

Product Catalogue

KRÄMER AG - the leading company for conveying and dedusting systems in the pharmaceutical industry







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Why Krämer products?

1. Our products are of Swiss Quality, developed and produced in Switzerland

- 2. Our save spacing solutions fit in confined spaces
- 3. We are open to customer inputs and suggestions
- 4. For special requirements we offer custom-made systems
- 5. For high potent products we have a range of WIP (Wash in Place) and DT (Dust Tight) dedusters
 - 6. We offer a worldwide customer service
- 7. Krämer dedusters have been used successfully in the pharmaceutical industry for the last 30 years
 - 8. Easy assembly and disassembly without tools
- 9. There are no loose parts such as screws or nuts inside the deduster systems
- 10. A strong vibration conveys the tablets upwards. They rub against one another and shed their burrs
 - 11. Air slots in the dedusting area ensure powerful dedusting of the tablets
 - 12. Upward conveying of tablets and capsules of almost all shapes
 - 13. Complete emptying of tablet dedusters without auxiliary means
 - 14. Process controllers with visual displays
 - 15. Universal application thanks to flexible height adjustments and pivoting systems

16. For the dedusting of challenging products, we offer a wide range of product contacting parts in a variety of materials and coating (electro polished, Teflon-coated, etc.)

17. Validation documents available for all products



About the company

History

- 1927 Heinrich Krämer established a mechanical workshop
- 1945 Construction of new factory building in Zürich-Oerlikon for mechanical tools, tools for tablet production, sheet metal forming
- 1965 Paul H. Krämer takes over the business
- 1975 Launch of first tablet deduster worldwide
- 1984 New plant in Bassersdorf with 5000m² floor space
- 1992 Launch of first upward conveying tablet deduster
- 2000 Launch of first wash in place tablet deduster (WIP)
- 2003 Termination of contract with IMA Kilian for the distribution exclusivity of Krämer products
- 2004 Establishment of a worldwide distribution network
- 2006 Launch of modular designed tablet deduster
- 2008 Launch of stainless steel cylinder for WIP tablet dedusters and the controller with automatic resonance control

Core competences

Manufacturing of machines for pharmaceutical use

Customer-oriented problem solution competence

Manufacturing of stainless steel products

A worldwide distribution and customer support network

Unique selling propositions (USP's)

Combination of dedusting, deburring, conveying upward and distribution of tablets on smalest space (all in one)

Simple mounting and dismounting of dedusting systems for cleaning process completely without tools

Very high life expectancy of tablet dedusters thanks to a simplified electromagnetic drive (worldwide patented)

Deduster drives with low external vibrations (no interference on metal detectors) WIP system working without expensive isolators

Customized special solutions



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Selection help

	Dedusting and deburring								
Process									
	Suit metal de								
Ce	hig	gh	medium	medium					
Performan	6'300'000 t (Round Ø 4. 140'000 ta (Round Ø 23	ablets / hour 8 x 2.3 mm) blets / hour .4 x 5.7 mm)	3'500'000 tablets / hour (Round Ø 4.8 x 2.3 mm) 103'000 tablets / hour (Round Ø 23.4 x 5.7 mm)	3'000'000 tablets / hour (Round Ø 5 x 2 mm) 80'000 tablets / hour (Round Ø 23.4 x 5.7 mm)					
iying heights	400 mm, 1200 mm, Krämer g	800 mm , 1600 mm ap helixes	250 mm, 500 mm 750 mm, 1250 mm 1500 mm	N/A					
Conve	Modular hel easy dismantling	ix concept for and assembling	Krämer standard helixes						
Products	Tablets of all shapes from Ø 3 to 35 mm or equivalent High potential agents Explosive products	Tablets of all shapes from Ø 3 to 35 mm or equivalent	Tablets of all shapes from Ø 3 to 25 mm or equivalent	Tablets of all shapes from Ø 5 to 25 mm or equivalent					
Versions	Stainless steel housing Acrylic glass housing DT (Dust tight) WIP (Wash In Place) EX (Explosion Proof)	Stainless steel housing N/A	Stainless steel housing Acrylic glass housing	N/A Acrylic glass housing					
Deduster	E5000	E4000	E2000	E80					
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What to consider when selecting a tablet deduster

Todd Linnen, Brian J. Smith, Pharmaceutical Machine Supply LLC, Shelton CT, USA

For those unfamiliar with tablet dedusters, this article describes the most popular dedusting methods and provides tips on selecting a machine to handle your tablets.

You can find a tablet deduster almost anywhere there's a tablet press, because tablet presses often create unwanted powder that adheres to the surface of tablets. Furthermore, because of the gap between the press punches and dies, burrs may form around the edge of tablets. By removing both the powder and the burrs, dedusters enable tablet coating and packaging machinery to perform as designed. Dedusters are normally used immediately after the tablet press but before the metal detector.

In today's competitive enviroment, it is important to find dedusting equipment that complements your process. Dedusters are, in the main, simple devices, and it's fairly easy to select from among them once you gain a little knowledge. The basic steps in selecting a machine are determining your requirements and identifying the equipment that satisfies those requirements. Let's begin with an overview of what is available:

Types of dedusters

There are several ways to remove dust, but most tablet dedusters are vertical vibratory, horizontal vibratory, or brush-type units.

Vertical vibratory: The vertical vibratory deduster uses vibration to convey the product upward in a spiral along a smooth, perforated surface. As the deduster conveys the tablets, they rub against one another and shed their burrs. The gentle vibration also loosens and displaces dust as the tablets ascend the spiral pathway. Blast air supplied to the unit assists in dedusting and keeps the dust airborne so that a vacuum can efficiently extract the dust. The vertical vibratory deduster is the most popular and most effective for dedusting tablets, also those prone to breakage. The unit can also serve as conveyor to gently transport capsules vertically to reach high bins or discharge ports.

Horizontal vibratory: The horizontal vibratory deduster is similar in operation to the vertical deduster. Tablets exit the tablet press onto a flat, perforated vibratory bed, which vibrates and shakes the dust off. On some units, air blows the dust off the tablets and a vacuum extracts it. Unlike vertical units, horizontal dedusters don't convey upward and thus cannot reach tall bulk bins.

Brush-type: Brush-type tablet dedusters are available in vertical and horizontal configurations. They usually use a motordriven rotary brush that simultaneously conveys and dedusts the tablets. Brush-type units are effective but are best suited to handle capsules. Disadvantages are that they can charge the products electrostatic and that the brushes are difficult to clean.

Four primary requirements

When establishing your requirements, first decide whether you need a deduster only or a combination unit that includes the deduster, a metal detector, and/or a diverter system. Next, decide whether the deduster should convey vertically or horizontally. If you plan to fill tall bins or to feed tablets into a metal detector or diverter system, then you will need a vertical deduster.

Third - and most important from a quality viewpoint - is to specify the maximum tablet size the deduster will handle and the maximum throughput of the tablet press at that tablet size. For instance, if your largest tablet is an oblong tablet that measures 19 by 8 by 6 millimeters and the top speed of your press is 300'000 tablets an hour per press outlet, see if the deduster you're considering can handle that size and throughput. If the deduster you're considering can't handle your top throughput, you're likely to have poorly dedusted tablets, which can create a production bottleneck.

The last important consideration is tablet hardness. You want to be sure that the deduster won't damage the tablets.

Additional considerations

For the best fit, you should also know the height of the tablet press outlet, the dimensions of the bin where the tablets will collect, the product characteristics like size, amount and hardness, how you will control the system, and the restrictions of the room where you'll install the deduster.

Press outlet height: The outlet height is important because you want the deduster inlet to align with your press outlet without major alterations.

Bin dimensions: These dimensions are critical because you want the tablets to exit the deduster at the proper height. Ideally the outlet of the deduster will be only a few inches above the bin. If the outlet is too high, you risk breaking the tablets.

Product characteristics: Determine whether the deduster will handle 'standard' or high-potency products. If the products are highly potent, consider specifying a Wash In Place (WIP) unit, which will minimize the operator exposure level (OEL).

Control: The control you need depends on whether the machine is a deduster only or a combination system to be controlled from a central location, often the tablet press. Controls are especially important if your facility's tablet presses are CFR 21 Part 11 compliant. In that case, you'll want to keep a log of the entire tabletting process.

Room restrictions: Room restrictions refer to the space and utilities available within the area of installation. First, make sure the room will accommodate the deduster. Is there enough room for you to adjust the deduster for each of the tablet presses it will work with? For instance, does the room allow you to position the deduster on different sides of the press? Operators should also have ample room to operate the machine comfortably.

As for utilities, verify the room has the voltage, vacuum source, and pressurized air supply that the deduster requires. If you plan to use a WIP unit, check the water supply and pressure.



Basics

Other factors

After you find a deduster that meets your production needs, look at the other factors that will contribute to your satisfaction. Ask the supplier whether spare parts for their machine are readily available. And what about maintenance? Although some manufacturers promote their dedusters are maintenance free, it's wise to learn ahead of time where you can purchase parts in case something breaks or malfunctions. It's also beneficial to know whether you can rebuild a deduster instead of purchasing a new one. And you should find out how easy a system is to operate and clean. Ask to see an owner's manual, and check what it recommends regarding operating and cleaning procedures. See if the unit disassembles easily into manageable pieces for easy cleaning. Can one person clean the deduster? Do you need tools to disassemble the deduster? Then see what's required to set up the deduster for production. Does the operator have to set up the controls each time, or are the presets retained?

You might also ask if the local sales representative or distributor has demonstration units you can use for trails. It's important to run trails not only to ensure that the deduster can handle the production needs, but also get operator feedback. Nothing replaces hands-on experience in a production setting when evaluating a unit's operation and cleanability.

Final thoughts

If you find that the equipment of more than one supplier can meet your needs, the warranty and after-sale support and service may tip the balance. Most companies offer a standard 1-year warranty, but others offer twice that. Whatever its duration, find out what the warranty covers. Some cover only parts of the machine, and others cover the entire machine.

Investigate each supplier's after sale service and support to spare yourself headaches later on. The supplier you select should offer local technical support, including locally sourced spare parts to ensure fast delivery. And if you purchase a combination deduster-metal detector, find out who supports the metal detector. Is it a local company or must you send components overseas for repair? Last, see what on-site training for operation and maintenance is offered and whether supplier will participate in factory- and siteacceptance testing (FAT/SAT) and installation and operational qualification (IQ/OQ).



The illustration shows a combined WIP unit for dedusting, metal checking and product distributing. For dedusting a vertical deduster is used. After dedusting and conveying upward the product will be checked for metal. Finally the product will be diverted into four bins. Upward conveying is needed since product must pass metal check and product diverter by gravity. The whole unit is designed as closed system and can be used for high potential agents.



Deduster E80

Medium conveying performance



Downward conveying 300 mm

Drive unit protection rating IP 20

Best choice if only deburring and dedusting is needed



Economical deduster for standard applications

Optional roll-away stand



Controller C820ER

Required floor area: Ø 315 mm



Deduster E80

Basic operation of the deduster E80

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

Design

- · Conveying performance complies with standard demands
- Acrylic glass housing (PMMA), stainless steel drive
- · Construction according to GMP specifications
- Downward conveying of tablets / capsules generated by continuously adjustable vibration
- · The process can be controlled visually
- The electronic control allows the pre-selection and reproduction of operating conditions
- The electronic control is available as an external (C820ER) controller
- The outlet can be rotated up to 360° facing the inlet.
- The deduster complies thus with any local situation

Versions

- Model E80 (230V, 50/60Hz) acrylic glass housing (PMMA / PC)
- Model E80 (115V, 50/60Hz) acrylic glass housing (PMMA / PC)

Deburring and dedusting

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

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

Options

- · Handle for roll-away stand
- Validation documents

Deduster type		E80 (115V)	E80 (230V)
Measures			
Weight	kg	27	27
Downwards conveying	mm	300	300
Maximum tablet diameter	mm	25	25
Maximum dedusting path	m	2.8	2.8
Technical Data			
Power supply		100 - 120V, 50/60Hz	200 - 240V, 50/60Hz
Maximum current	А	1	1
Compressed air ($p_0 = 1.5 - 2$ bar)	l/min	100 - 200	100 - 200
Air extraction ($p_{\mu} = 10 - 20$ mbar)	m³/h	50 - 100	50 - 100
Noise emission at 1 m distance	dB(A)	< 75	< 75
Protection rating of drive unit		IP20	IP20
Conveying Capacity			
Round Ø 5 x 2 mm	x 1'000 tablets / hour	3'000	3'000
Round Ø 8 x 3 mm	x 1'000 tablets / hour	1'200	1'200
Round Ø 10 x 4 mm	x 1'000 tablets / hour	800	800
Round Ø 15 x 4 mm	x 1'000 tablets / hour	180	180
Round Ø 23.4 x 5.7 mm	x 1'000 tablets / hour	80	80
Oblong 19.4 x 8.6 x 6 mm	x 1'000 tablets / hour	210	210



Deduster E2000 E2000S E2000A

Medium performance conveying

Optional electropolished helix



Versions with stainless steel cylinder or acrylic glass cylinder



Compatible with peripherals due to patented very low vibration housing

Our bestseller for standard applications

Krämer pointwelded helix



Drive unit dust protected, protection rating IP50

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



Conveying heights: 250 - 500 - 750 -1000 - 1250 -1500 mm



Deduster E2000 E2000S E2000A

Basic operation of the deduster E2000

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

Design

- Conveying performance complies with standard demands
- Construction according to GMP specifications
- Upward conveying of tablets / capsules generated by continuously adjustable vibration
- · The process can be controlled visually
- The electronic control allows the pre-selection and reproduction of operating conditions
- 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 up to 360° facing the inlet
- The deduster complies thus with any local situation

Versions

- Model E2000S stainless steel housing (AISI316L) with arylic glass inspection window (PMMA)
- Model E2000A acrylic glass housing (PMMA)

Deburring and dedusting

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

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

Options

- · Deduster base mounted (for lowest inlet height)
- Different inlet hoppers
- Stainless steel (AISI316L) inspection window
- · Electropolished spiral
- Handle for roll-away stand
- Validation documents

Deduster type	E2000 –	250	500	750	1000	1250	1500
Measures							
Weight	kg	55	66	75	81	92	98
Conveying height	mm	256	516	744	1'029	1'287	1'585
Maximum tablet diameter	mm	25	25	25	25	25	25
Dedusting path	m	5	7	9	11	15	18
lechnical Data		1		I		I	1
Power supply 100 - 240V, 50/60H	lz	x	x	х	x	х	х
Maximum current	A	1	1	1	1	1	1
Compressed air ($p_0 = 1.5 - 2$ bar) l/min	50 - 100	50 - 100	50 - 100	50 - 100	50 - 100	50 - 100
Air extraction ($p_{\mu} = 10 - 20$ 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
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	1'200	1'200	1'200	1'200	1'200	1'200
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



Deduster E4000 E4000S

Modular helix concept for easy dismantling and assembling



With stainless steel cylinder and acrylic glass inspection window

Drive unit dust protected, protection rating IP50

Compatible with peripherals due to patented very low vibration housing

Required floor area: 500 x 500 mm



Highest conveying performance due to large helix



Krämer gap helix



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



Conveying heights: 400 - 800 -1200 - 1600 mm



Deduster E4000 E4000S

Basic operation of the deduster E4000

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

Design

- Conveying performance complies with highest demands •
- Modular helix concept for easy dismantling and assembling •
- Construction according to GMP specifications •
- Upward conveying of tablets / capsules generated by continuously adjustable vibration
- · The process can be controlled visually
- The electronic control allows the pre-selection and reproduction of operating conditions
- 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 up to 360° facing the inlet
- The deduster complies thus with any local situation •

Versions

Model E4000S - stainless steel housing (AISI316L) with acrylic glass inspection window (PMMA)

Deburring and dedusting

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

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

Options

- Deduster base mounted (for lowest inlet height) ٠
- Different inlet hoppers •
- Stainless steel (AISI316L) inspection window
- Electropolished spiral
- Handle for roll-away stand
- Validation documents

Edition 13 EN

Deduster type	E4000 –	400	800	1200	1600
Measures					
Weight	kg	74	92	104	118
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
Tablet inlet (TriClamp)	Inch	3.0	3.0	3.0	3.0
Technical Defe			I	I	I
Technical Data		l	I	I	I
Power supply 100 - 240V, 50/60Hz		х	х	X	x
Maximum current	А	1	1	1	1
Compressed air ($p_0 = 1.5 - 2$ bar)	l/min	100 – 200	100 – 200	100 – 200	100 – 200
Air extraction ($p_u = 10 - 20$ mbar)	m³/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 Canacity					
Round Ø 4 8 x 2 3 mm	x 1'000 tablets / bour	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
Capsules 19.5 x 7. No. 1	x 1'000 tablets / hour	816	816	816	816





Deduster E5000 E5000S E5000S-EX

Modular helix concept for easy dismantling and assembling



Versions stainless steel or explosion proof version

Compatible with peripherals due to patented very low vibration housing

Required floor area: 500 x 500 mm





Highest conveying performance due to large helix



Krämer gap helix



Drive unit dust protected, protection rating IP65

Controller C820ER

Edition 13 EN

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Conveying heights: 400 - 800 -1200 - 1600 mm





Deduster E5000 E5000S E5000S-EX

Basic operation of the deduster E5000

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

Design

- Conveying performance complies with highest demands
- Modular helix concept for easy dismantling and assembling
- Drive unit dust tight and waterproof IP65
- Construction according to GMP specifications
- · Upward conveying of tablets / capsules generated
- by continuously adjustable vibration
- The process can be controlled visually
- The electronic control allows the pre-selection and reproduction of operating conditions
- The electronic control is available as an external controller (IP65)
- 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 complies thus with any local situation

Versions

- Model E5000S stainless steel housing (AISI316L) with acrylic glass inspection window (PMMA)
- Model E5000S-EX Explosion Proof stainless steel housing (AISI316L) for ATEX zone 22

Deburring and dedusting

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

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

Options

- · Deduster base mounted (for lowest inlet height)
- Different inlet hoppers
- Stainless steel (AISI316L) inspection window
- · Electropolished spiral
- Handle for roll-away stand
- Validation documents

Deduster type	E5000 –	400	800	1200	1600
Measures					
Weight	kg	115	130	145	160
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
Tablet inlet (TriClamp)	Inch	3.0	3.0	3.0	3.0
Technical Data					
Power supply 100 240V, 50/60Hz		х	x	x	х
Maximum current	А	1	1	1	1
Compressed air ($p_0 = 1.5 - 2$ bar)	l/min	100 – 200	100 – 200	100 – 200	100 – 200
Air extraction ($p_{\mu} = 10 - 20$ mbar)	m³/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
Convoying Canacity					
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
Capsules 19.5 x 7, No. 1	x 1'000 tablets / hour	816	816	816	816





Deduster E5000 E5000S-DT E5000S-WIP E5000A-WIP

Modular helix concept for easy dismantling and assembling



Designed for OEB 5

Dust Tight DT or Wash In Place WIP versions

Compatible with peripherals due to patented very low vibration housing

Required floor area: 500 x 500 mm



Highest conveying performance due to large helix



Krämer gap helix



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



Conveying heights: 400 - 800 -1200 - 1600 mm





Deduster E5000 E5000S-DT E5000S-WIP E5000A-WIP

Basic operation of the deduster E5000

- Upward conveying range 400 1600 mm
- Designed for OEB 5
- Buffering allows continuous operation of tablet press / capsule filling facility
- Conveying of tablets of Ø 3 35 mm and capsules

Design

- · Conveying performance complies with highest demands
- Modular helix concept for easy dismantling and assembling
- Drive unit dust tight and waterproof IP65
- · Construction according to GMP specifications
- Upward conveying of tablets / capsules generated by continuously adjustable vibration
- · The process can be controlled visually
- The electronic control allows the pre-selection and reproduction of operating conditions
- The electronic control is available as an external controller (IP65)
- 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 complies thus with any local situation

Versions

- Model E5000S-DT Dust Tight stainless steel housing (AISI316L) with acrylic glass inspection window (PMMA)
- Model E5000S-WIP Wash in Place stainless steel housing (AISI316L) with acrylic glass inspection window (PMMA)

 Model E5000A-WIP Wash in Place acrylic glass housing (PMMA)

Washing modes for WIP

- WIPA flooding (wetting)
- WIPB washing (flushing)
- WIPC sequencial washing (flushing)

Deburring and dedusting

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

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

Options

- Deduster base mounted (for lowest inlet height)
- Different inlet hoppers
- Electropolished spiral
- Handle for roll-away stand
- Validation documents

3 1 ()					
Deduster type	E5000 –	400	800	1200	1600
Measures					
Weight	kg	115	130	145	160
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
Tablet inlet E5000S-WIP / E5000S-EX (Tr	iClamp) Inch	3.0	3.0	3.0	3.0
Tablet inlet E5000A-WIP	Inch	2.5 / 3.0	2.5 / 3.0	2.5 / 3.0	2.5 / 3.0
Technical Data					
Power supply 100 - 240V, 50/60Hz		х	х	х	x
Maximum current	А	1	1	1	1
Compressed air ($p_u = 1.5 - 2 \text{ bar}$)	l/min	100 – 200	100 – 200	100 – 200	100 – 200
Air extraction ($p_u = 10 - 20$ mbar)	m³/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
Water consumption E5000-WIPA	l/min	30 (4.5bar)	30 (4.5bar)	30 (4.5bar)	30 (4.5bar)
Water consumption E5000-WIPB	l/min	72 (4.5bar)	96 (4.5bar)	120 (4.5bar)	144 (4.5bar)
Water consumption E5000-WIPC (C920+	M920 needed) I/min	50 (4.5bar)	50 (4.5bar)	50 (4.5bar)	50 (4.5bar)
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





Combined Units E2000 E2000S E2000A



Edition 13 EN





Ceia THS-PH21 Lock MET30+ Safeline TABLEX 2S (or L) Mesutronic PHARMATRON 05 A

Features

- Compact combination unit E2000 + metal detector
- Flexible use (on left or right side of tablet press)
- · Metal detector after or before deduster
- · Deduster and metal detector on telescopic columns
- Conveying performance for standard demands
- Required floor area 800 x 600 mm
- · Protection rating of drive unit IP50

Deduster

- · Model E2000S stainless steel housing
- Model E2000A acrylic glass housing

Available with metal detector

- Ceia THS-PH21
- Lock MET30+
- Safeline TABLEX 2S (or L)
- Mesutronic PHARMATRON 05 A

.

Available with product diverter

Available with controller

• C820IR

V2000-2

V4000

- C820ER
- C920

Options

- Deduster base mounted (for lowest inlet height)
- Different inlet covers
- Stainless steel (AISI316L) inspection window
- · Bin holders
- Emergency stop button
- Diverter V2000 or V4000
- · Handle for roll-away stand
- Validation documents

THS-PH21 Electronics / controller

Power supply 90-126 / 180-253V AC / 48-62Hz 250 memory locations

Battery driven backup permanent storage (data are not lost in case of power blackout) RS232 interface

6 different safety levels, with programmable access level for 20 operators Failsafe

CFR 21 part 11

Waterproof and dust tight according to IP65 Search head

Apertures 100x40mm / 90x25mm

Waterproof and dust tight according to IP65 Capacity up to 30'000 tab/min

Digital data transmission to controller (digital processing point acc. Ceia spec.) Single cable transmission to controller

Reject system

- Functions with gravity Lift-Flap System
- Stainless steel AISI316L construction Waterproof and dust tight according to IP65
- Product contact parts are designed for easy strip-down (no tools required) Mechanical end stop of reject flap in the product area
 - With reject confirmation and flap presence check

Test samples

0.25mm FE (AISI E 52100) with certificate (for 90x25mm) 0.3mm FE (AISI E 52100) with certificate (for 100x40mm) 0.3mm NFE (70Cu30Zn) with certificate (for 90x25mm) 0.35mm NFE (70Cu30Zn) with certificate (for 100x40mm) 0.4mm SS (AISI316) with certificate (for 100x40mm) 0.5mm SS (AISI316) with certificate (for 100x40mm)



MET30+

Electronics / controller Universal power supply 95 – 264V AC / 47 – 63Hz 100 memory locations

Battery driven backup permanent storage (data are not lost in case of power blackout) Electronics module easily exchangeable RS232 / 422 interfaces

4 different safety levels

Failsafe Waterproof according to IP65 und NEMA 4X

Search head

Apertures 95x38mm / 95x22mm Waterproof and dust tight according to IP65 and NEMA 4X

Capacity up to 30'000 tab/min

Analog data transmission to controller (Digital processing point acc. Lock spec.) Single twisted pair cable transmission to controller

Reject system

Functions with gravity Lift-Flap and Side Diverter System Stainless steel AISI316L construction Waterproof and dust tight according to IP65 and NEMA 4X Product contact parts are designed for easy strip-down (no tools required) Cushioned end stop of reject flap within the solenoid With reject confirmation **Test samples**

> 0.3mm FE with certificate (for 95x22mm) 0.3mm FE with certificate (for 95x38mm) 0.35mm NFE with certificate (for 95x22mm) 0.35mm NFE with certificate (for 95x38mm) 0.5mm SS316 with certificate (for 95x38mm)





Combined Units E4000 E4000S



Edition 13 EN



Ceia THS-PH21 Lock MET30+ Safeline TABLEX 2S (or L) Mesutronic PHARMATRON 05 A

Features

- · Compact combination unit E4000S + metal detector
- Flexible use (on left or right side of tablet press)
- · Metal detector after or before deduster
- · Deduster and metal detector on telescopic columns
- · Conveying performance for highest demands
- Required floor area 800 x 600 mm
- · Protection rating of drive unit IP50

Deduster

Model E4000S - stainless steel housing

Available with metal detector

- Ceia THS-PH21
- Lock MET30+
- Safeline TABLEX 2S (or L)
- Mesutronic PHARMATRON 05 A

• V2000-2

Available with product diverter

• V4000

Available with controller

- C820IR
- C820ER
- C920

Options

- Deduster base mounted (for lowest inlet height)
- Different inlet hoppers
- Stainless steel (AISI316L) inspection window
- · Bin holders
- Emergency stop button
- Diverter V2000 or V4000
- · Handle for roll-away stand
- Validation documents

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SAFELINE TABLEX 2S (or L)

Metal Detection Electronics / controller Power supply 100 – 240V AC +10%/-15% / 50 or 60Hz

20 memory locations Battery driven backup permanent storage (data are not lost in case of power blackout) Performance validation routine software and printer driver fitted as standard

2x RS232 interfaces – one used for included printer connector 6 different safety levels

Failsafe

Waterproof and dust tight according to IP66 Search head Apertures 95x38mm / 76x38mm / 76x22mm

Waterproof and dust tight according to IP66

Capacity up to 35'000 tab/min Analog data transmission to controller Twice cable transmission to controller

Reject system

Functions with gravity Side Diverter System or Lift-Flap System Stainless steel AISI316L construction Waterproof and dust tight according to IP65 Product contact parts are designed for easy strip-down (no tools required) Rotenoid positional control of side diverter Reject confirmation

Test samples

0.25mm FE (AISI E 52100) with certificate (for 76x22mm) 0.3mm FE (AISI E 52100) with certificate (for 76x38mm and 95x38mm) 0.3mm NFE (70Cu302n) with certificate (for 76x22mm) 0.35mm NFE (70Cu302n) with certificate (for 76x38mm and 95x38mm) 0.39mm SS (AISI304) with certificate (for 76x38mm and 95x38mm) 0.5mm SS (AISI304) with certificate (for 76x38mm and 95x38mm)



PHARMATRON 05 A

Electronics / controller Universal power supply 100 – 240V AC 50/60Hz 50 memory locations

Battery driven backup permanent storage (data are not lost in case of power blackout) RS232 interface 4 different safety levels

Failsafe

Controller built in the search head, with Touch screen display Waterproof and dust tight according to IP65

Search head

Apertures 86x58mm / 80x30mm Waterproof and dust tight according to IP65 Capacity up to 25'000 tab/min Data transmission to internal controller on search head

Reject system

Functions with gravity Lift-Flap System Construction in POM C Not waterproof Product contact parts are designed for easy strip-down (no tools required) Mechanical end stop of reject flap in the product area Reject confirmation with initiators **Test samples** 0.3mm FE (St37) with certificate (for 68x18mm) 0.4mm FE (St37) with certificate (for 68x40mm) 0.5mm NFE with certificate (for 68x40mm) 0.5mm NFE with certificate (for 68x40mm)

0.5mm SS (SUS 316) with certificate (for 68x18mm) 0.6mm SS (SUS 316) with certificate (for 68x40mm)





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Ceia THS-PH21 Lock MET30+ Safeline TABLEX 2S (or L) Mesutronic PHARMATRON 05 A

Features

- Compact combination unit E5000S + metal detector
- Flexible use (on left or right side of tablet press)
- · Metal detector after or before deduster
- Deduster and metal detector on telescopic columns
- · Conveying performance for highest demands
- Required floor area 900 x 600 mm
- Protection rating of drive unit and controller IP65

Deduster

· Model E5000S - stainless steel housing

Available with metal detector

- · Ceia THS-PH21
- Lock MET30+
- Safeline TABLEX 2S (or L)
- Mesutronic PHARMATRON 05 A

THS-PH21

SAFELINE Metal Detection



TABLEX 2S (or L)

V2000-2V4000

Available with product diverter

Available with controller

- C820ER
- C920

Options

- Deduster base mounted (for lowest inlet height)
- Different inlet hoppers
- Stainless steel (AISI316L) inspection window
- Emergency stop button
- Electropolished spiral
- Handle for roll-away stand
- Diverter V2000 or V4000
- · Handle for roll-away stand
- Validation documents



MET30+





PHARMATRON 05 A





E5000S-EX Explosion Proof E5000S-DT Dust Tight E5000S-WIP Wash In Place E5000A-WIP Wash In Place



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Combined Units E5000 Ceia THS-PH21 EX / DT / WIP Lock MET30+ EX/DT/WIP

Features

- Compact combination unit E5000 + metal detector
- Flexible use (on left or right side of tablet press)
- Metal detector after or before deduster .
- Deduster and metal detector on telescopic columns •
- Conveying performance for highest demands
- Required floor area 900 x 600 mm
- ٠ Protection rating of drive unit and controller IP65
- Contained system for high potential agents ٠

Deduster

- Model E5000S-EX stainless steel housing
- Model E5000S-DT stainless steel housing
- Model E5000S-WIP stainless steel housing •
- Model E5000A-WIP acrylic glass housing

Available with metal detector

- Ceia THS-PH21 FX
- Ceia THS-PH21 DT
- Ceia THS-PH21 WIP
- Lock MET30+ EX
- Lock MET30+ DT ٠
- Lock MET30+ WIP •

Available with product diverter

- V5000DT
- V5000WIP •



THS-PH21 Standard EX / DT / WIP Electronics / controller Power supply 90-126 / 180-253V AC / 48-62Hz 250 memory locations Battery driven backup permanent storage (data are not lost in case of power blackout) RS232 interface 6 different safety levels, up to 20 operators with programmable access level Failsafe CRF 21 part 11 Waterproof and dust tight according to IP65 Search head Apertures 100x40mm / 90x25mm Waterproof and dust tight according to IP65 Capacity up to 30'000 tab/min Digital data transmission to controller (digital processing point acc. Ceia spec.) Single cable transmission to controller Reject system Functions with gravity Lift-Flap System Stainless steel AISI316L construction Waterproof and dust tight according to IP65 Product contact parts are designed for easy strip-down (no tools required) Mechanical end stop of reject flap in the product area With reject confirmation and flap presence check Versions DT Dust Tight WIP Wash In Place EX Explosion Proof (ATEX Zone 22) Test samples 0.25mm FE (AISI E 52100) with certificate (for 90x25mm) 0.3mm FE (AISI E 52100) with certificate (for 100x40mm) 0.3mm NFE (70Cu30Zn) with certificate (for 90x25mm) 0.35mm NEE (70Cu30Zn) with certificate (for 100x40mm)

0.4mm SS (AISI316) with certificate (for 90x25mm)

0.5mm SS (AISI316) with certificate (for 100x40mm)

Available with controller

- C820FR
- C820EX
- C920

Options

- Deduster base mounted (for lowest inlet height)
- Emergency stop button
- Electropolished spiral
- Diverter V2000 or V4000
- Handle for roll-away stand
- Validation documents

Washing concepts

WIPA: Flooding

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

WIPB: Washing

High water consumption (80 - 210 I/ min) depending on cylinder height

· Fast washing speed

WIPC: Sequential washing

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



MET30+ Standard EX / DT / WIP

Electronics / controller Universal power supply 95 - 264V AC / 47 - 63Hz 100 memory locations Battery driven backup permanent storage (data are not lost in case of power blackout) Electronics module easily exchangeable RS232 / 422 interfaces 4 different safety levels Failsafe Waterproof according to IP65 und NEMA 4X Search head Apertures 95x38mm / 95x22mm Waterproof and dust tight according to IP65 and NEMA 4X Capacity up to 30'000 tab/min Analog data transmission to controller (Digital processing point acc. Lock spec.) Single twisted pair cable transmission to controller Reject system Functions with gravity Lift-Flap and Side Diverter System Stainless steel AISI316L construction Waterproof and dust tight according to IP65 and NEMA 4X Product contact parts are designed for easy strip-down (no tools required) Cushioned end stop of reject flap within the solenoid With reject confirmation Versions DT Dust Tight WIP Wash In Place EX Explosion Proof (ATEX Zone 22, only controller and search head) Test samples 0.3mm FE with certificate (for 95x22mm)

0.3mm FE with certificate (for 95x38mm) 0.35mm NFE with certificate (for 95x22mm) 0.35mm NEE with certificate (for 95x38mm) 0.5mm SS316 with certificate (for 95x22mm)

0.5mm SS316 with certificate (for 95x38mm)





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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 in the electronic control of the tablet press or capsule filling machine if required.

Versions

Model V2000-2 - with two outlets

Design

- Stainless steel housing (AISI316L)
- Cover in acrylic glass (PMMA)
- Drive unit with rotary magnet
- Jam monitoring using a capacitive proximity switch at the inlet

Product diverter type	V2000-2
Measures	
Weight kg	4
Number of outlets	2
Technical Data	
Power supply moving-magnet 24 VDC, ± 10 %	x
Jam sensor: capacitive proximity switch	PNP / NC





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V4000

Design

- · Round diverter pan with 2 to 12 discharge sockets
- Transparent cover in acrylic glass (PMMA)
- · Brushless electric motor built into diverter holder
- Power fail-safe position monitoring
- · Construction according to GMP specifications
- Integrated in CU combined unit with deduster and with or without metal detector
- As stand-alone product diverter on roll-away stand
- The diverter is controlled either by the controller C920 or optionally directly by the tablet press (requires press software modification)

Control modes

- Mode A Container level control A sensor monitors the level of each container. When a preset level is reached, the switch moves to the next position. All monitoring and other signals are processed in the controller C920 (Independent operation)
- Mode B Press generates signal The press outputs a signal (time based or tablet number based) over a zero-voltage relay to the controller C920 which in turn commands the distribution switch into the next position. The monitoring is performed by the controller C920 (Signal from press required)
- Mode C Press outputs impulses The press outputs impulses over a zero-voltage relay to the controller C920 which counts them. The switch moves to the next position when count reaches a preset number (Signal from press required)
- Mode D Preset container barreling time Barreling time is entered into the controller C920 independently from the press. The switch moves to the next position when the preset time is up. All monitoring and other signals are processed in the controller C920 (Independent operation)

Versions

· Model V4000 - round ø60mm connections on the outlets

Inlet and outlet

- Round inlet tube with 30° inclination
- Hoses in PU/KM (required inclination min. 45°)
- Stainles steel tube outlets (needed if inclination is less than 45°)

Options

- Jam sensor capacitive proximity switch PNP / NC in the inlet tube
- CAN Bus interface
- Profi Bus interface
- Validation documents

Product diverter type		V4000	
Measures			
Weight of diverter pan (depends on number of outlets)	kg	10 – 15	
Overall height (middle inlet – middle outlet)	mm	285	
Overall diameter	mm	468	
Number of outlets		2 – 12	
Connection Nominal Diameter			
Inlet	mm	ø60	
Outlet	mm	ø60	
Technical Data			
Power supply 24VDC, ± 10 %		х	
Rated current	A	1.7	
Protection rating		IP54	

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Product diverter V5000 V5000DT V5000WIP



design with low installation height the process automatization

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Product diverter V5000 V5000DT V5000WIP

Design

- Round diverter pan with 2 to 12 discharge sockets
- Transparent cover in acrylic glass (PMMA)
- · Brushless electric motor built into diverter holder
- · Power fail-safe position monitoring
- · Construction according to GMP specifications
- Integrated in CU combined unit with deduster and with or without metal detector
- As stand-alone product diverter on roll-away stand
- The diverter is controlled either by the controller C920 or optionally directly by the tablet press (requires press software modification)

Control modes

- Mode A Container level control A sensor monitors the level of each container. When a preset level is reached, the switch moves to the next position. All monitoring and other signals are processed in the controller C920 (Independent operation)
- Mode B Press generates signal The press outputs a signal (time based or tablet number based) over a zero-voltage relay to the controller C920 which in turn commands the distribution switch into the next position. The monitoring is performed by the controller C920 (Signal from press required)
- Mode C Press outputs impulses The press outputs impulses over a zero-voltage relay to the controller C920 which counts them. The switch moves to the next position when count reaches a preset number (Signal from press required)
- Mode D Preset container barreling time Barreling time is entered into the controller C920 independently from the press. The switch moves to the position when the preset time is up. All monitoring and other signals are processed in the controller C920 (Independent operation)

Versions

- Model V5000DT Dust Tight TriClamp connections on the outlets
- Model V5000WIP Wash In Place with TriClamp connections on the outlets

Inlet and outlet

- Round inlet tube with 30° inclination
- Hoses in PU/KM (required inclination min. 45°)
- Stainles steel tube outlets (needed if inclination is less than 45°)
- Split valve systems on request

Options

- Jam sensor capacitive proximity switch PNP / NC in the inlet tube
- CAN Bus interface
- Profi Bus interface
- Validation documents

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Product diverter type		V5000DT	V5000WIP	
Measures				
Weight of diverter pan (depends on number of outlets)	kg	10 – 15	10 – 15	
Overall height (middle inlet – middle outlet)	mm	285	285	
Overall diameter	mm	468	468	
Number of outlets		2 – 12	2 – 12	
Connection Nominal Diameter				
Inlet (TriClamp)		ISO DN50	ISO DN50	
Outlet (TriClamp)		DIN DN50	DIN DN50	
Technical Data				
Power supply 24VDC, ± 10 %		х	х	
Rated current	Α	1.7	1.7	
Protection rating		IP54	IP54	



Controller C820 C820ER C820EX C820IR



Edition 13 EN



Controller C820 C820ER C820EX C820IR

Features

Frequency controller C820 is designed for use with Krämer pharmaceutical conveyors. It can be used to operate all conveyors supplied with pulse control unit. As a further improvement in operating safety, the selected parameters are shown in a display.

- Graphic display shows speed, frequency, power, memory location, status, errors and warnings
- · Automatic power and frequency control
- · Automatic current sensing and limitation
- Short-circuit protection
- Two user levels
- · Stand-by function
- The electronic controller permits reproducible and preselectable operating states

Main menu

The complete system is started in the main menu. In addition, all available set-up levels can be selected in the main menu. General settings like e.g. the language can also be selected and modified in the main menu.

Only those functions are displayed which can be selected by the currently logged-in user, based on pre-defined user rights.

Versions

- Model C820ER external remote controller
- Model C820EX external remote controller Explosion Proof for ATEX zone 22
- Model C820IR internal remote controller

Deduster

The deduster speed can be pre-selected in steps of 1%. The current value is graphically displayed if the deduster is in operation.

Frequency and power are automatically adjusted by using an acceleration sensor in the drive unit of the deduster.

Interfaces

- 1 deduster
- 1 jam sensor
- 1 air valve

Options

- Device control by a computer system using an interface RS232 or CAN BUS
- Device control with analogue signals from a tablet press (0 - 25V)
- Display protection cover (PMMA)
- Acceleration sensor for deduster drive unit (for automatical speed regulation)

	COZUER / EX	Cozuik
kg	1.74	2.22
mm	170 x 110 x 156	300 x 175 x 170
	Anodized Aluminium	1.4301
	100 - 240V, 50/60Hz	100 - 240V, 50/60Hz
А	3.0	3.0
Hz	25.0 - 50.0	25.0 - 50.0
	0 - 40° C	0 - 40° C
VDC	0 to 25	0 to 25
	IP65	IP50
	kg mm A Hz VDC	kg 1.74 mm 170 x 110 x 156 Anodized Aluminium 100 - 240V, 50/60Hz A 3.0 Hz 25.0 - 50.0 0 - 40° C VDC 1P65





Controller C920

Monochrome display with touchscreen for an easy operation, color display optional Can be used in WIP environments, protection class IP65

Modules for jam detection and other monitoring functions optional

Visualization of the processes, graphical display of settings Languages German and English selectable, other languages on request

Control of the deduster and other peripherals

PLC controller, operation system of the display: Windows CE[®] With acceleration sensor for automatical speed adjustment peripherals

Management of different user levels



Controller C920

Features

Frequency controller C920 is designed for use with Krämer pharmaceutical conveyors and product diverters. It can be used to operate all conveyors supplied with pulse control unit. As a further improvement in operating safety, the selected parameters are shown in a LCD display.

- LCD display shows speed, frequency, power, status, errors and warnings
- · Automatic power and frequency control
- · Automatic current sensing and limitation
- Short-circuit protection
- Two user levels
- The electronic controller permits reproducible and preselectable operating states
- · Allen Bradley ML 1200 PLC controller built in

Main menu

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

General settings like e.g. the language can also be selected and modified in the main menu.

Only those functions are displayed which can be selected by the currently logged-in user, based on pre-defined user rights.

Versions

Model C920

Deduster

The deduster speed can be pre-selected in steps of 1%. The current value is graphically displayed if the deduster is in operation.

Frequency and power are automatically adjusted by using an acceleration sensor in the drive unit of the deduster.

Metal detector

Additional monitoring functions to the controller C920 features are available if the metal detector is purchased via Krämer.

WIP control

In connection with the Krämer media box M920 various WIP programs are available for flooding or sequentially washing the unit.

Product diverter

If a Krämer product diverter V4000/V5000 is used, the outlet channels can be comfortably and graphically programmed in the controller C920.

Various modes (A/B/C/D) 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.

- Mode A Container level control
- Mode B Press generates signa
- Mode C Press outputs impulses
- Mode D Preset container barreling time

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 V4000/V5000
- 1 Krämer media box M920 for WIP functions
- 6 monitoring sensors (optional 12)

Options

- Device control with analogue signals from a tablet press (0 - 25V)
- Color LCD display
- · PLC software backup tools
- Acceleration sensor for deduster drive unit (for automatical speed regulation)

Controller Type		C920	
Measures			
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 - 260V, 50/60Hz	
Maximum current	А	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	

Agencies





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