

FLEXDRIVE-8

Screw Driven Linear Stage

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Flexdrive-8 Positioning Tables, using a high-performance ball screw drive for positioning applications where high accuracy, longer travels, and high-load carrying capacities are required.

Screw Driven Stages

The flexdrive™-8 series is an expansion of the product line to a small compact size and the modular design makes it an ideally suited translation module for a larger number of applications requiring precision, reliability and ease of integration. Engineers, system integrators and designer prefer the flexdrive-8 for their superb performance, flexibility to match to the application and assured longevity.

Superior Mechanical Design

The flexdrive series is a very compact precision stage based on a monolithic high strength aluminum alloy with a 74 x 227 mm envelope and travel range from 250-750 mm. The payload capability is rated at 75 kg. The superb positioning performance is supported by square rails with recirculating low noise linear ball bearings and a precision ground ballscrew drive.

- Environmentally hardened.
- Long travel 250 to 750 mm.
- Heavy-duty design with multi-track precision guide system for load capacity up to 75 kg.
- High stiffness, constant support geometry saddle accepts loading from multiple directions.
- High speeds to 900 mm/sec.

High Precision Design

This positioning stage is designed as a fine precision machine with selected high-performance components to achieve outstanding positioning performance with extended life expectancy. The stage base is fabricated from a specially selected hardened high-strength aluminum alloy slab, precision machined to extremely close tolerances. In addition, the saddle is equipped with a wear resistant hard-coat anodized protective finish.

Guide System

The guide system features advanced technology multi-track linear bearings. The four integrally preloaded bearing carriages establish the proper stiffness and achieve constant support geometry for the saddle. This precise and rigid motion platform produces exceptional results in terms of accuracy and motion trajectory, even with high payload.

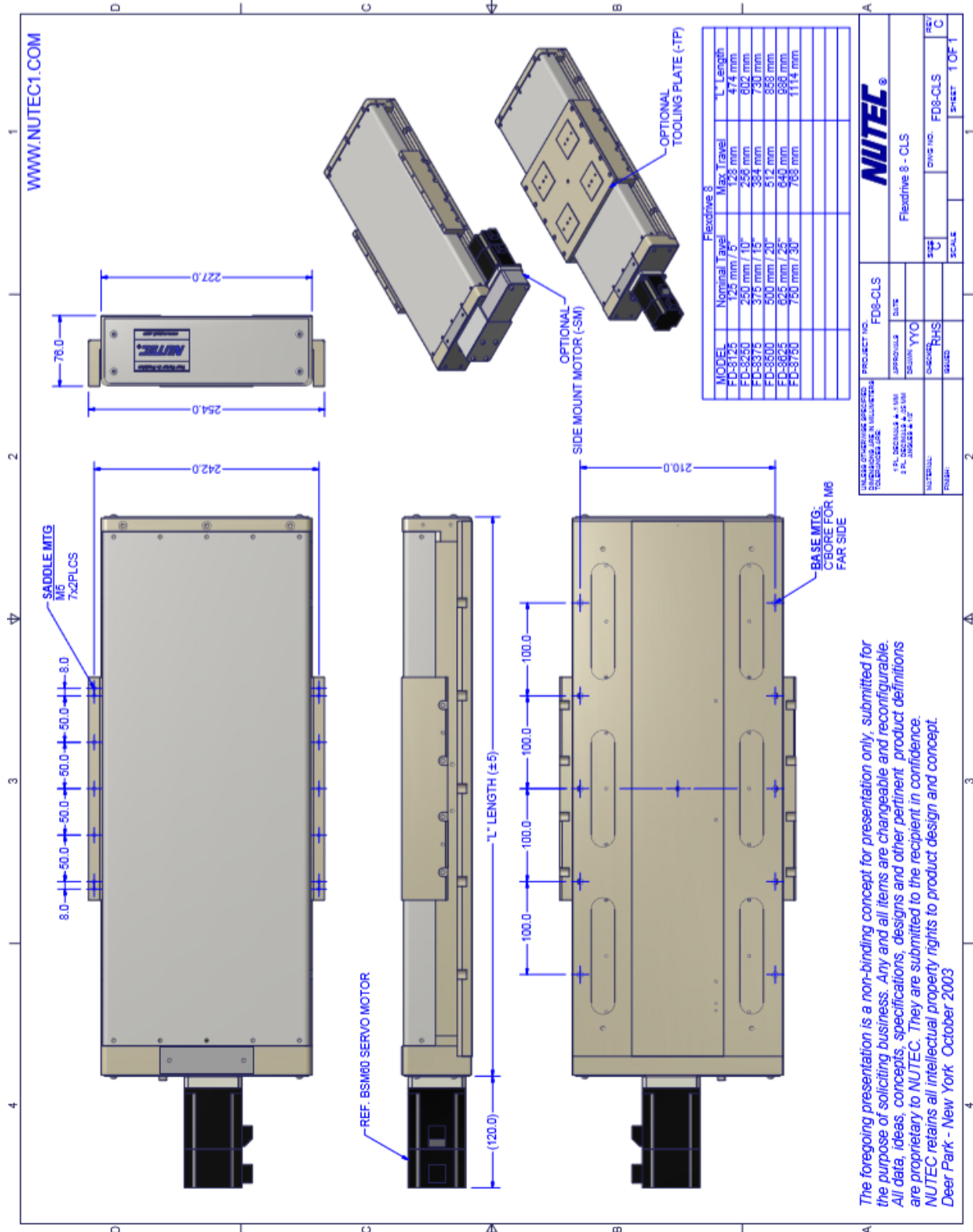
FLEXDRIVE-8 Specifications

	FD-8-SP
Travel	250 – 750 mm
Drive System	NEMA #23 or #17 Servomotor
Maximum Acceleration	Payload Dependent
Max. Axial Load	450 N
Recommended Payload Limit	75kg
Drive Efficiency	80-90 %
Parasitic Torque Max.	0.15 Nm
Drive Screw Max.	3000 RPM

	FD-8250	FD-8375	FD-8500	FD-8625	FD-8750
Travel Length	250 mm	375 mm	500 mm	625 mm	750 mm
Ball Screw Diameter	15 mm	15 mm	15 mm	15 mm	15 mm
Ball Screw Lead	5 mm	5 mm	5 mm	5 mm	5 mm
Trajectory Control					
Accuracy					
Rotary Encoder	± 15 µm	± 20 µm	± 30 µm	± 40 µm	± 50 µm
Linear Encoder	± 10 µm	± 15 µm	± 20 µm	± 20 µm	± 30 µm
Straightness/Flatness	2.5 µm	3.0 µm	3.5 µm	3.5 µm	4.0 µm
Yaw/Pitch/Roll	15 arc-sec	15 arc-sec	20 arc-sec	30 arc-sec	40 arc-sec
2 Axis System					
Orthogonality					
Standard Grade	10 arc-sec	10 arc-sec	15 arc-sec	20 arc-sec	20arc-sec
High Precision	5 arc-sec	5 arc-sec	5 arc-sec	5 arc-sec	5 arc-sec

- Accuracy Described on Full System Travel
- Straightness/Flatness Described per 100 mm travel
- All trajectory data based on axis uniformly supported over full length on precision mounting surface with vibration isolation.
- Payload capacities are recommended values to achieve maximum lifetime in the worst-case scenario featuring maximum dynamic operation and off-center loading.
- Force, acceleration and speed performance are based on operations with NUTEC ELECTRONIC controls.

FLEXDRIVE-8 Dimensions



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS		PROJECT NO.	FD8-CLS
1" PL. DIMENSIONS & 1" DIA. DIMENSIONS & 1/2"		APPROVALS	DATE
MATERIAL:		DESIGNER	Y.Y.O
FINISH:		CHECKER	R.H.S.
		SCALE	1" = 1"
		DWG. NO.	FD8-CLS
		SHEET	1 OF 1

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