



tousek[®]
G A T E A U T O M A T I O N

36
MONTHS

GUARANTEE


QUALITY PRODUCTS
FROM AUSTRIA



**GATE
AUTOMATION**



sliding gate automation

cantilever systems

swing gate automation

barriers and bollards

control boards for automation

tousek connect / tousek service interface

radio systems, LED lights

impulse emitters

safety devices



Personalize the radio transmitter

- printing with UV technology and gloss protective varnish
- multicolored in CMYK with excellent quality
- at small amounts
- see page 109



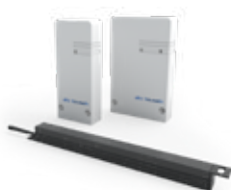
Reflective photocells RLS 630

- up to 9m range
- 24-230V AC/DC
- see page 133



Safety contact edges TXE

- for protection of closing edges and shearing points
- see page 134



Radio transmission system TX 320

- for safety contact edges
- see page 137

Symbols and pictograms



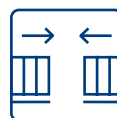
for residential use



entrance width of gate



for commercial use



Master/Slave-function



weight of gate
(for swing gates: weight of leaf)



leaf width of gate



Tousek Connect: Set parameters, read memory and search for errors.
Simply via Smartphone - no matter where you are. Fast competent help for your customer.



Tousek Service Interface: The most elegant solution for the communication between operator and computer. The self-explanatory user guidance for the programming of the control board makes reading a manual literally superfluous.



Save energy! When in standby mode the intelligent control switches off unused devices and thus achieves an extremely low power consumption of only 1 Watt in standby mode! This saves valuable energy.



A high-resolution sensor monitors engine speed and power for maximum safety and comfort.



Clear text menu programmable via four buttons in 8 languages.
Selectable languages: English, German, Spanish, French, Italian, Dutch, Czech, Polish.



Initial test under EN 13241-1 of TÜV-Süd taking as basis EN 12453 and EN 12445.

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Family business

An ambitious entrepreneurial type founds a company, Tousek Torantriebe, which has grown from the One-Man Show to an internationally successful and innovative company.

What can help such an entrepreneur and the company more than the successor generation following the footsteps of the founder, Eduard Tousek.





48 YEARS **tousek**®
G A T E A U T O M A T I O N

48 years of experience - 48 years of success

Eduard Tousek founded the company tousek gate automation in Austria in 1974. A success story that is unparalleled. For the past 48 years, Eduard Tousek has been operating at the highest level through constant development of his product range, both in national and international competition. The clientele of the company are mainly locksmiths, gate manufacturers and electricians. Professionals and tousek employees form a team whose ultimate goal is the absolute satisfaction of the end customer. Tousek supplies exclusively the specialized trade, in order to be able to guarantee a professional assembly of the gate operators. A connection based on mutual trust and respect. The company owes its many years of success to this long-term and consistent cooperation.

products

Tousek products are in use and highly valued around the world for their advanced technology and high quality standards. Long life expectancy and state-of-the-art electronics are the key features of our products. Quality means more to technicians and developers at tousek than just dimensional accuracy and function. Constant analyzes and controls both in incoming and outgoing goods are the most important core elements of quality assurance at tousek. Short and fast communication channels between development and sales ensure rapid implementation and adaptation to the needs of the market. The "tousek InHouse" principle guarantees an always consistent production level for the customer. Research, development, prototyping, testing, production and quality assurance are housed in the company's own plant, only this way the company can vouch for the "original **tousek** quality".

Our employees

... are the most valuable asset of our company. For this reason, we attach great importance to long-term affiliation and constant training and further education. The resulting high level of knowledge and experience of our employees is noticeable at all times for our customers. Teamwork and strong cohesion, as in a large family, are not empty phrases, but reality experienced day by day.

I appreciate the peace at my workplace, because I can do things in peace.

Christian Schinnerl / cnc skilled worker
(operates the loudest machine in the factory)

My supervisor is a role model whom I enjoy working with.

Bertram Maier / purchase department
(to Mr. Gaiswinkler)

My colleagues should stay as they are.

Georg Grigorijevs
/ field sales

An operator is really favourable if it works three times longer than a cheap one.

Thomas Fischer / sales manager

My colleagues are mostly great and partly annoying.

Stefan Schmitzhofer / software development

My job is good and right.

Bertram Maier / purchase department

When I see a Tousek operator at a gate, I stop to see who built it.

Roland Hackl / field sales service

Our customers buy the right gate operator.

Richard Mandowski / electronic development

I am particularly pleased if a customer is satisfied and says so.

Georg Sigl / field sales service

I feel very connected to the company tousek.

Robert Böhm / mechanical workshop

My motto: Be friendly to everyone, then he is also friendly to you.

Ulrike Neudorfer / accounting

I do not give my job away anymore.

Carina Perl
/ reception and switchboard



All our activities and actions are focused on the success of our customers. Businesses have been and will be made between people in the past as well as today and in the future. Therefore, we treat all our customers courteously, friendly and appreciative. The customer should feel comfortable with us.



award

The technical advantage of our products ensures our customers a reliable and long-lasting operation.

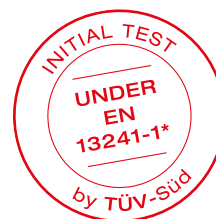


ISO

The meticulous compliance with the strictest production standards, the tightest manufacturing tolerances and their constant monitoring are a matter of course for us. To ensure this, our company has been ISO 9001 certified since September 2016.

TÜV

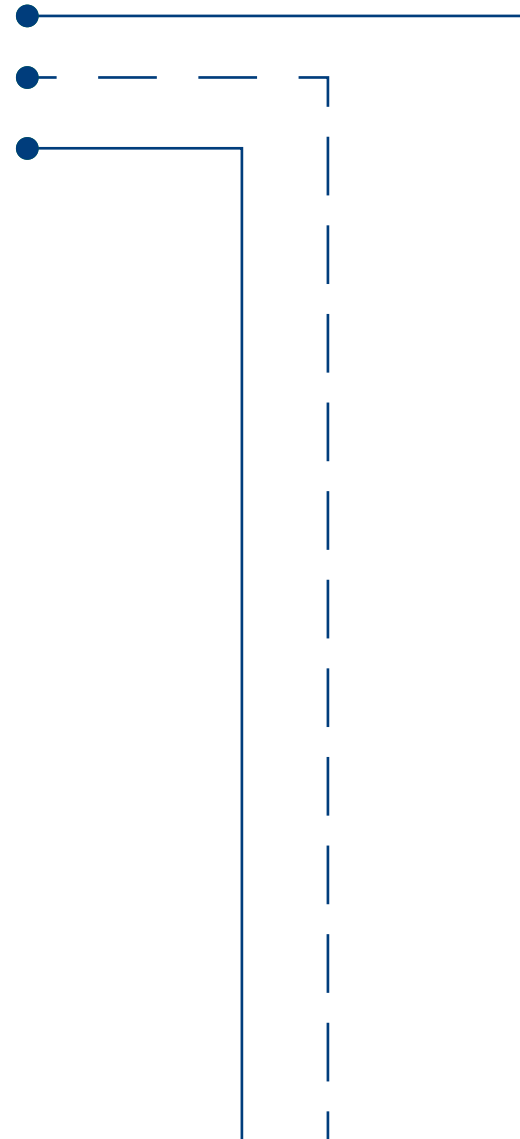
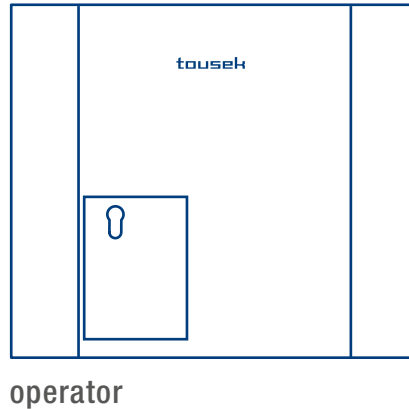
Our sliding gate operators Pull T, TPS 20, as well as our swing gate operators Slim and Swing X have been first approved by TÜV Süd according to EN 132 41-1 underlying of EN 12453 and EN 12445. There is no need to have an active contact edge on the main closing edge (excluding TPS 20).



Programmable tousek control units

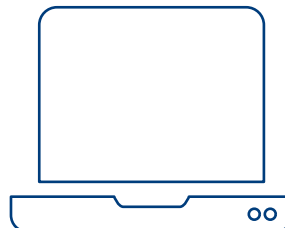
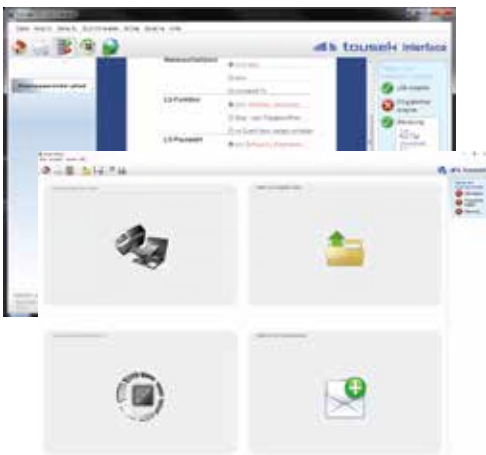
general product features

- event viewer of the last 800 cycles
- history of all the changes/events in the menu
- cycle counter



tousek service interface

- very practical, you can access all the relevant information on-site via your computer
- all the information is convenient and comfortable visible at a glance
- possible software-updates are accessible via internet
- see page 101



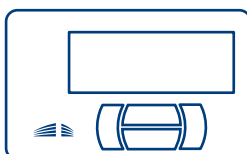
optional

Programmable tousek control units

programmable on LCD screen with four buttons

- A two-line illuminated display with clear text menu is integrated on each operator (except TSA).
- The settings of the control unit are so simple and comfortable like never before.
- Programming and troubleshooting will be much easier for the user.

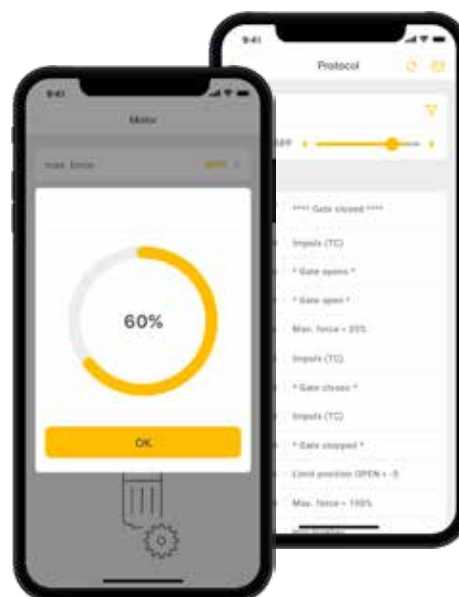
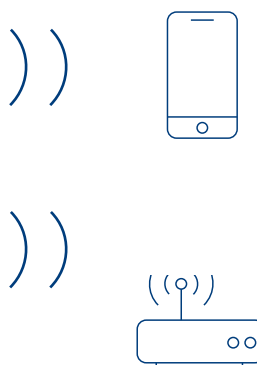
series



tousek connect

- With the tousek connect, you can turn any smartphone into an extended user interface of the operator.
- Any time and from every place you can have a comfortable access to all the data and functions of the control unit.
- Therefore you can have a precise insight of what happened in the past and you can more easily and rapidly support your clients.
- see page 98

optional







page

PULL TSA	●			up to 400kg	14
PULL T4 speed new	●			up to 400kg	16
PULL T5	●			up to 500kg	16
PULL T8	●	●	●	up to 800kg	16
PULL T24	●	●		up to 600kg	16
PULL T24 speed	●	●		up to 400kg	16
PULL T8 traffic light		●		up to 800kg	18
PULL T10	●	●	●	up to 1000kg	18
PULL T15		●	●	up to 1500kg	18
TPS 6speed		●		up to 600kg	22
TPS 10 speed		●		up to 1000kg	22
TPS 20		●	●	up to 2000kg	24
TPS 20N		●	●	up to 2000kg	25
TPS 20 PRO		●		up to 2000kg	25
TPS 40 PRO		●		up to 4000kg	26
TPS 60 PRO		●		up to 6000kg	27



Sliding gate automation

PULL TSA

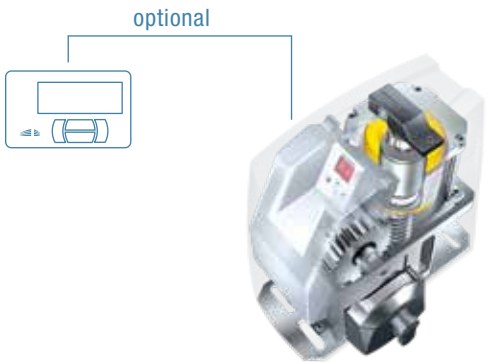
product features PULL TSA

- programmable with four buttons and 7-segment display
- selectable operating mode (impulse, automatic, deadman)
- event memory of the last 800 cycles
- 1m partial opening for pedestrians (also radio-controlled)
- encapsulated control board
- self learning end positions
- permanent automatic force regulation
- ARS - automatic reversal system
- direct connection of 8,2 k Ω safety sensing edges separated for main and side edge
- adjustable softstop
- up to 48 transmitters can be programmed
- memory of the radio receiver manageable from the display
- emergency release secured with profile half cylinder (optional)
- tempered steel gear and hardened worm wheel



INTEGRATED
RADIO RECEIVER RS 868

	max. gate weight	in operating mode S3	speed (m/min)	speed (mm/s)
PULL TSA	up to 400 kg	20/day	11	183



accessories		product code
display in housing	for programming, incl. 20cm cable	12111250
profile half cylinder with 3 keys	simultaneous locking for locking of tousek-emergency release	13300220

→ The max. gate weights are specified for easy-running, wind-permeable and horizontally moving gates.

Sliding gate automation

PULL TSA kit



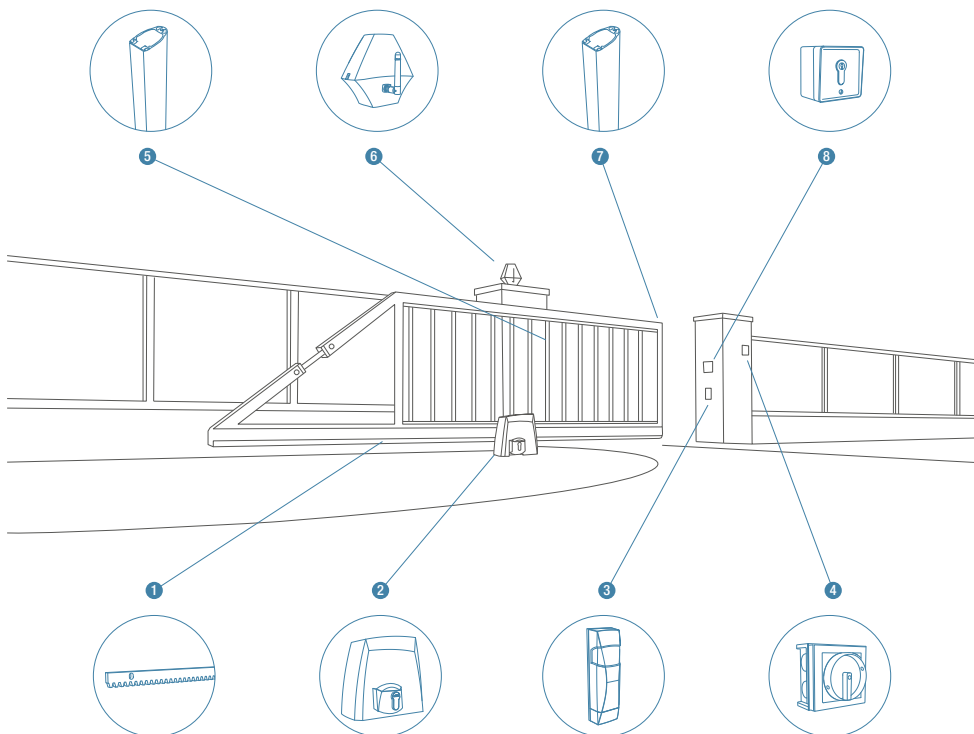
Kit includes:

- 1 operator
- 1 integrated radio receiver RS 868, 2-channel
- 2 transmitters RS 868-4M, 4-channel
- 1 signal lamp LED
- 1 pair of photocells LS 180

product
code

PULL TSA - Kit

61006



1. Gear rack
2. Operator
3. Photocell
4. Main switch
5. Side safety edge
6. Signal lamp and antenna
7. Main safety edge
8. Key switch



Sliding gate automation

PULL T

product features PULL T

- large illuminated and removable LC-Display (2x16 characters)
- clear text menu programmable through four buttons
- selectable operating mode (impulse, automatic, deadman)
- self learning end positions
- permanent automatic force regulation
- even with reduced speed no loss of force
- ARS - automatic reversal system
- direct connection of 8,2 k Ω safety sensing edges separated for main and side edge
- status display for safety and impulse inputs
- adjustable soft stop (distance and speed)
- adjustable partial opening for pedestrians or car/truck
- partial opening can also be remote controlled (transmitter)
- event memory of the last 800 cycles
- tempered steel gear running in oil bath
- slot for pluggable radio receiver
- encapsulated control unit
- worm wheel and spindle made of tempered steel



emergency release
with standard cylinder

Pull T24

- 24V motor
- in standby mode low power consumption
- integrated backup battery (optional)



	max. gate weight	power supply	duty cycle in operating mode S3	speed (m/min)	speed (mm/s)	product code
PULL T 4speed new	up to 400 kg	230V	40-60%	17.5	291	11111000
PULL T5	up to 500 kg	230V	20/day	11	183	11110370
PULL T8	up to 800 kg	230V	40%	11	183	11110380
PULL T24.2	up to 600 kg	230V	40-80%	13	216	11110540
PULL T24.2 speed	up to 400 kg	230V	40-80%	16	266	11110550



The max. gate weights are specified for easy-running, wind-permeable and horizontally moving gates.
The duty cycle depends on gate weight. Please also see technical data sheets.



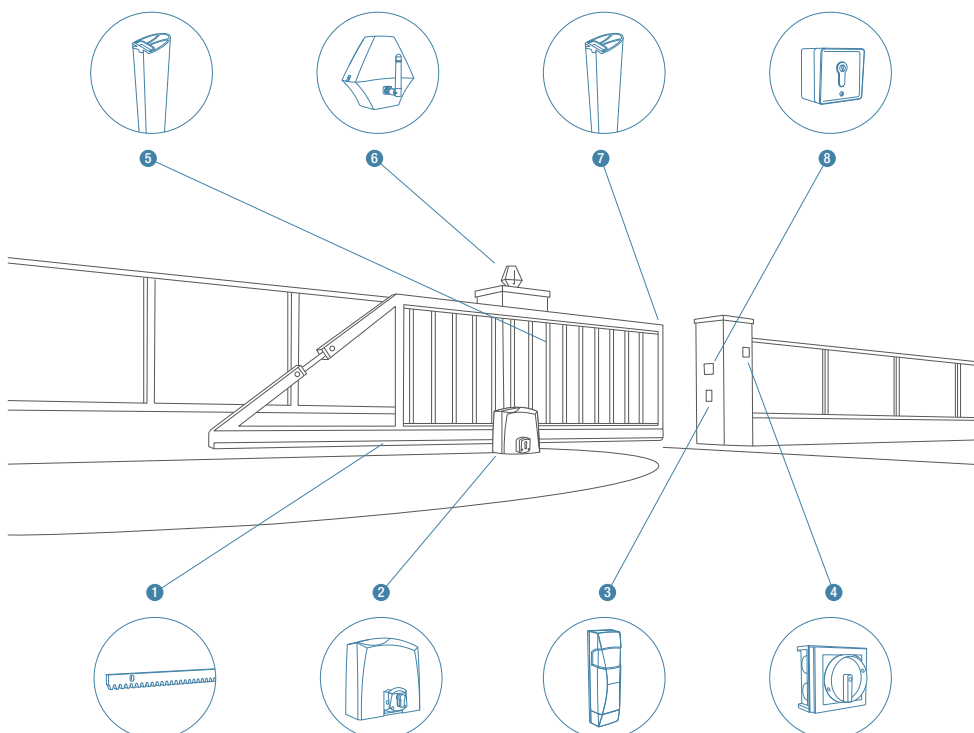
Kit includes:

- 1 operator
- 1 receiver RS 868, 2-channels
- 2 transmitters RS 868-4M, 4-channels
- 1 signal lamp LED
- 1 pair of photocells LS 180



product
code

PULL T4speed - Kit new	61015
PULL T5 - Kit	61007
PULL T8 - Kit	61008
PULL T24 - Kit	61009
PULL T24speed - Kit	61010



1. Gear rack
2. Operator
3. Photocell
4. Main switch
5. Side safety edge
6. Signal lamp and antenna
7. Main safety edge
8. Key switch



Sliding gate automation

PULL T8, T10, T15

product features PULL T8, T10, T15

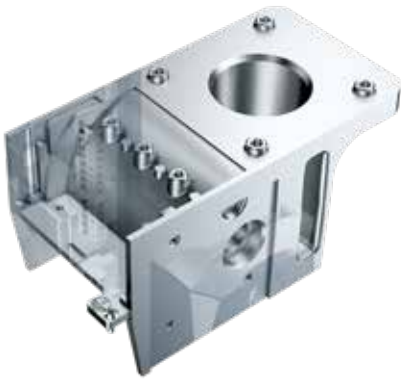
- large illuminated and removable LC-Display (2x16 characters)
- clear text menu programmable through four buttons
- selectable operating mode (impulse, automatic, deadman)
- self learning end positions
- permanent automatic force regulation
- even with reduced speed no loss of force
- ARS - automatic reversal system
- direct connection of 8,2 kΩ safety sensing edges separated for main and side edge
- status display for safety and impulse inputs
- adjustable soft stop (distance and speed)
- adjustable partial opening for pedestrians or car/truck
- partial opening can also be remote controlled (transmitter)
- event memory of the last 800 cycles
- tempered steel gear running in oil bath
- slot for pluggable radio receiver
- encapsulated control unit
- worm wheel and spindle made of tempered steel
- master / slave for sliding gates running in opposite directions
- emergency release lockable with EU standard profile half cylinder



	max. gate weight	power supply	duty cycle	speed (m/min)	speed (mm/s)	product code
PULL T8	up to 800 kg	230V	40%	11	183	Standard: 11110380 Traffic light: 11110510 Master: 11110430 Slave: 11110440
PULL T10	up to 1.000 kg	230V	40-60%	9	150	Standard: 11110390 Master: 11110640 Slave: 11110650
PULL T15	up to 1.500 kg	230V	60%	9	150	Standard: 11110570 Master: 11110680 Slave: 11110690



The max. gate weights are specified for easy-running, wind-permeable and horizontally moving gates.
The duty cycle depends on gate weight. Please also see technical data sheets.



One-piece die-cast aluminium housing



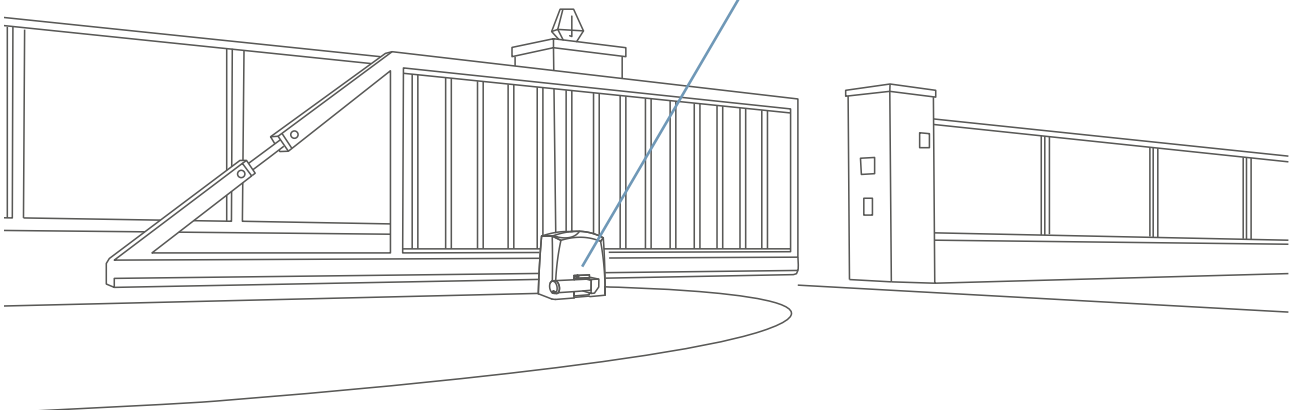
gearing made of tempered steel



speed sensor (6.200 signals/s)



electric emergency release
see page 21





Sliding gate automation accessories for PULL T

battery for PULL T24 and T24 speed

for max. 10 cycles/load including mounting bracket

S35116



gate status display module incl. fault signal contact

status display: open, close, in motion, outside the end positions

12111310



Only one of the two additional modules can be used.

signal transmission system TX400i

inductive, for DIN-rail (width 23mm), see page 132

TX 400i

13660390

pillar with fork

hot-dip galvanised, height adjustable

13660190



additional module for courtyard/control lamp

potential free contact, up to 230V/100W
programmable via menu for up to 15 minutes

12111300



Only one of the two additional modules can be used.

power adapter 24V 60W

for DIN-rail (width 35mm)

12112290



DIN rail with 3 screws for ISD 5

width of the DIN rail 75mm

14110220



Radio transmission system TX 320* **new**

Bidirectional system 868MHz,

TX 320T transmitter 2 channel in housing

13660570

TX 320R2 receiver 2 channel in housing

13660580



I-loop detector ISD 5 and ISD 5/2**

for DIN-rail (width 38mm)

ISD 5 1-channel

13430130

ISD 5/2 2-channel

13430120



* Cannot be fitted in PULL T24 and T24speed housing

** Cannot be fitted in PULL T15, T24 and T24speed housing



electric emergency release for PULL T

applications

- the automatic emergency release for the PULL T operators allows manual gate opening in the event of a power failure without first having to perform a manual unlocking.
- most required at fire brigade entries

The most important functions at a glance:

- 230V a.c. supply for the control unit
- release/lock via impulse button or radio transmitter
- automatic unlocking at main voltage drop selectable
- LED display of the operating state (after first impulse input)
- integrated 12V DC battery to ensure unlocking / locking function

electric emergency release for PULL T

24V

13830050



control unit for emergency release

incl. battery and charger board

12112160



installation of electric emergency release for PULL T



14150190



Sliding gate automation

TPS 6 speed, TPS 10speed

product features TPS 6speed, TPS 10speed

- suitable for heavy duty use (100% duty cycle)
- large, illuminated LC-Display (2x16 characters)
- clear text menu programmable via four buttons
- operation mode is selectable (impulse, automatic, deadman)
- free adjustable partial opening for pedestrians or car/truck function
- distance measurement made via absolute encoder (without limit switches), NO need of learning cycles after unlocking or power failure.
- adjustable soft stop (separated for OPEN and CLOSE movement), controlled by frequency converter
- adjustable speed (separated for OPEN and CLOSE movement), controlled by frequency converter
- mechanical brake for safe gate stop
- electronic monitoring of the emergency release
- direct connection of four separated 8,2 kΩ safety sensing edges
- input for rear area monitoring
- status display for safety and impulse inputs
- self monitoring of photocells
- slot for radio receiver
- optional external gate status display (e.g. for concierge)
- optional courtyard lamp module (230V, 100W)
- DIN rail for additional accessories: 60mm and 130mm
- dimension (W x H x D): 610 x 530 x 211mm
- gear wheel Z20 module 4



	max. gate weight	power supply	duty cycle operating mode S1	speed (m/min)	speed (mm/s)	housing color*	product code
TPS 6speed	up to 600 kg	230V	100%	30	500	grey aluminum anthracite grey	11110620 11110810
TPS 10speed	up to 1000 kg	230V	100%	20	333	grey aluminum anthracite grey	11110870 11110880
steel gear rack	1m, module 4, 20mm wide version						14210110
mounting bracket	4 angles incl. screws for wide gear rack, per meter						14220100
elect. emergency release**	optional impulse or automatic function						13830070
control unit emergency release**	for electric emergency release, incl. rechargeable battery, 24V, NiMH 1.800mAh						12112480

The max. gate weights are specified for easy-running, wind-permeable and horizontally moving gates.

We recommend to use the wide gear rack.

With speeds up to 20m / min you can secure the closing edges by means of the contact strip TCL 80.

For higher operation speeds it is possible to secure crush hazard points by using separating protective devices.

(s. EN 12453:2000 5.1.1) or in dead man mode.

* similar RAL9007 or RAL7016

** Please clarify availability with your sales advisor



Sliding gate automation

TPS 6, TPS 10speed



30m/min *



0,5m/s

* TPS 6speed

600kg

SPEED



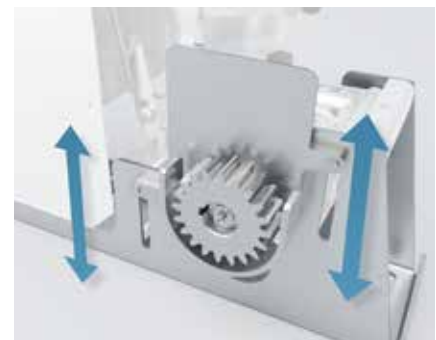
Electrical emergency release



emergency release



absolute encoder with a max. deviation of 1,8mm on 30m driveway



vertical adjustment between 110 and 185mm



Sliding gate automation

TPS 20, TPS 20N, TPS 20 PRO

product features TPS 20

- suitable for heavy duty use (80% duty cycle)
- large, illuminated LC-Display (2x16 characters)
- clear text menu programmable via four buttons
- operation mode is selectable (impulse, automatic, deadman)
- free adjustable partial opening for pedestrians or car/truck function
- distance measurement made via speed sensor (without limit switches)
- adjustable soft stop (distance and speed)
- ARS – automatic reversal system
- mechanical brake for safe gate stop
- permanent self-regulating force with boost function (increased start force)
- electronic monitoring of emergency release
- direct connection of four separate 8,2 kΩ safety sensing edges
- input for rear area monitoring
- suitable for traffic control operation in combination with STA 11
- status display for safety and impulse inputs
- self-monitoring of photocells
- slot for radio receiver
- optional, external gate status display (e.g. for concierge)
- optional courtyard lamp module (230V, 100W)
- 2 x 130mm DIN rail for additional accessories
- dimension (W x H x D): 610 x 530 x 211mm
- height adjustable gear wheel (top edge): 100–175mm
- TPS 20 - standard also available in anthracite grey (similar RAL7016)



● TPS 20



	max. gate weight	power supply	duty cycle operating mode S3	speed (m/min) (mm/s)			product code
TPS 20	up to 2000 kg	230V	80%	14	233	Standard, grey aluminum	11110460
						Standard, anthracite grey	11110800
						Master, grey aluminum	11110490
						Slave, grey aluminum	11110500
TPS 20N	TPS 20N like TPS 20, for columns/pillars at installation site					Standard	11110470
						Master	11110660
						Slave	11110670
TPS 20PRO	like TPS 20 but in large PRO-housing, grey aluminum						11110480
STA 11	traffic light control unit						12120370



The max. gate weights are specified for easy-running, wind-permeable and horizontally moving gates.
For gate weight > 1000kg we suggest to use the wide gear rack version.



further product features for TPS 20N

- galvanised base housing
- 260mm DIN-rail for additional accessories
- dimension (W x H x D): 328 x 950 x 188mm
- height adjustable gear wheel (top edge): 107–147mm



● TPS 20N, for installation in on-site pillar

further product features for TPS 20 PRO

- base housing: cathodic dip coating and powdercoating **new**
- door made of powdercoated aluminium and lockable with profile half cylinder
- optional, height adjustable fork or angle for signal transmission system
- integrated main power switch and 230V Schuko socket
- DIN rail for additional accessories, 2 x 120mm + 300mm inside the door
- dimension (W x H x D): 520 x 995 x 230mm
- height adjustable gear wheel (top edge): 120–200mm



● TPS 20 PRO



Sliding gate automation

TPS 40 PRO

product features TPS 40 PRO

- main housing KTL and powdercoated **new**
- suitable for heavy duty use (100% duty cycle)
- large, illuminated LC-Display (2x16 characters)
- clear text menu programmable via four buttons
- operation mode is selectable (impulse, automatic, deadman)
- free adjustable partial opening for pedestrians or car/truck function
- distance measurement via absolute encoder (no limit switches), no need of learning cycles after unlocking or power failure
- adjustable soft stop (distance and speed)
- adjustable speed (separately for OPEN and CLOSE), controlled by frequency converter
- mechanical brake for safe gate stop
- electronic monitoring of the emergency release
- direct connection of four separate 8,2 kΩ safety sensing edges
- input for rear area monitoring
- status display for safety and impulse inputs
- self-monitoring of photocells
- slot for radio receiver
- optional, external gate status display (e.g. for concierge)
- optional courtyard lamp module (230V, 100W)
- integrated main power switch and 230V Schuko socket
- optional height adjustable fork or angle for signal transmission system
- dimension (W x H x D): 520 x 995 x 230mm
- height adjustable gear wheel (top edge): 143–173,5mm
- gear wheel Z13 module 6



	max. gate weight	power supply	duty cycle operating mode S1	speed (m/min)	speed (mm/s)	product code
TPS 40 PRO	up to 4000 kg	230V	100%	17,5	291	11110760
steel rack	1m, module 6, electrogalvanised, to bolt on					14210140
mounting bracket	electrogalvanised, for steel racks module 6, 4 pcs. incl. screws					14220110



The max. gate weights are specified for easy-running, wind-permeable and horizontally moving gates.



product features TPS 60 PRO

- integrated control unit with frequency converter
- large, illuminated LC-Display (2x16 characters)
- clear text menu programmable via four buttons
- operation mode is selectable (impulse, automatic, deadman)
- adjustable partial opening for pedestrians or car/truck function
- distance measurement through speed sensor with positioning limit switches
- adjustable soft stop (distance and speed)
- direct connection of 8,2 kΩ safety sensing edges separately for main and side safety edge
- status display for safety and impulse inputs
- self monitoring of photocells
- external gate status display (e.g. for concierge)
- main housing made of brushed stainless steel
- aluminium cap, powder coated
- cover lockable with profile half cylinder
- integrated main switch and 230V Schuko socket
- optional, height adjustable fork or angle for power supply system
- dimension (W x H x D): 520 x 1365 x 230mm
- DIN rail for additional accessories, 1 x 120mm + 300mm inside the door
- height adjustable gear wheel (top edge): 230–270mm
- gear wheel Z17 module 6



	max. gate weight	power supply	duty cycle operating mode S3	speed (m/min)	speed (mm/s)	product code
TPS 60 PRO	up to 6000 kg	400V	80%	9	150	11110700
steel rack	1m, module 6, electrogalvanised, to bolt on					14210140
mounting bracket	electrogalvanised, for steel racks module 6, 4 pcs. incl. screws					14220110
ISD 6	2-channel loop detector, pluggable					13430140



The max. gate weights are specified for easy-running, wind-permeable and horizontally moving gates.



Sliding gate automation accessories for TPS

power socket

for DIN-rail (width 45mm)

13400250



main switch

for DIN-rail (width 52mm)

13310110



signal transmission system TX 400i

inductive, for DIN-rail (width 23mm), see page 132

TX 400i

13660390



power adapter 24V 60W

for DIN-rail (width 35mm)

12112290



radio transmission system TX 320

new

for DIN rail

TX 320DR receiver **13660640**

power supply 24V 15W **12112490**



gate status display module incl. fault signaling contact

status display: open, closed, in motion, outside of end positions

gate status display module **21110420**

Only one of the two additional modules can be used.



additional module for courtyard/control lamp

up to 100W, 230V programmable via menu
for up to 15 minutes

gate courtyard/control lamp module **21110490**

Only one of the two additional modules can be used.



I-loop detector ISD 5 or ISD 5/2

for DIN-rail (width 38mm)

ISD 5 1-channel **13430130**

ISD 5/2 2- channel **13430120**



PTFE wire

1 bundle = 70m

13400270



ready made induction loop

incl. 10m twisted cable

13400220



travel speed limiter

for ascending sliding gates up to 7Nm or 12,2Nm torque

7Nm **35400100** on request

12,2Nm **35400210** on request



pre-installation incl. prewiring



In order to save time on site, you can have your sliding gate automation „Ready to use“ in our house.

14150190

e.g. 1 loop detector or 1 main switch or 1 power socket or 1 signal transmission system or 2 safety sensing edges with TPS 20 PRO or 1 programmable timer (excl. programming).

Sliding gate automation accessories for PULL TSA, PULL T, TPS



plastic gear rack with steel core

bolt-on, 1m mounting link up

1m gear rack	14220010
Mounting equipment 6 bolts M6x14 incl. plates	14220040



plastic gear rack with steel core

bolt-on, 1m mounting link down

1m gear rack	14220020
Mounting equipment 6 bolts M6x14 incl. plates	14220040



plastic gear rack with steel core

Bolt-on, mounting link down, 3 x 0,33m incl. mounting equipment

1m gear rack	14220060
4m packaging unit	S35104



steel rack for welding

electrogalvanised, incl. mounting equipment (spacer pins, washer and screws)

1m gear rack	14210010
4m packaging unit	S35105



steel rack to bolt-on

electrogalvanised, incl. mounting equipment (spacer pins, washer and screws)

1m gear rack	14210020
4m packaging unit	S35103



stainless steel gear rack to bolt-on

INOX 304, incl. mounting equipment (spacer pins, washer and screws)

1m gear rack	14210050
--------------	-----------------



steel rack wide version width: 20mm

recommended for weights above 1.000kg, electrogalvanised, excl. mounting equipment

1m gear rack	14210110
mounting equipment for gear rack	14220100



steel rack module 6

galvanised, for TPS 40 PRO and TPS 60 PRO

1m gear rack	14210140
mounting equipment for gear rack module 6	14220110





sliding gate automation

accessories for PULL TSA, PULL T, TPS

foundation plate PULL

electrogalvanised and height adjustable
to set in concrete

for PULL T

14110030



mounting plate cranked PULL

hot-dip galvanised, height adjustable
up to 75 mm

for PULL TSA

14650320

for PULL T

14650120



mounting plate PULL

hot-dip galvanised, height adjustable
up to 40 mm

for PULL T

14630070



120mm distance-console

for TPS 20, and TPS 6speed, hot-dip galvanised

14650310





description	PULL TSA	PULL T4speed	PULL T5	PULL T8	PULL T10	PULL T24	PULL T24speed
gate weight	400kg	400kg	500kg	800kg	1000kg	600kg	400kg
gear wheel	Z20 M4	Z16 M4	Z20 M4	Z20 M4	Z16 M4	Z16 M4	Z20 M4
power supply	230V±10%	230V±10%	230V±10%	230V±10%	230V±10%	230V±10%	230V±10%
motor voltage	230V	230V	230V	230V	230V	24V	24V
max. drive distance	30m	30m	30m	30m	30m	30m	30m
duty cycle *	private area	S3 40–60 %	private area	S3 40 %	S3 40–60 %	S3 40–80 %	S3 40–80 %
speed	m/min.	11	17,5	11	11	9	13
	mm/s	183	291	183	183	150	216
torque	15Nm	20Nm	20Nm	25Nm	25Nm	20Nm	20Nm
power consumption	1,3A	1,9A	1,6A	1,6A	1,9A	1A	1A
protection class	IP 44						
LCD with text programming	7-segment	●	●	●	●	●	●
integrated control board	●	●	●	●	●	●	●
automatic reversal system	●	●	●	●	●	●	●
self-learning limit positions	●	●	●	●	●	●	●
soft stop	●	●	●	●	●	●	●
pedestrian entry function	●	●	●	●	●	●	●
dead man function	●	●	●	●	●	●	●
courtyard lamp (adjust.)	/	optional	optional	optional	optional	optional	optional
lockable emergency release	optional	●	●	●	●	●	●
direct connection of 2x 8,2kΩ safety edges	●	●	●	●	●	●	●

description	PULL T15	TPS 6speed	TPS 10speed	TPS 20(N,PRO)	TPS 40 PRO	TPS 60 PRO
gate weight	1500kg	600kg	1000kg	2000kg	4000kg	6000kg
gear wheel	Z16 M4	Z20 M4	Z20 M4	Z15 M4	Z13 M6	Z17 M6
power supply	230V±10%	230V±10%	230V±10%	230V±10%	230V±10%	400V±10%
motor voltage	230V	3 x 230V	3 x 230V	230V	400 V	3 x 400V
max. drive distance	30m	30m	30m	30m	30m	60m
duty cycle *	S3 60 %	S1 100%	S1 100%	S3 80%	S1 100%	S3 80%
speed	m/min	9	30	20	14	17,5
	mm/s	150	500	333	233	291
torque	30Nm	70Nm	70Nm	45Nm	100Nm	300Nm
increased driving torque	/	/	/	65Nm	/	/
power consumption	2,2A	3,0A	3,0A	4,0A	3,0A	5,0A
protection class	IP 44					
LCD with text programming	●	●	●	●	●	●
integrated control board	●	●	●	●	●	●
automatic reversal system	●			●		●
friction clutch						●
self-learning limit positions	●	●	●	●	●	●
soft stop	●	●	●	●	●	●
pedestrian entry function	●	●	●	●	●	●
dead man function	●	●	●	●	●	●
autom. courtyard lamp (adjust.)	optional	optional	optional	optional	optional	
lockable emergency release	●	housing locked with profile half cylinder				
integrated 8,2kΩ resistance evaluator	2-channels	4-channels	4-channels	4-channels	4-channels	2-channels
force adjustment	/	frequency converter	frequency converter	via menu	frequency converter	frequency converter



Note: the max. gate weights are for easy moving and horizontal gates.

* The duty cycle depends on the gate weight. Check also technical data sheets.



Ordering help

Please enter the data of your sliding gate in the table:

dimensions:

A entrance width: mm

B gate height: mm

C lateral space: mm

gate type:

☐ cantilever

☐ ground rollers

gate filling:

☐ stockades

☐ fully filling

incline/decline:

☐ yes ☐ no

(° or %)

system:

estimated weight kg

duty cycle %

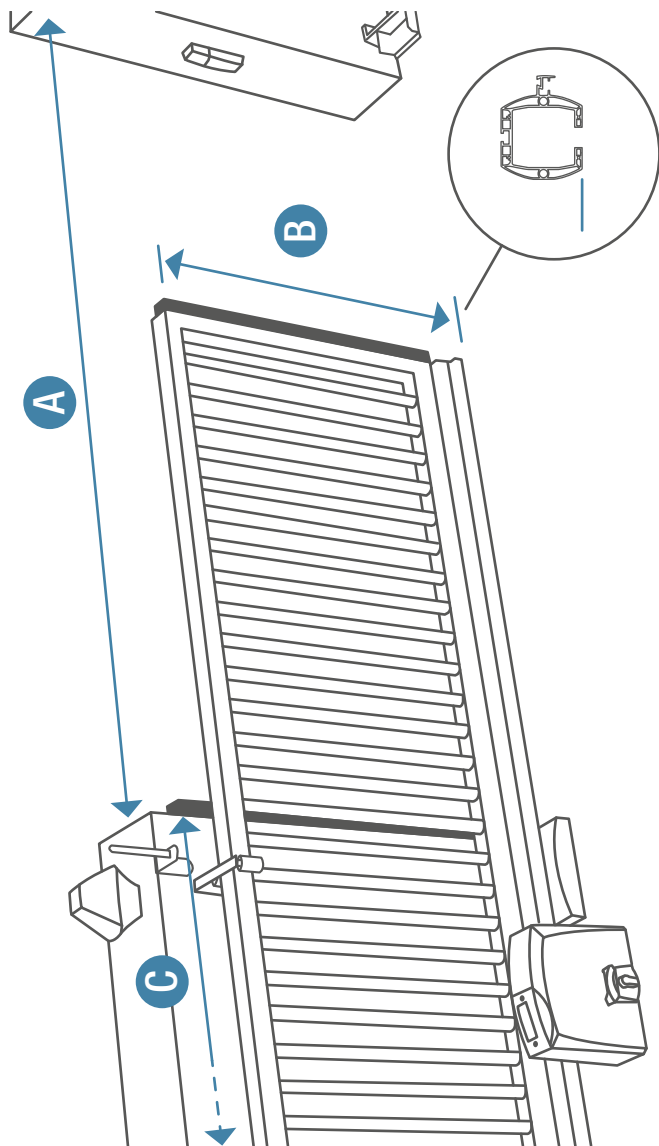
operations/day

parking spaces

cantilever gate:

☐ aluminium (max. entrance width 5.800mm)

☐ steel (max. entrance width 9.100mm)



accessories:

☐ safety edge

☐

☐

operation:

☐ radio

☐ keyswitch

☐ external impulse (potential free)

☐ card reader

☐

☐

Please send us this form by email or fax and you will receive a customized offer for your inquiry!

company stamp, date



safety edge arrangement sliding gate

FE final edge

PE passage edge

P passive edge

main edge passive	
<input type="checkbox"/> No.1	
<input type="checkbox"/> No.2	
<input type="checkbox"/> No.3	
main edge active with radio transmission system TX320	
<input type="checkbox"/> No.4	
<input type="checkbox"/> No.5	
<input type="checkbox"/> No.6	
main edge active with inductive signal supply system TX400i	
<input type="checkbox"/> No.7	
<input type="checkbox"/> No.8	
<input type="checkbox"/> No.9	





page

STEEL

Rollco® LWS 101	●		4,00m	up to 25 kg/m	36
Rollco® LWS 111	●		6,25m	up to 60 kg/m	37
Rollco® LWS 125	●	●	9,10m	up to 150 kg/m	37

ALUMINIUM

Rollco® LWA 115	●		5,80m	up to 40 kg/m	42
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Cantilever system

Rollco® LWS 101, Rollco® LWS 111 and Rollco® LWS 125

product features

- cold-rolled hot-dip galvanised steel strip
- electrogalvanised rolling gear with ball bearing rollers
- including heavy load anchor
- rolling gear with adjusting bolts for easy alignment
- optional stainless steel sole plates

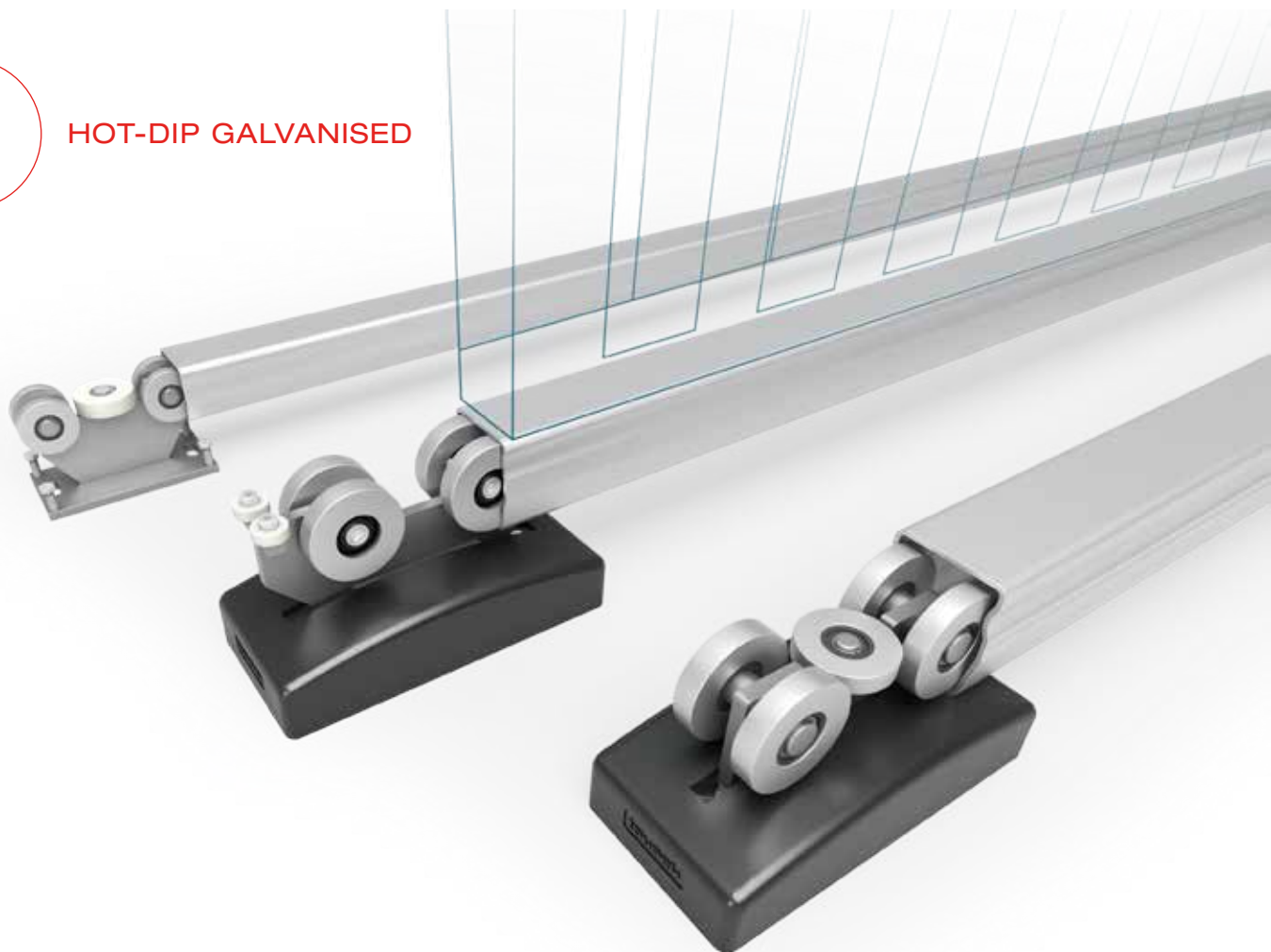
60
MONTHS

GUARANTEE

Rollco® LWS
101, 111, 125



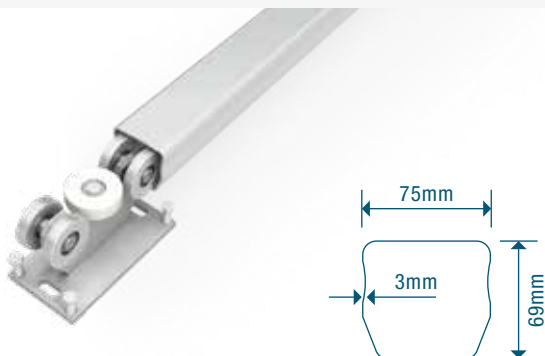
HOT-DIP GALVANISED



Cantilever system

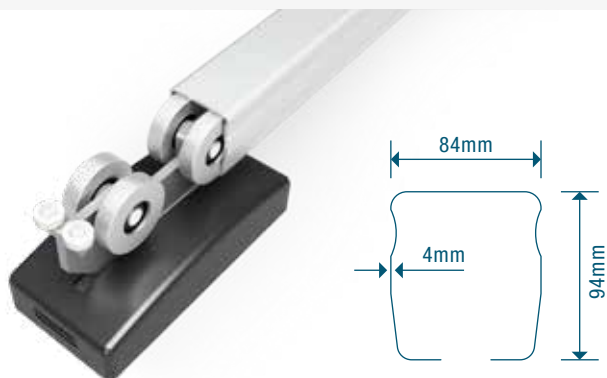
Rollco® LWS 101, Rollco® LWS 111 and Rollco® LWS 125

LWS 101



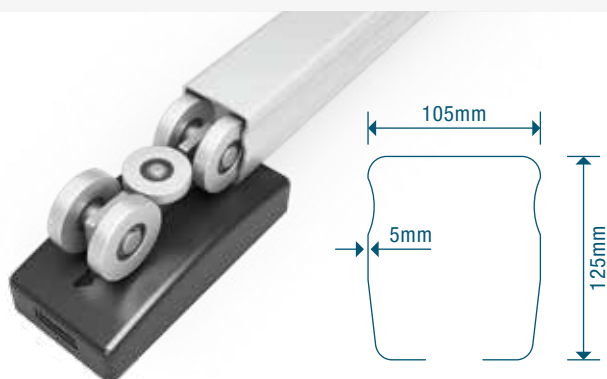
- gate cycles: 20 cycles/day
- load weight: 25kg/m
- weight: 5,5kg/m

LWS 111



- drilling indicator for easier gear rack mounting
- rolling gear with adjusting bolt against tilting for change of load
- rolling gear with a pair of vertical rollers as favorable option (L)
- rolling gear plastic covers
- gate cycles: 30 cycles/day (L)
20 cycles/day (S)
- load weight: up to 60kg/m
- weight: 9kg/m

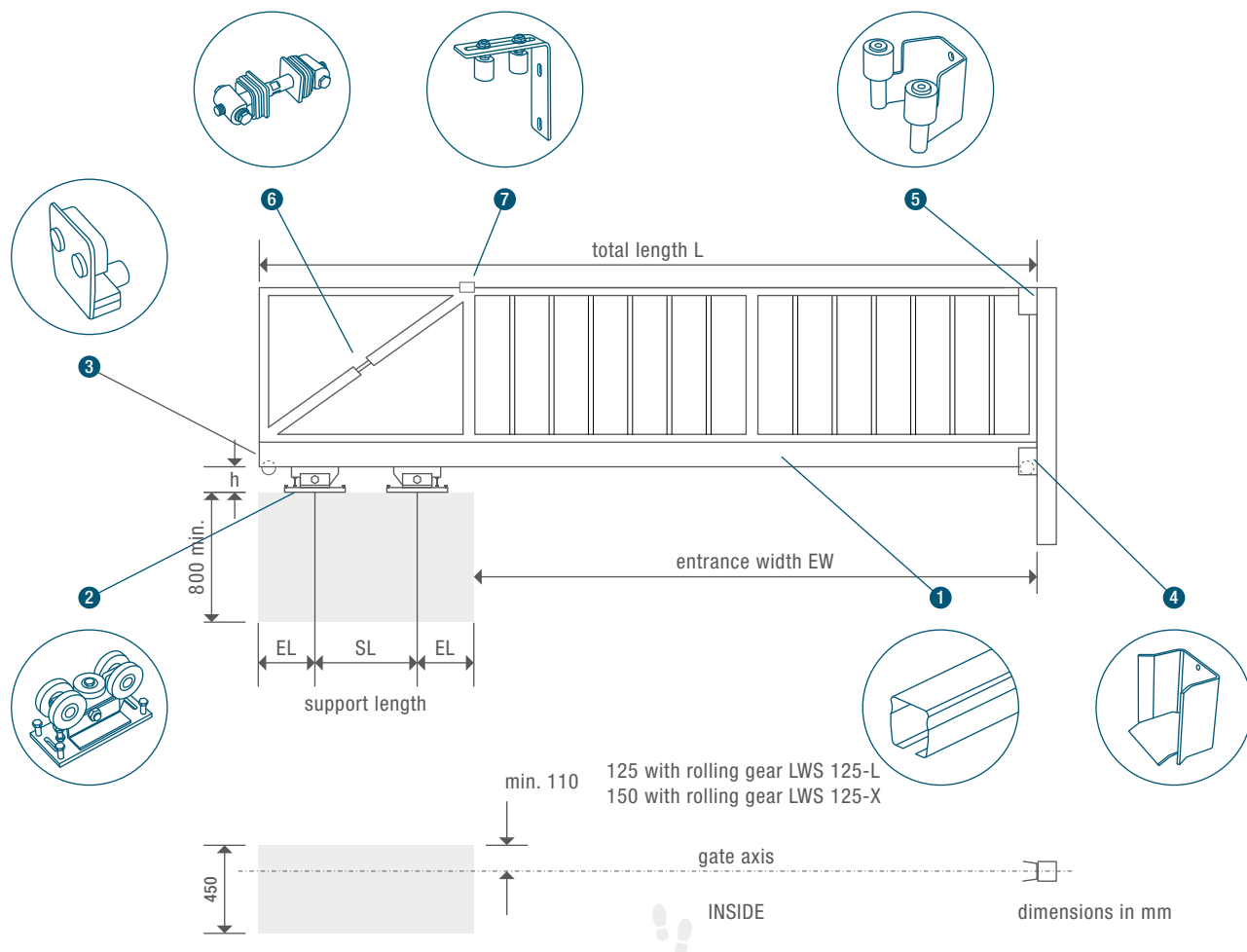
LWS 125



- drilling indicator for easier gear rack mounting
- rolling gear with adjusting bolt against tilting for change of load (S+L)
- rolling gear plastic covers (S+L)
- gate cycles: 100 cycles/day (S+L)
200 cycles/day (X)
- serially with stainless steel sole plates (S+L) respectively zinc coated sole plates (X)
- load weight: up to 150kg/m
- weight: 15kg/m

Cantilever system

Rollco® LWS 101, Rollco® LWS 111 and Rollco® LWS 125



- 1. steel track
- 2. rolling gear
- 3. end plate
- 4. guide-in bracket
- 5. guide-in fork
- 6. turnbuckle
- 7. guide bracket

	h (mm)	excess length EL (mm)
LWS 101	60	225
LWS 111-S, -L	85	275
LWS 125-S, -L	110	275
LWS 125-X	110	325

L total length
EL excess length
SL support length
EW entrance width
TL track length

Cantilever system

Rollco® LWS 101, Rollco® LWS 111 and Rollco® LWS 125



Rollco® LWS 101 / max. load weight

total length L = track length (TL) + 6mm

EW (entrance width) mm	3000	3250	3500	3750	4000
TL (track length) mm	4300	4700	5200	5600	6000
SL (support length) mm	850	1000	1250	1400	1550
max. load weight kg/m	25				

Rollco® LWS 111 / max. load weight

total length L = track length (TL) + 10mm

EW (entrance width) mm	3000	3250	3500	3750	4000	4200	4500	4750	5000	5250	5500	5700	5900	6100	6250
TL (track length) mm	4200	4700	5000	5400	5700	6000	6400	6800	7150	7500	7850	8000	8000	8400	8400
SL (support length) mm	650	900	950	1100	1150	1250	1350	1500	1600	1700	1800	1750	1550	1750	1600
max. load weight kg/m	rolling gear S	50					40					/			
	rolling gear L	60					50					45	40	35	

Rollco® LWS 125 / max. load weight

total length L = track length (TL) + 10mm

EW (entrance width) mm		3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9100
TL (track length) mm		5000	5700	6400	7100	7800	8500	9200	10000	10600	11300	12000	12000
SL (support length) mm	rolling gear S, L	950	1150	1350	1550	1750	1950	2150	2450	2550	2750	2950	/
	rolling gear X	850	1050	1250	1450	1650	1850	2050	2350	2450	2650	2850	2350
max. load weight kg/m	rolling gear S	75		70	65	60	55	/					
	rolling gear L	120	110	100	90	85	80	75	70	65	60	55	/
	rolling gear X	150		130		120		110		100		90	60



The above values are reference values. We can calculate the necessary dimensions for your sliding gate.

Cantilever system

Rollco® LWS 101, LWS 111 and LWS 125



Rollco® LWS 101 - KIT

6000mm steel track, incl. 2 units rolling gear

cantilever kit Rollco® LWS 101

product code

for max. EW 4000mm	S46124
for a common delivery of 6 kits	S46124
stainless steel sole plate	14610080



Rollco® LWS 111

steel tracks Rollco® LWS 111

steel track length

product code

for max. EW 3000mm	4200mm	14610170
for max. EW 4200mm	6000mm	14610100
for max. EW 6250mm	8400mm	14610180

rolling gear for LWS 111

2 units necessary, height adjustable, steel rollers, electrogalvanised, incl. covers

product code

rolling gear LWS111-S	in particular for manual operation	14610130
rolling gear LWS111-L	adjustable in inclination	14610120
stainless steel sole plate		14610050



Rollco® LWS 125

steel tracks Rollco® LWS 125

steel track length

product code

for max. EW 5000mm	7100mm	14620230
for max. EW 6000mm	8500mm	14620240
for max. EW 7000mm	10000mm	14620250
for max. EW 9100mm	12000mm	14620260

rolling gear for LWS 125

2 units necessary, height adjustable, steel rollers, electrogalvanised, incl. covers and stainless steel plate

max. load length

product code

rolling gear LWS125-S	75kg/m	14620280
rolling gear LWS125-L	120kg/m	14620270

rolling gear LWS125-X

2 units necessary, steel rollers, electrogalvanised, incl. stainless steel sole plate, 200 cycles/day
Hinge bearing in main axis for optimal load distribution on all 4 rollers

max. load length

product code

rolling gear LWS125-X	150kg/m	14620290
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Cantilever system

Rollco® LWS 101, LWS 111 and LWS 125 equipment



end plate

electrogalvanised

for LWS 101 **14650180**



end plate

electrogalvanised,
with track roller

for LWS 101 **14650190**



end plate

electrogalvanised,
with rubber bumper

for LWS 111 **14650220**

for LWS 125 **14650250**



end plate

electrogalvanised,
with rubber bumper and track roller

for LWS 111 **14650230**

for LWS 125 **14650240**



limit stop

clamp-on design,
with rubber bumper

for LWS 101 **14650210**

for LWS 111,125 **14650170**



guide-in bracket

electrogalvanised

for LWS 101 **14650200**

for LWS 111 **14650100**

for LWS 125 **14650110**



guide-in bracket with roller

electrogalvanised,
for gates with safety sensing edge

for LWS **14650140**



guide-in fork

opening 60mm or 80mm, hot-dip
galvanised, incl. 2 polyamide rollers

W 60 **14650050**

W 60 stainless steel **14650160**

W 80 **14650270**



limit stop reinforced version

TPS 40 PRO and TPS 6 speed clamp-on
design, with rubber bumper

for LWS125 **14650330**



frictional force 20.000N

guide bracket

straight, hot dip galvanised,
for frame size up to 100mm

14650010



guide bracket

angled, hot dip galvanised,
for frame size up to 100mm

14650020



corrosion protection tape

20m strip for aluminium gates,
3 x 60mm

14630140



turnbuckle

for tension strut, stainless steel

for tube 60/60/3mm **14650030**

for tube 80/80/3mm **14650260**



guide-in console

version: 140mm or 220mm
incl. counter plate and bolts

small: 140mm **14650280**

large: 220mm **14650290**



mounting examples

guide-in bracket console

guide-in fork console

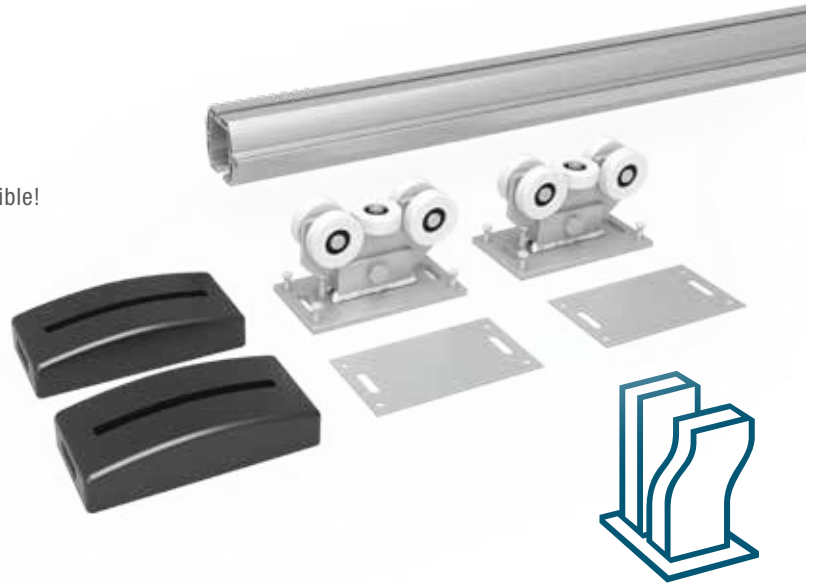


Cantilever system

Rollco® LWA 115

product features

- very smooth running
- corrosion-resistant - natural aluminium
- track for limit switches
- slide-in plastic gear rack incl. gear rack cover
- mounting of gate without drillings on profile possible!
- polyamide rollers
- rolling gear covers in plastic
- optional stainless steel sole plate
- gate cycles: 50 cycles/day
- load weight: up to 40kg/m
- weight: 5kg/m



INNOVATION PRICE
R+T 2003 STUTTGART

FLEXIBLE

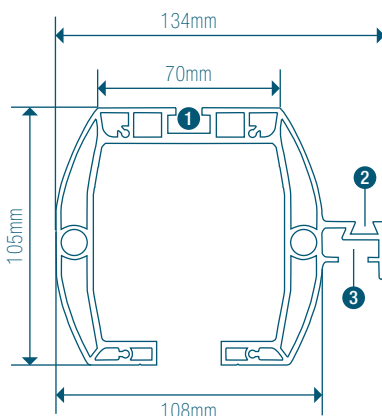
The tiltable and height-adjustable rolling gears exclude load change reactions completely.

SMOOTH RUNNING

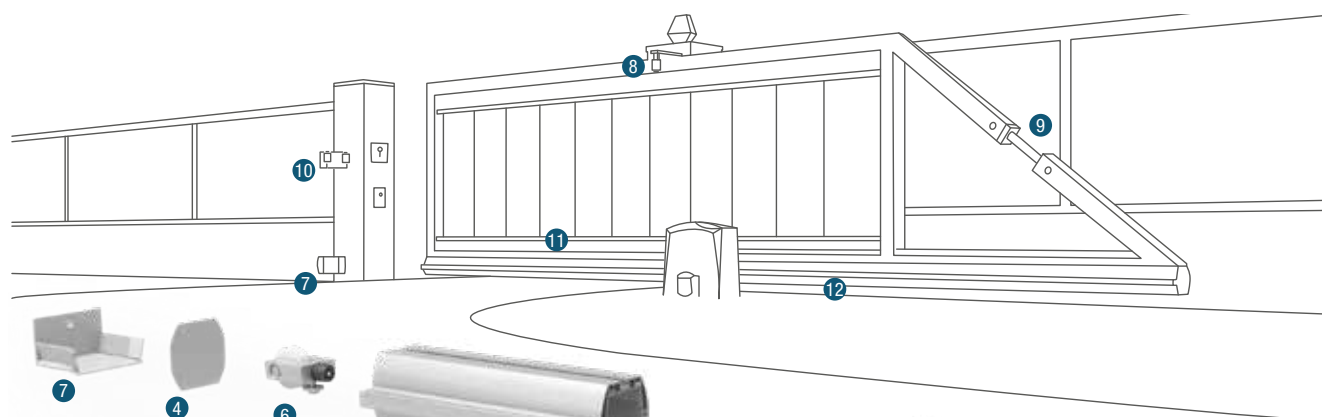
The aluminium cantilever track, in combination with the solid rolling gear and large, ball-bearing polyamide rollers guarantee the highest smoothness.

EFFICIENT

The technically innovative cantilever track allows time-saving and efficient installation of gear rack and limit switches.

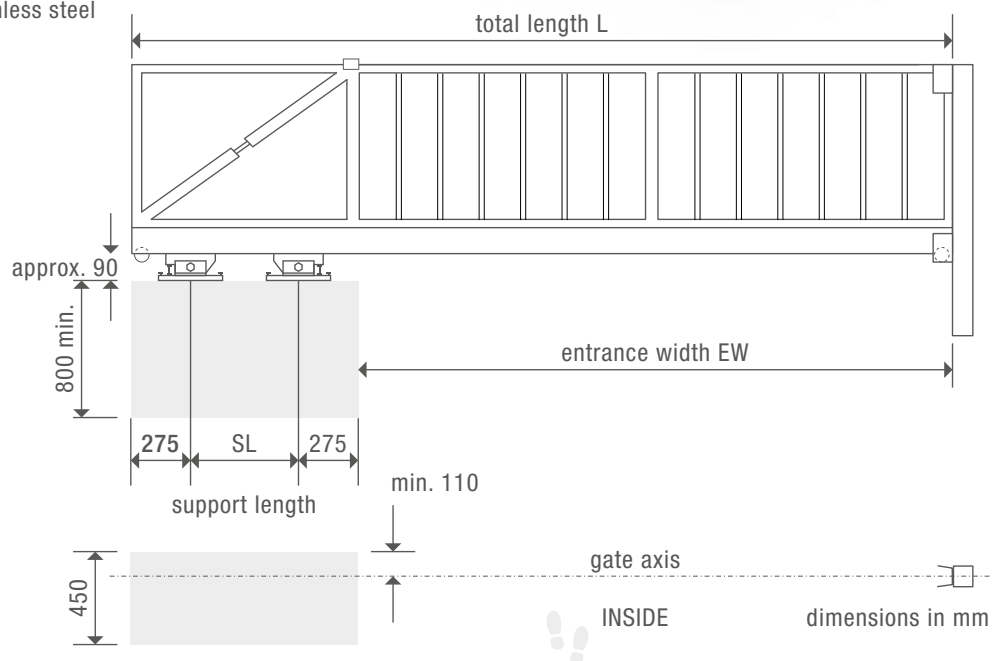


1. track for hammer head bolts
2. profile for limit switches
3. track for plastic gear rack



1. aluminium track
2. rolling gear incl. covers
3. motor mounting plate for tousek sliding gate automation
4. end plate in aluminium
5. limit stop with rubber bumper
6. limit stop with rubber bumper and roller
7. guide-in bracket aluminium
8. guide bracket stainless steel
9. turnbuckle stainless steel
10. guide-in fork stainless steel
11. hammer head bolt stainless steel
12. gear rack plastic

L total length
SL support length
EW entrance width
TL track length



Rollco® LWA 115 / max. load weight

total length L = track length (TL) + 6mm

EW (Entrance width) mm	3000	3500	4000	4300	4500	5000	5500	5800
TL (track length) mm	4300	4900	5600	6000	6250	6900	7550	8000
SL (support length) mm	750	850	1050	1150	1200	1350	1500	1650
max. load weight kg/m	40			35			30	

Cantilever system

Rollco® LWA 115



Rollco® LWA 115

cantilever tracks Rollco® LWA 115	aluminium track length	product code
for max. EW 3000mm	4300mm	14630200
for max. EW 4300mm	6000mm	14630020
for max. EW 5800mm	8000mm	14630030



gear rack

made of plastic, to slide into the aluminium track

product code

gear rack	2 x 0,5m	14220030
-----------	----------	----------



clamping piece

for fixing the gear rack inside track, stainless steel

only one pair needed per cantilever

product code

clamping piece (pair)	14630040
-----------------------	----------



rolling gear for LWA 115

2 units necessary, height adjustable, polyamide rollers, electrogalvanised, incl. covers

product code

rolling gear LWA 115/1A	14630080
stainless steel sole plate	14610050

Cantilever system

Rollco® LWA 115 and equipment



limit stop

natural aluminium, clamp-on design,
with rubber bumper

14630110



limit stop

natural aluminium, clamp-on design,
with rubber bumper and roller

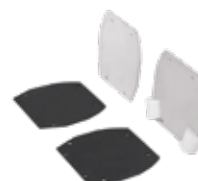
14630120



end plates

natural aluminium, front end plate with
plastic covers and gaskets

14630090



guide-in bracket

natural aluminium, sandblasted

14630100



turnbuckle

for tension strut, stainless steel,
for tube 60/60/3

14650030



guide bracket

angled, stainless steel,
for gate frame size up to 100mm

14650150



guide-in fork

opening 60mm, stainless steel,
incl. 2 polyamide rollers

14650160



hammer head bolt

for connecting the gate with profile, stainless
steel, with cap nutt and discs,
recommendation: every 0.5m

14630050



hammer head bolt

for connecting the gate with profile, stainless
steel, with cap nut and discs, recommendation:
at both ends of the cantilever track

14630060



double: for larger load capacity at the gate ends

corrosion protection tape

tape 20m
for steel gates, 3 x 60mm

14630140





Swing gate automation



page

ELECTROMECHANICAL, SURFACE-MOUNTED

SLIM CLR	●		up to 2,5m	up to 150kg	48
SONIC 24 new	●		up to 2,5m	up to 200kg	50
TURN	●		up to 3,0m	up to 350kg	52
TURN UP	●		up to 3,0m	up to 350kg	52
SWING X	●	●	up to 5,0m	up to 500kg	54
SWING X3 TPspeed		●	up to 3,0m	up to 300kg	58
SWING X4 LH TP		●	up to 4,0m	up to 400kg	58
SPIN 250	●		up to 2,5m	up to 200kg	60
REX force		●	up to 12m	up to 1.500kg	62

ELECTROHYDRAULIC, SURFACE-MOUNTED

SWING 225	●	●	up to 2,5m	up to 400kg	64
SWING 265	●	●	up to 6,0m	up to 600kg	64

ELECTROMECHANICAL, UNDERGROUND-MOUNTED

TURN 310 UF	●		up to 3,0m	up to 400kg	66
DROP BOLT Safelock	●				68

Swing gate automation

SLIM

product features SLIM

- 12V direct current motor
- slim design
- stainless piston rod
- housing made of anodised aluminium
- with limit switches
- mounting brackets in stainless steel
- ARS automatic reversal system
- optional with backup battery for power failure
- soft start and soft stop selectable in a combination with control unit ST12/5



stable motor attachment
in high-grade steel



setting the limit switches
without tools

	max. leaf weight	max. leaf width	working stroke	duty cycle operating mode S3	limit switches	product code
SLIM CLR	150 kg	2,5m	330mm	private area	●	11260280

→ Indication of the max. leaf width is for wind-permeable and for non ascending gates!

general product features ST 12/5

- large illuminated LC-Display (2x16 characters)
- clear text menu programmable through four buttons
- direct connection of 8,2 kΩ safety edges
(separate inside/outside)
- status display for safety and impulse inputs
- partial opening can also be remote controlled (transmitter)
- operating mode selectable (impulse, automatic, dead man)
- adjustable soft stop
- adjustable partial opening for pedestrians
also with single leaf operation
- self-monitoring of photocells



control unit ST 12/5

		product code
ST 12/5	with limit switch management	12111730
battery DA2.2LP	12V, incl. charger board for control ST12/5, up to max. 15 cycles/charge	S35118
additional module courtyard/control lamp	for 230V lamp connection, max. 100W	21110620
additional module gate status	potential free signal contacts, max. 24V, 10W	21110630

→ Only one of the two additional modules can be used.

Swing gate automation

SLIM kit

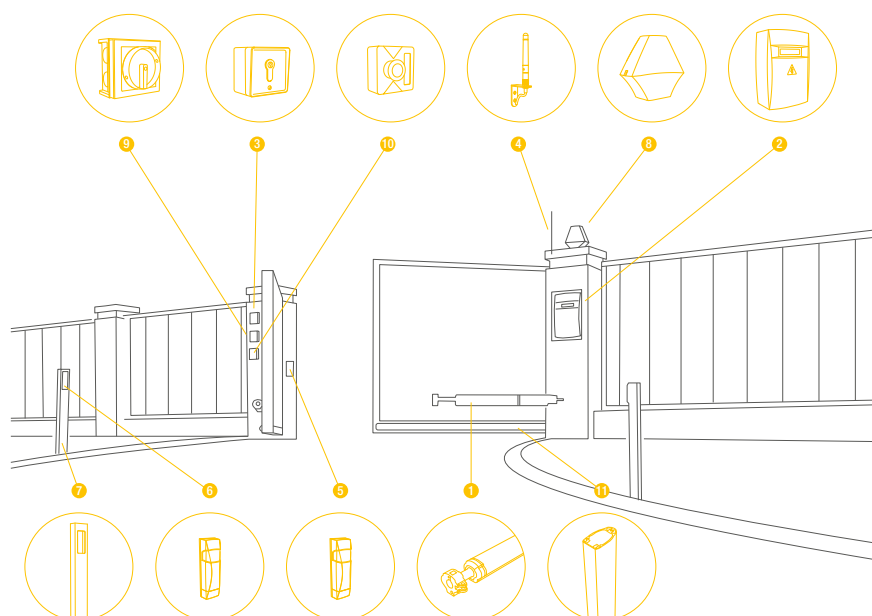
Kit includes:

2 motors incl. mounting equipment
1 control unit ST 12/5
1 receiver RS 868, 2-channels
2 transmitters RS 868-4M, 4-channels
1 signal lamp LED
1 pair of photocells LS 180



product
code

SLIM CLR	2-leaves	62002
----------	----------	-------



1. swing gate operator
2. control unit
3. key-, codepad
4. antenna
5. photocell outside
6. photocell inside
7. photocell pillar
8. signal lamp
9. main switch
10. emergency stop button
11. safety sensing edge

Swing gate automation

SONIC 24

product features SONIC 24

- super fast, 11s for 90°
- included encoder and power consumption-monitoring
- integrated mechanical limit stop for open position, and closed position
- 24V technology
- sensor cable integrated in motor cable
- direct connection of courtyard light
- available in pure white RAL9010, moss green RAL6005 and anthracite grey RAL7016*

new



plastic cover in different colors *



90°

11s

SPEED

product features ST 24 **new**

- with large illuminated LC display with clear text menu
- self-monitoring of photocells
- automatic operator detection
- optional: emergency mode with battery
- radio receiver RS868 integrated
- up to 54 transmitter codes can be learned
- integrated courtyard light output (24V, 4W for connection of a relay)
- output for 24V signal lamp



**INTEGRATED
RADIO RECEIVER RS 868**



Green safe



	max. leaf weight	max. leaf width	working stroke	duty cycle operating mode S3	speed
SONIC 24	200 kg	2,5m	380mm	private area	32mm/s



Indication of the max. leaf width is for wind-permeable and for non ascending gates!
* (similar pure white RAL9010, moss green RAL6005 or anthracite grey RAL7016)

Swing gate automation

SONIC 24 kits

Kit includes:

- 2 operators incl. mounting equipment
- 1 control unit ST 24 (with display)
- 1 integrated radio receiver RS 868, 2-channels
- 2 transmitters RS 868-4M, 4-channels
- 1 pair of photocells LS 180



	with display	product code	price (Euro) excl. VAT
SONIC 24	anthracite grey	62004	
	moss green	62005	
	pure white	62006	

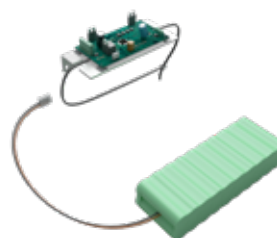
mounting brackets
screwable SONIC
2 pairs

14110230



rechargeable battery 24V, NiMh 1.800mAh, incl. charging control board and cable set

12130260

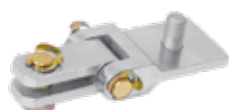


Swing gate automation

TURN, TURN UP

product features TURN

- self-locking operator
- force adjustment through control unit
- 230V AC-motor
- high torque
- very silent operation
- soft stop in combination with control unit ST51



motor bracket for ascending gates



Massive operator spindle made of steel



operator unit



emergency release Turn UP: lockable with key

	max. leaf weight	max. leaf width	working stroke	duty cycle operating mode S3		product code
TURN 10	350 kg	2,5m	303mm	private area	left right	11260210 11260220
TURN 20	350 kg	3,0m	402mm		left right	11260230 11260240
TURN UP1	350 kg	2,5m	300mm		left right	11260170 11260180
TURN UP2	350 kg	3,0m	400mm		left right	11260190 11260200
motor bracket for operator TURN			for ascending gates, electrogalvanised		14120150	
motor bracket for operator TURN UP			for ascending gates, electrogalvanised		14120160	

→ Indication of the max. leaf width is for wind-permeable and for non ascending gates!

product features ST 51

- large illuminated LC-Display (2x16 characters)
- clear text menu programmable through four buttons
- direct connection of 8,2 kΩ safety sensing edges (separate inside/outside)
- status display for safety and impulse input
- self-monitoring of photocells
- adjustable soft stop
- operating mode selectable (impulse, automatic, dead man)
- adjustable partial opening for pedestrians also with single leaf operation
- partial opening can also be remote controlled (transmitter)



control unit ST 51

	product code
ST 51	12111660
E-lock-/magnet module	see page 69 13810220
ST 51A	for traffic light operation, see page 94 12120350
STA 11	traffic light control unit, only in combination with ST 51A 12120370

Swing gate automation

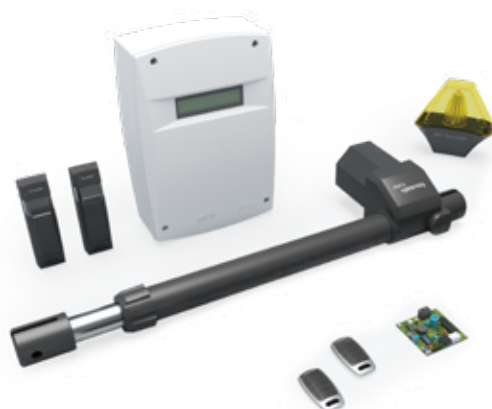
TURN, TURN UP kits

Kit includes:

1 or 2 operator(s) incl. mounting equipment
 1 control unit ST 51
 1 radio receiver RS 868, 2-channels
 2 transmitters RS 868-4M, 4-channels
 1 signal lamp LED
 1 pair of photocells LS 180

product code

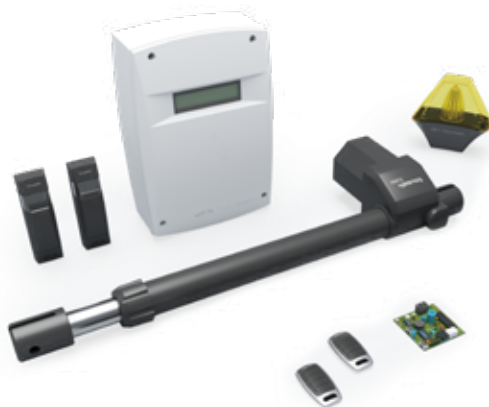
TURN 10	① 2-leaves		62109
TURN 20	① 2-leaves		62110
TURN 20	② 1-leaf	left	62111
		right	62112
TURN UP 1	③ 2-leaves		62113
TURN UP 2	③ 2-leaves		62114
TURN UP 2	④ 1-leaf	left	62115
		right	62116



① 2-leaves TURN



② 1-leaf TURN



③ 2-leaves TURN UP

④ 1-leaf TURN UP

Swing gate automation

SWING X

product features SWING X

- self-locking gearing (blocking of gate)
- emergency release lockable with profile half cylinder
- adjustable internal, mechanical limit stops
- ARS automatic reversal system
- very massive ball-bearing spindle with bronze made screwed coupling
- gimbal-mounted on both sides
- all parts made of high quality materials, such as aluminium, stainless steel, bronze or electrogalvanised steel
- adjustable soft stop and soft start in combination with control unit ST61
- integrated speed sensor



massive motor-gearing unit



emergency release with profile half cylinder



integrated limit stops



general product features ST 61

- large illuminated LC-Display (2x16 characters)
- clear text menu programmable through four buttons
- operating mode selectable (impulse, automatic, dead man)
- rotation speed sensor input
- direct connection of 8,2 k Ω safety sensing edges separated (inside/outside)
- status display for safety and impulse inputs
- self-monitoring of photocell
- adjustable soft stop



Swing gate automation

SWING X Kits

Kit includes:

1 or 2 operator(s) incl. mounting equipment
 1 control unit ST 61
 1 receiver RS 868, 2-channels
 2 transmitters RS 868-4M, 4-channels
 1 signal lamp LED
 1 pair of photocells LS 180

		product code	price (Euro) excl. VAT
SWING X3 HD	1 2-leaves	62208	
SWING X3 LHD		62209	
SWING X4 LHD		62210	
SWING X3 HD	2 1-leaf	62211	
SWING X3 LHD		62212	
SWING X4 HD		62213	
SWING X4 LHD		62214	



electric emergency release

for SWING X, Release or locking through impulse button or transmitter
 automatic release in case of power failure can be selected

release motor

incl. mounting
 12V

13830040

installation **14150190**



control unit

(incl. battery and charger board)
 suitable for two release motors

12112160



motor console / gate side

for SWING X, massive finish,
 adjustable

zinc coated **14120310**

stainless steel **14120370**



motor console / column side

for SWING X, massive finish

zinc coated **14120280**

stainless steel **14120300**



Swing gate automation

SWING X



	max. leaf weight	max. leaf width	shear force	motor supply	working stroke	duty cycle operating mode S3	product code
SWING X3 HD	500 kg	3,0m	4000N	230V	320mm	60%	11260520
SWING X3 LHD	500 kg	3,5m	4000N	230V	450mm	60%	11260530
SWING X4 HD	500 kg	4,0m	5000N	230V	320mm	60%	11260460
SWING X4 LHD	500 kg	4,5m	5000N	230V	450mm	60%	11260470
SWING X5 LH	500 kg	5,0m	6500N	230V	450mm	40%	11260420

→ Indication of the max. leaf width is for wind-permeable and for non ascending gates!
The integrated mechanical limit stops of SWING X are for gates up to 200kg and for leaf width up to 3m.
LH versions are for bigger gate pillars and larger opening angle.



control unit ST 61

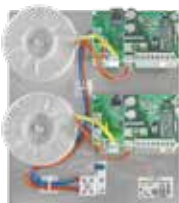
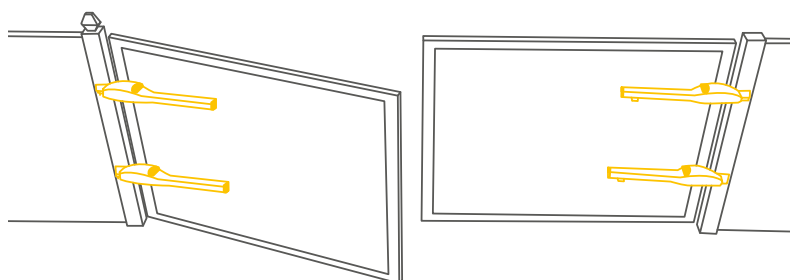
	product code
ST 61	12111670
e-lock-/magnet module	see page 69 13810220
drop bolt module	see page 68 13810240
additional module courtyard lamp/control lamp	for 230V lamp connection, max. 100W 21110490
additional module for gate status	potential free signal contacts, max. 24V, 10W 21110420
ST 61A	for traffic lights, see page 94 12120340
STA 11	traffic light control unit, only in combination with ST61A 12120370

general product features ST64

- connection for 4 pieces SWING X, 2 units per gate leaf
- in steel cabinet
- dimensions W x H x D: 600 x 380 x 210mm
- large, illuminated LC display (2x16 characters)
- clear text menu programmable through 4 buttons
- operation mode is selectable (impulse, automatic, deadman)
- encoder input
- direct connection of 8.2 k Ω safety edges (seperated for main and side edge)
- status display for safety and impulse inputs
- self-monitoring of the photocells
- main switch built into the door



extension module
for 1 drop bolt



extension module
for 2 drop bolts

control unit ST64		product code
ST 64	in steel cabinet	12112340
ST 64A	incl. STA11, in steel cabinet, see page 93	12112430
extension module for 1 drop bolt	built on steel plate, incl extension module	12112410
extension module for 2 drop bolts	and installation, for door mounting	12112420
additional module courtyard lamp/ control lamp	for 230V lamp connection, max. 100W	21110490
additional module for gate status	potential free signal contacts, max. 24V, 10W	21110420

Swing gate automation

SWING X TP

product features SWING X3 TP *SPEED* and SWING X4 LH TP

- 3 phase motor
- self-locking gear mechanism
- emergency release lockable with profile half cylinder
- adjustable internal, mechanical limit stops
- ARS automatic reversal system
- very massive ball-bearing spindle with bronze made screwed coupling
- gimbal-mounted on both sides
- all parts made of high quality materials, such as aluminium, stainless steel, bronze or electrogalvanised steel
- adjustable soft stop and soft start in combination with control unit ST 63
- integrated speed sensor
- smooth soft start / stop due to frequency converter



emergency release with profile half cylinder



massive motor-gearing unit



integrated limit stops

general product features ST 63

- large illuminated LC-Display (2x16 characters)
- clear text menu programmable through four buttons
- encoder input
- direct connection of four 8,2kΩ safety sensing edges
- status display for safety and impulse inputs
- self-monitoring of photocells
- operating mode selectable (impulse, automatic, dead man)
- traffic light in combination with STA11
- adjustable soft stop and soft start
- automatic engine detection
- output for 24V signal lamp
- operation mode is selectable (swing gate or folding gate)
- integrated courtyard light output (potential-free contact, max. 5A)
- shielded motor cable required!
- in steel cabinet or in plastic housing
- steel cabinet: W x H x D: 600 x 400 x 210mm
- plastic housing: W x H x D: 291 x 341 x 128mm



Swing gate automation

SWING X TP

	max. leaf weight	max. leaf width	shear force	motor power supply	working stroke	duty cycle operating mode S3	product code
SWING X3 TP speed	300 kg	3,0m	4000N	3x230V	320mm	80%	11260550
SWING X4 LH TP	400 kg	4,0m	5000N	3x230V	450mm	80%	11260570

→ Indication of the max. leaf width is for wind-permeable and for non ascending gates!
The integrated mechanical limit stops of SWING X are for gates up to 200kg and for leaf width up to 3m.
The operators are delivered without motor and sensor cables.

SWING X TP connection set 2.5m, for one operator	Motor- and sensor cable incl. one-sided plug	14120470
SWING X TP connection set 10m for one operator		14120480

control unit ST 63

		product code
ST 63K 1-leaf*	incl. 1 frequency converter, in plastic housing	12112240
ST 63 1-leaf	incl. 1 frequency converter, in steel cabinet	12112210
ST 63 2-leaves	incl. 2 frequency converters, in steel cabinet	12112220
additional module for gate status	potential free signal contacts, max. 24V, 10W	21110420
extension module for 1 drop bolt*	built on steel plate, incl. control unit with extension module	12112410
extension module for 2 drop bolts*	and installation, for door mounting	12112420
extension module STA11	including installation, see page 93	12120440

→ * The extension modules are only suitable for the control boards in the steel cabinet.

electric emergency release

for SWING X TP, 230V, release or locking through
impulse button or transmitter, automatic release in case of
power failure can be selected

release motor

incl. mounting
12V

13830040

installation **14150190**



control unit

(incl. battery and charger board)
suitable for two release motors

12112160



motor console / gate side

for SWING X TP,
massive finish, adjustable
(not for standard SWING X)

stainless steel **14120400**



Motor console / column side

for SWING X TP and SWING X,
massive finish

stainless steel **14120300**



Swing gate automation

SPIN 250

product features SPIN 250

- very slim design: 125mm
- electromechanical operator with articulated arm
- self-locking articulated arm (blocking of the gate)
- integrated encoder
- simple emergency release with socket wrench, optional with bowden cabel
- opening and closing force infinitely adjustable via control unit
- soft- start and stop in combination with ST 61 control unit



	max. leaf weight	max. leaf width	motor power supply	duty cycle operating mode S3	speed	product code
SPIN 250	200kg	2,5m	230V	private area	9°/s	11260580
emergency release external	for bowden cable, lockable, incl. profile half cylinder					14130370
bowden cabel 3m	with cable 1,5mm x 4m					14140130
bowden cabel 4,5m	with cable 2mm x 5m					14140140
bowden cabel 7,5m	with cable 2mm x 8m					14140150



Indication for the max. leaf width is for wind permeable and for non ascending gates!

general product features ST 61

- large illuminated LC-Display (2x16 characters)
- clear text menu programmable through four buttons
- operating mode selectable (impulse, automatic, dead man)
- rotation speed sensor input
- direct connection of 8,2 kΩ safety sensing edges separated (inside/outside)
- status display for safety and impulse inputs
- self-monitoring of photocells
- adjustable soft start and stop



		product code
ST 61		12111670
e-lock-/magnetic module	see page 69	13810220
drop bolt module	see page 68	13810240
ST 61A	for traffic lights, see page 94	12120340
STA 11	traffic light control unit, only in combination with ST 61A	12120370

Swing gate automation

SPIN 250 kit



Kit includes:

- 2 operators incl. mounting equipment
- 1 control unit ST 61
- 1 radio receiver RS 868, 2-channels
- 2 transmitters RS 868-4M, 4-channels
- 1 signal lamp LED
- 1 pair of photocells LS 180

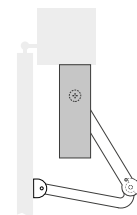
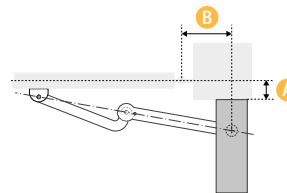
product code

SPIN 250	62304
articulated arm A1*	11260630
articulated arm A2*	11260640

*2 pieces necessary

articulated arm A1

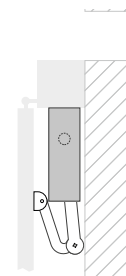
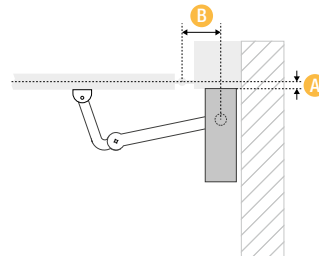
L=350mm + 430mm,
Limit stop in the articulated arm
increases the holding force.



A: 0 ÷ 300mm
B: 100 ÷ 350mm

articulated arm A2

L=210mm + 430mm,
with little lateral space
requirement, up to max. 200kg
and 1.75m leaf width, for small
leaves with little space in the
open position



A: 0 ÷ 155mm
B: 100 ÷ 250mm

For exact dimensions, please refer to the mounting- and installation manual. Information applies to 90° opening angle.

Swing gate automation

REX force

product features REX force

- suitable for continuous operation (100% duty cycle)
- angle measurement via absolute encoder
(no limit switches), it is not necessary to search for limit positions after unlocking or after power failure.
- internal adjustable mechanical limit stops
- adjustable soft stop (travel and speed)
- adjustable speed (separated for OPEN and CLOSE), controlled via frequency converter
- mechanical brake for safe gate stop
- dimension (W x H x D): 361 x 340 x 820mm
- massive triplex chain



	max. gate weight	max. leaf width	time for 90°	product code
REX force	1500kg	12m	30-50s	11260500
motor arm REX force				14120380
gate arm REX force	with screwable gate bracket, adjustable			14120390
surface mounted external emergency release REX	for bowden cable, lockable, incl. profile half cylinder			14130370
bowden cable 3m	with cable 1,5mm x 4m			14140130
bowden cable 4,5m	with cable 2mm x 5m			14140140
bowden cable 7,5m	with cable 2mm x 8m			14140150

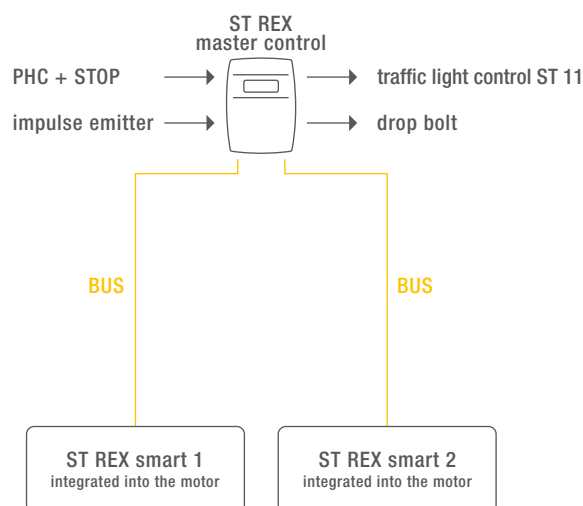
→ Indication of max. leaf width valid for wind-permeable and non ascending gates!

general features ST REX

- large illuminated display (2 x 16 characters)
- clear text menu programmable through 4 buttons
- slot for radio receiver
- status display for safety and impulse inputs
- self-monitoring photocells
- operating mode selectable (impulse, automatic, deadman)
- free adjustable partial opening for pedestrians (even with single leaf operation)
- partial opening can also be remote controlled (transmitter)
- locking with dropbolt possible (additional module and control unit are necessary for drop bolt)
- combined with STA11 traffic light operation (one-way or two-way traffic control)
- input for gate rear area monitoring
- separate input for I-loop detectors
- 12V and 230V signal lamp output
- integrated fault signaling contact
- optional external gate status display (e.g. concierge)
- optional courtyard module (230V,100W)
- optional drop bolt module

general features ST REX smart

- management of brake, emergency release, motor and integrated frequency converter
- direct connection of 8,2 kΩ safety sensing edges /separated (inside/outside)
- connection to the master control via BUS line



control unit ST REX

		product code
ST REX force (master control)	in housing F/DSP	12112140
ST REX smart	for installation into the motor, incl. frequency converter	12112130
mounting of ST REX smart into REX force operator	incl. pre-wiring	14150430
STA 11	traffic light control board	12120370
additional module courtyard/ control light*	for 230V light connection, max. 100W	21110490
additional module for gate status display*	potential free signal contacts, max. 24V, 10W	21110420
additional module drop bolt	see page 68	13810240
control unit for drop bolt Safelock	for 1 drop bolt	12112150
control unit for drop bolt Safelock	for 2 drop bolts	12112280
drop bolt Safelock grey aluminium**	see page 68	13800070
drop bolt Safelock anthracite grey**	see page 68	13800060



For trouble-free operation, an all-current-sensitive residual current circuit breaker is essential.

* Only one of the two additional modules can be used.

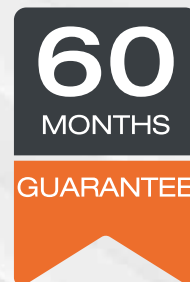
** similar RAL 7016 or RAL 9007

Swing gate automation

SWING 225, SWING 265

product features SWING

- very strong torque (up to 4500N)
- force adjustment through bypass valves
- closed hydraulic system no ventilation necessary - maintenance free
- anodised, shapely aluminium housing
- for lowest temperatures (up to -25°C)
- covered emergency release



SWING 225, 265



hydraulic pump



piston rod with cover



the rear operator bracket

general product features ST 51

- large illuminated LC-Display (2x16 characters)
- clear text menu programmable through four buttons
- direct connection of 8,2 kΩ safety sensing edges (separately inside/outside)
- status display for safety and impulse inputs
- self-monitoring of photocells
- adjustable soft stop
- operating mode selectable (impulse, automatic, dead man)
- free adjustable partial opening for pedestrians also with single leaf operation
- partial opening can also be remote controlled (transmitter)



Swing gate automation

SWING 225 and SWING 265 kits

	max. leaf weight	max. leaf width	motor power supply	working stroke	duty cycle operating mode S3	blocking open / closed	product code
SWING 225 AEB/29N	400 kg	1,8m	230V	285mm	30%	●	11210210
SWING 225 NB/29N *	400 kg	2,5m	230V	285mm	30%		11210220
SWING 265 AEB/29N	600 kg	2,5m	230V	295mm	40%	●	11220080
SWING 265 AEB/44V1	600 kg	3,0m	230V	445mm	40%	●	11220110
SWING 265 NB/29N *	600 kg	4,0m	230V	295mm	40%		11220090
SWING 265 NB/44N *	600 kg	6,0m	230V	445mm	40%		11220100

→ Indication of the max. leaf width is for wind-permeable and for non ascending gates!
* Electric lock or drop bolt necessary

	product code
ST 51	12111660
e-lock-/magnetic module	see page 69
ST 51A	for traffic light operation, see page 94
STA 11	traffic light control board, only in combination with ST51A

Kit includes:

- 2 operators incl. mounting equipment
- 1 control unit ST 51
- 1 radio receiver RS 868, 2-channels
- 2 transmitters RS 868-4M, 4-channels
- 1 signal lamp LED
- 1 pair of photocells LS 180



		product code
SWING 225	2x SWING 225AEB/29N	62403
SWING 265	2x SWING 265AEB/29N	62404

Swing gate automation

TURN 310 UF underground operator

product features

TURN 310 UF and TURN 310 UF/E

- integrated, mechanical limits for OPEN and CLOSE positions
- optional with stainless steel case (TURN 310 UF/E)
- emergency release on both sides with socket wrench
- dismantling without removing the gate is possible
- opening and closing force infinitely adjustable via control unit
- soft stop in combination with control unit ST 51



junction box



optional bracket for 180° opening



general product features ST 51

- large illuminated LC-Display (2x16 characters)
- clear text menu programmable through four buttons
- direct connection of 8,2 k Ω safety sensing edges (separately inside/outside)
- status display for safety and impulse inputs
- self-monitoring of photocells
- adjustable soft stop
- operating mode selectable (impulse, automatic, dead man)
- free adjustable partial opening for pedestrians also with single leaf operation
- partial opening can also be remote controlled (transmitter)



Swing gate automation

TURN 310 UF kit

	max. leaf weight	max. leaf width	motor power supply	duty cycle operating mode S3	opening angle	product code
TURN 310UF	400 kg	up to 3,0m*	230V	30%	110°	11230101
TURN 310UF/E, stainless steel	400 kg	up to 3,0m*	230V	30%	110°	11230111
optional bracket	for TURN 310 UF opening angle 180° (external limit stops necessary)					14120220
junction box IP66	aluminium housing with metal cable bolting					11230130
protection wax	for conservation of motor and housing					13660310



Indication of the max. leaf width is for wind-permeable and for non ascending gates!
* from 2,5m leaf width an electric lock or a drop bolt is necessary.

	product code
ST 51	12111660
e-lock-/magnetic module	see page 69
ST 51A	for traffic light operation, see page 94
STA 11	traffic light control board, only in combination with ST51A
	12120350
	12120370

TURN 310 UF - KITS

Kit includes:

- 2 operators incl. mounting equipment
- 1 control unit ST 51
- 1 radio receiver RS 868, 2-channels
- 2 transmitters RS 868-4M, 4-channels
- 1 signal lamp LED
- 1 pair of photocells LS 180



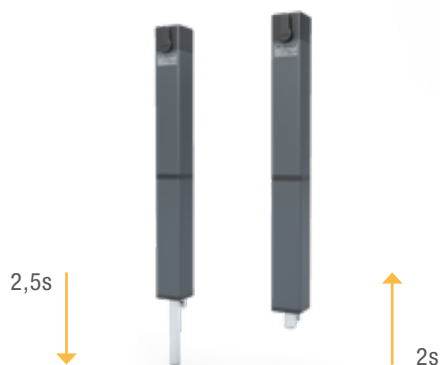
		product code
TURN 310 UF	zinc coated case	62503
TURN 310 UF/E	stainless steel case	62504

Drop bolt

Safelock

product features

- working stroke 125mm
- diameter of the bolt: 23mm
- powder-coated aluminium housing
- emergency release locked with profile half cylinder including 3 keys
- limit switch for "bolt retracted"
- ARS - automatic reversal system for optimal adjustment of the track
- suitable for vertical installation
- incl. 1m 4-pin cable
- control unit required
- for control units ST 51, ST 61, ST 63, ST 64 and ST-REX
- can be used for external control units via flashing light output



speed



control unit drop bolt

new



stop for motor bolt Safelock

		product code
drop bolt Safelock anthracite grey*	similar RAL 7016	13800060
drop bolt Safelock grey aluminium*	similar RAL 7016	13800070
control unit for drop bolt Safelock	for one drop bolt	12112150
control unit for drop bolt Safelock	for two drop bolts	12112280
drop bolt module	for control units ST 51, ST 61, ST 63, ST 64 and ST-REX	13810240
stop for motor bolt Safelock	stainless steel, for frame size 50mm or 60mm	14120490

magnetic clamp 24V

Only in combination with control unit ST 51, ST 61, ST 63

GD 50
500N adhesive force **13820060**

GD 70
1450N adhesive force **13820070**



anchor plate

for GD 50 **13820030**

for GD 70 **13820040**



anchor plate (telescopic)

for GD 50 **13820050**

for GD 70 **13820080**



electric lock

with internal cylinder

12V AC **13810020**

24V DC **13810120**



electric lock

with internal and external cylinder, 12V AC

12V AC **13810030**



electric lock

with rotary knob

12V AC **13810010**

24V DC **13810110**



electric lock

for profile half cylinder without cylinder

12V AC **13810090**

24V DC **13810100**



electric lock

with cylinder and 3 keys

12V AC **13810080**

24V DC **13810140**



electric lock

with pull wire

12V AC **13810070**

24V DC **13810150**



alignment bracket

for electric lock, electrogalvanised

13800040



travel limiter swing gate

with stainless steel-pipe, for OPEN and CLOSE, adjustable, bolt-on

electrogalvanised **14120140**

stainless steel **14120270**



electric lock/magnetic module

for ST 51, ST 61 and ST 63

for 24V DC electric lock and 24V DC magnet **13810220**

for 12V DC electric lock and 24V DC magnet **13810230**



Swing gate automation

technical data

description	SLIM CLR	TURN 10	TURN 20	TURN UP1	TURN UP2
max. leaf weight	150kg	350kg	350kg	350kg	350kg
max. leaf width	2,5m	2,5m	3m	2,5m	3m
duty cycle S3*	private area				
motor power supply	12V	230V±10%	230V±10%	230V±10%	230V±10%
travel speed	13mm/s	18,5mm/s	18,5mm/s	18,8mm/s	18,8mm/s
max. shear forc/torque	1800N	3500 N	3500 N	2800 N	2800 N
max. working stroke	330mm	303mm	402mm	300mm	400mm
max. opening angle	120°	95°	110°	95°	110°
blocking position OPEN	●	●	●	●	●
blocking position CLOSED	●	●	●	●	●
force adjustment through control unit	●	●	●	●	●
built-in limit switches	●				
emergency release	●	●	●	●	●

description	SPIN 250	TURN 310UF	SONIC 24	REX FORCE
max. leaf weight	200kg	400kg	200kg	1500kg
max. leaf width	2,5m	3m	2,5m	12m
duty cycle S3*	private area	30%	private area	100%
motor power supply	230V±10%	230V±10%	24V	3x230V
opening speed	9°/s	6°/s	8°/s	30 up to 50s/90°
max. shear force/torque	400Nm	300Nm	1800N	3500Nm
max. working stroke			380mm	
max. opening angle	120°	110° - opt. 180°	110°	110°
internal limit stops			●	
blocking position OPEN	●	●	●	●
blocking position CLOSED	●	●	●	●
force adjustment through control unit	●	●	●	●
built-in limit switches				
emergency release	●	●	●	●
adjustable limit stops		●	●	●
torque sensor	●		●	●

* The duty cycle depends on the gate weight, please check also the technical sheets!

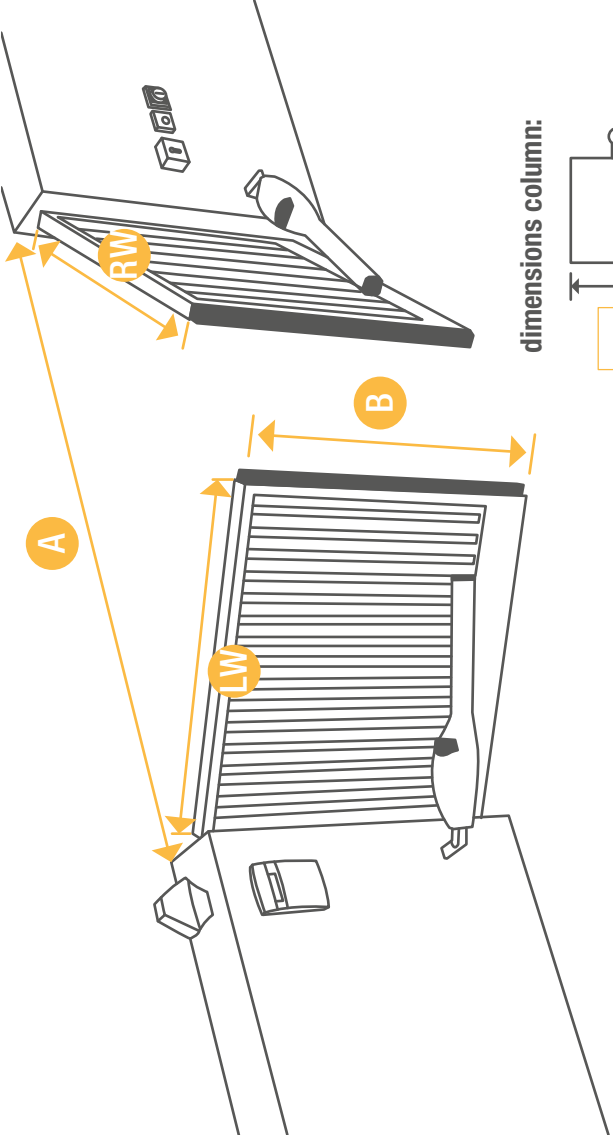
Swing gate automation

technical data

description	SWING X3 HD	SWING X3 LHD	SWING X4 HD	SWING X4 LHD	SWING X5 LH	SWING X3 TP SPEED	SWING X4 LH TP
max. leaf weight	500kg	500kg	500kg	500kg	500 kg	300kg	400kg
max. leaf width	3,0m	3,5m	4,0m	4,5m	5,0m	3,0m	4,0m
duty cycle S3*	60%	60%	60%	60%	40%	80%	80%
motor power supply	230V±10%	230V±10%	230V±10%	230V±10%	230V±10%	3x230V	3x230V
stroke speed	14,0mm/s	14,0mm/s	11mm/s	11mm/s	11mm/s	28mm/s	14mm/s
max. shear force/torque	4000N	4000N	5000N	5000N	6500N	4000N	5000N
max. working stroke	320mm	450mm	320mm	450mm	450mm	320mm	450mm
max. opening angle	100°	110°	100°	110°	110°	100°	100°
internal limit stops up to	200kg/3m	200kg/3m	200kg/3m	200kg/3m	200kg/3m	200kg/3m	200kg/3m
blocking position OPEN	●	●	●	●	●	●	●
blocking position CLOSED	●	●	●	●	●	●	●
force adjustment through control unit	●	●	●	●	●	●	●
emergency release	●	●	●	●	●	●	●
adjustable limit stops	●	●	●	●	●	●	●
torque sensor	●	●	●	●	●	●	●

description	SWING 225AEB/29N	SWING 225NB/29N	SWING 265AEB/29N	SWING 265NB/29N	SWING 265AEB/44V1	SWING 265NB/44N
max. leaf weight	400kg	400kg	600kg	600kg	600kg	600kg
max. leaf width	1,8m	2,5m	2,5m	4,0m	3,0m	6,0m
duty cycle *	S3 30%	S3 30%	S3 40%	S3 40%	S3 40%	S3 40%
motor power supply	230V±10%	230V±10%	230V±10%	230V±10%	230V±10%	230V±10%
travel speed	10mm/s	10mm/s	10mm/s	10mm/s	20mm/s	10mm/s
max. shear force	3000N	3000N	4500N	4500N	3000N	4500N
max. working stroke	285mm	285mm	285mm	285mm	445mm	445mm
max. opening angle	110°	110°	110°	110°	110°	110°
blocking position OPEN	●		●		●	
blocking position CLOSED	●		●		●	
force regulation through bypass valves	●	●	●	●	●	●
emergency release	●	●	●	●	●	●

* The duty cycle depends on the gate weight, please check also the technical sheets!



Please enter the data of your swing gate in the table:

dimensions:

A

entrance width:

mm

LW

left wing:

mm

RW

right wing:

mm

B

gate height:

mm

operator type:

☐ overground operator

☐ underground operator

gate filling:

☐ stockades

☐ fully filling

incline/decline:

☐ yes

☐ no

(° or %)

system:

estimated weight

kg

leaf weight

kg

second leaf weight

%

duty cycle

operations/day

parking spaces

dimensions column:

mm

mm

mm

accessories:

☐ ground limit stop

☐ door hinge

☐ safety edges

☐

☐

operation:

☐ radio

☐ keyswitch

☐ external impulse (potential free)

☐ card reader

☐

☐

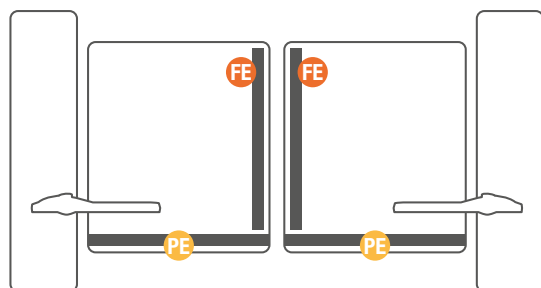
company stamp, date

safety edge arrangement swing gate

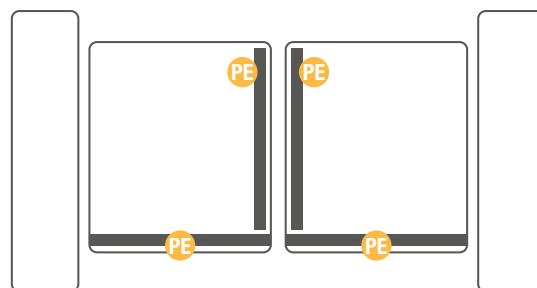
FE final edge

PE passage edge

☐ No. 1

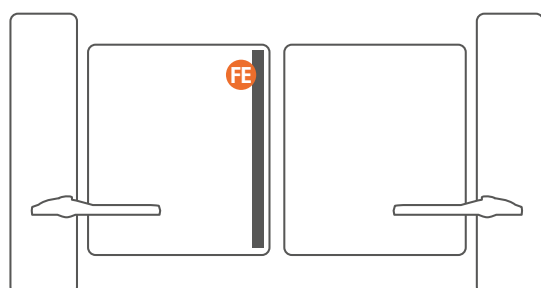


INSIDE



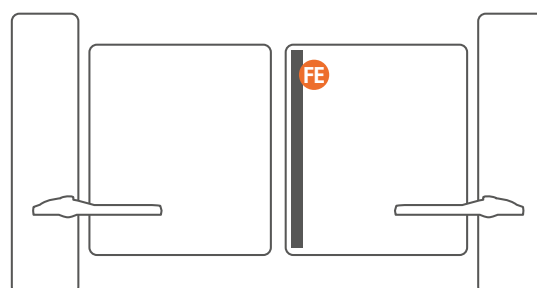
OUTSIDE

☐ No. 2



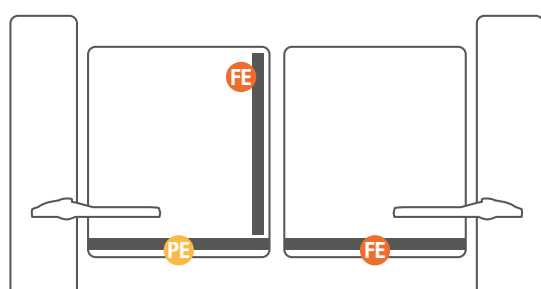
INSIDE

☐ No. 3



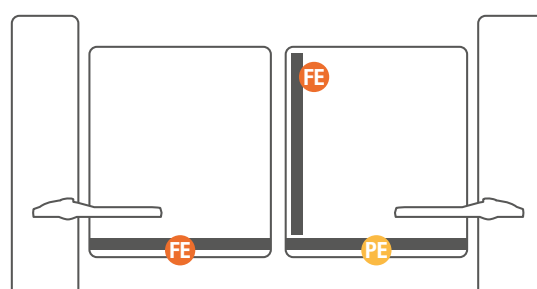
INSIDE

☐ No. 4



INSIDE

☐ No. 5



INSIDE

Ordering help

SPIN 250

Please enter the data of your swing gate in the table:

dimensions:

DL entrance width:	<input type="text"/>	mm
(double leaf swing gate)		
F1 leaf for cars	<input type="text"/>	mm
F2 pedestrian leaf	<input type="text"/>	mm
B gate leaf height	<input type="text"/>	mm

gate filling:

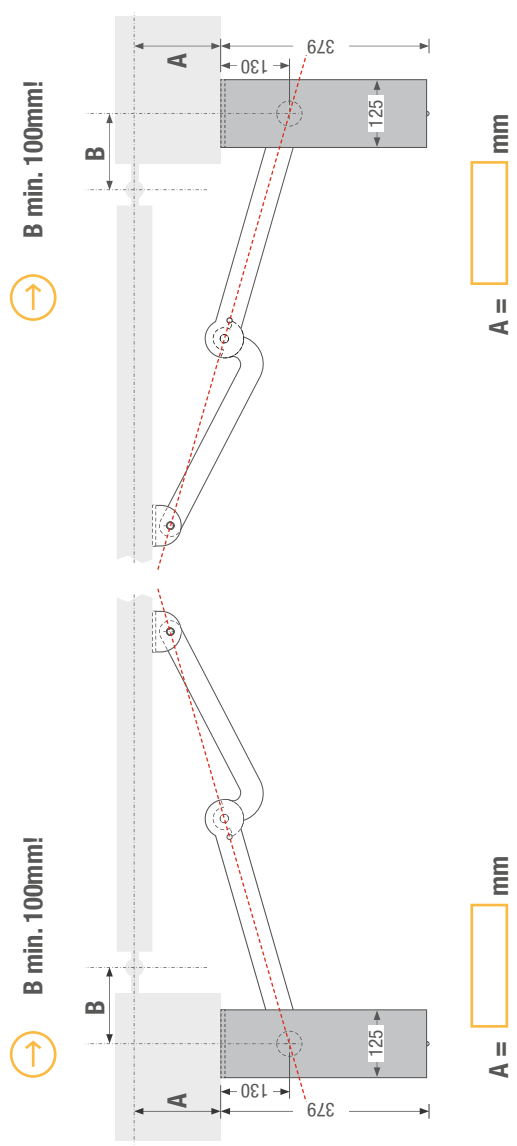
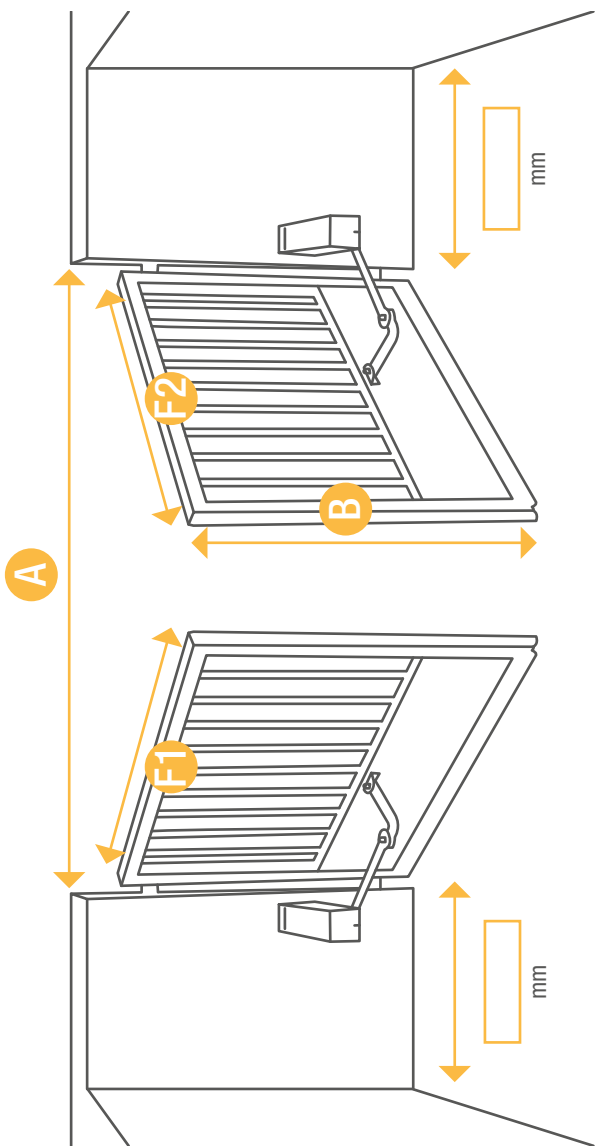
☐ stockades

system:

estimated weight	<input type="text"/>	kg
leaf for cars	<input type="text"/>	kg
gate leaf height	<input type="text"/>	kg

Please send us this form by email or fax and you will receive a customized offer for your inquiry!

company stamp, date







page

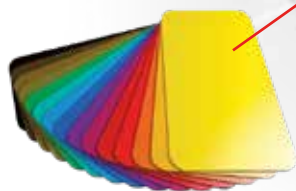
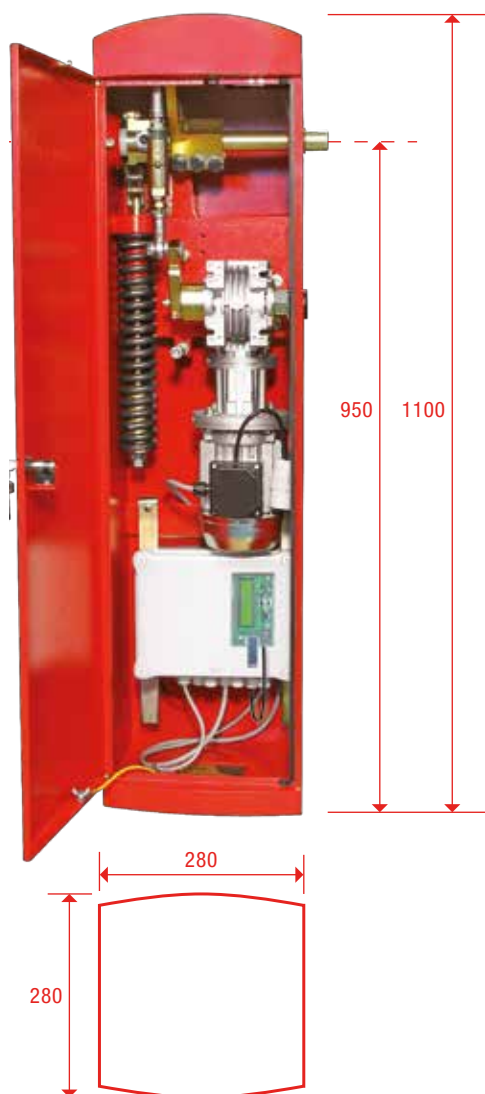
PASS 838	up to 6m boom length	78
Equipment for barriers		82
Lifting chain barrier LIFT X3		86
Electromechanical bollard VSZ 2, VSZ 3		88
Electrohydraulic bollard VSZ 4		89

Barriers

PASS 838

product features PASS 838

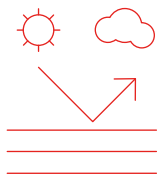
- standard colour flame red/ anthracite grey (similar to RAL3000/ RAL7016)
- optional any RAL colour available
- optional with stainless steel case (electrogalvanised)
- fast opening speed
- for heavy duty use (100% ED)
- self-learning end positions (without limit switches)
- ARS - automatic reversal system
- integrated control board
- forced closing (with PASS 838V)



product features control board ST 80

- operation mode selectable (impulse, automatic, dead man)
- adjustable soft stop
- direct connection of 8,2 k Ω safety sensing edge for boom bottom edge
- status display for safety inputs and switches
- optional: external status display of the boom (e.g. for concierge) -> additional module necessary
- connection slots for radio receiver and induction loop detector ISD6
- output for magnetic clamp for fixing the boom in closed position

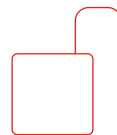




durable due
to multi-layer painting



door lockable with
profile half cylinder



emergency release
from outside



vandalism proof gearing
with forced closing (838V)



When ordering barrier operators please specify the desired installation position by adding to the article number L for left and R for right position ! E.g.: PASS 838V as right barrier: 11530320R

barrier operators with opening time 1,5s ** - only for vehicle traffic!

vandalism-proof gearing with self-locking function

	max. closing length	power supply	duty cycle operating mode S1	max. cycles/day *	housing colour ***	product code
PASS 838V	3m	230V	100%	2000	flame red anthracite grey	11530320 11530510
PASS 838V-ST 80 incl. control unit	3m	230V	100%	2000	flame red anthracite grey	11530360 11530520

barrier operators with opening time 7s **

PASS 838L3	3m	230V	100%	1000	flame red anthracite grey	11530290 11530450
PASS 838L3-ST 80 incl. control unit	3m	230V	100%	1000	flame red anthracite grey	11530330 11530480
PASS 838L4	4,5m	230V	100%	1000	flame red anthracite grey	11530300 11530460
PASS 838L4-ST 80 incl. control unit	4,5m	230V	100%	1000	flame red anthracite grey	11530340 11530490
PASS 838L6	6m	230V	100%	500	flame red anthracite grey	11530310 11530470
PASS 838L6-ST 80 incl. control unit	6m	230V	100%	500	flame red anthracite grey	11530350 11530500

mounting base plate

mounting base plate 838	14140160
-------------------------	----------



* Prerequisite: regular maintenance according to our specifications (depending on intensity of operation 1 to 4 times/year)

** Calculated speed without soft stop

*** similar to RAL3000/ RAL7016



booms

aluminium, white coated, with red reflective stripes

product code

for PASS 838 and 838L3	3m with rubber profile	14160300
for PASS 838L4	4,5m with rubber profile	14160310
for PASS 838L6	6m round boom Ø 84mm	14160320



When ordering, please advise if the barrier is L or R!

booms with LED's

aluminium, white coated, 3 LED's on both sides and red reflective stripes

product code

for PASS 838 and 838L3	3m with rubber profile	14160360
for PASS 838L4	4,5m with rubber profile	14160370
for PASS 838L6	6m round boom Ø 84mm	14160380

control units for PASS 838 double barrier

for a double barrier 1 master and 1 slave control board are necessary (for barrier 838 without integrated control unit)

product code

ST 80V	with forced closing function	Master	12111580
		Slave	12111560
ST 80		Master	12111570
		Slave	12111550

control units for PASS 838 with traffic light

one-way or two-way traffic control, connection for 2 red/green traffic lights 230V, 60W (for barrier 838 without integrated control unit)

product code

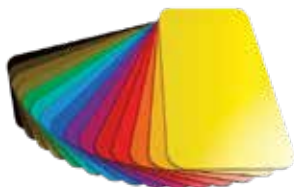
ST 80VA for STA 11	barrier control unit with forced closing function	12111610
ST 80A for STA 11	barrier control unit	12111620
traffic control board STA 11	for combination with barrier control unit ST 80 (V)A, built into plastic box, slot for radio receiver and I-loop detector ISD 6, not integrated in the barrier housing	12120370



1. barrier housing with integrated control unit
2. column in proper design for coin tester, interphone, code pad etc.
3. photocell
4. induction loop
5. tip rest
6. traffic light

RAL colour on request

23400120 on request



stainless steel housing

painted in red, stainless steel

35150070 on request



plastic box

for add. equipment for mounting on the inside of barrier door
WxD: 200 x 150 x 75mm

12140260



additional module for boom status display

pluggable into control board series ST 80 and ST 800,
potential free signal contacts, max. 24V AC/DC, 10W

21110420



traffic light pillar short

Height 1000mm, electrogalvanised,
for mounting onto barrier housing

for traffic lights SGA

13700190

for LED's

13700300



boom lamp kit

6 units of lamps with 3 strong LEDs, incl. 15m cable, for mounting onto boom,
programmable (blinks or illuminates)

for round boom

13710250

for rectangular boom

13710190



barrier housing signal lamp RED

Barrier housing signal lamp set, 2 signal lamps with 3 powerful LEDs
24V DC, for mounting on the barrier housing, incl. cable set

13710270



vehicle impact protection

for barriers and impulse emitter pillars,
WxH: 480 x 350, Ø 60mm, special sizes on request

36540030



tip rest with boom guide, height adjustable

tip rest (flame red)	14150160
tip rest (anthracite grey)	14150180
mounting base plate	14150170



pendulum arm

for PASS 838-L3, -L4	14150250
for PASS 838-L6	14150240



articulated boom bracket

aluminium, white coated, incl. assembly

for PASS 838L3 and L4	14150220
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magnet for boom

for fixing in closed position in combination with tip rest. Kit with: console (natur. aluminium), magnet GD 70 (1.450N adh. force) and anchor plate, without installation

for round boom	14150380
for rectangular boom	14150390

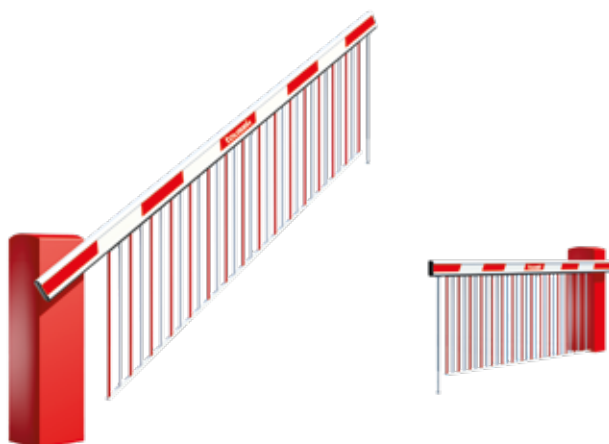


barrier boom grid PASS 838L: up to 4m

aluminium naturally anodised / red powder-coated, height 750mm, distance between bars 150mm

Please consider the weight compensation and the use of tip rest or pendulum arm

2m	14150320
3m	14150330



only suitable for the rectangular shaped boom

impulse emitter column V03

standard red painted steel plate housing (optional in any RAL colour available), lockable with profile half cylinder

red column	13400200
mounting base plate	13300170



maintenance package

Necessary for maintenance after 200.000 cycles, consisting of: compensating spring, chain and damping arm.

maintenance package WP 838
for PASS 838 and PASS 838L3 **11530370**

Maintenance package WP 838L4 and
L6 - for PASS 838L4 and PASS 838L6 **11530380**



pre-installation (incl. rewiring)

In order to save installation and assembly time on site you can ask our workshop to make the barrier ready for operation.

E.g. 1 photocell or 1 signal lamp or 1 barrier signal lamp or 1 traffic light pillar incl. light or 1 key switch or 1 induction loop detector or 1 large housing.

For installation of a boom lamp kit two units will be charged!

mounting/installation **14150190**



main switch, 2 poles

for mounting into the control box ST 80,
max. contact load 230V / 4kW, incl. cable set

13310100



induction loop detector ISD 6

2-channels,
pluggable into ST 80

13430140



PTFE-wire

13400270

To lay for subsequent cutting.
1 bunch = 70m, 1,0mm², Tmax 180°C

ready made induction loop

13400220

To lay before applying the final layer of pavement,
including 10m of twisted cable
The price/cm refers to the length of the induction loop



Please enter the data of your barrier in the table:

barrier:

boom length

m

duty cycle

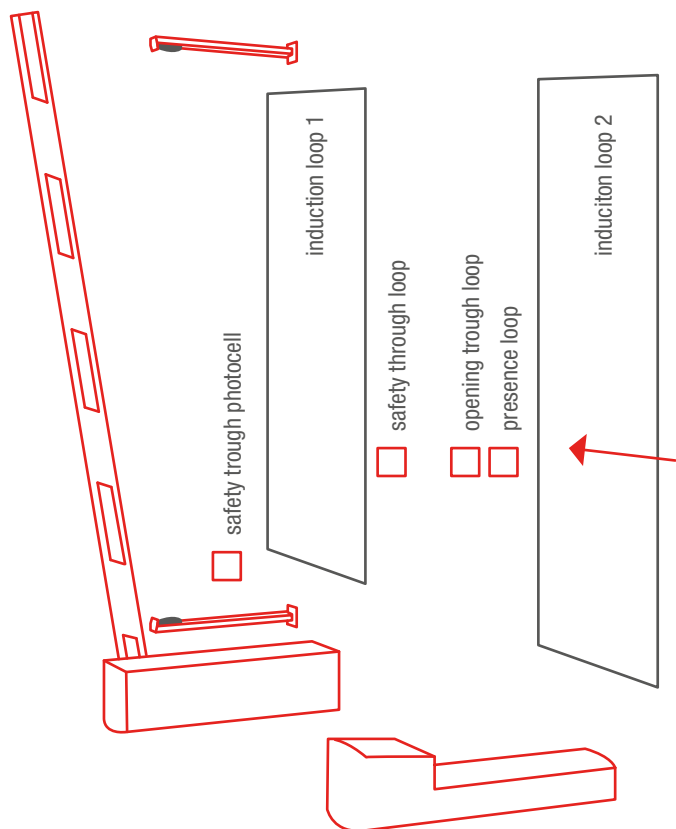
%

operations/day

parking spaces

(for private parking spaces)

☐ cars
 ☐ trucks



safety:

- ☐ main switch
- ☐ photocells
- ☐ blinking lamp on barrier housing
- ☐ blinking lamp on the barrier boom

accessories:

- ☐ tip rest
- ☐ pendulum arm

operation:

<input type="checkbox"/>	radio
<input type="checkbox"/>	keyswitch
<input type="checkbox"/>	external impulse (potential free)
<input type="checkbox"/>	card reader
<input type="checkbox"/>	impulse emitter column
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

Please send us this form by email or fax and you will receive a customized offer for your inquiry!

company stamp, date

Lifting chain barrier

LIFT X3

product features LIFT X3

- 12V technology
- motor and counter pillar made of powder-coated aluminium
- simple mounting, already pre-installed
- 20 cycles/day
- pillar dimensions: 120 x 120 x 1000mm
- max. closing width 10m
- protection class IP 54



control unit incl. receiver



nylon chain with counter weight

lifting chain barrier LIFT X3

		product code
LIFT X3		11590770
LIFT X3 -KIT	1 motor pillar 1 radio receiver RS 868 1-channel 1 radio transmitter 2-channels RS 868-2M 1 antenna RS 868	S15020

counter pillar for LIFT X3

counter pillar	same design as LIFT X3	11590170
----------------	------------------------	----------

Lifting chain barrier

LIFT X3

use without counter pillar



use with counter pillar



mounting plate

stainless steel, bolt-on for LIFT X2,
200 x 200mm

14150300



mounting base plate

to set in concrete LIFT X2,
120 x 120mm

14150310



nylon chain

6mm, black/yellow,
incl. counter weight

6m **11590110**

10m **11590120**



stainless steel chain

incl. counter weight

6m **11590130**

10m **11590140**



Bollard VSZ 2, VSZ 3

product features VSZ 2, VSZ 3

- electromechanical bollard 24V DC
- integrated lighting with 12 strong and sequential LEDs
- steel with black, cataphoretic coating
- optional cylindrical case made of stainless steel
- protection class IP 54
- plug connection between control unit and bollard (Plug & Play)



bollard VSZ 2

incl. foundation box VSZ 2/500: Ø 330 x 1008mm, VSZ 2/800: Ø 330 x 1358mm; round base plate

	diameter	working stroke	duty cycle	impact resistance	breaking resistance	raising/ lowering time		product code
VSZ 2/500	200mm	500mm	1.200/day	11.000J	180.000J	3s/4s	black	11590190
							stainless steel	11590200
VSZ 2/800	200mm	800mm	1.000/day	11.000J	180.000J	5s/7s	black	11590210
							stainless steel	11590220

bollard VSZ 3

incl. foundation box VSZ 3/500: 360 x 360 x 1008mm, VSZ 3/800: 360 x 360 x 1358mm; square base plate

VSZ 3/500	254mm	500mm	900/day	18.000J	240.000J	3s/4s	black	11590230
							stainless steel	11590240
VSZ 3/800	254mm	800mm	600/day	18.000J	240.000J	5s/7s	black	11590250
							stainless steel	11590260

control boards for bollards VSZ

230Va.c./50Hz, IP 68

for VSZ 2/500	for 1 bollard	11590300
	for 2 bollards	11590310
	for 4 bollards	11590320
for VSZ 2/800, VSZ 3/500 and VSZ 3/800	for 1 bollard	11590330
	for 2 bollards	11590340
	for 4 bollards	11590350
connection cable bollard/control unit	5m	11590400
	10m	11590410
	25m	11590420

equipment

heating system		11590430
acoustic warning signal		11590440
receiver with 11-pole plug-in socket RS 868-S0230V	power supply 230V	13280040

no stock item-delivery time: approx. 8 weeks

product features VSZ 4

- electrohydraulic bollard 230V AC
- integrated lighting with blue sequential LEDs
- steel with black, cataphoretic coating
- emergency release on the top of the bollard
- integrated inductive limit switches for the „open“ position
- optional cylindrical case made of stainless steel
- protection class IP 54

product features control unit ST 40

- for max. 4 bollards VSZ 4 in synchronous operation
- one-way or two-way traffic control integrated
- connection for 2 red/green traffic lights 230V, 60W
- programming through a large, illuminated LC-Display (2x16 characters)
- clear text menu programmable through four buttons
- permanent red selectable
- clearance time 1–60s selectable
- green phase 5–120s selectable
- storing of a drive-through requirement
- status display for safety and impulse inputs
- automatic mode
- slot for radio receiver STN for opening signal from „outside“
- slot for I-loop detector ISD 6 for opening signal from „inside“



bollard VSZ 4

incl. foundation box VSZ 4/500: Ø 330 x 1008mm, round base plate

	diameter	working stroke	duty cycle	impact resistance	breaking resistance	raising/ lowering time	product code
VSZ 4/500	200mm	500mm	750/day	11.000J	180.000J	5s	black
							stainless steel

11590470
11590480

bollard VSZ 4 EV

like VSZ 4, with an additional electrovalve, that ensures an automatic lowering in case of power failure

	diameter	working stroke	duty cycle	impact resistance	breaking resistance	raising/ lowering time	product code
VSZ 4/500 EV	200mm	500mm	750/day	11.000J	180.000J	5s	black
							stainless steel

11590490
11590500

control unit in control cabinet (for 4 units VSZ 4 in parallel use)

ST 40–STA11	prewired incl. main switch dimension: 380 x 300 x 150mm	12120400
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equipment

ISD 6	2-channel I-loop detector	13430140
RS 868-STN1	1-channel radio receiver	13280060
connection cable bollard/control unit	Plug & Play, with fully-fitted plug	10m
		25m
traffic light	2-chamber, red/green	13710090

no stock item-delivery time: approx. 8 weeks



	page
swing gate control units	92
traffic light control units	94



Operator control units with display

product features

- large illuminated LC-Display (2x16 characters)
- housing with vision panel
- full text menu programmable through four buttons
- status display for safety and impulse inputs
- slot for radio receiver
- direct connection of 8,2 kOhm safety sensing edges (seperated inside/outside)
- electronic force adjustment
- electric lock output (with ST 51 and ST 61 in combination with module)
- magnet output (only for ST 51 and ST 61 in combination with module)
- self-monitoring of photocells
- operating mode selectable (impulse, automatic, dead man)
- adjustable partial opening for pedestrians (also with single leaf operation)
- partial opening can also be remote controlled (transmitter)



for operators SLIM CLR

additionally with soft start and soft stop

product code

ST 12/5		12111730
battery DA2.2LP12V	up to max. 15 cycles/load	S35118
additional module courtyard lamp/control lamp	for 230V lamp connection, max. 100W	21110620
additional module for gate status	potential free signal contacts, max. 24V, 10W	21110630



for operators TURN, TURN UP, TURN 310UF, SWING, SPIN, TIP and FOLD

additionally with soft stop, reverse stroke

ST 51		12111660
e-lock-/magnetic module	for 24V DC electric lock, magnet output for open and closed position	13810220
drop bolt module	see page 68	13810240



for operators of SWING X series and for SPIN 250

additionally with soft stop, reverse stroke and speed sensor input

ST 61		12111670
e-lock-/magnetic module	for 24V DC electric lock, magnet output for open and closed position	13810220
drop bolt module	see page 68	13810240
additional module courtyard lamp/control lamp	for 230V lamp connection, max. 100W	21110490
additional module for gate status	potential free signal contacts, max. 24V, 10W	21110420

Operator control units with display



for 4 operators of SWING X

2 operators per leaf, no speed control or no force control possible, only one operator's encoder is used per leaf, in the steel cabinet. Main switch in the door. Compatible with the drop bolt module.

product code

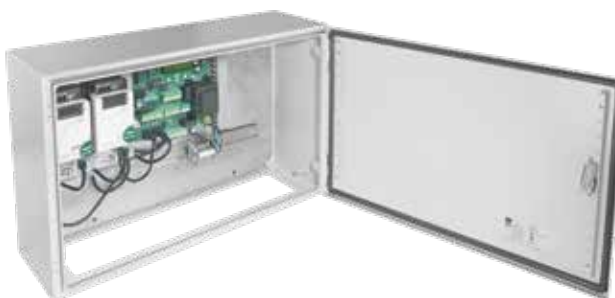
ST 64		12112340
ST64A	incl. STA11, in the steel cabinet	12112430
additional module courtyard lamp/control lamp	for 230V lamp connection, max. 100W	21110490
additional module for gate status	potential free signal contacts, max. 24V, 10W	21110420

for SWING X3 TPspeed and operators SWING X4 LH TP

ST 63K 1-leaf	incl. 1 frequency converter, in plastic housing	12112240
ST 63 1-leaf	incl. 1 frequency converter, in the steel cabinet	12112210
ST 63 2-leaves	incl. 2 frequency converters, in the steel cabinet	12112220
additional module for gate status	potential free signal contacts, max. 24V, 10W	21110420



ST 63K 1-leaf
(WxHxD): 295mm x 340mm x 130mm



ST 63 2-leaves, pre-wired, incl. main switch
(WxHxD): 380mm x 300mm x 150mm

extension modules

for ST 63 (only in the steel cabinet), ST 64 and ST 64A, for door mounting

preinstalled module for 1 drop bolt	on steel plate, incl. drop bolt module and installation	12112410
preinstalled module for 2 drop bolts	on steel plate, incl. drop bolt module and installation	12112420
preinstalled module STA 11	incl. installation, features - see page 94	12120440



for 1 drop bolt



for 2 drop bolts

Traffic light control units with display

general product features

- traffic light control board STA 11 in combination with control units ST 51A, ST 61A, ST REX, ST 63, ST 64A and TPS 20
- one way traffic or two way traffic regulation
- connection for 2 red/green traffic lights 230V, 60W
- programming via large illuminated LC-Display (2x16 characters)
- multi language text menu programmable through four buttons
- constant RED selectable
- exit time 1–60s selectable
- green phase 5–120s selectable
- storing a drive-through request
- status display for safety and impulse inputs
- automatic operating mode
- self-monitoring of photocells
- slot for radio receiver STN for opening impulse from „outside“
- slot for I-loop detector ISD 6 for opening impulse from „inside“



traffic light control unit inside control cabinet, combined

for operators TURN, TURN UP, TURN 310UF, SPIN, SWING, FOLD, TIP and other brands

product code

ST 51A–STA11*	pre-wired incl. main switch dimensions: 380 x 300 x 150mm	12120380
---------------	--	----------

* Note: time controlled or for open position (green phase) external limit switches necessary.



for SWING X and SPIN 250 operators

ST 61A–STA11	pre-wired incl. main switch dimensions: 380 x 300 x 150mm	12120300
--------------	--	----------



traffic light control in plastic housing

operator- and traffic light control board in separated boxes
box dimension (WxHxD): 210 x 310 x 125mm

ST 51A for STA 11	operator control unit	12120350
ST 61A for STA 11	operator control unit	12120340
STA 11	traffic light board , only in combination with ST 51A or ST 61A	12120370

equipment

ISD 6	2-channel I-loop detector	13430140
RS 868-STN 1	1-channel radio receiver	13280060
LED traffic light	2-chamber, red/green	13710210
e-lock-/magnet module	for 24V DC electric lock, magnet output for open and closed position	13810220

Swing gate control units

technical data

description	ST 12/5	ST 51	ST 61
power supply	230V AC \pm 10%	230V AC \pm 10%	230V AC \pm 10%
motor output	2 x 12V DC, 60W	2x230V, 500W	2x230V, 500W
illuminated LC-Display	●	●	●
operating mode	automatic/impulse/dead man	automatic/impulse/dead man	automatic/impulse/dead man
courtyard lamp output	via module		via module
control lamp output	via module		via module
signal lamp output	230V AC, 40W	230V AC, 40 W	230V AC, 40W
low voltage output	12V DC, 0,3A	24V AC, 0,3A	24V AC, 0,3A
electric lock output	12V DC, 15W	via module	via module
drop bolt output		via module	via module
magnetic clamp output		via module (24V DC)	via module (24V DC)
gate status display	via module		via module
sensor management			●
limit switch management	●		
pause time	1-255s	1-255s	1-255s
opening delay motor 2	0-25s	0-25s	0-25s
closing delay motor 1	0-25s	0-25s	0-25s
pedestrian/partial opening	●	●	●
reverse stroke, to relieve e-lock		●	●
separate photocell inputs outside/inside	●	●	●
8,2k Ω resistance evaluation, 2-channels	●	●	●
increased starting force		●	●
increased pressure		●	●

description	ST 24.2	ST 63	ST 64
power supply	230V AC \pm 10%	230V AC \pm 10%	230V AC \pm 10%
motor output	2 x 24V DC	3x 230V	230V
illuminated LC-Display	optionally with / without	●	●
operating mode	automatic/impulse/dead man	automatic/impulse/dead man	automatic/impulse/dead man
courtyard lamp output	24V 3W	pot. free 5A	via module
signal lamp output	24V 5W	24V 5W	230V AC, 40W
low voltage output	24V 0,3A	24V 0,3A	24V 0,3A
electric lock output		via module	via module
drop bolt output	via module	via module	via module
gate status display		via module	via module
sensor management	●	●	●
pause time	1-255s	1-255s	1-255s
opening delay motor 2	0-25s	0-25s	0-25s
closing delay motor 1	0-25s	0-25s	0-25s
pedestrian/partial opening	●	●	●
reverse stroke, to relief the e-lock		●	●
separate photocell inputs outside/inside	●	●	●
8,2K Ω resistance evaluation, 2-channels		●	●



tousek
KUNSTSTOFFE

☐ **Gespr. Partner:**

☐ **E-mail:**

☐ **Tel.:**

☐ **Fax:**

☐ **newsletter:**

☐ **Angebot E-Mail**

☐ **Präsenz**

☐ **Besprechung**

☐ **Zustellung**

☐ **Spedition**

Tousek connect / tousek service interface

	page
tousek connect	98
TSI	101



Tousek connect

general product features TC

- programming* via smartphone for Android, iOS compatibility to be expected soon
- easy access and status query from any location ***
- read logfile (last 800 cycles)
- direct connection on site or via online mode with cloud
- can be upgraded any time also for already existing operators
- apps for end users and resellers available through the appropriate store
- software update of the control units
- downwards compatible **, compatible with PULL T series, TPS series, ST 12/5, ST 24, ST 51, ST 61, ST 63, ST 64, ST 80 and ST REX

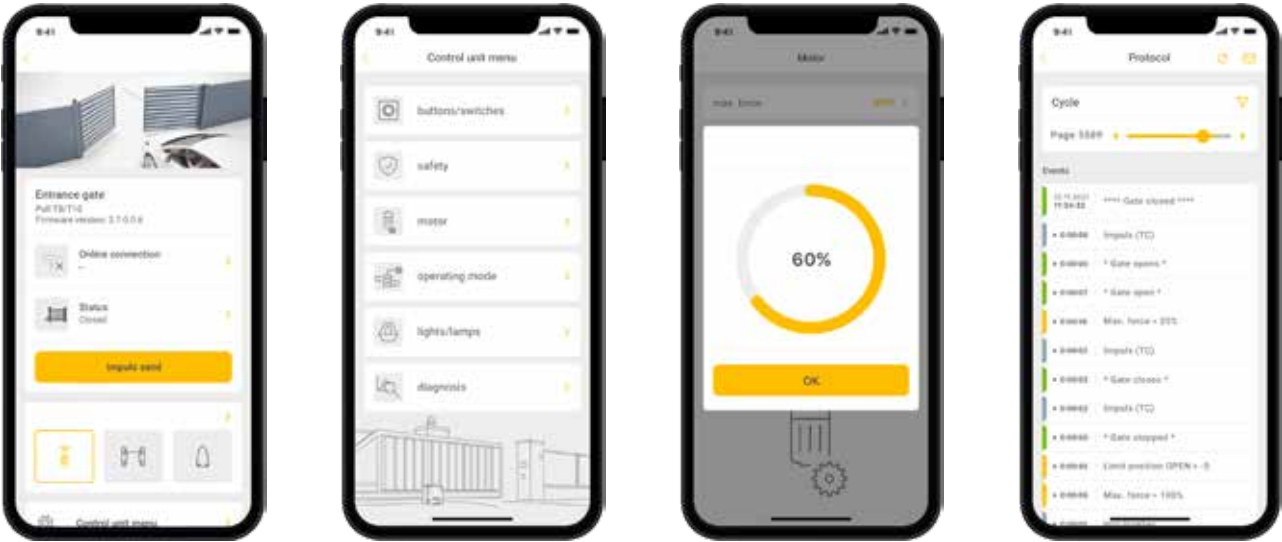


* Please see technical data sheets.

** from multilingual plain text menu (software update required, via the net module)

*** local W-LAN required





tousek connect		product code
net module tousek connect		12112360
This is plugged in instead of the on-site display. This is thus inoperative during operation with the net module.		

Tousek service interface




general product features TSI

- programming via PC
- event viewer of the last 800 cycles (approx.)
- saving of preset menu-parameters/ construction project
- uploading of preset menu settings into the control board
- history of all the changes/events in the menu
- cycle counter
- software updates via Internet
- event memory sent by e-mail (internet access required)

compatible with:

- operator series PULL TSA, PULL T, TPS 6speed, TPS 20 (N, PRO), TPS 40 PRO and TPS 60 PRO
- barrier series PASS 838 / ST 80
- control units ST 12/5, ST 24, ST 51, ST 61, ST 63* and ST 64*

 * Update via TSI not possible



Tousek service interface



event log



loading parameters



softwareupdate



tousek Interface

including 1,5m USB-cable and software on USB-Stick
system requirements: Windows XP® or Windows 7® (32/64-bit), from INTEL Atom 1.6 GHz

product code

tousek service interface

12111450



	page
transmitter RS 433 and RS 868	104
RS 868 PRO	105
RS 868 transmitters	108
RS 868 radio receivers	109
RS 433 transmitters	110
RS 433 radio receivers	111
BT 40	113
GSM 400, 420-RS 868	112
ST LED	114

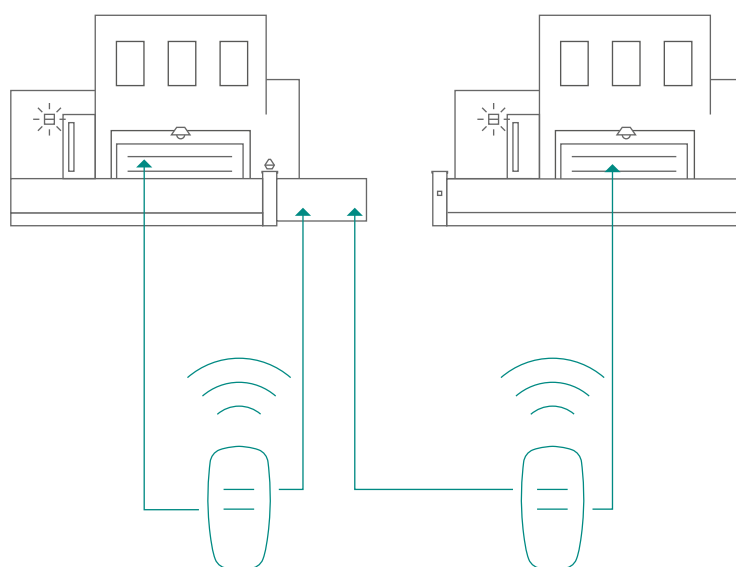
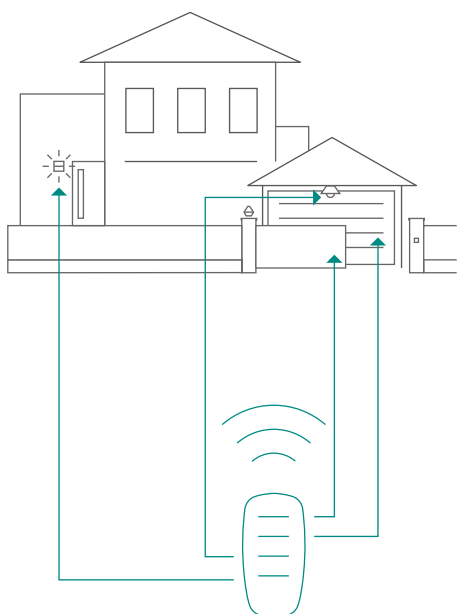


Radio system

RS 433 and RS 868

product features RS 433 and RS 868

- frequency: 433 MHz or 868 MHz
- self-adjusting technology
- highest security due to rolling code: everytime you push the button a new code is sent, each transmitter is unique
- in combination with antenna up to 200m range
- up to 64 different transmitters can be programmed into radio receiver



Radio transmitter

RS 433 and RS 868

Personalize the radio transmitter

- printing with UV technology and gloss protective varnish
- multicolored in CMYK with excellent quality
- at small amounts
- your logo or your customers as a personal gift



		product code
Imprint up to 45 pieces transmitter 868 series M		13150120
transmitter RS868 2M neutral for customer imprint	2-channels	13180150
transmitter RS868 4M neutral for customer imprint	4-channels	13180160



Note: The "handheld transmitter imprint" service cannot be discounted and represents the basic costs/setup for an order for up to 45 handheld transmitters. The price includes a rendering with your logo as a preview. "Please note valid trademark rights for protected logos. In the case of third-party logos, a written declaration of consent from the logo owner is required"

price examples:

- 12 pieces 2M transmitter: 12 x 36,- plus 69,-
- 78 pieces 4M transmitter: 78 x 38,50 plus 2 x 69,-

Radio transmitter

RS 868 PRO

product features RS 868 PRO

- frequency: 868 MHz rolling code, bidirectional transceiver
- each transmitter is a unique piece
- protected, exclusive radio system for the facility installer; only he can hand over transmitters for his system,
- management and programming of the transmitters via PC, eliminates the need for on-site learning and the transmitter is immediately operational for the user
- assign to customer references / construction projects

new



STN 2.2



230V4



S0230V

Radio transmitter

RS 868 PRO



transmitter			product code
RS 868 PRO-2M		2-channels	13180120
RS 868 PRO-4M		4-channels	13180130

radio receiver			
RS 868 PRO-STN 2.2	pluggable into the tousek control unit	2-channels	13280300
RS 868 PRO-S0230V	with 11-pin socket	1-channel	13280310
RS 868 PRO-230V4	power supply 230V AC, contact load 48V/28W	4-channels	13280320
RS 868-PRO-K2.2	with terminal blocks, power supply 12 or 24V AC/DC, contact load 24V/10mA, IP 23	2-channels	13280360

programming shell RS868 PRO	for transmitter programming	13280330
software	for PC, management and programming	13280340



Radio system

RS 868 transmitters



transmitter RS 868- 2M, -4M

suitable for radio receiver RS 868

product code

RS 868-2M	2-channels	13180070
RS 868-4M	4-channels	13180080



transmitter RS 868

product code

RS 868-TXR-2B	2-channels, incl. wall mounting	13180050
RS 868-TXR-4B	4-channels, incl. wall mounting	13180060

product code

RS 868-TXR-1	1-channel	13180010
RS 868-TXR-2	2-channels	13180020
RS 868-TXR-4	4-channels	13180030
wall mounting	incl. clip	13150070



transmitter RS 868 **new**

Please contact our specialist consultants regarding compatibility!

product code

RS 868-7C	7-channels, incl. wall mounting	13180110
-----------	---------------------------------	----------



code pad TORCODY RS 868

suitable for receiver RS 868, 4-channels (3 x with code, 1x without code)

TORCODY 868	black	13170080	13170080
	white	13170090	13170090



wall transmitter WTN RS 868

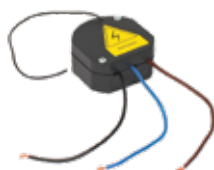
WTN 868	suitable for RS 868	1-channel	13170120	13170120
		2-channels	13170130	13170130



transmitter RS 868 2E **new**

for external motion detector or button connection, dimensions 45 x 33 x 11mm

RS 868	2-channels, with pot.free contact	16000110
--------	-----------------------------------	----------



radio light switch RRL 868

230V, switching capacity max. 300W inductive / 1000W ohmic, Ø 53mm, height 25mm (conventional socket)

RRL 868	868 MHz, with potential free contact	13270470
---------	--------------------------------------	----------

replacement batteries

battery 3V CR2032	for RS 868-M, RS 868 TXR-B, RS 868 TXR, installation transmitter	13140040
battery 3V CR2430	for RS 868-WTN, RS 868-7C	13140070
battery		13140030



rolling code radio receiver RS 868 pluggable

for tousek control units, 12V DC, contact load 24V/10mA, IP 00

product code

RS 868-STN 1	1-channel	13280060
RS 868-STN 2.2	2-channels	13280250



rolling Code radio receiver RS 868 in housing IP 23

with connection clamps, power supply 12 or 24V AC/DC, contact load 24V/10mA

RS 868-K	1-channel	13280010
RS 868-K2.2	2-channels	13280260



rolling code radio receiver RS 868 with 11-pole socket

1-channel, power supply 24V AC/DC or 230V AC, contact load 230V/60W

RS 868-S024V	24V	13280030
RS 868-S0230V	230V	13280040



rolling code radio receiver RS 868 in housing IP 54

with connection clamps, power supply 12/24V AC/DC or 230V AC, contact load 48V/28W

RS 868-230V1	1-channel	13280080
RS 868-230V4	4-channels	13280050
channel extension		13270250



RS 868-KSD

receiver RS 868, 1-channel, in power socket housing, integrated antenna, potential free contact, over 1m long cable, max. contact load 1A 48V, up to max. 61 transmitter channels

RS 868-KSD	13280140
------------	----------



rod antennas for radio receiver RS 868

range in combination with antenna FK 433 or FK 868 up to 200m, incl. 4m coax. cable and stainless steel bracket

FK 868	13250140
--------	----------



memory module

for extension of the max. amount of transmitters (for 256 transmitter channels)

memory module vertical	for STN and K	13270110
memory module horizontal	for SO and V	13270360



programming device PROG RS 433/868

for deleting single transmitter codes from the receiver without transmitter

PROG RS 433/868	13170040
-----------------	----------

Radio system

RS 433 transmitters



transmitter RS 433- 2M, -4M

suitable for radio receiver RS 433

product code

RS 433-2M	2-channels	13180090
RS 433-4M	4-channels	13180100



transmitter RS 433

product code

RS 433-TXR-2B	2-channels, incl. wall mounting	13160200
RS 433-TXR-4B	4-channels, incl. wall mounting	13160210



product code

RS 433-TXR-1	1-channel	13160010
RS 433-TXR-2	2-channels	13160020
RS 433-TXR-4	4-channels	13160030
RS 433-TXR-12	12-channels with display	13160170
wall mounting	incl. clip	13150070



code pad TORCODY RS 433

suitable for receiver RS 433, 4-channels (3 x with code, 1x without code)

product code

TORCODY 433	black	13170030
	white	13170050



wall transmitter WT RS 433

WT 433	suitable for RS 433	2-channels	13170010
		4-channels	13170020

replacement batteries

battery 3V CR2032	for RS 433-M, RS 433 TXR-B, RS 433 TXR12	13140040
battery 12V L1028	for RS 433 TXR, RS 433 TXR-W, WT 433	13140010
battery		13140030



rolling code radio receiver RS 433 pluggable

for tousek control units, 12V DC, contact load 24V/10mA, IP 00

product code

RS 433-STN 1	1-channel	13270210
RS 433-STN 2.2	2-channels	13270450



rolling code radio receiver RS 433 in housing IP 23

with connection clamps, power supply 12 or 24V AC/DC, contact load 24V/10mA

RS 433-K	1-channel	13270040
RS 433-K2.2	2-channels	13270460



rolling code radio receiver RS 433 with 11-pole socket

1-channel, power supply 24V AC/DC or 230V AC, contact load 230V/60W

RS 433-S024V	24V	13270030
RS 433-S0230V	230V	13270020



rolling code radio receiver RS 433 in housing IP 54

with connection clamps, power supply 12/24V AC/DC or 230V AC, contact load 48V/28W

RS 433-230V1	1-channel	13270180
RS 433-12/24V4	4-channels	13270150
RS 433-230V4	4-channels	13270120
channel extension		13270250



rod antennas for radio receiver RS 433

range in combination with antenna FK 433 up to 200m, incl. 4m coax. cable and stainless steel bracket

FK 433		13250130
--------	--	----------



memory module

for extension of the max. amount of transmitters (for 256 transmitter channels)

memory module vertical	for STN and K	13270110
memory module horizontal	for SO and V	13270360



programming device PROG RS 433/868

for deleting single transmitter codes from the receiver without transmitter

PROG RS 433/868		13170040
-----------------	--	----------

Radio system

BT 40

product features BT 40

- frequency 40MHz, with self-adjusting technology, the transmitter code is learned into the receiver

BT 40 transmitter with code

compatible with former radio system HS 40 series,
button colour light grey

1-channel: BT40-1B 13150010

2-channels: BT40-2B 13150020

4-channels: BT40-4B 13150030



BT 40 transmitter with code

compatible with former radio system HS 40 series,

wall mounting * 13150070

battery 12V ** 13140010

* incl. clip, ** alkaline, L1028



1-channel radio receiver self-adjusting

up to 64 different codes programmable. Per coding an indefinite amount of transmitters is possible.

BT40-STM

radio receiver board,
not suitable for PULL !

13260040



BT40-cable

radio receiver with 4 pol. connection cable,
24V AC/DC

13260080



BT40-S024V bzw. BT40-S0230V

radio receiver with 11 pole socket

24V AC/DC **13260020**

230V **13260010**



BT40-STN-adapter

enables the use of BT40 radio system on all new
tousek control units (ST12, ST51) in combination
with BT40-TT6, pluggable, not suitable for PULL !

13260100



Antenna FK4/2

for 40 MHz, with 2m coax cable,
for larger range

13250100



Plastic housing

for radio receiver, IP65
HxWxD: 200 x 155 x 80mm

12140190



Operate automatic gates with your mobile telephone

GSM 400, GSM 420 RS 868

product features

- a simple call and the gate opens, no SMS necessary
- system requirement for software GSM 801:
Windows XP® or Windows 7® (32/64-Bit), from INTEL Atom
1.6 GHz
- no call charges as no connection
- a prepaid SIM card is enough
- up to 300 different mobile numbers can be memorized
- delete and add transmitters easily by SMS
- output adjustable via SMS with operating mode on / off,
impulse or time-controlled (from 0 to 9999 sec.)
- In case of an accident (Power ON Reset) SMS and / or phone
calls can be sent to a max. of 8 phone numbers.
- GSM antenna with magnetic base
- suitable for DIN rail mounting

additional product features GSM 420 RS 868

- two inputs, where an SMS can be assigned, for example, as
a notification of the gate position (open, closed)
- up to 100 storage locations for transmitter
- delete and add transmitters easily by SMS or
from GSM module
- built-in 2-channel receiver suitable for tousek RS868
- one of the two channels is the GSM channel
- optional software for easy management



technical data

- power supply: 230V AC
- GSM-Band: Quad 850/900/1800/1900 MHz
- IP10

product code

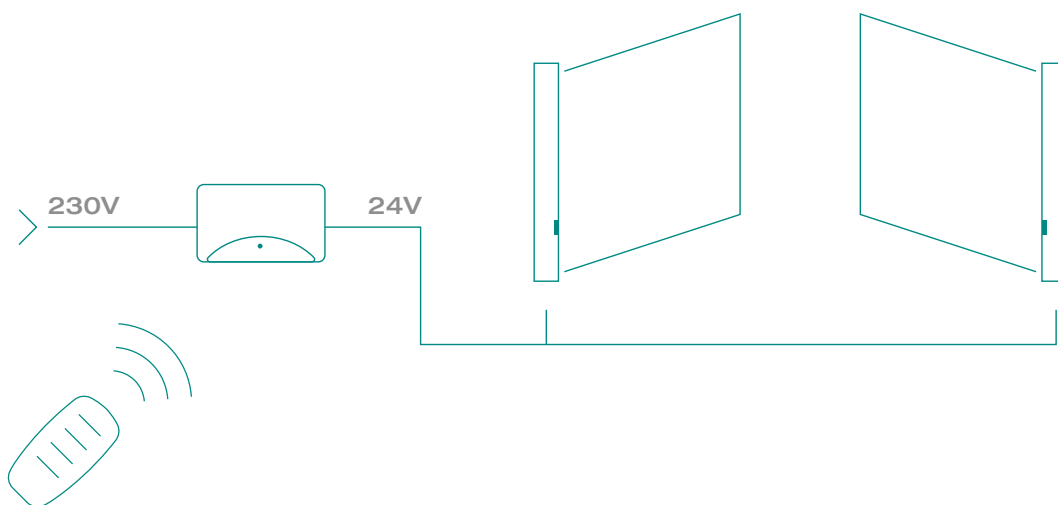
GSM 400	1-channel, only for mobile phones	13280270
GSM 420 RS 868	2-channels, for mobile phones AND Tousek transmitter RS 868	13280280
housing	for GSM 400 and GSM 420 RS 868	12140350
GSM 801 Software	only for GSM 420 RS 868, incl. connecting cable(USB)	S35119



The SIM-card is not included with GSM-Module.
For charges of SIM-card please contact your mobile phone provider.

general product features

- super bright LED's for lighting the gate or the driveway
- controllable via Tousek RS868 radio system
- simultaneous start with gate movement (10min automatic switch off programmable)
- dimmed steady light for more safety
- retractable or moving spot
- high quality pluggable and waterproof cable connections in different lengths
- targeted switching on/off LED's
- dimming by brightness sensor possible (e.g. 25%, completely off)



wall spot
tiltable 355°, 90°



brightness sensor



recessed light, round,
tiltable +/- 13°
rings for painting
unscrewable



ST LED



WALL SPOT

LED wall spot

tiltable 355°, 90° warm white, 24V, 4,3W
380 lumen, IP 54

16000050**LED recessed light**

tiltable +/- 13°, warm white, 4,3W, 380 lumen, IP 54
rings for painting unscrewable

16000040RECESSED
LIGHT



ST LED

LED transformer with housing and integrated radio receiver RS868, 24V 60W

16000070



distributor/connection cable

20/20/160cm

16000080



extension cable

length 5m

16000090



endcap

16000100



4-channel transmitter

RS 868-4M

13180080**transmitter RS 868 new**RS 868-7C
7-channel, incl. wall bracket**13180110****2-channel built-in transmitter RS 868 2E**RS 868, e.g. for external motion detector or push button connection
dimensions: 45x33x11mm**16000110****antenna FK 868**

for improved range

13250140**brightness sensor**

Automatic switching on of LEDs at dusk to e.g. 25% luminous intensity

16000060



	page
key switches	120
push buttons, switches	122
induction loop detector	123
code lock	130



Impulse emitters

key switches

product features

- surface mounted or flush-mounted switches
- mechanical cover lock
- anodised aluminium front plate
- prepared for 40mm profile half cylinder
- contact load max. 250V/10A, 1-pole

surface mounted, flush-mounted key switches in plastic housing IP54

MP-APZ 1 - 1T

one-way contact

13360260

with cylinder and 3 keys

13360250



MP-APZ 1 - 2T

two-way contact

13360240

with cylinder and 3 keys

13360230



surface mounted key switches in light metal housing IP54

MP-APZ 1 - 1T

one-way contact

13360180

with cylinder and 3 keys

13360190



MP-APZ 1 - 2T

two-way contact

13360200

with cylinder and 3 keys

13360210



J-APZ 1 - 1T

one-way contact

13360010



J-APZ 1 - 2T

two-way contact, 2-poles

13360050



J-APZ 1 - 1R

one-way maintained contact, 2-poles

13360030



J-APZ 1 - 2R

two-way maintained contact, 2-poles

13360070



J-APZ 2 - 1T

one-way contact + STOP button

13360090



J-APZ 2 - 2T

CLOSE-OPEN switch + STOP button

13360110



J-APZ 3 - 1R

OFF-ON switch with
CLOSE-OPEN button

13360150



profile half cylinder

with 3 keys

13300040

simultaneous locking for tousek emergency release

13300220

additional key

13300230



rocker switch IP44

one-way rocker contact,
surface mount

surface mounted 1T, momentary

13320090



rocker switch IP44

two-way rocker contact,
surface mount

surface mounted 2T, momentary

13320060

surface mounted 2R, maintained

13320030



flush-mounted key switches in light metal housing IP54

MR 1 - 1T

one-way momentary contact
mini key switch, Ø 60mm

13370300

with cylinder and 3 keys

13370310



MR 1 - 2T

CLOSE-OPEN button mini key
switch, Ø 60mm

13370320

with cylinder and 3 keys

13370330



J-EPZ - 1T

one-way contact

13370070



J-EPZ 1 - 2T

CLOSE-OPEN switch, 2-poles

13370150



J-EPZ 1 - 1R

one-way maintained contact,
2-poles

13370110



J-EPZ 1 - 2R

two-way maintained contact,
2-poles

13370180



J-EPZ 3-1R

CLOSE-OPEN switch with
CLOSE-OPEN button

13370270



fire brigade switch

ON-OFF switch with
triangle keys

surface mounted: **13360270**

flush mounted: **13370460**



GSB pillar

Hot-dip galvanised or red painted,
massive tube, with ground plate, bolt-on
also large version available (truck/car)



GS EPZ

for GSB pillar

13370010

13370030



red painted

13300010

red painted, large version (trucks/cars)

13300110

foundation plate, electrogalvanised

13300070

J-EPZ 2 - 1T

one-way momentary contact
+STOP button (also for pillar GSB)

13370210



J-EPZ 2 - 2T

CLOSE-OPEN button + STOP
button (also for pillar GSB)

13370230



rocker switch IP44

one-way rocker contact,
flush-mounted

flush-mounted 1T, momentary

13320010



rocker switch IP44

2-way rocker contact, flush-mounted
flush-mounted 2T, momentary

13320050

flush-mounted 2R, maintained

13320020



Impulse emitters

buttons, switches

Push-buttons IP 65

KDT1	KDT2	KDT3	KDT4	KDT1N	keys toggle	turning toggle
one-way push-button	two-way push-button	three-way push-button	three-way push-button and key knob	emergency push-button	for KDT 1, maintained contact	for KDT 1, maintained contact
13330090	13330110	13330120	13330150	13330100	13300090	13300080
						

main switch (max. contact load)

built-in 2 poles (230V / 4 kW)	built-in 4 poles (400V / 4 kW)	surface mounted 4 poles (400V / 4 kW)
13310050	13310040	13310020



pull buttons

in light metal housing, IP65	plastic S1-U1	mounting KIT, for pull button, incl. 2m chain and pull ring
13340020	13340010	13300100



main switch

for DIN-rail

13310110



roller contact limit switch

in light metal housing

13550010



limit contact switch

with roller

13350020



spiral cable

plastic, 3-pole, length: 1,5m
extendable up to 3,5m

13500010



induction loop and detectors

ISD 5

1-channel induct. loop detector

13430130



ISD 5/2

2-channels induct. loop detector,
recognizing direction

13430120



PTFE-wire

1 roll = 70m,
1,0mm², Tmax 180°C

13400270



plastic housing

for 2 induct. loop detectors

13600130



ISD 6

2-channels, pluggable
for ST 80, STA 11 and TPS 60 PRO

13430140



ready made induction loop

Incl. 10m twisted wire feed cable, to install before last layer of drive way.
The price/cm refers to the length of the induction loop.

13400220



Impulse emitters

code keypads, code key reader



code pad TORCODY RS 433 and RS 868

suitable for radio receiver RS 433 and RS 868, 4-channels (3 with code, 1 without code)

TORCODY 433	black	13170030
	white	13170050
TORCODY 868	black	13170080
	white	13170090



code locks CODY LIGHT

housing IP54, including metal pad IP65

TCS CODY LIGHT-V3	230 V AC and 24 V AC/DC, 1-channel	13450270
TCS CODY LIGHT-V3 1/2-V3	230 V AC and 24 V AC/DC, 2-channels	13450330
TCS CODY metal keypad	additional pad, up to 4 unit(s) possible, for intensive use	13450180

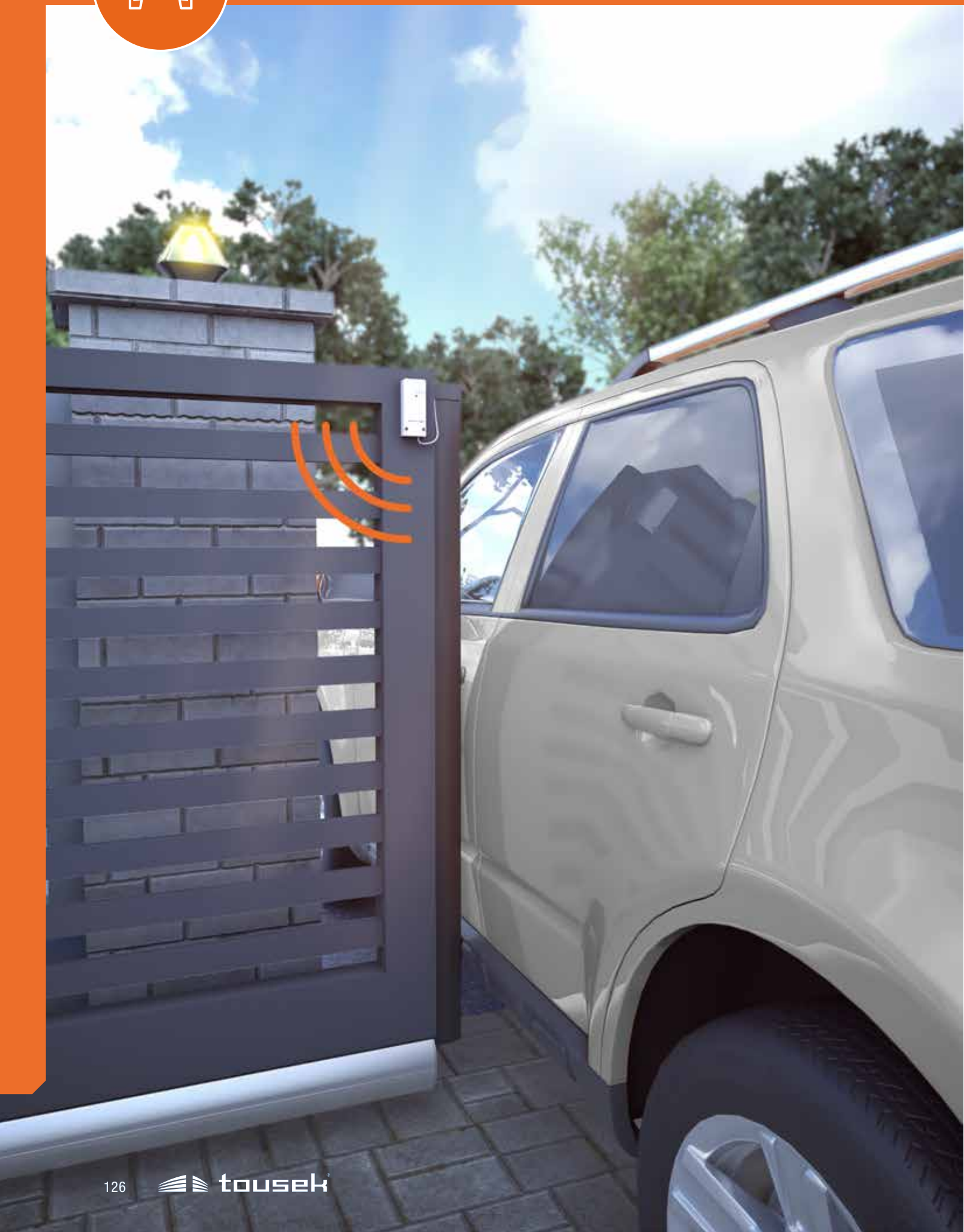


code key readers TL1000, contactless

housing IP54, keyboard IP65, up to 1000 different keys programmable, 4 entrances, 2 readers can be connected, 230V

TL 1000	pot.free contact, incl. 2 grey key, 1 reader	13440560
add. reader TL1000	for code key reader TL1000	13440630
transponder keys	green	13440600
	blue	13440590
	red	13440610
	grey	13440580
programming pad	for deleting keys from the code reader	13440570
distance housing	for mounting on metal	13440620





	page
transmitter-receiver photocells	128
reflective photocells	129
safety contact edges TXE new	130
inductive signal supply system TX 400i	132
radio transmission system TX 320 new	133
signal lamps and traffic lights	134

Safety devices

photocells LS 41, LS 180

general product features

- very slim shape (40mm)
- cable entry optionally on the back side (covered) or underneath
- 12/24V AC/DC
- surface mount

additional features LS 180

- tiltable lens 180°
- lens separated from electronic

LS 180: tiltable lens



vandalism-proof housing (stainless steel)

		product code
LS 41	fixed lens, range 8m	13510330
LS 180	tiltable lens, range 20m	13510340
metal pillar for cars	height: approx. 500mm	red coated 13500500
		silver coated 13500460
metal pillar for trucks/cars	height: approx. 1.060mm	red coated 13500490
		silver coated 13500470
mounting base plate	for metal pillar LS 41 and LS 180	14150170
vandalism-proof housing	stainless steel	13500480

Safety devices

photocells RLS 610, RLS 620, RLS 630, LS 26, LS 45, LS 100



reflective photocells RLS

reflective photocell with reflector, with polarised filter

		product code
RLS 610	24-230V AC/DC, up to 7m range	13510260
RLS 620	12-240V AC/DC, up to 9m range	13510280
accessory kit for RLS 610, 620	plastic cover for reflector and metal housing	red S35113
		silver S35114
RLS 630 new	24-240V AC/DC, up to 9m range	13510540
metal pillar		red 13500120
		silver 13500410
pillar in stainless steel		13500320
mounting base plate		14150170



transmitter-receiver photocell LS 26 up to 20m

12-24V AC/DC, suits standard flush-mounted, with SYNC-function, lens with 3 bolts adjustable

LS 26		13510240
set of AP-cover	plastic, for surface mount	13510290
metal pillar for cars	height: 660mm, red painted	13500050
metal pillar for cars/trucks	height: 1.060mm, red painted	13500150
mounting base plate		14150170



transmitter-receiver photocell LS 45 up to 30m

12/24V AC/DC, plastic housing, surface mount, side mount possible, lens with 3 bolts adjustable

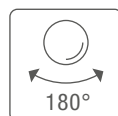
LS 45		13510350
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transmitter-receiver photocell LS 100 up to 30m

supply voltage 12/24V AC/DC, simple surface mounting

LS 100	robust aluminum cover	13510520
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Safety devices

safety contact edges TXE

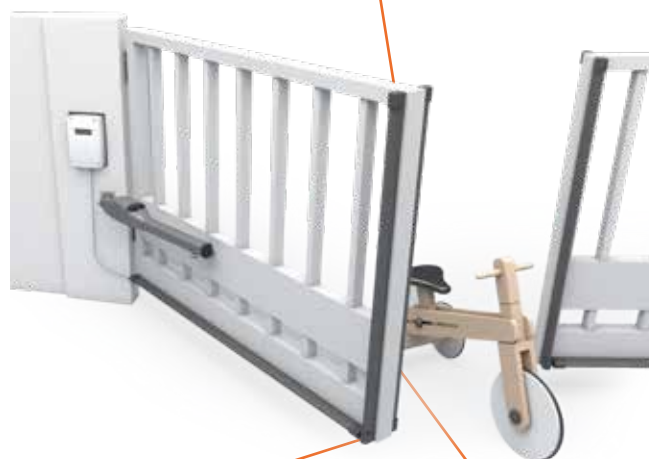
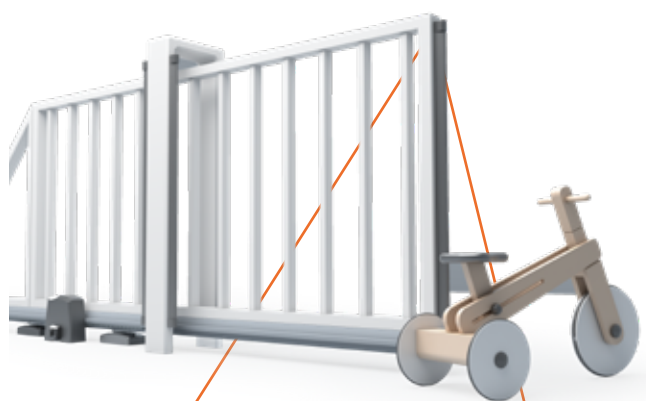
Product features TXE safety contact edges

- to secure closing edges and shearing points
- rubber profile with integrated switching surfaces
- rubber profile with integrated switching surfaces
- end resistance 8.2k Ω
- final edge (8.2k Ω) or passage edge (0 Ω)
- quick mounting system

new



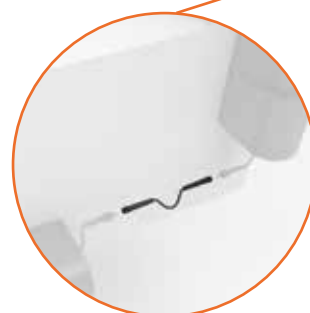
8,2k Ω



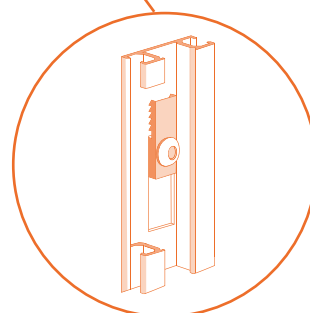
external transmitter



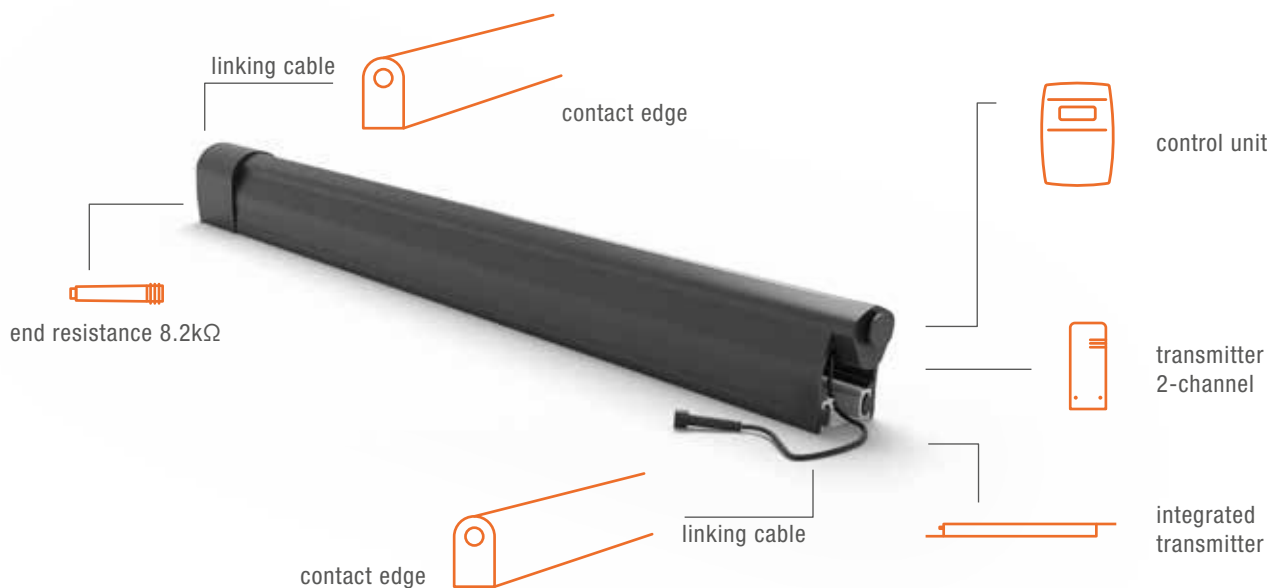
integrated transmitter



connecting cable



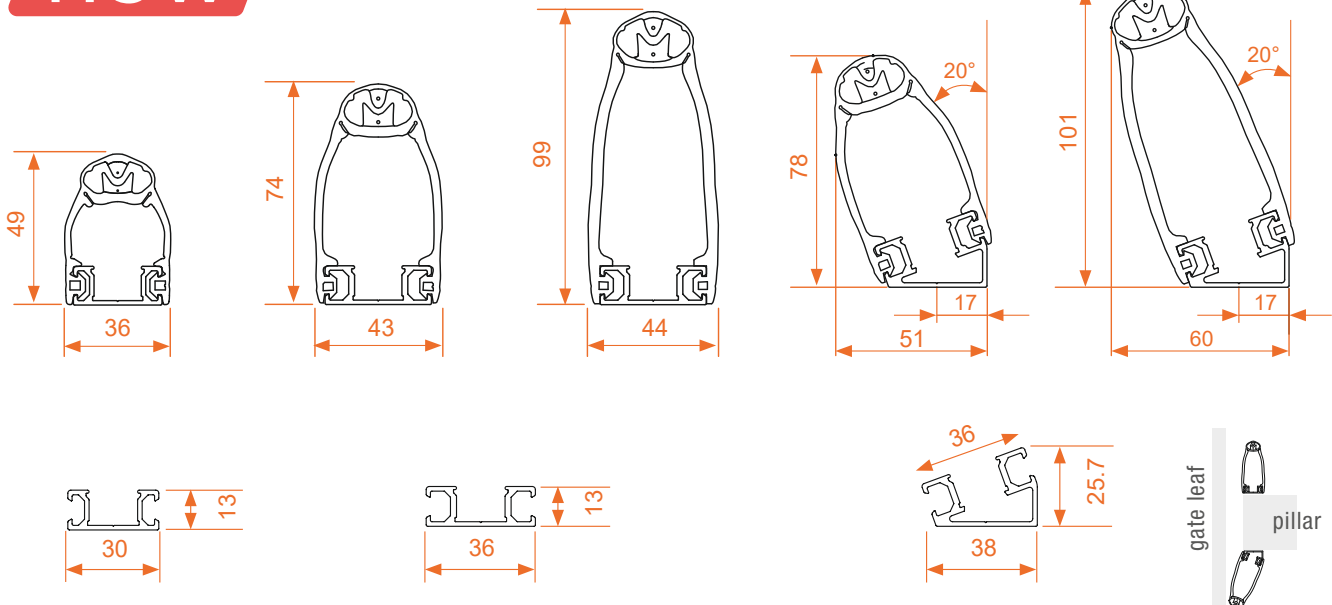
quick assembly



Safety devices

safety contact edges TXE

new



TXE - final edge	basic price one-sided wire, incl. 8.2kΩ end resistor	
TXE - passage edge	basic price wire on both ends	
TXE 49 rubber profile	cm-price	on request
TXE 74 rubber profile	cm-price	
TXE 99 rubber profile	cm-price	
aluminium profile for TXE 49	natural aluminium	assembled
aluminium profile for TXE 74 and 99	natural aluminium	
aluminium profile for TXE 74 und 99	angled 20°, incl. end caps, black	
mounting set	4 x screw, 4x quick mounting clip	13650490
end connection cable 1m	1 connector	13650410
end connection cable 2m		13650420
end connection cable 5m		13650430
end connection cable 10m		13650440
linking cable 0.2m	2 connectors	13650450
linking cable 1m		13650460
linking cable 2m		13650470
linking cable 5m		13650480

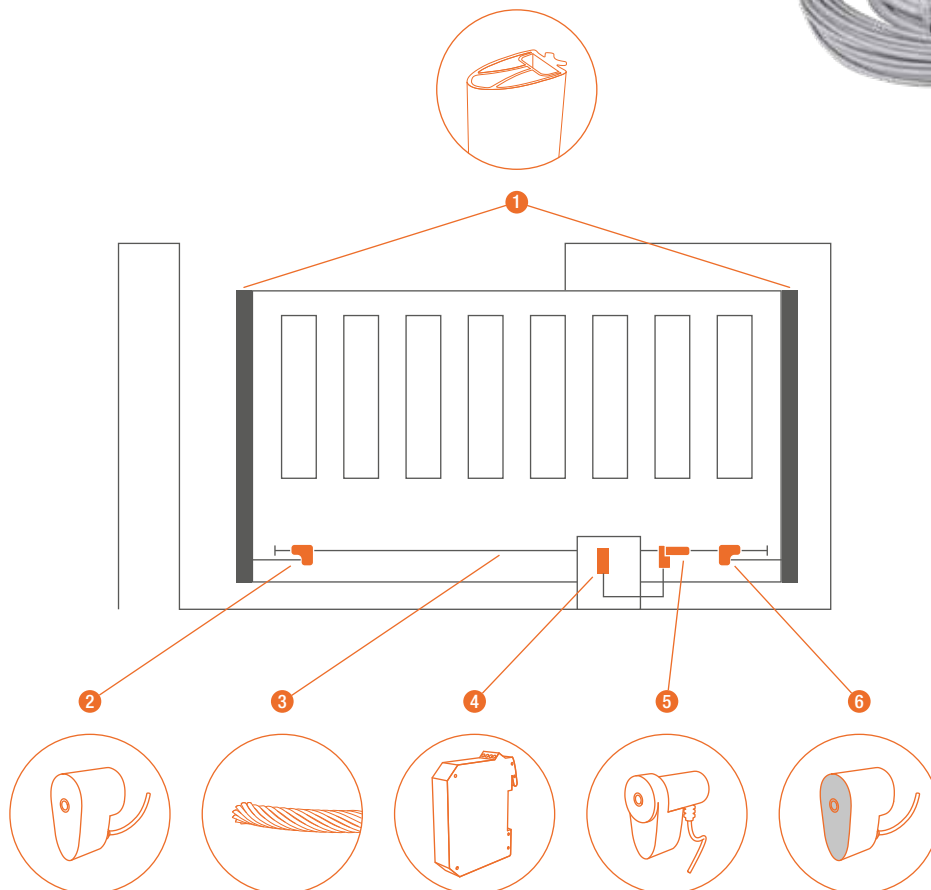


Safety devices

inductive signal supply system TX 400i

product features for inductive signal transmission system TX 400i

- long durability and low operating cost (wear-free signal transmission)
- simple function and error analysis due to 7-segment-display, which helps saving time in the periodic maintenance works
- high flexibility for gate construction because of small inductor dimension
- «hidden» installation possible to reduce vandalism risk
- safety category 3 in accordance of EN954-1
- switching device for mounting onto DIN-rail
- switching output: potential-free break contact N.C.



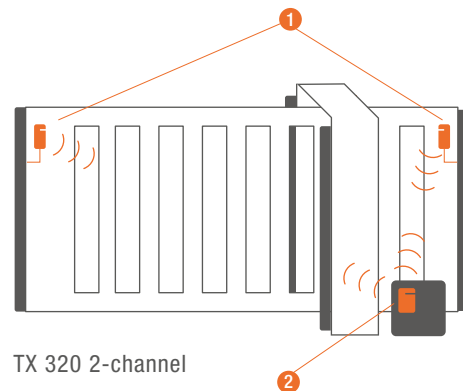
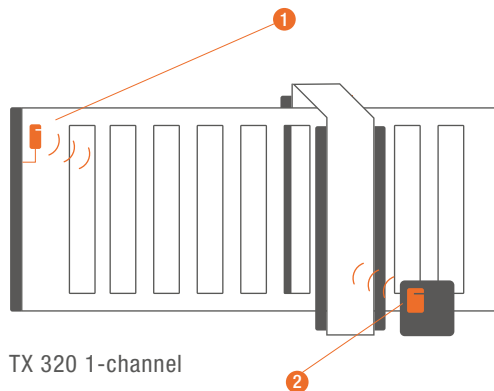
1. safety sensing edges
2. converter
3. cable
4. switching device
5. inductor
6. add. converter
7. pillar with fork

TX 400i - inductive signal transmission system		product code
TX 400i	incl. 2-channel 8,2kΩ resistance evaluator, up to 11m drive way	13660390
additional converter	for gate back edge	13660400
pillar with fork	for TX 100 and TX 400i, hot-dip galvanised, height adjustable, max. 450mm	13660190
plastic housing	for TX 400i	13600130
cable 25m	for drive way up 24m	13660550

product features for radio transmission system TX 320

- bidirectional radio system, 868,3MHz
- 1 input either 8,2k Ω or potential free
- 1 output either 8,2k Ω or potential free
- battery-powered transmitter
- acoustic and optical signal for low battery indication
- power supply for receiver: 12–24V AC/DC

new



Radio transmission system for contact edges

TX 320T2 transmitter	2-channel in housing	13660570
TX 320Ti transmitter	1-channel for integration in TXE	13660620
battery 3.6V	for TX 320Ti transmitter	13140080
battery CR2450N 3V	for transmitter TX 320T2, 2-channel	13140090
TX 320R1 receiver	in housing 1-channel	13660630
TX 320R2 receiver	in housing 2-channel	13660580
TX 320DR receiver	for DIN rail, 2-channel incl. antenna	13660640
power supply	for TX 320DR, for DIN rail, 24V, 15W	12112490

Safety devices

traffic lights, signal lamps



signal lamp LED 12-230V

2 LED lamps, durable, fail-proof, for ST 12/5, ST 24, ST 51, ST 61, ST 63, PULL T, TPS prepared for antenna FK 433 or FK 868 (see page 111)

product code

signal lamp LED 12-230V		13720221
mounting bracket	made of stainless steel	13700290



traffic lights SGA

plastic housing, excl. bulb, Ø Lens: 120mm, lamps in RED, GREEN, YELLOW and RED/GREEN with pivot fastening, incl. diffuser disc. RED/GREEN-lamp additionally with connection bracket.

traffic lights SGA	red	13710050
	green	13710060
	yellow	13710070
	red/green	13710090
bulb for traffic light	230V, 40W, E27, impact resistant	13700070



LED traffic light

black, solid plastic housing, incl. rigid mounting bracket, 110-230V AC, Ø lens: 100mm, IP 65, angle: 60 °, power consumption: 7W

LED traffic light	red/green	13710210
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traffic light pillar

for RED-GREEN traffic light with pivot fastening. Form tube 80x80x3mm, height 1810mm, with ground plate, zinc coated

traffic light pillar		13700170
mounting base plate	zinc coated	13300070

traffic light pillar short

height 1000mm, zinc coated, for mounting onto barrier housing

traffic light pillar, short		13700190
traffic light pillar, LED		13700300



Technical terms and abbreviations

A

AEB: Abbr. for extended and retracted blocking. It is mainly used for swing gate operators and means that the operator is executed self-blocking in all positions (gate opened, gate closed). Usually no further locking mechanisms (e-locks, motorized locking bars) are necessary.

ARS: Abbr. for automatic reversal system. If the gate reaches an obstacle, it automatically reverses in the opposed direction.

ASS: Abbr. for automatic stop system. Comparable to ARS, but when reaching an obstacle, the operator stops.

automatic mode: An impulse (e.g. by radio, torcody, keyswitch,...) triggers the opening of the gate. After the adjusted time (see pause time) the gate closes automatically without giving any further impulse.

B

bypass valves: Are used for force regulation at hydraulic gate operators.

C

Closed hydraulic system: All hydraulic operators of Tousek have this system. The advantage compared with usual, open systems (vent holes to the outside) is the resistance to dust and mainly atmospheric moisture.

D

dead man's operation (Totmann): In this operating mode separate OPEN- and CLOSE commands exist. Impulses may only be given by a non-locking impulse switch. As long as it is actuated, the gate moves. When the impulse switch is released, the gate stops.

duty cycle (ED): During a constant load, the motor starts heating up from the beginning of the load time. As soon as it is relieved, the temperature falls again. The relation of load- and relieve time is called duty cycle and stated in %.

F

friction safety clutch: Is a safety device, where at least 2 friction surfaces are pressed against each other. As soon as the operator reaches an obstacle, these friction surfaces start sliding against each other.

I

impulse operation: An impulse (by radio, key switch,...) triggers the opening of the gate. Then the gate remains in opened position until another impulse is given. Depending on the control unit, an impulse during movement stops or reverses the gate.

L

leaf delay: The leaf delay causes a certain closing order, so that the two gate leaves don't collide during closing.

N

NB: Abbr. for non blocking (see also AEB). At non blocking operators additional locking devices like e-locks, motorized locking bars or the like are required due to the missing self-locking.

P

pause time: Means the time while the gate remains in opened position in automatic operation. At most controls and operators this time is adjustable.

pedestrian entry mode: Allows the partial opening of the gate for pedestrians. Sliding gates open approx. 1 m, at swing gates you can adjust the required opening angle at the control unit.

pinion module: Is a basic measurement to which all further dimensions of toothing are related. It results of the proportion of diameter to teeth number of the pinion. Pinion and gear rack have to show the same module.

potential-free contact: Is an electrical switch contact without voltage (potential).

proximity limit switches: Are needed to define the exact limit positions of the gate. "Proximity" means that there exist no levers or cams, which could cause problems, mainly in winter.

R

radio encoding: Through radio encoding you can give your transmitter a personal identification. At series BT40 B up to 1016 different adjustments are possible, at series BT40T up to 19683. At series RS433 and RS868 a fixed factory-code (by random out of over 67 bn.) is chosen.

red pre-alert: Is only available in automatic operation and usually lasts 5 seconds, which means that 5 seconds before closing the signal lamp starts flashing, resp. the traffic lights turn to red.

rolling code: Each time you press a transmitter button, a new code is generated. All former codes become invalid and are no longer accepted. Therefore, scanning the radio signal is ineffective.

S

self-adjusting radio receiver: Here the already encoded transmitter is stored in the receiver. The advantage, besides saving time, is the possibility to

store more than one code (at BT40: 64, at RS433 and RS868: 340).

soft start and –stop: Due to this system the speed at starting and stopping of the operator is reduced. It's main function is the noise reduction, basically at garage doors.

SYNC-function: This photocell-function prevents the interference of pairwise mounted photocells. Thus, both photocell transmitters resp. –receivers can be mounted at the same side.

General Sale and Delivery Terms of the TOUSEK Ges.m.b.H.

1. Validity/Conclusion

- 1.1. Henceforth the "Tousek Gesellschaft mit beschränkter Haftung" shall be designated "seller", the other party to a contract shall be designated "buyer".
- 1.2. Only this version of the General Sale and Delivery Terms is valid, resp. as soon as a new version appears, this new one becomes valid. The actually valid version can be requested any time, whereas the latest date at the end of the General Sale and Delivery Terms is decisive for the actuality of the version.
- 1.3. These General Sale and Delivery Terms are valid for contracts between enterprises. For contracts between seller and consumer, as far as they are no enterprisers, the legal regulations are valid in case of divergences.
- 1.4. The terms of sale and delivery shall apply to all types of contracts, not only to contracts of sale, and, even if not expressly agreed upon, shall also apply to future business contacts. Herewith the seller will not accept the buyer's terms of purchase. Neither will they be binding to the seller, even if the seller does not explicitly express his disagreement.

2. Offer

- 2.1. Offers and written sales materials will not be binding to the seller.
- 2.2. Offers and written sales materials, as well as Price lists, brochures, graphs, drawings and information about dimensions and weights will only be binding to the seller if separately and explicitly recognized by the seller.

3. Conclusion of a contract

- 3.1. A contract will be regarded concluded when the seller, after having received an order, has sent a written confirmation of the order or has dispatched a delivery.
- 3.2. Later changes of or additions to the contract require a written confirmation of the seller in order to be valid.

4. Prices

- 4.1. All prices are ex works or ex warehouse seller, not including freight, packing, loading and turnover tax/V.A.T. Any further fees, taxes and charges will be paid by the buyer.
- 4.2. Repairs will be carried out if deemed necessary and appropriate by the seller, and they will be charged to the buyer according to the actually required time and expenditures. This also applies to services and extra services which only in the course of the execution of a repair turn out to be necessary and appropriate. In those cases, however, the seller is not obliged to inform the buyer.
- 4.3. The buyer has to re-pay the seller all costs occurring in the course of the setting-up of repair offers or examinations, even if no subsequent order is then placed by the buyer.

5. Delivery

- 5.1. The delivery time starts with the latest of the following dates:
 - a) Date of the confirmation of an order.
 - b) Date upon which all technical, commercial or other pre-conditions which are the responsibility of the buyer have been fulfilled.
 - c) Date upon which the seller receives a part payment or security due prior to the delivery of the goods.
- 5.2. Any authorizations or permissions required from official authorities or other third parties have to be obtained by the buyer. If such authorizations are not issued on time, the delivery will be delayed accordingly.
- 5.3. The seller is entitled to carry out and invoice partial or preliminary deliveries.
- 5.4. Keeping the agreed delivery time is conditional of unforeseeable acts or circumstances which cannot be influenced by the parties, like e.g. all cases of force majeure; these also include armed conflicts, official interventions or bans imposed by authorities, delay of transport and customs clearance, damage in transit, shortages of energy resources and raw materials, as well as a larger portion or essential part of the ordered item(s) becoming reject, or labour disputes. An extension of the delivery time is also possible if a supplier of the seller is subjected to above mentioned circumstances.
- 5.5. If the dispatch of goods is not possible due to reasons for which the seller is not responsible, or if the buyer does not wish the dispatch to be carried out, the seller is entitled to charge the costs of storage of the goods to the buyer, with the delivery being regarded as carried out. This will not alter the agreed terms of payment.
- 5.6. If no way of transport has been agreed upon, the seller is entitled to choose one at his own discretion without being obliged to check for the cheapest method of transport.
- 5.7. If the seller should overrun the delivery time for more than eight weeks, the buyer is entitled to set a period of grace of one month.
- 5.8. The buyer is in no case entitled to claim damages or decrease in value for reason of delay of delivery.

6. Fulfilment and transfer of risks

- 6.1. Utilization and risks are transferred to the buyer at the time of dispatch of the goods from the factory or warehouse at the latest, regardless of the terms of payment (like e.g. franco, c.i.f. etc.) agreed for the delivery. This provision also applies if the delivery is carried out in the course of an installation, or if the transport is carried out or organised and directed by the seller.

7. Payment

- 7.1. If no special terms of payment have been agreed, the seller's claims are due upon the buyer's reception of a delivery. If a delivery according to 5.5. is not possible, the seller's claims are due upon the buyer's reception of the invoice.
- 7.2. In case of a hire purchase the respective part payments are due upon the buyer's reception of the corresponding invoices. This also applies to invoice amounts which increase the original amount due to follow-up deliveries or other agreements, regardless of the terms of payment agreed for the main delivery.
- 7.3. Payments to the seller have to be made in cash without any deductions in the agreed currency. Cheques or bills of exchange will only be accepted for effecting payments. Any expenses arising in this context (like e.g. direct debit or discount fees) will be charged to the buyer.
- 7.4. The buyer is not entitled to withhold or offset payments because of guarantee claims or other counter-claims.
- 7.5. A payment is regarded carried out on the day the seller is able to dispose about it.
- 7.6. Regardless of other instructions issued by the buyer, all payments will first be charged to interest and expenses before being charged to capital. Nevertheless, the seller is also entitled to apply the corresponding legal regulations instead.
- 7.7. If the buyer is in default of an agreed payment or other service, the seller is entitled
 - a) to defer his own obligations until the buyer has effected his outstanding payments or other services.
 - b) to effect an adequate postponement of the delivery time.
 - c) to demand all outstanding payments (with the agreed delivery dates becoming ineffective), and
 - d) to charge interest on outstanding payments to the extent of 1% per month plus turnover tax from date of maturity, provided that the seller does not prove additional expenses, or,
 - e) in case of the buyer's non-compliance within an adequate period of grace, to withdraw from the contract.
- 7.8. Granted discounts or bonuses will be deferred until all outstanding payments have been fully settled.
- 7.9. The seller retains property of all delivered items until the invoice amounts, plus interest and expenses, have been fully paid. Until then the buyer is entitled to resell, process, manufacture or join the acquired goods only with the seller's written approval, except in those cases in which the goods were intended for being resold, processed, manufactured or joined. In order to secure the seller's claims on the outstanding sales Price payments, the buyer undertakes to assign his claims on the resold items to the seller, and to include

a corresponding remark in his business accounts or invoices. Until the outstanding invoice amounts have been fully paid, the buyer undertakes to keep and administer the revenues obtained from reselling the goods in trust to the amount of the seller's pro rata sales Price. In case of seizure of or other demands on the goods, the buyer undertakes to point out the seller's ownership and to inform him immediately.

8. Warranty

- 8.1. Upon compliance with the agreed terms of payment, and in accordance with the following provisions, the seller undertakes to rectify any defects which impair the proper functioning of the goods if they are caused by an error in the design or by a material- or manufacturing defect.
- 8.2. Warranty period is 36 months, whereas the buyer has to verify the deficiency of the goods. This provision also applies to goods or services which are firmly linked to a building or estate. The warranty period starts at the moment of the transfer of risks according to item 6.1.
- 8.3. A claim under the warranty terms can only be accepted if the buyer has notified the seller in writing about the occurred defects without delay. If the claims are justified under the warranty provisions according to 8.1., the seller informed in this way undertakes, at his own discretion, to replace the defective goods or parts thereof, to mend them on the premises, or to have them sent back to him for repair.
- 8.4. All expenses arising in connection with the repair (e.g. for removing and reinstalling, transport and journey) are chargeable to the buyer. For warranty services being carried out on the buyer's premises the required assistant personnel, lifting devices, scaffolding and hardware parts etc. have to be provided by the buyer free of charge. Any replaced parts become property of the seller.
- 8.5. If the seller manufactures a product according to the buyer's designs, drawings, models or other specifications, the seller's liability will be limited to the previously agreed performances.
- 8.6. The warranty excludes those defects which result from installation not arranged by the seller, from installation at unsufficiently equipped facilities, from disregarding the installation requirements and operating conditions, from subjecting the parts to loads in excess of the seller's ratings, or from care-less, negligent or improper treatment or handling, or from usage of unsuitable operating materials. This provision also applies to defects originating from the use of materials provided by the buyer. The seller will not be liable for damage caused by acts of third parties, by atmospheric discharges, by excess voltage, or by chemical influences. The warranty does not include the replacement of parts which are subject to normal wear.
- 8.7. The warranty will expire immediately if the buyer himself or a third party (not explicitly authorized) carries out alterations or repair works on the delivered products without the seller's prior written permission. The seller will not accept invoices over any such works. Works and deliveries carried out under the warranty provisions will not extend the original warranty period.
- 8.8. Limitation period for claims of recourse regarding warranty is 6 months.

9. Withdrawal from the contract

- 9.1. Preconditions for the buyer's withdrawal from a contract are a delay of delivery through the seller's fault, as well as the unsuccessful expiry of an adequately set period of grace.
- 9.2. With the exception of the provisions listed under 7.7.e) the seller is entitled to withdraw from a contract
 - a) if the delivery or the beginning or continuation of services is made impossible for reasons lying within the buyer's responsibility, and continues to be delayed in spite of the setting of an adequate period of grace.
 - b) if doubts regarding the buyer's solvency have arisen, and the buyer - on the seller's request - neither effects an advance payment nor presents an appropriate security prior to the delivery of the goods, or
 - c) if the extension of the delivery time, due to the circumstances listed under 5.4., totals more than half of the originally agreed delivery time, amounting however to a period of at least two months.
- 9.3. The withdrawal from the contract can also be declared with regard to an outstanding part of the delivery or service in accordance with the above listed reasons.
- 9.4. If insolvency proceedings are instituted about the assets of one of the parties to the contract, or if a petition for the initiation of insolvency proceedings has been turned down for lack of sufficient assets, the other party is entitled to withdraw from the contract without setting up a period of grace.
- 9.5. In case of a withdrawal, and regardless of the seller's rightful claim to the payment of damages, already performed services or parts thereof will be invoiced and have to be paid according to the terms of the contract. This provision also applies to the case that the delivery or service has not yet been taken by the buyer, as well as to preparatory actions performed by the seller. Instead of this, the seller is however also entitled to demand the return of already delivered items.
- 9.6. Any other consequences from the withdrawal from a contract are excluded.

10. Liability

- 10.1. In cases in which the product liability law does not apply the seller can only be held liable for damage, in accordance with the corresponding legal provisions, if it was caused by provably deliberate action or gross negligence on his part. Liability for mild negligence, as well as compensation for follow-up and property damage, not achieved savings, losses of interest, and damage resulting from claims of third parties against the buyer, are excluded.
- 10.2. Within the limits of the product liability law the seller can be held responsible for injury to persons as well as for property damage suffered by consumers. Neither the seller nor his suppliers and sub-suppliers will be liable for property damage suffered by an entrepreneur.
- 10.3. In cases of non-compliance with any existing requirements for installation, setting into operation and use (like e.g. included in the connection-, installation- and operating instructions), or noncompliance with any official requirements, any claims for damages are excluded. The seller will in no case be liable for damage caused by the assembly of the devices and facilities. In addition, the buyer is obliged to make his best efforts in checking possible sources of errors and safety hazards.
- 10.4. The limitations of liability according to items 10.2. and 10.3. will also apply in full content to the buyer's customers, including the obligation to pass on the cited limitations of liability to further customers.

11. Place of jurisdiction, place of fulfilment, applying law

Any legal disputes arising from the contract - including those about its existence or non-existence- can only be brought for judgement before the factually competent court of law at the location of the seller's head offices - in Vienna this is the district court Innere Stadt Wien - except if the dispute has arisen from a consumer business matter on the buyer's side. The contract is subject to Austrian law. The application of the United Nations' UNCITRAL-agreement covering contracts about international sales of goods is hereby excluded by mutual agreement.

Vienna, 22. February 2007

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