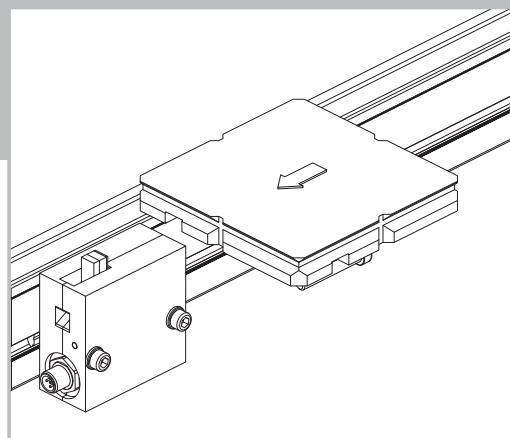


非阻尼阻挡器**ELU-30**

**Separating stop, undamped, ELU-30**



参数表  
**Data Sheet**

编号/No. 44000571  
有效起始日期/valid from  
2017/09

**Der Wörner-Stopper. Das Original.**

## 非阻尼电子阻挡器 ELU-30

### 功能描述

阻挡器适用于在特定工作位置阻挡一个或多个托盘。通过机电运动实现下沉功能

### 作用

- 结实、牢固的设计
- 便于安装
- 较短的周期时间
- 通过机电运动实现较高的效率和较低的运行费用
- 由于省去气动系统因此保证较低的安装成本
- 低噪音
- 通过集成的诊断工具(根据款式进行选择)极易进行调试及维护

### 产品类型

升降冲程: 7 mm  
倾斜阻挡头  
为客户特殊要求提供解决方案  
各式配件

### 使用范围

最大推进力: 21 N	
输送速度	托盘重量
6 m/min	30 kg
9 m/min	15 kg
12 m/min	9 kg
18 m/min	4 kg

所有数据适用于当运输设备与托盘之间的摩擦系数为 $\mu=0,07$ 且为钢制阻挡头的情况, 其为试验结果并在持久测试中被证实

## Separating stop, undamped, electrical, ELU-30

### Functional Description

The separating stop places one or multiple pallets in a defined position and clears them individually for downstream transport. The lowering movement is carried out by an electromechanical drive.

### Value

- compact, sturdy design
- easy installation
- short cycle times
- high efficiency and low operating costs due to electromechanical drive
- low installation costs by eliminating the pneumatic system
- low noise
- simplified commissioning and maintenance through integrated diagnostic tools (depending on model)

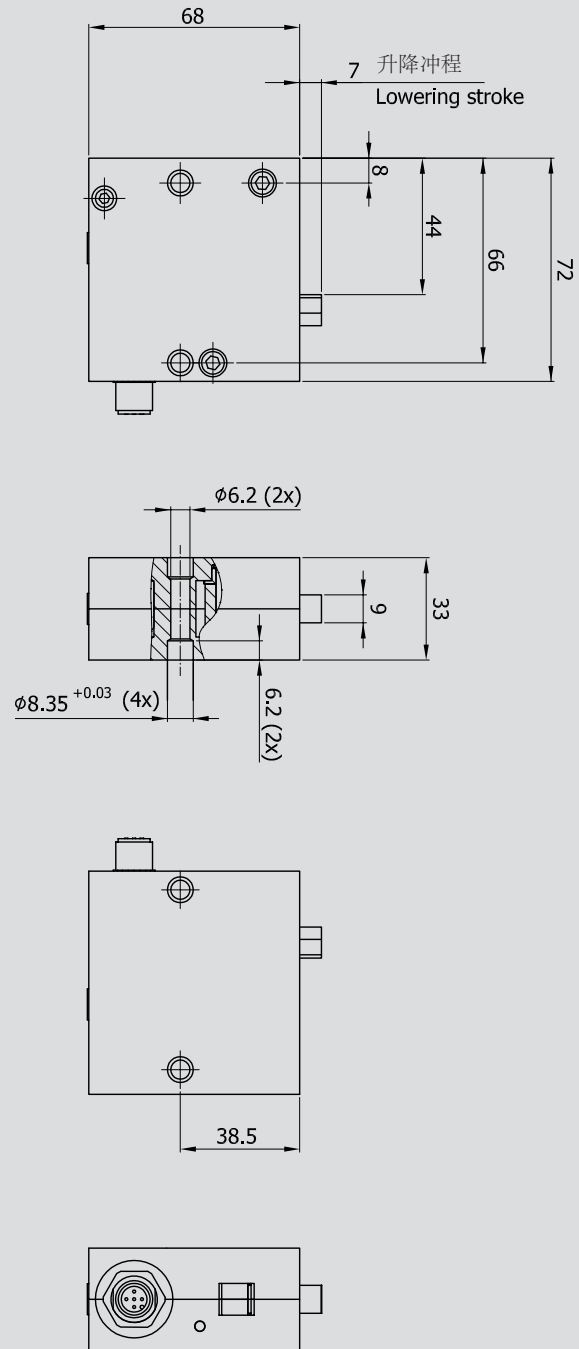
### Product types

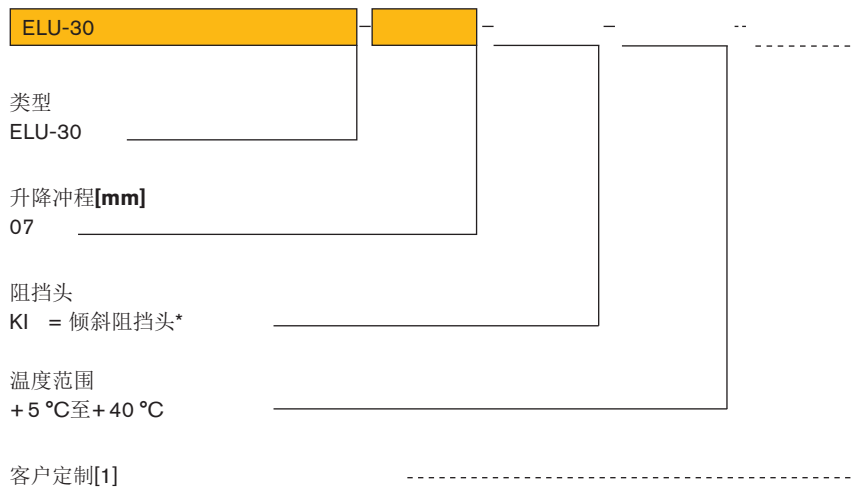
Lowering stroke: 7 mm  
Tilt stop  
Customer-specific solutions  
Various accessories

### Scope of application

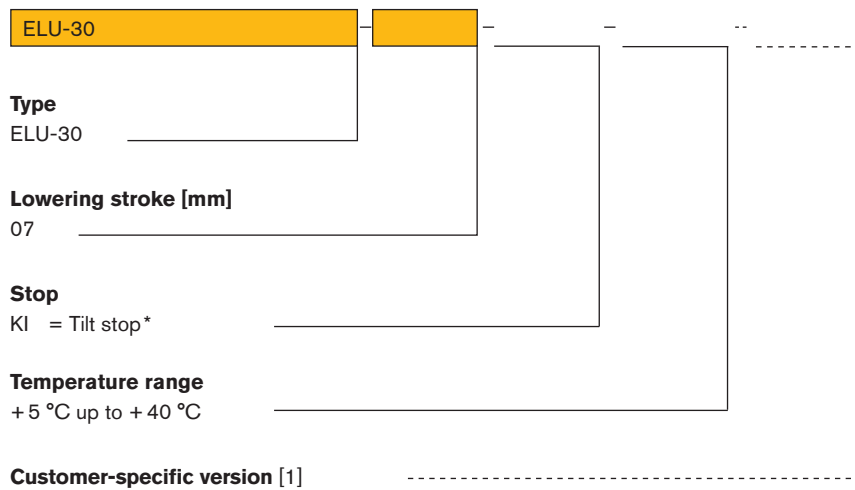
Max. propelling force: 21 N	
Conveying speed	Pallet weight
6 m/min	30 kg
9 m/min	15 kg
12 m/min	9 kg
18 m/min	4 kg

All specifications apply for a coefficient of friction between means of conveyance and pallet of  $\mu = 0.07$  and a steel stop. They are experimentally determined and confirmed in endurance and fatigue tests.

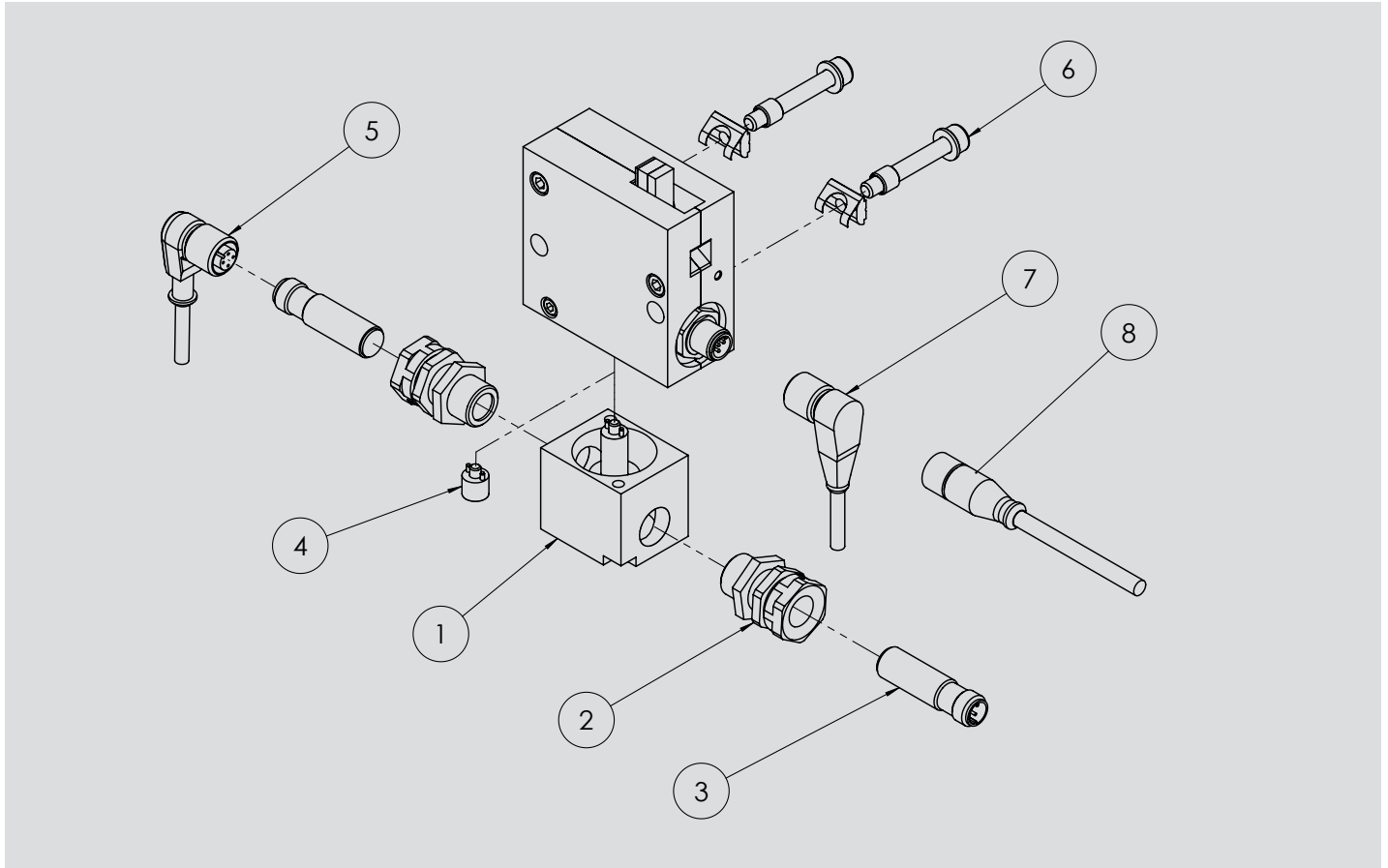




[1] 按需分配  
\* 在订购号中无编号



[1] assigned correspondingly  
\* without mark in the order code



项目号	产品名称	描述	订单号
[1]	位置传感器	识别阻挡头是否打开/关闭	44000575
[2]	夹紧支架		30539
[3]	接近开关	电感	06205001
[4]	手动操纵器		44000576
[5]	传感线	长度: 5m, 用于电感接近开关	06290003
[6]	固定组件	M6	44000574
[7]	弯角空气接头连接线		06290024
[8]	直角空气接头连接线		06290025

Item no.	Product name	Description	Order no.
[1]	<b>Position sensor</b>	Detection stop plate open/closed	44000575
[2]	<b>Clamping holder</b>		30539
[3]	<b>Proximity switch</b>	inductive	06205001
[4]	<b>Manual hand operation</b>		44000576
[5]	<b>Sensor cable</b>	Length: 5m, for inductive proximity switch	06290003
[6]	<b>Assembly kit</b>	M6	44000574
[7]	<b>Angular connection line</b>		06290024
[8]	<b>Straight connection line</b>		06290025

## 警告

安装、投产、保养及维修之前要注意查看参数表。该工作必须由经过培训和指导的专业人员进行

电气连接必须符合国家相关规定

维修及保养之前必须关闭电源(主开关等)。此外还要采取必要的措施以避免不可预知的重启，例如主开关显示警示标志“维修”等

## 常规用途

将运行托盘上一个或多个工件阻挡在预定位置

- 阻挡器可用于传输系统中的多个托盘
- 阻挡器不可以与预定的运输方向反向运行
- 阻挡器不能在有爆炸危险的区域使用
- 阻挡器不能作为安全开关使用
- 按照安装位置使用适合的防护措施，以便在运行及维护过程中避免链条被夹住。如有必要，请询问阻挡头的位置

## 质保

如果阻挡器由于使用不当及未按照说明擅自操作而损坏，生产商不承担任何质保及赔偿责任。未使用原装备件，生产商不承担质保。请确保使用合适的包装用于运输本产品

## 环境保护

更换配件时，请妥善处理

## Warnings

*Before installation, commissioning, maintenance and repair data sheet must be observed. The work must be performed only by trained, instructed personal.*

*Electrical connections must comply with the respective national regulations.*

*The power supply must always be switched off (main switch, etc.) before maintenance and repair work. In addition, measures are needed to prevent unintentional restart, for example to put a warning sign „repair work“ at the main switch.*

## Intended use

*Stopping one or more accumulated pallets at a defined stop position.*

- *The separating stop is designed to separate pallets in transfer systems.*
- *The separating stop must not be used against the intended conveying direction.*
- *The separating stop must not be used in locations exposed to the danger of explosions.*
- *The separating stop must not be used as a safety switch.*
- *Depending on the installation situation, suitable protective measures have to be taken to prevent extremities from any damage. If necessary, the position of the stop is to be queried.*

## Warranty

*In no event can the manufacturer accept warranty claims or liability for damages arising from improper use of the separating stop or from intervention in the appliance other than described in this data sheet. The manufacturer can accept no warranty claims if non-original spare parts have been used. For the transport of the unit is to ensure a suitable packaging.*

## Environmental protection

*Always dispose of changed parts in the correct manner when replacement work is completed.*

**推进力  $F_R$** 

推进力为运输设备与托盘(推动力)之间的摩擦力，其取决于摩擦系数 $\mu$ ，托盘重量 $m$ 以及重力加速度 $g$

$$F_R = \mu \times m \times g$$

如果有多个托盘堆积，则必须计算其数量： $F_R = n \times \mu \times m \times g$

摩擦系数 $\mu$ 反映了运输设备与托盘之间的摩擦情况

举例：

传送带/皮带：

$$\mu = 0.2 \text{ 至 } 0.3$$

塑料环链：

$$\mu = 0.3 \text{ 至 } 0.5$$

挡板辊链：

$$\mu = 0.01 \text{ 至 } 0.03$$

**阻挡位设置**

设置阻挡位的时候，我们建议将两个基本功能(阻止和削弱)分开设置

**基本功能：阻止**

参数表里说明了阻挡器的使用范围。使用此表格，您能够很轻松知道，计划使用的阻挡器是否能在必要的输送速度情况下阻挡计划重量的托盘。

**基本功能：削弱**

参数表里说明了最大推进力，能够在长期运行时确保降低阻挡器的速度。系统里的推进力必须小于说明的推动力。请您注意，其它重量的托盘也可以在不同的摩擦系数下被降速。使用上述表格，您可以使用其它摩擦系数换算我们给出的最大推进力

**Propelling force  $F_R$** 

The propelling force is the friction force between the conveyor equipment and the pallet. It is a function of the coefficient of friction  $\mu$ , the weight of the pallet  $m$  and acceleration due to gravity  $g$ :

$$F_R = \mu \times m \times g$$

If more than one pallet is accumulated, their number  $n$  must be taken in to account:  $F_R = n \times \mu \times m \times g$

The coefficient of friction  $\mu$  characterizes the friction between conveyor and pallet.

Examples:

Belt/band:

$$\mu = 0.2 \text{ to } 0.3$$

Plastic modular belt:

$$\mu = 0.3 \text{ to } 0.5$$

Accumulation roller chain:

$$\mu = 0.01 \text{ to } 0.03$$

**Configuration of a stopping point**

When configuring the stopping point, we recommend to consider the two basic functions (Stopping and Lowering) separately.

**Basic function: Stopping**

The scope of application of the various stoppers is indicated in the data sheets. Using these tables, it is easy to determine whether the intended stopper is able to stop the expected pallet weight at your required conveyor speed.

**Basic function: Lowering**

The data sheets indicate the maximum propelling force against which the stopper can reliably lower during long-term operation. The propelling force in your system must be less than the specified value. Please note that other pallet weights can be reliably lowered at different coefficients of friction. Using the formula above, you can easily convert the maximum propelling force specified by us for other coefficients of friction.

阻挡器直接通过电源线控制。电压打开：阻挡器脱开，托盘可以通过。电压关闭：阻挡器闭锁，托盘被阻挡

The separating stop is controlled directly through the power line. Voltage is applied: The separating stop is unlocked and the pallet can pass through. Voltage is switched off: The separating stop is locked and the pallet is stopped.

应用领域

- 垂直安装阻挡器
- 主要运行速度为12 m/min
- 在设备运行时有利于减少噪音以及阻挡时的机械负荷
- 以最小的电力消耗实现阻挡的功能
- 由于阻挡头在一个较短的释放信号后自动进入下一个空位，因此可以省去传感器
- 设备断电时，托盘应当自动停止
- 适用于污染较少的区域

Area of application

- for vertical installation of the separating stop
- mainly for conveying speeds up to 12 m/min
- in systems in which it is advantageous to reduce the noise and the mechanical load during stopping
- for stopping with minimum electric power consumption
- to save sensors, since the stop plate is tilting and automatically is raised after the pallet has passed
- in systems, where after a power failure, the pallets should be stopped automatically
- in areas with little dirt/contamination

能阻挡的最大重量

输送速度	托盘重量
06 m/min	30 kg
09 m/min	15 kg
12 m/min	9 kg
18 m/min	4 kg

Maximum mass to be stopped

Conveying Speed	Pallet weight
06 m/min	30 kg
09 m/min	15 kg
12 m/min	9 kg
18 m/min	4 kg

如果摩擦力超过 $\mu = 0,1$ ，则无法保证有效阻挡

If the friction of  $\mu = 0.1$  is exceeded, correct lowering isn't guaranteed anymore.

最大推进力

为了确保有效阻挡，推进力不应超过30N。这个数值适用于Wörner的常规阻挡头，且托盘须搭配硬化后的钢制阻挡头

Maximum propelling force

To ensure a correct lowering, the propelling force of 30 N should not be exceeded. This applies for a Wörner standard stop and a pallet with hardened steel stop.

释放时间

0,15秒

Clearing time

0.15 seconds

温度范围

适用范围+ 5°C至+ 40°C

Temperature range

Operating conditions + 5°C up to + 40°C

维护工作

无需进行维护工作。阻挡头区域必须保证干净且无杂质，以确保托盘能够精确定位

Maintenance

No maintenance is required. To guarantee an exact positioning of the pallet, the area around the stop plate must be clean and free of swarf.

重量

0,44 kg

Weight

0.44 kg

重量数据

与总重量(托盘和工作件)相关，与轴向力无关

Weight data

Refers to the total weight (pallet and workpiece), not the axial force.

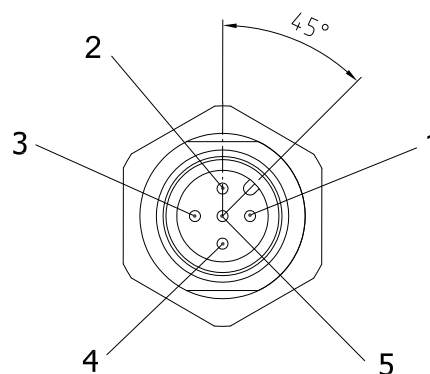
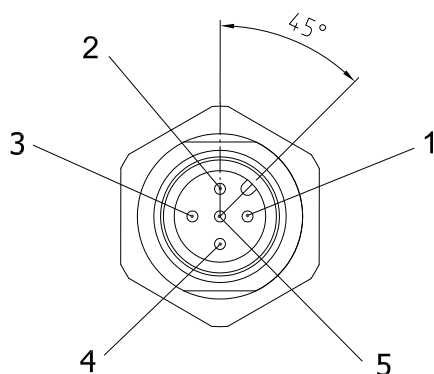
重要说明:

为了确保有效运行，需注意阻挡器需要在上述参数范围内运行，包括重量、速度、推进力和温度，因为电子推进力与气动推进力无法相比。由于涉及综合机械力，因此阻挡器不能在肮脏的、特别是沾油污的地方使用

Important advice:

To guarantee perfect work, it is necessary to attend to the specifications as weight, speed, propelling force and temperature listed above, because electric and pneumatic forces are not comparable. Due to their more complex mechanics the separating stops must not be used in defiled, especially oleaginous, areas.





连接板		线路颜色 连接线 BCC09H5 (BCC08F8)
连接	功能	
1	-	棕色
2	接入端口“打开”	白色
3	GND	蓝色
4	+ 24 V DC	黑色
5	PE (外壳)	绿色/黄色

Connecting chart		Wire-colour connecting cable BCC09H5 (BCC08F8)
Pin	Function	
1	-	brown
2	Input „open”	white
3	GND	blue
4	+ 24 V DC	black
5	FE (case)	green/yellow

Öffnen: + 24 V DC an Pin 2  
Schließen: 0 V an Pin 2

Open: + 24 V DC to Pin 2  
Close: 0 V to Pin 2

连接负载  
电源

电压范围:  
24 V DC ± 15 %, 由于反极性保护可至30 V DC  
最大电压30 V DC

**Electrical power ratings**  
**Power supply**

Voltage range:  
24 V DC ± 15 %, reverse polarity protection to 30 V DC  
Maximum voltage 30 V DC

电力损耗

Pin 4: 打开时最大电流约400mA < 1,7 A (bei 24 V DC)  
保持电流 < 0,2 A  
Pin 2: 最大5 mA

**Power consumption**

Pin 4: max. current opening for about 400mA < 1.7 A (at 24 V DC)  
Holding current < 0.2 A  
Pin 2: max. 5 mA

连接线

5极插座  
例如Balluff  
BCC09H5 (直角连接线)  
BCC08F8 (弯角连接线)

**Connecting cable**

5-pole connector  
e.g. Balluff  
BCC09H5 (straight connection line)  
BCC08F8 (angular connection line)

**LED功能**

**LED持续发亮:**  
阻挡器连接电源并位于阻挡位置

**Function of LED**

**LED lights permanently:**  
Separator is connected to the power supply and is in locked position

**LED闪烁:**

阻挡器释放托盘

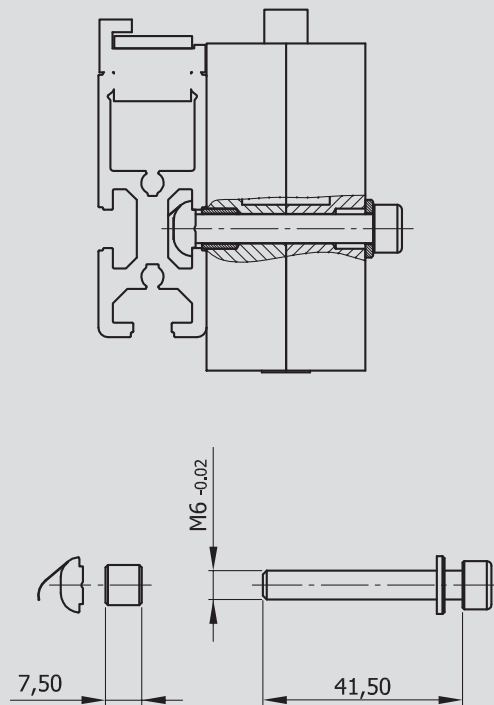
**LED flashes:**

Separating stop releases the pallet.

过高的电压会导致持续损伤!

Higher voltage can lead to permanent damages!


固定组件  
**Assembly kit**

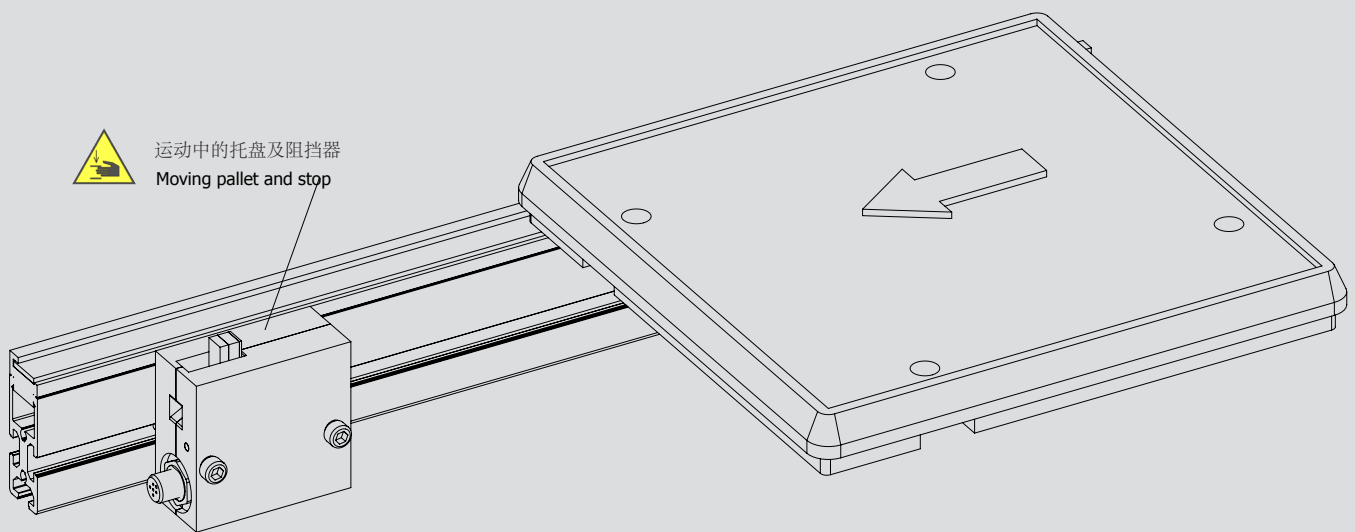


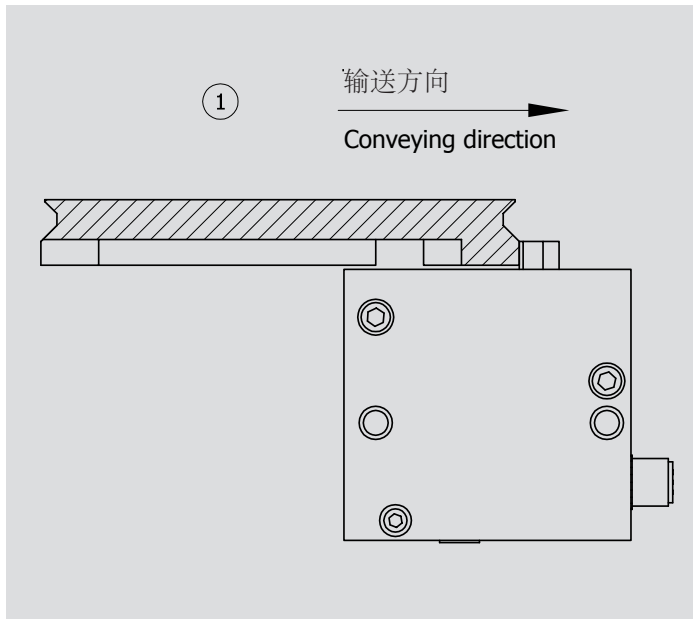
固定螺丝最多拧紧10 Nm。锁紧区域最多允许0,1 mm的凹陷

The fastening screw must tighten with max. 10 Nm. The screw-on face should be max. 0.1 mm concave.

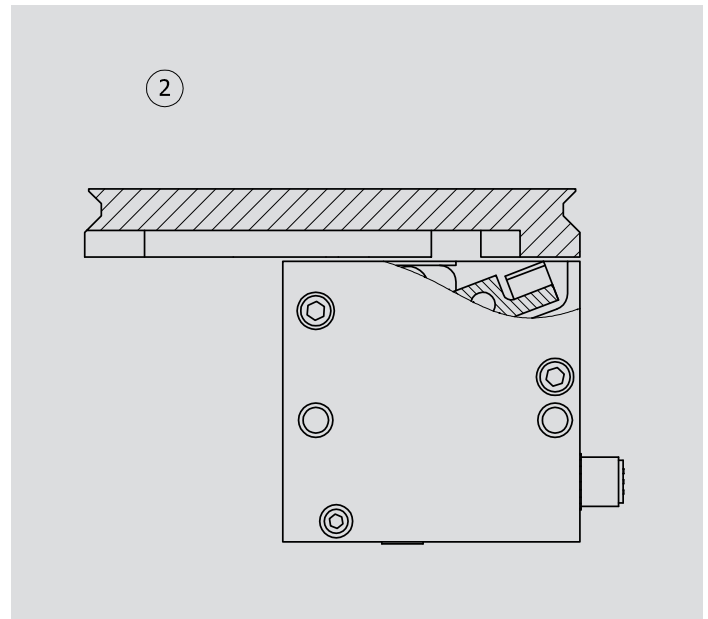
安全说明  
**Safety Instructions**

 运动中的托盘及阻挡器  
Moving pallet and stop

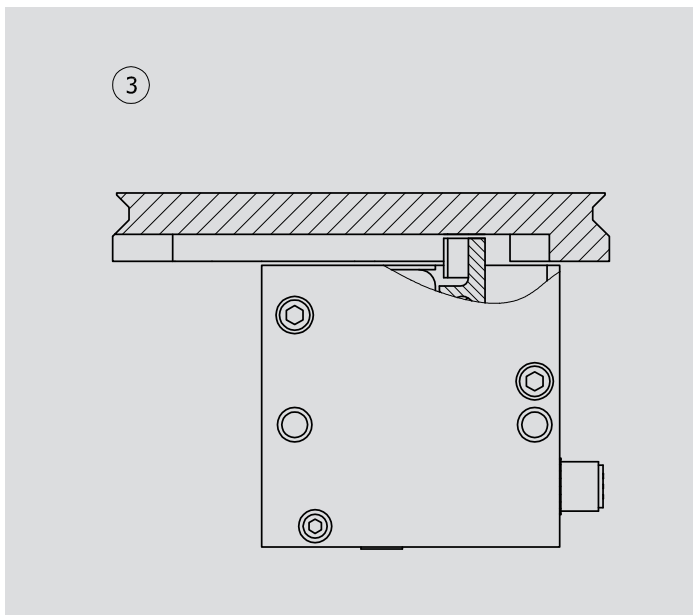




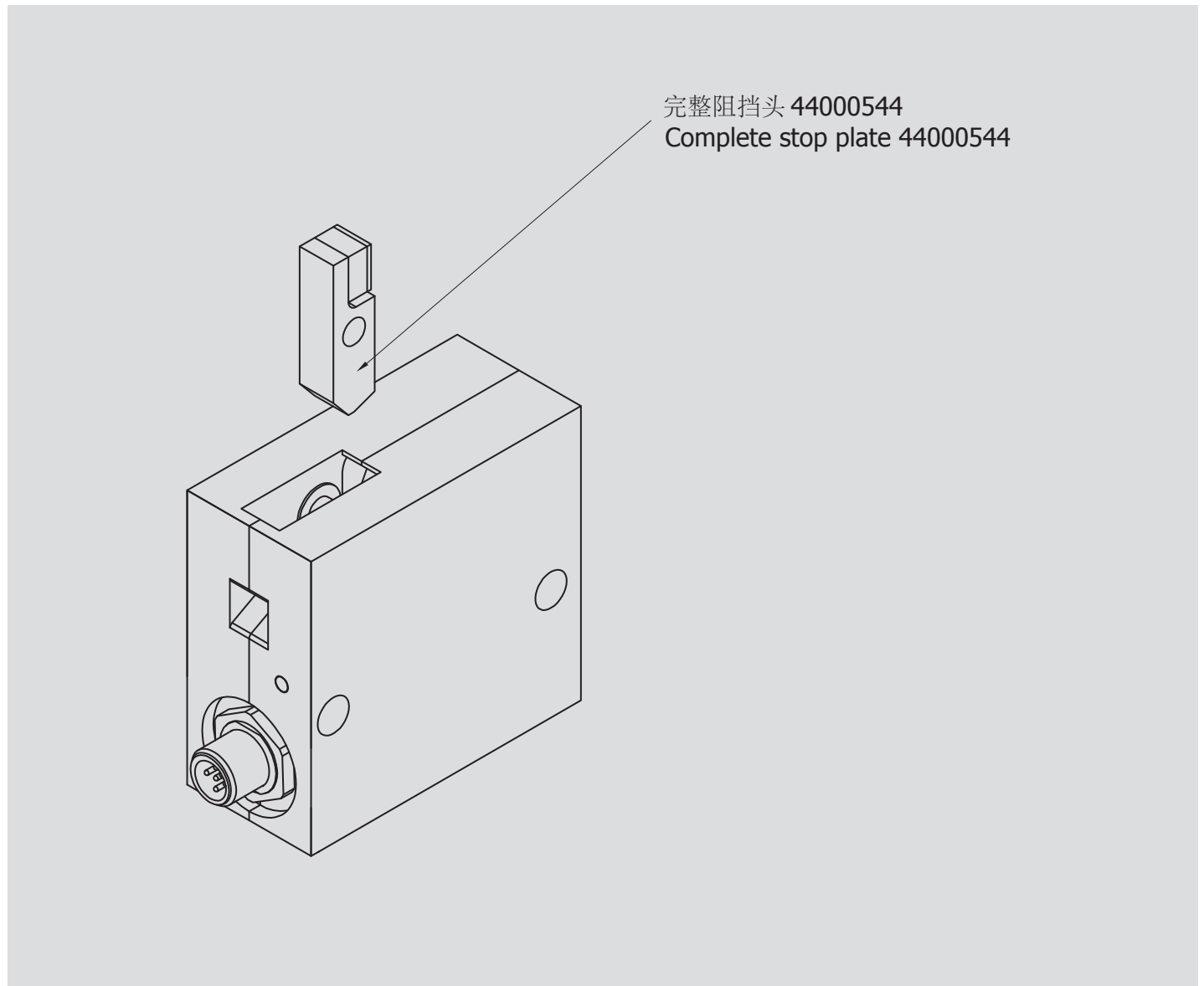
- 托盘停在阻挡头上
- *Pallet on stop plate.*



- 托盘被释放
- 阻挡头能够迅速回到阻挡位置
- 倾斜阻挡头允许目前的托盘通过
- *Pallet released.*
- *Separating stop can be switched into locked position immediately.*
- *The tilt stop lets pallet pass through.*



- 当倾斜阻挡头恢复到垂直位置，阻挡头将再次阻挡
- 下一个托盘将被自动挡住
- *Once the tilt stop is raised vertically, the separating stop is locked again*
- *The next pallet is stopped automatically.*



项目	数量	订购号	备件	备件组成/产品版本	每个密封修理包数量
1	1	44000544	完整阻挡头		

Item	Quantity	Order-no.	Spare part	Elements of spare part/product version	Quantity per seal repair kit
1	1	44000544	Complete stop plate		

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