

# Product Overview







# Centrifuges & Systems







# **Pharmaceutical Industry**





- mobile, compact design

ideal for scaling-up
very simple handling

- easy "plug and use" installation

- can be installed in separator housing/glove box

**Key benefits:** 

– CIP cleaning

#### Vertical Basket Centrifuges

V 300 – 500 TP

0.14–0.50 m<sup>2</sup> filter area 3.9–31.5 L nominal volume

#### Horizontal Peeler Centrifuges

H 300 – 500 P

0.12–0.39 m² filter area 4.9–20 L nominal volume

#### Key benefits:

- compact design
- easy "plug and use" installation
   cGMP compliant
- fully automated operation
- ideal for scaling-up



- manual discharge of filter cake

- automated CIP cleaning

- gentle discharge, no particle damage

- easy access to all product contact parts

**Key benefits:** 

#### Top Discharge Centrifuges

V 630 – 1250 TP 0.80 – 3.14 m<sup>2</sup> filter area

- flexible adaptation for moderately well filtering products

51–400 L nominal volume

#### Vertical Peeler Centrifuges

V 800 – I250 BP

1.58–3.14 m<sup>2</sup> filter area 100–400 L nominal volume

#### Key benefits:

- small foot print
- cGMP compliant
- process housing opens and closes automatically
- automated product discharge
- automated CIP cleaning
- easy access to all product contact parts



#### Horizontal Peeler Centrifuges H 630 – 1250 P

0.62–3.14 m² filter area 42–400 L nominal volume



### Inverting Filter Centrifuges

FI – F4 HF 300.I – I300.I

0.10–2.00 m<sup>2</sup> filter area 10–1500 kg/h capacity

#### Key benefits:

- wide range of applications
- meets highest cGMP standards
- fully automated and validated CIP cleaning
- all process parts accessible for inspection
- cleanroom design

#### **Key benefits:**

- for moderately well filtering products
- complete discharge
- safe discharge
- additional pressure for maximum dewatering
- centrifuge can be used for drying
- small foot print
- $-\, {\rm very}$  simple through-the-wall installation

# **Chemical Industry**





- mobile, compact design

- ideal for scaling-up

and clearing tests

- easy "plug and use" installation

- double jacket for heating and cooling

- baskets for basic filtering, sedimentation, classifying

**Key benefits:** 

#### Vertical Basket Centrifuges

V 300 – 500 TC

0.14–0.50 m<sup>2</sup> filter area 3.9–31.5 L nominal volume



#### Horizontal Peeler Centrifuges

H 300 - 500 PC

0.12–0.39 m² filter area 4.9–20 L nominal volume

#### Key benefits:

- very compact design
- choice of tabletop or portable design
- easy "plug and use" installation
- ideal for scaling-up
- fully automated operation



#### Vertical Peeler Centrifuges

V 800 – 1800 BC

1.58–7.07 m<sup>2</sup> filter area 100–1350 L nominal volume



#### Horizontal Peeler Centrifuges

H 630 – 1800 C

I.58–7.07 m<sup>2</sup> filter area 63–I300 L nominal volume

#### **Key benefits:**

- excellent adaptability to changing products
- high throughputs
- separation by filtration or sedimentation
- better cake discharge due to gravity assist
- cartridge bearing and small foot print

#### **Key benefits:**

- wide range of applications
- high batch frequency
- high washing and extraction performance
- low residual moisture levels due to high G-force
- discharge through chute or screw-conveyor
- can be used with perforated basket or back-flushing basket



#### Vertical Top Discharge Centrifuges

V 500 – I250 TC

0.50–3.14 m<sup>2</sup> filter area 31.5–400 L nominal volume



#### Vertical Peeler Centrifuges V 800 – 1800 BG

1.58–7.07 m<sup>2</sup> filter area 100–1350 L nominal volume

#### Key benefits:

- optimized application for small through large throughputs
- minimal residual moisture
- maximum reduction of chloride concentrations through optimized wash process
- available in stainless steel or rubber coated

#### Key benefits:

- flexible adaptation for difficult to filter products
   complete discharge of filter cake
- gentle discharge, no particle damage
- high washing and extraction performance
- easy to assemble
- effective system for removal of filter bag
- robust and easy system for removable border ring

# **Special Applications**





#### Sterile Top Discharge Sedimentation Centrifuges

V 630 - 1000 TS

I.I0–I.60 m<sup>2</sup> sedimentation area I00–250 L nominal volume

#### **Key benefits:**

- meets highest cGMP standards
- fully automated and validated CIP cleaning
- high G-force
- cleanroom installation



#### Classifying Centrifuges 630 BK ||/|||

0.78–0.99 m<sup>2</sup> sedimentation area 3.75–38 L nominal volume – Titanium Dioxide production

#### Key benefits:

- precise separation cut
  easy adjustment of separation cut
- high throughputs
- recycling of coarse particles
- simple to install
- low maintenance, maintenance-friendly design
- $\text{TiO}_2$  production, Al<sub>2</sub>O<sub>3</sub>, SIC, CaCO<sub>3</sub>, etc.



adhesive coatings etc.

**Key benefits:** 

- simple to install

### Vertical Dip Coating Centrifuges

0.20 m² filter area 20 L nominal volume

V 425 TT

- economical coating of small parts with oil, lacquer,

- optimized spinning off of excess coating material



#### Vertical Multi-purpose Centrifuges

V 300 - 700 TM

0.06–0.66 m² filter area 10–150 L nominal volume

#### Key benefits:

- economical solution for recovering liquids and oils
- easy "plug and use" installation
- simple, robust design



#### Vertical Pusher Centrifuges V 600 – 1100 P

0.4-10 long ton / h capacity



#### **Ball Segment Valve** BSV 150 – BSV 400

DN 150-400 nominal diameter

#### **Key benefits:**

- recovery of liquids and oils from chips produced by
- processing centers and from plastic pellets
- simple, robust design

#### Key benefits:

- cGMP and FDA compliant design
- inflatable seal with large seal area; seal available in various materials
- complete, unobstructed discharge
- cavity-free aseptic design
- automated, verifiable CIP cleaning

## **Services**





#### Rebuilt Machines

#### Key benefits:

- international procurement
- machines from all manufacturers, assembled to suit
- customer requirements
- constantly changing range
- fast availability
- $-\operatorname{warranty}$  as for a new machine
- attractive prices



#### Conversions/ Retrofits

#### **Key benefits:**

- full mechanical overhaul
- electronic assembly upgrades
- current explosion protection regulations taken into account
- updated documentation



#### Drive Systems/ Controls

#### **Key benefits:**

- safety checked
- modular and flexible
- standalone, or can be integrated into any DCS
- GAMP, ATEX, 21 CFR Part II, EN 12547
- remote maintenance and systems analysis
- premium component suppliers
- overall development in-house at HEINKEL

#### **After Sales Services:**

- Technical support
- Online support
- Installation and commissioning
- Preventative maintenance
- Maintenance contracts
- Spare parts logistics
- Overhauls and upgrades
- Consulting
- Training
- Rental machines
- Pilot units

# **HEINKEL Drying and Separation Group products are used to manufacture the following products:**

- Agricultural chemicals
- API (active pharmaceutical ingredients)
- Aromatic substances
- Biocides
- Cellulose derivatives
- Fragrant substances
- Precious metals
- Effective pigments
- Electrochemical
- Color pigments

- Fine chemicals
- Herbicides
- Catalysts
- Corrosion inhibitors
- Cosmetics
- Food additives and food substances
- Metallic powder
- Nitrocellulose
- Brighteners
- Pesticides
- Plant extractives

- Pharmaceutical substances
- Preliminary pharmaceutical substances
- Intermediate pharmaceutical products
- Photographic chemicals
- Specialty polymers
- Vitamins

# www.heinkel.com





HEINKEL Process Technology GmbH Ferdinand-Porsche-Str. 8 74354 Besigheim GERMANY Phone +49 7143 9692-0 Telefax +49 7143 9692-269 E-Mail info@heinkel.de Internet www.heinkel.de



#### BOLZ Process Technology GmbH

Sigmannser Weg 2 88239 Wangen GERMANY Phone +49 7522 9162-0 Telefax +49 7522 9162-105 E-Mail info@bolz-pt.de Internet www.heinkel.de

#### HEINKEL Process Technology Pte Ltd.

25 International Business Park 4-59A German Centre, Singapore 609916 Phone +65 6562-8048 Telefax +65 6562-8049 E-Mail info@heinkel.com.sg Internet www.heinkel.com



HEINKEL Filtering Systems, Inc. 520 Sharptown Road Swedesboro, NJ 08085-1731 USA Phone +1 856 467-3399 Telefax +1 856 467-1010 E-Mail info@heinkelusa.com Internet www.heinkelusa.com



COMBER Process Technology S.r.l. Via Garibaldi, 67 20061 Carugate (MI) ITALY Phone +39 02 99990146 Telefax +39 02 99990148 E-Mail info@combenit Internet www.heinkel.com

#### HEINKEL s.r.o.

Machkova 587 50011 Hradec Králové CZECH REPUBLIC Phone +420 495 406250 Telefax +420 495 406251 E-Mail info@heinkel.cz Internet www.heinkel.com



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