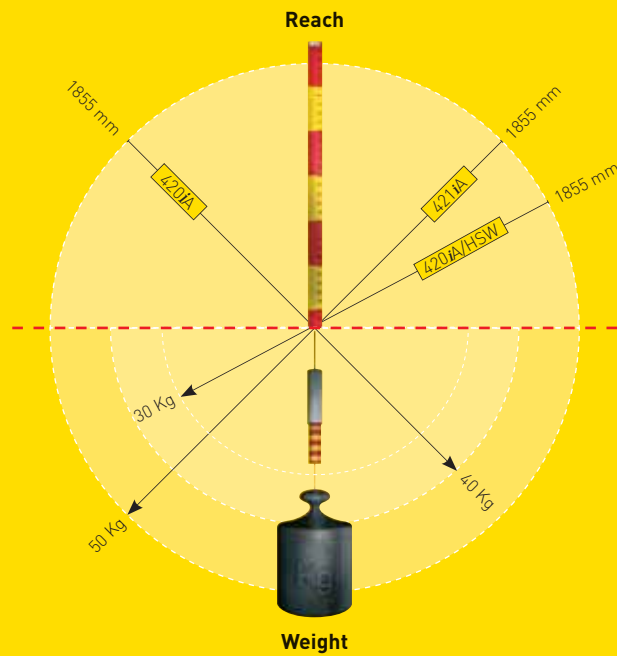


# ➤ M-420iA, M-420iA SECONDARY FOOD, M-421iA

|                | Robot model                    | Controller | Controlled axes | Max. load capacity at wrist [kg] | Repeatability [mm] | Mechanical weight [kg] | Reach [mm] | Motion range [°] |     |     |     |    |    | Maximum speed [°/s] |     |     |     |    |    | J4 Moment [Nm]/ Inertia [kgm <sup>2</sup> ] | J5 Moment [Nm]/ Inertia [kgm <sup>2</sup> ] | J6 Moment [Nm]/ Inertia [kgm <sup>2</sup> ] | IP Rating |
|----------------|--------------------------------|------------|-----------------|----------------------------------|--------------------|------------------------|------------|------------------|-----|-----|-----|----|----|---------------------|-----|-----|-----|----|----|---|---|---|-----------|
|                |                                |            |                 |                                  |                    |                        |            | J1               | J2  | J3  | J4  | J5 | J6 | J1                  | J2  | J3  | J4  | J5 | J6 |   |   |   |           |
| <b>M-420iA</b> | M-420iA                        | R-30iA     | 4               | 40                               | ± 0.5              | 620                    | 1855       | 320              | 115 | 100 | 540 | —  | —  | 180                 | 200 | 200 | 350 | —  | —  | 98/2.5                                      | —   | —   | IP54      |
|                | M-421iA                        |            | 2               | 50                               | ± 0.5              | 520                    | 1855       | 115              | 100 | —   | —   | —  | —  | 200                 | 200 | —   | —   | —  | —  | 98/2.5 <sup>(d)</sup>                       | —   | —   |           |
|                | M-420iA (2 <sup>nd</sup> food) |            | 4               | 40                               | ± 0.5              | 620                    | 1855       | 320              | 115 | 100 | 540 | —  | —  | 180                 | 200 | 200 | 350 | —  | —  | 98/2.5                                      | —   | —   |           |
|                | M-420iA (High Speed wrist)     |            | 4               | 30                               | ± 0.5              | 630                    | 1855       | 320              | 115 | 100 | 540 | —  | —  | 180                 | 200 | 200 | 720 | —  | —  | 68/2.5                                      | —   | —   |           |

d) J2



**Available in 4 versions:**

- The M-420iA, 4-axes with a payload of 40kg
- The M-420iA, 4-axes with a payload of 40kg, Secondary Food (special food configuration)
- The M-421iA, 2-axes with a payload of 50kg
- The M-420iA (HSW – High Speed Wrist), 4-axes with a payload of 30kg

THE M-420*i*A AND M-421*i*A ROBOTS ARE DESIGNED ESPECIALLY FOR HIGH SPEED HANDLING AND PACKAGING APPLICATIONS. BOTH UNITS ARE FLOOR MOUNTED.

## » FEATURES AND BENEFITS

### The M-420*i*A Series, the solution for:

- Heavy high speed packaging applications

#### SPECIAL PURPOSE MECHANICAL DESIGN

Designed specifically for high speed handling and packaging applications

- Minimum floor space needed
- Very high speed operation with heavy payloads
- Large work envelope for pick/place applications

#### AIR AND ELECTRICAL CONNECTIONS PROVIDED FROM J1 TO J4,

- Easier programming
- Increased uptime
- Better performance
- No additional cost

#### HIGH ALLOWABLE WRIST MOMENT AND INERTIA

- Ability to handle large gripper and heavy payload at high speed, thus providing higher throughput
- Flexibility on gripper design and material used

#### HOLLOW JOINT CONSTRUCTION FOR REDUCERS

- Reduced wear of cable routing as most reducers have hollow construction

#### MOTORS DIRECTLY COUPLED TO THE REDUCER

- Simplified mechanical unit
- Reduced breakdown risk
- Compact and reliable solution
- High accuracy and minimum backlash

#### DRIVE OF PERIPHERAL UNIT

The robot is equipped as standard with 6-axes servo amplifier, allowing the robot to control:

- M-420*i*A : an additional 2-axes to drive peripheral devices
- M-421*i*A : an additional 4-axes to drive peripheral devices

#### SPECIAL UNIT M-420*i*A SECONDARY FOOD

##### FOOD GRADE GREASE

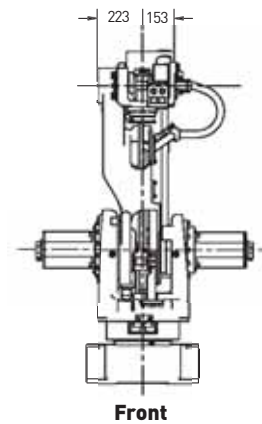
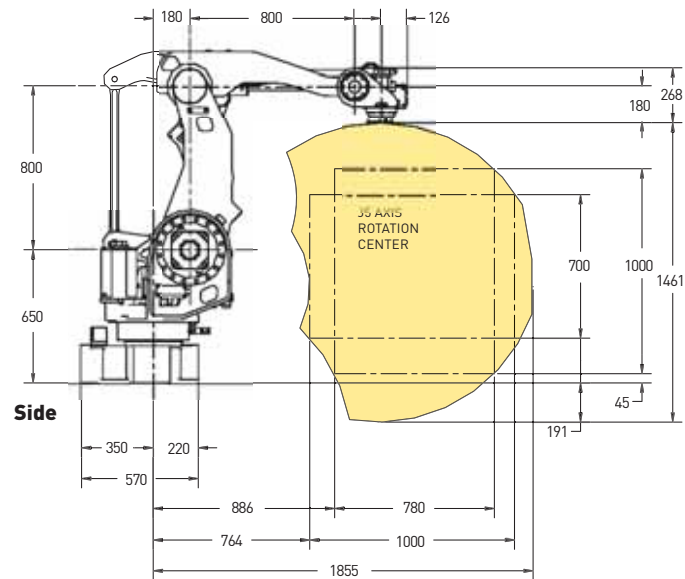
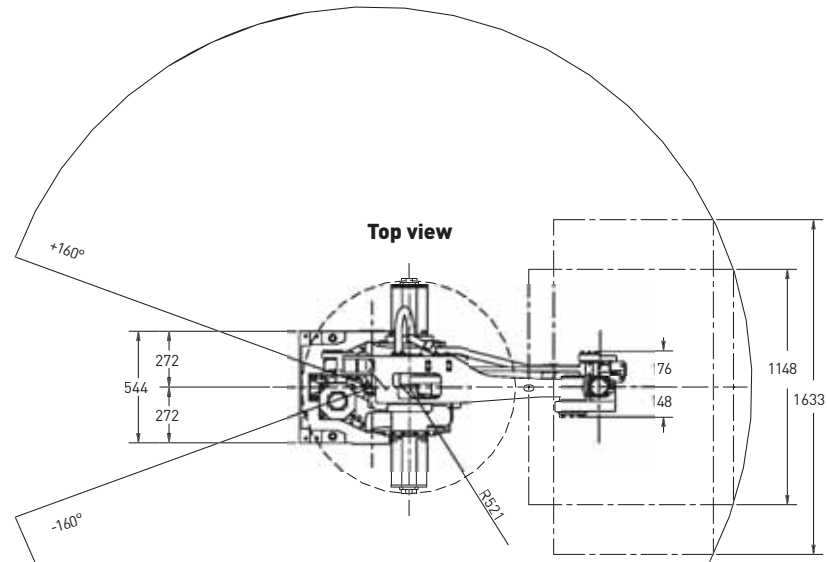
- Special food grease to avoid any risk of contaminating food with grease or oil

##### ROBOT ARM DESIGNED FOR FOOD INDUSTRY CLEANING REQUIREMENTS

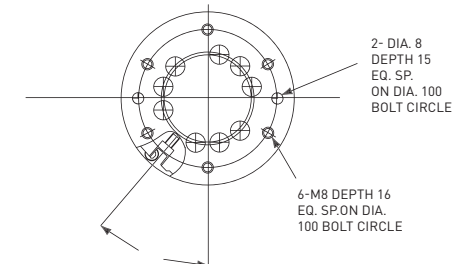
- Special coating and sealing which protect against hot water, acid and alkaline cleaners
- Perfectly smooth surface of the whole unit for easy cleaning, thus avoiding the contamination by germs
- IP65



## M-420iA

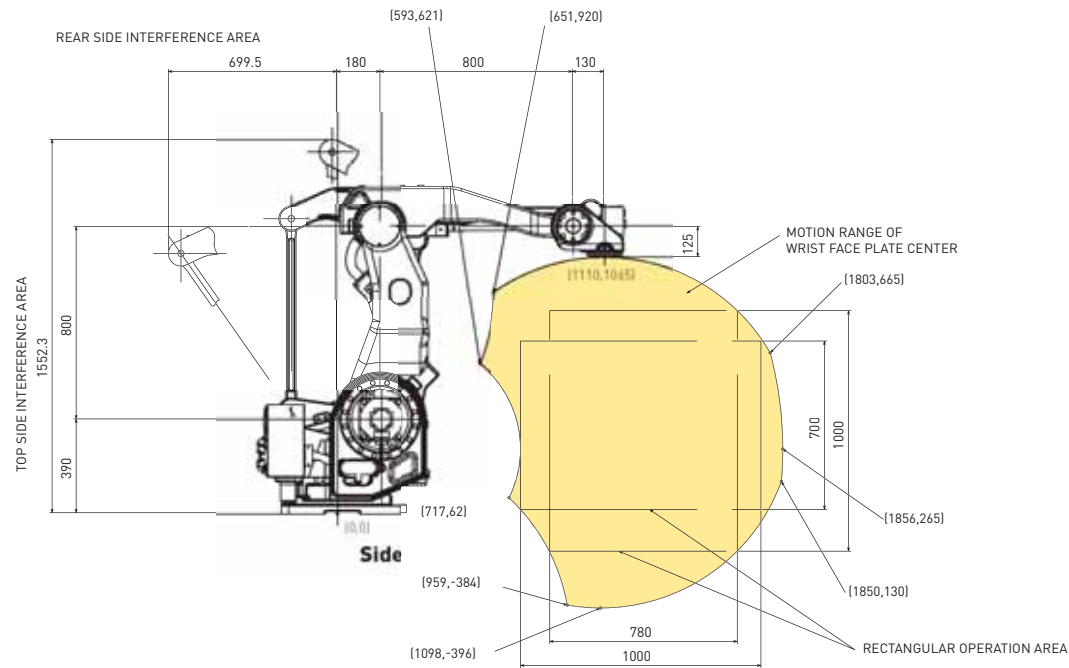
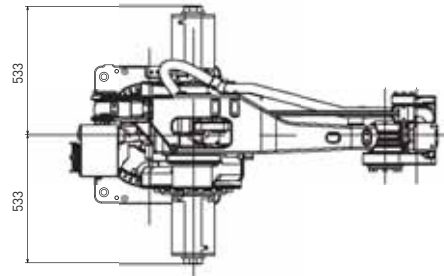


## Flange Wrist M-420iA, M-421iA

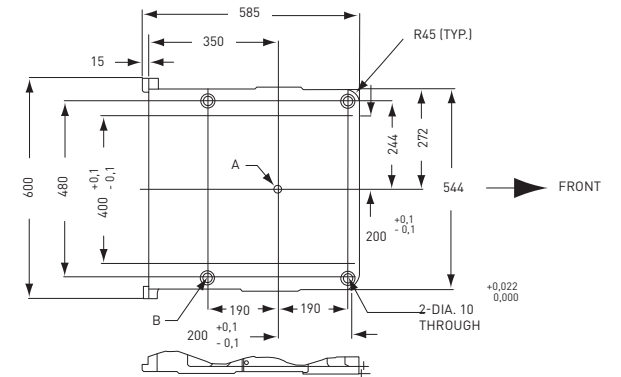


## M-421iA

Top view



## Footprint M-420iA, M-421iA



A : JOINT 1 AXIS ROTATION CENTER  
 B : 4-DIA. 24 THROUGH DIA. 38 FACING DEPTH 4 (FOR ROBOT MOUNTING BOLT)