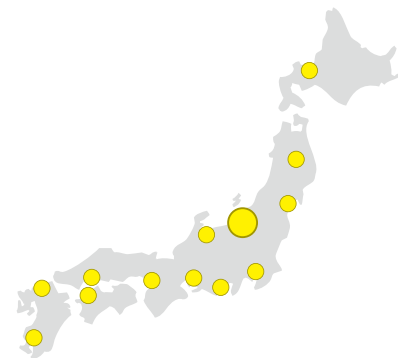


Agents



Japan office

Metal Detectors

General Catalog



For more information, contact our office listed below.
The contents of the specifications are subject to change without prior notice due to continual improvement.



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Europe • United Arab Emirates • Malaysia • Indonesia • Vietnam • Mexico

Japan office
Sapporo • Iwate • Sendai • Niigata • Tokyo • Shizuoka • Toyama • Nagoya
Kansai • Hiroshima • Shikoku • Fukuoka • Kagoshima

www.system-square.com

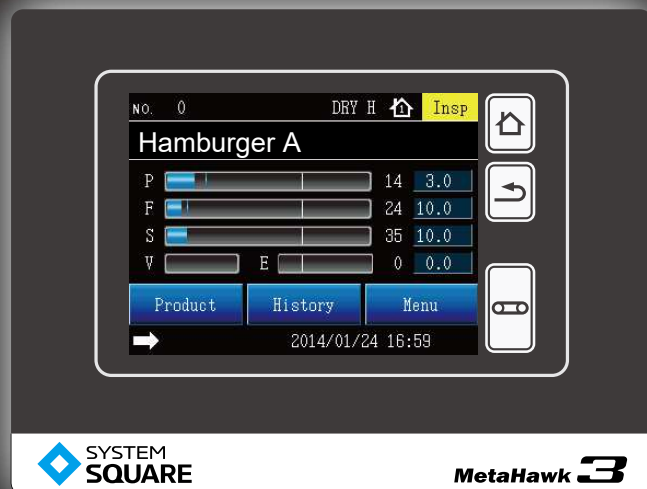




Operator friendly operability

Everyone can operate the system.

1 Level meter display

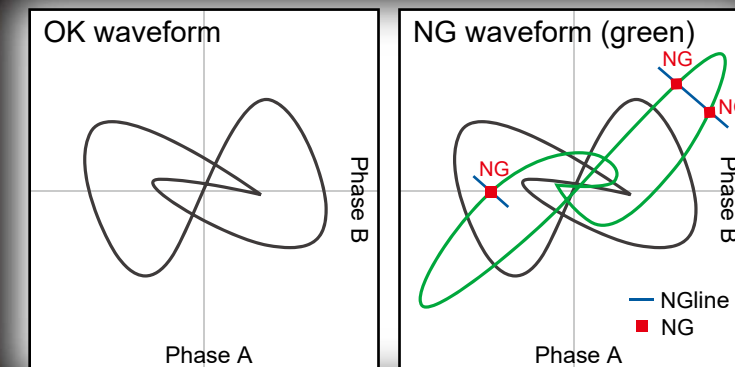


Continuously improved basic performances

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.



One-touch display change



2 Inspection Q'ty display

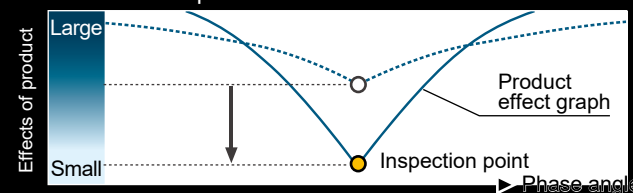


3 Inspection result magnification display



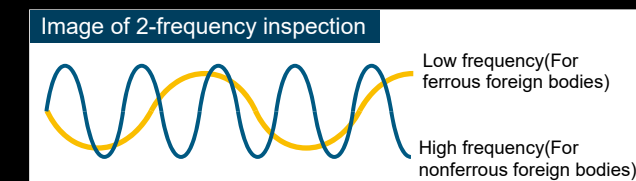
2 Advanced ECP function

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.

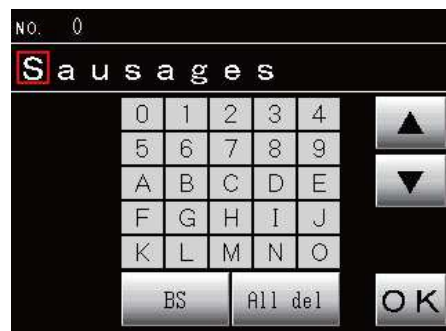


3 2-frequency inspection

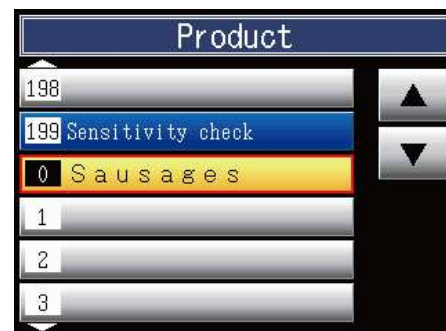
Both Fe and SUS foreign objects can be detected with high sensitivity. (System Square incorporated this 2-frequency inspection technology into the mass-production machines, first in the world and already has 10-year past experiences.)



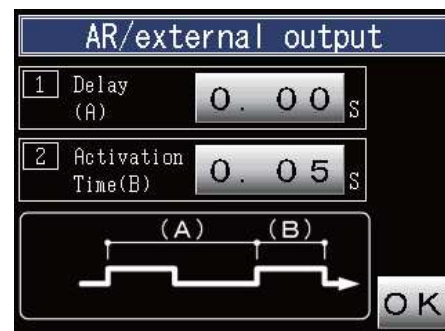
Comfortable operation with large touch panel LCD



Product name input screen
Easy inputs of products' name

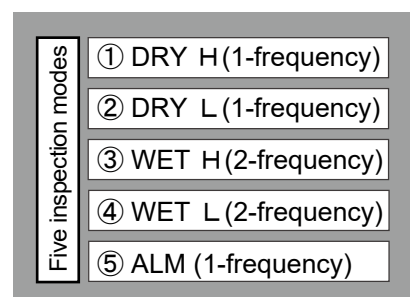


Product selection screen
Easy confirmation of registered products

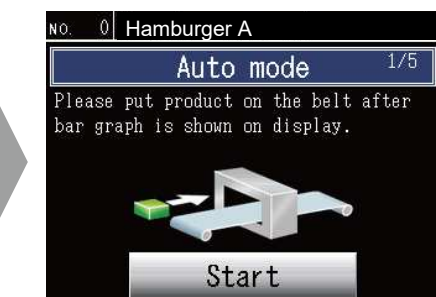


Sorting machine setting screen
Easy understanding with illustration and graph

Easy automatic sensitivity setting



Difficult selection of inspection mode...



Just operate flowing to instruction on screen...



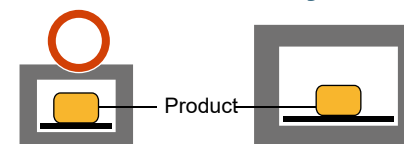
Everyone can set the best sensitivity

Example of detection sensitivity

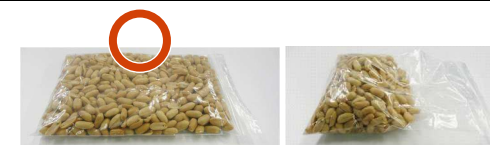
※The detection sensitivity may vary depending on the product.

	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

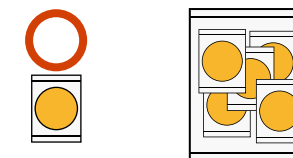
To get better sensitivity



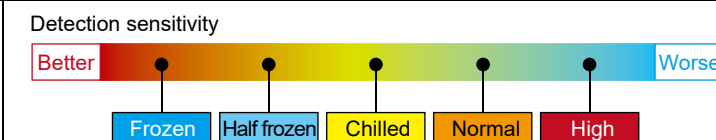
Select suitable coil
Select suitable coil because using large coil for small products causes worse sensitivity.



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.



Inspect individual package
Better sensitivity can be expected with smaller coil



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.

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

Easy cleaning



Easy cleaning

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



Enhanced history function

NO. 0 Hamburger A
All NG Event Error 82/ 88
END 14/01/24 17:02:16 No.197
14/01/24 17:02:16 CHVFRM 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=33.5 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

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 10:23:59
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.

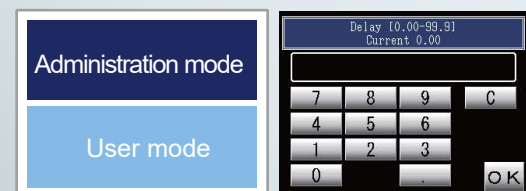
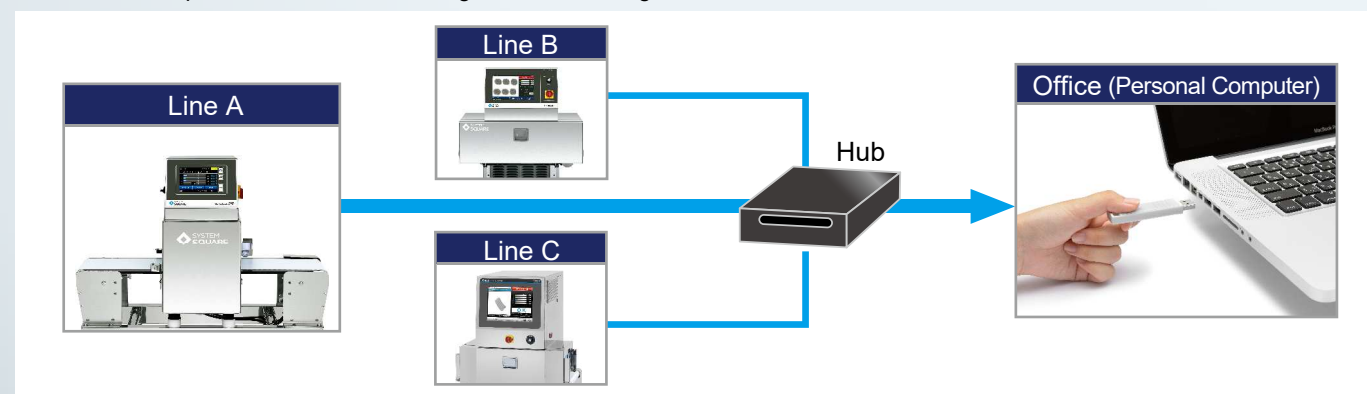
NO. 0 Hamburger A
Maintenance history
Date 2000/01/01 12:07:32
Balance value 0 16
Test piece Fe 0.0 SUS 0.0
Product name
Inspection mode DRY H
AD value 0/ 16/ 0/ 0
NG threshold 128/ 0/7852/7904

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.



Pass word is required to change access mode

Access mode selection

Protect from incorrect settings by inexperienced operators. Pass word is required to change access mode.

Enhanced communication function

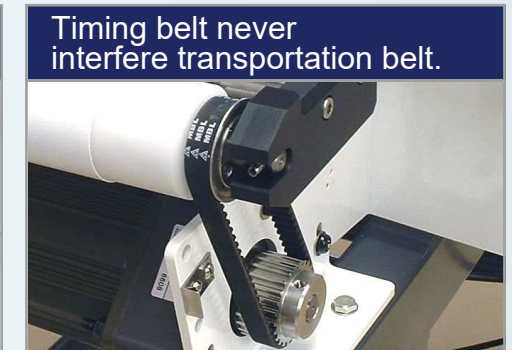
4 serial ports and LAN port is available for communication between PC, labeler, bar code, printer, etc.

Simple structure

Waterproof 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.

<h3>Hydraulic pressure</h3> <p>Running water</p> <p>Head 1m Max.</p>	<h3>Water temperature</h3> <p>40°C Max.</p>	<h3>Detergent</h3> <p>Neutral detergent</p> <p>Consult us if ozone sterilization, alkaline/acid detergent or salt water is to be used.</p>	<h3>Cleaning tools</h3> <ul style="list-style-type: none"> 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.

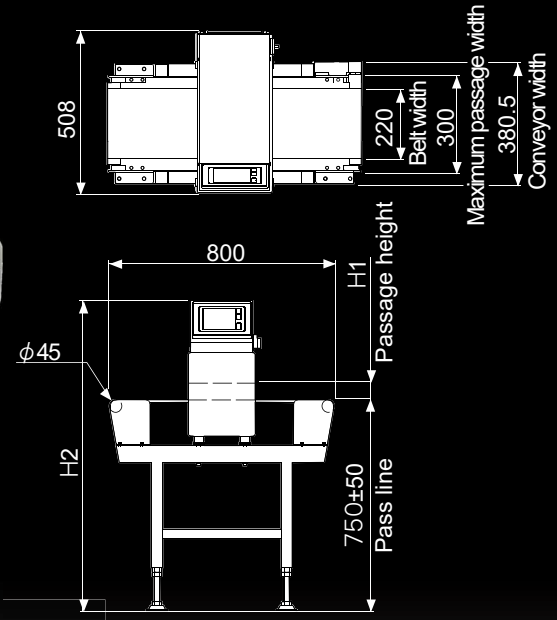
ISO (International Organization for Standardization)

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.

Compact size Metal Detectors SD3-30Type



	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

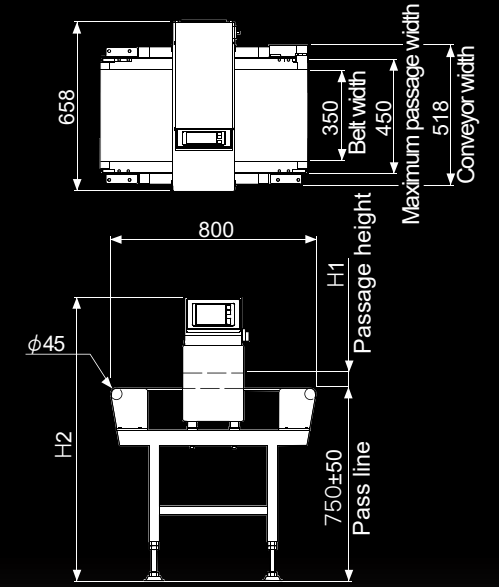
Unit: mm



For inspection of small products, such as small snack bags

Applicable to a passage width of up to 30 cm

Compact size Metal Detectors SD3-45Type



	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)	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	φ 0.35	φ 0.4	φ 0.45	φ 0.5	φ 0.55	φ 0.6
	SUS304	φ 0.65	φ 0.7	φ 0.8	φ 0.9	φ 0.95	φ 1.0
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	

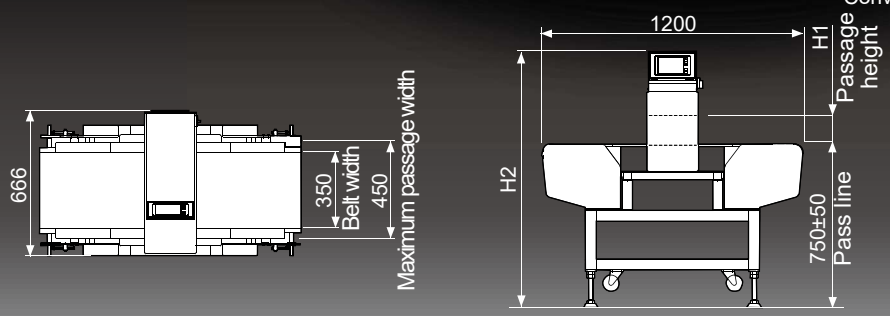
Model(SD3-XXXXD/W)	4506	4508	4510	4512	4515	4518	
Maximum passage width (mm)	450						
Maximum passage height (mm)	60	80	100	120	150	180	
Detection sensitivity (mm)	Fe	φ 0.4	φ 0.45	φ 0.5	φ 0.55	φ 0.6	φ 0.7
	SUS304	φ 0.7	φ 0.8	φ 0.9	φ 1.0	φ 1.1	φ 1.2
Belt speed	24m/min(50Hz)						
Conveyor size	800mm(length)×350mm(belt 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

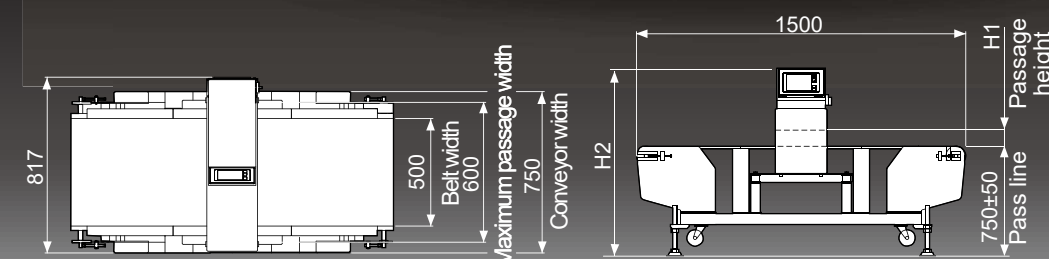
For inspection of products contained in large boxes and bags, such as rice, wheat flour, and cereals, etc
It copes with conveyance of heavy items (20Kg) (On the conveyor)



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

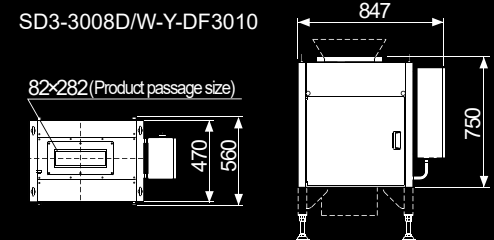
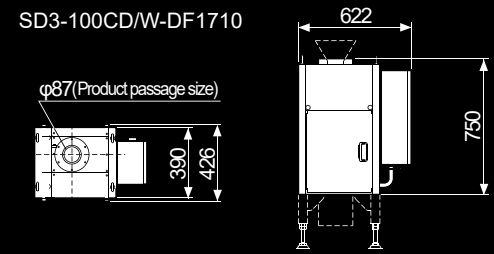


Model(SD3-XXXXBD/W)	4505	4507	4509	4511	4514	4517	4520	4525	4530	4535	
Maximum passage width (mm)	450										
Maximum passage height (mm)	50	70	90	110	140	170	200	250	300	350	
Detection sensitivity(mm)	Fe	φ 0.4	φ 0.45	φ 0.5	φ 0.55	φ 0.6	φ 0.7	φ 0.7	φ 0.8	φ 0.9	φ 1.0
	SUS304	φ 0.85	φ 0.9	φ 0.95	φ 1.0	φ 1.1	φ 1.2	φ 1.4	φ 1.5	φ 1.7	φ 2.0
Belt speed	24m/min(50Hz)										
Conveyor size	1,200mm(length)×350mm(belt width)										
Upon detection of metal	Belt stopped, buzzer warning or automatic sorting (option)										
Transport weight	20Kg										
Power requirements	AC100V±10%, 50/60Hz, 300VA										

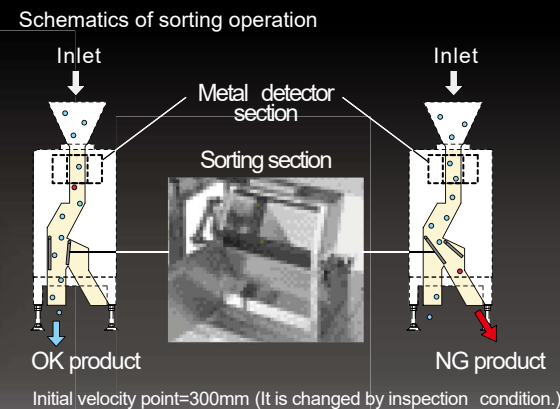
Model(SD3-XXXXD/W)	6007	6009	6011	6014	6017	6020	6025	6030	6035	
Maximum passage width (mm)	600									
Maximum passage height (mm)	70	90	110	140	170	200	250	300	350	
Detection sensitivity(mm)	Fe	φ 0.5	φ 0.55	φ 0.55	φ 0.6	φ 0.7	φ 0.8	φ 0.8	φ 1.0	φ 1.2
	SUS304	φ 1.0	φ 1.1	φ 1.2	φ 1.3	φ 1.5	φ 1.5	φ 1.5	φ 1.7	φ 2.0
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.

Drop type Metal Detectors



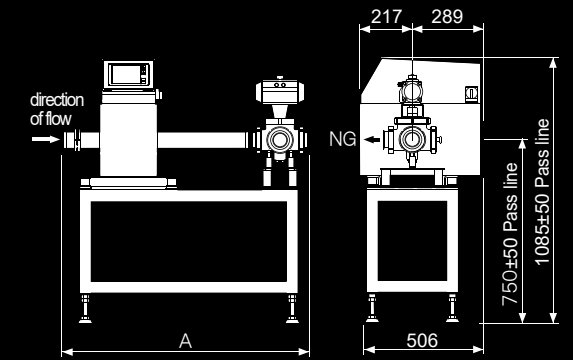
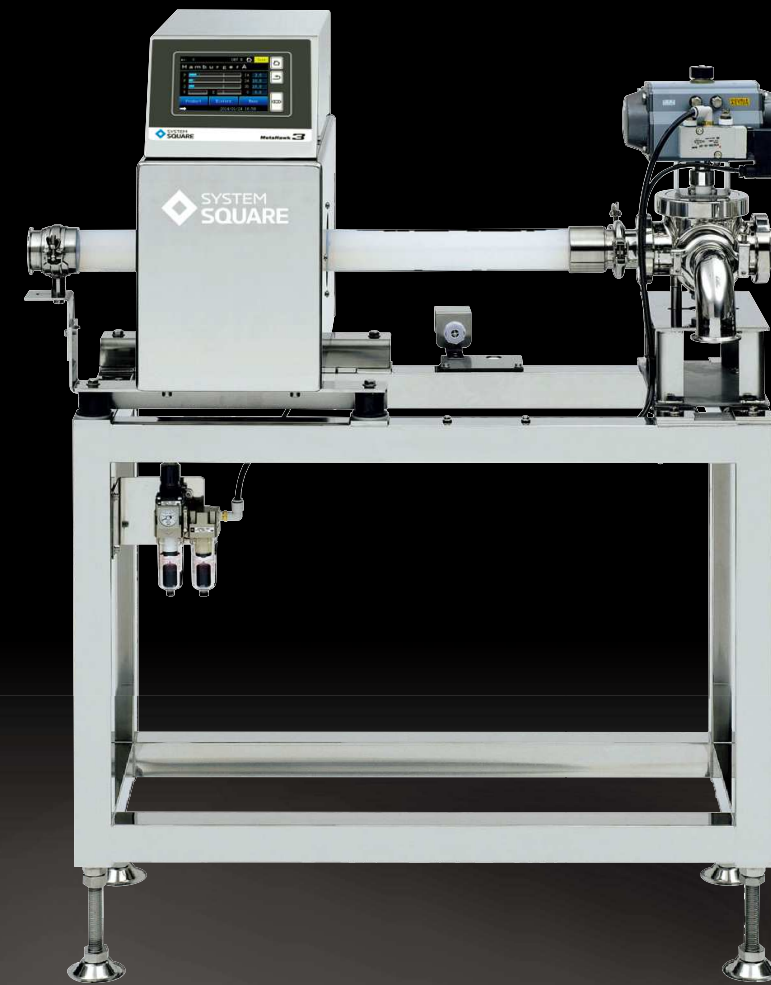
*The sections indicated with dotted line are option.



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.

Pipe transfer type Metal Detectors



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	SD3-100CD/W-DF1710	SD3-3008D/W-Y-DF3010
Maximum passage width (mm)	φ 87	82×282
Detection sensitivity (mm)	Fe	φ 0.4
	SUS304	φ 0.7
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

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	φ 0.4			
	SUS304	φ 0.7			
Inside diameter of coil opening	φ 100				
Pipe size (inch)	1.0	1.5	2.0	2.5	3.0
Height of inlet/outlet	750mm				
Ferrule shape	IDF ferrule				
Maximum passage flow rate (ℓ/h)*1	500	1200	2000	4500	7000
Withstand pressure (MPa)*2	1.5	1.5	1.3	1.3	1.1
Heatproof temperature(°C)*2	80	80	80	80	50
Sorting method	Air driven 3-way ball valve				
Ball valve operation	Operating temperature range: -5°C to 95°C, Max. operating pressure: 0.7 MPa, IP55				
Power requirements	AC100V(50/60Hz)120VA				
Air supply 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.

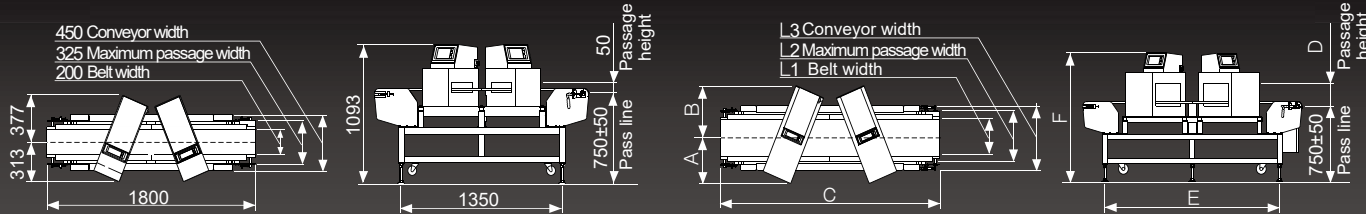
D (non-waterproof) / W (waterproof) Appropriate measures are taken so that no products are brought in contact with the inside of the passage port. The detection sensitivity may vary depending on the product and/or operating environment. The specifications are subject to change without prior notice due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

Metal Detectors for needles



SD3-4505VW

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



	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 which cannot 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	φ 0.6	φ 1.2	φ 1.8	φ 2.0	
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



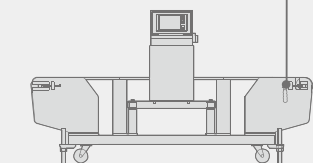
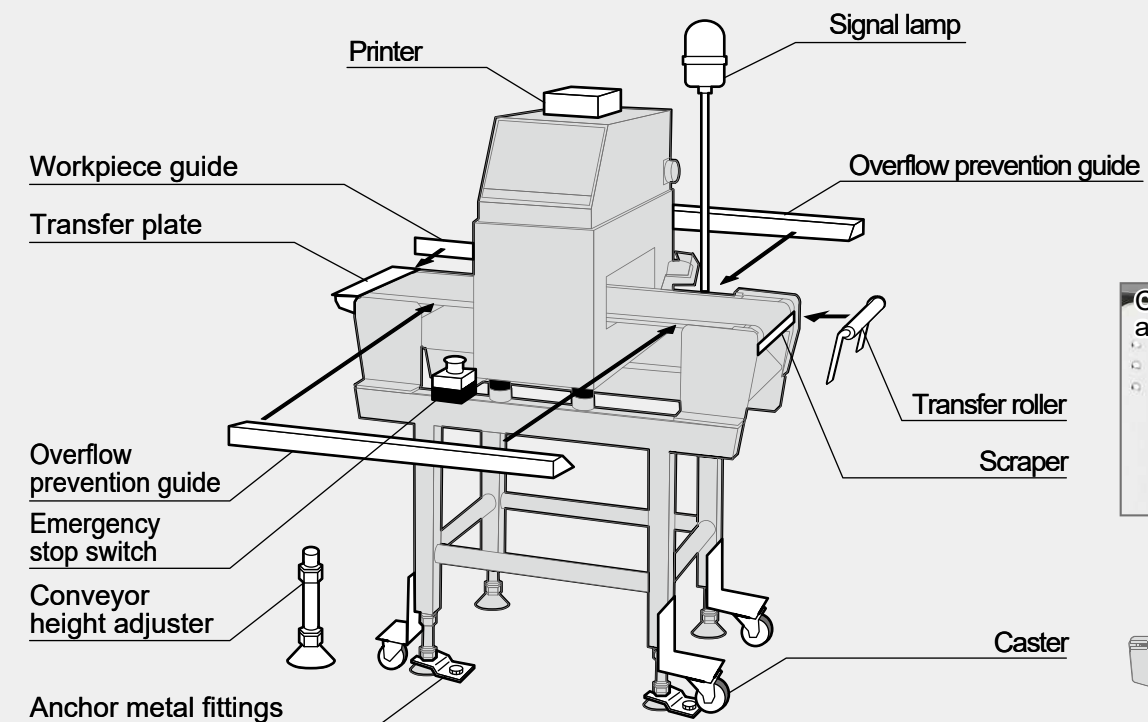
Drop type



Wide type

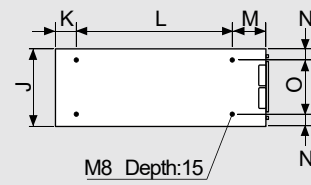
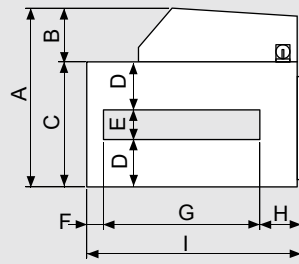


Options

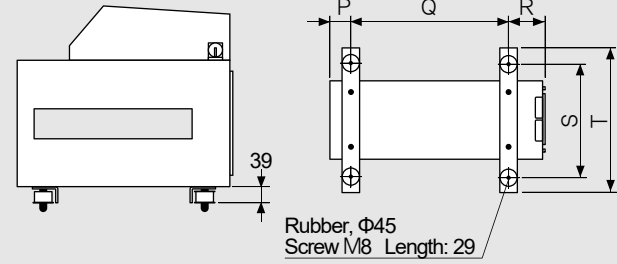


Coils

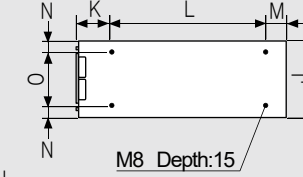
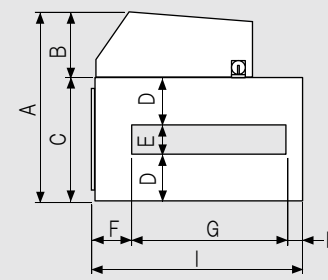
SD3-30,45,60 type



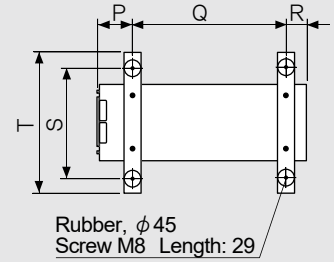
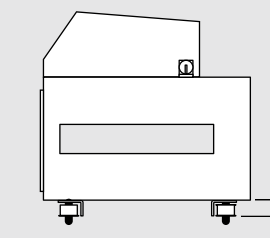
With anti-vibration rubber



SD3-80 type



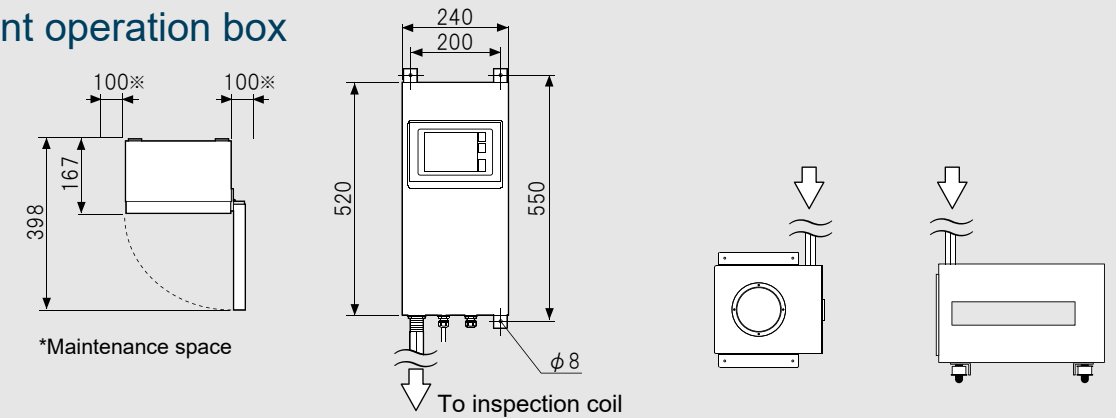
With anti-vibration rubber



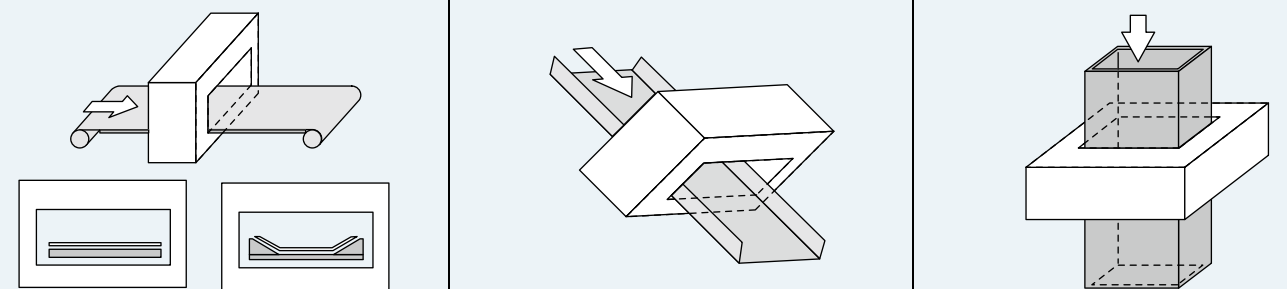
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	Mass (kg±10%)
3006	481	185	296	108	80	67	300	141	508	236	53	328	127	36	164	53	328	128	354	400	54
3008	481	185	296	98	100	67	300	141	508	236	53	328	127	36	164	53	328	128	354	400	50
3010	501	185	316	98	120	67	300	141	508	236	53	328	127	36	164	53	328	128	354	400	52
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

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

Independent operation box



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

Flipper system



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

Model	FL220D/W	FL350D/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

Dropout system(with belt)



	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

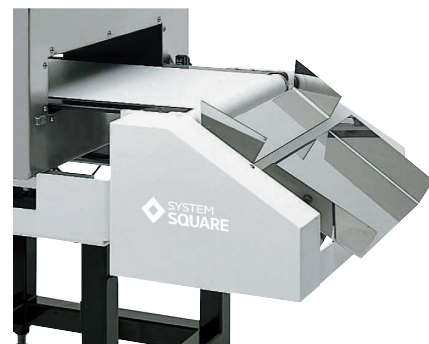
Shuttle conveyor



	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

Dropout system(with chute)



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

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

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