

# KW9001AP/KW9002AP CAPSULE CHECKWEIGHERS

- High Accuracy  $\pm 2$  mg
- Capacity of 120,000 capsules/h (KW9001AP)

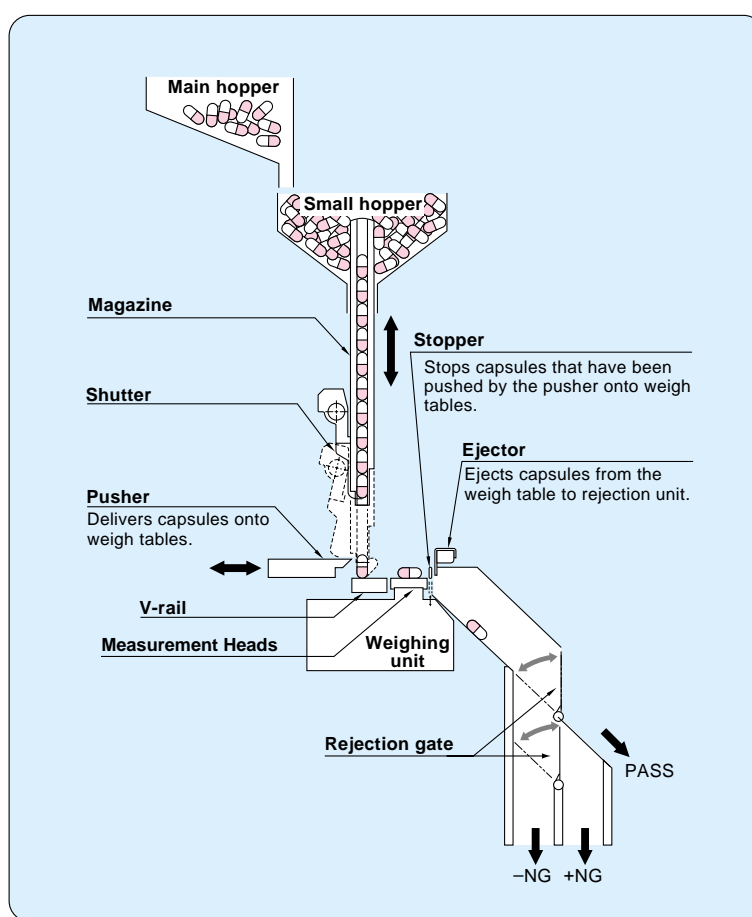


# Increased speeds, higher degree of measurement accuracy . . . Capsule checkweighers with enhanced measuring capabilities now available.

Anritsu KW9001AP and KW9002AP capsule checkweighers feature unprecedented operational speeds and accuracy.

The new interactive indicator unit allows for even easier use.

Advanced rejecting confirmation, total screening data storage and easy cleaning are also featured and meet GMP standards and validation requirements.

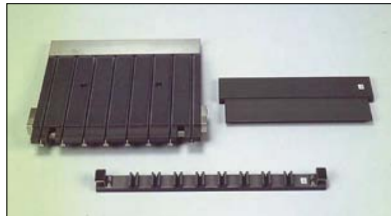


## High-speed Operation and Increased Accuracy

- High-speed, extremely accurate measurement performance at 120,000 capsules per hour (KW9001AP model) with an accuracy of plus or minus 2 mg is achieved.
- Weighs capsules from 20 mg to 1,000 mg.
- Maintains high precision with automatic weigh table cleaning and zero setting performed at regular intervals.
- A vibration-proof weighcell and variable cut-off digital filter (VCF) prevent floor vibrations. Dummy cell to eliminate vibrations are not used, allowing for easy maintenance.

## Reliable and Safety-Assured

- The fail-safe rejection gate has been specially designed to maintain the NG direction and operate only when OK capsules pass.
- Capsule feeding is controlled by a single drive mechanism, allowing for increased reliability and power saving.
- Self-diagnosis feature performs ROM/RAM check automatically when power is on.
- Changing capsule sizes is easy using a single tool to change the magazine, V-rail and pusher units. Each unit is also designed for easy cleaning and maintenance.



## Automated Operation

- The RS232C interface and control input/output terminals are provided as standard.
- Data management is easy. Stored data, general and alarms, can be processed.
- A lower-level sensor alerts the operator when residual capsule volume in the main hopper falls to its prescribed level. Installation of an up-per-level sensor allows capsule feeding to be controlled for maximum efficiency.



Main hopper

## Advanced State-of-the-art Monitor Functions

Rejection  
gate  
monitor

Monitors rejection gate for proper operation.

Weigh-  
cell

Monitors the weigh-cell to insure zero position.

Defective  
%  
monitor

Monitors defective rate percentages for each feed line.

Capsule  
flow

Monitors capsule feeding on all lines and alerts to jams.

Printer

Monitors printer and sends an alert when printer is out of paper or jams occur.

Battery  
voltage

Monitors battery voltage, to insure uninterrupted storage of reference values and other parameters. Sends alert when time for batter replacement.

Motor

Monitors motor to insure smooth operation. Alerts sent for any motor-related abnormality.

Air

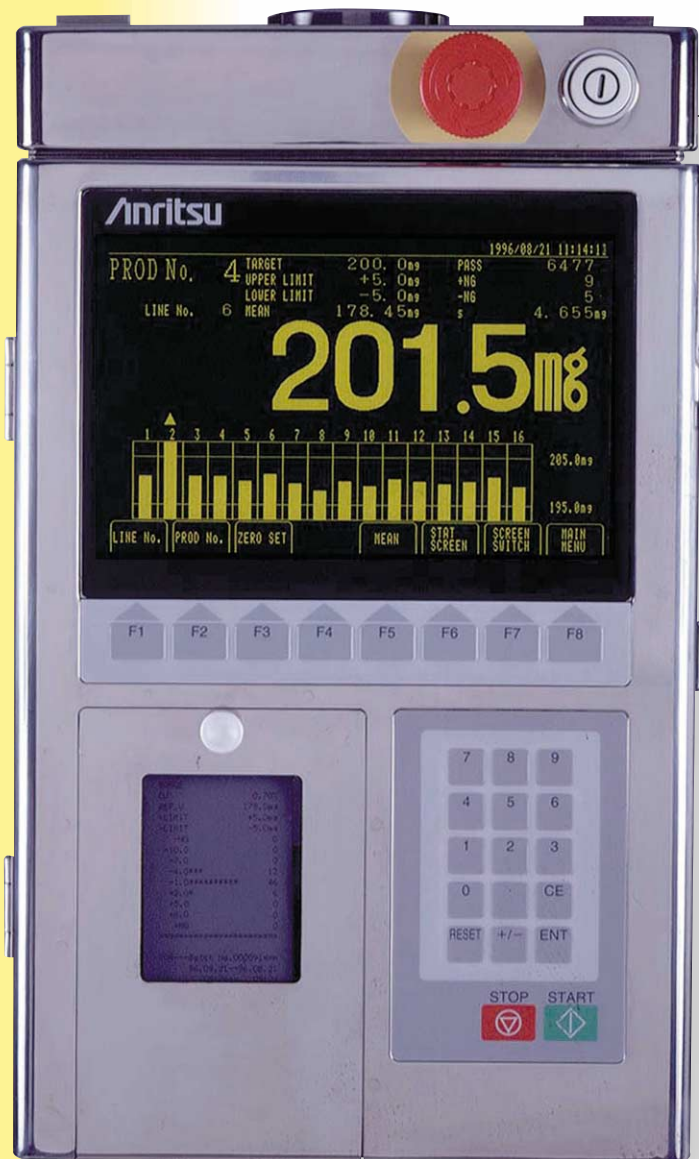
Monitors air pressure used for weigh table cleaning. Alert sent if pressure falls below specified pressure.

## Validation

- Measurement accuracy can be confirmed and data stored as statistical data for each batch of 60 capsules.
- The reject gate motion is checked and auto-zero setting is performed prior to the start of operation.
- An interactive system allows for error less sensitivity calibration.
- Test validation and results available.

# Easy operation.

## The display panel is user-friendly and easy to operate.



### Enlarged image for each line

Data for each line is displayed in bar graphs.

### Control Panel/Display Unit

- Large, easy-to-read electro luminescence (EL) display screen.
- A printer is provided as a standard.
- All operations and displays can be performed interactively.
- Reference, upper- and lower-level values, item name and lot numbers for up to 20 different capsule types can be set. Product item changeover can be done by the touch of a key.
- Capsule damping waveforms can be monitored on the display, enabling measurement timing confirmation on a real-time basis.
- Password function is provided for secure production.
- Console position can be flexible according to installation requirements.

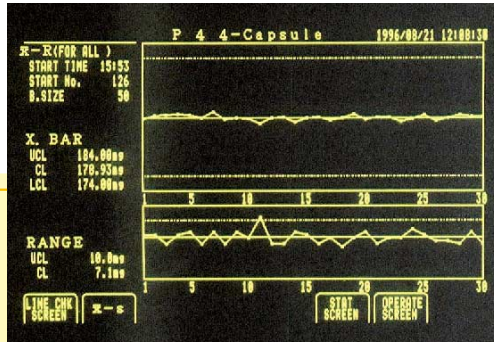
### Total Printing

P01	===	TOTAL	=====
			99.02.12--99.02.12
			17:15-- 17:16
BATCH			3
P.NAME			K-ZE 00
LOT No			01213456789
TOTAL			3905
-NG	1.2%		46
PASS	98.8%		3859
+NG	0.0%		0
TOTAL W.			3190.6515g
MEAN	(X)		817.07mg
STAND D.	(S)		5.986mg
MAX			835.0mg
MIN			802.5mg
RANGE	(R)		32.5mg
CV			0.73%
REF.V			820.0mg
+LIMIT			+15.0mg
-LIMIT			-15.0mg
-NG			46
-15.0***			304
-11.0*****			589
-7.0*****			967
-3.0*****			920
+1.0*****			659
+5.0***			307
+13.0			9
+NG			0
			=====

< Histogram >



# Operation monitoring and data management the Anritsu way.



## X-R/s display

Screening data along with average value, scatter and standard deviation for each line, can be monitored.

The error alarm message screen displays 'A104 Front cover open' with the instruction 'Close front cover before operating.' Below is a data table for 16 lines:

LINE	1	2	3	4	5	6	7	8
ERRR mg	0.5	0.5	0.0	0.5	0.0	0.5	0.0	0.5
PRSS pcc	647	644	641	646	641	639	641	642
MNR pcc	1	2	1	0	0	0	0	0
MNR pcc	10	10	11	10	10	10	10	10

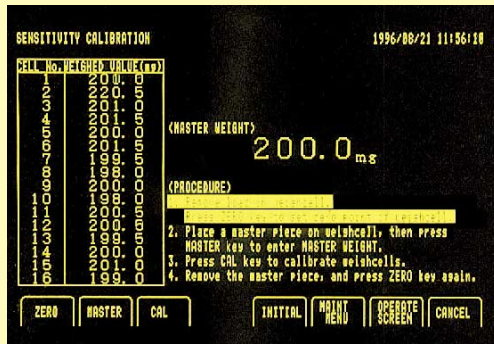
  

LINE No.	9	10	11	12	13	14	15	16
ERRR mg	0.0	0.5	0.0	0.0	0.0	0.0	-0.5	-0.5
PRSS pcc	654	643	654	652	650	648	649	651
MNR pcc	1	2	0	1	0	2	1	0
MNR pcc	10	10	10	10	11	11	10	10

Navigation buttons: PROD No., ZERO SET, NEAR, STAT SCREEN, SCREEN SWITCH, MAIN MENU.

## Error alarm message screen

An error alarm message and action required.



## Sensitivity calibration screen

Calibration is simple after placing a reference weight on the balance.

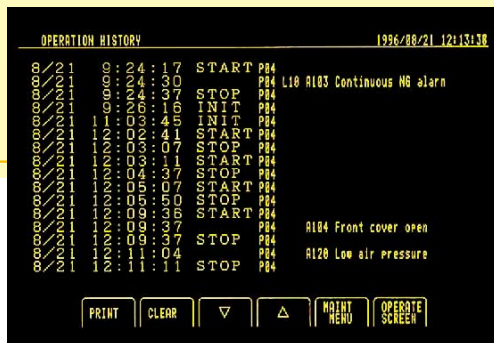
The pre-setting screen is titled 'SETUP' on 1996/08/21 11:52:48. It shows 'PRODUCT No. 4' and a table of items with set values and remarks:

ITEMS	SET VALUE	REMARKS
1. NAME	2-Capsule	10 characters
2. TARGET	200.0mg	Target Weighing range
3. UPPER LIMIT	5.0mg	Deviation value from target
4. LOWER LIMIT	-5.0mg	Lower limit-Upper limit Weighing range
5. LOW UNDER	10.0mg	Absolute value
6. COUNTER	0 to 99999	0=Invalid

Navigation buttons: PROD No., PRINT, FEED, DOWN, UP, SETUP MENU, OPERATE SCREEN, PROD. NAME.

## Pre-setting screen

The reference, upper-limit and lower-limit values, item name and lot numbers for up to 20 different capsule types can be set.



## Operational record screen

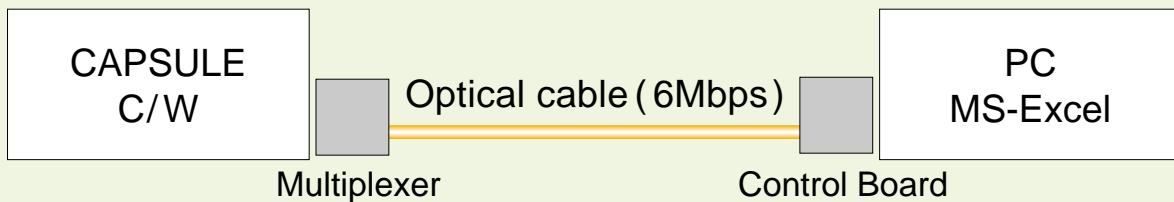
Information regarding operational management can be monitored easily.

# Data Recording System(Software)KW2051A

**Capsule checkweigher measurement data can be displayed in MS-Excel 95/97.**

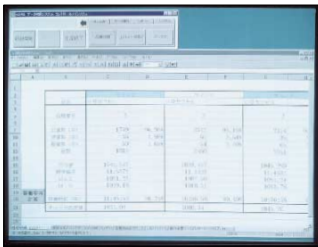
KW2051A allows capsule checkweigher measurement data to be displayed in MS Excel. Data transferred into Excel can be used to create graphs, charts, and daily and monthly reports.

Screening data can also be stored, useful for GMP, validation and other data management purposes.

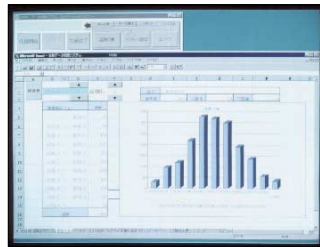


\*System configuration does not include a personal computer.

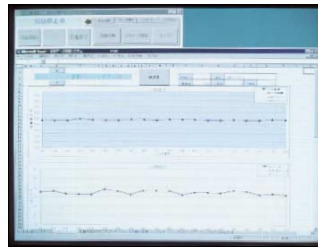
## Statistical Analyses



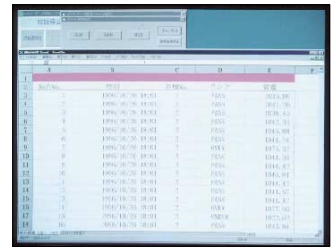
Pass/Fail data



Pass data



$\bar{X}$ -R/s data



Weight/Retrievable data

## SPECIFICATIONS

Maximum storage capacity	2,500 pieces/min. All lines
Maximum number of storable pieces	According to PC disk space, 30,000 data/1Mbite
Controls	Start/stop, item changeover, limit value setting
System environments	PC98, IBM compatible (Pentium 133MHz or faster), Windows® 95/98, Microsoft MS-Excel 95/97
Connection distance	Maximum 1km

## OTHER OPTIONS

Hopper-Full Limit Sensor	This outputs the Hopper Full signal from the control signal terminal when the hopper is full.
NG BOX	This NG BOX replaces the standard NG Chute.
NG BOX Full Limit Sensor	This sensor is attached to the NG BOX and outputs the NG BOX Full signal when the NG BOX becomes full. The operation of the main unit can be stopped when a predetermined number of capsules is reached after outputting NG BOX Full signal.
Warning Light	This Warning Light is used for remote monitoring of the equipment status.
Internal Hopper Check Mirror	This stainless-steel mirror is mounted the top of the hopper and is used to visually check the remaining capsules in the hopper.
NG Chute Outlet Direction Change	The standard NG Chute feeds both +NG and -NG capsules to the left side. This option feeds either both +NG and -NG capsules, or only +NG or -NG capsules to the right side.

\*Microsoft Excel and Windows® 95/98 are registered trademarks of Microsoft Corporation.

# KW9001AP

# KW9002AP



(Warning Light optional.)



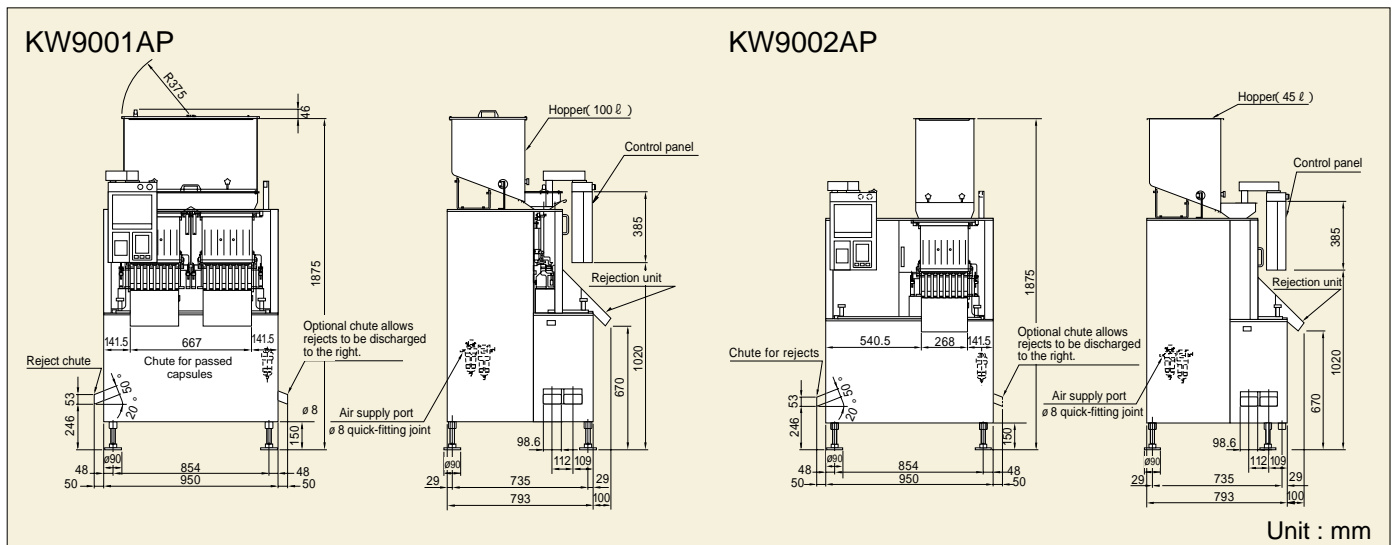
(Warning Light optional.)

## SPECIFICATIONS

Item	Model	KW9001AP	KW9002AP
Measurement range		20 to 1,000 mg	
Applicable capsule types		00, 0, 1, 2, 3, 4, 5	
Measurement accuracy(3 $\sigma$ ) *		$\pm 2$ mg	
Sorting capacity *		120,000 pieces/hour under normal conditions	60,000 pieces/hour under normal conditions
Auto-zero setting		Zero correction is performed automatically at selectable intervals of 1 to 60 min.	
Indication range		0 to 1,100 mg	
Scale interval (minimum scale)		0.5 mg	
Limit setting range		Within indicated range	
Steps of sorting		3 steps	
Monitor functions		Rejection gate monitor, weighcell monitor, defective % monitor, capsule flow, printer errors, battery monitor, motor monitor, air pressure monitor.	
Operating temperature range		15 to 25°C (change in temperatures being 1°C/h or less)	
Counter		8 digits each on UNDER, PASS, and OVER	
Hopper capacity		100 $\ell$ (120,000 pieces [#3 capsules])	45 $\ell$ (50,000 pieces [#3 capsules])
Air source		0.3 to 0.9 Mpa, 30 $\ell$ min[ A.N.R ]	
Power source		100, 115, 120, 200, 220, 230 or 240 Vac $\pm 10$ % single phase, 50 / 60 Hz (KW9001AP: 600 VA max) (KW9002AP: 550 VA max)	
Weight		Approx. 600 kg	Approx. 500 kg

\*The above accuracy and sorting capacity may change depending on the capsules measured.

## EXTERNAL DIMENSIONS

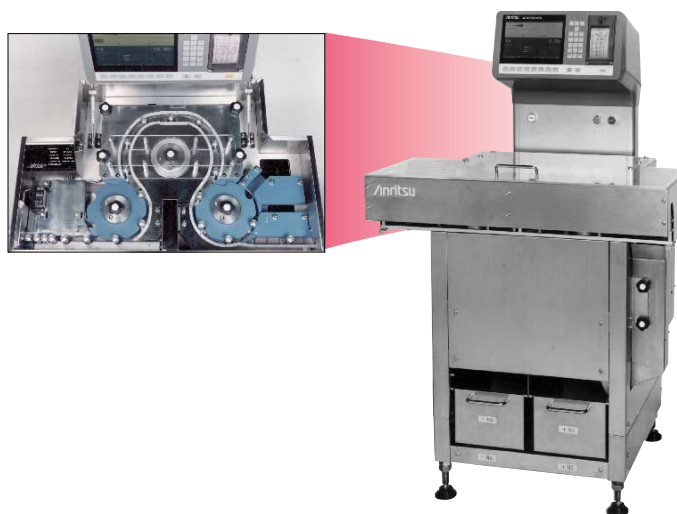


To check tiny cylinder shape product such as aerosol can with high speed and accuracy . .

## CHECKWEIGHER KW627A

### SPECIFICATIONS

Item	Model	KW627A
Measurement range		0.5 to 60 g
Maximum measurement accuracy(3σ)		±0.05 g
Maximum sorting capacity		150 pieces/min
Measurements	Items to be measured	aerosol spray containers
	Can diameter	φ15 to 30 mm
	Height	40 to 90 mm
Power source		100 Vac ± 10%, 1.2 kVA
Dimensions		900(W) x Pass line + 600(H) x 710(D) mm
Weight		120 kg
Trim		SUS specifications (applies to certain trim items)



To check missing items such as tablet, capsule, or leaflet.

## CHECKWEIGHERS KW621A/KW632A



### SPECIFICATIONS

Item	Model	KW621A	KW632A
Measurement range		0.5 to 60 g	5 to 600 g
Maximum measurement accuracy(3σ)		±0.02 g	±0.05 g
Maximum sorting capacity		150 pieces/min	250 pieces/min
Measurements	Width	20 to 120 mm	20 to 120 mm
	Length	30 to 200 mm	30 to 205 mm
	Height	0.5 to 90 mm	0.5 to 90 mm
Power source		100 Vac ± 10%, 150 VA	100 Vac ± 10%, 200 VA
Dimensions		550(W) x Pass line + 600(H) x 580(D) mm	
Weight		70 kg	
Trim		SUS specifications (applies to certain trim items)	Coating

To check missing items such as sachets, strips.

## FC-SERIES CHECKWEIGHER KW5341AP



### SPECIFICATIONS

Item	Model	KW5341AP
Measurement range		10 to 1200 g
Maximum measurement accuracy(3σ)		±0.3 g
Maximum sorting capacity		120 pieces/min
Measurements	Width	20 to 220 mm
	Length	35 to 300 mm
	Height	5 to 160 mm
Power source		100 Vac ± 10%, 250 VA
Outer dimensions		1405(W) x Pass line + 500(H) x 677(D) mm
Weight		130 kg
Trim		SUS specifications (applies to certain trim items)

# Anritsu

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