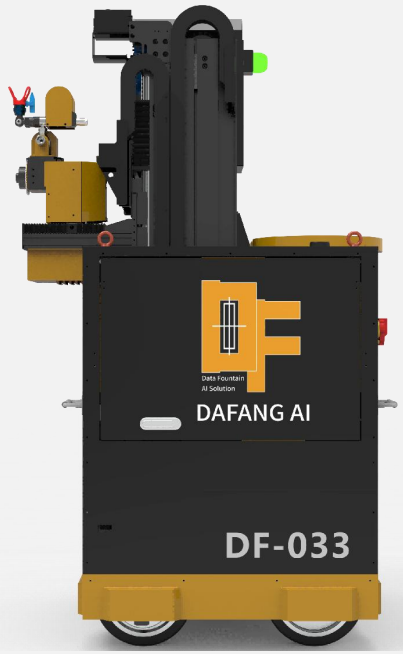
DAFANG AI

DF033

Residential Wall Finishing Robot

Robot Introduction



DF033

Residential Wall Finishing Robot

Introduction

This is a **Four in One** robot, combining functions of **grinding, skimming**, **sanding** and **painting**. Utilizes the innovative SCA (Smart and Flexible Actuator) technology and combines visual autonomous driving, laser sensing, automatic spraying, polishing and automatic vacuuming, and 5G navigation technology, replacing manual labor working in high-dust environment, improving efficiency and safety.

Design

Customized residential buildings, small size and lightweight design, dual-mode drive (cable or battery), offers flexibility and can operate in narrow corridor and rooms.

Application

For residential buildings, apartments, houses, and other structures with a height ranging from 0 to 3.3 meters.



Features

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■ Lightweight

Small-sized, lightweight, and compact design, capable of both plug-in and battery power supply, easily moved within rooms for flexible construction operations.

■ L3 auto-drive

Autonomous driving operations based on laser radar and visual cameras, automatically detect obstacles, and issue warnings.

■ Digital Cloud Services

Manager can monitor the robot's real-time location, status, work progress by APP and Portal, which helps project management evolve towards a more visual and digitized approach.

■ Voice Alert

Multi-sensor information fusion, enabling the robot to autonomously perceive the surrounding environment, provide alerts to assist manual judgment in complex scenarios, and remind operators of remaining paint levels.



■ APP control

The robot operation is wirelessly managed with APP (Android or tablet). Battery level and internal temperature and humidity of the chassis are monitored and displayed simultaneously.

■ Multi-function

Simply replacing the operation module, it can do grinding, skimming, sanding, and painting, offering intelligent and efficient performance.

■ SLAM Navigation

Utilizing laser radar ranging, inertial measurement unit sensor and SLAM algorithm, the robot achieves high-precision localization by constructing map. It efficiently plans operational path based on data and layout.

■ AGV auto balance

Dafang develops auto-balance technology while moving, even in complex environments and uneven sites, robot can work stably and efficiently.

Specifications (*Data from Dafang AI Lab)

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DF033 Specifications

Specifications	Performance Indicators
Robot weight	≤160 kg (352.74 lb)
Robot size (L*W*H)	750*750*1550 mm (29.5*29.5*61 in)
Power supply	Plug: 220 V 13.6 A/Battery
Obstacle clearance height	≤25 mm
Climbing height	≤25°
Crossing width	≤64 mm
Movement speed	≤400 mm/s
Positioning accuracy	±10 mm

Battery Specifications

Battery Type	Lithium-ion battery
Battery capacity	2*60 Ah
Voltage & Current	48 V, 62.5 A
Charging Time	6 h

Painting Parameters

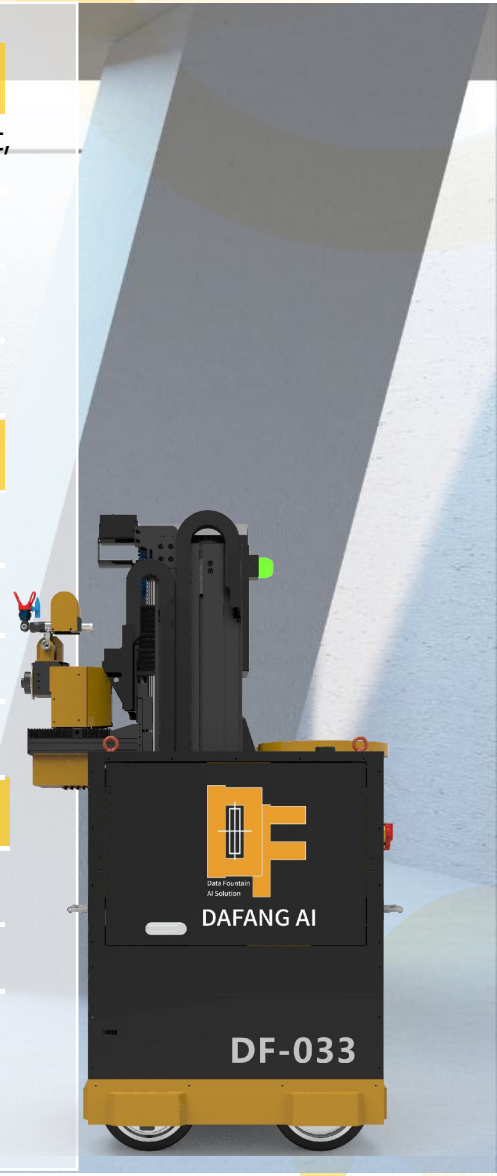
Paint capacity	External 20 L paint bucket, replaceable and refillable
Paint spraying height	0-3850 mm
Painting efficiency	≤150 m²/h
Spraying pressure	8-12 MPa

Skimming Parameters

Putty capacity	External material feeder, can be added
Skimming height	200-3400 mm
Skimming efficiency	≤50 m²/h
Spraying pressure	8-20 MPa

Putty Wall Sanding Parameters

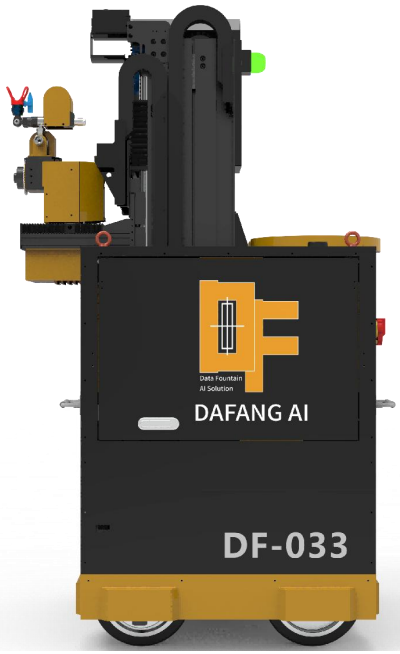
Putty wall sanding height	300-3150 mm
Sanding speed (0.1 mm~0.5 mm/depth)	≤60 m²/h
Sanding power	≤800 W
Sandpaper	60 mesh – 320 mesh



Product Model

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Wall Finishing Robot Main Body



Working Modules



Concrete Wall Grinding Module



Putty Wall Sanding Module



Skimming Module



Painting Module

Equipment



Material Feeder



Follower (optional)

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