

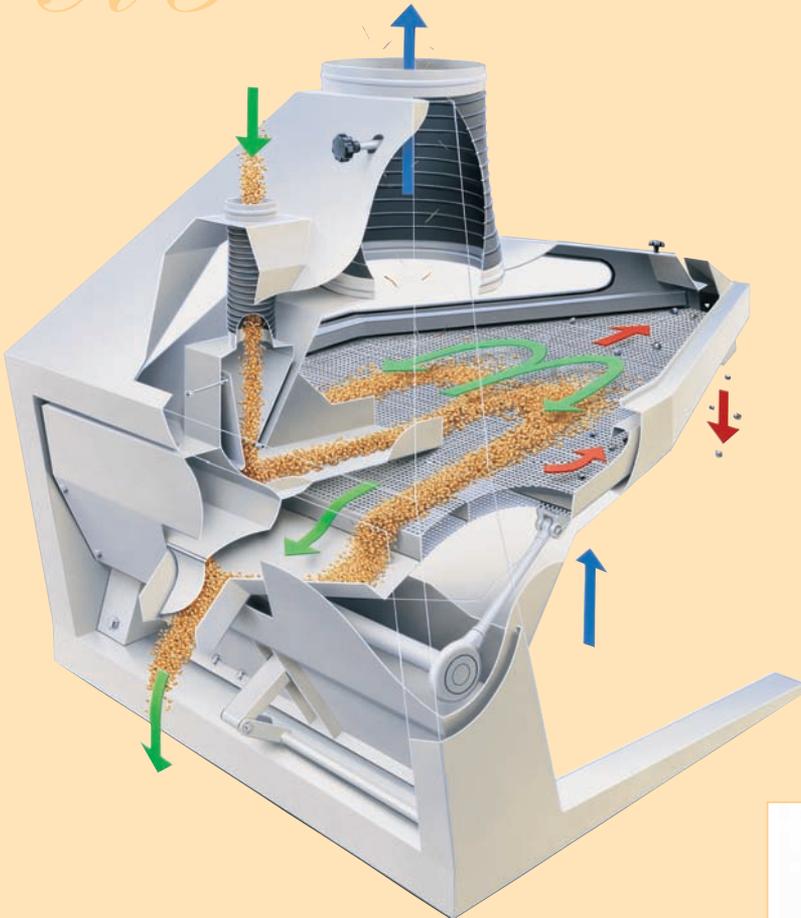


# *TS* Dry Stoners





# Mode of operation



The new generation of machines, with its types TS 90-S, TS 180-S and TS 360-S, are operated with aspiration (no dust escape) and are equipped with the patented fly-wheel type of drive, ensuring complete balancing of the dynamic forces(= minimum of vibrations).

## Application

Dry stoners are used to separate granular material according to the specific weight into two fractions and in dry material condition.

They find their application mainly in the elimination of heavy impurities, such as stones, metallic particles etc., from coffee, grain, pulse etc.

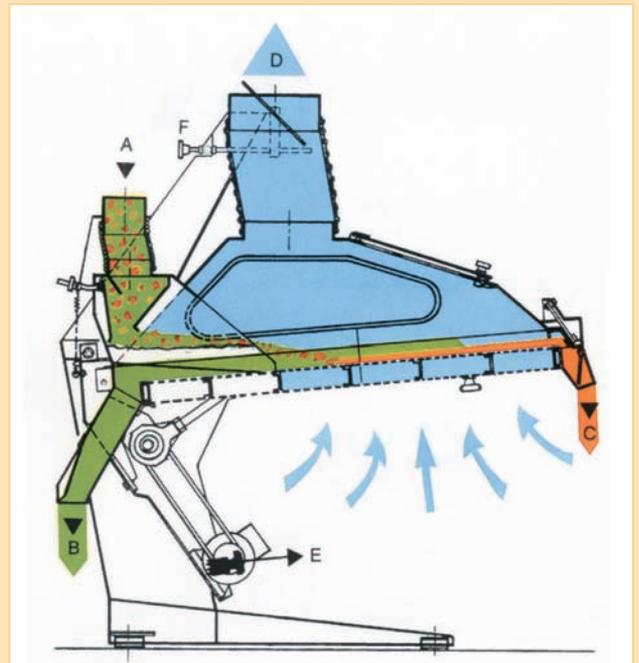
## Design

The machine consists of a self supporting steel section frame, carrying the variable frame with the fly-wheel drive and the adjustment of inclination (6-15°) of the separator table.

The vibrating movement of the table is effected by an eccentric drive (through electric motor and belt drive).

The deck surface is covered by a closed hood, containing large sight glasses and an inspection door. The exhaust duct for the required air consumption is connected to this hood. The required air volume is aspirated through the deck insert, which is permeable to air and can easily be folded down for cleaning or replacement purposes.

Air volume and material input are adjusted to each of the required operation conditions by means of adjustable flaps.



## Mode of operation

The granular material to be separated is fed onto the table deck (in its conveying direction) through an adjustable spring-actuated flap.

Depending on the grain size, the deck surface, with its adjustable inclination of 6-15°, is covered by a fine-meshed or a large meshed wire cloth, through which a steady and adjustable air flow is aspirated.

The combined effect of the vibrating movement and of the air passing through the deck causes an arranging in layers of the material flowing in (fluidisation).

The heavy admixtures sink towards the bottom and are moved to the highest point of the table deck surface (stone outlet) by the contact with the rough deck covering.

The main produce (clean produce) floats towards the top and flows, against the conveying direction of the table, to the lowest point of the deck surface, the clean produce discharge.

In the outlet area of the heavy particles, a "counter-air flow zone" avoids the clean produce being discharged into the heavy particles outlet during operation.



# Features



## Counter- air flow zone

At the stone outlet an adjustable counter- air flow zone is installed.

This is to prevent the good product from being discharged through the stone outlet during operation by means of a strong air stream.



## Adjustment of capacity

The amount of incoming material can be regulated and therefore an ideal coverage of the deck surface can be achieved.

An adjustable spring- actuated flap prevents false air from being sucked in through the material supply pipe.

## Residual discharge

On request, the machine can be equipped with a residual discharge.

Therefore, the sorting table is inclined pneumatically towards the clean product discharge (working- inclination + 8°) so that rapid table emptying can take place.



## Inlet situation

The machine with its so called "inlet- shoe" supplies itself with the correct amount of product from the material supply pipe arranged in front of the dry stoner.





# Closed circuit recirculating air system

Air recirculation systems are primarily required for equipment with high air consumption as only a small part of the air volume must be exhausted by filters.



## Advantages

- reduced filter area
- lower power consumption
- less space requirements
- savings on operating and installation costs

## Design Features

The system consists of following components

- stoner with air inlet hood
- fan with motor
- dust extractor
- pipes
- frame

The design allows either arrangement as a space saving compact unit and if building space requires an open installation the fan extractor unit can be placed in remote location to the stoner. It is also possible to install the air recirculation system on an existing conventional stoner.

## Mode of Operation

The air is pulled through the stoner by the fan and pushed into the dust separator where the dust is skimmed off returning the clean air back to the stoner via the air inlet hood. Inside the dust separator, the air flow is looped around spirally. The dust and concentrated outer layer is pushed through an adjustable slot and must be sucked into a general exhaust system or filter. The air volume that is removed from the system is substituted by air around the stoner. The negative pressure in the system ensures that dust remains in the circuit.

The amount of air leaving the system can be controlled by adjusting the width of the slot of the dust separator and controlling air velocity in the aspiration duct.

## Dimensions and specifications

Type		TS 90-S		TS 180-S	
		Standard Type A	Special Type B	Standard Type A	Special Type B
Fan power requirement	kW	4	5,5	7,5	11
Air amount	m <sup>3</sup> /min	65	85	95	120
Dust loadout air to exhaust system	m <sup>3</sup> /min	10	16	20	27
<b>Dimensions</b>	mm				
Length		1830	1830	2580	2580
Width		1460	1460	1650	1650
Height		2200	2300	2380	2470
<b>Weight net</b>	kg	440	460	680	690

• For the TS 360, no recirculating air system is available because of air-technical reasons.





# M Machine Range



**TS 90**



**TS 180**



**TS 360**

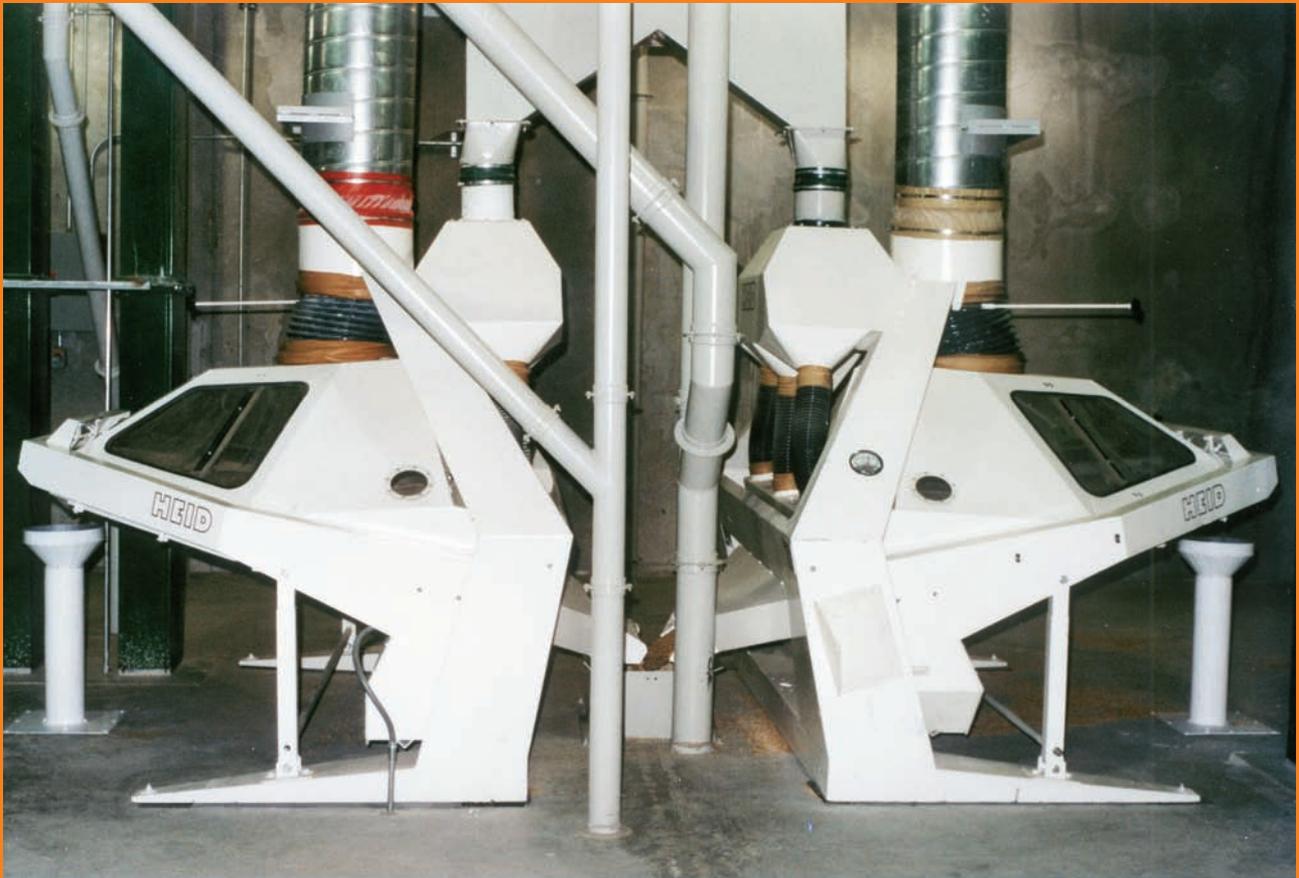


## Dimensions and specifications

Type		TS 90-S	TS 180-S	TS 360-S
<b>Capacity</b>	t/h			
Wheat		5	10,0	20,0
Raw coffee		3,8	7,5	15,0
Roasted coffee		2,5	5,0	10,0
Rice (Paddy)		2,8	5,5	11,0
White rice		3,2	6,5	13
Sesam		1,5	3,0	6,0
<b>Power consumption</b>	kW	0,37	0,55	1,10
<b>air demand</b>	m <sup>3</sup> /min	65 / 95*	95 / 120*	155 / 200*
<b>Dimensions</b>	mm			
Length		1460	1645	2150
Width		980	1700	2600
Height		1500	1580	2050
<b>Weight (netto)</b>	kg	204	250	740

\* for heavy products (e.g. beans, peas,...)

# Our dry stoners are in operation 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 installed 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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