

# Reducing Manual Labor in Post-Weld Processing

Grinding and Polishing Robot System



# Problems at the polishing work site



- Manpower shortage
- Variations in quality due to workers
- **Work environment (dust, heavy work)**



#### Daihen's polishing robot system solves!

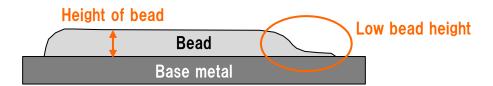
- Load control provides a stable finish with uniform polishing marks
- Automation from roughing to finishing with a single robot

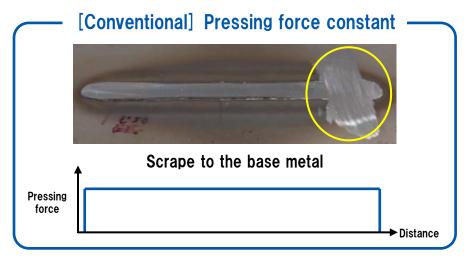
### Features of the polishing robot system

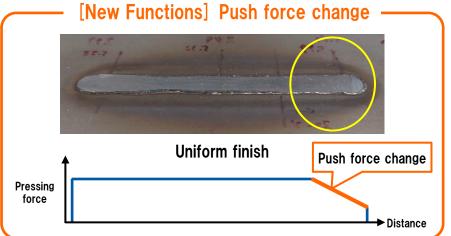


#### You can adjust machining conditions to match the bead height

→ Achieves uniform polishing finish



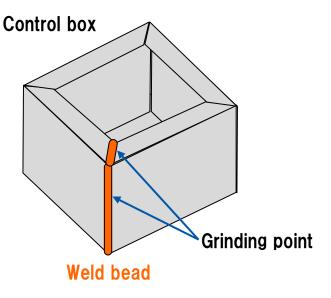




### **Demonstration: Weld bead grinding + finish grinding**



- 1 By roughing the weld bead of the square joint
- **2**Tool change and finish polishing



Workpiece		
Dimensions	150×150×100 mm	
Material	Iron (SPCC), plate thickness 3.2 mm	
Bead shape	Height 3 mm, Width 7 mm	

	Polishing conditions		
	Weld bead grinding	Finish polishing	
Rotational speed	10,000 rpm		
Feed speed	70~120 cm / portion	120 cm / portion	
Pressing force	5~25 N	10 N	
Abrasive yarn count	#60	#180	

# Optimal robot for polishing operations

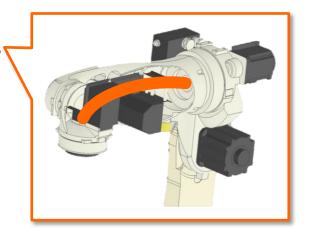


#### 100 kg Transportable Hollow-Structure Handling Robot FD-B100

■ Built-in cables in hollow-structure arms

Avoid interference with peripherals

■ High dust and water resistance Wrist axis: IP65, Basic axis: IP54

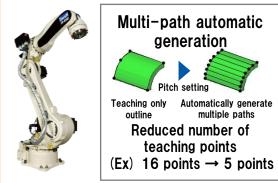


## **System configuration**

multiple paths







Robots equipped with dedicated teaching support functions for polishing and grinding

# A5 愛知産業株式会社



With load control device **Grinding tools** (Made in PUSHCORP, USA)

Aichi Industries is a domestic distributor of **PUSHCORP** Corporation







Abrasives with high abrasive strength and long life

# **Application Examples**





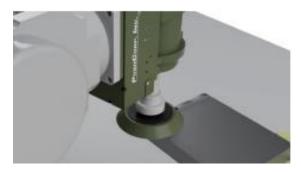
Hairline finish on car side panels



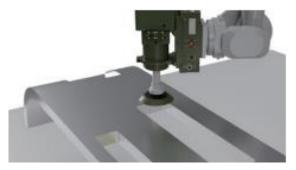
Automotive B-pillar brazing polishing



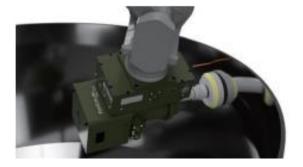
Scratch removal/polishing of steel plate



Removal of slabs and gas cutting



Sanding of truck bumpers



Polishing of stainless steel containers

Provided by Aichi Sangyo Co., Ltd.



# Daihen's robotic system helps reduce heavy labor in post-weld processes

