Krämer

krämer ...
brings your tablets and capsules in top form

Edition 15 EN

Tablet-Dedusters

» Pages 7 – 17

Electronic-Controllers

» Pages 18 – 21

Combined-Units

» Pages 28 – 37

Belt Conveyors

» Pages 38 – 39

Edition 15 EN

Table of contents

Krämer

Stainless Steel Design

Wash in Place (WiP) Applications

Conveying Heights up to 1'600 mm from Tablet Inlet

High-Containment Applications

Easy Dismantling and Assembly

Electronic Controller with Feed-back Loop

Excellent Dedusting Performance

Visual Supervision due to Windows

Combined Units with Metal Detector
- Ceia
- Lock
- Mesutronic
- Safeline

Patented Drive Unit

Gentle Product Handling

Flexibility due to Height-Adjustments

Service and Support

Water- and Dust-Tight Drive Unit (IP65, optional)

Vibration free Housing

Customer Specific Solutions

High Conveying Performance

No loose Parts in Product Area

Edition 15 EN

Stainless Steel Design

Stainless steel is the most accepted construction material in the pharmaceutical industry. The use of stainless steel has the following advantages:

- Well known procedures for cleaning validation.
- No limitations regarding cleaning media.
- No risk of cross-contamination.
- No risk of contamination with non-metalic parts that can not be detected with a metal detector.
- Electrostatic effects can be eliminated.

Visual Supervision due to Windows

All Krämer devices are equipped with windows for visual inspection. Models with full transparent acrylic cylinders are available.

Excellent Dedusting Performance

For 30 years Krämer AG has set the standard in tablet dedusting performance. A combined vibration and airflow system allows the best dedusting results. Krämer AG also has expierences with sensitive products like direct compressed tablets.

Easy Dismantling and Assembly

- Time required to dismantle and assemble for cleaning is 3 - 5 minutes, even for unskilled operators.
- Disassembly and assembly for cleaning requires no tools.
- Weights of individual parts below 15 kg.
- Individual parts are small enough to be manageable while cleaning.

No Loose Parts in the Product Area

- Mechanical parts can not fall into the product.
- High product safety.

Gentle Product Handling

Special design elements on the inlet section and on the helix prevent tablet damage. Krämer dedusters provide especially gentle handling of Oblong and soft effervescent tablets.

High Conveying Performance

The conveying performance of Krämer devices fullfills the needs of state-of-the-art tablet presses. Krämer AG has relationships with all respected press manufactureres. The product range of Krämer AG is adapted to the performance of the tablet presses.

- Model E2000 for tablet presses with medium performance.
- Models E4000 / E5000 for tablet presses with highest performance.

Patented Drive Unit

- Dynamic compensation of forces and vibrations
- Long service intervals
- Easy to maintain
- Vibration free Housing
- Due to the patented drive unit vibrations will not be transmitted to the housing. The vibration is limited to the helix where it is needed for the upward conveying movement.
- Krämer deduster can be combined with vibration sensitive metal detectors.
- Fixed connections at the inlet and outlet of the deduster can be established.
- State of the art connections (e.g. TriClamp) are available.

Water- and Dust-Tight Drive Unit

The Krämer deduster model E5000 is equipped with a water- and dust-tight drive unit. Protection rating of this drive unit is IP65. This drive unit fullfills the highest hygienic demands. Further the model E5000 is used for Wash in Place (WiP) and High-Containment applications.

Electronic Controller with Feed-back Loop

Feed-back loop allows constant conveying speed under all circumstances.

- Conveying speed is easily adjustable from 0 to 100 %.
- Maximum speed governor can be preset to a safe level to prevent operators from overloading the machine.
- An acceleration sensor allows constant automatic adjustment of the drive unit to maximize conveying speed under all product loads.
- Only one parameter for adjustment needed.
- Automatic adjustment of resonance frequency.

Conveying Heights

Conveying heights from 400 up to 1600 mm are available. The conveying height is only needed for the subsequent processes like metal detection, product distribution to different bins. The dedusting performance is independent from the conveying height.

Height-Adjustable Stands

The deduster stand gives you a 250 mm range of height adjustment giving you the ability to adapt it to existing equipment. Units are also available without a column (base mounted) or with extremely low product entry (low-slung).

Combined Units with Metal Detector

Full technical support can be given on combined units equipped with any of the metal detectors listed:

- Ceia, Lock, Mesutronic, Safeline

Wash in Place (WiP) Applications

Three different concepts for Wash in Place applications are available:

- Concept A (Flooding): a simple and easy Wash in Place solution.
- Concept B (Wash down): wash down of the internal parts with turning wash nozzles.
- Concept C (Sequential washing): a variante of concept B, wash down of internal parts occurs in stages instead of all at once, to reduce the instantaneous water requirements.

High-Containment Applications

Units up to OEB 5 are available as standard. A factory OEL assessment test will be carried out on every individual high containment unit before delivery.

Customer Specific Solutions

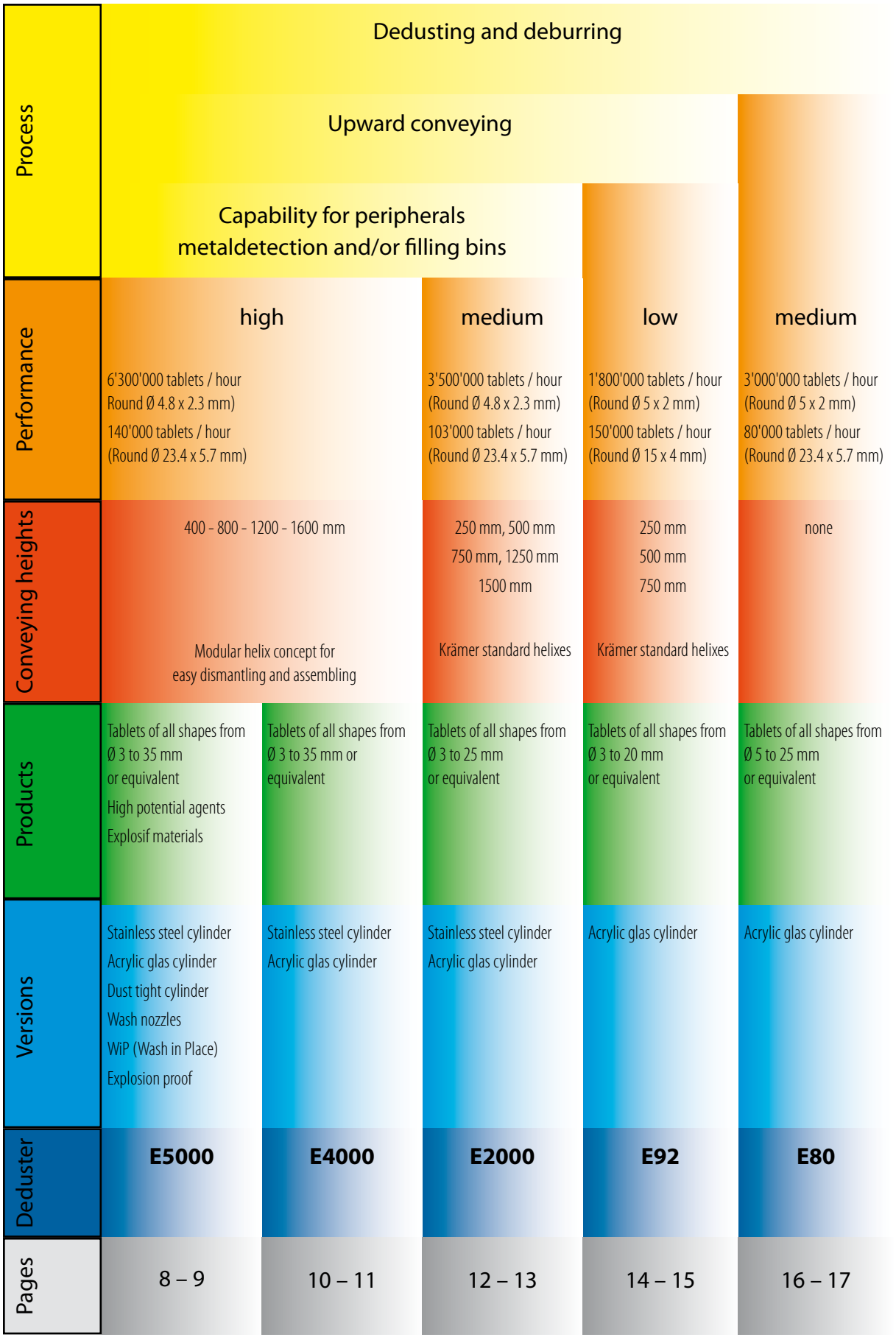
Although Krämer AG offers a wide range of standard units sometimes customer specific solutions are needed. Krämer AG has extensive experience in handling customer specific projects. By placing the customers needs first, the best solution can be found.

Service and Support

The warranty time on all Krämer devices is two years. Krämer AG has established a world-wide service network which covers over 40 countries. This allows shortest response times in the unusal case of unexpected trouble.

Edition 15 EN

Selection help Dedusters



Highest conveying performance due to large helix

Various versions available from standard stainless steel to WiP

Integrated acceleration sensor for the best performance with varying tablet loads

Compatible with peripherals due to very low housing vibration

Patented drive system prevents helix vibration from being transmitted to housing.

Conveying heights:
400 - 800 -
1200 - 1600 mm

Modular helix for easy dismantling and assembling

Drive unit as well as controller are dust tight and waterproof, protection rating IP65

Required floor area:
500 x 500 mm

Edition 15 EN

Basic operation of deduster model E5000

- Upward conveying range 400 - 1600 mm
- Buffering allows continuous operation of tablet press / capsule filling facility
- Conveying of tablets of 3 - 35 mm diameter, and capsules

Design

- **Conveying performance complies with the highest demands**
- Modular helix concept for easy dismantling and assembly
- Drive unit is dust tight and waterproof IP65
- Constructed according to GMP specifications
- Upward conveying of tablets / capsules generated by continuously adjustable vibration
- The process can be monitored visually at all times through a large acrylic window
- Integrated acceleration sensor allows constant flow of tablets under different conditions (e.g. different loads on helix)
- The electronic control is available as an external (C820ER) controller
- The device outlet can be fitted with peripherals such as metal detectors, diverter switches, chutes etc.
- The outlet can be rotated 360° facing the inlet. The deduster is therefore adjustable to the tablet press discharge configuration.

Versions

- **E5000S**
  Stainless steel housing with acrylic glass inspection window
- **E5000A**
  Acrylic glass housing (PMMA), modular concept
- **E5000S-DT**
  Dust tight stainless steel housing with acrylic glas inspection window, modular concept
- **E5000A-DT**
  Dust tight acrylic glass housing (PMMA), modular concept
- **E5000S-WiP**
  Stainless steel housing with acrylic glass inspection windows and conduits for wash-in-place media, modular concept
- **E5000A-WiP**
  Acrylic glass housing (PMMA) with conduits for wash-in-place media, modular concept

Deburring and dedusting

- Air flow system efficiently removes dust particles from tablets
- Air flow system is an optimized combination of blown air and vacuum dust extraction

Features

- A patented suspension system based on counterweights eliminates vibration of the housing
- For cleaning the deduster can be disassembled easily and without tools by a single person
- Low maintenance

Deduster Type	E5000S –	400	800	1200	1600
Dimensions					
Weight	kg	115	130	145	160
Tablet Inlet	TC	3"	3"	3"	3"
Overall height (without stand)	mm	1'026	1'429	1'832	2'235
Inlet height (without stand)	mm	407	407	407	407
Conveying height	mm	347	750	1'153	1'556
Maximum tablet diameter	mm	35	35	35	35
Dedusting path	m	6.5	11.0	15.5	20.0
Technical Data					
Power supply 100 – 240 V, 50/60 Hz		x	x	x	x
Maximum current	A	1	1	1	1
Compressed air (p_u = 1.5 – 2 bar)	l/min	100 – 200	100 – 200	100 – 200	100 – 200
Air extraction (p_u = 10 – 20 mbar)	m^3/h	150 – 350	150 – 350	150 – 350	150 – 350
Noise emission at 1 m distance	dB(A)	< 70	< 70	< 70	< 70
Protection rating of drive unit		IP65	IP65	IP65	IP65
Conveying Capacity					
Round Ø 4.8 x 2.3 mm	x 1'000 tablets / hour	6'300	6'300	6'300	6'300
Round Ø 9.1 x 3.2 mm	x 1'000 tablets / hour	1'800	1'800	1'800	1'800
Round Ø 12.1 x 3.7 mm	x 1'000 tablets / hour	574	574	574	574
Round Ø 16 x 4 mm	x 1'000 tablets / hour	378	378	378	378
Round Ø 23.4 x 5.7 mm	x 1'000 tablets / hour	140	140	140	140
Round Ø 26.3 x 7 mm	x 1'000 tablets / hour	90	90	90	90
Round Ø 33.5 x 6.5 mm	x 1'000 tablets / hour	80	80	80	80
Oblong 16.3 x 7.6 x 5.7 mm	x 1'000 tablets / hour	770	770	770	770

Edition 15 EN

Krämer

Highest conveying performance due to large helix

Conveying heights:
400 - 800 -
1200 - 1600 mm

Versions with stainless steel cylinder or acrylic glass cylinder

Modular helix concept for easy dismantling and assembling

Integrated acceleration sensor for the best performance with varying tablet loads

Controller C820IR integrated in drive unit (external controller C820ER optional)

Compatible with peripherals due to very low housing vibration.

Patented drive system prevents helix vibration from being transmitted to housing.

Required floor area:
500 x 500 mm

Edition 15 EN

Basic operation of deduster model E4000

- Upward conveying range 400 - 1600 mm
- Buffering allows continuous operation of tablet press / capsule filling facility
- Conveying of tablets of 3 - 35 mm diameter, and capsules

Design

- **Conveying performance complies with the highest demands**
- Modular helix concept for easy dismantling and assembly
- Constructed according to GMP specifications
- Upward conveying of tablets / capsules generated by continuously adjustable vibration
- The process can be monitored visually at all times through a large acrylic window
- Integrated acceleration sensor allows constant flow of tablets under different conditions (e.g. different loads on helix)
- The electronic control is available as built-in (C820IR) or as an external (C820ER) controller
- The device outlet can be fitted with peripherals such as metal detectors, diverter switches, slides etc.
- The outlet can be rotated 360° facing the inlet. The deduster is therefore adjustable to the tablet press discharge configuration.

Versions

- **E4000S**
  Stainless steel housing with acrylic glass inspection window
- **E4000A**
  Acrylic glass housing (PMMA), modular concept

Deburring and dedusting

- Air flow system efficiently removes dust particles from tablets
- Air flow system is an optimized combination of blown air and vacuum dust extraction

Features

- A patented suspension system based on counterweights eliminates vibration of the housing
- For cleaning the deduster can be disassembled easily and without tools by a single person
- Low maintenance

Deduster Type	E4000 –	400	800	1200	1600
Dimensions					
Weight	kg	74	92	104	118
Tablet Inlet	TC	3"	3"	3"	3"
Overall height (without stand)	mm	1'052	1'454	1'809	2'259
Inlet height (without stand)	mm	386	386	386	386
Conveying height	mm	375	777	1'180	1'583
Maximum tablet diameter	mm	35	35	35	35
Dedusting path	m	6.5	11.0	15.5	20.0
Technical Data					
Power supply 100 – 240 V, 50/60 Hz		x	x	x	x
Maximum current	A	1	1	1	1
Compressed air (p_u = 1.5 – 2 bar)	l/min	100 – 200	100 – 200	100 – 200	100 – 200
Air extraction (p_u = 10 – 20 mbar)	m^3/h	150 – 350	150 – 350	150 – 350	150 – 350
Noise emission at 1 m distance	dB(A)	< 70	< 70	< 70	< 70
Protection rating of drive unit		IP50	IP50	IP50	IP50
Conveying Capacity					
Round Ø 4.8 x 2.3 mm	x 1'000 tablets / hour	6'300	6'300	6'300	6'300
Round Ø 9.1 x 3.2 mm	x 1'000 tablets / hour	1'800	1'800	1'800	1'800
Round Ø 12.1 x 3.7 mm	x 1'000 tablets / hour	574	574	574	574
Round Ø 16 x 4 mm	x 1'000 tablets / hour	378	378	378	378
Round Ø 23.4 x 5.7 mm	x 1'000 tablets / hour	140	140	140	140
Round Ø 26.3 x 7 mm	x 1'000 tablets / hour	90	90	90	90
Round Ø 33.5 x 6.5 mm	x 1'000 tablets / hour	80	80	80	80
Oblong 16.3 x 7.6 x 5.7 mm	x 1'000 tablets / hour	770	770	770	770

Edition 15 EN

Krämer

Medium performance conveying

Conveying heights 250 - 1500 mm, in 250 mm steps

Versions with stainless steel cylinder or acrylic glass cylinder

Our bestseller for standard applications

Integrated acceleration sensor for the best performance with varying tablet loads.

Controller C820IR integrated in drive unit (external controller C820ER optional)

Compatible with peripherals due to very low housing vibration.

Required floor area: 500 x 500 mm

Patented drive system prevents helix vibration from being transmitted to housing.

Basic operation of deduster model E2000

- Upward conveying range 250 - 1500 mm
- Buffering allows continuous operation of tablet press / capsule filling facility
- Conveying of tablets of 3 - 25 mm diameter, and capsules

Design

- Constructed according to GMP specifications
- Upward conveying of tablets / capsules generated by continuously adjustable vibration
- The process can be monitored visually at all times through a large acrylic window
- Integrated acceleration sensor allows constant flow of tablets under different conditions (e.g. different loads on helix)
- The electronic control is available as built-in (C820IR) or as an external (C820ER) controller
- The device outlet can be fitted with peripherals such as metal detectors, diverter switches, slides etc.
- The outlet can be rotated 360° facing the inlet. The deduster is therefore adjustable to the tablet press discharge configuration.

Versions

- **E2000S**
  Stainless steel housing with acrylic glass inspection window
- **E2000A**
  Housing consists of modular acrylic glass elements (PMMA)

Deburring and dedusting

- Air flow system efficiently removes dust particles from tablets
- Air flow system is an optimized combination of blown air and vacuum dust extraction

Features

- A patented suspension system based on counterweights eliminates vibration of the housing
- For cleaning the deduster can be disassembled easily and without tools by a single person
- Low maintenance

Deduster Type	E2000 –	250	500	750	1000	1250	1500
Dimensions							
Weight	kg	55	66	75	81	92	98
Overall height (without stand)	mm	811	1'181	1'328	1'584	1849	2'141
Inlet height (without stand)	mm	345	345	345	345	345	345
Conveying height	mm	256	518	745	1'030	1'290	1'587
Maximum tablet diameter	mm	25	25	25	25	25	25
Dedusting path	m	5	7	9	11	15	18
Technical Data							
Power supply 100 – 240 V, 50/60 Hz		x	x	x	x	x	x
Maximum current	A	1	1	1	1	1	1
Compressed air (p_u = 1.5 – 2 bar)	l/min	50 - 100	50 - 100	50 - 100	50 - 100	50 - 100	50 - 100
Air extraction (p_u = 10 – 20 mbar)	m³/h	100 - 250	100 - 250	100 - 250	100 - 250	100 - 250	100 - 250
Noise emission at 1 m distance	dB(A)	< 70	< 70	< 70	< 70	< 70	< 70
Protection rating of drive unit		IP50	IP50	IP50	IP50	IP50	IP50
Conveying Capacity							
Round Ø 4.8 x 2.3 mm	x 1'000 tablets / hour	3'500	3'500	3'500	3'500	3'500	3'500
Round Ø 9.1 x 3.2 mm	x 1'000 tablets / hour	1'300	1'300	1'300	1'300	1'300	1'300
Round Ø 12.1 x 3.7 mm	x 1'000 tablets / hour	410	410	410	410	410	410
Round Ø 16 x 4 mm	x 1'000 tablets / hour	280	280	280	280	280	280
Round Ø 23.4 x 5.7 mm	x 1'000 tablets / hour	103	103	103	103	103	103
Round Ø 25 x 7 mm	x 1'000 tablets / hour	68	68	68	68	68	68
Oblong 16.3 x 7.6 x 5.7 mm	x 1'000 tablets / hour	425	425	425	425	425	425
Capsules 19.5 x 7 mm, No. 1	x 1'000 tablets / hour	448	448	448	448	448	448

Edition 15 EN

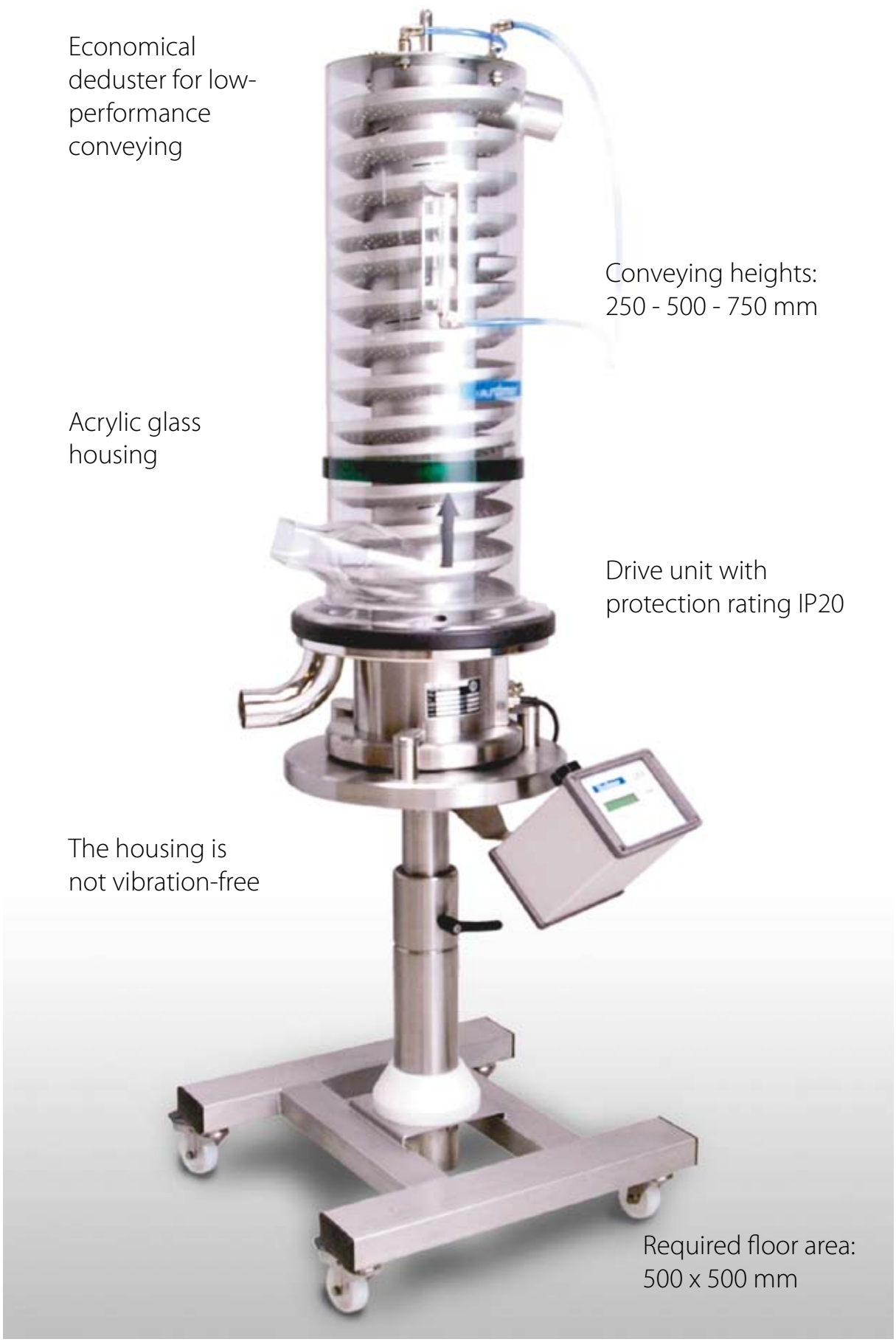
Economical deduster for low-performance conveying

Conveying heights:
250 - 500 - 750 mm

Acrylic glass housing

Drive unit with protection rating IP20

The housing is not vibration-free



Required floor area:
500 x 500 mm

Basic operation of deduster model E92

- Upward conveying range 250 - 750 mm
- Conveying of tablets of 3 - 20 mm diameter, and capsules

Design

- Acrylic glass housing (PMMA), stainless steel drive
- Constructed according to GMP specifications
- Upward conveying of tablets / capsules generated by continuously adjustable vibration
- The process can be monitored visually at all times through a large acrylic window
- The electronic control allows the reproduction of operating conditions
- The device outlet can be fitted with peripherals such as metal detectors, diverter switches, slides etc.
- The outlet can be rotated 2 x 90° facing the inlet. The deduster is therefore adjustable to the tablet press discharge configuration.

Deburring and dedusting

- Air flow system efficiently removes dust particles from tablets
- Air flow system is an optimized combination of blown air and vacuum dust extraction

Features

- For cleaning, the deduster can be disassembled easily and without tools by a single person
- Low maintenance
- Vibration is transmitted from the oscillating drive to the housing

Edition 15 EN

Deduster Type	E92 –	250	500	750
Dimensions				
Weight	kg	27	29	33
Overall height (without stand)	mm	658	898	1'183
Inlet height (without stand)	mm	278	278	278
Conveying height	mm	250	490	770
Maximum tablet diameter	mm	20	20	20
Maximum dedusting path	m	4.0	6.8	9.6
Technical Data				
Power supply 100 – 240 V, 50/60 Hz		x	x	x
Maximum current	A	1	1	1
Compressed air (p_u = 1.5 – 2 bar)	l/min	200 - 400	200 - 400	200 - 400
Air extraction (p_u = 10 – 20 mbar)	m^3/h	100 - 250	100 - 250	100 - 250
Noise emission at 1 m distance	dB(A)	< 75	< 75	< 75
Protection rating of drive unit		IP20	IP20	IP20
Conveying Capacity				
Round Ø 5 x 2 mm	x 1'000 tablets / hour	1'800	1'800	1'800
Round Ø 8 x 3 mm	x 1'000 tablets / hour	730	730	730
Round Ø 10 x 4 mm	x 1'000 tablets / hour	480	480	480
Round Ø 15 x 4 mm	x 1'000 tablets / hour	150	150	150
Oblong 19.4 x 8.6 x 6 mm	x 1'000 tablets / hour	120	120	120

Medium-performance conveying

Drive unit protection rating IP 20

Best choice if only deburring and dedusting is needed

Downward conveying 300 mm

Housing not vibration-free

Required floor area: Ø 315 mm

Edition 15 EN

Basic operation of deduster model E80

- Downward conveying range 300 mm
- Conveying of tablets of 5 - 25 mm diameter, and capsules

Design

- Acrylic glass housing (PMMA), stainless steel drive
- Constructed according to GMP specifications
- Downward conveying of tablets / capsules generated by continuously adjustable vibration
- The process can be monitored visually at all times through a large acrylic window
- The electronic control allows the duplication of operating conditions
- The device outlet can be fitted with peripherals such as metal detectors, diverter switches, slides etc.
- The outlet can be rotated up to 360° facing the inlet. The deduster can adapt to any local situation

Deburring and dedusting

- Air flow system efficiently removes dust particles from tablets
- Air flow system is an optimized combination of blown air and vacuum dust extraction

Features

- For cleaning the deduster can be disassembled easily and without tools by a single person
- Low maintenance
- Vibration is transmitted from the oscillating drive to the housing

Deduster Type		E80	
Dimensions			
Weight	kg	27	
Overall height (without stand)	mm	440	
Inlet height (without stand)	mm	400	
Downwards conveying	mm	300	
Maximum tablet diameter	mm	25	
Maximum dedusting path	m	2.8	
Technical Data			
Power supply 100 – 240 V, 50/60 Hz		x	
Maximum current	A	1	
Compressed air (p_u = 1.5 – 2 bar)	l/min	100 - 200	
Air extraction (p_u = 10 – 20 mbar)	m^3/h	50 - 100	
Noise emission at 1 m distance	dB(A)	< 75	
Protection rating of drive unit		IP20	
Conveying Capacity			
Round Ø 5 x 2 mm	x 1'000 tablets / hour	3'000	
Round Ø 8 x 3 mm	x 1'000 tablets / hour	1'200	
Round Ø 10 x 4 mm	x 1'000 tablets / hour	800	
Round Ø 15 x 4 mm	x 1'000 tablets / hour	180	
Round Ø 23.4 x 5.7 mm	x 1'000 tablets / hour	80	
Oblong 19.4 x 8.6 x 6 mm	x 1'000 tablets / hour	210	

Edition 15 EN

Controller C920

Monochrome display with touchscreen for easy operation

Visualization of the processes, graphical display of settings

Settings password protected, auto-login operator as option

Can be used in WiP environments, protection class IP65

Control of the deduster and other peripherals

Closed-loop control circuit allows constant flow of product

Best performance throughout the operating range

Modules for jam detection and other monitoring functions optional

PLC controller, operation system of the display: Windows CE®

Edition 15 EN

Main menu

The complete system can be controlled by the main menu. In addition, all available set-up levels can be selected in the main menu.

General settings, for example the language, can also be selected and modified in the main menu.

Upon login, each user sees only the functions he is allowed to use, depending on preset user rights.

Deduster

Tuning the deduster: speed of tablet flow can be adjusted in increments of 0.1. The current value is graphically displayed if the deduster is in operation. Further ajustment parameters for the deduster are password protected.

Metal detector

The controller C920 features additional monitoring functions if a metal detector supplied by Krämer is used.

WIP control

If equipped with a Krämer media box, various WiP programs are available.

Product diverter

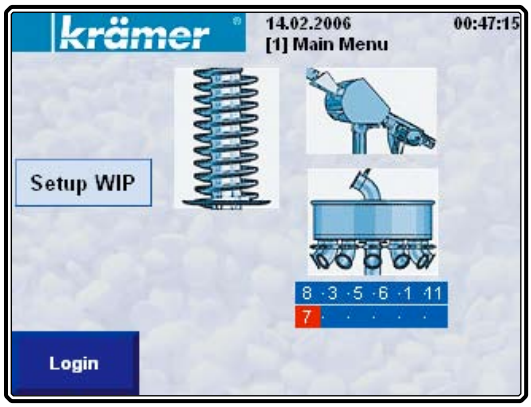
If a Krämer product diverter V4000 is used the outlet channels can be comfortably and graphically programmed in the controller C920.

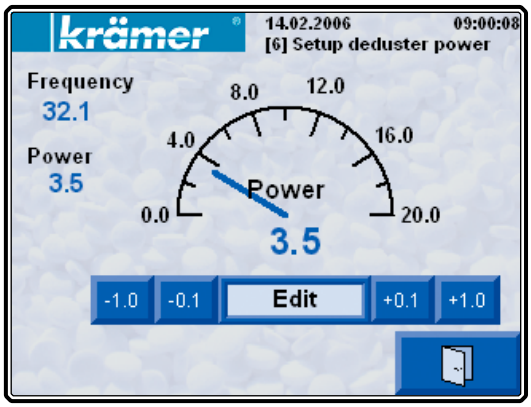
Various programs for diverting the products can easily be programmed and stored. Usually, the counter signal from the tablet press is processed. In connection with older presses the diverting time is programmed. Moreover, the product diverter can be entirely controlled by the tablet press.

Another option is the programming of a sample collector. In this case, one of the channels of the product diverter is used as a sample collector.

Interfaces

- 1 deduster
- 2 belt conveyors
- 1 interface to tablet press
- 1 metal detector
- 1 Krämer product diverter
- 1 Krämer media box M900 for WIP functions
- 6 monitoring sensors





Controller Type		C920	
Dimensions			
Weight	kg	10	
Dimension Cabinet (L x W x H)	mm	300 x 400 x 700	
Dimension Display	mm	115 x 85	
Resolution Display	pixel	320 x 240	
Material Cabinet		1.4304, AISI304	
Technical Data			
Power supply 90 - 260 V, 50/60 Hz		x	
Maximum current	A	2.2	
PLC Controller		Allen-Bradley ML 1200	
Ambiente temperature		0 - 55° C (32 - 131° F)	
Lifetime backup battery		5 Years minimum	
Protection rating		IP65	

Controller C820

Frequency controller for vibratory drives

Monochrome display for easy operation

Closed-loop control circuit allows constant flow of product

Automatic search and tracking of optimal frequency

Best performance throughout the operating range

Soft-key protected access to adjustment parameters

Digital and analog interfaces available

Edition 15 EN

Features

The frequency controller C820 is designed for the use with Krämer dedusters and other vibratory drives.

- Graphic display shows current settings
- Automatic current sensing and limitation
- Short-circuit protection
- Main voltage detection (100 / 240 V)
- Soft-key protection prevents unauthorized operations
- Status of controller will be saved at power off
- The conveyor (deduster) can be automatically switched on upon "power on"
- The electronic controller permits reproducible operating states

Close-loop control circuit

If the deduster is equipped with an acceleration sensor the flow speed of products will be automatically controlled. The operator only preselects the desired flow speed on the controller. Values from 0 % (no flow speed) up to 100 % (mechanical maximum) are possible. The C820 controller holds the flow speed constant under changing conditions, for example under different product load on the helix.

Furthermore, a system equipped with an acceleration sensor allows the automatic adjustment of frequency. With this function, the vibratory drive always works in the best possible operating point.

Interfaces

- 1 vibratory drive (deduster)
- 1 jam sensor
- 1 air valve
- Analogue signal for flow speed 0 - 100 % (0 - 25 V)
- CAN-Bus interface optional

Edition 15 EN

Controller Type		C820 ER	C820 IR
Dimensions			
Weight	kg	1.735	2.700
Dimension Cabinet, without sockets (L x W x H)	mm	170 x 110 x 156	300 x 175 x 170
Housing Material		Anodized Aluminium	1.4301
Technical Data			
Power supply 100 - 240 V, 50/60 Hz		x	x
Maximum current	A	3	3
Output frequency range (0.1 Hz increments)	Hz	25.0 - 50.0	25.0 - 50.0
Ambiente temperature		0 - 40° C	0 - 40° C
Analogue input signals	VDC	0 to 25	0 to 25
Protection rating		IP65	IP50

Product diverter V4000 / V5000

Compact and lightweight design with low installation height

Transparent cover allows visual supervision of filling process

2 – 12 discharge positions for process automation

Short switching times between discharge positions

Every position can be defined a sample collector

Controlled by the Krämer C920 controller or optionally by the tablet press (requires press software modification)

Edition 15 EN

Design

- Round diverter pan with 2 to 12 discharge positions
- Transparent cover in acrylic glass (PMMA)
- Brushless electric motor built into diverter holder
- Power fail-safe position monitoring
- Jam monitoring: Capacitive proximity switch PNP / NC in the inlet tube
- Construction according to cGMP specifications

Control modes

- The diverter is controlled either by the Krämer controller C920 or optionally directly by the tablet press
- Switch signal from press to diverter (press counts pieces, rotations, etc.)
- Impulses from press are counted by the Krämer controller C920, PLC actuates switching of the diverter
- Dwelling time on each outlet is set in the Krämer controller C920
- Fill-level monitoring by sensors at each bin. Sensors actuate switching of the diverter

Versions

- Integrated in CU combined unit with deduster, with or without metal detector
- As stand-alone product diverter on roll-away stand
- V4000: standard version
- V5000-DT: dust and watertight version with Triclamp connections at outlets
- V5000-WIP: washable version with 4 rotating nozzles in cover and inlet as well as Triclamp connections at outlets

Inlet and outlets

- Round inlet tube at 30° angle
- Outlet hoses in PU/KM (must be installed at min. 45°)
- Optional: steel tube outlets (if angle of at least 45° is not possible)

Product Diverter Type		V4000	V5000-DT	V5000-WIP
Dimensions				
Weight (depends on number of outlets)	kg	10 – 15	10 – 15	10 – 15
Overall height (middle inlet – middle outlet)	mm	285	285	285
Overall diameter	mm	468	468	468
Number of outlets		3 – 12	2 – 12	2 – 12
Connection Nominal Diameter				
Inlet		Ø 60 mm	TC DN50	TC DN50
Outlet	Ø mm	60	—	—
Outlet with Triclamp	TC ISO	—	DN50	DN50
Technical Data				
Power supply 24 VDC, ± 10 %		x	x	x
Rated current	A	1.7	1.7	1.7
Protection rating		IP65	IP65	IP65

Edition 15 EN

Alternating, automatic filling of two bins

Can be easily integrated to E2000, E4000 and E5000S dedusters

Process controlled by tablet press or capsule filling machine

Space saving design

Edition 15 EN

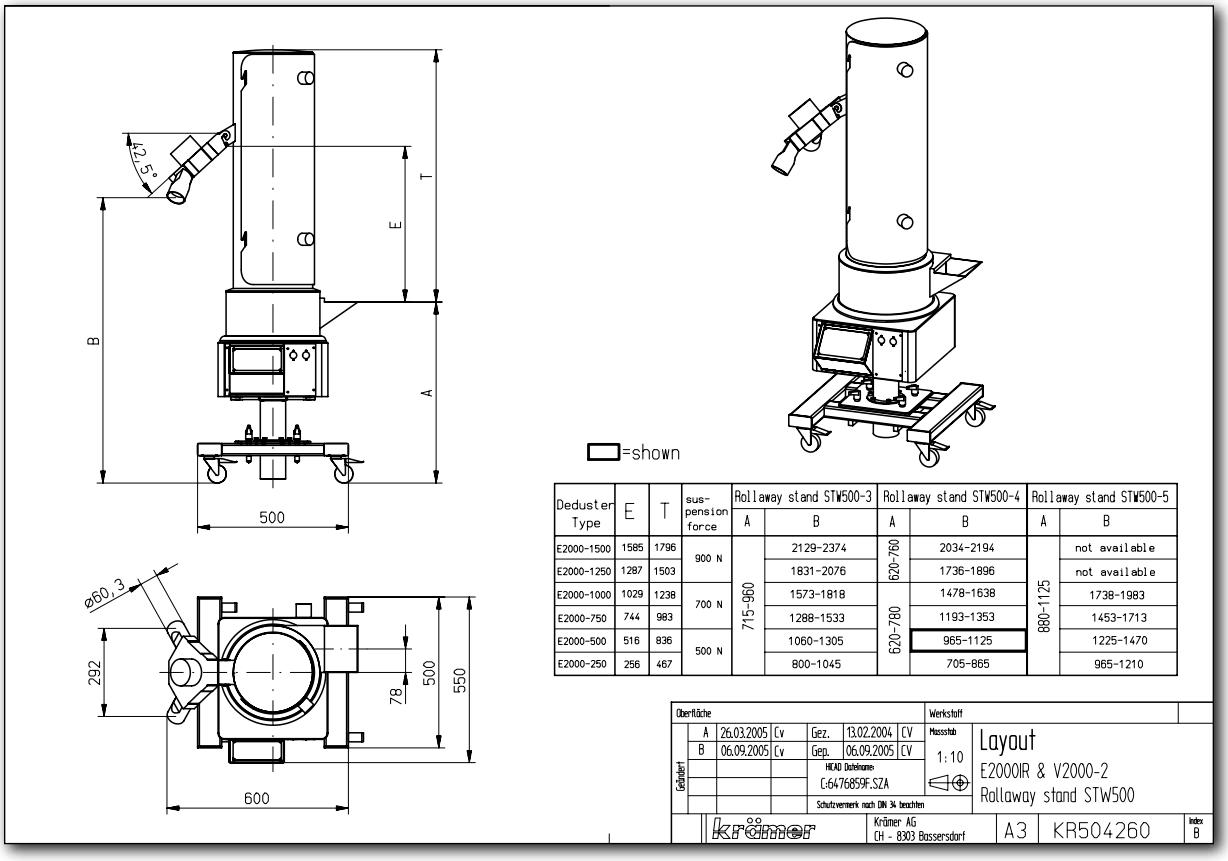
Basic operation of the diverter V2000-2

The electronic control of the tablet press or capsule filling machine generates a 24V / 0V DC switching signal for the diverter.

The jam monitoring signal can be used to stop the tablet press or capsule filling machine if required.

Design

- Housing in stainless steel
- Cover in acrylic glass (PMMA)
- Drive unit with rotary magnet
- Jam monitoring using a capacitive proximity switch at the inlet



Deduster Type	E	T	sus-pension force	Rollaway stand STW500-3		Rollaway stand STW500-4		Rollaway stand STW500-5	
				A	B	A	B	A	B
E2000-1500	1585	1796	900 N	715-960	2129-2374	620-760	2034-2194	880-1125	not available
E2000-1250	1287	1503			1831-2076		1736-1896		not available
E2000-1000	1029	1238	700 N		1573-1818	620-780	1478-1638		1738-1983
E2000-750	744	983			1288-1533		1193-1353		1453-1713
E2000-500	516	836	500 N		1060-1305		965-1125		1225-1470
E2000-250	256	467			800-1045		705-865		965-1210

Oberfläche | Werkstoff
A 26.03.2005 Cv Gez. 13.02.2004 CV
B 06.09.2005 Cv Gep. 06.09.2005 CV
Gelöscht | Massstab 1:10
HEAD Dateiname C:6476859F.SZA
Schutzvermerk nach DIN 34 beachten
Layout
E2000IR & V2000-2
Rollaway stand STW500
Krämer
Krämer AG CH - 8303 Bassersdorf
A3 KR504260 Index B

Product Diverter Type	V2000-2	
Measures		
Weight	4 kg	
Number of outlets	2	
Technical Data		
Power supply moving-magnet	24 V DC	
Jam sensor: capacitive proximity switch	PNP / NC	

Rollaway Stand STW500

» Applicable to Deduster types: E2000, E4000, E5000

» Mobile on casters with brakes

» Height adjustable telescopic column

» Telescopic column laterally adjustable without tools

Rollaway Stand STW500AG

» Applicable to deduster type E92

» Mobile on casters with brakes

» Height adjustable telescopic column

» Vibration compensation with dampers

» Brackets allow easy fixation of deduster

Rollaway Stand STW500A

» Applicable to deduster type E80

» Mobile on casters with brakes

» Height adjustable telescopic column

» Brackets allow easy fixation of deduster

Edition 15 EN

Stand STA

- » Applicable to deduster type E80
- » Round pedestal, not mobile
- » Height adjustable telescopic column
- » Brackets allow easy fixation of deduster

Stand Type		STW500	STW500AG	STW500A	STA
Dimensions					
Weight	kg	19.0	37.0	15.0	6.5
Chassis frame, square tube	mm	500 x 510	500 x 510	500 x 510	—
Diameter support plate	mm	—	—	—	260
Diameter pedestal	mm	—	—	—	315
Adjustment range height	mm	145 / 245	345	340	200
Number of castors with brakes		4	4	4	—
Diameter of castors	mm	60	60	60	—
Technical Data					
Load capacity	N	1'500	500	250	250
Gas spring support force	N	500 / 700 / 900	500	250	250
Material stainless steel 1.4301 / AISI316		x	x	x	x

Edition 15 EN

Deduster
E2000S-750

Metal Detector
Ceia THS/PH21

Controller C820

Rollaway stand
STW800 with
electric box

Required floor area:
800 x 600 mm

Edition 15 EN

Features

- Compact combination of devices (E2000 with metal detector)
- Flexible use (on left or right side of tablet press / capsule filling facility)
- Metal detector after deduster
- Deduster on telescopic column: flexible inlet height
- Conveying performance for medium demands
- Required floor area 800 x 600 mm
- Protection rating of whole unit IP 50

Metal detector

Type: Ceia THS/PH21

Controller

- Waterproof and dust tight according to IP65
- Failsafe operation mode
- CRF 21 Part 11 compatible
- RS232 interface standard, ethernet optional
- Up to 20 operators with programmable access level
- 250 memory locations for different products
- Data will not be lost in case of power blackout due to permanent battery driven storage backup.
- Power supply 90 - 162 VAC / 180 - 253 VAC / 48 - 62 Hz

Detection head

- Aperture 100 x 40 mm or 90 x 25 mm
- Waterproof and dust tight according IP65
- Capacity up to 1'800'000 tablets / hour
- Failure free data transmission to controller due to digital signals

Rejection system

- Drop reject system functions with gravity
- Stainless steel construction
- Water proof and dust tight according to IP65
- Failsafe operation with reject confirmation and flap presence check

Spherical Sensitivity of model with aperture 100 x 40 mm

- Ferrous (Fe): 0.3 mm
- Non-Ferrous (70Cu30Zn): 0.35 mm
- Stainless Steel (AISI316): 0.5 mm

Spherical Sensitivity of model with aperture 90 x 25 mm

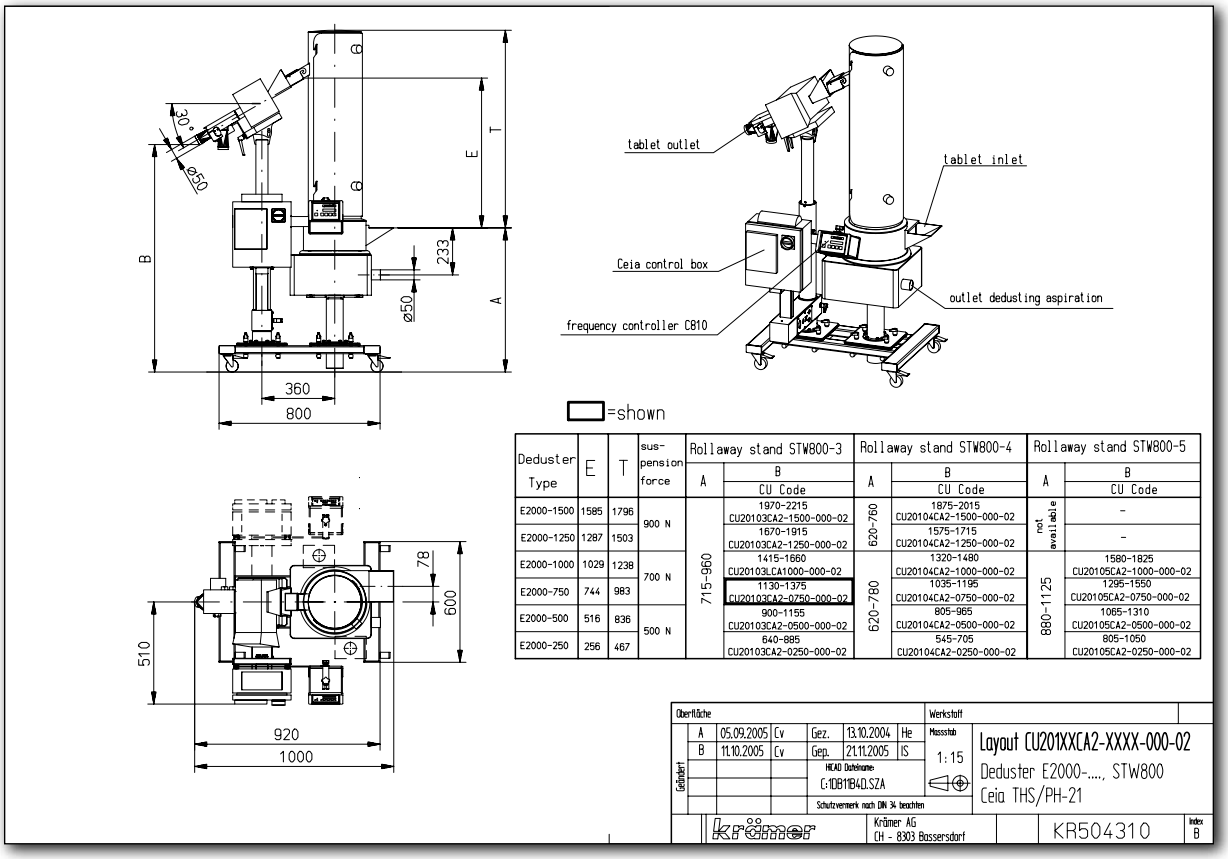
- Ferrous (Fe): 0.25 mm
- Non-Ferrous (70Cu30Zn): 0.3 mm
- Stainless Steel (AISI316): 0.4 mm

Test samples

- Test samples, including a blank test sample, will be provided with certificates.

Documentation

- Operating manuals in all major languages available
- IQ/OQ as an option available



=shown

Deduster Type	E	T	sus-pension force	Rollaway stand STW800-3 A	Rollaway stand STW800-3 B CU Code	Rollaway stand STW800-4 A	Rollaway stand STW800-4 B CU Code	Rollaway stand STW800-5 A	Rollaway stand STW800-5 B CU Code
E2000-1500	1585	1796	900 N	715-960	1970-2215 CU20103CA2-1500-000-02	620-760	1875-2015 CU20104CA2-1500-000-02	not available	-
E2000-1250	1287	1503			1670-1915 CU20103CA2-1250-000-02		1575-1715 CU20104CA2-1250-000-02		-
E2000-1000	1029	1238	700 N		1415-1660 CU20103LCA1000-000-02	620-780	1320-1480 CU20104CA2-1000-000-02	880-1125	1580-1825 CU20105CA2-1000-000-02
E2000-750	744	983			1130-1375 CU20103CA2-0750-000-02		1035-1195 CU20104CA2-0750-000-02		1295-1550 CU20105CA2-0750-000-02
E2000-500	516	836	500 N		900-1155 CU20103CA2-0500-000-02		805-965 CU20104CA2-0500-000-02		1065-1310 CU20105CA2-0500-000-02
E2000-250	256	467			640-885 CU20103CA2-0250-000-02		545-705 CU20104CA2-0250-000-02		805-1050 CU20105CA2-0250-000-02

Oberfläche | Werkstoff

A	05.09.2005	Cv	Gez.	13.10.2004	He	Massstab	Layout CU201XXCA2-XXXX-000-02
B	11.10.2005	Cv	Gep.	21.11.2005	IS	1:15	Deduster E2000-...., STW800
			HEAD Dateiname: C:\DB1\B4D.SZA				Ceia THS/PH-21

Schutzvermerk nach DIN 34 beachten

Kramer AG CH - 8303 Bassersdorf | KR504310 | Index B

Krämer

Deduster E4000-1200

Metal Detector
Ceia THS/PH21

Product Diverter
V4000-12

Controller C920
allows operation of all
attached peripherials

Space saving design

Edition 15 EN

Features

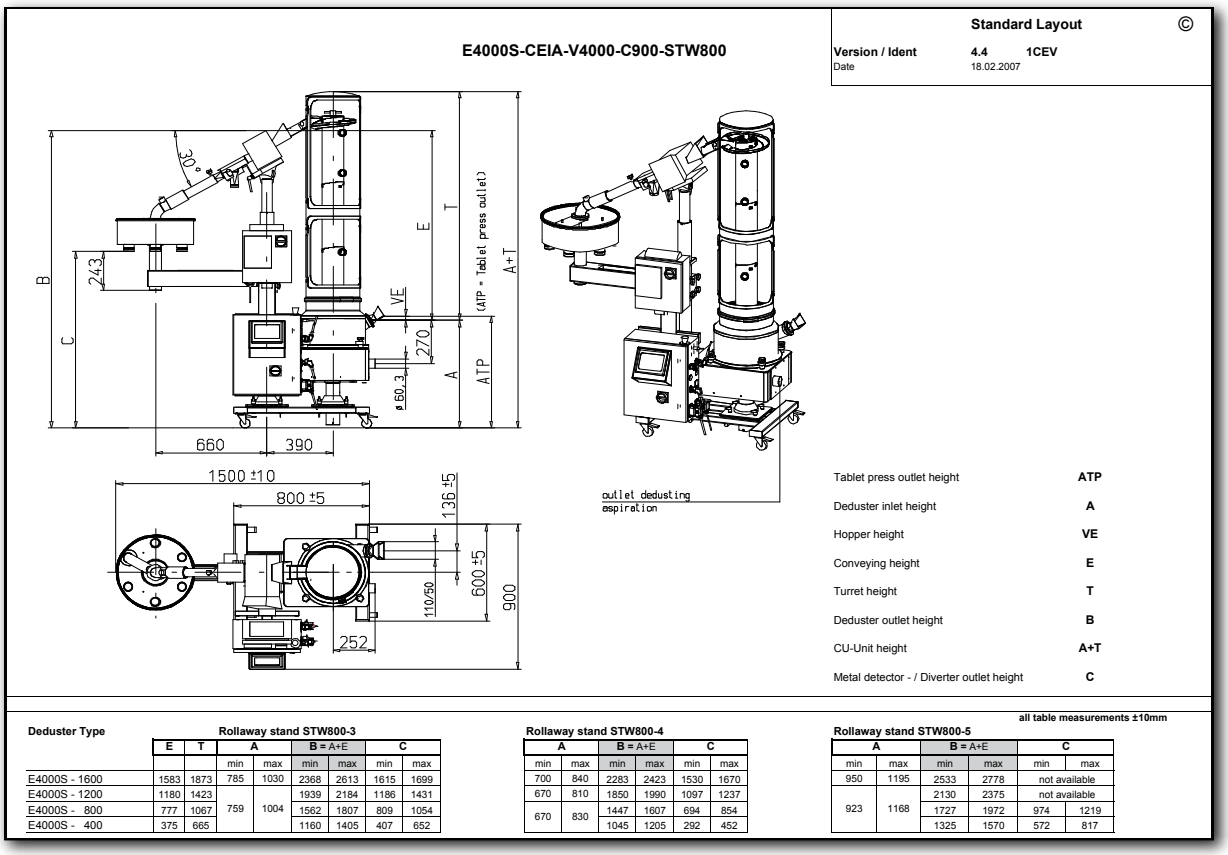
- Compact combination of devices
  (E4000 with metal detector and product diverter)
- Flexible use (on left or right side of tablet
  press / capsule filling facility)
- Metal detector after deduster
- Deduster mounted on mobile stand: low inlet height
- Conveying performance for highest demands
- Required floor area 800 x 600 mm
- Protection rating of whole unit IP 50

Metal detector

- Type: Ceia THS/PH21
- Waterproof and dust tight according to IP65
- Failsafe operation mode
- Drop-down diverter

Product diverter

- Model V4000-12
- Models with 2 to 12 outlet ports available
- Filling sequences programmable on C920 controller



all table measurements ±10mm

Deduster Type	Rollaway stand STW800-3							
	E	T	A		B = A+E		C	
			min	max	min	max	min	max
E4000S - 1600	1583	1873	785	1030	2368	2613	1615	1699
E4000S - 1200	1180	1423	759	1004	1939	2184	1186	1431
E4000S - 800	777	1067			1562	1807	809	1054
E4000S - 400	375	665			1160	1405	407	652

Rollaway stand STW800-4					
A		B = A+E		C	
min	max	min	max	min	max
700	840	2283	2423	1530	1670
670	810	1850	1990	1097	1237
670	830	1447	1607	694	854
		1045	1205	292	452

Rollaway stand STW800-5					
A		B = A+E		C	
min	max	min	max	min	max
950	1195	2533	2778	not available	
923	1168	2130	2375	not available	
		1727	1972	974	1219
		1325	1570	572	817

Krämer

Metal Detector
Lock Met 30+

Deduster
E4000-400

Controller C820

Rollaway stand
STW800 with
electric box

Required floor
area:
800 x 800 mm

Edition 15 EN

Features

- Compact combination of devices (E4000 with metal detector)
- Flexible use (on left or right side of tablet press / capsule filling facility)
- Metal detector after deduster
- Deduster on telescopic column: flexible inlet height
- Conveying performance for highest demands
- Required floor area 800 x 800 mm
- Protection rating of whole unit: IP 50

Metal detector

Type: Lock Met 30+

Controller

- Waterproof and dust tight according to IP65 and NEMA 4x
- Failsafe operation mode
- CFR 21 Part 11 compatible with windows® panel PC
- RS232 / RS485 interface standard, ethernet optional
- ADC windows® diagnostic and training software
- Four different safety levels
- 100 memory locations for different products
- Data will not be lost in case of power blackout due to battery driven permanent storage
- Power supply 95 - 264 VAC, 43 - 63 Hz

Detection head

- Aperture 95 x 38 mm or 95 x 22 mm
- Waterproof and dust tight according to IP65 and NEMA 4x
- Capacity up to 180'000 tablets/hour
- Single twisted pair cable transmission to controller

Rejection system

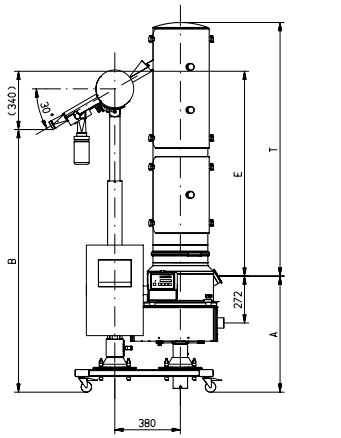
- Drop reject system functions with gravity
- Side reject system as option available
- Waterproof and dust tight according to IP66 and NEMA 4x
- Failsafe operation with reject confirmation
- Cushioned end stop of reject flap within the solenoid

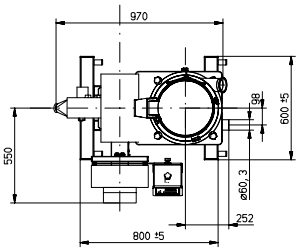
Spherical Sensitivity of model with aperture 95 x 38 mm

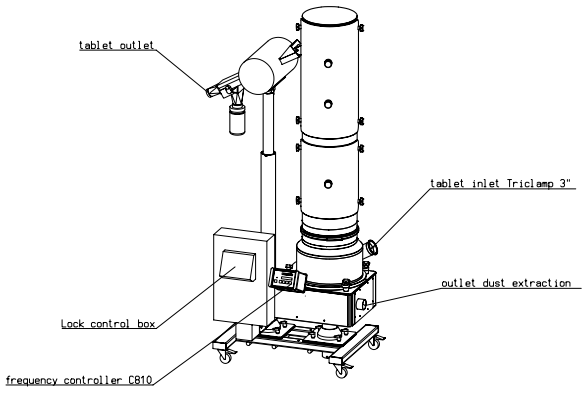
- Ferrous (Fe): 0.3 mm
- Non-Ferrous (70Cu30Zn): 0.35 mm
- Stainless Steel (AISI316): 0.5 mm
- Other sizes available (optional)

Documentation

- Operating manuals in all major languages available
- IQ / PQ / OQ Documentation including material certification







=shown

all table measurements ±10mm

Deduster Type	E	T	sus-pension force	Rollaway stand STW800-3		Rollaway stand STW800-4		Rollaway stand STW800-5	
				A	B CU Code	A	B CU Code	A	B CU Code
E4000S-1600	1583	1873	1000 N	760-1005	2003-2248 CU40S03LC2-1600-000-02	675-815	1918-2058 CU40S04LC2-1600-000-02	not available	-
E4000S-1200	1180	1470	900 N		1600-1845 CU40S03LC2-1200-000-02		1515-1655 CU40S04LC2-1200-000-02		-
E4000S-800	777	1067	700 N		1197-1442 CU40S03LC2-0800-000-02	675-835	1112-1272 CU40S04LC2-0800-000-02	925-1170	1362-1607 CU40S05LC2-0800-000-02
E4000S-400	375	666	500 N		795-1040 CU40S03LC2-0400-000-02		710-870 CU40S04LC2-0400-000-02		960-1205 CU40S05LC2-0400-000-02

Änderung	Datum	Name	Gez.	07.11.2005	IS
A	09.12.2005	IS	Ges.	28.02.2006	SS
B	07.02.2006	SS	HEAD Dichtkante		
			C4F5901598.SZA		
			Schutzvermerk nach DIN 34 beachten		

Werkstoff

Massstab 1:12

CU40S0XLC2-XX00-000-02
E4000S-400/800/1200/1600&Lock

Kräner AG Dr.-[illegible] Bassersdorf

KR505561

Index B

Metal Detector
Mesutronic
Pharmatron 05 A

Deduster
E2000S-750

Controller C820

Required floor area:
800 x 600 mm

Edition 15 EN

Features

- Compact combination of devices (E2000 with metal detector)
- Flexible use (on left or right side of tablet press / capsule filling facility)
- Metal detector after deduster
- Deduster on telescopic column: flexible inlet height
- Conveying performance for medium demands
- Required floor area 800 x 600 mm
- Protection rating of whole unit IP 54

Metal detector

Type: Mesutronic Pharmatron 05 A

- Easy dismantling for cleaning without tools
- Waterproof and dust tight according to IP65
- Failsafe operation mode
- Touch Screen with self explaning menu structure
- Programmable access level
- RS232 serial data interface
- Memory locations for 50 different products
- Data will not be lost in case of power blackout
- Power supply 100 - 240 VAC, 50/60 Hz

Detection head

- Aperture 68 x 40 mm or 68 x 18 mm
- Waterproof and dust tight according IP65
- Capacity up to 1'800'000 tablets / hour
- Circuit board integrated into search head, no control box needed

Rejection system

- Drop reject system functions with gravity
- Maintenance free, fast reacting pneumatic drive
- Water proof and dust tight according to IP65
- Failsafe operation with reject confirmation and flap presence check

Spherical Sensitivity of model with aperture 68 x 40 mm

- Ferrous (Fe): 0.3 mm
- Non-Ferrous (70Cu30Zn): 0.4 mm
- Stainless Steel (AISI316): 0.5 mm

Spherical Sensitivity of model with aperture 68 x 18 mm

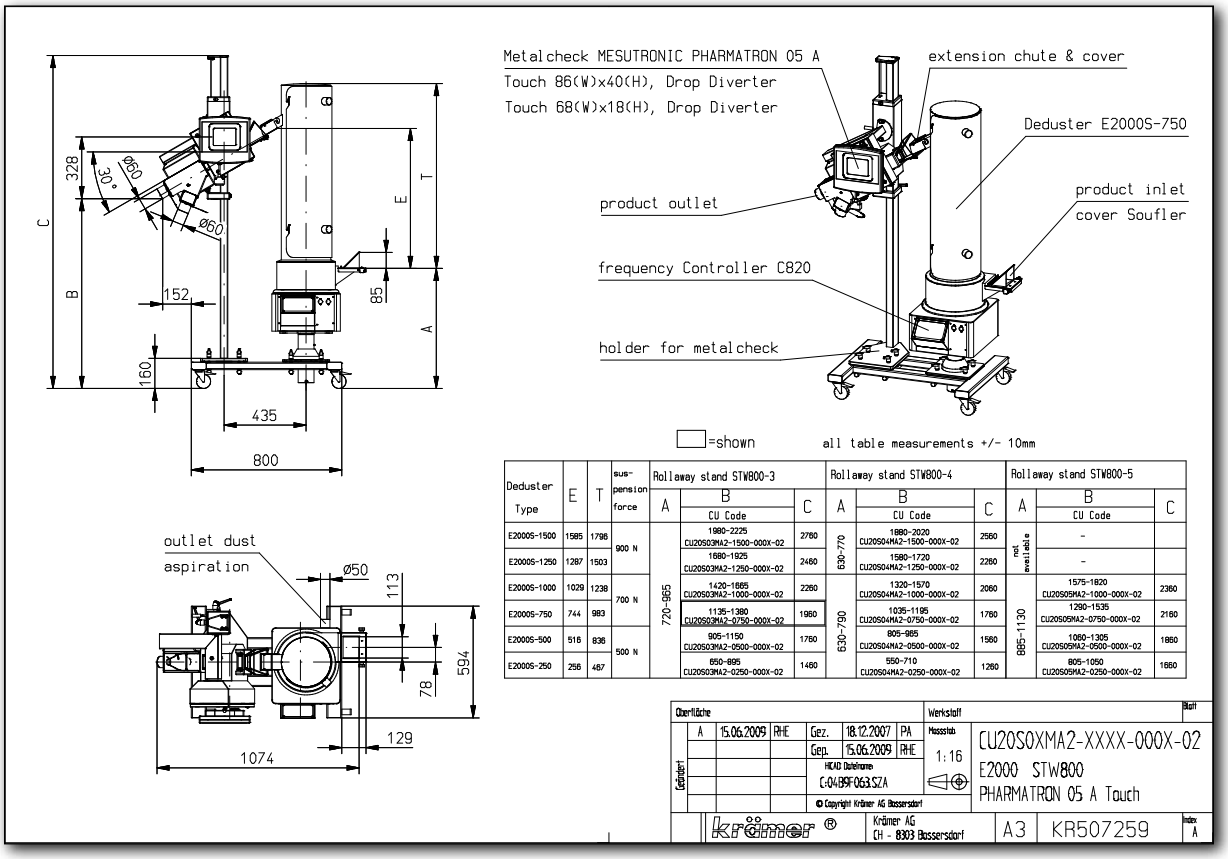
- Ferrous (Fe): 0.2 mm
- Non-Ferrous (70Cu30Zn): 0.3 mm
- Stainless Steel (AISI316): 0.4 mm

Test samples

- All needed test samples will be proviced with certificates.

Documentation

- Operating manuals in all major languages available
- IQ/OQ as an option available



Deduster Type	E	T	sus-pension force	Rollaway stand STW800-3 A	B CU Code	C	Rollaway stand STW800-4 A	B CU Code	C	Rollaway stand STW800-5 A	B CU Code	C
E2000S-1500	1585	1798	900 N	720-965	1980-2225 CU20S03MA2-1500-000X-02	2760	630-770	1880-2020 CU20S04MA2-1500-000X-02	2560	not available	-	
E2000S-1250	1287	1503			1680-1925 CU20S03MA2-1250-000X-02	2460		1580-1720 CU20S04MA2-1250-000X-02	2260		-	
E2000S-1000	1029	1238	700 N		1420-1665 CU20S03MA2-1000-000X-02	2260	630-790	1320-1570 CU20S04MA2-1000-000X-02	2060	865-1130	1575-1820 CU20S05MA2-1000-000X-02	2360
E2000S-750	744	983			1135-1380 CU20S03MA2-0750-000X-02	1960		1035-1195 CU20S04MA2-0750-000X-02	1760		1290-1535 CU20S05MA2-0750-000X-02	2160
E2000S-500	516	836	500 N		905-1150 CU20S03MA2-0500-000X-02	1760		805-965 CU20S04MA2-0500-000X-02	1560		1060-1305 CU20S05MA2-0500-000X-02	1860
E2000S-250	256	487			950-895 CU20S03MA2-0250-000X-02	1460		550-710 CU20S04MA2-0250-000X-02	1260		805-1050 CU20S05MA2-0250-000X-02	1660

Oberfläche | Werkstoff | Blatt
Gezeichnet | A 15.06.2009 RHE | Gez. 18.12.2007 PA | Ges. 15.06.2009 RHE | HICAD Dateiname C-04B9F063.SZA | Massstab 1:16
CU20S0XMA2-XXXX-000X-02
E2000 STW800
PHARMATRON 05 A Touch
© Copyright Krämer AG Bassersdorf
Krämer® Krämer AG CH - 8303 Bassersdorf A3 KR507259 Index A

Deduster
E5000WIP-1600

Contained system
with Hepa-Filter

Metal Detector
Ceia THS/PH21-WiP

Product-Diverter
V5000WIP-6

Edition 15 EN

Combined-Unit WiP (Wash in Place)

Features

- Compact combination of devices (E5000 with metal detector and product diverter)
- Flexible use (on left or right side of tablet press / capsule filling facility)
- Metal detector after deduster
- Deduster mounted on fixed column: low inlet height
- Conveying performance for highest demands
- Contained system for high potential agents
- Protection rating of whole unit IP 65

Deduster

- Model E5000WiP-1600
- Acrylic glass cylinder with integrated water supply ducts
- Spray nozzles all over the cylinder depending on cylinder height and washing concept

Metal detector

- Type: Ceia THS/PH21-WiP
- Waterproof and dust tight according to IP65
- Failsafe operation mode
- Drop-down diverter
- Two spray nozzles for WiP function integrated

Product diverter

- Model V5000-6
- Models with 2 to 12 outlet ports available
- One outlet port used for sample collector
- Filling sequences programmable on C920 controller
- Four spray nozzles for WiP function integrated

Three different washing concepts

Concept A: Flooding

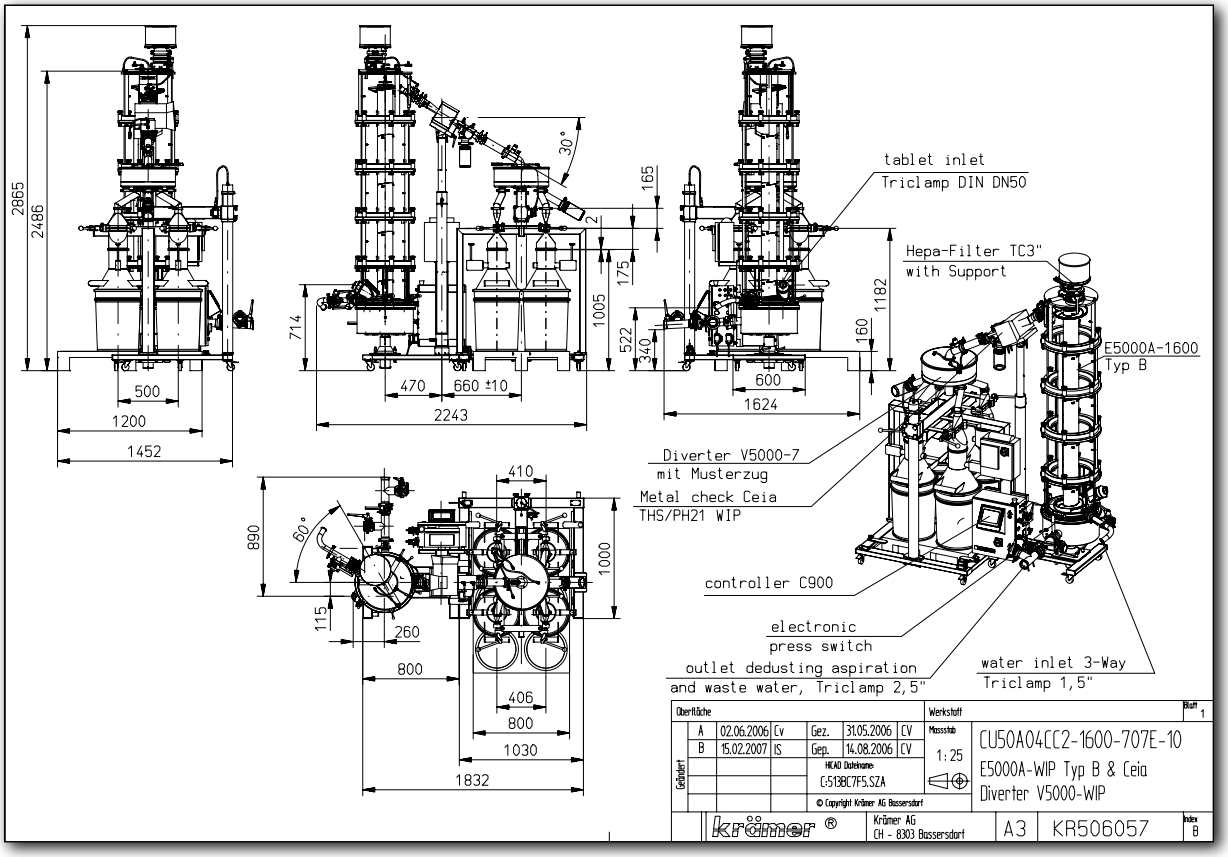
- Low water consumption (30 l/min) independent of deduster cylinder height.
- Washing speed depending on cylinder height

Concept B: Washing

- High water consumption (80 - 160 l/min) depending on cylinder height
- Fast washing speed

Concept C: Sequential washing

- Medium water consumption (50 l/min) depending on washing time
- Slow washing speed, depending on application



Horizontal and upward conveying (0° - 40°)

Easy dismantling and assembling without tools for cleaning

Controller with frequency converter for speed control as option

Required floor area:

500 x 500 mm

GMP compliant design

Edition 15 EN

Belt Conveyor F1000 - F2500

Range of use

- Pharmaceutical and food production industry

Features

- Stainless steel, GMP-compliant design
- Horizontal and upward conveying (0° - 40°)
- Mobile stand on castors with height adjustable telescopic column
- Motor without speed control (3x400V, 50/60Hz, gear reduction 30:1, belt speed 0.25 m/s)
- Single action belt removal, cleaning made easy
- Belt coating and basic fabrics FDA compliance
- Belt equipped with edge guides

Measurements

- Various belt lengths available (1000, 1250, 1500, 2000 or 2500 mm)
- Telescopic column in 3 heights available (Type 1, 2 or 3)
- Belt width 98 mm

Options

- Speed control (230V, 50/60 Hz, gear reduction 20:1, belt speed 0.04 – 0.37 m/s)
- Hopper with electronic overfill monitoring

KR800072

Belt conveyer data sheet

tolerances ±10 mm
measurement in mm
Stroke with: •ES34: 160 mm
•ES2: 345 mm
•ES41: 275 mm

*limited stroke

		Inclination 0°			Inclination 10°			Inclination 20°			Inclination 30°			Inclination 40°		
in case of raised covering		x = +30 mm			x = +30 mm z = + 5 mm			x = +28 mm z = +10 mm			x = +26 mm z = +15 mm			x = +23 mm z = +20 mm		
		X	Y	Z	X	Y	Z	X	Y	Z	X	Y	Z	X	Y	Z
F1000S incl. STW 500A-ES34	suspension force 250N	625 - 785	400 - 560	985	545 - 705	490 - 650	985	465 - 625	585 - 745	980	385 - 545	670 - 830	930	310 - 470	750 - 910	875
F1000S incl. STW 500A-ES2		765 - 1110	540 - 885	985	685 - 1030	630 - 975	985	605 - 950	725 - 1070	980	525 - 870	810 - 1155	930	450 - 795	890 - 1235	875
F1000S incl. STW 500A-ES41		1105 - 1380	880 - 1155	985	1025 - 1300	970 - 1245	985	945 - 1220	1065 - 1340	980	865 - 1140	1150 - 1425	930	790 - 1065	1230 - 1505	875
F1250S incl. STW 500A-ES34		625 - 785	400 - 560	1230	545 - 705	535 - 695	1230	465 - 625	670 - 830	1215	385 - 545	795 - 955	1160	310 - 470	910 - 1070	1070
F1250S incl. STW 500A-ES2		765 - 1110	540 - 885	1230	685 - 1030	675 - 1020	1230	605 - 950	810 - 1155	1215	525 - 870	935 - 1280	1160	450 - 795	1050 - 1395	1070
F1250S incl. STW 500A-ES41		1105 - 1380	880 - 1155	1230	1025 - 1300	1015 - 1290	1230	945 - 1220	1150 - 1425	1215	865 - 1140	1275 - 1550	1160	790 - 1065	1390 - 1665	1070
F1500S incl. STW 500A-ES34		625 - 785	400 - 560	1475	535 - 695	570 - 730	1475	445 - 605	735 - 895	1450	355 - 515	890 - 1050	1370	310 - 425*	1035 - 1195	1260
F1500S incl. STW 500A-ES2		765 - 1110	540 - 885	1475	675 - 1020	710 - 1055	1475	585 - 930	875 - 1220	1450	495 - 840	1030 - 1375	1370	405 - 750	1175 - 1520	1260
F1500S incl. STW 500A-ES41		1105 - 1380	880 - 1155	1475	1015 - 1290	1050 - 1325	1475	925 - 1200	1215 - 1490	1450	835 - 1110	1370 - 1645	1370	745 - 1020	1515 - 1790	1260
F2000S incl. STW 800A-ES34	suspension force 500N	625 - 785	400 - 560	1960	510 - 670	620 - 780	1960	390 - 550	845 - 1005	1900	310 - 460*	1055 - 1215	1785	310 - 320*	1245 - 1405	1615
F2000S incl. STW 800A-ES2		765 - 1110	540 - 885	1960	650 - 995	760 - 1105	1960	530 - 875	985 - 1330	1900	440 - 785	1195 - 1540	1785	310 - 645*	1385 - 1730	1615
F2000S incl. STW 800A-ES41		1105 - 1380	880 - 1155	1960	990 - 1265	1100 - 1375	1960	870 - 1145	1325 - 1600	1900	780 - 1055	1535 - 1810	1785	640 - 915	1725 - 2000	1615
F2500S incl. STW 800A-ES34		625 - 785	400 - 560	2450	475 - 635	665 - 825	2455	320 - 480	940 - 1100	2365	310 - 335*	1200 - 1360	2210	-	-	-
F2500S incl. STW 800A-ES2		765 - 1110	540 - 885	2450	615 - 960	805 - 1150	2455	460 - 805	1080 - 1425	2365	315 - 660	1340 - 1685	2210	310 - 515*	910 - 1115	1990
F2500S incl. STW 800A-ES41		1105 - 1380	880 - 1155	2450	955 - 1230	1145 - 1420	2455	800 - 1075	1410 - 1685	2365	655 - 930	1680 - 1955	2210	510 - 785	1910 - 2185	1990

Edition 15 EN

Especially built for dust extraction in the pharmaceutical and food industry

Suction performance up to 850 m^3/h

Differential pressure 1.4 / 1.7 kPa

Time controlled pneumatic filter de-clogging system

GMP compliant design

Easy filter exchange without tools

Dust tray capacity 45 l

Required floor area:

500 x 500 mm

Edition 15 EN

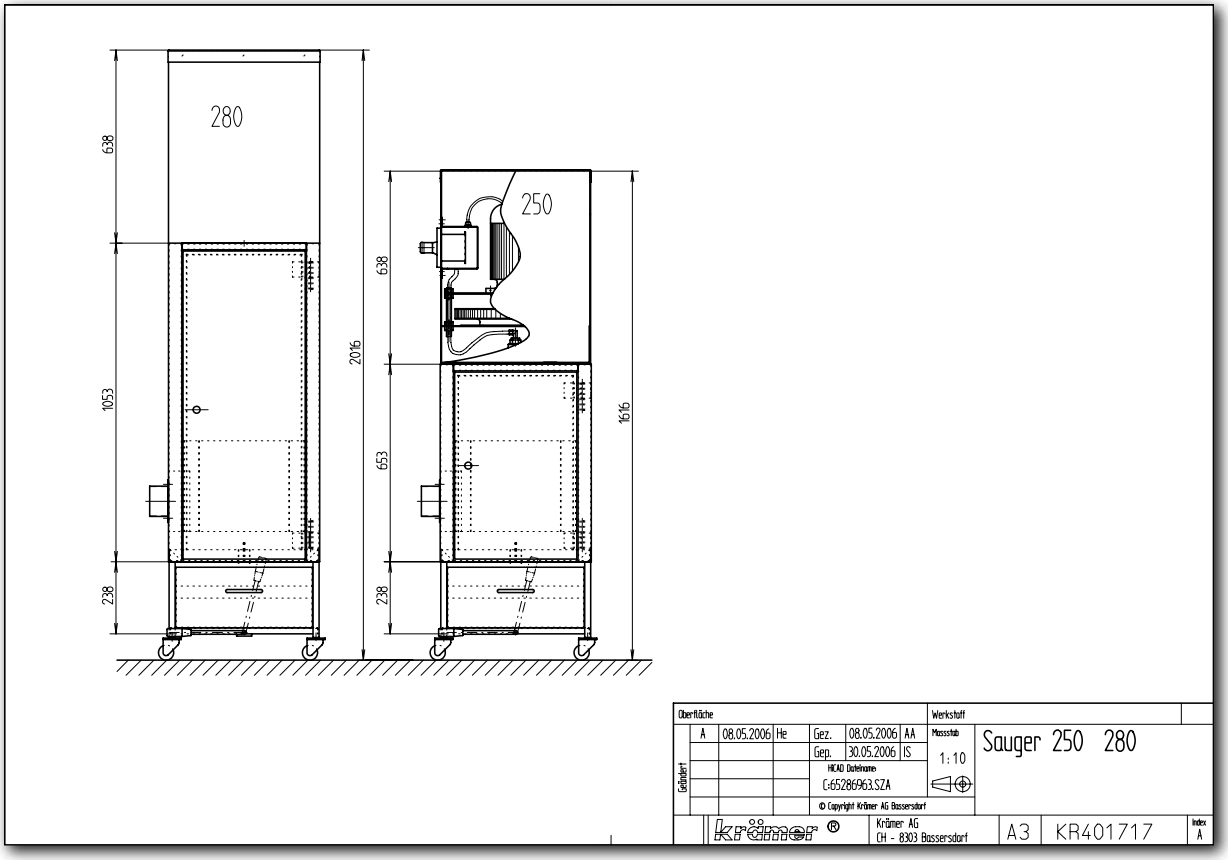
Air Cleaner S250 / S280

Features

- Easy to clean dust bin (volume 45 l)
- Robust fan designed for continuous operation
- Mobile housing (4 casters)

Filter Options

- Filter class F8 according to EN779
- Type A: standard for dry dust
- Type P: PTFE, for moist dust
- Type TA: PTFE, for moist and/or electrostatic dust



Vacuum-Cleaner Type		S250	S280
Measures			
Dimension Housing (L x W x H)	mm	500 x 500 x 1'590	500 x 500 x1'990
Weight	kg	125	150
Technical Data			
Power supply 3 x 220 V, 3 x 400 V, 50/60 Hz		x	x
Power supply 3 x 440V, 3 x 480 V, 50/60 Hz		x	x
Maximum power input	kW	1.1 / 1.3	1.5 / 1.8
Speed frequency	min^{-1}	2800 / 3400	2800 / 3400
Differential pressure	kPa	1.4	1.7
Filter surface	m^2	9	15
Average flow quantity	m^3/h	900	1'100
Compressed air	bar	6	6
Air consumption per cleaning cycle	l	50 – 60	50 – 60
Diameter air intake port	mm	100	100
Noise emission	dB(A)	61	61

Edition 15 EN

Krämer

Transport of tablet samples
from press to central
testing device

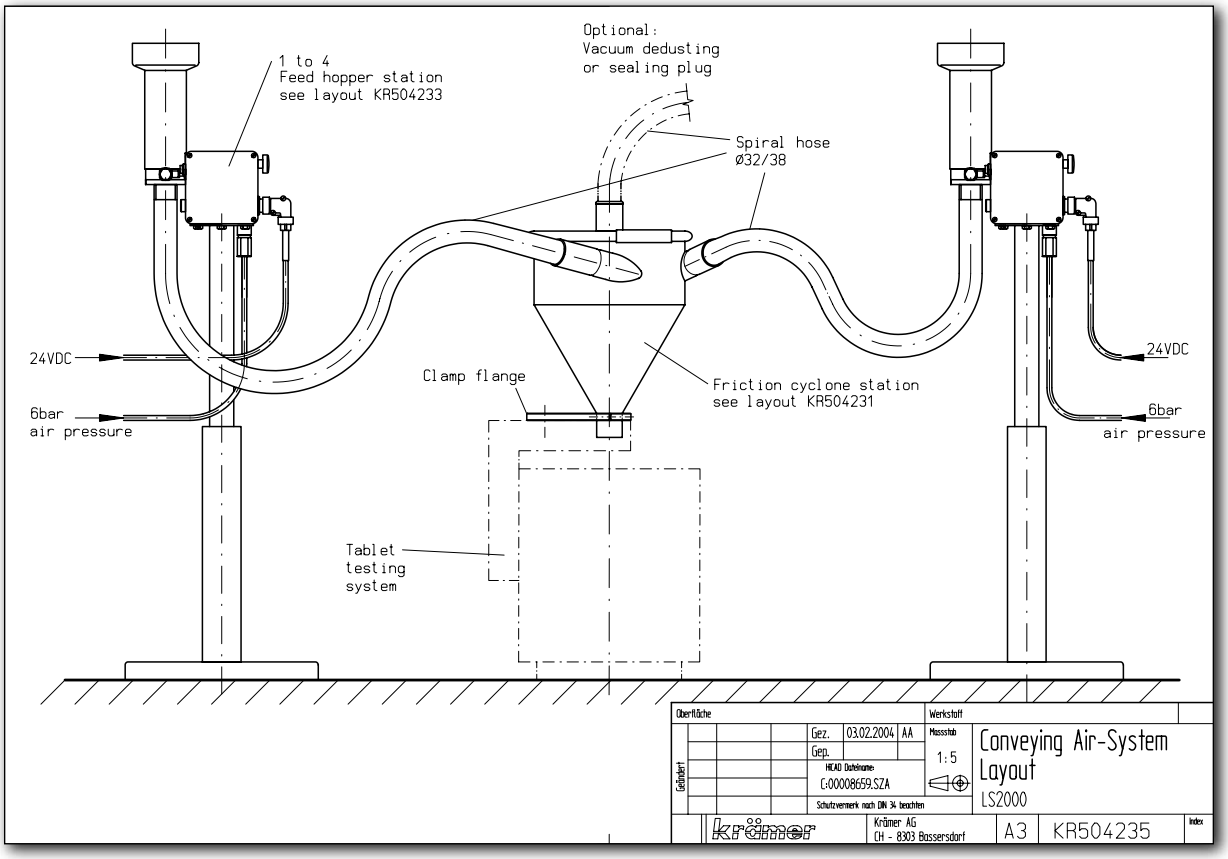
Edition 15 EN

Application

Fast and stress free transport of tablets and capsules over distances from room to room / floor to floor, suitable for the transport of samples to the tablet testing system.

Characteristics

- Conveying speed: A batch of up to 10 tablets every 20 seconds
- Dimension round tablets: max. 15mm
- Dimension oblong tablets: max 18mm
- Max. 4 sample collector inlets
- Safe transport and smooth entrance into cyclone
- Air flow adjustable depending on tablet size, shape, weight, and density, as well as transport height and distance
- Min. required pneumatic air pressure 6 bar
- Power supply 24 V DC
- Parts in contact with the product can easily be disassembled without any tools for cleaning



Krämer AG
Grindelstrasse 23
8303 Bassersdorf
Switzerland
Phone: +41 44 838 44 66
Fax: +41 44 838 44 60
sales@kraemerag.ch
www.kraemerag.ch

Kraemer US, LLC
700, Main Road
Towaco, NJ 07082
United States of America
Phone: +1 973 331 0107
Fax: +1 973 331 0140
sales@kraemerus.com
www.kraemerus.com