The versatile
Material Handling System

Modern factories are geared towards high speed production. Time pressure increases constantly. Changeover time between production runs need to be shorter. Therefore product cycles and demanding customers require a new dimension in flexibility.

The solution is now available: Robotunits expands its Modular Automation System with a unique concept for material handling. Only 8 multi-functional components allow for a large range of applications.

**Individual lengths and widths**
- Lane length and width can be easily adjusted
- No tools needed to change lane width
- Additional tracks can be added if load requires

**Adjustable angle**
- Infinitely adjustable angle
- Track can be attached to the tube clamp in the front, or in the T-slot of the extrusion
- Brakes can be inserted anywhere on the track to control the speed of the box

**Safe and rigid design**
- Rigid system through Robotunits Fastening Technology
- Tight fitting track covers prevent contamination of roller tracks
- Low noise level due to special gliding bearings
- Entire construction available for ESD
- Anti-Reverse can be placed anywhere on the track
- Colored anti-reverse shows maximum fill level

**System compatible**
- 8 components fully compatible with the Robotunits Modular Automation System
- Multi-functional stop elements allow safe in-feed and removal of material
- Unlimited applications due to 14mm T-slot
- Reduced inventory cost due to multi-functional parts

**Save time, reduce cost**
- Minimal design effort necessary
- Snap-in connections for quick assembly
- Minimal training required
- Individual adjustments possible

**High Flexibility**
- Open T-slots can be used to install additional components
- Tracks can be inserted in any of the Robotunits extrusions
- Quick assembly without special tools
- System can be easily adjusted for new requirements
The versatile **Material Handling System**

**System Options**

- **Roller Track**
  - MAT 456
  - Page 78

- **Roller Track with Side Guides**
  - MAT 459
  - Page 79

- **Tube Clamp Front**
  - MAT 3011
  - Page 80

- **Tube Clamp T-slot**
  - MAT 3021
  - Page 81

- **Front Part Flat/Stop**
  - MAT 4577
  - Page 82

- **Front Part Slider Left/Right**
  - MAT 4579
  - Page 83

- **Brake for Roller Track**
  - MAT 4580
  - Page 84

- **Anti-Reverse for Roller Track**
  - MAT 4575
  - Page 85

- **Round Tube**
  - PIL 3002
  - Page 86

- **End Cap for Round Tube**
  - CAP 3002
  - Page 86

- **Label Holder**
  - 50 x 100
  - MAT 3050
  - Page 87
Option with front Tube Clamp

**Advantages**

- Option with Front Tube Clamp saves 41mm in height compared to option with T-Slot Tube Clamp
- Multifunctional Tube Clamp can also be used as end stop (less parts)

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1. Roller Track with Side Guides MAT 4591 (page 79)
2. Anti-Reverse for Roller Track MAT 4575 (page 85)
3. Roller for Roller Track (page 78/79)
4. Brake for Roller Track MAT 4580 (page 84)
5. Tube Clamp Front MAT 3011 (page 80)
6. Round Tube PIL 3002 (from page 86)
Option with T-slot tube clamp

Advantages
- Staggered configuration possible
- Different track lengths on the same level for ergonomic reach

1. Roller Track with Side Guides MAT 4591 (page 79)
2. Anti-Reverse for Roller Track MAT 4575 (page 85)
3. Roller for Roller Track (page 78/79)
4. Brake for Roller Track MAT 4580 (page 84)
5. Tube Clamp T-slot MAT 3021 (page 81)
6. Front Part Flat/Stop MAT 4577 (page 82)
7. Front Part Slider Left/Right MAT 4579 (page 83)
8. Round Tube PIL 3002 (from page 86)
Connecting the tracks using snap-in connections which allow for compensation of temperature related length changes.

**Application**
For roller tracks, e.g. for:
- Material flow applications
- Manual assembly stations
- In- and out-feed
- Transport carts
- Rolling side guides

**Technical Data**
Material:
- Base part PA6 black (ESD)
- Cover PA6 gray or PA6 black (ESD)
- Roller POM-C black (ESD)

Max. load per unit 15 kg
Max. load per meter 60 kg

Resistance to ground per ESD assembly < 35 MΩ

**Order Code**

<table>
<thead>
<tr>
<th>Description</th>
<th>Scope of Delivery</th>
<th>Order Code(1)</th>
<th>Length</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>Roller Track Kit</td>
<td>1 1 7</td>
<td>MAT 4561</td>
<td>0.12 kg</td>
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<tr>
<td>Roller Track Kit, cut to length</td>
<td>1 1 X(2)</td>
<td>MAL 4561 SNN</td>
<td>0.448 kg/m</td>
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<td>1 1 X(2)</td>
<td>MAL 4563 SNN</td>
<td>0.456 kg/m</td>
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</tbody>
</table>

1) Please complete the order code by adding the desired length
2) Roller quantity depending on cut track length
3) Ideal length is in increments of 35mm (roller pitch)

Diagram dimensions in mm
Connecting the tracks using snap-in connections which allow for compensation of temperature related length changes.

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**ESD Conductivity**
Connecting the tracks using snap-in connections which allow for compensation of temperature related length changes.

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<table>
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<tr>
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<th>Order Code</th>
<th>Length</th>
<th>Weight/Meter</th>
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<td>MAL 4591 SNN</td>
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1) Please complete the order code by adding the desired length
2) Roller quantity depending on cut track length
3) Ideal length is in increments of 35mm (roller pitch)
Diagram dimensions in mm
**MAT 3011  Tube Clamp Front**

**Application**
Connector to attach the Round Tube to the face of the extrusion

**Technical Data**
Material:
Base part PA6 black (ESD)
Clamp PA6 black (ESD)
and TPV rubber black
Hardware: steel, galvanized

**ESD Conductivity**

Fasten the screw at the indent underneath the ESD-logo
Tube Clamp attached to the face of the extrusion performs as a stop
Connecting track with the tube clamp using snap-in connections

**Order Code**

<table>
<thead>
<tr>
<th>Description</th>
<th>Scope of Delivery</th>
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<tr>
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<td>Clamping Part 1</td>
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<td></td>
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<td>BLS M008 S02</td>
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<td></td>
<td>BKS 2x07</td>
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</table>

Diagram dimensions in mm

**Resistance to ground per ESD assembly**
< 35 MΩ
**MAT 3021**

**Tube Clamp T-slot**

**Application**
Connects the Round Tube to the T-slot of the extrusion

**Technical Data**
- **Material:**
  - Base part PA6 black (ESD)
  - Clamp PA6 black (ESD)
  - and TPV rubber black
- **Hardware:** steel, galvanized

**Diagram dimensions in mm**

**Resistance to ground per ESD assembly**
< 35 Ω

**ESD Conductivity**

Fasten the screw at the indent underneath the ESD-logo

**Order Code**

<table>
<thead>
<tr>
<th>Description</th>
<th>Scope of Delivery</th>
<th>Order Code</th>
<th>Weight</th>
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</thead>
<tbody>
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<td>0.062 kg</td>
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Diagram dimensions in mm
MAT 4577  Front Part Flat/Stop

**Application**
Material stop at start or end of the roller track
In-feed, removal or transfer support in combination with roller track without side guides

**Technical Data**
Material: PA6 black (ESD)
Hardware: steel, galvanized

**Options**

**ESD Conductivity**
Connecting tracks with Front Part Flat/Stop using snap-in connection

**Order Code**

<table>
<thead>
<tr>
<th>Description</th>
<th>Scope of Delivery</th>
<th>Order Code</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Front Part ESD Flat/Stop Kit</td>
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<td></td>
<td>IBS M08x025 1</td>
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<td></td>
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</tbody>
</table>

Diagram dimensions in mm
MAT 4579 Front Part Slider Left/Right

Application
In-feed, removal or transfer support in combination with roller track without side guides

Technical Data
Material: PA6 black (ESD)
Hardware: steel, galvanized

Option In-feed left

Option Infeed right

Adjustable Insert Applications
ESD Conductivity

Connecting tracks with left / right feeder using snap-in connection

Order Code

<table>
<thead>
<tr>
<th>Description</th>
<th>Scope of Delivery</th>
<th>Order Code</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>Front Part ESD Slider Left/Right Kit</td>
<td>Base Part</td>
<td>1</td>
<td>MAT 4579</td>
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<tr>
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<td>Adjustable insert</td>
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<tr>
<td></td>
<td>IBS M08x025</td>
<td>1</td>
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Diagram dimensions in mm
**MAT 4580**  
**Brake for Roller Track**

**Application**  
To slow down boxes or trays

**Technical Data**  
Material: TPV Rubber black

Easy to insert post-assembly by swapping roller with brake. Depending on the transported material (weight, surface properties, ...) multiple brakes can be inserted adjacent to each other or spaced out with rollers in between

### Function

**Order Code**

<table>
<thead>
<tr>
<th>Description</th>
<th>Order Code</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Brake for Roller Track</td>
<td>MAT 4580</td>
<td>0.003 kg</td>
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</table>

Diagram dimensions in mm
MAT 4575 Anti-Reverse for Roller Track

**Application**
Material stop at the start or end of the roller track
Colored Anti-Reverse shows maximum fill level
(e.g. Kanban signal)

**Technical Data**
Material: POM-C orange

Easy to insert post-assembly!
(Swap roller with anti-reverse)

**Function**

Material in-feed

Material stop

**Order Code**

<table>
<thead>
<tr>
<th>Description</th>
<th>Order Code</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>Anti-Reverse for Roller Track</td>
<td>MAT 4575</td>
<td>0.006 kg</td>
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</tbody>
</table>

Diagram dimensions in mm
### PIL 3002 Round Tube

**Application**
Used in applications like:
- Material flow
- Assembly work stations
- In-, out-feed
- Signs and shelves
- Transport carts
- Table frames

**Technical Data**
Material: EN AW-6063-T66 clear anodized aluminum
Section modulus \( W_x = W_y \): 1.16 cm³
Area moment of inertia against \( x + y \): \( I_x = I_y \): 1.73 cm⁴
Against torsion: \( I_t \): 3.47 cm⁴
Cross sectional area \( A \): 175.9 mm²

### Order Code

<table>
<thead>
<tr>
<th>Description</th>
<th>Order Code</th>
<th>Length</th>
<th>Weight/Meter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round Tube 30x2, cut to length</td>
<td>PIL 3002</td>
<td>SNN</td>
<td>0.475 kg</td>
</tr>
<tr>
<td>Round Tube stock length 6050 mm (usable length 6000 mm)</td>
<td>PIL 3002</td>
<td>NNN 6050</td>
<td>0.475 kg</td>
</tr>
<tr>
<td>Round Tube, 175 units, stock length 6050 (usable length 6000 mm)</td>
<td>PIL 3002</td>
<td>PAC 0175</td>
<td>0.475 kg</td>
</tr>
</tbody>
</table>

### CAP 3002 End Cap for Round Tube

**Application**
End cover for Round Tube

**Technical Data**
Material: PE black

### Order Code

<table>
<thead>
<tr>
<th>Description</th>
<th>Order Code</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>End Cap for Round Tube 30x2</td>
<td>CAP 3002</td>
<td>0.004 kg</td>
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</tbody>
</table>

1) Please complete the order code by adding the desired length
Diagram dimensions in mm
**MAT 3050  Label Holder 50 x 100**

**Application**
Labels can be inserted into transparent Label Holder
Label Holder can be snapped on directly to Round Tube

**Technical Data**
Material: PVC transparent
Max. label size 50 x 100 mm

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### Order Code

<table>
<thead>
<tr>
<th>Description</th>
<th>Order Code</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>Label Holder 50 x 100</td>
<td>MAT 3050</td>
<td>0.023 kg</td>
</tr>
</tbody>
</table>

Diagram dimensions in mm