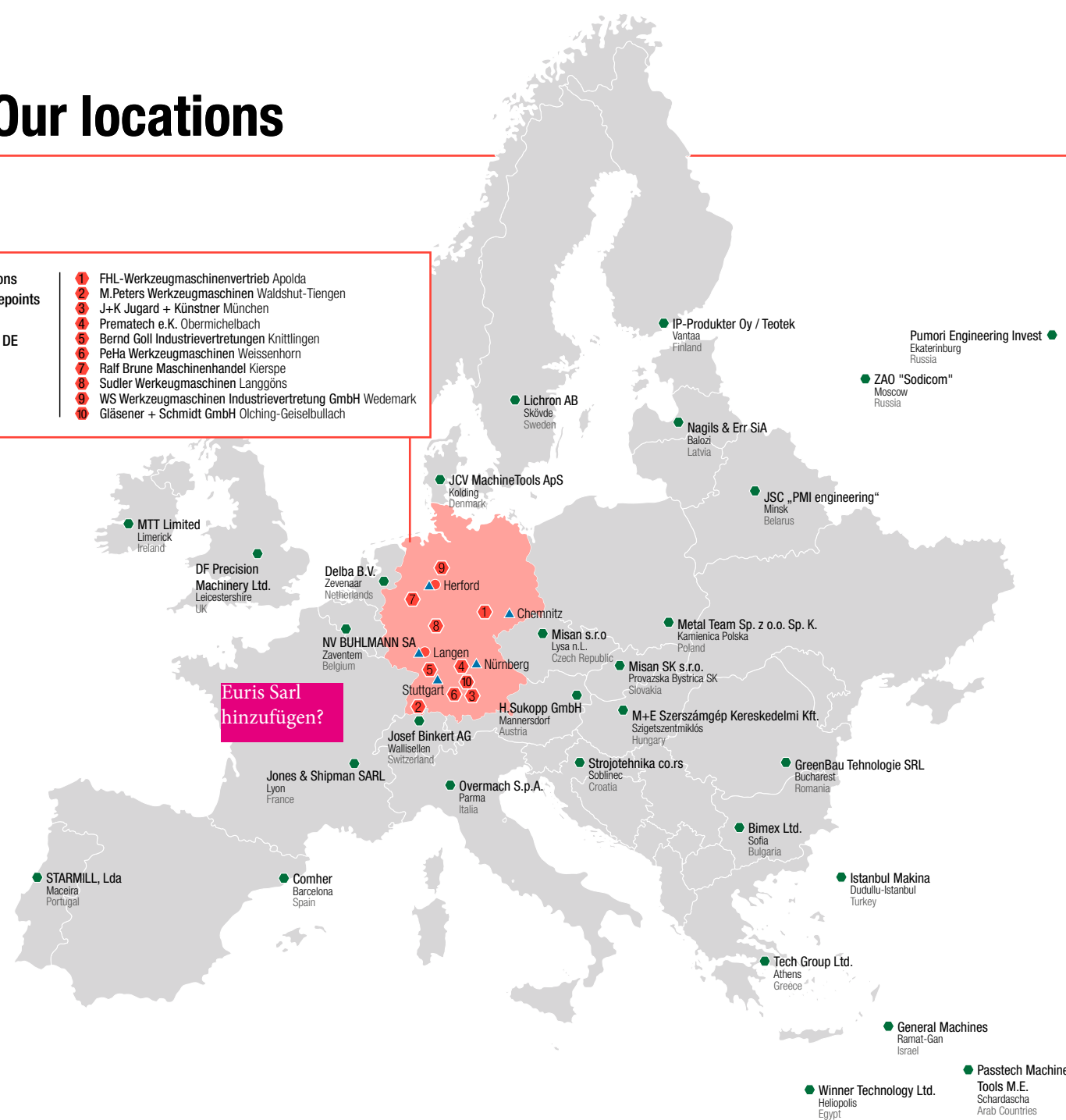


# Our locations

- Locations
  - ▲ Servicepoints
  - Dealer
  - Dealer DE
- 1 FHL-Werkzeugmaschinenvertrieb Apolda
  - 2 M.Peters Werkzeugmaschinen Waldshut-Tiengen
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  - 10 Gläserner + Schmidt GmbH Olching-Geiselbullach



**Okamoto**  
GRIND - X

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All data contained herein is based on the technical status of the machines at the time of printing. We reserve the right to change any detail via further development. As a result, dimensions, weights, colours, etc. of the delivered machines may vary.  
Printed in April 2021.

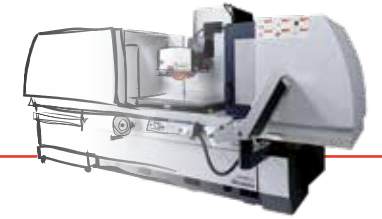
# Surface & Profile Grinding Machine

ACC CAiQ



GRIND - X  
OKAMOTO PRECISION SYSTEMS  
**Okamoto**

GRINDING SOLUTIONS



## NEW MODEL SERIES OF MEDIUM SIZE SURFACE GRINDING MACHINES

## ACC CAiQ

- Better operability and repeatable accuracy are considered as the most important factor.
- The 400 mm wide models are redesigned to column moving system.
- The 600 mm wide range are developed to meet the market requirements for larger work piece sizes.



### INCREASED FUNCTIONS

- Electro permanent magnet
- Paper belt filter with coolant device
- ISO software, profile creation software
- Okamoto-I-CAM, CAD/CAM software

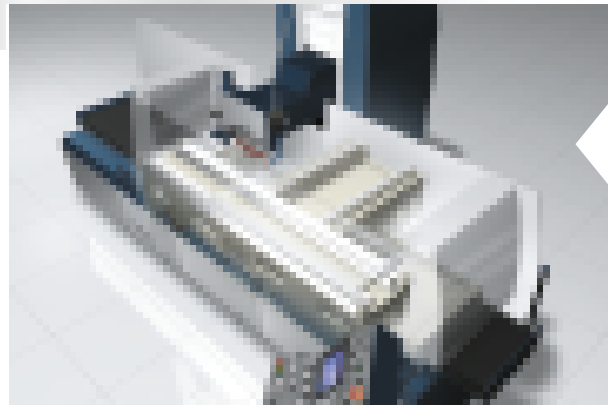
|                                                                          | Description                                    | Unit                     | CAiQ-series              |                |                 |                    |                 |
|--------------------------------------------------------------------------|------------------------------------------------|--------------------------|--------------------------|----------------|-----------------|--------------------|-----------------|
|                                                                          |                                                |                          | 64CAiQ                   | 84CAiQ         | 104CAiQ         | 66CAiQ             | 106CAiQ         |
| <b>Capacity</b>                                                          | Table working cap. (length x width)            | mm                       | 605 x 400                | 805 x 400      | 1016 x 400      | 605 x 600          | 1016 x 600      |
|                                                                          | Maximum travel (manual : longitudinal x cross) | mm                       | 800 x 440                | 1000 x 440     | 1200 x 440      | 800 x 652          | 1200 x 652      |
|                                                                          | Distance new wheel – table                     | mm                       | 22,5 - 522,5             |                |                 | -2,5 - 497,5       | -2,5 - 497,5    |
|                                                                          | Standard magnetic chuck size                   | mm                       | 600 x 400 x 85           | 800 x 400 x 85 | 1000 x 400 x 85 | 600 x 600 x 85     | 1000 x 600 x 85 |
|                                                                          | Table load capacity (incl. chuck weight)       |                          | 1000                     |                |                 | 1500               | 1500            |
|                                                                          | Height on table (from floor)                   | mm                       | 915                      |                |                 |                    |                 |
| <b>Table</b>                                                             | T-slots (width x No)                           | mm                       | -                        |                |                 |                    |                 |
|                                                                          | Hydraulic feed rate (Li : linear motor)        | m / min                  | 3 - 25                   |                |                 |                    |                 |
| <b>Crossfeed</b>                                                         | Manual cross feed                              | Hand feed per revolution | 0,01 / 0,1 / 1,0 / 5,0   |                |                 |                    |                 |
|                                                                          |                                                | Graduation of handwheel  | 0,0001/0,001/0,01 / 0,05 |                |                 |                    |                 |
|                                                                          | Automatic cross feed                           | Intermittent feed        | 0,5 - 20                 |                |                 |                    |                 |
|                                                                          |                                                | Continuous feed          | 0 - 1000                 |                |                 |                    |                 |
| <b>Wheel head</b>                                                        | Manual pulse feed                              | Hand feed per revolution | 0,01 / 0,1 / 1,0         |                |                 |                    |                 |
|                                                                          |                                                | Graduation of handwheel  | 0,0001 / 0,001 / 0,01    |                |                 |                    |                 |
|                                                                          | Automatic downfeed (traverse & plunge)         | Rough grinding           | 0,001 - 0,03 (15 steps)  |                |                 |                    |                 |
|                                                                          |                                                | Fine grinding            | 0,0001 - 0,01 (11 steps) |                |                 |                    |                 |
|                                                                          | Feedrate (F-Command)                           | mm                       | 1000                     |                |                 |                    |                 |
|                                                                          | No. of sparkout                                |                          | 0 - 99                   |                |                 |                    |                 |
| Rapid feed rate                                                          |                                                | 0 - 1000                 |                          |                |                 |                    |                 |
| <b>Grinding wheel</b>                                                    | Size OD x W x ID                               | mm                       | Ø 355 x 38 x Ø 127       |                |                 | Ø 405 x 50 x Ø 127 |                 |
|                                                                          | Speed (Invertor)                               | min <sup>-1</sup>        | 500 - 2500               |                |                 |                    |                 |
| <b>Motors</b>                                                            | Grinding wheel spindle (reverse-ventilation)   | kW                       | 7,5                      |                |                 |                    |                 |
|                                                                          | Hydraulic pump                                 | kW                       | 2,2 / 4                  |                |                 |                    |                 |
|                                                                          | Vertical feed (AC servo)                       | kW                       | 1,5                      |                |                 |                    |                 |
|                                                                          | Cross feed (AC servo)                          | kW                       | 0,75                     |                |                 |                    |                 |
| <b>Destred power supply (including electro mag &amp; coolant system)</b> |                                                |                          | 24                       |                |                 |                    |                 |
| <b>Floor space</b>                                                       | Length                                         | mm                       | 3710                     | 4000           | 4500            | 4000               | 4500            |
|                                                                          | Width                                          | mm                       | 3439                     | 3500           | 3500            | 3700               | 3610            |
|                                                                          | Height                                         | mm                       | 2203                     | 2203           | 2203            | 2275               | 2275            |
|                                                                          | Net weight                                     | kg                       | 4950                     | 5500           | 7000            | 6300               | 7500            |

## Column type suitable for larger work pieces



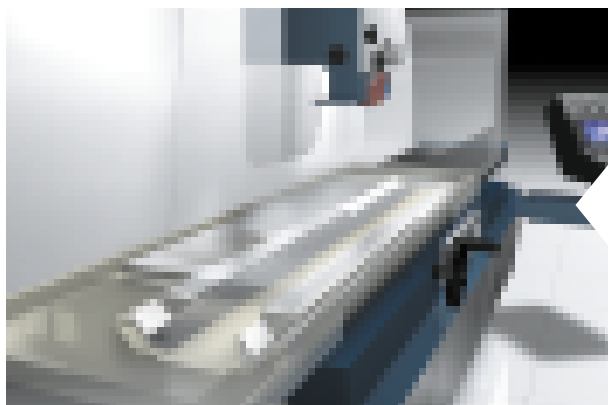
### Improved Covering

- Standard cover designed for the use of high pressure coolant systems.
- Draining system to meet the increased amount of coolant.
- High quality sheet metal cover (powder coated) with new design.
- Two tone colour painting and ergonomic design.



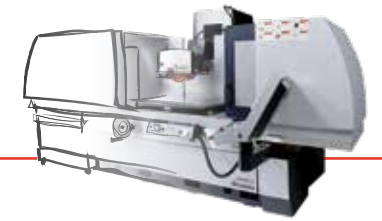
### High rigid structure

- The cross feed movement is supported on very rigid guide ways.
- This design of the column has been developed to guarantee very accurate cross movement.



# ACC CAiQ

## LCD touch screen display Simplified and efficient control



### Easy access to working area

- Column type design gives easier access for loading and unloading the work pieces.
- For the same reason the distance between floor and work table has been reduced.
- For the same reason the distance between floor and work table has been reduced. This is 87 mm lower than existing machines of the same size.



### T shaped main casting

- Extremely rigid single piece T shaped main casting.
- Machine table supported on both sides at all times. Additional table mounted devices, and fixtures are supported across the full table length.



### V-V slide way

- The double V (V-V) longitudinal slideway ensures accurate straightness.
- Controls the amount of the lubricating oil layer.

### Control to simplify the operation

The development of the new Okamoto iQ touch screen control and its easy to use software, coupled with an inherent mechanical accuracy, allows everyone to achieve impressive results. Setting of the machine is divided into 2 parts, wheel dressing and grinding. A logical

graphical representation of each of these operations serves to guide the operator through the setting process. This setting process is made even easier by the use of easy to understand icons displayed on a generously sized colour screen.

### Control Panel

- The position of the panel gives easy access to the controls, with the switches ergonomic positioned.

### Mode selector switch

- Automatic cycle position setting, rapid and manual feed rate to be set.
- All function are interlocked.

### Handwheel

- Both axes can be moved with electronic handwheels, whereby the pitch can be varied

### Stock removal set

- The remaining stock removal is displayed (0,1).
- Rough and fine infeed amount are set by selector switches (0.5, 1, 2, 5, 10, 20, 30 µm).



### Grinding Data (Surface)

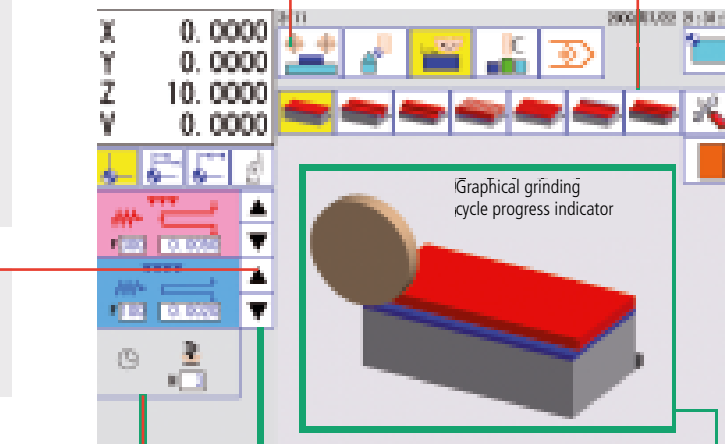
The grinding method and all other parameters including wheel shape are set-up using the touch screen panel.

#### Mode Select

- Table setting
- Dress data
- Grind data
- Combined grinding
- File operation

#### Feed Rates

- Can be changed in running cycle



#### Grinding Feed Rates

- **iQ Function**  
By entering the wheel mesh size, optimal grinding condition automatically set.
- Cross feed
- 1 Speed (F)
- 2 Infeed amount
- Spark out passes / times
- Estimated remaining time to cycle finish

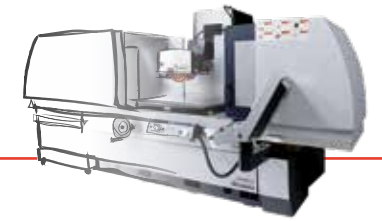
#### Dynamic Menu

- Surface shape
- U-shape
- T-shape
- Pitch
- Step
- Side face
- Conturing

#### Dynamic Menu

- (Grind parameters)
- Datum method selected (picture show work datum)
  - Setting parameters
    - 1 Select step or continuous feed
    - 2 Chuck/Word datum select
    - 3 Set up air-cut amount
  - Selected wheel shape for current grind cycle (Press this icon to alter dress conditions)

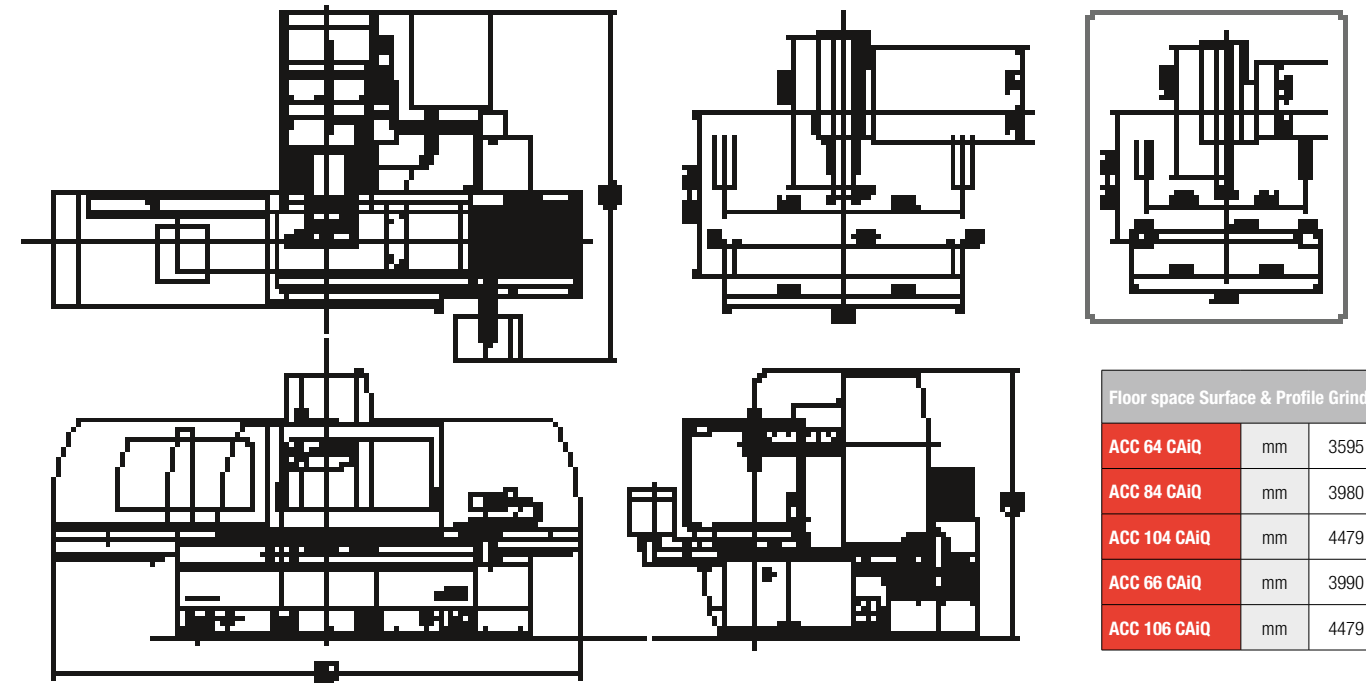




Software

|                           |                                           |                                      |
|---------------------------|-------------------------------------------|--------------------------------------|
| <p><b>Surface</b></p>     | <p><b>Grinding data (Surface)</b></p>     | <p><b>Dress data (Straight)</b></p>  |
| <p><b>t shape</b></p>     | <p><b>Grinding data (T shape)</b></p>     | <p><b>Dress data (Side)</b></p>      |
| <p><b>Pitch Shape</b></p> | <p><b>Grinding data (Pitch shape)</b></p> | <p><b>Dress data (V shape)</b></p>   |
| <p><b>Contouring</b></p>  | <p><b>Grinding data (Contouring)</b></p>  | <p><b>Dress data (Radius)</b></p>    |
| <p><b>UPCAM</b></p>       | <p><b>Rapid pre-profil dressing</b></p>   | <p><b>Dress data (Free Form)</b></p> |

Outline Drawing



| Floor space Surface & Profile Grinding Machines |    |                    |
|-------------------------------------------------|----|--------------------|
| ACC 64 CAiQ                                     | mm | 3595 x 2900 x 2203 |
| ACC 84 CAiQ                                     | mm | 3980 x 2900 x 2203 |
| ACC 104 CAiQ                                    | mm | 4479 x 2900 x 2203 |
| ACC 66 CAiQ                                     | mm | 3990 x 3350 x 2275 |
| ACC 106 CAiQ                                    | mm | 4479 x 3350 x 2275 |

Accessories

| Standard                                                      | Optional                      |                                             |
|---------------------------------------------------------------|-------------------------------|---------------------------------------------|
| Grind X grinding wheel                                        | <b>Coolant system</b>         |                                             |
| Wheel balancing arbor                                         |                               | Coolant tank with paper                     |
| Spindle speed inverter                                        | <b>Chuck</b>                  |                                             |
| Whee flange                                                   |                               | Electro magnetic chuck                      |
| 3 point dresser                                               | <b>Grinding whel adaptor</b>  |                                             |
| Flexible nozzle                                               |                               | Electro permanent chuck and microcontroller |
| Standard tools                                                | <b>Balancing apparatus</b>    |                                             |
| Leveling bolts and plates                                     |                               | Spare grinding wheel adaptor                |
| Splash cover                                                  |                               | Balancing apparatus with arbor              |
| chuck controller MA5                                          | <b>Work light</b>             |                                             |
| Earth leakage breaker                                         |                               | LED Working light                           |
| Grinding time estimate function                               |                               |                                             |
| Grinding cycle (Surface, U shape, T shape, step, pitch, side) | <b>Oil cooling system</b>     |                                             |
| Dressing cycle (straight,side)                                |                               | Air exchange                                |
| Wheel guard 400 mm                                            | <b>Measuring instrument</b>   |                                             |
|                                                               |                               | Oil cooling system                          |
|                                                               | <b>Safety related options</b> |                                             |
|                                                               |                               | Temperature controlled grinding head        |
|                                                               | <b>Dressing options</b>       |                                             |
|                                                               |                               | Calendar time                               |
|                                                               | <b>Grinding cycles</b>        |                                             |
|                                                               |                               | Postoperation power off                     |
|                                                               | <b>Dressing cycle</b>         |                                             |
|                                                               |                               | Overhead wheel dresser with compensation    |
|                                                               | <b>Programming software</b>   |                                             |
|                                                               |                               | Swing dresser                               |
|                                                               |                               | Contouring cycle                            |
|                                                               |                               | ISO code cycle                              |
|                                                               |                               | Radius dress                                |
|                                                               |                               | Full radius dress                           |
|                                                               |                               | V form dress                                |
|                                                               |                               | ISO code dress                              |
|                                                               |                               | UP CAM                                      |