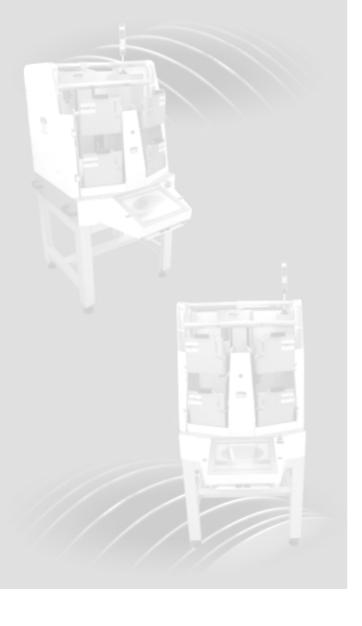
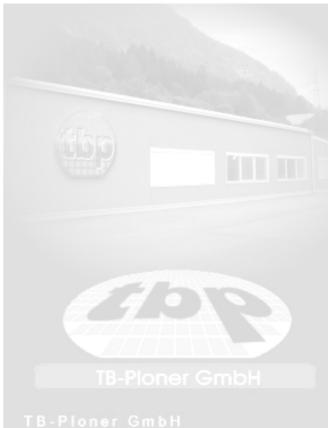
# Products TB-Ploner GmbH

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## FOUR-CASSETTE-SORTER FCS-Series



TB-Ploner GmbH A.G.3 A-9873 Döbriach

phone:+43 424629375 emai:office@buero-ploner.com web:www.buero-ploner.com



### Get the most compact 4-Cassette Sorter.

The FCS is designed for automatic sorting based on wafer Id's. The system consists of four load-ports with 4", 6", 8" capability, optical wafer notch/flat-aligner and a linear-robot.

With this system it is possible to split ,merge,sort,compress wafer-lots, or create, individual wafer mix as desired.





- Increased efficiency for wafer handling and sorting.
- Automatic mode upon loading the cassette including cassette scanning and sorting.
- Detection of cross and double-slot wafers
- 4", 5", 6" & 8" notched or flat wafer capability
- Precise wafer scribe alignment +/- 0.5°
- Thin wafer cabapility
- Wafer-Flip-Modes
- Compact footprint
- 13-Slot Cassette capability
- Recipes and macros can stored on system and selected through a color-touchscreen.
- Throughput >600 wph
- Low cost of ownership
- Full SECS/GEM compliance
- User friendly windows interface



The FCS is compatible with most standard plastic wet/dry process cassettes, shipping,metal cassettes and storage containers. Custom models are available for non-standard carriers.



### **Specification**

- Integrated Industrial PC
- 15 " Colour-PanelPc
- Integrated Touchscreen.
- Integrated Keyboard.
- Mousepad
- Ethernet connection RJ45-Connector (TCP/IP).
- Open design resulting in minimal laminar flow disturbance.

#### **Performance**

- Throughput > 600 wph
- MTBF > 5000 hrs
- MTTR < 4 hrs
- MTBA > 1000 hrs
- Wafer breakage 1/100 000

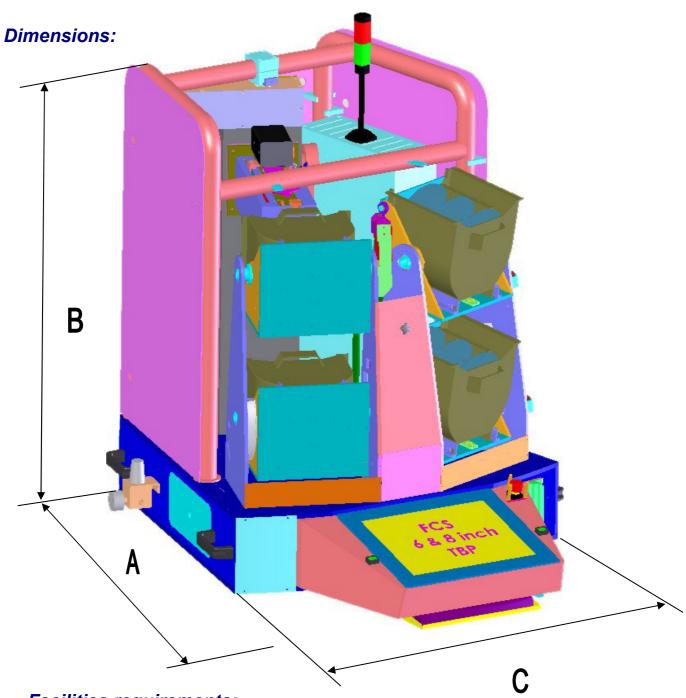
### **Options**

- Barcode gun
- Automatic Cassette-Identification (Barcode-label required on cassettes)
- RFID-Cassette-Identification
- Wafer-Flipping
- Thinwaferhandling
- SECS/HSMS-Interface
- Custom modes

#### Standard Modes

- Shift transfer
- Split / Merge
- Invert
- Compress to top (by ID or Slot)
- Compress to bottom (by ID or Slot)
- Drag and Drop wafer
- Numeric Sort
- Randomized Sort
- Flip-Modes





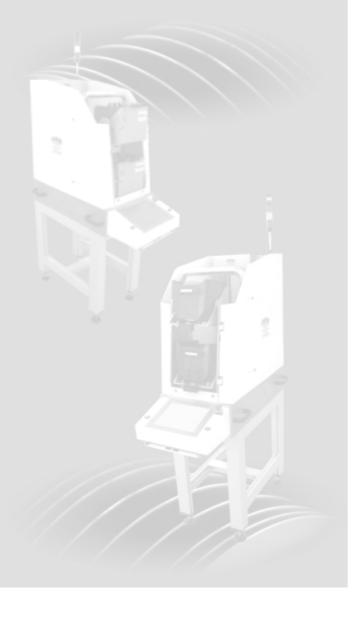
## Facilities requirements: Overall dimension (mm):

	FCS
Α	1100
В	1100
С	800

- Weight:160 kg
- Electrical:100-240 VAC ,5A, 50-60 Hz
- Vacuum:-40-50 kPa,Flow rate 5liter/min







## COMPACT-TWO-CASSETTE SORTER CTS-Series





### Get the most compact Two-Cassette Sorter.

The CTS series is designed for automatic sorting based on wafer Id's. The system consists of two automatic tilting load-ports , wafermap-sensors, optical wafer notch/flat-aligner and a linear-robot.

With this system it is possible to split ,merge,sort,compress,flip wafer-lots,or create individual wafer-mix as desired.





- Increased efficiency for wafer handling and sorting.
- Automatic mode upon loading the cassette including cassette scanning and sorting.
- Detection of cross and double-slot wafers
- notched or flat wafer capability
- Precise wafer scribe alignment +/- 0.5°
- Thin wafer cabapility (optional)
- Compact footprint
- 13-Slot Cassette capability (optional)
- 26-Slot Cassette capability (optional)
- Recipes and macros can stored on system and selected through a color-touchscreen.
- Throughput >600 wph
- Low cost of ownership
- Full SECS/GEM compliance
- User friendly human-machine interface

The CTS is compatible with most standard plastic wet/dry process cassettes, shipping,metal cassettes and storage containers. Custom models are available for non-standard carriers.





### **Specification**

- Integrated Industrial PC
- 12,1 " Colour-Flatscreen
- Integrated Touchscreen.
- Integrated Keyboard.
- Mousepad
- Ethernet connection RJ45-Connector (TCP/IP).
- USB and RS232 Interfaces
- Open design resulting in minimal laminar flow disturbance.

#### **Performance**

- Throughput > 600 wph
- MTBF > 5000 hrs
- MTTR < 4 hrs
- MTBA > 1000 hrs
- Wafer breakage 1/100 000

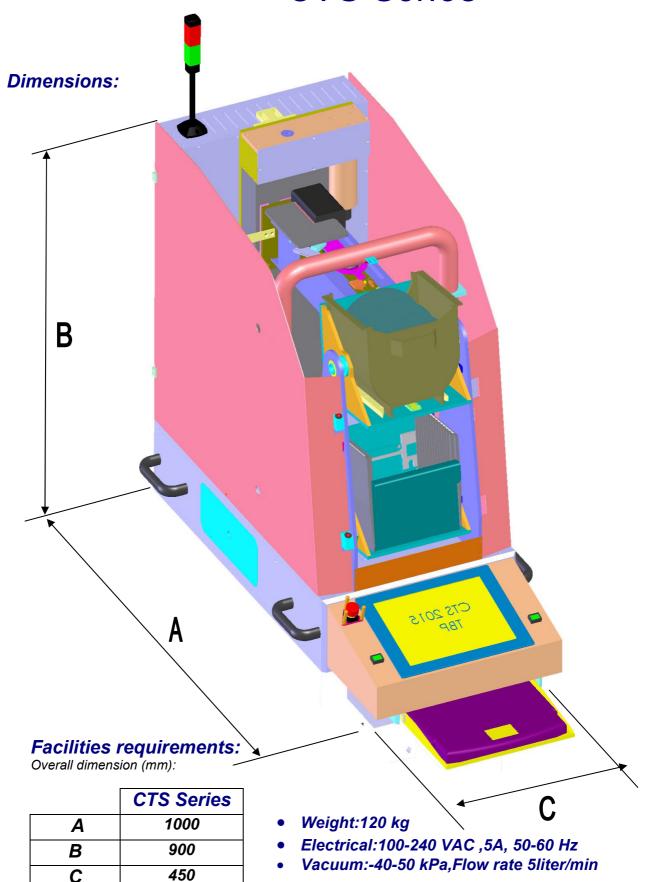
### **Options**

- Barcode gun
- Automatic Cassette-Identifikation (RFID)
- RFID-Cassette-Identification
- Wafer-Flipping
- Thinwaferhandling
- SECS/HSMS-Interface
- Custom modes

#### Standard Modes

- Shift transfer
- Split / Merge
- Invert
- Compress to top (by ID or Slot)
- Compress to bottom (by ID or Slot)
- Drag and Drop wafer
- Numeric Sort
- Randomized Sort







### Availability:

Tool availability > 97% MTBF > 4000 h MTTR < 4 h MTBA > 200 h

### Clean concept:

Class 10





## HORIZONTAL-MAP-SYSTEM HMS-Series





The HMS-Series is designed to read wafer Id's.

The system consists of one load-port, a optical wafer alignment and a linear-robot.

With this system it is possible to read wafer-Id's and optionally a wafer batch can be sorted to the same cassette.





- Increased efficiency for wafer handling and reading.
- Automatic mode upon loading the cassette including cassette scanning and reading.
- Detection of cross and double-slot wafers
- notched or flat wafer capability
- Precise wafer scribe alignment +/- 0.5°
- Thin wafer cabapility (upon request)
- Compact footprint
- 13-Slot Cassette capability (upon request)
- Recipes and macros can stored on system and selected through a colortouchscreen.
- Throughput >600 wph
- Low cost of ownership
- Full SECS/GEM compliance
- User friendly windows interface



The HMS2015 is compatible with most standard 6" and 8" plastic wet/dry process cassettes, shipping,metal cassettes and storage containers. Custom models are available for non-standard carriers.



### **Specification**

- Integrated Industrial PC
- 12,1 " Color-Flatscreen
- Integrated Touchscreen.
- Integrated Keyboard.
- Touchpad
- Ethernet connection RJ45-Connector (TCP/IP).
- Open design resulting in minimal laminar flow disturbance.

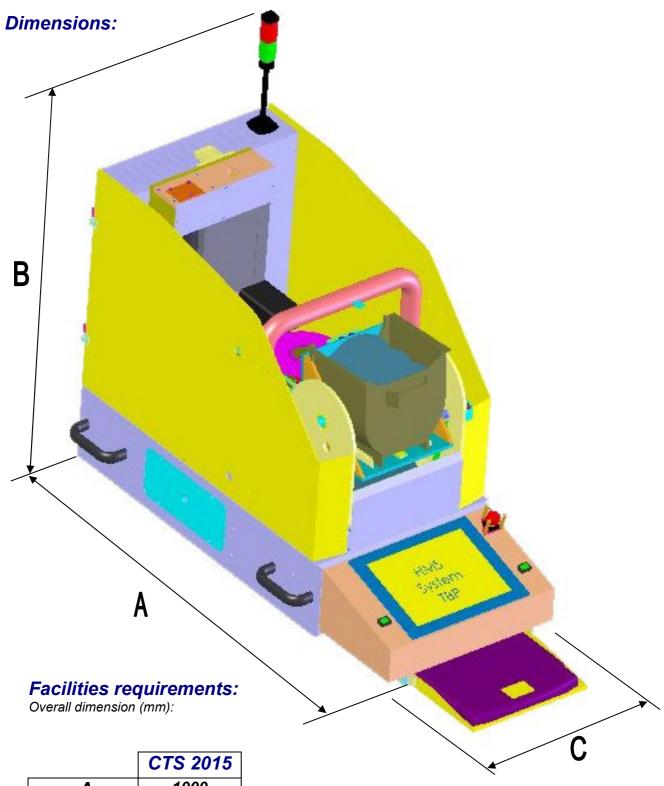
#### **Performance**

- Throughput > 600 wph
- MTBF > 5000 hrs
- MTTR < 4 hrs
- MTBA > 1000 hrs
- Wafer breakage 1/100 000

### **Options**

- Barcode gun
- Automatic Cassette-Identifikation ( RFID)
- Thinwaferhandling
- SECS/HSMS-Interface
- Custom modes



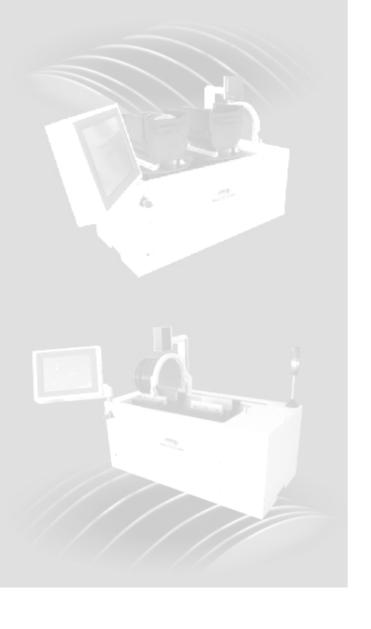


	CTS 2015
Α	1000
В	1000
С	450

- Weight:65 kg
- Electrical:100-240 VAC ,5A, 50-60 Hz
- Vacuum:-40-50 kPa,Flow rate 5liter/min

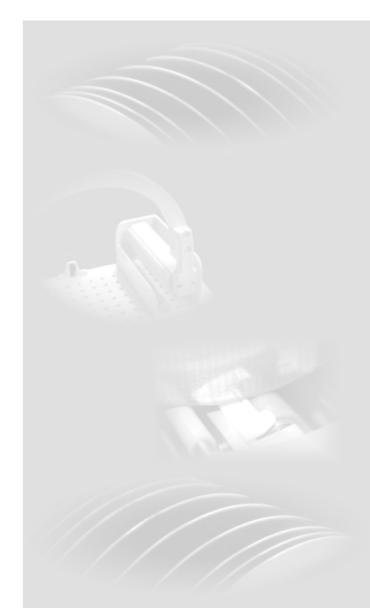






## TWO-CASSETTE-SORTER

TCS 8"
Vertical Sorter





## Two Cassette Sorter TCS 8 "

The sorter is designed for automatic sorting based on wafer lds. The system consists of two aligners, a wafer-id-read-unit, and a vacuum free single and batch wafer transfer capability.

#### **Vertical Sorter**





## Two Cassette Sorter TCS 8 "

#### Vertical Sorter

- Get more efficiency by your wafer handling and sorting with this system.
- One system for Barcode, OCR and data matrix codes.
- Automatic mode upon loading the cassette including cassette scanning, scribe readings and sorting.
- Detecting cross and double slot wat
- Flat or notch alignment +/- 1
- Edge contact transfer technology
- Powder coated aluminium chassis
- Recipes and macros can stored on system and selected through a touchscreen.
- User friendly windows interface

These models are compatible with most standard 4", 5", 6" and 8" plastic wet/dry process cassettes, shipping and storage containers.

Units are not compatible with metal cassettes.

Custom models are available for metal cassettes and non-standard carriers.

BC 412 OCR 2-D Dot Matrix









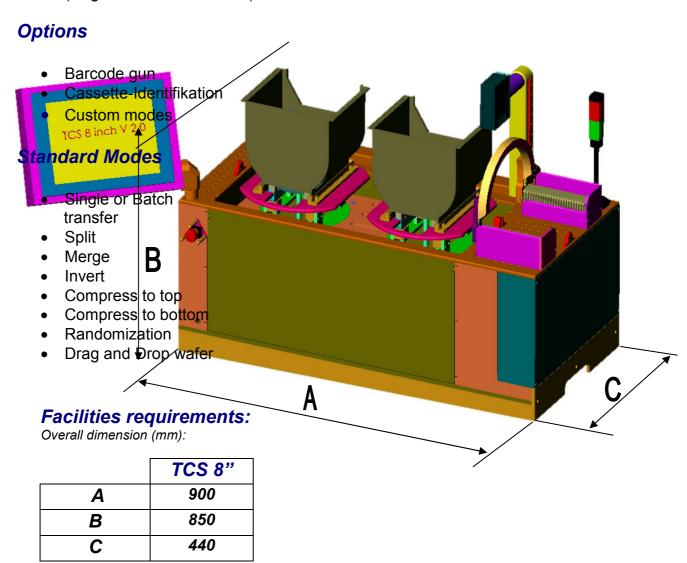
## Two Cassette Sorter TCS 8 "

### **Specification**

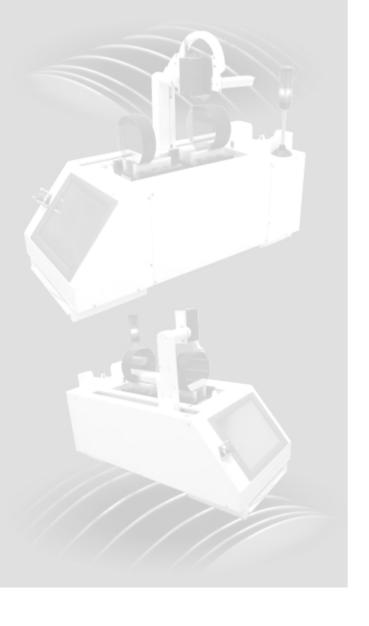
- Industrial PC
- 12,1" Color-Flatscreen
- Integrated Touchscreen.
- Integrated Keyboard.
- Ethernet connection RJ45-Connector (TCP/IP).
- Open design resulting in minimal laminar flow disturbance.

#### **Performance**

Time to read 25 wafer
 2 min
 ( alignment & scan & read)

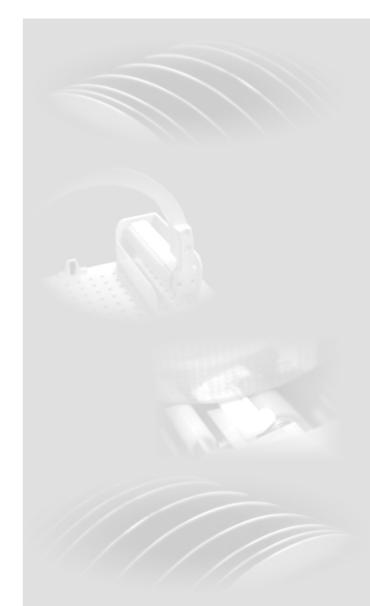


- Weight: 55 kg
- Full range 100-240 VAC, 50-60 Hz



## TWO-CASSETTE-SORTER

TCS 6" Vertical Sorter



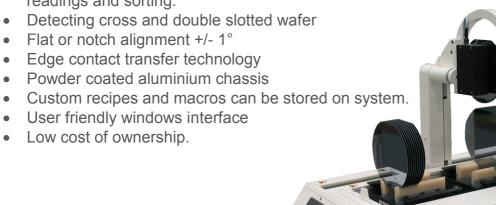


## Two Cassette Sorter TCS 6"

The sorter is designed for automatic sorting based on wafer lds. The system consists of two aligners, a wafer-id-read-unit, and a vacuum free single-batch wafer transfer capability.

#### Vertical Sorter

- Get more efficiency by your wafer handling and sorting with this system.
- One system for Barcode, OCR and data matrix codes.
- Automatic mode upon loading the cassette including cassette scanning, scribe readings and sorting.





These models are compatible with most standard 4", 5", 6" and 8" plastic wet/dry process cassettes, shipping and storage containers.

Units are not compatible with metal cassettes.

Custom models are available for metal cassettes and non-standard carriers.

BC 412 OCR 2-D Dot Matrix









## Two Cassette Sorter TCS 6"

### **Specification**

- Industrial PC
- 12,1" Color-Flatscreen
- Integrated Touchscreen.
- Integrated Keyboard.
- Ethernet connection RJ45-Connector (TCP/IP).
- Open design resulting in minimal laminar flow disturbance.

#### **Performance**

Time to read 25 wafer
 2 min
 ( alignment & scann & read)

### **Options**

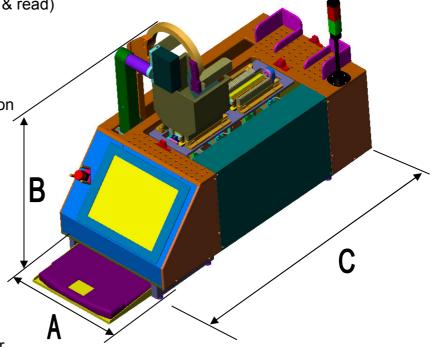
Barcode gun

Cassette-Identifikation

Custom modes

### Standard Modes

- Single or Batch transfer
- Split / Merge
- Invert
- Compress to top
- Compress to bottom
- Randomization
- Drag and Drop wafer

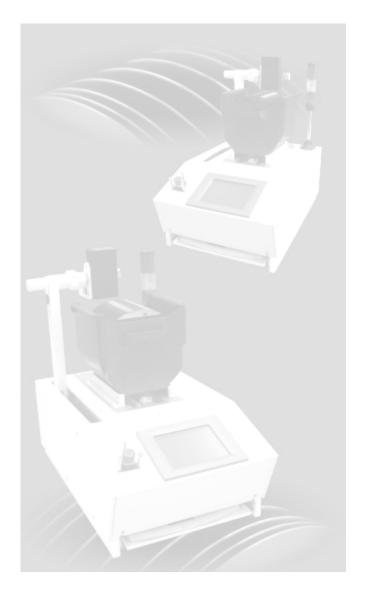


### Facilities requirements:

Overall dimension (mm):

	TCS 4"	TCS 5"	TCS 6"
Α	400	400	400
В	620	620	620
С	820	820	820

- Weight: 45 kg
- Full range 100-240 VAC, 50-60 Hz



## WAFER-MAP-SYSTEM

WMS - Series Vertical





## Lot and Wafer Identification-System

#### Identification of Lot & Wafer

- Get more efficiency by your wafer monitoring with this system.
- One system for Barcode, OCR and data matrix codes.
- Automatic mode upon loading the cassette including cassette scanning and scribe readings.
- Flat or notch alignment +/- 1°
- Recipes can stored on system and selected through a touchscreen.
- User friendly windows interface



These models are compatible with most standard 4", 5", 6" and 8" plastic wet/dry process cassettes, shipping and storage containers.
Units are not compatible with metal cassettes.
Custom models are available for metal cassettes and non-standard carriers.

BC 412 OCR 2-D Dot Matrix









## Lot and Wafer Identification-System

### **Specification**

- Industrial PC
- 6,4" Color-Touchpanel
- Integrated Keyboard.
- Ethernet connection RJ45-Connector (TCP/IP).
- Open design resulting in minimal laminar flow disturbance.
- Table Top system.

#### **Performance**

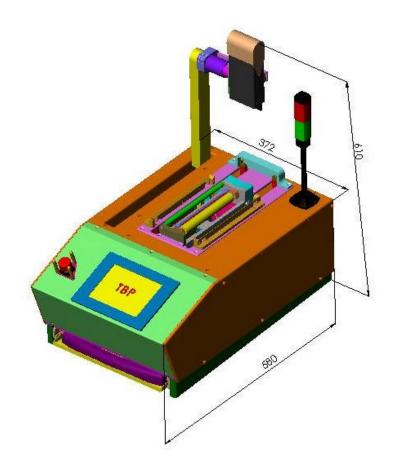
Time to read 25 wafer
 2 min
 ( alignment & scann & read )

### **Options**

- Barcode gun
- Backside-Reading
- Front & Backside Reading
- Cassette-Identifikation
- Custom modes
- SECSII/GEM Interface

## Facilities requirements: Overall dimension (mm):

- Weight: 27 kg
- Full range 100-240 VAC, 50-60 Hz





## SINGLE-WAFER-READER

SWR - Series Vertical





## Single Wafer Identification System

### Low Cost Wafer-Identification System





## SINGLE / MASS-WAFERTRANSFER SYSTEM

SWTS - Series Vertical





The system is designed for automatic transfer wafers from a source-cassette to a target cassette.

With this system it is possible to split or merge a wafer-lot or make a individual wafer-mix if no wafer-identification is needed.

The wafers can be moved wafer per wafer or all wafers in one step.



**SWTS-Series** 





- Get more efficiency by your wafer handling and sorting with this system.
- Automatic mode upon loading the cassette including cassette scanning and sorting.
- Detecting cross and double slot wafer
- Edge contact transfer technology
- Powder coated aluminium chassis

Recipes and macros can stored on system and selected through a touchscreen.

User friendly windows interface



These models are compatible with most standard 4", 5", 6" and 8" plastic wet/dry process cassettes, Units are not compatible with metal cassettes. Custom models are available for metal cassettes and non-standard carriers.



### **Specification**

- Industrial PC
- 12,1" Color-Flatscreen
- Integrated Touchscreen.
- Integrated Keyboard.
- Ethernet connection RJ45-Connector (TCP/IP).
- Open design resulting in minimal laminar flow disturbance.

#### **Performance**

 Time to transfer 25 wafer < 30 sec ( alignment & scann & transfer)

### **Options**

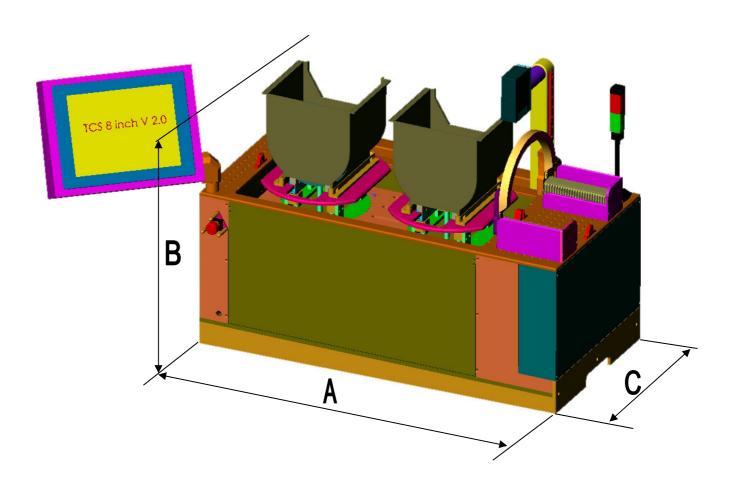
- Barcode gun
- Cassette-Identifikation
- Wafer-Identification
- Wafer-Alignement
- SECS/HSMS-Interface
- Custom modes

#### Standard Modes

- Shift transfer
- Split / Merge
- Invert
- Compress to top
- Compress to bottom
- Drag and Drop wafer



### **Dimensions:**

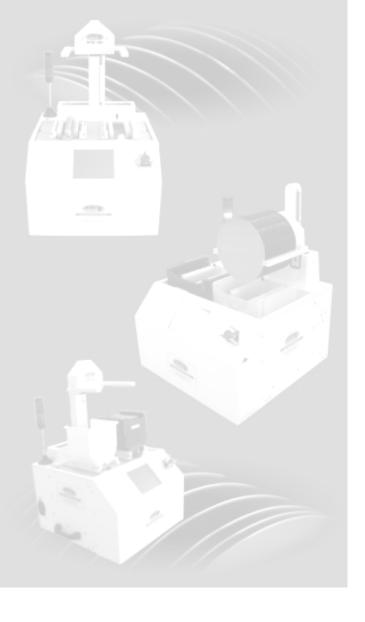


## Facilities requirements: Overall dimension (mm):

	SWTS 8"
Α	900
В	850
С	440

Weight: 50 kg

Full range 100-240 VAC , 50-60 Hz



### WAFER-TRANSFER-MACHINE

WTM - Series Vertical





### Wafer Transfer Machine WTM

This system is designed to transfer a whole wafer batch from a plastic cassette to a other plastic cassette.

( e.g. Storage-cassette-->Process-cassette, Storage-cassette-->Teflon-cassette, etc..)

- Integrated Flat or Notchfinder
- Edge gripping.
- No vacuum needed.
- Integrated microcontroller
- Integrated Touchpanel
- Smooth motions.
- Compact footprint.
- ESD save by use static dissipative materials - POM-C. (wafer-combs & wafer-gripper)

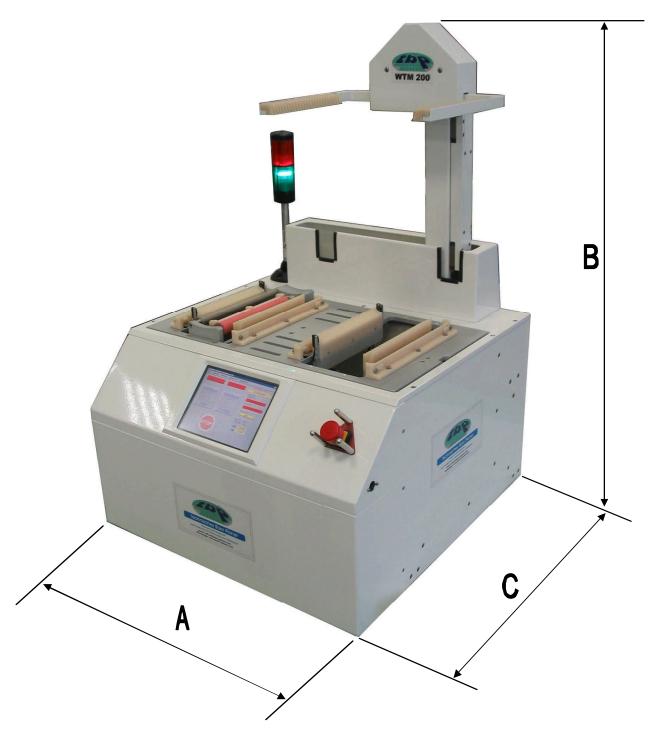


- Wafer-Identification
- **Custom Modes**





# Wafer Transfer Machine WTM



# Facilities requirements: Overall dimension (mm):

	WTM 200
Α	510
В	770
С	505

Weight: 35 kg

Full range 100-240 VAC , 50-60 Hz



### **QUARZ-BOAT-LOADER**

QBL - Series Vertical





# Quarz-Boat-Loader QBL

This system is designed to transfer a whole wafer batch from a plastic cassette to a quarz-boat.

- Integrated Flat or Notchfinder
- Edge gripping.
- No vacuum needed.
- Integrated microcontroller
- Integrated Touchpanel
- Smooth motions.
- Compact footprint.
- ESD save by use static dissipative materials - POM-C. (wafer-combs & wafer-gripper)

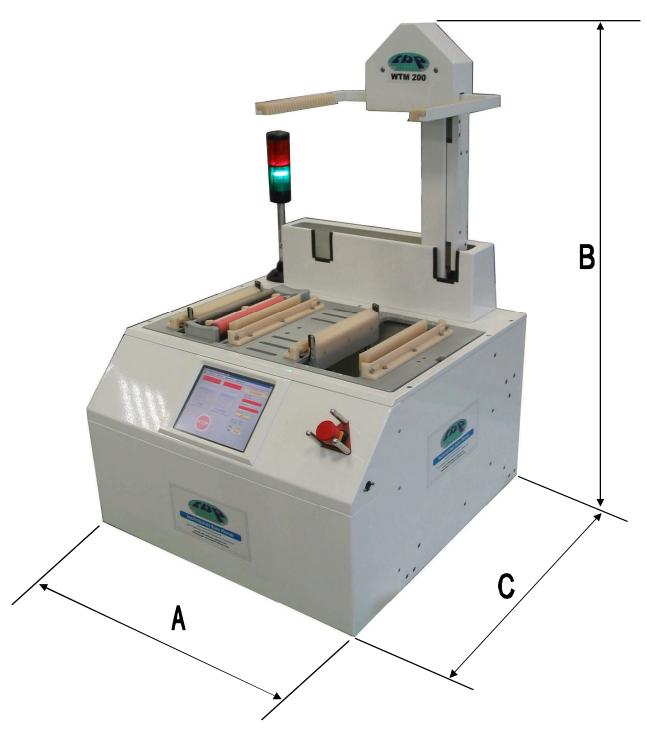




- Wafer-Identification
- Custom Modes



# Quarz-Boat-Loader QBL

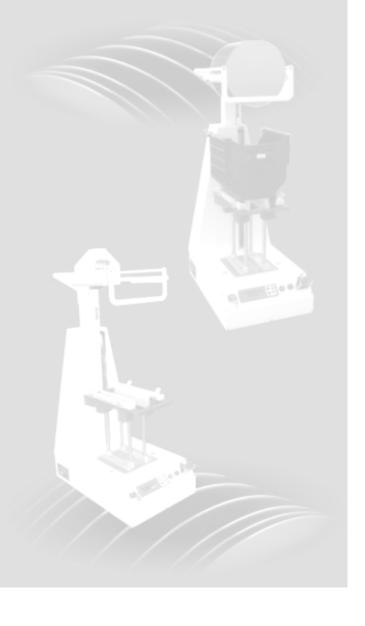


# Facilities requirements: Overall dimension (mm):

	QBL 200
Α	510
В	770
С	505

Weight: 35 kg

Electrical: 100-240 VAC ,2 A, 50-60 Hz



# SINGLE-STATION-WAFER TRANSFER-MACHINE

SWTM - Series Vertical





### Vacuumfree Waferhandling Tool

- Get more efficiency by your wafer handling with this system.
- Reduced Particle addition by handling the wafers vertically.
- Smooth motion
- Only edge contact to the wafers.
- No change of hardware necessary to transfer wafers from high profile to low profile cassettes. (high→low, low→high, low→low, high→high)
- Open design resulting in minimal laminar flow disturbance.
- Compact footprint.
- ESD save by use static dissipative materials.

These models are compatible with most standard

4", 5", 6" and 8" plastic wet/dry process cassettes,

shipping and storage containers.

Units are not compatible with metal

cassettes.

Custom models are available for metal cassettes and non-standard carriers.





### Single Station Wafer Transfer Machine

### **Specification**

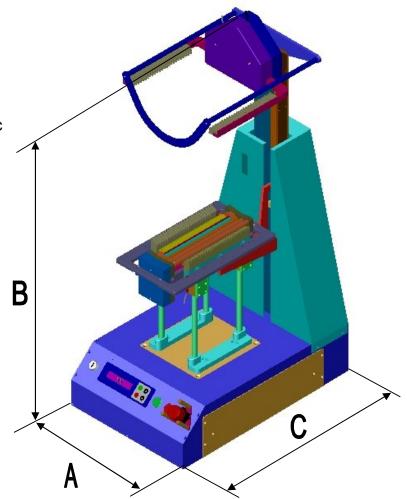
- Controlled by Microcontroller
- 16x2 digit LCD Display
- RS232 port

### **Performance**

Cycle Time to transfer 25 wafer from cassette to cassette = 12 sec

### **Options**

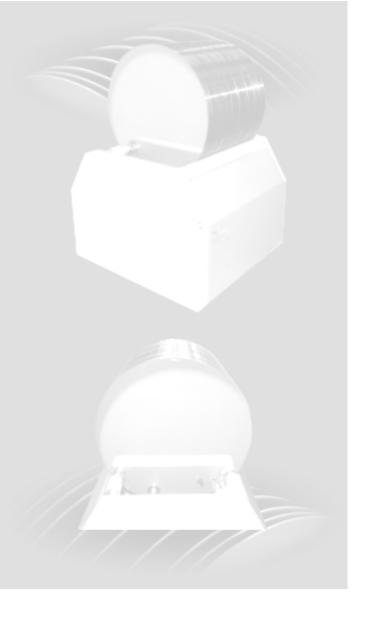
- Wafer-Identification
- Wafer-Aligner
- Custom modes



# Facilities requirements: Overall dimension (mm):

	SWTM 100	<b>SWTM 125</b>	SWTM 150	SWTM 200
Α	300	300	300	300
В	830	830	830	900
С	450	450	450	450

- Weight: 12 kg
- Full range 100-240 VAC, 50-60 Hz



### **NOTCH-FINDER-300mm**

NF300 - Series Batch-Alignment



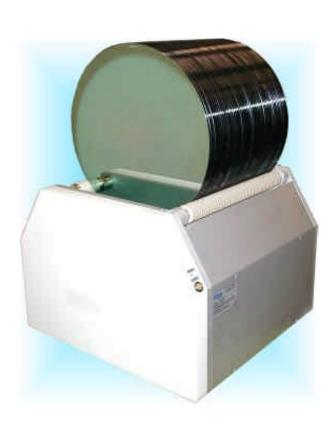


# Notchfinder 300mm Model: NF300

The NF300 is designed for OEM-Applications like wetetchbench,stockersystems etc. To align the wafers, no casettes are needed, because the wafers stands in specially rollers with minimal edge-contact to the wafers.

### **Specification**

- integrated μController
- Communication over RS232
- Precise alignment <0.5°
- small footprint
- time to change whole rollers in the system <1min (e.g. to eliminate contamination from an other process)
- Open design resulting in minimal laminar flow disturbance



#### Performances:

align 52 wafers and rotate they to 180° in 15 sec.

### Available Modes:

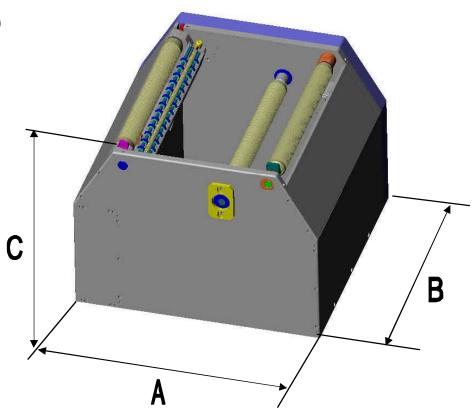
- Maintenance / diagnostic
- Custom modes available upon request.



# Notchfinder 300mm Model: NF300

### **Options:**

- integrated Waferreader (OCR, Barcode and 2D-Data Matrix)
- integrated Sensor (Wafer presence/absence)
- different pitches (5mm,10mm,12mm)

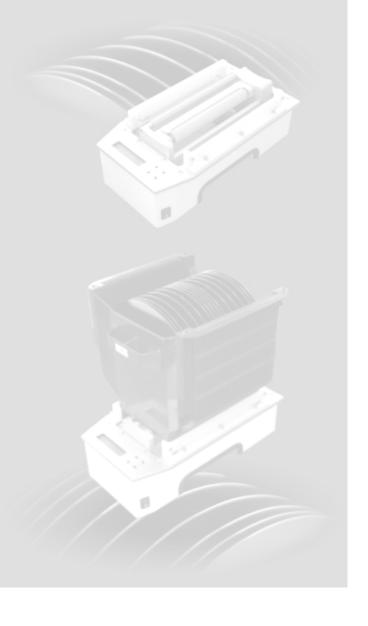


## Facilities requirements: Overall dimension (mm):

	NF300
A	390
В	355
С	285

Weight: 15 kg

24 VDC 2 A



### **NOTCH-FINDER-200mm**

NF200 - Series Automatic-Wafer-Batch-Alignment





## Notchfinder 8" ESD SAFE

### AUTOMATIC ESD SAVE NOTCH FINDER

This fully automatic microprocessor controlled notchfinder provides for wafer notch finding with minimal operator involvement.

To align wafer notchs the operator places the carrier on the unit and pushes the "START" Button. All wafer notchs are automatically aligned to the bottom, then relocated to one of 8 fixed positions or one individual position. Accuracy is better than plus or minus one degree.

No manual operation or override is available.
All rotation is controlled at a constant speed for minimal particle generation.

Final wafer notch location is controlled by the Buttons "UP" and "DOWN".

The operator can select 8 standard adjustment points

(0,45,90,135,180,225,270 and 315 degrees.)

or one individual adjustment point, which can teached in in 1 degree steps. This tool also can used for optical inspection ,by selecting the Inspection-Mode. The wafer are rotated for two cycles or the operator can stop the rotation by press the "CANCEL" Button.



These models are compatible with most standard 8" plastic wet/dry process cassettes, shipping and storage containers. Units are not compatible with metal cassettes. Custom models are available for metal cassettes and non-standard carriers.

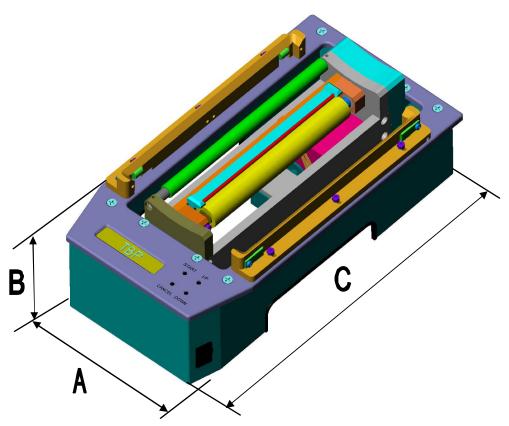




## Notchfinder 8" ESD SAFE

### **Specification**

- Swivel and rotation motors are stepper motors.
- Operation is controlled by a microprocessor and programmable EEPROM.
- Parameters (e.g. rollerspeed, liftposition) can changed with the integrated LC-Display.
- Surge protection is internally provided.
- External power supply full range 85 VAC to 240 VAC 40Hz-60Hz.
- The chassis has built in tilt to maintain wafer separation.
- The roller is made of precision-ground, conductive polyurethane over aluminum.
- · Open design resulting in minimal laminar flow disturbance



### Facilities requirements:

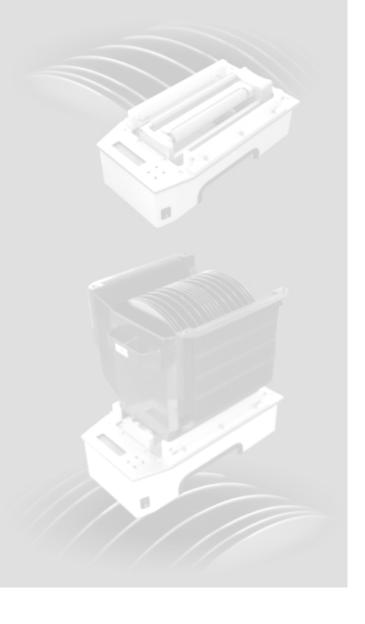
Overall dimension (mm):

	NF200
Α	167
В	110
С	315

Weight: 1.2 kg

### Replacement Parts:

Part	Description
RMN01	Roller Motor Assembly
LMN01	Lift Motor Assembly
PRN01	Polyurethane Roller
EPN01	Electronic Board
PSN01	Powersupply



### FLAT-FINDER-125/150mm

FF125/FF150 Automatic-Wafer-Batch-Alignment





# Flatfinder 5" and 6" ESD SAFE

### AUTOMATIC ESD SAVE NOTCH FINDER

This fully automatic microprocessor controlled flatfinder provides for wafer flat finding with minimal operator involvement.

To align wafer the operator places the carrier on the unit and pushes the "START" Button. All wafer flats are automatically aligned to the bottom, then relocated to one of 8 fixed positions or one individual position. Accuracy is better than plus or minus one degree.

No manual operation or override is available.
All rotation is controlled at a constant speed for minimal particle generation.

Final wafer notch location is controlled by the Buttons "UP" and "DOWN".

The operator can select 8 standard adjustment points

. (0,45,90,135,180,225,270 and 315 degrees.)

or one individual adjustment point, which can teached in in 1 degree steps. This tool also can used for optical inspection ,by selecting the Inspection-Mode. The wafer are rotated for two cycles or the operator can stop the rotation by press the "CANCEL" Button.



These models are compatible with most standard plastic wet/dry process cassettes, shipping and storage containers. Units are not compatible with metal cassettes. Custom models are available for metal cassettes and non-standard carriers.

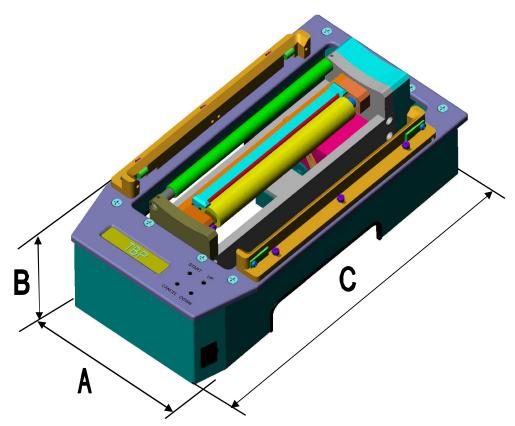




# Flatfinder 5" and 6" ESD SAFE

### **Specification**

- Swivel and rotation motors are stepper motors.
- Operation is controlled by a microprocessor and programmable EEPROM.
- Parameters (e.g. rollerspeed, liftposition) can changed with the integrated LC-Display.
- Surge protection is internally provided.
- External power supply full range 85 VAC to 240 VAC 40Hz-60Hz.
- The chassis has built in tilt to maintain wafer separation.
- The roller is made of precision-ground, conductive polyurethane over aluminum.
- · Open design resulting in minimal laminar flow disturbance



### Facilities requirements:

Overall dimension (mm):

	FFXXX
Α	150
В	120
С	320

Weight: 1.5 kg

### Replacement Parts:

Part	Description
RM01	Roller Motor Assembly
LM01	Lift Motor Assembly
PR01	Polyurethane Roller
EP01	Electronic Board
PS01	Powersupply