

# CLUTCHES & BRAKES

## CONTENTS



COUPLINGS

ETP BUSHINGS

**ELECTROMAGNETIC  
CLUTCHES & BRAKES**SPEED CHANGERS  
& REDUCERS

INVERTERS

LINEAR SHAFT DRIVES

TORQUE LIMITERS

ROSTA

## » 248 ELECTROMAGNETIC CLUTCHES & BRAKES » 334 SPRING-ACTUATED BRAKES

250 Electromagnetic Clutch & Brake Models

252 Selection Guide

253 Select by Product Characteristics

254 Applications

## » 256 ELECTROMAGNETIC-ACTUATED MICRO CLUTCHES & BRAKES

258 Product Lineup

262 102

266 CYT

268 112

## » 270 ELECTROMAGNETIC-ACTUATED CLUTCHES & BRAKES

272 Product Lineup

276 101

278 CS

280 111

282 CSZ

283 BSZ

## » 284 ELECTROMAGNETIC CLUTCH AND BRAKE UNITS

286 Product Lineup

292 125

296 121-□ -20G

298 126

302 CBW

306 CMW

308 121-□ -10G

310 122

## » 312 ELECTROMAGNETIC-ACTUATED CLUTCHES & BRAKES TECHNICAL DOCUMENT

336 Product Lineup

340 BXW-L/H/S

342 BXW-R

344 BXR-LE

346 BXR

350 BXL

354 BXH

358 BXL-N

360 Selection Procedures

## » 368 ELECTROMAGNETIC TOOTH CLUTCHES

370 546

## » 374 BRAKE MOTORS

376 BMS

378 BMM

## » 382 POWER SUPPLIES

384 Product Lineup

386 BES

388 BEH

390 BEW

392 BEW-S

394 BEW-W












396 BEW-FH


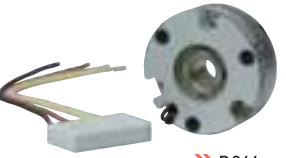





398 BEM

400 BEM-T

## » 625 MIKI PULLEY Hole-Drilling Standards

Electromagnetic Clutch & Brake Models

| Series | ELECTROMAGNETIC-ACTUATED MICRO CLUTCHES & BRAKES   |  |   |  |
|--------|--|--|---|--|
| Device | Micro Clutches   |  | Micro Brakes  |  |
| Models | 102  | CYT  | 112   |  |
| Type   | 13   | 33   | 33M   | 13   |
|        |  >> P.262 |  >> P.264 |  >> P.266 |  >> P.268 |
|        | 15   | 35   |   | 12   |
|        |  >> P.263 |  >> P.265 | 33B   |  >> P.269 |
|        | 11   | 31   |   | 11   |
|        |  >> P.263 |  >> P.265 |  >> P.267 |  >> P.269 |

| Series | SPRING-ACTUATED BRAKES   |  |   |  |
|--------|--|--|---|--|
| Models | BXW-L/H/S  | BXR-LE   | BXL   | BXL-N  |
|        |  >> P.340 |  >> P.344 |  >> P.350 |  >> P.358 |
| Models | BXW-R  | BXR  | BXH   |  |
|        |  >> P.342 |  >> P.346 |  >> P.354 |  |

| Series | ELECTROMAGNETIC CLUTCH & BRAKE POWER SUPPLIES  |  | RECTIFIED POWER SUPPLIES FOR SPRING-ACTUATED BRAKES<br>DC45/90/180V                           |  |
|--------|--|--|---|--|
| Models | BES  | BEH  | BEW   | BEW-S  |
|        |  >> P.386 |  >> P.388 |  >> P.390 |  >> P.392 |

COUPLINGS

ETP BUSHINGS

**ELECTROMAGNETIC CLUTCHES & BRAKES**

SPEED CHANGERS & REDUCERS

INVERTERS

LINEAR SHAFT DRIVES

TORQUE LIMITERS

ROSTA

SERIES

ELECTROMAGNETIC-ACTUATED MICRO CLUTCHES & BRAKES  
 ELECTROMAGNETIC-ACTUATED CLUTCHES & BRAKES  
 ELECTROMAGNETIC CLUTCH & BRAKE UNITS

SPRING-ACTUATED BRAKE

ELECTROMAGNETIC TOOTH CLUTCHES












BRAKE MOTORS

POWER SUPPLIES




## ELECTROMAGNETIC-ACTUATED CLUTCHES & BRAKES

| Clutches |     |     | Brakes |     |
|----------|-----|-----|--------|-----|
| 101      | CS  | CSZ | 111    | BSZ |
| 13G      | 33G | 35  | 13G    | 12  |

|   |   |  |  |  |
|---|---|--|--|--|
|  >> P.276  |  >> P.278  |  |  >> P.280  |  |
| 15G   | 35G   |  | 12G  |  |
|  >> P.277  |  >> P.279  |  >> P.282 |  >> P.281  |  >> P.283 |
| 11G   | 31G   |  | 11G  |  |
|  >> P.277 |  >> P.279 |  |  >> P.281 |  |

### Series ELECTROMAGNETIC CLUTCH AND BRAKE UNITS

| Series | Clutches & Brakes  | Double clutches & brakes   |
|--------|--|--|
| Device |  >> P.292 |  >> P.310 |
|        |  >> P.308 |  |

### Series ELECTROMAGNETIC TOOTH CLUTCHES BRAKE MOTORS

| Series | ELECTROMAGNETIC TOOTH CLUTCHES  | BRAKE MOTORS   |
|--------|---|--|
| Models | 546   | BMS-BMM  |
|        |  >> P.370 |  >> P.376 |

BEW-W

BEW-FH

BEM

BEM-T



>> P.394



>> P.396



>> P.398



>> P.400

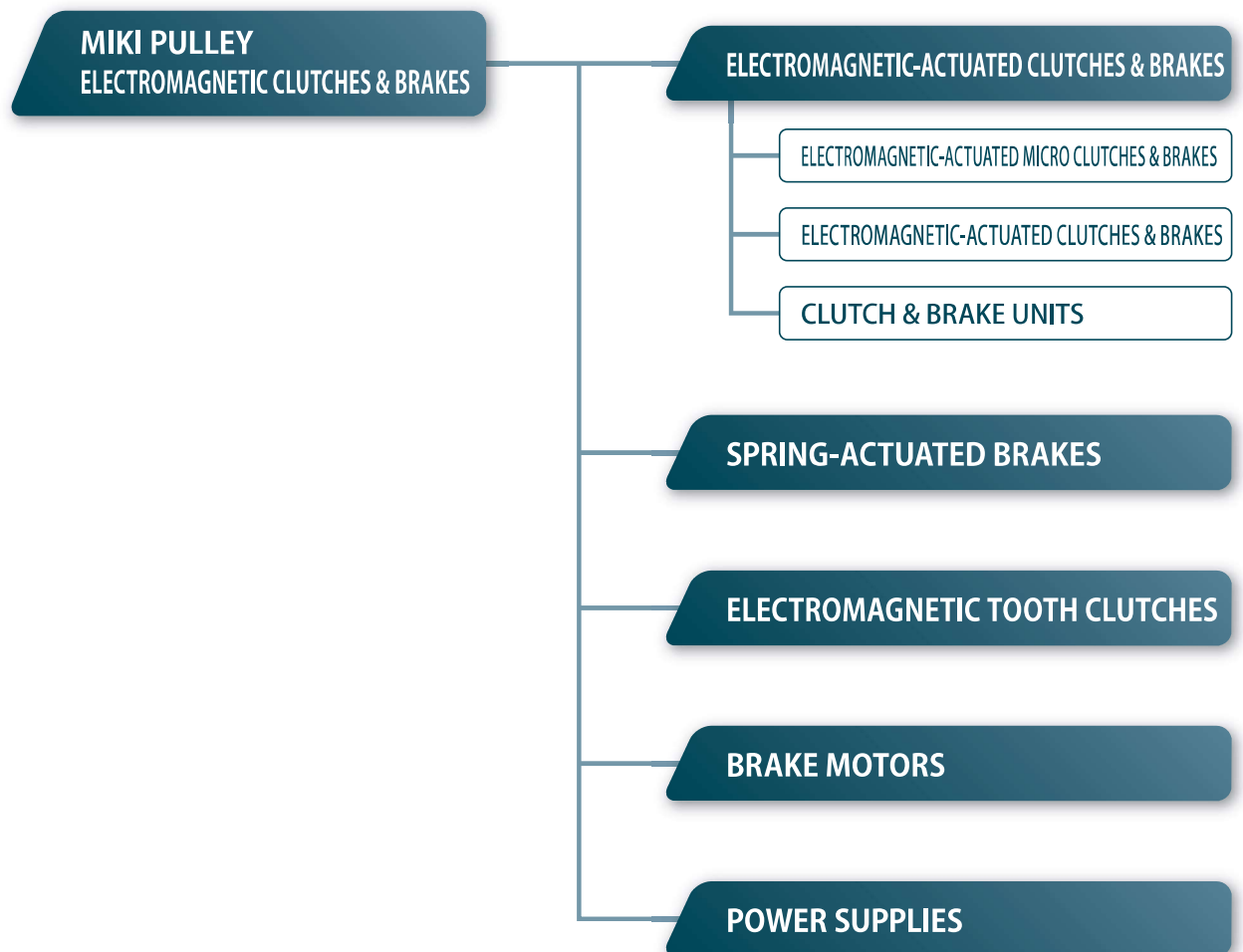
>> A selection guide for electromagnetic clutches and brakes begins on the next page.

## Selection Guide

Miki Pulley divides its electromagnetic clutches & brakes into several major categories: electromagnetic-actuated clutches & brakes, spring-actuated clutches & brakes, electromagnetic tooth clutches, brake motors, and power supplies.

When selecting a product, have information handy on your application, required torque, performance, load properties, drive source and the like, and then use the diagram on the page at right as your guide. Selection details are described in the selection procedures given for each series.

### List of Products



Select by Product Characteristics

|  |                                | Torque (N·m)   |   |
|--|--------------------------------|--|---|
| ELECTROMAGNETIC-ACTUATED CLUTCHES & BRAKES | Electromagnetic-actuated micro | Clutches   | 102 [0.4-2.4 N·m]<br>CYT [0.4-1.0 N·m]  |
|  |                                | Brakes   | 112 [0.4-2.4 N·m]                       |
|  | Electromagnetic-actuated       | Clutches   | CSZ [2.4-10 N·m]<br>101/CS [5-320 N·m]  |
|  |                                | Brakes   | BSZ [2.4-10 N·m]<br>111 [5-320 N·m]     |
|  | Clutch & Brake Units           | Drip-proof type  | 125 [2.4-160 N·m]                       |
|  |                                | Open-disc brake system type  | 121-□-206 [5-320 N·m]                   |
|  |                                | Motor-coupled type   | 126 [5-80 N·m]                          |
|  |                                | Speed reducer-integrated type  | CBW [5-40 N·m]                          |
|  |                                | Motor/speed reducer-integrated type                                      | CMW [5-40 N·m]                          |
|  |                                | Double-clutch units  | 121-□-106 [5-320 N·m]                   |
| Double clutch and brake units              |                                | 122 [5-160 N·m]  |   |
| SPRING-ACTUATED BRAKES                     | Holding use                    | BXW-R [0.30-2.50 N·m]<br>BXW-S [0.36-5.20 N·m]<br>BXR-LE [0.06-3.20 N·m] | BXR [5-55 N·m]                          |
|  |                                | Holding and braking use  | BXW-H [0.24-4.00 N·m]<br>BXH [4-44 N·m] |
|  | Braking use                    | BXW-L [0.12-2.00 N·m]<br>BXL [2-22 N·m]<br>BXL-N [2-80 N·m]              |   |
| Tooth clutches                             |                                | 546 [17.5-2200 N·m]  |   |
| BRAKE MOTORS                               | Electromagnetic-actuated       | BMM [2.5-50 N·m]<br>Motor output 0.2 kW to 3.7 kW                        |   |
|  | Spring-actuated                | BMS [2-15 N·m]<br>Motor output 0.2 kW to 1.5 kW                          |   |

COUPLINGS

ETP BUSHINGS

ELECTROMAGNETIC CLUTCHES & BRAKES

SPEED CHANGERS & REDUCERS

INVERTERS

LINEAR SHAFT DRIVES

TORQUE LIMITERS

ROSTA

SERIES

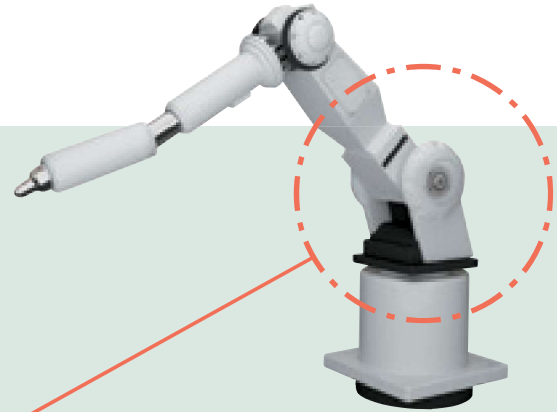
|  |  |
|--|--|
| ELECTROMAGNETIC-ACTUATED MICRO CLUTCHES & BRAKES | ELECTROMAGNETIC-ACTUATED MICRO CLUTCHES & BRAKES |
| ELECTROMAGNETIC-ACTUATED CLUTCHES & BRAKES       | ELECTROMAGNETIC-ACTUATED CLUTCHES & BRAKES       |
| ELECTROMAGNETIC CLUTCH & BRAKE UNITS             | ELECTROMAGNETIC CLUTCH & BRAKE UNITS             |
| SPRING-ACTUATED BRAKE                            | SPRING-ACTUATED BRAKE                            |
| ELECTROMAGNETIC TOOTH CLUTCHES                   | ELECTROMAGNETIC TOOTH CLUTCHES                   |
| BRAKE MOTORS                                     | BRAKE MOTORS                                     |
| POWER SUPPLIES                                   | POWER SUPPLIES                                   |



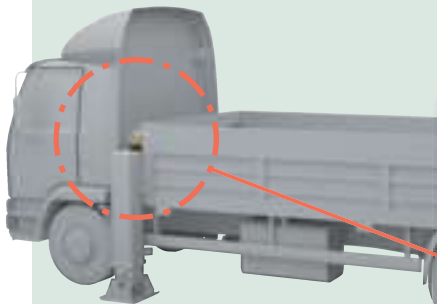
Applications

**Product model** BXR

**Employed device** Articulated Robot



BXR spline type for holding arms. Saves space with slim design and greatly reduces drag wear by using light rotor.



**Product model** 111

**Employed device** Special-purpose Vehicles

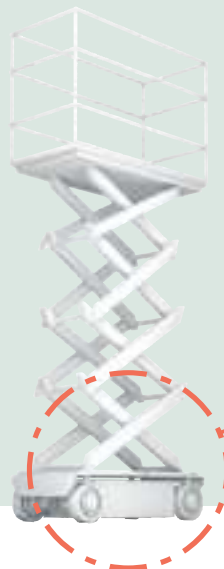


The Electromagnetic-actuated brake 111 model is used in the elevating device for the auxiliary leg.

**Product model** BXR

**Employed device** Aerial Vehicle

BXR model as the holding brake for drive motor. Slim design helps save space.



COUPLINGS

ETP BUSHINGS

ELECTROMAGNETIC CLUTCHES & BRAKES

SPEED CHANGERS & REDUCERS

INVERTERS

LINEAR SHAFT DRIVES

TORQUE LIMITERS

ROSTA

SERIES

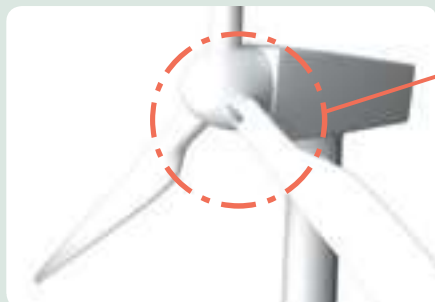
|  |  |
|--|--|
| ELECTROMAGNETIC-ACTUATED CLUTCHES & BRAKES | ELECTROMAGNETIC-ACTUATED MICRO CLUTCHES & BRAKES |
|  | ELECTROMAGNETIC-ACTUATED CLUTCHES & BRAKES       |
|  | ELECTROMAGNETIC CLUTCH & BRAKE UNITS             |

SPRING-ACTUATED BRAKE

ELECTROMAGNETIC TOOTH CLUTCHES

BRAKE MOTORS

POWER SUPPLIES



**Product model** BXW Large Size (Custom Product)

**Employed device** Wind Turbine Generator

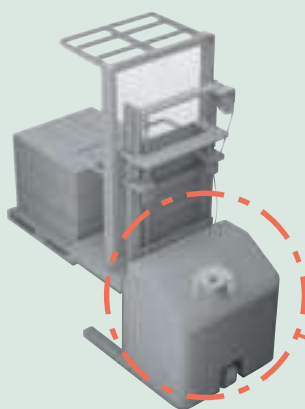
Large BXW as the pitch drive device of a wind turbine generator.



**Product model** BXR-LE

**Employed device** Vertically Articulated Robots

The BXR-LE models owes its ultra-thin profile to a dedicated controller. Mounted on the output shaft, it is ideal for applications where space is limited. Its dedicated controller also saves energy.



**Product model** BXH

**Employed device** Forklifts

Spring-actuated brake BXH model for electric forklift. Compact, high torque design.

