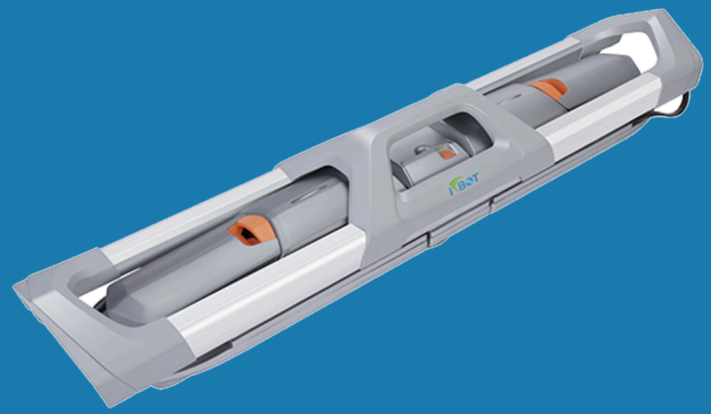
IFBOT M20 & X3 • SOLAR PANEL CLEANING ROBOTS

Clean panels.
Limitless reach.





WET CLEAN • FLAT AND LOW-TILT INSTALLATIONS

IFBOT M20



Dual-brush wet clean **Remote control and Bluetooth app**

Triple-layer fall protection

Watch the M20 in action: youtu.be/PoFpXejiQCk

12.7 kg
One piece, nothing to assemble

1,000 m²/h
About 0.17 MW cleaned per hour

8 h
Continuous run, hot-swap dual battery, approx. 5 h recharge

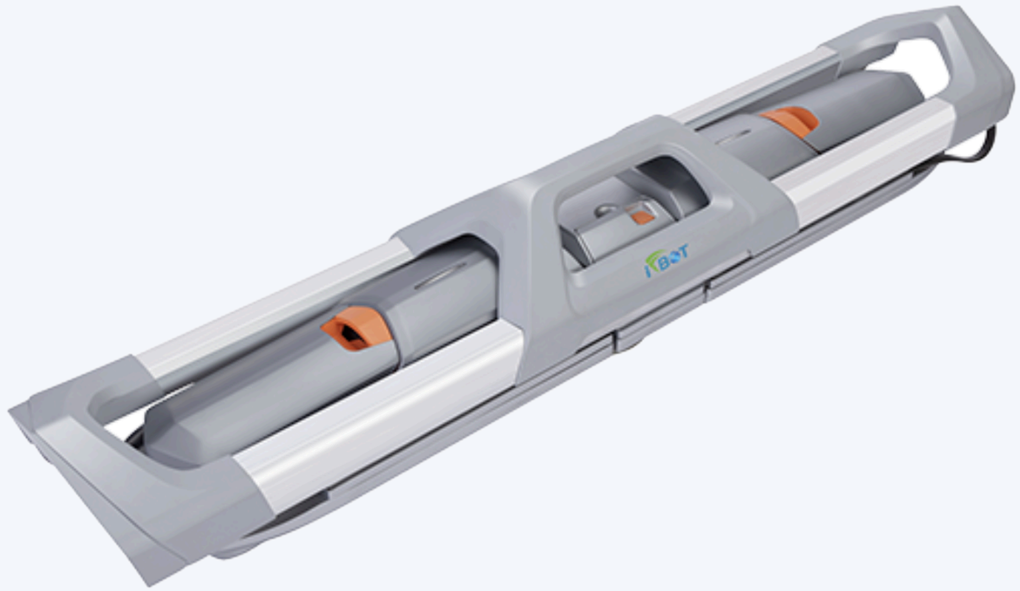
0-15°
Panel tilt range

20 cm
Gap between panels it crosses

13 L/min
Water use, 4-5 bar supply

DRY CLEAN • STEEP, TIGHT AND WATERLESS SITES

IFBOT X3



Nano-brush dry clean

Autonomous run

Bluetooth app remote

Returns to lowest position on low battery

Self-cleaning brushes, dust tank prevents re-soiling

Watch the X3 in action: youtu.be/ySQ0_MhP02Q

6.2 kg
Light enough to carry anywhere

30 m²/h
About 0.005 MW cleaned per hour

8 h
Continuous run, hot-swap dual battery, approx. 5 h recharge

0-45°
Panel tilt range

10 cm
Gap between panels it crosses

0 water
No water line, tank or truck

Two robots, side by side

Spec	IFBOT M20	IFBOT X3
Cleaning	Wet, dual brush	Dry, self-cleaning nano brushes. Dust tank prevents re-soiling.
Weight	12.7 kg	6.2 kg
Throughput	1,000 m²/h (~0.17 MW)	30 m²/h (~0.005 MW)
Tilt range	0-15°	0-45°
Gap crossing	Up to 20 cm	Up to 10 cm
Runtime	8 h, hot-swap dual battery. Recharge approx. 5 h.	8 h, hot-swap dual battery. Recharge approx. 5 h.
Water	13 L/min at 4-5 bar	None
Operation	Own remote control and Bluetooth app, triple-layer fall protection	Autonomous run, returns to lowest position on low battery, Bluetooth app remote

The right robot for every PV site



M20: cover the ground

Large flat and low-tilt PV installations, from commercial sites to utility rows. 1,000 m²/h, wet clean.



X3: go where others can't

Steep arrays up to 45°, sites with no water, residential installations and large arrays.

WHY IFBOT

Light. Ready. All-day. Affordable.

6.2-12.7 kg

X3 6.2 kg, M20 12.7 kg: carry either one anywhere on site

0 parts

Nothing to assemble on either robot: unpack, place, clean

8 hours

Dual hot-swap battery, standard on both robots

US$1,300-8,000

X3 US$1,300, M20 US$8,000, ex-works: a fraction of comparable robots



IFBOT M20 • WEIGHT

M20: 12.7 kg. One person. One trip.

The M20 straps on like a backpack. A two-person crew becomes one person plus a robot. The X3 is lighter still, at 6.2 kg.

IFBOT M20 • PRODUCTIVITY

The M20 empowers your crew to do 6x more

The M20 does the washing. The same crew covers six times the ground, one person and one robot at a time.



1,000 m²/h

M20 throughput: about 0.17 MW cleaned every hour

~6x

The ground one person covers with the M20, against 150 m²/h by hand

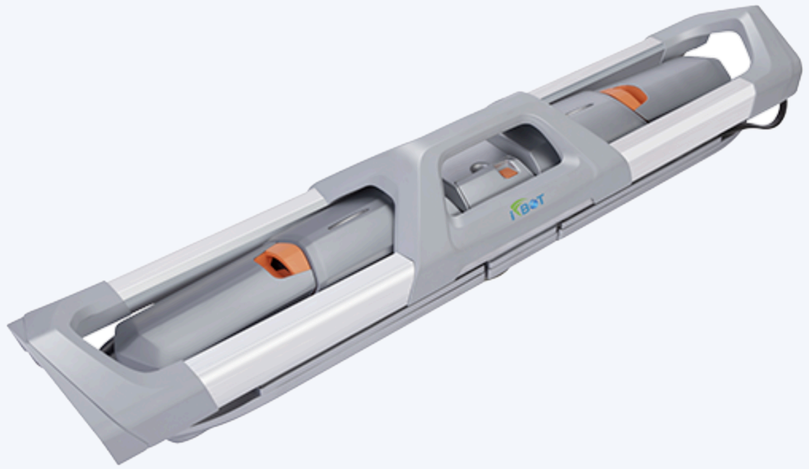
8-12 wks

Typical M20 payback in Australia, from the labor time it frees up

IFBOT X3 • REACH

The X3 reaches the panels others can't

6.2 kg, dry clean, no water line. Steep arrays, residential installations and large arrays, all within reach of one light robot.



0-45°

X3 tilt range, for panels too steep for safe manual access

0 water

Nano-brush dry clean: no water line, tank or truck on site

Autonomous

X3 cleans on its own and returns to the lowest position when the battery runs low

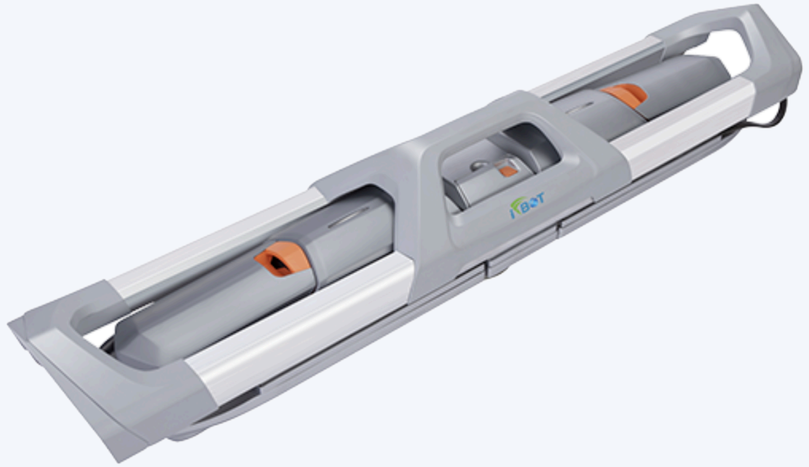
Dust tank

Self-cleaning brushes, and the tank stops dust falling back on the panels

IFBOT X3 • SCALE

One operator. Many X3s.

Each X3 cleans 30 m²/h by itself, so capacity grows one robot at a time. IFBOT designs for one operator to manage dozens of robots at once.



5 X3

150 m²/h

About 0.025 MW cleaned an hour

10 X3

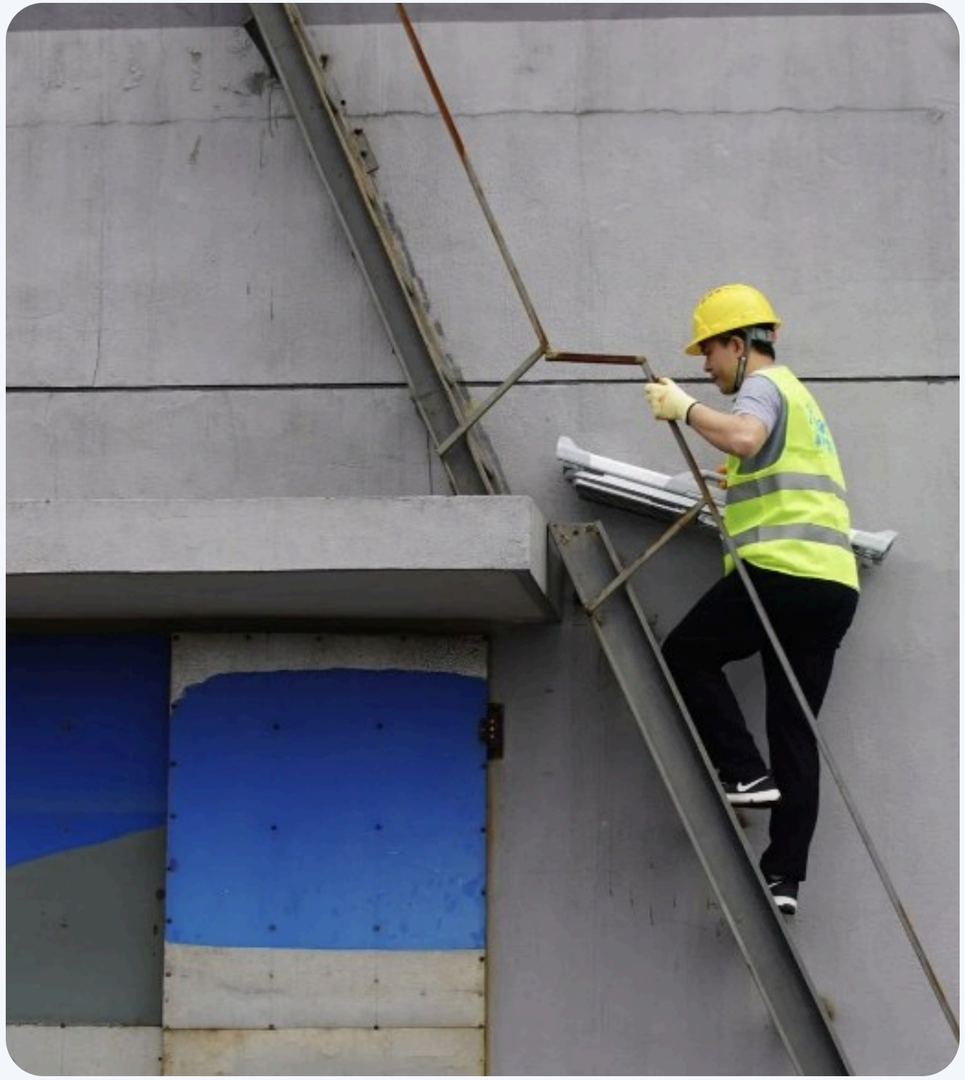
300 m²/h

About 0.05 MW cleaned an hour

20 X3

600 m²/h

About 0.1 MW cleaned an hour



Keep people out of harm's way

M20: triple-layer fall protection

Stays on the panels near edges; run by remote control from a safe spot.

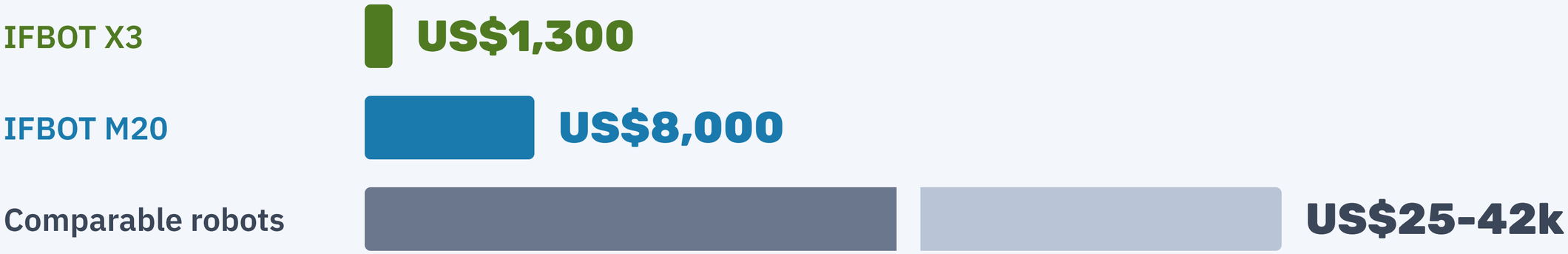
X3: steep arrays up to 45°

Reaches panels too steep for safe manual access.

Both robots: less time at height

Light, nothing to assemble, so fewer people spend less time at height.

X3 US$1,300. M20 US$8,000. A fraction of comparable robots.



M20 costs about **US$8** per m²/h of throughput, against about US$25 and US$39 for two competing wet-clean models.

Prices are **US$, ex-works, Fujian factory**. Ask for a quotation delivered to your door.

ABOUT THE COMPANY

IFBOT builds robots that free people from dangerous cleaning work

IFBOT's mission: keep people safe, panels clean and solar plants producing.

Watch our introduction video: youtu.be/AXDA3lmNwv0

2018

Founded on one belief: robots, not people, should do the dangerous cleaning

SJTU

Research partner Shanghai Jiao Tong University; core technologies patented

Dozens

of robots managed by one operator, with no physical effort

Red Dot

Best of the Best, Product Design 2022, for the IFBOT X3

The team

Serial entrepreneurs, academics, robotic and software engineers

Safety first

Returns to the panel's lowest point when power runs low; cleans at night

Next: drones

Drones that launch and retrieve robots, working in China; pending regulatory approval outside China

Some of IFBOT's references

A base built in the Americas, now expanding in Australia, New Zealand and Southeast Asia.

Company	Country	Region
Empresas GTC	Chile	Americas
Rio Yaqui Solar	Mexico (Sonora)	Americas
Solarrow	United States (Fremont, CA)	Americas
Union Solar Pte Ltd	Singapore	Asia
AMSOLAR SDN BHD	Malaysia	Asia
Sustainergy Global Tech Co., Ltd. (SGT)	Thailand	Asia
Solar Electric Vietnam (SEV)	Vietnam	Asia

2,000 MW About 12 million m² of solar surface under cleaning by IFBOT robots: the equivalent of 20 large solar farms

IFBOT M20 & X3

Let's get in touch.

Tell us about your PV installation and we will match the right robot.

CLICK BELOW TO START THE CONVERSATION

luca@foundcoo.com