



Spring 2015 Sales Presentation

SYNEO

Synergy in Product Integration & Innovation in Technology

Core competencies

- Technology of precision cutting, feeding, drilling, punching, slitting, flaring, grinding, skiving, printing, and assembly
- Part detection, measurement, orientation and location using optical sensing and machine vision systems
- Design and manufacture of high-quality cutter tools for surgical device applications
- Design, development, software, machining, finishing and assembly of medical grade equipment

History

**Founded on July 13, 2012 by the merger of
ASG Medical Systems and Technical Innovations**

ASG Medical Systems | wide range of process automation for catheter and guidewire manufacturing.



Technical Innovations | high performance automated machinery and cutting tools for drilling, punching and skiving for catheter and surgical device applications.



Partial Customer List - OEM/CM



Product Families

Accu-Cut

The first Accu-Cut automated tube cutter, the Accu-Cut 100, was manufactured in 1992. Since then, this product has evolved into a complete line of advanced tube cutters for a wide range of tubing, including large diameter, soft and braided.

Accu-Feed

The Accu-Feed stick and spool feeder family provides fully automated tube and wire feeding to Syneo machines, as well as other machines, for cutting, grinding, extrusion, marking, assembly, testing and many other processes.

Accu-Trim

Accu-Trim machines are ideal for R&D, point-of-use and low production trimming and skiving of standard and braided tubing.

Accu-Punch

Accu-Punch hole punchers safely and precisely create holes of various sizes in a wide range of tubing materials. The Accu-Punch family includes manual, pneumatic and automated machines.

Accu-Drill

Accu-Drill hole drillers are safe, space-efficient solutions for drilling round holes in a wide range of tubing materials. The Accu-Drill family includes both manual and automated machines.

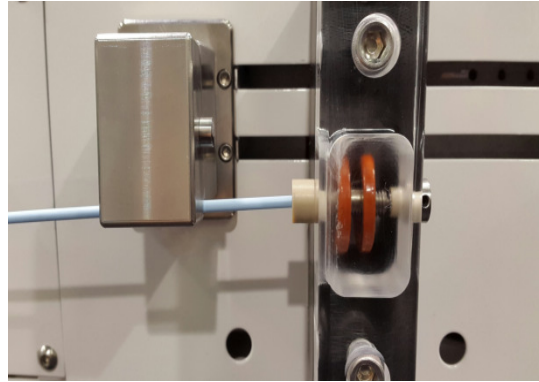
Accu-Grind

The Accu-Grind line is the newest Syneo product line. Accu-Grind machines grind, deburr and shape wires to precision, resulting in the highest quality after centerless grinding.

Latest Product Family

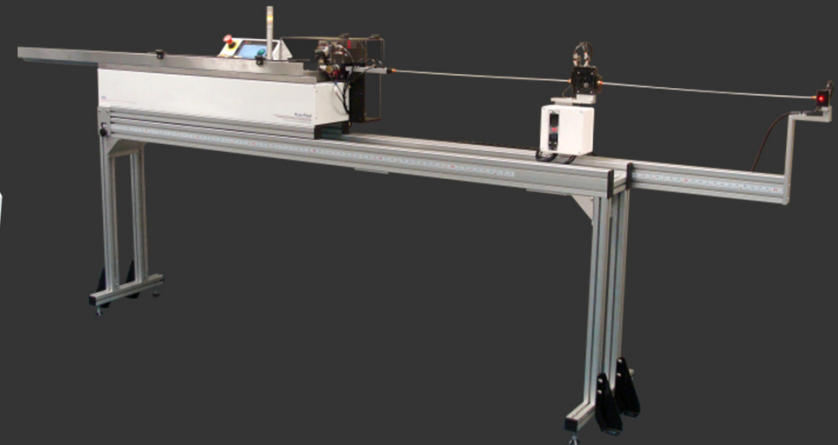
Accu-Tip RF

The Accu-Tip RF with TQM (Tip Quality Monitor) machine provided by Syneo significantly raises the bar on controlling the RF tipping and bonding process and is automation ready.



All under control by TQM:
Temperature
Dwell time
Insertion speed/force
Cooling temperature/feedback
Part retraction speed/force
Encoder based position control

Integrating with current feeding systems



Accu-Cut

Originally developed in 1992, the **Accu-Cut 202L** is constantly updated and remains the industry's most accurate and reliable tube cutter for a wide range of plastic and rubber tubing.

The **Accu-Cut CT** has top and bottom drive belt indexing for traction on heavy tubing up to 1/2".

The **Accu-Cut 202CT-XL** employs caterpillar drive technology for extra large tube cutting capability.

The **Accu-Cut Micro II** incorporates the powerful cut mechanics of the Accu-Cut 202L for R&D and low volume production, and now features a full-color LCD touchscreen.

Accu-Cut 202L



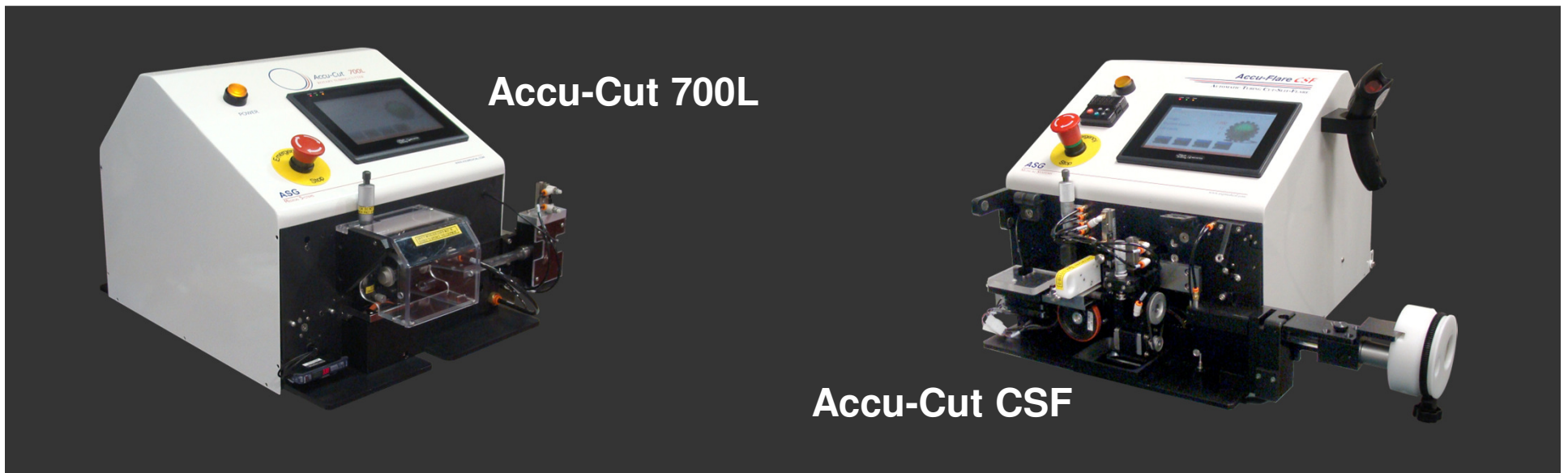
Accu-Cut CT-XL

Accu-Cut (continued)

The **Accu-Cut 700L** is engineered to cut braided tubing, hard plastics and metal tubing.

The **Accu-Cut 701L** provides burr free, square cuts on hard materials and very short lengths.

The **Accu-Cut CSF** is the first machine in the world to fully integrate the cutting, slitting and flaring of thermoplastic tubing.



Accu-Cut options

There are many Accu-Cut options available to fit your specifications, including:

Input

- Auto-Load: detects incoming part and starts process
- Auto-Gap: automatically controls gap height for precise processing
 - Input guide: helps guide part into Auto-Gap

Performance and control

- Recipe Database System: eliminates errors in machine set-up
 - Barcode scanner: allows for effortless, error-free machine set-up when used with barcode identification sheet
- Alcohol dispenser: provides smooth feeding of silicone, PVC, polyurethane, Pebax and other similar materials
- High speed option: increases max index speed from 14 to 40ips and max accel from 200 to 1000ips²; recommended for long parts and/or high volume

Accu-Cut options (continued)

Special processes

- High resolution: ensures a standard deviation on short parts of 0.003” or better
- Large diameter: increases max material handling to 0.500” OD
- Slitting option: provides independently programmable lengthwise slitting of one end of tube; can be turned off when necessary
- PEEK processing: provides adjustable blade damping for smooth cuts on tough plastics, including PEEK and polycarbonate
- 45 degree angled cut: utilizes a guillotine cut system for 45 degree cuts

Output and storage

- CleanStore storage systems: cleanly stores finished material; jar, tube and bag versions available
- Custom bag attachment: customized to fit bag provided
- CleanAir Deionizer: eliminates static to allow for easier final part handling
- Scrap Eject System: automatically separates scrap ends

Accu-Feed

Stick feeders

The **Accu-Feed 110** provides fast, precise and fully automatic stick feeding of wire and tubing for a wide range of processes.

The **Accu-Feed 410** provides fully automatic, high speed in-and-out feeding of wire for tip processing operations.

The compact **Accu-Feed CPF** stick feeds a standard range of wire and tubing widths and lengths.

Accu-Feed CPF



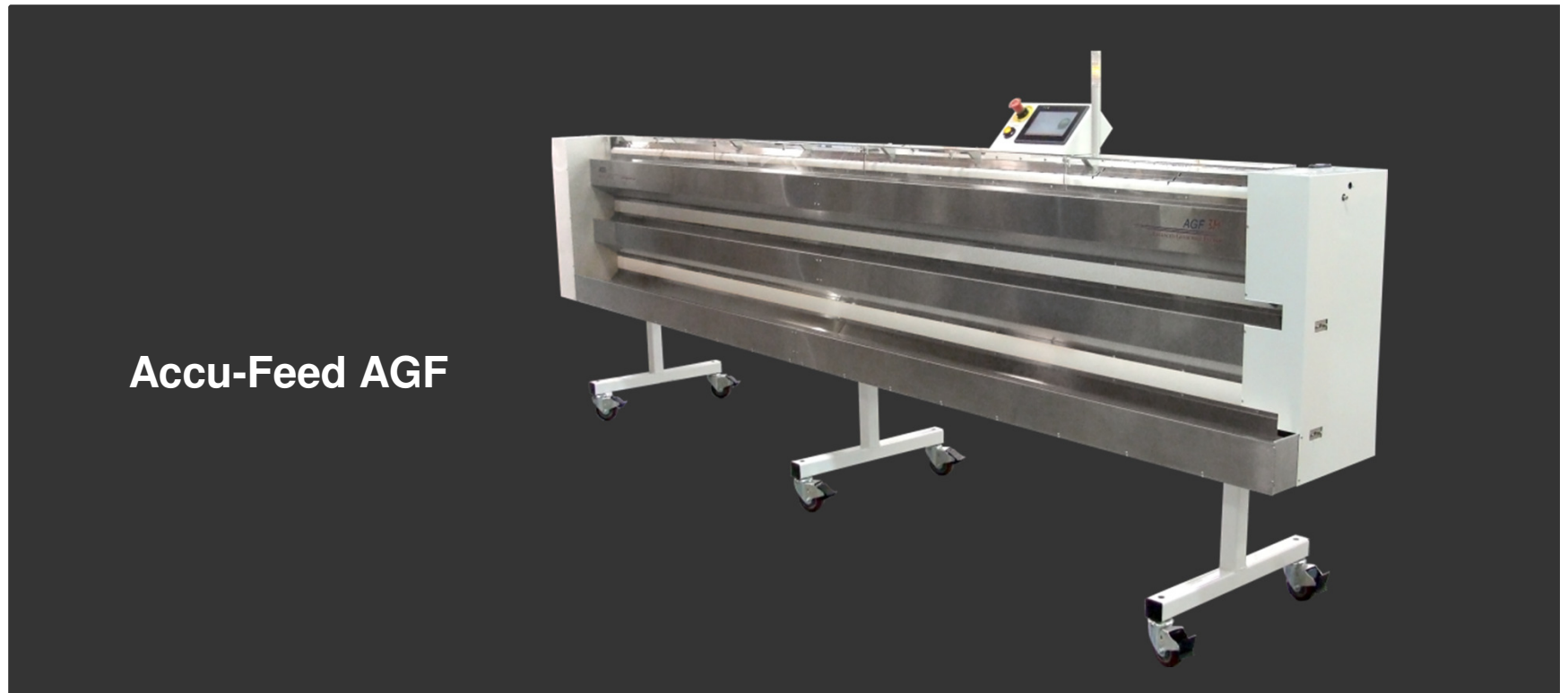
Accu-Feed 410



Accu-Feed (continued)

The **Accu-Feed AGF** is the most powerful and precise stick feeder for centerless grinders available.

The **Accu-Feed AGF V-series** was designed for perfect integration with the RMG Generation 5 centerless grinder.

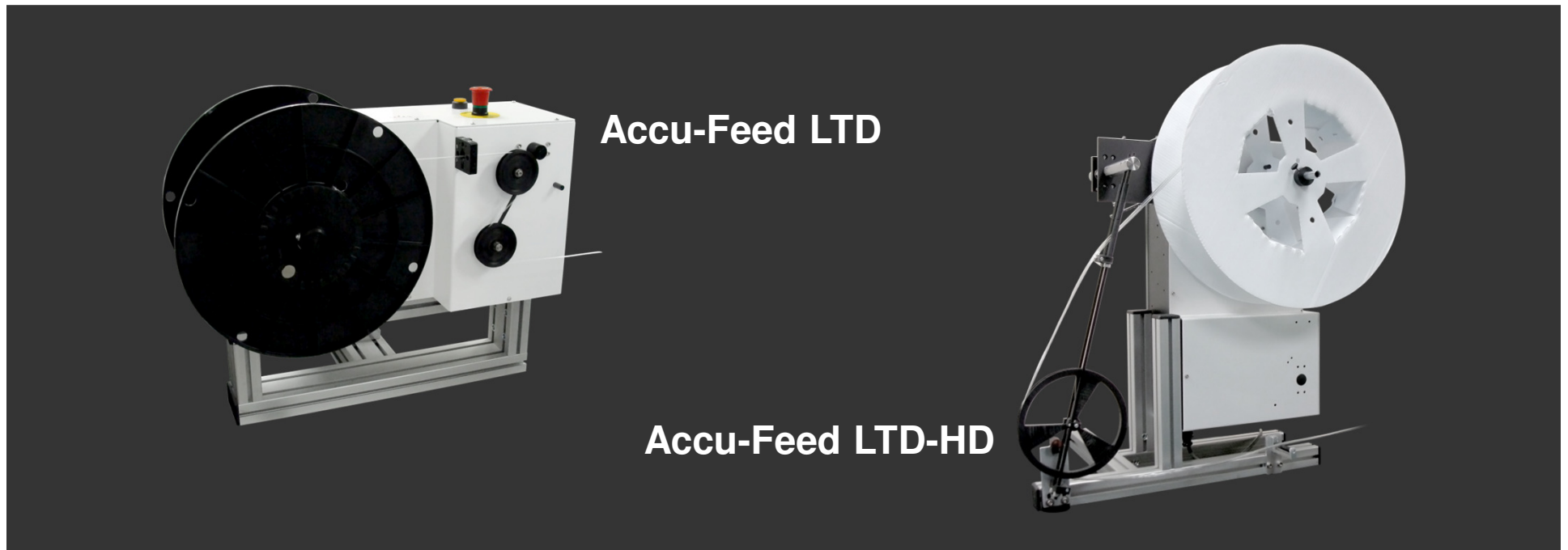


Accu-Feed (continued)

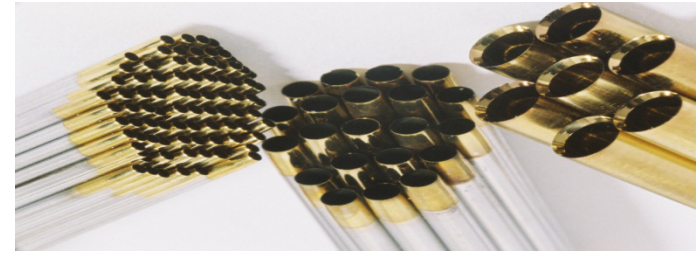
Spool feeders

The **Accu-Feed LTD** easily integrates with machines requiring low-force tube feeding from a spool.

Utilizing the same technology of the Accu-Feed LTD, the **Accu-Feed LTD-HD** is optimized to handle much larger spools of tubing.



Tools



C-Series

First line of tools (1993)
Used for punching and drilling
For round or oval holes
Ideal for making holes in one wall of catheter

H-Series

Developed between 1993 and 1995
More often used for punching than drilling
Manufactured from a solid rod; ability to create any diameter or shape
Ideal for more durable materials (usually catheter-based)

B-Series

Developed in 1998
Used for punching only
Ideal for making holes in catheters with stainless steel braids

T-Series

Developed in 2006
Used for punching and drilling
Similar to H-series, but is much harder
For abrasive or hard materials

Dual Feed System

The **DFS** consists of three mainstay machines (Accu-Feed CPF, Accu-Feed LTD, and Accu-Cut 202L or Accu-Cut CSF) mounted onto a high quality, aluminum extruded, anodized rotary stand.

This system provides precise alignment of the three machines for variable production, whether stick feeding from the Accu-Feed CPF or spool feeding from the Accu-Feed LTD.

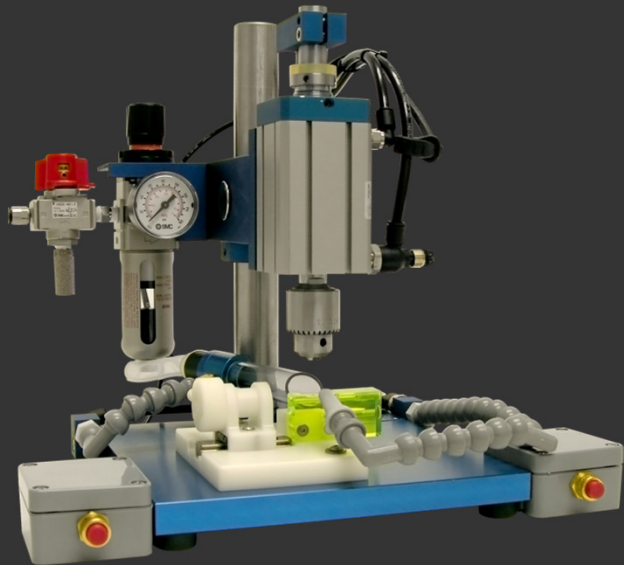


Accu-Punch

The **Accu-Punch MP** line of compact, manually-operated hole punching systems provide precise round and oval holes at a cost-effective price. *Four models available from one to three axes and a university research model.*

The **Accu-Punch SP** line of hole punchers are safe, precise and versatile solutions to round and oval hole-making needs. *Four models available from one to four axes, and pneumatic to programmable.*

Accu-Punch MP



Accu-Punch SP



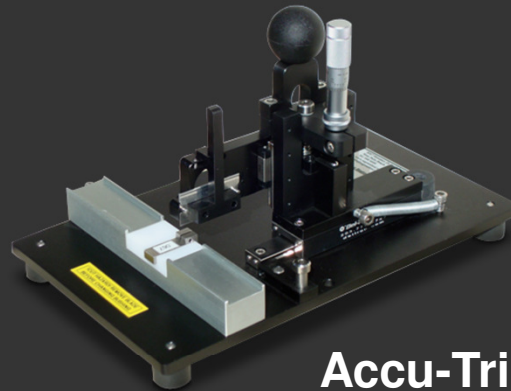
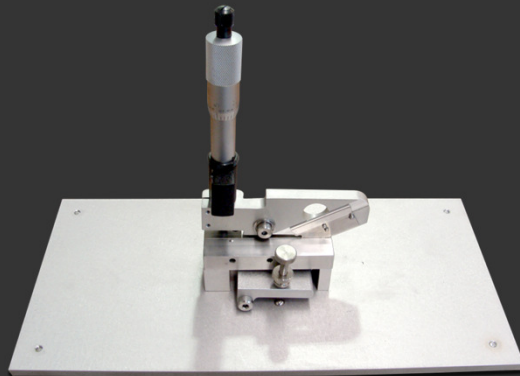
Accu-Trim

The **Accu-Trim 20M** manually trims rough-cut assemblies to accurate lengths with square, burr-free cuts.

The **Accu-Trim 70M** brings precise braided tube cutting to low volume production.

The **Accu-Trim Hand Skive** is the safest manual tube slitter available.

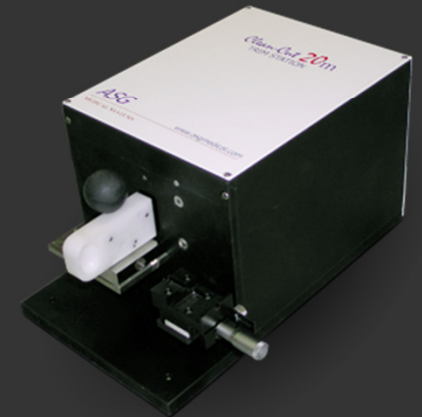
Accu-Trim Hand Skive



Accu-Trim 70M



Accu-Trim 20M



Custom Solutions

SYNEO has experience in the following processes for tubing and wires, and can customize systems to your needs:

- **Cut**
- **Feed**
- **Drill**
- **Punch**
- **Flare**
- **Skive**
- **Assemble**
- **Grind**
- **Inspect**
- **Slit**
- **Tip**
- **Print**

Accu-Drill

The **Accu-Drill MD** line of compact, manually-operated hole drilling systems provide precise, round holes at a cost-effective price. *Three models available from one to three axes.*

The **Accu-Drill SD** line of hole drillers are safe, precise and powerful solutions to round hole-making needs. *Four programmable models available from one to four axes.*



Services

SYNEO offers in-house tube cutting and hole making services.



International Presence



SYNEO is represented in the United States, Ireland, Germany, Japan, Hong Kong and China.

SYNEO

the medical device solutions company

info@syneoco.com | www.syneoco.com