AD-4961
Checkweigher

Inspection Simplified

A&D Inspection

AD-4961 SERIES

A&D has redefined checkweighing with unparalleled simplicity and best-in-class precision.

Best-In-Class Precision

With a newly developed digital load cell and an ultra-high speed processing module, high level precision of 0.08g (3σ)* has been realized. With this high accuracy checkweigher, you can minimize the giveaway of materials above the specified weight and contribute to reductions in production costs.

7" Colortouch Panel

The display utilizes a high visibility touch panel color LCD with friendly Graphic User Interface (audio guidance support function included).

Image Import from USB

Product images can be quickly uploaded to the checkweigher from a USB flash drive, making product identification and upload fast and simple.

IP65

Protected from dust and water to IP65 standards. Hygienic design with the entire system washable.

Lightweight and Compact Design

With it's modular structure, the AD-4961 allows for rapid and simple installation or relocation.

Stores Up to 1000 Products

Products can be divided into 10 different groups with up to 100 products able to be recorded within each group.

USB flash drive

Unique Modular Design

AD-4961 consists of four units: an infeed conveyor unit, a weighing conveyor unit, a control unit and a base unit, allowing fast and simple assembly. In the case of system shutdown, you do not need to wait for a service engineer to respond to the issue. Just simply replace the unresponsive module by yourself, so that you can shorten system downtime and maximize production efficiency.
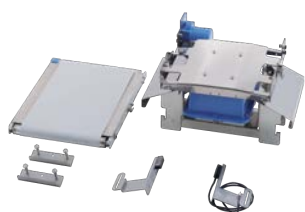
Infeed Conveyor Unit
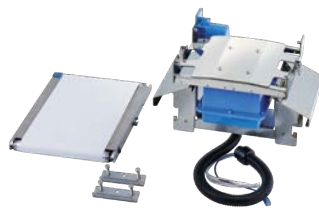
Weighing Conveyor Unit

Control Unit

Base Unit

*1 For AD-4961-2KD-2035. Depends on the shape and the condition of the product and installation environment.

CHECKWEIGHER

A&D's checkweigher can be used for connection and communication with external devices.

Modbus® Communication

Equipped with Modbus RTU/Modbus TCP as standard. With Modbus communication, seamless connection can be easily achieved. Operations such as stopping and starting weighing, collecting data and changing product can all be set from an external device.

Ethernet

LCD Screen   Touch Panel PC   AD-4971 Metal Detector   AD-4961 Checkweigher
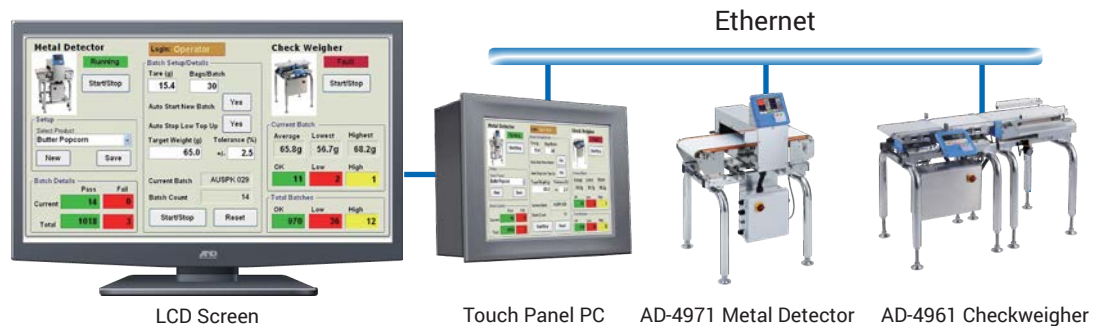
Data Summary

Various summary data such as histograms (frequency including defects), X charts, R charts, total summaries, etc., are available. You can visually confirm fluctuation of weighing results and adjust your manufacturing machine accordingly.

Various Inputs/Outputs

Rejector output, alarm output, metal detector input, RS-232C, TCP/IP and USB interface are equipped as standards. Storing data in a USB flash drive or outputting data to a printer is also possible.

Graph Printing to a Printer

Histogram, X/R control charts and summary reports can be outputted to a PostScript printer via Ethernet.
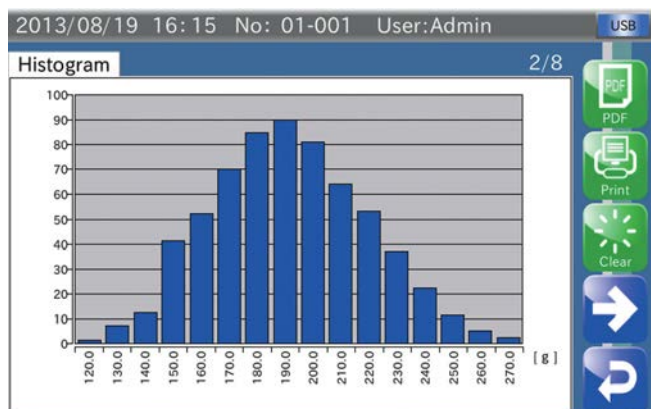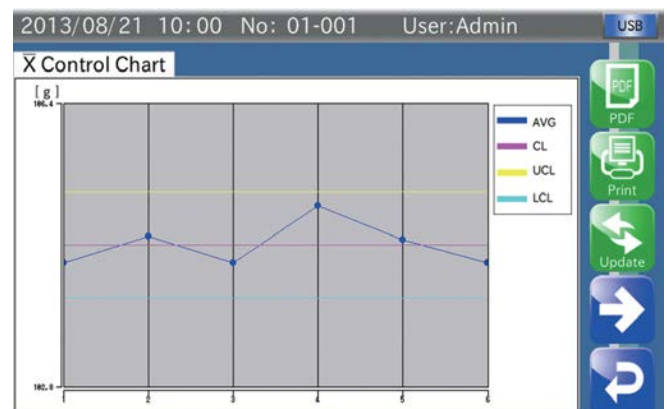
Histogram Display Screen

Chart Screen

AD-4961-600-1224

Specifications	AD-4961-600-1224
Capacity	600 g | 1.3 lbs
Resolution	0.01 g
Accuracy (3σ)*[1]	0.08 g
Max. throughput	400 pcs/min
Conveyor belt width	120 mm | 4.7 in
Conveyor length	360 mm | 14.2 in
Transport medium	Urethane belt
Conveyor belt speed	15 ~ 120 m/min | 49.2 ~ 393.7 ft/min
Max. product dimensions	Length: 22 ~ 200 mm Width: 120 mm
	Length: 0.9 ~ 7.9 in Width: 4.7 in
Weighing sensor	Strain gauge load cell
Display	7 inch touch panel color display (WVGA)
Operation method	Touch panel (resistive film type), operation buttons
Number of recorded items	1,000 items (10 groups x 100 items)
Communication functions	Modbus TCP / Modbus RTU / RS-232C / 485 (selectable) / TCP/IP (PostScript Printer)
	USB (for PostScript printer, USB memory, data storage, image import use)*[3]
External input	Non-voltage contact input 4 points
External output	Relay output 8 points
Dust/water resistance specifications	IP65
Operation temperature / humidity range	-5 ~ 40°C / 23 ~ 104°F humidity below 85% (with no condensation)
Power supply*[4]	Single phase AC100V-240V (+10% / -15%), 50/60Hz 180 VA
External dimensions	Length: 660 mm / Width: 602 mm / Height: 713-860mm
	Length: 26 in / Width: 23.7 in / Height: 28.1 - 33.9 in
Weight*[2]	Approx. 35 kg / 77.2 lbs
Material	Display: ABS resin
	Conveyor unit: Aluminum (alumite coating) and PP resin
	Control box: Stainless steel
	Base unit: Stainless steel

*1 Depends on the shape and the condition of the product and installation environment
*2 Values for external dimensions and weight are for the standard condition without rejector
*3 USB memory must be formatted to FAT32
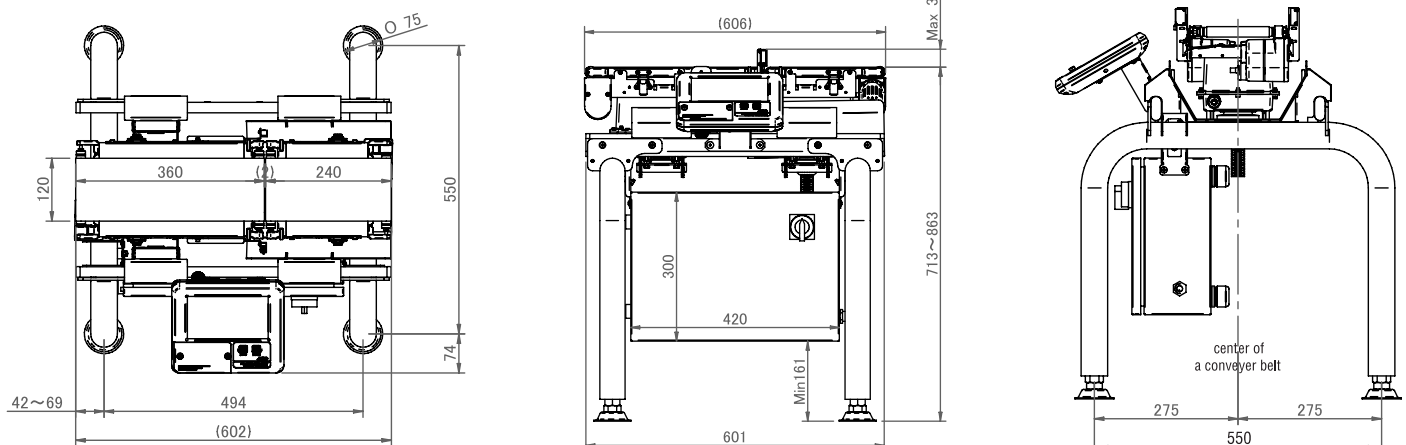*4 Please prepare a Φ 4-7 mm power cable

If you are looking for a mighty machine with a small form factor our 600g checkweigher is the right choice. This system can achieve speeds up to 400 pieces per minute and has an overall system length under 3 ft.

AD-4961-600-1224

Dimensions (mm)

Conveyor Belt Width 120mm
Capacity 600g

Rejector for AD-4961-600-1224

*Please supply an air compressor with Φ 10 mm air tube or 1/4" quick connect to be connected to the filter regulator of the rejector. Air supply: 72.5 psi, 2.6 NL/time

Air Jet Rejector AD-4984-1246

Screening capability 400 pcs/min.

Dimensions (mm)

Options for all AD-4961 models

Optional tower light and display stand installed

Leg Kit Extension
AD-4961-LEG
Leg kit extension up to 40".

Display Stand
AD-4961-01
The display is attached on the opposite side from the standard display position, across from the user. The display is located approx. 310 mm (12 in.) above the conveyor belt
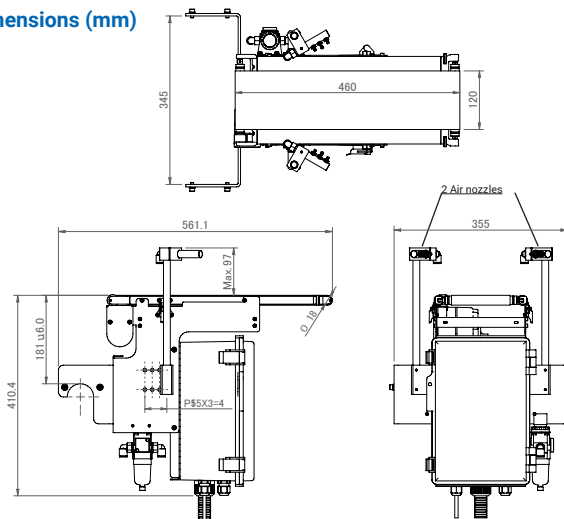
Tower Light
AD-4961-02
Highly visible three color LED tower. Easy configuration with the AD-4961 checkweigher using DO (Digital Output) map setting.
* AD-4961-01 display stand is required to install this option
* Dust and water resistance level is IP53

Options for AD-4961-600-1224

Optional anti-static breeze break installed

Anti-Static Breeze Break
AD-4961-11-1224
Anti-static breeze break prevents air currents to the weighing conveyor and static electricity to achieve accurate weighing.
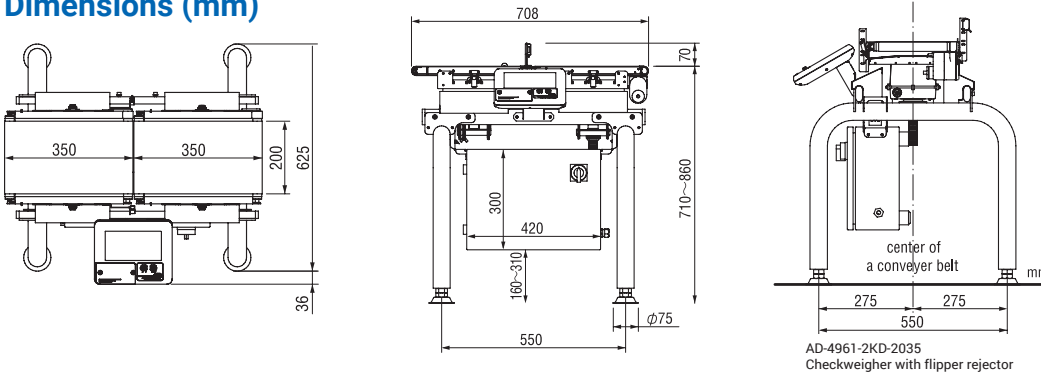
AD-4961-2KD-2035

Specifications	AD-4961-2KD-2035
Capacity	500 g / 2,000 g | 1.1 lbs / 4.4 lbs
Resolution	0.01 g / 0.1 g
Accuracy (3σ)[*1]	0.08 g / 0.18 g
Max. throughput	320 pcs/min
Conveyor belt width	200 mm | 7.8 in
Conveyor length	350 mm | 13.7 in
Transport medium	Urethane belt
Conveyor belt speed	15 ~ 120 m/min | 49 ~ 393 ft/min
Max. product dimensions	Length: 30 ~ 300 mm Width: 200 mm
	Length: 1 ~ 11.8 in Width: 7.8 in
Weighing sensor	Strain gauge load cell
Display	7 inch touch panel color display (WVGA)
Operation method	Touch panel (resistive film type), operation buttons
Number of recorded items	1,000 items (10 groups x 100 items)
Communication functions	Modbus TCP / Modbus RTU / RS-232C / 485 (seletable) / TCP/IP (PostScript Printer)
	USB (for PostScript printer, USB memory, data storage, image import use)[*3]
External input	Non-voltage contact input 4 points
External output	Relay output 8 points
Dust / water resistance specifications	IP65
Operation temperature / humidity range	-5 ~ 40°C / 23 ~ 104°F humidity below 85% (with no condensation)
Power supply[*4]	Single phase AC100V-240V (+10% / -15%), 50/60Hz 180 VA
External dimensions	Length: 700 mm / Width: 660 mm / Height: 710-860 mm
	Length: 27.5 in / Width: 25.9 in / Height: 27.9 - 33.8 in
Weight[*2]	Approx. 35 kg / 86 lbs
Material	Display: ABS resin
	Conveyor unit: Aluminum (alumite coating) and PP resin
	Control box: Stainless steel
	Base unit: Stainless steel

Our 2000g checkweigher is very versatile featuring dual range capacity enabling high repeatability. This system can reach speeds of 320 pieces per minute giving our customers the throughput they need to accelerate productivity.

*1 Depends on the shape and the condition of the product and installation environment.
*2 Values for external dimensions and weight are for the standard condition without rejector.
*3 USB memory must be formatted to FAT32.
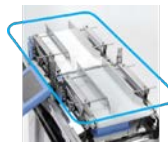*4 Please prepare a Φ 4-7 mm power cable

Dimensions (mm)

350 350 200 625 36

708 70 710~860 300 420 160~310 550 φ75

center of a conveyer belt mm
275 275
550

Conveyor Belt Width 200mm
Capacity 2,000g

AD-4961-2KD-2035
Checkweigher with flipper rejector

Options for AD-4961-2KD-2035

Optional upper and lower breeze break installed

Product guide
AD-4961-14
Installed on both infeed and weighing conveyors. Adjust products to be conveyed on the center of both conveyors. Applicable product width is from 500 mm (19 in.) to 100 mm (4 in.)
* This option is for AD-4961-2KD-2035.

Cross Plate
AD-4961-13
Eliminates gap between infeed conveyor and weighing conveyor and conveys product smoothly. Suitable for weighing small products.
* Material: Stainless steel
* This option is for AD-4961-2KD-2035.

Lower Breeze Break
AD-4961-12
Prevents air currents from underneath the system to ensure accurate weighing.
* Recommended use with the lower breeze break.
* Material: Stainless steel
* This option is for AD-4961-2KD-2035.

Upper Breeze Break
AD-4961-11
Anti-static breeze break prevents air currents to the weighing conveyor and static electricity to achieve accurate weighing. Clearance between the conveyor belt and the breeze break is 135 mm (5 in.)
* Recommended use with the lower breeze break.
* This option is for AD-4961-2KD-2035.
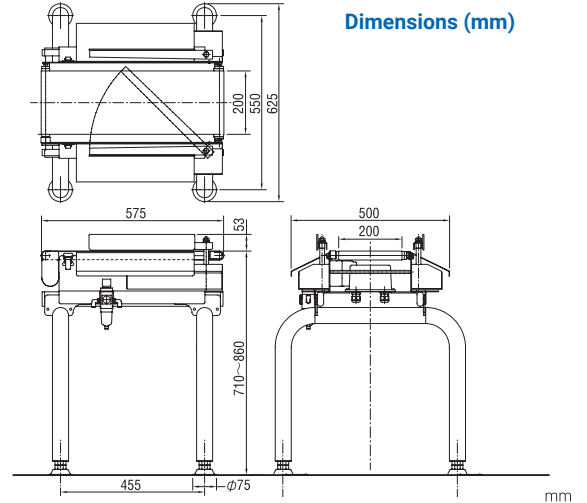
CHECKWEIGHER

Rejector for AD-4961-2KD-2035

*Please supply an air compressor with Φ 6 mm air tube or 1/4" quick connect to be connected to the filter regulator of the rejector. Air supply: 72.5 psi, 0.1 NL/time
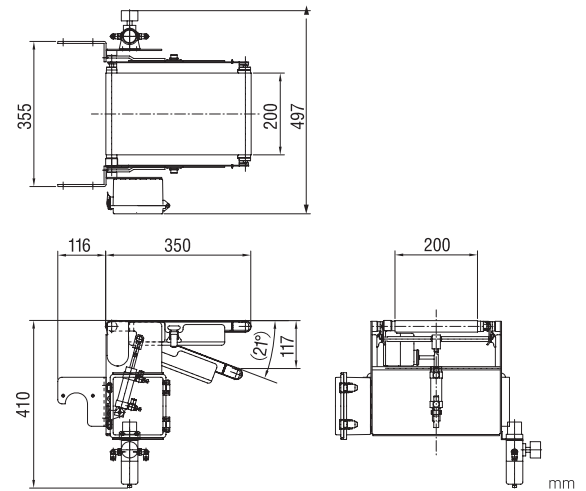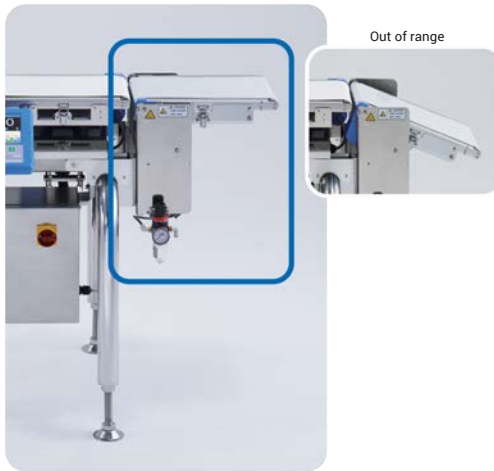
Flipper Type Rejector
AD-4981-2057

Screening capability
120 pcs/min.

Rejection

Dimensions (mm)
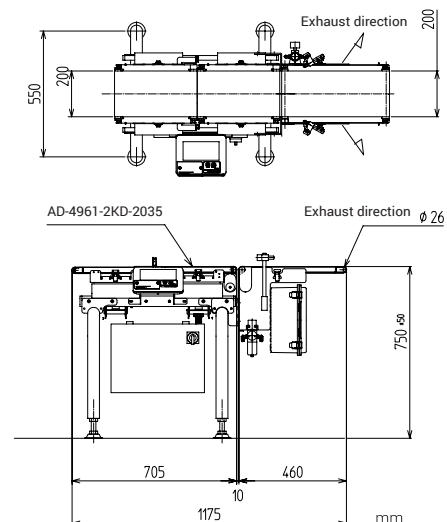
200 550 625
575 53
500 200
710~860
455 Φ75
mm

Conveyor Drop Rejector
AD-4982-2035

Screening capability
150 pcs/min.

Out of range

355 200 497
116 350 200
(21°) 117
410
mm

Air Jet Rejector
AD-4984-2046

Air supply: 72.5 psi
2.6 NL/time
Screening capability
320 pcs/min.

Exhaust direction 200
200
550

AD-4961-2KD-2035 Exhaust direction Φ 26
750 +50
705 460
10
1175
mm
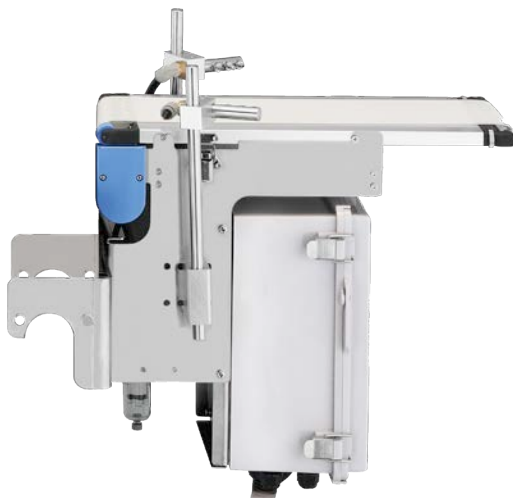
AD-4961-6K-3050

Specifications	AD-4961-6K-3050
Capacity	6,000 g | 13.2 lbs
Resolution	0.1 g
Accuracy (3σ)*[1]	1.0 g
Max. throughput	145 pcs/min
Conveyor belt width	300 mm | 11.8 in
Conveyor length	500 mm | 19.6 in
Transport medium	Urethane belt
Conveyor belt speed	10 ~ 80 m/min | 32.8 ~ 262.4 ft/min
Max. product dimensions	Length: 80 ~ 450 mm Width: 300 mm
	Length: 3.1 ~ 17.7 in Width: 13 in
Weighing sensor	Strain gauge load cell
Display	7 inch touch panel color display (WVGA)
Operation method	Touch panel (resistive film type), operation buttons
Number of recorded items	1,000 items (10 groups x 100 items)
Communication functions	Modbus TCP / Modbus RTU / RS-232C / 485 (seletable) / TCP/IP (PostScript Printer)
	USB (for PostScript printer, USB memory, data storage, image import use)*[3]
External input	Non-voltage contact input 4 points
External output	Relay outut 8 points
Dust / water resistance specifications	IP65
Operation temperature / humidity range	-5 ~ 40°C / 23 ~ 104°F humidity below 85% (with no condensation)
Power supply*[4]	Single phase AC100V -240V (+10% / -15%), 50/60Hz 180 VA
External dimensions	Length: 1005 mm / Width: 736 mm / Height: 720-870mm
	Length: 39.5 in / Width: 28.9 in / Height: 28.3 - 34.2 in
Weight*[2]	Approx. 50 kg / 110 lbs
Material	Display: ABS resin
	Conveyor unit: Aluminum (alumite coating) and PP resin
	Control box: Stainless steel
	Base unit: Stainless steel

*1 Depends on the shape and the condition of the product and installation environment
*2 Values for external dimensions and weight are for the standard condition without rejector
*3 USB memory must be formatted to FAT32
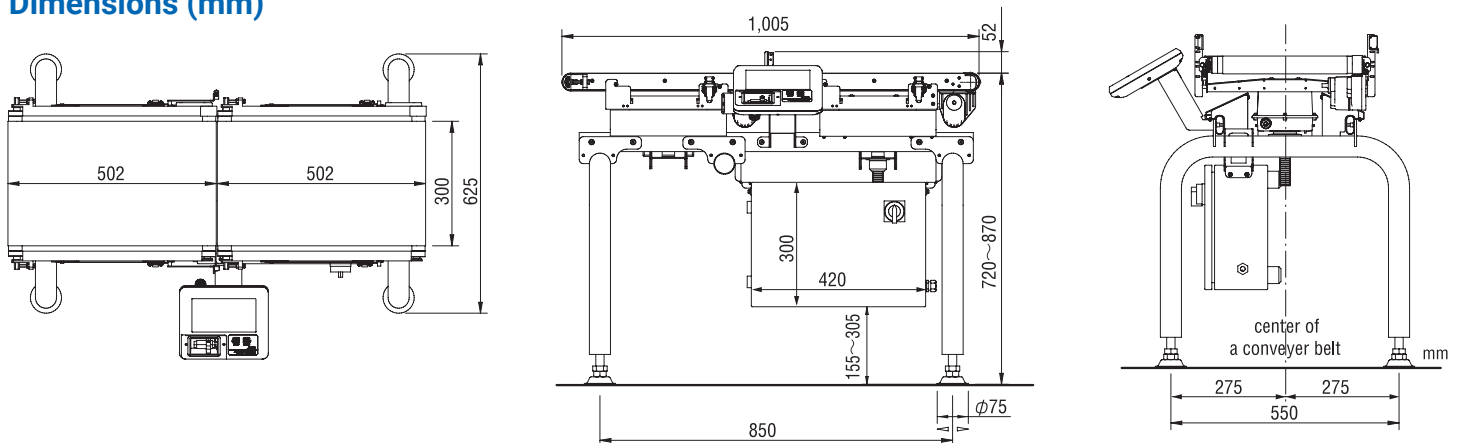*4 Please prepare a Φ 4-7 mm power cable

Our intermediate checkweigher with a capacity up to 6000g. This machine embodies the essential aspects needed in a checkweigher. The 6K offers high repeatability for bulk case weights and individual packages.

AD-4961-6K-3050 with optional display stand tower light and pusher rejector

Dimensions (mm)

Conveyor Belt Width 300mm
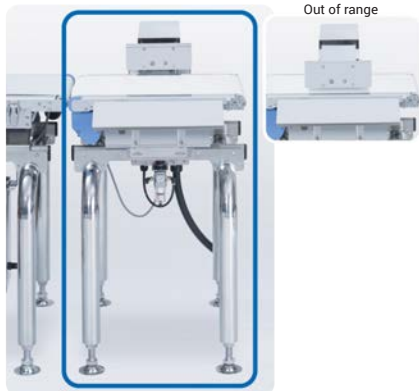**Capacity 6,000g**

CHECKWEIGHER

Rejector for AD-4961-6K-3050

*Please supply an air compressor with Φ 8 mm air tube or 1/4" quick connect to be connected to the filter regulator of the rejector. Air supply: 72.5 psi, 0.1 NL/time
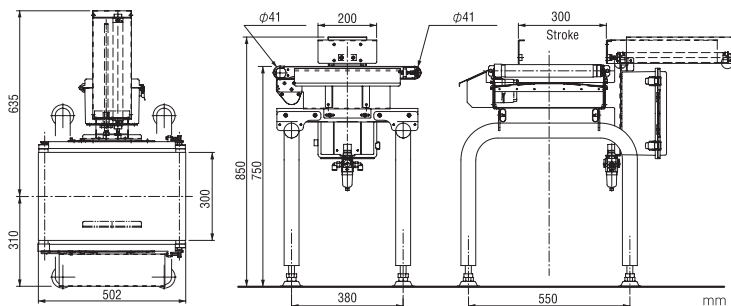
Pusher Rejector
AD-4983-3050

Screening capability 60 pcs/min.

Out of range

Dimensions (mm)

φ41 200 φ41 300 Stroke

635 850 750 310 300

502 380 550 mm

Options for all AD-4961 Models

Display Stand
AD-4961-01

The display is attached on the opposite side from the standard display position, across from the user. The display is located approx. 310 mm (12 in.) above the conveyor belt

Tower Light
AD-4961-02

Highly visible three color LED tower. Easy configuration with the AD-4961 checkweigher using DO (Digital Output) map setting.
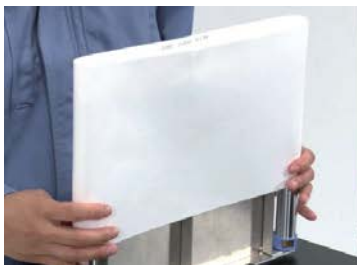
* AD-4961-01 display stand is required to install this option.
* Dust and water resistance level is IP53.

Leg Kit Extension
AD-4961-LEG

Leg kit extension up to 40".

Maintenance Kit for AD-4961 Series

The maintenance kit contains disposable parts that need to be replaced periodically. These maintenance parts are easy to replace, so system downtime can be minimized.

Replacing a belt

Replacing a gear

Replacing a conveyor

Replacing a motor

The Maintenance Kit Includes

Weighing Conveyor Unit (1)	Idle Pulley (Balance Adjusted) (1)
In-feed Conveyor Unit (1)	Motor Unit (including a Plastic Gear) (1)
Photo Sensor without Reflector (1)	Plastic Gears (5)
Drive Pulley (Balance Adjusted) (1)	

AD-4961 SERIES

Optimization of Weighing Configuration

By inputting throughput (products per minute) or belt speed (m.min), optimal weighing conditions can be automatically set. You can weigh products precisely without inputting various settings.

History Function Operational History

The history of configuration changes can be recorded and displayed. Suitable for use in HACCP programs along with the weighing history function. Users can be registered and their scope of permitted operations controlled according to 4 management levels.

[Operator]

[Supervisor]

[Quality Manager]

[Administrator]

By assigning each user to the appropriate level of access, inadvertent operations can be avoided*[2]

*2 -"Operator" is set when the power is turned on.

Weighing History

Weighing results are automatically recorded in a USB flash drive during weighing. Output data: Date, time, group, and product number, weight data and judgments.

USB Memory

Approx. 6MB memory size is required for 8 hours operation at the maximum throughput (320 pcs/min.)

Approx. 7GB memory size is required for 24 hours 365 days operation.

Weighing History Output Example

```
2014/10/3, 19:45:52, 40, 01-001, 100.05, OK
2014/10/3, 19:45:56, 54, 01-001, 150.1, Over
2014/10/3, 19:46:00, 58, 01-001, 70.5, Under
2014/10/3, 19:46:04, 52, 01-001, 0.0, Detect Two
2014/10/3, 19:46:08, 56, 01-001, 0.0, Unsplit
2014/10/3, 19:46:12, 60, 01-001, 100.5, Metal
2014/10/3, 19:46:16, 54, 01-001, 105.1, Ext 1
2014/10/3, 19:46:20, 78, 01-001, 95.5, Ext 2
```

| Date | Time | Group / Product number | Weight | Judgment |

CHECKWEIGHER
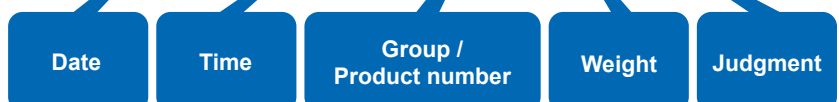
Don't Forget about our Metal Detectors & Heavy Duty Checkweigher

AD-4971 Series Metal Detectors

AD-4961 Heavy Duty Checkweigher

A&D Inspection