MORRISON
CONTAINER HANDLING SOLUTIONS®

the Morrison Guide to TIMING SCREW FUNDAMENTALS

container handling solutions for increased productivity

FEEDING · TURNING · GROUPING · TWISTING · INVERTING · COMBINING · DIVIDING · ORIENTING

the Morrison Guide to TIMING SCREW FUNDAMENTALS:

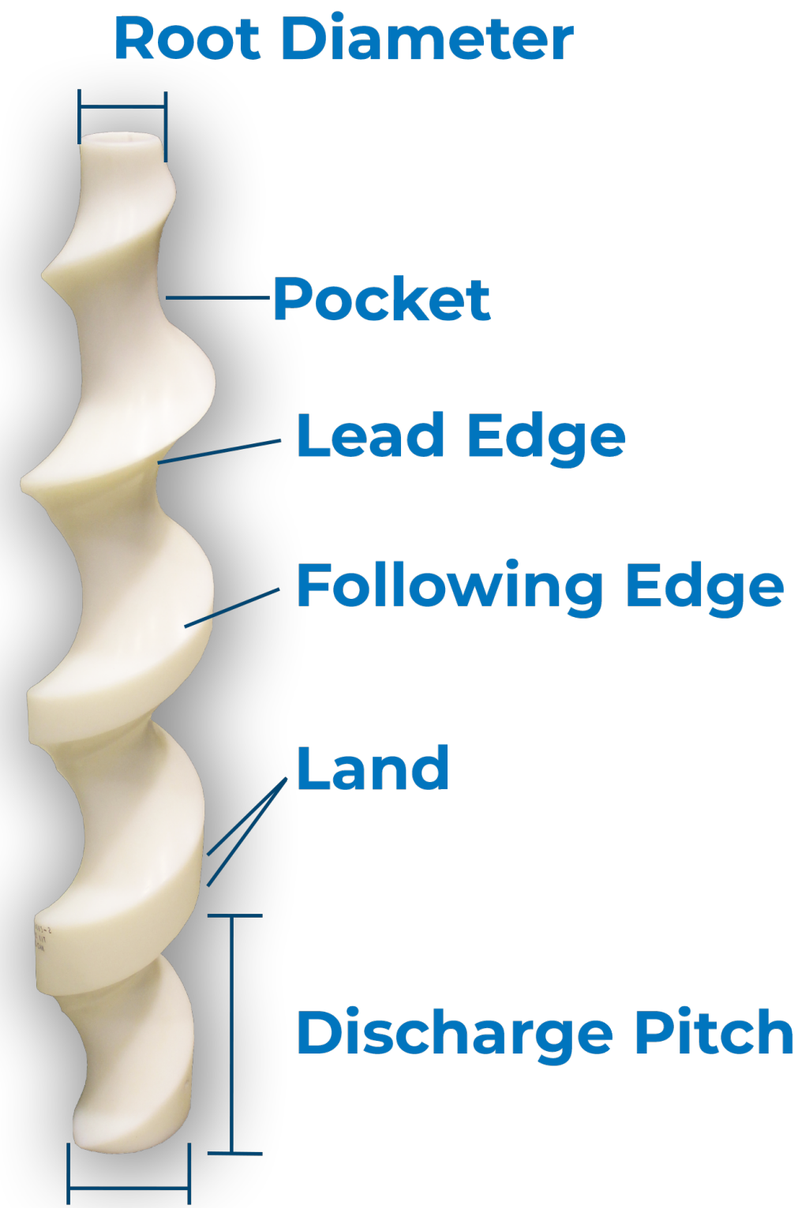
Split second accuracy in container handling can becritical to running an efficient production line. That's why expert designed timing screws [feed screws] are key to maximizing your performance.

Looking at the basics, timing screws are designed to provide a smooth flow of containers into packaging equipment machines. But that's just the beginning of what timing screws can offer you. Thanks to advances in technology and innovation from Morrison, timing screws are now more sophisticated and can accomplish many more complex applications for rigid and semi-rigid containers, as well as virtually any shape, from round to square..

INNOVATIVE
CONTAINER HANDLING
EXPERT DESIGN
SUPPORT BUILT IN®

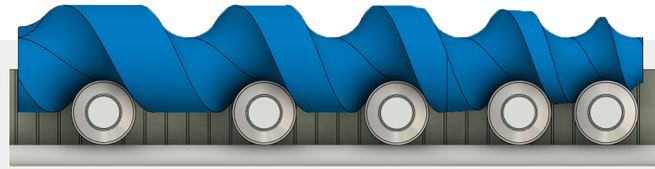
THE MOST CRITICAL ELEMENT OF YOUR LINE

Parts of a Timing Screw

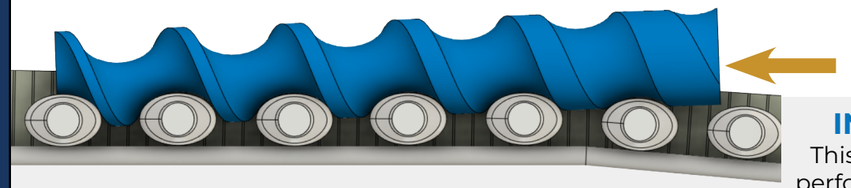


STANDARD INFEED TIMING SCREWS

STRAIGHT ROOT DESIGN



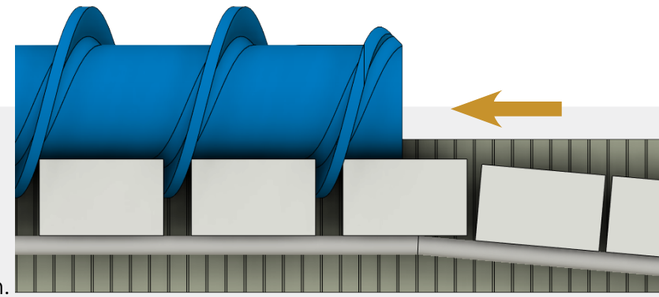
This infeed design has a constant root diameter, and the thread height graduates from zero to the needed outside diameter, which is determined by container shape, size and machine limitations. A spring-loaded guide rail can be added to the infeed to aid random speeding. This screw design is used for round, oval and rectangular containers with sufficiently rounded edges to allow for effective separation.



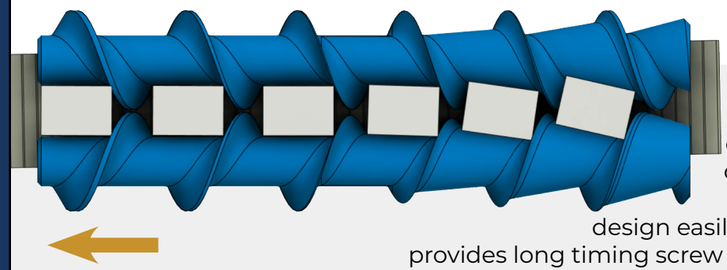
INVERSE TAPER DESIGN

This is a design used for maximum performance when random feeding unstable or non-round containers. An offset guide rail is required to feed the container parallel to the timing screw root. For best performance, the initial guide rail should be spring-loaded.

NON-ROUND CHOKE DESIGN



Used with the proper guide rail and fed at an angle, this type of infeed design will aid in separating rectangular or square containers while maximizing performance. A backlog of containers is required for effective operation.



SHINGLE INFEED DESIGN

design is characterized by a matched pair of timing screws that efficiently separates rectangular or flat-sided containers. This design easily handles large line backlog pressure and provides long timing screw life. Shingle infeed works effectively on all machines that are modified to accept it. It is most commonly used on labelers.

arrow indicates direction of flow

Common applications our TIMING SCREWS are used for:

- indexing
- grouping
- turning
- transferring
- feeding
- metering
- inverting
- orienting
- stacking
- dividing lanes
- combining lanes
- collating

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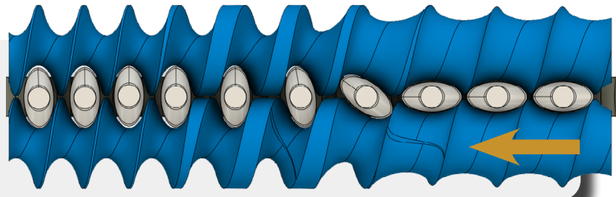
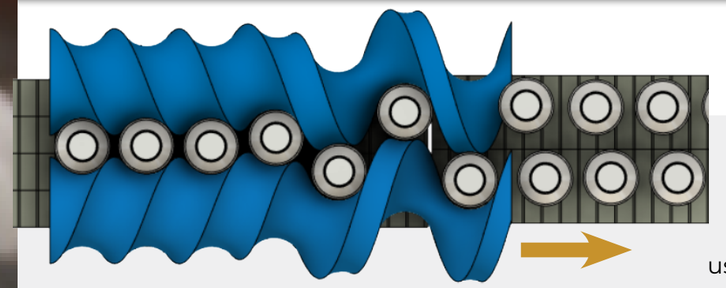
PICKING THE RIGHT SCREW FOR YOUR APPLICATION

TURNING TIMING SCREWS

Rotate containers 90°, 180°, or 360° to proper orientation for specific operations. Turning a container requires two timing screws.



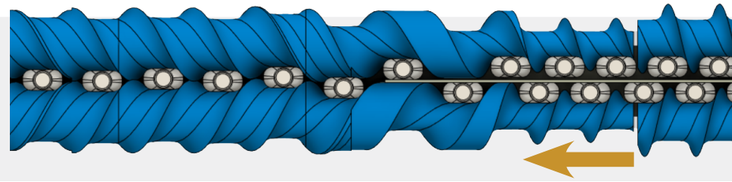


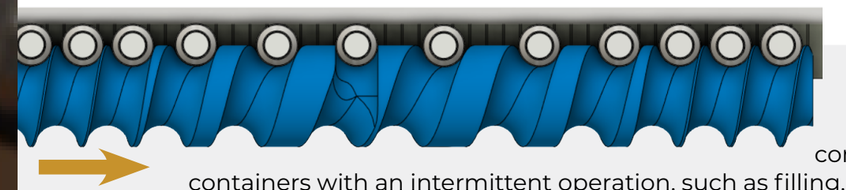
DIVIDING TIMING SCREWS

A matched pair of timing screws can be used to divide a single lane of containers into two or three lanes. This operation is usually accomplished in as little as 24 inches.

COMBINING TIMING SCREWS

Use proper phasing to combine containers with a wide variety of shapes.



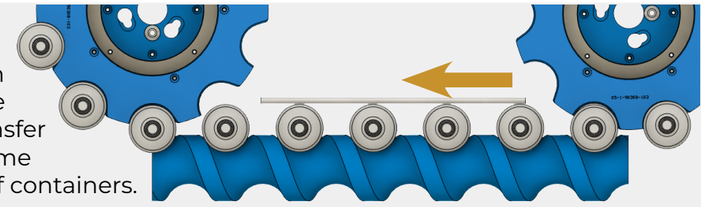


DWELL TIMING SCREWS

Dwelling timing screws combine the continuous feeding of containers with an intermittent operation, such as filling, capping or cottoning. The screw thread is machined to allow the container to stop its forward motion for up to one-half revolutions, although the screw continues to rotate.

TRANSFER TIMING SCREWS

With a transfer timing screw, it will maintain control of containers as they move from one machine or operation to the next. Since transfer timing screws are never random fed, the same pocket configuration can handle a variety of containers.



arrow indicates direction of flow

OPTIONS AND CUSTOMIZATION

COLOR CODE YOUR SCREWS FOR QUICK, EASY CHANGEOVER

Production downtime costs money!
To reduce changeover times, Morrison timing screws can be manufactured with color coding.

We stock 6 colors, but additional are available to fit your line needs. Select one of the stock colors for us to make your order with shorter lead times.

STOCK COLORS

White | Red | Green

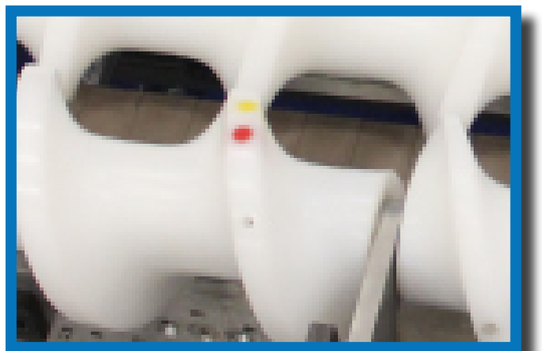
Black | Blue | Yellow

- custom colors also available upon request -

RUNNING MULTIPLE CONTAINERS ON THE SAME LINE?
USE COLOR PLUGS FOR EASY CHANGEOVER IDENTIFICATION

WHAT ARE COLOR PLUGS?
If you order all of the same color screws but still want to create color association with container sizes being run, color plugs are a great option to use.

Morrison will install a color plug, highlighted on the right, in your screws that will allow operators and maintenance to quickly identify which screws need to be installed to run the different container. This can minimize changeover time by making identification simple.



MORRISON PARTS CARTS - SAFE STORAGE SOLUTIONS

Parts carts are great storage solutions when parts are not in use - for example, when running a different container size or during sanitation processes. Morrison's carts keep your screws safe from damage when not in use.

Morrison's design highlights the specific place each screw should be stored, making it easy for operators to quickly locate the intended screw.

Carts have stainless steel frames to allow for cleaning of the parts directly on the carts and are equipped with extra enclosed storage to accommodate any other pieces that accompany your container handling sets.

how to place YOUR ORDER

When you're ready to place your order, our sales team can come to your plant, virtually or in person, to provide a line evaluation at no cost to you, and get the ball rolling.

Let's bring Morrison's container handling expertise to your plant and achieve your production goals.

Want to know more? Click here to submit a timing screw inquiry!

CLICK HERE

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CONNECT WITH AN EXPERT

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