Mechanical Separation Solutions from GEA Westfalia Separator
The know-how for over 3000 processes and procedures makes GEA Westfalia Separator an approved partner.

We provide solutions for the food industry, chemistry, pharmaceuticals, biotechnology, energy, shipping and environmental technology.
Contents

4 Liquids to Value
6 GEA Mechanical Equipment
8 GEA Westfalia Separator
10 Excellent Engineering for Future-Proof Separation Technology Systems
12 Separators and Decanters from GEA Westfalia Separator
14 As Simple as Possible, as Complex as Necessary

16 Business Area Sales
18 Business Line Beverage Technology
20 Business Line Dairy Technology
22 Business Line Renewable Resources
26 Business Line Chemical/Pharmaceutical Technology
28 Business Line Marine
30 Business Line Energy
32 Business Line Oil & Gas
34 Business Line Environmental Technology

36 Business Area Service
38 Westfalia Separator® capitalcare – Original Manufacturer Service
40 Customized Service Packages – 24/7 – Around the World

42 Business Area Production
44 Centre of Competence in Oelde Assures First-Class Quality Worldwide
46 Technology Centre for Process Engineering
48 Engineering Made in Oelde – Plant and Control from a Single Source
50 Sales, Engineering and Service Worldwide
Our Answer to the Global Challenges: Liquids to Value

GEA Westfalia Separator is the leading company in the world in the field of mechanical separation. With the efficient processing of liquids and liquid mixtures, this technology ensures considerable added value: more quality of life for mankind. More sustainability for the earth. And more efficiency for your company.

The global population is expanding rapidly. Almost seven billion people nowadays have to be supplied with water, energy, food and medical products. At the same time, the requirements for sustainable management are becoming more and more stringent. Only efficient handling of valuable resources will ensure our quality of life without endangering the fundamental basis of future generations. Healthy growth – this is the objective of mechanical separation of GEA Westfalia Separator.

Since 1893, we have been building centrifuges used for separating liquids and liquid mixtures. Whether separators or decanters: the process lines of GEA Westfalia Separator combine high separating efficiencies, clarifying efficiencies and throughput capacities with maximum savings in terms of energy, water, production and disposal costs.

Based on the experience gained with more than 3000 process applications and a procedure for rapidly translating innovations into marketable processes, we provide profitable answers to some of the most urgent questions of our time. Liquids to Value. This message has made us one of the leading companies in the world in the field of mechanical separation.
GEA Mechanical Equipment –
Pooled Competence for Flowing Processes

Within the GEA Group, GEA Westfalia Separator is allocated to the new segment GEA Mechanical Equipment. It pools and coordinates the services of leading specialists in the treatment of liquid substances. Cooperation in the worldwide network releases synergies and promotes the identification of customized high-end solutions for complex tasks.

The GEA Mechanical Equipment segment combines GEA Westfalia Separator as well as other companies in the GEA Group which handle and process liquids. In addition to mechanical separation, this includes products such as homogenizers, pumps, valves and tank cleaning systems. The close combination of these companies in the worldwide network offers a direct practical benefit to customers.

The integration in a segment permits coordinated research and development. The continuous know-how transfer and joint innovation competition encourages the optimization of technologies and the development of new markets.

Synergies are utilized in order to enable the services of all affiliated companies to be adapted even better to individual customer wishes.

Liquids to Value is the promise of success of GEA Mechanical Equipment. Suitably qualified employees, a high quality level, decades of know-how and far-reaching knowledge of the market always guarantee the best solution for a wide range of requirements. Our handling of liquids forms the basis for considerable added value. At the same time, we also enable production costs to be reduced and the strain on the environment to be reduced noticeably and in a sustainable manner.

The Business Units

GEA Mechanical Separation
(GEA Westfalia Separator, Oelde, Germany)
GEA Homogenizers
(GEA Niro Soavi, Parma, Italy)
GEA Flow Components
(GEA Tuchenhagen, Büchen, Germany)

stand for the GEA Mechanical Equipment segment. The market of liquid-processing components receives very broad regional as well as application-related cover as a result of a global network of sales and service branches.
Our Organization is Optimum. For You.

We want to make everything as simple as possible for you. This is shown by the organization of our business lines already. Flat hierarchies, practical structures and easy-to-understand designations are designed to promote proximity to our customers.

Engineering made in Germany
The strategy headquarters of GEA Westfalia Separator is based in Oelde. From here, we provide you with engineering made in Germany – with a strong focus on innovation and maximum quality awareness. The company is organized in business areas and subordinate business lines. The system for allocating powers to the various business areas consistently reflects practical realities. This is also reflected in the easy-to-understand names of these areas.

Business Area Sales
The Business Area Sales supports you with competence and experience in all phases of the preparation and realization of your investment decision. Backed up by the comprehensive specialist expertise of the business lines, customized centrifuges and process lines are available for a broad application spectrum.

Our process-oriented business lines are dedicated primarily to complex processes. Our specialists plan and realize procedures and processes for the most stringent separating requirements. Such applications are covered by the business lines:
- Beverage Technology
- Dairy Technology
- Renewable Resources
- Chemical/Pharmaceutical Technology

Our system-oriented business lines are primarily involved with the purification and treatment of large volume streams. They supply high-performance machines, systems and modules that are seamlessly integrated in your operations. These duties are covered by the business lines:
- Marine
- Energy
- Oil & Gas
- Environmental Technology

Business Area Service
The Business Area Service combines all services of the company under a single roof. Worldwide, customers benefit from a tightly-knit network, rapid response times and high flexibility. The proactive service concept Westfalia Separator® capitalcare ensures that the specialist knowledge of the manufacturer is available on a round-the-clock basis.

Business Area Production
This business area is responsible for all worldwide production activities for separators and decanters. The Oelde headquarters and also all other production facilities are certified according to DIN EN ISO 9001:2000 and DIN EN ISO 14001.

More than 50 sales and service companies worldwide
The international network of GEA Westfalia Separator comprises more than 50 sales and service companies. They offer excellent customer support around the globe, ranging from advice right through to ensuring the permanent availability of specified machine capacities.
Excellent Engineering for Future-Proof Separation Technology Systems

Speed to market – under this premise, we concentrate our experience on one objective: strengthening the value added chains of our customers with no time delay. Complete solutions from a single source minimize the time required for process integration and strengthen investment security.

The speed of implementation of new process and system developments in line with market requirements is a significant feature of GEA Westfalia Separator solutions. This is made possible by comprehensive experience and process knowledge.

GEA Westfalia Separator realizes process solutions from one supplier – with no interface problems. Technological know-how and comprehensive understanding of processes enable us to reliably solve critical issues even at the plant planning stage. As such, we can harmoniously align all process and system units to each other, from the multi-cyclone for pre-cleaning to classic separation solutions with separators or decanters.

Complete solutions from one supplier eliminate time delays and expensive coordination processes right from the start. Instead, they ensure constant high performance in terms of flow rate and separation efficiency – at minimal expense. This excellent process economy secures your investment decisions in the long term.

Highly productive process lines from a single source:
- Competence and clear responsibility
- Reliable communication
- Reliable planning
- Optimum plant and process configuration without barriers
- High level of functionality and investment reliability
Separators and Decanters
from GEA Westfalia Separator

Separating and clarifying liquids
Our separators are designed especially for liquid-based applications. Using centrifugal force, they separate substances and solids from liquids. They are equally as effective at separating liquid mixtures at the same time as removing solids.

The fields of application range from separating processes in the chemical and pharmaceutical industries through oil and fat recovery to the production of dairy products, beer, wine, fruit and vegetable juices, as well as the processing of mineral oil and mineral oil products.

Separator designs:
- Solid-wall separators for the separation of liquids
- Chamber separators, also in coolable design, for example for the fractionation of human blood plasma
- Self-cleaning disk separators for clarification and separating processes
- Nozzle separators for the concentration and washing of suspensions
Separating solids and clarifying liquids
In solid-based applications, our decanters ensure optimum separation efficiency, particularly in the case of suspensions with a very high proportion of solids. They are also used for the extraction of constituents from liquids and for concentrating, dewatering and classifying solids.

Application areas include the cleaning of wash water and the treatment of fruit and vegetables in the food industry, the recovery of animal and plant oils and fats, the production of herbal medicines, copper extraction, chemical extraction in the paper industry, the treatment of waste oil for power generation, waste water treatment in waste water treatment plants, and use on oil platforms for the extraction of crude oil.

Decanter designs:
- Clarifying decanter for clarifying liquids
- Dewatering decanter for maximum concentration of solids
- Concentrating decanter for the concentration of solids
- Separating decanter for the separation of liquid mixtures and the simultaneous separation of solids
- Classifying decanters for the extraction of different solid fractions
- Extraction decanters for the extraction of reusable materials
As Simple as Possible, as Complex as Necessary

Innovations from GEA Westfalia Separator set the standard for efficiency around the world.

**Westfalia Separator® vinex**: this process uses a continuous separation process to extract the juice from grapes. High juice yield and outstanding quality properties increase the profits of the producers.

**Westfalia Separator® directdrive**: separators use the power transmission with almost no loss of efficiency and the result is good: minimized energy consumption, lower wear and maintenance costs, plus a reduced space requirement.

**Westfalia Separator® wewatch®**: the condition monitoring of separators and decanters, which can be used to evaluate the relevant parameters online or offline, brings transparency and reliability to the production process.

**PROFI®**: the innovative beer filtration with the intelligent combination of a high-performance centrifuge and membrane filtration improves clarification and eliminates the need for kieselguhr handling.
As Simple as Possible, as Complex as Necessary

set the standard for efficiency around the world

Westfalia Separator® seaprotect solutions: bilgewater and oil sludge are treated with the greatest efficiency in separation. The result is that IMO-compliant clear water with < 15 ppm can be discharged back into the sea.

Westfalia Separator® unitrol plus: monitors and controls automatic separators for the treatment of fuel and lube oil. Concepts for the unmanned machine room are monitored reliably.

Westfalia Separator® vari pond®: identifies the automatic regulation of decanter pond depths, e.g. for waste water treatment. Even with a fluctuating feed concentration, a constant discharge concentration is regulated.

Westfalia Separator® capital care: these tailor-made products offer the benefit from the service competence of the technology leader throughout the entire life cycle of the centrifugal technology from GEA Westfalia Separator.
In production, slim, fluent processes and high yield from the raw materials used are gaining as much in importance as the conservation of the environment and resources. The efficient separators, decanters, filtration systems and process lines from GEA Westfalia Separator are completely compliant with these demands. They achieve first class product results, allow product differentiation in line with market requirements, and minimize environment-related material flows as well as the consumption of water, natural ingredients and energy. Examples of this include the following process innovations, with which GEA Westfalia Separator sustainably strengthens the competitiveness of its customers:

**Westfalia Separator® profi**
Combines the specific advantages of centrifugal separation technology and membrane filtration in the production of beer. This eliminates the need to use kieselguhr. The beer filtration is continuous – with maximum yield and simple changing of types. With this new process, breweries are able to ensure high beer quality and efficient processing with the maximum possible conservation of the environment.

**Westfalia Separator® vinex**
Facilitates continuous, gentle and rapid juice extraction from the grapes in wine production by means of decanters. With the Westfalia Separator® vinex process, wineries achieve constant high quality with a significantly greater yield from the grapes and reduced mash standing times.

**Westfalia Separator® frupex®**
Replaces the pressing process previously used in the production of fruit juice by the use of a complete processing line of separators and decanters. This means that producers are able to handle all sorts of fruit and vegetables even in small batches, with good results: sparing use of raw materials, significant increases in yield and consistently high juice quality.

**Maximum extract yield with instant coffee and tea**
Ensures an efficient process, in which GEA Westfalia Separator uses specially designed separators and decanters in the areas of flavour separation (de-oiling), clarification, extraction from solids and process water treatment.

With the simplest integration into existing production lines, producers achieve a high yield from the raw materials used and first class results in the quality of their instant coffees and teas.

Examples of application areas include the production and extraction of:
- Beer
- Wine, sparkling wine and champagne
- Citrus juice
- Premium juice from fruits, berries, vegetables and herbs
- Exotic juices
- Base materials for soft drinks
- Essential oils
- Coffee
- Tea
- Soy drinks
- Cereal drinks
- Phytochemicals from natural raw materials
With the mechanical separation technology from GEA Westfalia Separator, beverage manufacturers are able to achieve a decisive competitive advantage.
Business Line Dairy Technology

Milk is one of the most important and versatile foodstuffs in the world. Consumers no longer expect only naturalness and freshness in milk products; they now also increasingly demand variety of flavor as well as maximum functionality.

In cooperation with our company, dairies benefit from over a century of successful experience in all areas of milk processing. Tailored to the sometimes extreme differences in preferences of the international milk market, GEA Westfalia Separator has developed a series of forward-looking processes.

Westfalia Separator® directdrive®

With this innovation, the company has achieved a major advance in terms of separator technology. Westfalia Separator® directdrive® is the first separator with an integrated direct drive to be used for removing bacteria from milk. This new drive considerably boosts the efficiency. The result: lower energy costs, lower infrastructure costs and leaner processes. In conjunction with the proactive services of Westfalia Separator® directcare, the dairy industry benefits from higher availability with full budget certainty.

Westfalia Separator® hyvol® proplus

Westfalia Separator® hyvol® proplus characterizes the new generation of separators which combines the excellent performance features of the Westfalia Separator® hyvol® with the Westfalia Separator® proplus systems. The features are a considerable increase in protein yield and a significant cost reduction. The results that can be expected right from the start include rapid amortization and greater profit from the raw milk used, over the entire lifetime.

Westfalia Separator® procool

This process advances dairies in the area of cold milk skimming. The innovative Westfalia Separator® procool process maintains optimum product quality and provides high microbiological safety for cold milk separation.

The focus of this process is on energy saving, lower operating costs, and higher protein quality. The separators used for this stand out for performance and skimming efficiency, which are currently rivalled by no other cold milk skimming machine.

Complete system solutions

In addition to supplying individual separators and decanters for integration into existing plants, GEA Westfalia Separator also implements complete process lines for the production of various milk products, e. g. for the production of quark and soft cheese.

Example of application areas include:

- Skimming of milk and whey
- Clarification of milk and whey
- Bacteria removal from milk and whey
- Concentration of cream

Production and extraction of:

- Casein
- Cheese fines
- Quark
- Soft cheese
- Lactose
- Whey protein
- Phospholipids
- Butter
- Butter oil
- Calcium phosphate
Renewable raw materials offer many opportunities for securing food for the people as well as substituting fossil-based raw materials and thus introducing completely new products and industrial processes. Efficient handling of natural resources is the order of the day. With the concentration of our know-how in the Business Line Renewable Resources, we give these requirements a platform for forward-looking solutions.

The Business Line Renewable Resources remains your market aide for tried and tested processes, e.g., in the extraction of cooking oil and starch, at the same time as forming a centre of competence for new, innovative ideas and visions – particularly in the development and exploitation of renewable energy sources. We support the forward-thinkers of our time by providing the latest process technology, from laboratory testing to industrial implementation.

Business Line Renewable Resources

Conservation of resources and sustainability both play a key role in the future provision of basic supplies. Pioneers and researchers focusing on solutions with renewable resources will find us to be a technically accomplished and committed partner.
Tradition and Innovation

The Business Line Renewable Resources is the competence and development center for new visions and future markets. At the same time, we remain your market aide for tried and tested processes, with core competences in the following areas:

**Starch and protein**
International demand for custom-made starch products and high purity proteins is constantly increasing. Centrifugal separation technology is a key technology with considerable potential for improving products and production processes in the extraction of reusable plant materials.

Examples of application areas of our centrifuges and process lines:
- Corn starch and corn gluten
- Wheat starch (A and B starch), wheat gluten, pentosans and protein coagulate
- Tapioca/manioc starch
- Potato starch, pulp, gratings and protein
- Rice starch
- Pea starch
- Proteins (e.g. from soy), protein concentrate, protein isolate

**Biofuels and the fermentation industry**
The Business Area Process supports the production of high-quality biodiesel from sustainable raw materials by way of implementing complete process lines and optimizes the extraction of bioethanol with separators and decanters constructed especially for the stringent demands in these processes.

Solutions of the Business Area Process for the production of biodiesel:
- Complete process lines with the Connenmann – ADM System CD process
- Individual machines for refining, washing, glycerine cleaning, separation of glycerine and catalyst from biodiesel, separation of salts from glycerine, and for separation of fatty acids and glycerine

Application areas of our separators and decanters in the production of bioethanol:
- Dry milling process
- Wet milling process
- Extraction of ethanol from molasses
- Extraction of ethanol from biomasses, e.g. such as yeast or cellulose

Examples of application areas of our centrifuges and process lines in the modern fermentation industry:
- Processing of bioproducts such as molasses, stillage, vinasse, sugar juice
- Processing of extra-cellular products such as amino acids, acetic acid, L-Lysine, monosodium glutamate, threonines, tryptophan, citric acid
- Processing of fermentation products such as algae, baker’s yeast, single-cell proteins, fodder yeast
- Processing of intra-cellular products such as yeast extract, ribonucleic acid
Oils and fats
Highly reliable, energy-saving and extremely productive in the smallest of spaces – separators and decanters from the Business Line Renewable Resources recover oils and fats in any quality required.

Our separation technology systems and plants are used both for the extraction of raw oils and fats and in the refining of oils for press oil clarification, de-gumming, neutralization, washing, wax removal, fractionation and splitting soapstock. Here, examples of applications include:

- Extraction of olive oil, avocado oil, nut oils, cocoa butter, jojoba, linseed and others
- Extraction of animal fats, blood meal and plasma, gelatine and others from meat by-products
- Extraction of fish meal, fish and liver oil, protein hydrolysates and surimi
- Processing of flotation sludges in the fish and meat industry
- Cleaning of frying and cooking fats
- Refining raw oils to cooking oils, e.g. such as soy oil, rapeseed oil, palm oil, sunflower oil, cottonseed oil, corn oil
Business Line Chemical / Pharmaceutical Technology

The preservation of fragile cell cultures, processing with the highest CIP and SIP requirements, comprehensive safety e. g. in the handling of concentrated acid compounds or explosive mixtures – the separation technology solutions of the Business Line Chemical / Pharmaceutical Technology represent engineering at the highest level.

The centrifuges that we develop specifically for these industries are compliant with exceptionally high standards in the areas of safety, hygiene and product quality. Examples of these include:

- Steam-sterilizable separators – which work extremely sparingly with the product using their hydrohermetic feeds – are produced entirely in GMP design and reliably eliminate the risk of product contamination by the sterilizability of all plant components (including separators)
- Separators in various corrosion-resistant special materials for use in the chemical industry.

Here, one particular speciality of GEA Westfalia Separator is the lining of solid-wall bowls e. g. with Incoloy 825 or titanium palladium. The result for our customers: manageable investment costs at the same time as a high degree of reliability and performance from the separators used.

In this business line, we combine the complex safety requirements of chemistry, pharmaceuticals and biotechnology with high separation performances and a significant reduction in the operating costs of separation technology plants in the following applications:

Organic, inorganic and petrochemicals:
- Aldehydes, alcohols
- Aluminum hydroxide
- Barium sulphate
- Recovery of alkali salts (boiler ash)
- Cellulose and derivatives
- Printing colours, ink
- Paints, lacquers, resins
- Gum arabic
- Catalyst separation
  (as well as liquid gas)
- Cosmetic and hygiene products
Lyes
Phosphors
Solvent recovery/clarification
Nitration of aromatic compounds
Nylon, caprolactam
Petrochemical additives
Pesticides
Peroxides
Phosphoric acid
Polyacetates
Polyethylene
Acids (inorganic and organic)
Terephthalic acid
Viscose, cellulose acetate
Xanthan

Pharmaceutical biotechnology
Human vaccines and veterinary vaccines
Insulin from biomass
Enzymes
Starter cultures (bacteria cultures)
Human blood proteins
Synthetic pharmaceutical products
Animal cell cultures

Extraction
Essential oils
Alkaloids
Antibiotics
Aromatic substances
Fragrances
Medicinal teas
Organ extracts
Pectins
Herbal medicines
Statins
Steroids, hormones
Vitamins
Polycarbonate

Mineral processing
Industrial minerals
- Calcium carbonate
- Kaolin
- Bentonites
- Titanium dioxides
Metal ores
- Copper
- Nickel
- Zinc
- Cobalt
Business Line Marine

The greater the reliability, economy, cleanness and strength of the drive and supply systems, the quicker, more efficient, safer and more environmentally friendly the ship. The separators and the cooling and supply systems from the Business Line Marine give equal consideration to the economic challenges of maritime logistics and the increasingly stringent regulations for the protection of the sea as well as progress in shipbuilding technology.

The system solutions of this business line reliably ensure high performance and economical operation of diesel engines, increasing their life expectancy even under extreme conditions. Examples of this include:

- Westfalia Separator® eagleclass: with their high g-force, these separators set the new standard around the world for the treatment of fuel and lube oils for maritime use. They are designed for unmonitored continuous operation and comply with all the regulations of the classification societies.

- Westfalia Separator® d type separators cost-effectively treat bilgewater and sludges containing oil, under the label of Westfalia Separator® seaprotect solutions, and are fully compliant with the IMO and USCG requirements.

- Westfalia Separator® Bilgemaster® clean design systems for processing bilgewater. Capacities of up to 4000 l per hour can be reduced to achieve a residual oil content of < 5 ppm. All requirements relating to environmental protection are also satisfied in particularly sensitive marine areas.

- Modular compact units consist of a base module, which is additionally completely pre-assembled with the required units. Such compact units can be easily installed in the shipyard, as plug and play devices. Alternatively, the Westfalia Separator® centripacks concept offers the option of combining all of the required separators in a single unit and delivering this to the shipyard piped and pre-fitted with all control modules, where it can be quickly installed.

- Westfalia Separator® ViscoBooster Units for the treatment of heavy fuel oil for marine engines. These adjust the viscosity, temperature and pressure to be optimal for the requirements of the engine manufacturer.

- Fresh water generators from GEA Westfalia Separator continuously extract drinking water from seawater and eliminate the need for fresh water supply tanks.

- Performance-enhancing retrofit units are easy to install and used to replace existing processes with the more efficient centrifugal separation technology, to extend performance limits, to increase capacities, to automate processes, and to reduce service and maintenance costs.

From the perspective of GEA Westfalia Separator, all options are available for the marine area, from individual components to complete system solutions. The concept is set up for our customers in such a way that the interfaces and planning expenditure are reduced and substantial savings can be achieved in terms of weight and space requirement.
The outstanding separation efficiency of the high-performance Westfalia Separator® eagle class centrifuges sustainably optimizes the reliable operation of turbines and diesel engines in power stations.
The concept of our treatment plants is precision work, which we adjust to the nature of the respective fuels and oils used. Here – in addition to demand-based dimensioning – the design is influenced by aspects including viscosity, density and level of contamination.

As such, trace elements, which cause corrosion damage at high exhaust gas temperatures, are separated e.g. from the combustible fuels by our separators. The reliable desalination of fuel oil and the separation of solids by our separators reduce corrosion problems to the minimum level that is technically practical and ensure fault-free operation of these plants.

Water, wear and other impurities may have a considerable effect on performance, e.g. in the case of steam turbines. In severe cases, unplanned stoppages or complete failures threaten consequences that can quickly become “unaffordable”. Here too, our treatment systems ensure continuous reliability and constant high performance.

This applies equally for self-cleaning separators in continuous operation and for ready-to-connect treatment systems with a high level of automation in any performance class.

In order to replace existing systems, extend performance boundaries, automate processes and – at the same time – reduce maintenance and service costs, the Business Line Energy supplies retrofit units, which are easy to install and facilitate considerable increases in treatment efficiency.

Our separators and system solutions for the energy industry carry out:

- The treatment and maintenance of combustible fuels for diesel and gas turbines
- The treatment and maintenance of lubricating oils
- The treatment of oil, water and solid mixtures
- The treatment of waste water containing oil
Our new generation of separators and decanters carries out continuous liquid-liquid-solid separation in many different application areas, reliably meeting the decisive parameters of the oil, gas and metal industries:
- Safety for people and the environment
- Continuous availability of constant high performance even under extreme usage conditions
- Weight and space-saving structures and process efficiency

With their modular structure based on the plug and play principle, being simple to operate and extremely easy to maintain, the centrifuges safely and economically manage even large volume flows.

We support extreme operating conditions, for example with the use of highly corrosion-resistant materials and technical solutions that are compliant with applications which require gastight and explosion-proof designs.

Aligned to your ambient and application conditions on site, our centrifuges ensure optimum processes and process results in the following application areas:
- Treatment of drilling fluids
- Separation of oil from “produced water” and “drain water”
- Dewatering of crude oil, also heavy crude oil
- Cleaning and treatment of fuel, lubricating and hydraulic oil
- Separation of cat fines from residual oil
- Cleaning of “slop oil” and oil pits
- Monoethylene glycol clarification

Save process media – protect the environment
Our separators and decanters can also be profitably used for processing industrial fluids. They extend the operating life of the fluids by a factor of between four and five; they reduce the wear of the production systems and reduce disposal costs.

Fields of application for industrial fluids:
- Maintenance of cooling lubricants, clarifying liquids, fountain solutions and process liquids
- Clarifying and dewatering of lube oil, hydraulic oil and diesel oil
- Treatment of waste oil, used emulsion, MARPOL oil and water-containing oil

Business Line Oil & Gas

The high-speed centrifuges of the Business Line Oil & Gas are used in the exploration, production and processing of oil and gas. Efficiency, safety and environmental protection in a wide range of extremely specialized applications mean that these are first-choice developments. The processing of the industrial liquids is a further area of application. The centrifuges from GEA Westfalia Separator make a contribution towards considerably reducing operating costs and the consumption of resources.
The market launch of the Westfalia Separator® eagle class separators provides new options for increased flow rates with minimum weight and space requirements.
Business Line Environmental Technology

Whether they are used for generating drinking water or treating process water or effluents: the system solutions of the Business Line Environmental Technology set worldwide standards for economy, efficiency and sustainable environmental protection. Companies and municipal institutions are able to considerably reduce their operating costs and consumption of resources.

It is not only oil deposits but also global reserves of fresh water that are limited. The focus is increasingly on the economical use of water and particularly on more efficient ways of extracting drinking water. Installation operators have to face the challenge of carrying out these and other tasks such as the treatment of sewage sludge or process water with minimum costs. For these challenges, the Business Line Environmental Technology provides answers which are convincing from the economic as well as ecological points of view.

For many years, GEA Westfalia Separator has been developing successful solutions for the sustainable use of precious resources: over 3500 stationary and mobile plants improve drinking water and waste water treatment around the world. The mechanical separation technology that has the highest flow rates with the lowest energy consumption and low-maintenance operation stands out particularly in the dewatering and thickening of sewage sludge. The figures are self-explanatory: decanters from GEA Westfalia Separator for instance thicken sewage sludge in such a way that the volume of surplus activated sludge which is produced is reduced by up to 90 percent.

These parameters mean that the technology is compliant with the restrictive cost management both in industry and in municipal waste water treatment plants.

Versatile application:
- Treatment of process water
- Dewatering of sewage sludge
- Thickening of sewage sludge
- Treatment of drinking water
- Treatment of municipal and industrial waste water
- Recovery of reusable materials from production flows and sewage sludge
- Stationary or mobile solutions
BUSINESS AR
EA SERVICE
Only by using the modularly structured original service from GEA Westfalia Separator is it possible to avoid the risk of jeopardizing the investment in the product and process quality – and therefore the success of the entire project – with unqualified servicing.
Westfalia Separator® capital care –
Original Manufacturer Service

Westfalia Separator® capital care – the service for process applications. There is only one way to ensure the unique service level of our separation technology systems over the entire life cycle: service from the manufacturer.

You expect the highest separation technology performance for the best possible results in production. Machines from GEA Westfalia Separator are among the best in the world, regularly setting new standards in terms of flow volume and separation efficiency.

The excellence of the machine is complemented by the comprehensive know-how of the specialists in separation technology processes. We are happy to pass on this knowledge to our customers and support them in the aim of establishing optimum production processes.

Best machines need the best service
In order to achieve the performance level, we have combined the best experts and production technologies with decades of know-how. So that our machines and process components continue to provide maximum performance even after many years, we provide our knowledge to you through coordinated services.

Here, we keep in mind that our customers plan their repair and maintenance budgets to be as efficient as possible. Customized service level agreements offer numerous options here. These may be agreements for basic services, although premium contracts are also available, which can be defined with specified services for the framework of a budget.

Reliability for processes and investments
Only with detailed knowledge of the modern centrifuges and process lines from GEA Westfalia Separator and with original replacement parts is it possible to provide the reliability that the equipment will accurately complete its separation technology tasks with all of the specific performance parameters, hour by hour and day by day.

All of the major services are provided for you – within a manageable budget:
- Field service
- Original spare parts
- Repair
- Condition monitoring
- Training
- Service level agreements are adjusted precisely to the requirements of customers’ production processes

Westfalia Separator ® capital care
Original Manufacturer Service

There is only one way to ensure the unique service level of our separation technology systems over the entire life cycle: service from the manufacturer.
Customized Service Packages – 24/7 – Around the World

Westfalia Separator® capital care: with customized service packages, the 24/7 manufacturer’s service concept for system applications ensures the outstanding performance of our separation technology machines and systems. If necessary, our service technicians can be on site straight away – all over the world.

The reliable availability of maximum system performance is a prerequisite for the highest level of process efficiency. The machines must run at a constant level of effectiveness, around the clock. Our preventive services and measures are designed to comprehensively secure this performance and availability and to avoid unplanned stoppage times.

Here, we keep in mind that our customers plan their repair and maintenance budgets to be as efficient as possible. Customized service level agreements offer numerous options here. These may be agreements for basic services, although premium contracts are also available, which can be defined with specified services for the framework of a budget.

Proactive services for constant process efficiency

Our most important services for individual alignment to your plant technology and your budget framework:

- Field service
- Original spare parts
- Repair
- Training
- Service level agreements are adjusted precisely to the requirements of application conditions

Support points around the world – 24/7 service on site

Our proactive services are run from many centers in strategically important ports, for example in Hamburg, Singapore, Tianjin and Dubai. With numerous authorized workshops and service stations around the world, we are never far away, so we can be there when you need us.
Automated production processes and computer-based production technologies ensure that our production enjoys a sound economic and ecological base. Very short production times also provide our customers with clear advantages in terms of time; this is reflected particularly in product development and the development of new markets.

Location investments around the globe
In order to further optimize our delivery capability and product quality, we continuously invest in buildings, installations and in the ideas of our employees. This improves our infrastructures for production, assembly and final testing.

Specialization is the key to success. In Oelde, Germany, our centre of competence for mechanical separation as well as in the production locations in Niederahr (Germany), Château-Thierry (France), WuQing (China) and Bengaluru (India), we have the most modern production facilities in the world. With these production facilities, we provide effective support to our customers in the markets of today and tomorrow.

Quality management at global level
GEA Westfalia Separator is one of the few companies in the world which are certified in accordance with DIN EN ISO 9001:2000 and DIN EN ISO 14001 in all production facilities throughout the globe. Compliance with extremely stringent quality requirements at our company is assured with the latest measuring technology and test bays in all production phases. By means of good manufacturing practice and complete quality documentation, we ensure that all of our quality commitments are implemented in reality.

Westfalia Separator® lifecyclebenefit®
Our quality commitment comprises much more than error-free production and punctual delivery. All performance criteria are harmonized with the aim of maximizing the holistic benefit, and are optimized throughout the entire life cycle. From planning, installation and commissioning right through to upgrade and return concepts for used machines. This makes sure our customers benefit from maximum performance at minimum cost – throughout the entire life cycle of the machines and systems.

Centre of Competence in Oelde Assures First-Class Quality Worldwide
Managed by the Centre of Competence in Oelde, the Business Area Production has established worldwide production capacities in order to ensure that products are manufactured efficiently and in close proximity to customers.
Quality with a system: GEA Westfalia Separator is internationally certified in accordance with DIN EN ISO 9001:2000 and DIN EN ISO 14001.

With the know-how and replacement parts from the manufacturer, authorized workshops ensure reliable availability.
Technology Centre for Process Engineering: Greater Security in the Investment Decision

From initial laboratory tests through pilot phases to the large-scale industrial plant, we develop optimally designed process integration in cooperation with our customers. This is based on our broad portfolio of separation technology systems and decades of experience in analysis, advising and construction. From this, our customers gain sound decision-making support and security in investment and production planning.

When selecting the right separation technology solution, not only are customers advised well by our process engineering centre, they also receive active support. This is based on investigations of the original/sample to be produced or processed in large-scale series and on customer specifications with respect to working temperature, flow capacity, degree of clarification or separation etc. After thorough analysis of all the data, the team from the application-specific laboratory recommends which machine type and which model will be best suited to the task. The results report and the documentation provide the greatest possible security for the investment decision.

Sound support for new development and scale-up

We provide intensive support right from the start for companies entering into new territory by planning the development of new types of products of production processes. Even for small volume units, we are able to design our separation technology systems exactly and to integrate them easily into the research work and product development of the customer.

Thus, in cooperation with the engineers from the respective business line, it is possible to clarify even before product development whether the planned quality parameters for new formulations are also achievable in the industrial application – and at which performance dimensions our separation technology solutions meet the set requirements 1:1. From this, our customers know the size to expect the investment to come to, even at the initial stage.
One-off training field for performance tests

Other indications can be gained from test trials on original products at 20 to 2000 litres. The central process engineering test bay keeps numerous machines and systems for various performance tests under conditions that closely resemble practical application.

Basic scientific research

In cooperation with various colleges, we acquire the basic scientific knowledge to enable us to integrate new technical processing solutions into the production processes of our customers.

Which way is right depends on the task. The objective is always to support customers in the selection of their centrifuges and to place their investment decisions on a secure footing.
Engineering Made in Oelde –
Plant and Control from a Single Source

The two essential elements for solving a technical process task are the plant and the control. However, it is only by their individual coordination and combination that they unite to form a useful unit – and thus an efficient technical processing plant.

GEA Westfalia Separator sees every plant as a whole, to set it up for the highest level of efficiency from the start. Customer requests, quality requirements and the relevant regulations are taken into consideration here. The package units and process lines developed in this way produce immediate added value.

Service and added value:
what we supply to you

The general trend is going in the direction of modules and package structures – because this provides numerous benefits; the Business Area Production takes full advantage of this trend in the interests of its customers, by breaking down larger process lines where possible into sensible modules.

The advantages are obvious: one package unit describes a clearly defined scope, both in terms of function and in terms of mechanics and technical control. Thanks to clear interfaces, the alignment work is reduced. This enables the Business Area Production to boost efficiency in all areas.

All modules are manufactured under optimum conditions by the Business Area Production: the components are assembled on a frame, the pipes fully installed, all electrical and pneumatic connections fitted, checking carried out, and qualification and acceptance are completed if desired.

Here, the individually aligned control is also of particular significance, as without it, even the most efficient machine or plant cannot operate to its full potential. The modules are then integrated into the ongoing production process at the minimum possible expense.

For this reason, system solutions of GEA Westfalia Separator are packages which relieve our customers of the need to worry – because they extend their value added chain without interrupting it.

Your advantages at a glance:

- Individual complete development
- Highest standards with innovative technologies
- No interface problems, no time delay
- Perfect system alignment and control
- Very easy operation
- One system partner for the entire process
GEA Westfalia Separator is present all over the world, with more than 50 sales and service companies and over 20 authorized workshops. As such, original spare parts from the technology leader are always quickly on site. Naturally, our experts are also there for you when you need us.

Sales, Engineering and Service Worldwide – We are Here, Where You Need Us

For us, proximity to the market is more than a catchphrase; it is the fundamental requirement for added value from partnerships and it secures the long-term success of our customers.

Use the advantage of knowledge from the technology leader in mechanical separation technology to fulfill your requirements for production and process solutions. The result is clear: Liquids to Value!
The information contained in this brochure merely serves as a non-binding description of our products and is without guarantee.

Binding information, in particular relating to capacity data and suitability for specific applications, can only be provided within the framework of concrete inquiries.

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