RNA
We handle it.



Component

Hopper Systems



Welcome to RNA

As your leading partner for efficient, high-precision, and high-performance feeding technology, we offer a comprehensive range of feeding system components specially designed to optimise your production processes. With nine production sites and an international network of partners, we can serve your needs anywhere in the world. For decades, our name has been synonymous with outstanding performance in terms of technology, quality, and reliability. Our two business units include the development and manufacture of tailor-made feeding systems and their components.

Whether you are looking for customised belt feeders, hopper systems, bowl or linear feeders, vibratory platforms, or controllers – RNA offers the most advanced solutions, tailored to your specific requirements. Our products are regarded as industry standards and stand for longevity, reliability, and efficiency across a wide range of industries – from automotive and medical technology to electronics manufacturing, to name but a few. Thanks to our extensive expertise in feeding technology, all components have been tried and tested under real-world production conditions and are renowned for their exceptional reliability and robustness. New insights are continuously incorporated into the further development of all components, with the aim of continuously enhancing our products.

We offer a complete range of powerful drives and controllers, as well as accessories, whose quality and functionality are widely recognised – including for applications with special performance requirements. What's more, all our drives are digitised and can be digitally tuned using our specially developed **DigitalMotion** simulation software. This allows you to perfectly adjust our drives already during the design phase of your system, saving valuable time on the shop floor.

Our product portfolio is rounded out by excellent service, immediate delivery, and high availability, as well as specialised designs for the pharmaceutical and food industries and certifications to UL and CE standards. Prior to delivery, all components undergo extensive testing once more to ensure trouble-free operation. With more than 55 years of experience in automation and feeding systems, we are proud to present innovative products backed by a strong commitment to technological excellence and sustainability. Our goal is to support you in boosting productivity and efficiency by offering tailored solutions for your manufacturing requirements.

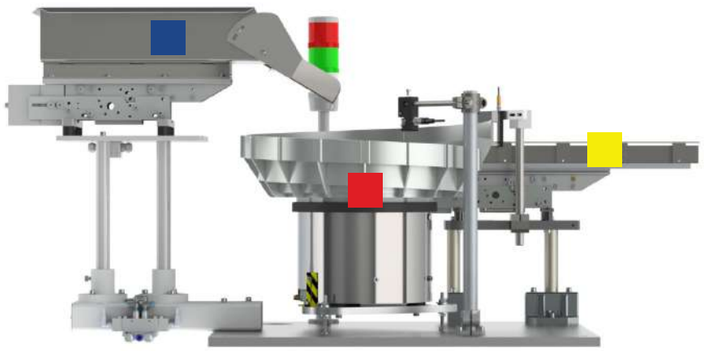
Last but not least, our workforce stands firmly behind all our products. The true measure of their success is customer satisfaction. We know that long-term commercial success can only be achieved through top-quality products and services, where every related task is executed to the highest standard at all times.

In our new catalogue, discover how we can help revolutionise your processes with our high-quality components. Do you have questions or would you like a personal consultation? Our team of experts is here to help. We look forward to accompanying you every step of the way towards your perfect automation solution.

Rhein-Nadel Automation GmbH – we handle it.

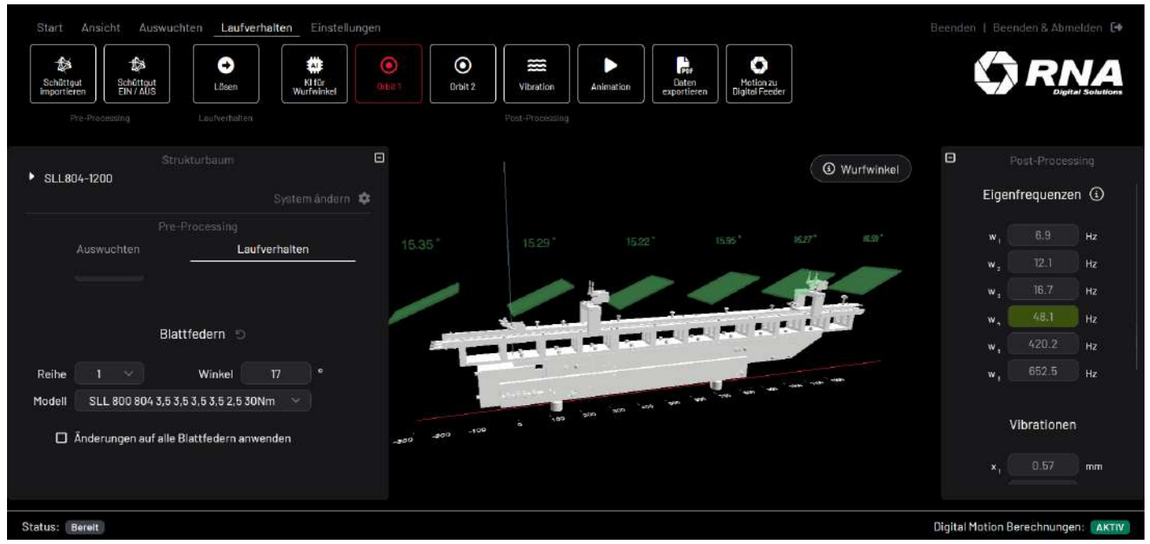
Overview

Component	Colour in catalogue
Vibratory Feeders and Bowl Feeders	
Linear Feeders	
FlexCubes (not shown on right)	
Belt Feeders (not shown on right)	
Hopper Systems	
Step Feeders (not shown on right)	
Controllers (not shown on right)	



Revision date: March 2025
We reserve the right to make technical changes.
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DigitalMotion – Tuning drives in the Cloud



The browser-based DigitalMotion software enables you to tune the feeding behaviour of RNA components with a few clicks. This saves valuable time during initial commissioning of your drives, creates a reproducible set-up with clear documentation, and forms the basis for optimal operation of your feeding system in the long term.

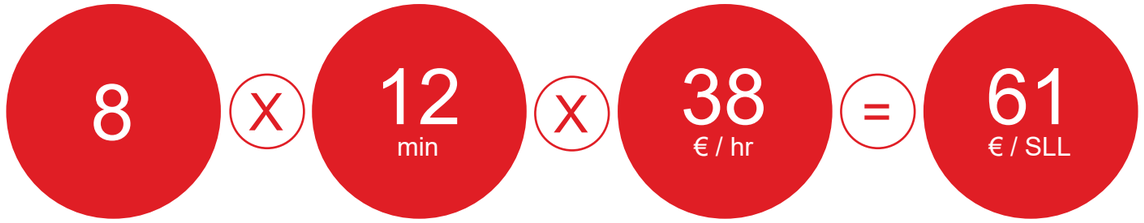
Simple workflow

DigitalMotion can be seamlessly integrated into your existing processes. All you need is the CAD design data of your feeder rail or bowl. The graphic presentation of the simulation results and integrated interpretation aids make the tuning process child's play. Exporting the results to a *.pdf file provides you with a documentation that will help you install the drives on your own, or to order pre-configured drives from RNA. This makes DigitalMotion your tool to combat the shortage of skilled personnel in the field of feeding technologies.

High return-on-Investment

The use of DigitalMotion does not only permit direct savings during commissioning of your drives. Correctly setting up the feeding behaviour is actually the basis for optimal long-term operation of feeding systems. In this manner, you benefit twice over: In your own shops and in the production facilities of your customers.

Example: calculation of the savings for tuning an SLL 800-800:

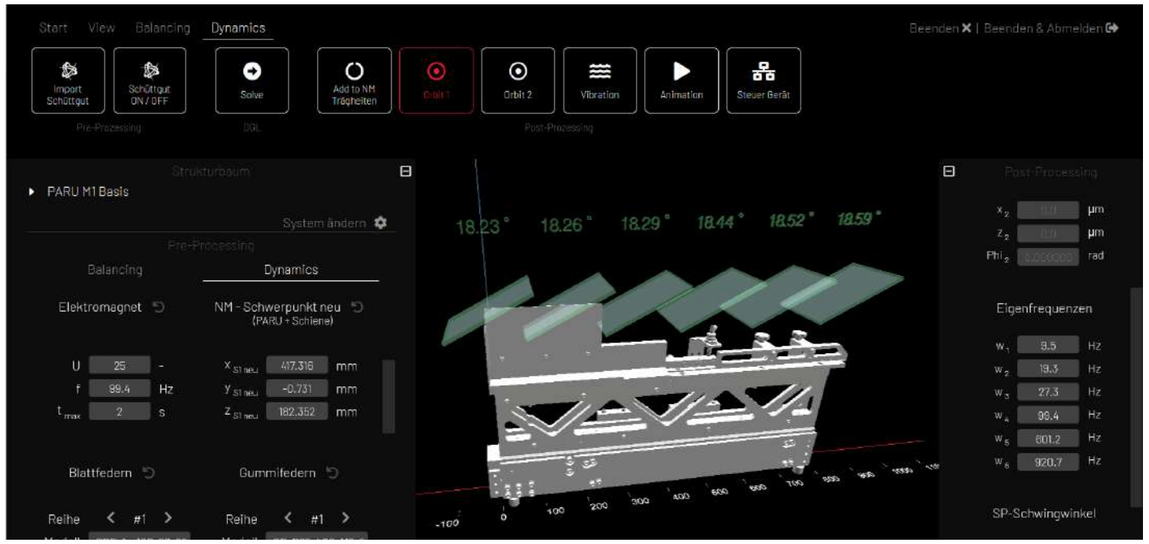


Ø number of parameter variations on an SLL (leaf springs: stiffness, inclination…)

Ø duration per adaptation

Hourly rate in shop

Cost savings per drive using simulation



Digitized drives from RNA

Due to the positive feedback from our customers, we are constantly updating DigitalMotion with additional RNA components. At present, following products are already incorporated in this software:

- SLL series (SLL 175, SLL 400, SLL 800, SLL 804)
- PARU Mini
- SRC-N series (160, 200, 250, 400)



Numerous access options

DigitalMotion offers various access solutions tailored to your specific needs. Our Credit System is an excellent option for all customers requiring digital validations occasionally only. Under our monthly subscription scheme you will have full access to the simulation feature, with an unlimited number of calculations. Be sure to contact your RNA representative for additional information, personalized solutions or a non-binding test phase.

RNA hopper systems for precise filling of / feeding to downstream equipment

The use of hoppers offers multiple advantages to users:

Metered filling: Metered filling of the feeder bowl prevents variations in running speed due to fluctuating filling levels.

Gentle part handling: There are only as many parts present in the process as are needed to meet the required performance data.

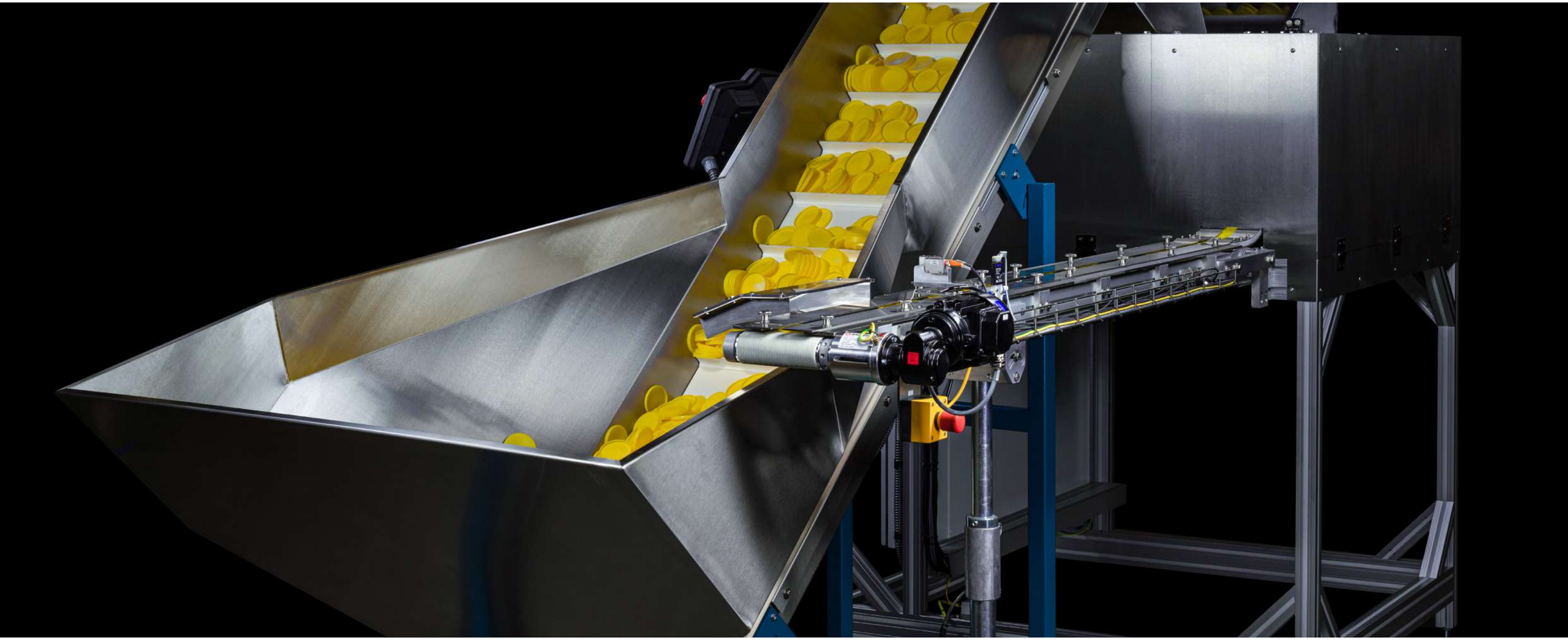
Availability: The availability of the feeding system increases as there is less entanglement of the parts with each other, and less part jamming in the orienting tools.

Autonomy: The autonomy of a sorting system can be increased considerably by including a hopper.

Ergonomics: The ergonomics of filling the equipment can be greatly enhanced by adding hoppers.

In the following pages we present our standardised systems - available from stock - but also custom systems, as well as a summary overview of the various possibilities for parts storage and filling.

We are here to assist you in rating and dimensioning your hoppers and to prepare a concept, including a quotation.



Hopper Systems

Vibratory hopper series BVL



Infos

- **Available from stock**
- **With the exception of size BVL 3, all hoppers of the BVL hopper series have a bolted-on outlet chute. The slope of this chute is ad-justable.**
- **Prepared for Plug & Play in combination with RNA control unit**
- **Optionally available with coating**
- **Available for all mains voltages**

Description

Vibratory hoppers of the BVL series are designed for metered filling of downstream feeder bowls.

The hopper tray is manufactured from 1.4301 grade stainless steel and glass-bead blasted.

For optimal transmission of the vibrations, we place particular emphasis on the stiffness of the hopper trays.

The adjustable discharge chute serves to guide the parts to the desired place.

Vibratory hoppers of the BVL series are factory-tuned to the permissible useful weight,so that the bulk products (parts handled) are pre-singulated with increasing speed towards the exit. A fine-tuning can be performed at any time by the user. BVL series hoppers are available from stock.

Typical application: Feeding system with BVL-5 for metered filling of the feeder bowl



Hopper Systems



Type	BVL 3	BVL 5	BVL 15	BVL 25	BVL 50	BVL 70	BVL 100
Filling volume (l)	3.5	7	15	25	50	70	100
Filling weight (kg)	15	15	20	25	50	50	50
Drive	SLL 400-400	SLL 400-400	SLL 400-600	SLL 400-800	SLL 804-800	SLL 804-1000	SL 804-1000
Rated voltage	200V / 50Hz	200V / 50Hz	200V / 50Hz	200V / 50Hz	200V / 50Hz	200V / 50Hz	200V / 50Hz
Current input approx.	0.55 A	0.55 A	0.55 A	0.55 A	1.26 A	1.26 A	1.26 A
Vibrating fre-quency	100 Hz	100 Hz	100 Hz	100 Hz	50 Hz	50 Hz	50 Hz
Protection rating	IP54	IP54	IP54	IP54	IP54	IP54	IP54
Length of con-necting cable (mm)	1,800	1,800	1,800	1,800	1,800	1,800	1,800
Dimensions L x W x H	504 x 124 x 229	718 x 237 x 270	946 x 309 x 313	1145 x 309 x 313	1316 x 380 x 428	1453 x 384 x 482	1527 x 431 x 510

Standard voltage 200 V / 50 Hz. Also available with special voltage of 110 V and frequencies of 50 Hz or 60 Hz.

All hopper trays (BVL 3 - BVL 5 - BVL 15 - BVL 25 - BVL 50 - BVL 70 - BVL100) available in sizes from 3 to 100 litres.

Mini-vibratory hopper series BVL-M



Infos

- **Available from stock**
- **With the exception of size BVL 3, all hoppers of the BVL hopper series have a bolted-on outlet chute. The slope of this chute is ad-justable.**
- **Prepared for Plug & Play in combination with RNA control unit**
- **Optionally available with coating**
- **Available for all mains voltages**

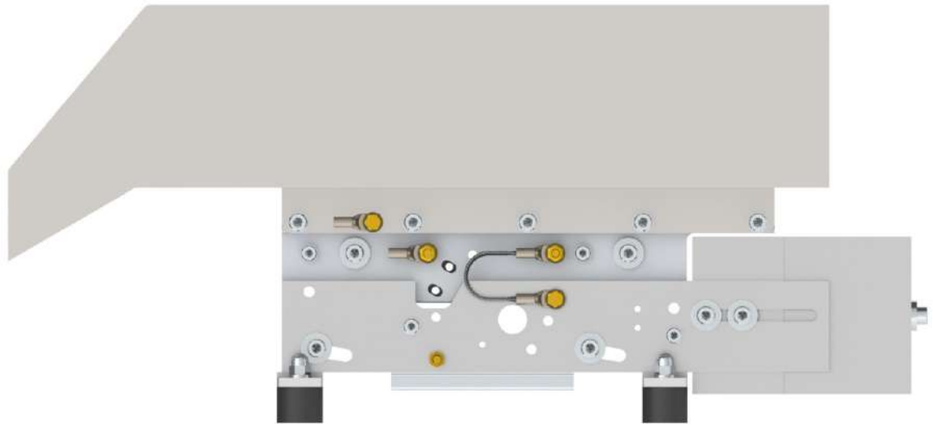
Description

Vibratory hoppers of the BVL-M series have the same design as BVL series hoppers. They have been developed for applications requiring small filling volumes, and are the ideal complement for small feeder bowls or vibration platforms. Vibratory hoppers of the BVL are factory-tuned to the permis-sible useful weight,so that the bulk product (parts handled) are pre-singulated with increasing speed towards the exit. A fine-tuning can be performed at any time by the user.

Typical application: Two 2 BVL-3M with static hopper for metered filling of a vibratory platform



Hopper Systems



Type	BVL 0.8-M	BVL 1-M	BVL 2-M	BVL 3-M
Filling volume (l)	0.8	1	2	3
Filling weight (kg)	3	3	15	15
Drive	SLL 175-250B	SLL175-250B	SLL 400-270S	SLL 400-400S
Rated voltage	200V / 50Hz	200V / 50Hz	200V / 50Hz	200V / 50Hz
Current input approx.	0.07A	0.07 A	0.55 A	0.55 A
Vibrating frequency	100 Hz	100 Hz	100Hz	100 Hz
Protection rating	IP 54	IP54	IP54	IP54
Length of connecting cable (mm)	1,800	1,800	1,800	1,800
Dimensions L x W x H	419 x 86 x 130	443 x 86 x 130	507 x 160 x 211	715 x 160 x 234

Vibratory hopper series BVL-S and BVL-SE





Infos

- **Available from stock**
- **With adjustable discharge chute**
- **Prepared for Plug & Play in combination with RNA control unit**
- **With quick dump gate**
- **Optionally available with coating**
- **Available for all mains voltages**

Description

Vibratory hoppers of the BVL-S series are an upgrade of the BVL series. They have the same characteristics. In hoppers of the BVL-S series, the rear of the hopper tray is sloped. This offers the advantage that the hopper tray extends over the add-on weights of the linear feeder, and also the possibility to integrate a quick dump gate.

BVL- S series hoppers are available from stock.

Typical application: BVL-25 SE for metered feeing of pins to an incline conveyor



Type	BVL 3S BVL 3S-SE	BVL5 S BVL5 S-SE	BVL 10S BVL 10S-SE	BVL 15S BVL 15S-SE	BVL 25S BVL 25S-SE	BVL50 S BVL50 S-SE
Filling volume (l)	3.5	7	10	15	25	50
Filling weight (kg)	10	10	10	20	25	50
Drive	SLL 400-270	SLL 400-400	SLL 400-600	SLL 400-600	SLL 400-800	SLL 804-800
Rated voltage	200V / 50Hz	200V / 50Hz	200V / 50Hz	200V / 50Hz	200V / 50Hz	200V / 50Hz
Current input approx.	0.55 A	0.55 A	0.55 A	0.55 A	0.55 A	1.26 A
Vibrating frequency	100 Hz	100 Hz	100 Hz	100 Hz	100 Hz	50 Hz
Protection rating	IP54	IP54	IP54	IP54	IP54	IP54
Length of connecting cable (mm)	1,800	1,800	1,800	1,800	1,800	1,800
Dimensions L x W x H	572 x 210 x 261	782 x 250 x 275	1002 x 252 x 305	1017 x 309 x 315	1216 x 310 x 315	1404 x 380 x 430

*Standard voltage 200V / 50 Hz. Also available with special voltage of 110 V and frequencies of 50 Hz or 60 Hz.

Heavy-duty vibratory hopper series BV



Infos

- **High loading weights**
- **Available from stock**
- **With fixed discharge chute**
- **Prepared for Plug & Play in combination with RNA control unit**
- **Optionally available with coating**
- **Available for all mains voltages**

Description

Vibratory hoppers of the BV50 – BV 200 series have been specially designed for storing and metered feeding of large filling volumes with high weights. As for all vibratory hoppers supplied by RNA, the trays of BV series hoppers are manufactured from 1.4301 grade stainless steel. The special design of the trays combined with the linear drives and controllers enables these hoppers to handle weights up to 180 kg. Vibratory hoppers of the BV series are not only used in high throughput applications with the associated requirement for high filling volumes, but also to feed larger and/or heavy parts.

Typical application: Vibratory hopper BV 200 shown as single component



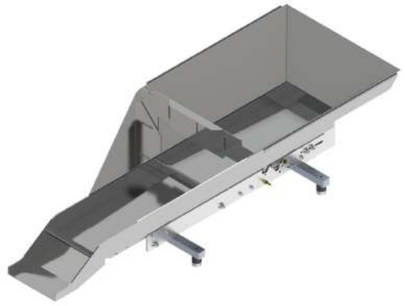
Hopper Systems



Type	BV 50	BV 100	BV 150	BV 200
Filling volume (l)	50	100	150	200
Filling weight (kg)	150*	150*	180*	180*
Drive	SLF 1000-1000S	SLF 1000-1000S	SLF 1000-1000S	SLF 1000-1000S
Rated voltage	200V / 50Hz	200V / 50Hz	200V / 50Hz	200V / 50Hz
Current input approx.	2.5 A	2.5 A	2.5 A	2.5 A
Vibrating frequency	50 Hz	50 Hz	50 Hz	50 Hz
Protection rating	IP54	IP54	IP54	IP54
Length of connecting cable (mm)	1,800	1,800	1,800	1,800
L x W x H (mm)	1588 x 609 x 410	1588 x 716 x 505	1594 x 716 x 571	1592 x 716 x 668

*The maximum filling weight depends on the condition of the parts to be handled. Applies only in connection with SCF 3000 and vibration amplitude sensor.

Vibratory hopper series BVL-P





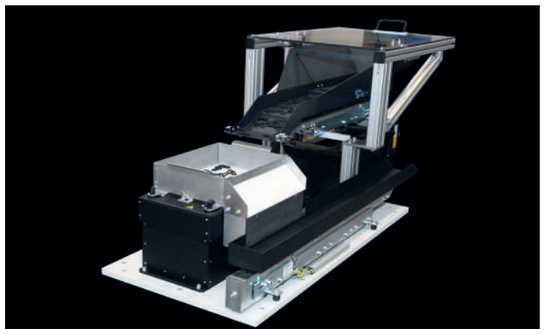
Infos

- **A perfect match for vibratory platforms**
- **Available from stock**
- **With fixed discharge chute**
- **Prepared for Plug & Play in combination with RNA controller**
- **Optionally available with coating**
- **Available for all mains voltages**

Description

Vibratory hoppers of the BVL-P series have been conceived for finely metered feeding of bulk products. The hopper tray is designed with a defined filling area from where the parts are transferred to the downstream process by way of a stepped bottom. This bottom permits the feeding of parts lying flat in a single layer. These vibratory hoppers are the equipment of choice in applications relying on vibratory platforms.

Typical application: FlexCube 380 with upstream BVL 15-P



Type	BVL 7	BVL 12 - P	BVL 15 - P	BVL 20 - P
Filling volume (l)	3	10	15	20
Filling weight (kg)	15	20	15	20
Drive	SLL 400-400S	SLL 400-600B	SLL 400-800B	SLL 400-800B
Rated voltage	200V / 50Hz	200V / 50Hz	200V / 50Hz	200V / 50Hz
Current input approx.	0.55 A	0.55 A	0.55 A	0.55 A
Vibrating frequency	100 Hz	100 Hz	100 Hz	100 Hz
Protection rating	IP54	IP54	IP54	IP54
Length of connecting cable (mm)	1,800	1,800	1,800	1,800
Dimensions: L x W x H	715 x 160 x 234	919 x 299 x 237	1127 x 429 x 340	1127 x 440 x 340

Belt-type hopper series BUW



Infos

- **Compact design**
- **Also suited for FDA applications**
- **With fixed discharge chute**
- **Optionally with quick dump**
- **Optional covers**
- **Prepared for Plug & Play in combination with RNA controller**
- **Available for all mains voltages**

Description

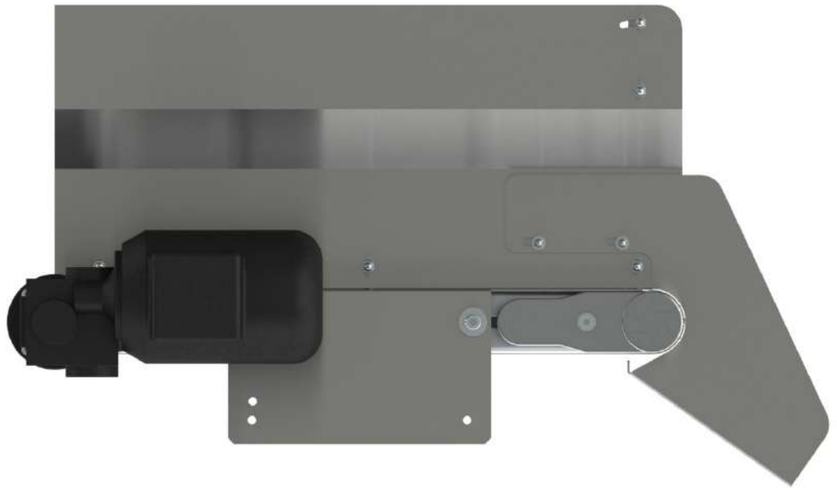
BU-W series belt-type hoppers are intended for storage of parts and increase the autonomy of the feeding system they supply. The are conceived for horizontal filling of downstream systems.

The basis of these belt-type hoppers is RNA's proven belt feeder FP120. A distinct characteristic of BU-W belt-type hoppers is their compact direct drive system and their top-mounted components from stainless steel brushed on both sides. BU-W belt-type hoppers are available from stock.

Typical application: Feeding system with BUW-25 for metered filling



Hopper Systems



Type	BU-W 5	BU-W 15	BU-W 25	BU-W 50	BU-W 100	BU-W 200
Filling volume (l)	5	15	25	50	100	200
Filling weight (kg)	15	50	70	80	100	100
Belt speed (m/min)	1 or 2					
Rated voltage (V)	230/400 or 230					
Current input (A)	0.37 or 0.64					
Motor rating (W)	90					
Motor position	Standard motor position 6 (on right when viewed in feeding direction) / alternatively motor position 1 (on left when viewed in feeding direction)					
Total length (mm)	590	590	640	940	1140	1140
Width excluding motor (mm)	125	250	280	380	430	430
Dimensions: L x W x H	615 x 125 x 105	615 x 250 x 205	665 x 280 x 240	965 x 380 x 240	1165 x 430 x 290	1165 x 430 x 510

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