MOTOMAN-GP25
SUPPLEMENTAL INSTRUCTIONS

TYPE:
YR-1-06VXH25-A50 (Wall-Mounted S-Axis ±90° Specifications)

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

MOTOMAN INSTRUCTIONS
MOTOMAN-GP25 INSTRUCTIONS
YRC1000 INSTRUCTIONS
YRC1000 OPERATOR'S MANUAL (GENERAL) (SUBJECT SPECIFIC)
YRC1000 MAINTENANCE MANUAL
YRC1000 ALARM CODES (MAJOR ALARMS) (MINOR ALARMS)

The YRC1000 operator's manual above corresponds to specific usage. Be sure to use the appropriate manual. The YRC1000 operator's manual above consists of "GENERAL" and "SUBJECT SPECIFIC". The YRC1000 alarm codes above consists of "MAJOR ALARMS" and "MINOR ALARMS".

Please have the following information available when contacting Yaskawa Customer Support:
• System
• Primary Application
• Software Version (Located on Programming Pendant by selecting: (Main Menu) - (System Info) - (Version))
Robot Serial Number (Located on robot data plate)
Robot Sales Order Number (Located on controller data plate)

Part Number: 181657-1CD
Revision: 0
Introduction

This supplementary instruction manual describes how YR-1-06VXH25-A50 (here in after referred to as GP25-A50) is different from YR-1-06VXH25-A00 (hereinafter referred to as GP25-A00).

Read this supplementary instruction manual thoroughly together with the following instruction manuals "MOTOMAN-GP25 INSTRUCTIONS" (Manual No. HW1484720).

Points of Difference

The GP25-A50 is different from the GP25-A00 in the following point:

• Wall-mounted S-axis ± 90° specifications

The differences are described based on "MOTOMAN-GP25 INSTRUCTIONS" (Manual No. HW1484720). Read this manual thoroughly replacing the subject matters for changes with this supplementary instruction manual.

2.1 Transport Method

The length of the wire rope described as “1200 mm” must be changed to “2500 mm”.

Fig. 2-1: Transporting Position (factory setting)
2.1.2 Using a Forklift

The weight of the manipulator including the shipping bolts and brackets described as "254 kg" must be changed to "440 kg".

*Fig. 2-2: Using a Forklift*

![Diagram showing the use of a forklift](image)

2.2 Shipping Bolts and Brackets

*Fig. 2-3: Shipping Bolts and Brackets*

- Bolt M16 (4 places)
- Hexagon socket head cap screw M16 (length: 35 mm) (2 screws)
- Spring washer M16, Washer M16 (2 washers each)
- Shipping bolts and brackets A
- Shipping bolts and brackets B
- Hexagon socket head cap screw M16 (length: 35 mm) (2 screws)
- Spring washer M16, Washer M16 (2 washers each)
5 Basic Specifications

5.1 Basic Specifications

Replace the following items with the corresponding items listed on Table 5-1 “Basic Specifications”.

- Range of Motion:
  
  S-Axis: -90° to 90°
  L-Axis: -45° to +155°

- Mass: 410 kg
5.2 Dimensions and P-Point Maximum Envelope

Fig. 5-2: Dimensions and P-Point Maximum Envelope

Fig. 5-3: Home Position and Operating Range of Each Axis
5.5 Alterable Operating Range

5.5.1 Components for Altering Operating Range

Fig. 5-7: Components of the S-Axis Stopper and Stopper Mounting Position

Table 5-1: S-Axis Operating Range

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-Axis Operating Range</td>
<td>-90° - +90°</td>
</tr>
<tr>
<td></td>
<td>-60° - +60°</td>
</tr>
<tr>
<td></td>
<td>-30° - +30°</td>
</tr>
</tbody>
</table>

5.5.2 Notes on the Mechanical Stopper Installation

The mechanical stopper can be set at 30° pitch intervals from 30° to 90° range.

For the settable angles, refer to table 5-3 “The Settable Angle for S-Axis Stopper”.

For the GP-A50, the angle of mechanical stopper is set within the range of -90° to +90° as a standard.

5.5.3 Adjustment to the Pulse Limitation of S-Axis

For altering the range of motion of S-Axis, refer to “Chap.6.13 Softlimit Setting Function” in “YRC1000 GENERAL OPERATOR’S MANUAL (RE-CSO-A051)”. With programming pendant, input the numeric value as shown in the following table to modify the parameter.

<table>
<thead>
<tr>
<th>Degree</th>
<th>± 30°</th>
<th>± 60°</th>
<th>± 90°</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Pulse</td>
<td>± 40242</td>
<td>± 80483</td>
<td>± 120725</td>
</tr>
</tbody>
</table>
Table 5-3: The Settable Angle for S-Axis Stopper

The angle range which allows S-axis to be set for + direction and - direction angles. (Ex. -150° to +150° is settable, however 0° to +150° is not settable)

<table>
<thead>
<tr>
<th>The Angle of S-Axis Stopper for + Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>180°</td>
</tr>
<tr>
<td>-180°</td>
</tr>
<tr>
<td>-150°</td>
</tr>
<tr>
<td>-120°</td>
</tr>
<tr>
<td>-90°</td>
</tr>
<tr>
<td>-60°</td>
</tr>
<tr>
<td>-30°</td>
</tr>
<tr>
<td>0°</td>
</tr>
<tr>
<td>30°</td>
</tr>
<tr>
<td>60°</td>
</tr>
<tr>
<td>90°</td>
</tr>
<tr>
<td>120°</td>
</tr>
<tr>
<td>150°</td>
</tr>
<tr>
<td>180°</td>
</tr>
</tbody>
</table>

“Table 5-3 The Settable Angle for S-Axis Stopper” indicates the angle range which allows S-axis to be set for + direction and - direction angles. (Ex. -150° to +150° is settable, however 0° to +150° is not settable)
6 Allowable Load for Wrist Axis and Wrist Flange

6.1 Allowable Wrist Load

The maximum allowable payload of the wrist axis described as “25 kg” must be changed to “10 kg”.

*Fig. 6-1: Moment Arm Rating*
7 System Application

7.1 Peripheral Equipment Mounts

Fig. 7-1: Installing Peripheral Equipment

Mount the peripheral equipment within this area

Tapped hole M6 (2 places) (depth: 12 mm) (pitch: 1)

Tapped hole M5 (2 places) (depth: 11 mm) (pitch: 0.8)

Tapped hole M6 (4 places) (depth: 14 mm) (pitch: 1)

Center of gravity of the peripheral equipment on the U-arm must be within this area

Tapped hole M8 (4 places) (depth: 16 mm) (pitch: 1.25)

Tapped hole M6 (4 places) (depth: 12 mm) (pitch: 1)

Tapped hole M5 (2 places) (depth: 11 mm) (pitch: 0.8)

Through tap M5 (8 places) (Pitch: 0.8)

The mounts marked with "★" must be used only to secure the cables.
The thread depth for through taps must be 10 mm or less.