

## The Advantages

*Improved Helical Screw Flight Fit.  
Shorter Lead Times. Reduced Costs.  
BETTER Bottom Line.*

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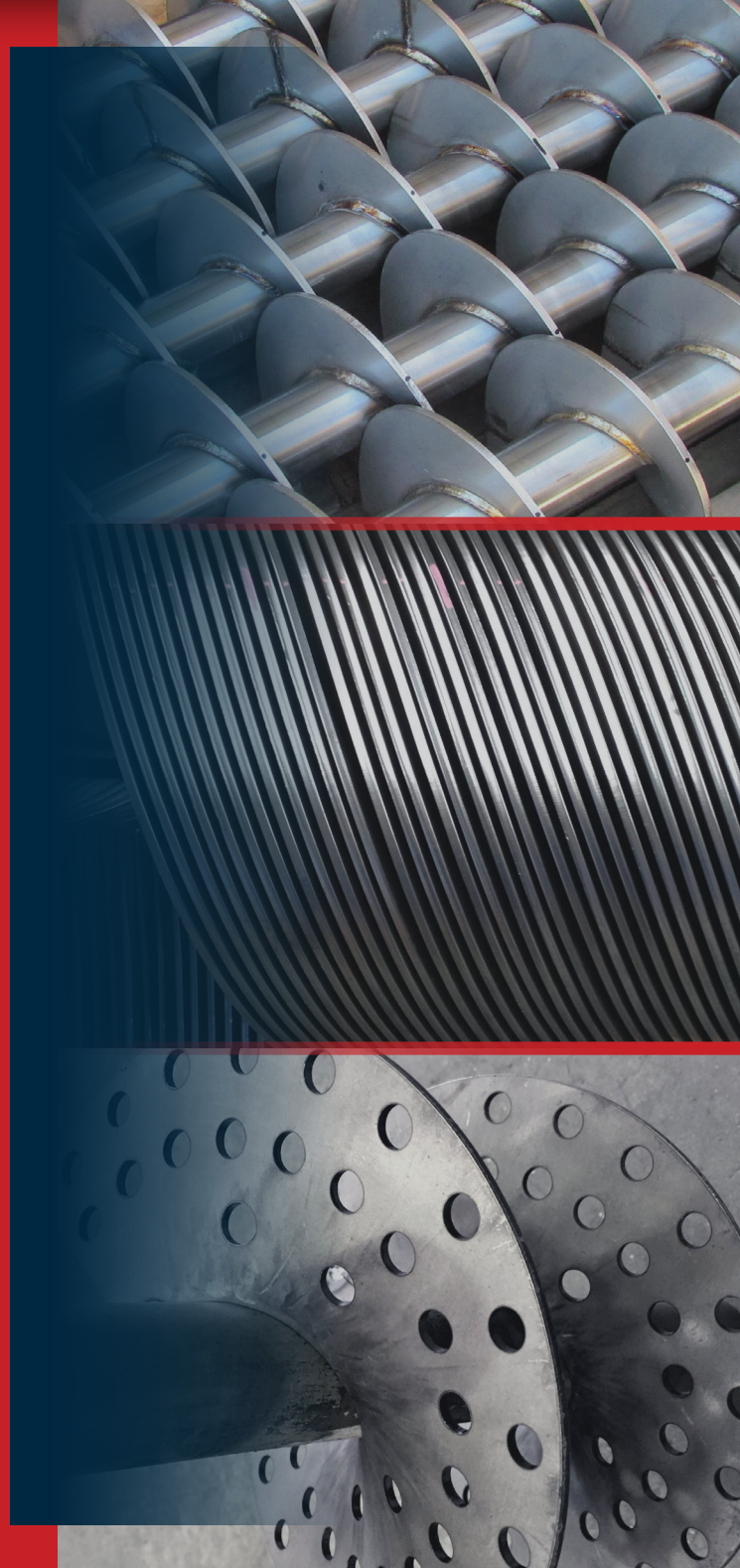
## The Innovators

*Patented Helical Screw Flight Forming  
Manufacturing Technology from the  
Recognized World Experts*

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## The Technology

*Revolutionary TruHelix™ Helical Screw Flight  
Forming System: Your Pain-Free Solution to  
Manufacturing Screw Flights In-House*



# The TruHelix™ System

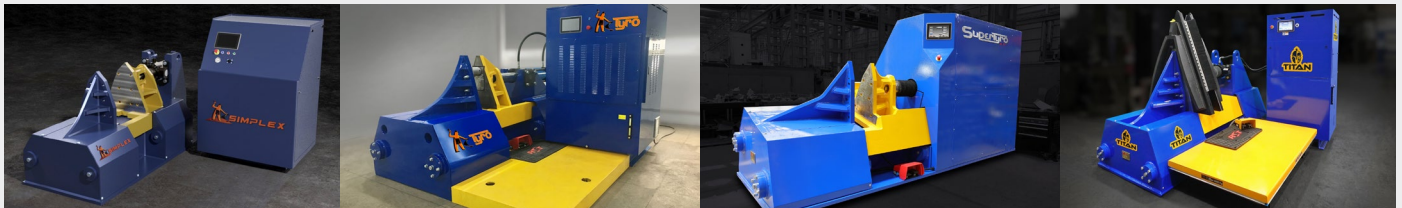
## Finding a Better Way

**This has been the driving force behind the beginnings of Advanced Spiral Technology and our patented TruHelix™ Helical Screw Flight Forming System.**

Advanced Spiral Technology Pty Ltd (AST) was formed over 20 years ago as a vehicle to bring the world's best practice in sectional helical screw flight manufacture and screw conveyor design to the global market. AST has developed, and continues to expand and improve, the only true sectional helical screw flight manufacturing system that has intelligence built in. Our system provides painless entry into sectional screw flight manufacturing for those just starting to manufacture their own helical flights in house and a better, more precise way for those who have been manufacturing them for years.

The technology behind AST is the result of the cooperative efforts of Greg Bloxham of Scott-Osmond Pty Ltd, who has been developing innovative screw conveyor design for five decades, and Scott Kelf of Scott Spiral Pty Ltd, a world leader in the manufacture of sectional screw flight helices. After many years, many attempts and many dollars spent trialing and testing new ideas and thoughts, Greg was able to invent a unique and revolutionary method for the forming of sectional screw flight helices which could be seamlessly coupled with his helix flight designer software suite.

**The Result:  
the TruHelix™ Helical Screw  
Flight Forming System.**



**Our TruHelix™ Helical Screw Flight Forming System is ideal for a range of applications, from 150mm to 3000mm OD screws, to move a variety of materials. No matter what you need to move, we have the machine, tooling, and software for you.**

### Tyro Simplex™

Our Tyro Simplex™ is the perfect solution for the production of the more common helical screw flights, in price conscience markets, where the need for infinite range and variety is not so demanding. It lacks nothing in safety, reliability or durability and is an ideal fit for Jobbing Shops and Original Equipment Manufacturers wishing to bring the process of Sectional Screw Flight Helix manufacture in-house.

### Tyro™

The Tyro™ is our base model NC controlled Machine where 'Automatic' mode comes standard making it the perfect choice for those budget conscience organizations that need good efficiency and strong production rates.

### Super Tyro™

With market leading reliability and durability, the Super Tyro™, since its inception in 2010, has been recognized as the world leading helical screw flight forming machine. Our Super Tyro™ will give you the advantage, and flexibility, of being able to consistently form the vast majority of the world market's helical screw flight needs accurately and efficiently.

### Titan™

The primary purpose behind the development of AST's Titan™ Machine was to provide the TMR Feed Mixer Wagon & Hydroscrew manufacturers with the capacity to improve their production efficiency and product quality. The versatility of the Titan means that it is not just confined to the one industry or purpose; it readily accepts all the Super Tyro's TruForm™ Tools greatly enhancing the range and functionality of the Titan.

**The TruHelix™ Helical Screw Flight Forming System is exactly that:**

a system that encompasses both the intelligence of a proprietary software suite, and the tooling and machines that have been developed through the deep engineering knowledge of our highly experienced team of helical screw flight design and manufacturing experts.

In the past, the accuracy and consistency of the helical form – the true essence of the helix – was largely a function of the forming method, the experience of the operator, and the accuracy of the cut flight blank from which the helix was formed.

The TruHelix™ Helical Screw Flight Forming System has been designed specifically to provide consistent, accurate output, and high productivity, with minimal skill input from the operator.

**The system consists of the following components:**

**1. AST's TruFlight™ Software Suite**

incorporates two unique modules that encapsulates the knowledge and expertise of helical screw flight manufacture to perform specialized engineering calculations at a cost that is many times less than a Flight Specialist or real-life Engineer.

**Module 1 – TruBlank™ Flight Blank Designer**

calculates an instantaneous accurate cutting size for the flat helical flight blank. The results are displayed graphically and can be saved as a DXF file for transfer.

**Module 2 – TruTool™ Machine Configuration Tool**

evaluates the individual mechanical characteristics of the required material to select the appropriate tool set and the exact tool set up.

**2. AST's TruForm™ Flight Forming Tools**

removes the need for size specific, shaped tooling and can be precisely set to suit every individual parameter of your helical screw flight regardless of its complexity.

**3. AST's TruSet™ Forming Parameters Program**

assists any operator to swiftly accumulate the skills to efficiently form accurate helical screw flights allowing a novice to become competently to train in sectional helical screw flight manufacturing within days.



The following chart represents nominal measurements that reflect industry standard helical screw flight systems. AST is able to achieve customized ranges to meet your requirements.

TruPress™ Machine Models	Simplex™	Tyro™	SuperTyro™	Titan™
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**Model Type - Helical Screw Flight Range:**

<b>Standard Outside Diameter Range</b>	150mm (6") to 1,200mm (48")	150mm (6") to 1,200mm (48")	150mm (6") to 1,200mm (48")	150mm (6") to 2,200mm (87")
<b>Standard Land or Web (OD - ID/2)</b>	400mm (16")	450mm (18")	450mm (18")	750mm (30")
<b>Expandable Outside Diameter</b>	Up to 2,200mm (87") / Land up to 750mm (30")	Up to 2,200mm (87") / Land up to 750mm (30")	Up to 2,200mm (87") / Land up to 750mm (30")	Up to 3,000mm (119") / Land up to 1,280mm (50")
<b>Thickness</b>	Up to 20mm (¾") thick Carbon Steel	Up to 25mm (1") thick Carbon Steel	Up to 32mm (1¼") thick Carbon Steel	Up to 32mm (1¼") thick Carbon Steel

For Primary Applications and Specialized Helical Screw Flights contact AST at [info@advancedspiral.com](mailto:info@advancedspiral.com)



*With the TruHelix™ software suite, you simply input the finished helix flight parameters of Outside Diameter, Inside Diameter, Pitch, Thickness, and Material, and your TruPress™ helical screw flight-forming machine will automatically set the speed, pressure, and travel set points applicable to the helical screw flight to be formed.*

## How Can We Help?

To learn more or to speak to an AST representative please get in touch:

### North America:

[info@advancedspiral.com](mailto:info@advancedspiral.com)

### Europe:

[europe@advancedspiral.com](mailto:europe@advancedspiral.com)

### Global/Australia:

[info@advancedspiral.com](mailto:info@advancedspiral.com)

## Key Benefits of the TruHelix™ Helical Screw Flight Forming System:

**Doesn't use heavy, pitch dependent forming dies.** It uses a pack of lightweight forming plates that can produce sectional helical screw flights of unprecedented quality regardless of the pitch, outside diameter, and inside diameter.

**The same set of forming plates can be used to produce both left and right-hand flights.** Our patented system utilizes tensile strength and material spring back factors and other scientific data built into the software to ensure the accuracy of the forming process dependent on sizes and materials to be cut and formed.

**Tooling wear and maintenance costs are greatly reduced** using our process of forming helical screw flights.

**TruForm™ tools take up a fraction of the space** required for conventional dies and can be changed by hand in minutes.

**Operator training to reach full production capability is measured in days, not years...** producing top-quality helical flights three to five times faster than old methods.

**The TruFlight™ Flight Blank Designer program will accurately calculate the perfect blank size** based on inputting the finished size of your required helical flight. The Machine Configuration Tool shows the operator exactly how to set up the forming plates and what information to put into the AST forming machine controls to consistently produce quality helical screw flights time after time.

**The TruHelix™ Helical Screw Flight Forming System forms, not deforms, the material to achieve a pure true helix shape** requiring minimal operator input. Fitting to the center tube and the helical screw flight ends are improved and results in additional labor and time savings due to helical screw flights consistently fitting better.

**Conforms to all known OH&S requirements and meets CE (European Community) requirements** for safety.