

LH-TC

End-Of-Arm Tooling

Products Brochure

Stable Safe Efficient Excellent



Company Profile

Zhengzhou Linghang Robot Co.,Ltd with trademark "LH-TC", mentioned as "Linghang" afterwards, was founded in year 2015, with registered capital RMB24.63millions, listed in Zhongyuan stock exchange Market(stock code 200649), is located in No.11 Building, Zhengtuo technology and Innovation park, Erqi industrial development zone, Zhengzhou city, Linghang owns a professional and independent R&D team and a modern intelligent production plant, is a national high-tech enterprise which integrated design, production, sales and service as a whole concept.

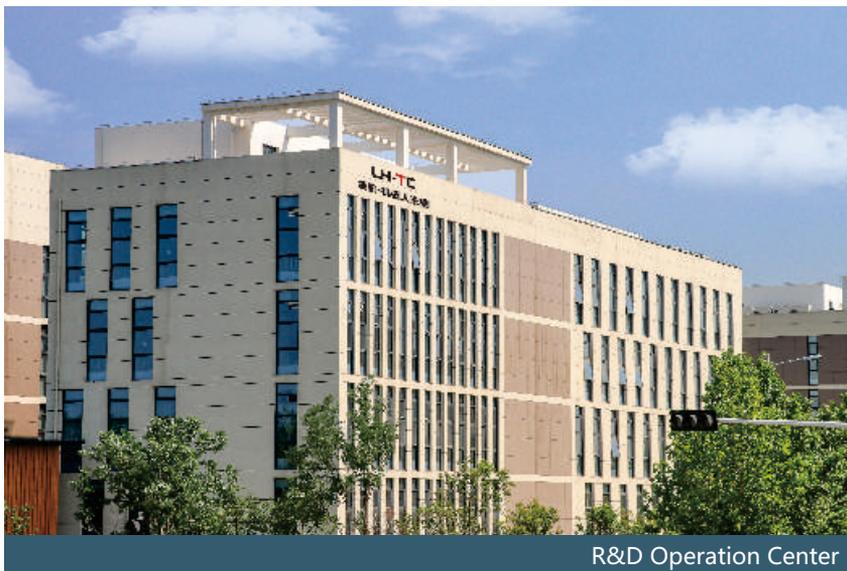
In China there are numbers of offices in South China, East China, Center China, Northeast China and Southwest China, and develops many agencies and dealers in Europe, North America, Southeast Asia, the products have been exported to more than 60 countries and regions.

Linghang has been awarded honorary titles of "National high-tech Enterprise", "Henan Province science and technology enterprises", "Henan Province Specialized and Special New Enterprise".

Linghang has gained ISO9001 quality system certification, CE and SIL safety certifications, with more than 70 patents and 5 copyrights.

The main products are robot tool changers, spot welding tool changers, utility couplers, floating deburring tools, pneumatic grippers and energy coupling devices, provide unlimited flexible tool switching for robot applications, improve production efficiency and safety of industrial robots and cobots. These products are widely used in industrial sites such as automatic spot welding, automatic handling, assembly, deburring, palletizing, etc.

-  Company Vision: Committed to becoming the world's best supplier of robot terminal equipment.
-  Company mission: Keep the original intention of craftsmen, help Chinese intelligence manufacturing to release human labor
-  Company spirit: Innovation, Excellence, Efficiency, Concentration
-  Team Concept: Treat with sincerity, perform with truth



R&D Operation Center

60⁺ exported countries and regions

70⁺ Patents

5⁺ Copyrights

Honor

Focus on R&D of robot end-of-arm tooling, improve production efficiency of manufacturing industry
ISO9001 Quality certification, CE and SIL safety certification, more than 70 patents.



Product

Robot Tool Changer



- The special materials and process combine with the inclined structure perfectly, ensure safety locking
- Innovated redundancy signal transmission technology, ensure the transmission of data and signals more stable
- Excellent fluid connection technology, ensure no leakage during millions operations.

Pneumatic Gripper



- The perfect combination of multi-tooth guide rail and trapezoid structure, can bear larger moment and torque;
- The unique coating process ensures the precision after ten millions operations;
- Unique self-lubricating design, longer maintenance-free service time.

Floating Deburring Tools



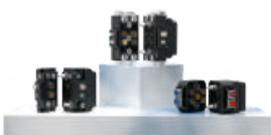
- 360-degree radial floating, suitable for deburring various workpieces;
- 1000-6000RPM electric spindle with replaceable cutter automatically, meet all kinds of process requirements;
- Axial floating grinding tools: grind complex surfaces adaptively, adjust the work force precisely, compensate work force within $\pm 0.5N$ in any direction actively.

Floating Position Compensate Device



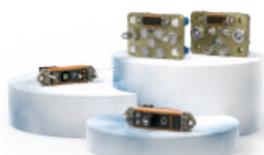
- Support position compensation in X&Y, Z, X&Y&Z directions, correct the error in position or angle during assembly and loading precisely.
- Ensure the operation is exact by locking the center point and position storing function.
- ISO9409 interface to simplify assembled process.

Energy Connectors



- Modular medium and multi-module interfaces make combination more flexiable;
- With floating in X, Y, Z direction, eliminate docking errors;
- Optional visible LED lights of locked and unlocked status.

Energy Coupling Device



- Offer energy coupling between the main station and slave station, include power, data, I/O, pneumatic, liquid, ect.
- Ultra-high plug life, high stability and reliability
- With super current carrying capacity, can resistant the strong impact of vibration.

LH-TC-Robot Tool Changers

Robot tool changers are flexible devices which can help single industrial robot match more end-effectors, ensure each robot side match with more tool sides, increase robot production lines' flexibility and use of robots, are widely used in end-of-arm-tools switching, such as spot welding guns, end-effectors, grippers, press guns, deburring tools, visible tools, ultrasonic welding guns etc.



With ISO9001,
SIL and CE certifications



Payload ranges from
5kg to 3000kg



Offer various modules for all
kinds of applications, support
customized design



Air pressure lost self-locking
function

Technology highlights



Locking mechanism

The special materials and process combine with the inclined structure perfectly, ensure safety locking.

Redundancy technology

Innovated redundancy signal transmission technology, ensure the transmission of data and signals more stable.

Fluid module

Excellent fluid connection technology realize millions operation without leak.

Safety docking

Unique patented technology of tool and bracket interlocking, when tool changer operate normally, the tool changer won't open even industrial robots output order mistakenly to solenoid valve module.



Model: LTC-0005A

- ◆ Recommended payload $\leq 5\text{KG}$
- ◆ Locking force: 770N
- ◆ Allowable static moment: 13.2N·m
- ◆ Allowable static torque: 18N·m
- ◆ With 4 x M5 air ports, 1 available module interfaces



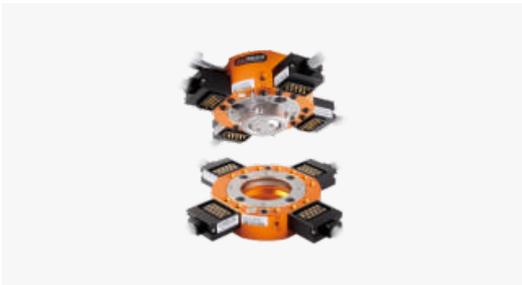
Model: LTC-0010E

- ◆ Recommended payload $\leq 10\text{KG}$
- ◆ Locking force: 1193N
- ◆ Allowable static moment: 26.5N·m
- ◆ Allowable static torque: 35.7N·m
- ◆ With 4 x M5 air ports, 2 available module interfaces
- ◆ Master plate with locking/unlocking sensor and tool-in-position sensor



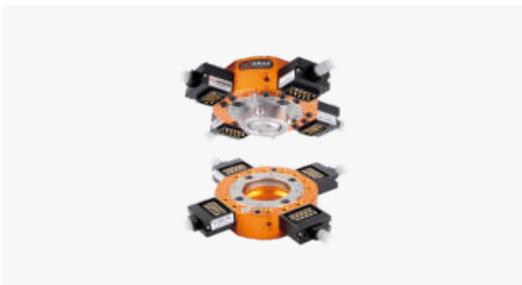
Model: LTC-0010F

- ◆ Recommended payload $\leq 10\text{KG}$
- ◆ Locking force: 1193N
- ◆ Allowable static moment: 26.5N·m
- ◆ Allowable static torque: 35.7N·m
- ◆ With 6 x M5 air ports, 2 available module interfaces



Model: LTC-0020D

- ◆ Recommended payload $\leq 20\text{KG}$
- ◆ Locking force: 2514N
- ◆ Allowable static moment: 58.6N·m
- ◆ Allowable static torque: 80N·m
- ◆ With 12 x M5 air ports, 4 available module interfaces
- ◆ Master plate with locking/unlocking sensor and tool-in-position sensor



Model: LTC-0020E

- ◆ Recommended payload $\leq 20\text{KG}$
- ◆ Locking force: 2514N
- ◆ Allowable static moment: 58.6N·m
- ◆ Allowable static torque: 80N·m
- ◆ With 12 x M5 air ports, 4 available module interfaces



Model: LTC-0040A

- ◆ Recommended payload $\leq 40\text{KG}$
- ◆ Locking force: 7497N
- ◆ Allowable static moment: 216N·m
- ◆ Allowable static torque: 228N·m
- ◆ With 8 x PT1/8 air ports, 2 available module interfaces
- ◆ Master plate with locking/unlocking sensor and tool-in-position sensor



Model: LTC-0070A

- ◆ Recommended payload $\leq 70\text{KG}$
 - ◆ Locking force: 9973N
 - ◆ Allowable static moment: 328.5N·m
 - ◆ Allowable static torque: 451N·m
 - ◆ With 8 x PT1/8 air ports, 2 available module interfaces
 - ◆ Master plate with locking/unlocking sensor and tool-in-position sensor
-



Model: LTC-0070B

- ◆ Recommended payload $\leq 70\text{KG}$
 - ◆ Locking force: 9973N
 - ◆ Allowable static moment: 328.5N·m
 - ◆ Allowable static torque: 451N·m
 - ◆ With 6 x PT1/8 air ports, 4 available module interfaces
 - ◆ Master plate with locking/unlocking sensor and tool-in-position sensor
-



Model: LTC-0120C

- ◆ Recommended payload $\leq 120\text{KG}$
 - ◆ Locking force: 15407N
 - ◆ Allowable static moment: 842N·m
 - ◆ Allowable static torque: 1200N·m
 - ◆ With 10 x PT1/8 air ports, 2 available module interfaces
 - ◆ Master plate with locking/unlocking sensor and tool-in-position sensor
-



Model: LTC-0120D

- ◆ Recommended payload $\leq 120\text{KG}$
 - ◆ Locking force: 15407N
 - ◆ Allowable static moment: 842N·m
 - ◆ Allowable static torque: 1200N·m
 - ◆ With 8 x PT1/8 air ports, 4 available module interfaces
 - ◆ Master plate with locking/unlocking sensor and tool-in-position sensor
-



Model: LTC-0200D

- ◆ Recommended payload $\leq 230\text{KG}$
 - ◆ Locking force: 31458N
 - ◆ Allowable static moment: 2260N·m
 - ◆ Allowable static torque: 2245N·m
 - ◆ With 9 x PT3/8 air ports, 2 available module interfaces
 - ◆ Master plate with locking/unlocking sensor and tool-in-position sensor
-



Model: LTC-0200E

- ◆ Recommended payload $\leq 230\text{KG}$
 - ◆ Locking force: 31458N
 - ◆ Allowable static moment: 2260N·m
 - ◆ Allowable static torque: 2245N·m
 - ◆ With 18 x PT1/8 air ports, 2 available module interfaces
 - ◆ Master plate with locking/unlocking sensor and tool-in-position sensor
-



Model: LTC-0200F

- ◆ Recommended payload $\leq 230\text{KG}$
- ◆ Locking force: 31458N
- ◆ Allowable static moment: 2260N-m
- ◆ Allowable static torque: 2245N-m
- ◆ With 6 x PT1/8 air ports, 2 x PT3/8 air ports, 4 available module interfaces
- ◆ Master plate with locking/unlocking sensor and tool-in-position sensor



Model: LTC-0300G

- ◆ Recommended payload $\leq 300\text{KG}$
- ◆ Locking force: 35421N
- ◆ Allowable static moment: 2767N-m
- ◆ Allowable static torque: 2526N-m
- ◆ With 10 x PT3/8 air ports, 2 available module interfaces
- ◆ Master plate with locking/unlocking sensor and tool-in-position sensor



Model: LTC-0630F

- ◆ Recommended payload $\leq 650\text{KG}$
- ◆ Locking force: 72930N
- ◆ Allowable static moment: 5000N-m
- ◆ Allowable static torque: 5000N-m
- ◆ 4 available module interfaces
- ◆ Master plate with locking/unlocking sensor and tool-in-position sensor



Model: LTC-1300A

- ◆ Recommended payload $\leq 1300\text{KG}$
- ◆ Locking force: 106263N
- ◆ Allowable static moment: 6830N-m
- ◆ Allowable static torque: 6920N-m
- ◆ 6 available module interfaces
- ◆ Master plate with locking/unlocking sensor and tool-in-position sensor



Model: LTC-3000A

- ◆ Recommended payload $\leq 3000\text{KG}$
- ◆ Locking force: 130200N
- ◆ Allowable static moment: 13600N-m
- ◆ Allowable static torque: 13000N-m
- ◆ 6 available module interfaces
- ◆ Master plate with locking/unlocking sensor and tool-in-position sensor

LH-TC-Clamping Technology

Pneumatic grippers belongs to end-effectors which take compressed air as power to clamp or grab workpiece, can replace human hand, are used to catch workpiece with different shapes, measurements, weights and materials, combine grabbing force and grabbing stroke perfectly and then improve the stability of production process.



LH-TC technology
high strength mechanism
grippers



Strong structure, greater
load bearing capacity



Multi-tooth cross-section
design, guarantee reliable
clamping



Multi-sensor sensing
positions, detect closing
and opening flexibly



Unique self-lubrication
design, longer service life
with maintenance-free



More than 400
combinations of function
expansion



LH-TC Two-finger Parallel Grippers



Model: LT-TG2-40series

- ◆ Stroke per jaw: 2.5mm
- ◆ Closing force: 153N~210N
- ◆ Recommended workpiece weight: 0.76kg
- ◆ The allowed longest finger: 54mm~58mm
- ◆ The allowed heaviest finger: 0.1kg
- ◆ Optional basic type, force holding type, dust-proof type, high temperature type, etc.



Model: LT-TG2-50series

- ◆ Stroke per jaw: 4mm/2mm
- ◆ Closing force: 192N~533N
- ◆ Recommended workpiece weight: 0.95kg~1.9kg
- ◆ The allowed longest finger: 64mm~72mm
- ◆ The allowed heaviest finger: 0.18kg
- ◆ Optional basic type, force holding type, dust-proof type, high temperature type, etc.



Model: LT-TG2-64series

- ◆ Stroke per jaw: 6mm/3mm
- ◆ Closing force: 295N~770N
- ◆ Recommended workpiece weight: 1.45kg~2.95kg
- ◆ The allowed longest finger: 80mm~90mm
- ◆ The allowed heaviest finger: 0.35kg
- ◆ Optional basic type, force holding type, dust-proof type, high temperature type, etc.



Model: LT-PG2-80series

- ◆ Stroke per jaw: 8mm/4mm
- ◆ Closing force: 440N~1180N
- ◆ Recommended workpiece weight: 2.2kg~4.3kg
- ◆ The allowed longest finger: 100mm~110mm
- ◆ The allowed heaviest finger: 0.6kg
- ◆ Optional basic type, force holding type, dust-proof type, high temperature type, etc.



Model: LT-PG2-100series

- ◆ Stroke per jaw: 10mm/5mm
- ◆ Closing force: 710N~1920N
- ◆ Recommended workpiece weight: 3.5kg~7.1kg
- ◆ The allowed longest finger: 125mm~145mm
- ◆ The allowed heaviest finger: 1.1kg
- ◆ Optional basic type, force holding type, dust-proof type, high temperature type, etc.



Model: LT-PG2-125series

- ◆ Stroke per jaw: 13mm/6.5mm
 - ◆ Closing force: 1160N~3170N
 - ◆ Recommended workpiece weight: 5.8kg~11.7kg
 - ◆ The allowed longest finger: 160mm~180mm
 - ◆ The allowed heaviest finger: 2.1kg
 - ◆ Optional basic type, force holding type, dust-proof type, high temperature type, etc.
-



Model: LT-PG2-160series

- ◆ Stroke per jaw: 16mm/8mm
 - ◆ Closing force: 1785N~4500N
 - ◆ Recommended workpiece weight: 8.5kg~17kg
 - ◆ The allowed longest finger: 200mm~220mm
 - ◆ The allowed heaviest finger: 3.5kg
 - ◆ Optional basic type, force holding type, dust-proof type, high temperature type, etc.
-



Model: LT-PG2-200series

- ◆ Stroke per jaw: 25mm/14mm
 - ◆ Closing force: 2960N~6640N
 - ◆ Recommended workpiece weight: 14.5kg~25kg
 - ◆ The allowed longest finger: 200mm~280mm
 - ◆ The allowed heaviest finger: 6.5kg
 - ◆ Optional basic type, force holding type, dust-proof type, high temperature type, etc.
-



Model: LT-PG2-240series

- ◆ Stroke per jaw: 30mm/17mm
 - ◆ Closing force: 4300N~9290N
 - ◆ Recommended workpiece weight: 21.5kg~37kg
 - ◆ The allowed longest finger: 240mm~320mm
 - ◆ The allowed heaviest finger: 8.5kg
 - ◆ Optional basic type, force holding type, dust-proof type, high temperature type, etc.
-



Model: LT-PG2-300series

- ◆ Stroke per jaw: 35mm/20mm
 - ◆ Closing force: 5780N~12330N
 - ◆ Recommended workpiece weight: 29kg~49.5kg
 - ◆ The allowed longest finger: 250mm~350mm
 - ◆ The allowed heaviest finger: 11.5kg
 - ◆ Optional basic type, force holding type, dust-proof type, high temperature type, etc.
-



Model: LT-PG2-380series

- ◆ Stroke per jaw: 45mm/26mm
 - ◆ Closing force: 9630N~23750N
 - ◆ Recommended workpiece weight: 48kg~82.5kg
 - ◆ The allowed longest finger: 300mm~400mm
 - ◆ The allowed heaviest finger: 17kg
 - ◆ Optional basic type, force holding type, dust-proof type, high temperature type, etc.
-

LH-TC Three-finger Parallel Grippers



Model: LT-TG3-40series

- ◆ Stroke per jaw: 2.5mm
- ◆ Closing force: 250N~350N
- ◆ Recommended workpiece weight: 1.25kg
- ◆ The allowed longest finger: 45mm~50mm
- ◆ The allowed heaviest finger: 0.1kg
- ◆ Optional basic type, force holding type, dust-proof type, high temperature type, scrap wing components, etc.



Model: LT-TG3-50series

- ◆ Stroke per jaw: 4mm
- ◆ Closing force: 430N~555N
- ◆ Recommended workpiece weight: 2.1kg
- ◆ The allowed longest finger: 58mm~64mm
- ◆ The allowed heaviest finger: 0.18kg
- ◆ Optional basic type, force holding type, dust-proof type, high temperature type, scrap wing components, etc.



Model: LT-TG3-64series

- ◆ Stroke per jaw: 6mm
- ◆ Closing force: 700N~900N
- ◆ Recommended workpiece weight: 3.5kg
- ◆ The allowed longest finger: 72mm~80mm
- ◆ The allowed heaviest finger: 0.35kg
- ◆ Optional basic type, force holding type, dust-proof type, high temperature type, scrap wing components, etc.



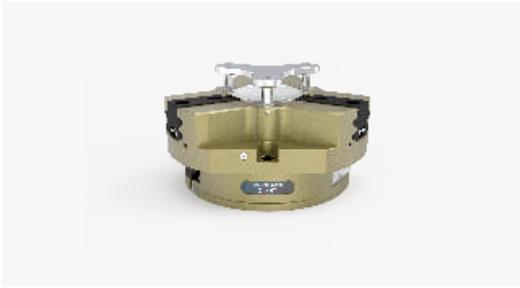
Model: LT-PG3-80series

- ◆ Stroke per jaw: 8mm/4mm
- ◆ Closing force: 1090N~2860N
- ◆ Recommended workpiece weight: 5.4kg~10.5kg
- ◆ The allowed longest finger: 100mm~110mm
- ◆ The allowed heaviest finger: 0.6kg
- ◆ Optional basic type, force holding type, dust-proof type, high temperature type, scrap wing components, etc.



Model: LT-PG3-100series

- ◆ Stroke per jaw: 10mm/5mm
- ◆ Closing force: 2050N~5570N
- ◆ Recommended workpiece weight: 10kg~20kg
- ◆ The allowed longest finger: 125mm~145mm
- ◆ The allowed heaviest finger: 1.1kg
- ◆ Optional basic type, force holding type, dust-proof type, high temperature type, scrap wing components, etc.



Model: LT-PG3-125series

- ◆ Stroke per jaw: 13mm/6.5mm
 - ◆ Closing force: 3240N~8820N
 - ◆ Recommended workpiece weight: 16kg~32kg
 - ◆ The allowed longest finger: 160mm~180mm
 - ◆ The allowed heaviest finger: 2.1kg
 - ◆ Optional basic type, force holding type, dust-proof type, high temperature type, scrap wing components, etc.
-



Model: LT-PG3-160series

- ◆ Stroke per jaw: 16mm/8mm
 - ◆ Closing force: 5970N~15030N
 - ◆ Recommended workpiece weight: 29.5kg~57kg
 - ◆ The allowed longest finger: 200mm~220mm
 - ◆ The allowed heaviest finger: 3.5kg
 - ◆ Optional basic type, force holding type, dust-proof type, high temperature type, scrap wing components, etc.
-



Model: LT-PG3-200series

- ◆ Stroke per jaw: 25mm/14mm
 - ◆ Closing force: 8200N~17320N
 - ◆ Recommended workpiece weight: 41kg~63kg
 - ◆ The allowed longest finger: 200mm~280mm
 - ◆ The allowed heaviest finger: 6.5kg
 - ◆ Optional basic type, force holding type, dust-proof type, high temperature type, scrap wing components, etc.
-



Model: LT-PG3-240series

- ◆ Stroke per jaw: 30mm/17mm
 - ◆ Closing force: 11860N~27590N
 - ◆ Recommended workpiece weight: 59kg~101kg
 - ◆ The allowed longest finger: 200mm~300mm
 - ◆ The allowed heaviest finger: 8.5kg
 - ◆ Optional basic type, force holding type, dust-proof type, high temperature type, scrap wing components, etc.
-



Model: LT-PG3-300series

- ◆ Stroke per jaw: 35mm/20mm
 - ◆ Closing force: 15950N~43910N
 - ◆ Recommended workpiece weight: 79kg~137kg
 - ◆ The allowed longest finger: 200mm~250mm
 - ◆ The allowed heaviest finger: 11.5kg
 - ◆ Optional basic type, force holding type, dust-proof type, high temperature type, scrap wing components, etc.
-



Model: LT-PG3-380series

- ◆ Stroke per jaw: 45mm/26mm
 - ◆ Closing force: 29040N~65900N
 - ◆ Recommended workpiece weight: 145kg~249kg
 - ◆ The allowed longest finger: 200mm~250mm
 - ◆ The allowed heaviest finger: 13.5kg
 - ◆ Optional basic type, force holding type, dust-proof type, high temperature type, scrap wing components, etc.
-

Optional Components



Model: LT-JQC-64-P

Jaw quick change device: LT-JQC-64B-P

- ◆ Weight (the location pins are not included): 0.037kg
- ◆ The Max allowed torque: 29N.m ◆ The Max allowed force: 510N

Model of the location pin: LT-JQC-64A-P

- ◆ Weight (2pcs each set): 0.005kg
 - ◆ Material: 42CrMo
-

Model: LT-JQC-100-P

Jaw quick change device: LT-JQC-100B-P

- ◆ Weight (the location pins are not included): 0.12kg
- ◆ The Max allowed torque: 105N.m ◆ The Max allowed force: 1960N

Model of the location pin: LT-JQC-100A-P

- ◆ Weight (2pcs each set): 0.04kg
 - ◆ Material: 42CrMo
-

Model: LT-JQC-160-P

Jaw quick change device: LT-JQC-160B-P

- ◆ Weight (the location pins are not included): 0.38kg
- ◆ The Max allowed torque: 310N.m ◆ The Max allowed force: 5360N

Model of the location pin: LT-JQC-160A-P

- ◆ Weight (2pcs each set): 0.14kg
 - ◆ Material: 42CrMo
-

Model: LT-JQC-240-P

Jaw quick change device: LT-JQC-240B-P

- ◆ Weight (the location pins are not included): 1.35kg
- ◆ The Max allowed torque: 880N.m ◆ The Max allowed force: 9330N

Model of the location pin: LT-JQC-240A-P

- ◆ Weight (2pcs each set): 0.62kg
 - ◆ Material: 42CrMo
-

Model: LT-JQC-50-P

Jaw quick change device: LT-JQC-50B-P

- ◆ Weight (the location pins are not included): 0.025kg
- ◆ The Max allowed torque: 14N.m ◆ The Max allowed force: 350N

Model of the location pin: LT-JQC-50A-P

- ◆ Weight (2pcs each set): 0.005kg
 - ◆ Material: 42CrMo
-

Model: LT-JQC-80-P

Jaw quick change device: LT-JQC-80B-P

- ◆ Weight (the location pins are not included): 0.06kg
- ◆ The Max allowed torque: 63N.m ◆ The Max allowed force: 1080N

Model of the location pin: LT-JQC-80A-P

- ◆ Weight (2pcs each set): 0.02kg
 - ◆ Material: 42CrMo
-

Model: LT-JQC-125-P

Jaw quick change device: LT-JQC-125B-P

- ◆ Weight (the location pins are not included): 0.2kg
- ◆ The Max allowed torque: 225N.m ◆ The Max allowed force: 2815N

Model of the location pin: LT-JQC-125A-P

- ◆ Weight (2pcs each set): 0.09kg
 - ◆ Material: 42CrMo
-

Model: LT-JQC-200-P

Jaw quick change device: LT-JQC-200B-P

- ◆ Weight (the location pins are not included): 0.77kg
- ◆ The Max allowed torque: 510N.m ◆ The Max allowed force: 6110N

Model of the location pin: LT-JQC-200A-P

- ◆ Weight (2pcs each set): 0.32kg
 - ◆ Material: 42CrMo
-

Model: LT-JQC-300-P

Jaw quick change device: LT-JQC-300B-P

- ◆ Weight (the location pins are not included): 1.8kg
- ◆ The Max allowed torque: 1220N.m ◆ The Max allowed force: 12420N

Model of the location pin: LT-JQC-300A-P

- ◆ Weight (2pcs each set): 0.79kg
 - ◆ Material: 42CrMo
-

LH-TC·Floating Position Compensation Devices

The floating compensation devices are mainly used to improve machining accuracy and process reliability, especially when processing deformation sensitive workpieces, the biggest advantage is the ability to respond to workpiece position deviations flexibly through the floating compensation function, while ensuring the stability and durability of the clamping force, thereby extending the equipment maintenance cycle time, reducing maintenance costs, and improving overall machining efficiency.



Powerful function:

Compensate the position error during assembly and loading precisely.



Compensation in multi-direction:

Support position compensation in X&Y, Z, X&Y&Z directions, ensure wide and flexible compensation ability.



Precise control:

Ensure the operation is exact by locking the center point and position storing function.



Easy for mounting:

ISO9409 interface to simplify assembled process.



Stable and durable:

Adopt firm material, improve the service life of equipment.





Floating compensation devices in X&Y Directions

| Model | LT-COMP-50XY | LT-COMP-63XY | LT-COMP-80XY |
|---|--------------------|--------------------|--------------------|
| Compensation in X and Y directions | ±2.5mm | ±3mm | ±4mm |
| Rotate angle | ±12° | ±12° | ±16° |
| Recommended handling weight in straight direction | 6kg | 9kg | 15kg |
| Recommended handling weight in horizontal direction | 4kg | 6kg | 10kg |
| Recommended handling weight in the storing position | 1.5kg | 1.8kg | 4kg |
| The locking force of located piston | 240N | 380N | 610N |
| The Max locking payload | 130N | 200N | 310N |
| The piston force of storing position | 145N | 240N | 590N |
| The Max radial force in storing position | 40N | 70N | 175N |
| The rotate moment in the Max storing position | 1.2N.m | 1.7N.m | 4N.m |
| The Min/Rated/The Max work air pressure | 0.3/0.6/0.8MPa | 0.3/0.6/0.8MPa | 0.3/0.6/0.8MPa |
| Repeatability | 0.1mm | 0.1mm | 0.1mm |
| The flange in the robot side | ISO 9409-1-50-4-M6 | ISO 9409-1-63-4-M6 | ISO 9409-1-80-6-M8 |
| Product weight | 0.45kg | 0.82kg | 1.43kg |
| The lowest/The highest environmental temperature | +5/+60°C | +5/+60°C | +5/+60°C |
| Dimension | Φ65×48mm | Φ80×56mm | Φ100×62mm |



Floating compensation devices in Z Direction

| Model | LT-COMP-50Z-1/ LT-COMP-50Z-2 | LT-COMP-63Z-1/ LT-COMP-63Z-2 | LT-COMP-80Z-1/ LT-COMP-80Z-2 |
|---|---------------------------------|---------------------------------|---------------------------------|
| Compensation in Z direction | 8mm | 8mm | 10mm |
| Recommended handling weight | 5kg | 9kg | 12kg |
| The locking force in retraction state(under 0.6MPa) | 280N / 260N | 630N / 590N | 1160N / 1140N |
| The locking force in extended state(under 0.6MPa) | 510N / 530N | 900N / 920N | 1500N / 1520N |
| The Min spring force | 20N / 40N | 40N / 60N | 70N / 90N |
| The Max spring force | 40N / 60N | 60N / 100N | 100N / 120N |
| The Min/Rated/The Max work air pressure | 0.3/0.6/0.8MPa | 0.3/0.6/0.8MPa | 0.3/0.6/0.8MPa |
| Repeatability | 0.02mm | 0.02mm | 0.02mm |
| The flange in the robot side | ISO 9409-1-50-4-M6 | ISO 9409-1-63-4-M6 | ISO 9409-1-80-6-M8 |
| Product weight | 0.6kg | 1kg | 1.7kg |
| The lowest/The highest environmental temperature | +5/+60°C | +5/+60°C | +5/+60°C |
| Dimension | 67.5×67.5×53mm | 82.5×82.5×59.5mm | 105×105×65mm |

Floating compensation devices in X&Y&Z Directions



| Model | LT-COMP-100XYZSeries | LT-COMP-125XYZSeries |
|---|----------------------|----------------------|
| Compensation in X and Y directions | ±4mm | ±7mm |
| Compensation in Z direction | 10mm | 12mm |
| Recommended handling weight in straight direction | 9kg | 18kg |
| Recommended handling weight in horizontal direction | 5.5kg | 11kg |
| The locking force in X and Y directions | 633N | 1224N |
| The locking force in Z direction | 871N | 1584N |
| The radial force of position memory piston | 180N | 260N |
| The Min/Rated/The Max work air pressure | 0.3/0.6/0.8MPa | 0.3/0.6/0.8MPa |
| The work temperature | +5/+60°C | +5/+60°C |
| Repeatability | 0.1mm | 0.1mm |
| Flange standard | ISO 9409-1-100-6-M8 | ISO 9409-1-125-6-M10 |

Remark: Optional X&Y directions or Z direction.

| Model | LT-COMP-160XYZSeries | LT-COMP-200XYZSeries |
|---|----------------------|----------------------|
| Compensation in X and Y directions | ±10mm | ±12mm |
| Compensation in Z direction | 14mm | 14mm |
| Recommended handling weight in straight direction | 60kg | 160kg |
| Recommended handling weight in horizontal direction | 40kg | 100kg |
| The locking force in X and Y directions | 1847N | 2787N |
| The locking force in Z direction | 2080N | 3176N |
| The radial force of position memory piston | 334N | 521N |
| The Min/Rated/The Max work air pressure | 0.3/0.6/0.8MPa | 0.3/0.6/0.8MPa |
| The work temperature | +5/+60°C | +5/+60°C |
| Repeatability | 0.1mm | 0.1mm |
| Flange standard | ISO 9409-1-160-6-M10 | ISO 9409-1-200-6-M12 |

Remark: Optional X&Y directions or Z direction.

LH-TC·Force Controlled Deburring Tools

Force controlled deburring tools are efficient and flexible automatically deburring tools, equipped with powerful electric motor, can quickly and automatically remove burrs, seams and edge -breaking of various materials. Applied in multi-process, suitable for components with materials such as cast iron, steel, aluminum alloy, plastic, etc. Under operation condition, the floating mechanism and the cutter can comply the irregular workpiece burrs and conduct adaptive processing, avoid the damage of the cutter and the workpiece, eliminate the error of workpiece shape and positioning.



Flexible contact,
adjustable rotate speed



360 degree floating in
Radial direction, floating in
axial direction



Durable contact
component, dust-proof,
air leakage proof



Aluminum alloy shell,
light weight design



Build-in steel ball to
reduce friction and
lengthen service life



Replaceable Variety
grinding heads, meet
customized deburring
requirement

Axial floating tools series



Model: LT-FRC030B-3060J

- ◆ The Max rotate speed: 60000rpm
- ◆ The Max torque: 9cN·m
- ◆ Power: 350W
- ◆ Floating force: 7N~30N
- ◆ Axial floating distance: 7mm
- ◆ Radial floating angle 360-degree, Floating angle (X, Y)±5°
- ◆ Support replaceable cutters automatically, Replaceable tool holder diameter 0.5mm~6.35mm



Model: LT-FRC030B-3030T-J

- ◆ The Max rotate speed: 30000rpm
- ◆ The Max torque: 18cN·m
- ◆ Power: 350W
- ◆ Floating force: 7N~30N
- ◆ Axial floating distance: 7mm
- ◆ Radial floating angle 360-degree, Floating angle (X, Y)±5°
- ◆ Support replaceable cutters automatically, Replaceable tool holder diameter 0.5mm~6.35mm



Model: LT-FR020A-20-S6000

- ◆ The Max rotate speed: 60000rpm
- ◆ The Max torque: 9cN·m
- ◆ Power: 250W
- ◆ Floating force: 3N~14N
- ◆ Axial floating distance: 4mm
- ◆ Radial floating angle 360-degree, Floating angle (X, Y) $\pm 5^\circ$



Model: LT-FR030B-3060J

- ◆ The Max rotate speed: 60000rpm
- ◆ The Max torque: 9cN·m
- ◆ Power: 350W
- ◆ Floating force: 7N~30N
- ◆ Axial floating distance: 5mm
- ◆ Radial floating angle 360-degree, Floating angle (X, Y) $\pm 5^\circ$



Model: LT-FR030B-3030T-J

- ◆ The Max rotate speed: 30000rpm
- ◆ The Max torque: 18cN·m
- ◆ Power: 350W
- ◆ Floating force: 7N~30N
- ◆ Axial floating distance: 5mm
- ◆ Radial floating angle 360-degree, Floating angle (X, Y) $\pm 5^\circ$



Model: LT-FR040B-S4040

- ◆ The Max rotate speed: 20000rpm
- ◆ The Max torque: 60cN·m
- ◆ Power: 400W
- ◆ Floating force: 7N~29N
- ◆ Axial floating distance: 6.5mm
- ◆ Radial floating angle 360-degree, Floating angle (X, Y) $\pm 5^\circ$



Model: LT-6000

- ◆ The Max rotate speed: 36000rpm
- ◆ The Max torque: 2.8N·m
- ◆ Power: 6KW
- ◆ Floating force: 96N~203.8N
- ◆ Axial floating distance: 10mm
- ◆ Radial floating angle 360-degree, Floating angle (X, Y) $\pm 4^\circ$

Radial floating Tools Series



Model: LT-AF100B

- ◆ Controllable motion range: 360°
- ◆ Force control accuracy: $\pm 0.5N$
- ◆ Stroke accuracy: $\pm 0.025mm$
- ◆ Stroke: 35mm
- ◆ Product weight: 4.2kg
- ◆ Respond time: 40ms
- ◆ Floating force: 10-100N

LH-TC·Energy Connectors

Energy connectors can provide energy connection between the main station and the slave station, and pass through energy media such as power, air, fluid, communication, etc. The fixed station with a unique flexible mechanical equipment, which can compensate the position errors and mechanism errors during the docking process. The main applications are in automotive manufacturing industry, to provide electrical power, air, signals to equipment or trolley during the quick docking of trolley, equipment and molds.



Provide energy connection between the main station and the slave station, include electrical power, data, I/O, etc.



Modular design of medium, combination more flexible



Floating in X, Y, Z direction, eliminate docking error.



Optional servo motor or cylinder driven





Model: LT-F31

- ◆ Realize quick connection of energy media such as pneumatic, electric current, communication, etc
 - ◆ With 2×PT3/8 self-sealed pneumatic ports
 - ◆ Optional driven way: servo motor or cylinder
 - ◆ Support Ethernet, EtherNet/IP, EtherCAT, Profinet, Devicenet, Profibus, CC-Link, Gigabit Ethernet
 - ◆ Compensation available:
Compliance(X&Y-Axis): $\pm 4\text{mm}$
Compliance(Z-Axis): 2mm
Rotational Compliance: $\pm 3^\circ$
Required Coupling Force: $\geq 1526\text{N}$
-



Model: LT-F31C

- To realize the quick docking of energy media such as pneumatic, liquid, current and communication, etc.
- Optional 1~ 4 channels PT1/2 pneumatic port or water port
- Optional driven way: servo motor or cylinder
- Support Ethernet, EtherNet/IP, EtherCAT, Profinet, Devicenet, Profibus, CC-Link, Gigabit Ethernet
- Compensation available:
Compliance(X&Y-Axis) $\pm 4\text{mm}$
Compliance(Z-Axis) 2mm
Rotational Compliance $\pm 3^\circ$
Required Coupling Force $\geq 1526\text{N}$
-



Model: LT-F41

- ◆ To realize the quick docking of energy media such as current and communication, etc.
 - ◆ Compact design, light weight
 - ◆ Optional driven way: servo motor or cylinder
 - ◆ Support Ethernet, EtherNet/IP, EtherCAT, Profinet, Devicenet, Profibus, CC-Link, Gigabit Ethernet
 - ◆ Compensation available :
Compliance(X&Y-Axis): $\pm 4\text{mm}$
Compliance(Z-Axis): 2mm
Rotational Compliance: $\pm 3^\circ$
Required Coupling Force: $\geq 1526\text{N}$
-

LH-TC·Energy Coupling Device

The Energy coupling devices can integrate multiple kinds of connections on a single frame or housing, and can be configured according to the specific requirements. It can meet the multi-function and frequent plug requirements, integrated the power, signal, data, fiber, liquid, pneumatic, etc. It's suitable for applications which need to combine electrical, power and pneumatic together.



High stability High reliability



Ultra-high plug life



Strong current carrying capacity



Strong resistance to vibration and impact

Product Introduction

| | |
|-------------------------|--------|
| X、Y direction tolerance | ±4mm |
| Floating angle | ±1.5° |
| Position Repeatability | ±0.1mm |



Optional Components



Φ1.6 Signal Module



Φ4 Power Module



Φ8 Power Module



Φ14 Power Module



1000Mbps Network Module



Φ3 Two-core gas module



Framework



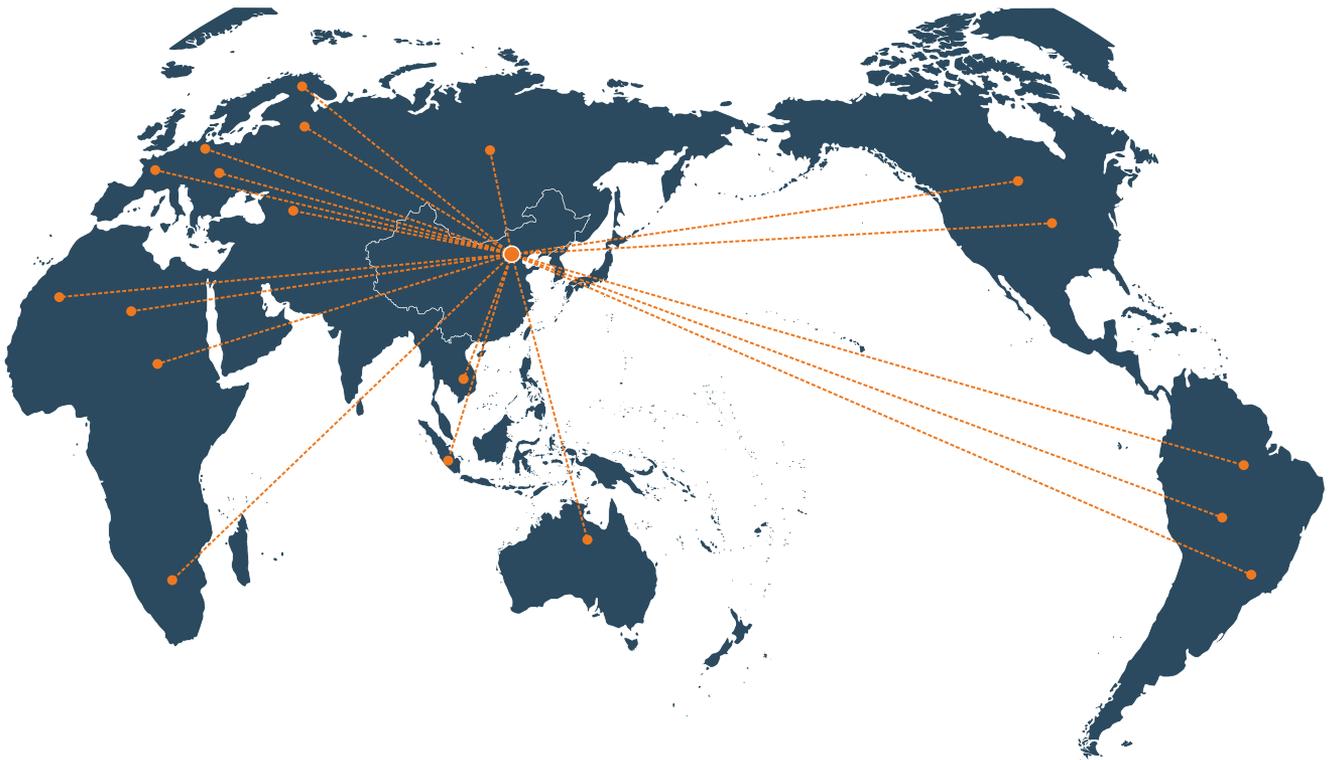
Water-air joint



Hydraulic joint



LH-TC-Service Network



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LH-TC

End-Of-Arm Tooling

———— Committed to becoming the best robot end-effector supplier ————



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