

PRODUCT SPECIFICATION

ET-MP-PN-300

Pneumatic Rigid-Arm Manipulator

ET-MP-PN-300 is an Easytech pneumatic rigid-arm manipulator. Rated load: 300 kg.



Series reference image.

Configuration, complete technical data and selection guidance

Read the specified load and movement with their conditions. This document supports purchasing and project definition; the supplied equipment instructions govern operation and maintenance.

Jenny Zhan | Phone / WhatsApp: +86 135-3727-1735

Configuration at a glance

Drive	Pneumatic
Mounting	Project-specific
Materials	Workpieces

Technical specifications

Parameter	Specification
Rated load	300 kg
Jib length	2.5 m
Drive type	Pneumatic

Rigid-arm drive choice

These platforms share a 2.5 m jib specification but differ in rated load and electric or pneumatic drive. The gripper, tool mass, offset and orientation functions must be specified for the actual workpiece.

Compare the published configuration

Selection point	ET-MP-PN-300 - Pneumatic Rigid-Arm Manipulator	ET-MP-EL-100 - Electric Rigid-Arm Manipulator	ET-MP-PN-200 - Pneumatic Rigid-Arm Manipulator
Rated load	300 kg	100 kg	200 kg
Drive type	Pneumatic	Electric	Pneumatic
Jib length	2.5 m	2.5 m	2.5 m

Equipment and intended application

A balancing mechanism supports the end effector and workpiece while the operator guides their position. The gripper supplies the workpiece-specific connection; the arm or cable mechanism and mounting structure define the working envelope. The end-effector mass is part of the load that the system must support.

Workpiece suitability and limits

Topic	Details
Workpiece and grip	Identify the lifting feature, surface condition, centre of gravity and required orientation. A clamp, hook and vacuum head solve different grip problems and are not interchangeable load ratings.
Machine access	Check both the minimum and maximum working radius, the lowest and highest end positions and the space occupied by the arm above them.
Assembly work	Describe whether the operator needs to hold a part level, turn it, reach into a machine or maintain a floating load while aligning fasteners.

Configuration and supply boundaries

Topic	Details
Balancer	The balancing unit carries the combined end-effector and workpiece load within its stated envelope.
End effector	The fixture is designed around the actual workpiece and handling sequence. Its weight, gripping points and orientation functions are part of the configuration.
Mounting	Fixed, mobile, overhead and rail-mounted arrangements have different structural and clearance requirements. Use the mounting stated for the selected model.
Utilities	Pneumatic and electric drive versions are separate configurations. Apply only the pressure or electrical requirements actually listed for the model.

Installation and commissioning

- Plot pickup and placement coordinates relative to the mounting point. Include the minimum-radius blind area and the full moving-arm envelope.
- Design the foundation, overhead support or mobile base for the specified system and operating loads. A matching bolt pattern alone does not verify structural capacity.
- Install the selected fixture and utility supply, then commission its balance, grip/release controls and locking functions with representative workpieces.
- Provide the operator with a clear path and access to the controls at every required posture. Reassess the system when the fixture or workpiece changes.

Handling sequence

1. Inspect mounting, joints, fixture and the applicable utility supply.
2. Engage the fixture using its defined gripping procedure and verify that the workpiece is secure.
3. Guide the balanced load through the clear working envelope without forcing it against a travel stop.
4. Support the workpiece at the destination before releasing the fixture; park the arm in its designated position.

Inspection, maintenance and replacement parts

Topic	Details
Arm and mounting	Inspect fixings, joints and locking functions for looseness, wear or drift.
Fixture	Check contact pads, clamp jaws, hooks or vacuum elements according to the installed gripping method.
Pneumatic versions	Check air quality, filter bowl, hoses and leakage; do not alter factory balance settings to compensate for a fault.
Changed loads	Recheck balance and grip after replacing an end effector or changing the workpiece mass or centre of gravity.

Troubleshooting priorities

Topic	Details
Load drifts or balance changes	Support the workpiece and check the fixture mass, utility supply and balance system before continuing.
Cannot reach the placement	Check minimum radius, maximum radius, end height and obstacles. Do not force the arm beyond its mechanical envelope.
Fixture slips	Stop use and review gripping surface, fixture engagement and the actual workpiece geometry.

Frequently asked questions

What load should I use when selecting ET-MP-PN-300?

The stated rated load for ET-MP-PN-300 is 300 kg. Apply it only to the specified configuration and operating conditions. Include the workpiece geometry, orientation and any tooling in the application assessment; do not combine separate maximum reach, height and capacity values.

Does the load figure include the gripper?

The balancing mechanism supports the end effector as well as the workpiece. Assess their combined mass and the centre of gravity when sizing the system.

Why does minimum radius matter?

A position too close to the column may be unreachable even though it is inside the maximum-radius circle. Plot both pickup and placement against the complete arm envelope.

Can one fixture handle every part?

Only if its grip, adjustment and load limits cover those parts. Part families with different centres of gravity or gripping features may need different fixtures.

Information for application assessment

- Identify the workpiece material, dimensions, mass, contact surface and centre of gravity. Include the least favourable item in a mixed production range.
- Describe pickup and placement positions, required orientation changes, handling frequency and the site layout.
- Identify the available power or air supply and any host machine, crane, support structure or interface that must be retained.
- State the destination market and required documentation, accessories and packing constraints so the proposed configuration can be assessed as a complete system.

Document scope

This product specification supports equipment selection and project definition. It includes the model data and application guidance presented on the product page. The operating instructions supplied for the actual machine govern commissioning, testing, maintenance procedures and safe use; this specification does not replace them.

Contact Easytech

Dongguan Easytech Automation Mechanical and Electrical Equipment Co., Ltd.

Room 403, No. 212, Zhongxing Road, Dalingshan, Dalingshan Town, Dongguan City

Jenny Zhan | Phone / WhatsApp: +86 135-3727-1735

Email: jennyzhan@auto-easy.com | WeChat: easytech1

<https://www.auto-easy.com/>