

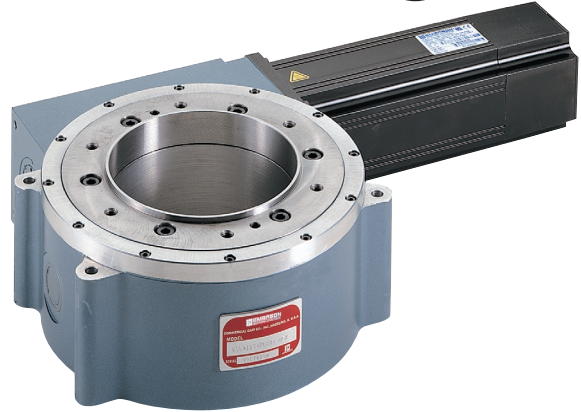


**CONTROL
TECHNIQUES**

“Motion Made Easy”

Discover Servo Indexing

Flex-i-Dex™



Rugged Mechanical Indexing —Precision Servo Control

The Flex-i-Dex servo indexing system combines the flexibility of a servo drive with the long life of a mechanical indexer. Whether a few stops or a few thousand, unusual motions or unique configurations, the Flex-i-Dex creates revolutionary possibilities in machine design.

Unlike the fixed motion of a traditional mechanical indexer, Flex-i-Dex can be programmed to meet the specific needs of the application. It offers a repeatability of 15 arc seconds and accuracies of 60 arc seconds or better. Never before has there been a servo-mechanical indexer that can hold tighter tolerances with higher accuracy “off the shelf.” Servo indexing with the Flex-i-Dex opens up a whole new world of possibilities.

Need a precision reducer to pull your conveyor or main drive line? Flex-i-Dex can do the job! Flex-i-Dex provides zero backlash. It’s 20:1 reduction is back-drivable, eliminating binding that can be found in traditional worm-gear reductions. Turn the Flex-i-Dex on its side and you have a large support bearing perfect for wind and unwind applications.

Flex-i-Dex offers extraordinary versatility. It is ideally suited to machine builders and end users who desire more flexibility in their design process, more freedom to fine tune their designs, want higher degrees of accuracy and performance. Companies with “just-in-time” production requirements benefit because Flex-i-Dex is a stock item and often can be shipped the same day the order is received.

Figure 1 below shows the Flex-i-Dex performing the function of a traditional mechanical indexer for typical 2, 4, 5, 8, etc., stop applications. In the Figure 2 we see the flexibility of the Flex-i-Dex. Random motions, reverse motions, unique configurations are now all possible in a standard, off-the-shelf system. Flex-i-Dex eliminates the problems associated with design-in-process projects, allowing for last-minute motion refinements. Our user-friendly software allows you to be up and running in minutes, and easily modify the program for precision performance.

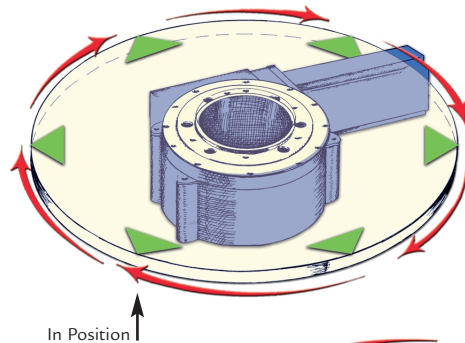


Figure 1

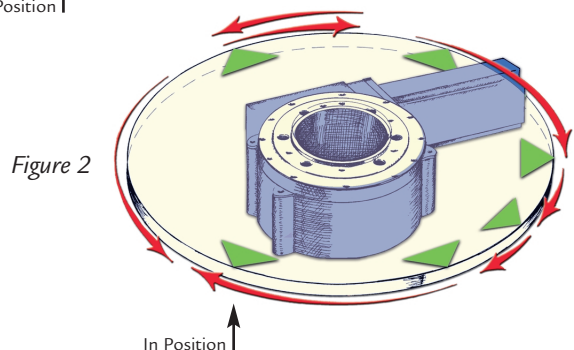
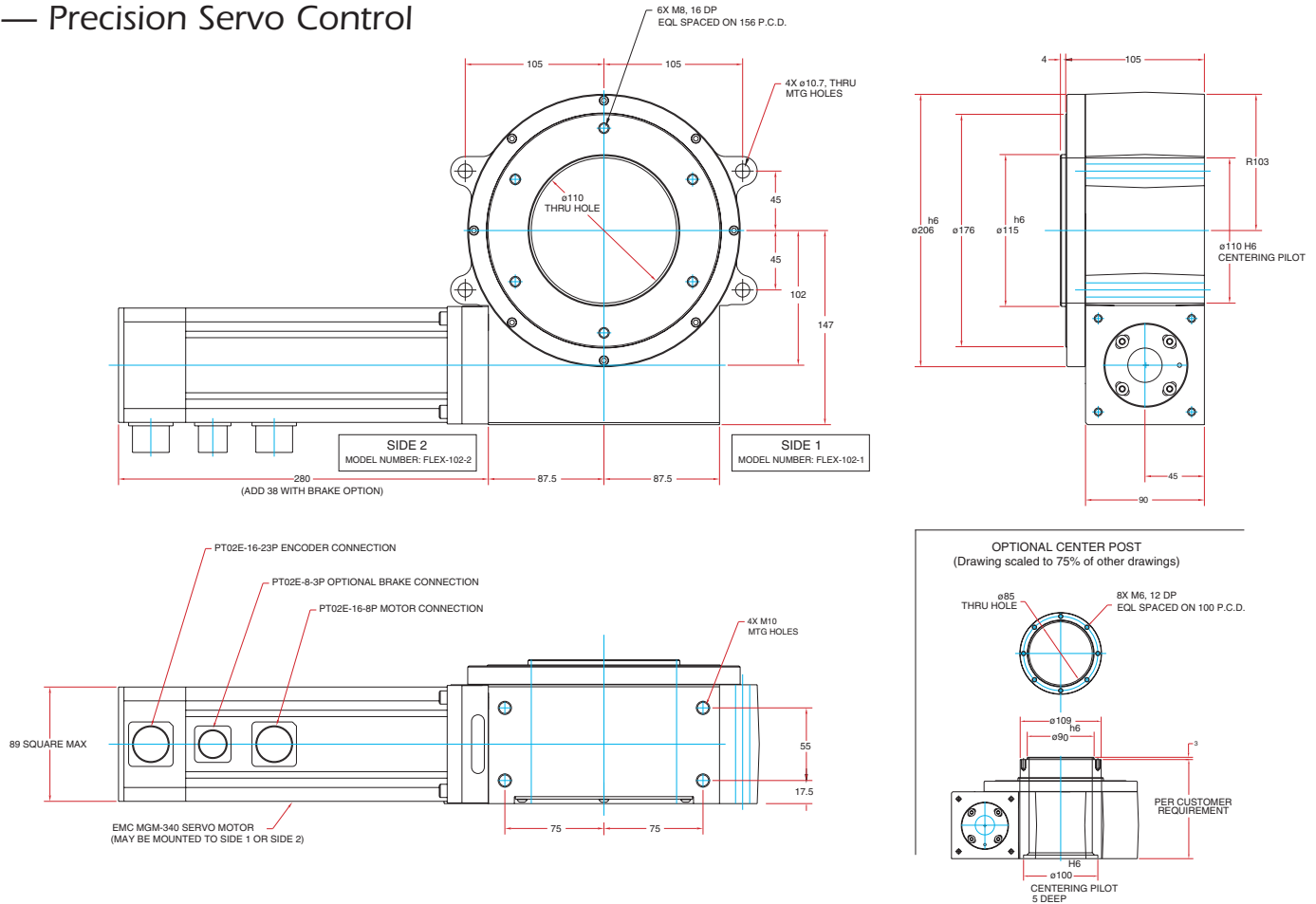


Figure 2



Rugged Mechanical Indexing
— Precision Servo Control



Specifications

Model Numbers:

FLEX-102-1 (From Top View,
Motor is on the Right)

FLEX-102-2 (From Top View,
Motor is on the Left)

Reduction: 20:1 (Further reduction is possible by adding an optional reducer.)

Maximum Inertia Allowed on the Output Dial (using an MG-340 or an NT-355) without additional input reduction: 10,000 lb-in²
Flex-i-Dex Inertia reflected at the input shaft: 0.00323 lb-in-sec²

Friction: 14-16 lb-in room temp, 10-12 lb-in warm, 25 lb-in maximum break-away torque.

Maximum Axial Load*: 2270 lbs
(*Balanced Weight)

Axial run-out: 0.0015 inches

Maximum Radial Load: 910 lbs

Maximum Offset Load: 3180 lb-in bending moment (ie:318 lb @ 10 inches from center)

Dial Flatness: 0.002 in TIR (Total Inch Runout)

Accuracy: 60 arc seconds

Repeatability: 15 arc seconds

Backlash: 0 arc seconds

Operating Temperatures:

Minimum temperature: -40° F

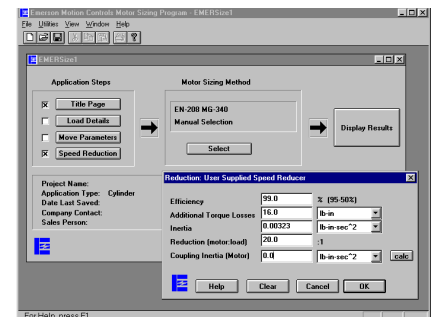
Maximum temperature: +160° F

Drawings: Certified engineering sales drawings are available upon request.

Use EMERSIZE to fit the **Flex-i-Dex** to your specific application

The Flex-i-Dex uses a brushless 3" servo motor paired with either an Epsilon Ei drive, an E-Series drive with an FM-2 or FM-3, or an AXIMA multi-axis controller and base drive(s). Using the "manual selection" in EMERSizeCT, you can properly size a servo system to your specific Flex-i-Dex application.

Setup Screen:



Download EMERSizeCT from www.emersonct.com.