



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:

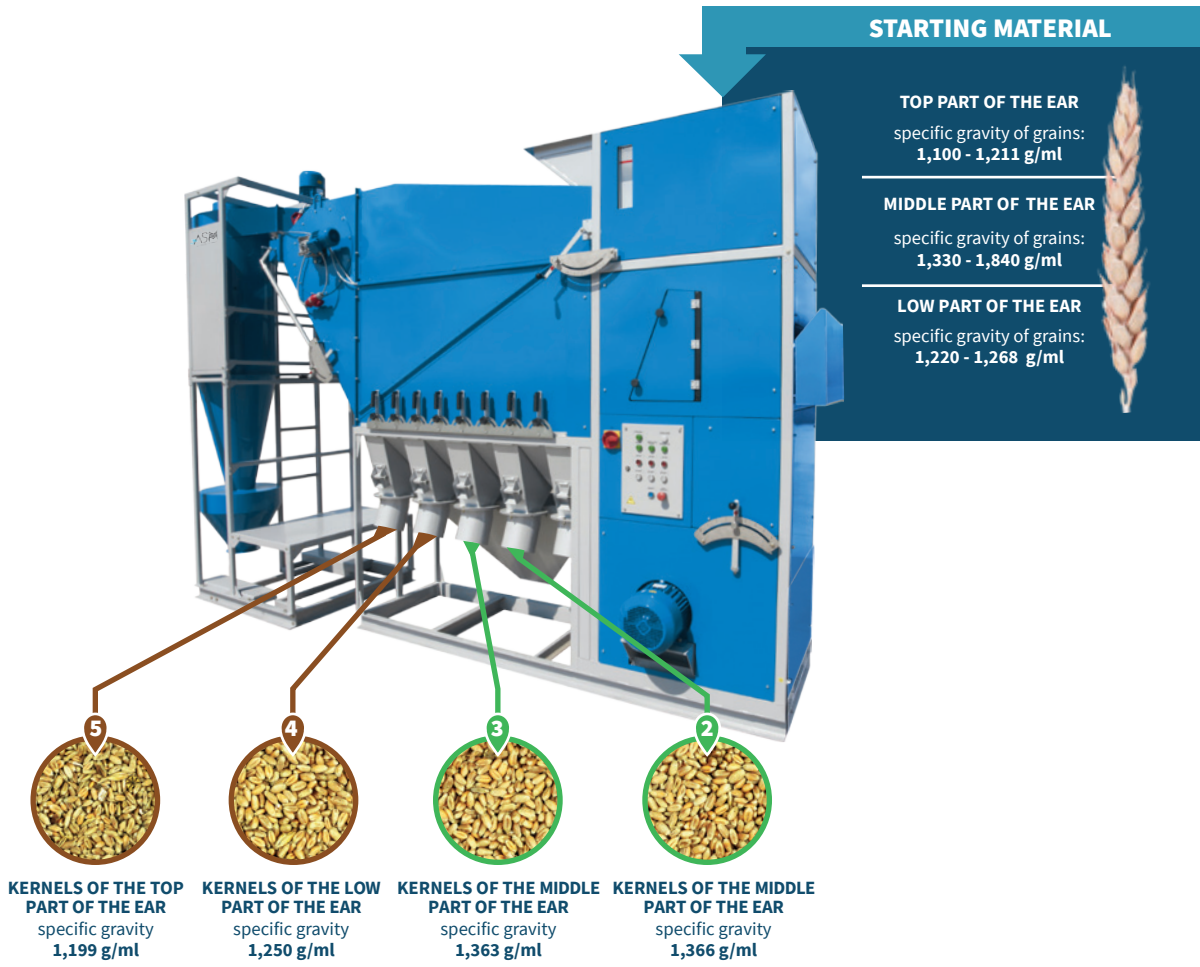
- ◆ drying,
- ◆ preliminary cleaning,
- ◆ proper cleaning,
- ◆ calibration (separation) according to the specific weight.

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

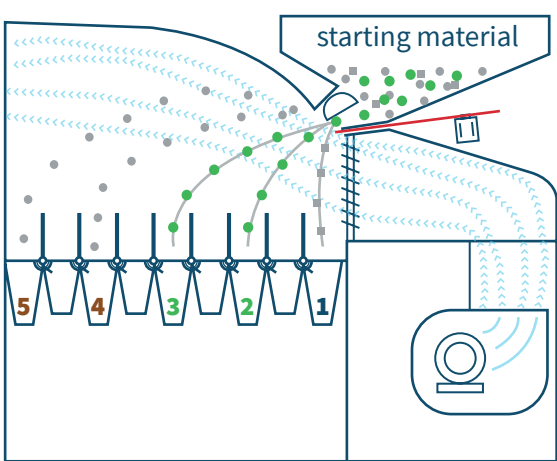
ASM separators sort seeds basing on specific weight. Our technology can be successfully used in:

- ◆ **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.



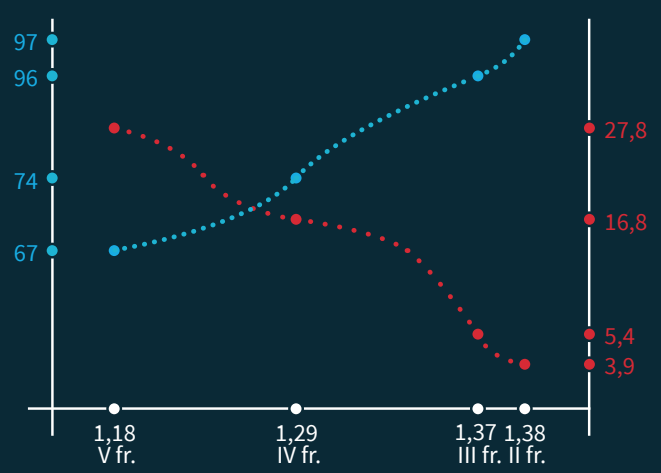
THE WAY SEPARATORS WORK

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



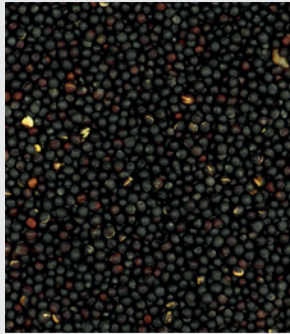
fraction 4



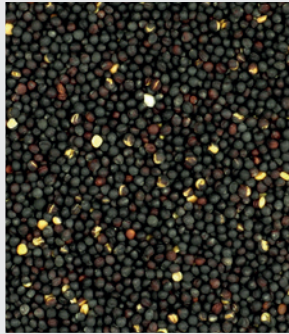
fraction 5

**RAPE**

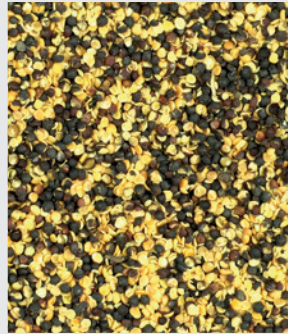
fraction 2



fraction 3



fraction 4



fraction 5

**VETCHES**

fraction 2



fraction 3



fraction 4



fraction 5

**PHACELIA**

fraction 2



fraction 3



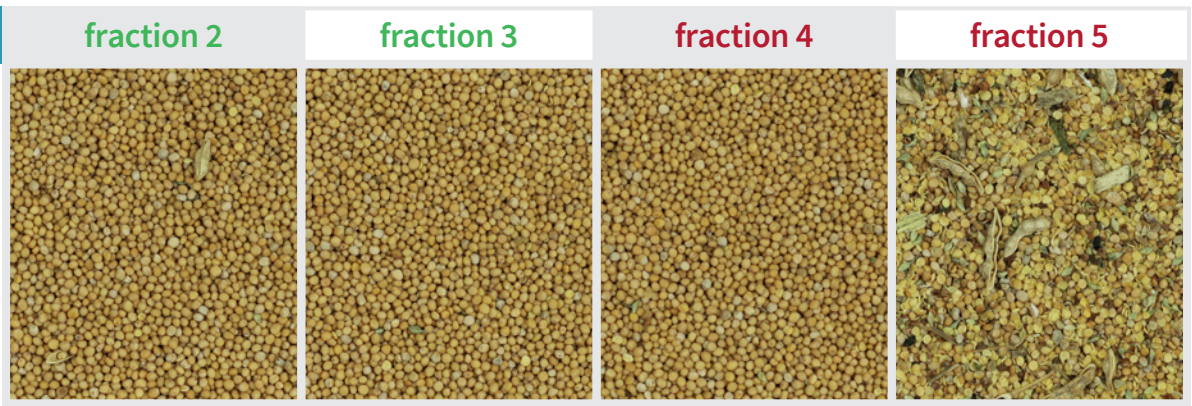
fraction 4



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%
GERMINATION ENERGY	71%	83%

RYE

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

BARLEY

	Raw material	Fraction 2
CLEARANCE	92,2%	96,6%
GERMINATION CAPACITY	92%	92%
GERMINATION ENERGY	85%	90%

OAT

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

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



Preliminary cleaning (up to t/h)	7	Power (kW)	2,45
Proper cleaning (up to t/h)	5	Voltage (V)	230
Calibration (separation) (up to t/h)	2	Regulator engine speed	YES
Dimension (length/width/high mm)	2490/735/1830	Cyclone	NO
Weight (kg)	260		

SEPARATOR ASM-71i



Preliminary cleaning (up to t/h)	7	Power (kW)	3,00
Proper cleaning (up to t/h)	5	Voltage (V)	230
Calibration (separation) (up to t/h)	2	Regulator engine speed	YES
Dimension (length/width/high mm)	2800/735/1830	Cyclone	YES
Weight (kg)	370		

LOW ENERGY CONSUMPTION

SEPARATOR ASM-100i



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

SEPARATOR ASM-101



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

HIGH PERFORMANCE

SEPARATOR ASM-301



Preliminary cleaning (up to t/h)	50	Power (kW)	15,55
Proper cleaning (up to t/h)	30	Voltage (V)	400
Calibration (separation) (up to t/h)	15	Regulator engine speed	NO
Dimension (length/width/height mm)	4650/1463/3335	Cyclone	YES
Weight (kg)	1390		

SEPARATOR ASM-601i



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

DISTRIBUTION

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