

QC/TP SERIES

Automatic Tool Changers | Features and Benefits

Flexibility of the tool:

Cylindrical Horizontal compliance devices are used for inserting components that may be misaligned with the tool. They allow a horizontal displacement that compensates for part placing inaccuracies.

For precision applications:

The use of high quality components allow to get centering repeatability from 0.02mm and angular repeatability from $\pm 10^\circ$.

Harsh environments:

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

Spring assist:

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

Failsafe Operation

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

Durable Components

Locking components are made from hardened bearing & tool steels

Self Lubricating Seals

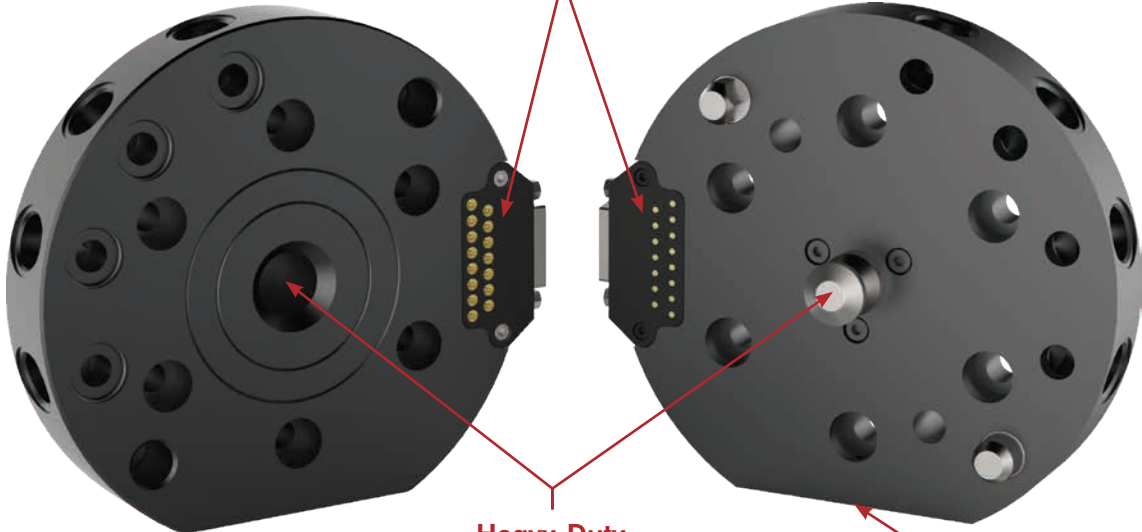
Self lubricating dynamic seals

Offboard I/O Block

with heavy-duty pins offer reliable contact points

Robot Plate

Tool Plate



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

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

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

Mounting Information



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



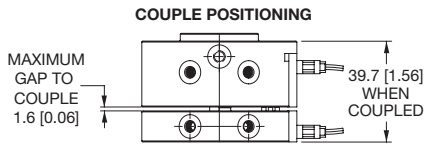
Tool Plate
has counterbored
holes for mounting
and two dowel pins
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30 has pilot boss)

QC/TP SERIES

Automatic Tool Changers | Technical Information

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

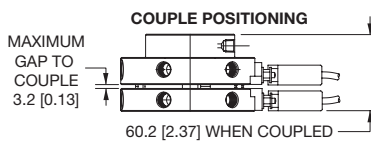
QC-30/TP-30



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

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

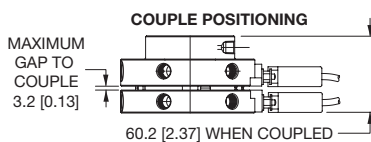
QC-60/TP-60



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

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

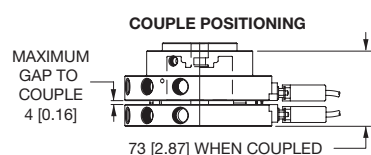
QC-60-10P/TP-60-10P



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

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

QC-150/TP-150

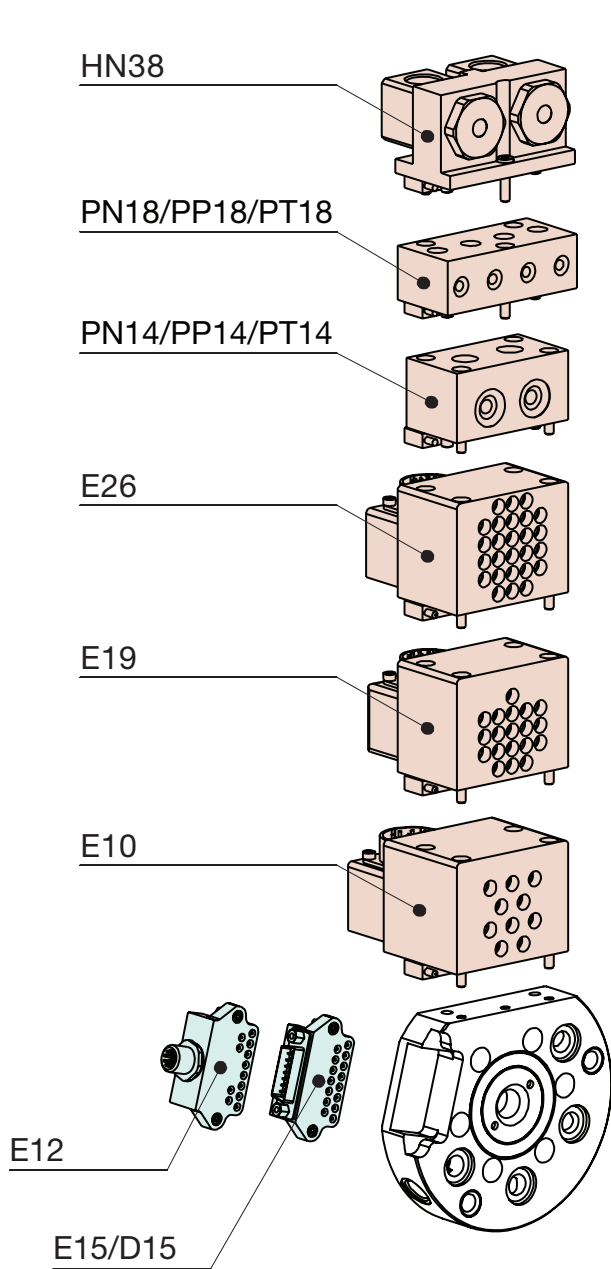


QC-150 **TP-150P**
Robot Plate **Tool Plate**

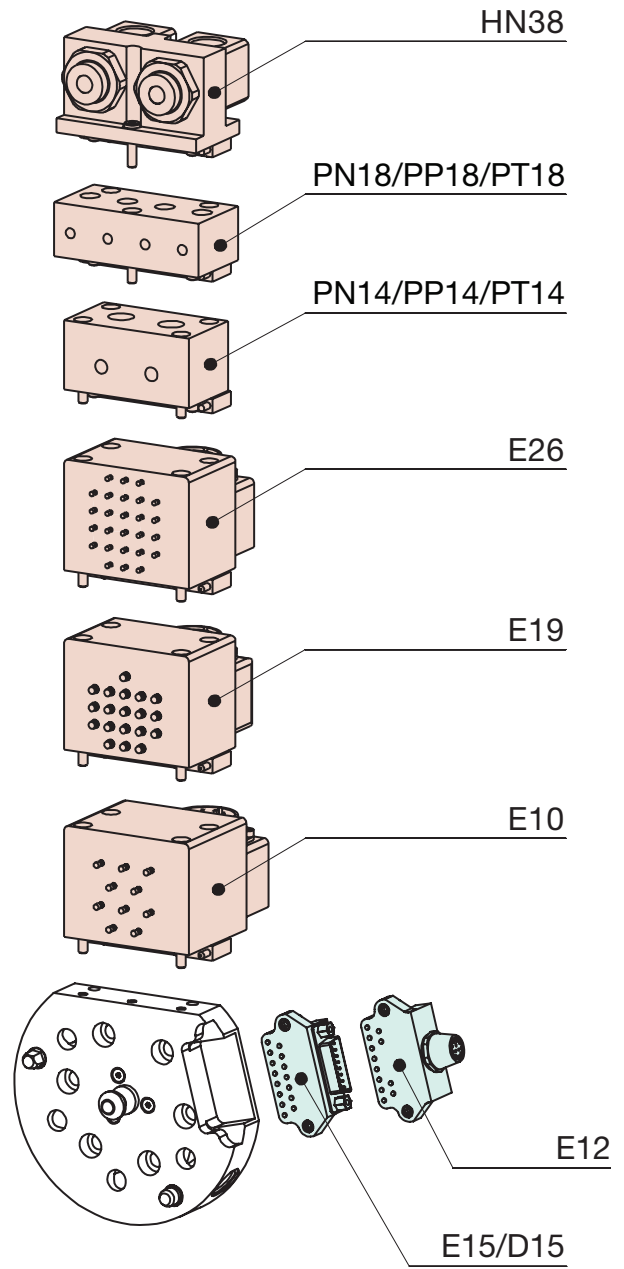
QC/TP SERIES

Automatic Tool Changers | Module Usage Illustrations

QC Series Robot Plate with Optional Modules

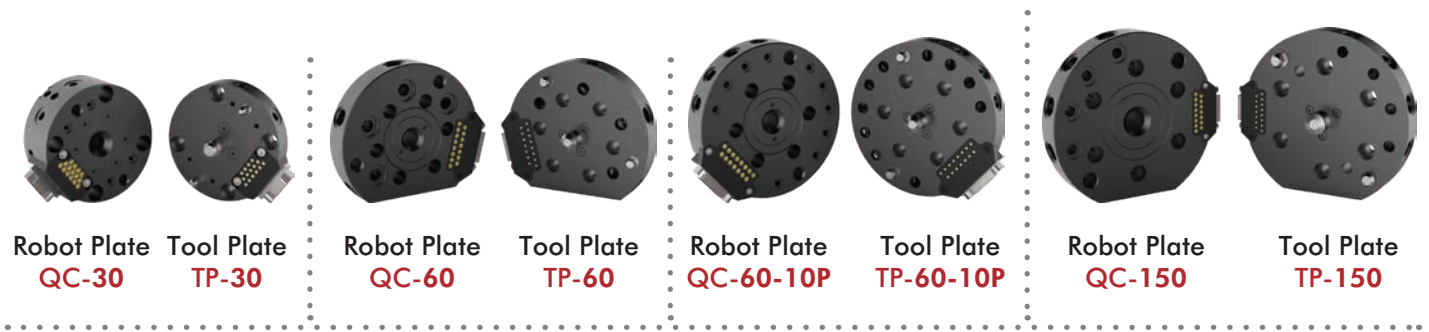


TP Series Tool Plate with Optional Modules



QC/TP SERIES

Automatic Tool Changers | How to Order



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

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

Electric and Pneumatic Accessories (Ordered Separately)

Electrical Accessories

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

Pneumatic Accessories

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

QC-30 (ROBOT PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions



QC-30 Specification:

Max. Payload: 13.6 Kg [30 lbs]

Weight: 0.23 Kg [0.50 lbs]

Bore Ø: 25.4 mm [1.00 in]

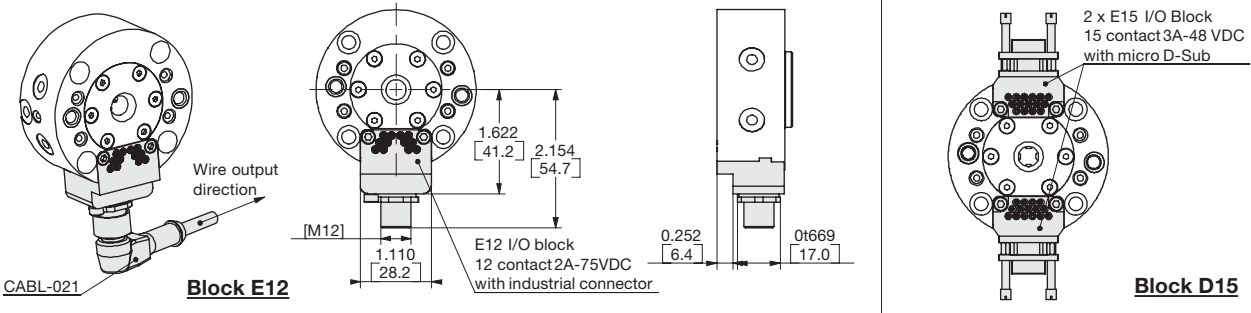
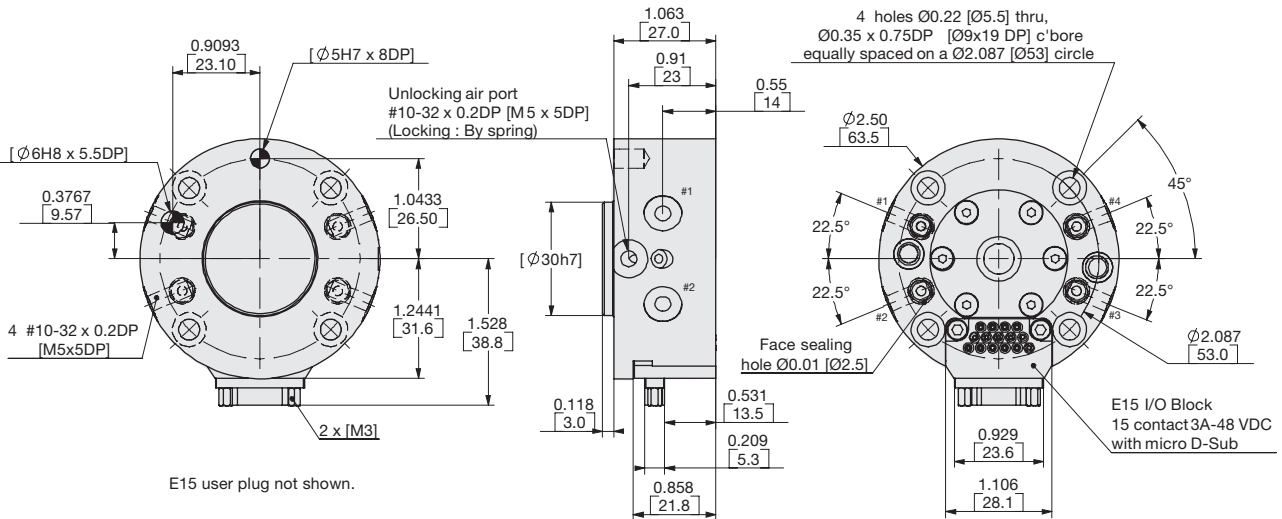
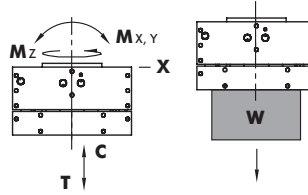
Displacement: 3.9 cm³ [0.24 in³]

Loading Capacity

Max. Tensile T: 311 N [70 lb]

Max. Compressive C: 445 N [100 lb]

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



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

\varnothing
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

\triangle
THIRD ANGLE PROJECTION

\bullet
ALL DOWEL HOLES ARE SF (SLIP FIT).
LOCATIONAL TOLERANCE $\pm 0.005^\circ$ OR $[\pm 0.13\text{MM}]$

\oplus
METRIC THREADS
COURSE PITCH

IMPERIAL ([IN.])
0.00 = ± 0.01
0.000 = ± 0.005
0.0000 = ± 0.0005

METRIC (MM)
[0] = ± 0.25
[0.0] = ± 0.13
[0.00] = ± 0.13

TP-30 (TOOL PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions

TP-30 Specification:

Max. Payload: 13.6 Kg [30 lbs]

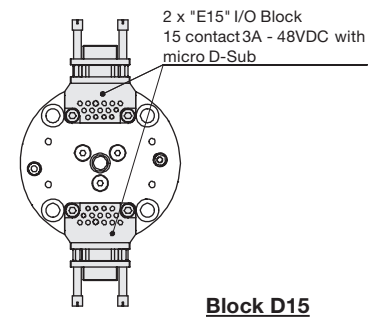
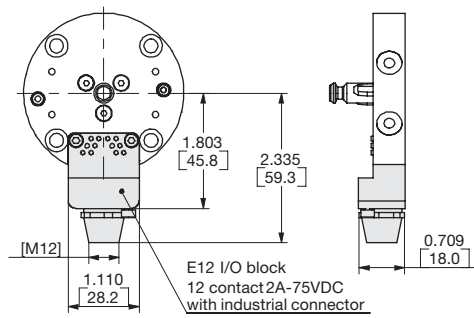
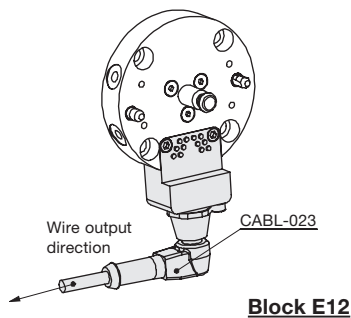
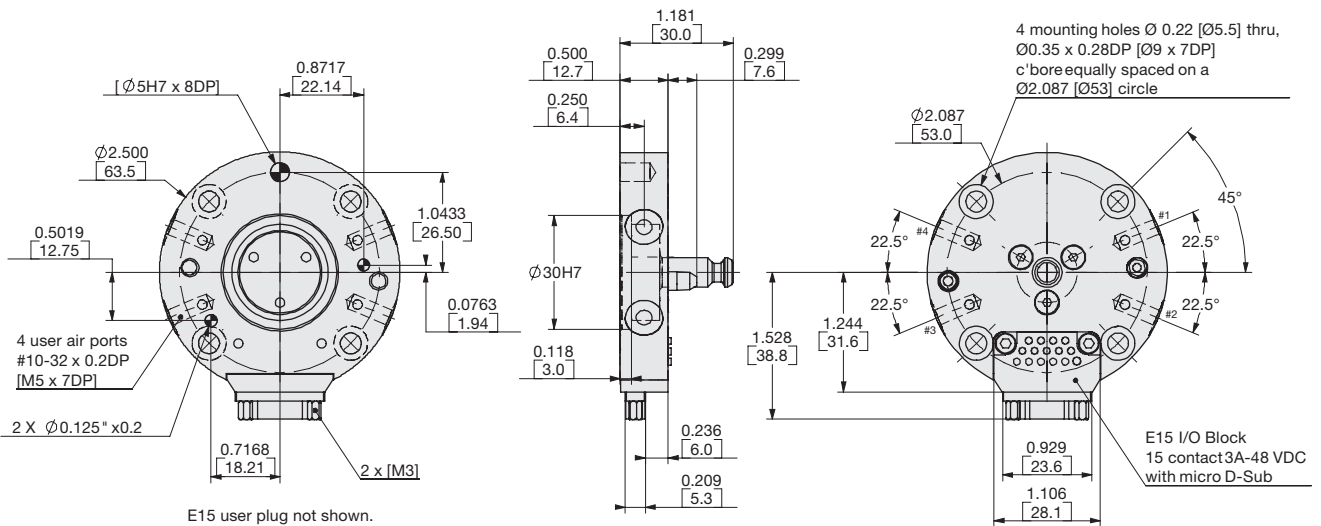
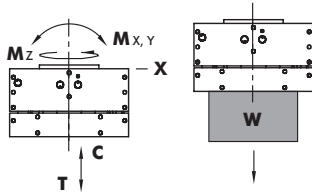
Weight: 0.11 Kg [0.25 lbs]

Loading Capacity

Max. Tensile T: 311 N [70 lb]

Max. Compressive C: 445 N [100 lb]

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



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[0.0] = \pm [.13]
[0.00] = \pm [.013]

QC-60 (ROBOT PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions



QC-60 Specification:

Max. Payload: 27 Kg [60 lbs]

Weight: 0.86 Kg [1.9 lbs]

Bore Ø: 44.5 mm [1.75 in]

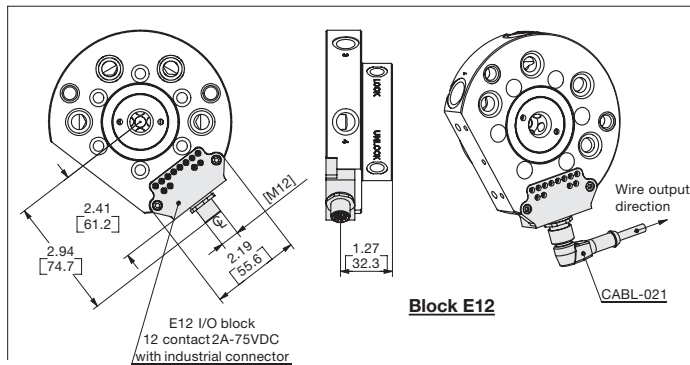
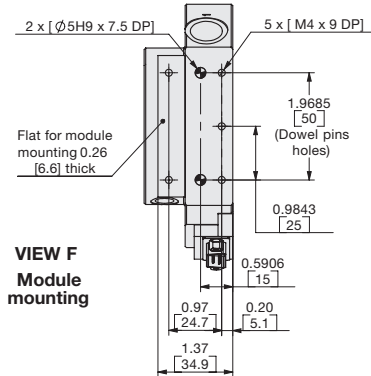
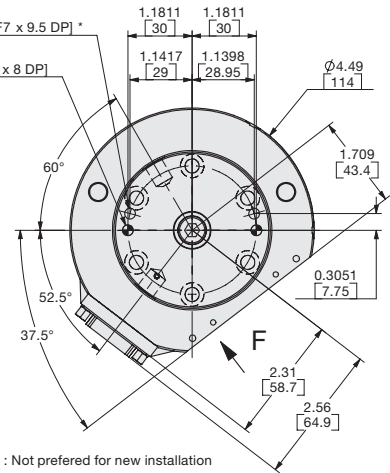
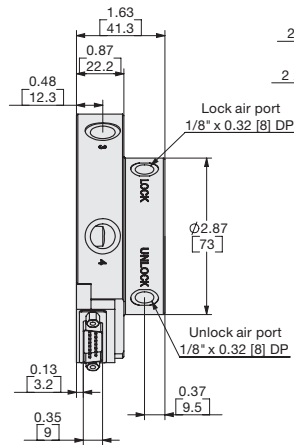
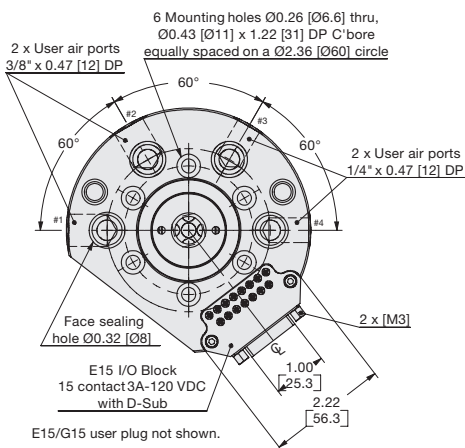
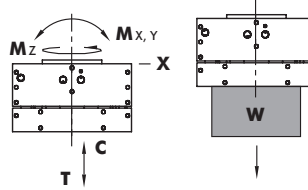
Displacement: 9.2 cm³ [0.56 in³]

Loading Capacity

Max. Tensile T: 445 N [100 lb]

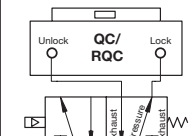
Max. Compressive C: 534 N [120 lb]

Max. Moment (M_x/M_y/M_z): 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.



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⌀ DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

THIRD ANGLE PROJECTION

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

METRIC THREADS COURSE PITCH

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

METRIC (MM)
[0] = [±.25]
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TP-60 (TOOL PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions

TP-60 Specification:

Max. Payload: 27 Kg [60 lbs]

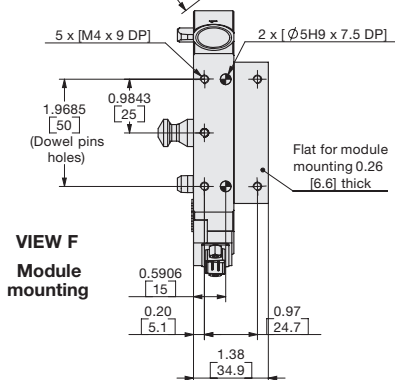
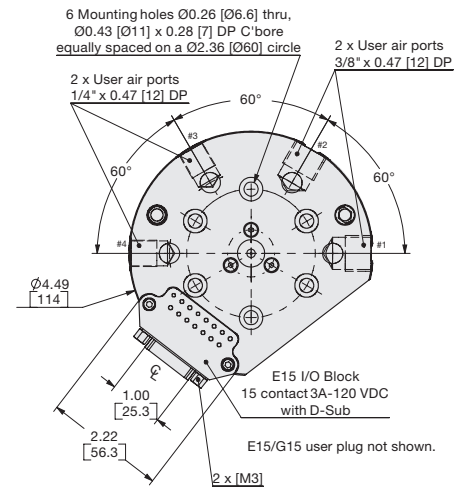
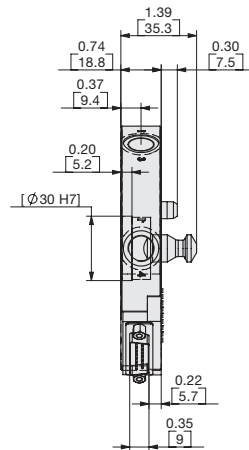
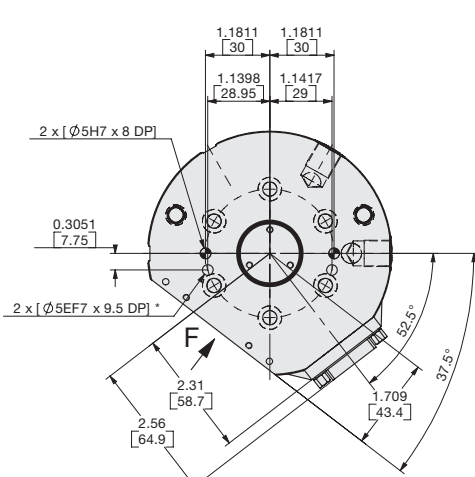
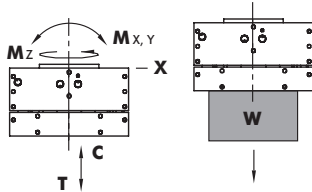
Weight: 0.41 Kg [0.90 lbs]

Loading Capacity

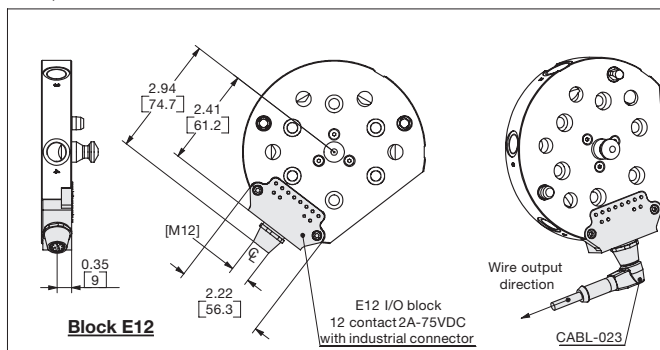
Max. Tensile T: 445 N [100 lb]

Max. Compressive C: 534 N [120 lb]

Max. Moment (M_x/M_y/M_z): 88.1 Nm [780 in-lb]



* : Not preferred for new installation



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QC-60-10P (ROBOT PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions



QC-60-10P Specification:

Max. Payload: 27 Kg [60 lbs]

Weight: 0.86 Kg [1.9 lbs]

Bore Ø: 44.5 mm [1.75 in]

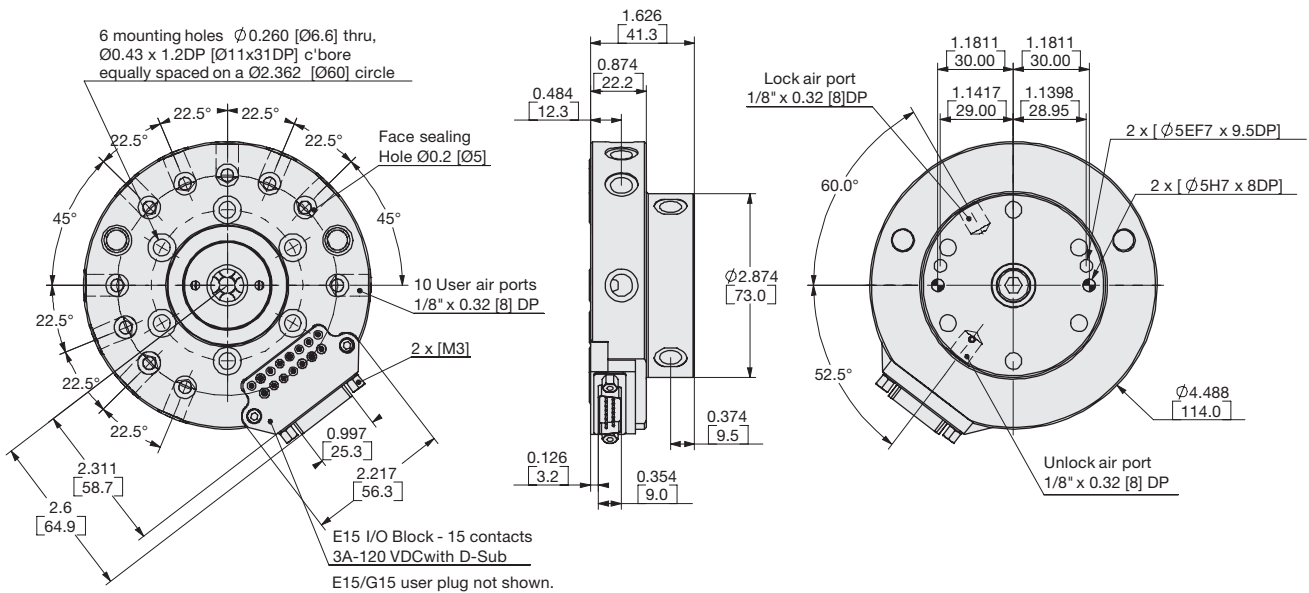
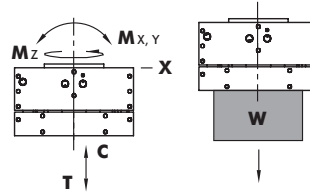
Displacement: 9.2 cm³ [0.56 in³]

Loading Capacity

Max. Tensile T: 445 N [100 lb]

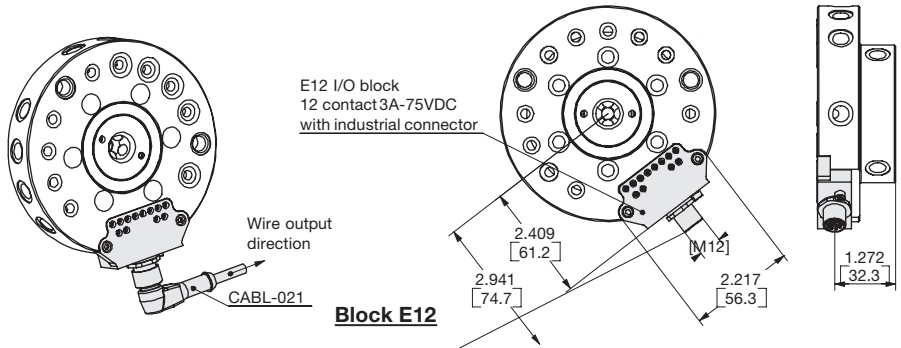
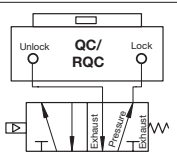
Max. Compressive C: 534 N [120 lb]

Max. Moment (M_x/M_y/M_z): 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.



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TP-60-10P (TOOL PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions

TP-60-10P Specification:

Max. Payload: 27 Kg [60 lbs]

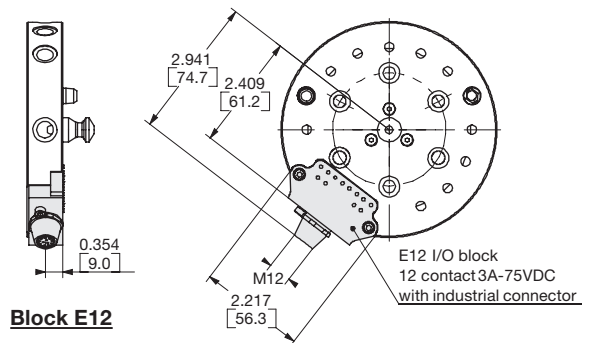
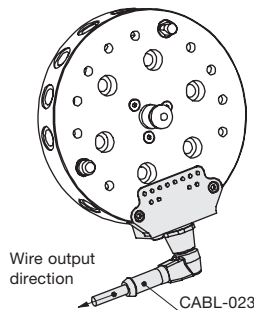
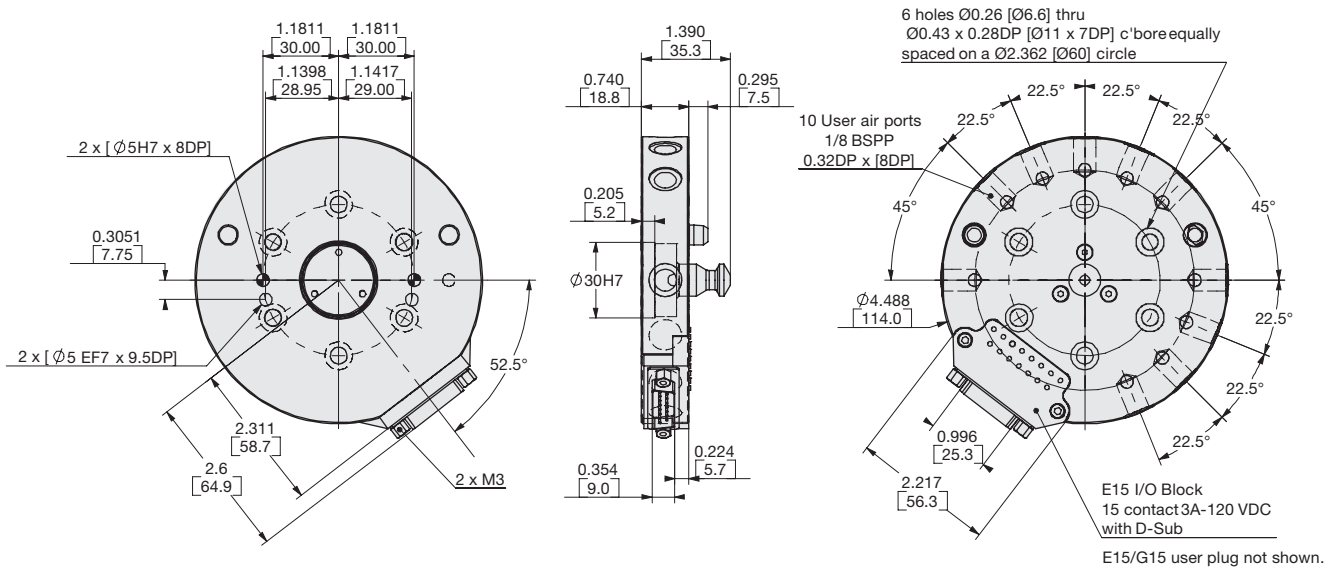
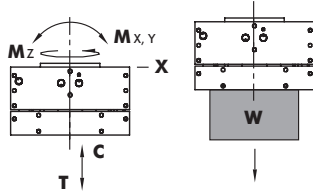
Weight: 0.41 Kg [0.90 lbs]

Loading Capacity

Max. Tensile T: 445 N [100 lb]

Max. Compressive C: 534 N [120 lb]

Max. Moment (M_x/M_y/M_z): 88.1 Nm [780 in-lb]



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

QC-150 (ROBOT PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions



QC-150 Specification:

Max. Payload: 68 Kg [150 lbs]

Weight: 2.2 Kg [4.8 lbs]

Bore Ø: 66.8 mm [2.63 in]

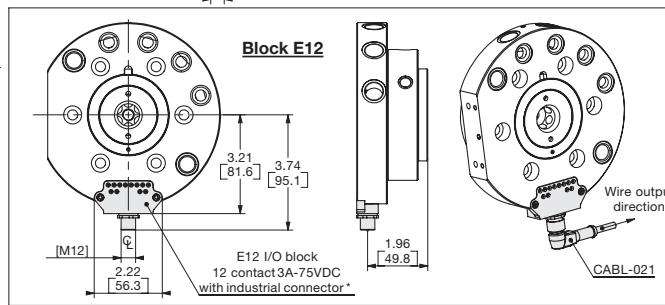
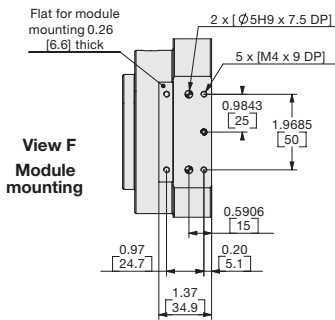
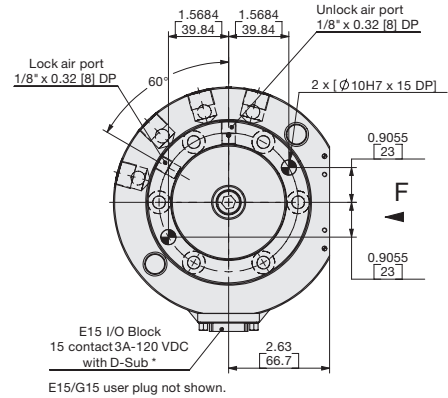
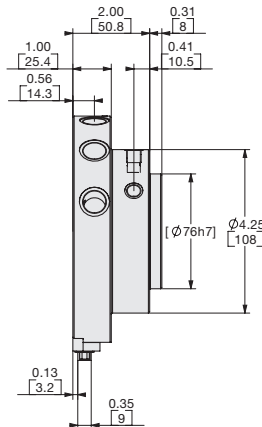
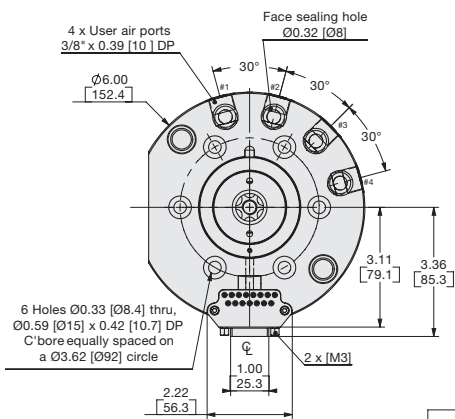
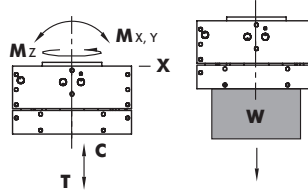
Displacement: 25.4 cm³ [1.55 in³]

Loading Capacity

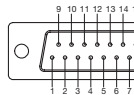
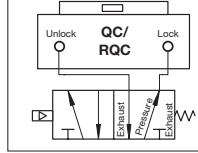
Max. Tensile T: 890 N [200 lb]

Max. Compressive C: 1334 N [300 lb]

Max. Moment (M_x/M_y/M_z): 215 Nm [1900 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.



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



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LOCAL TOLERANCE ± 0.0005 " OR ± 0.013 MM]

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COURSE PITCH

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[0.0] = ± 0.13
[0.00] = ± 0.13

TP-150 (TOOL PLATE)

Automatic Tool Changers | Technical Specifications | Dimensions

TP-150 Specification:

Max. Payload: 68 Kg [150 lbs]

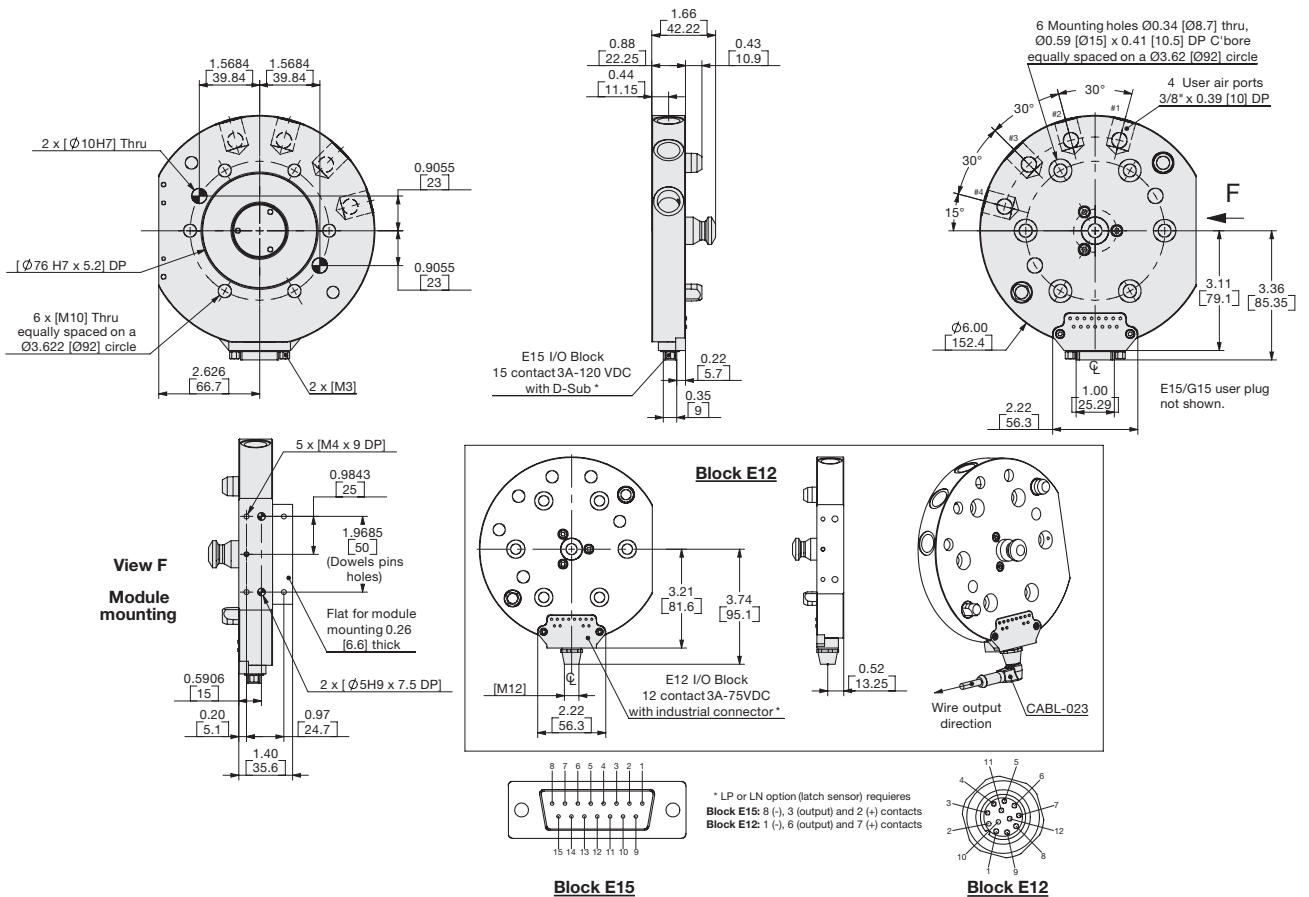
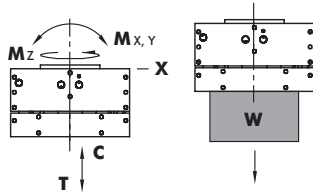
Weight: 1.0 Kg [2.3 lbs]

Loading Capacity

Max. Tensile T: 890 N [200 lb]

Max. Compressive C: 1334 N [300 lb]

Max. Moment (M_x/M_y/M_z): 215 Nm [1900 in-lb]



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

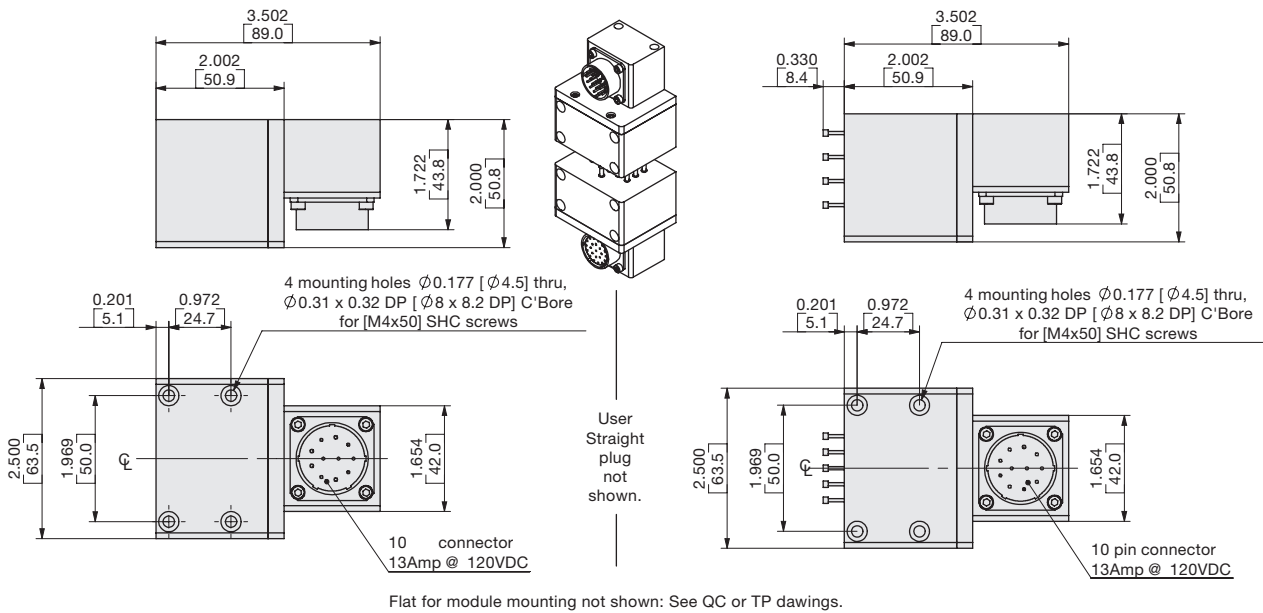
☐
METRIC THREADS
COURSE PITCH

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

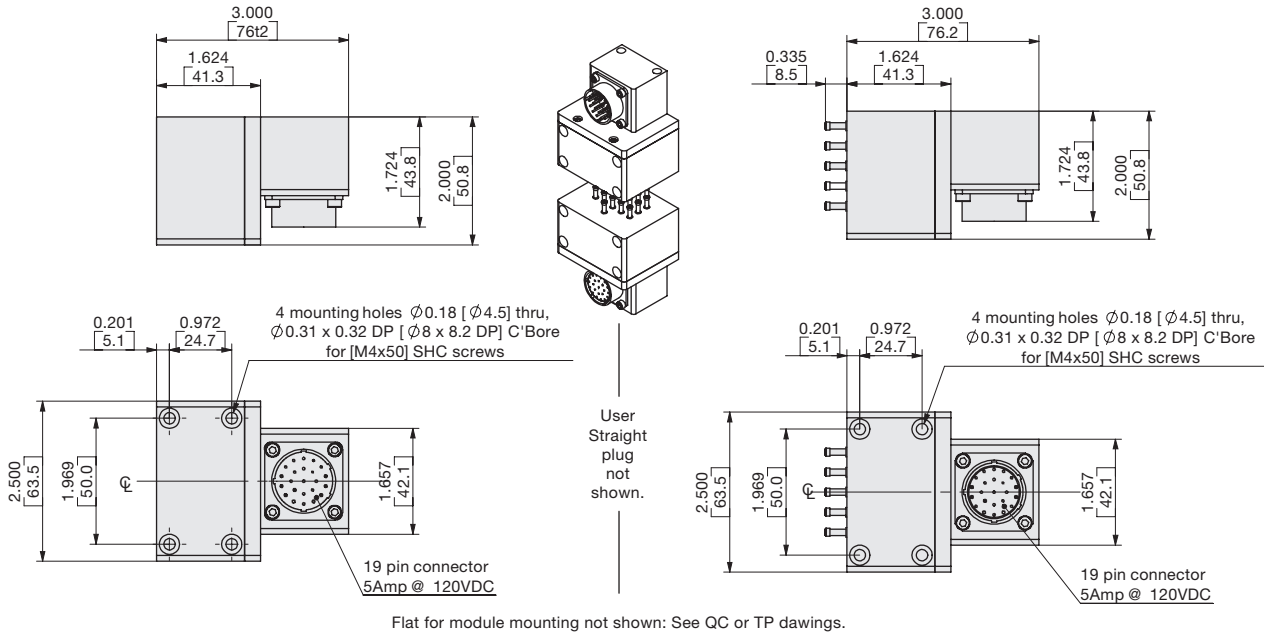


Model	Module	Robot Plate	Tool Plate	*Accessory
QC/TP60	E10	KE10-QC60	KE10-TP60	ELCT-041 (Female)
QC/TP150	E10	KE10-QC150	KE10-TP150	ELCT-042 (Male)

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

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

19-Pin Module 5Amp @ 120VDC Electric Module

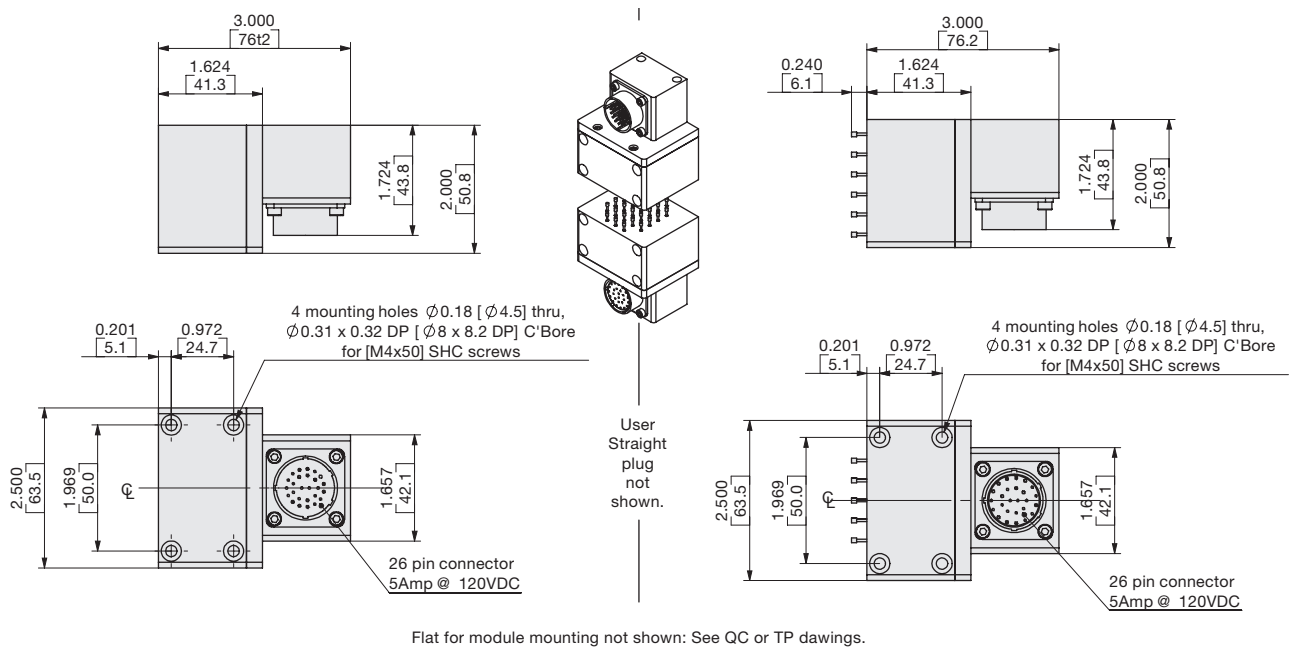


Model	Module	Robot Plate	Tool Plate	*Accessory
QC/TP60	E19	KE19-QC60	KE19-TP60	ELCT-043 (Female)
QC/TP150	E19	KE19-QC150	KE19-TP150	ELCT-044 (Male)

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

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

Automatic Tool Changers | Dimensions | 26-Pin Module 5Amp @ 120VDC Electric Module



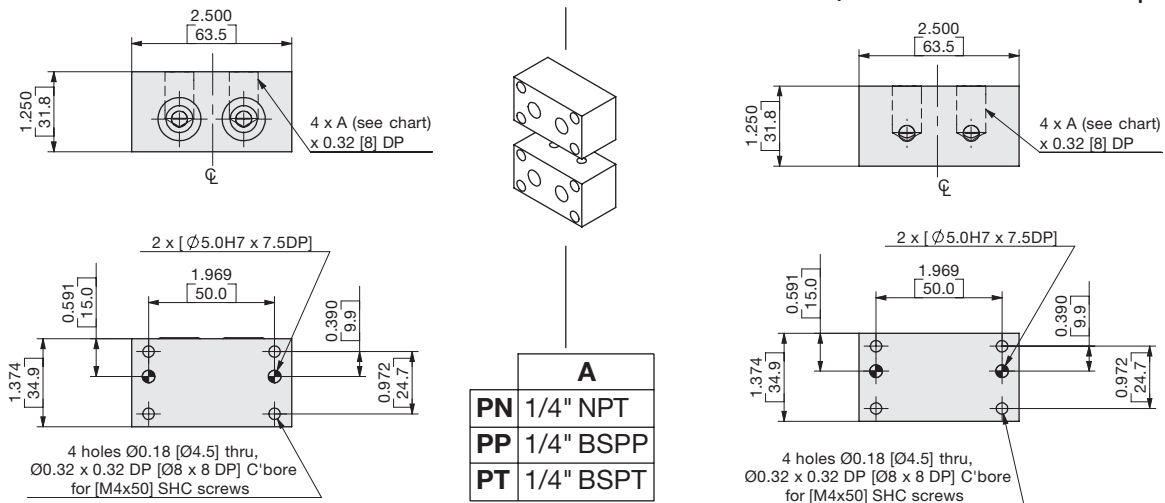
Flat for module mounting not shown: See QC or TP drawings.

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

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

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

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



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

For QC/TP-60

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

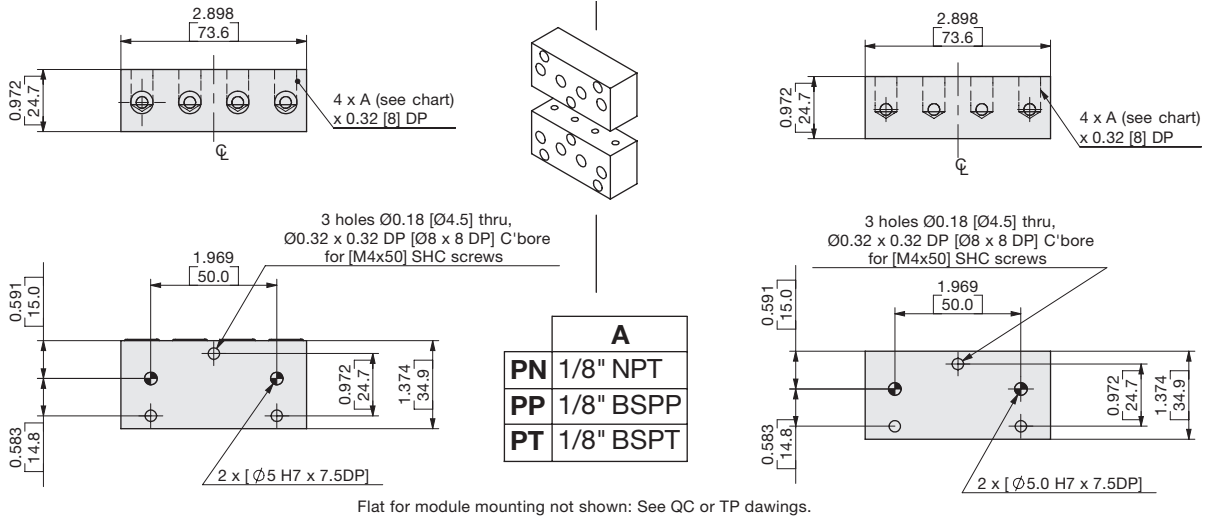
For QC/TP-150

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

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

QC/TP SERIES

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



Maximum Working Pressure: 10 bar

For QC/TP-60

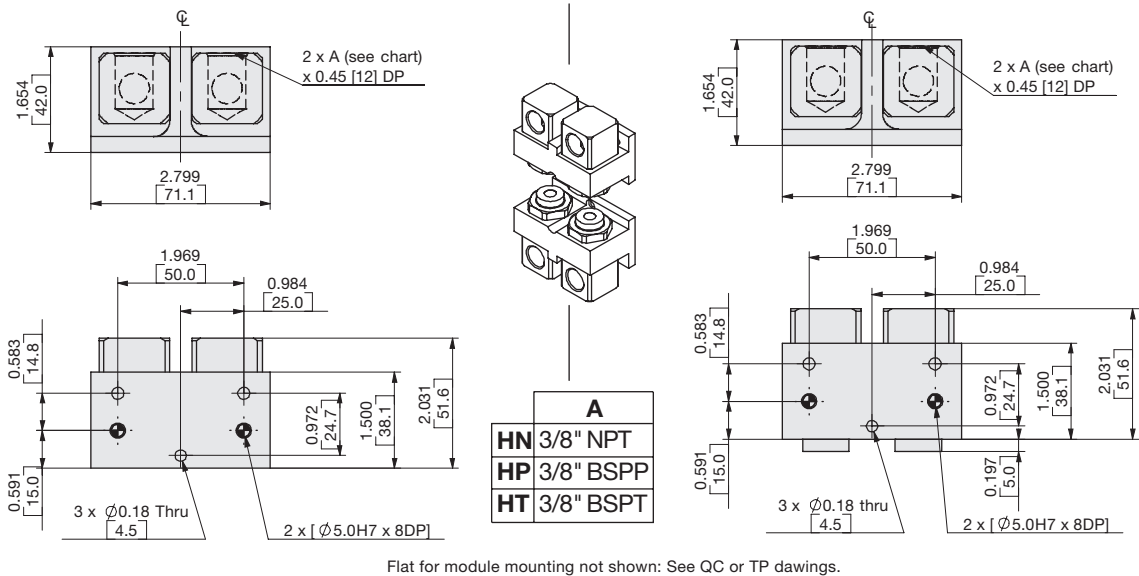
Module	Robot Plate	Tool Plate
PN18	KPN18-QC60	KPN18-TP60
PP18	KPP18-QC60	KPP18-TP60
PT18	KPT18-QC60	KPT18-TP60
Seal Kit	SLKT-391	---

For QC/TP-150

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

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

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



Maximum Working Pressure: 100 bar

For QC/TP-60

Module	Robot Plate	Tool Plate
HN38	KHN38-QC60	KHN38-TP60

For QC/TP-150

Module	Robot Plate	Tool Plate
HN38	KHN38-QC150	KHN38-TP150

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

QC/TP SERIES

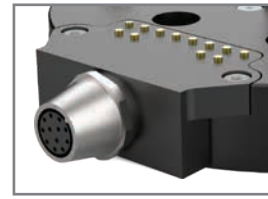
Automatic Tool Changers | Dimensions | Sub-D Conn and User Plug IO Block



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

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

See individual datasheets for dimensions.



12 Pin w/Turck M12 Conn w/o Cordset

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

See individual datasheets for dimensions.