Aluminum Frame Units –How to Assemble–

Before Starting Assembly

1. Prepare a flat and wide space for assembly.
2. Divide the frames by size and component.
3. Check to make sure the quantity of nuts which are pre-set in the groove in advance.

When installing the board and the cover, prepare pre-assembly nuts separately. This assembly also describes the installation of the plate with adjuster and caster optionally available.

1. Assemble the single joint connection type
   1. Assemble the bottom.
   2. Connect the center with Pre-Assembly Double Joint.
   3. Insert the necessary nuts.
   (2) Tighten temporarily with the pre-assembly double joint. (Refer to P.2244)

2. Mount Pillars
   1. Connect the center with pillar with single joint.
   2. Insert the necessary nuts.
   (2) Tighten temporarily with the pre-assembly double joint. (Refer to P.2244)

3. Stand the Center Pillars
   1. Connect the center with Pre-Assembly Double Joint.
   2. Insert 4 pre-assembly fittings nuts at the top of the frame.
   *Be sure to insert the nuts.

4. Assemble the Top (1)
   1. Attach single joints to the top of the four pillars.
   2. Pass the single joint through and position it. (There will be some play.)

5. Assemble the Top (2)
   1. Insert 4 pre-assembly fittings nuts in the bottom of the frame to attach the plate with casters.
   *Be sure to insert the nuts.

6. Mount the Adjusters · Casters
   1. Adjusters and casters are optional; one P.230 for selection.

7. Final Tightening
   1. Final tightening with adjusting the frame positions.

8. Remove dirt from the Surface
   1. Remove the dirt off the surface using alcohol, etc.

Aluminum Frames Q&A

Q: How to select aluminum frames?
A: M5/M6 aluminum frames are consisted of the following series.
Set Width 6 MF65 Series (30, 45, 60, 90mm Square) Medium-Sized Medium-Sized Conveyors, Conveyoys Frames, etc.
Set Width 8 MF85 Series (40, 60, 80, 100mm Square) Large Conveyoys, Equipment Pedestals, Structural Materials, etc....
First obtain the load applied on the product, and then select frames referring to the allowable load table on P.2249.

Q: How to select brackets?
A: Brackets are categorized according to compatible series and listed accordingly. For the information on allowable load of brackets, refer to the relative page of the bracket. When L-shaped brackets interfere with products or panels, select blind bracket (P.2150) or tapering joint (P.2213), screw joint (P.2228), single joint (P.2245), center joint (P.2246, Post-assembly double joint (P.2241) or Pre-assembly double joint (P.2243). When an aluminum frame structure is on one side, design frame (P.2330) using these brackets and l-beam brackets.

Q: What is the material of the aluminum frames?
A: It is A6061-T5, JIS (Symbol). This material has more hardness than A6063 Aluminum alloy or general extruded aluminum alloy. For detailed data of materials, refer to the material data of aluminum frames (P.2172).

Q: How much is the tolerance for cutting the aluminum frames?
A: Cut with a chip saw for soft steel materials. After assembling frames, cover cut surfaces with frame and caps (P.2182 or other).

Q: How about perpendicularity of a cross section of an aluminum frame?
A: Since an aluminum frame is made of drawing material, there is no reference plane. Therefore, perpendicularity of a cut face is not available.

Q: Can JIS-compliant hexagon nuts or square nuts be used with these aluminum frames?
A: No, M5/M6 aluminum frames have a relative large contact area by using the special nuts, and prevents the aluminum frame buckling.

Q: What is the method used for cutting aluminum frames?
A: Cut with a chip saw for soft steel materials. After assembling frames, cover cut surfaces with frame and caps (P.2182 or other).

Q: What is the material of the aluminum frames?
A: It is A6061-T5, JIS (Symbol). This material has more hardness than A6063 Aluminum alloy or general extruded aluminum alloy. For detailed data of materials, refer to the material data of aluminum frames (P.2172).

Q: How much tightening torque is required when pre-assembly fitting nuts and hexagon socket head cap screws are used?
A: Please refer to reference tightening torque (N·m) on the pages of nuts for aluminum frames.

Q: How can I attach a resin panel to an aluminum frame?
A: The following methods are available for fixing resin panels. Select one according to your needs. (P.2258)

1. Attaching the panel to the backside of the frame.
   a. This method is recommended to safety covers etc., due to its good appearance and easy disassembly.
   b. Inserting Panel into the Frame Slot
   c. This method is recommended to design-oriented usage, because there are no holes on panels nor screw stop. (Nothing may be required depending on the material.)
   d. Pasting the panel onto the outside of frame
   e. For a large number of nuts, Pre-assembly Spring Nuts (P.2225) and Post-assembly Spring Nuts (P.2221) are effective.

Q: How can I fix adjusters or casters?
A: Adjusters and casters are available for each frame size. (P.2251~2258)

Q: Are there any points that should be noted for assembly?
A: To assemble frames, prepare a flat and wide space.

Q: Is the Express T service of aluminum frames free?
A: Yes. The service continues in the future. Please specify Express T when you hope for shipment on the same day of ordering. This express service will not be charged. Express T service is not for free of charge for Aluminum Braced Frames (P.2290), Aluminum Frames (P.2265, 2266) and Fence Frames (P.2289).

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