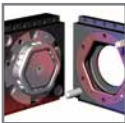


# AUTOMATIC TOOL CHANGERS

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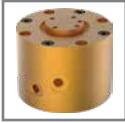
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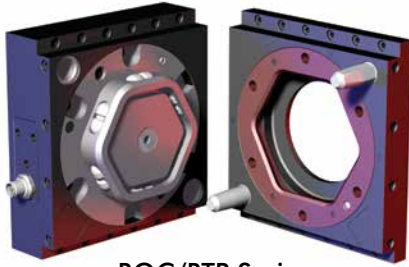
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# RQC/RTP, QC/TP, RHC SERIES

Automatic Tool Changers | Introduction



RQC/RTP Series



QC/TP Series



RHC Series

**DESTACO Automatic Tool Changers** allows multiple tooling applications to be achieved using one robot with exceptional repeatability, high rigidity and load capacity.

Each Series offers:

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

## 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:**  $\pm 0.025\text{mm}$  [ $\pm 0.001$  in]

**Field Repairable:** Yes

**Seal Repair Kits Available:** Yes

### Application Restrictions

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

## 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.

# RQC/RTP SERIES

## 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 17)

### Optional 19 Pin I/O Module

Spring loaded contacts are  
recessed for a better protection

V-Seal provides moisture resistance

Robot Side

Tool Side

### Locking Mechanisms

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

### Latch/Unlatch Switch

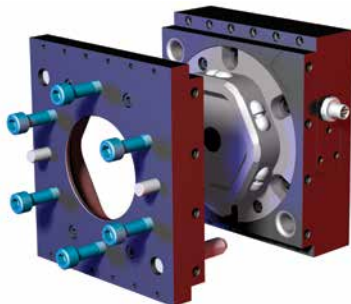
RQC's are pre-equipped for latch,  
unlatch (all sizes) and part presence  
sensing (sizes 800 & 1200 only)

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

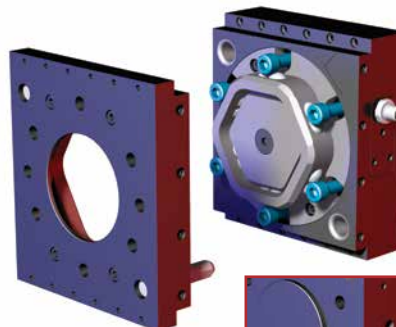
Optional 6 Port  
Pneumatic Module

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



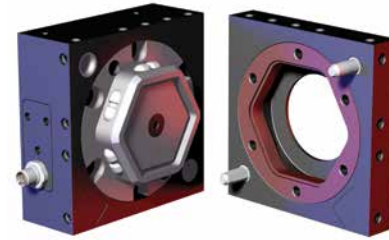
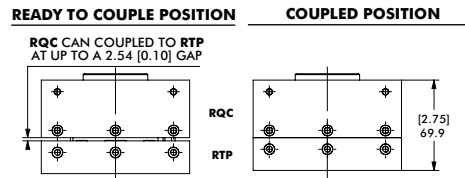
Back Side of Robot  
Half Adaptor

# RQC/RTP SERIES

Automatic Tool Changers | Technical Information

## RQC-200/RTP-200

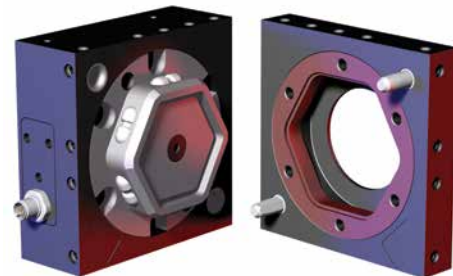
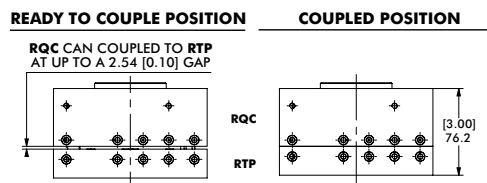
**Combined Weight:** 3 Kg [6.7 lb]  
**Max. Payload:** 90 Kg [200 lb]  
**Max. Moment:** 810 Nm [7200 in.-lb.]



**RQC-200** **RTP-200**  
**Robot Adaptor Module** **Tool Adaptor Module**

## RQC-400/RTP-400

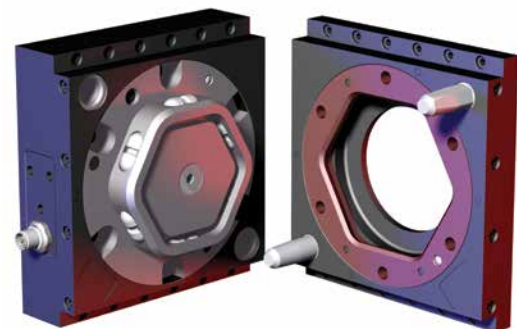
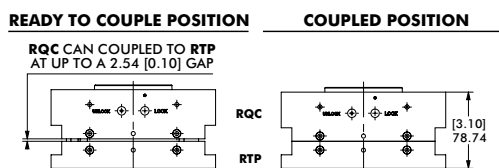
**Combined Weight:** 4.7 Kg [10.4 lb]  
**Max. Payload:** 180 Kg [400 lb]  
**Max. Moment:** 1580 Nm [14000 in.-lb.]



**RQC-400** **RTP-400**  
**Robot Adaptor Module** **Tool Adaptor Module**

## RQC-800/RTP-800

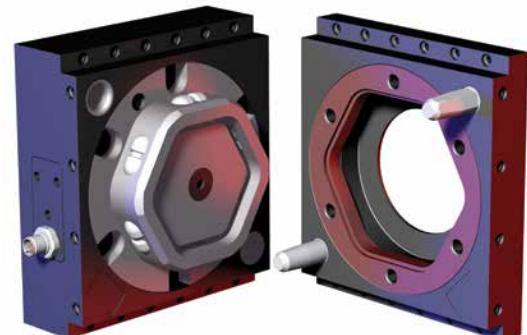
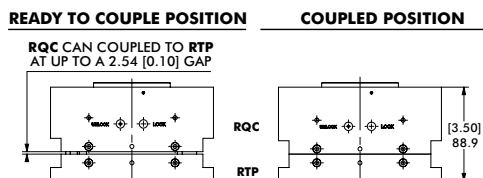
**Combined Weight:** 7.1 Kg [15.8 lb]  
**Max. Payload:** 360 Kg [800 lb]  
**Max. Moment:** 2490 Nm [22000 in.-lb.]



**RQC-800** **RTP-800**  
**Robot Adaptor Module** **Tool Adaptor Module**

## 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.]



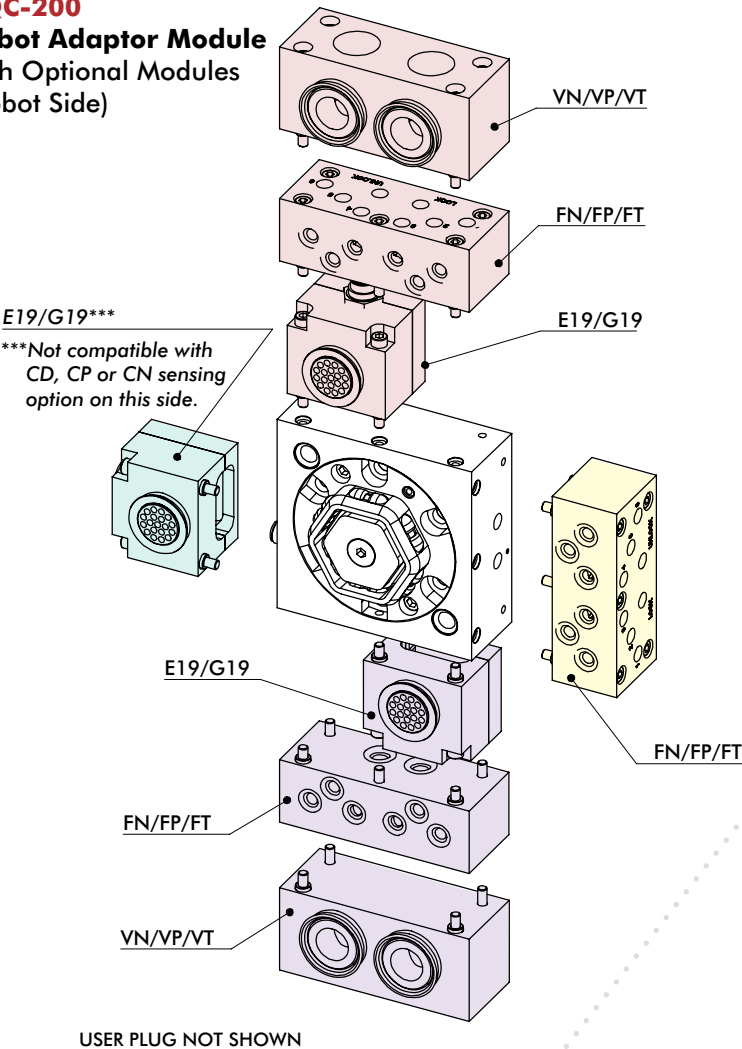
**RQC-1200** **RTP-1200**  
**Robot Adaptor Module** **Tool Adaptor Module**



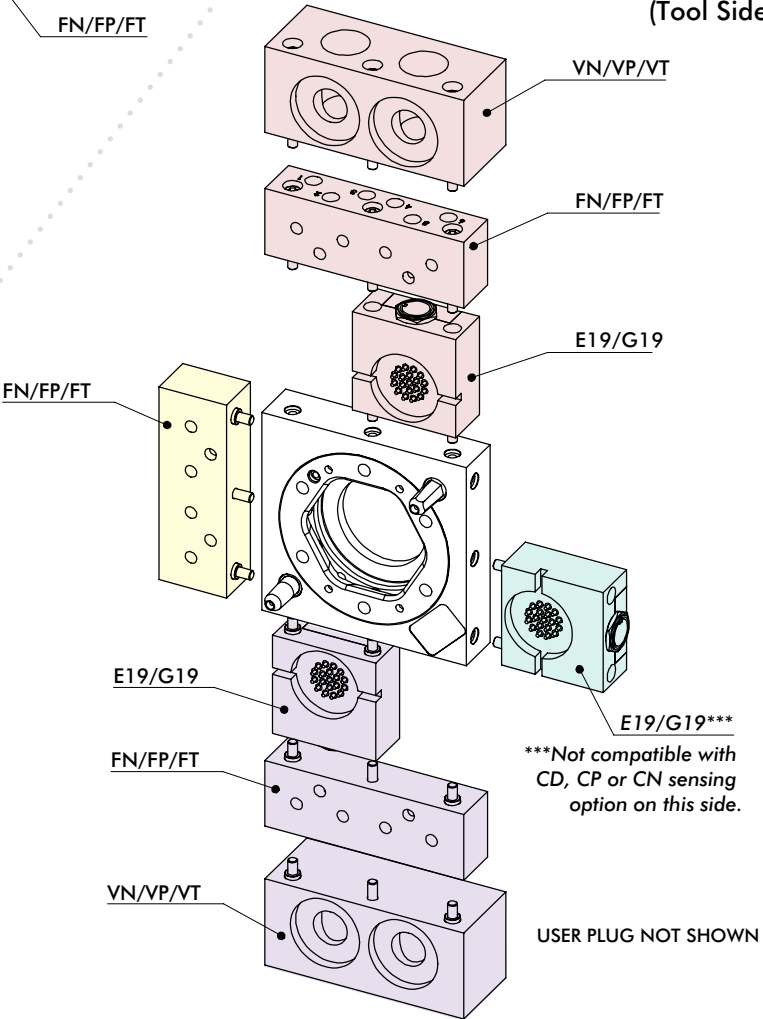
# RQC-200/RTP-200

## Automatic Tool Changers | Module Usage Illustrations

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



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



# RQC-200/RTP-200

## Automatic Tool Changers | Ordering Information

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>200</b>	<b>N</b>	<b>L0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
 <b>RQC</b> Robot Side <b>RTP</b> Tool Side	 <b>200</b> 90 kg [200 lb] Max. Payload	 <b>N</b> 1/8 NPT <b>M</b> 1/8 BSPP <b>A</b> 1/8 BSPT	 <b>L0</b> <b>LP*</b> <b>CP†</b> <b>LN*</b> <b>CN†</b> <b>LD*</b> <b>CD†</b>	<p>No Sensing PNP Inductive Sensing PNP Inductive Sensing with M12 connector NPN Inductive Sensing NPN Inductive Sensing with M12 connector Dry contact sensor Dry contact sensor with M12 connector</p> <p>*Requires <b>E19</b> or <b>G19</b> module mounted on <b>Side C</b>. †Cordset or plug are sold separately.</p>			

Optional Electrical, Air and Vacuum Modules can be ordered with Base Model

See below for Module Description  
(See Page 5 for Illustrated Module Use Configuration)

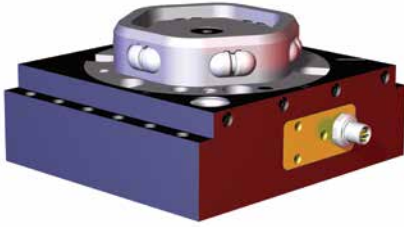
Side A	Side B	Side C	Side D	Order Code	Optional Modules
●	●	●	●	<b>0</b>	No Module
	●	●***	●	<b>E19†***</b>	19 pin, 3 Amp, 48 VDC Module w/Turck M12 Conn, w/o Cordset
	●	●***	●	<b>G19†***</b>	19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable
●	●		●	<b>FN</b>	6 X 1/8" NPT Air Ports Module, Face Seal, 10 Bar
●	●		●	<b>FP</b>	6 X 1/8" BSPP Air Ports Module, Face Seal, 10 Bar
●	●		●	<b>FT</b>	6 X 1/8" BSPT Air Ports Module, Face Seal, 10 Bar
	●		●	<b>VN</b>	2 X 3/4" Vacuum + 4 X 1/4" Air NPT Ports Module, Face Sealing
	●		●	<b>VP</b>	2 X 3/4" Vacuum + 4 X 1/4" Air BSPP Ports Module, Face Sealing
	●		●	<b>VT</b>	2 X 3/4" Vacuum + 4 X 1/4" Air BSPT Ports Module, Face Sealing

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



### Specification:

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

Cylinder Bore: Ø53mm [2.09in]

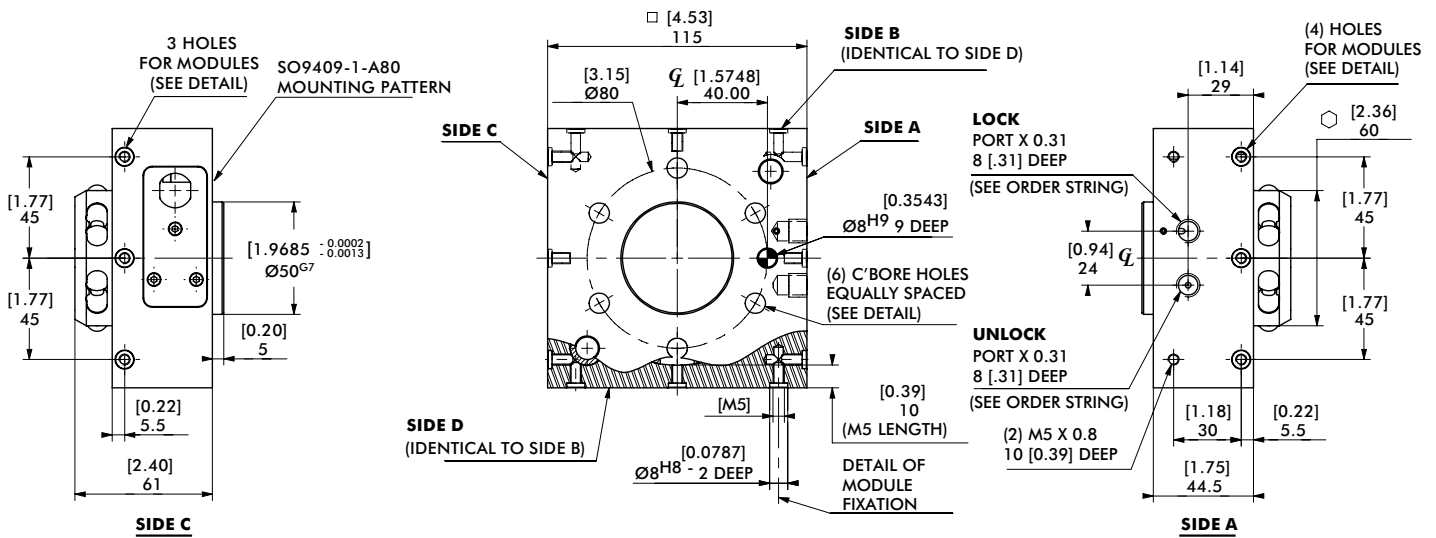
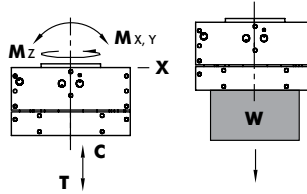
Displacement: 41.3 cm<sup>3</sup> [2.52in<sup>3</sup>]

### Loading Capacity:

Max. Tensile **T**: 1330 N [300 lb]

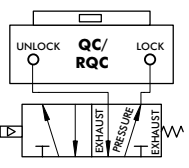
Max. Compressive **C**: 1780 N [400 lb]

Max. Moment (**M<sub>x</sub>/M<sub>y</sub>/M<sub>z</sub>**): 1580 Nm [810 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

⌀  
DIMENSIONS ARE  
SYMMETRICAL ABOUT  
CENTERLINE

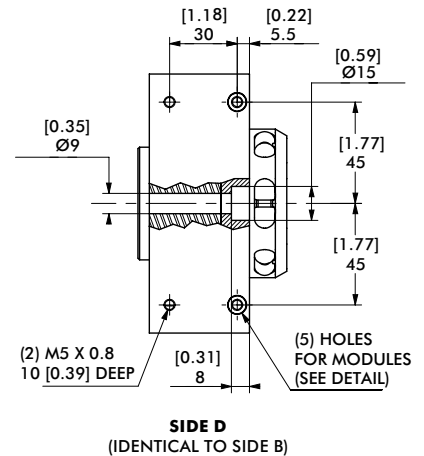
THIRD ANGLE  
PROJECTION

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

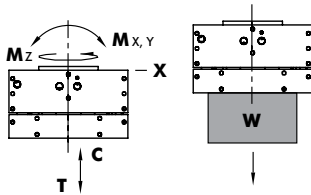
METRIC THREADS  
COURSE PITCH

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

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



## Automatic Tool Changers | Technical Specifications | Dimensions



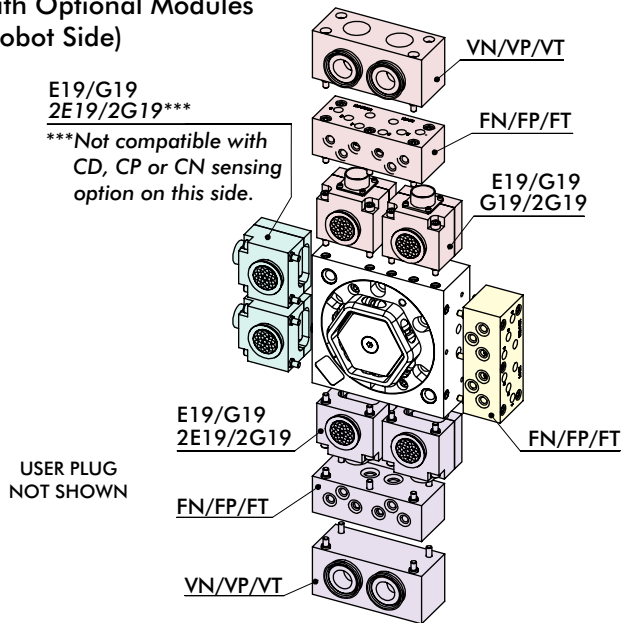
				IMPERIAL ( [ IN. ] )	METRIC (MM)
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE ± .0005" OR ± .013MM	METRIC THREADS COURSE PITCH	0.00 = ± .01 0.000 = ± .005 0.0000 = ± .0005	[0] = [± .25] [0.0] = [± .13] [0.00] = [± .013]

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

## Automatic Tool Changers | Module Usage Illustrations

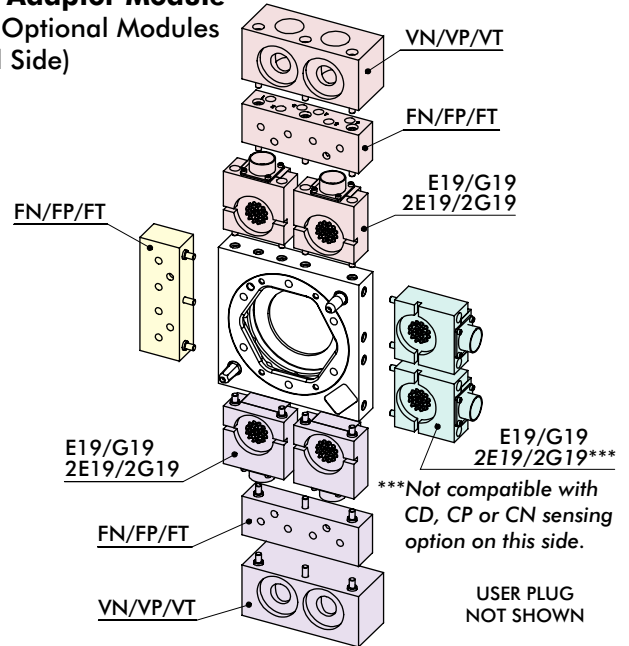
### RQC-400

#### Robot Adaptor Module with Optional Modules (Robot Side)



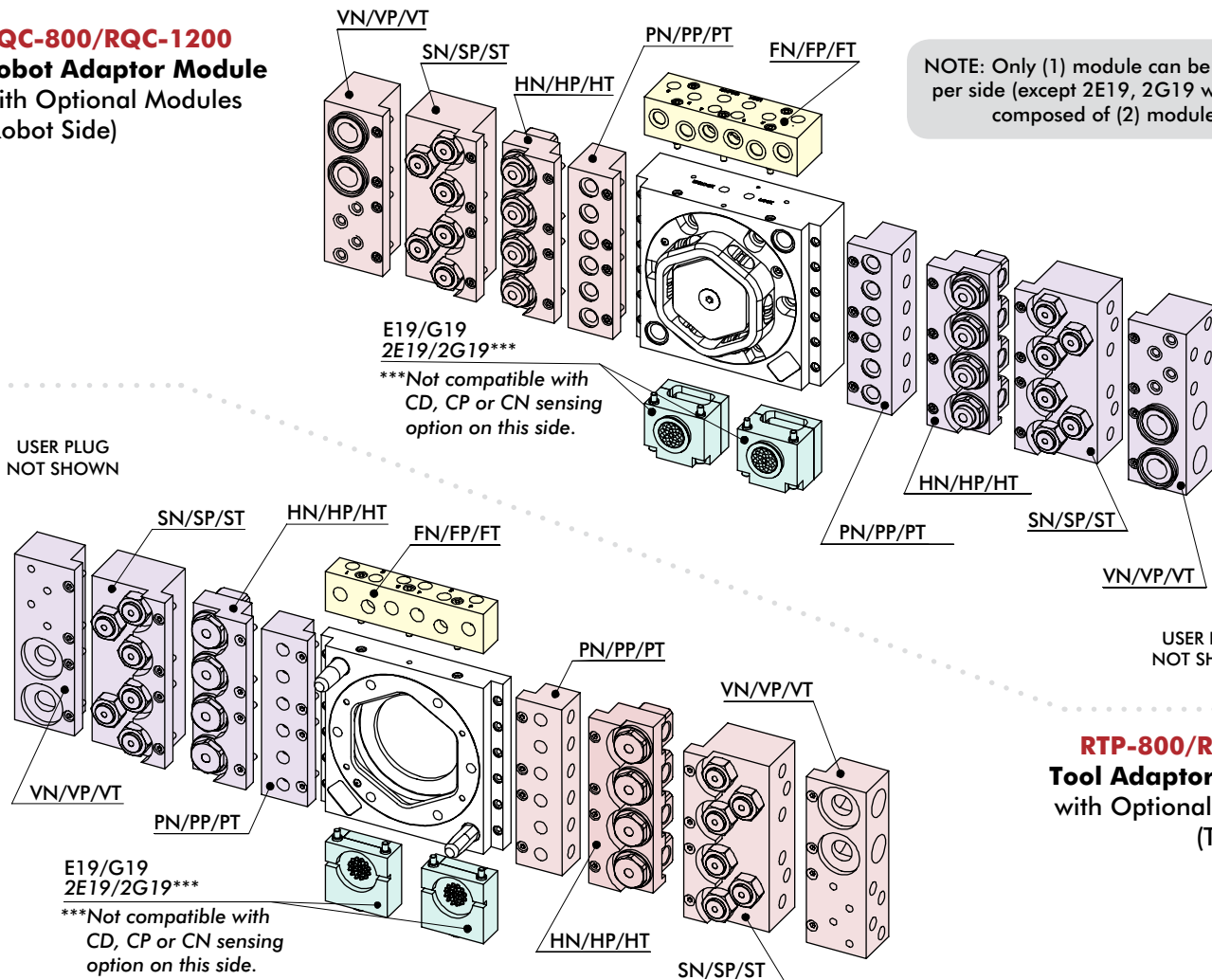
### RTP-400

#### Tool Adaptor Module with Optional Modules (Tool Side)



### RQC-800/RQC-1200

#### Robot Adaptor Module with Optional Modules (Robot Side)



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

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



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

## Automatic Tool Changers | Ordering Information

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>400</b>	<b>N</b>	<b>LO</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>RQC</b> Robot Side	<b>400</b> 180 kg [400 lb] Max. Payload	<b>N</b> 1/8 NPT	<b>LO</b> No Sensing	Optional Electrical, Air, Vacuum and Fluid Modules can be ordered with Base Model  See below for Module Description  (See Page 9 for Illustrated Module Use Configuration)			
<b>RTP</b> Tool Side	<b>800</b> 360 kg [800 lb] Max. Payload	<b>M</b> 1/8 BSPP	<b>LP*</b> PNP Inductive Sensing				
	<b>1200</b> 550 kg [1200 lb] Max. Payload	<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.

400	800/1200	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 M12 Conn, w/o Cordset
	•			•***		<b>2E19†***</b>	2x 19 pin, 3 Amp, 48 VDC Module w/Turck M12 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>E19†</b>	19 pin, 3 Amp, 48 VDC Module w/Turck M12 Conn, w/o Cordset
•			•	•***	•	<b>2E19†***</b>	2x 19 pin, 3 Amp, 48 VDC Module w/Turck M12 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>FN</b>	6 X 1/8" NPT Air Ports Module, Face Seal, 10 Bar
•		•	•		•	<b>FP</b>	6 X 1/8" BSPP Air Ports Module, Face Seal, 10 Bar
•		•	•		•	<b>FT</b>	6 X 1/8" BSPT Air Ports Module, Face Seal, 10 Bar
	•	•				<b>FN</b>	6 X 1/4" NPT Air Ports Module, Face Seal, 10 Bar
	•	•				<b>FP</b>	6 X 1/4" BSPP Air Ports Module, Face Seal, 10 Bar
	•	•				<b>FT</b>	6 X 1/4" BSPT Air Ports Module, Face Seal, 10 Bar
	•		•		•	<b>PN</b>	6 X 1/4" NPT Air Ports Module, Face Seal, 10 Bar
	•		•		•	<b>PP</b>	6 X 1/4" BSPP Air Ports Module, Face Seal, 10 Bar
	•		•		•	<b>PT</b>	6 X 1/4" BSPT Air Ports Module, Face Seal, 10 Bar
	•		•		•	<b>SN</b>	6 X 1/4" NPT Air Ports Module, Self Sealing, 10 Bar
	•		•		•	<b>SP</b>	6 X 1/4" BSPP Air Ports Module, Self Sealing, 10 Bar
	•		•		•	<b>ST</b>	6 X 1/4" BSPT Air Ports Module, Self Sealing, 10 Bar
•			•		•	<b>VN</b>	2 X 3/4" Vacuum + 4 X 1/4" Air NPT Ports Module, Face Sealing
•			•		•	<b>VP</b>	2 X 3/4" Vacuum + 4 X 1/4" Air BSPP Ports Module, Face Sealing
•			•		•	<b>VT</b>	2 X 3/4" Vacuum + 4 X 1/4" Air BSPT Ports Module, Face Sealing
	•		•		•	<b>HN</b>	4 X 3/8" NPT Fluid Ports Module, 100 Bar
	•		•		•	<b>HP</b>	4 X 3/8" BSPP Fluid Ports Module, 100 Bar
	•		•		•	<b>HT</b>	4 X 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

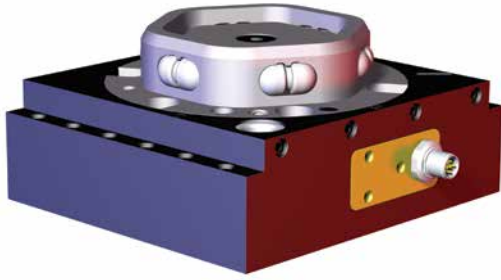
<b>ELCT-048</b>	90° Female Plug, w/o Cable, Solder Type, Cable Clamp for G19 (RQC Only)
<b>ELCT-049</b>	90° male Plug, w/o Cable, Solder Type, Cable Clamp for G19 (RTP Only)
<b>CABL-028</b>	90° Female M12 Cordset with 2M Cable for CP, CN, and CD (RQC Only)
<b>CABL-029</b>	90° Female Cordset with 4M Cable for E19 (RQC Only)
<b>CABL-031</b>	90° male Cordset with 2M Cable for E19 (RTP Only)
<b>OSRK-004</b>	PNP Inductive Sensor Repair Kit (RQC Only)
<b>OSRK-005</b>	NPN Inductive Sensor Repair Kit (RQC Only)
<b>OSRK-006</b>	Dry Contact Sensor Repair Kit (RQC Only)

### PNEUMATIC ACCESSORIES

<b>SLKT-402</b>	RQC-400 Standard Seal Repair Kit
<b>SLKT-403</b>	RQC-800 Standard Seal Repair Kit
<b>SLKT-404</b>	RQC-1200 Standard Seal Repair Kit

# RQC-400 (ROBOT SIDE)

## Automatic Tool Changers | Technical Specifications | Dimensions



### Specification:

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

Cylinder Bore: Ø73mm [2.87in]

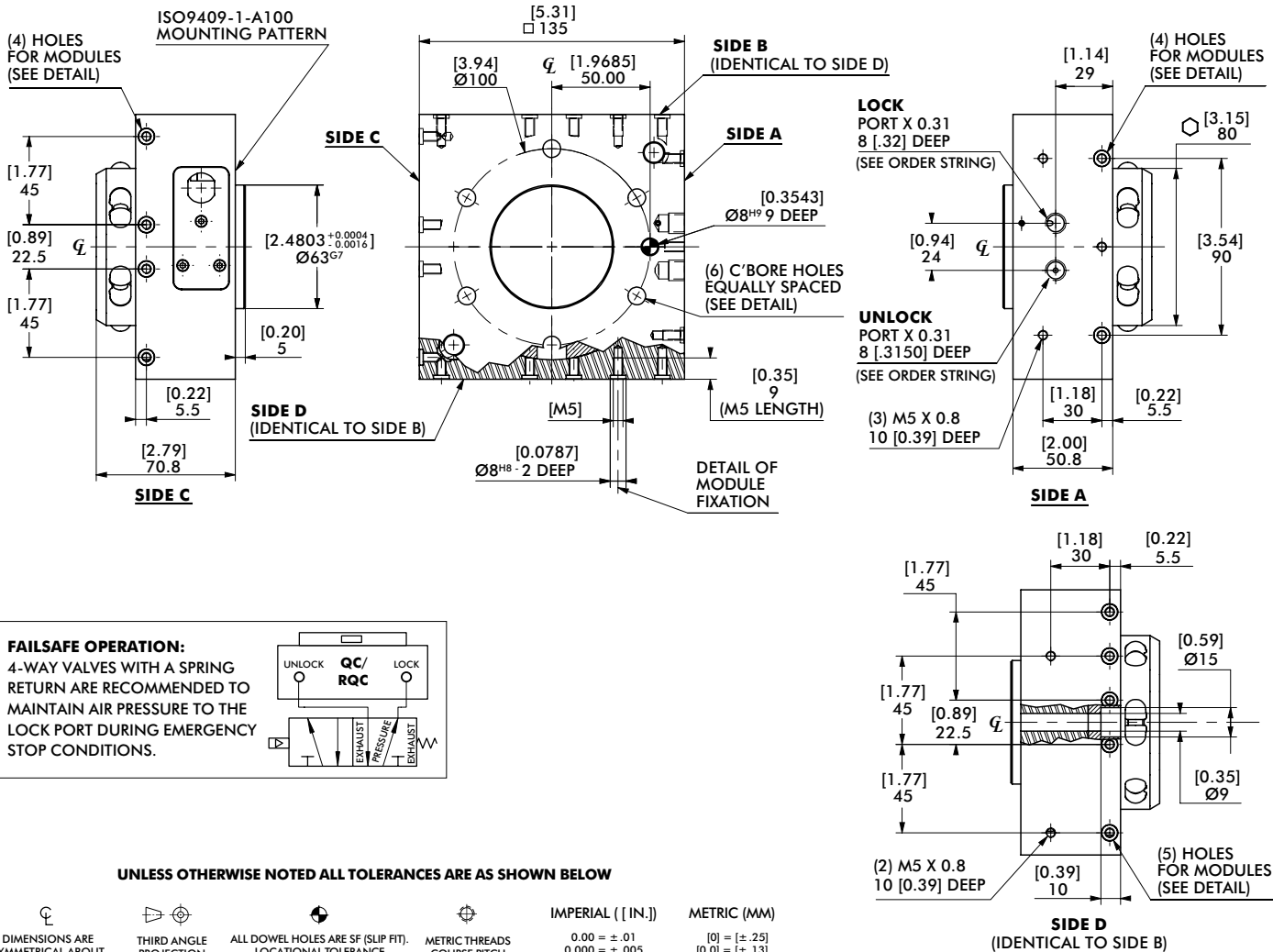
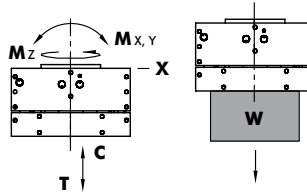
Displacement: 80.9 cm<sup>3</sup> [4.93in<sup>3</sup>]

### Loading Capacity:

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

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

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



# RTP-400 (TOOLING SIDE)

## Automatic Tool Changers | Technical Specifications | Dimensions

### Specification:

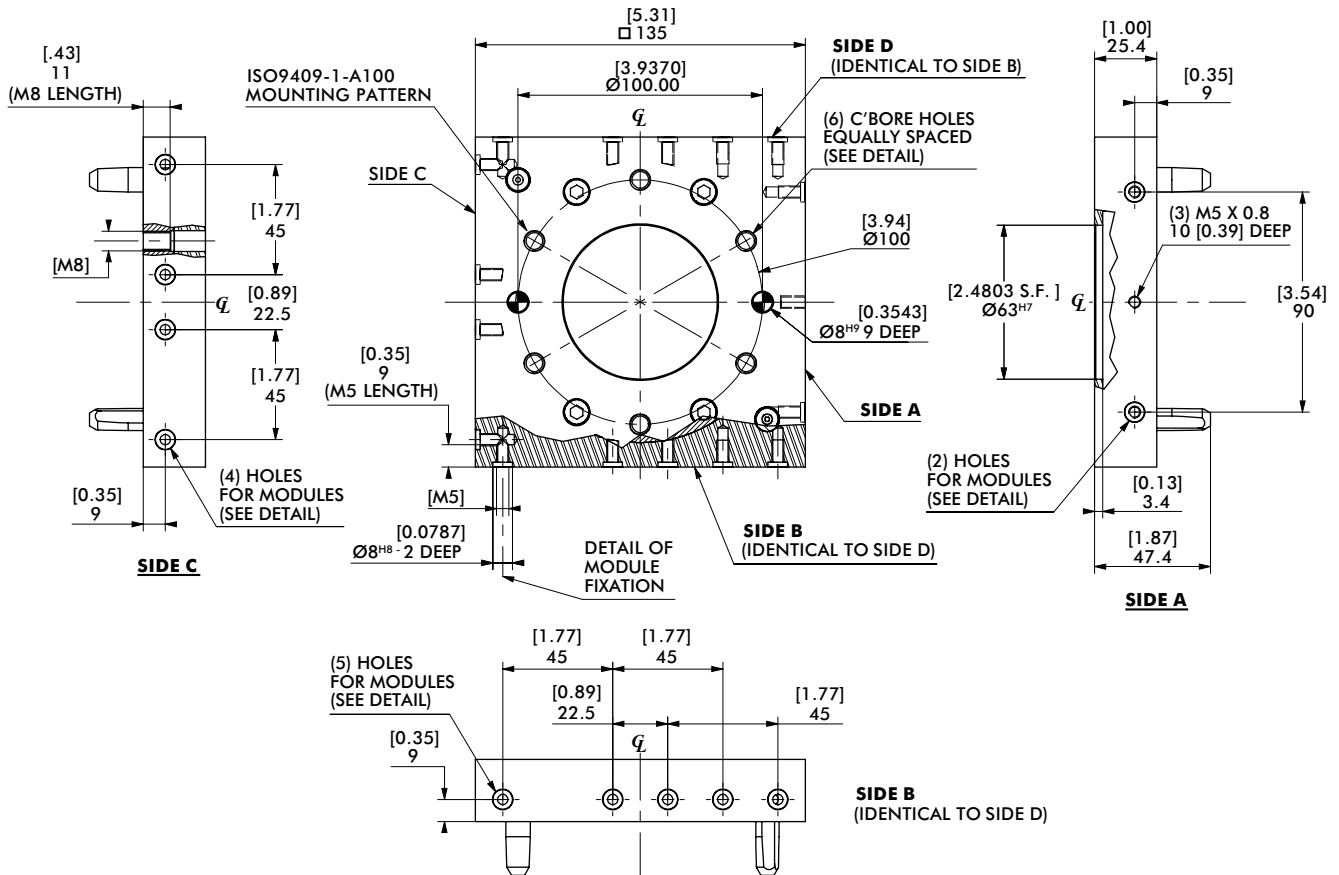
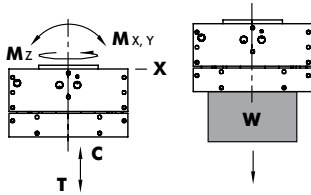
Max. Payload **W**: 180 Kg [400 lb]

### Loading Capacity:

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

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

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

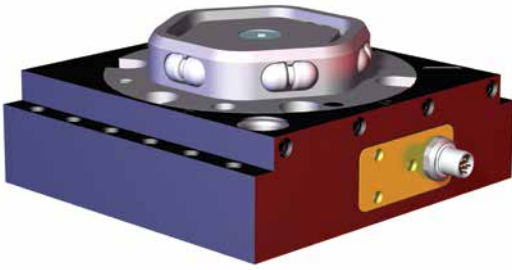


UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

IMPERIAL ( [ IN. ] )	METRIC (MM)
0.00 = ± .01	[0] = [± .25]
0.000 = ± .005	[0.0] = [± .13]
0.0000 = ± .0005	[0.00] = [± .013]

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

Automatic Tool Changers | Technical Specifications | Dimensions



## RQC-800 Specification:

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

RQC-800 Cyl. Bore:

Ø80mm [3.15in]

RQC-800 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 (**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]

RQC-1200 Cyl. Bore:

Ø95mm [3.74in]

RQC-1200 Displacement:

153.7 cm<sup>3</sup> [9.38in<sup>3</sup>]

## Loading Capacity:

Max. Tensile **T**:

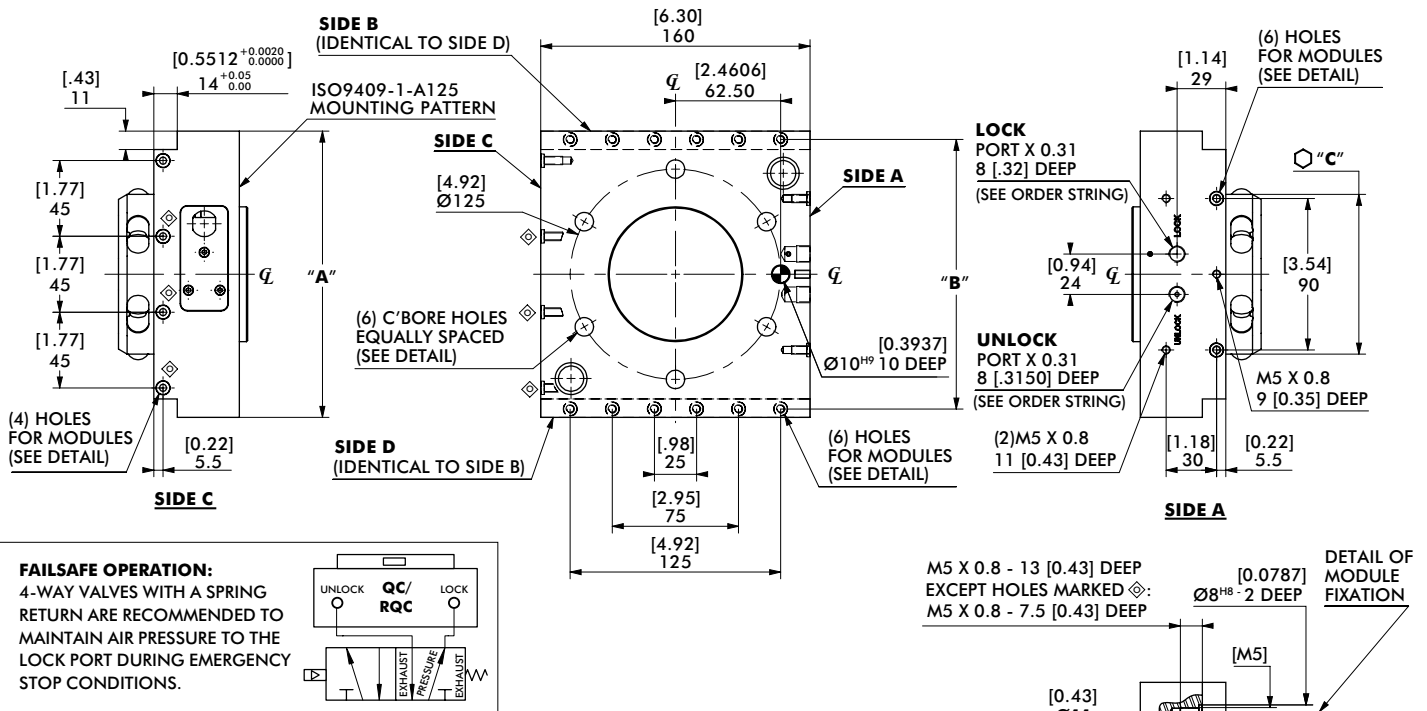
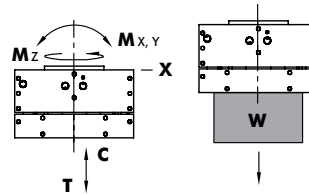
8000 N [1800 lb]

Max. Compressive **C**:

10700 N [2400 lb]

Max. Moment (**M<sub>x</sub>/M<sub>y</sub>/M<sub>z</sub>**):

3390 Nm [30000 in.-lb.]



MODEL NUMBER	"A"	"B"	"C"	"D"	"E"	WEIGHT
<b>RQC-800</b>	[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
<b>RQC-1200</b>	[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

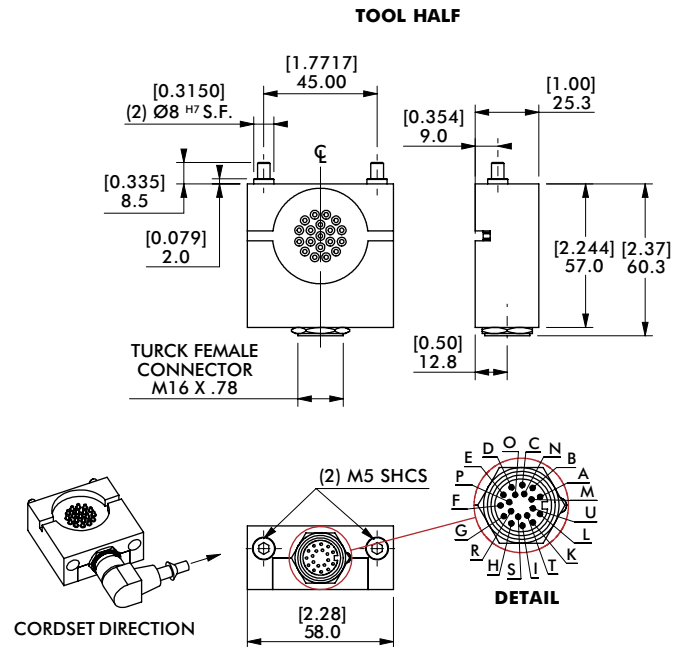
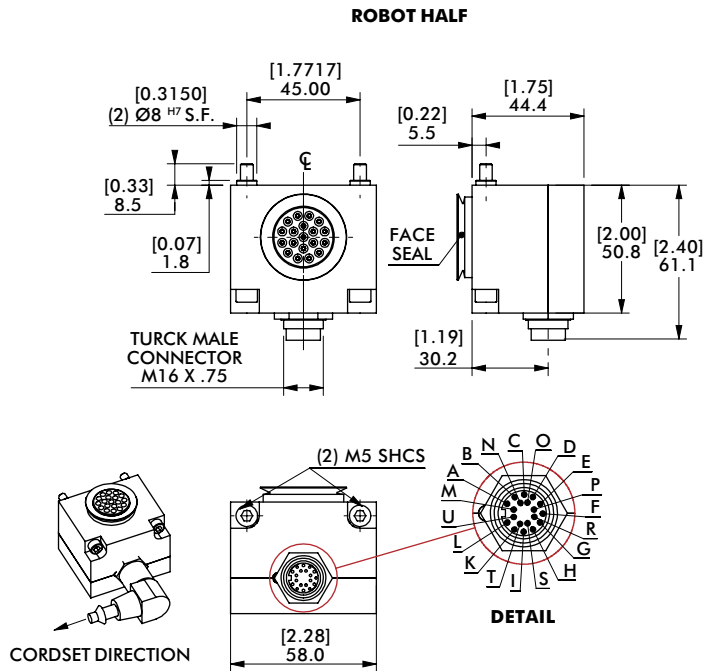




# RQC/RTP SERIES

## Automatic Tool Changers | Technical Specifications | Dimensions

### 19 Pin Module 3 Amp - 48 VDC

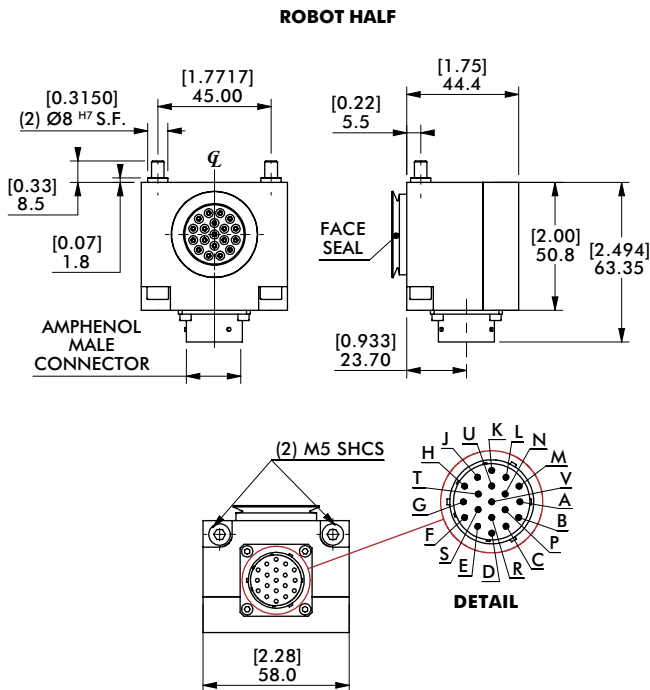


**MODULE REPLACEMENT** **ROBOT SIDE**  
**E19** **KE19-RQC**

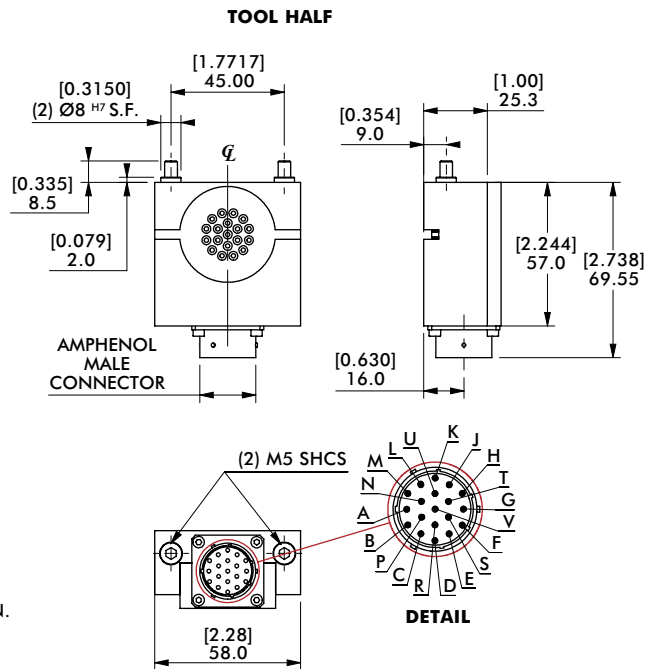
**Module kits above include:**  
90° Plug Support (without cable),  
indexing sleeves and hardware.

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

### 19 Pin Module 5 Amp - 120 VDC



USER  
90°  
PLUG  
NOT  
SHOWN.



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

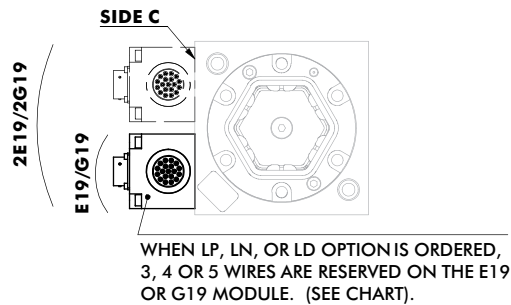
**Module kits above include:**  
90° Plug support (without cable),  
indexing sleeves and hardware.

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

# RQC/RTP SERIES

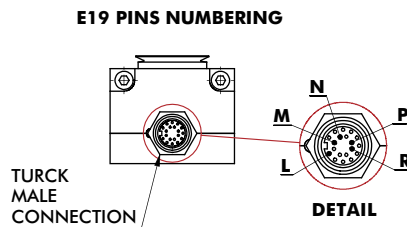
Automatic Tool Changers | Technical Specifications | Dimensions

Modules Connecting with Latch/Unlatch Sensors

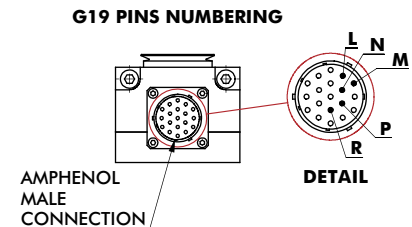


Reserved Pin Numbers on E19/G19		
Sensor/Switch	RQC 400	RQC 800 & 1200
LP or LN (Inductive)	R: + 10 - 30 VDC	R: + 10 - 30 VDC
	L: Common	L: Common
	M: Lock	M: Lock
	N: Unlock	N: Unlock
LD (Dry Contact)	R: + 10 - 30 VDC	R: + 10 - 30 VDC
	L: Common	L: Common
	M: Lock	M: Lock
	N: Unlock	N: Unlock
		P: Ready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

## Pin Numbering

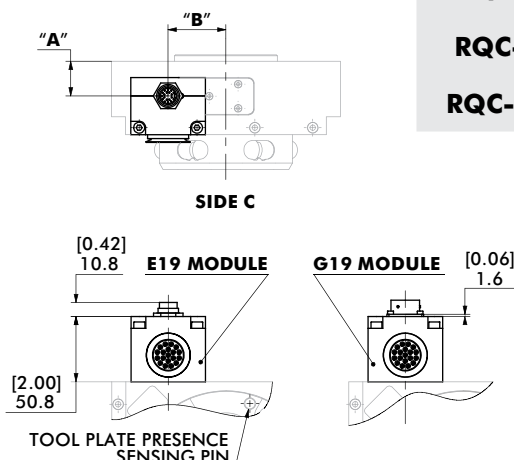


Wire Color on CABL-029 Cordset	
Contact	Wire Color
R	Red
L	Brown
M	Orange
N	Grey/Brown
P	White



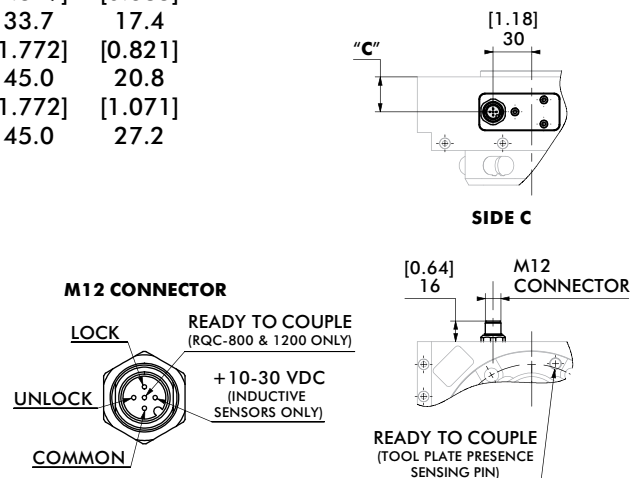
## Lock/Unlock Tool Plate Presence Sensing Options (with inductive Sensors and Dry Contact Switches)

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	"A"	"B"	"C"
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

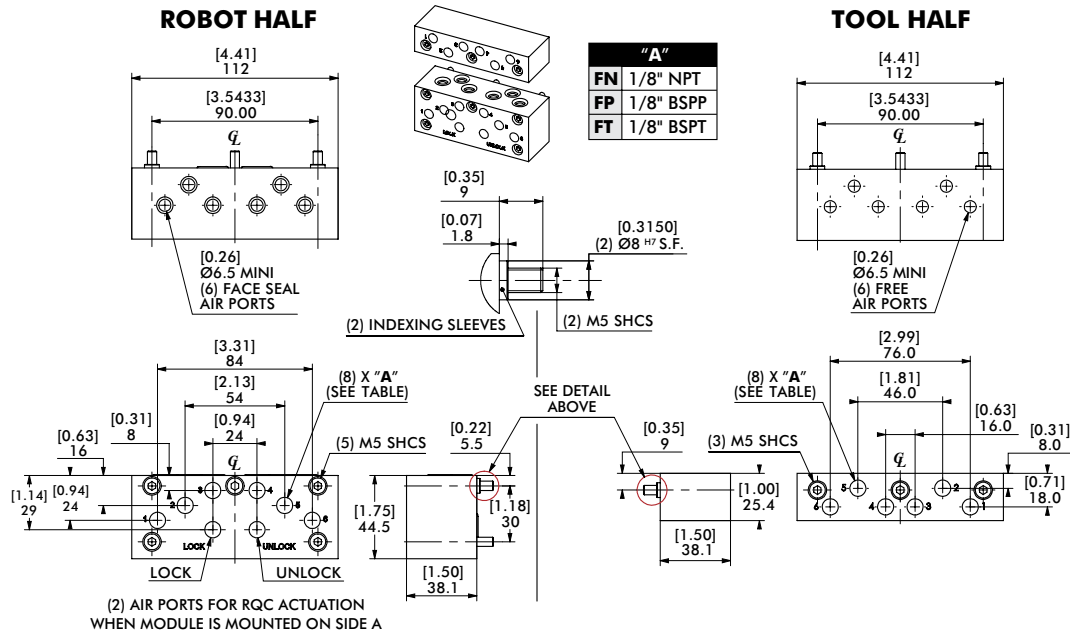
SENSING ACCESSORIES CP, CN, OR CD BY M12 CONNECTOR (3, 4, OR 5 PINS) (SEE BELOW)



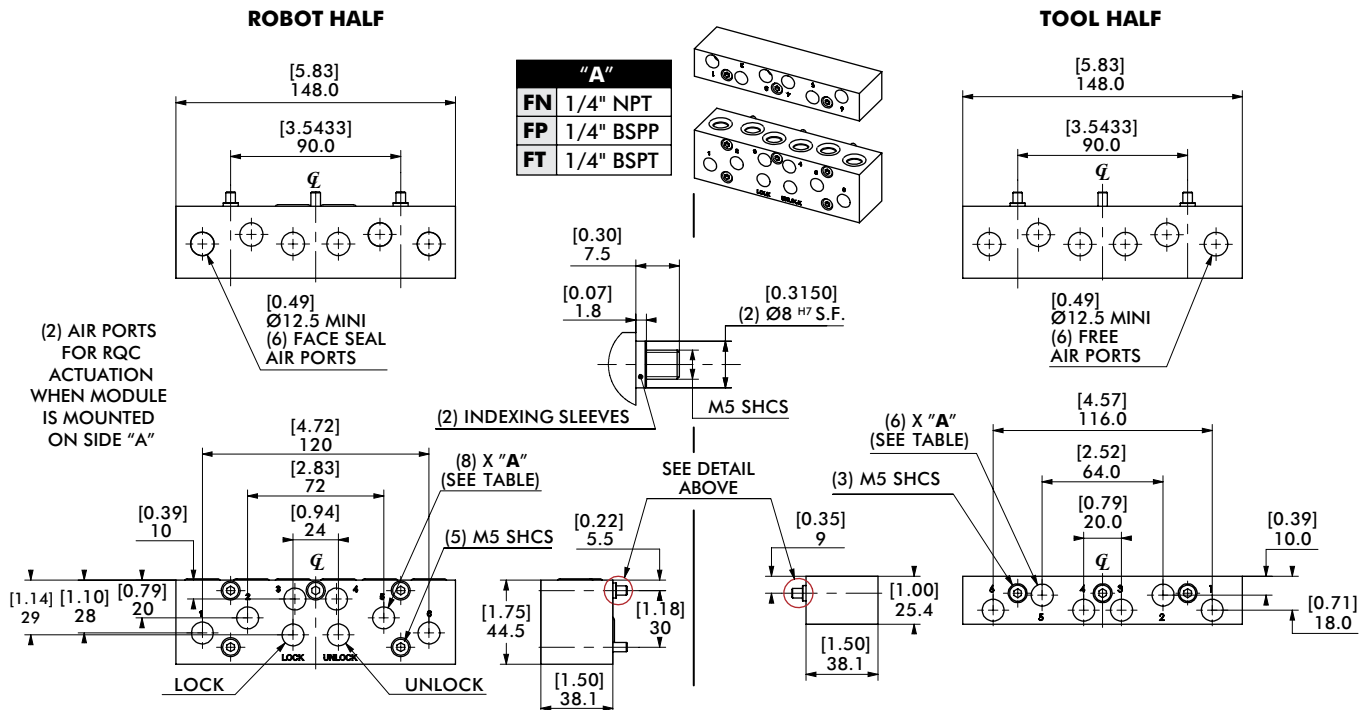
# RQC/RTP SERIES

## 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 & RQC/RTP-1200)

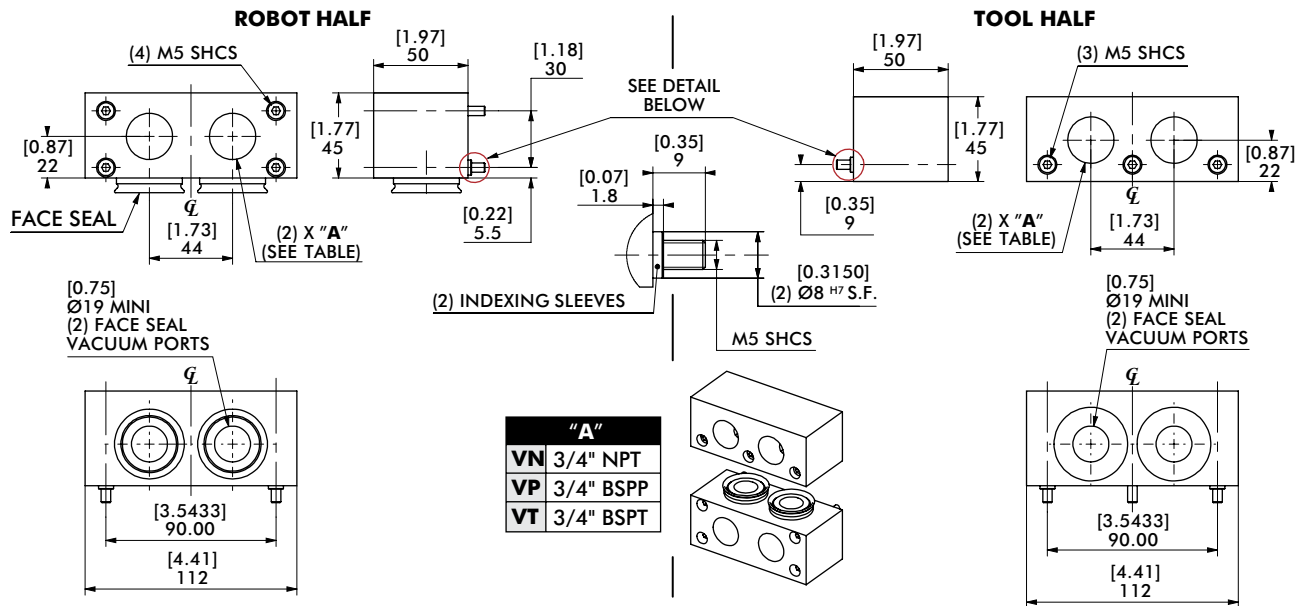


MODULE REPLACEMENT	FOR RQC-200/400	FOR RQC 800/1200
FN	KFN-RQC200	KFN-RQC800
FP	KFP-RQC200	KFP-RQC800
FT	KFT-RQC200	KFT-RQC800

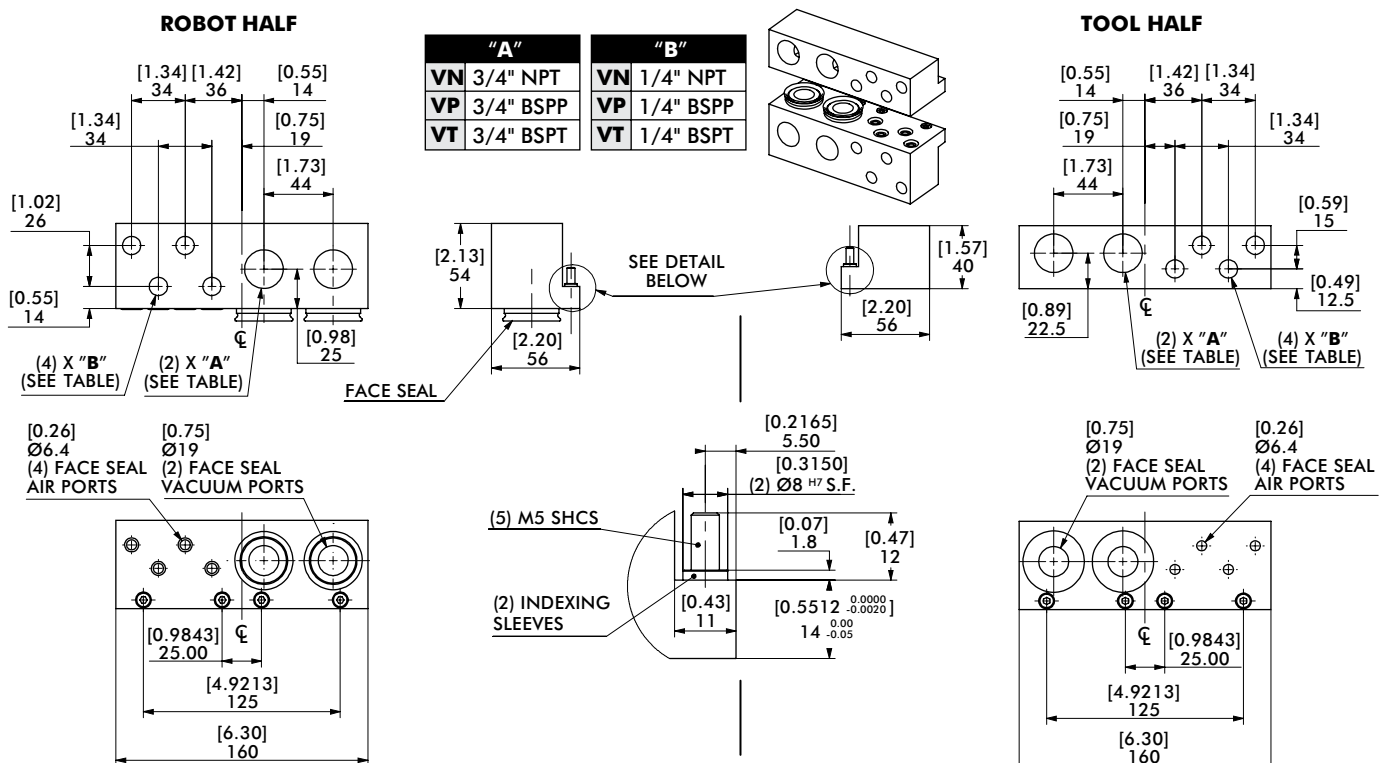
MODULE REPLACEMENT	FOR RTP-200/400	FOR RTP 800/1200
FN	KFN-RTP200	KFN-RTP800
FP	KFP-RTP200	KFP-RTP800
FT	KFT-RTP200	KFT-RTP800

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 & RQC/RTP-1200)



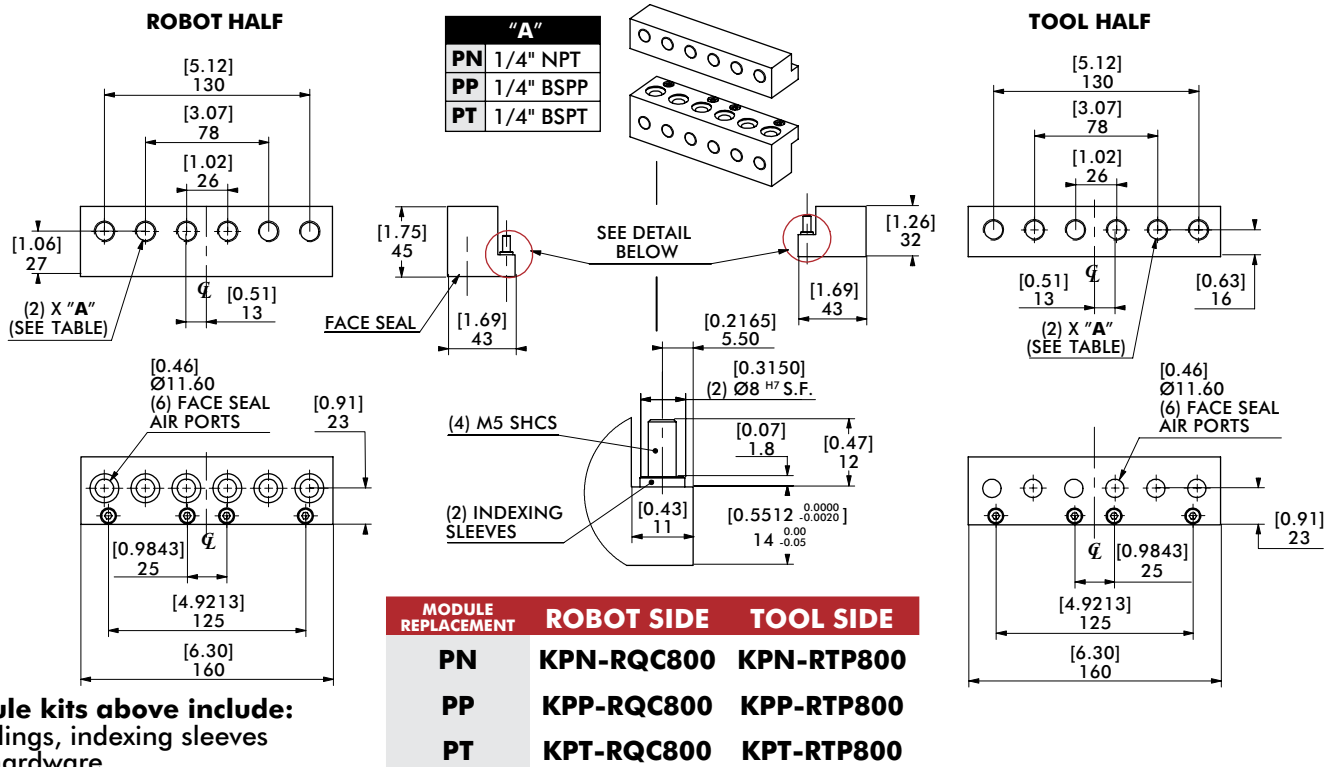
MODULE REPLACEMENT	FOR RQC-200/400	FOR RQC 800/1200	MODULE REPLACEMENT	FOR RTP-200/400	FOR RTP 800/1200
VN	KVN-RQC200	KVN-RQC800	VN	KVN-RTP200	KVN-RTP800
VP	KVP-RQC200	KVP-RQC800	VP	KVP-RTP200	KVP-RTP800
VT	KVT-RQC200	KVT-RQC800	VT	KVT-RTP200	KVT-RTP800

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

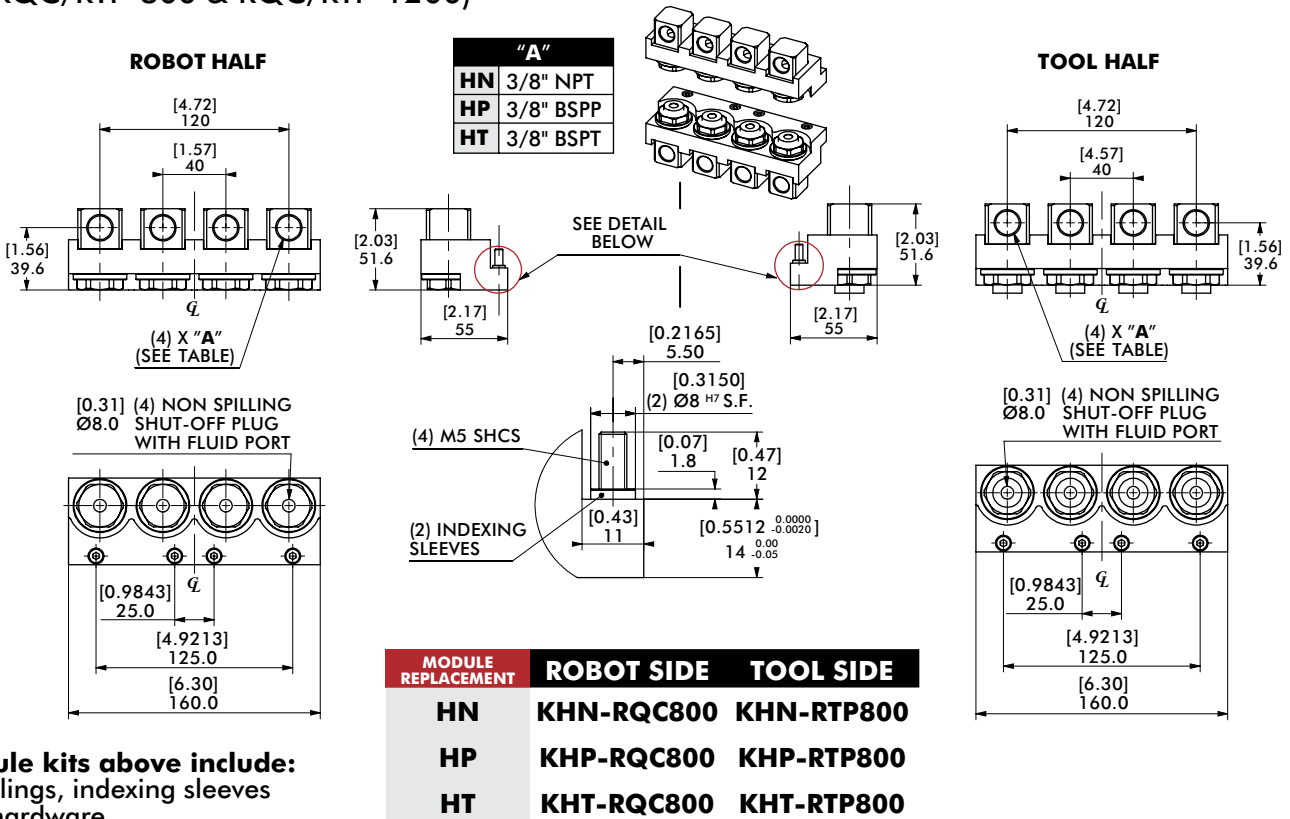
# RQC/RTP SERIES

Automatic Tool Changers | Technical Specifications | Dimensions

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



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

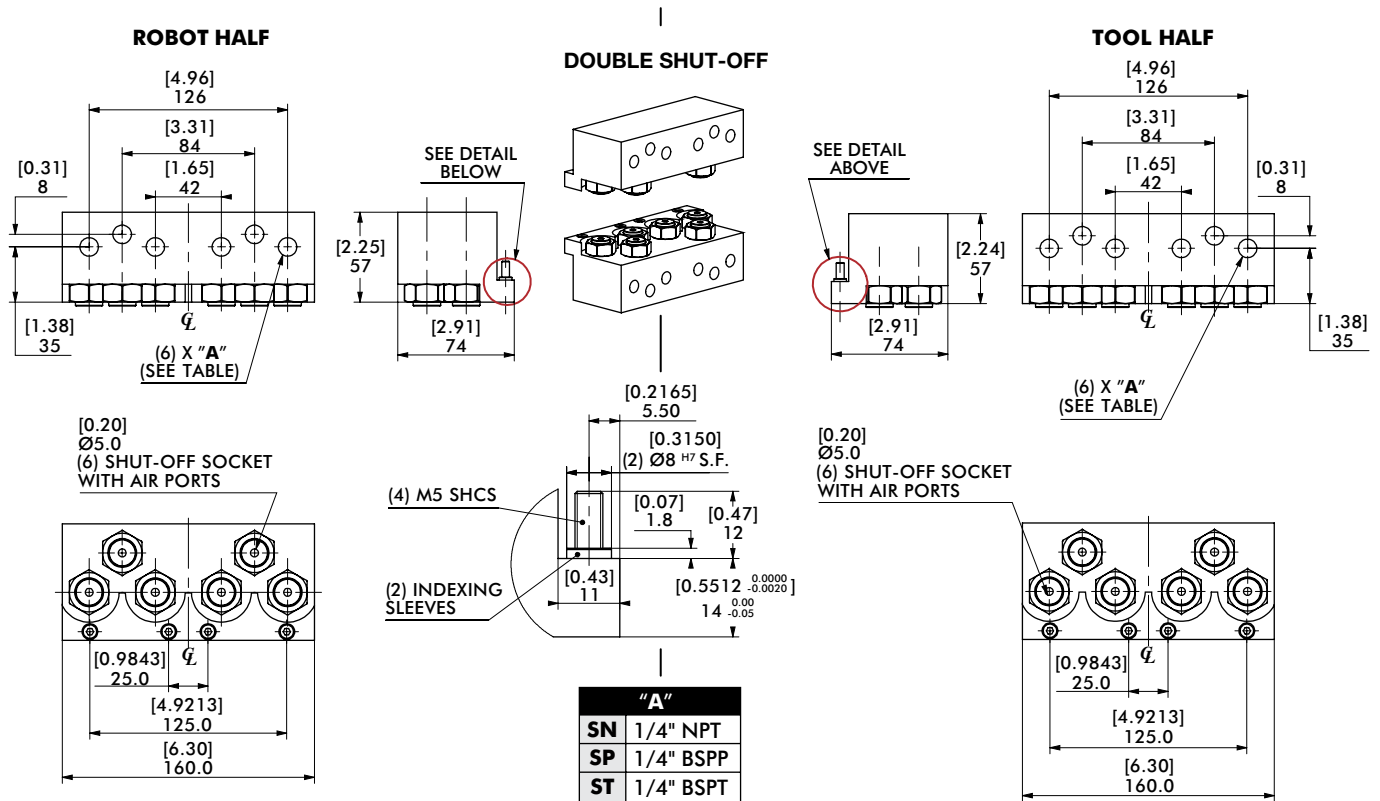




# RQC/RTP SERIES

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 & RQC/RTP-1200)



DOUBLE SHUT-OFF		
MODULE REPLACEMENT	ROBOT SIDE	TOOL SIDE
SN	KSN-RQC800	KSN-RTP800
SP	KSP-RQC800	KSP-RTP800
ST	KST-RQC800	KST-RTP800

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

# QC/TP SERIES

## Automatic Tool Changers | Features and Benefits

### Failsafe Operation

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

### Durable Components

Locking components are made from hardened bearing & tool steels

### Self Lubricating Seals

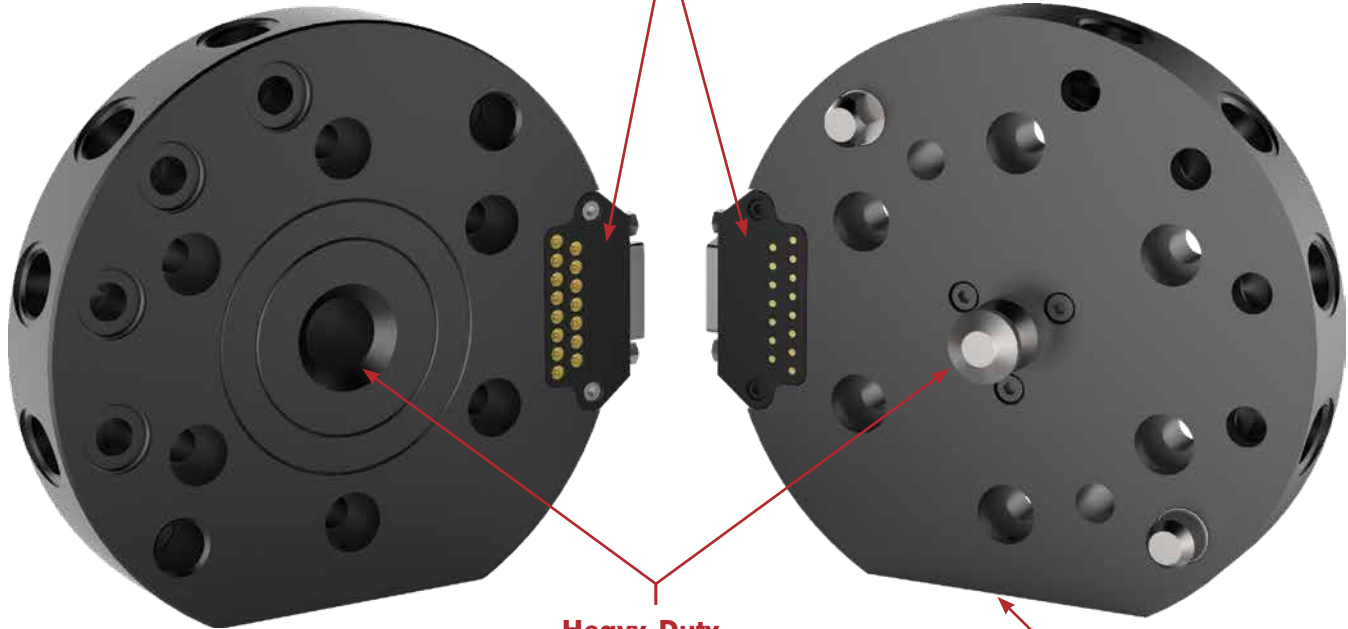
Self lubricating dynamic seals

### Offboard I/O Block

with heavy-duty pins offer reliable contact points

### Robot Side

### Tool Side



### Switches for Couple/Uncouple/Ready-to-Couple

Switch for latch (size 150 only)

### Heavy-Duty Locking Mechanism

Improved rigidity for heavy-duty and in-process changing

### Module Mounting Surface

Flat for optional pneumatic, fluid or electric module

## Mounting Information



### Robot Half Adaptor

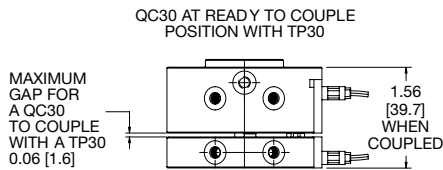
has counterbored holes for mounting and two dowel pins for hole location (size 30 has pilot boss)



### Tool Half Adaptor

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

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



### QC-30/TP-30



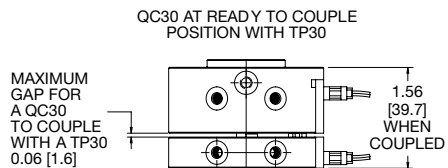
**QC-30**

**TP-30**

**Robot Adaptor Module**

**Tool Adaptor Module**

**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



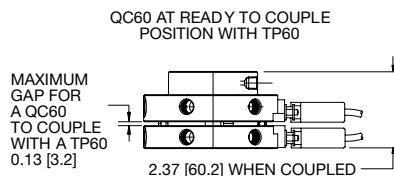
**QC-60**

**TP-60**

**Robot Adaptor Module**

**Tool Adaptor Module**

**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



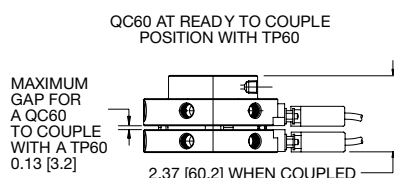
**QC-60-10P**

**TP-60-10P**

**Robot Adaptor Module**

**Tool Adaptor Module**

**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**

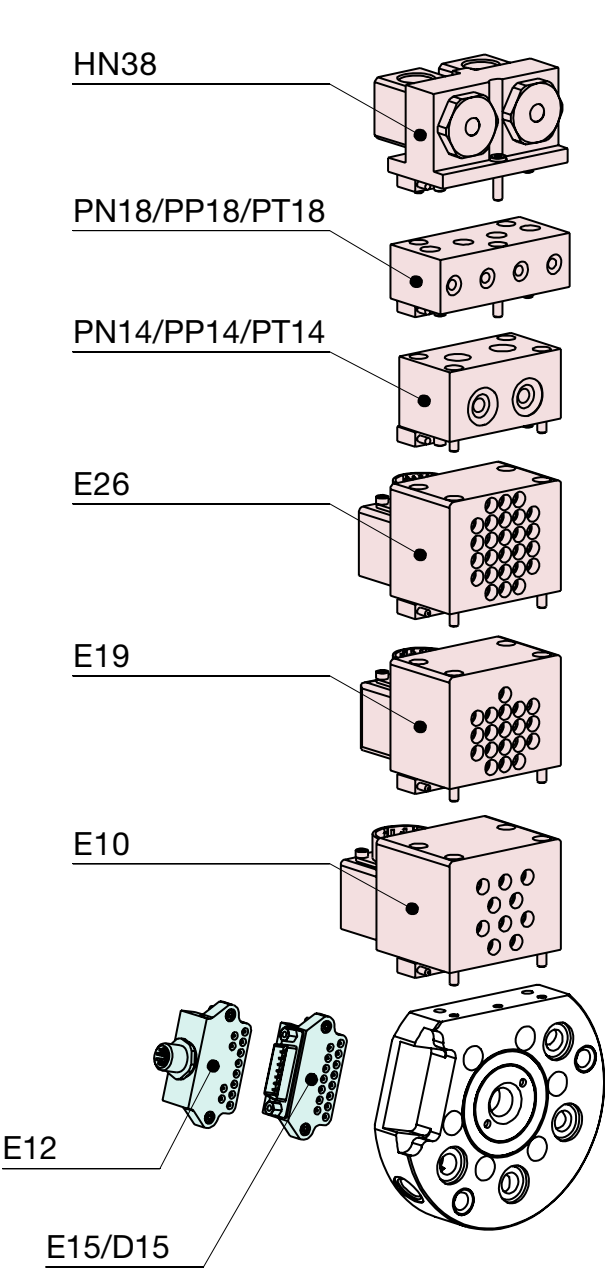
**Robot Adaptor Module**

**Tool Adaptor Module**

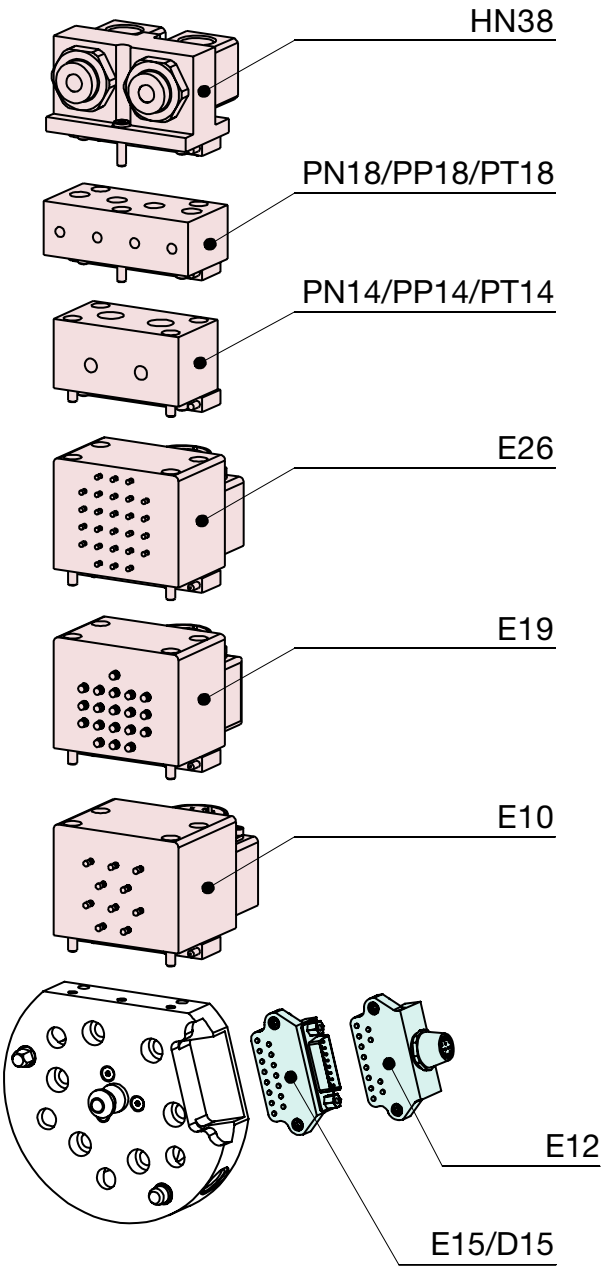
# QC/TP SERIES

## Automatic Tool Changers | Module Usage Illustrations

**QC Series**  
**Robot Adaptor Module**  
with Optional Modules  
(Robot Side)



**TP Series**  
**Tool Adaptor Module**  
with Optional Modules  
(Tool Side)



# QC/TP SERIES

## Automatic Tool Changers | How to Order



Base Model	Model Size	Port Options (QC-only)	I/O Block	Optional Modules*	10-Port (QC/TP-60 only)																						
<b>QC</b> Robot Side <b>TP</b> Tool Side	<b>60</b> 13.6 kg [30 lb] Max. Payload <b>30</b> 27 kg [60 lb] Max. Payload <b>60</b> 68 kg [150 lb] Max. Payload <b>150</b>	<b>M</b> Blank 1/8 NPT <b>M</b> 1/8 BSPP <b>A</b> 1/8 BSPT	<b>E15</b> No I/O Block <b>E15</b> 15-pin, Sub-D <b>D15</b> (2) X E15 (QC/TP-30 only) <b>E12</b> 12-pin, Turck	<b>PN18</b>	<b>10P</b>																						
<table><tr><th>Order Code</th><th>Optional Modules</th></tr><tr><td><b>E26</b></td><td>26-PIN 5A Module</td></tr><tr><td><b>E19*</b></td><td>19-PIN 5A Module</td></tr><tr><td><b>E10</b></td><td>10-PIN 13A Module</td></tr><tr><td><b>PN18</b></td><td>4 X 1/8 NPT Pneumatic Port</td></tr><tr><td><b>PP18</b></td><td>4 X 1/8 BSPP Pneumatic Port</td></tr><tr><td><b>PT18</b></td><td>4 X 1/8 BSPT Pneumatic Port</td></tr><tr><td><b>PN14</b></td><td>2 X 1/4 NPT Pneumatic Port</td></tr><tr><td><b>PP14</b></td><td>2 X 1/4 BSPP Pneumatic Port</td></tr><tr><td><b>PT14</b></td><td>2 X 1/4 BSPT Pneumatic Port</td></tr><tr><td><b>HN38</b></td><td>2 X 3/8 NPT Fluid Port</td></tr></table>						Order Code	Optional Modules	<b>E26</b>	26-PIN 5A Module	<b>E19*</b>	19-PIN 5A Module	<b>E10</b>	10-PIN 13A Module	<b>PN18</b>	4 X 1/8 NPT Pneumatic Port	<b>PP18</b>	4 X 1/8 BSPP Pneumatic Port	<b>PT18</b>	4 X 1/8 BSPT Pneumatic Port	<b>PN14</b>	2 X 1/4 NPT Pneumatic Port	<b>PP14</b>	2 X 1/4 BSPP Pneumatic Port	<b>PT14</b>	2 X 1/4 BSPT Pneumatic Port	<b>HN38</b>	2 X 3/8 NPT Fluid Port
Order Code	Optional Modules																										
<b>E26</b>	26-PIN 5A Module																										
<b>E19*</b>	19-PIN 5A Module																										
<b>E10</b>	10-PIN 13A Module																										
<b>PN18</b>	4 X 1/8 NPT Pneumatic Port																										
<b>PP18</b>	4 X 1/8 BSPP Pneumatic Port																										
<b>PT18</b>	4 X 1/8 BSPT Pneumatic Port																										
<b>PN14</b>	2 X 1/4 NPT Pneumatic Port																										
<b>PP14</b>	2 X 1/4 BSPP Pneumatic Port																										
<b>PT14</b>	2 X 1/4 BSPT Pneumatic Port																										
<b>HN38</b>	2 X 3/8 NPT Fluid Port																										

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

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

## Electric and Pneumatic Accessories (Ordered Separately)

### Electrical Accessories

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

### Pneumatic Accessories

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



## Automatic Tool Changers | Technical Specifications | Dimensions



**Max. Payload: 13.6 Kg [30 lbs]**

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

Weight of **QC Unit only**: 0.23 Kg [0.50 lbs]

**Weight of Coupled Units: 0.34 Kg [0.75 lbs]**

**Bore Ø: 25.4 mm [1.00 in]**

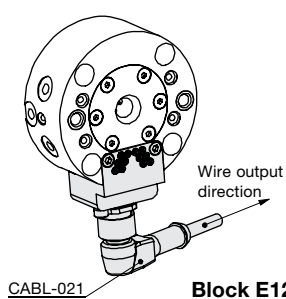
**Displacement:** 3.9 cm<sup>3</sup> [0.24 in<sup>3</sup>]

## Loading Capacity

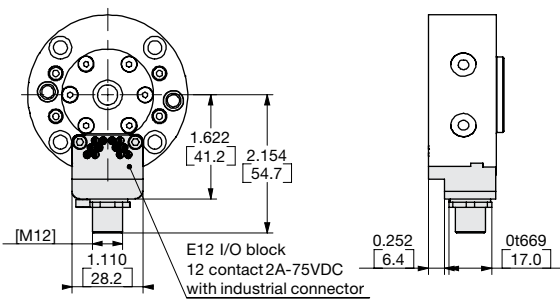
Max. Tensile **T**: 311 N [70 lb]

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

**Max. Moment ( $M_x/M_y/M_z$ ):** 22.6 Nm [200 in.-lb.]



## Block E12



**Block D15**

  
 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.]

$$\begin{aligned} 0.00 &= \pm .01 \\ 0.000 &= \pm .005 \\ 0.0000 &= \pm .0005 \end{aligned}$$

METRIC (MM)

$$\begin{aligned}[0] &= [\pm .25] \\ [0.0] &= [\pm .13] \\ [0.00] &= [\pm .013]\end{aligned}$$



# QC-60 (ROBOT SIDE)

## Automatic Tool Changers | Technical Specifications | Dimensions

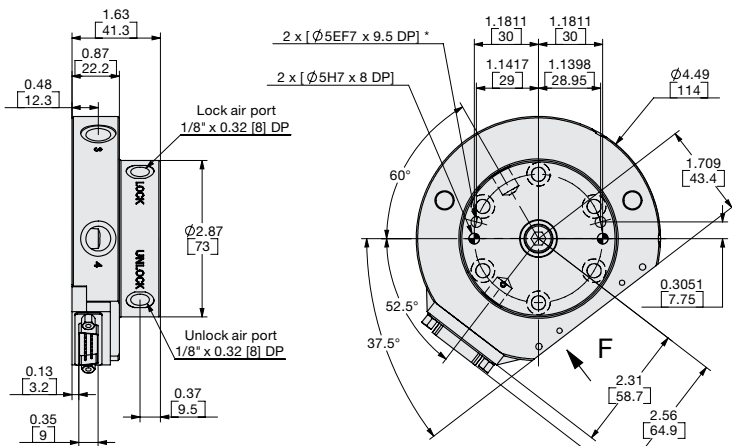
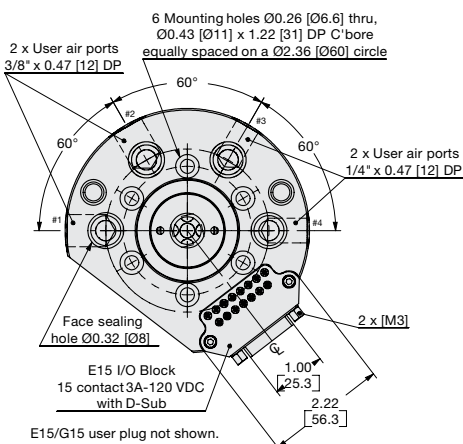
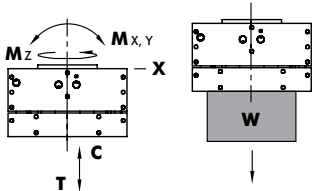


### QC-60 Specification:

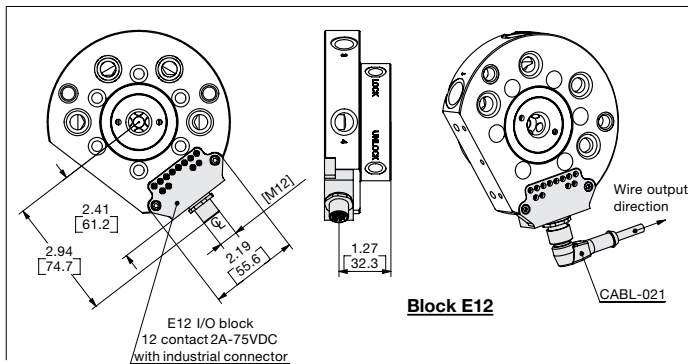
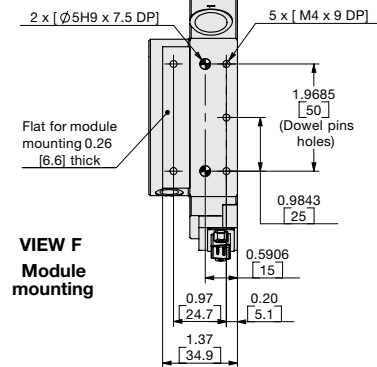
- Max. Payload: 27 Kg [60 lbs]
- Max. Moment Rating: 88.1 Nm [780 in.-lbs]
- Weight of QC Unit only: 0.86 Kg [1.9 lbs]
- Weight of Coupled Units: 1.27 Kg [2.8 lbs]
- Bore Ø: 44.5 mm [1.75 in]
- Displacement: 9.2 cm<sup>3</sup> [0.56 in<sup>3</sup>]

### Loading Capacity

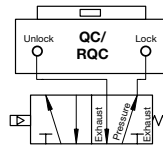
- Max. Tensile **T**: 445 N [100 lb]
- Max. Compressive **C**: 534 N [120 lb]
- Max. Moment (**M<sub>x</sub>/M<sub>y</sub>/M<sub>z</sub>**): 88.1 Nm [780 in.-lb.]



\* : Not preferred for new installation



**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

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 ]

# TP-60 (TOOLING SIDE)

## Automatic Tool Changers | Technical Specifications | Dimensions

### TP-60 Specification:

Max. Payload: 27 Kg [60 lbs]

Max. Moment Rating: 88 Nm [780 in.-lbs]

Weight of TP Unit only: 0.41 Kg [0.90 lbs]

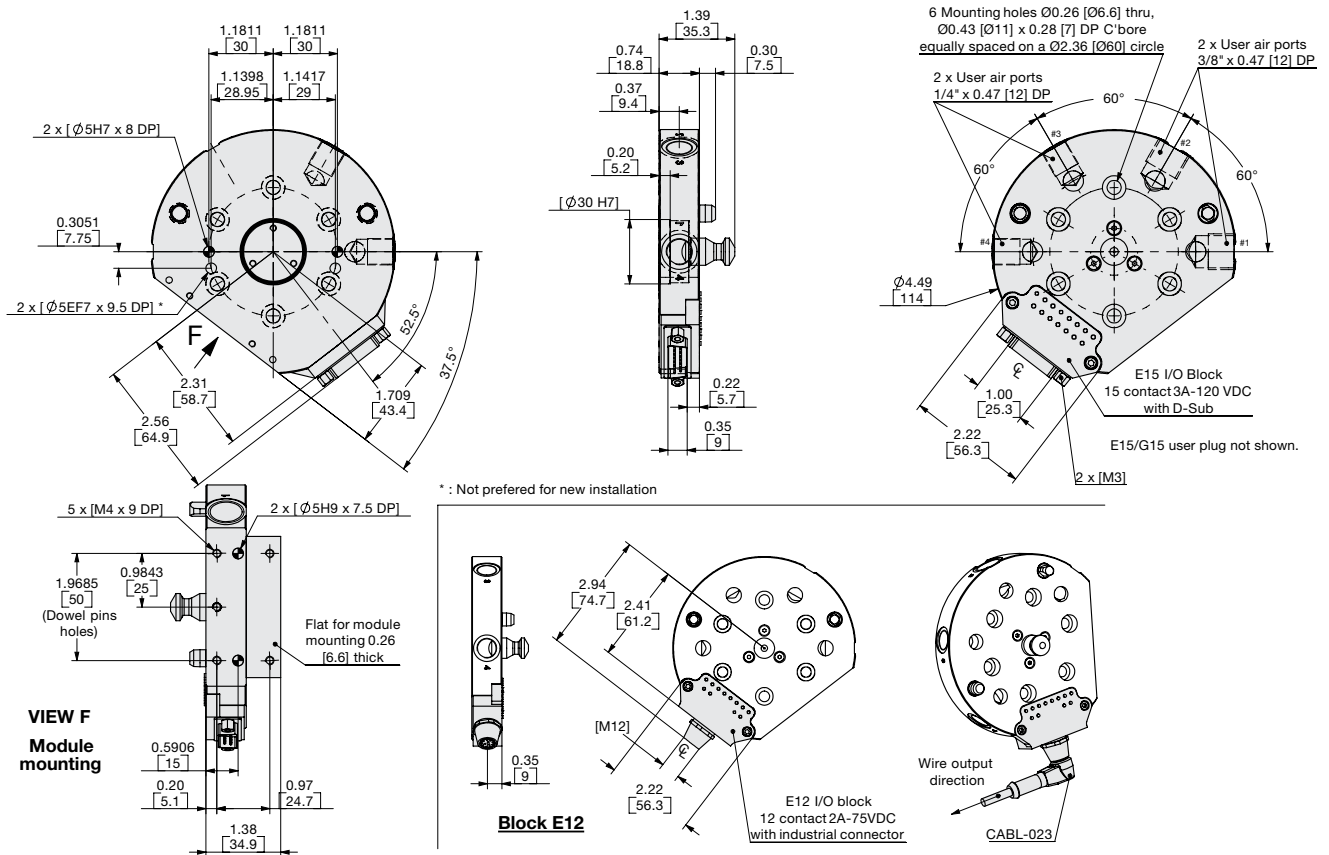
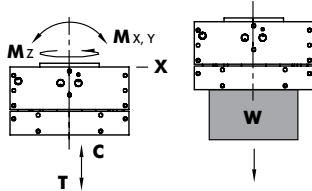
Weight of Coupled Units: 1.27 Kg [2.8 lbs]

### Loading Capacity

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

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

Max. Moment (**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 SIDE)

## Automatic Tool Changers | Technical Specifications | Dimensions

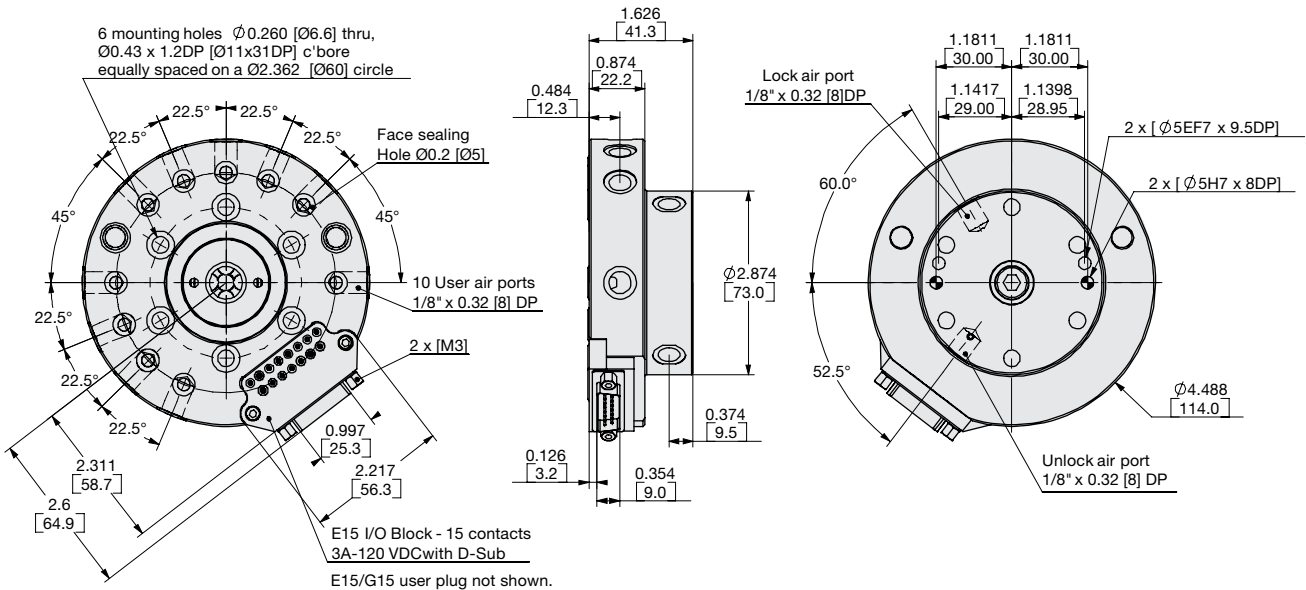
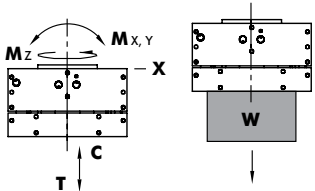


### QC-60-10P Specification:

- Max. Payload: 27 Kg [60 lbs]
- Max. Moment Rating: 88.1 Nm [780 in.-lbs]
- Weight of QC Unit only: 0.86 Kg [1.9 lbs]
- Weight of Coupled Units: 1.27 Kg [2.8 lbs]
- Bore Ø: 44.5 mm [1.75 in]
- Displacement: 9.2 cm<sup>3</sup> [0.56 in<sup>3</sup>]

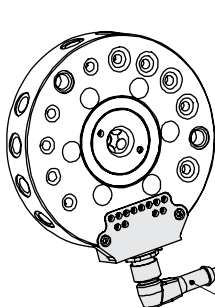
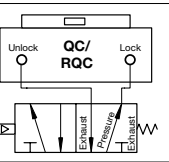
### Loading Capacity

- 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.]



#### Failsafe operation:

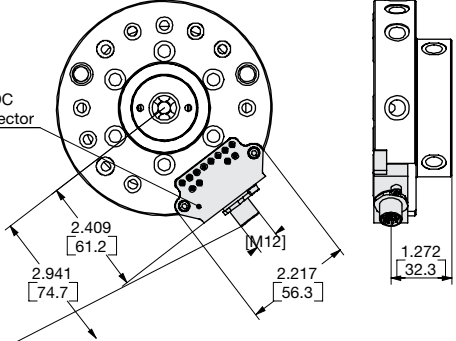
4-way valves with a spring return are recommended to maintain air pressure to the lock port during emergency stop conditions.



Wire output direction  
CABL-021

E12 I/O block  
12 contact 3A-75VDC  
with industrial connector

Block E12



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]

# TP-60-10P (TOOLING SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

## TP-60-10P Specification:

Max. Payload: 27 Kg [60 lbs]

Max. Moment Rating: 88 Nm [780 in.-lbs]

Weight of TP Unit only: 0.41 Kg [0.90 lbs]

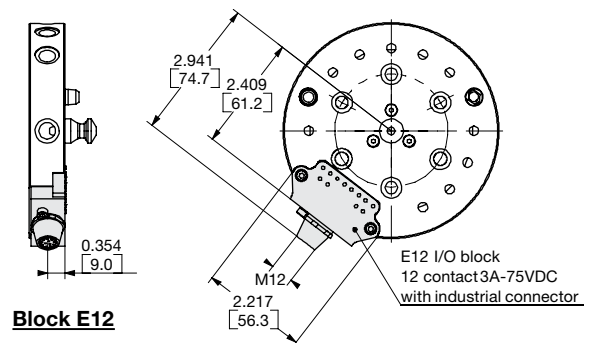
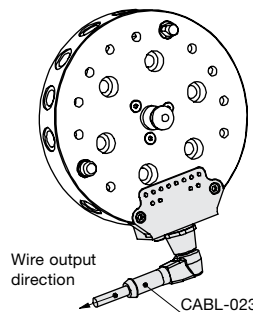
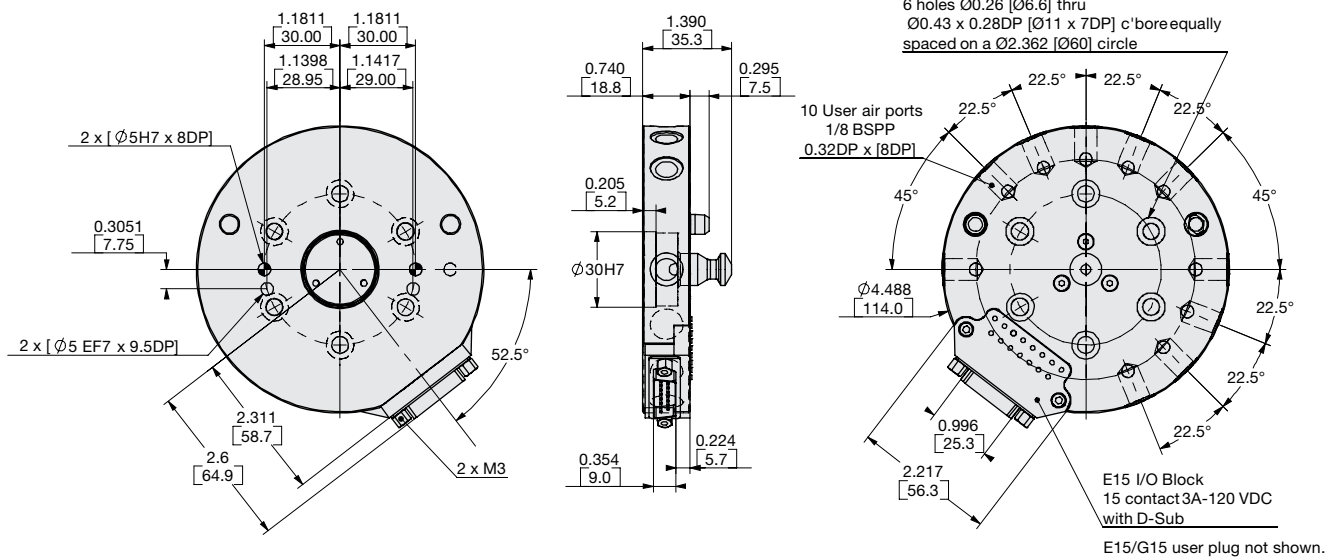
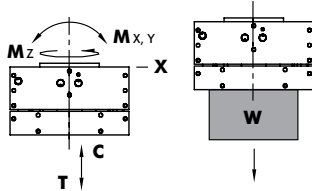
Weight of Coupled Units: 1.27 Kg [2.8 lbs]

## Loading Capacity

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

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

Max. Moment (**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 SIDE)

## Automatic Tool Changers | Technical Specifications | Dimensions



### QC-150 Specification:

**Max. Payload:** 68 Kg [150 lbs]

**Max. Moment Rating:** 215 Nm [1900 in.-lbs]

**Weight of QC Unit only:** 2.2 Kg [4.8 lbs]

**Weight of Coupled Units:** 3.2 Kg [7.1 lbs]

**Bore Ø:** 66.8 mm [2.63 in]

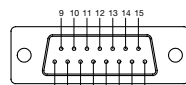
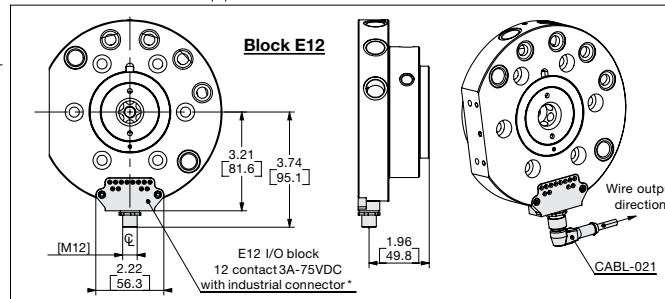
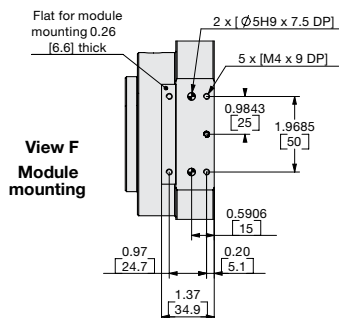
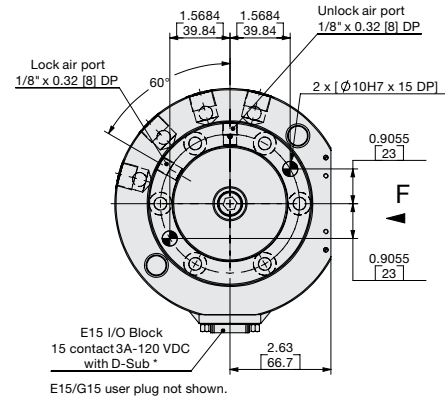
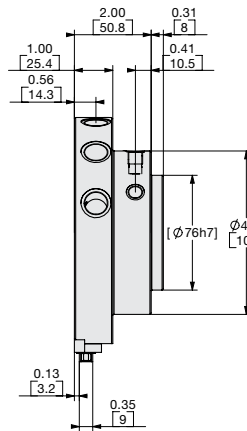
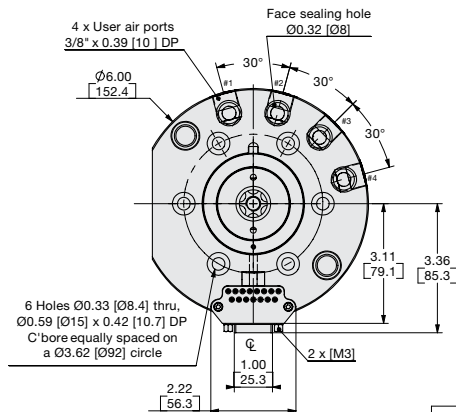
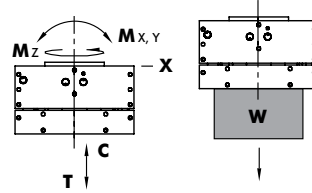
**Displacement:** 25.4 cm<sup>3</sup> [1.55 in<sup>3</sup>]

### Loading Capacity

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

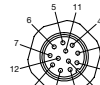
**Max. Compressive C:** 1334 N [300 lb]

**Max. Moment (M<sub>x</sub>/M<sub>y</sub>/M<sub>z</sub>):** 214 Nm [1900 in.-lb.]



**Block E15**

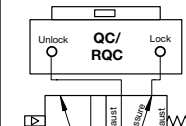
\* LP or LN option (latch sensor) requires  
Block E15: 8 (-), 3 (output) and 2 (+) contacts  
Block E12: 1 (-), 6 (output) and 7 (+) contacts



**Block E12**

### Failsafe operation:

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



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CENTERLINE

THIRD ANGLE  
PROJECTION

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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]

# TP-150 (TOOLING SIDE)

## Automatic Tool Changers | Technical Specifications | Dimensions

### TP-150 Specification:

Max. Payload: 68 Kg [150 lbs]

Max. Moment Rating: 215 Nm [1900 in.-lbs]

Weight of TP Unit only: 1.0 Kg [2.3 lbs]

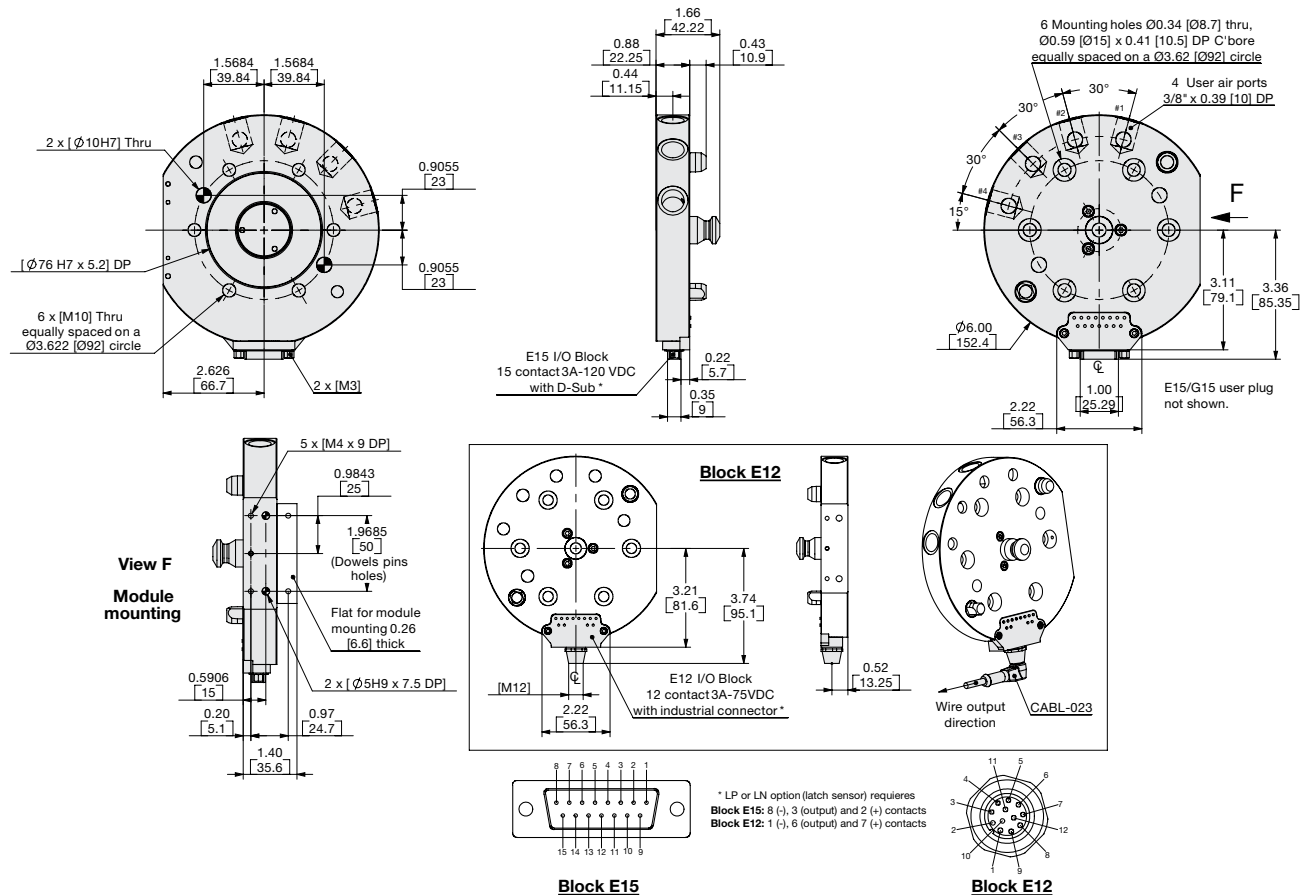
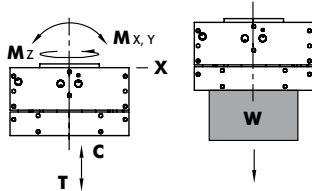
Weight of Coupled Units: 3.2 Kg [7.1 lbs]

### Loading Capacity

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

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

Max. Moment (**M<sub>x</sub>/M<sub>y</sub>/M<sub>z</sub>**): 214 Nm [1900 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]

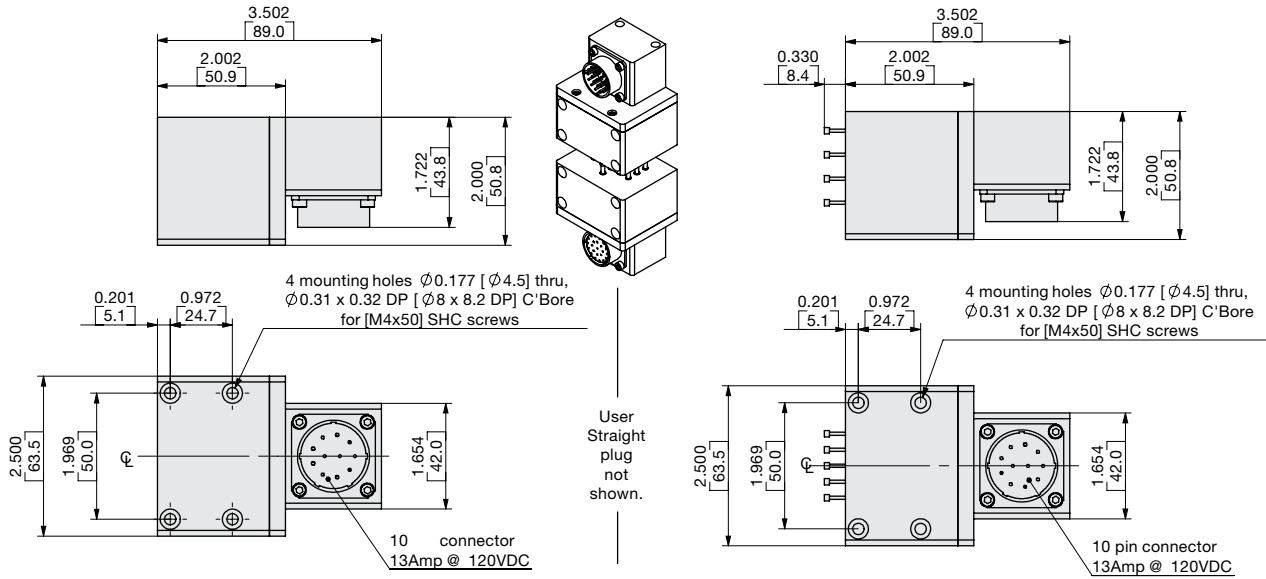
METRIC THREADS  
COURSE PITCH

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

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

# QC/TP SERIES

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



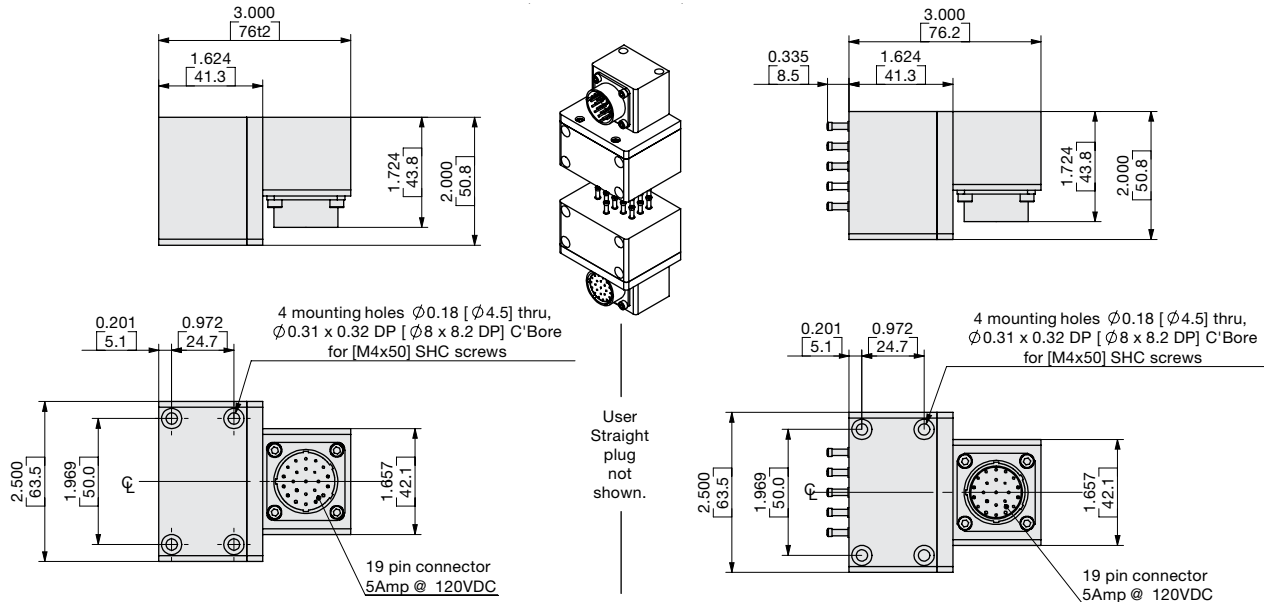
Flat for module mounting not shown: See QC or TP drawings.

Model	Module	Robot Side	Tool Side	*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



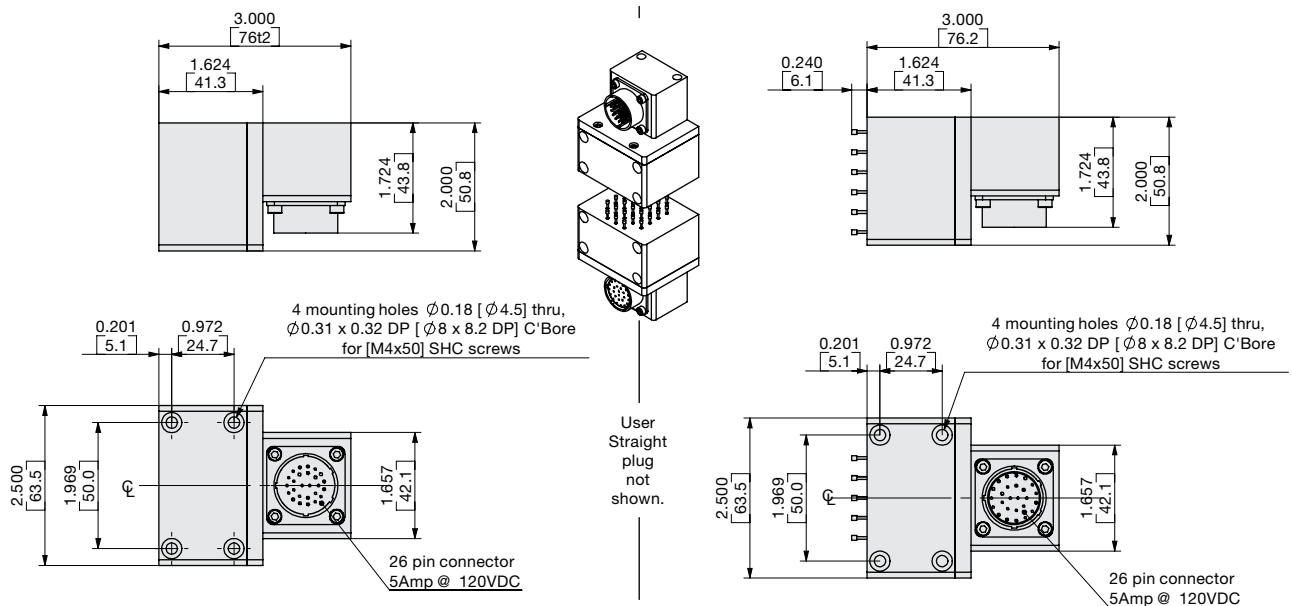
Flat for module mounting not shown: See QC or TP drawings.

Model	Module	Robot Side	Tool Side	*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



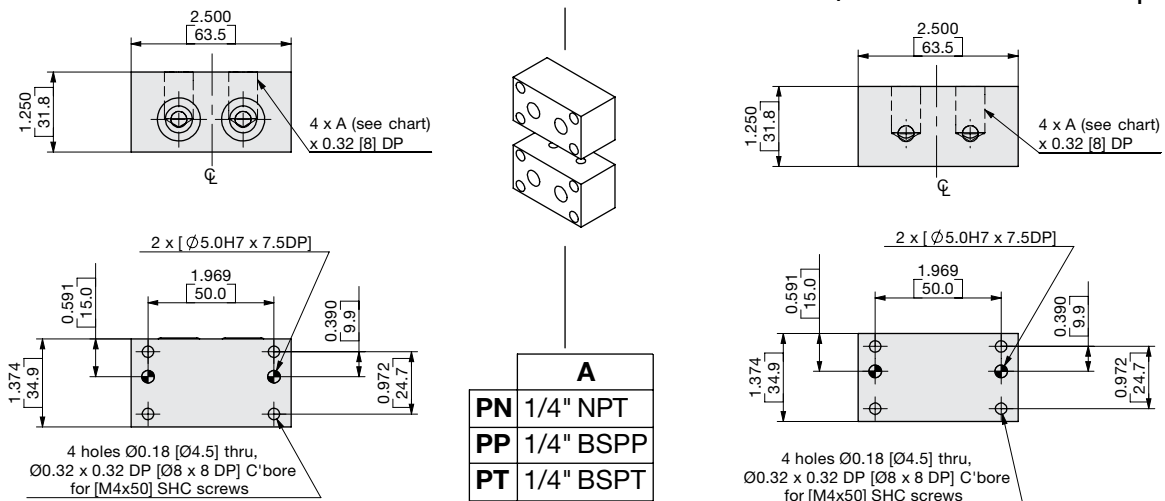
Flat for module mounting not shown: See QC or TP drawings.

Model	Module	Robot Side	Tool Side	*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



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

For QC/TP-60

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

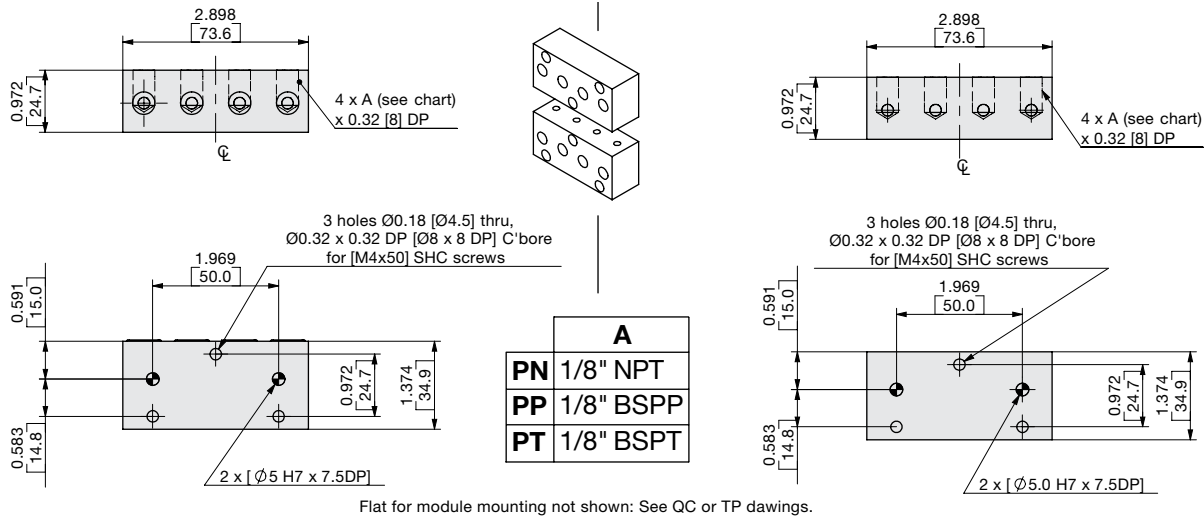
For QC/TP-150

Module	Robot Side	Tool Side
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**

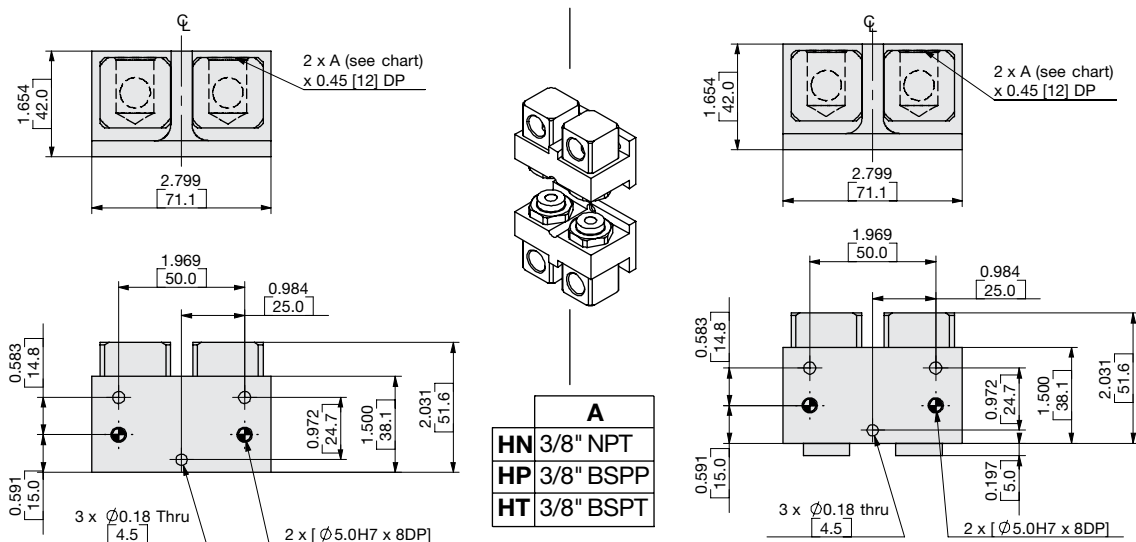
Module	Robot Side	Tool Side
<b>PN18</b>	<b>KPN18-QC60</b>	<b>KPN18-TP60</b>
<b>PP18</b>	<b>KPP18-QC60</b>	<b>KPP18-TP60</b>
<b>PT18</b>	<b>KPT18-QC60</b>	<b>KPT18-TP60</b>
<b>Seal Kit</b>	<b>SLKT-391</b>	<b>---</b>

For **QC/TP-150**

Module	Robot Side	Tool Side
<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>	<b>---</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**

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

For **QC/TP-150**

Module	Robot Side	Tool Side
<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

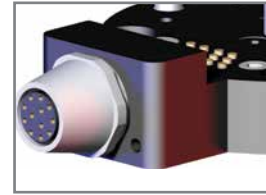
Automatic Tool Changers | Dimensions | Sub-D Conn and User Plug IO Block



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

Model	Module	Robot Side	Tool Side
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 Side	Tool Side
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

### Durable Components

Locking components are made from hardened bearing & tool steels

### Self Lubricating Seals

Self lubricating dynamic seals

### Quality Materials

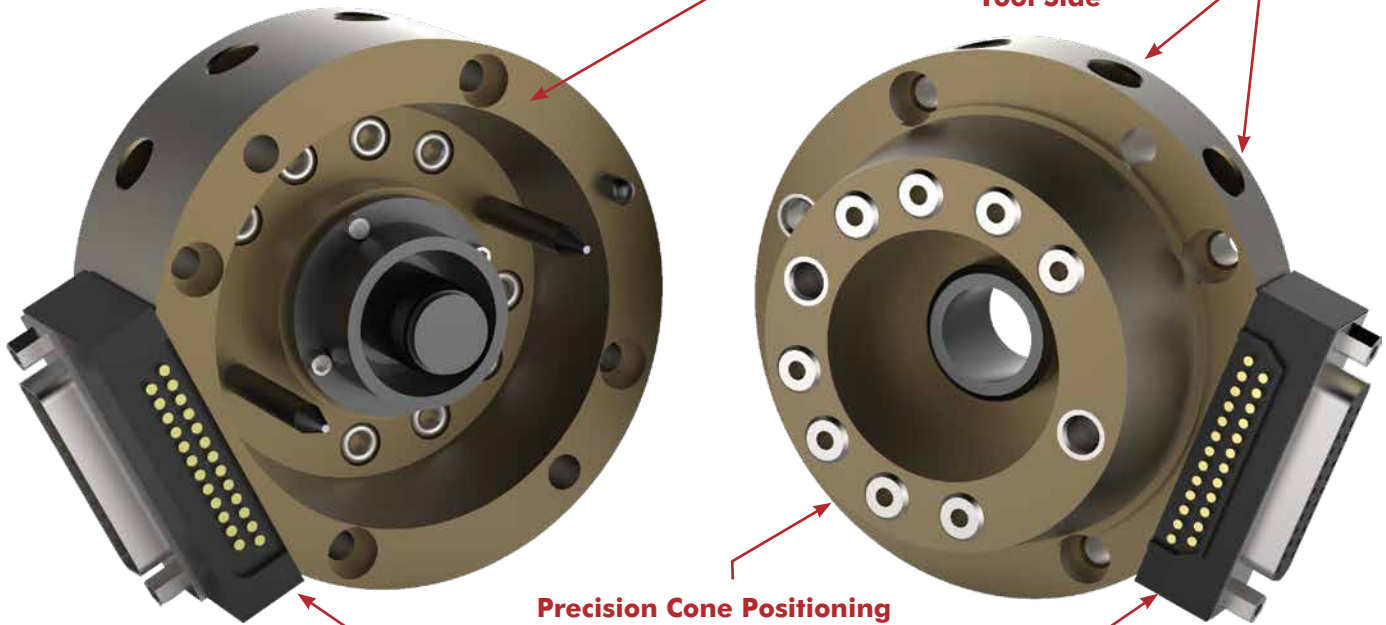
Each body is made of lightweight 7075-T6 aircraft quality aluminum

### Pneumatic Ports

User pneumatic ports

### Robot Side

### Tool Side



### 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 Half Adaptor

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



### Tool Half Adaptor

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

# RHC SERIES

## Automatic Tool Changers | Ordering Information



Robot Side  
**RHC-1-R**



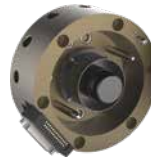
Tool Side  
**RHC-1-T**



Robot Side  
**RHC-2-R**



Tool Side  
**RHC-2-T**



Robot Side  
**RHC-3-R**



Tool Side  
**RHC-3-T**



Robot Side  
**RHC-4-R**



Tool Side  
**RHC-4-T**

Base Model	Model Size	Metric	Adapter Module	Seals (for -R only)	Contacts	Sensor (for RHC-3-R only)
<b>RHC</b>	<b>1</b>	<b>M</b>	<b>R</b>	<b>V</b>	<b>OHCC-009</b>	<b>P</b>
Base Model	<b>1</b> 9kg [20 lb] Max. Payload	<b>Blank</b> Imperial	<b>R</b> Robot Side Adaptor Module	<b>V</b> Viton® Seals		<b>P</b> PNP Sensors
	<b>2</b> 59kg [130 lb] Max. Payload	<b>M</b> Metric	<b>T</b> Tool Side Adaptor Module			<b>N</b> NPN Sensors
	<b>3</b> 136kg [300 lb] Max. Payload					<b>No Sensors</b> Leave Blank
	<b>4</b> 454kg [1000 lb] Max. Payload					

Robot Side	Optional Contacts
<b>OHCC-009</b>	15 Pin D-Sub Contacts (RHC-1)
<b>OHCC-001</b>	26 Pin D-Sub Contacts (RHC-1)
<b>OHCC-011</b>	15 Pin D-Sub Contacts (RHC-2, -3)
<b>OHCC-003</b>	25 Pin D-Sub Contacts (RHC-2, -3)
<b>OHCC-005</b>	19 Pin Mil. Spec. Contacts (RHC-3)
<b>OHCC-007</b>	38 Pin Mil. Spec. Contacts (RHC-3)
<b>OHCC-021</b>	24 Pin Mil. Spec. Contacts (RHC-4)
Tool Side	Optional Contacts
<b>OHCC-010</b>	15 Pin D-Sub Contacts (RHC-1)
<b>OHCC-002</b>	26 Pin D-Sub Contacts (RHC-1)
<b>OHCC-012</b>	15 Pin D-Sub Contacts (RHC-2, -3)
<b>OHCC-004</b>	25 Pin D-Sub Contacts (RHC-2, -3)
<b>OHCC-006</b>	19 Pin Mil. Spec. Contacts (RHC-3)
<b>OHCC-027</b>	24 Pin Mil. Spec. Contacts (RHC-4)
<b>OHCC-023</b>	24 Wire Single Pigtail Connector (RHC-4)
<b>OHCC-022</b>	24 Wire Double Pigtail Connector (RHC-4)

## Sensor and Pneumatic Accessories (Ordered Separately)

### Sensor Accessories

<b>OSMK-064</b>	Replacement Sensor Mounting Kit ( <b>RHC-3-R</b> )
<b>OISP-009</b>	Replacement Locked Position NPN Inductive Sensor with Hard Wired Cable ( <b>RHC-3-R</b> )
<b>OISP-009</b>	Replacement Locked Position NPN Inductive Sensor with Hard Wired Cable ( <b>RHC-3-R</b> )
<b>OSMK-063</b>	Replacement Sensor Mounting Kit ( <b>RHC-4-R</b> )
<b>OISN-008</b>	Replacement Locked Position NPN Inductive Sensor with Hard Wired Cable ( <b>RHC-4-R</b> )
<b>OISP-008</b>	Replacement Locked Position PNP Inductive Sensor with Hard Wired Cable ( <b>RHC-4-R</b> )

### Pneumatic Accessories

<b>SLKT-028</b>	Standard Seal Repair Kit ( <b>RHC-1-R</b> )
<b>SLKT-028V</b>	Viton Seal Repair Kit ( <b>RHC-1-R</b> )
<b>SLKT-029</b>	Standard Seal Repair Kit ( <b>RHC-2-R</b> )
<b>SLKT-029V</b>	Viton Seal Repair Kit ( <b>RHC-2-R</b> )
<b>SLKT-030</b>	Standard Seal Repair Kit ( <b>RHC-3-R</b> )
<b>SLKT-030V</b>	Viton Seal Repair Kit ( <b>RHC-3-R</b> )
<b>SLKT-031</b>	Standard Seal Repair Kit ( <b>RHC-4-R</b> )
<b>SLKT-031V</b>	Viton Seal Repair Kit ( <b>RHC-4-R</b> )

# RHC-1-R (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

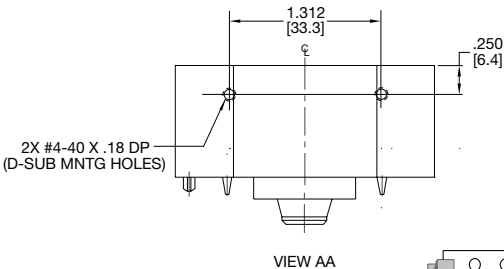
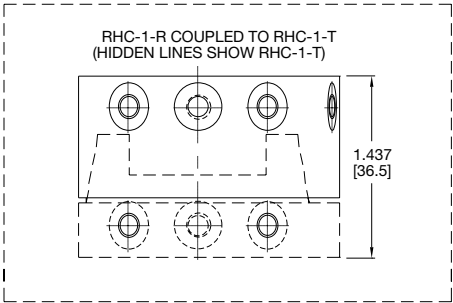
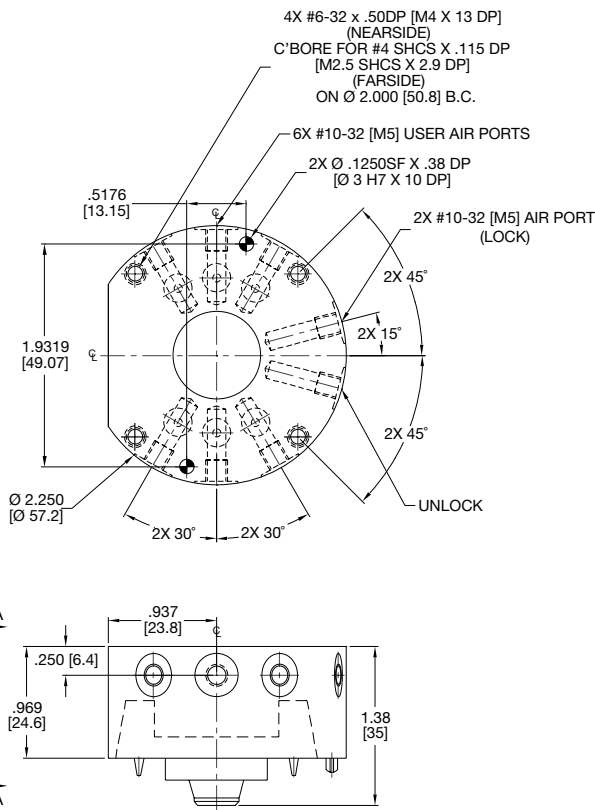
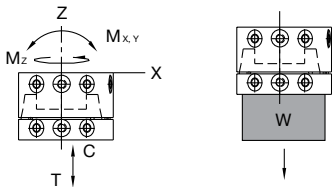


### RHC-1-R Specification:

- Max. Payload (**W**): 9 Kg [20 lbs]
- Weight of **-R Unit only**: 0.18 Kg [0.41 lbs]
- Weight of Coupled Units: 0.28 Kg [0.63 lbs]
- Bore Ø: 19 mm [0.75 in]
- Displacement: 4.18 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.]



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Ø  
DIMENSIONS ARE  
SYMMETRICAL ABOUT  
CENTERLINE

THIRD ANGLE  
PROJECTION

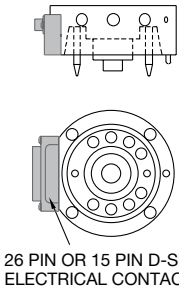
ALL DOWEL HOLES ARE SF (SLIP FIT).  
LOCATIONAL TOLERANCE  
±.0005" OR [±.013MM]

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 Side	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 (TOOLING SIDE)

## Automatic Tool Changers | Technical Specifications | Dimensions

### RHC-1-T Specification:

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

Weight of **-T Unit only**: 0.09 Kg [0.22 lbs]

Weight of Coupled Units: 0.28 Kg [0.63 lbs]

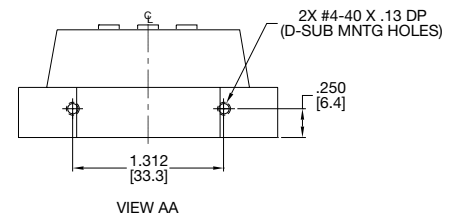
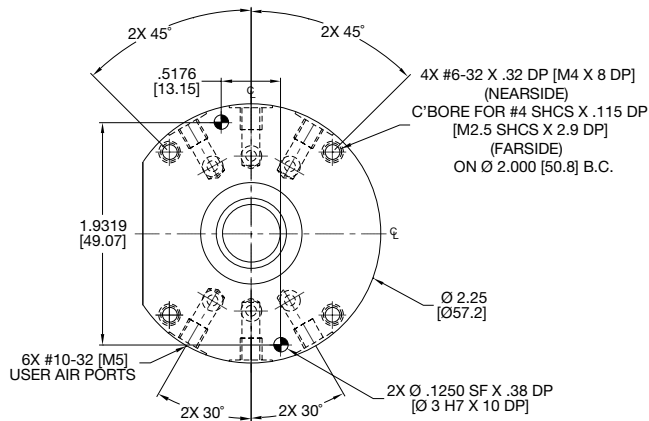
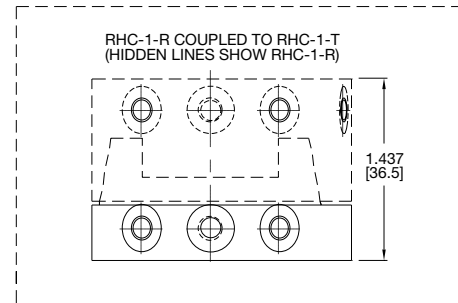
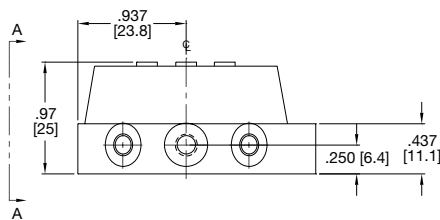
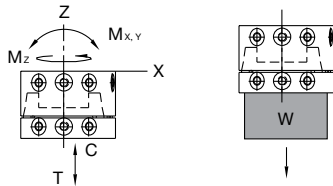
### Loading Capacity

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

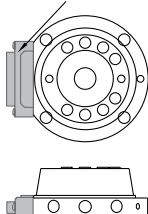
Max. Compressive **C**: 2224 N [500 lb]

Max. Moment (**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

DIMENSIONS ARE  
SYMMETRICAL ABOUT  
CENTERLINE

THIRD ANGLE  
PROJECTION

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

METRIC THREADS  
COURSE PITCH

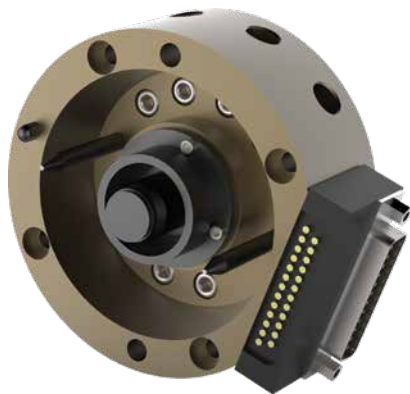
IMPERIAL ( [ IN.])  
0.00 = ±.01  
0.000 = ±.005  
0.0000 = ±.0005

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

Model	Tool Side	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 SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

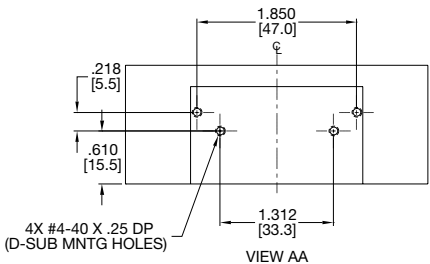
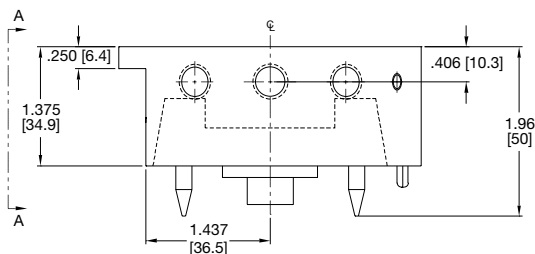
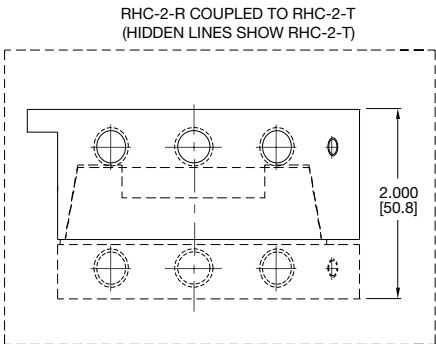
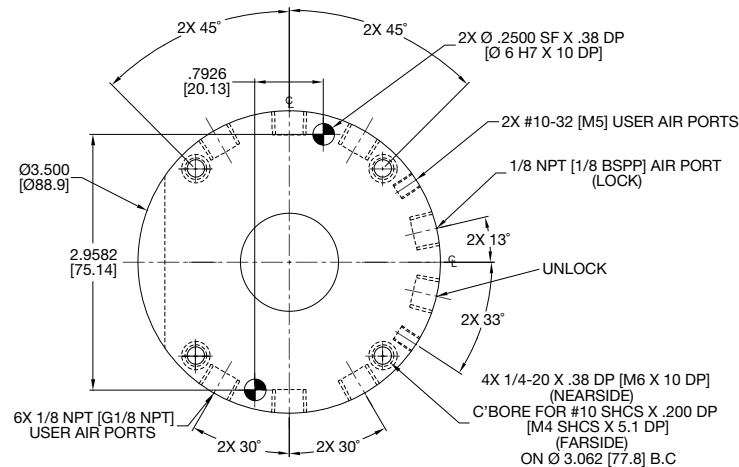
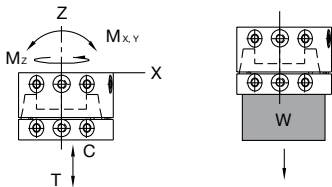


### RHC-2-R Specification:

- Max. Payload (**W**): 59 Kg [130 lbs]
- Weight of **-R Unit only**: 0.44 Kg [0.99 lbs]
- Weight of Coupled Units: 0.82 Kg [1.81 lbs]
- Bore Ø: 28.57 mm [1.125 in]
- Displacement: 12.22 cm<sup>3</sup> [0.746 in<sup>3</sup>]

### Loading Capacity

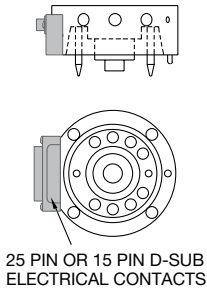
- Max. Tensile **T**: 3336 N [750 lb]
- Max. Compressive **C**: 6672 N [1500 lb]
- Max. Moment (**M<sub>x</sub>/M<sub>y</sub>**): 90 Nm [800 in.-lb.]
- Max. Moment (**M<sub>z</sub>**): 136 Nm [1200 in.-lb.]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

IMPERIAL ( [ IN. ] )	METRIC (MM)
0.00 = ± .01	[0] = [± .25]
0.000 = ± .005	[0.0] = [± .13]
0.0000 = ± .0005	[0.00] = [± .013]

Model	Robot Side	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-3-R (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

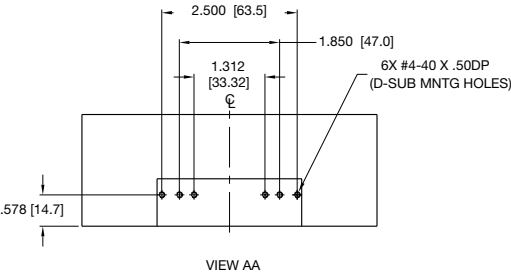
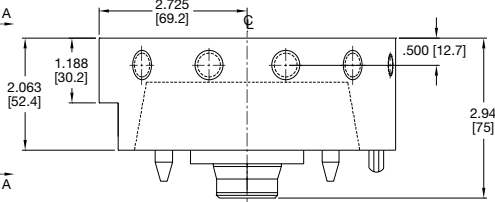
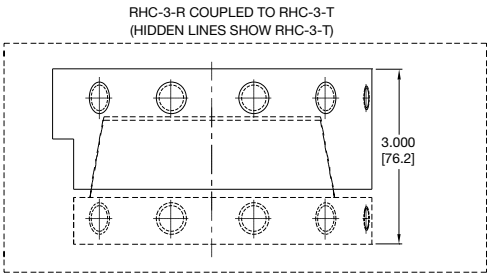
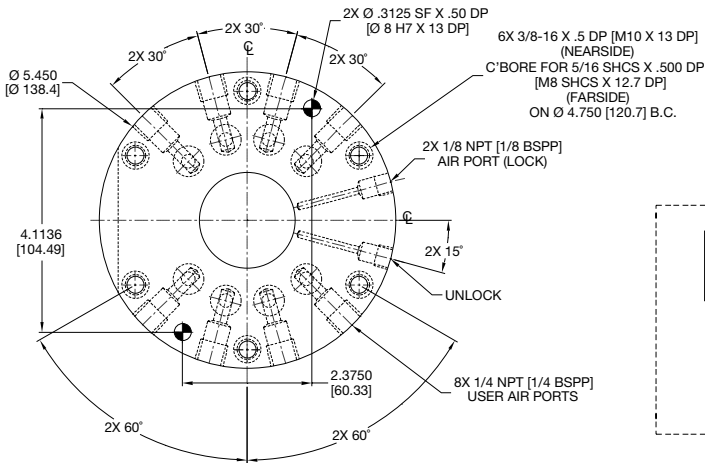
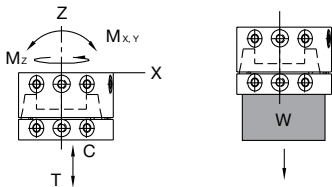


### RHC-3-R Specification:

- Max. Payload (**W**): 136 Kg [300 lbs]
- Weight of **-R Unit only**: 1.79 Kg [3.95 lbs]
- Weight of Coupled Units: 3.1 Kg [6.7 lbs]
- Bore Ø: 44.45 mm [1.750 in]
- Displacement: 44.34 cm³ [2.706 in³]

### Loading Capacity

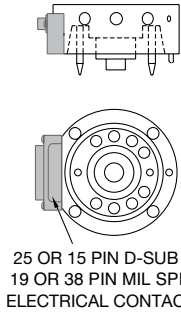
- Max. Tensile **T**: 8896 N [2000 lb]
- Max. Compressive **C**: 17793 N [4000 lb]
- Max. Moment (**M<sub>x</sub>/M<sub>y</sub>**): 678 Nm [6000 in.-lb.]
- Max. Moment (**M<sub>z</sub>**): 1017 Nm [9000 in.-lb.]



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]

Model	Robot Side	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



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

# RHC-3-T (TOOLING SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

## RHC-3-T Specification:

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

Weight of **-T** Unit only: 1.29 Kg [2.85 lbs]

Weight of Coupled Units: 3.1 Kg [6.7 lbs]

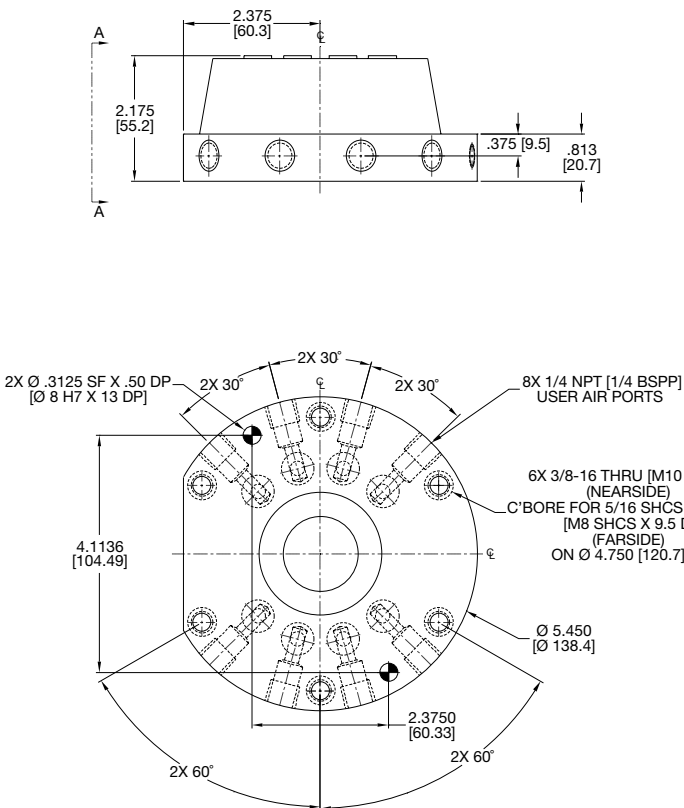
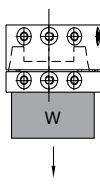
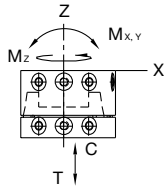
## Loading Capacity

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

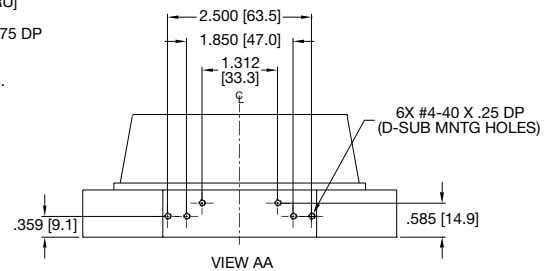
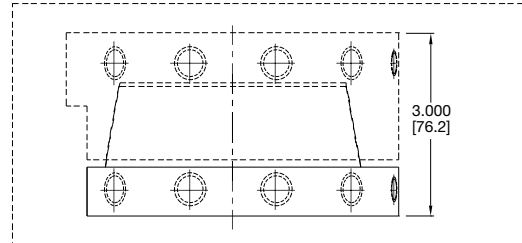
Max. Compressive **C**: 17793 N [4000 lb]

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

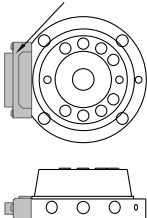
Max. Moment (**M<sub>z</sub>**): 1017 Nm [9000 in.-lb.]



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).  
LOCATIONAL TOLERANCE  
±.0005" OR [±.013MM]

⌀  
METRIC THREADS  
COARSE PITCH

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

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

Model	Tool Side	Description	Specification
<b>RHC-3</b>	<b>OHCC-010</b>	15 Pin D-Sub Contacts	15 Pin @ 3 AMPS
	<b>OHCC-002</b>	25 Pin D-Sub Contacts	25 Pin @ 3 AMPS
	<b>OHCC-006</b>	19 Pin Mil. Spec. Contacts	19 Pin @ 3 AMPS

# RHC-4-R (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

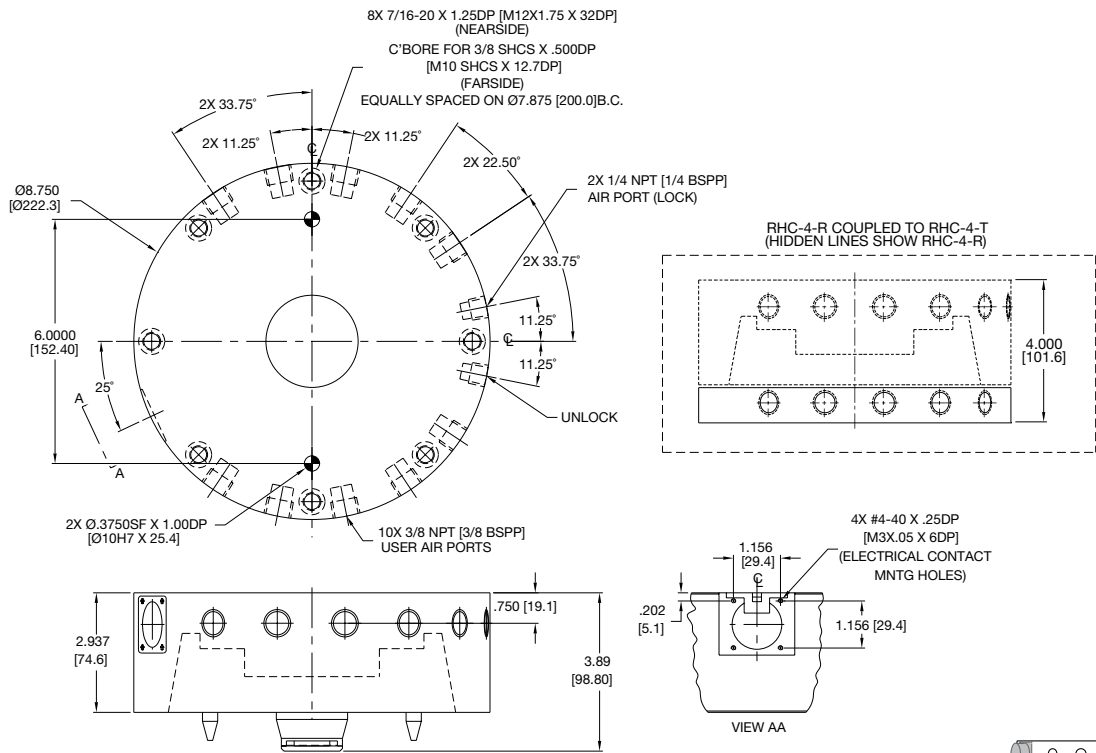
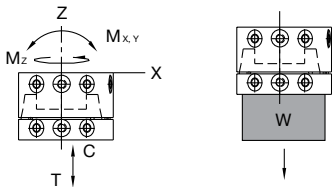


### RHC-4-R Specification:

- Max. Payload (**W**): 454 Kg [1000 lbs]
- Weight of **-R Unit only**: 6.52 Kg [12.39 lbs]
- Weight of Coupled Units: 22 Kg [10 lbs]
- Bore Ø: 57.15 mm [2.250 in]
- Displacement: 85.52 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

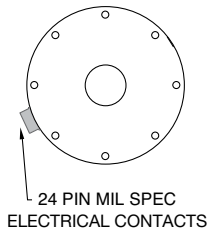
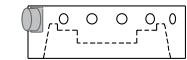
ALL DOWEL HOLES ARE SF (SLIP FIT).  
LOCATIONAL TOLERANCE  
±.0005" OR [±.013MM]

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



# RHC-4-T (TOOLING SIDE)

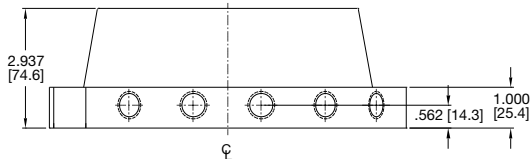
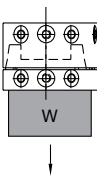
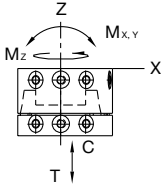
## Automatic Tool Changers | Technical Specifications | Dimensions

### RHC-4-T Specification:

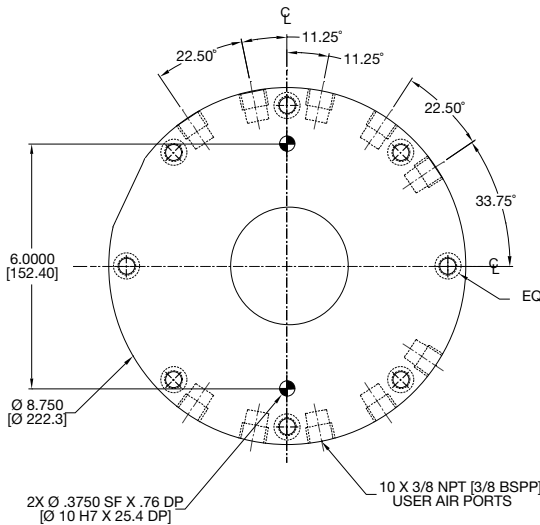
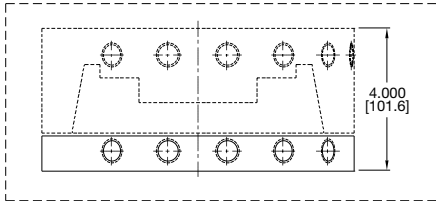
**Max. Payload (W):** 454 Kg [1000 lbs]  
**Weight of -T Unit only:** 4.35 Kg [9.61 lbs]  
**Weight of Coupled Units:** 10 Kg [22 lbs]

### Loading Capacity

**Max. Tensile T:** 35586 N [8000 lb]  
**Max. Compressive C:** 71171 N [16000 lb]  
**Max. Moment (M<sub>x</sub>/M<sub>y</sub>):** 2825 Nm [25000 in.-lb.]  
**Max. Moment (M<sub>z</sub>):** 2825 Nm [25000 in.-lb.]

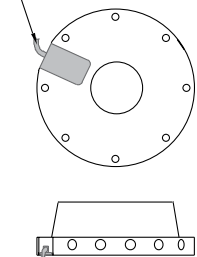


RHC-4-R COUPLED TO RHC-4-T  
(HIDDEN LINES SHOW RHC-4-R)



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.

INDUCTIVE SENSOR  
MOUNTING KIT



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. ] )      METRIC ( MM )  
0.00 = ± .01      [0] = [ ± .25 ]  
0.000 = ± .005      [0.0] = [ ± .13 ]  
0.0000 = ± .0005      [0.00] = [ ± .013 ]

Model	Tool Side	Description	Specification
RHC-4	OHCC-027	24 Pin Mil. Spec. Contacts	24 Pin @ 3 AMPS
	OHCC-023	24 Wire Single Pigtail Connector	
	OHCC-022	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:

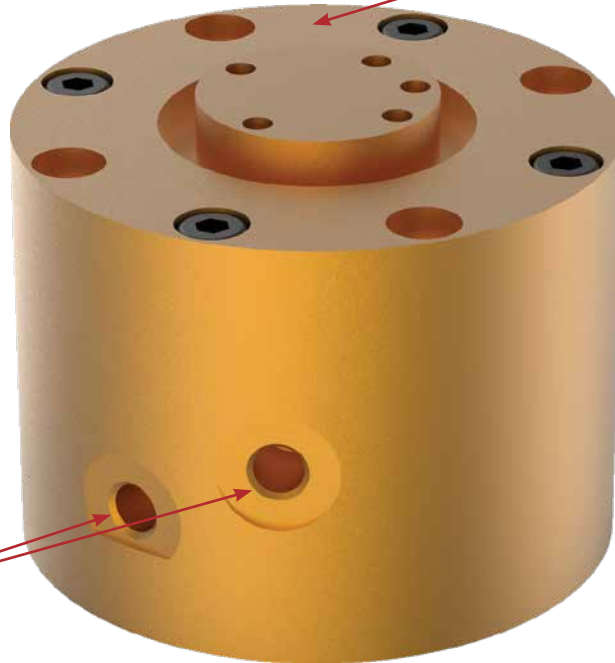
Due to the optional spring assist, compliance may be used in single acting mode.

### 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



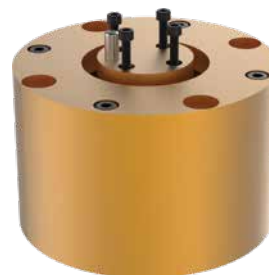
### Air Ports

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]

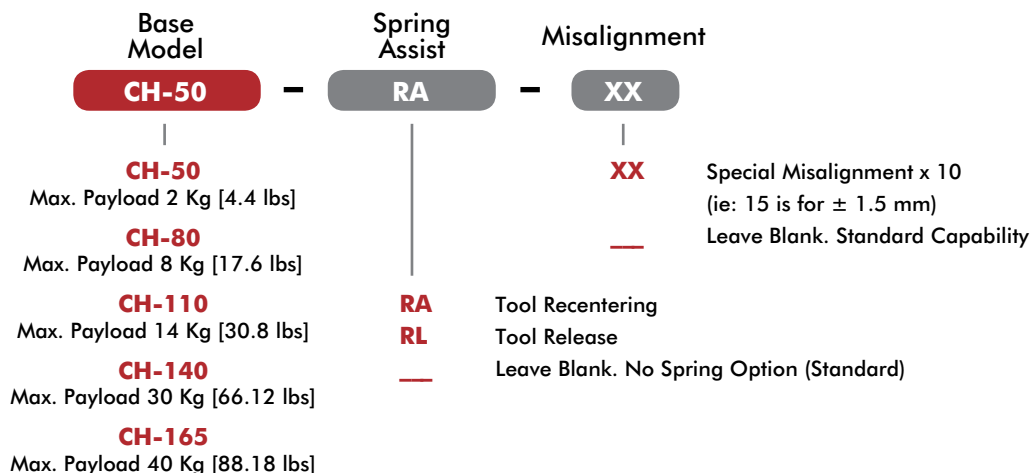
### Maintenance Specification

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.

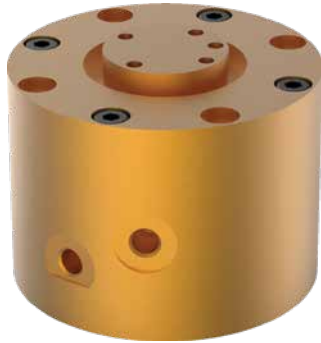
## How to Order





# CH-50P

## Cylindrical Horizontal Compliance Device | Technical Information | Dimensions



### CH-50P 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

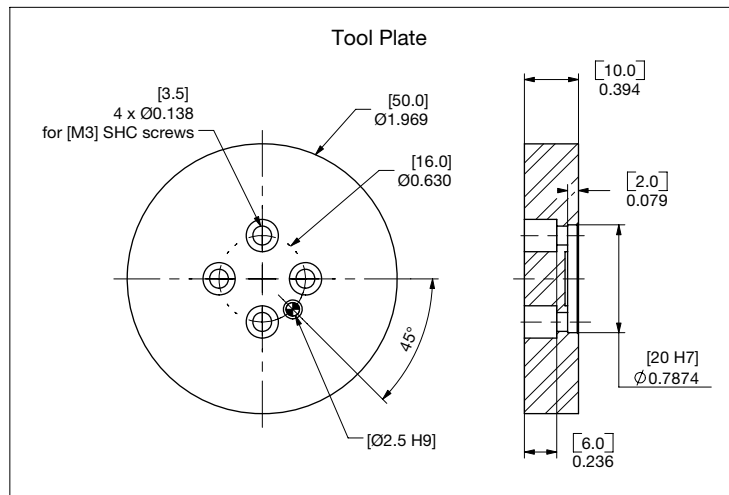
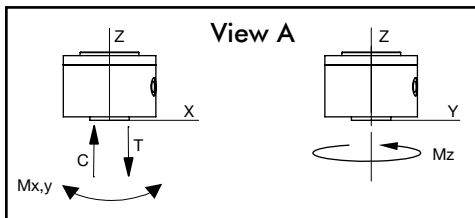
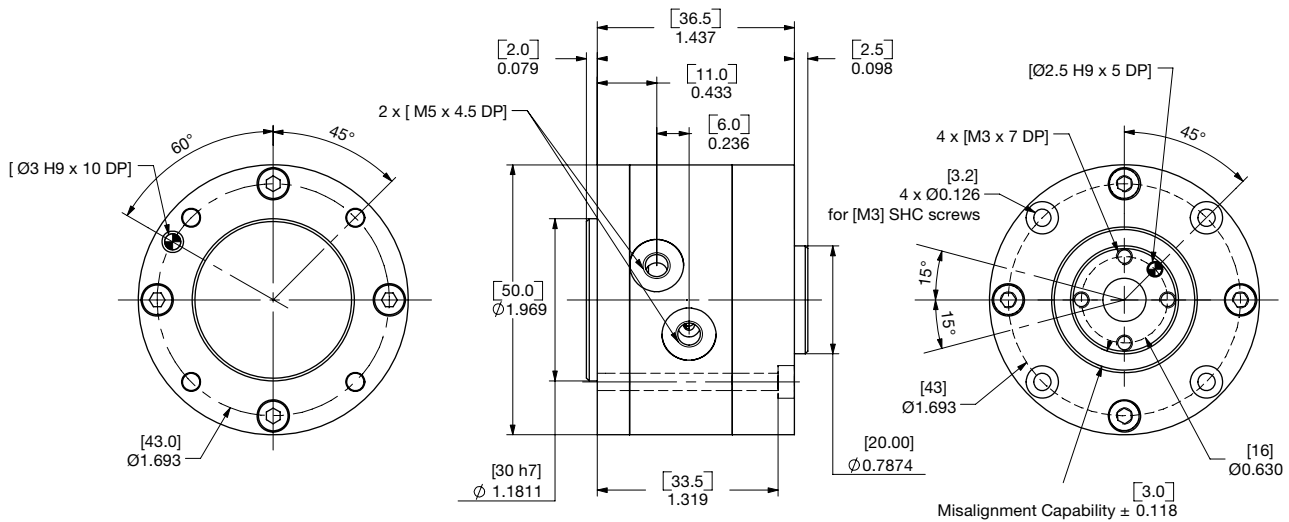
### Loading Capacity (View A):

Max. Tensile **T**: 75 N [17 lb]

Max. Compressive **C**: 75 N [17 lb]

Max. Moment (**M<sub>x</sub>/M<sub>y</sub>**): 2 Nm [17.7 in.-lb.]

Max. Moment (**M<sub>z</sub>**): 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 $\pm .0005^\circ$ 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] = [ $\pm .013$ ]

## Cylindrical Horizontal Compliance Device | Technical Information | Dimensions

### CH-80P 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]

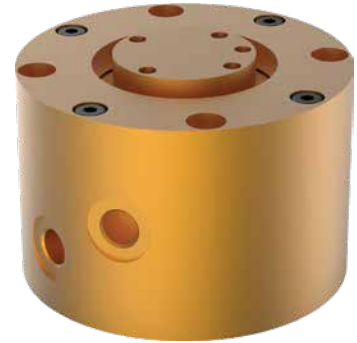
**Cylinder Bore:** 60 mm [2.37 in]

**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



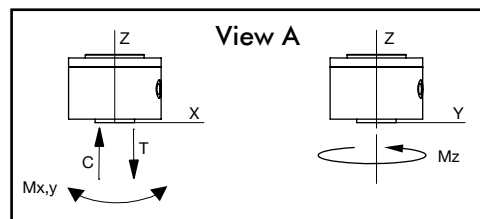
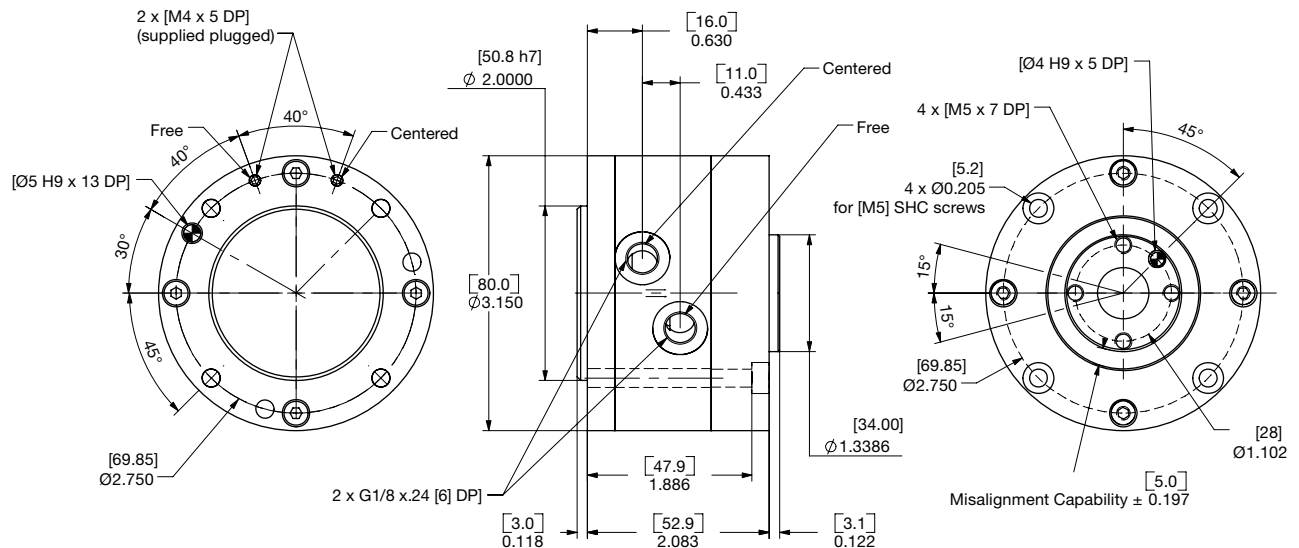
### Loading Capacity (View A):

Max. Tensile **T**: 160 N [36 lb]





Max. Compressive **C**: 160 N [36 lb]

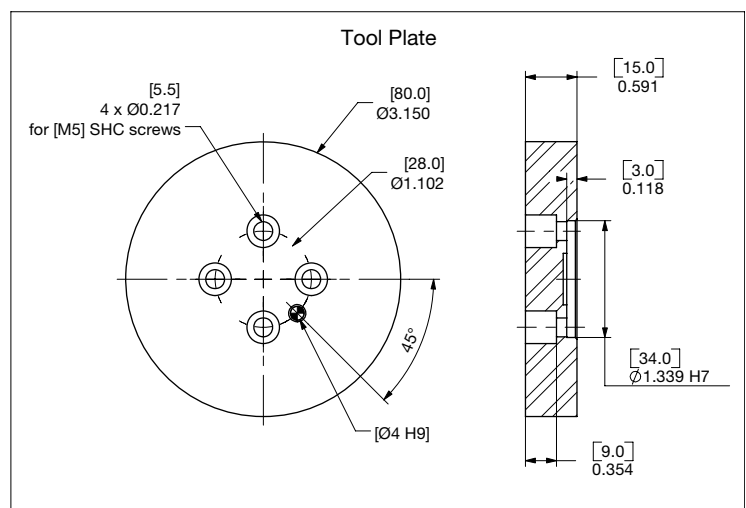
**Max. Moment ( $M_x/M_y$ ):** 8 Nm [71 in.-lb.]

**Max. Moment (Mz):** 6 Nm [53 in.-lb.]



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

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



# CH-110P

## Cylindrical Horizontal Compliance Device | Technical Information | Dimensions



### CH-110P 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

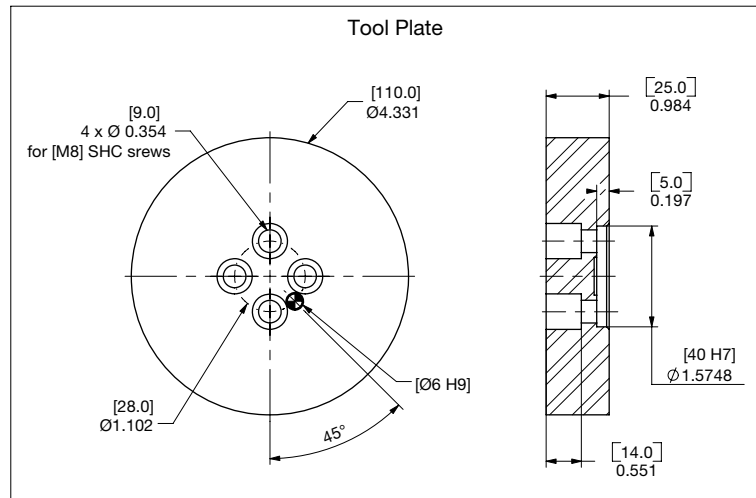
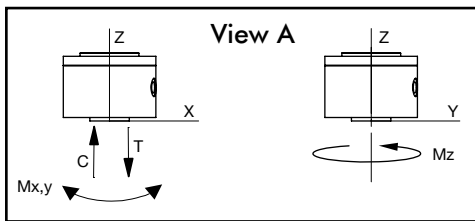
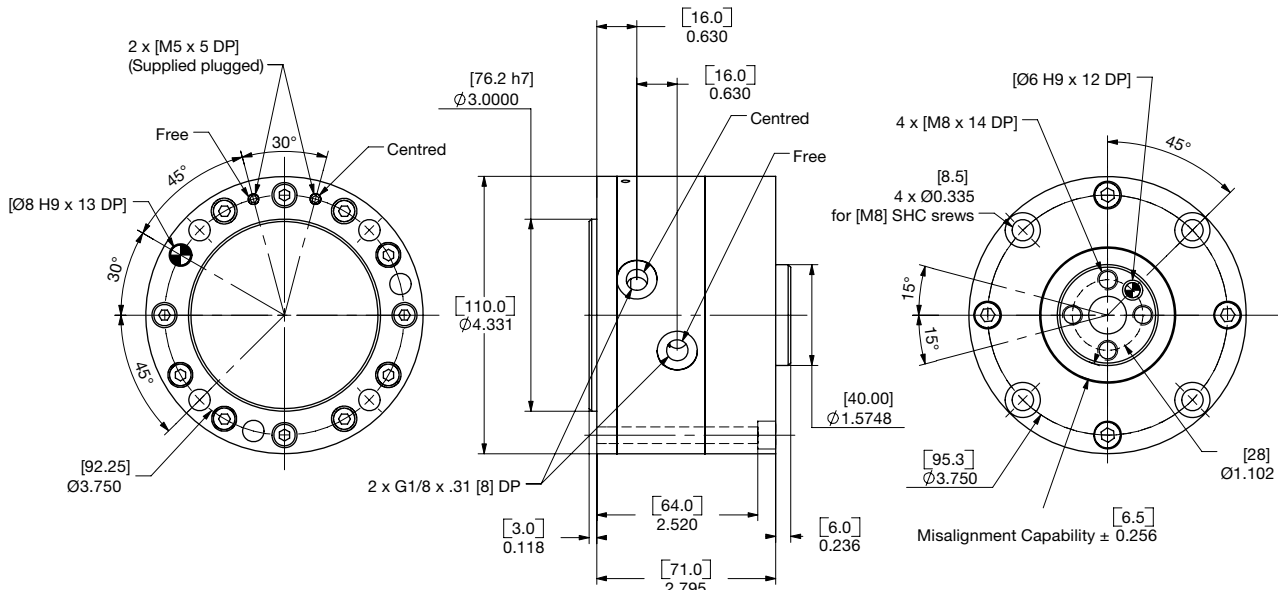
### Loading Capacity (View A):

Max. Tensile **T**: 190 N [43 lb]

Max. Compressive **C**: 190 N [43 lb]

Max. Moment (**M<sub>x</sub>/M<sub>y</sub>**): 12 Nm [106 in.-lb.]

Max. Moment (**M<sub>z</sub>**): 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 $\pm 0.005$ " OR [ $\pm 0.13$ 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-140P 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]

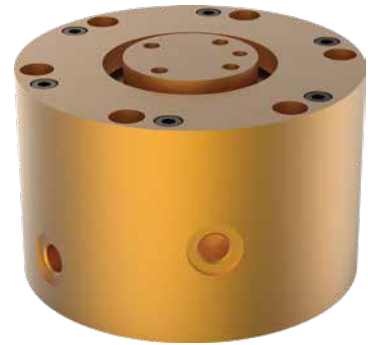
Cylinder Bore: 105 mm [4.13 in]

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



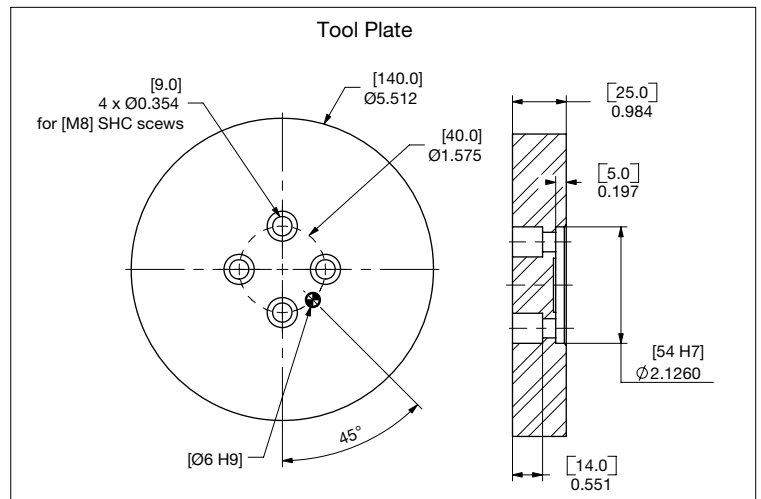
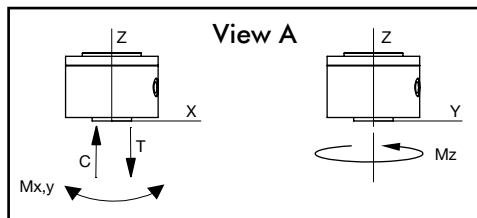
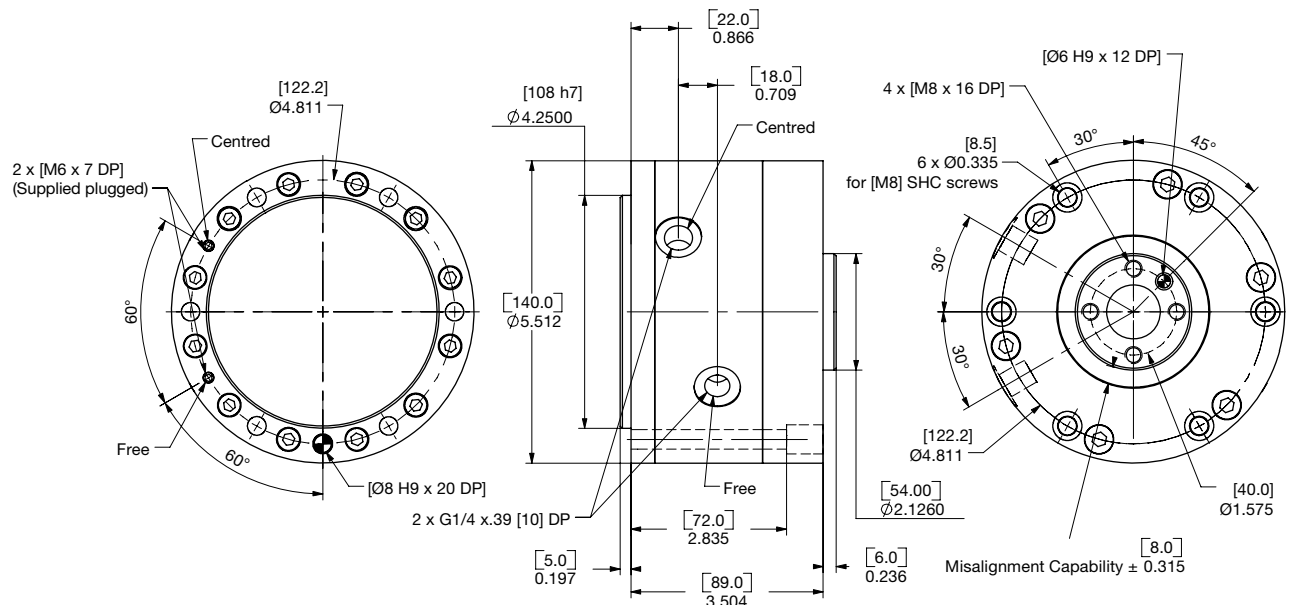
### Loading Capacity (View A):

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.]

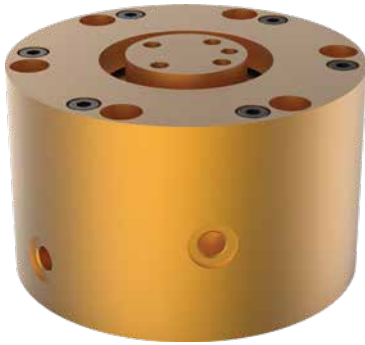


UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE $\pm 0.0005$ " 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] = $\pm 0.013$

# CH-165P

## Cylindrical Horizontal Compliance Device | Technical Information | Dimensions



### CH-165P 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

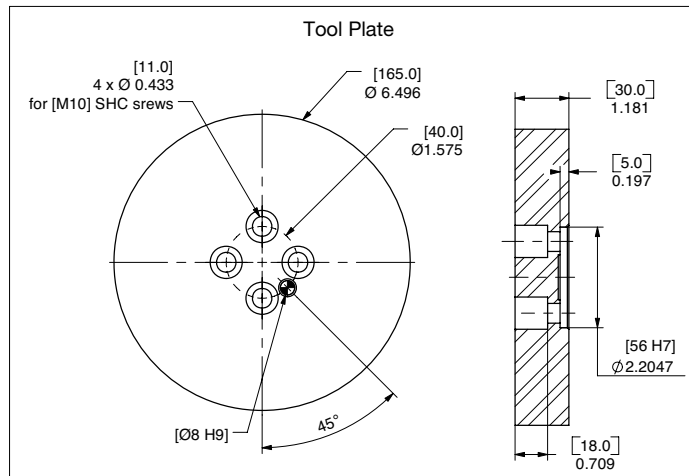
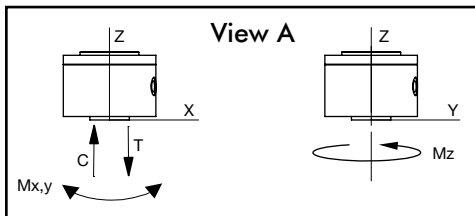
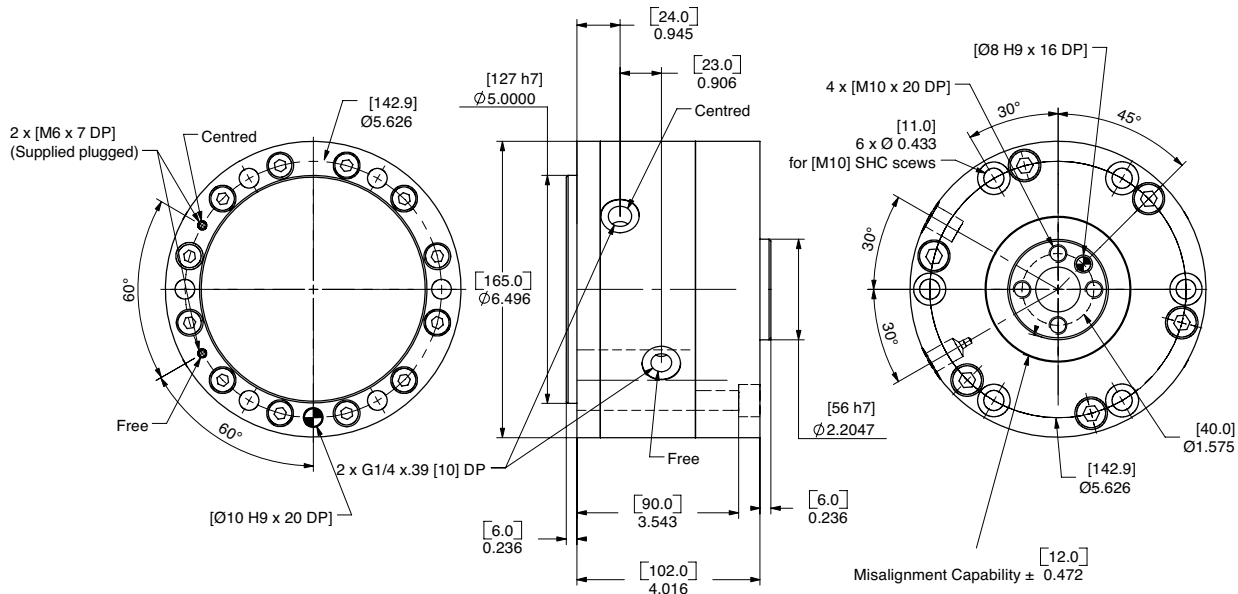
### Loading Capacity (View A):

Max. Tensile **T**: 230 N [52 lb]

Max. Compressive **C**: 230 N [52 lb]

Max. Moment (**M<sub>x</sub>/M<sub>y</sub>**): 23 Nm [203 in.-lb.]

Max. Moment (**M<sub>z</sub>**): 28 Nm [248 in.-lb.]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

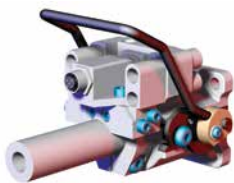
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE $\pm .0005$ " OR [ $\pm .013$ MM]
	IMPERIAL ([IN.])	METRIC (MM)
METRIC THREADS COURSE PITCH	0.00 = $\pm .01$ 0.000 = $\pm .005$ 0.0000 = $\pm .0005$	[0] = [ $\pm .25$ ] [0.0] = [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

[illegible]



# MANUAL TOOL CHANGERS

## Features & Benefits



<b>Quick Disconnect for 25mm/1.00 in. Tubes</b>	
Housing .....	4
Air/Electric Connections.....	6
Bayonet .....	8
Air/Electric Connections.....	9



<b>Quick Disconnect for 40mm/1.50 in. Tubes</b>	
Housing .....	10
Air/Electric Connections.....	13
Bayonet .....	19
Air/Electric Connections.....	20



<b>Quick Disconnect for 60mm/2.50 in. Tubes</b>	
Housing .....	26
Air/Electric Connections.....	27
Bayonet .....	31
Air/Electric Connections.....	32



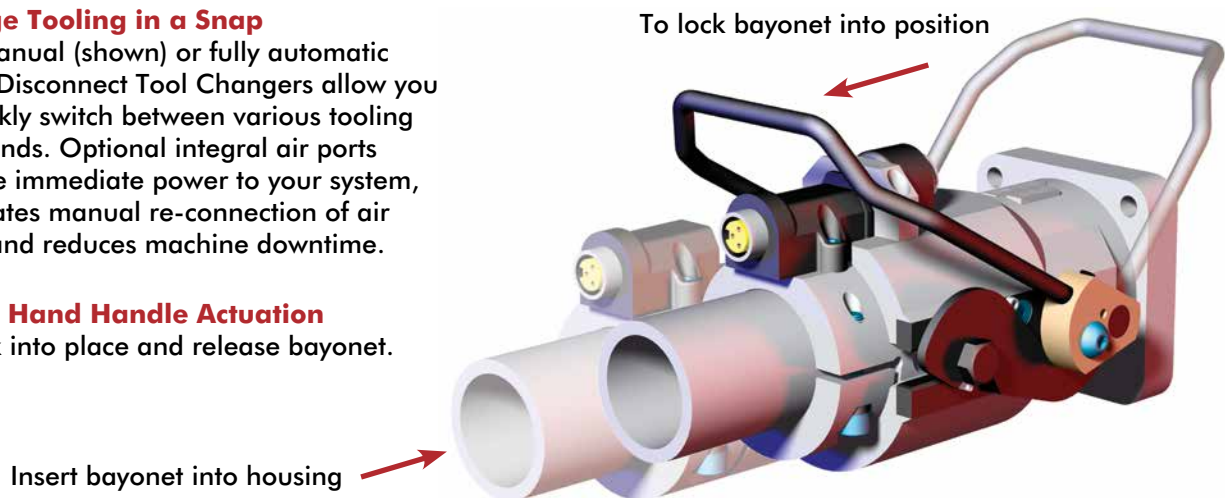
<b>Idle Station .....</b>	<b>37</b>
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### Change Tooling in a Snap

Our manual (shown) or fully automatic Quick Disconnect Tool Changers allow you to quickly switch between various tooling in seconds. Optional integral air ports provide immediate power to your system, eliminates manual re-connection of air lines, and reduces machine downtime.

### Single Hand Handle Actuation

To lock into place and release bayonet.



## RDN/RDC Features

(Handle in release position)



**RDN-40 Housing**  
**RDC-40/15 Bayonet**  
for Ø40mm/1.50"(in)  
Tooling Boom/Tubes

### Internal urethane bumpers

ensures a tight interface between the robot and tool sides

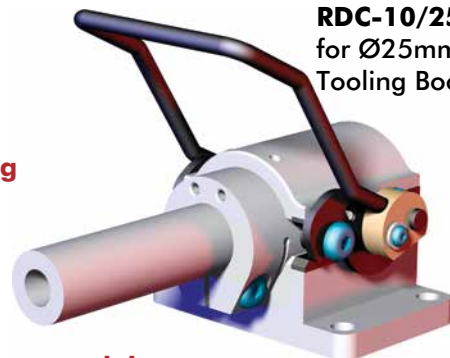
### Air & electrical connections

stay properly sequenced when tool is removed.

### Additional electrical connectors available

RDN-40 and RDH electrical connectors must be ordered separately from Housing/Bayonet.

(Handle in locking position)

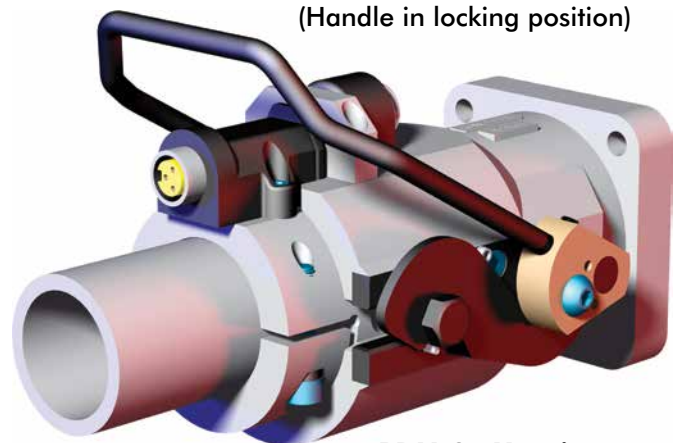


**RDN-10 Housing**  
**RDC-10/25M Bayonet**  
for Ø25mm/1.00"(in)  
Tooling Boom/Tubes

### Optional air port modules

auto disconnect when handle is released

(Handle in locking position)



**RDN-25 Housing**  
**RDC-60/25 Bayonet**  
for Ø60mm/2.50"(in)  
Tooling Boom/Tubes

# BAYONETS FOR MANUAL TOOL CHANGERS

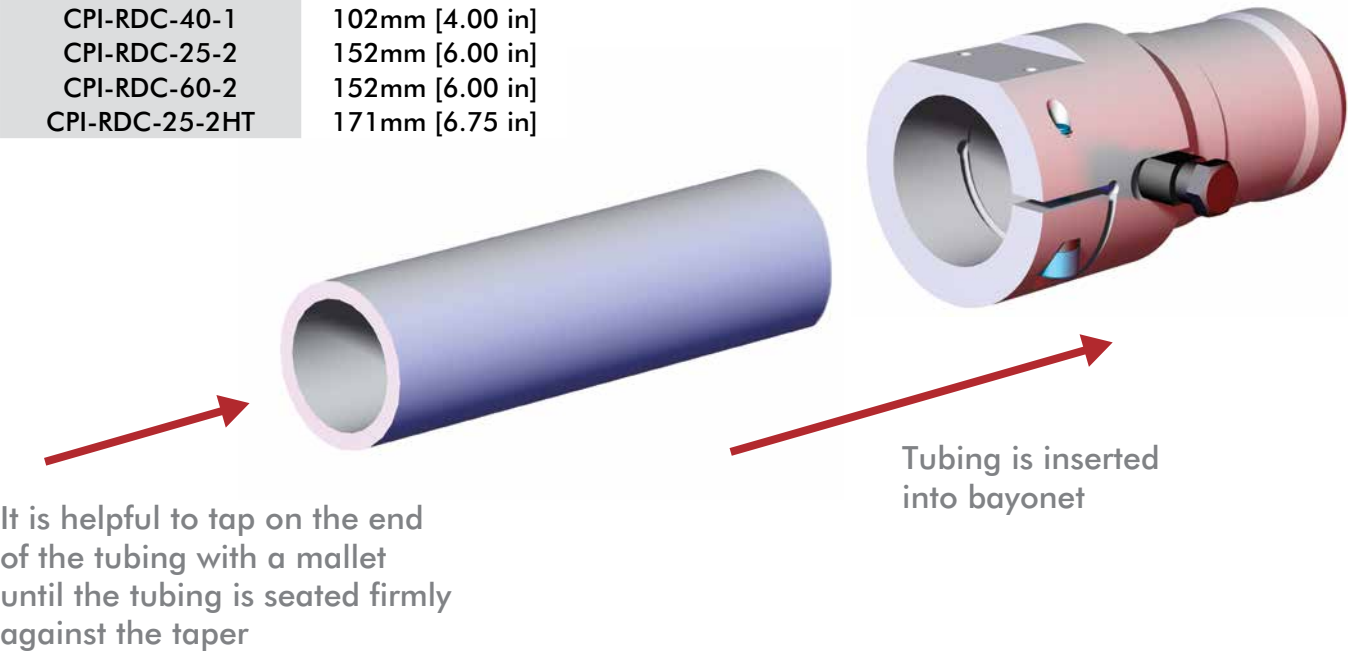
Manual Tool Changers | Bayonet & Boom Assembly Procedure | Product Overview

**Overview:**

The internal surface of the bayonet is tapered to lock the tubing in the position during hi-torque operations. Tubing must be inserted the proper distance to completely engage the taper.

**Procedure:**

Part Number	Depth
CPI-RDC-10-1	70mm [2.75 in]
CPI-RDC-25M-1	70mm [2.75 in]
CPI-RDC-15-1	102mm [4.00 in]
CPI-RDC-40-1	102mm [4.00 in]
CPI-RDC-25-2	152mm [6.00 in]
CPI-RDC-60-2	152mm [6.00 in]
CPI-RDC-25-2HT	171mm [6.75 in]



# RDN-10 DISCONNECT HOUSINGS

Manual Tool Changers | Flange Style Housing for RDC-10 Series Bayonets | Product Overview

## Features:

- 50.8mm [2.00 in.] Sq. Flange Mntg.
- Steel handle actuation allows quick and accurate installation, pulling the bayonet into a fixed position within the housing. This action also engages optional air and electric connectors
- Internal urethane rings eliminate vibration and seat the bayonet securely

## Specifications:

**Max. Static Product Load:**

47 N\*m [35 ft-lb]

## Material:

Body: Aluminum

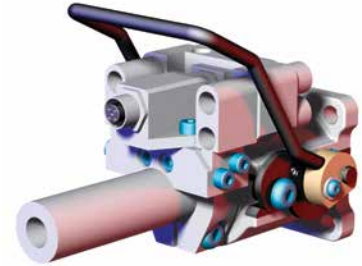
Knuckles: Brass

Handle and Hooks: Steel

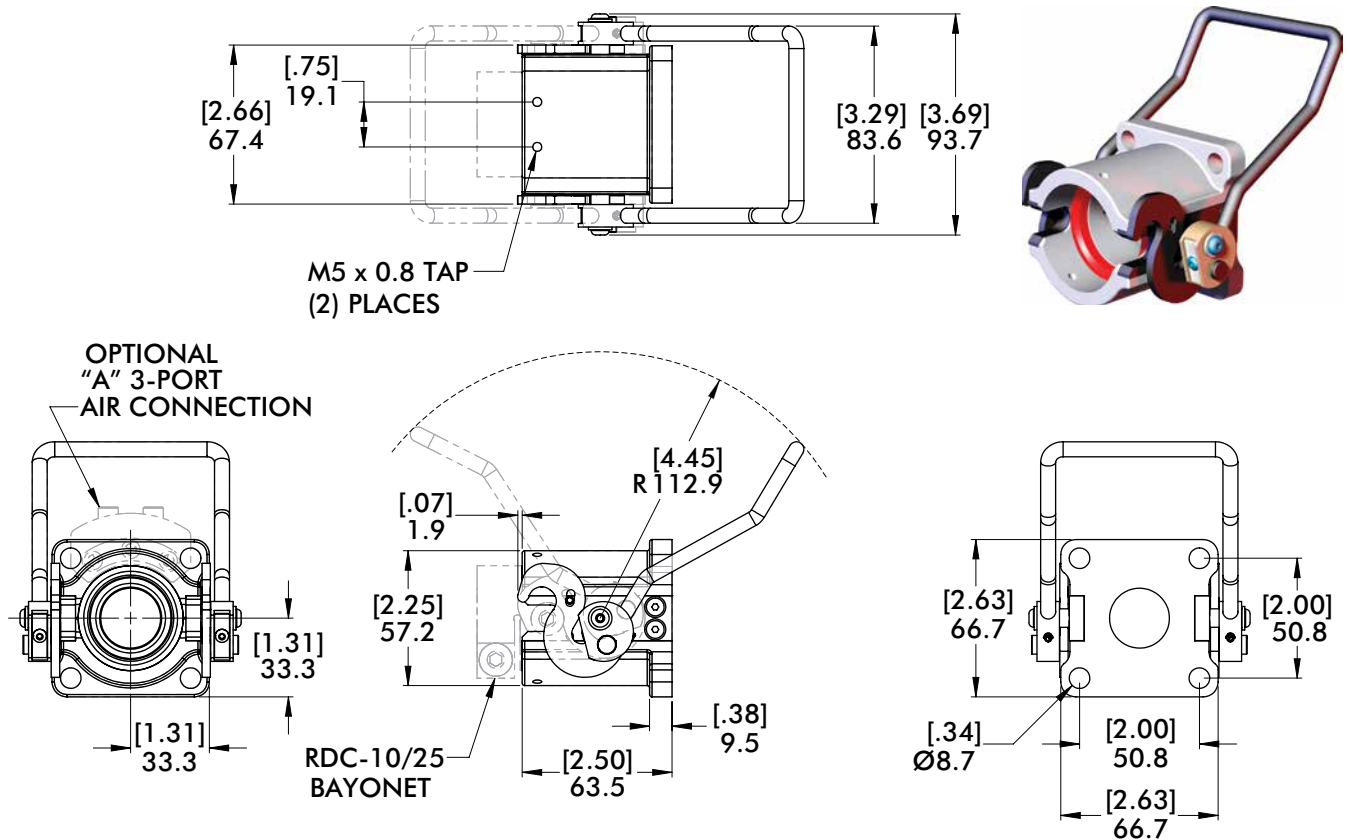
Inserts: Urethane

## Weight:

0.63 kg [1.4 lb]



## Dimensions

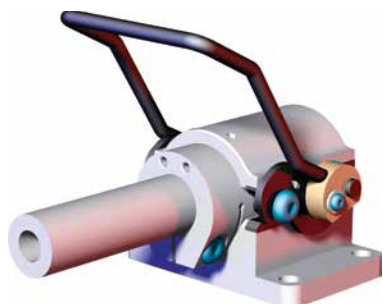


## How To Order

	Model	Mounting	Air Port Connection	Electrical Connection
<b>CPI</b>	<b>RDN-10</b>	<b>1F</b>	<b>4AS</b>	<b>5E</b>
	"RDN-10"	"1F"	"A" (3-Port Connector)	"5E" (5-Pin Connector)
	Ø25mm/1.00"	Flange Type	"5A" (5-Port Connector)	(Only available for "4AS" Option)
	Quick	Mounting	"4AS" (4-Port Connector)	
	Disconnect		(Leave blank for <b>No Options</b> )	
	Housing			

# RDN-10 HOUSINGS

Manual Tool Changers | Base Mount Style for RDC-10 Series Bayonets | Product Overview



**Specifications:**

**Max. Static Product Load:**  
47 N\*m [35 ft-lb]

**Material:**

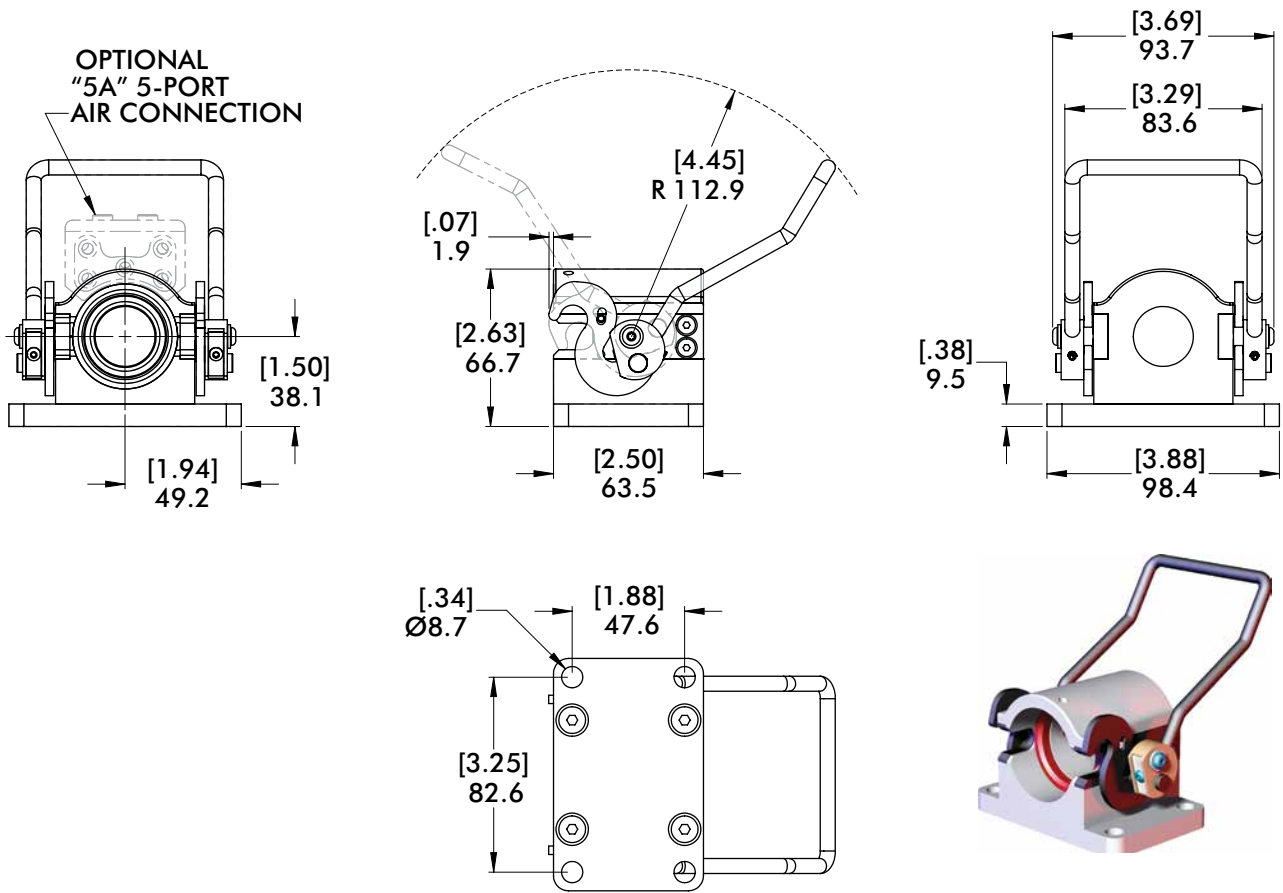
Body: Aluminum  
Knuckles: Brass  
Handle and Hooks: Steel  
Inserts: Urethane

**Weight:**  
0.82 kg [1.8 lb]

**Features:**

- 47.6mm x 82.6mm [1.88 in. x 3.25 in.] Base Mounting.
- Steel handle actuation allows quick and accurate installation, pulling the bayonet into a fixed position within the housing. This action also engages optional air and electric connectors
- Internal urethane rings eliminate vibration and seat the bayonet securely

## Dimensions



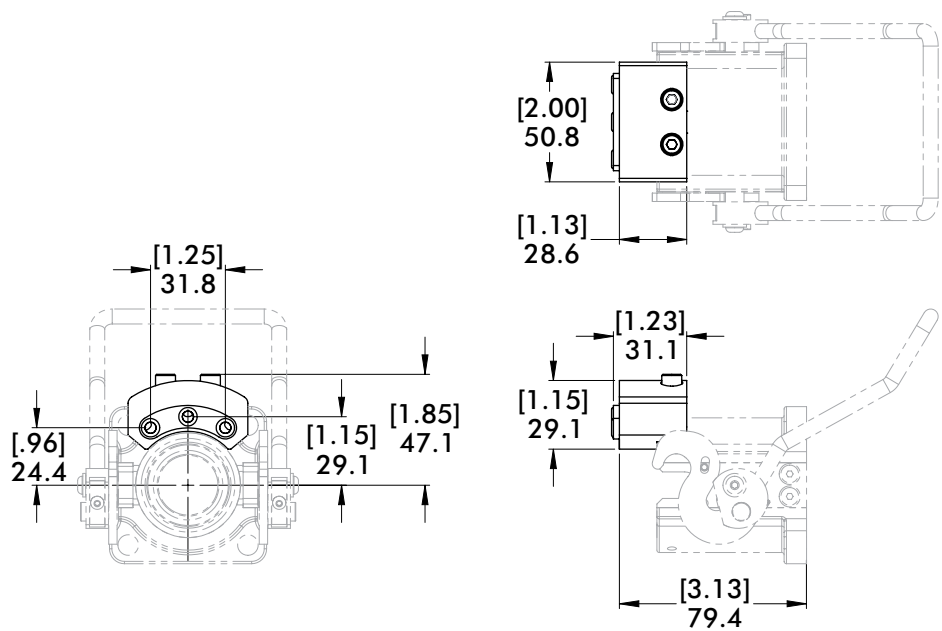
## How To Order

	Model	Mounting	Air Port Connection	Electrical Connection
CPI	<b>RDN-10</b>	<b>1B</b>	<b>4AS</b>	<b>5E</b>
	"RDN-10" Ø25mm/1.00" Quick Disconnect Housing	"1B" Base Type Mounting	"A" (3-Port Connector) "5A" (5-Port Connector) "4AS" (4-Port Connector) (Leave blank for <b>No Options</b> )	"5E" (5-Pin Connector) (Only available for "4AS" Option)

# AIR MANIFOLDS

Manual Tool Changers | RDN-10 Disconnect Series | Dimensions

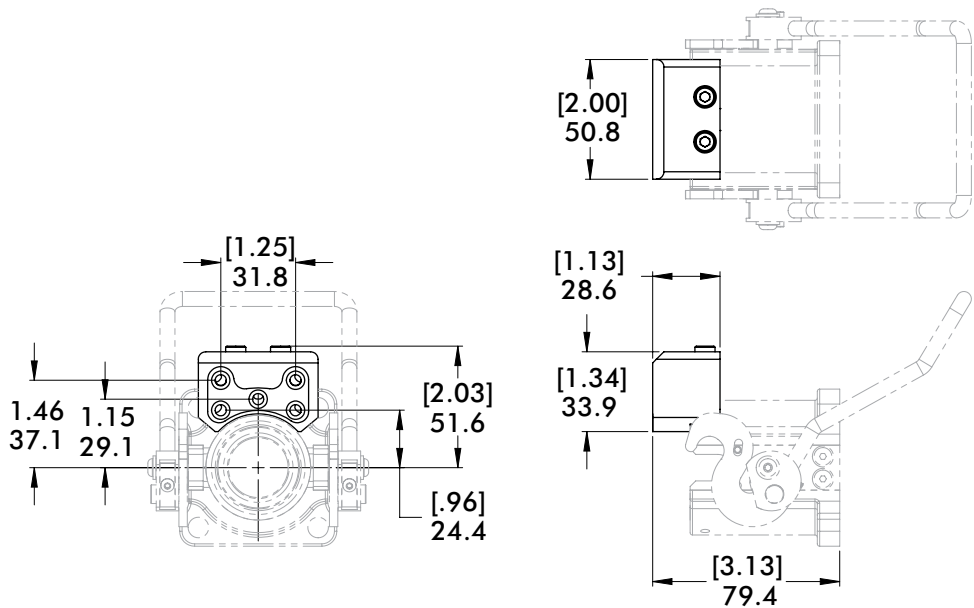
## 1A 3-Port Air Connection



**REPLACEMENT PART**

**RDN-10-8**

## 5A 5-Port Air Connection



**REPLACEMENT PART**

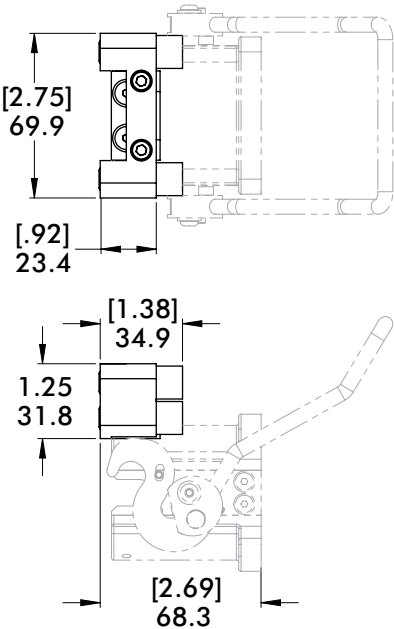
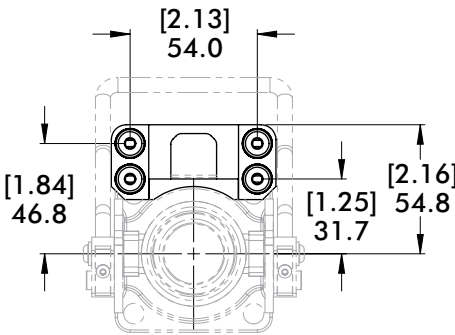
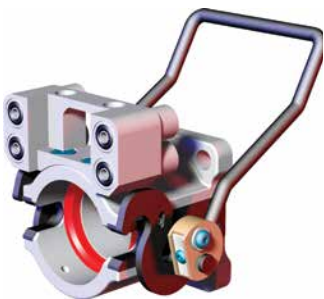
**RDN-10-9**



# AIR MANIFOLDS WITH OR WITHOUT ELECTRICAL CONNECTIONS

Manual Tool Changers | RDN-10 Disconnect Series | Dimensions

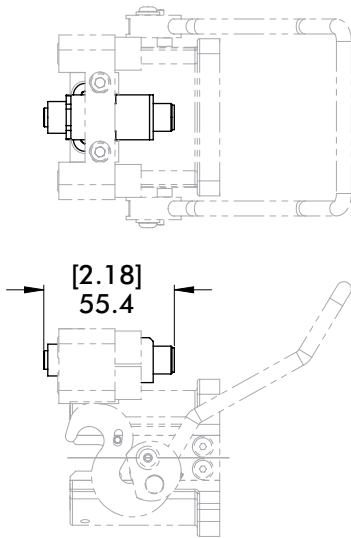
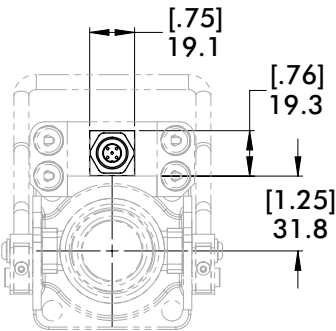
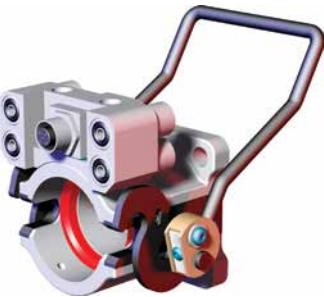
## 4AS 4-Port Air Connection with Shutoff



**REPLACEMENT PART**  
**CPI-RDN-10-4AS**

**Air fittings**  
(4) Needed  
**RDN-AS-U18**

## 5E 5-Pin Micro Electric Connection



See Page 17 for  
Pin Configuration

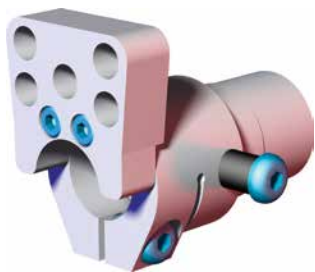
**REPLACEMENT PART**  
**CPI-RDH-F5S-5MCM**



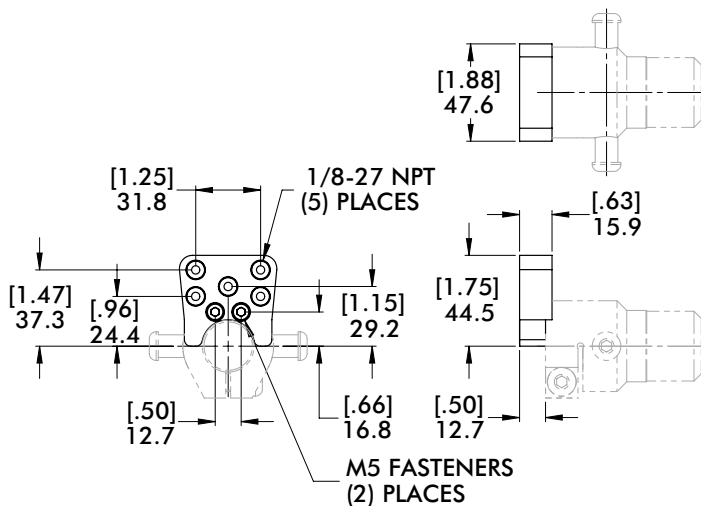
# AIR MANIFOLDS WITH OR WITHOUT ELECTRICAL CONNECTIONS

Manual Tool Changers | RDC-10/25 Series Bayonets | Dimensions

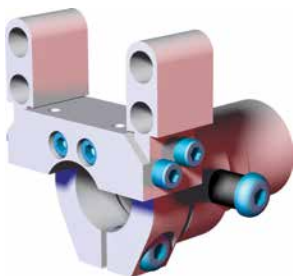
## 5A 5-Port Air Connection



**REPLACEMENT PART**  
**RDC-10-5**

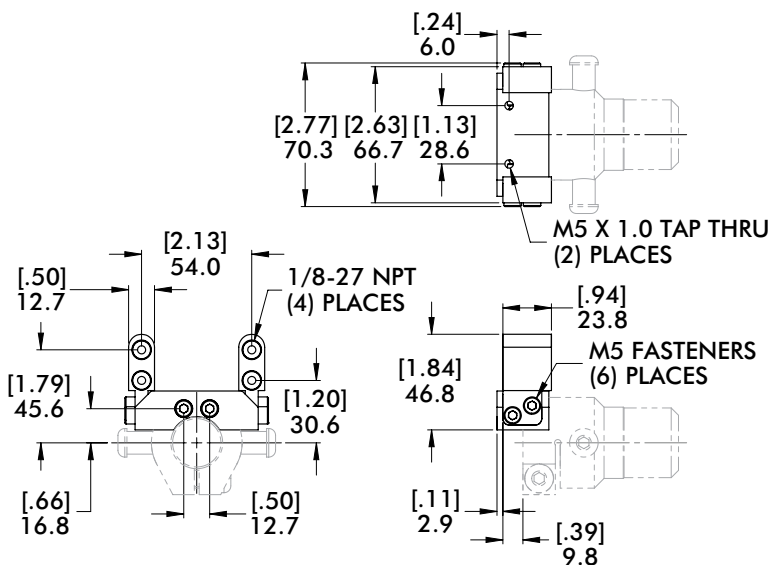


## 4AS 4-Port Air Connection with Shutoff

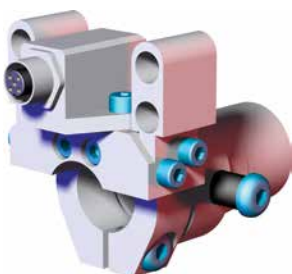


(2) Required

**REPLACEMENT PART**  
**RDC-10-4**

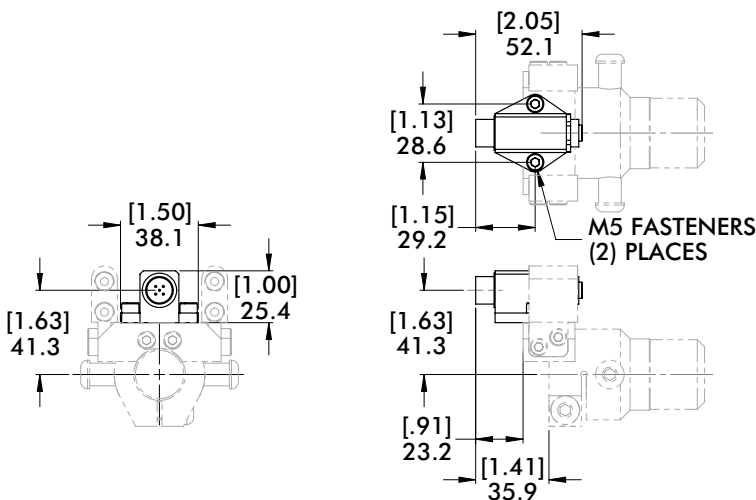


## 5E 5-Pin Micro Electric Connection



See Page 23 for  
Pin Configuration

**REPLACEMENT PART**  
**CPI-RDB-M5P-5MCF**



# RDN-40 DISCONNECT HOUSINGS

Manual Tool Changers | Flange Style Housing for RDC-40/150 Series Bayonets | Product Overview

## Features:

- 60.3mm [2.38 in.] Sq. Flange Mntg.
- Steel handle actuation allows quick and accurate installation, pulling the bayonet into a fixed position within the housing. This action also engages optional air and electric connectors.
- Internal urethane rings eliminate vibration and seat the bayonet securely.

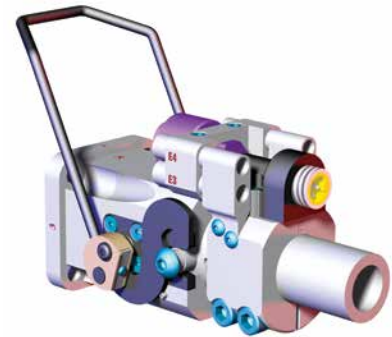
## Specifications:

**Max. Static Product Load:**  
305 N\*m [225 ft-lb]

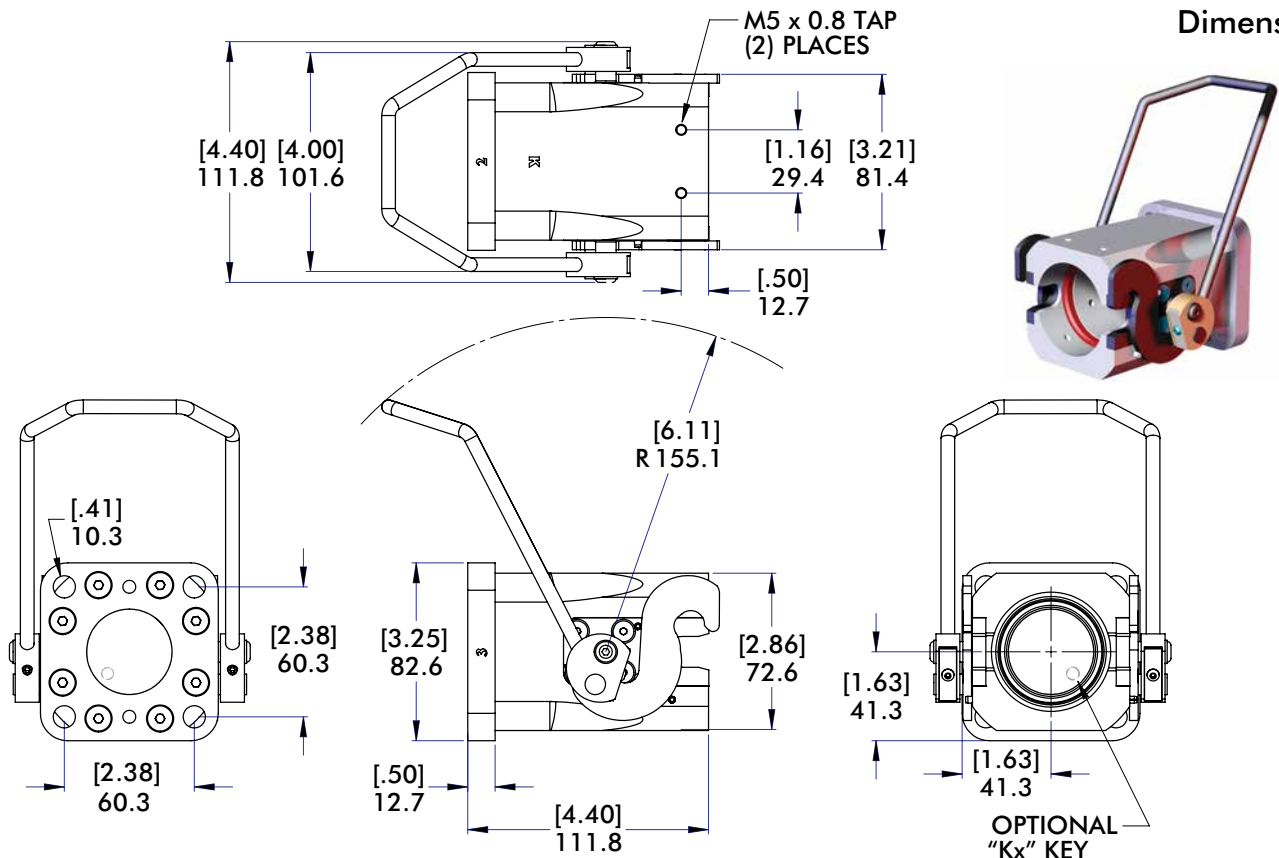
### Material:

Body: Aluminum  
Knuckles: Brass  
Handle and Hooks: Steel  
Inserts: Urethane

**Weight:**  
1.5 kg [3.3 lb]



## Dimensions



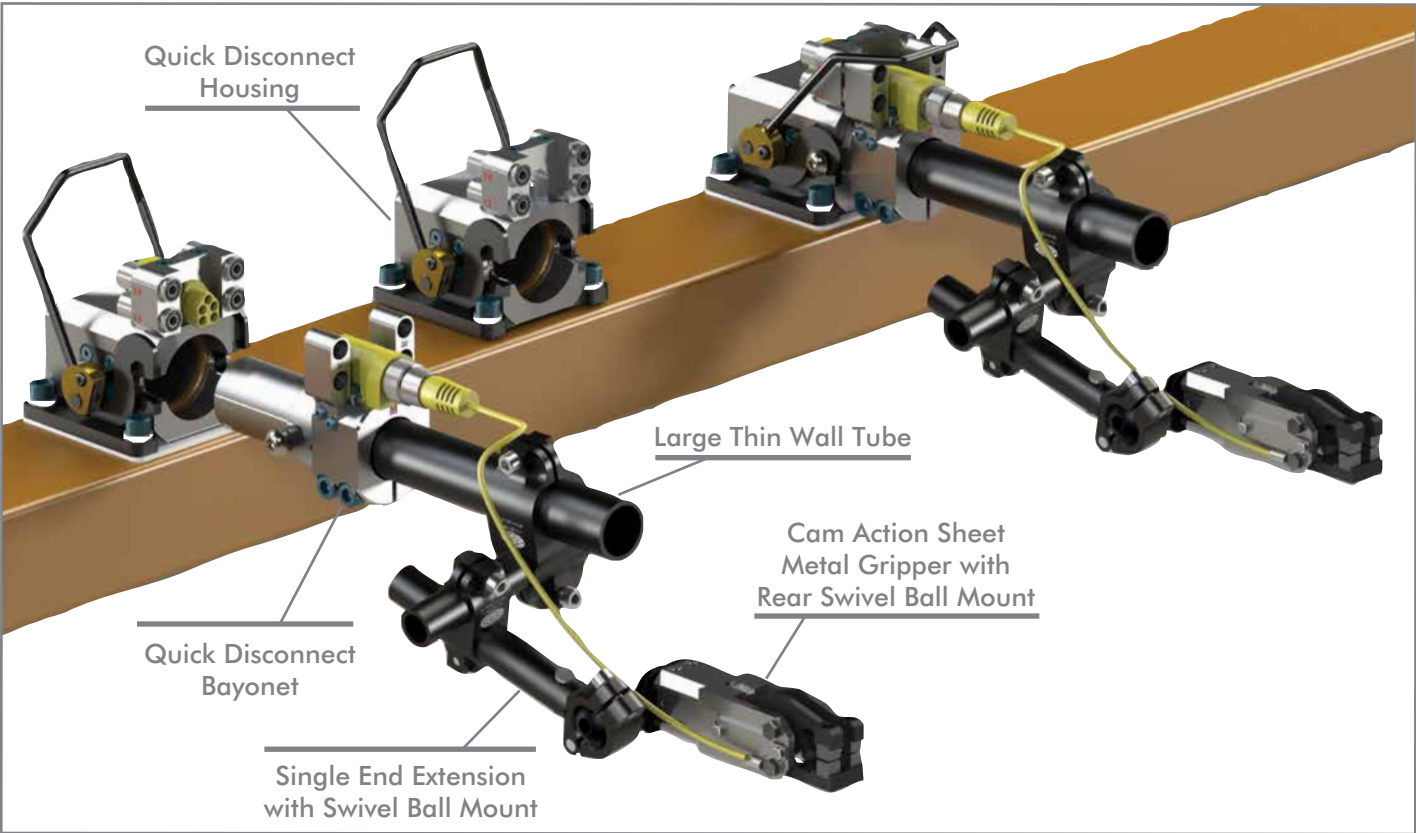
## How To Order

Add for  
"E4" or "E6"  
Air Port  
Connection  
Only

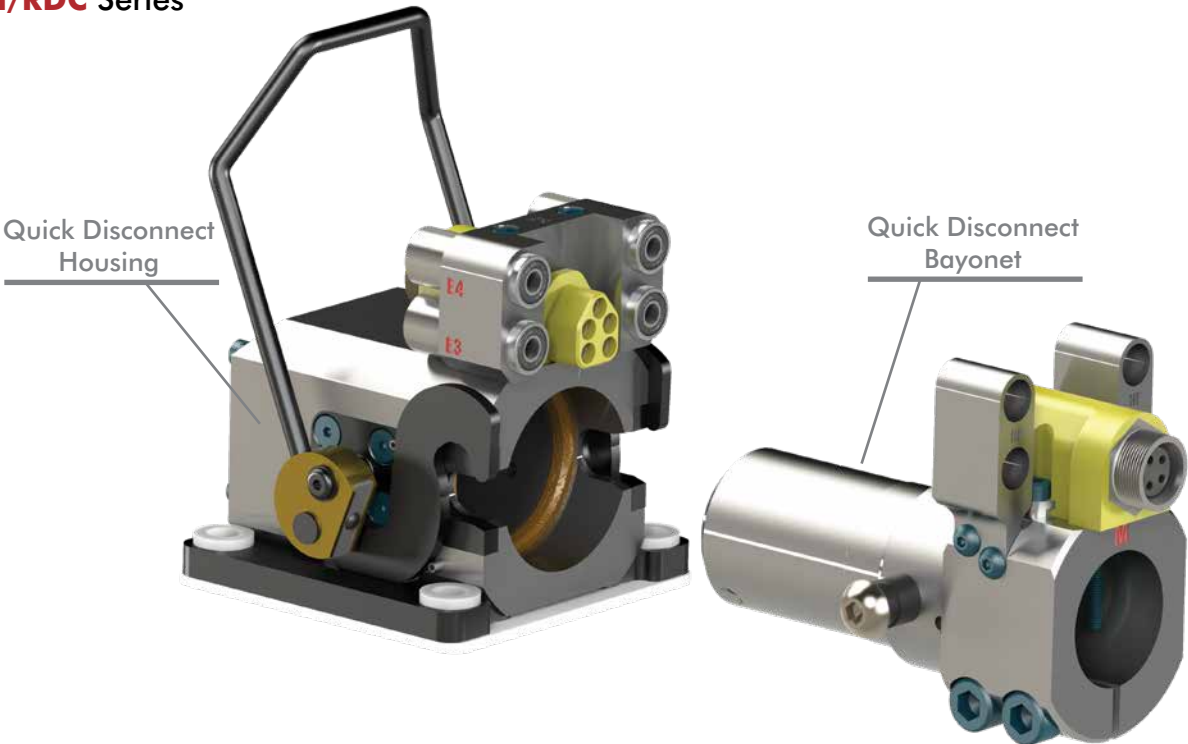
Model	Mounting	Air Port Connection	Key Position	Electrical Connection	
CPI — <b>RDN-40</b>	— <b>1F</b>	— <b>S4</b>	— <b>K2</b>	— <b>MC</b>	— <b>HF</b>
 "RDN-40" Ø40mm/1.50" Quick Disconnect Housing	 "1F" Flange Type Mounting	 "S4" (4-Port Internal) "E4" (4-Port External) "E6" (6-Port External) "SE4" (4-Port Int & Ext) (Leave blank for <b>No Options</b> )	 "K1 (1-4)" "VWK (1-16)" (Leave blank for <b>No Options</b> )	 "MC" (Micro 5-Pin) "MN" (Mini 3-Pin) (Leave blank for <b>No Options</b> )	

# RDN-40 BASE MOUNT DISCONNECT HOUSINGS

Manual Tool Changers | Tri-Axis Rail Tooling Example



## RDN/RDC Series

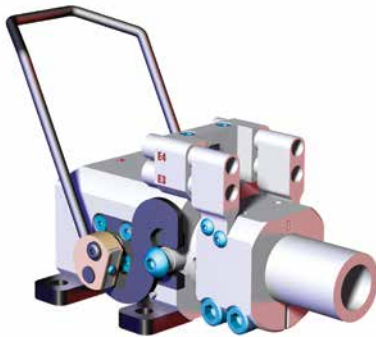


Model Number	Description
CPI-RDN-40-JB-E4-5MNM-HF-INS	Quick Disconnect Housing with 4-Port High Flow Air, 5-Pin Electric, Insulation
CPI-RDC-15-E4-5MNF-HF	Quick Disconnect Bayonet with 4-Port High Flow Air, 5-Pin Electric



# RDN-40 DISCONNECT HOUSINGS

Manual Tool Changers | Base Mount Housing for RDC-40/150 Series Bayonets | Product Overview



## Specifications:

**Max. Static Product Load:**  
305 N\*m [225 ft-lb]

## Material:

Body: Aluminum  
Knuckles: Brass  
Handle and Hooks: Steel  
Inserts: Urethane

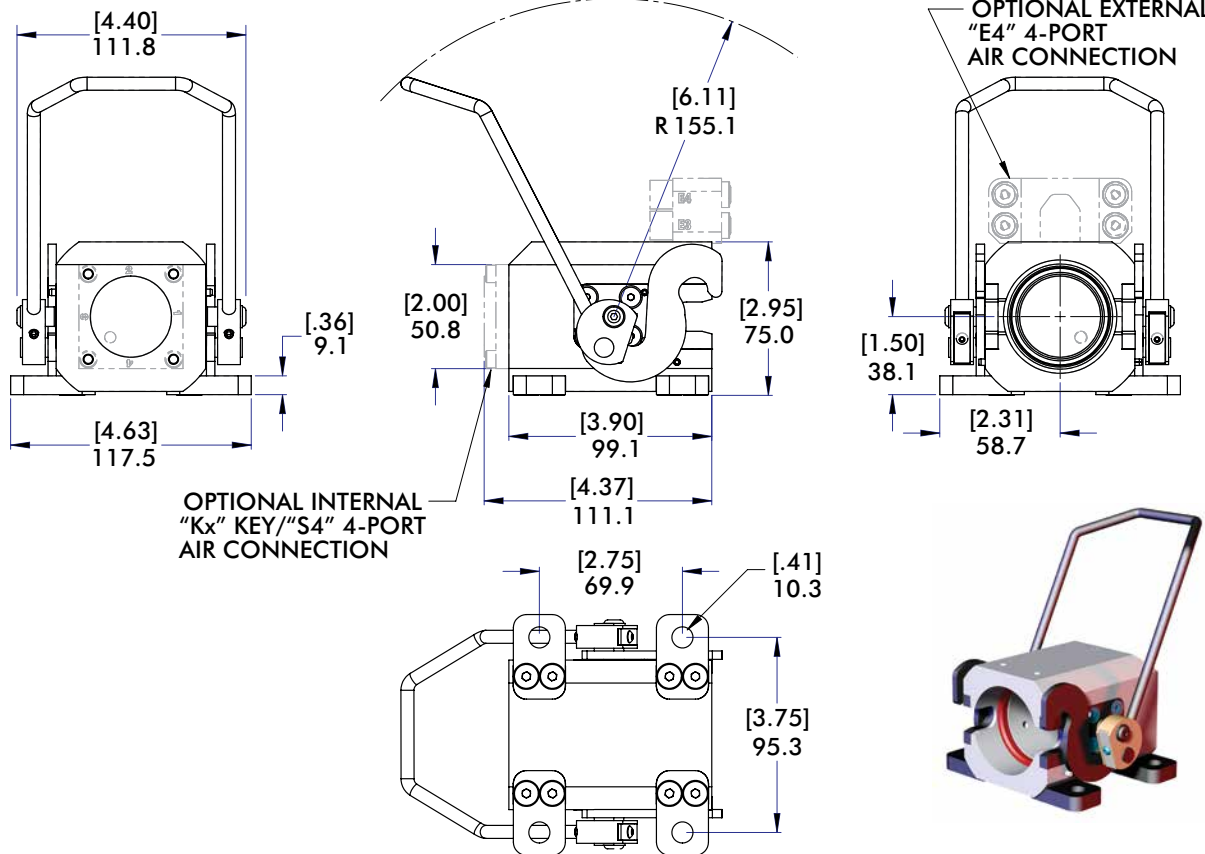
## Weight:

1.4 kg [3.1 lb]

## Features:

- 70mm x 95.3mm [2.75 in. x 3.75 in.] Base Mounting.
- Steel handle actuation allows quick and accurate installation, pulling the bayonet into a fixed position within the housing. This action also engages optional air and electric connectors.
- Internal urethane rings eliminate vibration and seat the bayonet securely.

## Dimensions, How To Order



## How To Order

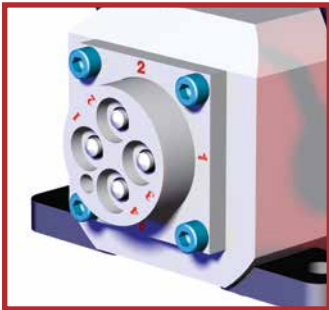
Model	Mounting	Air Port Connection	Key Position	Electrical Connection	
CPI — <b>RDN-40</b> —	<b>1B</b> —	<b>S4</b> —	<b>K2</b> —	<b>MC</b> —	<b>HF</b>
 "RDN-40" Ø40mm/1.50" Quick Disconnect Housing	 "1B" Base Type Mounting	 "S4" "E4" "E6" "SE4" (Leave blank for No Options)	 "K (1-4)" "VWK (1-16)" (Leave blank for No Options)	 "MC" (Micro 5-Pin) "MN" (Mini 3-Pin) (Leave blank for No Options)	Add for "E4" or "E6" Air Port Connection Only



# TOOLING ERROR PROOF KEY AND AIR PORTS

Manual Tool Changers | RDN-40 Flange Mount Disconnect Housings | Dimensions

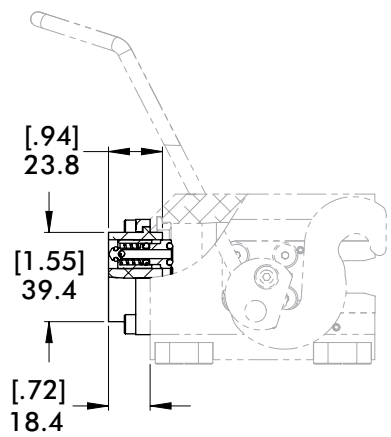
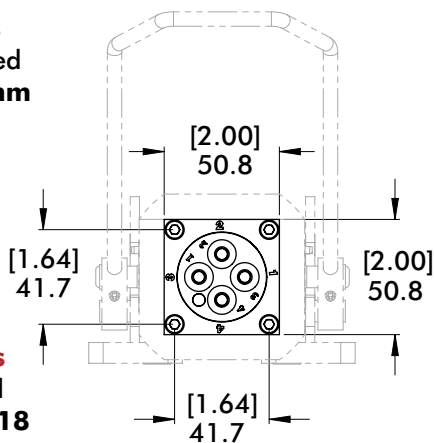
## S4 4-Port Internal Air Connection for Base Style Mounting



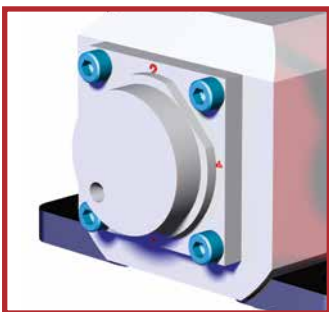
**REPLACEMENT PART**  
**RDN-40-10-IAB**

**Dowels**  
(1) Needed  
**M6 x 25mm**

**Air fittings**  
(4) Needed  
**RDN-SAS-U18**

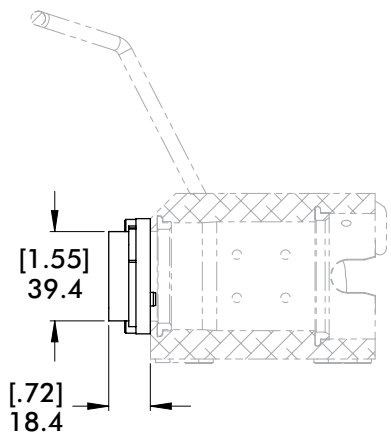
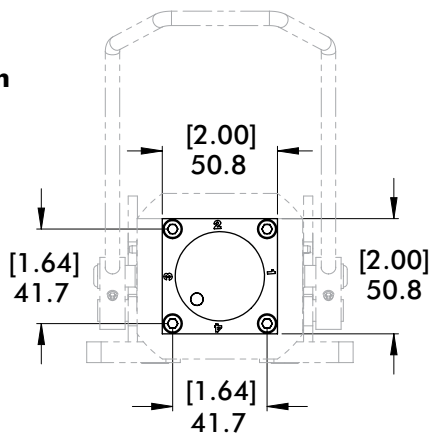


## Kx Locating Key for Base Style Mounting

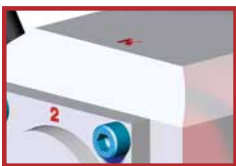


**REPLACEMENT PART**  
**RDN-40-10-IKB**

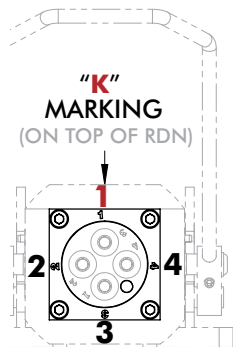
**Dowels**  
(1) Needed  
**M6 x 25mm**



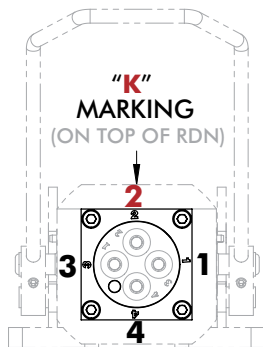
## S4 and Kx Internal Key Position for Base Style Mounting



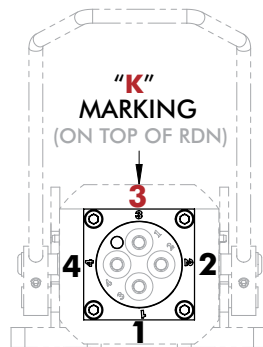
**BASE MOUNT RING**  
(1) Needed  
**RDN-40-3-MR**



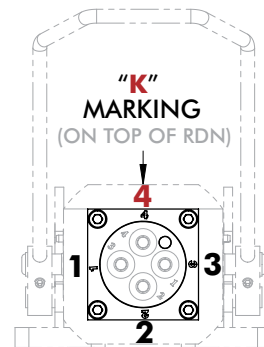
**"K1" POSITION**



**"K2" POSITION**



**"K3" POSITION**

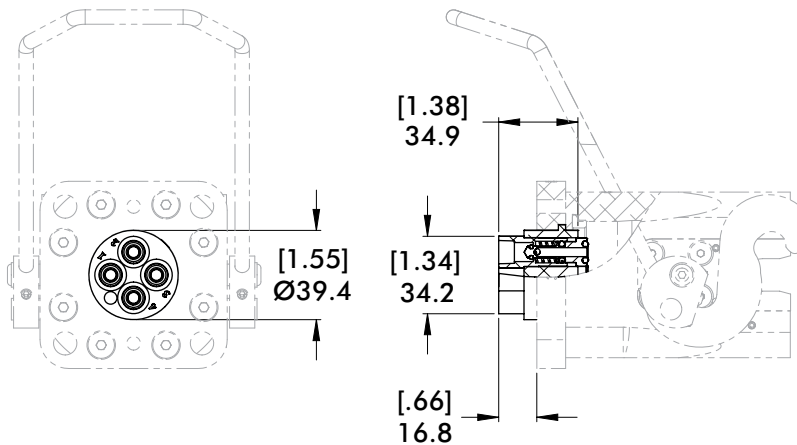


**"K4" POSITION**

# TOOLING ERROR PROOF KEY AND AIR PORTS

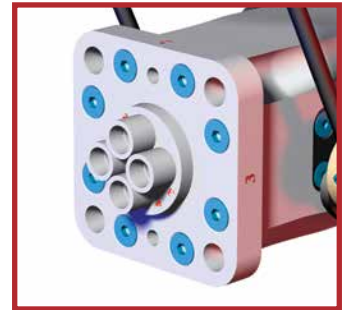
Manual Tool Changers | RDN-40 Flange Mount Disconnect Housings | Mounting

## S4 4-Port Internal Air Connection for Flange Style Mounting



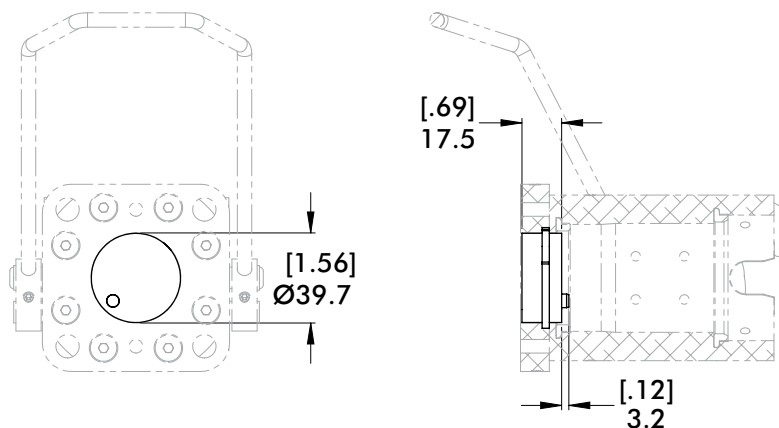
**Dowels**  
(1) Needed  
**M6 x 25mm**

**Air fittings**  
(4) Needed  
**RDN-AS-U18**



**REPLACEMENT PART**  
**RDN-40-10-IAB**

## Kx Locating Key for Flange Style Mounting

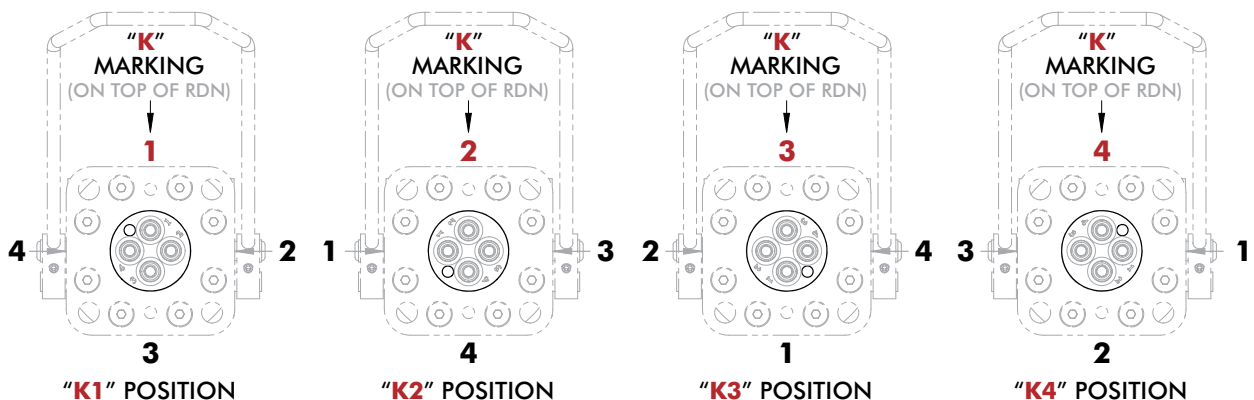
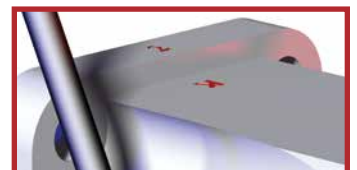


**Dowels**  
(1) Needed  
**M6 x 25mm**



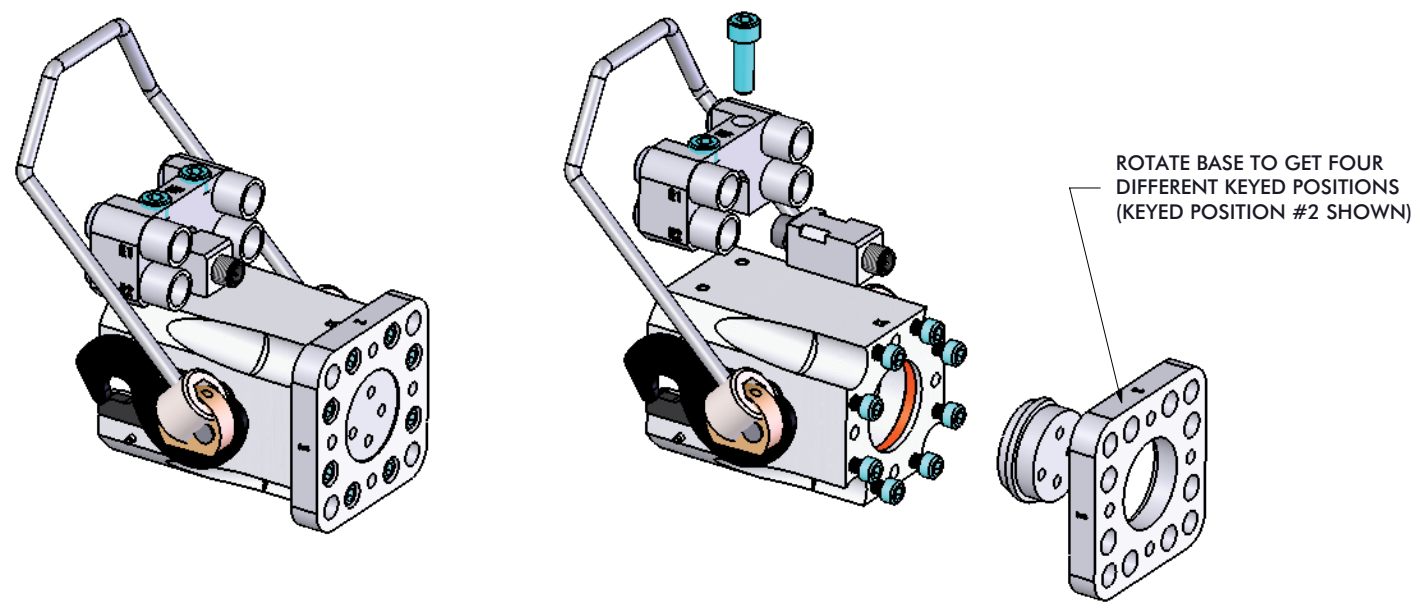
**REPLACEMENT PART**  
**RDN-40-10-IKB**

## S4 and Kx Internal Key Position for Flange Style Mounting



# TOOLING ERROR PROOF KEY POSITIONS

## Manual Tool Changers | Key Position Callout Chart

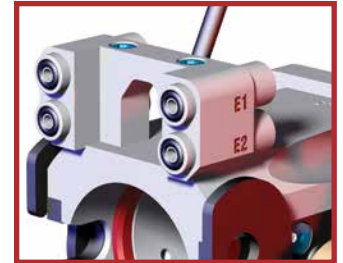
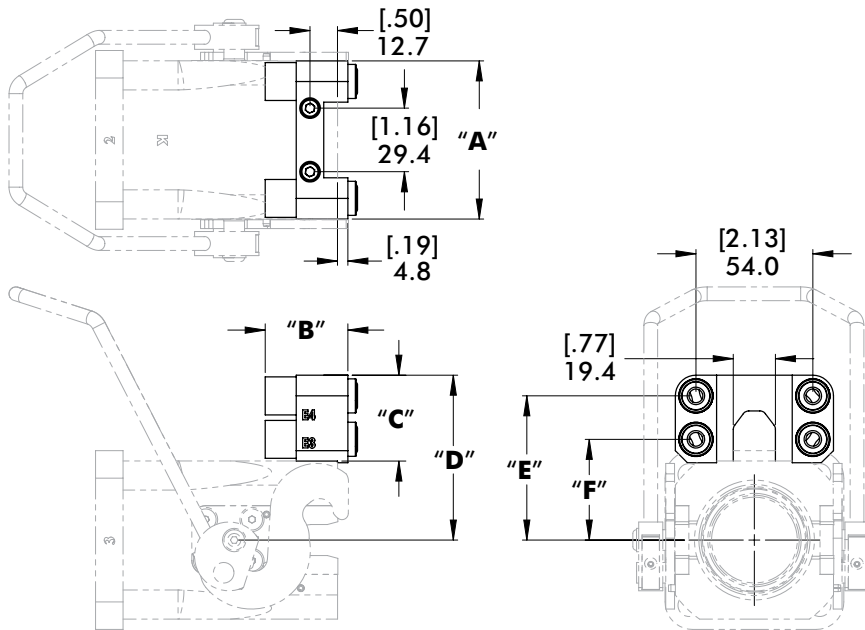


VIEWED FROM FRONT OF HOUSING

POSITION #1      POSITION #2      POSITION #3      POSITION #4

DOWEL IN HOLE A				
	VWK1	VWK5	VWK9	VWK13
DOWEL IN HOLE B				
	VWK2	VWK6	VWK10	VWK14
DOWEL IN HOLE C				
	VWK3	VWK7	VWK11	VWK15
DOWEL IN HOLE D				
	VWK4	VWK8	VWK12	VWK16

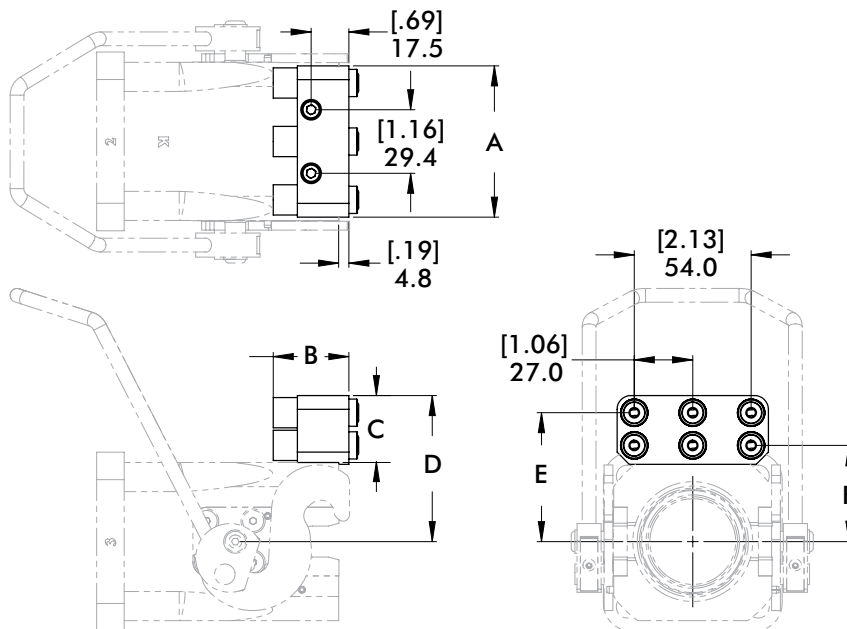
### E4 4-Port External Air Connection



**Air fittings**  
(4) Needed  
**RDN-AS-U18-Standard**  
**RDN-AS-U14-High Flow**

ORDER OPTION	REPLACEMENT PART	"A"	"B"	"C"	"D"	"E"	"F"	WEIGHT
<b>"E4"</b> (Standard High Flow)	<b>CPI-RDN-40-4AS-HF</b>	[2.88] 73.0	[1.50] 38.1	[1.56] 39.6	[3.00] 76.1	[2.62] 66.6	[1.83] 46.5	[2.90 lb] 1.32 kg
(Replacement for "E4" Legacy Applications only)	<b>CPI-RDN-40-4AS</b>	[2.75] 69.9	[1.38] 34.9	[1.22] 31.0	[2.66] 67.5	[2.34] 59.5	[1.75] 44.4	[2.89 lb] 1.31 kg

### E6 6-Port External Air Connection



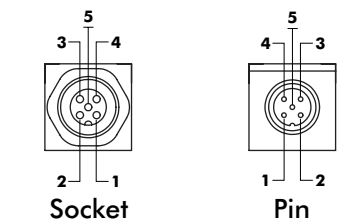
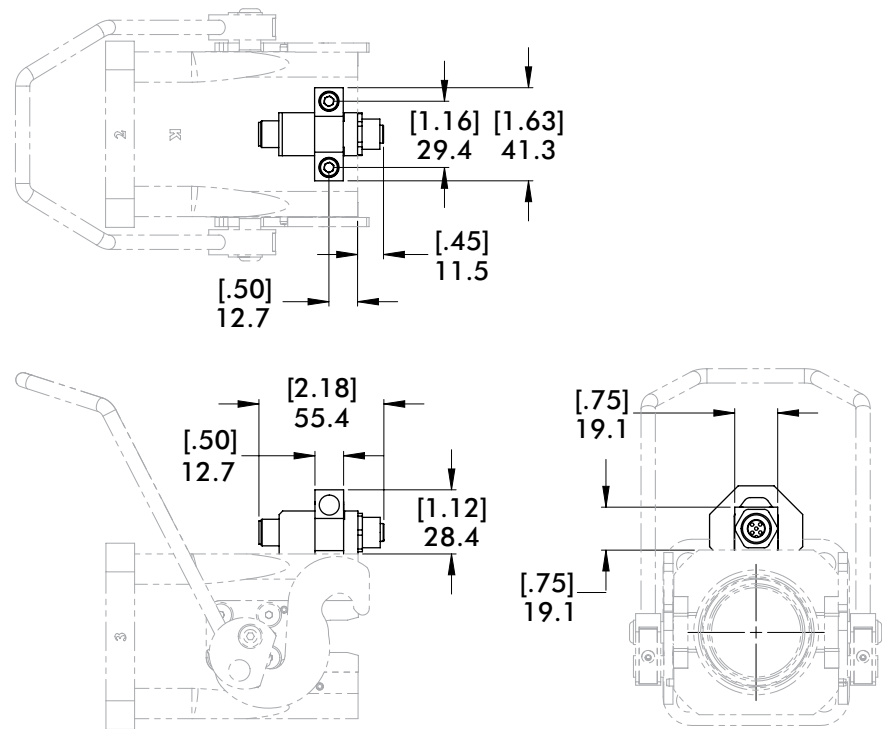
**Air fittings**  
(6) Needed  
**RDN-AS-U18-Standard**  
**RDN-AS-U14-High Flow**

ORDER OPTION	REPLACEMENT PART	"A"	"B"	"C"	"D"	"E"	"F"	WEIGHT
(Replacement for "E6" Legacy Applications only)	<b>RDN-40-10-6PA</b>	[2.75] 69.9	[1.38] 34.9	[1.22] 31.0	[2.66] 67.5	[2.43] 59.5	[1.75] 44.4	[2.89 lb] 1.31 kg
<b>"E6"</b> (Standard High Flow)	<b>CPI-RDN-40-10-6P-HF</b>	[3.00] 76.2	[1.5] 38.1	[1.59] 40.5	[3.03] 76.9	[2.69] 68.3	[1.87] 47.5	[2.90 lb] 1.32 kg

# ELECTRICAL CONNECTIONS

Manual Tool Changers | RDN-40 Series Disconnect Housings | Dimensions

## MC 5-Pin Micro Electric Connection

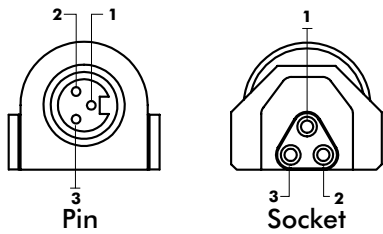
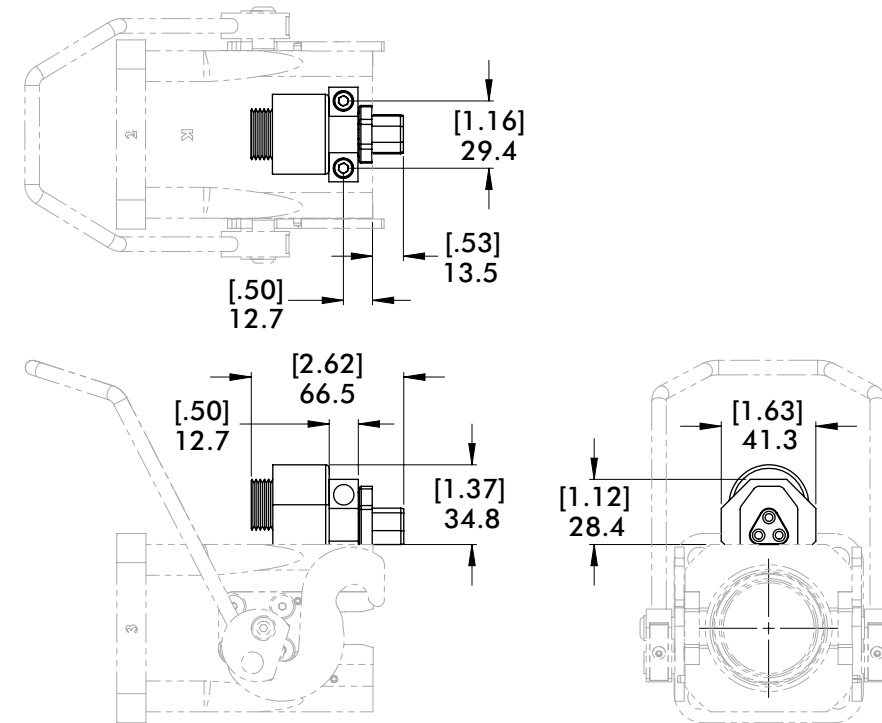


SOCKET #1	PIN #1
SOCKET #2	PIN #2
SOCKET #3	PIN #3
SOCKET #4	PIN #4
SOCKET #5	PIN #5

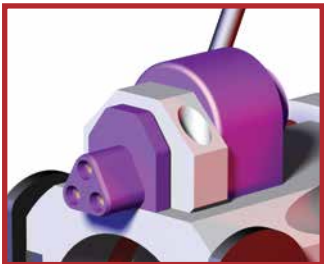


Part Number	
Plug & Strap	CPI-RDH-F5S-5MCM
Plug	RDH-F5S-5MCM
Strap	540-22005

## MN 3-Pin Mini Electric Connection



SOCKET #1	PIN #1
SOCKET #2	PIN #2
SOCKET #3	PIN #3



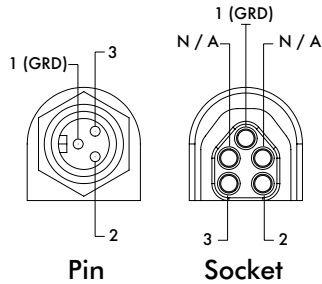
REPLACEMENT PART
CPI-TTH-F3S-3B3

# ELECTRICAL CONNECTIONS

Manual Tool Changers | RDN-40 Series Disconnect Housings | Dimensions

## 5-Pin Mini Electric Connection

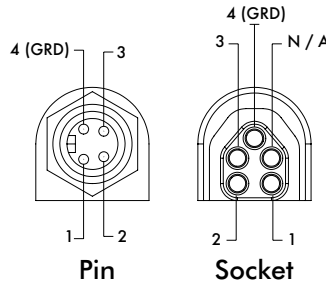
CPI-RDN-40-F5S-3MNM



SOCKET #1	GREEN	PIN #1
SOCKET #2	BLACK	PIN #2
SOCKET #3	WHITE	PIN #3
N / A		
N / A		

PLUG COLOR: BLACK

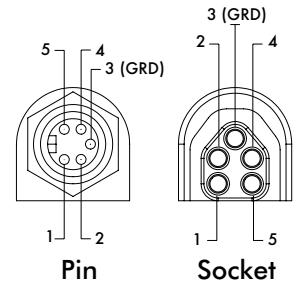
CPI-RDN-40-F5S-4MNM



SOCKET #1	BLACK	PIN #1
SOCKET #2	WHITE	PIN #2
SOCKET #3	RED	PIN #3
SOCKET #4	GREEN	PIN #4
N / A		

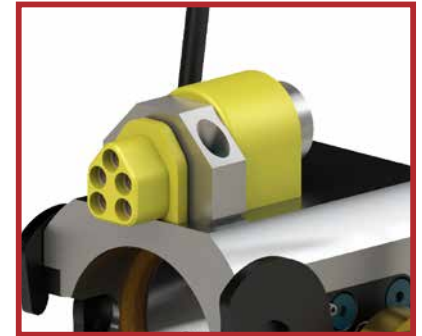
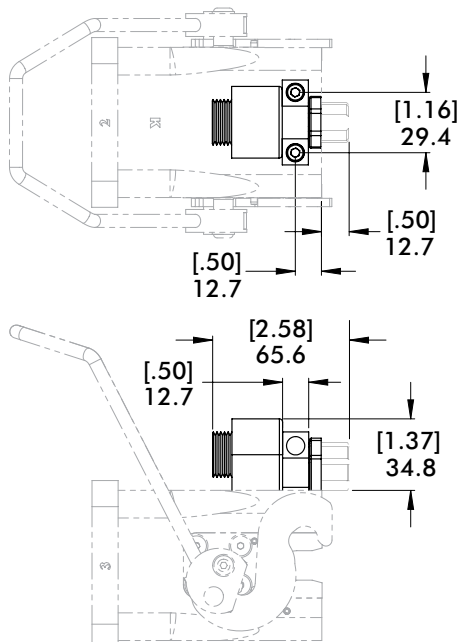
PLUG COLOR: GREEN

CPI-RDN-40-F5S-5MNM

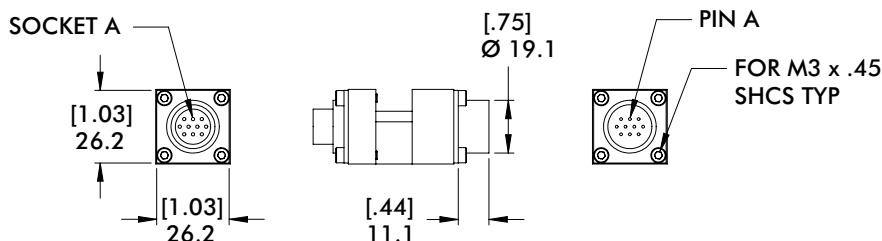
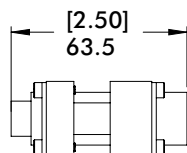


SOCKET #1	WHITE	PIN #1
SOCKET #2	RED	PIN #2
SOCKET #3	GREEN	PIN #3
SOCKET #4	ORANGE	PIN #4
SOCKET #5	BLACK	PIN #5

PLUG COLOR: YELLOW



Strap not included



## 10-Pin Amphenol



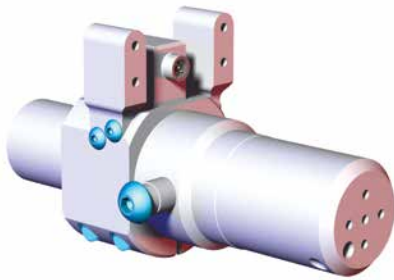
**REPLACEMENT PART**

**CPI-RDN-40-5-10**



# RDC SERIES BAYONET

Manual Tool Changers | 40mm / 1.50" Diameter Booms | Product Overview



## Features:

- Used in conjunction with the Quick Disconnect Housing to provide efficient mode of changing tools manually.
- (2) Hardened alignment pins allows quick and accurate installation into the housing.
- Optional internal key positioning prevents bayonet from being inserted in the wrong orientation.

## Specifications:

**Max. Static Product Load:**  
305 N\*m [225 ft-lb]

### Material:

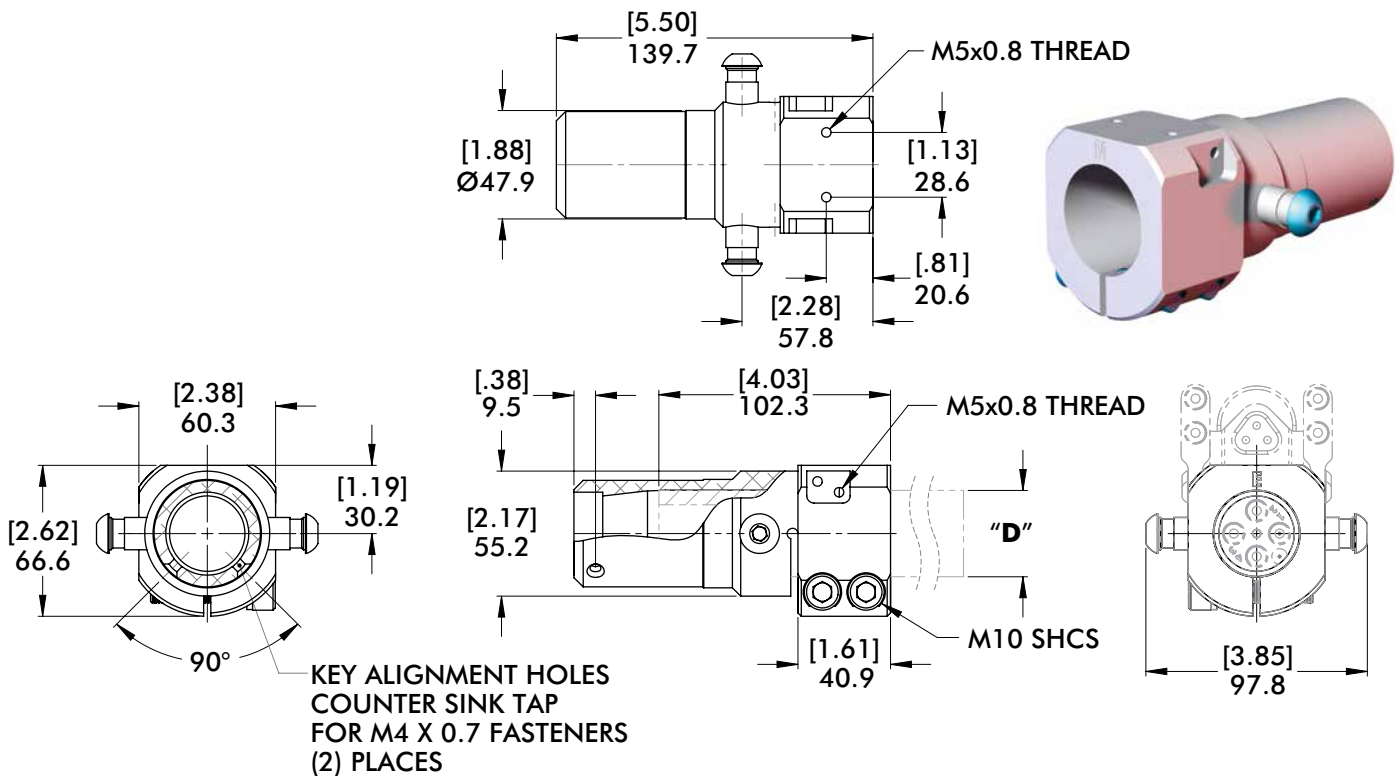
Body: Aluminum

Pins: Steel

### Weight:

0.69 kg [3.5 lb]

## Dimensions



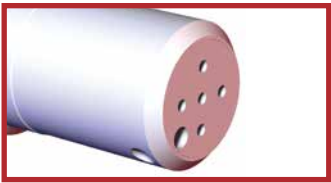
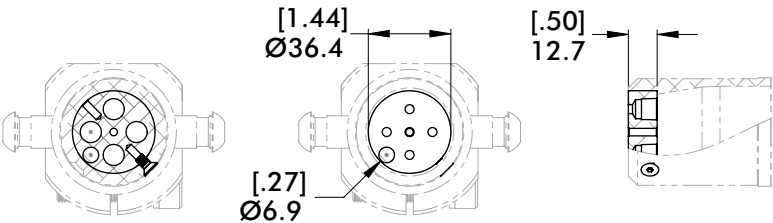
## How To Order

Model	Boom/Tube (Ø) "D"	Air Port Connection	Key Position	Electrical Connection	Add for "E4" or "E6" Air Port Connection Only
CPI - <b>RDC</b>	<b>40</b>	<b>S4</b>	<b>K1</b>	<b>MC</b>	<b>HF</b>
"RDC" Quick Disconnect Bayonet	"1510" 1.00" (in) "15" 1.50" (in) "40" 40mm Add "-1" after Boom/Tube (Ø) for No Options	"S4" (4-Port Internal) "E4" (4-Port External) "E6" (6-Port External) "SE4" (4-Port Int & Ext) (Leave blank for No Options)	"K (1-4)" "VWK (1-16)" (Leave blank for No Options)	"MC" (Micro 5-Pin) "MN" (Mini 3-Pin) (Leave blank for No Options)	

# TOOLING ERROR PROOF KEYS

Manual Tool Changers | RDC-40/150 Series Bayonets | Dimensions

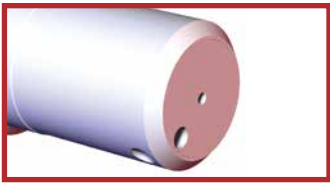
## S4 4-Port Internal Air Connection and Kx Locating Key



"S4" 4-Port Internal Air Connection

REPLACEMENT PART

RDC-40-4-IAB

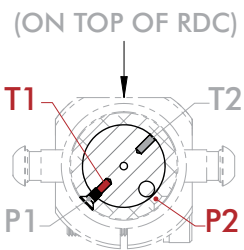


"Kx" Locating Key  
(x) Refers to Position

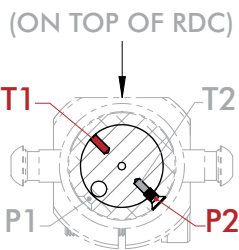
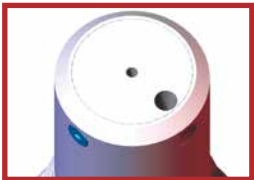
REPLACEMENT PART

RDC-40-4-IKB

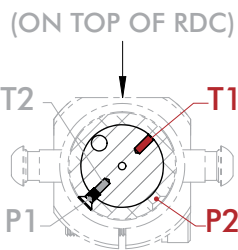
## S4 and Kx Internal Key Position



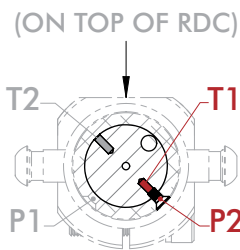
"K1" POSITION  
FASTENER IN  
(P1/T1)



"K2" POSITION  
FASTENER IN  
(P2/T2)



"K3" POSITION  
FASTENER IN  
(P1/T2)



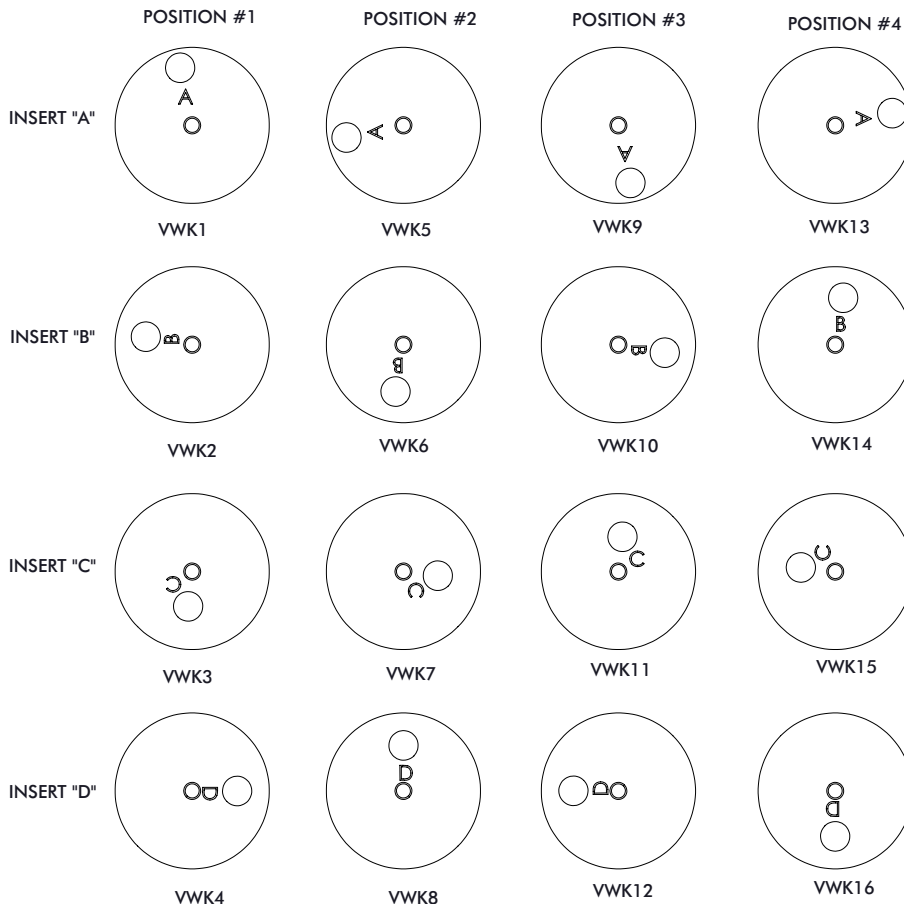
"K4" POSITION  
FASTENER IN  
(P2/T1)



# TOOLING ERROR PROOF KEY POSITIONS

Manual Tool Changers | RDC-40/150 Series Bayonets

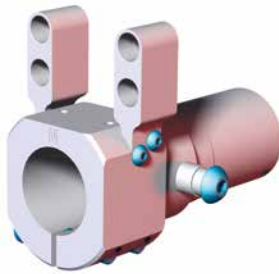
ASSEMBLY #	KEY POSITION #	KEY BLOCK #	INSERT	POSITION
CPI-RDC-40-E4-VWK1-MC-HF	VWK1	RDC-40-4-IKB-16-KA1-4	A	1
CPI-RDC-40-E4-VWK2-MC-HF	VWK2	RDC-40-4-IKB-16-KB1-4	B	1
CPI-RDC-40-E4-VWK3-MC-HF	VWK3	RDC-40-4-IKB-16-KC1-4	C	1
CPI-RDC-40-E4-VWK4-MC-HF	VWK4	RDC-40-4-IKB-16-KD1-4	D	1
CPI-RDC-40-E4-VWK5-MC-HF	VWK5	RDC-40-4-IKB-16-KA1-4	A	2
CPI-RDC-40-E4-VWK6-MC-HF	VWK6	RDC-40-4-IKB-16-KB1-4	B	2
CPI-RDC-40-E4-VWK7-MC-HF	VWK7	RDC-40-4-IKB-16-KC1-4	C	2
CPI-RDC-40-E4-VWK8-MC-HF	VWK8	RDC-40-4-IKB-16-KD1-4	D	2
CPI-RDC-40-E4-VWK9-MC-HF	VWK9	RDC-40-4-IKB-16-KA1-4	A	3
CPI-RDC-40-E4-VWK10-MC-HF	VWK10	RDC-40-4-IKB-16-KB1-4	B	3
CPI-RDC-40-E4-VWK11-MC-HF	VWK11	RDC-40-4-IKB-16-KC1-4	C	3
CPI-RDC-40-E4-VWK12-MC-HF	VWK12	RDC-40-4-IKB-16-KD1-4	D	3
CPI-RDC-40-E4-VWK13-MC-HF	VWK13	RDC-40-4-IKB-16-KA1-4	A	4
CPI-RDC-40-E4-VWK14-MC-HF	VWK14	RDC-40-4-IKB-16-KB1-4	B	4
CPI-RDC-40-E4-VWK15-MC-HF	VWK15	RDC-40-4-IKB-16-KC1-4	C	4
CPI-RDC-40-E4-VWK16-MC-HF	VWK16	RDC-40-4-IKB-16-KD1-4	D	4



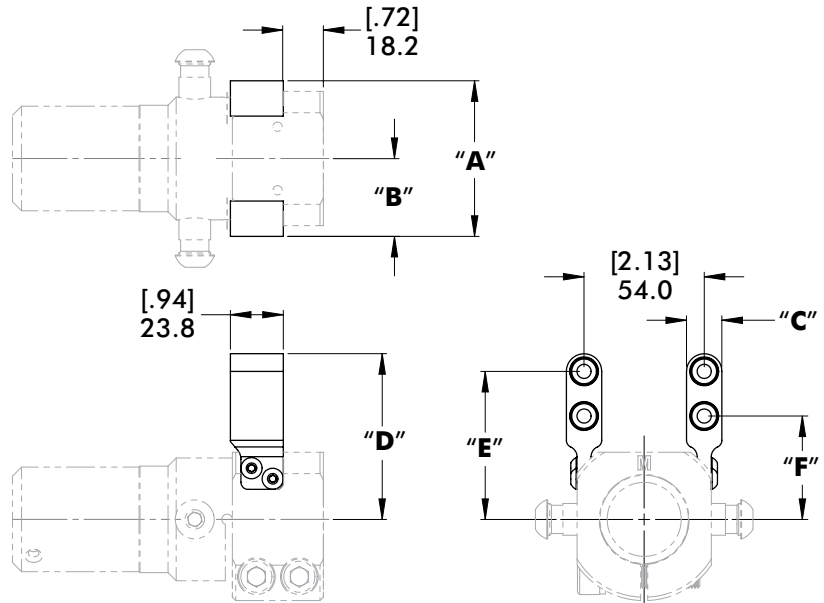
# EXTERNAL AIR MANIFOLDS

Manual Tool Changers | RDC-40/150 Series Bayonets | Dimensions

## 4-Port External Air Connection

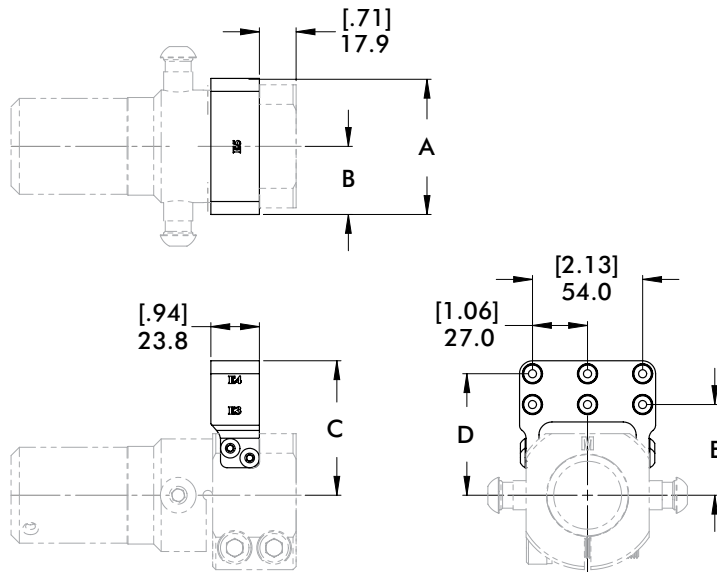
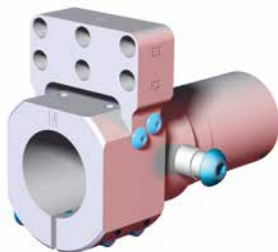


(2) Required



ORDER OPTION	REPLACEMENT PART	"A"	"B"	"C"	"D"	"E"	"F"	WEIGHT
"E4" (Standard High Flow)	CPI-RDC-40-4-HF	[2.75] 69.9	[1.38] 34.9	[1.56] 39.6	[3.00] 76.1	[2.62] 66.6	[1.83] 46.5	[2.90 lb] 1.32 kg
(Replacement for "E4" Legacy Applications only)	CPI-RDC-40-4	[2.63] 66.7	[1.30] 32.9	[1.22] 31.0	[2.66] 67.5	[2.34] 59.5	[1.75] 44.4	[2.89 lb] 1.31 kg

## 6-Port External Air Connection

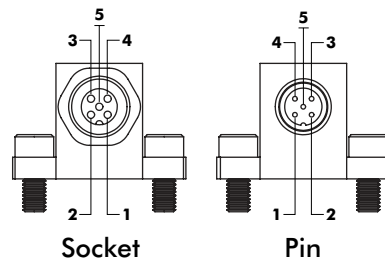
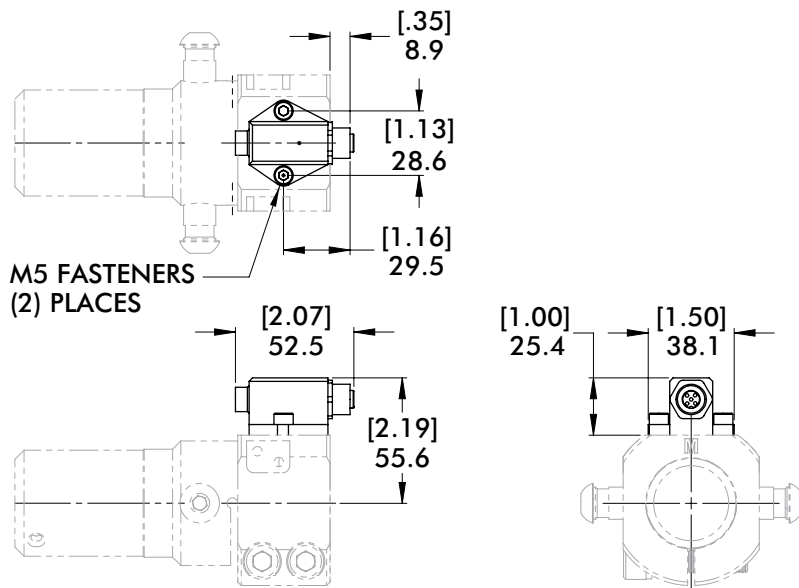


ORDER OPTION	REPLACEMENT PART	"A"	"B"	"C"	"D"	"E"
(Replacement for "E6" Legacy Applications only)	RDC-40-4-6PA	[2.61] 66.3	[1.31] 33.4	[2.59] 65.9	[2.34] 59.6	[1.75] 44.5
"E6" (Standard High Flow)	RDC-40-E6-HF	[2.75] 69.9	[1.38] 34.9	[3.12] 79.2	[2.62] 66.5	[1.83] 46.5

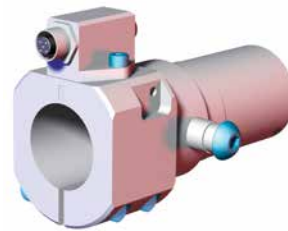
# ELECTRICAL CONNECTORS

Manual Tool Changers | RDC-40/150 Series Bayonets | Dimensions

## MC 5-Pin Micro Electric Connection



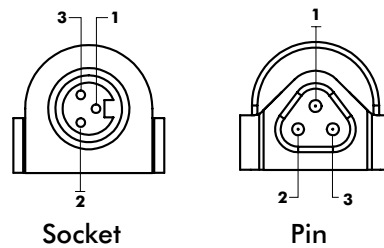
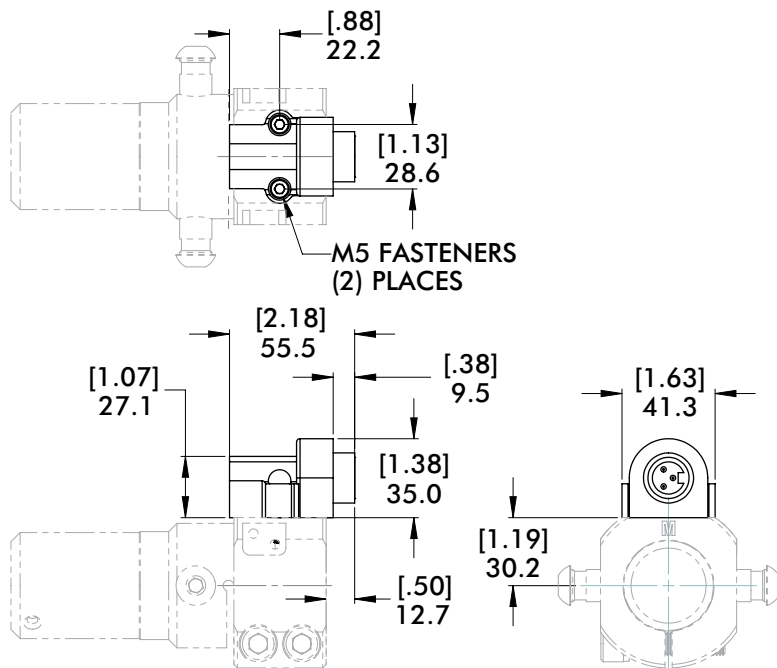
SOCKET #1 ————— PIN #1  
SOCKET #2 ————— PIN #2  
SOCKET #3 ————— PIN #3  
SOCKET #4 ————— PIN #4  
SOCKET #5 ————— PIN #5



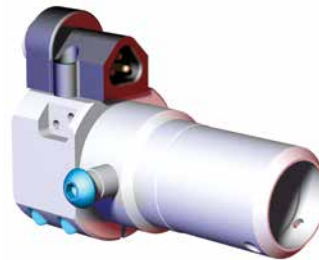
## REPLACEMENT PART

**CPI-RDB-M5P-5MCF**

## MN 3-Pin Mini Electric Connection



SOCKET #1 ————— PIN #1  
SOCKET #2 ————— PIN #2  
SOCKET #3 ————— PIN #3



## REPLACEMENT PART

**CPI-TTB-M3P-3B3**

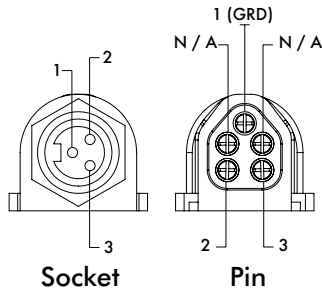
# ELECTRICAL CONNECTORS

Manual Tool Changers | RDC-40/150 Series Bayonets | Dimensions

## MNF 5-Pin Mini Electric Connection

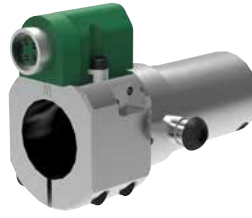


CPI-RDC-40-M5P-3MNF

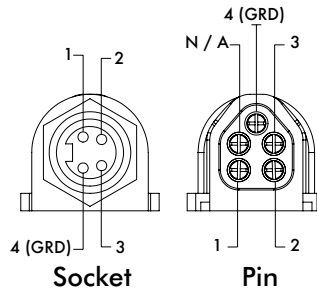


SOCKET #1	GREEN	PIN #1
SOCKET #2	BLACK	PIN #2
SOCKET #3	WHITE	PIN #3
		N / A
		N / A

PLUG COLOR: BLACK

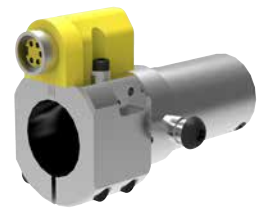


CPI-RDC-40-M5P-4MNF

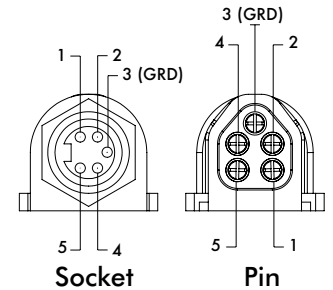


SOCKET #1	BLACK	PIN #1
SOCKET #2	WHITE	PIN #2
SOCKET #3	RED	PIN #3
SOCKET #4	GREEN	PIN #4
		N / A

PLUG COLOR: GREEN

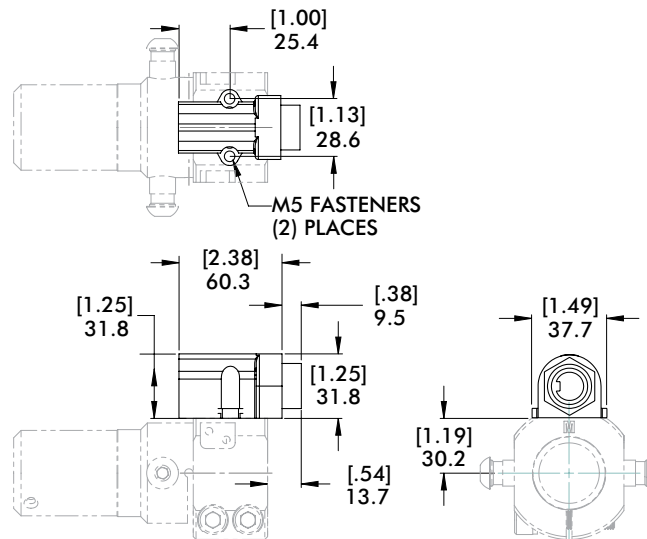


CPI-RDC-40-M5P-5MNF

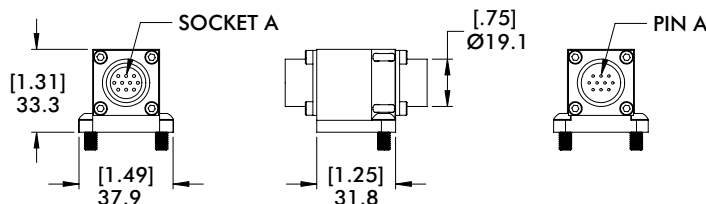
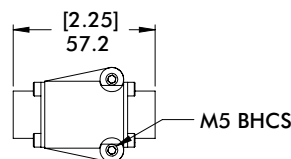


SOCKET #1	WHITE	PIN #1
SOCKET #2	RED	PIN #2
SOCKET #3	GREEN	PIN #3
SOCKET #4	ORANGE	PIN #4
SOCKET #5	BLACK	PIN #5

PLUG COLOR: YELLOW



## 10-Pin Electric Connection



REPLACEMENT PART

CPI-RDC-40-5-10

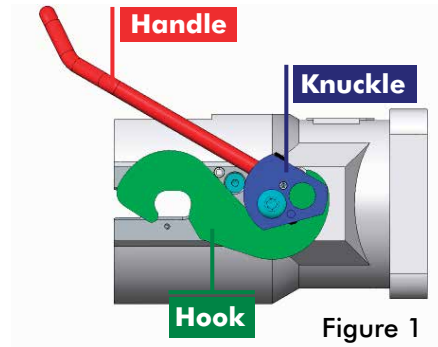


# RDN-25 SERIES DISCONNECT HOUSING

## Manual Tool Changers | Instructions for Inverting the Disconnect Locking Handle

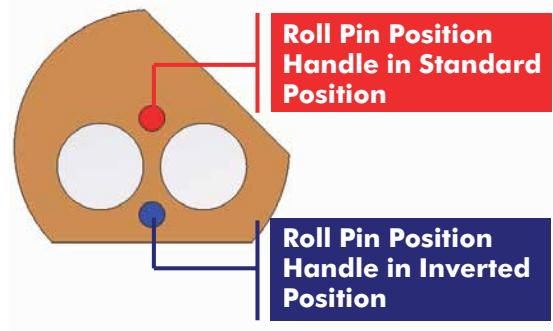


If the handle of the Quick Disconnect Housing interferes with other equipment, it can be inverted and accessed from below the housing. In the inverted position, the hooks and housing remain in the upright position.

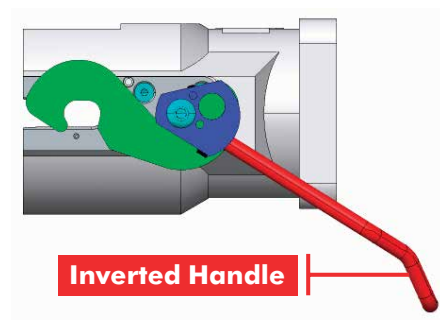
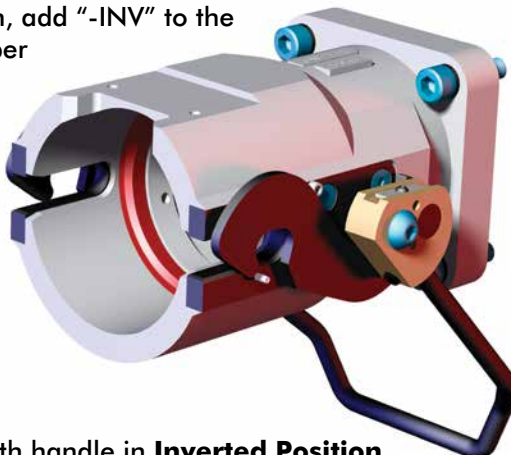


1. Loosen the set screw at the base of the handle in each knuckle.
2. Unscrew the button head screw from each knuckle, then remove the handle. (See Figure 1)
3. Slide knuckles and hooks off the main body of the housing. (See Figure 1)
4. Slide hook off each knuckle.
5. Remove the roll pin in each knuckle and insert a 3/16 x 5/16 pin into the hole for the inverted handle position, as shown. (See Figure 2)
6. Rotate each knuckle 180° from previous position and reinstall the hooks. Return the knuckle/hook sub-assembly to the housing.
7. Reinstall handle in the inverted position and tighten set screws. (See Figure 3)

Figure 2 - Housing Knuckle



To order RDN-25 housing with handle in Inverted Position, add "-INV" to the end of order number



# RDN-25 DISCONNECT HOUSING

Manual Tool Changers | RDC-25/60 Series Bayonets | Product Overview

## Features:

- 89mm [3.50 in.] Sq. Flange Mtng.
- Steel handle actuation allows quick and accurate installation, pulling the bayonet into a fixed position within the housing. This action also engages optional air and electric connectors.
- Internal urethane rings eliminate vibration and seat the bayonet securely.

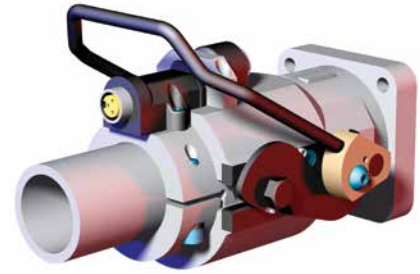
## Specifications:

**Max. Static Product Load:**  
949 N\*m [700 ft-lb]

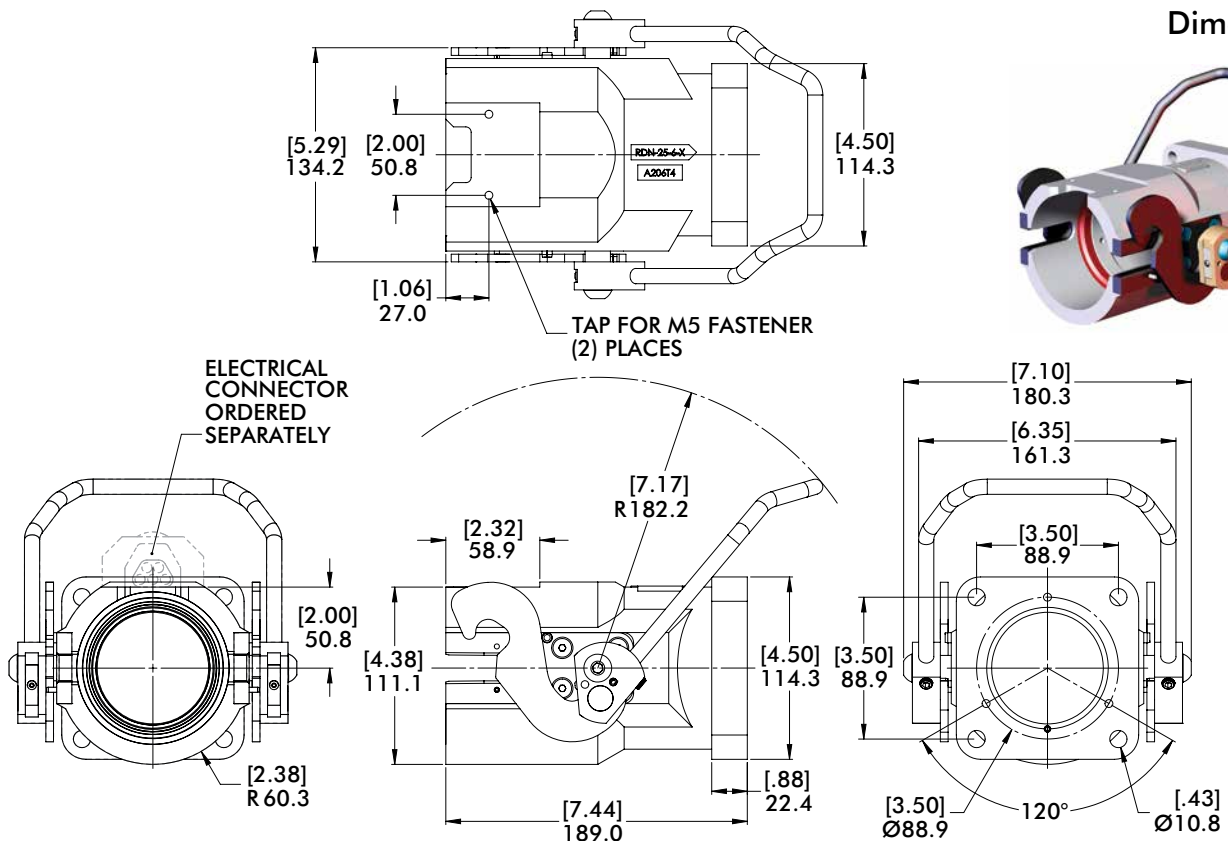
## Material:

Body: Aluminum  
Knuckles: Brass  
Handle and Hooks: Steel  
Inserts: Urethane

**Weight:**  
4.00 kg [8.90 lb]



## Dimensions



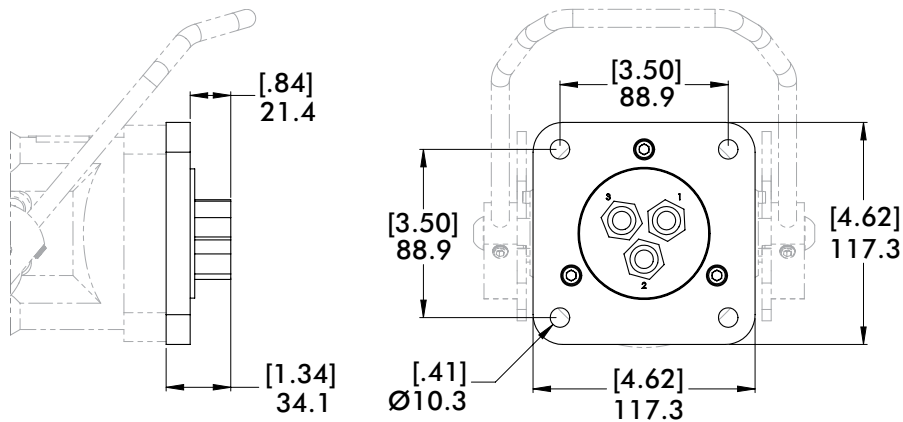
## How To Order

Model	Air Port Connection A3 (3 Port) or A6 (6-Port) "O(x)" = (Qty) of Open Ports / "S(x)" = (Qty) of Shutoff Ports	Electrical Mounting
<b>CPI</b> — <b>RDN-25-6</b>	<b>A3-O1-S2</b>	<b>EL10</b>
<b>"RDN-25-6"</b> Ø60mm/2.50" Quick Disconnect Housing	<b>"A3-O0-S3"</b> (0)Open-(3)Shutoff <b>"A3-O1-S2"</b> (1)Open-(2)Shutoff <b>"A3-O2-S1"</b> (2)Open-(1)Shutoff <b>"A3-O3-S0"</b> (3)Open-(0)Shutoff	<b>"A6-O0-S6"</b> (0)Open-(6)Shutoff <b>"A6-O1-S5"</b> (1)Open-(5)Shutoff <b>"A6-O2-S4"</b> (2)Open-(4)Shutoff <b>"A6-O3-S3"</b> (3)Open-(3)Shutoff <b>"A6-O4-S2"</b> (4)Open-(2)Shutoff <b>"A6-O5-S1"</b> (5)Open-(1)Shutoff <b>"A6-O6-S0"</b> (6)Open-(0)Shutoff
		<b>Mounting for Large Connectors</b> (Leave blank for Standard Mounting)

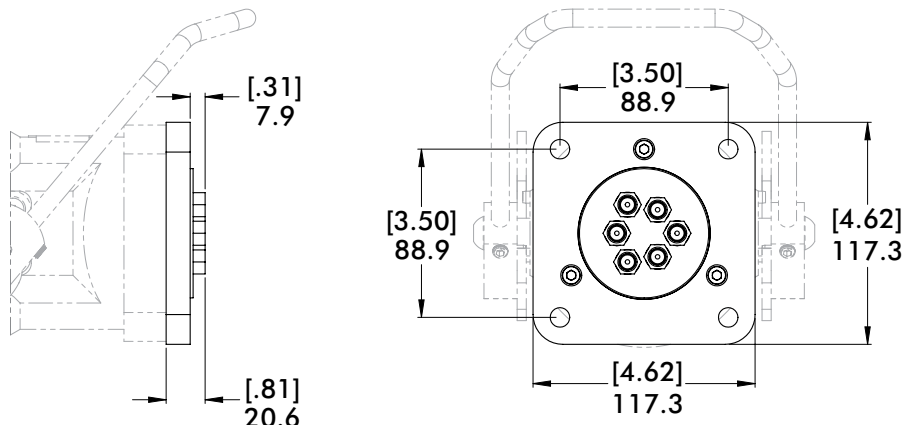
# AIR PORTS AND ELECTRICAL CONNECTIONS

Manual Tool Changers | RDN-25 Flange Mount Disconnect Housings | Dimensions

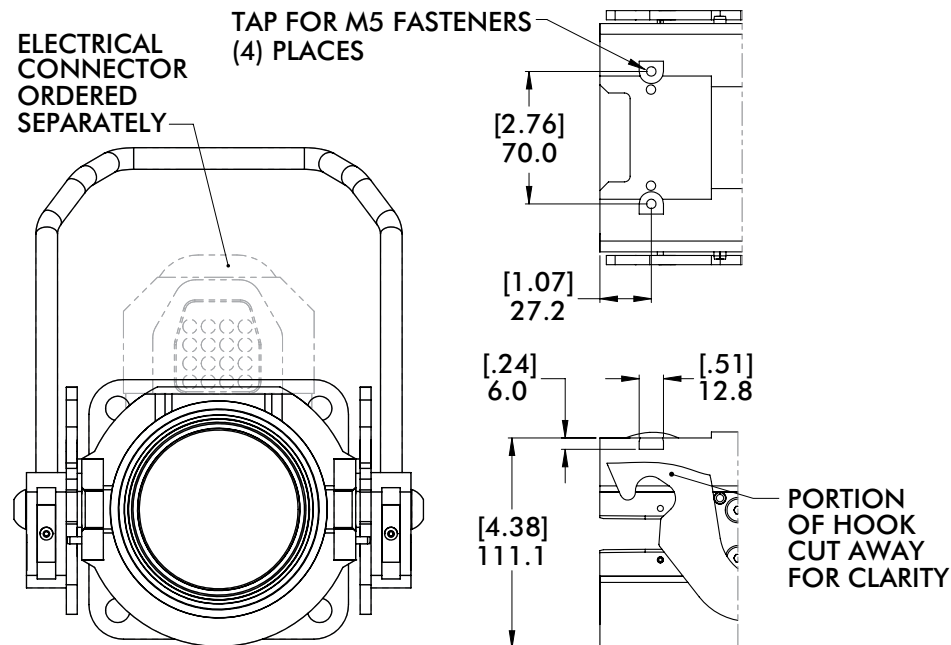
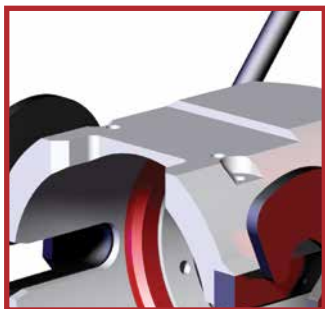
## A3 3-Port Internal Air Connection with Shutoff Option



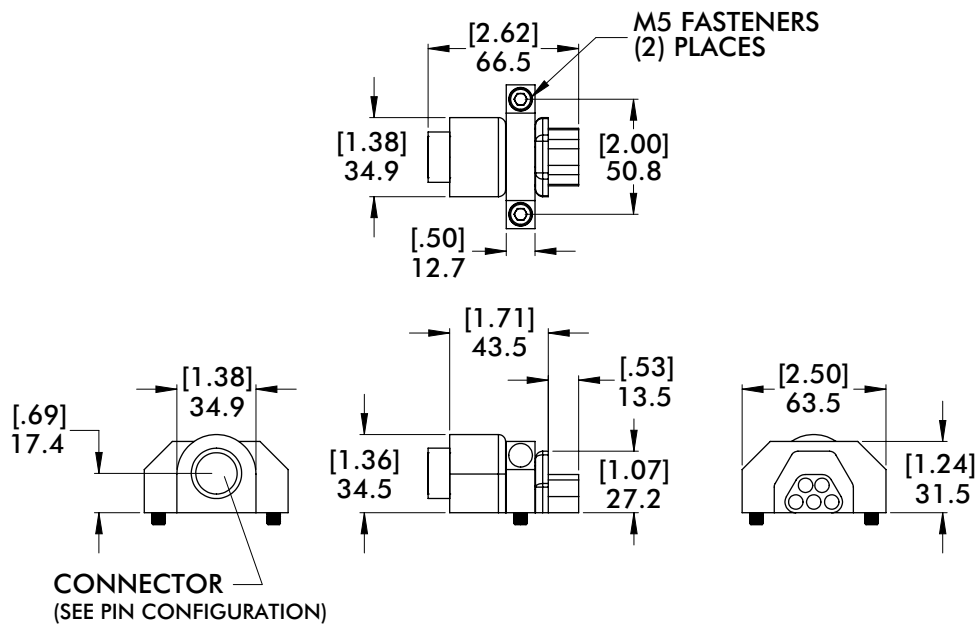
## A6 6-Port Internal Air Connection with Shutoff Option



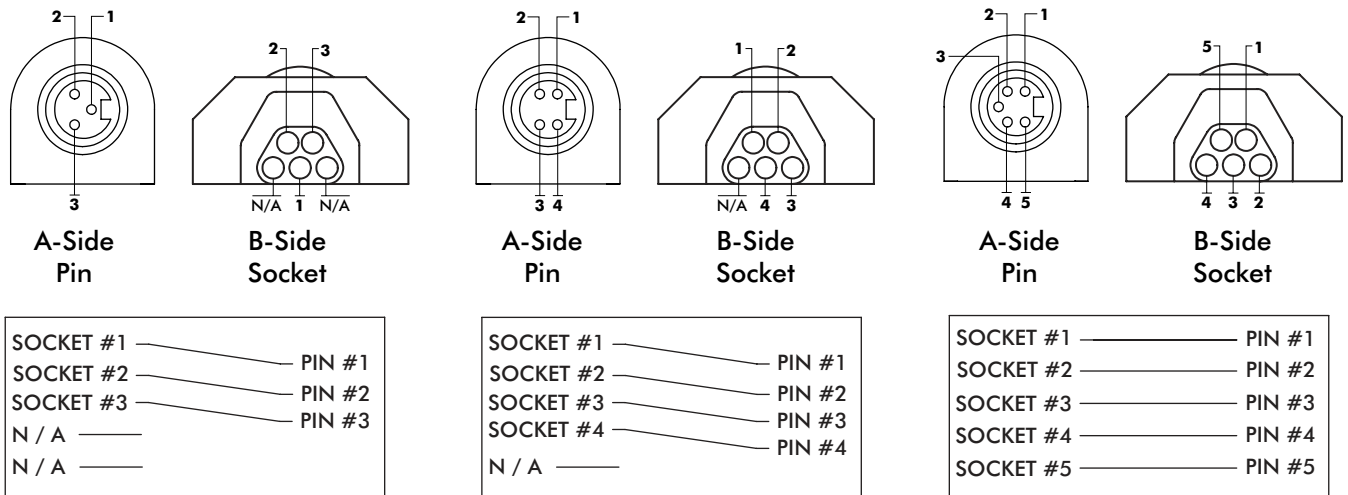
## EL10 Mounting for Large Electric Connection



## Manual Tool Changers | RDN-25 Series Disconnect Housings | Dimensions



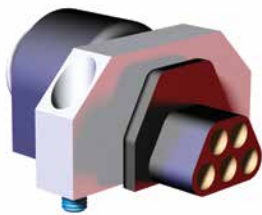
## 5 Pin Connectors for Housing - Standard Pin Configurations



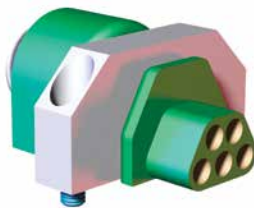
3-Pin to 5-Pin Connector	
A-Side	3-Pin, Single Key
B-Side	5-Pin, Male Plug, Female Socket

4-Pin to 5-Pin Connector	
A-Side	4-Pin, Single Key
B-Side	5-Pin, Male Plug, Female Socket

5-Pin to 5-Pin Connector	
A-Side	5-Pin, Single Key
B-Side	5-Pin, Male Plug, Female Socket



**MODEL NUMBER**  
**CPI-RDH-F5S-3B3**



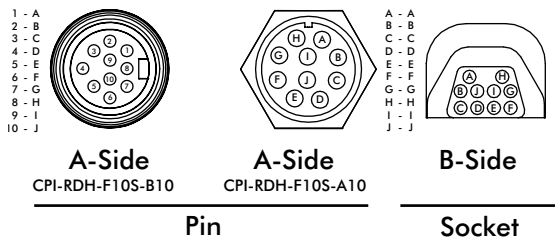
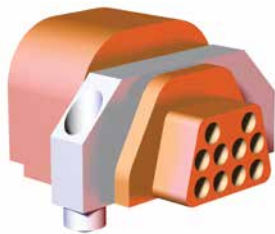
**MODEL NUMBER**  
**CPI-RDH-F5S-4B4**



**MODEL NUMBER**  
**CPI-RDH-F5S-5B5**

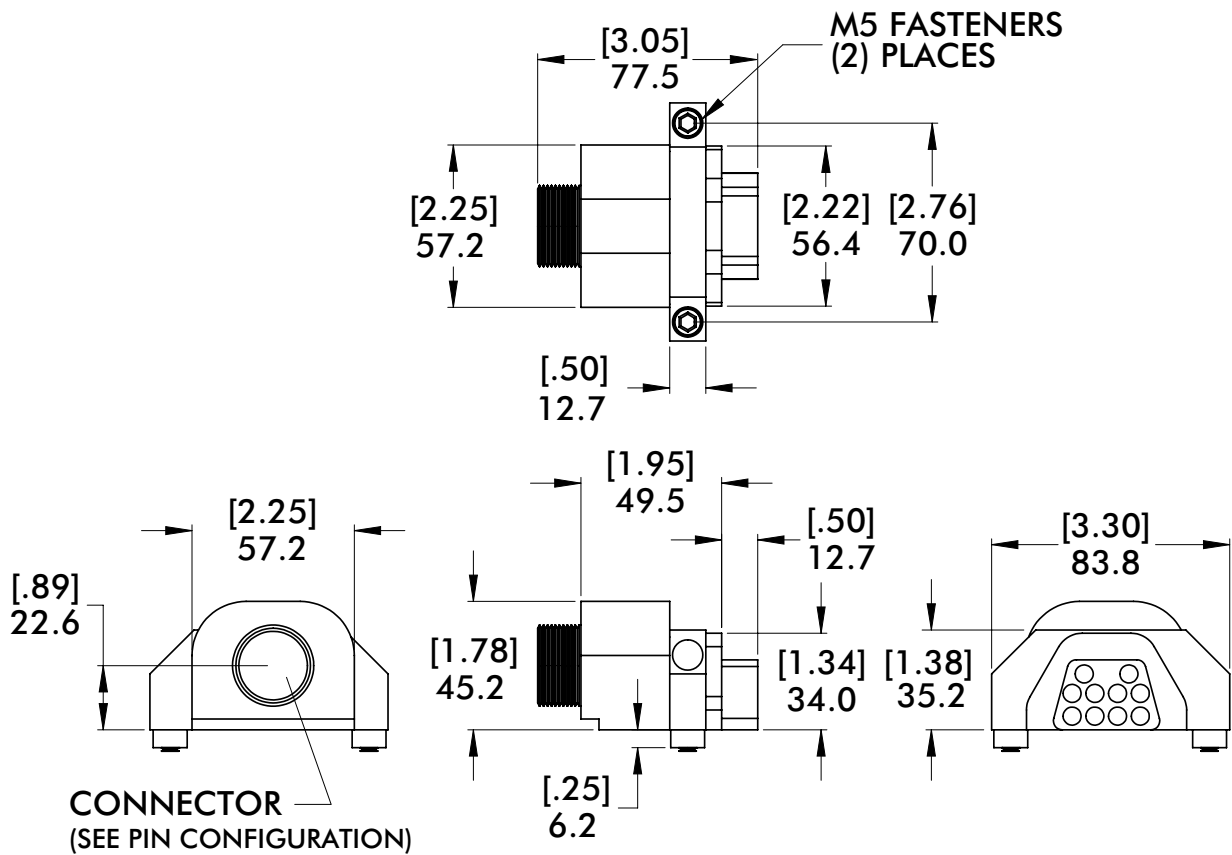
# ELECTRICAL CONNECTIONS

Manual Tool Changers | RDN-25 Series Disconnect Housings | Dimensions



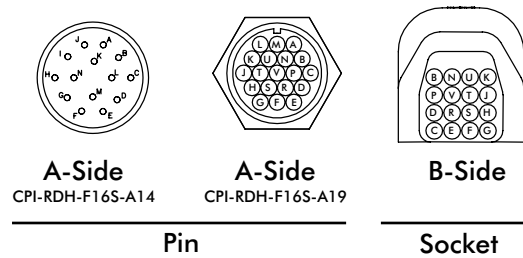
10 Pin Configuration

Model Number	A-Side	B-Side
CPI-RDH-F10S-A10	10-Pin	10-Pin, Male Plug, Female Socket
CPI-RDH-F10S-B10	10-Pin	



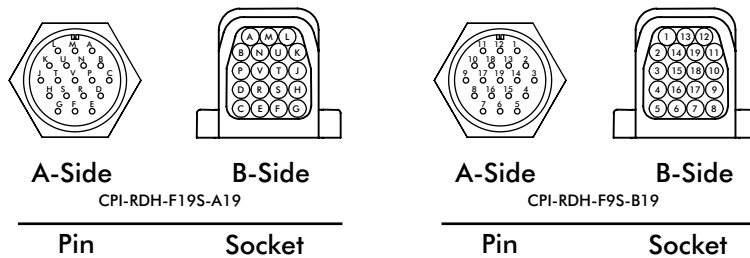
# ELECTRICAL CONNECTIONS

## Manual Tool Changers | RDN-25 Series Disconnect Housings | Dimensions



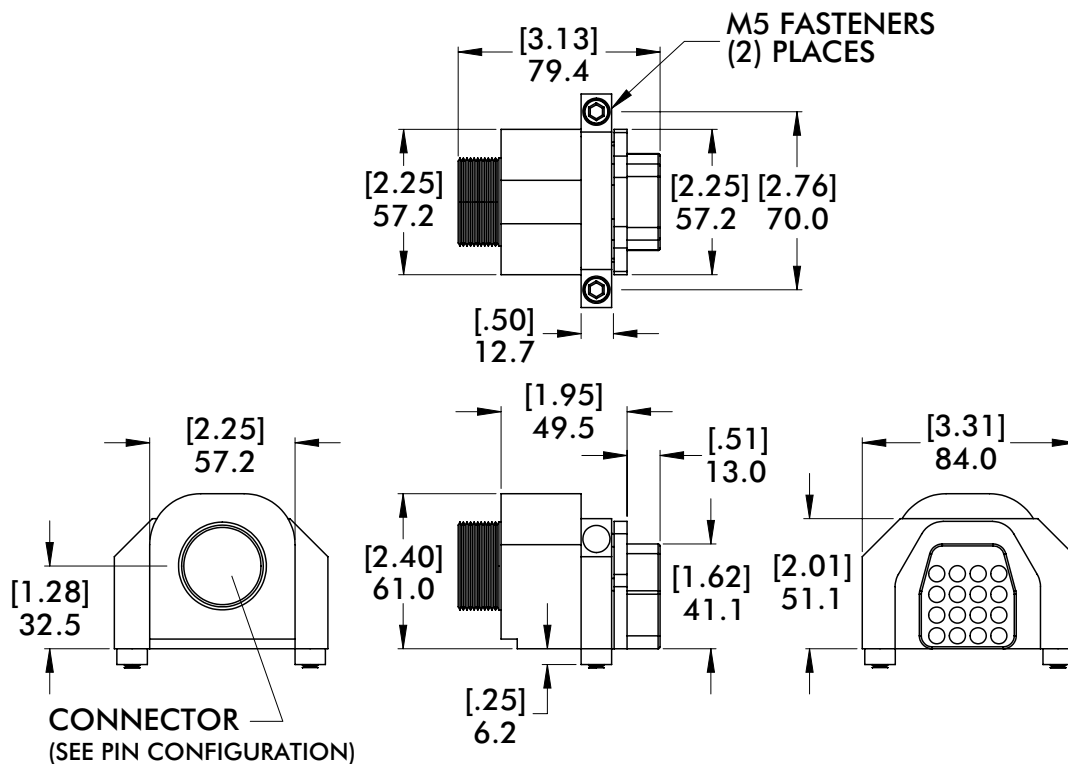
### 16 Pin Configuration

Model Number	A-Side	B-Side
<b>CPI-RDH-F16S-A19</b>	19-Pin	16-Pin, Male Plug, Female Socket
<b>CPI-RDH-F16S-A14</b>	14-Pin	



### 19 Pin Configuration

Model Number	A-Side	B-Side
<b>CPI-RDH-F19S-A19</b>	19-Pin	19-Pin, Male Plug, Female Socket
<b>CPI-RDH-F19S-B19</b>	19-Pin	





# RDC SERIES BAYONETS

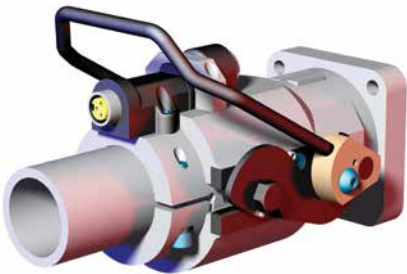
Manual Tool Changers | 2.50"/60mm Diameter Booms | Product Overview

**Features:**

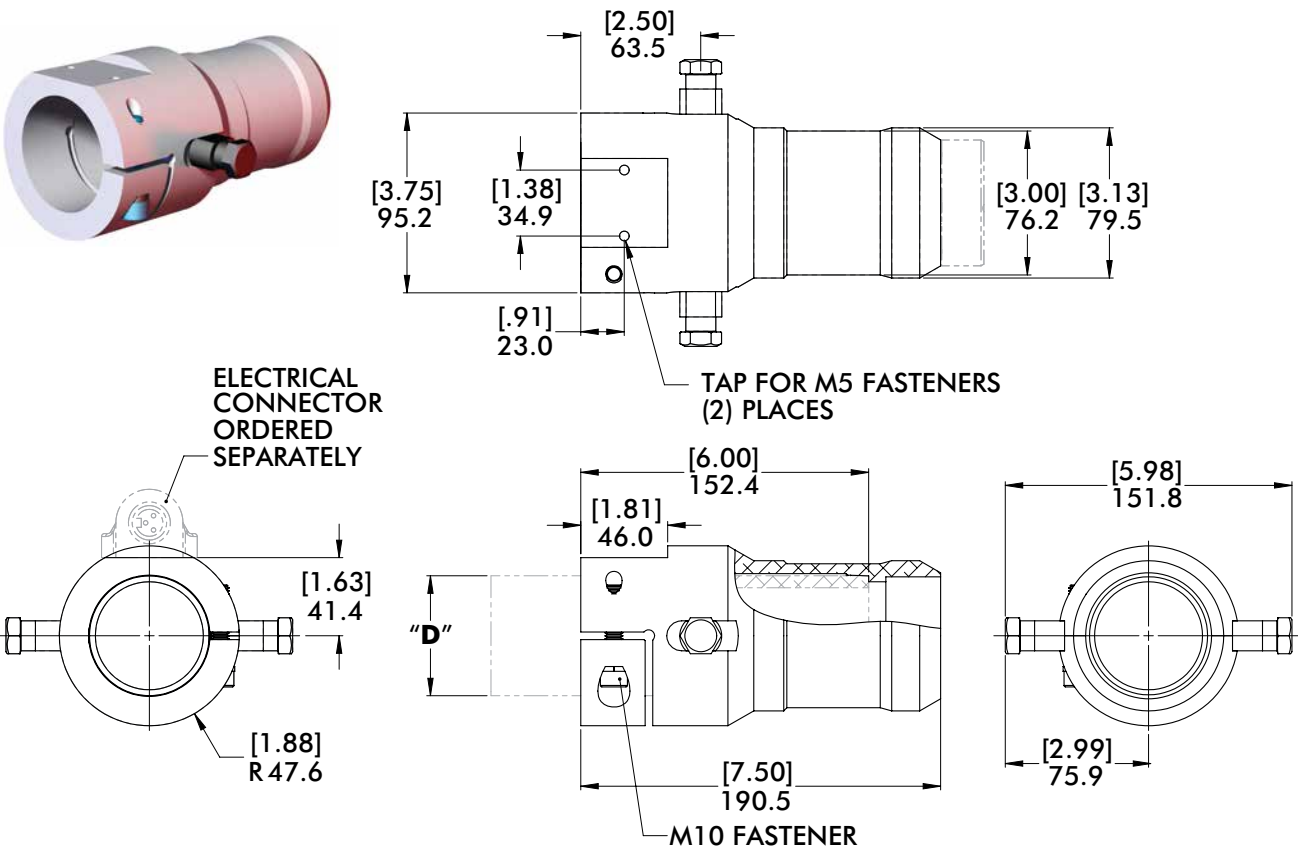
- Used in conjunction with the Quick Disconnect Housing to provide an efficient mode of changing tools manually.
- (2) Hardened alignment pins allows quick and accurate installation into the housing.
- Optional "EL10" machined surface for large electrical connectors.

**Specifications:**

**Max. Static Product Load:**  
678 N\*m [500 ft-lb]  
**Material:**  
Body: Aluminum  
Pins: Steel  
**Weight:**  
1.6 kg [3.5 lb]



**Dimensions**



**How To Order**

	Model	Boom/Tube (Ø) "D"	Version	Air Port Connection	Electrical Mounting
CPI	RDC	25	2	A3	EL10
	"RDC" Quick Disconnect Bayonet	"25" 2.50" (in) "60" 60mm	"2" Version 2	"A3" 3-Port "A6" 6-Port	Mounting for Large Connectors (Leave blank for Standard Mounting)

# RDC SERIES BAYONETS

Manual Tool Changers | 2.50"/60mm Diameter High Torque Booms | Product Overview

## Features:

- Extended clamp area increases the holding surface and torque capacity for high speed applications.
- (2) Hardened alignment pins allows quick and accurate installation into the bayonet.
- Optional "EL10" machined surface for large electrical connectors.

## Specifications:

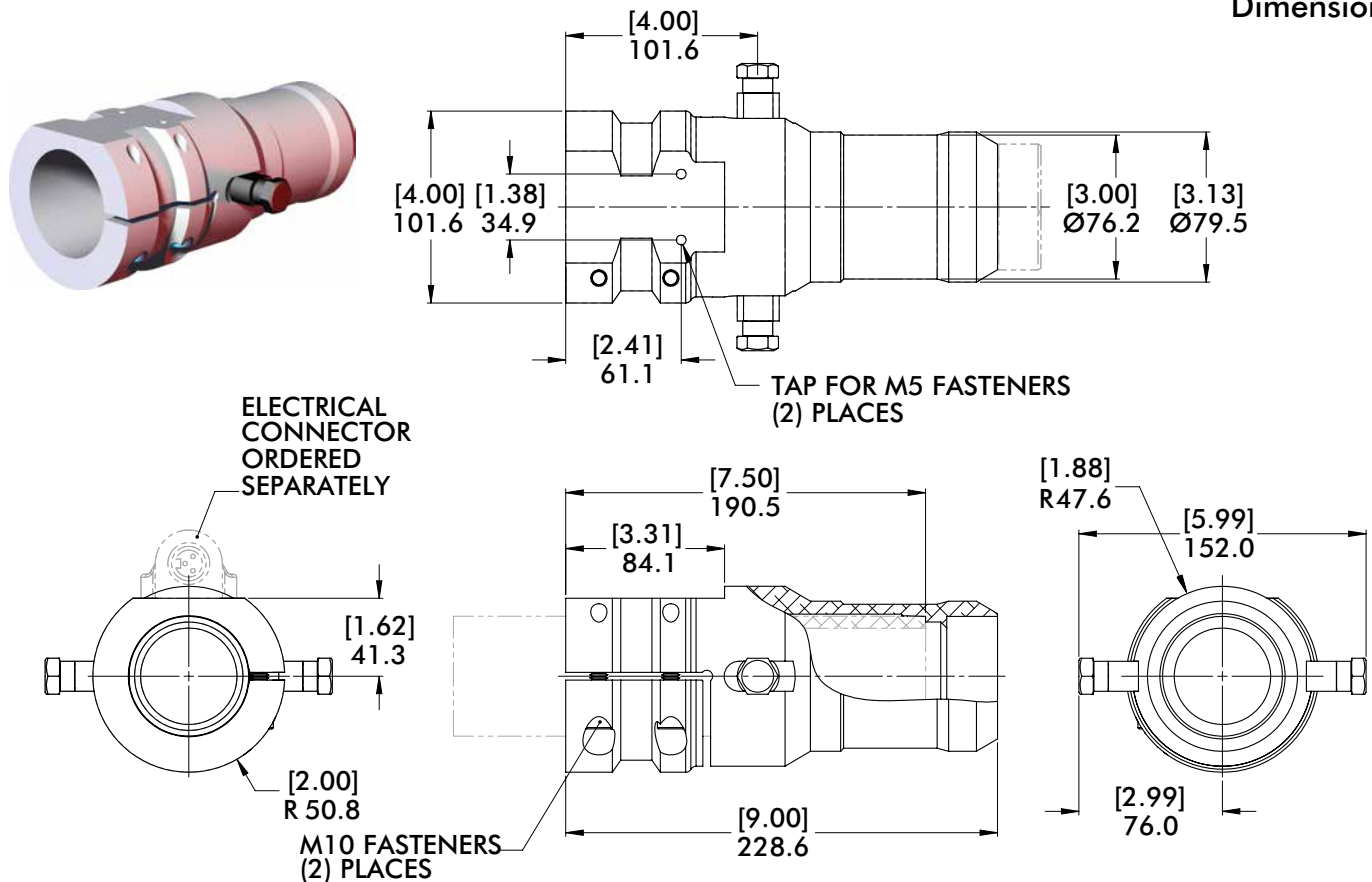
**Max. Static Product Load:**  
949 N\*m [700 ft-lb]

**Material:**  
Body: Aluminum  
Pins: Steel

**Weight:**  
2.1 kg [4.7 lb]



## Dimensions



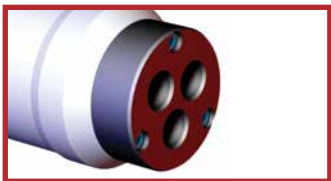
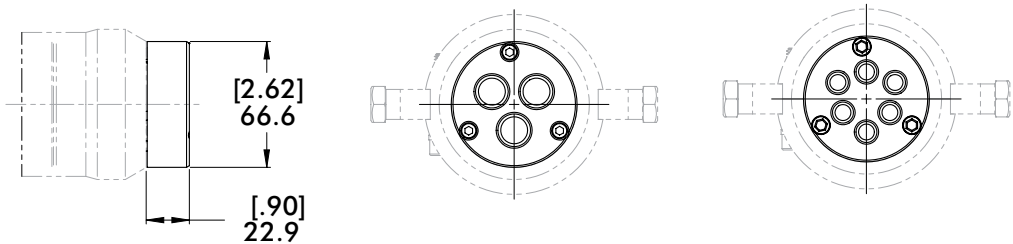
## How To Order

CPI	Model	Boom/Tube (Ø) "D"	Version	Air Port Connection	Electrical Mounting
—	<b>RDC</b>	—	<b>2HT</b>	—	<b>EL10</b>
	"RDC"	"25" 2.50"(in)	"2HT"	"A3" 3-Port	Mounting
	Quick	"60" 60mm	Version 2	"A6" 6-Port	for Large
	Disconnect		Hi-Torque		Connectors
	Bayonet				(Leave blank
					for Standard
					Mounting)

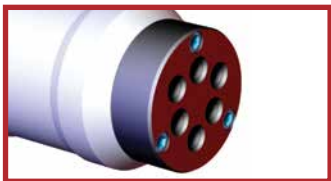
# AIR PORTS AND ELECTRICAL CONNECTIONS

Manual Tool Changers | RDC-25/60 Series Bayonets | Dimensions

## A3 3-Port/A6 6-Port Internal Air Connection



"A3" 3-Port Internal Air Connection



"A6" 6-Port Internal Air Connection

### REPLACEMENT PART

**CPI-BC-250-3-U38** (3/8 NPT ports)

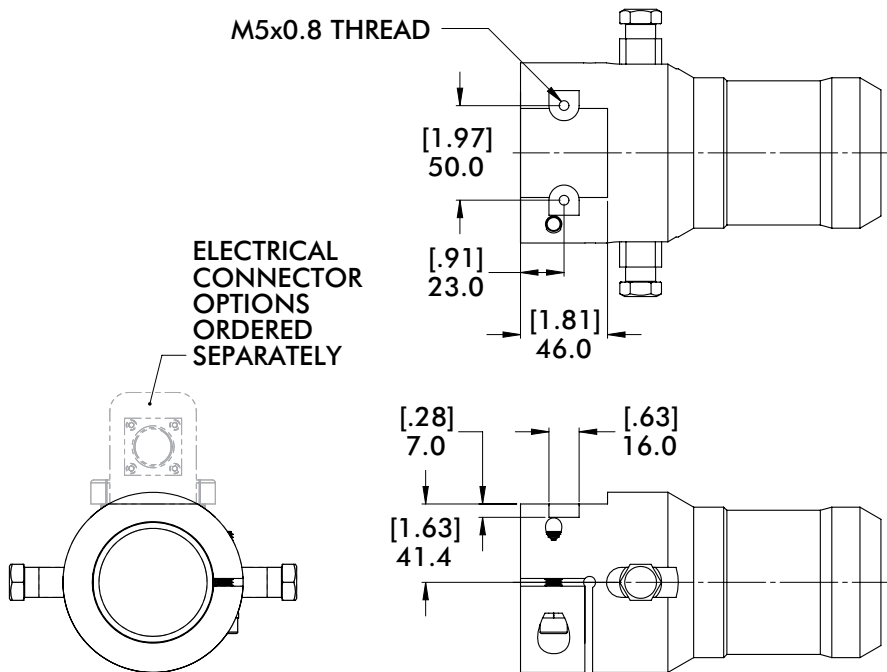
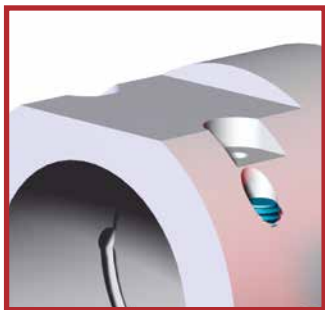
**CPI-BC-60-3-G38** (G3/8 ports)

### REPLACEMENT PART

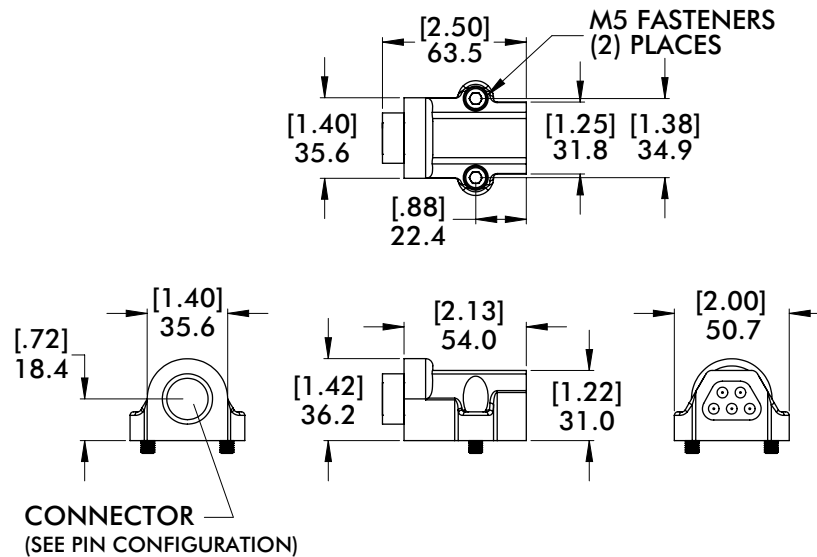
**CPI-BC-250-6-U18** (1/8 NPT ports)

**CPI-BC-60-6-G18** (G1/8 ports)

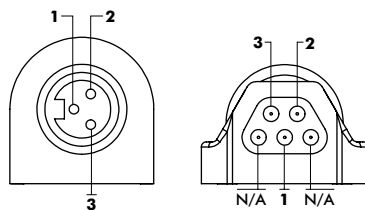
## EL10 Mounting for Large Electric Connection



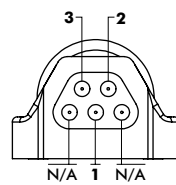
## Manual Tool Changers | RDC-25/60 Series Bayonets | Dimensions



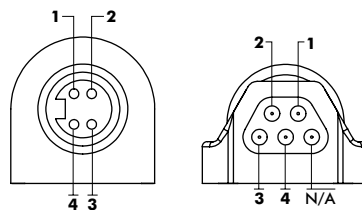
## 5 Pin Connectors for Bayonet (Tool Side)- Standard Pin Configurations



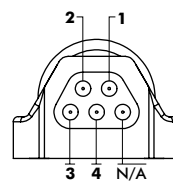
### A-Side Socket



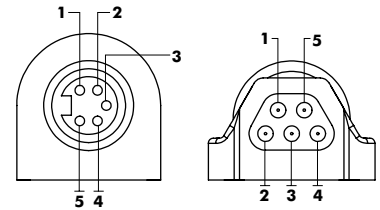
**B-Side  
Pin**



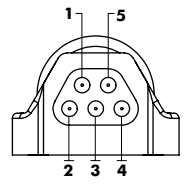
### A-Side Socket



**B-Side  
Pin**



## A-Side Socket



**B-Side  
Pin**

SOCKET #1 — PIN #1  
SOCKET #2 — PIN #2  
SOCKET #3 — PIN #3  
— N / A  
— N / A

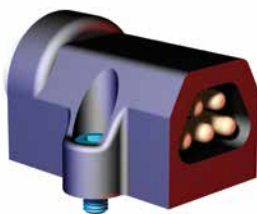
SOCKET #1	PIN #1
SOCKET #2	PIN #2
SOCKET #3	PIN #3
SOCKET #4	PIN #4
	— N / A

SOCKET #1	—————	PIN #1
SOCKET #2	—————	PIN #2
SOCKET #3	—————	PIN #3
SOCKET #4	—————	PIN #4
SOCKET #5	—————	PIN #5

3-Pin to 5-Pin Connector	
A-Side	3-Pin, Single Key
B-Side	5-Pin, Male Pin, Female Plug

4-Pin to 5-Pin Connector	
A-Side	4-Pin, Single Key
B-Side	5-Pin, Male Pin, Female Plug

5-Pin to 5-Pin Connector	
A-Side	5-Pin, Single Key
B-Side	5-Pin, Male Pin, Female Plug

**MODEL NUMBER**

**CPI-RDB-M5P-3B3**

**MODEL NUMBER**

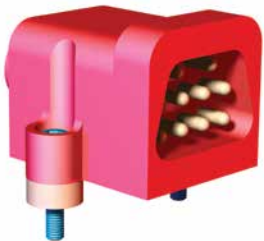
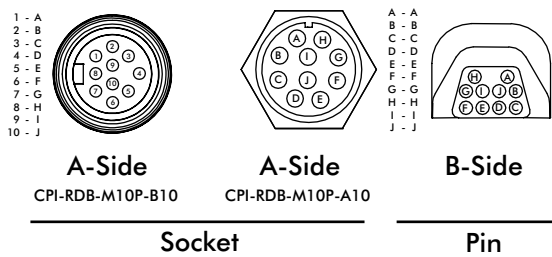
**CPI-RDB-M5P-4B4**

**MODEL NUMBER**

**CPI-RDB-M5P-5B5**

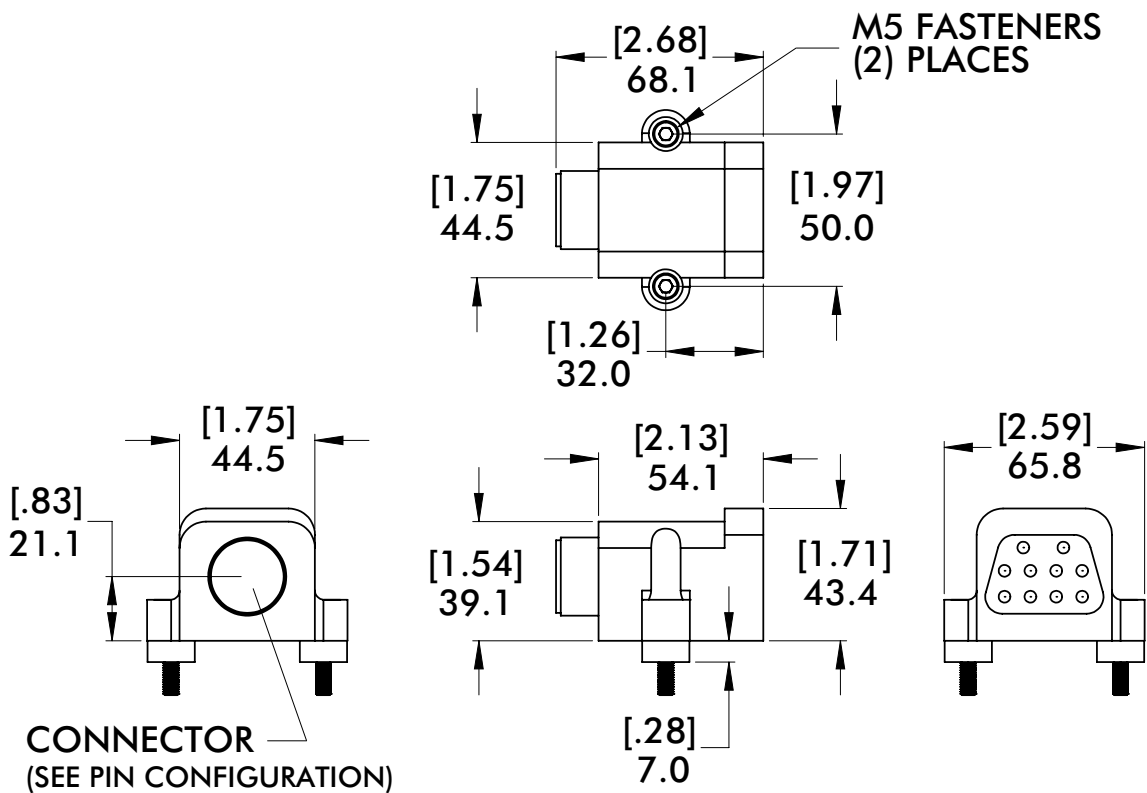
# ELECTRICAL CONNECTIONS

Manual Tool Changers | RDC-25/60 Series Bayonets | Dimensions



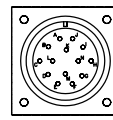
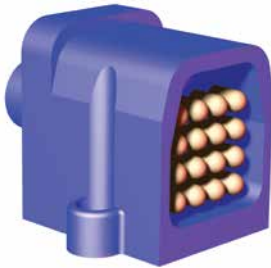
## 10 Pin Configuration

Model Number	A-Side	B-Side
CPI-RDB-M10P-A10	10-Pin	10-Pin, Male Pin, Female Plug
CPI-RDB-M10P-B10	10-Pin	



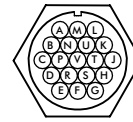
# ELECTRICAL CONNECTIONS

## Manual Tool Changers | RDC-25/60 Series Bayonets | Dimensions



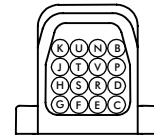
A-Side

CPI-RDB-M16P-A14



A-Side

CPI-RDB-M16P-A19



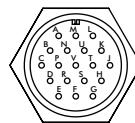
B-Side

Socket

Pin

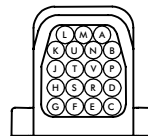
### 16 Pin Configuration

Model Number	A-Side	B-Side
<b>CPI-RDB-M16P-A19</b>	19-Pin	16-Pin, Male Pin, Female Plug
<b>CPI-RDB-M16P-A14</b>	14-Pin	



A-Side

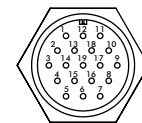
CPI-RDB-M19P-A19



B-Side

Socket

Pin



A-Side

CPI-RDB-M19P-B19



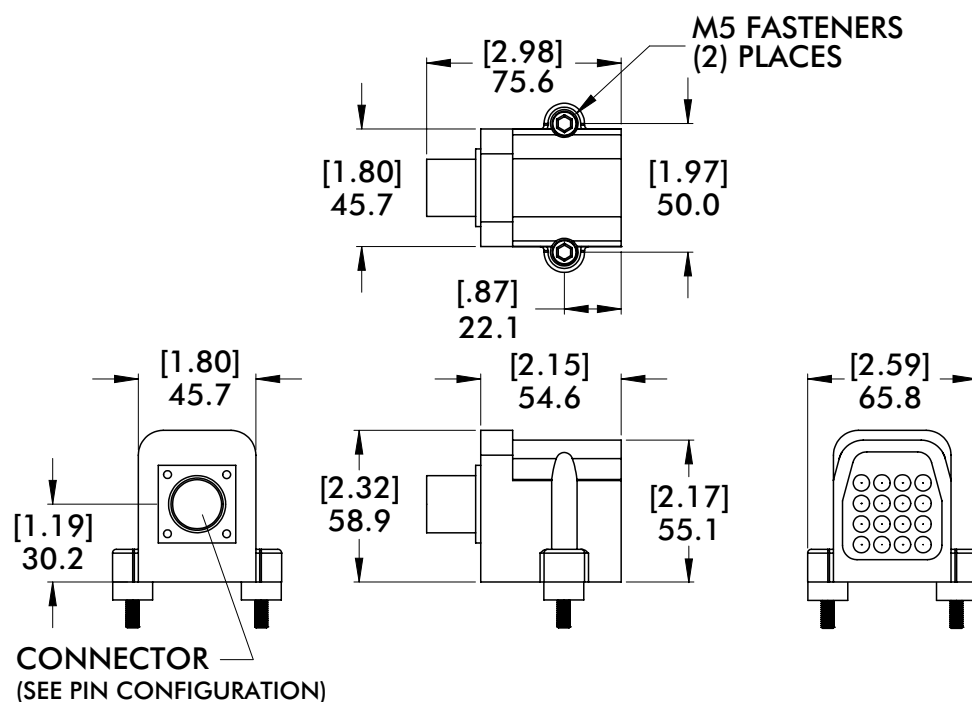
B-Side

Socket

Pin

### 19 Pin Configuration

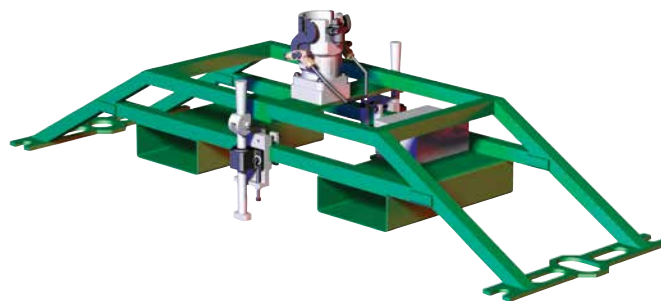
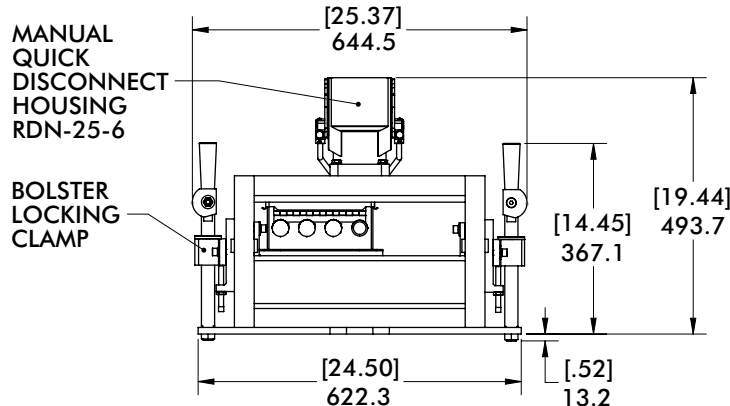
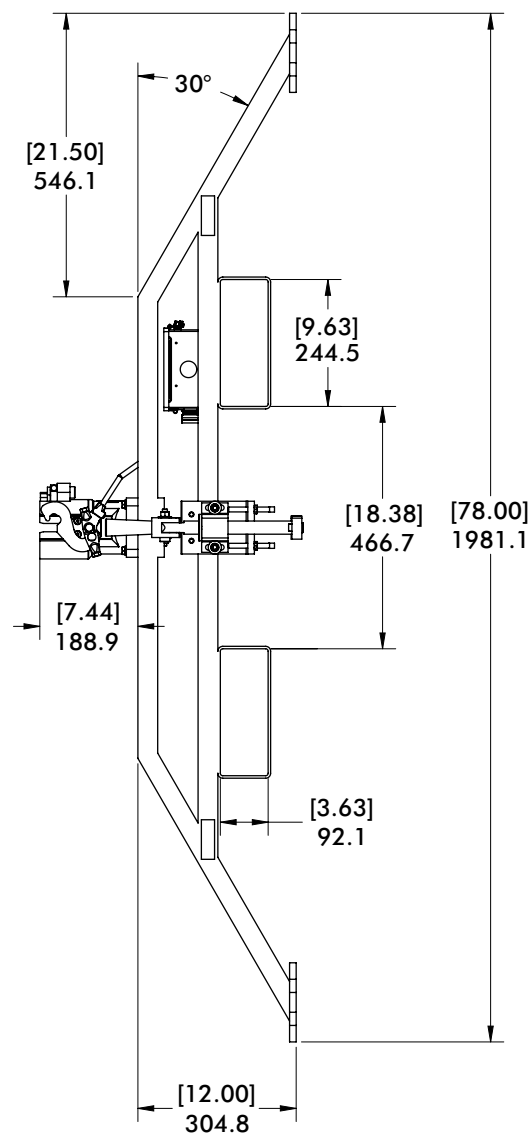
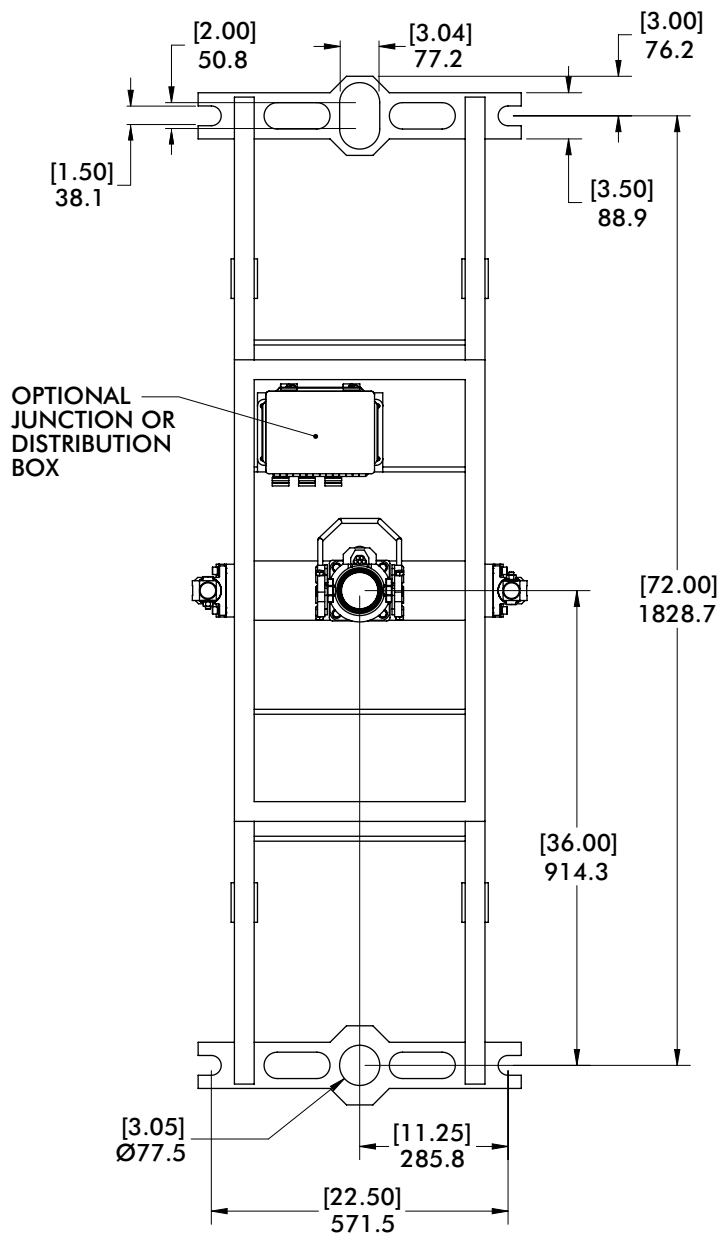
Model Number	A-Side	B-Side
<b>CPI-RDB-M19P-A19</b>	19-Pin	19-Pin, Male Pin, Female Plug
<b>CPI-RDB-M19P-B19</b>	19-Pin	



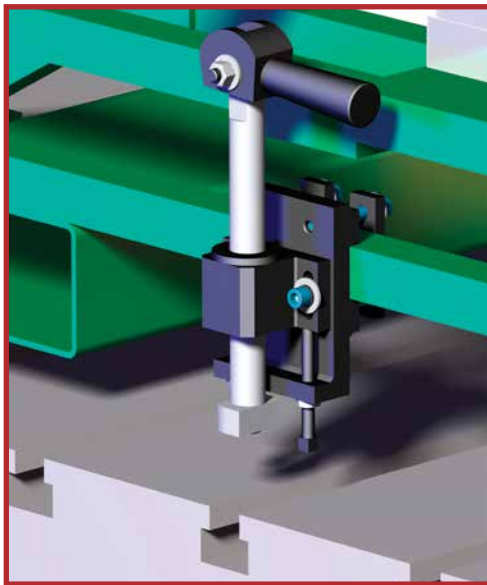
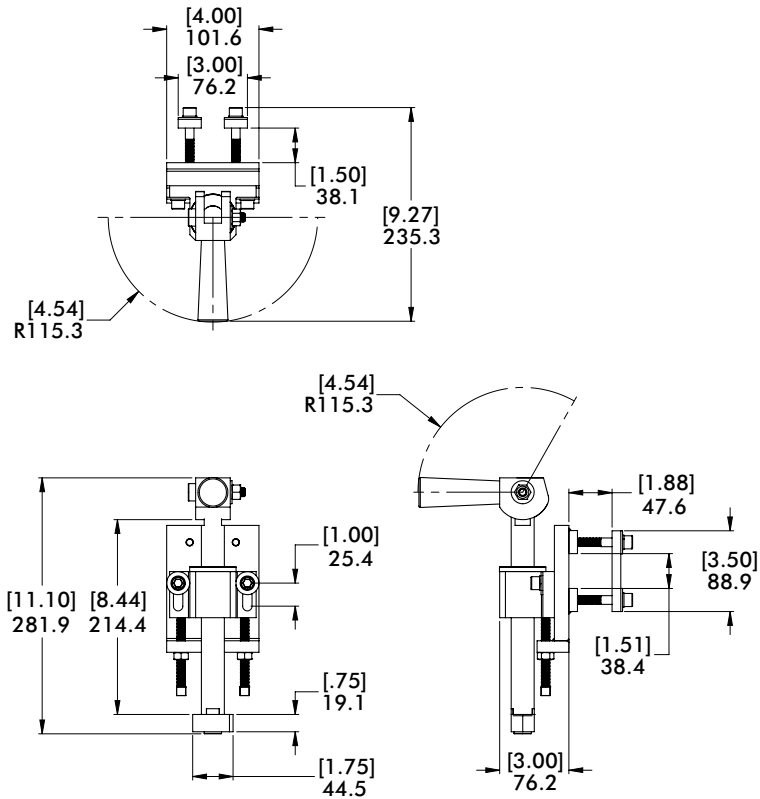


# IDLE STATION

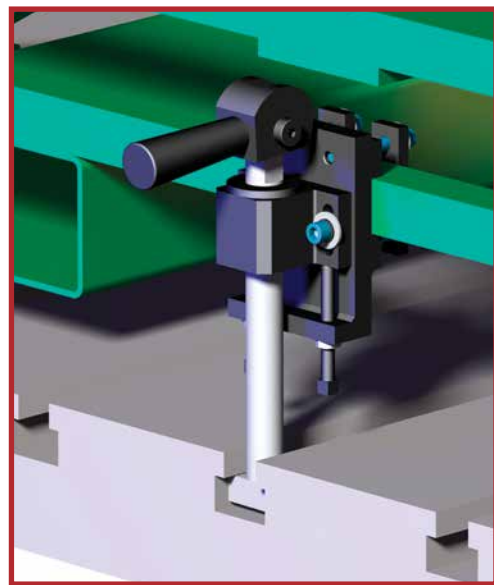
Automation Adaptors | (1) RDN-25-6 Disconnect Housings with Ability to be Fixed to Bolster | Dimensions



MODEL NUMBER	WEIGHT
CPI-PNS-ASSY	85.41 kg [188.30 lb]



Stored Position



In Use, Locked into Bolster

### MODEL NUMBER

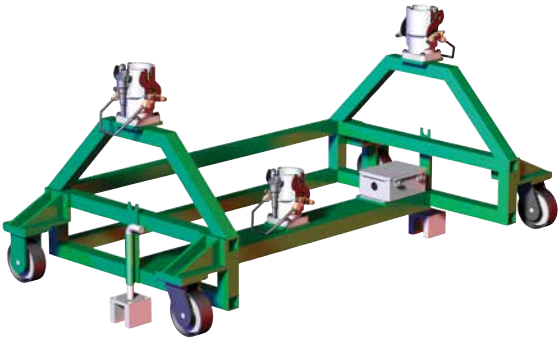
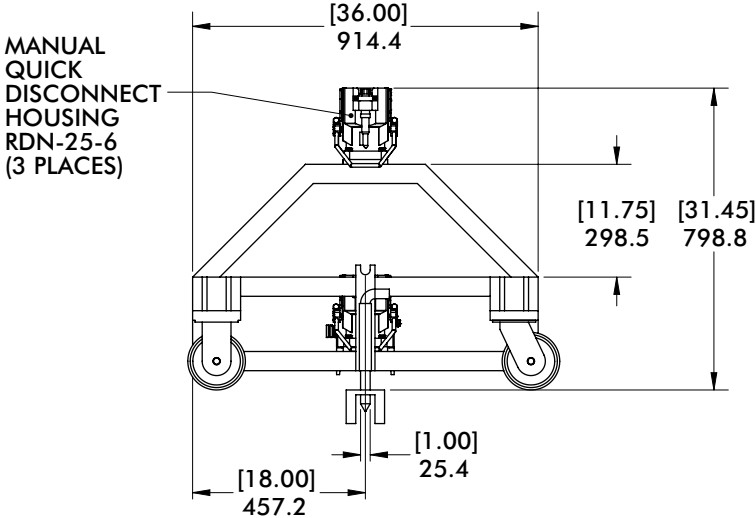
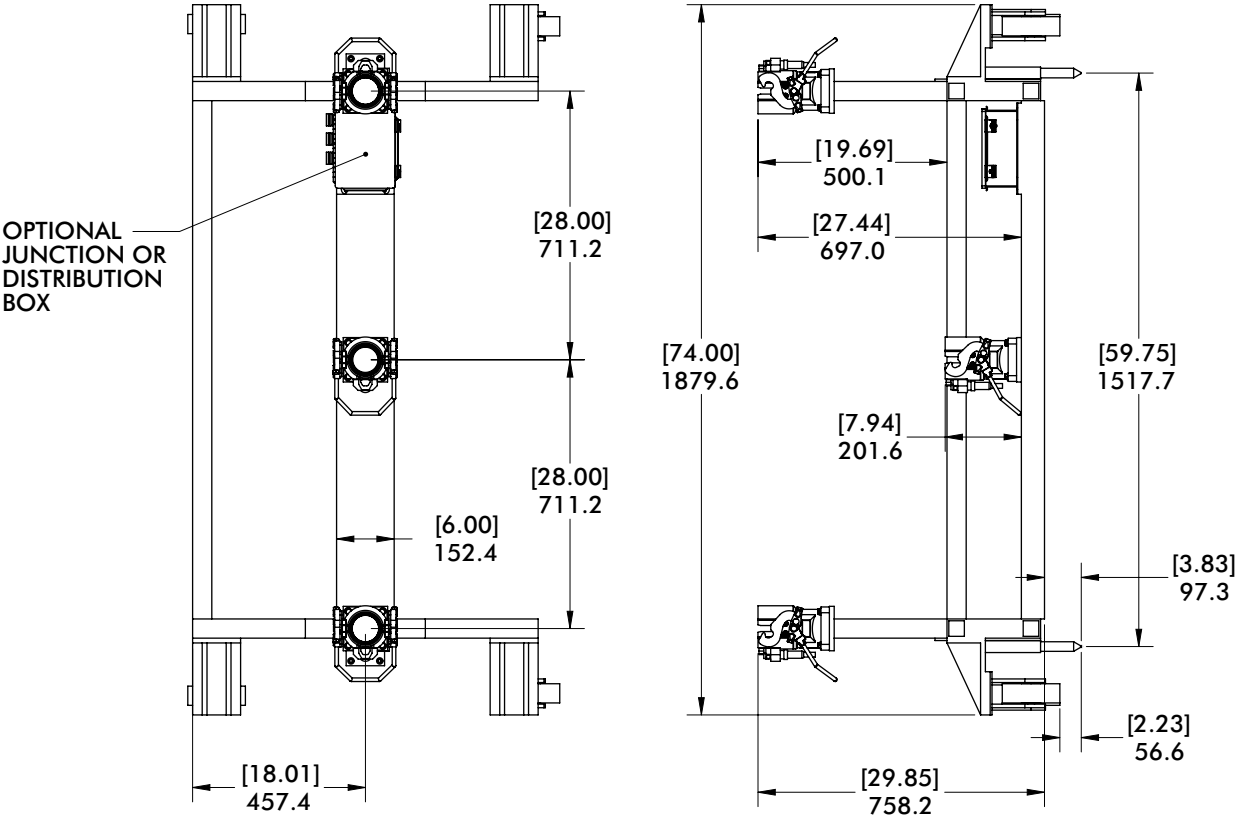
**CPI-BLC-100-15-6**

### WEIGHT

5.50 kg [12.12 lb]

# IDLE STATION

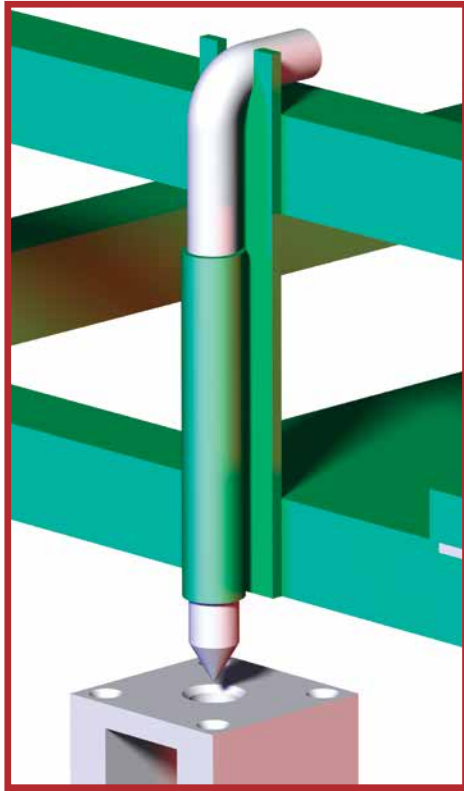
Automation Adaptors | (3) RDN-25-6 Disconnect Housings and Mobile Flexibility | Dimensions



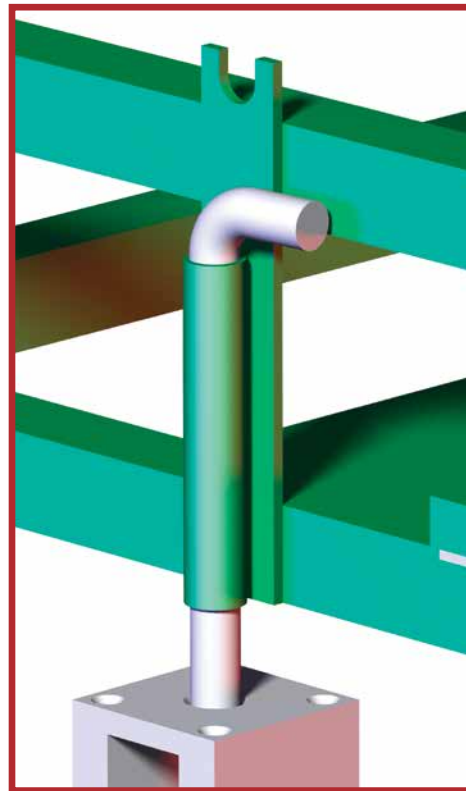
MODEL NUMBER	WEIGHT
CPI-INS-ASSY	182.67 kg [402.73 lb]

# LOCKING PINS IDLE STATIONS

Automation Adaptors | Locking Pin | Operating Procedure



Stored Position



Engaged Position