



MOTRIDAL
AMERICA INC.

The middle section of the image shows a close-up of white conveyor rollers, which are the primary focus of the background.

SHAFTLESS FLIGHT

The bottom section of the image shows a close-up of blue conveyor rollers, matching the top section.

Conveying Change



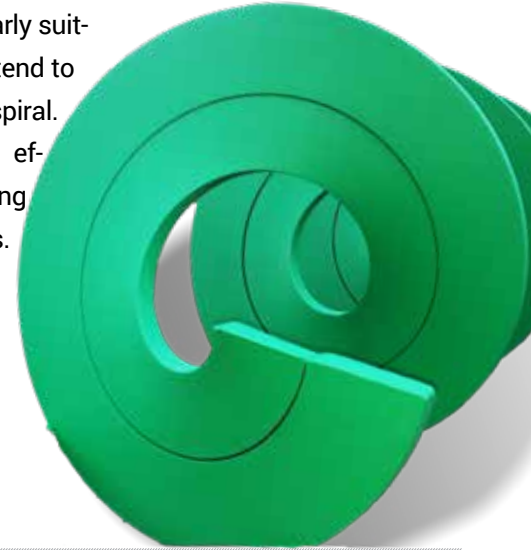
Manufactured to your specifications with diameters up to 35", a multitude of bar sizes and custom configurations available. Our spirals are made of high tensile micro-alloyed steel (HTMAS) that's cold formed using both single and two stage forming processes. Brinell Hardness up to 400 BHN is available. We also manufacture spirals in a wide variety of metals including but not limited to abrasion resistant steels and stainless steel. Need continuous spirals with variable pitches? Ours can change up to five times in each subsection.

Depending on the design application, spirals are manufactured with single or multiple bars of stacked flights coaxially welded together. At your specification, spirals are supplied at the required length or in subsections. Motridal shaftless flights are beveled on both ends to ensure proper connections. On request, in the inner/outer configurations, the internal spiral of each following subsection is longer than the outer one in order

to misalign the weld and increase the overall strength.

We also produce drive plates and drive shafts in various configurations.

This centerless screw makes a conveying system particularly suitable for materials that tend to tangle with a shafted spiral. It ensures reliable and efficient material handling with low life-cycle costs.

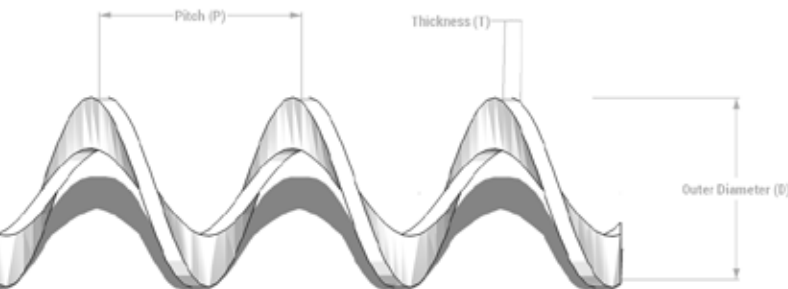


Dimensions

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 - 35 (inch)
Pitch (P):	1/2 - 40 (inch)
Thickness (T):	1/8 - 1-1/2 (inch)



Materials

Our broad network ensures worldwide raw material procurement.

Our cutting-edge technology assures the rolling of various Brinell Hardnesses up to 400 BHN.

Example of available materials:

- High tensile micro-alloyed steels (HTMAS)
- Carbon steels (A36)
- Stainless steels (AISI304, AISI316, Duplex)
- Abrasion resistant steels (AR400)
- A514 Gr.B (T-1)
- Aluminum
- Nickel Alloys
- 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.



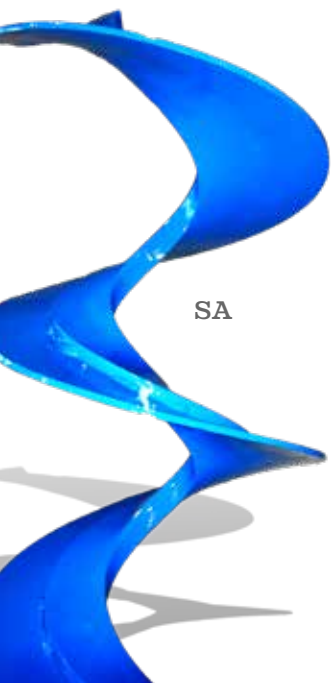
Main Applications

- Wastewater treatment (slaughter waste, garbage, sludge)
- Pulp & Paper (fibre sludge, pulper reject, wood chips)
- Food (sugar, salt, grain)
- Chemicals (granulate, capsules, fly ash)
- Biomass (wood chips, pellets, saw dust)
- Mining (sand, stone dust, carbonides)

Configurations

Spirals are manufactured with single or multiple bars of flanked and/or stacked flights welded together. Shaftless screws can also be manufactured as a combination of continuous and sectional flights. Here are some configuration examples:

- **A** – Single
- **AB** – Double flushed
- **ABC** – Triple flushed
- **EA** – Double flanked
- **EAB** – Triple stacked and flanked
- **EABC** – Quadruple flushed and flanked
- **EFAB** – Quadruple stacked and flanked
- **SA** – Double combined (Shaftless flight – Sectional flight)
- **SAB** – Triple combined (Double Shaftless flight – Sectional flight)





Welding Process

Final products meet rigid manufacturing quality standards. All Motridal America welders are certified in accordance with American Welding Society (AWS) Codes.



Cross-section

Tensile forces in forming process shapes flat bars from a rectangular cross section to a tapered one.



Double bar spiral



Single bar spiral

Shapes and Positioning

Spirals are produced from a flat bar in a multitude of diameters and pitches. Flat bars can have different shapes and can be oriented in different ways. Here are some examples:



Rectangular upright



Round



Rectangular flat



Square



Triangular

Subsection Ends

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:

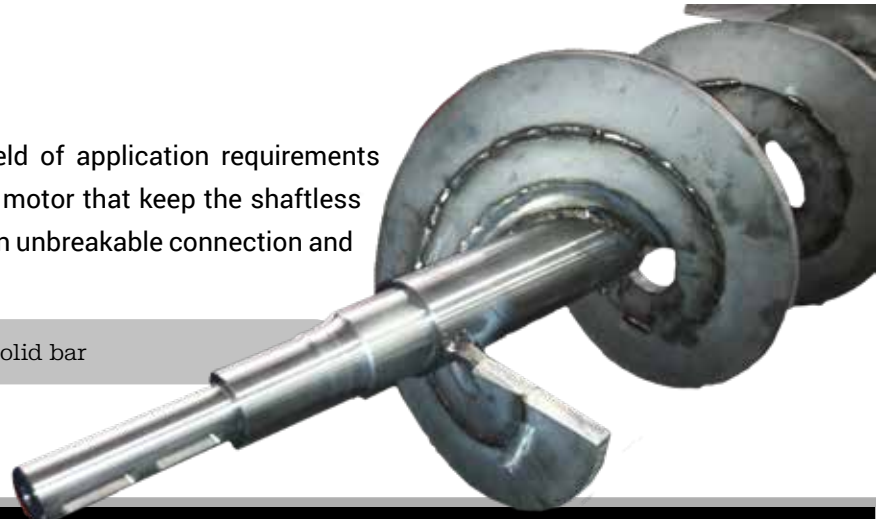




Drive Couplings

Manufactured to your specifications, to meet your field of application requirements drive couplings are connected to a gear reducer and a motor that keep the shaftless spiral in rotation. Drive plates and drive shafts provide an unbreakable connection and precise alignment. More examples:

Solid bar



Solid disc

Ring and flat bars



Disc, flat bars & tube

Disc & flat bars

Round gusset plate

Pipe

Bushing



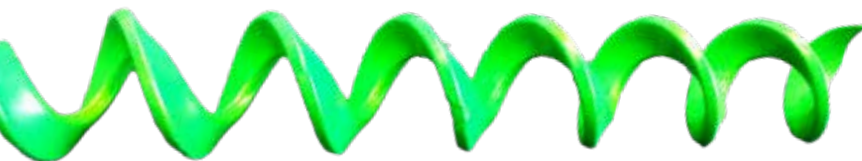
Variable Pitch

Motridal America's revolutionary technology allows us to roll spirals with variable pitches. Available from 1/2 to 40 (inch) and can change 5 times (!) In the same subsection.



Inclined Shaftless Flight

Motridal America's range of feasibility has no boundaries, our cutting-edge technology makes it possible to construct non perpendicular shaftless spirals.





Brush Equiped Spiral



Motridal America also produces spirals with brushes if required by your application.



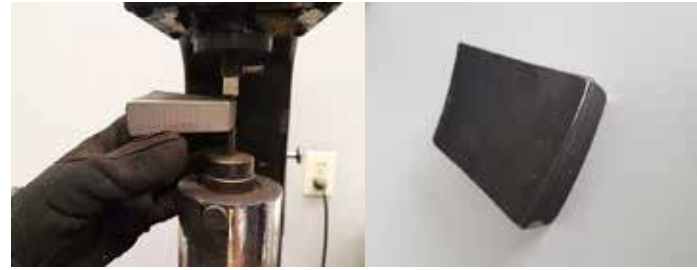
According to your specifications, spirals can be machined with holes or slots to host brushes.



Brushes are bolted or clamped onto the shaftless spiral to provide cleaning transport.

Hardness

Motridal America manufactures shaftless screws with a Brinell Hardness of up to 400 BHN. Our cutting-edge technology ensures the rolling of high strength alloys and wear resistant steels.



Surface Treated Spiral

Motridal America is capable of ensuring a huge range of industrial processes that alter the surface of a manufactured item to achieve a certain property.



Machined Spiral

According to client's specs, spirals can be machined for custom applications. They may be tapered or have holes to host additional components.



Hardfaced Spiral

For each industrial application, may be applied to a new part during production to increase its wear resistance.



Shaftless Conveyer

Motridal America supplies the main local and international manufacturer of shaftless conveyors. If you are looking for the complete machine don't hesitate to contact us. We can get you in touch with one of our well-established Partners. We believe in collaboration!

Shafted/Ribbon - Shaftless Flight

Continuous spirals from flat bars can replace sectional flights in shafted and ribbon applications. This solution ensures precision and tight tolerances. Assembling and welding times decrease significantly; the economic advantage is not so marginal.



Painting

According to your specifications, various finishes are available for your spiral surfaces. Common examples are blast cleaning or primer. We also offer two special finishes, metallic zinc rich epoxy primer and hydrophobic polyurethane coatings, which provide excellent protection for steel substrates in wastewater environments.

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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