

# Wafer Transfer Hand WHA/WHF Series

We design and manufacture products based on customer's specification. Edge clamping for non-contact on the front and back. Please contact us at any time.

## Key Features

### Fixed transfer

This product is applicable to numerous areas of application that requires various different handling positions and directions, and which prevents misalignment caused by high-speed operation

### No contact both on the front and back of the wafer

This model makes contact with the edges of the workpiece only in order to solve the concern for pad scars caused by clamping and vacuum transfer.

### Clean room compliant types available

### WHA series

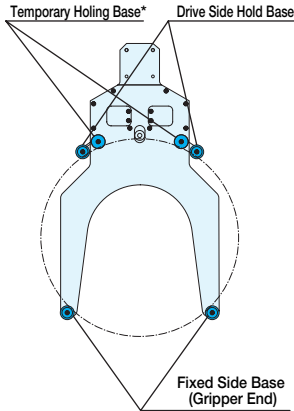
Single-Side Driven Edge Clamp with Side Arm

### WHF series

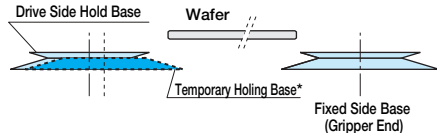
Dual-Side (Synchronized) Driven Edge Clamp via Side Arm & Main Fork

Clean packaging is not available

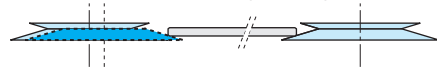
## Wafer Clamp Operation (Enlarged View) \*WHA series (single-side driven type with side arm only)



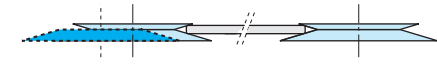
① This device receives wafer with holding base on the drive side open



② Place wafer on temporary holding base.\*



③ Clamp wafer with holding base at drive side



\*Temporary holding base is WHA-200AS-4 and HA-300AS-6 only.

Clean Room & Special Type

## How To Order

Single Wafer **Model** **WHA** - **Wafer Size** **450AS** - **Sensor, Quantity** **ET2LS2** - **Special** **Z** --- We design and manufacture products based on customer's specification.

Model	
Symbol	Name
WHA	Single Wafer Transfer Type Single-Side Driven Edge Clamp
WHF	Single Wafer Transfer Type Dual-Side Driven Edge Clamp

Wafer size	
Symbol	Name
150AS	dia.150 / 6 inches
200AS	dia.200 / 8 inches
300AS	dia.300 / 12 inches
450AS	dia.450 / 18 inches

Sensor, Quantity	
Symbol	Name
ET3	Non-Contact 3-Lead Straight
ET3L	Non-Contact 3-Lead L-Shape
ET2	Non-Contact 2-Lead Straight
ET2L	Non-Contact 2-Lead L-Shape
S1	1 Sensor
S2	2 Sensors

For sensor detail ▶ 277P

# WHA-200AS/300AS/450AS/WHF-200AS/300AS

## Specification

Model	WHA-200AS For Layout Drawing ▶380P	WHA-300AS For Layout Drawing ▶381P	WHA-450AS For Layout Drawing ▶381P	WHF-200AS For Layout Drawing ▶382P	WHF-300AS For Layout Drawing ▶382P
Transfer Workpiece	Wafer				
Workpiece Size	dia.200	dia.300	dia.450	dia.200	dia.300
Transfer Method	Edge Clamp				
Transfer Quantity	1 piece				
Drive System	Closed Spring (Clamp Method)				
	Open Vacuum Pressure -60KPa to 95KPa (Addition of Negative Pressure Cylinder)				
Total Jaw Stroke	10mm (Clamp 7mm, Clamp Stock 3mm)				
Grip Force	2 .4N to 1 .9N		Approximately 7N	2 .4N to 1 .9N	
Cleanliness	FED Standard Class 1 (Vacuum Required)				
Fork Material	CFRP				
Top, Temporary Holding Base, & Pad	PEEK				
Weight	Approximately 0.4kg	Approximately 0.5kg	Approximately 1.7kg	Approximately 1.2kg	Approximately 1.7kg
Option	Open & Close Confirmation Sensor				

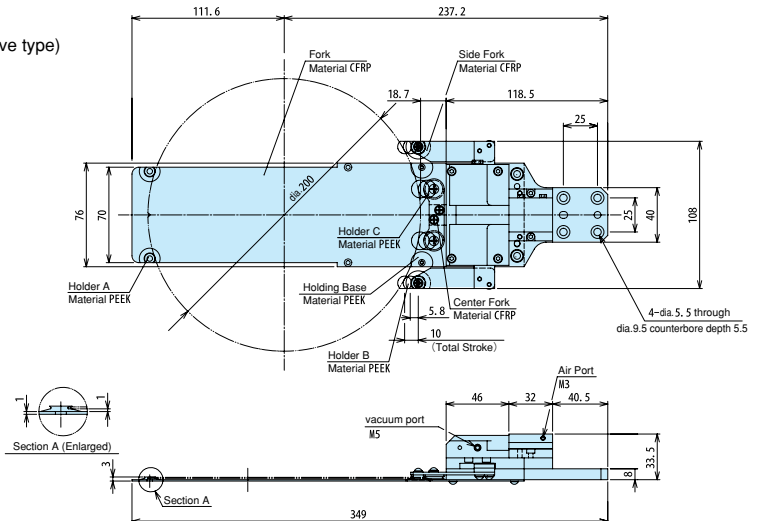
For CAD data, please go to ▶518P

## Layout Drawing

### WHA-200AS-Z

#### WHA-200AS-Z (Reference Chart)

- For dia.200 wafer
- Side arm only (one-side drive type)



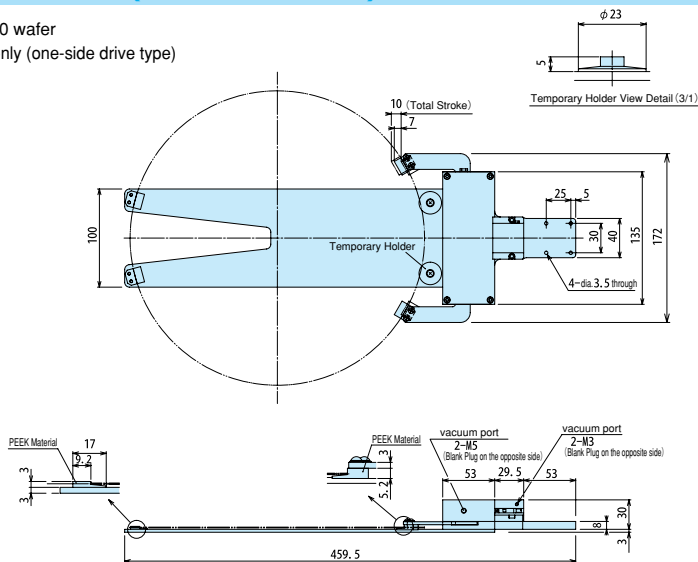
# Wafer Transfer Hand WHA/WHF Series

## Layout Drawing

### ■ WHA-300AS-Z

#### WHA-300AS-Z (Reference Chart)

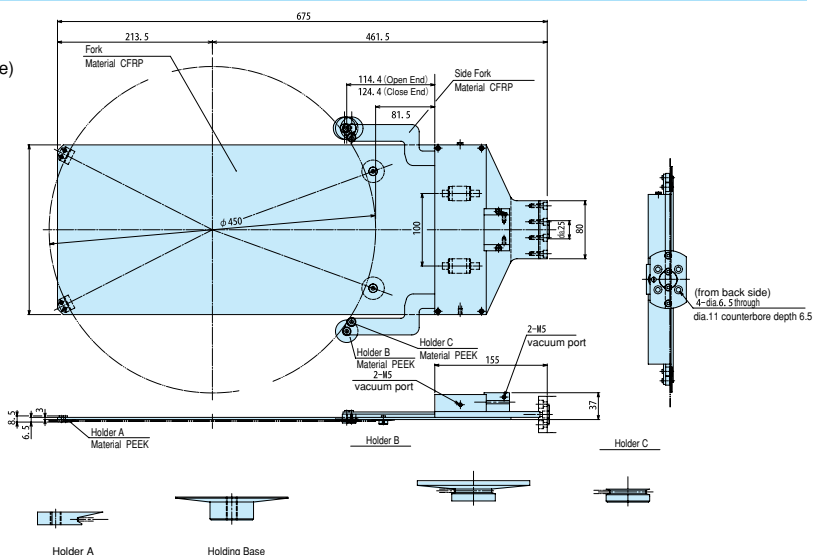
- For dia.300 wafer
- Side arm only (one-side drive type)



### ■ WHA-450AS-Z

#### WHA-450AS-Z (Reference Chart)

- For dia.450 wafer
- Side arm only (one-side drive type)



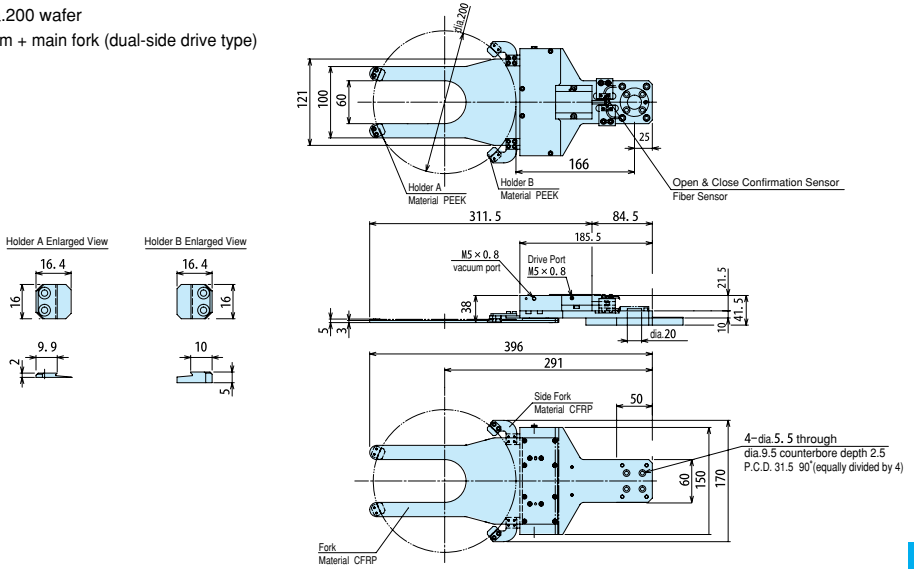
# WHA-200AS/300AS/450AS/WHF-200AS/300AS

For CAD data, please go to **▶518P**

## WHF-200AS-Z

### WHF-200AS-Z (Reference Chart)

- For dia.200 wafer
- Side arm + main fork (dual-side drive type)



## WHF-300AS-Z

### WHF-300AS-Z (Reference Chart)

- For dia.300 wafer
- Side arm + main fork (dual-side drive type)

