

Back Checks With Hydraulic Damping in the Opening Direction

The Dictator back checks with hydraulic damping slow down the movement of hinged doors before they reach the open position. Thus they limit the opening angle of the door and prevent damage to the door. The door can effortlessly be moved by hand without any resistance from the back check, except in the final position when the cushioning is working or at a too high opening speed of the door (e.g. by a sudden gust of wind). Usually the damping increases continually until the final position.

The Dictator back checks are often used on doors which could bump into a wall or something similar by gusts of wind, draught or just during opening being torn from the user's hand. Beside the damage this could cause to the door, the fittings and possibly the wall, doors opening at uncontrolled speed present a risk of accident not to be underestimated.

The back checks are produced in **two basic versions**: with or without adjustment of the damping force. Of both versions there are available several series for different sizes of doors. Our technical service would be happy to determine free of charge the back check for your application.



Technical Data

Cylinder diameter	TB: 23, 28 mm; TBR: 28, 35 mm
Piston rod diameter	TB: 10, 14 mm; TBR: 10, 14 mm
Cylinder	steel zinc-plated or coated in RAL colours, AISI 304
Piston rod	hard-chrome plated or AISI 304 stainless steel
Door size*	up to width 1.30 m, height 2.50 m (with 3 hinges)
Door weight*	up to ca. 200 kg; *for larger doors on demand
Maximum opening angle	120°
Mechanical stop (ca.)	TB: 1023: 250 N, 1428: 350 N, 1435: 500 N



Operation, Installation and Adjustment

DICTATOR back checks are the ideal solution for exterior doors being exposed to wind or interior doors in surroundings with heavy draught that might slam open. The cushioning by the back check reduces strain both on door (e.g. glass panes) and door hinges. One side of the back check is fixed to the upper door frame, the other side to the door leaf. When the door is opened normally, there is almost no cushioning effect of the back check perceptible. As soon as the door is opened very fast either by hand or e.g. a gust of wind, the back check hydraulically slows down this sudden movement.

Choosing the Correct Back Check

The tables with the different standard models show the weight of interior doors up to which the respective back check may be used. When installing a back check without adjustment on a frequently used door, you should always choose the series 1428 with 250 mm stroke (also with the sets)!

When you intend to install back checks on exterior doors or on doors with high pressure differences or heavy draught, please contact our advisory service. For this application we need the following data:

- Opening angle, weight, dimensions, thickness and material of the door
- Width and material of the door frame
- Mechanic stop required: yes/no
- Installation on the side of the hinges or on the side opposite to the hinges

Accessories

The **back checks** are available **with** various **installation kits** for the different types of doors, all packed in a unit box. This should **facilitate the choosing**. Information on the different sets is to be found beginning on page 02.063.00, the exact dimensions of the fixing accessories are shown on page 02.065.00 und 02.066.00.

Apart from the sets the fixing accessories are also separately available. For the 1435 series no sets are available as here the installation situations vary a lot. The necessary installation accessories have to be ordered additionally to the back check.

Mechanical Stop

The back checks can be furnished with an integrated mechanical stop for the door in the open position (stop at about 3° before the piston rod is completely extended). Back checks with mechanical stop are marked with the letter "F" in their name.

Installation

When installing the back check, please make sure it is fixed securely to the door and the frame. If door or frame are made from thin steel sheet or something similar, we recommend to use mounting plates.

Furthermore, the piston rod should not be fully compressed when the door is closed. There should be left approx. 10 mm of stroke in order to ensure the door can be opened without problems.

Damping Adjustment

When using a non-adjustable back check model the cushioning range can be reduced on site by withdrawing some of the oil through the valve screw.

The damping force of the adjustable back checks can be adjusted continuously and at any time. The piston rod has to be pulled out as far as possible and then - while still being pulled - be turned (stepped adjustment).



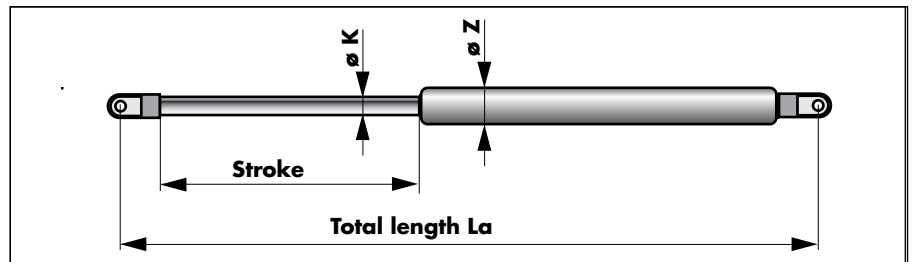
Non-Adjustable Back Checks TB

The economic and non-adjustable types **TB** are mainly intended for industrial applications (e.g. for hall doors opening to the outside).

There are produced two series of back checks TB with the diameters 1023 and 1428. The standard types are shown below. Of course, there are available differing lengths. In addition the back checks TB can also be provided with an integrated mechanical stop (code "F").

By default the steel version is zinc-plated. On demand coating in RAL colours is also possible. The dimensions of the fixing eyelet are to be found on the next page.

Dimensions



Technical Data and Order Information

Part no.	Ø K [mm]	Ø Z [mm]	Stroke [mm]	Length La [mm]	Door weight up to	Max. door opening	Me- chanic. stop	Ma- terial
10230200TBL	10	23	200	500	50 kg	95°	no	steel
10230200TBVL	10	23	200	500	50 kg	95°	no	AISI 304
10230200TBFL	10	23	200	500	50 kg	95°	yes	steel
10230200TBVFL	10	23	200	510	50 kg	95°	yes	AISI 304
10230250TBL	10	23	250	600	50 kg	120°	no	steel
10230250TBVL	10	23	250	600	50 kg	120°	no	AISI 304
10230250TBFL	10	23	250	600	50 kg	120°	yes	steel
10230250TBVFL	10	23	250	610	50 kg	120°	yes	AISI 304
10230250TBGL	10	23	250	660	50 kg	120°	no	steel
14280200TBL	14	28	200	500	90 kg	95°	no	steel
14280200TBVL	14	28	200	510	90 kg	95°	no	AISI 304
14280200TBFL	14	28	200	510	90 kg	95°	yes	steel
14280200TBVFL	14	28	200	510	90 kg	95°	yes	AISI 304
14280250TBL	14	28	250	600	200 kg	120°	no	steel
14280250TBVL	14	28	250	600	200 kg	120°	no	AISI 304
14280250TBFL	14	28	250	610	200 kg	120°	yes	steel
14280250TBVFL	14	28	250	610	200 kg	120°	yes	AISI 304
14280300TBL	14	28	300	750	200 kg	120°	no	steel
14280300TBVL	14	28	300	750	200 kg	120°	no	AISI 304
14280300TBFL	14	28	300	750	200 kg	120°	yes	steel
14280300TBVFL	14	28	300	750	200 kg	120°	yes	AISI 304
14280400TBL	14	28	400	1000	200 kg	120°	no	steel
14280400TBVL	14	28	400	1000	200 kg	120°	no	AISI 304
14280400TBFL	14	28	400	1000	200 kg	120°	yes	steel
14280400TBVFL	14	28	400	1000	200 kg	120°	yes	AISI 304

Some of the listed back checks TB are also available as a set with the appropriate fixing accessories. Information on the different sets (back check complete with fixing accessories) you will find on page 02.063.00.

Legend:

TBL: Standard back check, zinc-plated steel

TBVL: Standard back check, AISI 304

TBFL: Standard back check with integrated mechanical stop, zinc-plated steel

TBVFL: Standard back check with integrated mechanical stop, AISI 304

TBGL: Standard back check, installed together with a guide rail door closer, zinc-plated steel, (total length is longer)

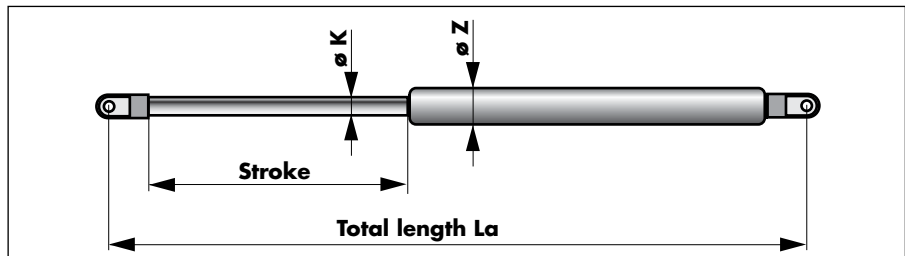


Adjustable Back Checks TBR

The adjustable back checks **TBR** are designed especially for the interior use, e.g. in residential building, hospitals, nursing homes etc. where higher requirements apply to the optimum movement of the door. They are also used on heavy doors as they can exactly be adjusted on site.

There are produced two series of adjustable back checks TB with the diameters 1028 and 1435. The standard types are shown below. Of course there are available differing lengths. In addition the diameter series 1435 is also available with an integrated mechanical stop (code "F"). For the fixing of the back checks there is provided an eyelet both on piston rod and cylinder (dimensions see below).

Dimensions



Technical Data and Order Information

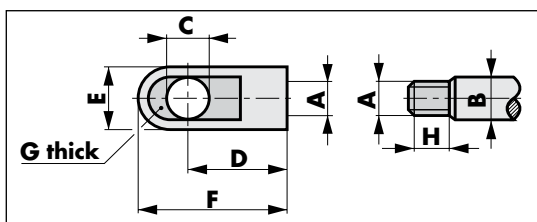
Part no.	Ø K [mm]	Ø Z [mm]	Stroke [mm]	Length La [mm]	Door weight up to	Max. door opening	Me- chanic. stop	Ma- terial
10280200TBRL	10	28	200	550	100 kg	95°	no	steel
10280200TBRLV	10	28	200	550	100 kg	95°	no	AISI 304
10280250TBRL	10	28	250	600	100 kg	120°	no	steel
10280250TBRLV	10	28	250	600	100 kg	120°	no	AISI 304
14350250TBRL	14	35	250	650	200 kg	120°	no	steel
14350250TBRLV	14	35	250	650	200 kg	120°	no	AISI 304
14350250TBRLF	14	35	250	650	200 kg	120°	yes	steel
14350300TBRL	14	35	300	750	200 kg	120°	no	steel
14350300TBRLV	14	35	300	750	200 kg	120°	no	AISI 304
14350300TBRLF	14	35	300	750	200 kg	120°	yes	steel
14350400TBRL	14	35	400	1000	200 kg	120°	no	steel
14350400TBRLF	14	35	400	1000	200 kg	120°	yes	steel
14350400TBRLF-1	14	35	400	1000	200 kg	120°	yes	steel
14350500TBRL-1	14	35	500	1150	200 kg	120°	no	steel
14350500TBRLF-1	14	35	500	1150	200 kg	120°	yes	steel

Legend:

- TBRL:** Standard back check, adjustable, zinc-plated steel
- TBRLV:** Standard back check, adjustable, AISI 304
- TBRLF:** Standard back check, adjustable, with integrated mechanical stop, zinc-plated steel
- TBRL-1:** Standard back check, adjustable, zinc-plated steel with eyelet 1435-1
- TBRLF-1:** Standard back check, adjustable, with integrated mechanical stop, zinc-plated steel, with eyelet 1435-1

Some of the listed back checks TBR are also available as a set with the appropriate fixing accessories (see next page).

Dimensions End Fitting "Eyelet"



Ø - series	1023 1028	1428	1428"V" 1435	1435-1*
A	M8	M10	M10	M10
B	Ø 10	Ø 14	Ø 14	Ø 14
C	Ø 8	Ø 8	Ø 8	Ø 10
D	22	30	27	27
E	14	18	18	18
F	32	40	36	36
G	10	10	10	10
H	10	10	10	10

Other end fittings on demand /* Fixing accessories on page 02.066.00



Back Check Sets

The most common standard TB and TBR back checks are also available as sets complete with the appropriate mounting accessories.

The required installation kit depends on the mounting situation, the type of door and frame. On the following page you will find the different kinds of installation and the corresponding accessories kit. Of course the fitting brackets are also available as single parts. Details and the dimensions of all components are shown on page 02.065.00.

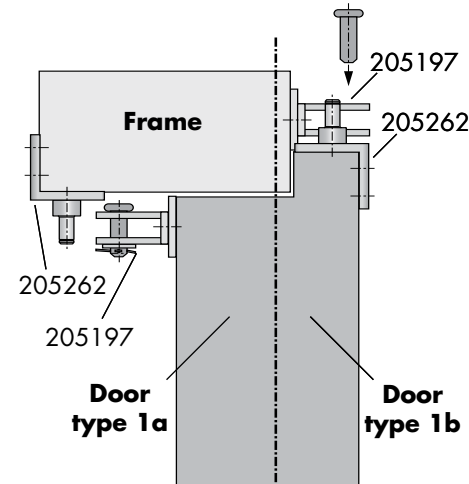
Order Information Back Check Sets

Back check sets not adjustable TB (zinc-plated steel)	Part no.	
	without stop	with stop
Back check 10230250TBL with installation kit 1	300981	
Back check 10230250TBFL with installation kit 1		300991
Back check 10230250TBL with installation kit 2	300982	
Back check 10230250TBFL with installation kit 2		300992
Back check 10230250TBL with installation kit 3	300983	
Back check 10230250TBFL with installation kit 3		300993
Back check 14280250TBL with installation kit 1	300984	
Back check 14280250TBFL with installation kit 1		300994
Back check 14280250TBL with installation kit 2	300985	
Back check 14280250TBFL with installation kit 2		300995
Back check 14280250TBL with installation kit 3	300986	
Back check 14280250TBFL with installation kit 3		300996
Back check sets not adjustable TB (AISI 304 stainless steel)		
Back check 14280250TBVL with installation kit 1	300987	
Back check 14280250TBFVL with installation kit 1		300998
Back check 14280250TBVL with installation kit 2	300990	
Back check 14280250TBFVL with installation kit 2		300997
Back check 14280250TBVL with installation kit 3	301901	
Back check 14280250TBFVL with installation kit 3		301902
Back check sets adjustable TBR (zinc-plated steel)		
Back check 10280250TBRL with installation kit 1	300975	
Back check 10280250TBRL with installation kit 2	300976	
Back check 10280250TBRL with installation kit 3	300977	
Back check sets adjustable TBR (AISI 304 stainless steel)		
Back check 10280250TBRL with installation kit 1	300999	
Back check 10280250TBRL with installation kit 2	300980	
Back check 10280250TBRL with installation kit 3	30190	

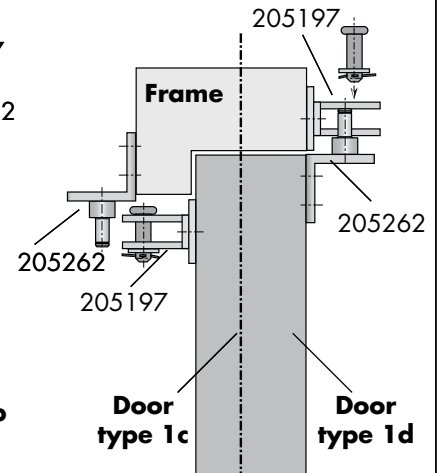


Installation Kits - Mounting Situations

Kit 1 can be used for the back (door type 1a with **mid-size frame**) or front side of an overlapping door (door type 1b).



Kit 1 also can be used on the back (door type 1c with **narrow frame**) or front of a flush door (door type 1d).

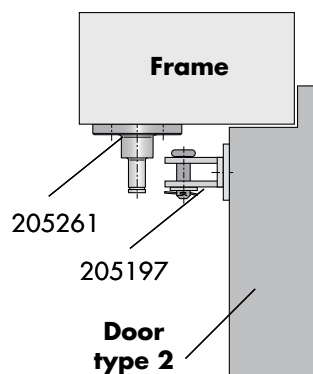


Installation Kit 1

for overlapping and flush doors:

Installation kit 1 (part no. 205197 and 205262) for back checks 10230250TBL, 14280250TBL or 10280250TBRL

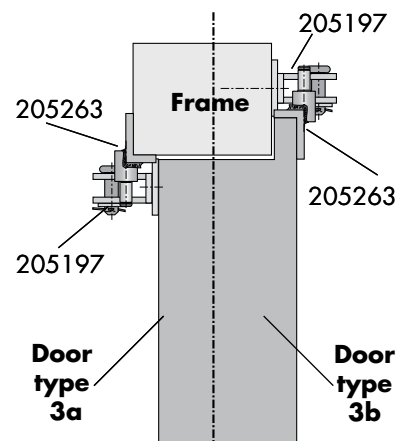
Kit 2 is used only on the **back side** of the door. There has to be enough space available on the frame for mounting flange no. 205261, to achieve a secure fixing.



Installation Kit 2 for backside installation under a large frame:

Installation kit 2 (part no. 205197 and 205261) for back checks 10230250TBL, 14280250TBL or 10280250TBRL

Kit 3 with the special bracket no. 205263 allows an installation on the **back side** of a narrow frame (3a) or on the **front** of doors with thin overlapping (3b).



Installation Kit 3 for installation under a narrow frame or on the front side of doors overlapping only slightly:

Installation kit 3 (part no. 205197 and 205263) for back checks 10230250TBL, 14280250TBL or 10280250TBRL

Note:

The kits are also available in stainless steel. Below are given the AISI 304 stainless steel part numbers matching those in zinc-plated steel shown in the adjacent drawings:

zinc-plated	AISI 304
205197	205249
205261	205281
205262	205282
205263	205258



Accessories - for the Series 1023, 1428 and 1435

For installing the back checks there are different brackets available. The type of bracket to mount on the frame depends mainly on the width of the frame. The bracket to be chosen for the door depends on the kind of door (overlapping or flush).

If the back check is fitted to a door already being equipped with an overhead door closer, special brackets are necessary. For fixing it to the frame you need a longer bracket (part no. 205275) and for the door the special bracket (part no. 205276). They allow to fix the back check below the guide rail of the door closer.

Under certain circumstances these accessories can be used for the series 1435 (not for 1435-1!).

Mounting bracket
part no. 205197 / 205249

Counter plate for mounting bracket
part no. 205468

Mounting bracket
part no. 205262 / 205282

Mounting bracket narrow
part no. 205263 / 205258

Mounting flange
part no. 205261 / 205281

Mounting bracket zinc-plated
(in combination with overhead door closer)
part no. 205275

Mounting bracket zinc-plated
(in combination with overhead door closer)
part no. 205276



Accessories - for the Series 1435-1

For the installation of the back check series 1435-1 we provide special accessories, as the applications where these back checks are used are subject to high forces. For this reason the diameter of the eyelet hole is 10 mm (instead of 8 mm as with the other eyelets). For the fixing to the door we recommend the mounting plate. To improve the stability of the fixing on e.g. very thin walled doors you should additionally use the counter plate with threaded inserts. The fastening angle is intended for the mounting to the frame. Depending on the mounting situation the bolt can be positioned on the inner or outer side.

The accessories are zinc-plated. Special accessories are available on demand.

Counter plate to mounting plate with threaded inserts
part no. 205461

Mounting flange for narrow door frames
part no. 205469

Mounting plate
part no. 205460

Mounting angle with bolt that can be positioned on the inner or outer side
part no. 205462

Order Information Mounting Accessories

Bracket, zinc-plated	for door and frame	part no. 205197
Bracket, AISI 304	for door and frame	part no. 205249
Counter plate with threaded inserts for bracket, AISI 304		part no. 205468
Mounting flange, zinc-plated	only for frame	part no. 205261
Mounting flange, AISI 304	only for frame	part no. 205281
Mounting bracket, zinc-plated	for door and frame	part no. 205262
Mounting bracket, AISI 304	for door and frame	part no. 205282
M. bracket narrow, zinc-plated	for door and frame	part no. 205263
M. bracket narrow, AISI 304	for door and frame	part no. 205258
Mounting bracket (overhead door closer)	for frame	part no. 205275
Mounting bracket (overhead door closer)	for door	part no. 205276
Mounting plate for 1435-1 series, zinc-plated		part no. 205460
Counter plate with threaded inserts for 205460, zinc-plated		part no. 205461
Mounting angle for 1435-1 series, zinc-plated		part no. 205462
Mounting flange for 1435-1 series, zinc-plated		part no. 205469