KLOSE® GmbH
Train Stop Systems

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KLOSE® GmbH
Train Stop Systems
Special designs


KLOSE
KLOSE® GmbH
Train Stop Systems
Standard designs
DB-main station Frankfurt am Main

The Company

- Klose GmbH was established on the 1st of March, 2005 in Westerkappeln. Their business field includes the design, planning and calculation of rail and blocks, including delivery and installation, as well as the preparation and maintenaance of existing constructions.

- The new patend buffer stop designs have been tested by DB AG in accordance with the latest regulations and correspondingly approved by the Federal Railway Authority. The mostly standardised designs have been developed on the basis of the owner'S more than 20 years of experience in the field of railway and rail end block technology.

Certificate of DIN EN ISO 9001

Optimized applications for users

Our new designs represent the advanced development of proven technology, opening up optimised applications for the user, amongst others with:

- New braking elements: Clamping force detection without dynamometric key; also retrofittable for older desings
- Low installation, maintenance and repair costs
- Additional brakes can be optionally fitted on the tracks or on brake rails arranged in the tracks
- Possibility ot optionally use hydraulic buffer systems
- The standardised designs have been technically tested by DB AG and approved by the Federal Railway Authority
- The use and implementation of all previos designs, as for instance also the tractive sleeper type buffer stops, are possible
- The meaningful classifications specify design and amount of friction elements = performance. Older classifications do not differ in between the buffer stop's designs and therefore are not suitable, for example as reference.

Why buffer stops?

- to make sure getting the hign level of safety of railways systems - safety by signaling and safety devices
- Signalling for driving trains and buffer stops for end of tracks protecting buildings, persons, trains, ...

What kind of buffer stop?
Which design will be the suitable one?

- Fixed or friction type?
- Design of steel or concrete?
- Buffer stop or wheel stop?
- We will do each type of buffer stop in correct design, considering the reqirements of actual situation

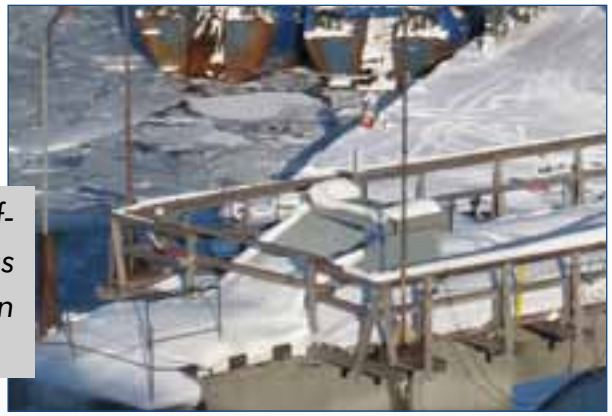
Why Klose Buffer stops?

- Klose Buffer stops and wheel stops will always designed on basis of approval from the german EBA so that the high quality and safety will given without any additional approvals for any case
- Klose Buffer stops are easy to maintain and built in

Buffer stops, standard designs

KLOSE® GmbH
Train Stop Systems

Standard buffer stop class 100B for German Railway DB AG



Standard buffer stop class 100B used in arctic habour

Standard buffer stop class 100BZ for Austrian Railway OBB

Standard buffer stop class 200 for Italien Railways RFI

Standard buffer stop class 300 in Main station of Frankfurt/ Main (Germany)

Buffer stop class 400 for heavy good train and for Metro train

Buffer stops, special designs

Friction buffer stop on elevated track in work shop

Friction buffer stop on a pit in a work shop

Friction buffer stop for heavy haul trains, axle load up to 48to

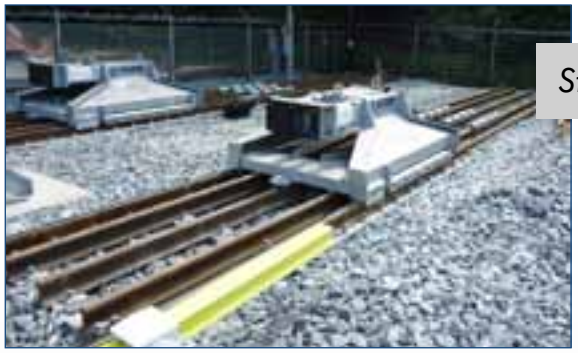
Buffer stops for curved tracks

Standard buffer stop class 100BZ for Danish railways, Banedanmark, center impact bin considering different heights

cover plates on tracks behind buffer stop in passenger railway station

cover plates on track behind buffer stop in work shop

Buffer stops, Metro-design



Standard buffer stop class 500

Standard buffer stop class 500 for narrow gauge

Simple fixed buffer stop

Buffer stop class 500 standard types for different customers

Buffer stops, Metro-design

Buffer stop class 500 designed for impacts by anti-climber and/or center coupler

Buffer stop for city train in curved track

Fixed buffer stops

Standard type FP200HP with hydraulic fiction device

Standard type BrePu12 with mechanical friction device

Special design suitable on car loading ramps

Special design for gauge 1435mm and narrow gauge

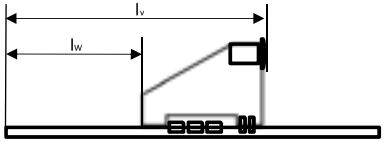
Special design for curved tracks

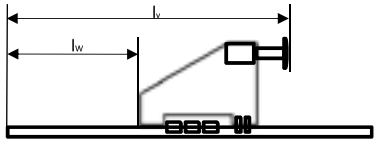
Historic design

Special design: hinged and cross over design

Questionnaire for the design of buffer stops

Please fill out as much as possible





1. Customer Information

Company: _____ Project: _____
Contact person: _____ E-Mail: _____
Phone: _____

2. Vehicle Information

Train Type: ◯ passenger train ◯ goods train
vehicle type:_____

Train Mass (max.): m=_____kg (coach + loco)

Impact Speed: ◯ 5km/h ◯ 10km/h (shunting according to DS 800 01)
◯ 15km/h (shunting according to DS 800 01) ◯ _____km/h

Deceleration: ◯_____m/s² or g

Vehicle Front: ◯ side buffers height over TOR _____mm
middle distance _____mm
◯ center buffer height over TOR _____mm
coupler type _____

3. Buffer Stop

Buffer Stop Type: ◯ fixed buffer stop
◯ friction buffer stop max. stopping distance: l_w=_____m

Max. Track Occupancy: l_v=_____m

Bumping Device: ◯ no
◯ yes ◯ mechanic ◯ hydraulic

Special Features: ◯ insulated ◯ for ramp

Corrosion Protection: ◯ galvanized ◯ painted/powder-coated_____

4. Superstructure

Rail Information: ◯ track slope _____% ◯ track rise _____%
◯ straight track
◯ curved track R= _____m ◯ right (in driving direction)
◯ left (in driving direction)
gauge: ◯ 1435mm ◯ 1000mm ◯ _____mm
sleeper spacing: ◯ 630mm ◯ _____mm

Rail Type: ◯ 49E1 ◯ 54E3 ◯ 60E1 ◯ UIC54 ◯ _____
rail height: ◯ new rail ◯ worn to h= _____mm
rail inclination: ◯ none ◯ 1:20 ◯ 1:40

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Questionnaire for the design of buffer stops

Please fill out as much as possible

5. Additional Information

Safety Factor: ◯ no
◯ yes ◯ 1,5 ◯ 2 ◯ _____

Special Design: ◯ retractable ◯ foldable sidewise
◯ _____

Temporary Use: ◯ yes ◯ no

Buffer Stop for rent: ◯ yes ◯ no

Sketch-Map: ◯ attached ◯ will follow

Notes:

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Friction wheel stops

Standard friction wheel stop BS80

Standard types on elevated tracks

Standard type BS 80mk, retractable design on elevated tracks

Friction wheel stop, retractable design

Friction wheel stop, retractable design including cover plates for sliding

Special design including retractable impact plate

Drag shoes

Standard type HS 2

Folding drag shoe, KHS 125 manual device

Drag shoe including safety locking

Folding drag shoe system including manual device and additional friction device

Fixed wheel stops

Fixed wheel stop KN 150mk, foldable design

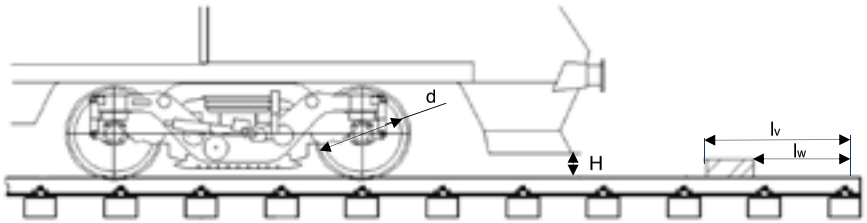
Foldable fixed wheel stop, automatically movement by train himself

Fixed wheel stop special design for wheel sets

Fixed wheel stop foldable design including box on embedded tracks

Questionnaire for the design of wheel stop

Please fill out as much as possible



1. Customer Information

Company: _____ Project: _____
Contact person: _____ E-Mail: _____
Phone: _____

2. Vehicle Information

Train Type: ◯ passenger train ◯ goods train
vehicle type:_____

Train Mass (max.): m=_____kg (coach + loco)
axle load of colliding wheelset = _____kg

Impact Speed: ◯ 3km/h ◯ 5km/h ◯ _____km/h

Decelaration: ◯_____m/s² or g

Vehicle Wheel: ◯ wheel diameter colliding wheelset d = _____mm
◯ height of wheel flange h = _____mm

3. Radvorleger-Angaben

Design Type: ◯ fixed wheel stop ◯ bolted to the rail
◯ clamped to the rail
◯ friction wheel stop max. stopping distance: l_w = _____m

Max. Track Occupancy: l_v = _____m

Max Height above top of Rail h= _____mm

Retractable Design? ◯ no
◯ yes ◯ manual
◯ automatic ◯ electric ◯ Mechanic
◯ retractable into protection box

Signaling: ◯ no ◯ yes, by _____

Corrossion Protection: ◯ galvanized ◯ painted/powder-coating_____

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Questionnaire for the design of wheel stop

Please fill out as much as possible

4. Superstructure

Rail Informationn: ◯ track slope _____% ◯ track rise _____%
gauge: ◯ 1435mm ◯ 1000mm ◯ _____mm
sleeper spacing: ◯ 630mm ◯ _____mm

Rail Type: ◯ 49E1 ◯ 54E3 ◯ 60E1 ◯ UIC54 ◯ _____
height of Rail: ◯ new rail ◯ worn to h= _____mm
rail inclination: ◯ none ◯ 1:20 ◯ 1:40

5. Additional Information

Safety Factor ◯ yes ◯ 1,5 ◯ 2 ◯ _____

Temporary Use ◯ yes ◯ no

Wheel Stop for rent ◯ yes ◯ no

Sketch-Map ◯ attached ◯ will follow

Remark:

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Derailer

Standard type GS 125 including signal block and manual device

Standard type GS 125 on narrow gauge including signal block and device`s for manual and automatically movement

Standard type GS 125 simple design

Derailer for the mounting into switches, delivered for ready installation

Questionnaire for the design of derailers

Please fill out as much as possible

1. Customer Information

Company: _____ Project: _____
Contact person: _____ E-Mail: _____
Phone: _____

2. Derailer Information

Installation: ◯ clamping at rail bottom
◯ bolted to timber sleeper
◯ bolted to rail web

Operation: ◯ manual ◯ manual switch stand
◯ electrical switch

Operating side: ◯ derailing side
◯ opposite derailing side

Signal: ◯ Sh0 ◯ Sh1 ◯ signal lamp
placed at ◯ derailing side
◯ opposite derailing side

Interlock: ◯ with key dependence lock for one or both end positions:_____
◯ with simple lock

Sensor: ◯ without
◯ sensor for both end positions

Step plank: ◯ timber ◯_____

Corrosion protection ◯ galvanized ◯ painted / powder coated_____

4. Superstructure

Track information: ◯ track slope _____% ◯ track rise _____%
◯ straight track
gauge: ◯ 1435mm ◯ 1000mm ◯ _____mm
sleeper spacing: ◯ 630mm ◯ _____mm

Rail cross-section: ◯ 49E1 ◯ 54E3 ◯ 60E1 ◯ UIC54 ◯ _____
rail height: ◯ new rail ◯ worn to h= _____mm
inclination: ◯ none ◯ 1:20 ◯ 1:40

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Questionnaire for the design of derailers

Please fill out as much as possible

5. Special features

Special design ◯ retractable ◯ retractable and traversable
◯ _____

Temporary use ◯ yes ◯ no

Derailer for rent? ◯ yes ◯ no

Sketch-map ◯ attached ◯ will follow

Notes:

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Crane end stops

Fixed crane end stop in domestic harbor

Mounting of crane end stop

Crane end stop including friction device

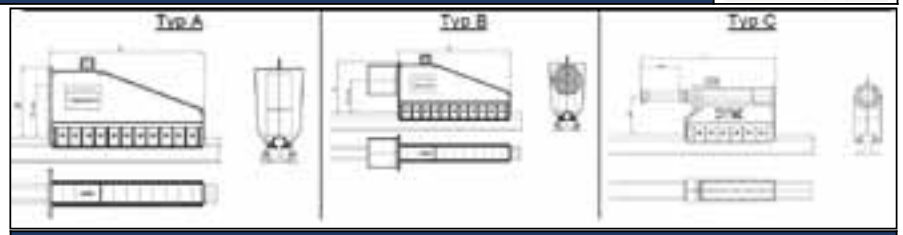
Simple end stop including buffer

End stop design for impact height of 1.9m

End stop including friction device considering special damping requirement

Questionnaire for the design of crane stops

Please fill out as much as possible



1. Customer Information

Company: _____ Project: _____
Contact person: _____ E-Mail: _____
Phone: _____

2. Crane Information

Total Weight: m=_____kg (load + cat + bridge)
impact weight per bumper/ axle frame : _____kg

Impact Speed: v= _____m/s (km/h)

Crane Bumping Device Available: ◯ no — height of impact TOR: _____mm; max. impact force: _____kN

◯ yes — height of impact TOR: _____mm; bumping device: _____mm; max. impact force: _____kN; energy absorption: _____kJ

◯ zellulare buffer ◯ hydraulic Puffer

Final Position Control: ◯ yes ◯ no

Crane load: ◯ swinging freely ◯ cataleptoid

◯ angular displacement/ load shift _____

3. Crane Buffer Stop

Crane Buffer Stop typ: ◯ Typ A ◯ Typ B ◯ Typ C

Desired Fastening of Crane stop: ◯ fixed with bolts through rail ◯ clamped on rail

Max. Track Occupancy: l_v=_____m

Corrosion Protection: ◯ galvanized ◯ painted/powder-coated

4. Superstructure

Rail Information: ◯ track slope _____% ◯ track rise _____%

Gauge: _____m

Rail Fastening: ◯ on sleeper ◯ on concrete basement

Schienenform: ◯ 49E1 ◯ 54E3 ◯ A100 ◯ A75 ◯ _____

rail height: ◯ new rail ◯ worn to h= _____mm

rail inclination: ◯ none ◯ 1:20 ◯ 1:40

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Questionnaire for the design of crane stops

Please fill out as much as possible

5. Additional Information

Safety Factor: ◯ no
◯ yes ◯ 1,5 ◯ 2 ◯ _____

Temporary Use: ◯ yes ◯ no

Crane Buffer Stop for rent: ◯ yes ◯ no

Sketch-Map: ◯ attached ◯ will follow

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SCS-Safety and Control System

Permanent and central monitoring of dead end

Why SCS?

The SCS-Safety and Control System is used in dead ends in order to

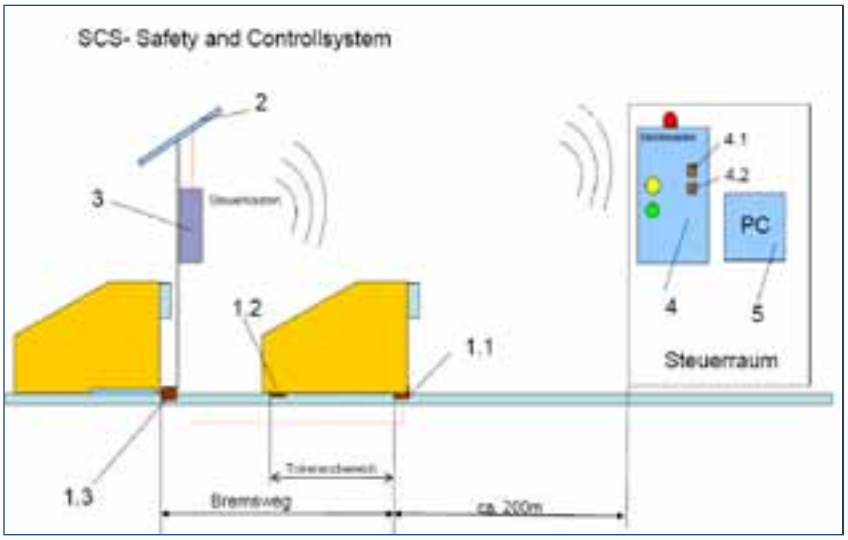
- indicate the operable state of the dead end permanently and at a central location
- display immediately a sliding of the dead end within a tolerance, i.e. no resetting is necessary as long as within tolerance.
- report immediately a sliding of the dead end out of tolerance, i.e. resetting is necessary.

The safety can be significantly increased!

- Through immediate notification of an accident service and maintenance can be made timely and precise.
- Even an immediate and reliable assistance by transferring the alarm to mobile devices is possibe.

The SCS is built up of 3 components

- Measurement Unit
- Transmitter Unit
- Receiver/Signal Unit



The measurement and the transmitter unit can be mounted on the track or alternatively on the buffer stop.

The transmitting device has preferably a battery as energy supply, because it can be re-charged e.g. by a solar cells. Alternatively, cables are possible.

The signal unit can be adapted to individual needs and requirements of the operator. It is possible of the operator. it is possible that messages

- can be send to one more mobile devices
- can be tranfer to a computer
- can be received as optical signal

Services delivery & Installation

- Each buffer stop is preassembled ready for installation, except for the guide claws and brake elements, which need to be fitted once the block is positioned on the track.



delivery by truck or train or …


Mounting, supervision
and documentation
of conformity


Calculation & project engeneering

- The required calculations and planning for dimensioning and design of rail end blocks are carried out in our company. They are based on the design approvals of the Federal Railway Authority and the attendant technical agreements on our standardised rigid and braking buffer stops in cooperation with the specialist department of DB AG.

Inspection & Maintenance & Repair

KLOSE® GmbH
Train Stop Systems












- Inspection, checking and documentation
- Maintenance | Repair/renewing
- emergency aid after impacts
- adaption to new requirements








We look forward to your call –
and to new challenges!
Please feel free to contact us
we would be glad
to answer you promptly.

KLOSE® GmbH
Train Stop Systems

Rail end blocks
for standard-gauge railways,
city railways, metros,
subways and suburban railway
Buffer stops, brake-shoes,
derailing stops, crane runway
buffer stops
Delivery, installation
Reconditioning, maintenance,
spare parts service,
calculations, project planning.

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Sales tax identification number
as per § 27 a Sales tax law:
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