THE ART OF SEPARATION
CONTINUOUS OPERATION

PUSHER CENTRIFUGES

PM-23 | Simple and robust
+ Originally developed by Sulzer Escher Wyss
+ Basket diameter: 230 mm
+ Mechanical pusher mechanism

P-32 - P-120 | Proven and efficient
+ Originally developed by Sulzer Escher Wyss
+ Basket diameter: 320 mm - 1200 mm
+ Hydraulic pusher mechanism

D-ACT® PUSHER CENTRIFUGES

PD-60 - PD-100 | Unbeatable performance
+ Ferrum patented
+ Basket diameter: 630 mm - 1000 mm
+ Double action hydraulic pusher mechanism

DECANTER CENTRIFUGES

ZDC-20 - ZDC-140 | Compact and reliable
+ Modular design
+ Basket diameter: 200 mm - 1400 mm
+ High level of containment
DISCONTINUOUS OPERATION

VERTICAL BASKET CENTRIFUGES

VTC 630 - 1600 | Top discharge
+ Basket diameter: 630 mm - 1600 mm
+ Basket volume: 51 l - 850 l

VTC-M 320 - 400 | Compact and mobile
+ Basket diameter: 320 mm - 400 mm
+ Basket volume: 7 l - 13 l

VBC-S 1000 - 1250 | Swivel open
+ Basket diameter: 1000 mm - 1250 mm
+ Basket volume: 200 l - 501 l

VBC-W 1000 - 1600 | Bottom discharge
+ Basket diameter: 1000 mm - 1600 mm
+ Basket volume: 200 l - 1011 l

VGC 1250 - 1600 | Performance trimmed
+ Basket diameter: 1000 mm - 1600 mm
+ Basket volume: 200 l - 1011 l

VTC-I 320 - 400 | HAPI containment
+ Basket diameter: 320 mm - 400 mm
+ Basket volume: 7 l - 13 l

HCZ 1000 - 2000 | Durable performance
+ Basket diameter: 1000 mm - 2000 mm
+ Basket volume: 172 l - 1718 l

HPZ 630 - 1600 | Highest purity
+ Basket diameter: 630 mm - 1600 mm
+ Basket volume: 41 l - 704 l

HORIZONTAL BASKET CENTRIFUGES
AFTERSALES SERVICE

SERVICE

+ Prompt and uncomplicated support from our customer service team
+ Worldwide service centres
+ Maintenance, inspections, maintenance contracts based on BGR 500
+ Modifications, upgrades and integration of new drive and control systems
+ Customer-specific training

SPARE PARTS

+ Large stock of spare parts
+ Fast delivery
+ Reliable service worldwide
+ Competitive prices
+ Top manufacturer quality
+ Original parts

UPGRADES

GET MORE FOR LITTLE

+ Process optimisation to reduce down times and increase reliability
+ Control system upgrades with newest hard- and software
+ Process monitoring to improve availability
+ Remote maintenance for fast inexpensive troubleshooting
+ Technical improvements to increase output and product quality
AUTOMATION SYSTEMS

RELIABLE CONTROL
+ Safety analyses, safety circuits
+ Design and assembly of control cabinets and operator panels
+ Regenerative breaking units
+ Compliance to international regulations
+ Interface to process control systems, remote maintenance
+ Documentation: diagrams, concept descriptions, instructions, safety certificates
+ Commissioning of complete systems on site
+ Modifications and upgrades of existing systems

INERTICATION SYSTEMS

INERTOSAFE® SIL 2
+ Validation according to SIL 2 (EN 61511)
+ Validation certificates included

INERTOSAFE® PL d
+ Validation according to PL d (EN 13849-2)
+ Validation certificate included

INERTOSAFE® Basic
+ For any type of vessel
+ Integration in customers own safety control system

PROCESS TECHNOLOGY

PROCESS ORIENTED
+ Product tests at our fully equipped laboratory
+ Product tests by our process engineers on site
+ Pilot tests on your site
+ Commissioning of new installations
+ Optimisation of existing installations
+ Troubleshooting
USED CENTRIFUGES

NEARLY AS GOOD AS NEW

- Know-how from the original equipment manufacturer
- Safe operation and compliance to all current regulations
- Short delivery time and 12 month guarantee
- Complete overhaul
- Application-specific modifications
- Detailed documentation

PERIPHERAL ELEMENTS

RISK-FREE OPERATION

- Various valves and butterfly valves
- Flexible connections and flow sight glasses
- Siphons and pressure relief valves
- CIP collectors and valves for the regulation of the CIP cleaning cycles
- Collectors on the centrifuge for the distribution of instrument air, nitrogen and hydraulic oil
- Pilot valve blocks for the control of various system parts
- Dosing devices and agitators for installation below static thickeners
- Hydrocyclones to thicken suspension prior to the centrifuge feed

DOCUMENTATION

CUSTOMISED

- Detailed documentation fulfilling all directives and standards
- Meeting requirements as per customer specification (e.g. EN10204 - 3.1 Certificates)
- DQ / IQ / OQ / As Built documents, data sheets, operating manuals
- Detailed spare parts catalogues
- Support at HAZOPS
- EC declaration of conformity
- ATEX 2014/34/EU
# APPLICATIONS

## APPLICATIONS IN THE CHEMICAL INDUSTRY

<table>
<thead>
<tr>
<th>MAIN PRODUCT GROUP</th>
<th>PRODUCTS</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorides</td>
<td>NaCl</td>
<td>Sodium chloride</td>
</tr>
<tr>
<td></td>
<td>KCl</td>
<td>Potassium chloride</td>
</tr>
<tr>
<td></td>
<td>NH4Cl</td>
<td>Ammonium chloride</td>
</tr>
<tr>
<td></td>
<td>TCCA</td>
<td>Trichloroisocyanuric acid</td>
</tr>
<tr>
<td></td>
<td>DCCNa</td>
<td>Sodium Dichloroisocyanurate</td>
</tr>
<tr>
<td>Sulphates</td>
<td>Na2SO4</td>
<td>Sodium sulphate anhydride</td>
</tr>
<tr>
<td></td>
<td>Na2SO4*10H2O</td>
<td>Sodium sulphate decahydrate</td>
</tr>
<tr>
<td></td>
<td>CaSO4*2H2O</td>
<td>Gypsum</td>
</tr>
<tr>
<td></td>
<td>K2SO4</td>
<td>Potassium sulphate</td>
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<td>MgSO4</td>
<td>Magnesium sulphate</td>
</tr>
<tr>
<td></td>
<td>(NH4)2SO4</td>
<td>Ammonium sulphate</td>
</tr>
<tr>
<td></td>
<td>FeSO4*7H2O</td>
<td>Iron sulphate heptahydrate</td>
</tr>
<tr>
<td>Chlorates</td>
<td>NaClO3</td>
<td>Sodium chlorate</td>
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<tr>
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<td>KClO3</td>
<td>Potassium chlorate</td>
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<tr>
<td>Nitrates</td>
<td>NaNO3</td>
<td>Sodium nitrate</td>
</tr>
<tr>
<td></td>
<td>KNO3</td>
<td>Potassium nitrate</td>
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<tr>
<td></td>
<td>C6H7NO2-</td>
<td>Lysine</td>
</tr>
<tr>
<td>Urea</td>
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<td>Diff. processes</td>
</tr>
<tr>
<td>Intermediate Products</td>
<td>Na2CO3</td>
<td>Sodium bicarbonate crude</td>
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<tr>
<td></td>
<td>Na2CO3H2O</td>
<td>Sodium carbonate monohydrate</td>
</tr>
<tr>
<td></td>
<td>C3H6NO</td>
<td>PAP, P-aminophenole</td>
</tr>
<tr>
<td>Fibrous Products</td>
<td></td>
<td>Nitrocellulose Chips / Fibers</td>
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<tr>
<td></td>
<td></td>
<td>CMC</td>
</tr>
<tr>
<td>Various</td>
<td>CaC2H2O6</td>
<td>Calcium tartrate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sewage</td>
</tr>
</tbody>
</table>

## APPLICATIONS IN THE FINE CHEMICAL AND PHARMA INDUSTRY

| Fine Chemicals | NaHCO3 | Sodium bicarbonate refined | Food industry |
|                |       | Pigments | Paint industry |
| NaCN           | Sodium cyanide | Herbicides, insecticides | Agrochemicals |
| C6H5NO         | Carbofuran | Antiviral, Vitamins, APIs | Health, pharmaceutical products |
| Pharmaceuticals |       | Antibiotics, Vitamins, APIs | Health, pharmaceutical products |
|                | Intermediates | Health, pharmaceutical products |
| Starch         | Various | Food industry |

## APPLICATIONS IN THE MINERAL PROCESSING

| Mining | Ca3(PO4)2 | Rock phosphate | Phosphate treatment plants |
|        | NaCl      | Rock salt, Sea salt | Phosphate treatment plants |
|        | KCl      | Potassium chloride from flotation | Fertilizer |

## APPLICATIONS IN THE PETROCHEMICAL INDUSTRY

| Basic Products | C6H8O4 | Adipic acid | Polyamides, Nylon 66 |
|               | C15H16O2 | Bisphenol A | Polycarbonate, plexiglass, synthetic resins |
|               | C9H14NO | Caprolactam | Nylon 6 |
|               | C8H10 | Paraxylene | Synthetic fibres |
|               | C2H6O | ABS, MBS | Pure resins |
|               | C6H12O2 | MEG (Monoethylene glycol) | MEG Recovery |
|               | (C3H7) | Polyethylene | Resins |
|               | (C3H7) | Polypropylene | Resins |