Our Centrifugal Technology and Your Benefits

- Highest separation efficiency of N (40 %) and P_2O_5 (70 %) by the use of g-forces
- No need for chemicals
- No filtration system, therefore no blockages
- Very compact design (4 m^3/m^2)
- Easy installation and operation
- PLC controlled and therefore a completely independent operating system
- Automatic adaptation of fluctuating feed streams
- Ability to build on mobile unit, complete with pumps and other equipment
- Global service organization, 24/7 availability

GEA engineering for a better world

We live our values.

Excellence • Passion • Integrity • Responsibility • GEA-versity

GEA Group is a global engineering company with multi-billion euro sales and operations in more than 50 countries. Founded in 1881, the company is one of the largest providers of innovative equipment and process technology. GEA Group is listed in the STOXX® Europe 600 Index.

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GEA Decanter Centrifuges for Manure Separation

With the highest separation efficiency of N and P_2O_5

GEA engineering for a better world

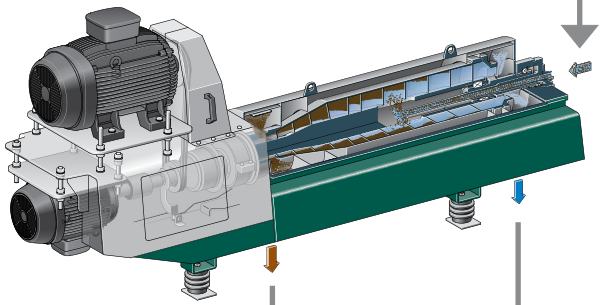
gea.com

Best Separation of Nutrients N and P_2O_5

Liquid manure obtained from animal husbandry is a valuable fertilizer in modern agriculture. It must, however, be properly integrated into the natural nutrient cycle. GEA has developed a cost-effective processing concept for this demand. The aim is to process the liquid manure, to treat the associated nutrient surpluses and to take specific advantage of the resultant products.

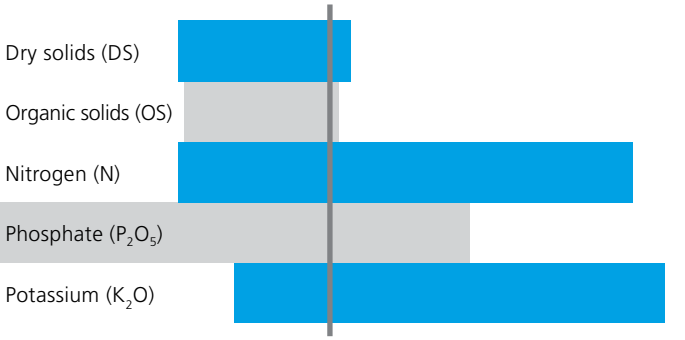
Decanter feed

Raw manure			
Dry solids (%)	4 – 7	6 – 10	7 – 10
Organic solids (%)	3.5 – 5.5	5.0 – 7.0	5.5 – 8.0
Nitrogen (kg/ton)	4.2	7.2	4.4
Phosphate (kg/ton)	3.0	4.2	1.6
Potassium (kg/ton)	4.3	7.2	6.2



Solid fraction

		
>27 %	>30 %	>30 %
>23.5 %	>23.9 %	>23.8 %
25 % 7.9 kg/ton	35 % 14.5 kg/ton	40 % 9.6 kg/ton
60 % 13.6 kg/ton	75 % 18.2 kg/ton	70 % 6.1 kg/ton
5 % 1.6 kg/ton	15 % 6.2 kg/ton	25 % 8.4 kg/ton



Liquid fraction

		
<2.5 %	<2.5 %	<3.5 %
<1.6 %	<2.3 %	<2.2 %
75 % 3.6 kg/ton	65 % 5.7 kg/ton	60 % 3.2 kg/ton
40 % 1.4 kg/ton	25 % 1.3 kg/ton	30 % 0.6 kg/ton
95 % 4.7 kg/ton	85 % 7.4 kg/ton	75 % 5.7 kg/ton

PROPERTIES RAW MANURE

- Difference in animal species, food, maturity, etc.
- N binds partly to solid (N_{org}) and is partially soluble (N_{min})
- P_2O_5 binds mostly to solids
- K_2O is completely soluble
- Decanter removes particles down to 40 microns
- Major reduction of Chemical Oxygen Demand (COD) level in liquid fraction (>50 – 90 %)