TSUBAKI
PLASTIC MODULAR CHAIN
BTM8H-M and BTC8H-M
Tsubaki has released a new plastic chain suitable for conveying metal trays. The new lineup includes two models: a magnetic type plastic chain with embedded magnets and a closed type suitable for operating on flat sections.

**Magnetic type BTM8H-M**

**Closed type BTC8H-M**

Conventional plastic chains have a variety of issues such as the risk of metal trays sliding on inclined sections and chipped fragments of thin sections of chain getting mixed in with conveyed items. Tsubaki’s newly released plastic chain uses magnetic force to attach trays, making it possible to convey metal trays smoothly even on inclined sections.

What’s more, magnetic and closed types employ links of identical thickness, reducing the possibility of link breakage. The new chains can also be made with a variety of high-function specifications (chain materials). Tsubaki’s new chain provides a single shape that can respond to a variety of scenarios.

### Feature 1
Magnets embedded in links convey metal trays smoothly even on inclined conveyors and in processes where trays are prone to sliding.

### Feature 2
Employs a thicker link construction that is less prone to chipping than conventional plastic chains.

### Feature 3
Magnetic type and closed type have identical dimensions and can be used with the same sprockets. Closed types can be replaced as necessary with magnetic types or changed to high-function specifications (materials).

### Feature 4
Plastic chain does not produce metal debris from abrasion caused by metals rubbing against each other. (Standard types use link materials with anti-static properties (gray only). Suitable for preventing sparks.)

### Feature 5
Chains can be easily disassembled and connected from either side. Pin holes are small, restricting the buildup of food residue.

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**TSUBAKI**

**Plastic Top Chain TTUPS-H**

TTUPS-H chain has an even, thick top plate that is ideal for conveying food trays and similar items. It can be used with the same sprockets as BTM8H-M and BTC8H-M, enabling the standardization of design and service parts.
**Magnetic type** suitable for use on inclined conveyors

- Closed type for flat sections (BTC8H-M)
- Magnetic type for inclined sections (BTM8H-M)

**Closed type** suitable for flat conveyors

**Available with a variety of specifications (materials)**

- Closed type for flat sections (BTC8H-M)
- Magnetic type for inclined sections (BTM8H-M)

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**Conceptual diagram of conveyor**

- At the transfer section between conveyors, the end of the metal tray sticks out from the magnetic type conveyor and the magnetic force acting on the conveyed item is reduced.

- Using a magnetic type conveyor as the conveyor in front of the inclined conveyor enables smooth belt-to-belt transfer by increasing the force with which the conveyed item is pushed onto the inclined conveyor.
Note 1: Weight of BTM8H-M chain does not include weight of magnets. Add 0.015 kg for each magnet.

Note 2: In the above table, max. allowable load, weight, operating temperature range, and allowable speed are values for standard models.

Note 3: The operating temperature range value (80) assumes a dry environment with no lube. Do not use in an environment where the chain may come into contact with hot water of 60°C or more.

Note 4: Requires dedicated plastic pins. Only plastic connecting pins (for joining) are orange. Regular plastic pins are white.

Note 5: BTM8H-M is only for use in dry environments. Do not use in an environment where the chain may come into contact with water or water vapor. As magnets do not respond well to heat, avoid storing or using the chain in an environment of 80°C or more.

Note 6: When using BTM8H-M on an inclined conveyor, the magnetic force acting on the conveyed item is at its lowest at the point where the item is transferred to the downstream process. (Refer to "Conceptual diagram of conveyor" on previous page.)

Note 7: Standard product ○ Made-to-order product

Standard type

Uses standard grade polyacetal resin with excellent mechanical properties. Standard types include blue (B) links and gray (G) links. The gray (G) standard type has anti-static properties. This prevents the buildup of static electricity (sparks) due to friction.

*The blue (B) standard type does not have anti-static properties.

Plastic chain

Magnetic type BTM8H-M (for dry environments)

Closed type BTC8H-M (for both dry and wet environments)

Magnet layout

Magnets can be spaced at desired intervals in magnetic type BTM8H-M chains on either the right or left side, when viewed from the direction of travel, or on both sides. Specify the magnet layout and spacing when ordering.

<table>
<thead>
<tr>
<th>Tsubaki model no.</th>
<th>Width mm</th>
<th>Max. allowable load kN(kgf)</th>
<th>Weight kg/m</th>
<th>Operating temperature range °C</th>
<th>Allowable speed m/min</th>
<th>Connecting pin</th>
<th>Link color</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTM8H-826-M-B</td>
<td>82.6</td>
<td>1.47(150)</td>
<td>1.2</td>
<td>-20 to 60 (80)</td>
<td>50</td>
<td>Plastic pin</td>
<td>Blue</td>
</tr>
<tr>
<td>BTM8H-826-M-B</td>
<td>82.6</td>
<td>1.47(150)</td>
<td>1.2</td>
<td>-20 to 60 (80)</td>
<td>50</td>
<td>Plastic pin</td>
<td>Gray</td>
</tr>
</tbody>
</table>
| Note 1: Weight of BTM8H-M chain does not include weight of magnets. Add 0.015 kg for each magnet.  
2. In the above table, max. allowable load, weight, operating temperature range, and allowable speed are values for standard models.  
3. The operating temperature range value (80) assumes a dry environment with no lube. Do not use in an environment where the chain may come into contact with hot water of 60°C or more.  
4. Requires dedicated plastic pins. Only plastic connecting pins (for joining) are orange. Regular plastic pins are white.  
5. BTM8H-M is only for use in dry environments. Do not use in an environment where the chain may come into contact with water or water vapor. As magnets do not respond well to heat, avoid storing or using the chain in an environment of 80°C or more.  
6. When using BTM8H-M on an inclined conveyor, the magnetic force acting on the conveyed item is at its lowest at the point where the item is transferred to the downstream process. (Refer to "Conceptual diagram of conveyor" on previous page.)  
7. ○ Standard product  ● Made-to-order product  

Standard chain length is 120 links.
Model Numbering

### Magnetic type

**BTM8H-826-M-G-TK**
- Chain type: Closed type
- Width: 826 : 82.6 mm
- Fixed width

**BTC8H-826-M-G**
- Chain type: Closed type
- Width: 826 : 82.6 mm
- Fixed width

**G**: Surface type (gray) with anti-static properties
**B**: Standard type (blue)

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### Sprockets

#### WT-SW2500-16T
- **No. of teeth:** 16
- **Pitch diameter Dp:** 130.2
- **Outside diameter Do:** 131.9
- **Bore shape:** Round
- **Bore diameter D:** ø25 (8), ø30 (8), ø35 (10), ø40 (12)
- **Keyway:** 82
- **Approx. mass kg:** 0.26
- **Material:** Reinforced polyamide (Black)
- **Type:** Split
- **Body:** Stainless steel
- **Bolts and nuts:**

#### WT-SW2500-18T
- **No. of teeth:** 18
- **Pitch diameter Dp:** 146.3
- **Outside diameter Do:** 148.3
- **Bore shape:** Round
- **Bore diameter D:** ø25 (8), ø30 (8), ø35 (10), ø40 (12)
- **Keyway:** 82
- **Approx. mass kg:** 0.29
- **Material:** Reinforced polyamide (Black)
- **Type:** Split
- **Body:** Stainless steel
- **Bolts and nuts:**

#### WT-SW2500-21T
- **No. of teeth:** 21
- **Pitch diameter Dp:** 170.4
- **Outside diameter Do:** 172.7
- **Bore shape:** Round
- **Bore diameter D:** ø25 (8), ø30 (8), ø35 (10), ø40 (12)
- **Keyway:** 82
- **Approx. mass kg:** 0.36
- **Material:** Reinforced polyamide (Black)
- **Type:** Split
- **Body:** Stainless steel
- **Bolts and nuts:**

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### Idler wheels

- **Tsubaki model no.**
- **Equivalent no. of teeth**
- **Outside diameter Do**
- **Groove diameter Du**
- **Bore diameter**
- **Approx. mass kg**
- **Material**
- **Type**

#### Made to order

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**Note:**
1. Bolt tightening torque: 5.7 N·m
2. When assembling split sprockets, do not mix pairs.
3. Operating temperature range: -20°C to 80°C.
4. Machined solid sprockets (steel or engineering plastic) can also be fabricated upon request. Contact a Tsubaki representative for further information.

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Idler wheels (no teeth) for TTP can also be used. However, as mounting dimensions and other factors differ, refer to the TSUBAKI Plastic Top Chain TTUPS-H catalog.
A new type of chain has joined our lineup of magnetic steel chains. When using conventional magnetic steel chains, magnets would sometimes break due to shock; however, our new model protects the magnets with a seamless stainless steel cover, making them less prone to breakage. It is ideal for applications where plastic chains provide insufficient load.

Double Pitch Chain with Magnets (MG)

![Double Pitch Chain with Magnets (MG)]

Sprockets

Model Numbering

### RF2060S 912T -SS

**Chain No.**

912T = 91°27' (If a sprocket has 10 effective teeth, the code is written 1000T)

**Material**

<table>
<thead>
<tr>
<th>Blank</th>
<th>Steel</th>
<th>Stainless steel</th>
<th>Engineering plastic</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF2060S912T</td>
<td>RF2060S912T-SS</td>
<td>RF2060S912T-P</td>
<td></td>
</tr>
<tr>
<td>RF2060S1012T</td>
<td>RF2060S1012T-SS</td>
<td>RF2060S1012T-P</td>
<td></td>
</tr>
<tr>
<td>RF2060S1112T</td>
<td>RF2060S1112T-SS</td>
<td>RF2060S1112T-P</td>
<td></td>
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<tr>
<td>RF2060S1200T</td>
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<td>RF2060S1212T-P</td>
<td></td>
</tr>
</tbody>
</table>

**Conditions of use for engineering plastic sprockets**

1. Operating temperature: -10°C to 60°C
2. Allowable speed: 70 m/min or less (during lube-free operation)
3. May be used at a circumferential velocity of up to 150 m/min in lubricated or pre-lubricated operation.
4. For details on allowable environments and chemicals, see page 189 of the TSUBAKI DRIVE CHAINS & SPROCKETS catalog.
1. LIMITED WARRANTY

General

The product has been designed and manufactured to meet the CE mark requirements. This equipment is intended for domestic use only and should not be used in a commercial or industrial environment.

Do not use chain or accessories for any purpose other than their original intended use. Never perform additional work on the chain (including machining, grinding, abrasive cleaning with acids or bleaches, electropolishing, welding or cutting with a torch) which will cause the chain to fail. These processes may cause the chain to break during operation, resulting in a risk of severe injury.

During installation, before attaching the chain to the machine, check the machine and the chain for damages and ensure that the chain is properly aligned with the machine.

Always refer to the manual or other documentation that was provided with the product, which explains the risk of severe injury from incorrect installation, usage, or improper maintenance. When replacing the chain or damaged parts, be sure to use a safety belt and observe all safety precautions.

2. NON-RELIABILITY

Buyer is responsible for the design and specifications of the product, including without limitation, the determination of suitability for Buyer's application. Buyer is not relying on any advice, representations or warranties except as expressly provided in writing by Seller.

When disconnecting items that have been connected publicly, do not reuse any unreleased products. If not, they may damage the machine and cause accidents.

3. CLAIMS

(a) Buyer shall notify Seller in writing within 30 days after the discovery of defects. Seller's warranty period is 12 months from the date of shipment. Buyer shall be responsible for the inspection and testing of the products as such.

(b) Any claim under the above-stated Limited Warranty shall be made in Seller's writing within 30 days after the discovery of defects. Buyer's warranty period is 12 months from the date of shipment. Buyer reserves the right to change these terms and conditions without notice.

4. INDEMNIFICATION

(a) Buyer shall an indemnify and hold Seller and its representatives harmless from all losses, liability, expense, and damages suffered or incurred by Buyer in connection with the design, manufacture, sale, and use of the products.

(b) Seller shall indemnify and hold Buyer and its representatives harmless from all losses, liability, expense, and damages suffered or incurred by Buyer in connection with the design, manufacture, sale, and use of the products.

5. ENTIRE AGREEMENT

This agreement contains the entire agreement between Buyer and Seller and supersedes all prior agreements, understandings, and negotiations between the parties.

Caution

To prevent accidents, observe the following rules.

For Your Safety When Using the Chain

1. BEFORE USING THE CHAIN

(a) Check the chain and the machine for damages and ensure that the chain is properly aligned with the machine.

(b) Ensure that the chain is properly lubricated.

(c) Ensure that the chain is properly tensioned.

2. DURING INSTALLATION

(a) Before installing the chain, check the machine and the chain for damages and ensure that the chain is properly aligned with the machine.

(b) Ensure that the chain is properly lubricated.

(c) Ensure that the chain is properly tensioned.

3. INSTRUCTIONS FOR USE

(a) Ensure that the chain is properly lubricated.

(b) Ensure that the chain is properly tensioned.

(c) Ensure that the chain is properly aligned with the machine.

4. MAINTENANCE

(a) Ensure that the chain is properly lubricated.

(b) Ensure that the chain is properly tensioned.

(c) Ensure that the chain is properly aligned with the machine.

5. STORAGE

(a) Store the chain in a clean and dry environment.

(b) Store the chain in a well-ventilated area.

(c) Store the chain in a cool and dry environment.

6. DISPOSAL

(a) Dispose of the chain in accordance with local regulations.

(b) Dispose of the chain in a safe and environmentally friendly manner.

(c) Dispose of the chain in a manner consistent with local regulations.

Warning

To avoid danger, observe the following rules.

1. MAINTENANCE

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Note: This manual is intended for use by authorized service personnel only. Always refer to the manual or other documentation that was provided with the product, which explains the risk of severe injury from incorrect installation, usage, or improper maintenance. When replacing the chain or damaged parts, be sure to use a safety belt and observe all safety precautions.

During Installation

(a) Before installing the chain, check the machine and the chain for damages and ensure that the chain is properly aligned with the machine.

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Note: In accordance with the policy of TSUBAKIMOTO CHAIN CO. to constantly improve its products, the specifications in this catalog are subject to change without notice.

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