

Nut inshell
hazelnuts
sorting
performance





Model	VALOR 5
X-Ray Output	320 W
X-Ray Leakage	< 0.2 uSv / h (without shielding)
Display Size	17 - inch
Air Guns	96
Machine Dimensions	2610 × 1100 × 2030 mm
Feeder Dimensions	700 × 700 × 300 mm
Air Pressure	0.6 MPa
Power Consumption	5.5 kW
Power Supply	220 VAC; 50 Hz

Sort out the listed bad kernel from NIS Hazelnuts as listed:



Mould kernel



Unhealthy kernel (white spot, rotten)



Heavy and light shrivelled

The real test data from the field



Rounds	Accept		Reject		Defects rates in Accept	False rejects rates (GIB)	Duration(S)	Capacity (t/h)
	Sound	Unsound	Sound	Unsound				
1	47	3	16	34	6%	32%		2.5
2	45	5	12	38	10%	24%		2.5
Invert	39	11	6	44	22%	12%		2.5



Photo of Raw material:

37 out of 100 pieces



Test 1:

image of Accept side (3 out of 50 are unsound)





Test 1:
Images of rejected side ,
out of 50 rejected nuts, 16 were sound and 34 were
unsound)



Invert sorting:

Images of accept side ,

11 out of 50 nuts, which can be run as a raw material again



Invert sorting:

Rejected side

Out of 50

6 are sound and 44 are Unsound)

Conclusion:



According to test results, the Valor 5 X-ray sorter significantly reduces unsound hazelnuts. Besides shrink and hollow-shell nuts, it efficiently identifies nuts with white spots, insect damage and mould.

Note:

All tests follow our internal inspection criteria, which may differ slightly from the customer's standards. Final assessment shall be confirmed via mutual consultation.