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)

Robot Plate

Tool Plate

Spring loaded contacts are recessed for a better protection V-Seal provides moisture resistance

Optional 19 Pin I/O Module

Optional (4) Self-Sealing Air Ports Module

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 & 2400 only)

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



Optional 6 Port Pneumatic Module

Locating Pins -

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

Shown with customer supplied adapter plate.



Robot Plate

has counterbored holes

location, and features a

pin hole, a raised boss for

ISO9409-1 mounting pattern

.

.

.

.

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

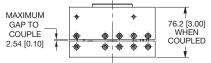
			1	
	•		¢	
				69.9 [2.75]
,	-@-	-		WHEN
				COUPLED
	Ψ	Ť	Ÿ	*
	¥	◆ • • •		

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

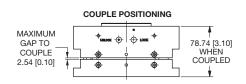
.



RQC-800/RTP-800

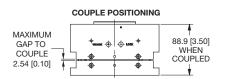
.

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

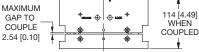
Combined Weight: 8.3 Kg [18.4 lb] Max. Payload*: 550 Kg [1200 lb] Max. Moment: 3390 Nm [30000 in-lb]



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





RQC-200 Robot Plate

RTP-200 Tool Plate





RQC-400 Robot Plate

RTP-400 Tool Plate



RQC-800 Robot Plate





RQC-1200 Robot Plate





RQC-2400 Robot Plate

RTP-2400 Tool Plate

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

TC-RQTP | 2



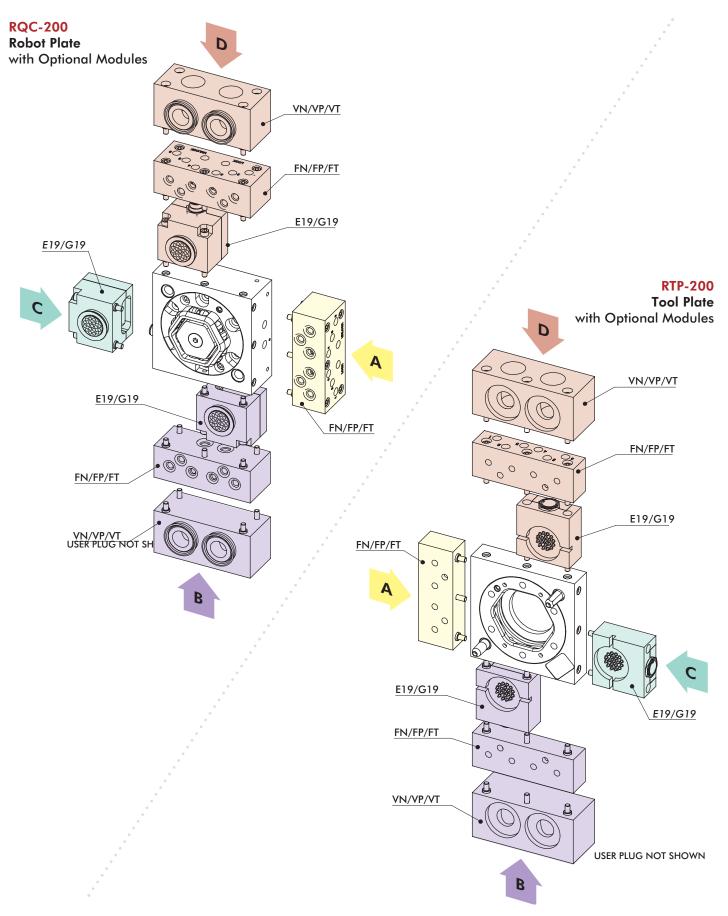


RTP-1200

Tool Plate

RQC-200/RTP-200

Automatic Tool Changers | Module Usage Illustrations



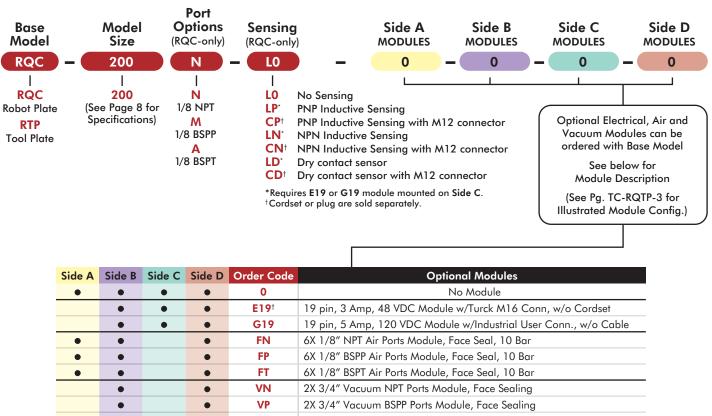


RQC-200/RTP-200

Automatic Tool Changers | Ordering Information



Robot Plate Tool Plate RQC-200 RTP-200



VT 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

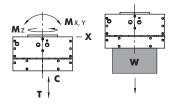


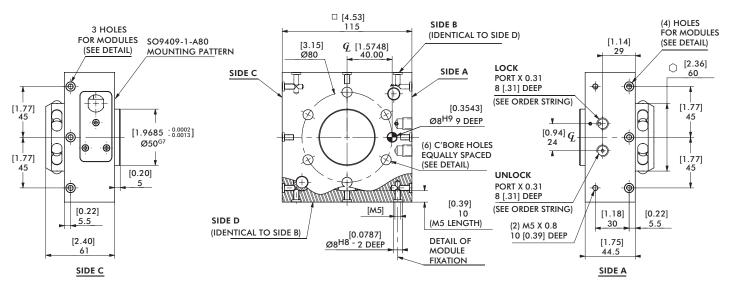
Specification:

Max. Payload* W: 90 Kg [200 lb] Weight: 2 Kg [4.41 lb] Cylinder Bore: Ø53mm [2.09in] Displacement: 41.3 cm³ [2.52in³] *Depending on your application paramaters please contact DESTACO for validation.

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]

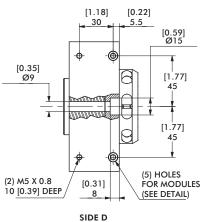




FAILSAFE OPERATION:	
4-WAY VALVES WITH A SPRING RETURN ARE RECOMMENDED TO MAINTAIN AIR PRESSURE TO THE	
LOCK PORT DURING EMERGENCY STOP CONDITIONS.	

UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

Ę	₽�	•	Φ	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	$0.00 = \pm .01$ $0.000 = \pm .005$ $0.0000 = \pm .0005$	$[0] = [\pm .25]$ [0.0] = [± .13] [0.00] = [± .013]	



(IDENTICAL TO SIDE B)



RTP-200 (TOOL PLATE)

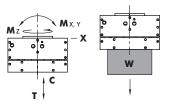
Automatic Tool Changers | Technical Specifications | Dimensions

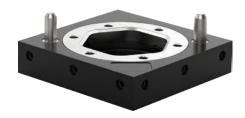
Specification:

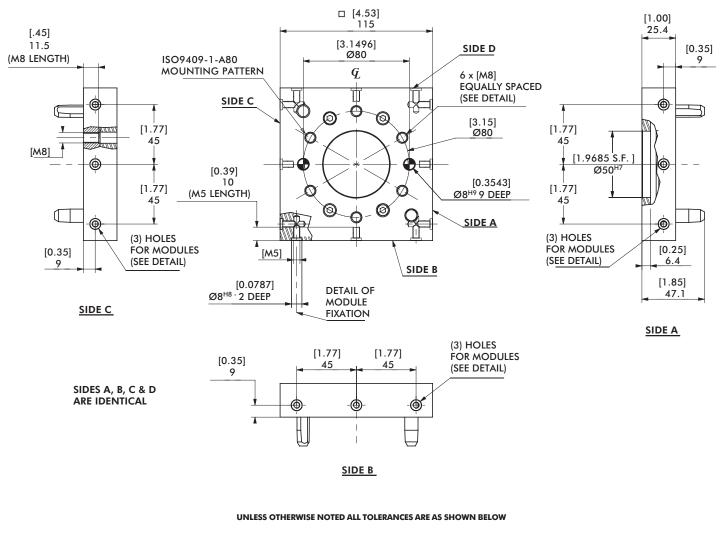
Max. Payload* W: 90 Kg [200 lb] Weight: 1 Kg [2.2 lb] *Depending on your application paramaters please contact DESTACO for validation.

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]





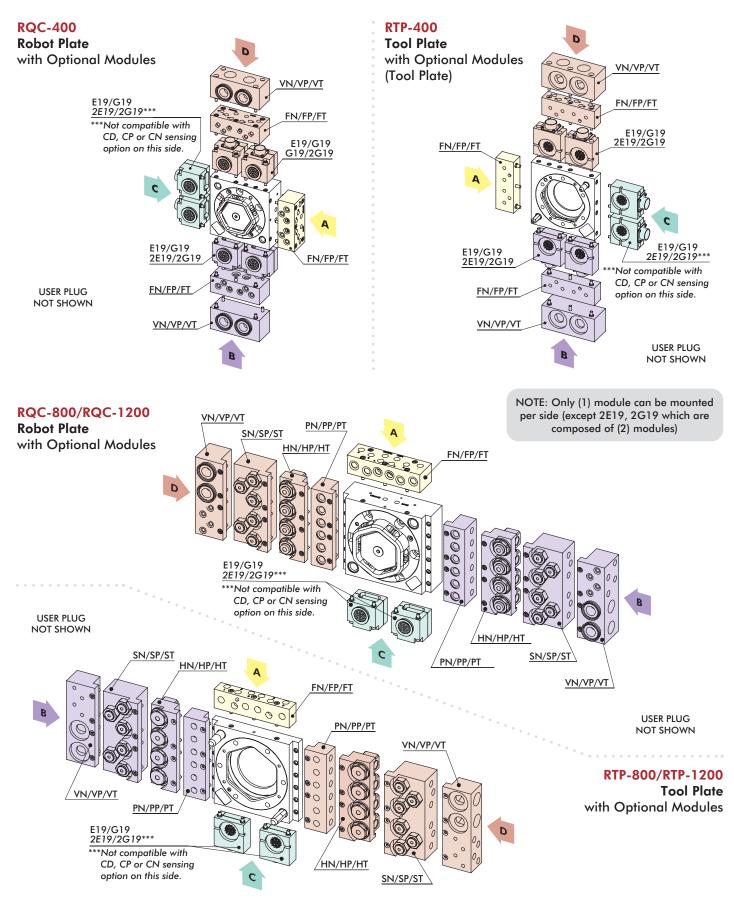


ę	₽�	•	Φ	IMPERIAL ([IN.])	METRIC (MM)
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE ±.0005" OR [±.013MM]	METRIC THREADS COURSE PITCH	$0.00 = \pm .01$ $0.000 = \pm .005$ $0.0000 = \pm .0005$	$\begin{matrix} [0] = [\pm .25] \\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



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

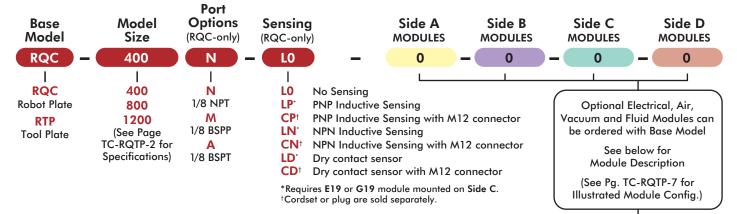
Automatic Tool Changers | Module Usage Illustrations





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

Automatic Tool Changers | Ordering Information



400	800/1200	Side A	Side B	Side C	Side D	Order Code	Optional Modules
٠	•	٠	٠	٠	٠	0	No Module
	•			٠		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
	•			٠		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
٠			•	•	٠	E19 [†]	19 pin, 3 Amp, 48 VDC Module w/Turck M12 Conn, w/o Cordset
•			٠	•***	٠	2E19 ^{+***}	2X 19 pin, 3 Amp, 48 VDC Module w/Turck M12 Conn, w/o Cordset
•			٠	٠	٠	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
•		•	•		٠	FP	6X 1/8" BSPP Air Ports Module, Face Seal, 10 Bar
•		•	٠		٠	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
	•		٠		•	PN	6X 1/4" NPT Air Ports Module, Face Seal, 10 Bar
	•		٠		•	PP	6X 1/4" BSPP Air Ports Module, Face Seal, 10 Bar
	•		•		•	РТ	6X 1/4" BSPT Air Ports Module, Face Seal, 10 Bar
	•		٠		•	SN	6X 1/4" NPT Air Ports Module, Self Sealing, 10 Bar
	•		٠		•	SP	6X 1/4" BSPP Air Ports Module, Self Sealing, 10 Bar
	•		٠		٠	ST	6X 1/4" BSPT Air Ports Module, Self Sealing, 10 Bar
٠			٠		•	VN	2X 3/4" Vacuum NPT Ports Module, Face Sealing
•			٠		•	VP	2X 3/4" Vacuum BSPP Ports Module, Face Sealing
•			•		•	VT	2X 3/4" Vacuum BSPT Ports Module, Face Sealing
	•		٠		•	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
	•		•		٠	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 electrica can only be used with cert for either RQC or RTP "Ba

For pneumatic accessories "Base Model" is considere

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)				
cal accessories	CABL-028	90° Female M12 Cordset with 2M Cable for CP, CN, and CD (RQC Only)				
rtain modules	CABL-029	90° Female Cordset with 4M Cable for E19 (RQC Only)				
ase Models".	CABL-031	90° male Cordset with 2M Cable for E19 (RTP Only)				
es, size of	OSRK-004	PNP Inductive Sensor Repair Kit (RQC Only)				
ed.	OSRK-005	NPN Inductive Sensor Repair Kit (RQC Only)				
	OSRK-006	Dry Contact Sensor Repair Kit (RQC Only)				
		CCESSODIES				

MATIC ACCESSORIES SLK

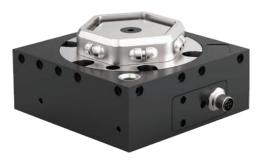
SLKT-402	RQC-400 Standard Seal Repair Kit
SLKT-403	RQC-800 Standard Seal Repair Kit
SLKT-404	RQC-1200 Standard Seal Repair Kit

TC-RQTP 8



RQC-400 (ROBOT PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions

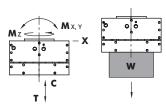


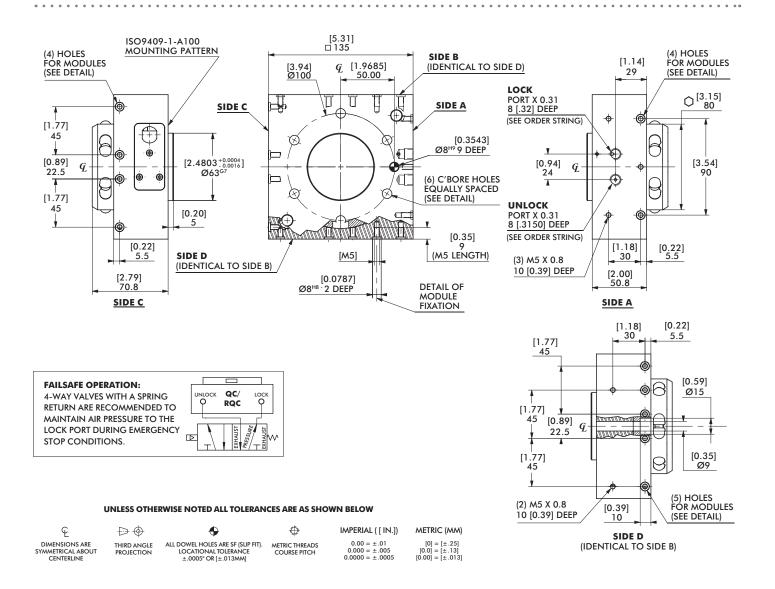
Specification:

Max. Payload* W: 180 Kg [400 lb] Weight: 3.6 Kg [7.94 lb] Cylinder Bore: Ø73mm [2.87in] Displacement: 80.9 cm³ [4.93in³] *Depending on your application paramaters please contact DESTACO for validation.

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]







RTP-400 (TOOL PLATE)

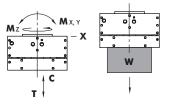
Automatic Tool Changers | Technical Specifications | Dimensions

Specification:

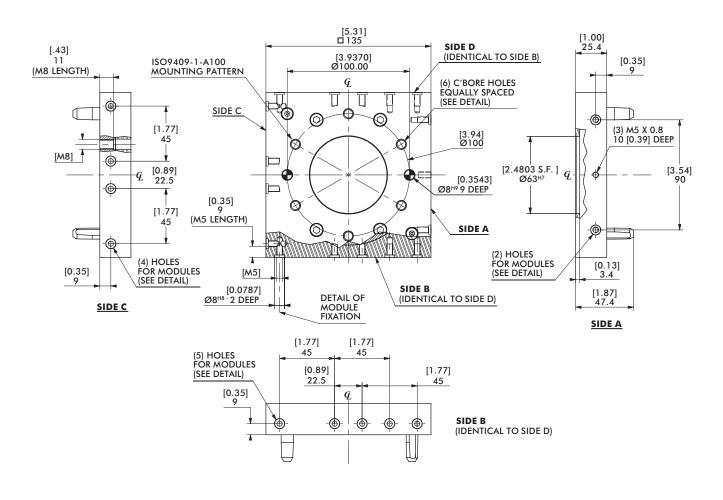
Max. Payload* W: 180 Kg [400 lb] Weight: 1.1 Kg [2.43 lb] *Depending on your application paramaters please contact DESTACO for validation.

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]







UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

£	₽�	•	Φ	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] = [± .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 cm³ [5.83in³] *Depending on your application paramaters please contact DESTACO for validation.

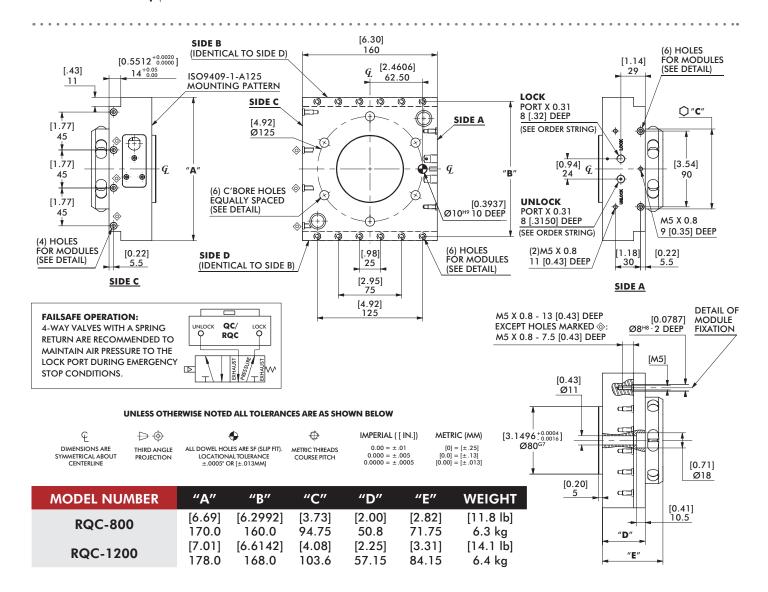
Loading Capacity: Max. Tensile T: 5340 N [1200 lb] Max. Compressive C: 7120 N [1600 lb] Max. Moment (Mx/My/Mz): 2490 Nm [22000 in-lb]

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 cm³ [9.38in³] *Depending on your application paramaters please contact DESTACO for validation.

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 (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 paramaters please contact DESTACO for validation.

Loading Capacity:

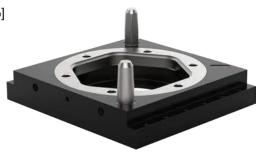
Max. Tensile T: 5340 N [1200 lb] Max. Compressive C: 7120 N [1600 lb] Max. Moment (Mx/My/Mz): 2490 Nm [22000 in-lb]

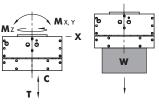
RTP-1200 Specification:

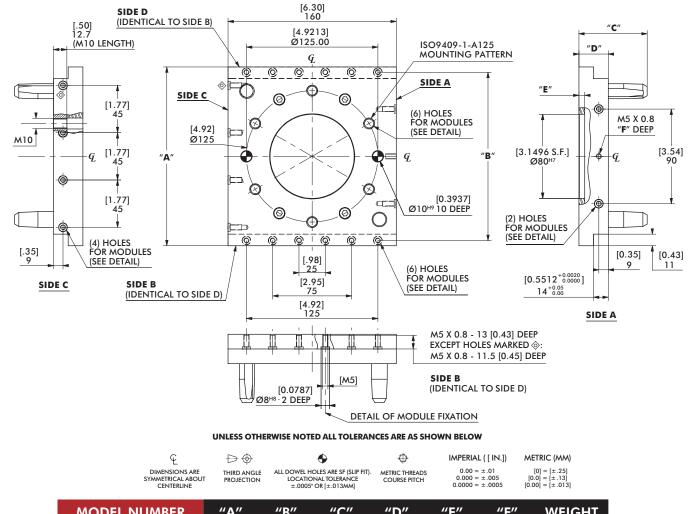
Max. Payload* W: 550 Kg [1200 lb] Weight: 1.9 Kg [4.19 lb] *Depending on your application paramaters please contact DESTACO for validation.

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]







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

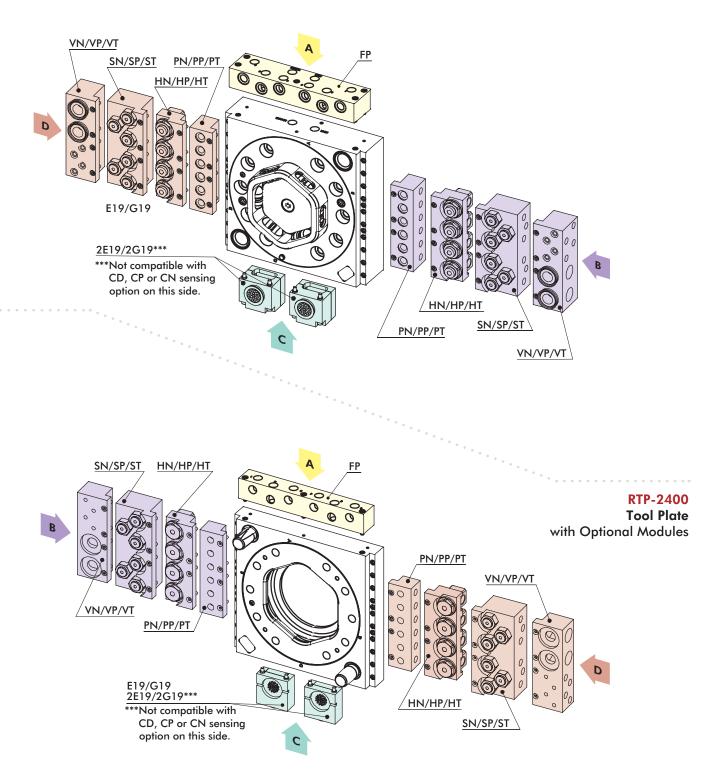


RQC-2400/RTP-2400

Automatic Tool Changers | Module Usage Illustrations

RQC-2400

Robot Plate with Optional Modules



USER PLUG NOT SHOWN

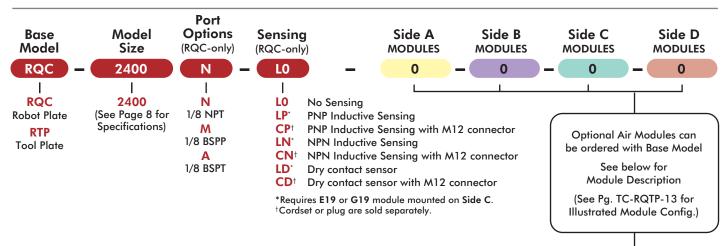


RQC-2400/RTP-2400

Automatic Tool Changers | Ordering Information



RQC-2400



RTP-2400

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 M16 Conn, w/o Cordset		
		•***		2E19 ^{+***}	2X 19 pin, 3 Amp, 48 VDC Module w/Turck M16 Conn, w/o Cordset		
		٠		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		
•				FP	6X 1/4" BSPP 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		
	•		•	РТ	6X 1/4" BSPT Air Ports Module, Face Seal, 10 Bar		
	•		•	SN	6X 1/4" NPT Air Ports Module, Self Sealing, 10 Bar		
	٠		•	SP	6X 1/4" BSPP Air Ports Module, Self Sealing, 10 Bar		
	•		•	ST	6X 1/4" BSPT Air Ports Module, Self Sealing, 10 Bar		
	٠		٠	HN	4X 3/8" NPT Fluid Ports Module, 100 Bar		
	٠		•	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.

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)

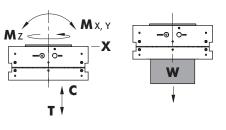
Automatic Tool Changers | Technical Specifications | Dimensions

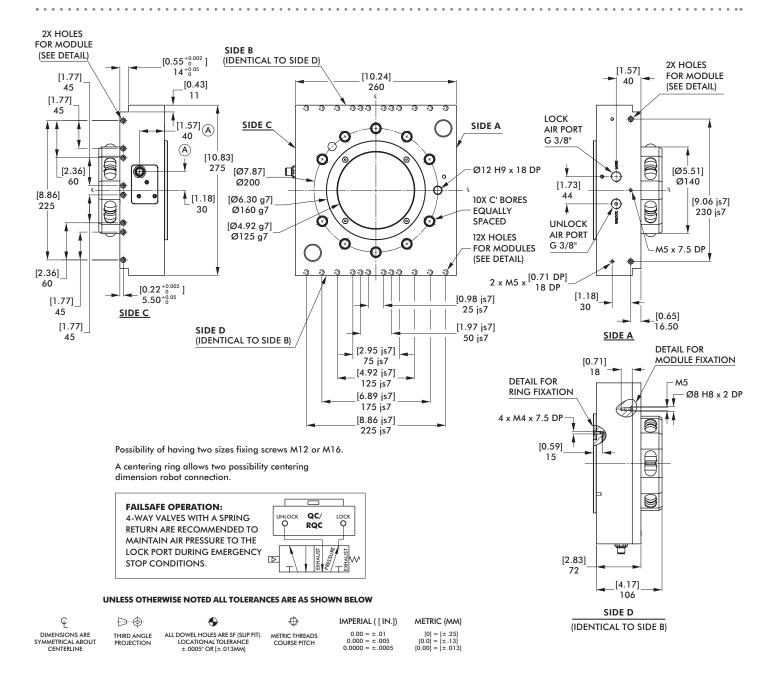


RQC-2400 Specification:

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]

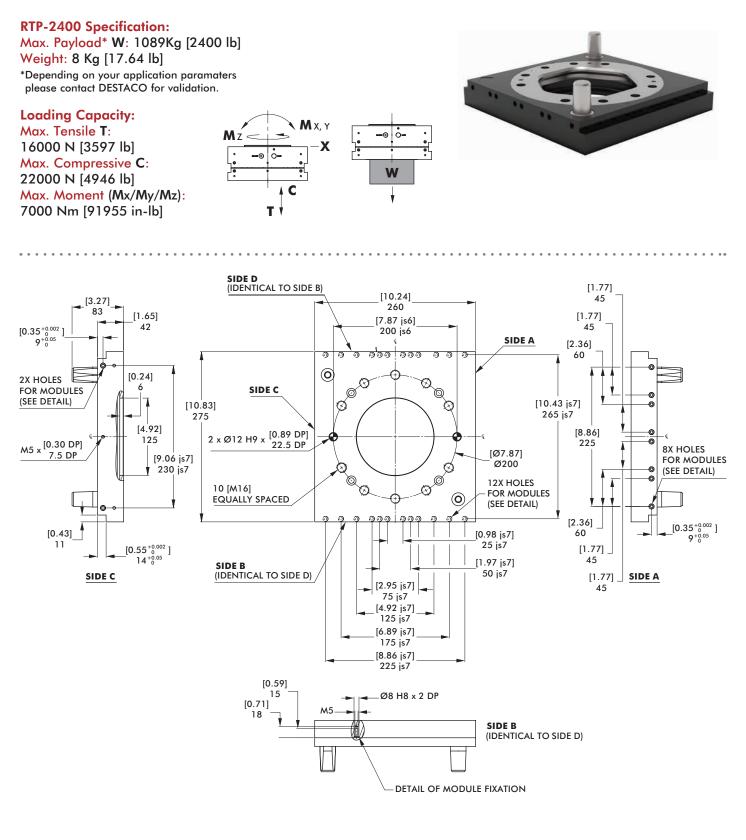






RTP-2400 (TOOL PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions

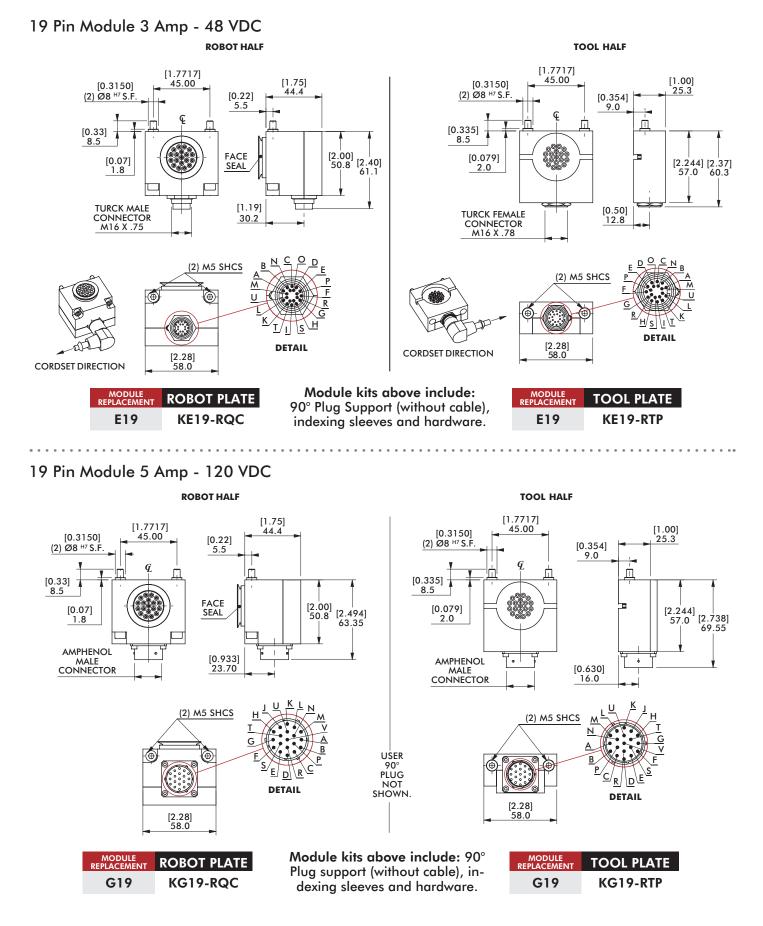


UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

ę	$\Rightarrow \Leftrightarrow$	•	Φ	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] = [± .13] [0.00] = [± .013]



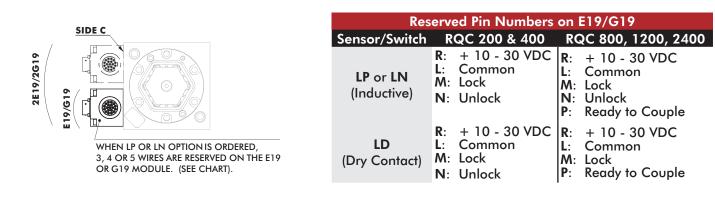
Automatic Tool Changers | Technical Specifications | Dimensions





Automatic Tool Changers | Technical Specifications | Dimensions

Modules Connecting with Latch/Unlatch Sensors



Pin Numbering



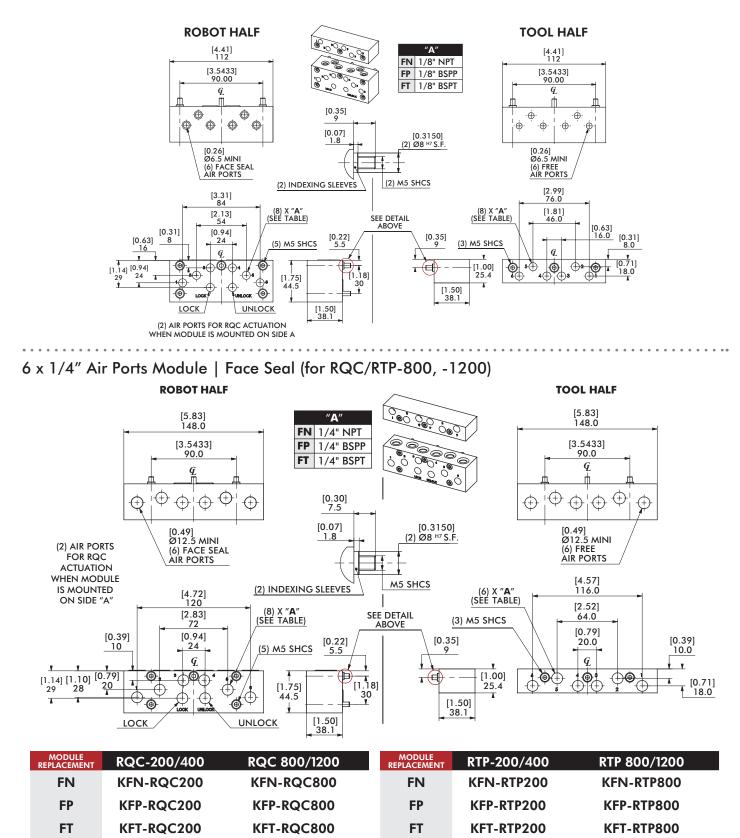
Lock/Unlock Tool Plate Presence Sensing Options (with inductive Sensors and Dry Contact Switches)

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)	MODEL RQC-200 RQC-400	"A" [0.563] 14.3 [0.811] 20.6 [0.811]	"B" [0.886] 22.5 [1.329] 33.7 [1.772]	"C" [0.652] 16.55 [0.685] 17.4 [0.821]	SENSING ACCESSORIES CP, CN, OR CD BY M12 CONNECTOR (3, 4, OR 5 PINS) (SEE BELOW) [1.18] " C " 30
SIDE C [0.42] 10.8 E19 MODULE G19 MODU	RQC-800 RQC-1200	20.6 [1.061] 26.9	45.0 [1.772] 45.0	20.8 [1.071] 27.2	SIDE C
[2.00] 50.8 TOOL PLATE PRESENCE SENSING PIN		• • • • • • • • • • • • •		K (R)	OR EADY TO COUPLE QC-800 & 1200 ONLY) +10-30 VDC (INDUCTIVE SENSORS ONLY) READY TO COUPLE (TOOL PLATE PRESENCE SENSING PIN)



Automatic Tool Changers | Technical Specifications | Dimensions

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

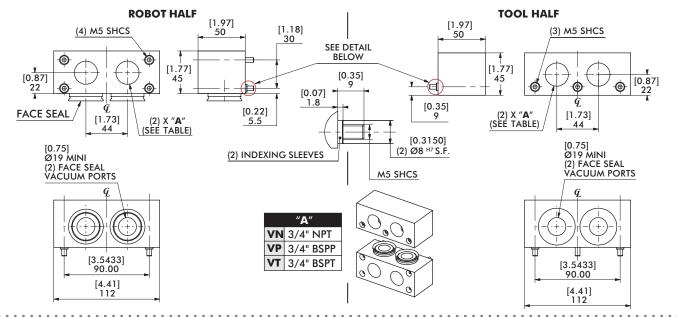


Module kits above include: Couplings, indexing sleeves and hardware.

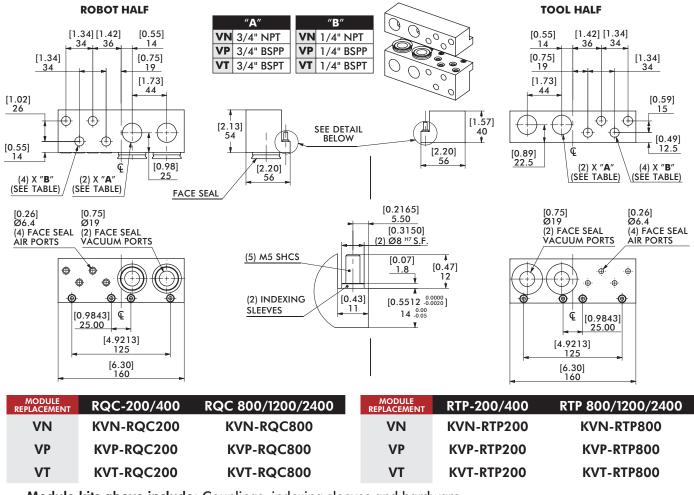


Automatic Tool Changers | Technical Specifications | Dimensions

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, -1200, -2400)

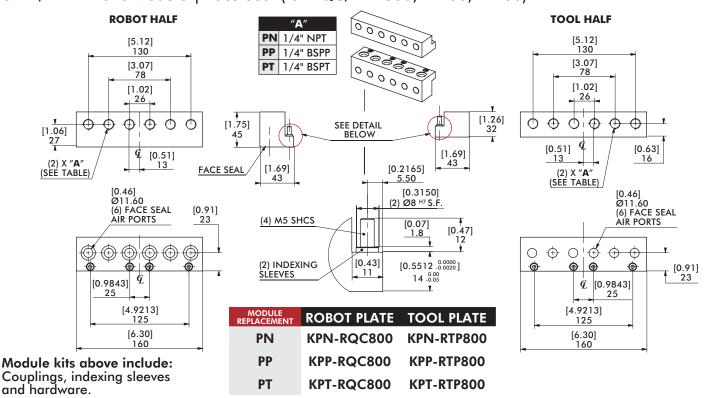


Module kits above include: Couplings, indexing sleeves and hardware.

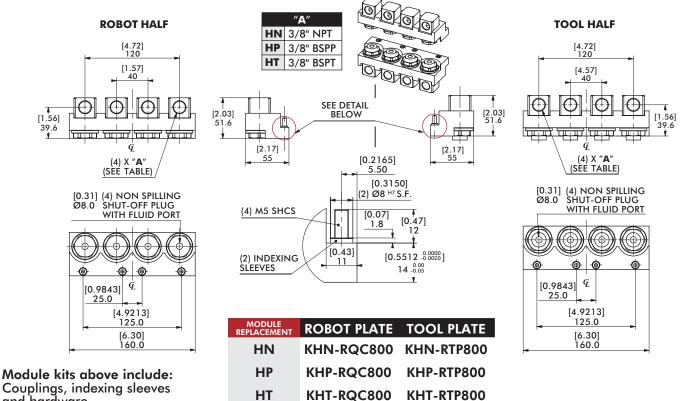


Automatic Tool Changers | Technical Specifications | Dimensions

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



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



Couplings, indexing sleeves and hardware.

STACO



Automatic Tool Changers | Technical Specifications | Dimensions

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

