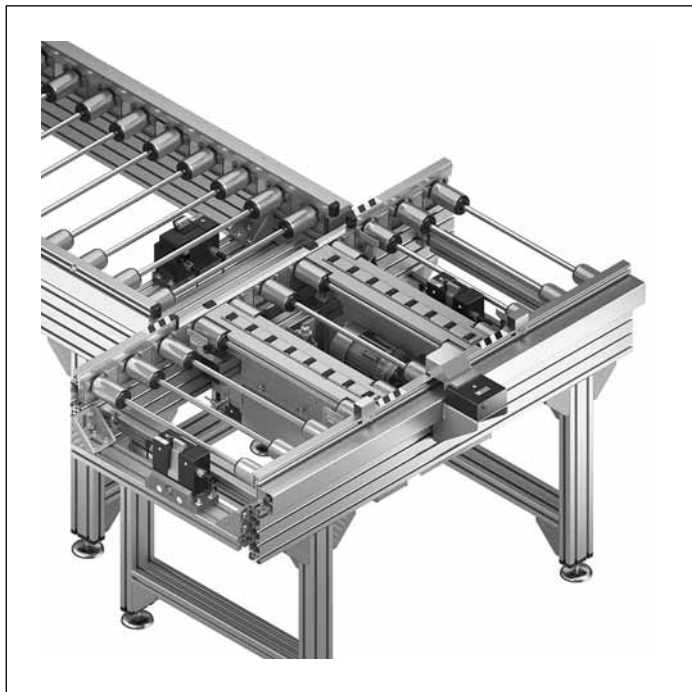


Transverse conveyor

| | |
|--|-------------|
| Design | 6-2 |
| HQ 5 lift transverse unit | 6-4 |
| Stop gate VE 5/200, VE 5/D-300, VE 5/D-301, VE 5/D-1000 | 6-9 |
| Damper DA 5/200, damper DA 5/1000 | 6-11 |
| Connection kit for connecting the transverse section | 6-13 |
| Connection bridge | 6-15 |
| HQ 5 lift transverse unit protective covers | 6-17 |
| Cover for lateral guide of HQ 5 lift transverse unit | 6-19 |

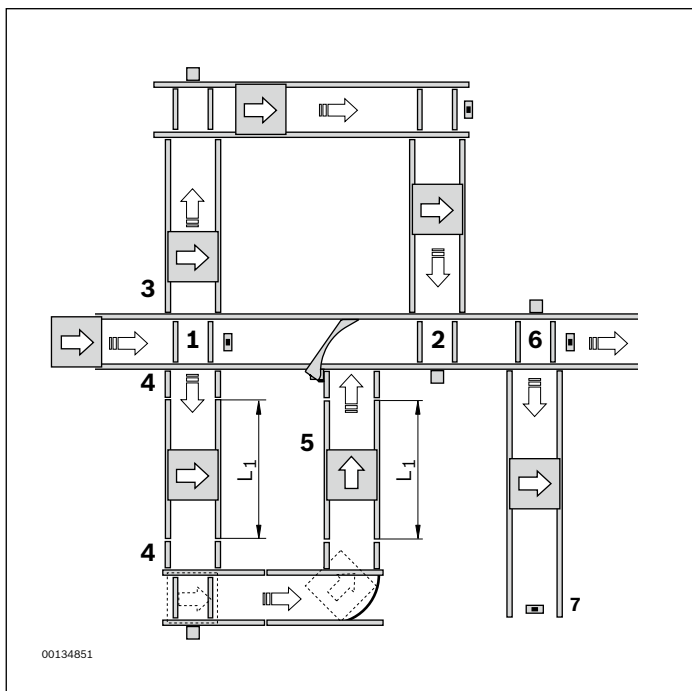
Design



Transverse conveyors are used to branch workpiece pallet paths into the individual processing stations. When changing from a longitudinal conveyor to a transverse conveyor and vice versa, the workpiece pallet also changes its orientation with regard to its direction of transport.

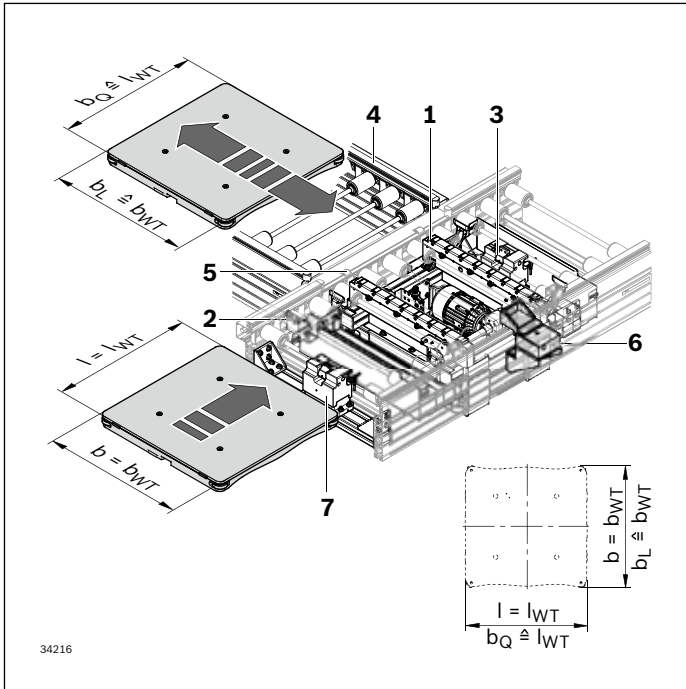
Note:

- ▶ Minimum speed of transverse section: 6 m/min
- ▶ Traveling through curves/diverters/junctions is only possible in a longitudinal direction (see arrow on workpiece pallet)!
- ▶ Accumulation is not permitted on HQ 5



HQ 5 infeeding and outfeeding options.

- ▶ Outfeeding to both sides
- ▶ Infeeding from just one side, see page 6-11
- ▶ Connection of the transverse section (standard section) in a circuit with 4 lift transverse units, see page 6-15
- ▶ Connection of the transverse section (2x connection bridge + standard section) with parallel use of lift transverse unit and curve/diverter/junction, see page 6-15
 L_1 : same section length
- ▶ Rotation of the workpiece pallet by 90° with the combination of lift transverse unit and curve/diverter
- ▶ Infeeding and outfeeding to dead end section
- ▶ Dead end section with stop gate as end stop



Transverse conveyor sections include the following components:

- ▶ Lift transverse unit HQ 5, see page 6-4
- ▶ Connection kit for connecting the transverse section, see page 6-13
- ▶ VE 5/D-300, VE 5/D-301 or VE 5/D-1000 stop gate to stop the workpiece pallet when outfeeding, see page 6-9
- ▶ Connection bridge (see page 6-15) to compensate for length with parallel use of lift transverse unit and curve/diverter/junction
- ▶ DA 5/... damper to stop the workpiece pallet when infeeding, see page 6-11
- ▶ Sensor 3 842 555 421 to query the position of the workpiece pallet, see page 9-16
- ▶ Stop gate, if required, to pre-stop the workpiece pallet, see page 9-6

HQ 5 lift transverse unit



Use:

The HQ 5 lift transverse unit is a ready-for-operation module for branching transport. It lifts the workpiece pallet from the rollers and moves it transversely to the original conveyor direction via a driven roller section.

Note:

Note the orientation of the workpiece pallet after branching.

Version:

- ▶ Can be used with all WT 5 workpiece pallets
- ▶ The transport level of the transverse section is 4.5 mm above the transport level of the longitudinal section
- ▶ Protective casing can also be removed in the case of low conveyor heights
- ▶ Compressed air connection 5 ... 6 bar
- ▶ Pneumatic push-in fitting: 6 mm

Scope of delivery:

- ▶ Incl. ST 5/XH or ST 5/H conveyor unit, dimensions, see page 4-4

Required accessories:

- ▶ Stop gate VE 5/200, VE 5/D-300, VE 5/D-301 or VE 5/D-1000, see page 6-9
- ▶ SH 2/U-H 3 842 537 289 switch bracket, see page 9-18
- ▶ Clamping holder for sensor, see page 9-15

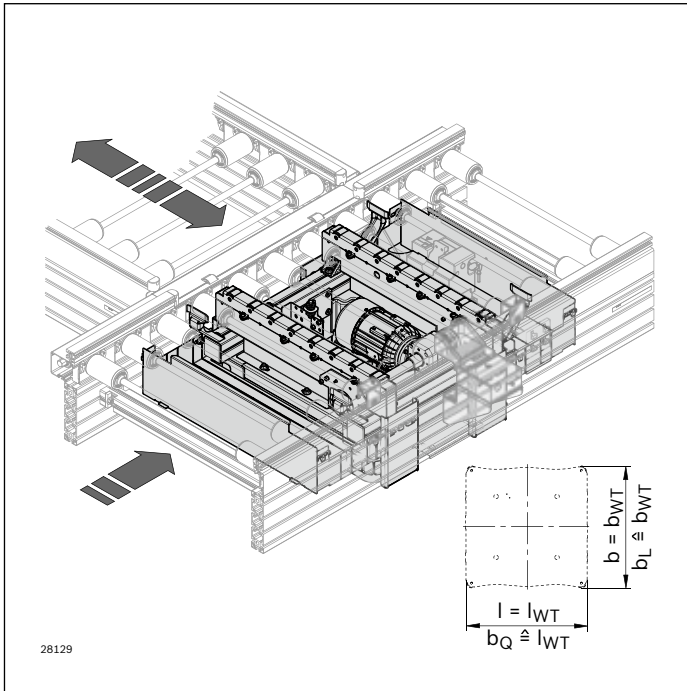
Condition on delivery:

- ▶ Fully assembled

Recommended accessories:

- ▶ Protective covers, see page 6-19
- ▶ For position inquiry WT sensor 3 842 555 421, see page 9-16

Ordering information



HQ 5 lift transverse unit

| b_L (mm) | b_Q (mm) | p (mm) | v_N (m/min) | SC | DSM | OFD | TR | U, f | AT | Material number |
|---------------|---------------|--------------------|------------------|------|------|---------|------|---------------|----|--------------------------------|
| 455 | 455 | 130 | 6; 9; 12 | 1; 2 | 1; 2 | 1; 2; 3 | 1; 2 | See page 13-9 | | 3 842 998 855 (HQ 5/XH) |
| 455 | 650 | 130; 195 | 6; 9; 12 | 1; 2 | 1; 2 | 1; 2; 3 | 1; 2 | | | 3 842 998 854 (HQ 5/H) |
| 650 | 650 | 130; 195 | 6; 9; 12 | 1; 2 | 1; 2 | 1; 2; 3 | 1; 2 | | | $b_L = \dots$ mm |
| 650 | 845 | 130; 195; 260 | 6; 9; 12 | 1; 2 | 1; 2 | 1; 2; 3 | 1; 2 | | | $b_Q = \dots$ mm |
| 845 | 845 | 130; 195; 260 | 6; 9; 12 | 1; 2 | 1; 2 | 1; 2; 3 | 1; 2 | | | $p = \dots$ mm |
| 845 | 1040 | 130; 195; 260; 325 | 6; 9; 12 | 1; 2 | 1; 2 | 1; 2; 3 | 1; 2 | | | $v_N = \dots$ m/min. |

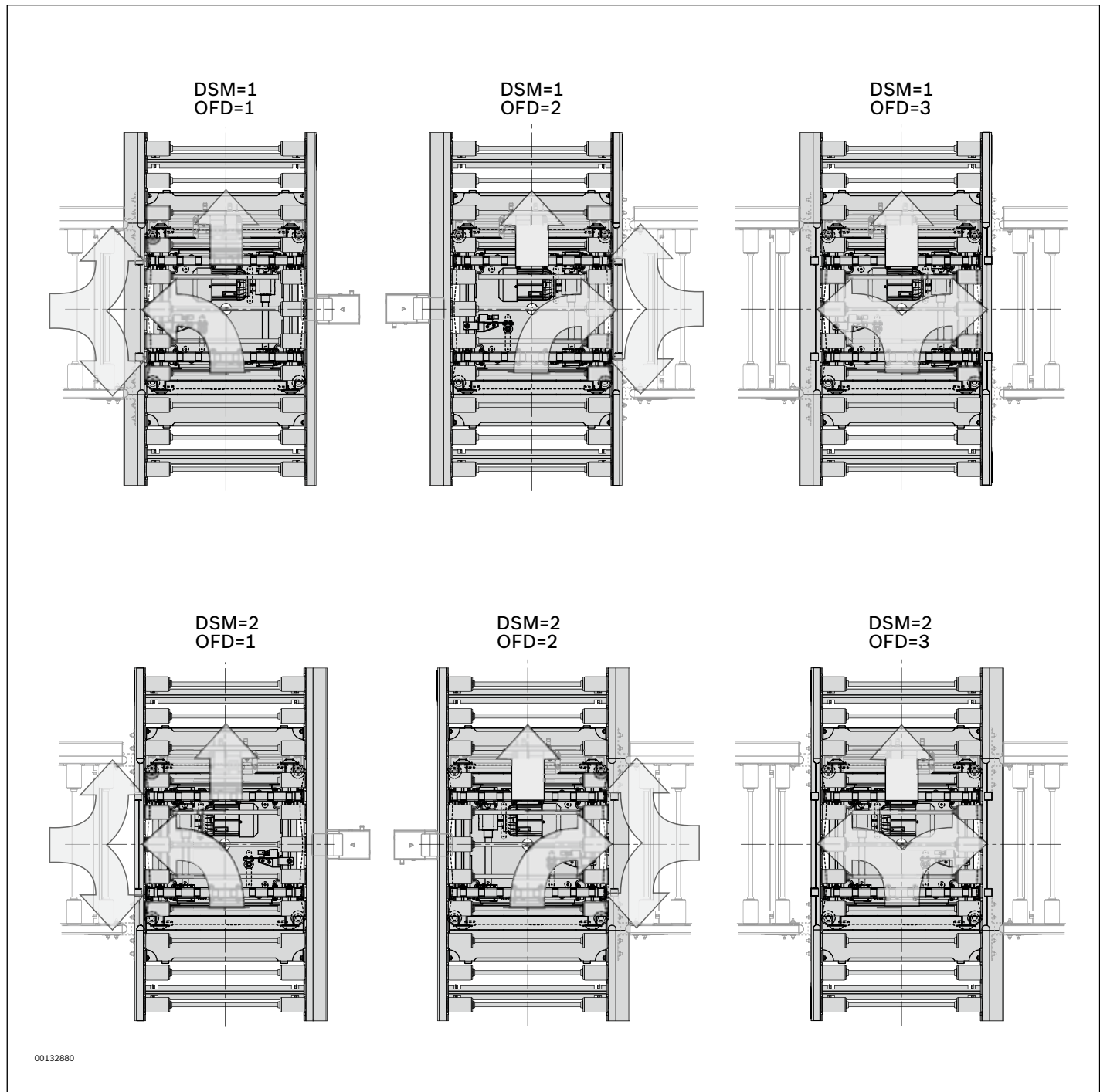
U = ... V, see page 13-9
 f = ... Hz, see page 13-9
 SC = ...
 OFD = ...
 DSM = ...
 TR = ...
 AT = ...

- | | | |
|--|---|--|
| b_L = track width in direction of transport (longitudinal conveyor) | SC = Housing element 1: without protective casing 2: with protective casing | AT = Motor connection K: with terminal box S: with cable/plug |
| b_Q = track width in direction of transport (transverse conveyor) | DSM = King shaft installation on main section 1: left 2: right | HQ 5 lift transverse unit position inquiry (top/bottom) on request |
| p = Roller spacing (pitch) | OFD = Direction of the outfeed 1: left 2: right 3: left and right | Description of further parameters, see page 0-3 Ordering examples, see page 6-6 |
| v_N = Nominal speed U = 0, $v_N > 0$: with gear, without motor $v_N = 0$: without motor and gear | | |

Order examples for the king shaft installation and direction of the outfeed

Size shown

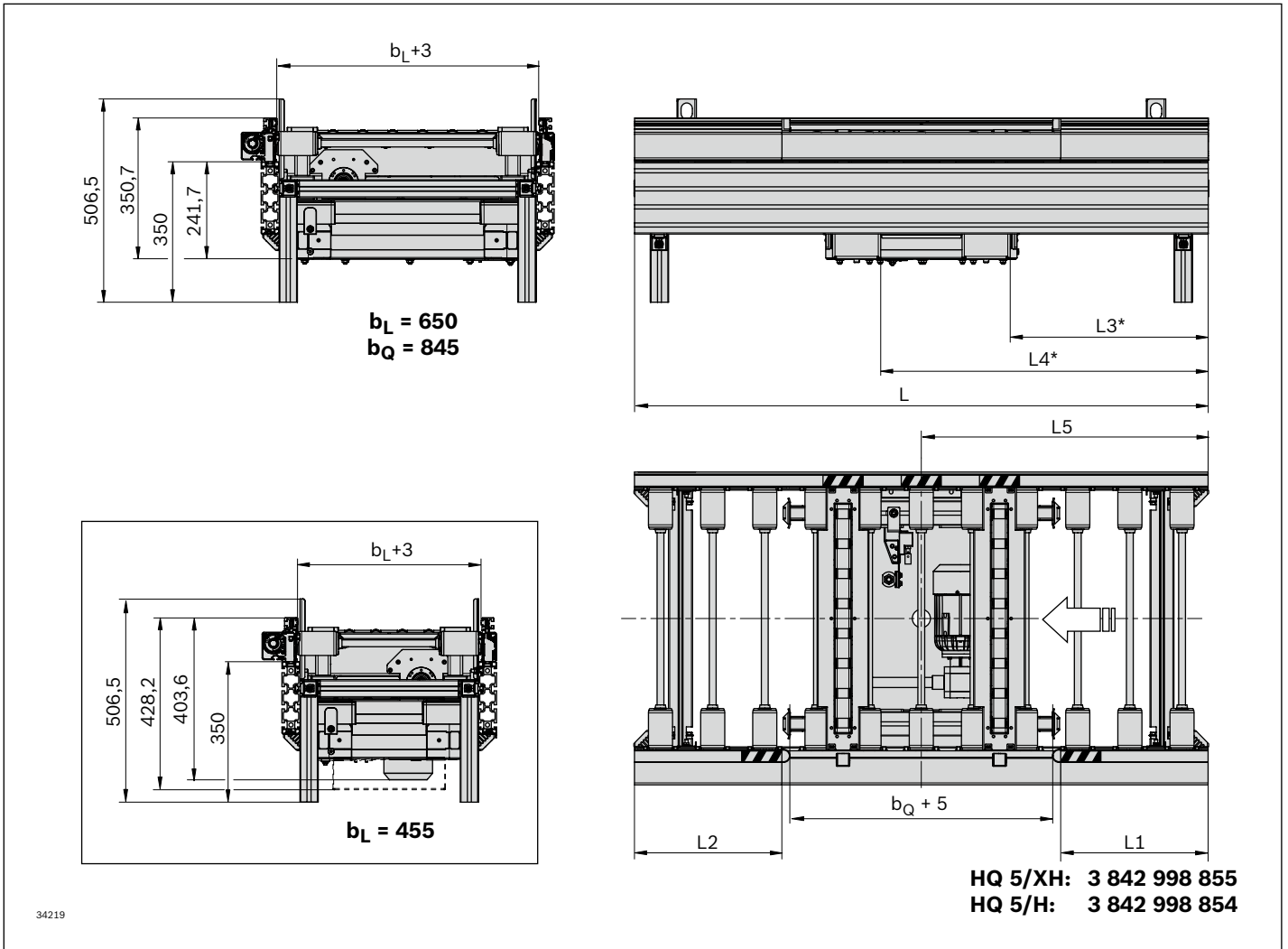
b = 650 x 650 mm



If infeeding in the main section takes place, the VE 5/... can be installed in the HQ as an alternative to the damper. In this case, the workpiece pallet is stopped in the center of the HQ and can then continue in any direction.

Dimensions

HQ 5 lift transverse unit



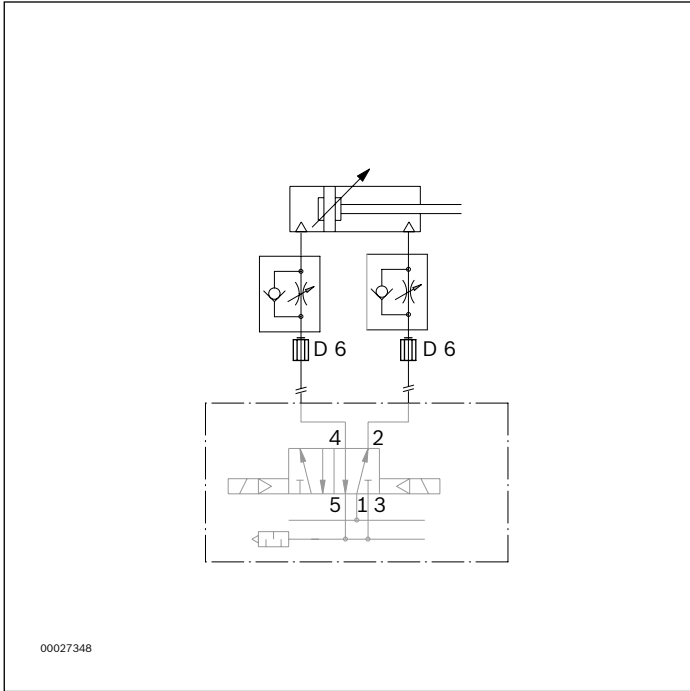
6

| b (mm) | l_{WT} (mm) | p (mm) | L (mm) | L1 (mm) | L2 (mm) | L3 (mm) | L4 (mm) | L5 (mm) |
|------------------|------------------------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 455 | 455 | 130 | 1300 | 400.0 | 400 | 493.8 | 686.3 | 650.0 |
| 455 | 650 | 130 | 1430 | 367.5 | 367.5 | 493.8 | 816.3 | 715.0 |
| 455 | 650 | 195 | 1560 | 432.5 | 432.5 | 558.8 | 881.3 | 780.0 |
| 650 | 650 | 130 | 1430 | 367.5 | 367.5 | 493.8 | 816.3 | 715.0 |
| 650 | 650 | 195 | 1560 | 432.5 | 432.5 | 558.8 | 881.3 | 780.0 |
| 650 | 845 | 130 | 1690 | 400.0 | 400.0 | 493.8 | 1076.3 | 845.0 |
| 650 | 845 | 195 | 1755 | 432.5 | 432.5 | 526.3 | 1108.8 | 910.0 |
| 650 | 845 | 260 | 1820 | 595.0 | 335.0 | 688.8 | 1271.3 | 650.0 |
| 845 | 845 | 130 | 1690 | 400.0 | 400.0 | 493.8 | 1076.3 | 845.0 |
| 845 | 845 | 195 | 1755 | 432.5 | 432.5 | 526.3 | 1108.8 | 877.5 |
| 845 | 845 | 260 | 1820 | 595.0 | 335.0 | 688.8 | 1271.3 | 650.0 |
| 845 | 1040 | 130 | 1820 | 367.5 | 367.5 | 493.8 | 1206.3 | 910.0 |
| 845 | 1040 | 195 | 1950 | 432.5 | 432.5 | 558.8 | 1271.3 | 975.0 |
| 845 | 1040 | 260 | 2080 | 432.5 | 562.5 | 558.8 | 1271.3 | 910.0 |
| 845 | 1040 | 325 | 1950 | 432.5 | 432.5 | 558.8 | 1271.3 | 975.0 |

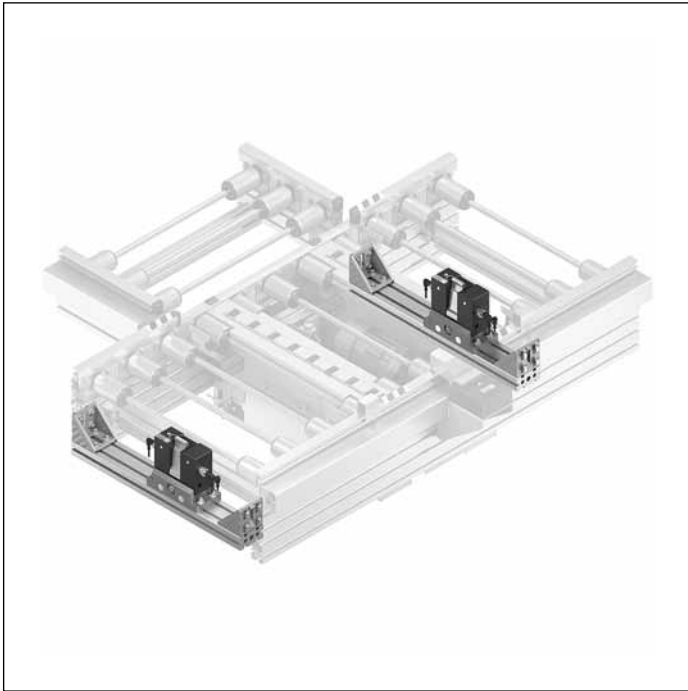
Description of parameters, see page 0-3

Circuit diagram

HQ 5 lift transverse unit



Stop gate VE 5/200, VE 5/D-300, VE 5/D-301, VE 5/D-1000



Use:

- ▶ For non-damped (VE 5/200) or damped (VE 5/D-300, VE 5/D-301 and VE 5/D-1000) stopping of accumulating workpiece pallets for outfeeding, see page 9-3, 9-6, 9-12

Version:

- ▶ Pneumatic stop gate. When the pressure is released the stop gate is closed by a spring and the workpiece pallet is stopped.
- ▶ Compressed air connection 5 ... 6 bar
- ▶ Further technical details, see page 9-3

Scope of delivery:

- ▶ Incl. fastening material for assembly on the conveyor section, pneumatic push-in connector \varnothing 6 mm

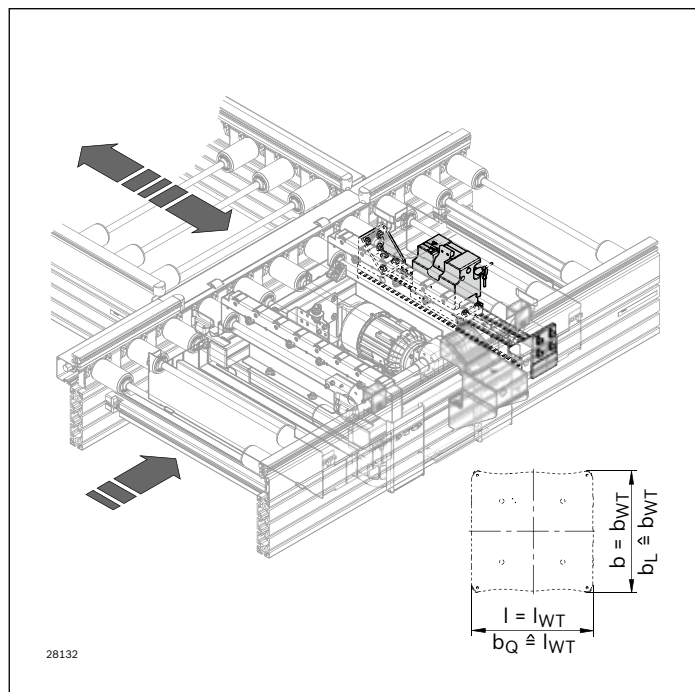
Recommended accessories:

- ▶ Sensor 3 842 549 811 or 3 842 537 814, see page 9-16
- ▶ Sensor for VE 5/D-301 3 842 551 761, see page 9-16
- ▶ Clamping holder for sensor, see page 9-15

Condition on delivery:

- ▶ Not assembled

Ordering information



VE 5/200 stop gates

| b (b_L) (mm) | Material number |
|-----------------------------------|-------------------------|
| 455; 650; 845; 1040 | 3 842 998 518 |
| | b _L = ... mm |

b_L = track width in direction of transport (longitudinal conveyor)

Permissible impact force per WT

| m_{WT} (kg) | v_N¹⁾ (m/min) |
|--------------------------------|---|
| 200 | 2 ... 9 |

¹⁾ Conveyor speed

VE 5/D-300 stop gate

| b (b_L) (mm) | Material number |
|-----------------------------------|-------------------------|
| 455; 650; 845; 1040 | 3 842 998 517 |
| | b _L = ... mm |

b_L = track width in direction of transport (longitudinal conveyor)

VE 5/D-301 stop gate

| b (b_L) (mm) | Material number |
|-----------------------------------|-------------------------|
| 455; 650; 845; 1040 | 3 842 998 079 |
| | b _L = ... mm |

b_L = track width in direction of transport (longitudinal conveyor)

Permissible impact force per WT

| m_{WT} (kg) | v_N¹⁾ (m/min) |
|--------------------------------|---|
| max. 300 | 2 ... 9 |
| max. 260 | 2 ... 12 |
| max. 160 | 2 ... 18 |

¹⁾ Conveyor speed

VE 5/D-1000 stop gate

| b (b_L) (mm) | Material number |
|-----------------------------------|----------------------------|
| 455; 650; 845; 1040 | 3 842 998 805 |
| | b _L = ... mm |
| | l _a = ... (1/2) |

b_L = track width in direction of transport (longitudinal conveyor)

Permissible impact force per WT

| m_{WT} (kg) | v_N¹⁾ (m/min) |
|--------------------------------|---|
| min. 50 max. 1000 | 2 ... 9 |
| min. 50 max. 900 | 2 ... 12 |
| min. 50 max. 700 | 2 ... 18 |

¹⁾ Conveyor speed

Damper DA 5/200, damper DA 5/1000



Use:

- ▶ Damped stopping of an accumulating workpiece pallet during infeeding

Version:

- ▶ Damping steplessly adjustable (DA 5/200, DA /1000 self-adjusting)
- ▶ See table for workpiece pallet loads
- ▶ The damper is extended pneumatically into the damping position (infeeding of the workpiece pallet to the main section) and is pushed into the end position by the infeeding workpiece pallet. A workpiece pallet can only move onto the main section if the damper is in the end position.
- ▶ Compressed air connection 5 ... 6 bar

Note:

If the damper is extended, it moves into the main section and cannot be retracted pneumatically! The damper can only be retracted by infeeding a workpiece pallet.
Collision hazard if there are overhanging carrying plates.

Scope of delivery:

- ▶ Incl. fastening material for assembly on the conveyor section, pneumatic push-in connector \varnothing 6 mm

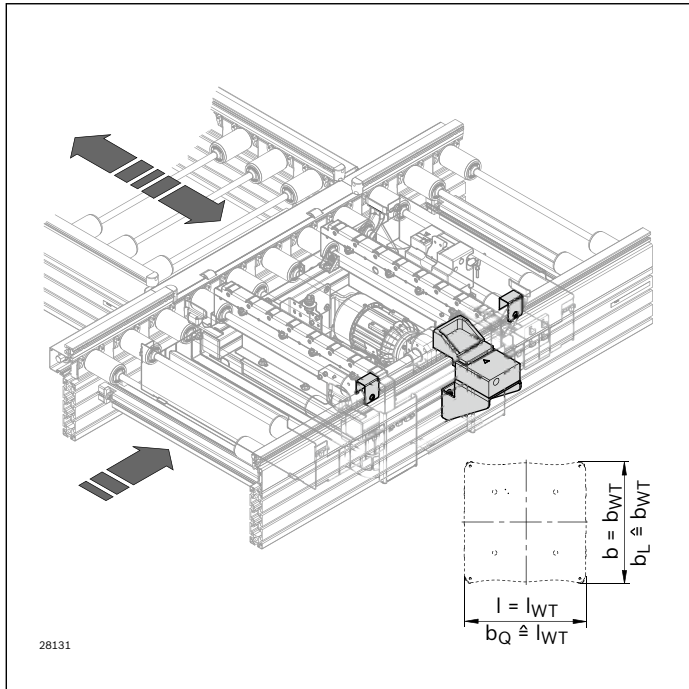
Recommended accessories:

- ▶ Cover for the lateral guide, see page 6-19f

Condition on delivery:

- ▶ Not assembled

Ordering information



DA 5/200 damper

| | Material number |
|-----|----------------------|
| Set | 3 842 545 128 |

Permissible impact force per WT

| m_{WT} (kg) | $v_N^{1)}$ (m/min) |
|------------------|-----------------------|
| max. 280 | 2 ... 9 |
| max. 240 | 2 ... 12 |
| max. 140 | 2 ... 18 |

¹⁾ Conveyor speed

DA 5/1000 damper

| | Material number |
|-----|----------------------|
| Set | 3 842 545 130 |

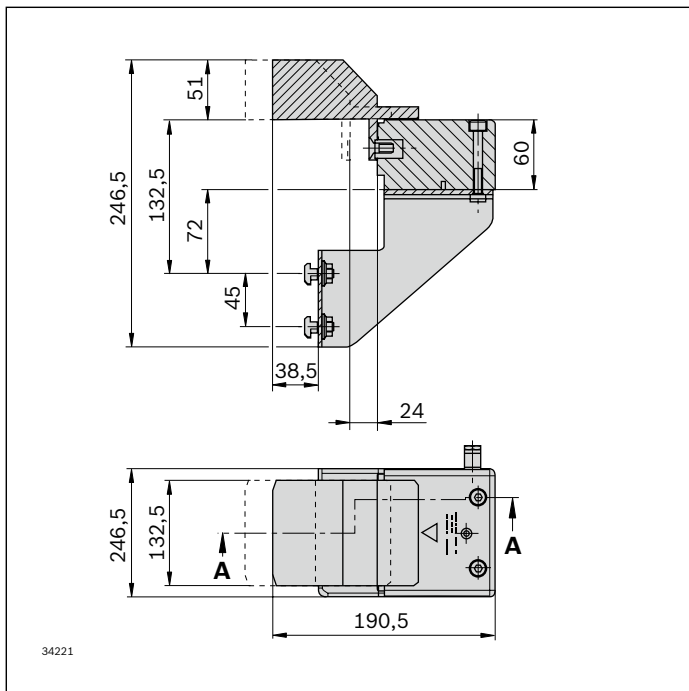
Permissible impact force per WT

| m_{WT} (kg) | $v_N^{1)}$ (m/min) |
|-------------------|-----------------------|
| min. 50 max. 1100 | 2 ... 9 |
| min. 50 max. 1000 | 2 ... 12 |
| min. 50 max. 800 | 2 ... 18 |

¹⁾ Conveyor speed

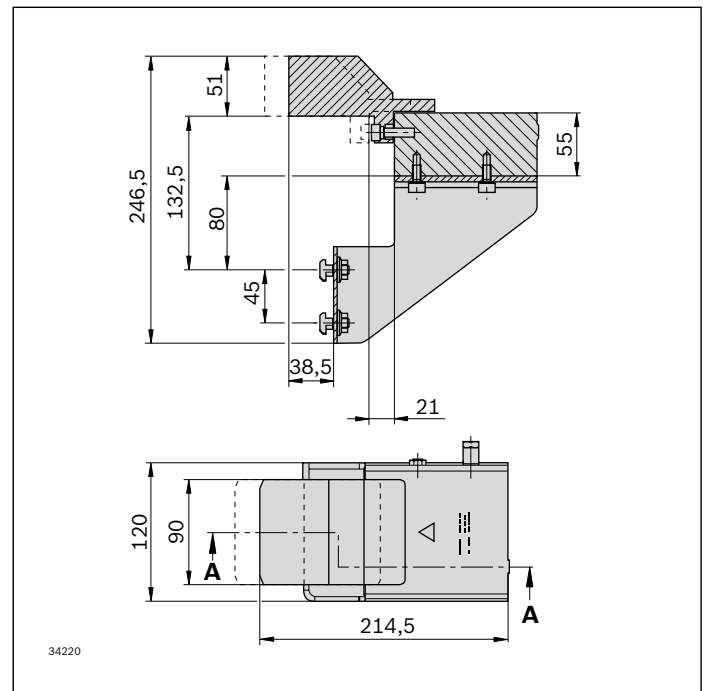
Dimensions

DA 5/200

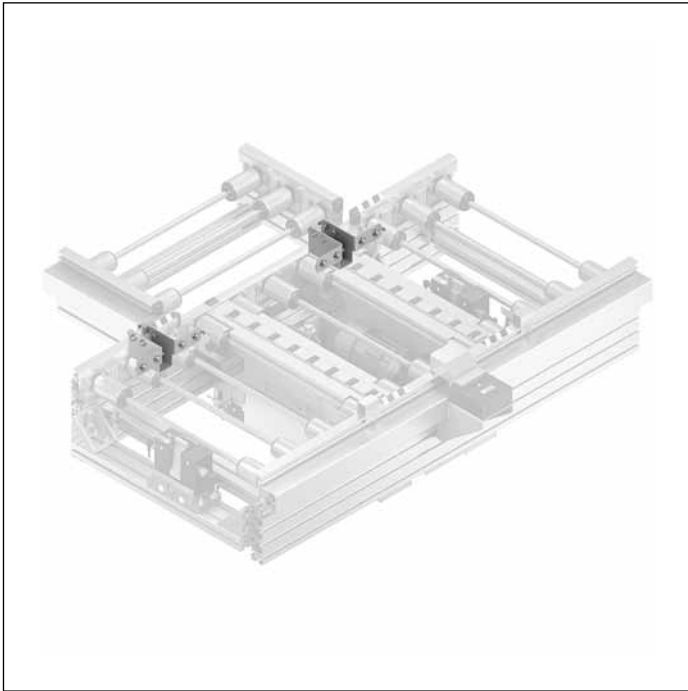


Dimensions

DA 5/1000



Connection kit for connecting the transverse section



Use:

For connecting the transverse section, independent of the drive side of the main section. If a circuit only consists of lift transverse units, the transverse sections are connected directly to the longitudinal section.

The guide kit **(A)** is part of the connection bridge (see page 6-15).

For the connection of a standard section, the guide kit **(A)** must be ordered separately.

Version:

- ▶ Support brackets made from galvanized steel incl. covers for the open profile ends of the transverse section

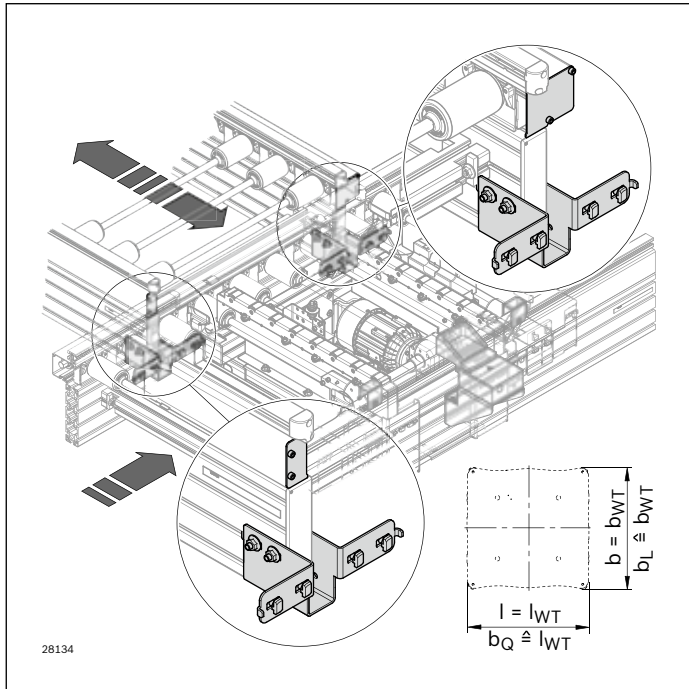
Scope of delivery:

- ▶ Connection kit for connecting the transverse section:
2 support brackets incl. fastening material for assembly
- ▶ Guide kit:
2 guide aids incl. fastening material for assembly


Condition on delivery:

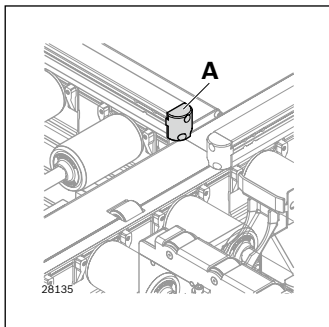
- ▶ Not assembled

Ordering information




Connection kit for connecting the transverse section

| |  | Material number |
|------------------------------|---|----------------------|
| ST 5/H, ST 5/XH | Set | 3 842 549 782 |
| ST 5/OC DD = 2 ¹⁾ | Set | 3 842 549 783 |
| ST 5/OC DD = 1 ¹⁾ | Set | 3 842 549 784 |

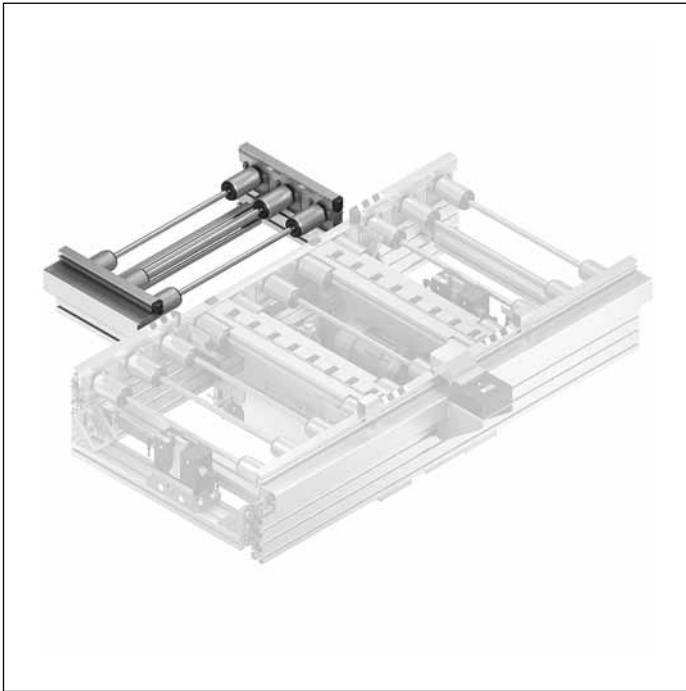


Guide kit

| |  | Material number |
|----------|---|----------------------|
| A | Set | 3 842 545 975 |

- ¹⁾ DD = drive
 1: on one side
 2: on two sides

Connection bridge



Use:

- ▶ The connection bridge is used for length adjustment when parallel transverse sections are used with lift transverse units and curves/diverters/junctions

Version:

- ▶ Support profile made of anodized aluminum
- ▶ Permissible section load:
 - ST 5/XH: 380 kg/m
 - ST 5/H: 200 kg/m
- ▶ Lateral guide profile made of steel, polymer, or aluminum in an anodized aluminum support
- ▶ Driven via king shaft with bevel wheels made of polymer or sintered metal

Condition on delivery:

- ▶ Ready-to-install.

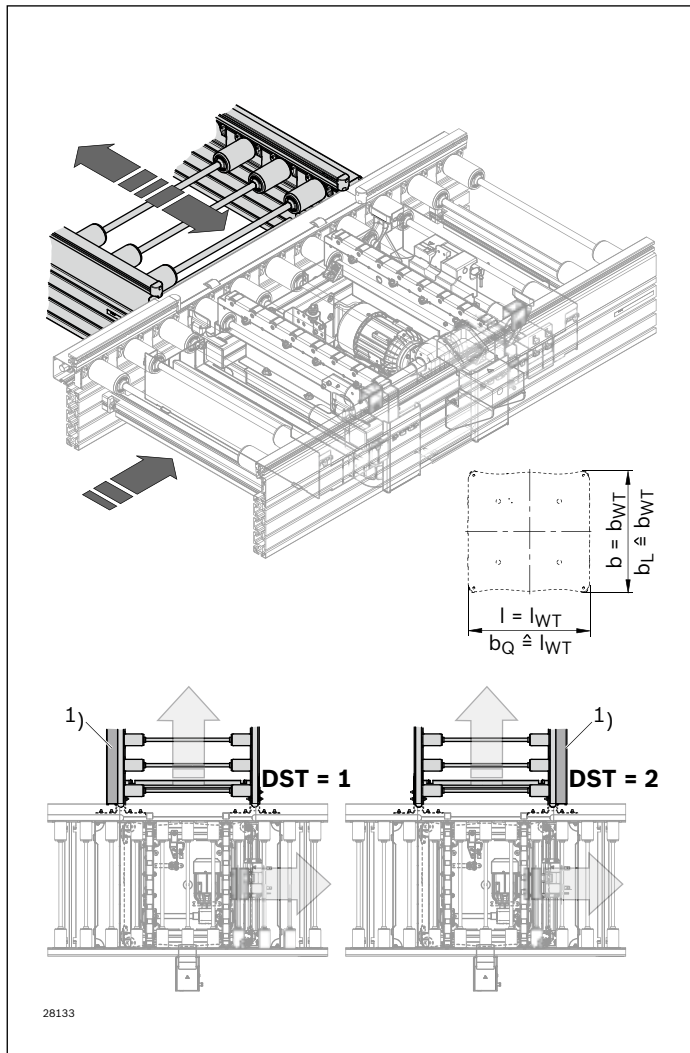
Required accessories:

- ▶ Connection kit for connecting the transverse section, see page 6-13

Material:

- ▶ Roller: galvanized steel

Ordering information



¹⁾ Drive side

Connection bridge

| b_Q ¹⁾ (mm) | b_L ²⁾ (mm) | LG ³⁾ | BG ⁴⁾ | DST ⁵⁾ | SC ⁶⁾ | Material number |
|-----------------------------|-----------------------------|------------------|------------------|-------------------|------------------|--------------------------------|
| 455 | 455 | 1; 2; 3 | 1; 2 | 1; 2 | 1; 2 | 3 842 998 605 (ST 5/XH) |
| 650 | 455; 650 | 1; 2; 3 | 1; 2 | 1; 2 | 1; 2 | 3 842 998 604 (ST 5/H) |
| 845 | 650; 845 | 1; 2; 3 | 1; 2 | 1; 2 | 1; 2 | $b_Q = \dots$ mm |
| 1040 | 845 | 1; 2; 3 | 1; 2 | 1; 2 | 1; 2 | $b_L = \dots$ mm |
| | | | | | | LG = ...; BG = ... |
| | | | | | | DST = ...; SC = ... |

¹⁾ b_Q = width of transverse section

²⁾ b_L = Width of workpiece pallet

³⁾ LG = Lateral guide material
1: steel; 2: plastic; 3: aluminum

⁴⁾ BG = Bevel wheel material
1: plastic
2: sintered metal

⁵⁾ DST = King shaft installation on secondary section
1: left
2: right

⁶⁾ SC = protective covers
1: without protective covers
2: with protective covers

Description of further parameters, see page 0-3

Ordering examples, see page 6-6

HQ 5 lift transverse unit protective covers



Use:

The protective covers are provided in working areas to increase safety.

Mobile protective covers (**A, B**) are assembled to HQ 5, fixed protective covers (**C, D, E**) are clipped between the rollers using spring elements. The user must make the openings in the protective covers, see assembly instructions.

Note:

Do not walk on the protective covers.
Slots for add-on parts must be made by the customer, for details see assembly instructions.

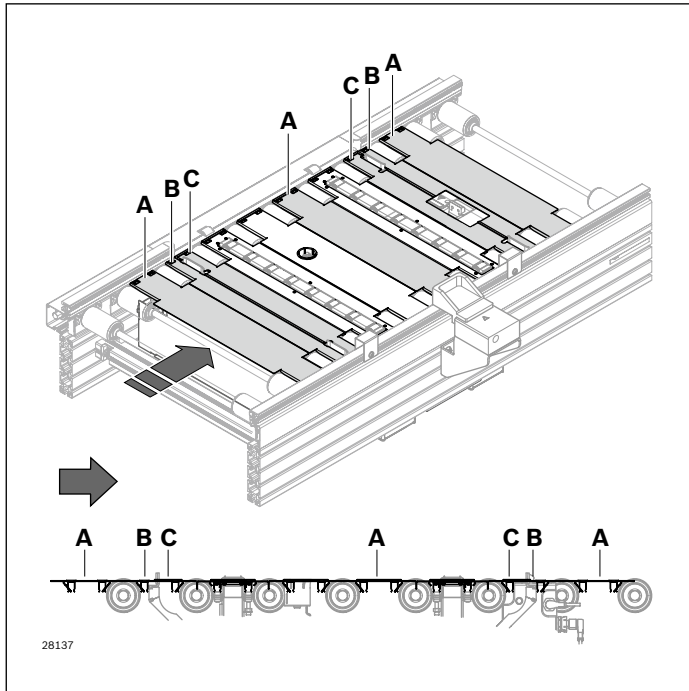
Versions:

- ▶ Protective covers for various widths and roller spacings

Material:

- ▶ galvanized steel

Ordering information

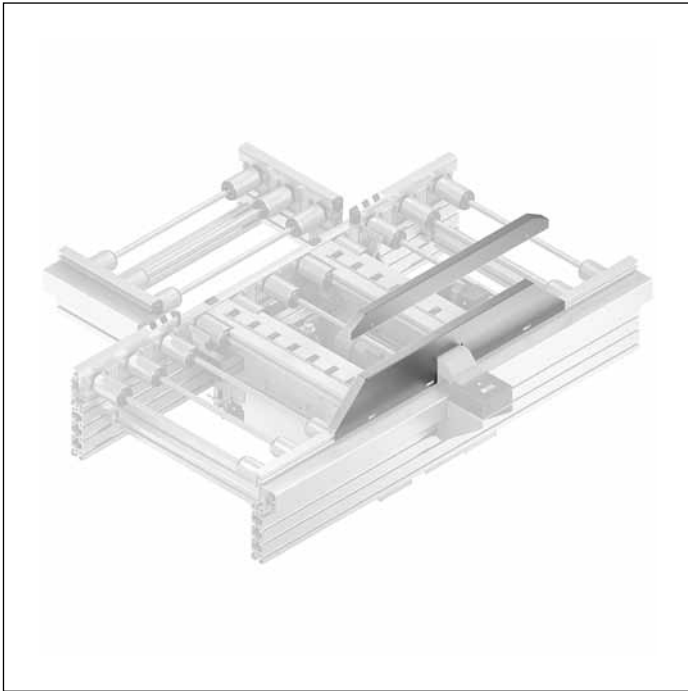


Required protective covers for HQ 5

| b_L (mm) | b_Q (mm) | p (mm) | n | Material number A | n | Material number B | C |
|---------------|---------------|-------------|-----|----------------------|-----|----------------------|-------------------------------|
| 455 | 455 | 130 | 8x | 3 842 545 404 | 1x | 3 842 545 966 | 2x Delivered pre-assembled |
| 455 | 650 | 130 | 9x | 3 842 545 404 | 1x | 3 842 545 966 | |
| 455 | 650 | 195 | 6x | 3 842 545 609 | 1x | 3 842 545 966 | |
| 650 | 650 | 130 | 9x | 3 842 545 405 | 1x | 3 842 545 966 | |
| 650 | 650 | 195 | 6x | 3 842 545 360 | 1x | 3 842 545 966 | |
| 650 | 845 | 130 | 11x | 3 842 545 405 | 1x | 3 842 545 966 | |
| 650 | 845 | 195 | 7x | 3 842 545 360 | 1x | 3 842 545 966 | |
| 650 | 845 | 260 | 5x | 3 842 545 612 | 1x | 3 842 545 966 | |
| 845 | 845 | 130 | 11x | 3 842 545 361 | 1x | 3 842 545 966 | |
| 845 | 845 | 195 | 7x | 3 842 545 362 | 1x | 3 842 545 966 | |
| 845 | 845 | 260 | 5x | 3 842 545 363 | 1x | 3 842 545 966 | |
| 845 | 1040 | 130 | 12x | 3 842 545 361 | 1x | 3 842 545 966 | |
| 845 | 1040 | 195 | 8x | 3 842 545 362 | 1x | 3 842 545 966 | |
| 845 | 1040 | 260 | 6x | 3 842 545 363 | 1x | 3 842 545 966 | |
| 845 | 1040 | 325 | 4x | 3 842 545 403 | 1x | 3 842 545 966 | |

- b_L = track width in direction of transport (longitudinal conveyor)
- b_Q = track width in direction of transport (transverse conveyor)
- p = Roller spacing (pitch)
- n = Required quantity

Cover for lateral guide of HQ 5 lift transverse unit



Use:

- ▶ Covers must be provided for the lateral guide in the vicinity of the HQ 5 lift transverse unit (see page 6-4) to increase safety.

Note:

Do not walk on the protective covers.

Versions:

- ▶ Covers with **(A)** a slot for DA 5/... dampers
- ▶ Covers without **(B)** a slot for DA 5/... dampers

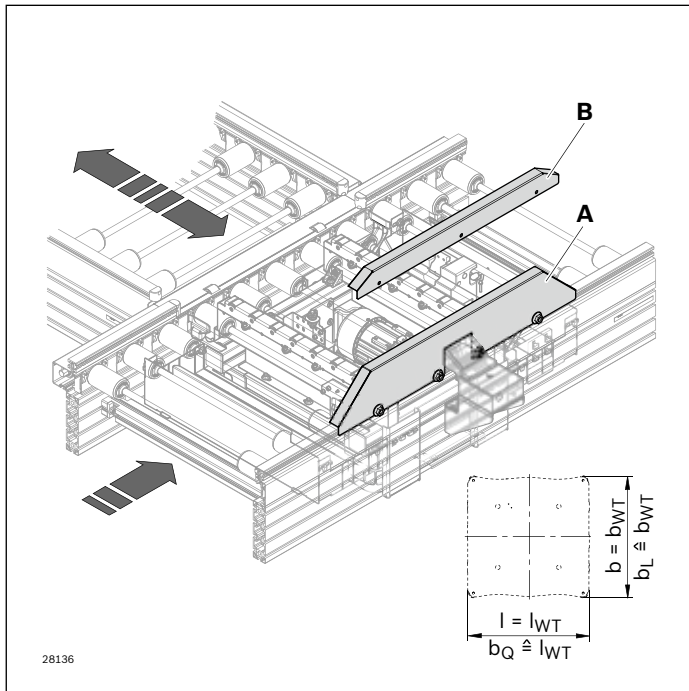
Required accessories:

- ▶ T-bolt, see page 6-20
- ▶ Flange nut, see page 6-20

Material:

- ▶ galvanized steel

Ordering information




Covers for lateral guide of HQ 5

| | b_Q (mm) | Material number |
|----------|---------------|----------------------|
| A | 455 | 3 842 552 658 |
| | 650 | 3 842 552 659 |
| | 845 | 3 842 552 660 |
| | 1040 | 3 842 552 661 |
| B | 455 | 3 842 552 662 |
| | 650 | 3 842 552 663 |
| | 845 | 3 842 552 664 |
| | 1040 | 3 842 552 665 |

b_Q = track width in direction of transport (transverse conveyor)

Required fastening materials:

| |  | Material number |
|-------------------|---|----------------------|
| Flange nut | 100 | 3 842 345 081 |
| T-bolt | 100 | 3 842 528 718 |

Description of the T-bolt and flange nut, see page 7-10