

Thermo Scientific F3 Articulated Robot

Articulated robots are ideal for applications that require complex movements, such as dispensing or machine loading and unloading. For applications requiring flexible movement without sacrificing speed or reliability, the Thermo Scientific F3™ provides these and six degrees of freedom. The F3 also offers a linear track option for tending multiple machines.



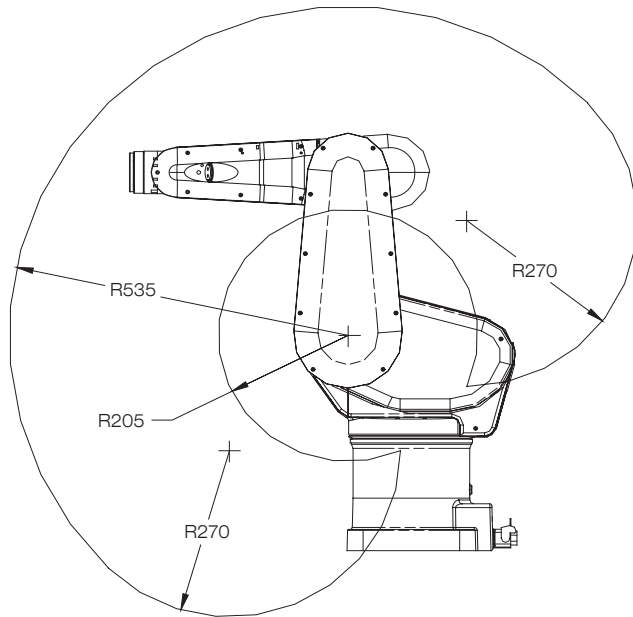
- Machine Loading
- Material Application
- Material Handling
- Assembly
- Product Testing
- Education

Key Benefits and Features:

- Fast: increased throughput and efficiency
- Robust: designed to run 24/7
- Absolute encoders: no homing necessary
- Rated Class 100 for clean room duty
- Easy to integrate: advanced software reduces programming time

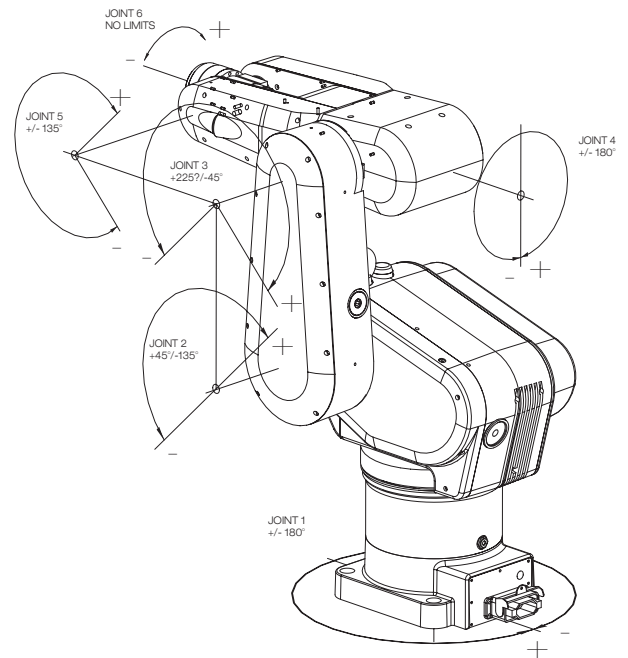
F3 robots can be programmed using powerful, yet easy to learn Thermo Scientific RAPL-3™ language or with our ActiveRobot™ software. CRS ActiveRobot™ allows F3 robots to be controlled by any object oriented programming language such as Visual Basic®, Visual C++®, Delphi™, or J++®.

Work Envelope



Dimensions in mm Elevation View (w/o gripper)

Range of Motion



Ready Position

Thermo Scientific F3 Specifications

Safety Compliance Standards

CE (European)	
EM Emissions:	EN55011/3:1991
EM Immunity	EN50082-2:1992
Machine Safety:	EN775:1992
	ISO 10218:1992 (E)
	EN60204-1:1992
	EN292:1991
	EN954:1997 CAT-1
ANSI/RIA	15.06-1992
CSA Std:	CAN/CSA-C22.2 No. Z434-94
	CAN/CSA-C22.s No 68-92

Features

- Fast, robust, cost effective
- Six degrees of freedom
- Upright, inverted or track mounting
- Absolute encoders, no homing
- 16 Inputs/16 Outputs (4 Relay)

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BRO-LAI-F3-5/07

Options

- Servo and pneumatic gripper
- ActiveRobot™ programming software
- Robcomm3 PC based development software
- Teach Pendant
- Linear Track (1 to 5 meters)
- Fully integrated ATI force/torque sensor
- End of Arm I/O
- Dual pneumatic tooling option

Performance Specifications

Payload	3kg (nominal)	6.6lb
Reach (no gripper)	710 mm	28 in.
Reach (std. gripper)	863 mm	34.0 in.
Repeatability	+/- 0.05mm	+/- 0.002 in.
Weight	53 kg	115 lb

Speed and Workspace

Axis	Workspace	Max Speed
J1 (waist)	$\pm 180^\circ$	240°/second
J2 (shoulder)	- 135° / + 45°	210°/second
J3 (elbow)	$\pm 135^\circ$	240°/second
J4 (wrist rotate)	$\pm 180^\circ$	375°/second
J5 (wrist pitch)	$\pm 135^\circ$	300°/second
J6 (wrist roll)	unlimited	375°/second