



# ZS Cylindrical screening machines





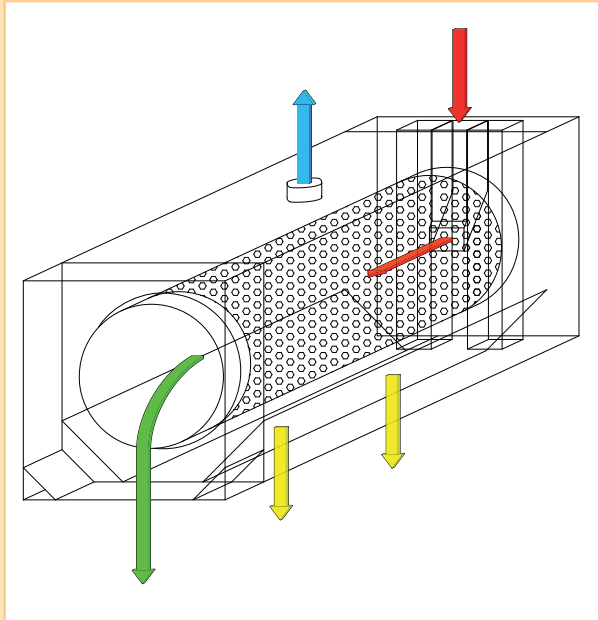
# A Application and function

Cylindrical screening machines are used for sorting and grading of seeds and cereals (grain, maize, sunflower seed, rice etc.) and generally granular products (recycling products). The incoming material is sorted according to its width (round perforation) and respectively its thickness (slotted perforation). All kernels thinner than the screen holes fall through the screen (yellow), and all thicker kernels remaining in the screening cylinder are transported to the end-outlet (green).

By means of the permanent circulation of the product and the resulting centrifugal force, each kernel is forced to be in contact with the screen perforation, enabling sorting operations to be carried out with high accuracy.

The single cylinders built as self supporting steel constructions can be joined in various configurations by means of the simple modular system, so that a huge spectrum of sorting targets can be covered. For example, cylindrical screening machines are mainly used for the calibration of maize seed (4 – 6 grades). Thus, the sorting section of the largest maize seed processing plant in the world, currently, (status 2005) is entirely equipped with Cimbria Heid cylinders.

Through the use of vibrating troughs, deflector boxes and discharge hoppers, gentle handling of the product and complete self emptying at the process-end are guaranteed.



# S Series Production

Cimbria Heid produces machines in series production. During production each machine has to pass several specific quality controls to meet the requirements at the highest level.



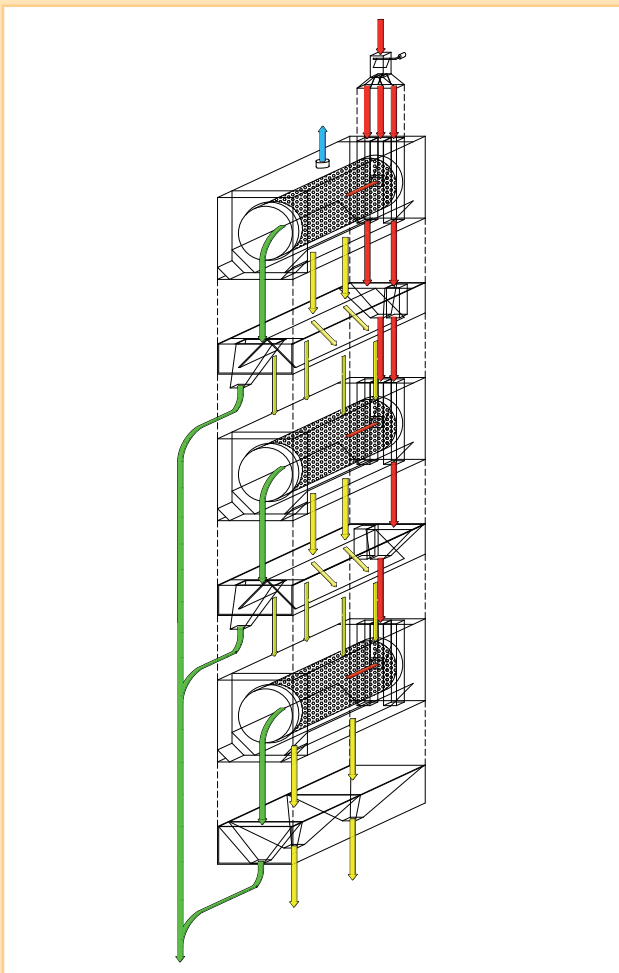


# Modular system

By means of the modular system previously mentioned, it is possible to realize 12 different sorting diagrams, always using only one drive motor (Energy saving) with chain drive connection to the single cylinders. A maximum of 3 cylinders can be installed above each other.

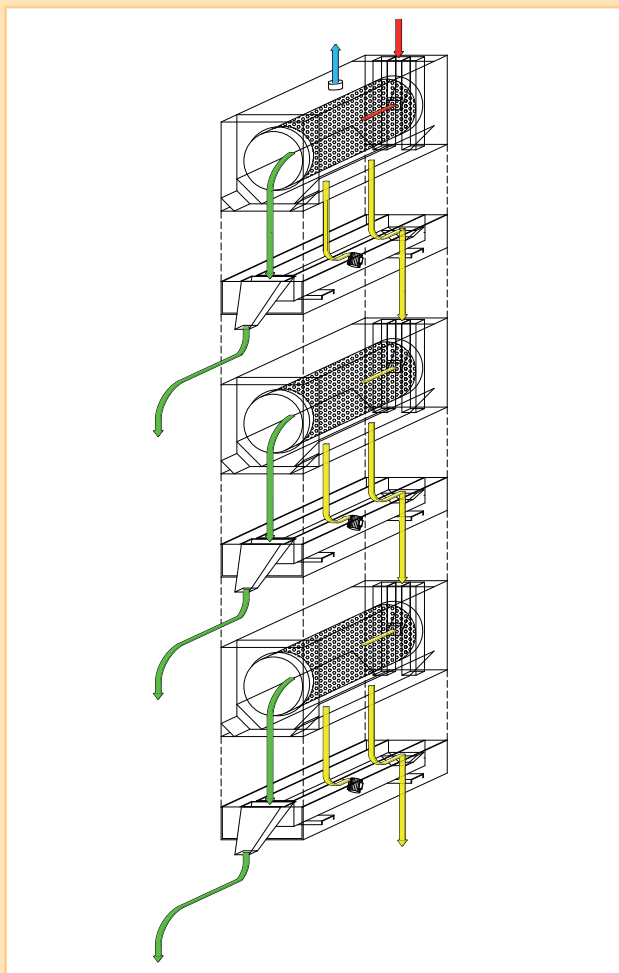
## Parallel operation:

It is necessary to deflect the product falling through the upper screening cylinder so that it doesn't hit the lower cylinder. Therefore, deflector boxes are used. The oversize product is discharged at the end of each cylinder. The even distribution of product to the single cylinders is achieved by a weight regulated flap on the inlet, to the separate inlet channels.



## Series operation:

The product falling through the upper screening cylinder is fed to the inlet of the next cylinder by means of a vibrating trough. The oversize product is discharged at the end of each cylinder.



The outlet of the bottom cylinder can either be fitted with an outlet hopper (left picture) or with a vibrating discharge trough (right picture).



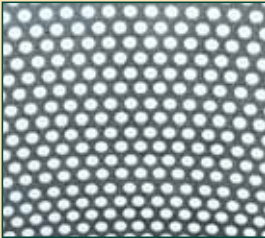
# The Screen

Cimbria Heid is one of only a few companies who are producing their screens 100% by themselves. Long experience in pressing technique has led to high precision and therefore accuracy in sorting. The advantage of an in-house punching shop gives us the advantage of short reaction time for subsequent screen deliveries. Generally, round perforations are used for sorting according to the width and slotted perforations for sorting according to the thickness.

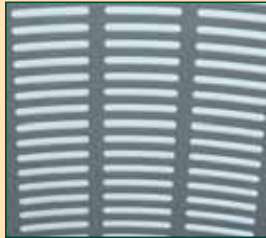
Five different kinds of perforation are available:

## Standard perforations

Standard-round



Standard-slotted



## Special perforations for very flat products

Special-round



Special-slotted



## Wire-screen

For special sorting-tasks, we can also offer highly precise wire-screens. Their advantages are the comparatively big open area and the excellent wear-resistance.



# Features

## Corporate drive

Up to 6 cylinders can be joined to one battery and driven by a single gear-motor with simple chain-drive → Energy saving.

The drive can be equipped with fixed speed or alternatively with variable speed (by frequency inverter or by mechanical speed variator gear).



## Simple screen-exchange

On the Types ZS300 and ZS500, the screening cylinders are precisely inserted via leading-bars and fixed by means of a bayonet lock. On the type ZS700, the 3 screen segments are attached on supporting discs.





### Adjustable Screen-inclination

For regulation of the throughput-capacity, the inclination of each cylinder is steplessly adjustable between 0 and 2,5°.



### Permanent screen cleaning

PU-rollers pressing against the screen with their own weight are permanently cleaning the screen to prevent blockage of the screen-holes and therefore avoiding capacity- and quality-losses. For certain products, brush rollers can be installed as an alternative. On request, an additional hand operated cleaning device can be included, which is used only briefly at the process-end to remove kernels which are still stuck in the screen holes.



## Technical data

DIAGRAM	TYPE	Capacity [t/h]							Drive [kW]		Aspiration [m <sup>3</sup> /min]	Dimensions [mm]			Net Weight [kg]	Grades
		Wheat	Maize Round perforation	Maize Slotted perforation	Sunflower Round perforation	Sunflower Slotted perforation	White rice	Standard	variable speed gear	Length		Width	Height			
	ZS 300 I	1,8	0,7	0,9	0,35	0,5	1	0,37	0,55	10	2242	565	925	230	2	
	ZS 500 I	3,75	1,3	1,8	0,7	1	2	0,75	1,1	10	2527	735	1170	315		
	ZS 700 I	7,5	2,5	3,5	1,4	2	4	1,1	1,5	20	3715	1036	1575	824 - br.		
	ZS 300 II-A	3,6	1,4	1,8	0,7	1	2	0,75	1,1	20	2357	1096	925	460	2/4	
	ZS 500 II-A	7,5	2,6	3,6	1,4	2	4	1,5	2,2	20	2610	1436	1170	790 - br.		
	ZS 700 II-A	15	5	7	2,8	4	8	2,2	3	40	3755	2036	1575	1600		
	ZS 300 II-BP	3,6	1,4	1,8	0,7	1	2	0,75	1,1	10	2531	565	1955	460	2	
	ZS 500 II-BP	7,5	2,6	3,6	1,4	2	4	1,5	2,2	10	2792	735	2450	744 - br.		
	ZS 700 II-BP	15	5	7	2,8	4	8	2,2	3	20	3978	1036	3360	1551		
	ZS 300 II-BS	1,8	0,7	0,9	0,35	0,5	1	0,75	1,1	10	2531	565	1715	470	3	
	ZS 500 II-BS	3,75	1,3	1,8	0,7	1	2	1,5	2,2	10	2792	735	2210	685		
	ZS 700 II-BS	7,5	2,5	3,5	1,4	2	4	2,2	3	20	3978	1036	3035	1551		
	ZS 300 III-P	5,4	2,1	2,7	1	1,5	3	1,1	1,5	10	2584	565	2770	700	2	
	ZS 500 III-P	11,25	3,9	5,4	2	3	6	2,2	3	10	2832	735	3515	1114		
	ZS 700 III-P	22,5	7,5	10,5	4	6	12	3	4	20	3991	1036	4900	2400		
	ZS 300 III-S	1,8	0,7	0,9	0,35	0,5	1	1,1	1,5	10	2584	565	2505	700	4	
	ZS 500 III-S	3,75	1,3	1,8	0,7	1	2	2,2	3	10	2832	735	3250	956		
	ZS 700 III-S	7,5	2,5	3,5	1,4	2	4	3	4	20	3991	1036	4495	2400		
	ZS 300 III-PS	3,6	1,4	1,8	0,7	1	2	1,1	1,5	10	2584	565	2745	700	3	
	ZS 500 III-PS	7,5	2,6	3,6	1,4	2	4	2,2	3	10	2832	735	3490	956		
	ZS 700 III-PS	15	5	7	2,8	4	8	3	4	20	3991	1036	4820	2400		
	ZS 300 IV-P	7,2	2,8	3,6	1,4	2	4	1,5	2,2	20	2584	1096	1955	930	2/4	
	ZS 500 IV-P	15	5,2	7,2	2,8	4	8	3	4	20	2845	1436	2450	1434 - br.		
	ZS 700 IV-P	30	10	14	5,6	8	16	5,5	7,5	40	4158	2036	3360	3200		
	ZS 300 IV-S	3,6	1,4	1,8	0,7	1	2	1,5	2,2	20	2584	1096	1715	930	3/6	
	ZS 500 IV-S	7,5	2,6	3,6	1,4	2	4	3	4	20	2845	1436	2210	1275		
	ZS 700 IV-S	15	5	7	2,8	4	8	5,5	7,5	40	4158	2036	3035	3200		
	ZS 300 VI-P	10,8	4,2	5,4	2,1	3	6	2,2	3	20	2624	1096	2770	1400	2/4	
	ZS 500 VI-P	22,5	7,8	10,8	4,2	6	12	4	5,5	20	2892	1436	3515	1912		
	ZS 700 VI-P	not available														
	ZS 300 VI-S	3,6	1,4	1,8	0,7	1	2	2,2	3	20	2624	1096	2505	1400	4/8	
	ZS 500 VI-S	7,5	2,6	3,6	1,4	2	4	4	5,5	20	2892	1436	3250	2036		
	ZS 700 VI-S	not available														
	ZS 300 VI-PS	7,2	2,8	3,6	1,4	2	4	2,2	3	20	2624	1096	2745	1400	3/6	
	ZS 500 VI-PS	15	5,2	7,2	2,8	4	8	4	5,5	20	2892	1436	3490	1912		
	ZS 700 VI-PS	not available														

Our cylindrical screening machines operate worldwide.



A large number of worldwide patents justify high research and development expenditure and indicate the high technological standards of our equipment and machines. All over the world the products of CIMBRIA HEID are bought and operated successfully: some 98% of our production is exported. As a member of the CIMBRIA Group, CIMBRIA HEID has access to a global network of highly-qualified partners offering permanent support to customers and their plants.



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