



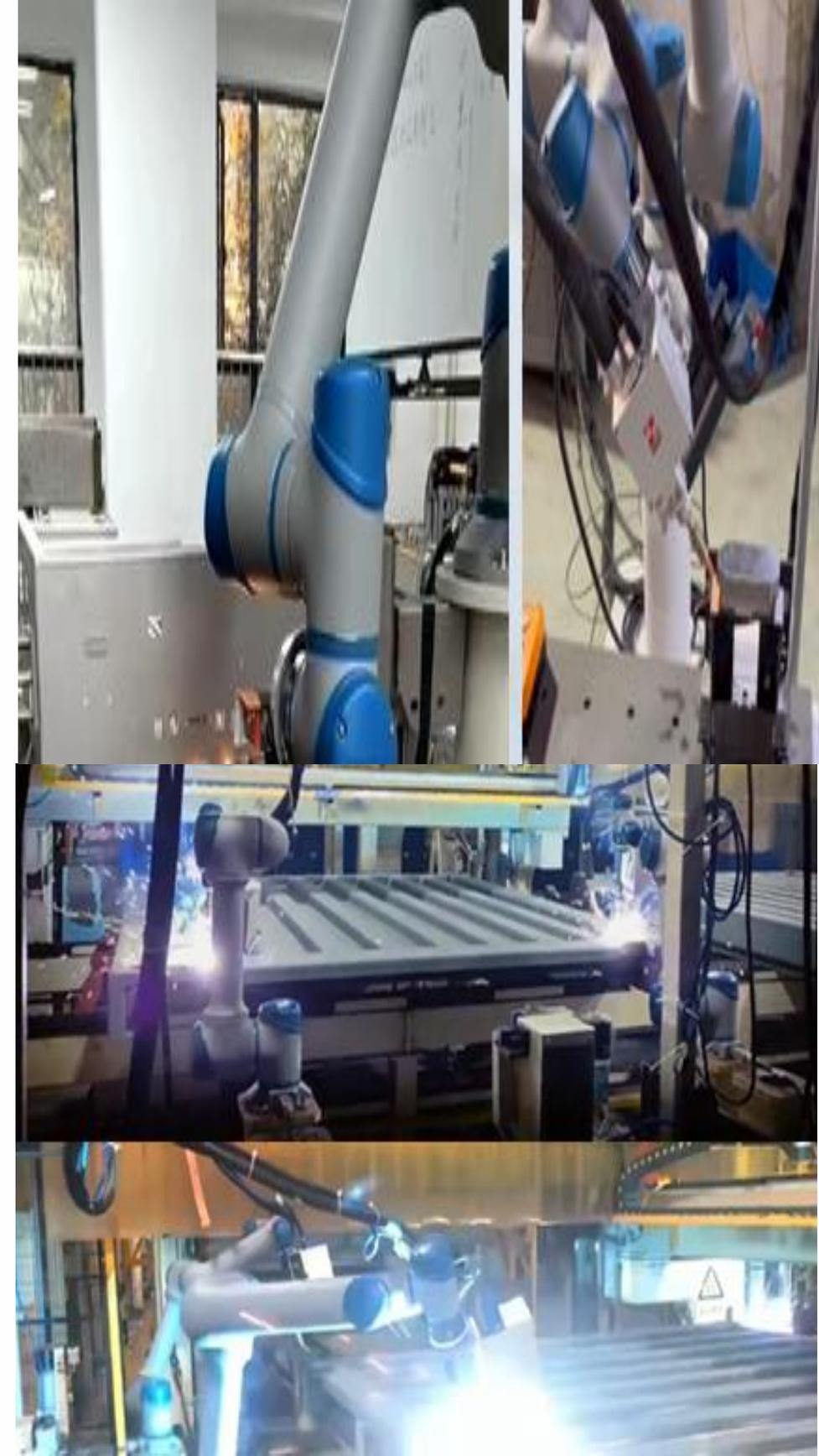
# RL ROBOTICS

ROBOTS • COBOTS • AMR • WELDING POWER SOURCES

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# Exceptional Benefits of Cobots for Welding



# Introduction to Cobots: What are Collaborative Robots?

## Collaborative Nature

Cobots are designed to work alongside humans in a shared workspace, strengthening collaboration and safety.

## Safety Features

Built-in safety features like force limiting and speed regulation allow for safe interaction with human workers.



# Advantages of Cobots in Welding Applications

## 1 Improved Safety

Reduce the risk of injuries associated with traditional welding by taking over hazardous tasks.

## 3 Enhanced Flexibility

Easily reprogram and adapt cobots to accommodate different welding tasks, making them ideal for small batches and changing production lines.

## 2 Increased Productivity

Boost output by automating repetitive and demanding welding tasks, freeing human workers for more complex operations.

## 4 Consistent Quality

Ensure consistent welding quality by providing precise control and repeatability, leading to fewer defects.

# Improved Safety and Reduced Risk of Injury



## Force Limiting

Cobots are equipped with force limiting technology, stopping movement if they encounter unexpected resistance, ensuring safety.

## Speed Regulation

They can slow down or stop entirely when humans enter their workspace, minimizing the risk of collisions.

## Collaborative Design

Cobots are designed to work safely alongside humans, reducing the need for safety cages or barriers in the workspace.

# Enhanced Productivity and Efficiency



## Faster Cycle Times

Cobots can work faster and for longer periods, significantly reducing cycle times and boosting overall production.



## Reduced Downtime

They minimize downtime due to fatigue or errors, ensuring consistent productivity and efficiency.



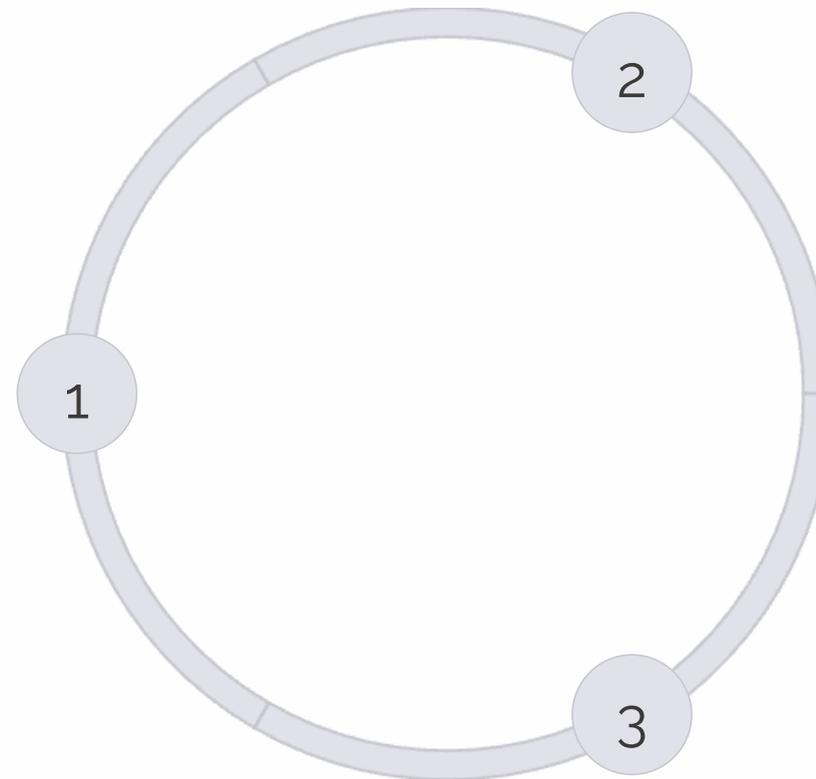
## Automated Tasks

Cobots can handle repetitive and demanding tasks, freeing human workers to focus on more complex and creative responsibilities.

# Increased Flexibility and Adaptability

## ➔ Easy Reprogramming

Cobots can be easily reprogrammed to handle new welding tasks, adapting to changing product designs and production demands.



## ➔ Compact Size

Their compact size allows them to be easily integrated into existing production lines, minimizing disruption and maximizing flexibility.

## ➔ Small Batch Production

Cobots are ideal for small batch production, where flexibility is key, as they can be quickly reconfigured for different tasks.



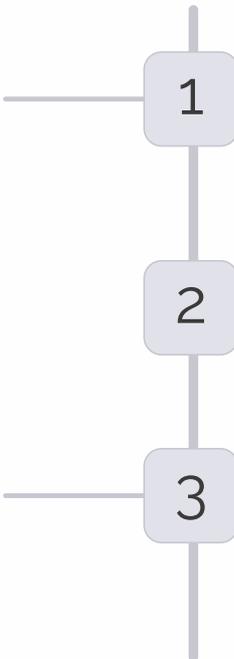
# Consistent Quality and Precision

## Precise Control

Cobots offer precise control and repeatability, resulting in consistent and high-quality weld beads.

## Improved Accuracy

They can achieve greater accuracy and precision compared to manual welding, ensuring consistent quality and meeting strict tolerances.



## Minimized Defects

Their consistency reduces the likelihood of welding defects, leading to fewer reworks and improved product quality.

# Cost-Effective and Scalable Solution

1

## Lower Labor Costs

Cobots can reduce the reliance on manual labor, leading to lower labor costs and increased affordability.

2

## Increased ROI

The benefits of cobots, including improved productivity and reduced downtime, lead to a significant return on investment.

3

## Scalable Deployment

We can easily add more cobots as per our production needs increase, scaling operations seamlessly.



# Collaborative Human-Robot Interaction

## Shared Workspace

Cobots work alongside human workers in a shared workspace, fostering collaboration and a seamless workflow.

## Human Expertise

Humans can still contribute their expertise, judgment, and problem-solving skills, while cobots handle repetitive tasks.

## Increased Efficiency

This collaboration leads to increased efficiency, as human workers can focus on more complex tasks, while cobots handle the repetitive ones.



# Conclusion: The Future of Welding Automation with Cobots

Cobots are transforming the welding industry, offering numerous benefits that enhance safety, productivity, flexibility, and quality. As technology continues to advance, cobots will play an increasingly crucial role in the future of welding automation, paving the way for a more collaborative and efficient future.



Container welding



Laser Welding



Laser welding of battery box



# THANK YOU

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