Agents

Japan office

Metal Detectors

General Catalog

3
MetaHawk

>> **SQUARE** ®
System Square Inc.

NO. 0   DRY H   Insp
Hamburger A
P   14   3.0
F   24   10.0
S   35   10.0
V   E   0   0.0
Preset   History   Menu
2014/01/24 16:59

MetaHawk 3

Functions and features

3 kinds of inspection screens

Operator friendly operability

Everyone can operate the system.

One-touch display change

1 Level meter display

```
NO.  0            DRY H      Insp
Hamburger A
P        14   3.0
F        24   10.0
S        35   10.0
V    E    0   0.0
     Product   History   Menu
  →              2014/01/24 16:59
SQUARE                    MetaHawk3
```

2 Inspection Q'ty display

```
NO.  0            DRY H      Insp
Hamburger A
    Number    26
    OK        25      Clear
    NG         1
  Product   History   Menu
  →          2014/01/24 16:57
```

3 Inspection result magnification display

```
NO.  0            DRY H      Insp
Hamburger A
L                        0   CLR
i                   × 3.0 Distri
m                            bution  P
i
t                         ◄    ►
  16:33:37         t
  Product   History   Menu
  →          2014/01/24 17:00
```

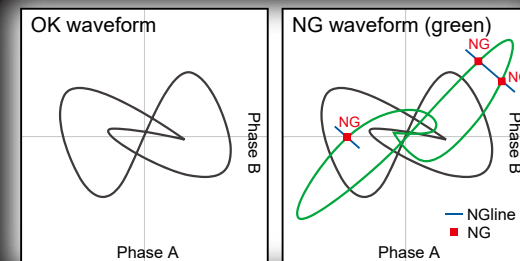## 3 kinds of inspection functions

Continuously improved basic performances

Always aiming at leading-edge high sensitivity

1 "V mode inspection" New system

As the product features are visualized using multiple phases, even fine changes are identified to achieve high sensitivity.

OK waveform — Phase A, Phase B

NG waveform (green) — Phase A, Phase B
— NGline
■ NG

2 Advanced ECP function

In the MetaHawk3, this ECP function has been further advanced using the leading-edge data analysis technology. Use of this function makes it possible to precisely detect products containing water content or salt content with large effects as well as products with small effects.
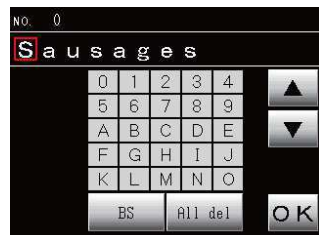
Effects of product — Large / Small
Product effect graph
Inspection point
► Phase angle
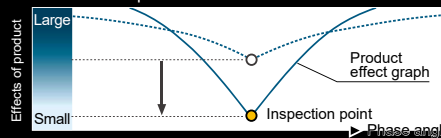
3 2-frequency inspection

Both Fe and SUS foreign objects can be detected with high sensitivity.(System Square incorporated this 2-frequency inspection technology into the mass-production machines, first in the world and already has 10-year past experiences.)

Image of 2-frequency inspection
Low frequency(For ferrous foreign bodies)
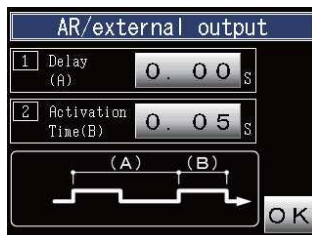High frequency(For nonferrous foreign bodies)

Comfortable operation with large touch panel LCD

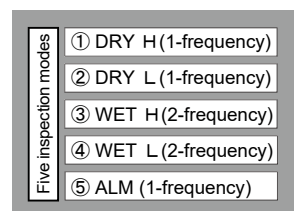**Product name input screen**
Easy inputs of products' name
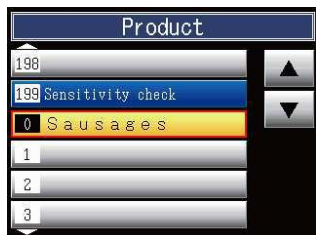
Product selection screen
Easy confirmation of registered products

Sorting machine setting screen
Easy understanding with illustration and graph

```
NO.  0
Sausages
  0  1  2  3  4     ▲
  5  6  7  8  9
  A  B  C  D  E     ▼
  F  G  H  I  J
  K  L  M  N  O
  BS  All del  OK
```

```
          Product
  198                       ▲
  199 Sensitivity check
    0  Sausages             ▼
    1
    2
    3
```

```
      AR/external output
  1 Delay       0.00 S
    (A)
  2 Activation  0.05 S
    Time(B)
      (A)    (B)
                         OK
```

Easy automatic sensitivity setting

Five inspection modes
① DRY H (1-frequency)
② DRY L (1-frequency)
③ WET H (2-frequency)
④ WET L (2-frequency)
⑤ ALM (1-frequency)

Difficult selection of inspection mode…

```
NO.  0  Hamburger A        1/5
        Auto mode
  Please put product on the belt after
  bar graph is shown on display.

        Start
```

Just operat flowing to instruction on screen…

```
NO.  0  Hamburger A
         DRY H
    Fe 5      SUS 12
         Regist
  Alternative choices.
              Fe    SUS
  WET H       3     17
  WET L       3     17
```

Everyone can set the best sensitivity

Example of detection sensitivity ※The detection sensitivity may vary depending on the product.

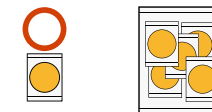|	Surimi		Sausage		Sliced ham	
	V-mode inspection 【Meta Hawk3-3008】	Conventional system (Normal inspection) 【META HAWK Ⅱ 3008】	V-mode inspection 【Meta Hawk3-3008】	Conventional system (Normal inspection) 【META HAWK Ⅱ 3008】	V-mode inspection 【Meta Hawk3-3008】	Conventional system (Normal inspection) 【META HAWK Ⅱ 3008】
Mode	WET H	WET H	WET H	WET H	WET H Magnification3.0	WET H Magnification3.0
Fe	φ0.6mm~φ0.7mm	φ0.8mm~φ1.0mm	φ0.7mm~φ0.8mm	φ0.8mm~φ0.8mm	φ0.5mm~φ0.6mm	φ1.0mm~φ1.0mm
SUS	φ1.5mm~φ2.0mm	φ2.0mm~φ2.0mm	φ2.0mm~φ2.0mm	φ2.0mm~φ2.4mm	φ1.5mm~φ1.5mm	φ2.0mm~φ2.0mm

To get better sensitivity

Select suitable coil
Select suitable coil because using large coil for small products causes worse sensitivity.

Product

Inspect individual package
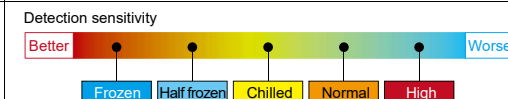Better sensitivity can be expected with smaller coil

Make thickness of products flat, or make thickness of products thin
It is possible to keep stable sensitivity if the product is flat and thin, or if the product has no partial deflection in package.

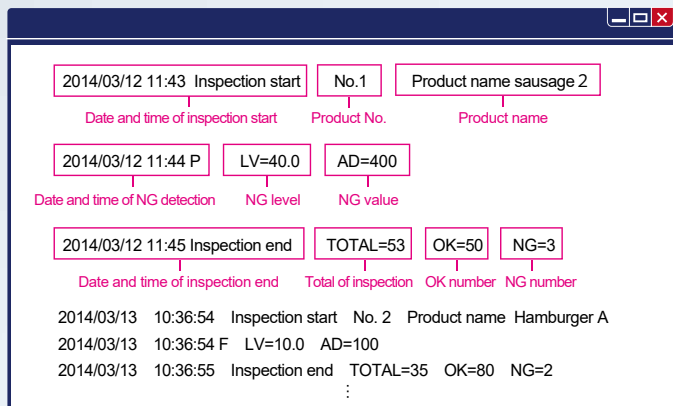**Keep temperature of product as low as possible. Avoid temperature change of product.**
Product effect of frozen product is the smallest. Product effect becomes bigger and bigger if temperature of product becomes higher and higher.

Detection sensitivity
Better ◄────────────► Worse
Frozen | Half frozen | Chilled | Normal | High
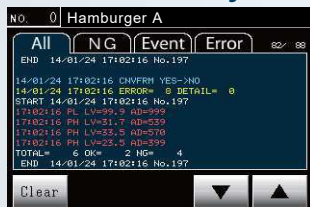
Functions and features

Extensive management functions

USB data management (option)
The inspection history data is transferred to PC for the management.
(10,000 histories can be saved)

| 2014/03/12 11:43 Inspection start | No.1 | Product name sausage 2 |
| Date and time of inspection start | Product No. | Product name |

| 2014/03/12 11:44 P | LV=40.0 | AD=400 |
| Date and time of NG detection | NG level | NG value |

| 2014/03/12 11:45 Inspection end | TOTAL=53 | OK=50 | NG=3 |
| Date and time of inspection end | Total of inspection | OK number | NG number |

2014/03/13 10:36:54 Inspection start No. 2 Product name Hamburger A
2014/03/13 10:36:54 F LV=10.0 AD=100
2014/03/13 10:36:55 Inspection end TOTAL=35 OK=80 NG=2

※Image of display on PC

Enhanced history function

NO. 0 Hamburger A
All NG Event Error 62/68
END 14/01/24 17:02:16 No.197
14/01/24 17:02:16 CNVFRM YES->NO
14/01/24 17:02:16 ERROR= 8 DETAIL= 0
START 14/01/24 17:02:16 No.197
17:02:16 PL LV=99.9 AD=999
17:02:16 PH LV=31.7 AD=539
17:02:16 PH LV=55.5 AD=570
17:02:16 PH LV=23.5 AD=599
TOTAL= 6 OK= 2 NG= 4
END 14/01/24 17:02:16 No.197
Clear ▼ ▲

Inspection history
Event Work history, such as machine setting change
Error Machine and software error history

NO. 0 Hamburger A
Statistics 2/2
Start inspection 2014/02/05 10:23:58
Stop inspection 2014/02/05 10:24:22
TOTAL= 26 OK= 25 NG= 1
NG history
10:24:22 P LV= 3.0 AD= 30
▼ ▲

Statistic display
General history from the inspection start to the inspection end. This display is used as inspection result daily report.

NO. 0 Hamburger A
Maintenance history
Date 2000/01/01 12:07:32
Balance value 0 16
Test piece Fe 0.0 SUS 0.0
Product name
Inspection mode DRY H
AD value 0/ 16/ 0/ 0
NG threshold 128/ 0/7852/7904
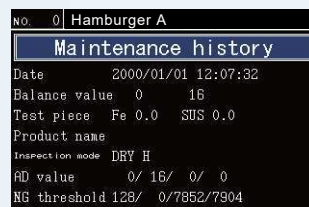
Inspection history
The final inspection records remain and can be checked later. This inspection history is also effective as prevention of missing periodic inspection.

Data management through network (option)
The data of multiple machines can be managed with PC through the LAN network.

Line A
Line B
Line C
Hub
Office (Personal Computer)
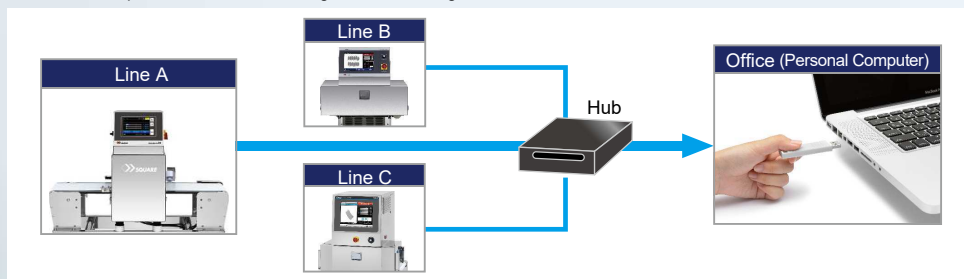
Access mode selection
Protect from incorrect settings by inexperienced operators. Pass word is required to change access mode.

Administration mode
User mode

Delay [0.00-99.9]
Current 0.00
7 8 9 C
4 5 6
1 2 3
0 . OK

Pass word is required to change access mode

Enhanced communication function
4 serial ports and LAN port is available for communication between PC, labeler, bar code, printer, etc.

Easy cleaning
One-touch detachment/attachment of the conveyors requiring the frequent cleaning ensures the sanitary system.

Small size metal detector

Large size metal detector (Option)

Simple structure
Waterproofing model has simple frame structure made with stainless steel. It provides easy cleaning and high hygiene.
Timing belt is located outside of frame, so that it never interferes transportation belt.

Easy cleaning frame

Timing belt never interfere transportation belt.
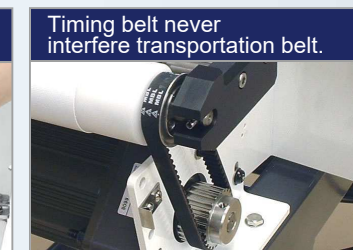
The IP66 dust protection and waterproof standard is satisfied
The machine is capable of handling lines involved with water with sufficiently high sensitivity. It can be cleaned with water.
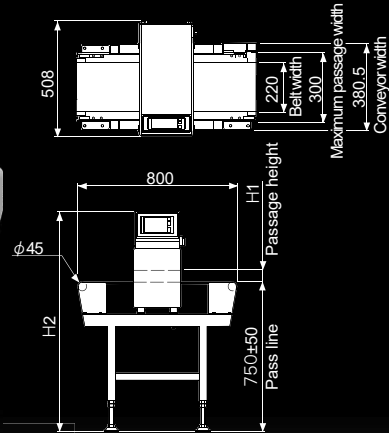
Hydraulic pressure	Water temperature	Detergent	Cleaning tools
Head 1m Max. Running water	40℃ Max.	Neutral detergent. Consult us if ozone sterilization, alkaline/acid detergent or salt water is to be used.	Soft plastic brush / Waste cloth / Metal wire brush

Importance of the quality control increases further.

PL (Product Liability)
ISO (International Organization for Standardization)
HACCP (Hazard Analysis & Critical Control Point)

PL (Product Liability)
When it is proven that the defect of the product has the casual relationship with the damage if the customer had the threat to life, personal injury, or property damage caused by the defect of the product, the manufacturer shall accept responsibility regardless of the intentional or negligent detect.

ISO (International Organization for Standardization)
International standards to promote the distribution of goods and services. For example, there are quality assurance standard ISO9000 for the quality assurance management from the design phase to the after-sales service and environmental management standard ISO14001 for the production, service, and management.

HACCP (Hazard Analysis & Critical Control Point)
Hazard that may occur in the food processing is analyzed (HA) and critical control point needing particular measures for the hazard is found (CCP). This point is monitored strictly to maintain the safety.

508

800

φ45

H1 Passage height

H2

750±50 Pass line

220 Belt width
300
380.5 Maximum passage width
Conveyor width

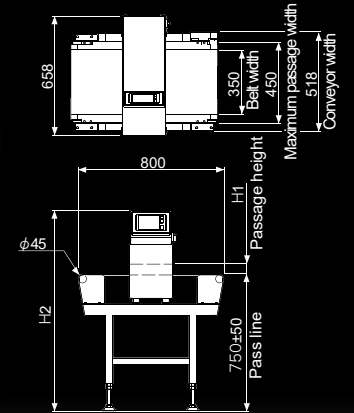|	H1	H2
SD3-3006D/W	60	1103±50
SD3-3008D/W	80	1113±50
SD3-3010D/W	100	1133±50
SD3-3012D/W	120	1153±50
SD3-3015D/W	150	1183±50
SD3-3018D/W	180	1213±50

Unit: mm

For inspection of small products, such as small snack bags

Applicable to a passage width of up to 30 cm

Model（SD3-XXXXD/W）		3006	3008	3010	3012	3015	3018
Maximum passage width (mm)		300					
Maximum passage height (mm)		60	80	100	120	150	180
Detection sensitivity (mm)	Fe	φ0.35	φ0.4	φ0.45	φ0.5	φ0.55	φ0.6
	SUS304	φ0.65	φ0.7	φ0.8	φ0.9	φ0.95	φ1.0
Belt speed		24m/min(50Hz)					
Conveyor size		800mm(length)×220mm(belt width)					
Upon detection of metal		Belt stopped, buzzer warning or automatic sorting (option)					
Transport weight		3kg					
Power requirements		AC100V±10%/AC200V±10%、50/60Hz、200VA					
Mass(kg)		84	82	83	84	86	88

658

800

φ45

H1 Passage height

H2

750±50 Pass line

350 Belt width
450
518 Maximum passage width
Conveyor width

	H1	H2
SD3-4506D/W	60	1103±50
SD3-4508D/W	80	1113±50
SD3-4510D/W	100	1133±50
SD3-4512D/W	120	1153±50
SD3-4515D/W	150	1183±50
SD3-4518D/W	180	1213±50

Unit: mm

For inspection of products contained in larger trays

Applicable to a passage width of up to 45 cm

Model（SD3-XXXXD/W）		4506	4508	4510	4512	4515	4518
Maximum passage width (mm)		450					
Maximum passage height (mm)		60	80	100	120	150	180
Detection sensitivity (mm)	Fe	φ0.4	φ0.45	φ0.5	φ0.55	φ0.6	φ0.7
	SUS304	φ0.7	φ0.8	φ0.9	φ1.0	φ1.1	φ1.2
Belt speed		24m/min(50Hz)					
Conveyor size		800mm(length)×350mm(belt width)					
Upon detection of metal		Belt stopped, buzzer warning or automatic sorting (option)					
Transport weight		3kg					
Power requirements		AC100V±10%/AC200V±10%、50/60Hz、200VA					
Mass(kg)		109	107	108	109	112	115

D (non-waterproof) / W (waterproof)   Appropriate measures are taken so that no products are brought in contact with the inside of the passage port.
The detection sensitivity may vary depending on the product and/or operating environment. The specifications are subject to change without prior notice due to improvement.

Medium size Metal Detectors SD3-45BType

Conveyor belt easy attach and remove system is option.
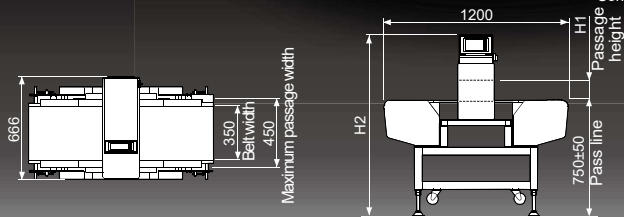
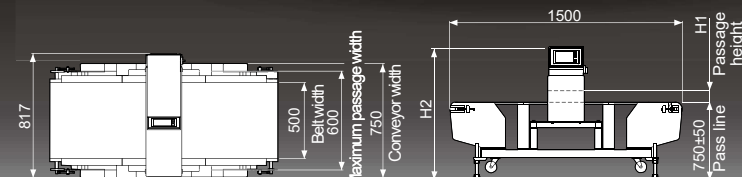|	H1	H2
SD3-4505BD/W	50	1106±50
SD3-4507BD/W	70	1106±50
SD3-4509BD/W	90	1126±50
SD3-4511BD/W	110	1146±50
SD3-4514BD/W	140	1176±50
SD3-4517BD/W	170	1206±50
SD3-4520BD/W	200	1236±50
SD3-4525BD/W	250	1286±50
SD3-4530BD/W	300	1336±50
SD3-4535BD/W	350	1386±50

Unit: mm

For inspection of products contained in large boxes and bags, such as rice, wheat flour, and cereals, etc

It copes with conveyance of heavy items (20Kg) (On the conveyor

Model（SD3-XXXXBD/W)		4505	4507	4509	4511	4514	4517	4520	4525	4530	4535
Maximum passage width (mm)		450									
Maximum passage height (mm)		50	70	90	110	140	170	200	250	300	350
Detection sensitivity(mm)	Fe	φ0.4	φ0.45	φ0.5	φ0.55	φ0.6	φ0.7	φ0.7	φ0.8	φ0.9	φ1.0
	SUS304	φ0.85	φ0.9	φ0.95	φ1.0	φ1.1	φ1.2	φ1.4	φ1.5	φ1.7	φ2.0
Belt speed		24m/min(50Hz)									
Conveyor size		1,200mm(length)×350mm(belt widt)									
Upon detection of metal		Belt stopped, buzzer warning or automatic sorting (option)									
Transport weight		20Kg									
Power requirements		AC100V±10%、50/60Hz、300VA									

Large size Metal Detectors SD3-60Type

Conveyor belt easy attach and remove system is option.

	H1	H2
SD3-6007D/W	70	1106
SD3-6009D/W	90	1126
SD3-6011D/W	110	1146
SD3-6014D/W	140	1176
SD3-6017D/W	170	1206
SD3-6020D/W	200	1236
SD3-6025D/W	250	1286
SD3-6030D/W	300	1336
SD3-6035D/W	350	1386

Unit: mm

For inspection of products contained in large boxes and bags, such as rice, wheat flour, and cereals, etc

Applicable to a passage width of up to 60 cm

Model（SD3-XXXXD/W)		6007	6009	6011	6014	6017	6020	6025	6030	6035
Maximum passage width (mm)		600								
Maximum passage height (mm)		70	90	110	140	170	200	250	300	350
Detection sensitivity(mm)	Fe	φ0.5	φ0.55	φ0.55	φ0.6	φ0.7	φ0.8	φ0.8	φ1.0	φ1.2
	SUS304	φ1.0	φ1.1	φ1.2	φ1.3	φ1.5	φ1.5	φ1.5	φ1.7	φ2.0
Belt speed		24m/min(50Hz)								
Conveyor size		1500mm(length)×500mm(belt width)								
Upon detection of metal		Belt stopped, buzzer warning or automatic sorting (option)								
Transport weight		20Kg (In the case of AC200V, it is possible to cope under 30Kg)								
Power requirements		AC100V±10%、AC200V±10%、50/60Hz、300VA or Three-phase AC200V±10%、50/60Hz、550VA								
Mass（kg)		186	187	188	194	199	202	204	210	216

D (non-waterproof) / W (waterproof)   Appropriate measures are taken so that no products are brought in contact with the inside of the passage port.
The detection sensitivity may vary depending on the product and/or operating environment. The specifications are subject to change without prior notice due to improvement.

Conveyor belt easy attach and remove system is option.
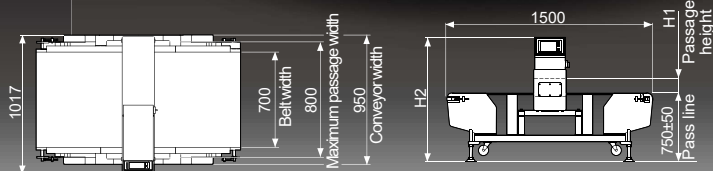
	H1	H2
SD3-8013D/W	130	966
SD3-8016D/W	160	996
SD3-8019D/W	190	1026
SD3-8025D/W	250	1086
SD3-8030D/W	300	1136
SD3-8035D/W	350	1186

Unit: mm

For inspection of larger box and bag products
Applicable to a passage width of up to 80 cm
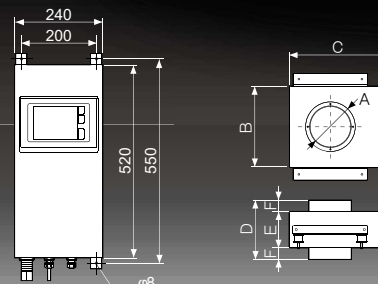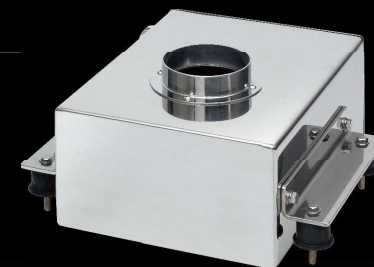
	A	B	C	D	E	F
SD3-080CD/W	80	280	369	220	160	30
SD3-100CD/W	100	280	369	220	160	30
SD3-130CD/W	130	310	398	220	160	30
SD3-150CD/W	150	330	419	260	160	50
SD3-180CD/W	180	360	449	260	160	50
SD3-200CD/W	200	380	469	260	160	50
SD3-250CD/W	250	430	519	360	160	100

Unit: mm

For inspection of rice, wheat flour, bread crumbs, snack food, cereals, and pellets, etc.
This model is suitable for inspection of products that drop naturally. A compact coil can be assembled into the pipe line.
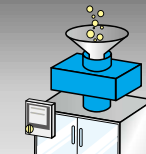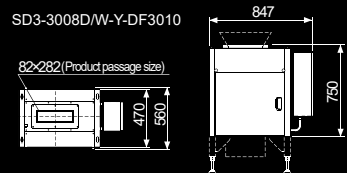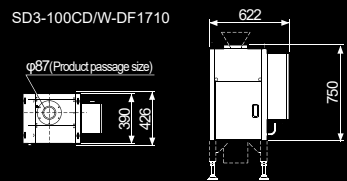
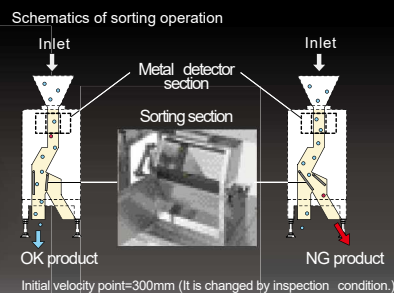| Model(SD3-XXXXD/W)	8013	8016	8019	8025	8030
Maximum passage width (mm)	800				
Maximum passage height (mm)	130	160	190	250	300
Detection sensitivity (mm) — Fe	ϕ0.8	ϕ0.9	ϕ1.0	ϕ1.2	ϕ1.5
Detection sensitivity (mm) — SUS304	ϕ1.5	ϕ1.5	ϕ1.5	ϕ2.0	ϕ2.4
Belt speed	24m/min(50Hz)				
Conveyor size	1500mm(length)×700mm(belt width)				
Upon detection of metal	Belt stopped, buzzer warning or automatic sorting (option)				
Transport weight	20Kg (In the case of AC200V, it is possible to cope under 30Kg)				
Power requirements	AC100V±10%, AC200V±10%, 50/60Hz, 300VA or Three-phase AC200V±10%, 50/60Hz, 550VA				
Mass(kg)	223	226	229	237	245

Model(SD3-XXXCD/W)	080	100	130	150	180	200	250
Coil diameter (mm)	ϕ80	ϕ100	ϕ130	ϕ150	ϕ180	ϕ200	ϕ250
Product passage diameter (Reference value) (mm)	ϕ60	ϕ80	ϕ110	ϕ130	ϕ160	ϕ180	ϕ230
Detection sensitivity (mm) — Fe	ϕ0.4	ϕ0.4	ϕ0.5	ϕ0.5	ϕ0.6	ϕ0.7	ϕ0.8
Detection sensitivity (mm) — SUS304	ϕ0.7	ϕ0.7	ϕ0.8	ϕ0.8	ϕ1.0	ϕ1.2	ϕ1.5
Amount of processing (Reference value) — Minute powder	1t/h	2t/h	3.5t/h	5t/h	7t/h	9t/h	15t/h
Amount of processing (Reference value) — Soybean	2t/h	4t/h	7t/h	10t/h	14t/h	18t/h	30t/h
Upon detection of metal	Buzzer warning, detection signal						
Power requirements	AC100V±10%, 50/60Hz, 120VA						
Mass(kg)	35	37	45	50	52	53	58

D (non-waterproof) / W (waterproof)   Appropriate measures are taken so that no products are brought in contact with the inside of the passage port.
The detection sensitivity may vary depending on the product and/or operating environment. The specifications are subject to change without prior notice due to improvement.
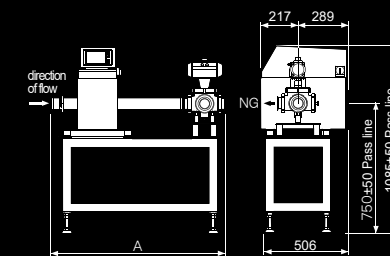
Drop type Metal Detectors

SD3-100CD/W-DF1710

622

φ87(Product passage size)

390 / 426

750

SD3-3008D/W-Y-DF3010

847

82×282(Product passage size)

470 / 560

750

*The sections indicated with dotted line are option.

Schematics of sorting operation

Inlet

Metal detector section

Sorting section

Inlet

OK product

NG product

Initial velocity point=300mm (It is changed by inspection condition.)

For inspection of rice, wheat flour, and plastic pellets, etc.

This model is suitable for inspection of products that drop naturally.
Sorting machine is incorporated.

Model	SD3-100CD/W-DF1710	SD3-3008D/W-Y-DF3010
Maximum passage width (mm)	φ87	82×282
Detection sensitivity (mm) Fe	φ0.4	φ0.5
Detection sensitivity (mm) SUS304	φ0.7	φ1.0
Sorting method	Integrated damper-type sorter	
Power requirements	AC100V±10%, 50/60Hz, 120VA	
Air supply source	0.5〜0.7Mpa	
Amount of processing(Reference value)	Minute powder…2t/h Soybean…4t/h	Minute powder…6t/h Soybean…12t/h
Mass(kg)	99	170

Pipe transfer type Metal Detectors

217 289

direction of flow

NG

750±50 Pass line
1085±50 Pass line

A

506

Pipe size (inch)	1.0	1.5	2.0	2.5	3.0
A	975	985	1000	1010	1020

For inspection of paste or fluid products, such as miso, minced meat, or jam.

Pipe is detachable with one-touch operation and capable of easy cleaning.

Model	SD3-100RW-1.0S	SD3-100RW-1.5S	SD3-100RW-2.0S	SD3-100RW-2.5S	SD3-100RW-3.0S
Detection sensitivity (mm) Fe	φ0.4				
Detection sensitivity (mm) SUS304	φ0.7				
Inside diameter of coil opening	φ100				
Pipe size (inch)	1.0	1.5	2.0	2.5	3.0
Height of inlet/outlet	750mm				
Ferrule shape	IDFferrule				
Maximum passage flow rate（ℓ/h）*1	500	1200	2000	4500	7000

Model	SD3-100RW-1.0S	SD3-100RW-1.5S	SD3-100RW-2.0S	SD3-100RW-2.5S	SD3-100RW-3.0S
Withstand pressure (MPa)*2	1.5	1.5	1.3	1.3	1.1
Heatproof temperature(℃)*2	80	80	80	80	50
Sorting method	Air driven 3-way ball valve				
Ball valve operation	Operating temperature range: -5℃ to 95℃, Max. operating pressure: 0.7 MPa, IP55				
Power requirements	AC100V(50/60Hz)120VA				
Air suppry source	0.4〜0.7Mpa				
Accessory	Hook spanner, clamp				
Mass(kg)	91	94	100	107	111

*1：The flow rate may drop as the selection valve change-over time is needed depending on the viscosity of the fluid to be used.
*2：The withstand pressure may vary depending on the operating temperature. Contact System Square for further information.

D (non-waterproof) / W (waterproof)   Appropriate measures are taken so that no products are brought in contact with the inside of the passage port.
The detection sensitivity may vary depending on the product and/or operating environment. The specifications are subject to change without prior notice due to improvement.
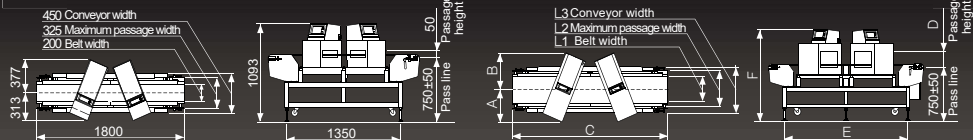
Metal Detectors for needles

SD3-4505VW

SD3-6517PVW/ SD3-9617PVW/ SD3-11825PVW

450 Conveyor width
325 Maximum passage width
200 Belt width

L3 Conveyor width
L2 Maximum passage width
L1 Belt width

Passage height
50
750±50 Pass line
1093
313 377
1800
1350

D Passage height
750±50 Pass line

	L1	L2	L3	A	B	C	D	E	F
SD3-6517PVW	350	485	600	424	488	2200	170	1205	1750
SD3-9617PVW	500	770	750	567	632	2600	170	1205	2150
SD3-11825PVW	700	980	950	668	734	2800	250	1285	2350

Unit: mm

For inspection of block meat, such as beef and pork.

Even magnetized needles used for baby pigs whichcannot be detected conventionally can be detected accurately.

Model（SD3-XXXXVW）		4505	6517P	9617P	11825P
Maximum passage width (mm)		325	485	770	980
Maximum passage height (mm)		50	170		250
Detection sensitivity(mm)	Fe	ϕ0.6	ϕ1.2	ϕ1.8	ϕ2.0
Belt speed		24m/min（50Hz）			
Conveyor size(mm)	Belt width	200	350	500	700
	Length	1800	2200	2600	2800
Upon detection of metal		Belt stopped, buzzer warning or automatic sorting (option)			
Transport weight		20kg	30kg		
Power requirements		AC100V±10% 50/60Hz 400VA	Three-phase AC200V±10% 50/60Hz 650VA		
Coil type		Concentric loop coil	Opposed coil		
Mass(kg)		210	300	380	500

D (non-waterproof) / W (waterproof)   Appropriate measures are taken so that no products are brought in contact with the inside of the passage port.
The detection sensitivity may vary depending on the product and/or operating environment. The specifications are subject to change without prior notice due to improvement.

Special machines

Seal Inspection Machine with Metal Detecto

Top seal

Vertical type

Tablet Products
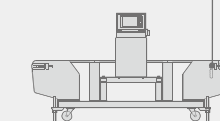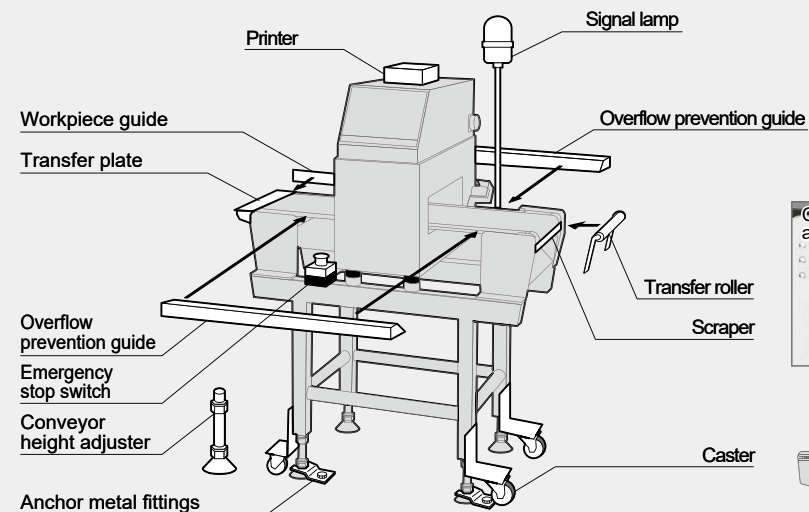

Coaxial and opposed type (Two coil types are used.)
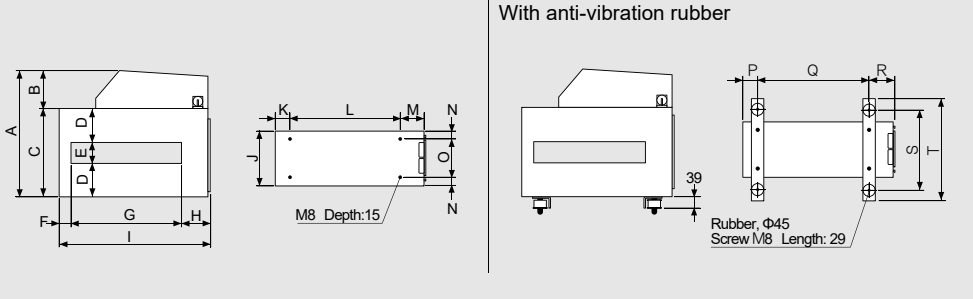
Drop type

Wide type

Options

Signal lamp

Printer

Workpiece guide

Overflow prevention guide

Transfer plate

Overflow prevention guide

Transfer roller

Scraper

Emergency stop switch

Conveyor height adjuster

Anchor metal fittings

Caster

Conveyor belt easy attach and remove system

Coils

SD3-30,45,60 type

With anti-vibration rubber

M8 Depth:15

Rubber, Φ45 Screw M8 Length: 29
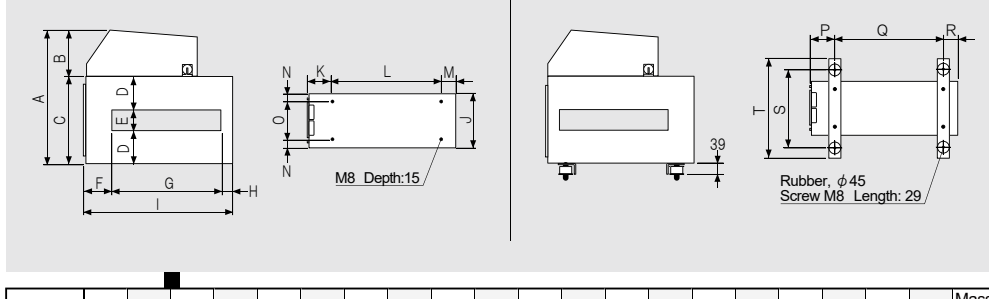
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	Mass (kg±10%)
3006	481	185	296	108	80	67	300	141	508	236	53	328	127	36	164	53	328	128	354	400	54
3008	481	185	296	98	100	67	300	141	508	236	53	328	127	36	164	53	328	128	354	400	50
3010	501	185	316	98	120	67	300	141	508	236	53	328	127	36	164	53	328	128	354	400	52
3012	521	185	336	98	140	67	300	141	508	236	53	328	127	36	164	53	328	128	354	400	54
3015	551	185	366	98	170	67	300	141	508	236	53	328	127	36	164	53	328	128	354	400	56
3018	581	185	396	98	200	67	300	141	508	236	53	328	127	36	164	53	328	128	354	400	58
4506	481	185	296	108	80	67	450	141	658	236	53	478	127	36	164	53	478	128	354	400	62
4508	481	185	296	98	100	67	450	141	658	236	53	478	127	36	164	53	478	128	354	400	58
4510	501	185	316	98	120	67	450	141	658	236	53	478	127	36	164	53	478	128	354	400	60
4512	521	185	336	98	140	67	450	141	658	236	53	478	127	36	164	53	478	128	354	400	62
4515	551	185	366	98	170	67	450	141	658	236	53	478	127	36	164	53	478	128	354	400	64
4518	581	185	396	98	200	67	450	141	658	236	53	478	127	36	164	53	478	128	354	400	66
4521	611	185	426	98	230	67	450	141	658	236	53	478	127	66	164	53	478	128	354	400	76
4527	671	185	486	98	290	67	450	141	658	236	53	478	127	66	164	53	478	128	354	400	83
4532	721	185	536	98	340	67	450	141	658	236	53	478	127	66	164	53	478	128	354	400	90
6005	481	185	296	108	80	67	600	141	808	236	52	630	126	28	180	57	620	132	415	465	72
6007	481	185	296	98	100	67	600	141	808	236	52	630	126	28	180	57	620	132	415	465	72
6009	501	185	316	98	120	67	600	141	808	236	52	630	126	28	180	57	620	132	415	465	70
6011	521	185	336	98	140	67	600	141	808	236	52	630	126	28	180	57	620	132	415	465	70
6014	551	185	366	98	170	67	600	141	808	266	52	630	43	28	180	57	620	132	415	465	80
6017	581	185	396	98	200	67	600	141	808	266	52	630	43	28	180	57	620	132	415	465	85
6020	611	185	426	98	230	67	600	141	808	296	52	630	58	28	180	57	620	132	415	465	88
6025	671	185	486	98	290	67	600	141	808	296	52	630	58	28	180	57	620	132	415	465	90
6030	721	185	536	98	340	67	600	141	808	296	52	630	58	28	180	57	620	132	415	465	96
6035	771	185	586	98	390	67	600	141	808	296	52	630	58	28	180	57	620	132	415	465	102

SD3-80 type

With anti-vibration rubber

M8 Depth:15

Rubber, φ45 Screw M8 Length: 29

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	Mass (kg±10%)
8005	531	235	296	108	80	141	800	67	1008	236	127	830	52	28	180	132	820	57	415	465	68
8007	531	235	296	98	100	141	800	67	1008	236	127	830	52	28	180	132	820	57	415	465	71
8009	551	235	316	98	120	141	800	67	1008	236	127	830	52	28	180	132	820	57	415	465	76
8011	571	235	336	98	140	141	800	67	1008	236	127	830	52	28	180	132	820	57	415	465	83
8013	601	235	366	98	170	141	800	67	1008	266	127	830	52	43	180	132	820	57	415	465	90
8016	631	235	396	98	200	141	800	67	1008	266	127	830	52	43	180	132	820	57	415	465	95
8019	661	235	426	98	230	141	800	67	1008	296	127	830	52	58	180	132	820	57	415	465	102
8025	721	235	486	98	290	141	800	67	1008	296	127	830	52	58	180	132	820	57	415	465	108
8030	771	235	536	98	340	141	800	67	1008	296	127	830	52	58	180	132	820	57	415	465	115
8035	821	235	586	98	390	141	800	67	1008	296	127	830	52	58	180	132	820	57	415	465	120

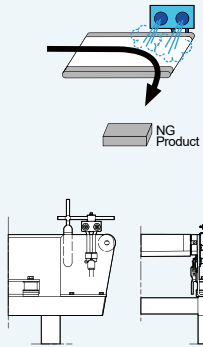*It is possible to provide metal detector coil part only. *Please ask us about other special coil size.
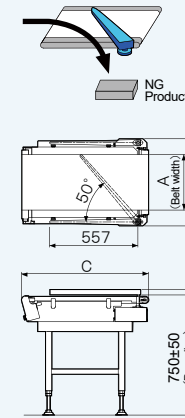
Independent operation box

*Maintenance space

To inspection coil

φ8
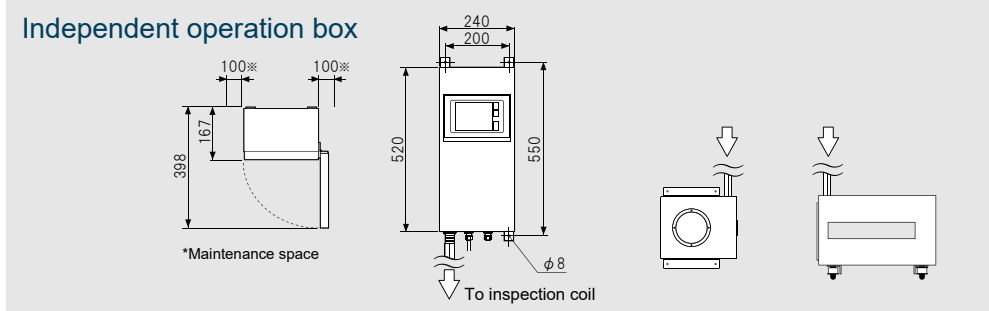
Example of transfer system
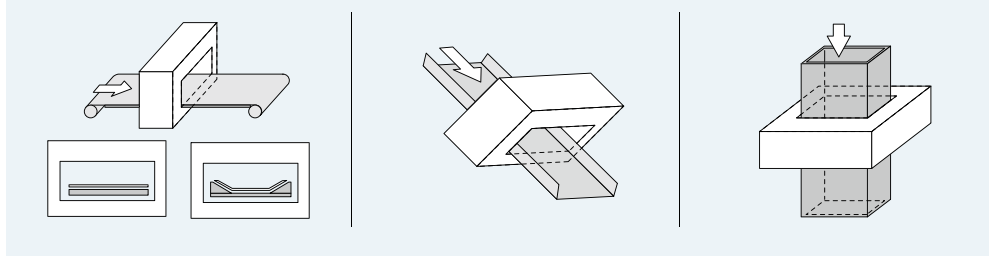
Sorting machines

Air jet system

Wide type

Narrow type

Model	AR001
Sorting direction	2directions
Transport weight	～0.3kg
Compressed air source	0.5Mpa～0.85Mpa
Air consumption	16L/time(ANR)
Mass	3kg

NG Product

Dropout system(with belt)

NG Product

	DV250W	DV400W	DV540W
A	250	400	540
B	350	500	660
C	350	500	650
D	750±50	750±50	870±50
E	25°	30°	24.1°
F	133	230	248

Model	DV250W	DV400W	DV540W
Sorting direction	2directions		
Transport weight	～5kg		
Compressed air source	0.5Mpa～0.7Mpa		
Air consumption	1.0L/time(ANR)		
Mass	22kg	28kg	37kg
Dimension	W350×L350	W500×L500	W660×L650

Dropout system(with chute)

Downward

Model	DS220 DW	DS350 DW	DS500 DW
Sorting direction	2directions		
Transport weight	～5kg		
Compressed air source	0.5Mpa～0.7Mpa		
Air consumption	0.5L/time(ANR)		
Mass	7kg	8kg	10kg

NG Product

Upward

Model	US220 DW	US350 DW	US500 DW
Sorting direction	2directions		
Transport weight	～5kg		
Compressed air source	0.5Mpa～0.7Mpa		
Air consumption	0.5L/time(ANR)		
Mass	7kg	8kg	10kg

NG Product

Flipper system

NG Product

50°

557

C

34

750±50 (Pass line)

A (Belt width)

B

	FL220D/W	FL350D/W
A	220	350
B	400	550
C	700	800

Model	FL220 D/W	FL350 D/W
Sorting direction	3directions	
Transport weight	～3kg	
Compressed air source	0.5Mpa～0.7Mpa	
Air consumption	0.4L/time(ANR)	
Mass	37kg	70kg
Dimension	W400×L700	W550×L800

Line change sorting machine

NG Product

153 (Conveyance plate)

466

740

783

750±50 (Pass line)
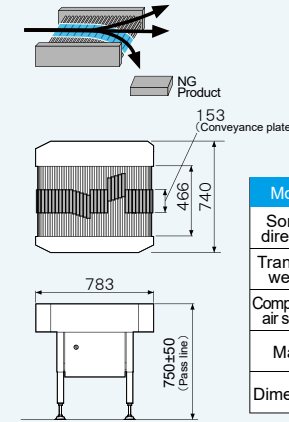
Model	SC3150W
Sorting direction	3directions
Transport weight	～2kg
Compressed air source	Not used
Mass	95kg
Dimension	W740×L783

Shuttle conveyor

NG Product

700

200 (Stroke)

A (Belt width)

B

750±50 (Pass line)

	SS250W	SS400W
A	240	390
B	393	543

Model	SS250W	SS400W
Sorting direction	2directions	
Transport weight	～5kg	
Compressed air source	0.5Mpa～0.7Mpa	
Air consumption	2.8L/time(ANR)	
Mass	40kg	50kg
Dimension	W393×L700	W543×L700

W: Dimension in belt width direction, L: Dimension in transport direction (The dimensions are reference values.)