Thor series
Experience powerful versatility

Designed for
scalability

Engineered for scalable performance, the Thor series offers payload options of 3, 7, 12, and 20 kg to meet diverse industrial needs. Its versatility ensures exceptional performance in both precise and heavy-duty operations.

With a standardized, user-friendly interface, users can easily integrate different robots from the series without having to adjust to various software.

Each robot features safe collision detection, supports graphical programming, and ensures quick deployment.

| **3 - 20** | **600 - 1,700** | **0.1 - 0.03** | **1.8 - 3.7** |
| kg payload | mm reach | mm repeatability | m/s speed |

Scale
with
ease

Thor 3

With a repeatability of ± 0.03 mm and a 3 kg payload capacity at 600 mm, Thor 3 is perfectly suited for precise, light assembly tasks. Its compact design, featuring a base diameter of just ⌀143 mm, along with a 360° motion range, allows for maximum coverage in small or tight workspaces.

| **3 kg** payload | **600 mm** reach | **± 0.03 mm** repeatability | **1.8 m/s** speed |

Thor 7

Thor 7 combines sturdiness with dexterity, offering a 7 kg payload and a 900 mm reach – ideal for tackling a wide range of medium-duty applications with ease. Despite reaching an impressive speed of 3.1 m/s, the robot maintains high repeatability of up to ± 0.03 mm.

| **7 kg** payload | **900 mm** reach | **± 0.03 mm** repeatability | **3.1 m/s** speed |

Thor 7 Pro

For those requiring greater dexterity, Thor 7 can be upgraded:
The force-controlled Thor 7 Pro features advanced joint torque sensors that enable precise force detection with a relative accuracy of 0.5 N. Like Thor 7, it offers a payload of 7 kg at 900 mm reach. Additionally, it provides multiple drive modes, precise position control, and intuitive hand-guiding teaching capabilities.

7 kg payload	**900 mm** reach	**±0.03 mm** repeatability	**2.5 m/s** speed

Thor 12

Thor 12 is the right choice for those who need a medium-duty robot with greater capacity and extended range. Featuring a 1,300 mm reach and a 12 kg payload, it excels in heavier assembly, machine tending, and material handling tasks. Bridging the gap between medium and heavy-duty robots, it offers the best of both worlds: impressive power, a repeatability of ± 0.05 mm, 3.7 m/s speed, and a compact footprint.

12 kg payload	**1,300 mm** reach	**± 0.05 mm** repeatability	**3.7 m/s** speed

Thor 20

Thor 20 was designed to execute heavy-duty tasks.
With a maximum payload of 20 kg and a reach up to 1,700 mm, the robot is ideally suited for tasks like loading and unloading, handling or palletizing. Its robust design, paired with an IP54-rated wrist, provides reliable performance in demanding conditions. Despite its robustness, Thor 20 achieves an impressive speed of up to 2.8 m/s.

20 kg payload	**1,700 mm** reach	**± 0.1 mm** repeatability	**2.8 m/s** speed

The right
robot,
everytime

Designed for diverse industrial tasks like assembly, quality inspection, dispensing, machine tending, and material handling, the Thor series offers robots with varying payloads, reach, and precision, each specializing in a particular category, while remaining highly versatile across all areas of industry.

The ideal choice
for any industry

Automotive

**Manufacturing
and machining**

**Medical
and cosmetics**
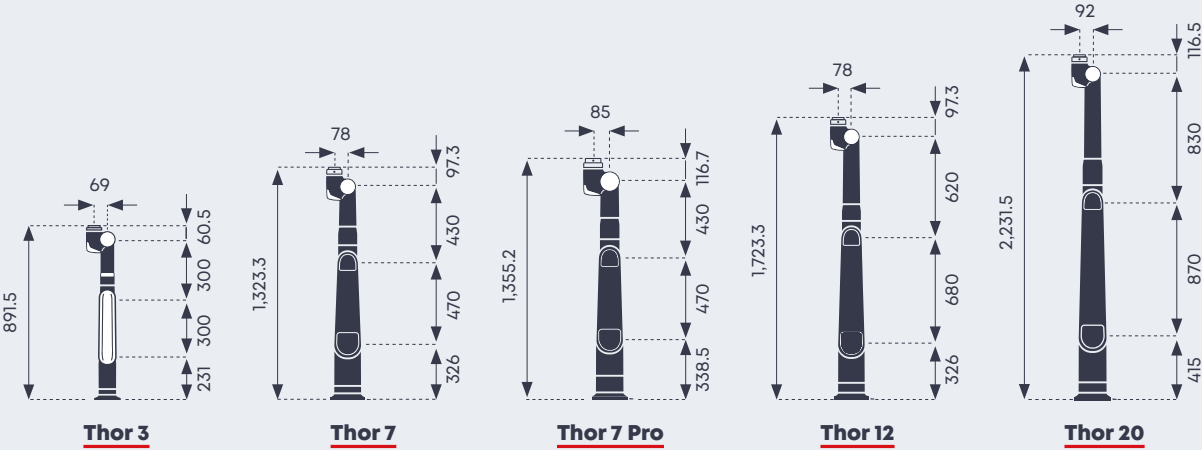

**Computer,
consumer electronics
and communication**

**Plastic
and polymers**

**And many
more**

Specifications

The technical data at a glance

	Thor 3	Thor 7	Thor 7 Pro	Thor 12	Thor 20
Payload	3 kg	7 kg	7 kg	12 kg	20 kg
Working radius	600 mm	900 mm	900 mm	1,300 mm	1,700 mm
Degrees of freedom	6	6	6	6	6
Repeatability	± 0.03 mm	± 0.03 mm	± 0.03 mm	± 0.05 mm	± 0.1 mm
Robot weight	14 kg	32 kg	38 kg	35 kg	72 kg
TCP maximum speed	1.8 m/s	3.1 m/s	2.5 m/s	3.7 m/s	2.8 m/s
Operating temperature	0 to 50 °C	0 to 50 °C	0 to 50 °C	0 to 50 °C	0 to 50 °C

Joints	Max. Speed	Range of motion	Max. Speed	Range of motion	Max. Speed	Range of motion	Max. Speed	Range of motion	Max. Speed	Range of motion
1	180°/s	-179° to 179°	240°/s	-360° to 360°	180°/s	-360° to 360°	200°/s	-360° to 360°	120°/s	-360° to 360°
2	180°/s	-179° to 179°	240°/s	-179° to 179°	180°/s	-179° to 179°	150°/s	-179° to 179°	120°/s	-180° to 180°
3	360°/s	-160° to 160°	250°/s	-165° to 165°	180°/s	-160° to 160°	215°/s	-170° to 170°	150°/s	-170° to 170°
4	400°/s	-360° to 360°	325°/s	-360° to 360°	320°/s	-360° to 360°	325°/s	-360° to 360°	210°/s	-360° to 360°
5	400°/s	-360° to 360°	440°/s	-360° to 360°	320°/s	-360° to 360°	410°/s	-360° to 360°	210°/s	-360° to 360°
6	400°/s	-360° to 360°	440°/s	-360° to 360°	320°/s	-360° to 360°	440°/s	-360° to 360°	210°/s	-360° to 360°

	Thor 3	Thor 7	Thor 7 Pro	Thor 12	Thor 20
End-effector electrical interface	–	2 DI, 2 DO, 2 AI, 12V/24V power supply, ModBus-RTU communication (master only)	–	2 DI, 2 DO, 2 AI, 12V/24V power supply, ModBus-RTU communication (master only)	2 DI, 2 DO, 2 AI, 12V/24V power supply, ModBus-RTU communication (master only)
IP classification	IP20	IP54	IP54	IP54	IP54
Programming method	The entire Thor series boasts a graphical programming environment, script programming, and an open API interface, which enables easy integration in smart factory systems.				

Thor 3   **Thor 7**   **Thor 7 Pro**   **Thor 12**   **Thor 20**

Robot controller

Model	RCB2.1.1T-0.3KW	CB-FS-3.2T-0.6KW	CB-FS-3.2T-0.6KW	CB-FS-3.2T-0.6KW	CB-FS-3.2T-1KW
Size	563 mm × 414 mm × 192 mm	483 mm × 377 mm × 192 mm	483 mm × 377 mm × 192 mm	483 mm × 377 mm × 192 mm	483 mm × 377 mm × 192 mm
Weight	20 kg	16 kg	16 kg	16 kg	16 kg
Power supply	200V-240VAC 50Hz/60Hz	110V-240VAC 50Hz/60Hz	110V-240VAC 50Hz/60Hz	110V-240VAC 50Hz/60Hz	110V-240VAC 50Hz/60Hz
Universal I/O					
Standard	16 DI/16 DO/2 AI/2 AO	16 DI/16 DO/2 AI/2 AO	16 DI/16 DO/2 AI/2 AO	16 DI/16 DO/2 AI/2 AO	16 DI/16 DO/2 AI/2 AO
Optional 1	32 DI/32 DO/2 AI/2 AO	32 DI/32 DO/2 AI/2 AO	32 DI/32 DO/2 AI/2 AO	32 DI/32 DO/2 AI/2 AO	32 DI/32 DO/2 AI/2 AO
Optional 2	48 DI/48 DO/2 AI/2 AO	48 DI/48 DO/2 AI/2 AO	48 DI/48 DO/2 AI/2 AO	48 DI/48 DO/2 AI/2 AO	48 DI/48 DO/2 AI/2 AO

Agile Robots is a leading provider of next-generation automation solutions. By combining artificial intelligence and robotics, the company makes industries smarter, more flexible, and more efficient.

Founded in Munich in 2018 by renowned robotics researchers from the German Aerospace Center (DLR), Agile Robots has experienced rapid global growth. Today, more than 2,500 highly skilled robotics and AI enthusiasts are employed worldwide. The company has one of the largest research and development teams in the AI and robotics industry.

Agile Robots has built a unique portfolio, together with the subsidiaries audEERING, BÄR Automation, Franka Robotics and idealworks, the company covers all areas of AI-driven robotics.

Find out more at: https://www.agile-robots.com/en

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