PRODUCT
CATALOG
EDITION 3.0

DZIEŃ DOBRY! WE COME FROM POLAND.

- Chain conveyors
- Mobile conveyors
- Conveyor chains
- Redler outlet slide gate
- Silo outlet slide gate
- Bucket elevators
- Two-way directional distributors
- Three-way directional distributors

niczuk

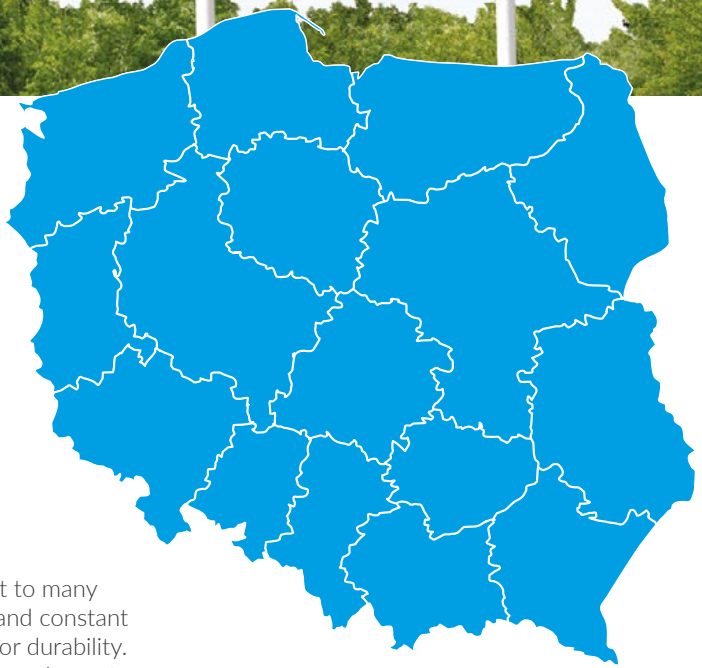
niczuk.eu

About us

THALE sp. z o.o. sp.k. Company (owner of the NICZUK brand) is a manufacturer of chain conveyors and other bulk material transport equipment. We have been designing and manufacturing high quality devices, many of which are still in operation, since 1980.

We produce in Poland

All our devices are manufactured in Poland. Direct supervision at each stage of the production process guarantees the highest quality and durability of the product.



Cooperation with the best

Over several decades of our activity we have delivered equipment to many customers who are leaders in their industries. Attention to detail and constant improvement of products have made NICZUK brand a synonym for durability. We provide support in the assembly and service of manufactured equipment.

Contact: +48 606 822 257 przenosniki@niczuk.pl

We support you at every stage of your investment

We focus on comprehensiveness – we provide technical support, think strategically and, based on the conditions on site, propose optimal solutions to meet the needs of our customers' companies.

Experienced specialists

We are an established brand on the Polish grain and milling market. The combination of the knowledge gained in working for the largest companies in Poland with the tools we have at our disposal guarantees professional and reliable service for our Customers.

Projects support

We offer technical advice and support for constructors in the selection of conveyor technology. We select products with a view to adapting the new conveyor to the existing installation. We owe the success of the company and the satisfaction of our customers to the work of a team of qualified specialists.

Quality control

Thanks to systematic supervision of production processes, technical documentation and verification of supplied materials, we guarantee the constant and highest quality of our products. Raw materials and semi-finished products are subject to quality control, the hardness of chains and the strength of elements, construction materials and composites are also checked.

We care for the environment

Environmental protection is an important part of the company policy. We implement a number of green projects and carry out activities aimed at reducing the consumption of energy maintaining the machinery park in perfect condition and strict supervision over the processes involving the use of chemical substances (varnishes, paints, solvents). Environmental awareness of the company's employees and cyclical training courses are an important element of the company's functioning.

Waste management and secondary raw materials

We plan, design and implement measures to reduce waste and its negative impact on the environment. Our waste management is very effective – we minimize waste generation "at source". All waste produced by us is transferred to specialized units for use in secondary production or disposal. We recycle 97% of our waste. Metal scrap, waste paper, plastic waste and waste oils are the main secondary raw materials at our plant.

Reduction of electricity use

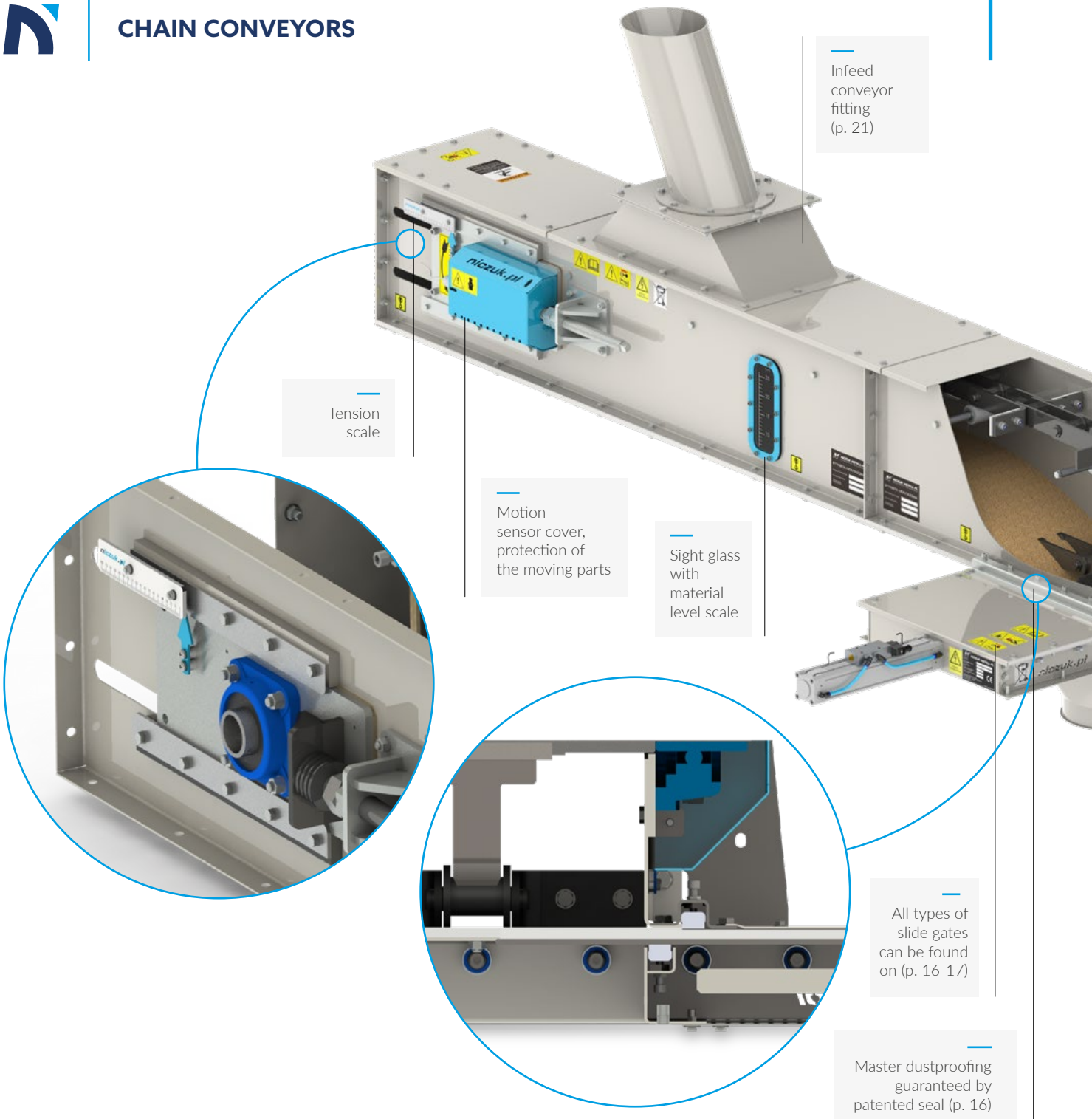
We strive to reduce electricity consumption in accordance with the principles of sustainable development. We regularly replace power receivers, engines and hydraulic pumps - we modernize the lighting and take care of the technical condition of all machines, which are subject to timely inspections.

Selection of clean materials

We make every effort to use environmentally friendly raw materials and materials. We use the highest quality raw materials for production, taking into account their chemical composition and possible environmental impact.

Contact: +48 606 822 257 przenosniki@niczuk.pl


niczuk
TECHNOLOGIE
TRANSPORTU
MATERIAŁÓW
SYPKICH



Application:

NICZUK devices are used in the transport of bulk materials such as: grain, pulses and oilseeds, sawdust, fodder and biomass. They are most often used in oil mills, mills, feed mixing plants, port handling and grain and biomass warehouses.

Construction:

The evidence of NICZUK products quality is the most stable construction of the drive system, which guarantees reliable operation for years. Thick cross-sections of the materials used throughout the machine ensure the rigidity of the structure and reduce the noise generated during operation.

Characteristics:

Depending on the medium, the conveyors can transport material at an angle of up to 20°. The devices use NORD and SEW gear motors. The offer includes conveyors with a capacity of up to 300 tons.

Several types of chain guides (p. 8-9)

Lock method of connecting the bottom of the conveyor guarantees dust-tightness

Gear motor torque arm

Outfeed fitting (option)

Inspection flap secured with a sensor of door opening

10 mm thick PE 1000 plastic prolongs the service life of the device, reduces energy consumption and suppresses noise

Gear motor in efficiency class IE3, for at least one of the ATEX-certified devices – IE2 efficiency class

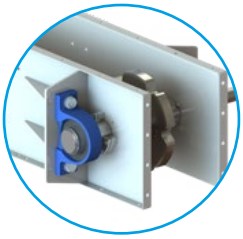
ATEX-certified conveyors

Characteristics:

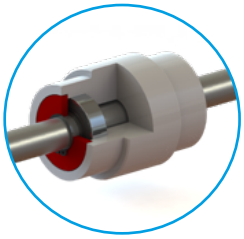
The ATEX EX II 2D certificate is a guarantee of safe operation of equipment in potentially explosive atmospheres

See page 15 for more information.

In the version adapted to work in conditions of increased explosion hazard, NICZUK devices are additionally equipped with:



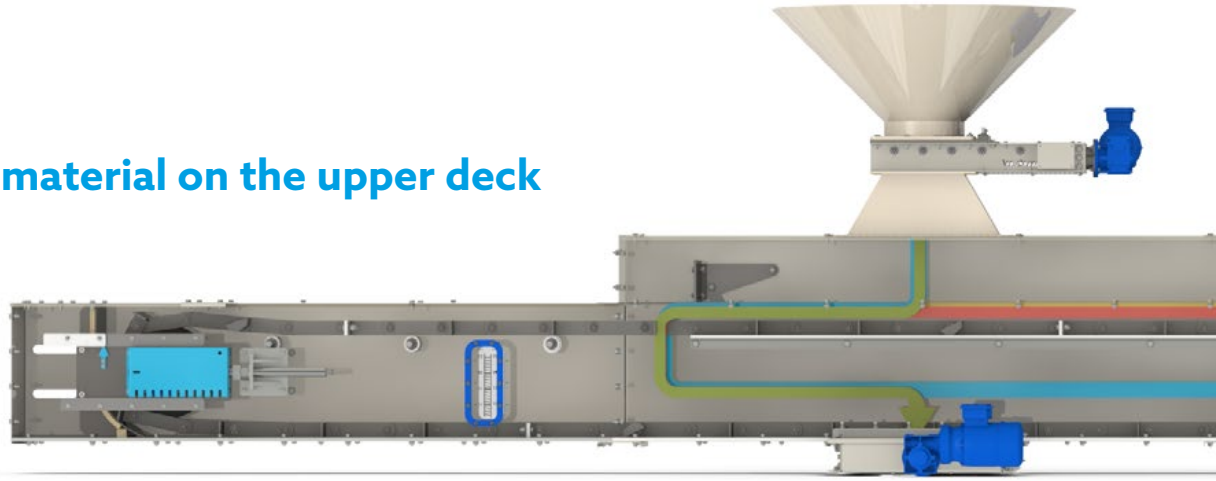
Bearings mounted outside the dust zone sealed with a graphite cord



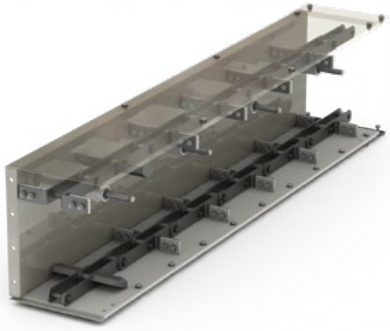
Bearing rollers with an extended service life

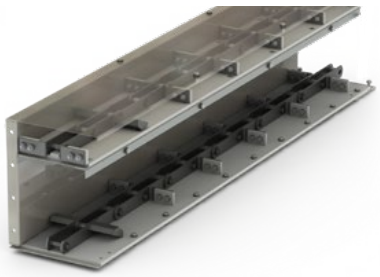
Cable connections (earthing) discharge electrostatic charges

Transport of material on the upper deck



Self-cleaning conveyor





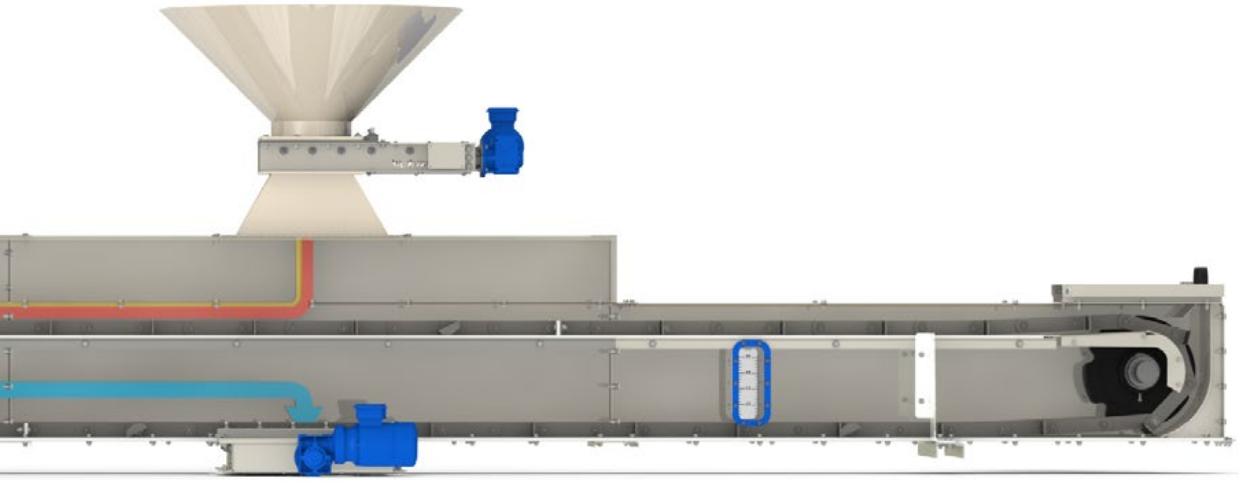
Standard version – roller chain return

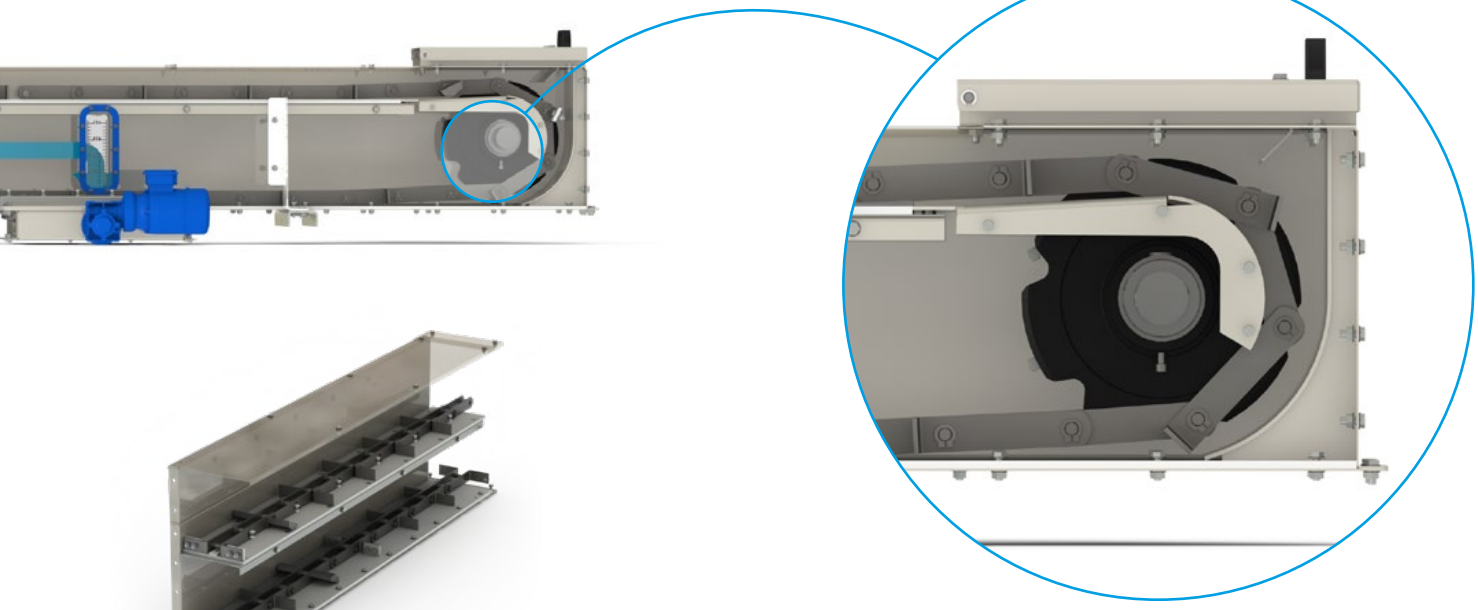
In standard systems, roller chain return is used. They are made of PA6G, which guarantees long-term reliability under typical operating conditions.
The 1,900 mm long intermediate trough is equipped with four rollers: one guiding, stepped with a centering ridge and three smooth rollers. As the roller is mounted on a steel axle, it is easy to replace without the need to dismantle other elements of the conveyor body.

Use bearing rollers with additional sealing and reduce downtime.

Self-cleaning

The self-cleaning version of the device is equipped with a rounded drive station, which prevents material from accumulating in it. For standard materials (cereals, feed industry, mills, etc.), self-cleaning is carried out using chain sections with buckets and return rollers. The buckets scoop out the material carried on the chain and transfer it to the device's return station. For sticky materials, there are no buckets used, but an upper deck on which excess material is scooped and transported to the device's return station. It is also possible to use an upper deck with buckets. For self-cleaning carried out using buckets, we use 1 section equipped with them for every 3 sections of a standard chain.





With upper transport deck

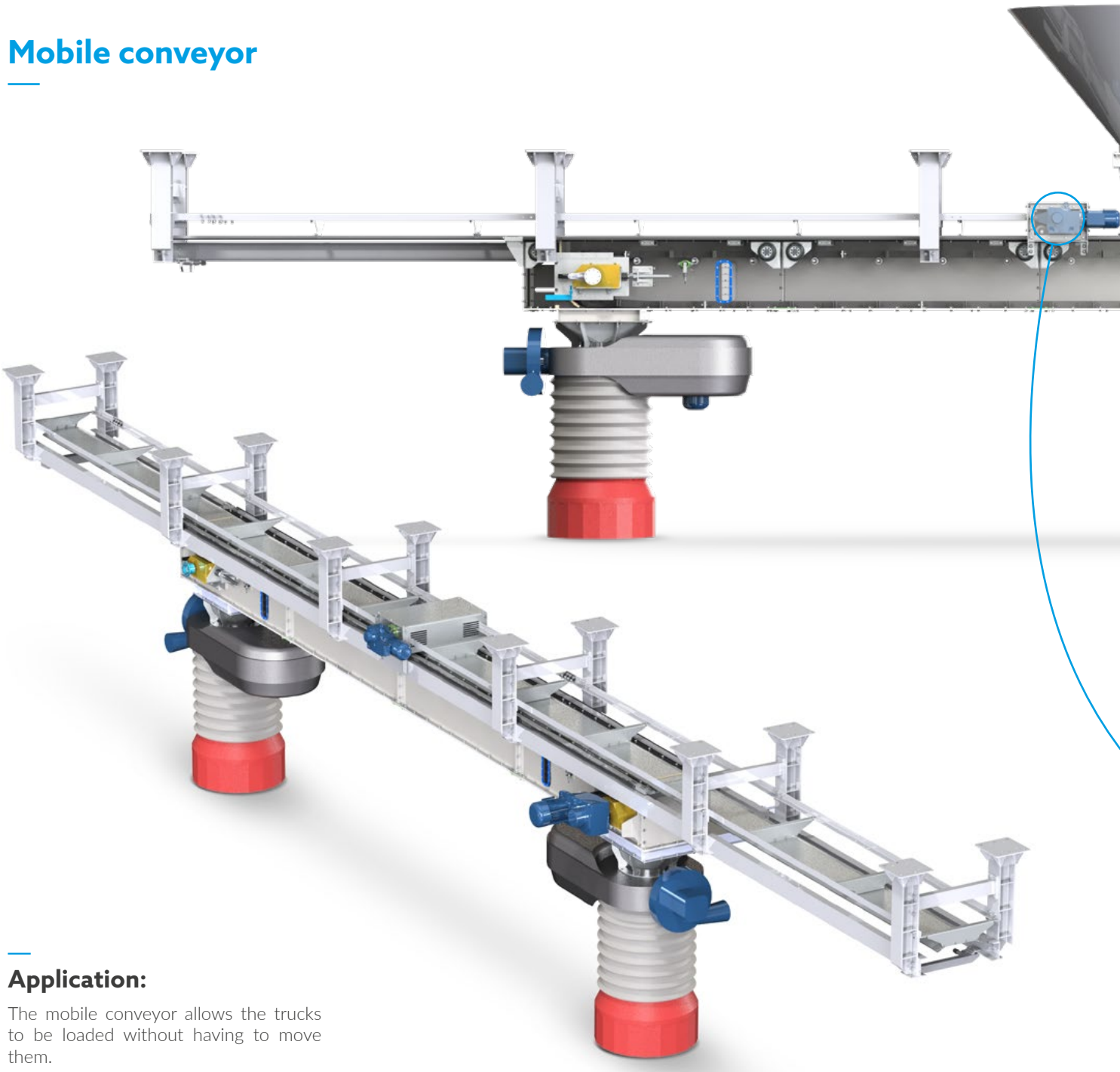
It is used in installations with a large amount of infeeds or in the case of outfeeds located before and after the infeed. Thanks to the use of a high double bottom, it is possible to transport the material through the upper deck towards the return station, where it falls to the lower bottom and is then taken to the drive station.

Use your conveyor more efficiently

The standard version of the chain conveyor could only transport material from the return station towards the drive station. There was a problem of the transported material deposited in the conveyor or having to transport the material in the opposite direction.
To meet these challenges, we have created conveyors in the following versions:

- self-cleaning,
- with the upper transport deck.

Mobile conveyor



Application:

The mobile conveyor allows the trucks to be loaded without having to move them.

Construction:

The mobile conveyor is a suspended device and is designed for horizontal movement in one axis. Its construction enables reversible operation of the conveyor.
The offer includes conveyors with a capacity of up to 200 tons.

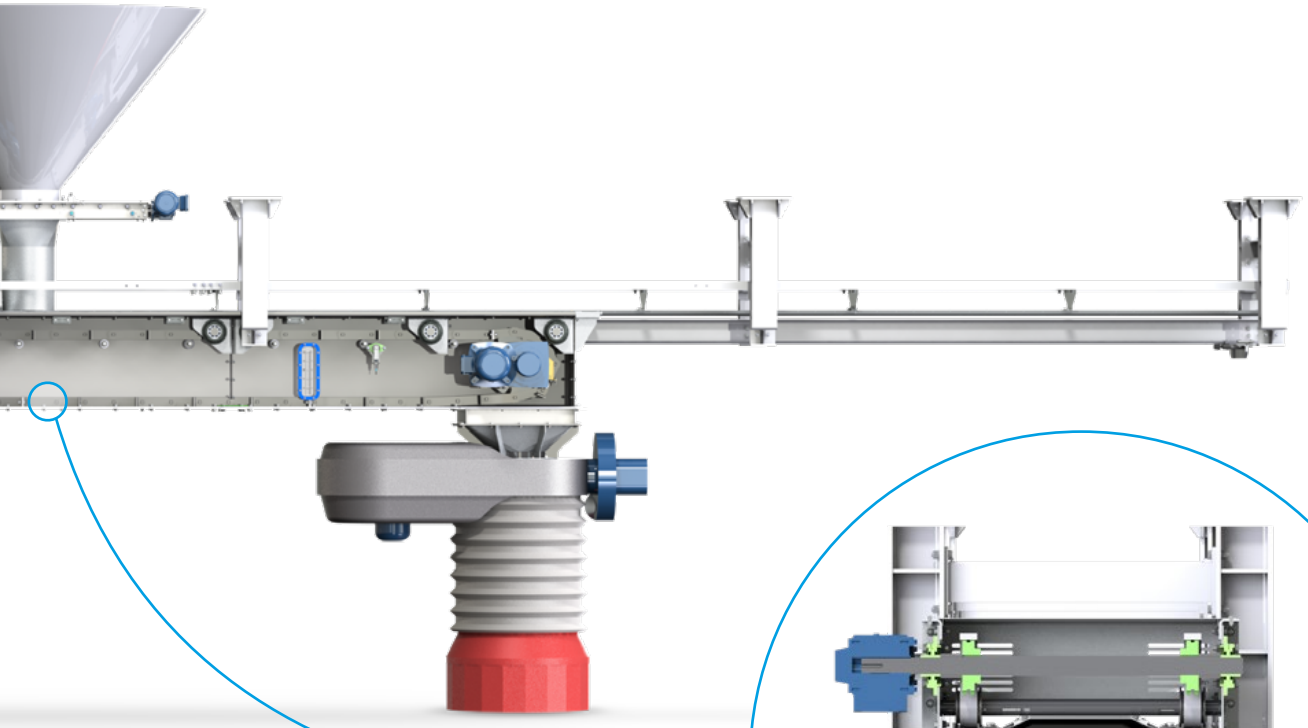
Conveyor length:

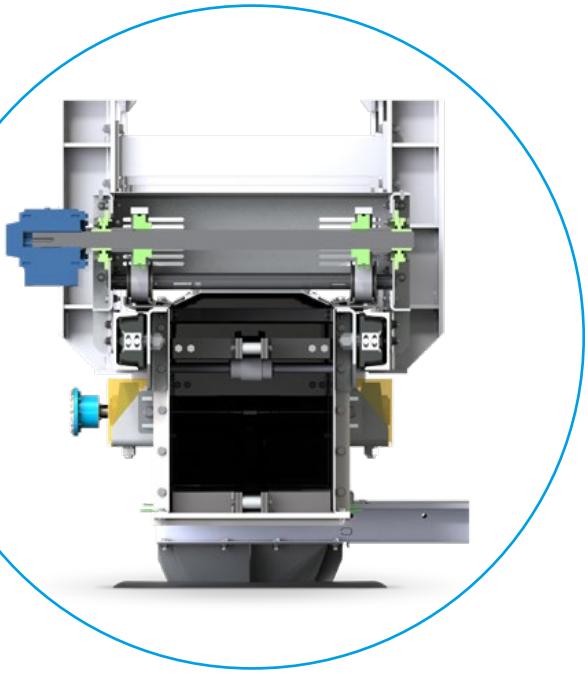
The optimum length of the conveyor is 7 lm, however, this parameter can be adapted to any requirement on request.
Adaptive design of the sleeves gives the possibility of smooth adjustment of their length to the height at which the conveyor can be suspended.

Loading method:

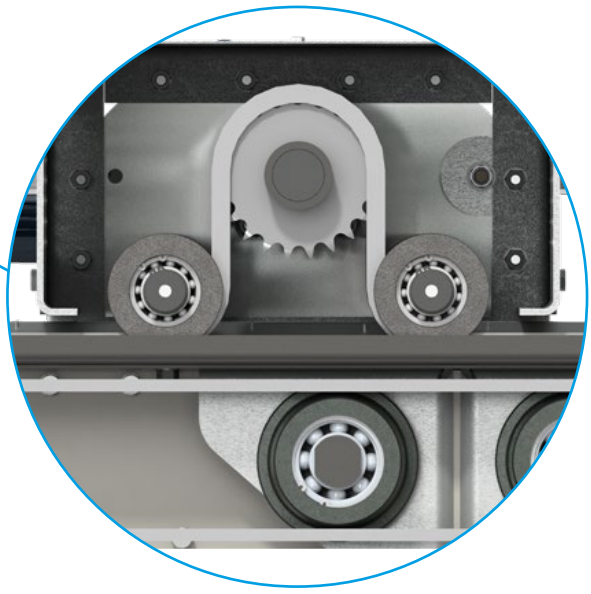
The most effective method of loading U-shaped vehicles.
Eliminate the need to move the vehicle during loading and use a shorter weighing facility

Contact: +48 606 822 257 przenosniki@niczuk.pl





Trough cross-section including support frame and conveyor drive system



Drive of the mobile conveyor system

Leading design solutions:

- **Precise movement of the mobile conveyor** – thanks to the use of a chain with a gear motor.
- **Safety at work** – double overfilling safety device and a reverse wheel movement sensor.
- **Dustproofing of the device** – thanks to double lip seal of the top cover.

5 years guarantee

Plate conveyor chain with cleaning strips

Standard chain, equipped with PE strips mounted on every fifth arm.

Plate conveyor chain with scraping buckets

Scraping buckets are used in self-cleaning versions. Their task is to take the material out of the drive station and lift it towards the return station. Installed at 0.96/1m per 15 lm of the chain.

Scraping block

The scraping block prevents the material from sticking in the space between the chain flat bars. The blocks are optionally mounted at a spacing of 1 piece per 4.8 lm of the chain.

Reduce the amount of material residues in the conveyor by installing strips, blocks and buckets.

Advantages:

- **Reliability** – made of suitable steel grades that meet the requirements of DIN 8165.
- **Savings** – a wide range ofsizes and pitches allows you to indicate the optimum chain size for your applications. The result is an improvement in the energy balance of the device and a reduction in the costs of operating repairs.
- **Durability in operation** – sleeves and pins are subjected to a careful thermo-chemical treatment which results in the actual hardness of 60 HRC. In order to extend their durability, they are protected against turning.
- **Quality** – each of the 20 chain sizes is equipped as standard with a cleaning strip for the corner space of the trough, which is made of durable and wear-resistant PEHD1000 plastic. Additionally, the strips act as a spacer between the scrapers and the side of the trough.

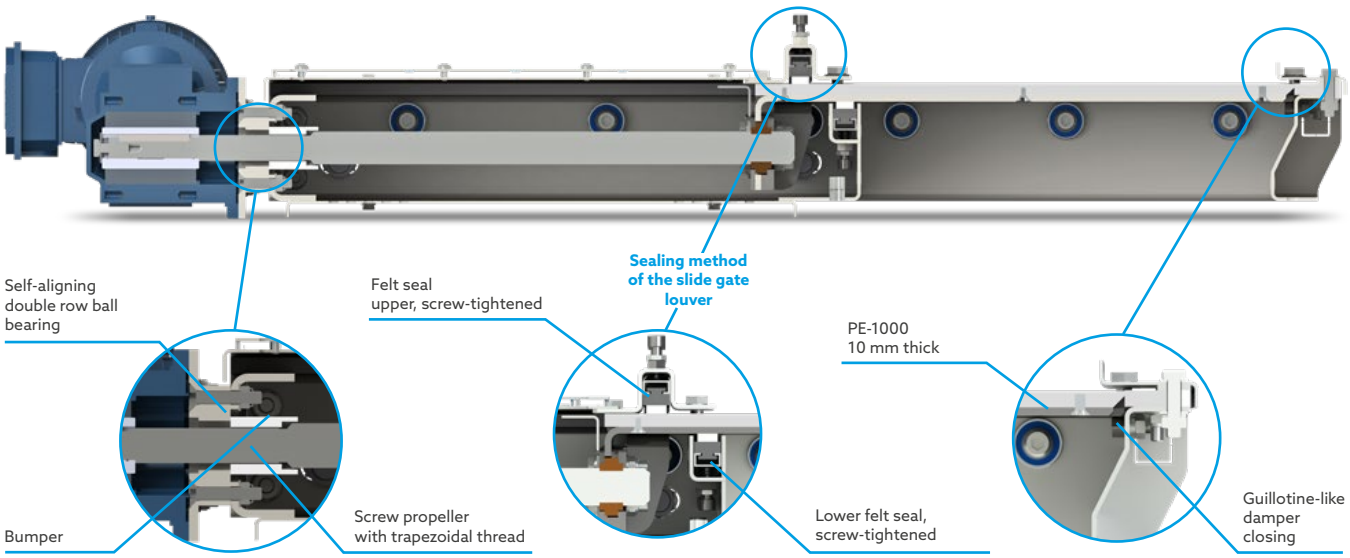
WE ARE THE QUALITY LEADER

Many years of experience in chain production allowed us to develop a manufacturing technology that extends the chain's life span and distinguishes us from the competition. We make every effort to ensure that every meter of chain is of the highest quality. At the customer's request, we can manufacture dedicated chains equipped with scraper bars, sleeve rollers and brackets.

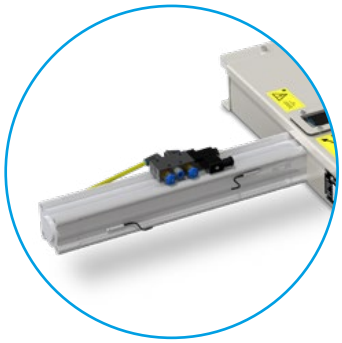
Equipment for feed plants, mills
and elevators are in constant contact with grain dust,
which, when achieving certain concentration, can
create an explosive atmosphere.

In order to reduce the risk and improve safety, THALE (owner of the NICZUK brand) has introduced conveyors, hoists, slide gates and distributors that can operate in Ex 3D (zone 22) and 2D (zone 21) zones.

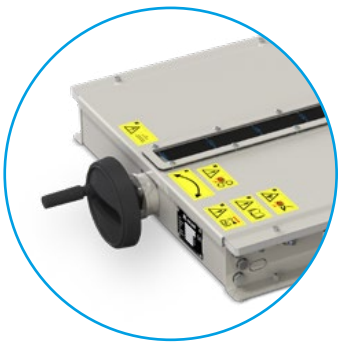
In NICZUK devices, such solutions include sensors and Ex drives, bearings mounted outside the dust zone, explosion relief systems. Each device designed to work in an explosive zone is properly marked.



ZPR-E | NZZ-E | electric drive*



ZPR-P | NZZ-P | pneumatic drive**



ZPR-R | NZZ-R | manual drive

* NORD or SEW | ** FESTO or HAFNER

Advantages:

- **Master dust-tightness** – the long-term dust-tightness of the drop plate is guaranteed by compensation of wear and pressure of the upper and lower sealing panel.
- **Robustness** – guarantees reliability for many years.
- **Energy-efficient use** – achieved by using composites, eliminating excessive frictional resistances.
- **Reliable design** – manual and electric control utilizing a screw with trapezoidal thread and a special nut made of bronze, which prevents blockage of the slide gate damper.
- **Smooth running** – the locking plate with ball-bearing mounted guides prevents blockages due to dust and clogging.

Construction:

The slide gate frame is made of molded sheet metal, previously cut out with the laser. The slide gates drive can be manual, electromechanical or pneumatic. Redler slide gates (ZPR) are made according to the series of produced conveyors (redlers). The redler outlet slide gate damper is lined with 10 mm thick PEHD material forming a single plane with the bottom of the conveyor.

Special orders:

There is a possibility of making a custom-made slide gate with a dimension adapted to the local conditions of the facility.

Contact: +48 606 822 257 przenosniki@niczuk.pl

Redler outlet slide gates

Electric slide gates controlled by NORD or SEW engine with inductive sensors.

Pneumatic slide gates, controlled by HAFNER or FESTO actuator equipped with reed sensors.

Silo outlet slide gates

They are used at silo outlets. They are equipped with a double-sided damper clamp eliminating the problem of dusting.

Easy
head opening
(modular design)

Elevator pipes
made of 2 mm/3 mm
thick sheet

Steel or plastic buckets

Elevator belts
in an oil-resistant, anti-
static or with increased
resistance to acid
design

Venting segment

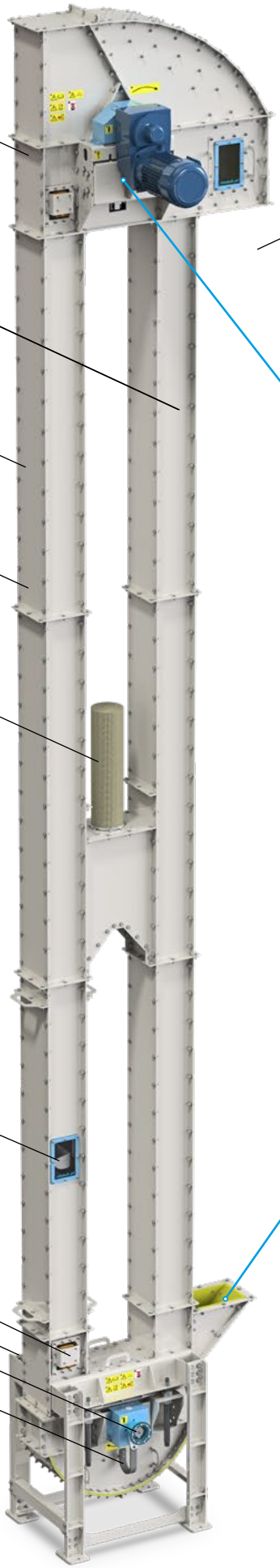
Control tube for quick
access
to the belt, equipped
with 2 sight glasses

Belt parallelism sensor

Elevator foot
standard, equipped
with two-directional
wheel draw. Infeed
in concurrent,
counter-rotating
or two-directional
design.

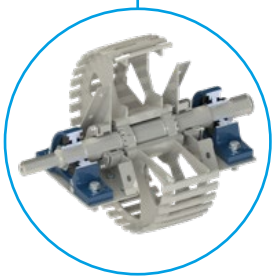
Motion sensor cover
(OCR)

Inspection hatch



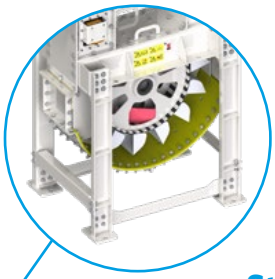
The split head design allows for easy access and replacement of worn parts. The elevator head is lined with 10 mm thick polyurethane or polyethylene. Gear motor mounted directly on the shaft or via a coupling, bearings in upright housing, mounted outside the dust zone

Head



Elevator wheel

Easy to replace shaft thanks to the use of Clapmex clamping rings also on the return wheel.



Foot

Standard foot with cleaning hatches

Contact: +48 606 822 257 przenosniki@niczuk.pl

Application:

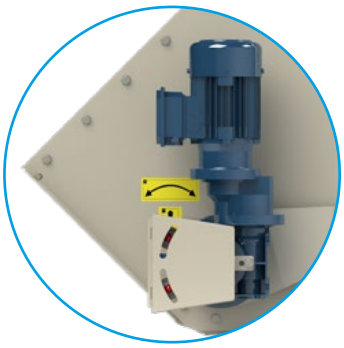
The bucket elevator is used for vertical transport of material: grain, pulses and oil seeds, fodder, biomass and other loose materials.

Leading design solutions:

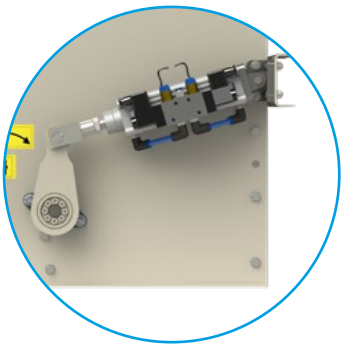
- **Elevator wheels** – perforated, prevent the material from sticking. The lower drum is equipped with kick plates that remove material from inside the wheel. The design significantly reduces damage to the raw material as well as belt and bucket assembly.
- **Elevator belts** adapted to thespecifics ofthe transported material, supplied by renowned manufacturers such as VAV, Stiff, Muhler Beltex. In antistatic, oil-resistant or resistant to acids added to feed designs.
- **Access to the elevator** – the design of the elevator takes into account the need to clean the device and the possibility of access to its interior. Each elevator is thus equipped with 2 inspection windows, a set of control tubes, a split head. In order to meet your requirements, we can make a device with more service pipes and additional cleaning hatches – see foot below.

Significant noise reduction of the lift thanks to plastic lining of places particularly exposed to abrasion. The lifts are certified 3D, 2D and internally 1D.

Control versions



RDA-E | RDS-E | electric drive*



RDA-P | RDS-P | pneumatic drive**

RDA-R | RDS-R | manual drive

* NORD or SEW | ** FESTO or HAFNER

Distributor types

Customized distributors for work in Ex 22 (3D) and 21 (2D) dust explosion hazard zones.

Advantages:

- **Higher workmanship culture** – The use of laser cutting technology guarantees dimensional repeatability.
- **Dismantable design** – enables easier and faster flap replacement, maintenance and repair.
- **Spare parts catalog** – possibility to replace worn parts.

Characteristics:

The product is available in a symmetrical version with an angle between outfeeds equal to 90° and an asymmetrical version with an angle of 45°. The design of the distributor enables the replacement of internal seals, the partition plate (flap) and axles.

PE 1000 plastic-lined distributors

We have developed a special solution for operation in areas particularly vulnerable to rubbing.

If you are aware that the distributor will work continuously or will be subjected to greater material friction and you are afraid of the sides rubbing too quickly, choose a plastic lined distributor on all walls.

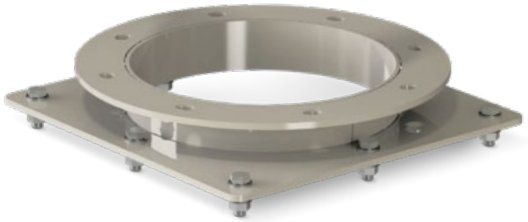
Reduce the downtime caused by the side or flap rubbing.

Infeed and outfeed fittings

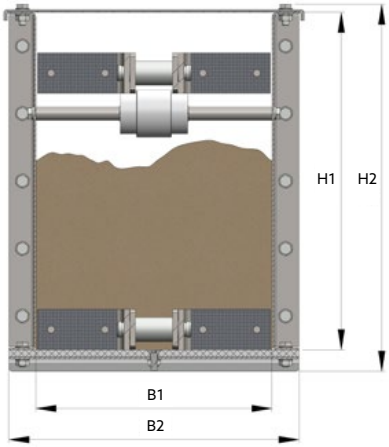
The distributor can be equipped with infeed and outfeed fittings. They are used to connect the distributor with material transport pipes. They can be finished with a flange, a KMH clamp or a tube to be welded in.

We can make other connections on request.

We offer **over 100 types of fittings** adapted to the conditions on site.

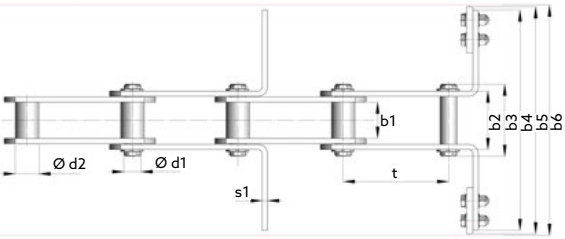


Conveyor



Conveyor type	SPR-030	SPR-050	SPR-075	SPR-100	SPR-150	SPR-200
Mass capacity for material with a density of 0,75t/m³ Qm [t]	15-40	35-60	60-75	90-120	130-160	160-300
Volume capacity Qv [m³]	20-53	47-80	80-100	120-160	173-200	213-400
Dimensions B1 x H1 [mm]	200x320	250x420	300x420	350x500	400x500	450x550
Dimensions B2 x H2 [mm]	280x363	330x463	380x463	430x543	480x543	530x593

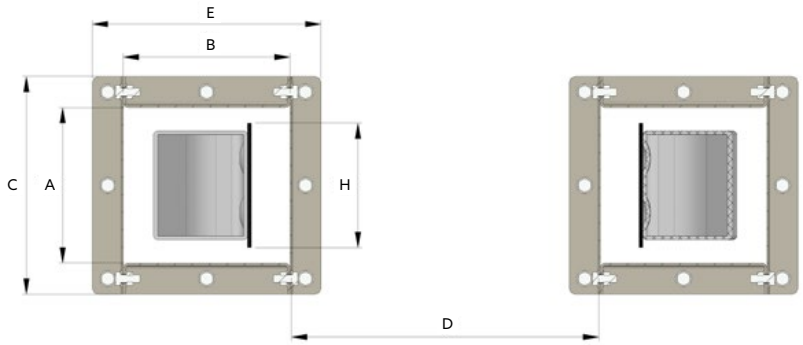
Conveyor chain



SPR	Trough inside width	Pitch	Flat bar		Pin	Sleeve	Clearance	Chain width	Pin length	Scrapers width	Strips width	Strips thickness	Connector length	Arm length
	b6 [mm]	t [mm]	g [mm]	s [mm]	Ø d1 [mm]	Ø d2 [mm]	b1 [mm]	b2 [mm]	b3 [mm]	b4 [mm]	b5 [mm]	s2 [mm]	L1 [mm]	L2 [mm]
10	150	100	35	5	14	20	25	46	60	135	145	8	140	145
30E	200	125	35	5	14	20	25	46	60	185	195	8	165	170
30	200	125	40	6	16	22	30	55	72	185	195	8	170	180
50E	250	160	40	6	16	22	30	55	72	235	245	8	205	215
50	250	160	45	6	18	26	35	60	78	235	245	8	210	225
75E	300	160	45	6	18	26	35	60	78	285	295	8	210	225
75	300	160	50	8	20	30	45	78	100	285	295	8	220	230
100E	350	160	50	8	20	30	45	78	100	335	345	8	220	230
100	350	160	60	8	26	36	55	88	110	335	345	8	230	240
150E	400	160	50	8	20	30	45	78	100	385	395	8	220	230
150	400	160	60	8	26	36	55	88	110	385	395	8	230	240
200E	450	160	60	8	26	36	55	88	110	435	445	10	230	240

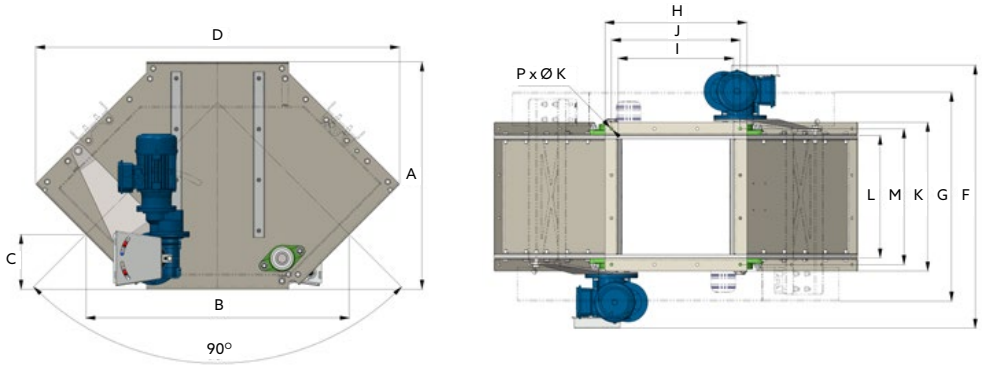
More possible types of chain can be found on the website www.NICZUK.eu in the chains tab.

Elevator



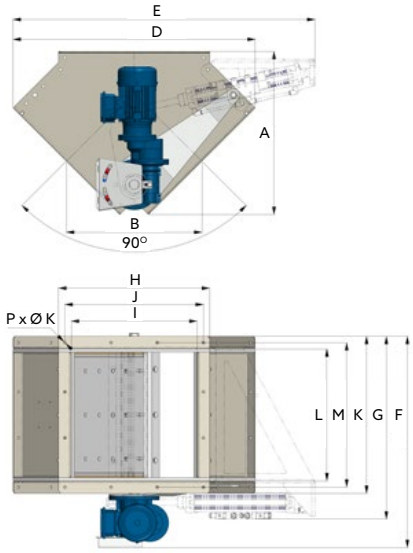
Elevator type	NPK-10	NPK-30	NPK-50	NPK-75	NPK-100	NPK-150	NPK-200
Capacity (t/h) for 0.7 t/m3 density	0-15	15-40	40-60	60-85	85-120	120-170	170-225
Assumed number of buckets pcs./m	0-21	21-57	57-86	86-125	125-171	171-243	243-320
Belt width H [mm]	8	7	5,75	8,5	7	5	6,5
Elevator wheel diameter [mm]	120	160	220	220	270	320	400
Pipe dimensions A x B [mm]	300	500	500	500	500	500	630
Outside dimension C x E	180x176	215x200	300x250	300x250	360x280	400x350	480x340
Distance between pipes D	260x256	295x280	380x330	380x330	440x360	480x430	560x420
Dystans między rurami D [mm]	236	400	400	400	400	400	530

Three-way distributor



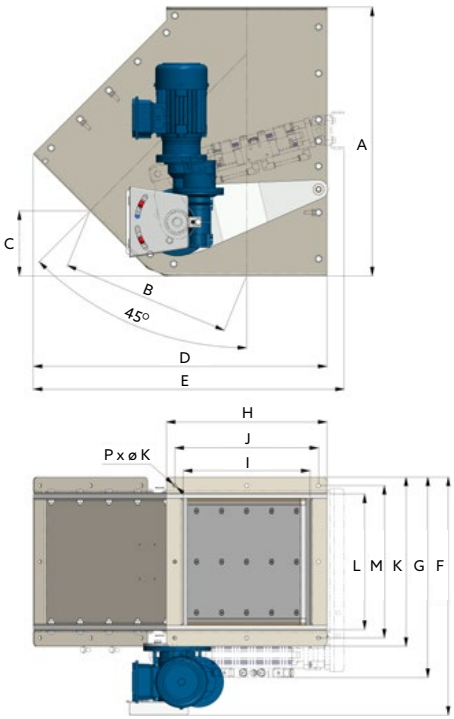
Type of manifold	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	Ø K [mm]	P [szt.]	Drive
RTSP-200-E	332	280	99	478	-	671	-	280	200	240	300	220	260	9	8	0.18 kW 4.6 rpm
RTSP-200-R						-	481									Lever L=345 mm
RTSP-200-P				-												Pneumatic actuator
RTSP-250-E	367	295	117	528	-	513	-	330	250	290	350	270	310	9	8	0.18 kW 4.6 rpm
RTSP-250-R						-	440									Lever L=345 mm
RTSP-250-P				-												Pneumatic actuator
RTSP-300-E	427	359	134	627	-	563	-	380	300	340	400	320	360	9	8	0.18 kW 4.6 rpm
RTSP-300-R						-	485									Lever L=465 mm
RTSP-300-P				-												Pneumatic actuator
RTSP-350-E	487	423	151	726	-	613	-	430	350	390	450	370	410	9	12	0.18 kW 4.6 rpm
RTSP-350-R						-	530									Lever L=BD mm
RTSP-350-P				-												Pneumatic actuator
RTSP-400-E	647	487	168	825	-	663	-	480	400	440	500	420	460	9	12	0.18 kW 4.6 rpm
RTSP-400-R						-	575									Lever L=BD mm
RTSP-400-P				-												Pneumatic actuator

Symmetrical distributor



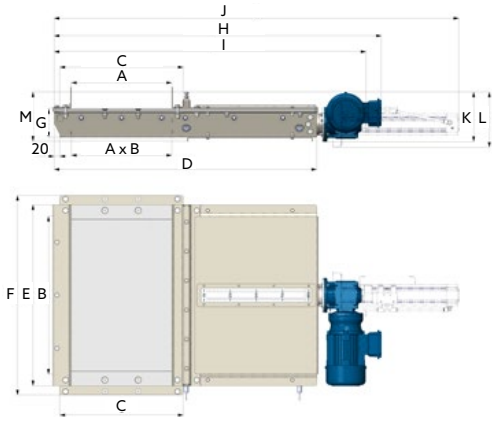
Type of manifold	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	Ø K [mm]	P [szt.]	Drive
RDSP-200-E				478	-	485	-									0.18 kW 4.6 rpm
RDSP-200-R	332	280	99			-	371	280	200	240	300	220	260	9	8	Lever L=345 mm
RDSP-200-P				-	720											Pneumatic actuator
RDSP-250-E				528	-	535	-									0.18 kW 4.6 rpm
RDSP-250-R	367	295	117			-	421	330	250	290	350	270	310	9	8	Lever L=415 mm
RDSP-250-P				-	743											Pneumatic actuator
RDSP-300-E				627	-	585	-									0.18 kW 4.6 rpm
RDSP-300-R	427	359	134			-	476	380	300	340	400	320	360	9	8	Lever L=465 mm
RDSP-300-P				-	845											Pneumatic actuator
RDSP-350-E				677	-	635	-									0.18 kW 4.6 rpm
RDSP-350-R	463	373	152			-	527	430	350	390	450	370	410	9	12	Lever L=515 mm
RDSP-350-P				-	861											Pneumatic actuator
RDSP-400-E				770	-	685	-									0.18 kW 4.6 rpm
RDSP-400-R	519	430	170			-	576	480	400	440	500	420	460	9	12	Lever L=615 mm
RDSP-400-P				-	976											Pneumatic actuator

Asymmetric distributor



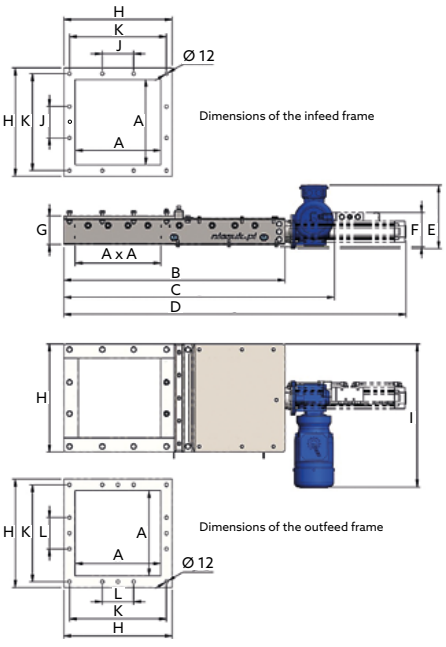
Type of manifold	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	Ø K [mm]	P [szt.]	Drive
RDAP-200-E				524	-	463	-									0.18 kW 4.6 rpm
RDAP-200-R	495	309	118			-	363	280	200	240	300	220	260	9	8	Lever L=345 mm
RDAP-200-P				-	565		385									Pneumatic actuator
RDAP-250-E				610	-	513	-									0.18 kW 4.6 rpm
RDAP-250-R	565	355	136			-	413	330	250	290	350	270	310	9	8	Lever L=415 mm
RDAP-250-P				-	651		440									Pneumatic actuator
RDAP-300-E				695	-	563	-									0.18 kW 4.6 rpm
RDAP-300-R	635	401	153			-	463	380	300	340	400	320	360	9	8	Lever L=465 mm
RDAP-300-P				-	736		490									Pneumatic actuator
RDAP-350-E				780	-	623	-									0.18 kW 4.6 rpm
RDAP-350-R	705	447	171			-	517	430	350	390	450	370	410	9	12	Lever L=515 mm
RDAP-350-P				-	821		543									Pneumatic actuator
RDAP-400-E				866	-	673	-									0.18 kW 4.6 rpm
RDAP-400-R	780	493	189			-	567	480	400	440	500	420	460	9	12	Lever L=615 mm
RDAP-400-P				-	907		595									Pneumatic actuator

Redler slide gate

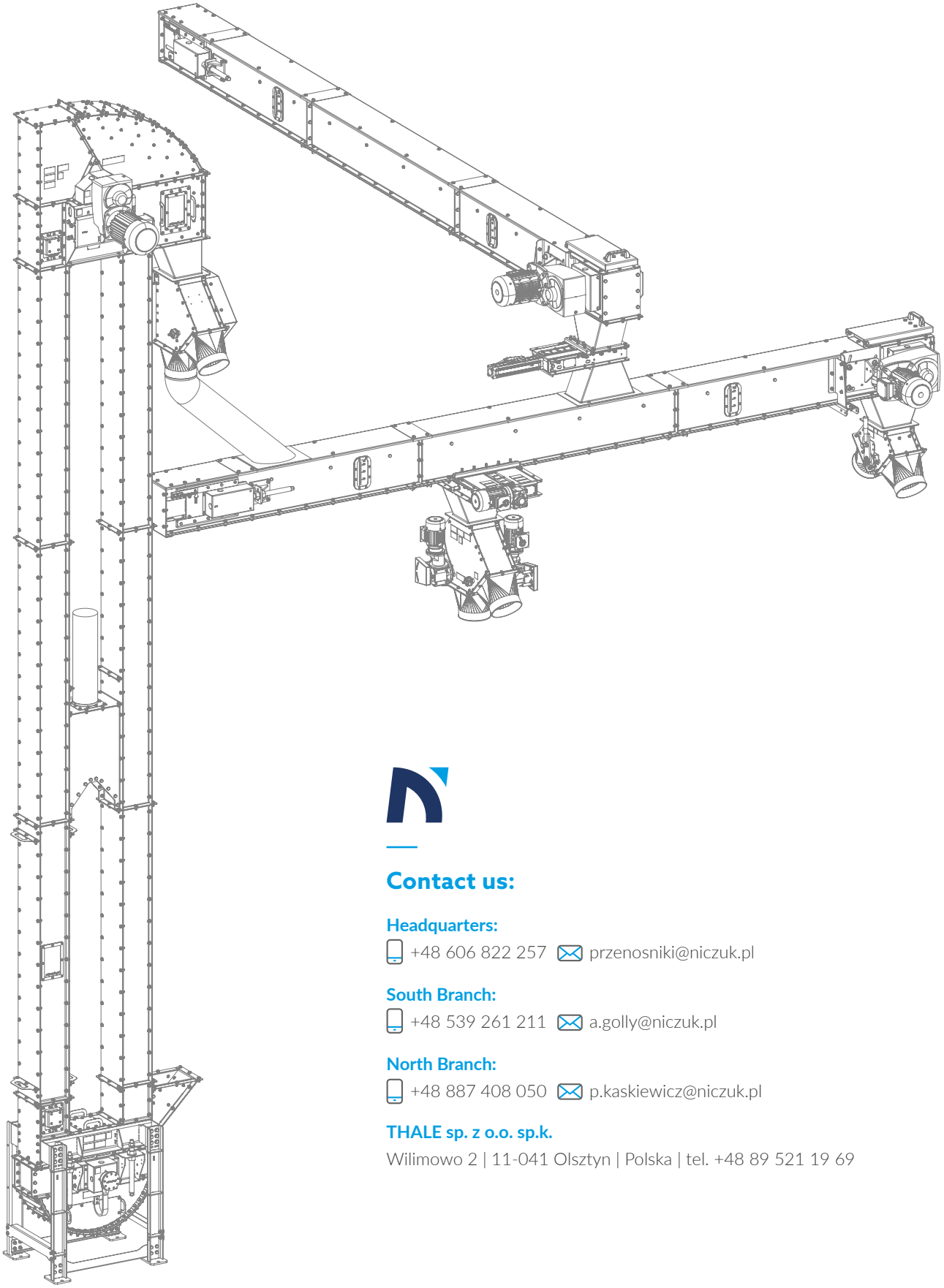


Actuator size	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	Slide gate size
ZPR-030-E	200	400	280	615	480	545	100	845	-	-	172	-	-	0.25 kW 276 rpm
ZPR-030-R								-	791		-	185		Hand wheel Ø160 mm
ZPR-030-P									-	965		-	164	Pneumatic actuator
ZPR-050-E	250	450	330	715	530	595	100	945	-	-	172	-	-	0.25 kW 276 rpm
ZPR-050-R								-	891		-	185		Hand wheel Ø160 mm
ZPR-050-P									-	1115		-	164	Pneumatic actuator
ZPR-075-E	300	450	380	815	530	595	100	1045	-	-	172	-	-	0.25 kW 276 rpm
ZPR-075-R								-	991		-	185		Hand wheel Ø160 mm
ZPR-075-P									-	1265		-	164	Pneumatic actuator
ZPR-100-E	350	550	430	915	630	695	100	1145	-	-	172	-	-	0.25 kW 276 rpm
ZPR-100-R								-	1091		-	185		Hand wheel Ø160 mm
ZPR-100-P									-	1415		-	164	Pneumatic actuator
ZPR-150-E	400	550	480	1015	630	695	100	1245	-	-	172	-	-	0.25 kW 276 rpm
ZPR-150-R								-	1191		-	185		Hand wheel Ø160 mm
ZPR-150-P									-	1565		-	164	Pneumatic actuator
ZPR-200-E	450	600	530	1115	680	745	100	1345	-	-	172	-	-	0.25 kW 276 rpm
ZPR-200-R								-	1291		-	185		Hand wheel Ø160 mm
ZPR-200-P									-	1715		-	164	Pneumatic actuator

Silo slide gate



Actuator size	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	J [mm]	K [mm]	L [mm]	Slide gate size
NZZ-200-E	200	575	750	---	215	---	100	280	455	---	240	---	0.25 kW 276 rpm
NZZ-200-R					160				---				Hand wheel Ø160 mm
NZZ-200-P			---	900	---	120							Pneumatic actuator
NZZ-250-E	250	675	850	---	215	---	100	330	180	100	290	---	0.25 kW 276 rpm
NZZ-250-R					16				---				Hand wheel Ø160 mm
NZZ-250-P			---	1050	---	120							Pneumatic actuator
NZZ-300-E	300	775	950	---	215	---	100	380	505	110	340	---	0.25 kW 276 rpm
NZZ-300-R					160				---				Hand wheel Ø160 mm
NZZ-300-P			---	1200	---	120							Pneumatic actuator
NZZ-350-E	350	875	1050	---	215	---	100	430	530	130	390	130	0.25 kW 276 rpm
NZZ-350-R					160				-				Hand wheel Ø160 mm
NZZ-350-P			---	1350	---	120							Pneumatic actuator
NZZ-400-E	400	975	1150	---	215	---	100	480	555	390	440	150	0.25 kW 276 rpm
NZZ-400-R					160				---				Hand wheel Ø160 mm
NZZ-400-P			---	1500	---	120							Pneumatic actuator



Contact us:

Headquarters:
+48 606 822 257 przenosniki@niczuk.pl

South Branch:
+48 539 261 211 a.golly@niczuk.pl

North Branch:
+48 887 408 050 p.kaskiewicz@niczuk.pl

THALE sp. z o.o. sp.k.
Wilimowo 2 | 11-041 Olsztyn | Polska | tel. +48 89 521 19 69

niczuk.eu