24 VDC MOTORIZED ROLLER SOLUTIONS FOR EFFICIENT CONVEYORS
R&D
ITOH DENKI is driven by values of research and innovation, to be able to develop new products that foresee and answer your needs.

Leader
Being the only fully autonomous manufacturer of motorized rollers, ITOH DENKI manages the entire process from conception to marketing thanks to its know-how and its experience in the fields of mechanics, electronics, automation, and logistics.

Control
ITOH DENKI’s products are designed and built to last. Furthermore we maintain a high level of product and customer service quality with rigorous quality control and our ISO9001 certification.

Environmental awareness
ITOH DENKI is an environmentally conscious company with ISO 14001 certification. Our products are low energy consumption, clean and recyclable.

Our products in use
Providing the most innovative industries with high quality solutions for conveyors.

E-commerce, Distribution
Air transport
Automotive
Postal service
Advertising display
Domestic appliances

Established in 1946
Since their industrialization in 1975, our research and development center has continued to improve our motorized asynchronous rollers. ITOH DENKI was the first company to offer motorized rollers with 24VDC Brushless technology in 1989, and has continued innovating ever since to anticipate your future needs.

“ Our objective: anticipate industry 4.0 ”
Kazuo Itoh, ITOH DENKI President

Innovation
Build Quality
Responsible
Pioneer

Flexibility
and modularity
• Easy integration within the conveyor
• Customized sizes

Safety
and comfort
• Only 24VDC is needed
• Ergonomic and quiet

Intelligent
• Integral control logics
• Network communication (IoT)
• Predictive maintenance

Environment
• Low energy consumption
• Clean and recyclable

Configurable
• Acceleration and deceleration
• Zero pressure accumulation

Power Moller® motorized rollers are the key component of groundbreaking solutions for conveyor lines.

Complex challenges made easy with Itoh Denki Power Moller solutions.

Innovation, modularity and security are the main features of ITOH DENKI products, enabling customers to create cutting edge logistics technology.
Power Moller solutions

Complex challenges made easy with Itoh Denki Power Moller solutions. Innovation, modularity and security are the main features of ITOH DENKI products, enabling customers to create cutting edge logistics technology.

Safety and comfort
- Only 24VDC is needed
- Ergonomic and quiet

Flexibility and modularity
- Easy integration within the conveyor
- Customized sizes

Intelligent
- Integral control logics
- Network communication (IoT)
- Predictive maintenance

Configurable
- Acceleration and deceleration
- Zero pressure accumulation

Environment
- Low energy consumption
- Clean and recyclable

Power Moller® motorized rollers are the key component of groundbreaking solutions for conveyor lines.

MDR motorized rollers
Vertical transfer
Horizontal transfer
Multidirectional sorter
Our technology in one conveyor

With ITOH DENKI's autonomous decentralized controls, without using a PLC, you can switch between 4 different operation modes according to your needs.

1. **ZPA (Zero Pressure Accumulation) transfer control**
   - Prevents tote from collision and crashing damage.

2. **Auto gapping transfer control**
   - More throughput by catch-up transfer.

3. **Batch forming transfer control**
   - Batch forming while conveying, achieving highly efficient sorting.

4. **High density accumulation control**
   - Increased throughput with minimal footprint by narrowing gaps between totes.

---

**VSS (Vertical Sorting System)**
- Achieving a 3-dimensional buffer, merge and divert

**SOG (Slide Open Gate)**
- Retractable conveyor section

**Flat-Right Angle Transfer U225**
- 90° Transfer for small totes

**MABS multi angle ball sorter**
- Scalable design

---

**MULTIPLE APPLICATIONS**

- 90° transfer
- Acceleration / Deceleration
- Lift
- Bifurcation / Merge
- Cross transfer
- Turn table
- Multidirectional transfer
- 30°/45° transfer
- Curve
- Position holding
- Length measurement
- Lifting table
- Cold room
- Jogging
- Stopping distance
- Belt conveyor
- Floor conveyor
- Gate
In your business, do you sometimes have to deal with large fluctuations in your logistics flow? Do you wonder how you can be more responsive to changes in your activity? ITOH DENKI’s IdPAC may be exactly the answer you need!

**Easy to set up**

With IdPAC, complete modules including rollers, transfer modules, circuit boards, frames and software are delivered to you, preassembled and cabled, ready to be connected together and put to work.

**Easy to perform**

IdPAC is a complete solution making both hardware and software set-up of your conveyor an easy and quick task. Manage and modify your conveyor according to your needs in just a few steps.

**Easy to manage**

Using IdPAC for your material handling means that:

- your engineers are less solicited during assembly and maintenance,
- with modular conveyor sections, your layout can be easily adapted, to quickly respond to your new requirements,
- your conveyor footprint is always minimal and adaptable,
- with predictive maintenance, avoid costly breakdowns and line stops.

**PLUG & PLAY**

In just 3 days, your modules can be fully assembled and your conveyor is operational.

**POINT & CLICK**

Using IdPAC software, program and manage your conveyor, no PLC and heavy programmation is needed.
3 KEY COMPONENTS

MOTORIZED ROLLER AND CIRCUIT BOARD

With external circuit board

<table>
<thead>
<tr>
<th>Light</th>
<th>Standard</th>
<th>With ZPA</th>
<th>Network controller</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS</td>
<td>CB-018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FE</td>
<td>CBM-105</td>
<td>HB-510</td>
<td>EtherCAT/PROFIBUS/IB-E03</td>
</tr>
<tr>
<td>FE-B</td>
<td>CB-016B</td>
<td>HB-510B</td>
<td>EtherCAT/PROFIBUS/IB-E03B</td>
</tr>
<tr>
<td>VE</td>
<td>CBV-108</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

With internal circuit board

<table>
<thead>
<tr>
<th>Standard</th>
<th>With ZPA</th>
<th>Network controller</th>
</tr>
</thead>
<tbody>
<tr>
<td>XE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

COMPATIBLE WITH MODULE ASI - BUS

<table>
<thead>
<tr>
<th>Light</th>
<th>Standard</th>
<th>With ZPA</th>
<th>Network controller</th>
</tr>
</thead>
<tbody>
<tr>
<td>XE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XK</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XC</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MODULES

No pneumatics needed, 24v MDR controls all lifting & transfer operations Fits into existing motor roller conveyor frames.

90° transfer Ability to move product in 4 different directions

FRAT-S

Up to 60m/min
Up to 2500 cases/h

FRAT-U

Up to 60m/min
Up to 2200 cases/h

45° transfer Compact pop up diverter (Version 45° and 30°)

POP-UP

Up to 3000 cases/h
Up to 60m/min max

OPTIONS

Motor shaft

Plain hexagonal
Threaded hexagonal

Shaft on the non-motor side

Hexagonal spring loaded
Set screw

Shape

Grooved
Crowned

Pulley

Ribbed
Grooved

Sleeve

Tapered
PVC

Lagging

Polyurethane
Natural rubber / nitrile

Cold Room

IP 54
IP 65
ITOH DENKI worldwide

UK Branch office
Suite 1 Trinity Space Centre
Waldorf Way, Wakefield WF2 8DH
United Kingdom

German Branch office
Neumeyerstrabe 48
90411 Nürnberg
Deutschland

Netherlands Branch office
Limmerick 3
1046AR Amsterdam
Netherlands

ITOH DENKI EUROPE S.A.S.
490 avenue des Jourdies
Z.A.E les Jourdies
74800 St Pierre en Faucigny
France

www.itoh-denki.com

ITOH DENKI CO., LTD
1146-2 Asazuma-Cho Kasai
Hyogo 679-0180
Japan

www.itohdenki.co.jp

ITOH DENKI USA, INC
21 Great Valley Blvd,
Hanover Crossings Business Park,
Wilkes-Barre, PA 18706-5332 U.S.A

www.itohdensity.com

ITOH DENKI USA, INC
21 Great Valley Blvd,
Hanover Crossings Business Park,
Wilkes-Barre, PA 18706-5332 U.S.A

www.itohdensity.com

ITOH DENKI SHANGHAI CO., LTD
Room 1812, No. 689, Guangdong Road,
Huangpu district, Shanghai 200001
R.P. China

www.itohdenki.com.cn

ITOH DENKI ASIA LTD
Unit F.22nd Floor, No8 Hart Avenue,
Tsim Sha Tsui, Kowloon,
Hong Kong