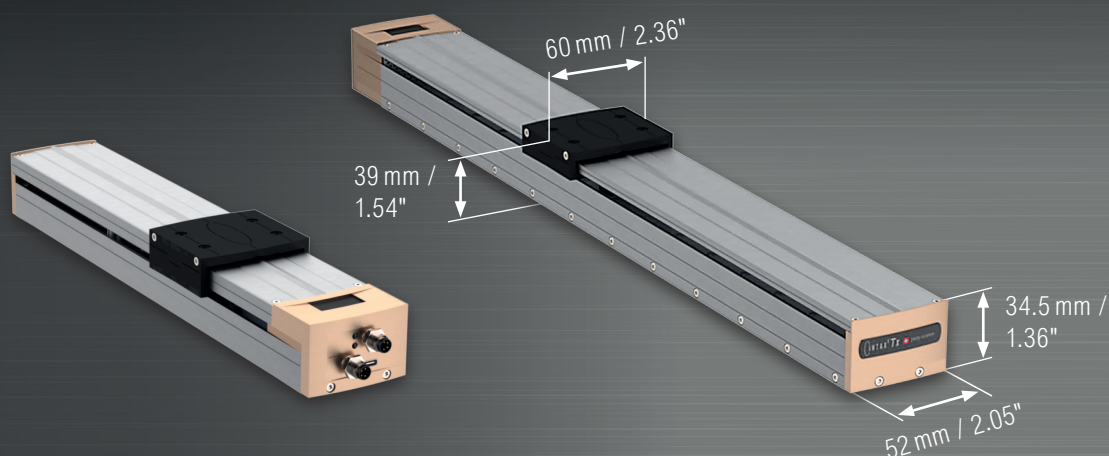




INTAX® Tx Linear motor axis

INTAX® = integrated Axis

- integrated servodrive, motor wiring and cable chain
- Two connectors only, one for Ethernet Bus and the other for 12V – 36V DC-Power
- Absolute measurement system with 1µm resolution, no reference drive necessary
- No space is required in the control cabinet

INTAX®	Force Fn / Fp [N] (lbf)	Encoder absolute	Dimensions Carriage W x H [mm] (in)	Weight Carriage (g)	Repetition Accuracy
Tx	8 / 24 (1.80 / 5.40)	1µm abs.	60 x 39 (2.36 x 1.54)	170	+/- 2µm

INTAX®	Stroke [mm] (in)	L Install. [mm] (in)	Weight Total [g] (lbs)
Tx 50F08	50 (1.97)	149 (5.87)	425 (0.94)
Tx 100F08	100 (3.94)	201 (7.91)	550 (1.21)
Tx 200F08	200 (7.87)	299 (11.77)	800 (1.76)
Tx 400F08	400 (15.75)	500 (19.69)	1300 (2.87)
Tx 600F08	600 (23.62)	700 (27.56)	1800 (3.97)



«GO» and the axis runs!

Everything runs automatically:

Simply connect the USB-C cable and a virtual network adapter is created on the PC/laptop. And by entering «run.Webmotion» in Windows Explorer, the web browser opens with WebMotion®. Button Quick Start, click on «GO» and the axis is running. No download, no installation of an app, no purchase of a license code and no registration, very user friendly.

What's behind it?

The decisive factor is the integrated servo controller with web server and the WebMotion® graphical user interface. This HTML5-based operator interface can be accessed via any web browser.

For professional machine integration, the axis offers fully developed Ethernet fieldbus communication with various protocols. The fieldbus connector provides a direct connection to the PLC, where currently the EtherCAT, Ethernet I/P and Profinet protocols are supported, more will follow.

Together with the library, similarly to PLCopen®, the axis can be put into operation immediately in cyclic synchronized mode or in profile position mode. The linear measuring system with absolute position allows an immediate start, without prior referencing to a zero point.

With connection to the 24VDC supply, the axis is directly ready for operation. The power supply is separate for controller and power output stage. This means that STO is already included as a functional safety feature. If the power output stage is interrupted, communication is maintained.

Integrated force control with Forceteq® basic A milestone of miniaturization

With the well-known Forceteq® basic force measurement of the servo controller, the cogging, load and friction forces of the iron-core linear motor can be compensated via the patented calibration method. This compensation is done by an automatically running calibration process (Force Calibration) of the completely installed axis with its configuration.

The calibration can be restarted at any time if load force, friction or orientation of the axis should change. To increase the accuracy of the recorded forces, the temperature drift is also compensated for when the output stage heats up.

With this Forceteq® basic, quality-relevant force-displacement diagrams can be recorded during travel. Assembly processes are thus monitored «in-process» and are traceable. It is also possible to move «by force», e.g. to press electrical contact adapters onto printed circuit boards with a specific force. This force-controlled contacting is used, for example, for reliable programming of the firmware on the hardware.

The INTAX® linear motor axis pushes the boundaries of miniaturization and shows what is technologically feasible today. The idea of physically building the servo controller into a motor axis is not new, and there are some servo motor suppliers that build the motion controller in directly. For linear motor axes, the INTAX® is the only solution available on the market with a fully integrated servo controller.

The INTAX® linear motor axes were specifically designed for miniaturization to integrate the electronic boards, motor wiring and cable trailing into the «free space» of the mechanical design. For this reason, the design of the axis was redesigned and the electronics were extremely compressed and distributed on different PCBs.

It is not visible from the outside where the servo controller is located. This results in an incredibly compact design with a slim, clear geometric shape. This allows engineers to build their machines and systems smaller and more space-efficient. Wiring, connectors and space for a servo controller are no longer required. And compared to conventional toothed belt and spindle drives, the INTAX® linear motor direct drive is more precise, faster and quieter.