

Wörner GmbH
Automation Technology

Rechbergstrasse 50
D-73770 Denkendorf

p: +49 (0) 711 601 609 - 0
f: +49 (0) 711 601 609 - 10

sales@woerner-gmbh.com
www.woerner-gmbh.com

Products

All technical details correspond to the stand of printing. As a result of continuous technical progress changes are subject without notice.





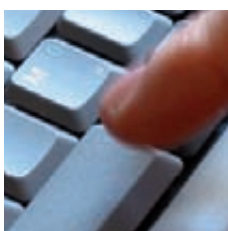
**Würner GmbH
Automation Technology**

About the company
p. 3



Contact

Addresses and contacts
p. 4



Product Configuration

Ordering - made easier!
p. 6 – p. 7



**Separating Stops,
without Damping**

p. 8 – p. 45



**Separating Stops,
with Damping**

p. 46 – p. 119



**Separating Stops
Delta FI**

p. 120 – p. 129



**Separating Stops
Delta EL**

p. 130 – p. 147



Angle Dampers

p. 148 – p. 177



Index Cylinders

p. 178 – p. 183



Anti-bounce Stops

p. 184 – p. 191



Position Sensors

p. 192 – p. 199



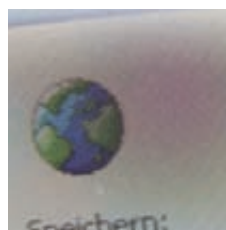
**Company-specific
Separating Stops**

p. 200 – p. 237



**Customized Devices
and Accessories**

p. 238 – p. 249



**Data Download
Service & Support
GTCT**

p. 250 – p. 252

**Wörner GmbH
Automation Technology!**

We are a manufacturer of damping, stopping and positioning modules for transfer systems in production and assembly lines. These system modules fulfill a key function in the automated material flow and are critical in determining the performance of such systems in regard to speed, accuracy and safety. Separating stops are small aids controlling the material flow in the system. They are responsible for stopping and separating the pallet holders at accumulation sections or for positioning at machining stations.

Separating stops are central components in transfer systems. In this context, the requirements in regard to their function are defined by the goods to be transported, these having different sensitivity levels and weights as well as speeds or ambient conditions.

Founded in 1965, **Wörner GmbH Automation Technology** today ranks as an internationally competent solution provider for customers with high demands. Creativity, experienced expertise and commitment to customer requirements are the key to our success. In fact, solutions formulated and produced around customer requirements are the Wörner standard.

Put us to the test!

Contact us!

You can find our service network with contacts worldwide on the following pages.

Here you can find all important information about Wörner GmbH. We have provided a wide range of download options in the Service area and for our products.

www.woerner-gmbh.com

**We're looking forward
to your visit!**



Wörner

Belgium
Sybermat A.G.
41 avenue du Commerce
B-1420 Braine L`Alleud

p: 0032 2386 11 70
f: 0032 2386 11 71
info@sybermat.com

contact person
Mr. Johnen

Italy
NC Componenti s.p.a.
Via F. Raimondo, 11/B
I-10090 Cascine Vica - Rivoli (TO)

p: 0039 011 9575222
f: 0039 011 9575113
info@nccomponenti.it
www.nccomponenti.it

contact person
Mr. Fundone

Slowenia
Vial Automation d.o.o.
Gotovlje 57
SI-3310 Žalec

p: 00386 3713 2790
f: 00386 3713 2794
info@vial-automation.si
www.vial-automation.si

contact person
Mr. Lichtenegger

France
Huber Automation
Zone Industrielle No.1
F-67490 Dettwiller

p: 0033 3887 19800
f: 0033 3889 14509
Pushub@aol.com

contact person
Mr. Huber

Nederland
Conway Nederland BV
Tolstraat 12 a
NL-7482 DB Haaksbergen

p: 0031 53574 3239
f: 0031 53574 3249
info@conwaynederland.nl
www.conwaynederland.nl

contact person
Mr. Pit

Spain
Minitec S.A. Uni
C/Carlos Jimenez Diaz No. 7
E-28806 Alcala de Henares (Madrid)

p: 0034 91656 2652
f: 0034 91677 5304
comercial@minitec.es
www.minitec.es

contact person
Mr. Martos

Great Britain
Drive Lines Technologies Ltd.
45 Murdock Road
Manton Lane Industrial Estate,
GB-Bedford, MK41 7PQ

p: 0044 1234 360689
f: 0044 1234 345673
sales@drivelines.co.uk
www.drivelines.co.uk

contact person
Mr. Newbery

Austria
R.Ludvik Industriegeräte
Rothkirchgasse 6
A-1120 Wien

p: 0043 18123 944
f: 0043 18159 558
office@r-ludvik.at
verkauf@r-ludvik.at
www.r-ludvik.at

contact person
Mr. Ludvik

South Korea/Japan
Se Chang International Co. Ltd.
Bugyang-dong Hwaseong-si
KR-500-55 Gyeonggi-do

p: 0082 31 366 8901
f: 0082 31 366 8906
woerner@sechang-kr.com
sales@shockabsorber.co.kr
www.sechang-kr.com

contact person
Mr. Tae Hoon Lee

Schwitzerland
Vial Automation GmbH
Hauptstr. 8 a
CH-4655 Stüsslingen

p: 0041 62295 3862
f: 0041 62295 5856
GSM: 0041 79689 3521
info@vial-automation.ch
www.vial-automation.ch

contact person
Mr. Lichtenegger

USA
Bosch Rexroth Corporation
816 East Third Street
Buchanan, Michigan 49107

p: 001 269 697 5315
f: 001 269 695 5363
mark.dinges@boschrexroth-us.com
www.boschrexroth-us.com

contact person
Mr. Dinges



Faster to your solution!

We have reworked our catalog for you, so that you can view the entire Wörner product range. The first orientation involves the summary of contents on page 2. We distinguish ten product areas, which are described in separate sections.

You can then reach the product pages via the introductory pages for the relevant product. The exact functional processes are shown here. The individual product is presented on two double pages. Technical information, order code, 3D periphery overviews with the accessories tables following directly afterwards allows you to get complete informations about Wörner products.

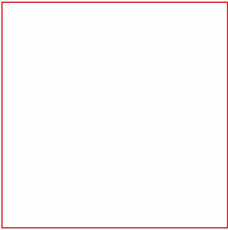
The 2D drawing accompanying the product lets you see the exact dimensions.

Ordering - made easier!

The product pages contain an order code for each product, allowing you to configure your product. Select a standard configuration or complete the order code with the supplements you have chosen. Orientate your selection towards the requirements for the product.

That means you can find your product in just two steps. The method of display was deliberately designed so that all possible variations can be shown in the product configuration.

Electronic data can be easy download from **www.woerner-gmbh.com**



Step 1 | **Determine order code**

Please fill out the boxes in the first line from left to right to find the correct order code.
For this, follow the link line from each box to the column with the associated sizes and variants and make your selection.

D070				
Type D070				
Function EW = single acting DW = dual acting				
Temperature range [° degrees] - = normal - 20° bis + 80° H = heat resistant - 20° bis + 180°* K = cold resistant - 50° bis + 80°*				
Position detection sensor - = without sensor I = inductive sensor [1]* E = electronic sensor [1]*				
Customer-specific version [2]				

[1] only for normal temperature range
[2] placed correspondingly
* on request



Four types of box are distinguished:

D070
.....

- 1. Mandatory data with predefined content,**
in the example on the above the first box with the basic type D070
- 2. Mandatory data** (empty box)
- 3. Optional data** (only line)
If no entry is made, only the basic version will be supplied,
in the example this means, for the temperature range
- = normal -20° bis + 80°
- 4. Customer-specific versions** (dotted line)
placed correspondingly

When making your selection, please note the conditions linked to variants (identified by footers).

The below example shows, that the position detection sensors I = inductive sensor and E = electronic sensor only works in normal temperature range. See footer [1] only for normal temperature range



Step 2 | **Select accessories**

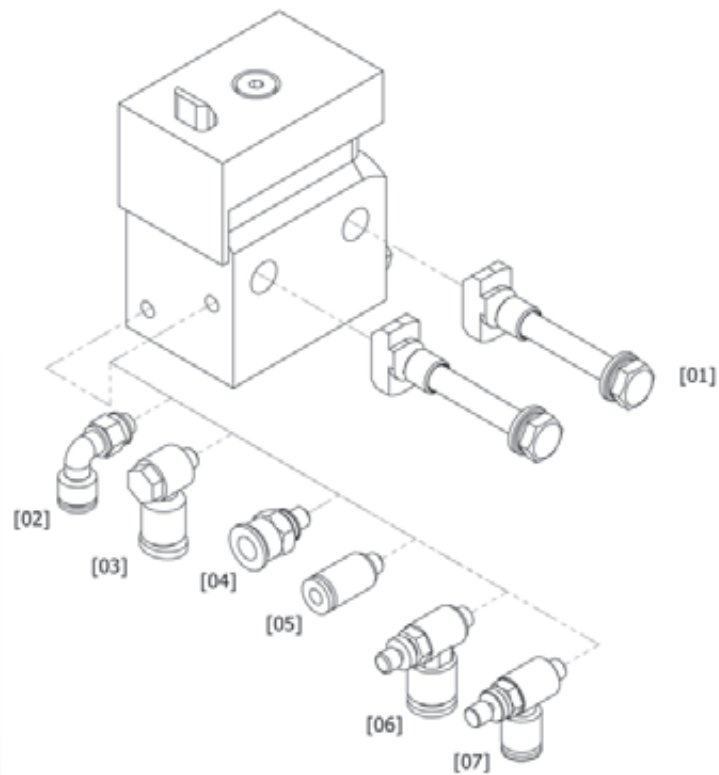
The 3D periphery overview provides a clear layout showing the corresponding accessories for the product. This gives you the opportunity to tailor the accessories to your requirements. You can find an accurate description of the accessory parts in table form below the periphery overview. Use the labeling with the corresponding numbers for orientation.

Order – In two steps!

First indicate the order you have determined in our order. Supplement your order with the order numbers of the accessory parts and the particular number, selected as required.

Please take note

All product pictures in this main catalogue are shown with accessories and do not correspond to the basic models of the order code.



Delta 070 | **Accessories**

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set Air connection		44000145	
[02]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[03]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[04]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[05]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[06]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	- 5° up to + 60°
[07]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	- 5° up to + 60°

Heat and cold resistant
accessories on request

Two examples:

You need a separating stop without damping, which can be used up to a total weight of 70 kg and at conveyor speeds of 6 m/min to 36 m/min, with a single acting function, only for normal temperature range and an electronic sensor.

---> **D070 - EW - E**

You need a separating stop without damping, which can be used up to a total weight of 70 kg and at conveyor speeds of 6 m/min to 36 m/min, with a dual acting function, uses in heat resistant temperatures -20° up to +180°, without sensor.

---> **D070 - DW - H**

Separating Stops, without Damping

Get down to business!



Flexible in use thanks to multi-configuration variants

Compatible with various transfer systems

Compact, sturdy design

Any installation position

Simple installation

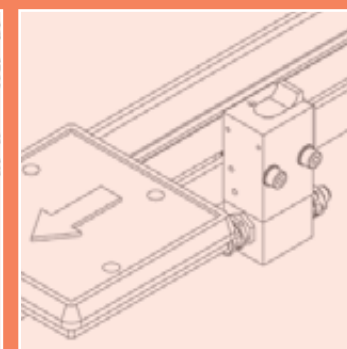
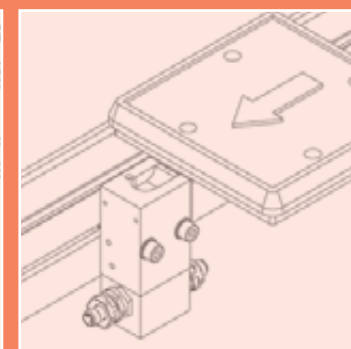
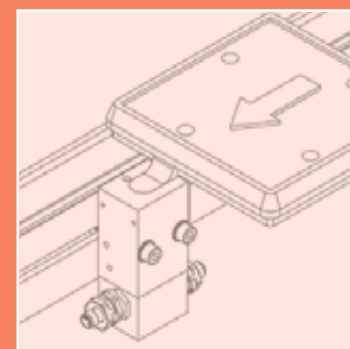
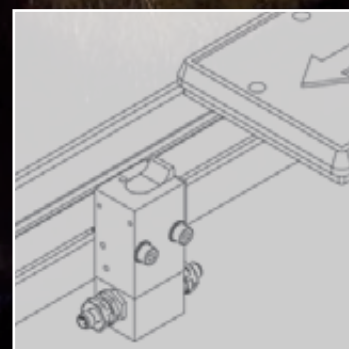
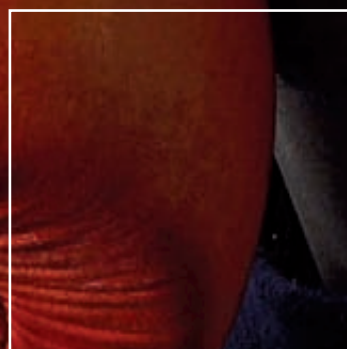
Optimally tailored to very high accumulated loads

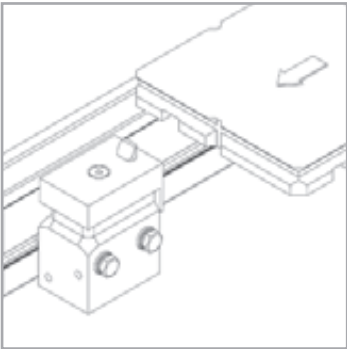
High productivity due to short cycle times

Can be used at conveyor speeds of 6 m/min to 36 m/min

Cost-effective variants, best price-performance ratio

Easy retooling from single action to double action





Applications

Stopping one or more accumulated pallet holders at defined stop areas. Use of the separating stop in automatic assembly and handling systems. Activated pneumatically.

Sturdy and economical separating stop without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The separating stop D070 can be mounted to the Bosch Rexroth TS1 transfer system without adapter plate.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop

Pallet holder loads up to 70 kg permissible (conveyor speed 6 m/min)

The single acting separating stop D070 - EW can be steered dual acting, so that the start-up of the stop plate is accelerated and the separating stop is faster ready for the next separation process.

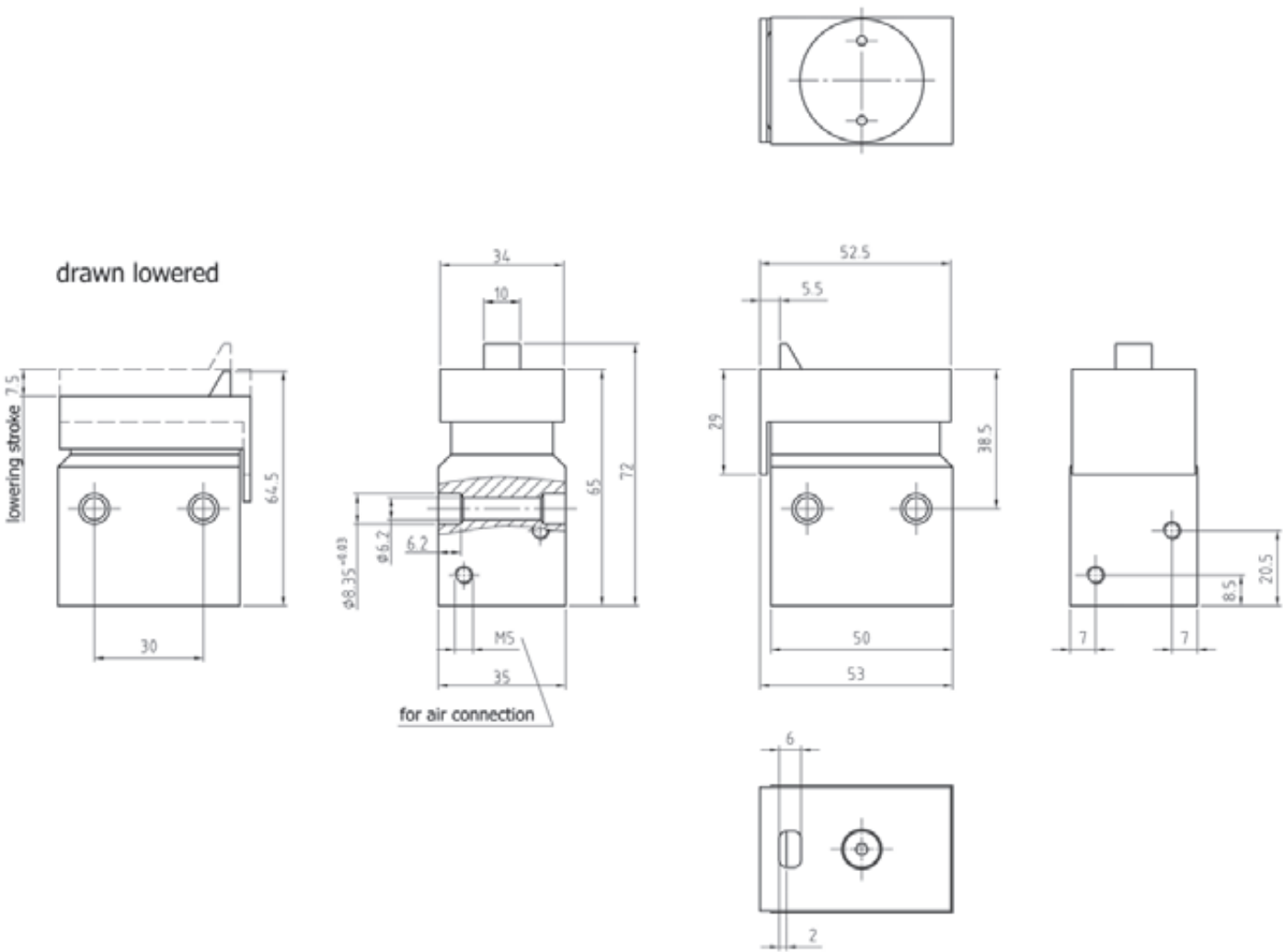
Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Technical data

Operating pressure [bar]
Treated compressed air 4 – 8 bar

Pneumatic connection
M5 thread for air supply



Delta 070 | Stopping forces

Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	70 kg	50 kg	25 kg	12 kg	7 kg	4 kg	3 kg

¹⁾ This information applies to friction of 0,07 μ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

Step 1 | Determine order code

D070

Type

D070

Function

EW = single acting
DW = dual acting

Temperature range [° degrees]

- = normal

- 20° bis + 80°

H = heat resistant

- 20° bis + 180°*

K = cold resistant

- 50° bis + 80°*

Position detection sensor

- = without sensor

I = inductive sensor [1]*

E = electronic sensor [1]*

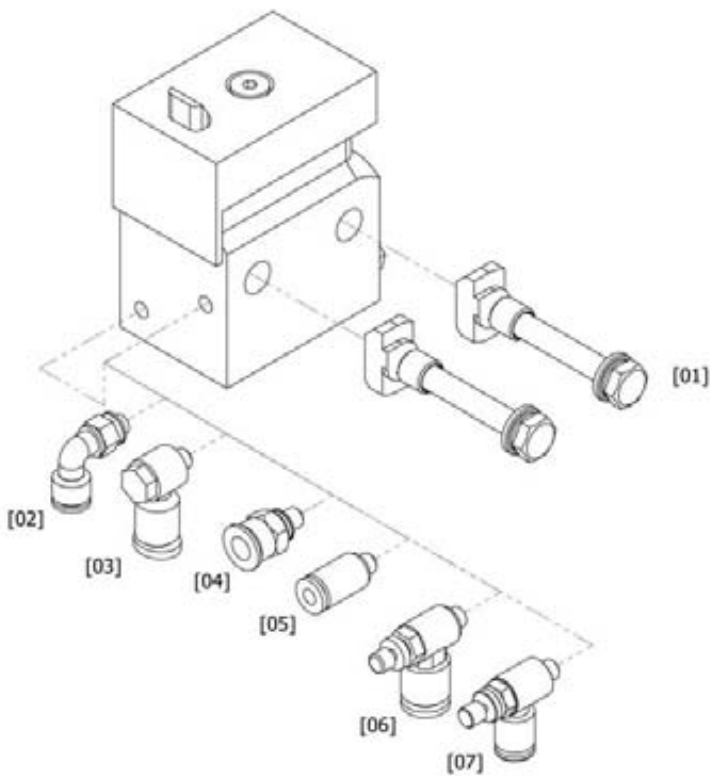
Customer-specific version [2]

[1] only for normal temperature range
[2] placed correspondingly
* on request



D070 - EW
Fastening set 44000145

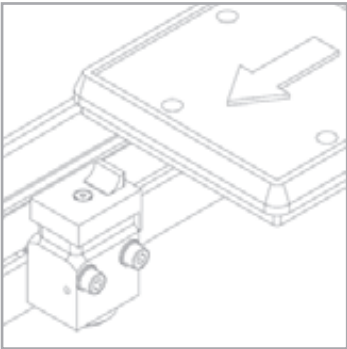
Step 2 | Select accessories



Delta 070 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set Air connection		44000145	
[02]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[03]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[04]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[05]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[06]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	- 5° up to + 60°
[07]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	- 5° up to + 60°

Heat and cold resistant
accessories on request



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Use of the separating stop in automatic assembly and handling systems. Activated pneumatically.

Sturdy and economical separating stop without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The separating stop D0120 is protected against dust and dirt by an additional cover. It is distinguished by its resistance to media in particular. Very stable design.

The separating stop D0120 can be mounted to the Bosch Rexroth TS2plus transfer system without adapter plate.

Design

- Aluminum basic housing with hard-anodizing coating
- Stop made from hardened steel
- Pneumatic separating stop
- Pallet holder loads up to 120 kg permissible (conveyor speed 6 m/min)

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Dual acting

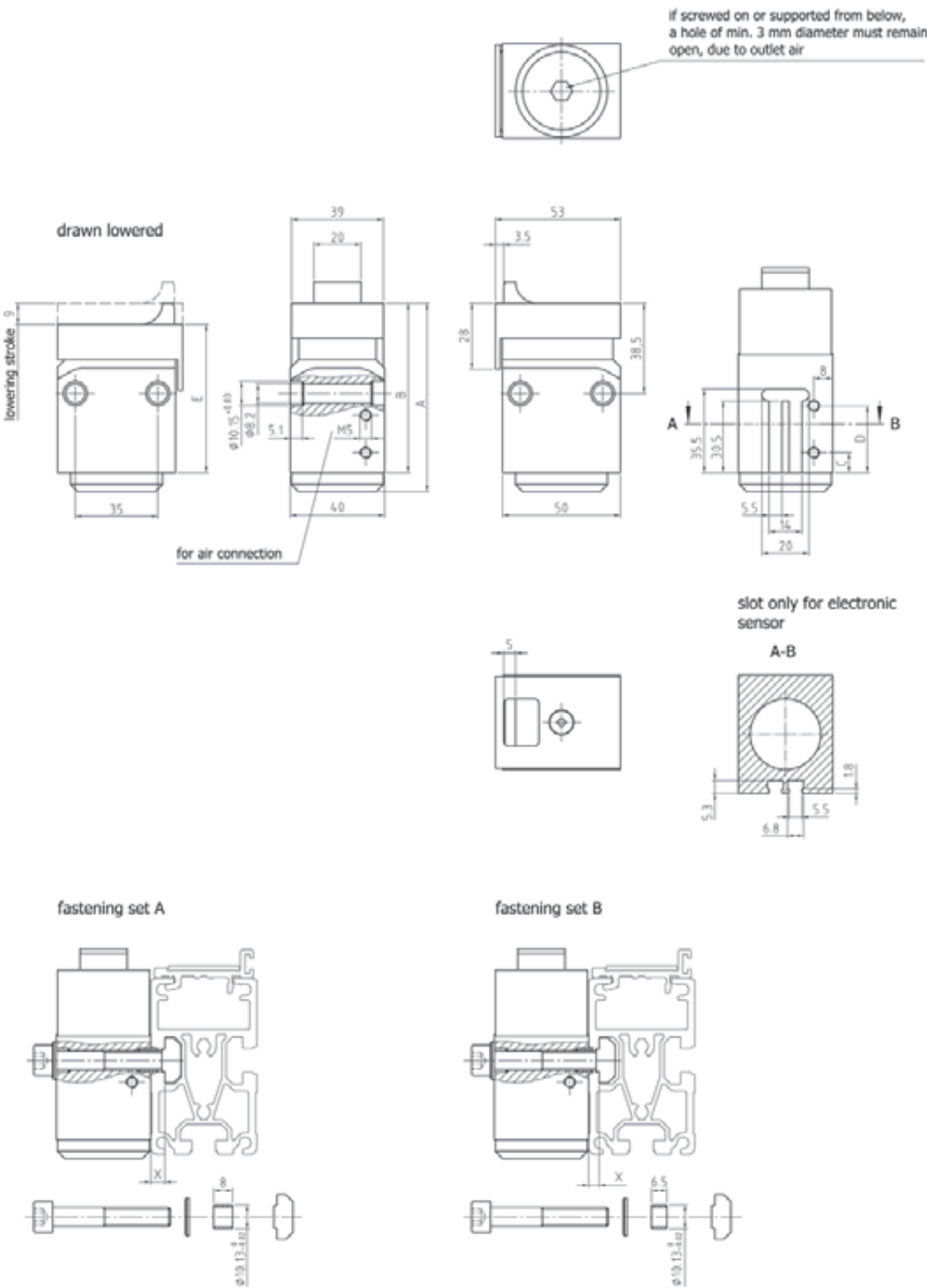
When depressurized, the separating stop remains at the position last moved to, thus increasing the lowering force and enabling higher accumulated loads to be separated and stopped.

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Technical data

- Operating pressure [bar] Treated compressed air 4 – 8 bar
- Pneumatic connection M5 thread for air supply



Delta 0120 | Stopping forces

Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	120 kg	100 kg	100 kg	100 kg	50 kg	30 kg	25 kg

	single acting	dual acting	single acting electr. sensor	dual acting electr. sensor
A	80	80	86	86
B	72	72	78	78
C	-	8.5	-	8.5
D	24.5	24.5	28.5	28.5
E	63	63	69	69

D0120

Typ
D0120

Function
EW = single acting
DW = dual acting

Temperature range [° degrees]
 – = normal - 20° bis + 80°
 H = heat resistant - 20° bis + 180°*
 K = cold resistant - 50° bis + 80°*

Position detection
 – = without sensor
 I = inductive sensor [1]*
 E = electronic sensor [1]*

Customer-specific version [2]

[1] only for normal temperature range

[2] placed correspondingly

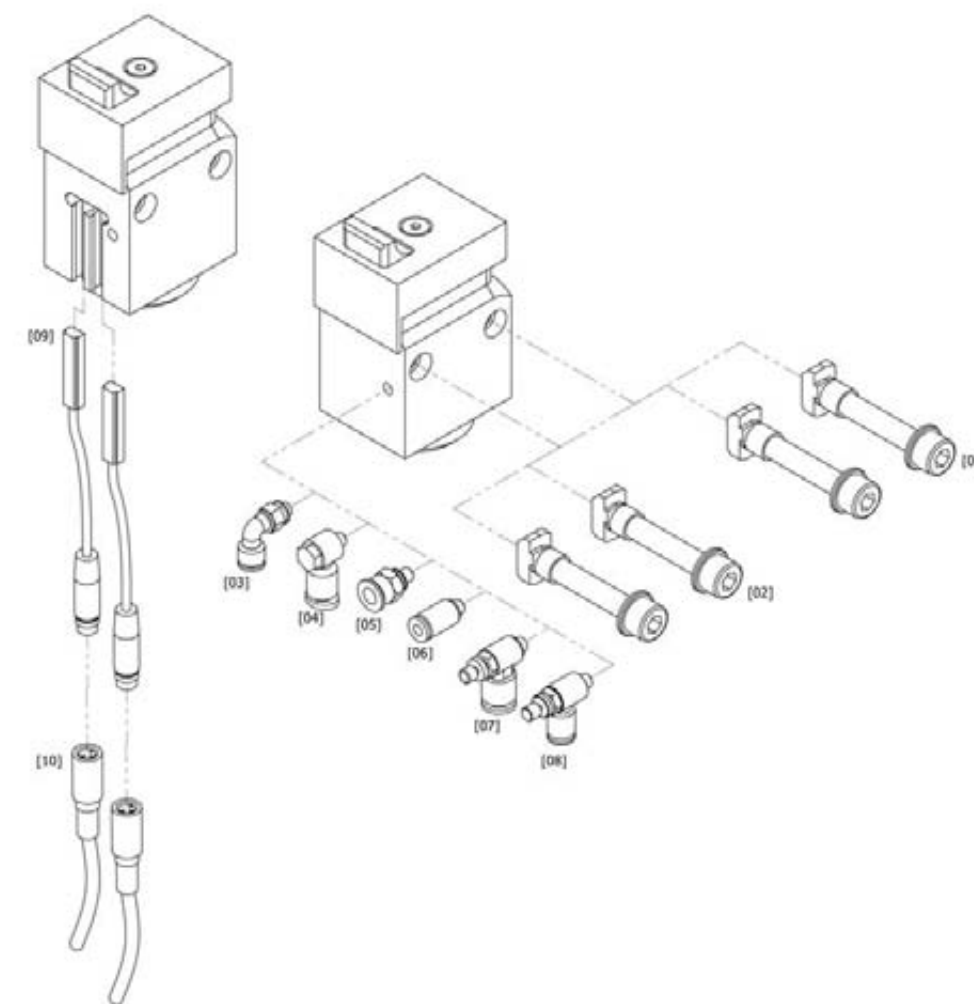
* on request



D0120 - EW
Fastening set 44000134



D0120 - EW - E
Fastening set 44000134
Electronic sensor 18620
Angular air connection 10519

Delta 0120 | **Accessories**

Item no.	Product designation	Description	Order no.	Temperature range
Fastening set				
[01]	Fastening set A	long spacer sleeve (see drawing S. 15)	44000134	
[02]	Fastening set B	short spacer sleeve (see drawing S. 15)	44000135	
Air connection				
[03]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[04]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[05]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[06]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[07]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	- 5° up to + 60°
[08]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	- 5° up to + 60°
[09]	Electronic sensor		18620	- 25° up to + 70°
[10]	Sensor cable	for electronic sensor	06290001	- 25° up to + 80°

Heat and cold resistant
accessories on request

19

Step 1 | Determine order code

D0140

Type

D0140

Function

EW = single acting
DW = dual acting

Temperatur range [° degrees]

- = normal

- 20° bis + 80°

H = heat resistant

- 20° bis + 180°

K = cold resistant

- 50° bis + 80°*

Position detection

- = without sensor

I = inductive sensor [1]*

Customer-specific version [2]

[1] only for normal temperature range

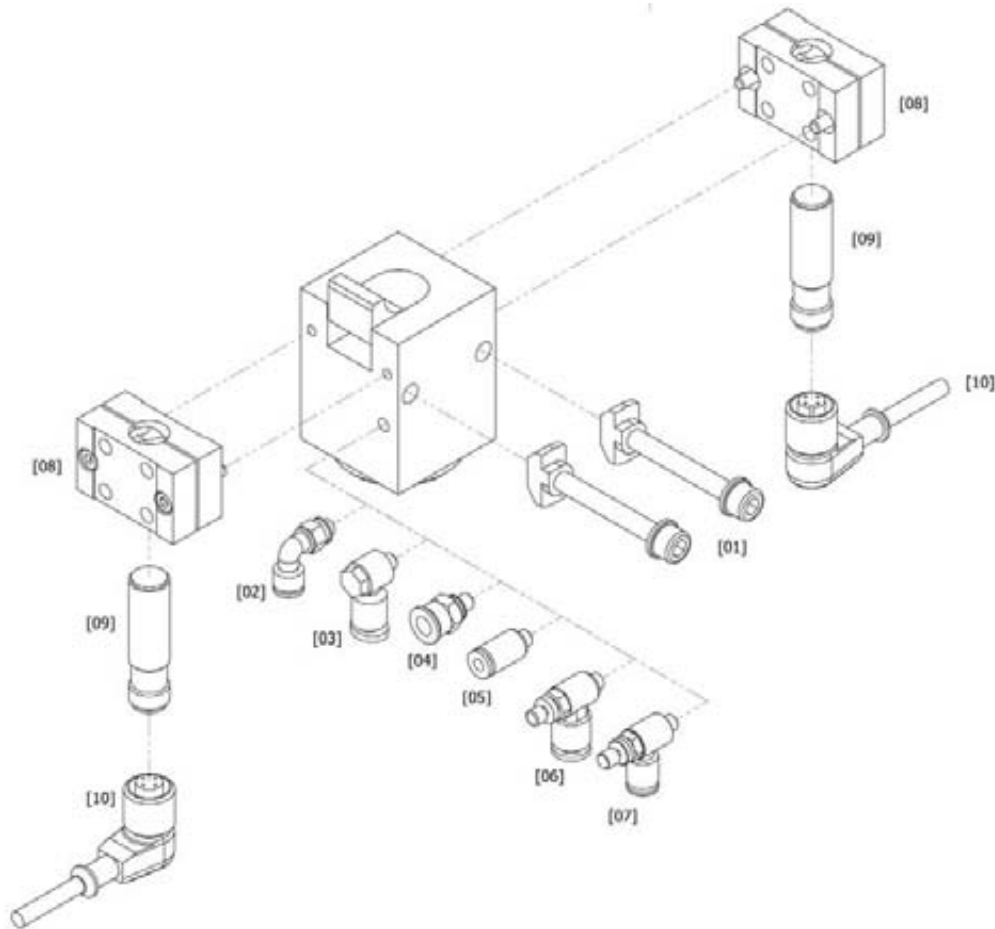
[2] placed correspondingly

* on request



D0140 - EW
Fastening set 44000144

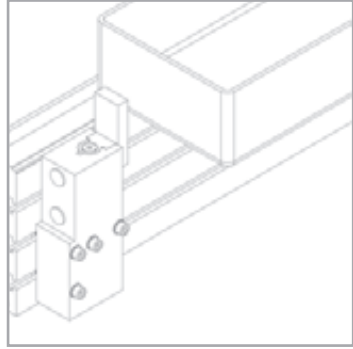
Step 2 | Select accessories



Delta 0140 | Accessories

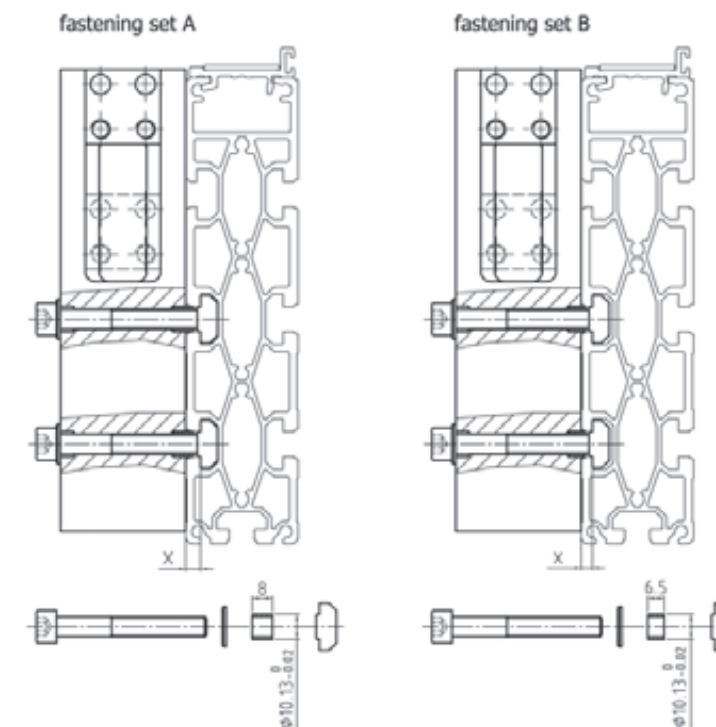
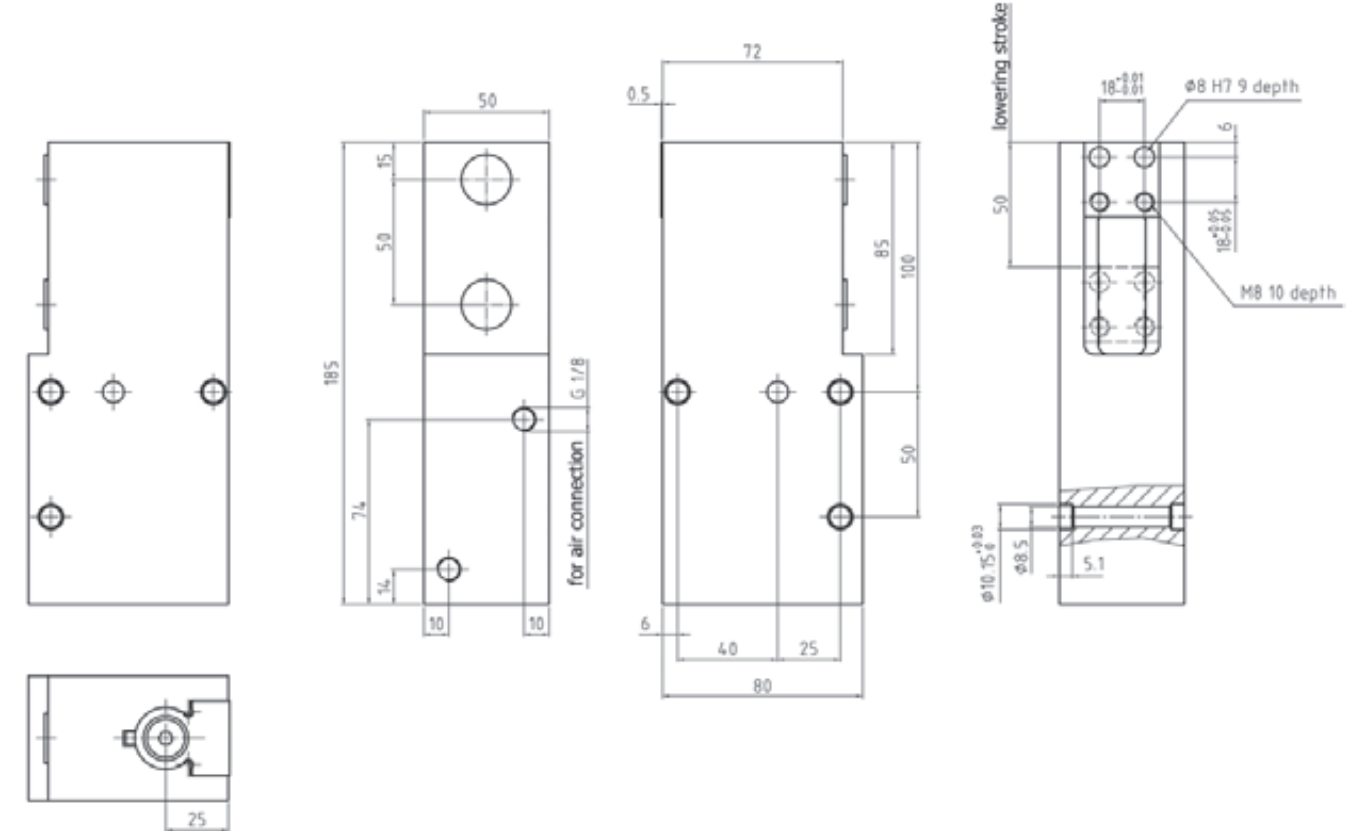
Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set		44000144	
	Air connection			
[02]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[03]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[04]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[05]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[06]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	- 5° up to + 60°
[07]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	- 5° up to + 60°
[08]	Switch holder	for INI Ø 12 mm	19100	- 50° up to +70°
[09]	Proximity switch	inductive	06205001	- 25° up to + 70°
[10]	Sensor cable	for inductive proximity switch	06290003	- 25° up to + 85°

Heat and cold resistant
accessories on request



Technical data

Pneumatic connection
M5 thread for air supply



Weight of pallet holder [kg] at a stop height of 50 mm	300 kg	225 kg	125 kg	60 kg	35 kg	20 kg	15 kg
---	--------	--------	--------	-------	-------	-------	-------

Step 1 | Determine order code

D0300

Type

D0300

Temperatur range [° degrees]

- = normal

- 20° bis + 80°

H = heat resistant

- 20° bis + 180°*

K = cold resistant

- 50° bis + 80°*

Customer-specific version [1]

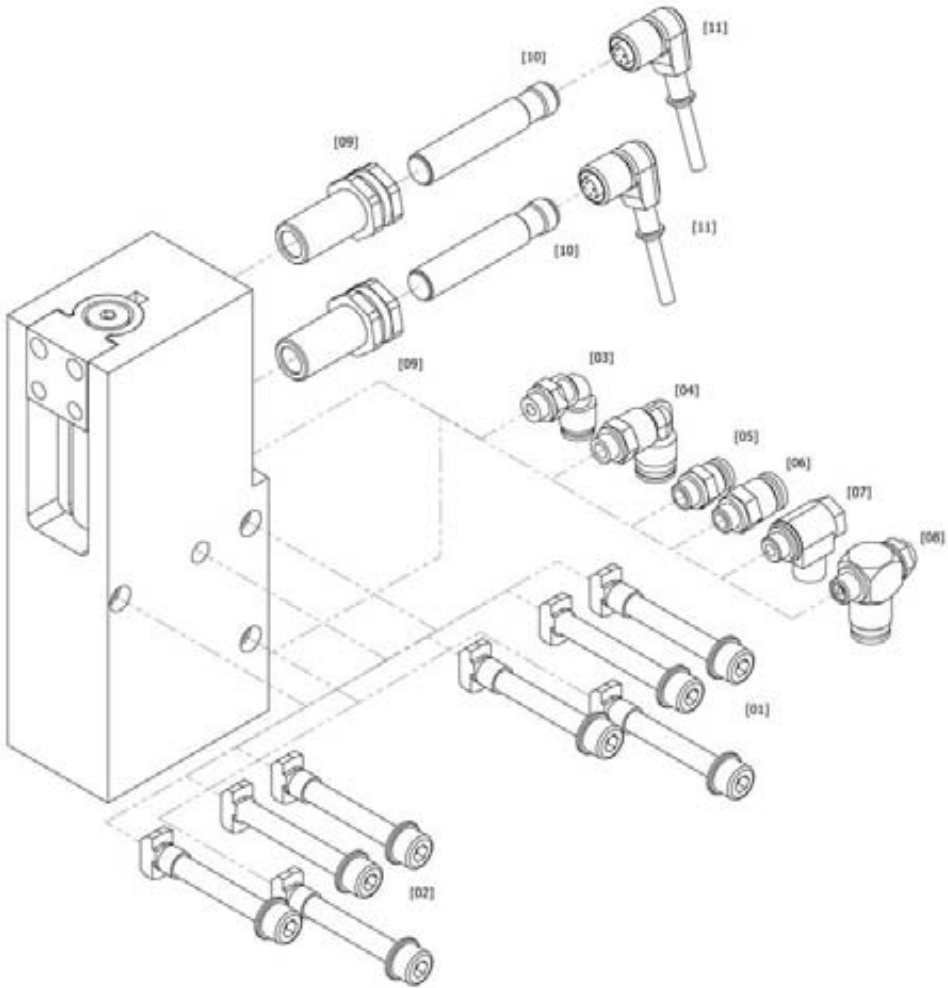
[1] placed correspondingly

* on request



D0300
Fastening set 44000142

Step 2 | Select accessories



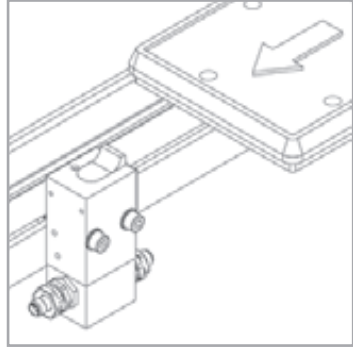
Delta 0300 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Fastening set				
[01]	Fastening set A	long spacer sleeve (see drawing S. 23)	44000142	
[02]	Fastening set B	short spacer sleeve (see drawing S. 23)	44000143	
Air connection				
[03]	Angular air connection	for hose external diameter Ø 6 mm	13539	- 10° up to + 80°
[04]	Angular air connection	for hose external diameter Ø 8 mm	04520001	- 10° up to + 80°
[05]	Straight air connection	for hose external diameter Ø 6 mm	04520007	- 10° up to + 80°
[06]	Straight air connection	for hose external diameter Ø 8 mm	04520008	- 10° up to + 80°
[07]	Delivery air throttle	for hose external diameter Ø 6 mm	04510001	- 10° up to + 80°
[08]	Delivery air throttle	for hose external diameter Ø 8 mm	18075	0° up to + 70°
[09]	Clamp		30540	- 25° up to + 70°
[10]	Proximity switch	inductive	19010	- 25° up to + 70°
[11]	Sensor cable	for inductive sensor	06290003	- 25° up to + 85°

Heat and cold resistant
accessories on request

Separating stop, without damping | up to 300 kg

Separating stop, without damping | up to 300 kg



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Use of the separating stop in automatic assembly and handling systems. Activated pneumatically.

Sturdy and economical separating stop without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The D0400 separating stop uses a proximity switch to detect the upper and lower position of the stopping plate.

The D0400 separating stop uses an electronic sensor to detect the upper and lower position of the stopping plate.

Attitude of lowering speed (noise optimized separating stop, without damping).

Inductive sensor facility after any time arming bar.

The separating stop D0400 can be mounted to the Bosch Rexroth TS2*plus* transfer system without adapter plate.

Design

Aluminum basic housing
with hard-anodizing coating

Stop made from hardened steel

Stop with a thread, untempered

Pneumatic separating stop

Pallet holder loads up to 400 kg
permissible (conveyor speed
6 m/min)

Detachable stock with thread drilling to the attachment of custom-designed stop plates

Simply convertible from
EW = single acting to
DW = dual acting

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Dual acting

When depressurized, the separating stop remains at the position last moved to, thus increasing the lowering force and enabling higher accumulated loads to be separated and stopped.

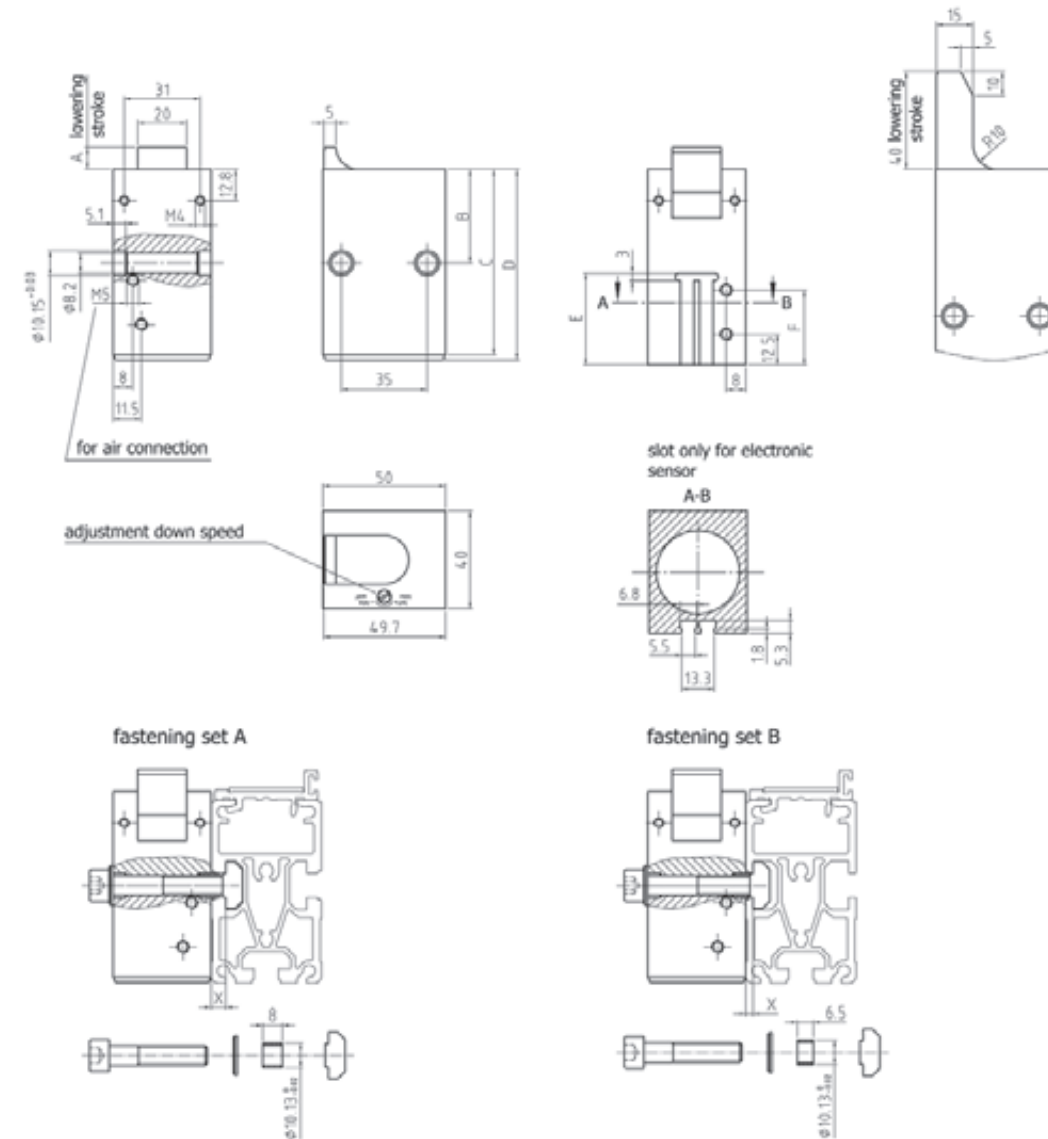
Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Technical data

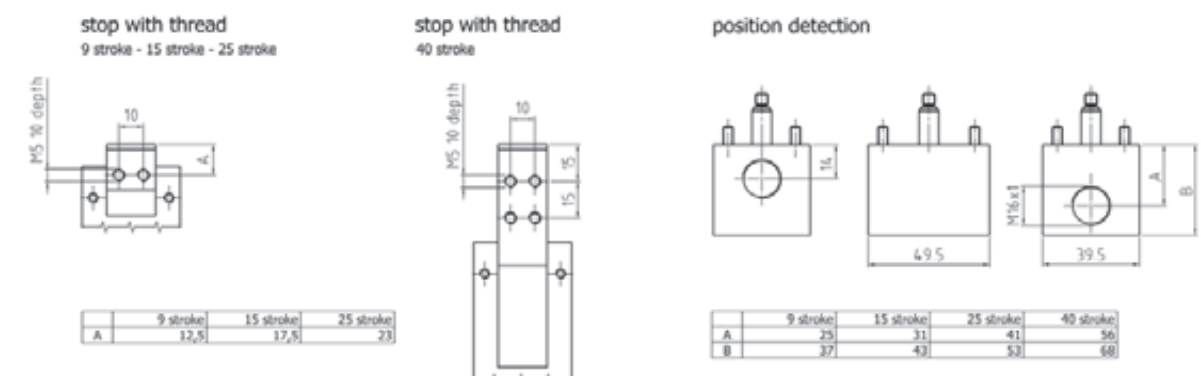
Operating pressure [bar]
Treated compressed air 4 – 8 bar

Pneumatic connection
M5 thread for air supply



	9 stroke single acting	15 stroke single acting	25 stroke single acting	9 stroke electr. single acting	15 stroke electr. single acting	25 stroke electr. single acting
A	6	6	6	6	6	6
B	38.5	38.5	50	38.5	38.5	50
C	76	76	104	80	92	104
D	78	90	108	-	-	-
E	-	-	-	37.5	44.5	50
F	30.5	37.5	63.5	34.5	41	50

	9 stroke dual acting	15 stroke dual acting	25 stroke dual acting	40 stroke dual acting	9 stroke electr. dual acting	15 stroke electr. dual acting	25 stroke electr. dual acting	40 stroke electr. dual acting
A	9	15	25	40	9	15	25	40
B	38.5	38.5	60	60	38.5	38.5	50	60
C	76	88	108	133	80	92	109	137
D	78	98	108	135	-	-	-	-
E	-	-	-	-	37.5	44.5	54.5	71.5
F	30.5	37.5	63.5	63	34.5	41	66.5	67



[illegible]

[1] 40 stroke exempt from EW single acting
[2] only for normal temperature range
[3] placed correspondingly



D0400 - 09 - EW

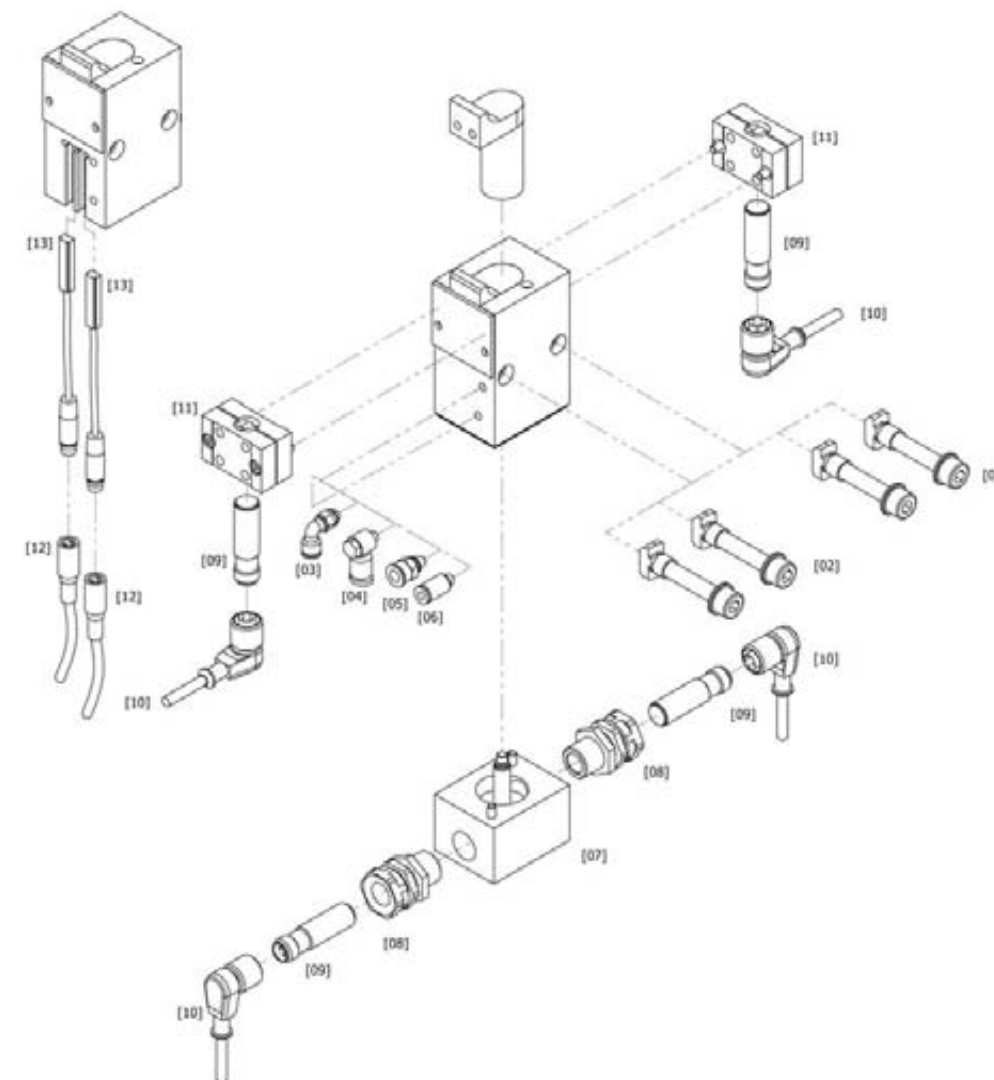


D0400 - 09 - EW
Switch holder 30539
Position detection for 9 stroke 44000152



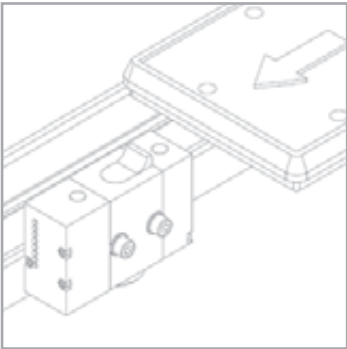
D0400 - 09 - EW - E
Electronic sensor 18620

Step 2 | Select accessories

Delta 0400 | **Accessories**

Item no.	Product designation	Description	Order no.	Temperature range
Fastening set				
[01]	Fastening set A	long spacer sleeve (see drawing S. 27)	44000134	
[02]	Fastening set B	short spacer sleeve (see drawing S. 27)	44000135	
Air connection				
[03]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[04]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[05]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[06]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
Position detection sensor				
[07]	upper and lower position	for 9 stroke	44000152	
		for 15 stroke	44000153	
		for 25 stroke	44000154	
		for 40 stroke	44000155	
[08]	Clamp		30539	- 25° up to + 70°
[09]	Proximity switch	inductive	06205001	- 25° up to + 70°
[10]	Sensor cable	length 5 m for proximity switch	06290003	- 25° up to + 85°
[11]	Switch holder	for INI Ø 12 mm	19100	- 50° up to + 70°
[12]	Sensor cable	length 5 m for electronic sensor	06290001	- 25° up to + 80°
[13]	Electronic sensor		18620	- 25° up to + 70°

Heat and cold resistant
accessories on request



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Use of the separating stop in automatic assembly and handling systems. Activated pneumatically.

Sturdy and economical separating stop without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

Only one air connection is needed which can be transferred by separating stop to separating stop. The electrical drive is also carried out via one single supply for each separating stop. Changing the stop position or the additional installation of further separating stops has to be managed without problems. The hard- and software can be modified inside shortest time. An exchange of a faulty separating stop is finished off in no time since everything is realised pluggably.

The separating stop D0400A can be mounted to the Bosch Rexroth TS2plus transfer system without adapter plate.

Design

Aluminum basic housing with hard-anodizing coating

Pneumatic separating stop with integrated 3/2-way valve

Actuation via field bus AS-i

Three integrated sensors

Connection option for an external sensor

Four preprogrammed operating modes

Pallet holder loads up to 400 kg permissible (conveyor speed 6 m/min)

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

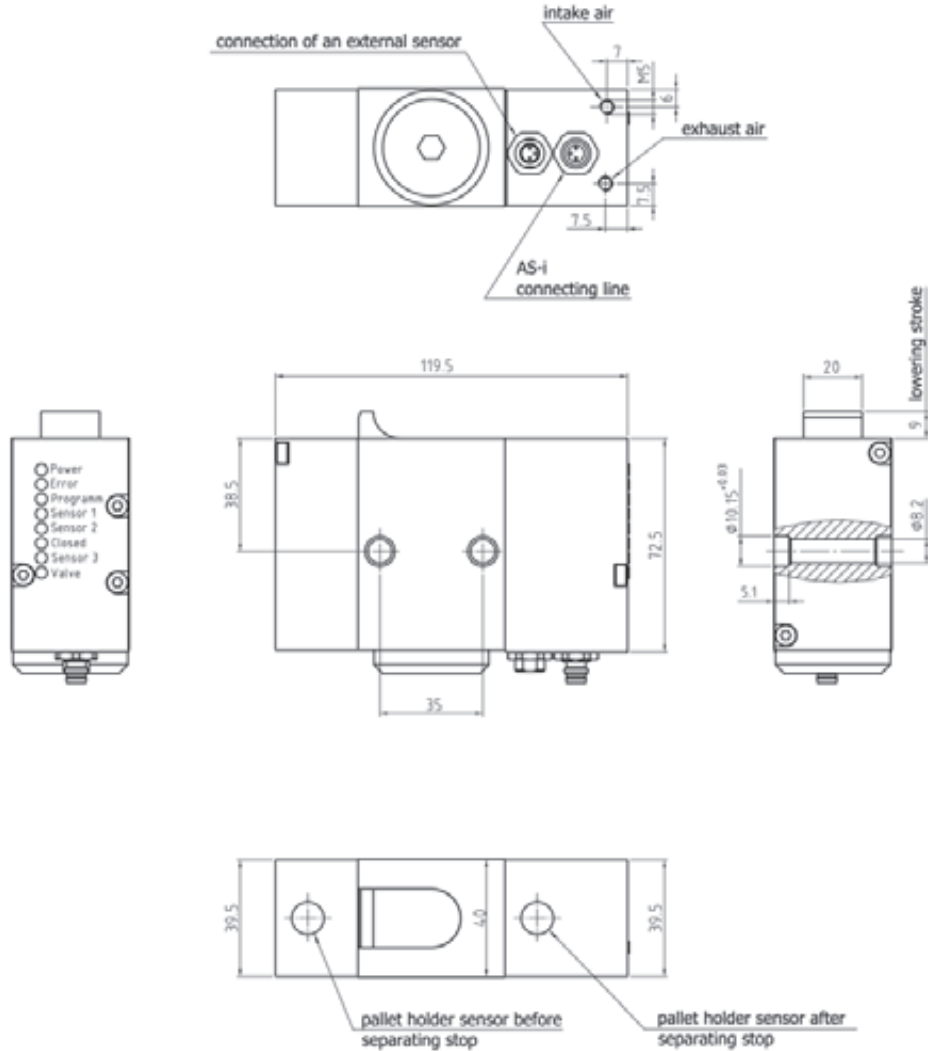
Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Technical data

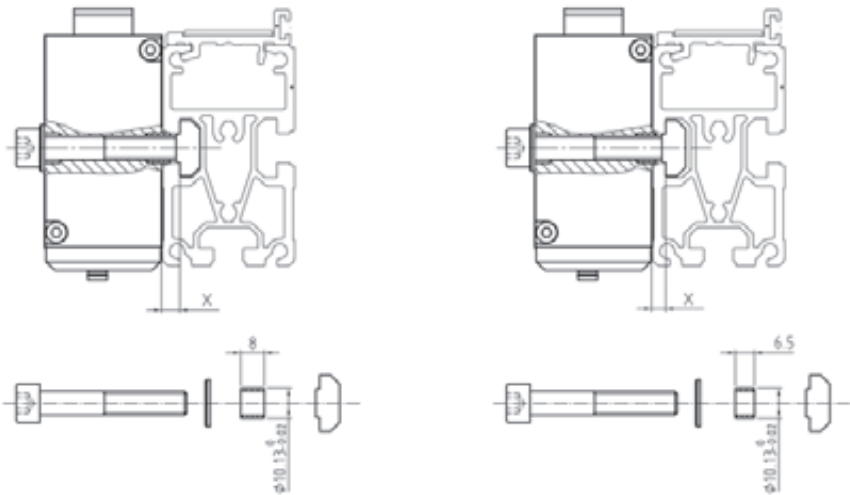
Operating pressure [bar]
Treated compressed air 4 – 7 bar

Pneumatic connection
M5 thread for air supply



fastening set A

fastening set B



Delta 0400A | Stopping forces

Speed v _N ¹⁾ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	400 kg	300 kg	250 kg	200 kg	110 kg	65 kg	50 kg

¹⁾ This information applies to friction of 0,07 μ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

– subject to change without notice –

– subject to change without notice –

Step 1 | Determine order code

D0400A

Type
D0400A

Customer-specific version [1]

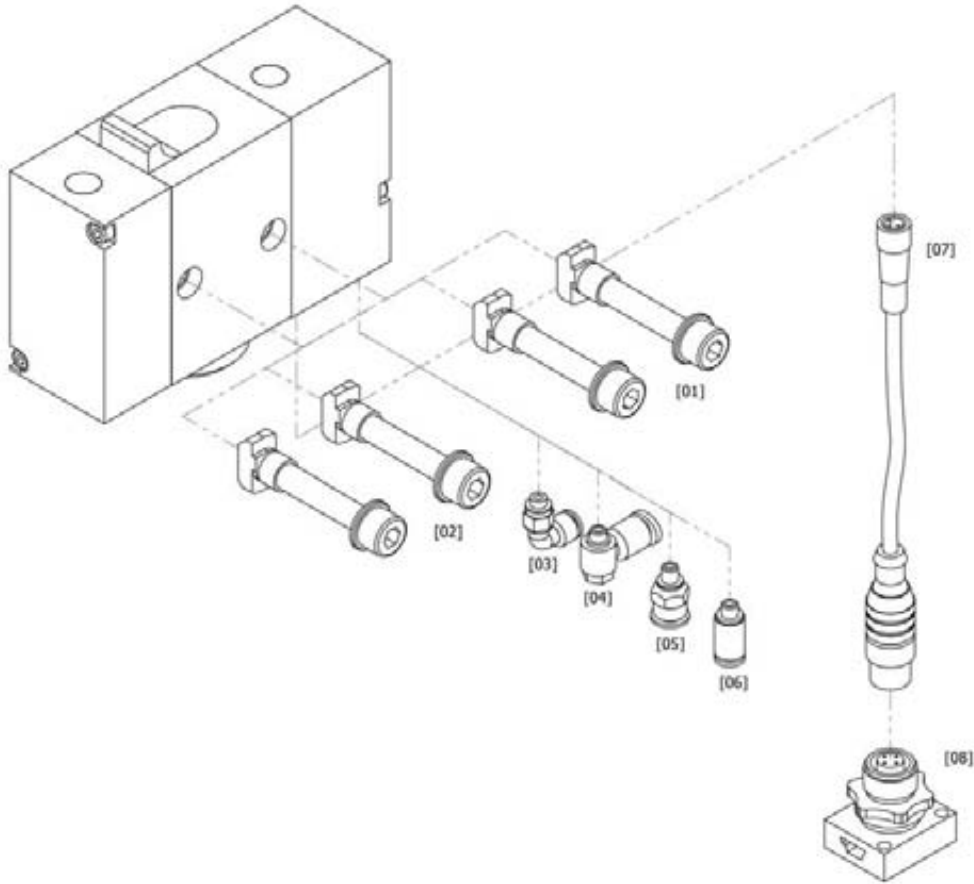
[1] placed correspondingly



D0400A
Fastening set 44000134

¹⁾ Specific information to the order code on the page 6/7

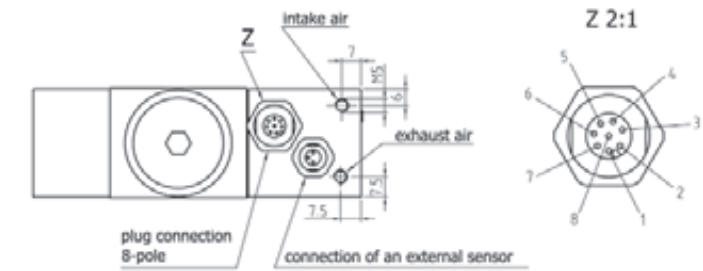
Step 2 | Select accessories



Delta 0400A | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Fastening set				
[01]	Fastening set A	long spacer sleeve (see drawing S. 31)	44000134	
[02]	Fastening set B	short spacer sleeve (see drawing S. 31)	44000135	
Air connection				
[03]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[04]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[05]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[06]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[07]	AS-i connecting line	length: 1 m*	06290004	- 25° up to + 80°
[08]	AS-i flat cable pick-off		06515002	- 25° up to + 80°

* further lengths on request



Technical data

Operating pressure [bar]
Treated compressed air 4 – 7 bar

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

fastening set B

Step 1 | Determine order code

D0400K

Type
D0400K

Customer-specific version [1]

[1] placed correspondingly



D0400K
Fastening set 44000134

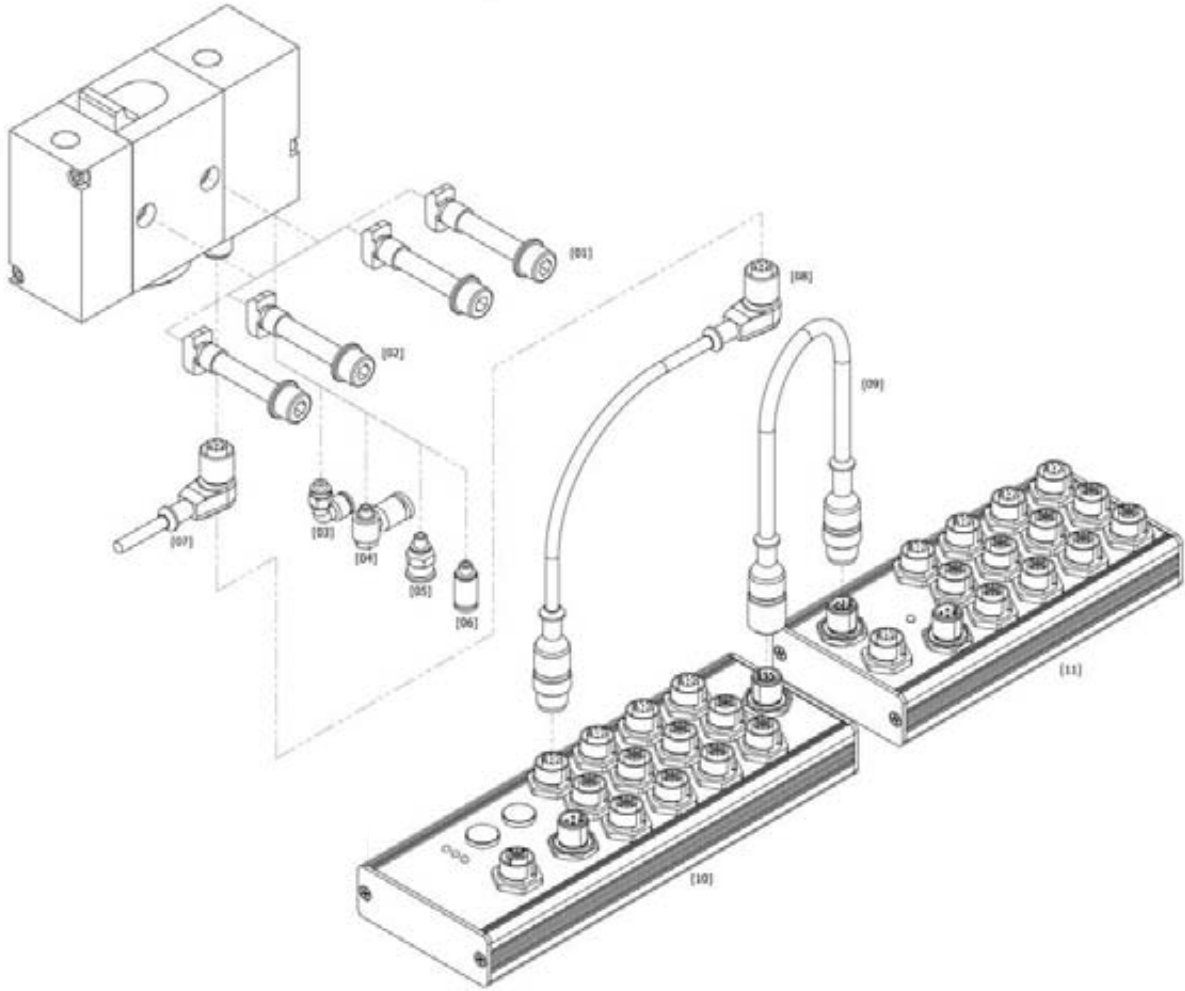


E/A Basic module
Profibus DP 0659901



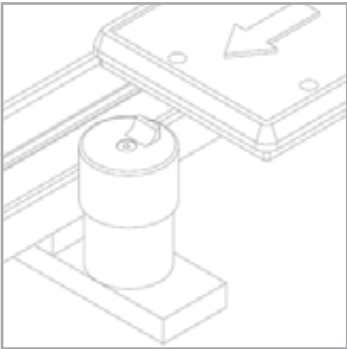
E/A Expansion module
06599005

Step 2 | Select accessories



Delta 0400K | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Fastening set				
[01]	Fastening set A	long spacer sleeve (see drawing S. 35)	44000134	
[02]	Fastening set B	short spacer sleeve (see drawing S. 35)	44000135	
Air connection				
[03]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[04]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[05]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[06]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[07]	Connection line	length: 5 m with strands	06290002	- 25° up to + 80°
[08]	Connection line	length: 1 m with plug connector/angle coupling	06290008	- 25° up to + 80°
		length: 5 m with plug connector/angle coupling	06290009	- 25° up to + 80°
			06290010	- 25° up to + 80°
[09]	Connection line	length: 0,3 m interconnection line for E/G-module	06290011	- 25° up to + 80°
		length: 1,0 m interconnection line for E/G-module	06290012	- 25° up to + 80°
[10]	E/A Basic module	Profibus DP	06599001	
		DeviceNet	06599002	
		Profinet IO	06599003	
		EtherNet/IP	06599004	
		AS-i	06599006	
[11]	E/A Expansion module		06599005	



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Use of the separating stop in automatic assembly and handling systems. Activated pneumatically.

Sturdy and economical separating stop without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

Specially developed for an extremely damp environment, e.g. in washing systems. It is distinguished by its resistance to media in particular.

Design

Basic housing made of stainless steel

Stop made from hardened steel

The completed closed housing provides special protection

Pneumatic separating stop

Pallet holder loads up to 400 kg permissible (conveyor speed 6 m/min)

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Dual acting

When depressurized, the separating stop remains at the position last moved to, thus increasing the lowering force and enabling higher accumulated loads to be separated and stopped.

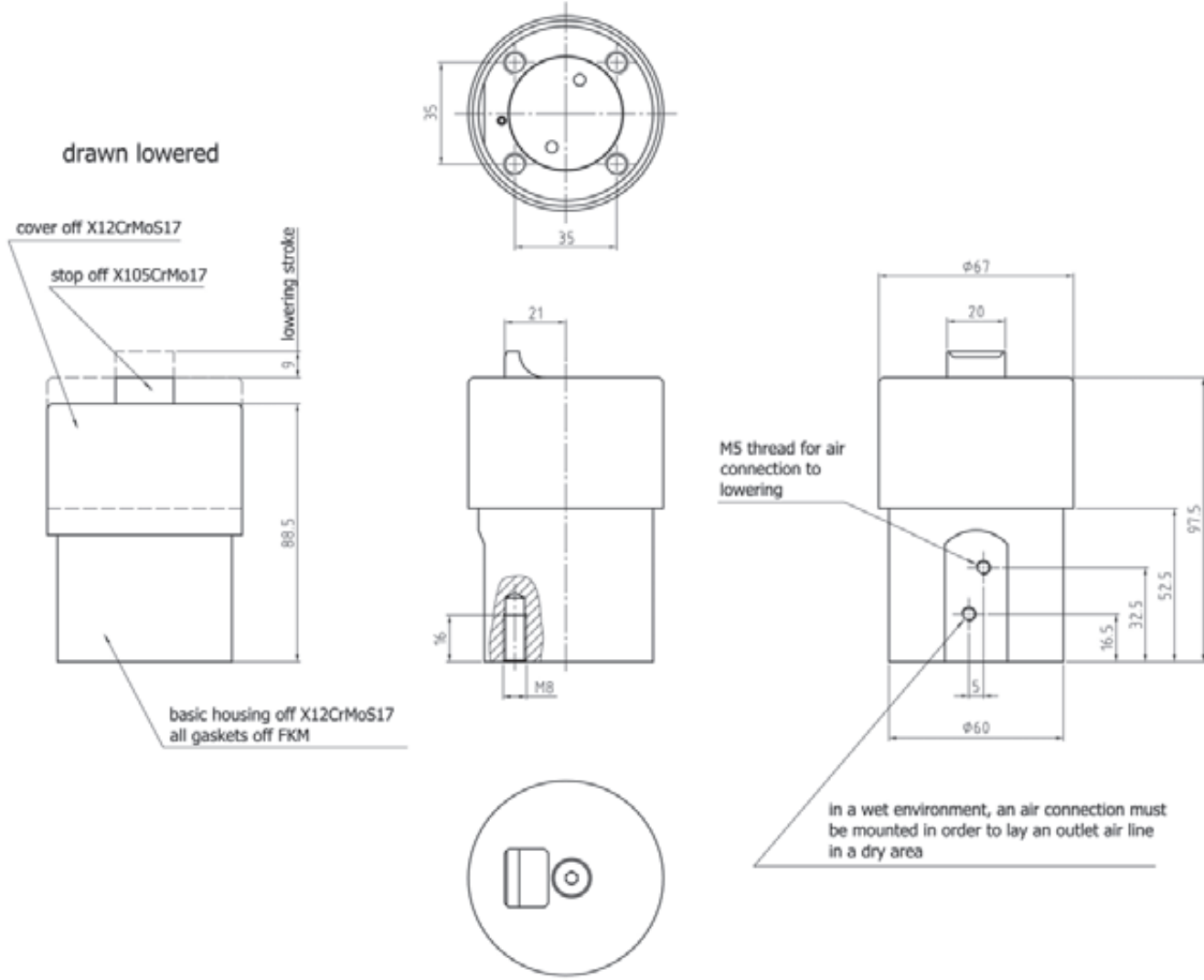
Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Technical data

Operating pressure [bar]
Treated compressed air 4 – 8 bar

Pneumatic connection
M5 thread for air supply



Delta 0400R | Stopping forces

Speed $v_n^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	400 kg	300 kg	250 kg	200 kg	110 kg	65 kg	50 kg

¹⁾ This information applies to friction of 0,07 μ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

– subject to change without notice –

– subject to change without notice –

Step 1 | Determine order code

D0400R

Type

D0400R

Function

EW = single acting
DW = dual acting

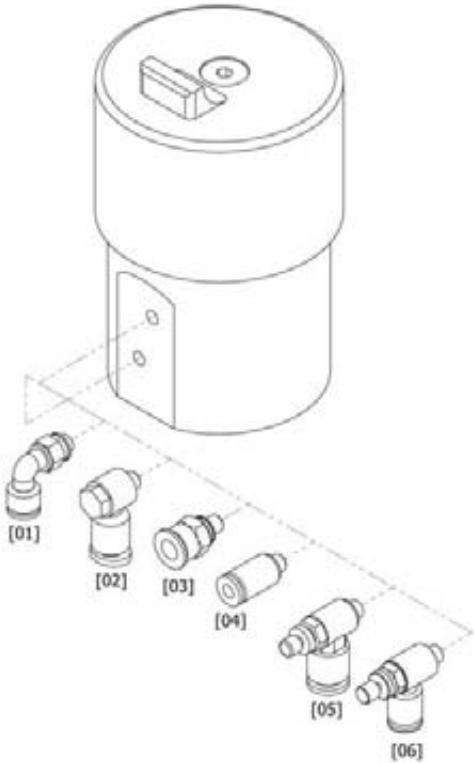
Customer-specific version [1]

[1] placed correspondingly



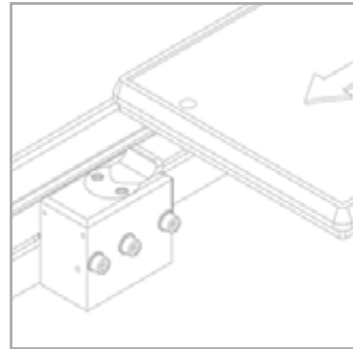
D0400R - EW

Step 2 | Select accessories



Delta 0400R | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Air connection				
[01]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[02]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[03]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[04]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[05]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	- 5° up to + 60°
[06]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	- 5° up to + 60°



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Use of the separating stop in automatic assembly and handling systems. Activated pneumatically.

Sturdy and economical separating stop without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The D0800 separating stop uses a proximity switch to detect the upper and lower position of the stopping plate.

The D0800 separating stop uses an electronic sensor to detect the upper and lower position of the stopping plate.

The separating stop D0800 can be mounted to the Bosch Rexroth TS2*plus* transfer system without adapter plate.

Design

Aluminum basic housing
with hard-anodizing coating

Stop made from hardened steel

Stop with a thread, untempered

Pneumatic separating stop

Pallet holder loads up to 800 kg
permissible (conveyor speed
6 m/min)

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Dual acting

When depressurized, the separating stop remains at the position last moved to, thus increasing the lowering force and enabling higher accumulated loads to be separated and stopped.

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

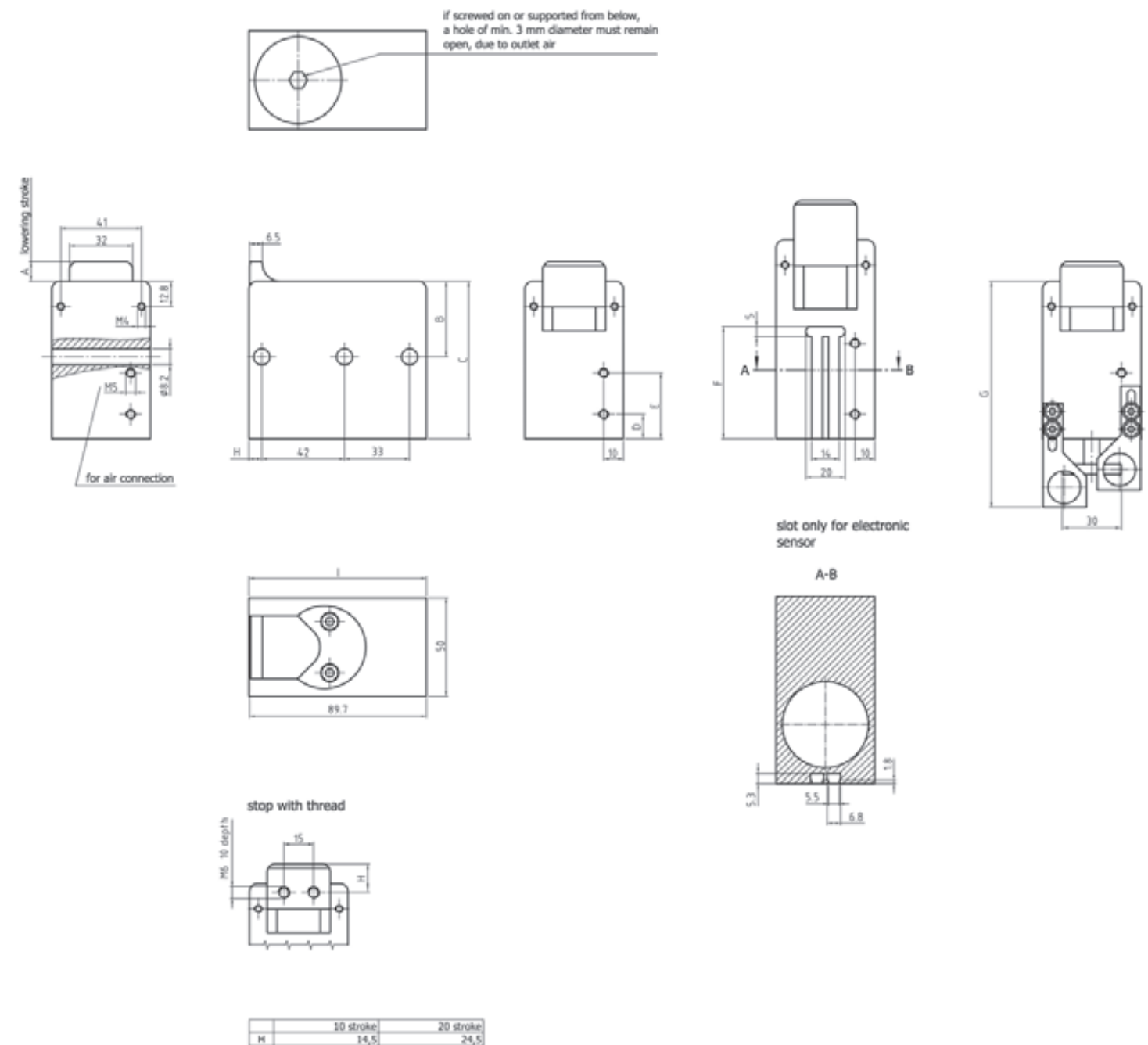
Technical data

Operating pressure [bar]
Treated compressed air 4 – 8 bar

Pneumatic connection
M5 thread for air supply



Dimensions of basic type | Download CAD data  www.woerner-gmbh.com



	10 stroke	20 stroke
H	14,5	24

	10 stroke single acting	20 stroke single acting	induct. sensor 10 stroke single acting	induct. sensor 20 stroke single acting	electr. sensor 10 stroke single acting	electr. sensor 20 stroke single acting
A	10	20	10	20	10	20
B	36.5	45	36.5	45	36.5	45
C	80	95	80	95	86	101
D	-	-	-	-	-	-
E	33.5	42.5	33.5	42.5	38	48.5
F	-	-	-	-	46.5	57
G	-	-	116	142	-	-
H	6.5	6.5	6.5	6.5	11.5	11.5
I	90	90	90	90	95	95

	10 stroke dual acting	20 stroke dual acting	induct. sensor 10 stroke dual acting	induct. sensor 20 stroke dual acting	electr. sensor 10 stroke dual acting	electr. sensor 20 stroke dual acting
A	10	20	10	20	10	20
B	38,5	45	38,5	45	38,5	45
C	80	95	80	95	80	101
D	12,5	12,5	12,5	12,5	12,5	12,5
E	33,5	42,5	33,5	42,5	38	48,5
F	-	-	-	-	46,5	57
G	-	-	116	142	-	-
H	6,5	6,5	6,5	6,5	11,5	11,5
I	90	90	90	90	95	95

Step 1 | Determine order code

D0800

Type

D0800

Lowering stroke [mm]

10, 20

Function

EW = single acting
DW = dual acting

Temperatur range [° degrees]

- = normal - 20° bis + 80°
H = heat resistant - 20° bis +180°*
K = cold resistant - 50° bis + 80°*

Position detection

- = without sensor
I = inductive sensor [1]
E = electronic sensor [1]

Stopping plate

- = without thread
G = with thread

Customer-specific version [2]

[1] only for normal temperature range

[2] placed correspondingly

* on depend



D0800 - 10 - EW
Fastening set 44000141

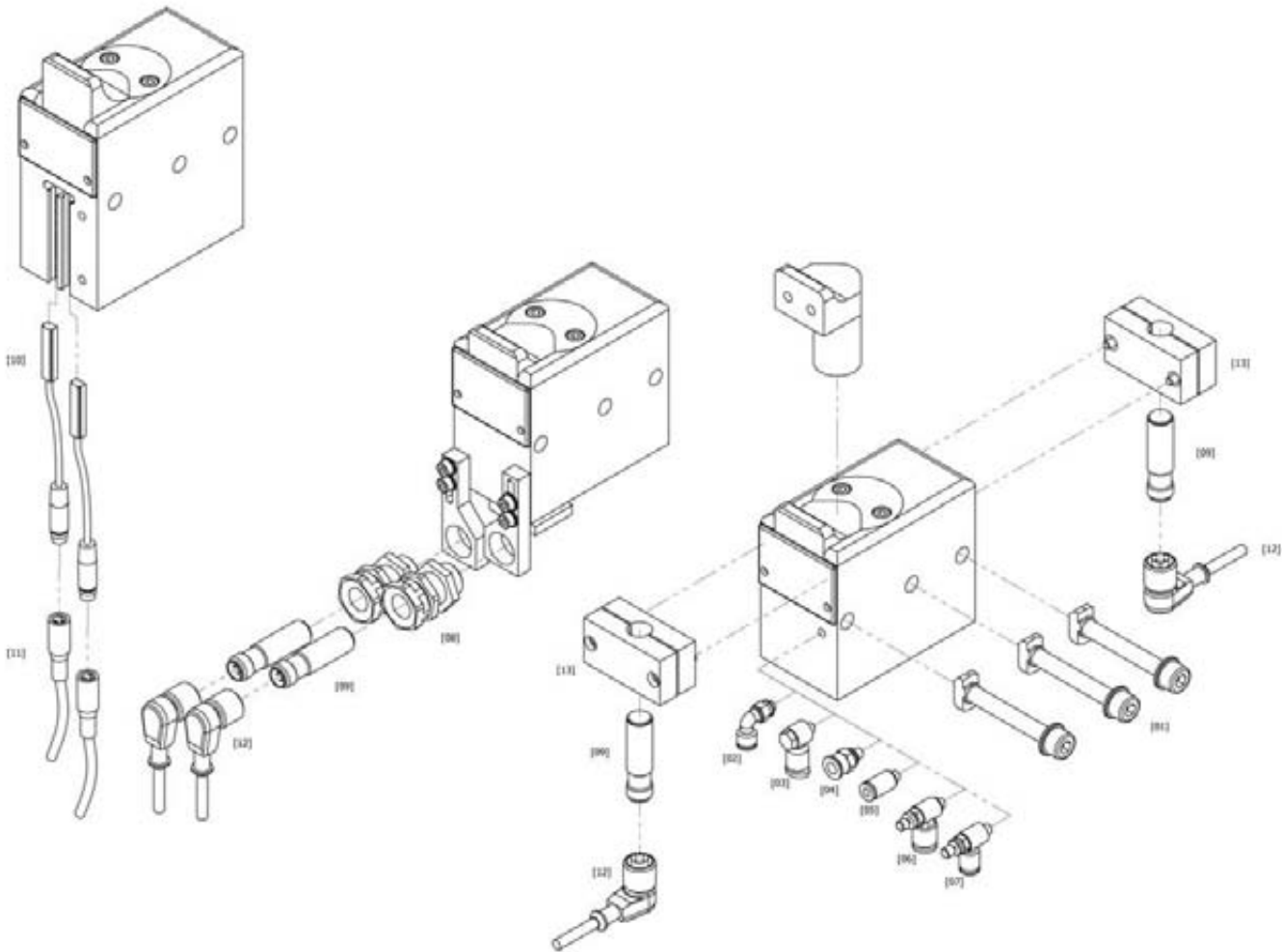


D0800 - 10 - EW - I
Fastening set 44000141
Clamp 30539
Proximity switch 06205001



D0800 - 20 - DW - E
Fastening set 44000141
Electronic sensor 18620

Step 2 | Select accessories



Delta 0800 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set Air connection		44000141	
[02]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[03]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[04]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[05]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[06]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	- 5° up to + 60°
[07]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	- 5° up to + 60°
[08]	Clamp		30539	- 25° up to + 70°
[09]	Proximity switch	inductive	06205001	- 25° up to + 70°
[10]	Electronic sensor		18620	- 25° up to + 70°
[11]	Sensor cable	for electronic sensor	06290001	- 25° up to + 80°
[12]	Sensor cable	for inductive proximity switch	06290003	- 25° up to + 85°
[13]	Switch holder	for INI Ø 12 mm	19150	- 30° up to + 100°

Heat and cold resistant
accessories on request

Separating Stops, with Damping Gentle!



Flexible in use thanks to multi-configuration variants

Compatible with various transfer systems

Gentle stopping and damping of accumulated pallet holders

Enables shock-sensitive parts to be conveyed

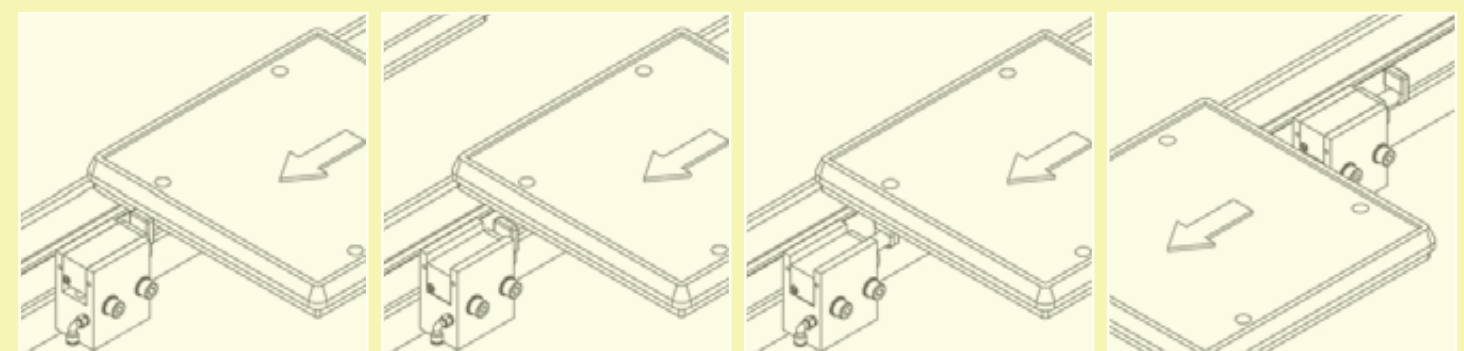
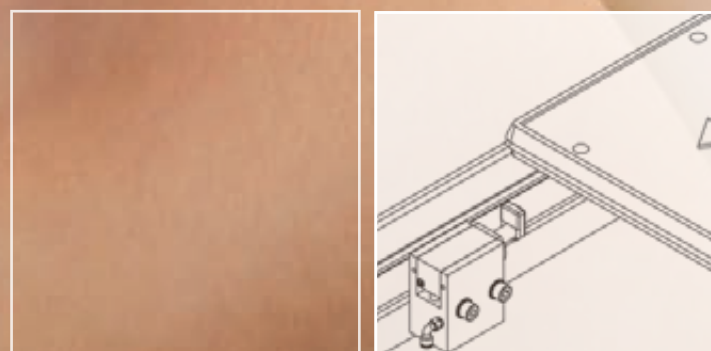
Infinitely adjustable damping irrespective of the degree of tooling

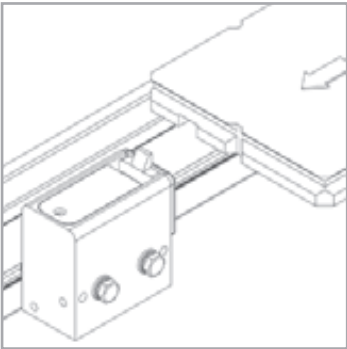
The impact force is consequently reduced by up to 95%

No vibration stress on the system due to vibration-free damping as far as end position

Supports an optimum position stability of the pallets on the pallet holders

Variable stopping plates depending on application





Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min. Weights can be damped from around 250 g and higher.

The DBS15 separating stop uses an electronic sensor to detect the upper and lower position of the stopping plate.

The separating stop DBS15 can be mounted to the Bosch Rexroth TS1 transfer system without adapter plate.

Design

Aluminum basic housing with hard-anodizing coating
Stop plate made of brass

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder weights between 0.25 kg and 15 kg
Pallet holder loads up to 15 kg permissible (conveyor speed 6 m/min)

The single acting separating stop DBS15 can be steered dual acting, so that the start-up of the stop plate is accelerated and the separating stop is ready for next separation process faster.

Scope/Condition of supply

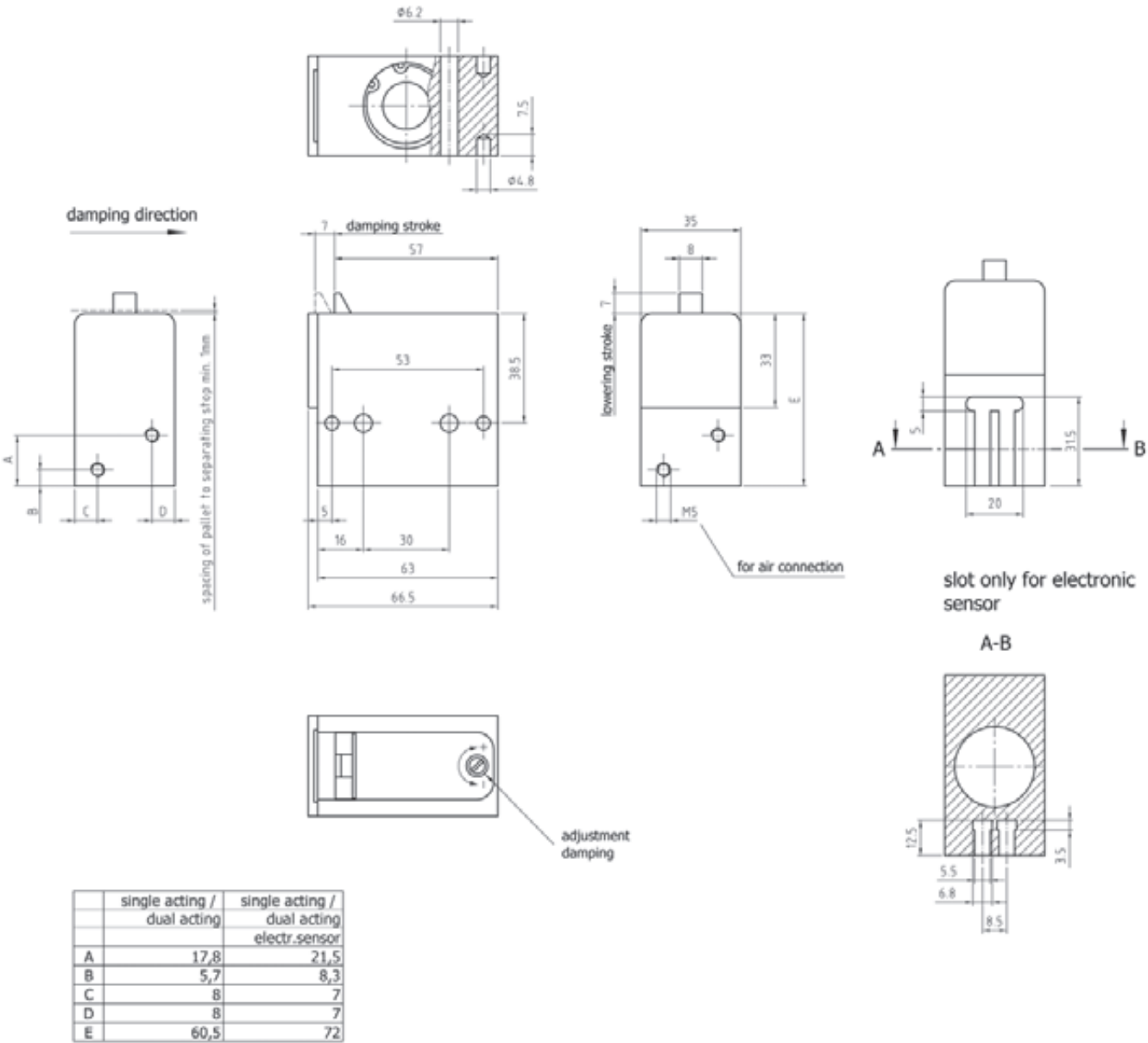
All accessory parts are supplied mounted, depending on customer request.

Fine adjustment
Damping force and damping speed can be set on the top of the device:

- + = increase damping force
- = decrease damping force

Technical data

Operating pressure [bar]
Treated compressed air 4 – 8 bar
Pneumatic connection
M5 thread for air supply



Delta BS15 | Damping forces

Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	0,25-15 kg	0,25-10 kg	0,25-9 kg	0,25-7 kg	0,25-6 kg	0,25-4 kg	0,25-2 kg

¹⁾ This information applies to friction of 0,07 μ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

– subject to change without notice –

– subject to change without notice –

Step 1 | Determine order code

DBS15

Type

DBS15

Function

EW = single acting
DW = dual acting

Temperatur range [° degrees]

- = normal - 20° bis + 80°
H = heat resistant - 20° bis + 180°
K = cold resistant - 50° bis + 80°*

Position detection

- = without sensor
E = electronic sensor [1]

Customer-specific version [2]

[1] only for normal temperature range
[2] placed correspondingly
* on depend

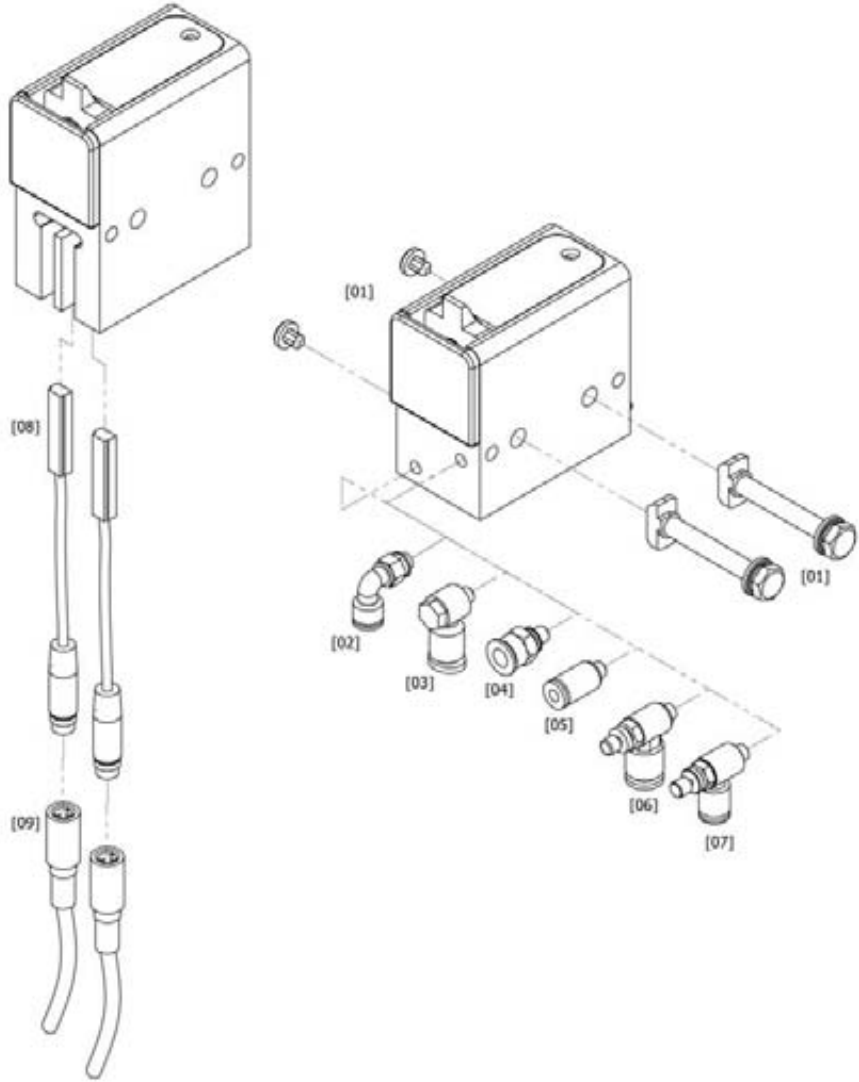


DBS15 - EW
Fastening set 44000140



DBS15 - EW - E
Fastening set 44000140
Electronic sensor 18620

Step 2 | Select accessories



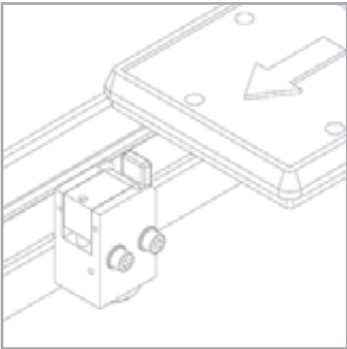
Delta BS15 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set Air connection		44000140	
[02]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[03]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[04]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[05]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[06]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	- 5° up to + 60°
[07]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	- 5° up to + 60°
[08]	Electronic sensor		18620	- 25° up to + 70°
[09]	Sensor cable	for electronic sensor	06290001	- 25° up to + 80°

Heat and cold resistant
accessories on request

Separating stop, with damping | up to 15 kg

Separating stop, with damping | up to 15 kg



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

By the short style several separating stops can be attached under a workpiece holder. A muffling repeatedly and placing of the workpiece holder at a processing station is possible.

The separating stop DBS15 can be mounted to the Bosch Rexroth TS2plus transfer system without adapter plate.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder weights between 0.7 kg and 15 kg

Pallet holder loads up to 15 kg permissible (conveyor speed 6 m/min)

Only for DBSS - 10 - R
Clean room execution
Class 3 or ISO class 5

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

Damping force and damping speed can be set on the top of the device:

+ = increase damping force

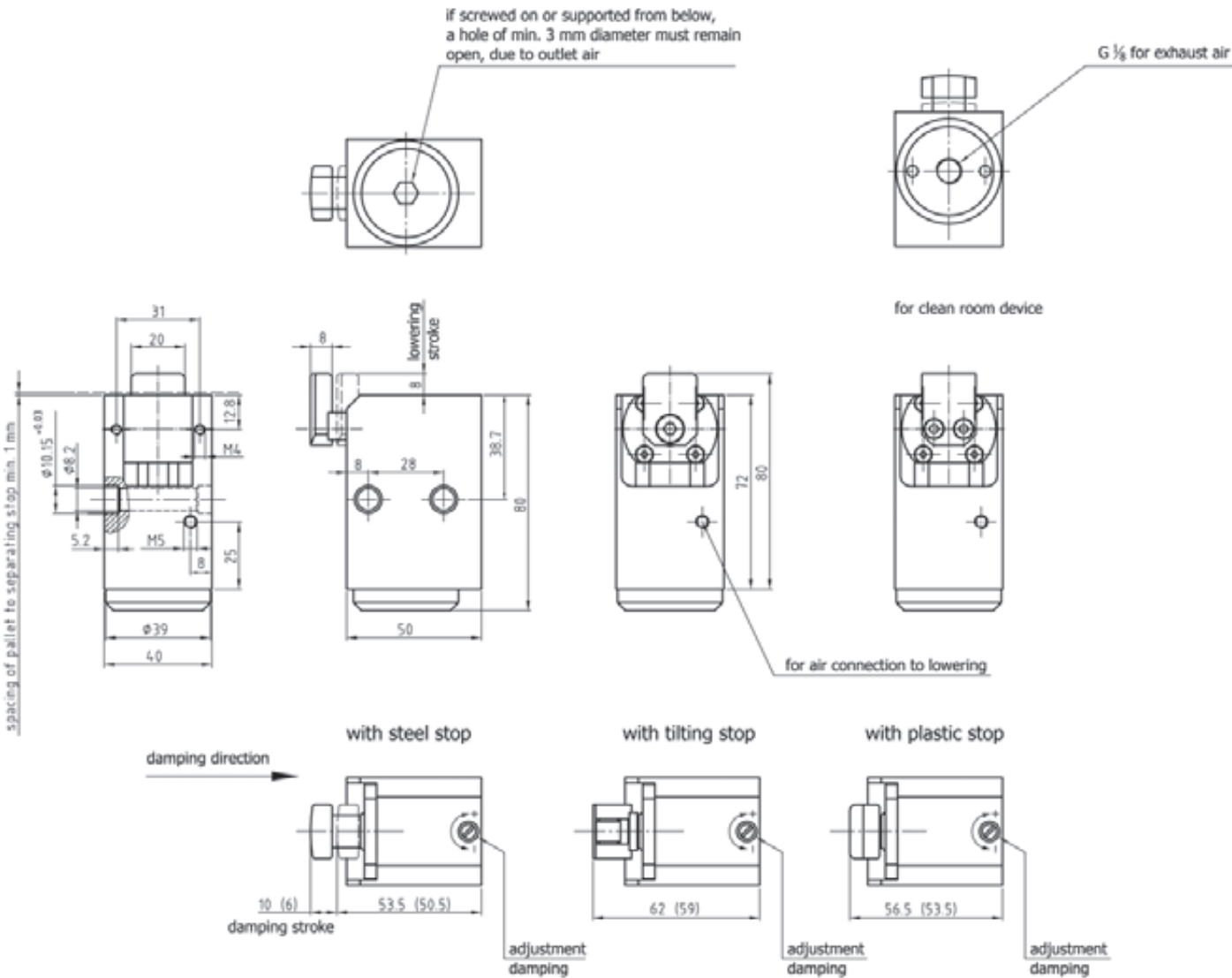
– = decrease damping force

Technical data

Operating pressure [bar]
Treated compressed air 4 – 8 bar

Pneumatic connection
M5 thread for air supply

G1/8 thread
for air connection / exhaust air only for DBSS - 10 - R



Delta BSS | Damping forces

Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg] DBSS - 06	0,7-10 kg	0,7-5 kg	0,7-5 kg	0,7-4 kg	0,7-2,5 kg	0,7-1,5 kg	0,7-1 kg
Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg] DBSS - 10	0,7-20 kg	0,7-10 kg	0,7-8 kg	0,7-6 kg	0,7-3,5 kg	0,7-2,5 kg	0,7-1,5 kg

Step 1 | Determine order code

DBSS

Type

DBSS

Damping stroke [mm]

06, 10

Temperature range [° degrees]

- = normal

- 20° bis + 80°

H = heat resistant

- 20° bis + 180°*

K = cold resistant

- 50° bis + 80°*

Stop

- = steel stop

KI = tilt stop

KU = plastic stop [1]

KA = plastic stop, antistatic [1]

Position detection

- = without sensor

I = inductive sensor* [1]

Clean room suitability

- = no test

R = ISO class 5 [2]

Customer-specific version [3]

[1] only for normal temperature range
[2] only for normal temperature range and steel stop without sensor with 10 mm damping stroke
[3] placed correspondingly
* on request

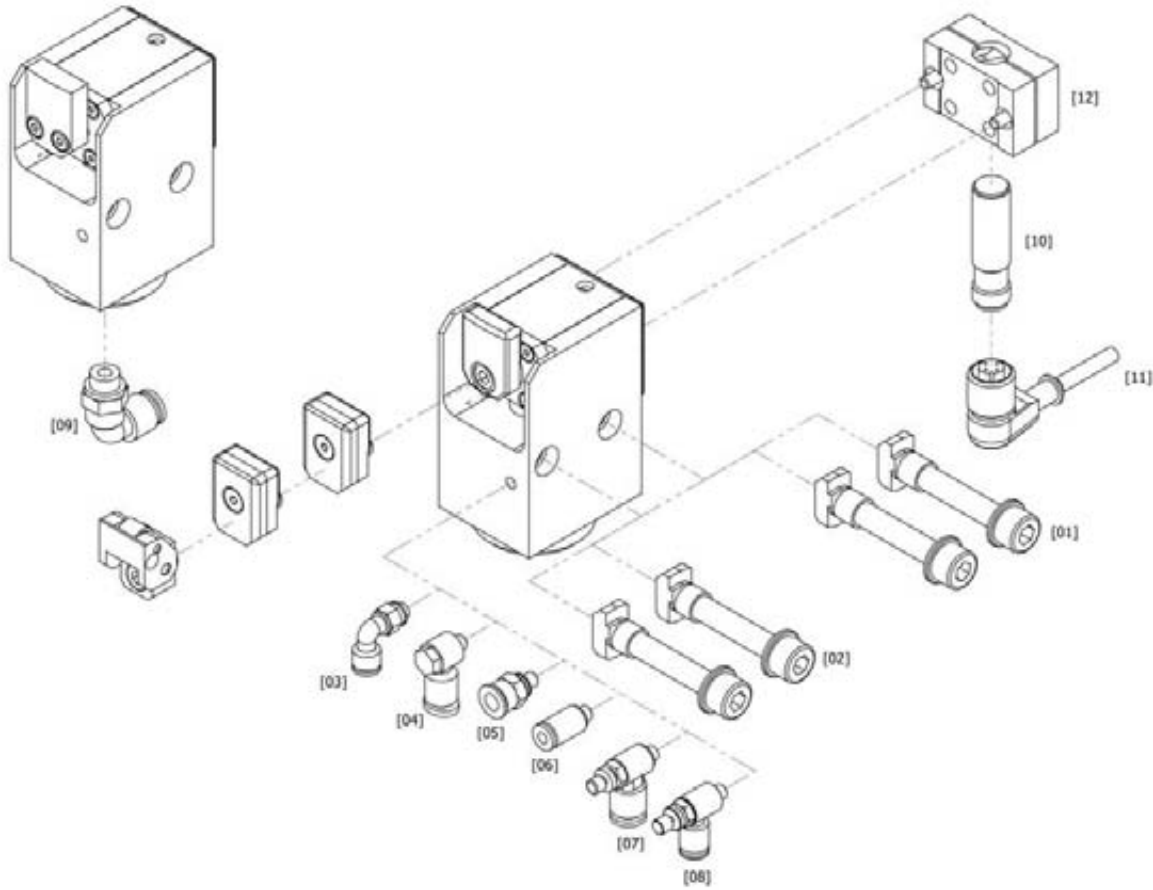


DBSS - 10 - R
Fastening set 44000134



DBSS - 06
Fastening set 44000134

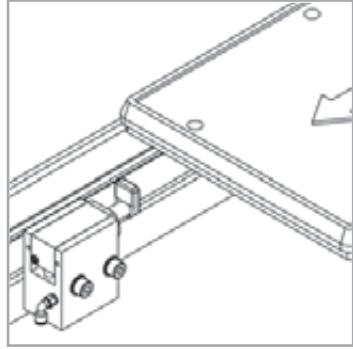
Step 2 | Select accessories



Delta BSS | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Fastening set				
[01]	Fastening set A	long spacer sleeve (see drawing p. 53)	44000134	
[02]	Fastening set B	short spacer sleeve (see drawing p. 53)	44000135	
Air connection				
[03]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[04]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[05]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[06]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[07]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	- 5° up to + 60°
[08]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	- 5° up to + 60°
[09]	Angular air connection	clean room G 1/8 for hose external Ø 6 mm	13539	- 10° up to + 80°
[10]	Proximity switch	inductive	06205001	- 25° up to + 70°
[11]	Sensor cable	for inductive Proximity switch	06290003	- 25° up to + 85°
[12]	Switch holder	for INI Ø 12 mm	19100	- 50° up to + 70°

Heat and cold resistant
accessories on request



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The DBS separating stop uses a proximity switch to detect the upper and lower position of the stopping plate.

The DBS separating stop uses an electronic sensor to detect the upper and lower position of the stopping plate.

The separating stop DBS can be mounted to the Bosch Rexroth TS2*plus* transfer system without adapter plate.

Design

Aluminum basic housing
with hard-anodizing coating

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder weights between 1 kg and 60 kg

Pallet holder loads up to 60 kg permissible (conveyor speed 6 m/min)

An inductive sensor is after arming cash any time

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Dual acting

When depressurized, the separating stop remains at the position last moved to, thus increasing the lowering force and enabling higher accumulated loads to be separated and stopped.

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

Damping force and damping speed can be set on the top of the device:

+ = increase damping force

– = decrease damping force

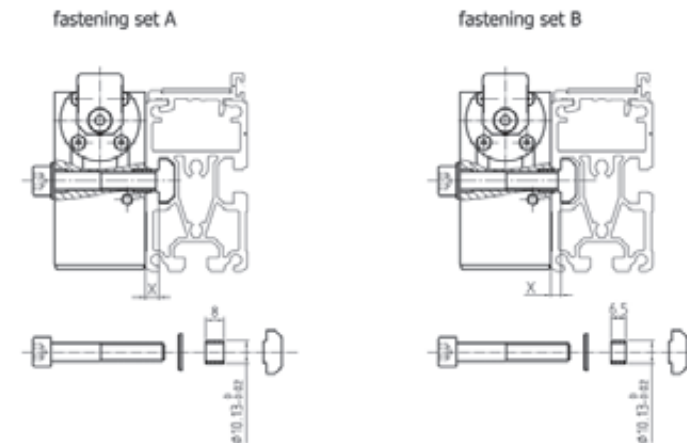
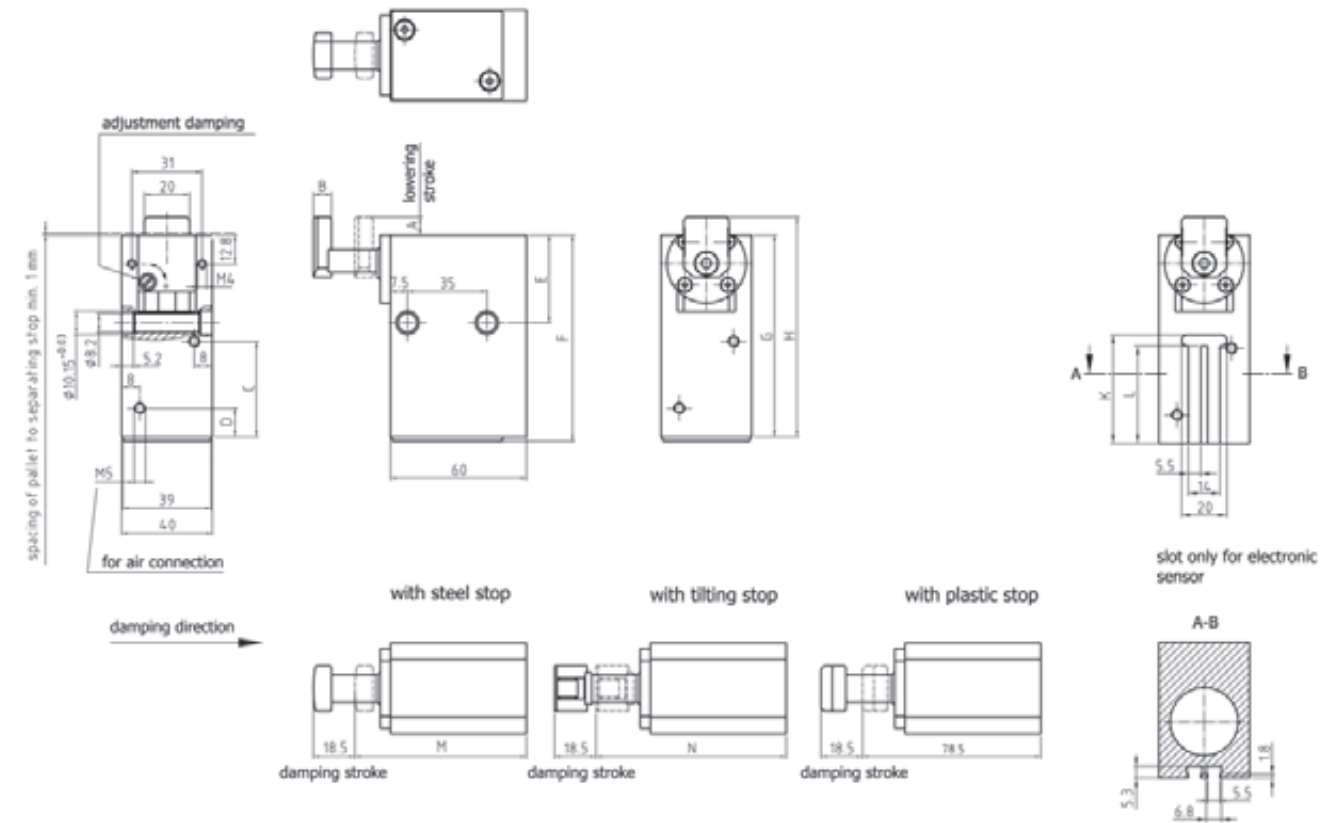
Technical data

Operating pressure [bar]

Treated compressed air 4 – 8 bar

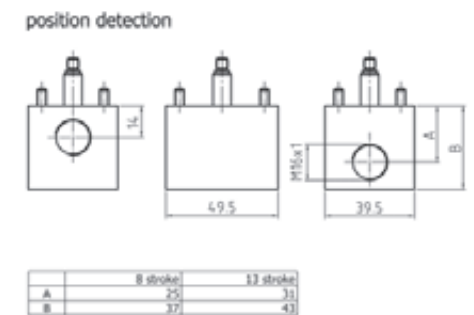
Pneumatic connection

M5 thread for air supply



	1 stroke single acting	1.3 stroke single acting	electr. sensor 8 stroke single acting	electr. sensor 1.3 stroke single acting
A	8	13	8	13
B	8	7.5	8	7.5
C	29	34	32	38
D	-	-	-	-
E	38.7	44	38.7	44
F	-	-	-	-
G	76	87	82	95
H	84	100	90	108
K	-	-	38.5	43
L	-	-	33.5	38
M	25.5	25	25.5	25
N	84	85.5	84	85.5

	8 stroke dual action	13 stroke dual action	electr. sensor 8 stroke dual action	electr. sensor 13 stroke dual action
A	8	8	8	8
B	8	13	8	7
C	42	52	42	42
D	12.5	12.5	12.5	12.5
E	38.7	46	38.7	38.7
F	91	106	-	-
G	89	104	92	92
H	92	112	100	100
K	-	-	48	58
L	-	-	43	53
M	75.5	75	75.5	75.5
N	84	84	84	84



Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	1-20 kg	1-10 kg	1-10 kg	1-10 kg	1-7 kg	1-5 kg	1-3 kg
DBS - 20							

Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	3-60 kg	3-40 kg	3-35 kg	3-30 kg	3-24 kg	3-18 kg	3-10 kg
DBS - 60							

[illegible]

[1] only for normal temperature range

[2] placed correspondingly

* on depend



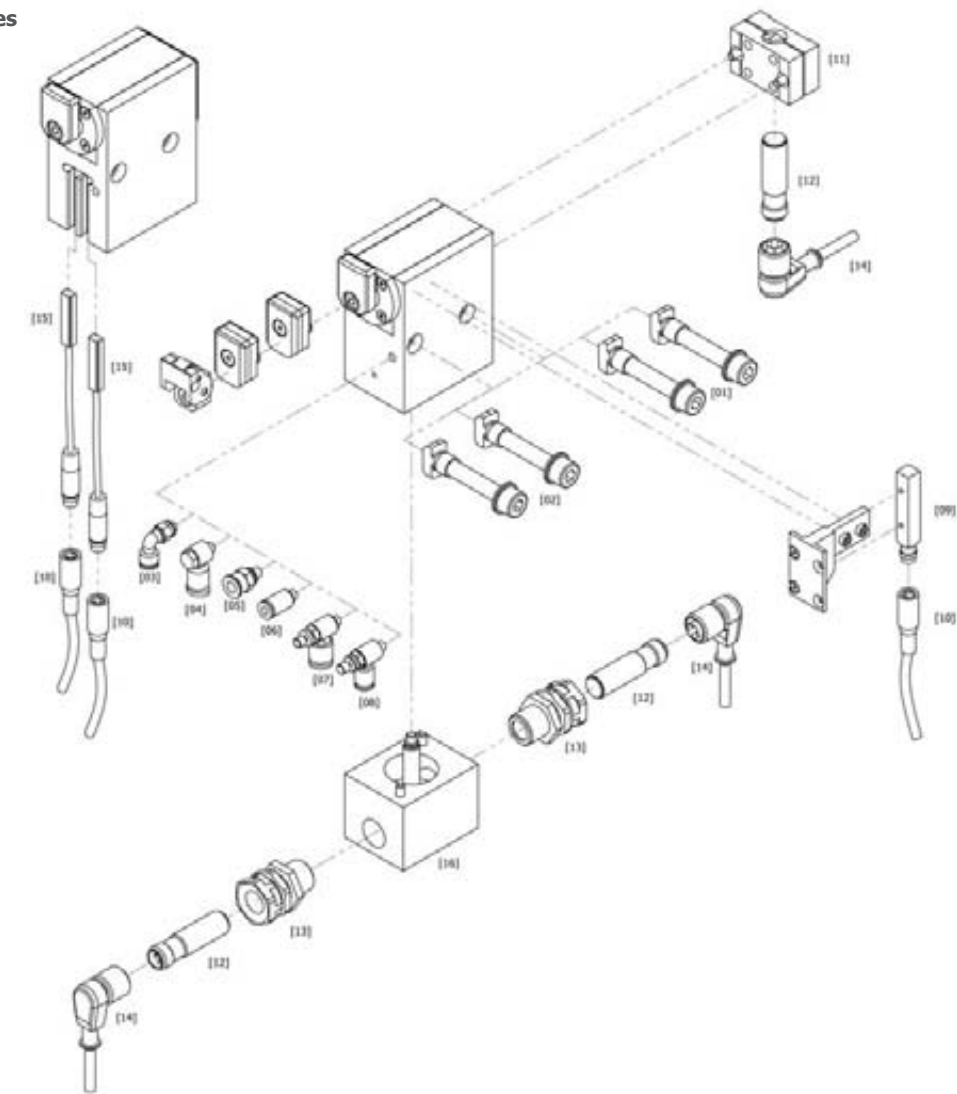
DBS - 20 - 08 - EW
Fastening set 44000134
Angular air connection 10519



DBS - 20 - 08 - EW
Fastening set 44000134
Clamp 30539
Position detection sensor for 8 stroke 44000152

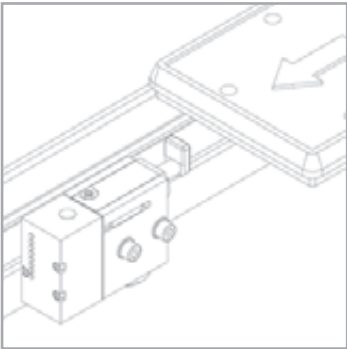


DBS - 20 - 08 - EW - E
Fastening set 44000134
Electronic sensor 18620
Angular air connection 10519



Item no.	Product designation	Description	Order no.	Temperature range
	Fastening set			
[01]	Fastening set A	long spacer sleeve (see drawing p. 57)	44000134	
[02]	Fastening set B	short spacer sleeve (see drawing p. 57)	44000135	
	Air connection			
[03]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[04]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[05]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[06]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[07]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	- 5° up to + 60°
[08]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	- 5° up to + 60°
[09]	Proximity switch	position detection stop plate retracted	19015	- 25° up to + 75°
[10]	Sensor cable	length: 5 m for 18620 and 19015	06290001	- 25° up to + 80°
[11]	Switch holder		19100	- 50° up to + 70°
[12]	Proximity switch	inductive for switch holder 19100 and position d.	06205001	- 25° up to + 70°
[13]	Clamp		30539	- 25° up to + 70°
[14]	Sensor cable	length: 5 m for 06205001	06290003	- 25° up to + 85°
[15]	Electronic sensor		18620	- 25° up to + 70°
[16]	Position detection sensor	for 8 stroke	44000152	
	upper and lower position	for 13 stroke	44000153	

Heat and cold resistant
accessories on request



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The separating stop DBSA can be mounted to the Bosch Rexroth TS2plus transfer system without adapter plate.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop integrated 3/2 way valve and directly adjustable damping

Optimum damping at pallet holder weights between 1 kg and 60 kg

Pallet holder loads up to 60 kg permissible (conveyor speed 6 m/min)

Actuation via field bus AS-i

Three integrated sensors

Connection option for an external sensor

Four preprogrammed operating modes

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

Damping force and damping speed can be set on the top of the device:

+ = increase damping force

– = decrease damping force

Technical data

Operating pressure [bar]

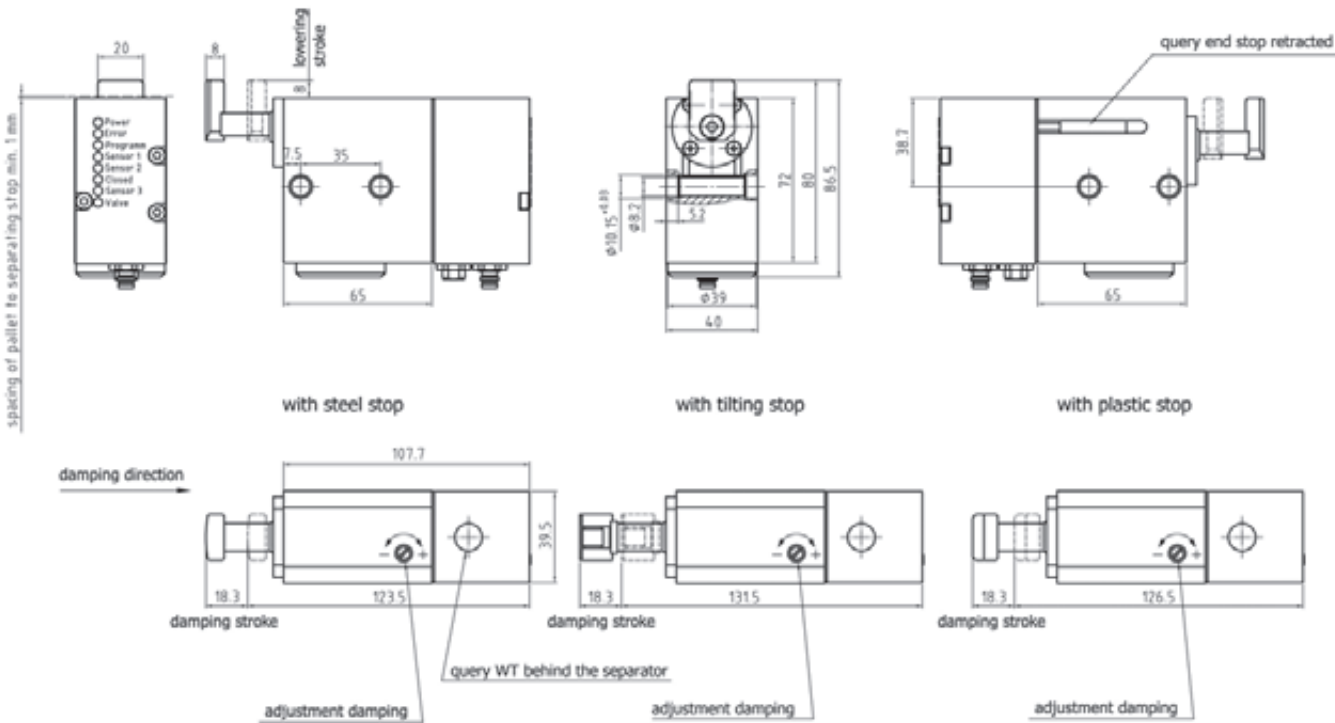
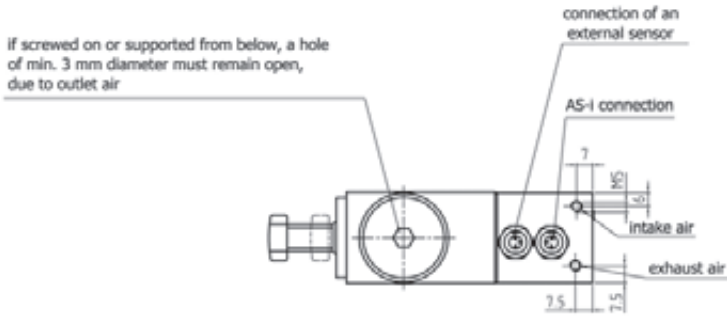
Treated compressed air 4 – 7 bar

Pneumatic connection

M5 thread for air supply

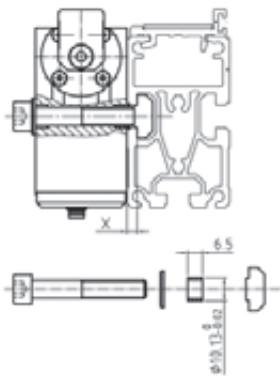
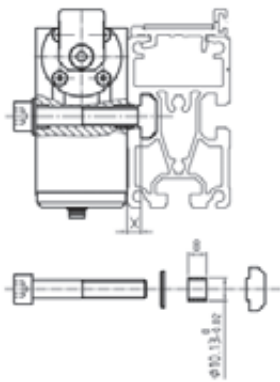
Putting into operation

Only one air connection is needed which can be transferred by separating stop to separating stop. The electrical drive is also carried out via one single supply for each separating stop. Changing the stop position or the additional installation of further separating stops has to be managed without problems. The hard- and software can be modified inside shortest time. An exchange of a faulty separating stop is finished off in no time since everything is realised pluggably.



fastening set A

fastening set B



Delta BSA | Damping forces

Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg] DBSA - 20	1-20 kg	1-10 kg	1-10 kg	1-10 kg	1-7 kg	1-5 kg	1-3 kg
Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg] DBSA - 60	3-60 kg	3-40 kg	3-35 kg	3-30 kg	3-24 kg	3-18 kg	3-10 kg

Step 1 | Determine order code

DBSA

Type

DBSA

Weight range [kg]

20 = 1-20

60 = 3-60

Stop

- = steel stop

KI = tilt stop

KU = plastic stop

KA = plastic stop, antistatic

Customer-specific version [1]

[1] placed correspondingly

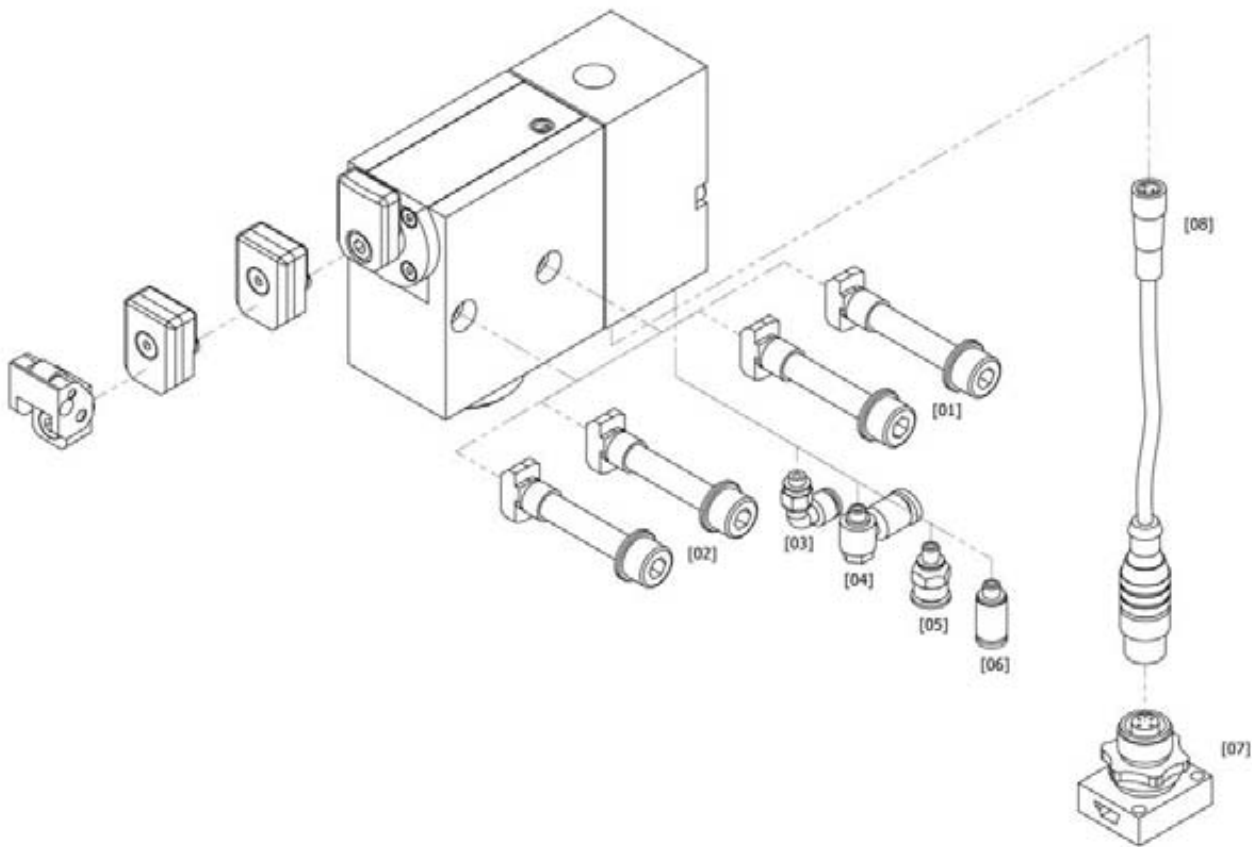


DBSA - 20
Fastening set 44000134



display status

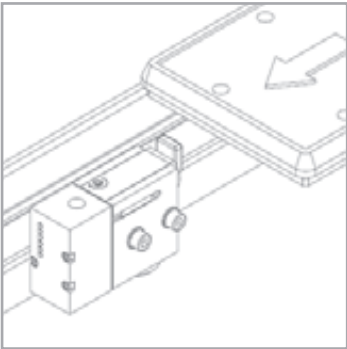
Step 2 | Select accessories



Delta BSA | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Fastening set				
[01]	Fastening set A	long spacer sleeve (see drawing p. 61)	44000134	
[02]	Fastening set B	short spacer sleeve (see drawing p. 61)	44000135	
Air connection				
[03]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[04]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[05]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[06]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[07]	AS-i flat cable pick-off		06515002	- 25° up to + 80°
[08]	AS-i connection line	length: 1 m*	06290004	- 25° up to + 80°

* further lengths on demand



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The separating stop DBSK can be mounted to the Bosch Rexroth TS2*plus* transfer system without adapter plate.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop integrated 3/2 way valve and directly adjustable damping

Optimum damping at pallet holder weights between 1 kg and 60 kg

Pallet holder loads up to 60 kg permissible (conveyor speed 6 m/min)

Three integrated sensors

Connection via an 8-pole plug

Connection option for an external sensor

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

Damping force and damping speed can be set on the top of the device:

+ = increase damping force

– = decrease damping force

Technical data

Operating pressure [bar]

Treated compressed air 4 – 7 bar

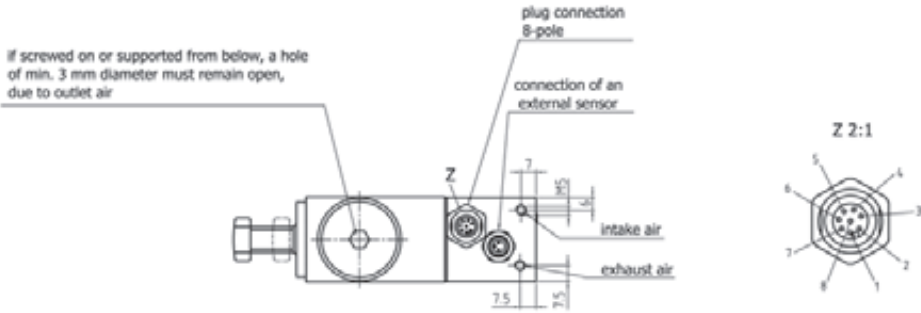
Pneumatic connection

M5 thread for air supply

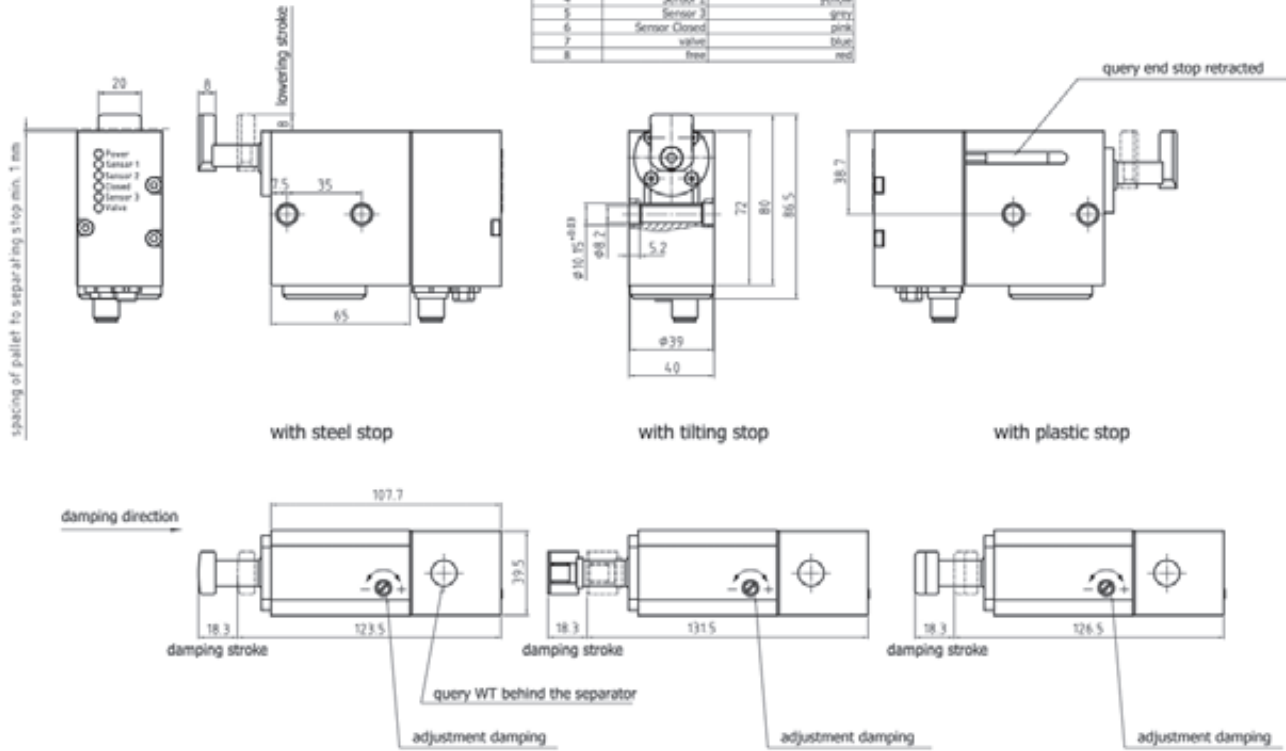
Bus connection

Connectivity to different bus systems via Wörner input- and output module. Four separating stops can be attached and eight sensors be evaluated at the basic module as well as at the expansion module.

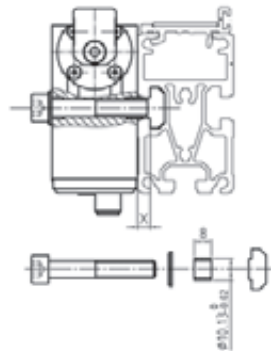
The bus systems: Profibus DP, DeviceNet, Profinet IO, EtherNet/IP und AS-i can be steered. Further bus connections on inquiry possible.



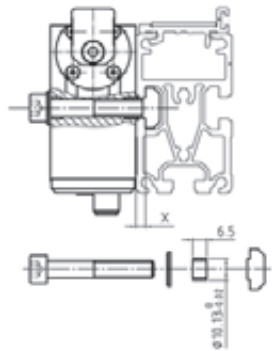
Connection	Function	Wire color by Wörner connecting lead 06280902
1	+24V DC	white
2	+GND	brown
3	Sensor 1	green
4	Sensor 2	yellow
5	Sensor 3	grey
6	Sensor closed	pink
7	valve	blue
8	free	red



fastening set A



fastening set B



Delta BSK | Damping forces

Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg] DBSK - 20	1-20 kg	1-10 kg	1-10 kg	1-10 kg	1-7 kg	1-5 kg	1-3 kg
Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg] DBSK - 60	3-60 kg	3-40 kg	3-35 kg	3-30 kg	3-24 kg	3-18 kg	3-10 kg

Step 1 | Determine order code

DBSK

Type

DBSK

Weight range [kg]

20 = 1-20

60 = 3-60

Stop

- = steel stop

KI = tilt stop

KU = plastic stop

KA = plastic stop, antistatic

Customer-specific version [1]

[1] placed correspondingly



DBSK - 20
Fastening set 44000134



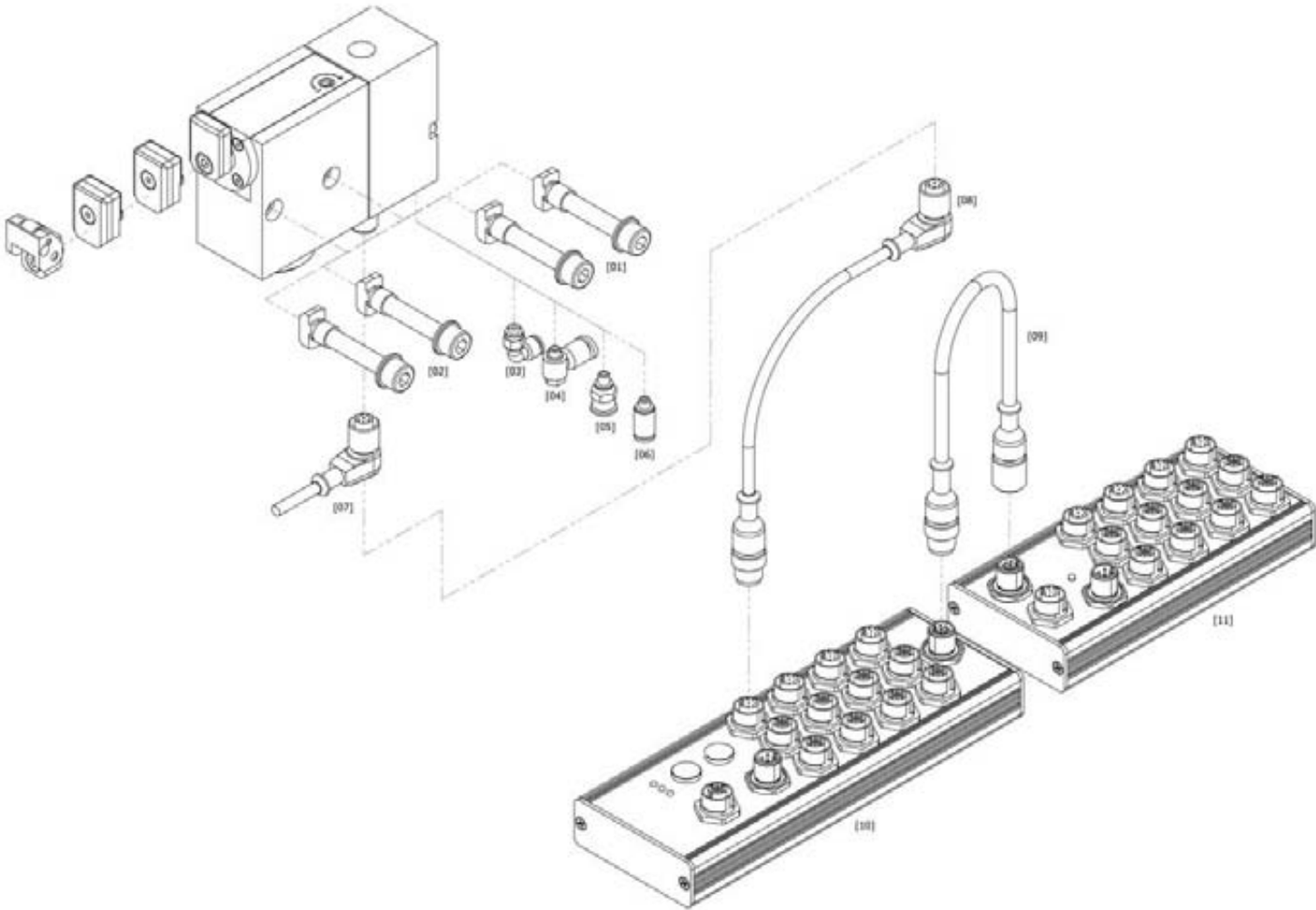
display status



E/A Basic module (above)
Profibus DP 06599001

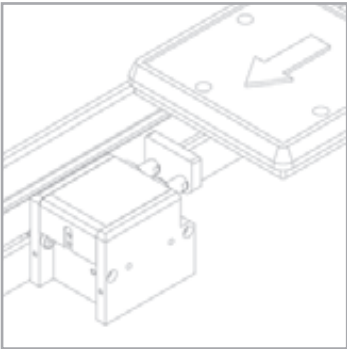
E/A expansion module (below)
06599005

Step 2 | Select accessories



Delta BSK | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Fastening set				
[01]	Fastening set A	long spacer sleeve (see drawing p. 65)	44000134	
[02]	Fastening set B	short spacer sleeve (see drawing p. 65)	44000135	
Air connection				
[03]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[04]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[05]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[06]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[07]	Connection line	length: 5 m with strands	06290002	- 25° up to + 80°
[08]	Connection line	length: 1 m with plug connector/angle coupling	06290008	- 25° up to + 80°
		length: 2 m with plug connector/angle coupling	06290009	- 25° up to + 80°
		length: 5 m with plug connector/angle coupling	06290010	- 25° up to + 80°
[09]	Connection line	length: 0,3 m interconnection line for E/G-module	06290011	- 25° up to + 80°
		length: 1,0 m interconnection line for E/G-module	06290012	- 25° up to + 80°
[10]	E/A Basic module	Profibus DP	06599001	
		DeviceNet	06599002	
		Profinet IO	06599003	
		EtherNet/IP	06599004	
		AS-i	06599006	
[11]	E/A Expansion module		06599005	



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The separating stop DBS150T2 can be mounted to the Bosch Rexroth TS2*plus* transfer system without adapter plate.

The DBS150T4 separating stop uses a proximity switch to detect the upper and lower position of the stopping plate.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder weights between 5 kg and 150 kg

Pallet holder loads up to 150 kg permissible (conveyor speed 6 m/min)

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Dual acting

When depressurized, the separating stop remains at the position last moved to, thus increasing the lowering force and enabling higher accumulated loads to be separated and stopped.

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

Damping force and damping speed can be set on the back of the device:

+ = increase damping force

– = decrease damping force

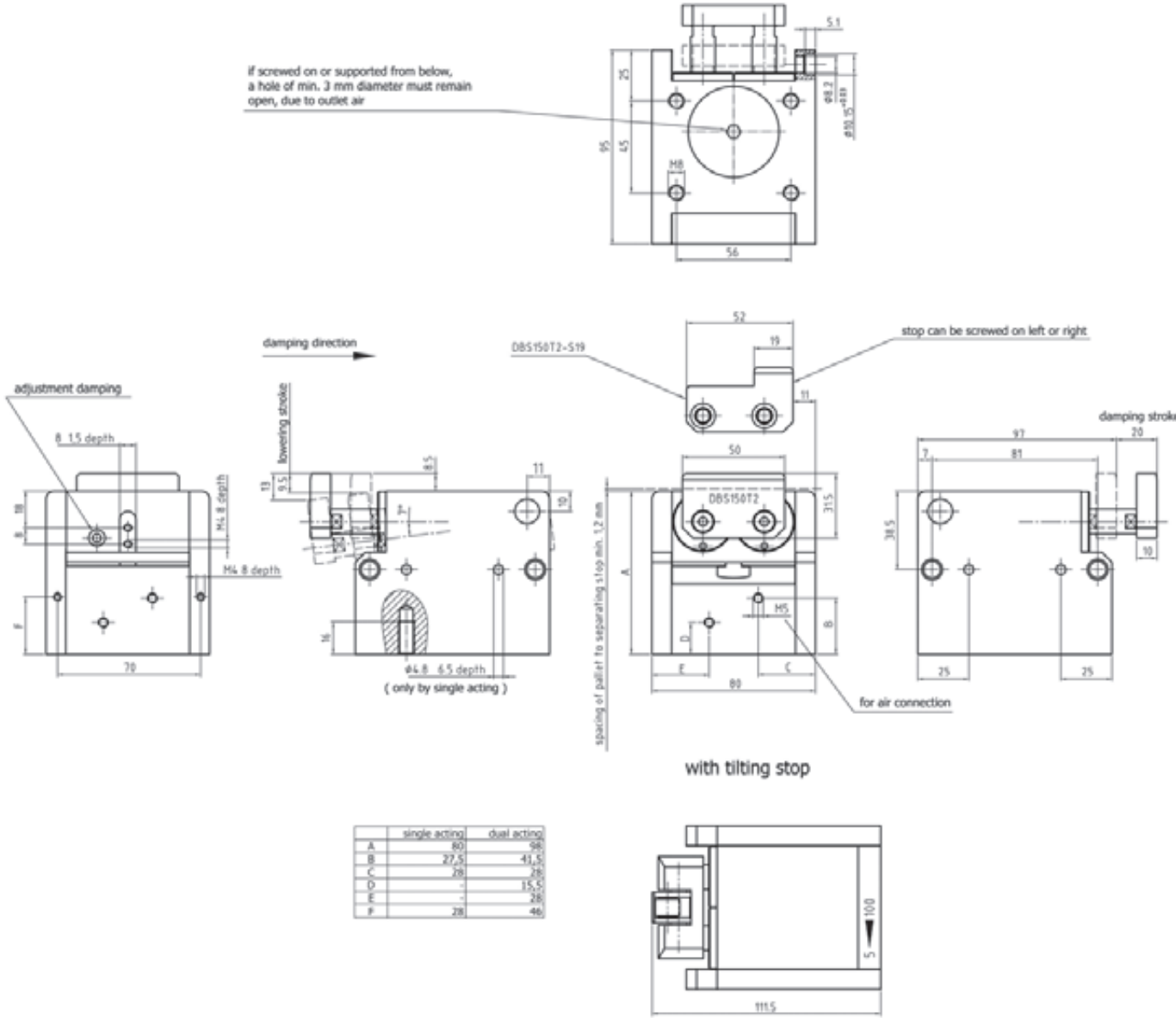
Technical data

Operating pressure [bar]

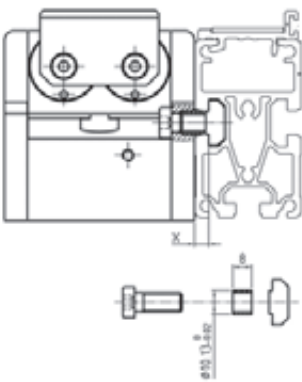
Treated compressed air 4 – 7 bar

Pneumatic connection

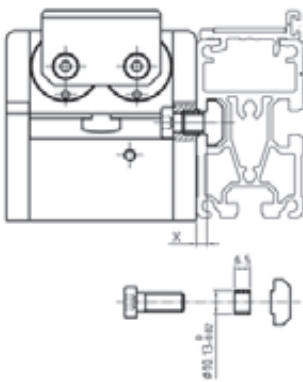
M5 thread for air supply



fastening set A



fastening set B



Delta BS150T2 | Damping forces

Speed $v_n^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	5-150 kg	5-100 kg	5-100 kg	5-90 kg	5-55 kg	5-35 kg	5-25 kg

¹⁾ This information applies to friction of 0,07 μ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

– subject to change without notice –

– subject to change without notice –

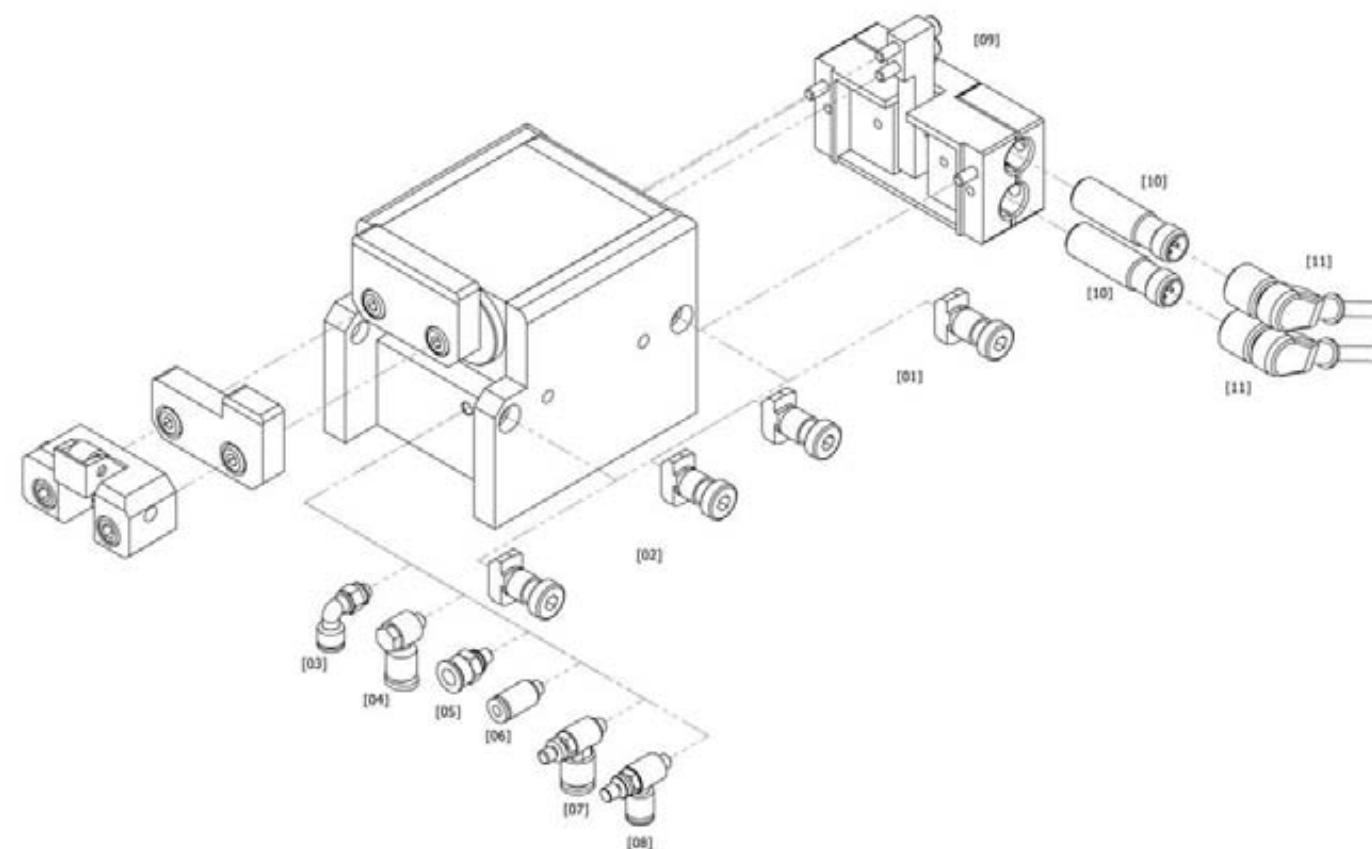
Step 1 | Determine order code

DBS150T2				
Type				
DBS150T2				
Function				
EW = single acting				
DW = dual acting				
Temperatur range [° degrees]				
- = normal	- 20° bis + 80°			
H = heat resistant	- 20° bis + 180°			
K = cold resistant	- 50° bis + 80°*			
Stop				
- = steel stop 50 mm broad				
S19= steel stop 19 mm broad				
KI = tilt stop				
Customer-specific version [1]				
[1] placed correspondingly				
* on depend				



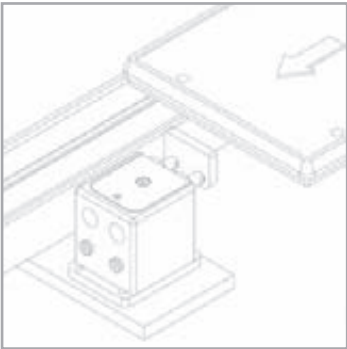
DBS150T2 - EW
Fastening set 44000150

Step 2 | Select accessories

Delta BS150T2 | **Accessories**

Item no.	Product designation	Description	Order no.	Temperature range
	Fastening set			
[01]	Fastening set A	long spacer sleeve (see drawing p. 69)	44000150	
[02]	Fastening set B	short spacer sleeve (see drawing p. 69)	44000151	
	Air connection			
[03]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[04]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[05]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[06]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[07]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	- 5° up to + 60°
[08]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	- 5° up to + 60°
[09]	Position detection sensor	query upper and lower position	19170	- 40° up to + 120°
[10]	Proximity switch		06205001	- 25° up to + 70°
[11]	Sensor cable		06290003	- 25° up to + 85°

Heat and cold resistant
accessories on request



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The DBS150 separating stop moves downwards vertically, 15 mm stroke.

The DBS150 separating stop uses a proximity switch to detect the upper and lower position of the stopping plate.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder weights between 5 kg and 150 kg

Pallet holder loads up to 150 kg permissible (conveyor speed 6 m/min)

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Dual acting

When depressurized, the separating stop remains at the position last moved to, thus increasing the lowering force and enabling higher accumulated loads to be separated and stopped.

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

Damping force and damping speed can be set on the top of the device:

+ = increase damping force

– = decrease damping force

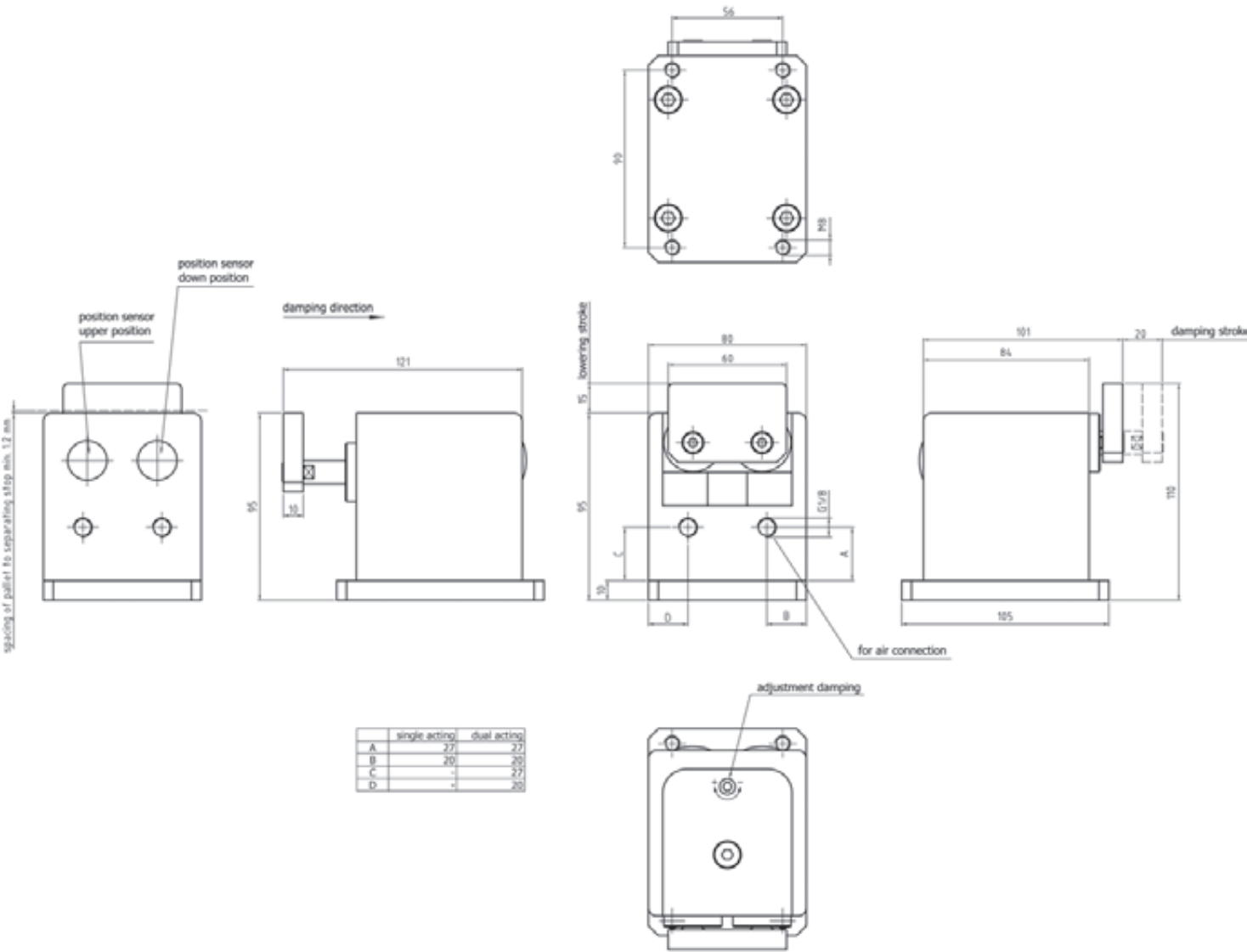
Technical data

Operating pressure [bar]

Treated compressed air 4 – 8 bar

Pneumatic connection

G1/8 thread for air supply



Delta BS150 | Damping forces

Speed $v_n^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	5-150 kg	5-100 kg	5-100 kg	5-90 kg	5-55 kg	5-35 kg	5-25 kg

¹⁾ This information applies to friction of 0,07 µ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

– subject to change without notice –

– subject to change without notice –

Step 1 | Determine order code

DBS150

Type

DBS150

Function

EW = single acting
DW = dual acting

Temperatur range [° degrees]

- = normal - 20° bis + 80°
H = heat resistant - 20° bis + 180°*
K = cold resistant - 50° bis + 80°*

Stop

- = steel stop
KI = tilt stop

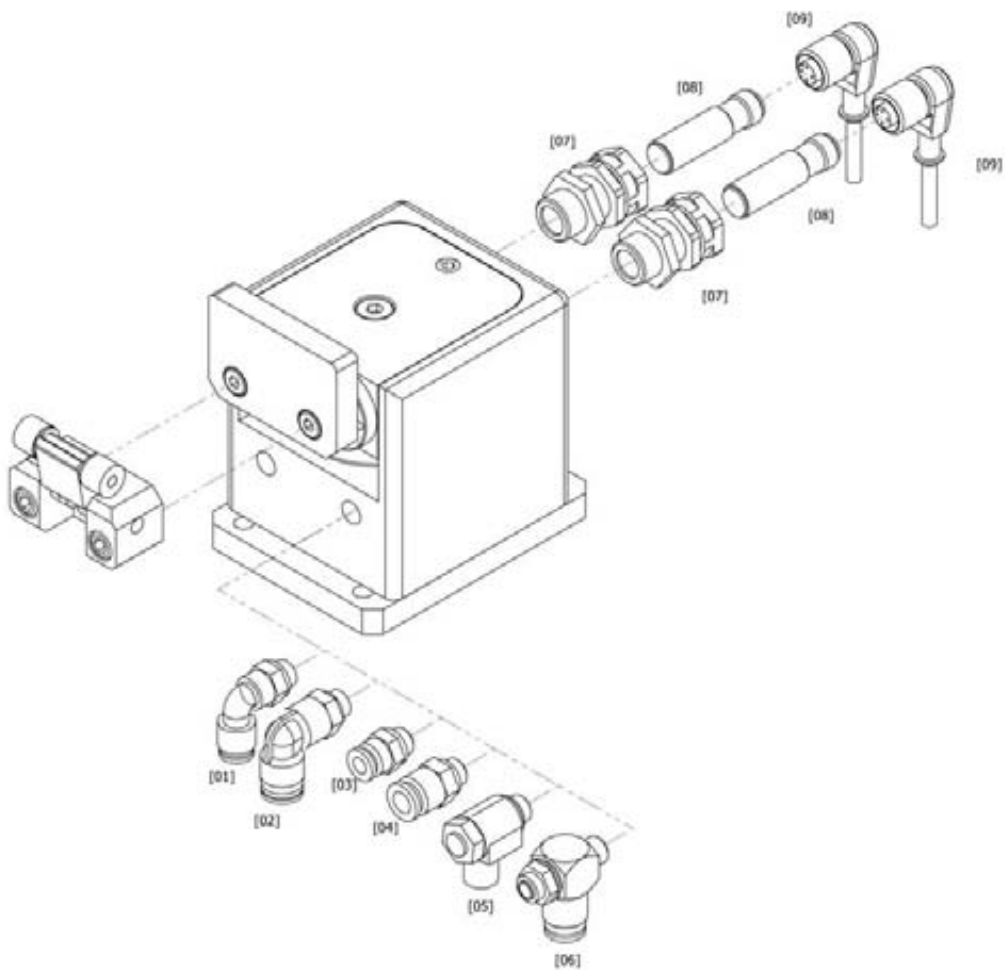
Customer-specific version [1]

[1] placed correspondingly
* on depend



DBS150 - EW

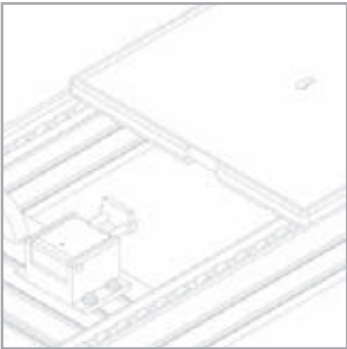
Step 2 | Select accessories



Delta BS150 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Air connection				
[01]	Angular air connection	for hose external diameter Ø 6 mm	13539	- 10° up to + 80°
[02]	Angular air connection	for hose external diameter Ø 8 mm	04520001	- 10° up to + 80°
[03]	Straight air connection	for hose external diameter Ø 6 mm	04520007	- 10° up to + 80°
[04]	Straight air connection	for hose external diameter Ø 8 mm	04520008	- 10° up to + 80°
[05]	Delivery air throttle	for hose external diameter Ø 6 mm	04510001	- 10° up to + 80°
[06]	Delivery air throttle	for hose external diameter Ø 8 mm	18075	0° up to + 70°
[07]	Clamp		30539	- 25° up to + 70°
[08]	Proximity switch	inductive	06205001	- 25° up to + 70°
[09]	Sensor cable	for inductive proximity switch	06290003	- 25° up to + 85°

Heat and cold resistant
accessories on request



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The separating stop DBS150T4 can be mounted to the Bosch Rexroth TS4*plus* transfer system without adapter plate.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder weights between 5 kg and 150 kg

Pallet holder loads up to 150 kg permissible (conveyor speed 6 m/min)

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

Damping force and damping speed can be set on the top of the device:

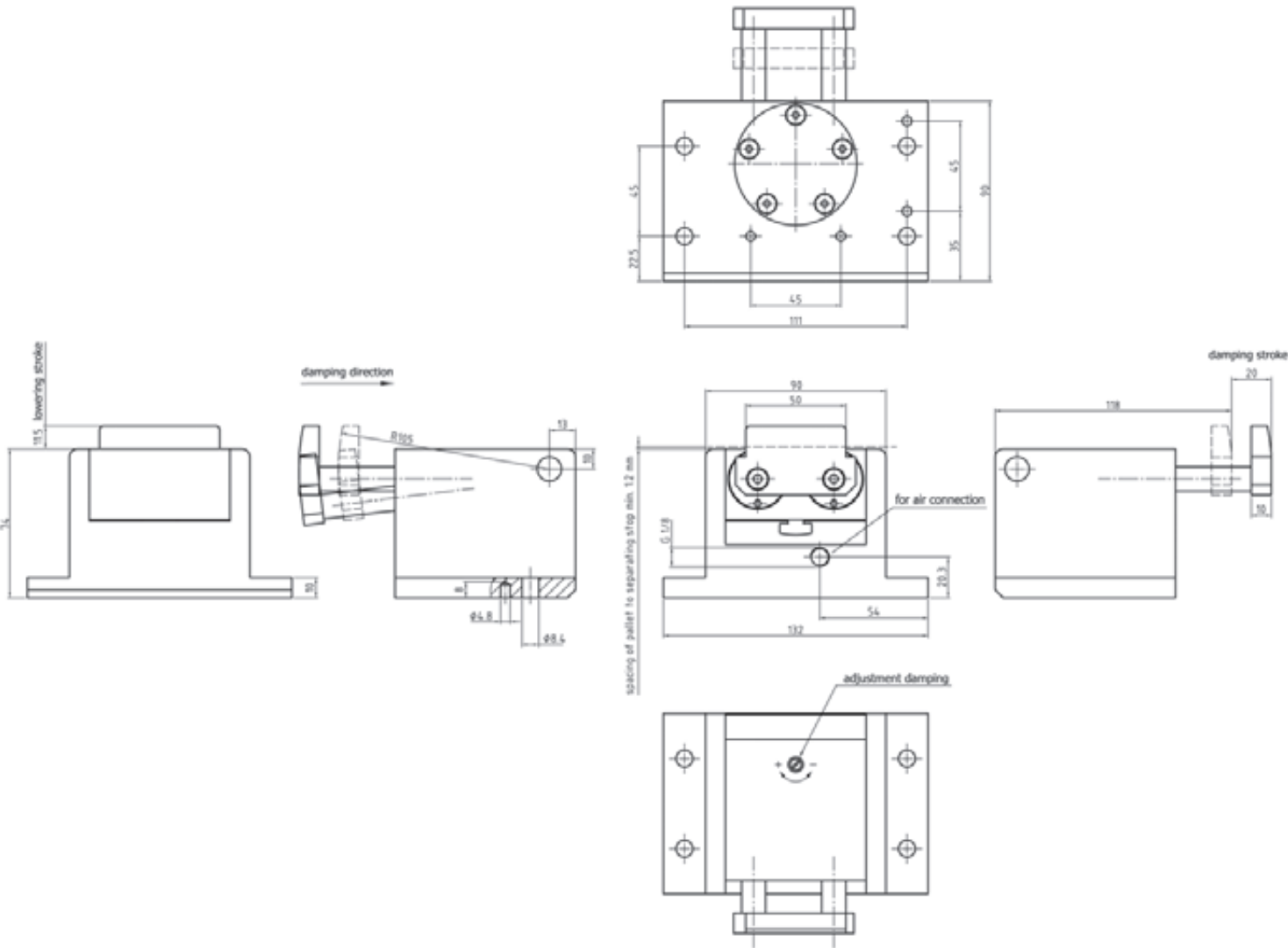
+ = increase damping force

– = decrease damping force

Technical data

Operating pressure [bar]
Treated compressed air 4 – 8 bar

Pneumatic connection
G1/8 thread for air supply



Delta BS150T4 | Damping forces

Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	5-150 kg	5-100 kg	5-100 kg	5-90 kg	5-55 kg	5-35 kg	5-25 kg

¹⁾ This information applies to friction of 0,07 µ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

– subject to change without notice –

– subject to change without notice –

Step 1 | Determine order code

DBS150T4

Type

DBS150T4

Temperatur range [° degrees]

- = normal

- 20° bis + 80°

H = heat resistant

- 20° bis + 180°*

K = cold resistant

- 50° bis + 80°*

Customer-specific version [1]

[1] placed correspondingly

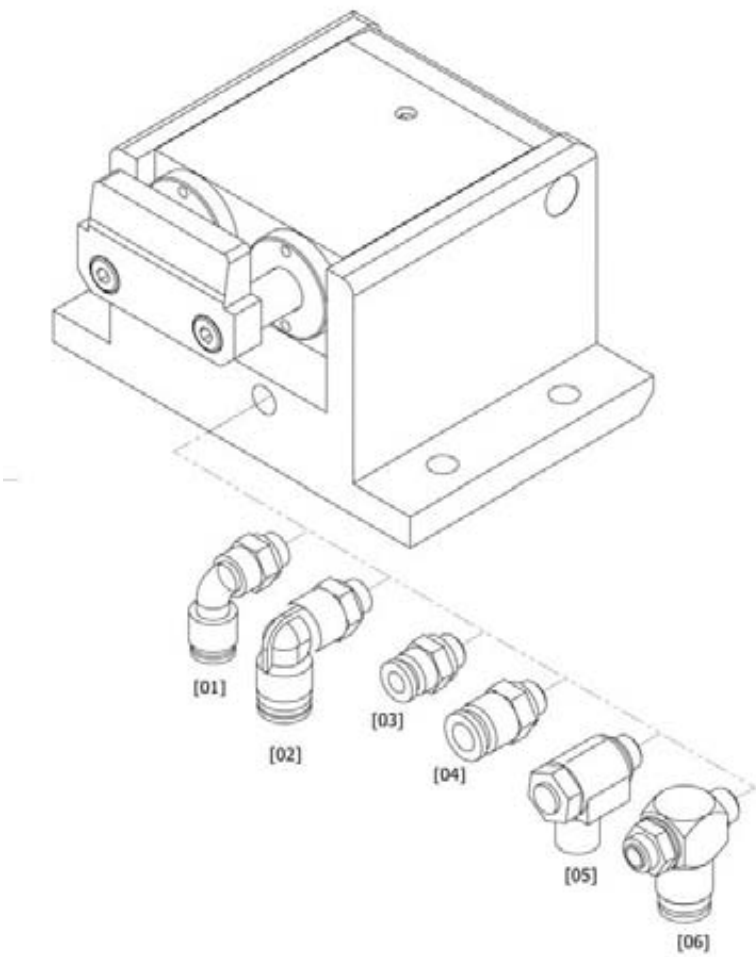
* on depend



DBS150T4

Separating stop, with damping | up to 150 kg

Step 2 | Select accessories

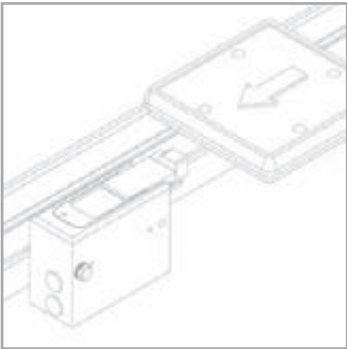


Delta BS150T4 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Air connection				
[01]	Angular air connection	for hose external diameter Ø 6 mm	13539	- 10° up to + 80°
[02]	Angular air connection	for hose external diameter Ø 8 mm	04520001	- 10° up to + 80°
[03]	Straight air connection	for hose external diameter Ø 6 mm	04520007	- 10° up to + 80°
[04]	Straight air connection	for hose external diameter Ø 8 mm	04520008	- 10° up to + 80°
[05]	Delivery air throttle	for hose external diameter Ø 6 mm	04510001	- 10° up to + 80°
[06]	Delivery air throttle	for hose external diameter Ø 8 mm	18075	0° up to + 70°

Heat and cold resistant
accessories on request

Separating stop, with damping | up to 150 kg



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The separating stop DBS250 can be mounted to the Bosch Rexroth TS2*plus* transfer system without adapter plate.

The DBS250 separating stop uses a proximity switch to detect the upper and lower position of the stopping plate.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder weights between 5 kg and 250 kg

Pallet holder loads up to 250 kg permissible (conveyor speed 6 m/min)

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

Damping force and damping speed can be set on the top of the device:

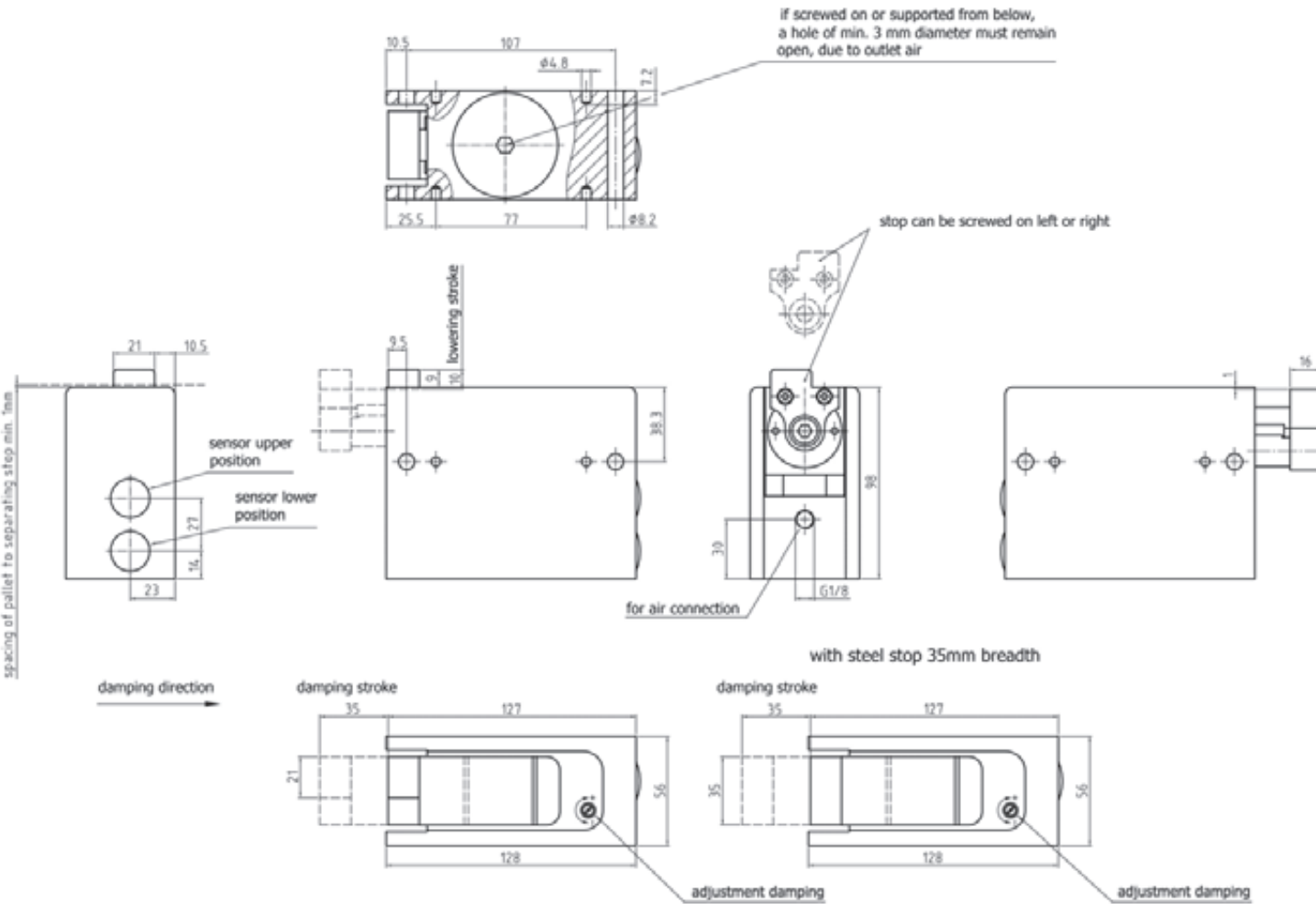
+ = increase damping force

– = decrease damping force

Technical data

Operating pressure [bar]
Treated compressed air 4 – 8 bar

Pneumatic connection
G1/8 thread for air supply



Delta BS250 | Damping forces

Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	5-250 kg	5-200 kg	5-150 kg	5-100 kg	5-55 kg	5-35 kg	5-25 kg

¹⁾ This information applies to friction of 0,07 μ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

Step 1 | Determine order code

DBS250

Type

DBS250

Function

EW = single acting
DW = dual acting*

Temperatur range [° degrees]

- = normal - 20° bis + 80°
H = heat resistant - 20° bis + 180°
K = cold resistant - 50° bis + 80°*

Stop

- = steel stop 21 mm broad
S35 = steel stop 35 mm broad

Customer-specific version [1]

[1] placed correspondingly

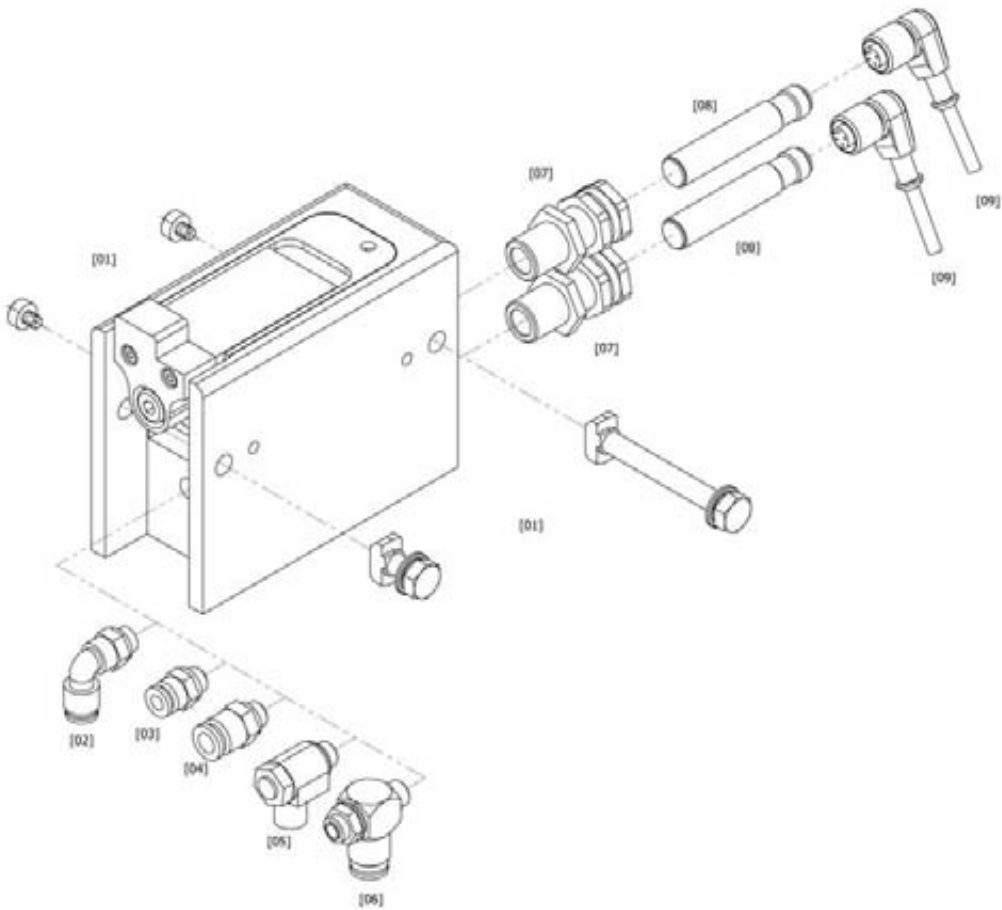
* on depend



DBS250 - EW
Fastening set 44000149

1) Specific information to the order code on the page 6/7

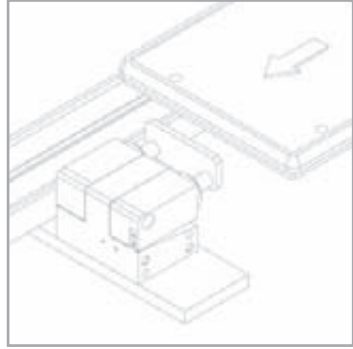
Step 2 | Select accessories



Delta BS250 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set		44000149	
	Air connection			- 10° up to + 80°
[02]	Angular air connection	for hose external diameter Ø 6 mm	13539	- 10° up to + 80°
[03]	Straight air connection	for hose external diameter Ø 6 mm	04520007	- 10° up to + 80°
[04]	Straight air connection	for hose external diameter Ø 8 mm	04520008	- 10° up to + 80°
[05]	Delivery air throttle	for hose external diameter Ø 6 mm	04510001	0° up to + 70°
[06]	Delivery air throttle	for hose external diameter Ø 8 mm	18075	
				- 25° up to + 70°
[07]	Clamp		30540	- 25° up to + 70°
[08]	Proximity switch		19010	- 25° up to + 85°
[09]	Sensor cable	length: 5 m	06290003	

Heat and cold resistant
accessories on request



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The DBS240 separating stop uses a proximity switch to detect the upper and lower position of the stopping plate.

The separating stop DBS240 can be mounted to the Bosch Rexroth TS2*plus* transfer system without adapter plate.

Design

Aluminum basic housing
with hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder weights between 10 kg and 240 kg

Pallet holder loads up to 240 kg permissible (conveyor speed 6 m/min)

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

Damping force and damping speed can be set on the back of the device:

+ = increase damping force

– = decrease damping force

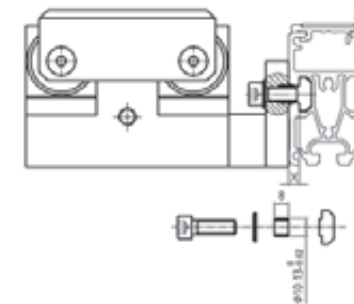
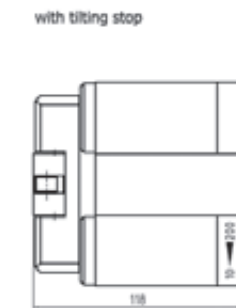
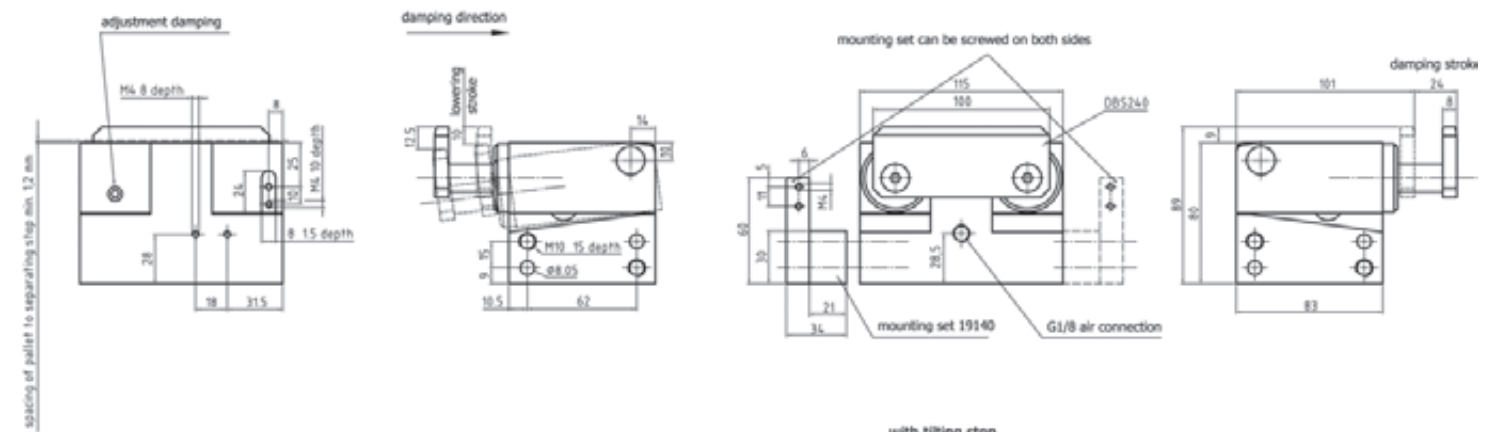
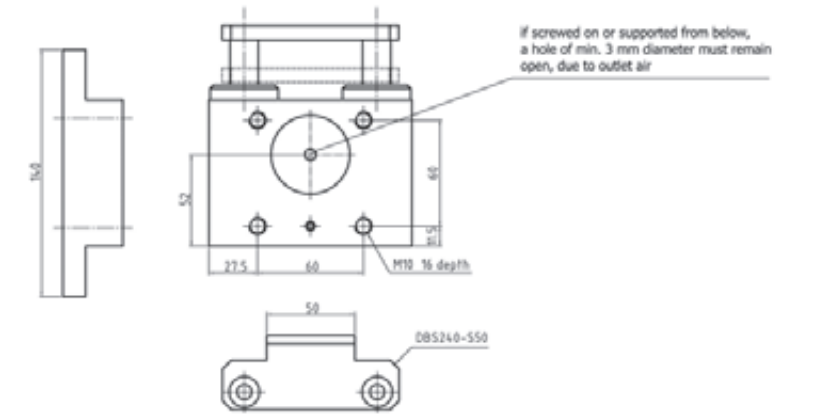
Technical data

Operating pressure [bar]

Treated compressed air 4 – 8 bar

Pneumatic connection

G1/8 thread for air supply



Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	10-240 kg	10-220 kg	10-200 kg	10-180 kg	10-110 kg	10-70 kg	10-50 kg

Step 1 | Determine order code

DBS240

Type

DBS240

Function

EW = single acting
DW = dual acting*

Temperatur range [° degrees]

- = normal

- 20° bis + 80°

H = heat resistant

- 20° bis + 180°

K = cold resistant

- 50° bis + 80°*

Stop

- = steel stop 100 mm broad

S50 = steel stop 50 mm broad

KI = tilt stop

Customer-specific version [1]

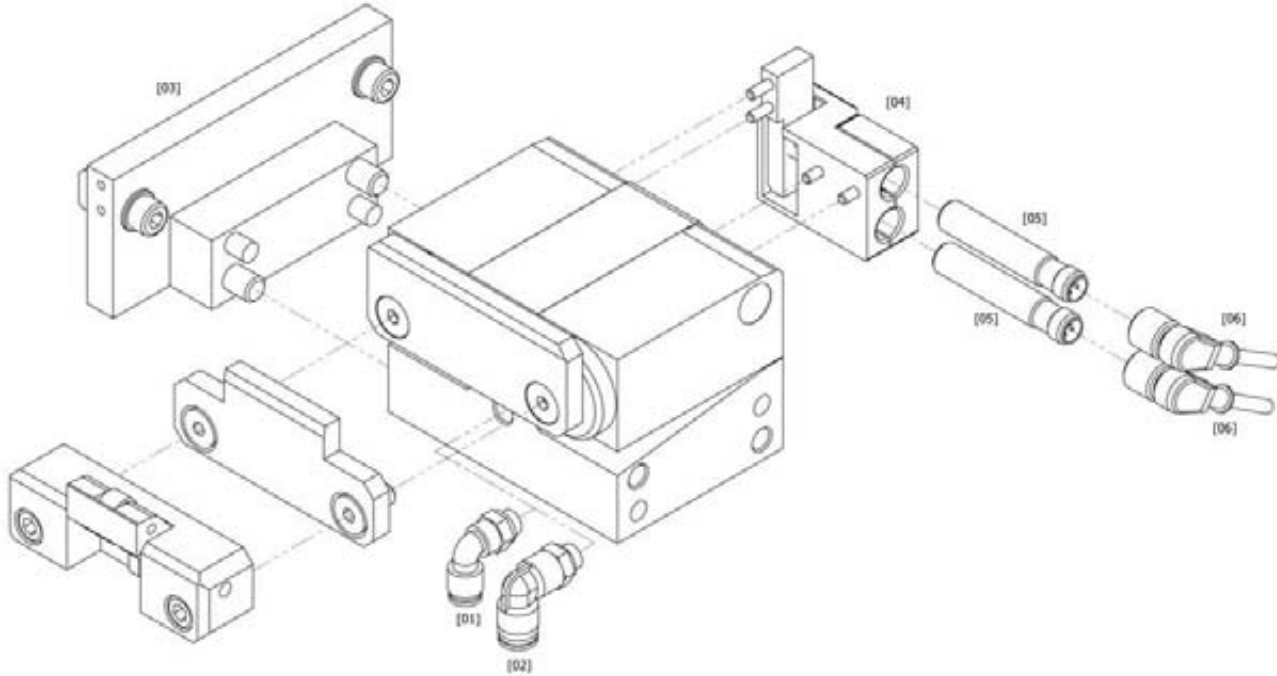
[1] placed correspondingly

* on depend



DBS240 - EW

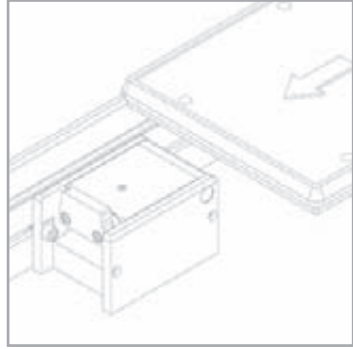
Step 2 | Select accessories



Delta BS240 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Air connection				
[01]	Angular air connection	for hose external diameter Ø 6 mm	13539	- 10° up to + 80°
[02]	Angular air connection	for hose external diameter Ø 8 mm	04520001	- 10° up to + 80°
[03]	Adapter kit	for Bosch Rexroth TS2plus transfer system	19140	
[04]	Position detection sensor	query upper and lower position	19160	- 40° up to + 120°
[05]	Proximity switch		19010	- 25° up to + 70°
[06]	Sensor cable	length: 5 m	06290003	- 25° up to + 85°

Heat and cold resistant
accessories on request



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The DBSU150 separating stop uses a proximity switch to detect the upper and lower position of the stopping plate.

The separating stop DBSU150 can be mounted to the Bosch Rexroth TS2*plus* transfer system without adapter plate.

Design

Aluminum basic housing
with hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder weights between 5 kg and 150 kg

Pallet holder loads up to 150 kg permissible (conveyor speed 6 m/min)

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Dual acting

When depressurized, the separating stop remains at the position last moved to, thus increasing the lowering force and enabling higher accumulated loads to be separated and stopped.

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

Damping force and damping speed can be set on the top of the device:

+ = increase damping force

- = decrease damping force

Technical data

Operating pressure [bar]

Treated compressed air 4 – 8 bar

Pneumatic connection

G1/8 thread for air supply

damping direction

lowering stroke

B 1.5 depth

for air connection

	single acting	dual acting
A	82	90
B	75	75
C	120	120
D	120	120
E	120	120
F	26	26
G	27.5	27.5
H	80	80
I	80	80

with steel stop

spacing of pullet to separating stop min. 12

with tilting stop

damping stroke

adjustment damping

fastening set A

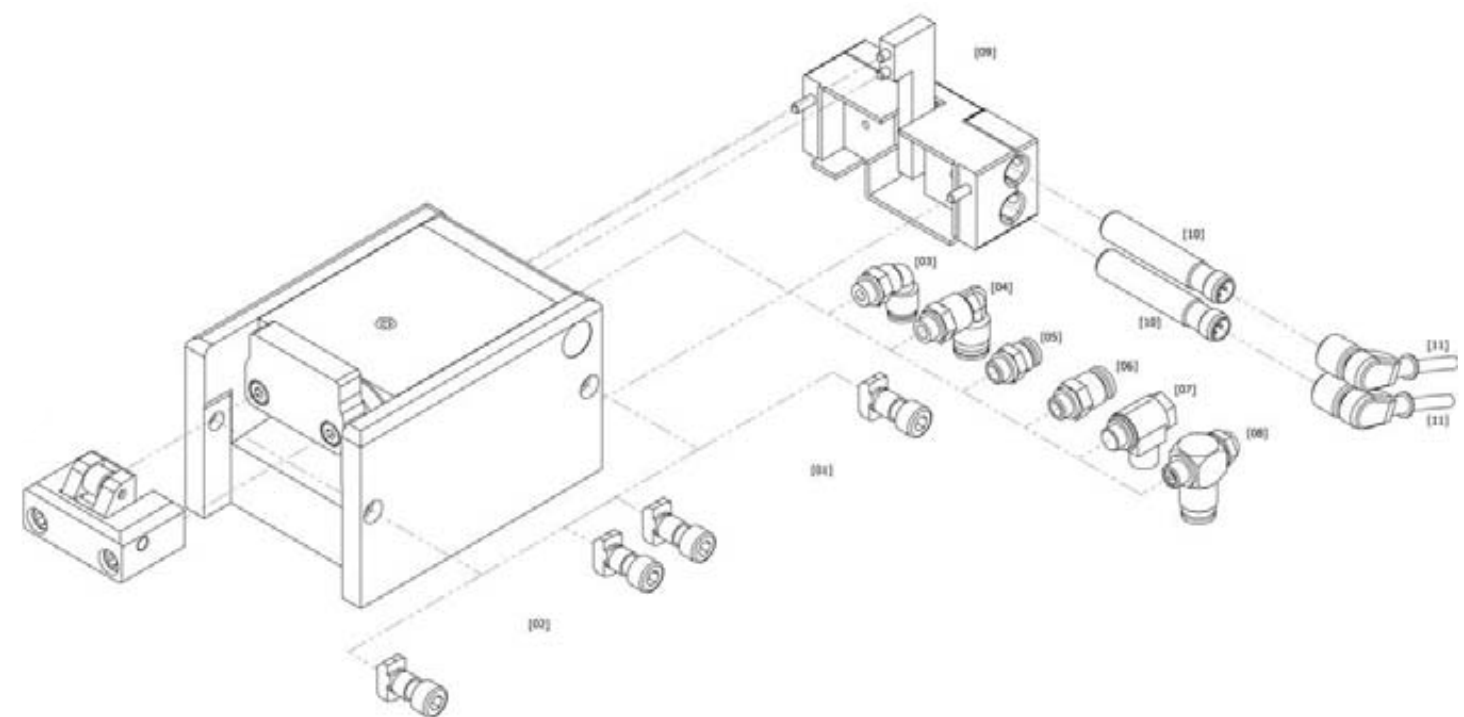
fastening set B

Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	5-150 kg	5-100 kg	5-100 kg	5-90 kg	5-55 kg	5-35 kg	5-25 kg

DBSU150			
Type DBSU150			
Function EW = single acting DW = dual acting			
Temperatur range [° degrees] — = normal - 20° bis + 80° H = heat resistant - 20° bis + 180°* K = cold resistant - 50° bis + 80°*			
Stop — = steel stop 50 mm broad KI = tilt stop			
Customer-specific version [1]			



DBSU150 - EW
Fastening set 44000147



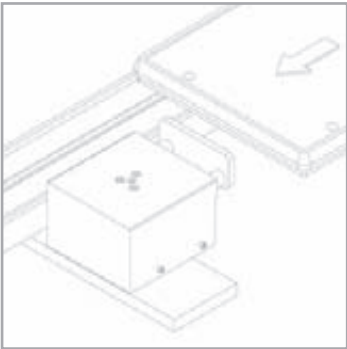
Item no.	Product designation	Description	Order no.	Temperature range
Fastening set				
[01]	Fastening set A	long spacer sleeve (see drawing p. 89)	44000147	
[02]	Fastening set B	short spacer sleeve (see drawing p. 89)	44000148	
Air connection				
[03]	Angular air connection	for hose external diameter Ø 6 mm	13539	- 10° up to + 80°
[04]	Angular air connection	for hose external diameter Ø 8 mm*	04520001	- 10° up to + 80°
[05]	Straight air connection	for hose external diameter Ø 6 mm*	04520007	- 10° up to + 80°
[06]	Straight air connection	for hose external diameter Ø 8 mm*	04520008	- 10° up to + 80°
[07]	Delivery air throttle	for hose external diameter Ø 6 mm*	04510001	- 10° up to + 80°
[08]	Delivery air throttle	for hose external diameter Ø 8 mm*	18075	0° up to + 70°
[09]	Position detection sensor	query upper and lower position**	44000030	- 40° up to + 120°
[10]	Proximity switch		19010	- 25° up to + 70°
[11]	Sensor cable	length: 5 m	06290003	- 25° up to + 85°

Heat and cold resistant

accessories on request

* not in conjunction with a position sensor 44000030

** DW dual acting on demand



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The DBS240R separating stop uses a proximity switch to detect the upper and lower position of the stopping plate.

Specially developed for an extremely damp environment, e.g. in washing systems. It is distinguished by its resistance to media in particular. Very stable design.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Protected particularly by case closed completely

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder weights between 10 kg and 240 kg

Pallet holder loads up to 240 kg permissible (conveyor speed 6 m/min)

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

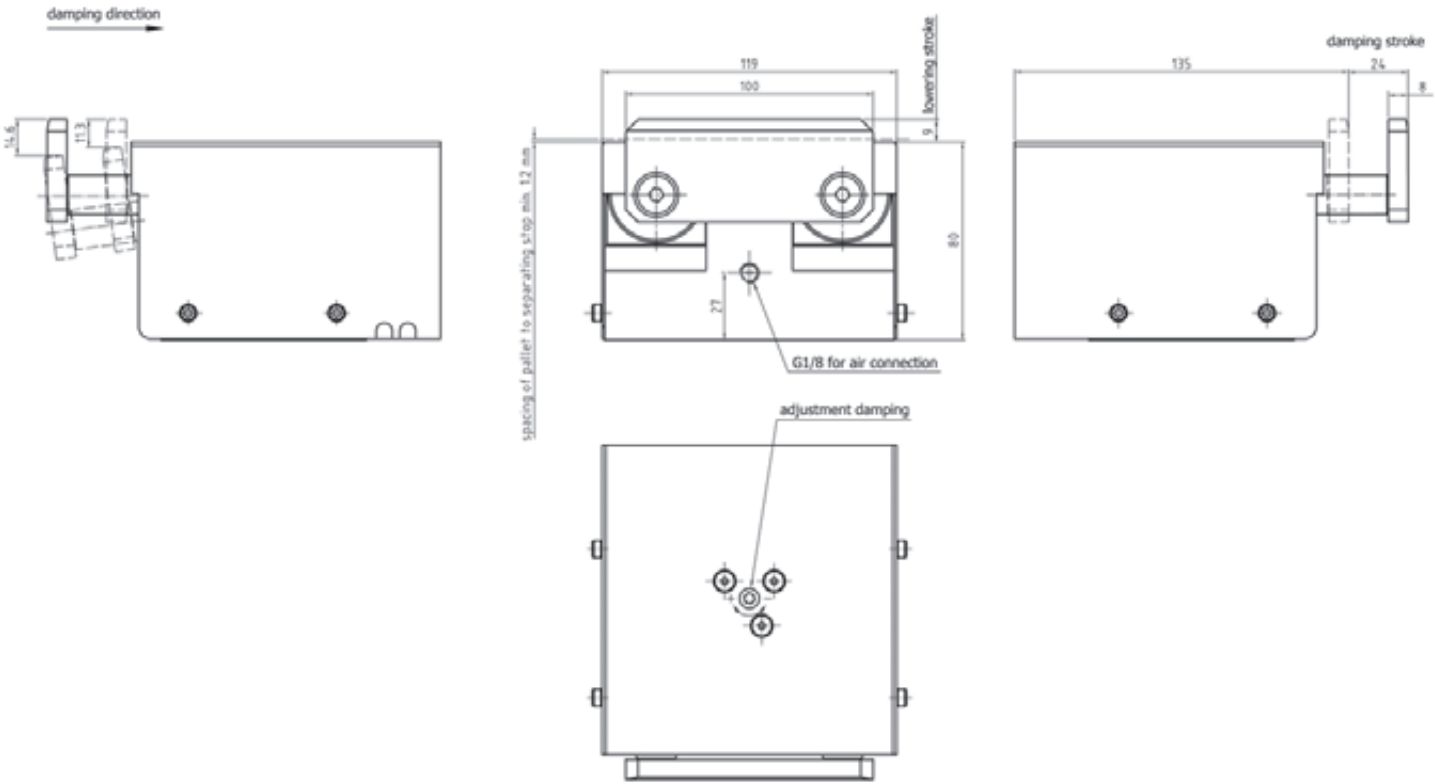
Fine adjustment
Damping force and damping speed can be set on the top of the device:

- + = increase damping force
- = decrease damping force

Technical data

Operating pressure [bar]
Treated compressed air 4 – 8 bar

Pneumatic connection
G1/8 thread for air supply



Delta BS240R | Damping forces

Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	10-240 kg	10-220 kg	10-200 kg	10-180 kg	10-110 kg	10-70 kg	10-50 kg

¹⁾ This information applies to friction of 0,07 μ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

Step 1 | Determine order code

DBS270R

Type

DBS270R

Function

EW = single acting
DW = dual acting*

Customer-specific version [1]

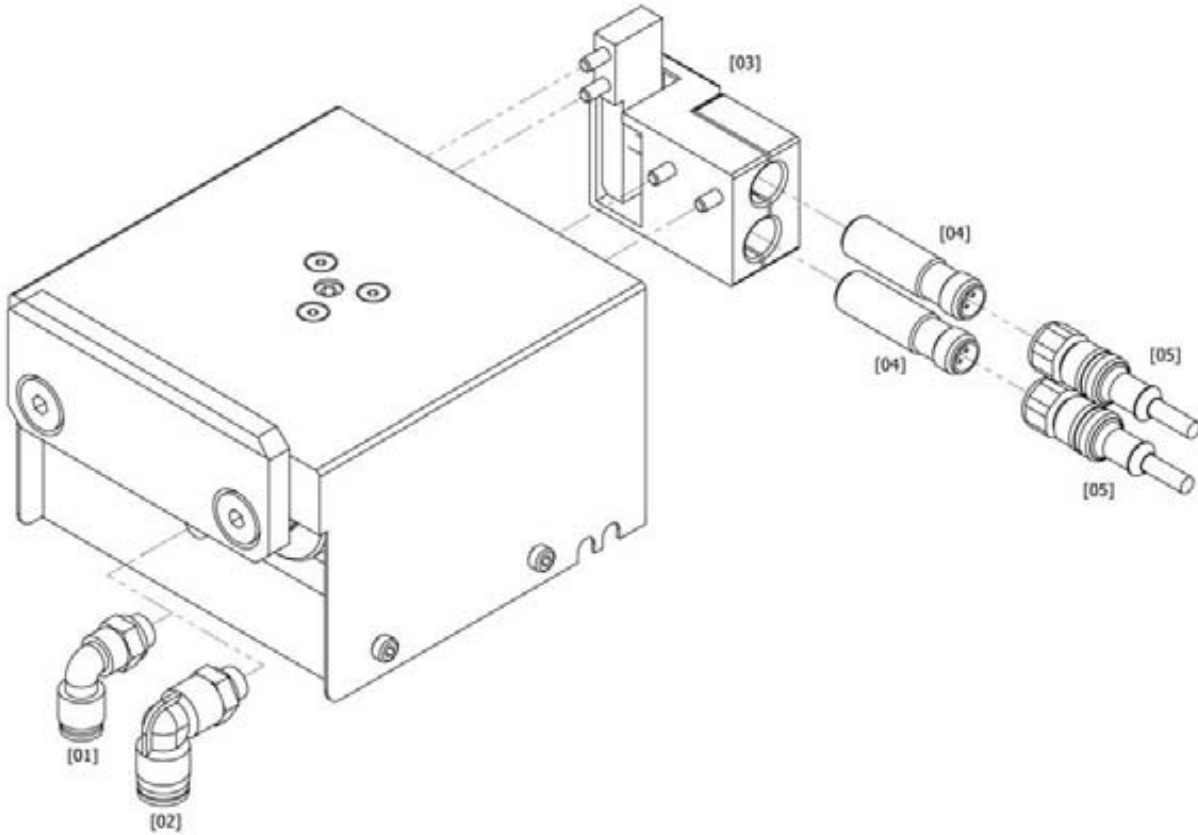
[1] placed correspondingly

* on depend



DBS270R - EW
Angular air connection 13539

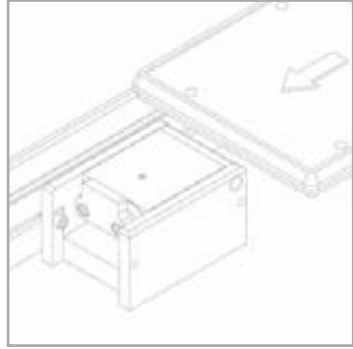
Step 2 | Select accessories



Delta BS240R | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Air connection				
[01]	Angular air connection	for hose external diameter Ø 6 mm	13539	- 10° up to + 80°
[02]	Angular air connection	for hose external diameter Ø 8 mm	04520001	- 10° up to + 80°
[03]	Position detection sensor		44000184	- 40° up to + 120°
[04]	Proximity switch		06205001	- 25° up to + 70°
[05]	Sensor cable	length: 5 m	06290007	- 25° up to + 70°

Heat and cold resistant
accessories on request



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The DBSU270 separating stop uses a proximity switch to detect the upper and lower position of the stopping plate.

The separating stop DBSU270 can be mounted to the Bosch Rexroth TS2*plus* transfer system without adapter plate.

Design

Aluminum basic housing
with hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder weights between 10 kg and 270 kg

Pallet holder loads up to 270 kg permissible (conveyor speed 6 m/min)

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Dual acting

When depressurized, the separating stop remains at the position last moved to, thus increasing the lowering force and enabling higher accumulated loads to be separated and stopped.

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

Damping force and damping speed can be set on the top of the device:

+ = increase damping force

– = decrease damping force

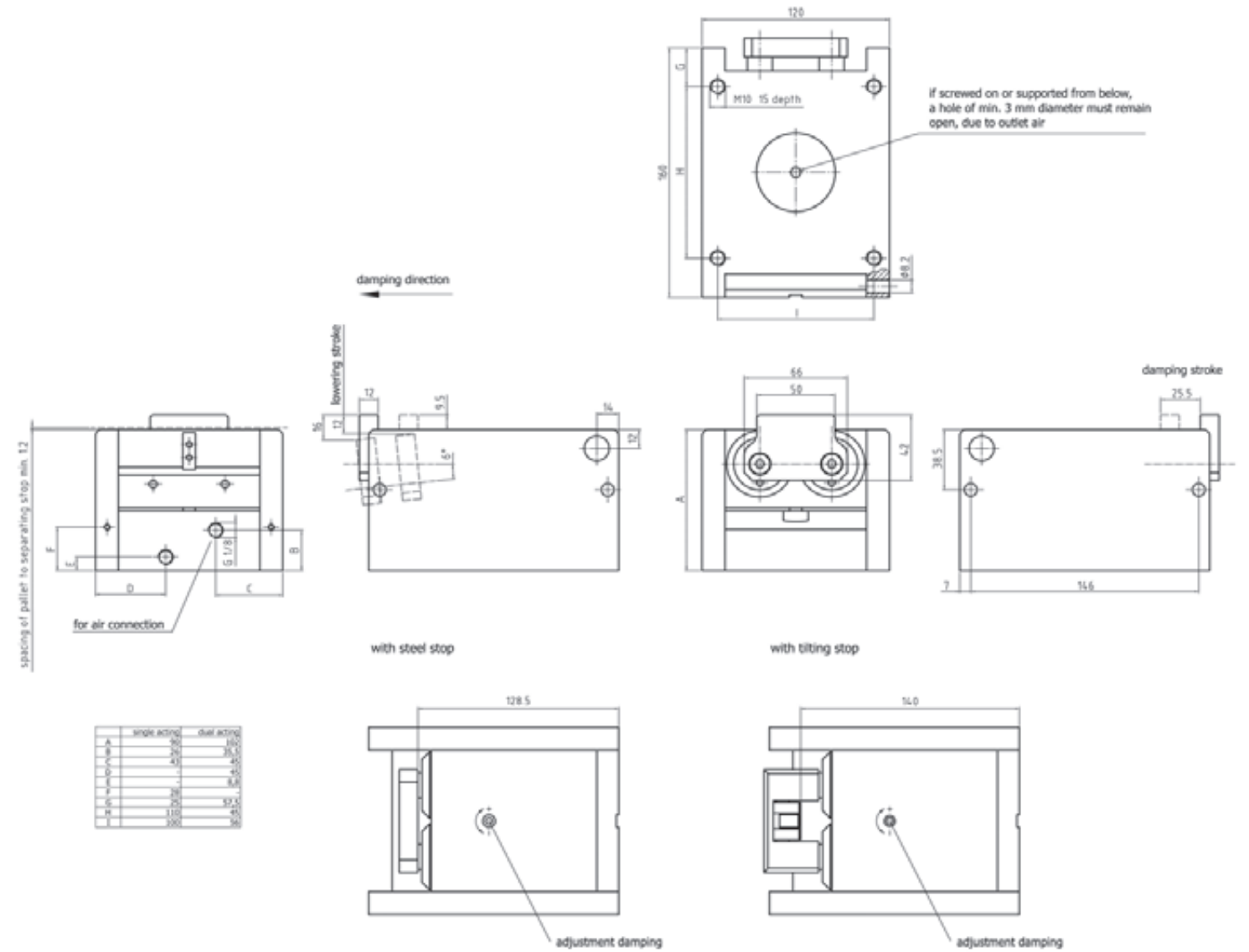
Technical data

Operating pressure [bar]

Treated compressed air 4 – 8 bar

Pneumatic connection

G1/8 thread for air supply

Delta BSU270 | **Damping forces**

Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	10-270 kg	10-220 kg	10-200 kg	10-180 kg	10-110 kg	10-70 kg	10-50 kg

Step 1 | Determine order code

DBSU270

Type

DBSU270

Function

EW = single acting
DW = dual acting

Temperatur range [° degrees]

- = normal - 20° bis + 80°
H = heat resistant - 20° bis + 180°*
K = cold resistant - 50° bis + 80°*

Stop

- = steel stop 50 mm broad
KI = tilt stop

Customer-specific version [1]

[1] placed correspondingly

* on depend

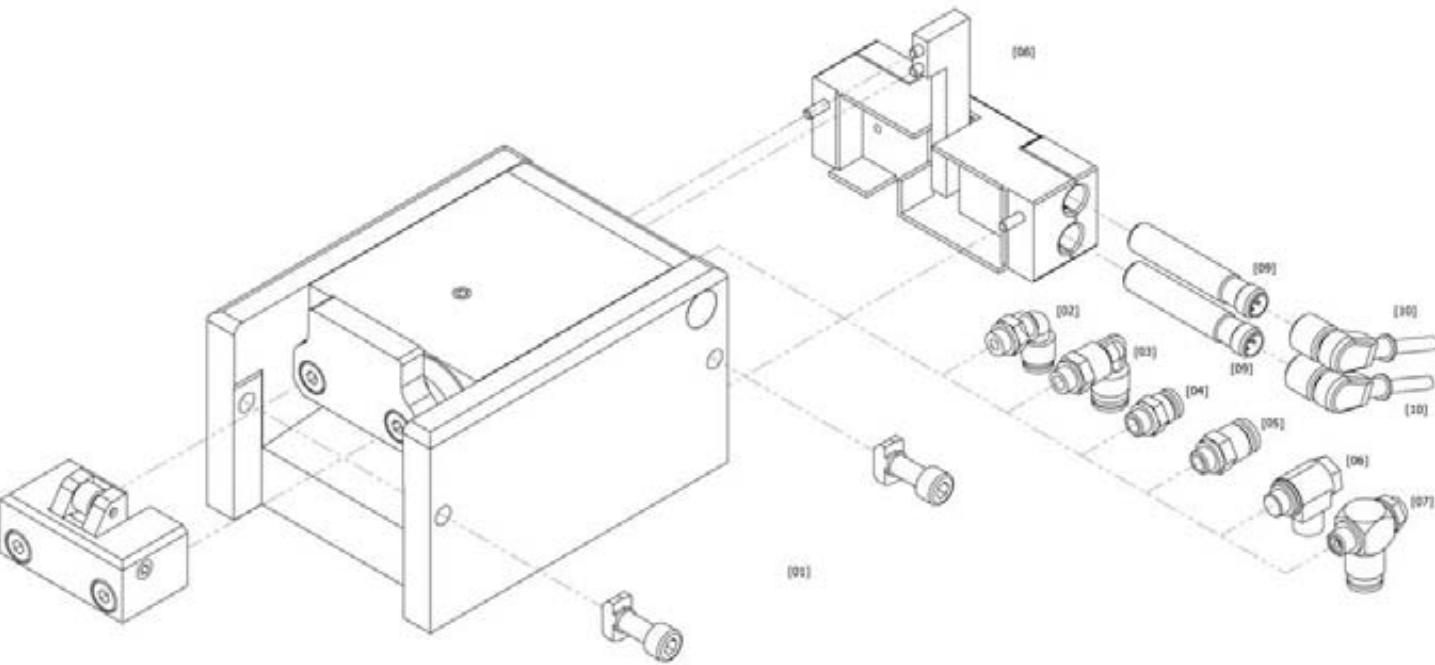


DBSU270 - EW
Fastening set 44000146

1) Specific information to the order code on the page 6/7

– subject to change without notice –

Step 2 | Select accessories



Delta BSU270 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set		44000146	
	Air connection			
[02]	Angular air connection	for hose external diameter Ø 6 mm	13539	- 10° up to + 80°
[03]	Angular air connection	for hose external diameter Ø 8 mm*	04520001	- 10° up to + 80°
[04]	Straight air connection	for hose external diameter Ø 6 mm*	04520007	- 10° up to + 80°
[05]	Straight air connection	for hose external diameter Ø 8 mm*	04520008	- 10° up to + 80°
[06]	Delivery air throttle	for hose external diameter Ø 6 mm*	04510001	- 10° up to + 80°
[07]	Delivery air throttle	for hose external diameter Ø 8 mm*	18075	0° up to + 70°
[08]	Position detection sensor	query upper and lower position**	44000029	- 40° up to + 120°
[09]	Proximiy switch		19010	- 25° up to + 70°
[10]	Sensor cable	length: 5 m	06290003	- 25° up to + 85°

Heat and cold resistant
accessories on request
* not in conjunction with a position sensor 44000029
** DW dual acting on demand

– subject to change without notice –



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The separating stop DBS300 can be mounted to the Bosch Rexroth TS4*plus* transfer system without adapter plate.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder weights between 12 kg and 300 kg

Pallet holder loads up to 300 kg permissible (conveyor speed 6 m/min)

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

Damping force and damping speed can be set on the top of the device:

+ = increase damping force

– = decrease damping force

Technical data

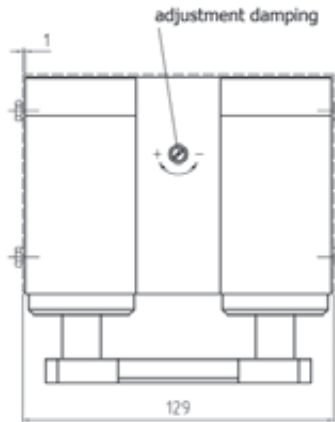
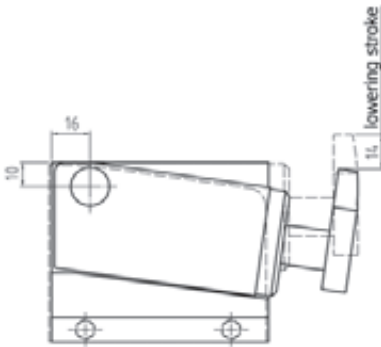
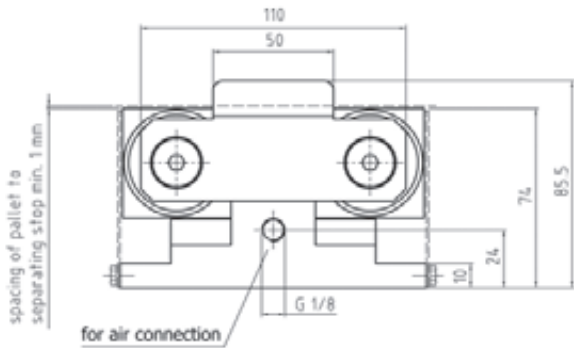
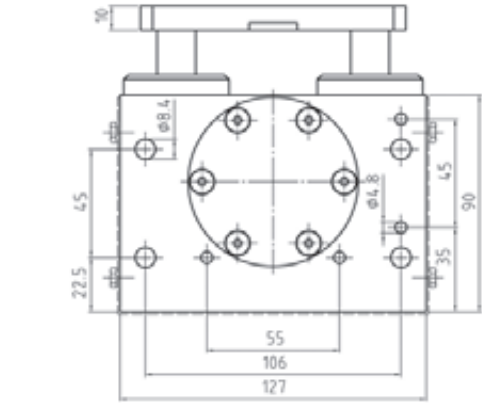
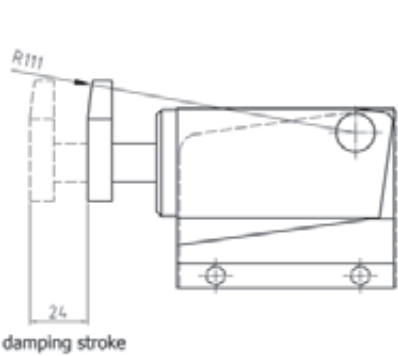
Operating pressure [bar]

Treated compressed air 4 – 8 bar

Pneumatic connection

G1/8 thread for air supply

damping direction



Delta BS300 | Damping forces

Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	12-300 kg	12-270 kg	12-250 kg	12-225 kg	12-140 kg	12-95 kg	12-70 kg

¹⁾ This information applies to friction of 0,07 μ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

– subject to change without notice –

– subject to change without notice –

Step 1 | Determine order code

DBS300

Type

DBS300

Temperatur range [° degrees]

- = normal

- 20° bis + 80°

H = heat resistant

- 20° bis + 180°*

K = cold resistant

- 50° bis + 80°*

Customer-specific version [1]

[1] placed correspondingly

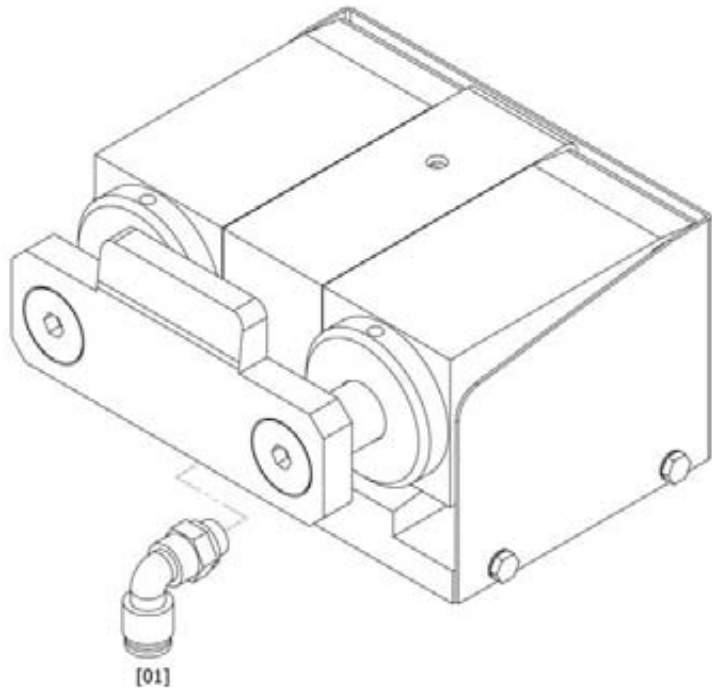
* on depend



DBS300

1) Specific information to the order code on the page 6/7

Step 2 | Select accessories



Delta BS300 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Angular air connection	for hose external diameter Ø 6 mm	13539	- 10° up to + 80°
	Heat and cold resistant accessories on request			

Step 1 | Determine order code

DBSUS

Type

DBSUS

Weight range [kg]

400 = 7 - 400

1100 = 40 - 1100

Function

EW = single acting

DW = dual acting

Temperatur range [° degrees]

- = normal - 20° bis + 80°

H = heat resistant - 20° bis + 180°* [2]

K = cold resistant - 50° bis + 80°* [2]

Stop

- = steel stop

KI = tilt stop [1]

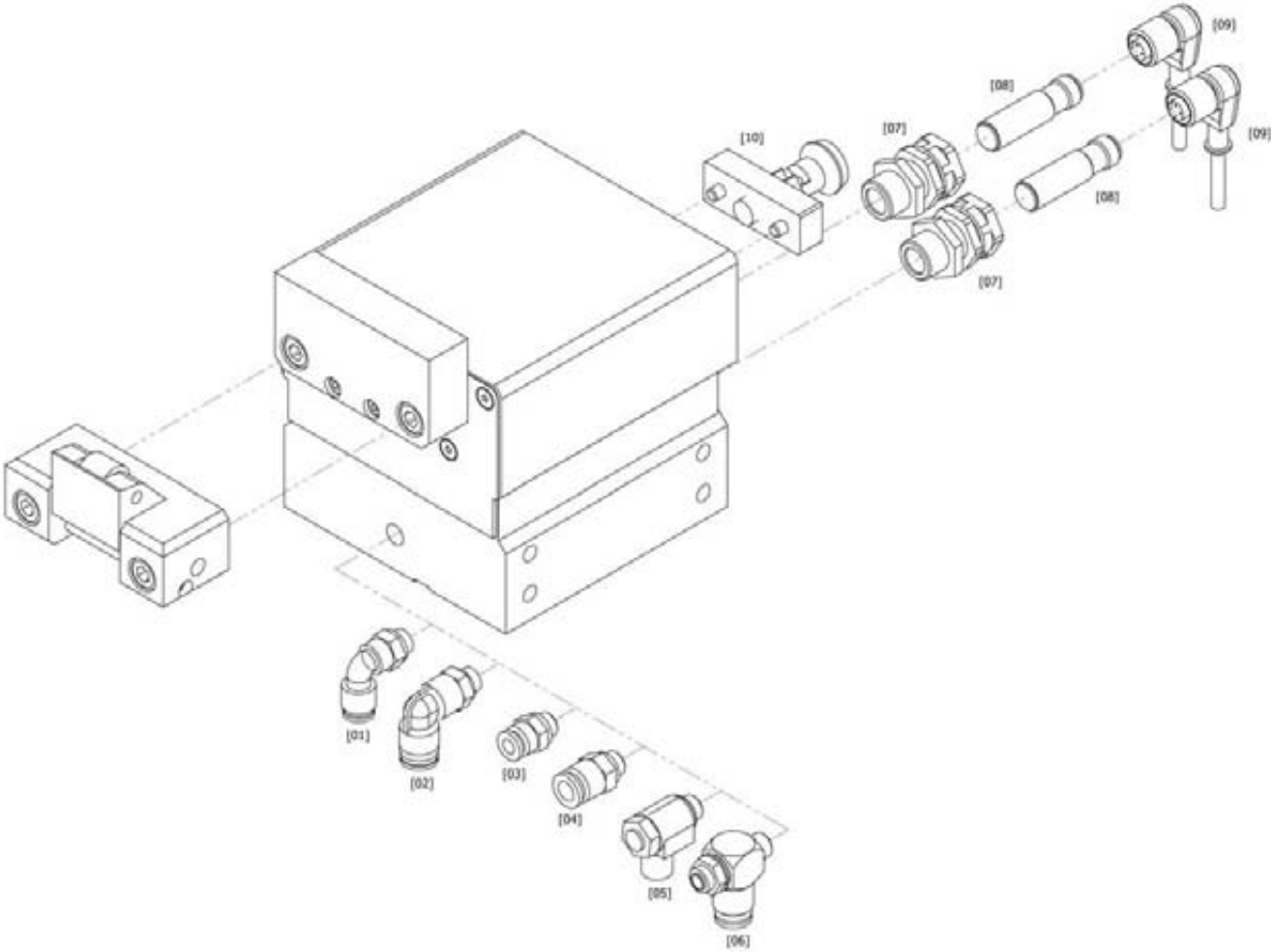
Customer-specific version [3]

[1] only for DBSUS - 1100
[2] only for DBSUS - 400
[3] placed correspondingly
* on request



DBSUS - 1100 - EW

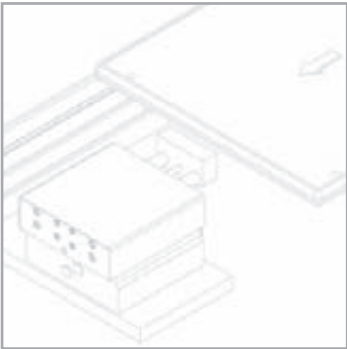
Step 2 | Select accessories



Delta BSUS | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Air connection				
[01]	Angular air connection	for hose external diameter Ø 6 mm	13539	- 10° up to + 80°
[02]	Angular air connection	for hose external diameter Ø 8 mm	04520001	- 10° up to + 80°
[03]	Straight air connection	for hose external diameter Ø 6 mm	04520007	- 10° up to + 80°
[04]	Straight air connection	for hose external diameter Ø 8 mm	04520008	- 10° up to + 80°
[05]	Delivery air throttle	for hose external diameter Ø 6 mm	04510001	- 10° up to + 80°
[06]	Delivery air throttle	for hose external diameter Ø 8 mm	18075	0° up to + 70°
[07]	Clamp		30539	- 25° up to + 70°
[08]	Proximity switch	inductive	06205001	- 25° up to + 70°
[09]	Sensor cable	for inductive proximity switch	06290003	- 25° up to + 85°
[10]	Indexing unit	is only for EW singe acting required	30108	- 28° up to + 80°

Heat and cold resistant
accessories on request



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The DBSUS3000 separating stop uses a proximity switch to detect the upper and lower position of the stopping plate.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Optimum damping at pallet holder weights between 110 kg and 3000 kg

Pallet holder loads up to 3000 kg permissible (conveyor speed 9 m/min)

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Dual acting

When depressurized, the separating stop remains at the position last moved to, thus increasing the lowering force and enabling higher accumulated loads to be separated and stopped.

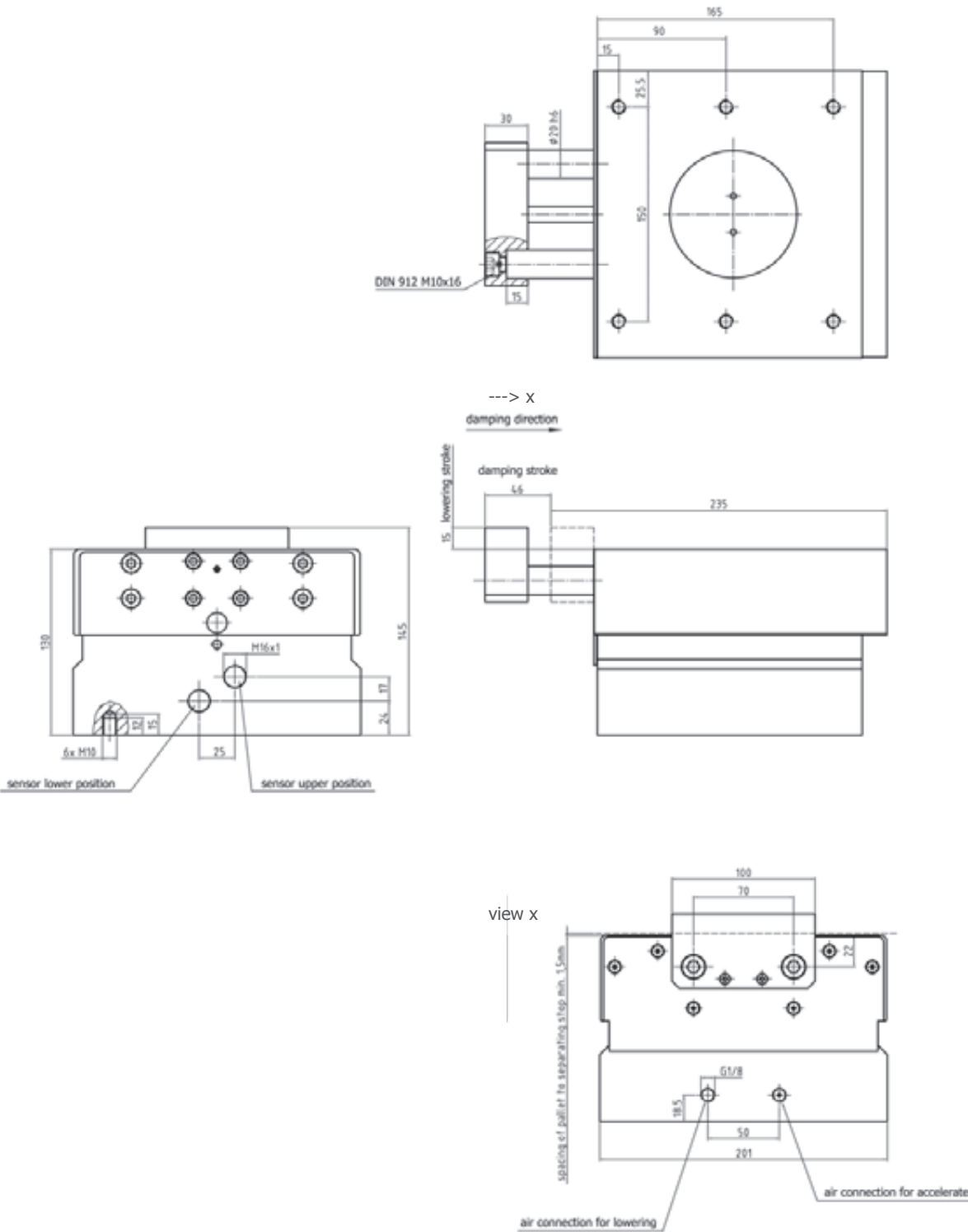
Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Technical data

Operating pressure [bar]
Treated compressed air 4 – 8 bar

Pneumatic connection
G1/8 thread for air supply



Delta BSUS3000 | Damping forces

Speed $v_N^{1)}$ [m/min]	9 m/min	12 m/min	15 m/min	18 m/min
Weight of pallet holder [kg]	110-3000 kg	110-3000 kg	110-2350 kg	110-1900 kg

¹⁾ This information applies to friction of 0,07 µ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

– subject to change without notice –

– subject to change without notice –

Step 1 | Determine order code

DBSUS3000

Type

DBSUS3000

Function

EW = single acting
DW = dual acting

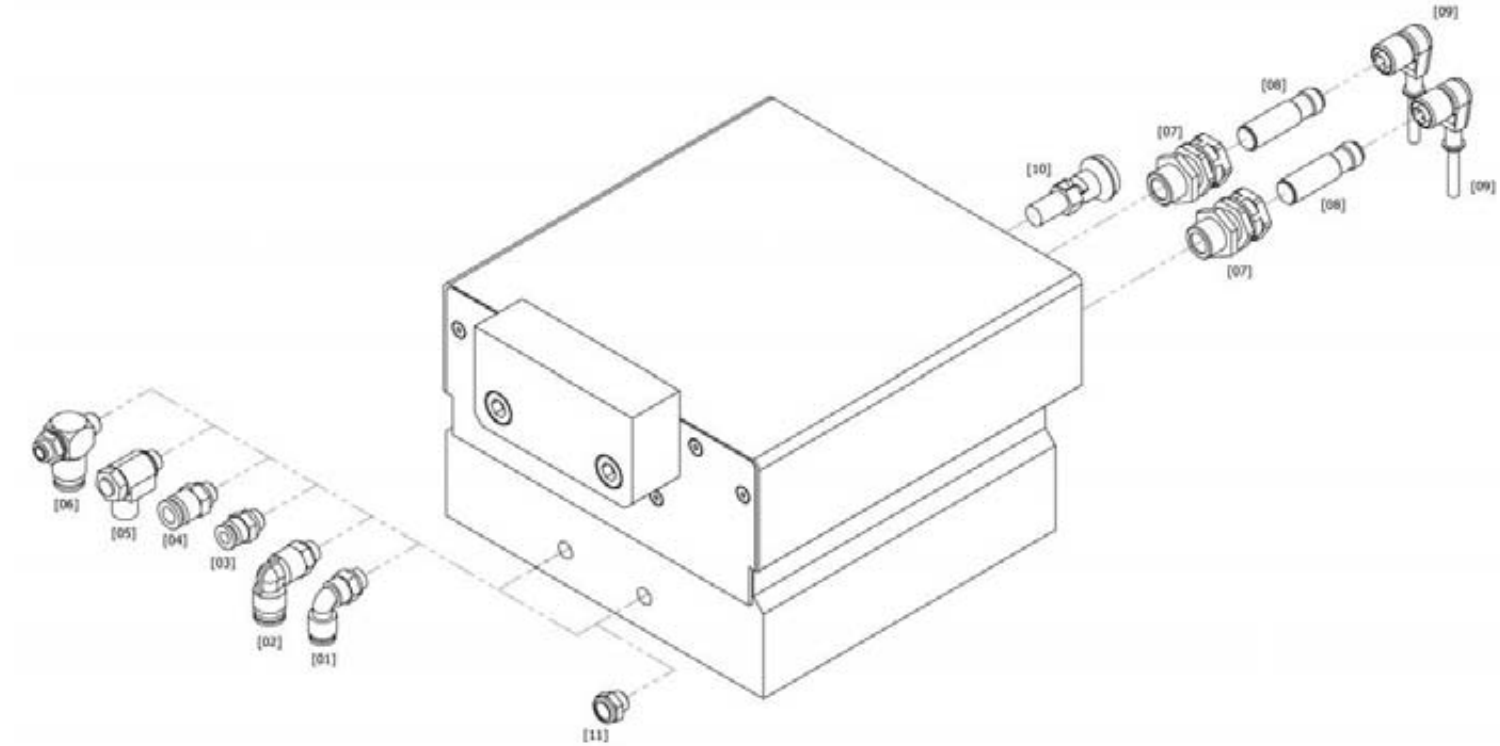
Customer-specific version [1]

[1] placed correspondingly



DBSUS3000 - EW
Silencer 04505001

Step 2 | Select accessories



Delta BSUS3000 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Air connection				
[01]	Angular air connection	for hose external diameter Ø 6 mm	13539	- 10° up to + 80°
[02]	Angular air connection	for hose external diameter Ø 8 mm	04520001	- 10° up to + 80°
[03]	Straight air connection	for hose external diameter Ø 6 mm	04520007	- 10° up to + 80°
[04]	Straight air connection	for hose external diameter Ø 8 mm	04520008	- 10° up to + 80°
[05]	Delivery air throttle	for hose external diameter Ø 6 mm	04510001	- 10° up to + 80°
[06]	Delivery air throttle	for hose external diameter Ø 8 mm	18075	0° up to + 70°
[07]	Clamp		30539	- 25° up to + 70°
[08]	Proximity switch	inductive	06205001	- 25° up to + 70°
[09]	Sensor cable	for inductive proximity switch	06290003	- 25° up to + 85°
[10]	Indexing bolts		30733	- 20° up to + 80°
[11]	Silencer		04505001	



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The DBSUSR400 separating stop uses a proximity switch to detect the upper and lower position of the stopping plate.

The DBSUSR400 separating stop also works in the smallest space. Specially developed for very narrow installation spaces between the individual transport rollers of various roller conveyor systems.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder weights between 15 kg and 400 kg

Pallet holder loads up to 400 kg permissible (conveyor speed 6 m/min)

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

Damping force and damping speed can be set on the top of the device:

+ = increase damping force

– = decrease damping force

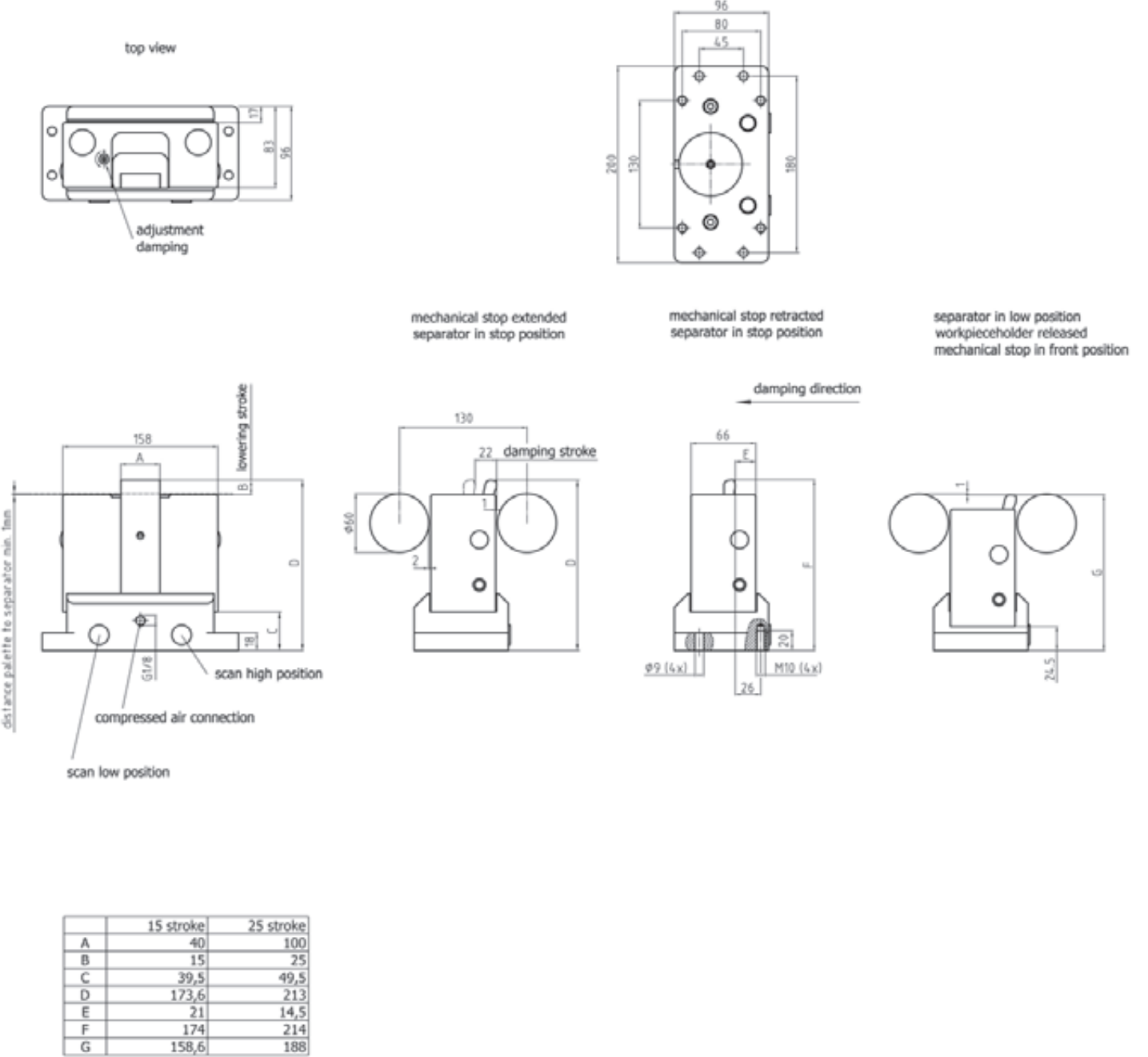
Technical data

Operating pressure [bar]

Treated compressed air 4 – 8 bar

Pneumatic connection

G1/8 thread for air supply



Delta BSUSR400 | Damping forces

Speed $v_n^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	15-400 kg	15-360 kg	15-280 kg	15-130 kg	15-90 kg	15-60 kg	15-40 kg

Step 1 | Determine order code

DBSUSR400

Type

DBSUSR400

Lowering stroke

15

25

Function

EW = single acting

DW = dual acting*

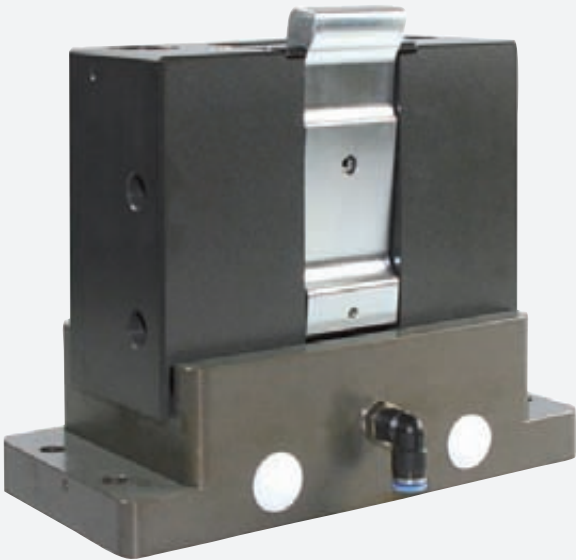
Customer-specific version [1]

[1]

placed correspondingly

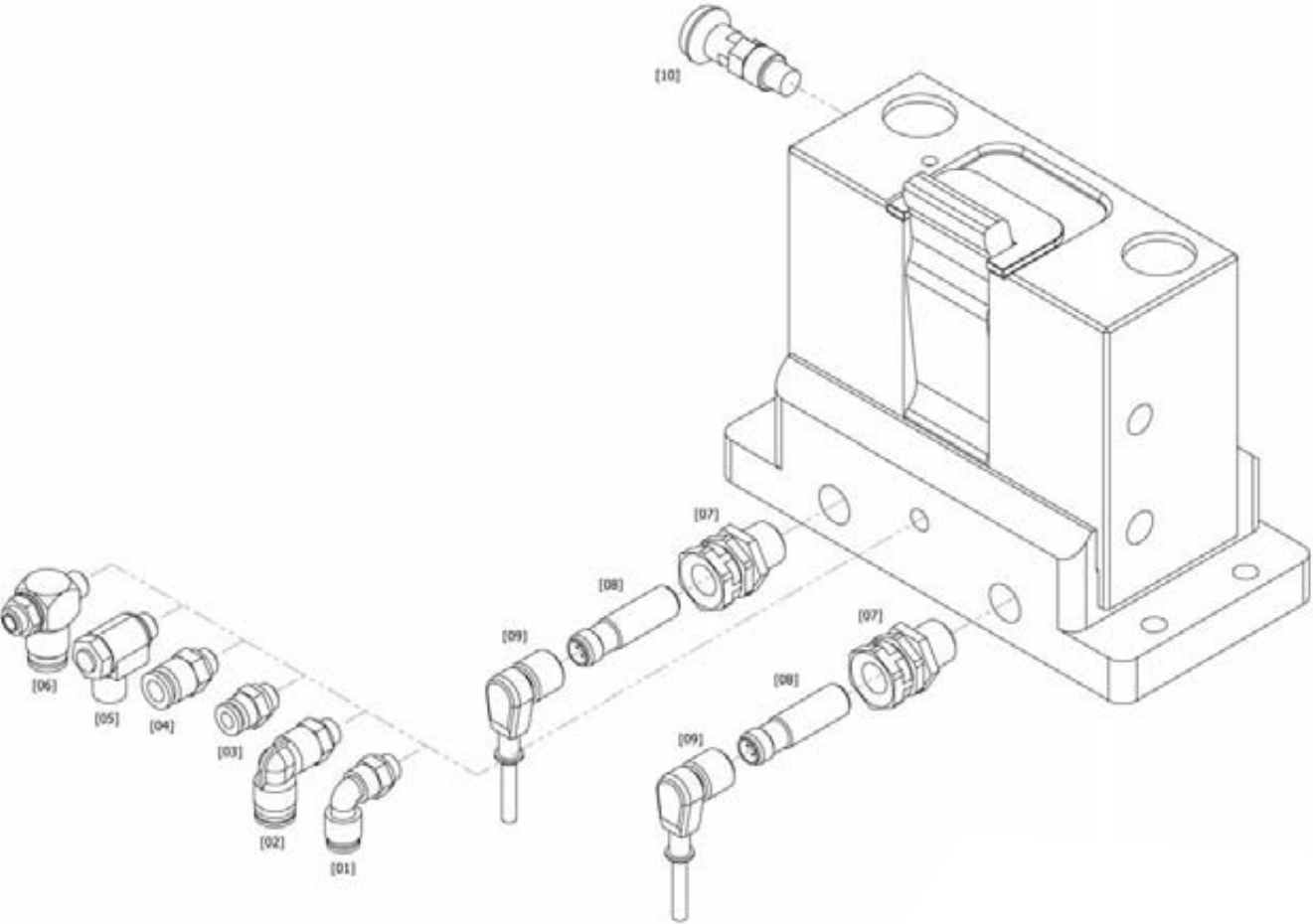
*

on demand



DBSUSR400
Angular air connection 13539

Step 2 | Select accessories



Delta BSUSR400 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Air connection				
[01]	Angular air connection	for hose external diameter Ø 6 mm	13539	- 10° up to +80°
[02]	Angular air connection	for hose external diameter Ø 8 mm	04520001	- 10° up to +80°
[03]	Straight air connection	for hose external diameter Ø 6 mm	04520007	- 10° up to +80°
[04]	Straight air connection	for hose external diameter Ø 8 mm	04520008	- 10° up to +80°
[05]	Delivery air throttle	for hose external diameter Ø 6 mm	04510001	- 10° up to +80°
[06]	Delivery air throttle	for hose external diameter Ø 8 mm	18075	0° up to +70°
[07]	Clamp	query upper and lower position	30539	- 25° up to + 70°
[08]	Proximity switch	inductive	06205001	- 25° up to + 70°
[09]	Sensor cable	for inductive proximity switch	06290003	- 25° up to + 85°
[10]	Indexing unit	for indexing in the position let down (only needed for EW single acting)	44000190	- 20° up to + 80°



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The DBSUSR1000 separating stop uses a proximity switch to detect the upper and lower position of the stopping plate.

The DBSUSR1000 separating stop also works in the smallest space. Specially developed for very narrow installation spaces between the individual transport rollers of various roller conveyor systems.

Design

Basic housing made of steel
Stop made from hardened steel

Optimum damping at pallet holder weights between 60 kg and 1000 kg

Pallet holder loads up to 1000 kg permissible (conveyor speed 9 m/min)

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

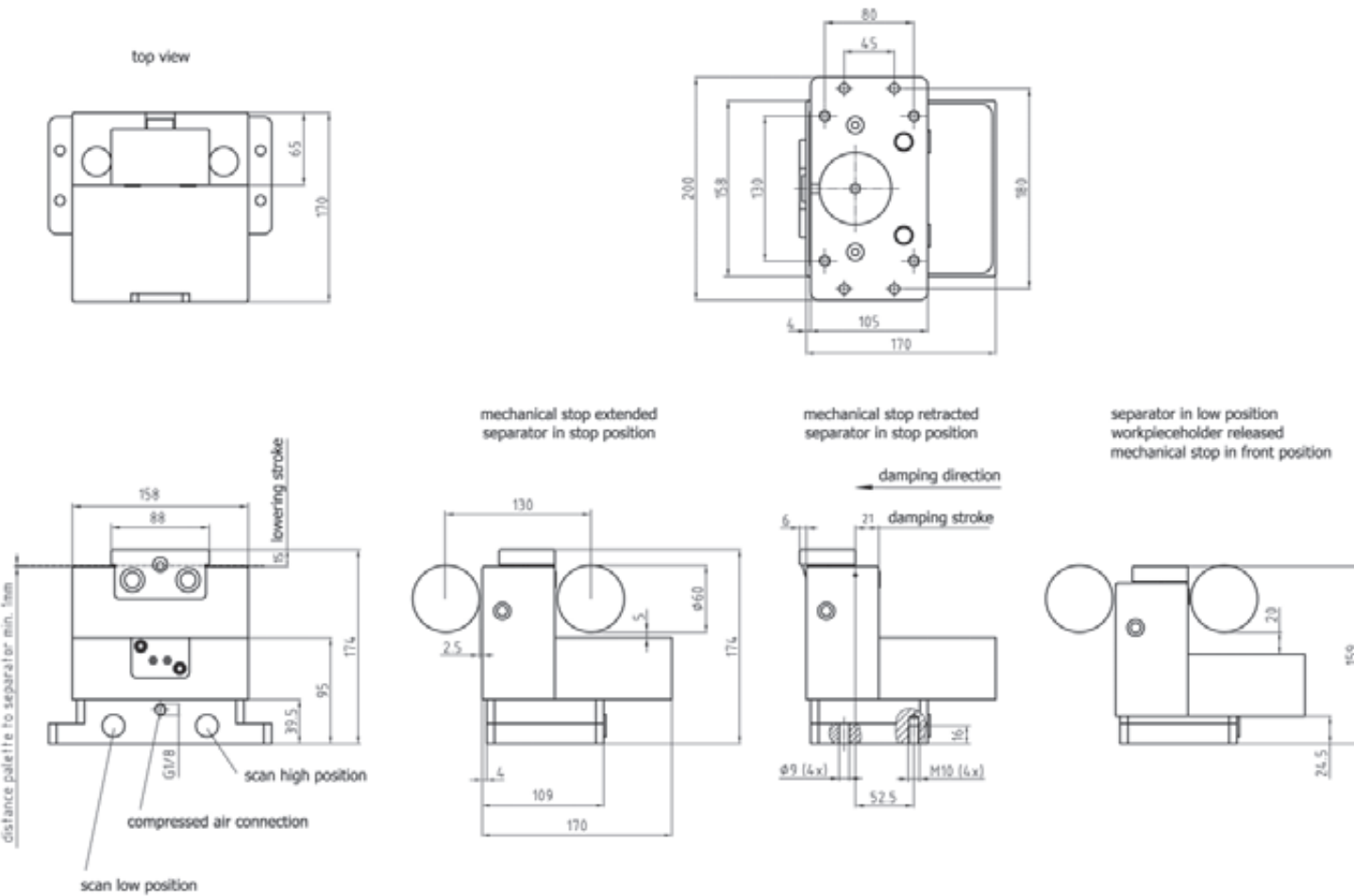
Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Technical data

Operating pressure [bar]
Treated compressed air 4 – 8 bar

Pneumatic connection
G1/8 thread for air supply



Delta BSUSR1000 | Damping forces

Speed $v_N^{1)}$ [m/min]	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min
Weight of pallet holder [kg]	60-1000	60-900	60-700	60-350	60-200

¹⁾ This information applies to friction of 0,07 μ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

– subject to change without notice –

– subject to change without notice –

Step 1 | Determine order code

DBSUSR1000

Type

DBSUSR

Function

EW = single acting
DW = dual acting*

Customer-specific version [1]

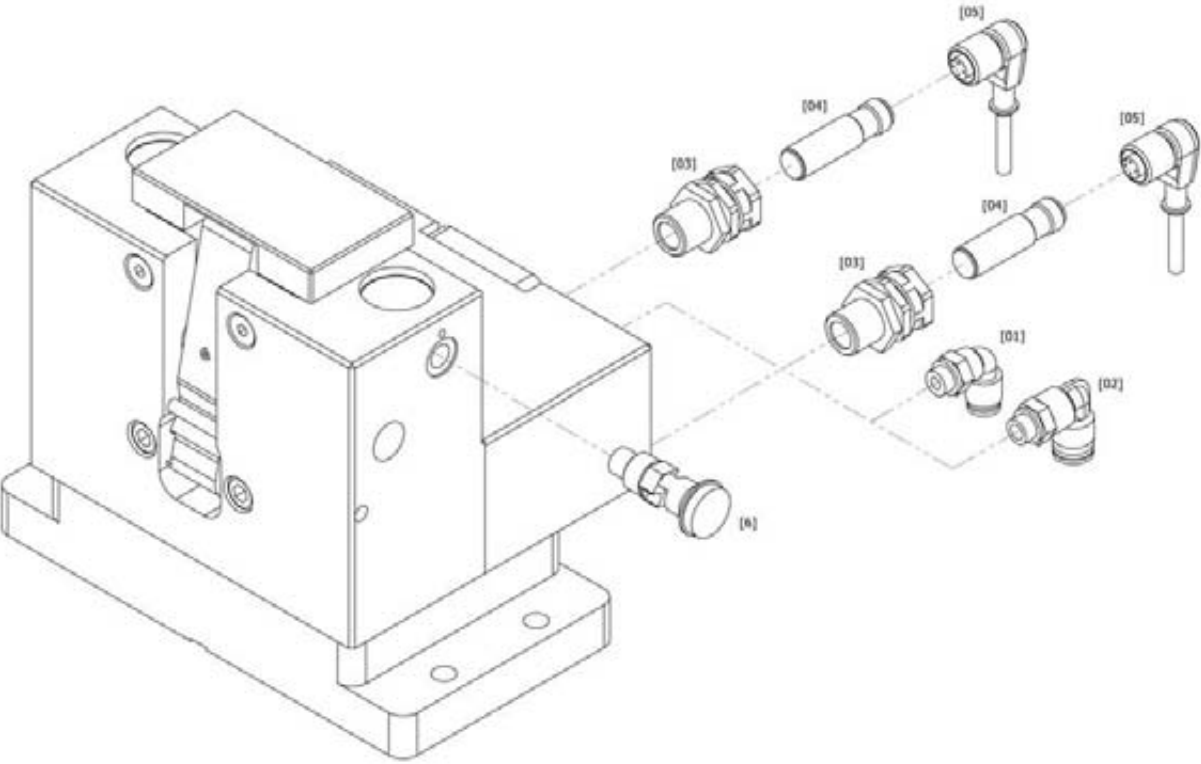
[1]

placed correspondingly
* on demand



DBSUSR1000

Step 2 | Select accessories

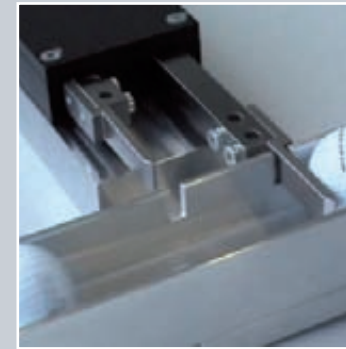


Delta BSUSR1000 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Air connection				
[01]	Angular air connection	for hose external diameter Ø 6 mm	13539	- 10° up to +80°
[02]	Angular air connection	for hose external diameter Ø 8 mm	04520001	- 10° up to +80°
Clamp				
[03]	Clamp	query upper and lower position	30539	- 25° up to + 70°
Proximity switch				
[04]	Proximity switch	inductive	06205001	- 25° up to + 70°
Sensor cable				
[05]	Sensor cable	for inductive proximity switch	06290003	- 25° up to + 85°
Indexing unit				
[06]	Indexing unit	for indexing in the position let down (only needed for EW single acting)	44000190	- 20° up to + 80°

Separating Stop Delta FI

The pain of parting!



Wear resistant and durable thanks to special coating

Corrosion resistant due to stainless steel finger

Optimum and precise adaptation option via adjusting holes

Compressed air connections, upper

Grooves for electronic sensor for position detection

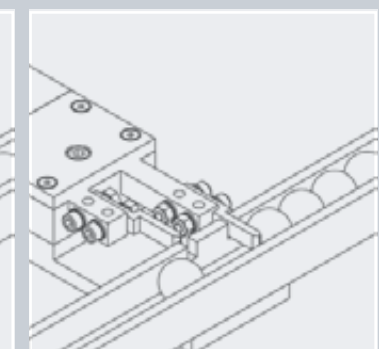
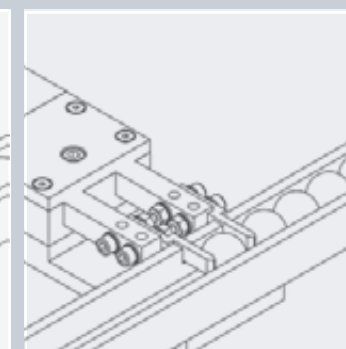
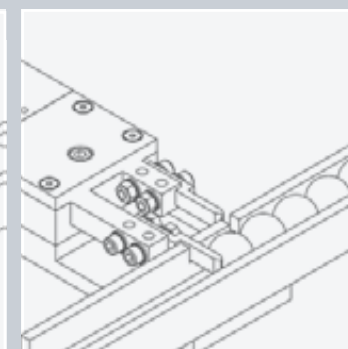
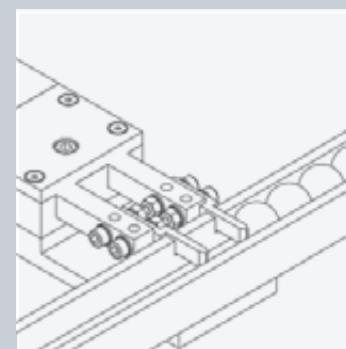
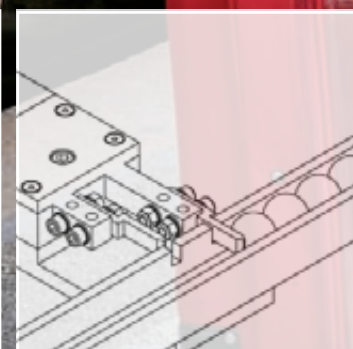
Variable sizes and stroke

Pneumatic connection M5

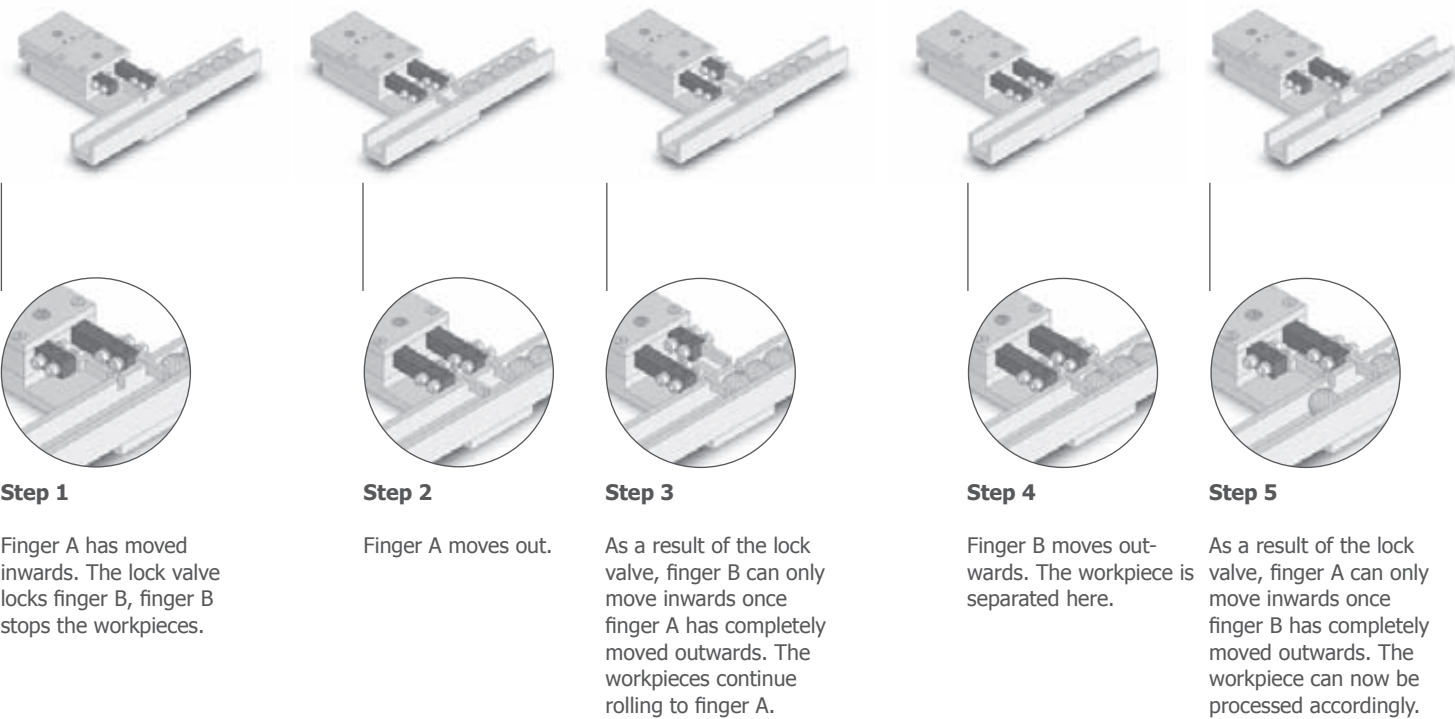
Dual acting function

Any installation position

Rapid cycle times



Delta FI14 - 20/40 | Functional principle



Device description

- Wear resistant and durable thanks to special coating
- Corrosion resistant due to stainless steel finger
- Optimum and precise adaptation option via adjusting holes
- Compressed air connections, upper
- Grooves for electronic sensor

An integral locking mechanism between the two fingers means that the retraction movement of one finger only occurs as soon as the other finger has extended. Both fingers are moved out for a short time and the part to be separated and stopped is surrounded during the changeover.

Design

- DFI14 - 20**
size Ø 14 mm
stroke 20 mm
- DFI14 - 40**
size Ø 14 mm
stroke 40 mm
- Pneumatic connection M5
- Dual acting function
- Damping without
- Position detection with electronic sensor
- Any installation position
- Operating conditions [bar]**
3 – 8 bar

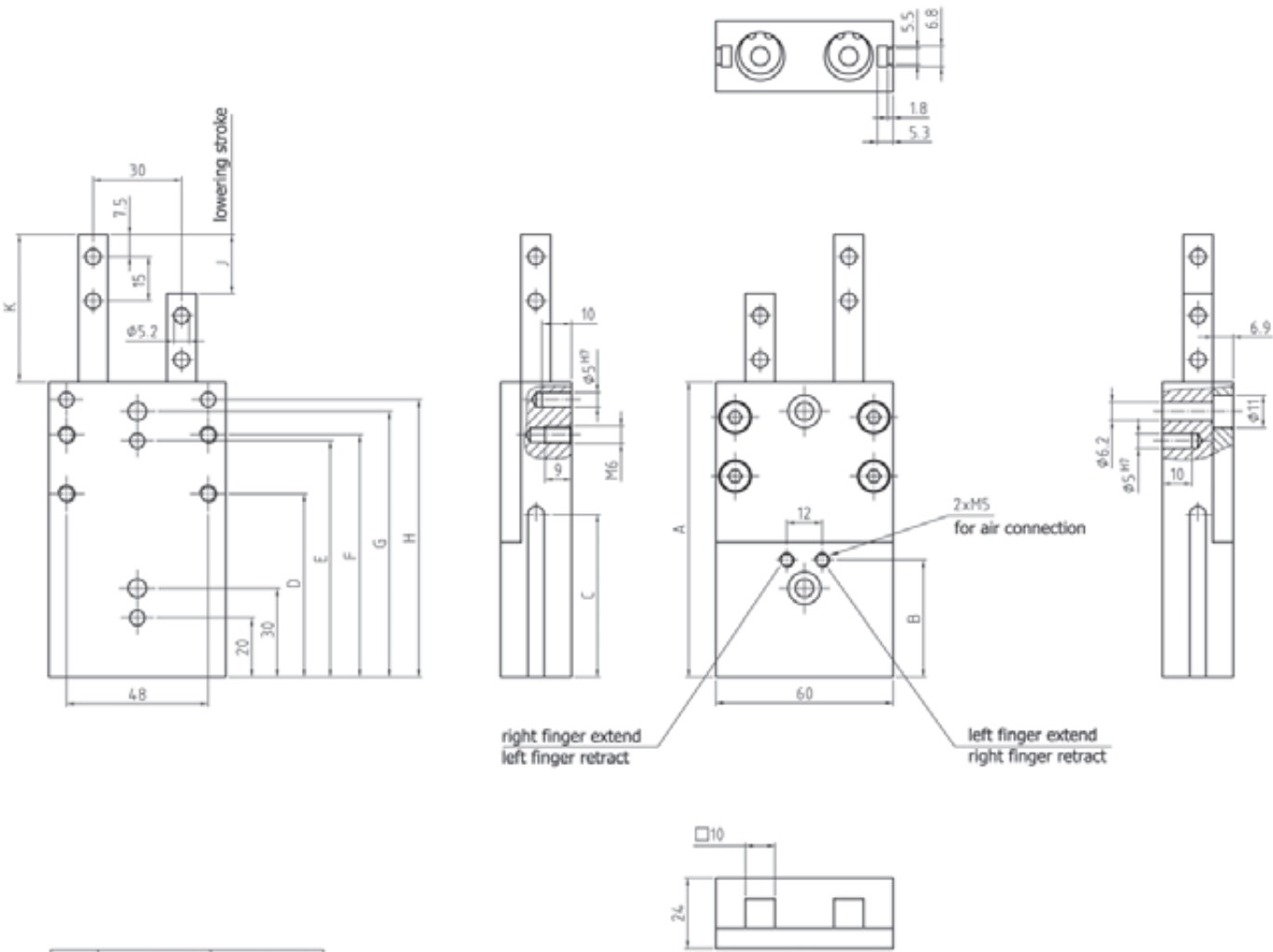
Forces [N]

- Theoretical force at 6 bar advance 92 N
- Theoretical force at 6 bar return 75 N
- Retraction and extension times [s] without adapter jaws**
- DFI14 - 20**
Retraction time 0.02 s
Extension time 0.02 s
Cycle time 0.04 s
- DFI14 - 40**
Retraction time 0.04 s
Extension time 0.04 s
Cycle time 0.08 s

Cycle time controller

The function heads the separating stop Delta FI. The clock frequency is adjustable of the separation of a workpiece within three seconds up to the separation of ten workpieces within a second.

The cycle time controller needs merely a 230 V connection and a pneumatics connection. At the application no SPS is needed.



Step 1 | Determine order code

DFI14

Type

DFI14

Stroke [mm]

20 = 20 mm

40 = 40 mm

Temperatur range [° degrees]

- = normal - 20° bis + 80°

H = heat resistant - 20° bis + 180°*

K = cold resistant - 50° bis + 80°*

Customer-specific version [1]

[1]

placed correspondingly

*

on demand



DFI14 - 20

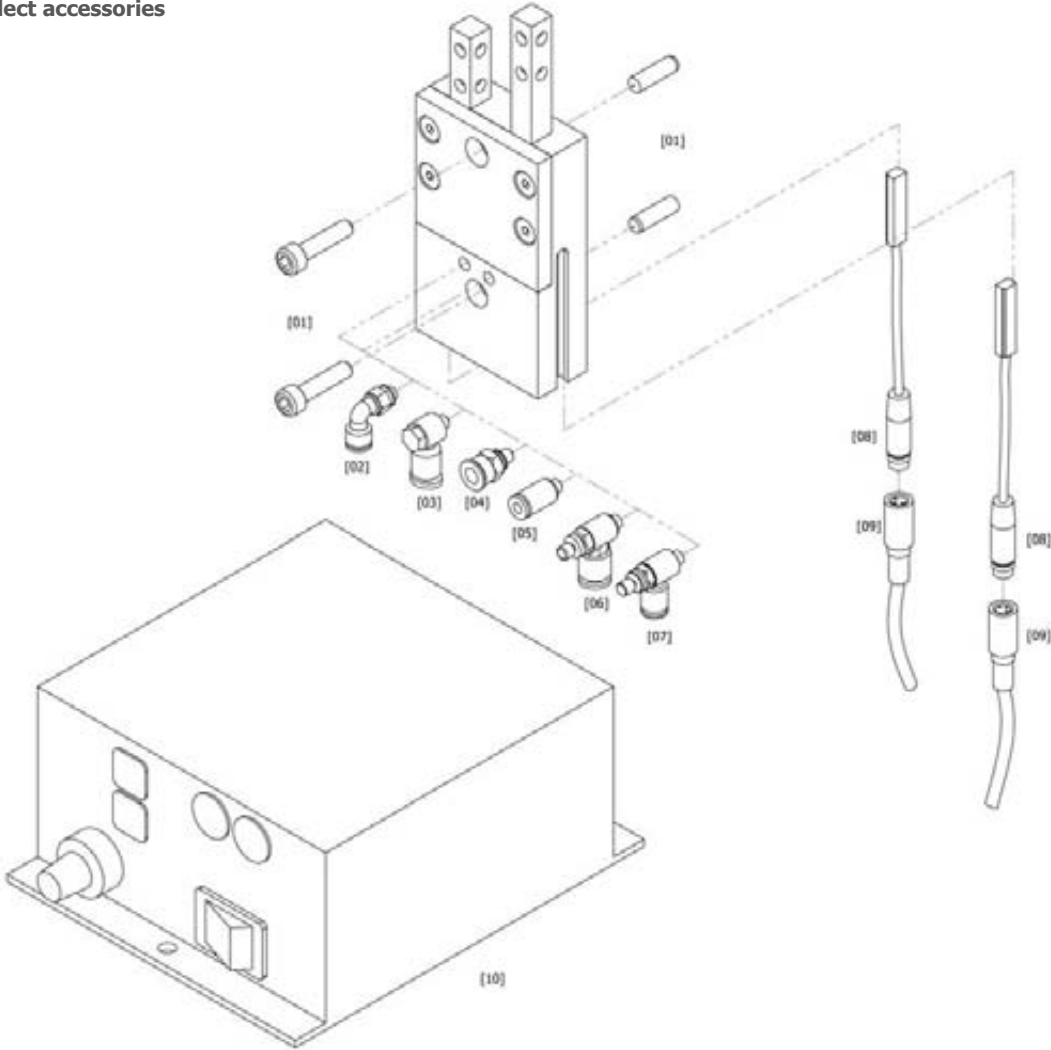


DFI14 - 40



Cycle time controller 06505007

Step 2 | Select accessories



Delta FI14 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set		44000171	
Air connection				
[02]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to +60°
[03]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to +60°
[04]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[05]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[06]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	- 5° up to +60°
[07]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	- 5° up to +60°
[08]	Electronic sensor		18620	- 25° up to + 70°
[09]	Sensor cable	for electronic sensor	06290001	- 25° up to + 80°
[10]	Cycle time controller		06505007	

Heat and cold resistant
accessories on request

Step 1 | Determine order code

DFI22

Type

DFI22

Stroke [mm]

30 = 30 mm

60 = 60 mm

Temperatur range [° degrees]

- = normal - 20° bis + 80°

H = heat resistant - 20° bis + 180°*

K = cold resistant - 50° bis + 80°*

Customer-specific version [1]

[1]

placed correspondingly

*

on demand



DFI22 - 30

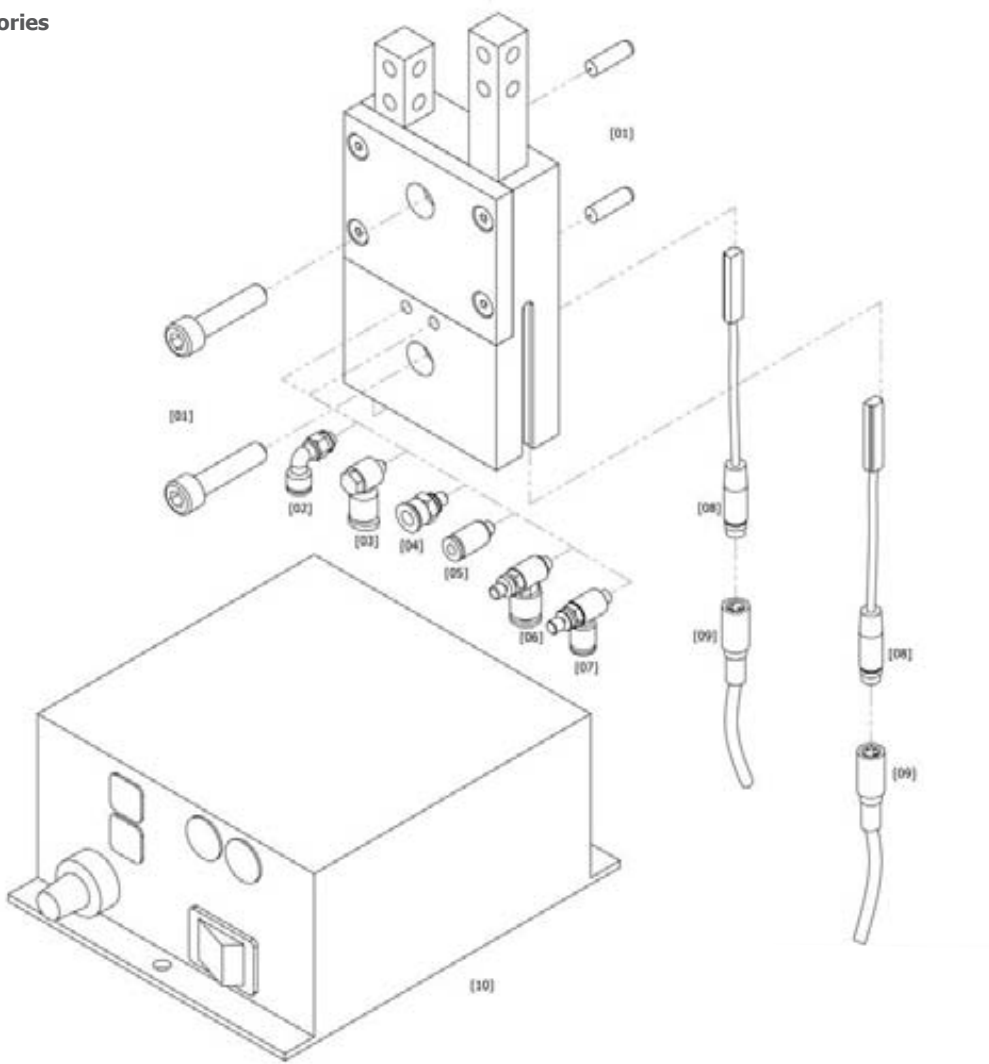


DFI22 - 60



Cycle time controller 06505007

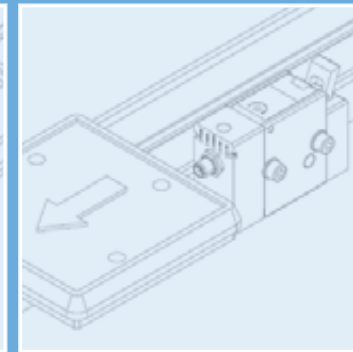
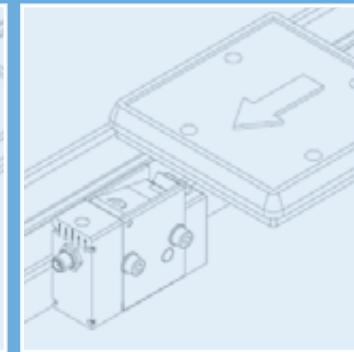
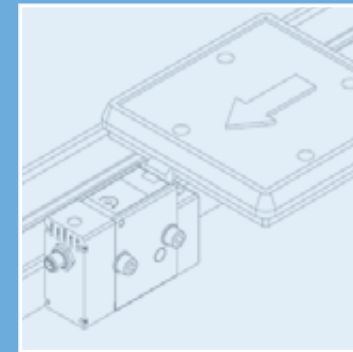
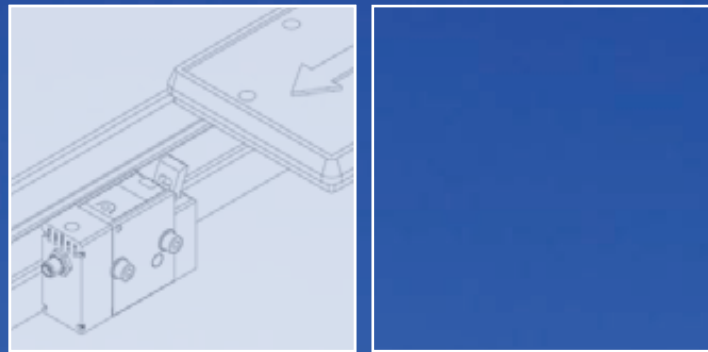
Step 2 | Select accessories



Delta FI22 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set		44000172	
Air connection				
[02]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to +60°
[03]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to +60°
[04]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[05]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[06]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	- 5° up to +60°
[07]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	- 5° up to +60°
[08]	Electronic sensor		18620	- 25° up to + 70°
[09]	Sensor cable	for electronic sensor	06290001	- 25° up to + 80°
[10]	Cycle time controller		06505007	

Heat and cold resistant
accessories on request

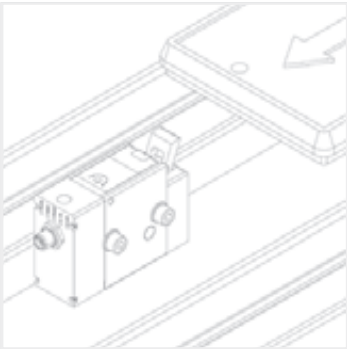


- Electrical separating stop without pneumatic connection with infinitely adjustable damping
- Integrated sensor system for detecting the upper and lower position of the stopping plate
- Optimum damping of the pallet holders irrespective of the degree of tooling
- High pallet holder loads, high conveyor speeds
- Easy commissioning/installation, a connecting line is all that is necessary
- Very environmentally friendly
- Connection to various bus systems
- Low operating costs



Separating Stop Delta EL

Live wire!



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

No need for compressed air at the site used. The lowering is electrical, an infinitely adjustable damping being ensured.

The separating stop DEL75 can be mounted to the Bosch Rexroth TS2*plus* transfer system without adapter plate.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Electrical separating stop with infinitely adjustable damping

Integrated sensor system for detecting the upper and lower position of the stopping plate

Integrated sensor system on the top of the device for detecting the position of the workpiece holder behind the separating stop

Connectivity for external sensors at the equipment front

Diagnostic function about LED at the rear of device

Optimum damping at pallet holder weights between 1 kg and 75 kg

Pallet holder loads up to 75 kg permissible (conveyor speed 6 m/min)

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

Damping force and damping speed can be set on the top of the device:

+ = increase damping force

– = decrease damping force

Technical data

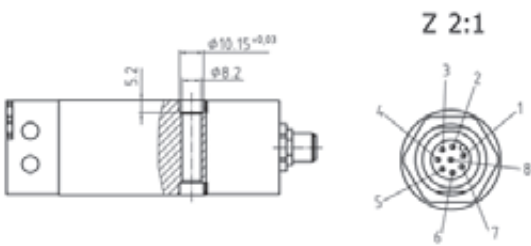
Electrical connection
8-pole M12x1 plug

Connection values 24 V

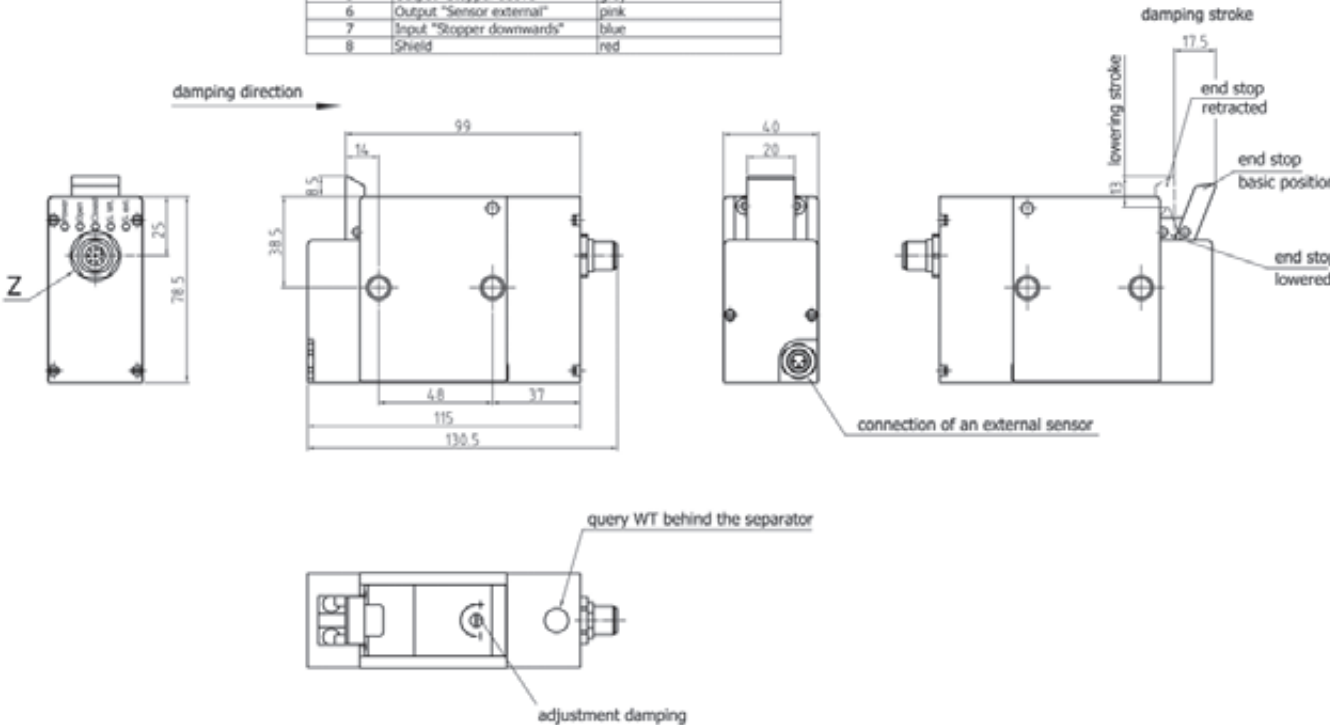
Bus connection

Connectivity to different bus systems via Wörner input- and output module. Four separating stops can be attached and eight sensors be evaluated at the basic module as well as at the expansion module.

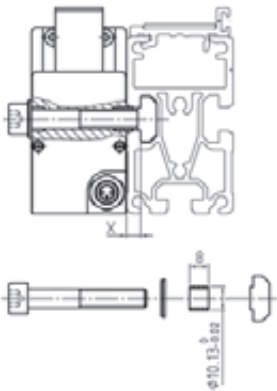
The bus systems: Profibus DP, DeviceNet, Profinet IO, EtherNet/IP und AS-i can be steered. Further bus connections on inquiry possible.



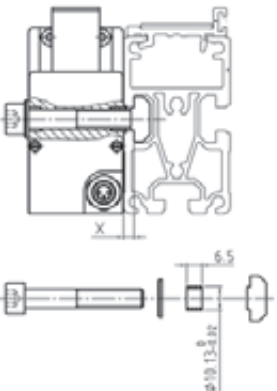
Connection	Function	Wire color by Wörner connecting lead 06290002
1	+ 24 V DC	white
2	GND	brown
3	Output "Sensor WT"	green
4	Output "Stopper below"	yellow
5	Output "Stopper above"	grey
6	Output "Sensor external"	pink
7	Input "Stopper downwards"	blue
8	Shield	red



fastening set A



fastening set B



Delta EL75 | Damping forces

Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	1-75 kg	1-65 kg	1-45 kg	1-30 kg	1-22 kg	1-14 kg	1-7,5 kg

¹⁾ This information applies to friction of 0,07 μ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

– subject to change without notice –

– subject to change without notice –

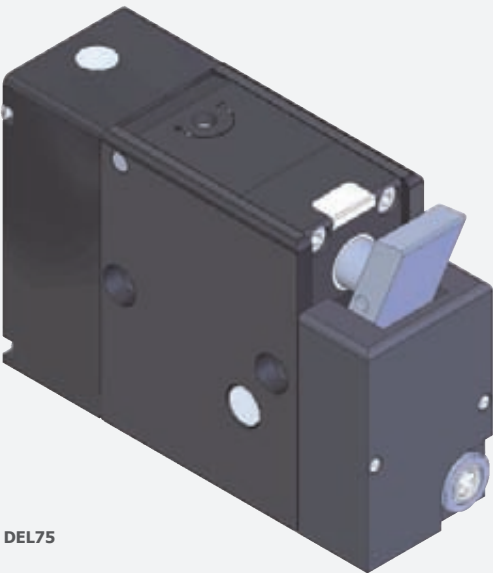
Step 1 | Determine order code

DEL75

Type
DEL75

Customer-specific version [1]

[1] placed correspondingly



DEL75



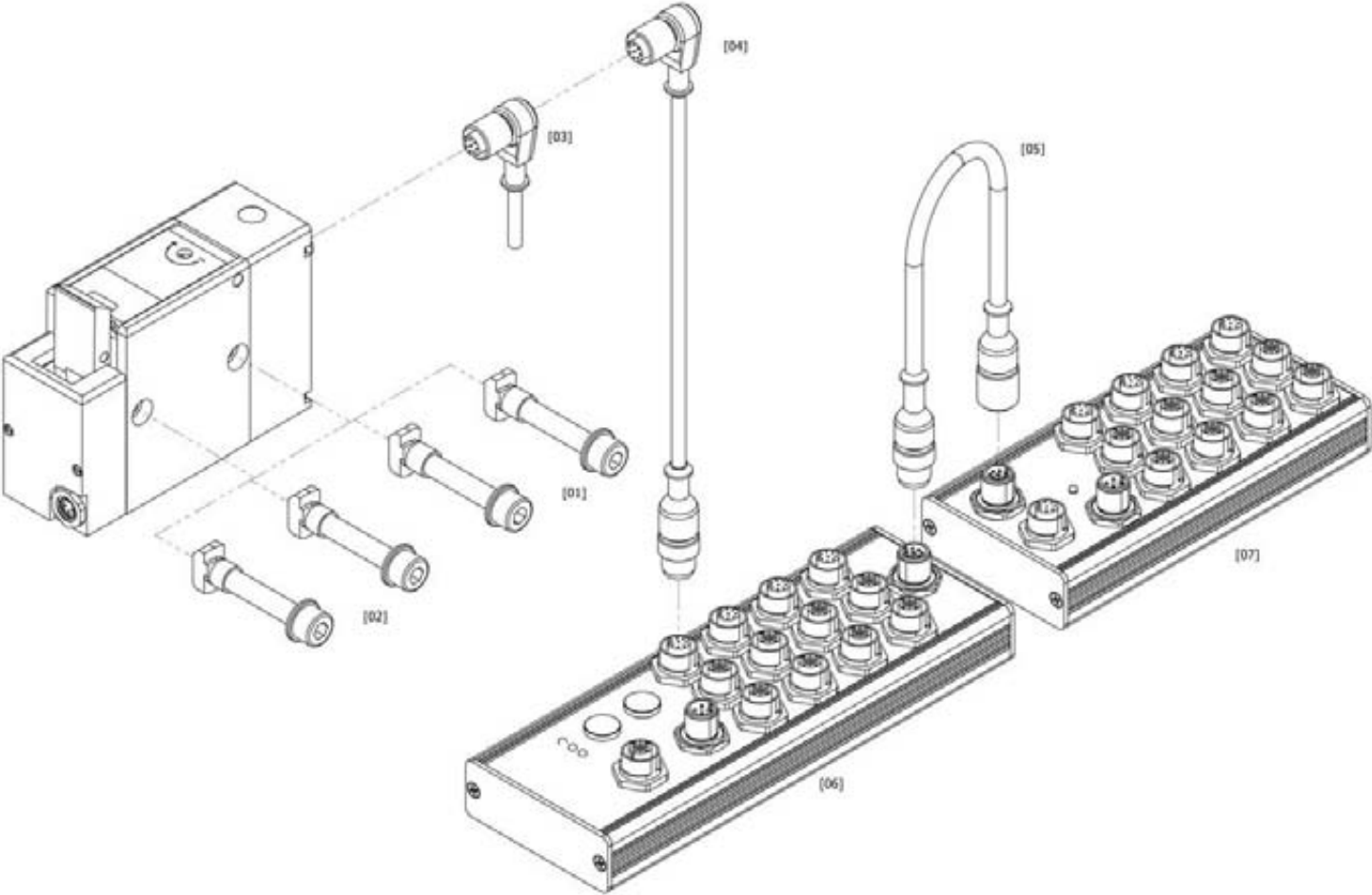
Rear view
DEL75



I/O Basic module (above)
Profibus DP 06599001

I/O Expansion module (below)
06599005

Step 2 | Select accessories



Delta EL75 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set			
[02]	Fastening set A	long spacer sleeve (see drawing p. 133)	44000134	
	Fastening set B	short spacer sleeve (see drawing p. 133)	44000135	
[03]	Connection line	length: 5 m with strands	06290002	- 25° up to + 80°
[04]	Connection line	length: 1 m with plug connector/angle coupling	06290008	- 25° up to + 80°
		length: 2 m with plug connector/angle coupling	06290009	- 25° up to + 80°
		length: 5 m with plug connector/angle coupling	06290010	- 25° up to + 80°
[05]	Connection line	length: 0,3 m interconnection line for E/G-module	06290011	- 25° up to + 80°
		length: 1,0 m interconnection line for E/G-module	06290012	- 25° up to + 80°
[06]	I/O Basic module	Profibus DP	06599001	
		DeviceNet	06599002	
		Profinet IO	06599003	
		EtherNet/IP	06599004	
		AS-i	06599006	
[07]	I/O Expansion module		06599005	

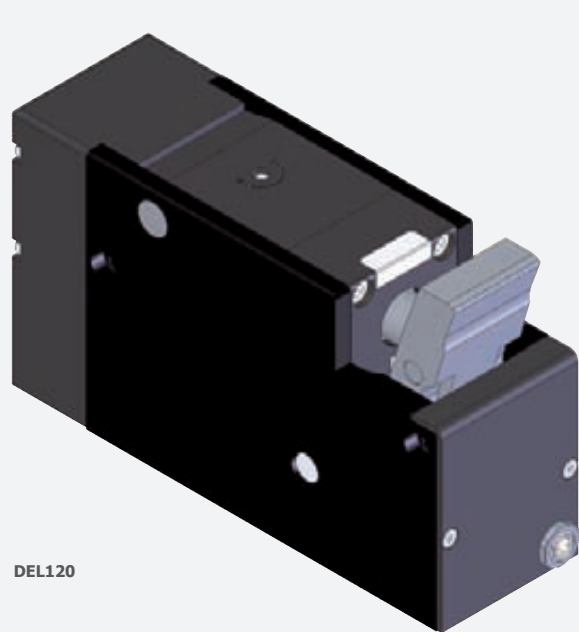
Step 1 | Determine order code

DEL120

Type
DEL120

Customer-specific version [1]

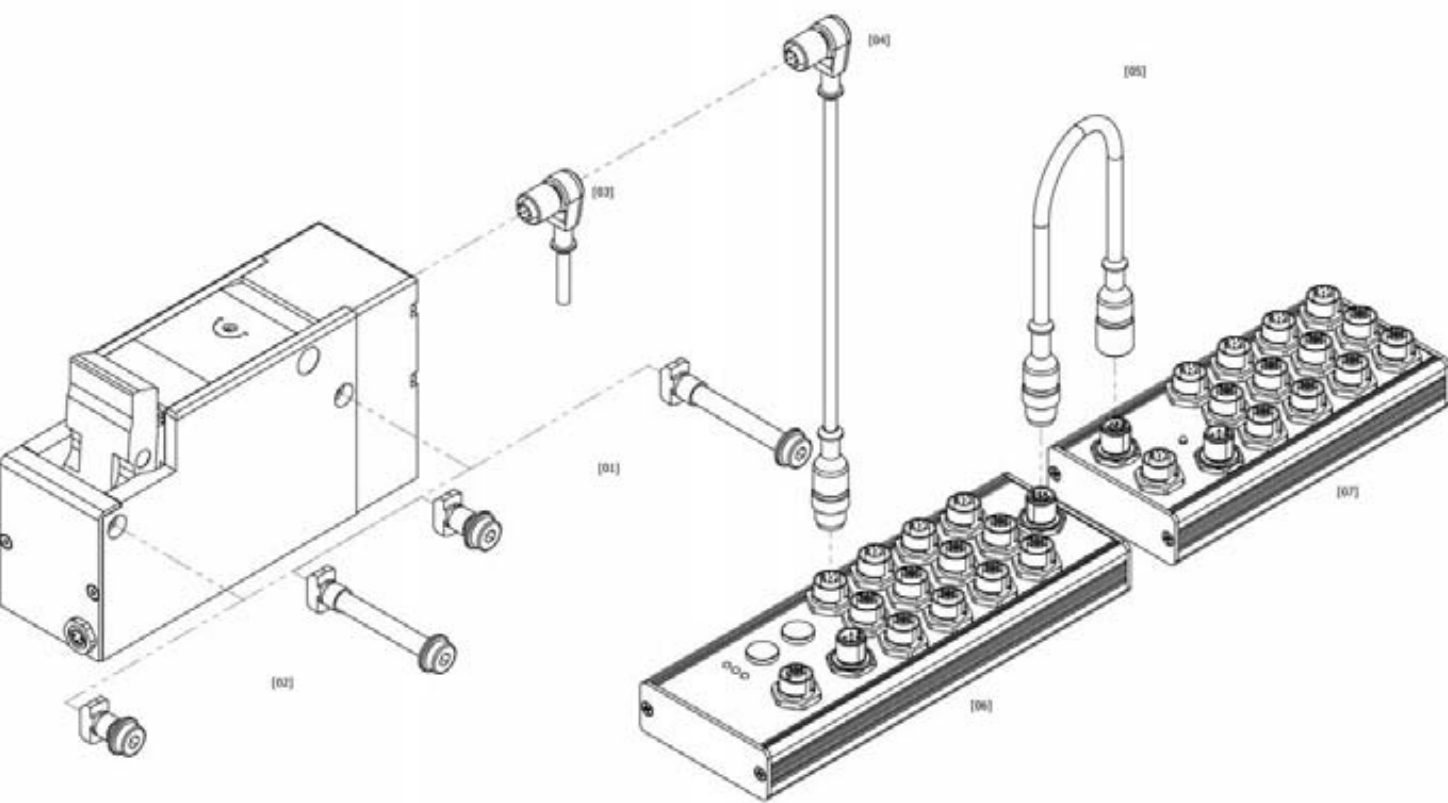
[1] placed correspondingly



I/O Basic module (above)
Profibus DP 06599001

I/O Expansion module (below)
06599005

Step 2 | Select accessories



Delta EL120 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Fastening set				
[01]	Fastening set A	long spacer sleeve (see drawing p. 137)	44000173	
[02]	Fastening set B	short spacer sleeve (see drawing p. 137)	44000174	
[03]	Connection line	length: 5 m with strands	06290002	- 25° up to + 80°
[04]	Connection line	length: 1 m with plug connector/angle coupling	06290008	- 25° up to + 80°
		length: 2 m with plug connector/angle coupling	06290009	- 25° up to + 80°
		length: 5 m with plug connector/angle coupling	06290010	- 25° up to + 80°
[05]	Connection line	length: 0,3 m interconnection line for E/G-module	06290011	- 25° up to + 80°
		length: 1,0 m interconnection line for E/G-module	06290012	- 25° up to + 80°
[06]	I/O Basic module	Profibus DP	06599001	
		DeviceNet	06599002	
		Profinet IO	06599003	
		EtherNet/IP	06599004	
		AS-i	06599006	
[07]	I/O Expansion module		06599005	

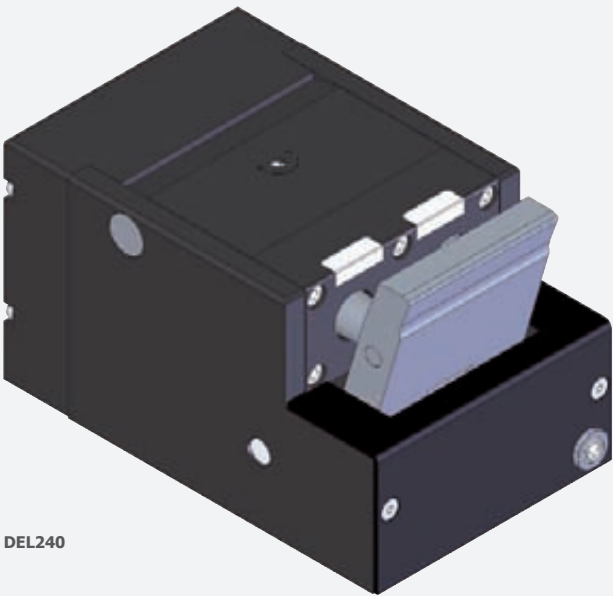
Step 1 | Determine order code

DEL240

Type
DEL240

Customer-specific version [1]

[1] placed correspondingly



DEL240



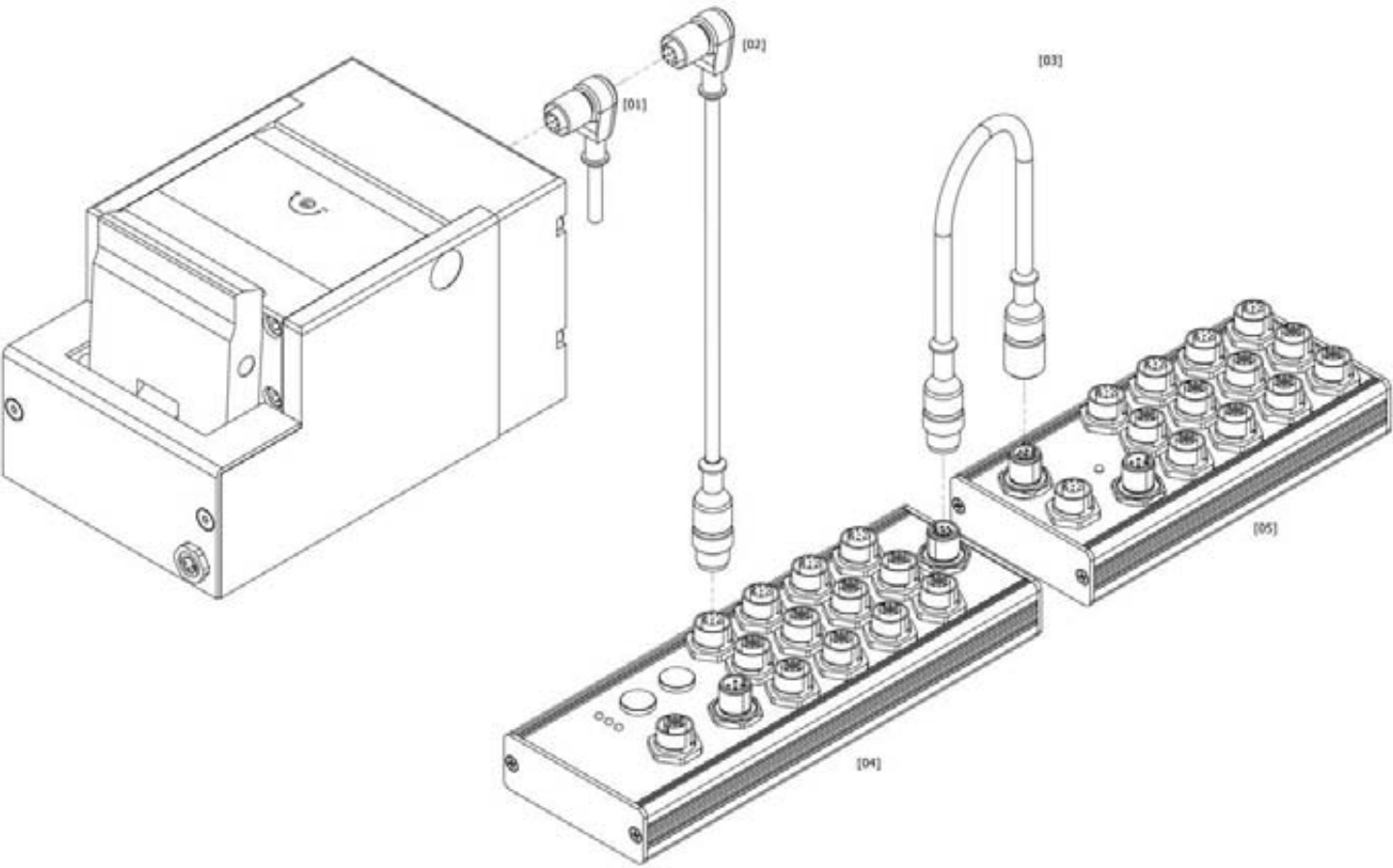
Rear view
DEL240



I/O Basic module (above)
Profibus DP 06599001

I/O Expansion module (below)
06599005

Step 2 | Select accessories



Delta EL240 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Connection line	length: 5 m with strands	06290002	- 25° up to + 80°
[02]	Connection line	length: 1 m with plug connector/angle coupling	06290008	- 25° up to + 80°
		length: 2 m with plug connector/angle coupling	06290009	- 25° up to + 80°
		length: 5 m with plug connector/angle coupling	06290010	- 25° up to + 80°
[03]	Connection line	length: 0,3 m interconnection line for E/G-module	06290011	- 25° up to + 80°
		length: 1,0 m interconnection line for E/G-module	06290012	- 25° up to + 80°
[04]	I/O Basic module	Profibus DP	06599001	
		DeviceNet	06599002	
		Profinet IO	06599003	
		EtherNet/IP	06599004	
		AS-i	06599006	
[05]	I/O Expansion module		06599005	



Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 9 m/min to 18 m/min.

Design

Pallet holder loads up to 600 kg permissible (conveyor speed 6 m/min)

Technical data

Input power
31 Watt

Delta EL | **Damping forces**

Separating stop Delta EL, electrical | up to 600 kg

Step 1 | Determine order code

DEL

Type
DEL

weight range [kg]
140 = 25-140
600 = 40-600

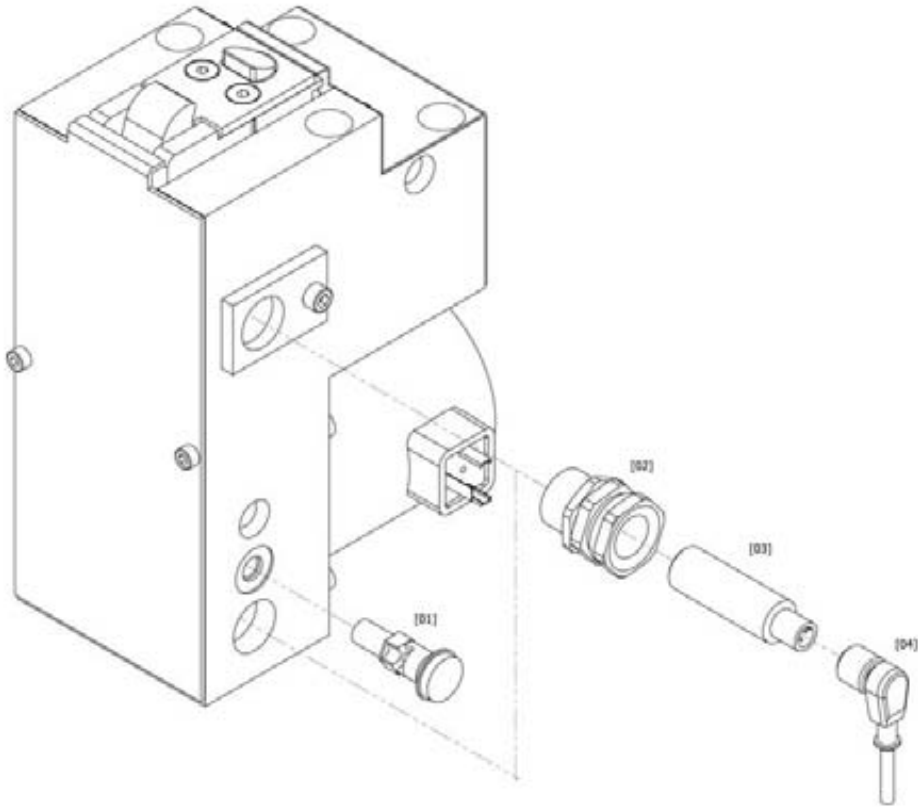
Customer-specific version [1]

[1] placed correspondingly



DEL - 600

Step 2 | Select accessories

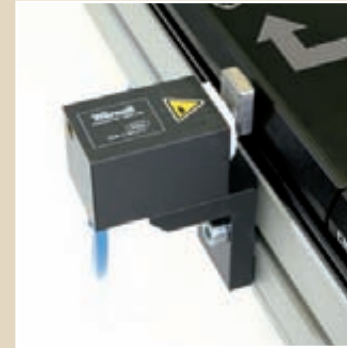


Delta EL | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Locking bolts		30733	- 20° up to + 80°
[02]	Clamp		06285004	- 25° up to + 70°
[03]	Proximity switch		06205005	- 25° up to + 70°
[04]	Connection line	length: 5 m	06290003	- 25° up to + 85°

Angle Dampers

Pointing the way!



Angle dampers are used to damp the impact of accumulated pallet holders

when changing over from a transverse to a longitudinal section and vice versa

Application for conveying shock-sensitive or fragile parts

Sturdy and economical angle damper

Can be used at conveyor speeds of 6 m/min to 36 m/min

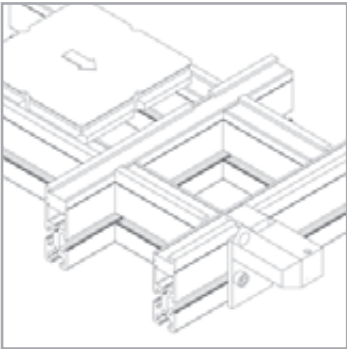
Pneumatic activation with infinitely adjustable damping

Substantially lower concussions of the plant

An optimal situation stability of the workpieces supports on the workpiece holder

Various stop plates depending on use





Applications

Angle dampers are used to damp the impact of accumulated pallet holders when changing over from a transverse to a longitudinal section and vice versa.

Application for conveying shock-sensitive or fragile parts. Use of angle dampers when channeling in pallet holders in transverse or longitudinal sections as well as when channeling out pallet holders in transverse or longitudinal sections. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical angle damper. Can be used at conveyor speeds of 6 m/min to 36 m/min. Weights can be damped from 250 g and higher.

The separating stop DESHB15 can be mounted to the Bosch Rexroth TS1 transfer system without adapter plate.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder loads of 0,25 kg to 15 kg permissible (conveyor speed 6 m/min)

Pallet holder total weight of up to 15 kg permissible

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment
Damping force and damping speed can be set on the top of the device:

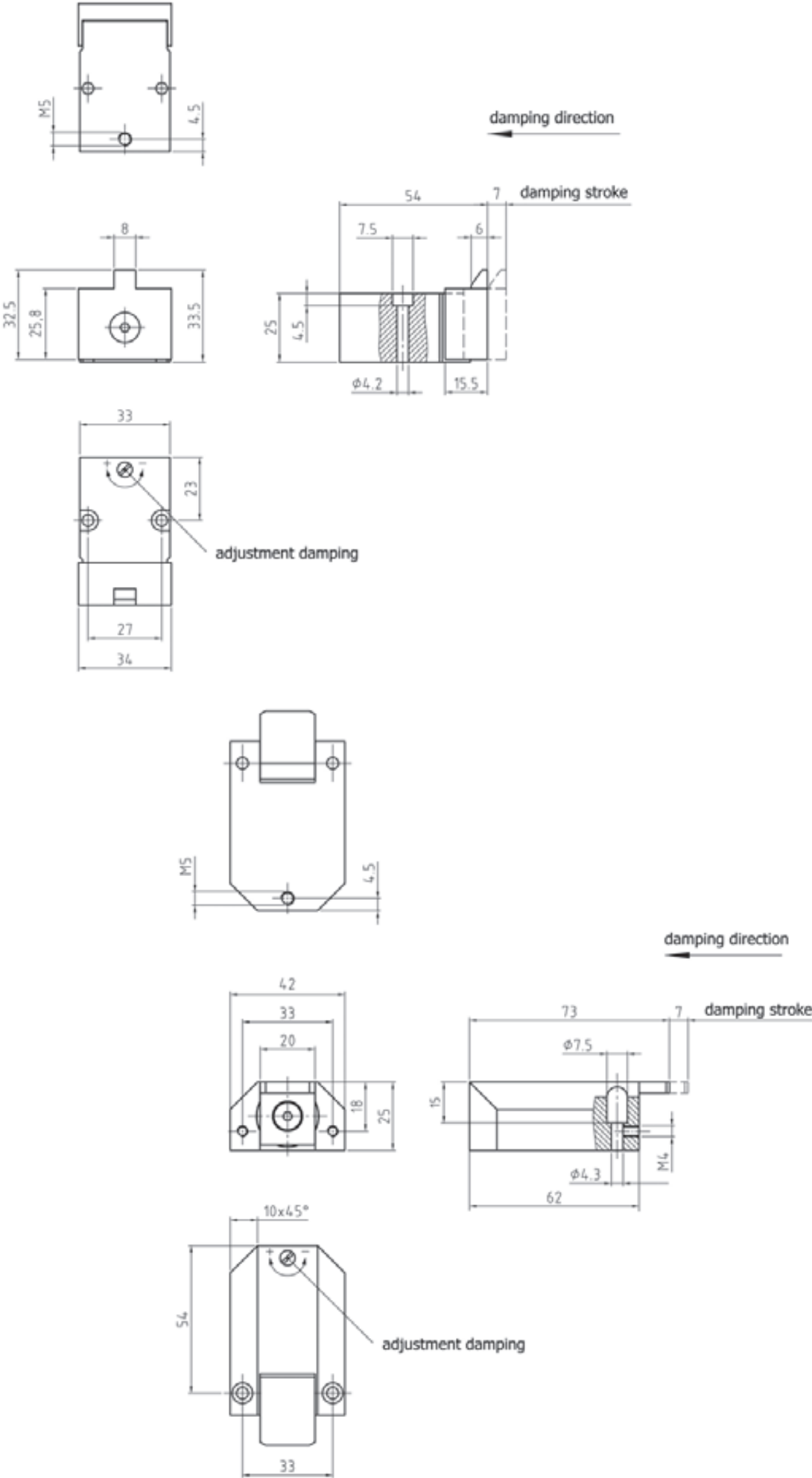
- + = increase damping force
- = decrease damping force

Technical data

Operating pressure [bar]
Treated compressed air
4 – 8 bar

Pneumatic connection
M5 thread for air connection

Separating stop function
Stop in initial position
- pneumatic



Delta ESHB15 | Damping forces

Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	0,25-15 kg	0,25-10 kg	0,25-9 kg	0,25-7 kg	0,25-6 kg	0,25-4 kg	0,25-3 kg

¹⁾ This information applies to friction of 0,07 μ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

– subject to change without notice –

– subject to change without notice –

Step 1 | Determine order code

DESHB15

Type

DESHB15

Stop plate

W = angle

G = straight

Temperatur range [° degrees]

- = normal - 20° bis + 80°

H = heat resistant - 20° bis + 180°

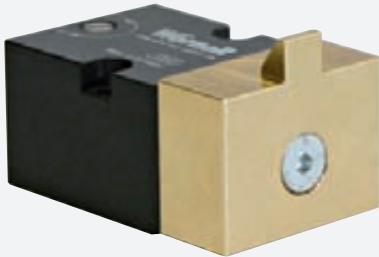
K = cold resistant - 50° bis + 80°*

Customer-specific version [1]

[1] placed correspondingly

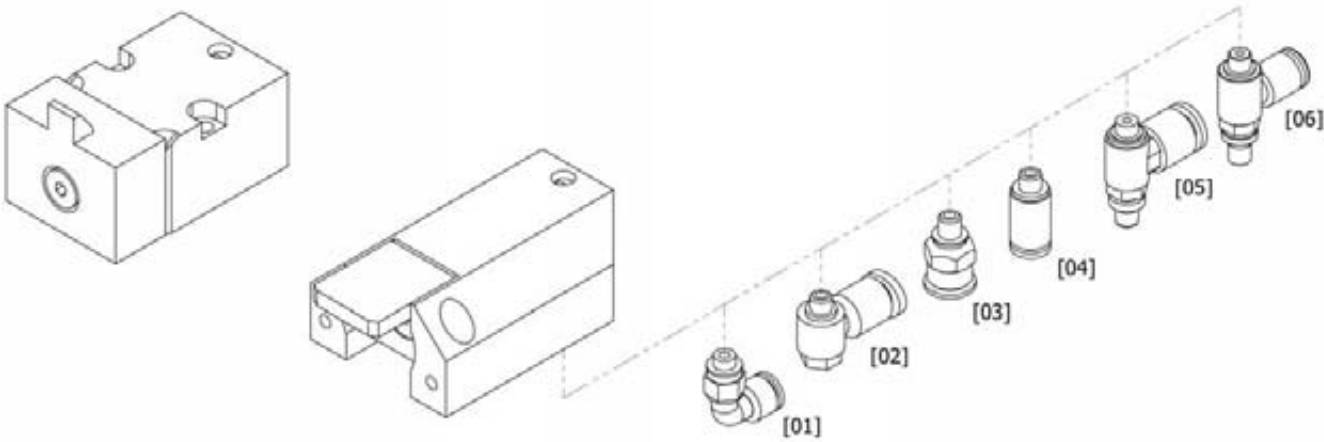


DESHB15 - W



DESHB15 - G

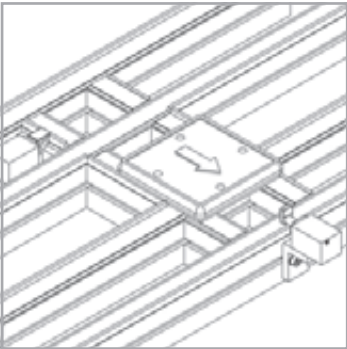
Step 2 | Select accessories



Delta ESHB15 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Air connection				
[01]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[02]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[03]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[04]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[05]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	0° up to + 60°
[06]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	0° up to + 60°

Heat and cold resistant
accessories on request



Applications

Angle dampers are used to damp the impact of accumulated pallet holders when changing over from a transverse to a longitudinal section and vice versa.

Application for conveying shock-sensitive or fragile parts. Use of angle dampers when channeling in pallet holders in transverse or longitudinal sections as well as when channeling out pallet holders in transverse or longitudinal sections. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical angle damper. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The separating stop DELQ can be mounted to the Bosch Rexroth TS2*plus* transfer system with angle fastening set.

Design

Aluminum basic housing with hard-anodizing coating

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder loads of 1 kg to 60 kg permissible (conveyor speed 6 m/min)

Pallet holder total weight of up to 60 kg permissible

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment
Damping force and damping speed can be set on the back of the device:

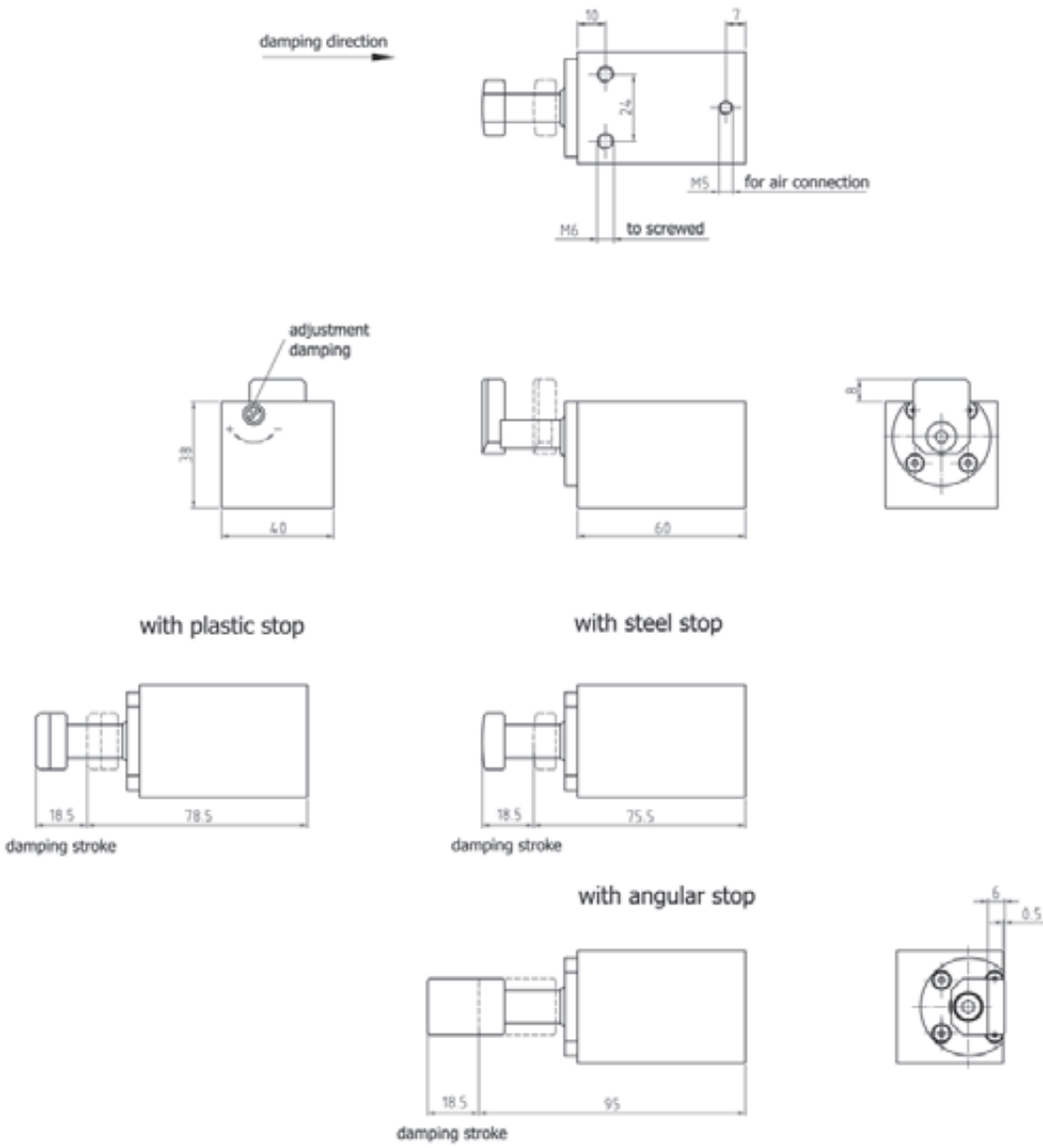
- + = increase damping force
- = decrease damping force

Technical data

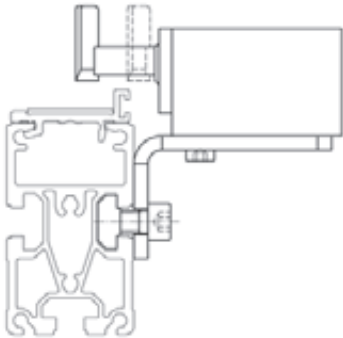
Operating pressure [bar]
Treated compressed air
4 – 8 bar

Pneumatic connection
M5 thread for air connection

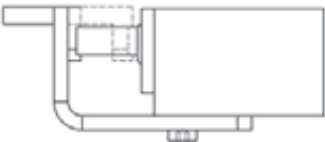
Separating stop function
Stop in initial position
- pneumatic



installation on TS2 / ST2 / ...



installation on TS2 / HQ2 / ...



Delta ELQ | Damping forces

Speed v _N ¹⁾ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg] DELQ - 20	1-20 kg	1-10 kg	1-10 kg	1-10 kg	1-7 kg	1-5 kg	1-3 kg
Speed v _N ¹⁾ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg] DELQ - 60	3-60 kg	3-40 kg	3-35 kg	3-30 kg	3-24 kg	3-18 kg	3-10 kg

¹⁾ This information applies to friction of 0,07 µ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

– subject to change without notice –

– subject to change without notice –

Step 1 | Determine order code

DELQ

Type

DELQ

Weight range [kg]

20 = 1-20

60 = 3-60

Temperatur range [° degrees]

- = normal - 20° bis + 80°

H = heat resistant - 20° bis + 180°

K = cold resistant - 50° bis + 80°*

Stop

- = steel stop

W = angle steel stop

KU = plastic stop [1]

KA = plastic stop, antistatic [1]

Customer-specific version [2]

[1] only for normal temperature range

[2] placed correspondingly

* on demand

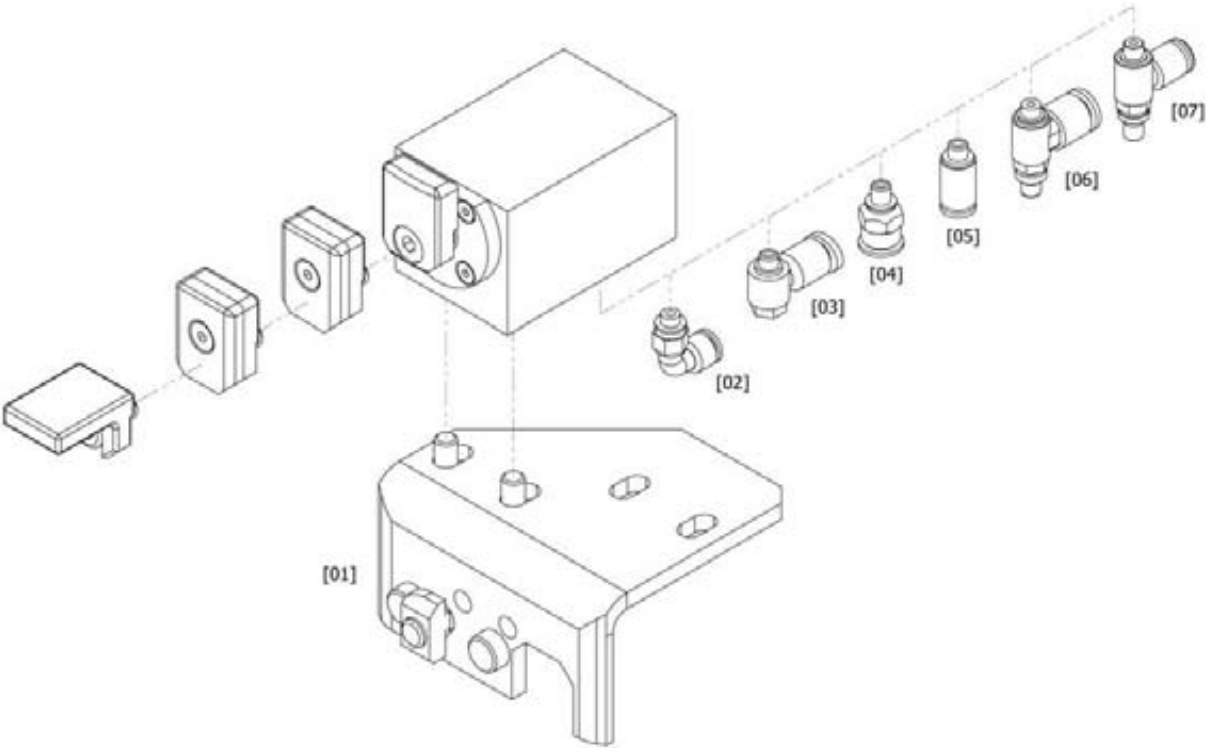


DELQ - 20 - W



DELQ - 20

Step 2 | Select accessories



Delta ELQ | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set		19141-160	
	Air connection			
[02]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[03]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[04]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[05]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[06]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	- 5° up to + 60°
[07]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	- 5° up to + 60°

Heat and cold resistant
accessories on request

Step 1 | Determine order code

DESHB150T4

Type

DESHB150T4

Temperatur range [° degrees]

- = normal

- 20° bis + 80°

H = heat resistant

- 20° bis + 180°*

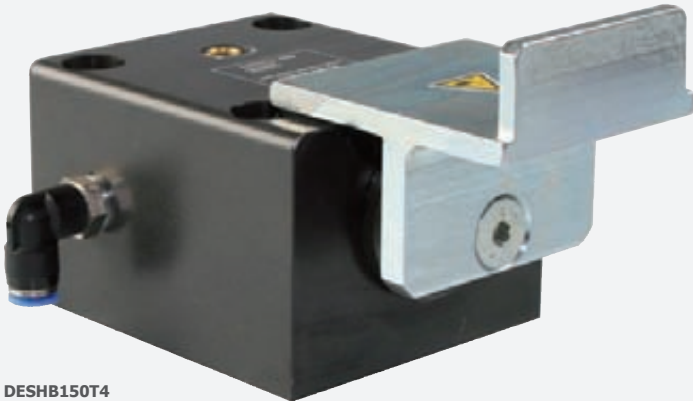
K = cold resistant

- 50° bis + 80°*

Customer-specific version [1]

[1] placed correspondingly

* on demand



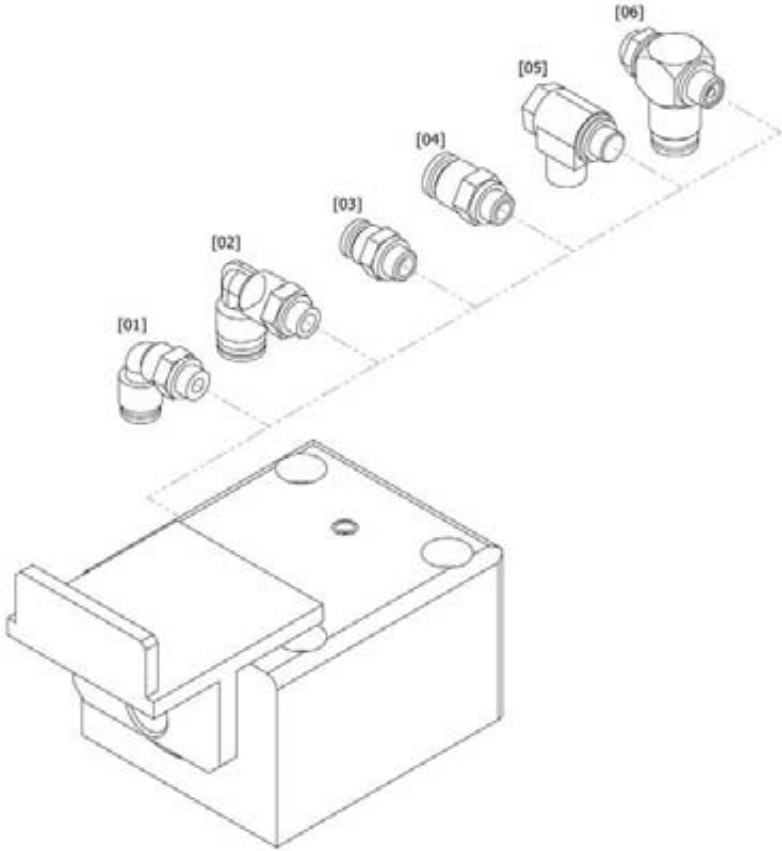
DESHB150T4
Angular air connection 13539

Angle dampers | up to 150 kg

¹⁾ Specific information to the order code on the page 6/7

– subject to change without notice –

Step 2 | Select accessories



Delta ESHB150T4 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Air connection				
[01]	Angular air connection	for hose external diameter Ø 6 mm	13539	- 10° up to + 80°
[02]	Angular air connection	for hose external diameter Ø 8 mm	04520001	- 10° up to + 80°
[03]	Straight air connection	for hose external diameter Ø 6 mm	04520007	- 10° up to + 80°
[04]	Straight air connection	for hose external diameter Ø 8 mm	04520008	- 10° up to + 80°
[05]	Delivery air throttle	for hose external diameter Ø 6 mm	04510001	- 10° up to + 80°
[06]	Delivery air throttle	for hose external diameter Ø 8 mm	18075	0° up to + 70°

Heat and cold resistant
accessories on request

– subject to change without notice –

Angle dampers | up to 150 kg



Applications

Angle dampers are used to damp the impact of accumulated pallet holders when changing over from a transverse to a longitudinal section and vice versa.

Application for conveying shock-sensitive or fragile parts. Use of angle dampers when channeling in pallet holders in transverse or longitudinal sections as well as when channeling out pallet holders in transverse or longitudinal sections. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical angle damper. Can be used at conveyor speeds of 6 m/min to 36 m/min

The separating stop DESHB150 can be mounted to the Bosch Rexroth TS2*plus* transfer system with angle fastening set.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder loads of 5 kg to 150 kg permissible (conveyor speed 6 m/min)

Pallet holder total weight of up to 150 kg permissible

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

Damping force and damping speed can be set on the top of the device:

+ = increase damping force

– = decrease damping force

Technical data

Operating pressure [bar]

Treated compressed air
4 – 8 bar

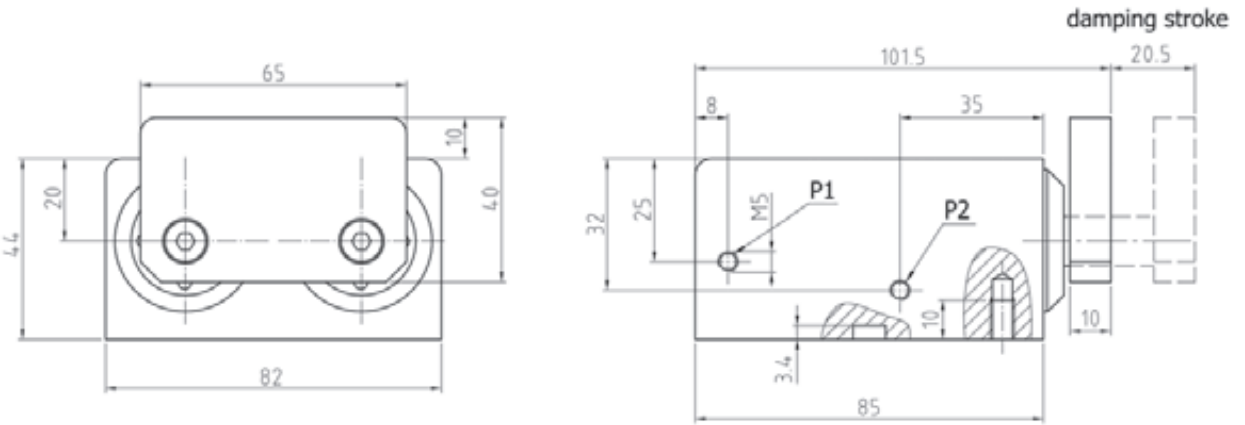
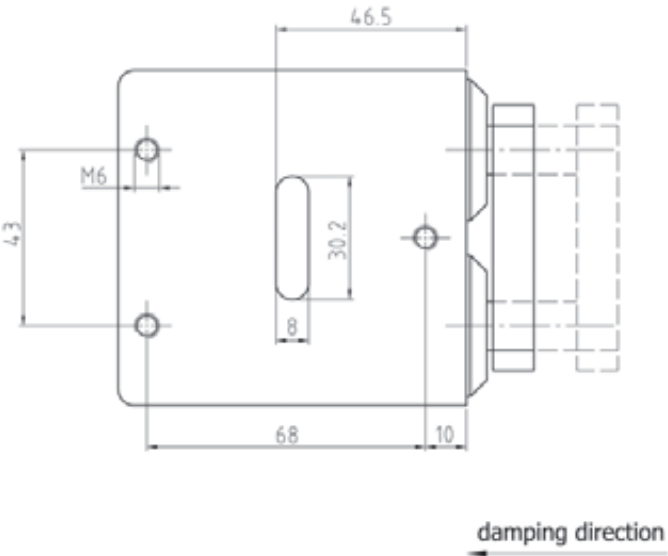
Pneumatic connection

M5 thread for air connection

Separating stop function

Stop in initial position

- pneumatic



Delta ESHB150 | Damping forces

Speed v _N ¹⁾ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	5-150 kg	5-100 kg	5-90 kg	5-90 kg	5-55 kg	5-35 kg	5-25 kg

¹⁾ This information applies to friction of 0,07 µ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

– subject to change without notice –

– subject to change without notice –

Step 1 | Determine order code

DESHB150

Type
DESHB150

Temperatur range [° degrees]
- = normal - 20° bis + 80°
H = heat resistant - 20° bis + 180°*
K = cold resistant - 50° bis + 80°*

Customer-specific version [1]

[1] placed correspondingly

* on demand



DESHB150

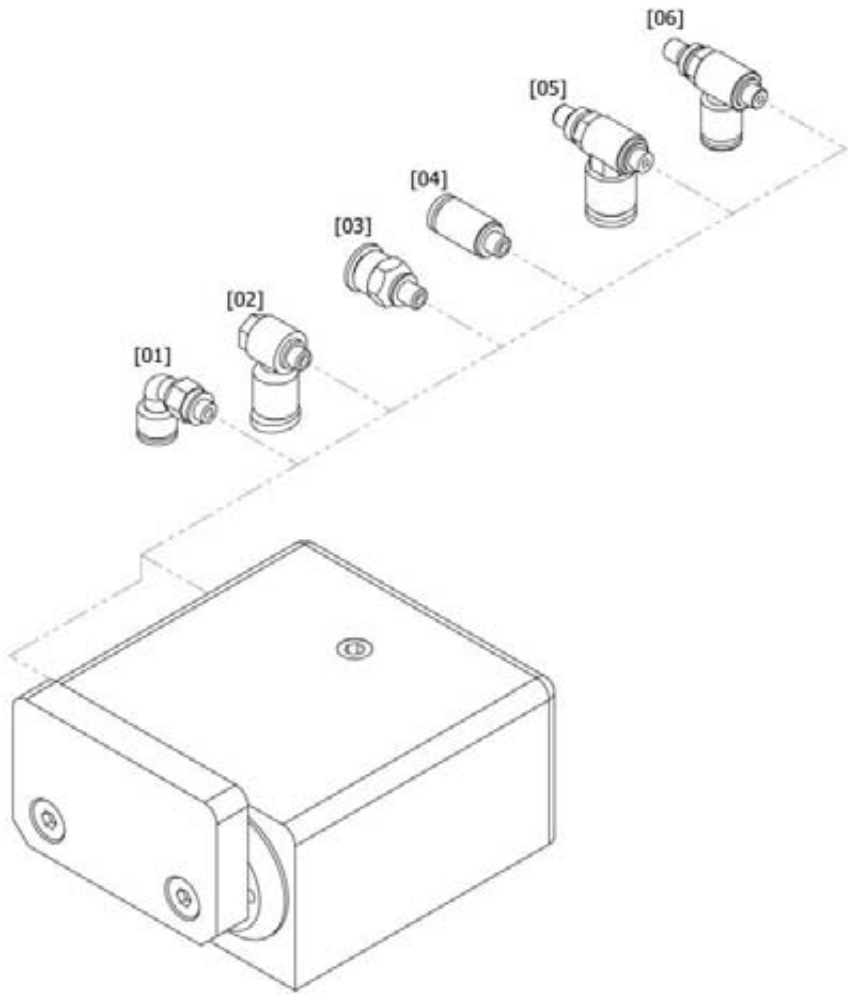


DESHB150

Air connection P1
for pushing the stop forward
into the starting position

Air connection P2
for inserting or holding the stop at
the rear, damped position.
Only required in special cases!

Step 2 | Select accessories



Delta ESHB150 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Air connection				
[01]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[02]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[03]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[04]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[05]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	0° up to + 60°
[06]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	0° up to + 60°

Heat and cold resistant
accessories on request



Applications

Angle dampers are used to damp the impact of accumulated pallet holders when changing over from a transverse to a longitudinal section and vice versa.

Application for conveying shock-sensitive or fragile parts. Use of angle dampers when channeling in pallet holders in transverse or longitudinal sections as well as when channeling out pallet holders in transverse or longitudinal sections. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical angle damper. Can be used at conveyor speeds of 6 m/min to 36 m/min

The separating stop DESHB150 can be mounted to the Bosch Rexroth TS2*plus* transfer system with angle fastening set.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder loads of 10 kg to 270 kg permissible (conveyor speed 6 m/min)

Pallet holder total weight of up to 270 kg permissible

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

Damping force and damping speed can be set on the top of the device:

+ = increase damping force

– = decrease damping force

Technical data

Operating pressure [bar]

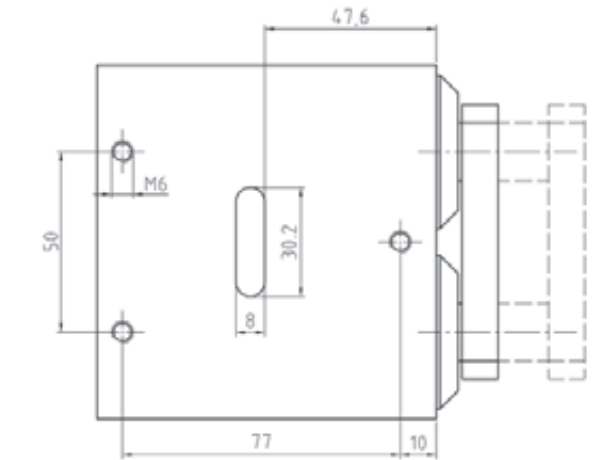
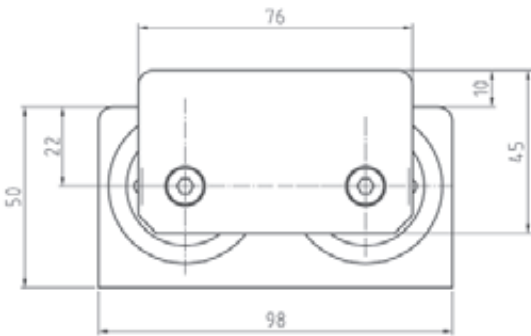
Treated compressed air
4 – 8 bar

Pneumatic connection

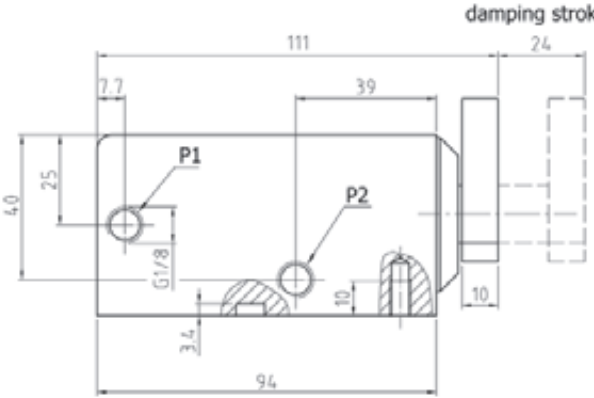
M5 thread for air connection

Separating stop function

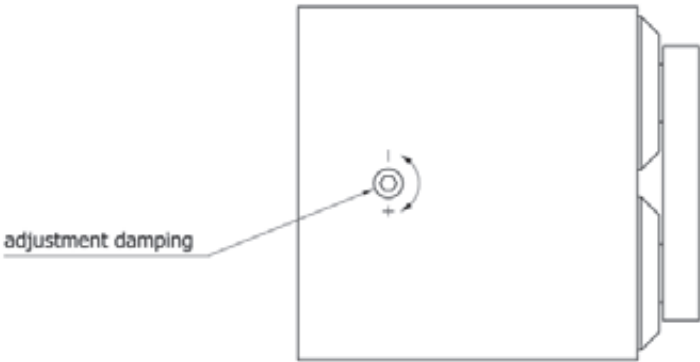
Stop in initial position
- pneumatic



damping direction



damping stroke



Delta ESHB270 | Damping forces

Speed $v_n^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	10-270 kg	10-220 kg	10-200 kg	10-180 kg	10-110 kg	10-70 kg	10-50 kg

¹⁾ This information applies to friction of 0,07 μ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

– subject to change without notice –

– subject to change without notice –

Step 1 | Determine order code

DESHB270

Type
DESHB270

Temperatur range [° degrees]
- = normal - 20° bis + 80°
H = heat resistant - 20° bis + 180°*
K = cold resistant - 50° bis + 80°*

Customer-specific version [1]

[1] placed correspondingly
* on demand



DESHB270

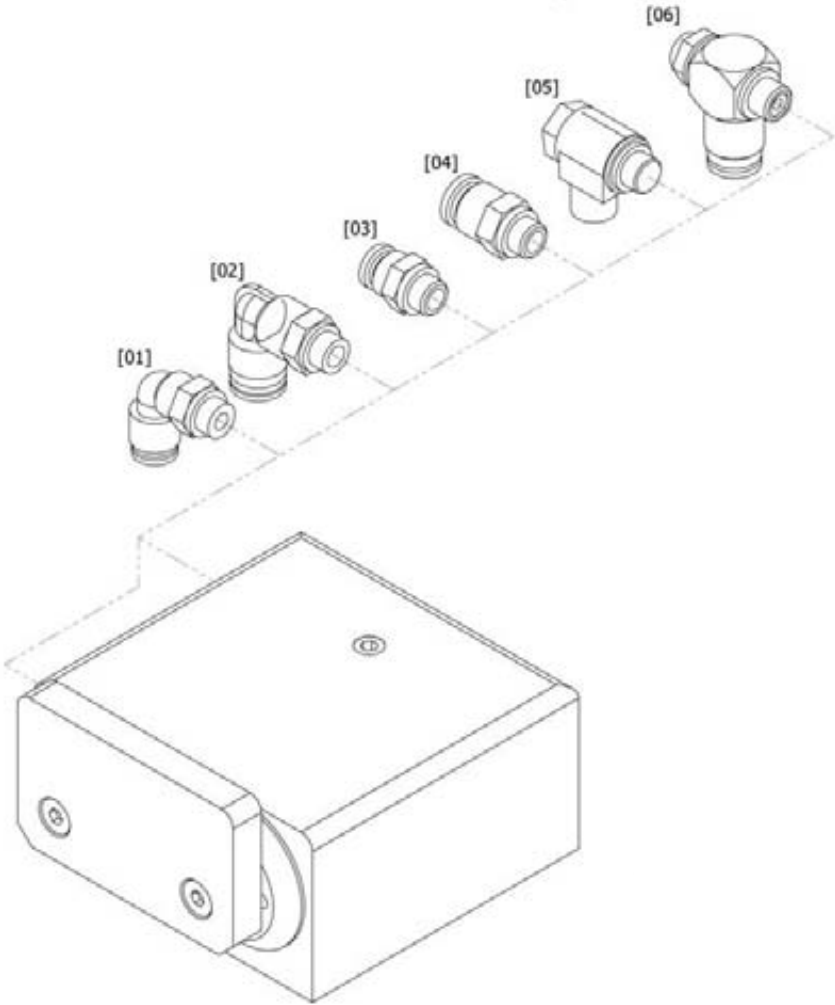


DESHB270

Air connection P1
for pushing the stop forward
into the starting position

Air connection P2
for inserting or holding the stop at
the rear, damped position.
Only required in special cases!

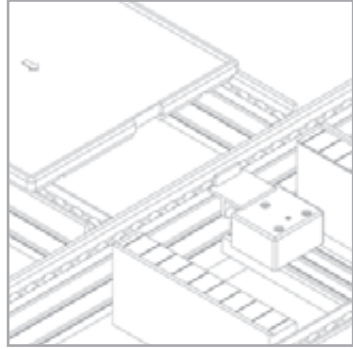
Step 2 | Select accessories



Delta ESHB270 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Air connection				
[01]	Angular air connection	for hose external diameter Ø 6 mm	13539	- 10° up to + 80°
[02]	Angular air connection	for hose external diameter Ø 8 mm	04520001	- 10° up to + 80°
[03]	Straight air connection	for hose external diameter Ø 6 mm	04520007	- 10° up to + 80°
[04]	Straight air connection	for hose external diameter Ø 8 mm	04520008	- 10° up to + 80°
[05]	Delivery air throttle	for hose external diameter Ø 6 mm	04510001	- 10° up to + 80°
[06]	Delivery air throttle	for hose external diameter Ø 8 mm	18075	0° up to + 70°

Heat and cold resistant
accessories on request



Applications

Angle dampers are used to damp the impact of accumulated pallet holders when changing over from a transverse to a longitudinal section and vice versa.

Application for conveying shock-sensitive or fragile parts. Use of angle dampers when channeling in pallet holders in transverse or longitudinal sections as well as when channeling out pallet holders in transverse or longitudinal sections. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical angle damper. Can be used at conveyor speeds of 6 m/min to 36 m/min

The separating stop DESHB300 can be mounted to the Bosch Rexroth TS4*plus* transfer system without adapter plate.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder loads of 12 kg to 300 kg permissible (conveyor speed 6 m/min)

Pallet holder total weight of up to 300 kg permissible

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

Damping force and damping speed can be set on the top of the device:

+ = increase damping force

– = decrease damping force

Technical data

Operating pressure [bar]

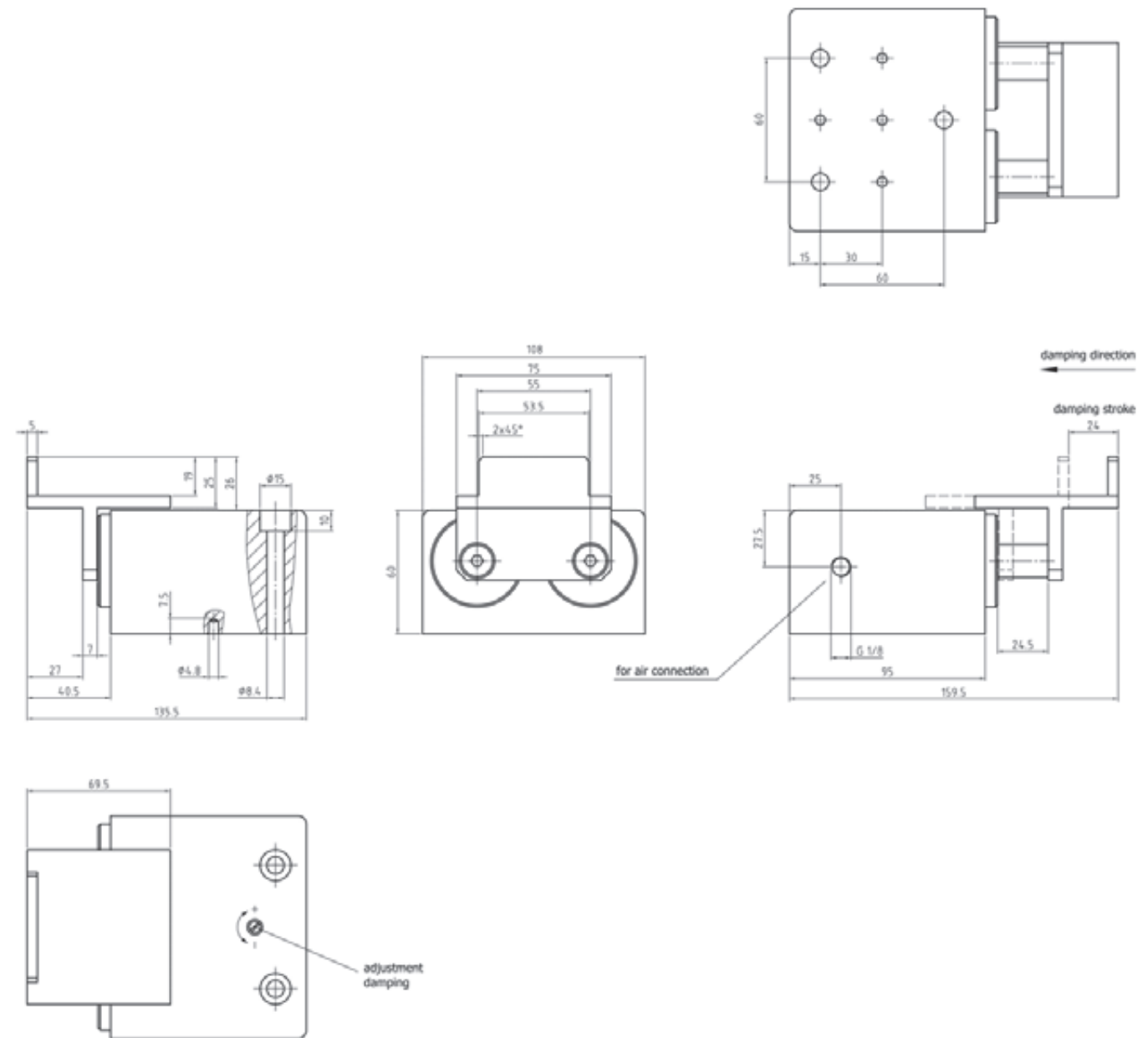
Treated compressed air
4 – 8 bar

Pneumatic connection

M5 thread for air connection

Separating stop function

Stop in initial position
- pneumatic



Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	12-300 kg	12-270 kg	12-250 kg	12-225 kg	12-140 kg	12-95 kg	12-70 kg

Step 1 | Determine order code

DESHB300

Type

DESHB300

Temperatur range [° degrees]

- = normal

- 20° bis + 80°

H = heat resistant

- 20° bis +180°*

K = cold resistant

- 50° bis + 80°*

Customer-specific version [1]

[1] placed correspondingly

* on demand

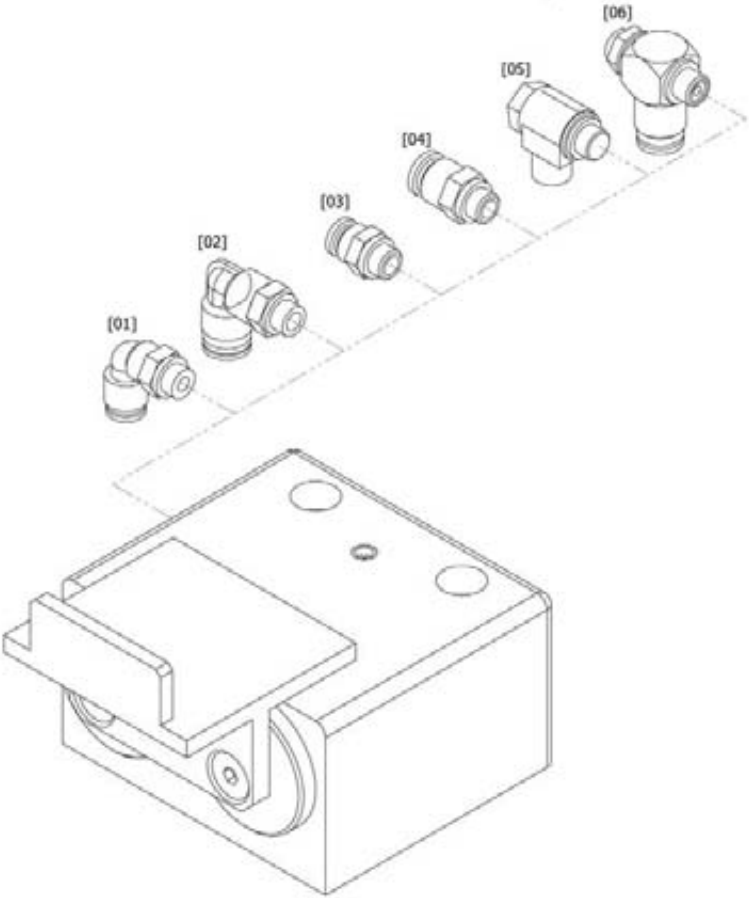


DESHB300
Angular air connection 13539

Angle dampers | up to 300 kg

¹⁾ Specific information to the order code on the page 6/7

Step 2 | Select accessories

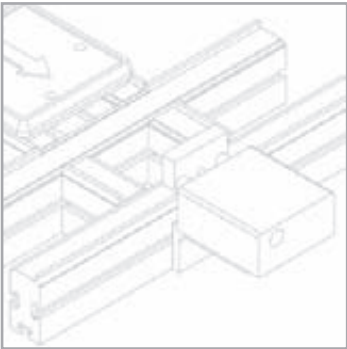


Delta ESHB300 | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Air connection				
[01]	Angular air connection	for hose external diameter Ø 6 mm	13539	- 10° up to + 80°
[02]	Angular air connection	for hose external diameter Ø 8 mm	04520001	- 10° up to + 80°
[03]	Straight air connection	for hose external diameter Ø 6 mm	04520007	- 10° up to + 80°
[04]	Straight air connection	for hose external diameter Ø 8 mm	04520008	- 10° up to + 80°
[05]	Delivery air throttle	for hose external diameter Ø 6 mm	04510001	- 10° up to + 80°
[06]	Delivery air throttle	for hose external diameter Ø 8 mm	18075	0° up to + 70°

Heat and cold resistant
accessories on request

Angle dampers | up to 300 kg



Applications

Angle dampers are used to damp the impact of accumulated pallet holders when changing over from a transverse to a longitudinal section and vice versa.

Application for conveying shock-sensitive or fragile parts. Use of angle dampers when channeling in pallet holders in transverse or longitudinal sections as well as when channeling out pallet holders in transverse or longitudinal sections. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical angle damper. Can be used at conveyor speeds of 6 m/min to 36 m/min

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop with infinitely adjustable damping only for DEUSD - 400

Optimum damping at pallet holder loads of 7 kg to 1100 kg permissible (conveyor speed 9 m/min)

Pallet holder total weight of up to 1100 kg permissible

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

Damping force and damping speed can be set on the top of the device:

+ = increase damping force

– = decrease damping force

Technical data

Operating pressure [bar]

Treated compressed air
4 – 8 bar

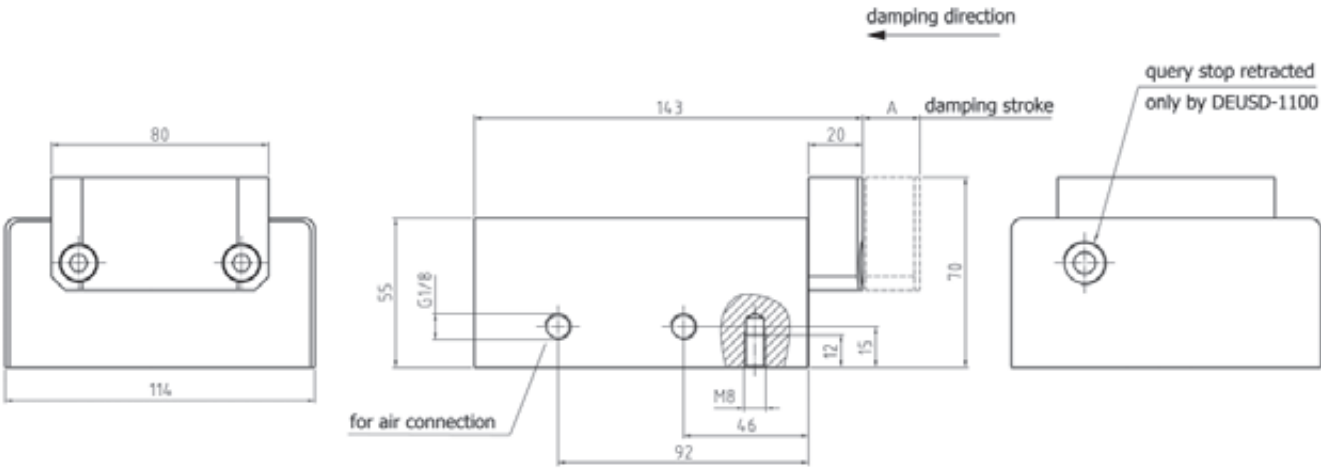
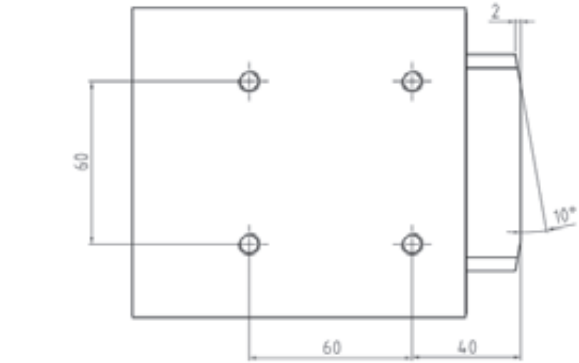
Pneumatic connection

G1/8 thread for air connection

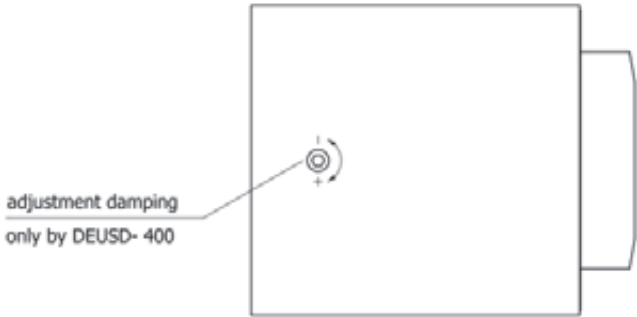
Separating stop function

Stop in initial position

- pneumatic



	DEUSD - 400	DEUSD - 1100
	dual acting	dual acting
A	23	21



Delta EUSD | Damping forces

Speed $v_N^{1)}$ [m/min] **6 m/min** **9 m/min** **12 m/min** **18 m/min** **24 m/min** **30 m/min** **36 m/min**

Weight of pallet holder [kg]
DEUSD - 400 7-400 kg 7-280 kg 7-240 kg 7-140 kg 7-100 kg 7-60 kg 7-40 kg

Speed $v_N^{1)}$ [m/min] **9 m/min** **12 m/min** **18 m/min** **24 m/min** **30 m/min**

Weight of pallet holder [kg]
DEUSD - 1100 40-1100 kg 40-1000 kg 40-800 kg 40-450 kg 40-280 kg

¹⁾ This information applies to friction of 0,07 μ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

– subject to change without notice –

– subject to change without notice –

Step 1 | Determine order code

DEUSD

Type
DEUSD

Weight range [kg]
400 = 7-400
1100 = 40-1100

Temperatur range [° degrees]
- = normal - 20° bis + 80°
H = heat resistant - 20° bis + 180°* [1]
K = cold resistant - 50° bis + 80°* [1]

Customer-specific version [2]

[1] only for DEUSD - 400

[2] placed correspondingly

* on demand



DEUSD - 1100

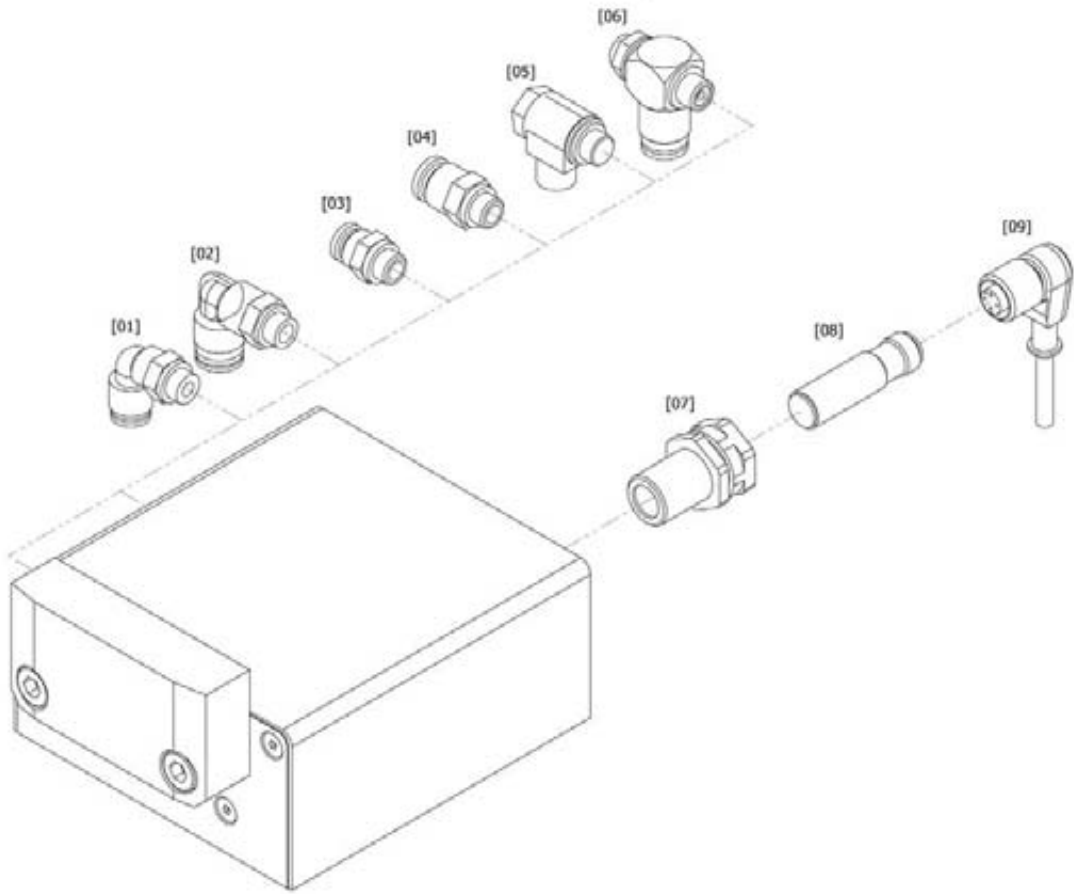


DEUSD - 1100

Air connection P1
for pushing the stop forward
into the starting position

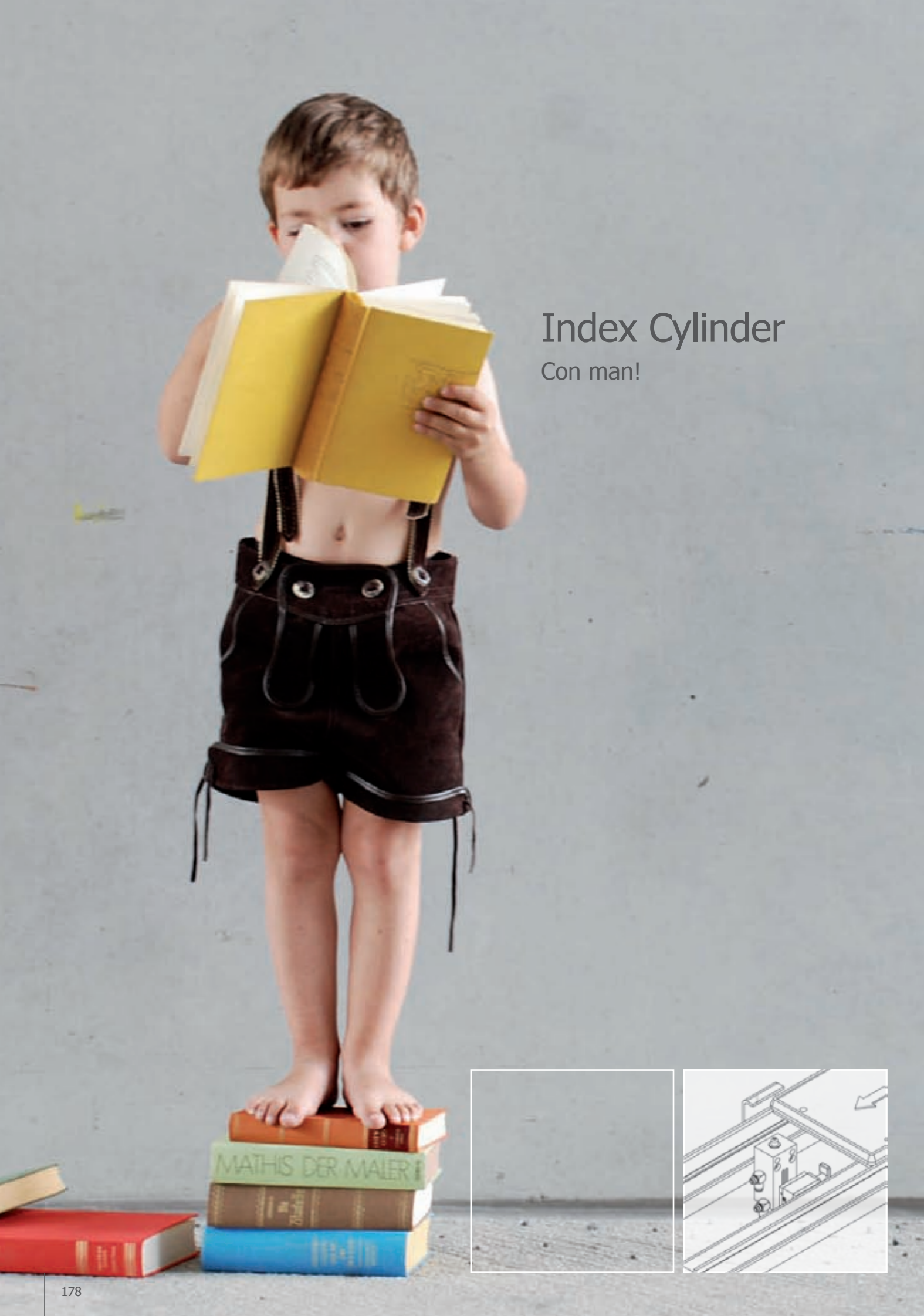
Air connection P2
for inserting or holding the stop at
the rear, damped position.
Only required in special cases!

Step 2 | Select accessories



Delta EUSD | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Air connection				
[01]	Angular air connection	for hose external diameter Ø 6 mm	13539	- 10° up to + 80°
[02]	Angular air connection	for hose external diameter Ø 8 mm	04520001	- 10° up to + 80°
[03]	Straight air connection	for hose external diameter Ø 6 mm	04520007	- 10° up to + 80°
[04]	Straight air connection	for hose external diameter Ø 8 mm	04520008	- 10° up to + 80°
[05]	Delivery air throttle	for hose external diameter Ø 6 mm	04510001	- 10° up to + 80°
[06]	Delivery air throttle	for hose external diameter Ø 8 mm	18075	0° up to + 70°
[07]	Clamp	only for DEUSD - 1100	30539	- 25° up to + 70°
[08]	Proximity switch	inductive, only for DEUSD - 1100	06205001	- 25° up to + 70°
[09]	Sensor cable	for inductive proximity switch, only for DEUSD - 1100	06290003	- 25° up to + 85°
Heat and cold resistant accessories on request				



Index Cylinder Con man!



Precise positioning and lifting of pallet holders

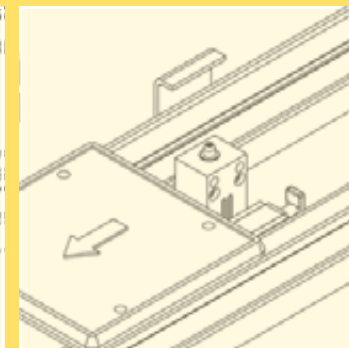
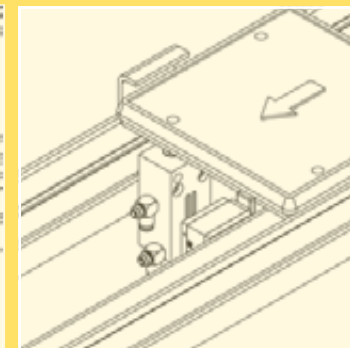
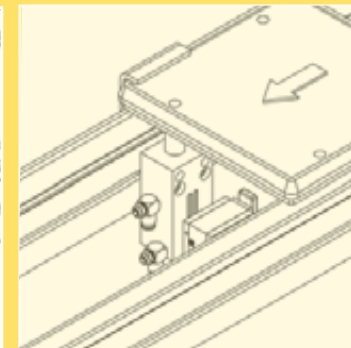
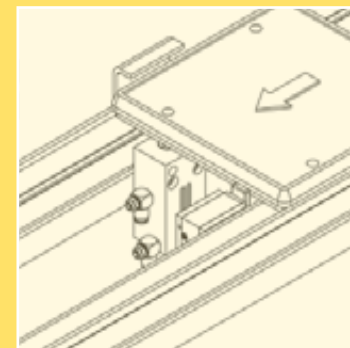
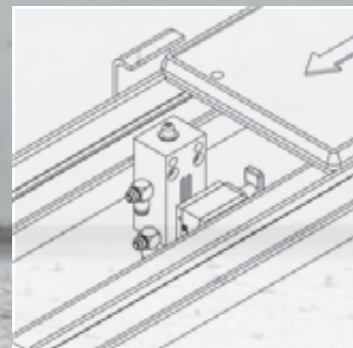
Two electronic switches with adjustable positions can be integrated in order to detect the upper and lower position of the piston rod

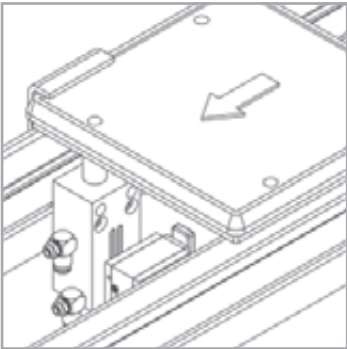
The pallets on the pallet holders can be machined, tooled and mounted precisely

Option for mounting various indexing bolts depending on pallet holder

Robust in movement thanks to different piston diameters

Optimal for rapid positioning tasks





Applications

Index cylinders serve for exact positioning and lifting of pallet holders. The pallets on the pallet holders can therefore be machined, toolled and mounted precisely.

It is possible to integrate two electronic switches on the front of the device, allowing detection of the upper and lower position of the piston rod. These are mounted in a T-groove and are variably adjustable.

The piston rod has an 8H7 hole on the top for mounting index bolts. These are available in six different versions, depending on the application and pallet holder.

The separating stop DI can be mounted to the Bosch Rexroth TS2*plus* transfer system without adapter plate.

Design

Aluminum basic housing with hard-anodizing coating

Piston rod made from rustproof material

Scope/Condition of supply

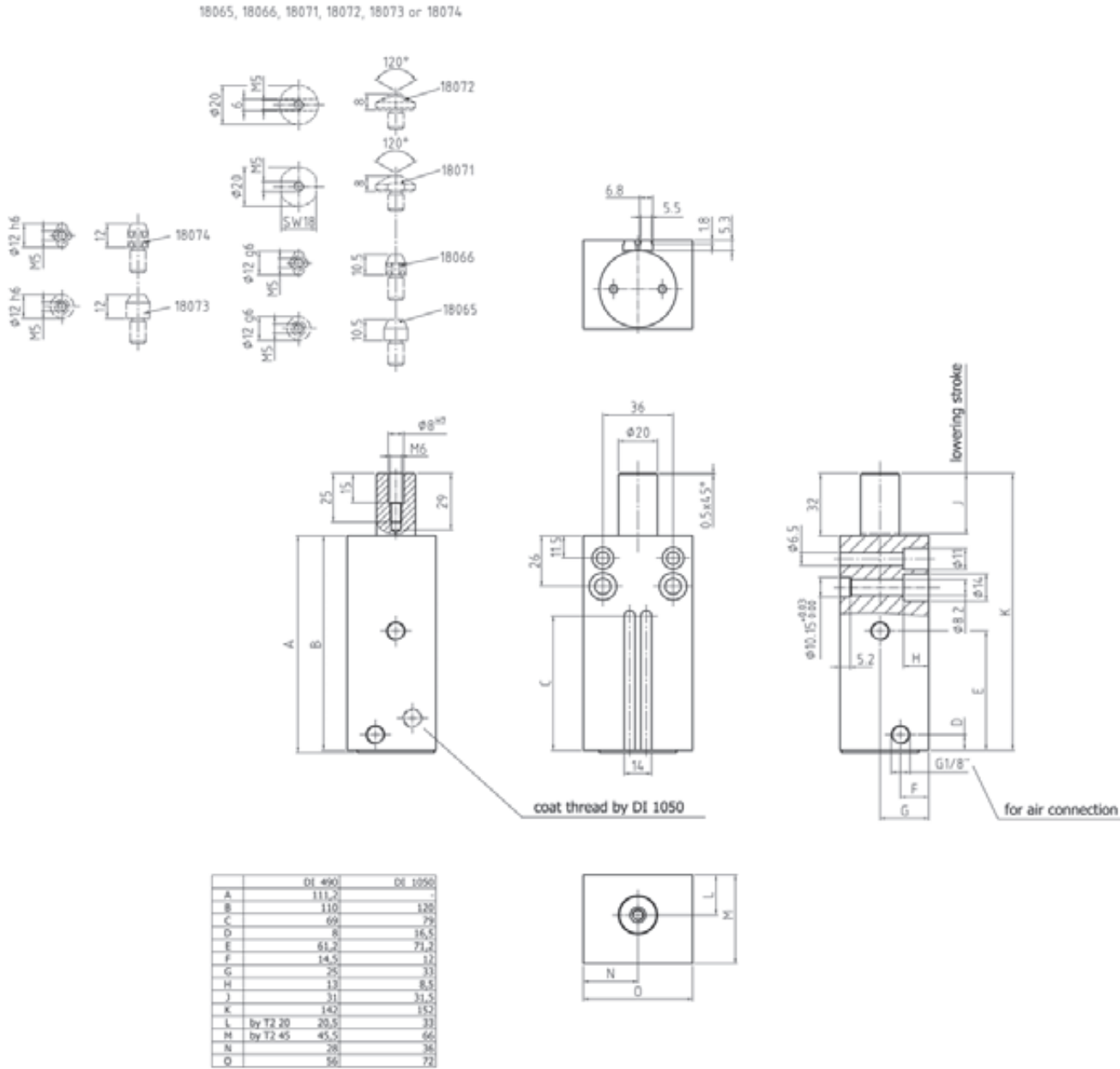
All accessory parts are supplied mounted, depending on customer request.

Technical data

Operating pressure [bar]
Treated compressed air
4 – 8 bar

Pneumatic connection
G 1/8 thread for air connection

Indexing function
extend - pneumatic
retract - pneumatic



Delta I | Piston forces

Operating pressure [bar]	4 bar	6 bar	8 bar
DI - 490			
retract	210 N	310 N	410 N
extend	320 N	490 N	670 N
Operating pressure [bar]	4 bar	6 bar	8 bar
DI - 1050			
retract	590 N	880 N	1180 N
extend	700 N	1050 N	1400 N

Step 1 | Determine order code

DI

Type

DI

Piston force [N]

490, 1050

Stroke limitation

-

= no stroke limitation

BX

= stroke limitation to XX mm [2]

Temperature range [° degrees]

-

= normal

- 20° bis + 80°

H

= heat resistant

- 20° bis + 180°*

Spacing dimensions [mm]

Dimension L on drawing [1]

-

= 20,5

T2

= 20,0

Customer-specific version [3]

[1] only for DI - 490
[2] XX is dummy for your stroke limitation, please indicate
[3] placed correspondingly
* on request



DI - 490
Fastening set 44000165
Exhaust air throttle 18059
Electronic sensor 18620

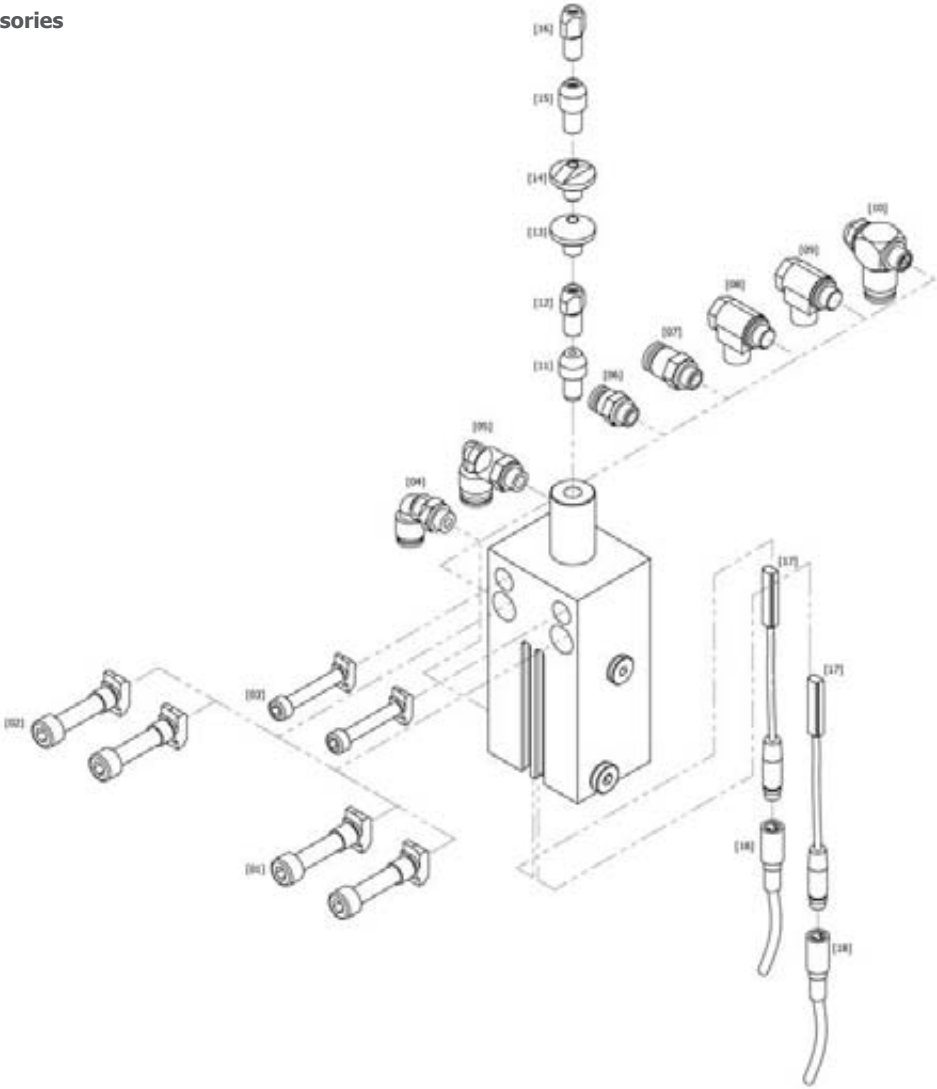


DI - 1050
Angular air connection 13539
Electronic sensor 18620



Index bolts

Step 2 | Select accessories



Delta I | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Fastening set				
[01]	Fastening set A	long spacer sleeve for DI - 490	44000165	
[01]	Fastening set A	long spacer sleeve for DI - 1050	44000166	
[02]	Fastening set B	short spacer sleeve for DI - 490	44000167	
[02]	Fastening set B	short spacer sleeve for DI - 1050	44000168	
[03]	Fastening set M6	for DI - 490	44000169	
[03]	Fastening set M6	for DI - 1050	44000170	
Air connection				
[04]	Angular air connection	for hose external diameter Ø 6 mm	13539	- 10° up to + 80°
[05]	Angular air connection	for hose external diameter Ø 8 mm	04520001	- 10° up to + 80°
[06]	Straight air connection	for hose external diameter Ø 6 mm	04520007	- 10° up to + 80°
[07]	Straight air connection	for hose external diameter Ø 8 mm	04520008	- 10° up to + 80°
[08]	Delivery air throttle	for hose external diameter Ø 6 mm	04510001	- 10° up to + 80°
[09]	Exhaust air throttle	for hose external diameter Ø 6 mm	18059	- 10° up to + 80°
[10]	Delivery air throttle	for hose external diameter Ø 8 mm	18075	0° up to + 70°
Index bolts				
[11]		cylindrical Ø 12 g6	18065	
[12]		free milled Ø 12 g6	18066	
[13]		Ø 20 120°	18071	
[14]		Ø 20 120° free milled	18072	
[15]		cylindrical Ø 12 h6	18073	
[16]		free milled Ø 12 h6	18074	
Electronic sensor				
[17]			18620	- 25° up to + 70°
Sensor cable				
[18]			06290001	- 25° up to + 80°
Removing tool				
[19]		for the demounting of the index bolts	44999013	
	Heat resistant accessories	(without illustration)		
	on request			

– subject to change without notice –

1) Specific information to the order code on the page 6/7

– subject to change without notice –

Anti-bounce Stop

One way!



Primarily installed in conjunction with separating stops without damping

Anti-bounce stops prevent the pallet holder from rebounding from the separating stop after the stopping process

The use of anti-bounce stops is especially recommended for transfer systems with low conveyor friction

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

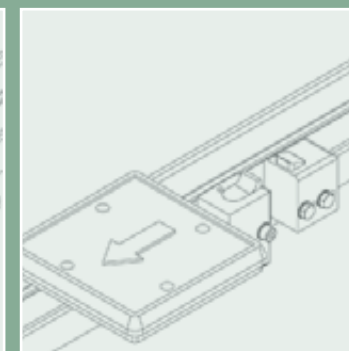
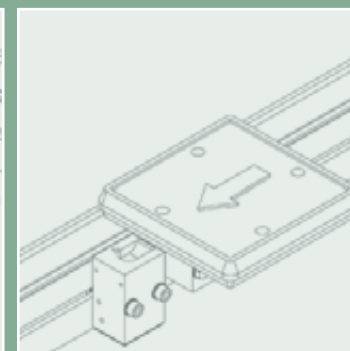
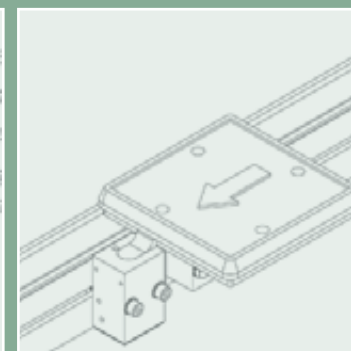
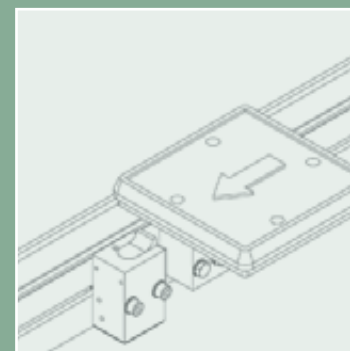
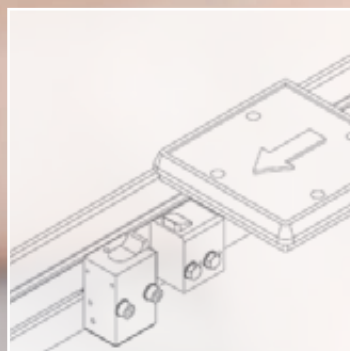
Spring-loaded pawl

Pallet holder minimum weight from 3 kg

Easy fastening in the groove of the section profile, can be used on left or right, any installation position

Pneumatically lowering anti-bounce stop for opening the pawl

Required for reversing operation



DR

Type

DR

Customer-specific version [1]

[1] placed correspondingly

DR
Fastening set 44000164



Applications

Primarily installed in conjunction with separating stops without damping. Anti-bounce stops prevent the pallet holder from rebounding from the separating stop after the stopping process.

The use of anti-bounce stops is especially recommended for transfer systems with low conveyor friction.

The separating stop DR can be mounted without adapter plate to the Bosch Rexroth TS2*plus* transfer system and with adapter plate (19652) to the Bosch Rexroth TS4*plus* transfer system.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Spring-loaded pawl

Pallet holder minimum weight from 3 kg

Easy fastening in the groove of the section profile, can be used on left or right

Scope/Condition of supply

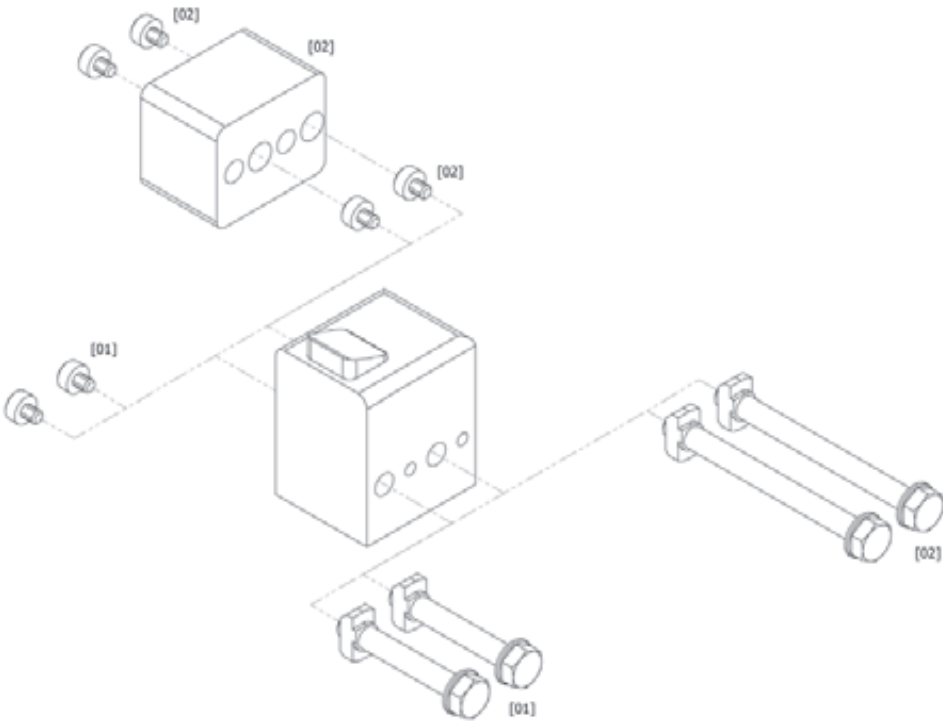
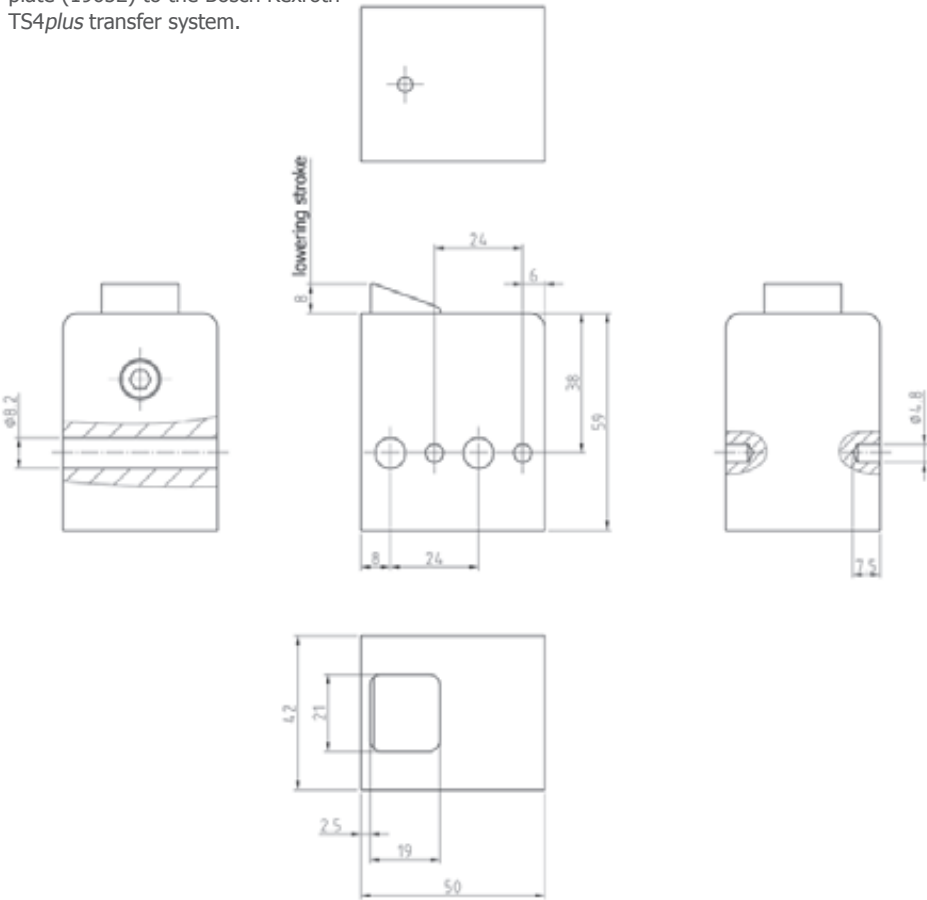
All accessory parts are supplied mounted, depending on customer request.

Technical data

Function

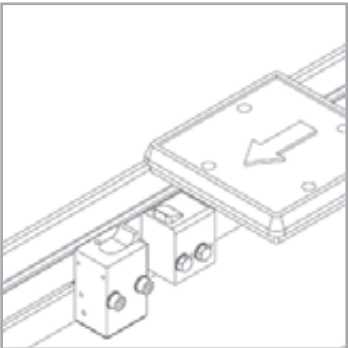
Open – through overrun of the pallet holder

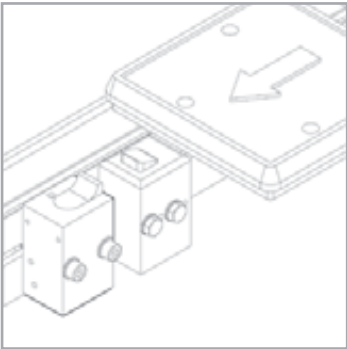
Close – through spring force



Delta R | Accessories

Item no.	Product designation	Description	Order no.
[01]	Fastening set		44000164
[02]	Fastening set	mounting on TS4 <i>plus</i> transfer system of Bosch Rexroth	19652





Applications

Primarily installed in conjunction with separating stops without damping. Anti-bounce stops prevent the pallet holder from rebounding from the separating stop after the stopping process.

The use of anti-bounce stops is especially recommended for transfer systems with low conveyor friction.

The DRP separating stop uses a proximity switch to detect the upper and lower position of the stopping plate.

The DRP separating stop uses an electronic sensor to detect the upper and lower position of the stopping plate.

The separating stop DRP can be mounted to the Bosch Rexroth TS2*plus* transfer system without adapter plate.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Pneumatically lowering anti-bounce stop for opening the pawl

Required for reversing operation

Spring-loaded pawl

Pallet holder minimum weight from 3 kg

Easy fastening in the groove of the section profile, can be used on left or right

Scope/Condition of supply

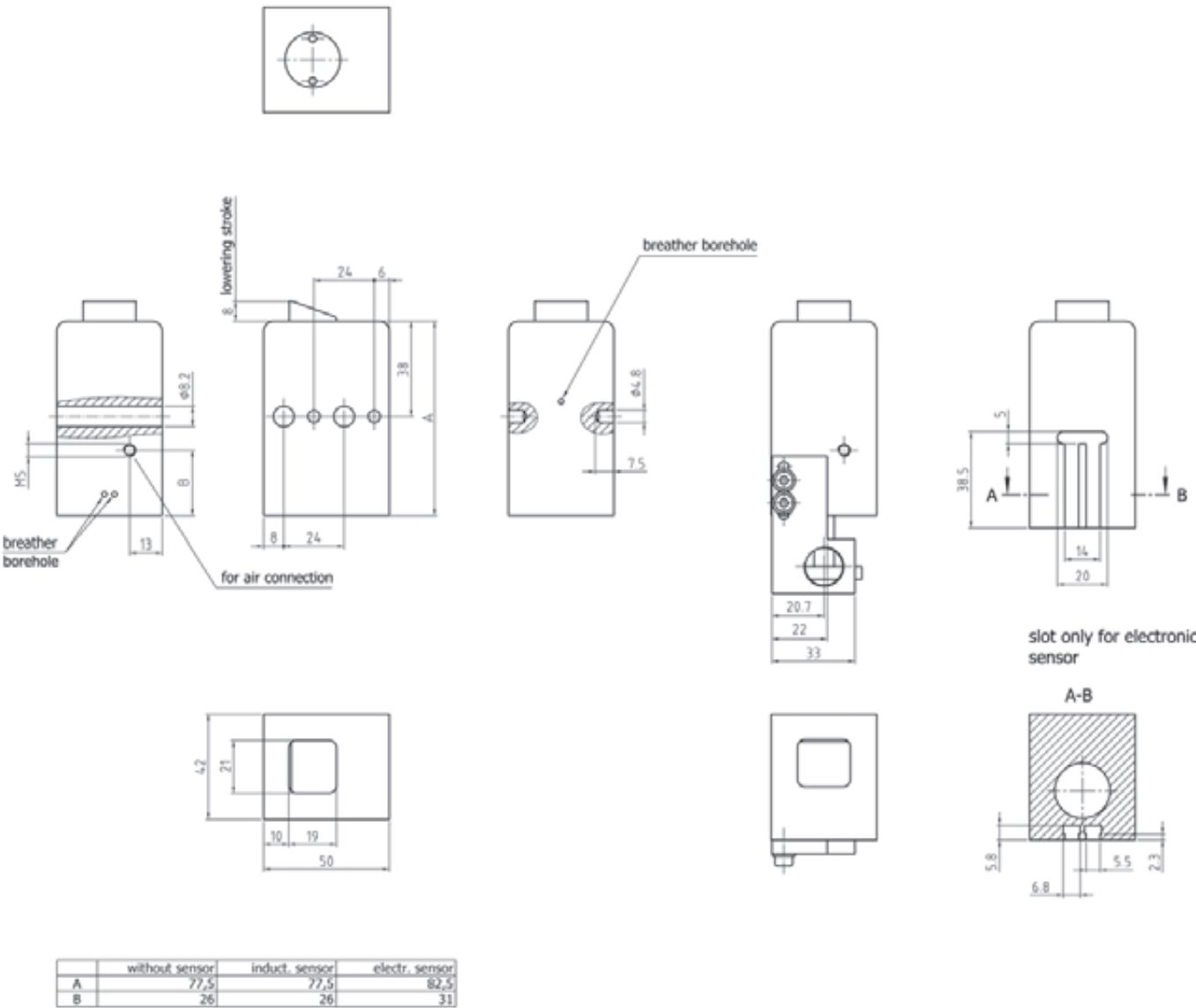
All accessory parts are supplied mounted, depending on customer request.

Technical data

Function
Open – through overrun of the pallet holder

Close – through spring force

Pneumatic connection
M5 thread for air connection



Step 1 | Determine order code

DRP

Type
DRP

Position detection sensor
– = without sensor
I = with inductive sensor
E = with electronic sensor

Customer-specific version [1]
[1] placed correspondingly



DRP
Fastening set 44000164

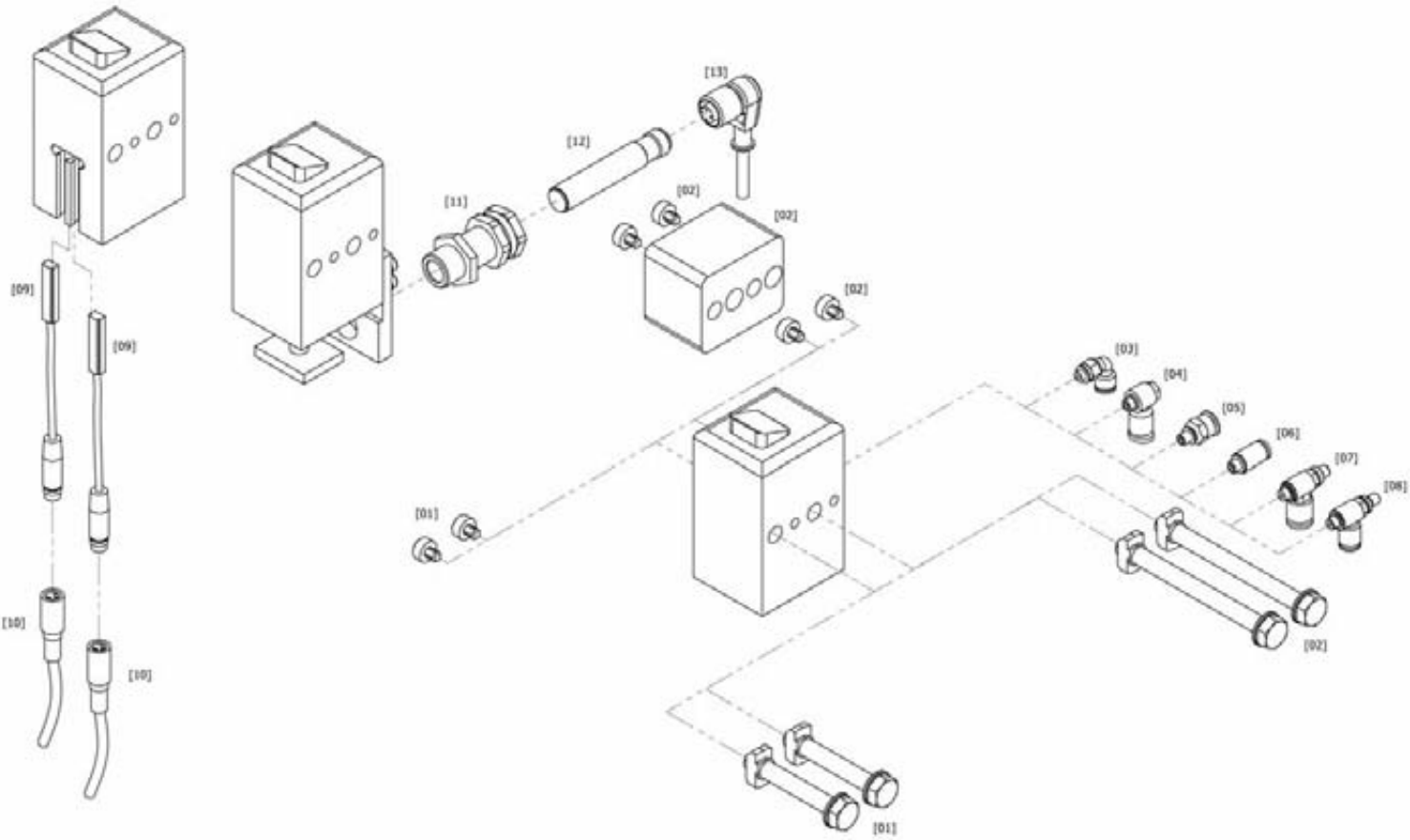


DRP - I
Fastening set 44000164
Clamp 30540
Proximity switch 19010



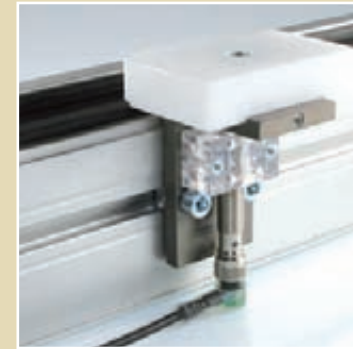
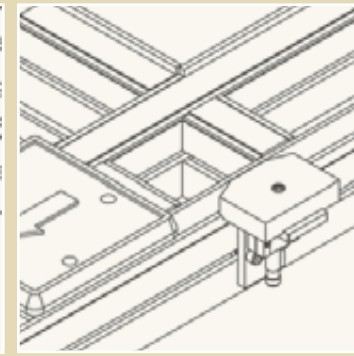
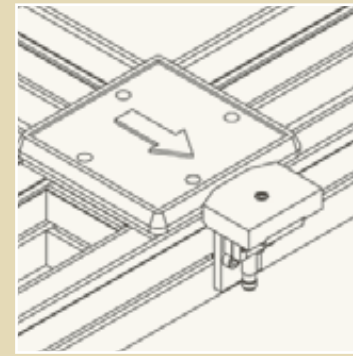
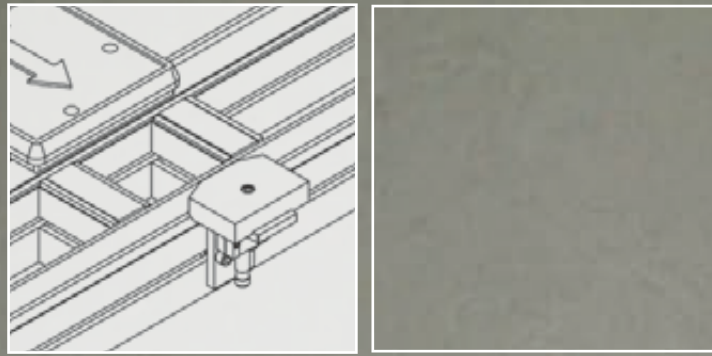
DRP - E
Electronic sensor 18620

Step 2 | Select accessories



Delta RP | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set		44000164	
[02]	Fastening set	mounting on TS4plus transfer system of Bosch Rexroth	19652	
Air connection				
[03]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[04]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[05]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[06]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[07]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	- 5° up to + 60°
[08]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	- 5° up to + 60°
Electronic sensor				
[09]	Sensor cable	length: 5 m for 18620	18620	- 25° up to + 70°
[10]	Clamp		06290001	- 25° up to + 80°
[11]	Proximity switch		30540	- 25° up to + 70°
[12]	Sensor cable	length: 5 m for 19010	19010	- 25° up to + 70°
[13]	Sensor cable		06290003	- 25° up to + 85°



Positioning sensor

Caught!

Position sensors serve for monitoring the range

Determining the end positions of pallet holders during transverse transport

The presence of a pallet holder can be signaled in conjunction with a proximity switch

Non-contact position detection

Step 1 | Determine order code

DP

Type

DP

Query

AU = query lower

AS = query on the side

Customer-specific version [1]

[1] placed correspondingly

DP - AU
Fastening set 44000160
Proximity switch 19010
Sensor cabel 06290003



Applications

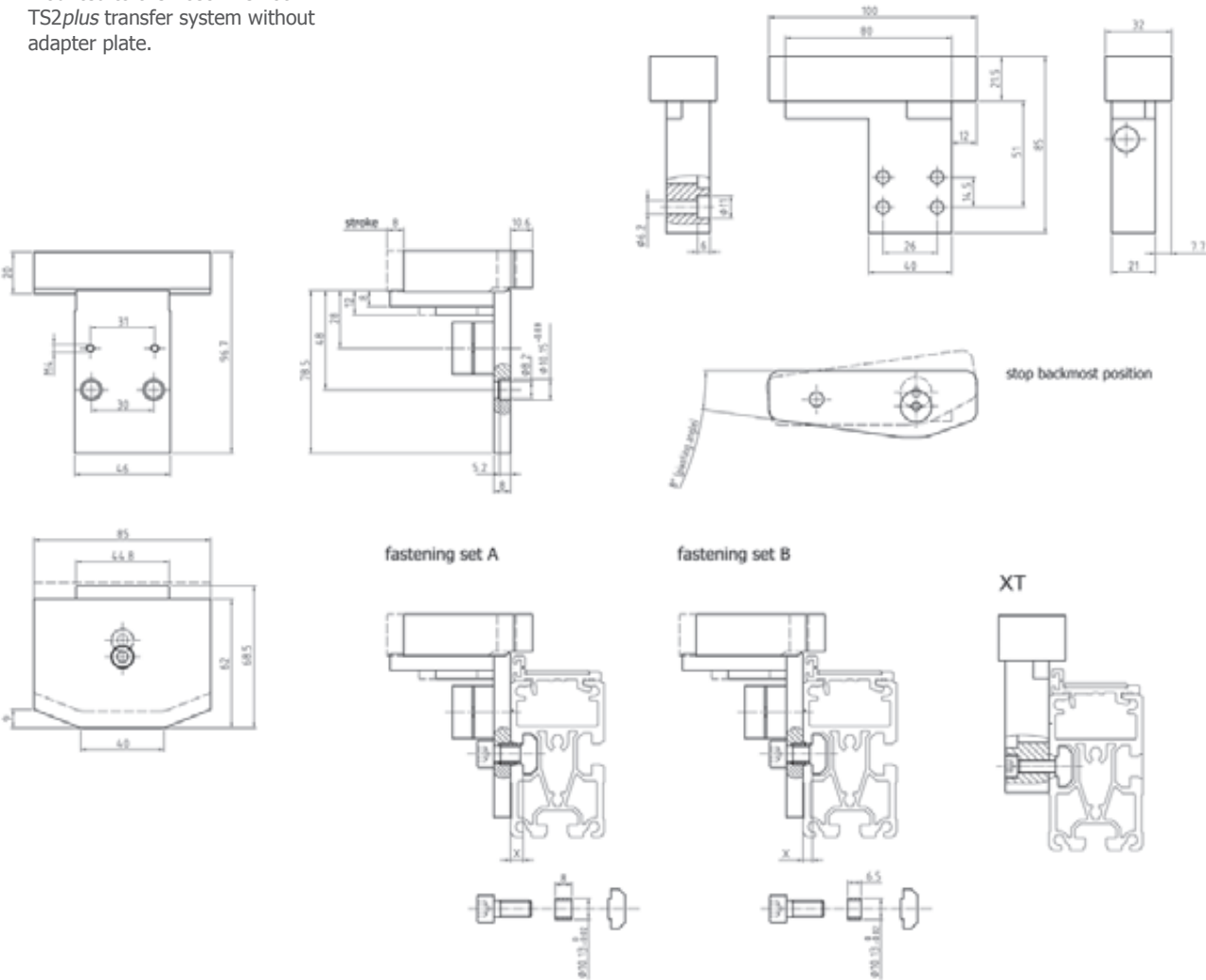
Position sensors serve for monitoring ranges and as the end position of the pallet holder during transverse transport.

The presence of a pallet holder can be signaled in conjunction with a proximity switch.

The separating stop DP can be mounted to the Bosch Rexroth TS2plus transfer system without adapter plate.

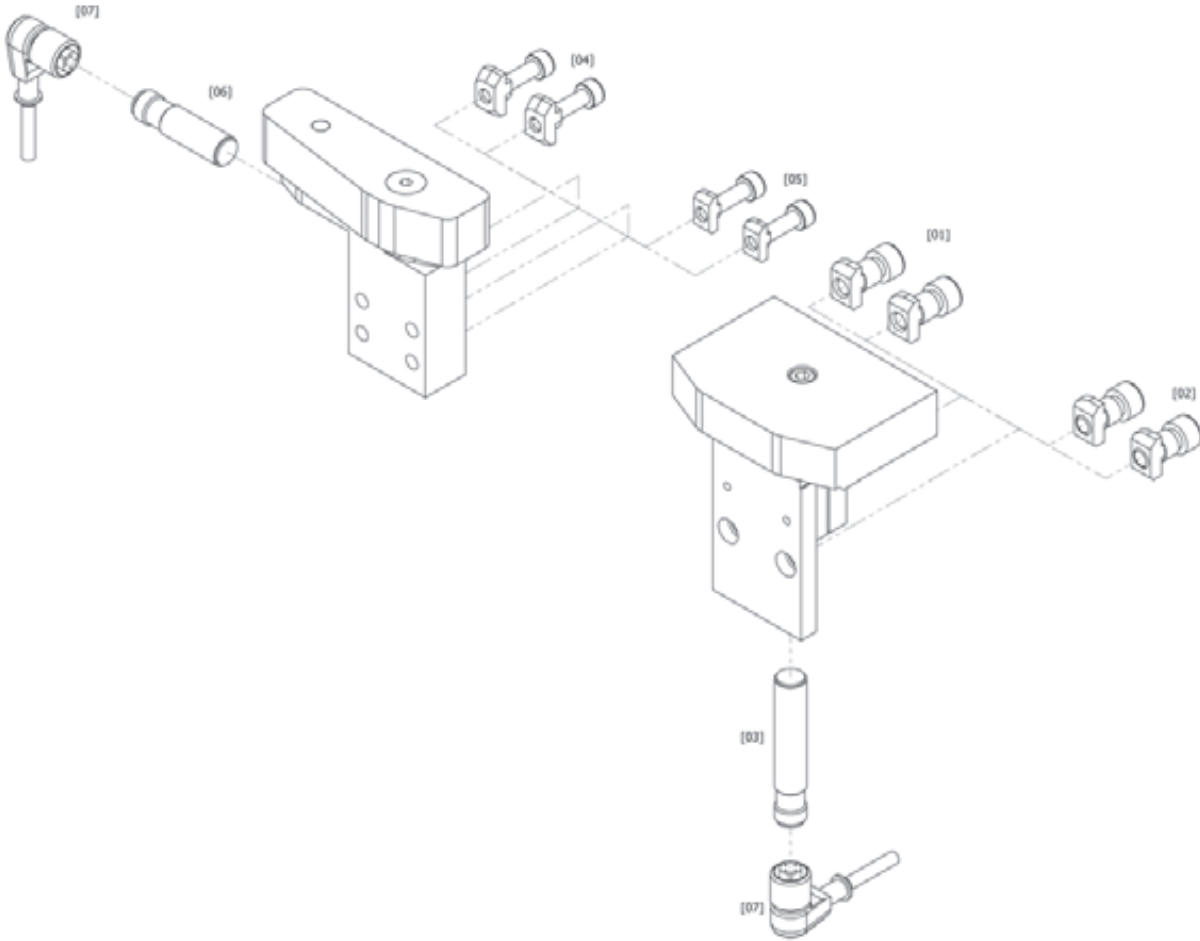
Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.



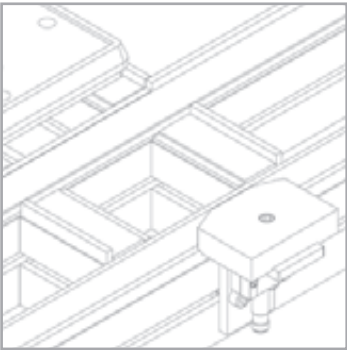
Step 2 | Select accessories

Dimensions of basic type | Download CAD data www.woerner-gmbh.com



Delta P | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Fastening set				
[01]	Fastening set A	for DP - AU with long spacer sleeve	44000160	
[02]	Fastening set B	for DP - AU with short spacer sleeve	44000161	
Proximity switch				
[03]	Proximity switch	for DP - AU	19010	- 25° up to + 70°
Fastening set				
[04]	Fastening set A	for DP - AS for 10er groove	44000162	
[05]	Fastening set B	for DP - AS for 8er groove	44000163	
Proximity switch				
[06]	Proximity switch	for DP -AS	06205001	- 25° up to + 70°
Sensor cable				
[07]	Sensor cable	length: 5 m	06290003	- 25° up to + 85°



Step 1 | Determine order code

DSA

Type
DSA

Temperature range [° degrees]
- = normal - 20° bis + 80°
H = heat resistant - 20° bis + 180°*
K = cold resistant - 50° bis + 80°*

Customer-specific version [1]

[1] placed correspondingly
* on demand

DSA
Proximity switch 19010
Sensor cabel 06290003



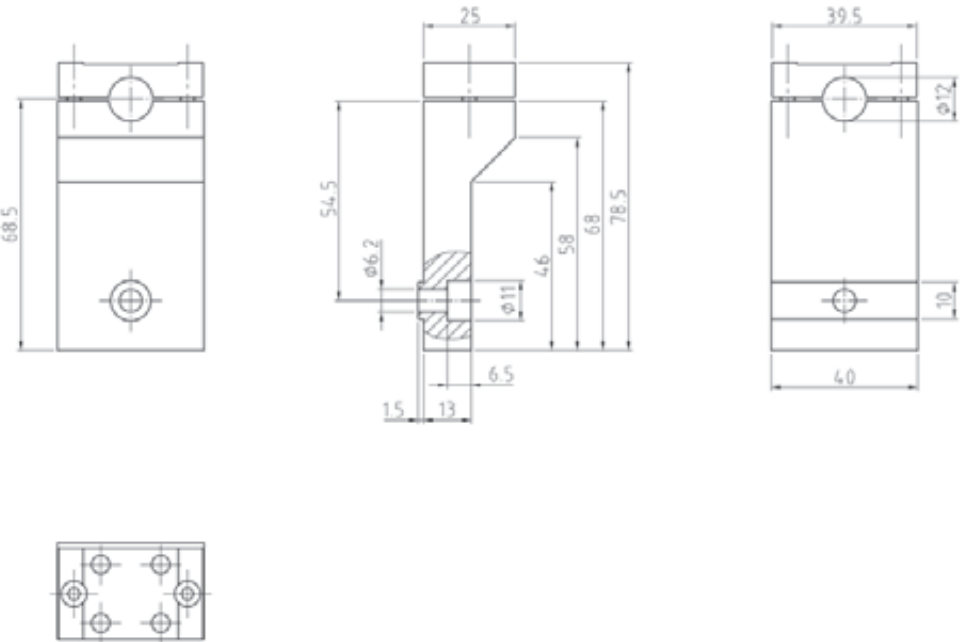
Applications

The sensor is used to determine the end position of the pallet holder.

The separating stop DSA can be mounted to the Bosch Rexroth TS2*plus* transfer system without adapter plate.

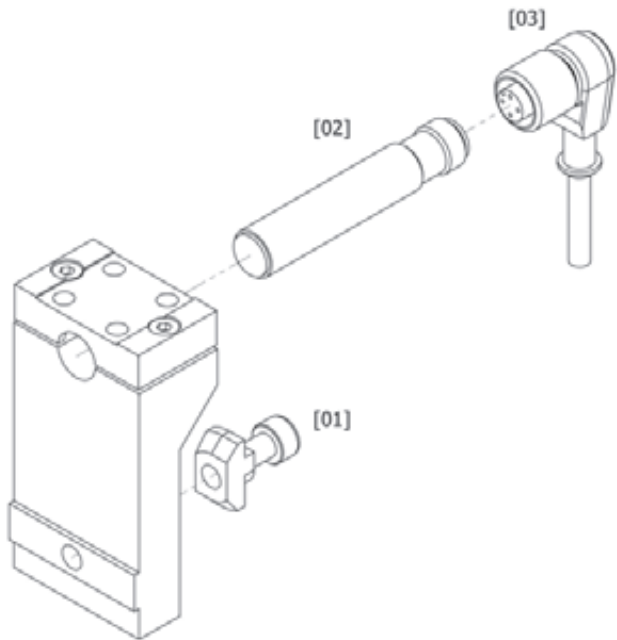
Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.



Step 2 | Select accessories

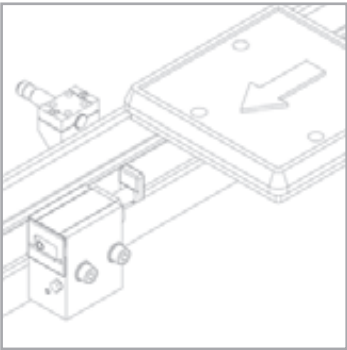
Dimensions of basic type | Download CAD data www.woerner-gmbh.com



Delta SA | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set		44000158	
[02]	Proximity switch		19010	- 25° up to + 70°
[03]	Sensor cable	length: 5 m	06290003	- 25° up to + 85°

Heat and cold resistant accessories on request



Step 1 | Determine order code

DSI

Type
DSI

Temperature range [° degrees]
- = normal - 20° bis + 80°
H = heat resistant - 20° bis + 180°*
K = cold resistant - 50° bis + 80°*

Customer-specific version [1]

[1] placed correspondingly
* on demand

DSI
Fastening set 44000159
Proximity switch 19010
Sensor cabel 06290003



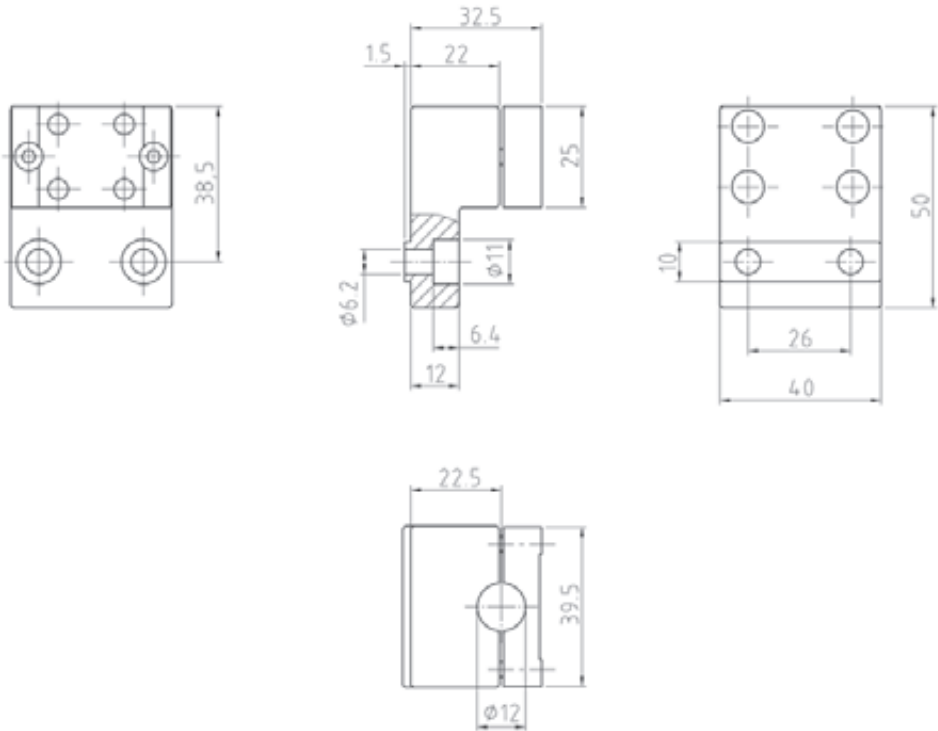
Applications

The sensor is used to determine the end position of the pallet holder.

The separating stop DSI can be mounted to the Bosch Rexroth TS2*plus* transfer system without adapter plate.

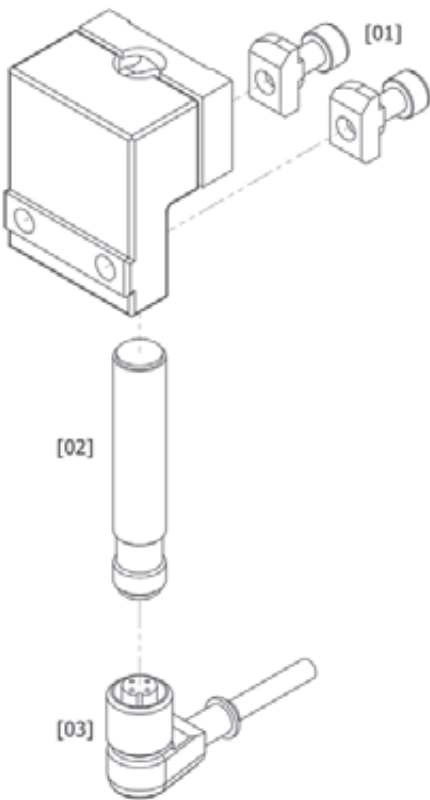
Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.



Step 2 | Select accessories

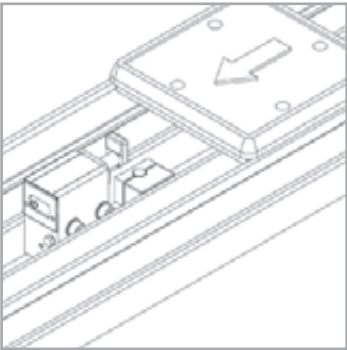
Dimensions of basic type | Download CAD data www.woerner-gmbh.com

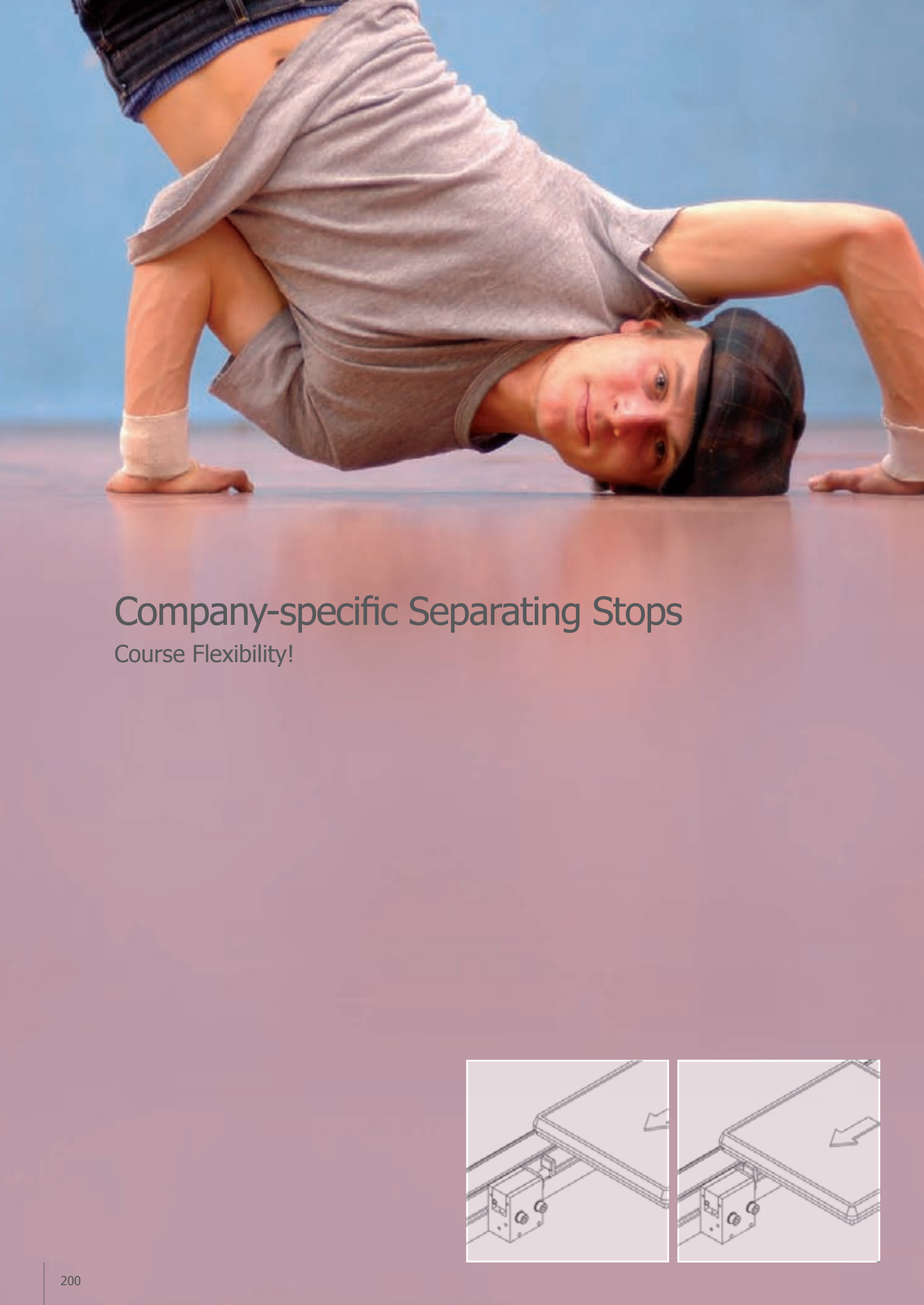


Delta SI | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set		44000159	
[02]	Proximity switch		19010	- 25° up to + 70°
[03]	Sensor cable	length: 5 m	06290003	- 25° up to + 85°

Heat and cold resistant accessories on request





Company-specific Separating Stops

Course Flexibility!



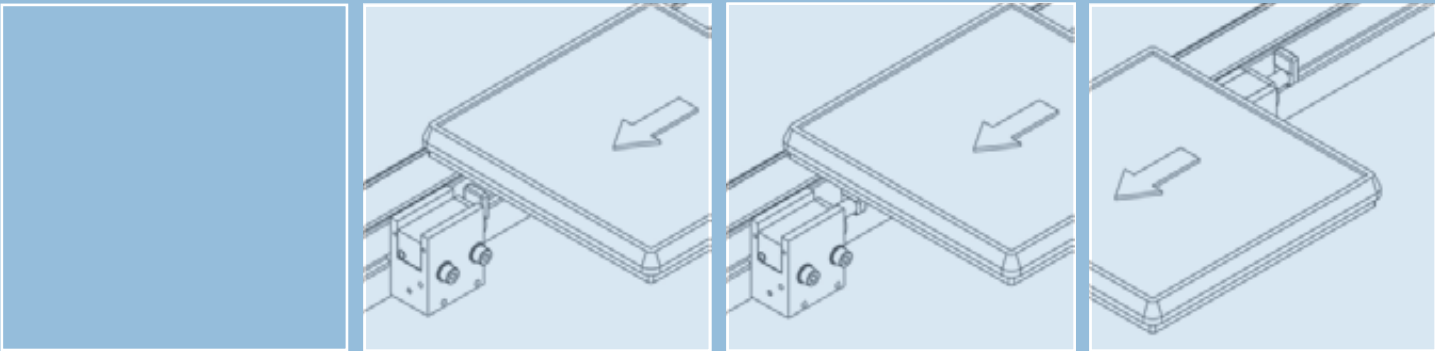
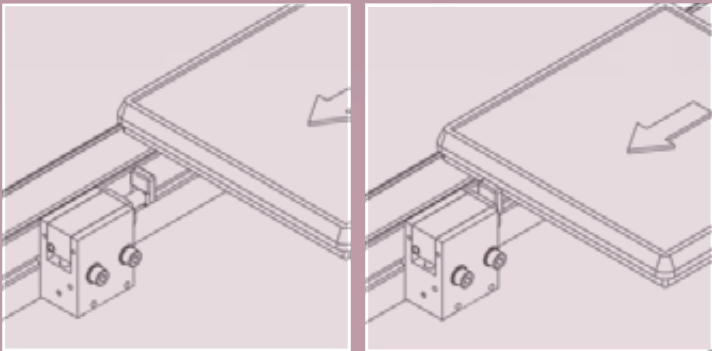
Customized in line with various system manufacturers or transfer systems:

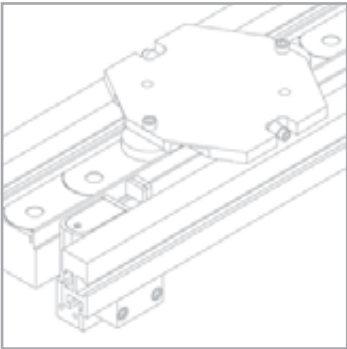
- Rexroth Bosch Group**
- Komax Gruppe, Sigma**
- Stein Automation GmbH & Co. KG**
- Flex Link Systems GmbH**

Development and design according to customer requirements

High degree of flexibility

Rapid production time





Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The separating stop DBSSI is mountable with a corresponding fastening set to the Sigma transfer system of the Komax group.

The DBSSI separating stop uses a proximity switch to detect the upper and lower position of the stopping plate.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder weights between 1 kg and 20 kg

Pallet holder loads up to 20 kg permissible (conveyor speed 6 m/min)

Dual acting
When depressurized, the separating stop remains at the position last moved to, thus increasing the lowering force and enabling higher accumulated loads to be separated and stopped.

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment
Damping force and damping speed can be set on the top of the device:

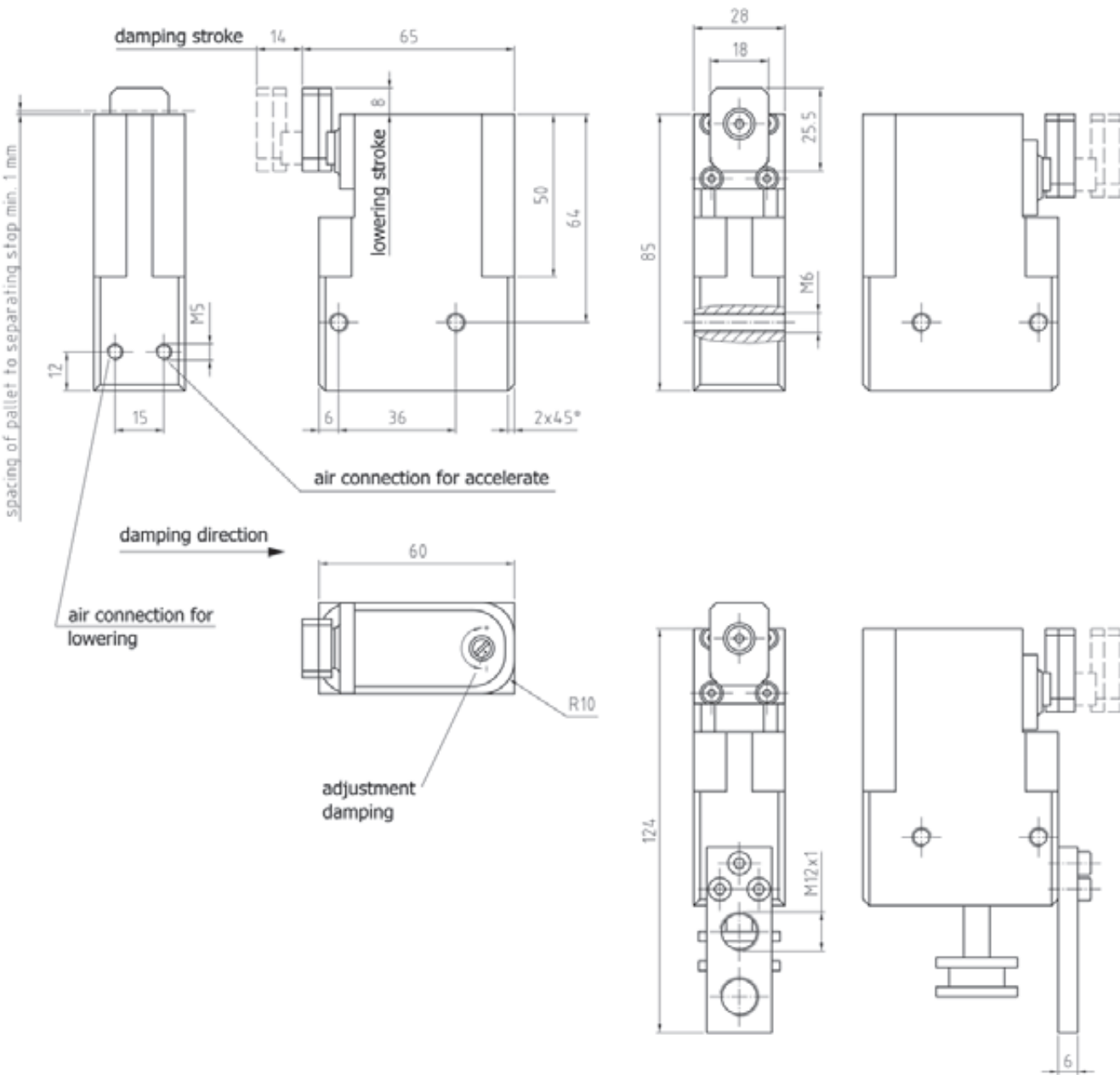
+ = increase damping force

– = decrease damping force

Technical data

Operating pressure [bar]
Treated compressed air
4 – 8 bar

Pneumatic connection
M5 thread for air connection



Delta BSSI | Damping forces

Speed v _n ¹⁾ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	1-20 kg	1-15 kg	1-12 kg	1-10 kg	1-6 kg	1-4 kg	1-2,5 kg

¹⁾ This information applies to friction of 0,07 µ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

– subject to change without notice –

– subject to change without notice –

Step 1 | Determine order code

DBSSI

Type

DBSSI

Temperature range [° degrees]

-

= normal

- 20° bis + 80°

H

= heat resistant

- 20° bis + 180°*

K

= cold resistant

- 50° bis + 80°*

Position detection

-

= without sensor

I

= with inductive sensor [1]

Customer-specific version [2]

[1]

only for normal temperature range

[2]

placed correspondingly

*

on demand



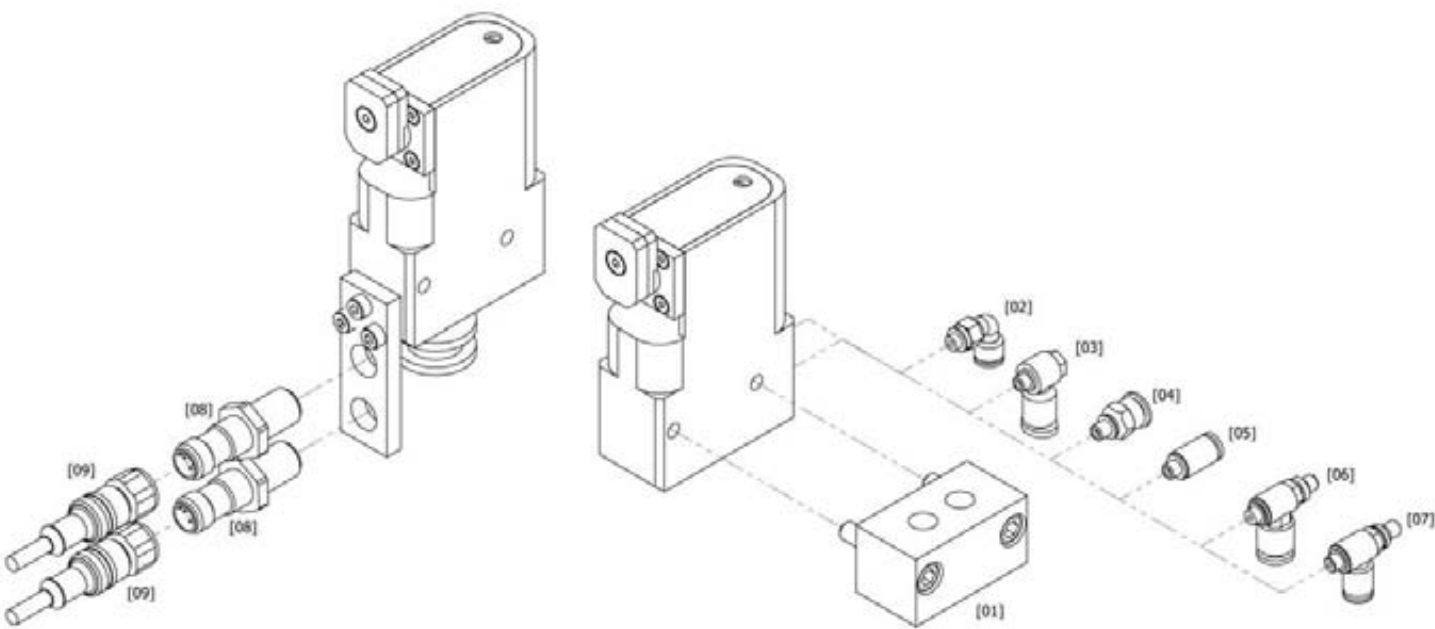
DBSSI

Sigma Separating stop, with damping | up to 20 kg

1) Specific information to the order code on the page 6/7

– subject to change without notice –

Step 2 | Select accessories



Delta BSSI | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set		44000107	
	Air connection			
[02]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[03]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[04]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[05]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[06]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	0° up to + 60°
[07]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	0° up to + 60°
[08]	Proximity switch		06205001	- 25° up to + 70°
[09]	Sensor cable	length: 5 m	06290007	- 25° up to+ 70°
	Heat and cold resistant accessories on request			

– subject to change without notice –

Sigma Separating stop, with damping | up to 20 kg



The separating stop DBSST is mountable with a corresponding fastening set to the Stein transfer system.

When depressurized, the separating stop remains at the position last moved to, thus increasing the lowering force and enabling higher accumulated loads to be separated and stopped.

– = decrease damping force

M5 thread for air connection



Step 1 | Determine order code

DBSST

Type
DBSST

Temperature range [° degrees]
– = normal - 20° bis + 80°
H = heat resistant - 20° bis + 180°*
K = cold resistant - 50° bis + 80°*

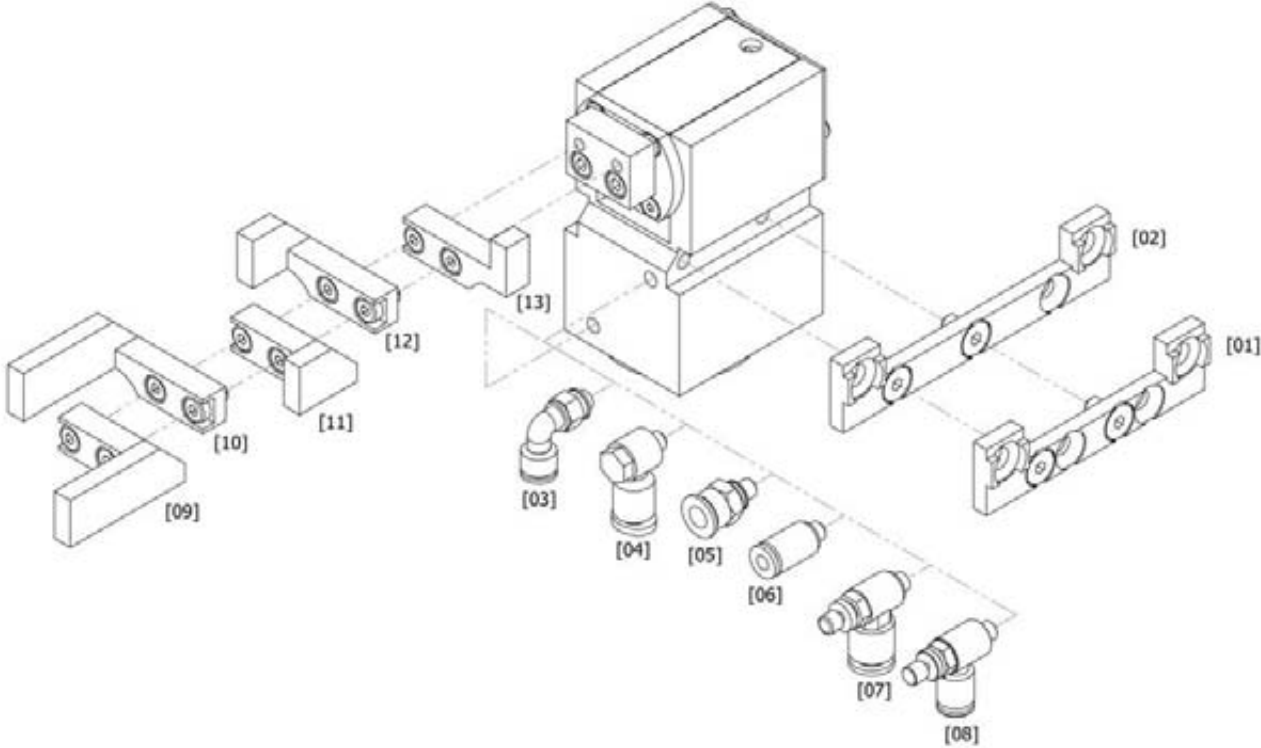
Customer-specific version [1]

[1] placed correspondingly
* on demand



DBSST

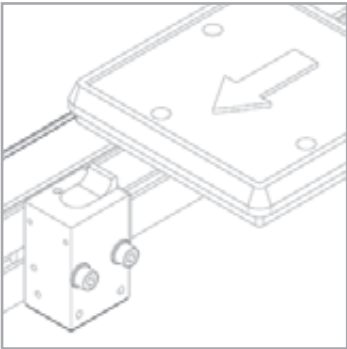
Step 2 | Select accessories



Delta BSST | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Fastening set				
[01]	Fastening set	short fastening angle	44000175	
[02]	Fastening set	long fastening angle	18589	
Air connection				
[03]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[04]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[05]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[06]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[07]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	- 5° up to + 60°
[08]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	- 5° up to + 60°
Stop				
[09]	Stop plate	length: 40 mm, in transfer direction right	18588	
[10]	Stop plate	length: 40 mm, in transfer direction left	18587	
[11]	Stop plate	length: 20 mm, in transfer direction right	18584	
[12]	Stop plate	length: 20 mm, in transfer direction left	18579	
[13]	Stop plate	length: 08 mm, pivotable	18577	

Heat and cold resistant
accessories on request



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Use of the separating stop in automatic assembly and handling systems. Activated pneumatically.

Sturdy and economical separating stop without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The D0400FL separating stop uses a proximity switch to detect the upper and lower position of the stopping plate.

The D0400FL separating stop uses an electronic sensor to detect the upper and lower position of the stopping plate.

Attitude of lowering speed (noise optimized separating stop, without damping).

Inductive sensor facility after any time arming bar.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Stop with thread, untempered

Pneumatic separating stop

Pallet holder loads up to 400 kg permissible (conveyor speed 6 m/min)

Detachable stock with thread drilling to the attachment of custom-designed stop plates

Simply convertible from
EW = single acting to
DW = dual acting

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Dual acting

When depressurized, the separating stop remains at the position last moved to, thus increasing the lowering force and enabling higher accumulated loads to be separated and stopped.

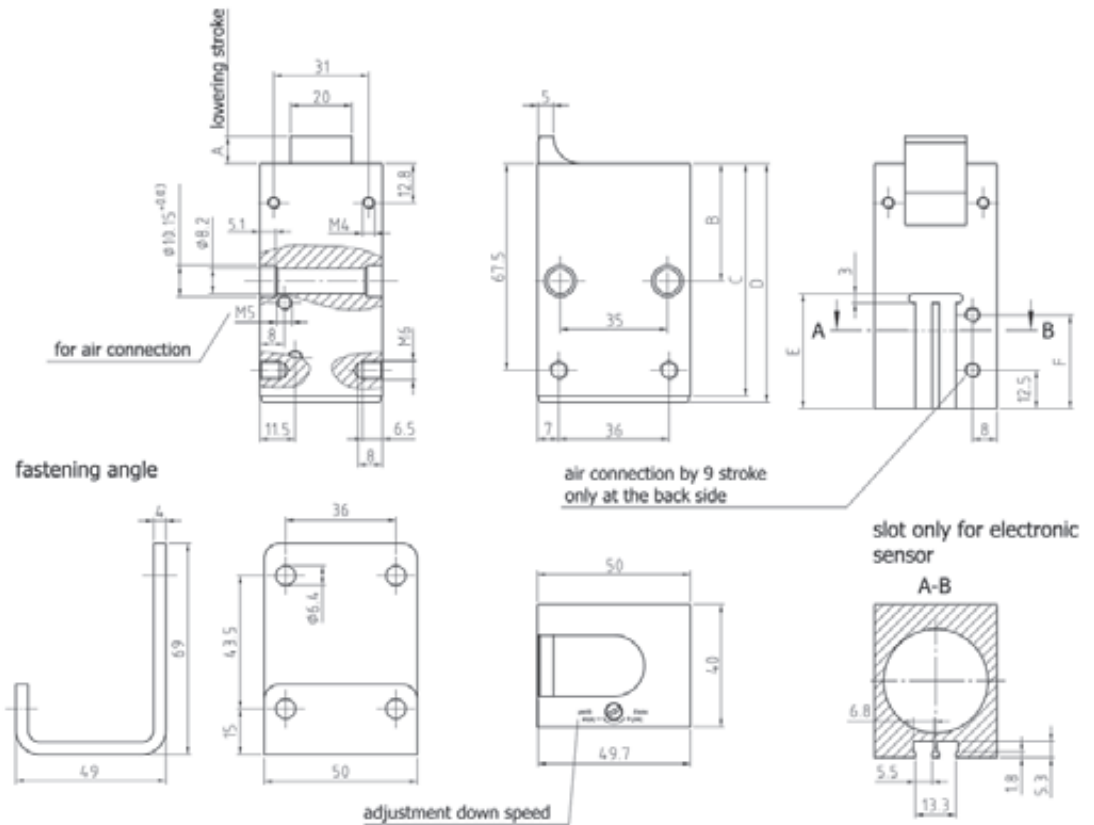
Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

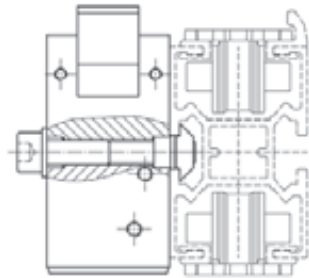
Technical data

Operating pressure [bar]
Treated compressed air
4 – 8 bar

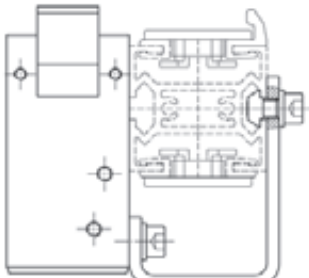
Pneumatic connection
M5 thread for air connection



XT

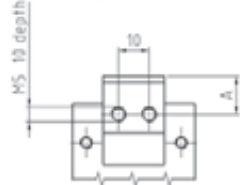


XT-compact



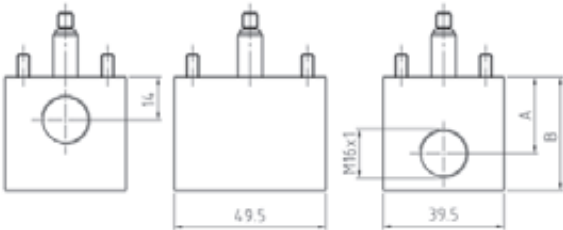
	9 stroke single acting	15 stroke single acting	9 stroke dual acting	15 stroke dual acting	9 stroke electr. single acting	15 stroke electr. single acting	9 stroke electr. dual acting	15 stroke electr. dual acting
A	9	15	9	15	9	15	9	15
B	38,5	38,5	38,5	38,5	38,5	38,5	38,5	38,5
C	76	88	76	88	80	92	80	92
D	78	90	78	90	-	-	-	-
E	-	-	-	-	37,5	44,5	37,5	44,5
F	30,5	37,5	30,5	37,5	34,5	41	34,5	41

stop with thread



	9 stroke	15 stroke
A	12,5	17,5

position detection



	9 stroke	15 stroke
A	25	31
B	37	43

Delta 0400FL | Stopping forces

Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	400 kg	300 kg	250 kg	200 kg	110 kg	65 kg	50 kg

Separating stop for Flex Link I up to 400 kg

Separating stop for Flex Link I up to 400 kg

[illegible]

[1] only for normal temperature range
[2] placed correspondingly



D0400FL - 09 - EW

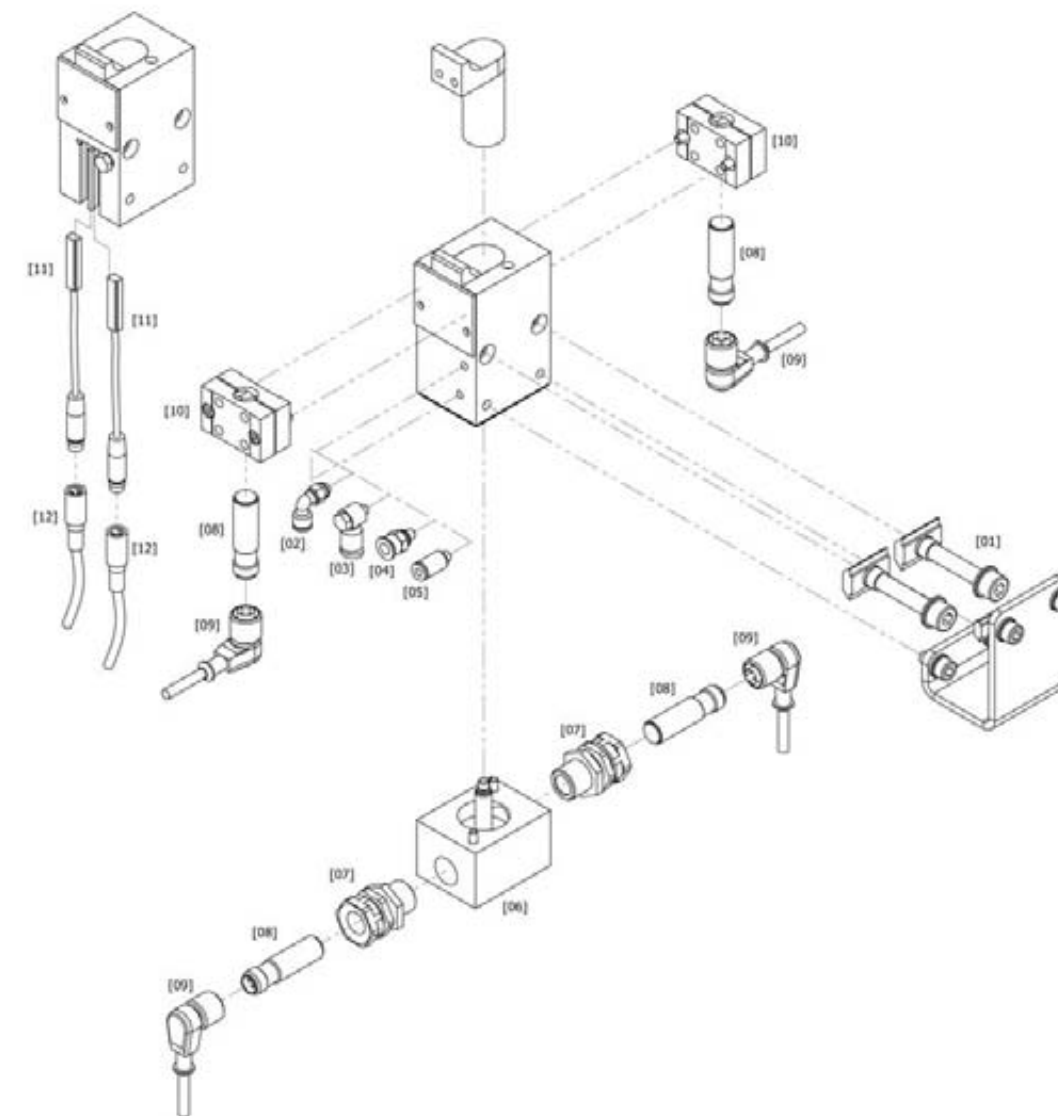


D0400FL - 09 - EW
Clamp 30539
Position detection for 9 stroke 44000152



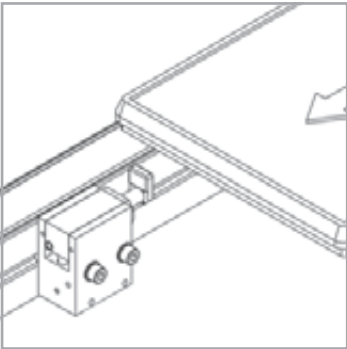
D0400FL - 09 - EW - E
Electronic sensor 18620

Step 2 | **Select accessories**

Delta 0400FL | **Accessories**

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set		44000118	
	Air connection			
[02]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[03]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[04]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[05]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
	Position detection sensor			
[06]	Inductive sensor	for 9 stroke	44000152	
	upper and lower position	for 15 stroke	44000153	
[07]	Clamp		30539	- 25° up to + 70°
[08]	Proximity switch	inductive	06205001	- 25° up to + 70°
[09]	Sensor cable	for inductive proximity switch	06290003	- 25° up to + 85°
[10]	Switch holder	for INI Ø 12 mm	19100	- 50° up to + 70°
[11]	Electronic sensor		18620	- 25° up to + 70°
[12]	Sensor cable	for electronic sensor	06290001	- 25° up to + 80°

Heat and cold resistant
accessories on request



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The DBSFL separating stop uses a proximity switch to detect the upper and lower position of the stopping plate.

The DBSFL separating stop uses an electronic sensor to detect the upper and lower position of the stopping plate.

Design

Aluminum basic housing with hard-anodizing coating

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder weights between 1 kg and 60 kg

Pallet holder loads up to 60 kg permissible (conveyor speed 6 m/min)

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

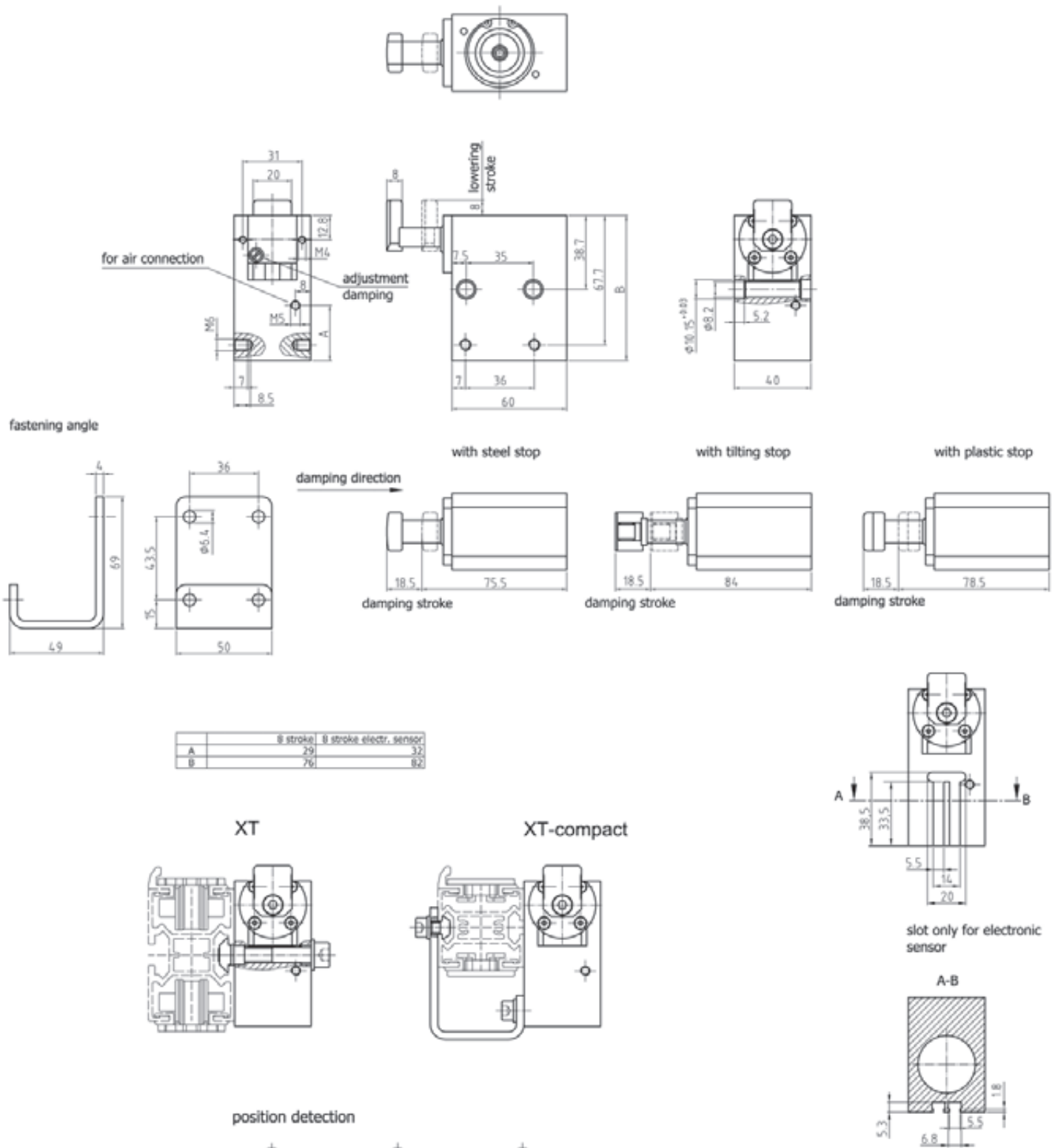
Damping force and damping speed can be set on the back of the device:

- + = increase damping force
- = decrease damping force

Technical data

Operating pressure [bar]
Treated compressed air
4 – 8 bar

Pneumatic connection
M5 thread for air connection



Delta BSFL | Damping forces

Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg] DBSFL - 20	1-20 kg	1-10 kg	1-10 kg	1-10 kg	1-7 kg	1-5 kg	1-3 kg
Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg] DBSFL - 60	3-60 kg	3-40 kg	3-35 kg	3-30 kg	3-24 kg	3-18 kg	3-10 kg

¹⁾ This information applies to friction of 0,07 µ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

– subject to change without notice –

– subject to change without notice –

Type	DBSFL
Weight range [kg]	20 = 1-20 kg 60 = 3-60 kg
Temperature range [° degrees]	- = normal - 20° bis + 80° H = heat resistant - 20° bis + 180° K = cold resistant - 50° bis + 80°*
Position detection sensor	- = without sensor E = electronic sensor [1] inductive sensor (see accessories)
Stop	- = steel stop KI = tilt stop KU = plastic stop [1] KA = plastic stop, antistatic [1]
Query	- = without sensor S = query stop plate retracted [1]
Customer-specific version [2]	

[1] only for normal temperature range

[2] placed correspondingly

* on demand



DBSFL - 60
Fastening set 44000118 (without angle fastening set)

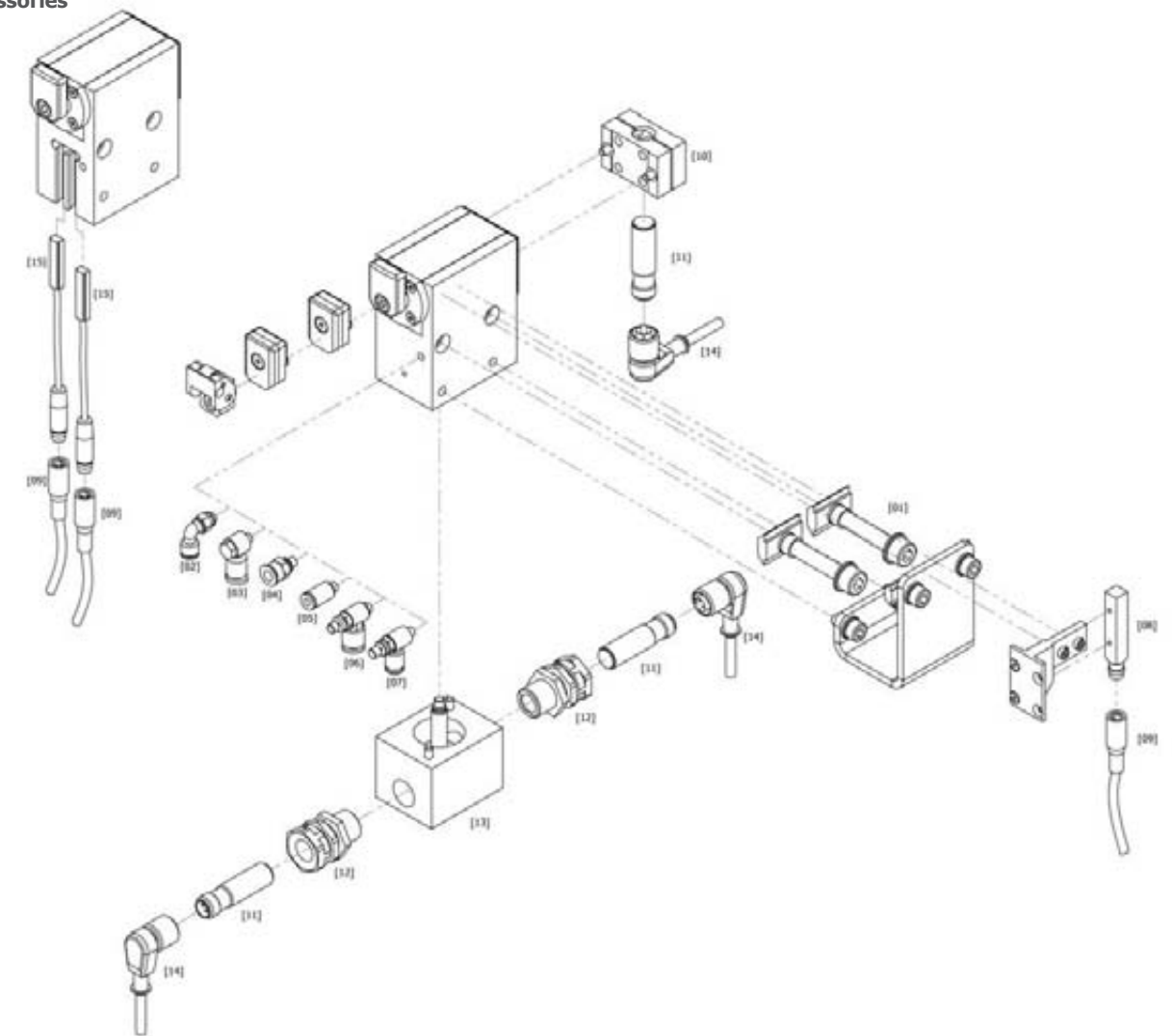


DBSFL - 60
Fastening set 44000118 (without angle fastening set)
Clamp 30539
Position detection for 8 stroke 44000152
Angular air connection 10519

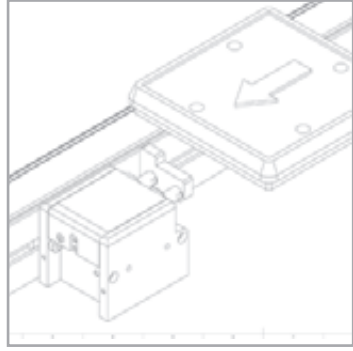


DBSFL - 60 - E
Fastening set 44000118 (without angle fastening set)
Electronic sensor 18620
Angular air connection 10519

Step 2 | Select accessories

Delta BSFL | **Accessories**

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set		44000118	
	Air connection			
[02]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[03]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[04]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[05]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[06]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	0° up to + 60°
[07]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	0° up to + 60°
[08]	Proximity switch	query stop plate retracted	19015	- 25° up to + 75°
[09]	Sensor cable	length: 5 m for 18620 and 19015	06290001	- 25° up to + 80°
[10]	Switch holder		19100	- 50° up to + 70°
[11]	Proximity switch		06205001	- 25° up to + 70°
[12]	Clamp		30539	- 25° up to + 70°
[13]	Position detection sensor	inductive query upper and lower position	44000152	
[14]	Sensor cable	length: 5 m for 06205001	06290003	- 25° up to + 85°
[15]	Electronic sensor		18620	- 25° up to + 70°



Applications

Stopping one or more accumulated pallet holders at defined stop areas. Application for conveying shock-sensitive or fragile parts. Use of the separating stop in automatic assembly and handling systems. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical separating stop with damping. The impact force is consequently reduced by up to 95% in comparison to separating stops without damping. Can be used at conveyor speeds of 6 m/min to 36 m/min.

The DBS150FL separating stop uses a proximity switch to detect the upper and lower position of the stopping plate.

Design

Aluminum basic housing with
hard-anodizing coating

Stop made from hardened steel

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder weights between 5 kg and 150 kg

Pallet holder loads up to 150 kg permissible (conveyor speed 6 m/min)

Single acting

When depressurized, the separating stop goes into the lock position via a spring, thus contributing significantly to process safety.

Dual acting

When depressurized, the separating stop remains at the position last moved to, thus increasing the lowering force and enabling higher accumulated loads to be separated and stopped.

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment

Damping force and damping speed can be set on the back of the device:

+ = increase damping force

– = decrease damping force

Technical data

Operating pressure [bar]

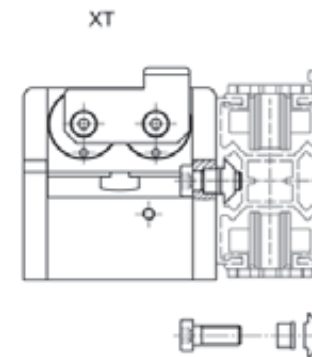
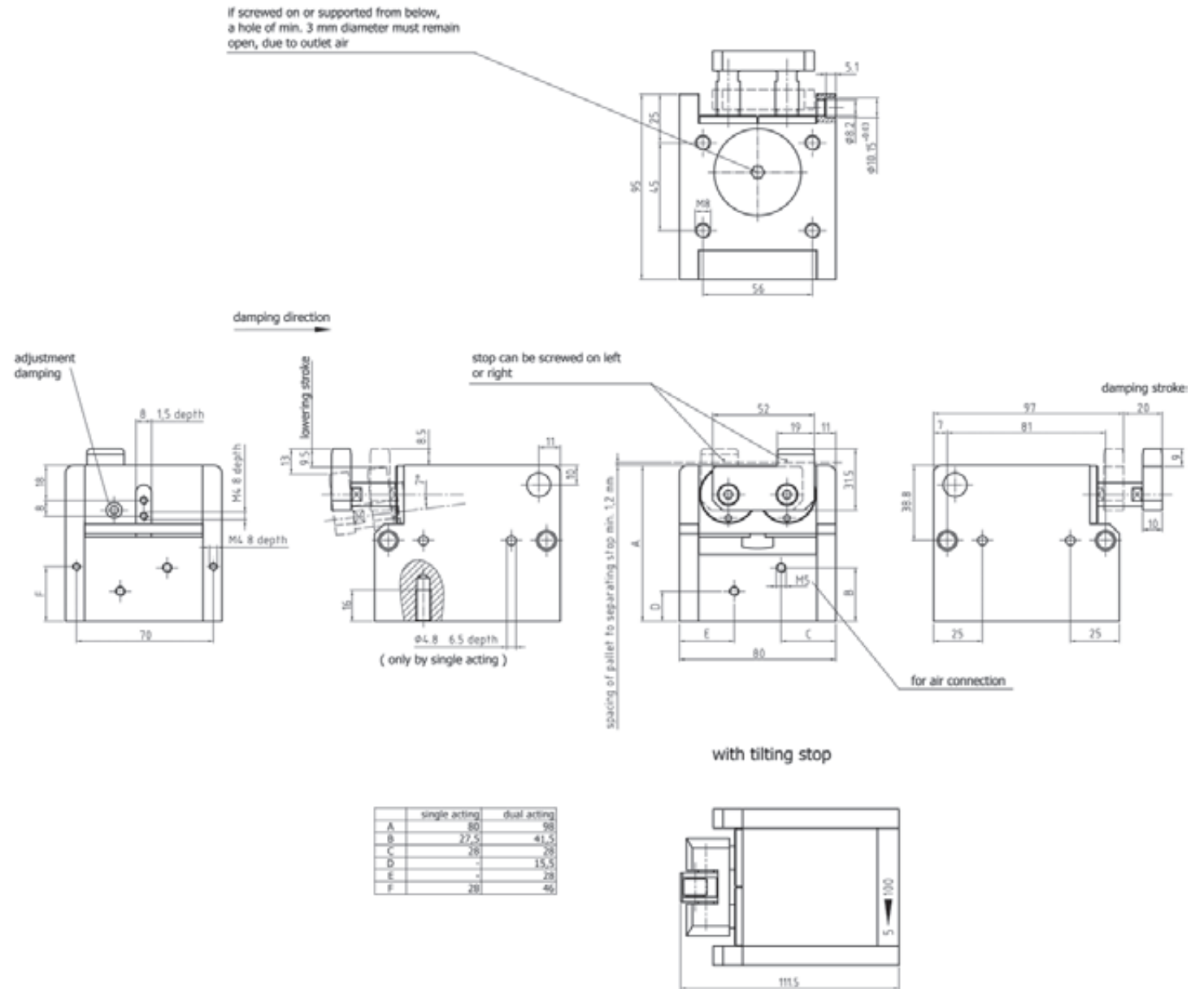
Treated compressed air
4 – 8 bar

Pneumatic connection

M5 thread for air connection



Dimensions of basic type | Download CAD data www.woerner-gmbh.com



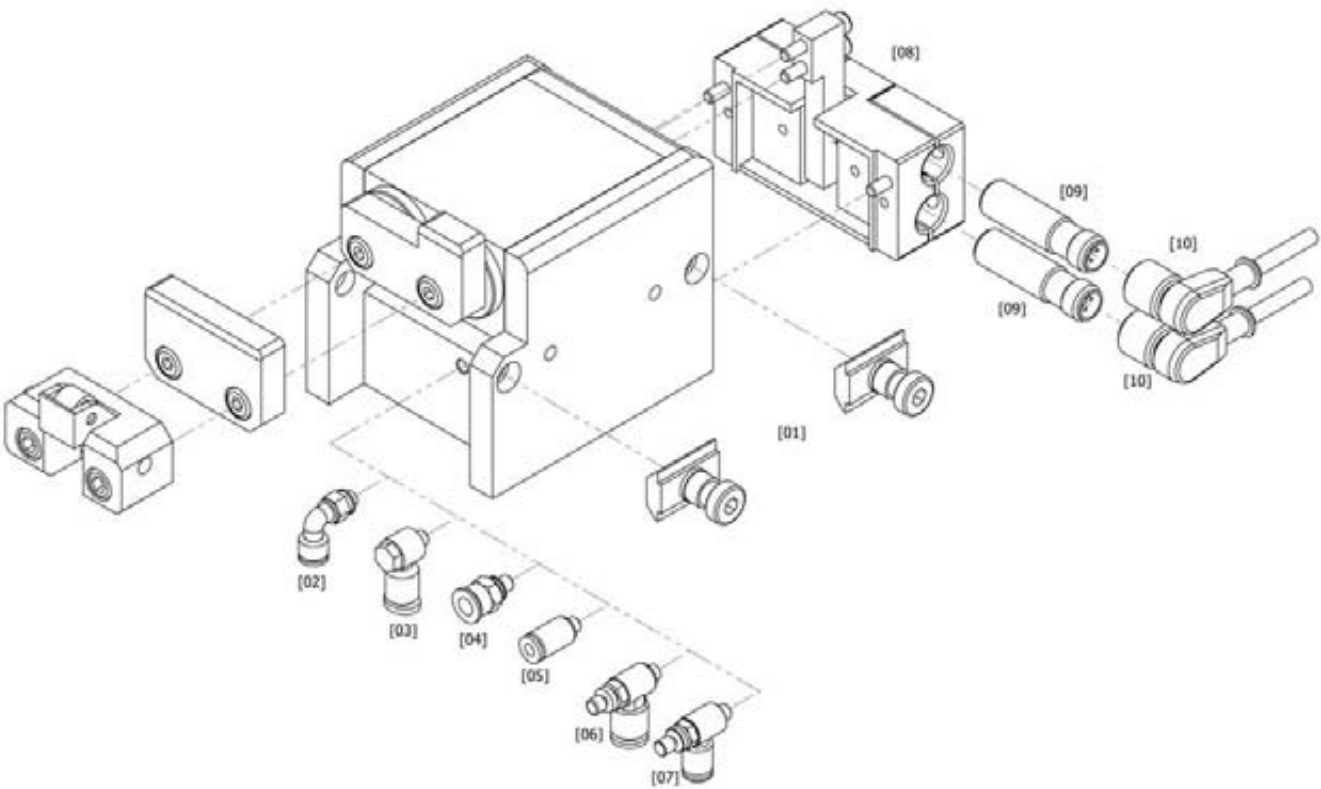
Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg]	5-150 kg	5-100 kg	5-100 kg	5-90 kg	5-55 kg	5-35 kg	5-25 kg

Step 1 | Determine order code

Type	DBS150FL
Function	EW = single acting DW = dual acting
Temperature range [° degrees]	- = normal - 20° bis + 80° H = heat resistant - 20° bis + 180° K = cold resistant - 50° bis + 80°*
Stop	- = steel stop 19 mm broad S50 = steel stop 50 mm broad KI = tilt stop
Customer-specific version [1]	[1] placed correspondingly * on demand

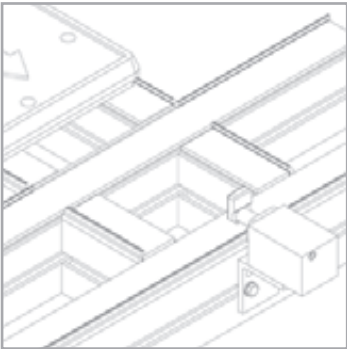


Step 2 | **Select accessories**

Delta BS150FL | **Accessories**

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set		44000178	
	Air connection			
[02]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[03]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[04]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[05]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[06]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	- 5° up to + 60°
[07]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	- 5° up to + 60°
[08]	Position detection sensor	query upper and lower position	19170	- 40° up to + 120°
[09]	Proximity switch		06205001	- 25° up to + 70°
[10]	Sensor cable	length: 5 m	06290003	- 25° up to + 85°

Heat and cold resistant
accessories on request



Applications

Angle dampers are used to damp the impact of accumulated pallet holders when changing over from a transverse to a longitudinal section and vice versa.

Application for conveying shock-sensitive or fragile parts. Use of angle dampers when channeling in pallet holders in transverse or longitudinal sections as well as when channeling out pallet holders in transverse or longitudinal sections. Pneumatic activation with infinitely adjustable damping.

Sturdy and economical angle damper. Can be used at conveyor speeds of 6 m/min to 36 m/min.

Design

Aluminum basic housing with hard-anodizing coating

Pneumatic separating stop with infinitely adjustable damping

Optimum damping at pallet holder weights between 1 kg and 60 kg

Pallet holder loads up to 60 kg permissible (conveyor speed 6 m/min)

Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.

Fine adjustment
Damping force and damping speed can be set on the back of the device:

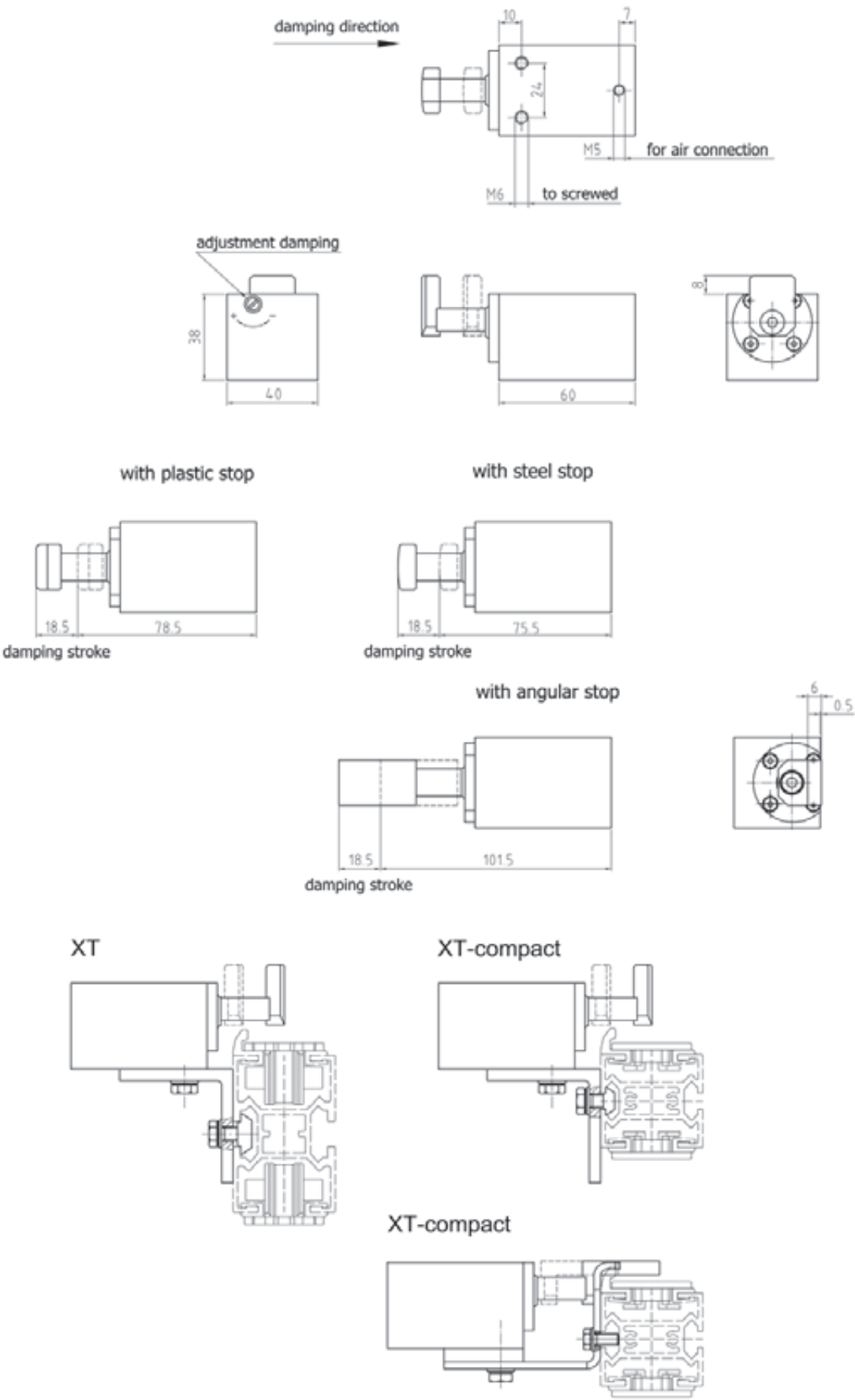
- + = increase damping force
- = decrease damping force

Technical data

Operating pressure [bar]
Treated compressed air
4 – 8 bar

Pneumatic connection
M5 thread for air connection

Separating stop function
Stop in initial position
- pneumatic



Delta ELQFL | Damping forces

Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg] DELQ - 20	1-20 kg	1-10 kg	1-10 kg	1-10 kg	1-7 kg	1-5 kg	1-3 kg
Speed $v_N^{1)}$ [m/min]	6 m/min	9 m/min	12 m/min	18 m/min	24 m/min	30 m/min	36 m/min
Weight of pallet holder [kg] DELQ - 60	3-60 kg	3-40 kg	3-35 kg	3-30 kg	3-24 kg	3-18 kg	3-10 kg

¹⁾ This information applies to friction of 0,07 μ between the pallet holder and the conveyor band for a standard Wörner stop. All weight data relates to the total weight of the pallet holder (pallet with material), not to the axial force.

– subject to change without notice –

– subject to change without notice –

DELQFL			..
Type DELQFL			
Weight range [kg] 20 = 1-20 60 = 3-60			
Temperature range [° degrees] - = normal - 20° bis + 80° H = heat resistant - 20° bis + 180° K = cold resistant - 50° bis + 80°*			
Stop - = steel stop W = angle steel stop KU = plastic stop [1] KA = plastic stop, antistatic [1]			
Customer-specific version [2]			

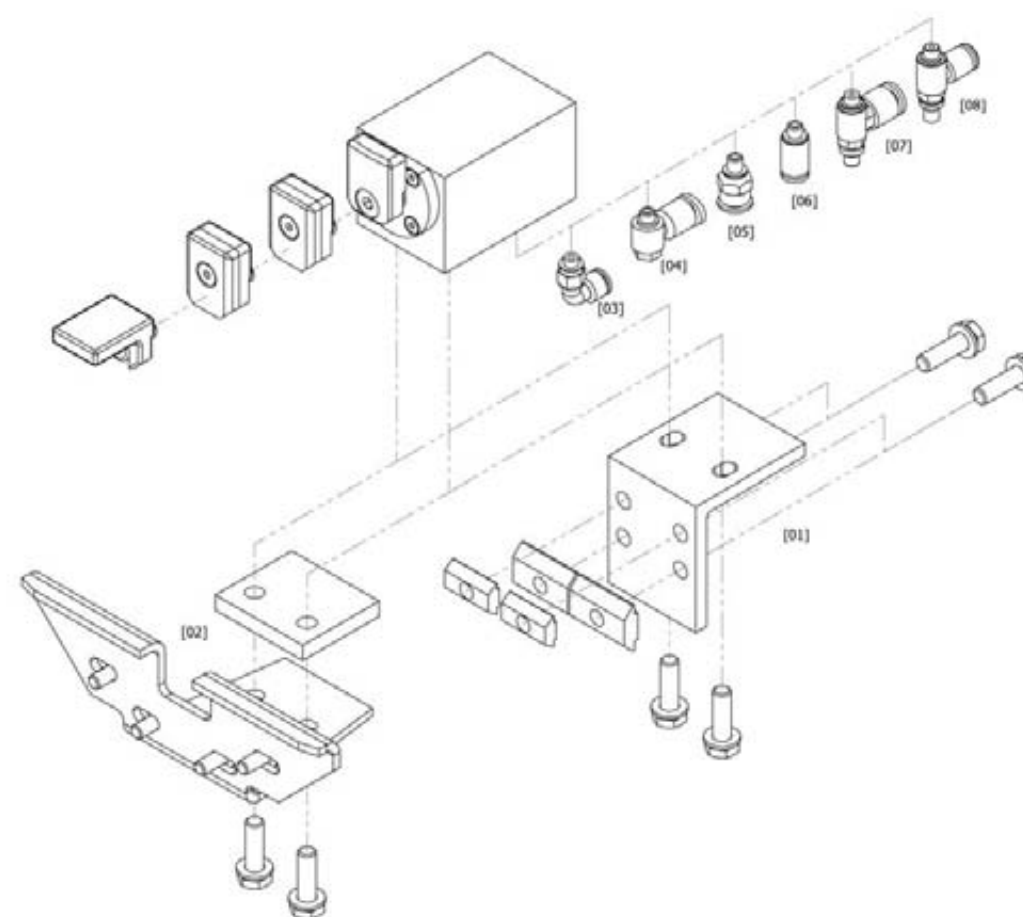
[1] only for normal temperature range
[2] placed correspondingly
* on demand



DELQFL - 60 - W



DELQFL - 60

Delta ELQFL | **Accessories**

Item no.	Product designation	Description	Order no.	Temperature range
Fastening set				
[01]	Fastening set A	for straight stop plate	44000176	
[02]	Fastening set B	for angle steel stop	44000177	
Air connection				
[03]	Angular air connection	for hose external diameter Ø 6 mm	10519	0° up to + 60°
[04]	Angular air connection	for hose external diameter Ø 4 mm	20524	0° up to + 60°
[05]	Straight air connection	for hose external diameter Ø 6 mm	11701	- 10° up to + 80°
[06]	Straight air connection	for hose external diameter Ø 4 mm	11705	- 20° up to + 80°
[07]	Delivery- and exhaust air throttle	for hose external diameter Ø 6 mm	20519	- 5° up to + 60°
[08]	Delivery- and exhaust air throttle	for hose external diameter Ø 4 mm	04510006	- 5° up to + 60°

Heat and cold resistant
accessories on request



It is possible to integrate two electronic switches on the front of the device, allowing detection of the upper and lower position of the piston rod. These are mounted in a T-groove and are variably adjustable.

Design

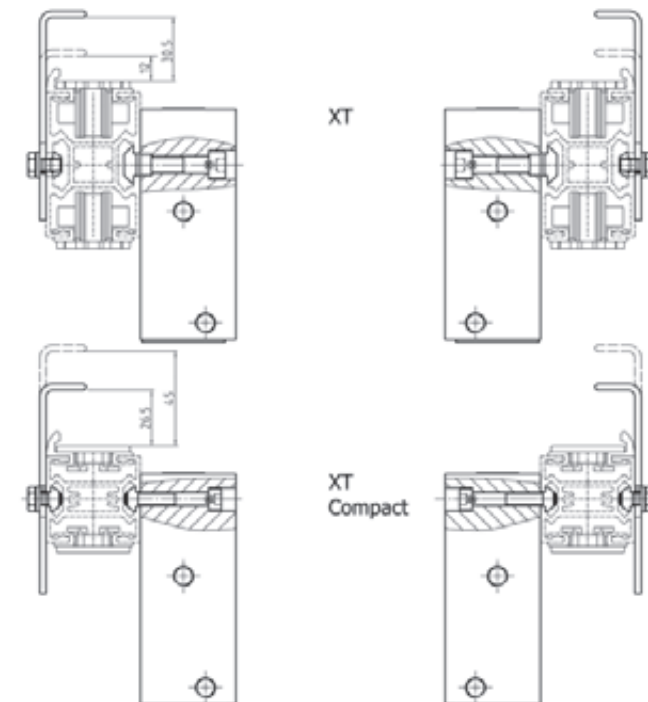
Scope/Condition of supply

Technical data

Pneumatic connection

Indexing function

optional 18065 or 18066



XT

XT
Compact

Step 1 | Determine order code

DIFL

Type

DIFL

Stroke limitation

-

= no stroke limitation

BXX= stroke limitation to XX mm [2]

Temperature range [° degrees]

-

= normal

- 20° bis + 80°

H

= heat resistant

- 20° bis + 180°*

Customer-specific version [1]

[1] only for normal temperature range
[2] XX is dummy for your stroke limitation, please indicate
* on demand

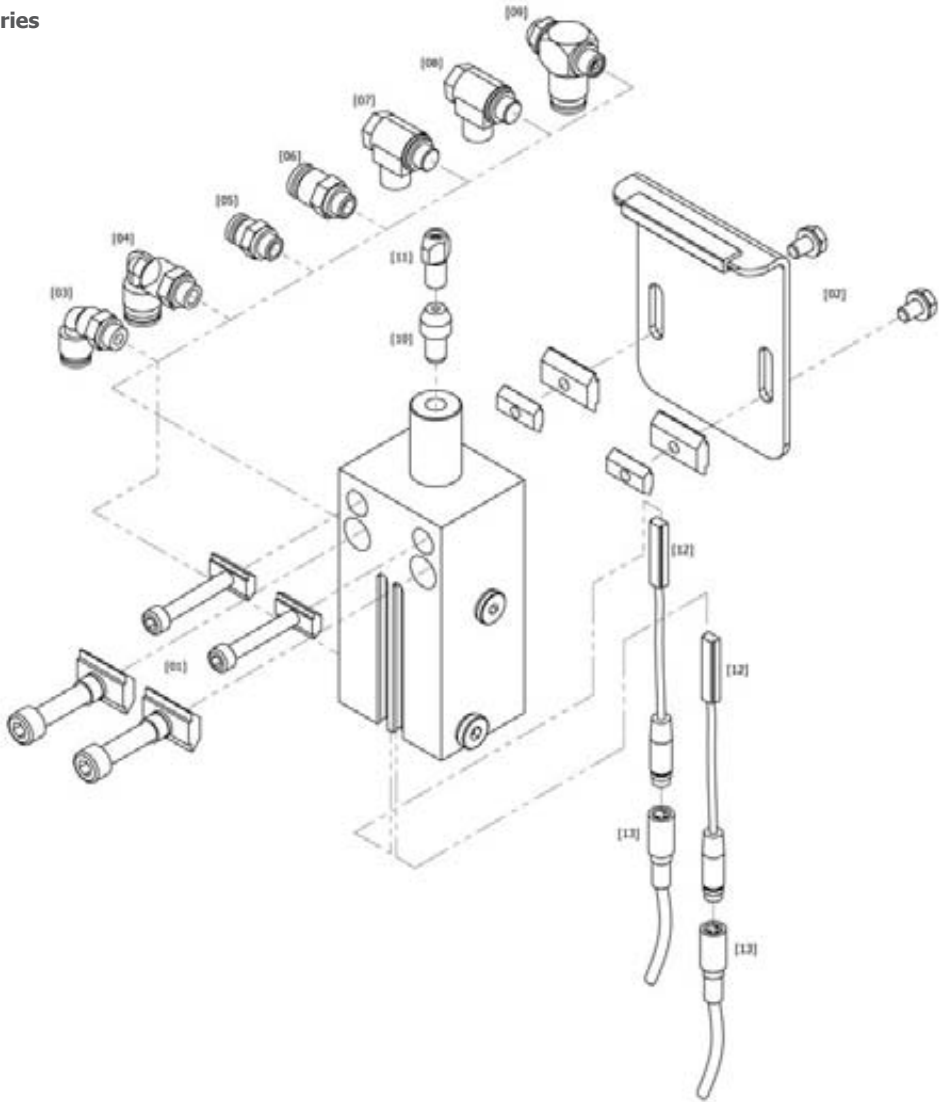


DIFL
Fastening set 44000179
Electronic sensor 18620
Exhaust air throttle 18059



Index bolts

Step 2 | Select accessories



Delta IFL | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set		44000179	
[02]	Low hold substitute		44000117	
	Air connection			
[03]	Angular air connection	for hose external diameter Ø 6 mm	13539	- 10° up to + 80°
[04]	Angular air connection	for hose external diameter Ø 8 mm	04520001	- 10° up to + 80°
[05]	Straight air connection	for hose external diameter Ø 6 mm	04520007	- 10° up to + 80°
[06]	Straight air connection	for hose external diameter Ø 8 mm	04520008	- 10° up to + 80°
[07]	Delivery air throttle	for hose external diameter Ø 6 mm	04510001	- 10° up to + 80°
[08]	Exhaust air throttle	for hose external diameter Ø 6 mm	18059	- 10° up to + 80°
[09]	Delivery air throttle	for hose external diameter Ø 8 mm	18075	0° up to + 70°
[10]	Index bolts	cylindrical Ø 12 g6	18065	
[11]		free milled Ø 12 g6	18066	
[12]	Electronic sensor		18620	- 25° up to + 70°
[13]	Sensor cable		06290001	- 25° up to + 80°
[14]	Removing tool	for the demounting of the index bolts (without illustration)	44999013	
	Heat resistant accessories	on request		

DRFL

Type

DRFL

Customer-specific version [1]

[1] placed correspondingly

DRFL
Fastening set 44000180



Applications

Primarily installed in conjunction with separating stops without damping. Anti-bounce stops prevent the pallet holder from rebounding from the separating stop after the stopping process.

The use of anti-bounce stops is especially recommended for transfer systems with low conveyor friction.

Design

Aluminum basic housing with hard-anodizing coating

Stop made from hardened steel

Spring-loaded pawl

Pallet holder minimum weight from 3 kg

Easy fastening in the groove of the section profile, can be used on left or right

Scope/Condition of supply

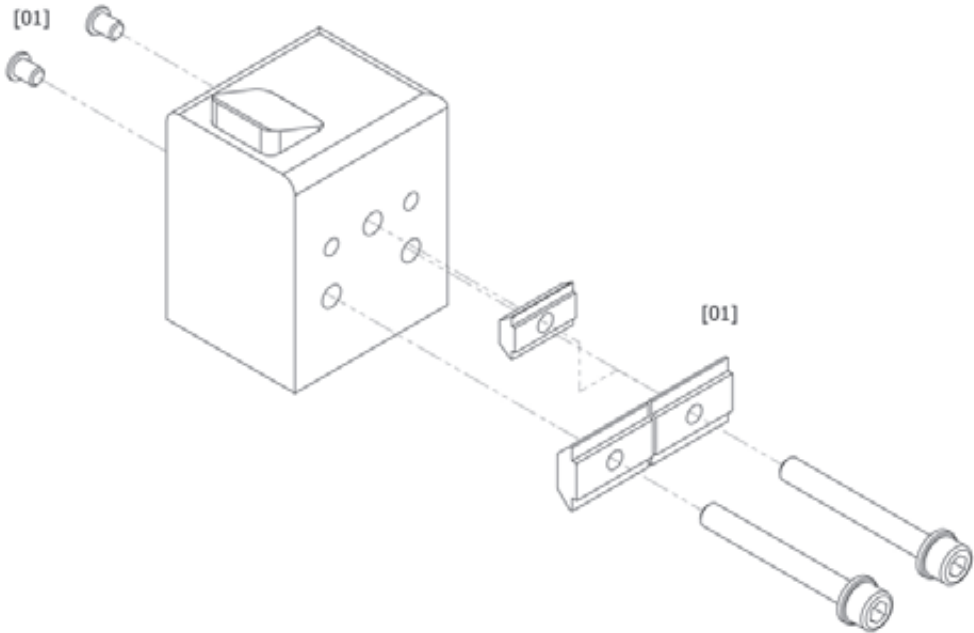
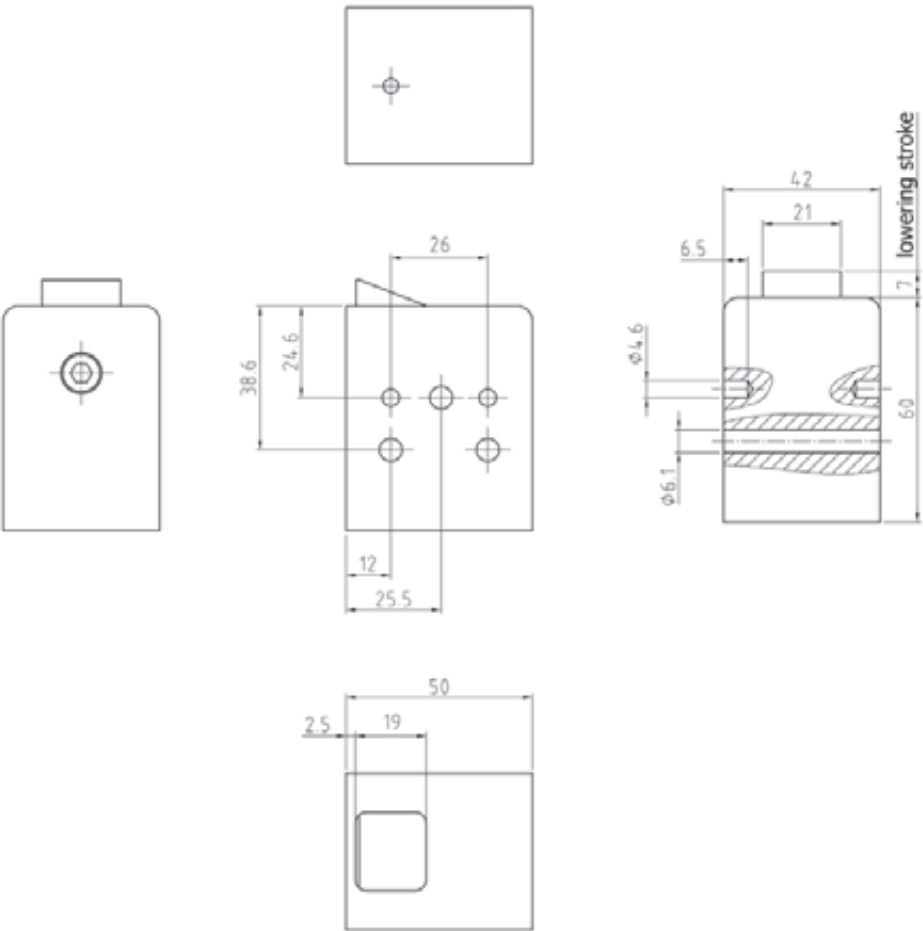
All accessory parts are supplied mounted, depending on customer request.

Technical data

Function

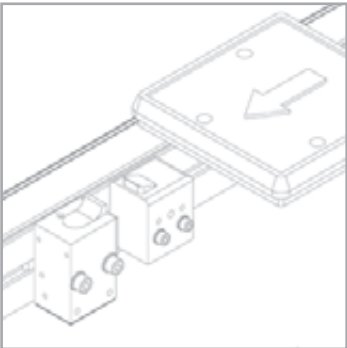
Open – through overrun of the pallet holder

Close – through spring force



Delta RFL | Accessories

Item no.	Product designation	Description	Order no.
[01]	Fastening set		44000180



Step 1 | Determine order code

DSIFL

Type
DSIFL

Temperature range [° degrees]
- = normal - 20° bis + 80°
H = heat resistant - 20° bis + 180°*
K = cold resistant - 50° bis + 80°*

Customer-specific version [1]

[1] placed correspondingly
* on demand

DSIFL
Fastening set 44000182
Proximity switch 06205001
Sensor cabel 06290003

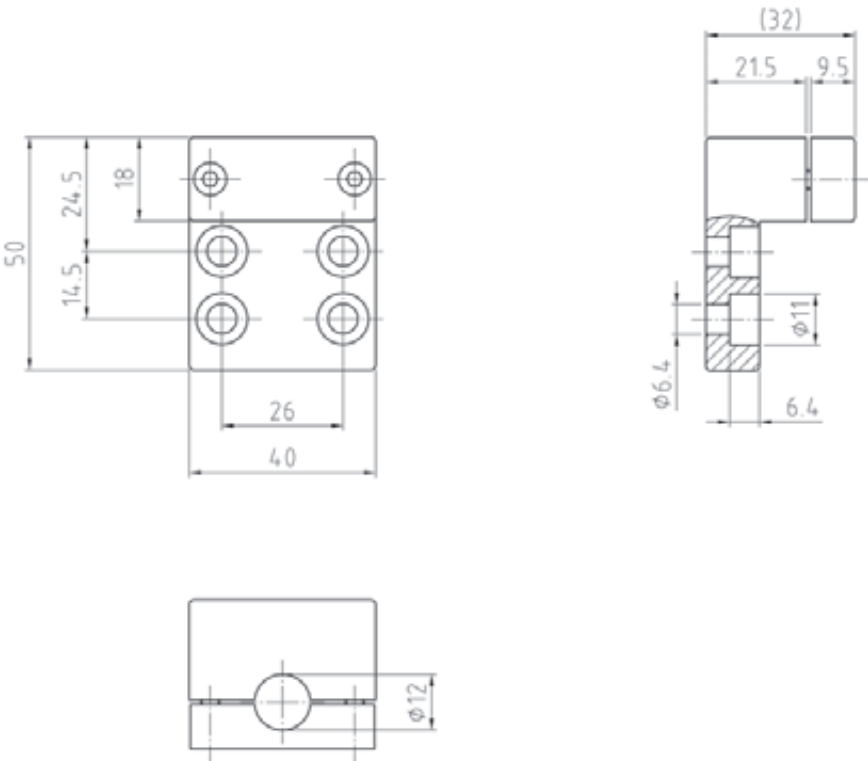


Applications

The sensor is used to determine the end position of the pallet holder.

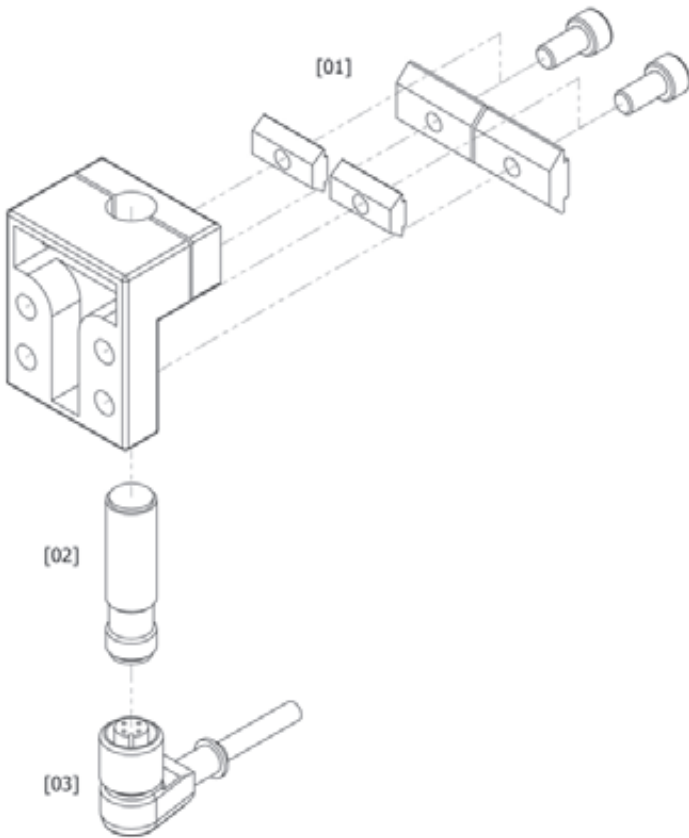
Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.



Step 2 | Select accessories

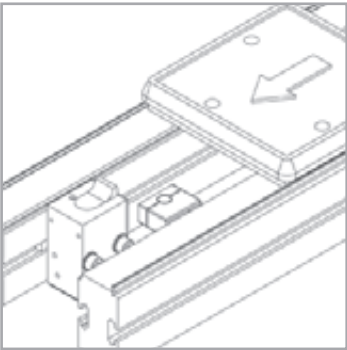
Dimensions of basic type | Download CAD data www.woerner-gmbh.com



Delta SIFL | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set		44000182	
[02]	Proximity switch		06205001	- 25° up to + 70°
[03]	Sensor cable	length: 5 m	06290003	- 25° up to + 85°

Heat and cold resistant accessories on request



Step 1 | Determine order code

DSAFL

Type
DSAFL

Temperature range [° degrees]
- = normal - 20° bis + 80°
H = heat resistant - 20° bis + 180°*
K = cold resistant - 50° bis + 80°*

Customer-specific version [1]

[1] placed correspondingly
* on demand

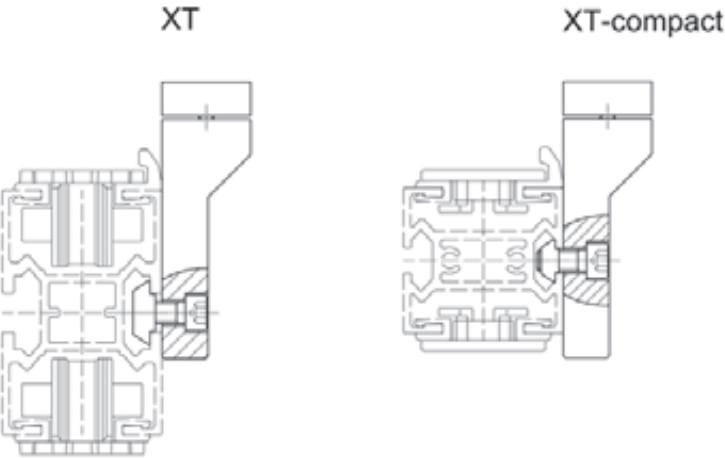
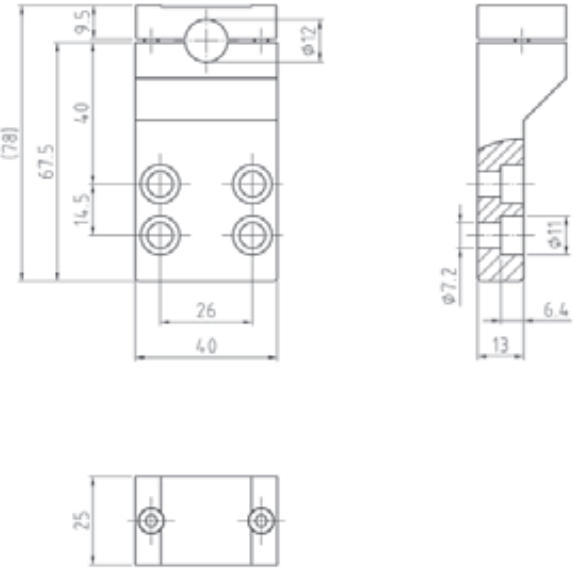


Applications

The sensor is used to determine the end position of the pallet holder.

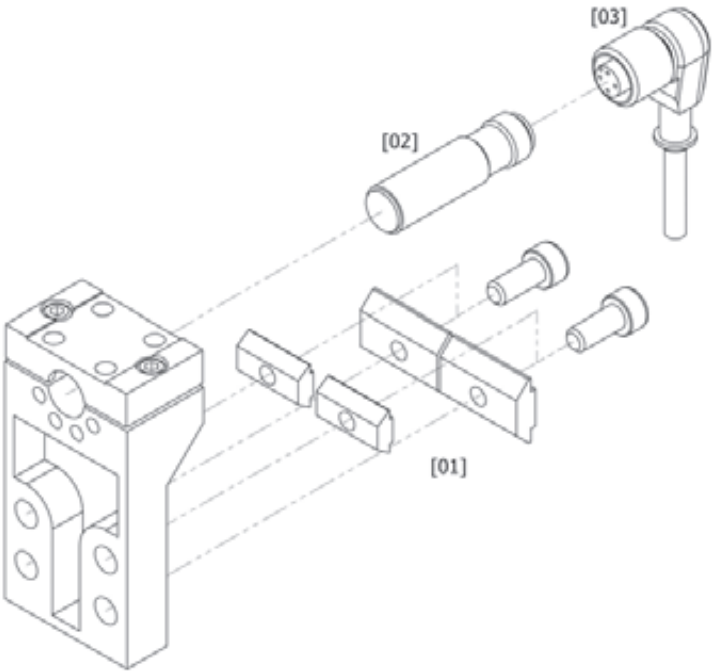
Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.



Step 2 | Select accessories

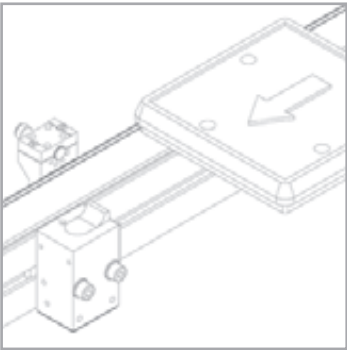
Dimensions of basic type | Download CAD data www.woerner-gmbh.com



Delta SAFL | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
[01]	Fastening set		44000181	
[02]	Proximity switch		06205001	- 25° up to + 70°
[03]	Sensor cable	length: 5 m	06290003	- 25° up to + 85°

Heat and cold resistant accessories on request



Step 1 | Determine order code

DPFL

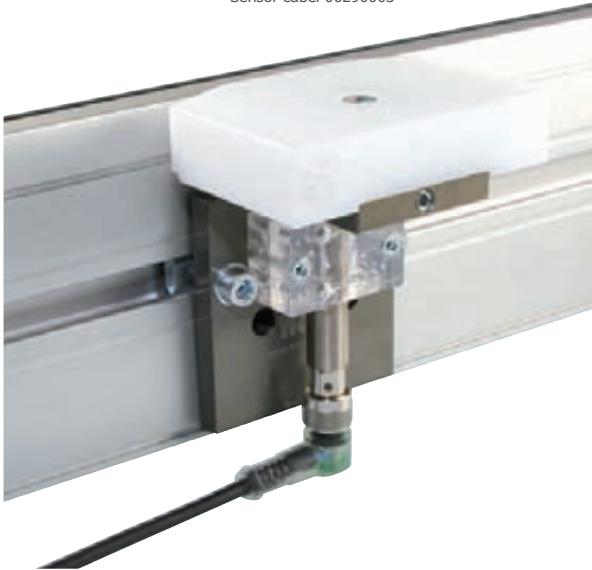
Type
DPFL

Query
AU = query lower
AS = query on the side

Customer-specific version [1]

[1] placed correspondingly

DPFL - AU
Fastening set 44000156
Proximity switch 06205001
Sensor cabel 06290003



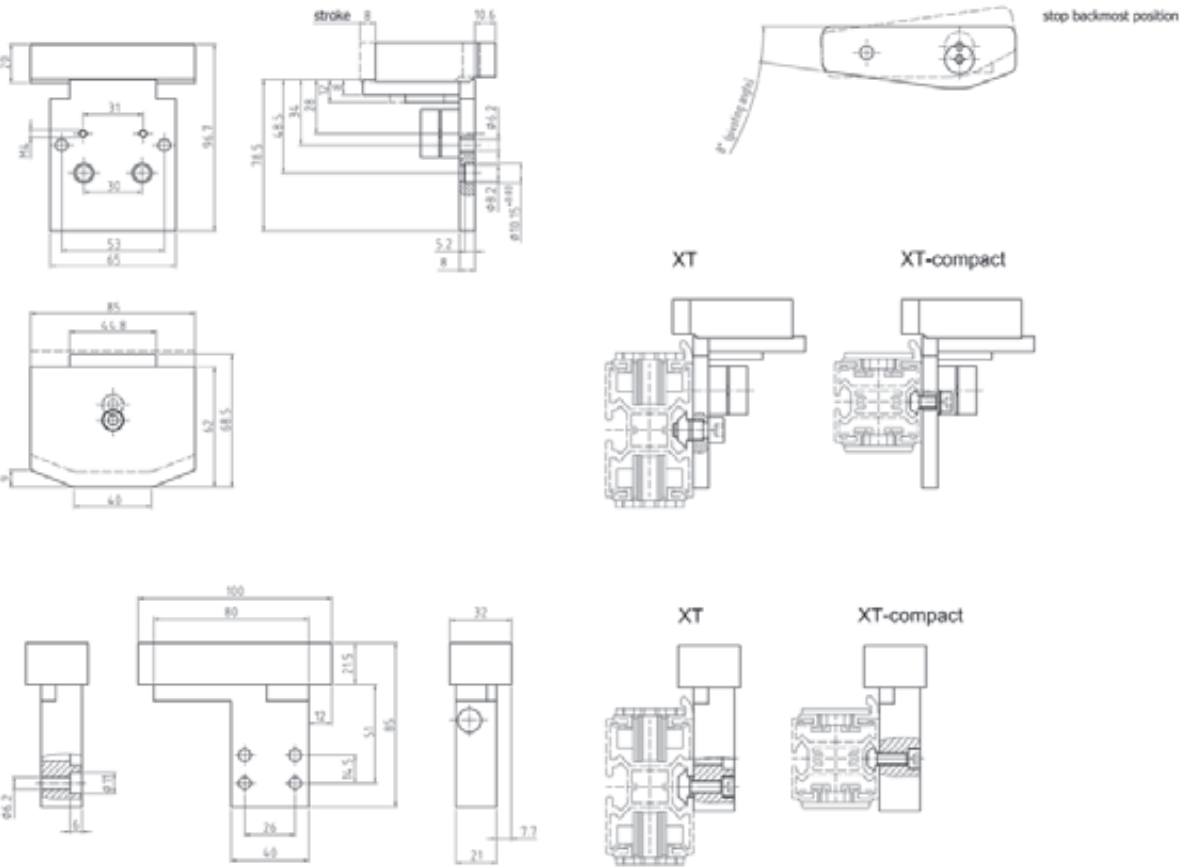
Applications

Position sensors serve for monitoring ranges and as the end position of the pallet holder during transverse transport.

The presence of a pallet holder can be signaled in conjunction with a proximity switch.

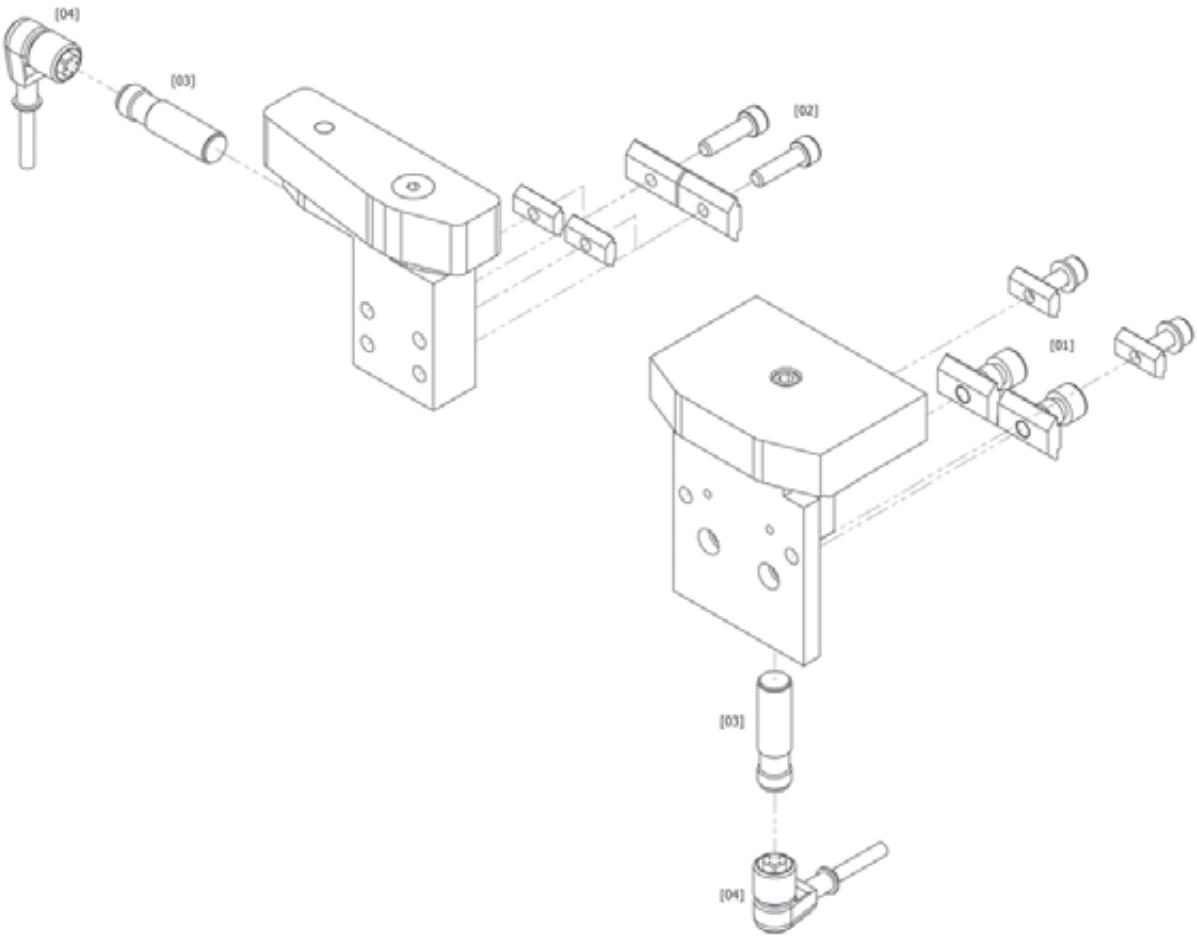
Scope/Condition of supply

All accessory parts are supplied mounted, depending on customer request.



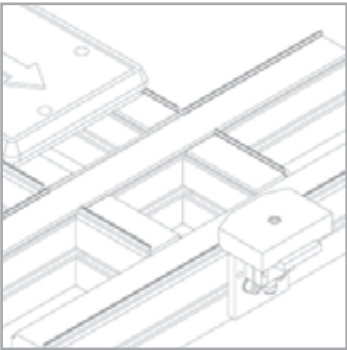
Step 2 | Select accessories

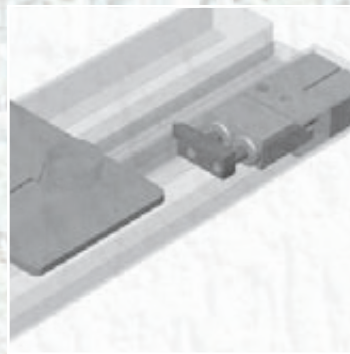
Dimensions of basic type | Download CAD data www.woerner-gmbh.com



Delta PFL | Accessories

Item no.	Product designation	Description	Order no.	Temperature range
Fastening set				
[01]	Fastening set	DPFL-AU	44000156	
[02]	Fastening set	DPFL-AS	44000157	
[03]	Proximity switch		06205001	- 25° up to + 70°
[04]	Sensor cable	length: 5 m	06290003	- 25° up to + 85°





Customer request:

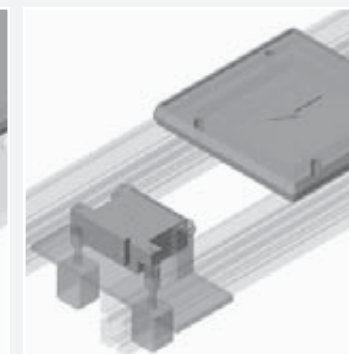
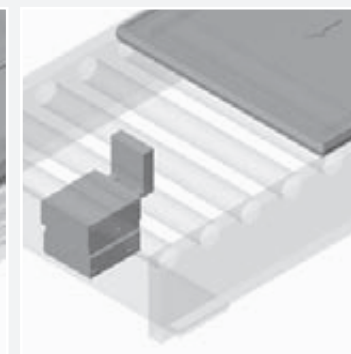
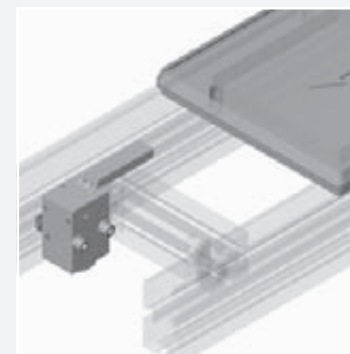
To construct a undamped separating stop for an existing profile from the company Wekal Maschinenbau GmbH.

Realisation:

Development of a slim device which can be integrated into the predefined cut-out of the profile.

Customised Devices

Exeptionally duties?



Customer request:

Positioning of a pallet holder near to a cross brace. Realisation for the company AEG.

Realisation:

Development of an extended stop lug at an undamped separating stop to bridge over the cross brace.

Customer request:

Development of an undamped separating stop for roller conveyor systems with a pallet holder weight up to 800 kg. Realisation for the company Claas.

Realisation:

New design engineering of a separating stop based on a Delta US 1000 with a strenghtened guide and a high stop plate, so that the device can be placed under the transport roller.

Customer request:

Construction of a damping unit compatible to the existing conditions (pneumatic cylinder). The function of the lowering was realised for the special equipment construction.

Realisation:

Damped separating stop adapted to the conditions of the customer.



Separating stop, with damping
Delta BS 1-10
cover, leadership part made of bronze
electronic sensor, for the company
Se Chang, South Korea



Separating stop, with damping
Delta BS 3-35
plastic stop plate
with Ø 10 mm



Separating stop, with damping
Delta US 500
with extending piston rod



Separating stop, with damping
Delta BS 3-35
stop with rubber plate



Separating stop, with damping
Delta 0
basic housing and stop plate
amended after customer wish,
for the company Claas




Separating stop, with damping
customised device for food packing
automation




Separating stop, without damping
with replaceable, rotating stop, for
the Bosch Rexroth TS2plus transfer
system




Separating stop, without damping
25 mm stroke, dual acting
various screw-ons attachment
possibilities, reverse mode,
replaceable stop




Separating stop, with damping
Delta US 1000
with double piston,
higher lowering force




Separating stop, with damping
Delta BS 10-200
integrated anti-bounce stop
matched to the pallet holder




Separating stop, without damping
for separating long, narrow pallet
holders, synchronised drop with
connecting shaft possibilities



Separating stop, without damping
for separating long, narrow pallet
holders, with integrated anti-bounce
stop



Angle damper
Delta SHB 5-100
for reduced space requirements,
for TS3 transfer system Bosch Rex-
roth, USA



Separating stop, without damping
Delta US 0
with thread at the stop plate to
fasten and change various stop
plates, for the company Claas



Separating stop, with damping
Delta BS 1-10
area medical technology,
the stop plate has a V4A material,
for the company TeamTechnik



Separating stop, with damping
sturdy design,
for the Stein transfer system



Separating stop, with damping
Delta BS 5-100
query upper and lower position,
stop plate retracted,
for the company Cooper Power Tools



Separating stop, without damping
Delta 0 with an extended stop lug
to bridge over a cross brace, the
installation of the separating stop
near to a workpiece holder can be
guaranteed, for the company AEG



Separating stop, with damping
Delta BS 5-100
delivering the stop plate with spring
load, lowering with external mechanic,
for the company Technicon



Separating stop, with damping
Delta US 800
with an high stop plate,
for roller conveyor systems,
for the company Cinetic



Separating stop, with damping
Delta BS 5-100
with integrated anti-bounce stop,
for the company Se Chang, South
Korea



Separating stop, with damping
Delta BS 10-200
special damping unit for the weight
range 10 kg - 200 kg, the function
of lowering was realized for the
special equipment construction



Separating stop, without damping
Delta 0 with a removed stop plate,
fastening of various stop blocks is
possible, for the company Mannes-
mann



Separating stop, without damping
small design, with a stop plate
levelled off, customer-specific,
for the company Mannesmann



Separating stop, with damping
Delta BS 3-35
for the separation of several
workpiece holder, two integrated
damping units, headed about a
seesaw, for the company Phillips



Separating stop, without damping
moving stop plate,
for the company Se Chang,
South Korea



Angle damper
Delta SHB 5-100
straight stop plate
with sticking protection,
for the company Bosch Rexroth



Angle damper
Delta SHB 5-100
long stop plate with sticking
protection, covered piston rod,
for the company Bosch Rexroth



Angle damper
Delta B-SHL 1-10/3-35
for reduced space requirements,
for the company Becker



Angle damper
Delta B-SHL 1-10/3-35
for reduced space requirements,
for the company Becker



Separating stop, with damping
Delta BS 10-200
slim device which can be
integrated into the predefined
cut-out of the profile



Separating stop, with damping
Delta US 200
stop plate separated one mobile,
for the company Grob



Separating stop, with damping
Delta US 1000
with cover



Separating stop, without damping
protected completely against dust
and dirt, for the company Daimler,
Application: Foundry



Separating stop, with damping
Delta BS 5-100
for reduced space requirements,
for the company Bosch Rexroth,
USA TS3 transfer system



Separating stop, with damping
Delta BS 10-200
with a high stop plate,
use in roller conveyor systems,
for the company Se Chang,
South Korea



10519
Angular air connection M5 thread
for hose external diameter Ø 6 mm



20524
Angular air connection M5 thread
for hose external diameter Ø 4 mm



11701
Straight air connection M5 thread
for hose external diameter Ø 6 mm



11705
Straight air connection M5 thread
for hose external diameter Ø 4 mm



20519
Delivery and exhaust air connection
M5 thread
for hose external diameter Ø 6 mm



04510006
Delivery and exhaust air connection
M5 thread
for hose external diameter Ø 4 mm



13539
Angular air connection G1/8 thread
for hose external diameter Ø 6 mm



04520001
Angular air connection G1/8 thread
for hose external diameter Ø 8 mm



04520007
Straight air connection G1/8 thread
for hose external diameter Ø 6 mm



04520008
Straight air connection G1/8 thread
for hose external diameter Ø 8 mm



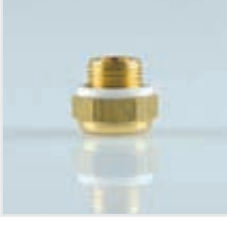
04510001
Delivery air connection
G1/8 thread
for hose external diameter Ø 6 mm



18059
Exhaust air connection
G1/8 thread
for hose external diameter Ø 6 mm



18075
Delivery air connection
G1/8 thread
for hose external diameter Ø 8 mm



04505001
Silencer
G1/8 thread



18589
Fastening set
for DBSST
with long angle fastening set



19652
Fastening set
for DR and DRP
for TS4plus transfer system
Bosch Rexroth Group



44000107
Fastening set
for DBSSI



44000117
Low hold substitute
für DIFL



44000118
Fastening set
for D0400FL and DBSFL



44000134
Fastening set A
with long spacer sleeve



44000135
Fastening set B
with short spacer sleeve



44000140
Fastening set
for DBS15



44000141
Fastening set
for D0800



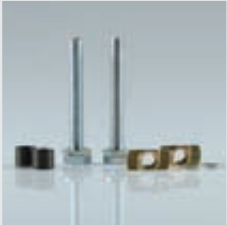
44000142
Fastening set A
for D0300
with long spacer sleeve



44000143
Fastening set B
for D0300
with short spacer sleeve



44000144
Fastening set
for D0140



44000145
Fastening set
for D070



44000146
Fastening set
for DBSU270



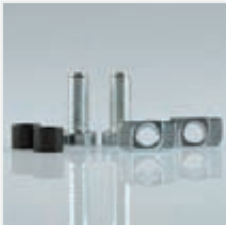
44000147
Fastening set A
for DBSU150
with long spacer sleeve



44000148
Fastening set B
for DBSU150
with short spacer sleeve



44000149
Fastening set
for DBS250



44000150
Fastening set A
for DBS150T2
with long spacer sleeve



44000151
Fastening set B
for DBS150T2
with short spacer sleeve



44000156
Fastening set
for DPFL-AU



44000157
Fastening set
for DPFL-AS



44000158
Fastening set
for DSA



44000159
Fastening set
for DSI



44000160
Fastening set A
for DP-AU
with long spacer sleeve



44000161
Fastening set B
for DP-AU
with short spacer sleeve



44000162
Fastening set A
for DP-AS
for 10er groove



44000163
Fastening set B
for DP-AS
for 8er groove



44000164
Fastening set
for DR



44000165
Fastening set A
for DI-490
with long spacer sleeve



44000166
Fastening set A
for DI-1050
with long spacer sleeve



44000167
Fastening set B
for DI-490
with short spacer sleeve



44000168
Fastening set B
for DI-1050
with short spacer sleeve



44000169
Fastening set M6
for DI-490



44000170
Fastening set M6
for DI-1050



44000171
Fastening set
for DFI14



44000172
Fastening set
for DFI22



44000173
Fastening set A
for DEL120
with long spacer sleeve



44000174
Fastening set B
for DEL120
with short spacer sleeve



44000175
Fastening set
for DBSST
with short fastening angle



44000176
Fastening set A
for DELQFL



44000177
Fastening set B
for DELQFL



44000178
Fastening set
for DBS150FL



44000179
Fastening set
for DIFL



44000180
Fastening set
for DRFL



44000181
Fastening set
for DSAFL



44000182
Fastening set
for DSIFL



19141-160
Fastening set
for DELQ



18620
Electronic sensor



19010
Inductive proximity switch
M12x1 long



06205001
Inductive proximity switch
M12x1 short



06205005
Inductive proximity switch
M18x1



19015
Inductive proximity switch
inductive 8x8



06285004
Clamp M24x1,5



30539
Clamp M16x1
short



30540
Clamp M16x1
long



19100
Switch holder
for INI Ø 12 mm



19150
Switch holder
for D0800



06290001
Sensor cable
for electronic sensor



06290007
Sensor cable M12x1
straight



06290003
Sensor cable
M12x1



Interconnection line
length: 1 m - 06290008
length: 2 m - 06290009
length: 5 m - 06290010



Interconnection line
length: 0,3 m- 06290011
length: 1 m - 06290012



06290002
Connection line
8-pole M12x1



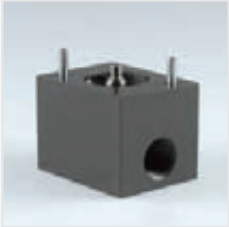
06515002
AS-i flat cable pick-off



06290004
AS-i-Connection line



44000152
Position detection sensor
for D0400-09
for DBS-08



44000153
Position detection sensor
for D0400-15
for DBS-13



44000154
Position detection sensor
for D0400-25



44000155
Position detection sensor
for D0400-40



19170
Position detection sensor
for DBS150T2



19160
Position detection sensor
for DBS240



44000030
Position detection sensor
for DBSU150



44000029
Position detection sensor
for DBSU270



44000184
Position detection sensor
for DBS240R



19140
Mounting kit
for DBS240
to the TS2plus transfer system
Bosch Rexroth Group



30108
Index unit



30733
Index bolts



18065
Index bolts
cylindrical



18066
Index bolts
free milled



18071
Index bolts
120°



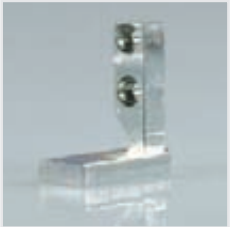
18072
Index bolts
120° free milled



18073
Index bolts
cylindrical



18074
Index bolts
cylindrical free milled



18588
Stop plate
for DBSST



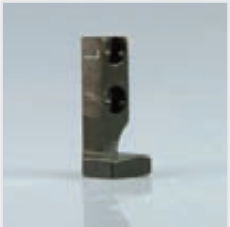
18587
Stop plate
for DBSST



18584
Stop plate
for DBSST



18577
Stop plate
for DBSST



18579
Stop plate
for DBSST

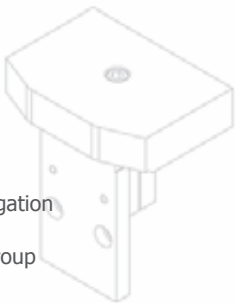
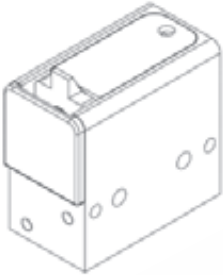
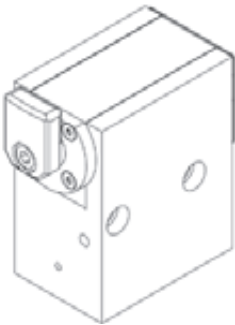
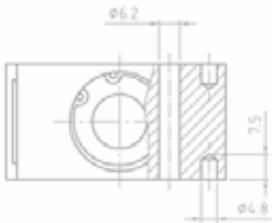


download 2D und 3D-data
... www.woerner-gmbh.com

All catalogue products available:

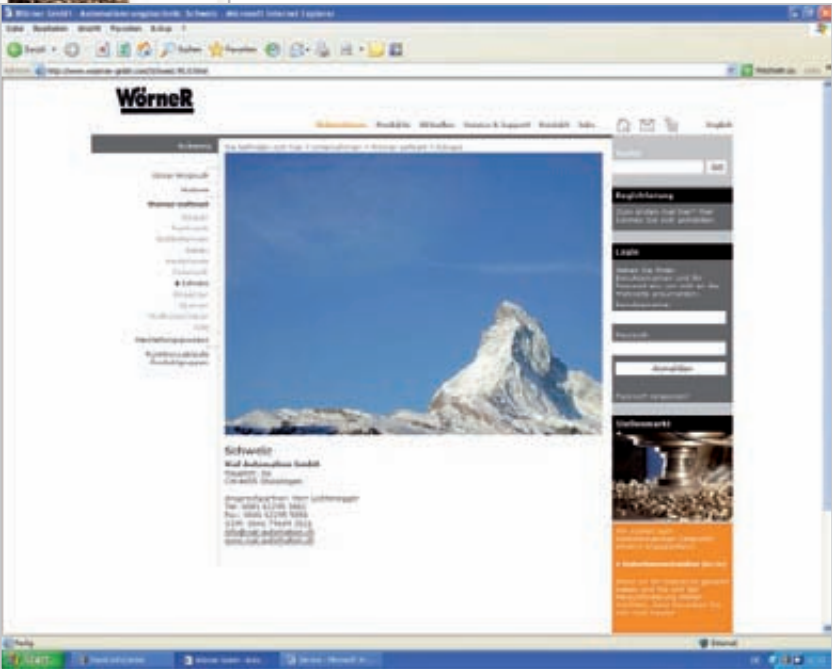
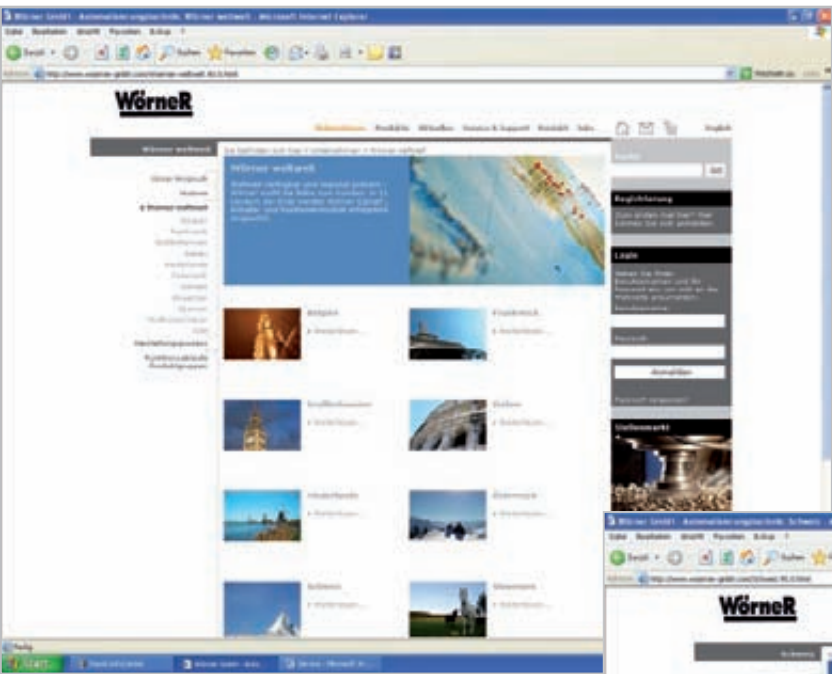
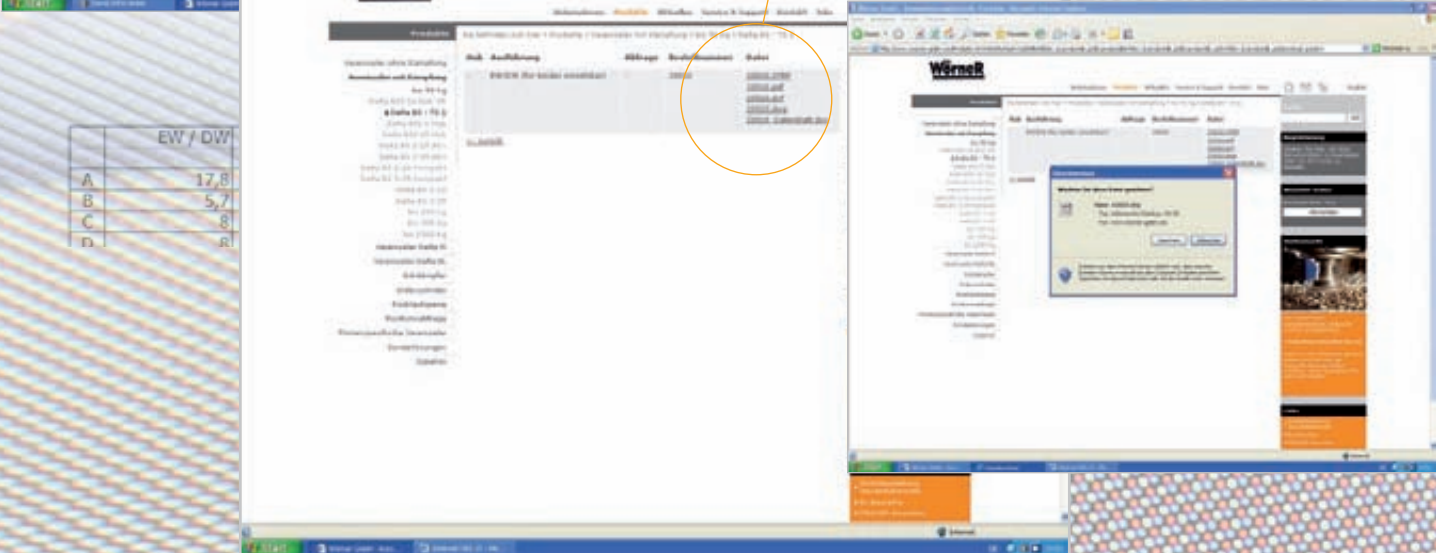
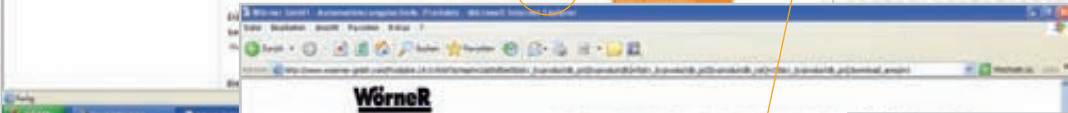
Your advantages:

- fast and secure registration
- comfortable download
- 2D-drawings and 3D-models freely available
- designing fast and efficiently
- common data formats (dxf, dwg, step, pdf)



Fast and uncomplicated:

- Choose „products“ in the main navigation
- Select the corresponding product group
- Choice total weight
Stopping and damping the goods to be transported
- Detailed view product, click on the download badge
- You can find different download possibilities here
- Data sheets, 2D-drawings, 3D-models, dxf, dwg, step



Do you seek the most current information about products and services of the Wörner GmbH Automation Technology?

Here you can find it:

- Data sheets
- CAD-drawings
- 3D-models
- Download possibilities catalogue
- Download possibilities product flyer
- FAQ
- Glossary
- Customers support
- Adresses of representations worldwide
- Current about the fair event
- Current over the press area
- ...

§ 1 General - Area of Application

1. These business conditions apply to all present and future business relationships.
2. Verbraucher i. S. d. Geschäftsbedingungen sind natürliche Personen, mit denen in Geschäfts- beziehung getreten wird, ohne dass diesen eine gewerbliche oder selbständige berufliche Tätigkeit zugerechnet werden kann.
2. Users in the meaning of these business conditions are all natural persons with whom a business relationship is entered into, with them necessarily being commercially or self-employed. Business persons in the sense of these business conditions are all natural or legal persons or limited part- nerships under law, with whom a business relationship is entered into, who are active within the bounds of a commercial or self-employed activity.

Customers in the sense of these business conditions are both consumers and business persons.

3. Deviating, contrary or additional general business conditions are not object of the contract, even when knowledge of them applies, except in cases where their applicability has exclusively been confirmed in writing.

§ 2 Contract Conclusion

1. Our offers and proposals are non-binding. We reserve the right to make all reasonable technical changes and changes in form, colour and/or weight at any time.
2. By ordering merchandise the customer bindingly declares himself willing to purchase the merchandise ordered.

We reserve the right to accept the offer of contract enclosed with the order within two weeks of receipt. Acceptance can either be declared in writing or by delivering the merchandise to the customer.

3. If the customer orders the merchandise via electronic channels, receipt of the order will be confirmed immediately. Confirmation of receipt does not represent a binding acceptance of the order. Confirmation of receipt can be linked to the declaration of acceptance.

4. Contract conclusion takes place under the proviso that the our supplier delivers the correct components at the correct time. This only applies in cases where we are not responsible for the failure to ship and in particular to the closing of a covering transaction with our supplier. The customer shall be informed of the non-availability of the merchandise immediately. Payment shall be returned immediately.

5. If the customer has ordered the merchandise via electronic channels, we shall save the contract text and supply it to the customer on request along with these GBCs per e-mail.

§ 3 Delivery Deadlines

Delivery deadlines apply from the date of our order confirmation and are approximate deadlines.

§ 4 Retention of Title

1. In the case of contracts with consumers, we retain ownership of the merchandise until full payment of the purchase price has been made.
- In the case of contracts with business persons, we retain ownership of the merchandise until full payment of all claims from a current business relationship have been made.
2. The customer is obliged to treat the merchandise with care. If maintenance and inspection work needs to be carried out, the customer is required to have this carried out at regular intervals.
3. The customer is required to inform us immediately of access or attachment by third-parties to the merchandise, in particular in the case of seizure, and any damage or destruction of the merchandi- se. The customer is even obliged to inform us of a change in ownership of the merchandise or an own change of address.
4. We retain the right to withdraw from the contract and demand the return of the merchandise if the customer acts contrary to the terms of this contract, in particular in cases of payment delay or violation of an obligation according to clauses 3. and 4. of these provisions.
5. The subject of the contract has the right to sell the merchandise within the normal course of business. He now assigns all claims to the amount reported on the invoice that result from the further sale to the third party. We herewith accept this assignment. Following assignment the agent to the contract is authorised to collect the claim. We reserve the right to collect the claim ourselves, as soon as the agent to the contract fails to fulfil his payment obligations in an orderly manner or delays payment.
6. Processing of the merchandise by the party to the contract always takes place in our name and under our decree. If processing takes place using object that we do not own, we purchase the joint ownership of the new object in equal relationship to the value of the merchandise we have supplied to the other objects processed. These same applies if the merchandise is mixed with objects that we do not own.

§ 5 Payment

1. The purchase price offered is binding [or limited in time if necessary]. VAT is not included in the purchase price
- If not stipulated otherwise in the order confirmation, our prices apply „ex-works“ excluding packaging. This will be invoiced for separately. Return of the packaging is excluded. No additional costs occur to the customer for using electronic channels of communication when ordering. The customer is permitted to make payment by cash on delivery, invoice or credit card.
2. After receipt of the merchandise the customer is obliged to pay the invoice 10 days after the invoice date at a 2% cash discount, and net 30 after the invoice date.

The customer is late with payment after this deadline has been passed. The consumer is obliged to pay interest at 5% above the base rate during the period of payment delay. The business person is obliged to pay interest at 8% above the base rate during the period of payment delay. In relation to business persons, we reserve the right to prove higher default damages and make a claim for these.

3. The customer only has an offsetting right if his counter claims have been deemed legally binding or recognised by us. The customer can only exercise a right of retention if his counter claim is based on the same contractual relationship.

4. Der Mindestbestellwert liegt bei Euro 30,00 (ohne MwSt.). Bei Bestellungen die den vorgenann- ten Betrag unterschreiten, ergänzt der Mindermengenzuschlag den Bestellwert um volle Euro auf mindestens Euro 30,00 (ohne MwSt.).

§ 6 Transfer of Risk - Packaging Costs

1. In the case of shipment purchases the risk of accidental destruction or deterioration of the merchandise is transferred to the custotmer with the transfer of the merchandise to the forwarding agent or other parties or agencies authorised for shipment.
2. If not otherwise detailed in the order confirmation, deliver is agreed „ex-works“. Transport and all miscellaneous packaging under the terms of the packaging regulations is not returnable; pallets are excepted from this. The ordering party is obliged to dispose of the packaging at his own cost. If the ordering party wishes, shipments can be insured with transport insurance. The costs for this are to be borne by the ordering party.
3. Transfer is equal to when the purchasing party is late with acceptance.

§ 7 Warranty

1. Initial warranty for defective merchandise is initially provided in the form of remedial repair or replacement according to our choice.
2. If this fails the customer can always demand that payment be discounted (reduction) or cancel the contract (rescission) according to his choice. However the customer has no right to cancel the contract in the case of minor contract violations, and in particular in the case of minor defects.
3. Obvious defects must be reported to us in writing within two weeks of receiving the merchandise. If this is not adhered to, any claims on the warranty are made void. Delivery by post suffices for maintaining the deadline. The customer takes full responsibility for providing evidence of fulfilment of the warranty requirements, in particular with regard to the defect, the date of identifying the defect and maintaining the deadline for notification of the defect.
4. If the customer chooses to cancel the contract due to a legal or tangible defect following failure to repair or replace on our part, he has no right to make claims for damages in parallel. if the customer chooses to claim for damages following failure to repair or replace on our part, the merchandise remains on the premises of the customer if this acceptable to him within the bounds of reason. Damages are restricted to the difference in value between the purchase price and the value of the defective merchandise. This does not apply when we have fraudulently caused violation of the contract.
6. The warranty period equals one year after delivery of the merchandise. This does not apply if the customer has failed to report a defect within the deadline set (Clause 3 of these provisions).
7. The manufacturer's product description as agreed applies at all times to the properties of the merchandise. Public statements, recommendations or advertising made by the manufacturer do not represent a contractually binding commentary on the properties of the merchandise.
8. If the customer receives fitting or assembly instructions that contain mistakes, we are merely obliged to supply fitting or assembly instructions free of mistakes, and only in cases where the mistakes in the fitting or assembly instructions are contrary to correct fitting or assembly.
9. We provide no guarantees to the customer in a legal sense. Manufacturer's warranties remain unaffected by this.

§ 8 Liability Limitations

1. In the case of minor negligent contract violations our liability is limited to the immediate, fore- castable average damages typical to the contract depending on the type of merchandise. This also applies to minor negligent contract violations by our legal representatives or their vicarious agents. We undertake no liability for the minor negligent violation of non-essential contract obligations in the case of business persons.
2. The liability limitations noted above do not apply to claims by the customer concerning product liability. Furthermore the liability limitations do not apply to physical injury, damage to health or loss of life attributable to us.
3. Claims for damages by customers due to defects are valid for one year after delivery of the merchandise. This does not apply if we are accused of fraudulent behaviour.

§ 9 Concluding Regulations

1. The law of Federal Republic of Germany applies at all times. The provisions of the purchasing rights under the terms of the UN find no application.
2. If the customer is a businessman, a public legal entity or a public special fund, place of jurisdic- tion for all litigation out of this contract is our company headquarters. These same applies if the customer has no general place of jurisdiction in Germany or his place of residence or whereabouts in unknown at the time of legal action being taken. However we do reserve the right to file an action against the customer at the court of his place of residence.
3. If one or more provisions of this contract with the customer, including these general business conditions, should be void in whole or part, the remaining provisions of the contract remain unaffected. The partially or wholly void provision shall be replaced by one that comes closest to the intended purpose of the original provision in terms of content and commercial value.