Anritsu

Capsule Checkweigher

KWS9002AP10/ KWS9002AP20/ KWS9002AP30

100% capsule weighing with the world’s highest-level precision and reliability

Anritsu first introduced the Capsule Checkweigher in 1970. Since then, Anritsu's Capsule Checkweighers have continued to evolve, incorporating new innovations such as high-precision force balance load cell and the unique capsule handling systems. While adopting to changing market demands, we have continued to tackle issues from a wide range of perspectives in order to handle capsules more reliably and inspect them with higher accuracy in various production environments. And this time, Anritsu's Capsule Checkweigher has been reborn into a new generation.

KWS9002AP30 (30 lanes)

KWS9002AP20 (20 lanes)

KWS9002AP10 (10 lanes)

Newly developed capsule handling mechanism

Reliable feeding and rejection

▸ p4

Industry-leading accuracy

Highest measurement accuracy of ±0.5 mg

▸ p5

Easy-to-handle

Improved workability and operability

▸ p6

Minimizing harm

Fail-safe mechanisms

▸ p7

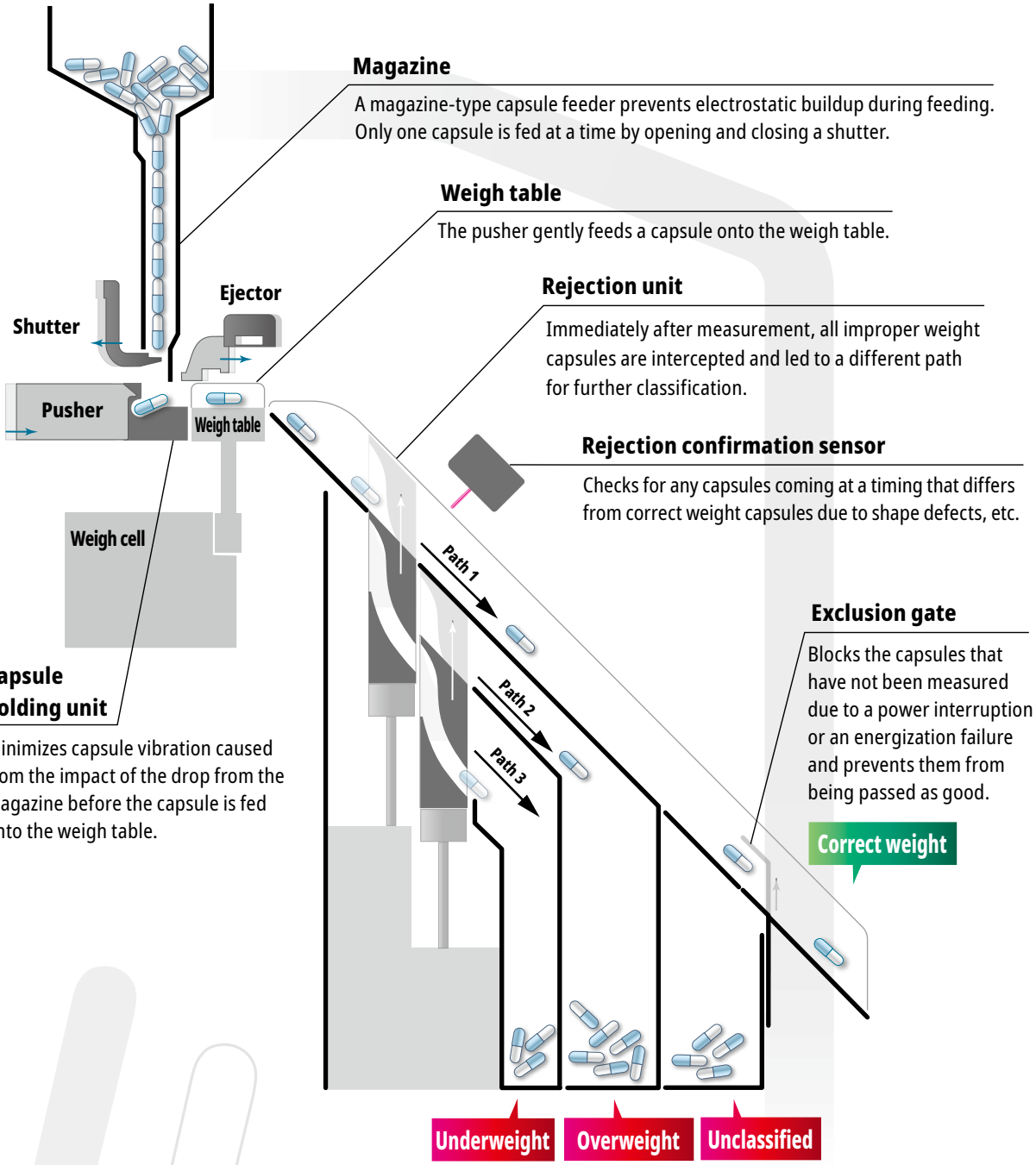
FDA 21 CFR Part 11, GDP, etc.

Conforming to international industry standards and regulations

▸ p8

Reliable feeding and rejection

A newly developed handling mechanism has significantly improved reliability and environmental flexibility in capsule handling. It can handle a variety of capsules, including filled and empty capsules. The feeding mechanism is easy on capsules as it reduces static electricity, and also ensures precise inspections and reliably rejects defective products.

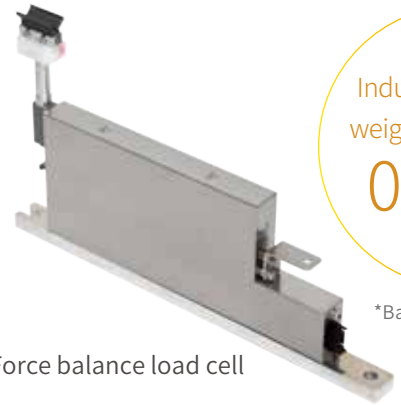


Sophisticated quality control with the world's highest-level measurement accuracy

For more than 50 years, Anritsu has been conducting in-house development of weigh cells. The new capsule checkweighers contain high-precision and compact weigh cells, which promotes sophisticated quality control. With high vibration resistance, they provide stable and precise measurements for a long time.

Suitable for 100% capsule checkweighing that require strict weight management

The high-performance force balance load cell has excellent accuracy of ±0.5 mg. It is suitable for 100% inspection of capsules requiring strict weight management such as anticancer drugs and immunosuppressive drugs, in which only small changes in quantity could affect both intended effects and side effects.



Force balance load cell

Industry's highest weighing accuracy*
0.5mg

*Based on our survey results

Yield improvement

High-precision weighing enables you to set the upper and lower limits of the checkweigher closer to the permissible weight limits for your product quality control standard.
As a result, the ratio of non-defective products will increase, contributing to improved production efficiency and reduction of raw material costs.

Protection of the weigh cell

The overload protection function prevents a shock by physical contact from being transmitted to the weigh cell. It protects the weigh cell during cleaning and exchanging parts.

Automatic sensitivity confirmation

It only takes 30 seconds for the built-in weight check to verify weigh cell sensitivity. Time, effort, and risk of making an error are greatly reduced compared to traditional verification procedures. Each weigh cell can be individually calibrated with the built-in weights.

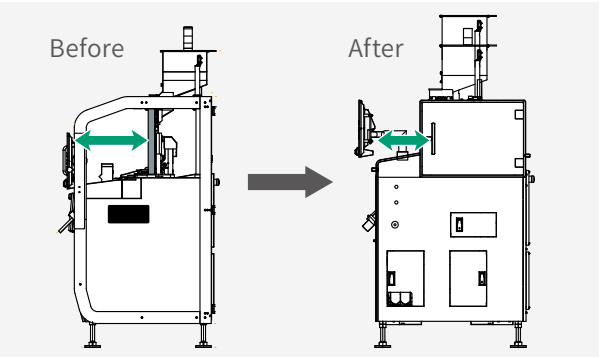
Each weigh cell has two built-in weights: 500 mg and 2,000 mg. Using two types of weights enables checking the accuracy of a weigh cell and provides high-precision measurement of capsules with different weights.

Built-in weights

Easy-to-handle
Significantly improved workability and operability

Quick, tool-free part exchange

The parts for each capsule size can be attached and detached without tools. The magazine and conveyor are easily accessible and can be held firmly with both hands. Compared to the previous model, the number of parts has been reduced, which decreases tool change time to one minute or less.



Rejection units can be removed by lane and easily cleaned.

At a glance complete line monitoring

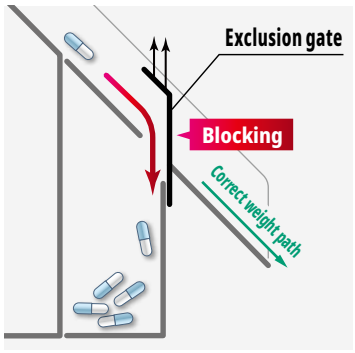
Large 15-inch touch panel with user-friendly GUI shows complete line status up to 10 lanes in a single screen, such as histograms, trending information, and underweight and overweight counts.

Enhanced fail-safe mechanisms

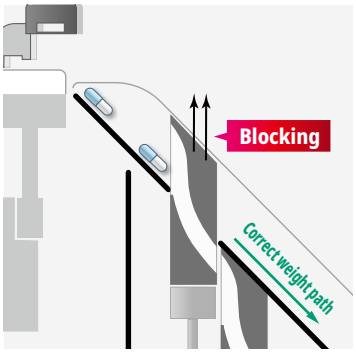
Even if a measurement failure occurs, defective or unmeasured capsules will not be leaked to the downstream process.

In case of unexpected malfunction and troubles

If the power is cut off due to a power outage or lightning strike and the measurement becomes impossible, both the rejection and the exclusion gate immediately operate to eliminate all the capsules being transported and do not transport them to the subsequent stage.



Exclusion gate



Standing by in the rejection position

Preventing incorrect part replacement

The size check function prevents operation with a part for a wrong capsule size. In such a case, the operator is warned with an alarm.

Safety interlock system

The panels covering the magazine and conveyor are fully transparent and have no blind spots. Good visibility facilitates checking for residual capsules, helping to prevent cross contamination.
The covers can be opened and closed without tools. When any cover is open, the equipment is immediately stopped with the interlock system for safe operation.

Rejection confirmation function

The rejection confirmation sensor is equipped with an automatic level adjustment function. This will increase the reliability of rejection confirmation, while saving your time and effort required for the manual adjustment work.

Conforming to international industry standards and regulations

FDA 21 CFR Part 11 complied (optional)

This system supports user authentication, audit trails, and data encryption/decryption required by FDA 21 CFR Part 11, and is suitable for pharmaceutical manufacturing.

User authentication (user management)

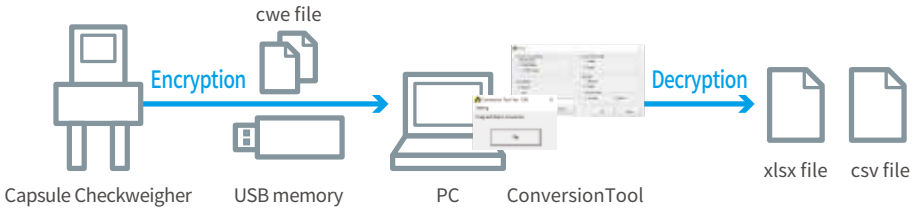
Setting access levels by user prevents unauthorized operations and allows monitoring mistaken operations.
The system supports Windows Active Directory, which allows you to centrally manage user information with your company system. Each operator can log into several devices on the production line with a single piece of user information.

Audit trail

The history of user actions and equipment responses during production, and the results of operational checks are kept inside the system, which can be used to monitor unauthorized and mistaken operations and analyze the cause.

Data encryption and decryption

The recorded audit trail data, statistical data, and equipment parameters can be stored in a USB memory in an encrypted form and decrypted on a PC.



SOP implementation assistance

Standard Operating Procedure (SOP) implementation assistance function: The standard work flow to be checked before, during, and after operation is organized as SOP wizards, and the operator, time and result of operation are recorded.

Use of FDA compliant materials

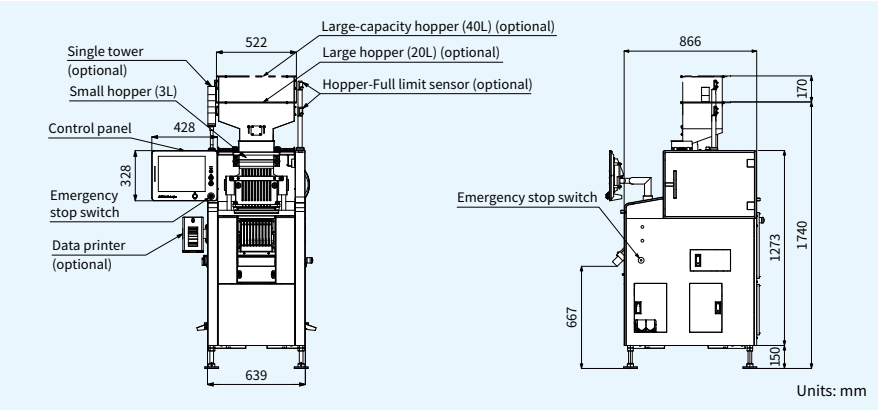
The parts in contact with capsules are made of materials compliant with FDA 21 CFR Part 177.
(The material certificate and the processing certificate are available.)

Connection with a production management system

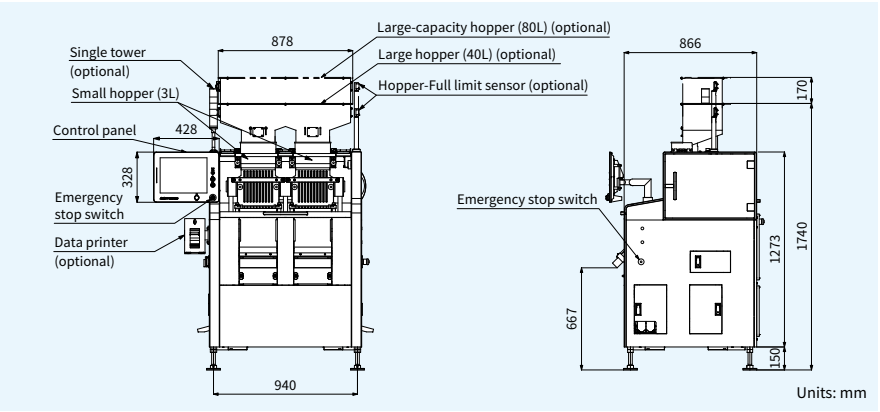
An Ethernet port is equipped as standard. It enables easy connection with upper systems such as MES and SCADA, and our quality management software QUICCA, supporting the implementation of Pharma 4.0.
QUICCA collects all capsule measurements and stores them in a database. It facilitates generating production records, which can be used to improve operation efficiency and for various analyses.

External view

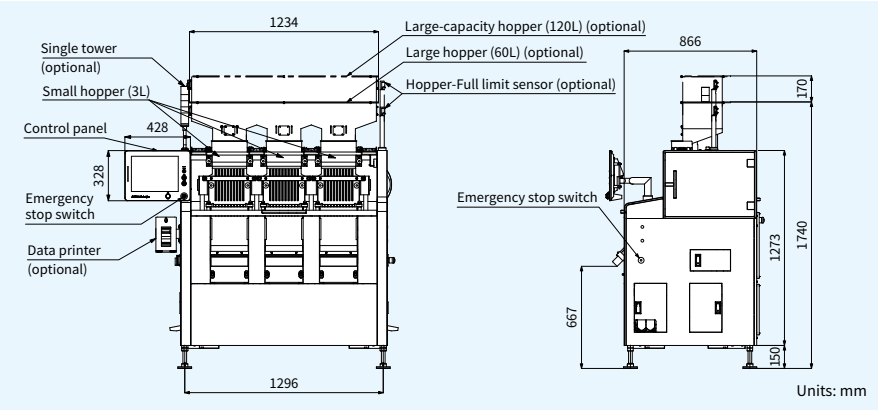
KWS9002AP10 (10 lanes)
Maximum throughput:
75,000 capsules/h



KWS9002AP20 (20 lanes)
Maximum throughput:
150,000 capsules/h



KWS9002AP30 (30 lanes)
Maximum throughput:
230,000 capsules/h



Specifications

Type	KWS9002AP10	KWS9002AP20	KWS9002AP30
Weighing range	2 to 2000 mg		
Scale interval	0.1 mg		
Maximum throughput [1]	75,000 capsules/h	150,000 capsules/h	230,000 capsules/h
Lane	10 lanes	20 lanes	30 lanes
Maximum accuracy (3σ) [1]	±0.5 mg		
Display	15-inch color TFT LCD		
Operation method	Touch panel + Key (Start, Stop, and Home are direct push buttons)		
Indication range	2045.0 mg		
Preset memory	Maximum 50		
Classification [2]	4 ways (overweight/correct weight/underweight/unclassified)		
Product size	Capsule No. 000 to 5		
Power requirements [3]	100 Vac to 115 Vac +10% -15%, single phase, 50/60 Hz, rush current 74 A (typ) (90 ms or less)		
Power consumption	500 VA	700 VA	1000 VA
Air requirements	0.5 MPa to 0.9 MPa, 200ℓ/min [A.N.R.], Air supply port: nylon tube of 8 mm dia.		
Mass	350 kg	500 kg	700 kg
Environmental conditions	15°C to 30°C (variation not to exceed 1°C/h to maintain accuracy), relative humidity: 30% to 70% (no-condensing)		
Protection class	IP30 (IP50 for weighcell)		
Exterior	Stainless steel (SUS304)		
Data output	USB port (USB2.0), Ethernet interface (10BASE-T, 100BASE-TX)		

1: Maximum throughput and maximum accuracy may vary depending on capsule size, filling content and quantity.
2: A rejection gate is installed per 10 lanes.
3: 120 Vac, 200 Vac to 240 Vac are available as an option.
Note: The noise level of the checkweigher is 79 dB(A) or less.

Pharmaceutical Quality Assurance based on GMP

We offer a wide range of inspection solutions including dynamic weighing, contaminant and shape detection for the pharmaceutical manufacturing and packaging process.

Filling control/Weight check

Seal check/Missing tablet check

Tablets

Capsules

Sachets / Sticks

Tubes

Bottles / Cans

Pharmaceutical Metal Detector

Capsule Checkweigher

Pharmaceutical X-ray Inspection System

Built-In Multi-Lane Weighing System

Multi-Lane Checkweigher

Aerosol Inhaler Checkweigher

*Non-conforming to CE marking

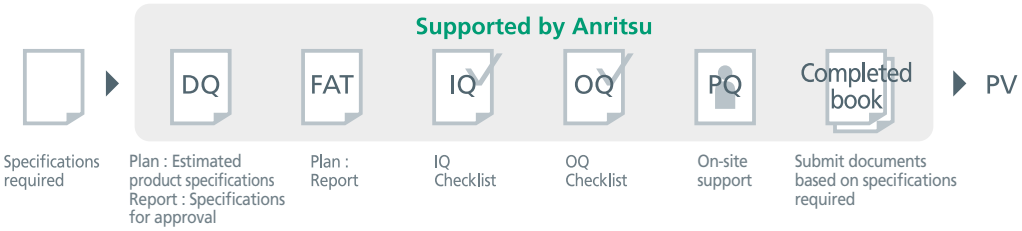
Small Bottle Checkweigher

*Non-conforming to CE marking

Supporting CSV guidelines :

Validation support

Anritsu also provides IQ/OQ checklists and on-site support during PQ process.



Missing blister pack check

Missing insert check (magnetic ink)

Missing pack check

Missing carton check

SSV-h Series Checkweigher conforming to CFR 21 Part 11

*MID approval

M Series Metal Detector

*Non-conforming to CE marking

SSV-h Series Checkweigher

*MID approval

Case Checkweigher

*Non-conforming to CE marking

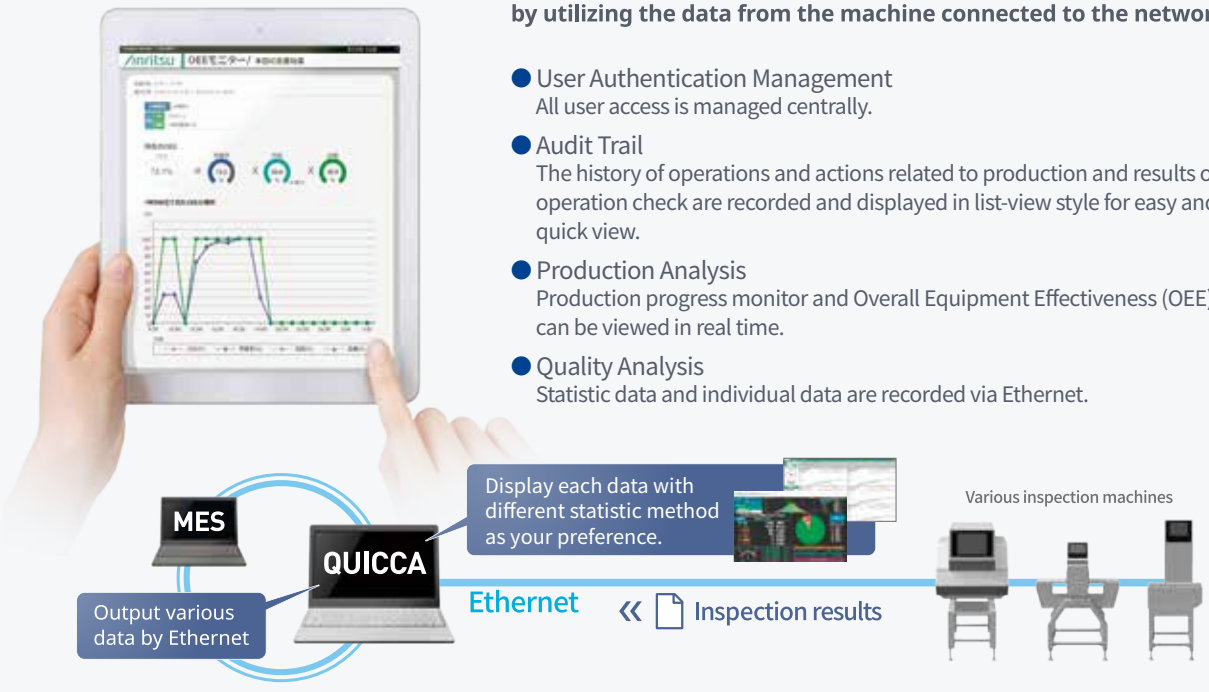
Quicca Pharma

Overall Quality Management and Control System for Pharmaceutical

Support making good use of data by various CFR 21 Part 11 complied functions.

Delivering Data Integrity as specified by CFR 21 Part 11 by utilizing the data from the machine connected to the network.

- User Authentication Management
  All user access is managed centrally.
- Audit Trail
  The history of operations and actions related to production and results of operation check are recorded and displayed in list-view style for easy and quick view.
- Production Analysis
  Production progress monitor and Overall Equipment Effectiveness (OEE) can be viewed in real time.
- Quality Analysis
  Statistic data and individual data are recorded via Ethernet.



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- Some products shown in this catalog may not be available in your country or region. Contact our sales representatives for details.
- To ensure proper operation, read the Operation Manual before using the machine.
- In addition to daily inspection, a full maintenance inspection should be completed annually.

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