



RNA
We handle it.



Conveyors

- *Mini-band Conveyors*
- *Conveyors*
- *Accessories*
- *Control Boxes*
- *Special Conveyors*
- *Conveyor Applications*



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Welcome to RNA Germany – your market leader in the field of feeding technology!

Rhein-Nadel Automation GmbH is a traditional family-owned enterprise that has its head office in Aachen, Germany. With seven production locations and an international network of partners, we are there for you worldwide. For many decades now, our name has stood for top-class performance regarding technology, quality and reliability.

Our two business segments are the development and manufacture of complete custom-made feeding systems and their corresponding components.

With many years experience in the automation and parts handling industry and nearly 2000 complete feeding systems supplied annually, RNA has earned a reputation for the most robust and reliable equipment on the market. Our commitment to research and development maintains our position at the leading edge of feeding technology. We provide an extensive range of the most efficient drive units, controllers and accessories for either standard or special requirements. All equipment is manufactured to the highest standards of quality upon which we have built our reputation. We offer first class service and standard equipment, immediate delivery from stock. Our product range is manufactured to meet the highest demands of the food and pharmaceutical industries and also includes equipment manufactured to UL and CSA standards. Quality has always been of central importance to RNA, with each employee committed to make their own personal contribution to the achievement of quality standards and customer satisfaction. We know that long term success in business can only be achieved by providing high quality equipment, which fulfils the customer's requirements.



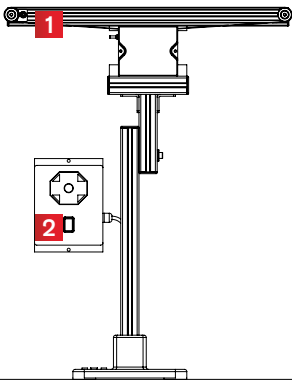
This catalogue represents our complete range of conveyors. This also includes the RNA mini-band conveyors type P15E and FP15D, with optional belt widths of 10, 20 or 30 mm and lengths of 200 to 2,000 mm. FK120 and FP120 conveyors are available in either steel or aluminium profile. These conveyors can offer belts from 50 to 400 mm in width and lengths of 500 to 12,000 mm. Accessories (e.g. knife edges, side guides etc.), control boxes and stands augment our

comprehensive range of equipment. Beyond the standard range we also manufacture according to specific customer requirements. Swan neck and Z-conveyors are just some of the options available to meet your special requirements.

Our experienced staff is available to provide advice and to offer a solution which meets your specific needs.

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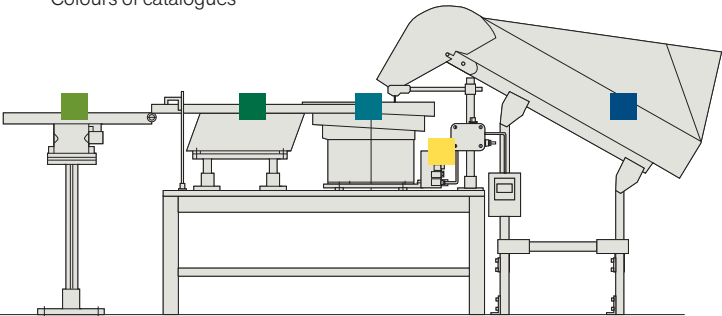
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Special technical requirements are available on request.
All measurements are in millimetres.

More product catalogues from the RNA range of equipment		
Conveyors		
Linear feeders		
Bowl feeders		
Control boxes		
Bulk hoppers		
Step feeders (not shown to the right)		

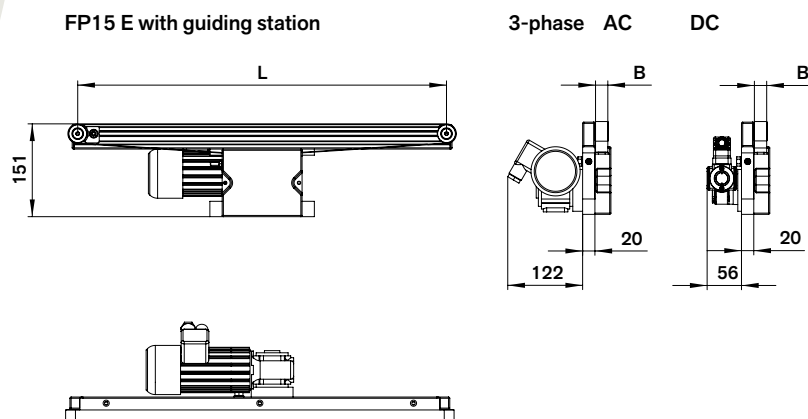
Colours of catalogues



Mini-band conveyors

FP15 E and FP15 D

RNA mini-band conveyors type FP15 E and FP15 D are manufactured from aluminium profiles and are especially suitable in small confined spaces. The knife edge construction makes it possible to overcome potential problems at critical transfer points. The FP15 D is a twin-band conveyor used to transport hanging parts. A benefit of this unit is that the installation of escapements between conveyors is made easier.



Standard Equipment (Derivations on request)

Type	FP15 E	FP15 D
L= Centre distance	200 - 2,000mm	200 - 2,000mm
B=Belt width	10, 20, 30 or 40 mm	10, 20, 30, 40 mm or round belt
Roller diameter	30mm	30mm
V=Adjustable gap	-	5-25, 20-55 or 50-85mm
F=Body width	B+22mm	B+22mm
Conveyor load	5 - 10 kg	5 - 10 kg
Protection class	IP54	IP54



Knife edges - both ends (rolling) see page 5

Conveyor belts

The belts are antistatic and FDA approved on request

Suitability of the belts	Back-pressure, continuous, wet operation
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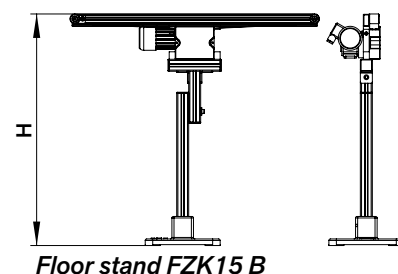
Options / Floor Stands*

Type	FZK15 B
H = Transport height (mm)	450 - 1,900
Adjustable gap (mm)	±30

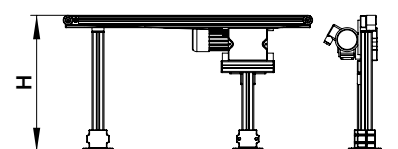
*we recommend the use of two fixing points at a axial distance starting from 1,500 mm

Support Stands

Type	FZK15 S	FZK15 G
H = Transport height (mm)	450 - 1,900	450 - 1,900

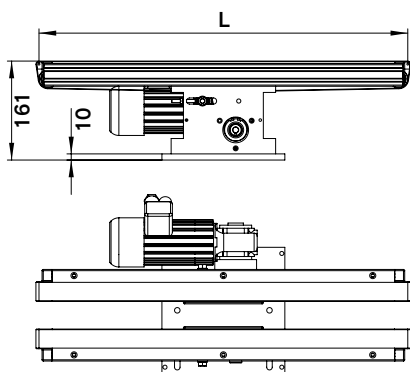


Floor stand FZK15 B

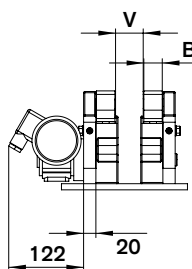


Support stand FZK15 S & FZK15 G

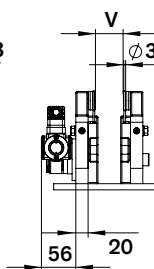
FP15 D with knife-edge



3-phase AC



DC



Constant Belt speed

3 phase

Constant belt speed

Belt speed	9, 15, 21 or 37 m/min
Voltage	230/400 V 50 Hz
Recommended control	Motor safety switch PKZ M

AC

Constant belt speed

Belt speed	9 and 15 m/min
Voltage	230 V 50 Hz
Recommended control	Motor safety switch PKZ C

Variable Belt speed

3 phase

Variable belt speed

Belt speed	0,5 - 30 m/min with a control ratio of 1:4
Voltage	230/400 V 50 Hz
Recommended control	EBF 05

VDC

Variable belt speed

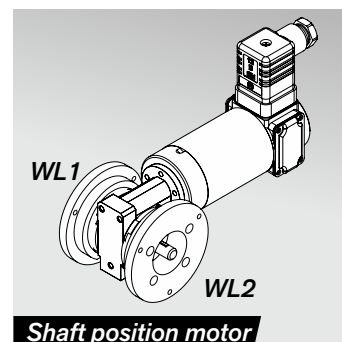
Belt speed	2 - 13 m/min with a control ratio of 1:4
Voltage	24 VDC
Recommended control	EBC 3000



Knife edge FP15



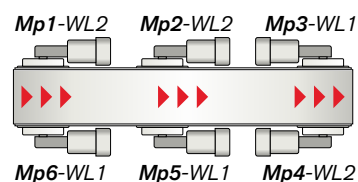
Knife edge FP15



Shaft position motor

Motor Position (Mp1 - Mp6)

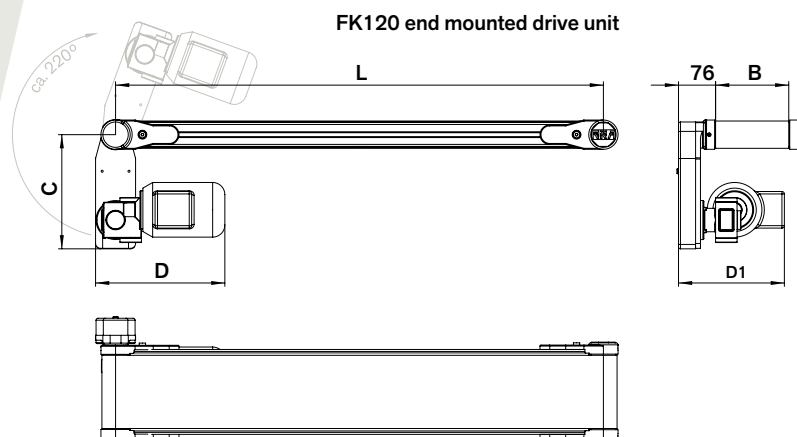
Please specify your requirements when ordering



Conveyors

FK120 and FP120

RNA conveyor systems FK120 and FP120 are suitable for all kinds of industries. Our standardised systems can easily be adapted to feed your parts in the most efficient way. The body of the FP120 consists of aluminium profile. Stainless steel systems and different types of belts are also available.

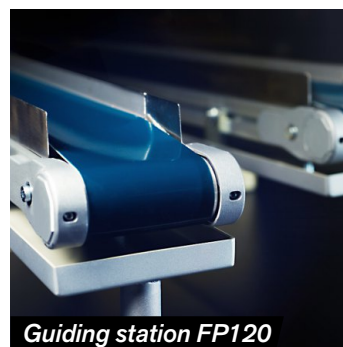


Standard Equipment *(Derivations on request)*

Type	FK120 and FP120
L = Length (mm)	500 - 12,000
B = Belt width (mm)	50 - 600
C = Height of motor top plate (mm)	Cmin=260 / Cmax=320
D = Drive unit (mm)	Dmin=356 / Dmax=402
D1 = Drive unit (mm)	D1min=172 / D1max=224
Roller diameter	52
Conveyor load (kg)	max. 100
Protection class	IP54



FK120 / FP120



Guiding station FP120

Mid position motor

Knife edge (rolling) diameter 8 mm

Conveyor belts

The belts are antistatic and FDA approved on request

Suitability of the belt	Back-pressure, continuous, wet operation
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Slat belts

K10

T20

L35

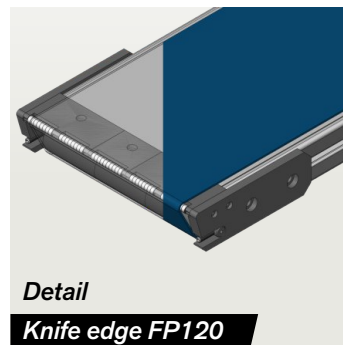
Slat belts are not suitable for mid-position motors and support rollers

Underguarding and catchtray

In accordance with our safety regulations we recommend underguarding when using a slat belt

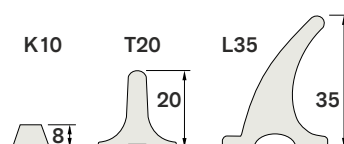
A tank is used to catch liquid, fitted with a tap to connect a 3/4" hose pipe

Derivations on request



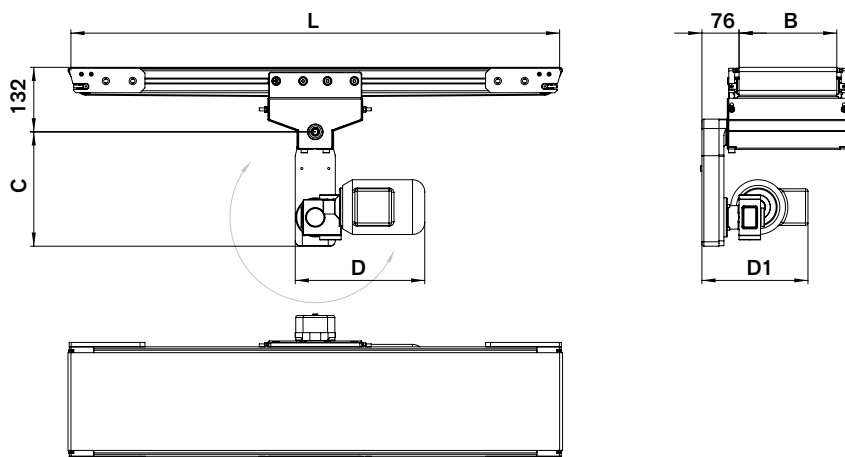
Detail

Knife edge FP120



Slat type

FK120 with knife-edge



Constant Belt speed

3 phase	Constant belt speed
Belt speed	0,5 - 100 m/min
Voltage	230/400 V 50 Hz
Recommended control	Motor safety switch PKZ M
AC	Constant belt speed
Belt speed	0,5 - 30 m/min
Voltage	230 V 50 Hz
Recommended control	Motor safety switch PKZ C



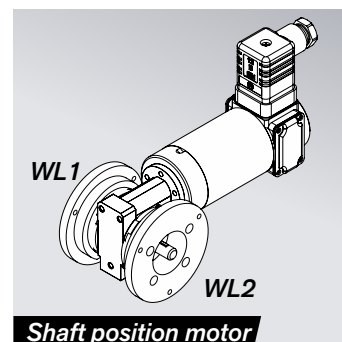
FP120



Special model

Variable Belt speed

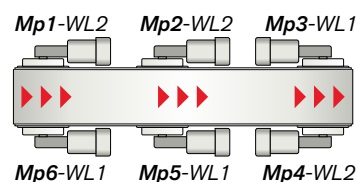
3 phase	Variable belt speed
Belt speed	0,25 - 80 m/min with a control ratio of 1:4
Voltage	230/400 V 50 Hz
Recommended control	EBF 05
VDC	Variable belt speed
Belt speed	0,25 - 80 m/min with a control ratio of 1:4
Voltage	180 VDC
Recommended control	EBC 10



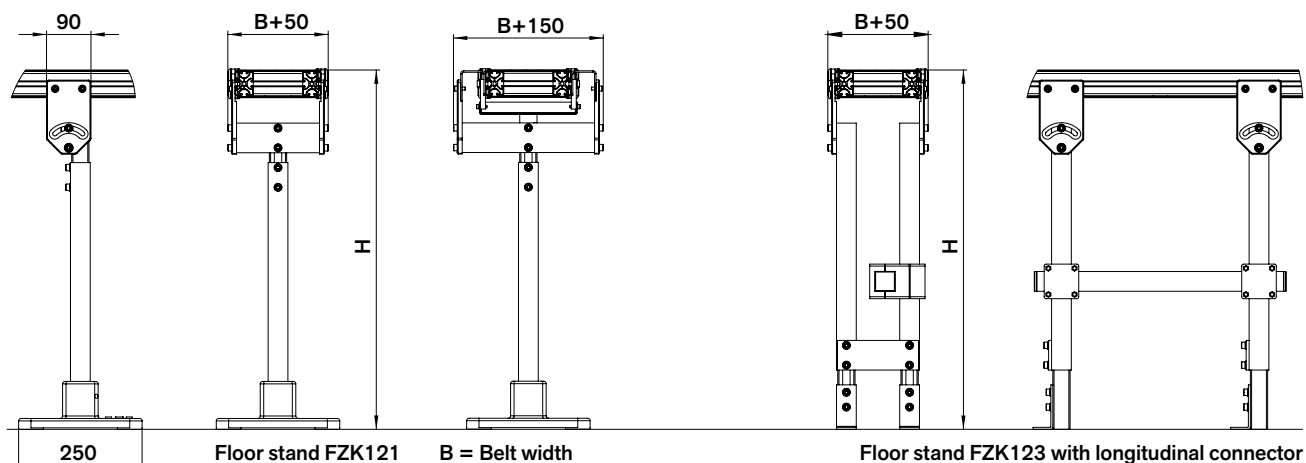
Shaft position motor

Motor Position (Mp1 - Mp6)

Please specify your requirements when ordering



Accessories



Stands (drawing as above)

FZK121

FZK123

H=Transport height (mm)

450 - 1.900

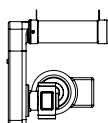
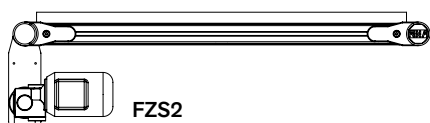
450 - 1.900

Adjustable gap (mm)

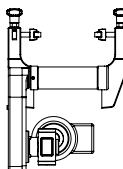
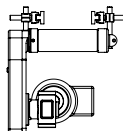
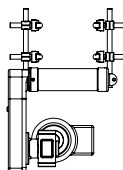
±70

±70

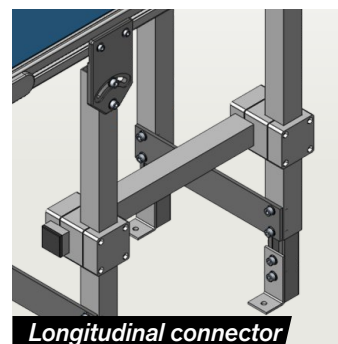
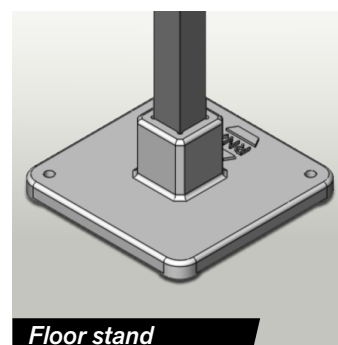
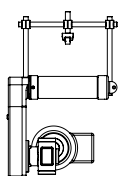
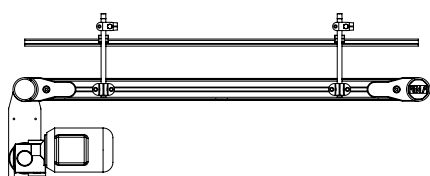
Folded skid plate type FZS2



Rail guides type FZS1 und FZS3



Top rail



Guide sections to be chosen for rail guides and top rails



For the power supply of all conveyors RNA offers optimal control designs, from the simple motor circuit breaker up to an intelligent control box with frequency converter. An intelligent processing of peripheral sensor technology, which is adapted to feeding technology is available just as the communication with superior control systems. Furthermore, all control boxes are available with CE and CSA/UL certificates.

Motor protection switch for fixed speed conveyors

PKZ

- Types FP15, FK/FP120, FK/FP300
- Manual operated switch with thermal and magnetic trips
- Complete main cable with plug CEE-switch 16A
- Plastic housing with flange mounting
- Voltage 230/400 V 50-60Hz protection class IP54
- Also available with single-phase capacitor motor with 230 V 50 Hz

Controller for RNA variable speed conveyors

EBC 3000

- Types FP15 E and FP15 D
- Output voltage on the control panel adjustable from 10% to 100%
- Pulse width setting with high clock frequency
- Remote Start/Stop facility built in with potential-free input on the circuit board
- Scoop proof safety extra-low voltage through power transformer according to VDE 0551
- Motor connection via plug on front plate
- Aluminium housing
- Voltage 230 V 50-60Hz, protection class IP54

Controller for RNA variable speed conveyors

EBC 10

- Types FK/FP120 and FK/FP300
- Min/max revolutions to be set to 1:4 ratio and by the use of the electronic current limit stable through internal I x R compensation
- Over current switch with interruption LED
- Separate adjustable start-up and return flow integrator
- Remote de-energisation through potential-free contact or 24 VDC signal
- Adjustable slow start and stop
- Useable status signal via opto-coupler
- Motor and power cable hard-wired
- Metal housing with flange mounting
- Voltage 230 V 50-60Hz, protection class IP54

Frequency controller for conveyors/hoppers with variable speed

EBF 05

- Types FP15, FK/FP120, FK/FP300 and step feeder STS
- Motor currents max. 370 or 750 watts
- External switch-off possible
- Speed settings using internal potentiometer
- Integrated EMV-filter
- Aluminium housing
- Voltage 230 V, 50-60 Hz, protection class IP54



Special conveyors

RNA also responds to individually customer requirements:

Conveyors especially for heavy parts, swan-neck or Z-conveyors and conveyors with anti-slip belts as well as accessories offers you an alternative solution for your special task. On the basis of the RNA product program our project engineers create solution concepts for your specific requirements. Our longstanding experience gives you the certainty of an expert advice. We are more than happy to make you an offer.

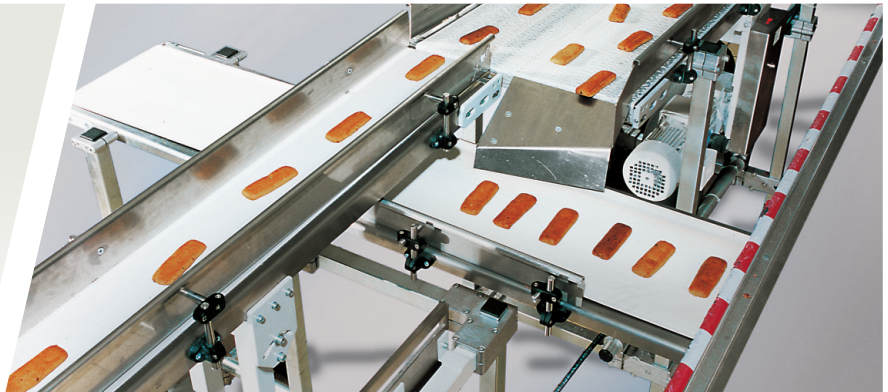
Swan-neck and Z-conveyors

These type of conveyor is used in small confined spaces. The conveyors are specially designed by our project team to meet specific requirements.



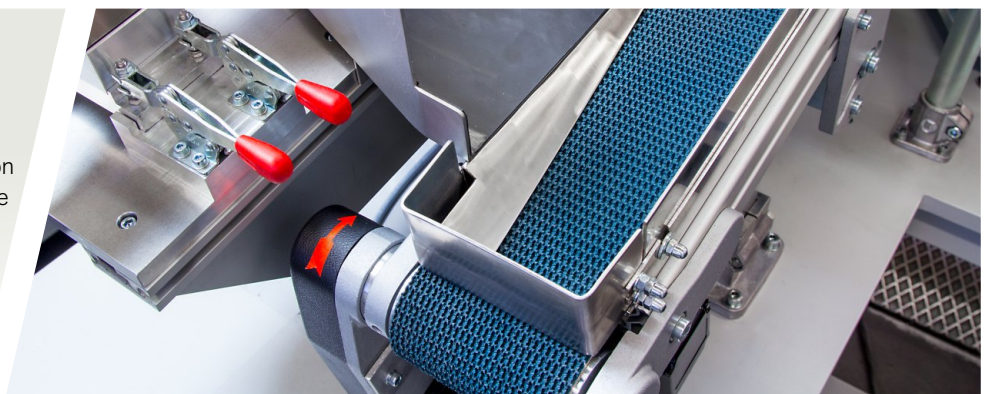
FK300 and FP300

The conveyor type FK/FP300 can be used for a total area load up to 40 kg and belt widths up to 1,500 mm. The distance between centres can go up to 12,000 mm.



Conveyors with anti-slip belts

or with drive belts are particularly suited for separation and careful feeding of sensitive parts. Additionally, the parts can be transported in an oblique position.



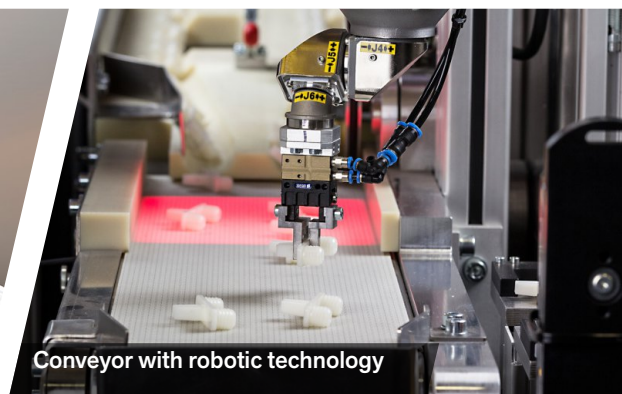
The images below show a range of RNA conveyors in use and clarify the various specifications and requirements of our customers. Different materials, parts and products are conveyed reliably, precisely and trouble-free to the subsequent production process.

Order form for conveyors

The order form for conveyors you will find at
<http://en.rna.de/components/conveyors/>



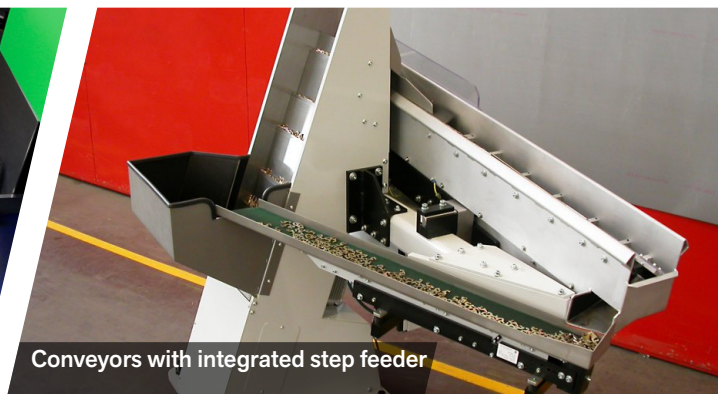
Complete conveyor systems



Conveyor with robotic technology



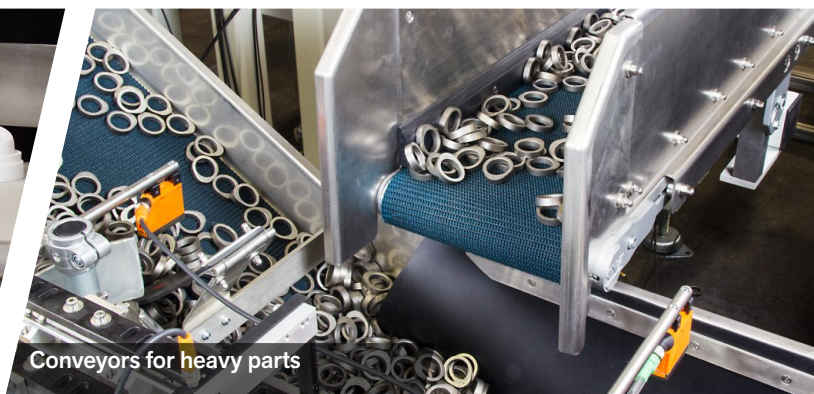
Conveyors for food industry



Conveyors with integrated step feeder



Conveyors with defined space for approval



Conveyors for heavy parts



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