

Strive for Excellence & Consistency



Zhengzhou Linghang Robot Co.,Ltd.

Phone: +86-371-86256680

Mobile: +86-18503835695

Web: www.ltautotools.com

Email: info@ltautotools.com

Add: No.1 Zhongwu Tech Park, Mazhai Industrial District,
Zhengzhou, Henan, China



2013

2015

2018

2020

► Robotic Tool Changers

Zhengzhou Linghang Robot Co.,Ltd.

Zhengzhou Linghang Robot Co.,Ltd.(Hereinafter referred to as Linghang Robot) is a high-tech company specialized in R&D, manufacture and sales of robot end tooling equipment.
As a National high-tech Enterprise, Linghang Robot (CCEE:200649) has been listed on Central China Equity Exchange Center.

2020



Zhengzhou Linghang Robot Co.,Ltd.(Hereinafter referred to as Linghang Robot) is a high-tech company specialized in R&D, manufacture and sales of robot end tooling equipment. As a National high-tech Enterprise, Linghang Robot (CCEE:200649) has been listed on Central China Equity Exchange Center; and has its Operation and R&D Center in Zhengzhou, and production plant in Xuchang.

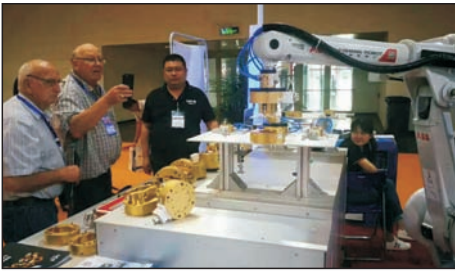
Linghang Robot,with register capital of 22 million RMB, has been recognized as AAA Credit Enterprise in 2019. Linghang Robot has registered more than 20 patents and 5 software copyrights; and also have got ISO9001 Quality Management System Certificate and CE Certificate for its products.



ISO9001 Cert



European CE Cert

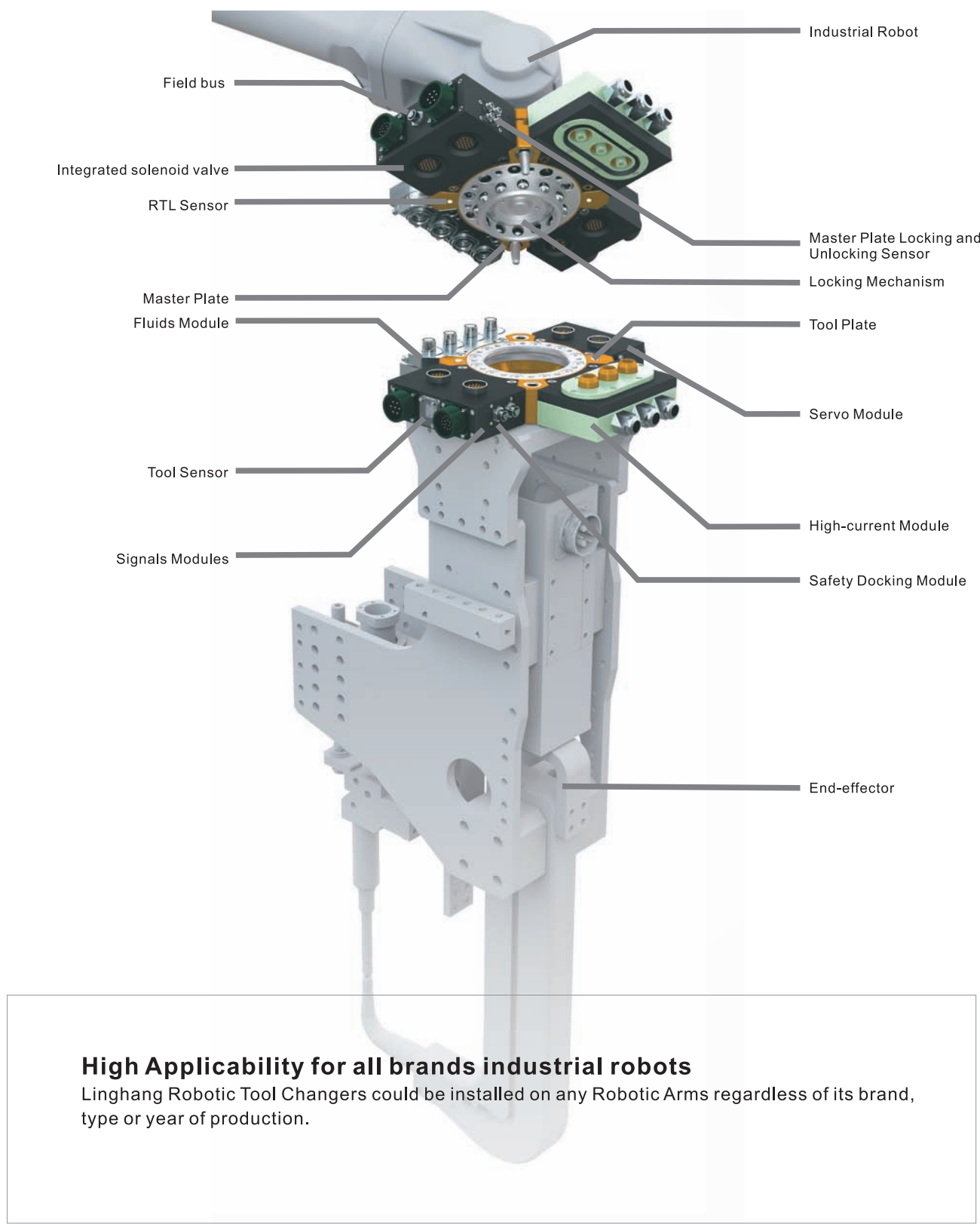


Robotic Tool Changer provides flexibility and efficiency to robotic applications by enabling the robot to change end-effector automatically in few seconds (e.g.; grippers, vacuum cup tooling, pneumatic and electric motors, weld guns, etc.); it was widely used for different aspects in automation industry. Robotic tool changers consist of a master plate, which is mounted to the robot arm, and a tool plate, which is mounted to the end-effector. The tool changer passes utilities such as pneumatics, electrical signals, fluids, video signals and more from the robot arm to the end-effector.

Contents

- About Linghang Robot 02
- System Structure04
- Robotic Tool Changers
 - LTC-0010B 06
 - LTC-0010C 08
 - LTC-0020C 10
 - LTC-0030B 12
 - LTC-0060A 14
 - LTC-0120B 16
 - LTC-0200B 18
 - LTC-0200C 20
 - LTC-0300C22
 - LTC-0650A 24
 - LTC-0700A 26
- Optional Utility Modules
 - Signals Modules 28
 - Servo Modules 29
 - Fluid Modules 29
 - High-current Modules 29
 - High-power Module 30
 - Pneumatics Modules 30
 - High-Frequency Module 30
 - Integrated solenoid valve Modules 30
- Flexible Utility Connector 31
- Locking Mechanism 32
- Application Display33
- Industrial Applications
 - Automobile Manufacturing34
 - Forging Industry34
 - Heavy Industry35
 - Education35

System Structure:



LT Robotic Tool Changers make the connections safer!

ISO9001 Quality Management System Certificate, European CE Certificate

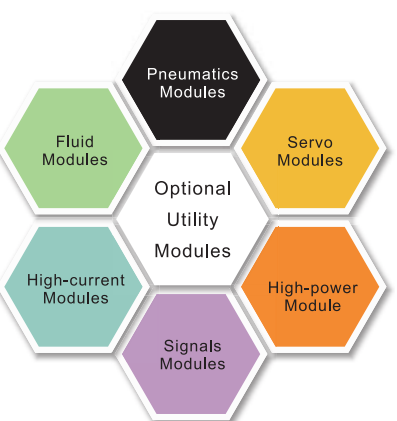
Hi Rigidity - All locking parts are made of high-strength alloy steel to ensure locking precision and safety

Superior Fail-Safe Locking Mechanism - The new mechanism locks the Master Place to the Tool Plate and remains locked even if pressure is accidentally removed

Safe Docking System - The tools could be unlocked unless docking on the tools station.

Available in different sizes tools family - The tool changer accommodates payloads ranging from 3 to 2100 kg.

Support for more Applications with plenty of optional utility modules. Tailored solutions supported.



Model : LTC-0010B

- Payload up to 10kg
- Steel Ball Locking Mechanism
- 6 X M5 Pneumatic ports connections, 1 Module mounting surface
- Suitable for handling, stacking, assembling and more applications
- Superior Fail-safe locking mechanism - The locking mechanism locks the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed.



Specification parameters

Model	Master Plate	LTC-0010BM
	Tool Plate	LTC-0010BT
Load	Payload Capacity	10kg
	Bending Moment Capacity	26.5Nm
	Torsional Moment Capacity	26.5Nm
Size and Precision	Housing Diameter	φ60mm
	Thickness when coupled	43mm
	Position Repeatability	±0.02mm
Air Pressure for Working		0.4~0.7Mpa
Locking Mechanism		Locking steel ball
Materials	Frame	Aluminum alloy
	Locking Mechanism	Alloy steel
Working Environment	Temperature	0~60℃
	Humidity	95%
Weight	Master Side	0.24kg
	Tool Side	0.09kg
Air Connector	Pneumatic Port	6 x M5
	Max Pressure	0.8Mpa

Optional Utility Modules



LMO-S15BM
15Pins Signals Module (M)



LMO-S15BT
15Pins Signals Module (T)



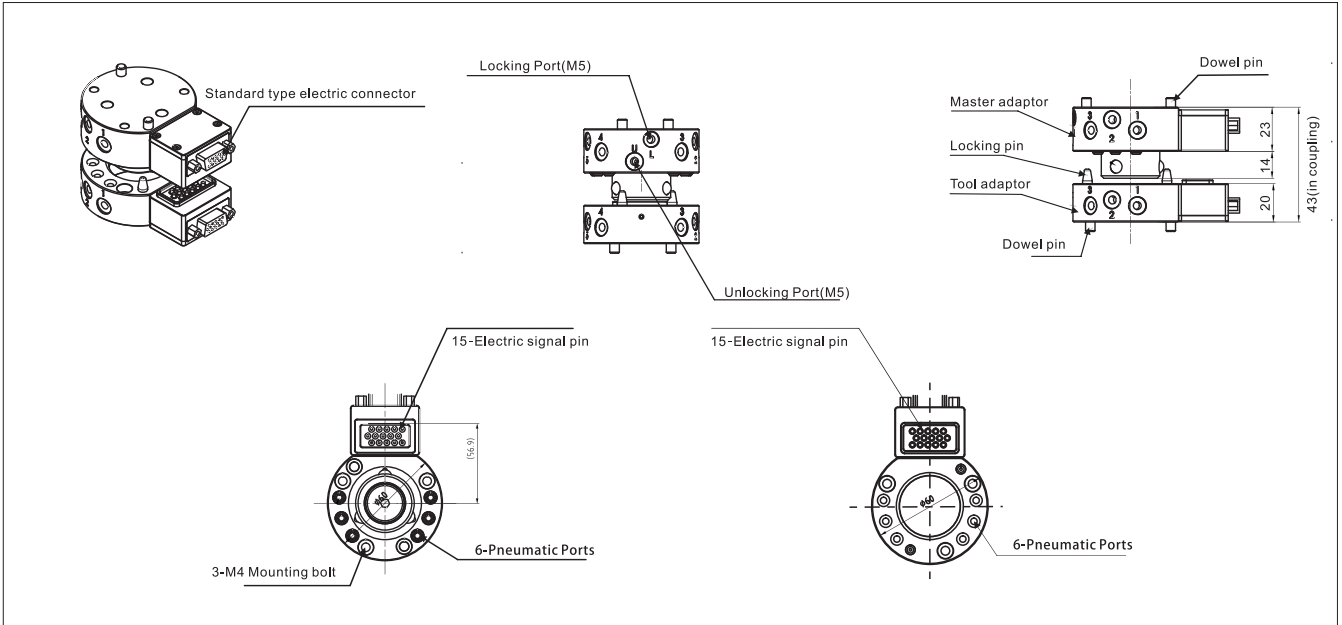
LMO-S15BM*2
15Pins Signals Module (M)*2



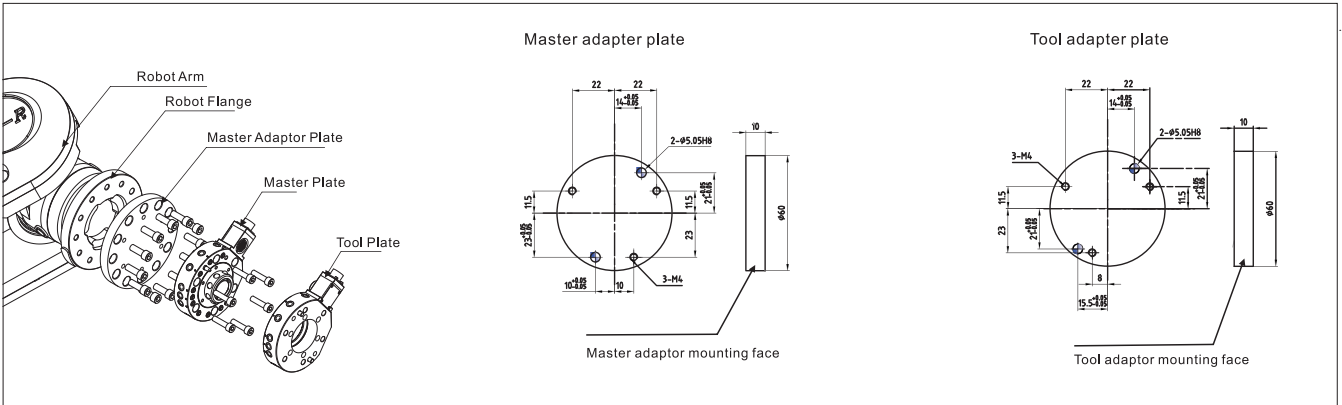
LMO-S15BT*2
15Pins Signals Module (T)*2

For more optional utility modules, please contact us for more information.

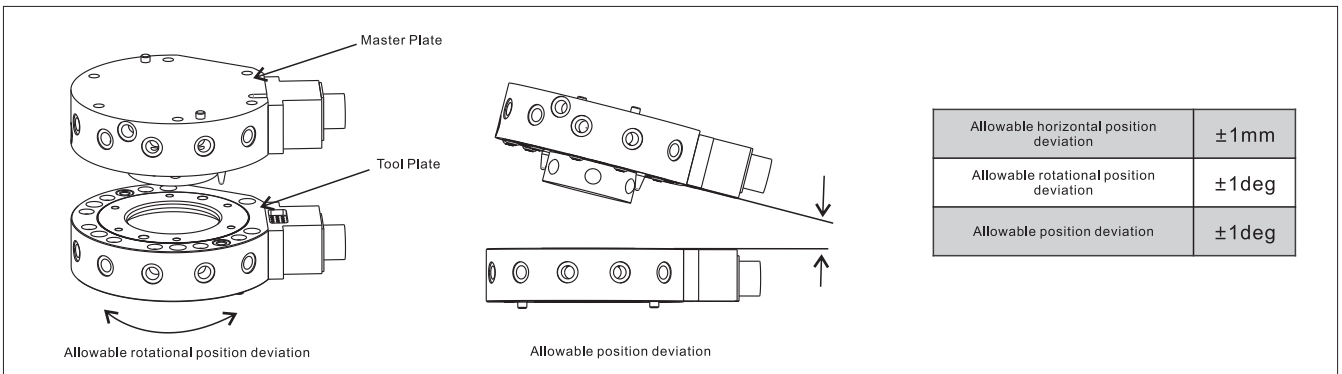
Dimensional Outline Drawing



Mounting Plate Drawing



Allowable Deviations



Warning



Warning

1. When selecting models, please make sure both the bending & torsional moment during working process are less than designed payload capacity of the tool changer.
2. Please pay attention that robots may produce moments two to three times higher than static moment due to their potentially high acceleration.
3. The locking mechanism enables our tool changers lock the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed during debugging and application period of the robot.

Model : LTC-0010C

- Payload up to 10kg
- Steel Ball Locking Mechanism
- 6 X M5 Pneumatic ports connections, 1 Module mounting surface
- Suitable for handling, stacking, assembling and more applications
- Superior Fail-safe locking mechanism - The locking mechanism locks the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed.
- Optional built-in locking/unlocking sensor for Main Plate, RTL sensor for Tool Plate.



Specification parameters

Model	Master plate	LTC-0010CM
	Tool plate	LTC-0010BT
Load	Payload capacity	10kg
	Bending Moment Capacity	26.5Nm
	Torsional Moment Capacity	26.5Nm
Size and Precision	Housing diameter	φ60mm
	Thickness when coupled	76mm
	Position repeatability	±0.02mm
Air pressure for working		0.4~0.7Mpa
Locking mechanism		Locking steel ball
Materials	Frame	Aluminum alloy
	Locking Mechanism	Alloy steel
Working Environment	Temperature	0-60℃
	Humidity	95%
Weight	Master Side	0.4kg
	Tool side	0.09kg
Air connector	Pneumatic Port	6 x M5
	Max Pressure	0.8Mpa

Optional Utility Modules



LMO-S15BM
15Pins Signals Module (M)



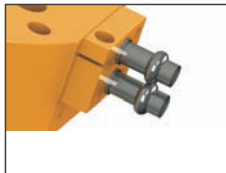
LMO-S15BT
15Pins Signals Module (T)



LMO-S15BM*2
15Pins Signals Module (M)*2



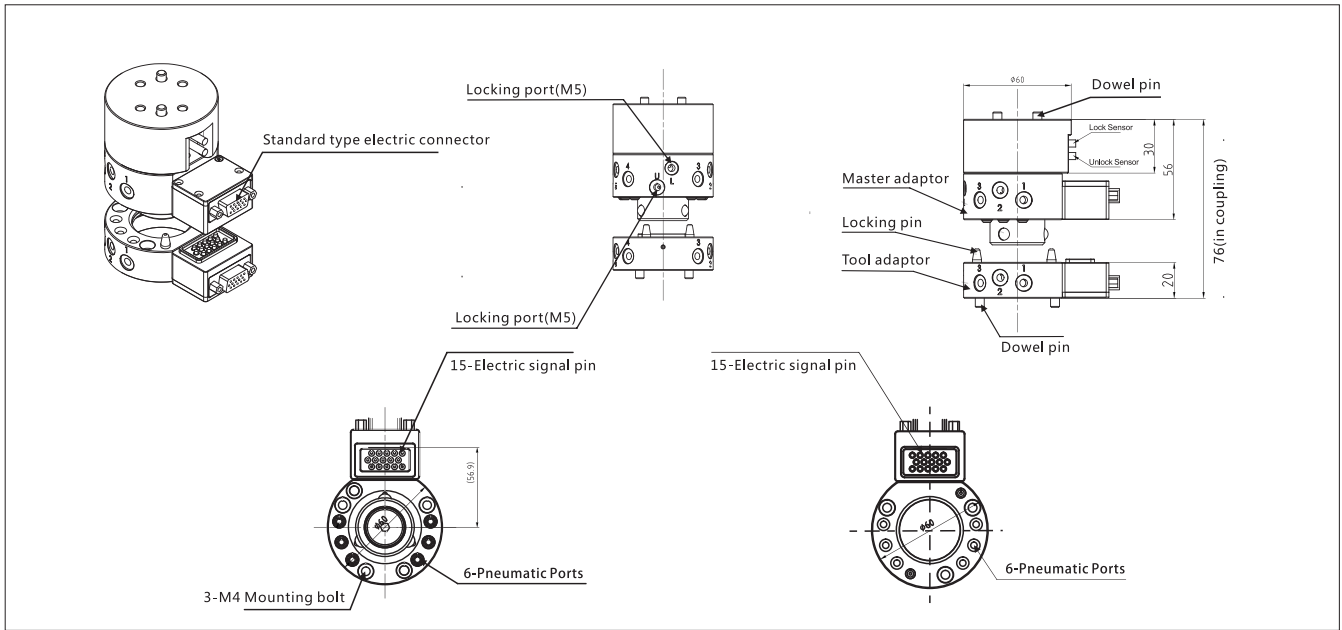
LMO-S15BT*2
15Pins Signals Module (T)*2



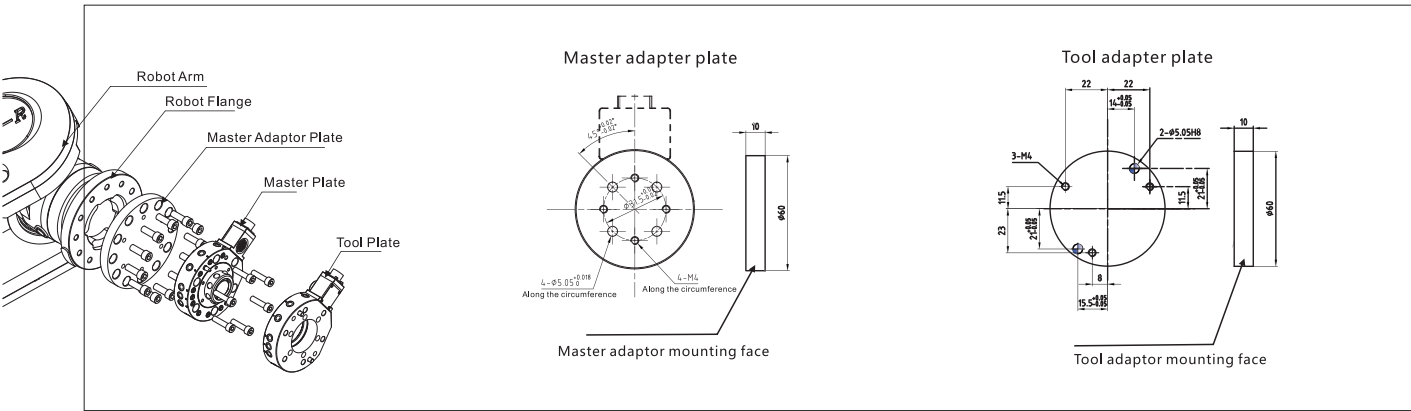
LH-SSC01
Locking/unlocking Sensor

For more optional utility modules, please contact us for more information.

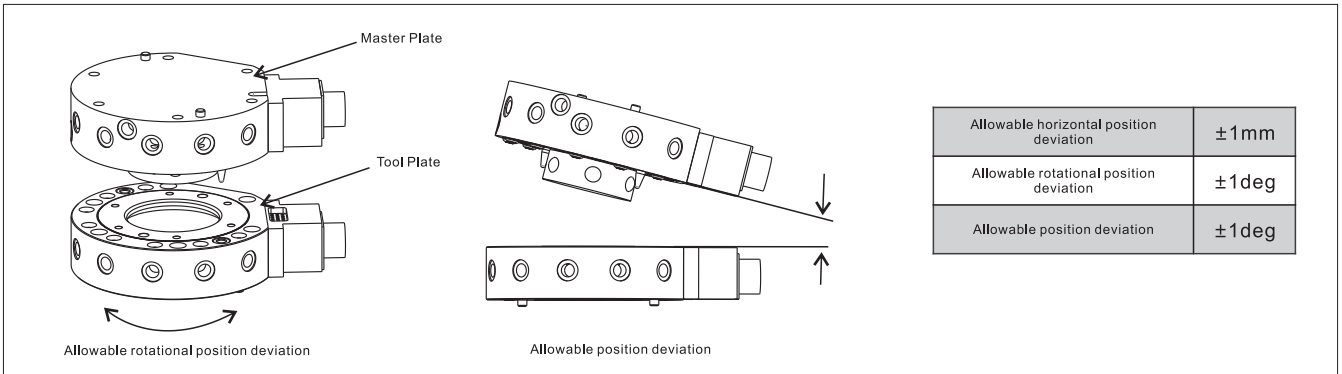
Dimensional Outline Drawing



Mounting Plate Drawing



Allowable Deviations



Allowable horizontal position deviation	±1mm
Allowable rotational position deviation	±1deg
Allowable position deviation	±1deg



Warning

Warning

1. When selecting models, please make sure both the bending & torsional moment during working process are less than designed payload capacity of the tool changer.
2. Please pay attention that robots may produce moments two to three times higher than static moment due to their potentially high acceleration.
3. The locking mechanism enables our tool changers lock the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed during debugging and application period of the robot.

Model : LTC-0020C

- Payload up to 10kg
- Steel Ball Locking Mechanism
- 12 X M5 Pneumatic ports connections, 4 Module mounting surface
- Suitable for handling, stacking, assembling and more applications
- Superior Fail-safe locking mechanism - The locking mechanism locks the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed.



Specification parameters

Model	Master plate	LTC-0020CM
	Tool plate	LTC-0020CT
Load	Payload capacity	20kg
	Bending Moment Capacity	60Nm
	Torsional Moment Capacity	60Nm
Size and precision	Housing diameter	φ85mm
	Thickness when coupled	49.5mm
	Position repeatability	±0.02mm
Air pressure for working		0.4~0.7Mpa
Locking mechanism		Locking steel ball
Materials	Frame	Aluminum alloy
	Locking mechanism	Alloy steel
Working Environment	Temperature	0-60℃
	Humidity	95%
Weight	Master side	0.53kg
	Tool side	0.30kg
Air connector	Pneumatic port	12 x M5
	Max pressure	0.8Mpa

Optional Utility Modules



LMO-S15BM
15Pins Signals Module (M)



LMO-S15BT
15Pins Signals Module (T)



LMO-G04BM
4-Pneumatic ports Module (M)



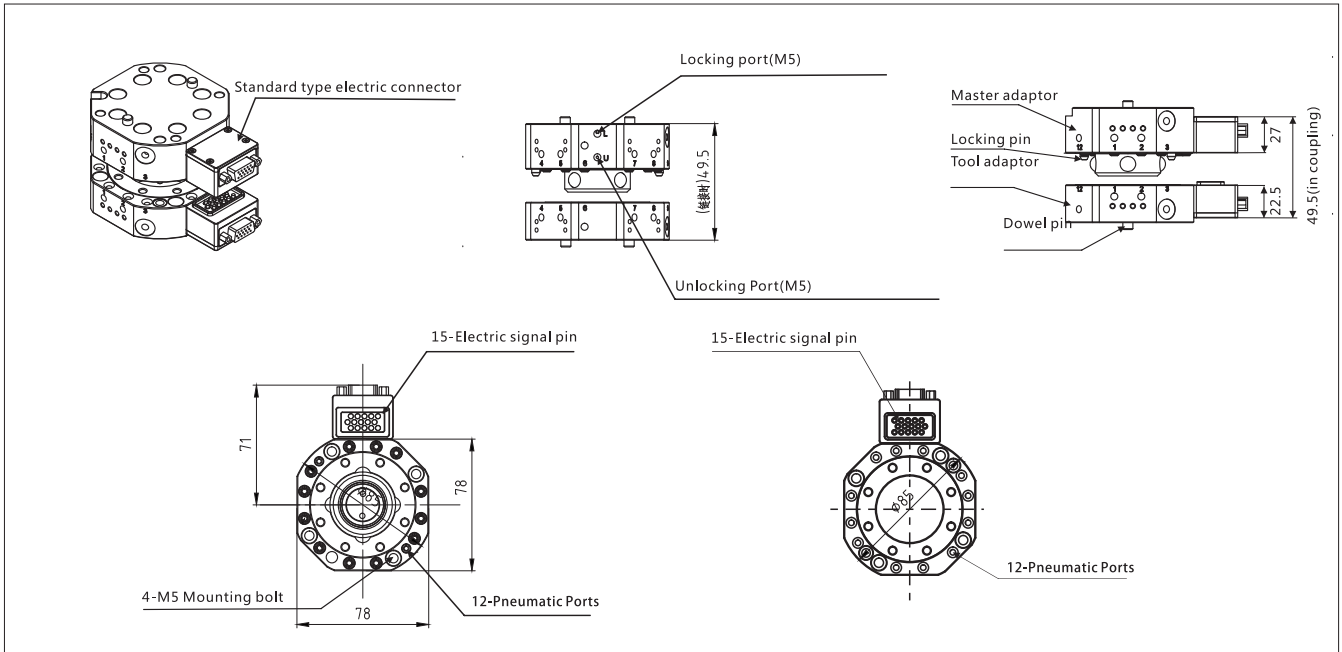
LMO-G04BT
4-Pneumatic ports Module (T)



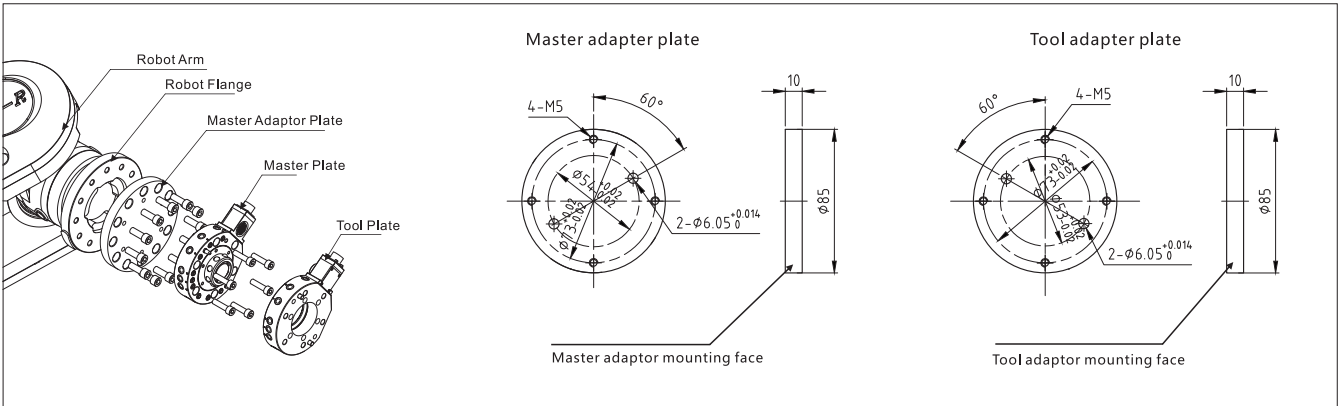
LH-STD01
RTL Sensor

For more optional utility modules, please contact us for more information.

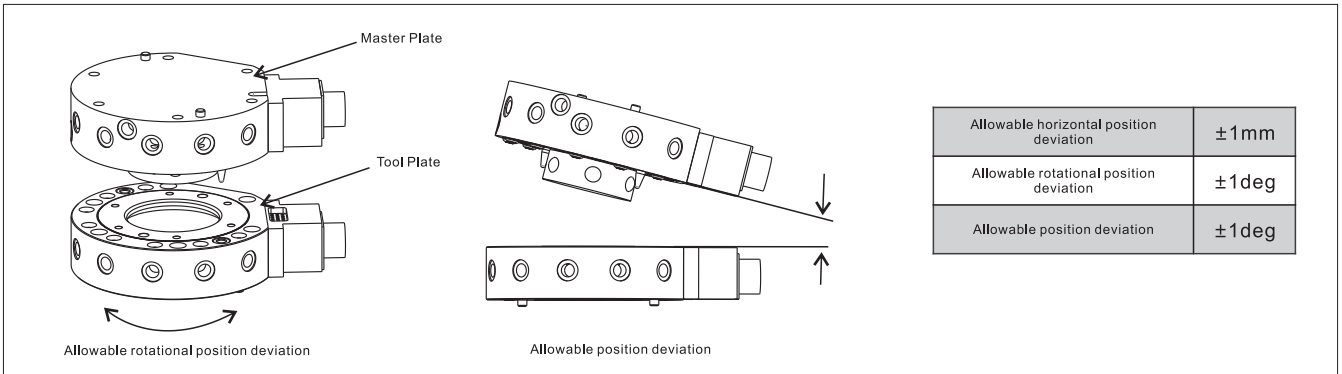
Dimensional Outline Drawing



Mounting Plate Drawing



Allowable Deviations



Warning



Warning

1. When selecting models, please make sure both the bending & torsional moment during working process are less than designed payload capacity of the tool changer.
2. Please pay attention that robots may produce moments two to three times higher than static moment due to their potentially high acceleration.
3. The locking mechanism enables our tool changers lock the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed during debugging and application period of the robot.

Model : LTC-0030B

- Payload up to 30kg
- Steel Ball Locking Mechanism
- 6 X PT1/8 Pneumatic ports connections, 2 Module mounting surface
- Suitable for handling, stacking, welding and more applications
- Superior Fail-safe locking mechanism - The locking mechanism locks the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed.
- Optional built-in locking/unlocking sensor for Main Plate, RTL sensor for Tool Plate.



Specification parameters

Model	Master plate	LTC-0030BM
	Tool plate	LTC-0030BT
Load	Payload capacity	30kg
	Bending Moment Capacity	160Nm
	Torsional Moment Capacity	160Nm
Size and precision	Housing diameter	φ95mm
	Thickness when coupled	59mm
	Position repeatability	±0.02mm
Air pressure for working		0.4~0.7Mpa
Locking mechanism		Locking steel ball
Materials	Frame	Aluminum alloy
	Locking mechanism	Alloy steel
Working Environment	Temperature	0-60°C
	Humidity	95%
Weight	Master side	0.78kg
	Tool side	0.44kg
Air connector	Pneumatic port	6 xPT1/8
	Max pressure	0.8Mpa

Optional Utility Modules



LMO-S15BM
15Pins Signals Module (M)



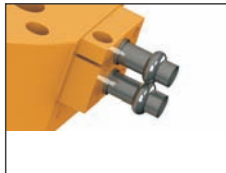
LMO-S15BT
15Pins Signals Module (T)



LMO-S15BM*2
15Pins Signals Module (M)*2



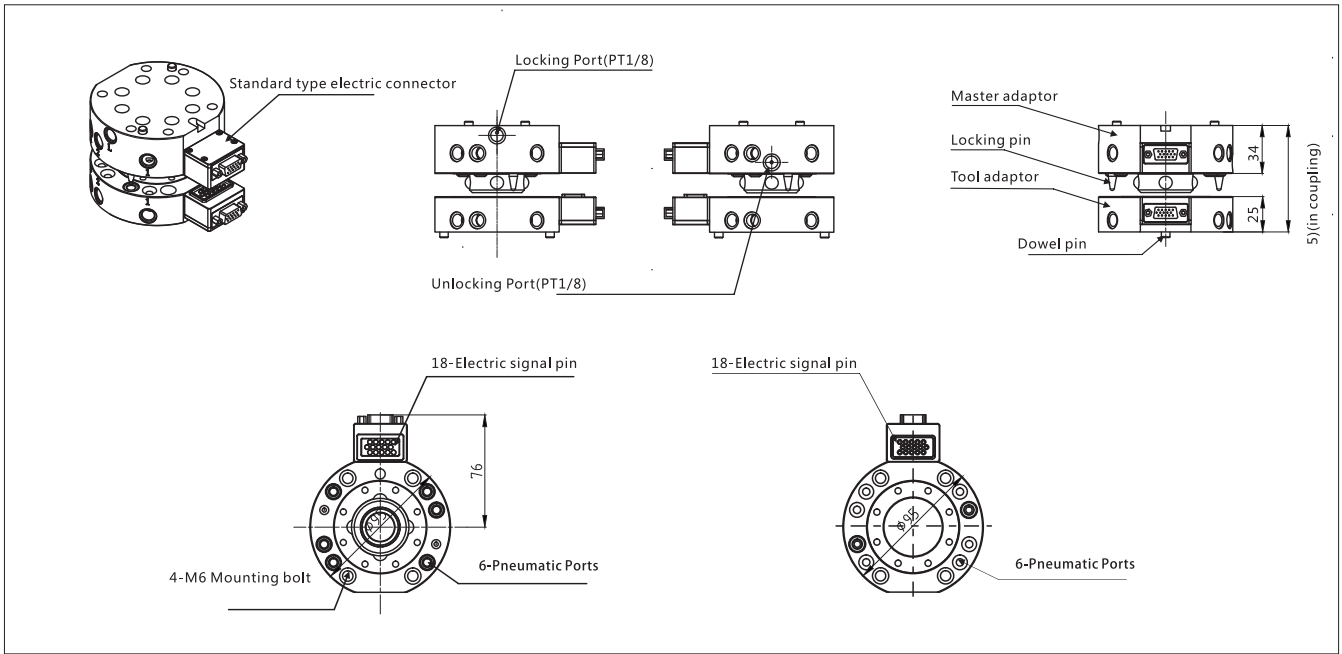
LMO-S15BT*2
15Pins Signals Module (T)*2



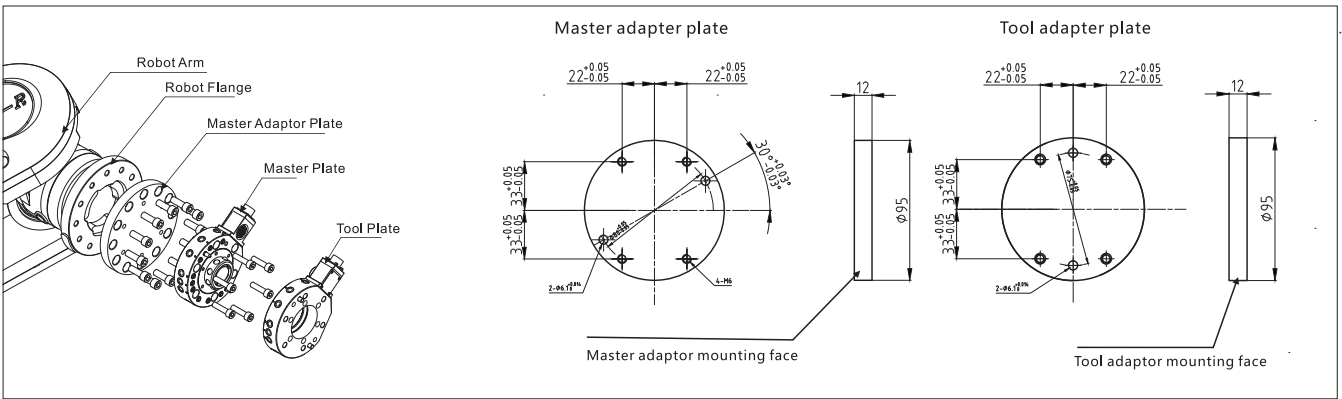
LH-SSC01
Locking/unlocking Sensor

For more optional utility modules, please contact us for more information.

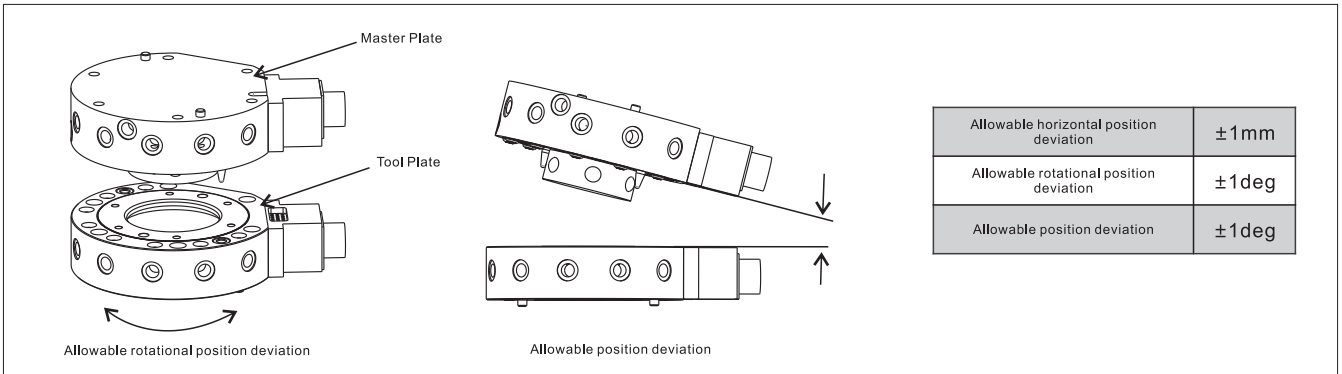
Dimensional Outline Drawing



Mounting Plate Drawing



Allowable Deviations



Warning



1. When selecting models, please make sure both the bending & torsional moment during working process are less than designed payload capacity of the tool changer.
2. Please pay attention that robots may produce moments two to three times higher than static moment due to their potentially high acceleration.
3. The locking mechanism enables our tool changers lock the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed during debugging and application period of the robot.

Model : LTC-0060A

- Payload up to 60kg
- Steel Ball Locking Mechanism
- 8 X PT1/8 Pneumatic ports connections, 2 Module mounting surface
- Suitable for handling, stacking, assembling, polishing, burring and more applications
- Superior Fail-safe locking mechanism - The locking mechanism locks the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed.
- Optional built-in locking/unlocking sensor for Main Plate, RTL sensor for Tool Plate.



Specification parameters

Model	Master plate	LTC-0060AM
	Tool plate	LTC-0060AT
Load	Payload capacity	60kg
	Bending Moment Capacity	390Nm
	Torsional Moment Capacity	390Nm
Size and precision	Housing diameter	φ135mm
	Thickness when coupled	72mm
	Position repeatability	±0.02mm
Air pressure for working		0.4~0.7Mpa
Locking mechanism		Locking steel ball
Materials	Frame	Aluminum alloy
	Locking mechanism	Alloy steel
Working Environment	Temperature	0~60℃
	Humidity	95%
Weight	Master side	1.83kg
	Tool side	1.14kg
Air connector	Pneumatic port	8 x PT1/8
	Max pressure	0.8Mpa

Optional Utility Modules



LMO-S15BM
15Pins Signals Module (M)



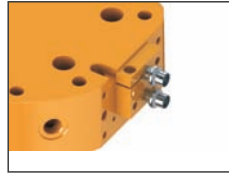
LMO-S18DM
18Pins Signals Module (M)



LMO-E06AM
6Pins 20A High-power Module(M)



LMO-U02BM
High-frequency Module(M)



LH-SSC01
Locking/unlocking Sensor



LMO-S15BT
15Pins Signals Module (T)



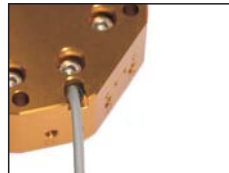
LMO-S18DT
15Pins Signals Module (T)



LMO-E06AT
6Pins 20A High-power Module(T)



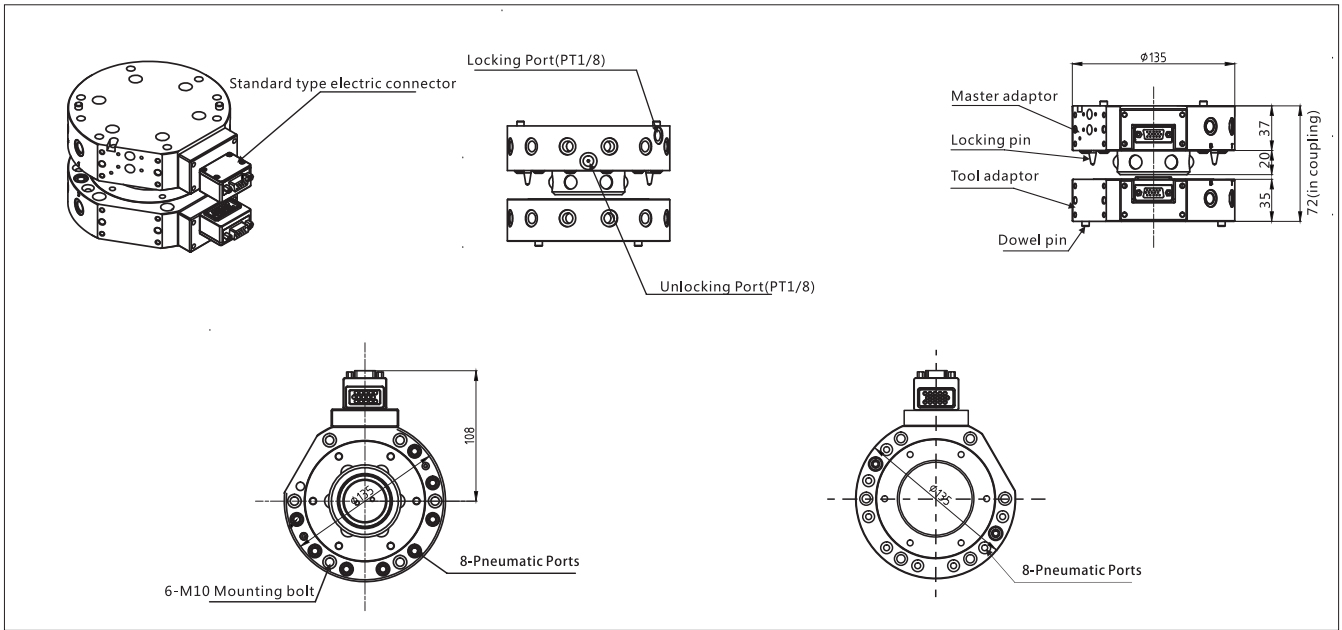
LMO-U02BT
High-frequency Module(T)



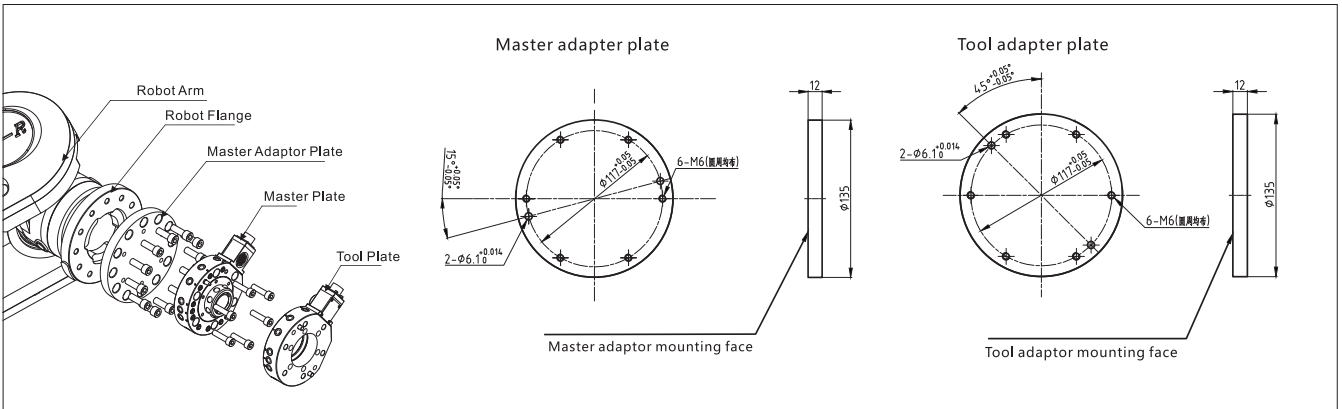
LH-SBD01
RTL Sensor

For more optional utility modules, please contact us for more information.

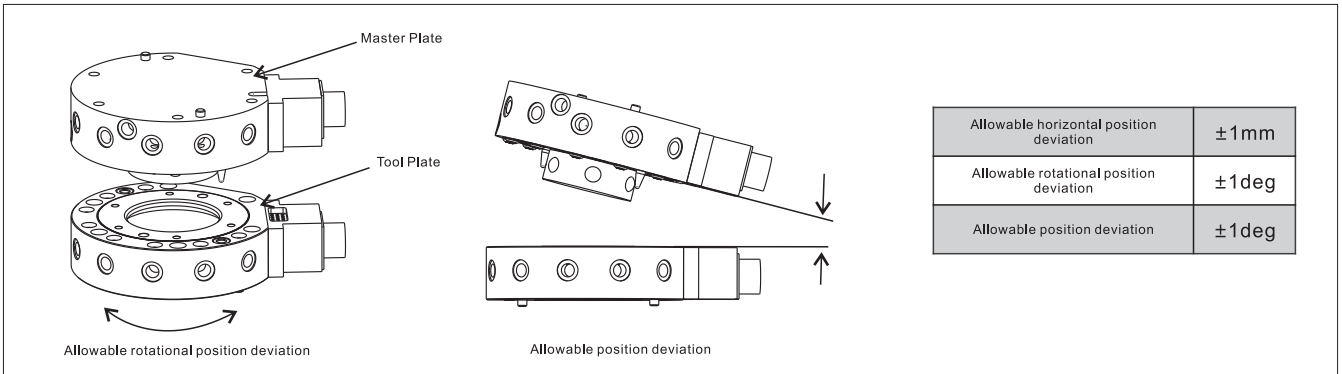
Dimensional Outline Drawing



Mounting Plate Drawing



Allowable Deviations



Warning



Warning

1. When selecting models, please make sure both the bending & torsional moment during working process are less than designed payload capacity of the tool changer.
2. Please pay attention that robots may produce moments two to three times higher than static moment due to their potentially high acceleration.
3. The locking mechanism enables our tool changers lock the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed during debugging and application period of the robot.

Model : LTC-0120B

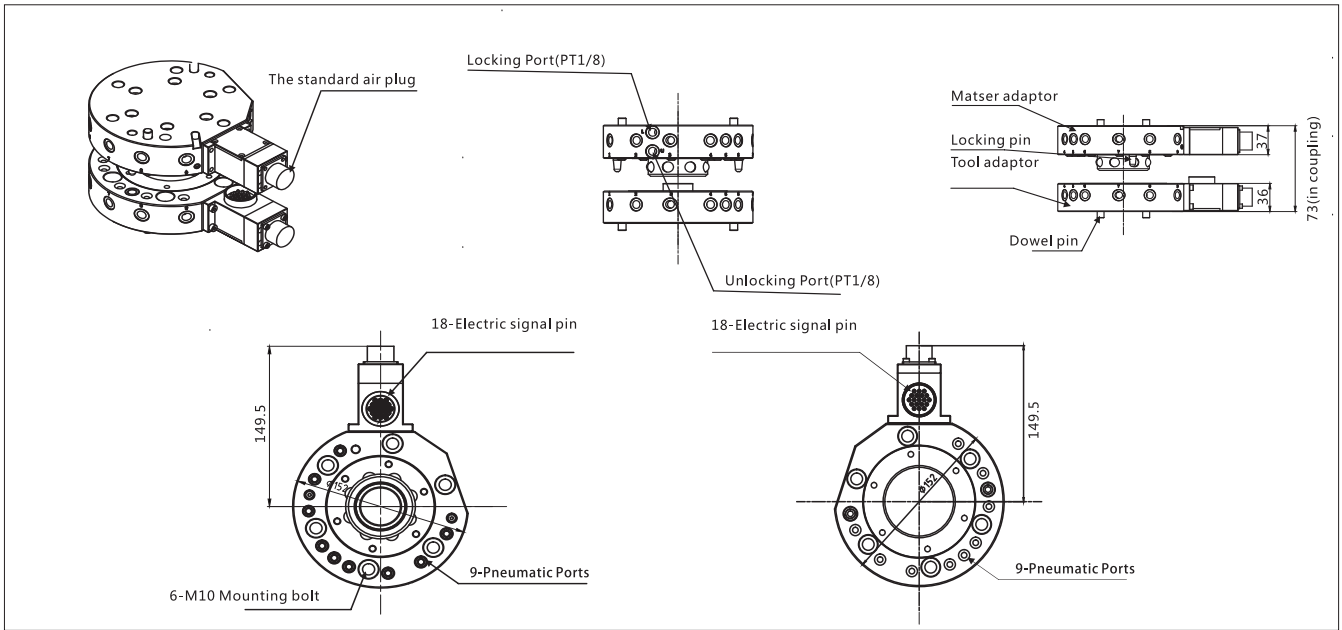
- Payload up to 120kg
- Steel Ball Locking Mechanism
- 9 X PT1/8 Pneumatic ports connections, 2 Module mounting surface
- Suitable for handling, stacking, assembling, polishing, burring and more applications
- Superior Fail-safe locking mechanism - The locking mechanism locks the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed.
- Optional built-in locking/unlocking sensor for Main Plate, RTL sensor for Tool Plate.



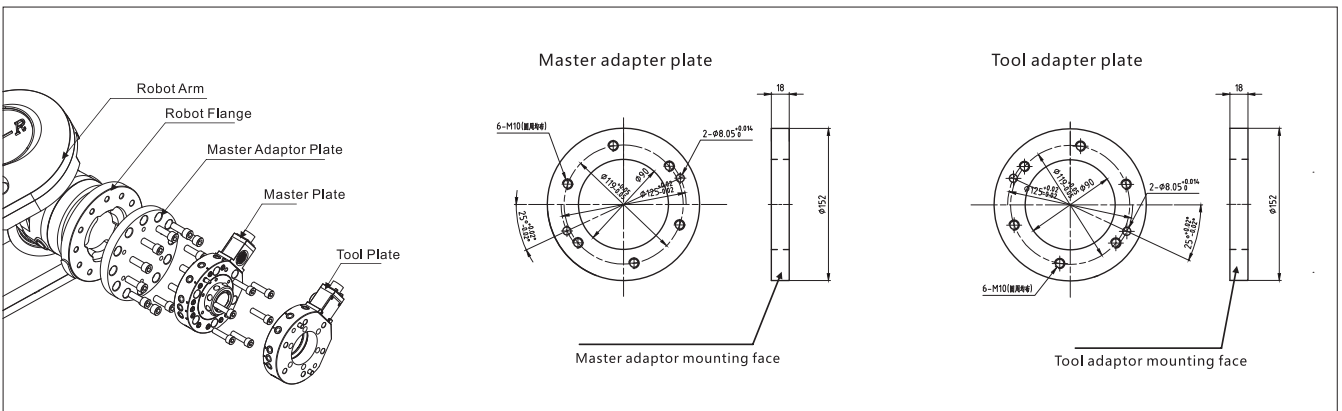
Specification parameters

Model	Master plate	LTC-0120BM
	Tool plate	LTC-0120BT
Load	Payload capacity	120kg
	Bending Moment Capacity	1100Nm
	Torsional Moment Capacity	1100Nm
Size and precision	Housing diameter	φ152mm
	Thickness when coupled	73mm
	Position repeatability	±0.02mm
Air pressure for working		0.4~0.7Mpa
Locking mechanism		Locking steel ball
Materials	Frame	Aluminum alloy
	Locking mechanism	Alloy steel
Working Environment	Temperature	0-60℃
	Humidity	95%
Weight	Master side	2.28kg
	Tool side	1.58kg
Air connector	Pneumatic port	9 x PT1/8
	Max pressure	0.8Mpa

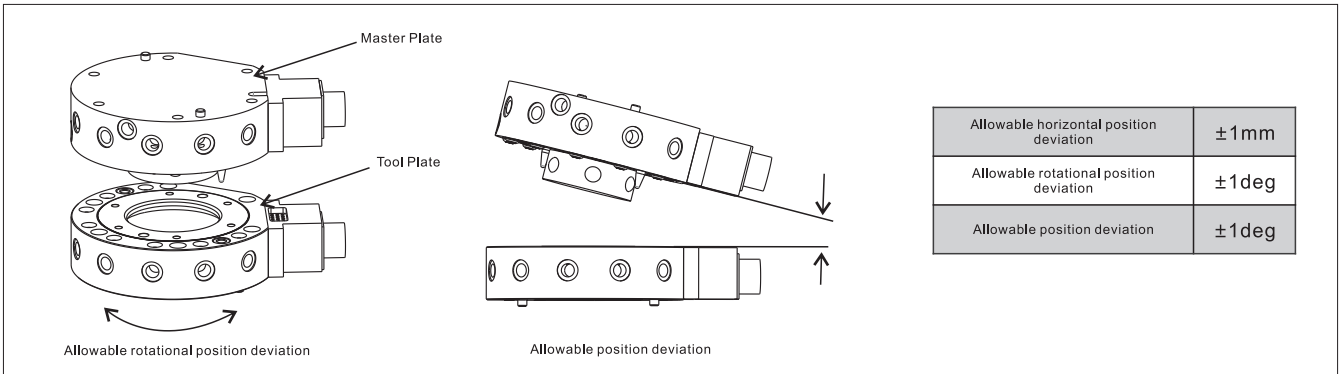
Dimensional Outline Drawing



Mounting Plate Drawing



Allowable Deviations



Optional Utility Modules



LMO-S15BM
15Pins Signals Module (M)



LMO-S18DM
18Pins Signals Module (M)



LMO-E06AM
6Pins 20A High-power Module (M)



LMO-U02BM
High-frequency Module (M)



LH-SSC01
Locking/unlocking Sensor



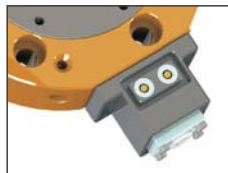
LMO-S15BT
15Pins Signals Module (T)



LMO-S18DT
18Pins Signals Module (T)



LMO-E06AT
6Pins 20A High-power Module (T)



LMO-U02BT
High-frequency Module (T)



LH-SBD01
RTL Sensor

For more optional utility modules, please contact us for more information.

Warning



1. When selecting models, please make sure both the bending & torsional moment during working process are less than designed payload capacity of the tool changer.
2. Please pay attention that robots may produce moments two to three times higher than static moment due to their potentially high acceleration.
3. The locking mechanism enables our tool changers lock the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed during debugging and application period of the robot.

Model : LTC-0200B

- Payload up to 230kg
- Steel Ball Locking Mechanism
- 8 X PT3/8 Pneumatic ports connections, 2 Module mounting surface
- Suitable for handling, stacking, assembling, polishing, burring and more applications
- Superior Fail-safe locking mechanism - The locking mechanism locks the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed.
- Optional built-in locking/unlocking sensor for Main Plate, RTL sensor for Tool Plate.



Specification parameters

Model	Master plate	LTC-0200BM
	Tool plate	LTC-0200BT
Load	Payload capacity	230kg
	Bending Moment Capacity	1420Nm
	Torsional Moment Capacity	1420Nm
Size and precision	Housing diameter	φ198mm
	Thickness when coupled	101mm
	Position repeatability	±0.02mm
Air pressure for working		0.4~0.7Mpa
Locking mechanism		Locking steel ball
Materials	Frame	Aluminum alloy
	Locking mechanism	Alloy steel
Working Environment	Temperature	0-60℃
	Humidity	95%
Weight	Master side	5.9kg
	Tool side	2.97kg
Air connector	Pneumatic port	8 x PT3/8
	Max pressure	0.8Mpa

Optional Utility Modules



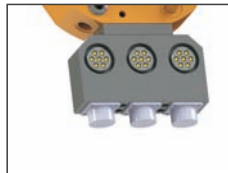
LMO-S18FM
18Pins Signals Module (M)



LMO-E06CM
6Pins 20A High-power Module(M)



LMO-M-S18-S18-S18-AM
54Pins Signals Module (M)



LMO-M-E06-E06-E06-AM
18Pins 20A High-power Module(M)



LH-SIF01
Locking/unlocking Sensor



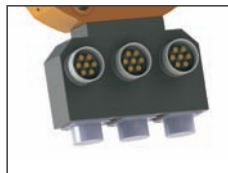
LMO-S18FT
18Pins Signals Module (T)



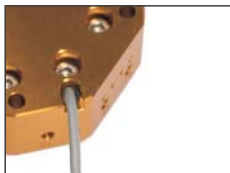
LMO-E06CT
6Pins 20A High-power Module(T)



LMO-M-S18-S18-S18-AT
54Pins Signals Module (T)



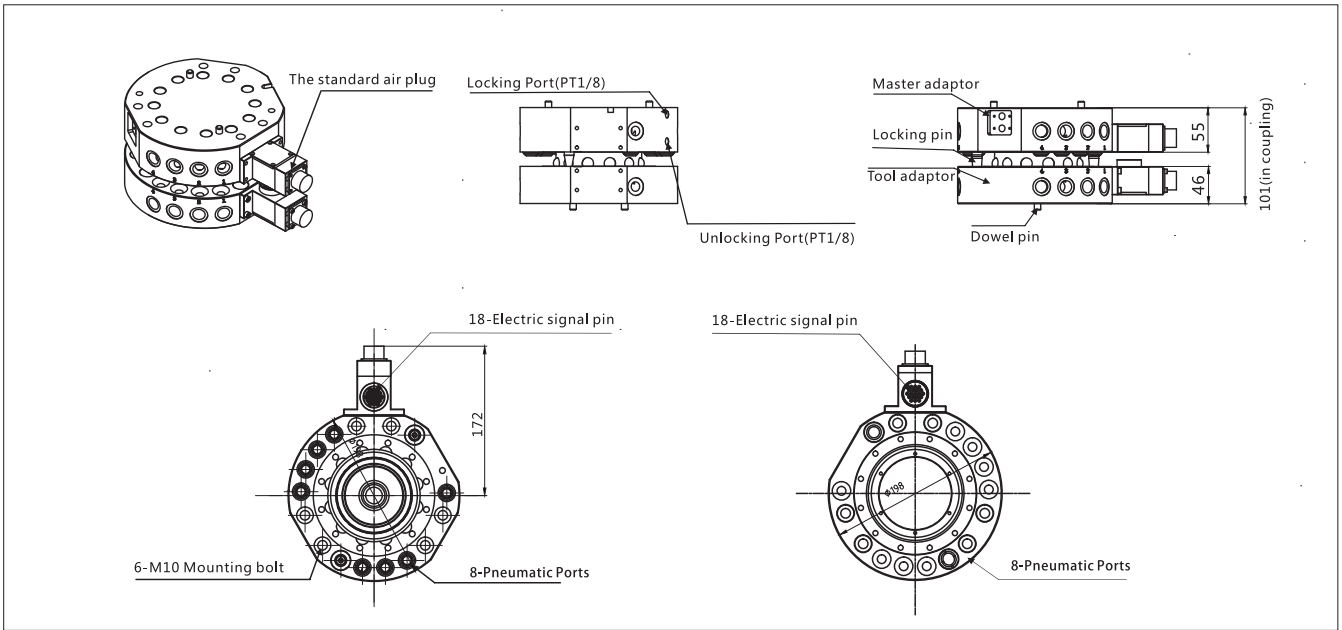
LMO-M-E06-E06-E06-AT
18Pins 20A High-power Module(T)



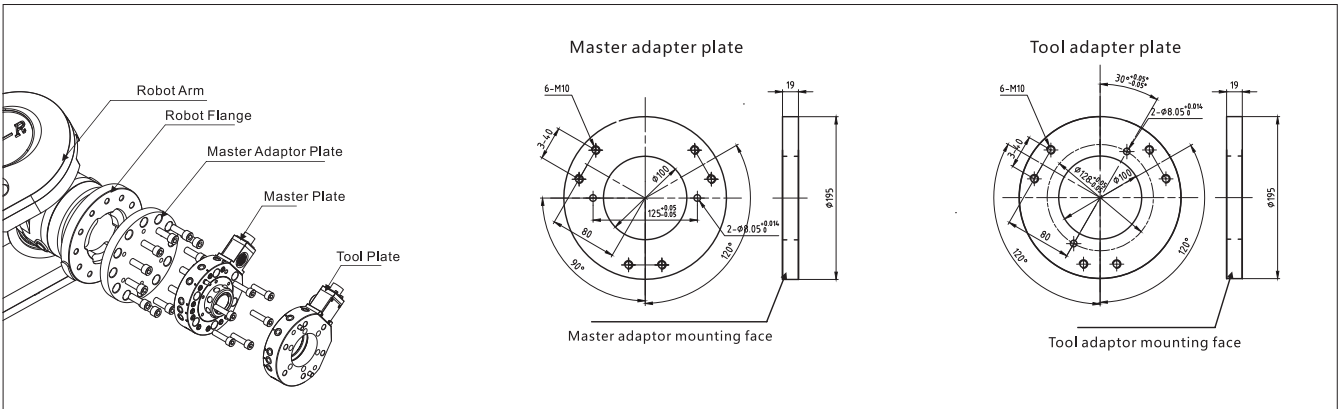
LH-SBD01
RTL Sensor

For more optional utility modules, please contact us for more information.

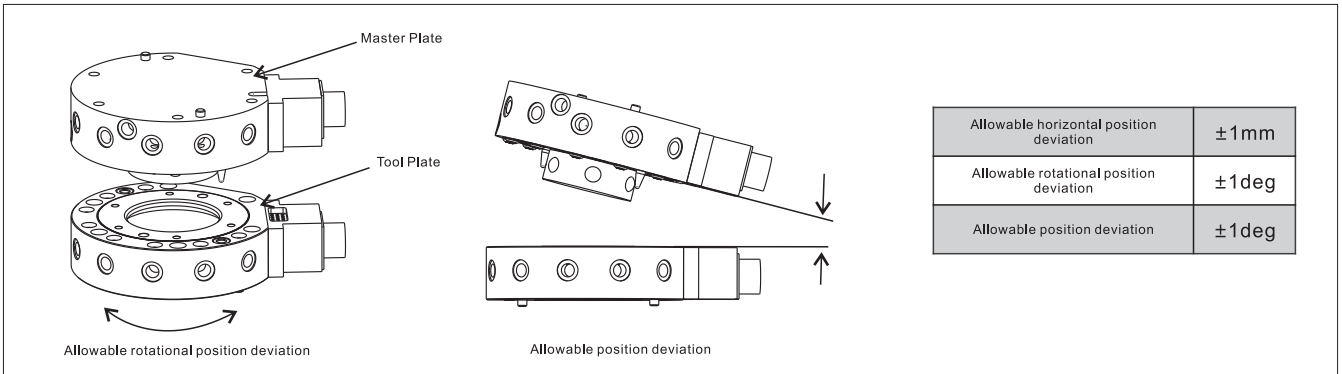
Dimensional Outline Drawing



Mounting Plate Drawing



Allowable Deviations



Warning



Warning

1. When selecting models, please make sure both the bending & torsional moment during working process are less than designed payload capacity of the tool changer.
2. Please pay attention that robots may produce moments two to three times higher than static moment due to their potentially high acceleration.
3. The locking mechanism enables our tool changers lock the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed during debugging and application period of the robot.

Model : LTC-0200C

- Payload up to 230kg
- Steel Ball Locking Mechanism
- 16 X PT1/8 Pneumatic ports connections, 2 Module mounting surface
- Suitable for handling, stacking, assembling, polishing, burring and more applications
- Superior Fail-safe locking mechanism - The locking mechanism locks the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed.
- Optional built-in locking/unlocking sensor for Main Plate, RTL sensor for Tool Plate.



Specification parameters

Model	Master plate	LTC-0200CM
	Tool plate	LTC-0200CT
Load	Payload capacity	230kg
	Bending Moment Capacity	1420Nm
	Torsional Moment Capacity	1420Nm
Size and precision	Housing diameter	φ198mm
	Thickness when coupled	101mm
	Position repeatability	±0.02mm
Air pressure for working		0.4~0.7Mpa
Locking mechanism		Locking steel ball
Materials	Frame	Aluminum alloy
	Locking mechanism	Alloy steel
Working Environment	Temperature	0-60℃
	Humidity	95%
Weight	Master side	5.9kg
	Tool side	2.97kg
Air connector	Pneumatic port	16 x PT1/8
	Max pressure	0.8Mpa

Optional Utility Modules



LMO-S18FM
18Pins Signals Module (M)



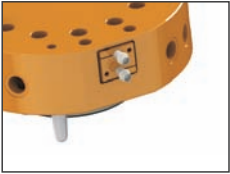
LMO-E06CM
6Pins 20A High-power Module(M)



LMO-M-S18-S18-S18-AM
54Pins Signals Module (M)



LMO-M-E06-E06-E06-AM
18Pins 20A High-power Module(M)



LH-SIF01
Locking/unlocking Sensor



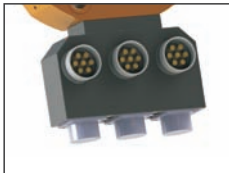
LMO-S18FT
18Pins Signals Module (T)



LMO-E06CT
6Pins 20A High-power Module(T)



LMO-M-S18-S18-S18-AT
54Pins Signals Module (T)



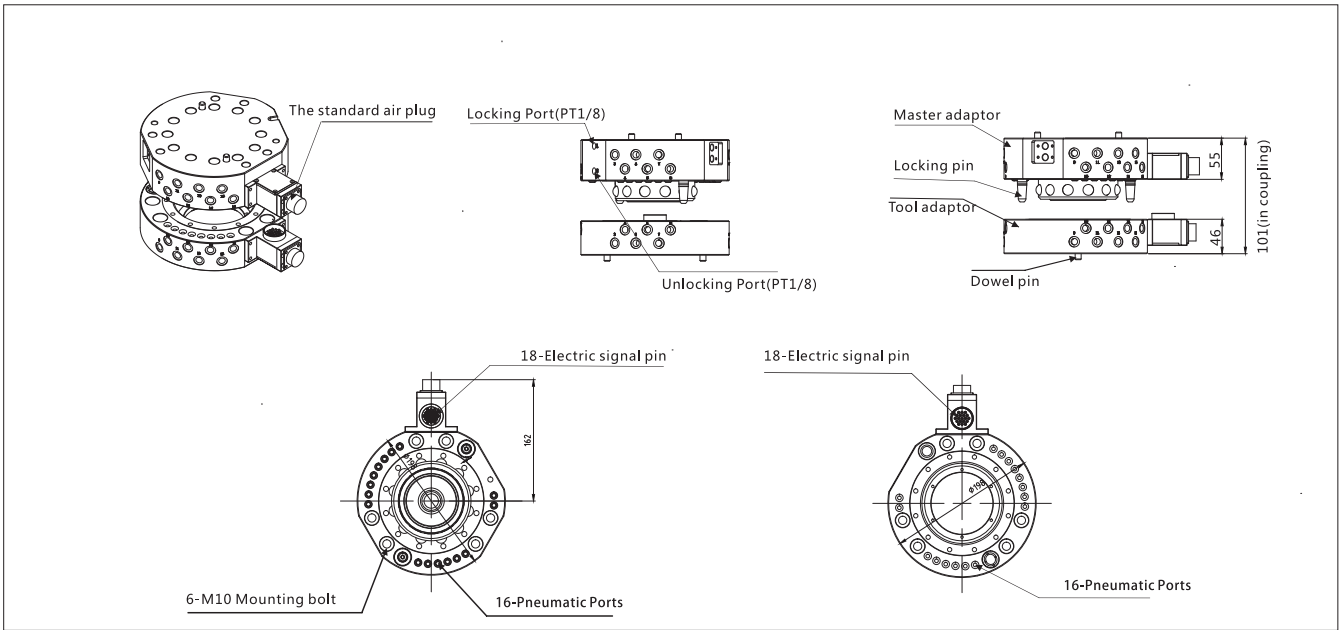
LMO-M-E06-E06-E06-AT
18Pins 20A High-power Module(T)



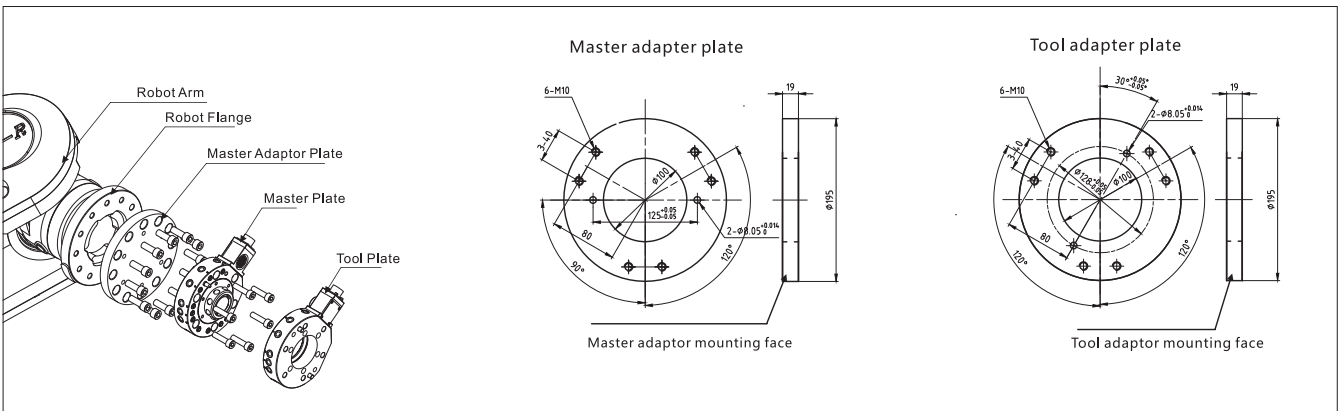
LH-SBD01
RTL Sensor

For more optional utility modules, please contact us for more information.

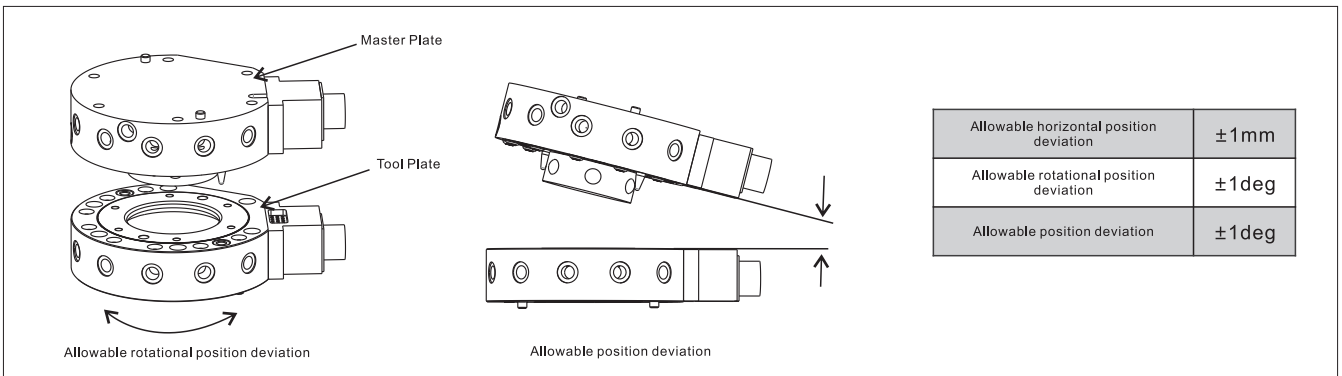
Dimensional Outline Drawing



Mounting Plate Drawing



Allowable Deviations



Warning



Warning

1. When selecting models, please make sure both the bending & torsional moment during working process are less than designed payload capacity of the tool changer.
2. Please pay attention that robots may produce moments two to three times higher than static moment due to their potentially high acceleration.
3. The locking mechanism enables our tool changers lock the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed during debugging and application period of the robot.

Model : LTC-0300C

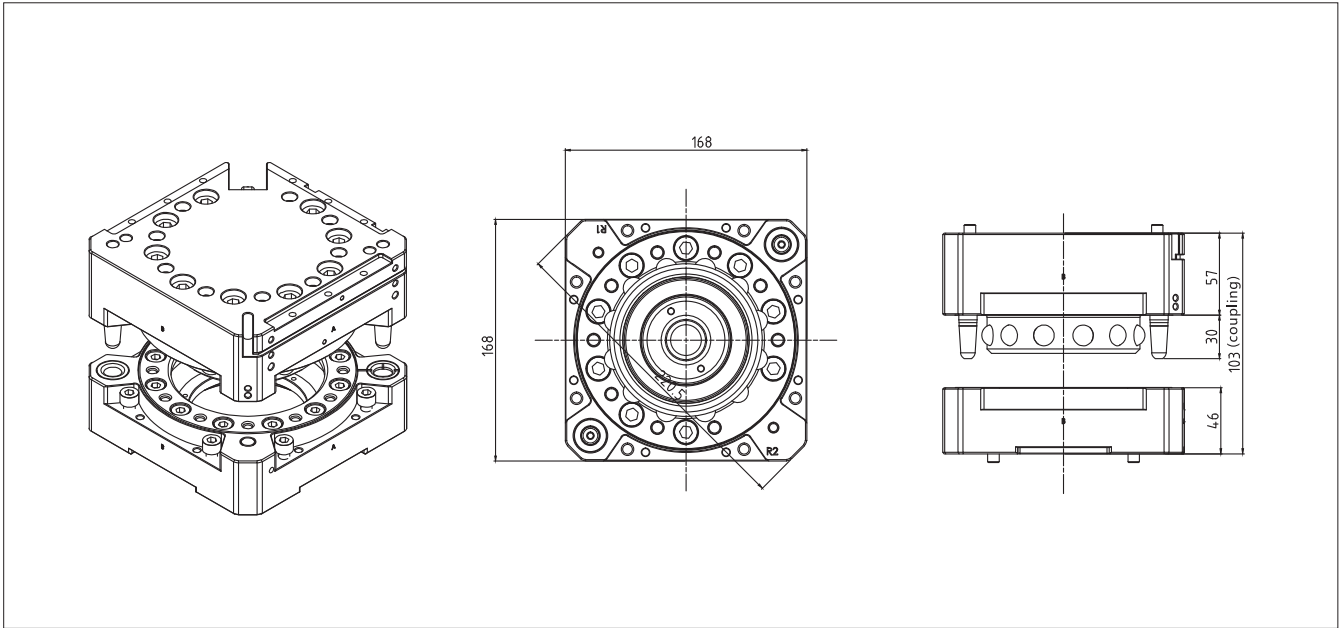
- Payload up to 300kg
- Steel Ball Locking Mechanism
- 4 Module mounting surface
- Suitable for handling, stacking, assembling, polishing, burring and more applications
- Superior Fail-safe locking mechanism - The locking mechanism locks the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed.
- Optional built-in locking/unlocking sensor for Main Plate, RTL sensor for Tool Plate.



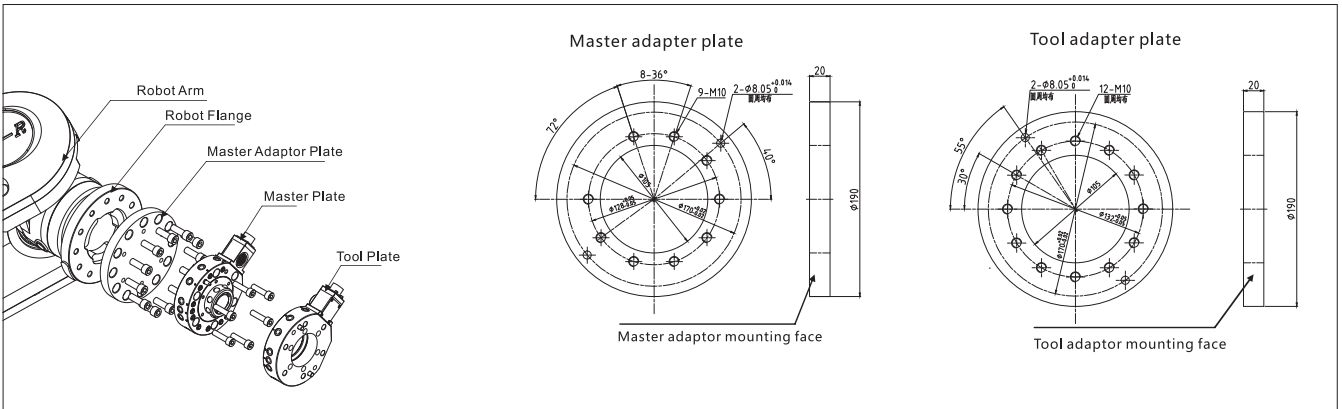
Specification parameters

Model	Master plate	LTC-0300CM
	Tool plate	LTC-0300CT
Load	Payload capacity	300kg
	Bending Moment Capacity	2300Nm
	Torsional Moment Capacity	2300Nm
Size and precision	Housing diameter	168mm*168mm
	Thickness when coupled	103mm
	Position repeatability	±0.02mm
Air pressure for working		0.4~0.7Mpa
Locking mechanism		Locking steel ball
Materials	Frame	Aluminum alloy
	Locking mechanism	Alloy steel
Working Environment	Temperature	0-60℃
	Humidity	95%
Weight	Master side	6.17kg
	Tool side	2.77kg

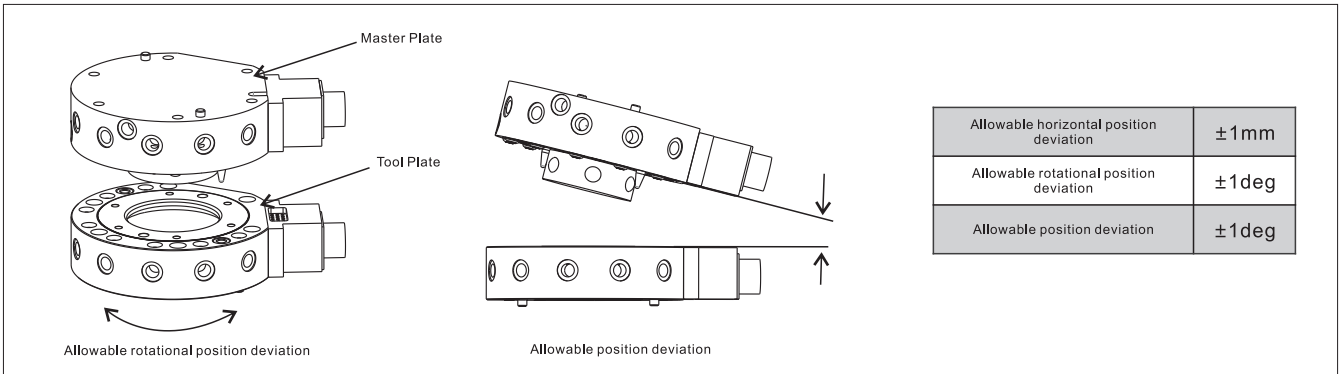
Dimensional Outline Drawing



Mounting Plate Drawing



Allowable Deviations



Optional Utility Modules



LMO-M0-S16-TS-BI-SS-4R-AM
16Pins Signals Module (M)



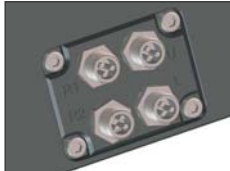
LMO-M-E07-S17-AM
Servo Module(M)



LMO-E03AM
High Current Module(M)



LMO-L04AM
4 ports fluid Module (M)



LH-SOM01
Locking/unlocking Sensor



LMO-M0-S16-TS-BI-SS-4R-AT
16Pins Signals Module (T)



LMO-M-E07-S17-AT
Servo Module(T)



LMO-E03AT
High Current Module(T)



LMO-L04AT
4 ports fluid Module (T)

For more optional utility modules, please contact us for more information.

Warning



Warning

1. When selecting models, please make sure both the bending & torsional moment during working process are less than designed payload capacity of the tool changer.
2. Please pay attention that robots may produce moments two to three times higher than static moment due to their potentially high acceleration.
3. The locking mechanism enables our tool changers lock the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed during debugging and application period of the robot.

Model : LTC-0650A

- Payload up to 650kg
- Steel Ball Locking Mechanism
- 2 X PT1/8 Pneumatic ports connections, 6 Module mounting surface
- Suitable for handling, stacking, assembling, polishing, burring and more applications
- Superior Fail-safe locking mechanism - The locking mechanism locks the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed.
- Optional built-in locking/unlocking sensor for Main Plate, RTL sensor for Tool Plate.



Specification parameters

Model	Master plate	LTC-0650AM
	Tool plate	LTC-0650AT
Load	Payload capacity	650kg
	Bending Moment Capacity	3200Nm
	Torsional Moment Capacity	3200Nm
Size and precision	Housing diameter	322mm*293mm
	Thickness when coupled	147mm
	Position repeatability	±0.025mm
Air pressure for working		0.4~0.7Mpa
Locking mechanism		Locking steel ball
Materials	Frame	Aluminum alloy
	Locking mechanism	Alloy steel
Working Environment	Temperature	0-60°C
	Humidity	95%
Weight	Master side	24.2kg
	Tool side	11.3kg
Air connector	Pneumatic port	2 x PT1/8
	Max pressure	0.8Mpa

Optional Utility Modules



LMO-M0-S16-TS-BI-SS-4R-AM
16Pin Signals Module (M)



LMO-M-E07-S17-AM
Servo Module(M)



LMO-E03AM
High Current Module(M)



LMO-L04AM
4 ports fluid Module (M)



LMO-SOL-A
Integrated solenoid valve Modules



LMO-M0-S16-TS-BI-SS-4R-AT
16Pin Signals Module (T)



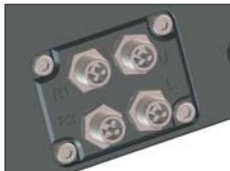
LMO-M-E07-S17-AT
Servo Module(T)



LMO-E03AT
High Current Module(T)



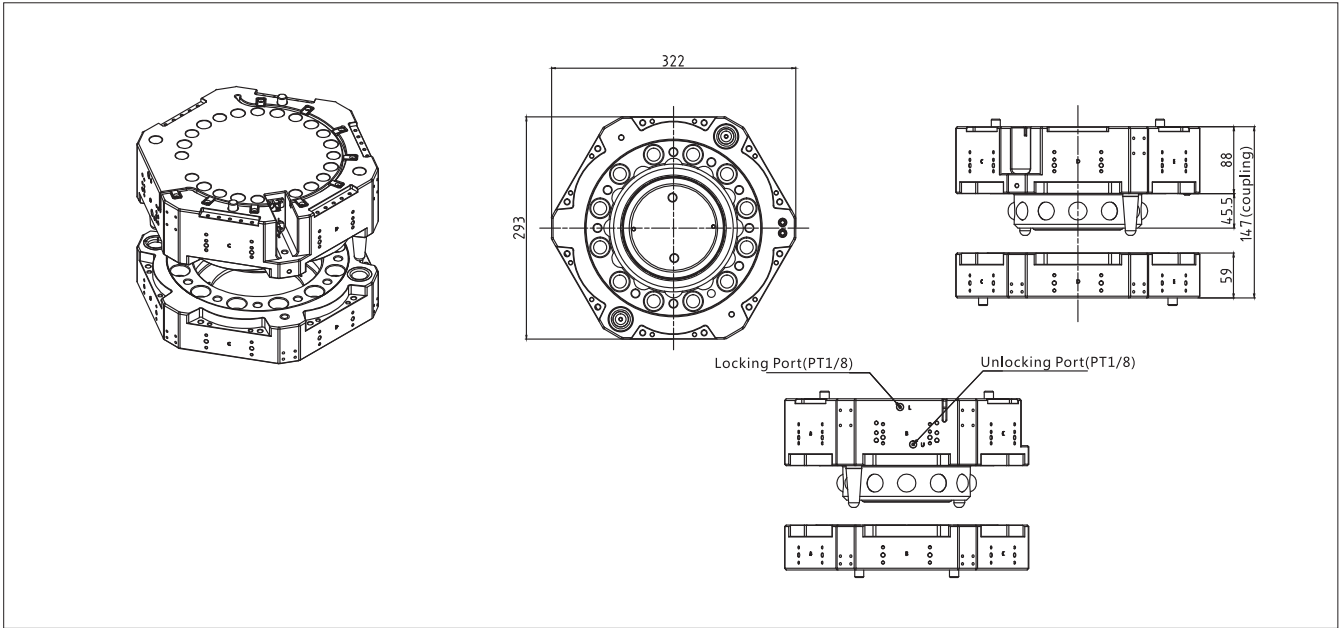
LMO-L04AT
4 ports fluid Module (T)



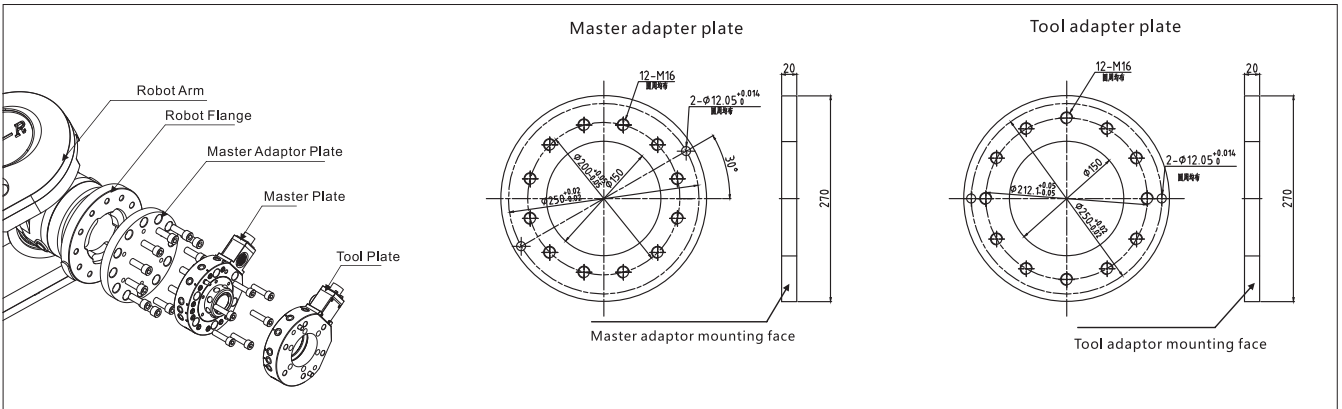
LH-SOM01
Locking/unlocking Sensor

For more optional utility modules, please contact us for more information.

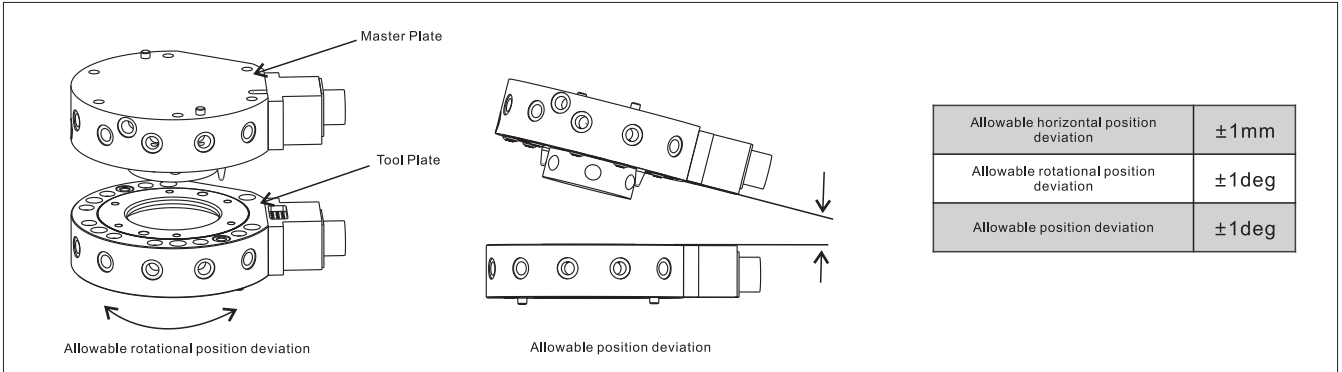
Dimensional Outline Drawing



Mounting Plate Drawing



Allowable Deviations



Warning	
	1. When selecting models, please make sure both the bending & torsional moment during working process are less than designed payload capacity of the tool changer.
	2. Please pay attention that robots may produce moments two to three times higher than static moment due to their potentially high acceleration.
	3. The locking mechanism enables our tool changers lock the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed during debugging and application period of the robot.

Model : LTC-0700A

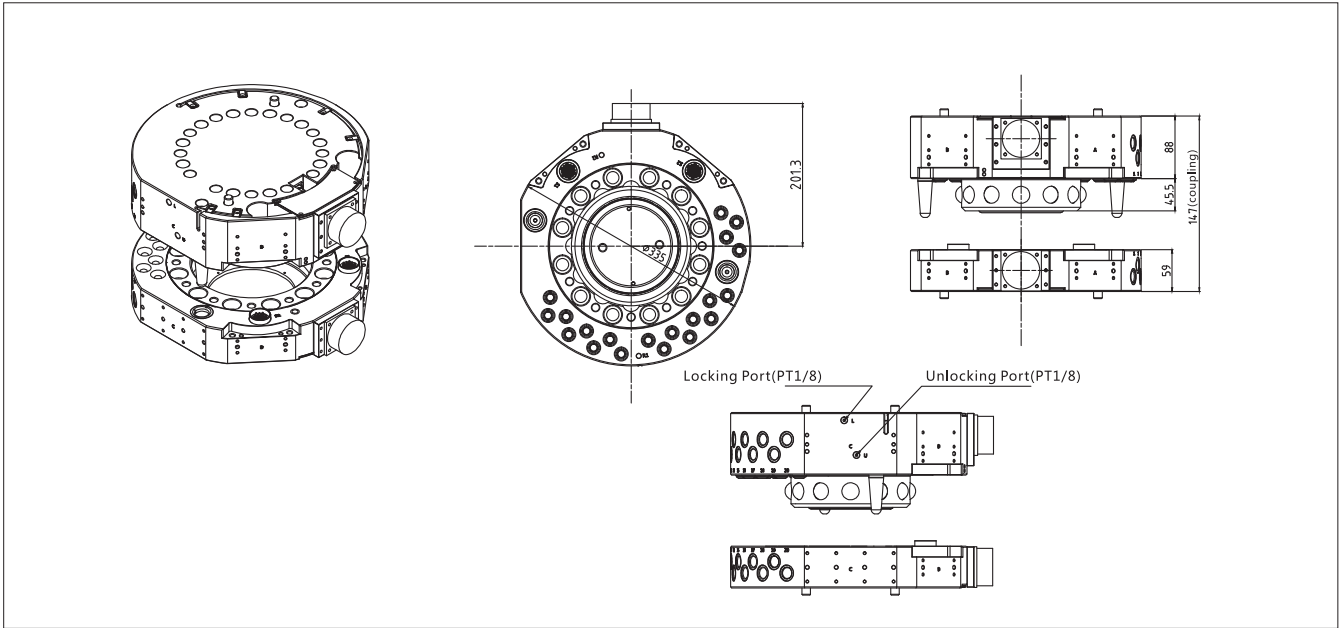
- Payload up to 700kg
- Steel Ball Locking Mechanism
- 20 X PT1/8 Pneumatic ports connections, 38ports Signals Modules,2 Module mounting surface
- Suitable for handling, stacking, assembling,polishing, burring and more applications
- Superior Fail-safe locking mechanism - The locking mechanism locks the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed.
- Optional built-in locking/unlocking sensor for Main Plate, RTL sensor for Tool Plate.



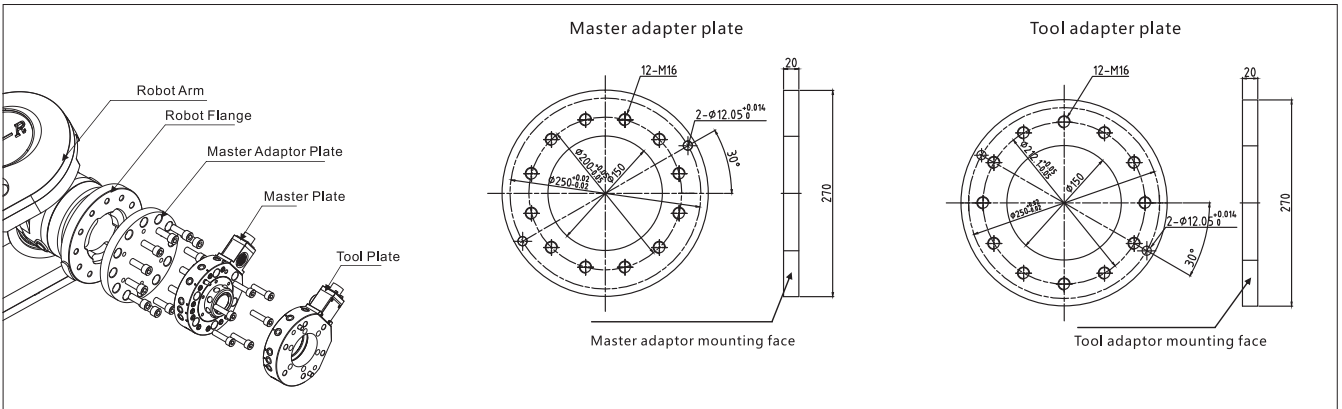
Specification parameters

Model	Master plate	LTC-0700AM
	Tool plate	LTC-0700AT
Load	Payload capacity	700kg
	Bending Moment Capacity	3500Nm
	Torsional Moment Capacity	3500Nm
Size and precision	Housing diameter	φ338mm
	Thickness when coupled	147mm
	Position repeatability	±0.025mm
Air pressure for working		0.4~0.7Mpa
Locking mechanism		Locking steel ball
Materials	Frame	Aluminum alloy
	Locking mechanism	Alloy steel
Working Environment	Temperature	0-60°C
	Humidity	95%
Weight	Master side	28.3kg
	Tool side	12.2kg
Air connector	Pneumatic port	20 x PT3/8
	Max pressure	0.8Mpa

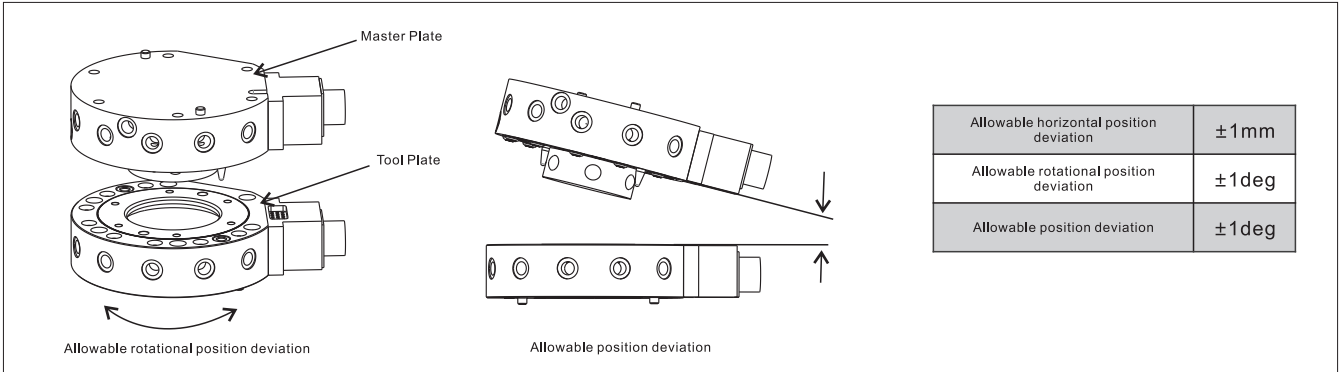
Dimensional Outline Drawing



Mounting Plate Drawing



Allowable Deviations



Optional Utility Modules



LMO-M0-S16-TS-BI-SS-4R-AM
16Pins Signals Module (M)



LMO-M-E07-S17-AM
Servo Module(M)



LMO-E03AM
High Current Module(M)



LMO-L04AM
4 ports fluid Module (M)



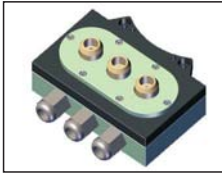
LMO-SOL-A
Integrated solenoid valve Modules



LMO-M0-S16-TS-BI-SS-4R-AT
16Pins Signals Module (T)



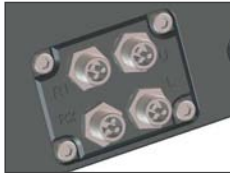
LMO-M-E07-S17-AT
Servo Module(T)



LMO-E03AT
High Current Module(T)



LMO-L04AT
4 ports fluid Module (T)



LH-SOM01
Locking/unlocking Sensor

For more optional utility modules,please contact us for more information.







Warning



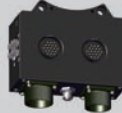

Warning

- 1.When selecting models, please make sure both the bending & torsional moment during working process are less than designed payload capacity of the tool changer.
- 2.Please pay attention that robots may produce moments two to three times higher than static moment due to their potentially high acceleration.
- 3.The locking mechanism enables our tool changers lock the Master Plate to the Tool Plate and remains locked even if pressure is accidentally removed during debugging and application period of the robot.

Signals Module:

Models	Master Plate Side/Tool Plate Side	Picture	Suitable Tool Changers	Materials	Configuration Parameter	Weight (g)
LMO-S15B	Master Plate Side		LTC-0010B LTC-0020C LTC-0030B LTC-0060A LTC-0120B	Black Resin	15pins 3A DC 24V	31.6
	Tool Plate Side					27.2
LMO-S18D	Master Plate Side		LTC-0060A LTC-0120B	Black Aluminium alloy	18pins 3A DC24V Made in Germany Pins	165.8
	Tool Plate Side					175.6
LMO-S18F	Master Plate Side		LTC-0200B LTC-0200C	Black Aluminium alloy	18pins 3A DC24V Made in Germany Pins	176.6
	Tool Plate Side					191
LMO-M1-S18-3R-A	Master Plate Side		LTC-0060A LTC-0120B	Black Aluminium alloy	18pins 3A DC24V Made in Germany Pins Integrated Sensors Profibus, DeviceNet, EtherNet, CC-Link fieldbus	192
	Tool Plate Side					193.2
LMO-M1-S18-3R-B	Master Plate Side		LTC-0200B LTC-0200C	Black Aluminium alloy	18pins 3A DC24V Made in Germany Pins Integrated Sensors Profibus, DeviceNet, EtherNet, CC-Link fieldbus	226.2
	Tool Plate Side					207.8

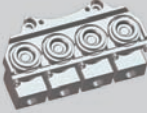

Signals Module:

Models	Master Plate Side/Tool Plate Side	Picture	Suitable Tool Changers	Materials	Configuration Parameter	Weight (g)
LMO-M0-S16-TS-BI-SS-4R-A	Master Plate Side		LTC-0300C LTC-0650A LTC-0700A	Black Aluminium alloy	16pins 3A DC24V Made in Germany Pins Integrated Sensors Profibus, DeviceNet, EtherNet, CC-Link Fieldbus	226.2
	Tool Plate Side					207.8

Servo Module:

Models	Master Plate Side/Tool Plate Side	Picture	Suitable Tool Changers	Materials	Configuration Parameter	Weight (g)
LMO-M-E07-S17-A	Master Plate Side		LTC-0300C LTC-0650A LTC-0700A	Black Aluminium alloy	7pins 20A AC 380V +17pins 3A DC 24V Made in Germany Pins	890.6
	Tool Plate Side					759





Fluid Module:

Models	Master Plate Side/Tool Plate Side	Picture	Suitable Tool Changers	Materials	Configuration Parameter	Weight (g)
LMO-L04A	Master Plate Side		LTC-0300C LTC-0650A LTC-0700A	304 stainless steel	4* PT1/2 Ports self-sealing adaptor	2254
	Tool Plate Side					2269.6



High Current Module:

Models	Master Plate Side/Tool Plate Side	Picture	Suitable Tool Changers	Materials	Configuration Parameter	Weight (g)
LMO-E03A	Master Plate Side		LTC-0300C LTC-0650A LTC-0700A	Aqua Glass fibre	3pins 150A AC 380V	1232.6
	Tool Plate Side					1315.8

High-power Module:

Models	Master Plate Side/Tool Plate Side	Picture	Suitable Tool Changers	Materials	Configuration Parameter	Weight (g)
LMO-E06A	Master Plate Side		LTC-0060A LTC-0120B	Black Aluminium alloy	6pins 20A AC 380V Made in Germany Pins	183
	Tool Plate Side					207.4
LMO-E06C	Master Plate Side		LTC-0200B LTC-0200C	Black Aluminium alloy	6pins 20A AC 380V Made in Germany Pins	193.8
	Tool Plate Side					222.8

Pneumatics Modules:

Models	Master Plate Side/Tool Plate Side	Picture	Suitable Tool Changers	Materials	Configuration Parameter	Weight (g)
LMO-G04B	Master Plate Side		LTC-0020C	Black Aluminium alloy	4-Pneumatic ports M5	61.8
	Tool Plate Side					62.4

High-Frequency Module:

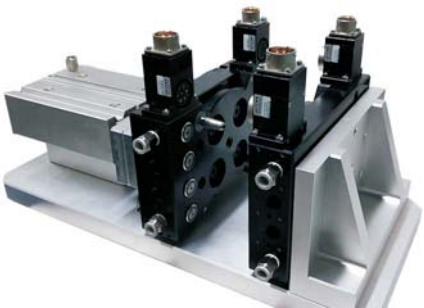
Models	Master Plate Side/Tool Plate Side	Picture	Suitable Tool Changers	Materials	Configuration Parameter	Weight (g)
LMO-U02B	Master Plate Side		LTC-0060A LTC-0120B	Black Aluminium alloy	2pins 12A Made in Switzerland Pins	71.8
	Tool Plate Side					72.4

Integrated solenoid valve Modules:

Models	Master Plate Side/Tool Plate Side	Picture	Suitable Tool Changers	Materials	Configuration Parameter	Weight (g)
LMO-SOL-A	Master Plate Side		LTC-0650A LTC-0700A	Black Aluminium alloy	Integrated solenoid valve	1163.4

Flexible Utility Connector

A flexible Utility Connector could couples utilities such as electric signals, pneumatic air, fluids for docking and fixturing applications. The Utility Connector has compliance features that will compensate for severe tooling misalignments.



- Integrated 8 x PT3/8 Self-seal Pneumatic Ports
- Same standard mounting face with LT Robotic Tool Changers
- Optional actuated Servo motor or Cylinder
- Compliance (X-Y Axis) : $\pm 4\text{mm}$
Compliance (Z Axis) : 2mm
Rotational Compliance : $\pm 3^\circ$
Min. Coupling Force : $\geq 2500\text{N}$.

Optional Utility Modules



LMO-M0-S16-TS-BI-SS-4R-AM
16pins signals module (M)



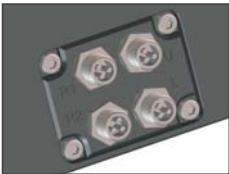
LMO-M-E07-S17-AM
Servo Module(M)



LMO-E03AM
High-current Modules(M)



LMO-L04AM
4 ports fluid Module(M)



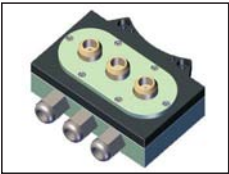
LH-SOM01
Master Plate Locking/Unlocking Sensor



LMO-M0-S16-TS-BI-SS-4R-AT
16pins signals module (T)



LMO-M-E07-S17-AT
Servo Module(T)

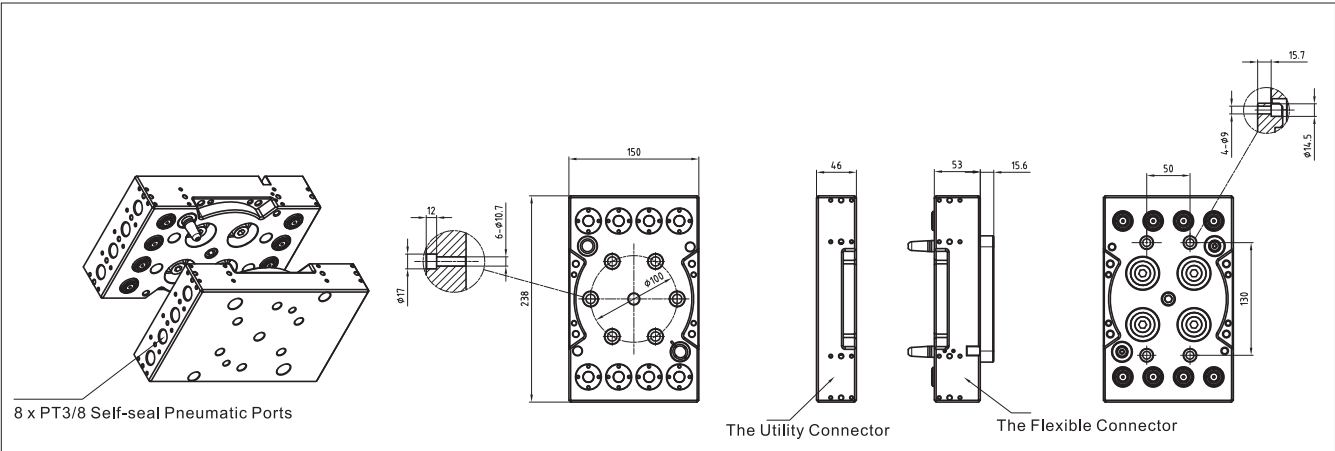


LMO-E03AT
High-current Modules(T)



LMO-L04AT
4 ports fluid Module(T)

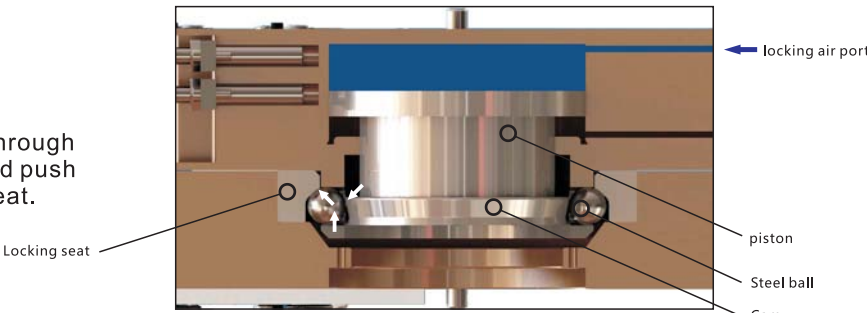
Dimensional Outline Drawing



Locking Mechanism

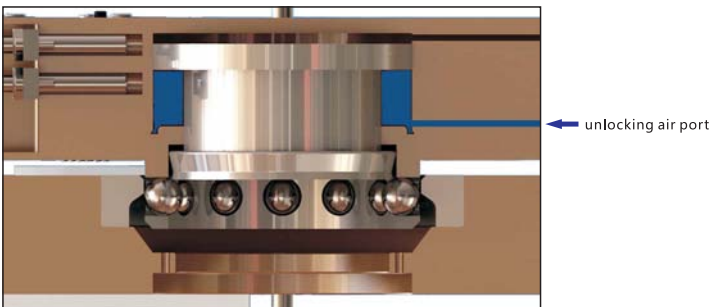
Locking State

The air enters into the tool changer through locking air port to push the piston and push out steel balls to clamp the locking seat.



Unlocking State

The air enters into the tool changer through unlocking air port to push the piston, and steel balls back.



Fail-safe Locking Mechanism

If the air pressure is accidentally cut off, the steel balls would move from the locking platform to insurance platform, with the spring's thrust, which would ensure the tool side wouldn't separate.

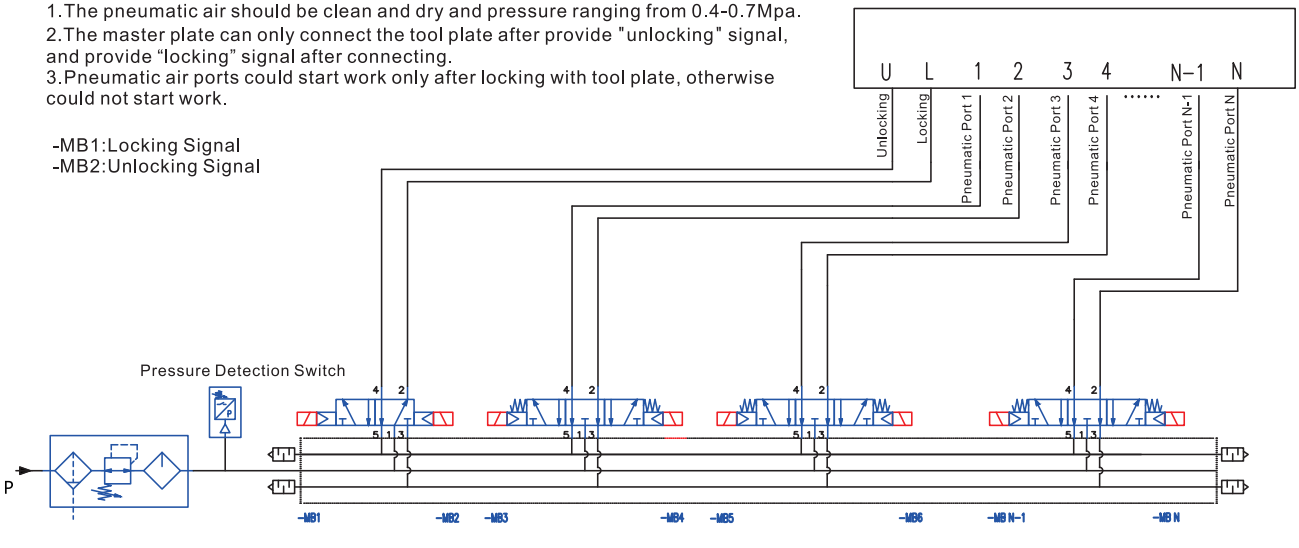


Recommended pneumatic ports connection drawing

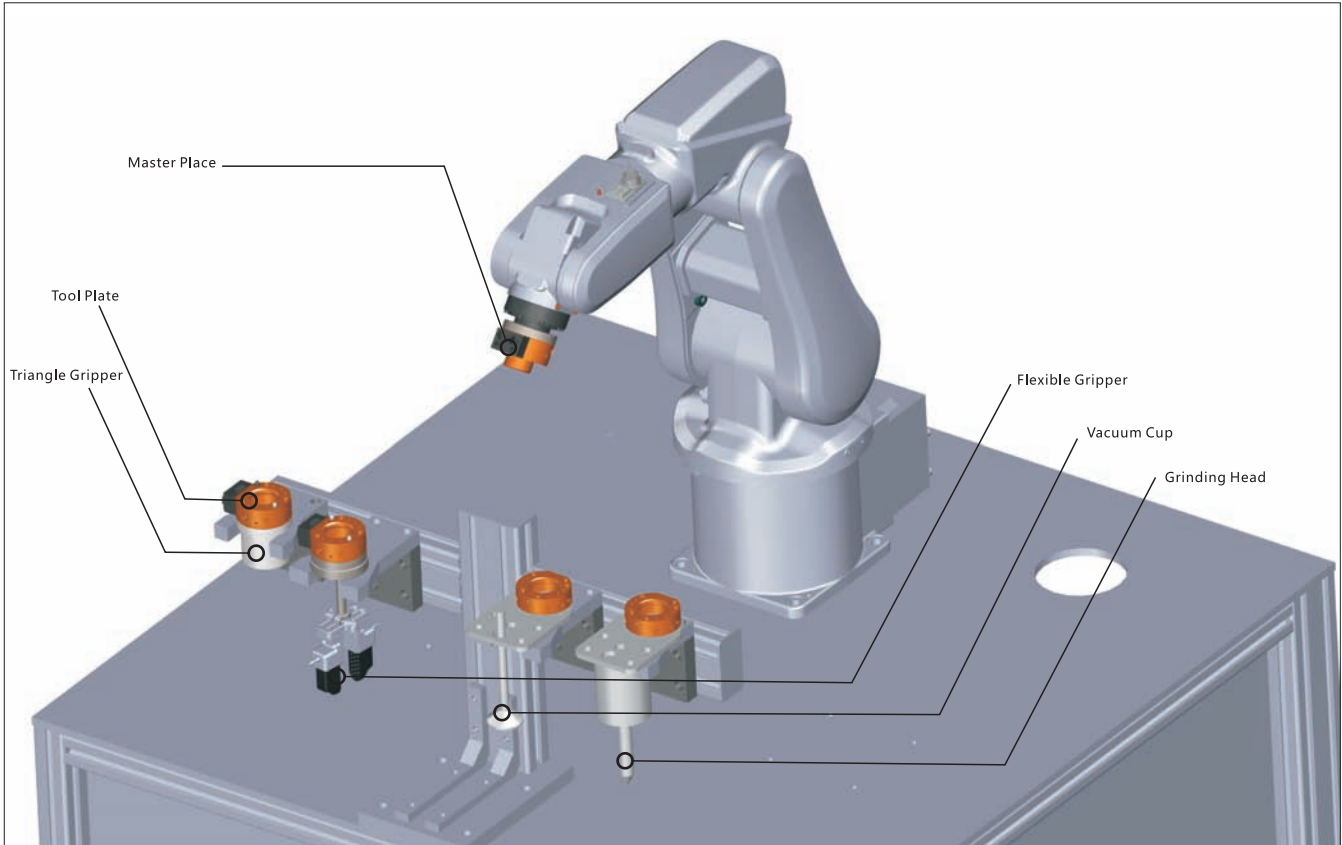
Warning:

- 1.The pneumatic air should be clean and dry and pressure ranging from 0.4-0.7Mpa.
- 2.The master plate can only connect the tool plate after provide "unlocking" signal, and provide "locking" signal after connecting.
- 3.Pneumatic air ports could start work only after locking with tool plate, otherwise could not start work.

-MB1:Locking Signal
-MB2:Unlocking Signal



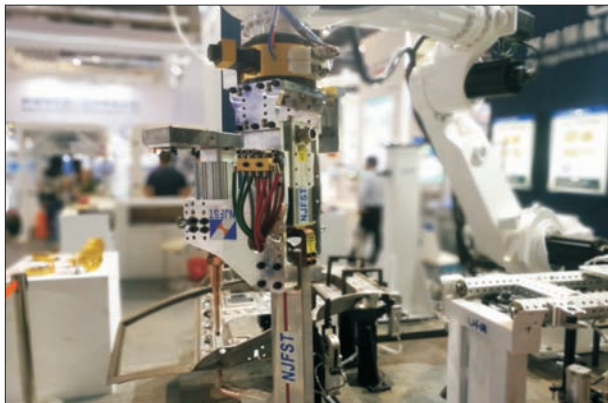
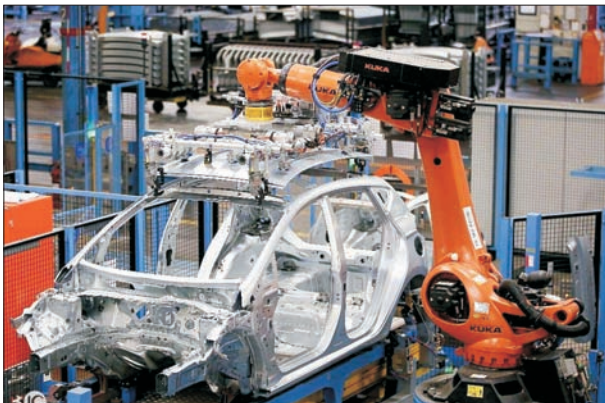
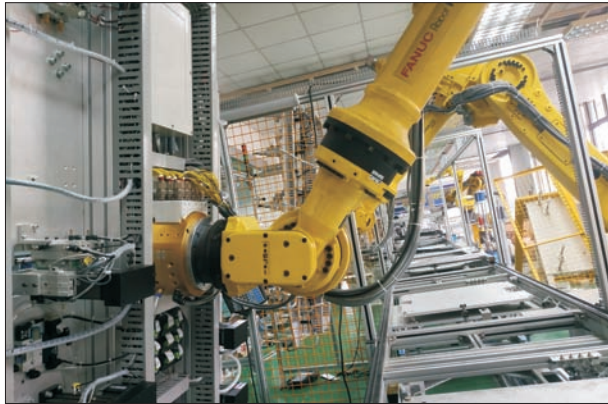
Application drawing



How to select a robotic tool changer?

Payload	Select a Tool Changer with a payload capacity equal to or greater than payload capacity of robot. (For example: Select a tool changer with 20kg+ payload capacity for ABBIRB4600-20 with 20kg payload capacity)
More Exact Method	Robot arms may produce moments 1.5-2 times higher than static moment due to their potentially high acceleration. Please use below method to calculate your approximate dynamic moments. 1.Calculate the weight (w) of the heaviest end-effector. 2.Find the approximate center-of-gravity of your heaviest end-effector, and calculate the distance (D) from the CG to the bottom of the Tool Plate. 3.Multiply (W) times (D) to get an approximate static moment (M) 4.Multiply (M) times 2 to get dynamic moment (DM). Select a Tool Changer with a moment capacity equal to or greater than (DM)
Pneumatic ports and electrical contacts	Determine the number and size of pneumatic ports, signals ports and electrical contacts needed.
Working environment	The working environment of the tool changer is ranging from 0 to 60 °C. Please contact us for additional information if your working temperature exceeds our ranges.

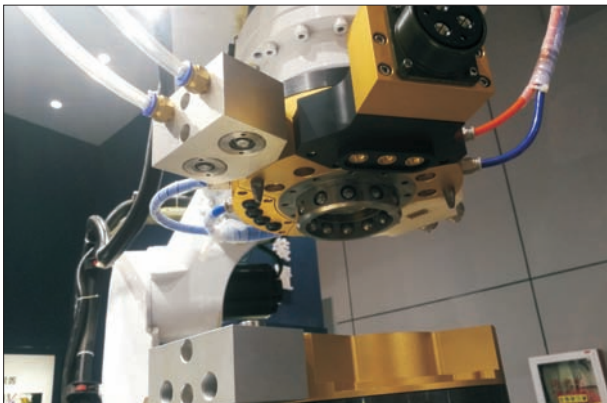
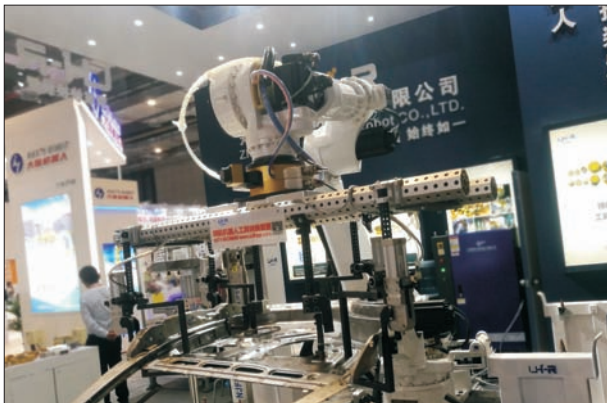
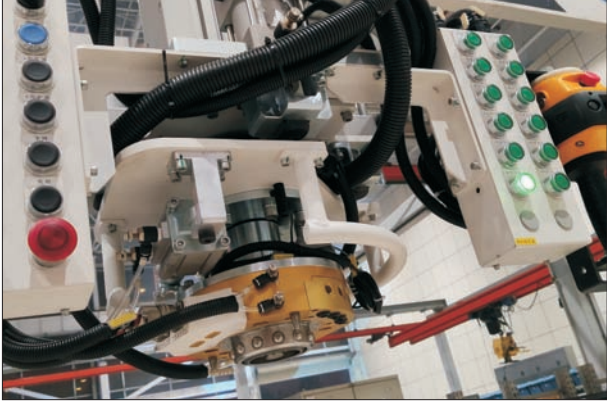
Auto Industry



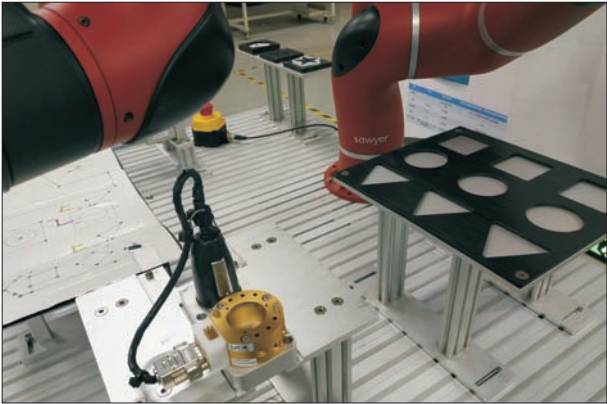
Foundry Industry



Heavy Industry



Education



Please contact us for more cases information.