MOTOMAN-MH180-120
SUPPLEMENTAL INSTRUCTIONS

TYPE:
YR-MS165/MH180-A40 (SPECIAL T-AXIS FLANGE SPECIFICATIONS)

Upon receipt of the product and prior to initial operation, read these instructions thoroughly, and retain for future reference.

MOTOMAN INSTRUCTIONS
MOTOMAN-MH180-120 INSTRUCTIONS
DX200 INSTRUCTIONS
DX200 OPERATOR’S MANUAL (for each purpose)
DX200 MAINTENANCE MANUAL

The DX200 operator’s manual above corresponds to specific usage. Be sure to use the appropriate manual.

Part Number: 177386-1CD
Revision: 0
Introduction

This supplementary instruction manual describes how YR-MS165/MH180-A40 (hereinafter referred to as MS165/MH180-A40) is different from YR-MS165/MH180-A10 (hereinafter referred to as MS165/MH180-A10).

Read this supplementary instruction manual thoroughly together with the following instruction manuals “MOTOMAN-MH180-120 INSTRUCTIONS” (175870-1CD).
Points of Difference

The MS165/MH180-A40 is different from the MS165/MH180-A10 in the following point:

- Special T-axis flange

The differences are described based on "MOTOMAN-MH180-120 INSTRUCTIONS" (175870-1CD).
Read this manual thoroughly replacing the subject matters for changes with this supplementary instruction manual.
5 Basic Specifications

5.1 Dimensions and P-Point Maximum Envelope

(Page 5-3)

Fig. 5-1: Dimensions and P-Point Maximum Envelope (MS165/MH180-A40)
6 Allowable Load for Wrist Axis and Wrist Flange

6.1 Allowable Wrist Load

(Page 6-1)

Fig. 6-1: Moment Arm Rating
6.2 Wrist Flange

(Page 6-2)

The fitting depths are shown in the following figure.

*Fig. 6-2: Wrist Flange*

---

**NOTE**
Wash off anti-corrosive paint (yellow) on the wrist flange surface with thinner or light oil before mounting the tools.
9 Maintenance and Inspection

9.1 Inspection Schedule

(Page 9-4)

Fig. 9-1: Inspection Items
9.3.3.1 Grease Exchange for S-, L-, U-, R-, B-, and T-Axes Speed Reducer

Fig. 9-4: Recommended Posture of Each Axis While Injecting

Fig. 9-7: Plug Position of R-, B-, and T-axis

At exchanging grease to U-axis
S-axis: Arbitrary
L-axis: Arbitrary
U-axis: 0 degree (U-arm, vertical to ground)
R-axis: Arbitrary
B-axis: Arbitrary
T-axis: Arbitrary

At exchanging grease to the R-, B-, T-gear inside the casing
S-axis: Arbitrary
L-axis: Arbitrary
U-axis: 0 degree (U-arm, vertical to ground)
R-axis: 0 degree (0 pulse)
B-axis: 0 degree (0 pulse)
T-axis: 0 degree (0 pulse)

At exchanging grease to L-axis
S-axis: Arbitrary
L-axis: 0 degree (0 pulse)
U-axis: Arbitrary
R-axis: Arbitrary
B-axis: Arbitrary
T-axis: Arbitrary

At exchanging grease to S-axis
S-axis: Arbitrary
L-axis: Arbitrary
U-axis: Arbitrary
R-axis: Arbitrary
B-axis: Arbitrary
T-axis: Arbitrary

At exchanging grease to R-axis

At exchanging grease to the B-, T-axis

B-, T-axis grease exhaust port
Hexagon socket head plug PT1/8

R-axis grease exhaust port
B-, T-axis grease inlet
Hexagon socket head plug PT1/8

R-axis grease inlet
Hexagon socket head plug PT1/8
10 Recommended Spare Parts

(Page 10-1)
Replace the following items with the equivalent items in Table 10-1 “Spare Parts for the YR-MS165/MH180-A40” in “MOTOMAN-MH180-120 INSTRUCTIONS”.

Table 10-1: Spare Parts for the YR-MS165/MH180-A40

<table>
<thead>
<tr>
<th>Rank</th>
<th>Parts No.</th>
<th>Name</th>
<th>Type</th>
<th>Manufacturer</th>
<th>Qty</th>
<th>Qty per Unit</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>B 6</td>
<td>Replace  Kit for S-Axis Speed Reducer</td>
<td>Y005C-MSMH180A40S</td>
<td>YASKAWA Electric Corporation</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 7</td>
<td>Replacement Kit for L-Axis Speed Reducer</td>
<td>Y005C-MSMH180A40L</td>
<td>YASKAWA Electric Corporation</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 8</td>
<td>Replacement Kit for U-Axis Speed Reducer</td>
<td>Y005C-MSMH180A40U</td>
<td>YASKAWA Electric Corporation</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 9</td>
<td>Replacement Kit for R-Axis Speed Reducer</td>
<td>Y005C-MSMH180A40R</td>
<td>YASKAWA Electric Corporation</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 10</td>
<td>Replacement Kit for B-Axis Speed Reducer</td>
<td>Y005C-MSMH180A40B</td>
<td>YASKAWA Electric Corporation</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B 11</td>
<td>Replacement Kit for T-Axis Speed Reducer</td>
<td>Y005C-MSMH180A40T</td>
<td>YASKAWA Electric Corporation</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C 13</td>
<td>Wrist Unit</td>
<td>HW127517-A</td>
<td>YASKAWA Electric Corporation</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MOTOMAN-MH180-120
SUPPLEMENTAL INSTRUCTIONS

HEAD OFFICE
2-1 Kurosakishiroishi, Yahatanishi-ku, Kitakyushu 806-0004, Japan
Phone  +81-93-645-7703 Fax  +81-93-645-7802

YASKAWA America Inc. (Motoman Robotics Division)
100 Automation Way, Miamisburg, OH 45342, U.S.A.
Phone  +1-937-847-6200 Fax  +1-937-847-6277

YASKAWA Europe GmbH (Robotics Division)
Yaskawastrasse 1, 85391 Allershausen, Germany
Phone  +49-8166-90-100 Fax  +49-8166-90-103

YASKAWA Nordic AB
Bredbandet 1 van. 3 varvsholmen 392 30 Kalmar, Sweden
Phone  +46-480-417-800 Fax  +46-480-417-999

YASKAWA Electric (China) Co., Ltd.
22/F One Corporate Avenue No.222, Hubin Road, Huangpu District, Shanghai 200021, China
Phone  +86-21-5385-2200 Fax  +86-21-5385-3299

YASKAWA SHOUGANG ROBOT Co. Ltd.
No7 Yongchang North Road, Beijing E&T Development Area, China 100176
Phone  +86-10-6788-2858 Fax  +86-10-6788-2878

YASKAWA India Private Ltd. (Robotics Division)
#426, Udyog Vihar, Phase-IV, Gurgaon, Haryana, India
Phone  +91-124-475-8500 Fax  +91-124-475-8542

YASKAWA Electric Korea Co., Ltd
9F, Kyobo Securities Bldg., 26-4, Yeouido-dong, Yeongdeungpo-gu, Seoul 150-737, Korea
Phone  +82-2-784-7844 Fax  +82-2-784-8495

YASKAWA Electric Taiwan Corporation
12F, No.207, Sec. 3, Beishin Rd., Shindian District, New Taipei City 23143, Taiwan
Phone  +886-2-8913-1333 Fax  +886-2-8913-1513

YASKAWA Electric (Singapore) PTE Ltd.
151 Lorong Chuan, #04-02A, New Tech Park, Singapore 556741
Phone  +65-6282-3003 Fax  +65-6289-3003

YASKAWA Electric (Thailand) Co., Ltd.
59, 1st-5th Floor, Flourish Building, Soi Ratchadapisek 18, Ratchadapisek Road, Huaykwang, Bangkok 10310, THAILAND
Phone  +66-2-017-0099 Fax  +66-2-017-0199

PT. YASKAWA Electric Indonesia
Secure Building-Gedung B Lantai Dasar & Lantai 1 Jl. Raya Protokol Halim Perdanakusuma, Jakarta 13610, Indonesia
Phone  +62-21-2982-6470 Fax  +62-21-2982-6741

Specifications are subject to change without notice for ongoing product modifications and improvements.