



Screw conveyor of modules





Conveyor Benefits

The Archimedys screw auger makes significant improvements to screw auger design and manufacture.

Excentys has designed a new screw auger. Standard modules are quickly assembled into large, unique screw augers for hexagonal axles. The screw auger conveyor can be modified by mixing different standard auger modules on the axle. This ingenious feature to optimize flange or ending function is brand new. The auger itself is pre-existing technology, but this modular design is brand-new technology.

Due to the special plastic material the augers have a slick-surface and are durable, meaning bulk material doesn't stick to the auger. The low friction and torque conserves energy. Cleaning and maintenance is quick and easy. There is no need for the difficult and time consuming operations such as burning or welding. As an added bonus, the flightings are naturally resistant to corrosion and chemicals.

Industry, food-industry, cleantech, pharmaceuticals, mining industries...

Screw auger production and maintenance

Quick to produce.

Quick maintenance: only necessary to replace damaged or worn modules.

Maintenance requires no burning or welding.

Welding-free production.





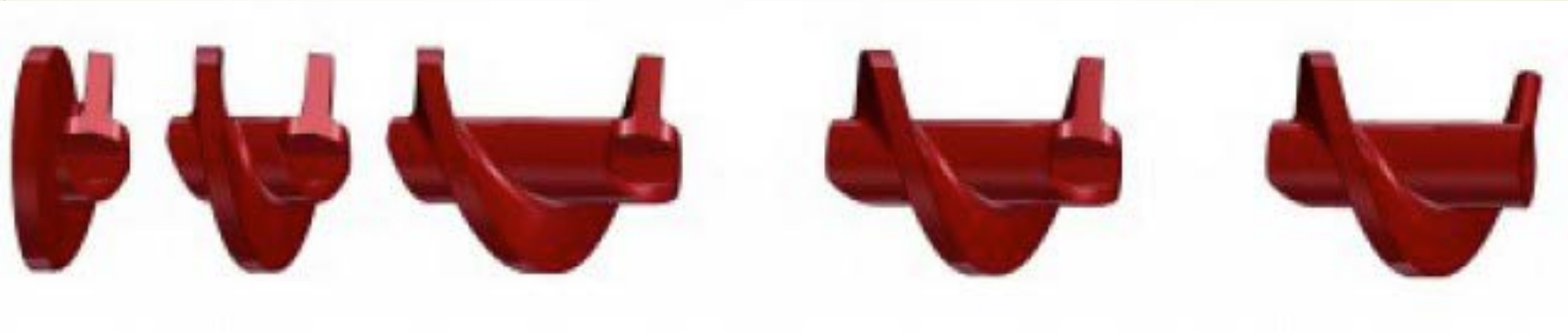
Improved operation

Improved rotor spin against the conveyor's lining.

No more intermediate bearings needed on long screw in many applications.

Excellent balance allowing high speed operation.

Screw auger conveyor modification



Specialized profiles are possible for any conveyor application, for example, see the grape sorting auger.

Varied inclines are easy to produce: for example, slow-fast-slow.

Ø50 mm minimum, Ø1000 mm maximum

Conveyors can easily be modified after assembly by replacing modular flightings.

Ecological design

Energy saving by reducing the motorization strain and torque.

Environment-friendly noise attenuation while operating.

No need for a poisonous sandblasting or polyurethane coating in order to protect from corrosion from toxic metals.





Endurance

Strengthened abrasion resistance. Lab tests has shown up to three times more wear resistant than construction with steel in certain applications.

Due to special plastic material flightings are naturally resistant to corrosion - impervious to a wide range of acids, caustics and other chemicals.



Food safe

Archimedys screw auger material is found food safe under FDA approval and European regulation 1935/2004 approval.

Slick surface simplifies cleaning.

Applications





Archimedys screw auger is suited to mass conveyance within the technical industry, chemical industry, food production industry, feed industry, agriculture and building material industry.

Corrosion-resistance, quiet operation and smaller energy requirements, along with convenient production and assembly as well as easy maintenance, ensure that Archimedys augers have a nearly infinite application in conveyance.

Metering, mixing, crushing light lumps and subsequent mixing are just some possible applications. Conveying chemicals and silt extracted in water treatment are a task the plastic auger design is well suited to.


Assembly & Design

Archimedys screw augers are assembled by connecting standard module flightings onto a hexagonal axle.

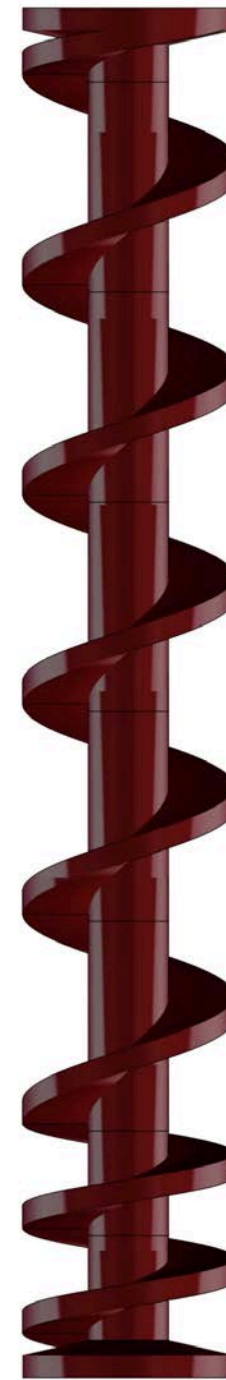

The assembled auger can be locked into place in one end with a screw or a nut, and the other end connected onto a support.


Standard modules include the flange and/or final module, and an open ending module.





Screw with two flanges. Input and output are perpendicular to the screw axis. Short pitch at the entrance ensure a regular troughput with 50% max screw filling






Screw with one flange and ending, feeding is perpendicular to the screw axis and the output can be in the direction of the screw or perpendicularly to it.

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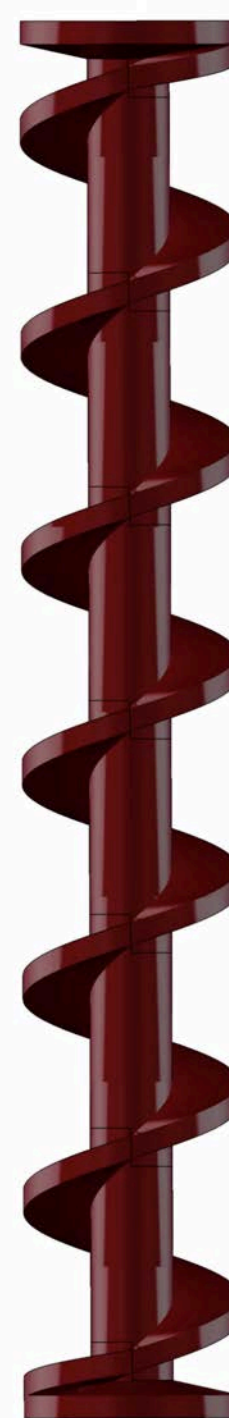
As no feeding modules are at the entrance, care must be taken to avoid over filling and torque peak damageable for the conveyor





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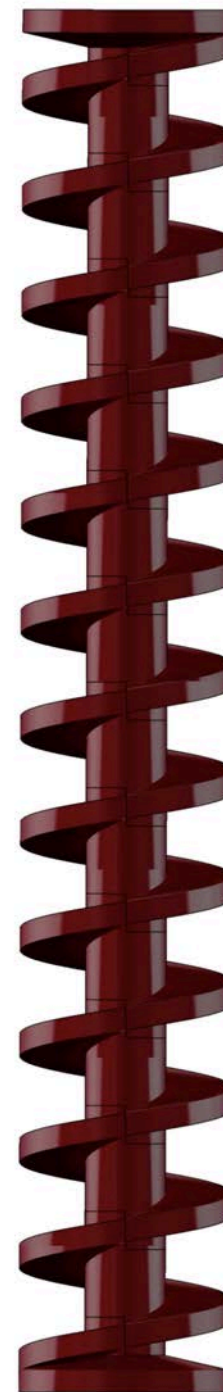
Classical screw design with constant pitch.

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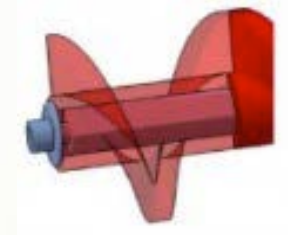
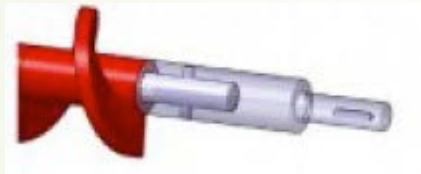
This particular configuration with only short pitch is used when inclination is over 70°, vertical elevator or dosing screws.



Each user can customize the flange or ending to their individual need.

Some examples are below.

Extra movable end shaft with a key pin or bolt:



The drive shaft is machined directly.

Module fixation is done with a screw.

Metal parts and standard hexagonal axles

Hexagonal shaft are the core of the modular Archimedys' screw. Different dimensions are available. The shaft standard length is 3m.

Metric standard steel and stainless steel hexagon are available anywhere in the world.

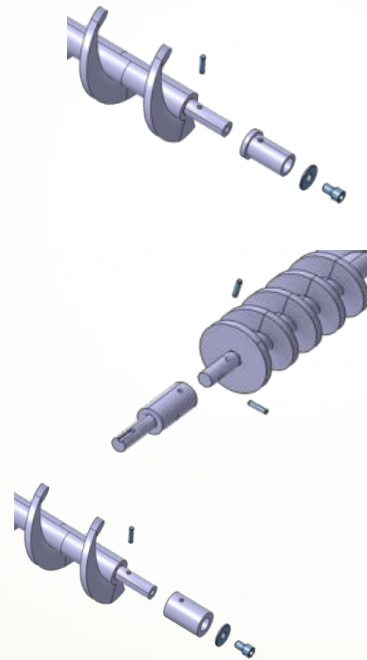
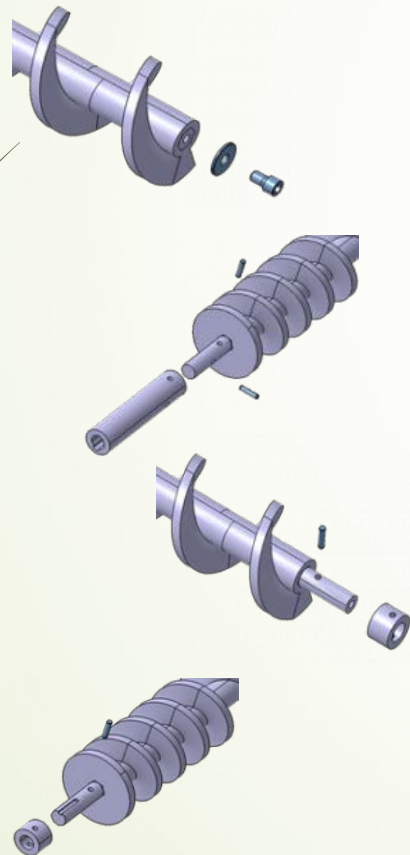
Standard stock length is 3 meters. Contact your steel supplier for more details on different lengths.



Machining endings can easily be done by your local supplier.
On request we can provide execution drawings according to your conveyor layout

End side configuration

Drive side configuration



Type 1

Type 2

Type 3

Type 4

Conveyable Materials

Grains and grain by-products

oats – sugar beet – barley – hemp seeds – rape oil seeds – corn –
corncoobs – peanuts – different flours.



Organic agricultural waste

corn leaves – soya bean stalks – sunflower seed shells – different wastes -hay – brans



Fuels

Cellulose – coal – coal ventilation – charcoal – lignite watering – brown coal dust
– peat - woodchip



Minerals and fertilizing chemicals

aluminium hydroxide – boric acid – citric acid – starch – clay – calcium carbonate
– phosphates – sodium – chlorides – potassium chloride – potassium magnesium
– potassium sulphate - urea



Foods

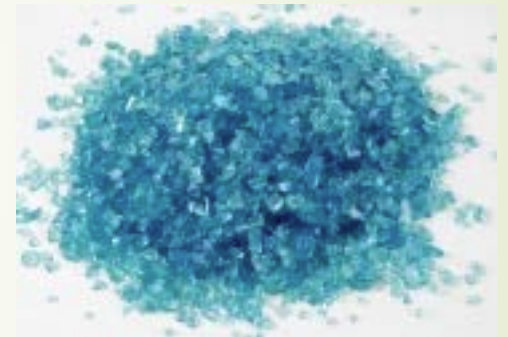
cocoa powder – breadcrumbs – cocoa bean shells – fishmeal – meat meal – potato starch – cocoa beans – powdered milk – salt – sugar

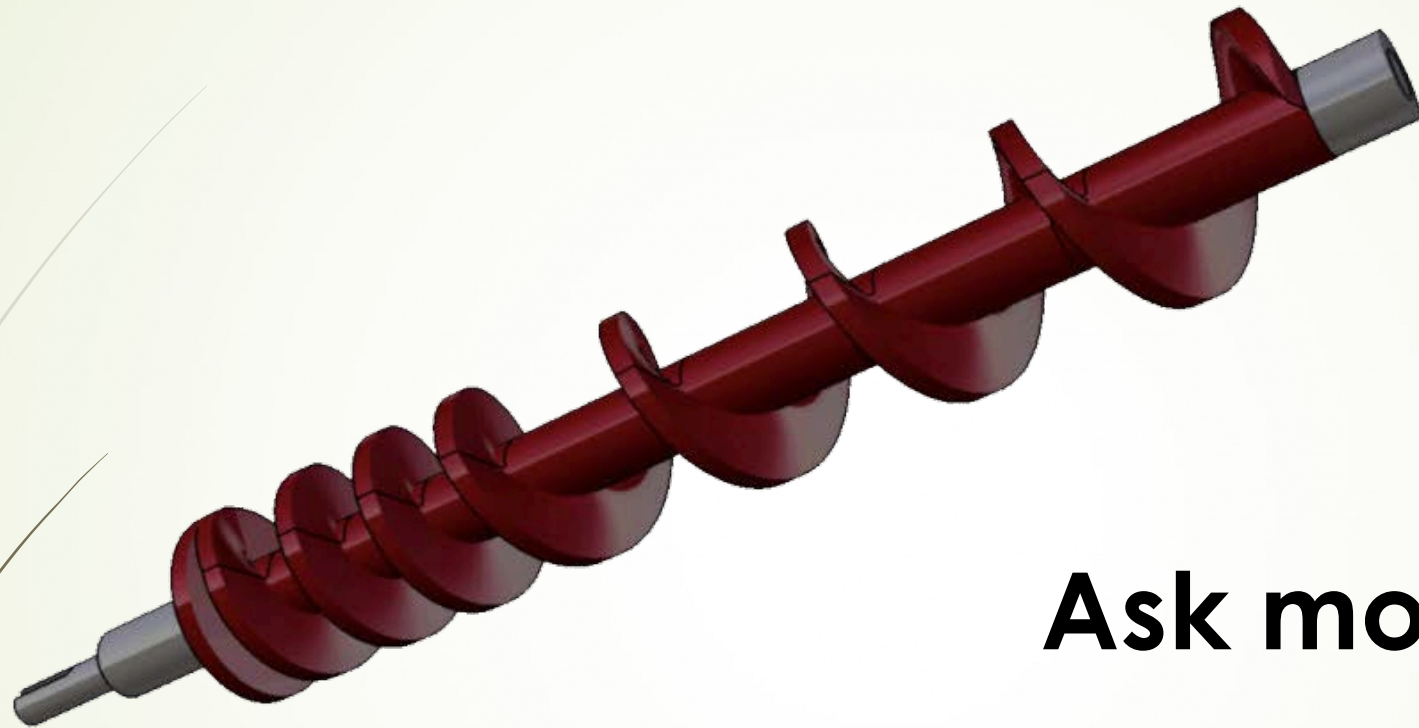


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