Automatic Tool Changers | Features and Benefits

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 Side



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

### Latch/Unlatch Switch

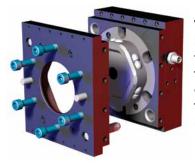
RQC's are pre-equipped for latch, unlatch (all sizes) and part presence sensing (sizes 800 & 1200 only)

Dry contact or inductive sensors with or w/o connectors are available

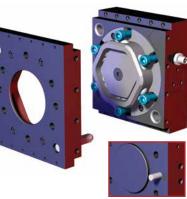
#### Optional 6 Port Pneumatic Module

Locating Pins-

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



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



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

Back Side of Robot Half Adaptor



## 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]

#### COUPLE POSITIONING

			<u> </u>	1	
MAXIMUM		•		¢	
GAP TO					69.9 [2.75]
COUPLE	<u>+</u>	-@-	-@-		WHEN
2.54 [0.10]	+	-@-		-@-	COUPLED
	•	Ŧ	T	•	*

#### **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]

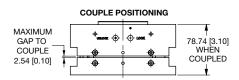
COUPLE POSITIONING

			_			
MAXIMUM GAP TO	_	+		+		76.2 [3.00]
COUPLE	<u>+</u>	-@-	-			WHEN COUPLED
2.54 [0.10]	ł		•	•	•	

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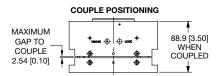
#### RQC-800/RTP-800

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



#### **RQC-1200/RTP-1200**

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

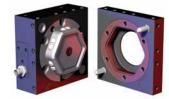


#### **RQC-2400/RTP-2400**

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

#### COUPLE POSITIONING

MAXIMUM GAP TO COUPLE 2.54 [0.10]	114 [4.49] WHEN COUPLED



**RQC-200 Robot Adaptor Module** . . . . . . . . . . . . .

**RTP-200 Tool Adaptor Module** 





**RQC-400 Robot Adaptor Module** 

**RTP-400 Tool Adaptor Module** 



**RQC-800 Robot Adaptor Module** 

**RTP-800 Tool Adaptor Module** 



**RQC-1200 Robot Adaptor Module** 

**RTP-1200 Tool Adaptor Module** 





**RQC-2400 Robot Adaptor Module** 

TC-RQTP | 2

**RTP-2400 Tool Adaptor Module** 

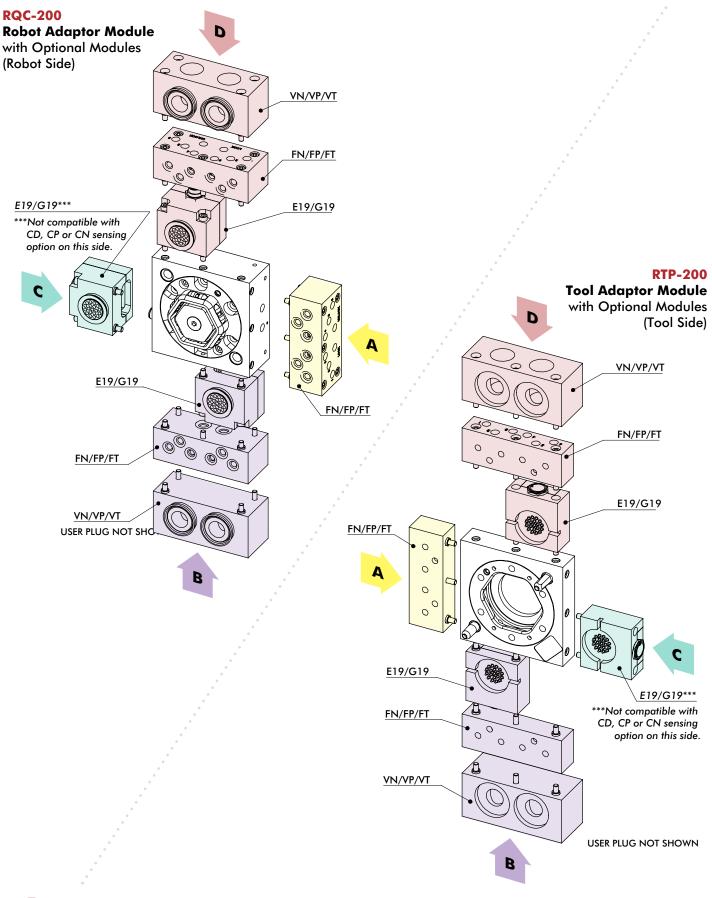




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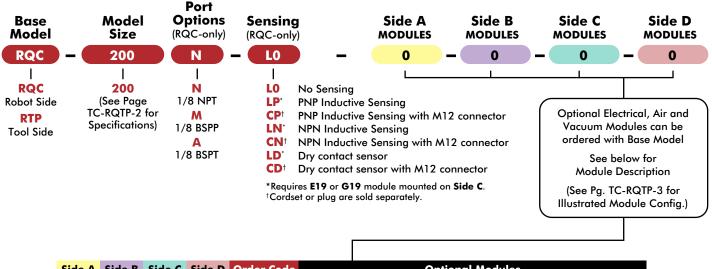
## **RQC-200/RTP-200**

Automatic Tool Changers | Module Usage Illustrations



# **RQC-200/RTP-200**

## Automatic Tool Changers | Ordering Information



Side A	Side B	Side C	Side D	Order Code	Optional Modules			
٠	•	٠	•	0	No Module			
	٠	•***	٠	E19 <sup>+***</sup>	19 pin, 3 Amp, 48 VDC Module w/Turck M12 Conn, w/o Cordset			
	٠	•***	٠	G19 <sup>+•••</sup>	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			
•	•		٠	FT	6X 1/8" BSPT Air Ports Module, Face Seal, 10 Bar			
	•		٠	VN	2X 3/4" Vacuum + 4 X 1/4" Air NPT Ports Module, Face Sealing			
	•		٠	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			

<sup>†</sup>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. Modules usage is based on the size of the Base Model and which side the module can be mounted.



# **RQC-200 (ROBOT SIDE)**

Automatic Tool Changers | Technical Specifications | Dimensions



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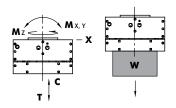
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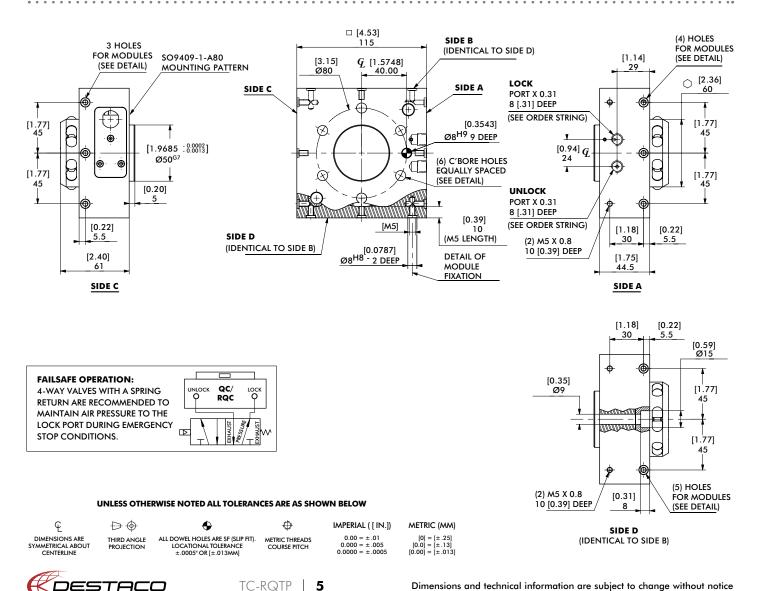
#### **Specification:**

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>]

#### **Loading Capacity:**

Max. Tensile T: 1330 N [300 lb] Max. Compressive C: 1780 N [400 lb] Max. Moment (Mx/My/Mz): 810 Nm [7200 in-lb]





## **RTP-200 (TOOLING SIDE)**

## Automatic Tool Changers | Technical Specifications | Dimensions

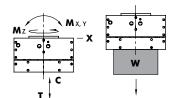
#### **Specification:**

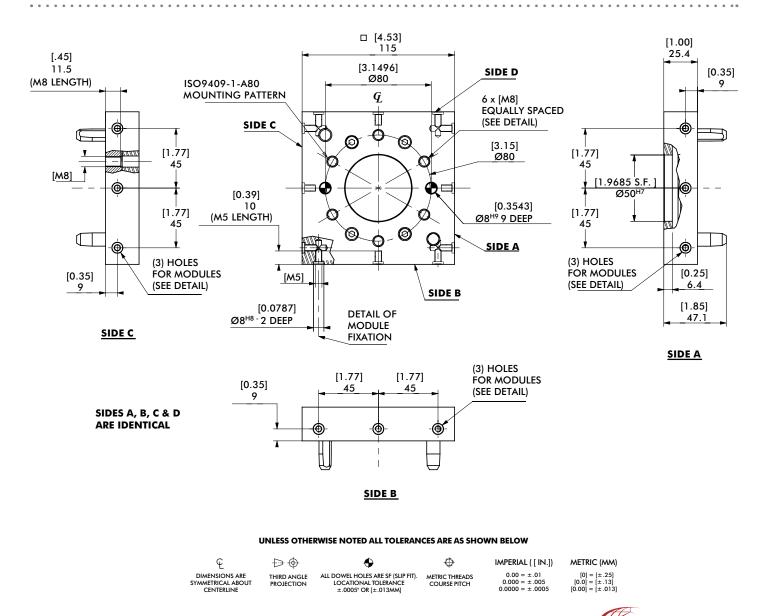
Max. Payload **W**: 180 Kg [400 lb] Weight: 1 Kg [2.2 lb]

#### **Loading Capacity:**

Max. Tensile T: 1330 N [300 lb] Max. Compressive C: 1780 N [400 lb] Max. Moment (Mx/My/Mz): 810 Nm [7200 in-lb]







Dimensions and technical information are subject to change without notice

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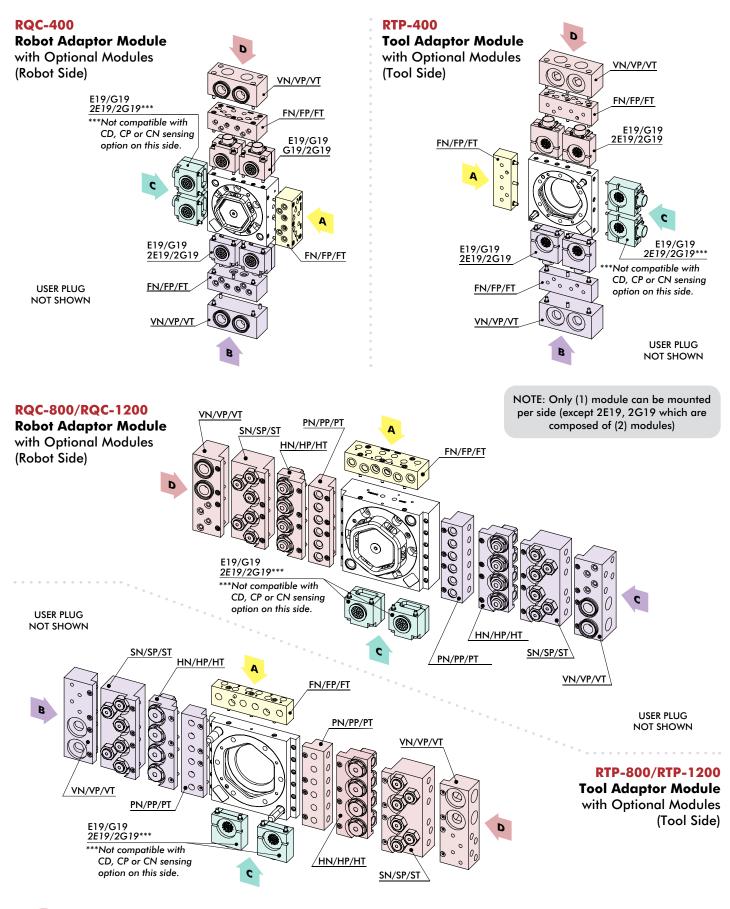
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# RQC-400, 800, 1200/RTP-400, 800, 1200

Automatic Tool Changers | Module Usage Illustrations





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

Automatic Tool Changers | Ordering Information

0 – 0 Optional Electrical, Air, acuum and Fluid Modules can be ordered with Base Model See below for Module Description (See Pg. TC-RQTP-7 for Illustrated Module Config.)				
acuum and Fluid Modules can be ordered with Base Model See below for Module Description (See Pg. TC-RQTP-7 for Illustrated Module Config.)				
acuum and Fluid Modules can be ordered with Base Model See below for Module Description (See Pg. TC-RQTP-7 for Illustrated Module Config.)				
ules				
ules				
M12 Conn, w/o Cordset				
ck M12 Conn, w/o Cordset				
19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable				
2X 19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable 19 pin, 3 Amp, 48 VDC Module w/Turck M12 Conn, w/o Cordset				
2X 19 pin, 3 Amp, 48 VDC Module w/Turck M12 Conn, w/o Cordset				
19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Coldser				
2X 19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable				
6X 1/8" NPT Air Ports Module, Face Seal, 10 Bar         6X 1/8" BSPP Air Ports Module, Face Seal, 10 Bar				
6X 1/8" BSPT Air Ports Module, Face Seal, 10 Bar				
6X 1/4" NPT Air Ports Module, Face Seal, 10 Bar				
6X 1/4" BSPP Air Ports Module, Face Seal, 10 Bar				
6X 1/4" BSPT Air Ports Module, Face Seal, 10 Bar				
6X 1/4" NPT Air Ports Module, Face Seal, 10 Bar				
, 10 Bar				
6X 1/4" BSPT Air Ports Module, Face Seal, 10 Bar				
g, 10 Bar				
ng, 10 Bar				
ng, 10 Bar				
s Module, Face Sealing				
ts Module, Face Sealing				
ts Module, Face Sealing				
r				

 $^{\dagger}$ 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	ELECTRICAL ACCESSORIES				
are ordered separately.	<b>ELCT-048</b>	90° Female Plug, w/o Cable, Solder Type, Cable Clamp for G19 (RQC Only)			
· · ·	<b>ELCT-049</b>	90° male Plug, w/o Cable, Solder Type, Cable Clamp for G19 (RTP Only)			
Please note some electrical accessories	<b>CABL-028</b>	90° Female M12 Cordset with 2M Cable for CP, CN, and CD (RQC Only)			
can only be used with certain modules	<b>CABL-029</b>	90° Female Cordset with 4M Cable for E19 (RQC Only)			
for either <b>RQC</b> or <b>RTP</b> "Base Models".	CABL-031	90° male Cordset with 2M Cable for E19 (RTP Only)			
For pneumatic accessories, size of	<b>OSRK-004</b>	PNP Inductive Sensor Repair Kit (RQC Only)			
"Base Model" is considered.	<b>OSRK-005</b>	NPN Inductive Sensor Repair Kit (RQC Only)			
	<b>OSRK-006</b>	Dry Contact Sensor Repair Kit (RQC Only)			
	PNEUMATIC A	CCESSORIES			

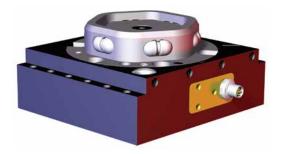
PNEUMATIC ACCESSORIES						
SLKT-402	RQC-400 Standard Seal Repair Kit					
SLKT-403	RQC-800 Standard Seal Repair Kit					
SLKT-404	RQC-1200 Standard Seal Repair Kit					

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# ROC-400 (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions



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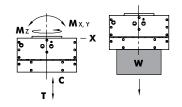
#### **Specification:**

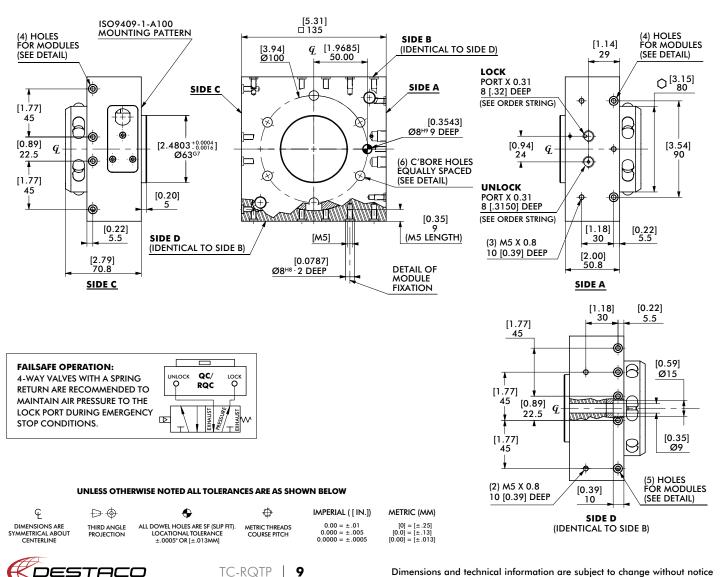
Max. Payload W: 180 Kg [400 lb] Weight: 3.6 Kg [7.94 lb] Cylinder Bore: Ø73mm [2.87in] Displacement: 80.9 cm<sup>3</sup> [4.93in<sup>3</sup>]

#### **Loading Capacity:**

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

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## **RTP-400 (TOOLING SIDE)**

## Automatic Tool Changers | Technical Specifications | Dimensions

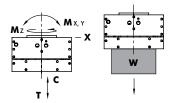
#### **Specification:**

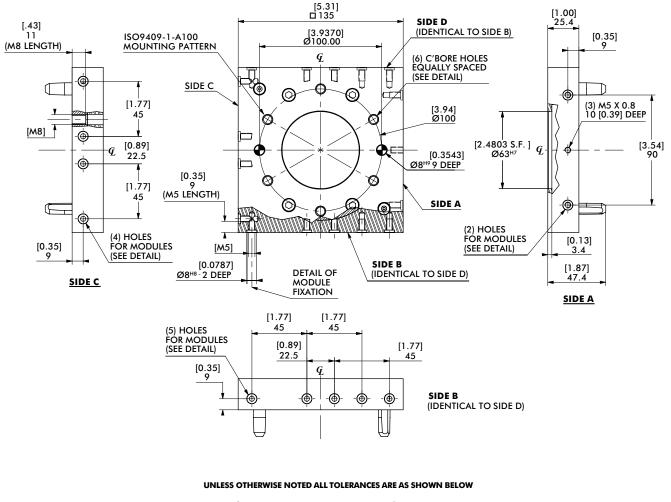
Max. Payload **W**: 180 Kg [400 lb] Weight: 1.1 Kg [2.43 lb]

#### **Loading Capacity:**

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







 
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 IMPERIAL ([IN.])
 METRIC (MM)

 DIMENSIONS ARE SYMMETRICAL ABOUT CENTERINE
 THIRD ANGLE RPOJECTION
 ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE COURSE PTCH
 METRIC THREADS 0.000 = ±.010 0.000 = ±.0005
 0.000 = ±.010 (0.00] = [±.13] 0.0000 = ±.0005
 [0.0] = [±.13] 0.000 = ±.0005

TC-RQTP | 10



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

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>]

#### Loading Capacity:

Max. Tensile T: 5340 N [1200 lb] Max. Compressive C: 7120 N [1600 lb] Max. Moment (Mx/My/Mz): 2490 Nm [22000 in-lb]

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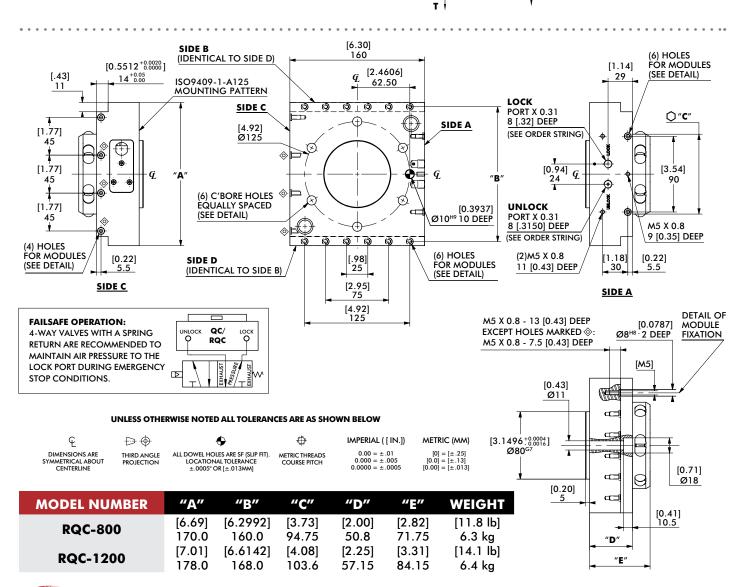
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#### **RQC-1200** Specification:

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>]

#### **Loading Capacity:**

Max. Tensile T: 8000 N [1800 lb] Max. Compressive C: 10700 N [2400 lb] Max. Moment (Mx/My/Mz): 3390 Nm [30000 in-lb]





# RTP-800, RTP-1200 (TOOLING SIDE)

## Automatic Tool Changers | Technical Specifications | Dimensions

#### **RTP-800 Specification:**

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

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#### **Loading Capacity:**

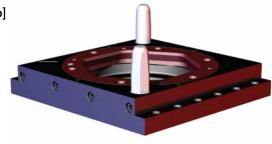
Max. Tensile T: 5340 N [1200 lb] Max. Compressive C: 7120 N [1600 lb] Max. Moment (Mx/My/Mz): 2490 Nm [22000 in-lb]

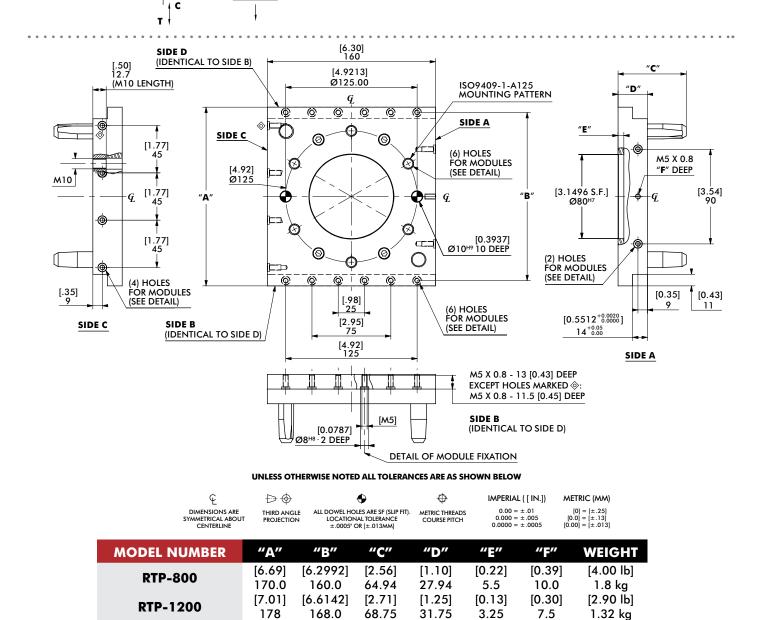
#### **RTP-1200** Specification:

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

#### Loading Capacity:

Max. Tensile T: 8000 N [1800 lb] Max. Compressive C: 10700 N [2400 lb] Max. Moment (Mx/My/Mz): 3390 Nm [30000 in-lb]



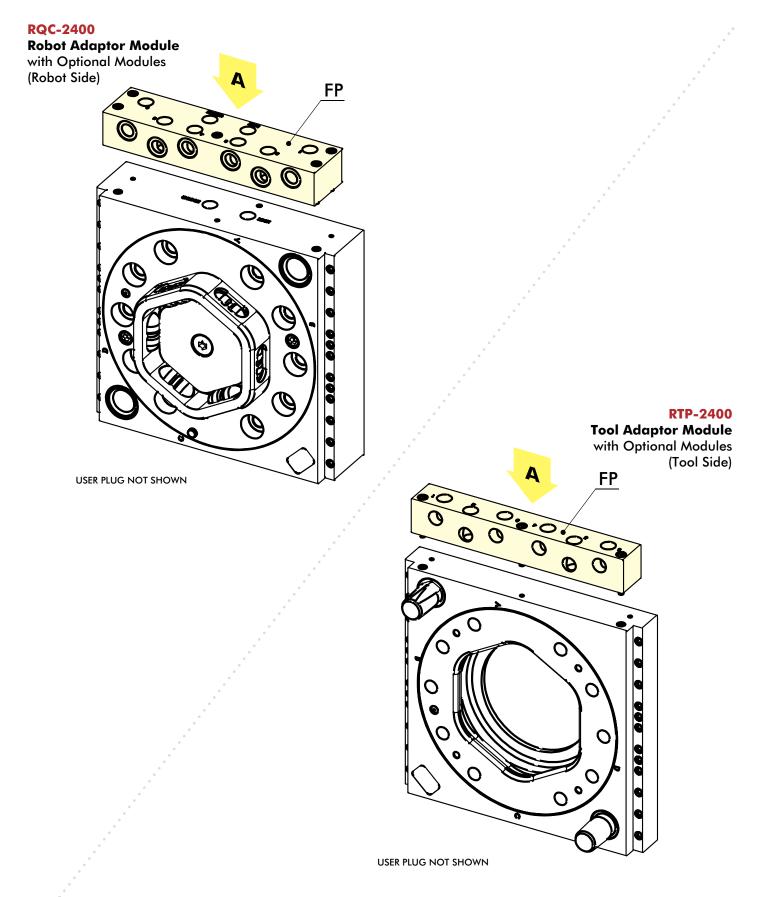


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## RQC-2400/RTP-2400

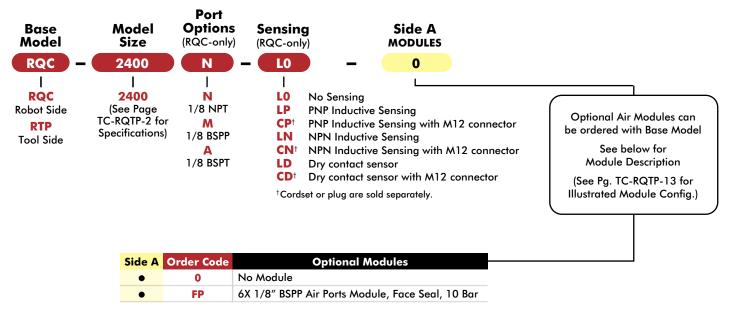
Automatic Tool Changers | Module Usage Illustrations





## RQC-2400/RTP-2400

## Automatic Tool Changers | Ordering Information



## 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-XXX RQC-2400 Standard Seal Repair Kit



## ROC-2400 (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

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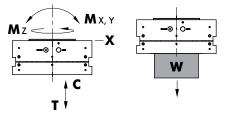
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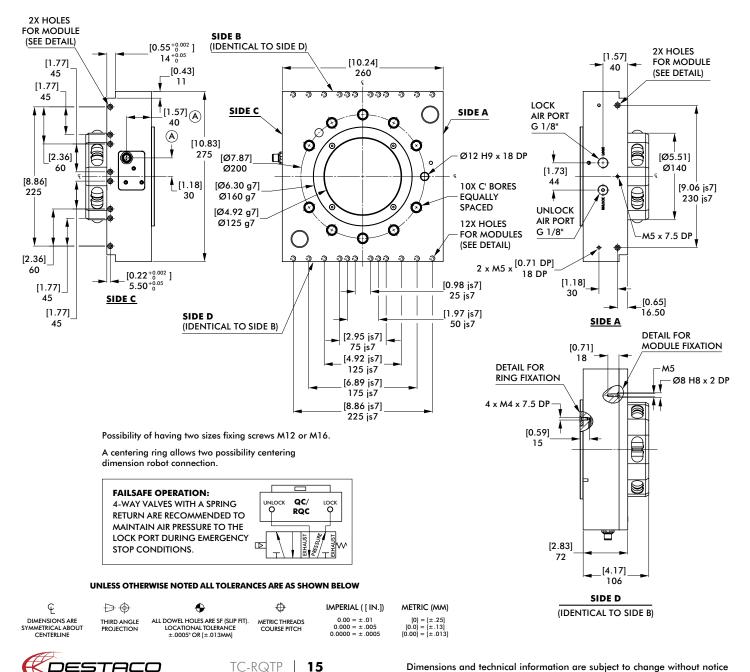
**RQC-2400** Specification:

Max. Payload W: 1089Kg [2400 lb] Weight: 22 Kg [48.5 lb] Cyl. Bore: Ø80mm [3.15in] Displacement: XXXcm<sup>3</sup> [XXXin<sup>3</sup>]

#### **Loading Capacity:**

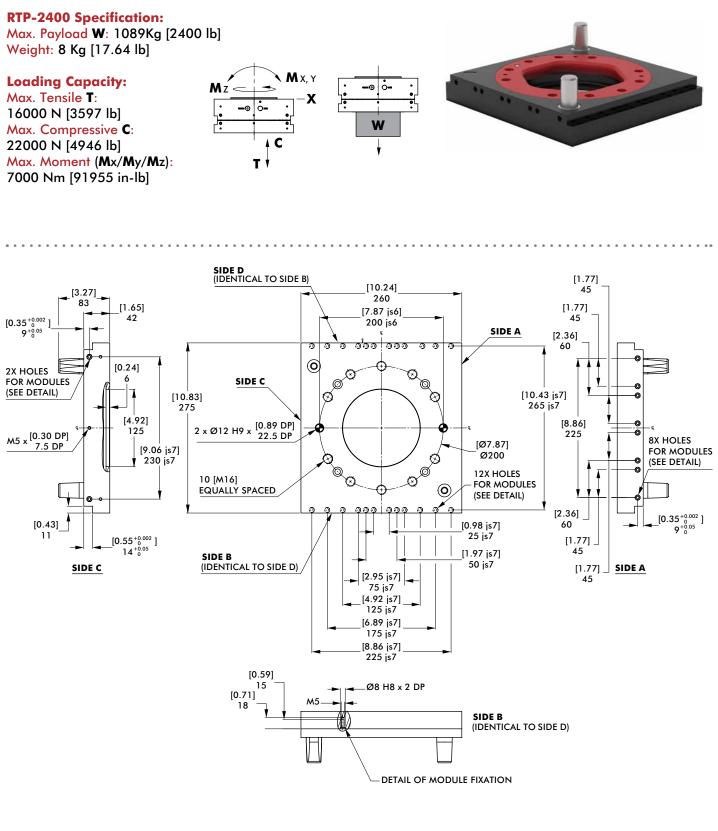
Max. Tensile T: 16000 N [3597 lb] Max. Compressive C: 22000 N [4946 lb] Max. Moment (Mx/My/Mz): 7000 Nm [91955 in-lb]





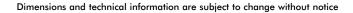
## **RTP-2400 (TOOLING SIDE)**

## Automatic Tool Changers | Technical Specifications | Dimensions



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

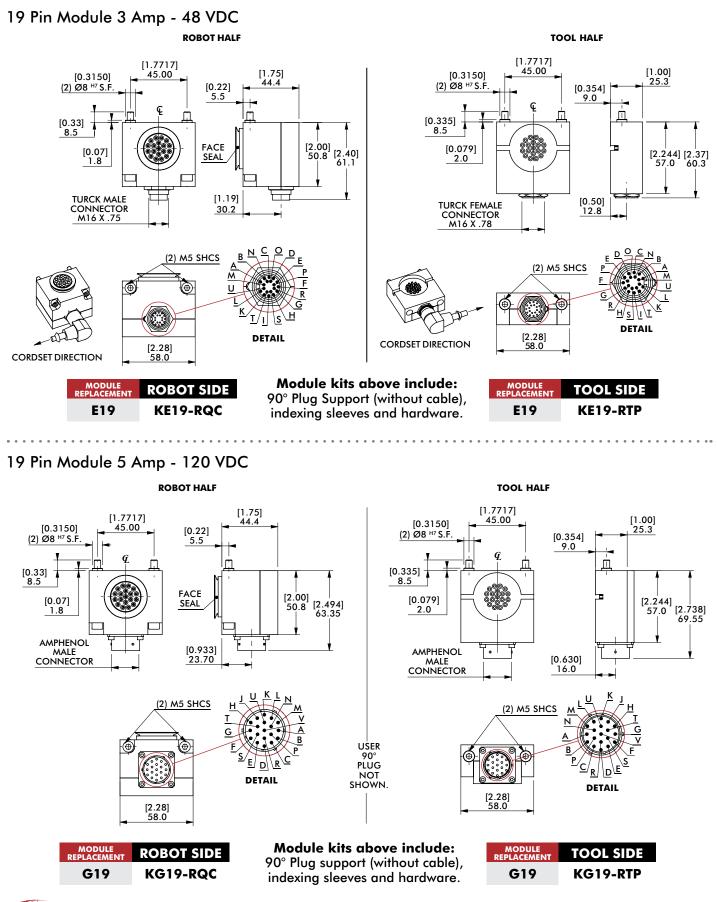
ę	₽�	<b>\$</b>	Ф	IMPERIAL ( [ IN.])	METRIC (MM)
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE ±.0005" OR [±.013MM]	METRIC THREADS COURSE PITCH	$\begin{array}{l} 0.00 = \pm .01 \\ 0.000 = \pm .005 \\ 0.0000 = \pm .0005 \end{array}$	$[0] = [\pm .25]$ $[0.0] = [\pm .13]$ $[0.00] = [\pm .013]$



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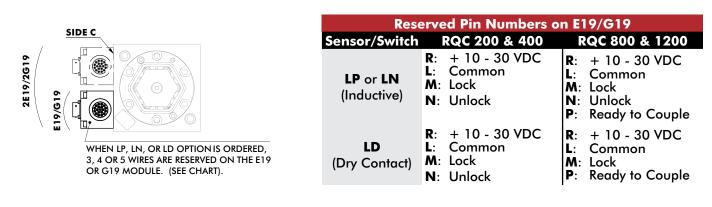
## Automatic Tool Changers | Technical Specifications | Dimensions





Automatic Tool Changers | Technical Specifications | Dimensions

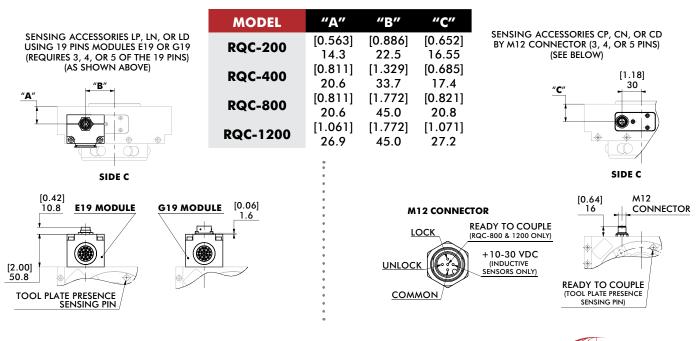
Modules Connecting with Latch/Unlatch Sensors



Pin Numbering



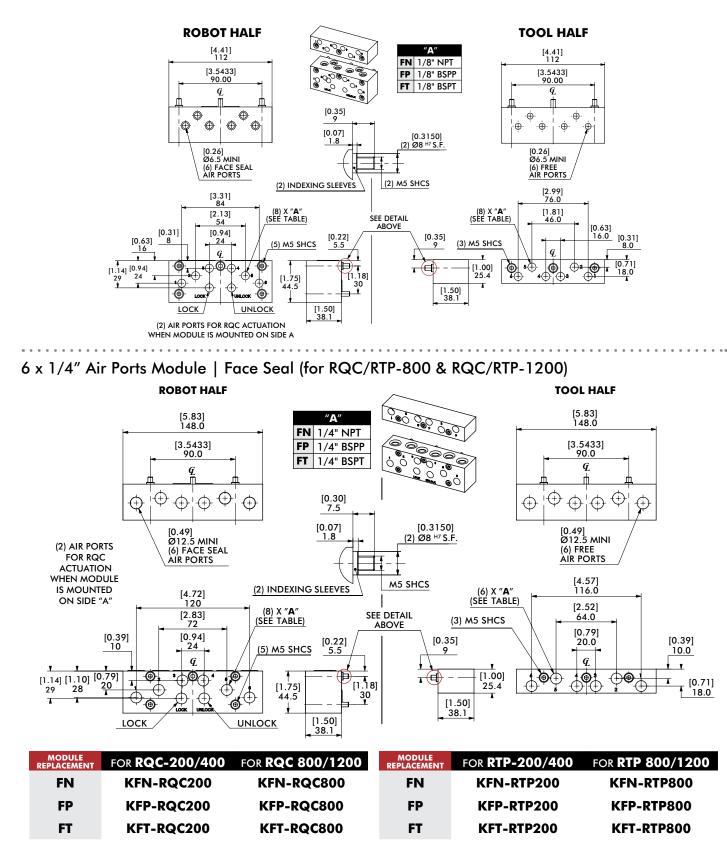
Lock/Unlock Tool Plate Presence Sensing Options (with inductive Sensors and Dry Contact Switches)





Automatic Tool Changers | Technical Specifications | Dimensions

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

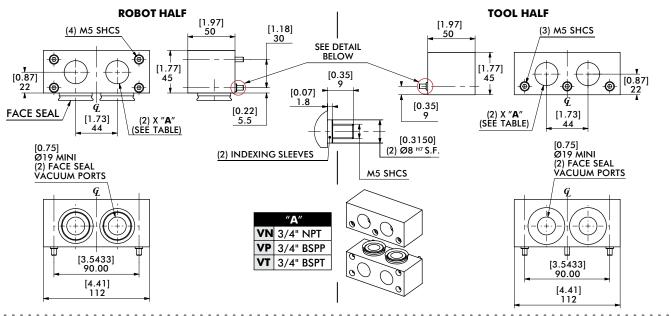


Module kits above include: Couplings, indexing sleeves and hardware.

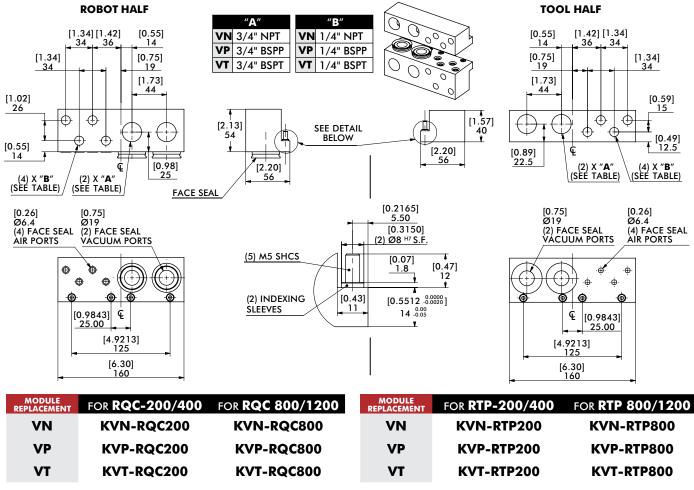


Automatic Tool Changers | Technical Specifications | Dimensions

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 & RQC/RTP-1200)



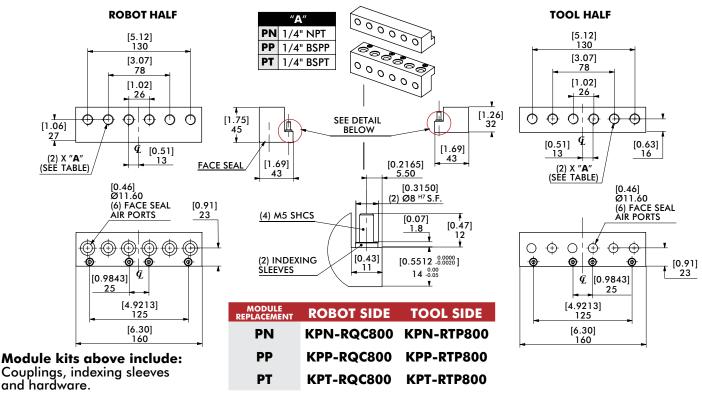
Module kits above include: Couplings, indexing sleeves and hardware.

TC-RQTP **20** 

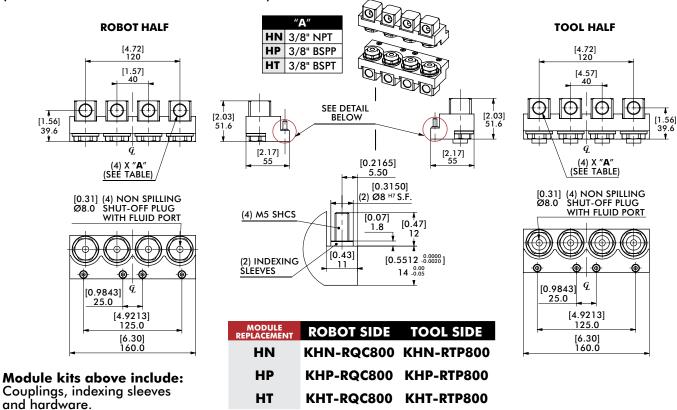


Automatic Tool Changers | Technical Specifications | Dimensions

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

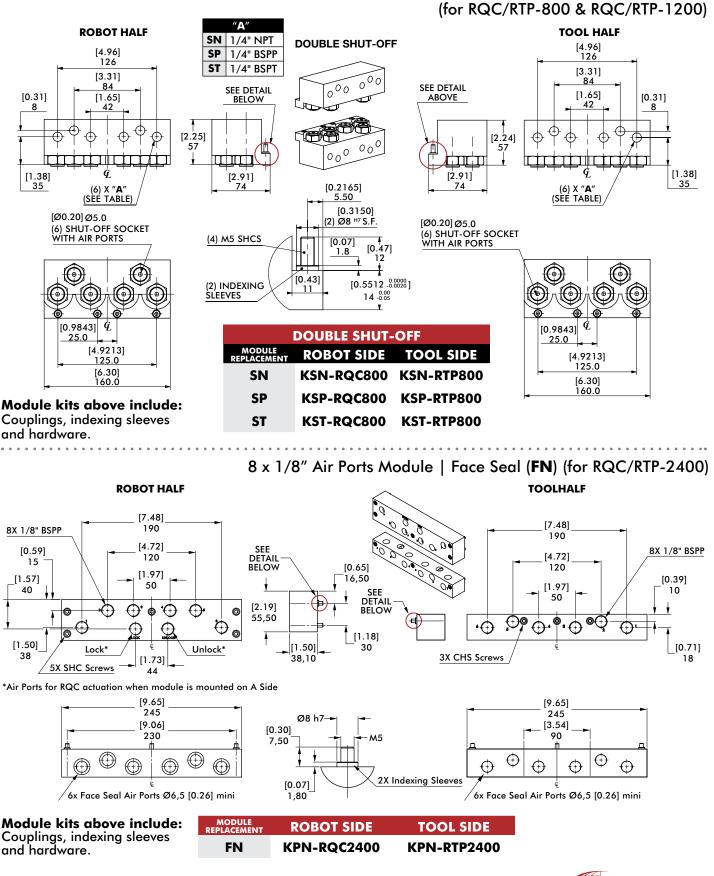


4 x 3/8" Fluid Ports Module | Non Spilling | Double Shut-Off (for RQC/RTP-800 & RQC/RTP-1200)





Automatic Tool Changers | Technical Specifications | Dimensions



6 x 1/4" Air Ports Module | Double Shut-Off Flat Face (SN/SP/ST)

Dimensions and technical information are subject to change without notice

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