

Modular **Pipe System** –
compatible with conventional board systems



ZUTHER

Gross price list

[ZUTHER-ONLINE.DE](https://www.zuther-online.de)



pipe system, hinged box, sliders
Gross price list 2023

QUALITY BY TRADITION

Your Partner for bulk material handling systems. For more than



years.

Limitless variety.....	5
Know what matters!.....	6
ZUTHER pipe systems with square ring system.....	7
ZUTHER running pipes with square ring.....	8
Pre-rolled pipe wear protection L-PUR® polyurethane with expanded mesh.....	8
Weld-on square rings for the production of custom pipe lengths.....	9
Sealed wide clamping ring, 2-part, with offset and seal.....	9
Clamping ring adapter (for flanged pipe components).....	9
Pipe segments with a wall thickness of 4 mm.....	10
Pipe segments 7.5°.....	10
Pipe segments 15°.....	10
Pipe segments 22.5°.....	11
Pipe branch 45°.....	11
Pipe skirt made of L-PUR 6 mm yellow.....	12
Inspection nozzle.....	12
<i>Screw-on inspection nozzle 90°.....</i>	<i>12</i>
<i>Screw-on inspection nozzle 45°.....</i>	<i>13</i>
<i>Rubber cover, black.....</i>	<i>13</i>
<i>Rubber cover, white (FDA-approved).....</i>	<i>13</i>
Pipe cone.....	14
Connecting piece.....	14
Impact nozzle.....	15
Replacement wear plates for impact nozzles.....	15
Hinged boxes with direct flap sensing based on modular principle.....	16
Advantages of ZUTHER hinged boxes.....	17
Electrically controlled hinged box.....	18
Pneumatically controlled hinged box.....	19
Hand-operated hinged boxes.....	20
Spare parts for hinged boxes.....	21
<i>Replacement flap for flap box KLR2.....</i>	<i>21</i>
<i>Replacement flap with L-PUR®*-wear protection.....</i>	<i>21</i>
<i>Wear protection PU 6 mm yellow L-PUR®* lining.....</i>	<i>21</i>
Hinged box transitions.....	22
Hinged box transition design (C) flange to VR system 22.5°.....	23
Hinged box transition design (B) flange to VR system.....	23
Hinged box transition design (O) flange to VR system 22.5°.....	24
Hinged box transition design (P) flange to VR system 22.5°.....	24
Hinged box transition design (A) flange to VR system.....	25
Hinged box transition design (X) hinged box flange.....	25

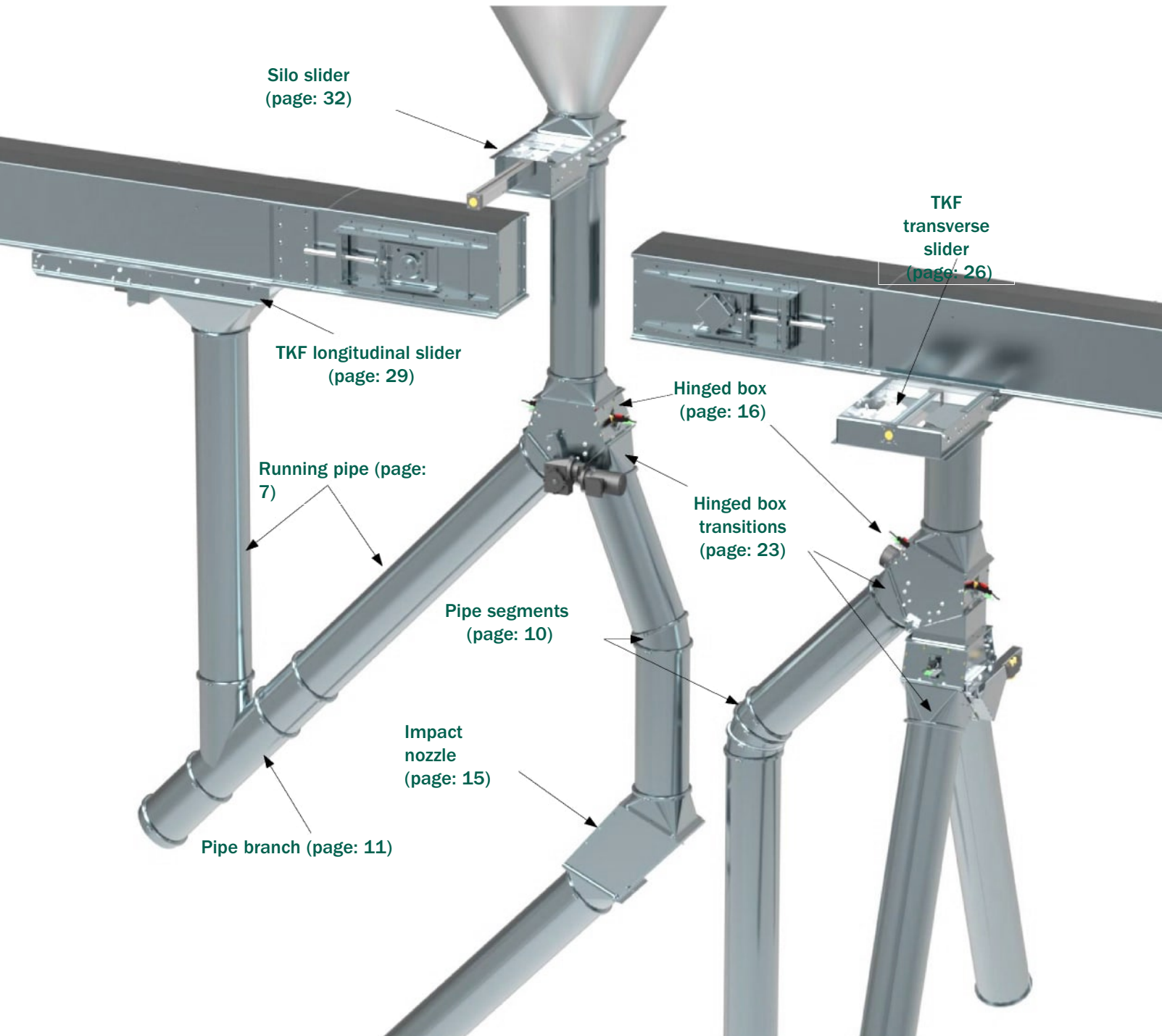
ZUTHER sliders.....	26
Outlet slider for trough chain conveyor (TKF) transverse pull-out (level with the floor).....	26
Electrically controlled.....	26
TKF outlet slider pneumatically controlled.....	27
TKF outlet slider handwheel adjustment.....	27
Outlet transitions for TKF outlet slider, transverse extension SRR.....	28
Outlet slider for trough chain conveyor (TKF), longitudinal extension.....	29
Electrically controlled.....	29
Outlet slider for trough chain conveyor (TKF), longitudinal extension.....	30
Pneumatically controlled.....	30
Outlet transitions for Redler outlet slider, longitudinal extension SRF.....	31
Silo slider type SRS.....	32
Electrically controlled.....	32
Silo slider type SRS, pneumatically controlled.....	33
Silo slider type SRS, handwheel.....	34
Inlet flange for silo slider type SRS.....	34
Outlet transitions for silo slider TYPE SRS.....	35

Limitless variety

ZUTHER pipe system offer countless installation options, which makes the flexibility in pipe construction almost limitless. The ZUTHER system can be easily integrated into any existing pipe construction using the adapter pieces available.

Our pipes can be individually adapted to different requirements with a wide variety of angles and designs. We would

be happy to advise you.



Know what matters!

ZUTHER GmbH is one of the leading providers of professional bulk material handling systems. With more than 100 years of experience in plant construction and close cooperation with our customers, our products are put to the test every day under the toughest operating conditions.

In pipe construction in particular, the demands on functionality have grown steadily. Tightness and durability are just as critical as straightforward assembly. Thanks to the adapters available, ZUTHER pipe components are compatible with pipe system from other manufacturers and they are easy to assemble. All components are usually in stock and can therefore be delivered at short notice.

The components contained in the standard range of the ZUTHER track system are available in the diameters of 200, 250, 300, 350 and 400 mm. We use steel sheets of quality S235JR and sheet thicknesses of 3–4 mm. Other materials can also be processed on request.

In case of heavy loads, such as highly abrasive products, the service life of the pipe components can be extended through wear lining. **To achieve this, our components are lined with an L-PUR® - polyurethane coating specially developed for our application purposes using modern casting and centrifugal processes. We also offer lining with Kryptane® or RHINO HYDE® polyurethane-based plastic sheets, in which case the material is screwed or glued into the pipe.**

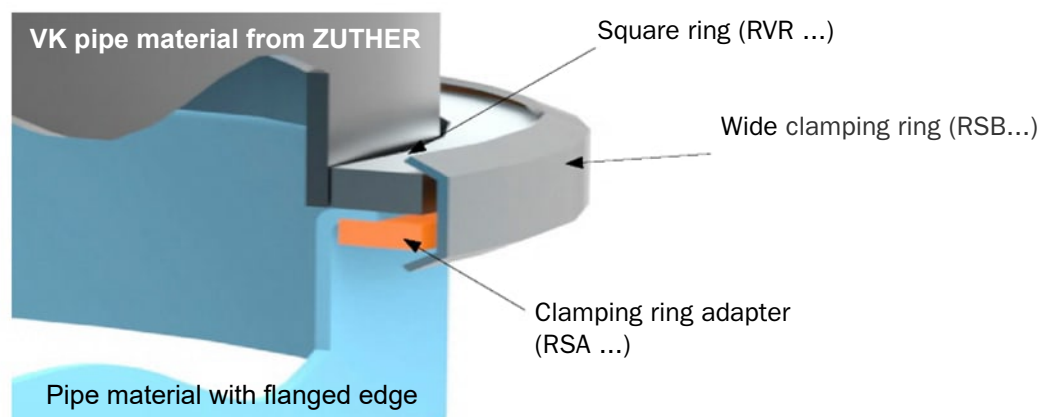
We also offer the right solution for explosion-proof areas. The relevant components can be supplied as ATEX versions if needed. As standard, we offer components designed for ZONE 22 (II3D).

Despite the standardised modular system, we can accommodate any customer requests. We can provide your components primed or we can paint them ready for installation in your preferred colour (subject to surcharge). Custom-made products can also be requested at any time. Together with our technicians, you will find the right solution.

At a glance:

- available in diameters of 200 mm, 250 mm, 300 mm, 350 mm, 400 mm (400 mm system on request)
- available with wear liner L-PUR® or alternatively Kryptane® or RHINO HYDE®
- Available with explosion protection according to the ATEX directive
- All wear parts are interchangeable
- Easy installation
- Short delivery times as many items are in stock

compatible with clamping board pipe systems from other manufacturers



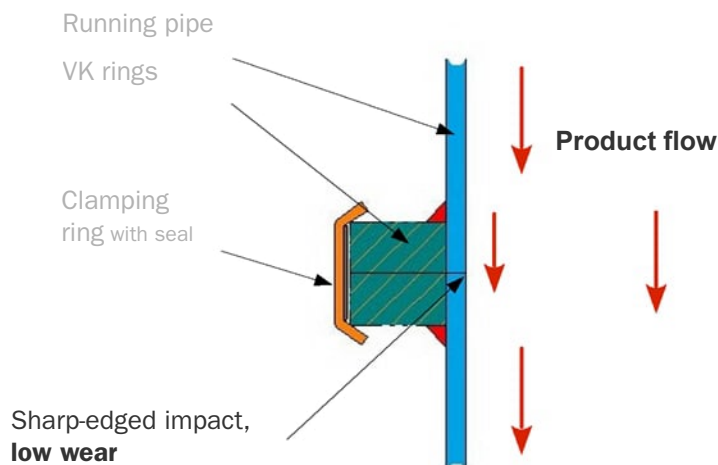
ZUTHER pipe systems with square ring system

A solid connection

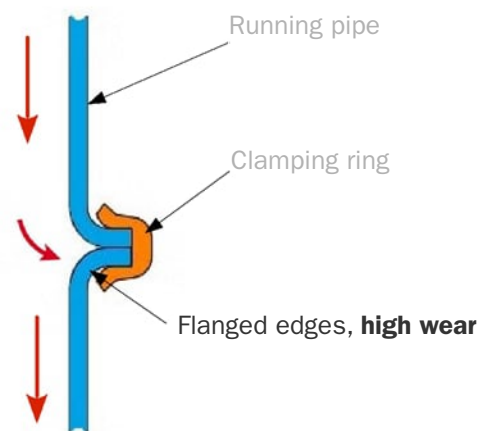
When using a wide clamping ring and a clamping ring adapter, the ZUTHER round pipe system is compatible with a wide variety of pipe systems with flanged edges.

With 3 mm track systems in particular, it is very difficult to produce a clean clamping board with custom lengths without special tools. But with our system, the pipe is simply cut off and fitted with new square rings. In addition to better strength, this system has proven itself time and again. We offer a complete system consisting of pipes, segments, impact nozzles, hinged boxes, control nozzles and much more at attractive prices.

ZUTHER pipe connections



Board systems from other manufacturers



Advantages of the ZUTHER pipe system with square ring

- No time-consuming, manual flanging with fitting lengths
- Developed for low-wear bulk material conveyance (no butt edges on board)
- Stable pipe connections through welding flanges with 2 x 8 mm wear zone
- Can be integrated into existing board systems from other manufacturers using a clamping ring adapter
- Hinged box with replaceable wear parts (subsequent design changes possible)

ZUTHER pipes with square ring

The ZUTHER pipe with a welded-on square ring is made from 3 mm sheet steel S235JR. The running pipes are also available with a 6 mm thick, spin-applied L-PUR® polyurethane coating*. Wide clamping rings are required to connect the running pipes and pipe segments. (Page 9)



Order no.	NW	Length	Variant	Price
RXZ02030VR100AE1	200	1000	Painted	On request
RXZ02030VR100AI1			Galvanised	€94.00
RXZ02030VR100VI2			L-PUR®	€243.40
RXZ02030VR200AE1		2000	Painted	On request
RXZ02030VR200AI1			Galvanised	€152.40
RXZ02030VR200VI2			L-PUR®	€442.80
RXZ02530VR100AE1	250	1000	Painted	On request
RXZ02530VR100AI1			Galvanised	€116.10
RXZ02530VR100VI2			L-PUR®	€305.40
RXZ02530VR200AE1		2000	Painted	On request
RXZ02530VR200AI1			Galvanised	€170.70
RXZ02530VR200VI2			L-PUR®	€538.70
RXZ03030VR100AE1	300	1000	Painted	On request
RXZ03030VR100AI1			Galvanised	€139.30
RXZ03030VR100VI2			L-PUR®	€367.00
RXZ03030VR200AE1		2000	Painted	On request
RXZ03030VR200AI1			Galvanised	€190.90
RXZ03030VR200VI2			L-PUR®	€633.70
RXZ03530VR100AE1	350	1000	Painted	On request
RXZ03530VR100AI1			Galvanised	€154.70
RXZ03530VR100VI2			L-PUR®	€423.10
RXZ03530VR200AE1		2000	Painted	On request
RXZ03530VR200AI1			Galvanised	€215.60
RXZ03530VR200VI2			L-PUR®	€737.80

Pre-rolled pipe wear protection L-PUR® polyurethane with expanded mesh

For retrofitting existing running pipes, we offer pre-rolled, 6 mm thick L-PUR® blanks* with embedded expanded mesh. The wear protection is screwed into the pipe. (**Attention:** Prices only include the wear plastic without pipe.)

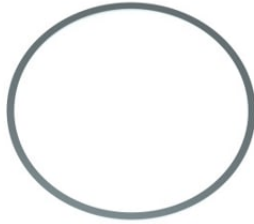


Order no.	NW	Length	Price/unit
SOKF81-20	200	1200	€217.10
SOKF81-25	250	1200	€276.30
SOKF81-30	300	1200	€321.70
SOKF81-35	350	1200	€376.70

*possibly also made of RHINO HYDE® or Kryptane®

Weld-on square rings for the production of custom pipe lengths

Square rings that are welded onto ZUTHER running pipe to produce custom lengths. The square rings are made from S235JR.



Order no.	NW	Price
RVR020-12-81	200	€7.70
RVR025-12-81	250	€8.20
RVR030-12-81	300	€8.90
RVR035-12-81	350	€9.60

Sealed wide clamping ring, 2-part, with offset and seal

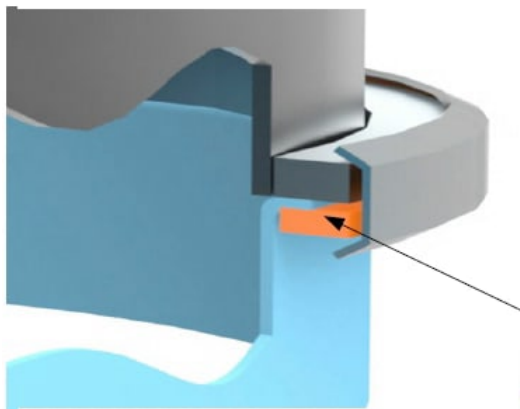
The wide clamping rings are galvanised and very easy to assemble due to the separation. The overlapping offset ensures perfect tightness. A corresponding clamping ring adapter No. RSA0**/01 is also required for connection to other pipe systems with flanged edges.



Order no.	NW	Variant	Price
RSB020AH2	200	Galvanised	€12.20
RSB025AH2	250	Galvanised	€14.00
RSB030AH2	300	Galvanised	€15.00
RSB035AH2	350	Galvanised	€15.60

Clamping ring adapter (for flanged pipe components)

Adapter for connecting the ZUTHER running pipe system to pipe systems with flanged abutting edges using a wide clamping ring no. RSB0**AH2. (Made from S235JR, galvanised)



Pipe material with flanged edge

Clamping ring adapter

Order no.	NW	Price
RSA020-01	200	€5.80
RSA025-01	250	€6.70
RSA030-01	300	€7.80
RSA035-01	350	€9.50

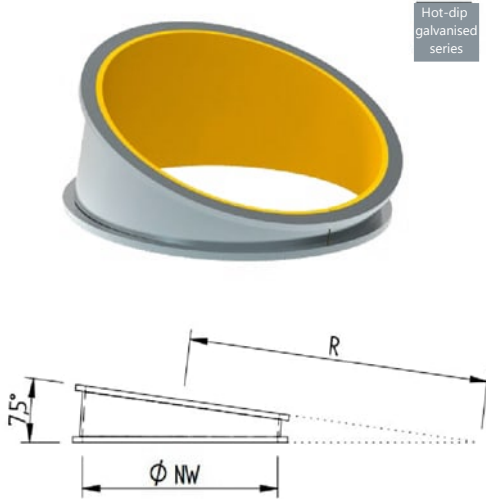


Pipe segments with a wall thickness of 4 mm

The ZUTHER pipe segments with square ring are made of 4 mm standard steel S235JR to extend the service life. For an improved service life, all segments are also available with additional L-PUR® wear lining. The pipe segments are connected with a wide clamping ring no. RSB0**AH2 (page 9).

Hot-dip galvanised series

Pipe segments 7.5°



Hot-dip galvanised series

Order no.	NW	R	Variant	Price
RSE02040VR07ZAE1	200	331	Painted	On request
RSE02040VR07ZAI1			Galvanised	€20.80
RSE02040VR07ZVI2			L-PUR®	€70.90
RSE02540VR07ZAE1	250	431	Painted	On request
RSE02540VR07ZAI1			Galvanised	€22.00
RSE02540VR07ZVI2			L-PUR®	€74.80
RSE03040VR07ZAE1	300	456	Painted	On request.
RSE03040VR07ZAI1			Galvanised	€29.50
RSE03040VR07ZVI2			L-PUR®	€82.70
RSE03540VR07ZAE1	350	700	Painted	On request
RSE03540VR07ZAI1			Galvanised	€35.90
RSE03540VR07ZVI2			L-PUR®	€96.30

Pipe segments 15°

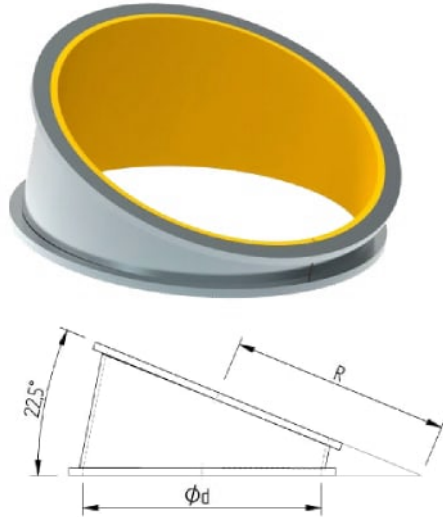


Hot-dip galvanised series

Order no.	NW	R	Variant	Price
RSE02040VR15ZAE1	200	218	Painted	On request
RSE02040VR15ZAI1			Galvanised	€25.00
RSE02040VR15ZVI2			L-PUR®	€88.80
RSE02540VR15ZAE1	250	280	Painted	On request
RSE02540VR15ZAI1			Galvanised	€27.00
RSE02540VR15ZVI2			L-PUR®	€95.60
RSE03040VR15ZAE1	300	304	Painted	On request
RSE03040VR15ZAI1			Galvanised	€35.00
RSE03040VR15ZVI2			L-PUR®	€105.00
RSE03540VR15ZAE1	350	525	Painted	On request
RSE03540VR15ZAI1			Galvanised	€35.90
RSE03540VR15ZVI2			L-PUR®	€114.40

*possibly also made of RHINO HYDE® or Kryptane®

Pipe segments 22.5°



Hot-dip galvanised series

Order no.	NW	R	Variant	Price
RSE02040VR22ZAE1	200	177	Painted	On request
RSE02040VR22ZAI1			Galvanised	€21.70
RSE02040VR22ZVI2			L-PUR®	€102.20
RSE02540VR22ZAE1	250	229	Painted	On request
RSE02540VR22ZAI1			Galvanised	€29.30
RSE02540VR22ZVI2			L-PUR®	€115.20
RSE03040VR22ZAE1	300	253	Painted	On request
RSE03040VR22ZAI1			Galvanised	€37.90
RSE03040VR22ZVI2			L-PUR®	€124.70
RSE03540VR22ZAE1	350	333	Painted	On request
RSE03540VR22ZAI1			Galvanised	€44.30
RSE03540VR22ZVI2			L-PUR®	€139.60

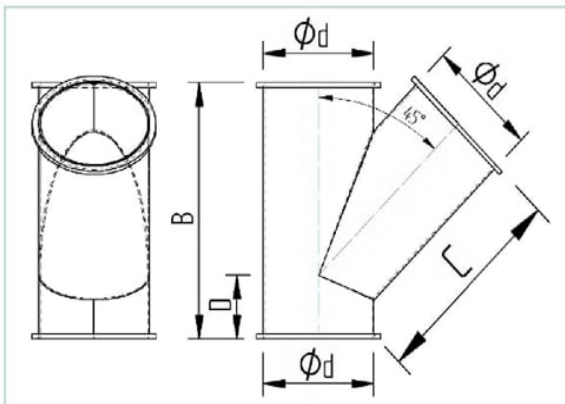
Pipe branch 45°

45° pipe branches with square ring. The pipe branches are made of 3 mm standard steel S235JR. Pipe branches with other angles or different nominal widths can be manufactured on request.



Hot-dip galvanised series

Order no.	NW	B	C	D	Variant	Price
RAZO2030VR45AE01	200	430	336	112	Painted	On request
RAZO2030VR45AI01					Galvanised	€115.70
RAZO2030VR45VI02					L-PUR®	€413.90
RAZO2530VR45AE01	250	530	415	138	Painted	On request
RAZO2530VR45AI01					Galvanised	€158.70
RAZO2530VR45VI02					L-PUR®	€545.60
RAZO3030VR45AE01	300	620	442	157	Painted	On request
RAZO3030VR45AI01					Galvanised	€211.90
RAZO3030VR45VI02					L-PUR®	€612.30
RAZO3530VR45AE01	350	720	545	178	Painted	On request
RAZO3530VR45AI01					Galvanised	€255.90
RAZO3530VR45VI02					L-PUR®	€682.50



*possibly also made of RHINO HYDE® or Kryptane®

Pipe skirt made of L-PUR 6 mm yellow

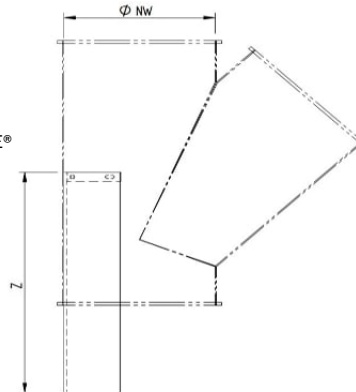
To increase the service life of branches, an L-PUR[®] *) apron can be installed as wear protection in the critical area of the impact surface.

Ships without the pipe branch shown (see page 11)



*possibly also made of RHINO HYDE[®]

Order no.	NW	Z	Price
RGU03A	200	365	€47.60
RGU04A	250	450	€65.40
RGU05A	300	485	€77.30
RGU07A	350	600	€106.70



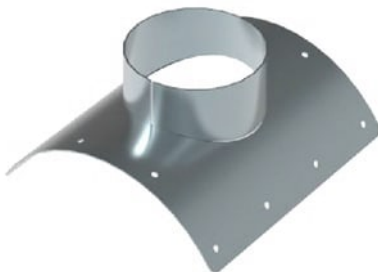
*possibly also made of RHINO HYDE[®]

Inspection nozzle

Galvanised inspection nozzle made of 2 mm standard steel S235JR. This is screwed onto the pipe (screws included).

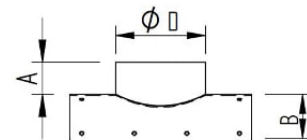
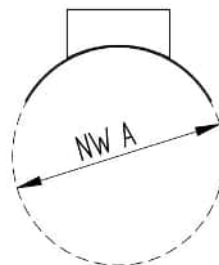
A rubber cover no. RGDXXX/1 (page 13) corresponding to the nominal width is also required for closing. A cover lock is also available optionally.

Screw-on inspection nozzle 90°

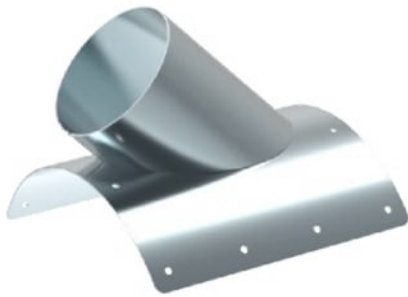


Hot-dip galvanised series

Order no.	NW A	A	B	D	Price
RAK020-15I01	200	50	50	150	€52.60
RAK025-15I01	250	50	63	150	€63.70
RAK030-15I01	300	50	75	150	€73.70
RAK035-15I01	350	50	90	150	€84.10

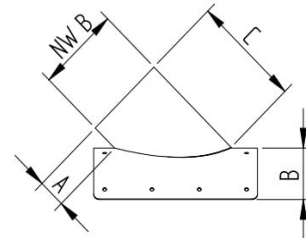
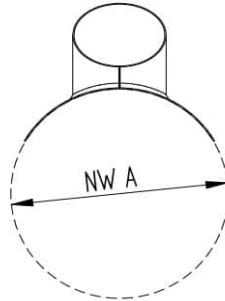


Screw-on inspection nozzle 45°



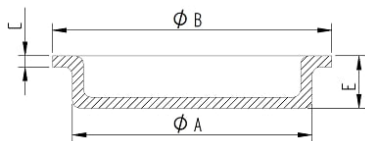
Hot-dip galvanised series

Order no.	NW A	NW B	A	B	C	Price
RAK020-15I02	200	150	52	100	220	€60.70
RAK025-15I02	250	150	52	127	220	€71.40
RAK030-15I02	300	150	52	152	220	€81.40
RAK035-15I02	350	150	52	177	220	€91.80



Rubber cover, black

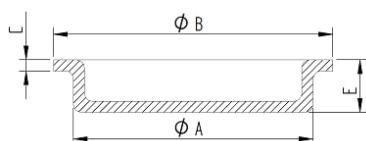
NW for nominal diameters A/B/C/E can deviate.



Order no.	NW	A	B	C	E	Price
RGD008-01	80	81	101	5	20	€5.10
RGD010-01	100	101	123	5	22	€5.50
RGD012-01	120	121	141	7	24	€5.90
RGD015-01	150	151	174	7	26	€8.30
RGD020-01	200	201	225	8	30	€15.20
RGD025-01	250	251	271	10	33	€23.60
RGD030-01	300	301	321	10	36	€28.40

Rubber cover, white (FDA-approved)

NW for nominal diameters A/B/C/E can deviate.



Order no.	NW	A	B	C	E	Price
RGD008-01A	80	81	101	5	20	€7.10
RGD010-01A	100	101	123	5	22	€7.40
RGD012-01A	120	121	141	7	24	€8.40
RGD015-01A	150	151	174	7	26	€11.60
RGD020-01A	200	201	225	8	30	€21.30
RGD025-01A	250	251	271	10	33	€33.20
RGD030-01A	300	301	321	10	36	€40.70

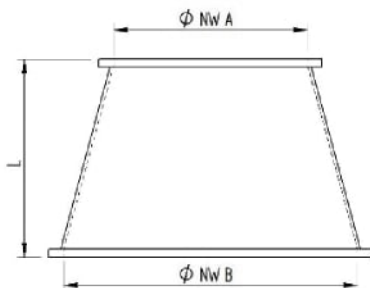
Pipe cone

Pipe cone pieces with square ring system (VR) made of 3 mm standard steel S235JR. Galvanised. Further dimensions are available on request.



Hot-dip galvanised series

Order no.	NW A	NW B	L	Variant	Connection	Price
RKN025-02030VR01	200	250	200	Galvanised	VR	€51.00
RKN030-02530VR01	250	300	200	Galvanised	VR	€67.80
RKN035-03030VR01	300	350	200	Galvanised	VR	€74.70



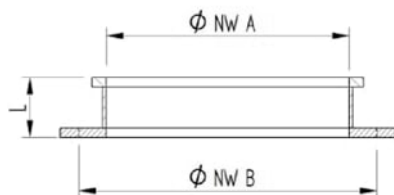
Connecting piece

Pipe connection pieces with square ring system (VR) made of 3 mm standard steel S235JR. Galvanised. Other dimensions are available on request.



Hot-dip galvanised series

Order no.	NW A	NW B	L	Variant	Connection	Price
RKN025-02030VR04	200	250	50	Galvanised	VR	€50.20
RKN030-02530VR04	250	300	50	Galvanised	VR	€51.20
RKN035-03030VR04	300	350	50	Galvanised	VR	€55.90

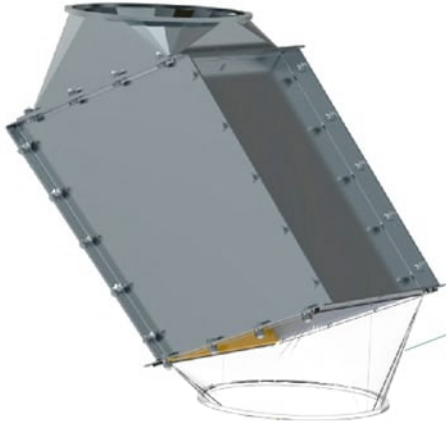


Impact nozzle

ZUTHER impact nozzles are made of 3 mm standard steel S235JR and delivered galvanised.

The wear-resistant plastic L-PUR®* ensures a long service life.

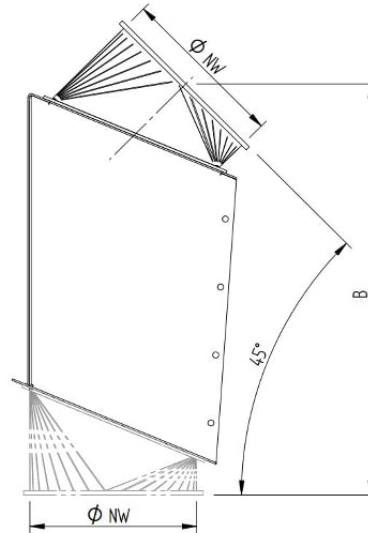
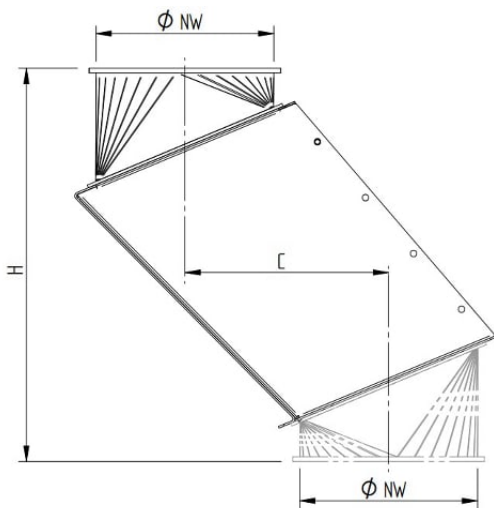
Transition to the inlet side according to the nominal size included.



Hot-dip galvanised series

Order no.	NW	B	C	H	Price
RPS02030FL03	200	258	592	532	€224.40
RPS02530FL03	250	290	731	675	€259.50
RPS03030FL03	300	352	757	666	€304.90
RPS03530FL03	350	379	834	740	€361.70

Transition form of the outlet side variable according to hinged box transitions
Select 22 side.



Replacement wear plates for impact nozzles

Replacement wear plates for impact nozzles made of 6 mm L-PUR®*



Order no.	NW	Impact nozzle no.	Price
RPS02030KK14	200	RPS02030FL02	€48.40
RPS02530KK14	250	RPS02530FL02	€54.50
RPS03030KK14	300	RPS03030FL02	€69.70
RPS03530KK14	350	RPS03530FL02	€78.90

Hinged boxes with direct flap sensing based on modular principle

With our modular hinged boxes you have the option of assembling them individually according to your requirements. But subsequent design changes are also possible.

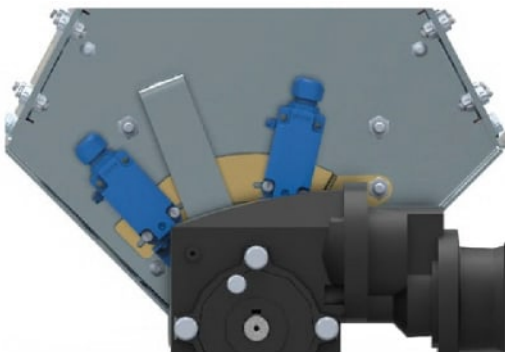
The basic hinged box is equipped with flange connections, for which we offer standardised transition and connection pieces. The hinged box is designed so that there is **hardly any loss of gradient**, even with several hinged boxes in a row. This ensures maximum flexibility in pipe construction.

Hot-dip
galvanised
series

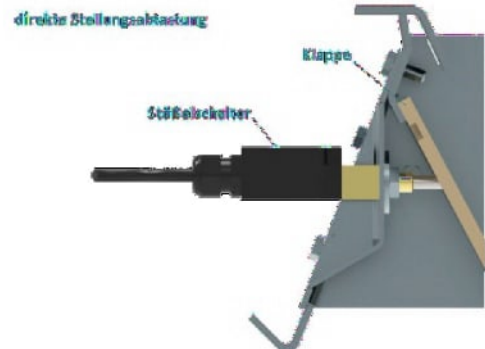


The illustration shows a standard E-hinged box
Wear lining polyurethane L-PUR yellow 6 mm
Roller lever switch shaft scanning*

Standard: Shaft scanning



Optional: Direct flap sensing



Material thicknesses:

NW 200–250 made of 3 mm sheet metal S235, flap NW 200 2 x 3 mm (6 mm) NW 250 2 x 4 mm (8 mm)

NW 300-350 made of 4 mm sheet metal S235, flap NW 2 x 4 mm (8 mm)

Galvanised

Advantages of ZUTHER hinged boxes

- Can be used individually thanks to the modular system
- Hinged box with flange connections and standardised transition and connection pieces that can be flange-mounted
- Interchangeable wear parts (e.g. wear lining, flap)
- Subsequent design changes possible
- Several hinged boxes in a row possible with little loss of gradient
- Optionally with Kryptane® * wear lining for a significantly longer service life
- Freely selectable drive type (electric, pneumatic, hand-operated)
- Hot-dip galvanised as series or made of stainless steel

FREELY COMBINABLE SHAPES

Hot-dip
galvanised
series



Full inlet and outlet variability

Transitions page 23

ZUTHER GMBH

An der Bundesstraße 8 - 9

D-29481 Karwitz Germany

All prices shown are non-binding, not including VAT, ex-works EXW

Phone: +49 (0)5861 961 0

Fax: +49 (0)5861 96140

E-mail: info@zuther-online.de

Managing Director: Andreas Zuther

District Court Lüneburg

HRB 120208

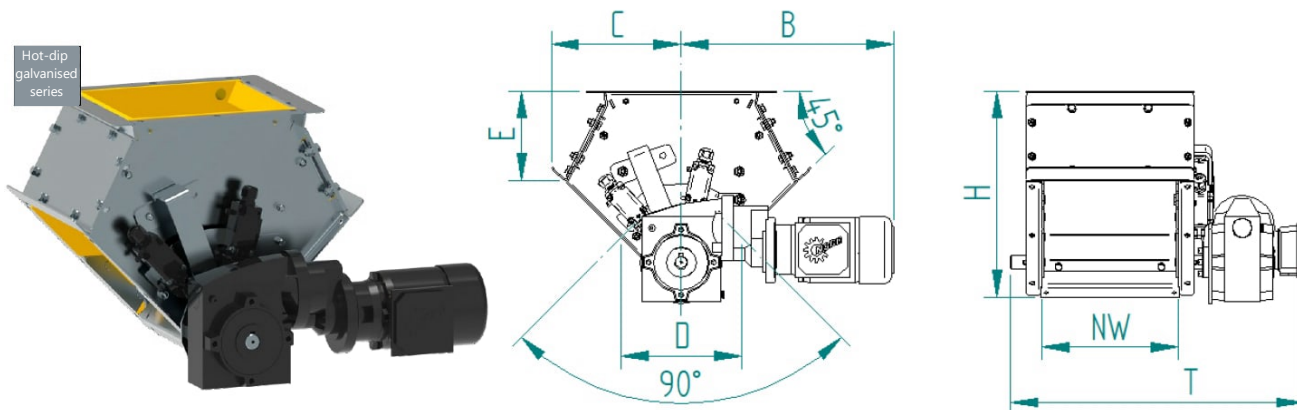
All dimensions in mm, unless otherwise stated

No guarantee as to the correctness of this information. Subject to errors and misprints

© ZUTHER 2023

Electrically controlled hinged box

Electrically controlled hinged box consisting of: Basic hinged box without transitions (pages 22–25),
 Housing made of sheet metal 3 mm from NW 300 made of sheet metal 4 mm, flap 8 mm (NW 200 flap 6 mm)
 Electric control with geared motor, 2 limit switches (6 A/250 VAC; 0.25 A/230 VDC).
 Motor voltage 230/400 V, 0.12 kW



Hinged box as a galvanised variant
20

Weather hood page

NW	B	C	D	E	H	T	Version	Housing/flap	Order no.	Price
200	390	197	177	139	312	490	electric	3/6 mm	KLR2-20000--EL41	€1,176.80
250	390	239	222	165	378	540	electric	3/8 mm	KLR2-25000--EL41	€1,199.20
300	390	264	255	201	443	590	electric	4/8 mm	KLR2-30000--EL41	€1,278.70
350	390	306	290	219	504	643	electric	4/8 mm	KLR2-35000--EL41	€1,443.80

Galvanized hinged box with PU 6 mm yellow **L-PUR**® *

NW	B	C	D	E	H	T	Version	Housing/flap	Order no.	Price
200	390	197	177	139	312	490	electric, L-PUR	3/6 mm	KLR2-20000--EL45	€1,429.20
250	390	239	222	165	378	540	electric, L-PUR	3/8 mm	KLR2-25000--EL45	€1,507.70
300	390	264	255	201	443	590	electric, L-PUR	4/8 mm	KLR2-30000--EL45	€1,634.90
350	390	306	290	219	504	643	electric, L-PUR	4/8 mm	KLR2-35000--EL45	€1,933.10

Galvanised hinged box with ATEX Zone 22 II3D



NW	B	C	D	E	H	T	Version	Housing/flap	Order no.	Price
200	390	197	177	139	312	490	electric, II3D	3/6 mm	KLR2-20000--EL43	€1,360.00
250	390	239	222	165	378	540	electric, II3D	3/8 mm	KLR2-25000--EL43	€1,382.30
300	390	264	255	201	443	590	electric, II3D	4/8 mm	KLR2-30000--EL43	€1,461.90
350	390	306	290	219	504	643	electric, II3D	4/8 mm	KLR2-35000--EL43	€1,642.00

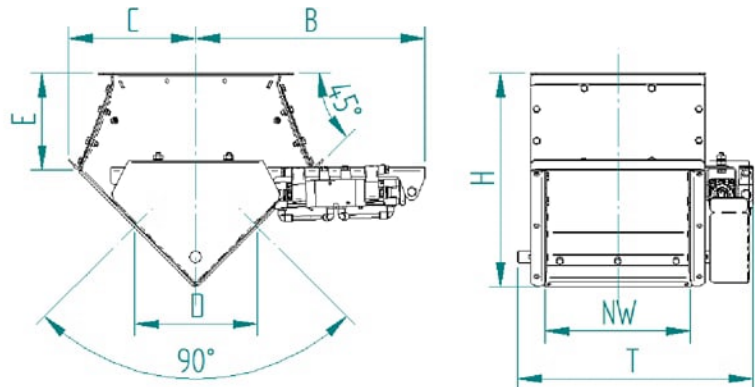
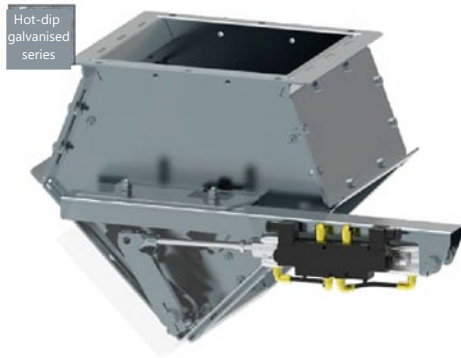
Galvanized hinged box with PU 6 mm yellow **L-PUR**® * and ATEX zone 22 II3D



NW	B	C	D	E	H	T	Version	Housing/flap	Order no.	Price
200	390	197	177	139	312	490	electric, II3D, L-PUR	3/6 mm	KLR2-20000--EL46	€1,621.30
250	390	239	222	165	378	540	electric, II3D, L-PUR	3/8 mm	KLR2-25000--EL46	€1,699.90
300	390	264	255	201	443	590	electric, II3D, L-PUR	4/8 mm	KLR2-30000--EL46	€1,827.10
350	390	306	290	219	504	643	electric, II3D, L-PUR	4/8 mm	KLR2-35000--EL46	€2,140.50

Pneumatically controlled hinged box

Pneumatically controlled hinged box consisting of: Basic hinged box without transitions (pages 22–25), 1 pneumatic lifting cylinder, 2 limit switches, standard voltage 24 VDC. (others on request)



Galvanised hinged box with ATEX Zone 22 II3D

NW	B	C	D	E	H	T	Version	Housing/flap	Order no.	Price
200	474	197	177	139	312	386	Pneumatic, II3D	3/6 mm	KLR2-20000--PL43	€1,199.10
250	474	239	222	165	378	436	Pneumatic, II3D	3/8 mm	KLR2-25000--PL43	€1,221.50
300	474	264	255	201	443	487	Pneumatic, II3D	4/8 mm	KLR2-30000--PL43	€1,301.00
350	474	306	290	219	504	537	Pneumatic, II3D	4/8 mm	KLR2-35000--PL43	€1,467.90

Galvanized hinged box with PU 6 mm yellow **L-PUR**[®] * and ATEX zone 22 II3D

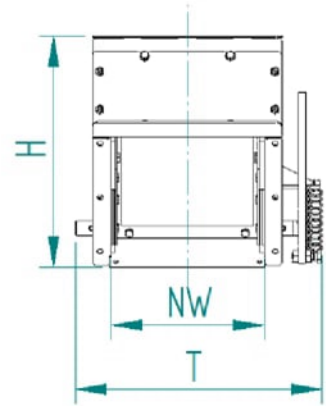
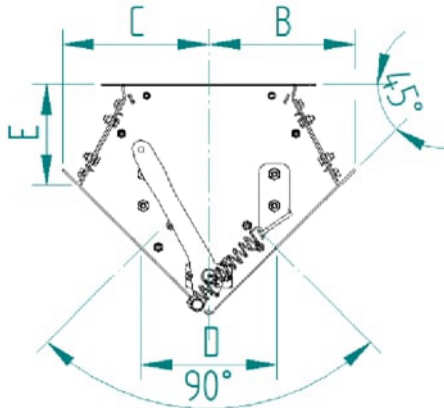


NW	B	C	D	E	H	T	Version	Housing/flap	Order no.	Price
200	474	197	177	139	312	386	Pneumatic,II3D, L-PUR	3/6 mm	KLR2-20000--PL46	€1,500.40
250	474	239	222	165	378	436	Pneumatic,II3D, L-PUR	3/8 mm	KLR2-25000--PL46	€1,578.90
300	474	264	255	201	443	487	Pneumatic,II3D, L-PUR	4/8 mm	KLR2-30000--PL46	€1,706.10
350	474	306	290	219	504	537	Pneumatic,II3D, L-PUR	4/8 mm	KLR2-35000--PL46	€2,009.90

Hand-operated hinged boxes

Hand-operated hinged boxes consisting of: Basic hinged box without transitions (pages 22–25), without limit switch (available optionally)

Hot-dip galvanised series



NW	B	C	D	E	H	T	Version	Housing/flap	Order no.	Price
200	197	197	177	139	312	351	Manual	3 / 6 mm	KLR2-20000--HL31	€473.30
250	239	239	222	165	378	402	Manual	3 / 8 mm	KLR2-25000--HL31	€496.00
300	264	264	255	201	443	453	Manual	4 / 8 mm	KLR2-30000--HL31	€573.20
350	306	306	290	219	504	503	Manual	4 / 8 mm	KLR2-35000--HL31	€678.50

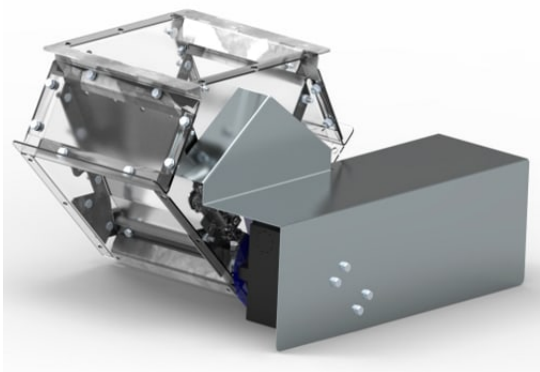
On request: Rope sheave, limit switch

Options for hinged boxes

Motor cover

for electrically controlled hinged box

made of galvanized sheet steel with mounting kit and screws

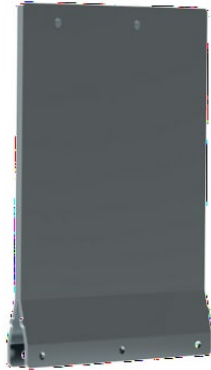


Order no.	NW	Surcharge
KLE04A	200–350	€31.20

Spare parts for hinged boxes

Replacement flap for flap box KLR2...

Flap made of 2 x 4 mm sheet steel, without shaft



Order no.	NW	Surcharge
KLZ20A	200	€24.00
KLZ25A	250	€37.00
KLZ30A	300	€44.90
KLZ35A	350	€54.20

Replacement flap with L-PUR® *-wear protection

Flap made of 2 x 4 mm sheet steel, 2 x PU 6 mm yellow L-PUR® * glued on



Order no.	NW	Surcharge
KLZ20B1	200	€94.10
KLZ25B1	250	€124.60
KLZ30B1	300	€140.60
KLZ35B1	350	€193.10

Wear protection PU 6 mm yellow L-PUR® * lining

1 set = 2 pieces each



Order no.	NW	Surcharge
KLZ20C1	200	€123.20
KLZ25C1	250	€167.50
KLZ30C1	300	€209.00
KLZ35C1	350	€276.60

Hinged box transitions

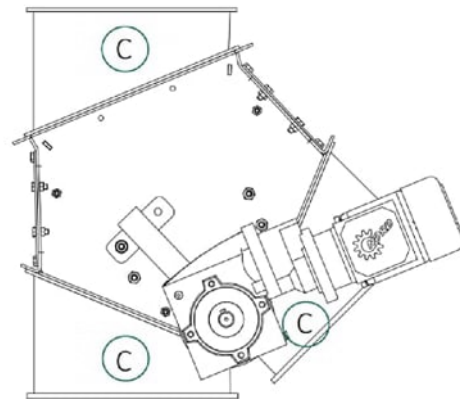
Our transitions enable you to configure the hinged box according to your requirements. With the different designs, it is possible to create a transition in almost all situations and pipe systems. The transitions are made of 3–4 mm standard steel S235JR and can be supplied galvanised and additionally with 6 mm wear protection made of L-PUR® polyurethane*.

The hinged box can be used as a symmetrical and an asymmetrical hinged box. The use is determined by the hinged box transition forms used, page 22.

If you cannot establish a connection with our standard transitions, please contact us. We can create tailor-made transitions for you in a special form or you can use the counter flange (page 25).

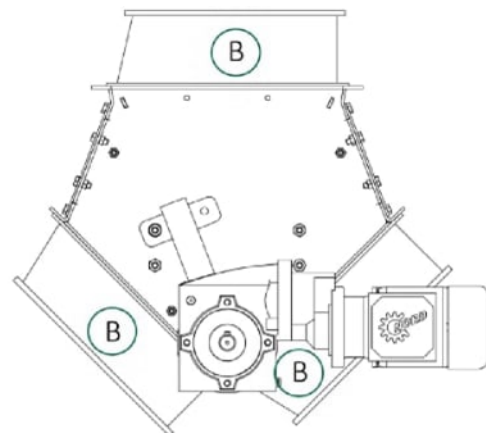
Hot-dip
galvanised
series

The ZUTHER hinged box with 3 transitions **Form C** yields an asymmetrical hinged box, which is also referred to as a **hinged pipe box**.



Asymmetrical flap box (hinged pipe box) with flap sensing (option)

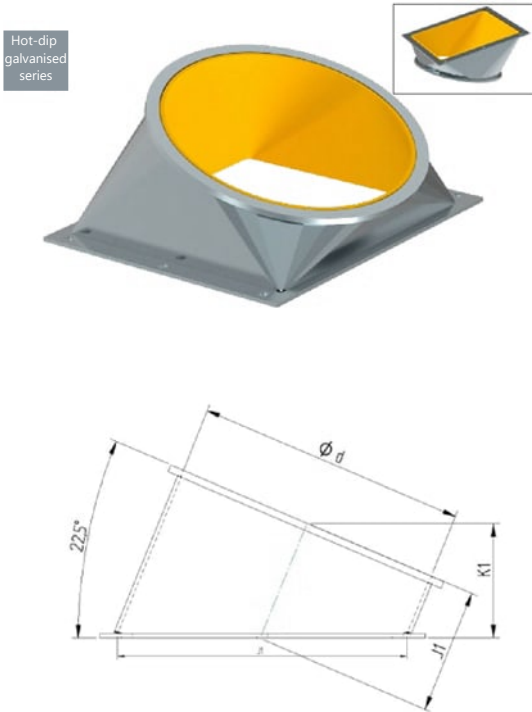
The ZUTHER hinged box with 3 transitions **Form B** yields a symmetrical hinged box, which is also referred to as a **ceiling-mounted hinged box**.



Symmetrical hinged box (ceiling-mounted hinged box) with flap sensing (option)

Hinged box transition design (C) flange to VR system 22.5°

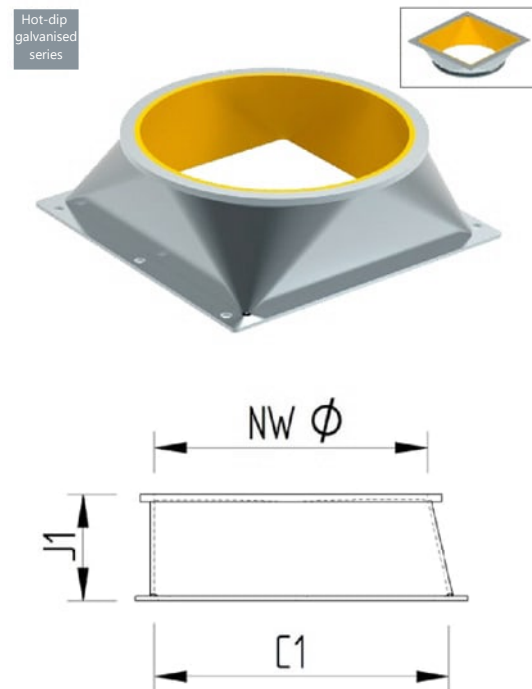
Transition from the hinged box flange to the ZUTHER running pipe with a 22.5° angle. The transition can be installed on the right or left side of the hinged box.



Order no.	NW	C1	K1	J1	t	Variant	Price
R3K20C3VF-E001	200	216	119	117	3	Painted	On request
R3K20C3VF-I001						Galvanised	€68.90
R3K20C3VF-I003						L-PUR®	€193.70
R3K25C3VF-E001	250	270	154	165	4	Painted	On request
R3K25C3VF-I001						Galvanised	€74.20
R3K25C3VF-I003						L-PUR®	€220.40
R3K30C3VF-E001	300	320	125	134	4	Painted	On request
R3K30C3VF-I001						Galvanised	€78.00
R3K30C3VF-I003						L-PUR®	€245.80
R3K35C3VF-E001	350	380	139	150	4	Painted	On request
R3K35C3VF-I001						Galvanised	€82.90
R3K35C3VF-I003						L-PUR®	€274.00

Hinged box transition design (B) flange to VR system

A straight transition from the hinged box flange to the ZUTHER running pipe. The transition can be installed on the right or left side of the hinged box.

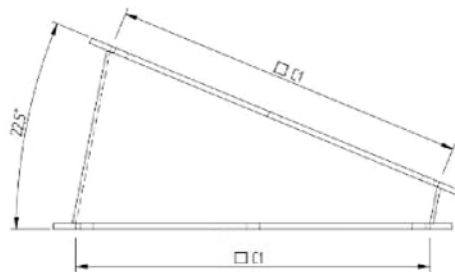


Order no.	NW	C1	J1	t	Variant	Price
R3K20B3VF-E001	200	216	113	3	Painted	On request
R3K20B3VF-I001					Galvanised	€52.00
R3K20B3VF-I003					L-PUR®	€194.30
R3K25B3VF-E001	250	270	113	3	Painted	On request
R3K25B3VF-I001					Galvanised	€53.30
R3K25B3VF-I003					L-PUR®	€219.20
R3K30B3VF-E001	300	320	113	3	Painted	On request
R3K30B3VF-I001					Galvanised	€60.30
R3K30B3VF-I003					L-PUR®	€253.30
R3K35B3VF-E001	350	380	113	3	Painted	On request
R3K35B3VF-I001					Galvanised	€73.50
R3K35B3VF-I003					L-PUR®	€295.10

Hinged box transition design (O) flange to VR system 22.5°

Transition from the hinged box flange to the ZUTHER square pipe or from the hinged box flange to the hinged box flange.

Hot-dip galvanised series



Order no.	NW	C1	t	Variant	Price
R3K2003FF-E001	200	216	3	Painted	On request
R3K2003FF-I001				Galvanised	€71.80
R3K2003FF-I003				L-PUR®	€172.60
R3K2503FF-E001	250	270	3	Painted	On request
R3K2503FF-I001				Galvanised	€76.90
R3K2503FF-I003				L-PUR®	€196.00
R3K3003FF-E001	300	320	3	Painted	On request
R3K3003FF-I001				Galvanised	€81.60
R3K3003FF-I003				L-PUR®	€220.20
R3K3503FF-E001	350	380	3	Painted	On request
R3K3503FF-I001				Galvanised	€85.90
R3K3503FF-I003				L-PUR®	€259.20

Hinged box transition design (P) flange to VR system 22.5°

Transition in which the flanges are rotated by 90° compared to the “O” variant. The transition can be installed from the hinged box flange to the ZUTHER square pipe or from hinged box flange to hinged box flange.

Hot-dip galvanised series

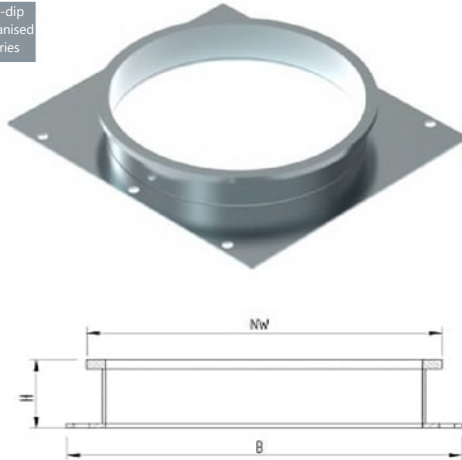


Order no.	NW	C1	L1	t	Variant	Price
R3K20P3FF-E001	200	216	86	3	Painted	On request
R3K20P3FF-I001					Galvanised	€72.50
R3K20P3FF-I003					L-PUR®	€157.30
R3K25P3FF-E001	250	270	96	3	Painted	On request
R3K25P3FF-I001					Galvanised	€73.60
R3K25P3FF-I003					L-PUR®	€172.10
R3K30P3FF-E001	300	320	106	3	Painted	On request
R3K30P3FF-I001					Galvanised	€75.80
R3K30P3FF-I003					L-PUR®	€192.60
R3K35P3FF-E001	350	380	117	3	Painted	On request
R3K35P3FF-I001					Galvanised	€83.90
R3K35P3FF-I003					L-PUR®	€222.80

Hinged box transition design (A) flange to VR system

A straight transition from the ZUTHER running pipe to the inlet side of a hinged box.

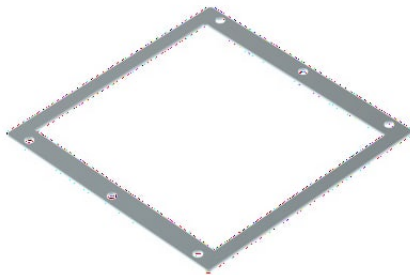
Hot-dip galvanised series



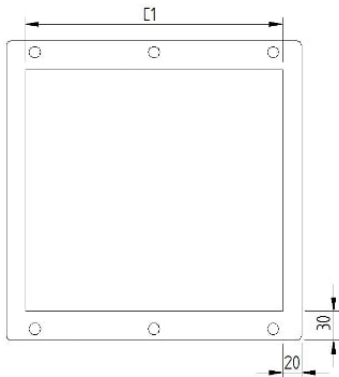
Order no.	NW	B	H	t	Variant	Price
R3K20A3VF-E001	200	260	50	3	Painted	a.A
R3K20A3VF-I001					Galvanised	€60.40
R3K25A3VF-E001	250	310	61	3	Painted	a.A
R3K25A3VF-I001					Galvanised	€62.50
R3K30A3VF-E001	300	360	50	3	Painted	a.A
R3K30A3VF-I001					Galvanised	€72.00
R3K35A3VF-E001	350	410	50	3	Painted	a.A
R3K35A3VF-I001					Galvanised	€82.60

Hinged box transition design (X) hinged box flange

Material 235-JR without paint, as a counter flange



Order no.	NW	C1	t	Price
R3K20X5KK-E001	200	216	5	€11.00
R3K25X5KK-E001	250	270	5	€11.30
R3K30X5KK-E001	300	320	5	€11.50
R3K35X5KK-E001	350	380	5	€12.00



ZUTHER sliders

Sliders are an important part of a flexible conveyor system because—in conjunction with other components—they enable precise control of the product flow to the desired target. Without reliable slider components, the full potential of the system cannot be exploited.

For increased performance and a longer service life, all three slider families (transverse, longitudinal and silo sliders) from ZUTHER have been reworked extensively using the empirical values collected.

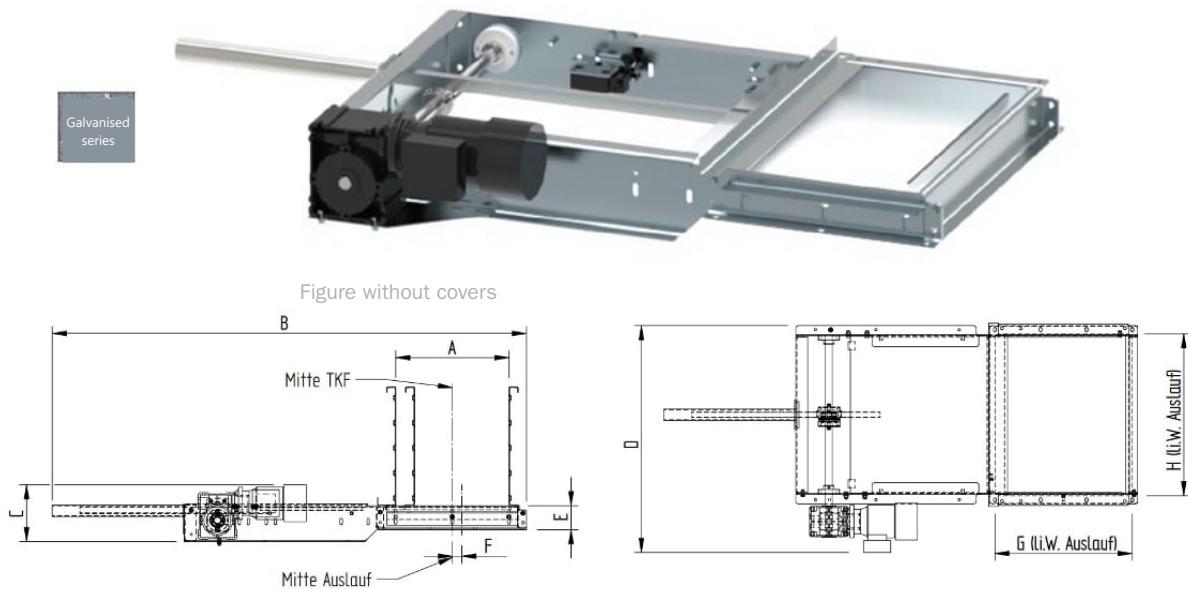
Outlet slider for trough chain conveyor (TKF) transverse pull-out (level with the floor)

Slider including covers that are installed transverse to the conveying direction. The transversely extending sliders are available as electric, pneumatic and hand-operated versions. Slider plate $t = 5 \text{ mm}$.

Version: galvanised

trough chain conveyor outlet slider electrically controlled

Electrically controlled outlet slider including gear motor and limit switches. Voltage 230/400 V 0.37kW. (others on request)



TKF outlet slider, basic version

Order no.	A	NW	B	C	D	E	F	G	H	Price
SRR30E-Z01	260/300	R26/R30	1534	213	844	90	20	386	582	€1,119.70
SRR42E-Z01	350/420	R35/R42	1760	210	840	90	35	510	585	€1,174.90
SRR65E-Z01	500/650	R50/R65	2385	220	975.5	95	0	736	700	€1,430.00

The TKF outlet slider with ATEX zone 22 II3D



Order no.	A	NW	B	C	D	E	F	G	H	Price
SRR30E-Z02	260/300	R26/R30	1534	213	844	90	20	386	582	€1,340.70
SRR42E-Z02	350/420	R35/R42	1760	210	840	90	35	510	585	€1,395.90
SRR65E-Z02	500/650	R50/R65	2385	220	975.5	950	0	736	700	€1,650.90

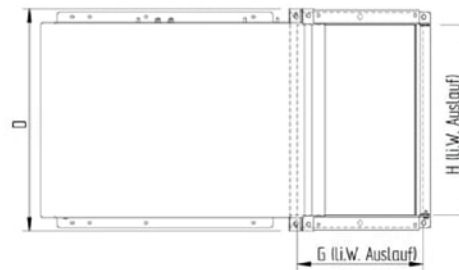
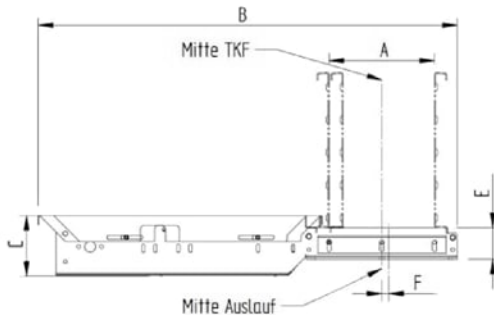
trough chain conveyor outlet slider pneumatically controlled

Standard voltage 24 VDC, others on request.

Galvanised series



Figure without covers



Pneumatic outlet slide, basic version

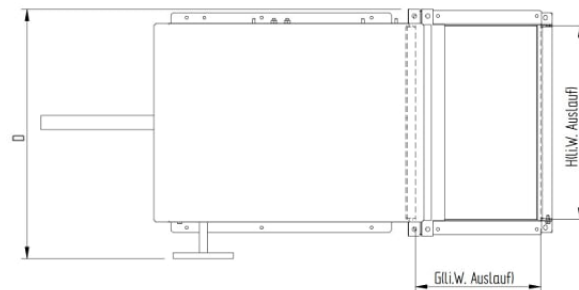
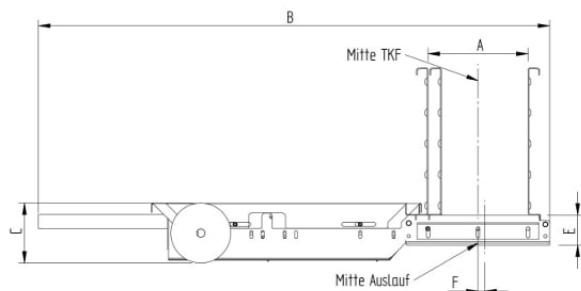
Order no.	A	NW	B	C	D	E	F	G	H	Price
SRR30P-Z01	260/300	R26/R30	1195	173	680	90	20	386	582	€1,025.60
SRR42P-Z01	350/420	R35/R42	1308	173	680	90	35	510	585	€1,066.70
SRR65P-Z01	500/650	R50/R65	1643	143	800	92	0	736	705	€1,172.80

The pneumatic outlet slider with ATEX zone 22 II3D



Order no.	A	NW	B	C	D	E	F	G	H	Price
SRR30P-Z02	260/300	R26/R30	1195	173	680	90	20	386	582	€1,149.00
SRR42P-Z02	350/420	R35/R42	1308	173	680	90	35	510	585	€1,190.00
SRR65P-Z02	500/650	R50/R65	1643	143	800	92	0	736	705	€1,296.20

trough chain conveyor outlet slider handwheel adjustment



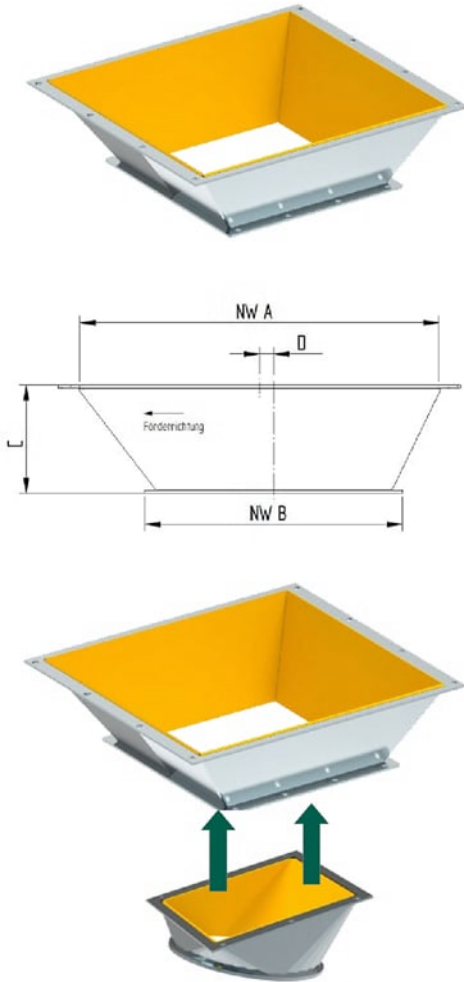
Outlet slider in basic version with manual control

Order no.	A	NW	B	C	D	E	F	G	H	Price
SRR30H-Z01	260/300	R26/R30	1534	200	844	90	20	386	582	€720.60
SRR42H-Z01	350/420	R35/R42	1760	200	840	90	35	510	585	€739.50
SRR65H-Z01	500/650	R50/R65	2385	200	975.5	95	0	736	705	€894.40

Surcharge for limit switches on request!

Outlet transitions for trough chain conveyor (TKF) outlet slider, transverse extension SRR

Transition made of 3 mm galvanised steel sheet, can be used for conveyors with an incline of 12°. Suitable for the transversely extending TKF outlet slider on pages 25–26. The flange on NW B matches the hinged boxes and transitions on pages 17–23.



Order no.	NW A	NW B	C	D	Variant	Price
SRUR30V0200FLAI1	R26/R30	200	260	42	Galvanised	€127.10
SRUR30V0200FLVI2					L-PUR®	345,10 €
SRUR30V0250FLAI1	R26/R30	250	220	32	Galvanised	€124.10
SRUR30V0250FLVI2					L-PUR®	€320.00
SRUR30V0300FLAI1	R26/R30	300	182	28	Galvanised	€123.30
SRUR30V0300FLVI2					L-PUR®	€302.00
SRUR42V0300FLAI1	R35/R42	300	211	33	Galvanised	€125.60
SRUR42V0300FLVI2					L-PUR®	€343.40
SRUR42V0350FLAI1	R35/R42	350	180	23	Galvanised	€124.80
SRUR42V0350FLVI2					L-PUR®	€318.40
SRUR65V0350FLAI1	R65	350	303	47	Galvanised	€182.30
SRUR65V0350FLVI2					L-PUR®	€502.00
SRUR65V0400FLAI1	R65	400	263	37	Galvanised	€177.30
SRUR65V0400FLVI2					L-PUR®	€469.30

Full inlet and outlet variability
Transitions page 23



Example illustration
can be combined with our hinged box transitions R3K + NW + Form (not included, please order separately) from page 23

Outlet slider for trough chain conveyor (TKF), longitudinal extension

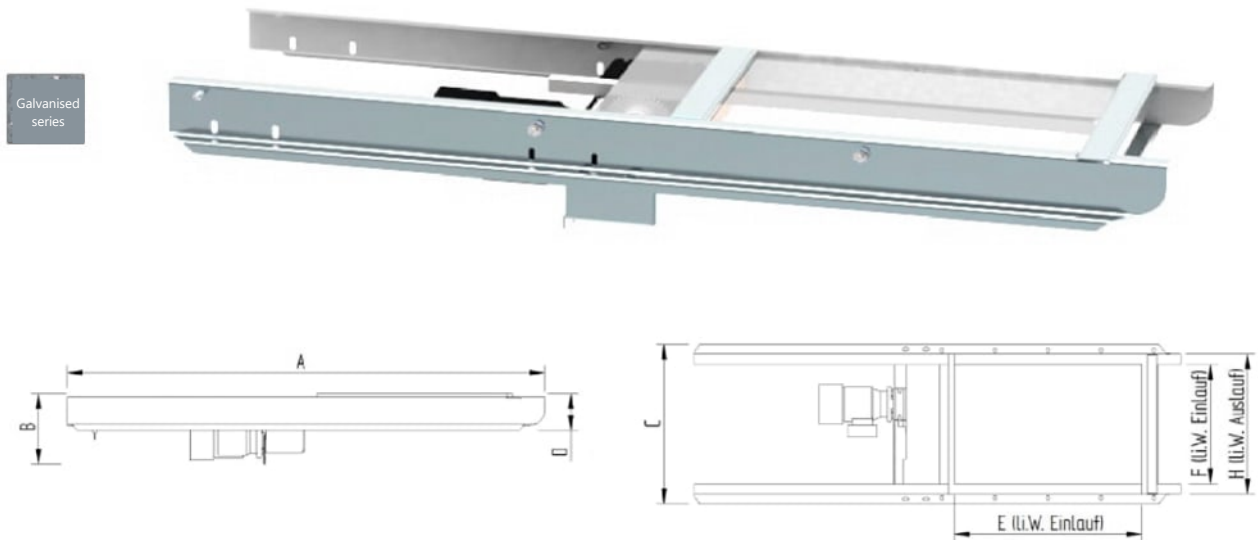
Sliders that are installed parallel to the conveying direction. Longitudinally extending sliders are available as electrical and pneumatic variants. Slider plate t = 5 mm (R50-R65 t = 6 mm).

Version: galvanized

Remark: The sliders are not level with the floor

Electrically controlled

Electrically controlled outlet slider including gear motor and limit switches.
Voltage 230/400 V 0.37kW. (others on request)



Longitudinally extending outlet slider, basic version



Order no.	TKF	A	B	C	D	E	F	G	H	Price
SRF26E-01	R26	1490	248	392	130	550	254	606	320	€1,162.20
SRF30E-01	R30	1490	248	432	130	550	294	606	360	€1,219.70
SRF35E-01	R35	1490	248	482	130	550	344	606	414	€1,274.90
SRF42E-01	R42	1690	248	552	130	650	413	706	486	€1,466.20
SRF50E-01	R50	1810	248	632	140	690	191	772	565	€1,517.50
SRF65E-01	R65	1810	248	782	140	690	644	772	720	€1,686.10

Longitudinally extending outlet slider with ATEX zone 22 II3D

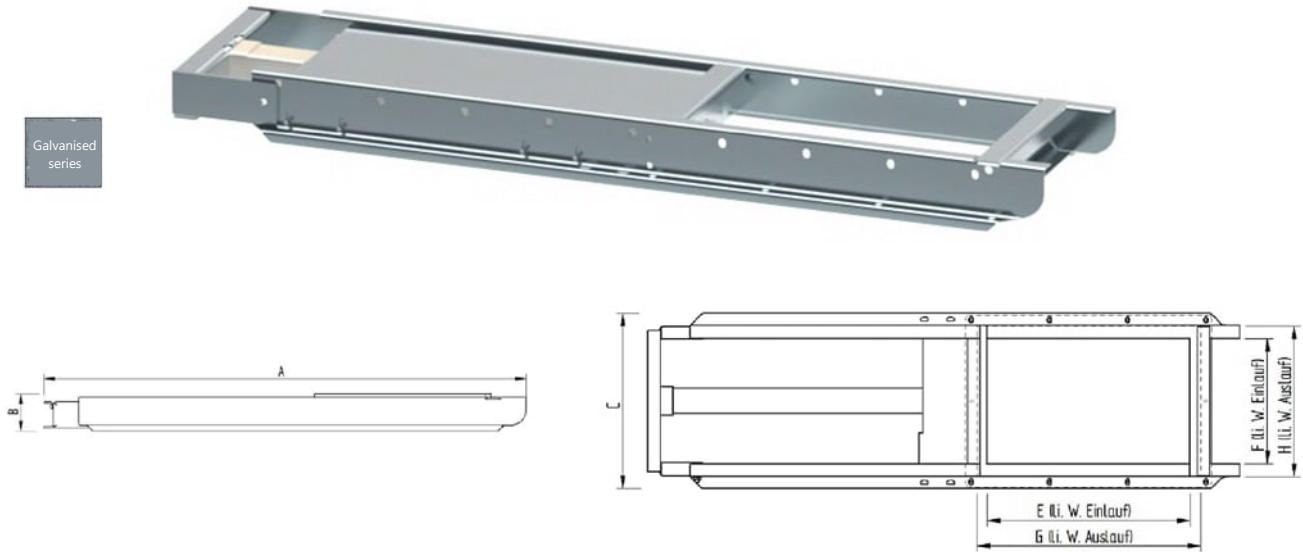


Order no.	TKF	A	B	C	D	E	F	G	H	Price
SRF26E-02	R26	1490	248	392	130	550	254	606	320	€1,383.20
SRF30E-02	R30	1490	248	432	130	550	294	606	360	€1,440.70
SRF35E-02	R35	1490	248	482	130	550	344	606	414	€1,495.90
SRF42E-02	R42	1690	248	552	130	650	413	706	486	€1,687.20
SRF50E-02	R50	1810	248	632	140	690	191	772	565	€1,716.40
SRF65E-02	R65	1810	248	782	140	690	644	772	720	€1,907.10

Outlet slider for trough chain conveyor (TKF), longitudinal extension

Pneumatically controlled

Standard voltage 24 VDC, others on request.



Longitudinally extending TKF outlet slider with pneumatic control, basic version

Order no.	TKF	A	B	C	E	F	G	H	Price
SRF26P-01	R26	1605	130	392	550	254	606	320	a.A
SRF30P-01	R30	1605	130	432	550	294	606	360	a.A
SRF35P-01	R35	1605	130	482	550	344	606	414	a.A
SRF42P-01	R42	1713	130	552	650	413	706	486	a.A
SRF65P-01	R65	1809	140	782	690	644	772	720	a.A

Longitudinally extending TKF outlet slider with pneumatic control and ATEX Zone 22 II3D

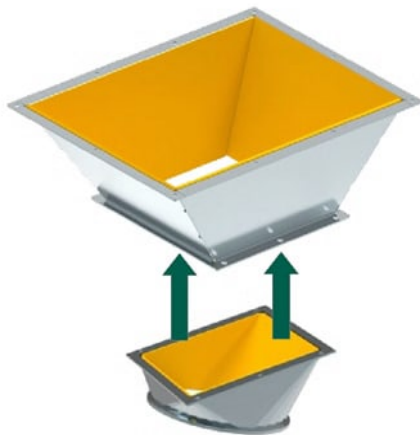
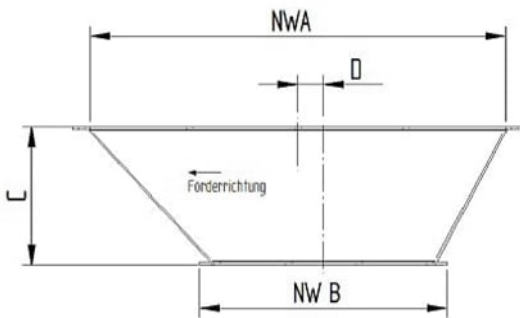


Order no.	TKF	A	B	C	E	F	G	H	Price
SRF26P-05	R26	1605	130	392	550	254	606	320	a.A
SRF30P-05	R30	1605	130	432	550	294	606	360	a.A
SRF35P-05	R35	1605	130	482	550	344	606	414	a.A
SRF42P-05	R42	1713	130	552	650	413	706	486	a.A
SRF65P-05	R65	1809	140	782	690	644	772	720	a.A

Outlet transitions for Redler outlet slider, longitudinal extension SRF

Transition made of 3 mm galvanised steel, can be used for conveyors with an incline of 12°. Suitable for the longitudinally extending Redler outlet slider on pages 28–29. The flange on NW B matches the hinged boxes and transitions on pages 17–23.

Galvanised series



Order no.	NW A	NW B	C	D	Variant	Price
SRUF26V0250FLAI1	R26	250	220	36	Galvanised	€105.40
SRUF26V0250FLVI2					L-PUR®	€294.80
SRUF30V0250FLAI1	R30	250	220	33	Galvanised	€108.90
SRUF30V0250FLVI2					L-PUR®	€305.10
SRUF30V0300FLAI1	R30	300	190	30	Galvanised	€95.90
SRUF30V0300FLVI2					L-PUR®	€277.50
SRUF35V0300FLAI1	R35	300	200	30	Galvanised	€105.60
SRUF35V0300FLVI2					L-PUR®	€285.40
SRUF35V0350FLAI1	R35	350	140	33	Galvanised	€90.50
SRUF35V0350FLVI2					L-PUR®	€261.00
SRUF42V0300FLAI1	R42	300	270	42	Galvanised	€150.50
SRUF42V0300FLVI2					L-PUR®	€404.50
SRUF42V0350FLAI1	R42	350	225	44	Galvanised	€125.00
SRUF42V0350FLVI2					L-PUR®	€354.80
SRUF50V0350FLAI1	R50	0			Galvanised	€158.10
SRUF50V0350FLVI2					L-PUR®	€424.70
SRUF50V0400FLAI1	R50	400			Galvanised	€131.20
SRUF50V0400FLVI2					L-PUR®	€372.60
SRUF65V0350FLAI1	R65	350	315	52	Galvanised	€164.80
SRUF65V0350FLVI2					L-PUR®	€499.90
SRUF65V0400FLAI1	R65	400	300	53	Galvanised	€158.20
SRUF65V0400FLVI2					L-PUR®	€490.50

Full inlet and outlet variability
Transitions page 23



Example illustration
can be combined with our hinged box transitions R3K + NW + Form (not included, please order separately) from page 23

Silo slider type SRS

The silo sliders including covers are available in electrical, pneumatic and hand-operated versions. Slider plate t = 4 mm (NW 500 = 5 mm).

Version: galvanised

Electrically controlled

Electrically controlled silo slider including gear motor and limit switches.
Voltage 230/400 V 0.37kW. (others on request)

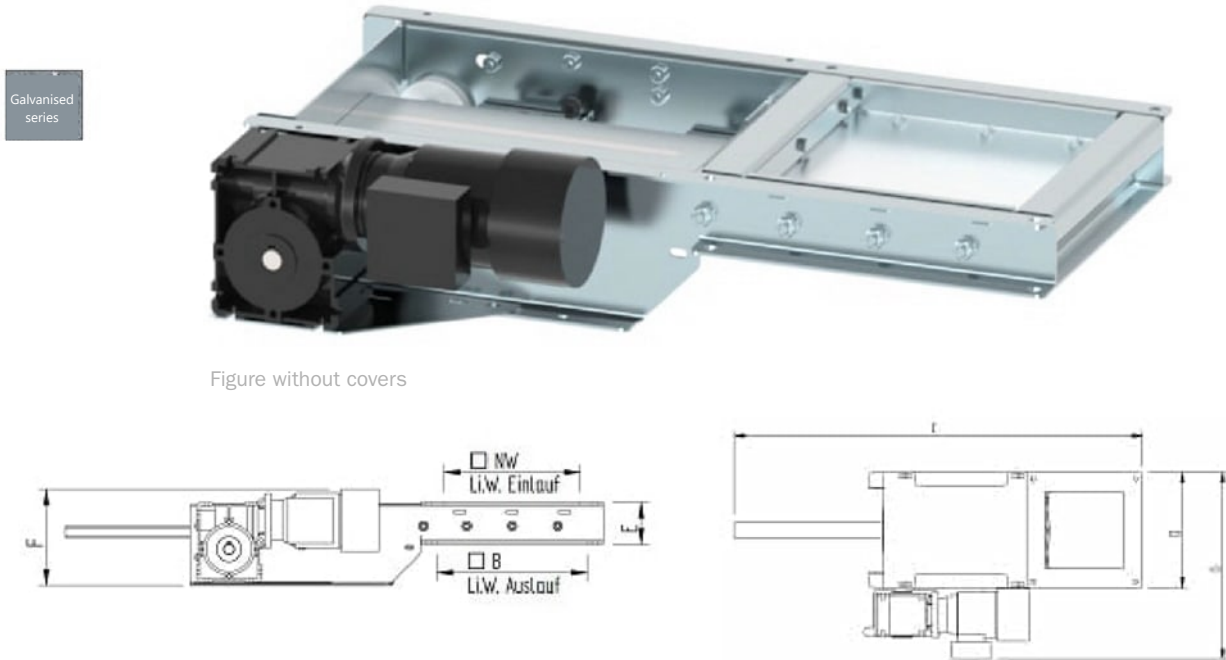


Figure without covers

Electrically controlled silo slider, basic version, XCK-S131

Galvanised series

Order no.	NW	B	C	D	E	F	G	Price
SRS20E-Z01	200	230	1059	484	92	213	484	€1,008.00
SRS25E-Z01	250	280	1159	534	92	213	534	€1,038.30
SRS30E-Z01	300	330	1259	584	92	213	584	€1,057.00
SRS35E-Z01	350	380	1362	634	92	213	634	€1,092.30
SRS40E-Z01	400	430	1462	684	92	213	684	€1,141.00
SRS50E-Z01*	500	620	1877	620	104	223	620	€1,252.50

Electrically controlled silo slider with ATEX Zone 22 II3D, IG513A



Galvanised series

Order no.	NW	B	C	D	E	F	G	Price
SRS20E-Z02	200	230	1059	485	92	213	484	€1,225.60
SRS25E-Z02	250	280	1159	534	92	213	534	€1,255.80
SRS30E-Z02	300	330	1259	584	92	213	584	€1,274.50
SRS35E-Z02	350	380	1362	634	92	213	634	€1,309.90
SRS40E-Z02	400	430	1462	684	92	213	684	€1,358.60
SRS50E-Z02*	500	620	1877	620	104	223	620	€1,470.00

* On the NW500 the motor is installed inside.

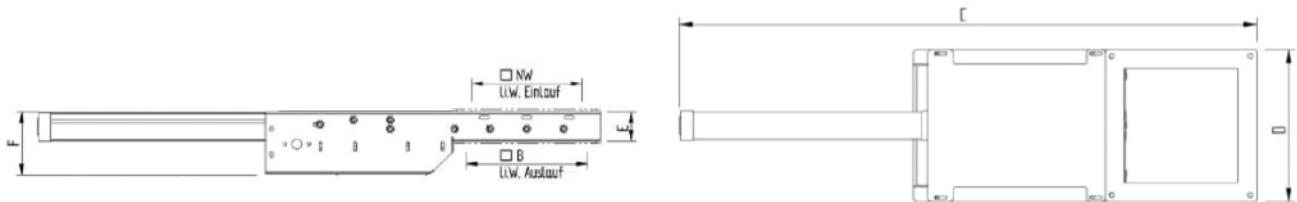
Silo slider type SRS, pneumatically controlled

Standard voltage 24 VDC, others on request.



Galvanised series

Figure without covers



Pneumatically controlled silo slider, basic version, mechn. Limit switch XCK-S131

Galvanised series

Order no.	NW	B	C	D	E	F	Price
SRS20P-Z01	200	230	1327	300	80	170	€963.70
SRS25P-Z01	250	280	1427	350	80	170	€989.60
SRS30P-Z01	300	330	1527	400	80	170	€1,007.90
SRS35P-Z01	350	380	1627	450	80	170	€1,039.70
SRS40P-Z01	400	430	1727	500	80	170	€1,084.00
SRS50P-Z01	500	620	1941	620	90	191	€1,189.30

The pneumatically controlled silo slider with ATEX Zone22 II3D, limit switch IG513A



Galvanised series

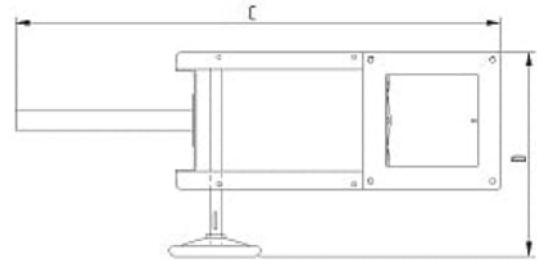
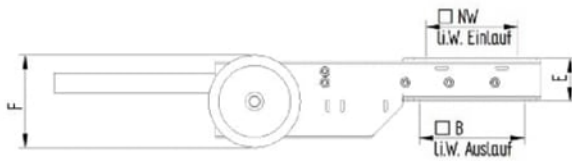
Order no.	NW	B	C	D	E	F	Price
SRS20P-Z02	200	230	1327	300	80	170	€1,085.20
SRS25P-Z02	250	280	1427	350	80	170	€1,111.10
SRS30P-Z02	300	330	1527	400	80	170	€1,129.40
SRS35P-Z02	350	380	1627	450	80	170	€1,161.10
SRS40P-Z02	400	430	1727	500	80	170	€1,205.40
SRS50P-Z02	500	620	1941	620	90	191	€1,310.70

Silo slider type SRS, handwheel

Galvanised series



Figure without covers

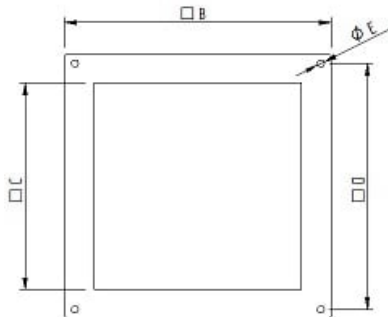


Silo slider with handwheel, basic version

Order no.	NW	B	C	D	E	F	Price
SRS20H-Z01	200	230	1059	485	92	200	€607.20
SRS25H-Z01	250	280	1159	534	92	200	€646.00
SRS30H-Z01	300	330	1259	584	92	200	€665.20
SRS35H-Z01	350	380	1362	634	92	200	€685.00
SRS40H-Z01	400	430	1462	684	92	200	€715.40
SRS50H-Z01	500	620	1877	691	104	200	€786.80

Surcharge for limit switches on request!

Inlet flange for silo slider type SRS



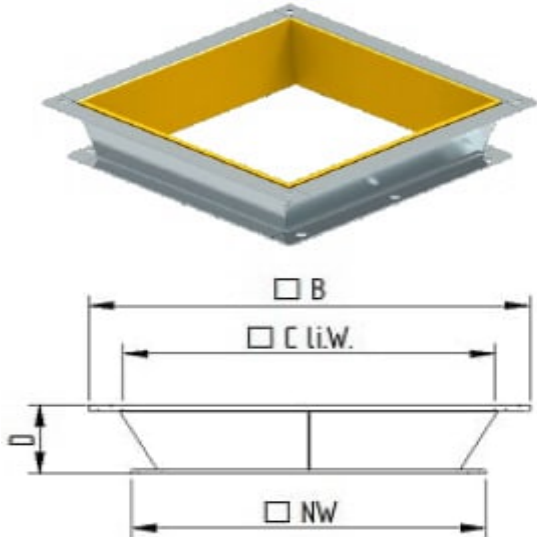
Order no.	NW	B	C	D	E	N	Price
SRC026	200	300	200	266	13	4	€10.30
SRC027	250	350	250	316	13	4	€13.00
SRC028	300	400	300	366	13	4	€16.20
SRC029	350	450	350	416	13	4	€19.50
SRC030	400	500	400	466	13	6	€28.60
SRC050	500	620	500	585	13	8	€66.30

*N = number of flange holes

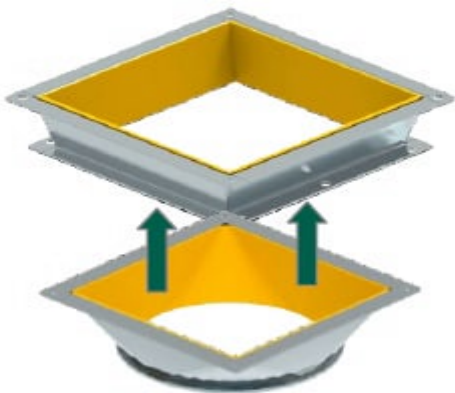
Outlet transitions for silo slider TYPE SRS

Transition made of 3 mm galvanised steel. Suitable for the silo slider on pages 31–33.
The flange on NW B matches the hinged boxes and transitions on pages 17–23.

Galvanised series



Order number	NW	B	C	D	Variant	Price
SRUS20V0200FLAI1	200	300	230	80	Galvanised	€81.40
SRUS20V0200FLVI2					L-PUR®	€162.50
SRUS25V0250FLAI1	250	350	280	80	Galvanised	€85.90
SRUS25V0250FLVI2					L-PUR®	€172.20
SRUS30V0300FLAI1	300	400	330	80	Galvanised	€91.80
SRUS30V0300FLVI2					L-PUR®	€189.20
SRUS35V0350FLAI1	350	450	380	80	Galvanised	€97.60
SRUS35V0350FLVI2					L-PUR®	€201.20
SRUS40V0400FLAI1	400	500	430	80	Galvanised	€105.20
SRUS40V0400FLVI2					L-PUR®	€217.90
SRUS50V0500FLAI1	500	620	530	80	Galvanised	€115.00
SRUS50V0500FLVI2					L-PUR®	€239.10



Full inlet and outlet variability
Transitions page 23



Example illustration

can be combined with our hinged box transitions R3K + NW + Form (not included, please order separately) from page 23



ZUTHER GmbH
An der Bundesstraße 8 - 9
D-29481 Karwitz/Germany

Phone: +49(0) 5861 9610
Fax: +49(0) 5861 96140
E-mail: info@zuther-online.de
Internet: www.zuther-online.de



Subject to errors, misprints and typographical errors. No guarantee as to the correctness of this information. Edition 10/2023
(* are registered trademarks of the respective manufacturers)