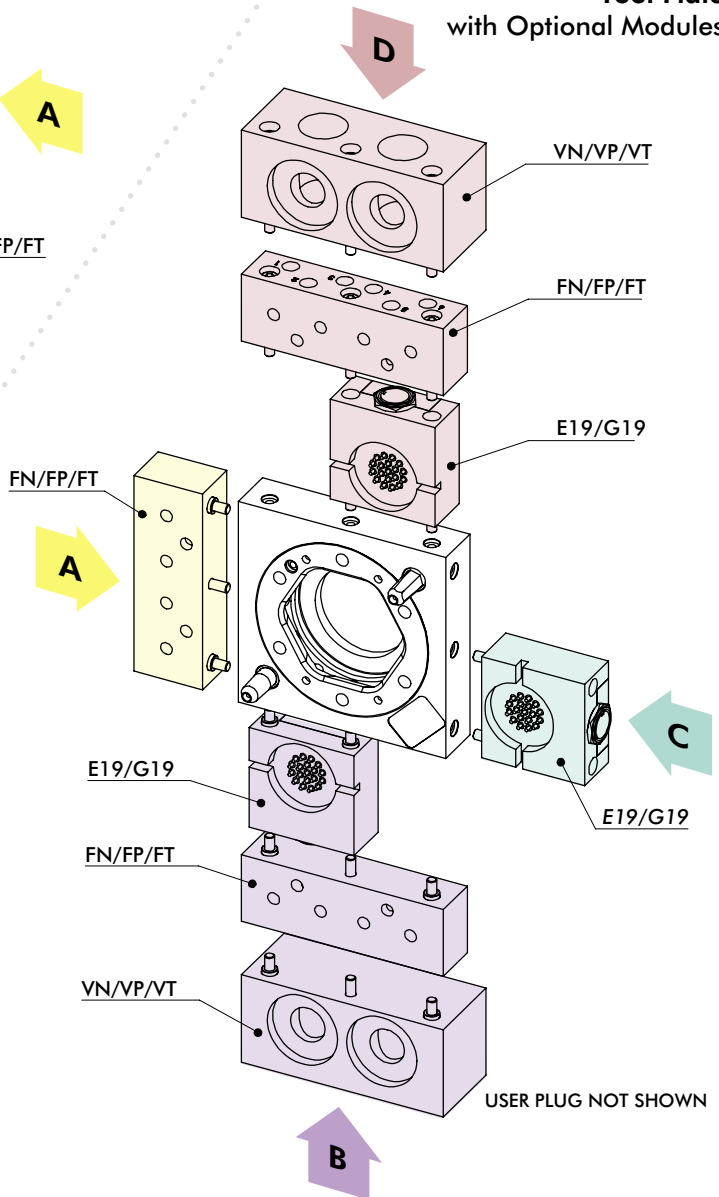
# RQC-200/RTP-200

## Automatic Tool Changers | Module Usage Illustrations

### RQC-200 Robot Plate with Optional Modules



### RTP-200 Tool Plate with Optional Modules



# RQC-200/RTP-200

## Automatic Tool Changers | Ordering Information



Robot Plate  
RQC-200      Tool Plate  
RTP-200

<b>Base Model</b>	<b>Model Size</b>	<b>Port Options</b> (RQC-only)	<b>Sensing</b> (RQC-only)		<b>Side A MODULES</b>	<b>Side B MODULES</b>	<b>Side C MODULES</b>	<b>Side D MODULES</b>
<b>RQC</b>	<b>200</b>	<b>N</b>	<b>L0</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
 <b>RQC</b> Robot Plate	 <b>200</b> (See Page 8 for Specifications)	 <b>N</b> 1/8 NPT	 <b>L0</b> No Sensing		<div style="border: 1px solid black; padding: 10px; width: fit-content; margin-left: auto; margin-right: auto;"> <p>Optional Electrical, Air and Vacuum Modules can be ordered with Base Model</p> <p>See below for Module Description</p> <p>(See Pg. TC-RQTP-3 for Illustrated Module Config.)</p> </div>			
 <b>RTP</b> Tool Plate		 <b>M</b> 1/8 BSPP	 <b>LP*</b> PNP Inductive Sensing					
		 <b>A</b> 1/8 BSPT	 <b>CP†</b> PNP Inductive Sensing with M12 connector					
			 <b>LN*</b> NPN Inductive Sensing					
			 <b>CN†</b> NPN Inductive Sensing with M12 connector					
			 <b>LD*</b> Dry contact sensor					
			 <b>CD†</b> Dry contact sensor with M12 connector					
			*Requires E19 or G19 module mounted on Side C.					
			†Cordset or plug are sold separately.					

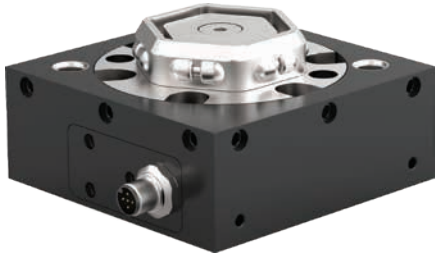
Side A	Side B	Side C	Side D	Order Code	Optional Modules
●	●	●	●	<b>0</b>	No Module
	●	●	●	<b>E19†</b>	19 pin, 3 Amp, 48 VDC Module w/Turck M16 Conn, w/o Cordset
	●	●	●	<b>G19</b>	19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable
●	●		●	<b>FN</b>	6X 1/8" NPT Air Ports Module, Face Seal, 10 Bar
●	●		●	<b>FP</b>	6X 1/8" BSPP Air Ports Module, Face Seal, 10 Bar
●	●		●	<b>FT</b>	6X 1/8" BSPT Air Ports Module, Face Seal, 10 Bar
	●		●	<b>VN</b>	2X 3/4" Vacuum NPT Ports Module, Face Sealing
	●		●	<b>VP</b>	2X 3/4" Vacuum BSPP Ports Module, Face Sealing
	●		●	<b>VT</b>	2X 3/4" Vacuum BSPT Ports Module, Face Sealing

†Cordset or plug are sold separately.

**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.

# RQC-200 (ROBOT PLATE)

## Automatic Tool Changers | Technical Specifications | Dimensions



### Specification:

Max. Payload\* W: 90 Kg [200 lb]

Weight: 2 Kg [4.41 lb]

Cylinder Bore: Ø53mm [2.09in]

Displacement: 41.3 cm<sup>3</sup> [2.52in<sup>3</sup>]

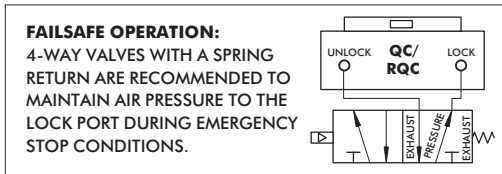
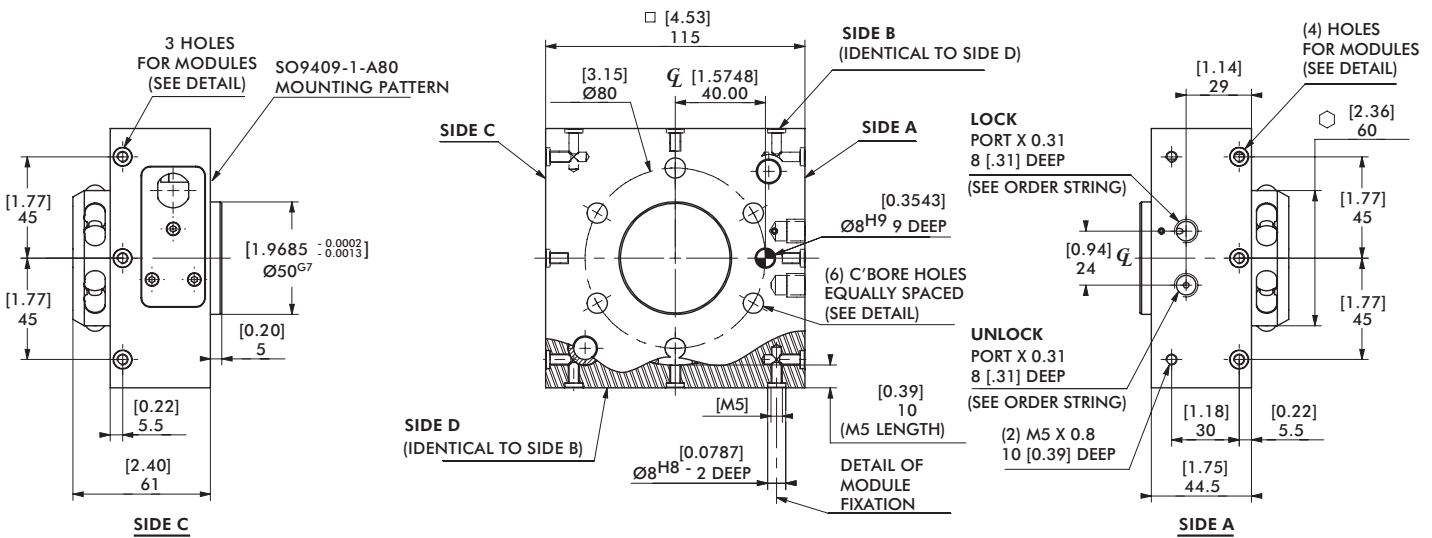
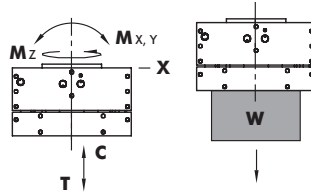
\*Depending on your application parameters please contact DESTACO for validation.

### Loading Capacity:

Max. Tensile T: 1330 N [300 lb]

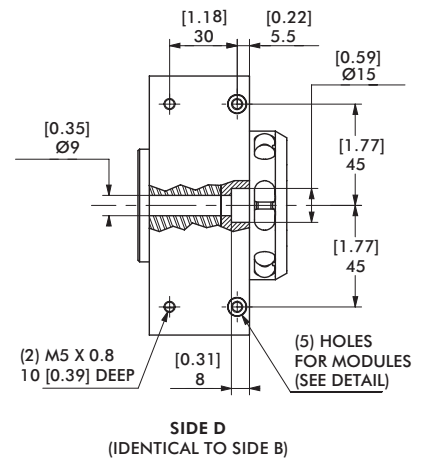
Max. Compressive C: 1780 N [400 lb]

Max. Moment (M<sub>x</sub>/M<sub>y</sub>/M<sub>z</sub>): 810 Nm [7200 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

				IMPERIAL ([ IN. ])	METRIC (MM)
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE ±.0005" OR [±.013MM]	METRIC THREADS COURSE PITCH	0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005	[0] = [±.25] [0.0] = [±.13] [0.00] = [±.013]

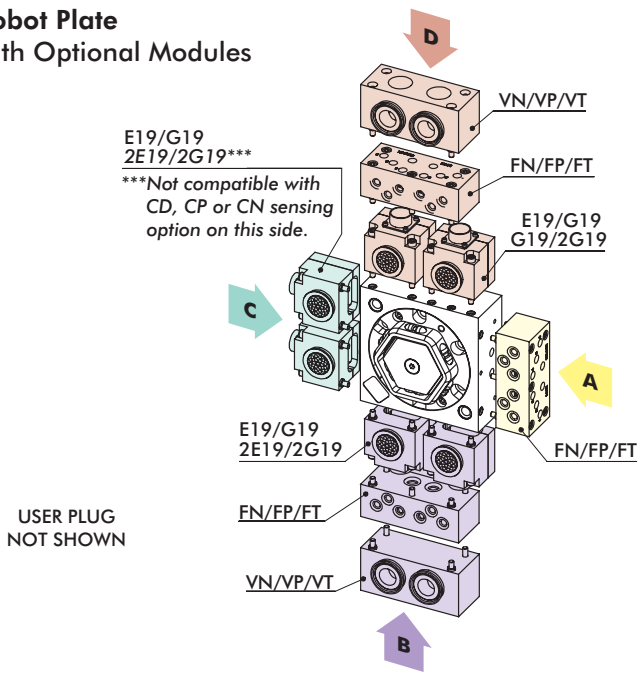




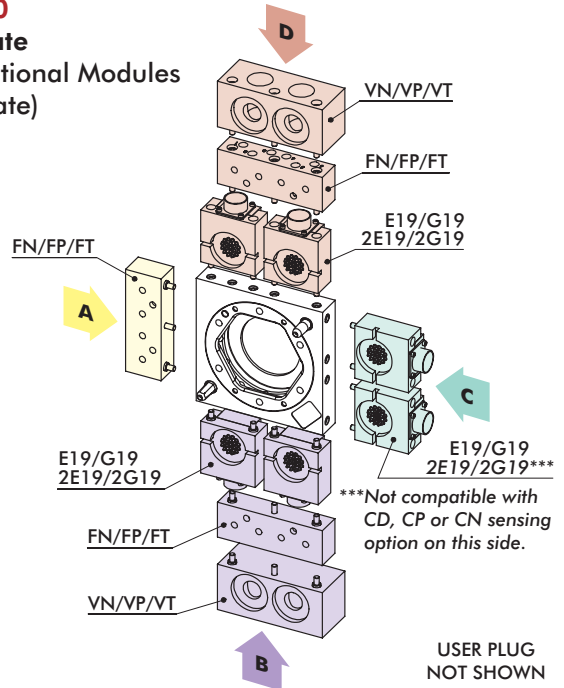
# RQC-400, 800, 1200/RTP-400, 800, 1200

## Automatic Tool Changers | Module Usage Illustrations

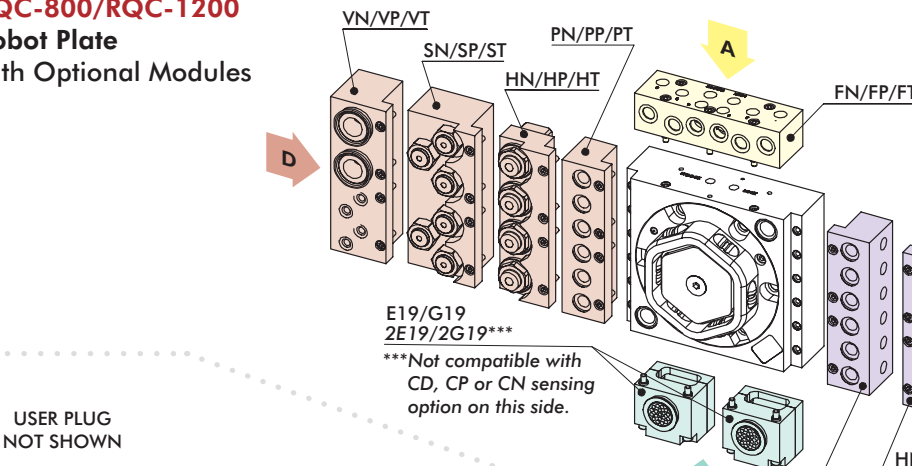
### RQC-400 Robot Plate with Optional Modules



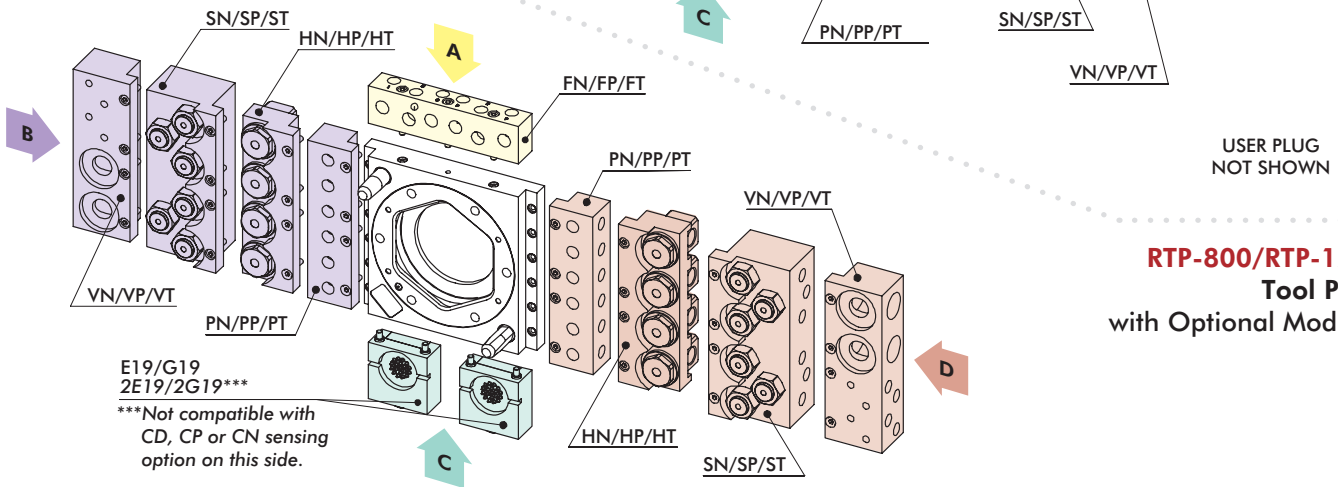
### RTP-400 Tool Plate with Optional Modules (Tool Plate)



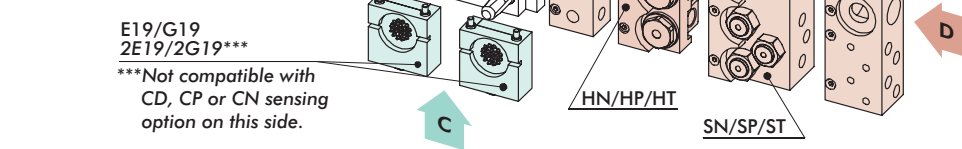
### RQC-800/RQC-1200 Robot Plate with Optional Modules



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

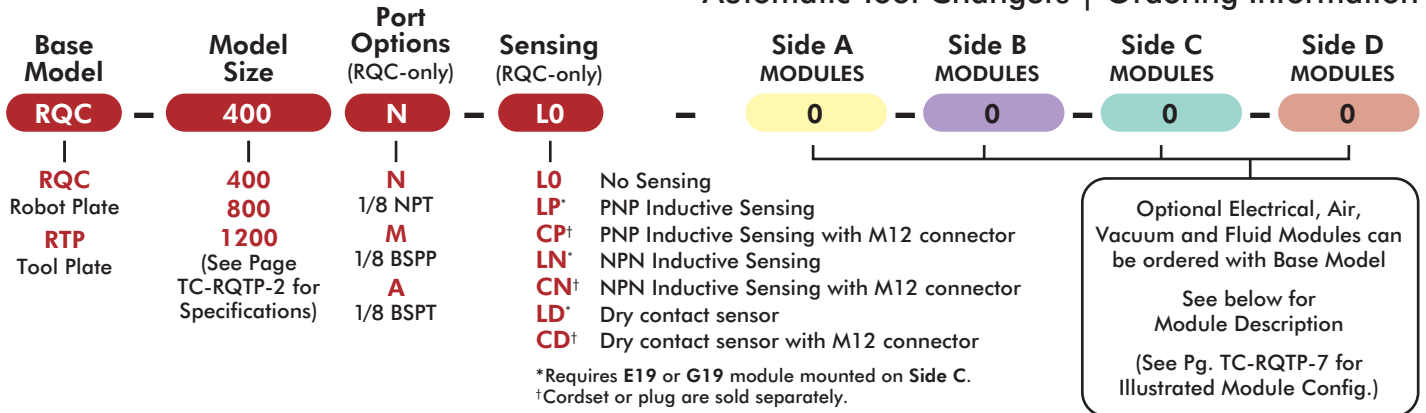


### RTP-800/RTP-1200 Tool Plate with Optional Modules



# RQC-400, 800, 1200/RTP-400, 800, 1200

## Automatic Tool Changers | Ordering Information



400	800/1200	Side A	Side B	Side C	Side D	Order Code	Optional Modules
●	●	●	●	●	●	0	No Module
	●			●		E19†	19 pin, 3 Amp, 48 VDC Module w/Turck M12 Conn, w/o Cordset
	●			●***		2E19†***	2X 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
	●			●***		2G19***	2X 19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable
●			●	●	●	E19†	19 pin, 3 Amp, 48 VDC Module w/Turck M12 Conn, w/o Cordset
●			●	●***	●	2E19†***	2X 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
●			●	●***	●	2G19***	2X 19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable
●		●	●		●	FN	6X 1/8" NPT Air Ports Module, Face Seal, 10 Bar
●		●	●		●	FP	6X 1/8" BSPP Air Ports Module, Face Seal, 10 Bar
●		●	●		●	FT	6X 1/8" BSPT Air Ports Module, Face Seal, 10 Bar
	●	●				FN	6X 1/4" NPT Air Ports Module, Face Seal, 10 Bar
	●	●				FP	6X 1/4" BSPP Air Ports Module, Face Seal, 10 Bar
	●	●				FT	6X 1/4" BSPT Air Ports Module, Face Seal, 10 Bar
	●		●		●	PN	6X 1/4" NPT Air Ports Module, Face Seal, 10 Bar
	●		●		●	PP	6X 1/4" BSPP Air Ports Module, Face Seal, 10 Bar
	●		●		●	PT	6X 1/4" BSPT Air Ports Module, Face Seal, 10 Bar
	●		●		●	SN	6X 1/4" NPT Air Ports Module, Self Sealing, 10 Bar
	●		●		●	SP	6X 1/4" BSPP Air Ports Module, Self Sealing, 10 Bar
	●		●		●	ST	6X 1/4" BSPT Air Ports Module, Self Sealing, 10 Bar
●			●		●	VN	2X 3/4" Vacuum NPT Ports Module, Face Sealing
●			●		●	VP	2X 3/4" Vacuum BSPP Ports Module, Face Sealing
●			●		●	VT	2X 3/4" Vacuum BSPT Ports Module, Face Sealing
	●		●		●	VN	2X 3/4" Vacuum + 4 X 1/4" Air NPT Ports Module, Face Sealing
	●		●		●	VP	2X 3/4" Vacuum + 4 X 1/4" Air BSPP Ports Module, Face Sealing
	●		●		●	VT	2X 3/4" Vacuum + 4 X 1/4" Air BSPT Ports Module, Face Sealing
	●		●		●	HN	4X 3/8" NPT Fluid Ports Module, 100 Bar
	●		●		●	HP	4X 3/8" BSPP Fluid Ports Module, 100 Bar
	●		●		●	HT	4X 3/8" BSPT Fluid Ports Module, 100 Bar

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

**NOTE:** Only (1) module can be mounted per side. (Except 2E19 and 2G19, which are composed of (2) modules).  
 Modules usage is based on the size of the Base Model and which side the module can be mounted.

### 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

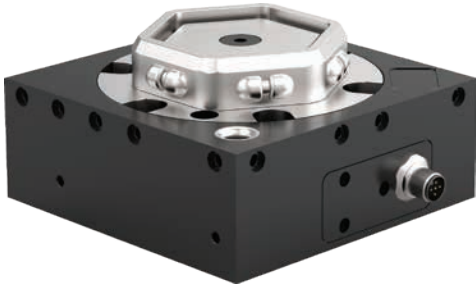
- ELCT-048 90° Female Plug, w/o Cable, Solder Type, Cable Clamp for G19 (RQC Only)
- ELCT-049 90° male Plug, w/o Cable, Solder Type, Cable Clamp for G19 (RTP Only)
- CABL-028 90° Female M12 Cordset with 2M Cable for CP, CN, and CD (RQC Only)
- CABL-029 90° Female Cordset with 4M Cable for E19 (RQC Only)
- CABL-031 90° male Cordset with 2M 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

# RQC-400 (ROBOT PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions



**Specification:**

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

**Weight:** 3.6 Kg [7.94 lb]

**Cylinder Bore:** Ø73mm [2.87in]

**Displacement:** 80.9 cm<sup>3</sup> [4.93in<sup>3</sup>]

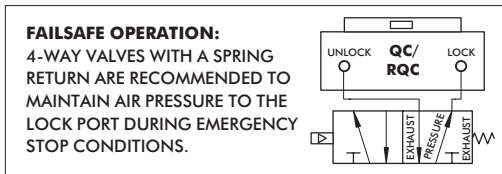
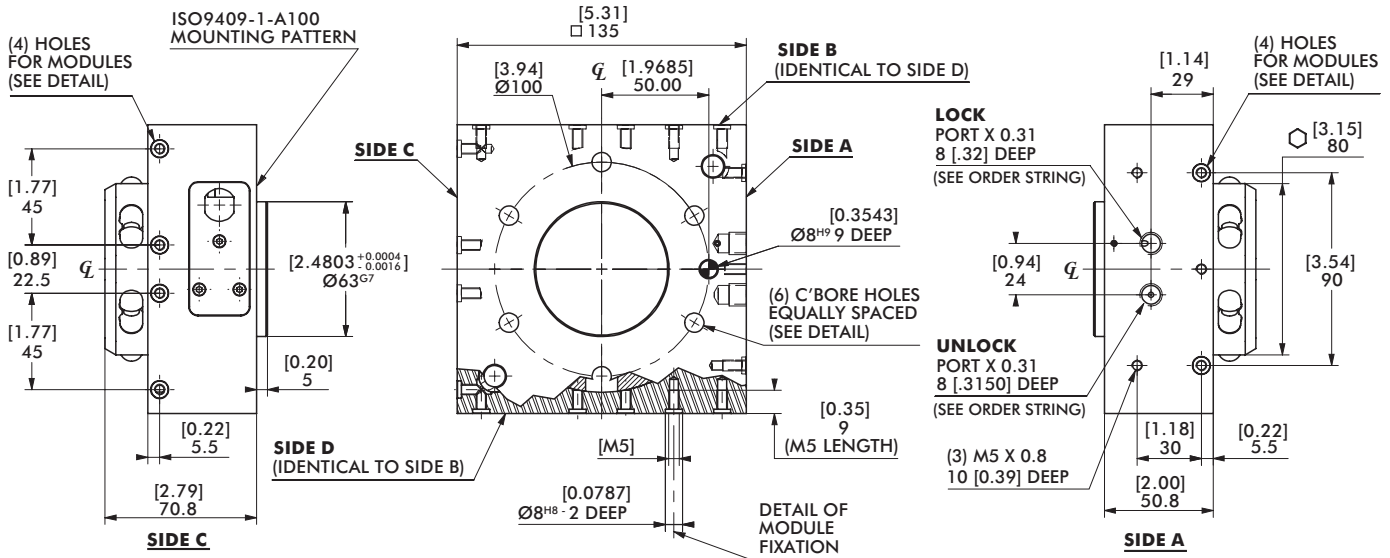
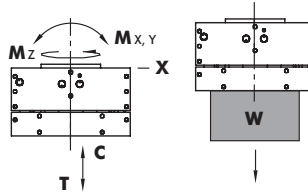
\*Depending on your application parameters please contact DESTACO for validation.

**Loading Capacity:**

**Max. Tensile T:** 2670 N [600 lb]

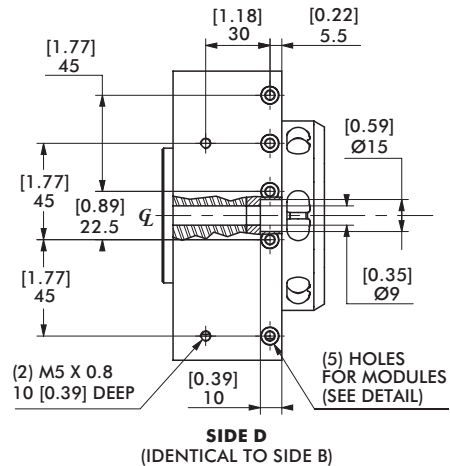
**Max. Compressive C:** 3560 N [800 lb]

**Max. Moment (M<sub>x</sub>/M<sub>y</sub>/M<sub>z</sub>):** 1580 Nm [14000 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

				IMPERIAL ([ IN. ])	METRIC (MM)
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE ±.0005" OR [±.013MM]	METRIC THREADS COURSE PITCH	0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005	[0] = [±.25] [0.0] = [±.13] [0.00] = [±.013]





# RTP-400 (TOOL PLATE)

## Automatic Tool Changers | Technical Specifications | Dimensions

### Specification:

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

Weight: 1.1 Kg [2.43 lb]

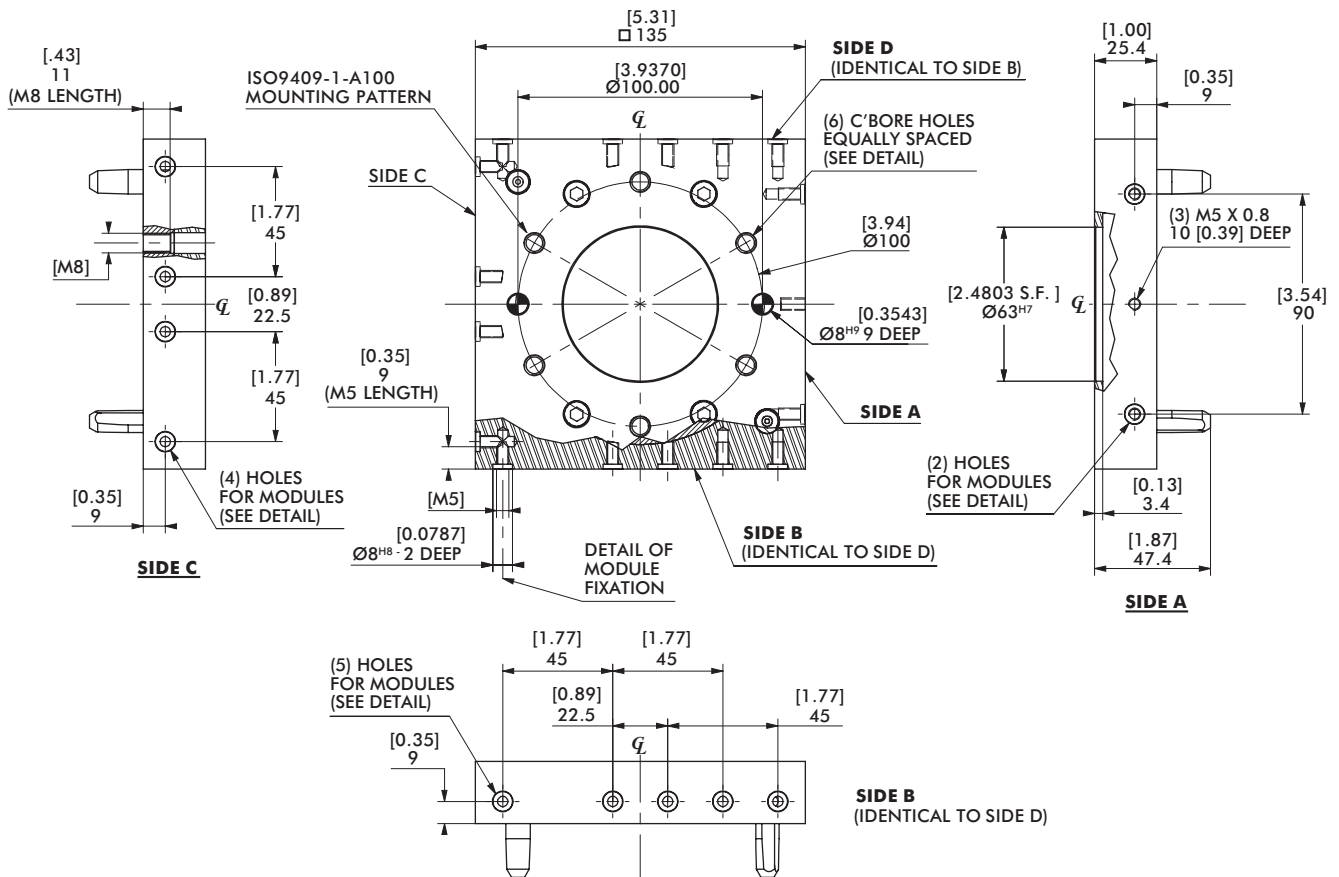
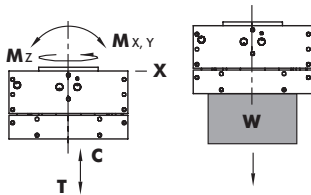
\*Depending on your application parameters please contact DESTACO for validation.

### Loading Capacity:

Max. Tensile **T**: 2670 N [600 lb]

Max. Compressive **C**: 3560 N [800 lb]

Max. Moment ( $M_x/M_y/M_z$ ): 1580 Nm [14000 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

THIRD ANGLE PROJECTION

ALL DOWEL HOLES ARE SF (SLIP FIT). LOCAL TOLERANCE ±.0005" OR [±.013MM]

METRIC THREADS COURSE PITCH

IMPERIAL ([ IN.])  
0.00 = ±.01  
0.000 = ±.005  
0.0000 = ±.0005

METRIC (MM)  
[0] = [±.25]  
[0.0] = [±.13]  
[0.00] = [±.013]

# RQC-800, RQC-1200 (ROBOT PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions



## RQC-800 Specification:

Max. Payload\* **W**: 360 Kg [800 lb]  
 Weight: 5.3 Kg [11.68 lb]  
 Cyl. Bore: Ø80mm [3.15in]  
 Displacement: 95.6 cm<sup>3</sup> [5.83in<sup>3</sup>]

\*Depending on your application parameters please contact DESTACO for validation.

## Loading Capacity:

Max. Tensile **T**:  
 5340 N [1200 lb]  
 Max. Compressive **C**:  
 7120 N [1600 lb]  
 Max. Moment (M<sub>x</sub>/M<sub>y</sub>/M<sub>z</sub>):  
 2490 Nm [22000 in-lb]

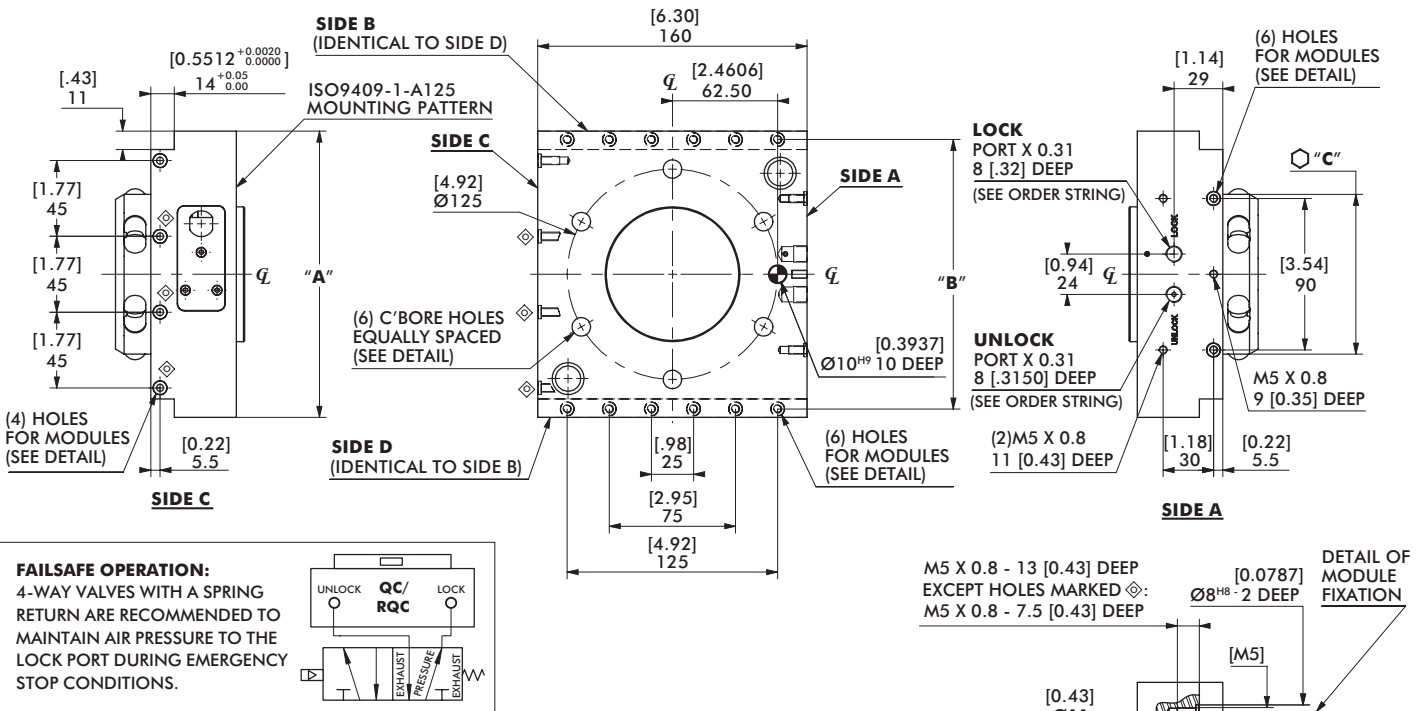
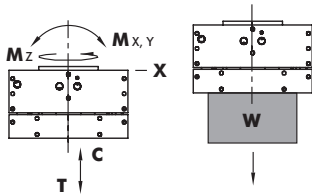
## RQC-1200 Specification:

Max. Payload\* **W**: 550 Kg [1200 lb]  
 Weight: 6.4 Kg [14.11 lb]  
 Cyl. Bore: Ø95mm [3.74in]  
 Displacement: 153.7 cm<sup>3</sup> [9.38in<sup>3</sup>]

\*Depending on your application parameters please contact DESTACO for validation.

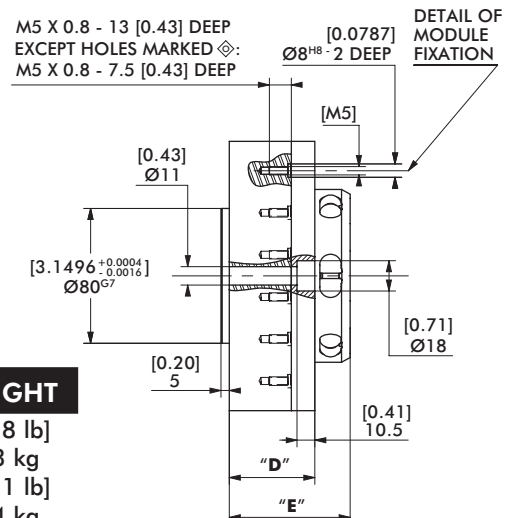
## Loading Capacity:

Max. Tensile **T**:  
 8000 N [1800 lb]  
 Max. Compressive **C**:  
 10700 N [2400 lb]  
 Max. Moment (M<sub>x</sub>/M<sub>y</sub>/M<sub>z</sub>):  
 3390 Nm [30000 in-lb]



				IMPERIAL ([ IN. ])	METRIC (MM)
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE ±.0005" OR ±.013MM	METRIC THREADS COURSE PITCH	0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005	[0] = [±.25] [0.0] = [±.13] [0.00] = [±.013]

MODEL NUMBER	"A"	"B"	"C"	"D"	"E"	WEIGHT
RQC-800	[6.69] 170.0	[6.2992] 160.0	[3.73] 94.75	[2.00] 50.8	[2.82] 71.75	[11.8 lb] 6.3 kg
RQC-1200	[7.01] 178.0	[6.6142] 168.0	[4.08] 103.6	[2.25] 57.15	[3.31] 84.15	[14.1 lb] 6.4 kg



# RTP-800, RTP-1200 (TOOL PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions

## RTP-800 Specification:

Max. Payload\* W: 360 Kg [800 lb]  
Weight: 1.8 Kg [3.97 lb]

\*Depending on your application parameters please contact DESTACO for validation.

## Loading Capacity:

Max. Tensile T:  
5340 N [1200 lb]  
Max. Compressive C:  
7120 N [1600 lb]  
Max. Moment (M<sub>x</sub>/M<sub>y</sub>/M<sub>z</sub>):  
2490 Nm [22000 in-lb]

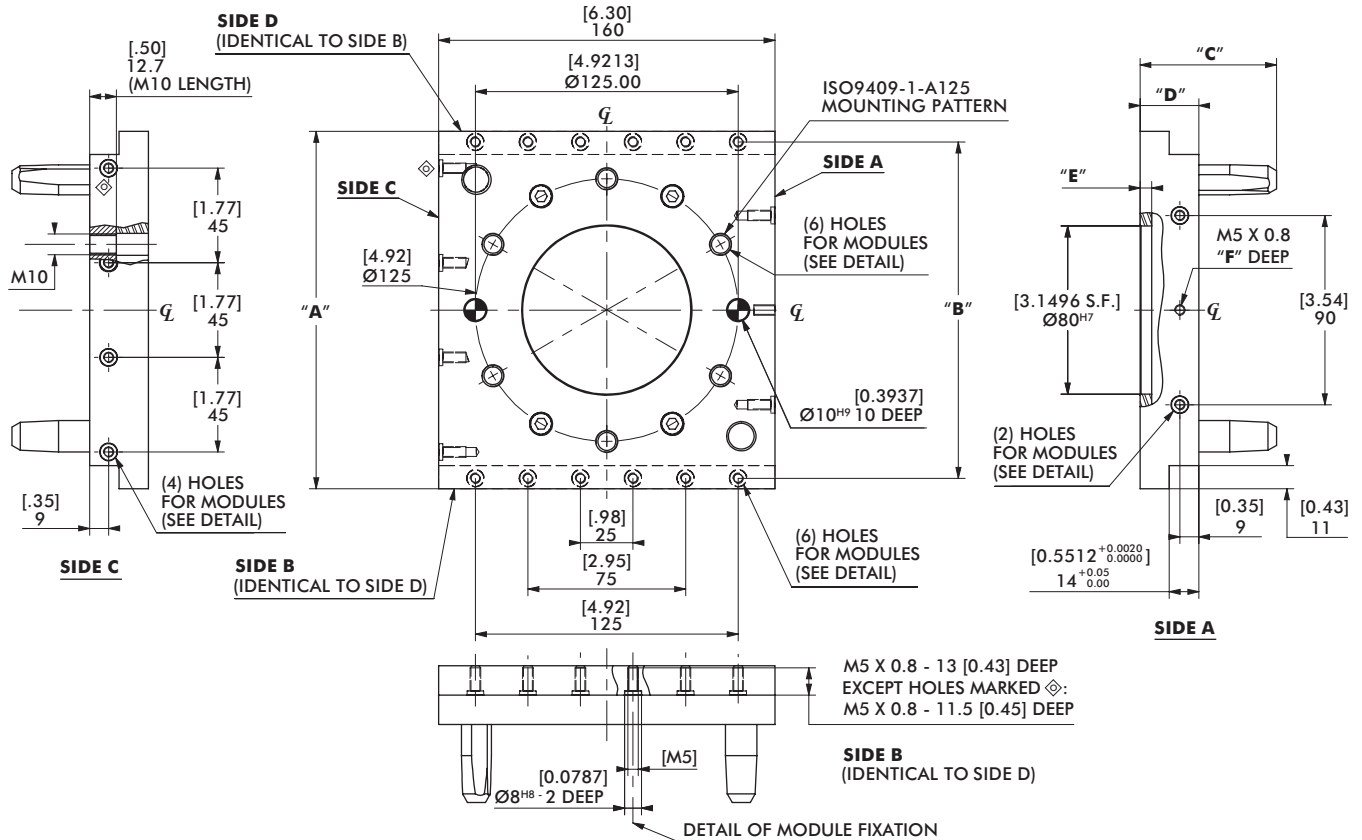
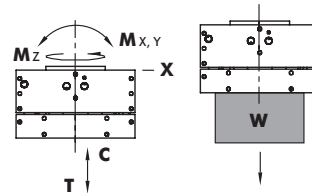
## RTP-1200 Specification:

Max. Payload\* W: 550 Kg [1200 lb]  
Weight: 1.9 Kg [4.19 lb]

\*Depending on your application parameters please contact DESTACO for validation.

## Loading Capacity:

Max. Tensile T:  
8000 N [1800 lb]  
Max. Compressive C:  
10700 N [2400 lb]  
Max. Moment (M<sub>x</sub>/M<sub>y</sub>/M<sub>z</sub>):  
3390 Nm [30000 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

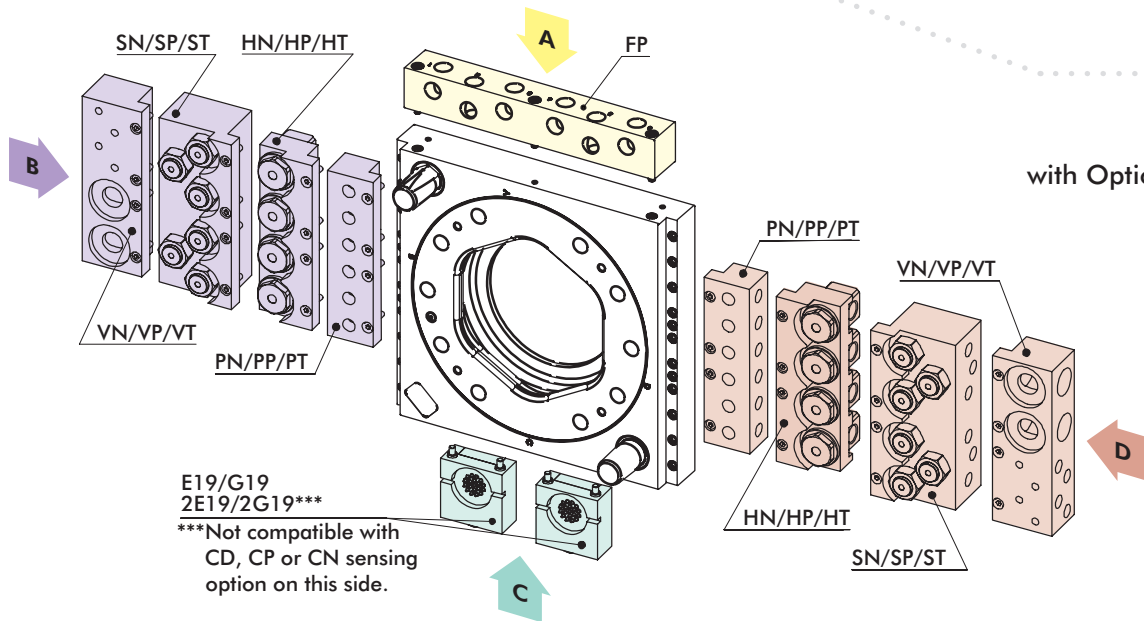
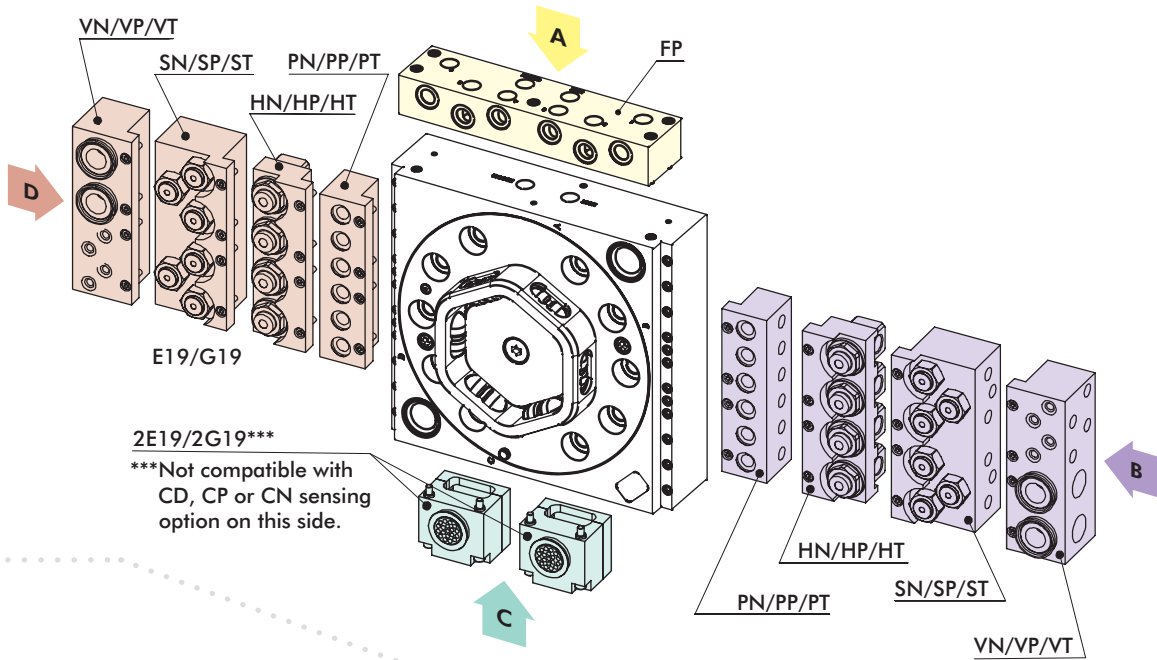
$\varnothing$	$\triangle$	$\oplus$	$\oplus$	IMPERIAL ( [ IN. ] )	METRIC ( MM )
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE $\pm .0005^{\circ}$ OR $\pm .013$ MM	METRIC THREADS COURSE PITCH	0.00 = $\pm .01$ 0.000 = $\pm .005$ 0.0000 = $\pm .0005$	[0] = $\pm .25$ [0.0] = $\pm .13$ [0.00] = $\pm .013$

MODEL NUMBER	"A"	"B"	"C"	"D"	"E"	"F"	WEIGHT
RTP-800	[6.69] 170.0	[6.2992] 160.0	[2.56] 64.94	[1.10] 27.94	[0.22] 5.5	[0.39] 10.0	[4.00 lb] 1.8 kg
RTP-1200	[7.01] 178	[6.6142] 168.0	[2.71] 68.75	[1.25] 31.75	[0.13] 3.25	[0.30] 7.5	[2.90 lb] 1.32 kg

# RQC-2400/RTP-2400

## Automatic Tool Changers | Module Usage Illustrations

### RQC-2400 Robot Plate with Optional Modules



### RTP-2400 Tool Plate with Optional Modules

USER PLUG NOT SHOWN

# RQC-2400/RTP-2400

## Automatic Tool Changers | Ordering Information



Robot Plate  
RQC-2400

Tool Plate  
RTP-2400

Base Model	Model Size	Port Options (RQC-only)	Sensing (RQC-only)	Side A MODULES	Side B MODULES	Side C MODULES	Side D MODULES
<b>RQC</b>	<b>2400</b>	<b>N</b>	<b>L0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
RQC Robot Plate	2400 (See Page 8 for Specifications)	N 1/8 NPT	L0 No Sensing				
RTP Tool Plate		M 1/8 BSPP	LP* PNP Inductive Sensing				
		A 1/8 BSPT	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				

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

Optional Air Modules can be ordered with Base Model  
See below for Module Description  
(See Pg. TC-RQTP-13 for Illustrated Module Config.)

Side A	Side B	Side C	Side D	Order Code	Optional Modules
●	●	●	●	<b>0</b>	No Module
		●		<b>E19†</b>	19 pin, 3 Amp, 48 VDC Module w/Turck M16 Conn, w/o Cordset
		●**		<b>2E19†***</b>	2X 19 pin, 3 Amp, 48 VDC Module w/Turck M16 Conn, w/o Cordset
		●		<b>G19</b>	19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable
		●**		<b>2G19***</b>	2X 19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable
●				<b>FP</b>	6X 1/4" BSPP Air Ports Module, Face Seal, 10 Bar
	●		●	<b>PN</b>	6X 1/4" NPT Air Ports Module, Face Seal, 10 Bar
	●		●	<b>PP</b>	6X 1/4" BSPP Air Ports Module, Face Seal, 10 Bar
	●		●	<b>PT</b>	6X 1/4" BSPT Air Ports Module, Face Seal, 10 Bar
	●		●	<b>SN</b>	6X 1/4" NPT Air Ports Module, Self Sealing, 10 Bar
	●		●	<b>SP</b>	6X 1/4" BSPP Air Ports Module, Self Sealing, 10 Bar
	●		●	<b>ST</b>	6X 1/4" BSPT Air Ports Module, Self Sealing, 10 Bar
	●		●	<b>HN</b>	4X 3/8" NPT Fluid Ports Module, 100 Bar
	●		●	<b>HP</b>	4X 3/8" BSPP Fluid Ports Module, 100 Bar
	●		●	<b>HT</b>	4X 3/8" BSPT Fluid Ports Module, 100 Bar

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

**NOTE:** Only (1) module can be mounted per side. (Except 2E19 and 2G19, which are composed of (2) modules).  
Modules usage is based on the size of the Base Model and which side the module can be mounted.

# RQC-2400 (ROBOT PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions



## RQC-2400 Specification:

Max. Payload\* W: 1089Kg [2400 lb]

Weight: 22 Kg [48.5 lb]

Cyl. Bore: Ø80mm [3.15in]

\*Depending on your application paramaters please contact DESTACO for validation.

## Loading Capacity:

Max. Tensile T:

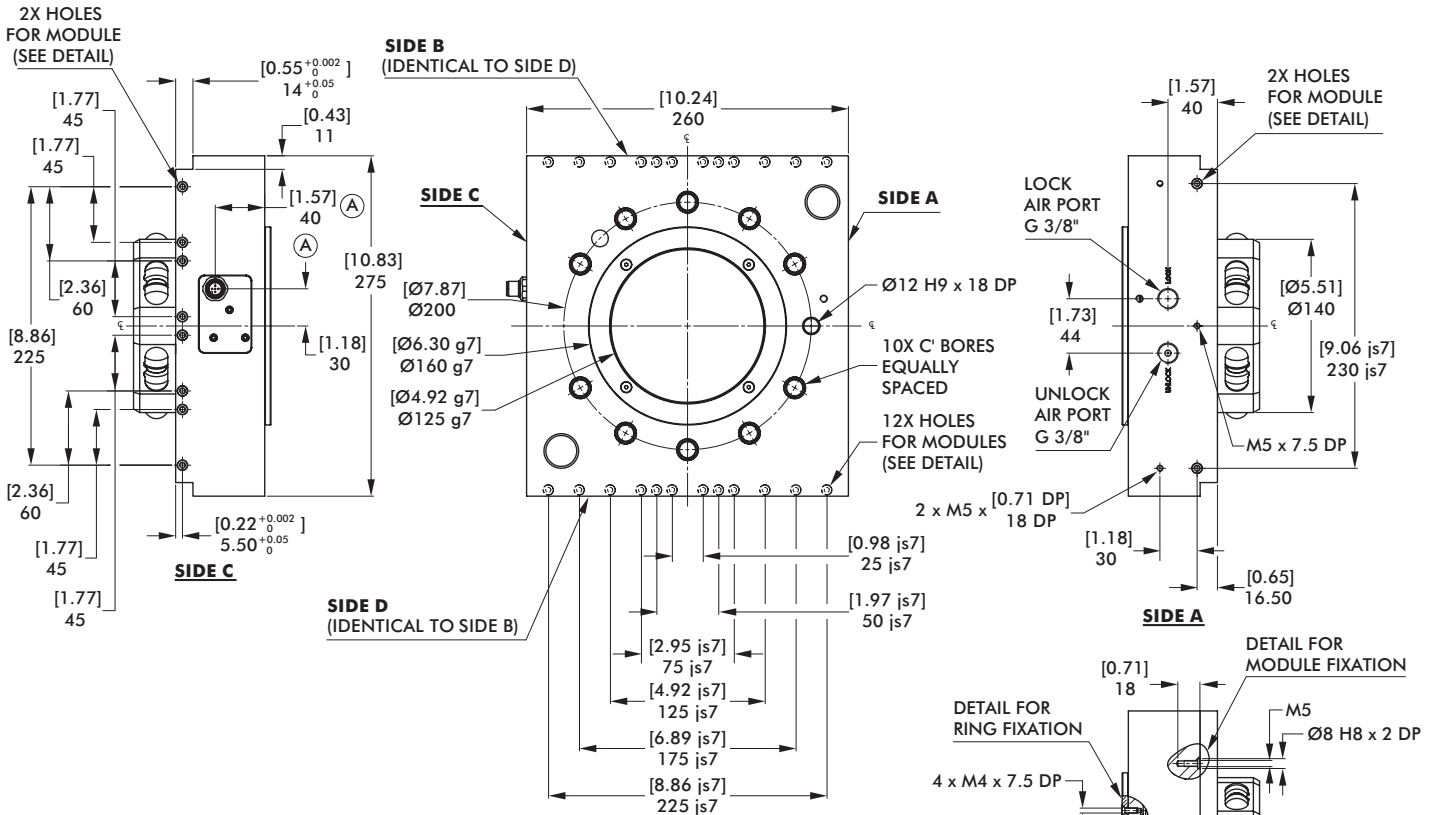
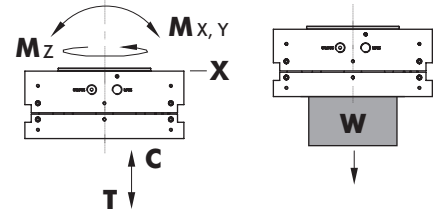
16000 N [3597 lb]

Max. Compressive C:

22000 N [4946 lb]

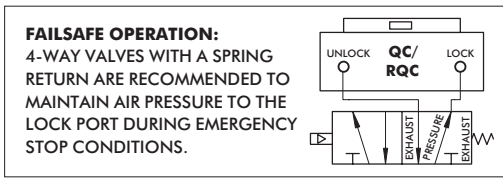
Max. Moment (Mx/My/Mz):

7000 Nm [91955 in-lb]



Possibility of having two sizes fixing screws M12 or M16.

A centering ring allows two possibility centering dimension robot connection.



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

				IMPERIAL ([ IN. ])	METRIC (MM)
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCAL TOLERANCE ±.0005" OR [±.013MM]	METRIC THREADS COURSE PITCH	0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005	[0] = [±.25] [0.0] = [±.13] [0.00] = [±.013]

# RTP-2400 (TOOL PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions

## RTP-2400 Specification:

Max. Payload\* W: 1089Kg [2400 lb]

Weight: 8 Kg [17.64 lb]

\*Depending on your application paramaters please contact DESTACO for validation.

## Loading Capacity:

Max. Tensile T:

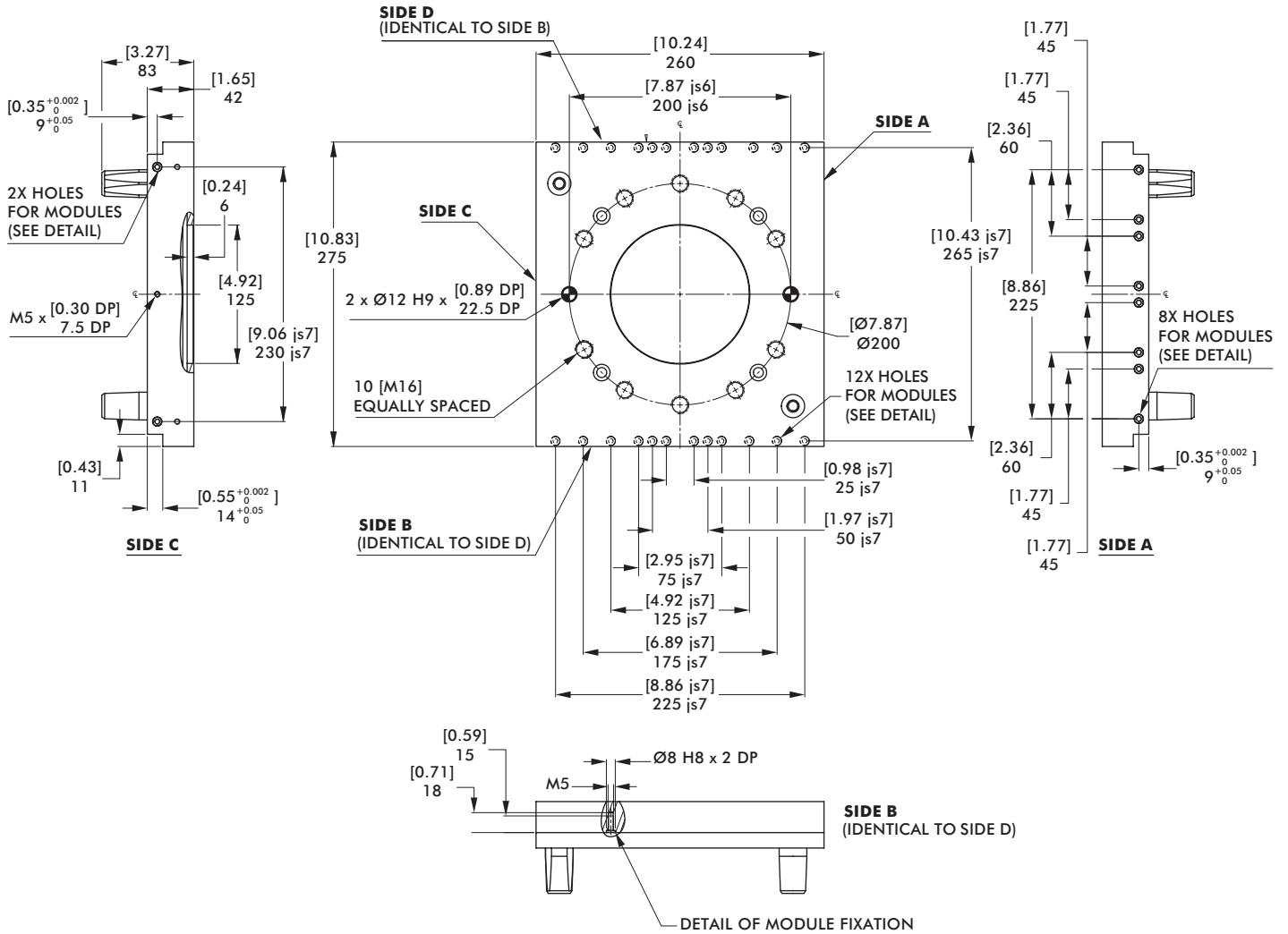
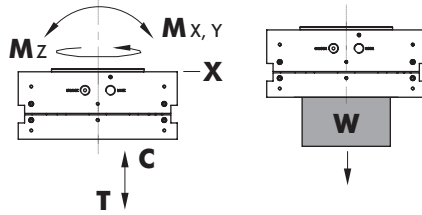
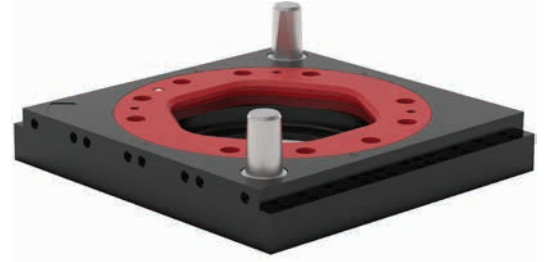
16000 N [3597 lb]

Max. Compressive C:

22000 N [4946 lb]

Max. Moment (Mx/My/Mz):

7000 Nm [91955 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

THIRD ANGLE PROJECTION

ALL DOWEL HOLES ARE SF (SLIP FIT). LOCALATIONAL TOLERANCE ±.0005" OR [±.013MM]

METRIC THREADS COURSE PITCH

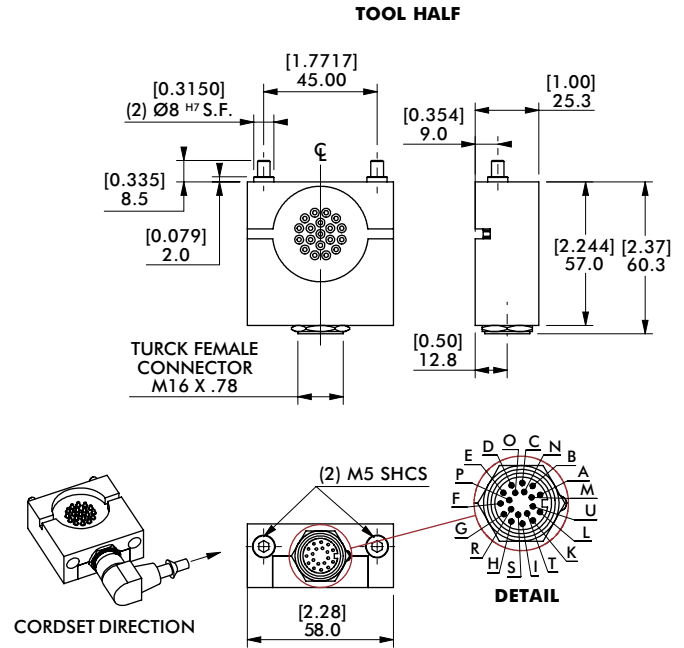
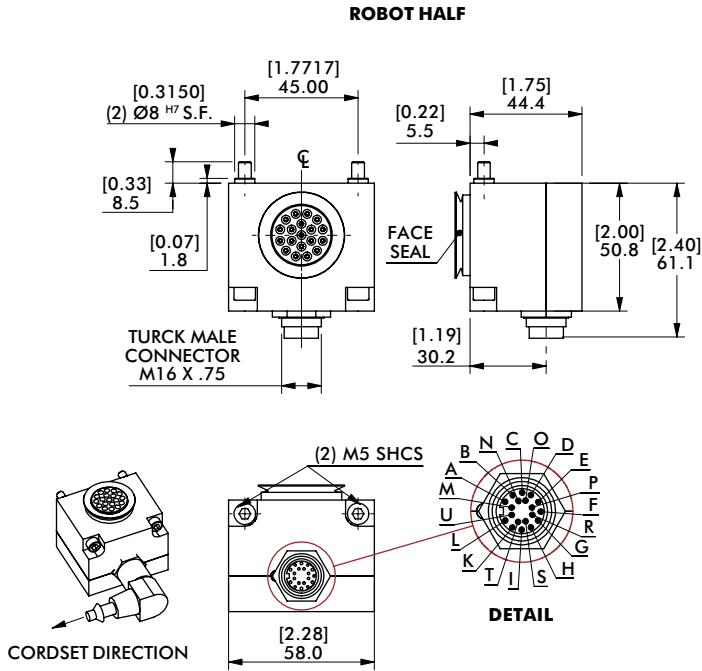
IMPERIAL ([ IN.])  
0.00 = ± .01  
0.000 = ± .005  
0.0000 = ± .0005

METRIC (MM)  
[0] = [± .25]  
[0.0] = [± .13]  
[0.00] = [± .013]

# RQC/RTP SERIES

## Automatic Tool Changers | Technical Specifications | Dimensions

### 19 Pin Module 3 Amp - 48 VDC

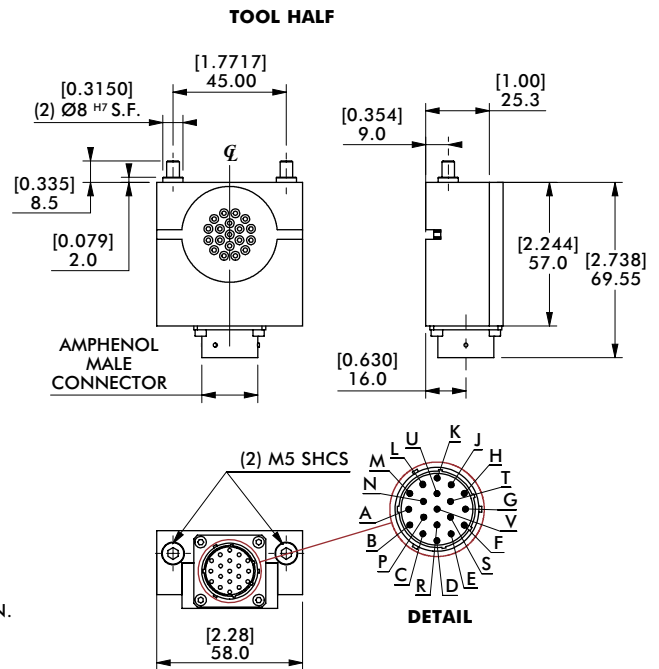
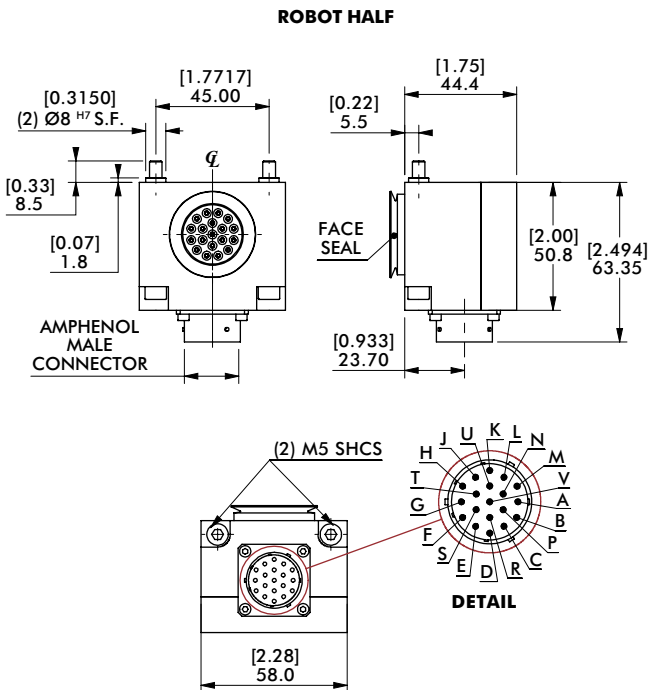


MODULE REPLACEMENT **ROBOT PLATE**  
E19 KE19-RQC

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

MODULE REPLACEMENT **TOOL PLATE**  
E19 KE19-RTP

### 19 Pin Module 5 Amp - 120 VDC



USER  
90°  
PLUG  
NOT  
SHOWN.

MODULE REPLACEMENT **ROBOT PLATE**  
G19 KG19-RQC

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

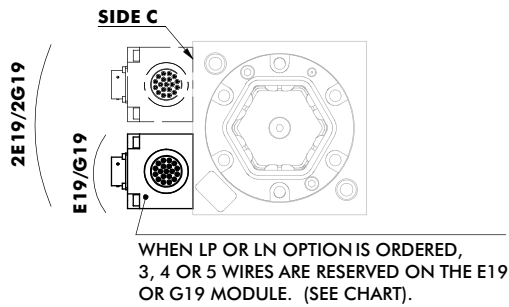
MODULE REPLACEMENT **TOOL PLATE**  
G19 KG19-RTP



# RQC/RTP SERIES

## Automatic Tool Changers | Technical Specifications | Dimensions

### Modules Connecting with Latch/Unlatch Sensors



Reserved Pin Numbers on E19/G19		
Sensor/Switch	RQC 200 & 400	RQC 800, 1200, 2400
LP or LN (Inductive)	R: + 10 - 30 VDC	R: + 10 - 30 VDC
	L: Common	L: Common
	M: Lock	M: Lock
	N: Unlock	N: Unlock
LD (Dry Contact)	R: + 10 - 30 VDC	R: + 10 - 30 VDC
	L: Common	L: Common
	M: Lock	M: Lock
	N: Unlock	N: Lock
		P: Ready to Couple

### Pin Numbering

**E19 PINS NUMBERING**

**Wire Color on CABL-029 Cordset**

Contact	Wire Color
R	Red
L	Brown
M	Orange
N	Grey/Brown
P	White

**G19 PINS NUMBERING**

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

SENSING ACCESSORIES LP, LN, OR LD USING 19 PINS MODULES E19 OR G19 (REQUIRES 3, 4, OR 5 OF THE 19 PINS) (AS SHOWN ABOVE)

**"A"**

**"B"**

MODEL	"A"	"B"	"C"
RQC-200	[0.563] 14.3	[0.886] 22.5	[0.652] 16.55
RQC-400	[0.811] 20.6	[1.329] 33.7	[0.685] 17.4
RQC-800	[0.811] 20.6	[1.772] 45.0	[0.821] 20.8
RQC-1200	[1.061] 26.9	[1.772] 45.0	[1.071] 27.2

SENSING ACCESSORIES CP, CN, OR CD BY M12 CONNECTOR (3, 4, OR 5 PINS) (SEE BELOW)

**"C"**

**E19 MODULE**

**G19 MODULE**

**M12 CONNECTOR**

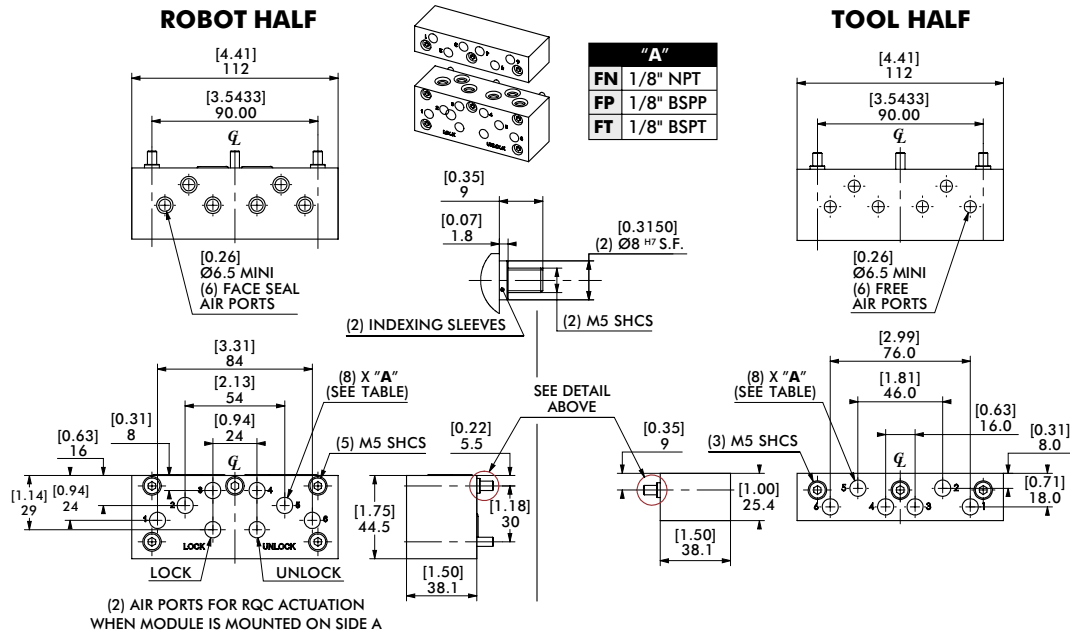
**M12 CONNECTOR**

**READY TO COUPLE (TOOL PLATE PRESENCE SENSING PIN)**

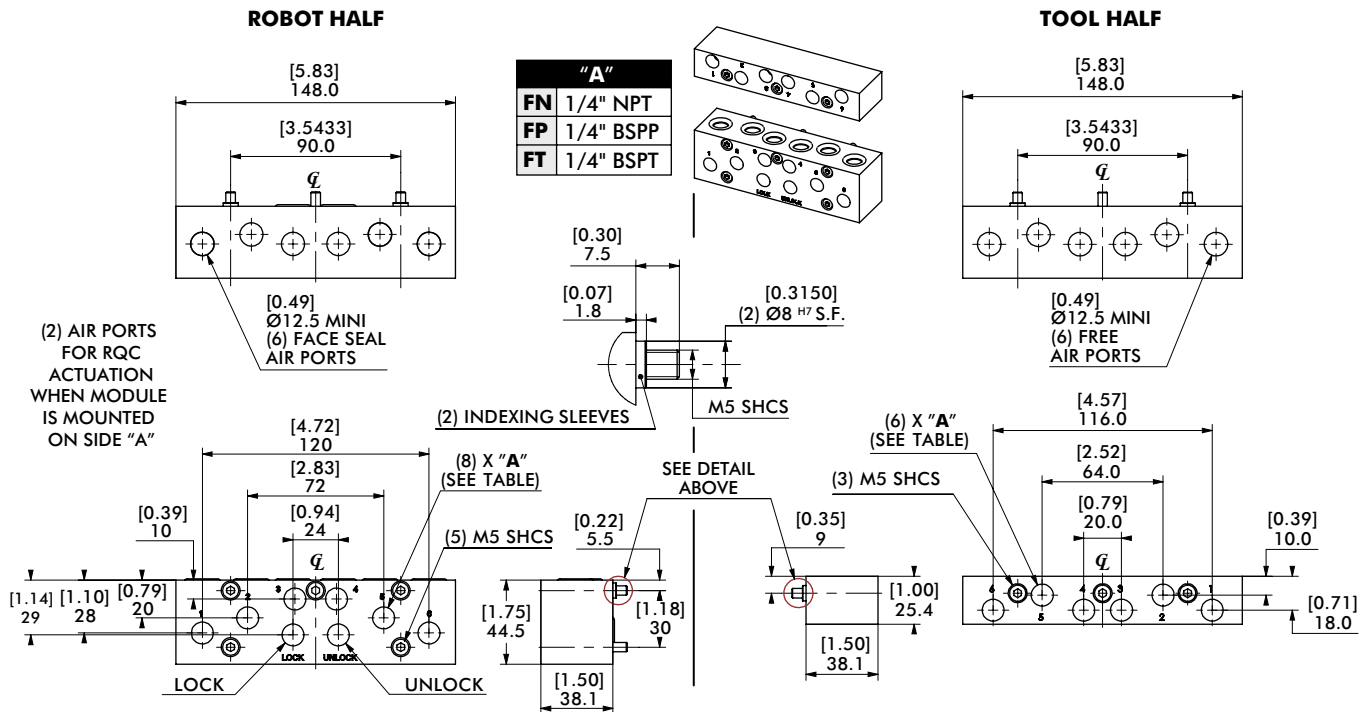
# RQC/RTP SERIES

Automatic Tool Changers | Technical Specifications | Dimensions

## 6 x 1/8" Air Ports Module | Face Seal (for RQC/RTP-200 & RQC/RTP-400)



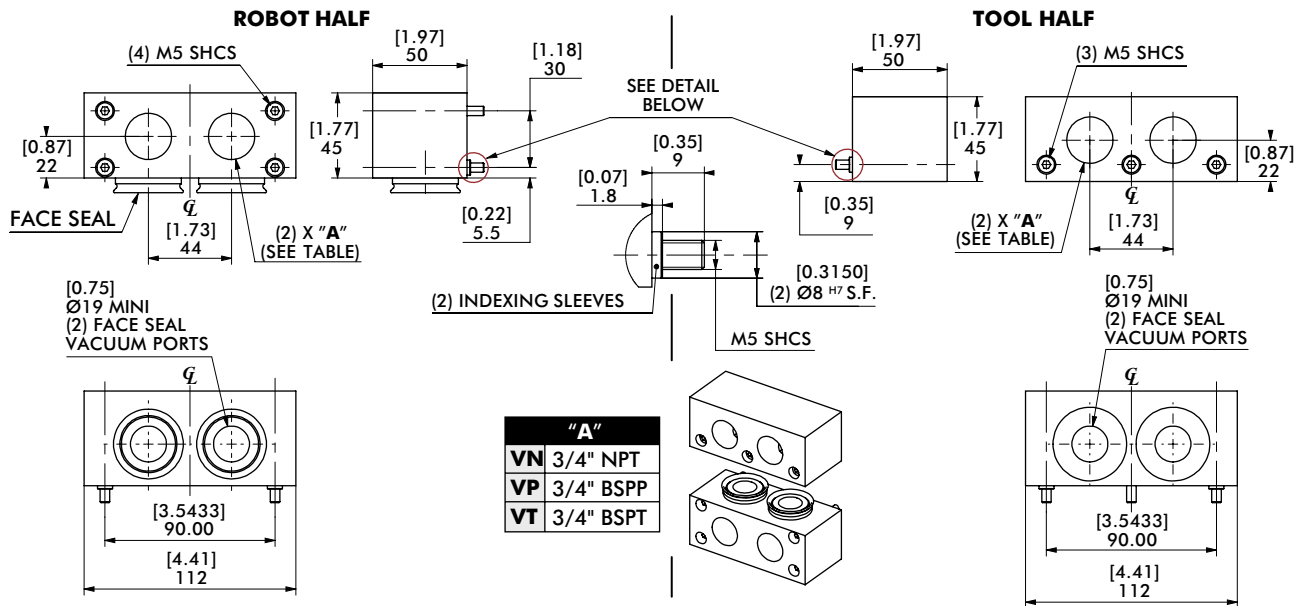
## 6 x 1/4" Air Ports Module | Face Seal (for RQC/RTP-800, -1200)



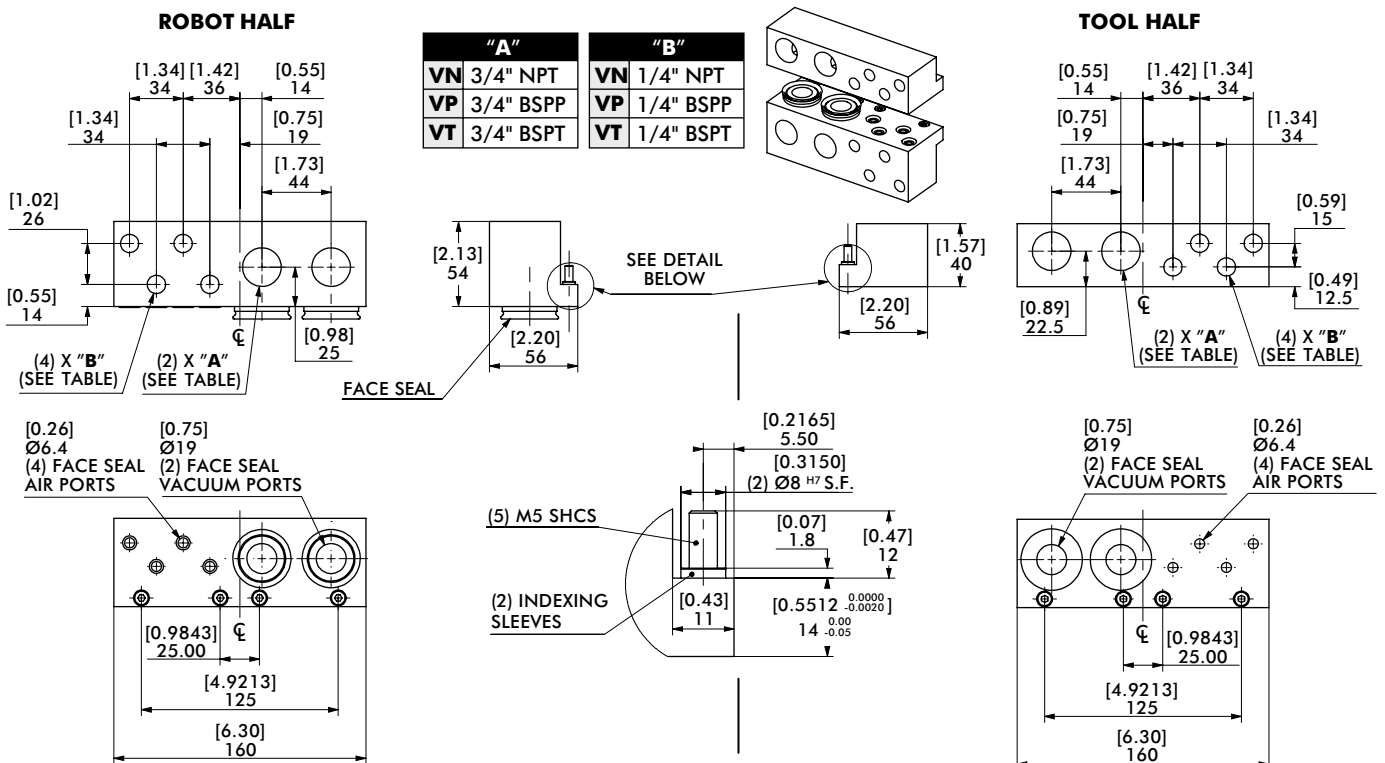
MODULE REPLACEMENT	RQC-200/400	RQC 800/1200	MODULE REPLACEMENT	RTP-200/400	RTP 800/1200
FN	KFN-RQC200	KFN-RQC800	FN	KFN-RTP200	KFN-RTP800
FP	KFP-RQC200	KFP-RQC800	FP	KFP-RTP200	KFP-RTP800
FT	KFT-RQC200	KFT-RQC800	FT	KFT-RTP200	KFT-RTP800

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

### 2 x 3/4" Vacuum Ports Module | Face Seal (for RQC/RTP-200 & RQC/RTP-400)



### 2 x 3/4" Vacuum Ports Module | Face Seal (for RQC/RTP-800, -1200, -2400)



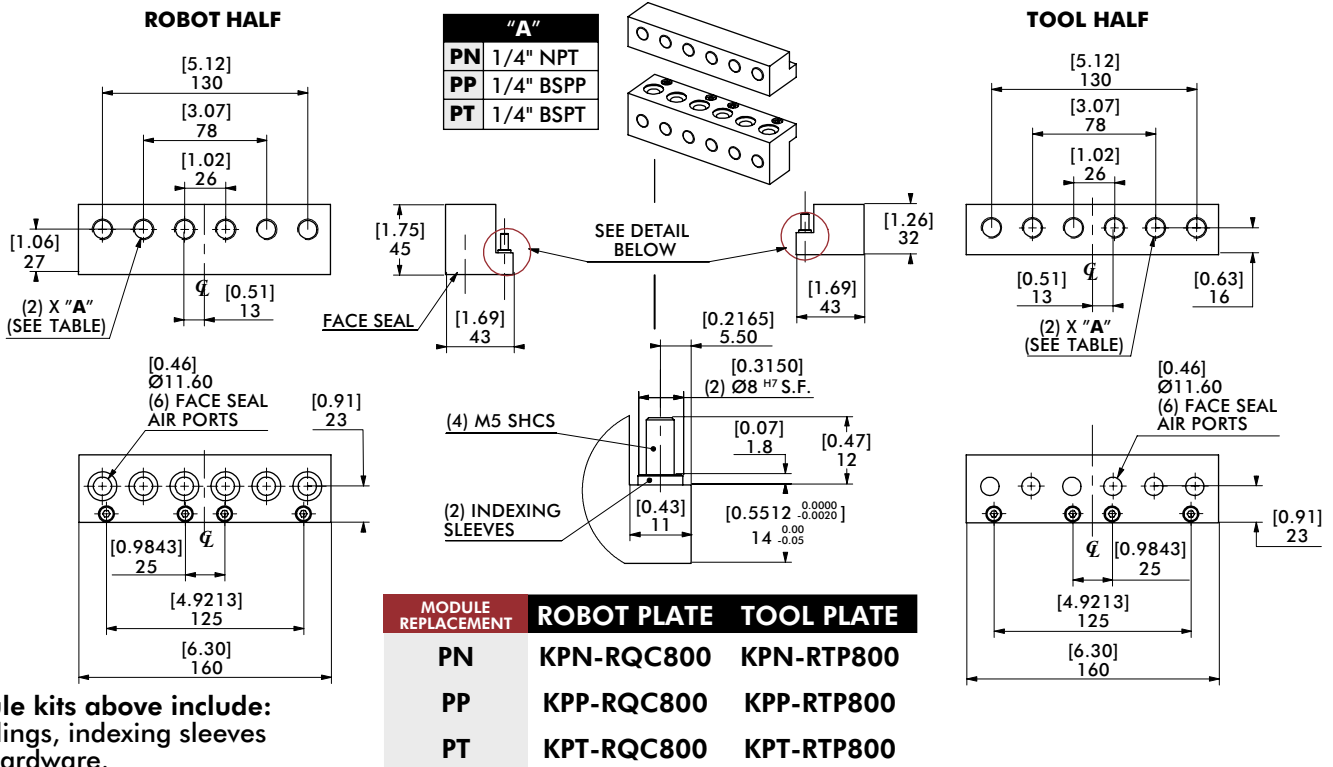
MODULE REPLACEMENT	RQC-200/400	RQC 800/1200/2400	MODULE REPLACEMENT	RTP-200/400	RTP 800/1200/2400
VN	KVN-RQC200	KVN-RQC800	VN	KVN-RTP200	KVN-RTP800
VP	KVP-RQC200	KVP-RQC800	VP	KVP-RTP200	KVP-RTP800
VT	KVT-RQC200	KVT-RQC800	VT	KVT-RTP200	KVT-RTP800

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

# RQC/RTP SERIES

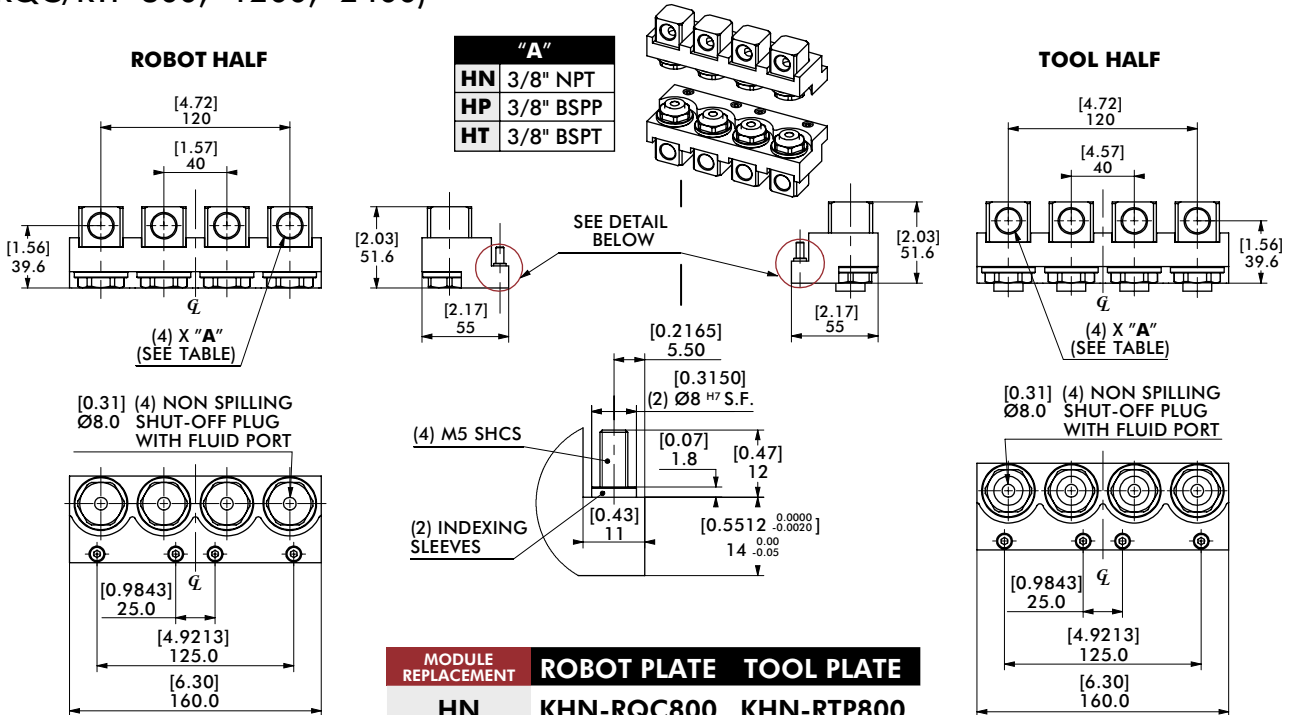
## Automatic Tool Changers | Technical Specifications | Dimensions

### 6 x 1/4" Air Ports Module | Face Seal (for RQC/RTP-800, -1200, -2400)



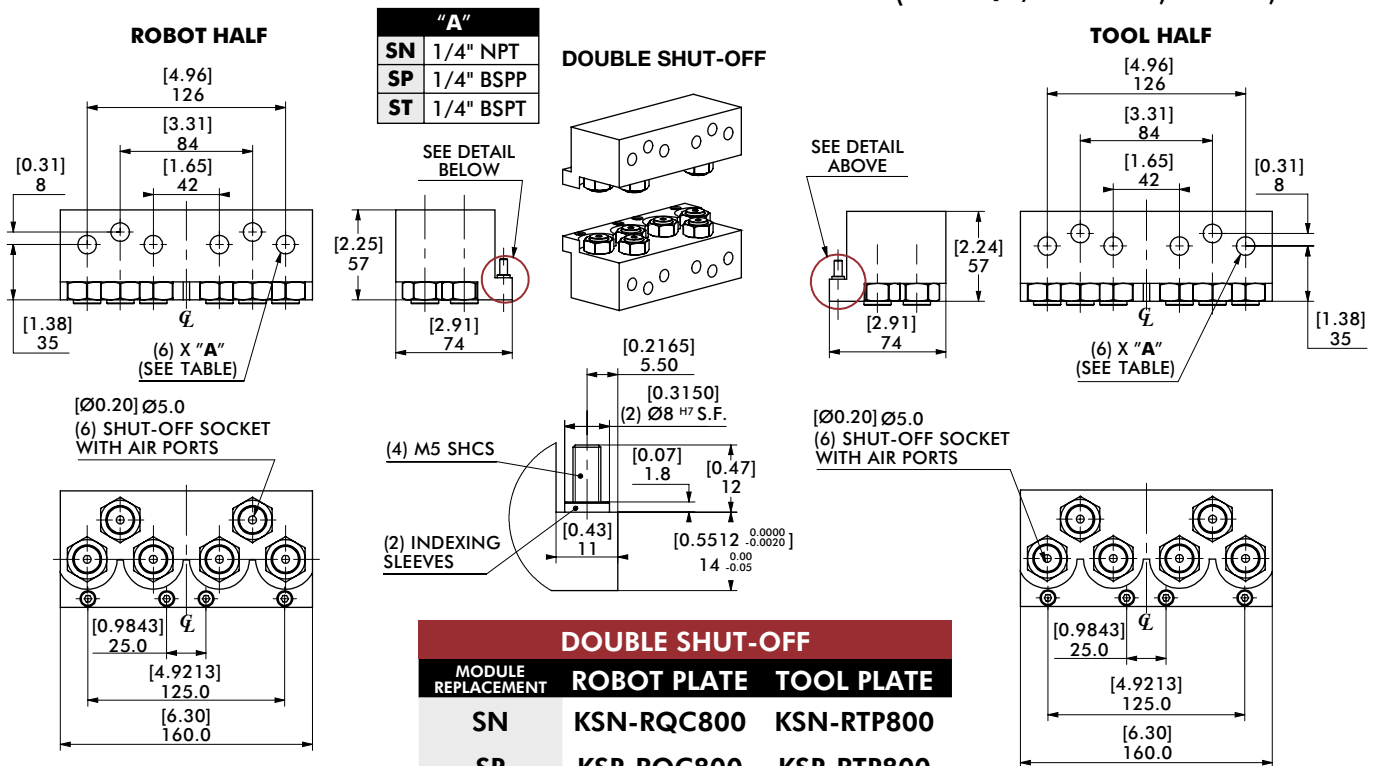
Module kits above include:  
Couplings, indexing sleeves  
and hardware.

### 4 x 3/8" Fluid Ports Module | Non Spilling | Double Shut-Off (for RQC/RTP-800, -1200, -2400)



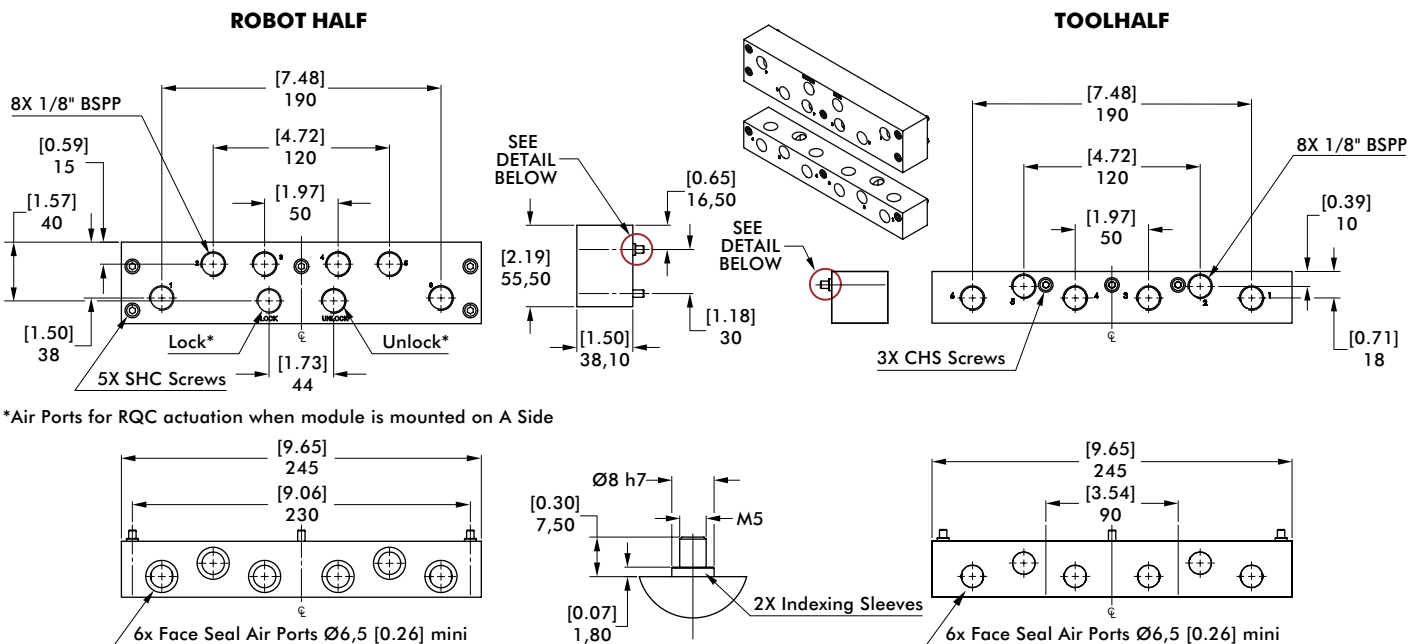
Module kits above include:  
Couplings, indexing sleeves  
and hardware.

### 6 x 1/4" Air Ports Module | Double Shut-Off Flat Face (SN/SP/ST) (for RQC/RTP-800, -1200, -2400)



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

### 8 x 1/8" Air Ports Module | Face Seal (FN) (for RQC/RTP-2400)



\*Air Ports for RQC actuation when module is mounted on A Side

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

# QC/TP SERIES

## Automatic Tool Changers | Features and Benefits

### 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  $\pm 10^\circ$ .

### 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.

### 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

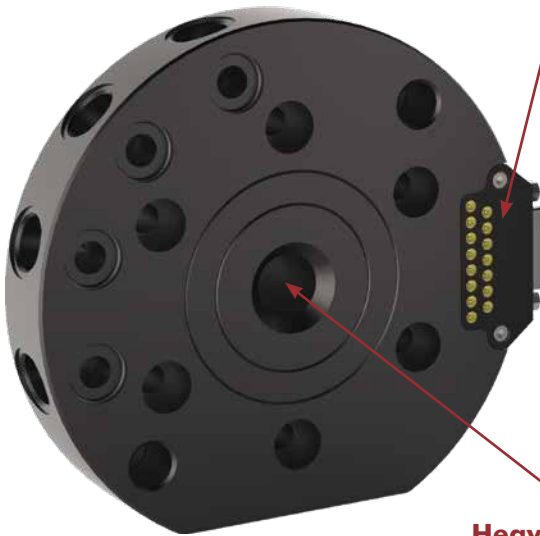
### Self Lubricating Seals

Self lubricating dynamic seals

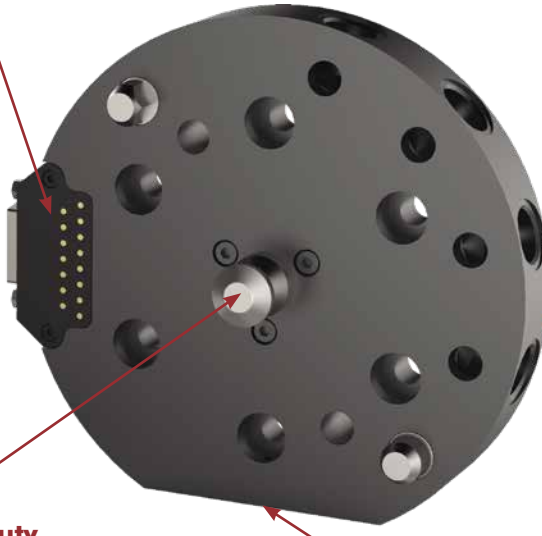
### Offboard I/O Block

with heavy-duty pins offer reliable contact points

### Robot Plate



### Tool Plate



**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

**Module Mounting Surface**  
Flat for optional pneumatic,  
fluid or electric module  
(See Page TC-QCTP-13)

## Mounting Information



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

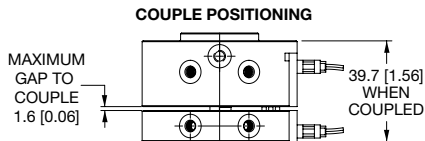


**Tool Plate**  
has counterbored  
holes for mounting  
and two dowel pins  
for hole location (size  
30 has pilot boss)

# QC/TP SERIES

## Automatic Tool Changers | Technical Information

**Combined Weight:** 0.34 Kg [0.75 lbs]  
**Max. Payload:** 13.6 Kg [30 lbs]  
**Max. Moment:** 22.6 Nm [200 in-lbs]

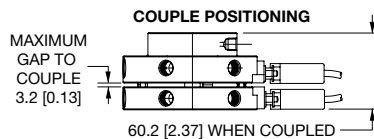


### QC-30/TP-30



**QC-30** **TP-30**  
**Robot Plate** **Tool Plate**

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

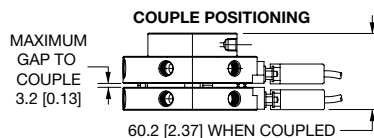


### QC-60/TP-60



**QC-60** **TP-60**  
**Robot Plate** **Tool Plate**

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

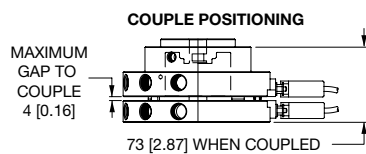


### QC-60-10P/TP-60-10P



**QC-60-10P** **TP-60-10P**  
**Robot Plate** **Tool Plate**

**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

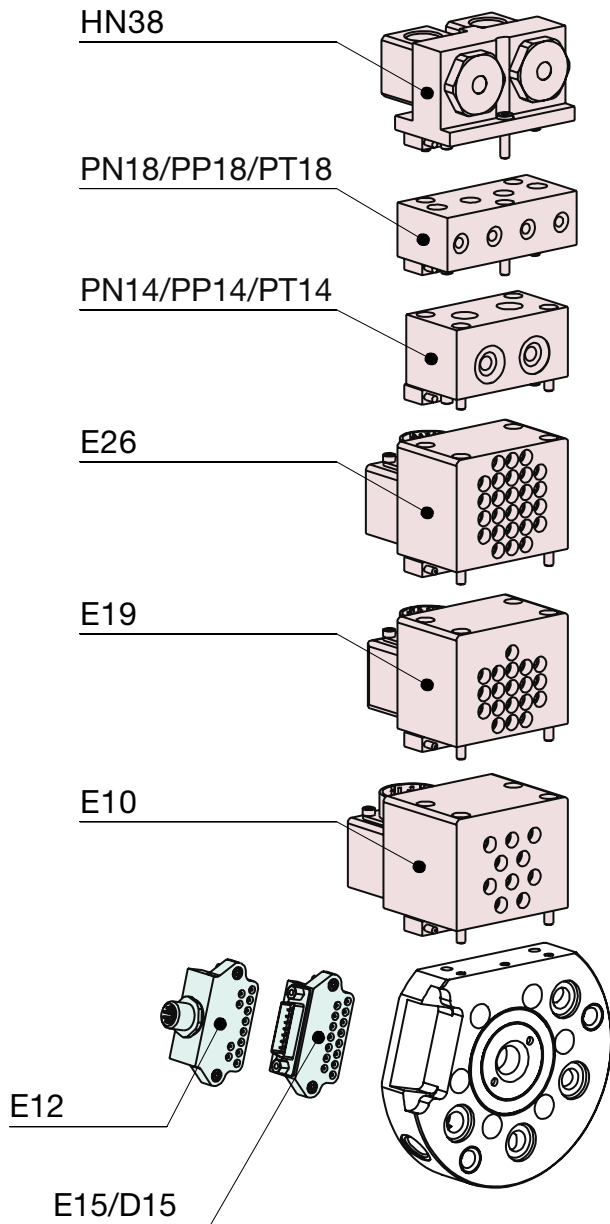


**QC-150** **TP-150P**  
**Robot Plate** **Tool Plate**

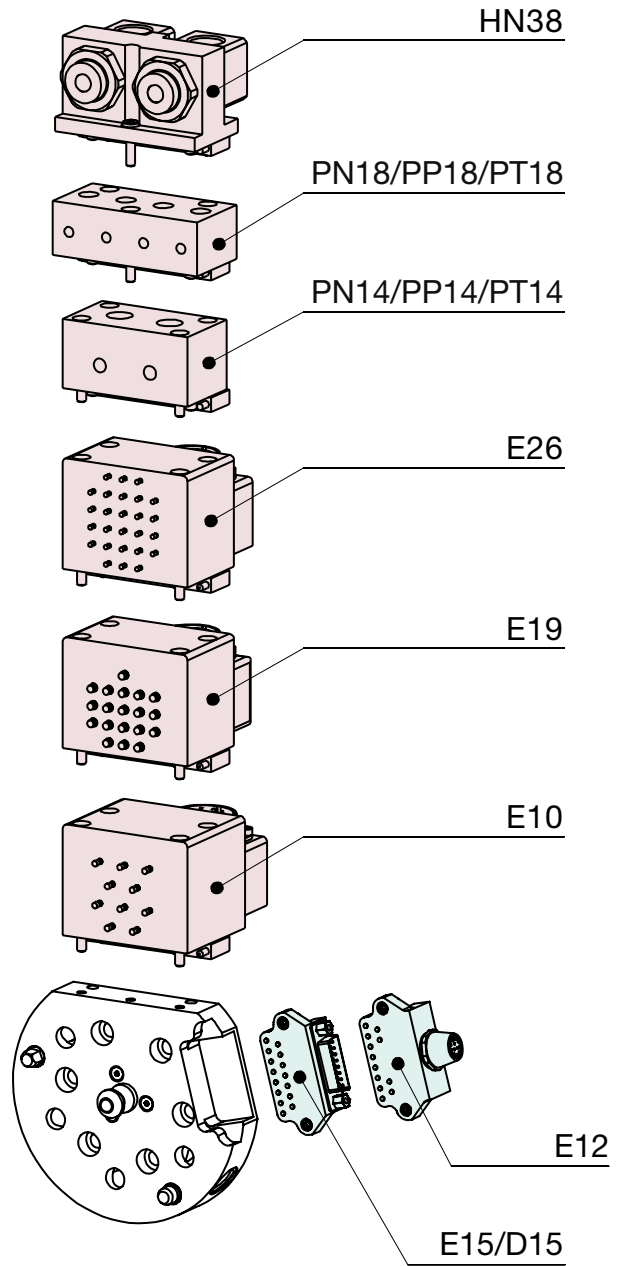
# QC/TP SERIES

## Automatic Tool Changers | Module Usage Illustrations

### QC Series Robot Plate with Optional Modules



### TP Series Tool Plate with Optional Modules





# QC/TP SERIES

Automatic Tool Changers | How to Order



<b>Base Model</b>	<b>Model Size</b>	<b>Port Options (QC-only)</b>	<b>I/O Block</b>	<b>Optional Modules*</b>	<b>10-Port (QC/TP-60 only)</b>
<b>QC</b>	<b>60</b>	<b>M</b>	<b>E15</b>	<b>PN18</b>	<b>10P</b>
<b>QC</b> Robot Plate	<b>30</b> <b>60</b> (See Page TC-QCTP-2 for Specifications)	<b>Blank</b> NPT	<b>0</b> No I/O Block	<b>E26</b>	<b>26-PIN 5A Module</b>
<b>TP</b> Tool Plate		<b>M</b> BSPP	<b>E15</b> 15-pin, Sub-D	<b>E19*</b>	<b>19-PIN 5A Module</b>
		<b>A</b> BSPT (QC-60 and QC-150 only)	<b>D15</b> (2) X E15 (QC/TP-30 only)	<b>E10</b>	<b>10-PIN 13A Module</b>
			<b>E12</b> 12-pin, Turck	<b>PN18</b>	<b>4X 1/8 NPT Pneumatic Port</b>
				<b>PP18</b>	<b>4X 1/8 BSPP Pneumatic Port</b>
				<b>PT18</b>	<b>4X 1/8 BSPT Pneumatic Port</b>
				<b>PN14</b>	<b>2X 1/4 NPT Pneumatic Port</b>
				<b>PP14</b>	<b>2X 1/4 BSPP Pneumatic Port</b>
				<b>PT14</b>	<b>2X 1/4 BSPT Pneumatic Port</b>
				<b>HN38</b>	<b>2X 3/8 NPT Fluid Port</b>

**\*QC/TP-30 and QC/TP-60-10P cannot be ordered with optional modules**

## 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-30 (ROBOT PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions

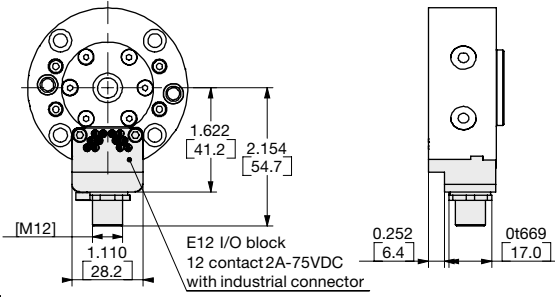
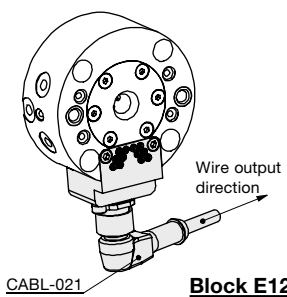
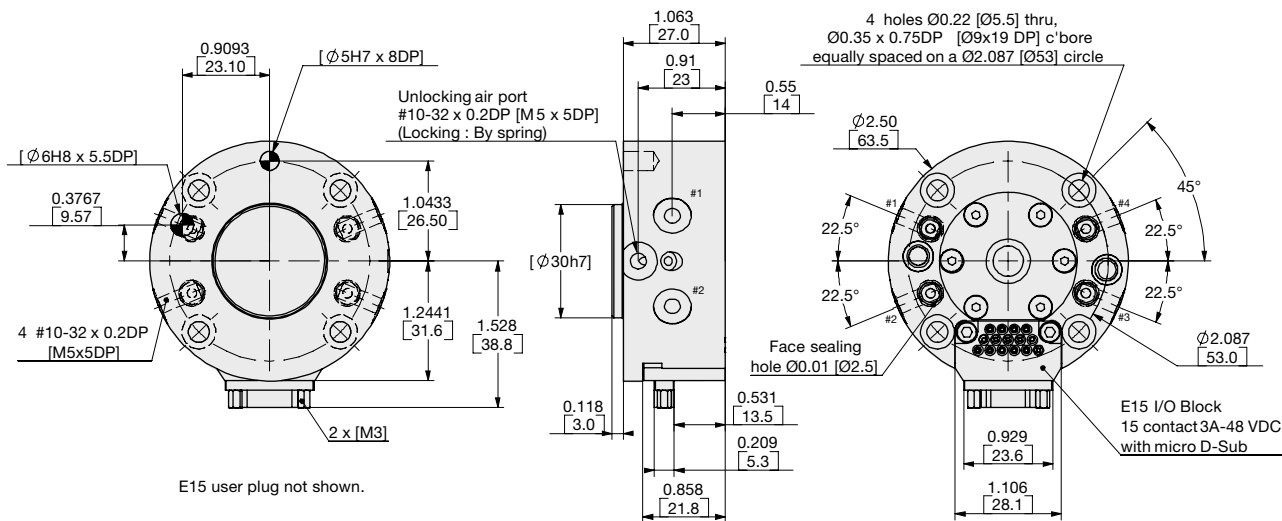
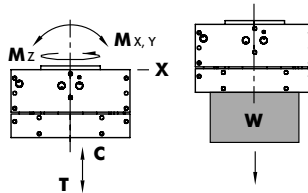


## QC-30 Specification:

**Max. Payload:** 13.6 Kg [30 lbs]  
**Weight:** 0.23 Kg [0.50 lbs]  
**Bore Ø:** 25.4 mm [1.00 in]  
**Displacement:** 3.9 cm<sup>3</sup> [0.24 in<sup>3</sup>]

## Loading Capacity

**Max. Tensile T:** 311 N [70 lb]  
**Max. Compressive C:** 445 N [100 lb]  
**Max. Moment (M<sub>x</sub>/M<sub>y</sub>/M<sub>z</sub>):** 22.6 Nm [200 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

⌀  
 DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

⊲  
 THIRD ANGLE PROJECTION

⊕  
 ALL DOWEL HOLES ARE SF (SLIP FIT).  
 LOCAL TOLERANCE ±.0005" OR [±.013MM]

⊘  
 METRIC THREADS  
 COURSE PITCH

IMPERIAL ([ IN.])  
 0.00 = ±.01  
 0.000 = ±.005  
 0.0000 = ±.0005

METRIC (MM)  
 [0] = [±.25]  
 [0.0] = [±.13]  
 [0.00] = [±.013]

# TP-30 (TOOL PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions

## TP-30 Specification:

Max. Payload: 13.6 Kg [30 lbs]

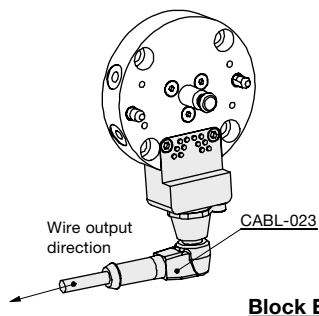
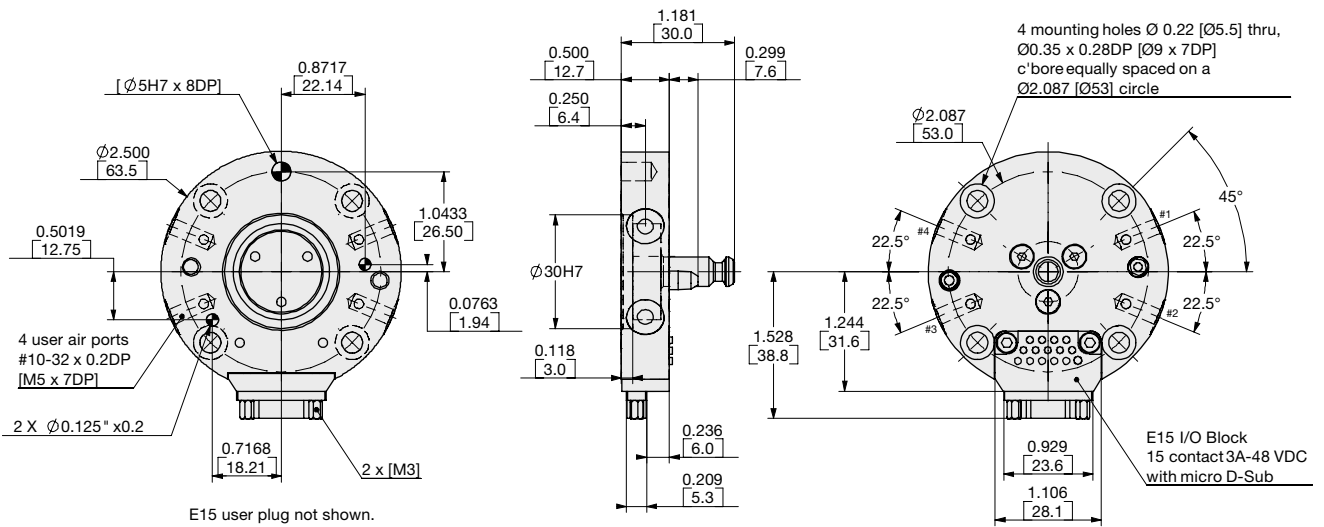
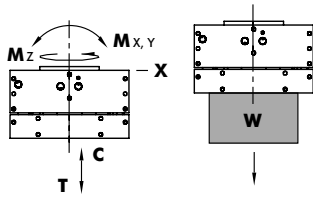
Weight: 0.11 Kg [0.25 lbs]

## Loading Capacity

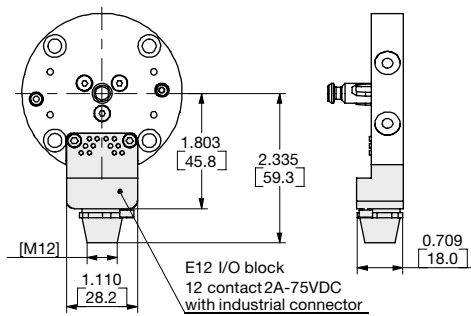
Max. Tensile **T**: 311 N [70 lb]

Max. Compressive **C**: 445 N [100 lb]

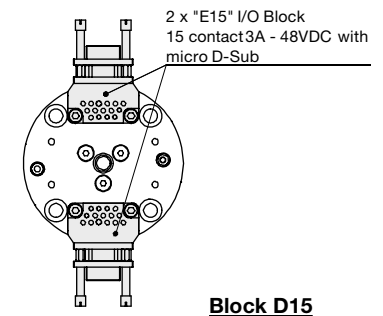
Max. Moment (**M<sub>x</sub>/M<sub>y</sub>/M<sub>z</sub>**): 22.6 Nm [200 in-lb]



**Block E12**



**Block D15**



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 ±.0005" OR [±.013MM]

METRIC THREADS  
COURSE PITCH

IMPERIAL ([ IN.])  
0.00 = ±.01  
0.000 = ±.005  
0.0000 = ±.0005

METRIC (MM)  
[0] = [±.25]  
[0.0] = [±.13]  
[0.00] = [±.013]

# QC-60 (ROBOT PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions



## QC-60 Specification:

Max. Payload: 27 Kg [60 lbs]

Weight: 0.86 Kg [1.9 lbs]

Bore Ø: 44.5 mm [1.75 in]

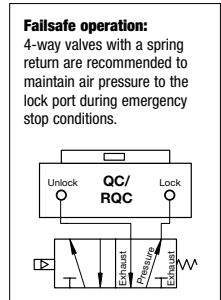
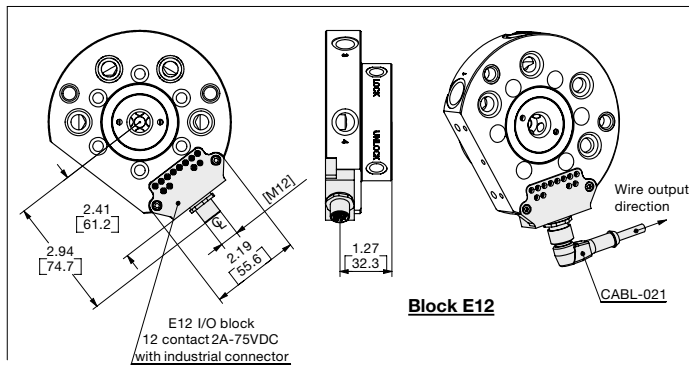
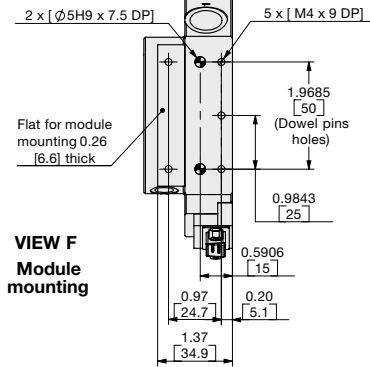
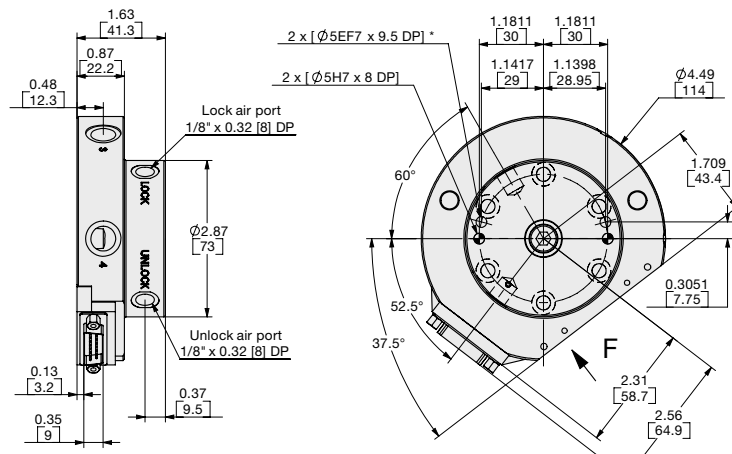
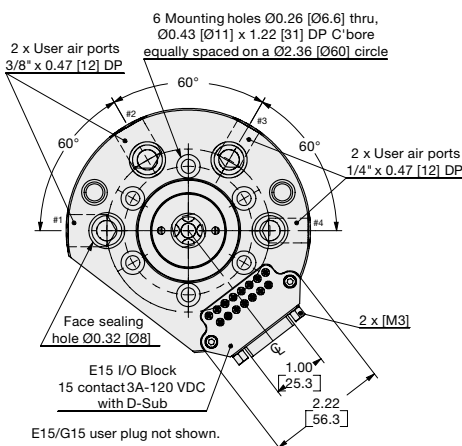
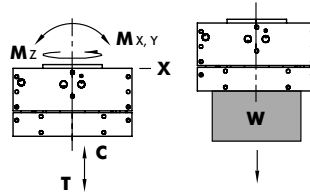
Displacement: 9.2 cm<sup>3</sup> [0.56 in<sup>3</sup>]

## Loading Capacity

Max. Tensile **T**: 445 N [100 lb]

Max. Compressive **C**: 534 N [120 lb]

Max. Moment (**M<sub>x</sub>/M<sub>y</sub>/M<sub>z</sub>**): 88.1 Nm [780 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

⌀ DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

THIRD ANGLE PROJECTION

ALL DOWEL HOLES ARE SF (SLIP FIT). LOCAL TOLERANCE ±.0005" OR ±.013MM

METRIC THREADS COURSE PITCH

IMPERIAL ([ IN.])  
0.00 = ± .01  
0.000 = ± .005  
0.0000 = ± .0005

METRIC (MM)  
[0] = [± .25]  
[0.0] = [± .13]  
[0.00] = [± .013]

# TP-60 (TOOL PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions

## TP-60 Specification:

Max. Payload: 27 Kg [60 lbs]

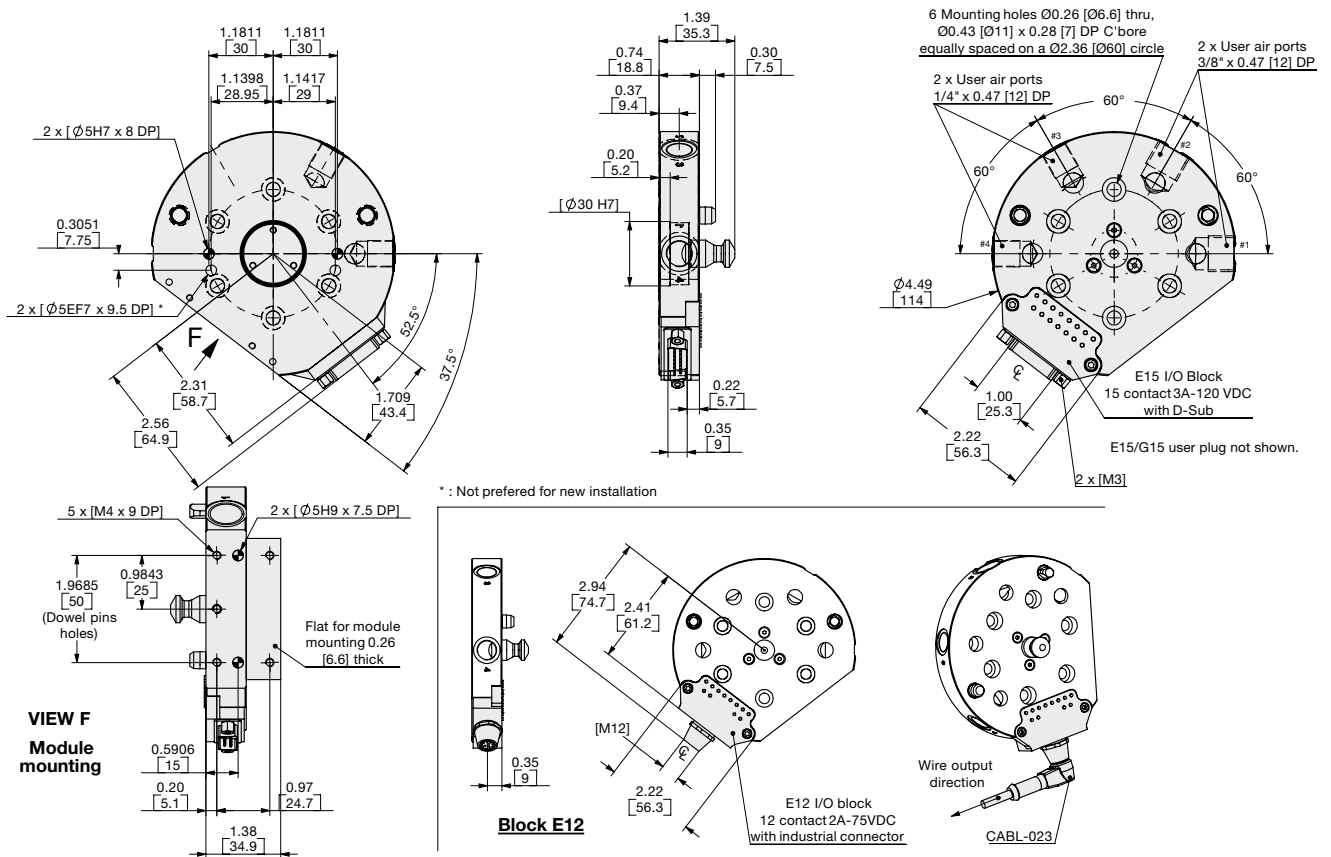
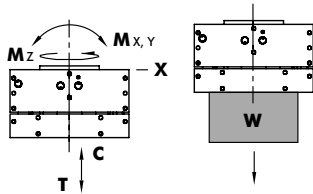
Weight: 0.41 Kg [0.90 lbs]

## Loading Capacity

Max. Tensile **T**: 445 N [100 lb]

Max. Compressive **C**: 534 N [120 lb]

Max. Moment (**M<sub>x</sub>/M<sub>y</sub>/M<sub>z</sub>**): 88.1 Nm [780 in-lb]



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 ±.0005" OR [±.013MM]

METRIC THREADS COURSE PITCH

IMPERIAL ([ IN.])  
0.00 = ±.01  
0.000 = ±.005  
0.0000 = ±.0005

METRIC (MM)  
[0] = [±.25]  
[0.0] = [±.13]  
[0.00] = [±.013]

# QC-60-10P (ROBOT PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions

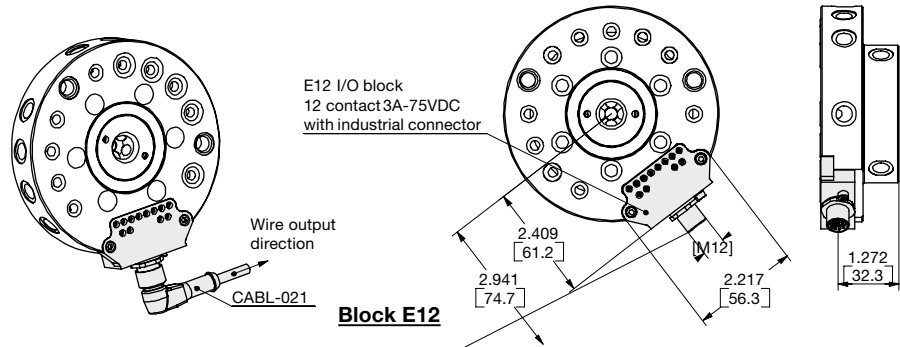
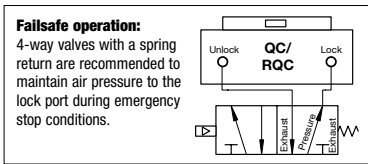
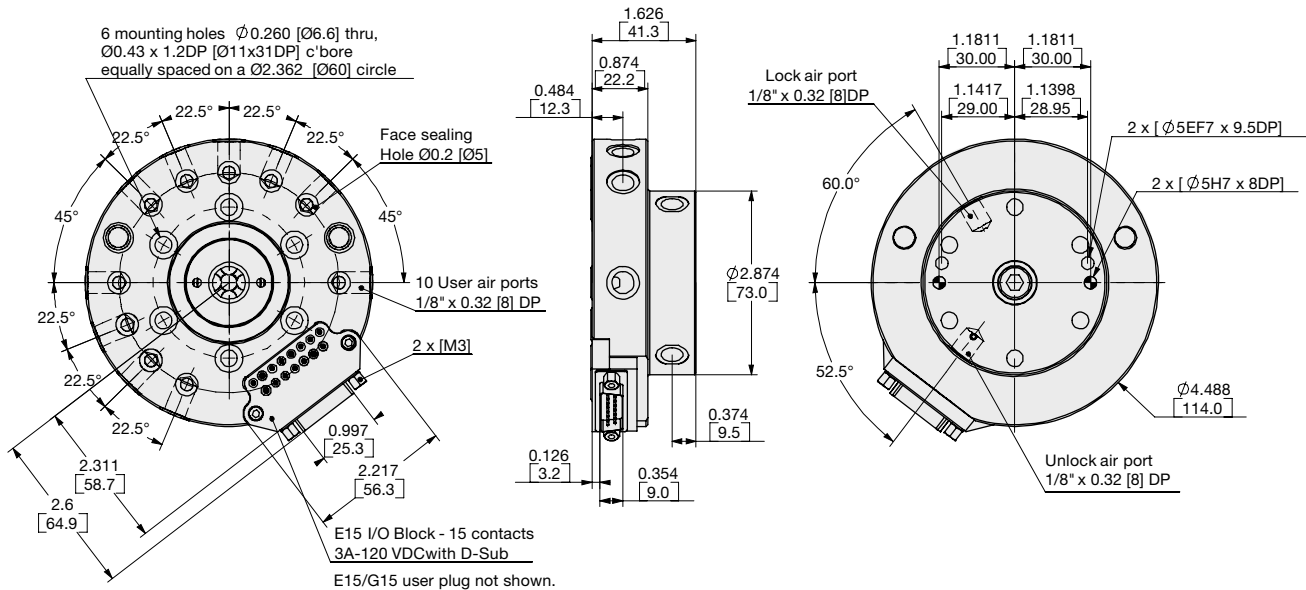
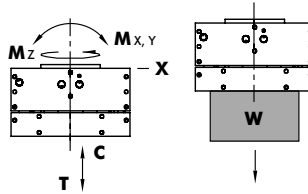


## QC-60-10P Specification:

Max. Payload: 27 Kg [60 lbs]  
 Weight: 0.86 Kg [1.9 lbs]  
 Bore Ø: 44.5 mm [1.75 in]  
 Displacement: 9.2 cm<sup>3</sup> [0.56 in<sup>3</sup>]

## Loading Capacity

Max. Tensile **T**: 445 N [100 lb]  
 Max. Compressive **C**: 534 N [120 lb]  
 Max. Moment (**M<sub>x</sub>/M<sub>y</sub>/M<sub>z</sub>**): 88.1 Nm [780 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

⌀	⊕	⊖	⊕	IMPERIAL ([ IN.])	METRIC (MM)
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCAL TOLERANCE ±.0005" OR ±.013MM	METRIC THREADS COURSE PITCH	0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005	[0] = ±.25 [0.0] = ±.13 [0.00] = ±.013

# TP-60-10P (TOOL PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions

## TP-60-10P Specification:

Max. Payload: 27 Kg [60 lbs]

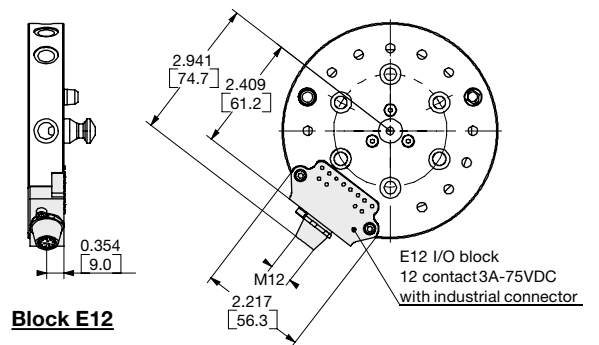
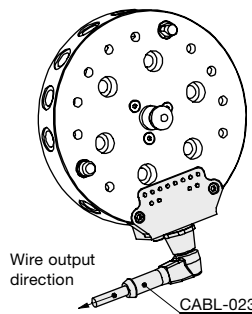
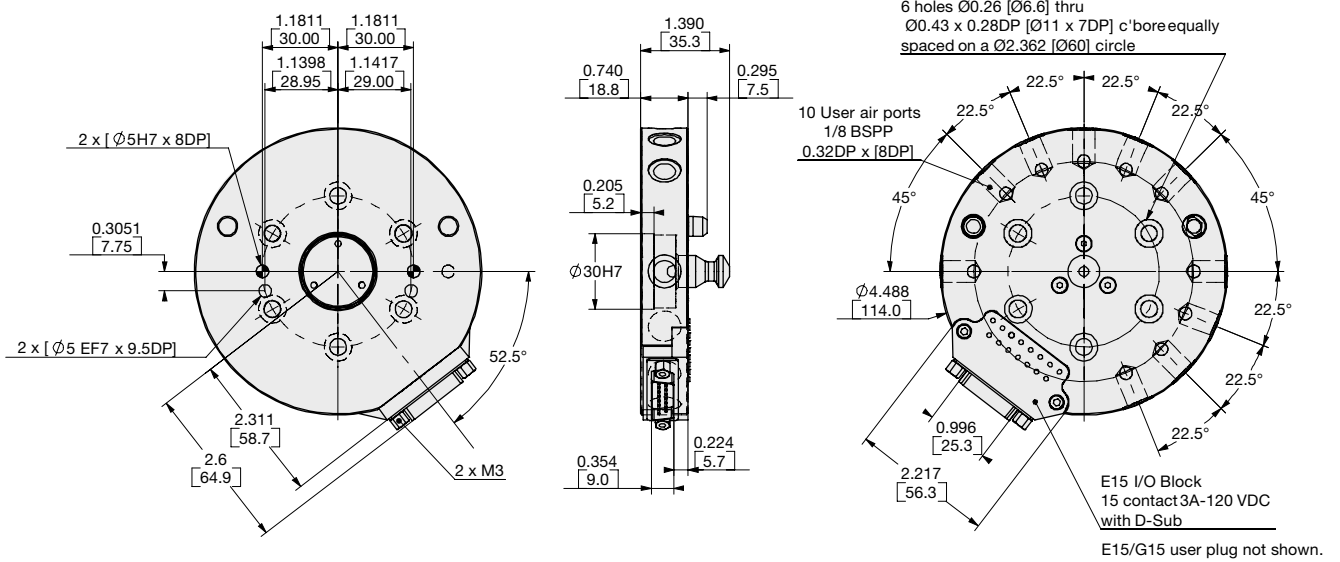
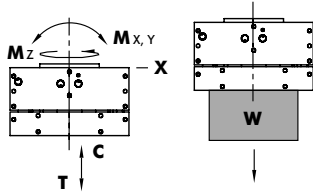
Weight: 0.41 Kg [0.90 lbs]

## Loading Capacity

Max. Tensile **T**: 445 N [100 lb]

Max. Compressive **C**: 534 N [120 lb]

Max. Moment (**M<sub>x</sub>/M<sub>y</sub>/M<sub>z</sub>**): 88.1 Nm [780 in-lb]



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 ±.0005" OR [±.013MM]

METRIC THREADS COURSE PITCH

IMPERIAL ([ IN.])  
 0.00 = ±.01  
 0.000 = ±.005  
 0.0000 = ±.0005

METRIC (MM)  
 [0] = [±.25]  
 [0.0] = [±.13]  
 [0.00] = [±.013]

# QC-150 (ROBOT PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions



## QC-150 Specification:

Max. Payload: 68 Kg [150 lbs]

Weight: 2.2 Kg [4.8 lbs]

Bore Ø: 66.8 mm [2.63 in]

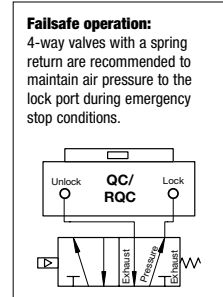
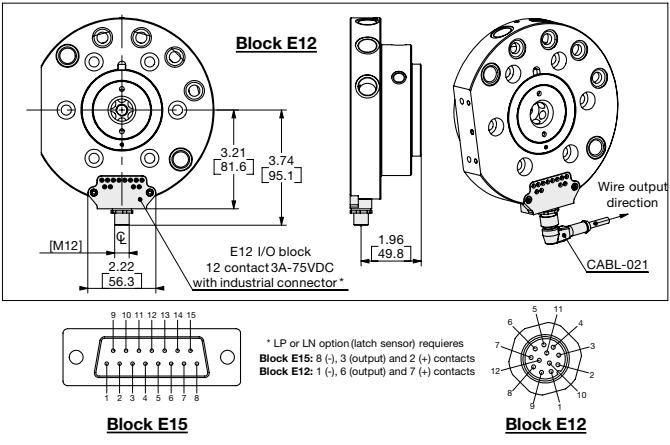
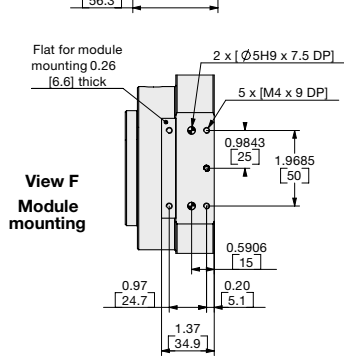
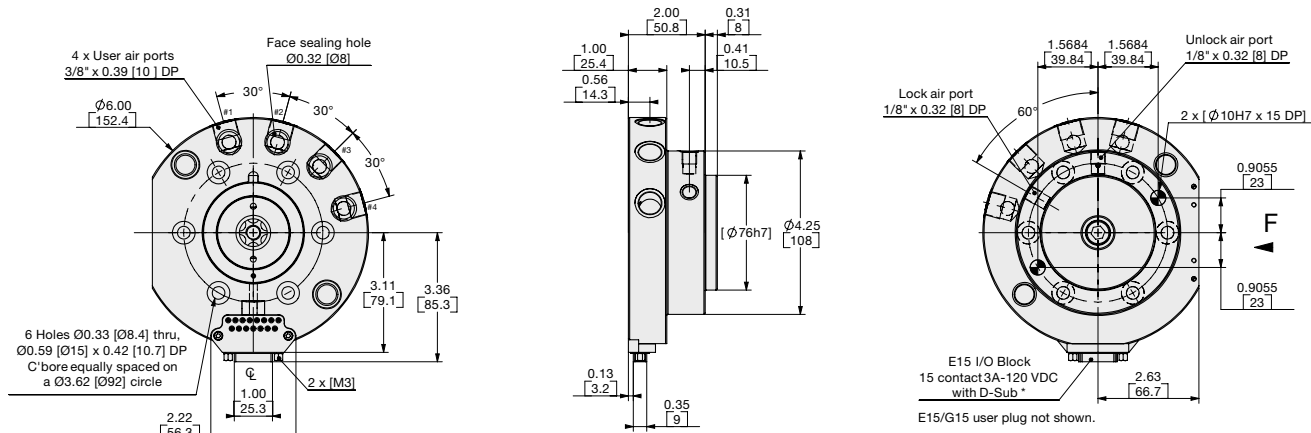
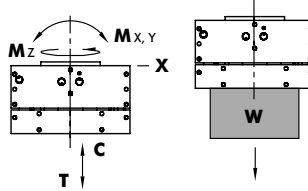
Displacement: 25.4 cm<sup>3</sup> [1.55 in<sup>3</sup>]

## Loading Capacity

Max. Tensile **T**: 890 N [200 lb]

Max. Compressive **C**: 1334 N [300 lb]

Max. Moment (**M<sub>x</sub>/M<sub>y</sub>/M<sub>z</sub>**): 215 Nm [1900 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

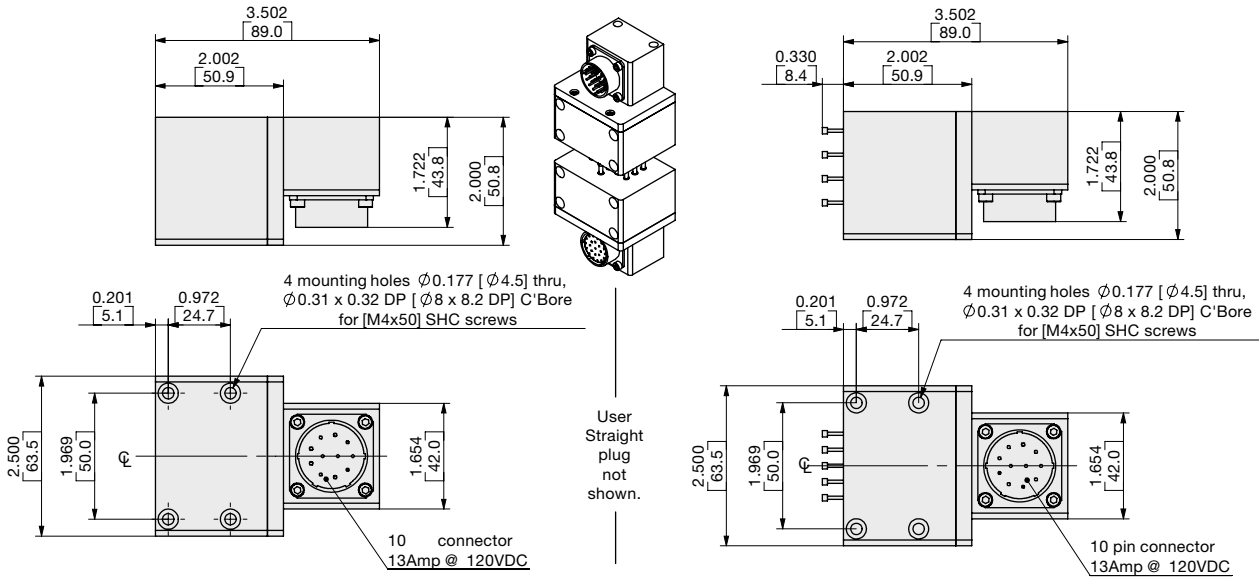
<p>DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE</p>	<p>THIRD ANGLE PROJECTION</p>	<p>ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE ±.0005" OR ±.013MM</p>	<p>METRIC THREADS COURSE PITCH</p>	<p>IMPERIAL ([ IN.])</p> <p>0.00 = ± .01 0.000 = ± .005 0.0000 = ± .0005</p>	<p>METRIC (MM)</p> <p>[0] = [± .25] [0.0] = [± .13] [0.00] = [± .013]</p>
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# QC/TP SERIES

## Automatic Tool Changers | Dimensions | 10-Pin Module 5Amp @ 120VDC Electric Module



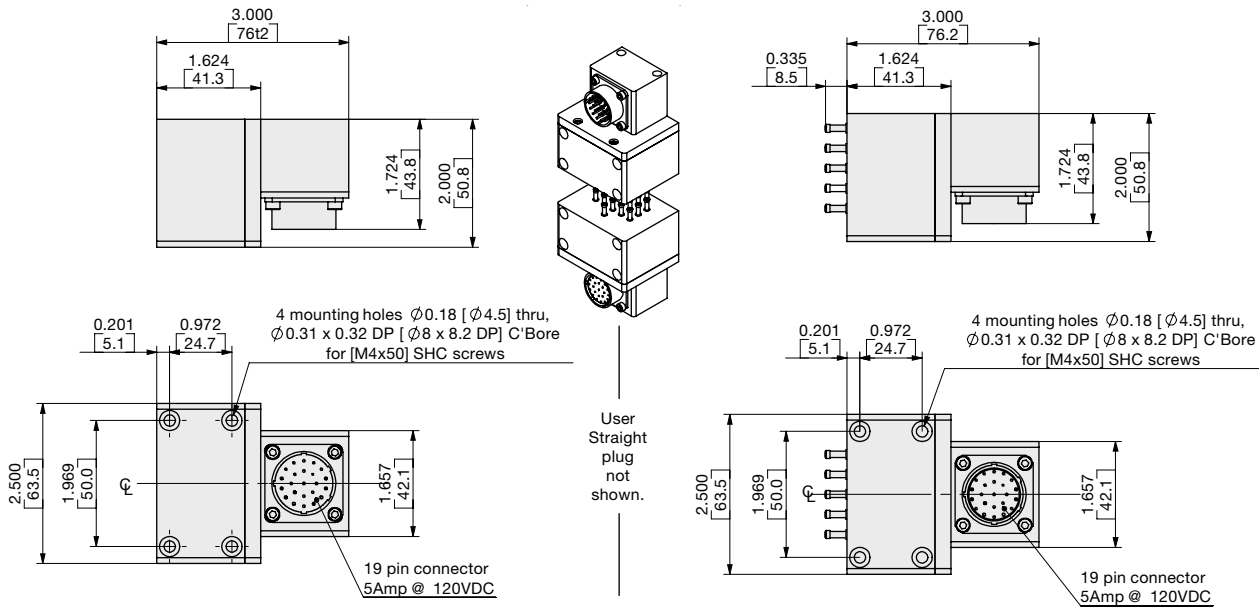
Flat for module mounting not shown: See QC or TP drawings.

Model	Module	Robot Plate	Tool Plate	*Accessory
QC/TP60	E10	KE10-QC60	KE10-TP60	ELCT-041 (Female)
QC/TP150	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



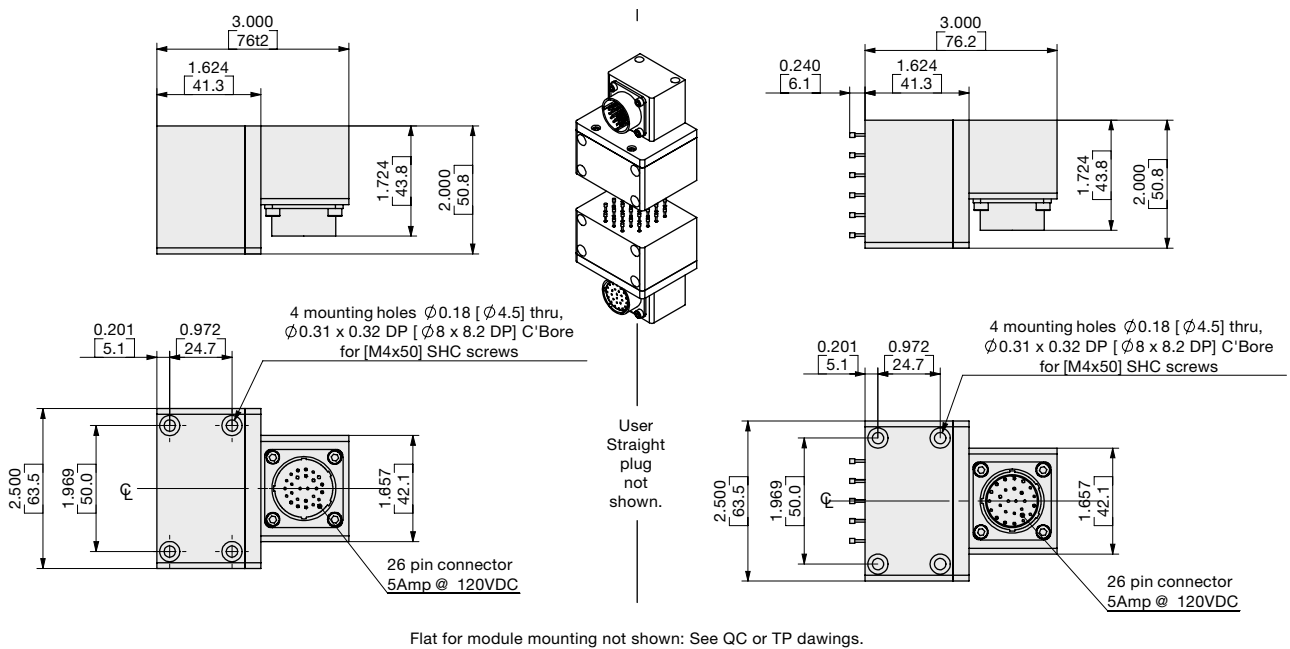
Flat for module mounting not shown: See QC or TP drawings.

Model	Module	Robot Plate	Tool Plate	*Accessory
QC/TP60	E19	KE19-QC60	KE19-TP60	ELCT-043 (Female)
QC/TP150	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

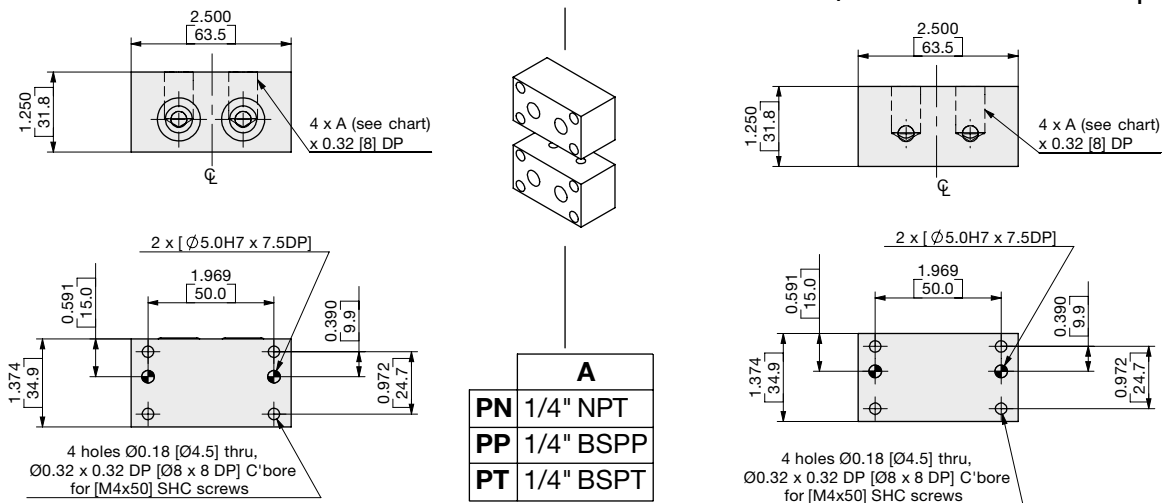


Model	Module	Robot Plate	Tool Plate	*Accessory
QC/TP60	E26	KE26-QC60	KE26-TP60	ELCT-045 (Female)
QC/TP150	E26	KE26-QC150	KE26-TP150	ELCT-046 (Male)

\*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.

## 2 X 1/4" Air Port Module | Face Seal



A	
PN	1/4" NPT
PP	1/4" BSPP
PT	1/4" BSPT

For **QC/TP-60**

Module	Robot Plate	Tool Plate
PN14	KPN14-QC60	KPN14-TP60
PP14	KPP14-QC60	KPP14-TP60
PT14	KPT14-QC60	KPT14-TP60
Seal Kit	SLKT-395	---

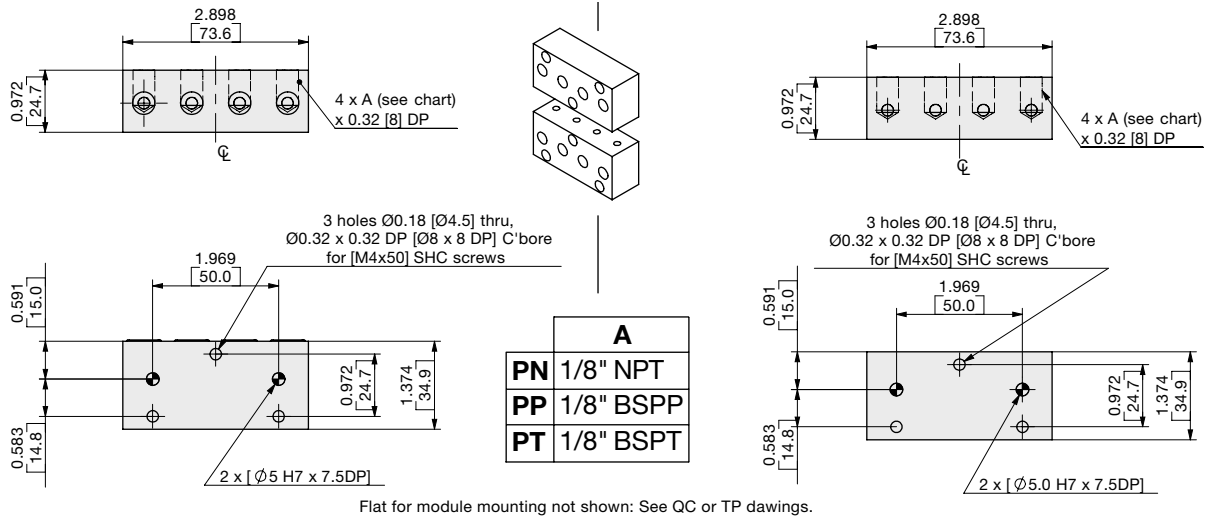
For **QC/TP-150**

Module	Robot Plate	Tool Plate
PN14	KPN14-QC150	KPN14-TP150
PP14	KPP14-QC150	KPP14-TP150
PT14	KPT14-QC150	KPT14-TP150
Seal Kit	SLKT-395	---

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

# QC/TP SERIES

## Automatic Tool Changers | Dimensions | 4 X 1/8" Air Port Module | Face Seal



Maximum Working Pressure: 10 bar

For **QC/TP-60**

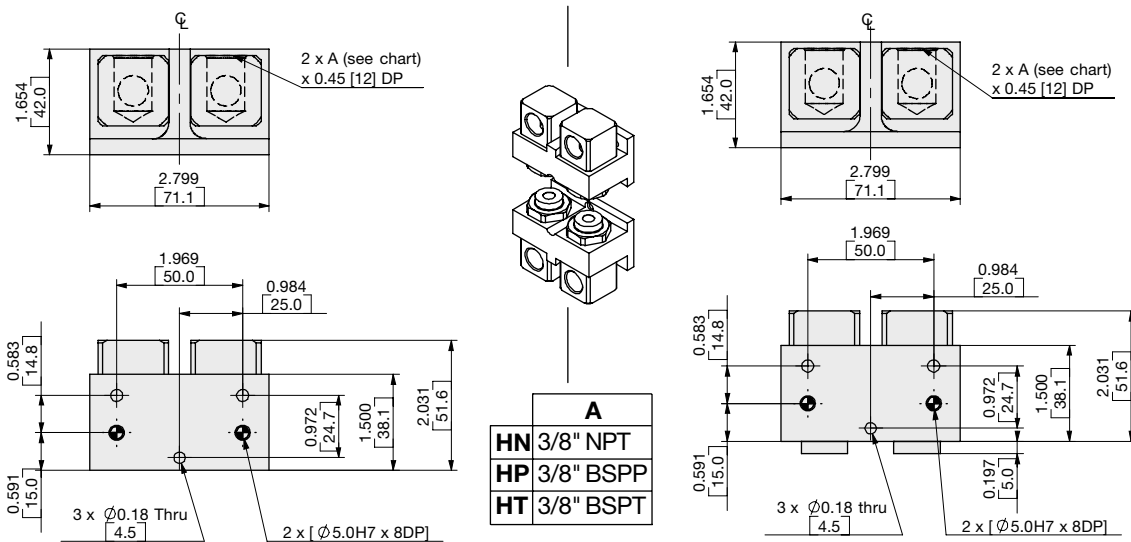
For **QC/TP-150**

Module	Robot Plate	Tool Plate
<b>PN18</b>	<b>KPN18-QC60</b>	<b>KPN18-TP60</b>
<b>PP18</b>	<b>KPP18-QC60</b>	<b>KPP18-TP60</b>
<b>PT18</b>	<b>KPT18-QC60</b>	<b>KPT18-TP60</b>
<b>Seal Kit</b>	<b>SLKT-391</b>	---

Module	Robot Plate	Tool Plate
<b>PN18</b>	<b>KPN18-QC150</b>	<b>KPN18-TP150</b>
<b>PP18</b>	<b>KPP18-QC150</b>	<b>KPP18-TP150</b>
<b>PT18</b>	<b>KPT18-QC150</b>	<b>KPT18-TP150</b>
<b>Seal Kit</b>	<b>SLKT-391</b>	---

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

## 2 X 3/8" Fluid Ports Module | Non-Spilling Double Shut-off



Maximum Working Pressure: 100 bar

For **QC/TP-60**

For **QC/TP-150**

Module	Robot Plate	Tool Plate
<b>HN38</b>	<b>KHN38-QC60</b>	<b>KHN38-TP60</b>

Module	Robot Plate	Tool Plate
<b>HN38</b>	<b>KHN38-QC150</b>	<b>KHN38-TP150</b>

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

# QC/TP SERIES

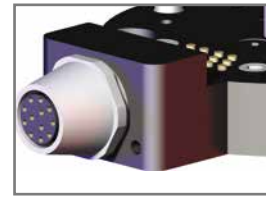
## Automatic Tool Changers | Dimensions | Sub-D Conn and User Plug IO Block



15 Pin w/Sub-D Conn and User Plug w/o cable

Model	Module	Robot Plate	Tool Plate
QC/TP30	E15	KE15-QC30	KE15-TP30
QC/TP60	E15	KE15-QC60	KE15-TP60
QC/TP150	E15	KE15-QC150	KE15-TP150

See individual datasheets for dimensions.



12 Pin w/Turck M12 Conn w/o Cordset

Model	Module	Robot Plate	Tool Plate
QC/TP30	E12	KE12-QC30	KE12-TP30
QC/TP60	E12	KE12-QC60	KE12-TP60
QC/TP150	E12	KE12-QC150	KE12-TP150

See individual datasheets for dimensions.

# RHC SERIES

## Automatic Tool Changers | 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.

#### Durable Components

Locking components are made from hardened bearing & tool steels

#### Self Lubricating Seals

Self lubricating dynamic seals

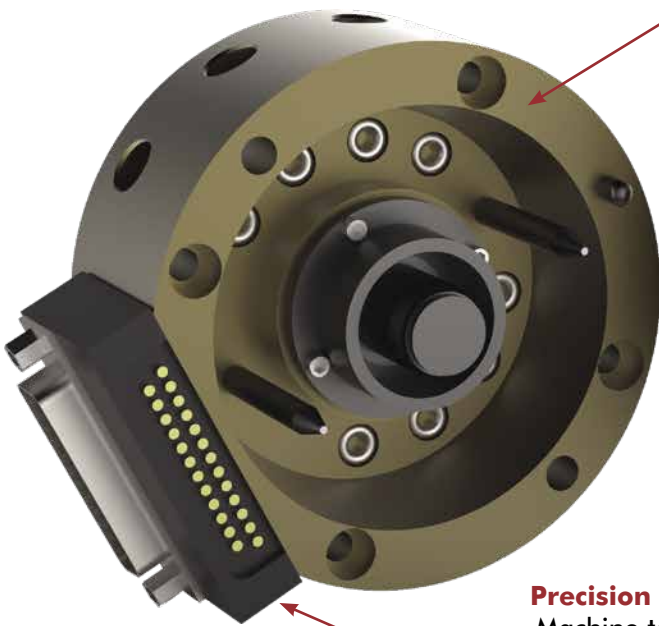
#### Quality Materials

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

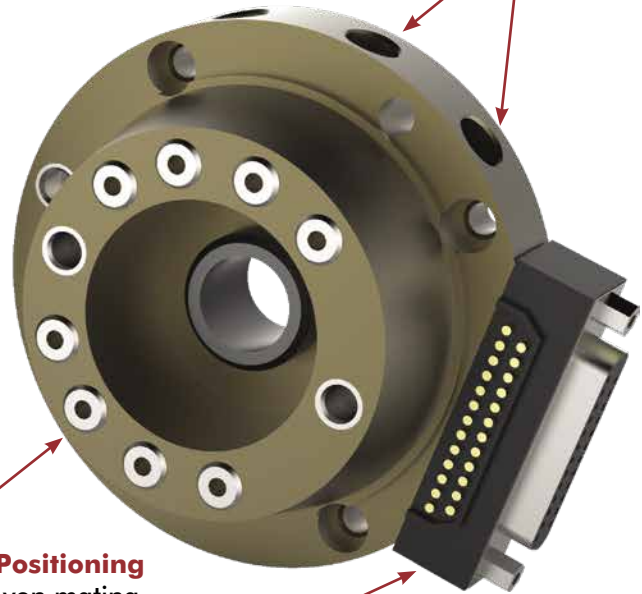
#### Pneumatic Ports

User pneumatic ports

#### Robot Plate



#### Tool Plate



#### Precision Cone Positioning

Machine tool proven mating conical coupling

#### Durable Finish

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

#### Electrical Contacts

(Sold Separately- See "How to Order" Section for more info)

#### Failsafe Operation

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

## Mounting Information



#### Robot Plate

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



#### Tool Plate

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.

# RHC SERIES

## Automatic Tool Changers | Ordering Information



Robot Plate  
RHC-1-R



Tool Plate  
RHC-1-T



Robot Plate  
RHC-2-R



Tool Plate  
RHC-2-T



Robot Plate  
RHC-3-R



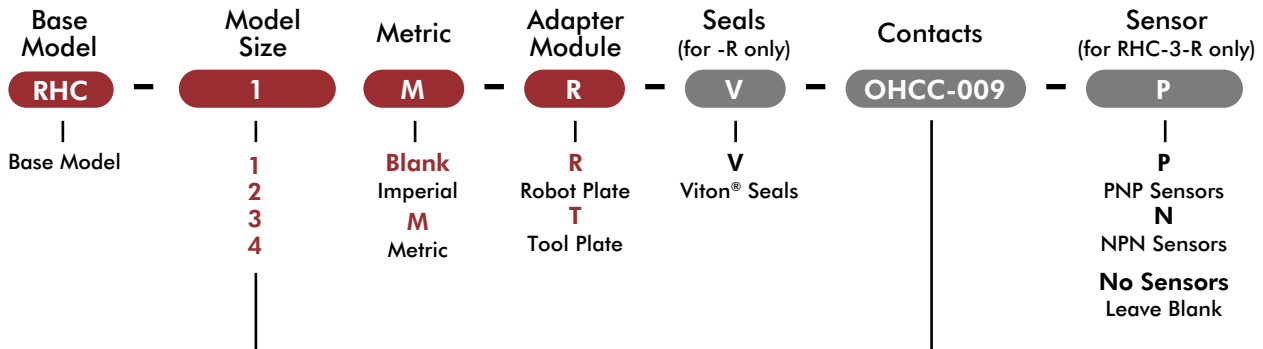
Tool Plate  
RHC-3-T



Robot Plate  
RHC-4-R



Tool Plate  
RHC-4-T



Size	Max. Moment Nm [in-lb]	Max. Payload Kg [lbs]
RHC-1	28 [250]	9 [20]
RHC-2	136 [1200]	59 [130]
RHC-3	1017 [9000]	136 Kg [300]
RHC-4	2825 [25000]	454 Kg [1000]

Robot Plate	Optional Contacts
OHCC-009	15 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 Plate	Optional Contacts
OHCC-010	15 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-3-R)
- OSMK-063** Replacement Sensor Mounting Kit (RHC-4-R)
- OISN-008** Replacement Locked Position NPN Inductive Sensor with Hard Wired Cable (RHC-4-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)

# RHC-1-R (ROBOT PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions

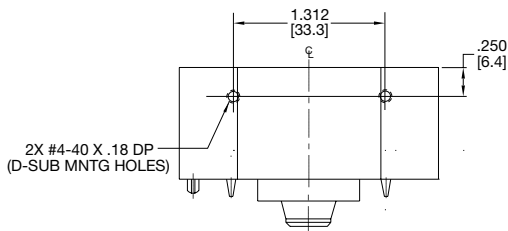
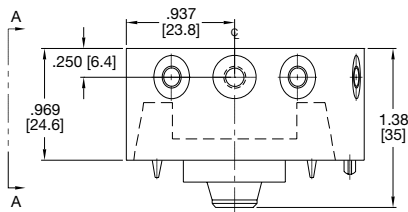
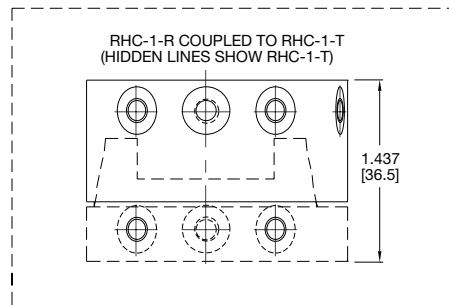
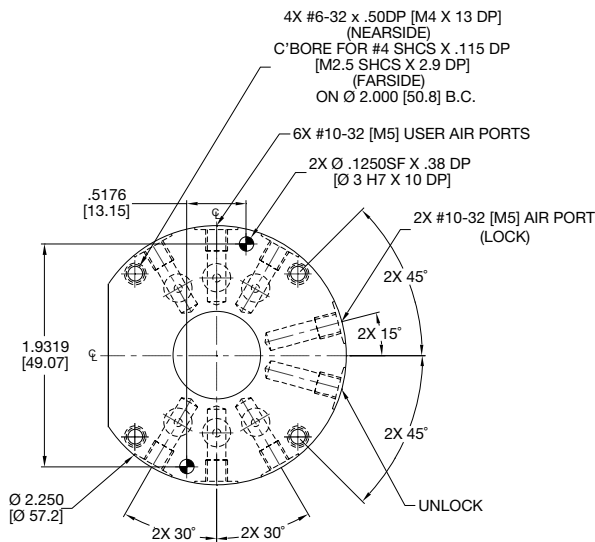
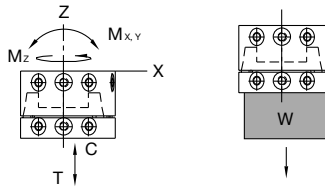


## RHC-1-R Specification:

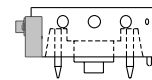
**Max. Payload (W):** 9 Kg [20 lbs]  
**Weight:** 0.18 Kg [0.41 lbs]  
**Bore Ø:** 19 mm [0.75 in]  
**Displacement:** 4.18 cm<sup>3</sup> [0.255 in<sup>3</sup>]

## Loading Capacity

**Max. Tensile T:** 890 N [200 lb]  
**Max. Compressive C:** 2224 N [500 lb]  
**Max. Moment (M<sub>x</sub>/M<sub>y</sub>):** 14 Nm [125 in-lb]  
**Max. Moment (M<sub>z</sub>):** 28 Nm [250 in-lb]



VIEW AA



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

☉  
 DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

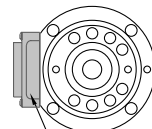
⊕  
 THIRD ANGLE PROJECTION

⊙  
 ALL DOWEL HOLES ARE SF (SLIP FIT).  
 LOCATIONAL TOLERANCE  
 ±.0005" OR [±.013MM]

⊘  
 METRIC THREADS  
 COURSE PITCH

IMPERIAL ([ IN.])  
 0.00 = ±.01  
 0.000 = ±.005  
 0.0000 = ±.0005

METRIC (MM)  
 [0] = [±.25]  
 [0.0] = [±.13]  
 [0.00] = [±.013]



26 PIN OR 15 PIN D-SUB ELECTRICAL CONTACTS

Model	Robot Plate	Description	Specification
RHC-1	OHCC-009	15 Pin D-Sub Contacts	15 Pin @ 3 AMPS
	OHCC-001	26 Pin D-Sub Contacts	26 Pin @ 3 AMPS



# RHC-1-T (TOOL PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions

## RHC-1-T Specification:

Max. Payload (**W**): 9 Kg [20 lbs]

Weight: 0.09 Kg [0.22 lbs]

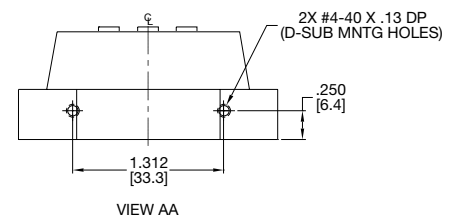
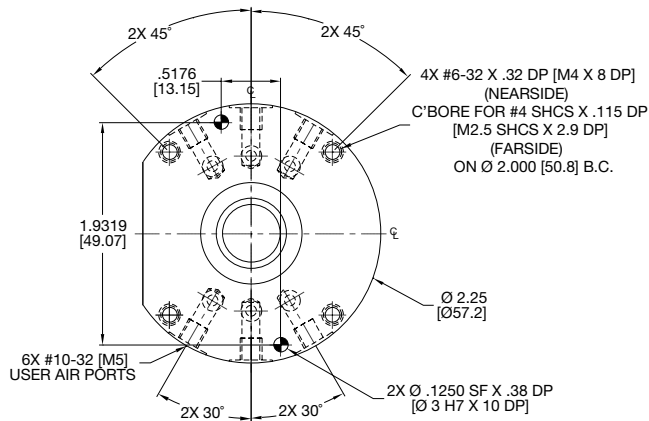
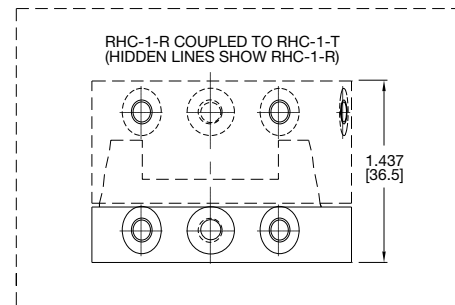
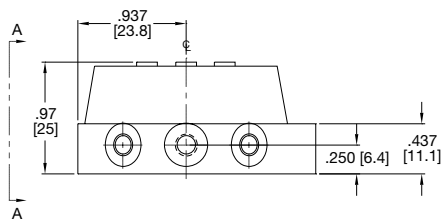
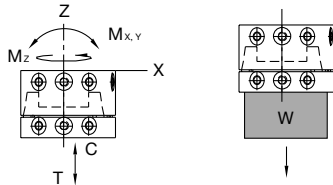
## Loading Capacity

Max. Tensile **T**: 890 N [200 lb]

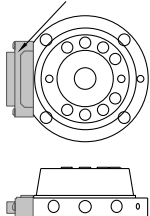
Max. Compressive **C**: 2224 N [500 lb]

Max. Moment (**M<sub>x</sub>/M<sub>y</sub>**): 14 Nm [125 in-lb]

Max. Moment (**M<sub>z</sub>**): 28 Nm [250 in-lb]



26 PIN OR 15 PIN D-SUB ELECTRICAL CONTACTS



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

$\phi$   
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

$\triangle$   
THIRD ANGLE PROJECTION

$\oplus$   
ALL DOWEL HOLES ARE SF (SLIP FIT).  
LOCATIONAL TOLERANCE  
 $\pm .0005$ " OR  $[\pm .013\text{MM}]$

$\oplus$   
METRIC THREADS  
COURSE PITCH

IMPERIAL ( [ IN. ] )  
0.00 =  $\pm .01$   
0.000 =  $\pm .005$   
0.0000 =  $\pm .0005$

METRIC (MM)  
[0] =  $[\pm .25]$   
[0.0] =  $[\pm .13]$   
[0.00] =  $[\pm .013]$

Model	Tool Plate	Description	Specification
RHC-1	OHCC-010	15 Pin D-Sub Contacts	15 Pin @ 3 AMPS
	OHCC-002	26 Pin D-Sub Contacts	26 Pin @ 3 AMPS

# RHC-2-R (ROBOT PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions

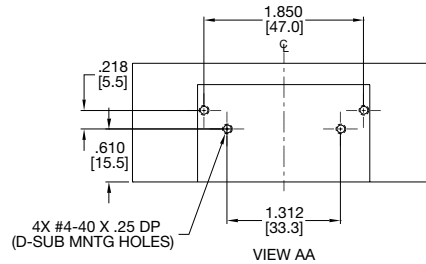
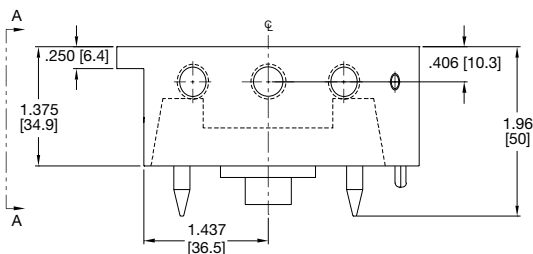
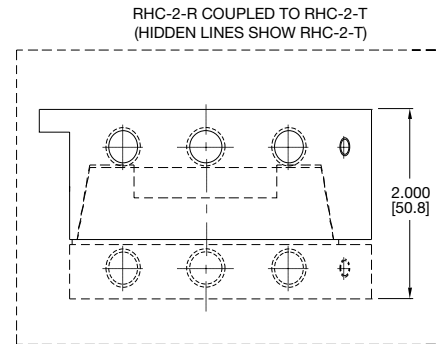
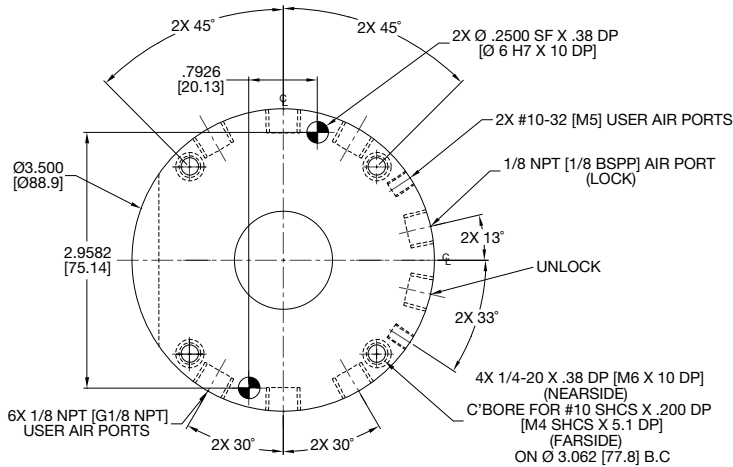
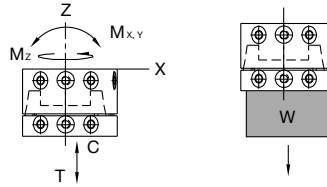


## RHC-2-R Specification:

**Max. Payload (W):** 59 Kg [130 lbs]  
**Weight:** 0.44 Kg [0.99 lbs]  
**Bore Ø:** 28.57 mm [1.125 in]  
**Displacement:** 12.22 cm<sup>3</sup> [0.746 in<sup>3</sup>]

## Loading Capacity

**Max. Tensile T:** 3336 N [750 lb]  
**Max. Compressive C:** 6672 N [1500 lb]  
**Max. Moment (M<sub>x</sub>/M<sub>y</sub>):** 90 Nm [800 in-lb]  
**Max. Moment (M<sub>z</sub>):** 136 Nm [1200 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

☉  
 DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

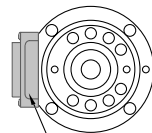
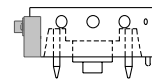
⊕  
 THIRD ANGLE PROJECTION

⊙  
 ALL DOWEL HOLES ARE SF (SLIP FIT).  
 LOCATIONAL TOLERANCE  
 ±.0005" OR [±.013MM]

⊘  
 METRIC THREADS  
 COURSE PITCH

IMPERIAL ([ IN.])  
 0.00 = ±.01  
 0.000 = ±.005  
 0.0000 = ±.0005

METRIC (MM)  
 [0] = [±.25]  
 [0.0] = [±.13]  
 [0.00] = [±.013]



25 PIN OR 15 PIN D-SUB ELECTRICAL CONTACTS

Model	Robot Plate	Description	Specification
RHC-2	OHCC-011	15 Pin D-Sub Contacts	15 Pin @ 3 AMPS
	OHCC-003	25 Pin D-Sub Contacts	25 Pin @ 3 AMPS

# RHC-2-T (TOOL PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions

## RHC-2-T Specification:

Max. Payload (**W**): 59 Kg [130 lbs]

Weight: 0.37 Kg [0.82 lbs]

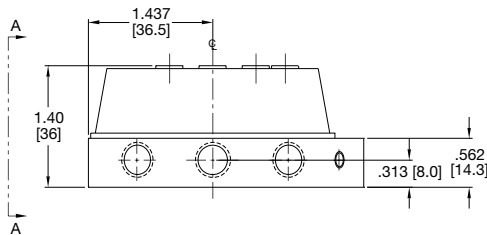
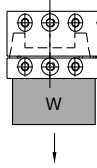
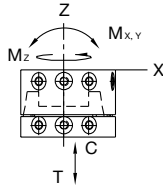
## Loading Capacity

Max. Tensile **T**: 3336 N [750 lb]

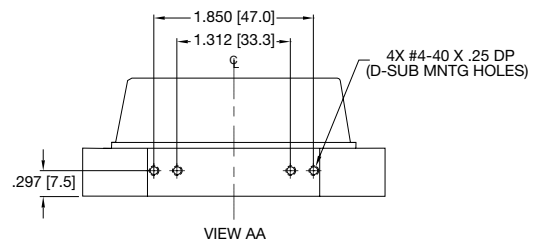
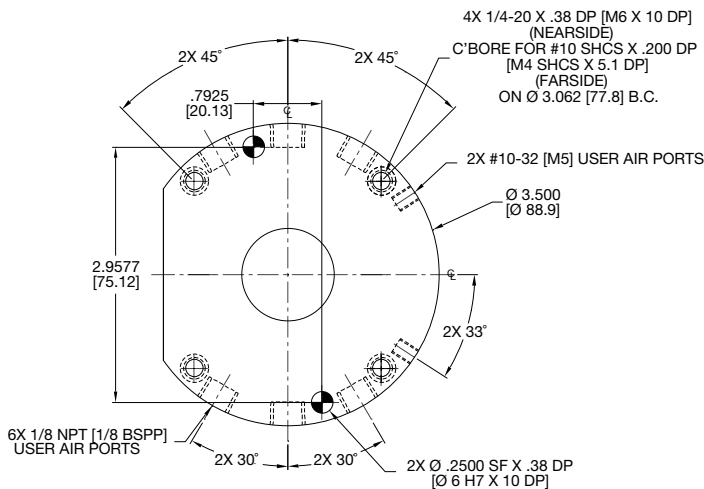
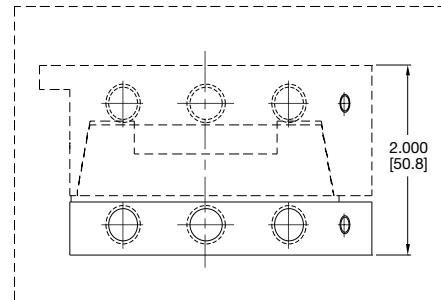
Max. Compressive **C**: 6672 N [1500 lb]

Max. Moment (**M<sub>x</sub>/M<sub>y</sub>**): 90 Nm [800 in-lb]

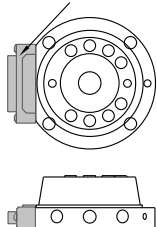
Max. Moment (**M<sub>z</sub>**): 136 Nm [1200 in-lb]



RHC-2-R COUPLED TO RHC-2-T  
(HIDDEN LINES SHOW RHC-2-R)



25 PIN OR 15 PIN D-SUB  
ELECTRICAL CONTACTS



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

$\phi$   
DIMENSIONS ARE  
SYMMETRICAL ABOUT  
CENTERLINE

$\triangle$   
THIRD ANGLE  
PROJECTION

$\oplus$   
ALL DOWEL HOLES ARE SF (SLIP FIT).  
LOCATIONAL TOLERANCE  
 $\pm .0005$ " OR [ $\pm .013$ MM]

$\oplus$   
METRIC THREADS  
COURSE PITCH

IMPERIAL ( [ IN. ] )  
0.00 =  $\pm .01$   
0.000 =  $\pm .005$   
0.0000 =  $\pm .0005$

METRIC (MM)  
[0] = [ $\pm .25$ ]  
[0.0] = [ $\pm .13$ ]  
[0.00] = [ $\pm .013$ ]

Model	Tool Plate	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 (ROBOT PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions



## RHC-3-R Specification:

Max. Payload (**W**): 136 Kg [300 lbs]

Weight: 1.79 Kg [3.95 lbs]

Bore Ø: 44.45 mm [1.750 in]

Displacement: 44.34 cm<sup>3</sup> [2.706 in<sup>3</sup>]

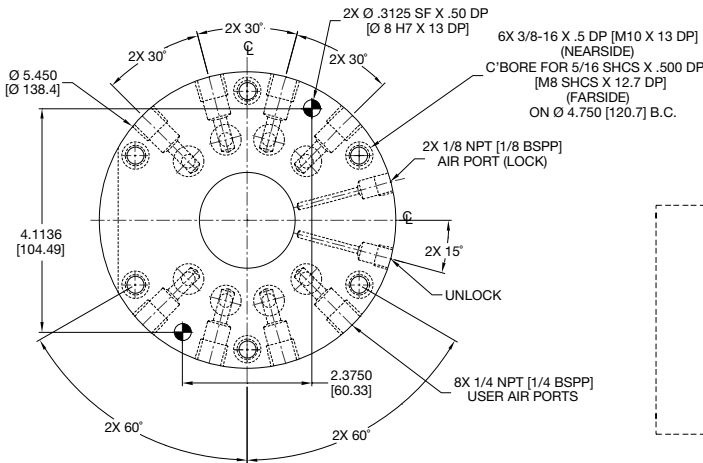
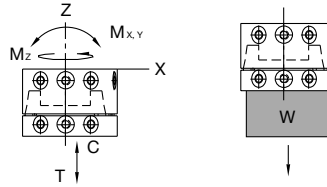
## Loading Capacity

Max. Tensile **T**: 8896 N [2000 lb]

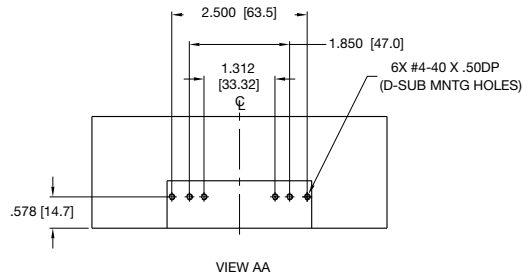
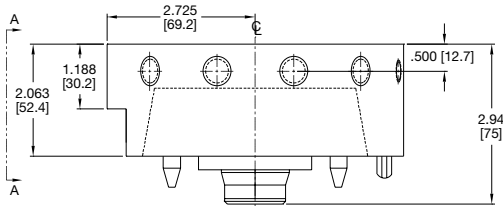
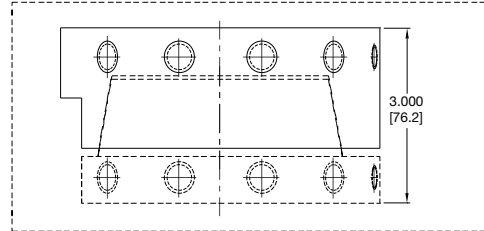
Max. Compressive **C**: 17793 N [4000 lb]

Max. Moment (**M<sub>x</sub>/M<sub>y</sub>**): 678 Nm [6000 in-lb]

Max. Moment (**M<sub>z</sub>**): 1017 Nm [9000 in-lb]



RHC-3-R COUPLED TO RHC-3-T (HIDDEN LINES SHOW RHC-3-T)



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

⌀ DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

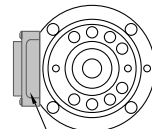
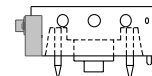
THIRD ANGLE PROJECTION

ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE ±.0005" OR [±.013MM]

METRIC THREADS COURSE PITCH

IMPERIAL ([ IN.])  
0.00 = ±.01  
0.000 = ±.005  
0.0000 = ±.0005

METRIC (MM)  
[0] = [±.25]  
[0.0] = [±.13]  
[0.00] = [±.013]



25 OR 15 PIN D-SUB or 19 OR 38 PIN MIL SPEC ELECTRICAL CONTACTS

Model	Robot Plate	Description	Specification
RHC-3	OHCC-011	15 Pin D-Sub Contacts	15 Pin @ 3 AMPS
	OHCC-003	25 Pin D-Sub Contacts	25 Pin @ 3 AMPS
	OHCC-005	19 Pin Mil. Spec. Contacts	19 Pin @ 3 AMPS
	OHCC-007	38 Pin Mil. Spec. Contacts	38 Pin @ 3 AMPS

# RHC-3-T (TOOL PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions

## RHC-3-T Specification:

Max. Payload (**W**): 136 Kg [300 lbs]

Weight: 1.29 Kg [2.85 lbs]

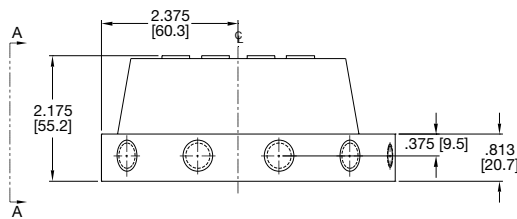
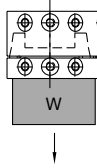
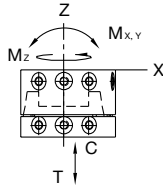
## Loading Capacity

Max. Tensile **T**: 8896 N [2000 lb]

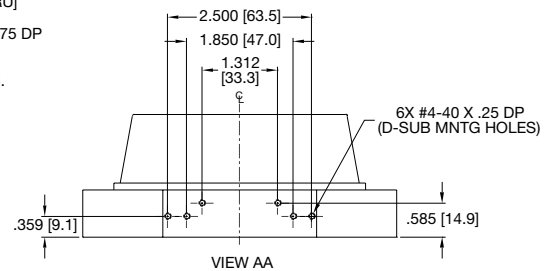
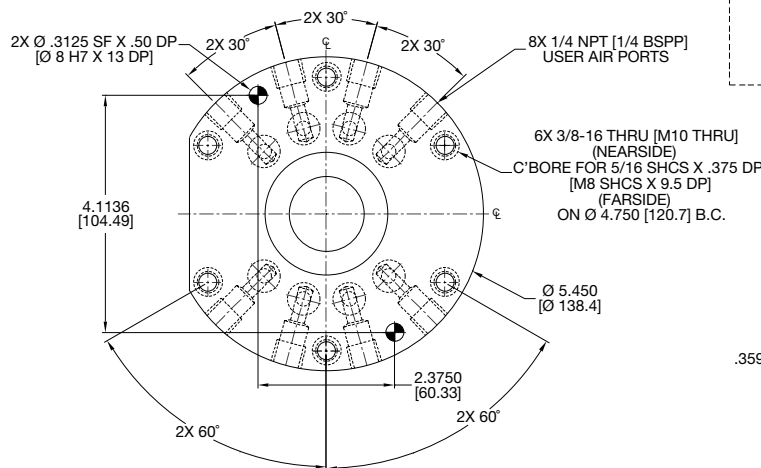
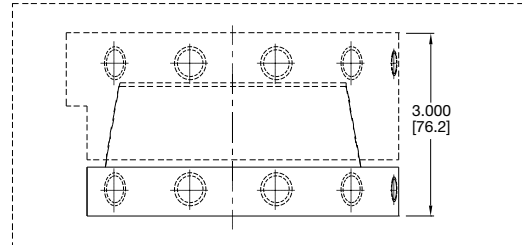
Max. Compressive **C**: 17793 N [4000 lb]

Max. Moment (**M<sub>x</sub>/M<sub>y</sub>**): 678 Nm [6000 in-lb]

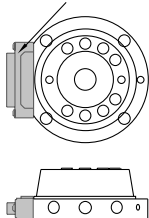
Max. Moment (**M<sub>z</sub>**): 1017 Nm [9000 in-lb]



RHC-3-R COUPLED TO RHC-3-T  
(HIDDEN LINES SHOW RHC-3-R)



25 OR 15 PIN D-SUB or  
19 OR 38 PIN MIL SPEC  
ELECTRICAL CONTACTS



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

⌀  
DIMENSIONS ARE  
SYMMETRICAL ABOUT  
CENTERLINE

⊲  
THIRD ANGLE  
PROJECTION

⊕  
ALL DOWEL HOLES ARE SF (SLIP FIT).  
LOCAL TOLERANCE  
±.0005" OR [±.013MM]

⊕  
METRIC THREADS  
COURSE PITCH

IMPERIAL ( [ IN. ] )  
0.00 = ± .01  
0.000 = ± .005  
0.0000 = ± .0005

METRIC (MM)  
[0] = [± .25]  
[0.0] = [± .13]  
[0.00] = [± .013]

Model	Tool Plate	Description	Specification
RHC-3	OHCC-010	15 Pin D-Sub Contacts	15 Pin @ 3 AMPS
	OHCC-002	25 Pin D-Sub Contacts	25 Pin @ 3 AMPS
	OHCC-006	19 Pin Mil. Spec. Contacts	19 Pin @ 3 AMPS

# RHC-4-R (ROBOT PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions



## RHC-4-R Specification:

Max. Payload (**W**): 454 Kg [1000 lbs]

Weight: 6.52 Kg [12.39 lbs]

Bore Ø: 57.15 mm [2.250 in]

Displacement: 85.52 cm<sup>3</sup> [85.52 in<sup>3</sup>]

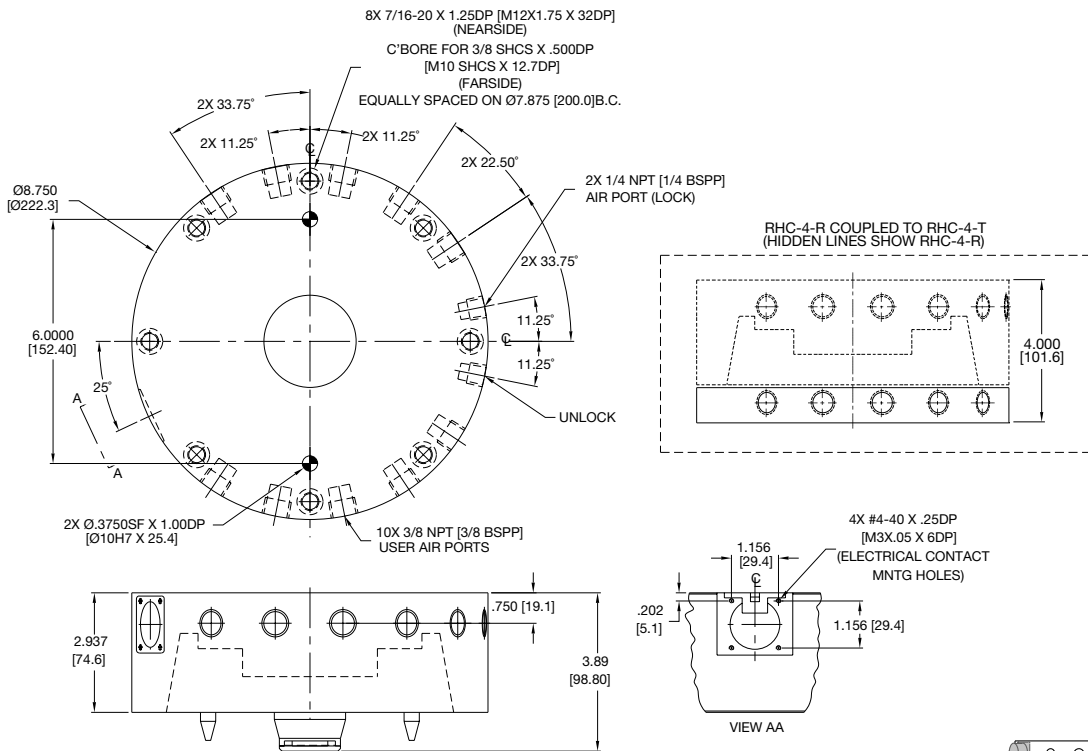
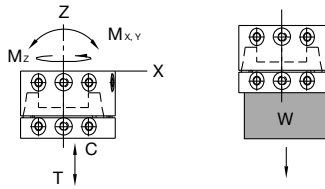
## Loading Capacity

Max. Tensile **T**: 35586 N [8000 lb]

Max. Compressive **C**: 71171 N [16000 lb]

Max. Moment (**M<sub>x</sub>/M<sub>y</sub>**): 2825 Nm [25000 in-lb]

Max. Moment (**M<sub>z</sub>**): 2825 Nm [25000 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

⌀  
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

THIRD ANGLE PROJECTION

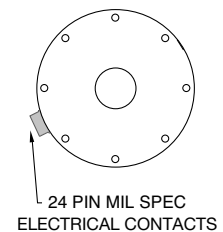
ALL DOWEL HOLES ARE SF (SLIP FIT).  
LOCATIONAL TOLERANCE  
±.0005" OR [±.013MM]

METRIC THREADS  
COURSE PITCH

IMPERIAL ([IN.])  
0.00 = ±.01  
0.000 = ±.005  
0.0000 = ±.0005

METRIC (MM)  
[0] = [±.25]  
[0.0] = [±.13]  
[0.00] = [±.013]

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



# RHC-4-T (TOOL PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions

## RHC-4-T Specification:

Max. Payload (**W**): 454 Kg [1000 lbs]

Weight: 4.35 Kg [9.61 lbs]

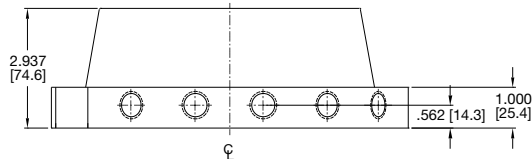
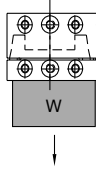
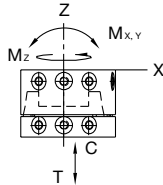
## Loading Capacity

Max. Tensile **T**: 35586 N [8000 lb]

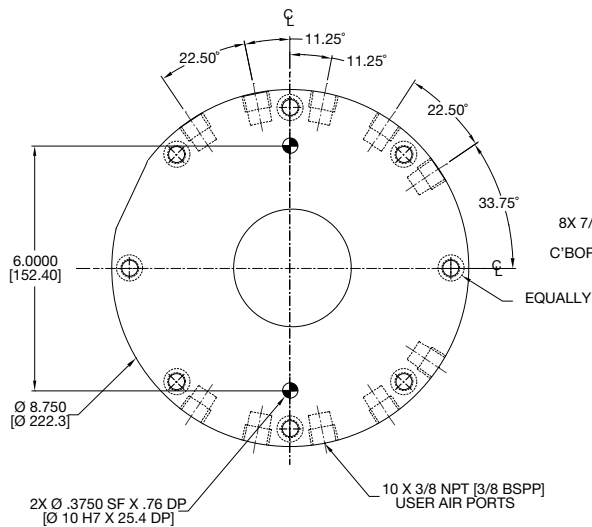
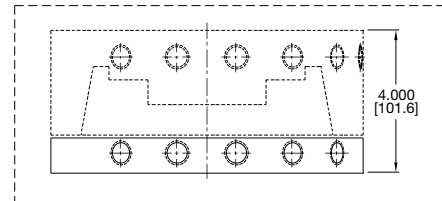
Max. Compressive **C**: 71171 N [16000 lb]

Max. Moment (**M<sub>x</sub>/M<sub>y</sub>**): 2825 Nm [25000 in-lb]

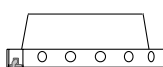
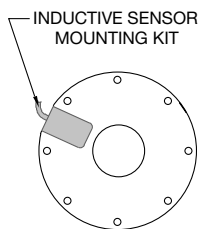
Max. Moment (**M<sub>z</sub>**): 2825 Nm [25000 in-lb]



RHC-4-R COUPLED TO RHC-4-T  
(HIDDEN LINES SHOW RHC-4-R)



8X 7/16-20 X .75 DP [M12 X 19 DP]  
(NEARSIDE)  
C'BORE FOR 3/8 SHCS X .375 DP  
[M10 SHCS X 9.5 DP]  
(FARSIDE)  
EQUALLY SPACED ON Ø 7.875 [Ø 200.0] B.C.



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

☉  
DIMENSIONS ARE  
SYMMETRICAL ABOUT  
CENTERLINE

☐  
THIRD ANGLE  
PROJECTION

⊕  
ALL DOWEL HOLES ARE SF (SLIP FIT).  
LOCAL TOLERANCE  
±.0005" OR [±.013MM]

⊕  
METRIC THREADS  
COURSE PITCH

IMPERIAL ( [ IN. ] )  
0.00 = ± .01  
0.000 = ± .005  
0.0000 = ± .0005

METRIC (MM)  
[ ] = [ ± .25 ]  
[ 0. ] = [ ± .13 ]  
[ 0.00 ] = [ ± .013 ]

Model	Tool Plate	Description	Specification
	<b>OHCC-027</b>	24 Pin Mil. Spec. Contacts	24 Pin @ 3 AMPS
<b>RHC-4</b>	<b>OHCC-023</b>	24 Wire Single Pigtail Connector	
	<b>OHCC-022</b>	24 Wire Double Pigtail Connector	

# CH SERIES

## Cylindrical Horizontal Compliance Device | Features and Benefits

### 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  $\pm 10^\circ$ .

### Harsh environments:

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

### Spring assist:

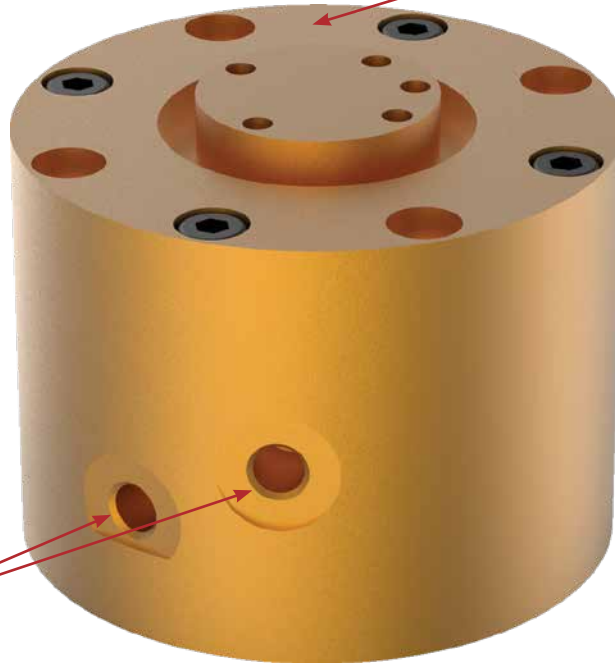
Due to the optional spring assist, compliance may be used in single acting mode.

### Spring Assist

Spring assist option allows to center the tool (RA) or to release the tooling (RL). It also allows the use in single acting mode

### Quality Components

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



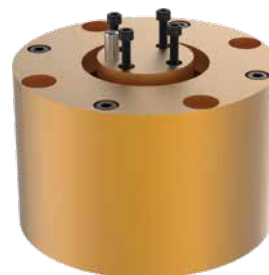
### Air Ports

Side or top airports (top ports require O-rings)

## 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 pin and a dowel pin and assembled using 4 screws



## Cylindrical Horizontal Compliance Device | Technical Information | Dimensions

### 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

### 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

### 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.

## How to Order

Base Model
Spring Assist
Misalignment

CH-50-P
-
RA
-
XX

CH-50-P  
CH-80-P  
CH-110-P  
CH-140-P  
CH-165-P

RA  
RL  
—

XX  
—

Special Misalignment x 10  
(ie: 15 is for ± 1.5 mm)  
Leave Blank. Standard Capability

Tool Recentering  
Tool Release  
Leave Blank. No Spring Option (Standard)

Size	Centering Force Nm [in-lb]	Max. Payload Kg [lbs]
CH-50-P	322 [74]	2 [4.4]
CH-80-P	1035 [232]	8 [17.6]
CH-110-P	1660 [373]	14 [30.8]
CH-140-P	3170 [712]	30 [66.1]
CH-165-P	4140 [931]	40 [88.2]

# CH-50-P

## Cylindrical Horizontal Compliance Device | Technical Information | Dimensions

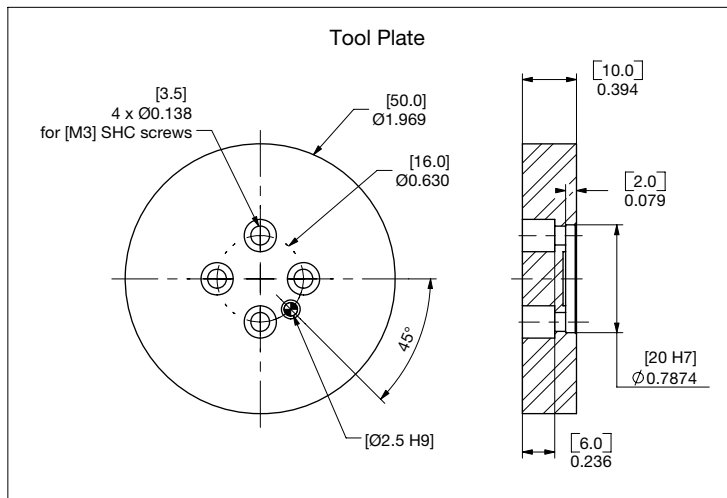
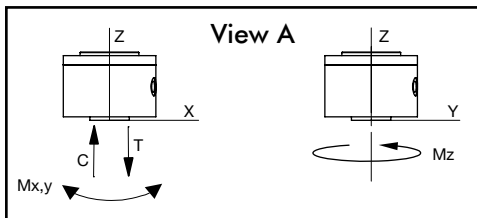
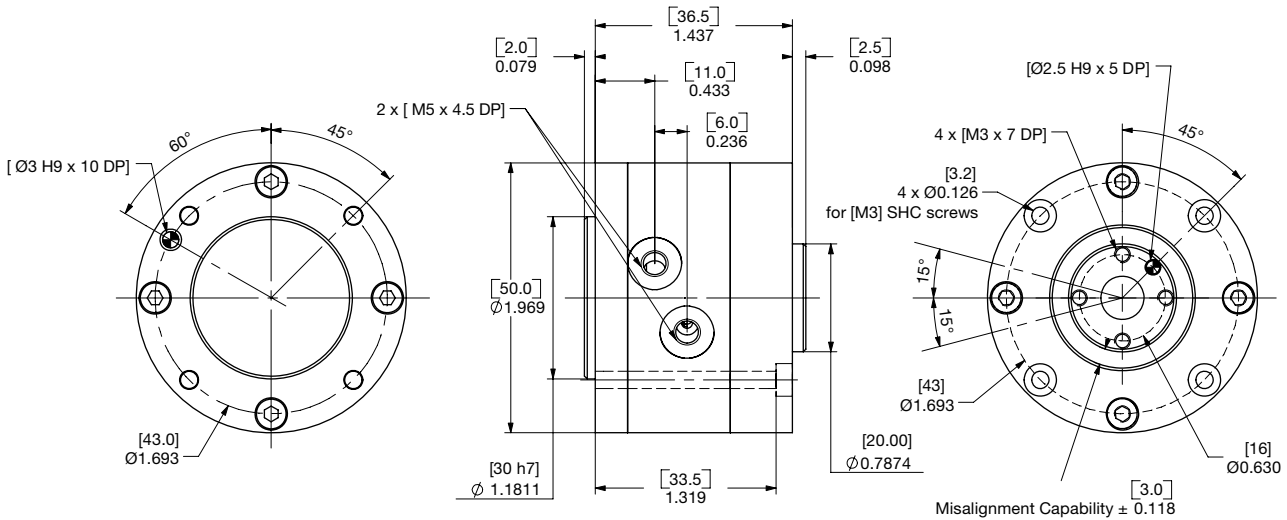


### CH-50-P Specification:

Centering Force @ 7 bar [100 psi]: 322 N [74 lbs]  
 Max. Payload: 2 Kg [4.4 lbs]  
 Misalignment Capability:  $\pm 3$  mm [ $\pm 0.12$  in]  
 Weight: 0.195 Kg [0.43 lbs]  
 Cylinder Bore: 34 mm [1.34 in]  
 Displacement: 5.2 cm<sup>3</sup> [0.32 in<sup>3</sup> lbs]  
 Actuation: 0.07 sec [0.07 sec]  
 Repeatability:  $\pm 0.02$  mm [ $\pm 0.0008$  in]  
 Angular Repeatability:  $\pm 10$  mm

### Loading Capacity (View A):

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



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  $\pm 0.005^\circ$  OR [ $\pm 0.13$ MM]

METRIC THREADS COURSE PITCH

IMPERIAL ([IN.])  
 0.00 =  $\pm 0.01$   
 0.000 =  $\pm 0.005$   
 0.0000 =  $\pm 0.0005$

METRIC (MM)  
 [0] = [ $\pm 0.25$ ]  
 [0.0] = [ $\pm 0.13$ ]  
 [0.00] = [ $\pm 0.13$ ]

## Cylindrical Horizontal Compliance Device | Technical Information | Dimensions

### CH-80-P Specification:

Centering Force @ 7 bar [100 psi]: 1035 N [232 lbs]

Max. Payload: 8 Kg [17.6 lbs]

Misalignment Capability:  $\pm 5$  mm [ $\pm 0.20$  in]

Weight: 0.750 Kg [1.65 lbs]

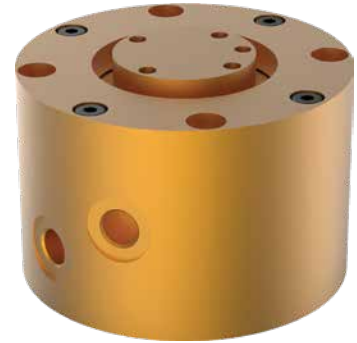
Cylinder Bore: 60 mm [2.37 in]

Displacement: 26.8 cm<sup>3</sup> [1.64 in<sup>3</sup> lbs]

Actuation: 0.08 sec [0.08 sec]

Repeatability:  $\pm 0.02$  mm [ $\pm 0.0008$  in]

Angular Repeatability:  $\pm 10$  mm



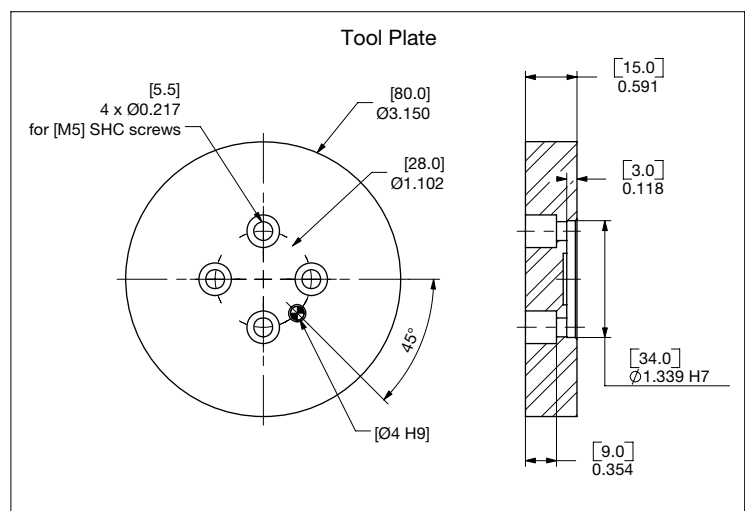
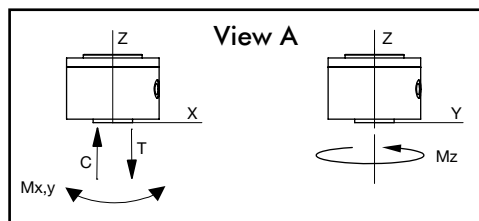
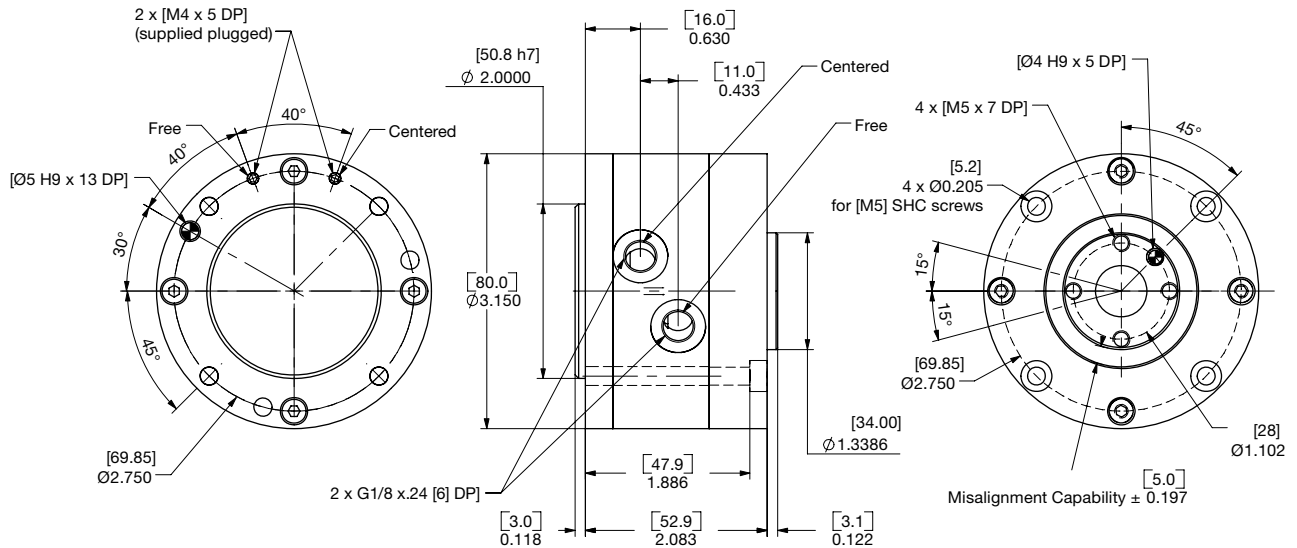
### Loading Capacity (View A):

Max. Tensile T: 160 N [36 lb]

Max. Compressive C: 160 N [36 lb]

Max. Moment (M<sub>x</sub>/M<sub>y</sub>): 8 Nm [71 in-lb]

Max. Moment (M<sub>z</sub>): 6 Nm [53 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCAL TOLERANCE $\pm 0.0005$ " OR [ $\pm 0.013$ MM]
	IMPERIAL ([ IN. ])	METRIC (MM)
METRIC THREADS COURSE PITCH	0.00 = $\pm .01$ 0.000 = $\pm .005$ 0.0000 = $\pm .0005$	[0] = [ $\pm .25$ ] [0.0] = [ $\pm .13$ ] [0.00] = [ $\pm .013$ ]

# CH-110-P

## Cylindrical Horizontal Compliance Device | Technical Information | Dimensions



### CH-110-P Specification:

Centering Force @ 7 bar [100 psi]: 1660 N [373 lbs]

Max. Payload: 14 Kg [30.8 lbs]

Misalignment Capability:  $\pm 6.5$  mm [ $\pm 0.25$  in]

Weight: 2.10 Kg [4.6 lbs]

Cylinder Bore: 76 mm [3.0 in]

Displacement: 56 cm<sup>3</sup> [3.42 in<sup>3</sup> lbs]

Actuation: 0.1 sec [0.1 sec]

Repeatability:  $\pm 0.04$  mm [ $\pm 0.0016$  in]

Angular Repeatability:  $\pm 15$  mm

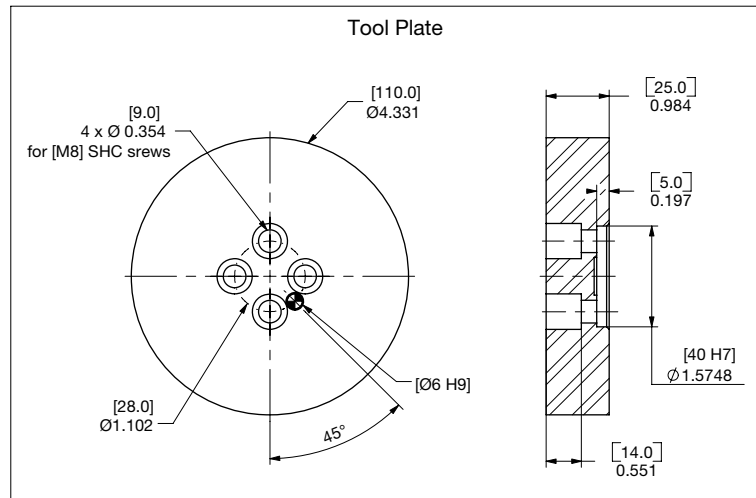
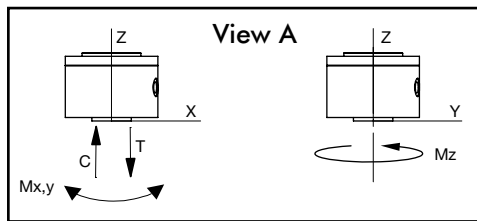
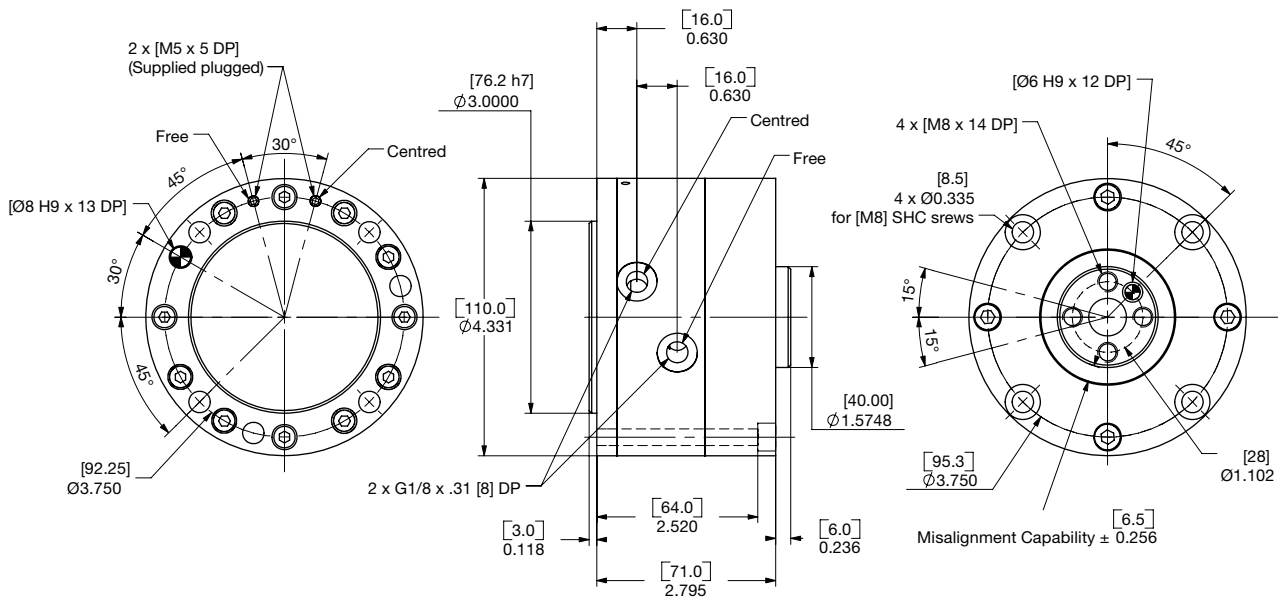
### Loading Capacity (View A):

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]



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 $\pm 0.0005^\circ$ OR [ $\pm 0.013$ MM]
	IMPERIAL ([IN.])	METRIC (MM)
METRIC THREADS COURSE PITCH	0.00 = $\pm 0.01$ 0.000 = $\pm 0.005$ 0.0000 = $\pm 0.0005$	[0] = [ $\pm 0.25$ ] [0.0] = [ $\pm 0.13$ ] [0.00] = [ $\pm 0.13$ ]

### CH-140-P Specification:

Centering Force @ 7 bar [100 psi]: 3170 N [712 lbs]

Max. Payload: 30 Kg [66.1 lbs]

Misalignment Capability:  $\pm 8$  mm [ $\pm 0.31$  in]

Weight: 4.31 Kg [9.5 lbs]

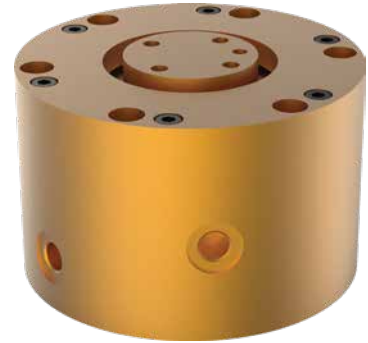
Cylinder Bore: 105 mm [4.13 in]

Displacement: 148 cm<sup>3</sup> [9.03 in<sup>3</sup> lbs]

Actuation: 0.02 sec [0.02 sec]

Repeatability:  $\pm 0.06$  mm [ $\pm 0.0024$  in]

Angular Repeatability:  $\pm 20$  mm



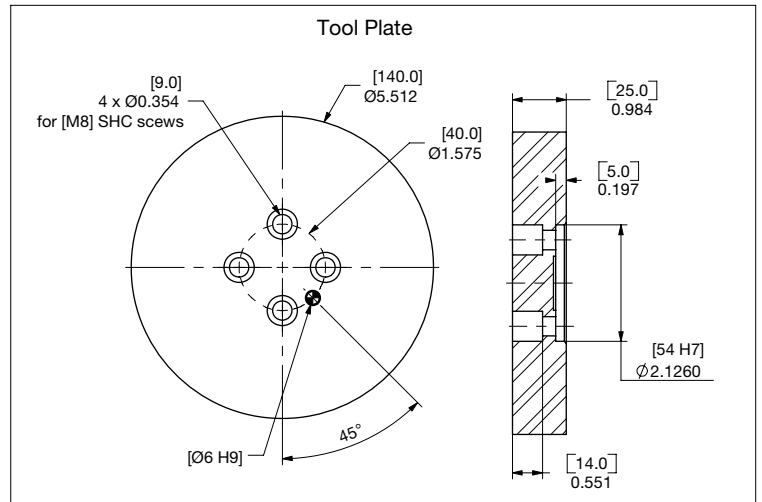
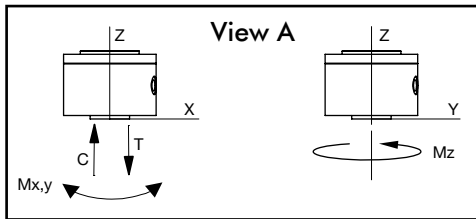
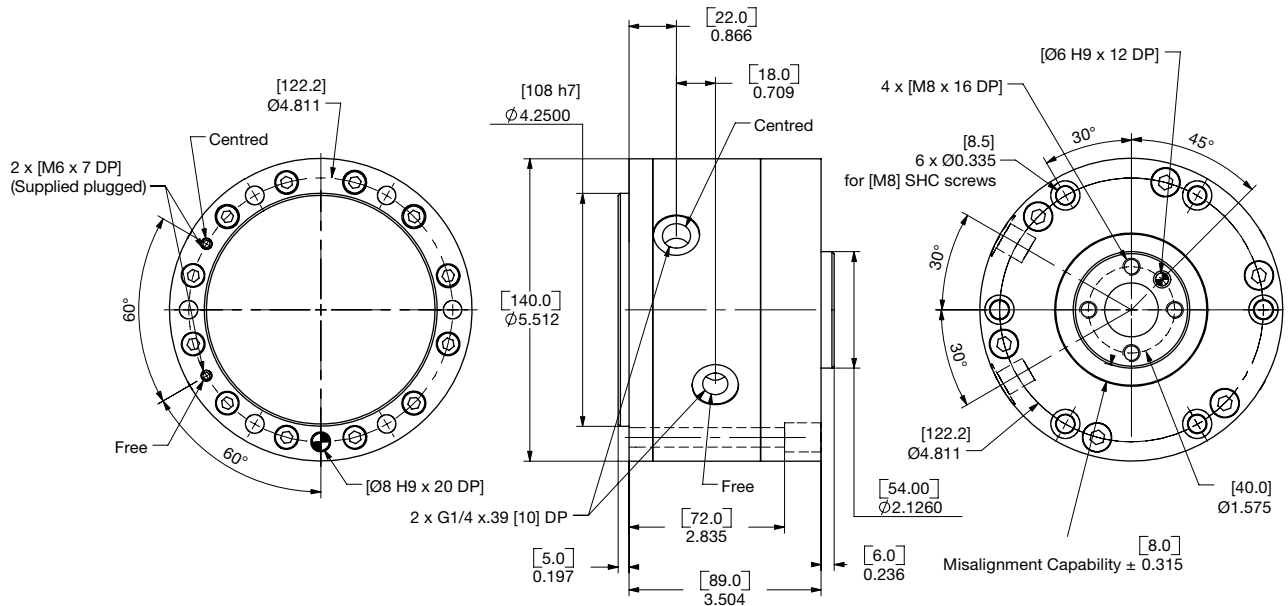
### Loading Capacity (View A):

Max. Tensile T: 225 N [50 lb]

Max. Compressive C: 225 N [50 lb]

Max. Moment (M<sub>x</sub>/M<sub>y</sub>): 19 Nm [168 in-lb]

Max. Moment (M<sub>z</sub>): 20 Nm [177 in-lb]

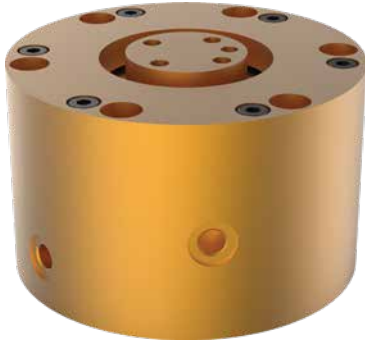


UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE $\pm 0.005$ " OR [ $\pm 0.13$ MM]
	IMPERIAL ([IN.])	METRIC (MM)
METRIC THREADS COURSE PITCH	0.00 = $\pm .01$ 0.000 = $\pm .005$ 0.0000 = $\pm .0005$	[0] = [ $\pm .25$ ] [0.0] = [ $\pm .13$ ] [0.00] = [ $\pm .013$ ]

# CH-165-P

## Cylindrical Horizontal Compliance Device | Technical Information | Dimensions



### CH-165-P Specification:

Centering Force @ 7 bar [100 psi]: 4140 N [931 lbs]

Max. Payload: 40 Kg [88.2 lbs]

Misalignment Capability:  $\pm 12$  mm [ $\pm 0.47$  in]

Weight: 8.7 Kg [19.2 lbs]

Cylinder Bore: 120 mm [4.72 in]

Displacement: 236 cm<sup>3</sup> [14.40 in<sup>3</sup> lbs]

Actuation: 0.36 sec [0.36 sec]

Repeatability:  $\pm 0.06$  mm [ $\pm 0.0024$  in]

Angular Repeatability:  $\pm 20$  mm

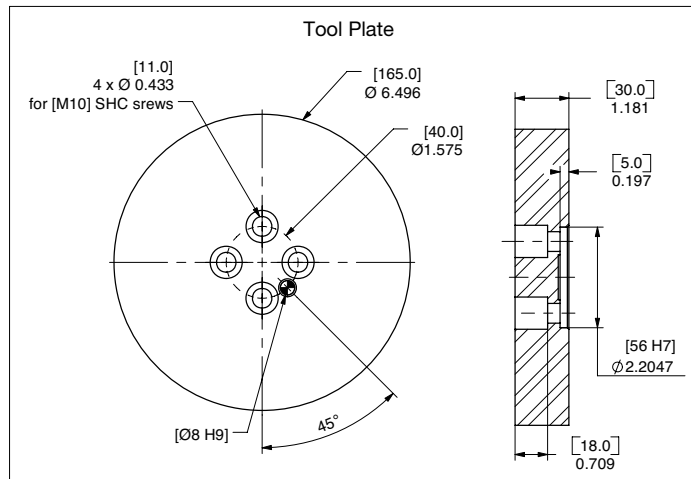
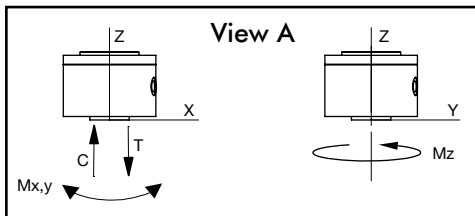
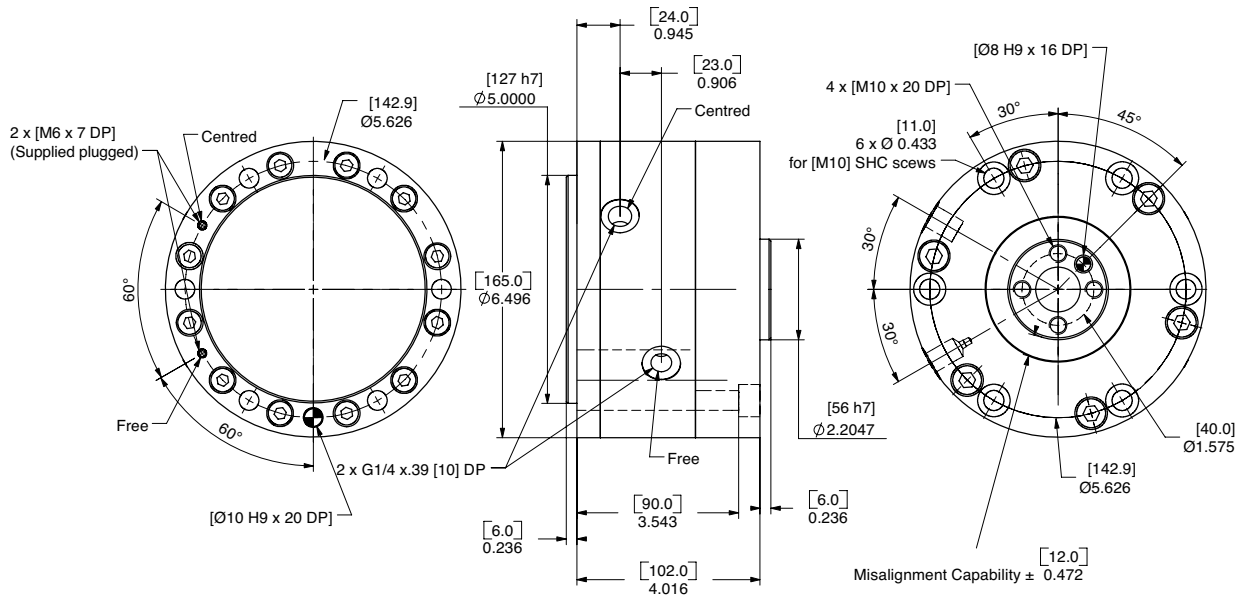
### Loading Capacity (View A):

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]



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 $\pm .0005$ " OR [ $\pm .013$ MM]
	IMPERIAL ([IN.])	METRIC (MM)
METRIC THREADS COURSE PITCH	0.00 = $\pm .01$ 0.000 = $\pm .005$ 0.0000 = $\pm .0005$	[0] = [ $\pm .25$ ] [0.0] = [ $\pm .13$ ] [0.00] = [ $\pm .013$ ]

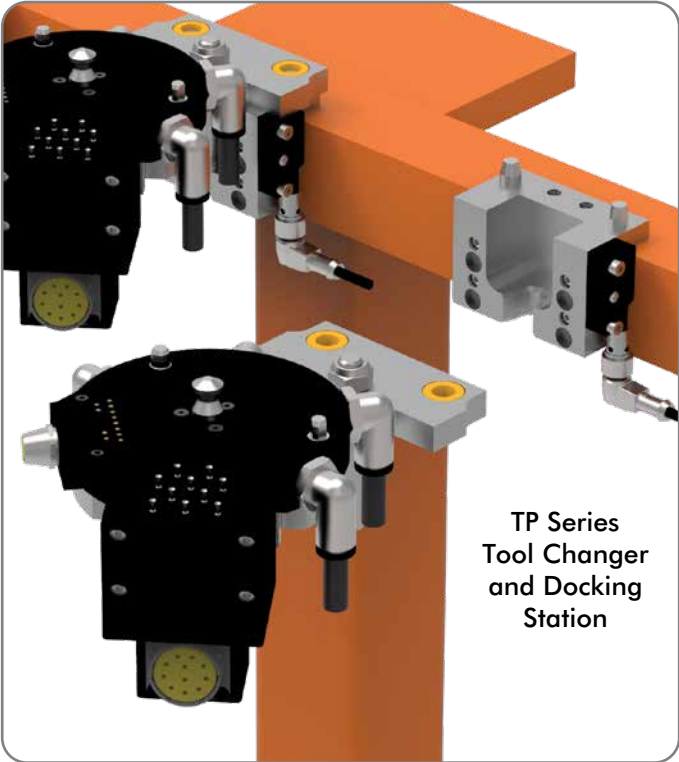
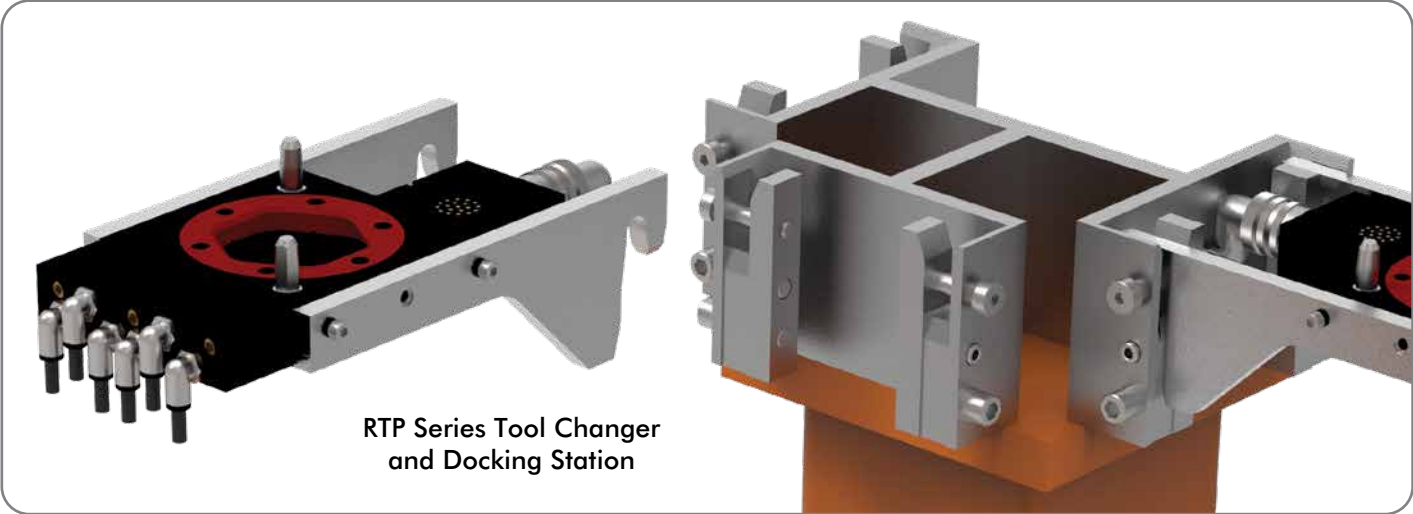
# ROBOTIC TOOLING SOLUTIONS

## Tool Changer Docking Station

Destaco offers custom and standard Docking Stations to fit customers needs. Please contact Destaco Sales for more information.

**Key Features:**

- Allows for quick changing of tooling
- Reducing machine down-time
- Safely stores tooling when not in use
- Standard or custom stations





THE BEST PRODUCTS.  
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