



## **IRB 6640- a stronger robot- the next generation**



# IRB 6640

- A stronger robot – the next generation
- High production capacity – the perfect robot for all applications

**IRB 6640-180/2.55**  
**IRB 6640-235/2.55**  
**IRB 6640-185/2.8**  
**IRB 6640-205/2.75**  
**IRB 6640-130/3.2**  
**IRB 6640ID-200/2.55**  
**IRB 6640ID-170/2.75**

**Options for:**  
**Foundry Plus**  
**Foundry Prime**  
**Clean room**



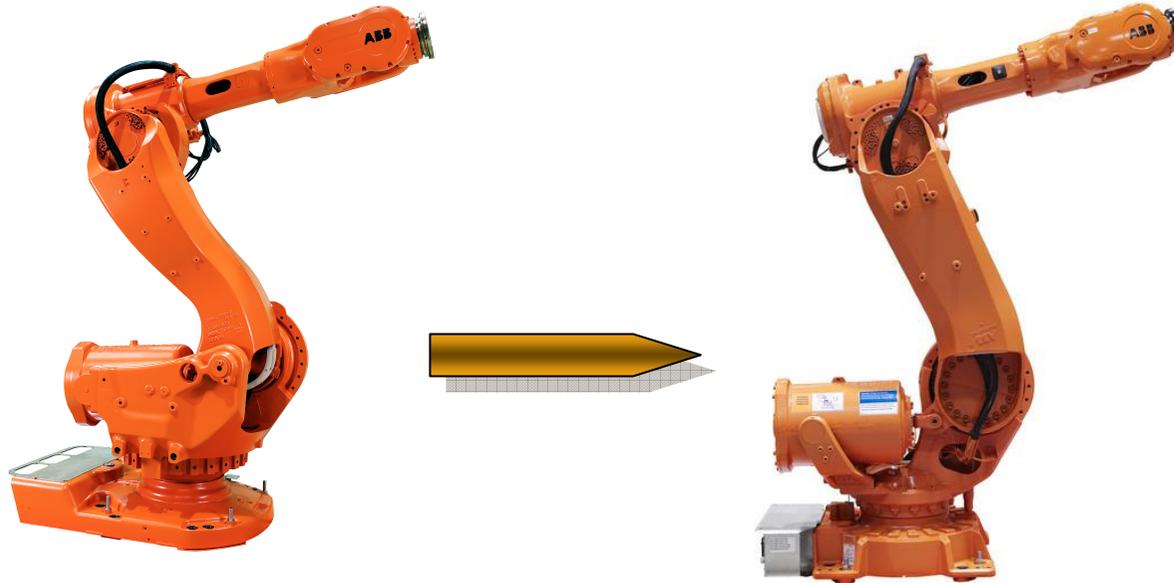
# Project objectives IRB 6640

- Building on the highly successful IRB 6600
- Replaces IRB 6600
- A new generation with many improvements
  - Stronger than IRB 6600
  - New software for improved performance
  - Reduced weight
  - Reduced cost
  - Easier maintenance
  - Coordination of technologies with IRB 6620
- The shelf robots IRB 6650S are the same as before

# IRB 6640 replaces IRB 6600

■ IRB 6600/6650 excl Shelf

■ IRB 6640



IRB 6600-175/2.55  
IRB 6600-225/2.55  
IRB 6600-175/2.8  
IRB 6650-200/2.75  
IRB 6650-125/3.2  
IRB 6600ID-185/2.55  
IRB 6650ID-170/2.75

IRB 6640-180/2.55  
IRB 6640-235/2.55  
IRB 6640-185/2.8  
IRB 6640-205/2.75  
IRB 6640-130/3.2  
IRB 6640ID-200/2.55  
IRB 6640ID-170/2.75

# IRB 6640 – Features & benefits

## ■ A stronger robot- the next generation

- Higher payload Stronger
- Increased path performance Second generation of motion control
- Easier installation Almost 400 kg lower weight
- Easy maintenance Carry over articles and solutions from IRB 6620

## ■ .....while still keeping trademarks such as

- Handling of large work pieces Strong wrist
- Collision resistance Rigid design



# A stronger robot – the next generation

- **Higher payload**
  - Suitable for many heavy material handling applications
  - IRB 6640: 235 kg (before: 225 kg)
  - IRB 6640ID: 200 kg (before: 185 kg)
- **Increased path performance**
  - Second generation of TrueMove & QuickMove
    - Means less time for programming
- **Easier maintenance & installation:**
  - Reduced weight: 400kg
    - IRB 6640: 1310 kg
    - IRB 6600: 1710 kg
  - New fork lift pockets
    - Lighter
    - Smarter installation
  - Easier to service
    - More space in the foot
- **Commonality within IRB 6600-family**
  - Proven components



# Second generation TrueMove™ & QuickMove™

## ■ TrueMove™

- What you program is what you get!
- Enhanced motion accuracy with up to 50%.
- The outstanding motion performance of ABB robots is maintained even for lightweight robots.
- Superior path and speed following.
- Speed independent path.

## ■ QuickMove™

- Minimum cycle time without effort or risk
- Cycle times improved up to 20%.
- Maximum acceleration and speed over the entire workcycle.
- Automatic acceleration optimization.
- The speed or acceleration is reduced only if a system or user limit otherwise would be exceeded.
- Protection against overloading.

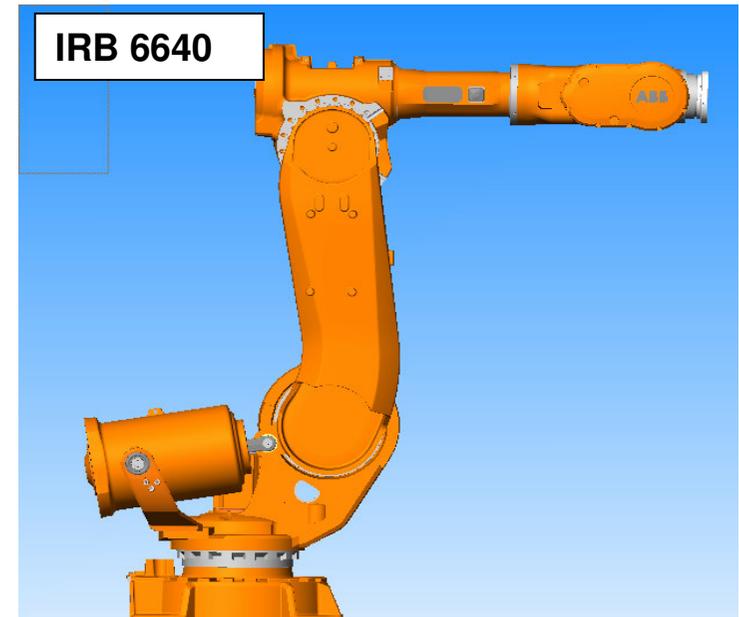
# Commonality within the IRB 6600 family

- IRB 6600 family robots have the same
  - Parts
  - Modules
  - Solutions
- Benefits:
  - Easy installation
  - Easy stock of spare parts
  - Easy maintenance
  - Easy exchangeability
  - Proven motors and gears
  - High uptime

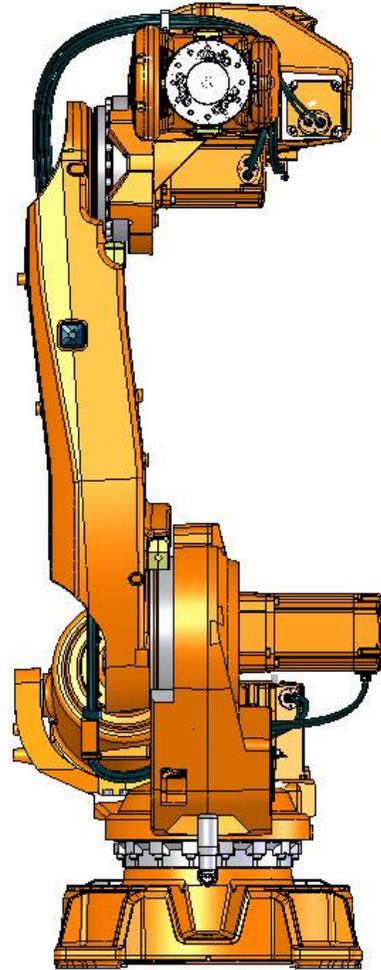


# Design change IRB 6640 vs IRB 6600

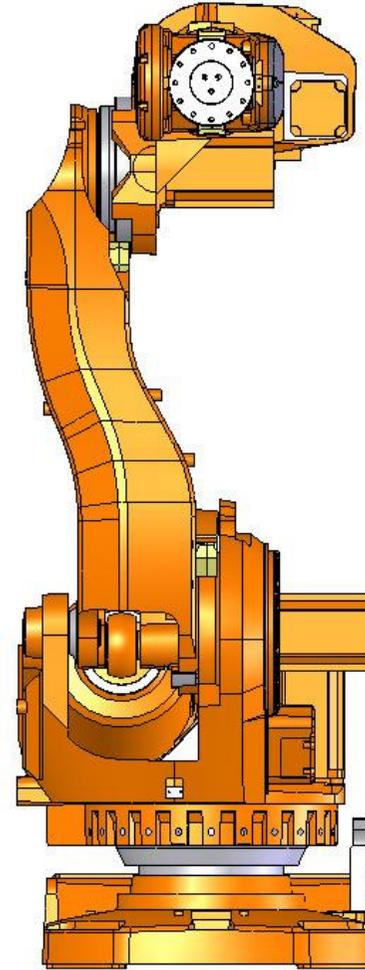
1. Foot, same as IRB 6620
2. Gear ax1, same as IRB 6620
3. Frame, no support bearing at ax2
4. Balancing device new (two versions at 6600)
5. Gear ax2, same as IRB 6620
6. Lower arm, new (short and long)
7. Upper arm, same as IRB 6600
8. Manipulator cable, same as IRB 6600
9. Spot-Weld, MH cable, same as IRB 6600
10. Small change of turning radius



# IRB 6640 versus IRB 6600 Front view



**IRB 6640**



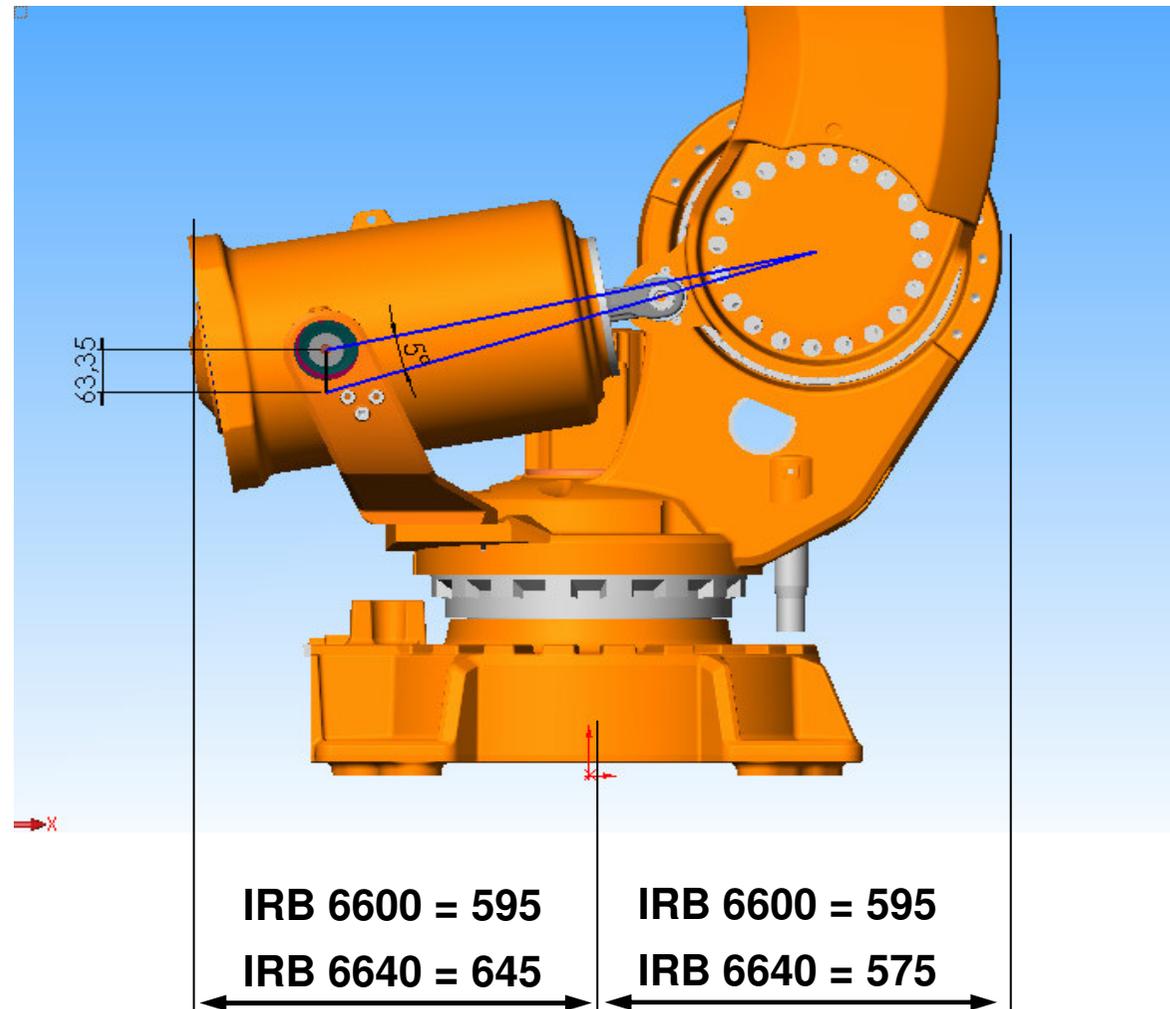
**IRB 6600**



# Turning radius axis1

Turning radius

- Reduced in front
- Increased back

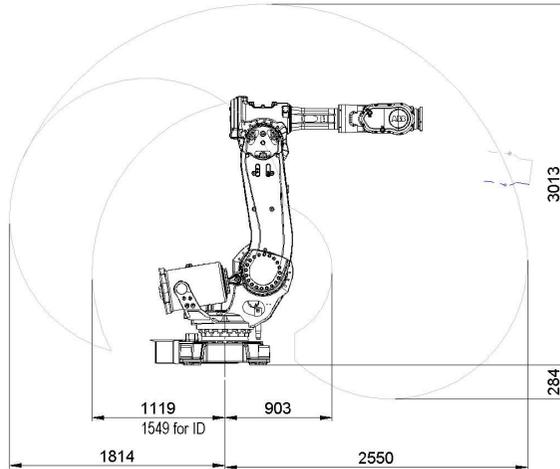


# Specifications IRB 6640 vs IRB 6600

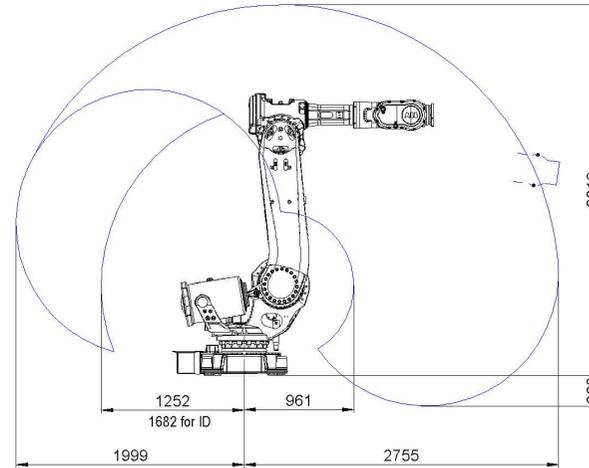
- Handling capacity increased 0-15kg, (at an offset of 300mm)
- Same reach as IRB 6600
- Same main dimensions as IRB 6600
- Motions
  - Ax1, +/- 170 deg, IRB 6600 +/- 180 deg. Option +/- 220 deg.
  - Ax2-6 same as IRB 6600
- Speed and acceleration basically as IRB 6600 except ax4, speed increased from 150 deg/sec to 170 deg/sec.
- Path performance increased in general
- Weight reduced with 400kg (weight 1310 kg)
- Mounting equipment, hip load
  - Permitted load on the frame is 250 kg (500 kg on IRB 6600)

# Working range

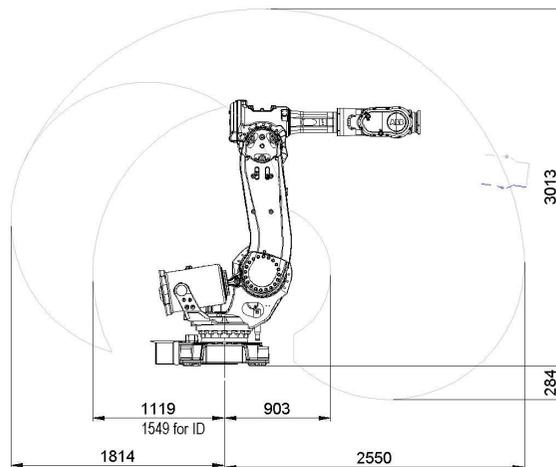
IRB 6640-2,55



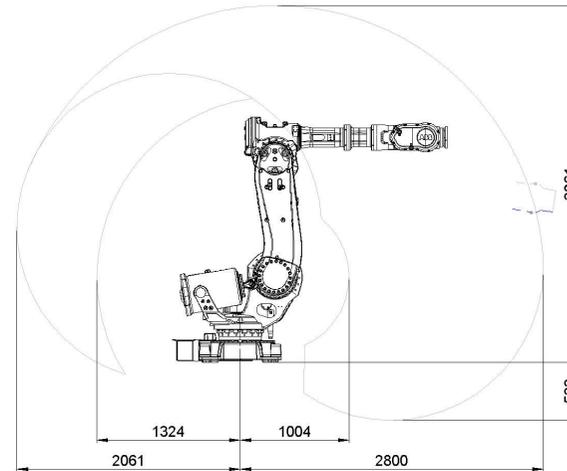
IRB 6640-2,75



IRB 6640-2,55



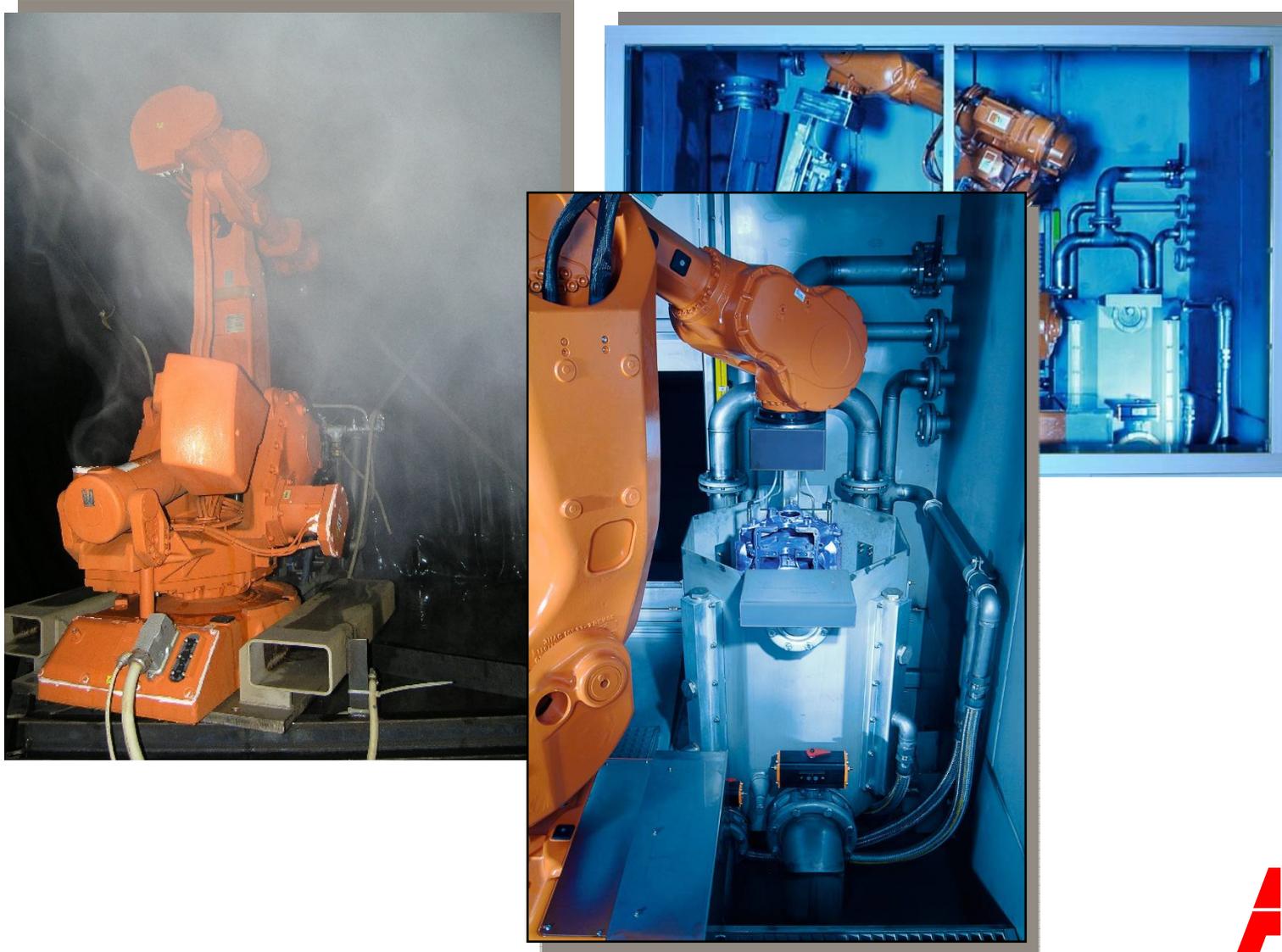
IRB 6640-2,8



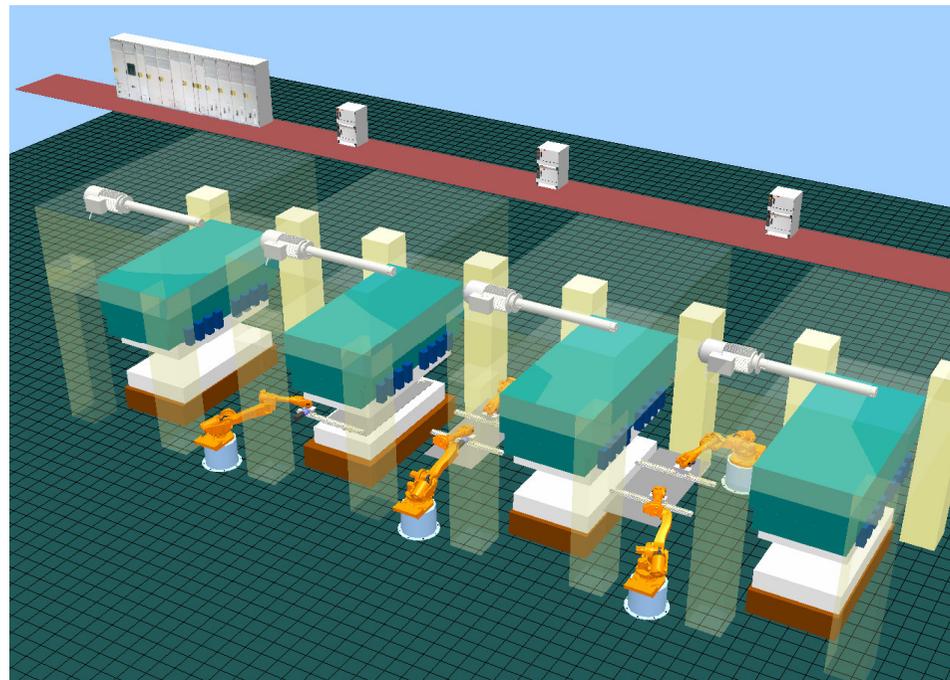
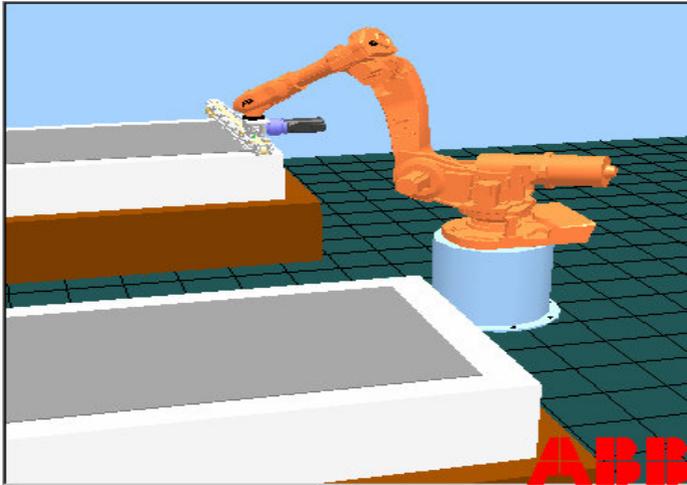
# Option IRB 6640 vs IRB 6600

- Position switch axis 1-3 replaced by Electronic Position Switches, EPS
- Cooling fan for axis 3 motor - eliminated
- Simplified fork lift devise – same as IRB 6620
- No Chip Protection available
- Clean room option introduced

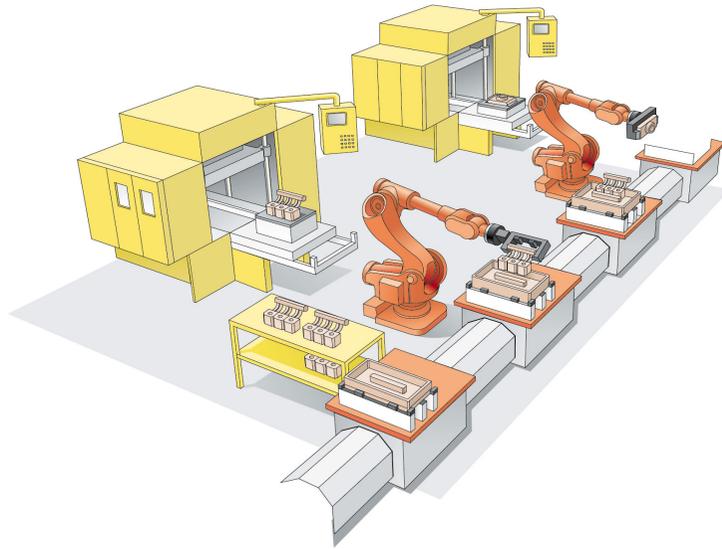
# Application examples - Water jet cleaning



# Application examples - Press tending



# Application examples - Foundry





**ABB**

**Power and productivity  
for a better world™**

