

**AD-4981-2057**

**Flipper Type Rejector**






**ASSEMBLY GUIDE**



**1WMPD4002896**

## WARNING DEFINITIONS

The warnings described in this manual have the following meanings:

 WARNING	A potentially hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION	A potentially hazardous situation which, if not avoided, may result in minor or moderate injury or damage to the instrument.
	This symbol indicates caution against electrical shock. Do not touch the part where the symbol is placed.
	This symbol indicates the ground terminal.
	This symbol indicates that an operation is prohibited.
Note	Information or cautions to use the device correctly.

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The contents of this manual and the specifications of the instrument covered by this manual are subject to change for improvement without notice.

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# 1. Introduction

AD-4981-2057 is a flipper type rejector exclusively designed for the AD-4961 Checkweigher. The flipper arms are activated by the air cylinder and separate the product into three directions (rejected products in two directions and passed products in one straight direction).

Chapter 3 describes how to assemble the AD-4981.

Chapter 4 describes how to connect the AD-4981 to the AD-4961.

Chapter 5 describes how to adjust the flipper arm swing speed.

# 2. Unpacking

## CAUTION

**The AD-4981-2057 flipper type rejector is a precision instrument. Handle it with great care. A strong impact may damage the instrument.**

Before assembling the rejector, confirm that everything is included and check each component for damage.

If any of the components are missing, please contact the nearest local dealer.

### Frame unit

U-shaped pipe with adjustment feet...2 pieces

Side beam...2 pieces

Frame assembling screw (M6x20 countersunk hexagon socket head screw)...8 pieces

### Rejector

Rejector main unit...1 unit

Main unit securing screw (M6 screw)...4 pieces

Pneumatic regulator...1 unit

### Documentation

Assembly guide (this document) ...1 copy

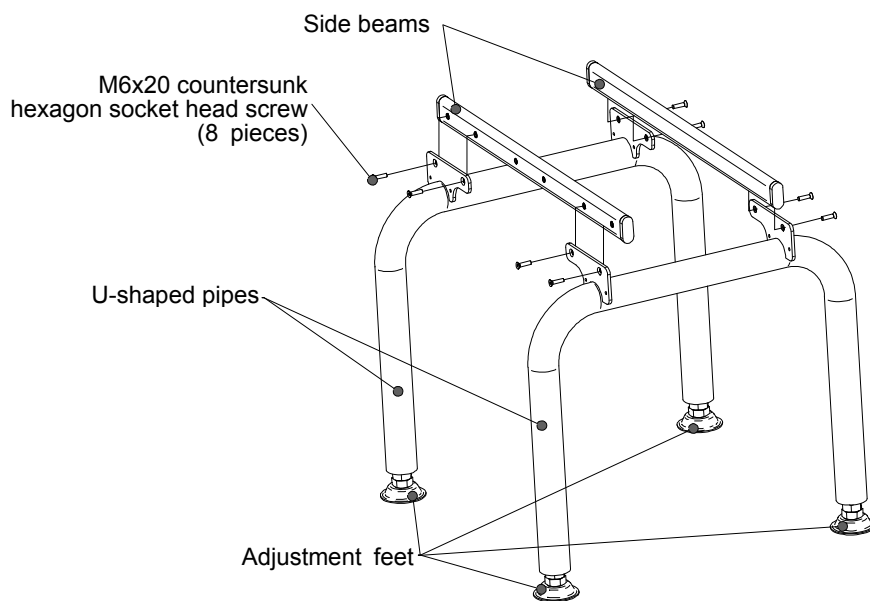
## 3. Assembling the AD-4981

### ⚠ CAUTION

- Two people or more are required to assemble the rejector.
- Before connection, be sure to remove the power cable from the AD-4961.

### 3.1. Assembling the Frame

Using the frame assembling screws (M6x20 countersunk hexagon socket head screw), secure the side beams to the U-shaped pipes.



## 3.2. Installing the Main Unit

Place the main unit on the assembled frame.



Use the main unit securing screws (M6 screw) provided, secure the rejector main unit to the frame.



## 3.3. Installing the Regulator

Attach the regulator to the lower part of the main unit as shown below.

Taking the rejector actual running location into consideration, determine where to secure the regulator, left side or right side of the main unit.

Install piping to the regulator.

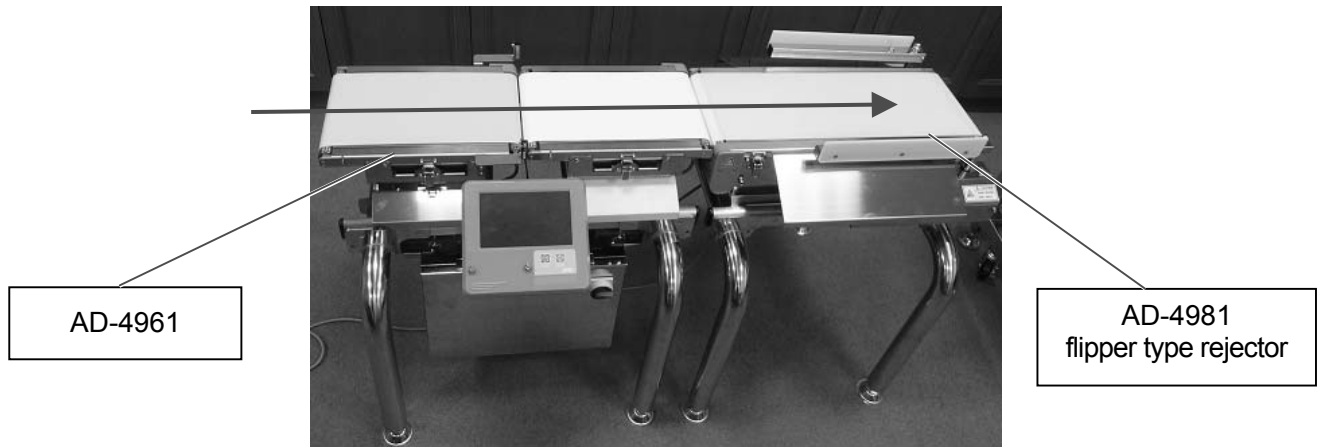
Adjust the regulator to set the air pressure to 0.5 Mpa.



### 3.4. Adjusting the Height and Level

As shown below, place the rejector beside the AD-4961 and adjust the conveyor height.

The arrow mark indicates the product flow direction.

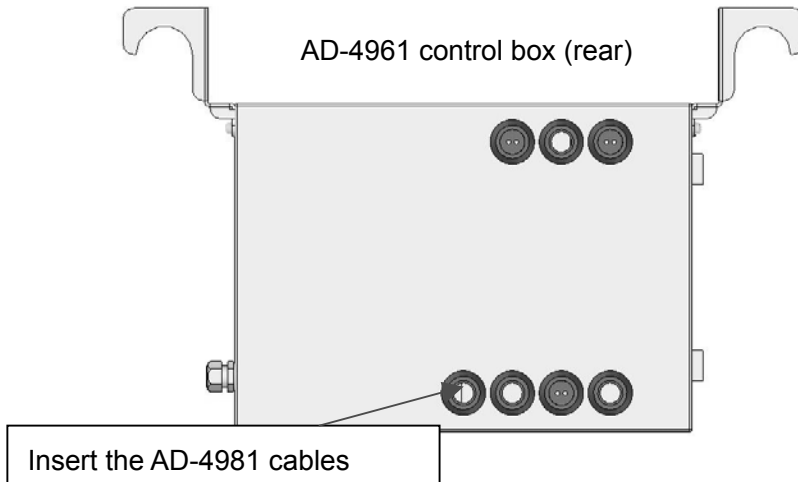


## 4. Connecting to the AD-4961

### 4.1. Connecting the Corrugated Tube

Connect the rejector to the AD-4961.

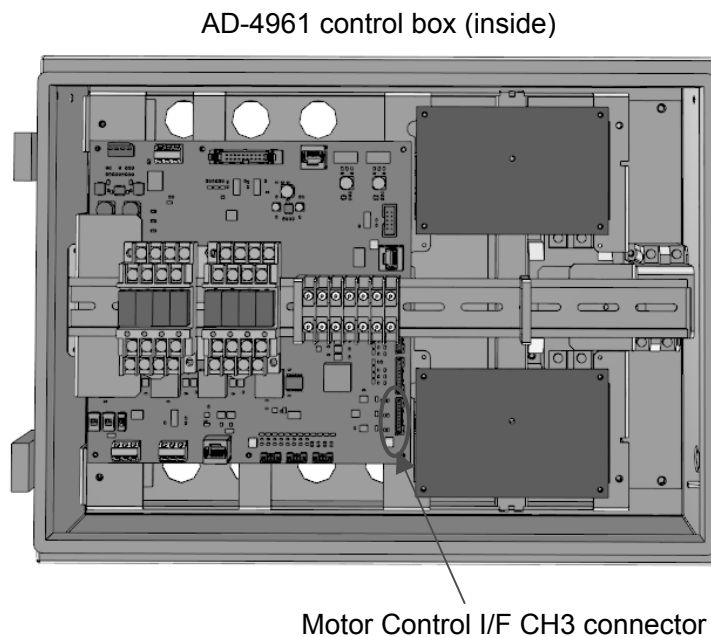
As shown below, insert the AD-4981 cables into the control box of the AD-4961 and attach the corrugated tube.



### 4.2. Connecting the Motor Driver Cable

Perform cable connection inside the control box of the AD-4961.

As shown below, insert the white 10-pole connector into the Motor Control I/F CH3 connector.



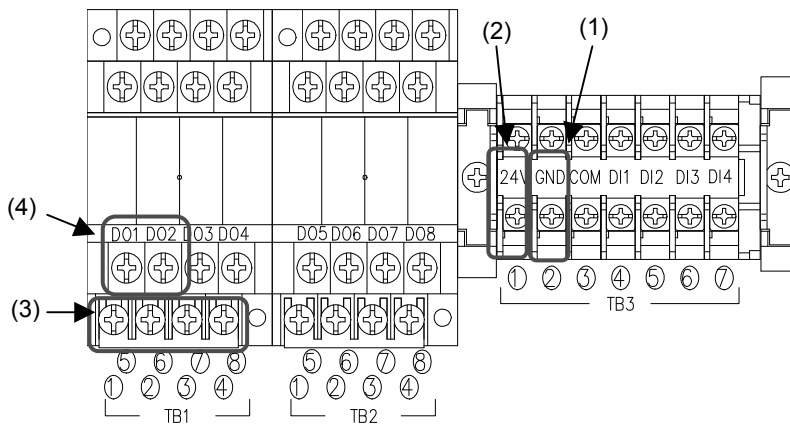


## 4.3. Connecting the Flipper Driving Cables

Connect cables to the terminal blocks inside the control box of the AD-4961.

See the illustration below to check the numbers of the terminal blocks and signal cables.

- (1) Connect the cable labeled as GND to the GND terminal (②) of TB3.
- (2) Connect one end of the cable labeled as 24V to the 24V terminal (①) of TB3.
- (3) Connect the other end of the cable labeled as 24V to either one of the terminals (① to ④) of TB1.  
The terminals (① to ④) of TB1 have a jumper pin connected. Keep the jumper pin connected so that these terminals have the same electric potential.
- (4) Connect the cable labeled as DO1 to the DO1 terminal (⑤) of TB1.  
Connect the cable labeled as DO2 to the DO2 terminal (⑥) of TB1.



The connection is complete.

Before using the rejector, check the connector connection and screws for looseness.

## 4.4. Adjusting the Belt Speed

Connect the power cable and turn the rejector on.

Refer to “5.2. Adjusting the Belt Speed” of the AD-4961 instruction manual to adjust the belt speed of the rejector.

## 4.5. Setting DO

Refer to “8.3. DO Map” and “8.4. DO Behavior” of the AD-4961 instruction manual to set the DO map and Do behavior for the product to be separated.

When the swing speed of the flipper arms is too slow to perform a correct separation or the impact of the swing of the flipper arms is too great, a swing speed adjustment is required as described in Chapter 5.

## 5. Adjusting the Swing Speed

Adjust the swing speed of the flipper arms.

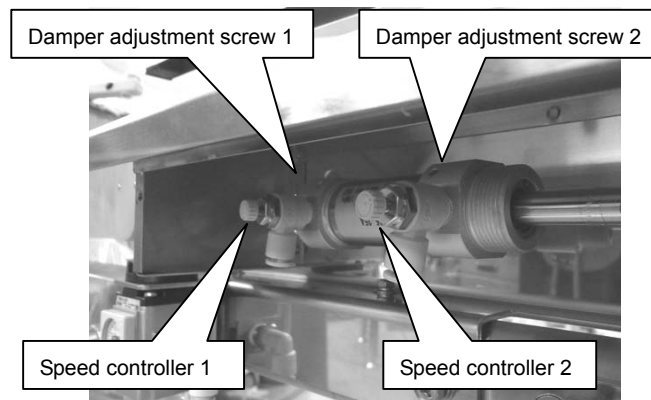
1. Remove the covers located on the left and right sides of the rejector.

The speed controllers and damper adjustment screws to adjust the behavior of each flipper arm are located inside.



2. Use the speed controllers to adjust the swing speed.

Use the damper adjustment screws to adjust the impact of the swing of the flipper arms.



Use the speed controller 1 to adjust the speed with which the flipper arm returns to the original position.

Use the damper adjustment screw 1 to adjust the impact of the flipper arm when it returns to the original position.

Use the speed controller 2 to adjust the speed with which the flipper arm swings to separate the product.

Use the damper adjustment screw 2 to adjust the impact of the flipper arm when it moves to separate the product.

3. Attach the covers.





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