

ASA-1C

Diamond color sorting machine

New product



Diamond sorting machine ASA-1C is designed for color sorting of diamonds of $-4 + 1.8$ mm in size into 12 classified positions.

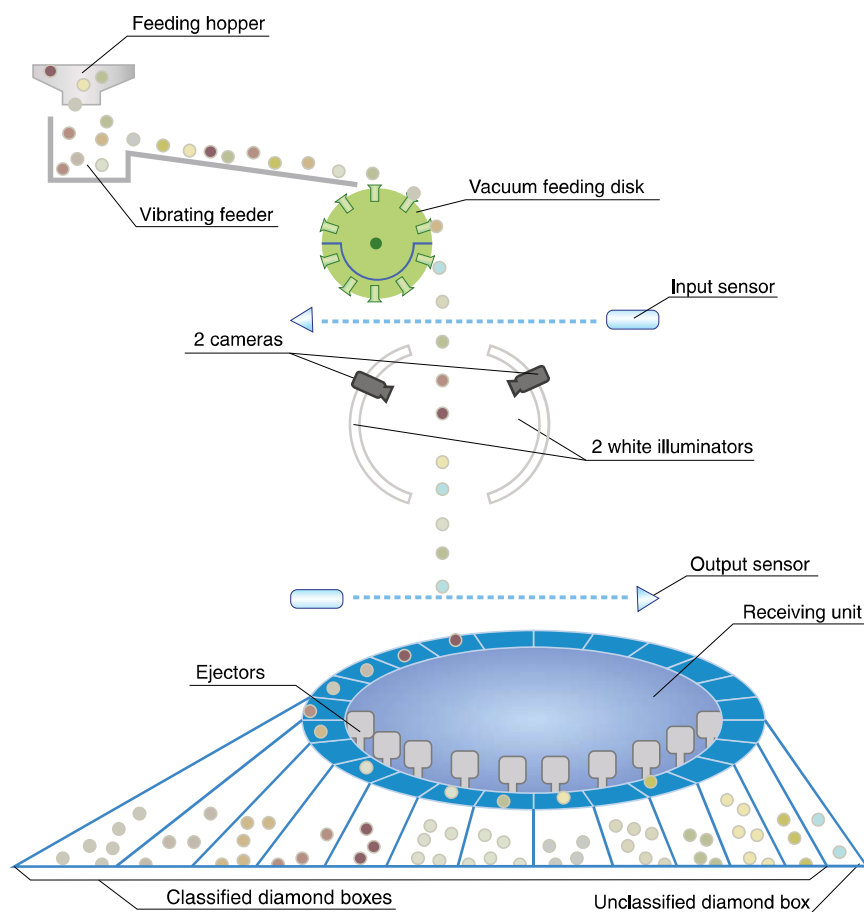
Operation

Diamond crystals are fed one by one into the registration zone by means of a vacuum disk. Two video cameras transmit two projections of the diamond to the computer. The classifier program creates a color model of the diamond and determines its color. The diamond is placed in the cell of the receiving drum, from where, at the command of the executive module, it is cut off into the box corresponding to the color number.

Technical data

Size fraction, mm	$-4.5 + 1.8$
Size variation for each fraction, mm	0.3
Average throughput, particles per second	5
Number of boxes for sorting diamonds:	
- classified items	12 (the actual number is determined by the classifier)
- unclassified items	1
Composition of each sorted item:	
- main item, not less than, %	90
- diamonds not belonging to this item, not more, %	10
The probability of mechanical separation of diamonds into the corresponding box according to the signal from the registration system not less than, %	99
Compressed air consumption, l/min	no more than 200
Overall dimensions (LxWxH), mm	1200x900x1500
Weight, kg	250
Power consumption, VA (single-phase network, 220V/50Hz)	1000

Principal Process Diagram



Software operation

SORTING BY COLOR											
1BRN	2BRN	3BRN	4BRN	5BRN	1CLR	2CLR	3CLR	4CLR	5CLR	CAPE	YELL

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