



MOTRIDAL
AMERICA INC.

SECTIONAL FLIGHT

Conveying Change



For every need and application, manufactured in a wide range of dimensions and materials, with the possibility of reaching up to 200" in diameter and greater, and thicknesses as large as 3-1/2".

Flexibility, experience and cutting edge technology, such as new laser cut and auger flight press machines for the flight forming, make it possible to construct cylindrical, conical, specially shaped, machine worked and drilled helical forged flights.

This process is applied when a continuous spiral cannot be manufactured due to the limitations that come with the physical and mechanical properties of the material itself. Available in both right and left hand, formed either cold or hot press that is cut out from steel sheet. Through this method we can produce uniform blades and thicknesses. The individual sectional flights are then assembled on to the pipe, welded and fastened by intermittent or continuous welds that form an un-

interrupted helix flight.

Normally manufactured in carbon steel, but we offer a wide of variety metals including but not limited to high tensile micro-alloyed steels (HTMAS), abrasion resistant steel and stainless steel. For all those special applications where abrasion and corrosion are a threat to the life expectancy of the components we offer the solution of manufacturing flights that consist of only one common steel base, and a coating surface in tungsten or chromium carbide.

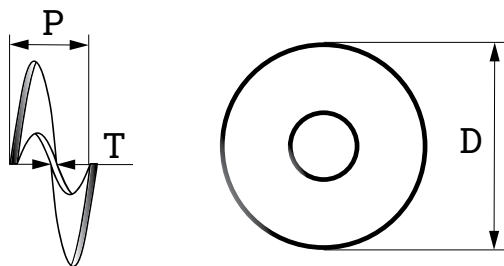


Dimensions

We do not have a standard; we truly **CUSTOMIZE** all our spirals to **FIT CLIENTS' NEEDS**.

Our R&D ensures ranges of feasibility are constantly expanding. Our current data:

Outer Diameter (D):	1-200 (inches)
Pitch (P):	3/4 - 700 (inches)
Thickness (T):	1/8 - 3-1/2 (inches)



Materials

Our broad network ensures worldwide raw material procurement.

Our cutting-edge technology assures the rolling of various Brinell Hardnesses up to 1000 BHN.

Example of available materials:

- Carbon steel (A36, A572-50)
- Stainless steel (AISI304, AISI316, Duplex)
- Abrasion resistant steel (AR235, AR400, Strenx 700E)
- High tensile micro-alloyed steel (HTMAS)
- Superalloy (C22, C276 Hastelloy)
- A541 Gr.B (T-1)
- Aluminum
- 11-14% Manganese

Motridal America has direct access to many markets, we can easily procure alternative materials as the European grades S355J2 (number 1.0577), St52-3 (number 1.0570) and special micro-alloyed Swedish steels.

Motridal America can easily operate in both imperial and metric systems of measurement.



Main Applications

- Agriculture (manure, cereals, vegetables)
- Drilling (soil, sand, gravels)
- Wastewater treatment (slaughter waste, garbage, sludge)
- Pulp & Paper (fibre sludge, pulper reject, wood chips)
- Plastics (granulate, chips, capsules)
- Construction (concrete, asphalt, sand)
- Food (sugar, salt, grain)
- Chemicals (granulate, capsules, fly ash)
- Biomass (wood chips, pellets, saw dust)
- Mining (sand, stone dust, carbonides)

Tolerances

We exceed industry standards and are extremely capable of meeting all your needs. Each batch will have specific tolerances, in general we can refer to the common values below.

Outer Diameter (D):	+ - 0.5%
Pitch (P):	+ - 3.0%
Thickness (T):	- 0 + 1/8 (inch)

MOTRIDAL America uses the latest technology and engineering software to support its high quality production.

High Diameters

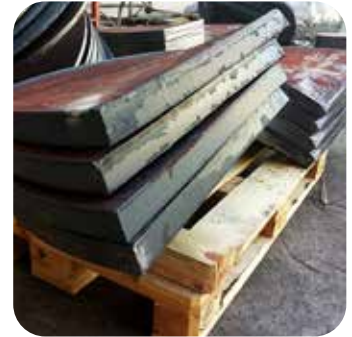
With our cutting edge made in house technology we can manufacture single-piece spiral sections of up to 200 inches and higher for the outer diameter. Generally intended for screw pumps/turbines and drilling applications without necessarily needing a multi-pieces welding in sequence to reach the desired outer diameter.





High Thickness

In order to manufacture spirals with thickness greater than 3 inches we combine our high power presses and the heated raw material. Our finished product/component is used in applications with extremely heavy usage.



Accuracy

The quality of our auger blades is superlative, we meet the most demanding tolerances clients care about. We exceed industry standards and meet your specifications perfectly. We place emphasis on in-process inspection capabilities, this is a know-how in which you can be confident.

Find below proper solutions to the most common problems:

- Flights not gapped around the pipe
- Flights ends not misaligned
- Flights ends not gapped
- Flights planarity and perpendicularity with the pipe.



Standard Flight

Shaftless screws are manufactured at required lengths or in subsections. Ends can be grinded and/or beveled to aid proper connections. Once welded into the final required length, Inner/Outer out-of-phase ends ensure a greater torque resistance to long spiral sections. Here are some examples:





Notched Flight

Generally used for the agitation and/or blending of different material during the initial conveying process. The outer paddles, promotes aggressive mixing of bulk materials.



Ribbon Flight

Excellent to convey sticky materials, inner cuttings are usually in regular intervals prevent products build up on

the flight-pipe interface. Proper connection of subsequent sections is guaranteed by perfect repeatability.



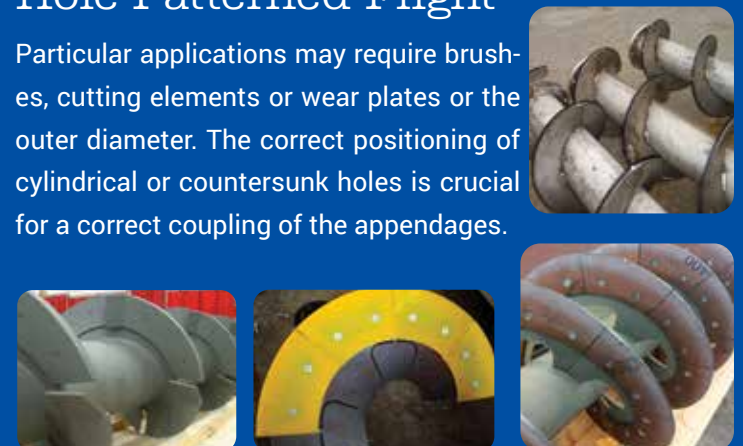
Saw Toothed Flight

Motridal laser technology ensures accurate outer cutting in regular intervals. Saw tooth edge can also be obtained by applying appropriate templates on the outer diameter.



Hole Patterned Flight

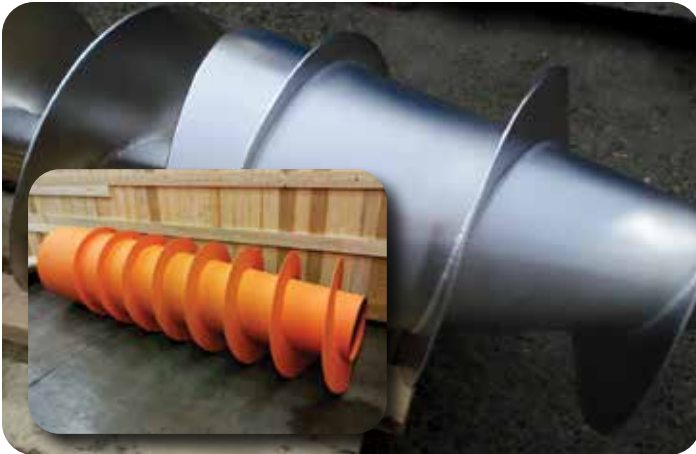
Particular applications may require brushes, cutting elements or wear plates or the outer diameter. The correct positioning of cylindrical or countersunk holes is crucial for a correct coupling of the appendages.





Coned Flight

Cylindrical flight having a variable inner diameter promotes even drawdown in a full hopper situation. Also made with progressive pitches, are generally used to control the pressure / filling in the screw feeder.



Tappered Flight

Conical flight having a constant inner diameter promotes even withdrawal from bins or silos. Also made with progressive pitches, are commonly used for the dewatering of materials in the wastewater treatment sectors.



Hardfaced Flight

For each industrial application, we offer this process to be applied to any new part during production to increase its wear resistance.



Twisted Angle Flight

Backwardly directed flights are commonly used as reinforcement of the main blade or in order to create a passage section of a coolant for controlling the product temperature in specific processes.





Beveled Flight

Upon request, flights can be beveled on both ends to ensure proper connections. Chamfers can also be made on the outside diameter in favor of specific needs.



Screw Conveyor

Motridal America supplies to the main local and international manufacturers of screw conveyors. If you are looking for the complete machine do not

hesitate to contact us. We can put you in touch with one of our well-established Partners. We believe highly in collaboration!



Packaging & Shipping

Package customization is a further benefit. Tailor-made crates and reinforced skids ensure transport costs

savings. ISPM-15 Heat Treated pallets come with all the goods shipped internationally.

Under the Incoterms 2020 rules, Motridal America either can offer FCA or DAP services through its reliable carriers.





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