

A close-up, slightly blurred photograph of a smartphone assembly line. Several smartphones are visible on a conveyor belt, with a robotic arm positioned over them. The background shows more of the factory floor with additional assembly stations.

Conveyor Systems in Smartphone Manufacturing Process

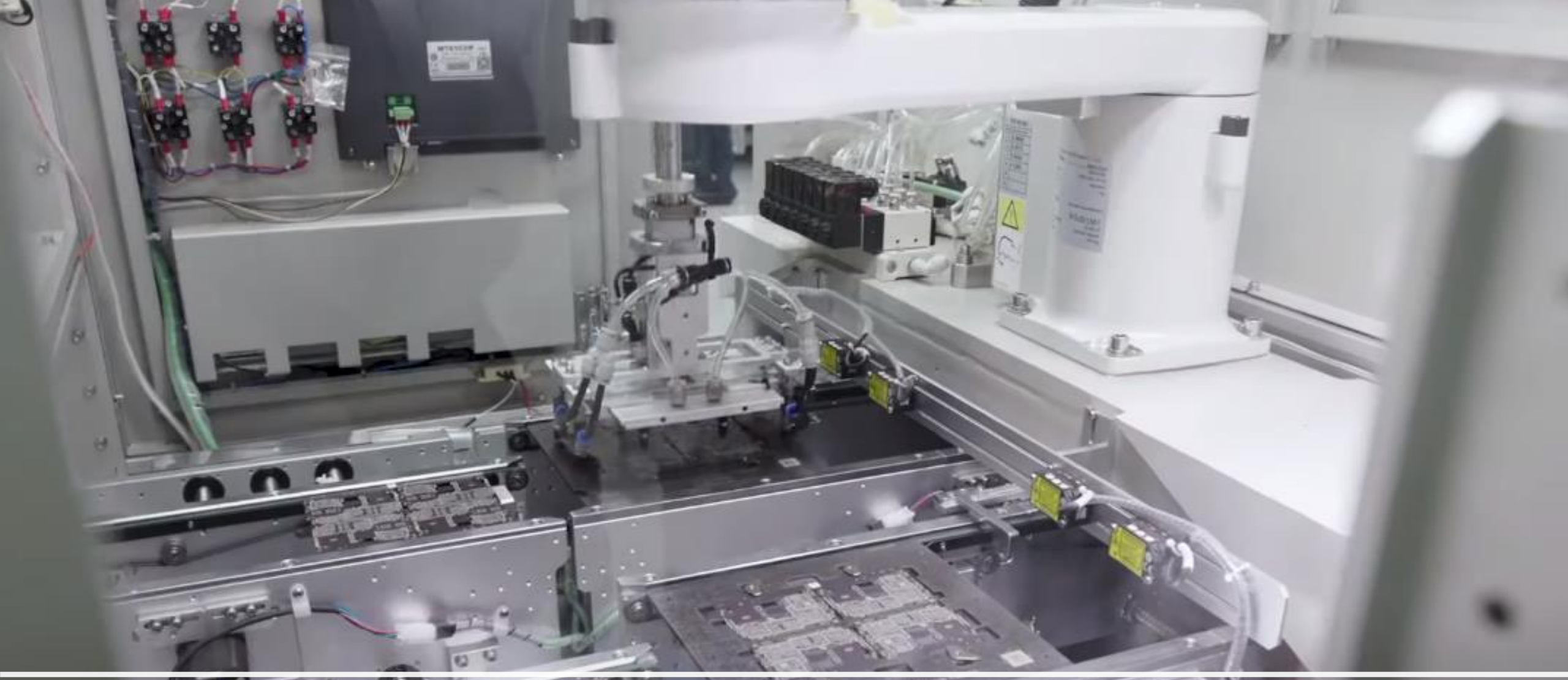
Presentation in Basic Mechanical Engineering



How a Smartphone is
Made

An exploded view of a smartphone, showing its various components separated into layers. From left to right, the layers include the front glass, a thin metal frame, the main logic board with various chips and connectors, another metal frame, and the back glass. The components are arranged vertically, with thin lines indicating their relative positions. The background is a gradient of blue and teal, and the floor is a grid pattern.

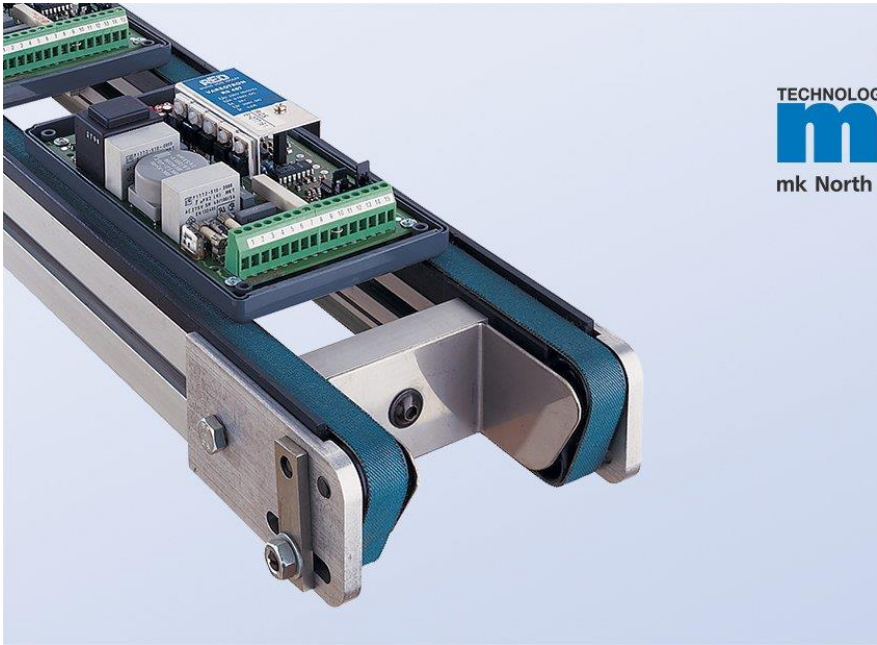
The Inside of a Smartphone



A Robotic Arm usually does most of the technical work of Manufacture

Every Step is followed by an inspection
process

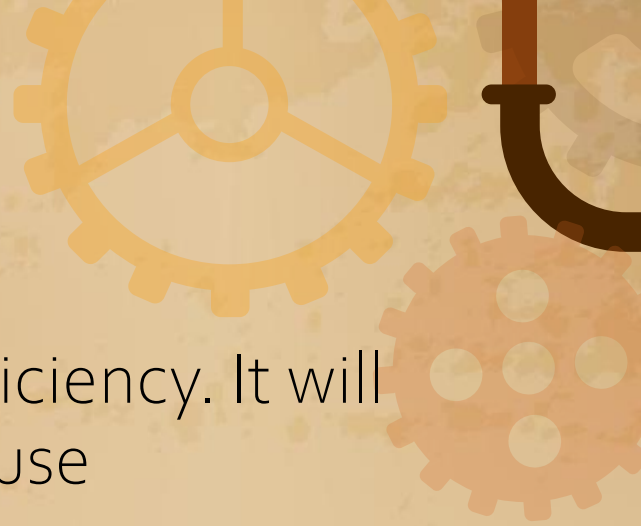




Electronics are transported by
motor controlled conveyors

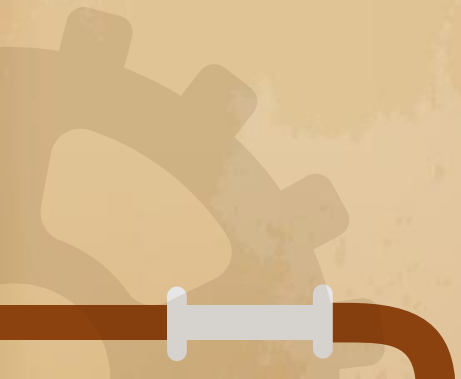
Moved With Motors and shafts

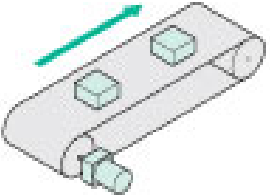
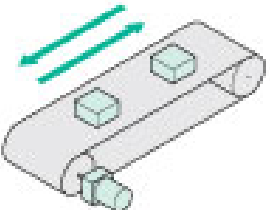
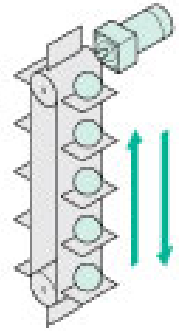




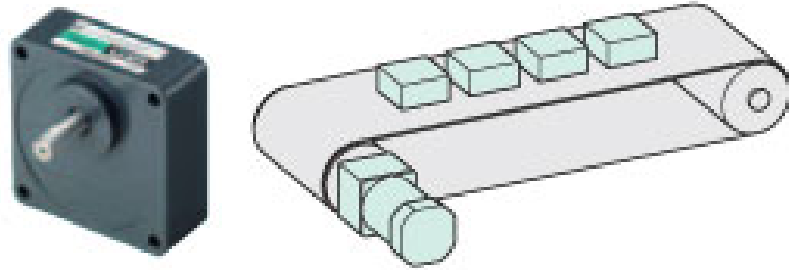
Advantages

- The right conveyor control saves time, money and efficiency. It will optimize your material handling systems and warehouse operations.
- It will allow for variable production rates and quick production changes. Programmable Logic Controls (PLC) allow for this necessary direct system control.
- This centralized network-oriented approach is best primed for automation and attaining the numbers you need to thrive.



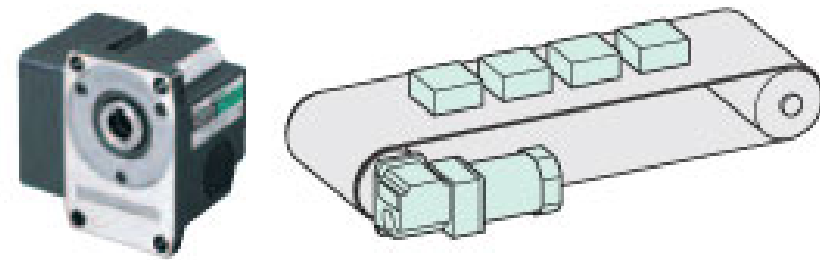
Type	Features	Output Power	Power Supply
	AC Induction Motors are suitable for applications where the motor is operated continuously in one direction.	1 W (1/750 HP) up to 3 HP	Single-Phase 100-120 VAC Single-Phase 200-240 VAC Three-Phase 200-240 VAC
	AC Reversible Motors are suitable for applications where the motor reverses its direction repeatedly.	1 W (1/750 HP) up to 3 HP	Single-Phase 100-120 VAC Single-Phase 200-240 VAC Three-Phase 200-240 VAC
	AC Motors with Electromagnetic Brake are suitable for applications where the load must always be held in place.	6 W (1/125 HP) up to 3 HP	Single-Phase 100-115 VAC Single-Phase 200-230 VAC Three-Phase 200-230 VAC

Parallel Shaft Gearheads



Parallel Shaft gearheads reduce the motor speed and generate greater torque. A wide range of gear ratios are available.

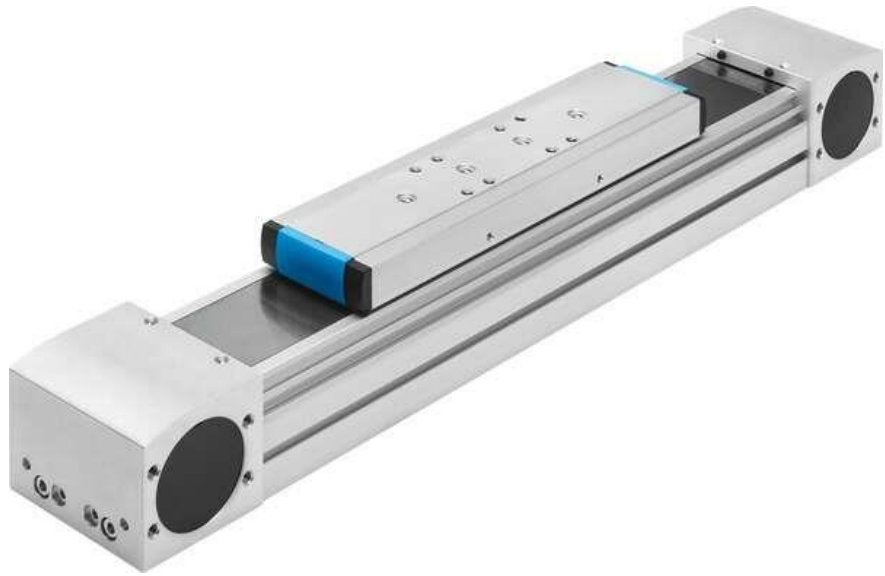
Right-Angle Gearheads

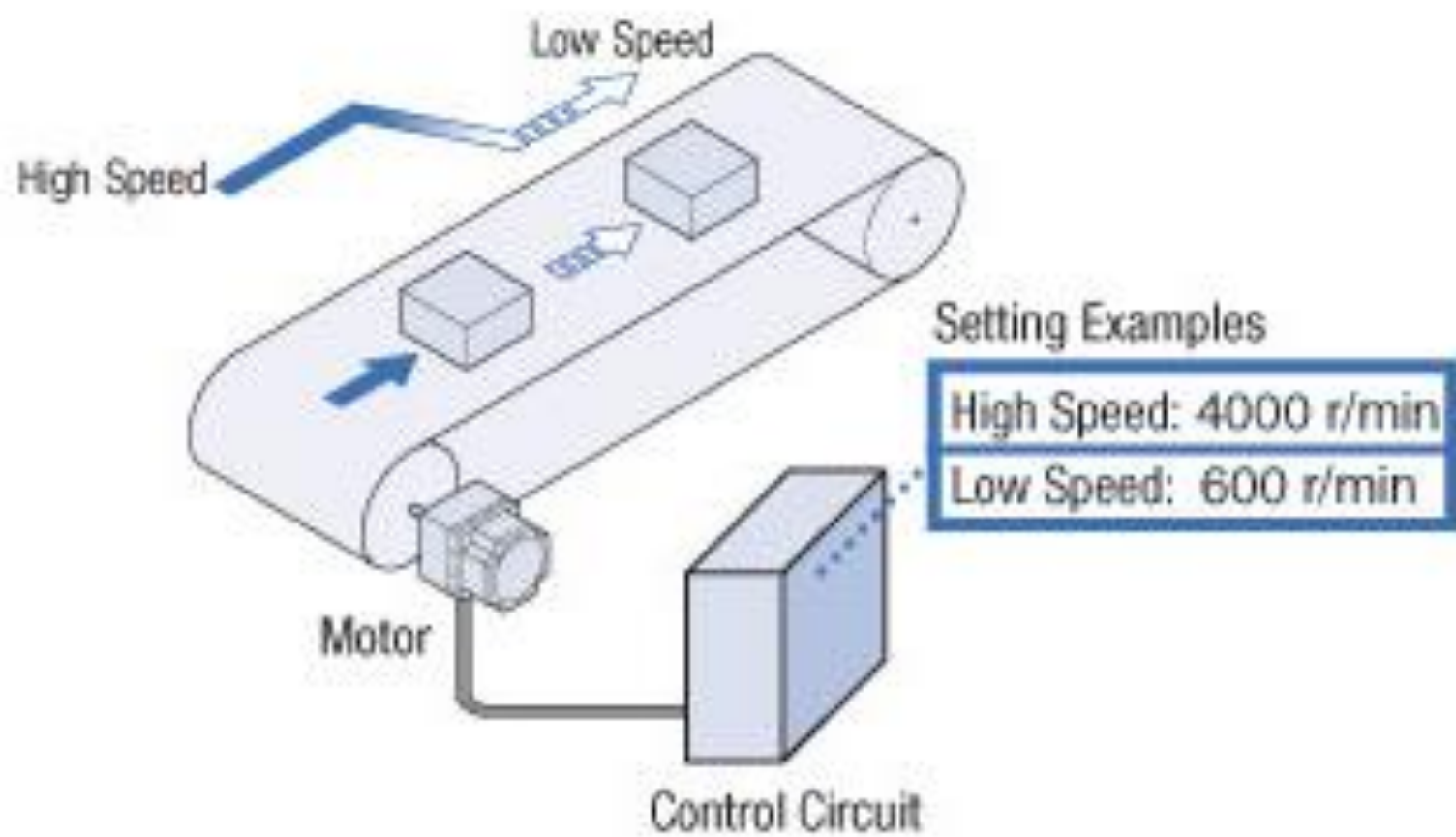


Right-Angle Gearheads are suitable for applications where space saving is required by allowing the motor to be mounted at a right-angle to the conveyor. Solid shaft and hollow shaft models are available.

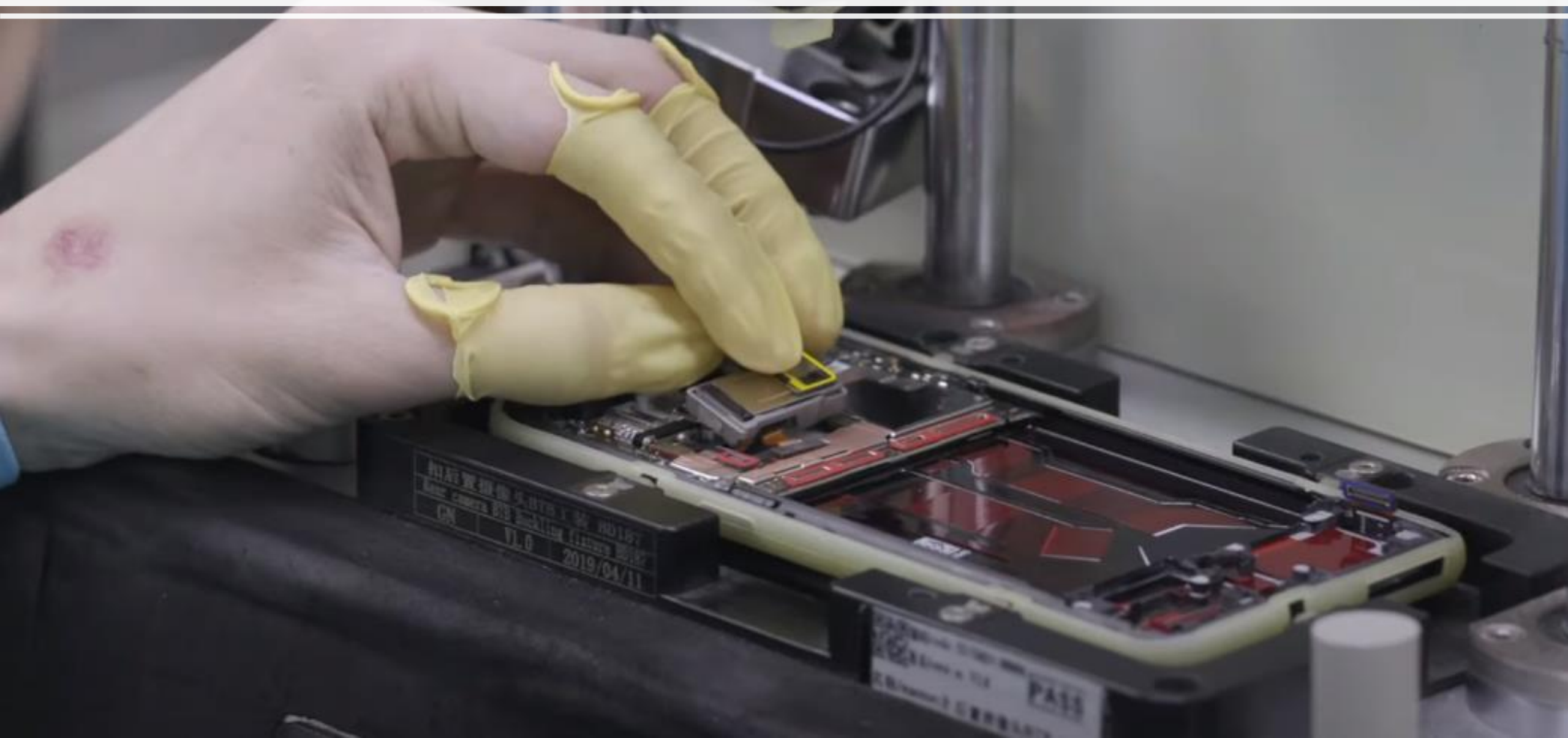


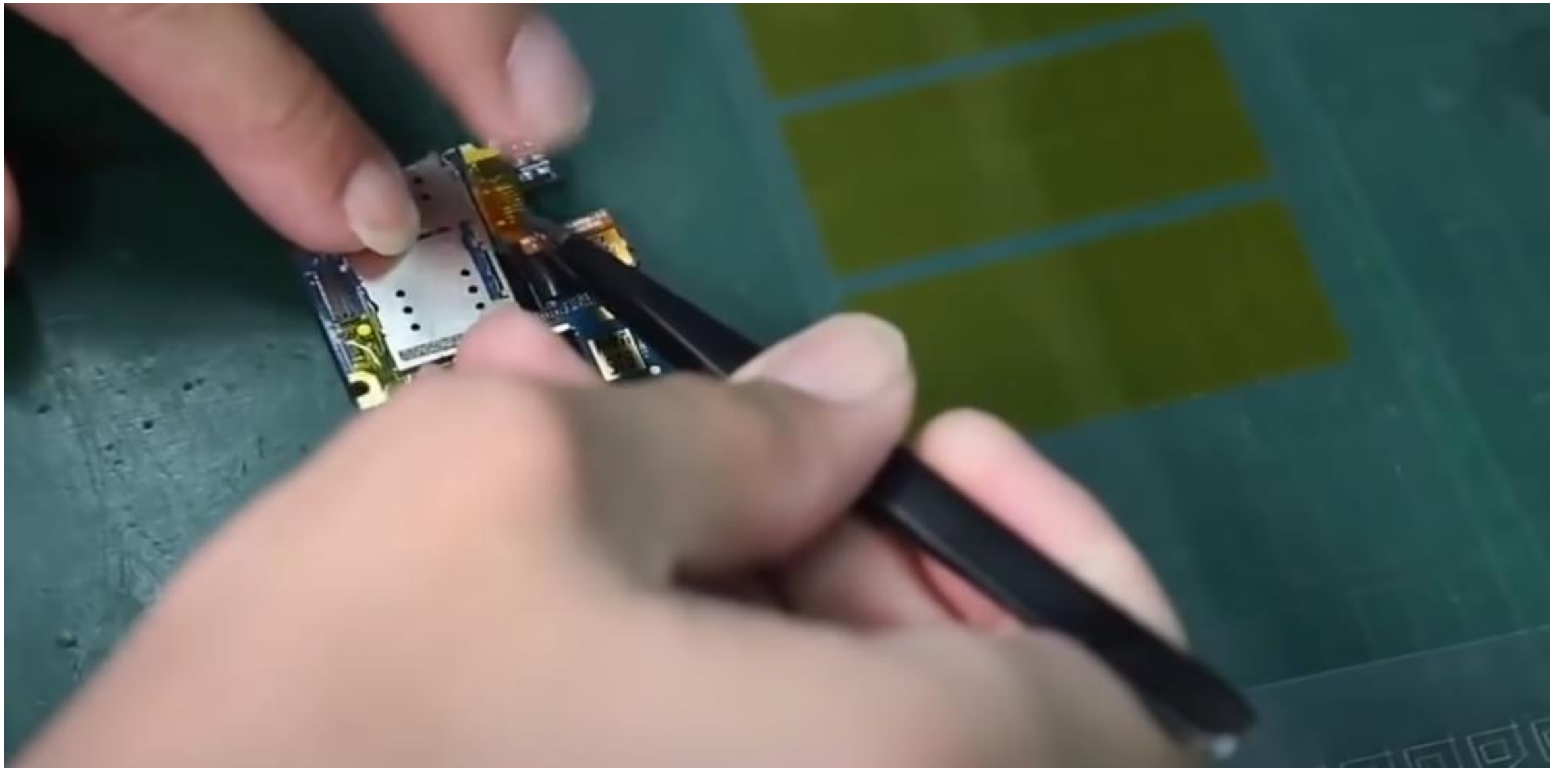
Conveyors used in Phone Manufacturing





Attaching Camera Module







For parts, Belt conveyers are used

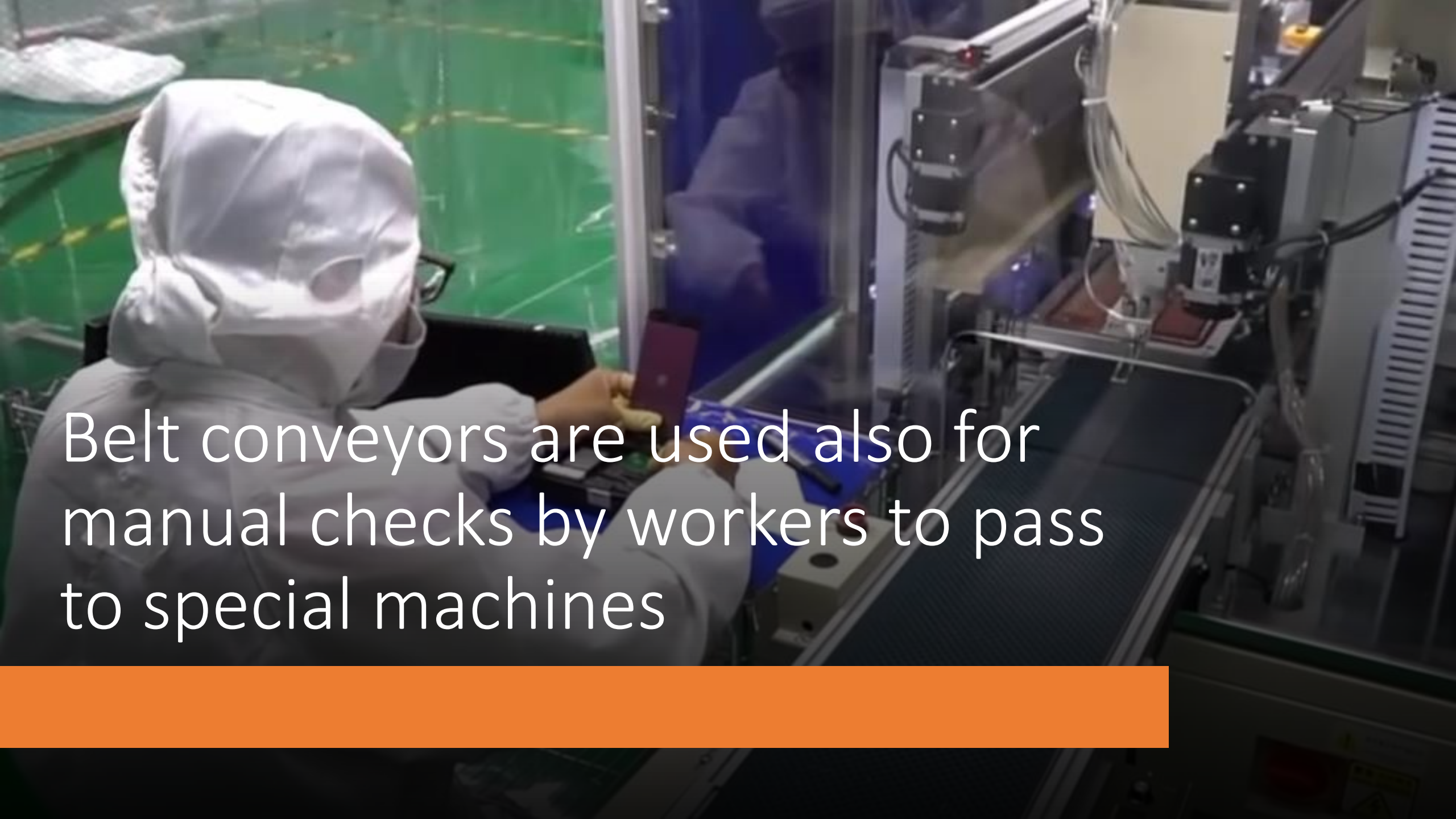
Advantages and Disadvantages of belt conveyers

Belt Conveyor System Advantages

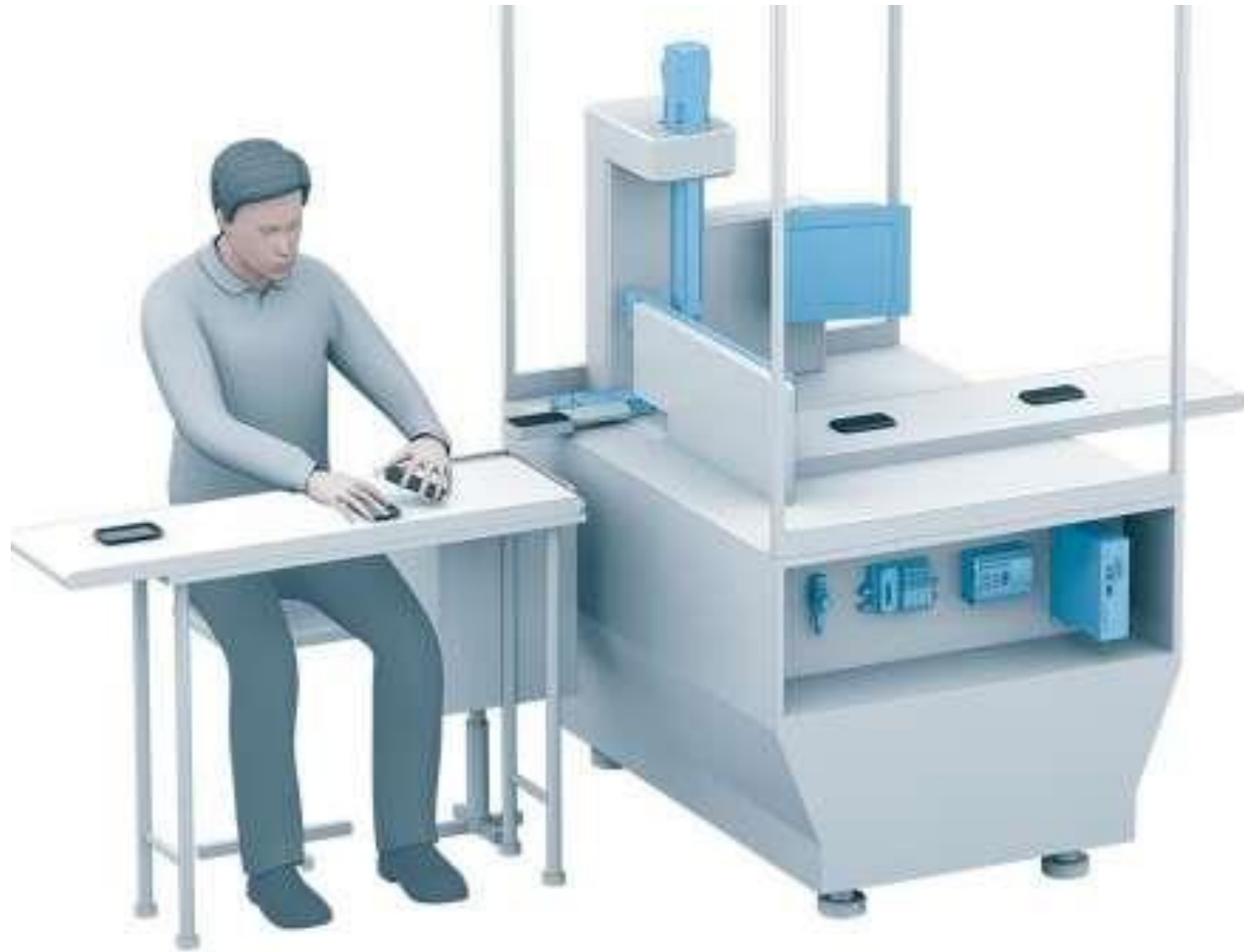
- One of the cheapest conveyors
- Simple and easy to use
- Can have changes in elevation
- Can be loaded from any place along the belt

Disadvantages

- The simplicity means very limited features
- Belt can be difficult to clean and generally does not leave a very successful result
- Sticky material can get stuck on the belt and transfer to the return side, the rolls, idlers and pulleys



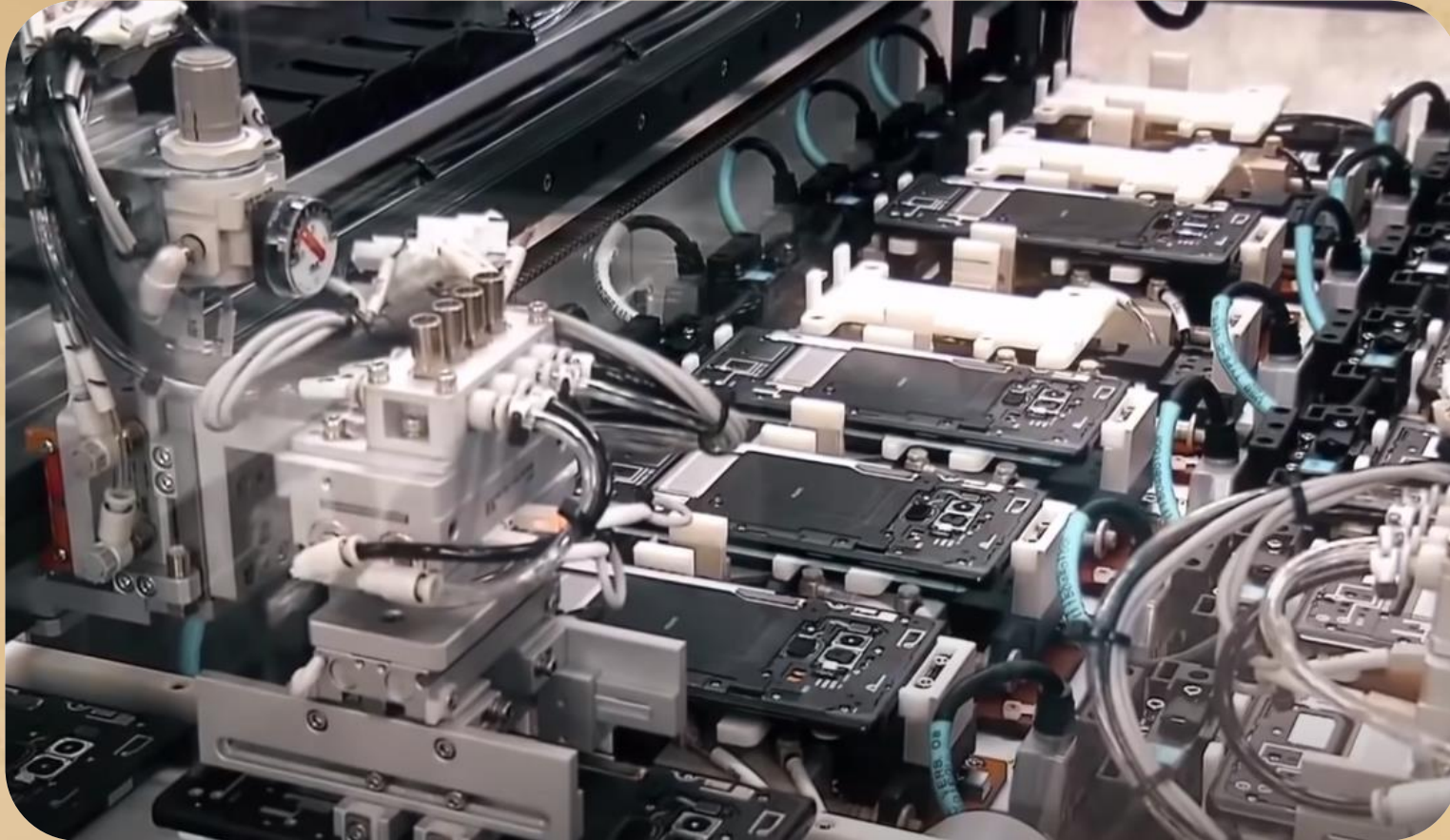
Belt conveyors are used also for manual checks by workers to pass to special machines

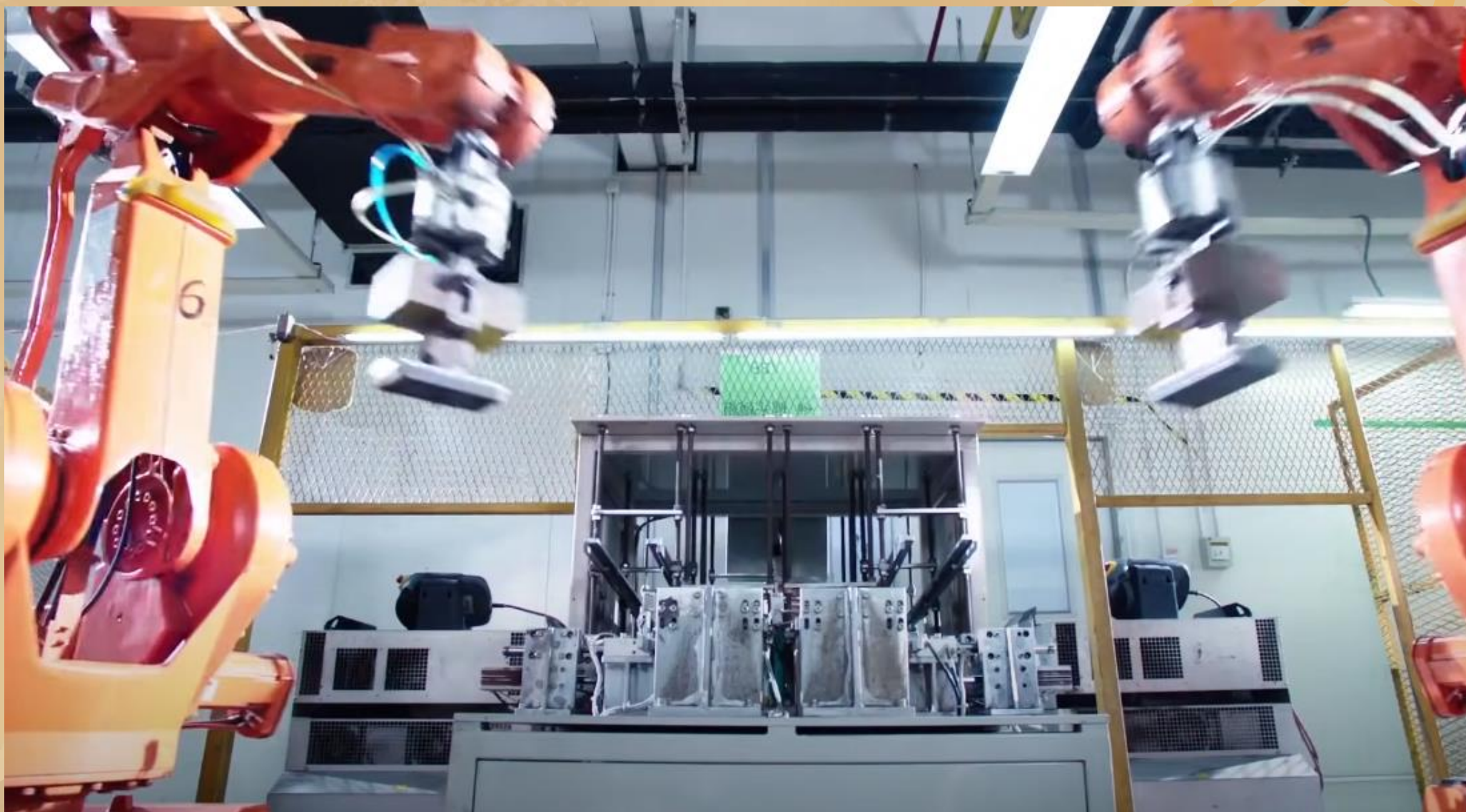



For Finished Products, rollers are used at the end



For Phones, Robotic Arms are used





The background is a textured, light brown surface. In the top left corner, there is a white pipe with a 90-degree elbow. In the top right corner, there are two interlocking gears, one light orange and one darker orange, with a dark brown pipe. In the bottom left corner, there is a large, faint gear and a white pipe with a T-junction.

Testing is finally done by
robots



Drop Testing

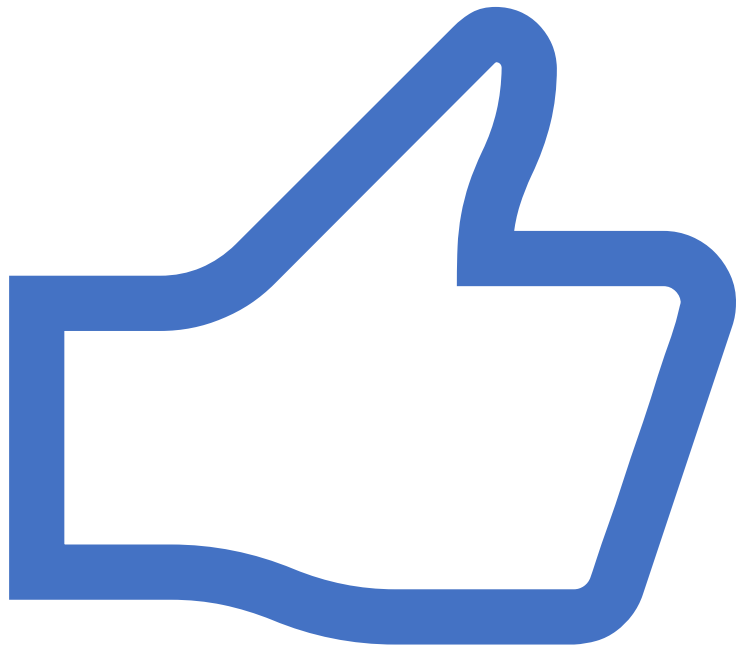
Jack Testing





Fold Testing





Thanks!