



# **AERODYNAMIC SEPARATORS**

# ASM TECHNOLOGY SP. Z O.O.

We offer specialized cleaning equipment for seed cleaning - aerodynamic separators, made by ASM. They use patented technology for cleaning and segregating the starting material based on specific weight, with the help of air streams. ASM separators can be used for cleaning, moisture reduction and raw material calibration.

## SCIENTIFIC AND PRODUCTION COMPANY ASM TECHNOLOGY

This is a new brand on the European map of the agricultural and food industry machinery manufacturers. Based on many years of experience, we offer you modern, high performance grain cleaning and packaging machines. Specialist, precise production takes place wholly in Poland, providing you with access to modern and effective solutions in the field of cleaning and processing seeds of grains, leguminous and oil plants.

## ASM SEPARATORS' UNIQUENESS

ASM separators are used to select healthy, high-quality seeds. They can work with any material (grains, grasses, leguminous and oil plants), regardless of its moisture content.

### ASM separators work with loose material of any type and humidity in four modes:

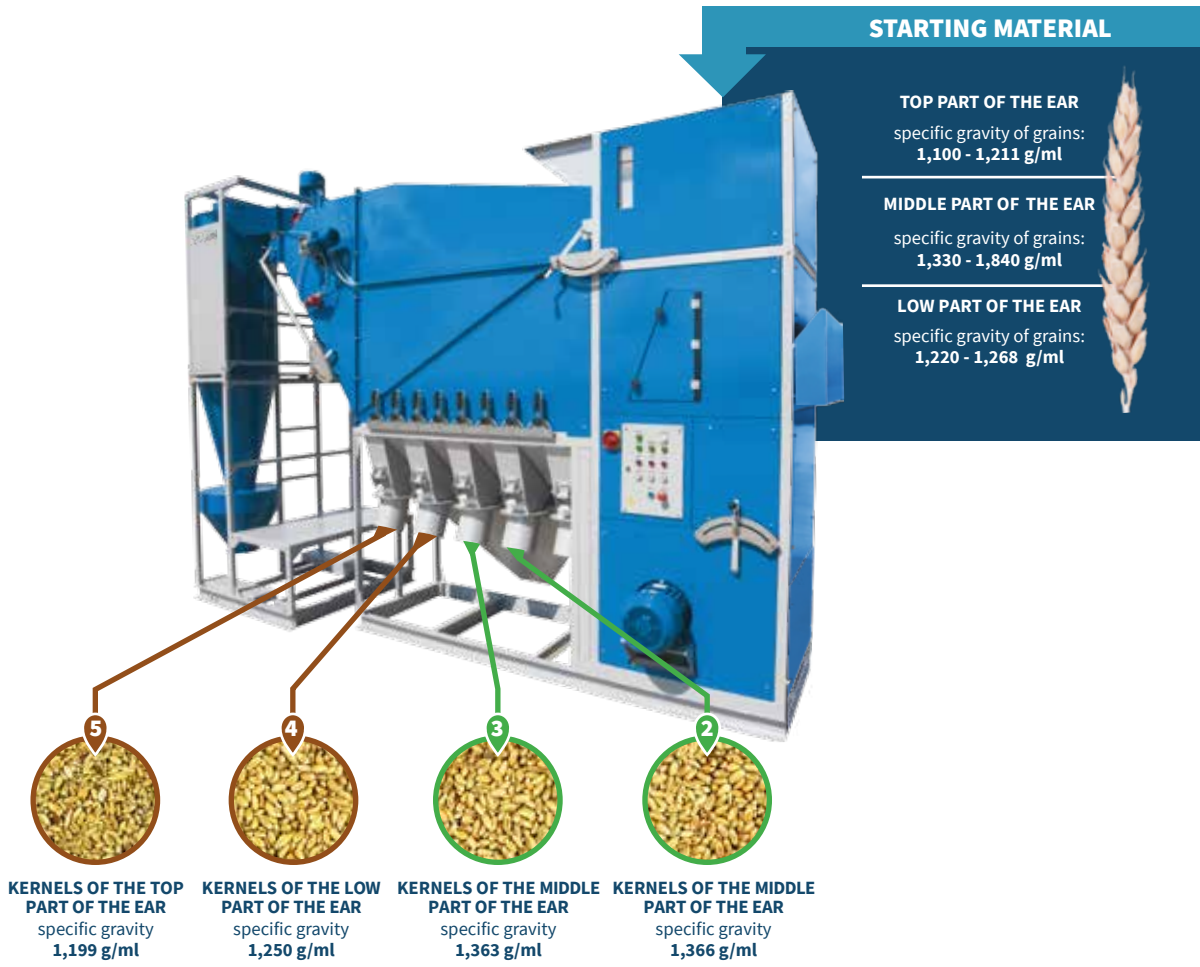
- ◆ drying,
- ◆ preliminary cleaning,
- ◆ proper cleaning,
- ◆ calibration (separation) according to the specific weight.

ASM's high-capacity separators (up to 100 t/h) and low energy consumption (from 2 kW/h) enable the moisture content of the raw material to be reduced by using air, with an efficiency of 1.5% to 2.0% per cycle. At the same time, they remove biological contaminants (fungi, bugs, beetles) and reduce the costs of further seed storage.

## TECHNOLOGY

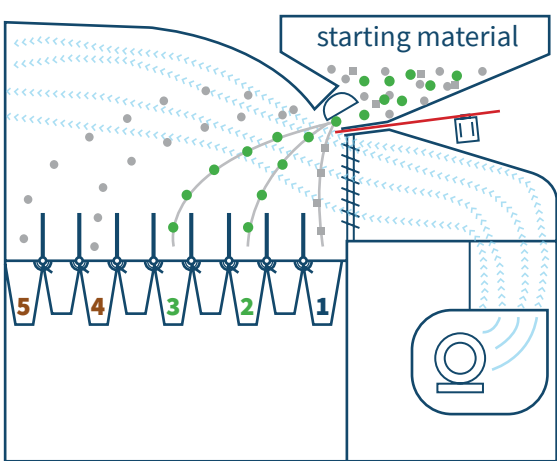
ASM separators sort seeds basing on specific weight. Our technology can be successfully used in:

- ◆ **agriculture** – when cleaning seed, it allows for selecting the most biologically valuable seeds, which translates into an increase in yields of up to 40%!
- ◆ **storage** – the pre-cleaning mode allows the grain to be prepared for storage and the lowering function allows the moisture content of the grain to be reduced to ensure the right conditions for storage.
- ◆ **processing industry** – numerous separator operation modes allow for effective cleaning of various types of raw material for the needs of mills, granaries, feed rooms, oil mills, distilleries, breweries, food industry plants and others.



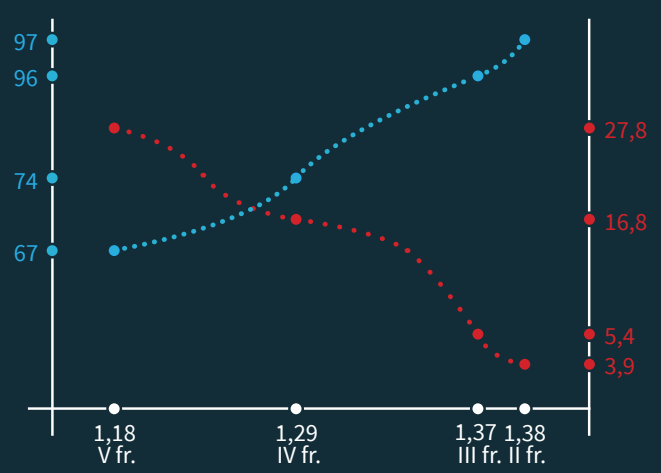
# THE WAY SEPARATORS WORK

## SEED CALIBRATION BASING ON SPECIFIC WEIGHT



The ASM aerodynamic separator separates any material of a certain density with a high accuracy of +/- 3%. More precisely - heavy seeds reach 2-3 fractions, and light, thin and damaged up to 4-5 fractions. The contaminants are separated in 1 fraction (eg. stones) or using a cyclone (dust).

## SEED SEPARATION AND REMOVAL OF INFECTED MATERIAL\*



ASM separators are also used at the pretreatment stage to reduce the risk of seed infection.

\*applicable to wheat, the starting material consisted in 19% of infected seeds

- Legend:**
- Specific gravity
  - Total infectioning
  - Germinating ability



The technology of precise segregation of the starting material based on the specific weight, in case of seeds gives very good results, allowing to extract biologically valuable seed material. This translates into an increase in yields of up to 40%.

**WHEAT**

fraction 2



fraction 3



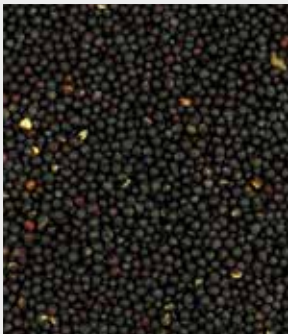
fraction 4



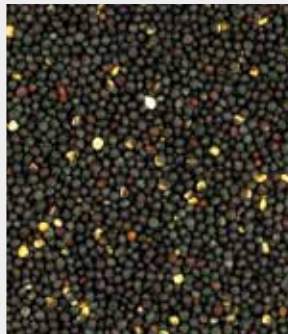
fraction 5

**RAPE**

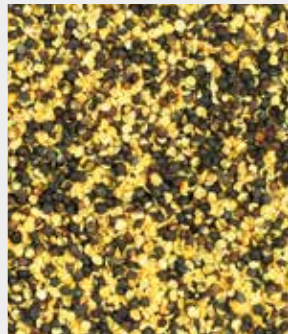
fraction 2



fraction 3



fraction 4



fraction 5

**VETCHES**

fraction 2



fraction 3



fraction 4



fraction 5

**PHACELIA**

fraction 2



fraction 3



fraction 4

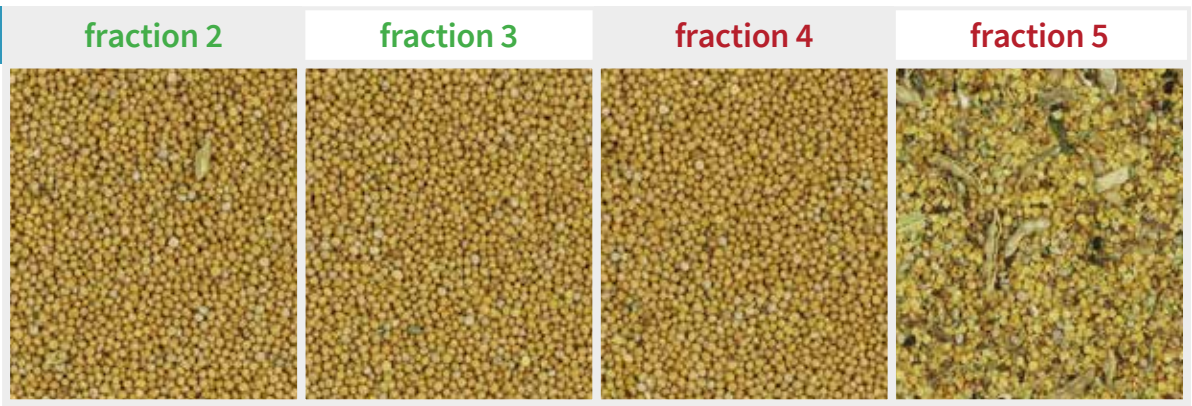


fraction 5





**THE MUSTARD**



**RYE**



**CORN**



**OAT**



## CLEANING RESULTS

The separator handles different types of raw material very well.

Examples of pre-cleaning:

WHEAT						
RAW MATERIAL	Fraction 1	Fraction 2	Fraction 3	Fraction 4	Fraction 5	Cyclone
100%	0,42%	16,39%	59,24%	20,38%	3,15%	0,42%
WEIGHT OF 1000 SEEDS (GRAMS)						
33,20	-	39,08	34,42	28,00	18,72	-
TO RAW MATERIAL	-	117,7%	103,7%	84,3%	56,4%	-

RYE						
RAW MATERIAL	Fraction 1	Fraction 2	Fraction 3	Fraction 4	Fraction 5	Cyclone
100%	0,62%	38,97%	48,45%	10,72%	1,03%	0,21%
WEIGHT OF 1000 SEEDS (GRAMS)						
33,62	-	35,68	34,44	29,48	21,00	-
TO RAW MATERIAL	-	106,1%	102,4%	87,7%	62,5%	-

BARLEY						
RAW MATERIAL	Fraction 1	Fraction 2	Fraction 3	Fraction 4	Fraction 5	Cyclone
100%	0,36%	19,13%	21,31%	33,15%	25,50%	0,55%
WEIGHT OF 1000 SEEDS (GRAMS)						
47,42	-	52,80	49,62	42,38	39,08	-
TO RAW MATERIAL	-	111,3%	104,6%	89,4%	82,4%	-

OAT						
RAW MATERIAL	Fraction 1	Fraction 2	Fraction 3	Fraction 4	Fraction 5	Cyclone
100%	0,75%	36,91%	30,42%	18,45%	12,97%	0,50%
WEIGHT OF 1000 SEEDS (GRAMS)						
33,62	-	41,26	43,40	31,38	23,88	-
TO RAW MATERIAL	-	110,4%	116,2%	84,0%	63,9%	-

CORN						
RAW MATERIAL	Fraction 1	Fraction 2	Fraction 3	Fraction 4	Fraction 5	Cyclone
WEIGHT OF 1000 SEEDS (GRAMS)						
291,08	330,10	328,88	314,08	263,10	154,06	-
TO RAW MATERIAL	113,4%	113,0%	107,9%	90,4%	52,9%	-

## THE EFFECTS OF PRECISION CLEANING

### WHEAT

	Raw material	Fraction 2
CLEARANCE	97,4%	99,6%
GERMINATION CAPACITY	87%	87%
<b>GERMINATION ENERGY</b>	<b>71%</b>	<b>83%</b>

### RYE

	Raw material	Fraction 2
CLEARANCE	98,5%	99,6%
GERMINATION CAPACITY	90%	96%
<b>GERMINATION ENERGY</b>	<b>89%</b>	<b>96%</b>

### BARLEY

	Raw material	Fraction 2
CLEARANCE	92,2%	96,6%
GERMINATION CAPACITY	92%	92%
<b>GERMINATION ENERGY</b>	<b>85%</b>	<b>90%</b>

### OAT

	Raw material	Fraction 2
CLEARANCE	96,1%	98,7%
GERMINATION CAPACITY	86%	89%
<b>GERMINATION ENERGY</b>	<b>66%</b>	<b>89%</b>

## EXAMPLES OF SEPARATION

### WHITE MUSTARD

	Raw material	II	III	IV
Cleanliness	97,5%	99,5%	98,8%	88,9%
Organic impurities	0,6%	0,2%	0,7%	8,4%
Weeds	1,5%	0,0%	0,1%	1,2%
Foreign crops	0,4%	0,3%	0,4%	1,5%
Total	100%	100%	100%	100%

### QUINTUS WHEAT

	Raw material	II
Cleanliness	76,6%	96,5%
Organic impurities	23,0%	3,5%
Weeds	0,2%	0,0%
Foreign crops	0,2%	0,0%
Total	100%	100%

### OIL RADISH

	Raw material	II	III	IV	V
Cleanliness	96,3%	98,6%	96,5%	84,8%	55,5%
Organic impurities	2,0%	1,2%	3,1%	10,3%	11,3%
Weeds	1,5%	0,0%	0,3%	4,8%	33,0%
Foreign crops	0,2%	0,2%	0,1%	0,1%	0,2%
Total	100%	100%	100%	100%	100%



# HIGH PERFORMANCE

## SEPARATOR ASM-70i



<b>Preliminary cleaning</b> (up to t/h)	7	<b>Power</b> (kW)	2,45
<b>Proper cleaning</b> (up to t/h)	5	<b>Voltage</b> (V)	400
<b>Calibration (separation)</b> (up to t/h)	2	<b>Regulator engine speed</b>	YES
<b>Dimention</b> (length/width/high mm)	2490/735/1830	We belong to the Polish Chamber of Commerce Agricultural machinery and equipment	
<b>Weight</b> (kg)	260		

## SEPARATOR ASM-71i



<b>Preliminary cleaning</b> (up to t/h)	7	<b>Power</b> (kW)	3,00
<b>Proper cleaning</b> (up to t/h)	5	<b>Voltage</b> (V)	400
<b>Calibration (separation)</b> (up to t/h)	2	<b>Regulator engine speed</b>	YES
<b>Dimention</b> (length/width/high mm)	2800/735/1830	<b>Cyclone</b>	YES
<b>Weight</b> (kg)	370		



# LOW ENERGY CONSUMPTION

## SEPARATOR ASM-100i



<b>Preliminary cleaning</b> (up to t/h)	20	<b>Power</b> (kW)	7,87
<b>Proper cleaning</b> (up to t/h)	10	<b>Voltage</b> (V)	400
<b>Calibration (separation)</b> (up to t/h)	5	<b>Regulator engine speed</b>	YES
<b>Dimention</b> (length/width/height mm)	3540/1010/2185	<b>Cyclone</b>	NO
<b>Weight</b> (kg)	560		

## SEPARATOR ASM-101



<b>Preliminary cleaning</b> (up to t/h)	20	<b>Power</b> (kW)	9,74
<b>Proper cleaning</b> (up to t/h)	10	<b>Voltage</b> (V)	400
<b>Calibration (separation)</b> (up to t/h)	5	<b>Regulator engine speed</b>	NO
<b>Dimention</b> (length/width/height mm)	4165/1140/2545	<b>Cyclone</b>	YES
<b>Weight</b> (kg)	830		

# HIGH PERFORMANCE

## SEPARATOR ASM-301



<b>Preliminary cleaning</b> (up to t/h)	50	<b>Power</b> (kW)	15,55
<b>Proper cleaning</b> (up to t/h)	30	<b>Voltage</b> (V)	400
<b>Calibration (separation)</b> (up to t/h)	15	<b>Regulator engine speed</b>	NO
<b>Dimention</b> (length/width/high mm)	4548/1456/3200	<b>Cyclone</b>	YES
<b>Weight</b> (kg)	1390		

## SEPARATOR ASM-601i



<b>Preliminary cleaning</b> (up to t/h)	100	<b>Power</b> (kW)	31,96
<b>Proper cleaning</b> (up to t/h)	60	<b>Voltage</b> (V)	400
<b>Calibration (separation)</b> (up to t/h)	30	<b>Regulator engine speed</b>	YES
<b>Dimention</b> (length/width/high mm)	4548/3635/3422	<b>Cyclone</b>	YES
<b>Weight</b> (kg)	3600		



## DISTRIBUTION

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We belong to the Polish Chamber of Commerce  
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