

美国人形机器人厂商实际交付了什么

Figure、Apptронik、1X、特斯拉、Agility、波士顿动力以及出售机器人脑的公司，截至 2026 年 9 月底：什么已经存在、谁在付钱、价格多少、东南亚买家能买到什么。资料读自公司页面和申报文件，缺口已标出。

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美国人形机器人的故事是用估值讲的：Figure 390 亿美元，Skild 超过 140 亿美元，Apptронik 接近 50 亿美元，Agility 以 25 亿美元借壳上市。中国的故事是用台数讲的：2025 年宇树交付了超过 5,500 台人形机器人，智元约 5,200 台，而 Figure、Agility 和特斯拉各约 150 台。两个故事都是真的，今年必须选一台机器人的东南亚买家需要同时记住两者。这份简报写下美国厂商造了什么、谁在为之付钱、价格多少、什么可以订购，并附日期和每条说法的可信度。

我们在 2026 年 9 月最后一周读了各公司的页面和申报文件。仅来自分析师或新闻报道的数字标注● **REPORTED**；来自公司页面、申报文件或监管机构的标注● **VERIFIED**；没有公开来源的说法标注● **UNVERIFIED**。

01 整个领域一屏看完

COMPANY	ROBOT TODAY	HOME	RAISED, ABOUT	LAST VALUATION	STATUS, LATE SEPTEMBER 2026
Figure AI	Figure 03	San Jose	US\$1.9 billion, plus an undisclosed Nscale stake in September 2026 ²	US\$39 billion post-money, Series C, 16 September 2025 ¹ • VERIFIED	More than 350 Figure 03 built by April 2026; working at BMW Spartanburg; Catalyst Brands agreement; a home push announced. ³
Apptronik	Apollo 2, Apollo 3 next	Austin	About US\$1 billion; Series A above US\$935 million	About US\$5 billion, February 2026 • REPORTED , sources disagree between US\$5 and 5.5 billion	Apollo 2 fleets collecting data at "Robot Parks"; pilots at Mercedes-Benz, GXO and Jabil.
1X Technologies	NEO	Palo Alto, with Norwegian roots	About US\$136 million confirmed	US\$820 million, January 2024 • VERIFIED ; a reported US\$10 billion round did not close	Hayward factory opened 30 April 2026; US\$20,000 or US\$499 a month; zero verified consumer deliveries by mid July 2026. ⁸
Tesla	Optimus V3, unrevealed	Austin, Fremont line	Internal	Not applicable	Several hundred built in 2025 against a 5,000 target; first-generation lines being installed at Fremont with production "later this year"; no external sales before 2027. ⁹
Agility Robotics	Digit 5, Digit 4 in the field	Salem, Oregon	More than US\$390 million	US\$2.5 billion pre-money in a SPAC with Churchill Capital XI, 24 June 2026 ¹¹ • VERIFIED	Digit 5 unveiled 15 September 2026 for early access in the first half of 2027; ¹² fewer than 100 robots built a year today.
Boston Dynamics	Atlas, electric,	Waltham, Massachusetts	Owned by Hyundai	About US\$3.4 billion implied	2026 Atlas output committed to

COMPANY	ROBOT TODAY	HOME	RAISED, ABOUT	LAST VALUATION	STATUS, LATE SEPTEMBER 2026
	plus Spot and Stretch			when Hyundai bought SoftBank's last stake in June 2026 • REPORTED	Hyundai and Google DeepMind; a training centre opened at Hyundai's Georgia plant on 21 September 2026. ¹⁵
Dyna Robotics	Stationary two-arm stations	Redwood City	US\$143.5 million	About US\$100 million at seed, March 2025 • REPORTED	Din Tai Fung rolling its napkin-folding stations to all locations; "hundreds of robots" planned by the first half of 2027. ¹⁷
Physical Intelligence	No robot; the π models	San Francisco	About US\$1.07 billion	US\$5.6 billion, November 2025 • REPORTED	π0.7 released April 2026; no commercial product.
Skild AI	No robot; Skild Brain	Pittsburgh	About US\$1.85 billion	More than US\$14 billion, Series C, January 2026 • REPORTED	Sells a brain that "learns by watching human videos" for inspection, mobile manipulation and packing platforms. ¹⁹

值得注意的规律：名单上估值最高的两家公司，Figure 和 Skild，付费客户的公开证据最少；而付费客户最清楚的两家，Agility 和 Dyna，估值只是前者的零头。这个差距是市场对通用自主能力的押注，也是今天购买美国人形机器人最大的不确定性。

02 交付与承诺

每家美国厂商都公布工厂产能，没有一家公布经审计的交付台数。最好的外部估计来自分析机构 Omdia，2026 年 1 月见诸报道：Figure、Agility 和特斯拉 2025 年各交付约 150 台人形机器人，而宇树按自己的招股书超过 5,500 台，智元约 5,200 台。²⁰ 美国数字为 • REPORTED，宇树为 • VERIFIED。2025 年全球总量各方口径在 13,000 到 18,000 台之间，所有来源都把中国的份额放在 90% 左右。

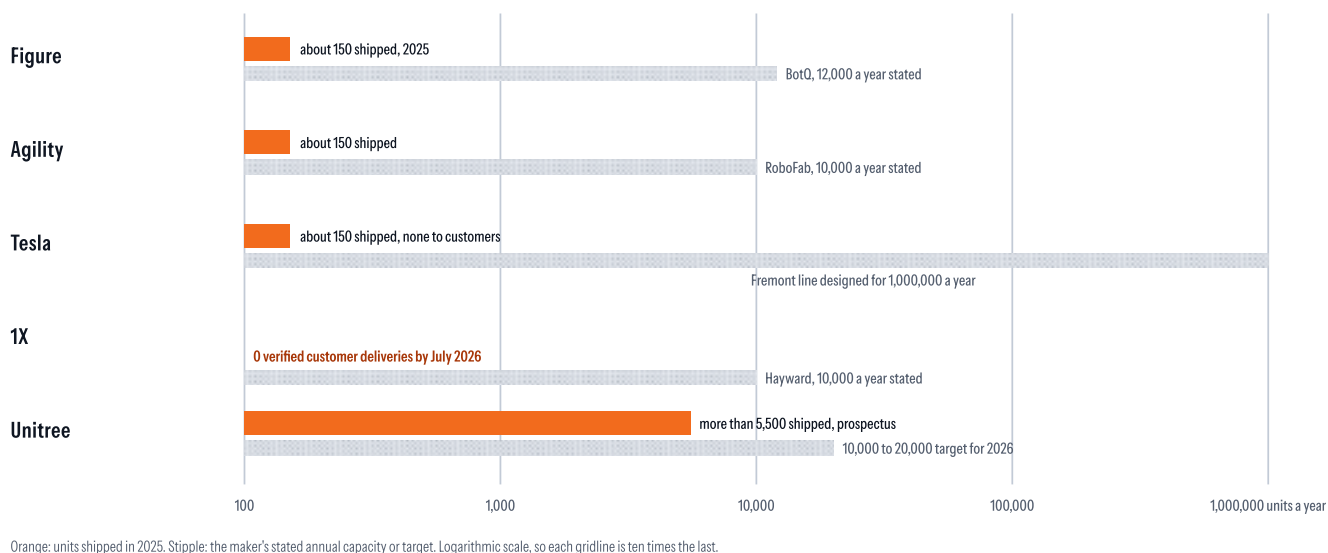


FIG 1 Stated capacity runs one to four orders of magnitude ahead of what shipped. Shipments are Omdia estimates for the US makers and Unitree's own prospectus; capacities are the makers' statements. ● **REPORTED** shipments, ● **VERIFIED** as statements of capacity.

两份预测框定了 2026 年。高盛在 2026 年 9 月上调了人形机器人展望：2026 年全球出货约 75,000 台，2030 年 89 万台，2035 年 650 万台；摩根士丹利认为仅中国 2026 年就约 50,000 台。● **REPORTED** 以此衡量，一家美国厂商 2026 年能交付 1,000 台就算不错，而中国厂商的 2026 年目标（宇树 10,000 到 20,000 台，优必选约 5,000 台）已经以千计。

03 谁在付钱

MAKER	CUSTOMER	WHAT THE ROBOT DOES	DATES	EVIDENCE
Figure	BMW Spartanburg, Figure 02	Loaded sheet metal in the body shop on 10-hour shifts; supported more than 30,000 X3s and about 1,250 hours over about 11 months before the F.02 was retired in November 2025	January 2024 to November 2025	Figure news ⁴ ● VERIFIED
Figure	BMW Spartanburg, Figure 03	Logistics "sequencing" in Hall 52: picks parts from unsorted bins into trolleys for just-in-sequence delivery, and pulls a heavy caster cart with whole-body control	From June 2026	BMW release 25 June 2026; Figure post 30 June 2026 ^{5 6} ● VERIFIED
Figure	Catalyst Brands (JCPenney, Aéropostale, Brooks Brothers)	Commercial agreement starting at a Reno, Nevada distribution centre; unit count and price undisclosed	26 May 2026	Figure news ⁷ ● VERIFIED
Apptronik	Mercedes-Benz; GXO; Jabil; Google DeepMind	Mercedes agreement March 2024 with plants in Berlin and Hungary and commercial volumes targeted for 2027; GXO hosts a Robot Park; Jabil is production partner and user for inspection, sorting, kitting and lineside delivery	2024 to 2026	Company announcements as read in our September dossier ● REPORTED
Agility	GXO; Schaeffler; Toyota Motor Manufacturing Canada; Amazon	GXO ran the first formal humanoid robot-as-a-service contract at a Georgia facility, more than 100,000 totes; Toyota runs seven Digits unloading parts totes at its Woodstock, Ontario plant from February 2026; Amazon pilots and invests	2024 to 2026	Agility news; Toyota agreement dated 19 February 2026 ¹³ ● VERIFIED as named, scale ● REPORTED
Boston Dynamics	Hyundai Motor Group; Google DeepMind	All 2026 Atlas output goes to Hyundai's new Robotics Metaplant Application Center near Savannah, Georgia, where Atlas trains on logistics preparation and parts sequencing; Hyundai talks of	21 September 2026	Boston Dynamics release ¹⁵ ● VERIFIED as plans

MAKER	CUSTOMER	WHAT THE ROBOT DOES	DATES	EVIDENCE
		25,000 Atlas units across its plants "within the next few years" and a US factory for 30,000 robots a year		
Boston Dynamics	Spot and Stretch customers	Spot: more than 2,000 units in more than 40 countries for inspection. Stretch: box unloading at about 500 parcels an hour in more than 20 facilities including DHL, Maersk, Gap and H&M	Ongoing	Boston Dynamics ¹⁶ ● VERIFIED
1X	EQT portfolio companies; consumer pre-orders	Up to 10,000 NEOs into EQT's 300-plus portfolio companies from 2026 to 2030; more than 10,000 consumer pre-orders in five days, with refundable deposits	December 2025; October 2025	Company claims ● REPORTED; deliveries ● UNVERIFIED
Tesla	Tesla itself	"Over 1,000 units" claimed for Tesla's own facilities against "several hundred" built in 2025; first builds in 2026 go to an internal training academy, no customer named	Q1 and Q2 2026	Tesla Q2 2026 update; Wikipedia summary of calls ^{9 10} figures ● CONTESTED
Dyna	Din Tai Fung; Monster Laundry; unnamed hotels, gyms and logistics sites	Napkin folding at 95 an hour with a 93% quality pass across an 18-hour shift, rolling to all Din Tai Fung locations; laundry folding at 100 items an hour	27 August 2026	Dyna deployments post ¹⁷ ● VERIFIED as company claims

整个领域最诚实的一句话

Dyna 在 2026 年 5 月写道，从签单到稳定运行需要"数周到数月的现场工程"，大部分部署工作"无法干净地复制到下一个客户"，最长的一次部署约为十个月的日常使用。¹⁸ ● VERIFIED 没有其他美国厂商发表过这样的话。这也是我们读到过的、对东南亚部署工作最贴切的描述。

04 价格

ROBOT	PRICE OR RATE	BASIS
1X NEO	US\$20,000 to buy, or US\$499 a month with a six-month minimum; US\$200 refundable deposit	Company pricing ⁸ • VERIFIED; the warranty term and minimum • REPORTED
Agility Digit	Robot-as-a-service about US\$8,500 a month plus a US\$25,000 deployment fee; purchase about US\$200,000 plus US\$20,000 deployment and US\$36,000 a year for software and maintenance	Trade press at the Digit 5 launch ¹⁴ • REPORTED; consistent with the company's US\$300 million order book over 1,000 robots and 36 months, about US\$8,300 per robot-month • ESTIMATE
Figure	Robot-as-a-service about US\$1,000 a month, a 2025 analyst estimate; a US\$600 a month home lease claimed in May 2026; no audited revenue	Analyst and press claims • REPORTED, lease • UNVERIFIED
Apptronik Apollo	No public price; a 2023 target of under US\$50,000 at scale	Company statements • REPORTED
Boston Dynamics Atlas	Not for sale to outside customers before 2027; a figure "below about US\$320,000" has circulated	• UNVERIFIED
Tesla Optimus	Target of US\$20,000 to 30,000 at scale; no sales before 2027	Executive statements • REPORTED
For comparison, Unitree G1	¥85,000 base in China, about US\$13,500 abroad; the EDU version by quote	Company pricing • VERIFIED
For comparison, UBTech Walker	Robot-as-a-service about US\$5,000 a month against a purchase above about US\$80,000	Our September dossier • REPORTED

对买家有用的比较是月费。Digit 约 8,500 美元/月，Walker 约 5,000 美元/月，两者都是对标美国仓库工人的综合用工成本定价的；对照新加坡清洁工 2,080 新元的最低月薪，或雅加达约 450 新元的最低工资，两者都无法仅靠人工节省回本。美国机器人进入本地区，首先会出现在人工成本已经很高、且场地受政策限制的地方，其次是通过其现有客户的全球账户。 • ESTIMATE

05 机器人参数对照

ROBOT	HEIGHT	WEIGHT	DEGREES OF FREEDOM	PAYLOAD	BATTERY AND RUNTIME	CHARGING
Figure 03	1.73 m	61 kg	44 or 60 depending on the source; hands 16 or 20	20 kg	2.3 kWh, 5 hours	2 kW wireless through the feet
Apptronik Apollo	1.73 m	72.6 kg	About 71 ● UNVERIFIED	25 kg	4 hours a pack	Hot-swap packs, tether or opportunity charging
1X NEO	1.68 m	30 kg	75: 22 per hand, 7 per arm, neck, spine, legs	Lifts 70 kg, carries 25 kg, 8 kg per arm	842 Wh, 4 hours	About 6 minutes per hour of runtime
Tesla Optimus Gen 2	1.73 m	57 kg	About 28 body plus 22 per hand on Gen 3	20 kg	2.3 kWh	Not public
Agility Digit 5	1.81 m	129 kg	Not public; swappable grippers, no fingers	22.7 kg repeated	90 minutes	9-minute autonomous dock, 10:1 run-to-charge
Boston Dynamics Atlas	1.9 m	90 kg	56	30 kg sustained, 50 kg peak	4 hours	Self battery swap under 3 minutes

参数为各厂商 2026 年 9 月公布的数字；1X 的页面为直接读取，其余通过厂商公告和我们的资料汇编。NEO、Digit 5 和 Atlas 为● VERIFIED，其余为● REPORTED。两处设计分歧对本地买家要紧：Digit 的夹爪和 9 分钟充电是为全天做一件事而设计的，而 Figure、NEO 和 Optimus 配五指手，押注通用操作；NEO 30 公斤的软体是其中唯一为家庭环境中与人共处而设计的。

06 背后的资金

- 2026 年的机器人风险投资到 8 月就超过了以往任何一年。Crunchbase 统计 2025 年全年约 150 亿美元，2026 年到 8 月初约 230 亿美元；仅人形机器人初创公司 2026 年就融资约 86 亿美元，2025 年为 37 亿美元。● REPORTED

- **"大脑"公司的估值与"身体"公司相当。** Skild AI 在 2026 年 1 月超过 140 亿美元，Physical Intelligence 在 2025 年 11 月为 56 亿美元，两家都没有自己的机器人。
● REPORTED
- **Agility 是第一家上市的美国人形机器人厂商，** 通过与 Churchill Capital Corp XI 合并，投前估值 25 亿美元，2026 年 6 月 24 日宣布，7 月秘密提交 S-4，7 月任命首席财务官，9 月 29 日公布上市公司董事会，10 月 6 日举行投资者日。^{11 13}
● VERIFIED 公司报告超过 3 亿美元的多年期订单和 2025 年约 1 亿美元的现金消耗，未披露收入。● REPORTED
- **宇树上市重置了比较基准。** 2026 年 8 月 19 日发行价 150.80 元，首日收于 845 元，涨幅约 460%，对应 2025 年收入 17.08 亿元、净利润 2.78 亿元。²⁰ 价格和申报数字为● VERIFIED。按我们的计算约合 510 亿美元，高于 Figure 最近一轮私募估值，而宇树是真正在交付的公司。● ESTIMATE
- **1X 的大额融资没有发生。** 2025 年 9 月起讨论的 100 亿美元融资到 2026 年 7 月仍未完成，2026 年 8 月的一篇报道称软银正在谈判以约 60 亿美元估值取得多数股权。● UNVERIFIED
- **特斯拉的宣称产能最大，披露最少。** 其 2026 年第二季度报告称第一代产线正在弗里蒙特安装，计划 2026 年投产，得州超级工厂的产线按 2027 年起年产一千万台设计，但没有给出任何台数。⁹ 作为公司表述为● VERIFIED

07 东南亚买家今天能买到什么

2026 年 10 月从新加坡订购一台美国造的机器人，可选的清单很短。Spot 和 Stretch 是有经销商、有服务、有超过 2,000 台在役的产品，新加坡已有经销商销售和维护 Spot。Digit 仅在北美以服务形式出租。Apollo 在与有名有姓的客户做试点，不对外销售。Atlas 2026 年全部产量已承诺给现代和谷歌 DeepMind，2027 年起才面向外部客户。NEO 按公司自己的说法先在美国交付，2027 年起才到国际市场。Optimus 2027 年前不销售。以上根据前述来源为● VERIFIED。

人形机器人会先通过厂商的现有客户来到这里，然后才通过经销商。Jabil 在槟城有工厂，现代在西爪哇组装，丰田和梅赛德斯奔驰在泰国组装，舍弗勒在越南有工厂、在新加坡有区域总部。这些工厂的母公司已经在别处运行 Apollo、Atlas 和 Digit。我们没有找到任何关于美国人形机器人出现在这些工厂的公告，所以这只是我们关于该往哪里看的推断，仅此而已。● ESTIMATE

对必须避免中国产联网设备的场地来说，今年可行的美国选项是四足机器人或拆箱机械臂，人形机器人试点只能通过母公司的项目。对其他所有场地，决定性的事实是价格差：一台中国人形机器人的价格是美国同类的五分之一到十分之一，几周内就能发货。这就是我们所在的市场，这份简报的意义在于，让市场的美国一侧得到与我们[供应链地图](#)中中国一侧同样细致的描述。

我们没能核实的事

Omdia 的分公司出货估计（我们通过媒体摘要读到）；Appttronik 的估值（两家媒体分别给出 50 亿和 55 亿美元）；Figure 的租赁费率和家用租赁价格；Atlas 的价格；1X 融资失败后的资金状况；特斯拉自相矛盾的台数；以及是否有任何美国人形机器人已进入东南亚的工厂。每核实一项我们就更新本页。

DRAWING Research note	SHEET GC-R-005	TITLE What the US humanoid makers have actually shipped
BY Groundcrew Robotics	PUBLISHED 2 Oct 2026	LICENCE CC BY 4.0