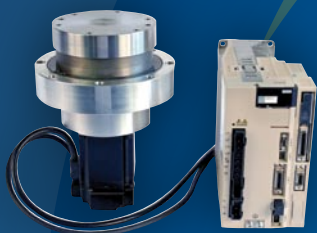


# CENTRICITY™

*automation products*

## Servo Indexers



**NT SERIES™**  
*servo indexers*

## Servo Indexers



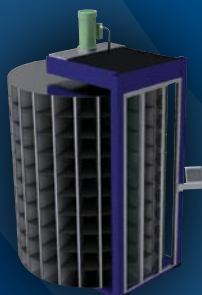
**MS SERIES™**  
*servo indexers*

## Custom Rotary Tables & Systems



**ACCURING™**  
*custom rotary tables*

## Rotary Pick-to-Light



**PACEPRO™**  
*rotary pick-to-light*

## I.D. Parts Feeding Systems



**FEEDSCAPE™**  
*parts feeding systems*

The products contained in this document are protected under the following U.S. patents. Other patents pending.

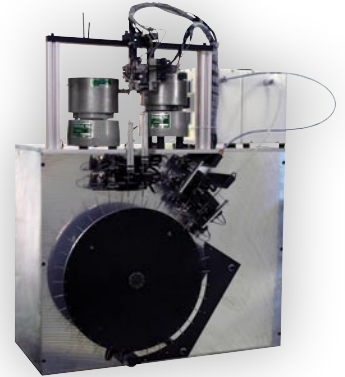
5,950,503 6,948,402 6,827,199 7,638,963



## OVERVIEW

Feedscape technology represents a radical departure from the traditional method of handling parts through contact with their outside surfaces, to handling parts on their I.D. This seemingly simple change in approach results in significant advantages and design possibilities.

The Patented Feedscape System is comprised of a tooling rod secured by a series of alternating jaws. Parts loaded on the tooling rod through their I.D. are free to travel down the rod as the jaws open and close. This technology maintains control of the parts at all times. There's no chance of parts flipping over, shingling, or falling off.



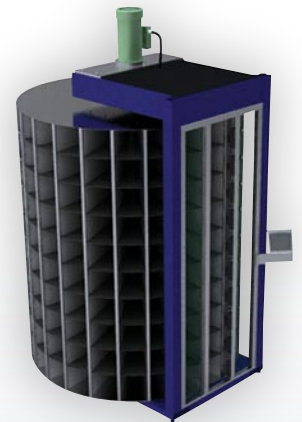
Vibratory in-line tracks, that are the major cause of part feeding problems, are eliminated. Tooling is less expensive to manufacture and significantly more flexible than "in-line" styles. One set of tooling can often be used for a family of parts requiring only a similar I.D. Part jams are dramatically reduced and simpler to clear than with conventional tooling. Ordinary part-to-part variation has no effect on performance. All external surfaces of the part are exposed and, therefore, available for additional operations such as inspection, gauging, and many others.



## OVERVIEW

The PacePro combines pick-to-light parts picking technology with Centricity's servo indexer know-how. This unique rotary based pick-to-light system is designed to eliminate operator travel time, sustain process pace, and error-proof kit building and parts picking.

In its typical 60" diameter footprint, the PacePro can be configured for up to 54 shelves with 24 dividers, resulting in as many as 1,296 discreet locations.



Once the system is loaded, the PacePro will rotate to present the proper column of parts to the operator. A green light indicates the correct bin to pick from and the quantity. After picking, the PacePro automatically indicates the next part to pick. Should an incorrect pick be attempted, the green light changes to red and an audible alarm sounds identifying an attempted incorrect pick. Extensive data on picked parts can be stored within the PacePro and can be accessed via an optional Ethernet connection and report generator, to aid in optimizing the process and maximizing throughput.

In addition to increased productivity, the PacePro will reduce picking errors, minimize operator training, save floor space, provide real-time information, and make your process more competitive. The PacePro is supplied fully assembled and ready to use. Just set it in place, adjust the leveling feet, and plug it into a standard 115V outlet. You can enter your pick list via Ethernet or simply plug in your laptop. It is that simple and there is nothing else to buy.



For specifications and downloadable drawings in IGES, STEP, DXF, and PDF formats, please visit our website at <http://www.centricity.net>.

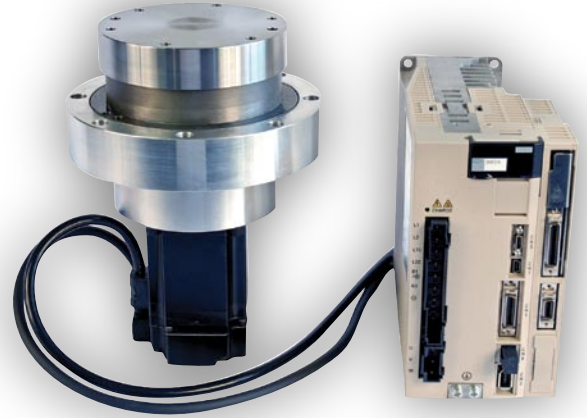
25 S State Street • Girard, OH 44420 • Tel: (330) 545-5624 • Fax: (330) 545-6749 • [www.centricity.net](http://www.centricity.net)

If you can “Point and Click”, you can set up the NT Series Servo Indexer. **It's that easy to use!**

## OVERVIEW

The NT Series Indexers are center-driven, high precision indexing machines designed to be low cost without sacrificing flexibility. They are ideally suited for higher inertia applications that require superior accuracy and high torque.

Unlike traditional servo indexing systems, the NT Series has been designed as an “off-the-shelf” indexing solution. It offers the most popular features of servo indexing at a price that competes head-on with mechanical indexers.



The ability to set the number of stops, direction of rotation, move time, precisely set the home position, electronic torque limiting, and other features provide servo indexing flexibility previously not available at this price and level of simplicity.

The NT Series is a complete indexing package that includes the rotary chasis with all position mounting, servomotor with digital AC servo controller, absolute position feedback, 5M power and encoder cables, and i-series software that runs on your laptop in a simple to use Excel spreadsheet. The spreadsheet is comprised of radio buttons and drop down boxes providing quick configuration of the indexer. There is no programming experience required, and unlike traditional servo applications... **there is no tuning required.**

| DESCRIPTION                       | VALUE              | NT2000A   | NT2000C  |
|-----------------------------------|--------------------|---|--|
| <b>LOADS</b> • Rated Axial Load   | Pounds             | 325   | 875  |
| • Rated Moment Load               | Pounds             | 1,700   | 7,600  |
| • Rated Load Inertia              | Lb-in <sup>2</sup> | 32,000  | 1,000,000  |
| <b>MOTIONS</b> • Indexing         | Number of Stops    | 1 through 48  | 1 through 48   |
| • Reciprocating                   | --                 | Yes   | Yes  |
| • Continuous                      | RPM Range          | 0.1 through 58  | 0.1 through 28   |
| <b>REPEATABILITY</b>              | +/- Arc Seconds    | < 30  | < 30   |
| <b>ELECTRONIC TORQUE LIMITING</b> | Percent            | 1-100   | 1-100  |
| <b>FOOTPRINT</b>                  | OAH" x Major 0"    | 8.20" x 5.94"   | 10.90" x 9.06"   |
| <b>COMMUNICATION</b>              | --                 | Discreet I/O, 24VDC In-Out  | Discreet I/O, 24VDC In-Out   |
| <b>CONFIGURABILITY</b>            | Spreadsheet        | Excel Based   | Excel Based  |
| <b>VOLTAGE</b>                    | --                 | 100VAC, Single Phase<br>200VAC, Single Phase<br>200VSC, Three Phase<br>Other voltages available | 200VAC, Three Phase<br>400VAC, Three Phase<br>Other voltages available |



## OVERVIEW

The MS Series indexer is a high precision, highly flexible servo indexer designed to work directly with today's PLC or PC control systems. Available in five standard models and dozens of sizes, the simple to install MS Series can handle loads from grams up to tens of thousands of pounds, with dial diameters from 8" to over 240". MS Series indexers can be fitted with brakes, secondary gear sets, dial plates, and machine bases.

### SERIES

### DESCRIPTION

#### MS1000

**Direct drive indexer** - ideal for low inertia applications requiring very high accuracy. Comes standard with Centricity's Drive/Control Package.

#### MS2000

**Center-driven geared indexer** - near zero backlash gearing for high inertia applications requiring superior accuracy and load carrying capabilities.

#### MS2500

**Center-driven geared indexer with external bearing set** - near zero backlash gearing integrated with a high capacity external bearing set for very high inertia applications requiring superior accuracy. Ideal for very heavy loads and large diameter dial plates.

#### MS4000

**Open-center geared indexer** - near zero backlash gearing with up to 4.70" diameter thru-bore for passage of fluids, electrical, or both.

#### MS4500

**Open-center geared indexer with external bearing set** - near zero backlash gearing integrated with external bearing set with up to a 23" thru-bore, for mounting of ancillary equipment, pedestals, and monuments.

All MS Series Indexers are available with Centricity's highly flexible Drive/Control Package. This package includes the servomotor, digital AC servo controller with multiple field bus capabilities (networking), touch screen pendant (no programming required), absolute position feedback and GEN-2 software. GEN-2 software contains simple to use functions such as dynamic home adjust, extensive fault recovery routines, simple indexer, spin, and teach mode set-up, selectable motion smoothers, move and dwell torque functions, configurable user output(s), and many others. Contact Centricity for detailed info on the Drive/Control Package.

### GENERAL INDEXER SELECTION GUIDE

| Series | No. of Models | Output Torque Range (In-lb) | Load Capacity (lb) | Thru-Bore Range  |
|--------|---------------|-----------------------------|--------------------|------------------|
| MS1000 | 4             | 13.5-405                    | 50-150             | 0"               |
| MS2000 | 8             | 1,000-78,000                | 325-5,500          | 0"               |
| MS2500 | 24            | 1,000-78,000                | 34,000-42,000      | 0"               |
| MS4000 | 6             | 1,700-55,500                | 1,250-6,500        | 0.98" thru 4.70" |
| MS4500 | 18            | 28,000-44,600               | 34,000-42,000      | Up to 23.0"      |

# ACCURING™

custom rotary tables

## OVERVIEW

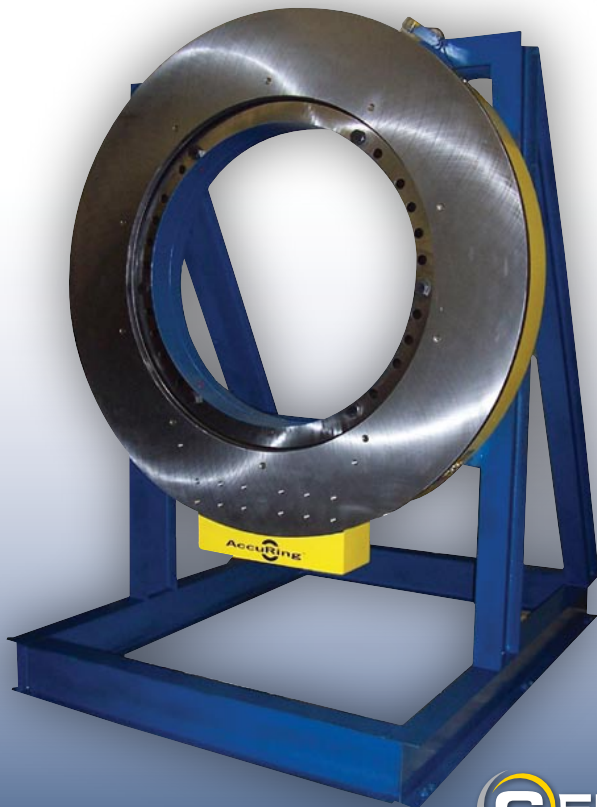
AccuRing Rotary Tables represent the ultimate in rotational flexibility. Each AccuRing is custom designed to meet your exacting specifications, and there are virtually no limits to the creativity of these products.

Drive systems can vary from electric to pneumatic to hydraulic. Center-driven to very large open-centers are available.

AccuRing Rotary Tables can be mounted horizontally, vertically, or even inverted. Custom bases with ancillary mounting surfaces, dial plates manufactured from aluminum, steel, stainless steel, or phenolic resins can complete your AccuRing. Large dial plates are designed to ship standard freight with easy "in-the-field" set-up.

If your application requires a "special" rotary indexing or continuous rotation device, the AccuRing can be the answer you're looking for.

Unique design, high precision sectional dials exceeding 25' in diameter with weight capacities ranging from ounces to hundreds of thousands of pounds. Packaged for standard commercial shipping and simple on-site assembly.



## TYPICAL OPTIONS

- Multi-Circuit Slip rings
- Multi-Passage Rotary Unions
- Shot Pins
- Vacuum Hold-down on Dial
- Custom Fixturing on Dial
- Under dial support for Pressing Operations
- Elevating Dial
- Sealed/Air Purged
- Explosion-Proof
- Wash down
- Fail Safe Brakes and High Speed Spin
- GEN-2 Servo Control Package
- Extensive Field Bus Capabilities for Networking DeviceNet, Modbus, Profibus, Ethernet, etc.
- Configurable I/O when used w/ GEN-2 Package



# **CENTRICITY**™ *automation products*

**Centricity Corporation**, a leading manufacturer of precision servo index drives, custom rotary tables, rotary pick-to-light systems, and I.D. parts feeding systems, was founded 1992 in Girard, OH. Our company was founded by engineers skilled in the design and construction of factory automation systems.

The Centricity product line was developed to simplify the complexities of factory automation with “plug and play” features providing flexibility and control for the most complex and demanding applications. Over 25 years of automation experience is built into every **NT Series** and **MS Series Servo Indexer**, **AccuRing Rotary Table**, **PacePro Rotary Pick-to-Light System**, and **FeedScape Parts Feeding System**.

Centricity’s greatest asset is that we speak your language. Our history as designers and builders of automation equipment has provided the expertise to understand the challenges that you face and more importantly to enable you to realize your automation objectives.

We have worked with many premier companies including Northrop Grumman, The Hoover Company, U.S. Postal Service, Oak Ridge National Laboratory, The Swagelok Company, American General, Hoffman Enclosures, Harley Davidson, as well as many others to solve a variety of challenging problems.

We work extensively with machine builders, OEMs, and end users in automotive, aerospace, pharmaceutical, medical, food processing, packaging, electronics, as well as many other industries. Centricity has the products and experience to make your design life a little easier. We thrive on difficult applications and have provided solutions for welding, painting, dispensing, assembly, waterjet cutting, stamping, and many other processes. Centricity’s highly trained staff of design engineers, electrical engineers, application engineers, and sales engineers will assist you in selecting the best indexing or parts feeding system solution for your machine design. Proprietary products and software as well as state of the art 3D design ensure that the system selected meets your requirements for accuracy, speed, load capacity, and life expectancy.

From conventional to complex, Centricity will work hand in hand with you to provide the best possible solution.



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