



Second Hand Machines



Special features for the customer's benefit

- availability on international markets
- all manufacturer's machines
- including HEINKEL Guarantee
- second hand, but first class Condition
- conformity

Added value



Special features for the customer's benefit

- preventative maintenance
- trouble shooting
- worldwide support
- online support, training and process optimisation
- rebuilds, upgrades, adaption to new requirements

Controls



Special features for the customer's benefit

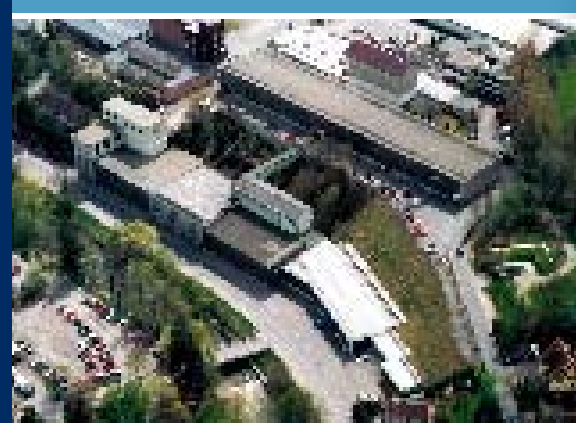
- modular and flexible
- "stand alone" or integrable into any DCS
- GAMP, ATEX, 21 CFR Part 11, EN 12547
- telemaintenance and remote system analysis
- premium component suppliers
- complete "in house" design

HEINKEL Services:

- Technical Support
- Online-Support
- Installation and commissioning
- Preventative maintenance
- Maintenance contracts
- Spare part logistic
- Refurbishments and upgrades
- Consulting
- Training
- Rental Units
- Product tests

HEINKEL's products are being used to manufacture the following:

- Agricultural chemicals
- API (active pharmaceutical ingredients)
- Aromatic substances
- Biocides
- Cellulose derivatives
- Fragrances
- Precious metals
- Pigments
- Elektro-chemicals
- Color pigments
- Fine chemicals
- Herbicides
- Catalysts
- Corrosion inhibitors
- Cosmetics
- Food additives and food substances
- Metallic powder
- Nitrocellulose
- Brighteners
- Pesticides
- Plant extracts
- Pharmaceutical substances
- Preliminary Pharmaceutical substances
- Intermediate pharmaceutical products
- Photographic chemicals
- Speciality polymers
- Vitamins



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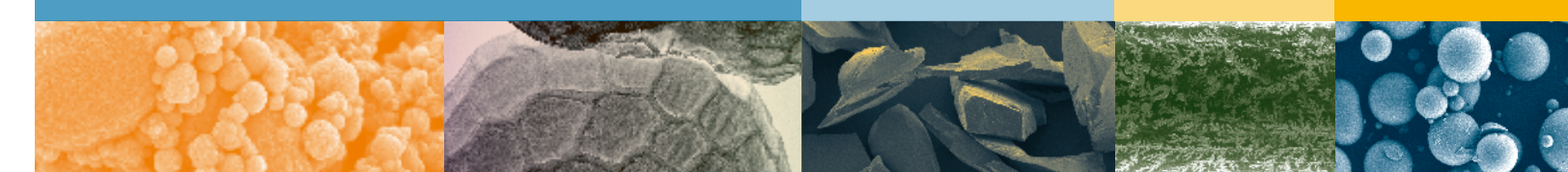
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Also with representatives in

- Australia
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- Japan
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- Netherlands
- Norway
- Austria
- Poland
- Portugal
- Puerto Rico
- Sweden
- Switzerland
- Singapore
- Spain
- Taiwan
- Turkey
- Hungary

and other countries

Product overview



03/2009 Technical data are subject to changes

Pharmaceutical Industry

Widest range of batch centrifuges



Pilot Plant Centrifuges



Vertical
V 200 - 500 TP
0.06 - 0.39 m² filter area
2.5 - 20 l nominal volume

Pilot Plant Centrifuges



Horizontal
H 250 - 500 P
0.065 - 0.39 m² filter area
2.5 - 20 l nominal volume

Special features for the customer's benefit

- compact and mobile design
- easy installation; "plug and use"
- ideal for "Up scaling"
- very simple handling
- CIP-cleaning
- installation in Isolator / Glove box possible

- compact design
- easy installation; "plug and use"
- cGMP conformity
- full automated operation
- ideal for "Up scaling"

Vertical Top-Discharge Centrifuges



Vertical
V 630 - 1250 TP
0.80 - 3.14 m² filter area
51 - 400 l nominal volume

Vertical Bottom-Discharge Centrifuges



Vertical
V 630 - 1250 BP
0.80 - 3.14 m² filter area
51 - 400 l nominal volume

Special features for the customer's benefit

- flexible adaption for difficult filtering products
- discharge without any product loss
- smooth discharge without damage of crystals
- automated CIP Cleaning
- easy access to all product contact parts

- minimal space requirements
- cGMP conformity
- automated opening and closing of process housing
- optimized product discharge
- automated CIP
- easy access to all product contact parts

Horizontal Peeler Centrifuges



Horizontal
H 630 - 1300 P
0.61 - 3.27 m² filter area
40 - 540 l nominal volume

Inverting Filter Centrifuges



F 0 - F 4
HF 300.1 - 1300.1
0.10 - 2.0 m² filter area
Throughput 10 - 1,500 kg/h

Special features for the customer's benefit

- highly flexible, therefore wide range of applications
- highest cCMP Standard
- fully automated, validated CIP cleaning
- easy access of all parts in process area
- clean room design

- for difficult filtering products
- complete discharge
- discharge always possible
- minimizing of residual moisture using Pressure added Centrifugation
- centrifuge functionality expandable as dryer
- small footprint
- easiest "through wall design"

Pilot Plant Centrifuges



Vertical
V 200 - 500 TC
0.06 - 0.39 m² filter area
1.5 - 16 l nominal volume

Special features for the customer's benefit

- mobile and compact design
- easy installation; "plug and use"
- ideal for "Up scaling"
- double Jacket for Heating or cooling
- different drums for principle testing of filtration, sedimentation, classifying and clarifying



Horizontal
H 250 - 500 PC
0.065 - 0.39 m² filter area
2.5 - 20 l nominal volume

- compact design
- alternatively available as table top or "A-Design"
- easy installation; "plug and use"
- ideal for "Up scaling"
- full automated operation

Vertical Bottom-Discharge Centrifuges



Vertical
V 630 - 1800 BC
0.80 - 7.07 m² filter area
51 - 1,350 l nominal volume

Special features for the customer's benefit

- excellent adjustment to different products
- high throughput
- separation by filtration or sedimentation
- low residual moisture by high g-force

Horizontal Peeler Centrifuges



Horizontal
H 630 - 1800 C
0.80 - 7.07 m² filter area
51 - 1,350 l nominal volume

- pharma industry!
- high charging frequency
- high wash and extraction factors
- low residual moisture due to high centrifugal force
- discharge via Chute or screw
- use of perforated or siphon drum possible

Vertical Top-Discharge Centrifuges



Vertical
V 630 - 1600 TC
0.63 - 5.0 m² filter area
50 - 1,000 l nominal volume

Special features for the customer's benefit

- flexible adaption for bad filtering products
- heel free discharge
- smooth solids discharge without crystal damage
- high wash and extraction performance
- simple design
- reliable filter bag removal system
- robust and easy rim removal system

Vertical Bottom-Discharge Centrifuges



Vertical
V 800 - 1800 BG
1.58 - 7.07 m² filter area
160 - 1,350 l nominal volume

- high turn-down ratio
- high availability
- minimum residual moisture
- maximum reduction of chloride by optimized wash efficiency
- alternatively available in stainless steel or rubber lined

"Sterile" Vertical Top-Discharge Sedimentation Centrifuges



Vertical
V 630 - 1000 BS
1.10 - 1.60 m² sedimentation area
100 - 250 l nominal volume

Special features for the customer's benefit

- highest cCMP Standard
- fully automated, validated CIP
- high centrifugal force
- clean room installation

Classifying Centrifuges



Vertical
V 350 - 630 BK
0.18 - 1.10 m² sedimentation area
3.75 - 38 l nominal volume

Special features for the customer's benefit

- precise separating cut
- easy adjustment of separating cut
- high throughput
- recycling of cross particles
- easy installation
- maintenance friendly design
- low wear of peeler knife by using high performance materials

Vertical Dip-Coating Centrifuges



Vertical
V 425 TT
0.2 m² filter area
20 l nominal volume

- economical coating of small part with oil, lacquer etc.
- ideal spin of excess coating media
- easy installation

Vertical Multi-Purpose Centrifuges



Vertical
V 300 - 700 TM
0.06 - 0.66 m² filter area
10 - 150 l nominal volume

Special features for the customer's benefit

- economic solution for recovering of oils and liquids
- easy installation; "plug and use"
- simple and robust design

Vertical Pusher Centrifuges



Vertical
V 600 - 1100 P1
Throughput 0.4 - 10 t/h

- recovering of oils and liquids from swarf and plastic pallets
- simple and robust design

Special Applications

Chemical Industry