

# Ideas for Improvement

## in Semiconductor Manufacturing Process

| Support

| Locate

| Setup Change

| Clamp

| Transfer

for Wafer Manufacturing and  
Front-end/Back-end Process

# Front-end Process

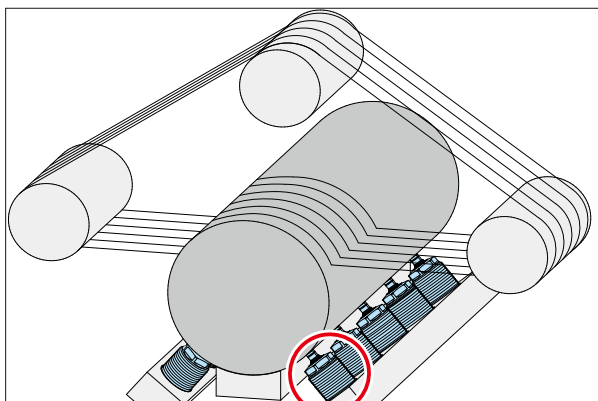
A wide variety of products to meet your needs.  
Enhance productivity in every process.

## Wafer Manufacturing

Polishing/  
Inspection/Oxidation

## Photoresist Coating

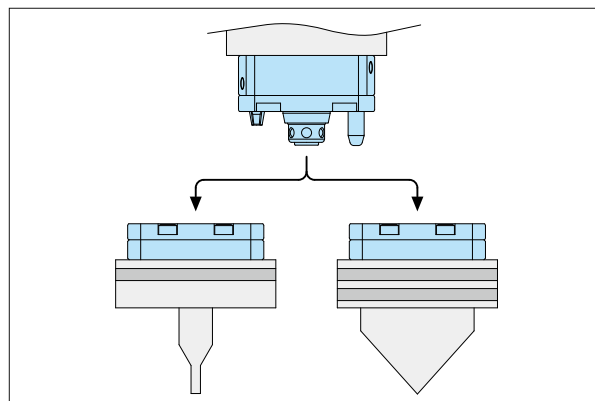
### To Slice Ingots



The tip stops when it touches the workpiece,  
providing strong support during machining.

High-Power Pneumatic Work Support model **WNC**

### To Change Nozzle

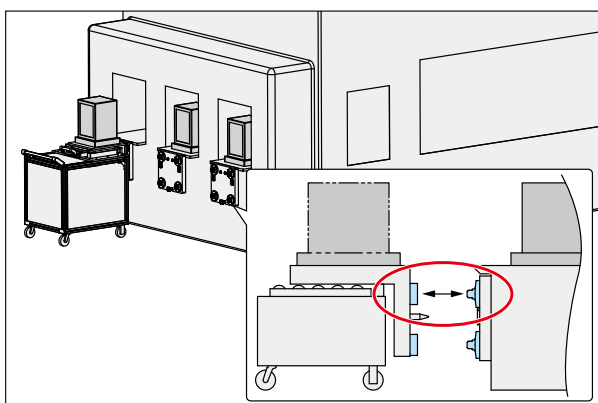


Instant, high-precision locating and clamping.  
Reduce setup time, improve stability during  
changeover.

Nozzle Changer model **SWRY**  
Please contact us for details.

## Etching/Cleaning

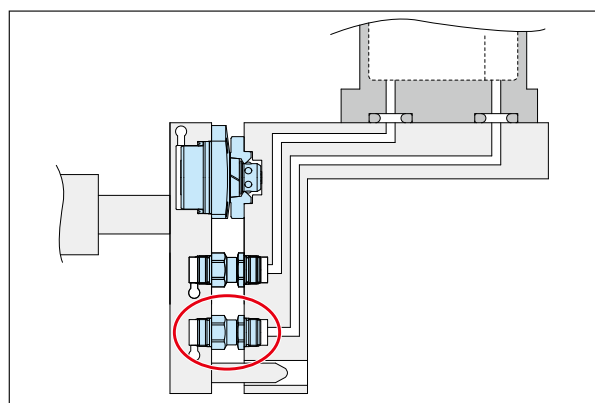
### For Docking Modules



Locating/Clamping for docking modules.

High-Power Pneumatic Pallet Clamp model **WVS**  
High-Power Automation Pallet Clamp model **WVG**  
High-Power Pull Stud Clamp model **WPT**

### For Fluid Supply



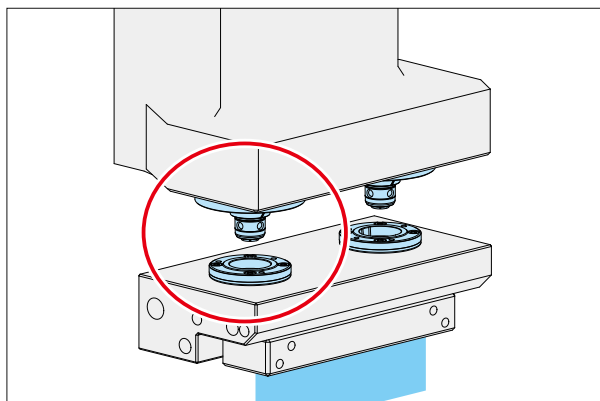
Connect various fluids to equipments.

Leakless Coupler model **JWC/D**  
Auto Coupler model **JTA/B•JV□**  
Compact Compressor model **AYW**

KOSMEK offers a wide variety of hydraulic and pneumatic products to meet your needs. Please feel free to let us know your requirements (100% stainless steel, low-dust grease, high-temperature environment, etc.). ※The figures shown below are examples.

## Exposure

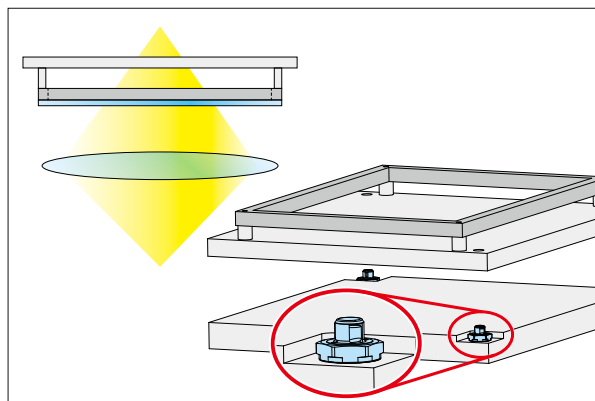
### To Change Coater Head



**Instant, high-precision locating and clamping. Reduce setup time, improve stability during changeover.**

Air Location Clamp      model **SWT/SWQ**  
 Robotic Hand Changer      model **SWR**

### For Locating during Setup



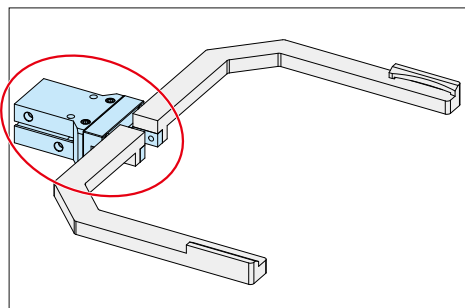
**Expansion locating pin enables high-accuracy locating of fixture/workpiece.**

Expansion Locating Pin      model **VRA/VRC**  
 Pneumatic Expansion Locating Pin      model **VWH/VWM**  
 Manual Expansion Locating Pin      model **VX**

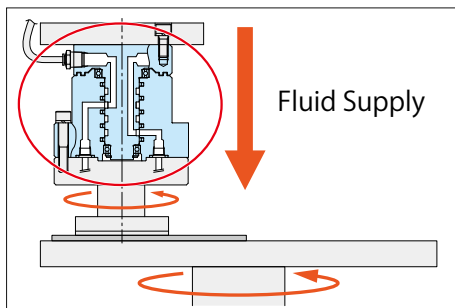
## CMP Chemical Mechanical Polishing

## Wafer Inspection

### Robotic Hands with 100% Stainless Steel For Fluid Supply

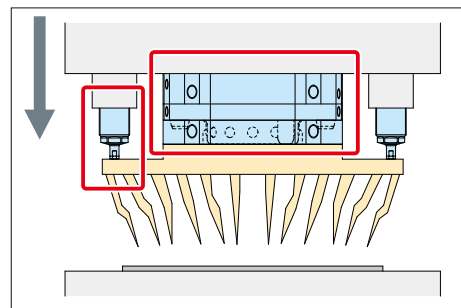


**Various Robotic Hands enables more efficient hand design.**



**Supply various fluids.**

### To Change Testing Device Tool



**Reduce setup time for testing device tools. Improve stability during tool change.**

Robotic Hands      model **WP□** ※

※ The standard models are not made of 100% stainless steel. Please contact us for details.

Rotary Joint      model **JR□**

Robotic Hand Changer  
 Large Model

model **SWL**

Pallet Gripper

model **WVA**

High-Power  
 Pneumatic Work Support      model **WNC**

## Back-end Process

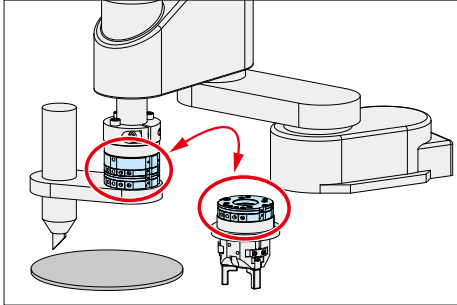
A wide variety of products to meet your needs.  
Enhance productivity in every process.

### Grinding

### Dicing

### Die Bonding Wire Bonding

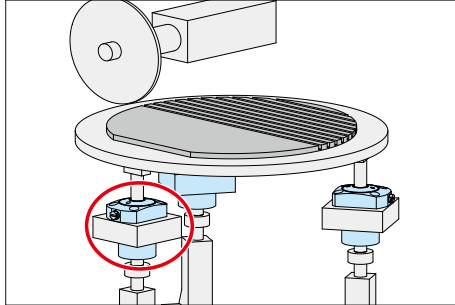
#### Tool Change Automation



Transfer, seal application, etc.  
Auto-changeover of various  
hands for different purposes.

Robotic Hand Changer    model SWR

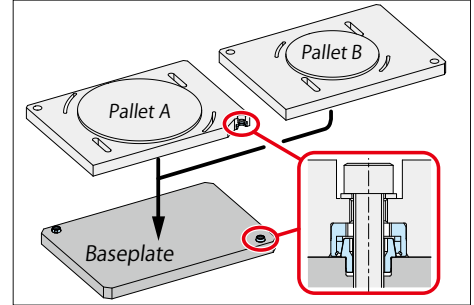
#### Lock Mechanism for the Stage Height



After adjusting the height and  
other settings, holds the rod  
with strong gripping force.

Pneumatic Work Support    model WNA

#### Change/Locate Fixture on Machine Side

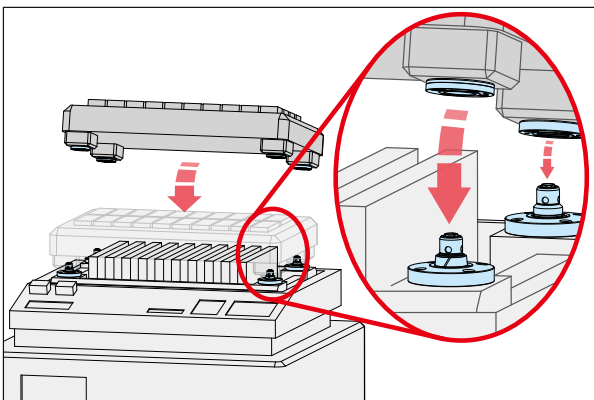


Screw Locator enables  
fixture setup with 0.003mm  
locating repeatability.

Screw Locator    model VXE/VXF

## Inspection

#### Change Testing Device Tool



Locates and clamps with high-accuracy.  
Allows for highly accurate setup.

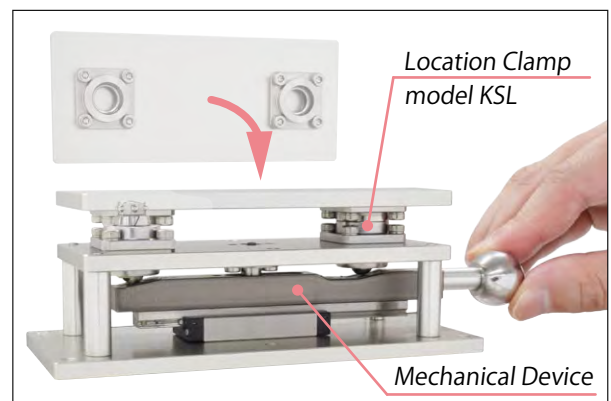
Air Location Clamp

model SWT

Compact Location Clamp

model SWQ

#### Mechanical Device



Powered by third-party source. Location  
Clamp mechanically operates using the  
force of a robot or a transfer device.

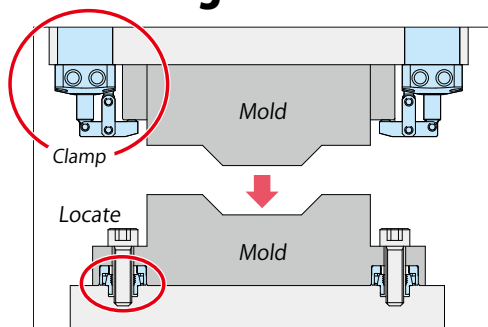
Smart Series Location Clamp

model KSL

KOSMEK offers a wide variety of hydraulic and pneumatic products to meet your needs. Please feel free to let us know your requirements (100% stainless steel, low-dust grease, high-temperature environment, etc.). ※The figures shown below are examples.

## Molding

### Clamp and Locate Molding Fixture



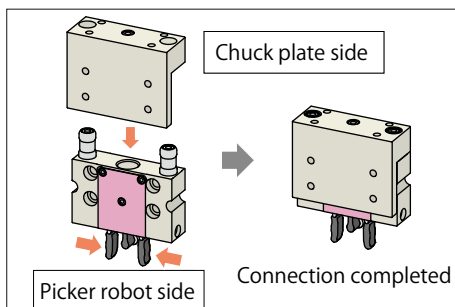
**Clamp with Automatic Clamp.  
Locate with Screw Locator.**

Pneumatic Link/Swing Clamp      model WCC/WFC/WHC

High-Power Pneumatic Link/Swing Clamp      model WCE/WHE

Screw Locator      model VXE/VXF

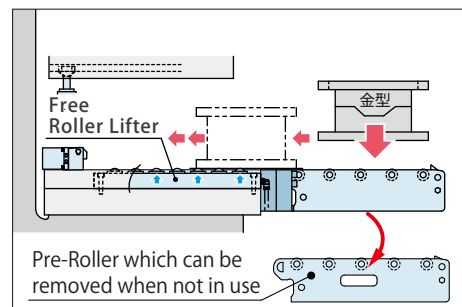
### Change Chuck Plate on Picker Robot



**Quick Chuck Changer enables simple and quick change of chuck plate.**

Quick Chuck Changer      model SXQ

### Mold Loading

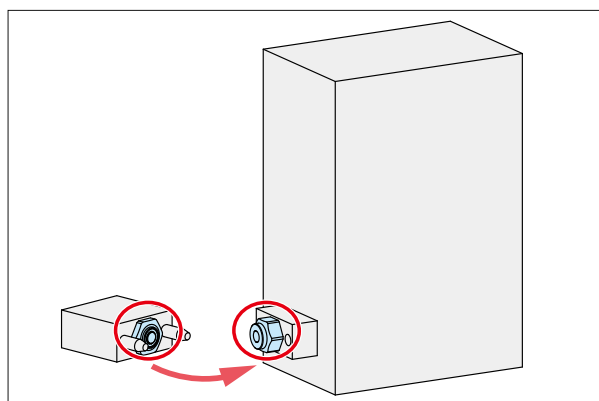


**Support mold transfer.  
Save space with removable Pre-Roller.**

Pre-Roller      model MR□

Pneumatic Free Roller Lifter      model RQC

## Pressure Maintaining for Leak Test



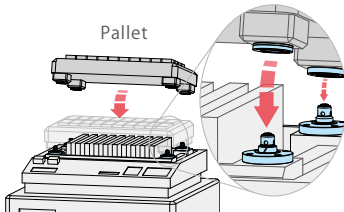
**Leakless Coupler outgoing side is able to keep the air pressure even when a coupler is disconnected.**

Leakless Coupler      model JWC/D

# Introducing Kosmek Products by Application

## Setup Change

For High-Accuracy Locating and Clamping of Pallet



**Pneumatic Location Clamp**  
model SWQ/SWT



**High-Power Pneumatic Pallet Clamp**  
model WVS

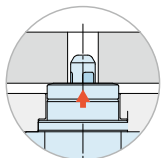


**High-Power Automation Pallet Clamp**  
model WVG/WVGT

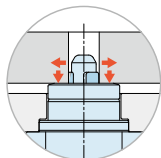


**Screw Locator**  
model VXE/VXF

For Locating and Clamping of Conveyor Transfer Pallet



Lifting

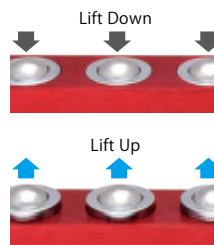


Locating + Clamping



**Lifting Hole Clamp**  
model SWJ

For Transferring Heavy Materials



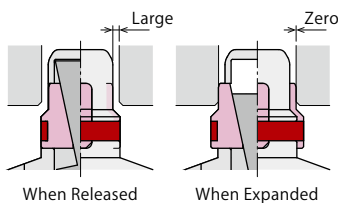
**Pneumatic Free Roller Lifter**  
model RQC



**Pre-Roller**  
model MR□

## Locate

For both Locating Accuracy and Smooth Loading



When Released

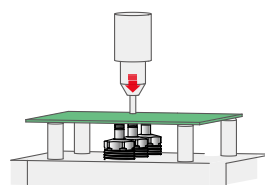
When Expanded



**Large Expansion Locating Pin**  
model VWH/VWM/VRA/VRC

## Support

For Chattering and Distortion Prevention



**High-Power Pneumatic Work Support**  
model WNC



**Pneumatic Work Support [Rodless Hollow]**  
model WNA

## Safety • Connecting • Air Pressure Maintaining



**Air Safety Valve**  
model BWS



**Auto Coupler**  
model JVA/JVB/JV□



**Leakless Coupler**  
model JWC/JWD



**Air Non-Leak Valve**  
model BWQ



**Air Sequence Valve**  
model BWD



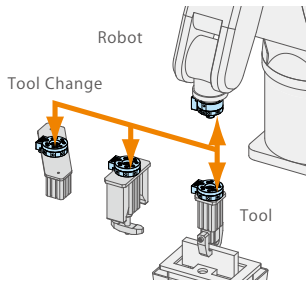
**NEW**

**Compact Compressor**  
model AYW



## Tool Change

For Robot Standardization



**NEW**

**Robotic Hand Changer  
(Spring Lock/Air Release)**

model STR

**NEW**

**Mechanical  
Robotic Hand Changer**

model SMR

**Robotic Hand Changer  
(Large Model)**

model SWL



**Robotic  
Hand Changer**

model SWR



**Manual Robotic  
Hand Changer**

model SXR

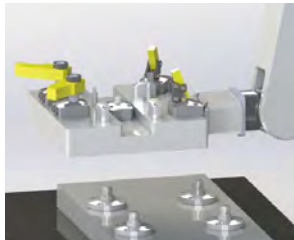


**Quick  
Chuck Changer**

model SXQ

## Transfer • Clamp

For Pallet Transfer



Internal Diameter Chucking Series



**NEW**

**Smart Series**

model KSL / KSH / KSA



**Pallet Gripper**

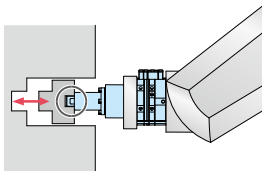
model WVA



**High-Power  
Pull Stud Clamp**

model WPT

For Workpiece Transfer



**FA Pneumatic  
Hole Clamp**

model WKH



**High-Power Pneumatic  
Hole Clamp**

model SWE



**Locating Pin Clamp**

model SWP

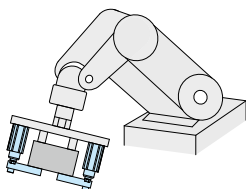


**Ball  
Lock Cylinder**

model WKA

External Chucking Series

For Workpiece Clamping  
and Transfer



**NEW**

**Smart Series**

model KSC / KSR / KSS



**Robotic Hands**

model WPA/WPB / WPE/WPF/WPH /  
WPJ / WPP / WPQ / WPS / WPW



**NEW**

**Pneumatic  
Swing Clamp**

model WHC



**NEW**

**Pneumatic Link Clamp  
Retracting Model**

model WFC



**NEW**

**Pneumatic  
Link Clamp**

model WCC



**Pneumatic  
Centering Vise**

model FWD



**High-Power  
Pneumatic Clamp**

model WHE/WCE/WFE



**Compliance  
Module**

model WRC

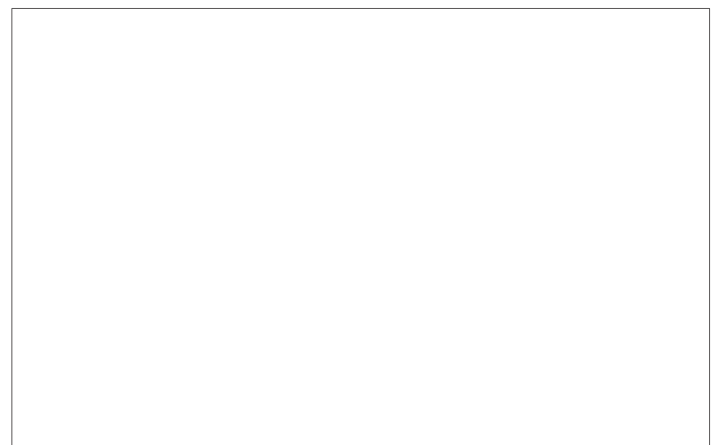


## KOSMEK LTD.

► <https://www.kosmek.com/>

HEAD OFFICE 1-5, 2-chome, Murotani, Nishi-ku, Kobe-city, Hyogo, Japan 651-2241  
TEL.+81-78-991-5162 FAX.+81-78-991-8787

United States of America SUBSIDIARY	KOSMEK (USA) LTD. 650 Springer Drive, Lombard, IL 60148 USA TEL. +1-630-620-7650 FAX. +1-630-620-9015
MEXICO REPRESENTATIVE OFFICE	KOSMEK USA Mexico Office Av. Santa Fe 103, Int. 59, col. Santa Fe Juriquilla, Queretaro, QRO, 76230, Mexico TEL. +52-442-851-1377
EUROPE SUBSIDIARY	KOSMEK EUROPE GmbH Schleppeplatz 2 9020 Klagenfurt am Wörthersee Austria TEL. +43-463-287587 FAX. +43-463-287587-20
CHINA SUBSIDIARY	KOSMEK (CHINA) LTD. Room601, RIVERSIDE PYRAMID No.55, Lane21, Pusan Rd, Pudong Shanghai 200125, China TEL. +86-21-54253000
INDIA BRANCH OFFICE	KOSMEK LTD. - INDIA 4A/Old No:649, Ground Floor, 4th D cross, MM Layout, Kavalbyrasandra, RT Nagar, Bangalore -560032 India TEL.+91-9880561695
THAILAND REPRESENTATIVE OFFICE	KOSMEK Thailand Representation Office 67 Soi 58, RAMA 9 Rd., Phatthanakan, Suanluang, Bangkok 10250, Thailand TEL. +66-2-300-5132 FAX. +66-2-300-5133



- For Further Information on Unlisted Specifications and Sizes, Please call us.
- Specifications in this Leaflet are Subject to Change without Notice.

