

METAL DETECTOR duw Series

Metal detector that supports safety and secure in the food business

Dual Wave & Easy Setting



Metal detector duw Series

The ultimate mission of a metal detector is to detect and eliminate minute metal contamination without fail. We have analyzed the concept comprehensively, and reengineered the series from scratch. The Metal detector duw series are our proud products thus developed to allow anyone to obtain highly sensitive and stable basic performance in production line. The duw series, which adopt the industry's first simultaneous 2-frequency magnetic field detecting method, **dual wave**, are provided with our unique sensing technology such as auto setting algorithm and tracking functions. Enhanced sensitivity both to ferrous and non-ferrous metals achieves stable detection performance.

High sensitivity and stability anyone can achieve

Simultaneous 2-frequency magnetization detection method allows high-sensitivity detection both of ferrous and non-ferrous metal contamination.

- **Auto setting algorithm equipped with our unique sensing technology**

Anyone can make the setting optimum for products to be checked, including dry, wet, and aluminum-evaporated film products, with the automatic setting function allowed by auto setting algorithm.

- **Simultaneous 2-frequency magnetization detection method adopted**

Highly sensitive detection of both ferrous and non-ferrous metals is allowed.

The auto setting algorithm and the detection method have improved detection sensitivity by 1 to 3 ranks compared with conventional metal detectors (test piece size, our company ratio).

- **Phase tracking function**

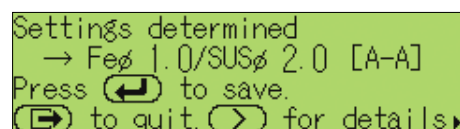
For frozen or wet products as well as bulk products, the tracking (phase tracking) function provided works on individual item, thus maintaining stable detecting operation.



Estimated detection sensitivity display

- **Provided with a function of displaying estimated detection sensitivity.**

Once auto setting is completed, estimated sensitivity to ferrous and stainless steel is displayed, which allows you to check detection sensitivity to the test piece.



Example of estimated detection sensitivity display

Note: The estimated detection sensitivity display does not assure the size of a test piece that can be detected. Check the detection sensitivity with the test piece.

Compliance with HACCP

Substantial waterproof design for easy cleaning

- **IP66-compliant** (AW model only) dustproof and waterproof performance allows easy cleaning with jet water. Possibility of propagation of bacteria due to entering of water into the equipment has thus been eliminated.
- **Stainless steel exterior, waterproof stainless steel motor, and open frame structure** that prevents dust from accumulating have been adopted with consideration given to maintenance of sanitary conditions and easy cleaning.
- **Transfer belt can be cleaned by boiling** (AW model only), which is ideal for hygienic management.



Open frame structure



Transfer belt can be cleaned by boiling

Superior adaptability to production line

- The speed of the conveyor belt can be individually selected by product type. Change of belt speed, which may be required because of increase of production, etc., is allowed without making modification. Setting change to adapt the flow direction resulting from relocation or change of production line layout can also be made easily.
- The range of supply voltage from 100 to 120 V/220 to 240 V (AC) allows the installation at any place.

Easy maintenance

- **Auto balancing function** provided to correct losing balance eliminates the need of adjustment work.
- **Adopted one-touch attaching/detaching system** and direct drive system (AW model only), which does not require a drive belt, facilitate maintenance work.
- **Adopted auto tension mechanism**, which eliminates the need of tension adjustment, and **meander-less transfer belt** (AW model only) facilitate belt adjustment.



Auto tension mechanism



One-touch attachment/
detachment of the conveyor

Easy operation and substantial functions

Simple operation based on interactive system

Adoption of interactive menu screen system allows simple and easy operation. Product type registration, auto setting, and rejecting setting in wizard system, in particular, prevent omission and mistakes in setting.

```
Choose check conditions.
1 Use wizard. (Recommend)
2 Specify evaluation mode.
```

```
Choose product type.
Pack / Bulk
Products in carton or tray
aligned and fed
```

```
Mode determined
Metal Check 1
Press [OK] to set
```

Example of wizard system menu

History recording function

NG history, which displays when and with which item metal contamination was detected, and operation history, which displays when product type or detection sensitivity was changed, are automatically recorded.

Statistical function

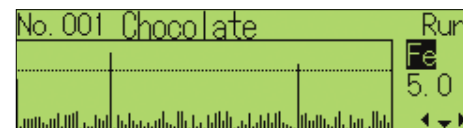
Total number of checked items, number of OK or NG items, NG ratio, etc. can be displayed.

Operation check function

Efficient automatic manual operation check with test piece and automatic result recording.

Monitoring the sensitivity to contained object

The level of the effect of contained objects on checked items viewed from the metal detector is graphically displayed in chronological order.



Example of monitoring of effect on an item

Access level control function

Access level controlled with password prevents unwanted setting change.

```
1a Operator level 1
1b Operator level 2
2 Administrator level
3 Service engineer level
```

Example of change of operator level

Missing component checking function

Metallic products with missing components are checked and removed as NG items.

Rejection confirmation function (Option)

Whether rejecting operation was performed securely with the rejecting machine is monitored.

Expandability and options

that assure further enhanced production line

Abundant expansion functions and options such as interlock with our Checkweighers are available. Contact our sales representatives for details.

Metal Detector

KD811X type KD8113A/KD8113AW/KD8115A/KD8115AW/KD8116A/KD8116AW

This is a high-sensitivity type for small individually packaged products and products in containers like glass or plastic bottles, etc.

IP66 Dust and waterproof protection class (only W type)	Interactive guidance	Printer (option)	Statistical functions	NG History	Operation history	Online interface
Supports flow direction change	BELT SPEED Variable belt speed LOW↔HIGH	Variable passline height	Simple cleaning	Rejection confirmation function	DSP	Automatic power switching 100V 200V
HACCP Support HACCP Support (only W type)	CE Marking (option)	Coaxial Type MD with coaxial detection coils	Dual frequency	Estimated sensitivity display		



KD8113AW

External Dimensions

KD8113A
KD8115A
KD8116A

Model	H1	H2
KD8113A	80	1100 ⁺¹⁰⁰ ₋₅₀
KD8115A	120	1140 ⁺¹⁰⁰ ₋₅₀
KD8116A	180	1200 ⁺¹⁰⁰ ₋₅₀

Units: mm

KD8113AW
KD8115AW
KD8116AW

Model	H1	H2
KD8113AW	75	1095 ⁺¹⁰⁰ ₋₅₀
KD8115AW	115	1135 ⁺¹⁰⁰ ₋₅₀
KD8116AW	175	1195 ⁺¹⁰⁰ ₋₅₀

Units: mm

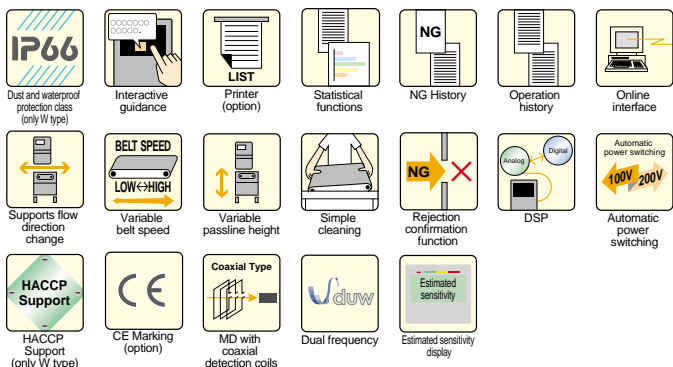
Specifications

Model	KD8113A	KD8113AW	KD8115A	KD8115AW	KD8116A	KD8116AW
Pass height	80 mm	75 mm	120 mm	115 mm	180 mm	175 mm
Max. pass width	300 mm					
Belt width	220 mm					
Display	STN LCD					
Operation method	Flat panel key					
Preset memory	Max. 100					
Product packaging	Both general and aluminum-evaporated film packaged products					
Belt speed	10 to 90 m/ min (variable speed depending on Product No.)					
Max. product weight	5 kg (A types can support up to 10 kg as an option. AW types can support up to 15 kg. However, the belt speed is 5 to 49 m/ min)					
Metal detection	Rejection signal output and beep, or belt stop and beep					
Power requirements	100 to 120 Vac +10% -15% or 200 to 240 Vac +10% -15%, single phase, 50/60 Hz, 200 VA, rush current 62 A (typ.) (20 ms min)					
Mass	72 kg		75 kg		77 kg	
Environmental conditions	0° to 40°C, relative humidity 30% to 85%, no condensation					
Protection class	IP30 compliance	IP66 compliance	IP30 compliance	IP66 compliance	IP30 compliance	IP66 compliance
External finish	A type: painted [Indicator and detector head: stainless steel (SUS304)] AW type: stainless steel (SUS304)					

Metal Detector

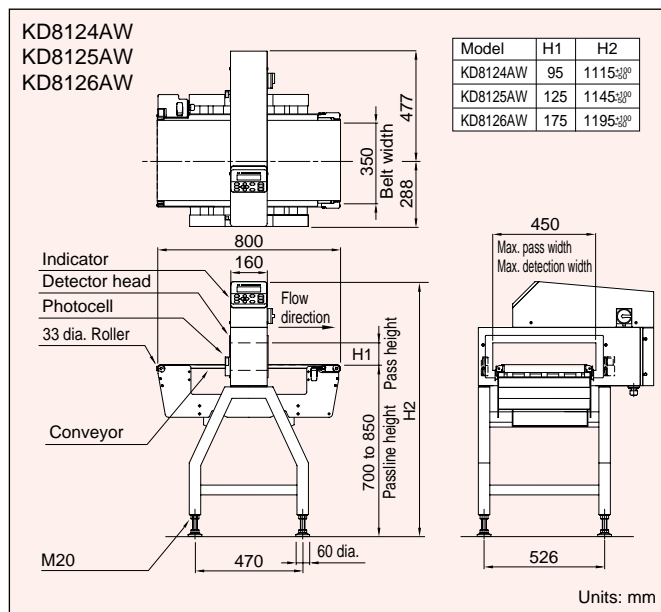
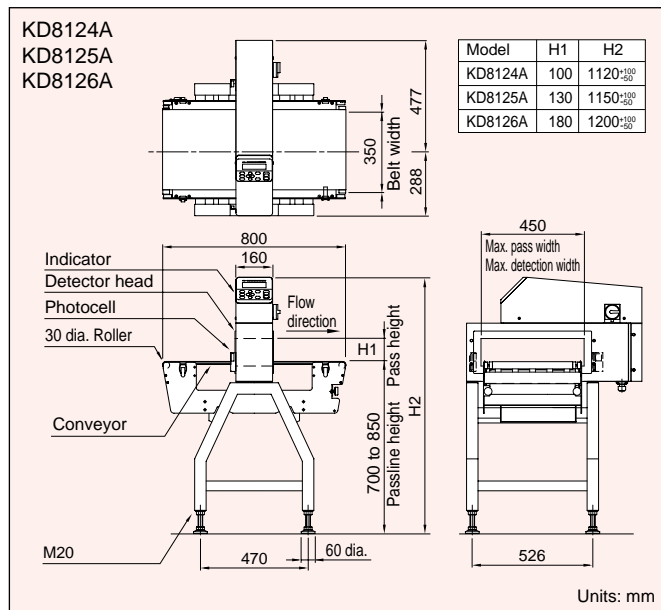
KD812X type KD8124A/KD8124AW/KD8125A/KD8125AW/KD8126A/KD8126AW

High-sensitivity and medium size type
Suitable for bulk products and bag products for commercial use



KD8124AW

External Dimensions



Specifications

Model	KD8124A	KD8124AW	KD8125A	KD8125AW	KD8126A	KD8126AW
Pass height	100 mm	95 mm	130 mm	125 mm	180 mm	175 mm
Max. pass width	450 mm					
Belt width	350 mm					
Display	STN LCD					
Operation method	Flat panel key					
Preset memory	Max. 100					
Product packaging	Both general and aluminum-evaporated film packaged products					
Belt speed	10 to 73 m/ min (variable speed depending on Product No.)					
Max. product weight	5 kg (A types can support up to 10 kg as an option. AW types can support up to 15 kg. However, the belt speed is 5 to 49 m/ min)					
Metal detection	Rejection signal output and beep, or belt stop and beep					
Power requirements	100 to 120 Vac +10% -15% or 200 to 240 Vac +10% -15%, single phase, 50/60 Hz, 200 VA, rush current 62 A (typ.) (20 ms min)					
Mass	82 kg		84 kg		85 kg	
Environmental conditions	0° to 40°C, relative humidity 30% to 85%, no condensation					
Protection class	IP30 compliance	IP66 compliance	IP30 compliance	IP66 compliance	IP30 compliance	IP66 compliance
External finish	A type: painted [Indicator and detector head: stainless steel (SUS304)] AW type: stainless steel (SUS304)					

KD811XAT type KD8113AT/KD8113AWT/KD8115AT/KD8115AWT/KD8116AT/KD8116AWT

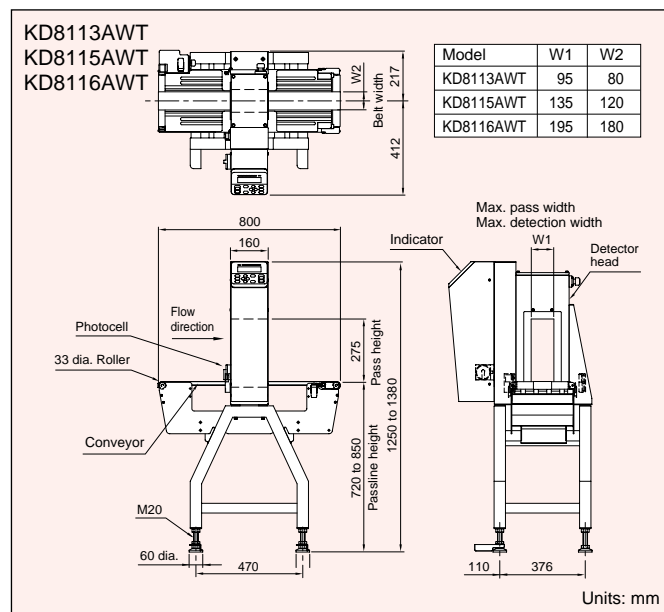
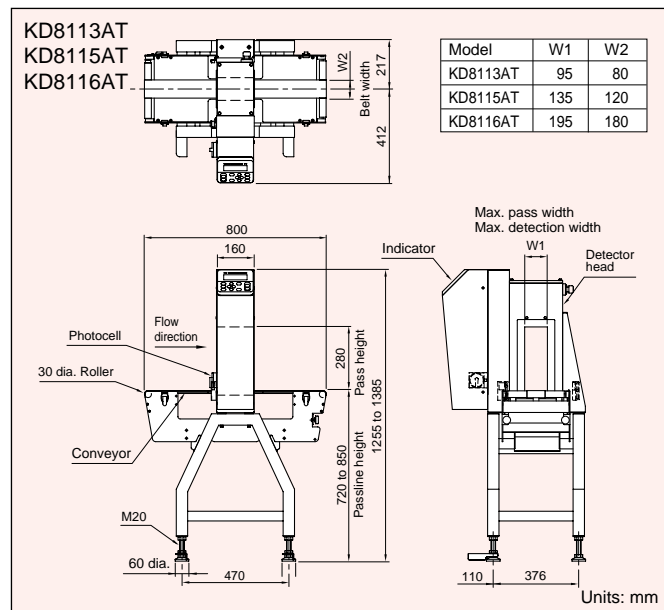
For tall products in containers such as glass and plastic bottles.

IP66 Dust and waterproof protection class (only W type)	Interactive guidance	LIST Printer (option)	Statistical functions	NG History	Operation history	Online interface
BELT SPEED LOW↔HIGH Supports flow direction change	Variable belt speed	Variable passline height	Simple cleaning	Rejection confirmation function	DSP	Automatic power switching 100V 200V
HACCP Support HACCP Support (only W type)	CE Marking CE Marking (option)	Coaxial Type MD with coaxial detection coils	Dual frequency	Estimated sensitivity display		



KD8115AWT

External Dimensions



Specifications

Model	KD8113AT	KD8113AWT	KD8115AT	KD8115AWT	KD8116AT	KD8116AWT
Pass height	280 mm	275 mm	280 mm	275 mm	280 mm	275 mm
Max. pass width	95 mm		135 mm		195 mm	
Belt width	80 mm		120 mm		180 mm	
Display	STN LCD					
Operation method	Flat panel key					
Preset memory	Max. 100					
Product packaging	Both general and aluminum-evaporated film packaged products					
Belt speed	10 to 90 m/ min (variable speed depending on Product No.)					
Max. product weight	5 kg (A types can support up to 10 kg as an option. AW types can support up to 15 kg. However, the belt speed is 5 to 49 m/ min)					
Metal detection	Rejection signal output and beep, or belt stop and beep					
Power requirements	100 to 120 Vac +10% -15% or 200 to 240 Vac +10% -15%, single phase, 50/60 Hz, 150 VA, rush current 62 A (typ.) (20 ms min)					
Mass	82 kg		85 kg		87 kg	
Environmental conditions	0° to 40°C, relative humidity 30% to 85%, no condensation					
Protection class	IP30 compliance	IP66 compliance	IP30 compliance	IP66 compliance	IP30 compliance	IP66 compliance
External finish	A type: painted [Indicator and detector head: stainless steel (SUS304)] AW type: stainless steel (SUS304)					

KD812XAT type

KD8124AT/KD8124AWT/KD8125AT/KD8125AWT/KD8126AT/KD8126AWT

For tall products in containers such as glass and plastic bottles.

IP66 Dust and waterproof protection class (only W type)	Interactive guidance	Printer (option)	Statistical functions	NG History	Operation history	Online interface
Supports flow direction change	BELT SPEED Variable belt speed LOW ↔ HIGH	Variable passline height	Simple cleaning	Rejection confirmation function	DSP	Automatic power switching 100V 200V
HACCP Support HACCP Support (only W type)	CE Marking (option)	Coaxial Type MD with coaxial detection coils	Dual frequency	Estimated sensitivity display		



KD8125AWT

External Dimensions

**KD8124AT
KD8125AT
KD8126AT**

Model	W1	W2
KD8124AT	115	100
KD8125AT	145	130
KD8126AT	195	180

Units: mm

**KD8124AWT
KD8125AWT
KD8126AWT**

Model	W1	W2
KD8124AWT	115	100
KD8125AWT	145	130
KD8126AWT	195	180

Units: mm

Specifications

Model	KD8124AT	KD8124AWT	KD8125AT	KD8125AWT	KD8126AT	KD8126AWT
Pass height	430 mm	425 mm	430 mm	425 mm	430 mm	425 mm
Max. pass width	115 mm		145 mm		195 mm	
Belt width	100 mm		130 mm		180 mm	
Display	STN LCD					
Operation method	Flat panel key					
Preset memory	Max. 100					
Product packaging	Both general and aluminum-evaporated film packaged products					
Belt speed	10 to 73 m/ min (variable speed depending on Product No.)					
Max. product weight	5 kg (A types can support up to 10 kg as an option. AW types can support up to 15 kg. However, the belt speed is 5 to 49 m/ min)					
Metal detection	Rejection signal output and beep, or belt stop and beep					
Power requirements	100 to 120 Vac +10% -15% or 200 to 240 Vac +10% -15%, single phase, 50/60 Hz, 150 VA, rush current 62 A (typ.) (20 ms min)					
Mass	92 kg		94 kg		96 kg	
Environmental conditions	0° to 40°C, relative humidity 30% to 85%, no condensation					
Protection class	IP30 compliance	IP66 compliance	IP30 compliance	IP66 compliance	IP30 compliance	IP66 compliance
External finish	A type: painted [Indicator and detector head: stainless steel (SUS304)] AW type: stainless steel (SUS304)					

Metal Detector

KD823 type

KD823A/KD823AW

For both general and aluminum-evaporated film packaged products

KD823AD/KD823ADW

For general packaged products

Wide large and general-use type
Suitable for large products in bags or cartons.



Dust and waterproof protection class (only W type)



Printer (option)



Online interface (option)



Variable passline height



DSP



CE Marking (option)

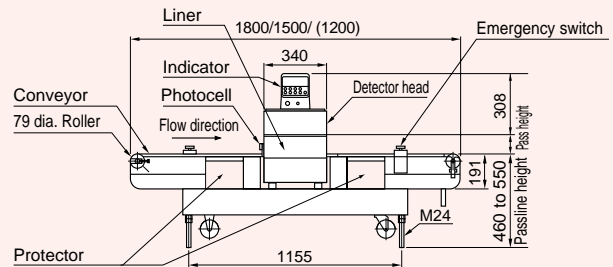
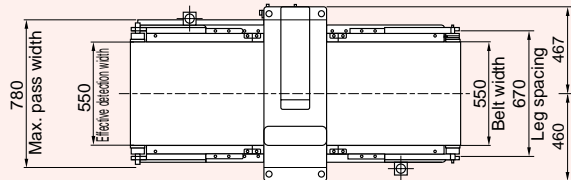


MD with opposed detection coils



External Dimensions

KD823A
KD823AW
KD823AD
KD823ADW



(1200) : KD823AW, KD823ADW

Units: mm

KD823A

Specifications

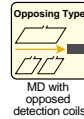
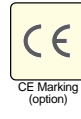
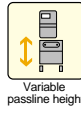
Model	KD823A	KD823AW	KD823AD	KD823ADW
Pass height	150 mm, 300 mm, 400 mm (The pass height is available in 50-mm pitch within the range from 100 to 400 mm.)			
Max. pass width	780 mm			
Belt width	550 mm			
Display	LED			
Operation method	Flat panel key			
Preset memory	Max. 50			
Product packaging	both general and aluminum-evaporated film packaged products		only dry products	
Belt speed	27.6 m / min (50 Hz), 33.2 m / min (60 Hz)	26.8 m / min (50 Hz), 32.2 m / min (60 Hz)	27.6 m / min (50 Hz), 33.2 m / min (60 Hz)	26.8 m / min (50 Hz), 32.2 m / min (60 Hz)
Max. product weight	50 kg			
Metal detection	Rejection signal output and beep, or belt stop and beep			
Power requirements	100 Vac \pm 10%, single phase, 50/60 Hz, 400 VA			
Mass	160 kg (Pass height: 150 mm)			
Environmental conditions	0° to 40°C, relative humidity 30% to 85%, no condensation			
Protection class	IP30 compliance	IP65 compliance	IP30 compliance	IP65 compliance
External finish	Painted	Conveyor: stainless steel (SUS304)	Painted	Conveyor: stainless steel(SUS304)

Metal Detector

KD803 type

KD803AD/KD803ADW KD803AU/KD803AUW
 For dry general packaged products For wet general packaged products

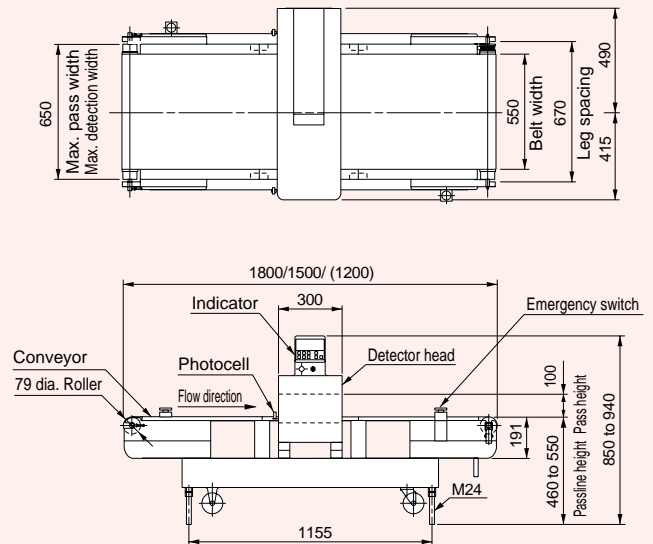
High-sensitivity type for wide large and bulk products.



KD803AUW

External Dimensions

KD803AD
 KD803ADW
 KD803AU
 KD803AUW



(1200) : KD803ADW, KD803AUW

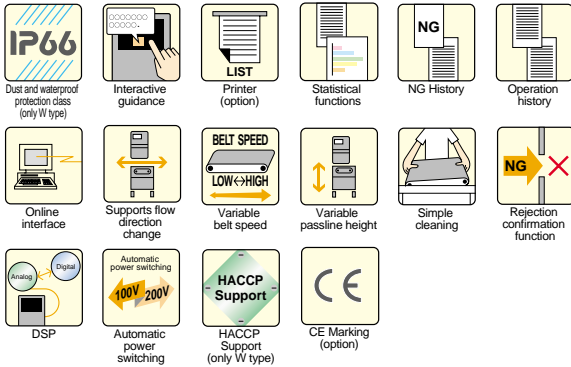
Units: mm

Specifications

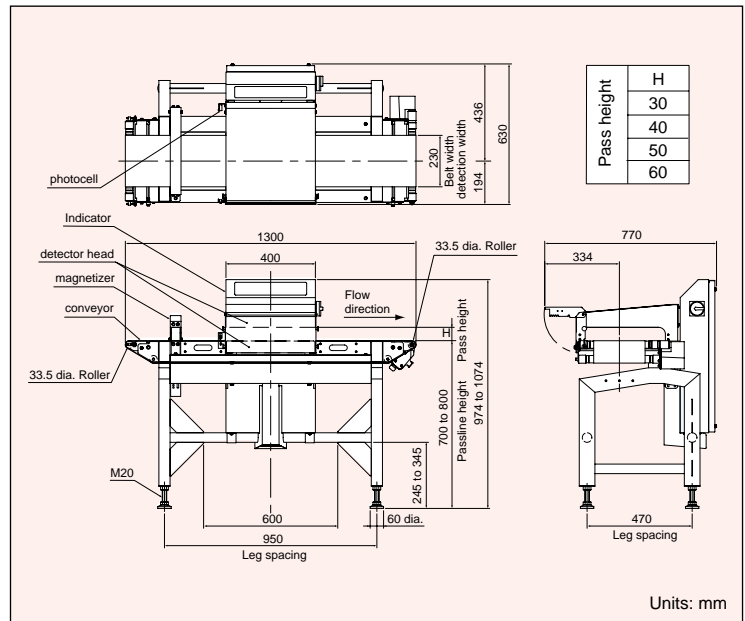
Model	KD803AD	KD803ADW	KD803AU	KD803AUW
Pass height	100 mm			
Max. pass width	650 mm			
Belt width	550 mm			
Display	LED			
Operation method	Flat panel key			
Preset memory	Max. 50			
Product packaging	dry products		wet products	
Belt speed	27.6 m/ min (50 Hz), 33.2 m/ min (60 Hz)	26.8 m/ min (50 Hz), 32.2 m/ min (60 Hz)	27.6 m/ min (50 Hz), 33.2 m/ min (60 Hz)	26.8 m / min (50 Hz), 32.2 m/ min (60 Hz)
Max. product weight	50 kg			
Metal detection	Rejection signal output and beep, or belt stop and beep			
Power requirements	100 Vac \pm 10%, single phase, 50/60 Hz, 400 VA			
Mass	160 kg		170 kg	
Environmental conditions	0° to 40°C, relative humidity 30% to 85%, no condensation			
Protection class	IP30 compliance	IP65 compliance	IP30 compliance	IP65 compliance
External finish	Painted	Conveyor: stainless steel (SUS304)	Detector head: stainless steel (SUS304)	Detector head, conveyor: stainless steel (SUS304)

KD8200AW

Especially for aluminum foil packaged products
such as retort pouches and snack foods



External Dimensions



Specifications

Model	KD8200AW
Pass height	30 mm, 40 mm, 50 mm, 60 mm
Max. pass width	230 mm
Belt width	230 mm
Display	STN LCD
Operation method	Flat panel key
Preset memory	Max. 100
Product packaging	Aluminum foil packaged products
Belt speed	10 to 90 m/ min (changeable)
Max. product weight	Less than 70 m/ min : 4 kg, Over 70 m/min : 3 kg
Metal detection	Rejection signal output and beep, or belt stop and beep
Power requirements	100 to 120 Vac +10% -15% or 200 to 240 Vac +10% -15%, single phase, 50/60 Hz, 200 VA, rush current 70 A (typ.) (20 ms min)
Mass	130 kg
Environmental conditions	0° to 40°C, relative humidity 30% to 85%, no condensation
Protection class	IP66 compliance
External finish	Stainless steel (SUS304)

especially for Aluminum foil packaged products

Metal Detector

KD821AH/KD821AHW

Especially for aluminum foil packaged products such as retort pouches and snack foods



Dust and waterproof protection class (only W type)



Printer (option)



Online interface (option)



Variable passline height



Simple cleaning



DSP



CE Marking (option)



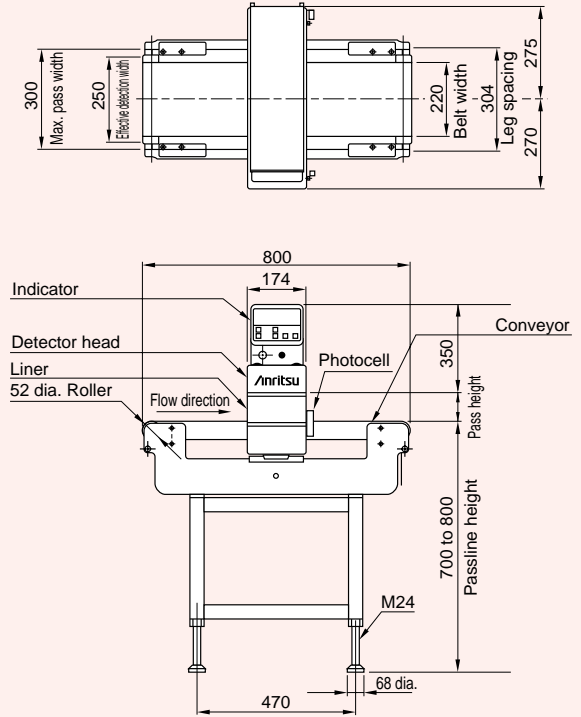
MD with opposed detection coils



KD821AH

External Dimensions

KD821AH
KD821AHW



Units: mm

Specifications

Model	KD821AH	KD821AHW
Pass height	30 mm, 55 mm, 80 mm, 105 mm, 130 mm	
Max. pass width	300 mm	
Belt width	220 mm	
Display	LED	
Operation method	Flat panel key	
Preset memory	Max. 50	
Product packaging	Aluminum foil packaged products	
Belt speed	39 m/ min	
Max. product weight	5 kg	
Metal detection	Rejection signal output and beep, or belt stop and beep	
Power requirements	100 Vac ±10%, single phase, 50/60 Hz, 200 VA	
Mass	75 kg	
Environmental conditions	0° to 40°C, relative humidity 30% to 85%, no condensation	
Protection class	IP30 compliance	IP65 compliance
External finish	Painted	Conveyor leg: stainless steel (SUS304)