



Linear Servo Motors & Stages

Ironcore and ironless linear motors, and stages in a wide range of force

Linear servo solutions

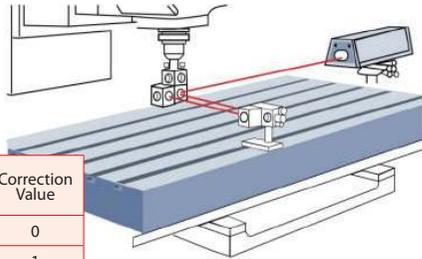
STXI Motion is a global expert in customized motion control systems. Our close attention to both product quality and customer requirements means STXI linear servo solutions reduce the time, effort and cost you spend on sourcing components, engineering, assembly and adjustment.

STXI linear servo systems, with either ironcore or ironless linear motors, ensure high throughput, accuracy and repeatability. Superior mechanical performance is achieved through STXI systems with features such as:

Feedback support for various devices and protocols - HIPERFACE, BiSS, EnDat, Tamagwa, Nikon, sensAR.

Harmonic compensation - algorithmic correction of motor cogging due to mechanics or magnetic elements.

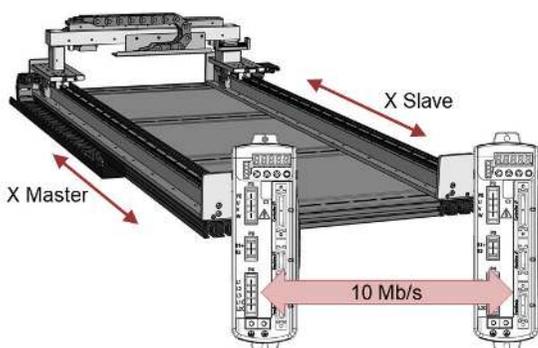
On-the-fly error correction - negates repeatable positioning errors.



| Motor Encoder Position | External Measured Position | Correction Value |
|------------------------|----------------------------|------------------|
| 0 | 0 | 0 |
| 100 | 99 | 1 |
| 200 | 202 | -2 |

Gantry systems

STXI offers fully-integrated gantry systems featuring two-axis synchronization, based on STXI linear servo motors, drives, motion controller and user interface.



Key Benefits

- A broad range of high-quality motors, servo drives and stage mechanics to meet the most demanding job requirements.
- **Ironcore** motors for heavy loads: small footprint, modular design and high force density enable very flexible application design.
- **Ironless** motors for light loads: zero cogging and ultra-smooth motion enable high precision, high acceleration applications.
- **Linear stages:** off-the-shelf or customized, prefabricated with all supporting elements including position feedback, limit sensors, cable carrier, linear bearing / guidways.

Ironcore Linear Motors

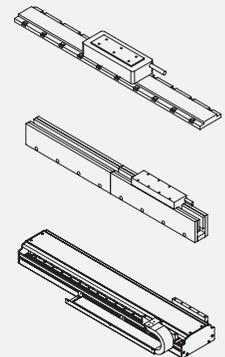
Continuous force: 74–535 N
Peak force: 235–1,900 N

Ironless Linear Motor

Continuous force: 28–884 N
Peak force: 170–6,630 N

Linear stages

Continuous force: 61–320 N
Peak force: 190–1,140 N



Supporting Products & Accessories

STXI linear motor systems with CDHD2 servo drives and softMC motion controller achieve the highest level of performance.

CDHD2
High-Performance Servo Drive with ServoStudio user interface



softMC
Multi-Axis Motion Controller



Ironcore Linear Motor

Standard; other options available upon request.

| Model | Units | LIC1-45 | LIC2-45 | LIC1-66 | LIC2-66 | LIC1-78 | LIC2-78 | LIC1-93 | LIC2-93 | LIC2-93 | LIC2-93 |
|-------------------------|-------|-----------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Coil width | [mm] | 45 | | 66 | | 78 | | 93 | | 122 | |
| Coil length | [mm] | 110 | 190 | 110 | 190 | 110 | 190 | 110 | 190 | 110 | 190 |
| Continuous force | [N] | 74.1 | 131.3 | 107.4 | 196.7 | 138.6 | 279.4 | 156.6 | 320.4 | 261.8 | 535.5 |
| Peak force | [N] | 235.0 | 476.0 | 346.0 | 670.0 | 483.0 | 913.0 | 560.0 | 1140.0 | 950.0 | 1900.0 |
| Continuous current | [A] | 2.2 | | | | | | | 4.5 | 2.2 | 4.5 |
| Peak current | [A] | 10.0 | | | | | | | 20.0 | 10.0 | 20.0 |
| Magnetic base length | [mm] | 80/200/400 | | | | | | | | 80/200 | |
| Recommended servo drive | | CDHD2-4D5 2A, CANopen or EtherCAT | | | | | | | | | |

Ironless Linear Motor

Standard; other options available upon request

| Model | Units | LILx-35 | LILx-39 | LILx-49 | |
|-------------------------|-------|---|------------|---------------|--|
| Coil width | [mm] | 35 | 38.5 | 49 | |
| Coil length | [mm] | 61 -361 | 61 -481 | 85 -757 | |
| Continuous force | [N] | 28 - 170 | 56 - 442 | 96 - 884 | |
| Peak force | [N] | 140 -867 | 315 -2496 | 700 -6360 | |
| Continuous current | [A] | 1.8 - 3.6 | 2.3 - 4.6 | 2.5 - 5.0 | |
| Peak current | [A] | 9.2 -18.4 | 13.0 -26.0 | 18.0 -36.0 | |
| Magnetic base length | [mm] | 119.5 - 599.5 | | 167.5 - 419.5 | |
| Recommended servo drive | | CDHD2-003 – CDHD2-020 2A, CANopen or EtherCAT | | | |

Linear Stages

Standard; other options available upon request

| Model | Units | SIC85 | SIC110 | SIC140 | SIC170 | SIC220 |
|-------------------------|-------|-----------------------------------|--------------|--------------|---------------|---------------|
| Width | [mm] | 85 | 110 | 140 | 170 | 220 |
| Stroke / Travel | [mm] | 70 - 1990 | 70 - 1990 | 70 - 2790 | 70 -2790 | 70 -2790 |
| Continuous force | [N] | 61.0 - 120.0 | 74.1 - 131.3 | 74.1 - 131.3 | 107.4 - 196.7 | 138.6 - 320.4 |
| Peak force | [N] | 190.0 -380.0 | 235.0 -476.0 | 235.0 -476.0 | 346.0 -670.0 | 483.0 -1140.0 |
| Continuous current | [A] | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| Peak current | [A] | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| Maximum speed | [m/s] | 2 | 1.5 | 4 | 4 | 4 |
| Optional cooling | | Convection air/Water | | | | |
| Optional installation | | Marble/Aluminum | | | | |
| Recommended servo drive | | CDHD2-4D5 2A, CANopen or EtherCAT | | | | |



Contact STXI Motion for optimal motion and automation solutions.

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